WKE

NOV 2015

PROJECT ID: 1300-13-74

WITH: N/A

COUNTY: MILWAUKEE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Cross-Sections

TOTAL SHEETS = 966

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1300-13-74		

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

LAKEFRONT GATEWAY

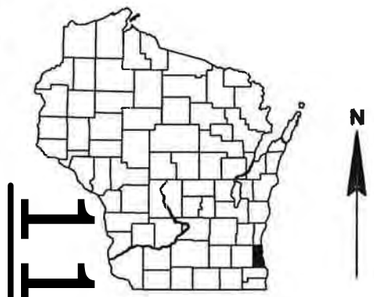
IH 794 RAMPS AT LINCOLN MEMORIAL DRIVE

IH 794

MILWAUKEE COUNTY

STATE PROJECT NUMBER

1300-13-74



DESIGN DESIGNATION

		IH 794 WB ENTRANCE RAMP	IH 794 EB EXIT RAMP	LINCOLN MEMORIAL DRIVE	CLYBOURN STREET
A.A.D.T. (2016)	=	10,500	10,600	33,600	1,400
A.A.D.T. (2036)	=	14,600	12,500	41,000	8,400
D.H.V. (2036)	=	1,475	1,260	4,840	990
D.D. (2036)	=	N/A	N/A	58-42	58-42
T. (2036)	=	3.5%	3.5%	3.5%	3.5%
DESIGN SPEED	=	30 MPH	30 MPH	35 MPH	35 MPH
ESALS	=	2,700,000	2,700,000	2,900,000	576,700

CONVENTIONAL SYMBOLS

PLAN

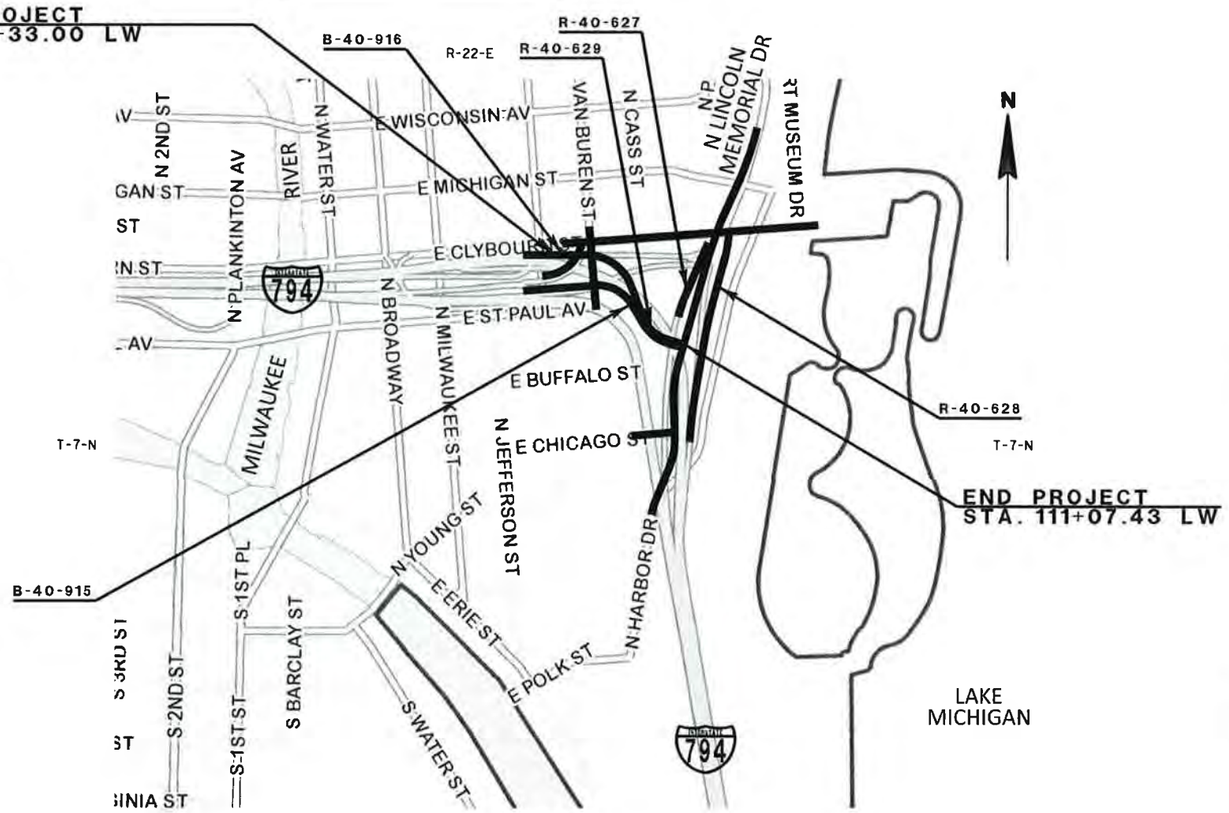
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- CONDUIT (C)
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE



LAYOUT

SCALE 0 250 FEET

NET LENGTH OF CENTERLINE (CH) = 0.035 MI.
NET LENGTH OF CENTERLINE (CL) = 0.196 MI.
NET LENGTH OF CENTERLINE (LM) = 0.425 MI.
NET LENGTH OF CENTERLINE (LW) = 0.191 MI.
NET LENGTH OF CENTERLINE (LE) = 0.175 MI.

TOTAL NET LENGTH OF CENTERLINES = 1.022 MI.

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), Milwaukee County, NAD 1983 (2007).

Elevations shown on this plan are referenced to the North American Vertical Datum of 1988 NAVD 88 (1991).

ORIGINAL PLANS PREPARED BY

GRAEF

One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax

WISCONSIN
STEVE L. HUBERTY
32396
WAUWATOSA, WI
PROFESSIONAL ENGINEER

7/28/15 (Date)

(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	KAPUR & ASSOCIATES, INC.
Designer	GRAEF
Project Manager	CAROLYNN GELLINGS, P.E.
Regional Examiner	
Regional Supervisor	BRIAN ROPER, P.E.
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 7/29/15 (Signature)

E

UTILITY CONTACTS

WE ENERGIES (ELECTRIC)
SEND ALL CORRESPONDENCE TO:

MR. LATROY BRUMFIELD, PROJECT MANAGER
333 W. EVERETT STREET - A299
MILWAUKEE, WI 53203
PHONE (414) 221-5617
latroy.brumfield@we-energies.com

CONSTRUCTION FIELD CONTACT:
DAVE THOMPSON
500 SOUTH 116TH STREET
WEST ALLIS, WI 53214
OFFICE: (414) 944-5558
MOBILE: (414) 322-2148
david.thompson@we-energies.com

WE ENERGIES (GAS)
SEND ALL CORRESPONDENCE TO:

MR. LATROY BRUMFIELD, PROJECT MANAGER
333 W. EVERETT STREET - A299
MILWAUKEE, WI 53203
PHONE (414) 221-5617
latroy.brumfield@we-energies.com

CONSTRUCTION FIELD CONTACT:
PAUL OSMANSKI
500 SOUTH 116TH STREET
WEST ALLIS, WI 53214
OFFICE: (414) 944-5796
MOBILE: (414) 315-1278
paul.osmanski@we-energies.com

AT&T WISCONSIN
MR. JAY BULANEK
2005 PEWAUKEE ROAD
WAUKESHA, WI 53188
PHONE (262) 896.7669
jb5175@att.com

CITY OF MILWAUKEE DPW
MR. ROBERT BRYSON
CHIEF TRAFFIC & LIGHTING ENGINEER
841 N BROADWAY, RM 920
MILWAUKEE, WI 53202
PHONE (414) 286-3244
robert.bryson@milwaukee.gov

MILWAUKEE WATER WORKS
MS. CARRIE LEWIS
841 N BROADWAY RM 409
MILWAUKEE, WI 53202
PHONE (414) 286-2801
carrie.lewis@milwaukee.gov

MILWAUKEE METRO SEWERAGE DIST.
MS. DEBRA JENSEN
PLANNING SERVICES SUPERVISOR
260 W SEEBOTH STREET
MILWAUKEE, WI 53204-1446
PHONE (414) 225-2143
djensen@mmsd.com

CENTURYLINK/QWEST NATIONAL NETWORK
MR. KEVIN HUFF
13057 S MONITOR AVE
PALOS HEIGHTS, IL 60463
PHONE (708) 837-7927
kevin.huff@centurylink.com

CITY OF MILWAUKEE UTILITIES
MR. TONY KOTECKI
CONSTRUCTION UTILITY COORDINATOR
841 N BROADWAY, ROOM 710
MILWAUKEE, WI 53202
PHONE (414) 708-3886
anthony.kotecki@milwaukee.gov

TIME WARNER CABLE
MR. STEVE CRAMER
1320 N MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
PHONE (414) 277-4045
steve.cramer@twcable.com

OTHER CONTACTS

MILWAUKEE COUNTY DEPARTMENT
OF TRANSPORTATION (MCDOT)
MR. GREG HEISEL
HWY MAINTENANCE MANAGER
10190 W WATERTOWN PLANK ROAD
MILWAUKEE, WI 53226
PHONE (414) 257-6566
greg.heisel@milwcnty.com

MILWAUKEE COUNTY TRANSIT SYSTEM
MS. MELANIE MACARTHUR
COORDINATOR OF STREET OPERATIONS
1942 NORTH 17TH STREET
MILWAUKEE, WI 53205
PHONE (414) 343-1764
mmacarthur@mcts.org

MILWAUKEE WORLD FESTIVAL, INC.
MR. ROBERT GOSSE
DIRECTOR OF DESIGN AND CONSTRUCTION
200 NORTH HARBOR DRIVE
MILWAUKEE, WI 53202
PHONE (414) 287-4466
rgosse@summerfest.com

MILWAUKEE POLICE DEPARTMENT
SERGEANT RICHARD YERKES
NEIGHBORHOOD TASK FORCE-MOTORCYCLE UNIT
4715 W. VLIET STREET
MILWAUKEE, WI 53208
PHONE (414) 935-7617
ryerke@milwaukee.gov

MILWAUKEE COUNTY SHERIFF DEPARTMENT
MR. MICHAEL BABICH
821 W STATE STREET - SAFETY BLDG.
MILWAUKEE, WI 53233
PHONE (414) 278-4788

MILWAUKEE COUNTY PARKS SYSTEM
MR. JAMES KEEGAN
9480 W. WATERTOWN PLANK ROAD
WAUWATOSA, WI 53226
PHONE (414) 257-4775
james.keegan@milwcnty.com

ENVIRONMENTAL COORDINATOR

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
MS. KRISTINA BETZOLD
SOUTHEAST REGION HEADQUARTERS
2300 N. DR. MARTIN LUTHER KING DRIVE
MILWAUKEE, WI 53212
PHONE (414) 263-8517

PROJECT CONTACTS

CITY OF MILWAUKEE

MR. JEFFREY POLENSKE
CITY ENGINEER
841 N BROADWAY, RM 701
MILWAUKEE, WI 53202
PHONE (414) 286-3701
jeffrey.polenske@milwaukee.gov

MR. MICHAEL LOUGHRAN
PUBLIC WORKS COORDINATION MANAGER
841 N BROADWAY, RM 501
MILWAUKEE, WI 53202
PHONE (414) 286-3304
michael.loughran@milwaukee.gov

WISDOT

MS. CAROLYNN GELLINGS
PROJECT MANAGER
WISDOT SE REGION
141 NW BARSTOW
WAUKESHA, WI 53187-0798
PHONE (414) 750-3233
carolynn.gellings@dot.wi.gov

DESIGN CONSULTANT

MS. MARY BETH PETTIT
GRAEF
125 S. 84TH STREET, SUITE 401
MILWAUKEE, WI 53214-1470
PHONE (414) 259-1500
marybeth.pettit@graef-usa.com

WISDOT DEPARTMENTS

WISDOT RWIS PROGRAM
MR. MIKE ADAMS (COMMUN. TOWER)
RM 501
PO BOX 7986
MADISON, WI 53707
PHONE (608) 266-5004
michael.adams@dot.wi.gov

WISDOT STOC
MR. JEFF MADSON
433 W ST PAUL AVENUE, STE 300
MILWAUKEE, WI 53203-3007
PHONE (414) 225-3723
jeffrey.madson@dot.wi.gov

WISDOT TRAFFIC LIGHTING
MR. ERIC PEREA
141 NW BARSTOW STREET
WAUKESHA, WI 53187
PHONE (262) 574-5422
eric.perea@dot.wi.gov

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

2

GENERAL NOTES

CURVE RADII ARE MEASURED TO CURB FLANGE UNLESS OTHERWISE NOTED.

PROPOSED ELEVATIONS ARE LISTED AT CURB FLANGE UNLESS OTHERWISE NOTED.

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

THE EXACT LOCATION OF PRIVATE ENTRANCES IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

REMOVE SIDEWALK AND CURB & GUTTER TO NEAREST JOINT OR AS DIRECTED BY THE ENGINEER.

CONTRACTOR SHALL CONTACT SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC) BEFORE DISTURBING ANY PUBLIC SURVEY MONUMENTS. CONTACT LEE KREBLIN AT (262) 547-6721 FOR MONUMENT RELOCATION PROCEDURES. CONTRACTOR SHALL ALSO CONTACT TOM LIPSKY AT WISDOT SOUTH EAST REGION AT (262) 548-6737.

THE LOCATIONS OF KNOWN EXISTING UTILITIES IN THE VICINITY OF THE PROJECT SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES IN THE AREA THAT ARE NOT SHOWN.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

EROSION CONTROL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. APPLY SEED OR SOD LAWN, FERTILIZE, AND MULCH/EROSION MAT TOPSOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS, WATERWAYS AND BRIDGE PIERS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

ALL OPENINGS BELOW SUBGRADE RESULTING FROM REMOVALS OR ABANDONMENTS SHALL BE FILLED WITH GRANULAR BACKFILL, UP TO THE LOWER OF EXISTING GROUND OR PROPOSED SUBGRADE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE COST OF GRANULAR BACKFILL SHALL BE INCIDENTAL TO THE REMOVAL OR ABANDONMENT ITEM.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM TRAFFIC CONTROL COVERING TYPE I OR TYPE II SIGNS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN AND PROVIDE DOCUMENTATION TO ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

ASPHALTIC SURFACE TEMPORARY WHERE INDICATED ON THE PLANS, SHALL CONSIST OF LAYERS AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.

TOTAL DEPTH	LAYERS	NOMINAL MAX SIZE GRADATION
3-INCH	ONE 3-INCH LAYER	19.0mm
5-INCH	ONE 5-INCH LAYER	25.0mm

ASPHALTIC SURFACE, WHERE INDICATED ON THE PLANS FOR PARKING LOT REPAVING AND SHARED-USE PATHS, SHALL CONSIST OF LAYERS AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.

TOTAL DEPTH	LAYERS	NOMINAL MAX SIZE GRADATION
3½-INCH	ONE 1¾-INCH UPPER LAYER	12.5mm
	ONE 1¾-INCH LOWER LAYER	12.5mm

STANDARD ABBREVIATIONS

BM	BENCH MARK
BMP	BEST MANAGEMENT PRACTICE
C/L	CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CATV	CABLE TELEVISION
CP	CONTROL POINT
D	DEGREE OF CURVE
DES.	DESIRABLE
D.S.	DESIGN SPEED
DS	DOWNSPOUT
EB	EASTBOUND
ELECT	ELECTRIC
ELEV	ELEVATION
EPS	EXTRUDED POLYSTYRENE
EXIST	EXISTING
HMA	HOT MIX ASPHALT
L	LENGTH OF CURVE
LT	LEFT
M/L	MATCHLINE
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
MIN.	MINIMUM
NB	NORTHBOUND
PC	POINT-OF-CURVE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
PM	PAVEMENT MARKING
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS OF CURVE
RR	RAILROAD
R	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RT	RIGHT
RTRP	REINFORCED THERMOSETTING RESIN PIPE
S.E.	SUPER ELEVATION
S.R.	SPEED RATING
SAN	SANITARY SEWER
SB	SOUTHBOUND
SHLDR	SHOULDER
SS	STORM SEWER
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
T	TANGENT LENGTH
TYP	TYPICAL
WB	WESTBOUND

REFERENCE LINE CALLOUTS

RAMPS	
LE	IH 794 EB EXIT RAMP
LW	IH 794 WB ENTRANCE RAMP
LN	IH 794 WB EXIT RAMP
LS	IH 794 EB ENTRANCE RAMP

LOCAL STREETS	
LM	N LINCOLN MEMORIAL DRIVE
CL	CLYBOURN STREET
CH	CHICAGO STREET
VB	VAN BUREN STREET

2

LEGEND

- EXISTING IH 794 MAINLINE AND RAMPS TO REMAIN IN PLACE
- EXISTING IH 794 RAMP REMOVAL
- PROPOSED IH 794 RAMP STRUCTURES
- OAK LEAF TRAIL
- HANK AARON STATE TRAIL
- HANK AARON STATE TRAIL - LAKE LOOP

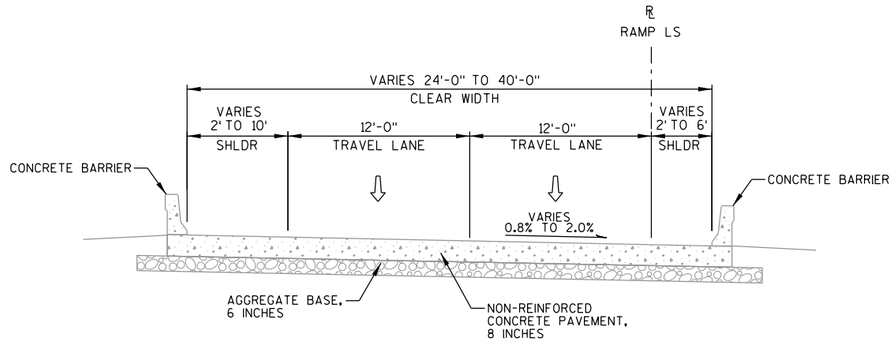
N

MILWAUKEE STREET
JEFFERSON STREET
JACKSON STREET
VAN BUREN STREET
CAS$ STREET
ST PAUL AVENUE
CLYBOURN STREET
HISTORIC THIRD WARD
BUFFALO STREET
CHICAGO STREET
POLK STREET
MICHIGAN STREET
WISCONSIN AVENUE
N HARBOR DRIVE
N LINCOLN MEMORIAL DRIVE
ART MUSEUM DRIVE
IH 794 (EB)
IH 794 (WB)
IH 794 EB ENTRANCE RAMP
IH 794 EB EXIT RAMP
IH 794 WB ENTRANCE RAMP
IH 794 WB EXIT RAMP
BEGIN PROJECT 1300-13-74
STA. 100+33.00 LW
END PROJECT
STA. 111+07.43 LW
B-40-915
B-40-916
R-40-627
R-40-628
R-40-629
HENRY MAIER FESTIVAL PARK (SUMMERFEST GROUNDS)
MILWAUKEE COUNTY TRANSIT CENTER
O'DONNELL PARK
LAKE MICHIGAN
DISCOVERY WORLD
MILWAUKEE ART MUSEUM

2

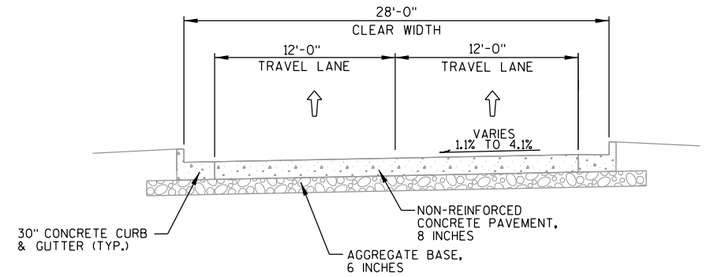
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 4	E

FILE NAME : 020201_po.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:300



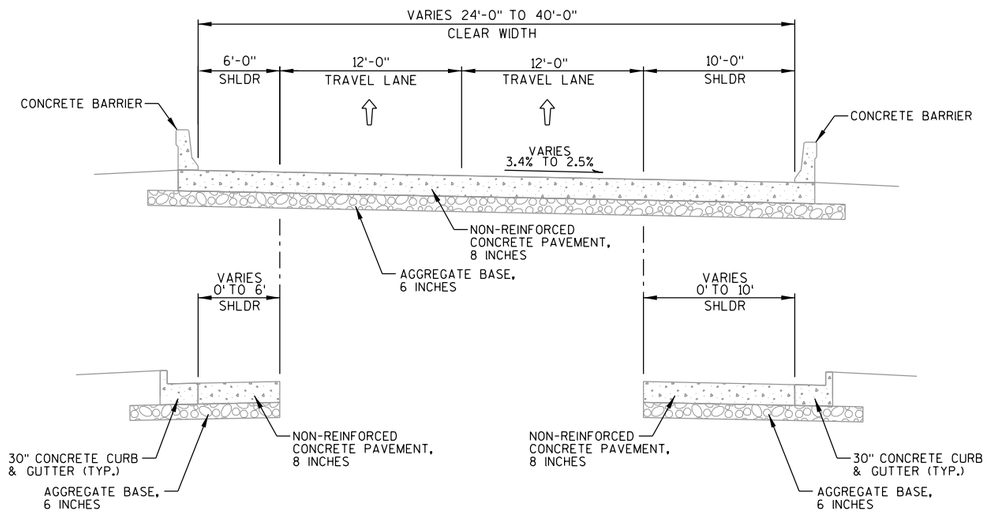
TYPICAL EXISTING SECTION, IH 794 EB ENTRANCE RAMP

N LINCOLN MEMORIAL DRIVE TO DANIEL HOAN MEMORIAL BRIDGE
(LOOKING NORTH)



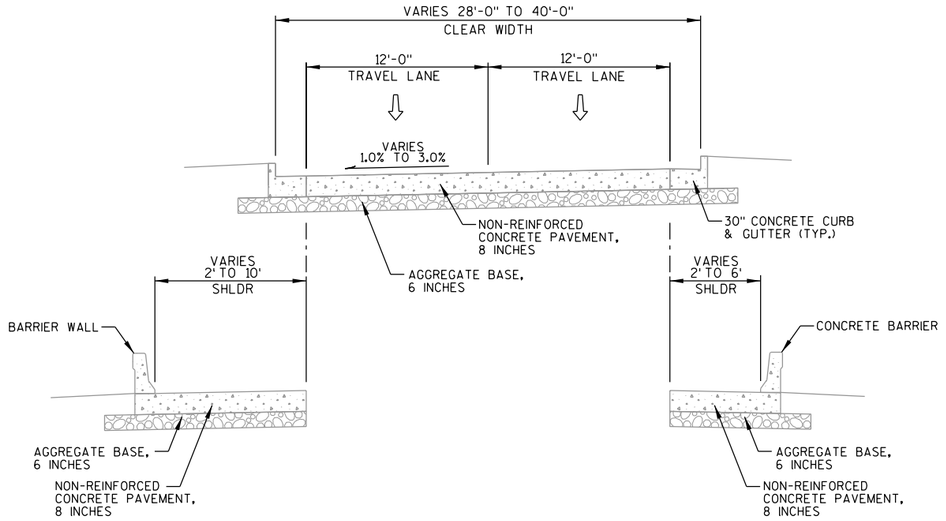
TYPICAL EXISTING SECTION, IH 794 WB EXIT RAMP

FROM DANIEL HOAN MEMORIAL BRIDGE TO N LINCOLN MEMORIAL DRIVE
(LOOKING NORTH)



TYPICAL EXISTING SECTION, IH 794 EB EXIT RAMP

FROM IH 794 LAKE INTERCHANGE TO N LINCOLN MEMORIAL DRIVE
(LOOKING EAST)

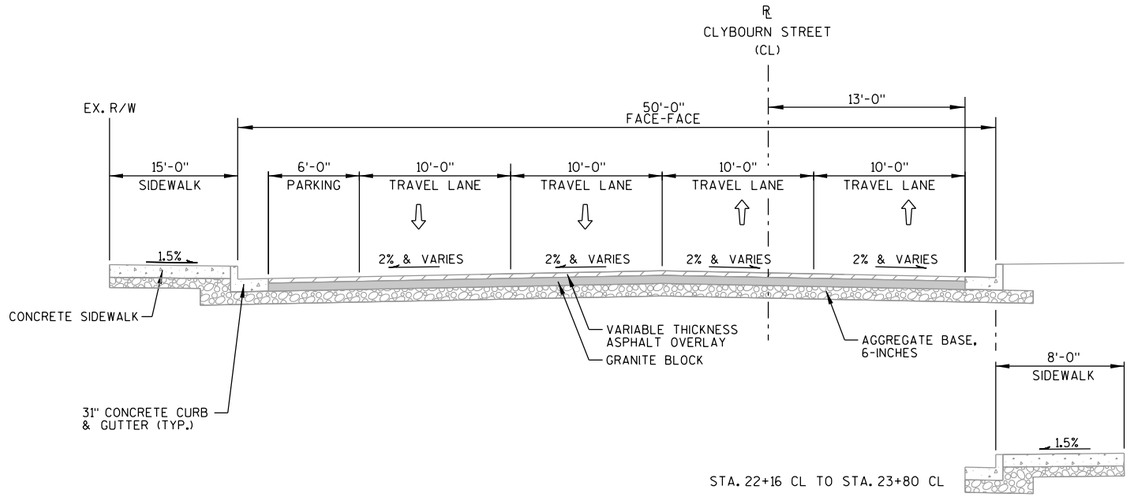


TYPICAL EXISTING SECTION, IH 794 WB ENTRANCE RAMP

FROM IH 794 LAKE INTERCHANGE TO N LINCOLN MEMORIAL DRIVE
(LOOKING EAST)

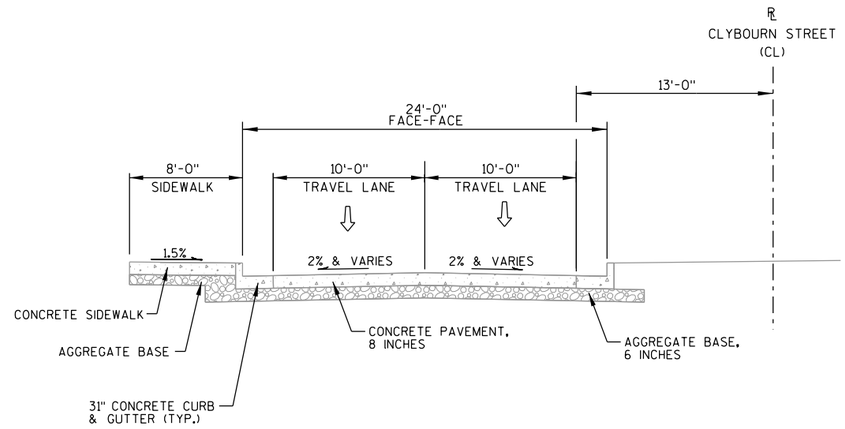
TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 5	E



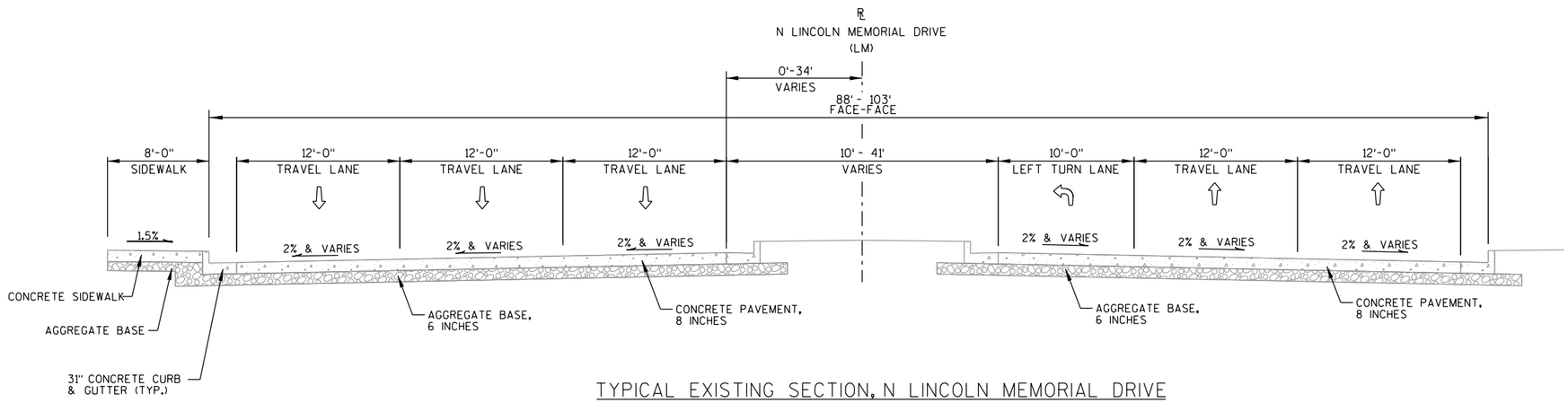
TYPICAL EXISTING SECTION, CLYBOURN STREET

STA. 21+07 CL TO STA. 25+90 CL
(LOOKING EAST)



TYPICAL EXISTING SECTION, CLYBOURN STREET

STA. 25+90 CL TO STA. 29+70 CL
(LOOKING EAST)



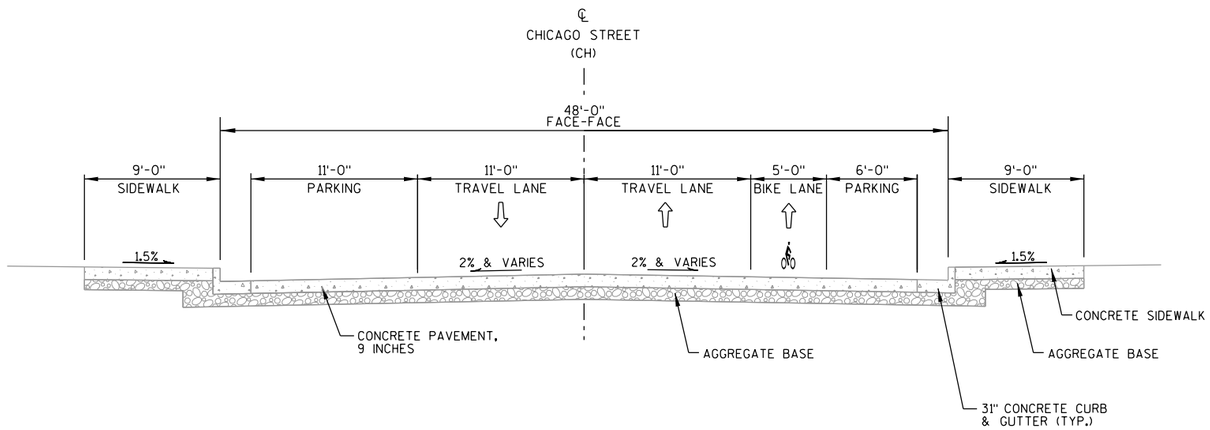
TYPICAL EXISTING SECTION, N LINCOLN MEMORIAL DRIVE

STA. 29+75 LM TO STA. 35+00 LM
(LOOKING NORTH)

TYPICAL SECTIONS NOT TO SCALE

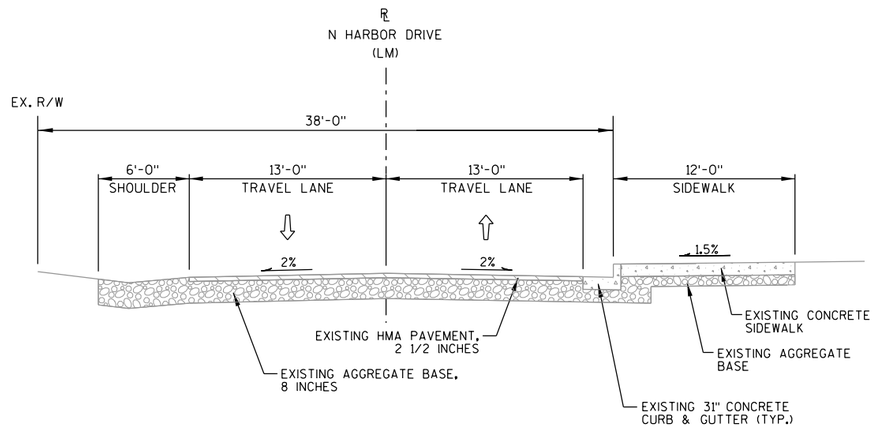
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 6	E

2



TYPICAL EXISTING SECTION, CHICAGO STREET

STA. 51+00 CH TO STA. 52+50 CH
(LOOKING EAST)

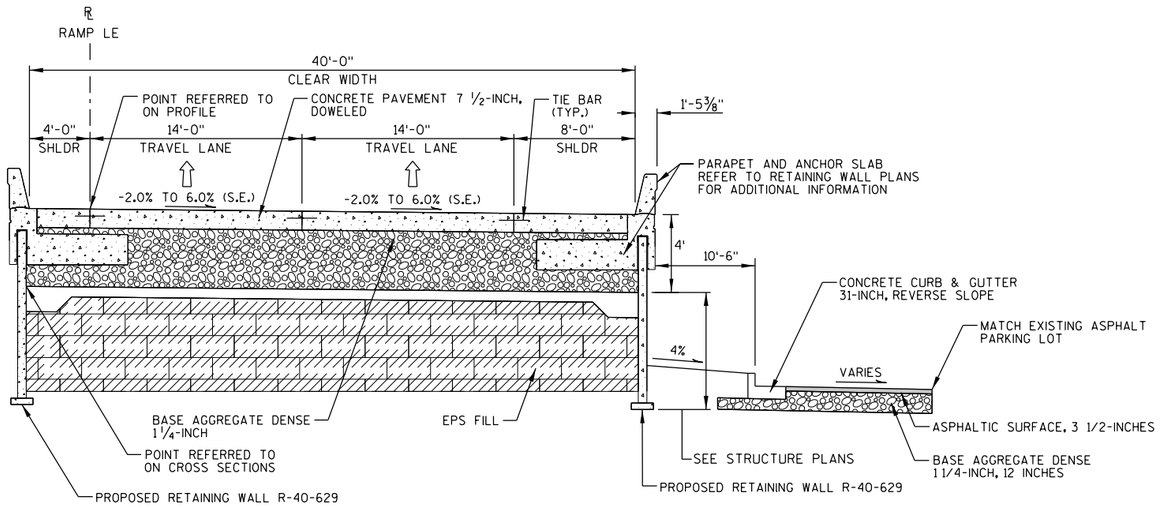


TYPICAL EXISTING SECTION, N HARBOR DRIVE

STA. 10+00 LM TO STA. 13+25 LM
(LOOKING NORTH)

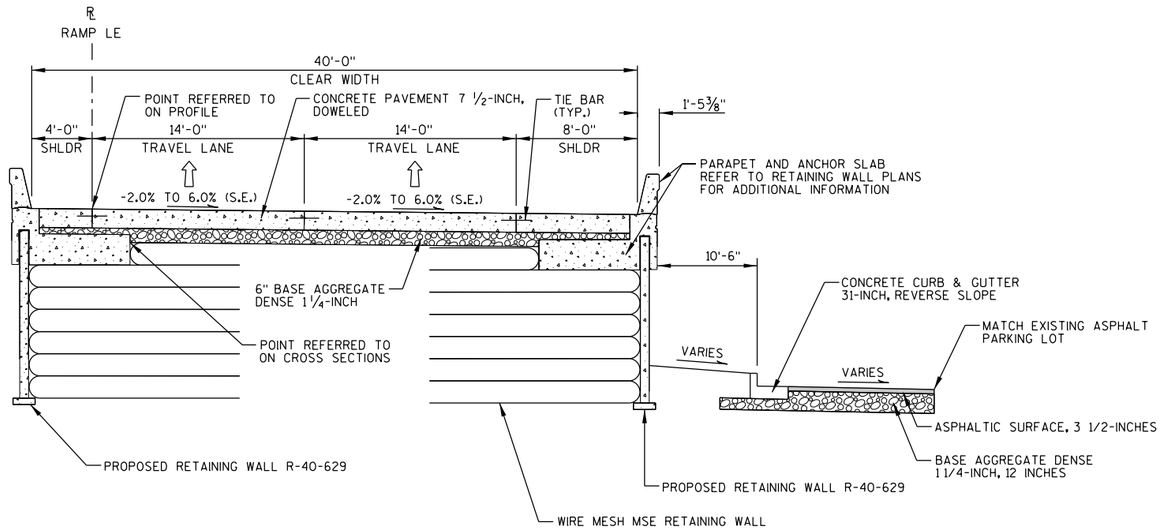
TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 7	E



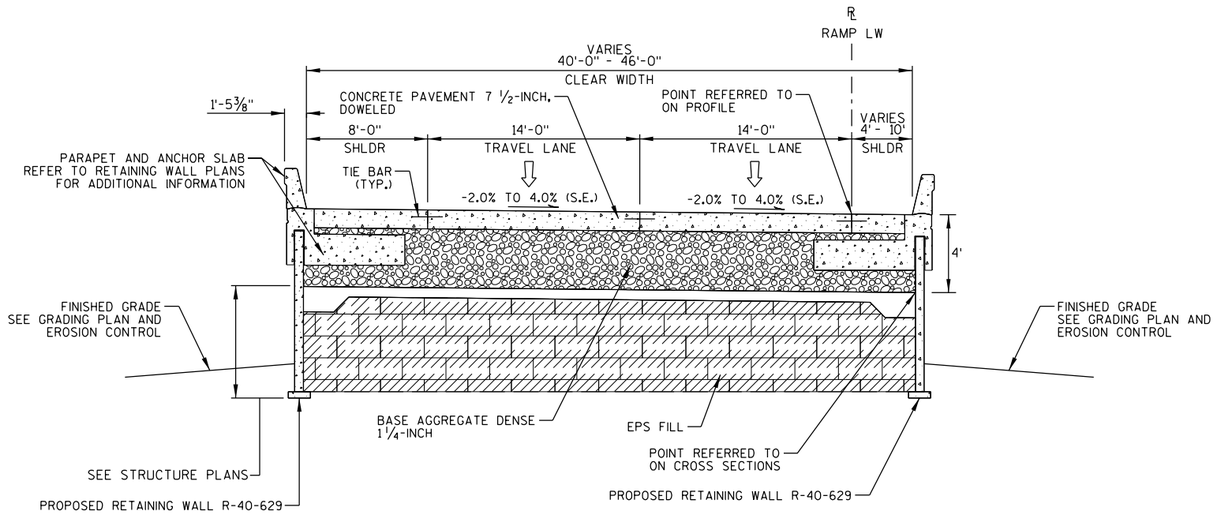
TYPICAL FINISHED SECTION, IH 794 EB EXIT RAMP

STA. 204+50 LE TO STA. 204+81 LE
(LOOKING EAST)



TYPICAL FINISHED SECTION, IH 794 EB EXIT RAMP

STA. 204+81 LE TO STA. 206+08 LE
(LOOKING EAST)

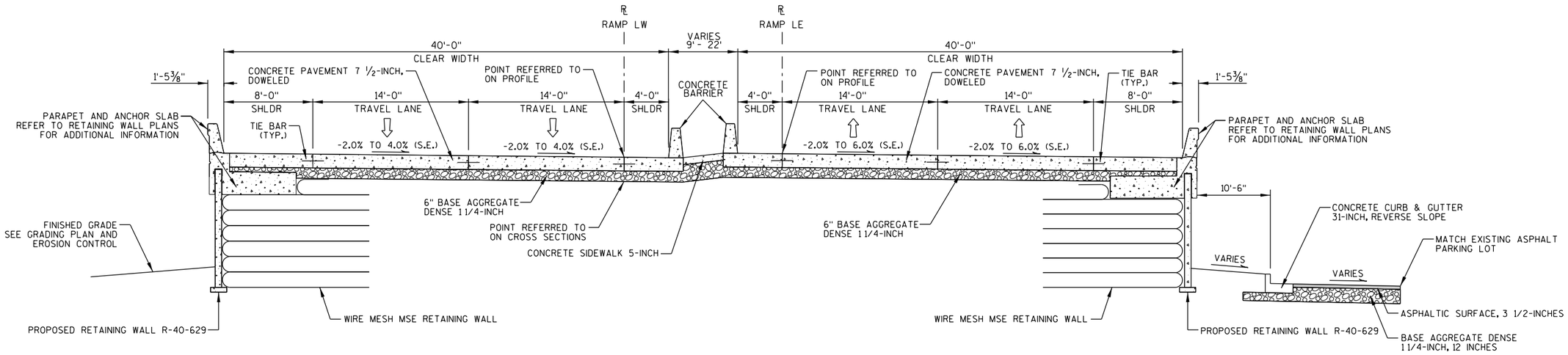


TYPICAL FINISHED SECTION, IH 794 WB ENTRANCE RAMP

STA. 105+45 LW TO STA. 107+05 LW
(LOOKING EAST)

TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 8	E

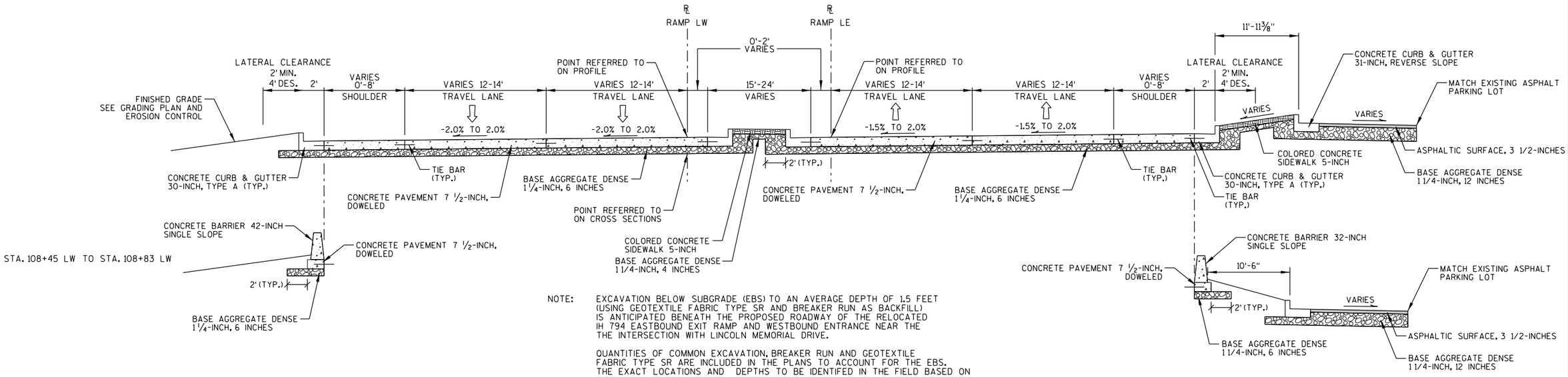


TYPICAL FINISHED SECTION, IH 794 WB ENTRANCE RAMP

STA. 107+05 LW TO STA. 108+83 LW
(LOOKING EAST)

TYPICAL FINISHED SECTION, IH 794 EB EXIT RAMP

STA. 206+08 LE TO STA. 207+90 LE
(LOOKING EAST)



NOTE: EXCAVATION BELOW SUBGRADE (EBS) TO AN AVERAGE DEPTH OF 1.5 FEET (USING GEOTEXTILE FABRIC TYPE SR AND BREAKER RUN AS BACKFILL) IS ANTICIPATED BENEATH THE PROPOSED ROADWAY OF THE RELOCATED IH 794 EASTBOUND EXIT RAMP AND WESTBOUND ENTRANCE NEAR THE THE INTERSECTION WITH LINCOLN MEMORIAL DRIVE.

QUANTITIES OF COMMON EXCAVATION, BREAKER RUN AND GEOTEXTILE FABRIC TYPE SR ARE INCLUDED IN THE PLANS TO ACCOUNT FOR THE EBS. THE EXACT LOCATIONS AND DEPTHS TO BE IDENTIFED IN THE FIELD BASED ON CONDITIONS FOUND AT THE TIME OF CONSTRUCTION.

TYPICAL FINISHED SECTION, IH 794 WB ENTRANCE RAMP

STA. 108+83 LW TO STA. 111+00 LW
(LOOKING EAST)

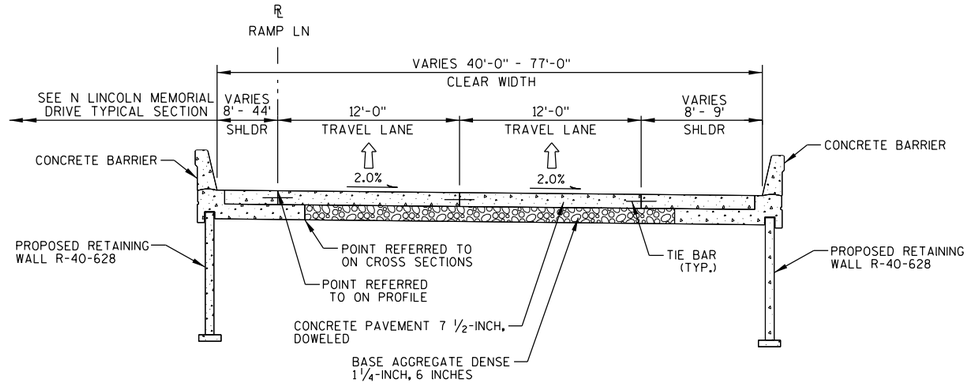
TYPICAL FINISHED SECTION, IH 794 EB EXIT RAMP

STA. 207+90 LE TO STA. 210+00 LE
(LOOKING EAST)

STA. 207+45 LE TO STA. 207+90 LE

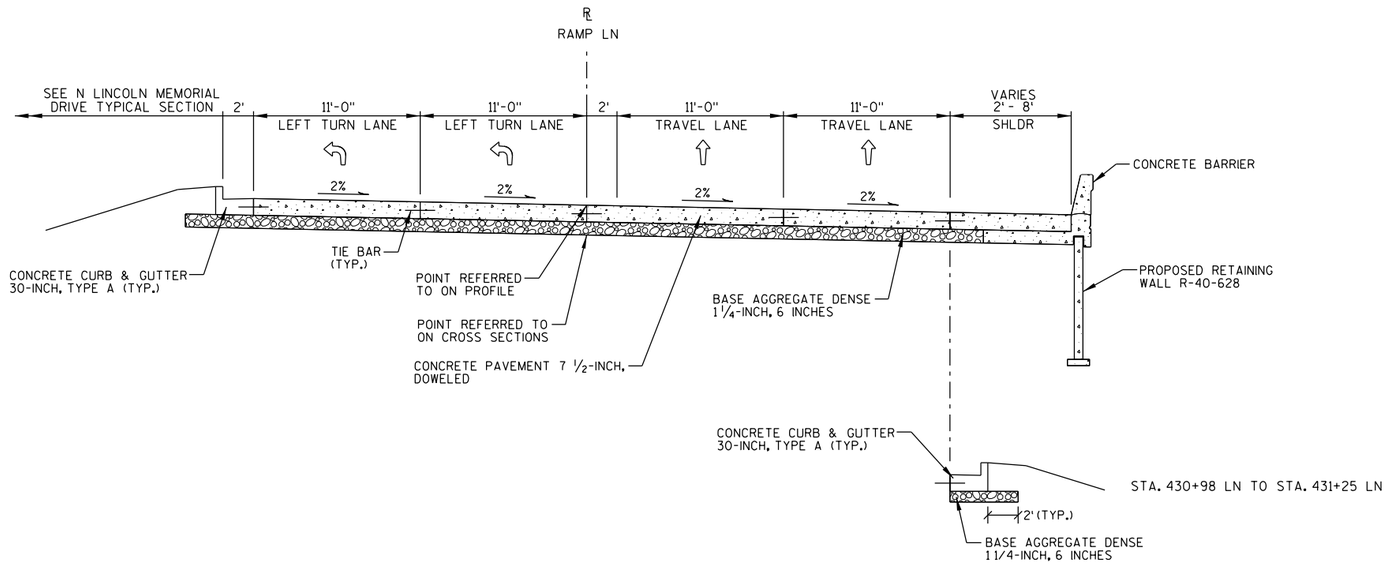
TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 9	E



TYPICAL FINISHED SECTION, IH 794 WB EXIT RAMP

STA. 424+60 LN TO STA. 427+85 LN
(LOOKING NORTH)



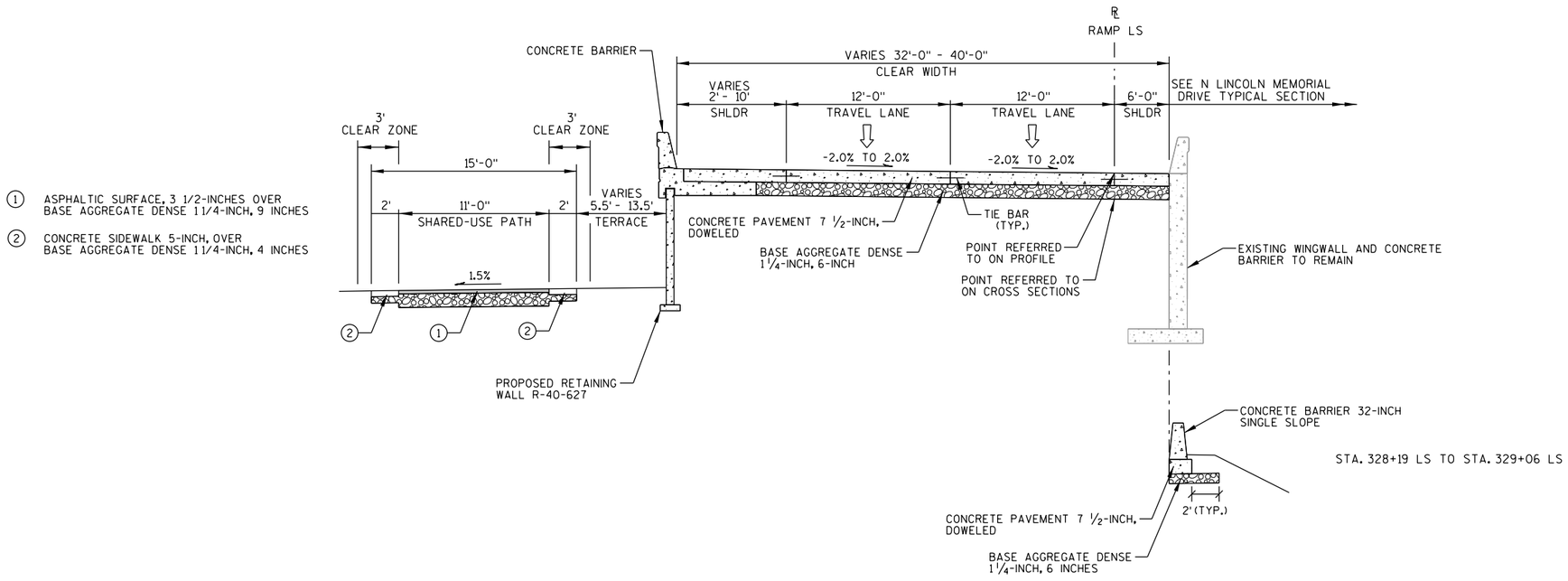
TYPICAL FINISHED SECTION, IH 794 WB EXIT RAMP

STA. 427+85LN TO STA. 431+25 LN
(LOOKING NORTH)

TYPICAL SECTIONS NOT TO SCALE

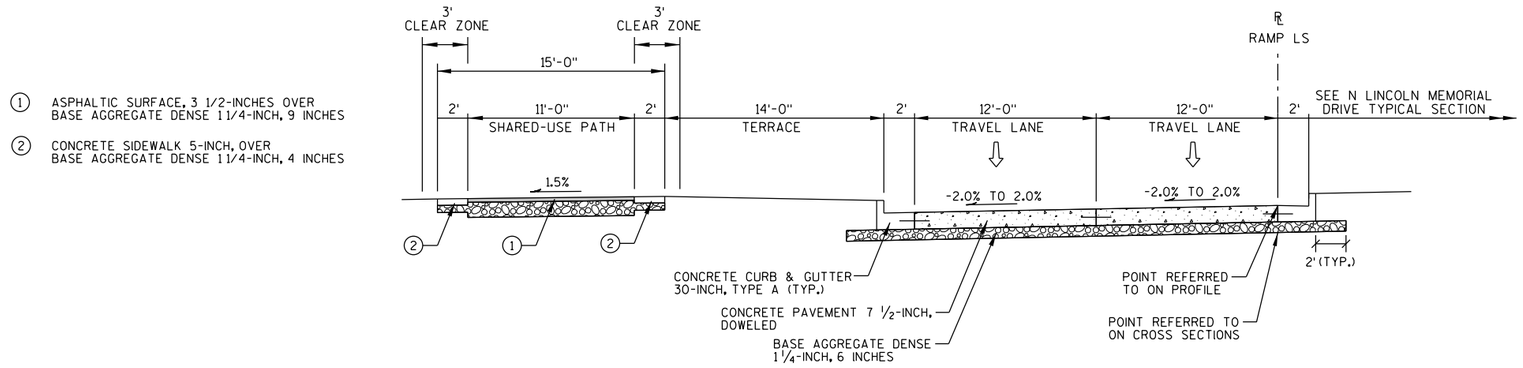
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 10	E

2



TYPICAL FINISHED SECTION, IH 794 EB ENTRANCE RAMP

STA. 327+94 LS TO STA. 329+06 LS
(LOOKING NORTH)



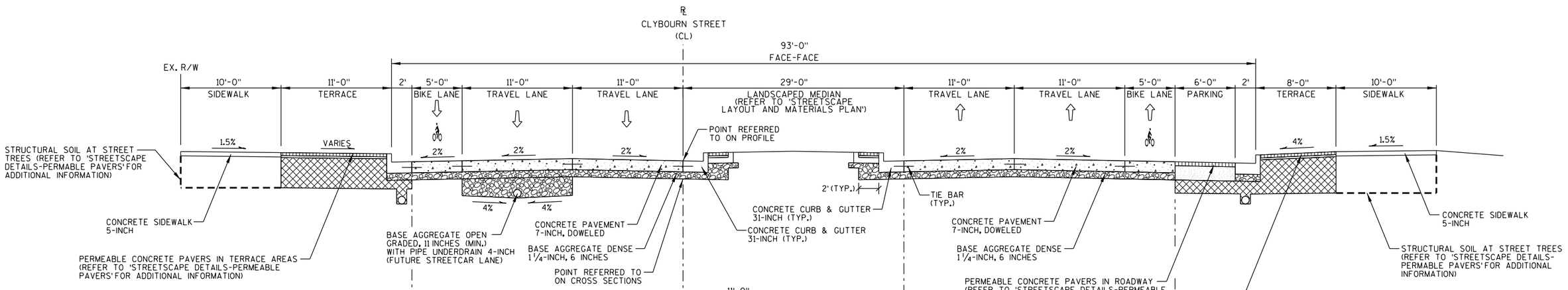
TYPICAL FINISHED SECTION, IH 794 EB ENTRANCE RAMP

STA. 329+06 LS TO STA. 330+80 LS
(LOOKING NORTH)

TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 11	E

2



TYPICAL FINISHED SECTION, CLYBOURN STREET

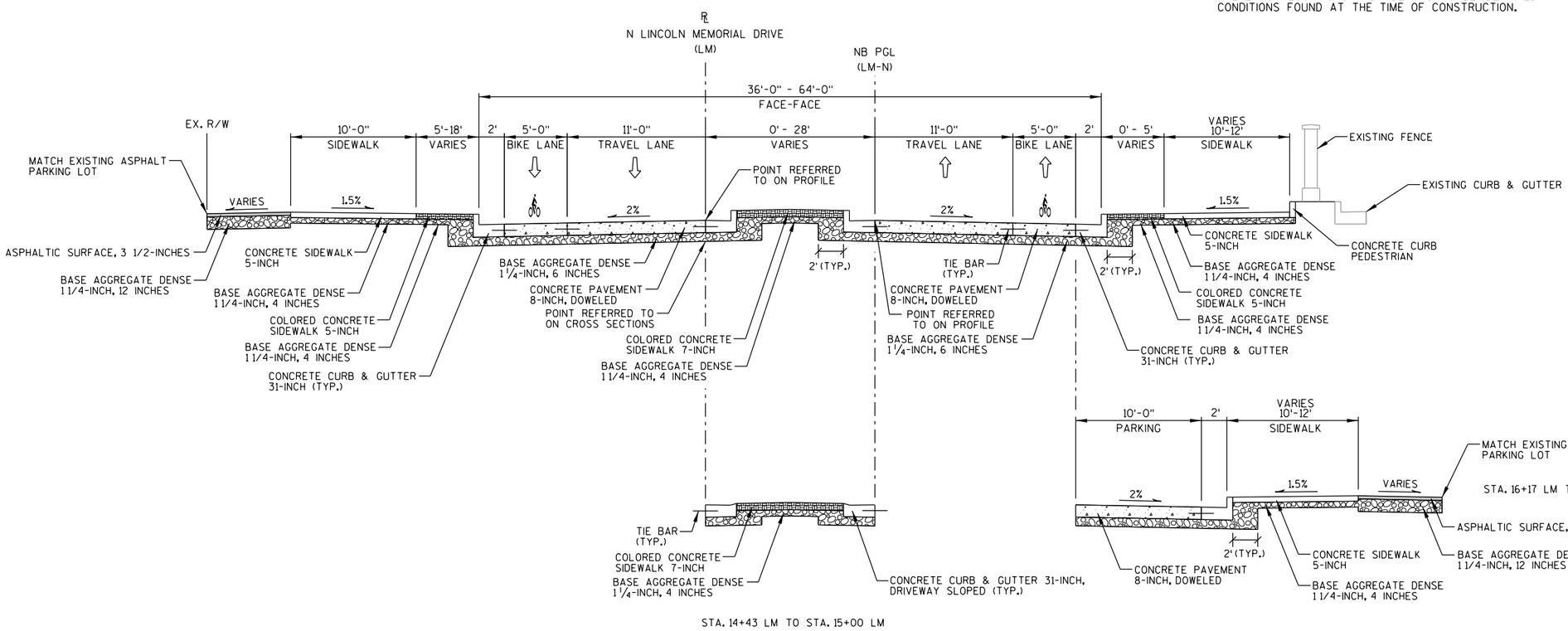
STA. 22+39 CL TO STA. 29+32 CL
(LOOKING EAST)

TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 12	E

NOTE: EXCAVATION BELOW SUBGRADE TO AN AVERAGE DEPTH OF 1.5 FEET (USING GEOTEXTILE FABRIC TYPE SR AND BREAKER RUN AS BACKFILL) IS ANTICIPATED BENEATH THE PROPOSED ROADWAY ALONG CHICAGO STREET, LINCOLN MEMORIAL DRIVE FROM THE SOUTH PROJECT LIMIT TO APPROXIMATELY STA. 24+50 LM, AND ALONG CLYBOURN STREET BETWEEN VAN BUREN STREET AND LINCOLN MEMORIAL DRIVE.

QUANTITIES OF COMMON EXCAVATION, BREAKER RUN AND GEOTEXTILE FABRIC TYPE SR ARE INCLUDED IN THE PLANS TO ACCOUNT FOR THE EBS. THE EXACT LOCATIONS AND DEPTHS TO BE IDENTIFED IN THE FIELD BASED ON CONDITIONS FOUND AT THE TIME OF CONSTRUCTION.



STA. 14+43 LM TO STA. 15+00 LM

TYPICAL FINISHED SECTION, N LINCOLN MEMORIAL DRIVE

STA. 12+00 LM TO STA. 18+26 LM
(LOOKING NORTH)

TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 13	E

NOTE: EXCAVATION BELOW SUBGRADE TO AN AVERAGE DEPTH OF 1.5 FEET (USING GEOTEXTILE FABRIC TYPE SR AND BREAKER RUN AS BACKFILL) IS ANTICIPATED BENEATH THE PROPOSED ROADWAY ALONG CHICAGO STREET, LINCOLN MEMORIAL DRIVE FROM THE SOUTH PROJECT LIMIT TO APPROXIMATELY STA. 24+50 LM, AND ALONG CLYBOURN STREET BETWEEN VAN BUREN STREET AND LINCOLN MEMORIAL DRIVE.

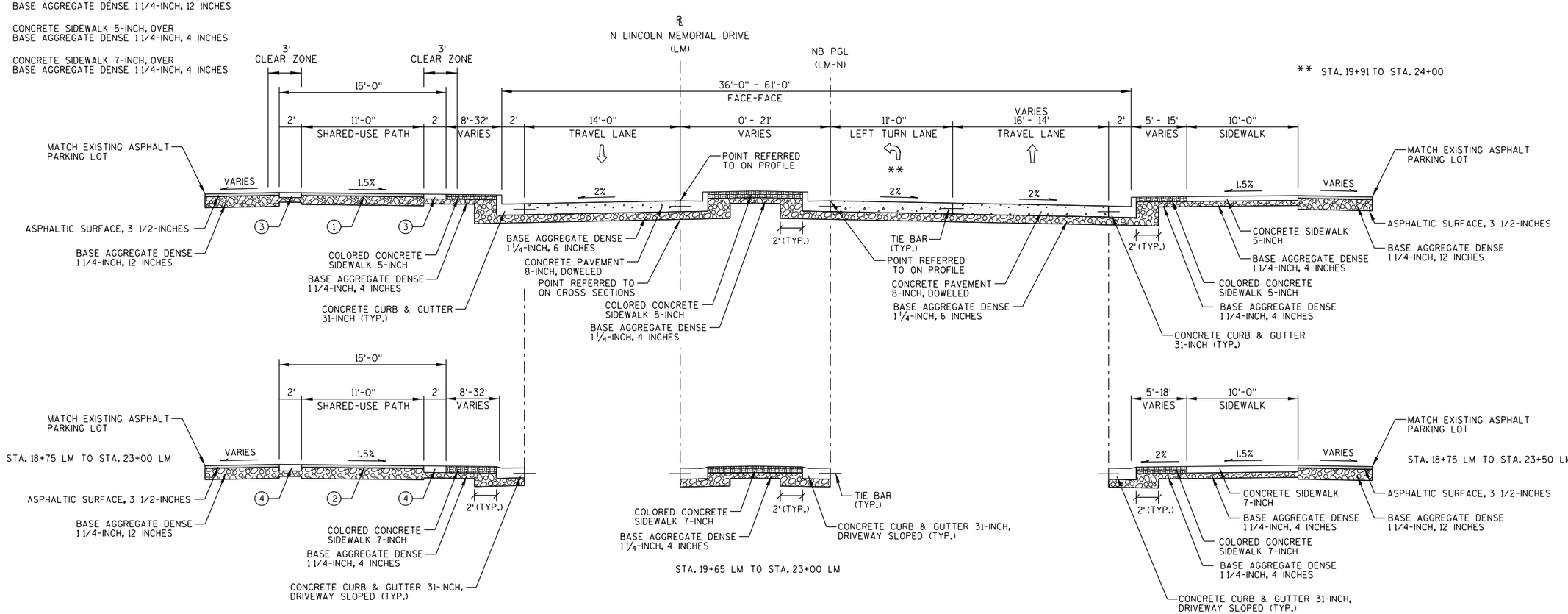
QUANTITIES OF COMMON EXCAVATION, BREAKER RUN AND GEOTEXTILE FABRIC TYPE SR ARE INCLUDED IN THE PLANS TO ACCOUNT FOR THE EBS. THE EXACT LOCATIONS AND DEPTHS TO BE IDENTIFED IN THE FIELD BASED ON CONDITIONS FOUND AT THE TIME OF CONSTRUCTION.

① ASPHALTIC SURFACE, 3 1/2-INCHES OVER BASE AGGREGATE DENSE 1 1/4-INCH, 9 INCHES

② ASPHALTIC SURFACE, 3 1/2-INCHES OVER BASE AGGREGATE DENSE 1 1/4-INCH, 12 INCHES

③ CONCRETE SIDEWALK 5-INCH, OVER BASE AGGREGATE DENSE 1 1/4-INCH, 4 INCHES

④ CONCRETE SIDEWALK 7-INCH, OVER BASE AGGREGATE DENSE 1 1/4-INCH, 4 INCHES

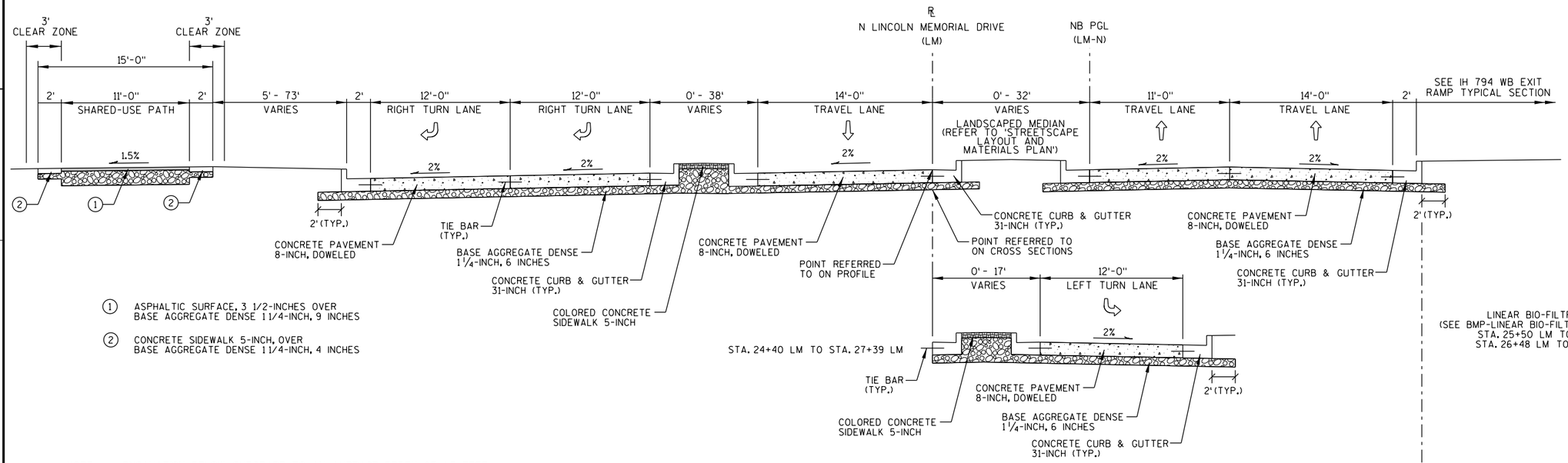


TYPICAL FINISHED SECTION, N LINCOLN MEMORIAL DRIVE

STA. 18+26 LM TO STA. 24+00 LM
(LOOKING NORTH)

TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 14	E



① ASPHALTIC SURFACE, 3 1/2-INCHES OVER BASE AGGREGATE DENSE 1 1/4-INCH, 9 INCHES

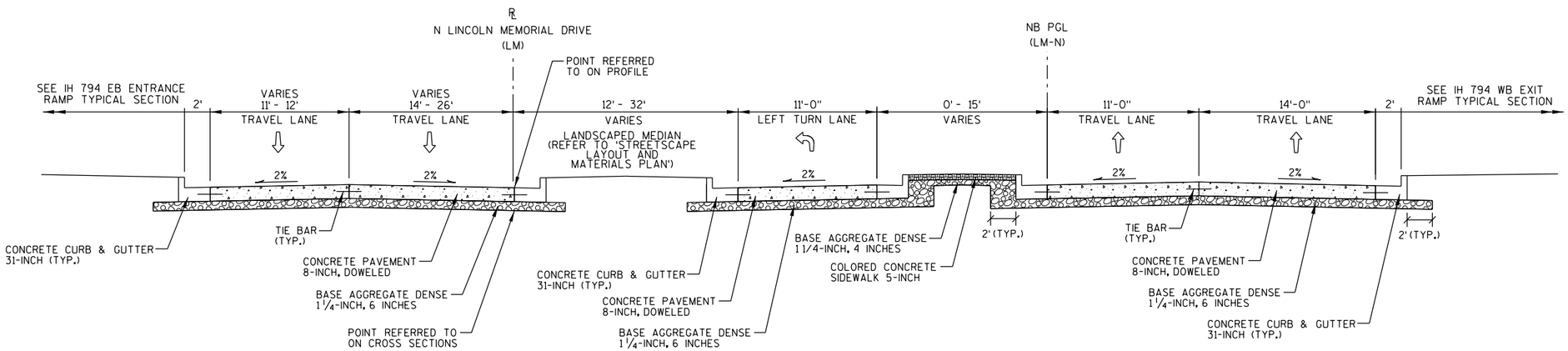
② CONCRETE SIDEWALK 5-INCH, OVER BASE AGGREGATE DENSE 1 1/4-INCH, 4 INCHES

NOTE: EXCAVATION BELOW SUBGRADE TO AN AVERAGE DEPTH OF 1.5 FEET (USING GEOTEXTILE FABRIC TYPE SR AND BREAKER RUN AS BACKFILL) IS ANTICIPATED BENEATH THE PROPOSED ROADWAY ALONG CHICAGO STREET, LINCOLN MEMORIAL DRIVE FROM THE SOUTH PROJECT LIMIT TO APPROXIMATELY STA. 24+50 LM, AND ALONG CLYBOURN STREET BETWEEN VAN BUREN STREET AND LINCOLN MEMORIAL DRIVE.

QUANTITIES OF COMMON EXCAVATION, BREAKER RUN AND GEOTEXTILE FABRIC TYPE SR ARE INCLUDED IN THE PLANS TO ACCOUNT FOR THE EBS. THE EXACT LOCATIONS AND DEPTHS TO BE IDENTIFED IN THE FIELD BASED ON CONDITIONS FOUND AT THE TIME OF CONSTRUCTION.

TYPICAL FINISHED SECTION, N LINCOLN MEMORIAL DRIVE

STA. 24+00 LM TO STA. 27+69 LM
(LOOKING NORTH)



TYPICAL FINISHED SECTION, N LINCOLN MEMORIAL DRIVE

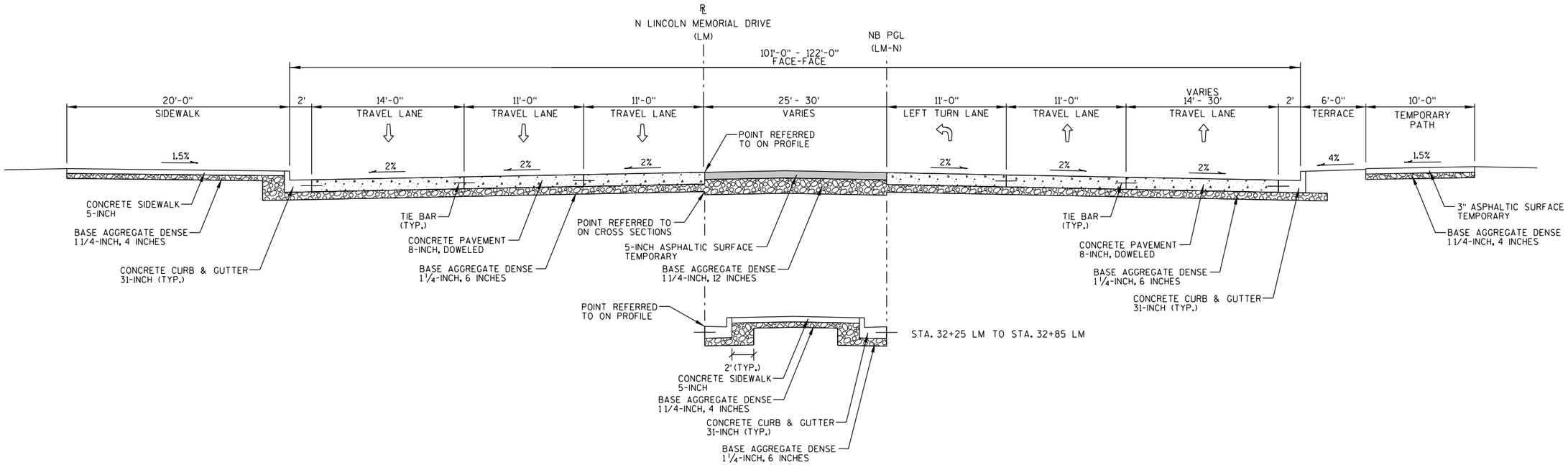
STA. 27+69 LM TO STA. 31+50 LM
(LOOKING NORTH)

TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 15	E

NOTE: EXCAVATION BELOW SUBGRADE TO AN AVERAGE DEPTH OF 1.5 FEET (USING GEOTEXTILE FABRIC TYPE SR AND BREAKER RUN AS BACKFILL) IS ANTICIPATED BENEATH THE PROPOSED ROADWAY ALONG CHICAGO STREET, LINCOLN MEMORIAL DRIVE FROM THE SOUTH PROJECT LIMIT TO APPROXIMATELY STA. 24+50 LM, AND ALONG CLYBOURN STREET BETWEEN VAN BUREN STREET AND LINCOLN MEMORIAL DRIVE.

QUANTITIES OF COMMON EXCAVATION, BREAKER RUN AND GEOTEXTILE FABRIC TYPE SR ARE INCLUDED IN THE PLANS TO ACCOUNT FOR THE EBS. THE EXACT LOCATIONS AND DEPTHS TO BE IDENTIFED IN THE FIELD BASED ON CONDITIONS FOUND AT THE TIME OF CONSTRUCTION.

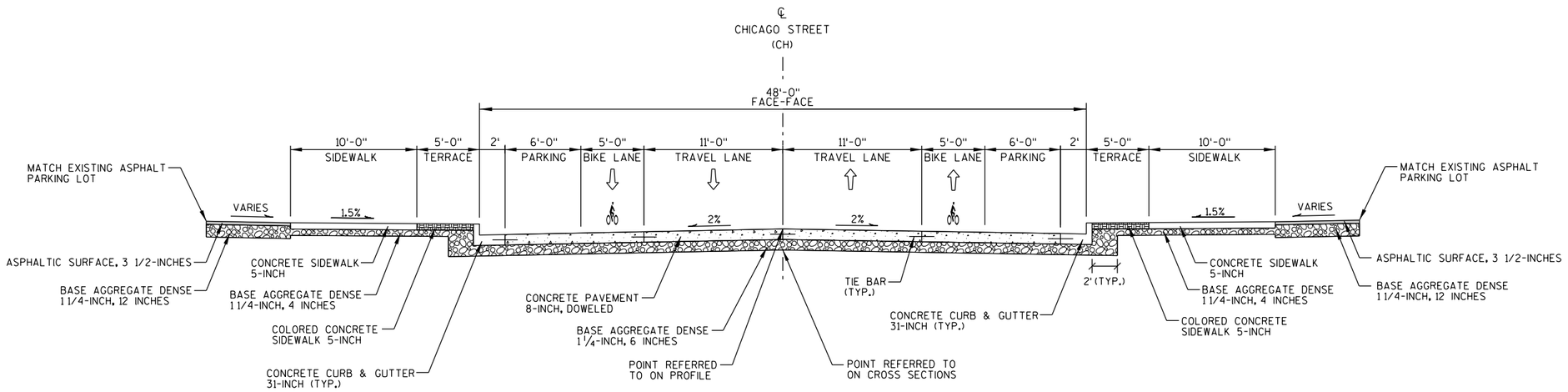


TYPICAL FINISHED SECTION, N LINCOLN MEMORIAL DRIVE

STA. 31+50 LM TO STA. 34+15 LM
(LOOKING NORTH)

TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 16	E

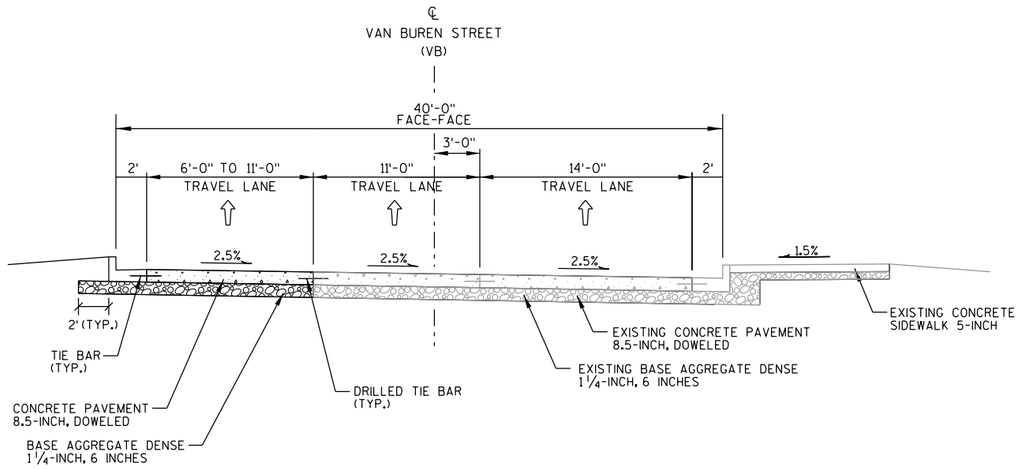


TYPICAL FINISHED SECTION, CHICAGO STREET

STA. 51+00 CH TO STA. 52+50 CH
(LOOKING EAST)

NOTE: EXCAVATION BELOW SUBGRADE TO AN AVERAGE DEPTH OF 1.5 FEET (USING GEOTEXTILE FABRIC TYPE SR AND BREAKER RUN AS BACKFILL) IS ANTICIPATED BENEATH THE PROPOSED ROADWAY ALONG CHICAGO STREET, LINCOLN MEMORIAL DRIVE FROM THE SOUTH PROJECT LIMIT TO APPROXIMATELY STA. 24+50 LM, AND ALONG CLYBOURN STREET BETWEEN VAN BUREN STREET AND LINCOLN MEMORIAL DRIVE.

QUANTITIES OF COMMON EXCAVATION, BREAKER RUN AND GEOTEXTILE FABRIC TYPE SR ARE INCLUDED IN THE PLANS TO ACCOUNT FOR THE EBS. THE EXACT LOCATIONS AND DEPTHS TO BE IDENTIFED IN THE FIELD BASED ON CONDITIONS FOUND AT THE TIME OF CONSTRUCTION.

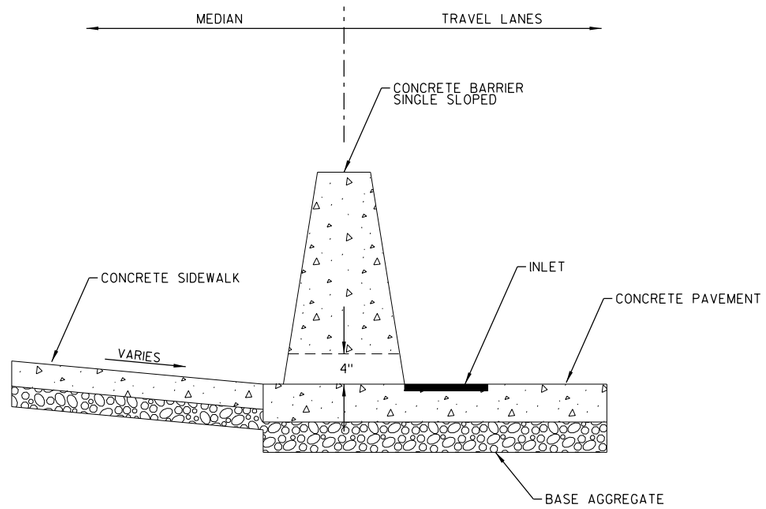


TYPICAL FINISHED SECTION, VAN BUREN STREET

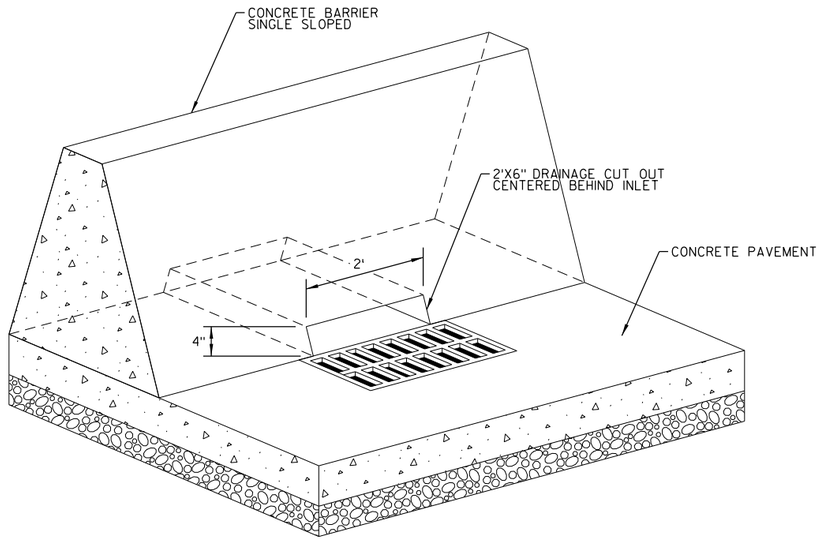
STA. 62+51 VB TO STA. 63+76 VB
(LOOKING NORTH)

TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 17	E



CROSS SECTION

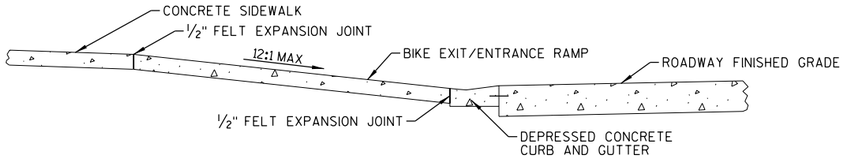


ISOMETRIC VIEW

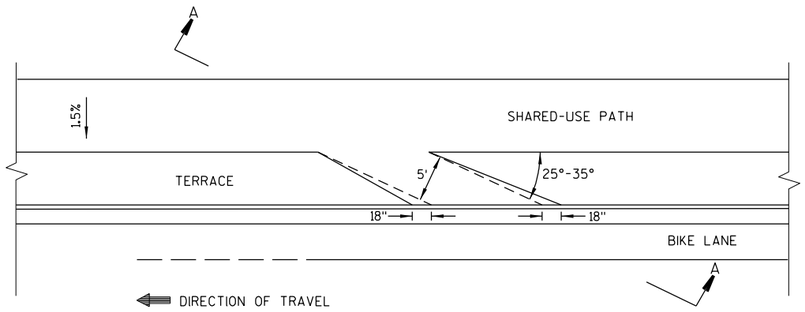
CONCRETE BARRIER DRAINAGE CUT-OUT

STA. 207+54 LE, 4.00' LT
STA. 207+69 LE, 4.00' LT

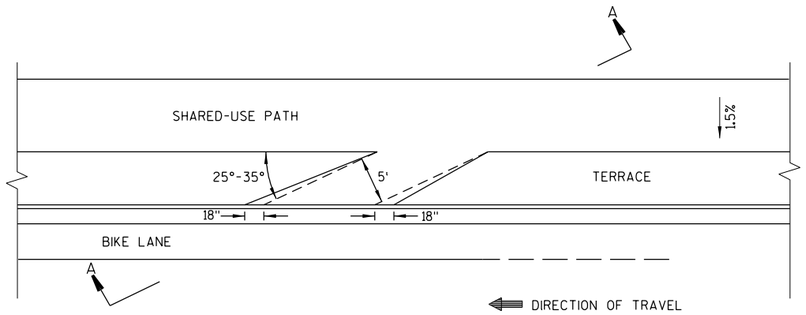
N.T.S.



SECTION A-A



BIKE RAMP EXIT FROM BIKE LANE

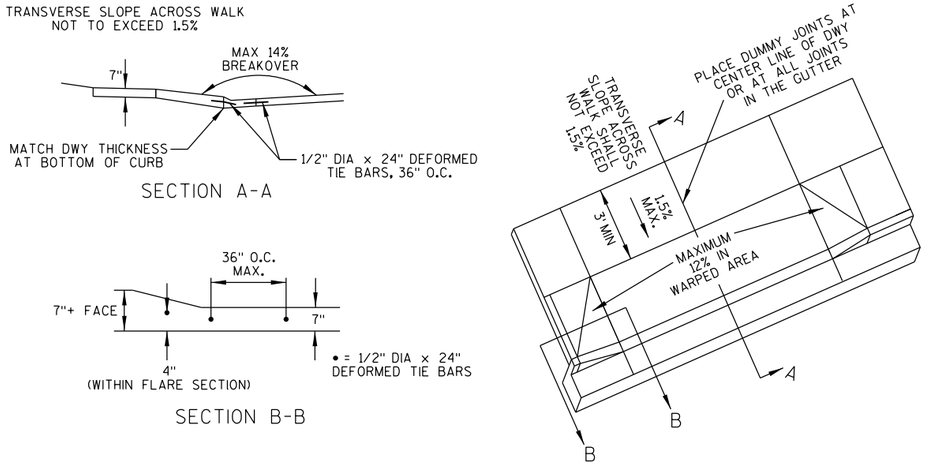


BIKE RAMP ENTRANCE TO BIKE LANE

TYPICAL BIKE RAMP ENTRANCE AND EXIT DETAIL

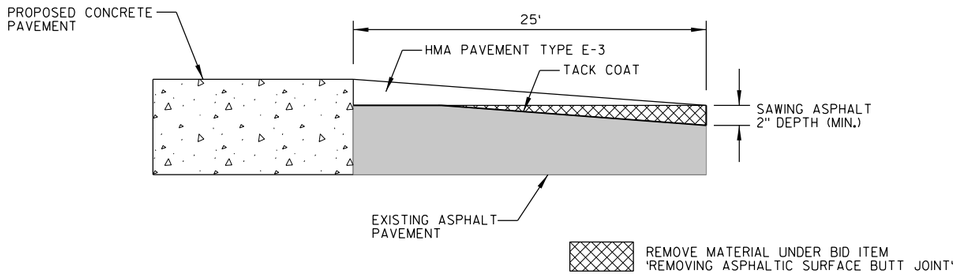
STA. 26+45.98 CL, 58.00' RT
STA. 329+85.44 LS, 26.50 LT
STA.13+07.89 LM, 18.00' LT
STA. 17+52.14 LM, 18.00' LT

N.T.S.



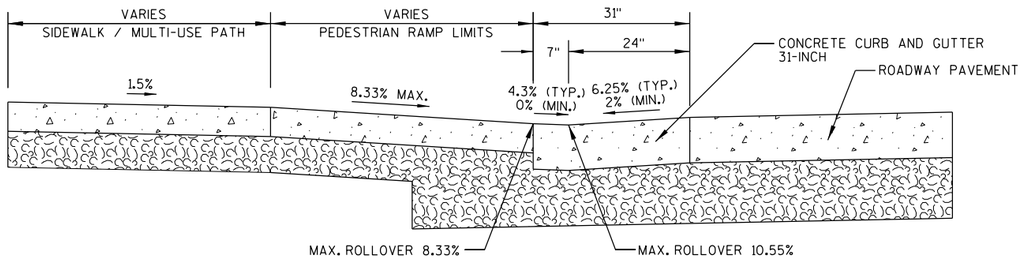
CONCRETE DRIVEWAY 7-INCH

N.T.S



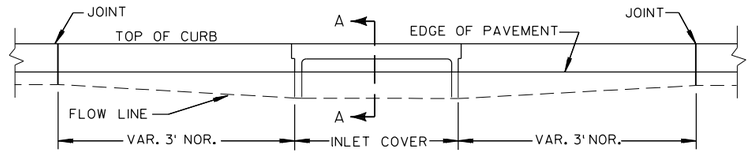
BUTT JOINT DETAIL

(SEE REMOVAL PLAN FOR LOCATIONS)
N.T.S

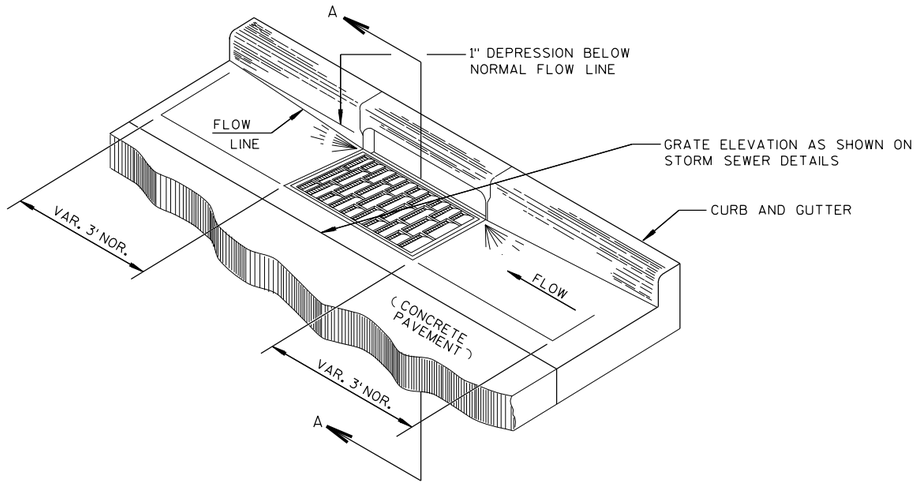


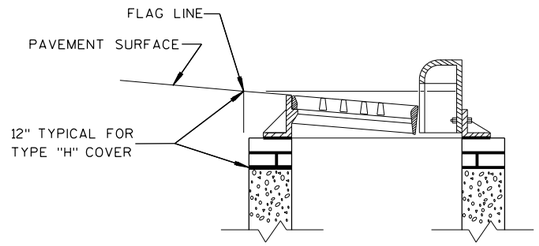
PEDESTRIAN CURB RAMP
RUNNING SLOPE TRANSITION AT CURB & GUTTER

N.T.S.



ELEVATION VIEW

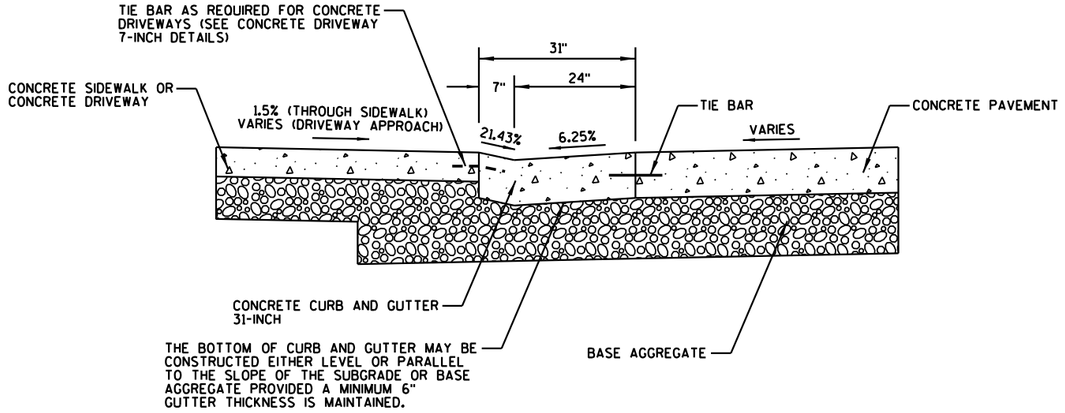




SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS

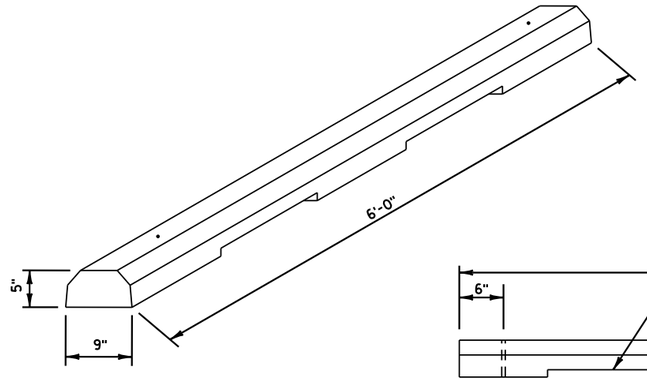
FOR NEW CURB & GUTTER CONSTRUCTION
(TYPE H INLET SHOWN)
N.T.S

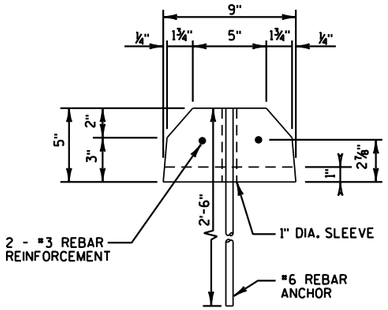


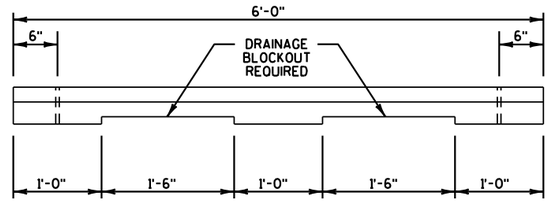
CONCRETE CURB AND GUTTER 31-INCH
DRIVEWAY SLOPED
N.T.S.

NOTE:

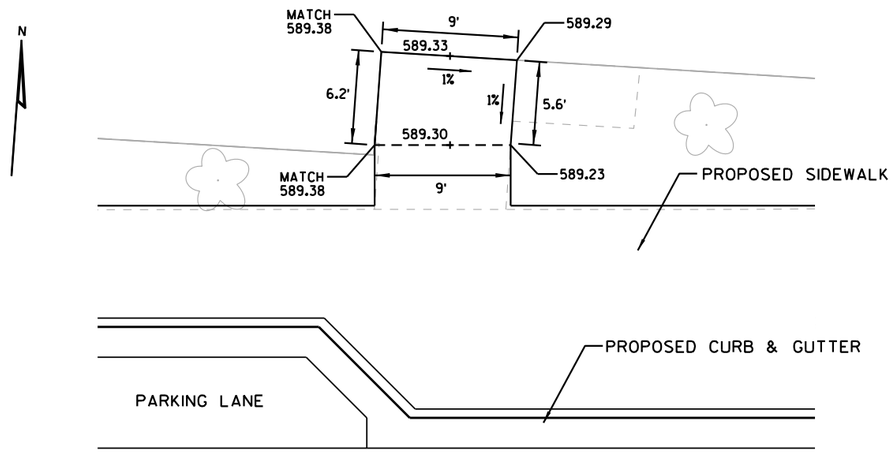
1. SEE PAVEMENT MARKING DETAILS FOR MORE INFORMATION REGARDING PLACEMENT OF CONCRETE WHEEL STOPS WITHIN PARKING STALLS.





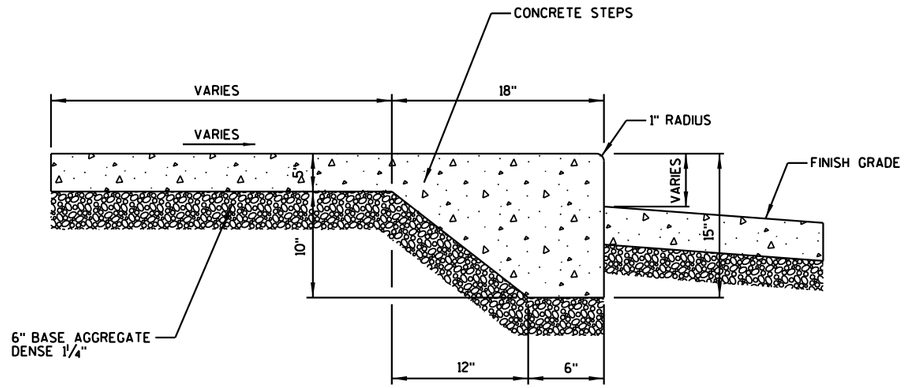


PRECAST CONCRETE WHEEL STOP
N.T.S.



CLYBOURN STREET

PLAN VIEW



NOTE:
CROSS SLOPE NOT TO EXCEED 2% IN ANY DIRECTION ON CONCRETE STEPS

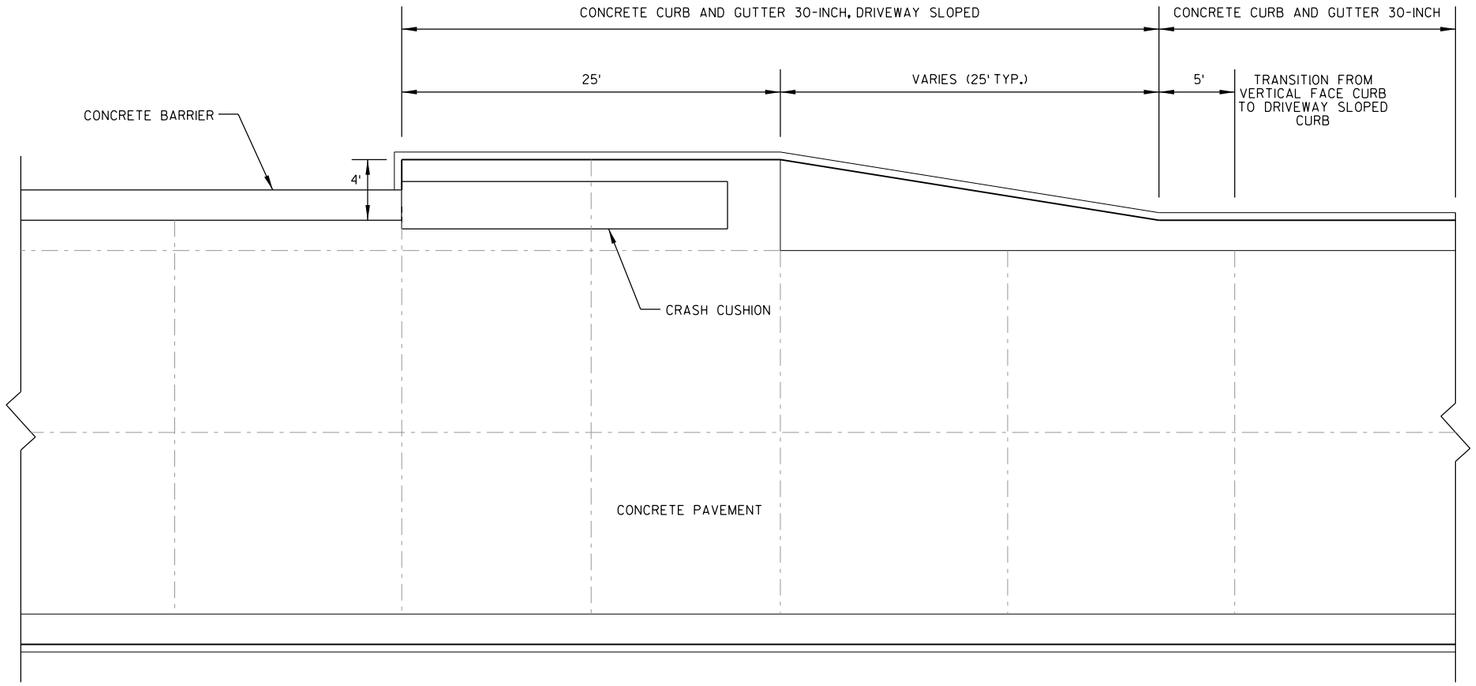
CROSS SECTION

CONCRETE STEPS

STA. 29+12 CL. 50.0'LT
N.T.S.

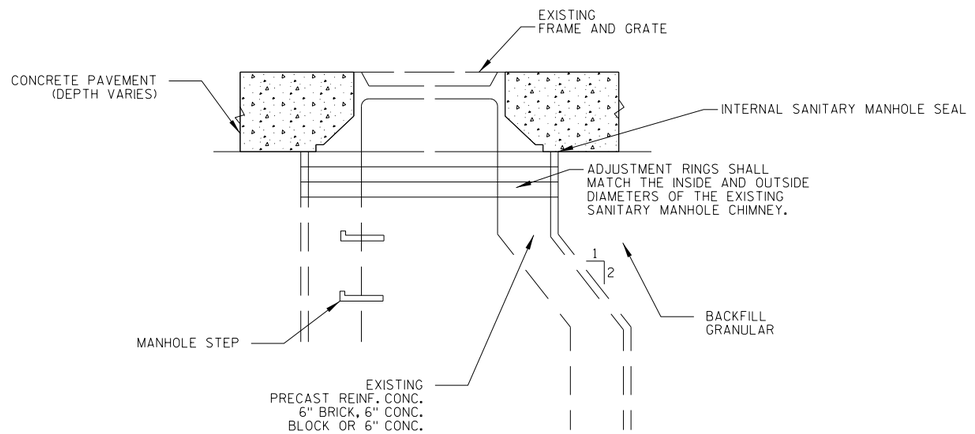
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 20	E

2



CURB AND GUTTER AT CRASH CUSHIONS

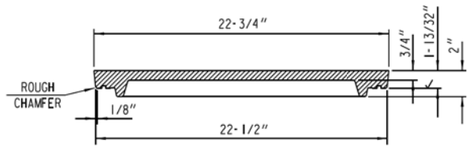
N.T.S.



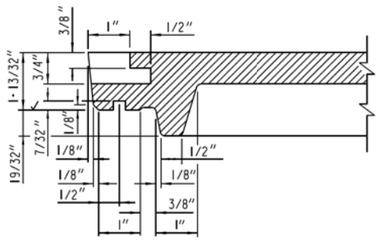
THE WORK INCLUDES REPAIRING AND ADJUSTING SANITARY MANHOLE CHIMNEY AND THE INSTALLATION OF THE INTERNAL SANITARY MANHOLE SEAL.

ADJUSTING SANITARY MANHOLE

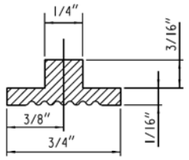
N.T.S.

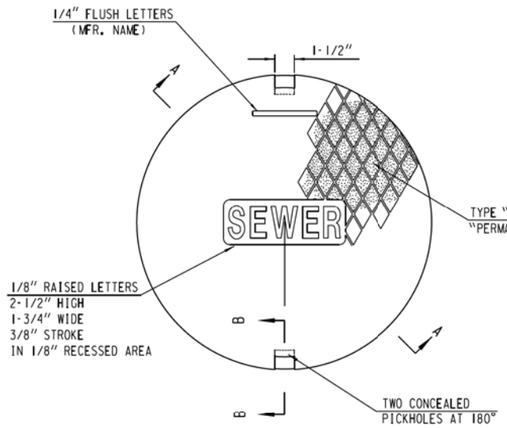


SECTION A-A

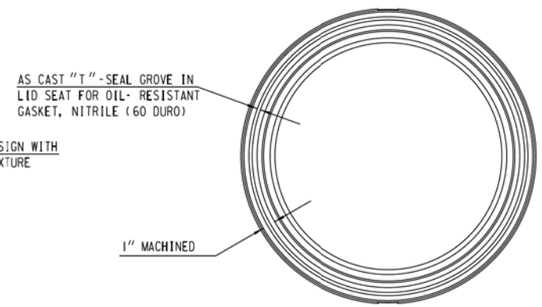


SECTION B-B





TOP VIEW



BOTTOM VIEW

SANITARY SEWER MANHOLE COVER - TYPE 58-A

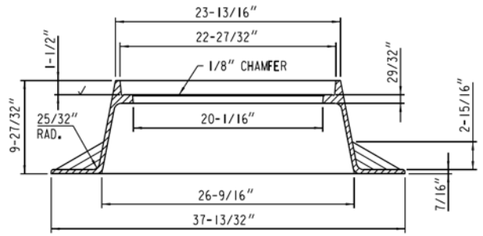
LID - 107 LBS.

NOTE:

ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8" HAVING A DIGIT OR LETTER HEIGHT OF ONE INCH ON LOWER FACE OF LID:

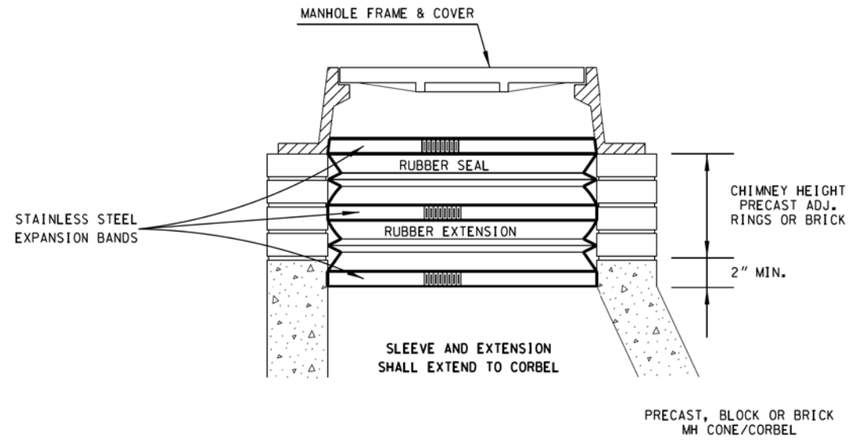
1. THE INITIALS OR MONOGRAM OF THE FOUNDRY.
2. THE CONTRACT NUMBER AND YEAR MADE.
3. THE CASTING IDENTIFICATION NUMBER.
4. THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

NOTE: ALL EXTERIOR EDGES SHALL BE GROUND.



SANITARY SEWER MANHOLE FRAME - TYPE MS21

FRAME - 182 LBS.



INTERNAL SANITARY MANHOLE SEAL

N.T.S.

LEGEND

- SLOPE INTERCEPTS
- STRIP DRAINS
- PIEZOMETER
- SETTLEMENT GAUGE

NOTES:

1. SEE CONSTRUCTION DETAILS FOR MORE INFORMATION REGARDING STRIP DRAINS AND DRAINAGE BLANKET.

DATA TABLE

STRUCTURE R-40-629 STRIP DRAINS

POINT NO.	STATION	OFFSET	TOP OF DRAINAGE BLANKET ELEV. (APPROX.)
1	204+93.00 LE	18.0' LT	589.81
2	205+00.00 LE	18.0' LT	589.80
3	205+50.00 LE	15.8' LT	589.75
4	206+00.00 LE	13.4' LT	589.69
5	107+00.00 LW	44.6' LT	589.57
6	107+50.00 LW	42.2' LT	589.59
7	108+00.00 LW	39.8' LT	589.53
8	108+37.00 LW	39.8' LT	589.50
9	204+93.00 LE	49.0' RT	588.22
10	205+00.00 LE	48.8' RT	588.23
11	205+50.00 LE	47.1' RT	588.27
12	206+00.00 LE	45.4' RT	588.31
13	206+50.00 LE	43.7' RT	588.43
14	207+00.00 LE	41.9' RT	588.48
15	207+42.00 LE	40.1' RT	588.55

B-40-916
B-40-915
R-40-629
IH 794 WB ENTRANCE RAMP
IH 794 EB EXIT RAMP
VAN BUREN STREET
EXISTING PIER (TYP.)
EXISTING PIER FOOTING (TYP.)
103+00 LW
104+00 LW
105+00 LW
106+00 LW
107+00 LW
108+00 LW
109+00 LW
204+00 LE
205+00 LE
206+00 LE
207+00 LE
208+00 LE
203+00 LE
+50 LW
+50 LE
+50 VB
00+29
00+19
00+09
STA. 204+93 LE TO STA. 207+42.00 LE
APPROXIMATE STRIP DRAIN DEPTH = 560.00

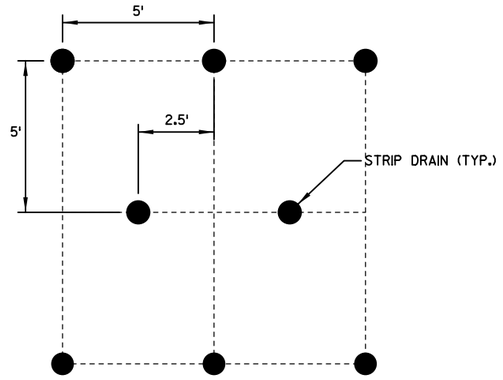
GEOTECHNICAL INSTRUMENTATION

STATION	OFFSET	TIP ELEVATION
PIEZOMETER (VIBRATING WIRE)		
205+10.00 LE	40.00' RT	565
205+10.00 LE	40.00' RT	576
205+95.00 LE	15.00' LT	565
205+95.00 LE	15.00' LT	576
SETTLEMENT GAUGES		
205+05.00 LE	40.00' RT	TOP OF DRAINAGE BLANKET
206+00.00 LE	20.00' LT	

KEY MAP

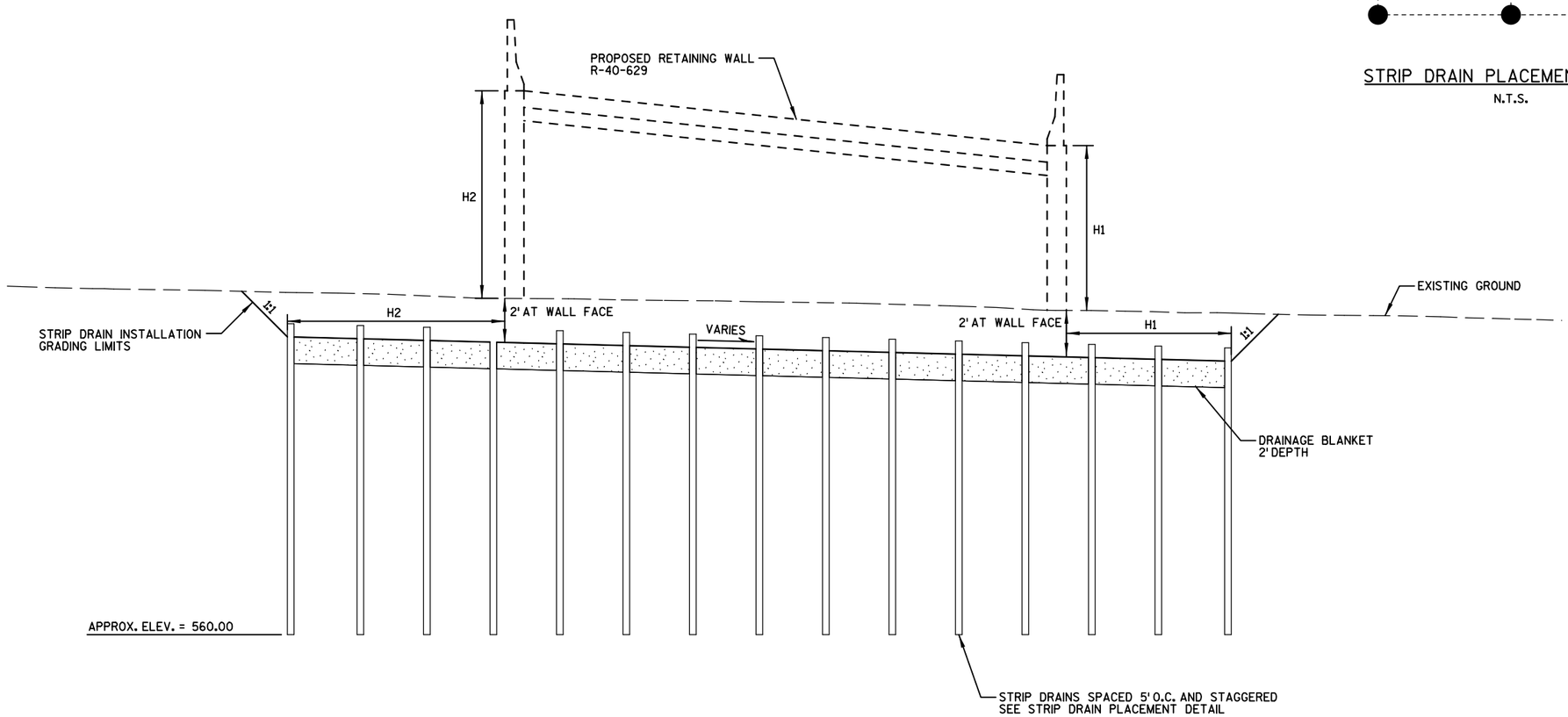
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	GEOTECHNICAL INSTRUMENTATION AND STRIP DRAIN DETAILS	SHEET 23	E

2



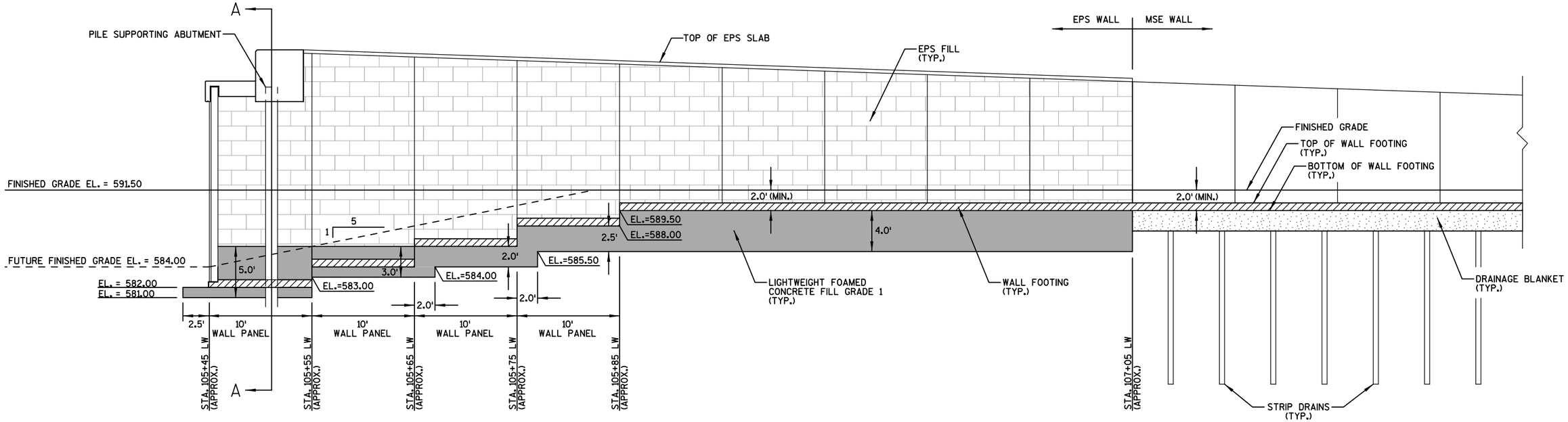
STRIP DRAIN PLACEMENT DETAIL

N.T.S.



TYPICAL CROSS SECTION -
STRIP DRAIN AND DRAINAGE BLANKET INSTALLATION

(LOOKING EAST)
N.T.S.

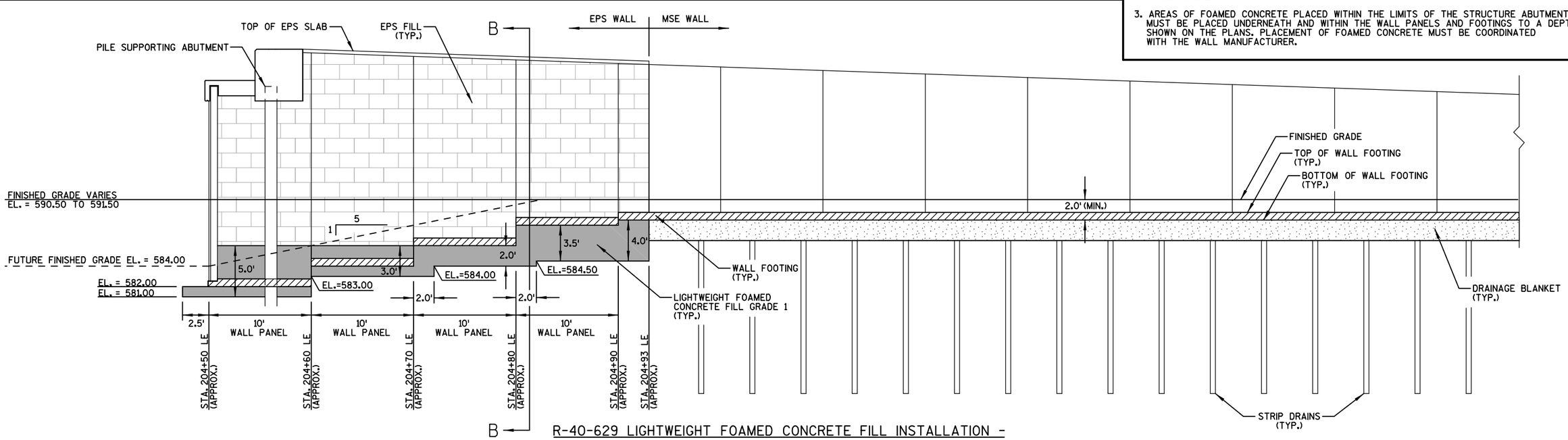


R-40-629 LIGHTWEIGHT FOAMED CONCRETE FILL INSTALLATION - IH 794 WB ENTRANCE RAMP ELEVATION

N.T.S.

NOTES:

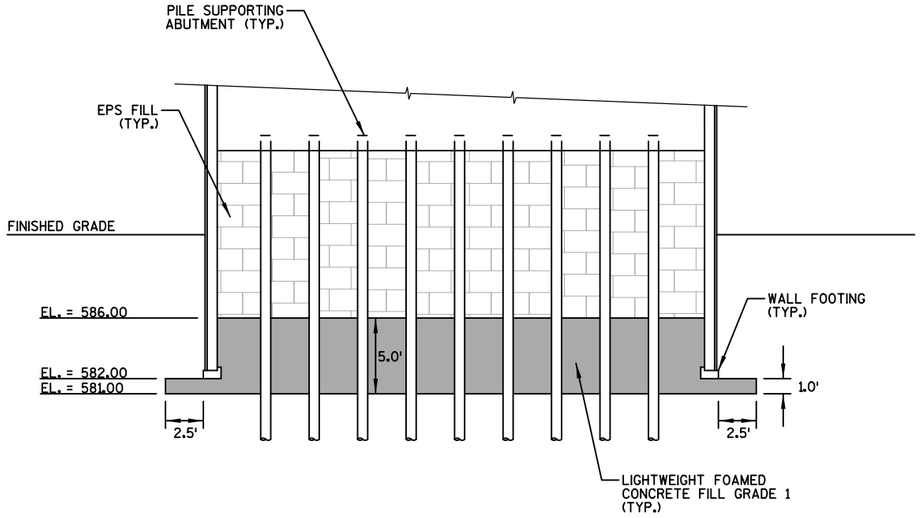
1. PILING MUST BE DRIVEN PRIOR TO PLACEMENT OF FOAMED CONCRETE.
2. WALL STEPS SHOWN ARE APPROXIMATE AND MUST BE COORDINATED WITH THE WALL MANUFACTURER.
3. AREAS OF FOAMED CONCRETE PLACED WITHIN THE LIMITS OF THE STRUCTURE ABUTMENT MUST BE PLACED UNDERNEATH AND WITHIN THE WALL PANELS AND FOOTINGS TO A DEPTH SHOWN ON THE PLANS. PLACEMENT OF FOAMED CONCRETE MUST BE COORDINATED WITH THE WALL MANUFACTURER.



R-40-629 LIGHTWEIGHT FOAMED CONCRETE FILL INSTALLATION - IH 794 EB EXIT RAMP ELEVATION

N.T.S.

2

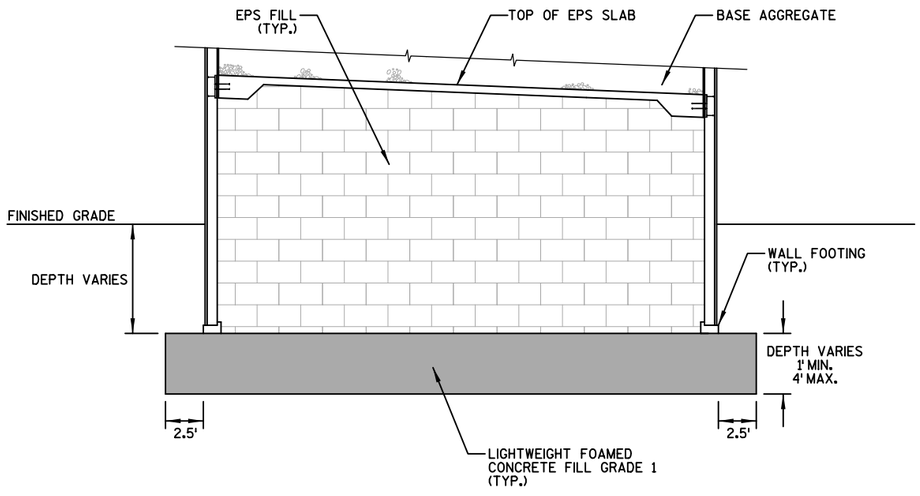


R-40-629 LIGHTWEIGHT FOAMED CONCRETE FILL INSTALLATION - SECTION A-A (AT ABUTMENT)

N.T.S.

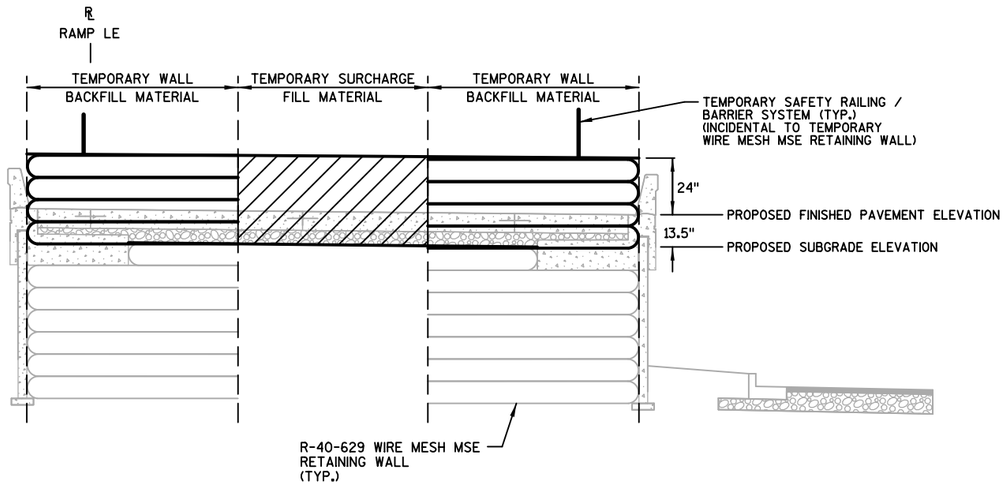
NOTES:

1. PILING MUST BE DRIVEN PRIOR TO PLACEMENT OF FOAMED CONCRETE.
2. SEE B-40-915, B-40-916, AND R-40-629 PLANS FOR DETAILS ON PILING.



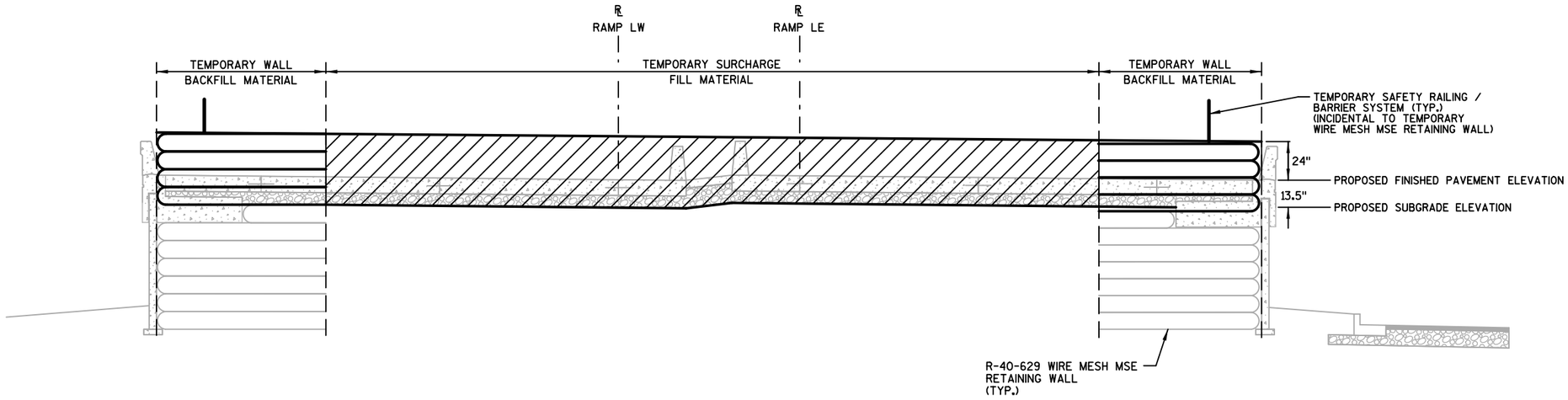
R-40-629 LIGHTWEIGHT FOAMED CONCRETE FILL INSTALLATION - SECTION B-B (AT MID-WALL)

N.T.S.



SECTION ALONG IH 794 EB EXIT RAMP

STA. 204+81 LE TO STA. 206+08 LE
(LOOKING EAST)



SECTION ALONG IH 794 WB ENTRANCE RAMP

STA. 107+05 LW TO STA. 108+83 LW
(LOOKING EAST)

SECTION ALONG IH 794 EB EXIT RAMP

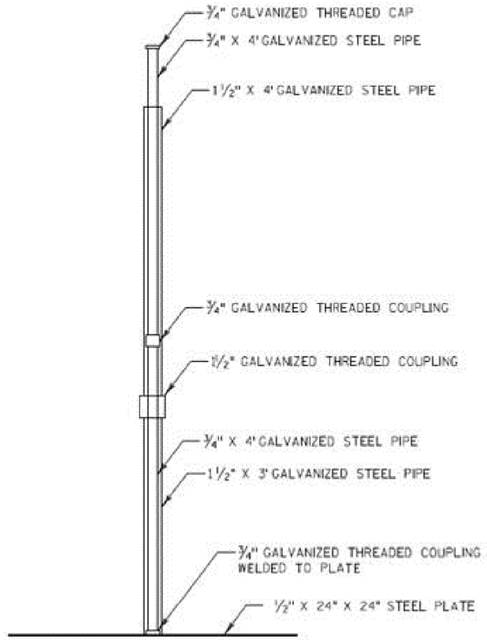
STA. 206+08 LE TO STA. 207+90 LE
(LOOKING EAST)

TEMPORARY WALL WIRE FACED MSE SYSTEM

TYPICAL SECTIONS NOT TO SCALE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - TEMPORARY WALL WIRE FACED MSE	SHEET 27	E

2



SETTLEMENT GAUGE DETAIL

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - SETTLEMENT GAUGE	SHEET 28	E

LEGEND

APPROXIMATE LIMITS OF FOUNDRY SAND/CONTAMINATED SOIL. SOIL EXCAVATED WITHIN PROJECT LIMITS TO BE TRANSPORTED OFF-SITE FOR LANDFILL DISPOSAL.

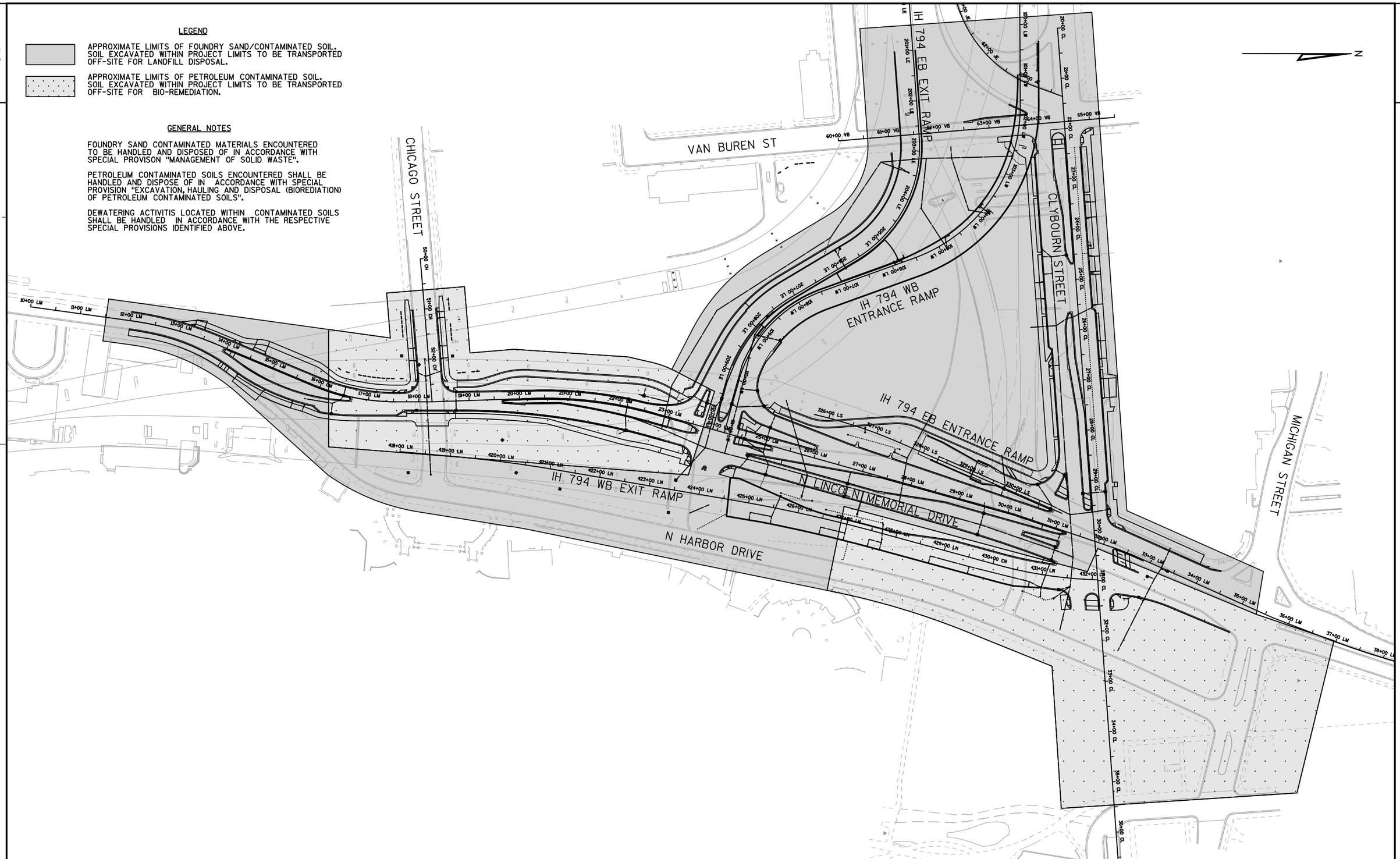
APPROXIMATE LIMITS OF PETROLEUM CONTAMINATED SOIL. SOIL EXCAVATED WITHIN PROJECT LIMITS TO BE TRANSPORTED OFF-SITE FOR BIO-REMEDIATION.

GENERAL NOTES

FOUNDRY SAND CONTAMINATED MATERIALS ENCOUNTERED TO BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH SPECIAL PROVISON "MANAGEMENT OF SOLID WASTE".

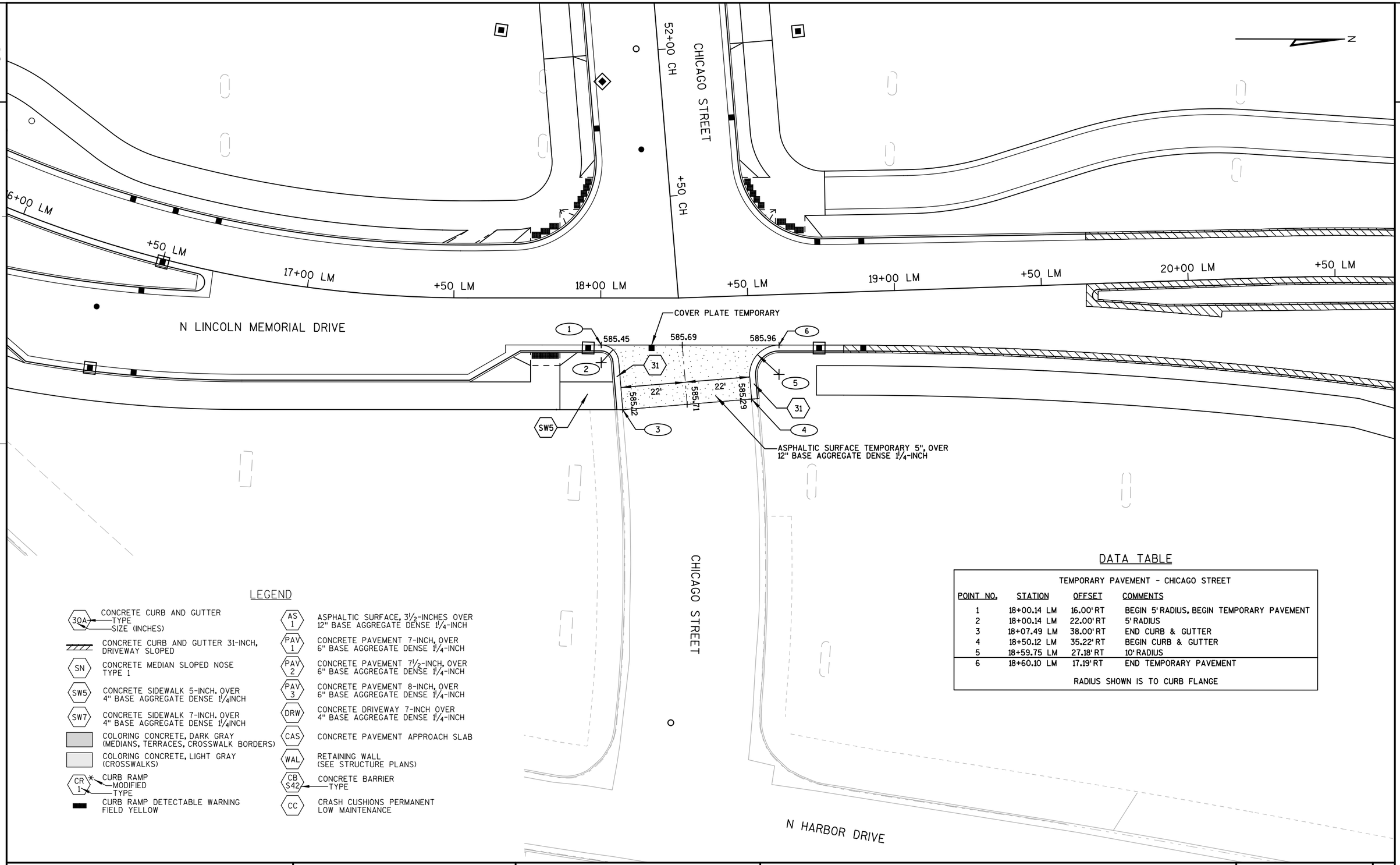
PETROLEUM CONTAMINATED SOILS ENCOUNTERED SHALL BE HANDLED AND DISPOSE OF IN ACCORDANCE WITH SPECIAL PROVISION "EXCAVATION, HAULING AND DISPOSAL (BIOREDIATION) OF PETROLEUM CONTAMINATED SOILS".

DEWATERING ACTIVITIS LOCATED WITHIN CONTAMINATED SOILS SHALL BE HANDLED IN ACCORDANCE WITH THE RESPECTIVE SPECIAL PROVISIONS IDENTIFIED ABOVE.



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CONTAMINATED SOIL LOCATIONS	SHEET 29	E

2



LEGEND

- 30A — CONCRETE CURB AND GUTTER — TYPE — SIZE (INCHES)
- CONCRETE CURB AND GUTTER 31-INCH, DRIVEWAY SLOPED
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH. OVER 4" BASE AGGREGATE DENSE 1¼INCH
- SW7 — CONCRETE SIDEWALK 7-INCH. OVER 4" BASE AGGREGATE DENSE 1¼INCH
- COLORING CONCRETE, DARK GRAY (MEDIANS, TERRACES, CROSSWALK BORDERS)
- COLORING CONCRETE, LIGHT GRAY (CROSSWALKS)
- CR 1 — CURB RAMP — MODIFIED — TYPE
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- AS 1 — ASPHALTIC SURFACE, 3½-INCHES OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 1 — CONCRETE PAVEMENT 7-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 2 — CONCRETE PAVEMENT 7½-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — CONCRETE PAVEMENT 8-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH OVER 4" BASE AGGREGATE DENSE 1¼-INCH
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- WAL — RETAINING WALL (SEE STRUCTURE PLANS)
- CB S42 — CONCRETE BARRIER — TYPE
- CC — CRASH CUSHIONS PERMANENT LOW MAINTENANCE

DATA TABLE

TEMPORARY PAVEMENT - CHICAGO STREET

POINT NO.	STATION	OFFSET	COMMENTS
1	18+00.14 LM	16.00' RT	BEGIN 5' RADIUS, BEGIN TEMPORARY PAVEMENT
2	18+00.14 LM	22.00' RT	5' RADIUS
3	18+07.49 LM	38.00' RT	END CURB & GUTTER
4	18+50.12 LM	35.22' RT	BEGIN CURB & GUTTER
5	18+59.75 LM	27.18' RT	10' RADIUS
6	18+60.10 LM	17.19' RT	END TEMPORARY PAVEMENT

RADIUS SHOWN IS TO CURB FLANGE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS - TEMPORARY PAVEMENT (CHICAGO STREET)	SHEET 30	E

22+00 LM +50 LM 23+00 LM +50 LM 24+00 LM +50 LM 25+00 LM +50 LM

N

N LINCOLN MEMORIAL DRIVE

INL

ASPHALTIC CURB

ASPHALTIC CURB

585.88 1.55% 586.22

585.80 1.5% 585.41

26'

ASPHALTIC SURFACE TEMPORARY 5", OVER 12" BASE AGGREGATE DENSE 1¼-INCH

585.73 2.00% 585.21

585.68 585.07 585.39

1 2 3 4 5 6 7

IH 794 WB EXIT RAMP

N HARBOR DRIVE

DATA TABLE

TEMPORARY PAVEMENT - N HARBOR DRIVE ACCESS ROAD

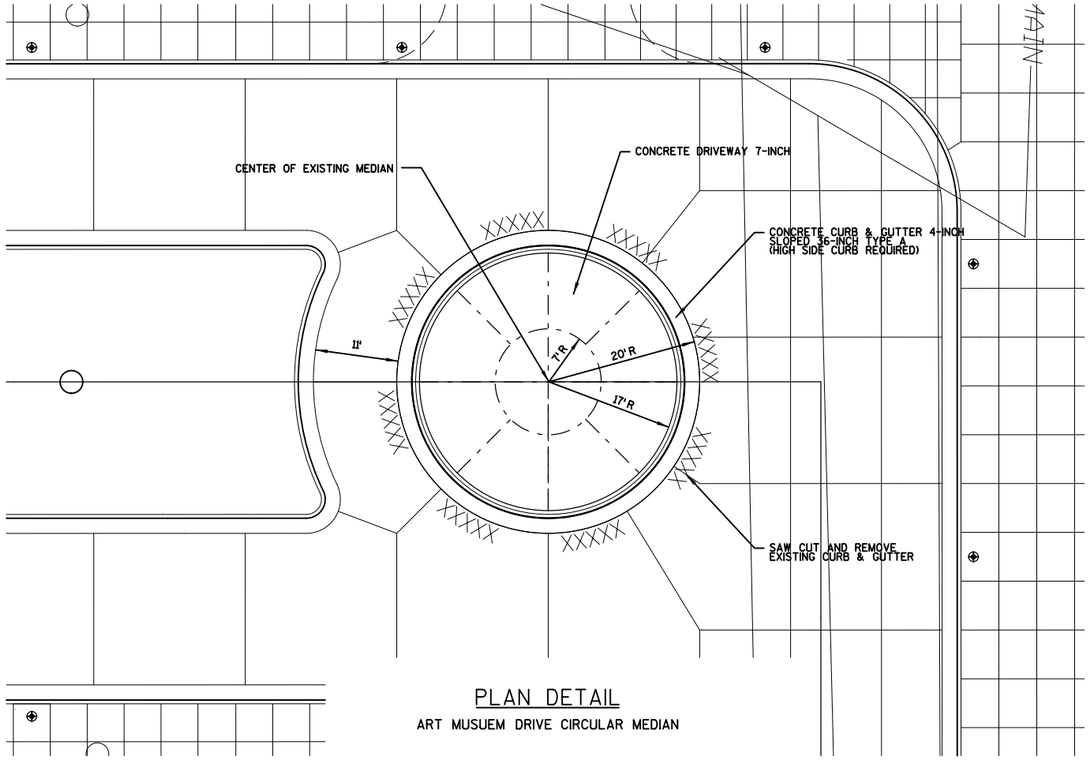
POINT NO.	STATION	OFFSET	COMMENTS
1	23+66.45 LM	82.36'RT	BEGIN TEMPORARY PAVEMENT
2	23+74.77 LM	209.37'RT	END TEMPORARY PAVEMENT
3	23+92.66 LM	82.25'RT	BEGIN TEMPORARY PAVEMENT
4	23+95.72 LM	128.97'RT	MIDPOINT OF ASPHALTIC CURB
5	23+98.65 LM	173.69'RT	BEGIN 32' RADIUS
6	24+30.58 LM	171.60'RT	32' RADIUS
7	24+32.69 LM	205.69'RT	END TEMPORARY PAVEMENT

RADIUS SHOWN IS TO CURB FLANGE

LEGEND

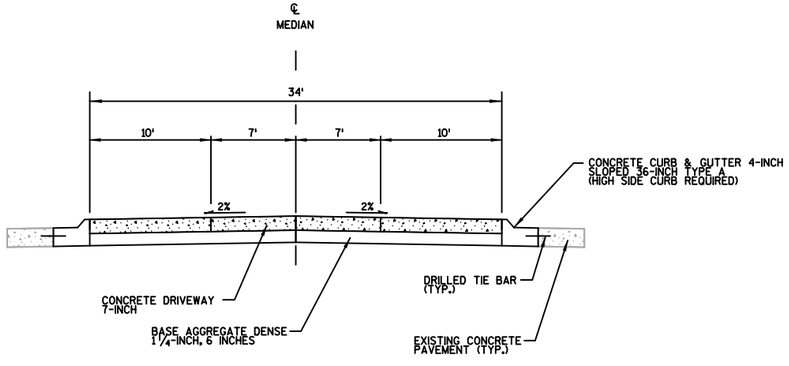
- 30A — CONCRETE CURB AND GUTTER TYPE SIZE (INCHES)
- CONCRETE CURB AND GUTTER 31-INCH, DRIVEWAY SLOPED
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH. OVER 4" BASE AGGREGATE DENSE 1¼INCH
- SW7 — CONCRETE SIDEWALK 7-INCH. OVER 4" BASE AGGREGATE DENSE 1¼INCH
- COLORING CONCRETE, DARK GRAY (MEDIANS, TERRACES, CROSSWALK BORDERS)
- COLORING CONCRETE, LIGHT GRAY (CROSSWALKS)
- CR 1 * — CURB RAMP MODIFIED TYPE
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- AS 1 — ASPHALTIC SURFACE, 3½-INCHES OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 1 — CONCRETE PAVEMENT 7-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 2 — CONCRETE PAVEMENT 7½-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — CONCRETE PAVEMENT 8-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH OVER 4" BASE AGGREGATE DENSE 1¼-INCH
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- WAL — RETAINING WALL (SEE STRUCTURE PLANS)
- CB S42 — CONCRETE BARRIER TYPE
- CC — CRASH CUSHIONS PERMANENT LOW MAINTENANCE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS - TEMPORARY PAVEMENT	SHEET 31	E



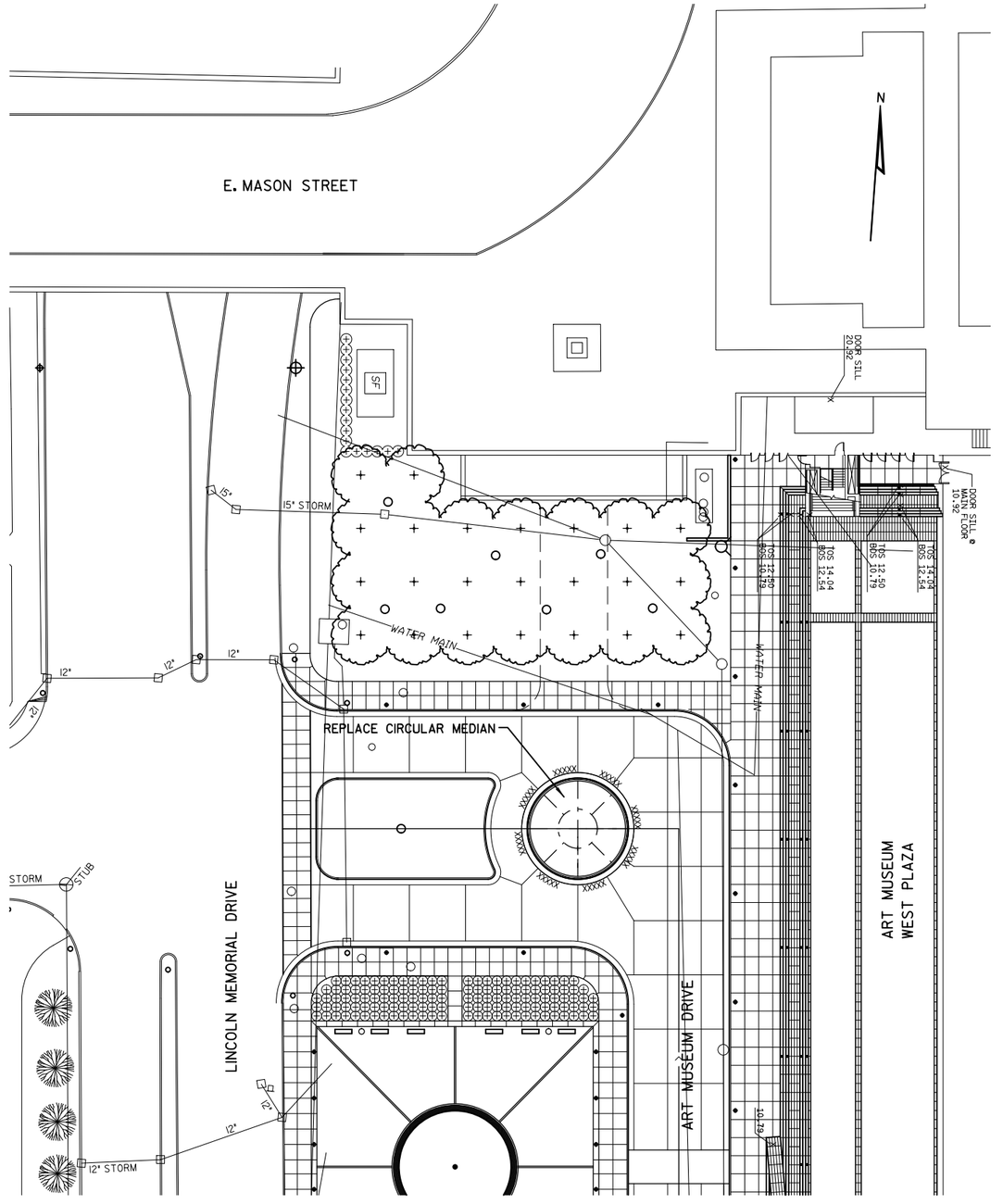
PLAN DETAIL

ART MUSUEM DRIVE CIRCULAR MEDIAN



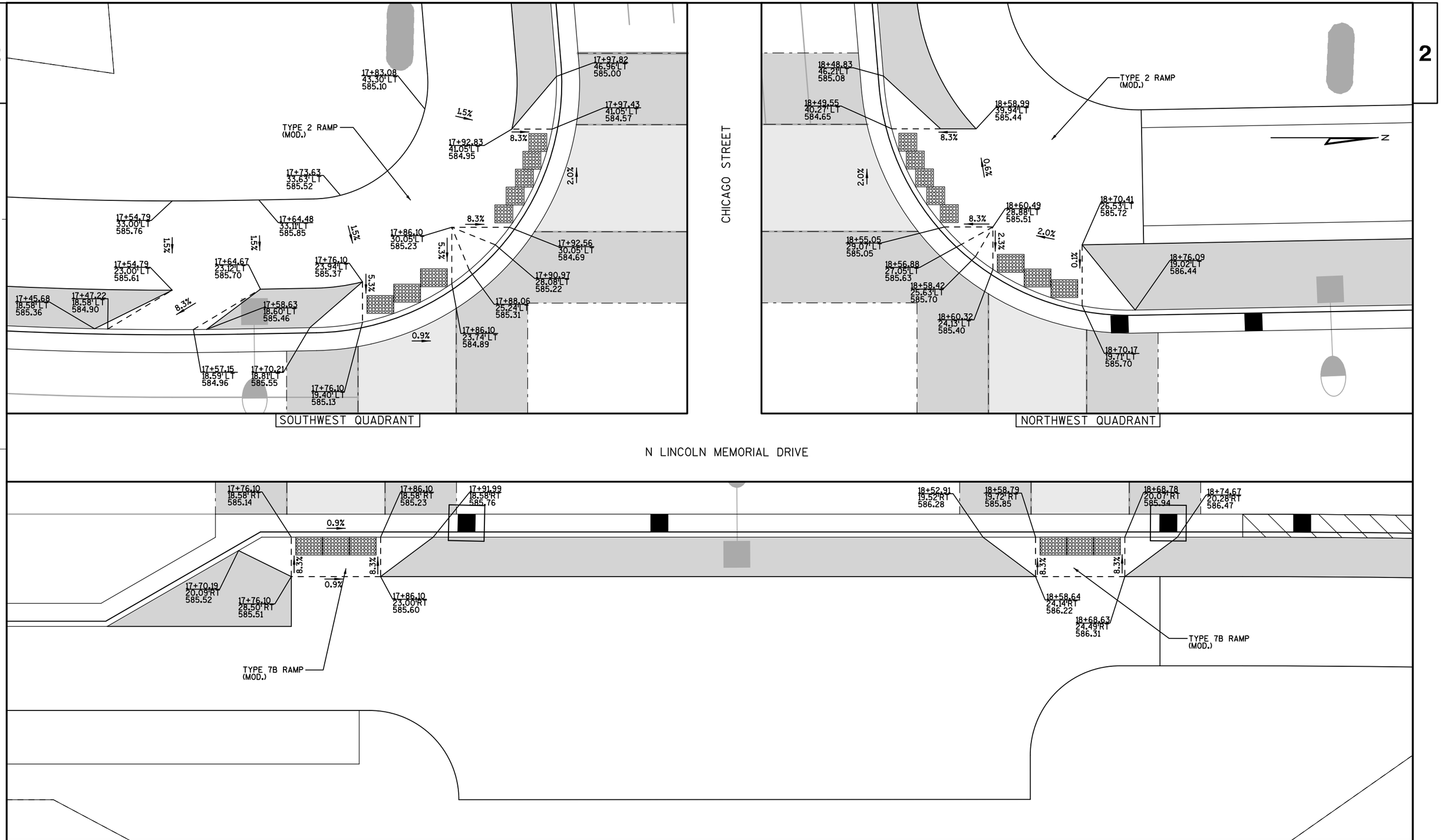
TYPICAL SECTION

ART MUSUEM DRIVE CIRCULAR MEDIAN

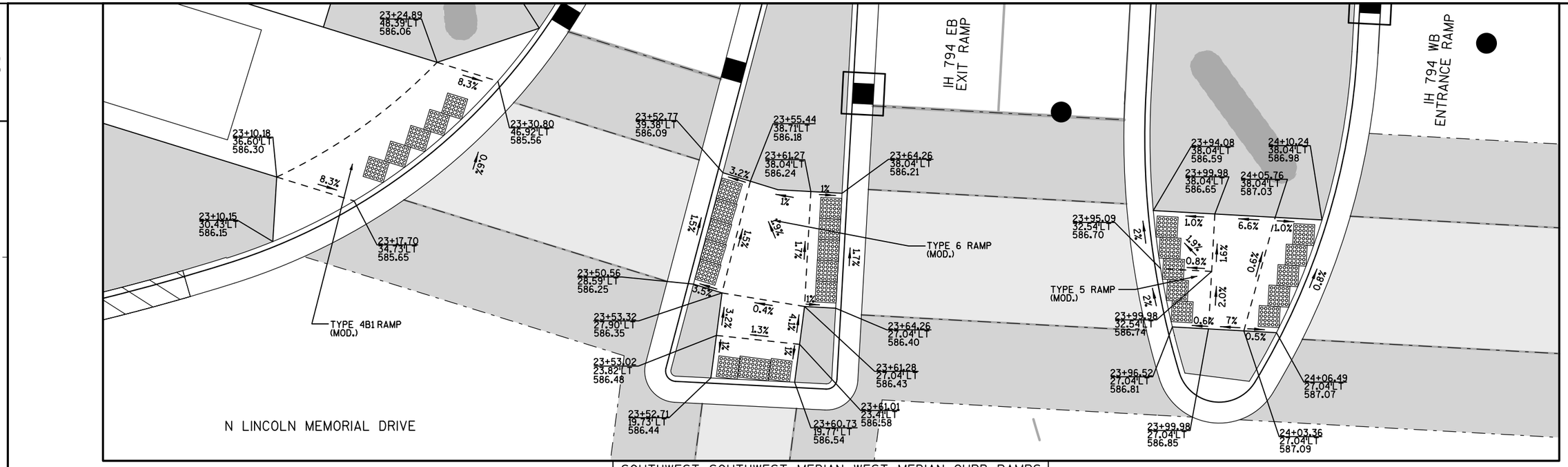


LOCATION MAP

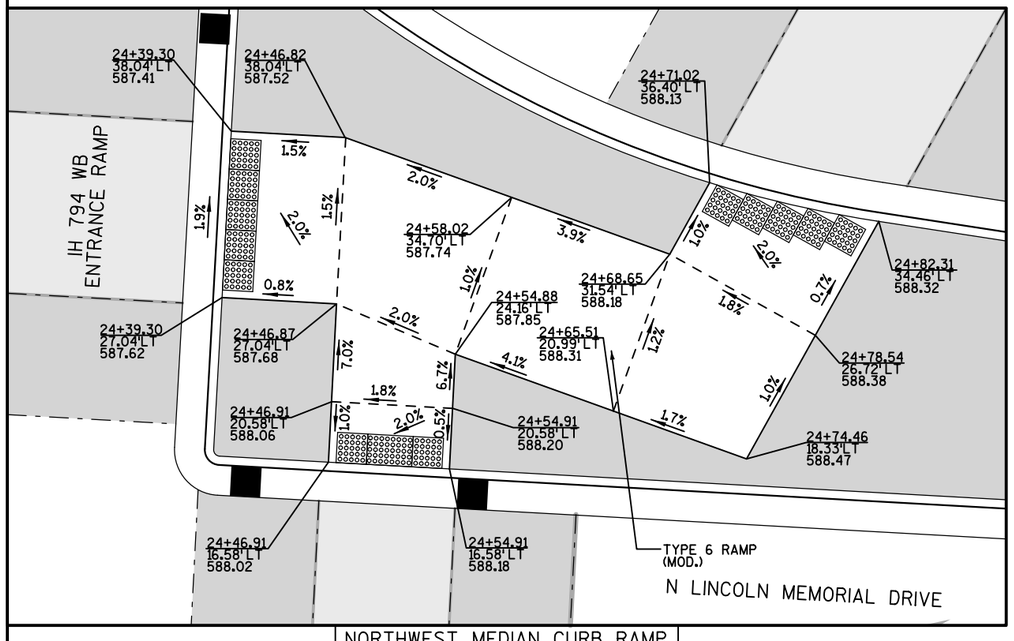
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - ART MUSEUM MEDIAN PAVING	SHEET 32	E



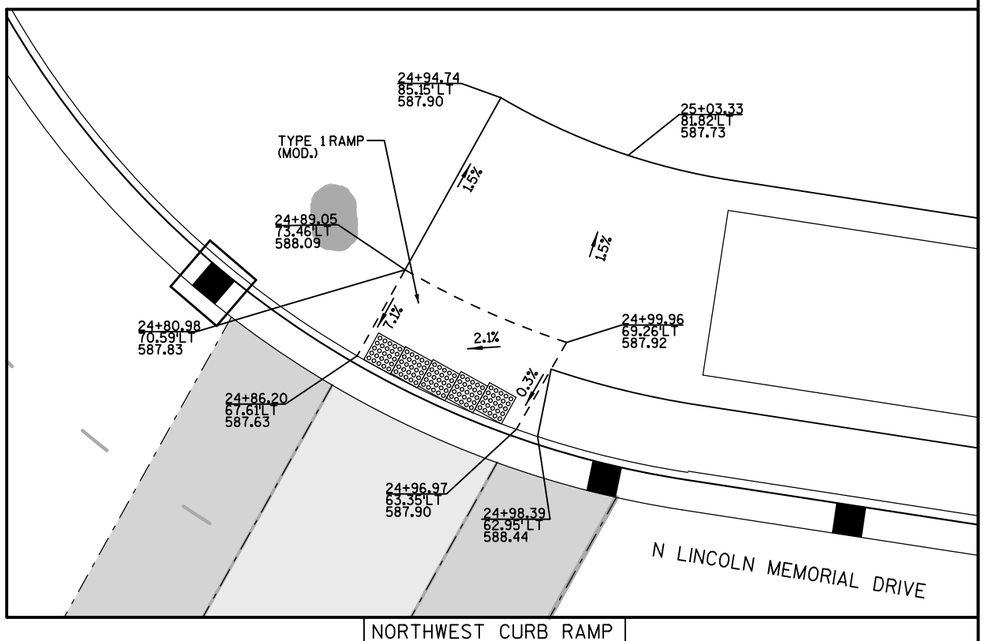
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CURB RAMP DETAILS - CHICAGO ST AND N LINCOLN MEMORIAL DR	SHEET 33	E



SOUTHWEST, SOUTHWEST MEDIAN, WEST MEDIAN CURB RAMPS

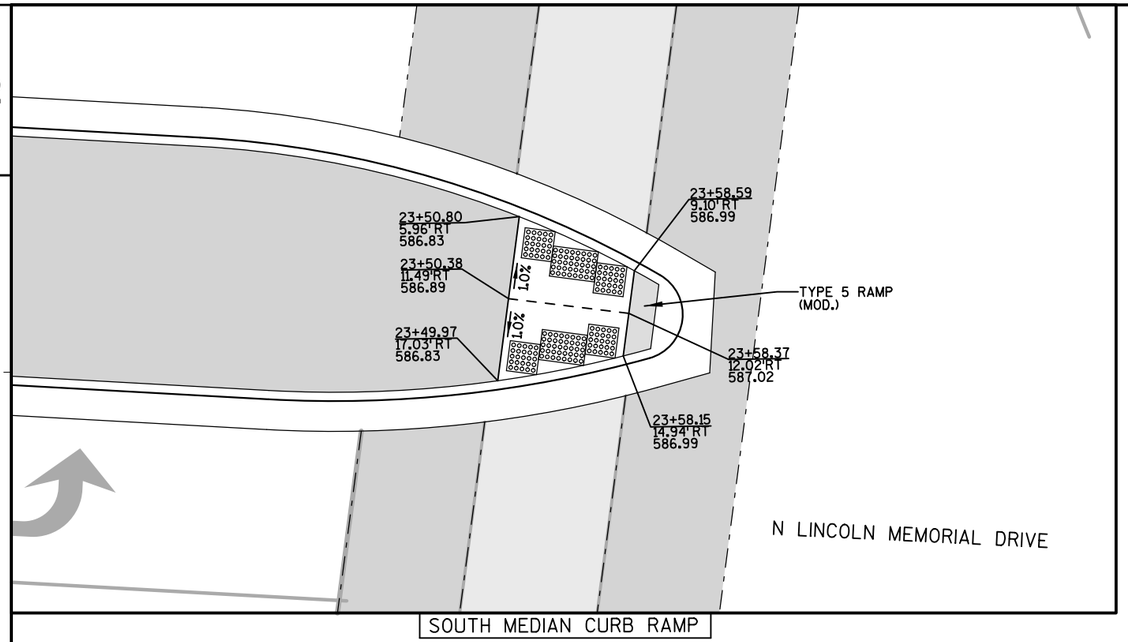


NORTHWEST MEDIAN CURB RAMP

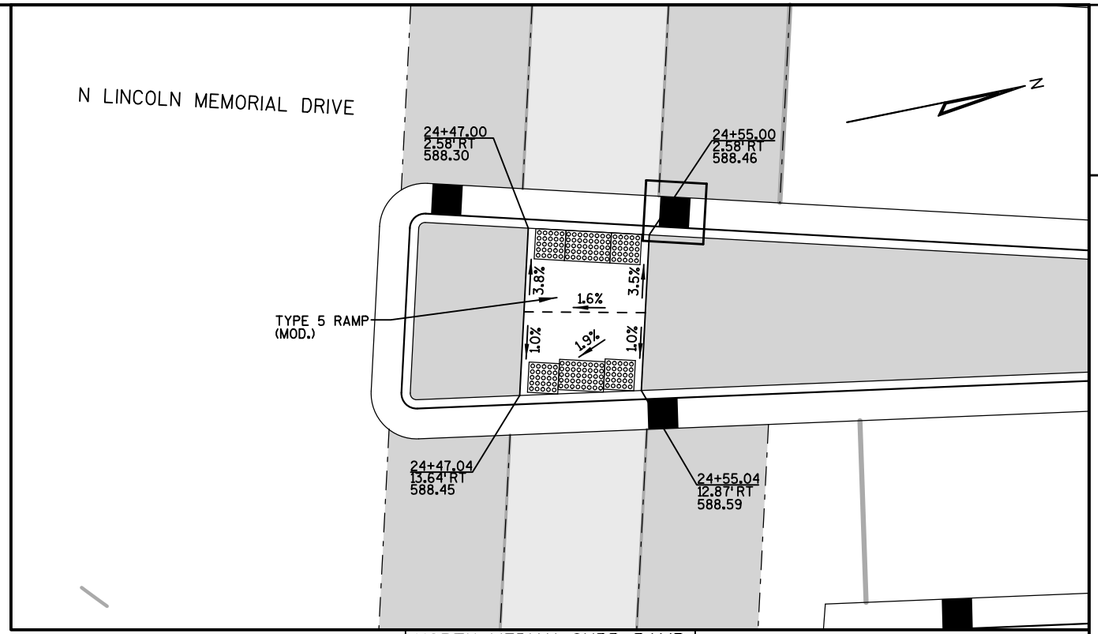


NORTHWEST CURB RAMP

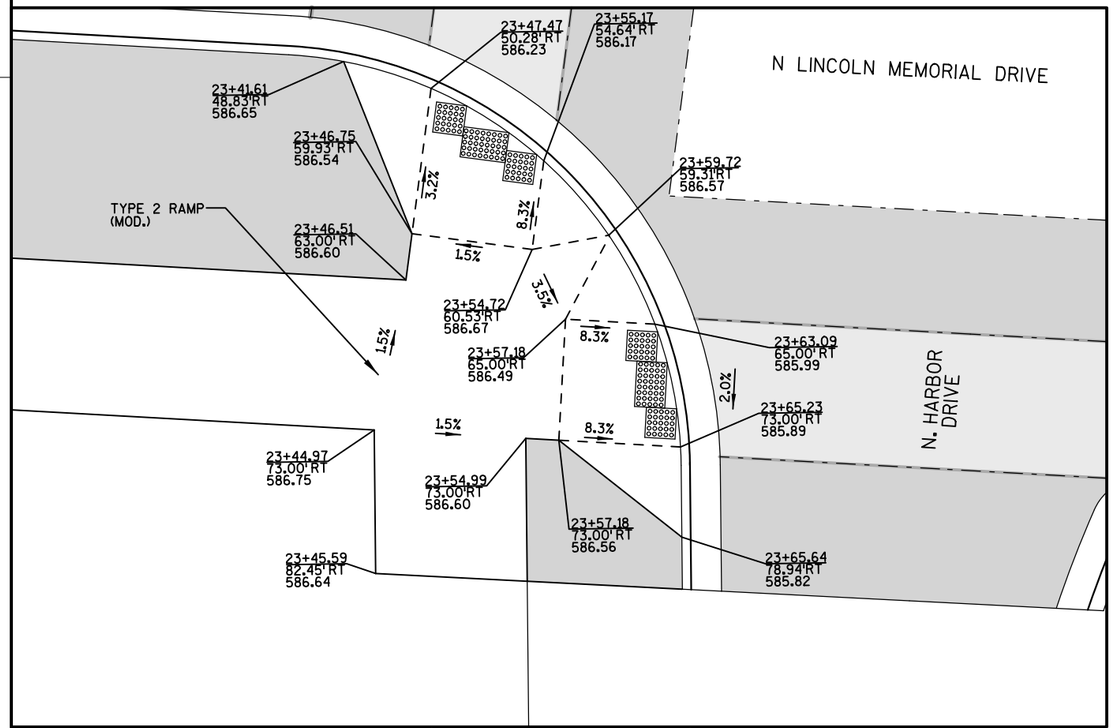
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CURB RAMP DETAILS - IH 794 RAMPS AND N LINCOLN MEMORIAL DR	SHEET 34	E



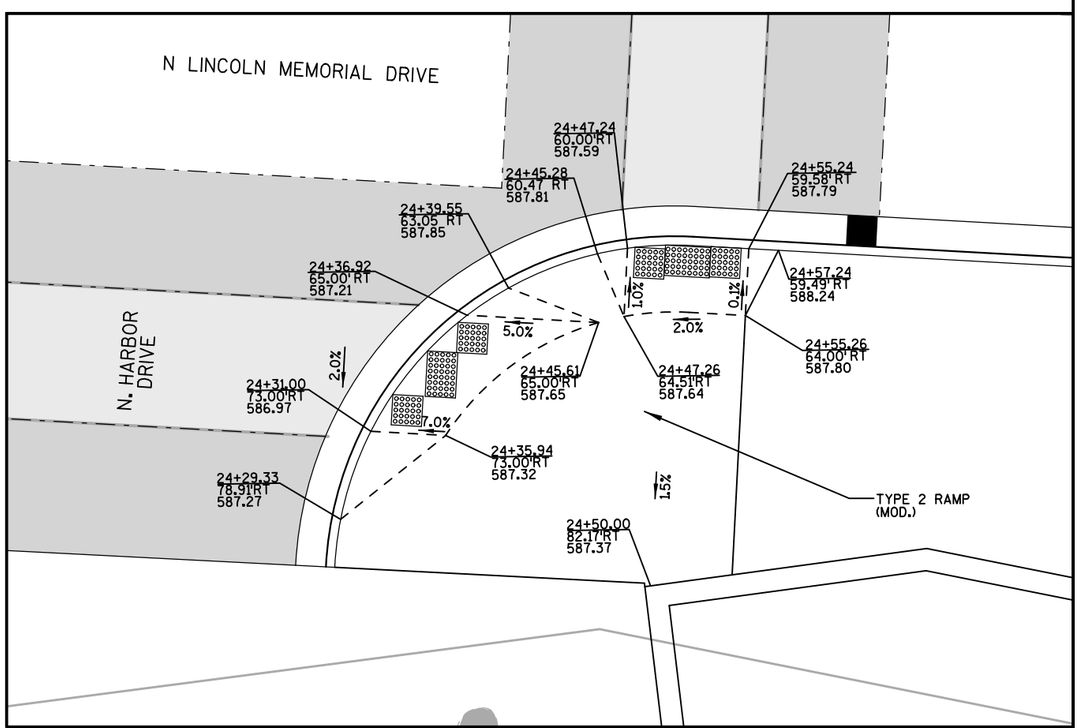
SOUTH MEDIAN CURB RAMP



NORTH MEDIAN CURB RAMP

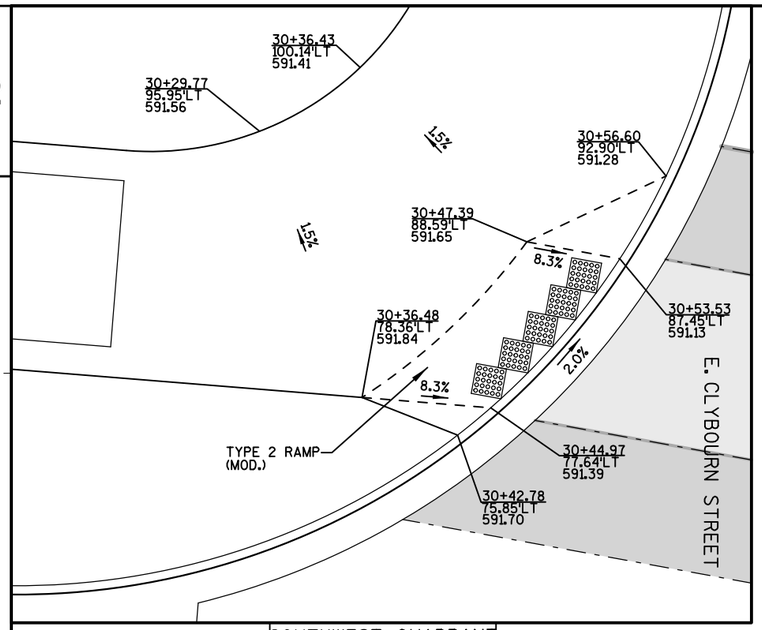


SOUTHEAST CURB RAMP

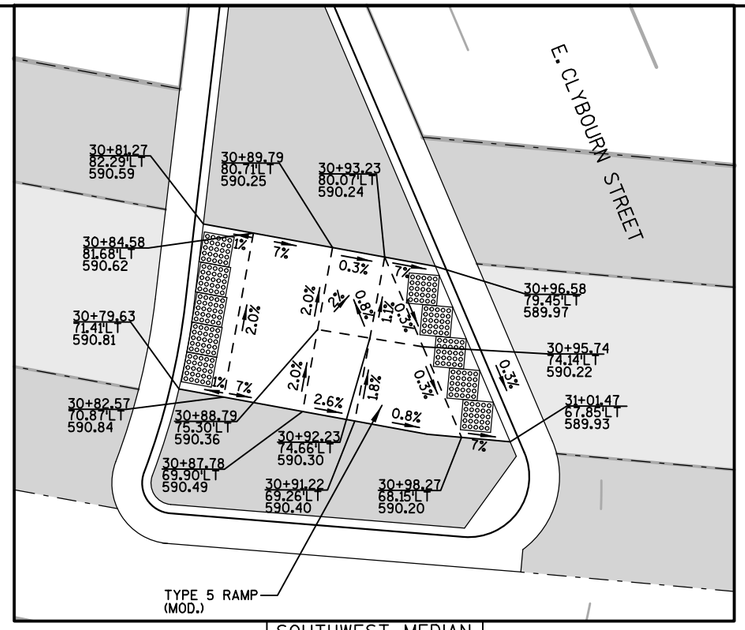


NORTHEAST CURB RAMP

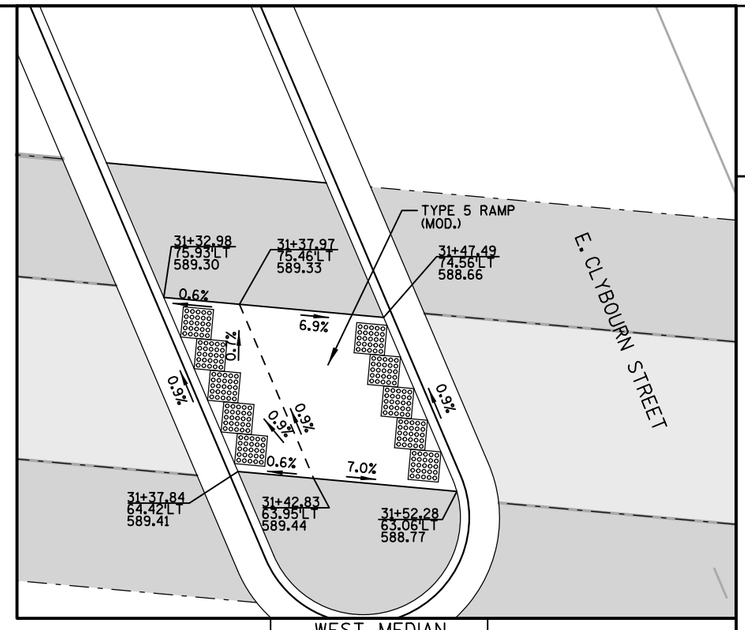
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CURB RAMP DETAILS - IH 794 RAMPS AND N LINCOLN MEMORIAL DR	SHEET 35	E



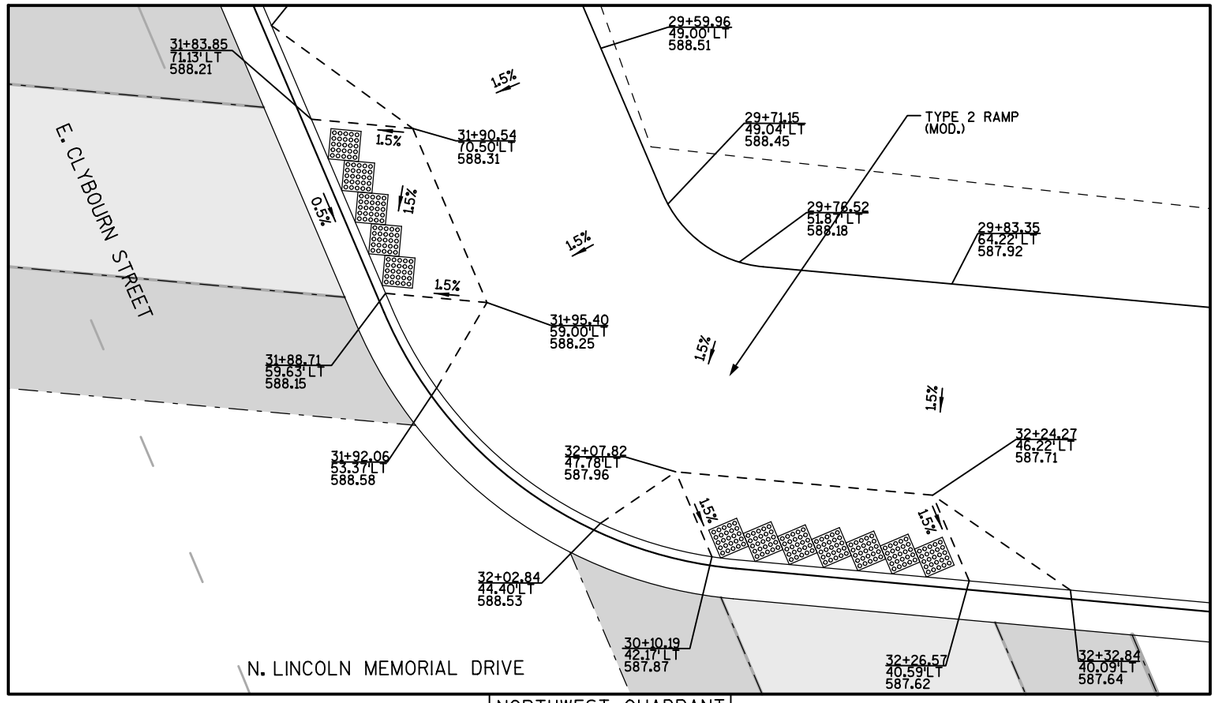
SOUTHWEST QUADRANT



SOUTHWEST MEDIAN

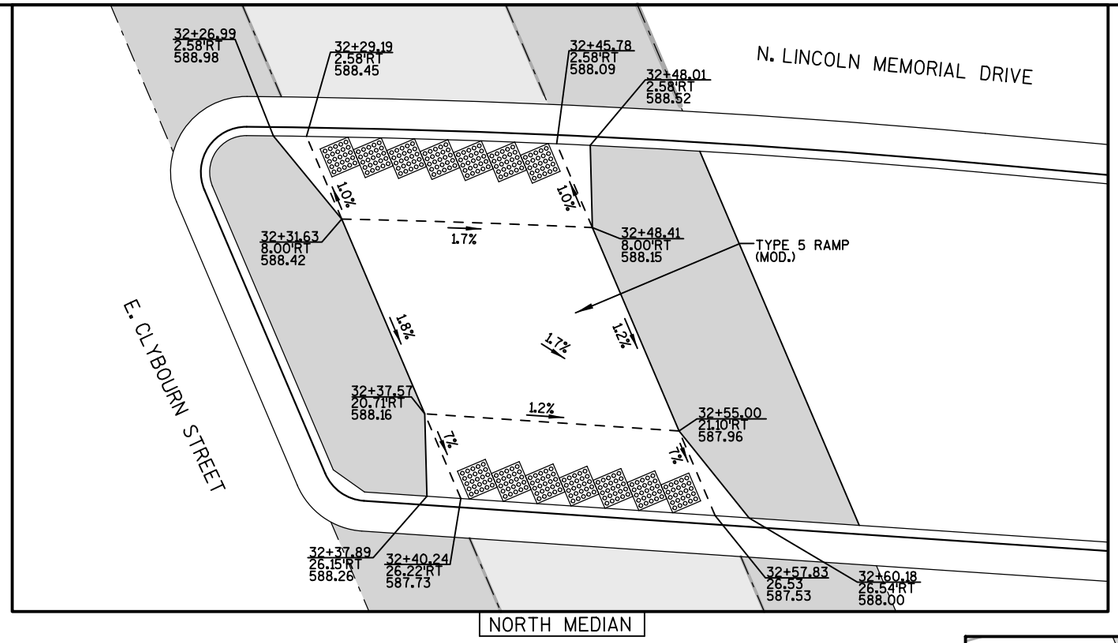


WEST MEDIAN

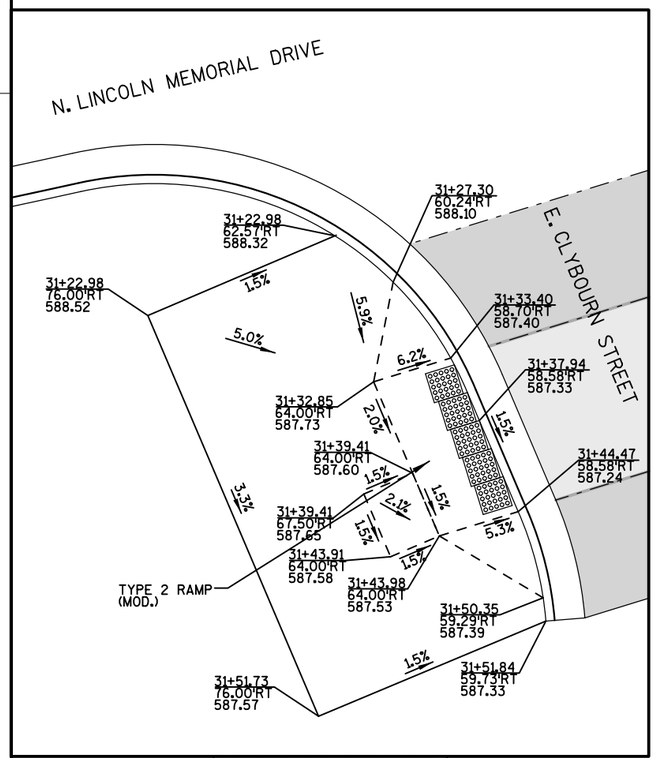


NORTHWEST QUADRANT

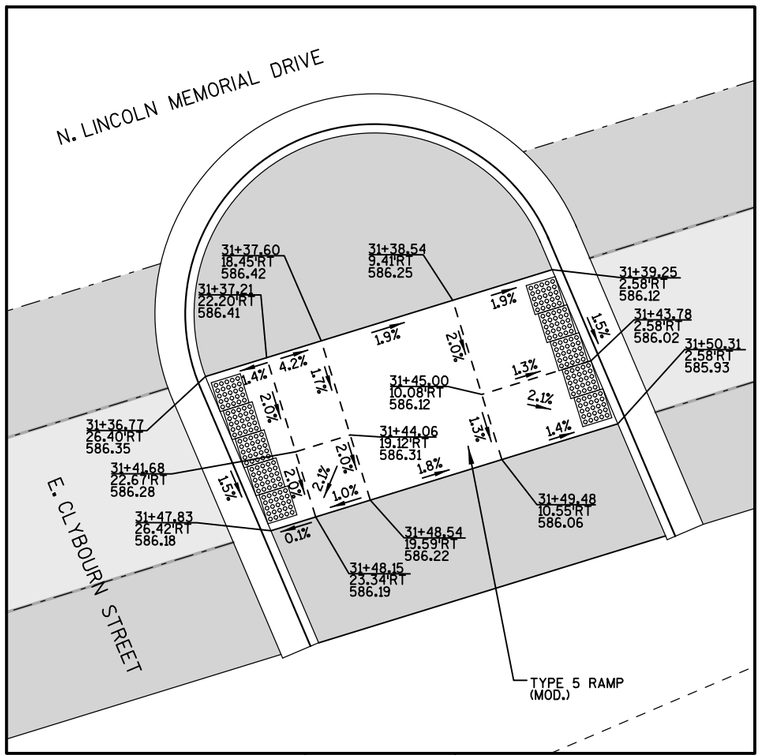
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CURB RAMP DETAILS - CLYBOURN ST AND N LINCOLN MEMORIAL DR	SHEET 36	E



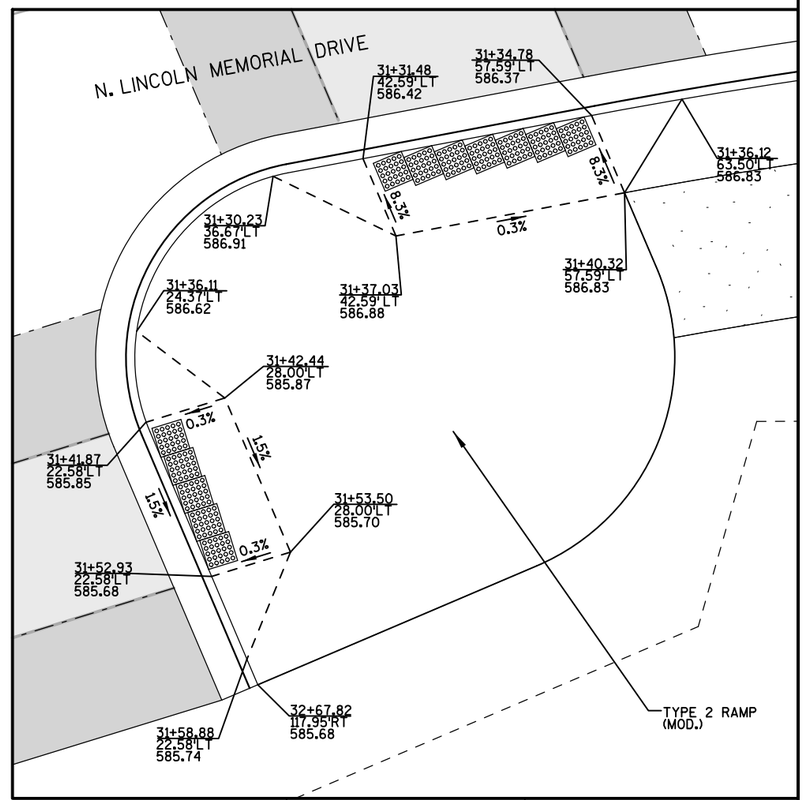
NORTH MEDIAN



SOUTHEAST QUADRANT

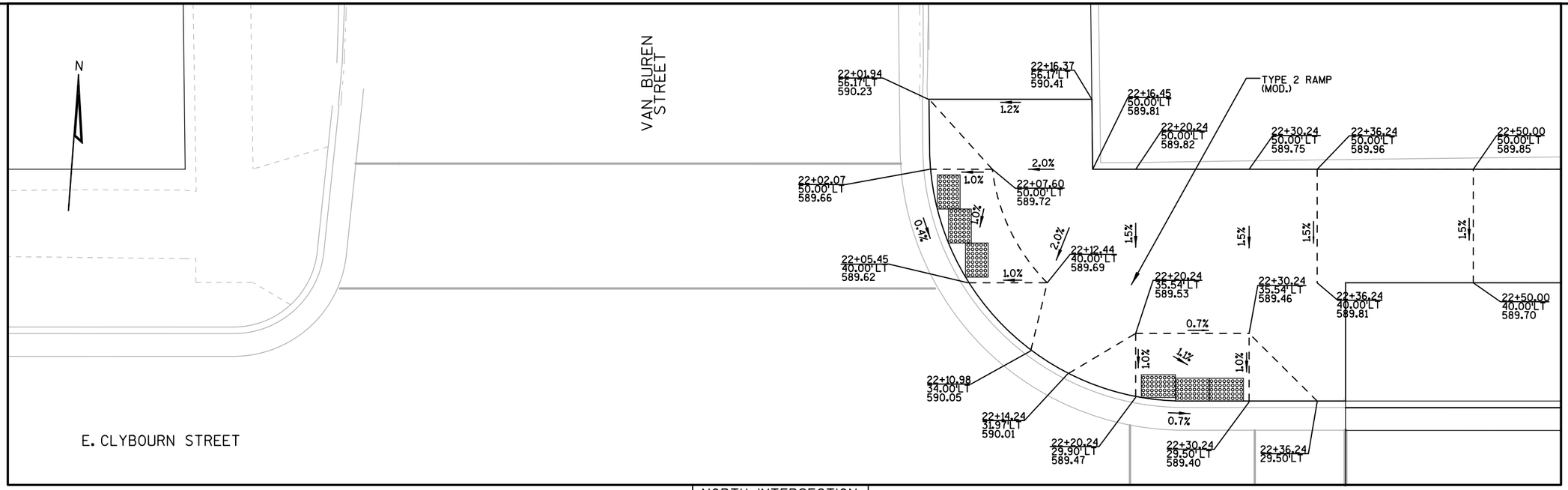


EAST MEDIAN

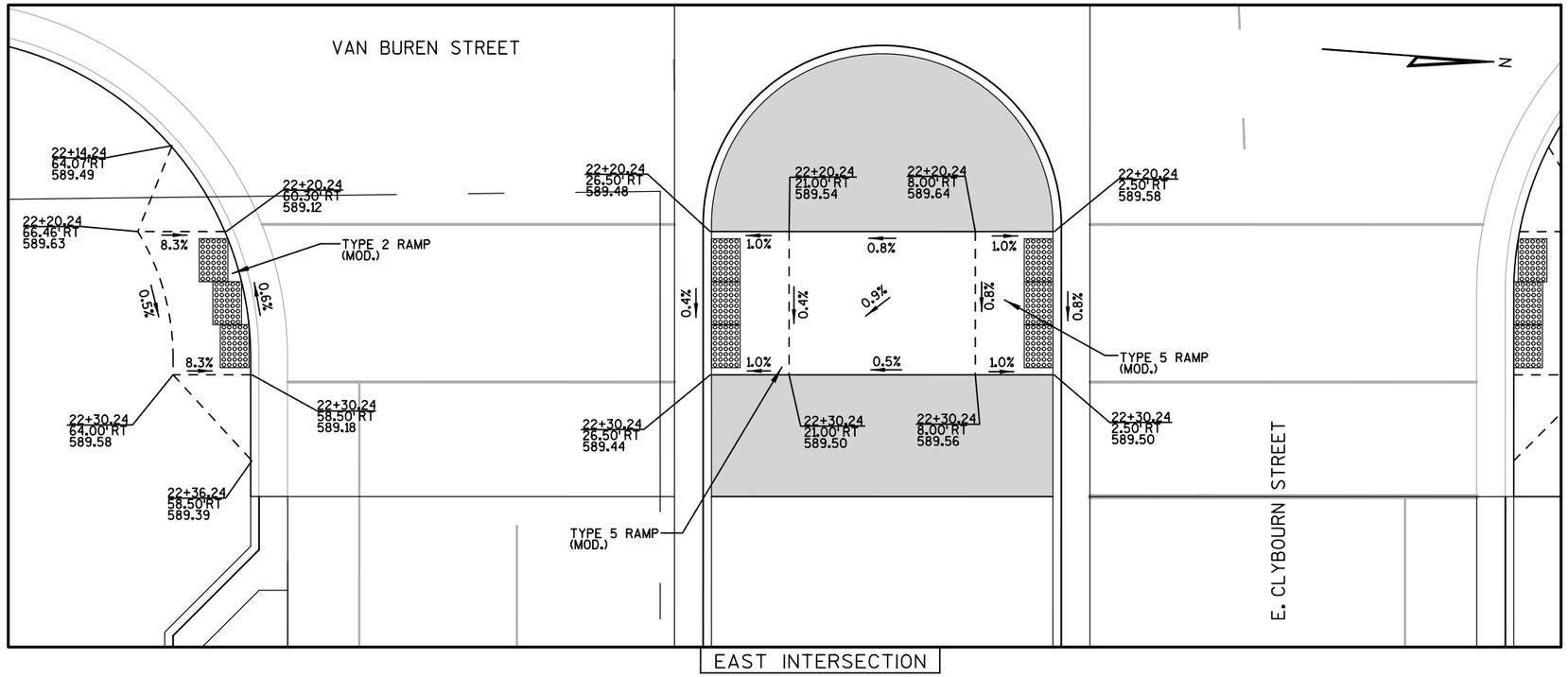


NORTHEAST QUADRANT

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CURB RAMP DETAILS - CLYBOURN ST AND N LINCOLN MEMORIAL DR	SHEET 37	E



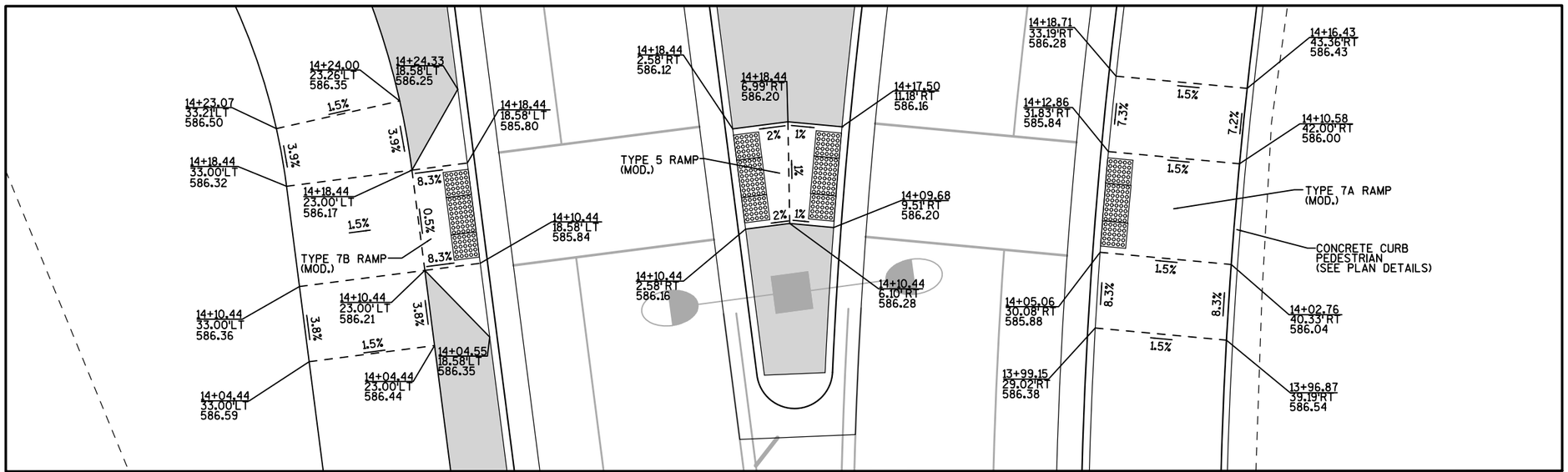
NORTH INTERSECTION



EAST INTERSECTION

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CURB RAMP DETAILS - CLYBOURN STREET AND VAN BUREN STREET	SHEET 38	E

2



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CURB RAMP DETAILS - LINCOLN MEMORIAL DRIVE	SHEET 39	E

2

LEGEND

- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE BUTT JOINT
- ASPHALT ROADWAY PAVEMENT REMOVAL AS EXCAVATION COMMON
- ASPHALT PARKING LOT PAVEMENT REMOVAL AS EXCAVATION COMMON
- REMOVING CURB & GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- SAWING ASPHALT
- XXXXX SAWING CONCRETE
- CLEARING AND GRUBBING
- TREE TO BE REMOVED - NOTIFY ENGINEER PRIOR TO REMOVAL

BEGIN REMOVING ASPHALTIC SURFACE BUTT JOINT
STA. 11+75.00 LM

END REMOVING ASPHALTIC SURFACE BUTT JOINT
STA. 12+00.00 LM

ASPHALT ROADWAY PAVEMENT REMOVAL TO BE PAID FOR AS EXCAVATION COMMON

BEGIN REMOVING CURB & GUTTER AND CONCRETE SIDEWALK
STA. 12+00.00 LM, 30.0' RT

BEGIN REMOVING FENCE
STA. 13+45.68 LM, 34.7' LT

END REMOVING FENCE
STA. 14+77.56 LM, 31.0' LT

BEGIN REMOVING FENCE
STA. 14+84.20 LM, 20.3' LT

BEGIN REMOVING FENCE
STA. 15+22.87 LM, 21.3' LT

END REMOVING FENCE
STA. 14+99.46 LM, 6.8' RT

BEGIN REMOVING FENCE
STA. 15+08.97 LM, 16.1' RT

END REMOVING CONCRETE SIDEWALK
STA. 15+55.42 LM, 86.5' RT

BEGIN REMOVING FENCE
STA. 51+69.70 CH, 70.4' RT

END REMOVING FENCE
STA. 16+90.11 LM, 106.3' RT

EX. R/W

+50 LM

12+00 LM

13+00 LM

14+00 LM

15+00 LM

16+00 LM

17+00 LM

HIGHWAY EASEMENT

IH 794 EB (ABOVE)

IH 794 EB ENTRANCE RAMP (ABOVE)

IH 794 WB (ABOVE)

N HARBOR DRIVE

MATCH LINE - STA. 17+50 LM

DATA TABLE

N HARBOR DRIVE

POINT NO.	STATION	OFFSET
1	13+26.75 LM	32.1' LT
2	13+45.13 LM	36.0' LT
3	13+45.13 LM	34.6' LT
4	14+50.00 LM	62.2' LT
5	15+00.00 LM	53.5' LT
6	15+85.69 LM	56.0' LT
7	16+24.91 LM	45.1' LT
8	16+85.99 LM	50.2' LT
9	17+47.42 LM	47.2' LT
10	17+40.10 LM	102.1' LT
11	14+34.80 LM	55.3' RT
12	14+92.19 LM	72.7' RT
13	16+03.34 LM	90.3' RT
14	16+10.95 LM	68.4' RT
15	16+76.21 LM	56.2' RT

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 40	E

DATA TABLE

N LINCOLN MEMORIAL DRIVE & E CHICAGO STREET

POINT NO.	STATION	OFFSET
1	50+79.22 CH	37.1' RT
2	51+00.00 CH	52.5' RT
3	51+50.00 CH	59.0' RT
4	50+77.88 CH	44.0' LT
5	51+50.00 CH	44.0' LT
6	51+76.00 CH	50.0' LT
7	51+76.00 CH	54.0' LT
8	51+97.48 CH	54.0' LT
9	52+01.66 CH	64.8' LT
10	20+48.50 LM	69.9' LT
11	21+99.39 LM	73.8' LT
12	22+85.51 LM	68.5' LT
13	17+98.77 LM	74.2' RT
14	18+06.33 LM	153.8' RT
15	18+23.46 LM	155.1' RT
16	18+26.42 LM	74.2' RT
17	18+62.31 LM	75.5' RT
18	18+62.30 LM	70.3' RT
19	19+00.00 LM	45.7' RT
20	19+50.00 LM	49.0' RT
21	20+00.00 LM	54.2' RT
22	20+50.00 LM	65.6' RT
23	21+00.00 LM	71.0' RT
24	22+50.00 LM	87.0' RT

LEGEND

- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE BUTT JOINT
- ASPHALT ROADWAY PAVEMENT REMOVAL AS EXCAVATION COMMON
- ASPHALT PARKING LOT PAVEMENT REMOVAL AS EXCAVATION COMMON
- REMOVING CURB & GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- SAWING ASPHALT
- XXXXX SAWING CONCRETE
- CLEARING AND GRUBBING
- TREE TO BE REMOVED - NOTIFY ENGINEER PRIOR TO REMOVAL

BEGIN REMOVING FENCE STA. 50+80.40 CH, 41.6' RT

BEGIN REMOVING CONCRETE SIDEWALK STA. 50+77.03 CH, 34.1' LT

BEGIN REMOVING FENCE STA. 50+77.96 CH, 40.4' RT

SAWCUT AND BEGIN REMOVING PAVEMENT STA. 51+00.00 CH

END REMOVING FENCE STA. 50+70.49 CH, 45.6' RT

END REMOVING FENCE STA. 51+73.73 CH, 34.0' RT

END REMOVING FENCE STA. 51+78.27 CH, 34.5' RT

END REMOVING FENCE STA. 52+00.88 CH, 34.1' RT

END REMOVING FENCE STA. 22+01.67 LM, 88.0' LT

BEGIN REMOVING FENCE STA. 18+61.05 LM, 11.4' RT

SAWCUT, END REMOVING CONCRETE SIDEWALK STA. 18+39.17 LM, 74.7' RT

BEGIN REMOVING FENCE STA. 17+99.43 LM, 109.0' RT

E CHICAGO STREET

IH 794 EB (ABOVE)

IH 794 EB ENTRANCE RAMP (ABOVE)

IH 794 WB (ABOVE)

IH 794 WB EXIT RAMP (ABOVE)

MATCH LINE - STA. 17+50 LM

MATCH LINE - STA. 23+00 LM

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET E

FILE NAME : c:\pwv8i-local\baker_projects\steve.huberty\d0330711\021201_rm.dgn PLOT DATE : 7/31/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

2

LEGEND

- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE BUTT JOINT
- ASPHALT ROADWAY PAVEMENT REMOVAL AS EXCAVATION COMMON
- ASPHALT PARKING LOT PAVEMENT REMOVAL AS EXCAVATION COMMON
- REMOVING CURB & GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- SAWING ASPHALT
- SAWING CONCRETE
- CLEARING AND GRUBBING
- TREE TO BE REMOVED - NOTIFY ENGINEER PRIOR TO REMOVAL

IH 794 WB (ABOVE)

IH 794 EB ENTRANCE RAMP (ABOVE)

IH 794 WB EXIT RAMP

BEGIN REMOVING CURB & GUTTER STA. 23+33.80 LM, 1.9' LT

REMOVING BOLLARDS

REMOVING BOLLARDS

REMOVING CONCRETE SIDEWALK

REMOVING BOLLARDS

END REMOVING CURB & GUTTER STA. 23+44.33 LM, 58.8' RT

BEGIN REMOVING CURB & GUTTER STA. 23+93.22 LM, 188.2' RT

END REMOVING FENCE STA. 23+61.28 LM, 192.5' RT

BEGIN REMOVING CONCRETE BARRIER STA. 424+65.47 LN, 44.4' LT

BEGIN REMOVING PAVEMENT STA. 424+66.93 LN, 23.3' LT

BEGIN REMOVING CONCRETE BARRIER STA. 424+68.44 LN, 2.1' LT

END REMOVING CONCRETE BARRIER STA. 425+80.89 LN, 51.8' LT

END REMOVING PAVEMENT STA. 426+40.47 LN, 44.4' LT

END REMOVING CONCRETE BARRIER STA. 425+84.67 LN, 20.8' LT

BEGIN REMOVING FENCE STA. 327+89.44 LS, 36.6' LT

REMOVING BOLLARD

BEGIN REMOVING FENCE STA. 327+88.23 LS, 8.2' RT

ASPHALT ROADWAY PAVEMENT REMOVAL TO BE PAID FOR AS EXCAVATION COMMON

MATCH LINE - STA. 23+00 LM

MATCH LINE - STA. 328+00 LS

MATCH LINE - STA. 28+00 LM

MATCH LINE - STA. 428+00 LN

DATA TABLE

N LINCOLN MEMORIAL DRIVE & IH 794 RAMPS

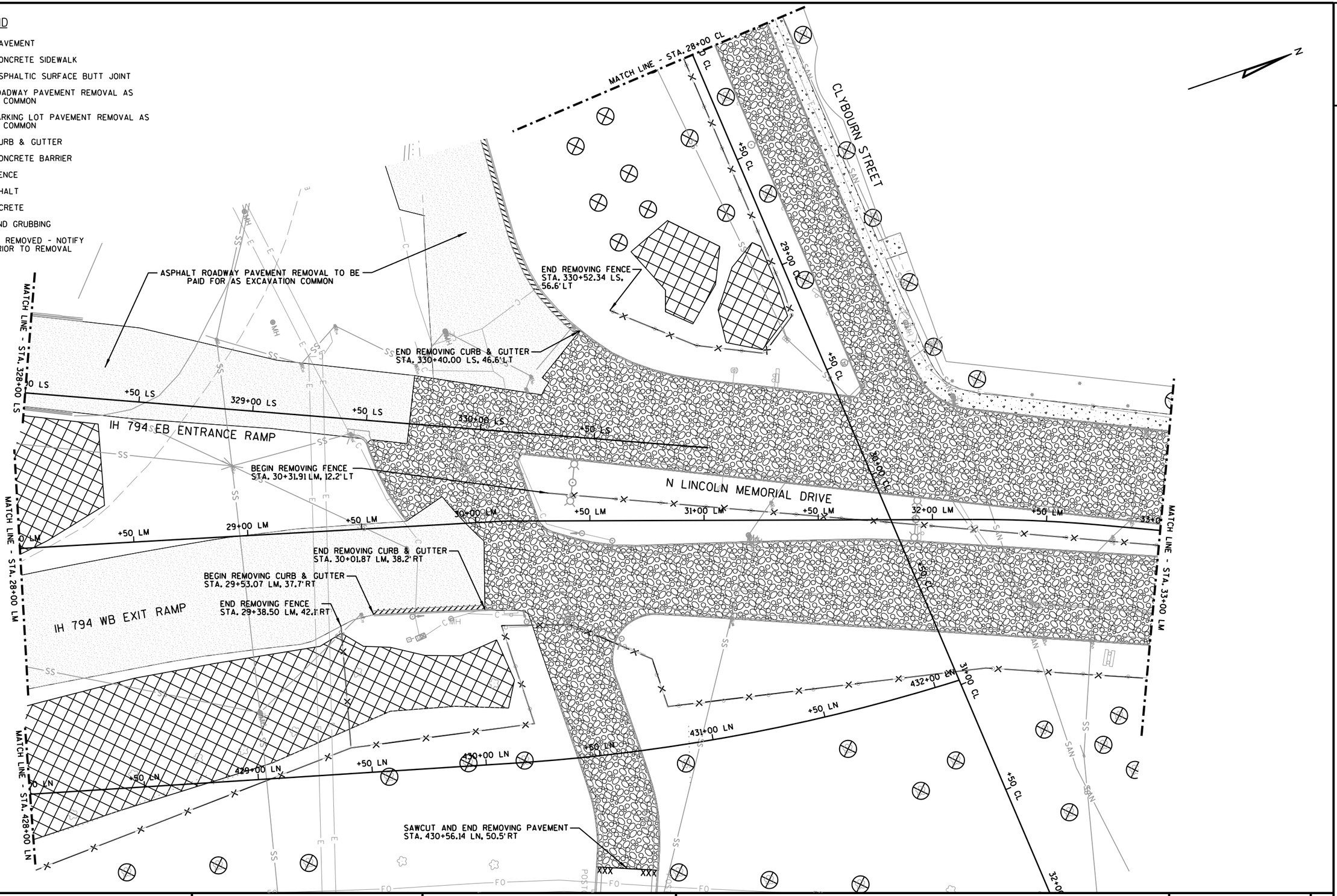
POINT NO.	STATION	OFFSET
1	23+49.63 LM	113.0' RT
2	23+53.10 LM	135.3' RT
3	23+51.41 LM	193.8' RT
4	23+63.09 LM	193.1' RT
5	23+91.39 LM	188.6' RT

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 42	E

2

LEGEND

- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE BUTT JOINT
- ASPHALT ROADWAY PAVEMENT REMOVAL AS EXCAVATION COMMON
- ASPHALT PARKING LOT PAVEMENT REMOVAL AS EXCAVATION COMMON
- REMOVING CURB & GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- SAWING ASPHALT
- SAWING CONCRETE
- CLEARING AND GRUBBING
- TREE TO BE REMOVED - NOTIFY ENGINEER PRIOR TO REMOVAL



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 43	E

FILE NAME : c:\pwv8i-local\baker_projects\steve.huberty\d0330711\021203_rm.dgn PLOT DATE : 7/31/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE BUTT JOINT
- ASPHALT ROADWAY PAVEMENT REMOVAL AS EXCAVATION COMMON
- ASPHALT PARKING LOT PAVEMENT REMOVAL AS EXCAVATION COMMON
- REMOVING CURB & GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- SAWING ASPHALT
- SAWING CONCRETE
- CLEARING AND GRUBBING
- TREE TO BE REMOVED - NOTIFY ENGINEER PRIOR TO REMOVAL

DATA TABLE

N LINCOLN MEMORIAL DRIVE

POINT NO.	STATION	OFFSET
1	34+35.03 LM	41.0' LT
2	34+35.03 LM	2.3' LT
3	34+89.51 LM	1.4' LT
4	34+89.81 LM	8.4' RT
5	34+35.03 LM	10.1' RT
6	34+35.03 LM	45.0' RT
7	34+76.74 LM	43.2' RT
8	35+14.48 LM	42.4' RT
9	35+30.38 LM	29.0' RT
10	35+32.90 LM	31.9' RT
11	35+00.12 LM	59.7' RT

END REMOVING CONCRETE SIDEWALK
STA. 34+33.91 LM, 45.5' LT

BEGIN REMOVING CONCRETE SIDEWALK
STA. 34+18.56 LM, 41.6' LT

END REMOVING CONCRETE SIDEWALK
STA. 33+96.00 LM, 51.1' LT

MATCH LINE - STA. 33+00 LM

BEGIN REMOVING CURB & GUTTER
STA. 34+48.03 LM, 50.5' RT

END REMOVING FENCE
STA. 33+41.55 LM, 6.3' RT

ASPHALT ROADWAY PAVEMENT REMOVAL TO BE PAID FOR AS EXCAVATION COMMON

END REMOVING FENCE
STA. 35+21.01 LM, 179.1' RT

MICHIGAN STREET (USH 18)

N LINCOLN MEMORIAL DRIVE

MICHIGAN STREET

34+00 LM, +50 LM, 35+00 LM, +50 LM, 36+00 LM, +50 LM, 37+00 LM, +50 LM, 38+00 LM

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 44	E

2

LEGEND

- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE BUTT JOINT
- ASPHALT ROADWAY PAVEMENT REMOVAL AS EXCAVATION COMMON
- ASPHALT PARKING LOT PAVEMENT REMOVAL AS EXCAVATION COMMON
- ////// REMOVING CURB & GUTTER
- REMOVING CONCRETE BARRIER
- —×— REMOVING FENCE
- SAWING ASPHALT
- XXXXX SAWING CONCRETE
- CLEARING AND GRUBBING
- TREE TO BE REMOVED - NOTIFY ENGINEER PRIOR TO REMOVAL

DATA TABLE

CLYBOURN STREET & VAN BUREN STREET

POINT NO.	STATION	OFFSET
1	63+20.02 JE	39.0' RT
2	63+20.02 JE	26.0' RT
3	63+44.33 JE	26.0' RT
4	63+44.33 JE	39.0' RT
5	22+00.41 CL	29.0' RT
6	22+00.41 CL	0.0' RT

CLYBOURN STREET

VAN BUREN STREET

JACKSON STREET

IH 794 WB ENTRANCE RAMP (ABOVE)

IH 794 WB (ABOVE)

JACKSON EB EXIT RAMP TO VAN BUREN STREET

20+00 CL

21+00 CL

22+00 CL

+50 CL

+50 VB

65+00 VB

64+00 VB

63+00 VB

62+00 VB

60+00 JE

61+00 JE

62+00 JE

63+00 JE

+50 JE

REMOVE THE MINIMUM NUMBER OF EXISTING CONCRETE PAVEMENT PANELS IN ORDER TO REMOVE PIER FOOTING

REMOVING ASPHALTIC SIDEWALK PAVEMENT TO BE PAID FOR AS EXCAVATION COMMON

BEGIN REMOVING CONCRETE SIDEWALK STA. 22+38.74 CL, 50.0' LT

BEGIN REMOVING CURB & GUTTER STA. 22+38.74 CL, 27.0' LT

BEGIN REMOVING PAVEMENT STA. 22+58.74 CL, 27.0' LT

MATCH LINE - STA. 23+00 CL

BEGIN REMOVING CURB & GUTTER STA. 22+86.49 CL, 45.0' RT

REMOVING ASPHALTIC ROADWAY PAVEMENT TO BE PAID FOR AS EXCAVATION COMMON

REMOVING ASPHALTIC SIDEWALK PAVEMENT TO BE PAID FOR AS EXCAVATION COMMON

REMOVING ASPHALTIC PAVEMENT TO BE PAID AS EXCAVATION COMMON

END REMOVING PAVEMENT STA. 63+43.14 VB, 8.0' LT

END REMOVING SIDEWALK STA. 63+15.48 VB, 24.8' RT

REMOVING CONCRETE SIDEWALK

BEGIN REMOVING PAVEMENT STA. 62+51.19 VB, 8.0' LT

END REMOVING CURB & GUTTER STA. 62+38.92 VB, 90.5' RT

END REMOVING FENCE STA. 61+79.71 VB, 32.8' RT

N

2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 45	E

FILE NAME : c:\pwv8i-local\baker_projects\steve.huberty\d0330711\021205_rm.dgn PLOT DATE : 7/31/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

2

CLYBOURN STREET

MATCH LINE - STA. 23+00 CL

MATCH LINE - STA. 28+00 CL

IH 794 WB ENTRANCE RAMP

IH 794 EB EXIT RAMP

SAWCUT AND BEGIN REMOVING PAVEMENT
STA. 27+19.75 CL, 64.4' LT

BEGIN REMOVING CONCRETE SIDEWALK
STA. 27+62.13 CL, 56.5' LT

END REMOVING CONCRETE SIDEWALK
STA. 23+79.87 CL, 23.7' RT

BEGIN REMOVING FENCE
STA. 23+70.17 CL, 32.4' RT

REMOVING BOLLARDS

REMOVING CONCRETE SIDEWALK

REMOVING CONCRETE
SIDEWALK

BEGIN REMOVING CURB & GUTTER
STA. 25+57.01 CL, 32.5' RT

END REMOVING CURB & GUTTER
STA. 25+53.79 CL, 76.2' RT

REMOVING BOLLARDS

REMOVING BOLLARDS

ASPHALT ROADWAY PAVEMENT REMOVAL TO BE
PAID FOR AS EXCAVATION COMMON

BEGIN REMOVING CURB & GUTTER
STA. 27+94.47 CL, 97.4' RT

REMOVING CURB & GUTTER

END REMOVING FENCE
STA. 25+58.45 CL, 76.2' RT

REMOVING BOLLARDS

END REMOVING CURB & GUTTER
STA. 23+81.11 CL, 170.9' RT

REMOVING BOLLARDS

REMOVING CONCRETE SIDEWALK

REMOVING BOLLARDS

REMOVING BOLLARDS

END REMOVING PAVEMENT
STA. 26+65.68 CL, 171.1' RT

REMOVING BOLLARDS

REMOVING CONCRETE
SIDEWALK

REMOVING CURB & GUTTER

BEGIN REMOVING FENCE
STA. 24+80.26 CL, 214.5' RT

BEGIN REMOVING CURB & GUTTER
STA. 24+20.52 CL, 234+7' RT

N

LEGEND

- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE BUTT JOINT
- ASPHALT ROADWAY PAVEMENT REMOVAL AS EXCAVATION COMMON
- ASPHALT PARKING LOT PAVEMENT REMOVAL AS EXCAVATION COMMON
- REMOVING CURB & GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- SAWING ASPHALT
- XXXXX SAWING CONCRETE
- CLEARING AND GRUBBING
- TREE TO BE REMOVED - NOTIFY ENGINEER PRIOR TO REMOVAL

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 46	E

2

LEGEND

- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE BUTT JOINT
- ASPHALT ROADWAY PAVEMENT REMOVAL AS EXCAVATION COMMON
- ASPHALT PARKING LOT PAVEMENT REMOVAL AS EXCAVATION COMMON
- ///// REMOVING CURB & GUTTER
- REMOVING CONCRETE BARRIER
- —×— REMOVING FENCE
- SAWING ASPHALT
- XXXXX SAWING CONCRETE
- CLEARING AND GRUBBING
- TREE TO BE REMOVED - NOTIFY ENGINEER PRIOR TO REMOVAL

DATA TABLE

LAKE INTERCHANGE PARKING LOT

POINT NO.	STATION	OFFSET
1	209+55.14 LE	105.2' RT
2	209+08.24 LE	91.5' RT
3	208+19.92 LE	85.4' RT

EX. R/W

EX. R/W

EX. R/W

IH 794 EB (ABOVE)

CONTINUED FROM PREVIOUS SHEETS

IH 794 EB EXIT RAMP

IH 794 WB ENTRANCE RAMP

209+00 LE

31+50 LE

100+80 LE

100+60 LE

31+50 LE

31+50 LE

BOLLARD

MATCHLINE A

2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 47	E

FILE NAME : c:\pwv8i-local\baker_projects\steve.huberty\d0330711\021207_rm.dgn PLOT DATE : 7/31/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

CONTINUED FROM PREVIOUS SHEETS

+50 LE
202+00 LE
+50 LE
+50 VB
203+00 LE
+50 LE
204+00 LE
+50 LE
205+00 LE
+50 LE
61+00 VB
+50 VB
60+00 VB
+50 LW
106+00 LW
+50 LW
107+00 LW
206+00 LE
+50 LW
108+00 LW
207+00 LE
+50 LE

N

ASPHALT PARKING LOT PAVEMENT REMOVAL AS EXCAVATION COMMON

ST PAUL AVENUE

VAN BUREN STREET

IH 794 EB (ABOVE)

IH 794 EB EXIT RAMP

IH 794 WB ENTRANCE RAMP

IH 794 WB (ABOVE)

2

BEGIN REMOVING FENCE
STA. 60+18.41 VB, 34.6' RT

END REMOVING FENCE
STA. 60+13.98 VB, 33.6' RT

1

BEGIN REMOVING FENCE
STA. 206+06.16 LE, 230.1' RT

MATCHLINE A

DATA TABLE

LAKE INTERCHANGE PARKING LOT

POINT NO.	STATION	OFFSET
1	205+80.78 LE	66.5' RT
2	203+10.24 LE	71.1' RT

LEGEND

- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE BUTT JOINT
- ASPHALT ROADWAY PAVEMENT REMOVAL AS EXCAVATION COMMON
- ASPHALT PARKING LOT PAVEMENT REMOVAL AS EXCAVATION COMMON
- REMOVING CURB & GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- SAWING ASPHALT
- XXXXX SAWING CONCRETE
- CLEARING AND GRUBBING
- TREE TO BE REMOVED - NOTIFY ENGINEER PRIOR TO REMOVAL

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 48	E

FILE NAME : c:\pwv8i-local\baker_projects\steve.huberty\d0330711\021208_rm.dgn
PLOT DATE : 7/31/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

2

ADJUSTING MANHOLE COVERS	
STATION	OFFSET
13+19.87 LM	20.98' RT
13+96.44 LM	0.94' RT
17+13.42 LM	37.99' RT

ADJUSTING WATER BOXES	
STATION	OFFSET
12+52.31 LM	10.12' RT

DATA TABLE

N LINCOLN MEMORIAL DRIVE

POINT NO.	STATION	OFFSET	COMMENTS
1	12+00.00 LM	16.00' LT	BEGIN CURB & GUTTER
2	12+00.00 LM	16.00' RT	BEGIN CURB & GUTTER
3	12+61.97 LM	16.00' RT	BEGIN 384' RADIUS
4	13+98.84 LM	5.00' RT	5' RADIUS
5	12+61.97 LM	400.00' RT	400' RADIUS
6	14+27.38 LM	16.19' RT	END 400' RADIUS, BEGIN 400' RADIUS (P.C.C.)
7	14+23.45 LM	31.71' RT	END 384' RADIUS, BEGIN 416' RADIUS (P.C.C.)
8	16+00.16 LM	37.59' RT	BEGIN TAPER
9	16+17.17 LM	44.72' RT	END TAPER, BEGIN 426' RADIUS
10	16+62.51 LM	5.00' RT	5' RADIUS
11	16+83.11 LM	32.64' RT	END 426' RADIUS
12	15+25.43 LM	371.60' LT	400' RADIUS
13	12+61.97 LM	400.00' RT	384' RADIUS
14	15+25.43 LM	371.60' LT	416' RADIUS

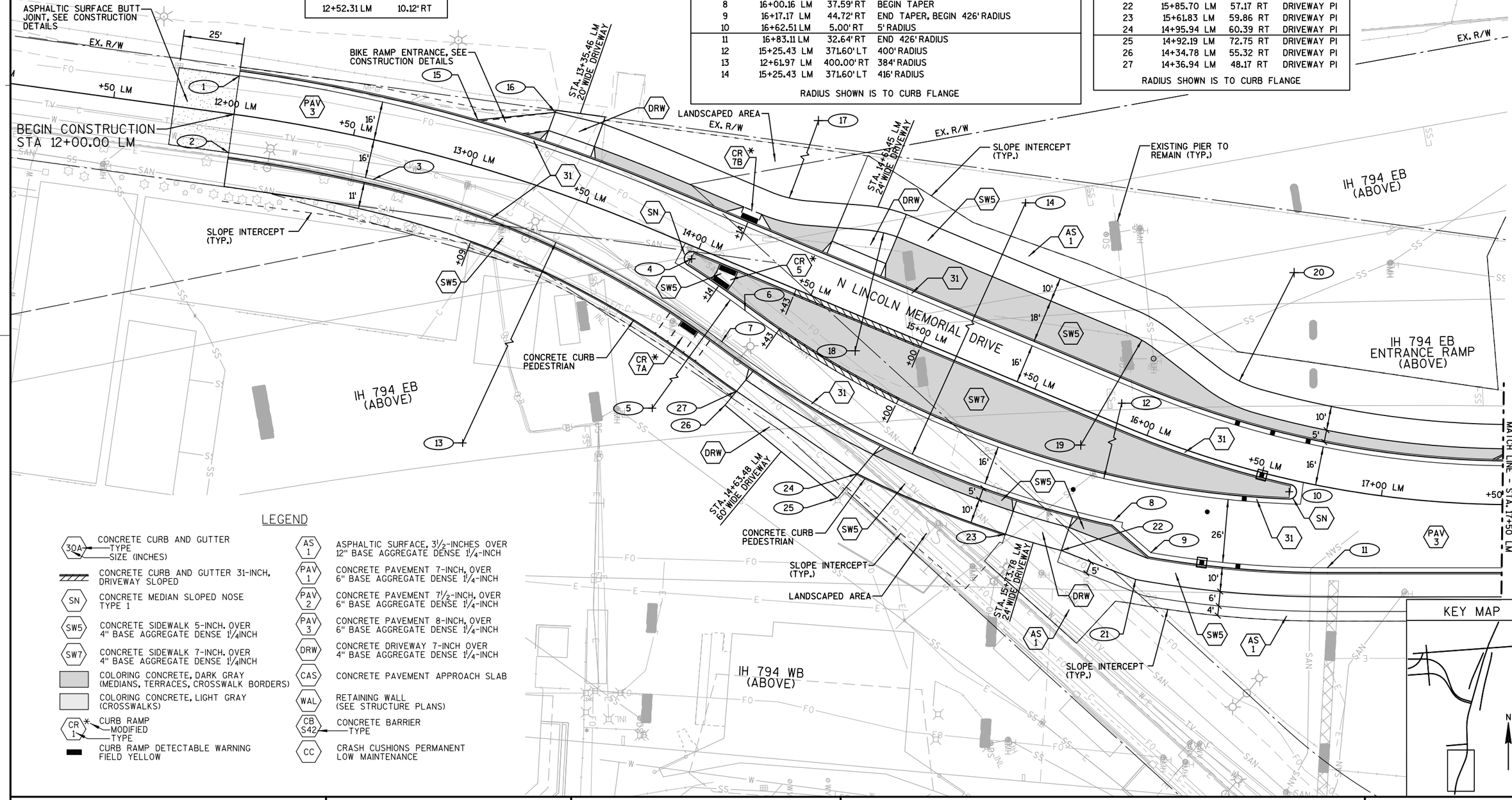
RADIUS SHOWN IS TO CURB FLANGE

DATA TABLE

N LINCOLN MEMORIAL DRIVE

POINT NO.	STATION	OFFSET	COMMENTS
15	12+97.49 LM	18.58 LT	SIDEWALK PI
16	13+26.00 LM	31.00 LT	DRIVEWAY PI
17	14+18.44 LM	83.00 LT	50' RADIUS
18	14+75.63 LM	14.00 RT	50' RADIUS
19	15+76.36 LM	14.00 RT	50' RADIUS
20	16.40.16 LM	83.00 LT	50' RADIUS
21	16+15.13 LM	57.23 RT	SIDEWALK PI
22	15+85.70 LM	57.17 RT	DRIVEWAY PI
23	15+61.83 LM	59.86 RT	DRIVEWAY PI
24	14+95.94 LM	60.39 RT	DRIVEWAY PI
25	14+92.19 LM	72.75 RT	DRIVEWAY PI
26	14+34.78 LM	55.32 RT	DRIVEWAY PI
27	14+36.94 LM	48.17 RT	DRIVEWAY PI

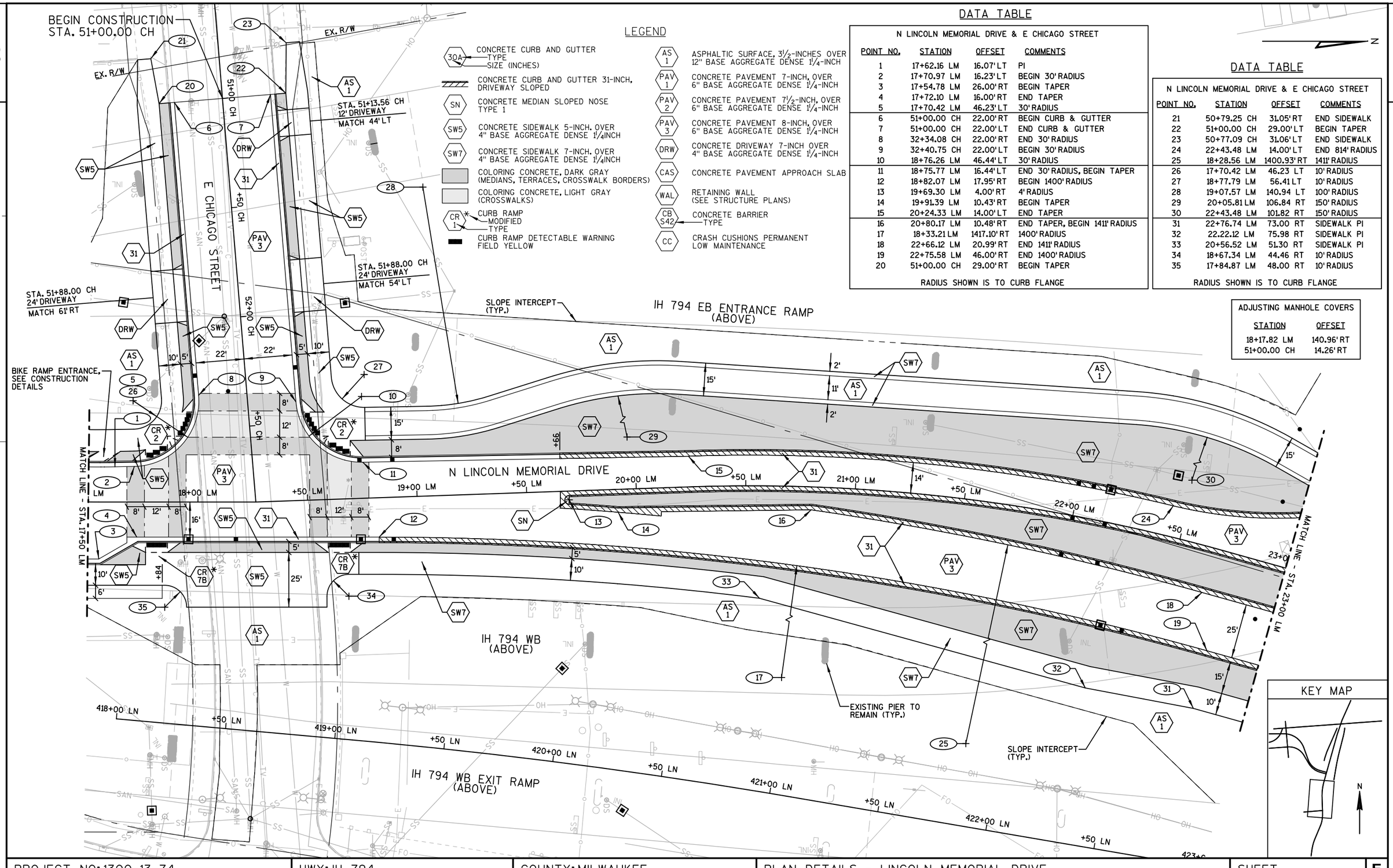
RADIUS SHOWN IS TO CURB FLANGE



LEGEND

30A — CONCRETE CURB AND GUTTER, TYPE, SIZE (INCHES)	AS 1 — ASPHALTIC SURFACE, 3½-INCHES OVER 12" BASE AGGREGATE DENSE 1¼-INCH
CONCRETE CURB AND GUTTER 31-INCH, DRIVEWAY SLOPED	PAV 1 — CONCRETE PAVEMENT 7-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1	PAV 2 — CONCRETE PAVEMENT 7½-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
SW5 — CONCRETE SIDEWALK 5-INCH, OVER 4" BASE AGGREGATE DENSE 1¼INCH	PAV 3 — CONCRETE PAVEMENT 8-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
SW7 — CONCRETE SIDEWALK 7-INCH, OVER 4" BASE AGGREGATE DENSE 1¼INCH	DRW — CONCRETE DRIVEWAY 7-INCH OVER 4" BASE AGGREGATE DENSE 1¼-INCH
COLORING CONCRETE, DARK GRAY (MEDIANS, TERRACES, CROSSWALK BORDERS)	CAS — CONCRETE PAVEMENT APPROACH SLAB
COLORING CONCRETE, LIGHT GRAY (CROSSWALKS)	WAL — RETAINING WALL (SEE STRUCTURE PLANS)
CR 1 — CURB RAMP, MODIFIED, TYPE	CB S42 — CONCRETE BARRIER, TYPE
CURB RAMP DETECTABLE WARNING FIELD YELLOW	CC — CRASH CUSHIONS PERMANENT LOW MAINTENANCE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN DETAILS - LINCOLN MEMORIAL DRIVE	SHEET 49	E



LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE, SIZE (INCHES))
- CONCRETE CURB AND GUTTER 31-INCH, DRIVEWAY SLOPED
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH, OVER 4" BASE AGGREGATE DENSE 1¼INCH
- SW7 — CONCRETE SIDEWALK 7-INCH, OVER 4" BASE AGGREGATE DENSE 1¼INCH
- COLORING CONCRETE, DARK GRAY (MEDIANS, TERRACES, CROSSWALK BORDERS)
- COLORING CONCRETE, LIGHT GRAY (CROSSWALKS)
- CR 1 * — CURB RAMP (MODIFIED TYPE)
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- AS 1 — ASPHALTIC SURFACE, 3½-INCHES OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 1 — CONCRETE PAVEMENT 7-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 2 — CONCRETE PAVEMENT 7½-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — CONCRETE PAVEMENT 8-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH OVER 4" BASE AGGREGATE DENSE 1¼-INCH
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- WAL — RETAINING WALL (SEE STRUCTURE PLANS)
- CB S42 — CONCRETE BARRIER (TYPE)
- CC — CRASH CUSHIONS PERMANENT LOW MAINTENANCE

DATA TABLE

N LINCOLN MEMORIAL DRIVE & E CHICAGO STREET

POINT NO.	STATION	OFFSET	COMMENTS
1	17+62.16 LM	16.07' LT	PI
2	17+70.97 LM	16.23' LT	BEGIN 30' RADIUS
3	17+54.78 LM	26.00' RT	BEGIN TAPER
4	17+72.10 LM	16.00' RT	END TAPER
5	17+70.42 LM	46.23' LT	30' RADIUS
6	51+00.00 CH	22.00' RT	BEGIN CURB & GUTTER
7	51+00.00 CH	22.00' LT	END CURB & GUTTER
8	32+34.08 CH	22.00' RT	END 30' RADIUS
9	32+40.75 CH	22.00' LT	BEGIN 30' RADIUS
10	18+76.26 LM	46.44' LT	30' RADIUS
11	18+75.77 LM	16.44' LT	END 30' RADIUS, BEGIN TAPER
12	18+82.07 LM	17.95' RT	BEGIN 1400' RADIUS
13	19+69.30 LM	4.00' RT	4' RADIUS
14	19+91.39 LM	10.43' RT	BEGIN TAPER
15	20+24.33 LM	14.00' LT	END TAPER
16	20+80.17 LM	10.48' RT	END TAPER, BEGIN 1411' RADIUS
17	18+33.21 LM	1417.10' RT	1400' RADIUS
18	22+66.12 LM	20.99' RT	END 1411' RADIUS
19	22+75.58 LM	46.00' RT	END 1400' RADIUS
20	51+00.00 CH	29.00' RT	BEGIN TAPER

RADIUS SHOWN IS TO CURB FLANGE

DATA TABLE

N LINCOLN MEMORIAL DRIVE & E CHICAGO STREET

POINT NO.	STATION	OFFSET	COMMENTS
21	50+79.25 CH	31.05' RT	END SIDEWALK
22	51+00.00 CH	29.00' LT	BEGIN TAPER
23	50+77.09 CH	31.06' LT	END SIDEWALK
24	22+43.48 LM	14.00' LT	END 814' RADIUS
25	18+28.56 LM	1400.93' RT	1411' RADIUS
26	17+70.42 LM	46.23 LT	10' RADIUS
27	18+77.79 LM	56.41 LT	10' RADIUS
28	19+07.57 LM	140.94 LT	100' RADIUS
29	20+05.81 LM	106.84 RT	150' RADIUS
30	22+43.48 LM	101.82 RT	150' RADIUS
31	22+76.74 LM	73.00 RT	SIDEWALK PI
32	22.22.12 LM	75.98 RT	SIDEWALK PI
33	20+56.52 LM	51.30 RT	SIDEWALK PI
34	18+67.34 LM	44.46 RT	10' RADIUS
35	17+84.87 LM	48.00 RT	10' RADIUS

RADIUS SHOWN IS TO CURB FLANGE

ADJUSTING MANHOLE COVERS

STATION	OFFSET
18+17.82 LM	140.96' RT
51+00.00 CH	14.26' RT

KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN DETAILS - LINCOLN MEMORIAL DRIVE	SHEET 50 E

LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE, SIZE (INCHES))
- CONCRETE CURB AND GUTTER 31-INCH, DRIVEWAY SLOPED
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH, OVER 4" BASE AGGREGATE DENSE 1¼INCH
- SW7 — CONCRETE SIDEWALK 7-INCH, OVER 4" BASE AGGREGATE DENSE 1¼INCH
- COLORING CONCRETE, DARK GRAY (MEDIANS, TERRACES, CROSSWALK BORDERS)
- COLORING CONCRETE, LIGHT GRAY (CROSSWALKS)
- CR 1* — CURB RAMP MODIFIED TYPE
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- AS 1 — ASPHALTIC SURFACE, 3½-INCHES OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 1 — CONCRETE PAVEMENT 7-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 2 — CONCRETE PAVEMENT 7½-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — CONCRETE PAVEMENT 8-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH OVER 4" BASE AGGREGATE DENSE 1¼-INCH
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- WAL — RETAINING WALL (SEE STRUCTURE PLANS)
- CB S42 — CONCRETE BARRIER TYPE
- CC — CRASH CUSHIONS PERMANENT LOW MAINTENANCE

N

MATCH LINE - STA. 208+50 LE

MATCH LINE - STA. 109+50 LW

SLOPE INTERCEPT (TYP.)

SIGN STRUCTURE S-40-793

REVERSE SLOPE

IH 794 EB EXIT RAMP

IH 794 WB ENTRANCE RAMP

IH 794 EB ENTRANCE RAMP (ABOVE)

** ONLY 9-INCHES OF BASE AGGREGATE DENSE 1¼-INCH REQUIRED IN THIS AREA

MATCH LINE - STA. 327+50 LS

SIGN STRUCTURE S-40-794

LANDSCAPED AREA

CONCRETE SURFACE DRAIN STA. 26+75.00 LM

CONCRETE SURFACE DRAIN STA. 27+45.00 LM

END DRIVEWAY SLOPED CURB & GUTTER

MATCH LINE - STA. 23+00 LM

N LINCOLN MEMORIAL DRIVE

LANDSCAPED MEDIAN

MATCH LINE - STA. 28+00 LM

STA. 424+85.91 LN

LANDSCAPED AREA

END RETAINING WALL R-40-628

EXISTING PIER TO REMAIN (TYP.)

IH 794 WB EXIT RAMP

BEGIN RETAINING WALL R-40-628

MATCH LINE - STA. 428+00 LN

KEY MAP

DATA TABLE

N LINCOLN MEMORIAL DRIVE & IH 794 RAMPS

POINT NO.	STATION	OFFSET	COMMENTS
1	23+06.70 LM	26.25' LT	BEGIN 60' RADIUS
2	22+85.56 LM	82.40' LT	60' RADIUS
3	209+53.28 LE	46.43' RT	END 60' RADIUS
4	209+00.50 LE	36.22' RT	BEGIN TAPER
5	208+56.24 LE	32.83' RT	END TAPER
6	208+90.05 LE	2.00' LT	BEGIN TAPER
7	209+25.97 LE	0.00' RT	END TAPER
8	109+67.77 LW	4.00' RT	PI
9	109+74.47 LW	34.00' LT	END 65' RADIUS, BEGIN 230' RADIUS (P.C.C.)
10	110+53.17 LW	0.00' RT	BEGIN 70' RADIUS
11	209+74.34 LE	0.00' RT	BEGIN 80' RADIUS
12	109+74.47 LW	99.00' LT	65' RADIUS
13	24+41.72 LM	47.68' LT	5' RADIUS
14	24+39.72 LM	17.00' LT	3' RADIUS
15	24+82.42 LM	37.05' LT	END 75' RADIUS
16	25+08.19 LM	58.65' LT	BEGIN 65' RADIUS
17	25+95.50 LM	20.00' LT	6' RADIUS
18	26+60.54 LM	43.80' LT	PI
19	27+39.44 LM	0.00' RT	BEGIN TAPER
20	25+11.26 LM	5.00' RT	5' RADIUS
21	24+40.24 LM	13.88' RT	3' RADIUS
22	24+40.19 LM	3.00' RT	3' RADIUS
23	209+52.91 LE	29.00' RT	5' RADIUS
24	23+49.35 LM	20.22' LT	3' RADIUS
25	23+63.76 LM	20.28' LT	3' RADIUS
26	24+01.17 LM	24.11' LT	6' RADIUS
27	23+29.48 LM	0.00' RT	BEGIN 70' RADIUS
28	23+34.92 LM	21.00' RT	BEGIN 80' RADIUS
29	23+58.93 LM	12.05' RT	5' RADIUS
30	23+37.97 LM	46.00' RT	BEGIN 30' RADIUS
31	23+37.97 LM	76.00' RT	30' RADIUS
32	23+67.91 LM	74.04' RT	END 30' RADIUS
33	23+68.45 LM	82.36' RT	END CURB & GUTTER
34	23+90.58 LM	82.26' RT	BEGIN CURB & GUTTER
35	23+99.53 LM	82.22' RT	END CURB & GUTTER
36	24+26.53 LM	82.11' RT	BEGIN CURB & GUTTER, BEGIN 25' RADIUS
37	24+51.53 LM	82.00' RT	25' RADIUS
38	24+51.53 LM	57.00' RT	END 25' RADIUS
39	24+70.89 LM	29.00' RT	3' RADIUS
40	27+36.71 LM	32.00' RT	BEGIN TAPER
41	427+85.33 LN	6.00' LT	BEGIN CURB & GUTTER
42	109+94.02 LW	74.93' LT	75' RADIUS
43	209+60.54 LE	75.80' RT	END CURB & GUTTER
44	209+52.79 LE	62.61' RT	PI
45	208+98.83 LE	52.05' RT	PI
46	23+96.01 LM	76.85' RT	3.5' RADIUS
47	25+77.01 LM	174.52 LT	100' RADIUS
48	27+67.12 LM	13.71 LT	100' RADIUS

RADIUS SHOWN IS TO CURB FLANGE

LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- CONCRETE CURB AND GUTTER 31-INCH, DRIVEWAY SLOPED
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH. OVER 4" BASE AGGREGATE DENSE 1¼INCH
- SW7 — CONCRETE SIDEWALK 7-INCH. OVER 4" BASE AGGREGATE DENSE 1¼INCH
- COLORING CONCRETE, DARK GRAY (MEDIANS, TERRACES, CROSSWALK BORDERS)
- COLORING CONCRETE, LIGHT GRAY (CROSSWALKS)
- CR 1* — CURB RAMP MODIFIED TYPE
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- AS 1 — ASPHALTIC SURFACE, 3½-INCHES OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 1 — CONCRETE PAVEMENT 7-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 2 — CONCRETE PAVEMENT 7½-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — CONCRETE PAVEMENT 8-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH OVER 4" BASE AGGREGATE DENSE 1¼-INCH
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- WAL — RETAINING WALL (SEE STRUCTURE PLANS)
- CB S42 — CONCRETE BARRIER (TYPE)
- CC — CRASH CUSHIONS PERMANENT LOW MAINTENANCE

ADJUSTING MANHOLE COVERS	
STATION	OFFSET
29+82.47 CL	46.21' LT

** ONLY 9-INCHES OF BASE AGGREGATE DENSE 1¼-INCH REQUIRED IN THIS AREA

*** CONSTRUCT DRIVEWAY SLOPE CURB AT APPROACHES TO CRASH CUSHIONS PERMANENT LOW MAINTENANCE.

MATCH LINE - STA. 28+00 CL

CLYBOURN STREET

LANDSCAPED MEDIAN

CONCRETE STEPS STA. 29+12 CL SEE CONSTRUCTION DETAILS

BEGIN RETAINING WALL R-40-627

BIKE RAMP EXIT, SEE CONSTRUCTION DETAILS

SIGN STRUCTURE S-40-796

IH 794 EB ENTRANCE RAMP

END RETAINING WALL R-40-627

MATCH LINE - STA. 327+50 LS

328+00 LS

329+00 LS

STA. 328+06.18 LS

LANDSCAPED AREA

SLOPE INTERCEPT (TYP.)

N LINCOLN MEMORIAL DRIVE

MATCH LINE - STA. 28+00 LM

MATCH LINE - STA. 33+00 LM

SIGN STRUCTURE S-40-795

LANDSCAPED MEDIAN

N LINCOLN MEMORIAL DRIVE

SIGN STRUCTURE S-40-797

LANDSCAPED AREA

IH 794 WB EXIT RAMP

MATCH LINE - STA. 428+00 LN

END RETAINING WALL R-40-628

ASPHALTIC SURFACE TEMPORARY 5", OVER 12" BASE AGGREGATE DENSE 1¼-INCH

LANDSCAPED AREA

KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN DETAILS - LINCOLN MEMORIAL DRIVE	SHEET 53	E

2

DATA TABLE

N LINCOLN MEMORIAL DRIVE & CLYBOURN STREET

POINT NO.	STATION	OFFSET	COMMENTS
1	329+30.47 LS	28.22' LT	BEGIN TAPER
2	329+30.47 LS	8.22' RT	BEGIN TAPER
3	330+27.59 LS	45.00' LT	45' RADIUS
4	329+57.39 LS	0.00' RT	END TAPER
5	329+59.62 LS	24.00' LT	END TAPER
6	330+21.33 LS	24.00' LT	CURB & GUTTER PI
7	330+05.54 LS	74.00' LT	50' RADIUS
8	28+31.92 CL	151.00' RT	95' RADIUS
9	28+85.30 CL	48.00' RT	3' RADIUS
10	330+74.66 LS	31.41' LT	4' RADIUS
11	330+94.12 LS	33.41' LT	6' RADIUS
12	29+51.09 CL	9.00' RT	9' RADIUS
13	29+70.39 CL	57.00' LT	30' RADIUS
14	32+25.21 LM	5.00' RT	5' RADIUS
15	32+33.69 LM	23.56' RT	5' RADIUS
16	330+63.04 LS	30.23' LT	40' RADIUS
17	330+79.31 LS	3.00' RT	3' RADIUS
18	30+96.16 LM	48.52' LT	60' RADIUS
19	30+67.49 LM	25.00' LT	BEGIN 40' RADIUS
20	28+74.21 LM	16.00' RT	END TAPER
21	30+99.35 LM	11.40' RT	BEGIN 60' RADIUS
22	31+20.55 LM	3.00' RT	3' RADIUS
23	31+12.34 LM	25.73' RT	4' RADIUS
24	28+84.44 LM	57.00' RT	BEGIN 2475' RADIUS
25	30+44.29 LM	30.35' RT	5' RADIUS
26	31+12.15 LM	32.81' RT	4' RADIUS
27	30+84.83 LM	61.10' RT	END 2475' RADIUS
28	31+18.46 LM	66.49' RT	4.5' RADIUS
29	430+12.29 LN	826.00' LT	804' RADIUS
30	430+12.29 LN	22.00' LT	BEGIN 804' RADIUS
31	429+13.20 LN	22.00' LT	END TAPER
32	430+98.00 LN	24.00' RT	BEGIN CURB & GUTTER
33	431+38.29 LN	24.00' RT	BEGIN 25' RADIUS
34	431+38.29 LN	49.00' RT	25' RADIUS
35	31+44.74 CL	81.00' RT	25' RADIUS
36	31+52.65 CL	57.28' RT	END CURB & GUTTER
37	31+55.86 CL	29.00' RT	BEGIN CURB & GUTTER
38	31+37.32 CL	14.50' RT	14.5' RADIUS
39	31+58.62 CL	0.00' RT	END CURB & GUTTER
40	31+42.53 CL	20.00' LT	BEGIN 15' RADIUS
41	31+42.53 CL	35.00' LT	15' RADIUS
42	32+85.97 LM	75.93' RT	BEGIN 350' RADIUS
43	31+60.71 CL	20.00' LT	BEGIN CURB & GUTTER
44	29+06.51 CL	27.00' LT	END PERMEABLE PAVERS
45	29+02.51 CL	33.00' LT	BEGIN TAPER
46	32+85.47 LM	0.00' RT	END CURB & GUTTER
47	32+86.08 LM	28.68' RT	END CURB & GUTTER
48	28+84.44 LM	2532.00' RT	2475' RADIUS
49	27+67.12 LM	13.71 LT	100' RADIUS
50	330+14.21 LS	75.95 LT	20' RADIUS
51	29+70.39 CL	57.00 LT	8' RADIUS
52	31+45.71 CL	42.59 LT	15' RADIUS

RADIUS SHOWN IS TO CURB FLANGE

LEGEND

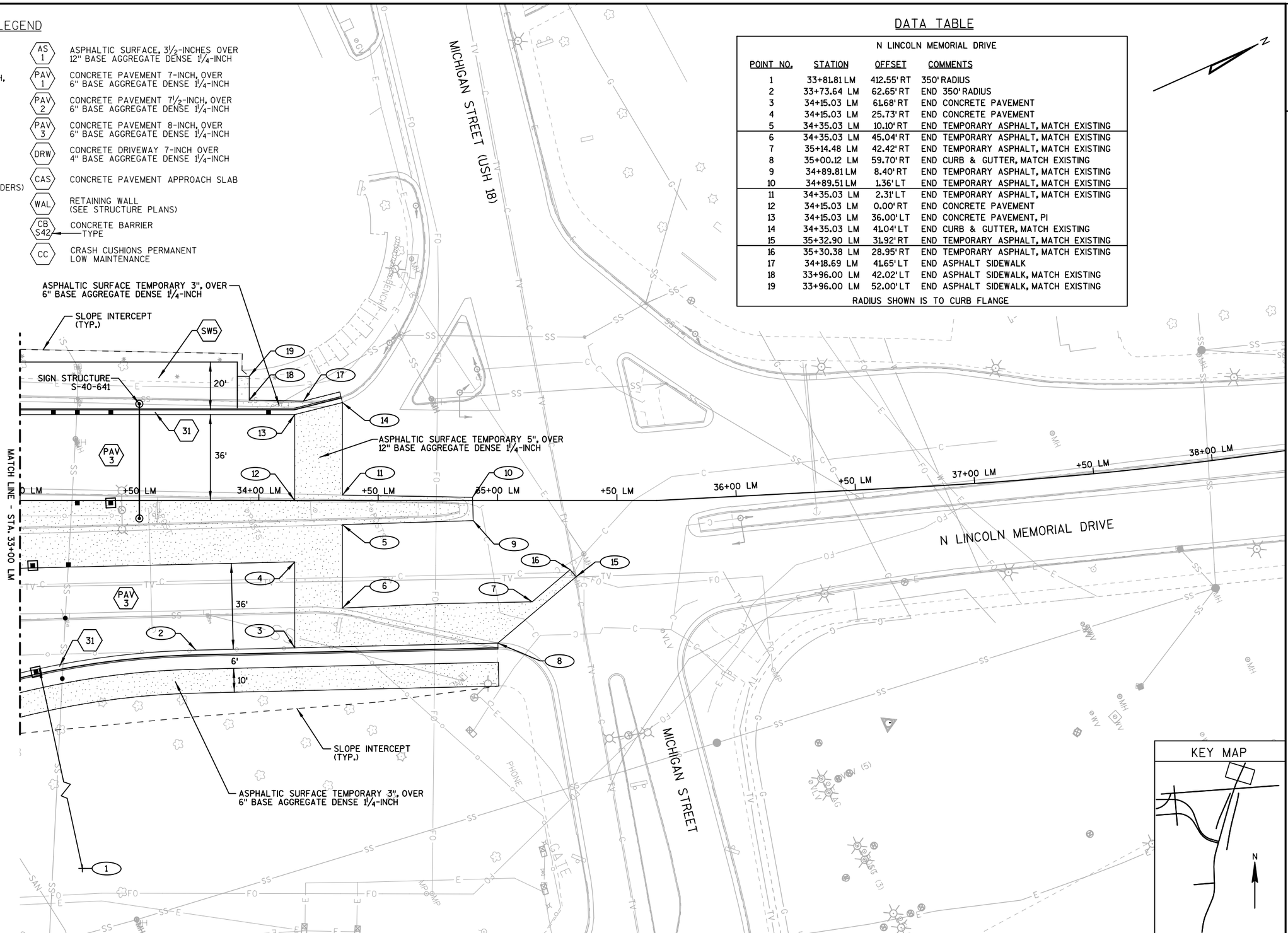
- 30A — CONCRETE CURB AND GUTTER (TYPE, SIZE (INCHES))
- CONCRETE CURB AND GUTTER 31-INCH, DRIVEWAY SLOPED
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH. OVER 4" BASE AGGREGATE DENSE 1¼INCH
- SW7 — CONCRETE SIDEWALK 7-INCH. OVER 4" BASE AGGREGATE DENSE 1¼INCH
- COLORING CONCRETE, DARK GRAY (MEDIANS, TERRACES, CROSSWALK BORDERS)
- COLORING CONCRETE, LIGHT GRAY (CROSSWALKS)
- CR 1 * — CURB RAMP (MODIFIED, TYPE)
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- AS 1 — ASPHALTIC SURFACE, 3½-INCHES OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 1 — CONCRETE PAVEMENT 7-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 2 — CONCRETE PAVEMENT 7½-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — CONCRETE PAVEMENT 8-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH OVER 4" BASE AGGREGATE DENSE 1¼-INCH
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- WAL — RETAINING WALL (SEE STRUCTURE PLANS)
- CB S42 — CONCRETE BARRIER (TYPE)
- CC — CRASH CUSHIONS PERMANENT LOW MAINTENANCE

DATA TABLE

N LINCOLN MEMORIAL DRIVE

POINT NO.	STATION	OFFSET	COMMENTS
1	33+81.81 LM	412.55' RT	350' RADIUS
2	33+73.64 LM	62.65' RT	END 350' RADIUS
3	34+15.03 LM	61.68' RT	END CONCRETE PAVEMENT
4	34+15.03 LM	25.73' RT	END CONCRETE PAVEMENT
5	34+35.03 LM	10.10' RT	END TEMPORARY ASPHALT, MATCH EXISTING
6	34+35.03 LM	45.04' RT	END TEMPORARY ASPHALT, MATCH EXISTING
7	35+14.48 LM	42.42' RT	END TEMPORARY ASPHALT, MATCH EXISTING
8	35+00.12 LM	59.70' RT	END CURB & GUTTER, MATCH EXISTING
9	34+89.81 LM	8.40' RT	END TEMPORARY ASPHALT, MATCH EXISTING
10	34+89.51 LM	1.36' LT	END TEMPORARY ASPHALT, MATCH EXISTING
11	34+35.03 LM	2.31' LT	END TEMPORARY ASPHALT, MATCH EXISTING
12	34+15.03 LM	0.00' RT	END CONCRETE PAVEMENT
13	34+15.03 LM	36.00' LT	END CONCRETE PAVEMENT, PI
14	34+35.03 LM	41.04' LT	END CURB & GUTTER, MATCH EXISTING
15	35+32.90 LM	31.92' RT	END TEMPORARY ASPHALT, MATCH EXISTING
16	35+30.38 LM	28.95' RT	END TEMPORARY ASPHALT, MATCH EXISTING
17	34+18.69 LM	41.65' LT	END ASPHALT SIDEWALK
18	33+96.00 LM	42.02' LT	END ASPHALT SIDEWALK, MATCH EXISTING
19	33+96.00 LM	52.00' LT	END ASPHALT SIDEWALK, MATCH EXISTING

RADIUS SHOWN IS TO CURB FLANGE



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN DETAILS - LINCOLN MEMORIAL DRIVE	SHEET 55	E

FILE NAME : 021215_pd.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

DATA TABLE

CLYBOURN STREET & VAN BUREN STREET

POINT NO.	STATION	OFFSET	COMMENTS
1	62+86.81 JE	52.00' RT	BEGIN CURB & GUTTER
2	62+86.81 JE	39.00' RT	MATCH EXISTING
3	63+20.02 JE	39.00' RT	MATCH EXISTING
4	63+20.02 JE	26.00' RT	MATCH EXISTING
5	63+44.33 JE	26.00' RT	MATCH EXISTING
6	63+44.33 JE	39.00' RT	MATCH EXISTING
7	63+54.68 JE	39.00' RT	MATCH EXISTING
8	64+10.11 VB	8.00' LT	MATCH EXISTING
9	63+18.32 JE	57.02' RT	3' RADIUS
10	62+93.59 VB	19.00' LT	BEGIN TAPER
11	62+51.19 VB	14.11' LT	END TAPER
12	63+43.83 VB	12.59' RT	50' RADIUS
13	63+41.61 VB	30.00' RT	BEGIN 45' RADIUS AND SIDEWALK
14	22+11.27 CL	63.43' RT	45' RADIUS
15	22+52.26 CL	82.00' RT	END 45' RADIUS
16	22+38.74 CL	56.00' RT	BEGIN CURB & GUTTER
17	22+45.28 CL	56.00' RT	BEGIN PERMEABLE PAVERS
18	22+49.28 CL	62.00' RT	END TAPER
19	22+85.02 CL	29.00' RT	BEGIN TAPER
20	22+38.74 CL	29.00' RT	BEGIN CONCRETE PAVEMENT
21	22+19.74 CL	29.00' RT	BEGIN 14.5' RADIUS
22	22+19.74 CL	14.50' RT	14.5' RADIUS
23	22+19.74 CL	0.00' RT	END 14.5' RADIUS
24	22+38.74 CL	0.00' RT	BEGIN CONCRETE PAVEMENT
25	22+38.74 CL	27.00' LT	BEGIN CONCRETE PAVEMENT
26	22+38.74 CL	40.00' LT	SIDEWALK PI
27	22+16.44 CL	50.00' LT	SIDEWALK PI
28	22+02.02 CL	56.17' LT	BEGIN SIDEWALK
29	63+15.48 VB	30.08' RT	END SIDEWALK
30	22+00.41 CL	29.00' RT	END CURB AND GUTTER
31	22+00.41 CL	0.00' RT	END CURB AND GUTTER
32	62+26.18 VB	8.00' LT	BEGIN BUTT JOINT / MATCH EXISTING
33	62+51.19 VB	8.00' LT	END BUTT JOINT

RADIUS SHOWN IS TO CURB FLANGE

ADJUSTING WATER BOXES	
STATION	OFFSET
22+39.36 CL	32.69' LT

CLYBOURN STREET

IH 794 WB ENTRANCE RAMP (ABOVE)

IH 794 WB (ABOVE)

JACKSON STREET

JACKSON EB EXIT RAMP - TO VAN BUREN STREET

VAN BUREN STREET

BEGIN CONSTRUCTION STA. 22+38.74 CL

BEGIN CONSTRUCTION STA. 62+26.18VB

MATCH LINE - STA. 23+00 CL

SLOPE INTERCEPT (TYP.)

PERMEABLE PAVER TERRACE (TYP.) SEE STREETSCAPE PLAN

LANDSCAPED MEDIAN

N

LEGEND

- 30A — CONCRETE CURB AND GUTTER, TYPE, SIZE (INCHES)
- CONCRETE CURB AND GUTTER 31-INCH, DRIVEWAY SLOPED
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH, OVER 4" BASE AGGREGATE DENSE 1¼INCH
- SW7 — CONCRETE SIDEWALK 7-INCH, OVER 4" BASE AGGREGATE DENSE 1¼INCH
- COLORING CONCRETE, DARK GRAY (MEDIANS, TERRACES, CROSSWALK BORDERS)
- COLORING CONCRETE, LIGHT GRAY (CROSSWALKS)
- CR 1 — CURB RAMP, MODIFIED, TYPE
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- AS 1 — 3½-INCH HMA TYPE E-0.3, OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 1 — CONCRETE PAVEMENT 7-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 2 — CONCRETE PAVEMENT 7½-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — CONCRETE PAVEMENT 8-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 4 — CONCRETE PAVEMENT 8.5-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH OVER 4" BASE AGGREGATE DENSE 1¼-INCH
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- WAL — RETAINING WALL (SEE STRUCTURE PLANS)
- CB S42 — CONCRETE BARRIER, TYPE
- CC — CRASH CUSHIONS PERMANENT LOW MAINTENANCE

KEY MAP

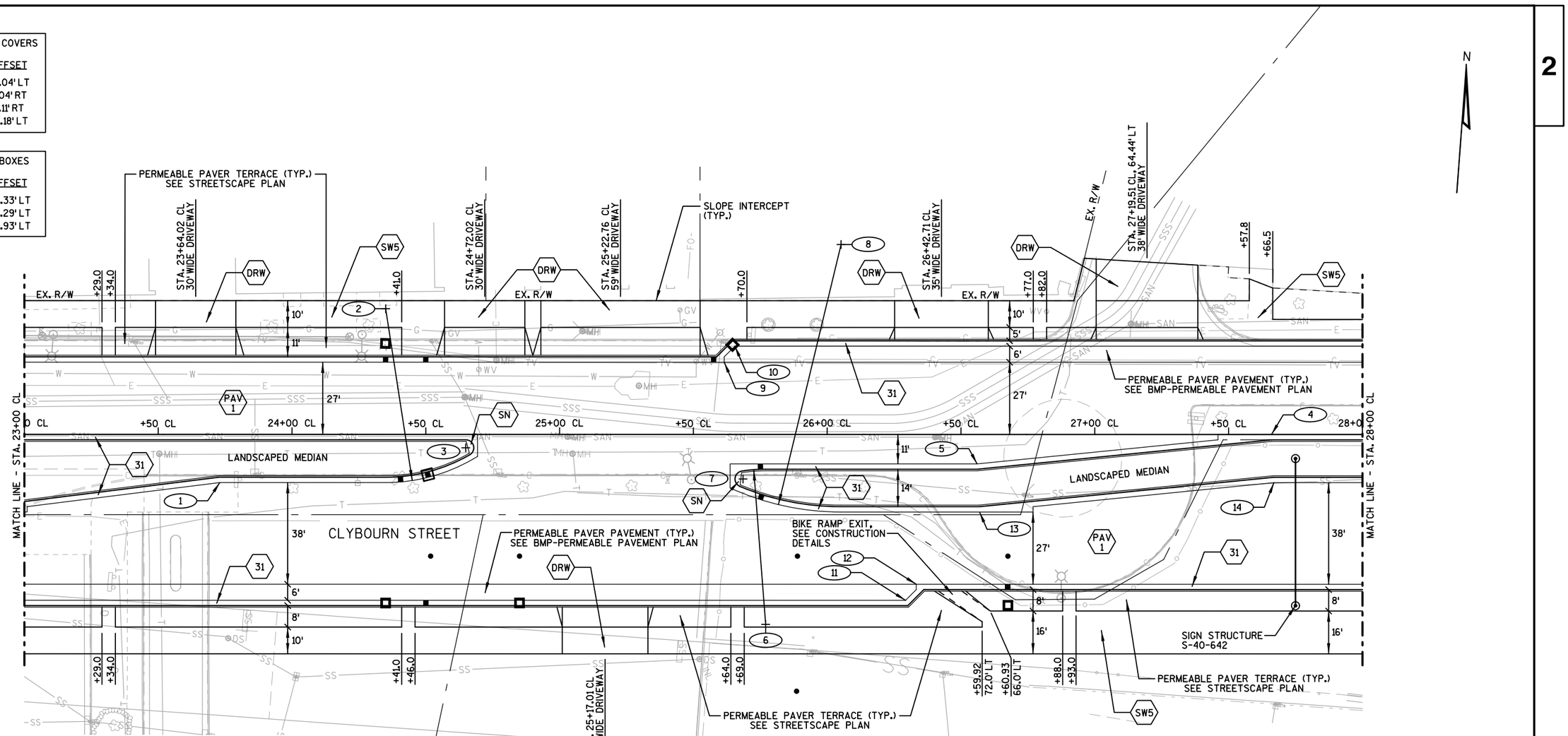
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN DETAILS - CLYBOURN STREET	SHEET 56 E

FILE NAME : 021216_pd.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

ADJUSTING MANHOLE COVERS	
STATION	OFFSET
24+64.52 CL	14.04' LT
25+03.06 CL	1.04' RT
26+40.36 CL	1.11' RT
27+13.40 CL	41.18' LT

ADJUSTING WATER BOXES	
STATION	OFFSET
24+70.01 CL	24.33' LT
25+51.15 CL	27.29' LT
26+82.10 CL	45.93' LT



LEGEND

- 30A — CONCRETE CURB AND GUTTER, TYPE, SIZE (INCHES)
- CONCRETE CURB AND GUTTER 31-INCH, DRIVEWAY SLOPED
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH, OVER 4" BASE AGGREGATE DENSE 1¼INCH
- SW7 — CONCRETE SIDEWALK 7-INCH, OVER 4" BASE AGGREGATE DENSE 1¼INCH
- COLORING CONCRETE, DARK GRAY (MEDIANS, TERRACES, CROSSWALK BORDERS)
- COLORING CONCRETE, LIGHT GRAY (CROSSWALKS)
- CR 1 — CURB RAMP, MODIFIED, TYPE
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- AS 1 — ASPHALTIC SURFACE, 3½-INCHES OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 1 — CONCRETE PAVEMENT 7-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 2 — CONCRETE PAVEMENT 7½-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — CONCRETE PAVEMENT 8-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH OVER 4" BASE AGGREGATE DENSE 1¼-INCH
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- WAL — RETAINING WALL (SEE STRUCTURE PLANS)
- CB S42 — CONCRETE BARRIER, TYPE
- CC — CRASH CUSHIONS PERMANENT LOW MAINTENANCE

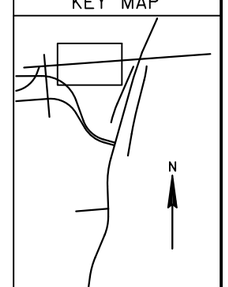
DATA TABLE

CLYBOURN STREET

POINT NO.	STATION	OFFSET	COMMENTS
1	23+73.02 CL	18.00' RT	END TAPER
2	24+35.01 CL	47.00' LT	65' RADIUS
3	24+64.94 CL	5.00' RT	5' RADIUS
4	27+66.04 CL	0.00' RT	BEGIN TAPER
5	26+56.02 CL	11.00' RT	END TAPER
6	25+77.01 CL	71.00' RT	60' RADIUS
7	25+68.55 CL	16.65' RT	5' RADIUS
8	26+05.18 CL	71.00' LT	100' RADIUS
9	25+61.51 CL	27.00' LT	BEGIN PERMEABLE PAVERS
10	25+65.51 CL	33.00' LT	END TAPER
11	26+29.28 CL	62.00' RT	BEGIN TAPER
12	26+33.28 CL	56.00' RT	END PERMEABLE PAVERS
13	26+56.94 CL	29.00' RT	BEGIN TAPER
14	27+66.94 CL	18.00' RT	END TAPER

RADIUS SHOWN IS TO CURB FLANGE

KEY MAP



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN DETAILS - CLYBOURN STREET	SHEET 57	E

LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- CONCRETE CURB AND GUTTER 31-INCH, DRIVEWAY SLOPED
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW5 — CONCRETE SIDEWALK 5-INCH. OVER 4" BASE AGGREGATE DENSE 1¼INCH
- SW7 — CONCRETE SIDEWALK 7-INCH. OVER 4" BASE AGGREGATE DENSE 1¼INCH
- COLORING CONCRETE, DARK GRAY (MEDIANS, TERRACES, CROSSWALK BORDERS)
- COLORING CONCRETE, LIGHT GRAY (CROSSWALKS)
- CR 1* — CURB RAMP (MODIFIED / TYPE)
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- AS 1 — ASPHALTIC SURFACE, 3½-INCHES OVER 12" BASE AGGREGATE DENSE 1¼-INCH
- PAV 1 — CONCRETE PAVEMENT 7-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 2 — CONCRETE PAVEMENT 7½-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- PAV 3 — CONCRETE PAVEMENT 8-INCH, OVER 6" BASE AGGREGATE DENSE 1¼-INCH
- DRW — CONCRETE DRIVEWAY 7-INCH OVER 4" BASE AGGREGATE DENSE 1¼-INCH
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- WAL — RETAINING WALL (SEE STRUCTURE PLANS)
- CB S42 — CONCRETE BARRIER (TYPE)
- CC — CRASH CUSHIONS PERMANENT LOW MAINTENANCE

DATA TABLE

IH 794 EB EXIT AND WB ENTRANCE RAMPS

POINT NO.	STATION	OFFSET	COMMENTS
1	207+90.12 LE	33.47' RT	BEGIN CURB & GUTTER
2	207+89.86 LE	2.00' LT	BEGIN CURB & GUTTER
3	108+83.43 LW	4.00' RT	END CONCRETE BARRIER
4	108+83.43 LW	36.00' LT	END CONCRETE BARRIER
5	203+07.26 LE	56.54' RT	BEGIN CURB & GUTTER
6	203+44.39 LE	49.95' RT	PI
7	109+12.18 LW	39.62' LT	BEGIN TAPER
8	109+40.88 LW	36.00' LT	END TAPER
9	109+08.20 LW	7.62' RT	BEGIN TAPER
10	109+33.01 LW	4.00' RT	END TAPER

RADIUS SHOWN IS TO CURB FLANGE

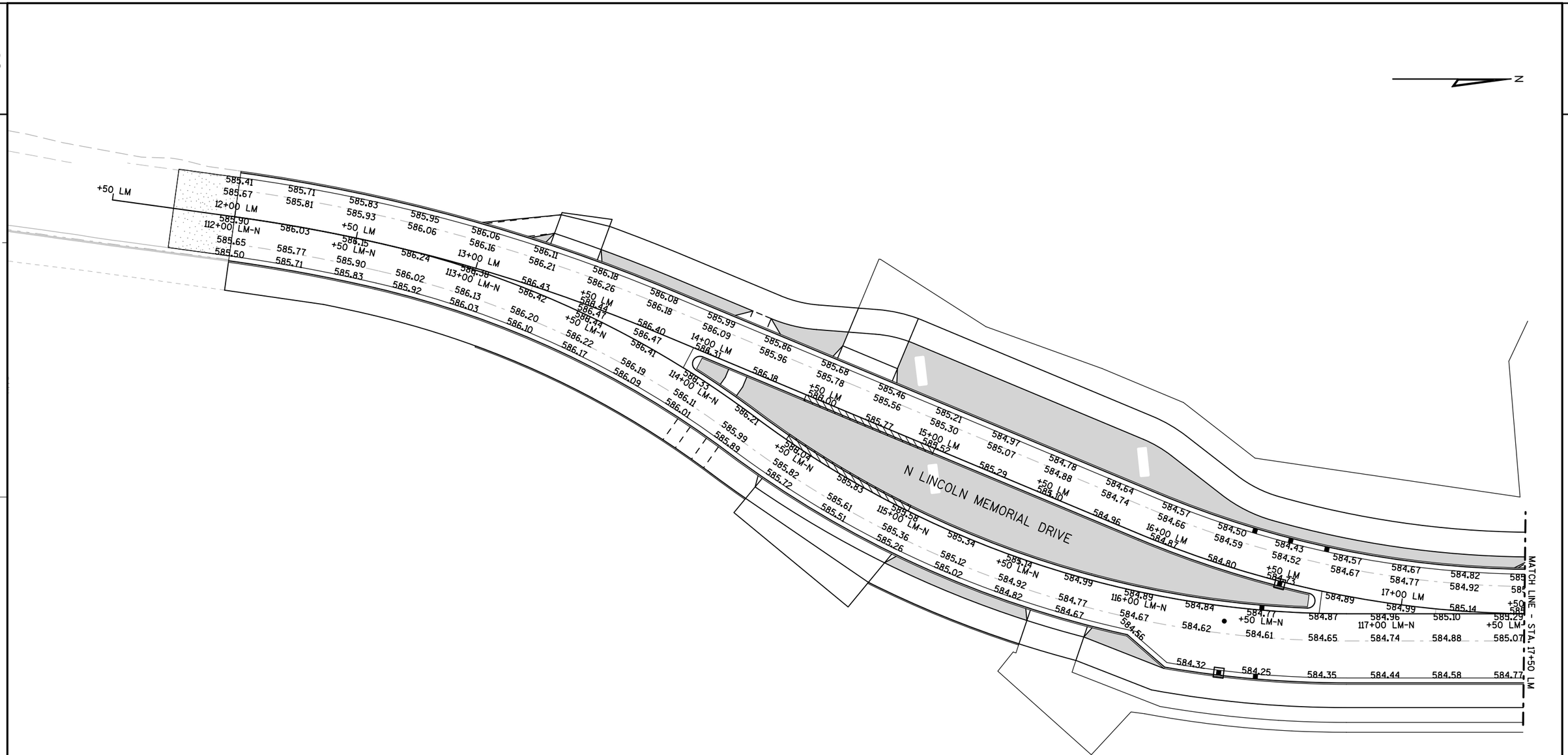
NOTES:

1. SEE STRUCTURE PLANS FOR LIMITS OF CONCRETE BARRIER TYPE AND TRANSITIONS ON RETAINING WALL R-40-629.

℄ R-40-629 ABUTMENT SEE STRUCTURE PLANS
STRUCTURAL APPROACH SLAB SEE STRUCTURE PLANS
B-40-400-2D PIER 1
B-40-400-2D PIER 2
STRUCTURAL APPROACH SLAB SEE STRUCTURE PLANS
℄ R-40-629 ABUTMENT SEE STRUCTURE PLANS
B-40-400-2C PIER 2
B-40-400-2C PIER 3
CONCRETE DRY BASIN SEE STORM SEWER/BMP PLAN FOR DETAILS
SEE NOTE 1
IH 794 WB ENTRANCE RAMP
IH 794 WB (ABOVE)
END RETAINING WALL R-40-629 STA. 108+37.21 LW
MATCH LINE - STA. 109+50 LW
MATCH LINE - STA. 208+50 LE
REVERSE SLOPE
SEE NOTE 1
IH 794 EB EXIT RAMP
CONCRETE BARRIER DRAINAGE CUT-OUT SEE CONSTRUCTION DETAILS
STRUCTURAL APPROACH SLAB SEE STRUCTURE PLANS
SLOPE INTERCEPT (TYP.)
VAN BUREN STREET
IH 794 EB (ABOVE)
END RETAINING WALL R-40-629 STA. 207+41.62 LE
REVERSE SLOPE
SLOPE INTERCEPT (TYP.)

KEY MAP

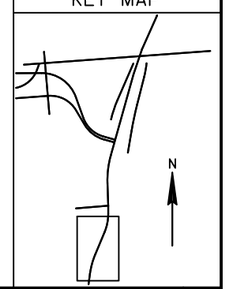
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN DETAILS - IH 794 EB EXIT AND WB ENTRANCE RAMP	SHEET 58 E



N LINCOLN MEMORIAL DRIVE
NB PGL CURVE DATA

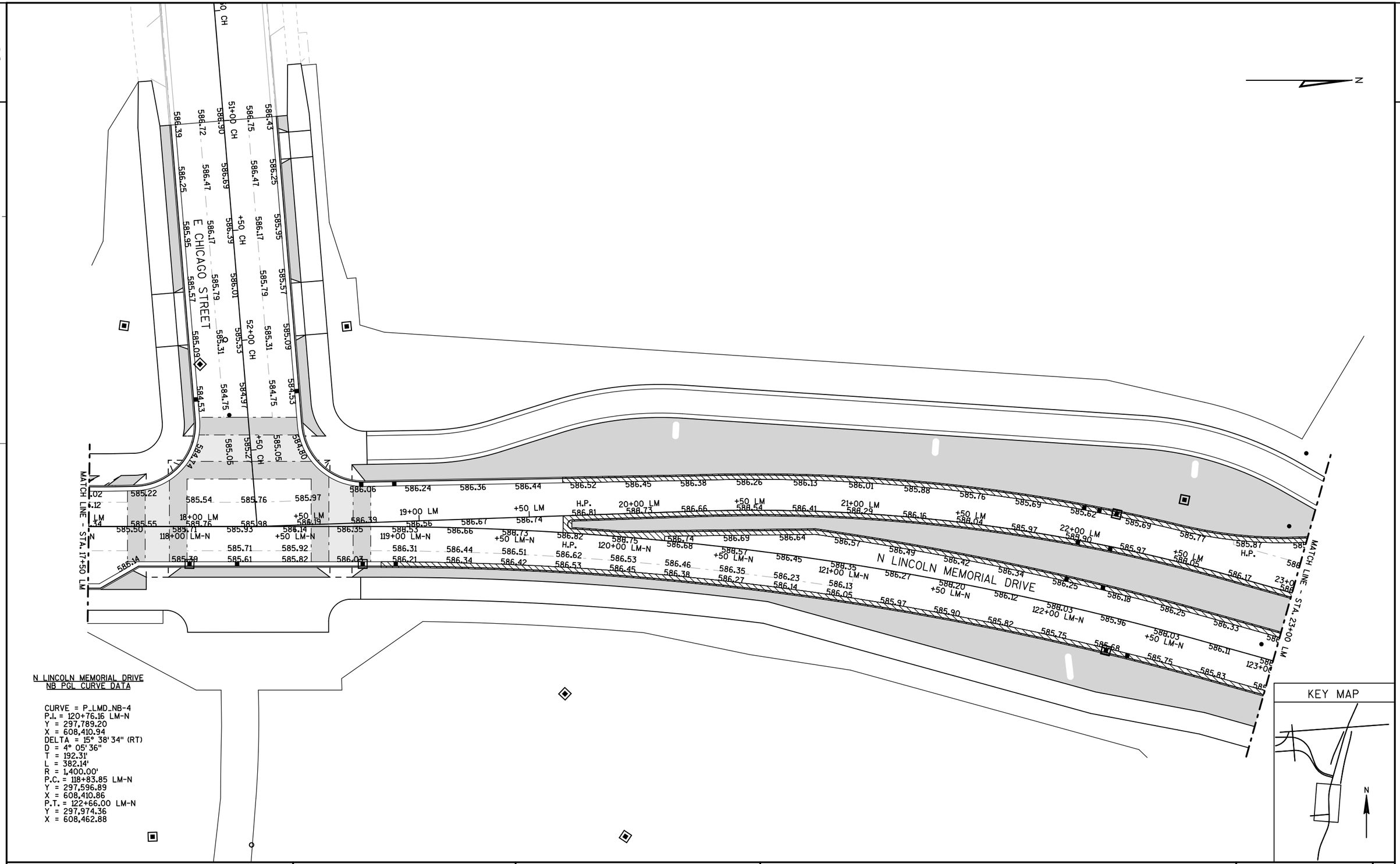
CURVE = P_LMD_NB-1	CURVE = P_LMD_NB-2	CURVE = P_LMD_NB-3
P.I. = 112+31.01 LM-N	P.I. = 113+46.23 LM-N	P.I. = 115+60.94 LM-N
Y = 296,977.67	Y = 297,090.00	Y = 297,264.05
X = 608,254.06	X = 608,280.14	X = 608,410.71
DELTA = 5° 11' 28" (RT)	DELTA = 23° 48' 18" (RT)	DELTA = 36° 51' 10" (LT)
D = 8° 23' 03"	D = 14° 21' 41"	D = 14° 21' 41"
T = 31.01'	T = 84.31'	T = 133.27'
L = 61.92'	L = 165.76'	L = 256.61'
R = 684.00'	R = 400.00'	R = 400.00'
P.C. = 112+00.00 LM-N	P.C. = 112+61.92 LM-N	P.C. = 114+27.67 LM-N
Y = 296,946.96	Y = 297,007.88	Y = 297,157.45
X = 608,249.81	X = 608,261.07	X = 608,330.30
P.T. = 112+61.92 LM-N	P.T. = 114+27.67 LM-N	P.T. = 116+84.28 LM-N
Y = 297,007.88	Y = 297,157.45	Y = 297,397.32
X = 608,261.07	X = 608,330.30	X = 608,410.77

KEY MAP



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVING DETAILS - LINCOLN MEMORIAL DRIVE	SHEET 59	E

2

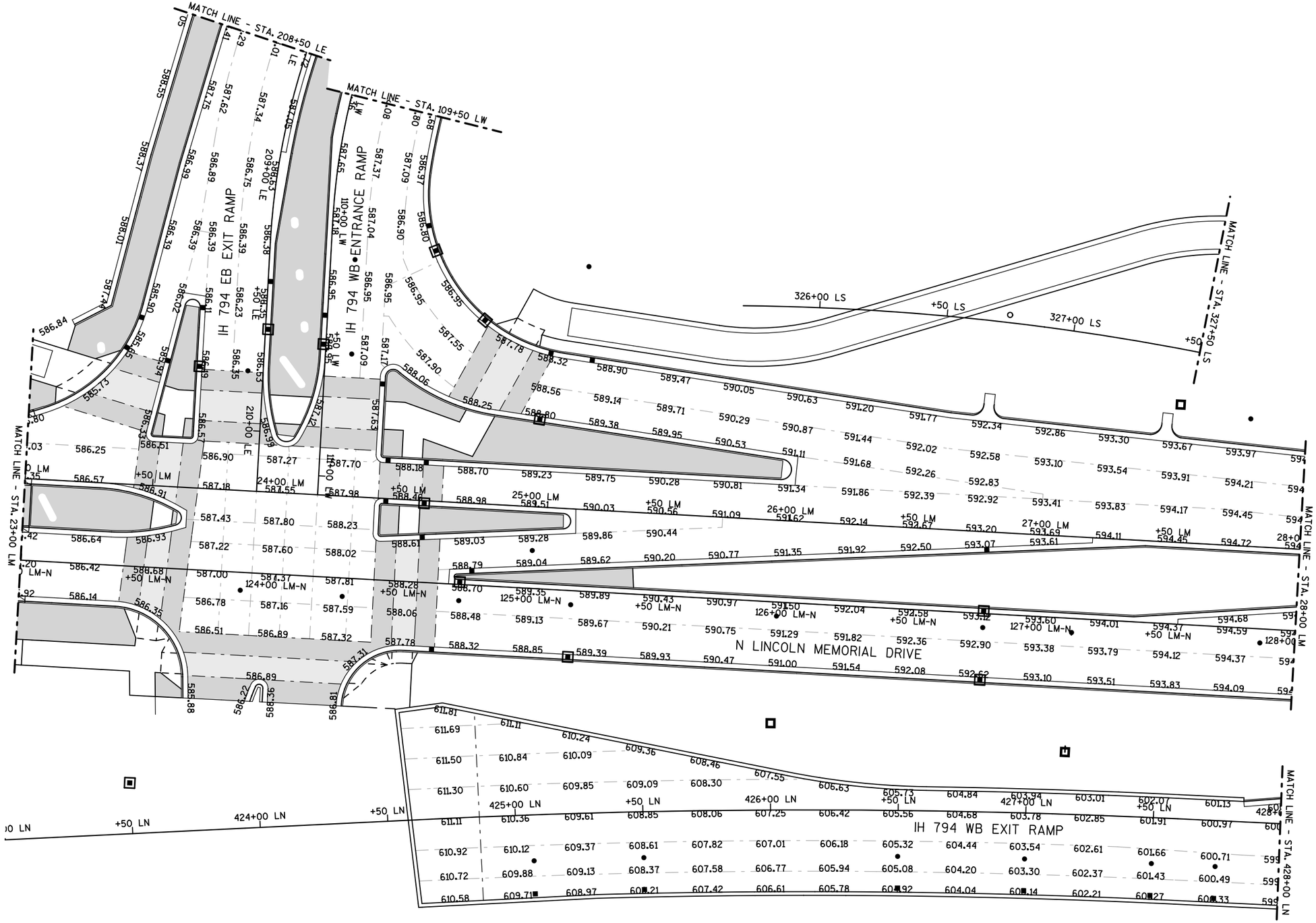


N LINCOLN MEMORIAL DRIVE
NB PGL CURVE DATA

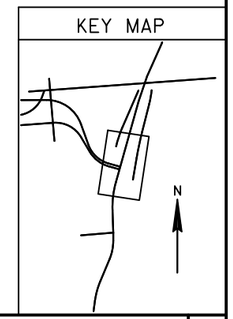
CURVE = P_LMD_NB-4
P.I. = 120+76.16 LM-N
Y = 297,789.20
X = 608,410.94
DELTA = 15° 38' 34" (RT)
D = 4° 05' 36"
T = 192.31'
L = 382.14'
R = 1,400.00'
P.C. = 118+83.85 LM-N
Y = 297,596.89
X = 608,410.86
P.T. = 122+66.00 LM-N
Y = 297,974.36
X = 608,462.88

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVING DETAILS - LINCOLN MEMORIAL DRIVE	SHEET 60	E

2



KEY MAP



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVING DETAILS - LINCOLN MEMORIAL DRIVE	SHEET 61	E

2

DETAIL A

DETAIL B



N LINCOLN MEMORIAL DRIVE
NB PGL CURVE DATA

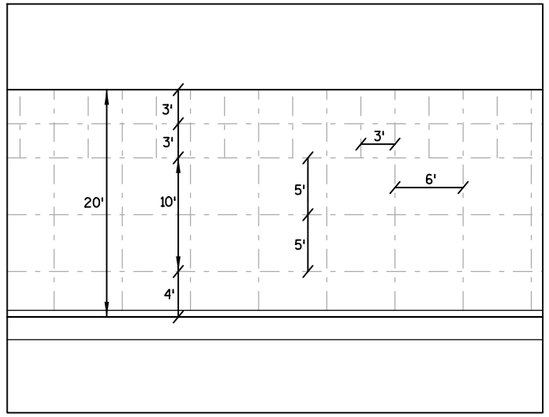
CURVE = P_LMD_NB-5
P.I. = 129+83.87 LM-N
Y = 298,665.56
X = 608,656.75
DELTA = 4° 33' 58" (RT)
D = 2° 17' 31"
T = 99.67'
L = 199.23'
R = 2,500.00'
P.C. = 128+84.20 LM-N
Y = 298,569.59
X = 608,629.83
P.T. = 130+83.43 LM-N
Y = 298,759.08
X = 608,691.22

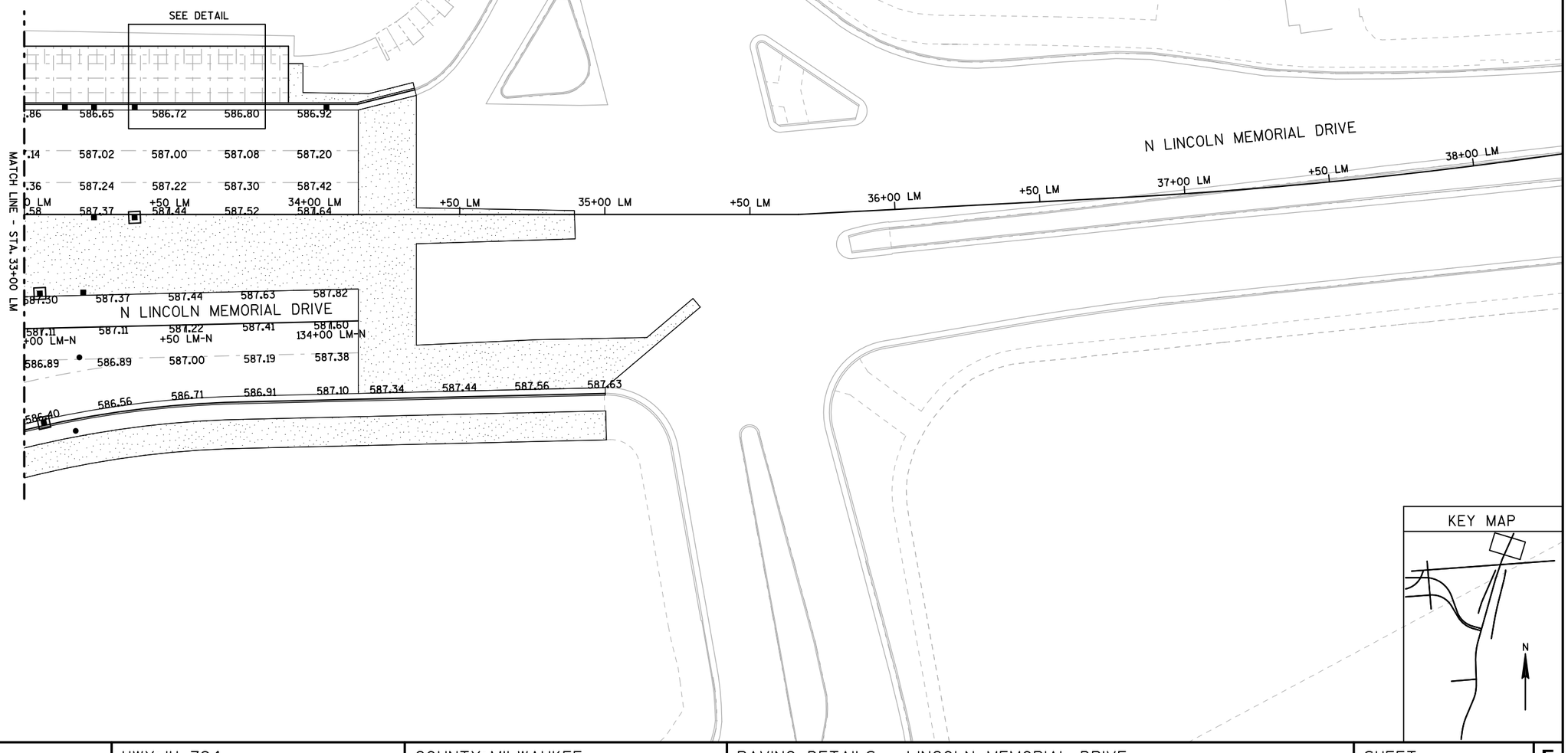
KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVING DETAILS - LINCOLN MEMORIAL DRIVE	SHEET 62	E

2

MICHIGAN STREET (USH 18)





KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVING DETAILS - LINCOLN MEMORIAL DRIVE	SHEET 63	E

2

CLYBOURN STREET

20+00 CL | +50 CL | 21+00 CL | +50 CL | 22+00 CL | +50 CL | 23+00 CL

JACKSON WB ENTRANCE RAMP

JACKSON STREET

+50 JE

63+00 JE

62+00 JE

JACKSON EB EXIT RAMP - TO VAN BUREN STREET

65+00 VB | +50 VB | 64+00 VB | +50 VB | 63+00 VB | +50 VB | 62+00 VB

VAN BUREN STREET

589.91 589.78 589.86 589.99 590.12 589.84 (589.60) 590.26 590.52 589.65 (589.42) 589.48 (589.25) 589.31 (589.07) 589.08 (588.90) 588.84

589.26 589.06 589 589.39 589.19 588 589.66 589.46 589 589.84 589.64 589.44 589.24 589 589.73 589.60 589.56 589.44 589.24 589 589.66 589.46 589 589.44 589.24 589 589.22 589.02 588

MATCH LINE - STA. 23+00 CL

SEE DETAIL

1' 3.33' 3.33' 3.33' 10'

N

KEY MAP

N

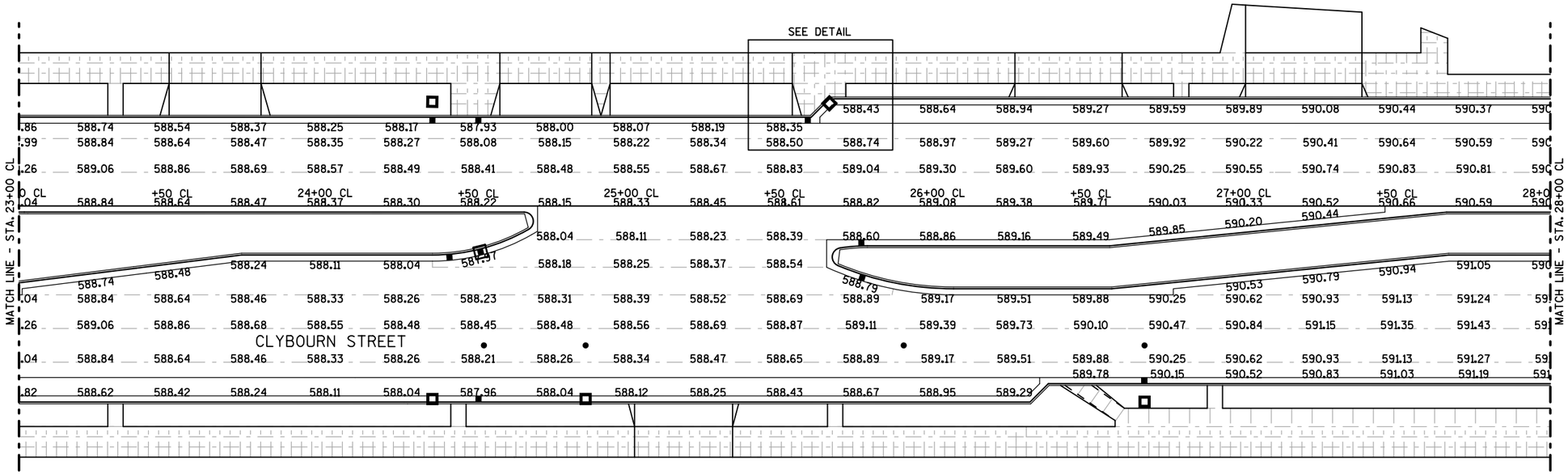
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVING DETAILS - CLYBOURN STREET	SHEET 64	E

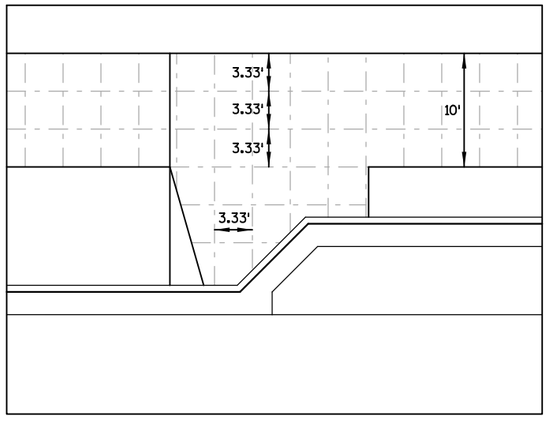
FILE NAME : 021306_jd.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

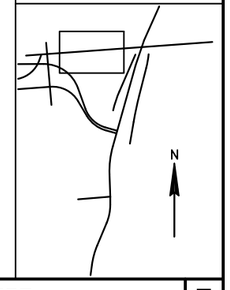
2

N



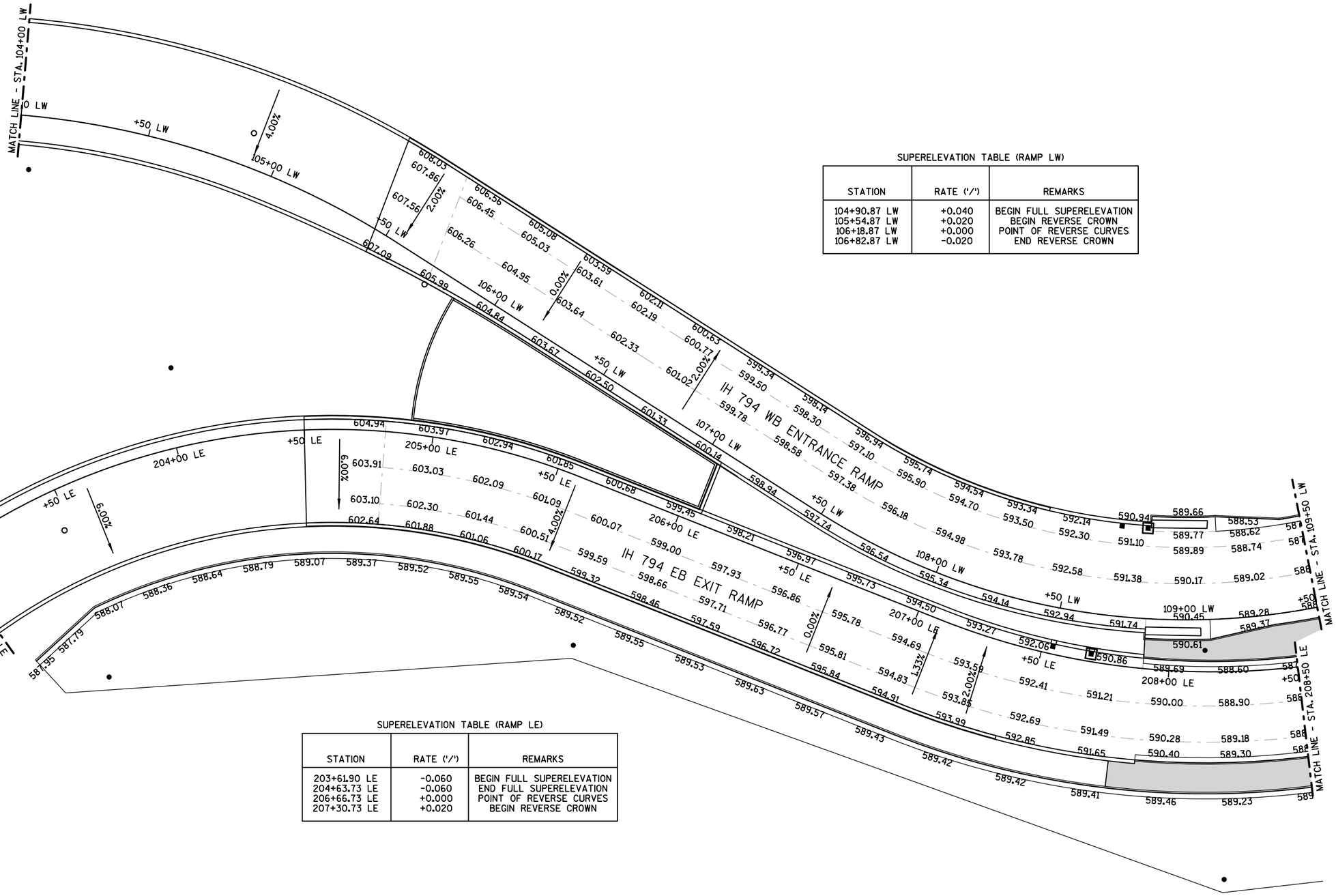


KEY MAP



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVING DETAILS - CLYBOURN STREET	SHEET 65	E

2



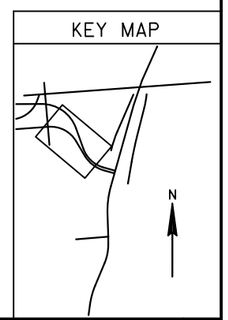
SUPERELEVATION TABLE (RAMP LW)

STATION	RATE ('/')	REMARKS
104+90.87 LW	+0.040	BEGIN FULL SUPERELEVATION
105+54.87 LW	+0.020	BEGIN REVERSE CROWN
106+18.87 LW	+0.000	POINT OF REVERSE CURVES
106+82.87 LW	-0.020	END REVERSE CROWN

SUPERELEVATION TABLE (RAMP LE)

STATION	RATE ('/')	REMARKS
203+61.90 LE	-0.060	BEGIN FULL SUPERELEVATION
204+63.73 LE	-0.060	END FULL SUPERELEVATION
206+66.73 LE	+0.000	POINT OF REVERSE CURVES
207+30.73 LE	+0.020	BEGIN REVERSE CROWN

KEY MAP



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVING DETAILS - IH 794 EB EXIT AND WB ENTRANCE RAMP	SHEET 66	E

2

2

SUPERELEVATION TABLE (RAMP LW)

STATION	RATE ('/')	REMARKS
100+33.28 LW	-0.011	MATCH EXISTING STRUCTURE
100+97.28 LW	+0.000	--
101+61.28 LW	+0.020	BEGIN REVERSE CROWN
102+25.28 LW	+0.040	END FULL SUPERELEVATION

N

+50 LW
99+00 LW
+50 LW
100+00 LW
1.10%
+50 LW
0.00%
101+00 LW
2.00%
+50 LW
64+00 VB
102+00 LW
4.00%
+50 LW
+50 VB
IH 794 WB ENTRANCE RAMP
103+00 LW
+50 LW
104+
MATCH LINE - STA. 104+00 LW

JACKSON STREET

IH 794 WB

63+00 VB
VAN BUREN STREET
+50 VB

SUPERELEVATION TABLE (RAMP LE)

STATION	RATE ('/')	REMARKS
201+00.00 LE	+0.0255	MATCH EXISTING STRUCTURE
201+70.00 LE	+0.000	--

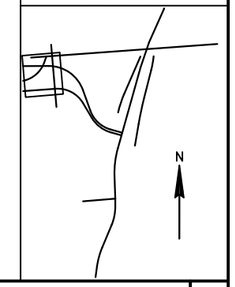
62+00 VB

9+00 LE
+50 LE
200+00 LE
+50 LE
201+00 LE
2.55%
+50 LE
0.00%
202+00 LE
+50 LE
203+
+50 VB
MATCH LINE - STA. 203+00 LE
IH 794 EB EXIT RAMP

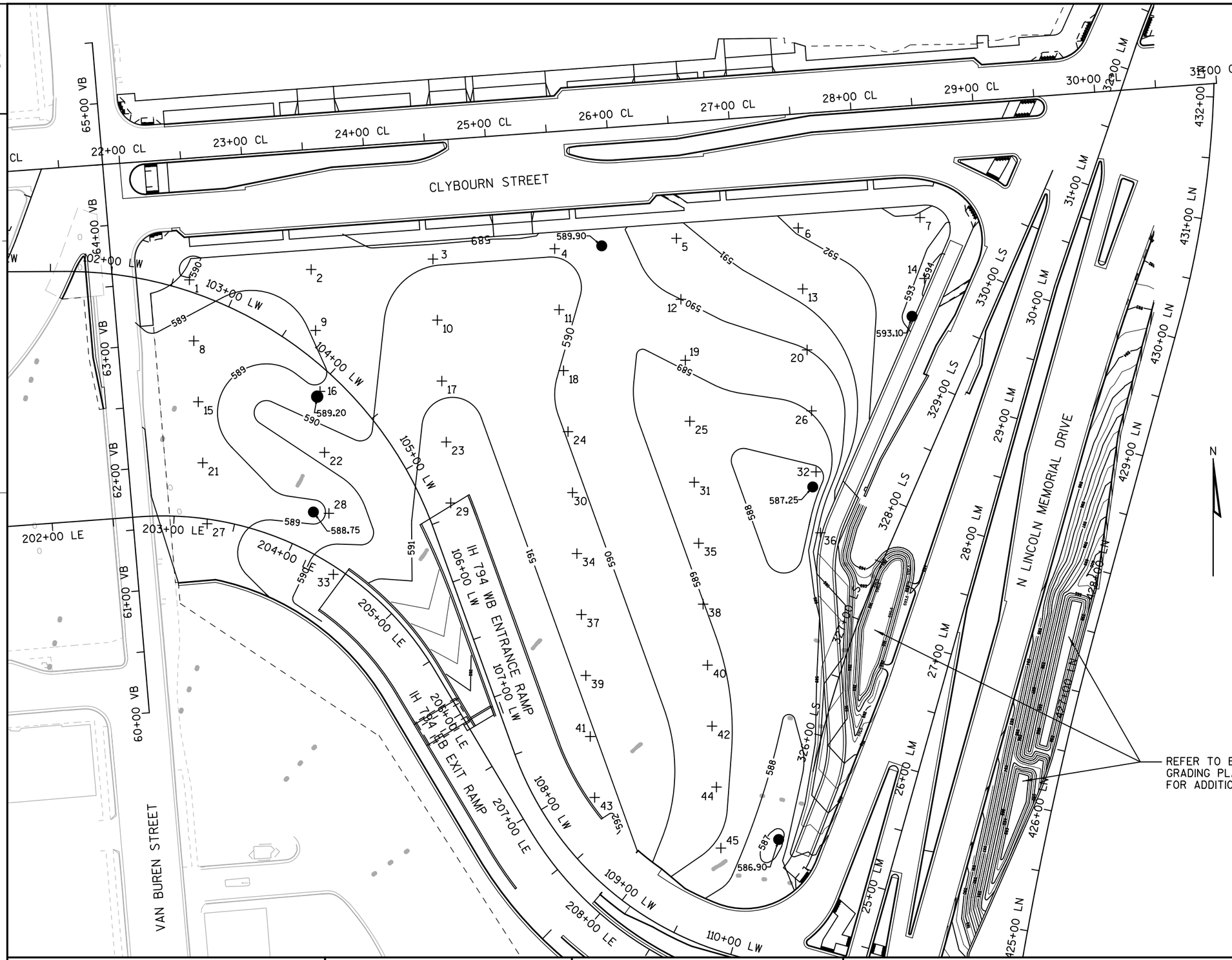
61+00 VB

IH 794 EB

KEY MAP



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVING DETAILS - IH 794 EB EXIT AND WB ENTRANCE RAMP	SHEET 67	E



DATA TABLE

POINT NUMBER	Y-COORD.	X-COORD.	ELEVATION
1	298706.80	607925.68	589.93
2	298715.29	608025.33	589.50
3	298723.78	608124.98	589.68
4	298732.28	608224.62	589.47
5	298740.77	608324.27	590.80
6	298749.26	608423.91	592.07
7	298757.76	608523.56	592.95
8	298656.93	607929.32	588.91
9	298665.42	608028.97	589.08
10	298673.91	608128.61	590.40
11	298682.41	608228.26	590.06
12	298690.90	608327.90	590.00
13	298699.39	608427.55	591.20
14	298707.89	608527.20	593.80
15	298607.06	607932.96	588.69
16	298615.55	608032.60	589.19
17	298624.04	608132.25	590.83
18	298632.54	608231.89	589.94
19	298641.03	608331.54	589.15
20	298649.52	608431.19	590.00
21	298557.18	607936.59	588.65
22	298565.68	608036.24	590.20
23	298574.17	608135.88	591.25
24	298582.66	608235.53	589.95
25	298591.16	608335.18	588.69
26	298599.65	608434.82	589.06
27	298507.31	607940.23	588.63
28	298515.81	608039.87	589.09
29	298524.30	608139.52	591.45
30	298532.79	608239.17	590.18
31	298541.29	608338.81	588.57
32	298549.78	608438.46	587.75
33	298465.93	608043.51	590.43
34	298482.92	608242.80	590.40
35	298491.41	608342.45	588.79
36	298499.91	608442.09	590.75
37	298433.05	608246.44	590.63
38	298441.54	608346.08	589.01
39	298383.18	608250.07	590.85
40	298391.67	608349.72	589.23
41	298333.31	608253.71	591.10
42	298341.80	608353.36	589.33
43	298283.44	608257.35	591.40
44	298291.93	608356.99	589.23
45	298242.06	608360.63	588.76

LEGEND

● INLETS, SEE STORM SEWER PLAN FOR ADDITIONAL INFORMATION

REFER TO BIO-FILTRATION BASIN GRADING PLANS AND CROSS SECTIONS FOR ADDITIONAL INFORMATION

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	GRADING PLAN	SHEET 68	E

2

GENERAL EROSION CONTROL NOTES

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

EROSION CONTOL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. APPLY SEED OR SOD LAWN, FERTILIZE, AND MULCH/EROSION MAT TOPSOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

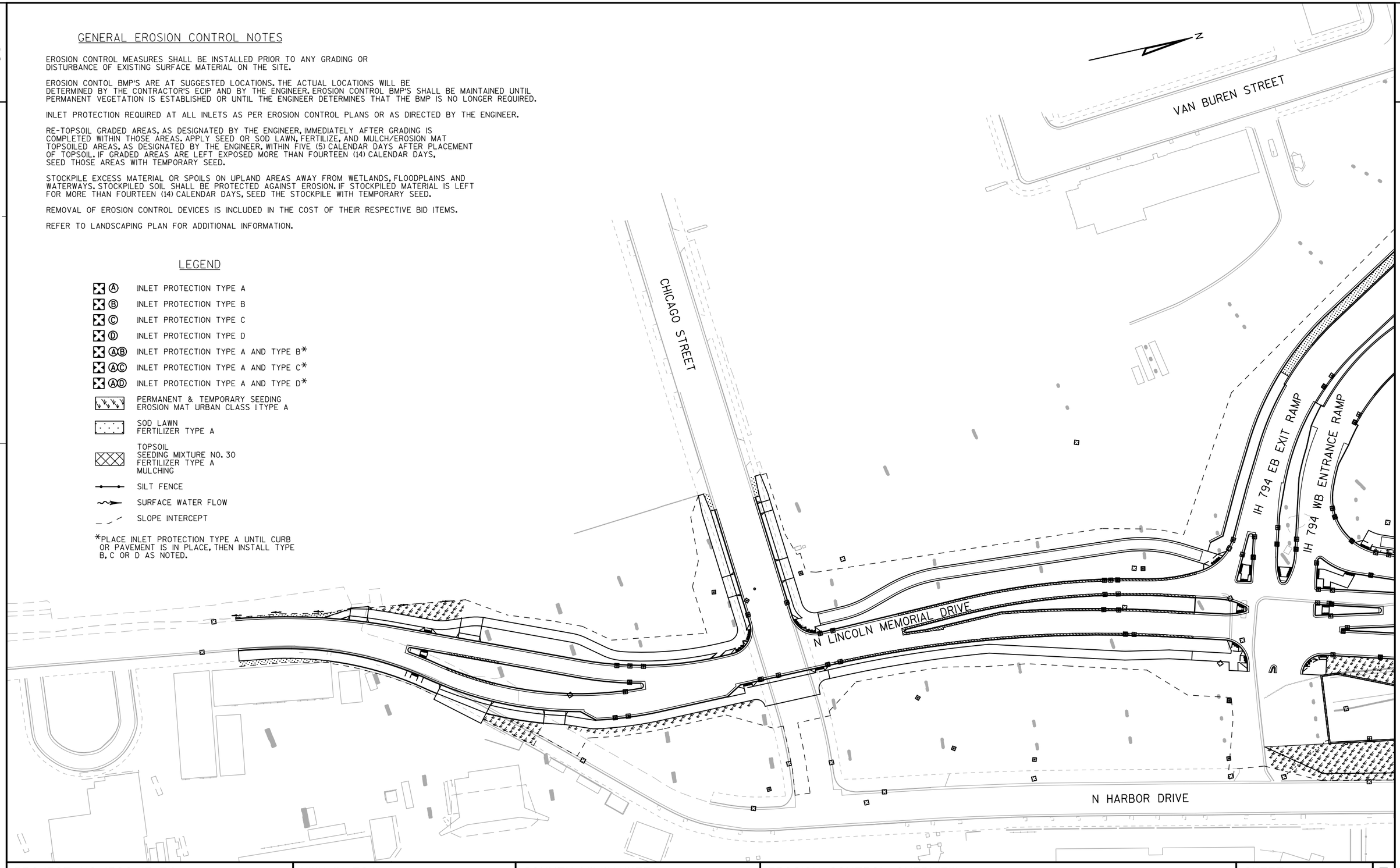
REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

REFER TO LANDSCAPING PLAN FOR ADDITIONAL INFORMATION.

LEGEND

- Ⓐ INLET PROTECTION TYPE A
- Ⓑ INLET PROTECTION TYPE B
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D
- ⒶⒷ INLET PROTECTION TYPE A AND TYPE B*
- ⒶⒸ INLET PROTECTION TYPE A AND TYPE C*
- ⒶⒹ INLET PROTECTION TYPE A AND TYPE D*
- PERMANENT & TEMPORARY SEEDING EROSION MAT URBAN CLASS I TYPE A
- SOD LAWN FERTILIZER TYPE A
- TOPSOIL SEEDING MIXTURE NO. 30 FERTILIZER TYPE A MULCHING
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT

*PLACE INLET PROTECTION TYPE A UNTIL CURB OR PAVEMENT IS IN PLACE, THEN INSTALL TYPE B, C OR D AS NOTED.



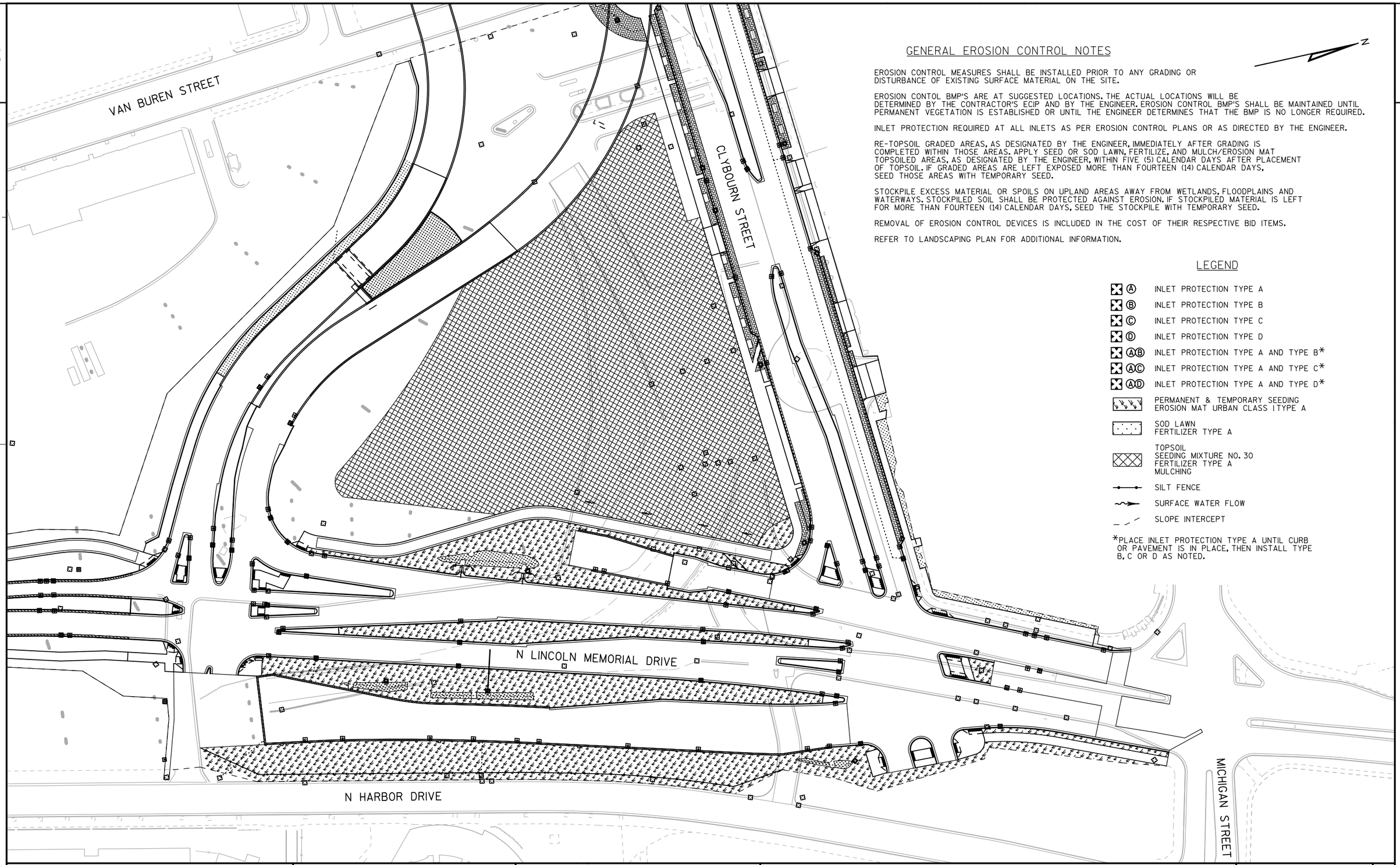
2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	EROSION CONTROL OVERVIEW	SHEET 69	E

FILE NAME : 022000_ec.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2



GENERAL EROSION CONTROL NOTES

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

EROSION CONTOL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. APPLY SEED OR SOD LAWN, FERTILIZE, AND MULCH/EROSION MAT TOPSOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

REFER TO LANDSCAPING PLAN FOR ADDITIONAL INFORMATION.

LEGEND

- Ⓐ INLET PROTECTION TYPE A
- Ⓑ INLET PROTECTION TYPE B
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D
- ⒶⒷ INLET PROTECTION TYPE A AND TYPE B*
- ⒶⒸ INLET PROTECTION TYPE A AND TYPE C*
- ⒶⒹ INLET PROTECTION TYPE A AND TYPE D*
- PERMANENT & TEMPORARY SEEDING EROSION MAT URBAN CLASS I TYPE A
- SOD LAWN FERTILIZER TYPE A
- TOPSOIL SEEDING MIXTURE NO. 30 FERTILIZER TYPE A MULCHING
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT

*PLACE INLET PROTECTION TYPE A UNTIL CURB OR PAVEMENT IS IN PLACE, THEN INSTALL TYPE B, C OR D AS NOTED.

2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	EROSION CONTROL OVERVIEW	SHEET 70	E

2

LEGEND

- Ⓐ INLET PROTECTION TYPE A
- Ⓑ INLET PROTECTION TYPE B
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D
- ⒶⒷ INLET PROTECTION TYPE A AND TYPE B*
- ⒶⒸ INLET PROTECTION TYPE A AND TYPE C*
- ⒶⒹ INLET PROTECTION TYPE A AND TYPE D*
- PERMANENT & TEMPORARY SEEDING
  EROSION MAT URBAN CLASS ITYPE A
- SOD LAWN
  FERTILIZER TYPE A
- TOPSOIL
  SEEDING MIXTURE NO. 30
  FERTILIZER TYPE A
  MULCHING
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT

*PLACE INLET PROTECTION TYPE A UNTIL CURB OR PAVEMENT IS IN PLACE, THEN INSTALL TYPE B, C OR D AS NOTED.

N

EX. R/W

+50 LM

12+00 LM

+50 LM

13+00 LM

+50 LM

14+00 LM

+50 LM

N LINCOLN MEMORIAL DRIVE

15+00 LM

+50 LM

16+00 LM

+50 LM

17+00 LM

+50

MATCH LINE - STA. 17+50 LM

KEY MAP

N

GENERAL EROSION CONTROL NOTES

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

EROSION CONTOL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. APPLY SEED OR SOD LAWN, FERTILIZE, AND MULCH/EROSION MAT TOPSOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

REFER TO LANDSCAPING PLAN FOR ADDITIONAL INFORMATION.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	EROSION CONTROL - LINCOLN MEMORIAL DRIVE	SHEET 71	E

GENERAL EROSION CONTROL NOTES

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

EROSION CONTOL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. APPLY SEED OR SOD LAWN, FERTILIZE, AND MULCH/EROSION MAT TOPSOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

REFER TO LANDSCAPING PLAN FOR ADDITIONAL INFORMATION.

LEGEND

- Ⓐ INLET PROTECTION TYPE A
- Ⓑ INLET PROTECTION TYPE B
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D
- ⒶⒷ INLET PROTECTION TYPE A AND TYPE B*
- ⒶⒸ INLET PROTECTION TYPE A AND TYPE C*
- ⒶⒹ INLET PROTECTION TYPE A AND TYPE D*
- PERMANENT & TEMPORARY SEEDING EROSION MAT URBAN CLASS I TYPE A
- SOD LAWN FERTILIZER TYPE A
- TOPSOIL SEEDING MIXTURE NO. 30 FERTILIZER TYPE A MULCHING
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT

*PLACE INLET PROTECTION TYPE A UNTIL CURB OR PAVEMENT IS IN PLACE, THEN INSTALL TYPE B, C OR D AS NOTED.

N

E CHICAGO STREET

51+00 CH

+50 CH

52+00 CH

+50 CH

N LINCOLN MEMORIAL DRIVE

MATCH LINE - STA. 17+50 LM

LM

18+00 LM

+50 LM

19+00 LM

+50 LM

20+00 LM

+50 LM

21+00 LM

+50 LM

22+00 LM

+50 LM

23+00 LM

MATCH LINE - STA. 23+00 LM

418+00 LN

+50 LN

419+00 LN

+50 LN

420+00 LN

+50 LN

421+00 LN

+50 LN

422+00 LN

+50 LN

423+00 LN

KEY MAP

N

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	EROSION CONTROL - LINCOLN MEMORIAL DRIVE	SHEET 72 E

FILE NAME : 022003_ec.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

MATCH LINE - STA. 109+50 LW

MATCH LINE - STA. 209+00 LE

IH 794 EB EXIT RAMP

IH 794 WB ENTRANCE RAMP

SEE STREETSCAPE LAYOUT AND MATERIALS PLAN FOR GROUND COVER REQUIREMENTS IN THIS AREA

INSTALL RIPRAP MEDIUM AT OUTFALLS (TYP.)

326+00 LS

+50 LS

327+00 LS

+50 LS

328+00 LS

MATCH LINE - STA. 328+00 LS

PLACE SILT FENCE BACKED BY EROSION BALES AT CONCRETE SURFACE DRAIN ENTRY POINTS TO BIO-FILTRATION BASINS FOR TEMPORARY PROTECTION. (TYPICAL)

SEE BIOFILTRATION BASIN DETAILS FOR EROSION CONTROL MEASURES REQUIRED FOR BASIN INSTALLATION

MATCH LINE - STA. 23+00 LM

+50 LM

24+00 LM

25+00 LM

+50 LM

26+00 LM

+50 LM

27+00 LM

+50 LM

28+00 LM

MATCH LINE - STA. 28+00 LM

N LINCOLN MEMORIAL DRIVE

SEE BIOFILTRATION BASIN DETAILS FOR EROSION CONTROL MEASURES REQUIRED FOR BASIN INSTALLATION

SEE BIOFILTRATION BASIN DETAILS FOR EROSION CONTROL MEASURES REQUIRED FOR BASIN INSTALLATION

INSTALL RIPRAP MEDIUM AT OUTFALLS (TYP.)

424+00 LN

+50 LN

425+00 LN

+50 LN

426+00 LN

+50 LN

427+00 LN

+50 LN

428+00 LN

MATCH LINE - STA. 428+00 LN

IH 794 WB EXIT RAMP

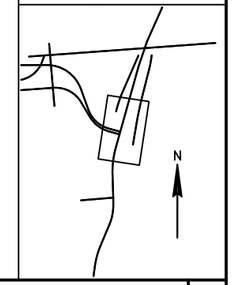
N HARBOR DRIVE

LEGEND

- Ⓐ INLET PROTECTION TYPE A
- Ⓑ INLET PROTECTION TYPE B
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D
- ⒶⒷ INLET PROTECTION TYPE A AND TYPE B*
- ⒶⒸ INLET PROTECTION TYPE A AND TYPE C*
- ⒶⒹ INLET PROTECTION TYPE A AND TYPE D*
- PERMANENT & TEMPORARY SEEDING EROSION MAT URBAN CLASS ITYPE A
- SOD LAWN FERTILIZER TYPE A
- TOPSOIL SEEDING MIXTURE NO. 30 FERTILIZER TYPE A MULCHING
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT

*PLACE INLET PROTECTION TYPE A UNTIL CURB OR PAVEMENT IS IN PLACE, THEN INSTALL TYPE B, C OR D AS NOTED.

KEY MAP



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	EROSION CONTROL - LINCOLN MEMORIAL DRIVE	SHEET 73	E

GENERAL EROSION CONTROL NOTES

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

EROSION CONTOL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. APPLY SEED OR SOD LAWN, FERTILIZE, AND MULCH/EROSION MAT TOPSOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

REFER TO LANDSCAPING PLAN FOR ADDITIONAL INFORMATION.

LEGEND

- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- (AB) INLET PROTECTION TYPE A AND TYPE B*
- (AC) INLET PROTECTION TYPE A AND TYPE C*
- (AD) INLET PROTECTION TYPE A AND TYPE D*
- PERMANENT & TEMPORARY SEEDING EROSION MAT URBAN CLASS ITYPE A
- SOD LAWN FERTILIZER TYPE A
- TOPSOIL SEEDING MIXTURE NO. 30 FERTILIZER TYPE A MULCHING
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT

*PLACE INLET PROTECTION TYPE A UNTIL CURB OR PAVEMENT IS IN PLACE, THEN INSTALL TYPE B, C OR D AS NOTED.

N

MATCH LINE - STA. 28+00 CL

CLYBOURN STREET

PERMEABLE PAVERS

PERMEABLE PAVERS

MATCH LINE - STA. 328+00 LS

IH 794 EB ENTRANCE RAMP

N LINCOLN MEMORIAL DRIVE

MATCH LINE - STA. 28+00 LM

MATCH LINE - STA. 33+00 LM

MATCH LINE - STA. 428+00 LN

IH 794 WB EXIT RAMP

SEE BIOFILTRATION BASIN DETAILS FOR EROSION CONTROL MEASURES REQUIRED FOR BASIN INSTALLATION

RIPRAP MEDIUM AT OUTFALL

KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	EROSION CONTROL - LINCOLN MEMORIAL DRIVE	SHEET 74 E

GENERAL EROSION CONTROL NOTES

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

EROSION CONTOL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. APPLY SEED OR SOD LAWN, FERTILIZE, AND MULCH/EROSION MAT TOPSOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

REFER TO LANDSCAPING PLAN FOR ADDITIONAL INFORMATION.

LEGEND

- Ⓐ INLET PROTECTION TYPE A
- Ⓑ INLET PROTECTION TYPE B
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D
- ⒶⒷ INLET PROTECTION TYPE A AND TYPE B*
- ⒶⒸ INLET PROTECTION TYPE A AND TYPE C*
- ⒶⒹ INLET PROTECTION TYPE A AND TYPE D*
- PERMANENT & TEMPORARY SEEDING EROSION MAT URBAN CLASS ITYPE A
- SOD LAWN FERTILIZER TYPE A
- TOPSOIL SEEDING MIXTURE NO. 30 FERTILIZER TYPE A MULCHING
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT

*PLACE INLET PROTECTION TYPE A UNTIL CURB OR PAVEMENT IS IN PLACE, THEN INSTALL TYPE B, C OR D AS NOTED.

MICHIGAN STREET (USH 18)

N LINCOLN MEMORIAL DRIVE

MATCH LINE - STA. 33+00 LM

0 LM +50 LM 34+00 LM +50 LM 35+00 LM +50 LM 36+00 LM +50 LM 37+00 LM +50 LM 38+00 LM

N LINCOLN MEMORIAL DRIVE

MICHIGAN STREET

KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	EROSION CONTROL - LINCOLN MEMORIAL DRIVE	SHEET 75 E

FILE NAME : 022006_ec.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

LEGEND

- Ⓐ INLET PROTECTION TYPE A
- Ⓑ INLET PROTECTION TYPE B
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D
- ⒶⒷ INLET PROTECTION TYPE A AND TYPE B*
- ⒶⒸ INLET PROTECTION TYPE A AND TYPE C*
- ⒶⒹ INLET PROTECTION TYPE A AND TYPE D*
- PERMANENT & TEMPORARY SEEDING EROSION MAT URBAN CLASS I TYPE A
- SOD LAWN FERTILIZER TYPE A
- TOPSOIL SEEDING MIXTURE NO. 30 FERTILIZER TYPE A MULCHING
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT

*PLACE INLET PROTECTION TYPE A UNTIL CURB OR PAVEMENT IS IN PLACE, THEN INSTALL TYPE B, C OR D AS NOTED.

GENERAL EROSION CONTROL NOTES

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

EROSION CONTOL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

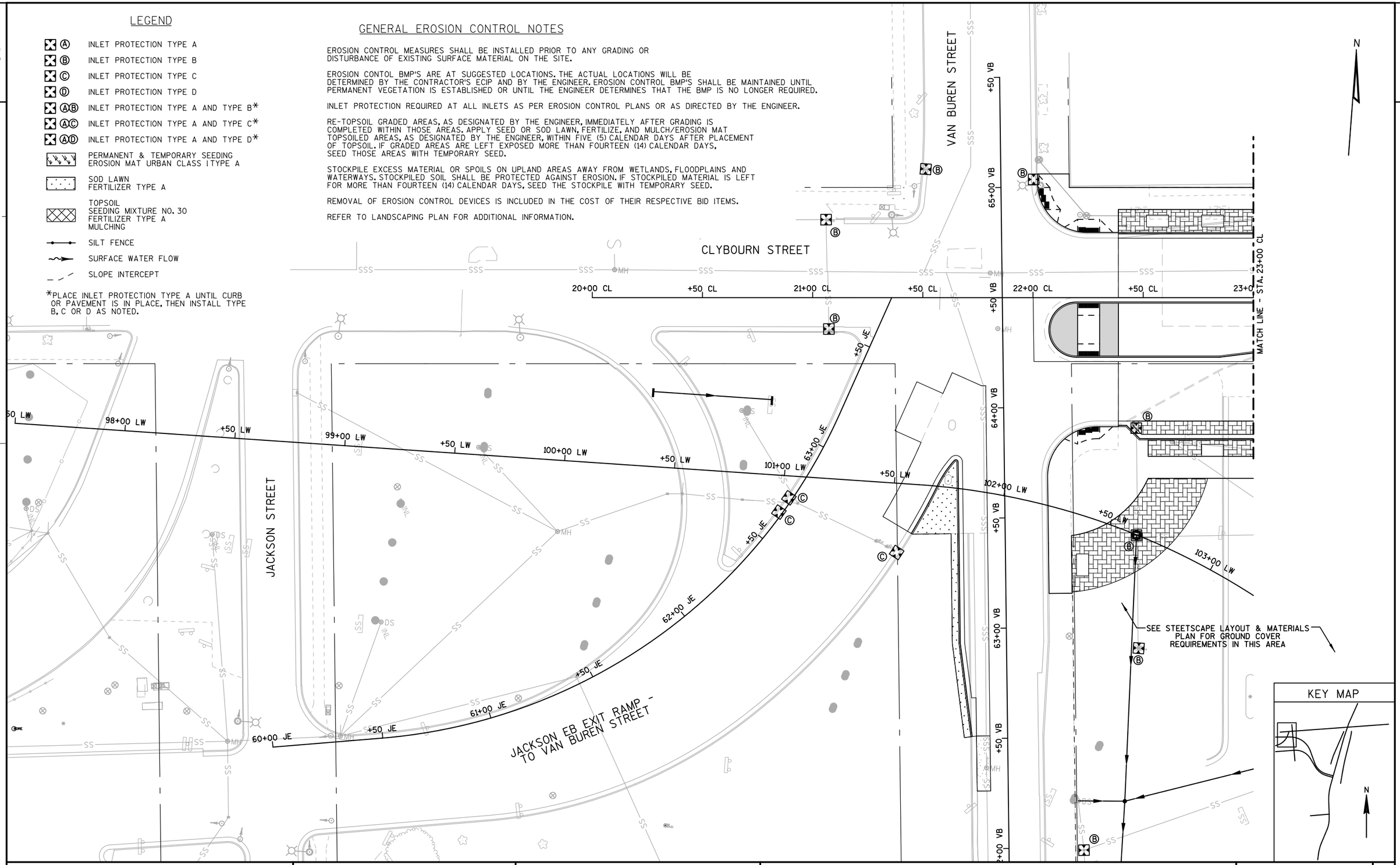
INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. APPLY SEED OR SOD LAWN, FERTILIZE, AND MULCH/EROSION MAT TOPSOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

REFER TO LANDSCAPING PLAN FOR ADDITIONAL INFORMATION.



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	EROSION CONTROL - CLYBOURN STREET	SHEET 76	E

FILE NAME : 022007_ec.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

LEGEND

- Ⓐ INLET PROTECTION TYPE A
- Ⓑ INLET PROTECTION TYPE B
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D
- ⒶⒷ INLET PROTECTION TYPE A AND TYPE B*
- ⒶⒸ INLET PROTECTION TYPE A AND TYPE C*
- ⒶⒹ INLET PROTECTION TYPE A AND TYPE D*
- PERMANENT & TEMPORARY SEEDING
  EROSION MAT URBAN CLASS I TYPE A
- SOD LAWN
  FERTILIZER TYPE A
- TOPSOIL
  SEEDING MIXTURE NO. 30
  FERTILIZER TYPE A
  MULCHING
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT

*PLACE INLET PROTECTION TYPE A UNTIL CURB OR PAVEMENT IS IN PLACE, THEN INSTALL TYPE B, C OR D AS NOTED.

GENERAL EROSION CONTROL NOTES

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

EROSION CONTOL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. APPLY SEED OR SOD LAWN, FERTILIZE, AND MULCH/EROSION MAT TOPSOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

REFER TO LANDSCAPING PLAN FOR ADDITIONAL INFORMATION.

N

PERMEABLE PAVERS

PERMEABLE PAVERS

MATCH LINE - STA. 23+00 CL

MATCH LINE - STA. 28+00 CL

23+00 CL +50 CL 24+00 CL +50 CL 25+00 CL +50 CL 26+00 CL +50 CL 27+00 CL +50 CL 28+00 CL

CLYBOURN STREET

PERMEABLE PAVERS

SEE STREETSCAPE & MATERIALS LAYOUT PLAN FOR GROUND COVER REQUIREMENTS IN THIS AREA.

KEY MAP

N

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	EROSION CONTROL - CLYBOURN STREET	SHEET 77	E

FILE NAME : 022008_ec.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

2

LEGEND

- Ⓐ INLET PROTECTION TYPE A
- Ⓑ INLET PROTECTION TYPE B
- Ⓒ INLET PROTECTION TYPE C
- Ⓓ INLET PROTECTION TYPE D
- ⒶⒷ INLET PROTECTION TYPE A AND TYPE B*
- ⒶⒸ INLET PROTECTION TYPE A AND TYPE C*
- ⒶⒹ INLET PROTECTION TYPE A AND TYPE D*
- PERMANENT & TEMPORARY SEEDING EROSION MAT URBAN CLASS ITYPE A
- SOD LAWN FERTILIZER TYPE A
- TOPSOIL SEEDING MIXTURE NO. 30 FERTILIZER TYPE A MULCHING
- SILT FENCE
- SURFACE WATER FLOW
- SLOPE INTERCEPT

*PLACE INLET PROTECTION TYPE A UNTIL CURB OR PAVEMENT IS IN PLACE, THEN INSTALL TYPE B, C OR D AS NOTED.

+50 LW
105+00 LW
+50 LW
106+00 LW
+50 LW
107+00 LW
+50 LW
108+00 LW
+50 LW
109+00 LW
+50
MATCH LINE - STA. 109+50 LW
MATCH LINE - STA. 208+50 LE
209+
208+00 LE
+50 LE
207+00 LE
+50 LE
206+00 LE
+50 LE
205+00 LE
+50 LE
204+00 LE
+50 LE
+50 LE
+50 VB
60+00 VB
+50 VB
VB

SEE STREETSCAPE LAYOUT AND MATEIALS PLAN FOR GROUND COVER REQUIREMENTS IN THIS AREA

SEE STREETSCAPE LAYOUT & MATEIALS PLAN FOR GROUND COVER REQUIREMENTS IN THIS AREA

INSTALL RIPRAMP MEDIAN FROM CONRETE BASIN OUTFALL TO INLET

IH 794 WB ENTRANCE RAMP

IH 794 EB EXIT RAMP

VAN BUREN STREET

INL

GENERAL EROSION CONTROL NOTES

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

EROSION CONTOL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. APPLY SEED OR SOD LAWN, FERTILIZE, AND MULCH/EROSION MAT TOPSOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

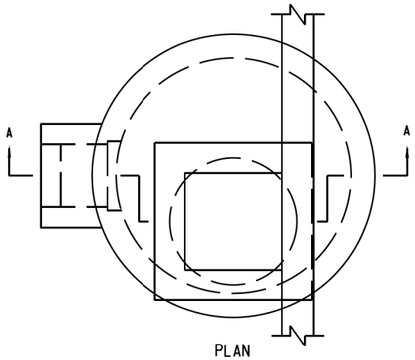
REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

REFER TO LANDSCAPING PLAN FOR ADDITIONAL INFORMATION.

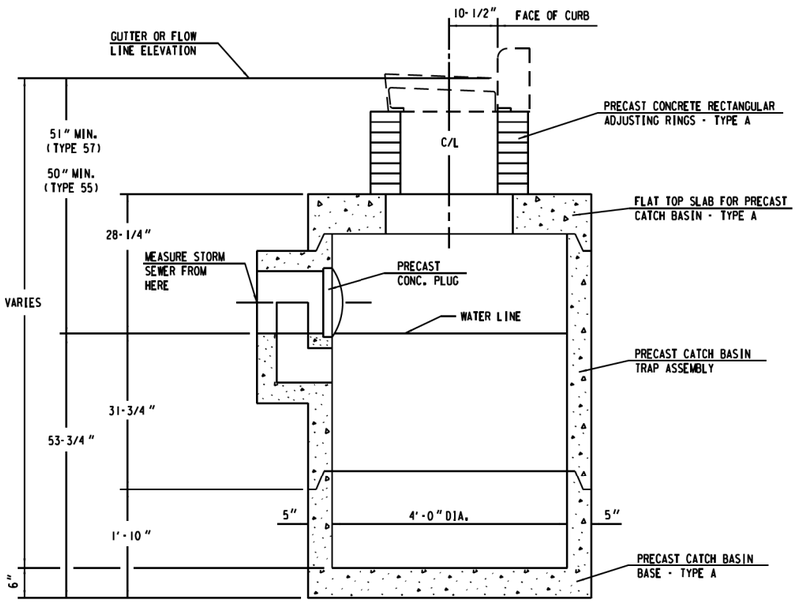
KEY MAP

N

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	EROSION CONTROL - IH 794 EB EXIT AND WB ENTRANCE RAMP	SHEET 78	E



PLAN



SECTION A-A

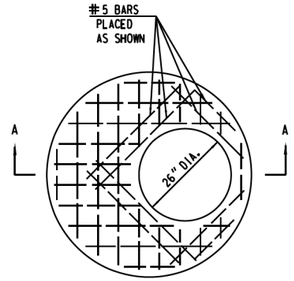
CATCH BASIN - TYPE 44A

GENERAL NOTES

1. REINFORCEMENT FOR 5" PRECAST REINFORCED CONCRETE SHALL BE 6" X 6" W16 X W16 WELDED STEEL WIRE FABRIC AND SHALL BE EMBEDDED 2" CLEAR.
2. PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.
3. PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 4" IN DEPTH WHICH MEETS REQUIREMENTS FOR GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.
4. SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON PLAN.
5. A PRECAST CONCRETE PLUG SHALL BE CEMENTED INTO THE OPENING AT THE INNER FACE OF THE CATCH BASIN TRAP ASSEMBLY.

NOTES

1. TYPE 44A STRUCTURE SHALL BE USED FOR ENHANCED CATCH BASINS WITH STORM SEWER PIPES LESS THAN OR EQUAL TO 8 INCH IN DIAMETER.
2. CONTRACTOR SHALL USE TYPE 44A MODIFIED STORM STRUCTURE FOR ALL ENHANCED CATCH BASINS WITH PIPES PIPES 12 INCHES IN DIAMETER.
3. CONTRACTOR SHALL USE TRAPPED STORM STRUCTURE WITH CUSTOM TRAP FOR ALL ENHANCED CATCH BASINS WITH PIPES LARGER THAN 14 INCHES IN DIAMETER,
4. SAFL BAFFLE SHALL BE INSTALLED WITHIN STRUCTURES LABELED AS ENHANCED CATCH BASINS AS INDICATED ON DRAWINGS.
5. STRUCTURE TOP SLAB AND CASTING SHALL BE POSITIONED TO ALLOW EASY ACCESS INTO AND OUT OF STRUCTURE WHEN SAFL BAFFLE IS INSTALLED.
6. TOP SLAB OPENING AND CASTING SHALL BE POSITIONED OFFSET FROM CENTER OF STRUCTURE.
7. CONTRACTOR SHALL REFER TO SAFL BAFFLE DETAILS FOR PROPER INSTALLATION OF BAFFLE WITHIN TYPE 44A STRUCTURE.
8. STEPS REQUIRED WITHIN STRUCTURE SHALL MEET WISDOT STANDARDS.

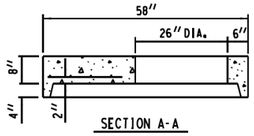


PLAN

FLAT TOP SLAB SHALL BE 8" THICK REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.12 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED IN THE CENTER THIRD OF THE SECTION AS SHOWN.

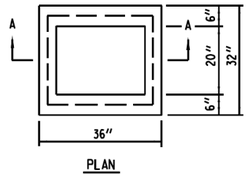
REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.



SECTION A-A

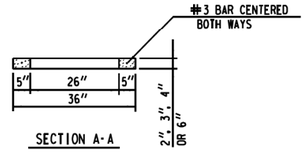
TOP SLAB - TYPE A



PLAN

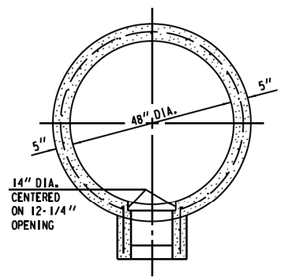
THE ADJUSTING RINGS SHALL BE 2", 3", 4" OR 6" IN HEIGHT.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.



SECTION A-A

RECTANGULAR ADJUSTING RING - TYPE A



SECTION A-A

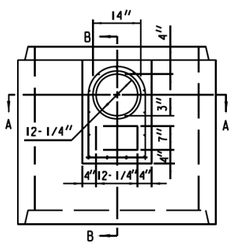
CIRCUMFERENTIAL REINFORCEMENT SHALL CONSIST OF ONE LINE OF STEEL NOT LESS THAN 0.12 SQ. IN. PER LINEAL FOOT, AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.

TRAP ASSEMBLY SHALL BE REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.12 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED IN THE CENTER THIRD OF THE SECTION AS SHOWN.

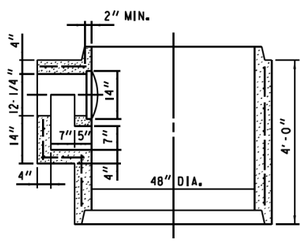
CIRCUMFERENTIAL AND TRAP ASSEMBLY REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.

TWO HANDLING HOLES 2 1/4 INCHES IN DIAMETER SHALL BE CAST OR DRILLED IN THE WALL.



PLAN

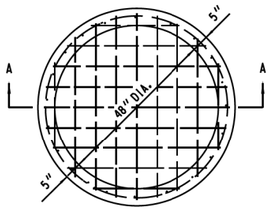


SECTION B-B

TRAP ASSEMBLY

STORM STRUCTURE TYPE-44A

N.T.S.



PLAN

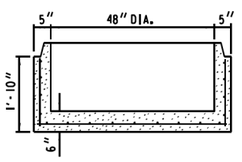
CIRCUMFERENTIAL REINFORCEMENT SHALL CONSIST OF ONE LINE OF STEEL NOT LESS THAN 0.12 SQ. IN. PER LINEAL FOOT, AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.

BOTTOM SLAB SHALL BE REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.12 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED IN THE CENTER THIRD OF THE SLAB.

CIRCUMFERENTIAL AND BOTTOM SLAB REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.

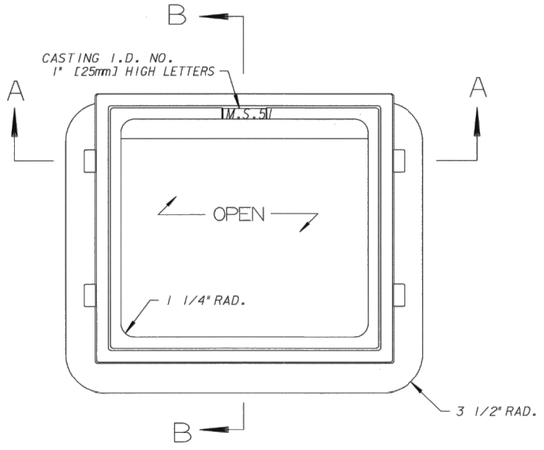
TWO HANDLING HOLES 2 1/4 INCHES IN DIAMETER SHALL BE CAST OR DRILLED IN THE WALL.

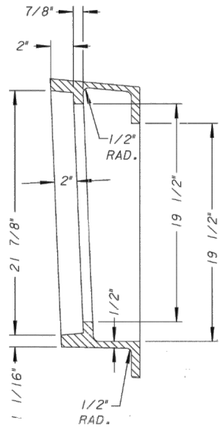


SECTION A-A

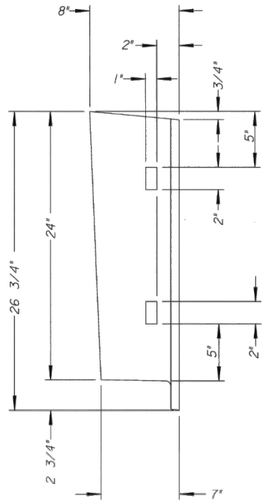
BASE - TYPE A

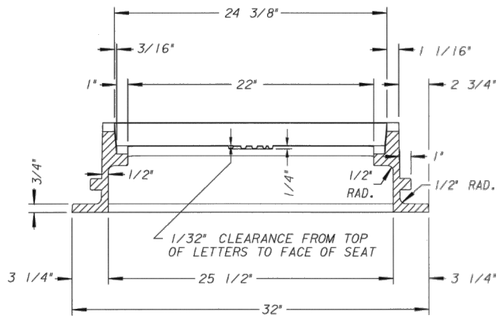
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	DRAINAGE DETAILS	SHEET 79	E





SECTION B-B
SCALE: N.T.S.





SECTION A-A
SCALE: N.T.S.

NOTE: ALL DIMENSIONS ARE SHOWN IN ENGLISH

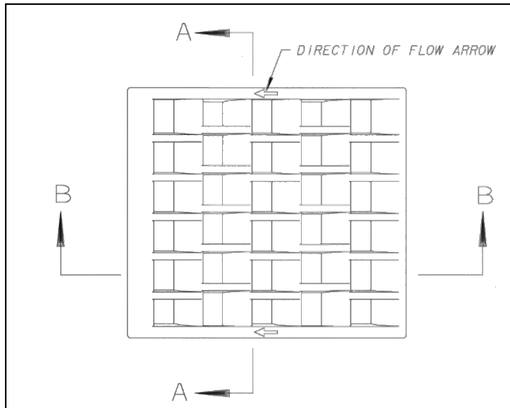
MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
FINISH: NO PAINT
WEIGHT: 237 LBS.

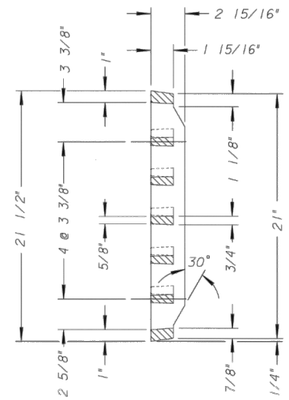
ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMBERS RAISED 1/8" AND HAVING A DIGIT OR LETTER HEIGHT OF 1 INCH ON THE UPPER FACE OF THE FRAME

1. THE INITIALS OR MONOGRAM OF THE FOUNDRY
2. THE CONTRACT NUMBER AND YEAR MADE
3. THE CASTING IDENTIFICATION NUMBER (MS-51)
4. THE SERIAL NUMBER OF THE CASTING

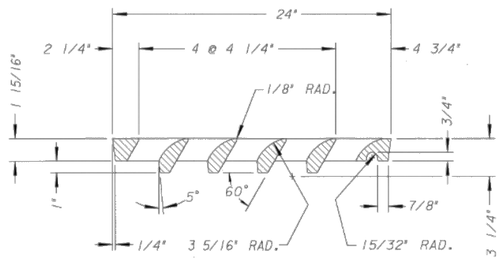
ALL EXTERIOR EDGES SHALL BE GROUND MUST FIT (MS-57) GRATE

TYPE MKE FRAME
CITY OF MILWAUKEE CURB AND GUTTER (MS-51) FRAME
N.T.S.





SECTION A-A
SCALE: N.T.S.



SECTION B-B
SCALE: N.T.S.

MS 57

NOTE: ALL DIMENSIONS ARE SHOWN IN ENGLISH

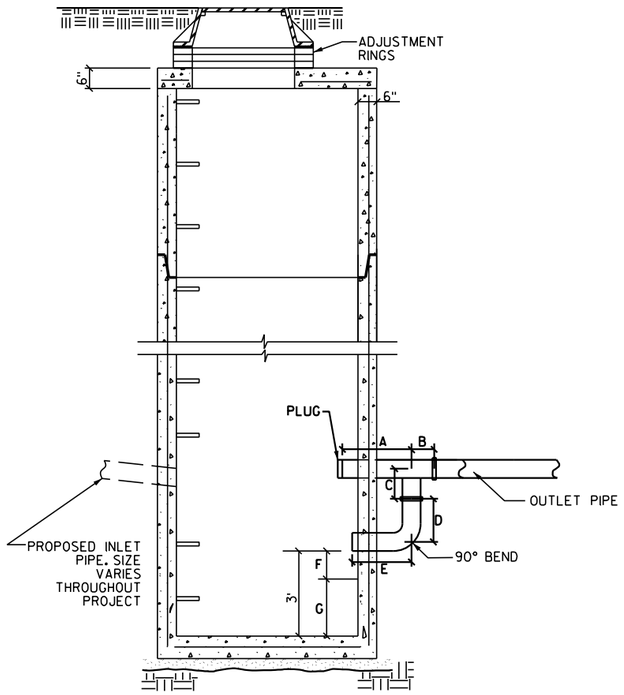
MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
FINISH: NO PAINT
WEIGHT: 237 LBS.

ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMBERS RAISED 1/8" AND HAVING A DIGIT OR LETTER HEIGHT OF 1 INCH ON THE UPPER FACE OF THE FRAME

1. THE INITIALS OR MONOGRAM OF THE FOUNDRY
2. THE CONTRACT NUMBER AND YEAR MADE
3. THE CASTING IDENTIFICATION NUMBER (MS-51)
4. THE SERIAL NUMBER OF THE CASTING

ALL EXTERIOR EDGES SHALL BE GROUND MUST FIT (MS-57) GRATE

TYPE MKE GRATE
CITY OF MILWAUKEE CURB AND GUTTER (MS-57) GRATE
N.T.S.



OUTLET PIPE DIAMETER (IN)	PLUG (IN)	A (IN)	B (IN)	C (IN)	D (IN)	E (IN)	F (IN)	G (IN)
15	16	23	15	15	23	15	10	26
18	18	24.5	16.5	16.5	24.5	16.5	7	29

NOTES

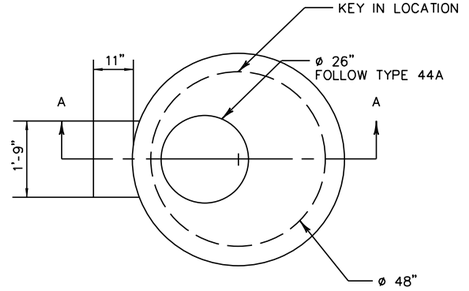
1. STRUCTURE SHALL BE CONSTRUCTED TO MEET WISDOT STANDARDS, AND SHALL BE CONSTRUCTED TO ACCOMMODATE CITY OF MILWAUKEE FRAMES AND GRATES.
2. TRAPPED STORM STRUCTURES SHALL BE USED FOR STORM SEWERS LARGER THAN 12 INCHES IN DIAMETER FOR ENHANCED CATCH BASINS.
3. TRAPPED STORM STRUCTURE SHALL HAVE A 3 FOOT SUMP BELOW LOWEST PIPE INVERT.
4. INSTALL SAFL BAFFLE AS INDICATED IN SAFL BAFFLE DETAILS.
5. SAFL BAFFLE SHALL BE INSTALLED WITHIN STRUCTURES LABELED AS ENHANCED CATCH BASINS AS INDICATED ON DRAWINGS.
6. STRUCTURE TOP SLAB AND CASTING SHALL BE POSITIONED TO ALLOW EASY ACCESS INTO AND OUT OF STRUCTURE WHEN SAFL BAFFLE IS INSTALLED.
7. TOP SLAB OPENING AND CASTING SHALL BE POSITIONED OFFSET FROM CENTER OF STRUCTURE.
8. FOR ALL PROPOSED 15 INCH STORM SEWER OUTLET PIPES, USE 16 INCH DIAMETER PIPES FOR THE PROPOSED EXTERIOR TRAP.
9. EXTERIOR TRAP SHALL BE DUCTILE IRON.

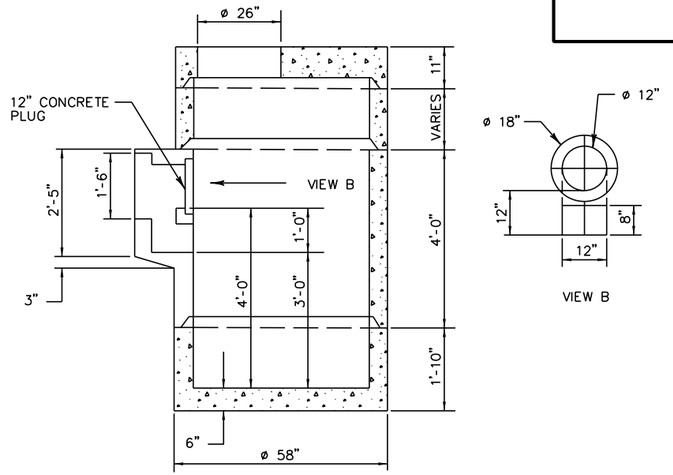
TRAPPED STORM STRUCTURE

N.T.S.

NOTES

1. STORM STRUCTURE TYPE-44A MODIFIED SHALL BE USED FOR ENHANCED CATCH BASIN WITH STORM SEWER PIPES 12 INCHES IN DIAMETER.
2. SEE STORM STRUCTURE TYPE-44A DETAIL FOR ADDITIONAL INFORMATION INCLUDING, BUT NOT LIMITED TO; REINFORCEMENT, ADJUSTING RINGS, CASTING POSITION, AND CONSTRUCTION NOTES.

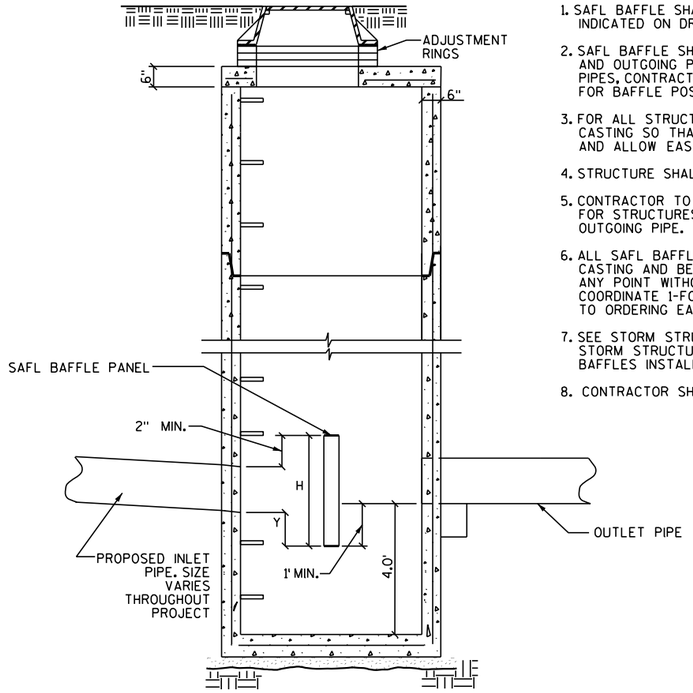




SECTION A-A

STORM STRUCTURE TYPE-44A MODIFIED

N.T.S.



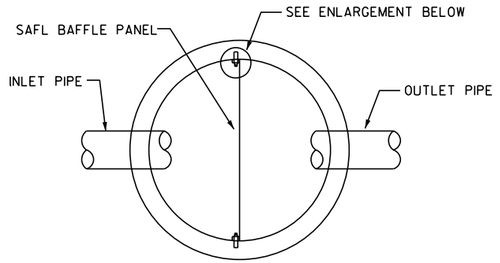
NOTES

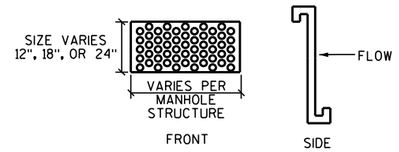
1. SAFL BAFFLE SHALL BE INSTALLED IN ENHANCED CATCH BASINS, AS INDICATED ON DRAWING.
2. SAFL BAFFLE SHALL BE POSITIONED PERPENDICULAR TO INCOMING AND OUTGOING PIPE. FOR STRUCTURES WITH MORE THAN ONE INCOMING PIPES, CONTRACTOR SHALL GET MANUFACTURERS RECOMMENDATION FOR BAFFLE POSITIONING.
3. FOR ALL STRUCTURES WITH SAFL BAFFLE, POSITION STRUCTURE CASTING SO THAT THE STRUCTURE MAY BE CLEANED BY VACUUM AND ALLOW EASY ACCESS INTO AND OUT OF THE STRUCTURE.
4. STRUCTURE SHALL HAVE ONE OUTLET PIPE.
5. CONTRACTOR TO COORDINATE BAFFLE DESIGN WITH MANUFACTURER FOR STRUCTURES WITH DROPS BETWEEN THE INCOMING AND OUTGOING PIPE.
6. ALL SAFL BAFFLE PLATES SHALL BE SIZED TO FIT THROUGH STRUCTURE CASTING AND BE INSTALLED SO THAT SAFL BAFFLE CAN BE REMOVED AT ANY POINT WITHOUT REMOVING THE CASTING. CONTRACTOR SHALL COORDINATE 1-FOOT BAFFLE WIDTHS WITH MANUFACTURER WELL IN ADVANCE TO ORDERING EACH BAFFLE.
7. SEE STORM STRUCTURE TYPE 44A, TYPE 44A MODIFIED, AND TRAPPED STORM STRUCTURE FOR MANHOLE AND TRAPS THAT WILL HAVE SAFL BAFFLES INSTALLED.
8. CONTRACTOR SHALL INSTALL PRODUCT AS SPECIFIED OR APPROVED EQUAL.

INCOMING PIPE DIA. (IN.)	H (IN.)	y (IN.)
8	34	12
12	34	12
15	34	12
18	34	12
21	44	12
24	44	12
27	44	12
30	54	12
36	54	12

SAFL BAFFLE POSITION WITH STRUCTURE

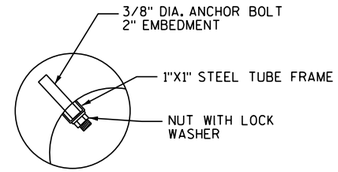
N.T.S.





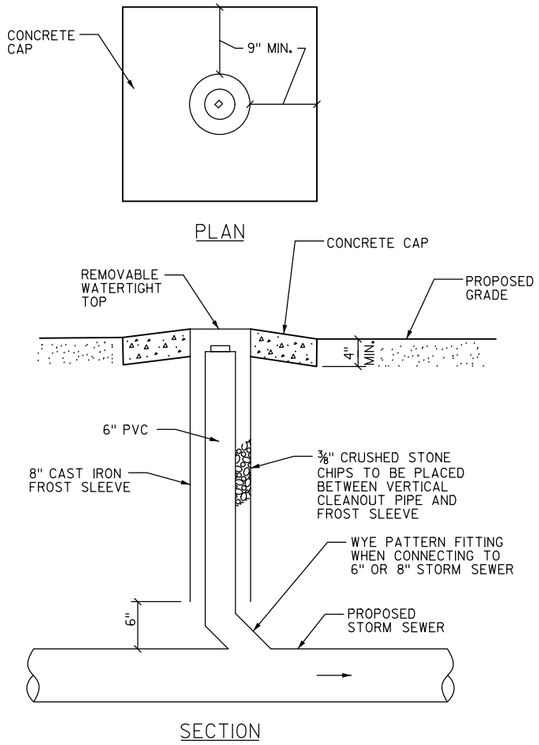
SAFL BAFFLE PANEL

N.T.S.



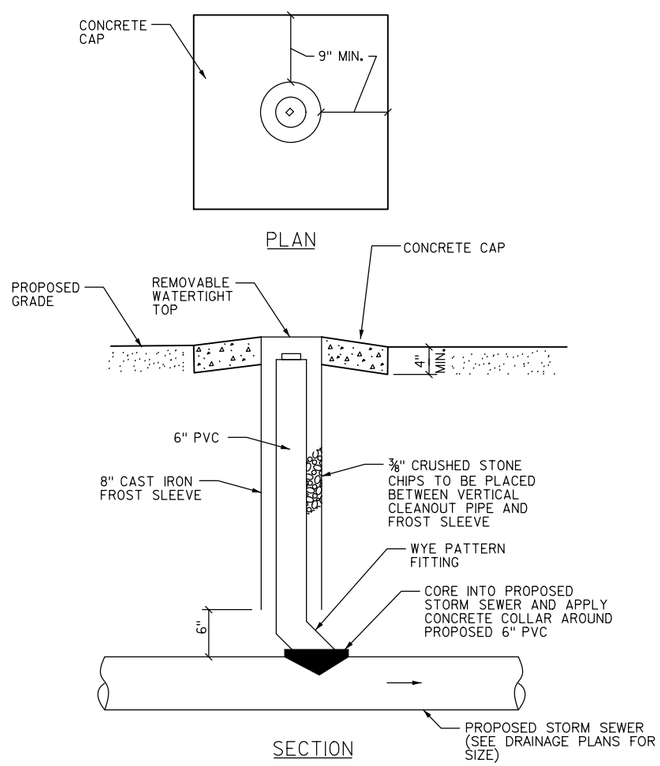
SAFL BAFFLE PANEL CONNECTION TO STRUCTURE

N.T.S.



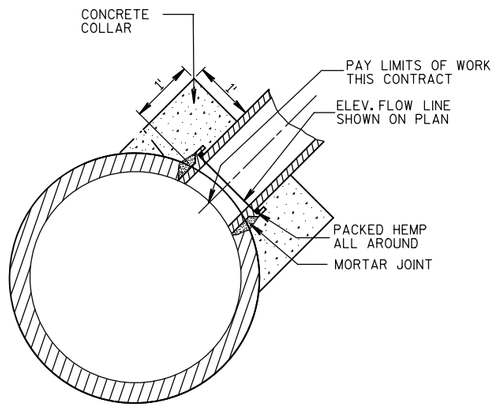
CLEANOUT DETAIL

N.T.S.



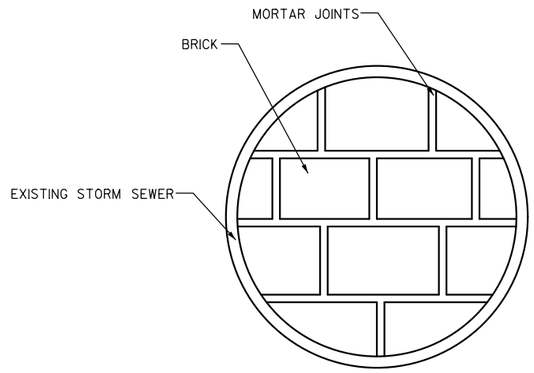
CORE CONNECTION CLEANOUT DETAIL

N.T.S.



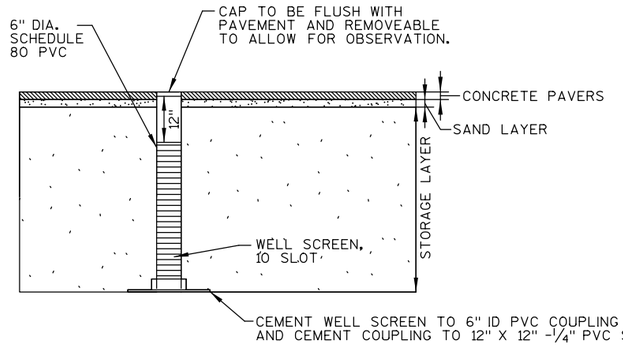
DETAIL OF CONNECTION TO STORM SEWER

NOTE: CONTRACT UNIT PRICE FOR PIPE SHALL INCLUDE COST OF CONNECTION TO EXISTING STORM SEWER OR M.H.



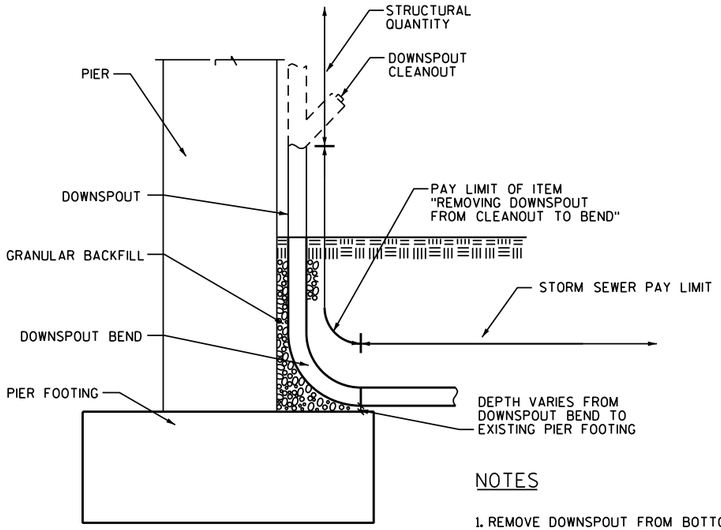
SEALING EXISTING PIPE DETAIL

N.T.S.



OBSERVATION WELL DETAIL

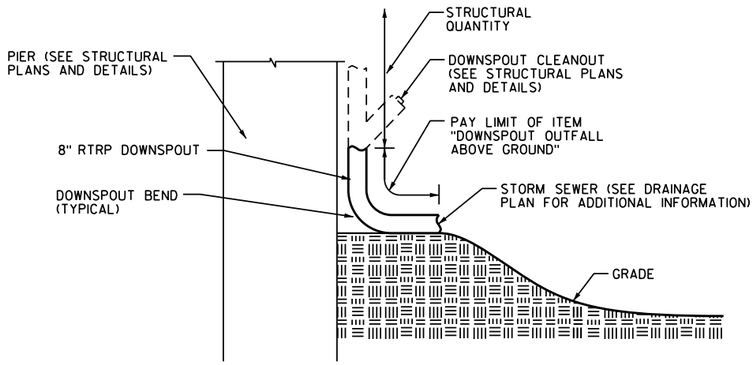
N.T.S.



REMOVING DOWNSPOUT, FROM CLEANOUT TO BEND
N.T.S.

NOTES

1. REMOVE DOWNSPOUT FROM BOTTOM OF CLEANOUT TO BEND BELOW GRADE.
2. VERIFY PIER AND FOOTING DEPTH AND SIZE PRIOR TO REMOVING DOWNSPOUT. (SEE STRUCTURAL PLANS FOR DETAILS)
3. DEPTH MAY VARY FROM GROUND ELEVATION TO DOWNSPOUT BEND.



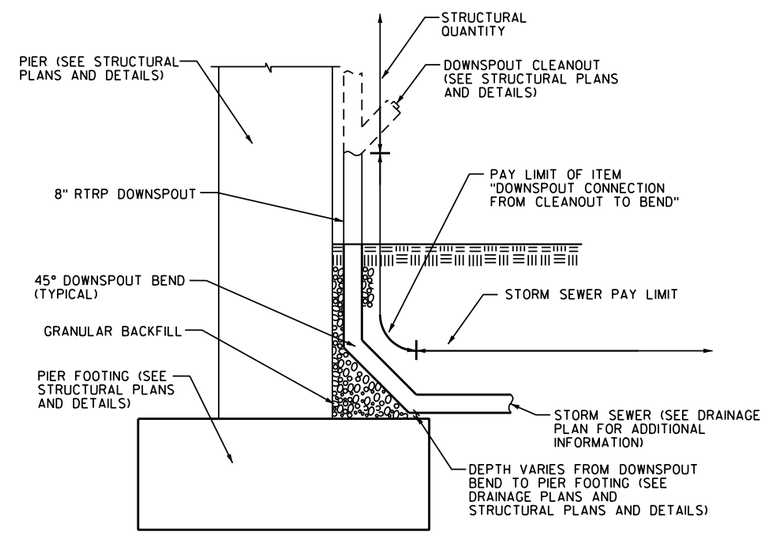
GENERAL NOTES

1. DOWNSPOUTS SHALL DISCHARGE ABOVE GRADE.
2. VERIFY PIER AND FOOTING DEPTH AND SIZE PRIOR TO INSTALLING PROPOSED DOWNSPOUT.
3. SEE DRAINAGE PLANS FOR ALL DOWNSPOUTS REQUIRING APRON END WALLS.

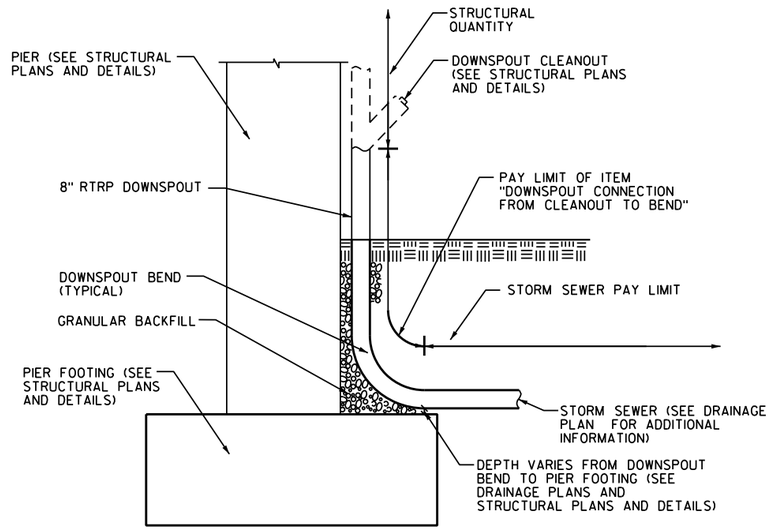
DOWNSPOUT OUTFALL ABOVE GRADE
N.T.S.

GENERAL NOTES

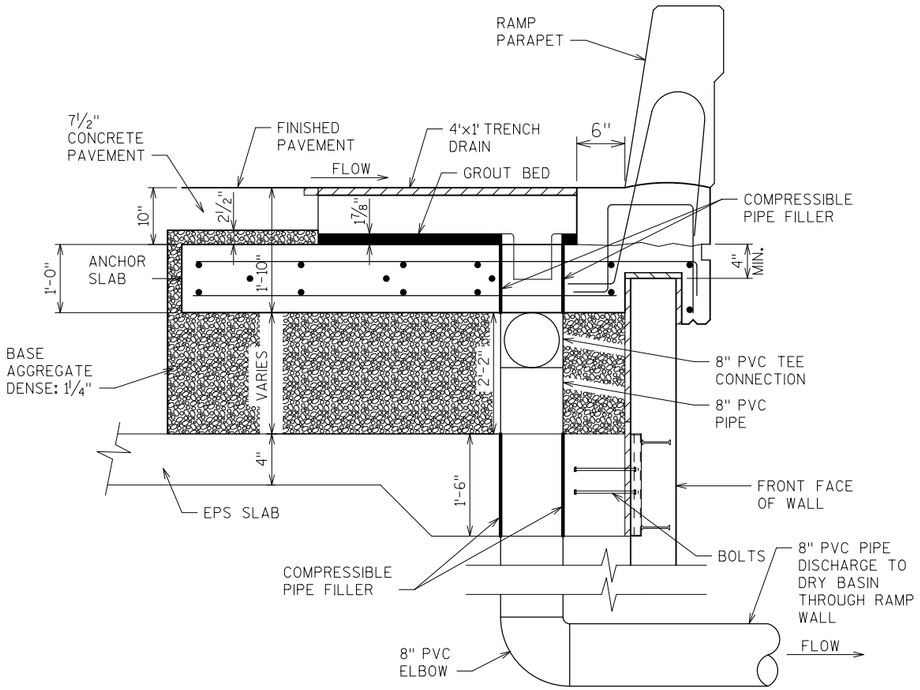
1. POSITION DOWNSPOUTS WITHOUT DAMAGING PIER AND FOOTINGS. ADJUST DOWNSPOUTS AS NECESSARY TO REACH STORM SEWER PIPE.
2. MAXIMUM DESIRABLE BEND SHALL BE 45 DEGREES. IF NECESSARY, 90 DEGREE BENDS CAN BE USED.
3. VERIFY PIER AND FOOTING DEPTH AND SIZE PRIOR TO INSTALLING DOWNSPOUT.
4. OPTION 3 SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLING DOWNSPOUT.



DOWNSPOUT CONNECTION, FROM CLEANOUT TO BEND OPTION 1
N.T.S.

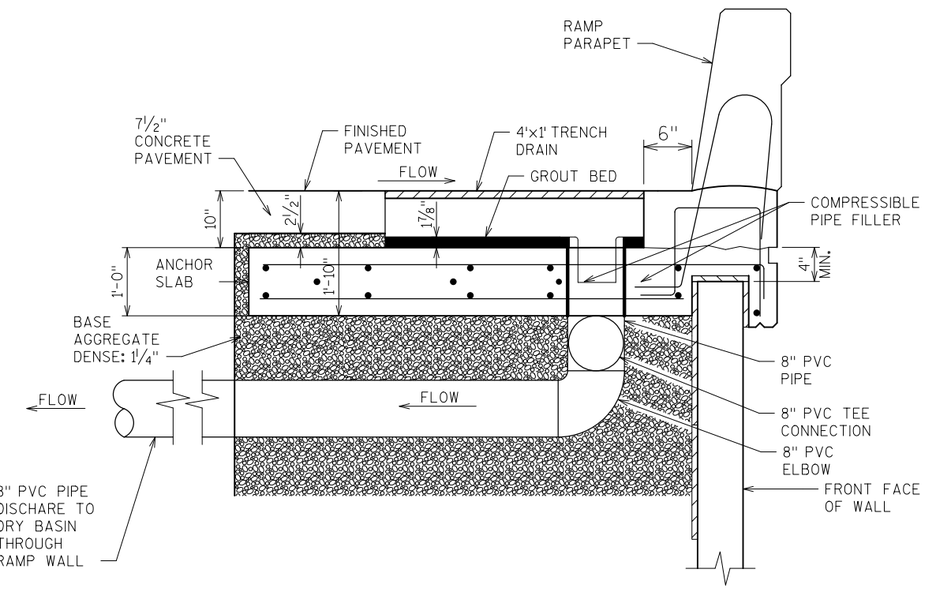


DOWNSPOUT CONNECTION, FROM CLEANOUT TO BEND OPTION 2
N.T.S.



RAMP TRENCH DRAIN CONNECTION THROUGH ANCHOR AND EPS SLAB

N.T.S.

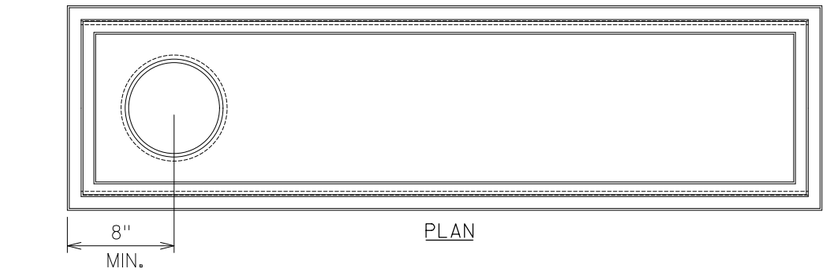


RAMP TRENCH DRAIN CONNECTION THROUGH ANCHOR SLAB

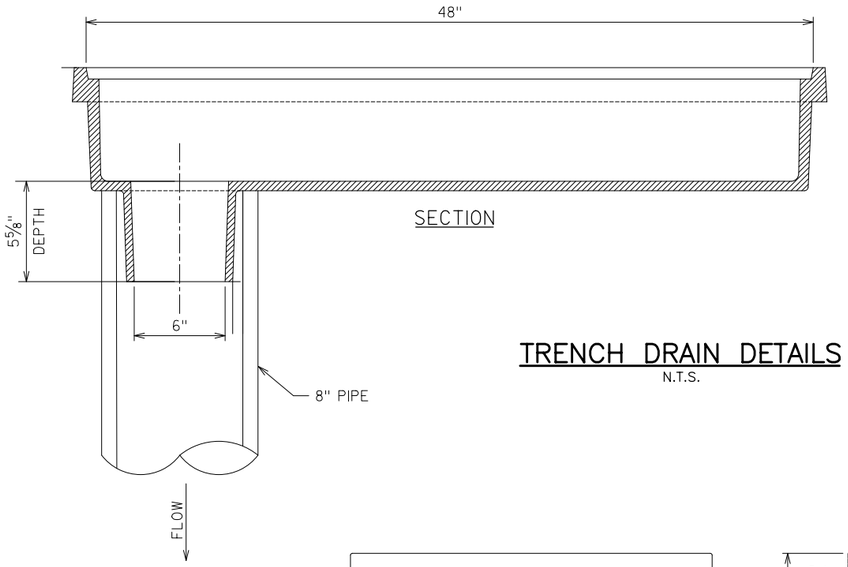
N.T.S.

NOTES

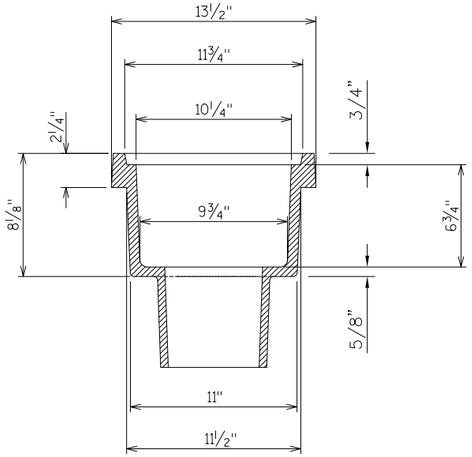
1. ALL TEE CONNECTIONS WITHIN EPS ZONE MUST BE BELOW ANCHOR SLAB AND ABOVE EPS SLAB.
2. SEE STRUCTURAL PLANS FOR ADDITIONAL ANCHOR AND EPS SLAB DESIGN AND INFORMATION.
3. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN STRUCTURAL PLANS AND DRAINAGE PLANS PRIOR TO COMMENCING WORK.
4. ALL PVC PIPE WITHIN RAMP SHALL BE WATER TIGHT.
5. CONTRACTOR SHALL PROTECT 8 INCH PIPE FROM RECEIVING CONCRETE AND/OR GROUT MATERIAL WHEN PLACING GROUT BED AND CONCRETE AROUND TRENCH DRAIN.
6. CONTRACTOR SHALL USE COMPRESSIBLE FILLER BETWEEN 8-INCH PIPE AND CONCRETE SLABS.
7. CONTRACTOR SHALL COORDINATE WITH NEENAH FOUNDRY WHEN ORDERING TRENCH DRAIN OUTLET POSITION PRIOR TO CONSTRUCTION.



PLAN



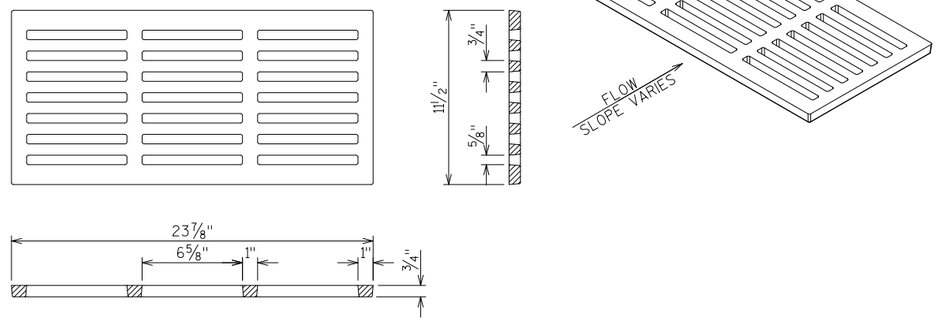
SECTION



SECTION

TRENCH DRAIN DETAILS

N.T.S.



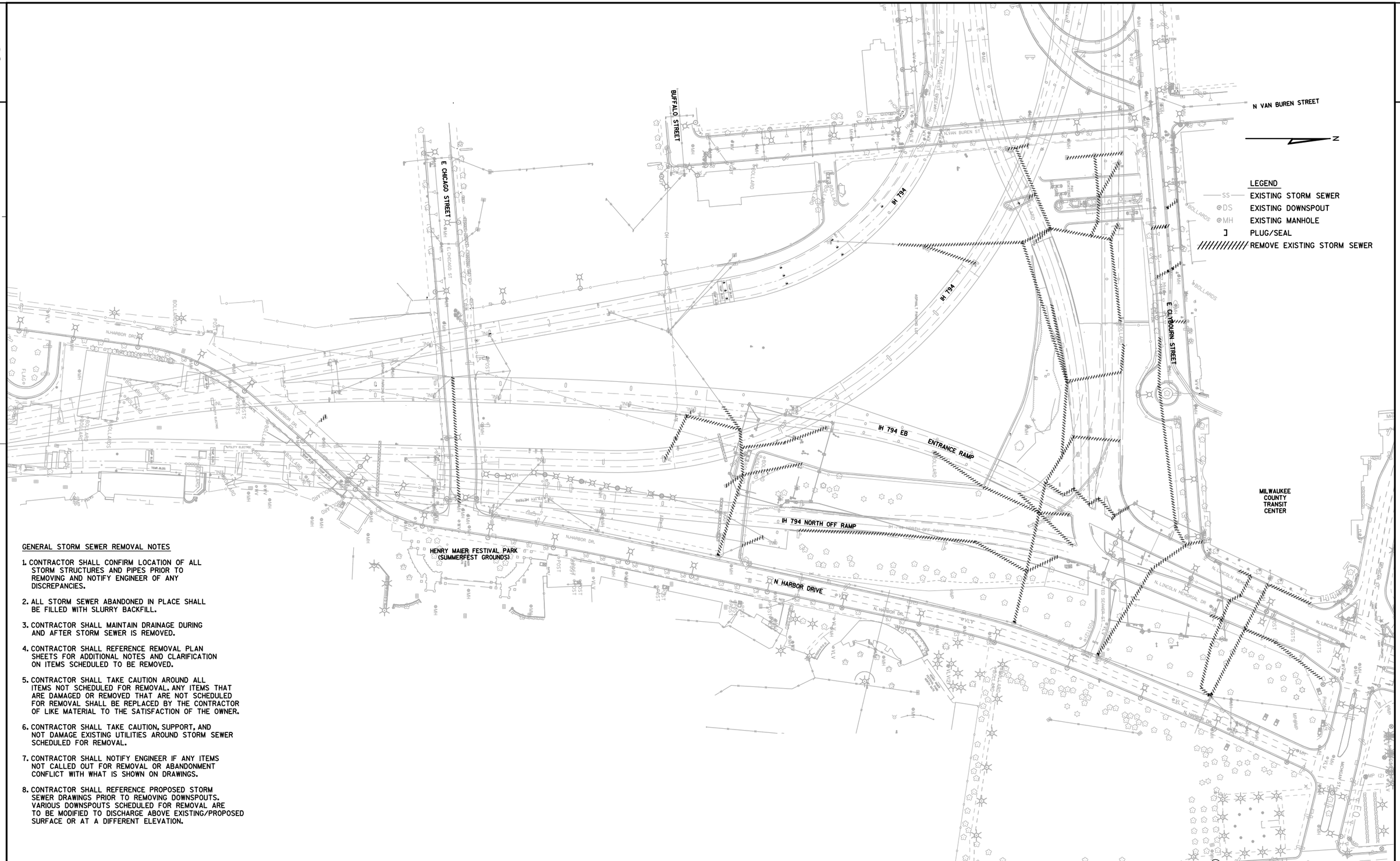
TRENCH DRAIN GRATE DETAILS

N.T.S.

NOTES

1. TRENCH DRAINS SHALL BE NEENAH R-4995-A1 TYPE M FRAME WITH TYPE C GRATE. (OR APPROVED EQUAL)

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	DRAINAGE DETAILS	SHEET 84	E



GENERAL STORM SEWER REMOVAL NOTES

1. CONTRACTOR SHALL CONFIRM LOCATION OF ALL STORM STRUCTURES AND PIPES PRIOR TO REMOVING AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
2. ALL STORM SEWER ABANDONED IN PLACE SHALL BE FILLED WITH SLURRY BACKFILL.
3. CONTRACTOR SHALL MAINTAIN DRAINAGE DURING AND AFTER STORM SEWER IS REMOVED.
4. CONTRACTOR SHALL REFERENCE REMOVAL PLAN SHEETS FOR ADDITIONAL NOTES AND CLARIFICATION ON ITEMS SCHEDULED TO BE REMOVED.
5. CONTRACTOR SHALL TAKE CAUTION AROUND ALL ITEMS NOT SCHEDULED FOR REMOVAL. ANY ITEMS THAT ARE DAMAGED OR REMOVED THAT ARE NOT SCHEDULED FOR REMOVAL SHALL BE REPLACED BY THE CONTRACTOR OF LIKE MATERIAL TO THE SATISFACTION OF THE OWNER.
6. CONTRACTOR SHALL TAKE CAUTION, SUPPORT, AND NOT DAMAGE EXISTING UTILITIES AROUND STORM SEWER SCHEDULED FOR REMOVAL.
7. CONTRACTOR SHALL NOTIFY ENGINEER IF ANY ITEMS NOT CALLED OUT FOR REMOVAL OR ABANDONMENT CONFLICT WITH WHAT IS SHOWN ON DRAWINGS.
8. CONTRACTOR SHALL REFERENCE PROPOSED STORM SEWER DRAWINGS PRIOR TO REMOVING DOWNSPOUTS. VARIOUS DOWNSPOUTS SCHEDULED FOR REMOVAL ARE TO BE MODIFIED TO DISCHARGE ABOVE EXISTING/PROPOSED SURFACE OR AT A DIFFERENT ELEVATION.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	OVERALL STORM SEWER REMOVAL	SHEET 85	E

2

N

LEGEND

SS	EXISTING STORM SEWER
DS	EXISTING DOWNSPOUT
MH	EXISTING MANHOLE
]	PLUG/SEAL
/ / / /	REMOVE EXISTING STORM SEWER

NOTES

1. SEE OVERALL STORM SEWER REMOVAL FOR ADDITIONAL GENERAL REMOVAL NOTES.

REMOVING INLETS

(1) STA. 15+85.84, 22.87'RT

52+00 CH

CHICAGO STREET

+50 CH

+50 LM

16+00 LM

+50 LM

17+00 LM

+50 LM

18+00 LM

+50 LM

19+00 LM

+50 LM

20+0

MATCH LINE 20+00 LM

(1)

18" STORM SEWER

REMOVE EXISTING STORM SEWER TO PROPOSED MANHOLE

36" STORM SEWER

418+00 LN

+50 LN

419+00 LN

+50 LN

420+00 LN

+50

MATCH LINE 420+50 LN

HARBOR DRIVE

2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - REMOVAL PLAN	SHEET 86	E

FILE NAME : 022401_ss_rm.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

N

MATCH LINE 20+00 LM

0 LM

+50 LM

21+00 LM

+50 LM

22+00 LM

+50 LM

23+00 LM

+50 LM

24+00 LM

+50 LM

25+00 LM

+50

MATCH LINE 25+50 LM

MATCH LINE 210+50 LE

+50 LE

210+00 LE

+50 LW

111+00 LW

MATCH LINE 111+75 LW

6" STORM SEWER

15" STORM SEWER

18" STORM SEWER

6" STORM SEWER

15" STORM SEWER

18" STORM SEWER

6" STORM SEWER

18" STORM SEWER

12" STORM SEWER

8" STORM SEWER

18" STORM SEWER (APPROX.)

LN

421+00 LN

+50 LN

422+00 LN

+50 LN

423+00 LN

+50 LN

424+00 LN

+50 LN

425+00 LN

+50 LN

MATCH LINE 420+50 LN

MATCH LINE 425+75 LN

12" STORM SEWER

6" STORM SEWER (APPROX.)

18" PLUG

REMOVE EXISTING DOWNSPOUT TO STATION AND OFFSET CALLED OUT ON PROPOSED STORM SEWER PLAN

HARBOR DRIVE

LEGEND

SS	EXISTING STORM SEWER
DS	EXISTING DOWNSPOUT
MH	EXISTING MANHOLE
]	PLUG/SEAL
/ / / /	REMOVE EXISTING STORM SEWER

NOTES

1. SEE OVERALL STORM SEWER REMOVAL FOR ADDITIONAL GENERAL REMOVAL NOTES.

REMOVING INLETS

1	22+22.25 LM, 16.58'RT
2	22+32.73 LM, 28.18'LT
3	23+35.04 LM, 75.08'RT
4	23+41.46 LM, 1.52'RT
5	24+55.60 LM, 0.21'RT
6	23+58.64 LM, 47.51'RT
7	24+80.34 LM, 118.37'RT

REMOVING MANHOLES

1	23+30.80 LM, 29.86'LT

REMOVING DOWNSPOUTS

1	22+41.60 LM, 42.20'LT
2	22+09.63 LM, 56.48'RT
3	24+81.81 LM, 76.06'LT
4	24+24.03 LM, 146.01'RT

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - REMOVAL PLAN	SHEET 87	E

2

N

LEGEND

SS	EXISTING STORM SEWER
DS	EXISTING DOWNSPOUT
MH	EXISTING MANHOLE
]	PLUG/SEAL
/ / / /	REMOVE EXISTING STORM SEWER

NOTES

1. SEE OVERALL STORM SEWER REMOVAL FOR ADDITIONAL GENERAL REMOVAL NOTES.

REMOVING INLETS

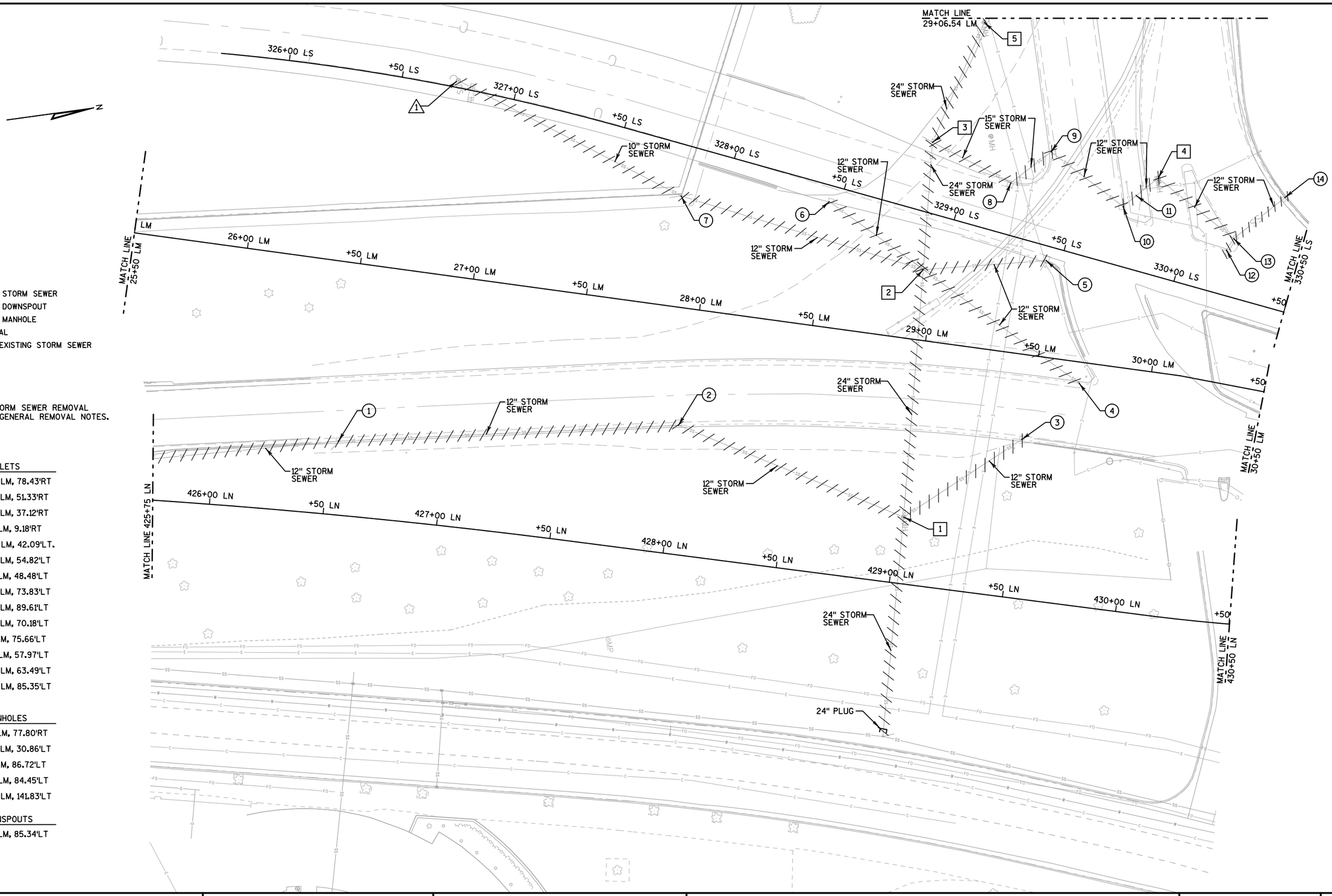
1	26+50.95 LM, 78.43'RT
2	27+97.66 LM, 51.33'RT
3	29+47.58 LM, 37.12'RT
4	29+69.13 LM, 9.18'RT
5	29+47.60 LM, 42.09'LT.
6	28+49.92 LM, 54.82'LT
7	27+85.18 LM, 48.48'LT
8	29+27.66 LM, 73.83'LT
9	29+43.28 LM, 89.61'LT
10	29+77.76 LM, 70.18'LT
11	29+82.81 LM, 75.66'LT
12	30+22.18 LM, 57.97'LT
13	30+24.36 LM, 63.49'LT
14	30+42.99 LM, 85.35'LT

REMOVING MANHOLES

1	29+00.91 LM, 77.80'RT
2	28+94.78 LM, 30.86'LT
3	28+91.16 LM, 86.72'LT
4	29+91.34 LM, 84.45'LT
5	29+06.54 LM, 141.83'LT

REMOVING DOWNSPOUTS

1	26+81.65 LM, 85.34'LT



2

N

LEGEND

- SS — EXISTING STORM SEWER
- DS EXISTING DOWNSPOUT
- MH EXISTING MANHOLE
- PLUG/SEAL
- REMOVE EXISTING STORM SEWER

NOTES

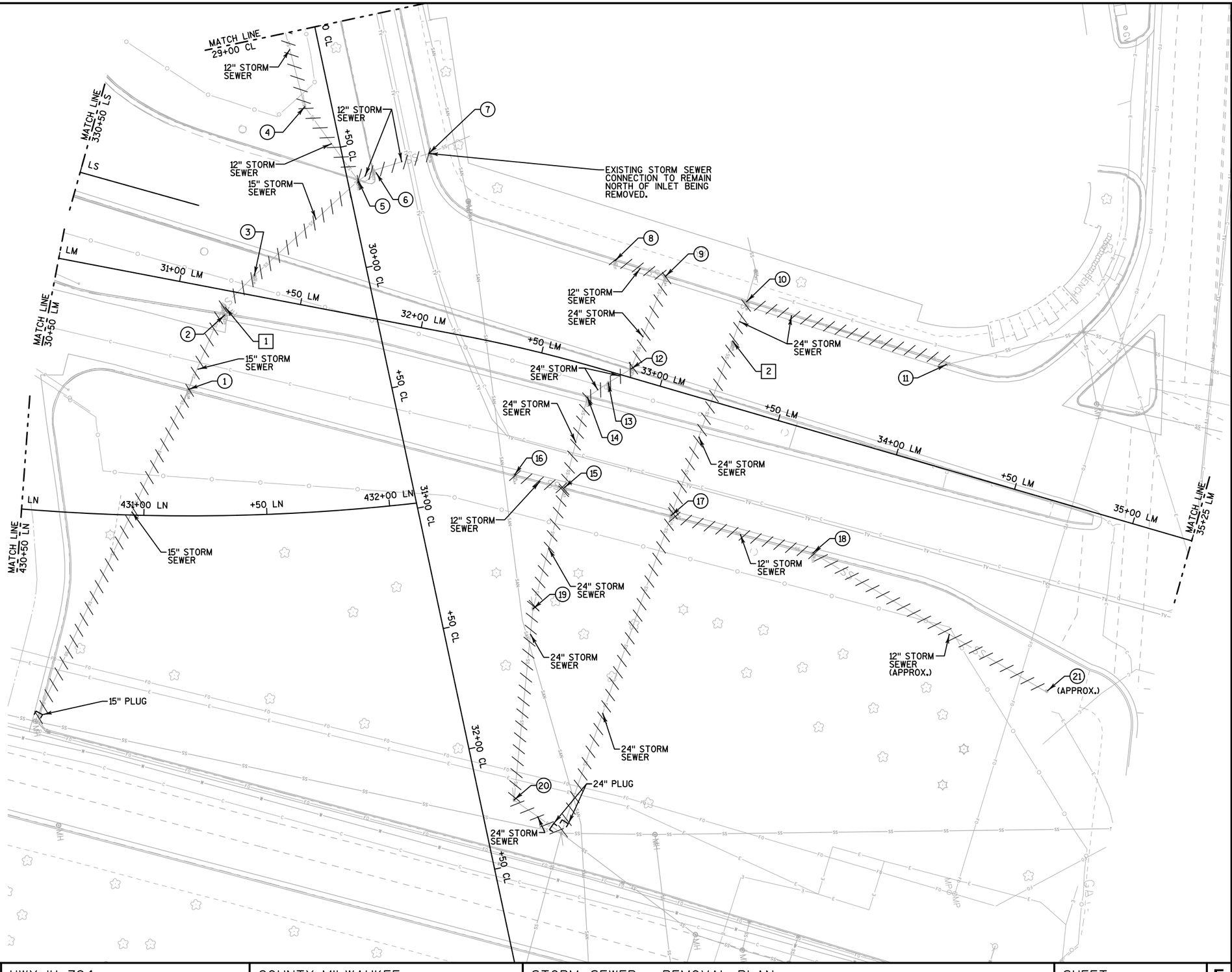
1. SEE OVERALL STORM SEWER REMOVAL FOR ADDITIONAL GENERAL REMOVAL NOTES.

REMOVING INLETS

1	31+11.78 LM, 42.43'RT
2	31+20.59 LM, 9.94'RT
3	31+29.38 LM, 8.02'LT
4	31+36.61 LM, 79.28'LT
5	31+63.63 LM, 53.87'LT
6	31+68.93 LM, 59.13'LT
7	31+90.04 LM, 70.27'LT
8	32+68.21 LM, 43.84'LT
9	32+89.57 LM, 43.34'LT
10	33+24.19 LM, 42.75'LT
11	34+09.35 LM, 40.98'LT
12	32+86.79 LM, 3.46'LT
13	32+79.42 LM, 4.56'RT
14	32+72.90 LM, 12.56'RT
15	32+74.15 LM, 50.51'RT
16	32+53.31 LM, 51.09'RT
17	33+18.99 LM, 49.25'RT
18	33+78.56 LM, 47.79'RT
19	32+75.70 LM, 101.35'RT
20	32+90.03 LM, 178.05'RT
21	34+85.16 LM, 75.43'RT

REMOVING MANHOLES

1	31+19.43 LM, 6.56'RT
2	33+23.26 LM, 25.68'LT



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - REMOVAL PLAN	SHEET 89	E

2

LEGEND

- SS — EXISTING STORM SEWER
- DS EXISTING DOWNSPOUT
- MH EXISTING MANHOLE
-] PLUG/SEAL
- / / / / REMOVE EXISTING STORM SEWER

NOTES

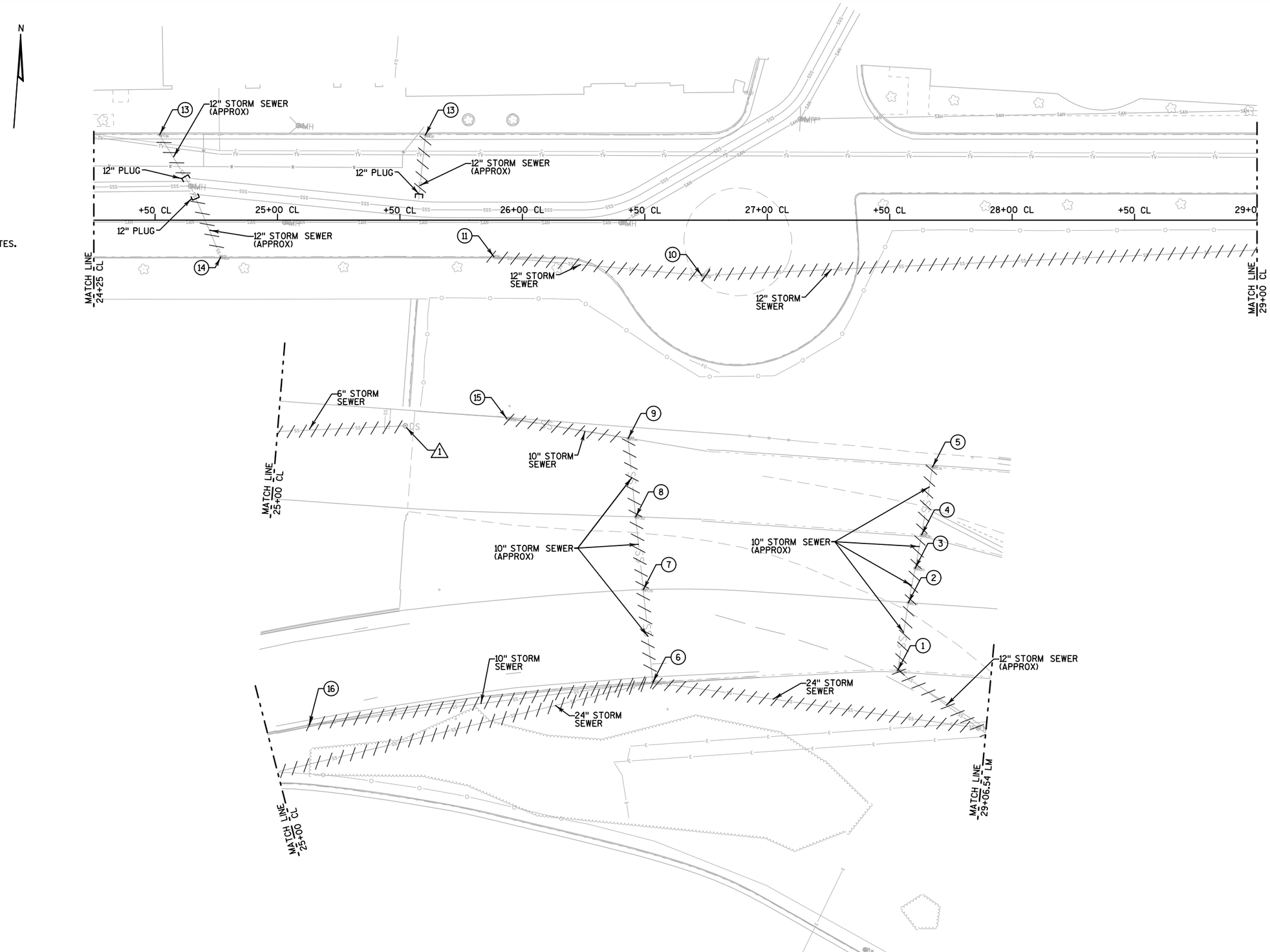
1. SEE OVERALL STORM SEWER REMOVAL FOR ADDITIONAL GENERAL REMOVAL NOTES.

REMOVING INLETS

1	27+53.23 CL, 184.03'RT
2	27+57.60 CL, 156.26'RT
3	27+60.38 CL, 142.22'RT
4	27+63.02 CL, 128.58'RT
5	27+67.48 CL, 100.87'RT
6	26+53.26 CL, 188.75'RT
7	26+49.39 CL, 150.93'RT
8	26+46.25 CL, 121.22'RT
9	26+43.19 CL, 89.16'RT
10	26+73.28 CL, 22.60'RT
11	25+88.39 CL, 15.01'RT
12	25+60.38 CL, 34.75'LT
13	24+51.83 CL, 34.93'LT
14	24+76.83 CL, 15.05'RT
15	25+93.84 CL, 81.07'RT
16	25+12.93 CL, 206.18'RT

REMOVING DOWNSPOUTS

1	25+52.23 CL, 84.00'RT



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - REMOVAL PLAN	SHEET 90	E

2

N

LEGEND

- SS — EXISTING STORM SEWER
- DS — EXISTING DOWNSPOUT
- MH — EXISTING MANHOLE
-] — PLUG/SEAL
- / / / / — REMOVE EXISTING STORM SEWER

NOTES

1. SEE OVERALL STORM SEWER REMOVAL FOR ADDITIONAL GENERAL REMOVAL NOTES.

REMOVING INLETS	
(1)	24+01.52 CL, 90.69'RT
(2)	23+92.22 CL, 125.99'RT
(3)	23+68.43 CL, 112.48'RT
(4)	23+24.49 CL, 107.29'RT
(5)	22+46.92 CL, 59.35'RT
(6)	22+47.77 CL, 159.02'RT
(7)	23+95.41 CL, 250.30'RT
(8)	23+86.13 CL, 15.01'RT
(9)	23+40.60 CL, 34.79'LT.

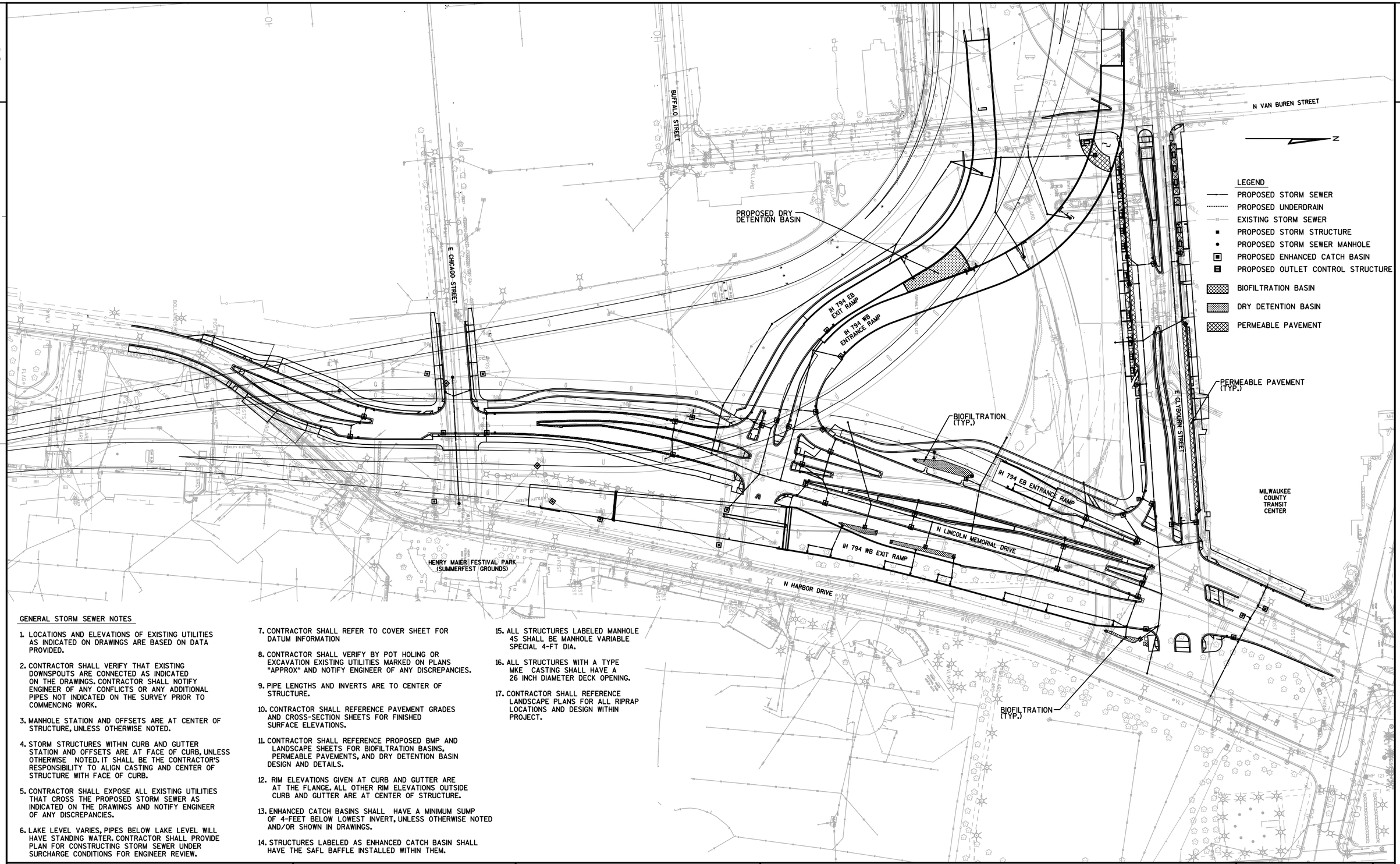
REMOVING MANHOLES	
1	22+47.47 CL, 108.57'RT
2	23+73.82 CL, 198.42'RT
3	22+23.13 CL, 250.77'RT
4	23+88.11 CL, 430.57'RT

REMOVING DOWNSPOUTS	
1	23+76.18 CL, 76.19'RT
2	22+63.10 CL, 65.46'RT
3	23+96.86 CL, 229.75'RT
4	23+14.02 CL, 233.63'RT
5	22+23.94 CL, 265.23'RT
6	22+20.56 CL, 228.40'RT
7	24+27.00 CL, 338.72'RT

61+00 VB
62+00 VB
+50 VB
203+00 LE
+50 LE
204+00 LE
205+00 LE
206+00 LE
207+00 LE
+50 LE
MATCH LINE 204+50 LE
6" STORM SEWER
6" STORM SEWER
15" STORM SEWER (APPROX)
6" STORM SEWER
REMOVE EXISTING STORM SEWER TO PROPOSED MANHOLE
6" STORM SEWER (APPROX)
21" STORM SEWER
6" STORM SEWER (APPROX)
18" STORM SEWER
24" STORM SEWER
MATCH LINE 25+00 CL
103+00 LW
+50 LW
104+00 LW
105+00 LW
106+00 LW
107+00 LW
108+00 LW
MATCH LINE 106+00 LW
12" STORM SEWER (APPROX)
12" STORM SEWER (APPROX)
POSSIBLE ALTERNATIVE LOCATION OF EXISTING STORM SEWER TO BE REMOVED IF EXISTING 6" STORM SEWER DOES NOT EXIST BETWEEN (2) AND (4)
6" STORM SEWER
12" STORM SEWER (APPROX)
12" STORM SEWER
18" STORM SEWER
6" STORM SEWER
+50 CL
23+00 CL
12" PLUG
12" STORM SEWER (APPROX)
24+00 CL
12" PLUG
6" STORM SEWER
MATCH LINE 24+25 CL
MATCH LINE 25+00 CL

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - REMOVAL PLAN	SHEET 91	E

2



GENERAL STORM SEWER NOTES

1. LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AS INDICATED ON DRAWINGS ARE BASED ON DATA PROVIDED.
2. CONTRACTOR SHALL VERIFY THAT EXISTING DOWNSPOUTS ARE CONNECTED AS INDICATED ON THE DRAWINGS. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS OR ANY ADDITIONAL PIPES NOT INDICATED ON THE SURVEY PRIOR TO COMMENCING WORK.
3. MANHOLE STATION AND OFFSETS ARE AT CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED.
4. STORM STRUCTURES WITHIN CURB AND GUTTER STATION AND OFFSETS ARE AT FACE OF CURB, UNLESS OTHERWISE NOTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ALIGN CASTING AND CENTER OF STRUCTURE WITH FACE OF CURB.
5. CONTRACTOR SHALL EXPOSE ALL EXISTING UTILITIES THAT CROSS THE PROPOSED STORM SEWER AS INDICATED ON THE DRAWINGS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
6. LAKE LEVEL VARIES, PIPES BELOW LAKE LEVEL WILL HAVE STANDING WATER. CONTRACTOR SHALL PROVIDE PLAN FOR CONSTRUCTING STORM SEWER UNDER SURCHARGE CONDITIONS FOR ENGINEER REVIEW.
7. CONTRACTOR SHALL REFER TO COVER SHEET FOR DATUM INFORMATION
8. CONTRACTOR SHALL VERIFY BY POT HOLING OR EXCAVATION EXISTING UTILITIES MARKED ON PLANS "APPROX" AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
9. PIPE LENGTHS AND INVERTS ARE TO CENTER OF STRUCTURE.
10. CONTRACTOR SHALL REFERENCE PAVEMENT GRADES AND CROSS-SECTION SHEETS FOR FINISHED SURFACE ELEVATIONS.
11. CONTRACTOR SHALL REFERENCE PROPOSED BMP AND LANDSCAPE SHEETS FOR BIOFILTRATION BASINS, PERMEABLE PAVEMENTS, AND DRY DETENTION BASIN DESIGN AND DETAILS.
12. RIM ELEVATIONS GIVEN AT CURB AND GUTTER ARE AT THE FLANGE. ALL OTHER RIM ELEVATIONS OUTSIDE CURB AND GUTTER ARE AT CENTER OF STRUCTURE.
13. ENHANCED CATCH BASINS SHALL HAVE A MINIMUM SUMP OF 4-FEET BELOW LOWEST INVERT, UNLESS OTHERWISE NOTED AND/OR SHOWN IN DRAWINGS.
14. STRUCTURES LABELED AS ENHANCED CATCH BASIN SHALL HAVE THE SAFL BAFFLE INSTALLED WITHIN THEM.
15. ALL STRUCTURES LABELED MANHOLE 4S SHALL BE MANHOLE VARIABLE SPECIAL 4-FT DIA.
16. ALL STRUCTURES WITH A TYPE MKE CASTING SHALL HAVE A 26 INCH DIAMETER DECK OPENING.
17. CONTRACTOR SHALL REFERENCE LANDSCAPE PLANS FOR ALL RIPRAP LOCATIONS AND DESIGN WITHIN PROJECT.

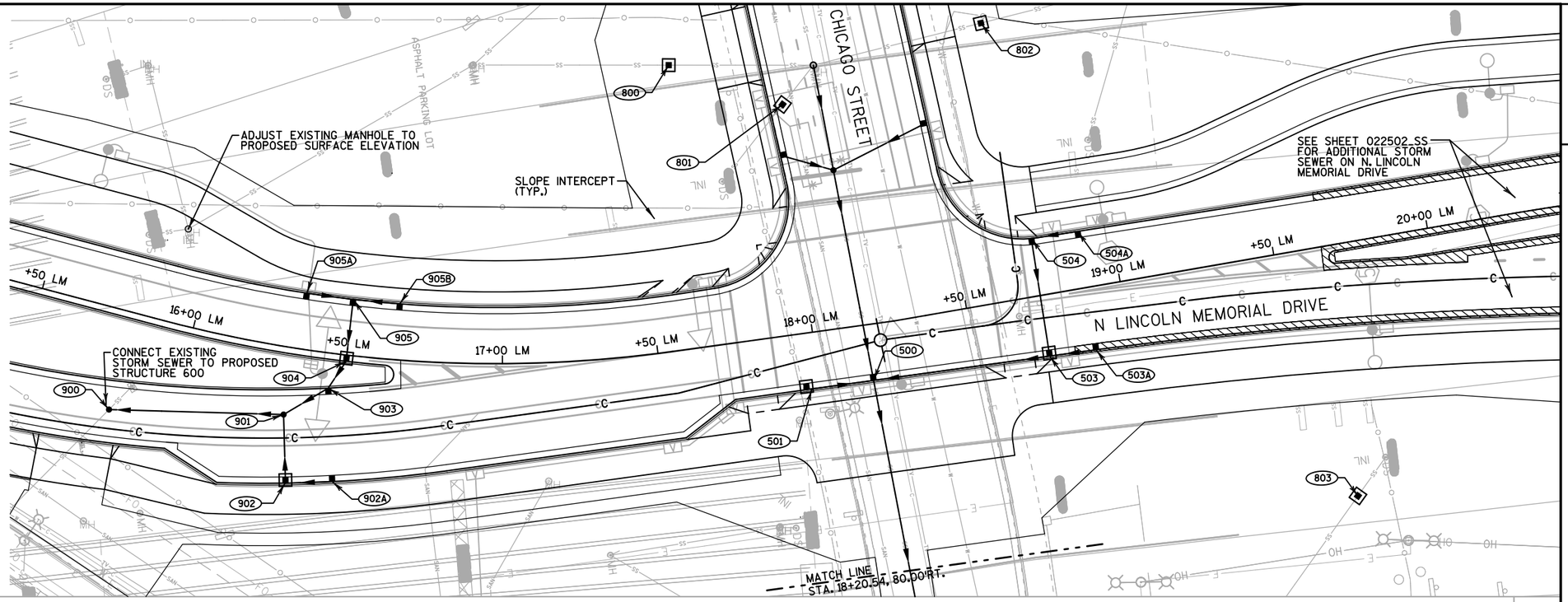
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	OVERALL STORM SEWER	SHEET 92	E

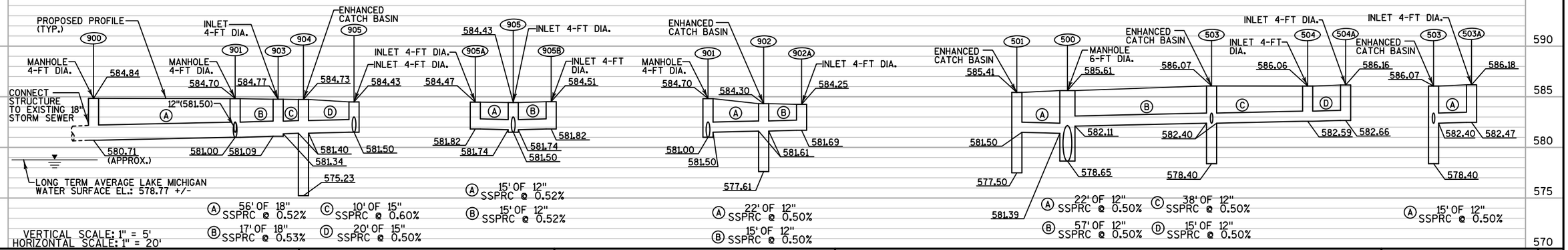


LEGEND
- PROPOSED STORM SEWER
- SS EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN

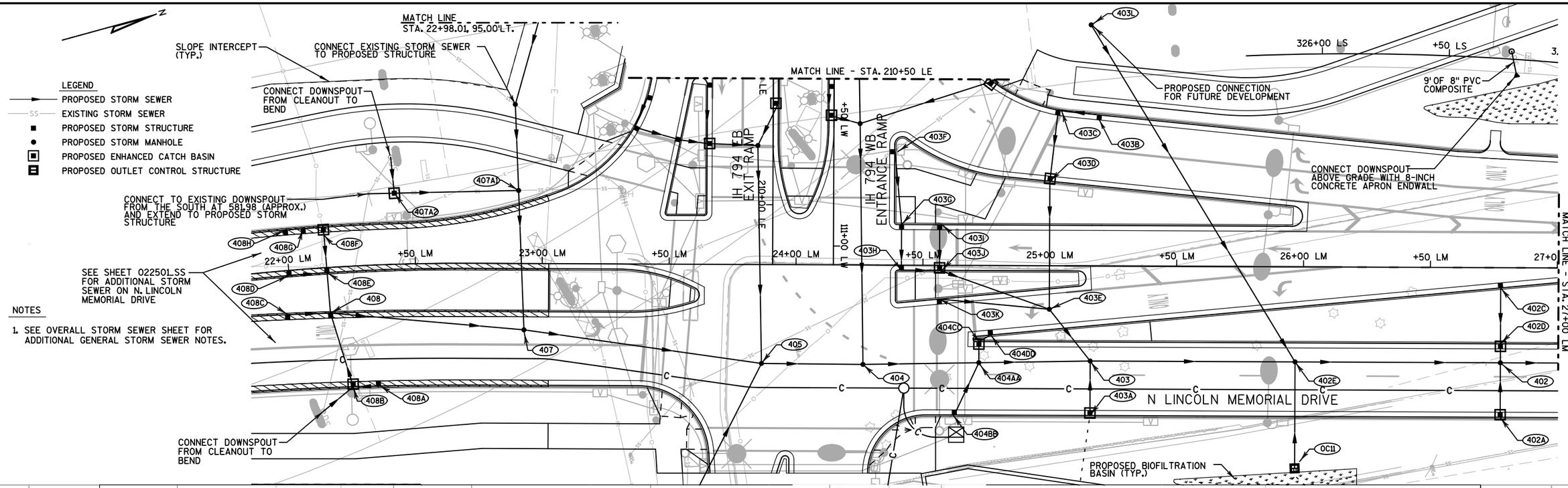
NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.

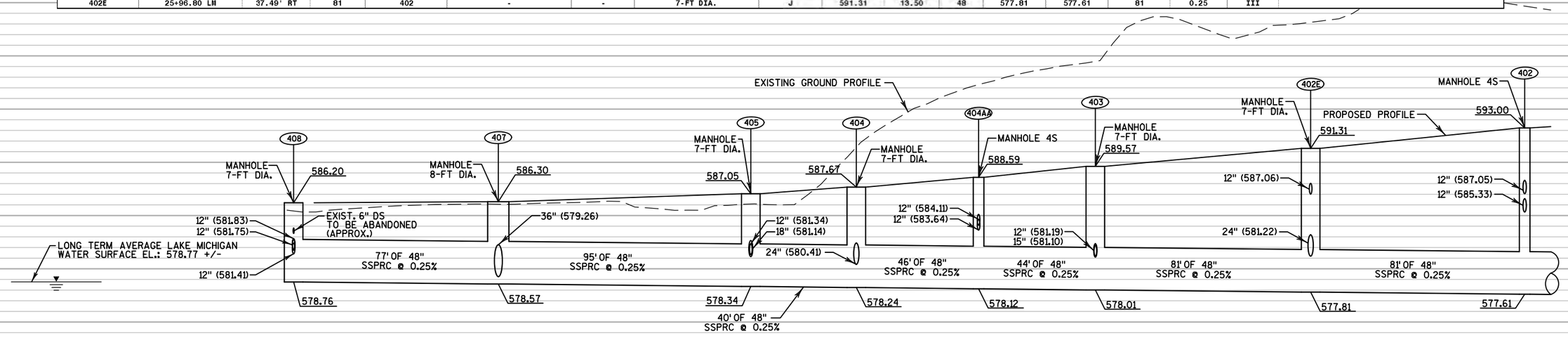




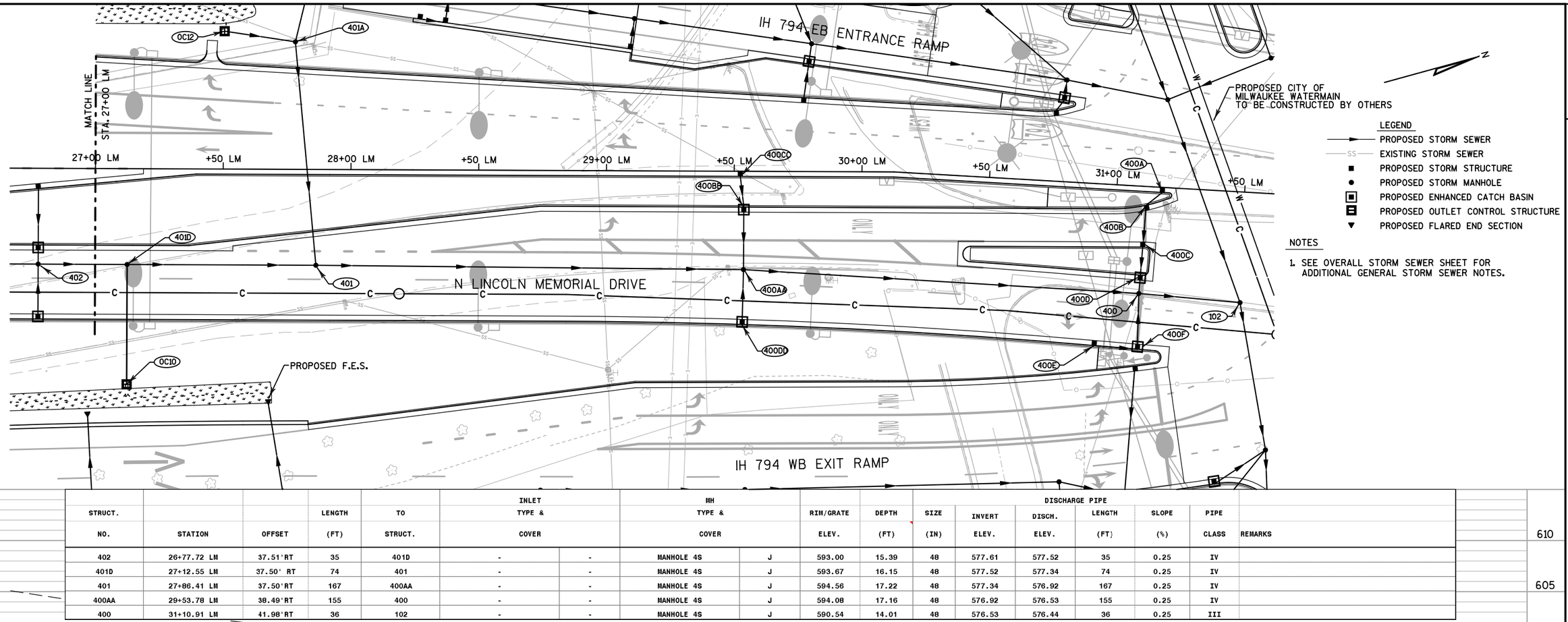
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - LINCOLN MEMORIAL DRIVE	SHEET 93 E



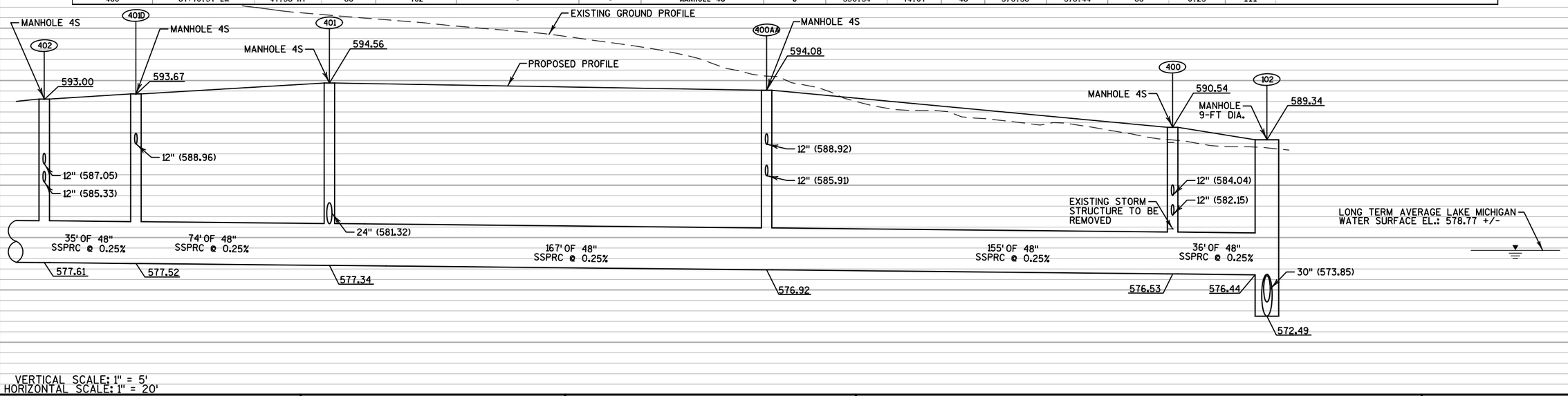
STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	SIZE (IN)	DISCHARGE PIPE INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
408	22+15.34 LM	18.00' RT	77	407	-	-	7-FT DIA.	J	586.20	7.44	48	578.76	578.57	77	0.25	III	
407	22+92.88 LM	26.15' RT	95	406	-	-	8-FT DIA.	J	586.30	7.73	48	578.57	578.34	95	0.25	III	
405	23+86.54 LM	39.02' RT	40	404	-	-	7-FT DIA.	J	587.05	8.71	48	578.34	578.24	40	0.25	III	
404	24+26.54 LM	39.22' RT	46	404AA	-	-	7-FT DIA.	J	587.67	9.43	48	578.24	578.12	46	0.25	III	
404AA	24+72.20 LM	38.34' RT	44	403	-	-	MANHOLE 4S	J	588.59	10.47	48	578.12	578.01	44	0.25	III	
403	25+16.07 LM	37.50' RT	81	402E	-	-	7-FT DIA.	J	589.57	11.56	48	578.01	577.81	81	0.25	III	
402E	25+96.80 LM	37.49' RT	81	402	-	-	7-FT DIA.	J	591.31	13.50	48	577.81	577.61	81	0.25	III	



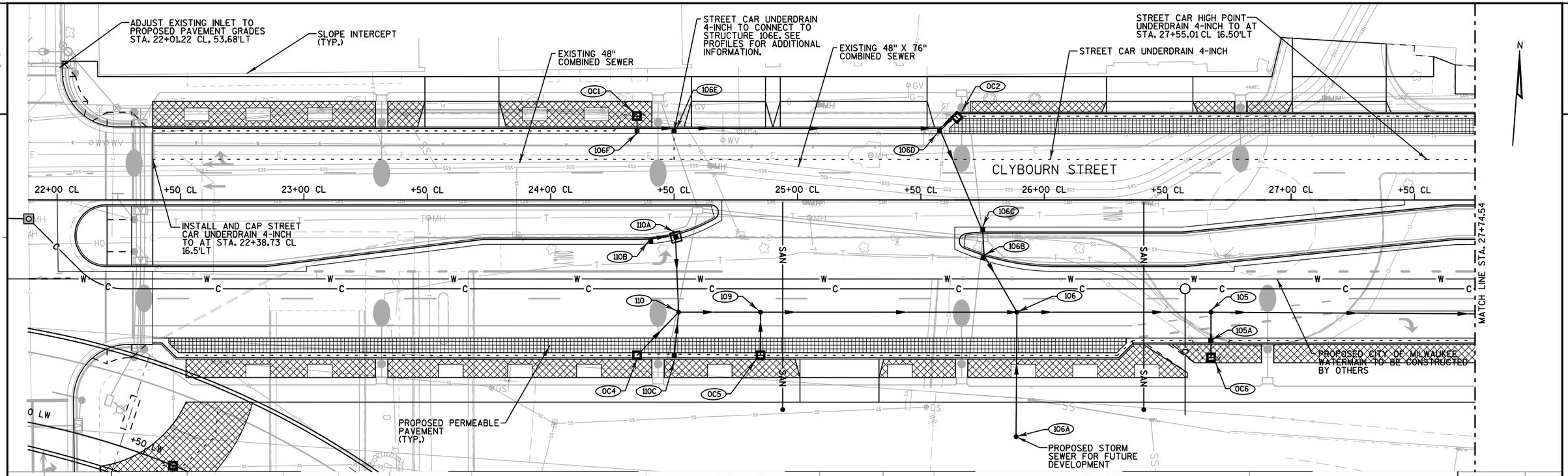
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - LINCOLN MEMORIAL DRIVE	SHEET 94 E



STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
402	26+77.72 LM	37.51'RT	35	401D	-	-	MANHOLE 4S	J	593.00	15.39	48	577.61	577.52	35	0.25	IV	
401D	27+12.55 LM	37.50' RT	74	401	-	-	MANHOLE 4S	J	593.67	16.15	48	577.52	577.34	74	0.25	IV	
401	27+86.41 LM	37.50'RT	167	400AA	-	-	MANHOLE 4S	J	594.56	17.22	48	577.34	576.92	167	0.25	IV	
400AA	29+53.78 LM	38.49'RT	155	400	-	-	MANHOLE 4S	J	594.08	17.16	48	576.92	576.53	155	0.25	IV	
400	31+10.91 LM	41.98'RT	36	102	-	-	MANHOLE 4S	J	590.54	14.01	48	576.53	576.44	36	0.25	III	



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - LINCOLN MEMORIAL DRIVE	SHEET 95 E

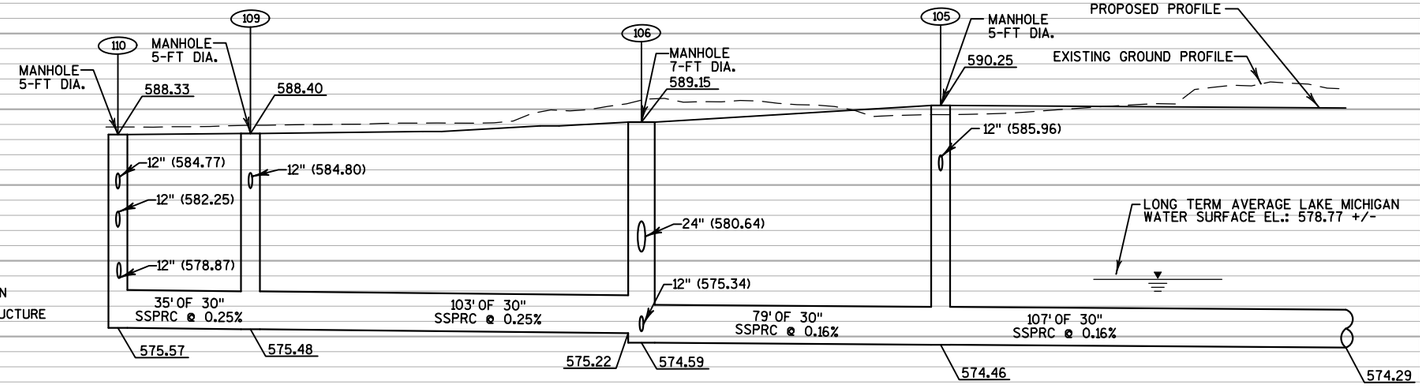


STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH/INLET TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
110	24+51.81 CL	45.50'RT	35	109	-	-	5-FT DIA.	J	588.33	12.76	30	575.57	575.48	35	0.25	III	
109	24+85.02 CL	45.50'RT	103	106	-	-	5-FT DIA.	J	588.40	12.92	30	575.48	575.22	103	0.25	III	
106	25+88.89 CL	45.50'RT	79	105	-	-	7-FT DIA.	J	589.15	14.56	30	574.59	574.46	79	0.16	III	
105	26+67.53 CL	45.50'RT	107	STA.27+50 CL	-	-	5-FT DIA.	J	590.25	15.79	30	574.46	574.29	107	0.16	III	STORM SEWER CONTINUES TO STRUCTURE 104

NOTES

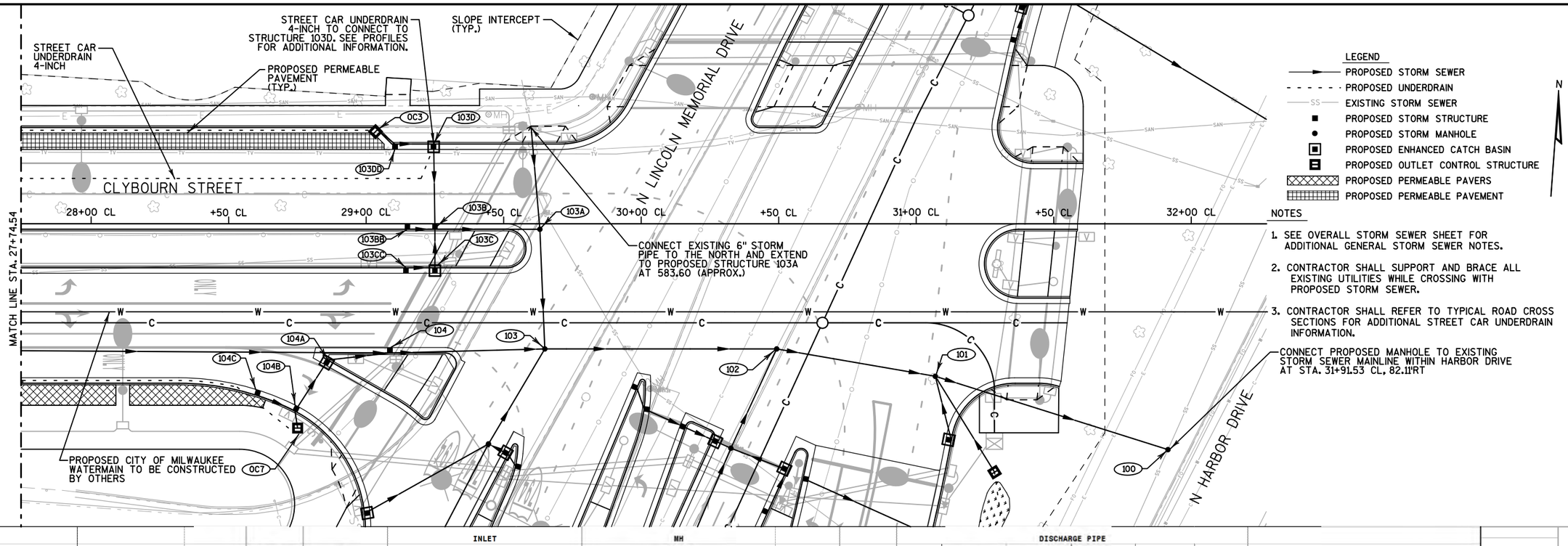
1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. CONTRACTOR SHALL SUPPORT AND BRACE ALL EXISTING UTILITIES WHILE CROSSING WITH PROPOSED STORM SEWER.
3. EXISTING COMBINED SEWER SHALL BE SUPPORTED PER CITY OF MILWAUKEE.
4. CONTRACTOR SHALL REFER TO TYPICAL ROAD CROSS SECTIONS FOR ADDITIONAL STREET CAR UNDERDRAIN INFORMATION.

LEGEND
- PROPOSED STORM SEWER
- PROPOSED UNDERDRAIN
- EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED PERMEABLE PAVERS
- PROPOSED PERMEABLE PAVEMENT

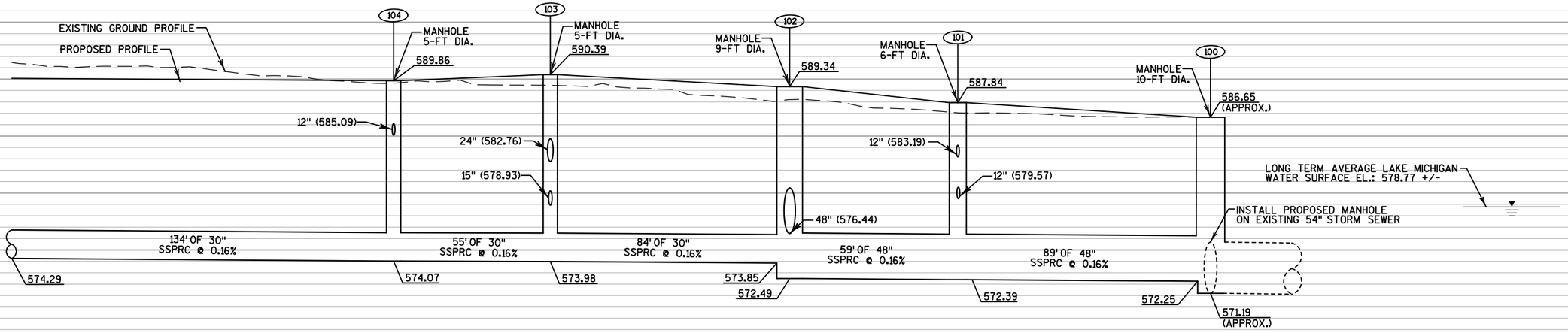


VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - CLYBOURN STREET	SHEET 96	E



STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	SIZE (IN)	DISCHARGE PIPE INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
STA:27+74.54 CL	27+74.54 CL	45.50'RT	134	104	-	-	-	-	-	-	30	574.29	574.07	134	0.16	III	STORM SEWER CONTINUES FROM STRUCTURE 105
104	29+08.67 CL	47.00'RT	55	103	-	-	5-FT DIA.	J	589.86	15.79	30	574.07	573.98	55	0.16	III	
103	29+64.96 CL	45.50'RT	84	102	-	-	5-FT DIA.	J	590.39	16.41	30	573.98	573.85	84	0.16	III	
102	30+49.27 CL	45.50'RT	59	101	-	-	9-FT DIA.	J	589.34	16.85	48	572.49	572.39	59	0.16	III	
101	31+06.94 CL	55.45'RT	89	100	-	-	6-FT DIA.	J	587.84	15.45	48	572.39	572.25	89	0.16	III	



VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - CLYBOURN STREET	SHEET 97 E

FILE NAME : 022506a_ss_20.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 41

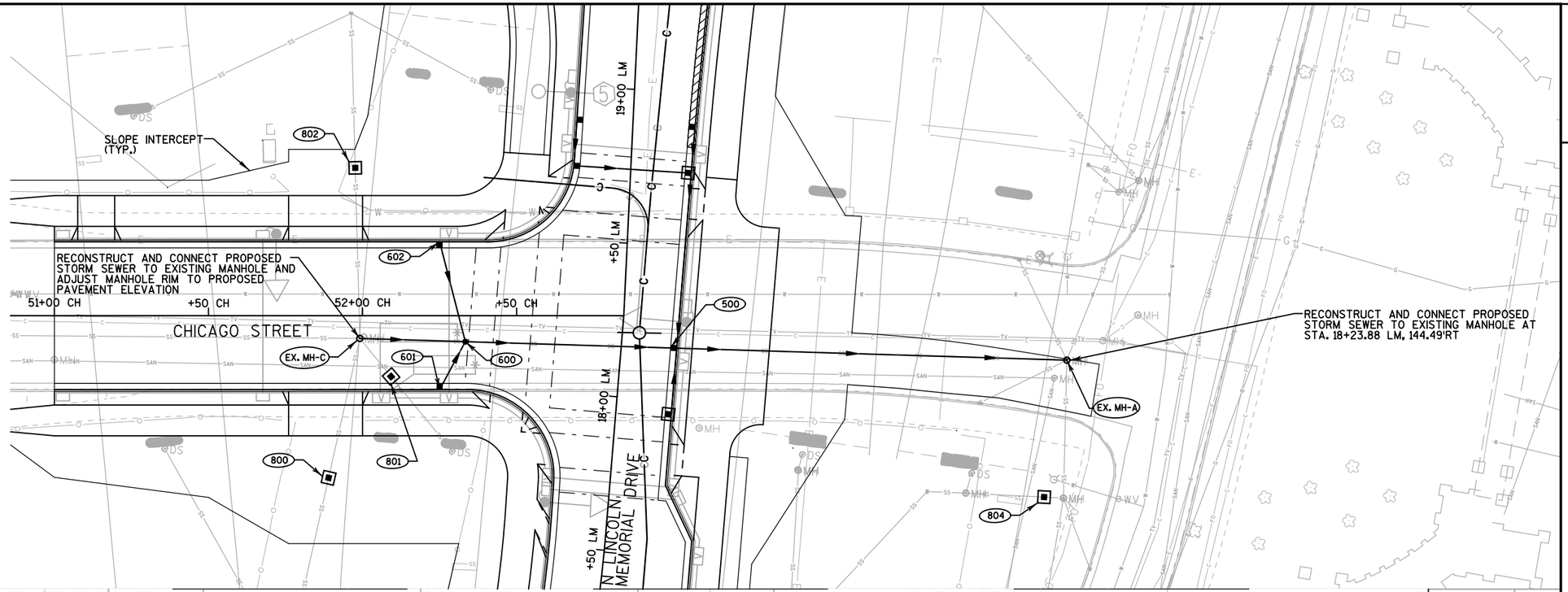
N

LEGEND

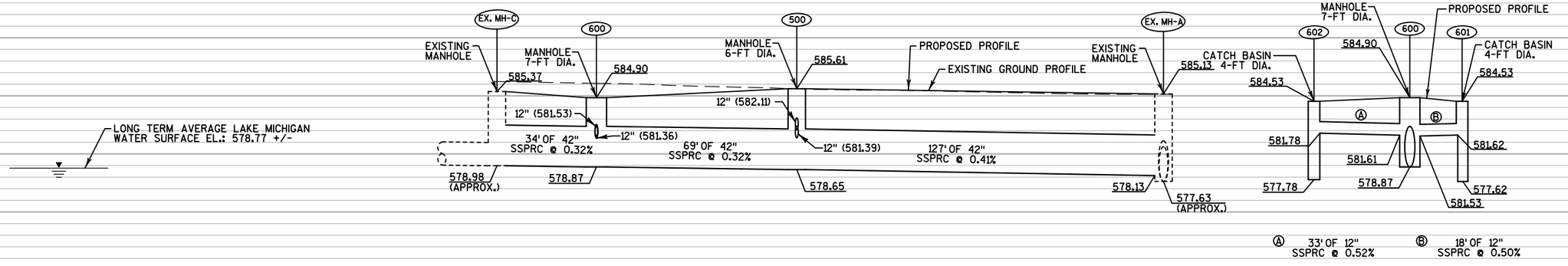
- PROPOSED STORM SEWER
- SS EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE

NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. CONTRACTOR SHALL SUPPORT AND BRACE ALL EXISTING UTILITIES WHILE CROSSING WITH PROPOSED STORM SEWER.
3. PROPOSED STORM SEWER AND EXISTING WATER MAIN SHALL HAVE A MINIMUM OF 6-INCHES OF CLEARANCE BETWEEN OUTSIDE DIAMETER OF PIPES. NOTIFY ENGINEER OF ANY DISCREPANCIES.



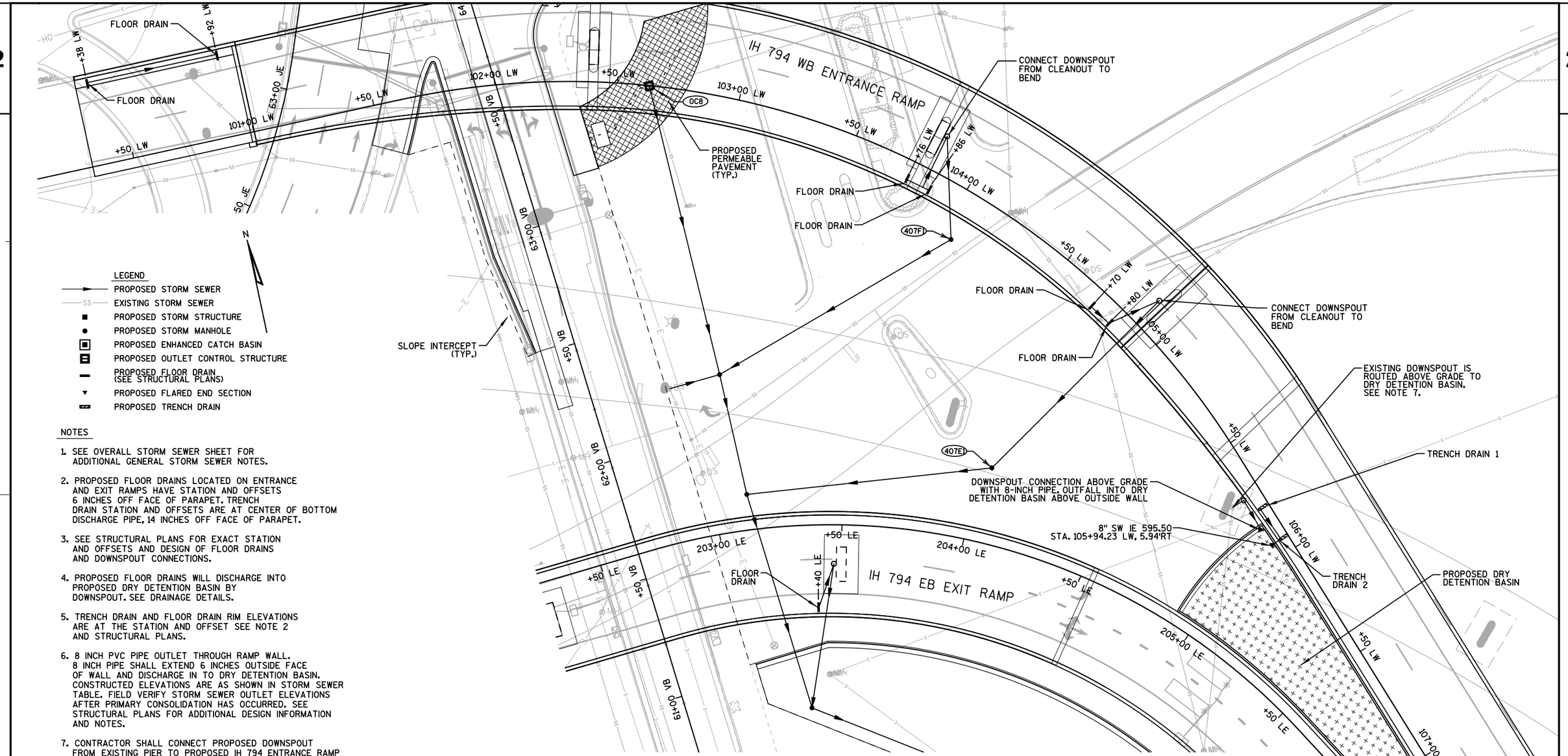
STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
EX. MH-C	51+99.11 CH	7.38' RT	34	600	-	-	-	-	585.37	6.39	42	578.98	578.87	34	0.32	IV	CONNECT PROPOSED STORM SEWER TO EXISTING MANHOLE
600	52+33.35 CH	8.44' RT	69	500	-	-	7-FT DIA.	J	584.90	6.03	42	578.87	578.65	69	0.32	IV	
500	18+17.32 LM	18.00'RT	127	EX. MH-A	-	-	6-FT DIA.	MKE	585.61	6.96	42	578.65	578.13	127	0.41	IV	
601	52+25.00 CH	24.00' RT	18	600	CB 4-FT DIA.	MKE	-	-	584.53	2.91	12	581.62	581.53	18	0.50	IV	4-FT SUMP BELOW LOWEST INVERT. NO TRAP
602	52+25.00 CH	24.00' LT	33	600	CB 4-FT DIA.	MKE	-	-	584.53	2.75	12	581.78	581.61	33	0.52	IV	4-FT SUMP BELOW LOWEST INVERT. NO TRAP



VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - CHICAGO STREET	SHEET 98	E

FILE NAME : 022508_ss_20.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40



NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. PROPOSED FLOOR DRAINS LOCATED ON ENTRANCE AND EXIT RAMPS HAVE STATION AND OFFSETS 6 INCHES OFF FACE OF PARAPET. TRENCH DRAIN STATION AND OFFSETS ARE AT CENTER OF BOTTOM DISCHARGE PIPE, 14 INCHES OFF FACE OF PARAPET.
3. SEE STRUCTURAL PLANS FOR EXACT STATION AND OFFSETS AND DESIGN OF FLOOR DRAINS AND DOWNSPOUT CONNECTIONS.
4. PROPOSED FLOOR DRAINS WILL DISCHARGE INTO PROPOSED DRY DETENTION BASIN BY DOWNSPOUT. SEE DRAINAGE DETAILS.
5. TRENCH DRAIN AND FLOOR DRAIN RIM ELEVATIONS ARE AT THE STATION AND OFFSET SEE NOTE 2 AND STRUCTURAL PLANS.
6. 8 INCH PVC PIPE OUTLET THROUGH RAMP WALL. 8 INCH PIPE SHALL EXTEND 6 INCHES OUTSIDE FACE OF WALL AND DISCHARGE IN TO DRY DETENTION BASIN. CONSTRUCTED ELEVATIONS ARE AS SHOWN IN STORM SEWER TABLE. FIELD VERIFY STORM SEWER OUTLET ELEVATIONS AFTER PRIMARY CONSOLIDATION HAS OCCURRED. SEE STRUCTURAL PLANS FOR ADDITIONAL DESIGN INFORMATION AND NOTES.
7. CONTRACTOR SHALL CONNECT PROPOSED DOWNSPOUT FROM EXISTING PIER TO PROPOSED IH 794 ENTRANCE RAMP WALL BY U-CLAMPS, OR APPROVED EQUAL. CONNECTION SHALL BE MADE BELOW PARAPET ON PROPOSED ENTRANCE RAMP. DOWNSPOUT SHALL BE FASTENED TO PROPOSED RAMP WALL AND DISCHARGE ABOVE DRY DETENTION BASIN.

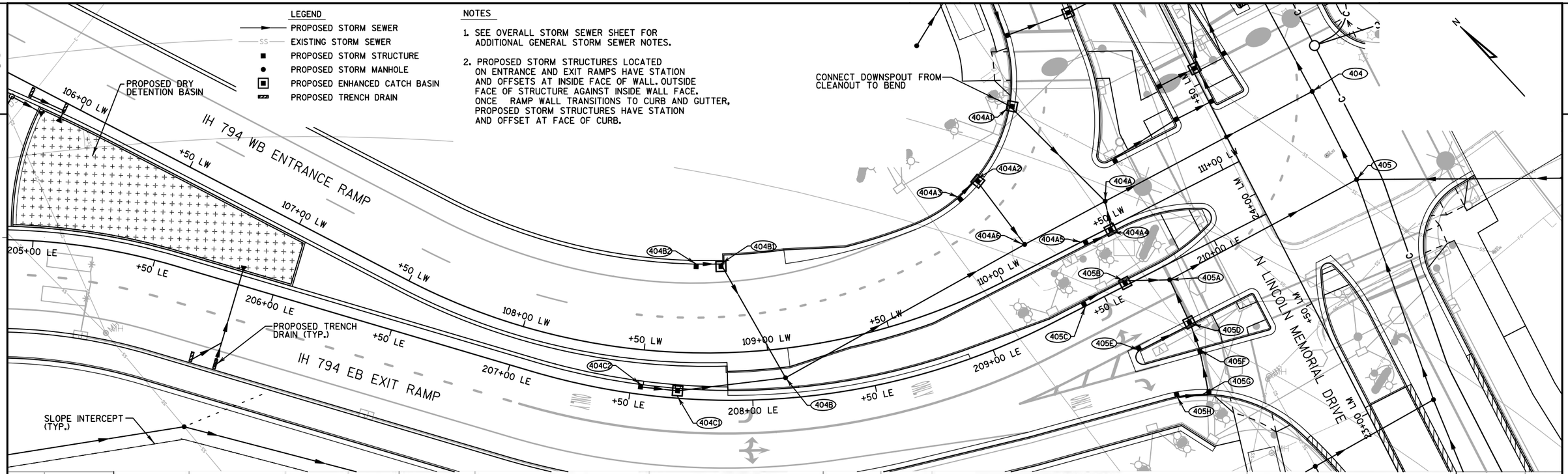
STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	STRUCTURE TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
TRENCH DRAIN 1	105+79.25 LW	4.01'RT	15	TRENCH DRAIN 2	TRENCH DRAIN	-	605.79	3.24	8	602.55	601.86	15	4.60	-	STORM SEWER PIPE COMPOSITE 8-INCH
TRENCH DRAIN 2	105+94.16 LW	3.28'RT	3	DRY BASIN	TRENCH DRAIN	-	605.11	9.58	8	595.53	595.50	3	1.04	-	STORM SEWER PIPE COMPOSITE 8-INCH
TRENCH DRAIN 3	205+75.47 LE	34.83'RT	14	WYE CONNECTION	TRENCH DRAIN	-	599.30	3.26	8	596.04	595.87	14	1.20	-	STORM SEWER PIPE COMPOSITE 8-INCH
TRENCH DRAIN 4	205+85.49 LE	34.83'RT	10	WYE CONNECTION	TRENCH DRAIN	-	598.96	3.04	8	595.92	595.87	10	0.52	-	STORM SEWER PIPE COMPOSITE 8-INCH
WYE CONNECTION	205+85.49 LE	24.59'RT	31	DRY BASIN	-	-	-	-	8	595.87	595.50	31	1.20	-	STORM SEWER PIPE COMPOSITE 8-INCH

LEGEND

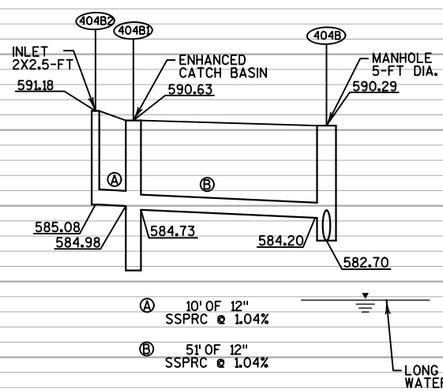
- PROPOSED STORM SEWER
- SS EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED TRENCH DRAIN

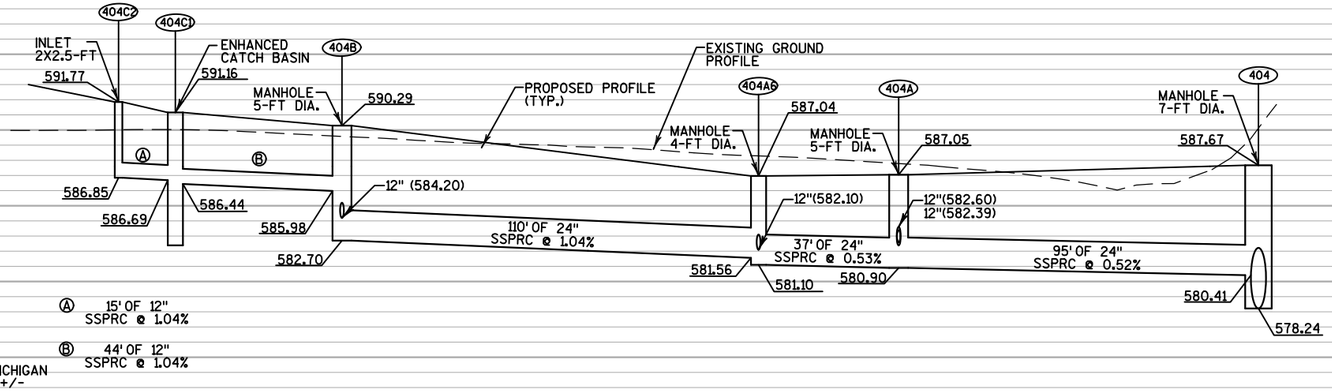
NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. PROPOSED STORM STRUCTURES LOCATED ON ENTRANCE AND EXIT RAMPS HAVE STATION AND OFFSETS AT INSIDE FACE OF WALL. OUTSIDE FACE OF STRUCTURE AGAINST INSIDE WALL FACE. ONCE RAMP WALL TRANSITIONS TO CURB AND GUTTER, PROPOSED STORM STRUCTURES HAVE STATION AND OFFSET AT FACE OF CURB.



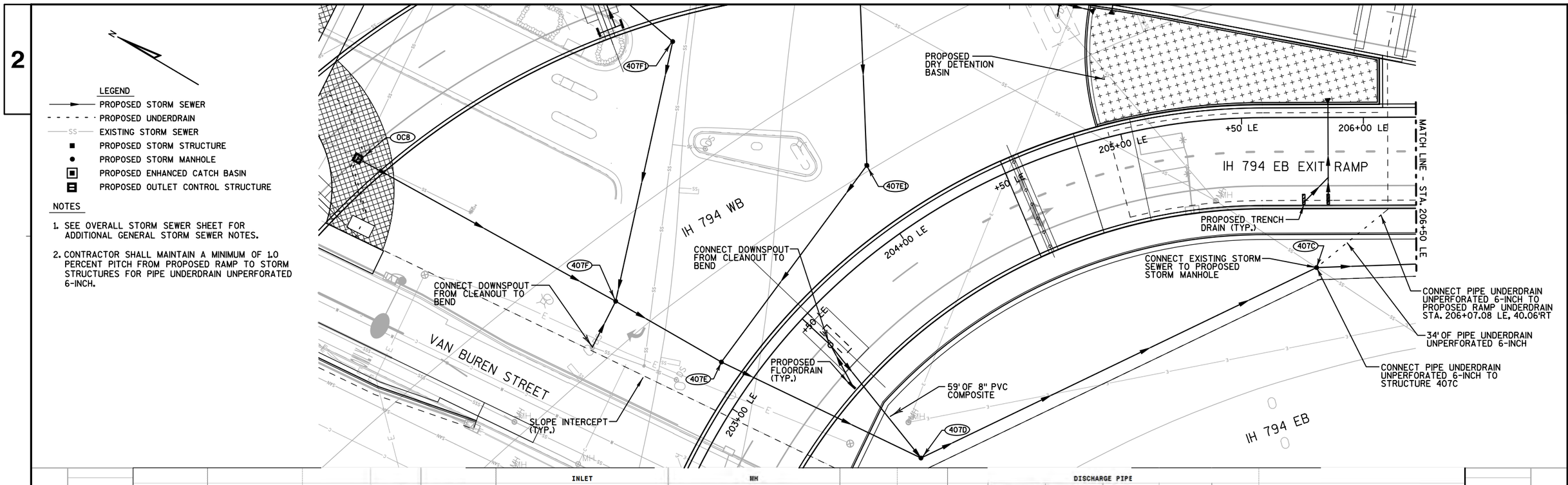
STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MANHOLE TYPE & COVER		RIM/GRATE ELEV.	DISCHARGE PIPE DEPTH (FT)	SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
404C2	108+49.97 LW	14.08' RT	15	404C1	2 X 2.5 FT	BW	-	-	591.77	4.92	12	586.85	586.69	15	1.04	III	
404C1	108+64.21 LW	14.61' RT	44	404B	ENHANCED CB	BW	-	-	591.16	4.72	12	586.44	585.98	44	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
404B	109+05.96 LW	11.90' RT	110	404A6	-	-	5-FT DIA.	J	590.29	7.59	24	582.70	581.56	110	1.04	III	
404A6	110+14.68 LW	9.55' LT	37	404A	-	-	4-FT DIA.	J	587.04	5.94	24	581.10	580.90	37	0.53	III	
404A	110+51.67 LW	10.30' RT	95	404	-	-	5-FT DIA.	J	587.05	6.15	24	580.90	580.41	95	0.52	III	
404B2	108+70.38 LW	36.00' LT	10	404B1	2 X 2.5 FT	BW	-	-	591.18	6.10	12	585.08	584.98	10	1.04	III	
404B1	108+81.97 LW	36.00' LT	51	404B	ENHANCED CB	BW	-	-	590.63	5.90	12	584.73	584.20	51	1.04	III	USE TYPE 44A MODIFIED STRUCTURE



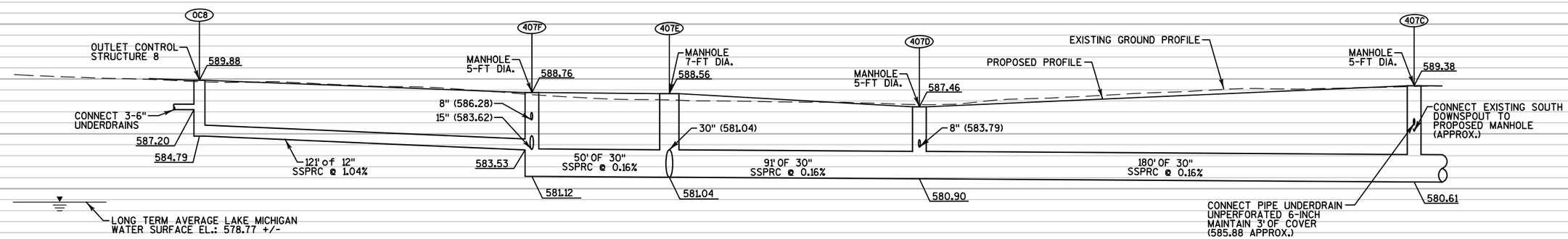


VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

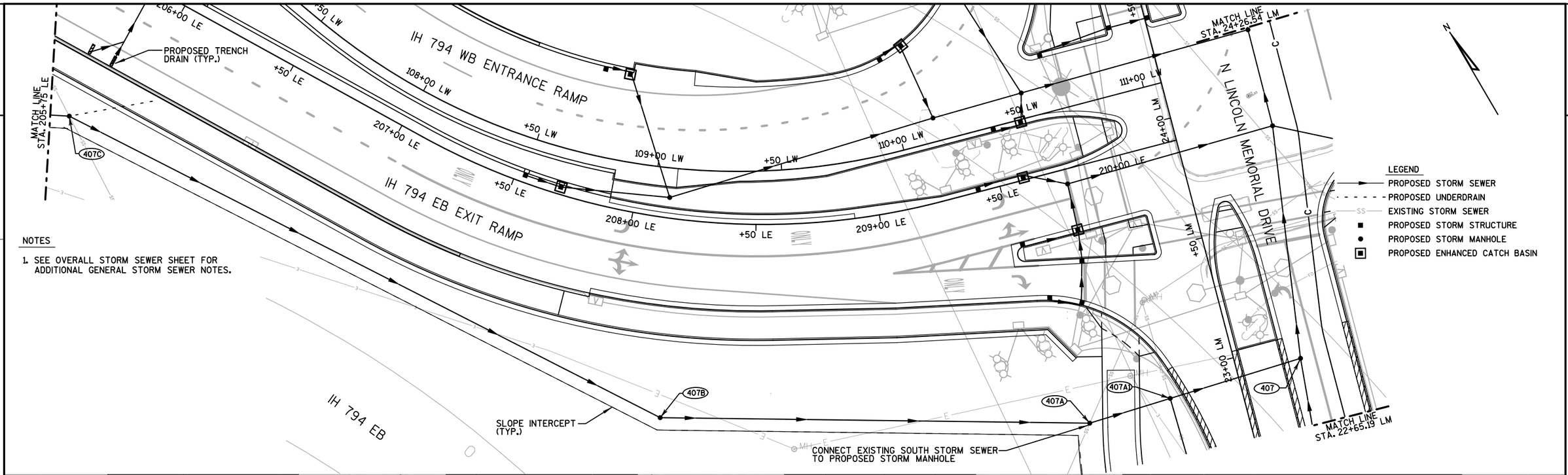
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - IH 794 WB ENTRANCE RAMP	SHEET 100	E



STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
OC8	203+02.14 LE	184.73'LT	121	407F	OC STRUCTURE 8	R-1878-A9L	-	-	589.88	5.09	12	584.79	583.53	121	1.04	III	SEE BMP FOR OCS DESIGN. CONNECT UNDERDRAIN.
407F	203+09.11 LE	64.28'LT	50	407E	-	-	5-FT DIA.	C	588.76	7.64	30	581.12	581.04	50	0.16	III	
407E	203+13.02 LE	14.48' LT	91	407D	-	-	7-FT DIA.	C	588.56	7.52	30	581.04	580.90	91	0.16	III	
407D	203+34.79 LE	74.33' RT	180	407C	-	-	5-FT DIA.	C	587.46	6.56	30	580.90	580.61	180	0.16	III	



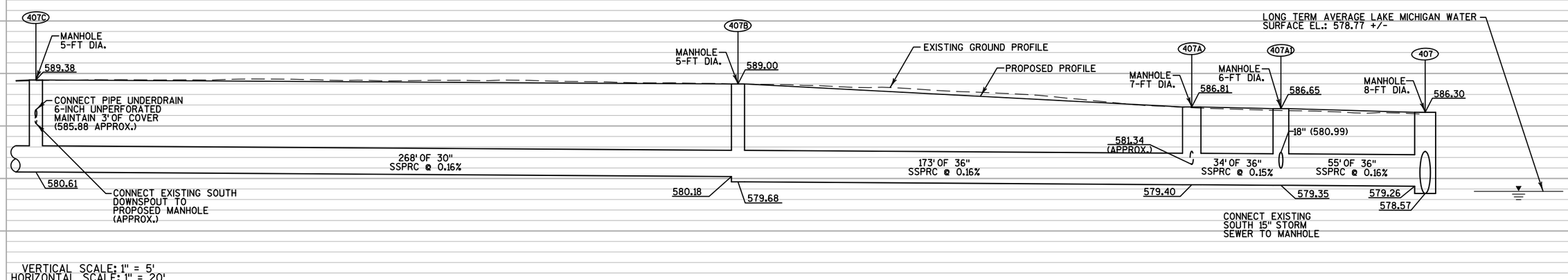
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - IH 794 EB EXIT RAMP	SHEET 101 E



NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
407C	205+80.62 LE	61.52' RT	268	407B	-	-	5-FT DIA.	C	589.38	8.77	30	580.61	580.18	268	0.16	III	
407B	208+20.43 LE	80.36' RT	173	407A	-	-	5-FT DIA.	C	589.00	9.32	36	579.68	579.40	173	0.16	III	
407A	209+60.87 LE	101.64' RT	34	407A1	-	-	7-FT DIA.	C	586.81	7.41	36	579.40	579.35	34	0.16	III	
407A1	209+94.81 LE	100.20' RT	55	407	-	-	6-FT DIA.	C	586.65	7.30	36	579.35	579.26	55	0.16	III	



VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - IH 794 EB EXIT RAMP	SHEET 102	E

2

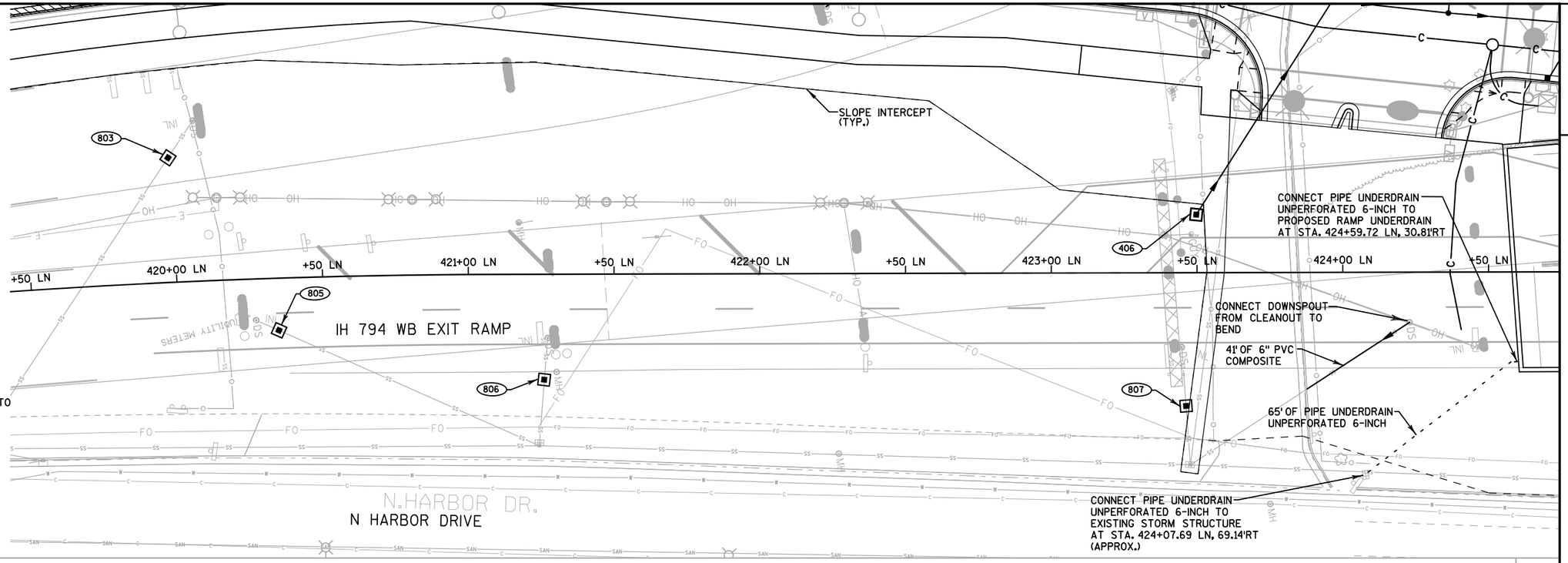
N

LEGEND

- PROPOSED STORM SEWER
- PROPOSED UNDERDRAIN
- EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN

NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. CONTRACTOR SHALL NOTIFY ENGINEER IF PIER FOOTING IS IN CONFLICT WITH PROPOSED ENHANCED CATCH BASIN AND RELOCATE ENHANCED CATCH BASIN AS NEEDED TO AVOID CONFLICT WITH EXISTING PIER FOOTING.
3. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 1.0 PERCENT PITCH FROM PROPOSED RAMP TO EXISTING STORM STRUCTURE FOR PIPE UNDERDRAIN UNPERFORATED 6-INCH.



635 630 625 620 615 610 605 600 595 590

620 615 610 605 600 595 590 585 580 575

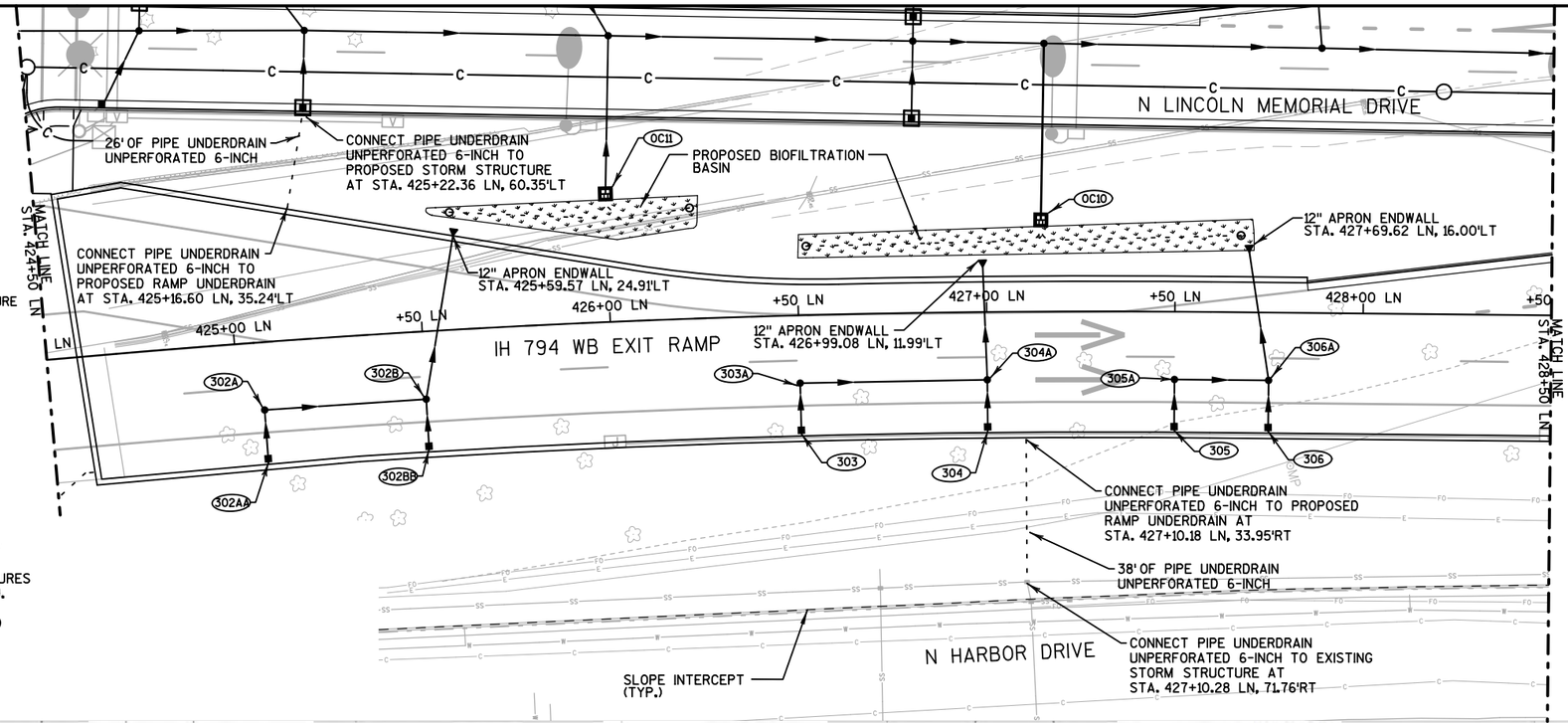
NO PROFILES THIS SHEET

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - IH 794 WB EXIT RAMP	SHEET 103	E

FILE NAME : 022511_ss_20.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 41



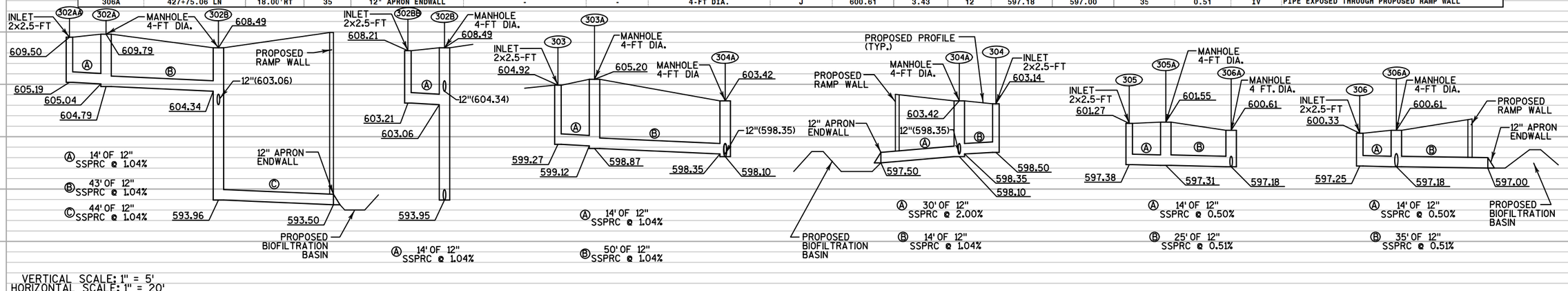
LEGEND

- PROPOSED STORM SEWER
- PROPOSED UNDERDRAIN
- SS EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED FLARED END SECTION

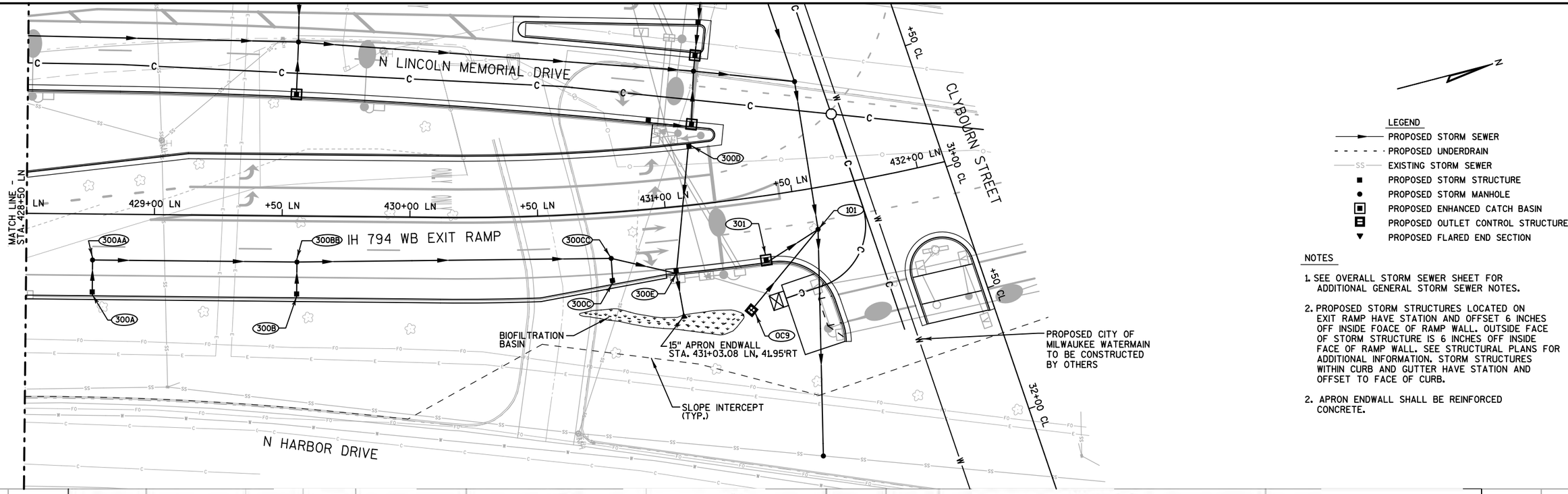
NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. PROPOSED STORM STRUCTURES LOCATED ON EXIT RAMP HAVE STATIONS AND OFFSET 6 INCHES OFF INSIDE FACE OF RAMP WALL. OUTSIDE FACE OF STORM STRUCTURE IS 6 INCHES OFF INSIDE FACE OF RAMP WALL. SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION.
3. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 1.0 PERCENT PITCH FROM PROPOSED RAMP TO EXISTING AND PROPOSED STORM STRUCTURES FOR PIPE UNDERDRAIN UNPERFORATED 6-INCH.
4. ALL APRON ENDWALLS SHALL BE REINFORCED CONCRETE.

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MANHOLE TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
302AA	425+06.74 LN	31.96'RT	14	302A	2X2.5-FT	BW	-	-	609.50	4.31	12	605.19	605.04	14	1.04	III	
302A	425+06.74 LN	18.00'RT	43	302B	-	-	4-FT DIA.	J	609.79	5.00	12	604.79	604.34	43	1.04	III	
302BB	425+50.00 LN	31.50'RT	14	302B	2X2.5-FT	BW	-	-	608.21	5.00	12	603.21	603.06	14	1.04	III	
302B	425+50.00 LN	18.00'RT	44	12" APRON ENDWALL	-	-	4-FT DIA.	J	608.49	14.53	12	593.96	593.50	44	1.04	IV	PIPE EXPOSED THROUGH PROPOSED RAMP WALL
303	426+50.00 LN	31.50'RT	14	303A	2X2.5-FT	BW	-	-	604.92	5.65	12	599.27	599.12	14	1.04	III	
303A	426+50.00 LN	18.00'RT	50	304A	-	-	4-FT DIA.	J	605.20	6.33	12	598.87	598.35	50	1.04	III	
304	427+00.00 LN	31.50'RT	14	304A	2X2.5-FT	BW	-	-	603.14	4.64	12	598.50	598.35	14	1.04	III	
304A	427+00.00 LN	18.00'RT	30	12" APRON ENDWALL	-	-	4-FT DIA.	J	603.42	5.32	12	598.10	597.50	30	2.00	III	PIPE EXPOSED THROUGH PROPOSED RAMP WALL
305	427+50.00 LN	31.50'RT	14	305A	2X2.5-FT	BW	-	-	601.27	3.89	12	597.38	597.31	14	0.50	IV	
305A	427+50.00 LN	18.00'RT	25	306A	-	-	4-FT DIA.	J	601.55	4.24	12	597.31	597.18	25	0.51	III	
306	427+75.06 LN	31.50'RT	14	306A	2X2.5-FT	BW	-	-	600.33	3.08	12	597.25	597.18	14	0.50	IV	
306A	427+75.06 LN	18.00'RT	35	12" APRON ENDWALL	-	-	4-FT DIA.	J	600.61	3.43	12	597.18	597.00	35	0.51	IV	PIPE EXPOSED THROUGH PROPOSED RAMP WALL



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - IH 794 WB EXIT RAMP	SHEET 104 E



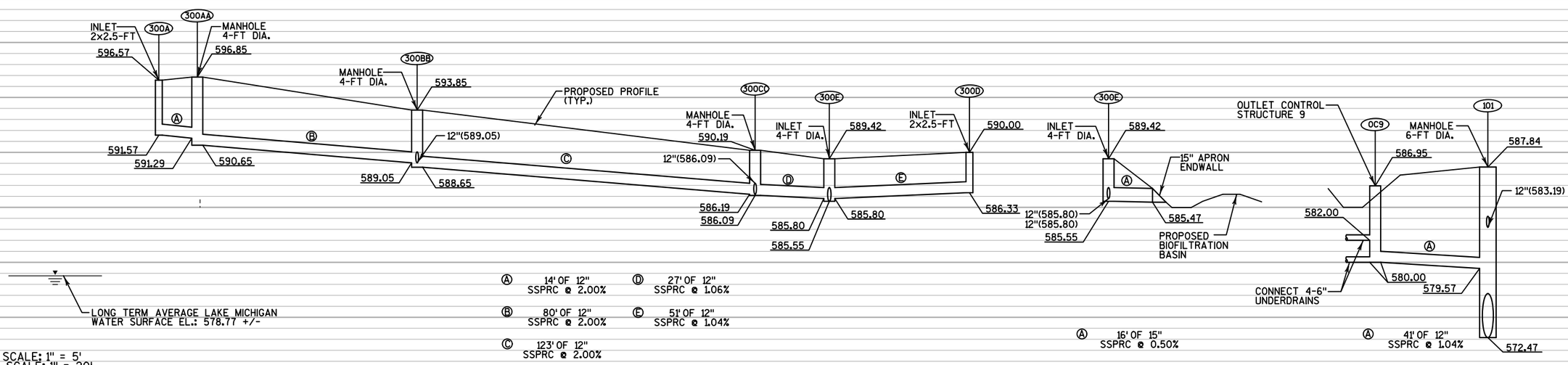
LEGEND

- PROPOSED STORM SEWER
- PROPOSED UNDERDRAIN
- EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED FLARED END SECTION

NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. PROPOSED STORM STRUCTURES LOCATED ON EXIT RAMP HAVE STATION AND OFFSET 6 INCHES OFF INSIDE FOACE OF RAMP WALL. OUTSIDE FACE OF STORM STRUCTURE IS 6 INCHES OFF INSIDE FACE OF RAMP WALL. SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION. STORM STRUCTURES WITHIN CURB AND GUTTER HAVE STATION AND OFFSET TO FACE OF CURB.
2. APRON ENDWALL SHALL BE REINFORCED CONCRETE.

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
300A	428+75.97 LN	31.50'RT	14	300AA	2X2.5-FT	BW	-	-	596.57	5.00	12	591.57	591.29	14	2.00	III	
300AA	428+75.97 LN	18.00'RT	80	300BB	-	-	4-FT DIA.	J	596.85	6.20	12	590.65	589.05	80	2.00	III	
300BB	429+55.97 LN	18.00'RT	123	300CC	-	-	4-FT DIA.	J	593.85	5.20	12	588.65	586.19	123	2.00	IV	
300CC	430+77.59 LN	18.00'RT	27	300E	-	-	4-FT DIA.	J	590.19	4.10	12	586.09	585.80	27	1.06	IV	
300D	431+11.91 LN	24.00'LT	51	300E	2X3-FT	H	-	-	590.00	3.67	12	586.33	585.80	51	1.04	IV	
300E	431+01.87 LN	26.00'RT	16	15" APRON ENDWALL	4-FT DIA.	H	-	-	589.42	3.87	15	585.55	585.47	16	0.50	IV	
0C9	431+28.31 LN	43.66'RT	41	101	OC STRUCTURE 9	R-4880	-	-	586.95	6.95	12	580.00	579.57	41	1.04	III	GRATE W/R-4899 ANGLE FRAME



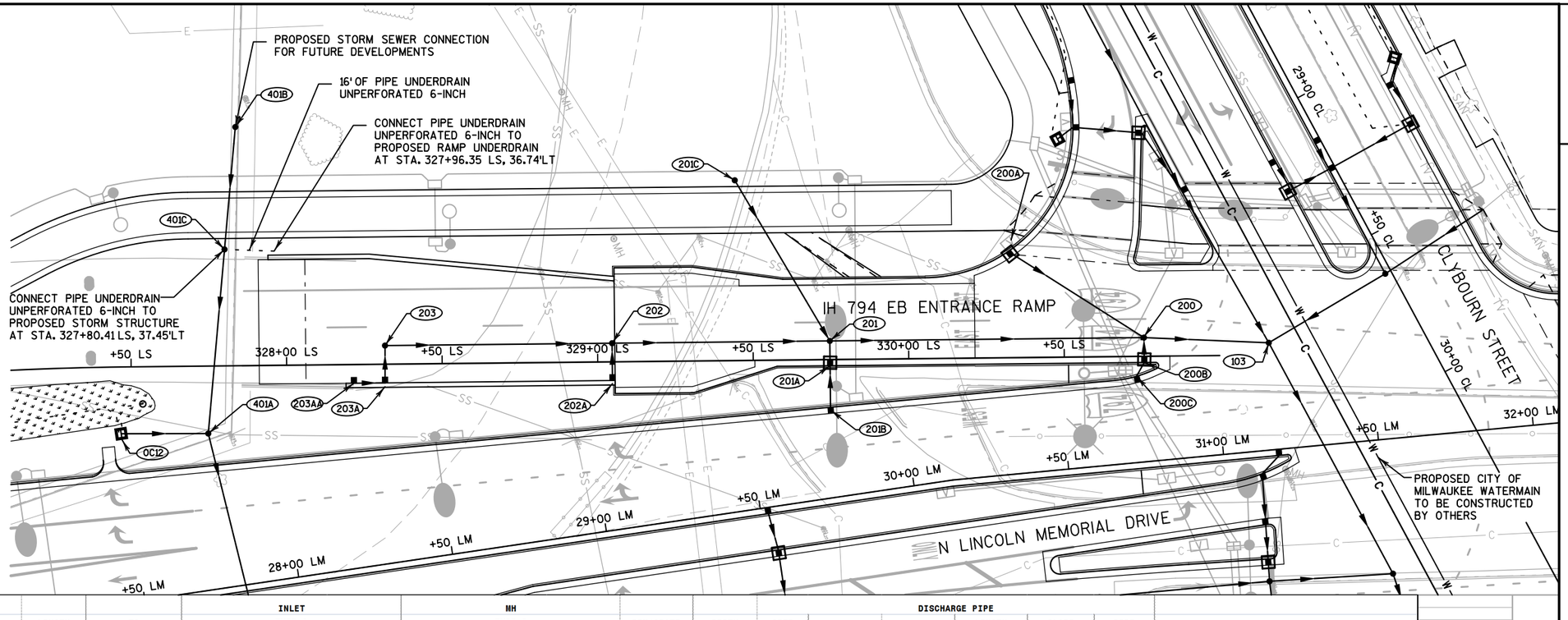
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - IH 794 WB EXIT RAMP	SHEET 105	E

LEGEND

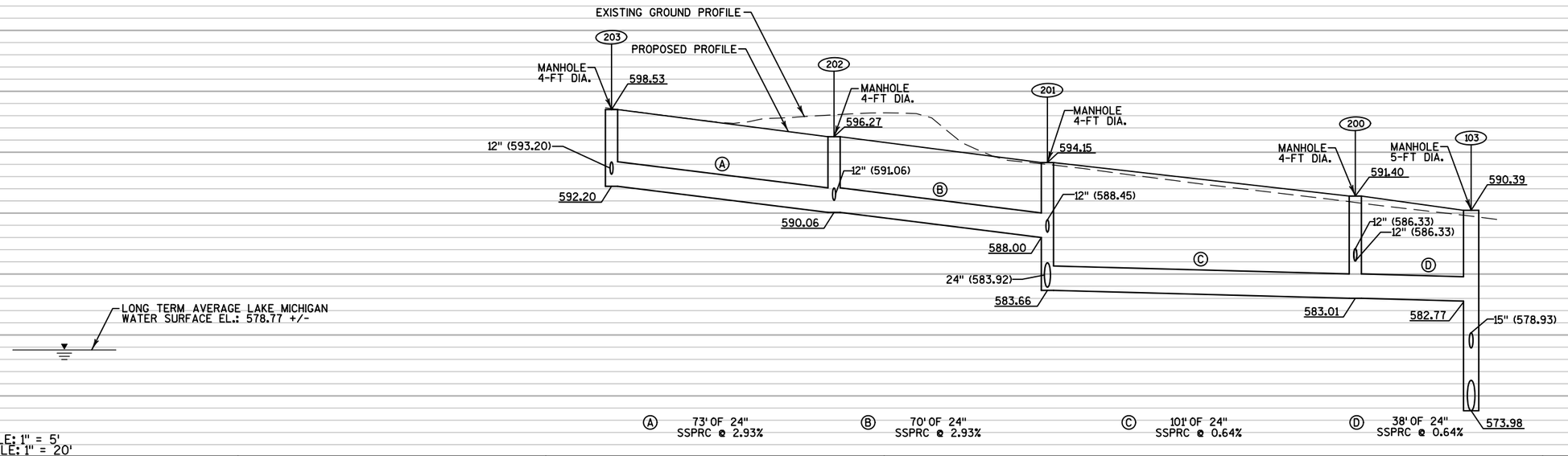
- PROPOSED STORM SEWER
- PROPOSED UNDERDRAIN
- SS EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE

NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. PROPOSED STORM STRUCTURES LOCATED ON ENTRANCE RAMP HAVE STATION AND OFFSETS AT INSIDE FACE OF RAMP WALL. OUTSIDE FACE OF STORM STRUCTURE IS AT INSIDE FACE OF RAMP WALL. STORM STRUCTURES LOCATED WITHIN CURB AND GUTTER HAVE STATION AND OFFSET AT FACE OF CURB.
3. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE FROM PROPOSED RAMP WALL TO PROPOSED STORM STRUCTURE FOR PIPE UNDERDRAIN UNPERFORATED 6-INCH.



STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
203	328+31.69 LS	6.00'LT	73	202	-	-	4-FT DIA.	J	598.53	6.33	24	592.20	590.06	73	2.93	III	
202	329+04.69 LS	6.00'LT	70	201	-	-	4-FT DIA.	J	596.27	6.21	24	590.06	588.00	70	2.93	III	
201	329+74.69 LS	6.00'LT	101	200	-	-	4-FT DIA.	J	594.15	10.49	24	583.66	583.01	101	0.64	III	
200	330+75.69 LS	6.02'LT	38	103	-	-	4-FT DIA.	J	591.40	8.39	24	583.01	582.77	38	0.64	III	



Ⓐ 73' OF 24" SSPRC @ 2.93%

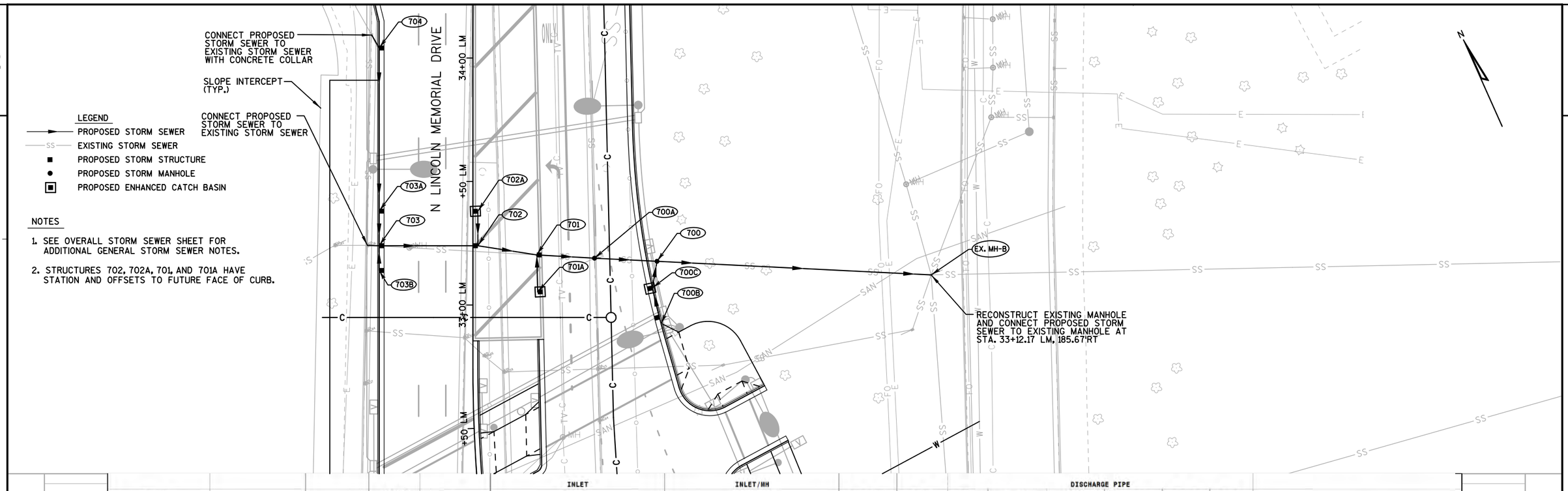
Ⓑ 70' OF 24" SSPRC @ 2.93%

Ⓒ 101' OF 24" SSPRC @ 0.64%

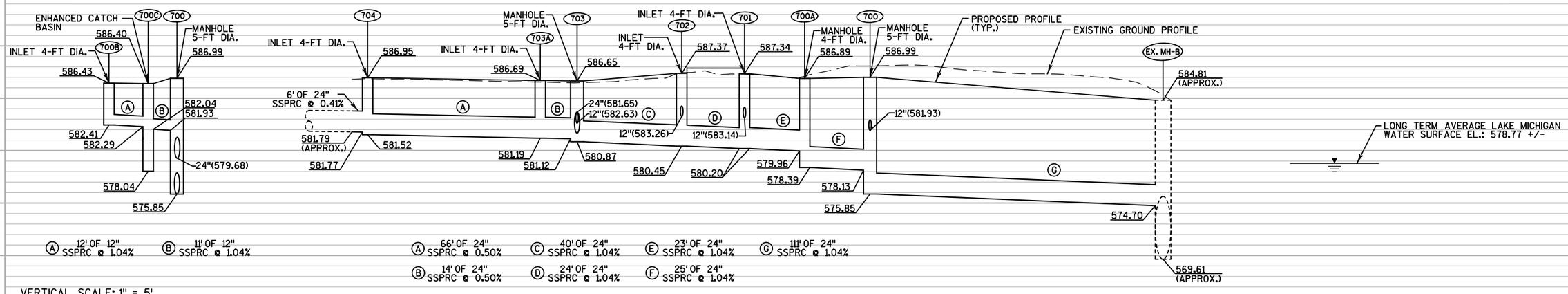
Ⓓ 38' OF 24" SSPRC @ 0.64%

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

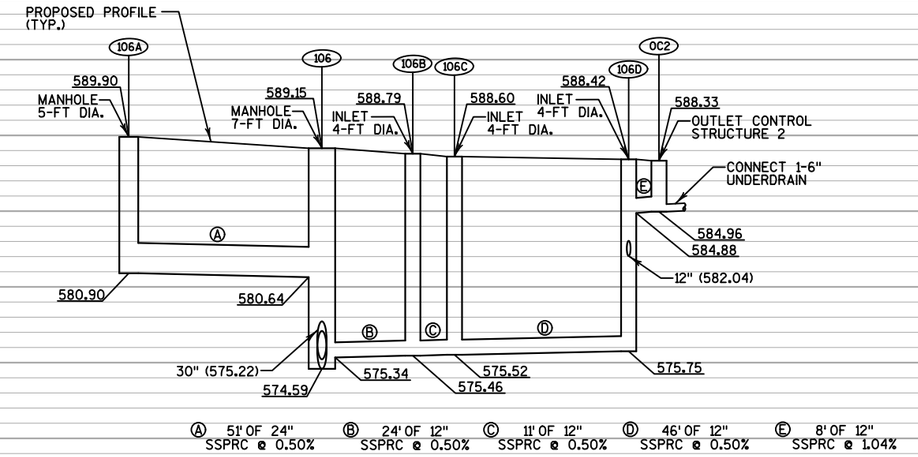
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - IH 794 EB ENTRANCE RAMP	SHEET 106 E



STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		INLET/MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
CONNECT EXIST.	34+09.34 LM	40.97'LT	6	704	-	-	-	-	-	-	24	581.79	581.77	6	0.41	III	CONNECT PROPOSED STORM SEWER TO EXISTING STORM SEWER - COLLAR REQUIRED
704	34+04.12 LM	38.00'LT	66	703A	4-FT DIA.	MKE	-	-	586.95	5.43	24	581.52	581.19	66	0.50	III	
703A	33+38.06 LM	38.00'LT	14	703	4-FT DIA.	MKE	-	-	586.69	5.50	24	581.19	581.12	14	0.50	III	
703	33+24.00 LM	38.00'LT	40	702	-	-	5-FT DIA.	MKE	586.65	5.78	24	580.87	580.45	40	1.04	III	
702	33+24.00 LM	2.00'RT	24	701	4-FT DIA.	MKE	-	-	587.37	6.92	24	580.45	580.20	24	1.04	III	
701	33+20.28 LM	25.88'RT	23	700A	4-FT DIA.	MKE	-	-	587.34	7.14	24	580.20	579.96	23	1.04	III	
700A	33+18.99 LM	49.25'RT	25	700			4-FT DIA.	J	588.86	10.47	24	578.39	578.13	25	1.04	III	CONNECT PROPOSED STORM SEWER TO EXISTING MANHOLE
700	33+17.73 LM	74.59'RT	111	EX. MH-B			5-FT DIA.	J	586.90	11.05	24	575.85	574.70	111	1.04	III	
700B	32+95.12 LM	75.52'RT	12	700C	4-FT DIA.	MKE	-	-	586.43	4.02	12	582.41	582.29	12	1.04	III	
700C	33+06.96 LM	72.71'RT	11	700	ENHANCED CB	MKE	-	-	586.40	4.36	12	582.04	581.93	11	1.04	III	USE TYPE 44A MODIFIED STRUCTURE



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - LINCOLN MEMORIAL DRIVE	SHEET 107 E



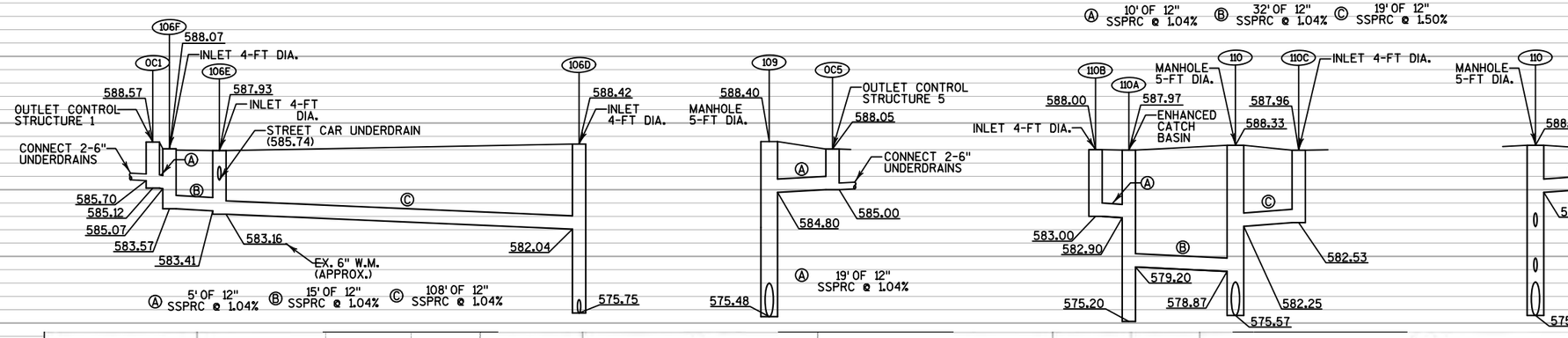
NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.

LONG TERM AVERAGE LAKE MICHIGAN WATER SURFACE EL.: 578.77 +/-

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
106A	25+88.57 CL	95.98' RT	51	106	-	-	5-FT DIA.	C	589.90	9.00	24	580.90	580.64	51	0.50	III	
OC2	25+63.90 CL	34.22'LT	8	106D	OC STRUCTURE 2	MKE	-	-	588.33	3.13	12	585.20	585.12	8	1.04	V	SEE BMP DETAILS FOR DESIGN OF OCS. CONNECT ALL UNDERDRAIN.
106D	25+57.58 CL	29.00'LT	46	106C	4-FT DIA.	MKE	-	-	588.42	12.67	12	575.75	575.52	46	0.50	V	
106C	25+75.07 CL	13.03'RT	11	106B	4-FT DIA.	MKE	-	-	588.60	13.08	12	575.52	575.46	11	0.50	V	
106B	25+75.60 CL	22.43'RT	24	106	4-FT DIA.	MKE	-	-	588.79	13.33	12	575.46	575.34	24	0.50	V	

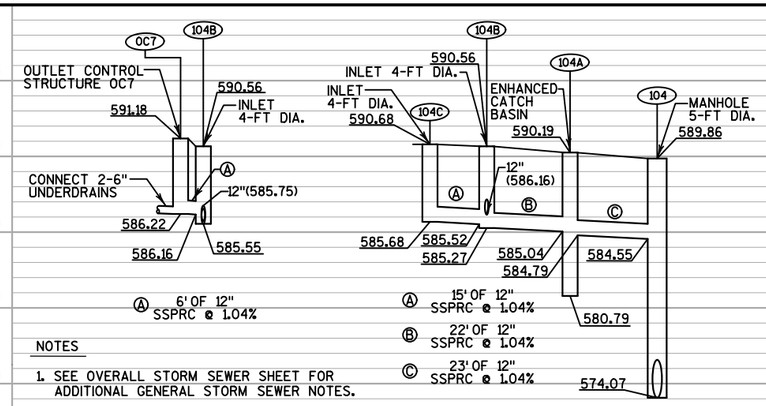
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

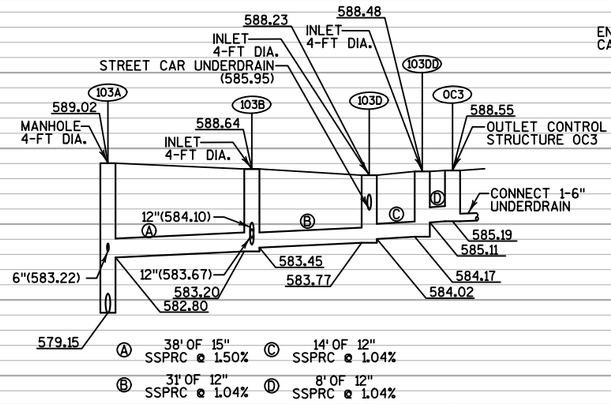


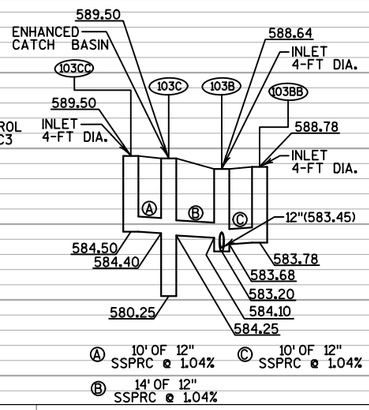
NOTES

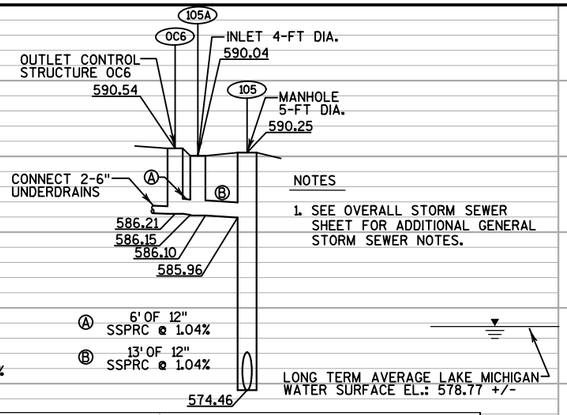
1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERALSTORM SEWER NOTES.

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
OC1	24+34.95 CL	34.00'LT	5	106F	OC STRUCTURE 1	R-1878-A9L	-	-	588.57	3.45	12	585.12	585.07	5	1.04	V	SEE BMP DETAILS FOR DESIGN OF OCS. CONNECT ALL UNDERDRAIN.
106F	24+35.00 CL	29.00'LT	15	106E	4-FT DIA.	MKE	-	-	588.07	4.50	12	583.57	583.41	15	1.04	V	
106E	24+50.00 CL	29.00'LT	108	106D	4-FT DIA.	MKE	-	-	587.93	4.77	12	583.16	582.04	108	1.04	III	
OC5	24+85.00 CL	64.00'RT	19	109	OC STRUCTURE 5	MKE	-	-	588.05	3.05	12	585.00	584.80	19	1.04	V	SEE BMP DETAILS FOR DESIGN OF OCS. CONNECT ALL UNDERDRAIN.
110B	24+40.47 CL	15.76'RT	10	110A	4-FT DIA.	MKE	-	-	588.00	5.00	12	583.00	582.90	10	1.04	III	
110A	24+50.51 CL	14.06'RT	32	110	ENHANCED CB	MKE	-	-	587.97	8.77	12	579.20	578.87	32	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
OC4	24+35.02 CL	64.00'RT	24	110	OC STRUCTURE 4	MKE	-	-	588.01	2.87	12	585.14	584.77	24	1.54	V	SEE BMP DETAILS FOR DESIGN OF OCS. CONNECT ALL UNDERDRAIN.
110C	24+50.02 CL	64.00'RT	19	110	4-FT DIA.	MKE	-	-	587.96	5.43	12	582.53	582.25	19	1.50	III	









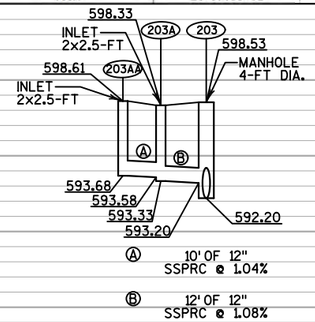
NOTES

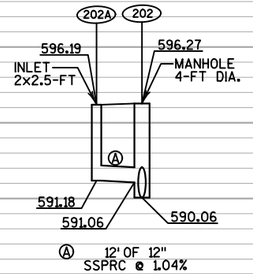
1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.

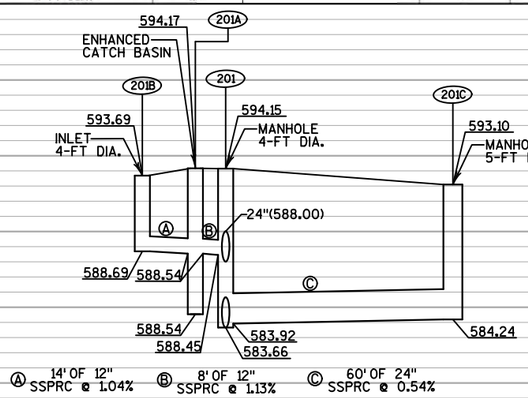
NOTES

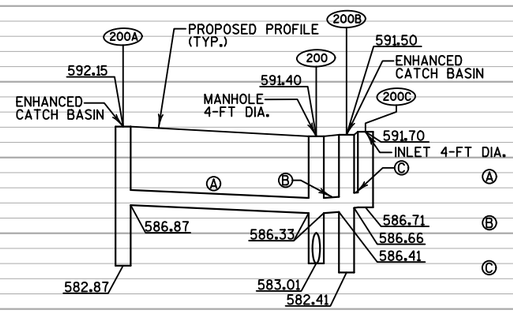
1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
OC7	28+75.09 CL	74.30'RT	6	104B	OC STRUCTURE 7	R-1878-A9L	-	-	591.18	4.96	12	586.22	586.16	6	1.04	III	SEE BMP DETAILS FOR OCS DESIGN. CONNECT UNDERDRAIN
104C	28+60.24 CL	62.42' RT	15	104B	4-FT DIA.	MKE	-	-	590.68	5.00	12	585.68	585.52	15	1.04	III	
104B	28+74.13 CL	68.13'RT	22	104A	4-FT DIA.	MKE	-	-	590.56	5.29	12	585.27	585.04	22	1.04	III	
104A	28+86.17 CL	49.54'RT	23	104	ENHANCED CB	MKE	-	-	590.19	5.40	12	584.79	584.55	23	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
OC3	29+04.12 CL	34.22' LT	8	103DD	OC STRUCTURE 3	MKE	-	-	588.55	3.36	12	585.19	585.11	8	1.04	III	SEE BMP DETAILS FOR OCS DESIGN. CONNECT UNDERDRAIN
103DD	29+10.44 CL	29.00'LT	14	103D	4-FT DIA.	MKE	-	-	588.48	4.31	12	584.17	584.02	14	1.04	III	
103D	29+24.55 CL	29.00'LT	31	103B	4-FT DIA.	MKE	-	-	588.23	4.46	12	583.77	583.45	31	1.04	III	
103B	29+25.02 CL	2.00'RT	38	103A	4-FT DIA.	MKE	-	-	588.64	5.44	15	583.20	582.80	38	1.04	III	
103CC	29+14.47 CL	16.00'RT	10	103C	4-FT DIA.	MKE	-	-	589.50	5.00	12	584.50	584.40	10	1.04	III	
103C	29+25.00 CL	16.00'RT	14	103B	ENHANCED CB	MKE	-	-	589.50	5.25	12	584.25	584.10	14	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
103BB	29+15.00 CL	2.00'RT	10	103B	4-FT DIA.	MKE	-	-	588.78	5.00	12	583.78	583.68	10	1.04	III	
OC6	26+67.53 CL	63.87'RT	6	105A	OC STRUCTURE 6	R-1878-A9L	-	-	590.54	4.33	12	586.21	586.15	6	1.04	III	
105A	26+67.53 CL	58.00'RT	13	105	4-FT DIA.	MKE	-	-	590.04	3.94	12	586.10	585.96	13	1.04	III	









VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

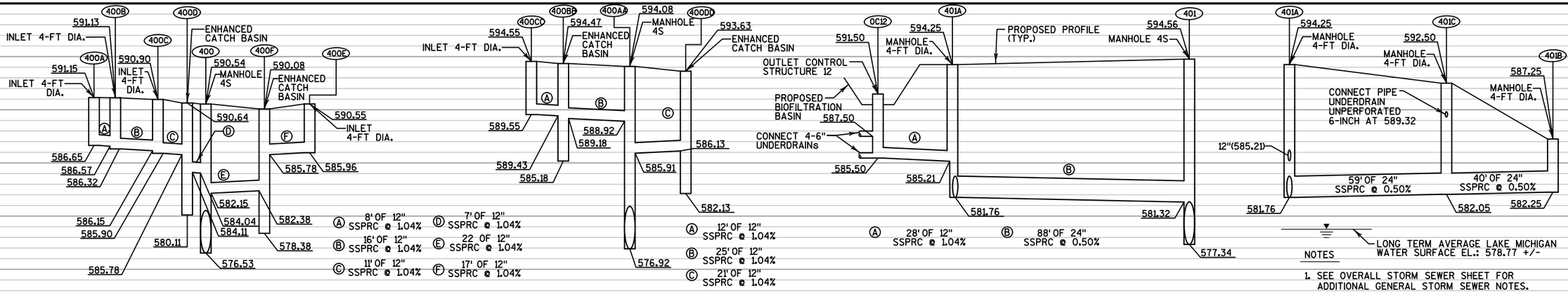
NOTES

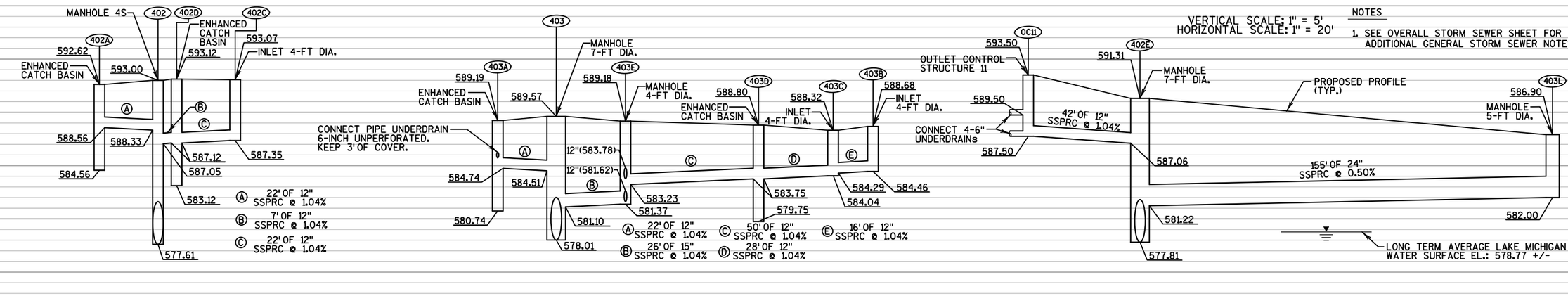
1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. SEE SHEET 022512_SS FOR ADDITIONAL STATION AND OFFSET NOTES.

LONG TERM AVERAGE LAKE MICHIGAN WATER SURFACE EL.: 578.77 +/-

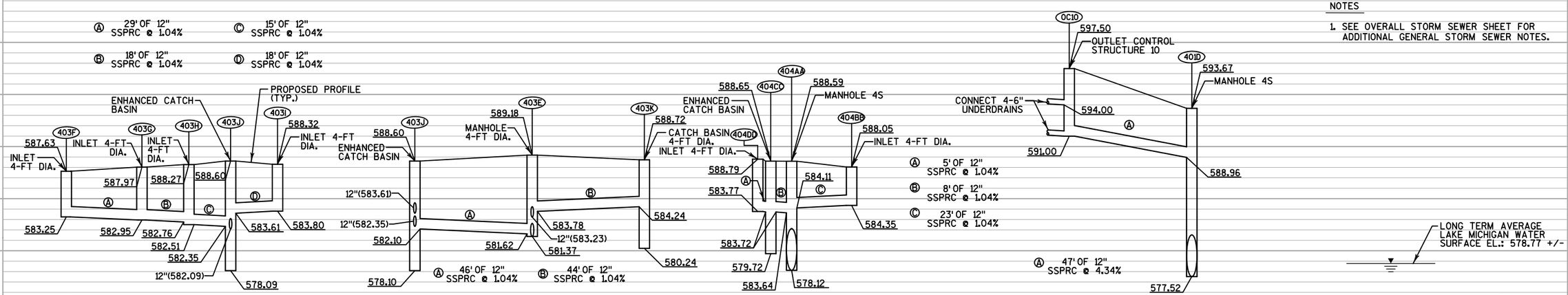
STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
203AA	328+21.57 LS	6.00'RT	10	203A	2X2.5-FT	BW	-	-	598.61	4.93	12	593.68	593.58	10	1.04	III	
203A	328+31.57 LS	6.00'RT	12	203	2X2.5-FT	BW	-	-	598.33	5.00	12	593.33	593.20	12	1.08	III	
202A	329+04.69 LS	6.00'RT	12	202	2X2.5-FT	BW	-	-	596.19	5.01	12	591.18	591.06	12	1.04	III	
201B	329+74.69 LS	15.31'RT	14	201A	4-FT DIA.	MKE	-	-	593.69	5.00	12	588.69	588.54	14	1.04	III	
201A	329+74.69 LS	2.00'RT	8	201	ENHANCED CB	WM	-	-	594.17	5.63	12	588.54	588.45	8	1.13	III	USE TYPE 44A MODIFIED STRUCTURE
201C	329+44.67 LS	57.96'LT	60	201	-	-	5-FT DIA.	C	593.10	8.86	24	584.24	583.92	60	0.54	III	
200C	330+73.16 LS	6.40'RT	5	200B	4-FT DIA.	MKE	-	-	591.70	4.99	12	586.71	586.66	5	1.04	III	
200B	330+75.69 LS	2.00'RT	8	200	ENHANCED CB	MKE	-	-	591.50	5.09	12	586.41	586.33	8	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
200A	330+32.33 LS	34.17'LT	52	200	ENHANCED CB	MKE	-	-	592.15	5.28	12	586.87	586.33	52	1.04	III	USE TYPE 44A MODIFIED STRUCTURE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - PROFILES	SHEET 109 E





PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - PROFILES	SHEET 110	E

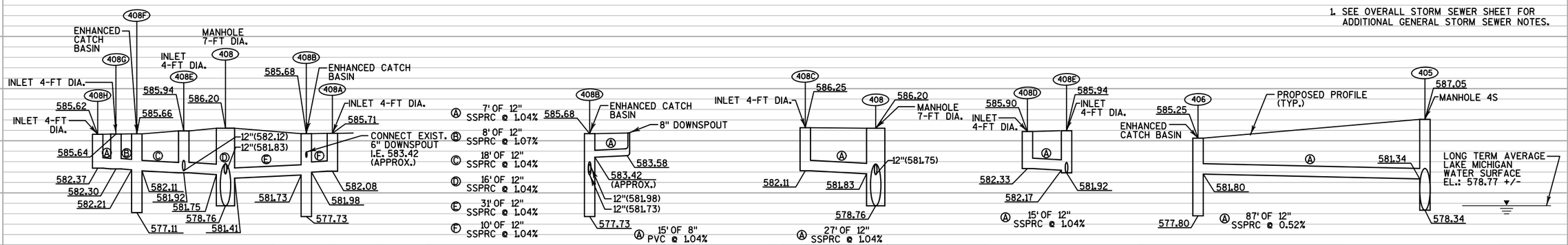


NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
403F	24+38.85 LM	44.73' LT	29	403G	4-FT DIA.	MKE	-	-	587.63	4.38	12	583.25	582.95	29	1.04	III	
403G	24+41.53 LM	16.00' LT	18	403H	4-FT DIA.	MKE	-	-	587.97	5.02	12	582.95	582.76	18	1.04	III	
403H	24+41.53 LM	2.00' RT	15	403J	4-FT DIA.	MKE	-	-	588.27	5.76	12	582.51	582.35	15	1.04	III	
403I	24+56.53 LM	16.00' LT	18	403J	4-FT DIA.	MKE	-	-	588.32	4.52	12	583.80	583.61	18	1.04	III	
403J	24+56.59 LM	2.00' RT	46	403E	ENHANCED CB	MKE	-	-	588.60	6.50	12	582.10	581.62	46	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
403K	24+56.46 LM	13.32' RT	44	403E	CB 4-FT DIA.	MKE	-	-	588.72	4.48	12	584.24	583.78	44	1.04	III	4-FT SUMP BELOW LOWEST INVERT
404DD	24+76.76 LM	27.43' RT	5	404CC	4-FT DIA.	MKE	-	-	588.79	5.02	12	583.77	583.72	5	1.04	III	
404CC	24+72.20 LM	30.00' RT	8	404AA	ENHANCED CB	MKE	-	-	588.65	4.93	12	583.72	583.64	8	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
404BB	24+62.63 LM	59.00' RT	23	404AA	4-FT DIA.	MKE	-	-	588.05	3.70	12	584.35	584.11	23	1.04	III	
0C10	27+12.53 LM	84.41' RT	47	401D	OCL STRUCTURE 10	R-4880	-	-	597.50	6.50	12	591.00	588.96	47	4.34	III	SEE BMP DETAILS FOR OCS DESIGN. CONNECT BASIN UNDERDRAIN. GRATE W/R-4899 ANGLE FRAME.

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

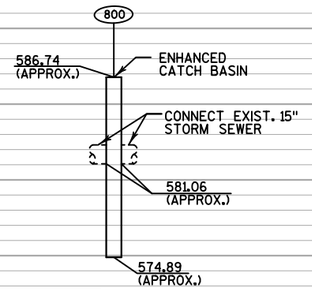


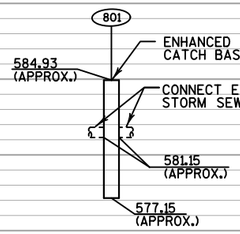
NOTES

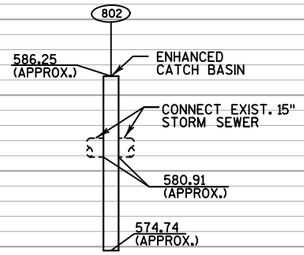
1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.

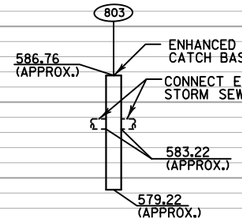
STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
408A	22+33.49 LM	47.76'RT	10	408B	4-FT DIA.	MKE	-	-	585.71	3.63	12	582.08	581.98	10	1.04	III	
DS	22+09.63 LM	56.48'RT	15	408B	-	-	-	-	-	-	8	583.58	583.42	15	1.04	-	PVC PIPE
408B	22+22.86 LM	47.55'RT	31	408	ENHANCED CB	MKE	-	-	585.68	3.95	12	581.73	581.41	31	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
408C	21+97.98 LM	17.34'RT	27	408	4-FT DIA.	MKE	-	-	586.25	4.14	12	582.11	581.83	27	1.04	III	
408H	22+00.00 LM	16.00' LT	7	408G	4-FT DIA.	MKE	-	-	585.62	3.25	12	582.37	582.30	7	1.04	III	
408G	22+06.86 LM	16.00' LT	8	408F	4-FT DIA.	MKE	-	-	585.64	3.34	12	582.30	582.21	8	1.07	III	
408F	22+14.71 LM	16.00' LT	18	408E	ENHANCED CB	MKE	-	-	585.66	3.55	12	582.11	581.92	18	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
408D	22+00.02 LM	2.00' RT	15	408E	4-FT DIA.	MKE	-	-	585.90	3.57	12	582.33	582.17	15	1.04	III	
408E	22+15.03 LM	2.00' RT	16	408	4-FT DIA.	MKE	-	-	585.94	4.02	12	581.92	581.75	16	1.04	III	
406	423+49.78 LN	19.90'LT	87	405	ENHANCED CB	C	-	-	585.25	3.45	12	581.80	581.34	87	0.52	III	USE TYPE 44A MODIFIED STRUCTURE

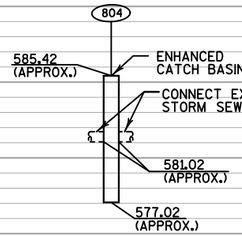
PROJECT NO: 1300-13-74 | HWY: IH 794 | COUNTY: MILWAUKEE | STORM SEWER - PROFILES | SHEET 111 | E

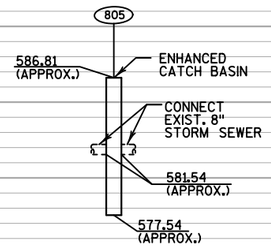






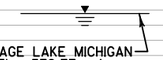






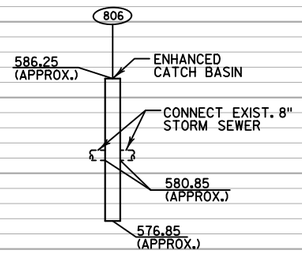
NOTES

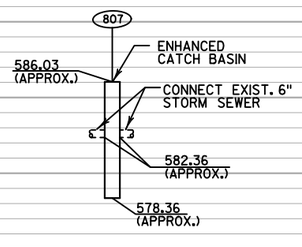
1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. CONTRACTOR SHALL VERIFY ALL EXISTING STORM SEWER PIPE DIAMETERS FOR ALL ENHANCED CATCH BASINS THAT ARE TO BE INSTALLED ALONG EXISTING STORM SEWERS.
3. CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING STORM SEWER FOR STRUCTURE 806 AND 807.
4. CONTRACTOR SHALL ADJUST ENHANCED CATCH BASIN LOCATION AS NEEDED TO NOT DAMAGE TO EXISTING PIER.



STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DISCHARGE PIPE DEPTH (FT)	SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
EX. PIPE	-	-	-	800	-	-	-	-	-	-	15	-	581.06	-	-	-	
800	17+66.06 LN	91.13'LT	-	EX. PIPE	-	-	ENHANCED CB	J	586.74	-	15	581.06	-	-	-	-	USE TRAPPED STORM STRUCTURE
EX. PIPE	-	-	-	801	-	-	-	-	-	-	8	-	581.15	-	-	-	
801	18+00.50 LN	73.64'LT	-	EX. PIPE	-	-	ENHANCED CB	J	584.93	-	8	581.15	-	-	-	-	USE TYPE 44A STRUCTURE
EX. PIPE	-	-	-	802	-	-	-	-	-	-	15	-	580.91	-	-	-	
802	18+70.22 LN	89.33'LT	-	EX. PIPE	-	-	ENHANCED CB	J	586.25	-	15	580.91	-	-	-	-	USE TRAPPED STORM STRUCTURE
EX. PIPE	-	-	-	803	-	-	-	-	-	-	8	-	583.22	-	-	-	
803	19+63.37 LN	80.73'RT	-	EX.PIPE	-	-	ENHANCED CB	J	586.76	-	8	583.22	-	-	-	-	USE TYPE 44A STRUCTURE
EX. PIPE	-	-	-	804	-	-	-	-	-	-	8	-	581.02	-	-	-	
804	17+78.97 LN	140.78'RT	-	EX. PIPE	-	-	ENHANCED CB	J	585.42	-	8	581.02	-	-	-	-	USE TYPE 44A STRUCTURE
EX. PIPE	-	-	-	805	-	-	-	-	-	-	8	-	581.54	-	-	-	
805	19+88.53 LN	146.44'RT	-	EX. PIPE	-	-	ENHANCED CB	J	586.81	-	8	581.54	-	-	-	-	USE TYPE 44A STRUCTURE

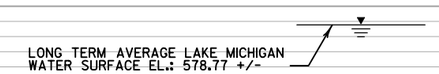
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'





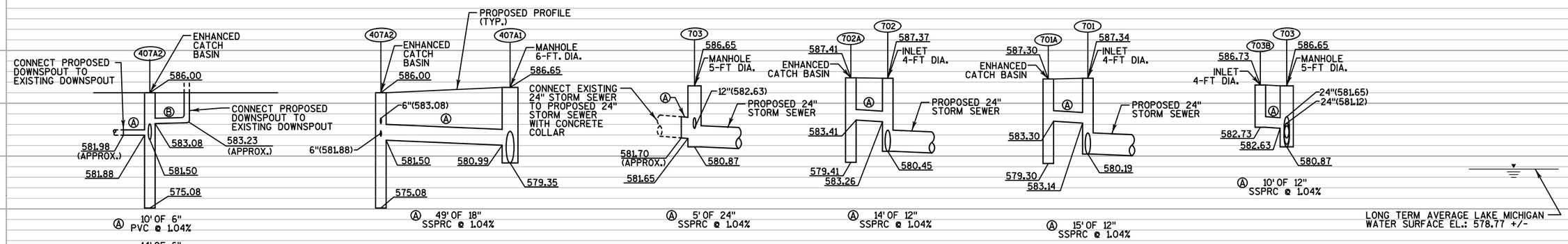
NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. CONTRACTOR SHALL VERIFY ALL EXISTING STORM SEWER PIPE DIAMETERS FOR ALL ENHANCED CATCH BASINS THAT ARE TO BE INSTALLED ALONG EXISTING STORM SEWERS.
3. CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING STORM SEWER FOR STRUCTURE 806 AND 807.
4. CONTRACTOR SHALL ADJUST ENHANCED CATCH BASIN LOCATION AS NEEDED TO NOT DAMAGE EXISTING PIER.



STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
EX. PIPE	-	-	-	806	-	-	-	-	-	-	8	-	580.85	-	-	-	
806	421+25.94 LN	36.14'RT	-	EX. PIPE	-	-	ENHANCED CB	J	586.34	-	8	580.85	-	-	-	-	USE TYPE 44A STRUCTURE
EX. PIPE	-	-	-	807	-	-	-	-	-	-	6	-	582.36	-	-	-	
807	23+50.65 LN	182.34'RT	-	EX. PIPE	-	-	ENHANCED CB	J	586.03	-	6	582.36	-	-	-	-	USE TYPE 44A STRUCTURE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - PROFILES	SHEET 112	E

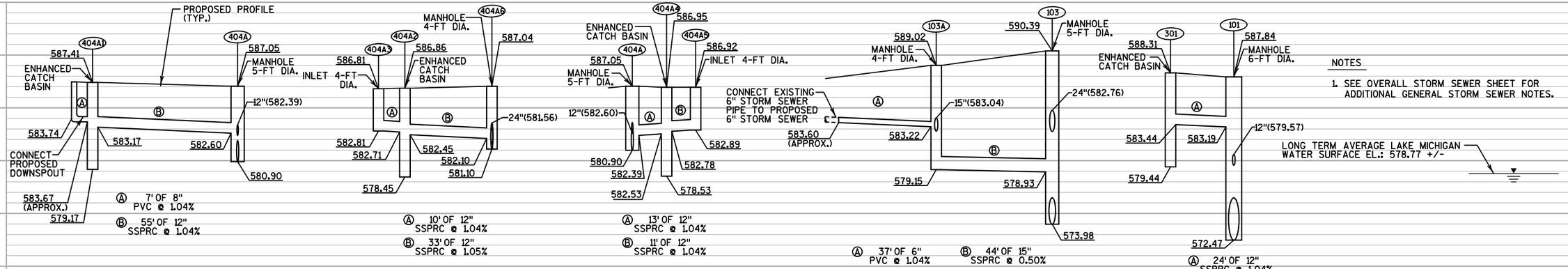


NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
EX. PIPE	34+09.35 LM	40.98'RT	5	703	-	-	-	-	-	-	24	581.70	581.65	5	1.04	IV	CONNECT EXISTING PIPE TO PROPOSED PIPE.
703B	33+14.02 LM	38.00'LT	10	703	4-FT DIA.	MKE	-	-	586.73	4.00	12	582.73	582.63	10	1.04	III	
702A	33+38.06 LM	2.00'RT	14	702	ENHANCED CB	MKE	-	-	587.41	4.00	12	583.41	583.26	14	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
701A	33+05.32 LM	26.23'RT	15	701	ENHANCED CB	MKE	-	-	587.30	4.00	12	583.30	583.14	15	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
407A2	22+42.56 LM	28.03'LT	49	407A1	ENHANCED CB	C	-	-	586.00	4.50	18	581.50	580.99	49	1.04	III	USE TRAPPED STORM STRUCTURE
DS	22+32.73 LM	28.18'LT	10	407A2	-	-	-	-	-	-	6	581.98	581.88	10	1.04	-	PVC PIPE
DS	22+41.60 LM	42.20'LT	14	407A2	-	-	-	-	-	-	6	583.23	583.08	14	1.04	-	PVC PIPE

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

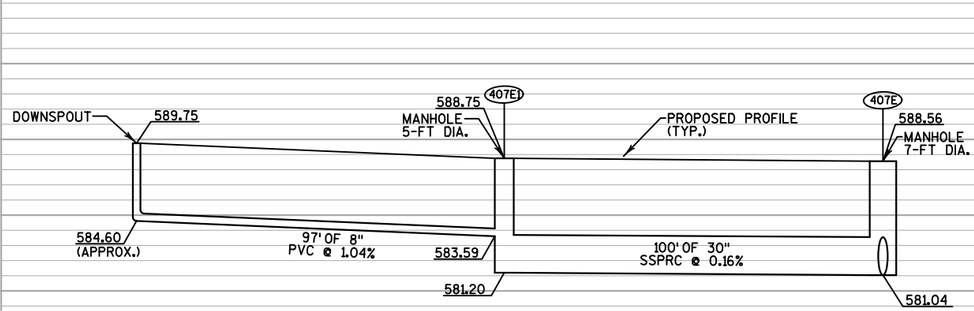


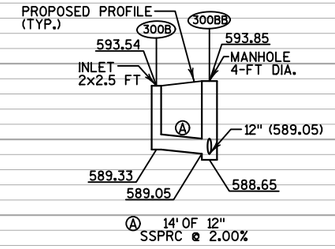
NOTES

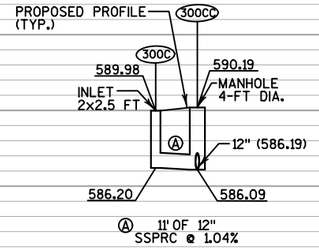
1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
DS	110+31.37 LW	67.10'LT	7	404A1	-	-	-	-	-	-	8	583.74	583.67	7	1.04	-	PVC PIPE
404A1	110+34.76 LW	62.35'LT	55	404A	ENHANCED CB	MKE	-	-	588.41	5.24	12	583.17	582.60	55	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
404A3	109+99.47 LW	38.70'LT	10	404A2	4-FT DIA.	MKE	-	-	586.81	4.00	12	582.81	582.71	10	1.04	III	
404A2	110+09.02 LW	41.92'LT	33	404A6	ENHANCED CB	MKE	-	-	586.86	4.41	12	582.45	582.10	33	1.05	III	USE TYPE 44A MODIFIED STRUCTURE
404A5	110+37.07 LW	2.00'RT	11	404A4	4-FT DIA.	MKE	-	-	586.92	4.03	12	582.89	582.78	11	1.04	III	
404A4	110+48.44 LW	2.00'RT	13	404A	ENHANCED CB	MKE	-	-	586.95	4.42	12	582.53	582.39	13	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
301	31+12.77 CL	78.73'RT	24	101	ENHANCED CB	MKE	-	-	588.31	4.87	12	583.44	583.19	24	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
EX. STUB	29+59.98 CL	34.95'LT	37	103A	-	-	-	-	-	-	6	583.60	583.22	37	1.04	-	PVC PIPE. CONNECT EXISTING PIPE TO PROPOSED PIPE
103A	29+63.16 CL	2.00'RT	44	103	-	-	4-FT DIA.	J	588.30	9.15	15	579.15	578.93	44	0.50	III	

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - PROFILES	SHEET 113	E





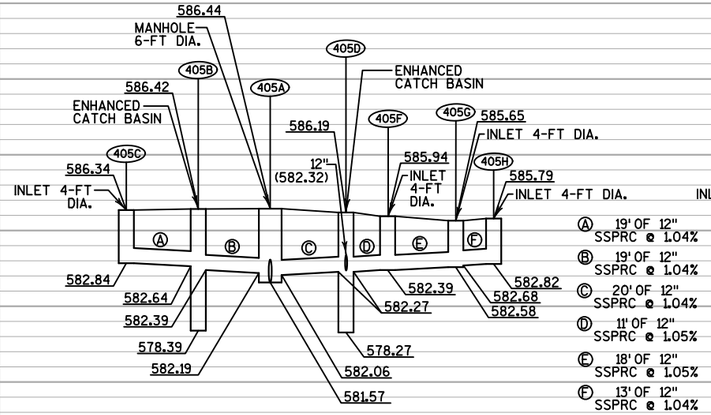


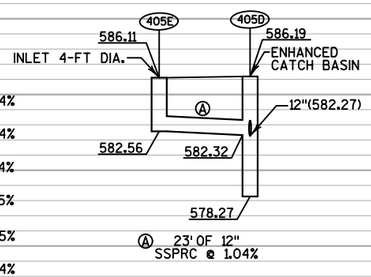
NOTES

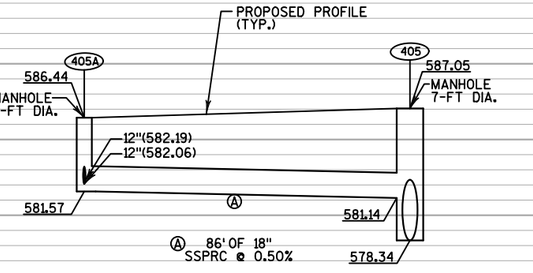
1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. CONTRACTOR SHALL VERIFY EXISTING PIER FOOTING PRIOR TO INSTALLING STORM SEWER DOWNSPOUT. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
3. SEE SHEET 022511b_SS FOR ADDITIONAL STATION AND OFFSETS ON LN ALIGNMENT RAMP.

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
DS	104+87.89 LW	13.13' LT	97	407E1	-	-	-	-	589.75	5.15	8	584.60	583.59	97	1.04	PVC	PVC PIPE. CONNECT DOWNSPOUT TO STRUCTURE 407E1.
407E1	204+04.58 LE	30.65'LT	100	407E	-	-	5-FT DIA.	C	588.75	7.55	30	581.20	581.04	100	0.16	III	CONNECT DOWNSPOUT
300B	429+55.97 LN	31.50'RT	14	300BB	2X2.5-FT	BW	-	-	593.54	4.21	12	589.33	589.05	14	2.00	III	
300C	430+77.59 LN	27.69'RT	11	300CC	2X2.5-FT	BW	-	-	589.98	3.78	12	586.20	586.09	11	1.04	IV	

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'







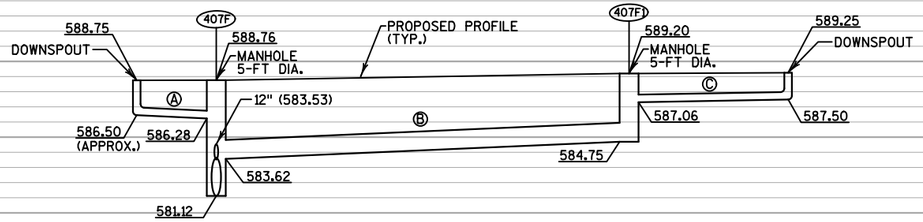
NOTES

1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.

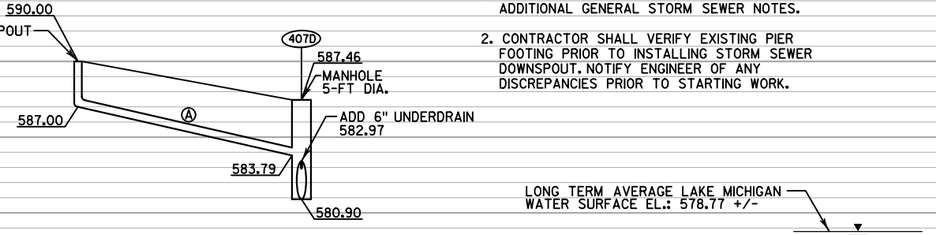
LONG TERM AVERAGE LAKE MICHIGAN WATER SURFACE EL.: 578.77 +/-

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
405C	110+25.05 LW	21.96'RT	19	405B	4-FT DIA.	MKE	-	-	586.34	3.50	12	582.84	582.64	19	1.04	III	
405B	110+43.81 LW	21.92'RT	19	405A	ENHANCED CB	MKE	-	-	586.42	4.03	12	582.39	582.19	19	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
405A	110+60.47 LW	29.95'RT	86	405	-	-	4-FT DIA.	J	586.44	4.87	18	581.57	581.14	86	0.50	III	
405H	110+41.65 LW	73.60'RT	13	405G	4-FT DIA.	MKE	-	-	585.79	2.97	12	582.82	582.68	13	1.05	III	
405G	110+53.49 LW	78.63'RT	18	405F	4-FT DIA.	MKE	-	-	585.65	3.07	12	582.58	582.39	18	1.04	III	
405F	110+58.44 LW	60.48'RT	11	405D	4-FT DIA.	MKE	-	-	585.94	3.55	12	582.39	582.27	11	1.05	III	
405D	110+59.78 LW	49.96'RT	20	405A	ENHANCED CB	MKE	-	-	586.19	3.92	12	582.27	582.06	20	1.04	III	USE TYPE 44A MODIFIED STRUCTURE
405E	110+36.72 LW	49.96'RT	23	405D	4-FT DIA.	MKE	-	-	586.11	3.55	12	582.56	582.32	23	1.04	III	

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - PROFILES	SHEET 114	E



Ⓐ 21' OF 8" PVC @ 1.04% Ⓑ 109' OF 15" SSPAC @ 1.04% Ⓒ 42' OF 8" PVC @ 1.04%



Ⓐ 59' OF 8" PVC @ 5.44%

NOTES

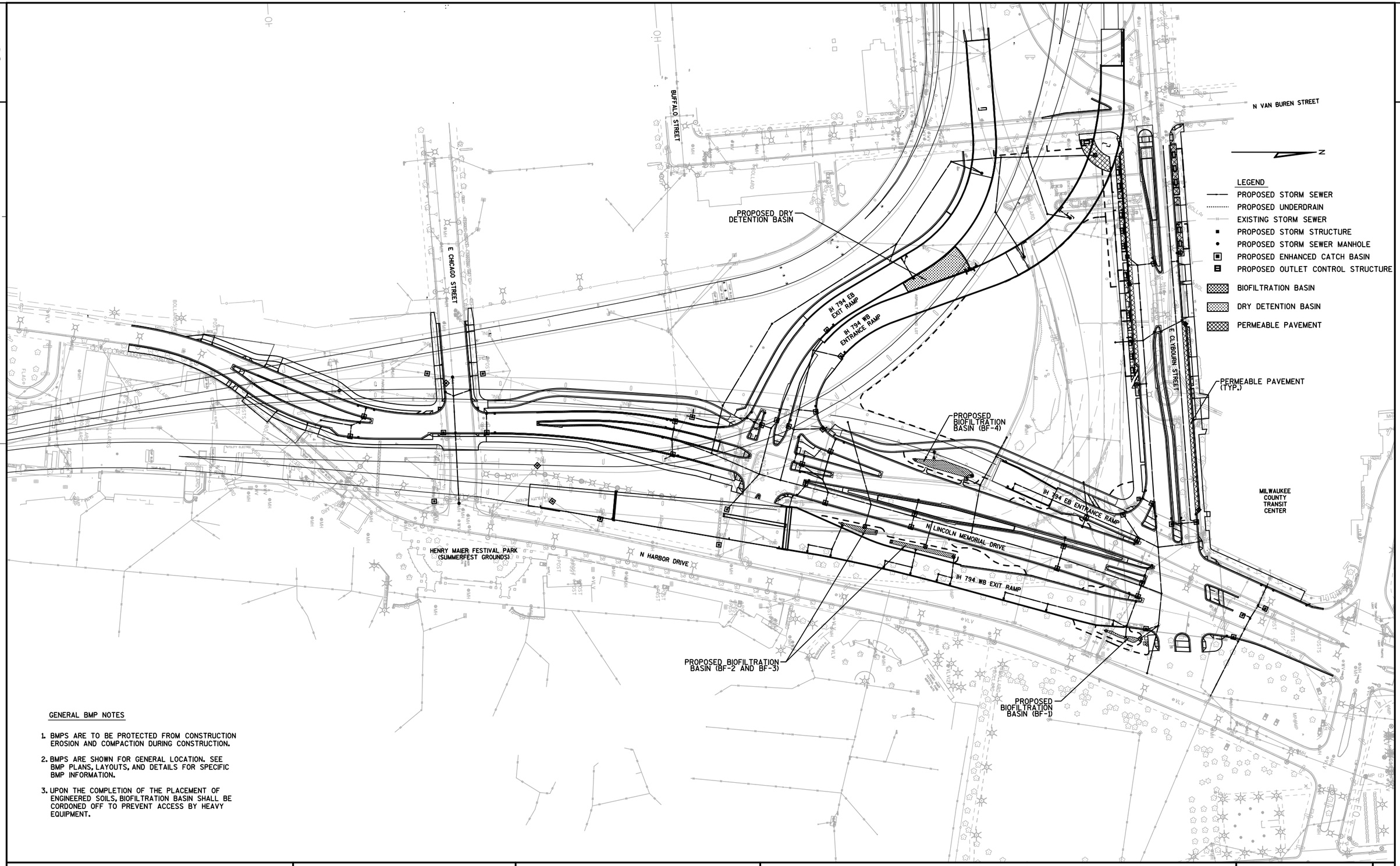
1. SEE OVERALL STORM SEWER SHEET FOR ADDITIONAL GENERAL STORM SEWER NOTES.
2. CONTRACTOR SHALL VERIFY EXISTING PIER FOOTING PRIOR TO INSTALLING STORM SEWER DOWNSPOUT. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.

STRUCT. NO.	STATION	OFFSET	LENGTH (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	INVERT ELEV.	DISCH. ELEV.	LENGTH (FT)	SLOPE (%)	PIPE CLASS	REMARKS
DS	202+92.23 LE	62.10' LT	21	407F	-	-	-	-	588.75	2.25	8	586.50	586.28	21	1.04	PVC	PVC PIPE. CONNECT DOWNSPOUT TO STRUCTURE 407F.
DS	103+82.86 LW	15.10' LT	42	407F1	-	-	-	-	589.25	1.75	8	587.50	587.06	42	1.04	PVC	PVC PIPE. CONNECT DOWNSPOUT TO STRUCTURE 407F1.
407F1	104+04.98 LW	20.75' RT	109	407F	-	-	5-FT DIA.	C	589.20	4.45	12	584.75	583.62	109	1.04	III	
DS	203+46.81 LE	15.86'RT	59	407D	-	-	-	-	590.00	3.00	8	587.00	583.79	59	5.44	PVC	PVC PIPE. CONNECT DOWNSPOUT TO STRUCTURE 407D.

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STORM SEWER - PROFILES	SHEET 115	E

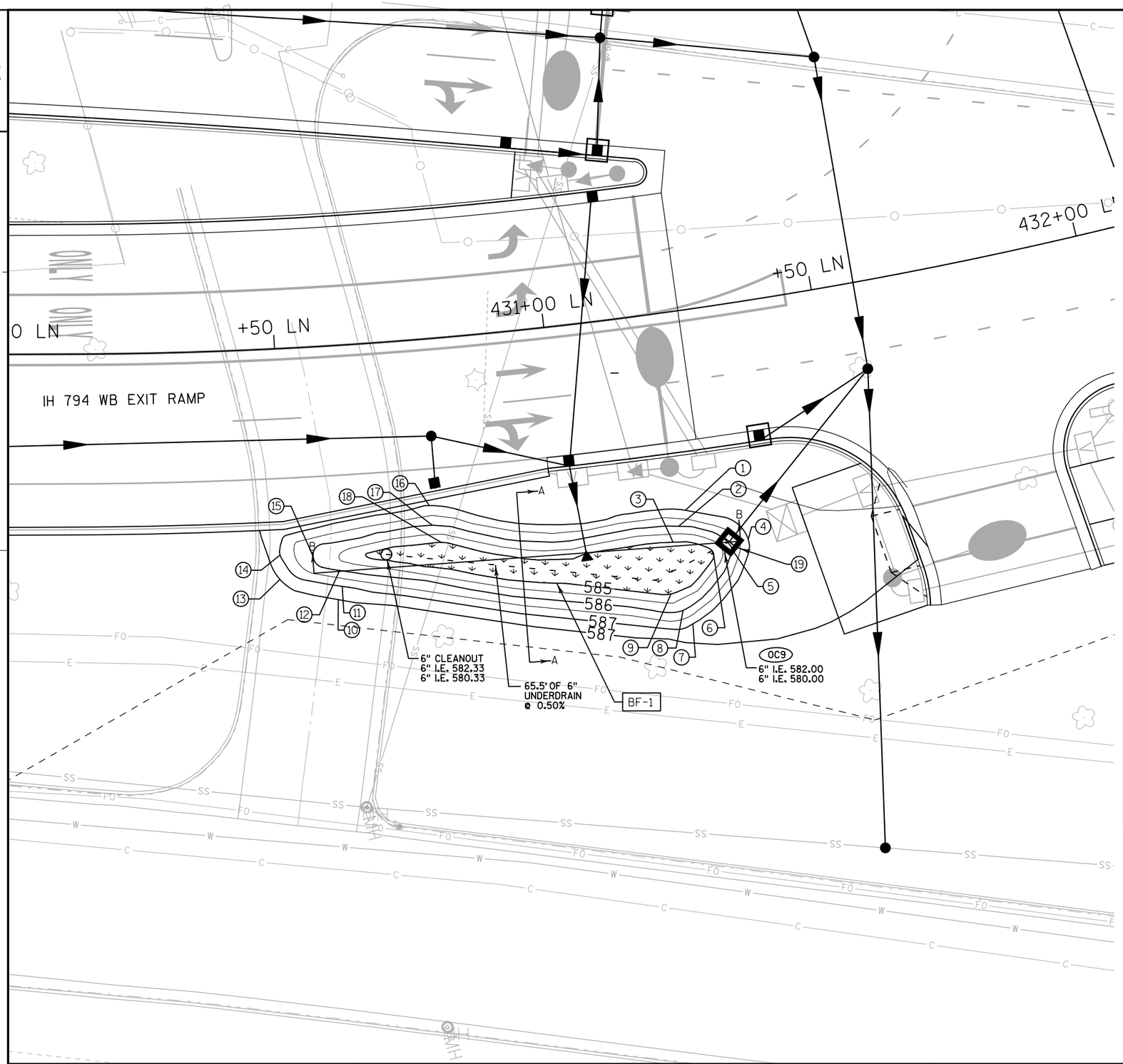
2



GENERAL BMP NOTES

1. BMPS ARE TO BE PROTECTED FROM CONSTRUCTION EROSION AND COMPACTION DURING CONSTRUCTION.
2. BMPS ARE SHOWN FOR GENERAL LOCATION. SEE BMP PLANS, LAYOUTS, AND DETAILS FOR SPECIFIC BMP INFORMATION.
3. UPON THE COMPLETION OF THE PLACEMENT OF ENGINEERED SOILS, BIOFILTRATION BASIN SHALL BE CORDONED OFF TO PREVENT ACCESS BY HEAVY EQUIPMENT.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	OVERALL BMP PLAN	SHEET 116	E



LEGEND

- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED UNDERDRAIN
- 586 PROPOSED CONTOUR

NOTES

1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. SEE PROPOSED STORM SEWER SHEETS, OUTLET CONTROL STRUCTURES DETAILS, AND BMP DETAILS FOR CONNECTING PROPOSED BIOFILTRATION BASIN TO PROPOSED STORM SEWER.
3. BIOFILTRATION BASIN SHALL HAVE A 3:1 MAXIMUM SLOPE.
4. CONTOURS SHOWN IN PLAN VIEW ARE AT 0.5-FOOT INTERVALS

BIOFILTRATION BASIN	POINT	STATION	OFFSET	ELEV. (FT)	COMMENTS
BF-1	1	431+21.42 LN	36.76'RT	587.00	
BF-1	2	431+19.84 LN	39.53'RT	586.00	
BF-1	3	431+18.50 LN	42.32'RT	585.00	
BF-1	4	431+31.68 LN	43.67'RT	587.00	
BF-1	5	431+28.60 LN	45.18'RT	585.00	
BF-1	6	431+25.26 LN	45.32'RT	585.00	
BF-1	7	431+20.03 LN	57.78'RT	587.00	
BF-1	8	431+18.66 LN	55.07'RT	586.00	
BF-1	9	431+16.95 LN	51.75'RT	585.00	
BF-1	10	430+59.02 LN	46.97'RT	587.00	
BF-1	11	430+59.85 LN	44.56'RT	587.00	
BF-1	12	430+59.57 LN	41.58'RT	586.00	
BF-1	13	430+48.98 LN	42.65'RT	587.00	
BF-1	14	430+49.20 LN	38.14'RT	587.00	
BF-1	15	430+55.03 LN	38.71'RT	586.00	
BF-1	16	430+76.22 LN	30.80'RT	587.00	
BF-1	17	430+76.46 LN	34.45'RT	586.00	
BF-2	18	430+77.82 LN	37.75'RT	585.00	
BF-3	19	431+28.31 LN	43.66'RT	586.95	OC-9

BIOFILTRATION BASIN	POINT	STATION	OFFSET	ELEV. (FT)	COMMENTS
BF-3	20	426+31.58 LN	38.02'LT	595.00	
BF-3	21	426+24.32 LN	32.62'LT	593.00	
BF-3	22	426+23.55 LN	24.45'LT	593.00	
BF-3	23	426+28.37 LN	20.08'LT	595.00	
BF-3	24	426+02.26 LN	15.83'LT	595.00	BASIN AGAINST WALL
BF-3	25	426+02.76 LN	21.75'LT	593.00	
BF-3	26	425+53.16 LN	32.67'LT	593.00	
BF-3	27	425+18.58 LN	38.13'LT	595.00	
BF-3	28	426+00.16 LN	34.01'LT	593.50	OCS 11

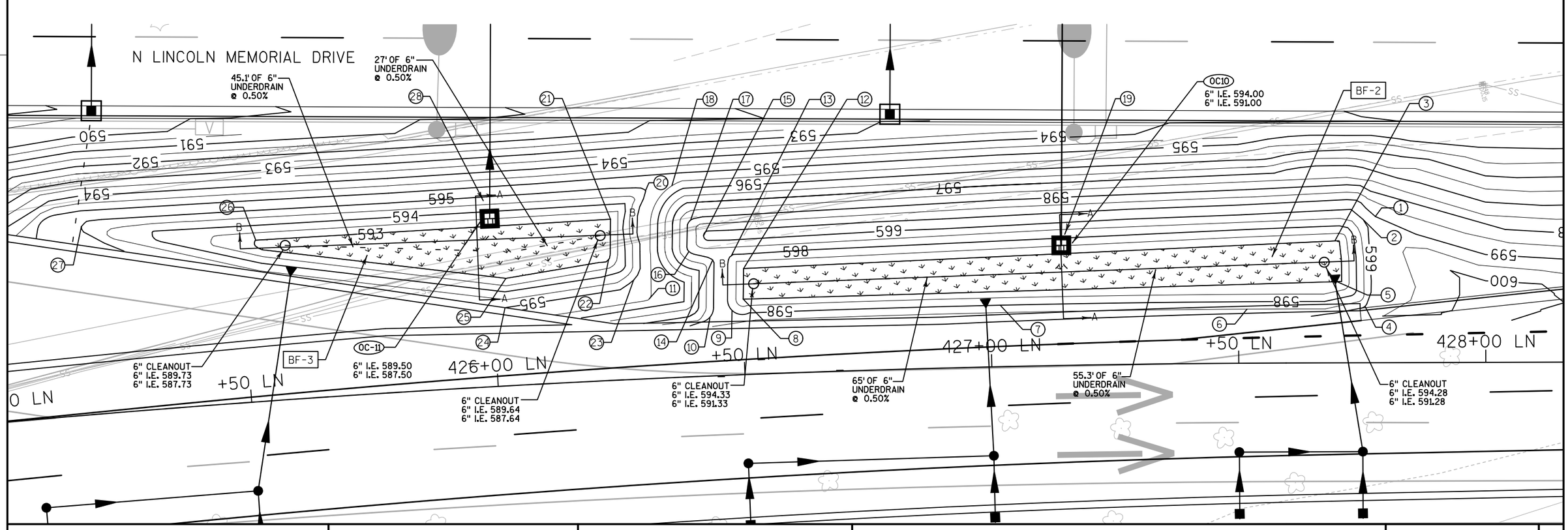
BIOFILTRATION BASIN	POINT	STATION	OFFSET	ELEV. (FT)	COMMENTS
BF-2	1	427+77.73 LN	29.61'LT	599.00	
BF-2	2	427+75.26 LN	29.01'LT	599.00	
BF-2	3	427+69.52 LN	24.69'LT	597.00	
BF-2	4	427+75.59 LN	11.43'LT	599.00	
BF-2	5	427+69.90 LN	16.44'LT	597.00	
BF-2	6	427+51.72 LN	10.95'LT	598.00	BASIN AGAINST WALL
BF-2	7	427+01.97 LN	12.45'LT	598.50	
BF-2	8	426+50.25 LN	15.29'LT	597.00	
BF-2	9	426+47.91 LN	13.10'LT	598.00	
BF-2	10	426+43.43 LN	11.93'LT	598.00	
BF-2	11	426+31.32 LN	16.12'LT	595.50	
BF-2	12	426+50.57 LN	21.47'LT	597.00	
BF-2	13	426+48.21 LN	24.14'LT	598.00	
BF-2	14	426+44.43 LN	23.46'LT	598.00	
BF-2	15	426+42.81 LN	28.43'LT	599.00	
BF-2	16	426+39.74 LN	25.37'LT	598.00	
BF-2	17	426+40.33 LN	31.69'LT	598.00	
BF-2	18	426+36.89 LN	38.82'LT	595.50	
BF-2	19	427+14.51 LN	24.31'LT	597.50	OCS 10

LEGEND

- PROPOSED STORM SEWER
- SS EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED UNDERDRAIN
- 586 PROPOSED CONTOUR

NOTES

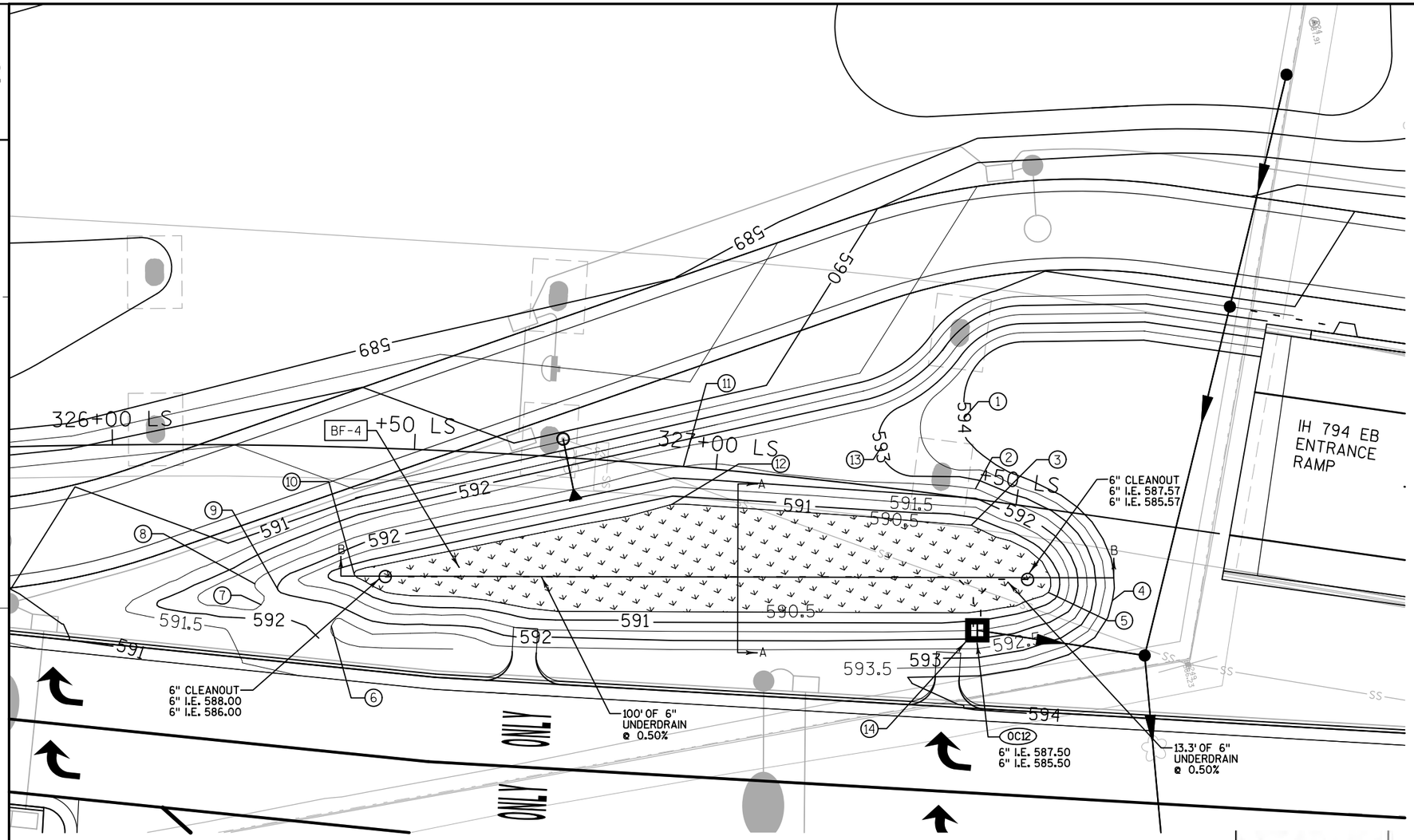
1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. SEE PROPOSED STORM SEWER SHEETS, OUTLET CONTROL STRUCTURES DETAILS, AND BMP DETAILS FOR CONNECTING PROPOSED BIOFILTRATION BASIN TO PROPOSED STORM SEWER.
3. BIOFILTRATION BASIN SHALL HAVE A 3:1 MAXIMUM SLOPE.
4. CONTOURS SHOWN IN PLAN VIEW ARE AT 0.5-FOOT INTERVALS



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	BMP - BIOFILTRATION BASIN (BF-2 AND BF-3)	SHEET 118	E

FILE NAME : 022602_ss_20.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 42



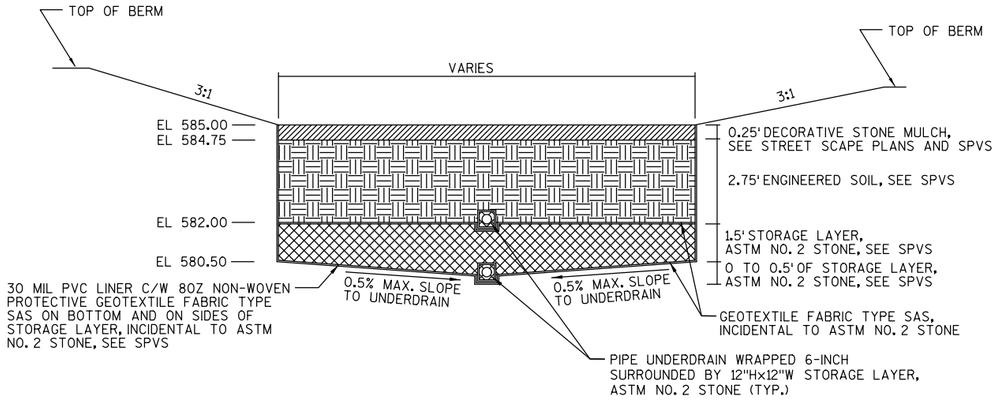
LEGEND

- PROPOSED STORM SEWER
- SS — EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED UNDERDRAIN
- 586 — PROPOSED CONTOUR

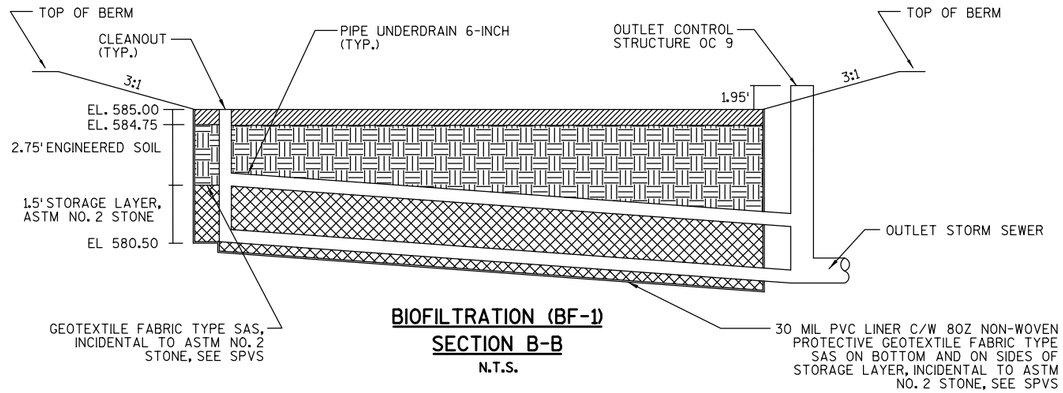
NOTES

1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. SEE PROPOSED STORM SEWER SHEETS, OUTLET CONTROL STRUCTURES DETAILS, AND BMP DETAILS FOR CONNECTING PROPOSED BIOFILTRATION BASIN TO PROPOSED STORM SEWER.
3. BIOFILTRATION BASIN SHALL HAVE A 3:1 MAXIMUM SLOPE.
4. CONTOURS SHOWN IN PLAN VIEW ARE AT 0.5-FOOT INTERVALS

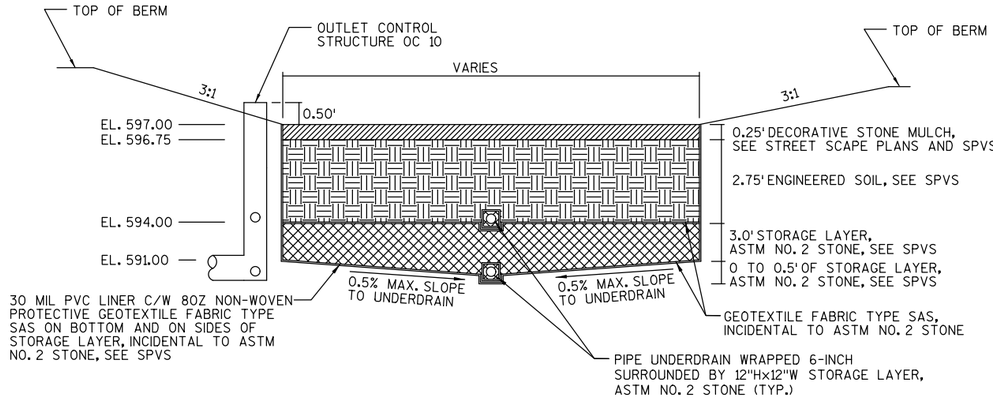
BIOFILTRATION BASIN	POINT	STATION	OFFSET	ELEV. (FT)	COMMENTS
BF-4	1	27+48.04 LM	89.16 LT	594.00	
BF-4	2	27+49.90 LM	77.37 LT	592.50	
BF-4	3	27+49.24 LM	71.36 LT	590.50	
BF-4	4	27+72.65 LM	58.99 LT	594.00	
BF-4	5	27+62.05 LM	60.29 LT	590.50	
BF-4	6	26+43.42 LM	54.20 LT	592.50	
BF-4	7	26+31.80 LM	57.69 LT	592.50	
BF-4	8	26+30.77 LM	61.13 LT	592.50	
BF-4	9	26+34.52 LM	60.30 LT	592.00	
BF-4	10	26+47.16 LM	62.90 LT	590.50	
BF-4	11	27+01.57 LM	80.88 LT	592.50	
BF-4	12	26+99.69 LM	74.59 LT	590.50	
BF-4	13	27+34.29 LM	84.22 LT	593.00	
BF-4	14	27+50.32 LM	53.96 LT	591.50	OCS 12



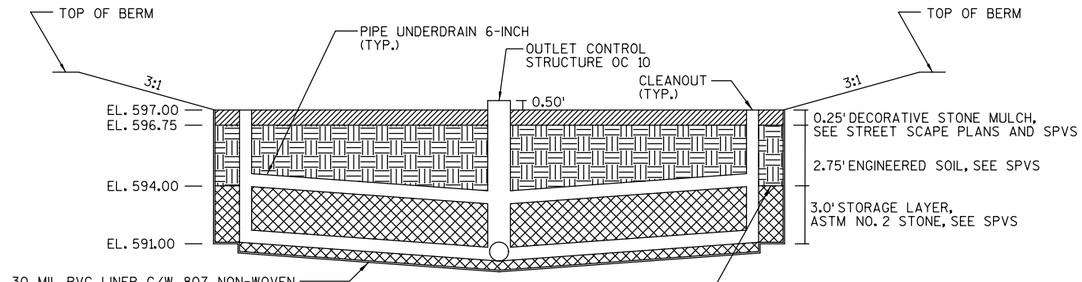
BIOFILTRATION (BF-1)
SECTION A-A
N.T.S.



BIOFILTRATION (BF-1)
SECTION B-B
N.T.S.



BIOFILTRATION (BF-2)
SECTION A-A
N.T.S.



BIOFILTRATION (BF-2)
SECTION B-B
N.T.S.

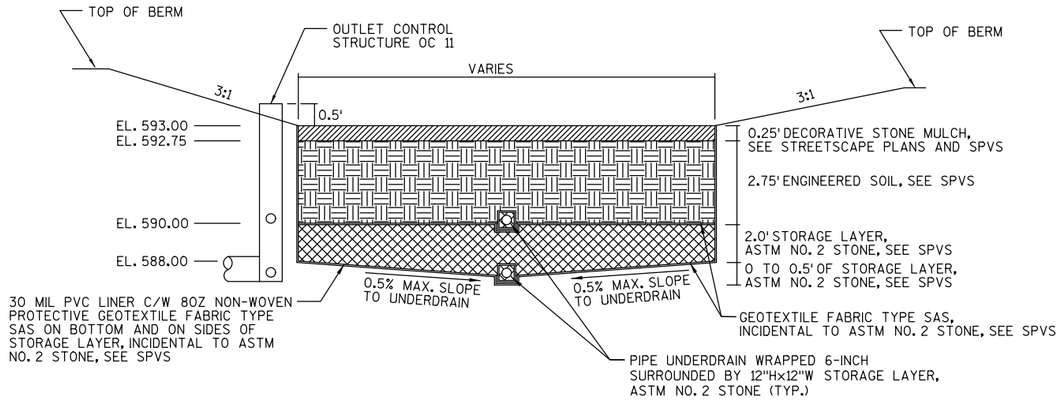
GENERAL NOTES

1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. SEE STORM SEWER PLANS AND GRADING SHEETS FOR LAYOUT AND ELEVATIONS.
3. COVER FILTER FABRIC WITH 2 INCHES OF STORAGE LAYER, ASTM NO. 2 STONE BEFORE INSTALLING UNDERDRAIN WRAPPED-6 INCH, CLEANOUTS, AND STAND PIPES.
4. FOR STAND PIPE AND CLEANOUT DETAILS, SEE CONSTRUCTION DETAILS.
5. VARY DEPTH OF ENGINEERED SOIL LAYER AND STORAGE LAYER, ASTM NO. 2 BASED ON SLOPE OF UNDERDRAIN SYSTEM AS SHOWN ON PLANS.
6. USE 6" PVC CLEANOUT FOR UNDERDRAIN COLLECTORS IN BIOFILTRATION.
7. IMPERMEABLE LINER SHALL FOLLOW THE OUTSIDE LAYOUT OF BIOFILTRATION BASIN.
8. GEOTEXTILE FABRIC, TYPE SAS, SHALL BE WRAPPED AROUND UNDERDRAIN PIPES, INSTALLED BETWEEN ENGINEERED SOIL LAYER AND STORAGE LAYER, AND BETWEEN STORAGE LAYER AND IMPERMEABLE LINER.

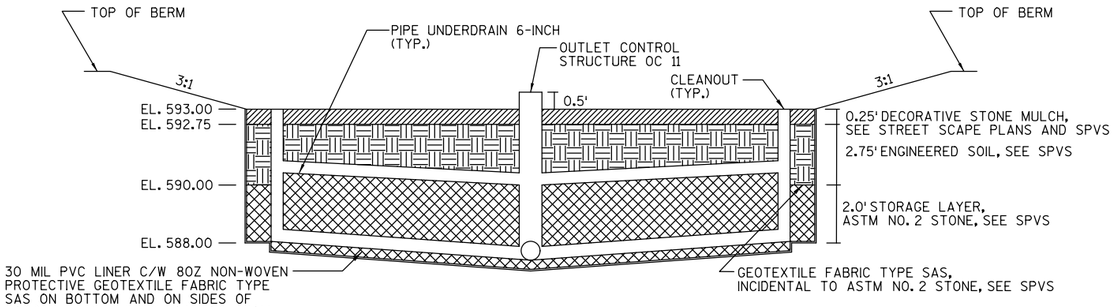
LEGEND

- DECORATIVE STONE MULCH SEE STREET SCAPE PLANS AND SPVS
- ENGINEERED SOIL, SEE SPVS
- STORAGE LAYER ASTM NO. 2 STONE, SEE SPVS

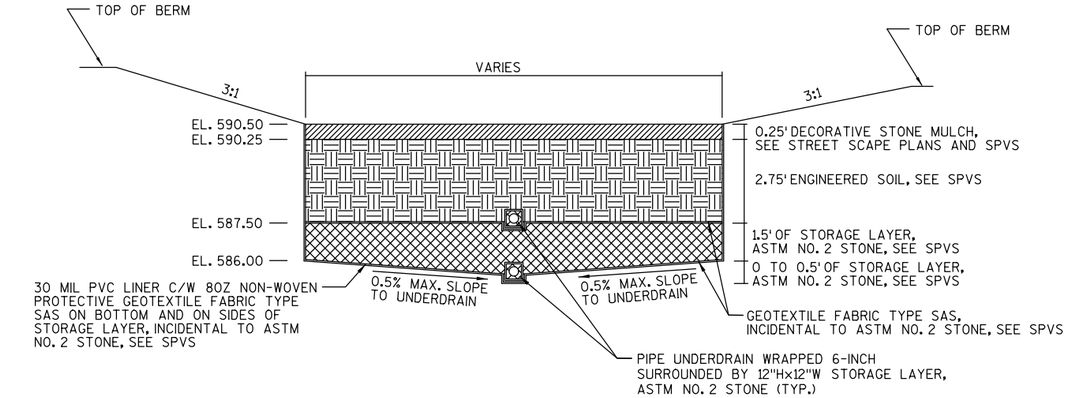
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	BMP - BIOFILTRATION BASIN (BF-1) & (BF-2) DETAILS	SHEET 120	E



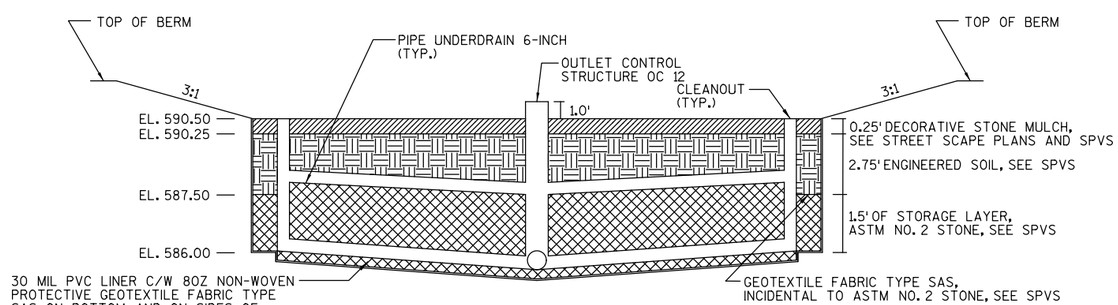
BIOFILTRATION (BF-3)
SECTION A-A
N.T.S.



BIOFILTRATION (BF-3)
SECTION B-B
N.T.S.



BIOFILTRATION (BF-4)
SECTION A-A
N.T.S.



BIOFILTRATION (BF-4)
SECTION B-B
N.T.S.

GENERAL NOTES

1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. SEE STORM SEWER PLANS AND GRADING SHEETS FOR LAYOUT AND ELEVATIONS.
3. COVER FILTER FABRIC WITH 2 INCHES OF STORAGE LAYER, ASTM NO. 2 STONE BEFORE INSTALLING UNDERDRAIN WRAPPED-6 INCH, CLEANOUTS, AND STAND PIPES.
4. FOR STAND PIPE AND CLEANOUT DETAILS, SEE CONSTRUCTION DETAILS.
5. VARY DEPTH OF ENGINEERED SOIL LAYER AND STORAGE LAYER, ASTM NO. 2 BASED ON SLOPE OF UNDERDRAIN SYSTEM AS SHOWN ON PLANS.
6. USE 6" PVC CLEANOUT FOR UNDERDRAIN COLLECTORS IN BIOFILTRATION.
7. IMPERMEABLE LINER SHALL FOLLOW THE OUTSIDE LAYOUT OF BIOFILTRATION BASIN.
8. GEOTEXTILE FABRIC, TYPE SAS, SHALL BE WRAPPED AROUND UNDERDRAIN PIPES, INSTALLED BETWEEN ENGINEERED SOIL LAYER AND STORAGE LAYER, AND BETWEEN STORAGE LAYER AND IMPERMEABLE LINER.

LEGEND

- DECORATIVE STON MULCH, SEE STREET SCAPE PLANS AND SPVS
- ENGINEERED SOIL
- STORAGE LAYER ASTM NO. 2 STONE

DRY DETENTION BASIN	POINT	STATION	OFFSET	BOTTOM OF WALL ELEV. (FT)	TOP OF WALL ELEV. (FT)	COMMENTS
DRY BASIN	1	206+05.77 LE	14.87'LT	592.17	594.00	
DRY BASIN	2	205+87.83 LE	16.41 LT	592.00	-	
DRY BASIN	3	205+63.29 LE	18.56 LT	591.75	-	
DRY BASIN	4	205+39.95 LE	21.28 LT	591.50	-	
DRY BASIN	5	205+16.82 LE	25.11 LT	591.25	-	
DRY BASIN	6	204+93.58 LE	30.36'LT	591.00	593.50	2 INCH ORIFICE AT WALL, SEE BMP DETAILS
DRY BASIN	7	204+91.65 LE	6.16'LT	591.24	594.00	
DRY BASIN	8	205+16.23 LE	6.16'LT	591.50	594.00	
DRY BASIN	9	205+42.01 LE	6.16'LT	591.75	594.00	
DRY BASIN	10	205+65.53 LE	6.16'LT	592.00	594.00	
DRY BASIN	11	206+05.77 LE	6.16'LT	592.38	594.00	
DRY BASIN	12	206+05.77 LE	23.58 LT	592.42	594.00	
DRY BASIN	13	205+63.01 LE	31.88'LT	592.00	594.00	
DRY BASIN	14	205+41.39 LE	37.20 LT	591.75	594.00	
DRY BASIN	15	205+19.44 LE	45.03 LT	591.50	594.00	
DRY BASIN	16	204+99.73 LE	53.57'LT	591.24	594.00	
DRY BASIN	17	204+92.99 LE	30.49 LT	591.00	593.50	RIP RAP AT GROUND ELEVATION

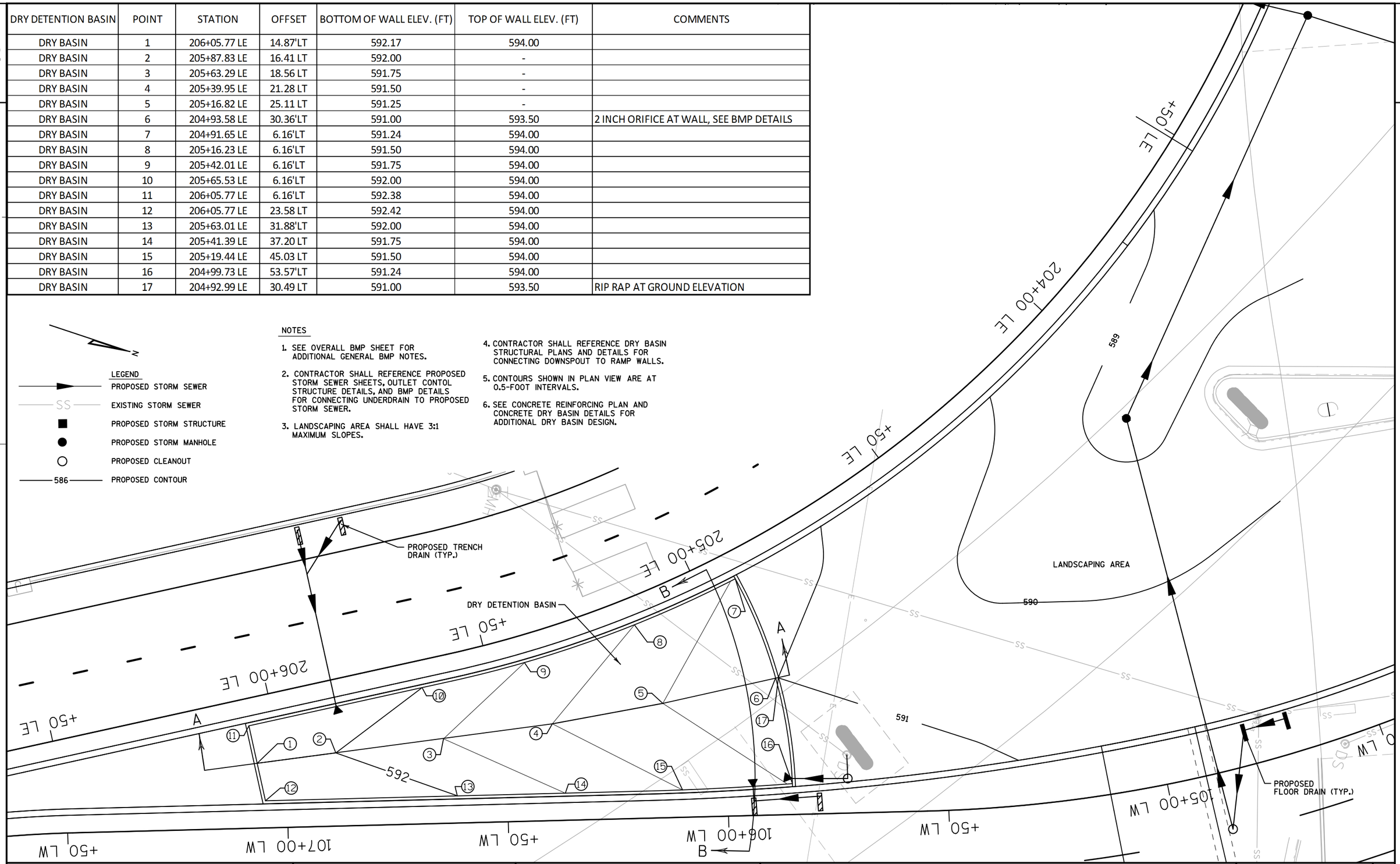
N

LEGEND

- PROPOSED STORM SEWER
- SS — EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED CLEANOUT
- 586 — PROPOSED CONTOUR

NOTES

1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. CONTRACTOR SHALL REFERENCE PROPOSED STORM SEWER SHEETS, OUTLET CONTOL STRUCTURE DETAILS, AND BMP DETAILS FOR CONNECTING UNDERDRAIN TO PROPOSED STORM SEWER.
3. LANDSCAPING AREA SHALL HAVE 3:1 MAXIMUM SLOPES.
4. CONTRACTOR SHALL REFERENCE DRY BASIN STRUCTURAL PLANS AND DETAILS FOR CONNECTING DOWNSPOUT TO RAMP WALLS.
5. CONTOURS SHOWN IN PLAN VIEW ARE AT 0.5-FOOT INTERVALS.
6. SEE CONCRETE REINFORCING PLAN AND CONCRETE DRY BASIN DETAILS FOR ADDITIONAL DRY BASIN DESIGN.

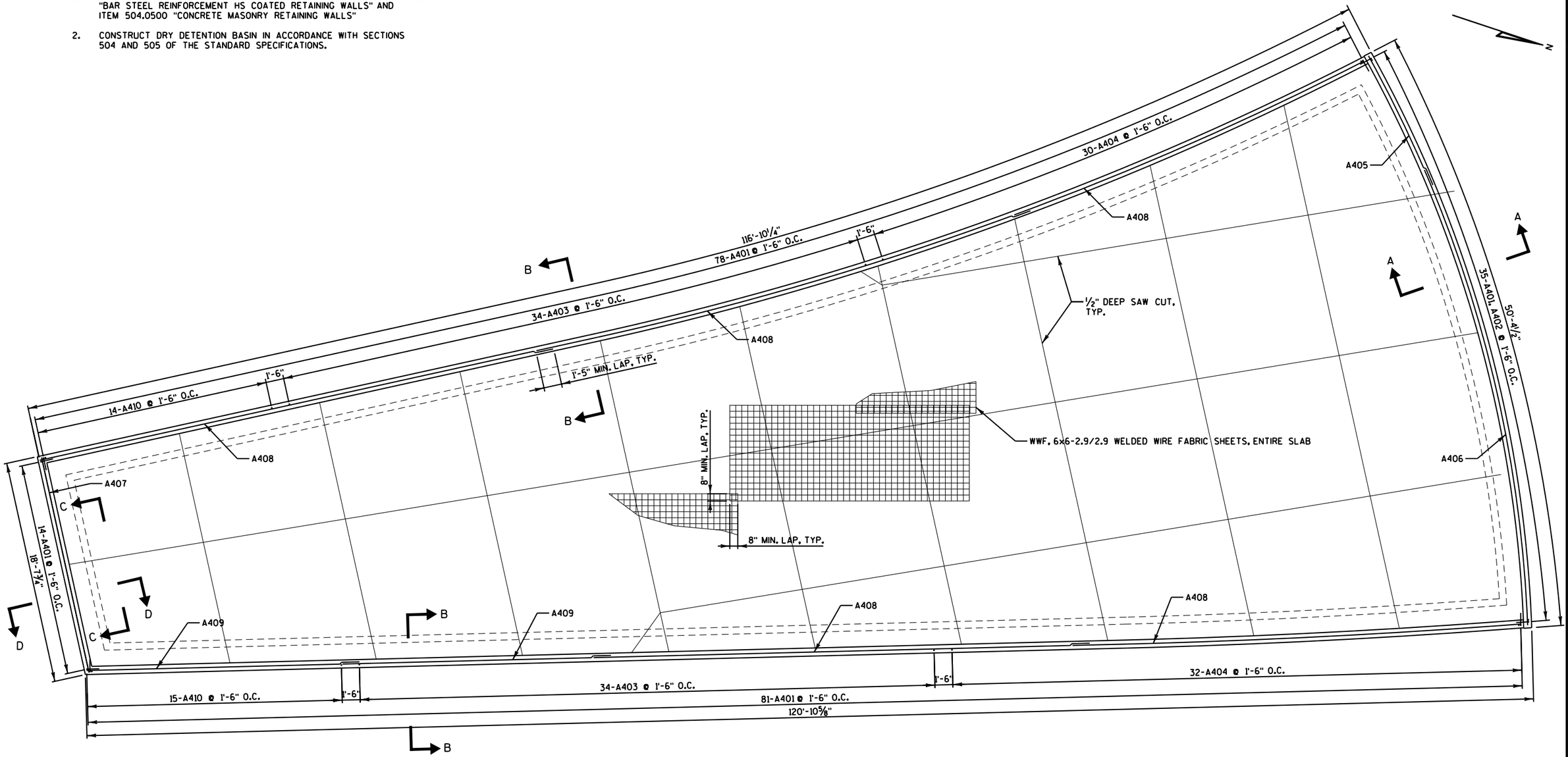


PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	DRY DETENTION BASIN	SHEET 122 E

GENERAL NOTES

1. DRY DETENTION BASIN IS PAID FOR AS STANDARD BID ITEMS 505.0615 "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS" AND ITEM 504.0500 "CONCRETE MASONRY RETAINING WALLS"

2. CONSTRUCT DRY DETENTION BASIN IN ACCORDANCE WITH SECTIONS 504 AND 505 OF THE STANDARD SPECIFICATIONS.



SCALE, FEET 0 10 20

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CONCRETE REINFORCING PLAN	SHEET 123	E

TOTAL ESTIMATED WEIGHT = 3,270 lb

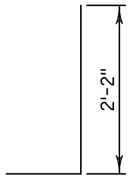
Dry Detention Basin - BILL OF BARS						
MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
A401	X	208	2'-9"		X	FOOTING DOWELS
A402	X	35	2'-7"			WEST WALL - VERTICAL
A403	X	68	1'-9"			NORTH & SOUTH WALLS - VERTICAL
A404	X	62	2'-2"			NORTH & SOUTH WALLS - VERTICAL
A405	X	4	11'-5"			WEST WALL & FOOTING - HORIZONTAL
A406	X	4	40'-0"			WEST WALL & FOOTING - HORIZONTAL
A407	X	4	18'-4"			EAST WALL & FOOTING - HORIZONTAL
A408	X	20	40'-0"			NORTH & SOUTH WALL & FOOTING - HORIZONTAL
A409	X	8	22'-5"			NORTH WALL & FOOTING - HORIZONTAL
A410	X	29	0'-8"			NORTH & SOUTH WALLS - VERTICAL
A411	X	4	2'-0"			SOUTH WALL DISCHARGE PIPE OPENING
WWF	X	*	*			SLAB WELDED WIRE FABRIC

THE FIRST DIGIT OR FIRST TWO DIGITS OF A BAR MARK INDICATES THE BAR SIZE.

ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

* = CONCRETE SLAB PLAN AREA = 3,840 FT² (EDGE TO EDGE)

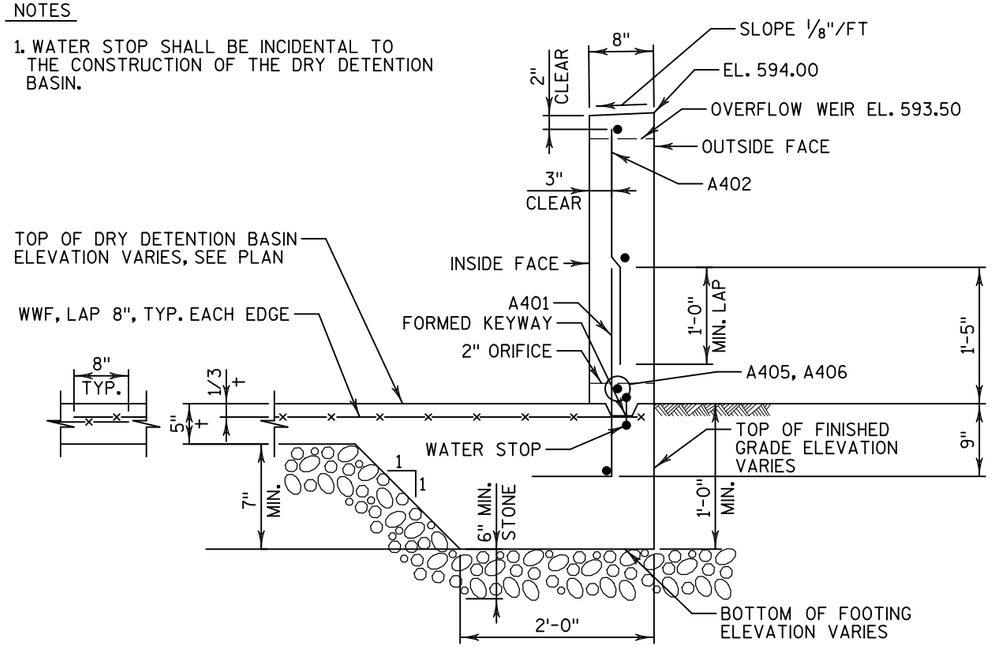
7'-6"x20'-0" WELDED WIRE FABRIC SHEETS ASSUMED, ESTIMATED WEIGHT = 1,800 lbs



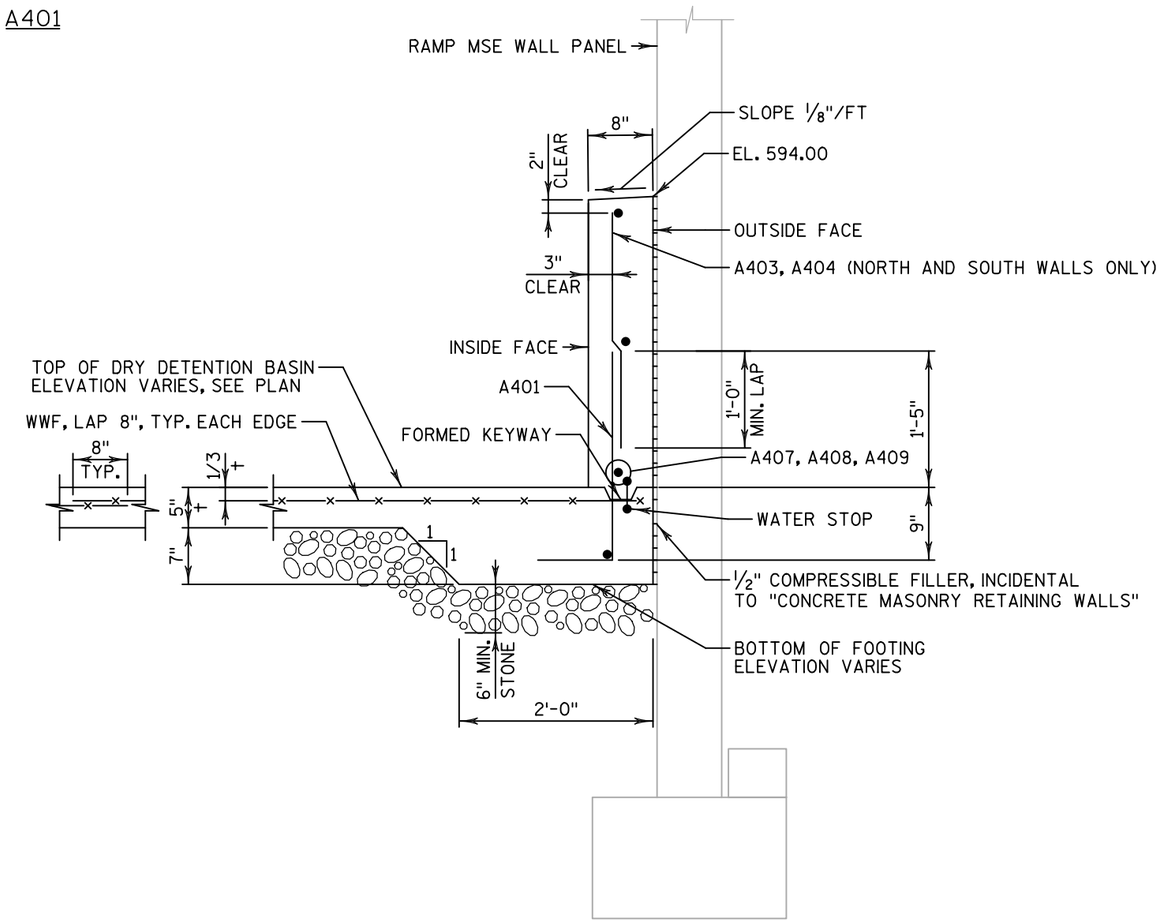
A401

NOTES

1. WATER STOP SHALL BE INCIDENTAL TO THE CONSTRUCTION OF THE DRY DETENTION BASIN.

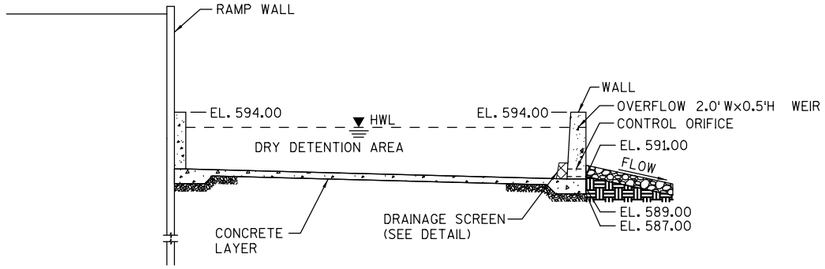


SECTION A-A



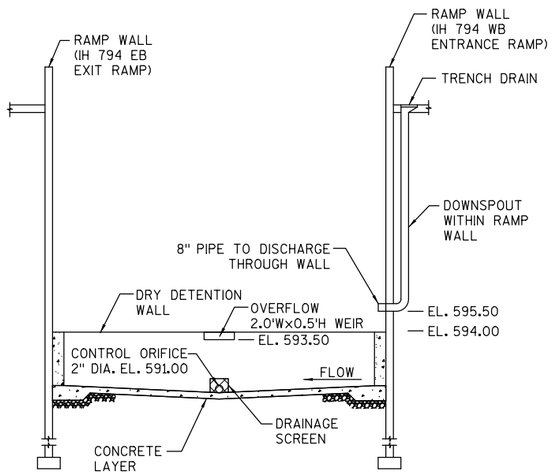
SECTION B-B

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CONCRETE DRY BASIN DETAILS	SHEET 124	E



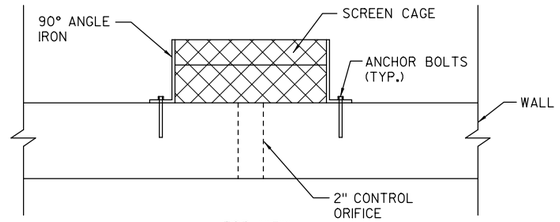
STORMWATER DRY DETENTION BASIN SECTION A-A

N.T.S.

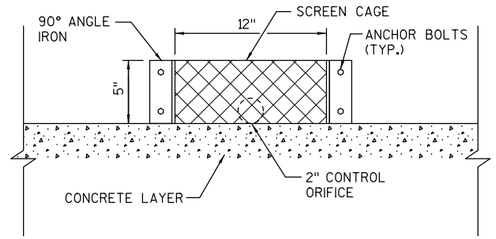


DRY DETENTION AREA SECTION B-B

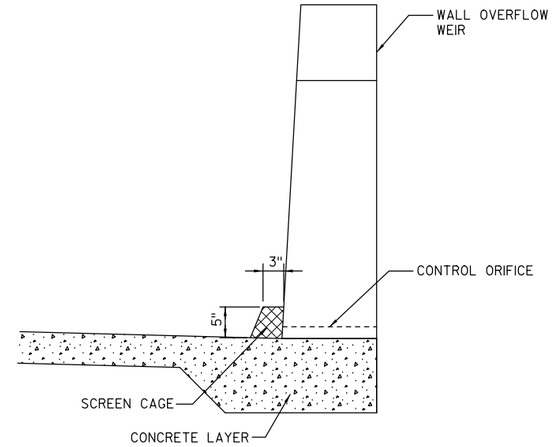
N.T.S.



TOP VIEW



FRONT VIEW



SECTION VIEW

DRAINAGE SCREEN DETAIL

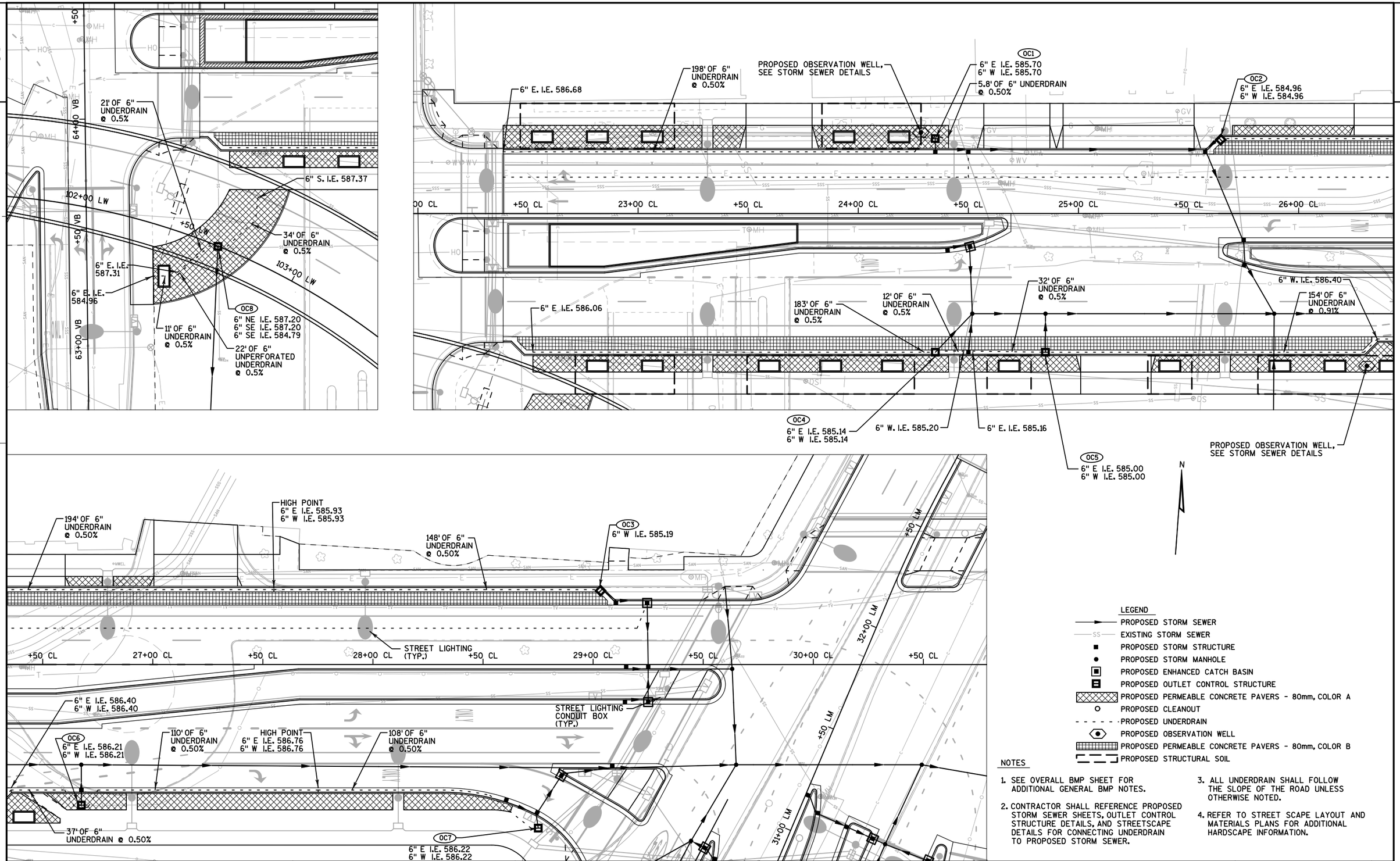
N.T.S.

GENERAL NOTES

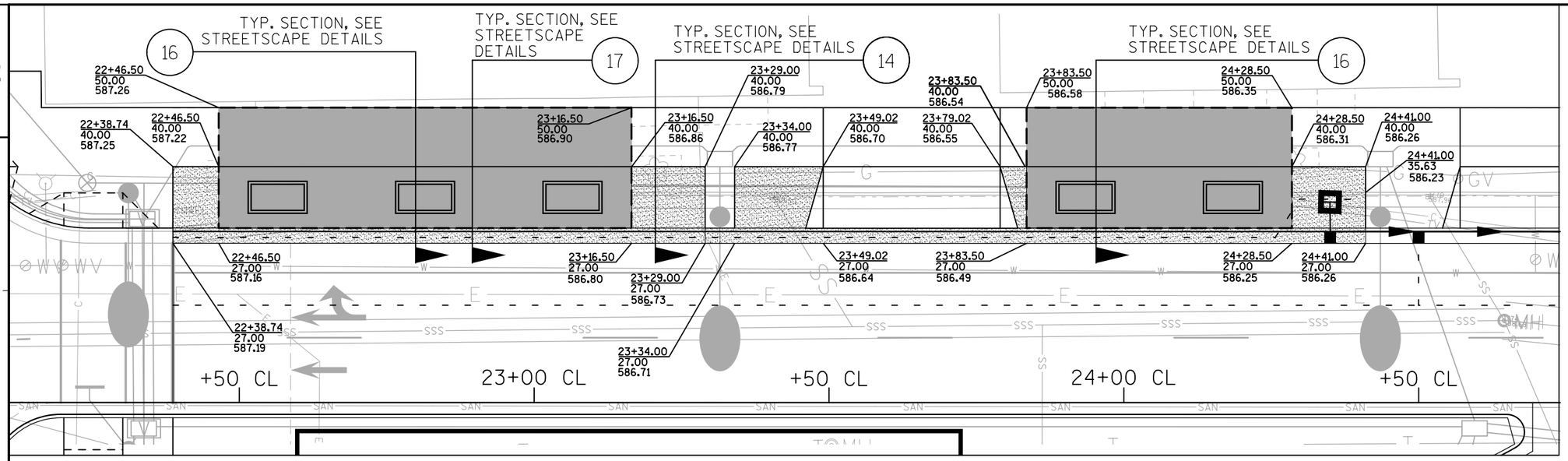
1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. SEE STORM SEWER PLANS AND GRADING SHEETS FOR LAYOUT AND ELEVATIONS.
3. SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION ON PROPOSED RAMP WALLS.
4. SEE CONCRETE DRY BASIN DETAILS FOR DESIGN OF DRY DETENTION BASIN WALLS AND CONCRETE BASE.
5. SCREEN CAGE AND ANY OTHER ITEMS ASSOCIATED WITH INSTALL AND CASTING OF SCREEN CAGE SHALL BE INCIDENTAL TO INSTALLATION OF DRY BASIN.
6. 8" PVC PIPE SHALL EXTEND 6 INCHES BEYOND WALL AND DISCHARGE INTO DRY BASIN.

NOTES:

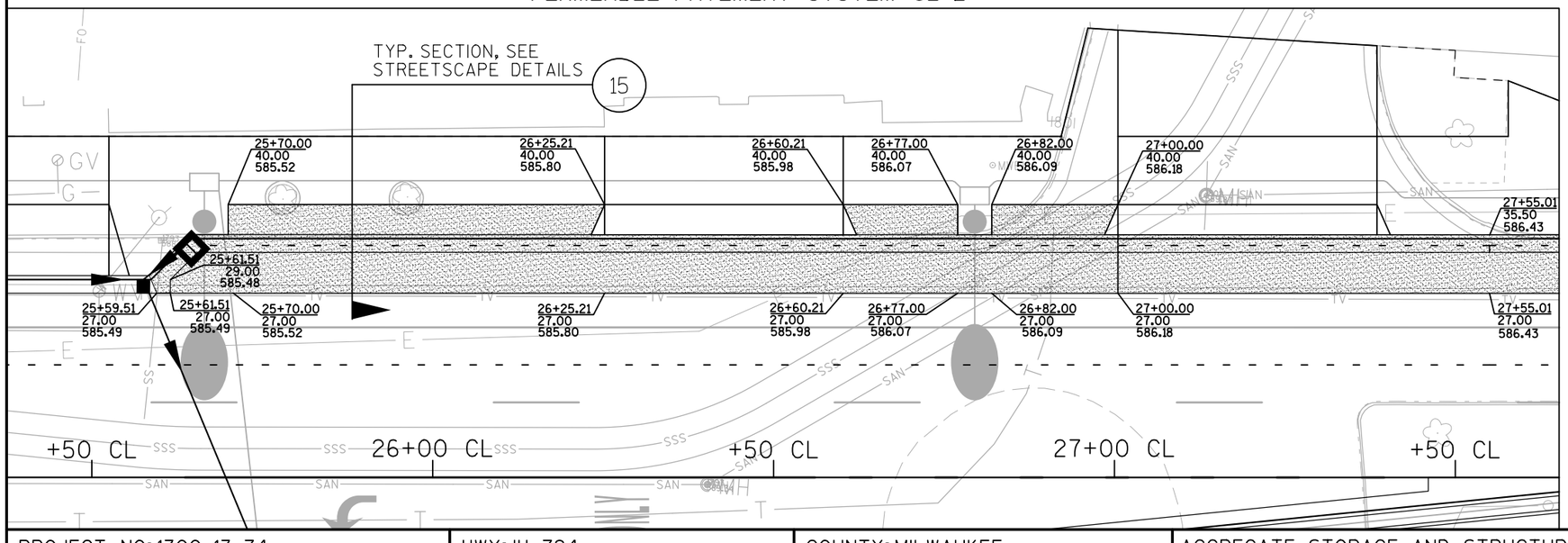
1. SCREEN CAGE SHALL BE STAINLESS STEEL EXPANDED SHEET METAL. EXPANDED STEEL SHALL HAVE A 1 INCH BY 0.5 INCH OPENING. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO INSTALLING SCREEN CAGE.
2. SCREEN CAGE SHALL BE FABRICATED TO BE ATTACHED TO THE CONCRETE DRY BASIN WALL AND TO HAVE THE ABILITY TO BE REMOVED AND REINSTALLED IN THE EXACT SAME LOCATION WITH STAINLESS STEEL ANCHOR BOLTS AS SHOWN IN THE DETAIL.
3. STAINLESS STEEL ANCHOR BOLTS SHALL BE A MINIMUM OF $\frac{3}{16}$ INCHES BY $2\frac{3}{4}$ INCHES, UNLESS ENGINEER SAYS OTHERWISE.



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	BMP - PERMEABLE PAVEMENT UNDERDRAIN PLAN	SHEET 126	E



PERMEABLE PAVEMENT SYSTEM CL-1



PERMEABLE PAVEMENT SYSTEM CL-2



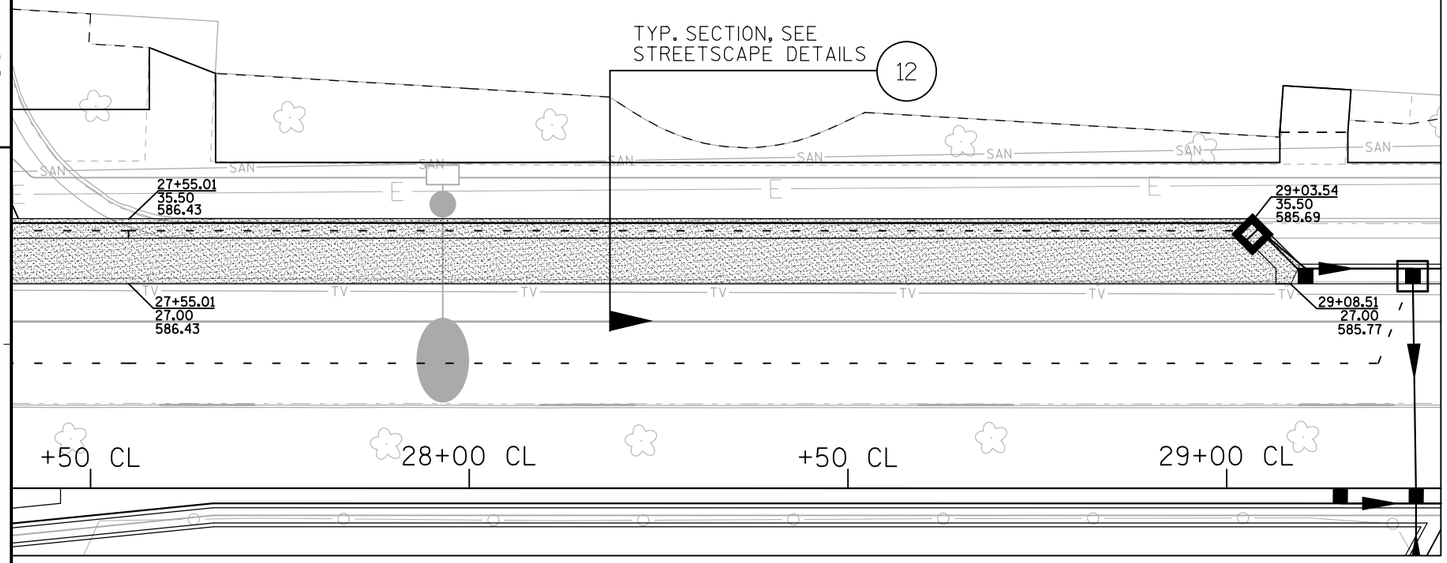
LEGEND

- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED UNDERDRAIN
- PROPOSED STRUCTURAL SOIL, SEE STREETSCAPE DETAILS
- PROPOSED STORAGE LAYER, SEE STREETSCAPE DETAILS

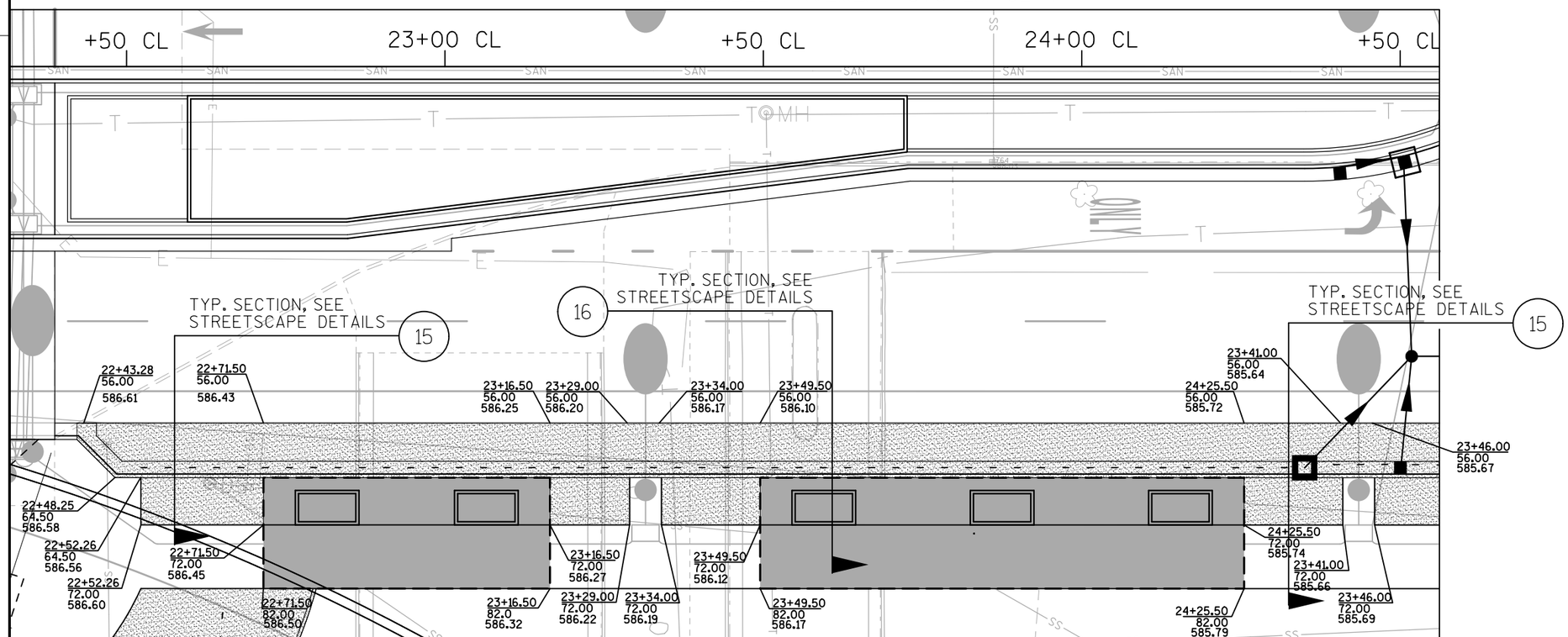
NOTES

1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. PLAN SHOWS AREAL EXTENT OF AGGREGATE STORAGE LAYER AND STRUCTURAL STORAGE LAYER AT THE BOTTOM OF THE PERMEABLE PAVEMENT SYSTEM.
3. ELEVATIONS AND STATION OFFSETS AREA FOR THE BOTTOM OF THE AGGREGATE STORAGE LAYER AND STRUCTURAL SOIL LAYER. BOTTOMS OF THE LAYERS SHALL BE SLOPED AT 0.005 FEET PER FOOT TOWARDS THE UNDERDRAIN.
4. SEE PERMEABLE PAVEMENT DETAILS IN THE STREET SCAPE PLANS FOR TYPICAL CROSS SECTIONS.
5. SEE BMP-PERMEABLE PAVEMENT PLAN FOR UNDERDRAIN DETAILS.
6. REFERENCE STORM SEWER PLANS, OUTLET CONTROL STRUCTURE DETAILS, AND BMP PLANS FOR ADDITIONAL INFORMATION.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	AGGREGATE STORAGE AND STRUCTURAL SOIL PLAN	SHEET 127	E



PERMEABLE PAVEMENT SYSTEM CL-3



PERMEABLE PAVEMENT SYSTEM CL-4

NOTES

1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. PLAN SHOWS AREAL EXTENT OF AGGREGATE STORAGE LAYER AND STRUCTURAL STORAGE LAYER AT THE BOTTOM OF THE PERMEABLE PAVEMENT SYSTEM.
3. ELEVATIONS AND STATION OFFSETS AREA FOR THE BOTTOM OF THE AGGREGATE STORAGE LAYER AND STRUCTURAL SOIL LAYER. BOTTOMS OF THE LAYERS SHALL BE SLOPED AT 0.005 FEET PER FOOT TOWARDS THE UNDERDRAIN.
4. SEE PERMEABLE PAVEMENT DETAILS IN THE STREET SCAPE PLANS FOR TYPICAL CROSS SECTIONS.
5. SEE BMP-PERMEABLE PAVEMENT PLAN FOR UNDERDRAIN DETAILS.
6. REFERENCE STORM SEWER PLANS, OUTLET CONTROL STRUCTURE DETAILS, AND BMP PLANS FOR ADDITIONAL INFORMATION.

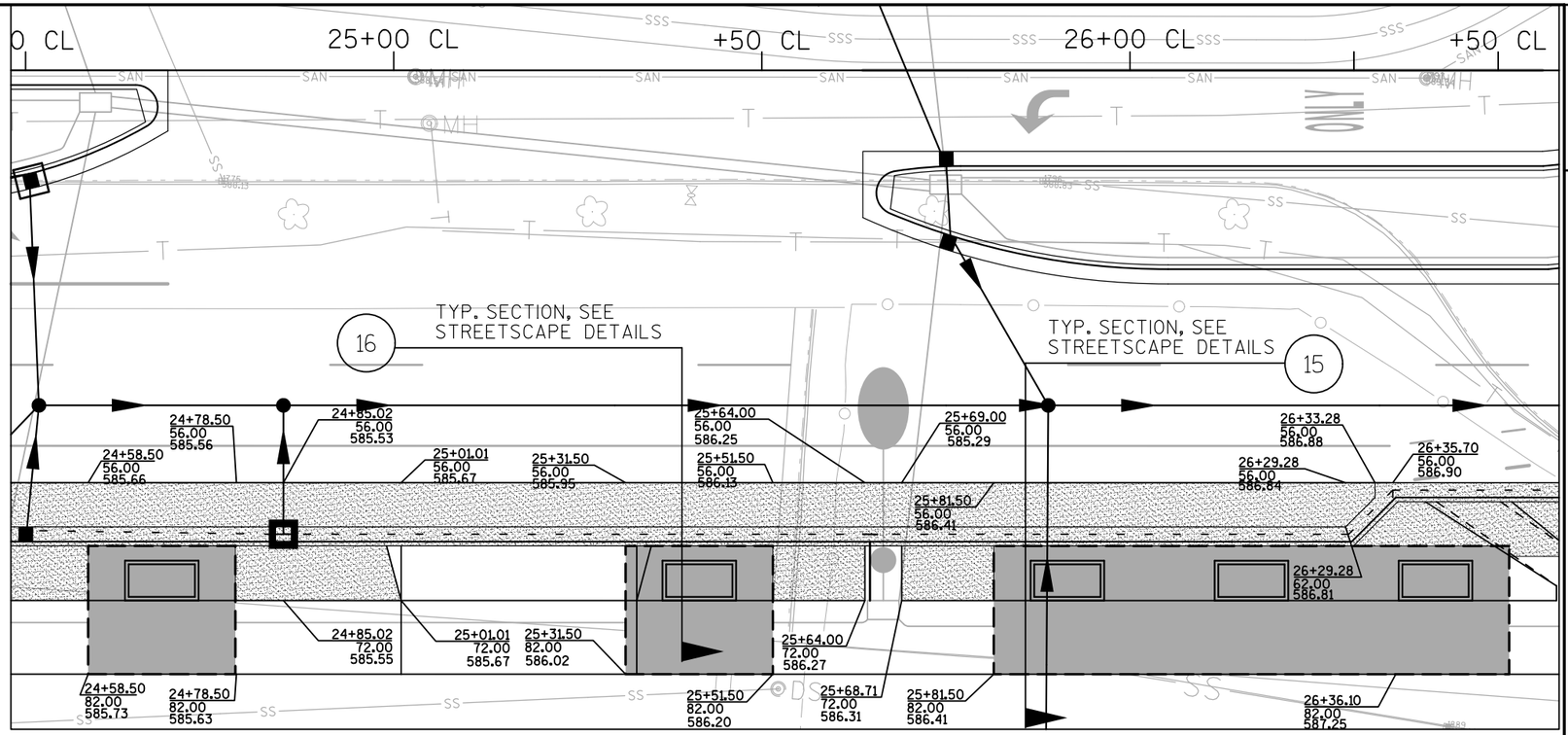
N

LEGEND

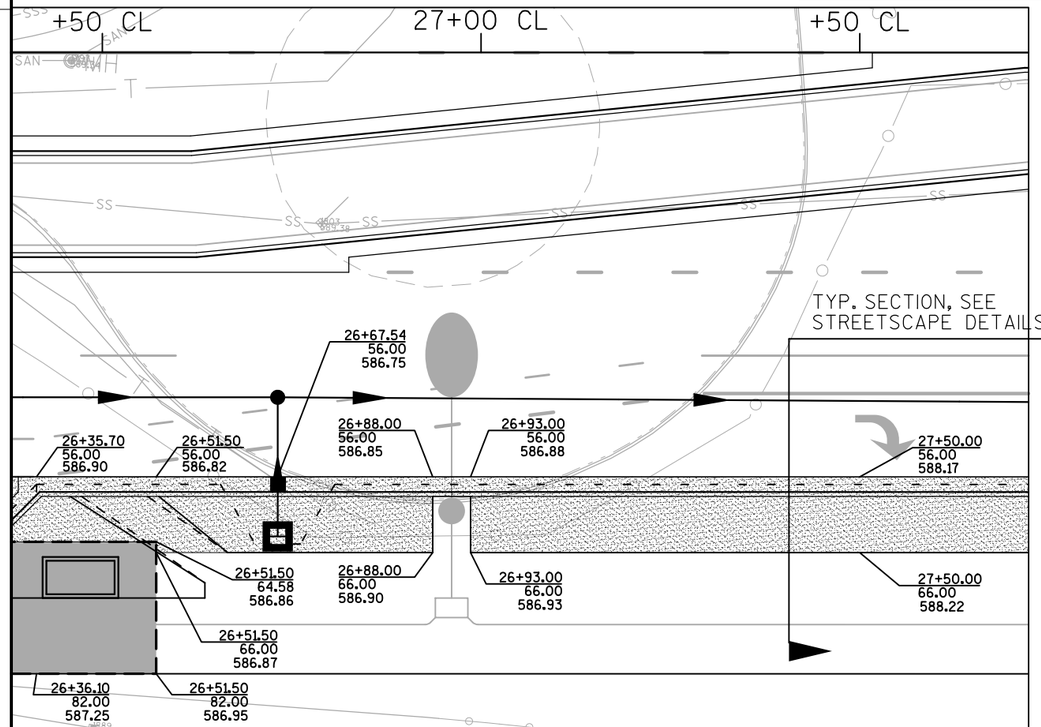
- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED UNDERDRAIN
- PROPOSED STRUCTURAL SOIL, SEE STREETSCAPE DETAILS
- PROPOSED STORAGE LAYER, SEE STREETSCAPE DETAILS

2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	AGGREGATE STORAGE AND STRUCTURAL SOIL PLAN	SHEET 128	E



PERMEABLE PAVEMENT SYSTEM CL-6



PERMEABLE PAVEMENT SYSTEM CL-5

NOTES

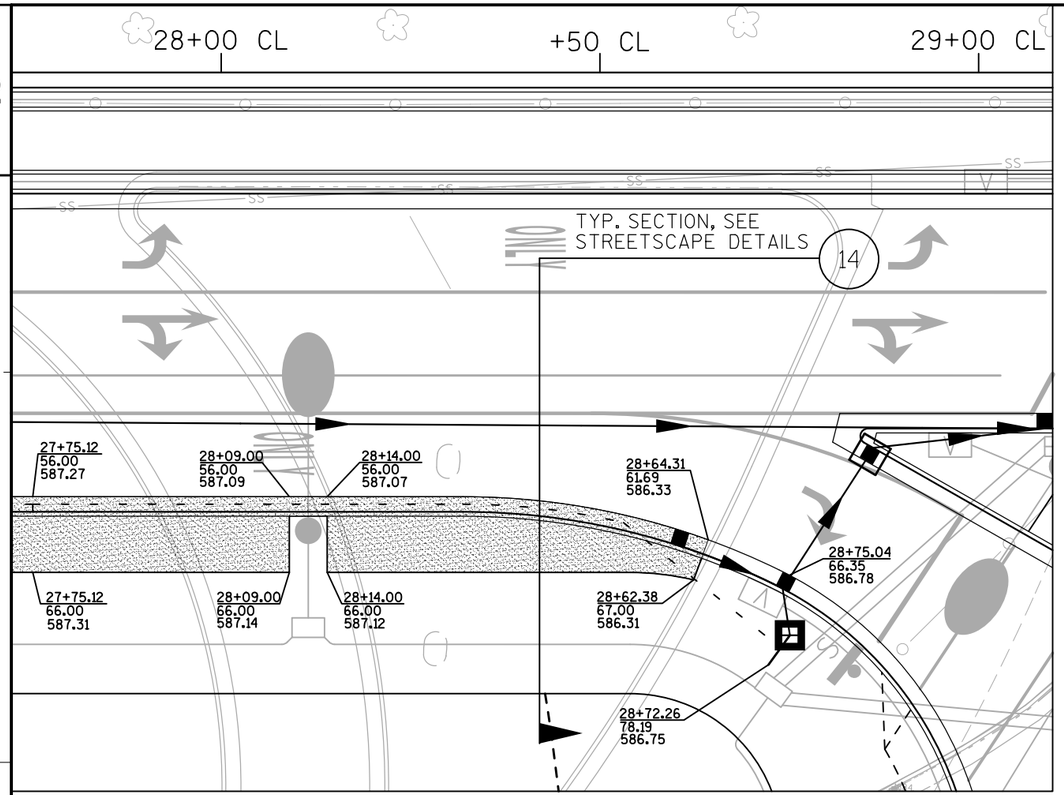
1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. PLAN SHOWS AREAL EXTENT OF AGGREGATE STORAGE LAYER AND STRUCTURAL STORAGE LAYER AT THE BOTTOM OF THE PERMEABLE PAVEMENT SYSTEM.
3. ELEVATIONS AND STATION OFFSETS AREA FOR THE BOTTOM OF THE AGGREGATE STORAGE LAYER AND STRUCTURAL SOIL LAYER. BOTTOMS OF THE LAYERS SHALL BE SLOPED AT 0.005 FEET PER FOOT TOWARDS THE UNDERDRAIN.
4. SEE PERMEABLE PAVEMENT DETAILS IN THE STREET SCAPE PLANS FOR TYPICAL CROSS SECTIONS.
5. SEE BMP-PERMEABLE PAVEMENT PLAN FOR UNDERDRAIN DETAILS.
6. REFERENCE STORM SEWER PLANS, OUTLET CONTROL STRUCTURE DETAILS, AND BMP PLANS FOR ADDITIONAL INFORMATION.

N

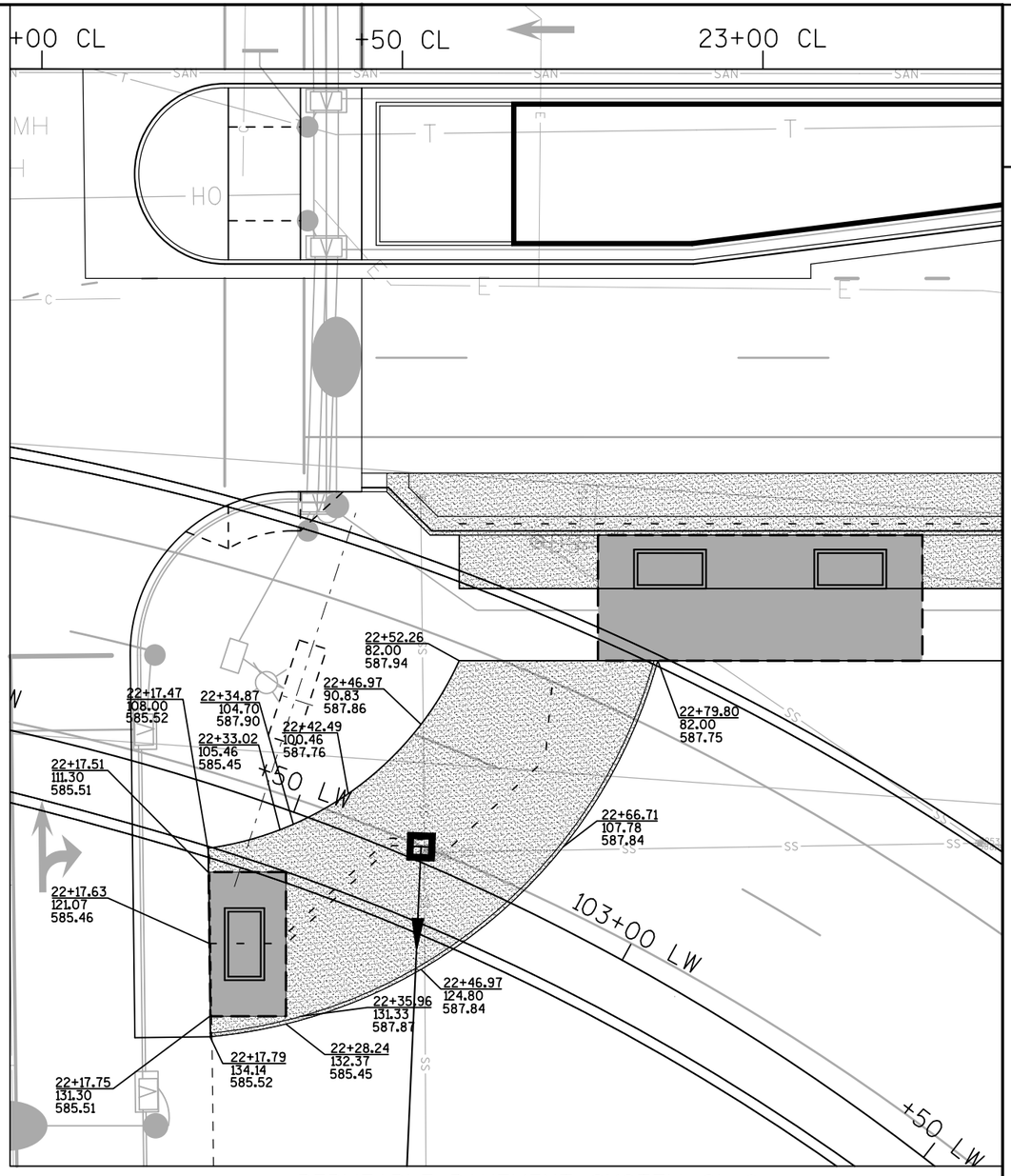
LEGEND

- PROPOSED STORM SEWER
- SS EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED UNDERDRAIN
- PROPOSED STRUCTURAL SOIL, SEE STREETSCAPE DETAILS
- PROPOSED STORAGE LAYER, SEE STREETSCAPE DETAILS

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	AGGREGATE STORAGE AND STRUCTURAL SOIL PLAN	SHEET 129	E



PERMEABLE PAVEMENT SYSTEM CL-7



PERMEABLE PAVEMENT SYSTEM CL-8

N

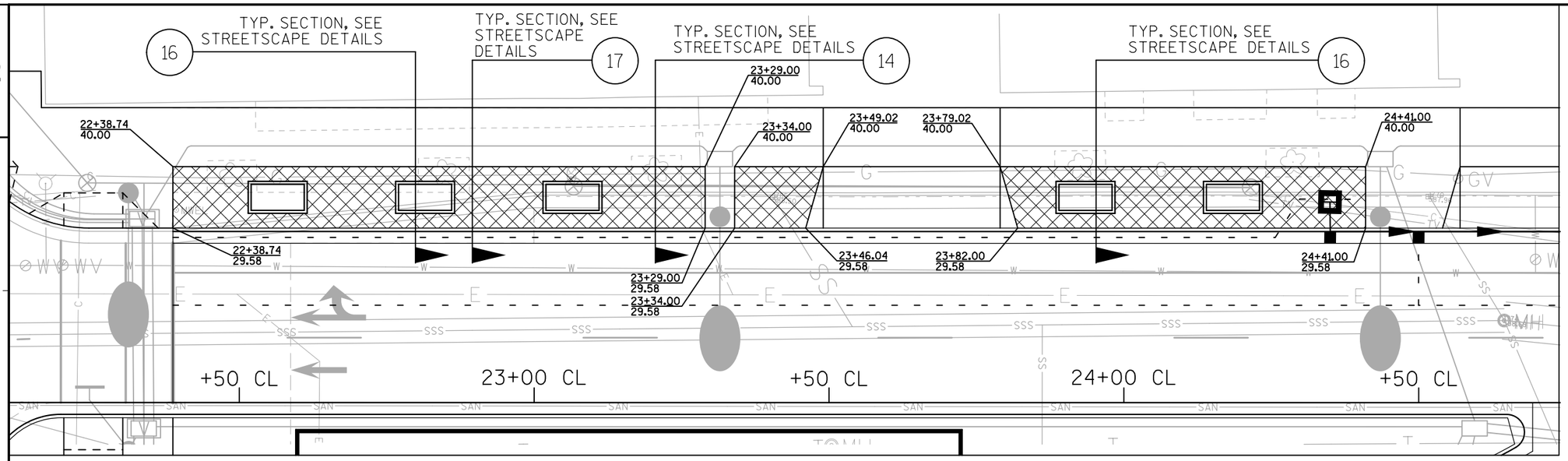
NOTES

1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. PLAN SHOWS AREAL EXTENT OF AGGREGATE STORAGE LAYER AND STRUCTURAL STORAGE LAYER AT THE BOTTOM OF THE PERMEABLE PAVEMENT SYSTEM.
3. ELEVATIONS AND STATION OFFSETS AREA FOR THE BOTTOM OF THE AGGREGATE STORAGE LAYER AND STRUCTURAL SOIL LAYER. BOTTOMS OF THE LAYERS SHALL BE SLOPED AT 0.005 FEET PER FOOT TOWARDS THE UNDERDRAIN.
4. SEE PERMEABLE PAVEMENT DETAILS IN THE STREET SCAPE PLANS FOR TYPICAL CROSS SECTIONS.
5. SEE BMP-PERMEABLE PAVEMENT PLAN FOR UNDERDRAIN DETAILS.
6. REFERENCE STORM SEWER PLANS, OUTLET CONTROL STRUCTURE DETAILS, AND BMP PLANS FOR ADDITIONAL INFORMATION.

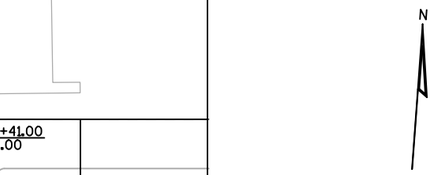
LEGEND

- PROPOSED STORM SEWER
- SS EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED UNDERDRAIN
- PROPOSED STRUCTURAL SOIL, SEE STREETSCAPE DETAILS
- PROPOSED STORAGE LAYER, SEE STREETSCAPE DETAILS

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	AGGREGATE STORAGE AND STRUCTURAL SOIL PLAN	SHEET 130	E



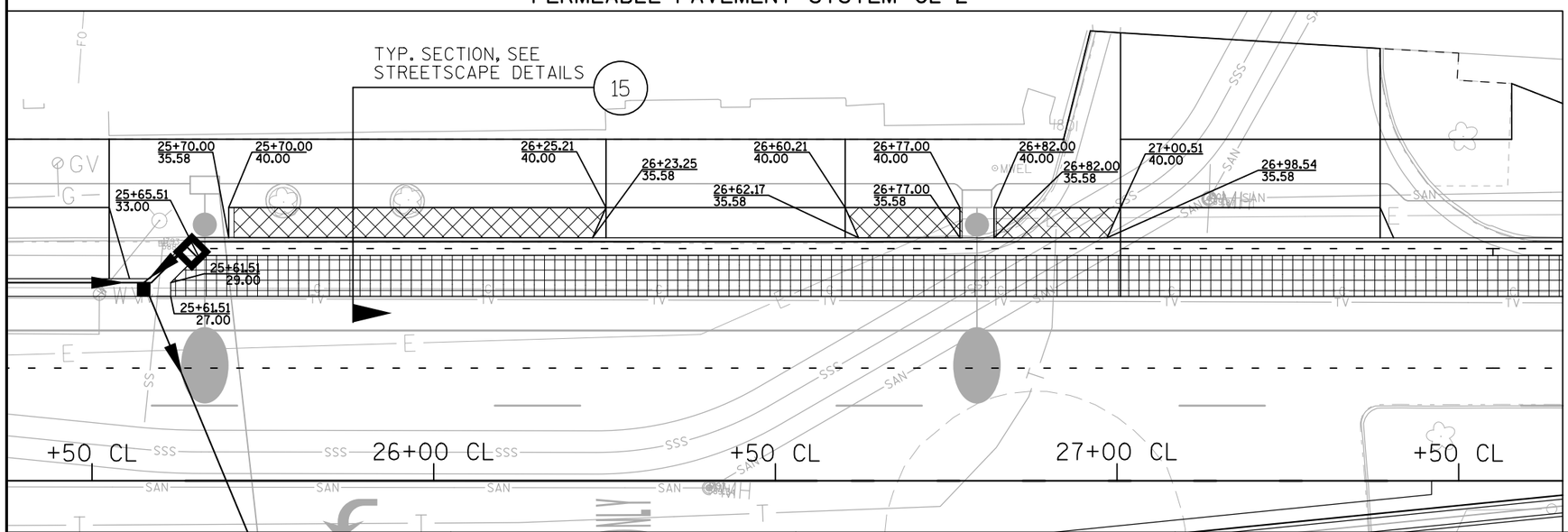
PERMEABLE PAVEMENT SYSTEM CL-1



LEGEND

- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED UNDERDRAIN
- PROPOSED PERMEABLE CONCRETE PAVERS - 80mm, COLOR A
- PROPOSED PERMEABLE CONCRETE PAVERS - 80mm, COLOR B

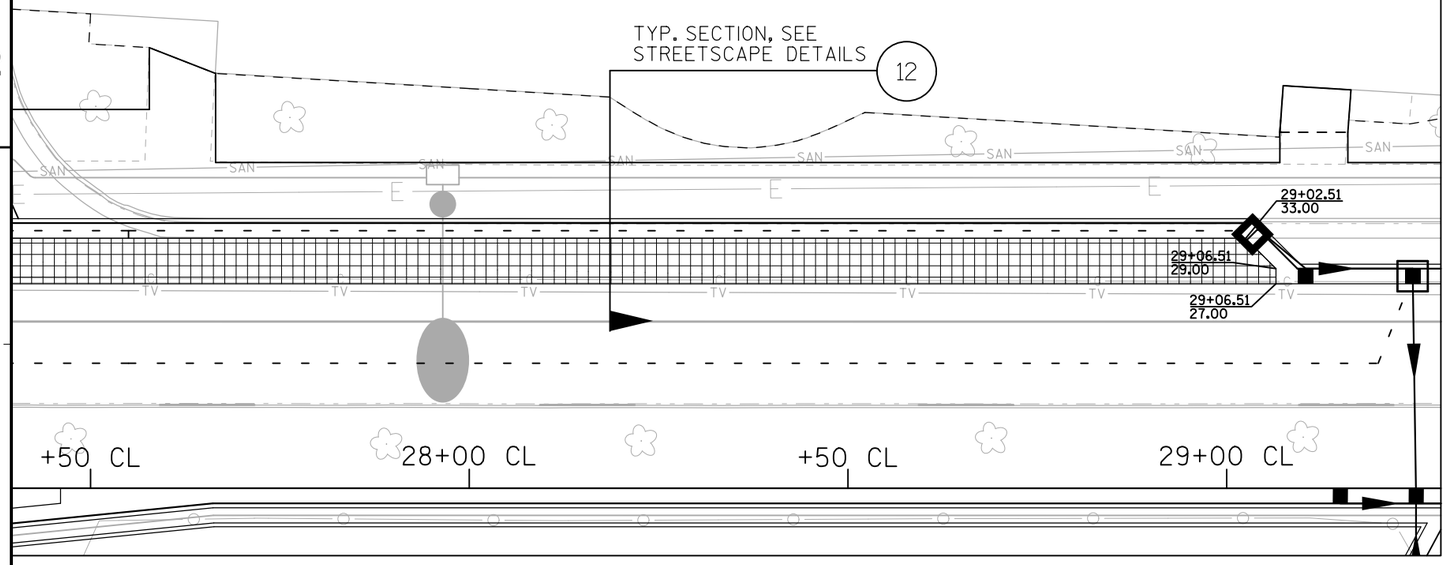
PERMEABLE PAVEMENT SYSTEM CL-2



NOTES

1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. SEE PERMEABLE PAVEMENT DETAILS IN THE STREET SCAPE PLANS FOR TYPICAL CROSS SECTIONS.
3. SEE STORM SEWER PLANS, BMP PLANS, AND BMP DETAILS SHOW SYSTEM INFORMATION ON PIPES AND OUTLET CONTROL STRUCTURES.
4. SEE AGGREGATE STORAGE AND STRUCTUREAL SOIL PLANS FOR EXCAVATION ELEVATIONS.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMEABLE PAVER LAYOUT PLAN	SHEET 131	E



PERMEABLE PAVEMENT SYSTEM CL-3

N

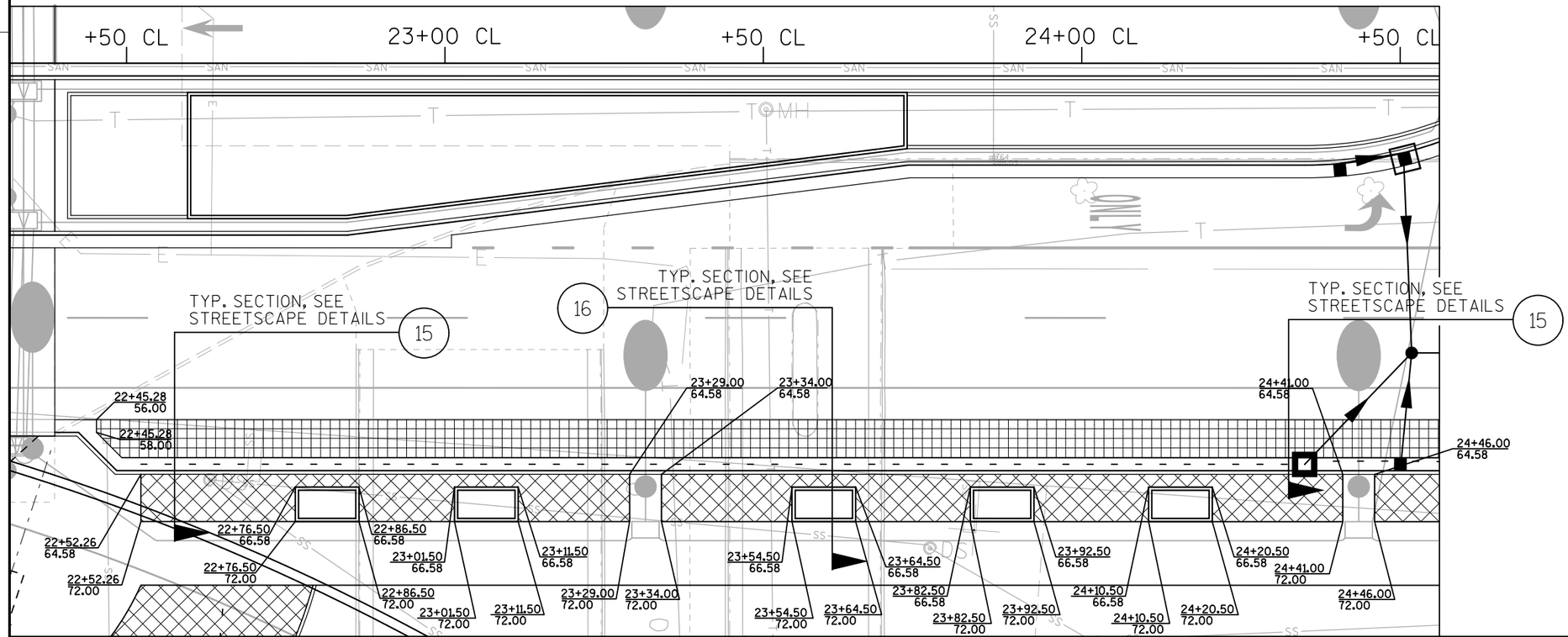
NOTES

1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. SEE PERMEABLE PAVEMENT DETAILS IN THE STREET SCAPE PLANS FOR TYPICAL CROSS SECTIONS.
3. SEE STORM SEWER PLANS, BMP PLANS, AND BMP DETAILS SHOW SYSTEM INFORMATION ON PIPES AND OUTLET CONTROL STRUCTURES.
4. SEE AGGREGATE STORAGE AND STRUCTUREAL SOIL PLANS FOR EXCAVATION ELEVATIONS.

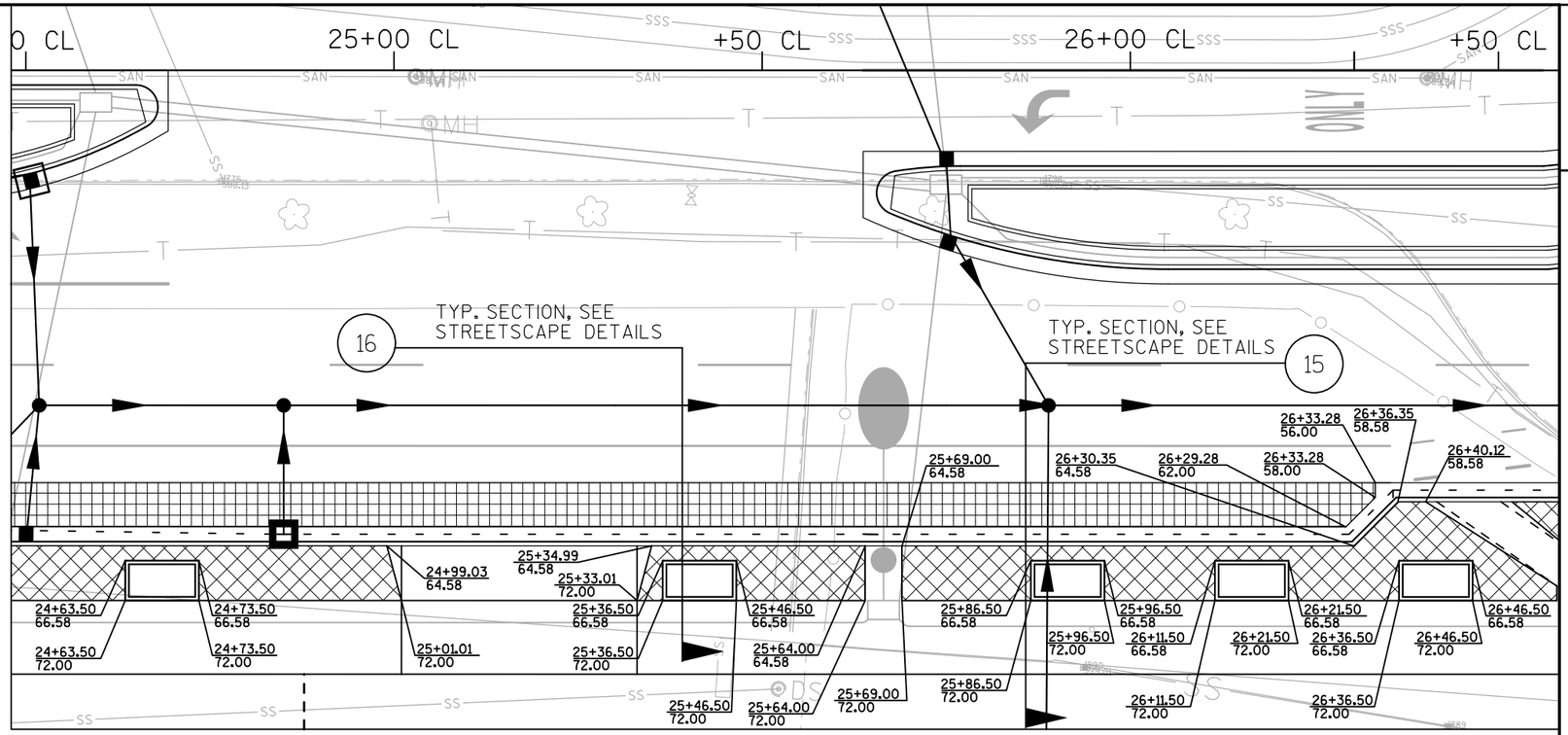
LEGEND

- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED UNDERDRAIN
- PROPOSED PERMEABLE CONCRETE PAVERS - 80 mm, COLOR A
- PROPOSED PERMEABLE CONCRETE PAVERS - 80 mm, COLOR B

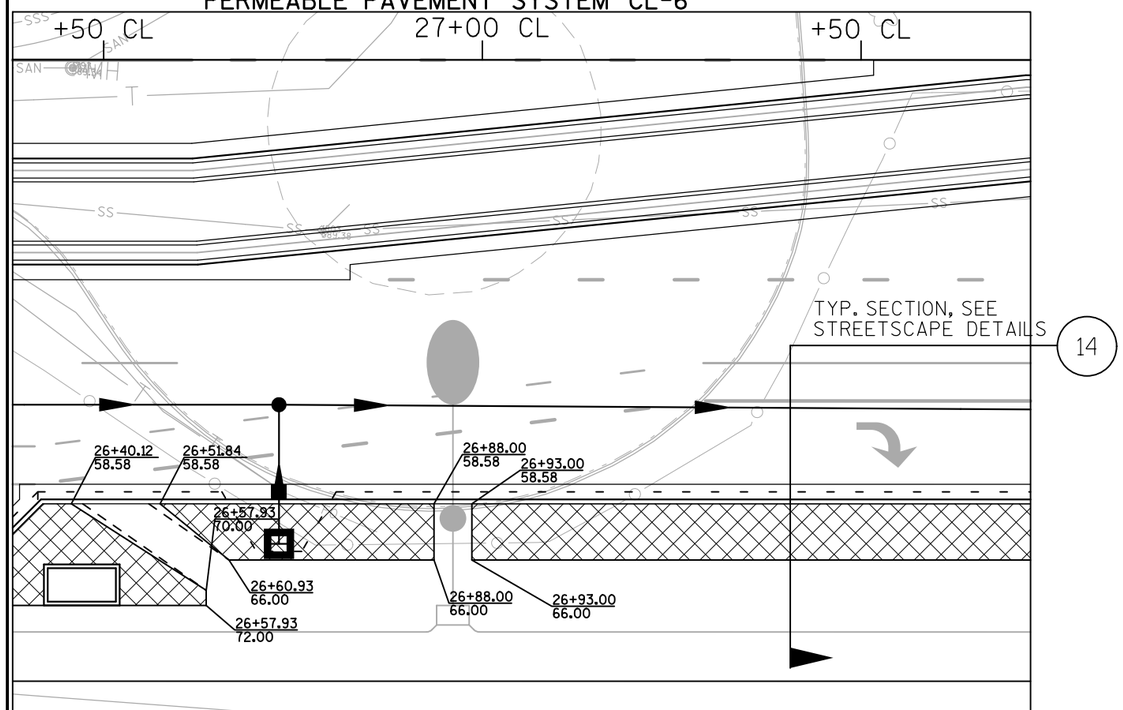
PERMEABLE PAVEMENT SYSTEM CL-4



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMEABLE PAVER LAYOUT PLAN	SHEET 132	E



PERMEABLE PAVEMENT SYSTEM CL-5



PERMEABLE PAVEMENT SYSTEM CL-6

NOTES

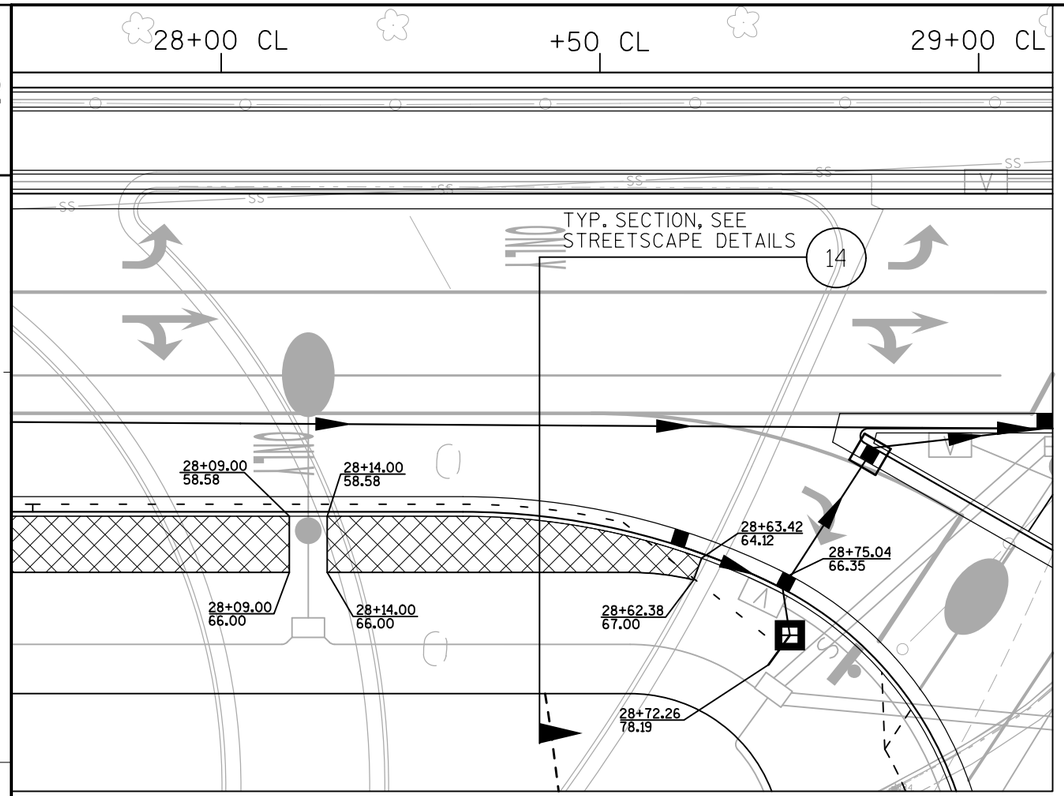
1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. SEE PERMEABLE PAVEMENT DETAILS IN THE STREET SCAPE PLANS FOR TYPICAL CROSS SECTIONS.
3. SEE STORM SEWER PLANS, BMP PLANS, AND BMP DETAILS SHOW SYSTEM INFORMATION ON PIPES AND OUTLET CONTROL STRUCTURES.
4. SEE AGGREGATE STORAGE AND STRUCTUREAL SOIL PLANS FOR EXCAVATION ELEVATIONS.

N

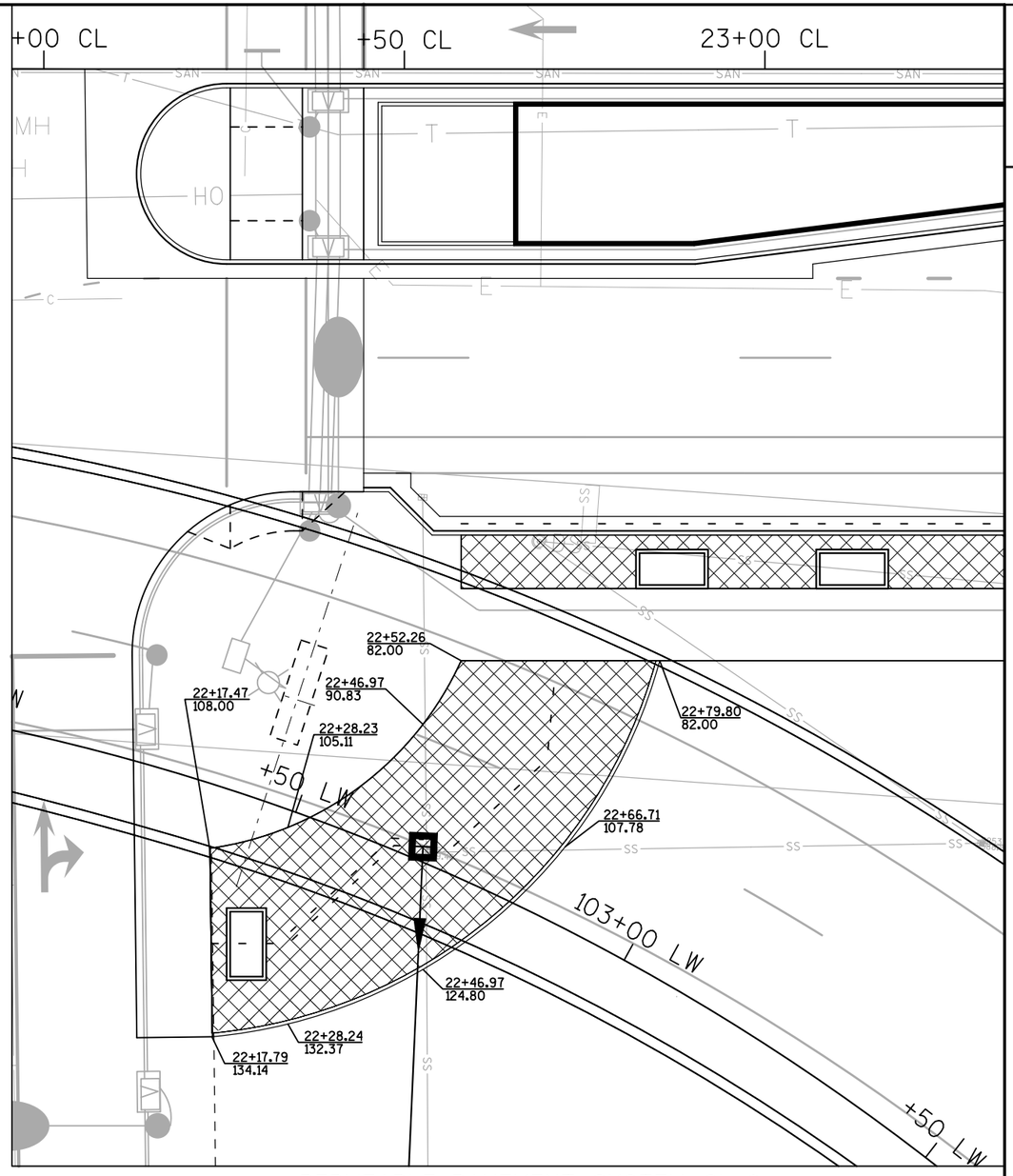
LEGEND

- PROPOSED STORM SEWER
- SS EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED UNDERDRAIN
- PROPOSED PERMEABLE CONCRETE PAVERS - 80mm, COLOR A
- PROPOSED PERMEABLE CONCRETE PAVERS - 80mm, COLOR B

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMEABLE PAVER LAYOUT PLAN	SHEET 133	E



PERMEABLE PAVEMENT SYSTEM CL-7



PERMEABLE PAVEMENT SYSTEM CL-8

NOTES

1. SEE OVERALL BMP SHEET FOR ADDITIONAL GENERAL BMP NOTES.
2. SEE PERMEABLE PAVEMENT DETAILS IN THE STREET SCAPE PLANS FOR TYPICAL CROSS SECTIONS.
3. SEE STORM SEWER PLANS, BMP PLANS, AND BMP DETAILS SHOW SYSTEM INFORMATION ON PIPES AND OUTLET CONTROL STRUCTURES.
4. SEE AGGREGATE STORAGE AND STRUCTUREAL SOIL PLANS FOR EXCAVATION ELEVATIONS.

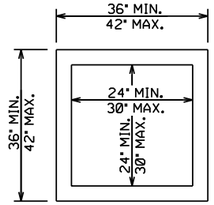
LEGEND

- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED STORM MANHOLE
- PROPOSED ENHANCED CATCH BASIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED UNDERDRAIN
- PROPOSED PERMEABLE CONCRETE PAVERS - 80mm, COLOR A
- PROPOSED PERMEABLE CONCRETE PAVERS - 80mm, COLOR B

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMEABLE PAVER LAYOUT PLAN	SHEET 134	E

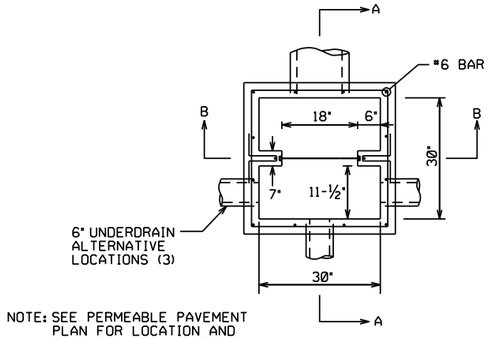
PERMEABLE PAVEMENT OUTLET CONTROL STRUCTURES
TABLE OF STRUCTURE ELEVATIONS AND DIMENSIONS

OUTLET CONTROL STRUCTURE	TYPE	CASTING	RIM ELEVATION	TOP OF PRECAST ELEV.	BOTTOM OF PRECAST ELEV.	HEIGHT OF PRECAST STRUCTURE	TOP OF ORIFICE PLATE ELEV.	BOTTOM OF ORIFICE PLACE ELEV.	HEIGHT OF ORIFICE PLATE	DIAMETER OF ORIFICE	ORIFICE INVERT ELEVATION
			A	B	C		D	E			F
OC - 1	TERRACE	R-1878-A9L	588.57	588.07	584.70	3.37	586.93	585.20	1.73	2 INCHES	585.70
OC - 2	GUTTER	MKE	588.33	587.83	583.96	3.87	586.93	584.46	2.47	2 INCHES	584.96
OC - 3	GUTTER	MKE	588.55	587.55	584.19	4.36	587.05	584.69	2.36	2 INCHES	585.19
OC - 4	GUTTER	MKE	588.10	587.60	584.14	3.46	587.10	584.64	2.46	2 INCHES	585.14
OC - 5	GUTTER	MKE	588.05	587.55	584.00	3.55	587.05	584.50	2.55	2 INCHES	585.00
OC - 6	TERRACE	R-1878-A9L	590.54	590.04	585.21	4.83	587.79	585.71	2.08	2 INCHES	586.21
OC - 7	TERRACE	R-1878-A9L	591.18	590.68	585.22	5.46	589.56	585.72	3.84	2 INCHES	586.22
OC - 8	TERRACE (PLAZA)	R-1878-A9L	589.88	589.38	583.79	5.59	588.72	584.29	3.93	2 INCHES	584.79



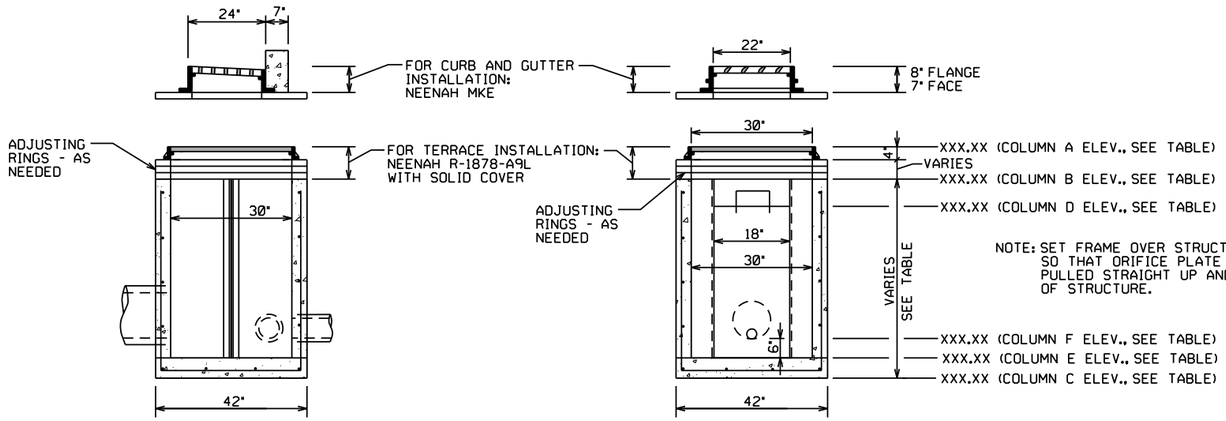
NOTE: ORIENT ADJUSTING RING SO THAT CASTING IS FULLY SUPPORTED AND ORIFICE PLATE CAN BE PULLED STRAIGHT UP AND OUT OF STRUCTURE.

ADJUSTING RINGS



NOTE: SEE PERMEABLE PAVEMENT PLAN FOR LOCATION AND ELEVATION OF UNDERDRAIN AT EACH STRUCTURE.

PLAN VIEW

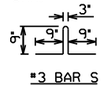


NOTE: SET FRAME OVER STRUCTURE SO THAT ORIFICE PLATE CAN BE PULLED STRAIGHT UP AND OUT OF STRUCTURE.

SECTION A-A

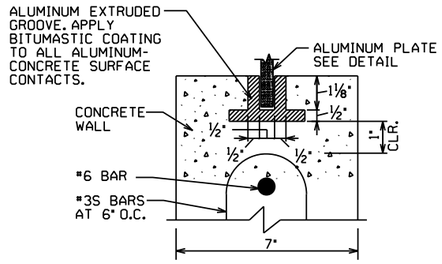
SECTION B-B

NOTE:
BAR MARKS REFER TO BAR BEND DIAGRAM SHOWN BELOW. A BILL OF MATERIAL FOR REINFORCING STEEL HAS NOT BEEN PROVIDED FOR THESE STRUCTURES. ALL DIMENSIONS ON BAR BEND ARE OUT TO OUT OF BAR.

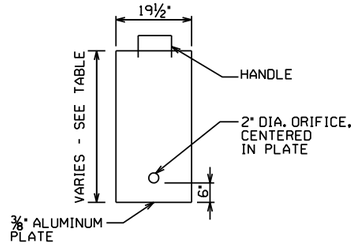


#3 BAR S

BEND DIAGRAM



SECTION C-C



ALUMINUM PLATE

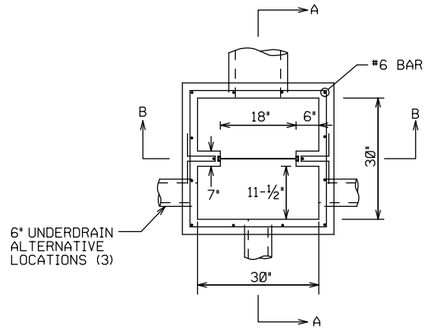
PERMEABLE PAVEMENT OUTLET CONTROL STRUCTURE

N.T.S.

2

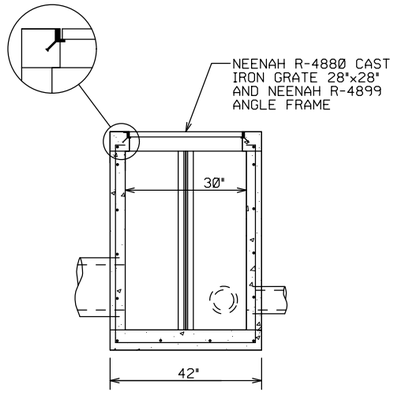
BIOFILTRATION BASIN OUTLET CONTROL STRUCTURES
TABLE OF STRUCTURE ELEVATIONS AND DIMENSIONS

OUTLET CONTROL STRUCTURE	TYPE	CASTING	RIM ELEVATION	BOTTOM OF STRUCTURE ELEV.	HEIGHT OF STRUCTURE	TOP OF ORIFICE PLATE ELEV.	BOTTOM OF ORIFICE PLACE ELEV.	HEIGHT OF ORIFICE PLATE	DIAMETER OF ORIFICE	ORIFICE INVERT ELEVATION
			A	B		C	D			E
OC - 9	BIO-BASIN	R-4880	586.95	579.00	7.95	585.95	579.50	6.45	2 INCHES	580.00
OC - 10	BIO-BASIN	R-4880	597.50	590.00	7.50	596.50	590.50	6.00	2 INCHES	591.00
OC - 11	BIO-BASIN	R-4880	593.50	586.50	7.00	592.50	587.00	5.50	2 INCHES	587.50
OC - 12	BIO-BASIN	R-4880	591.50	584.50	7.00	590.50	585.00	5.50	2 INCHES	585.50

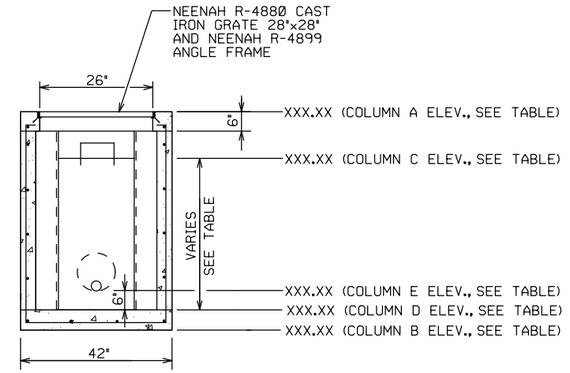


PLAN VIEW

NOTE: CENTER FRAME AND GRATE IN TOP OF STRUCTURE.

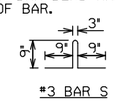


SECTION A-A

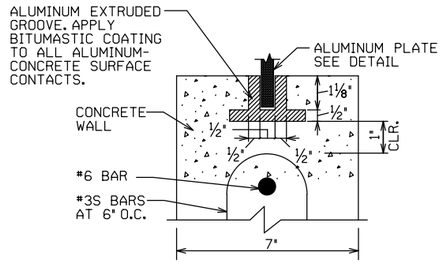


SECTION B-B

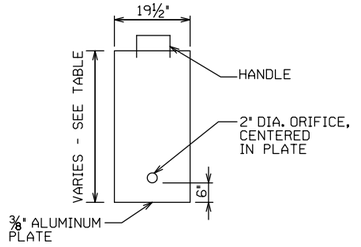
NOTE:
BAR MARKS REFER TO BAR BEND DIAGRAM SHOWN BELOW. A BILL OF MATERIAL FOR REINFORCING STEEL HAS NOT BEEN PROVIDED FOR THESE STRUCTURES. ALL DIMENSIONS ON BAR BEND ARE OUT TO OUT OF BAR.



BEND DIAGRAM



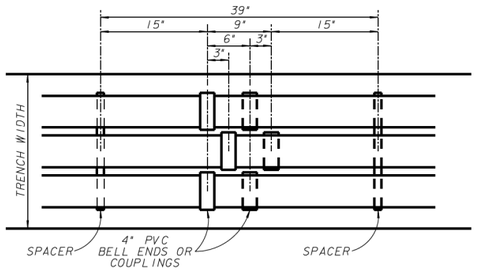
SECTION C-C



ALUMINUM PLATE

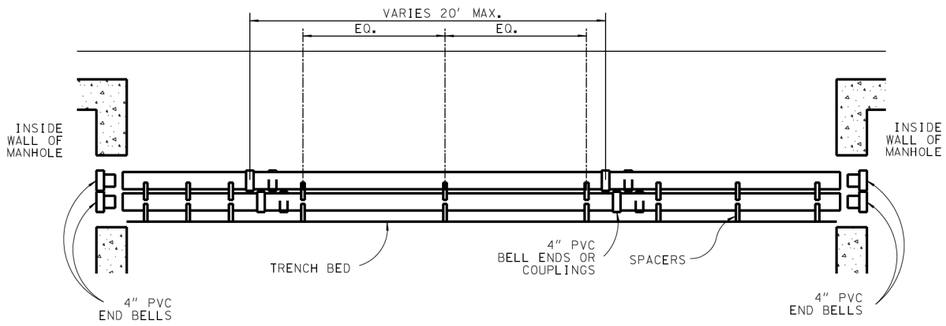
BIOFILTRATION BASIN OUTLET CONTROL STRUCTURE

N.T.S.



PLAN VIEW

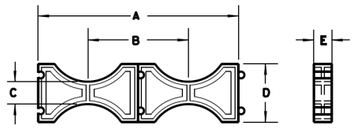
N.T.S



ELEVATION VIEW

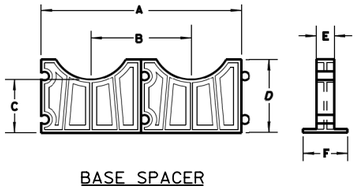
N.T.S

COND.	3"	4"
A	10"	11½"
B	5"	5⅝"
C	1½"	1¼"
D	3¼"	3¼"
E	1"	1"



INTERMEDIATE SPACER

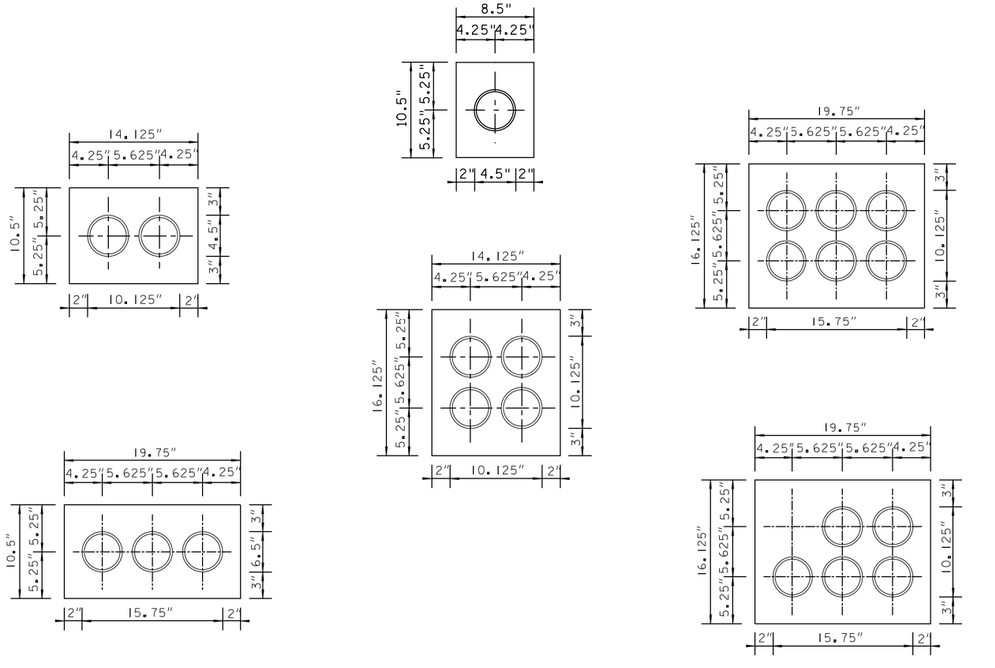
COND.	3"	4"
A	10"	11¼"
B	5"	5⅝"
C	3"	3"
D	3⅞"	4⅛"
E	1"	1"
F	2½"	2½"



BASE SPACER

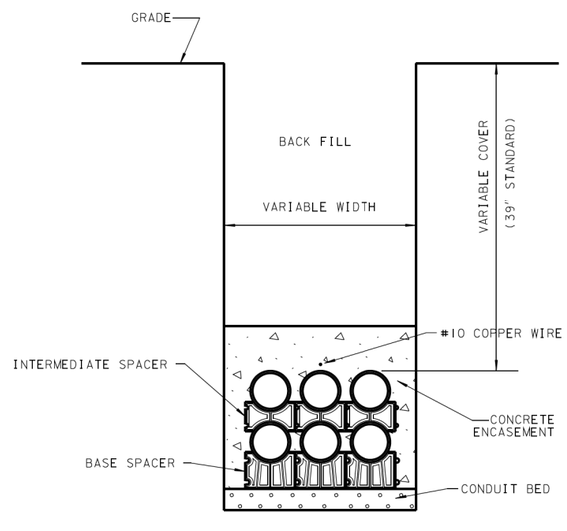
SPACER DETAILS

N.T.S



CONDUIT DUCT CROSS SECTIONS

N.T.S

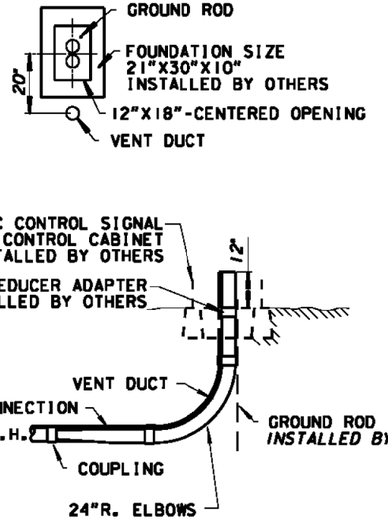


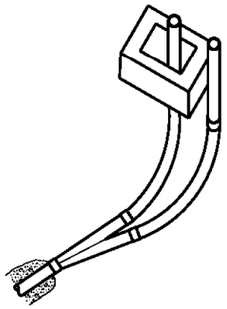
TRENCH CROSS SECTION

N.T.S

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	UTILITY PLAN - CITY OF MILWAUKEE CONDUIT DETAILS	SHEET 137	E

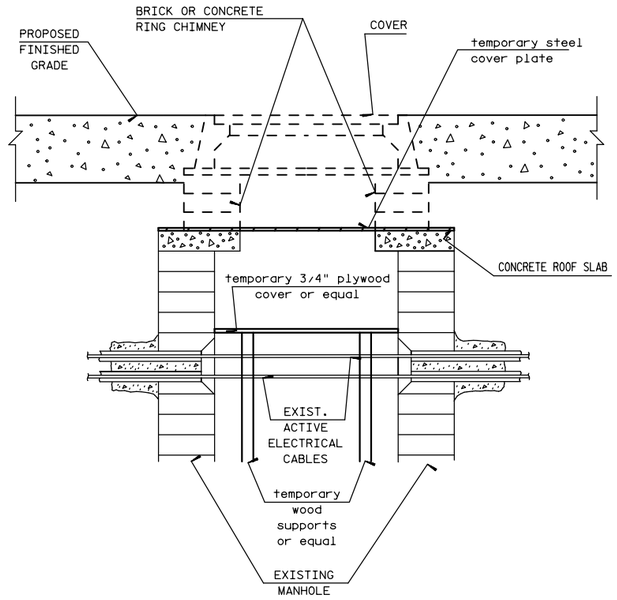
FILE NAME : 023001_up.dgn PLOT DATE : 7/30/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:10



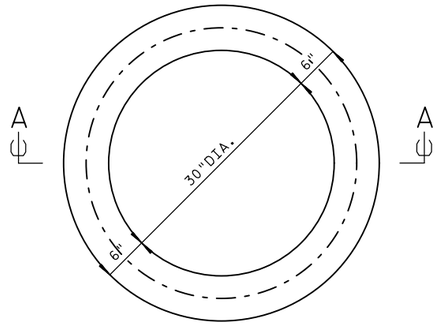


TRAFFIC CONTROL CABINET DETAIL

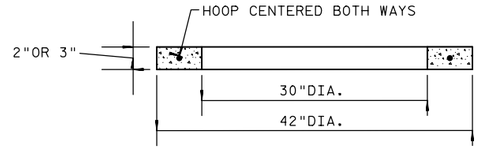
N.T.S



BLOCK OR PRECAST MANHOLE



PLAN



SECTION A-A

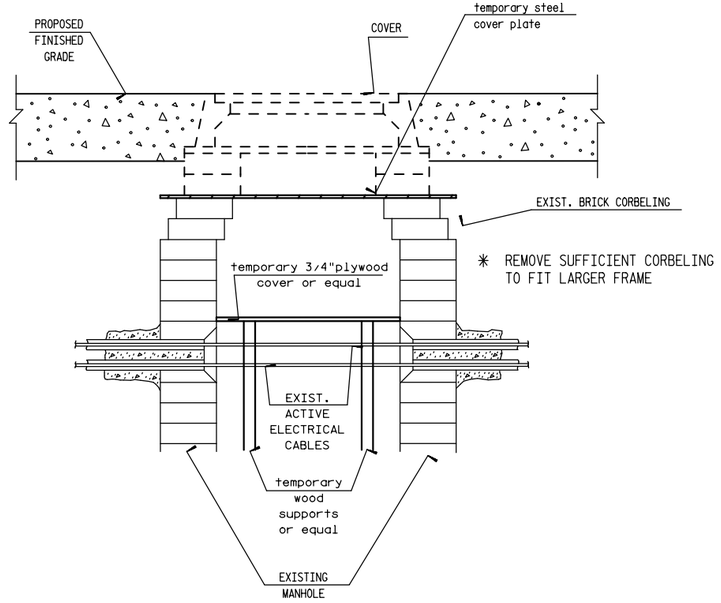
THE ADJUSTING RING SHALL BE 2" OR 3" IN HEIGHT.

THE CIRCUMFERENTIAL STEEL SHALL BE CENTERED WITHIN THE RING.

AREA OF CIRCUMFERENTIAL STEEL = 0.07 SQ. INCH PER VERTICAL FOOT WITH A MINIMUM OF .024 SQ. INCH IN ANY ONE RING.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE CORE SHALL BE 4000 P.S.I.

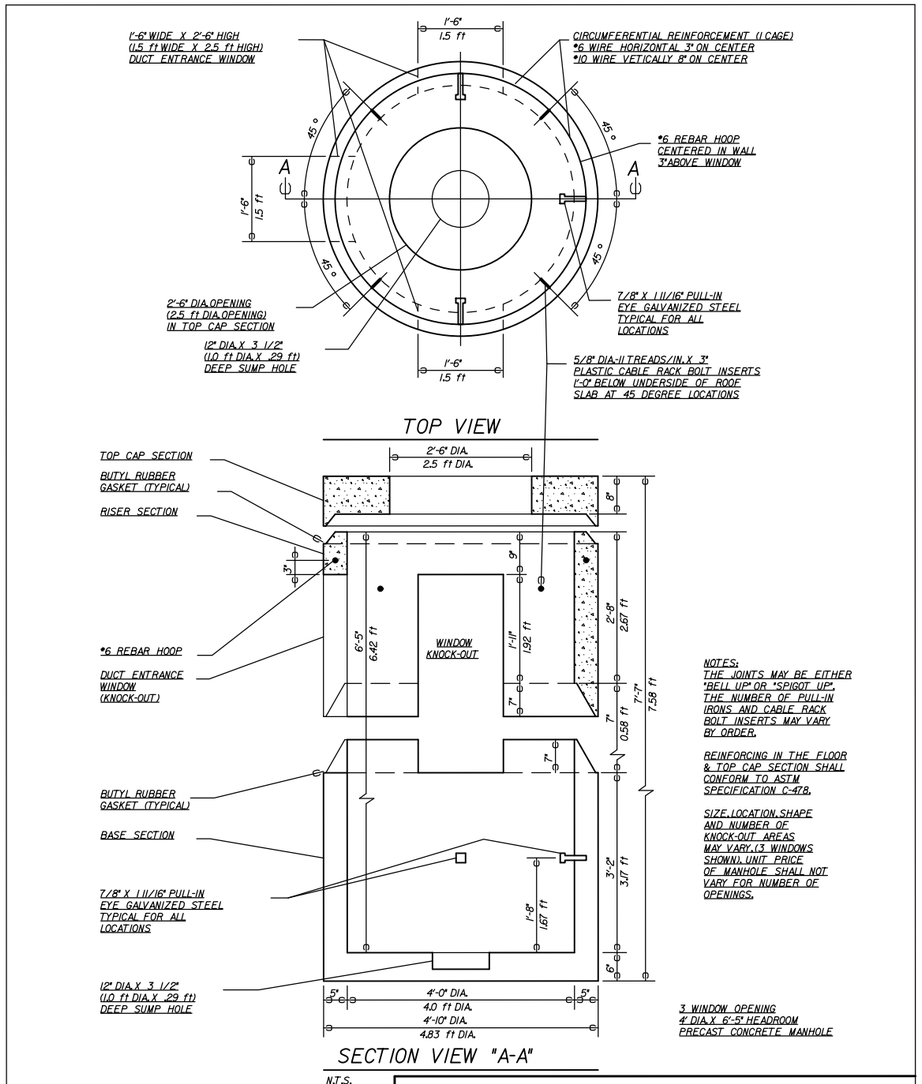
CONCRETE ADJUSTING RING



BRICK ROUND MANHOLE

ADJUSTING TES MANHOLES

N.T.S



4' DIAMETER "DOGHOUSE" MANHOLE

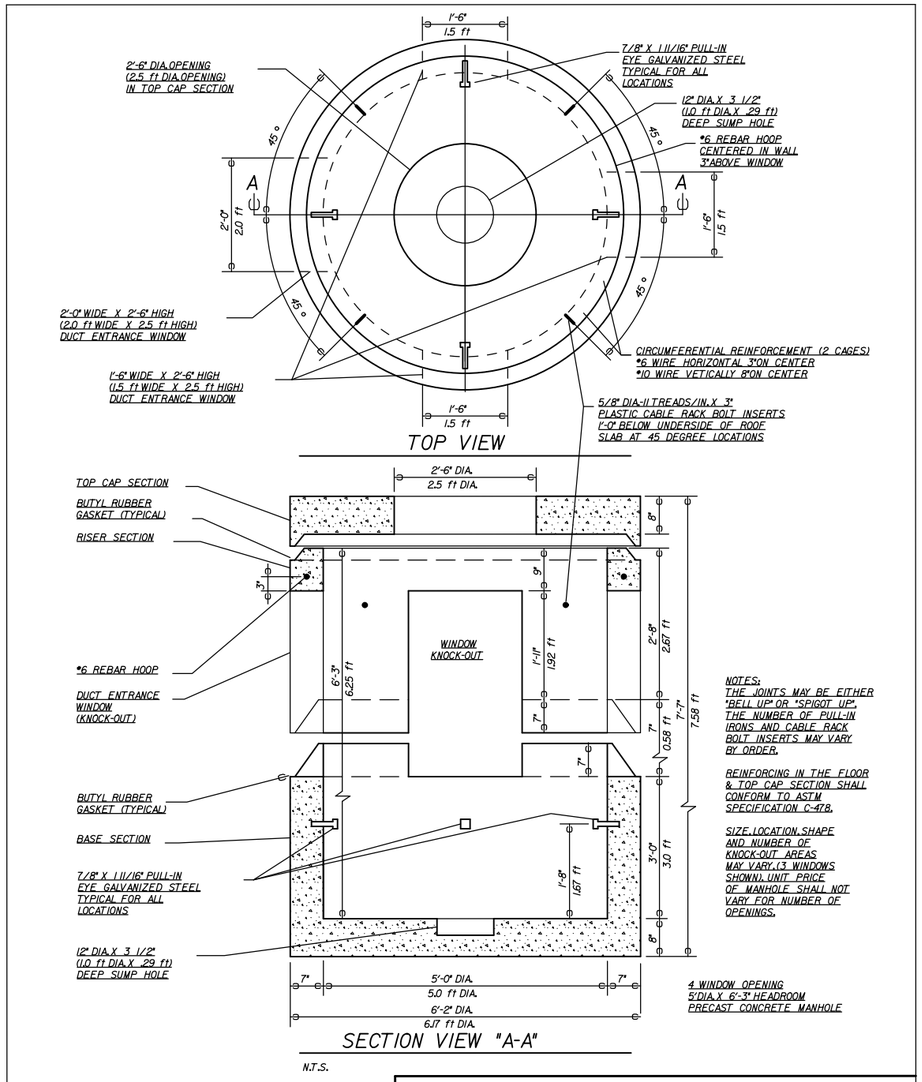
DIAGRAM 103C 12/13/06

TRANSPORTATION SECTION
INFRASTRUCTURE SERVICES DIVISION
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE, WISCONSIN

UNDERGROUND CONDUIT PLAN

4' DIAMETER "DOGHOUSE" MANHOLE TYPE TES

N.T.S



MANHOLE SKETCH NO. XXXX

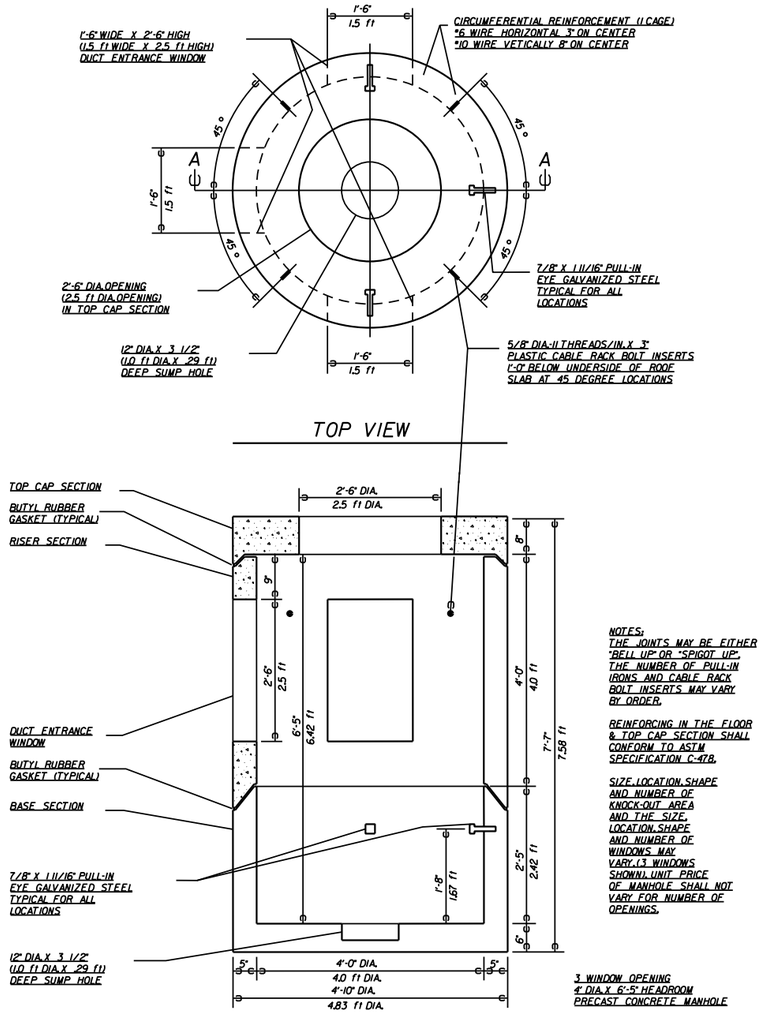
TRANSPORTATION SECTION
INFRASTRUCTURE SERVICES DIVISION
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE, WISCONSIN

UNDERGROUND CONDUIT PLAN

5' DIAMETER "DOGHOUSE" MANHOLE TYPE TES

N.T.S

2

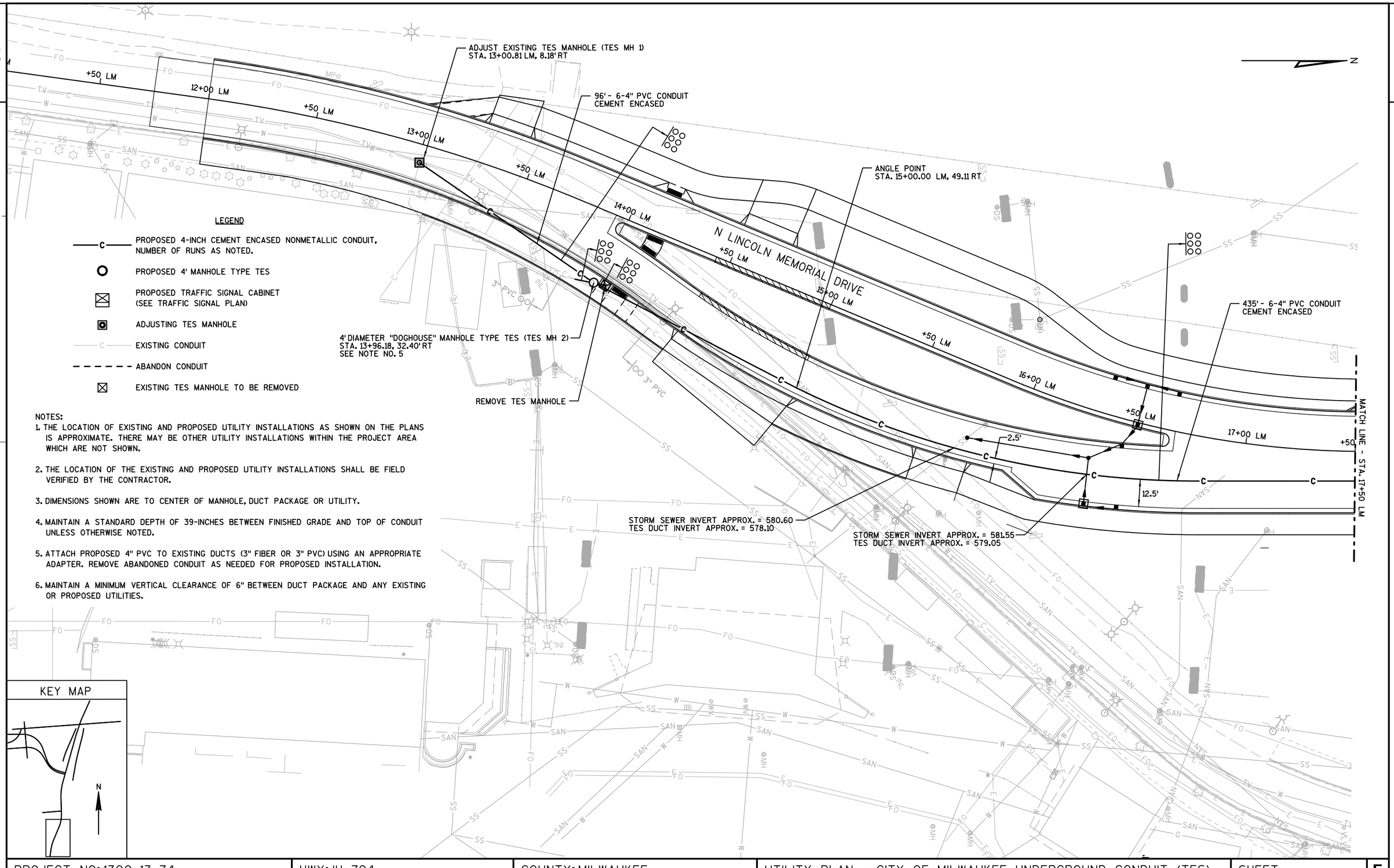


4' DIAMETER MANHOLE TYPE TES

N.T.S

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	UTILITY PLAN - CITY OF MILWAUKEE CONDUIT DETAILS	SHEET 140	E

2



LEGEND

- C — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
- PROPOSED 4' MANHOLE TYPE TES
- PROPOSED TRAFFIC SIGNAL CABINET (SEE TRAFFIC SIGNAL PLAN)
- ADJUSTING TES MANHOLE
- EXISTING CONDUIT
- ABANDON CONDUIT
- EXISTING TES MANHOLE TO BE REMOVED

NOTES:

1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4. MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT UNLESS OTHERWISE NOTED.
5. ATTACH PROPOSED 4" PVC TO EXISTING DUCTS (3" FIBER OR 3" PVC) USING AN APPROPRIATE ADAPTER. REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.
6. MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 6" BETWEEN DUCT PACKAGE AND ANY EXISTING OR PROPOSED UTILITIES.

KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	UTILITY PLAN - CITY OF MILWAUKEE UNDERGROUND CONDUIT (TES)	SHEET 141	E

2

LEGEND

- PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
- PROPOSED 4' MANHOLE TYPE TES
- PROPOSED TRAFFIC SIGNAL CABINET (SEE TRAFFIC SIGNAL PLAN)
- ADJUSTING TES MANHOLE
- EXISTING CONDUIT
- ABANDON CONDUIT
- EXISTING TES MANHOLE TO BE REMOVED

NOTES:

1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4. MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT UNLESS OTHERWISE NOTED.
5. ATTACH PROPOSED 4" PVC TO EXISTING DUCTS (3" FIBER OR 3" PVC) USING AN APPROPRIATE ADAPTER. REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.
6. MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 6" BETWEEN DUCT PACKAGE AND ANY EXISTING OR PROPOSED UTILITIES.

N

E CHICAGO STREET

N LINCOLN MEMORIAL DRIVE

MATCH LINE - STA. 17+50 LM

MATCH LINE - STA. 23+00 LM

92' - 1-4" PVC CONDUIT CEMENT ENCASED CAP DUCT END STA. 18+69.00 LM, 47.4' RT (FUTURE TRAFFIC SIGNAL CABINET LOCATION)

STORM SEWER INVERT APPROX. = 581.60
TES DUCT INVERT APPROX. = 578.40

12.5' R
STA. 18+55.17 LM,
7.0' RT

ANGLE POINT
STA. 17+54.78 LM,
13.50' RT

LM
18+00 LM
+50 LM
19+00 LM
+50 LM
20+00 LM
+50 LM
21+00 LM
+50 LM
22+00 LM
+50 LM
23+00 LM

10.5'
16.5'
16.5'

STORM SEWER INVERT APPROX. = 582.45
TES DUCT INVERT APPROX. = 576.15

342' - 6-4" PVC CONDUIT CEMENT ENCASED

435' - 6-4" PVC CONDUIT CEMENT ENCASED

STORM SEWER INVERT APPROX. = 578.65
TES DUCT INVERT APPROX. = 576.15

5' DIAMETER "DOGHOUSE" MANHOLE TYPE TES (TES MH 3)
STA. 18+21.51 LM, 8.94' RT
SEE NOTE NO. 5

4' DIAMETER MANHOLE TYPE TES (TES MH 4)
STA. 21+70.74 LM, 34.50' RT

300' - 6-4" PVC CONDUIT CEMENT ENCASED

KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	UTILITY PLAN - CITY OF MILWAUKEE UNDERGROUND CONDUIT (TES)	SHEET 142	E

2

LEGEND

- C — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
- PROPOSED 4' MANHOLE TYPE TES
- PROPOSED TRAFFIC SIGNAL CABINET (SEE TRAFFIC SIGNAL PLAN)
- ADJUSTING TES MANHOLE
- EXISTING CONDUIT
- ABANDON CONDUIT
- EXISTING TES MANHOLE TO BE REMOVED

NOTES:

1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4. MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT UNLESS OTHERWISE NOTED.
5. ATTACH PROPOSED 4" PVC TO EXISTING DUCTS (3" FIBER OR 3" PVC) USING AN APPROPRIATE ADAPTER. REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.
6. MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 6" BETWEEN DUCT PACKAGE AND ANY EXISTING OR PROPOSED UTILITIES.

IH 794 EB EXIT RAMP

IH 794 WB ENTRANCE RAMP

N LINCOLN MEMORIAL DRIVE

IH 794 WB EXIT RAMP

MATCH LINE - STA. 23+00 LM

MATCH LINE - STA. 28+00 LM

MATCH LINE - STA. 327+50 LS

MATCH LINE - STA. 428+00 LN

50' RADIUS STA. 23+85.56 LM, 1.50' LT

4' DIAMETER MANHOLE TYPE TES (TES MH 6) STA. 24+43.00 LM 48.50' RT

12.5' RADIUS STA. 24+55.19 LM, 55.31' RT

50' RADIUS STA. 22+98.64 LM, 87.50' RT

300' - 6-4" PVC CONDUIT CEMENT ENCASED

30' - 1-4" PVC CONDUIT CEMENT ENCASED

98' - 1-4" PVC CONDUIT CEMENT ENCASED

344' - 6-4" PVC CONDUIT CEMENT ENCASED

STORM SEWER INVERT APPROX. = 584.20
TES DUCT INVERT APPROX. = 578.70

STORM SEWER INVERT APPROX. = 584.30
TES DUCT INVERT APPROX. = 580.16

STORM SEWER INVERT APPROX. = 587.10
TES DUCT INVERT APPROX. = 583.03

STORM SEWER INVERT APPROX. = 588.45
TES DUCT INVERT APPROX. = 585.90

STORM SEWER INVERT APPROX. = 589.30
TES DUCT INVERT APPROX. = 585.90

STORM SEWER INVERT APPROX. = 581.40
TES DUCT INVERT APPROX. = 578.40

CONNECT INTO WISDOT CV424

16.5'

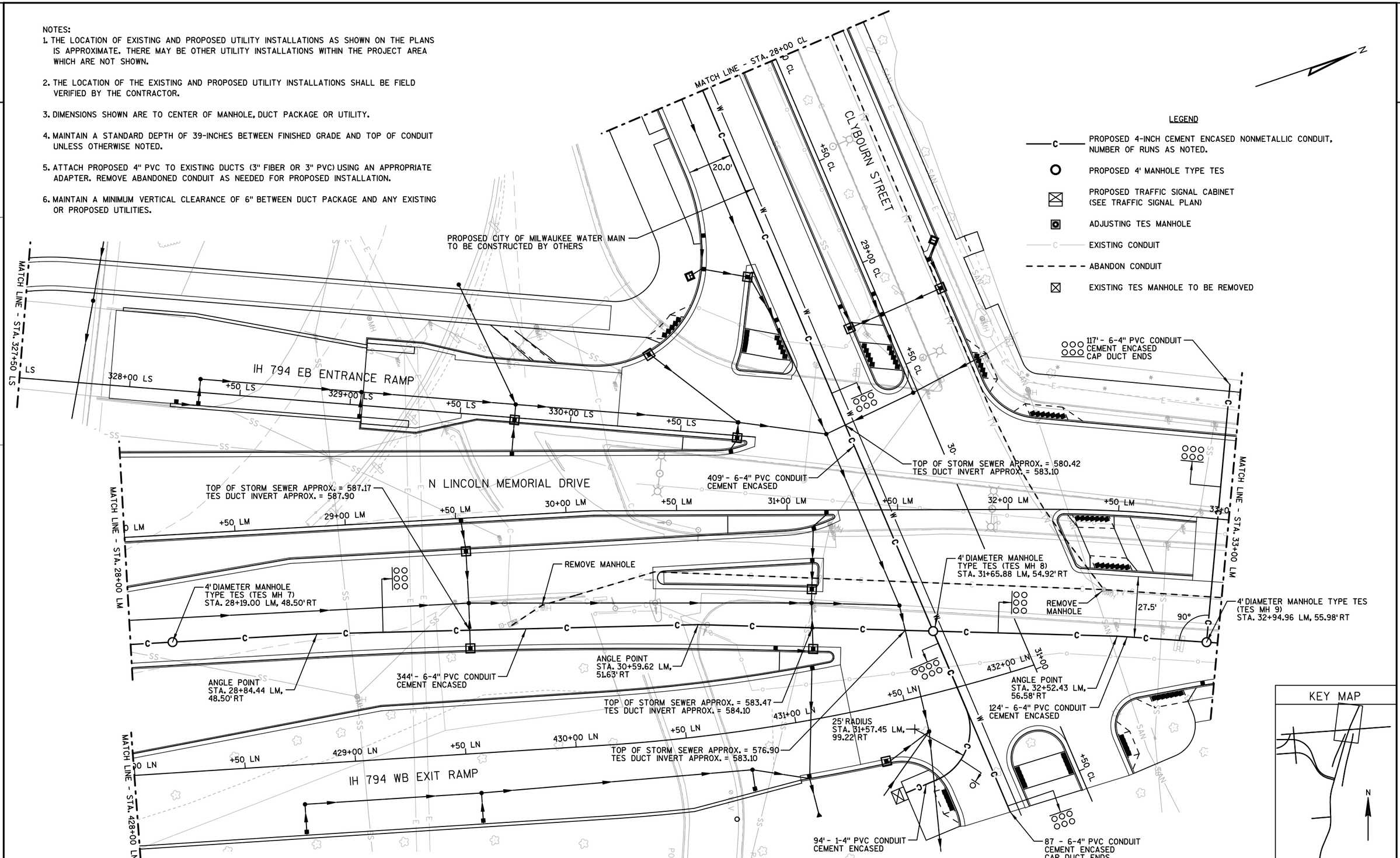
16.5'

KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	UTILITY PLAN - CITY OF MILWAUKEE UNDERGROUND CONDUIT (TES)	SHEET 143	E

NOTES:

1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4. MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT UNLESS OTHERWISE NOTED.
5. ATTACH PROPOSED 4" PVC TO EXISTING DUCTS (3" FIBER OR 3" PVC) USING AN APPROPRIATE ADAPTER. REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.
6. MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 6" BETWEEN DUCT PACKAGE AND ANY EXISTING OR PROPOSED UTILITIES.



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	UTILITY PLAN - CITY OF MILWAUKEE UNDERGROUND CONDUIT (TES)	SHEET 144 E

NOTES:

1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4. MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT UNLESS OTHERWISE NOTED.
5. ATTACH PROPOSED 4" PVC TO EXISTING DUCTS (3" FIBER OR 3" PVC) USING AN APPROPRIATE ADAPTER. REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.
6. MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 6" BETWEEN DUCT PACKAGE AND ANY EXISTING OR PROPOSED UTILITIES.

LEGEND

- C — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
- PROPOSED 4' MANHOLE TYPE TES
- PROPOSED TRAFFIC SIGNAL CABINET (SEE TRAFFIC SIGNAL PLAN)
- ADJUSTING TES MANHOLE
- C — EXISTING CONDUIT
- ABANDON CONDUIT
- EXISTING TES MANHOLE TO BE REMOVED

MICHIGAN STREET (USH 18)

N LINCOLN MEMORIAL DRIVE

MATCH LINE - STA. 33+00 LM

0 LM | +50 LM | 34+00 LM | +50 LM | 35+00 LM | +50 LM | 36+00 LM | +50 LM | 37+00 LM | +50 LM | 38+00 LM

25' RADIUS
STA. 34+98.27 LM,
26.23' RT

EXISTING TES MANHOLE #1837

195'- 6-4" PVC CONDUIT
CEMENT ENCASED

90'- 1-4" PVC CONDUIT
CEMENT ENCASED
CAP DUCT END
(TRAFFIC SIGNAL
CABINET LOCATION)

TOP OF STORM SEWER APPROX. = 580.62
TES DUCT INVERT APPROX. = 583.10

MICHIGAN STREET

KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	UTILITY PLAN - CITY OF MILWAUKEE UNDERGROUND CONDUIT (TES)	SHEET 145	E

NOTES:

1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4. MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT UNLESS OTHERWISE NOTED.
5. ATTACH PROPOSED 4" PVC TO EXISTING DUCTS (3" FIBER OR 3" PVC) USING AN APPROPRIATE ADAPTER. REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.
6. MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 6" BETWEEN DUCT PACKAGE AND ANY EXISTING OR PROPOSED UTILITIES.

LEGEND

- —C— PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
- PROPOSED 4' MANHOLE TYPE TES
- PROPOSED TRAFFIC SIGNAL CABINET (SEE TRAFFIC SIGNAL PLAN)
- ADJUSTING TES MANHOLE
- EXISTING CONDUIT
- ABANDON CONDUIT
- EXISTING TES MANHOLE TO BE REMOVED

CLYBOURN STREET

20+00 CL +50 CL 21+00 CL +50 CL 22+00 CL +50 CL 23+00 CL

MATCH LINE - STA. 23+00 CL

JACKSON STREET

JACKSON EB EXIT RAMP - TO VAN BUREN STREET

VAN BUREN STREET

60+00 JE +50 JE 61+00 JE +50 JE 62+00 JE +50 JE

62+00 VB +50 VB 63+00 VB +50 VB 64+00 VB +50 VB 65+00 VB +50 VB

+44 36.0' RT

26.0'

PROPOSED CITY OF MILWAUKEE WATER MAIN TO BE CONSTRUCTED BY OTHERS

413' - 6-4" PVC CONDUIT CEMENT ENCASED, CONNECT INTO EXISTING CONDUIT DUCT, SEE NOTE 5 INVERT APPROX. = 583.10

KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	UTILITY PLAN - CITY OF MILWAUKEE UNDERGROUND CONDUIT (TES)	SHEET 146 E

2

N

EXISTING TES MANHOLE #1826
TO BE REMOVED

PROPOSED CITY OF MILWAUKEE WATER MAIN
TO BE CONSTRUCTED BY OTHERS

CLYBOURN STREET

4' DIAMETER MANHOLE TYPE TES (TES MH 11)
STA. 26+57.07 CL, 36.00' RT

MATCH LINE - STA. 23+00 CL

MATCH LINE - STA. 28+00 CL

0 CL | +50 CL | 24+00 CL | +50 CL | 25+00 CL | +50 CL | 26+00 CL | +50 CL | 27+00 CL | +50 CL | 28+00

413' 6-4" PVC CONDUIT
CEMENT ENCASED

TOP OF STORM SEWER APPROX. = 580.17
TES DUCT INVERT APPROX. = 583.10

26.0'

90°

20.0'

409' 6-4" PVC CONDUIT
CEMENT ENCASED

SANITARY SEWER INVERT APPROX. = 579.29
TES DUCT INVERT APPROX. = 583.10

TOP OF STORM SEWER APPROX. = 576.57
TES DUCT INVERT APPROX. = 583.10

SANITARY SEWER INVERT APPROX. = 578.60
TES DUCT INVERT APPROX. = 583.10

TOP OF STORM SEWER APPROX. = 577.27
TES DUCT INVERT APPROX. = 583.10

51' 2-4" PVC CONDUIT
CEMENT ENCASED
CAP DUCT ENDS

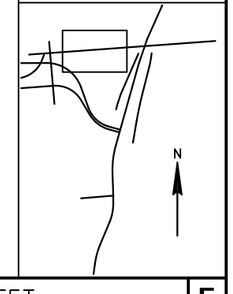
LEGEND

- C — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
- PROPOSED 4' MANHOLE TYPE TES
- PROPOSED TRAFFIC SIGNAL CABINET (SEE TRAFFIC SIGNAL PLAN)
- ADJUSTING TES MANHOLE
- C — EXISTING CONDUIT
- - - - - - ABANDON CONDUIT
- EXISTING TES MANHOLE TO BE REMOVED

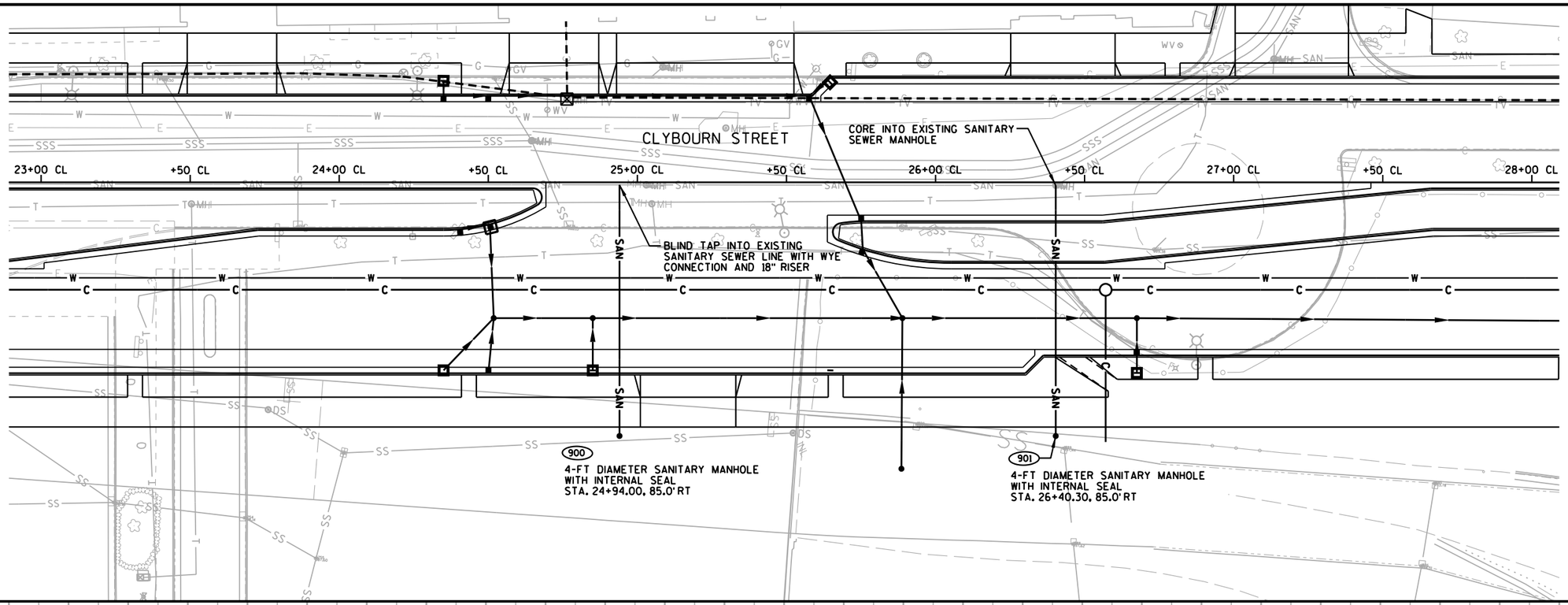
NOTES:

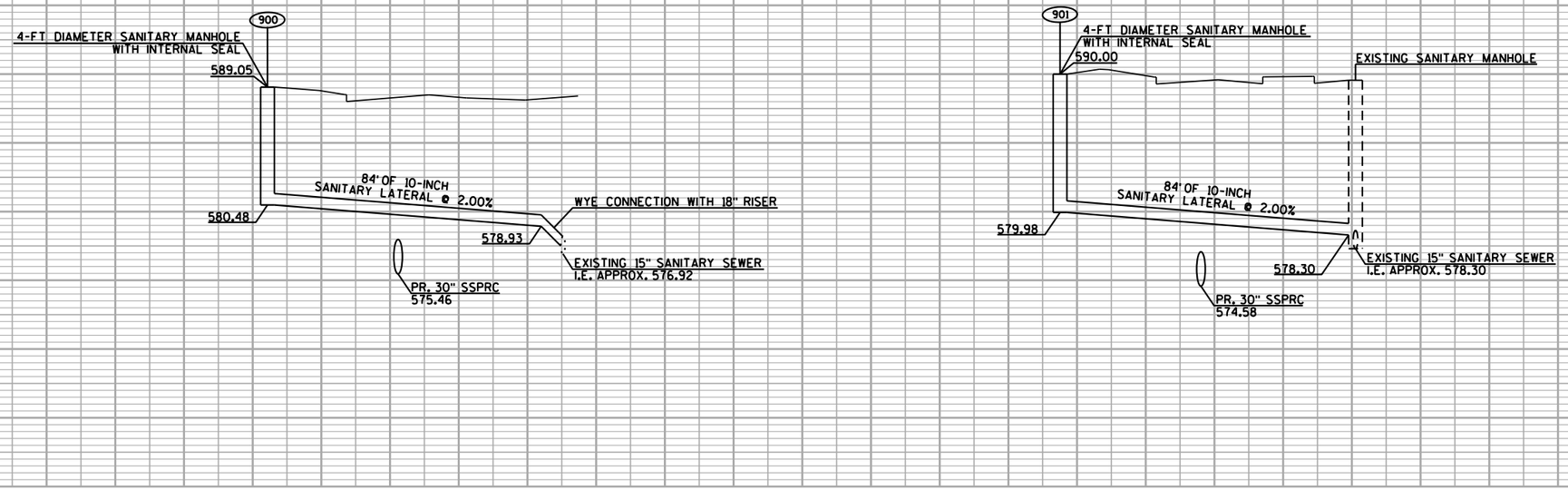
1. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4. MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT UNLESS OTHERWISE NOTED.
5. ATTACH PROPOSED 4" PVC TO EXISTING DUCTS (3" FIBER OR 3" PVC) USING AN APPROPRIATE ADAPTER. REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.
6. MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 6" BETWEEN DUCT PACKAGE AND ANY EXISTING OR PROPOSED UTILITIES.

KEY MAP



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	UTILITY PLAN - CITY OF MILWAUKEE UNDERGROUND CONDUIT (TES)	SHEET 147	E





PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	UTILITY PLAN - SANITARY SEWER	SHEET 148	E

KEY MAP

794 WB EXIT RAMP

794 EB ENTRANCE RAMP

LINCOLN MEMORIAL DR

BIOFILTRATION BASIN

SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION.

MAINTAIN MIN. 24" CLEAR SHREDDED BARK MULCH ZONE ALONG B.O.C. (TYP.)

3-HAV
12-CSB
18-DVL
98-SCC
60-SRF
4-PTM/4-PTM-C
45-DVL
270-SCB
28-NWL
1-TXD
46-PVN
1-ULF
5-RAG
52-RAG
4-GTK
7-SPM
71-RRD
30-NWL
38-HMS
106-ASP
121-HMS
239-SPT
257-SPT
100-CVM
60-DVL
38-NWL
22-FMM
1-GDE
3-CVW
1-TXD
4-CSB
1-QBC
26-CSB
3-PGD
3-PTM/3-PTM-C

STA. 26+98.74 LOCATE TREE 4.8' FROM B.O.C. (TYP.)

STA. 26+14.75

STA. 26+60.82 LOCATE TREE 7.3' FROM B.O.C. (TYP.)

326+00 LS
+50 LS
327+00 LS
209+00 LE
+50 LE
210+00 LE
110+00 LW
+50 LW
111+00 LW
+00 LM
+50 LM
24+00 LM
25+00 LM
26+00 LM
27+00 LM
425+00 LN
426+00 LN
427+00 LN

MATCH LINE - STA. 27+50 LM

LEGEND

- LIMESTONE OUTCROP BOULDERS, SEE LAYOUT AND MATERIALS PLAN
- ORNAMENTAL TREE
- SHADE TREE
- DECIDUOUS SHRUB
- POSED EVERGREEN SHRUB
- ORNAMENTAL GRASS
- RIPRAP MEDIUM
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP)
- ROADWAY LIGHTING - SEE LIGHTING PLANS
- ALUMINUM EDGER - SEE LAYOUT AND MATERIALS PLAN
- EXTENT OF STRUCTURAL SOIL AT STREET TREES
- NO-MOW FESCUE SEED AND EROSION MAT CLASS I TYPE A

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET	E

FILE NAME : c:\pwv8i-local\baker_projects\joe.komorowski\d0330711\023101_pl.dgn
PLOT DATE : 7/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 30.0000 sf / in.
WISDOT/CADDS SHEET 42

2

794 EB ENTERANCE RAMP

17-RTD
30-SCB
1-HAV
3-PGD
1-ANW
34-VJD
2-QBC
1-QBC
2-AFS
122-SPT
91-HMS
48-HMS
MAINTAIN MIN. 24" CLEAR SHREDDED BARK MULCH ZONE ALONG B.O.C. (TYP.)
OVERHEAD SIGNAGE SEE ROADWAY PLANS
CLYBOURN ST
MATCH LINE - STA. 29+00 CL
MATCH LINE - STA. 27+50 LM
MATCH LINE - STA. 32+00 LM
3-PTM/3-PTM-C
13-CSB
22-RAG
2-GTK
20-RAG
1-AGA
69-RRD
7-SPM
16-RAG
82-SPT
45-RAG
1-HAV
1-AFS
63-NWL
81-SPT
120-SPT
2-MRJ
67-HMS
73-HMS
KEY MAP

LINCOLN MEMORIAL DR

24-CSB
158-SCC
2-TXD
2-PTM/3-PTM-C
30-DVL
1-COC
35-SRF
3-CVW
1-AFS
63-PVS
3-TTS
3-AFS
55-SCC
18-DVL
1-COC
68-HMS
3-MRJ
STA. 428+10.31
STA. 428+49.49
STA. 430+13.06
STA. 430+51.18
MAINTAIN MIN. 24" CLEAR SHREDDED BARK MULCH ZONE ALONG B.O.C. (TYP.)
BIOFILTRATION BASIN
794 WB EXIT RAMP
13-RTD
33-DVL
3-PTM/3-PTM-C
1-AFS
263-SON
41-PVN
48-HMS
20-CSB
1-AGA
24-RAG
SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION.

LEGEND

- LIMESTONE OUTCROP BOULDERS, SEE LAYOUT AND MATERIALS PLAN
- ORNAMENTAL TREE
- SHADE TREE
- DECIDUOUS SHRUB
- POSED EVERGREEN SHRUB
- ORNAMENTAL GRASS
- RIPRAP MEDIUM
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP)
- ROADWAY LIGHTING - SEE LIGHTING PLANS
- ALUMINUM EDGER - SEE LAYOUT AND MATERIALS PLAN
- EXTENT OF STRUCTURAL SOIL AT STREET TREES
- NO-MOW FESCUE SEED AND EROSION MAT CLASS I TYPE A

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 150	E

FILE NAME : c:\pwv8i-local\baker_projects\joe.komorowski\d0330711\023102_pl.dgn
PLOT DATE : 7/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 30.0000 sf / in.
WISDOT/CADDS SHEET 42

2

CLYBOURN STREET

21+00 CL

22+00 CL

23+00 CL

24+00 CL

25+00

+50 CL

65+00 VB

64+00 VB

63+00 VB

+50 VB

42-RAG
72-SPT
29-HMS
3-TTS
35-RRD
4-GTK
24-SPT
4-MRJ
16-SPT
2-COC
68-PVS
2-AFS
63-HMS

12' 12' 12'

12' 12' 12'

25' 8' 36'

STA. 22+67.71

STA. 23+24.47

STA. 24+11.85

MATCH LINE - STA. 25+00 CL

32-SPT
7-COC
16-SPT
5-TTS
42-RAG
181-CAK

28' TYP.

SEE EROSION CONTROL PLANS FOR additional INFORMATION.

8-SPT
1-ASG

53-CAK
12-RAG
STA. 63+00.36
2-ASG

28'

2-RAG
6-CAK

MATCH LINE - STA. 62+09.83

+50 LW

+50 JE

101+00 LW

102+00 LW

103+00 LW

104+00 LW

63+00 JE

IH 794 WB ENTRANCE RAMP (ABOVE)

JACKSON EB EXIT RAMP - TO VAN BUREN STREET

VAN BUREN STREET

IH 794 WB (ABOVE)

MATCH LINE - STA. 104+50 CL

N

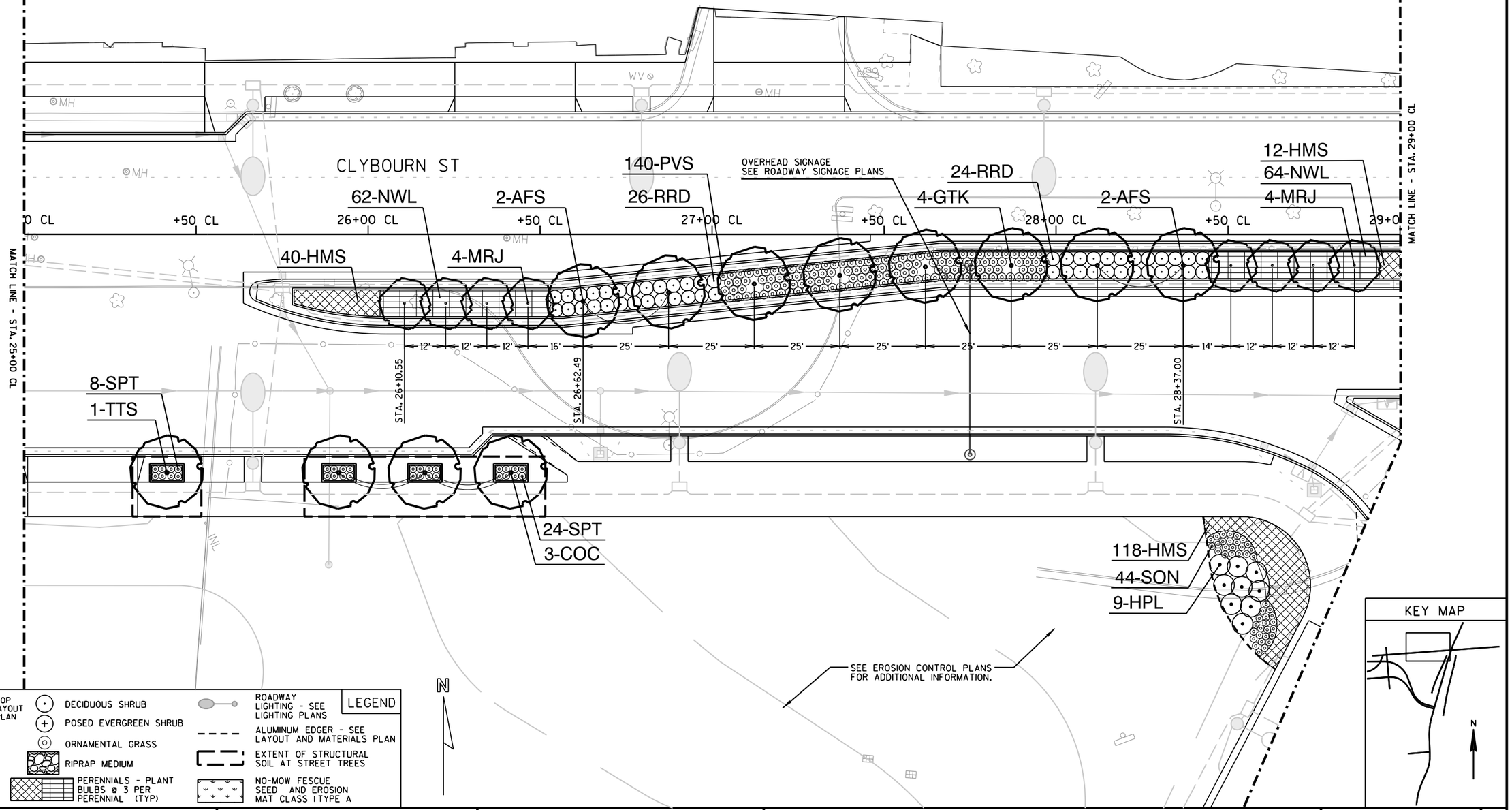
KEY MAP

LEGEND

- LIMESTONE OUTCROP BOULDERS, SEE LAYOUT AND MATERIALS PLAN
- ORNAMENTAL TREE
- SHADE TREE
- DECIDUOUS SHRUB
- POSED EVERGREEN SHRUB
- ORNAMENTAL GRASS
- RIPRAP MEDIUM
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP)
- ROADWAY LIGHTING - SEE LIGHTING PLANS
- ALUMINUM EDGER - SEE LAYOUT AND MATERIALS PLAN
- EXTENT OF STRUCTURAL SOIL AT STREET TREES
- NO-MOW FESCUE SEED AND EROSION MAT CLASS ITYPE A

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 151 E

2



LEGEND

- LIMESTONE OUTCROP BOULDERS, SEE LAYOUT AND MATERIALS PLAN
- ORNAMENTAL TREE
- SHADE TREE
- DECIDUOUS SHRUB
- POSED EVERGREEN SHRUB
- ORNAMENTAL GRASS
- RIPRAP MEDIUM
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP)
- ROADWAY LIGHTING - SEE LIGHTING PLANS
- ALUMINUM EDGER - SEE LAYOUT AND MATERIALS PLAN
- EXTENT OF STRUCTURAL SOIL AT STREET TREES
- NO-MOW FESCUE SEED AND EROSION MAT CLASS ITYPE A

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 152 E

KEY MAP

45-CAK
10-RAG

MATCH LINE - STA. 104+50 CL

794 EB ENTRANCE RAMP

794 WB EXIT RAMP

+50 LE
202+00 LE
203+00 LE
204+00 LE
205+00 LE
206+00 LE

62+00 VB
61+00 VB
60+00 VB

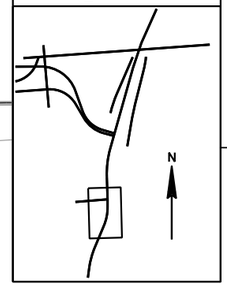
105+00 LW
106+00 LW
107+00 LW

LEGEND

- LIMESTONE OUTCROP BOULDERS, SEE LAYOUT AND MATERIALS PLAN
- ORNAMENTAL TREE
- SHADE TREE
- DECIDUOUS SHRUB
- POSED EVERGREEN SHRUB
- ORNAMENTAL GRASS
- RIPRAP MEDIUM
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP)
- ROADWAY LIGHTING - SEE LIGHTING PLANS
- ALUMINUM EDGER - SEE LAYOUT AND MATERIALS PLAN
- EXTENT OF STRUCTURAL SOIL AT STREET TREES
- NO-MOW FESCUE SEED AND EROSION MAT CLASS I TYPE A

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 153	E

KEY MAP



LEGEND

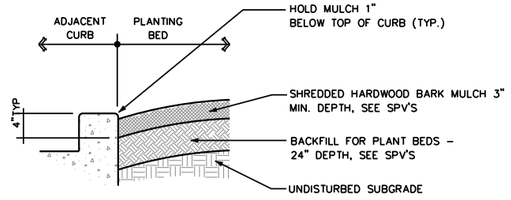
- LIMESTONE OUTCROP BOULDERS, SEE LAYOUT AND MATERIALS PLAN
- ORNAMENTAL TREE
- SHADE TREE
- DECIDUOUS SHRUB
- POSED EVERGREEN SHRUB
- ORNAMENTAL GRASS
- RIPRAP MEDIUM
- PERENNIALS - PLANT BULBS @ 3 PER PERENNIAL (TYP)
- ROADWAY LIGHTING - SEE LIGHTING PLANS
- ALUMINUM EDGER - SEE LAYOUT AND MATERIALS PLAN
- EXTENT OF STRUCTURAL SOIL AT STREET TREES
- NO-MOW FESCUE SEED AND EROSION MAT CLASS I TYPE A

35-RAG
21-PVN
7-VDC
9-PVN
20-RAG
24-PVN
8-VDC
42-RAG
+50 LM
14+00 LM
15+00 LM
16+00 LM
17+00 LM
18+00 LM
51+00 CH
52+00 CH
CHICAGO ST
LINCOLN MEMORIAL DR
INL
MH

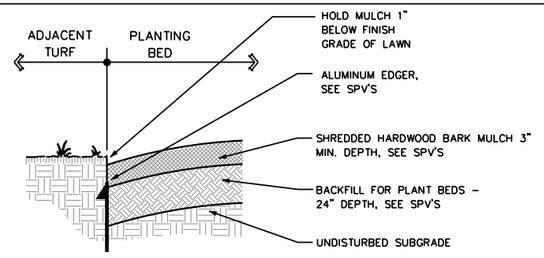
2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 154	E

FILE NAME : c:\pwv8i-local\baker_projects\joe.komorowski\d0330711\023107_pl.dgn
PLOT DATE : 7/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 30.0000 sf / in.
WISDOT/CADDS SHEET 42



1 TYP. SECTION - MULCH EDGE AT CURB



2 TYP. SECTION - ALUMINUM EDGER

PLANTING NOTES

CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING AWARE OF ALL RELATED EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR FIELD LOCATION OF ALL UNDERGROUND UTILITY LINES, INCLUDING DEPTHS, PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY AND ALL COST OR OTHER LIABILITIES INCURRED DUE TO DAMAGE OF SAID UTILITIES/STRUCTURES/ETC.

THE CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS APPARENT THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL LIABILITIES, INCLUDING NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.

CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH ALL PLANTING AND RELATED OPERATIONS.

SEE STANDARD SPECIFICATIONS AND DETAILS FOR PLANTING METHODS, REQUIREMENTS, TOPSOIL TESTING, MATERIALS, EXECUTION AND PLANT PROTECTION, PLANT STAKING METHODS, PLANT PIT DIMENSIONS, PLANTING MIXTURE AND OTHER RELATED REQUIREMENTS.

PLANT NAMES ARE ABBREVIATED ON THE DRAWINGS. SEE PLANT LEGEND FOR SYMBOLS, ABBREVIATIONS, BOTANICAL/COMMON NAMES, SIZES, ESTIMATED QUANTITIES (IF GIVEN) AND OTHER REMARKS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FURNISH ALL PLANT MATERIALS FREE OF PESTS OR PLANT DISEASES. IT IS THE CONTRACTOR'S OBLIGATION TO MAINTAIN AND PROVIDE WARRANTY FOR ALL PLANT MATERIALS PER THE STANDARD SPECIFICATIONS. ALL PLANTS SHALL BE SUBJECT TO APPROVAL BY THE RESIDENT ENGINEER AND JEFFREY S. POLENSKE, CITY OF MILWAUKEE ENGINEER (414-289-2400), PRIOR TO INSTALLATION.

THE CONTRACTOR SHALL FINE GRADE, RAKE AND BE RESPONSIBLE FOR POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES AND THROUGHOUT SITE, WITH ACCURATELY SET FLOW LINES. NO LOW SPOTS OR PONDING OF SURFACE WATER WILL BE ACCEPTED IN THE FINAL WORK. NO ROCKS OR DEBRIS WILL BE ACCEPTED. FINAL GRADE TOLERANCES ARE +/-0.1FOOT MAXIMUM.

WHERE PROVIDED, AREA TAKEOFFS AND PLANT QUANTITY ESTIMATES ARE FOR INFORMATION ONLY. CONTRACTOR IS RESPONSIBLE TO DO THEIR OWN QUANTITY TAKE-OFFS FOR ALL PLANT MATERIALS AND SIZES SHOWN ON PLANS. IN CASE OF ANY DISCREPANCIES, PLANS (PLANT SYMBOLS) ON DRAWINGS TAKE PRECEDENCE OVER CALL-OUTS AND/OR PLANT DATA CHART.

COORDINATE INSTALLATION OF ALL PLANT MATERIAL WITH INSTALLATION OF ALL ADJACENT PAVEMENTS, WALLS, MULCHES, DRAINAGE CURB AND RELATED STRUCTURES. ANY DAMAGE TO EXISTING IMPROVEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.

THE LANDSCAPE CONTRACTOR SHALL TAKE ALL NECESSARY SCHEDULING AND OTHER PRECAUTIONS TO AVOID WINTER, CLIMATIC, OR OTHER DAMAGE TO PLANTS. PLANT SUBSTITUTIONS BY THE LANDSCAPE CONTRACTOR WILL NOT BE PERMITTED UNLESS IT CAN BE VERIFIED UNEQUIVOCALLY THAT THE PLANTS ARE NOT AVAILABLE FROM NURSERY SOURCES LOCATED WITHIN 100 MILES FROM THE PROJECT SITE. IF THIS SHOULD HAPPEN, ANY PROPOSED PLANT SUBSTITUTION WILL REQUIRE PRIOR REVIEW AND APPROVAL BY THE RESIDENT ENGINEER AND JEFFREY S. POLENSKE, CITY OF MILWAUKEE ENGINEER (414-286-2400).

UNLESS OTHERWISE INDICATED ON THE DRAWINGS, ALL MEDIAN PLANTING BEDS ARE TO BE EXCAVATED TO A DEPTH OF 24-INCHES AND REPLACED WITH BACKFILL FOR PLANT BEDS - 24" DEPTH, (SEE SPV'S). ALL OTHER PLANTING BED AREAS OUTSIDE OF STRUCTURAL SOIL AREAS AND ENGINEERED SOIL AREAS SHALL BE PLANTED IN ACCORDANCE WITH SECTION 632 OF THE STANDARD SPECIFICATIONS.

REFER TO STREETSCAPE LAYOUT AND MATERIALS DRAWINGS FOR LAYOUT OF ALUMINUM EDGER, (SEE SPV'S).

UNLESS OTHERWISE INDICATED ON THE DRAWINGS, ALL PLANT BEDS, PRECAST PLANTERS AND CAST-IN-PLACE CONCRETE SALT-LIP PLANTERS SHALL RECEIVE SHREDDED HARDWOOD BARK MULCH (SEE SPV'S) AS INDICATED ON STREETSCAPE LAYOUT AND MATERIALS PLANS AND DETAILS.

ALL SHADE TREES PLANTED WITHIN STRUCTURAL SOIL, AT THE CAST-IN-PLACE CONCRETE SALT-LIP CURB PLANTERS, SHALL BE CENTERED WITHIN EACH PLANTER (SEE SPV'S).

REFER TO EROSION CONTROL PLANS FOR DELINEATION OF ALL PROPOSED LAWN SEED AND SOD AREAS (TYP).

2

2

PLANT DATA CHART

SYMBOL	COMMON NAME	SCIENTIFIC NAME	ANS TYPE	MATURE HEIGHT	SIZE WHEN PLANTED	ROOT CONDITION	MINIMUM SIZE BALL/POT ROOT DIAM.	MINIMUM SIZE BALL/POT ROOT DEPTH	MINIMUM SIZE PLANT HOLE DIAM.	MINIMUM SIZE PLANT HOLE DEPTH	BRACE OR GUY	FERTILIZER UNITS REQ'D	RODENT PROTECTION REQ'D	MULCH RING DIAM.	SPACING
	LARGE DECIDUOUS TREES														
TXD	BALDCYPRESS	TAXODIUM DISTICHUM	1T	50'-70'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
GDE	COFFEETREE, ESPRESSO KENTUCKY	GYMNOCLADUS DIOICA 'ESPRESSO'	1T	50'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
ULF	ELM, FONTIER	ULMUS 'FRONTIER'	1T	45'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
COC	HACKBERRY, CHICAGOLAND	CELTIS OCCIDENTALIS 'CHICAGOLAND'	1T	50'-60'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
GTK	HONEYLOCUST, SKYLINE	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE'	1T	45'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
TTS	LINDEN, STERLING SILVER	TILIA TOMENTOSA 'STERLING'	1T	40'-50'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
ASG	MAPLE, GREEN MOUNTAIN SUGAR	ACER SACCHARUM 'GREEN MOUNTAIN'	1T	45'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
ANW	MAPLE, NORWEGIAN SUNSET SHANTUNG HYBRID	ACER TRUNCATUM X A. PLATANOIDES 'KEITHSFORM'	1T	35'-45'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
AFS	MAPLE, SIENNA GLEN	ACER X FREEMANII 'SIENNA'	1T	60'	2.5" CAL	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
QBC	OAK, SWAMP WHITE	QUERCUS BICOLOR	1T	50'	2.0" CAL	B&B	28"	16"	52"	16"	NO	4	NO	72"*	AS SHOWN
	LARGE EVERGREEN TREES														
PGD	SPRUCE, BLACK HILLS	PICEA GLAUCA VAR. DENSATA	1T	20'-40'	8' HT	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
PGD	SPRUCE, BLACK HILLS	PICEA GLAUCA VAR. DENSATA	1T	20'-40'	10' HT	B&B	28"	16"	52"	16"	NO	4	NO	64"*	AS SHOWN
	SMALL DECIDUOUS TREES														
MRJ	CRABAPPLE, RED JEWEL	MALUS 'RED JEWEL'	3T	15'-18'	2" CAL SINGLE STEM	B&B	24"	14"	48"	14"	NO	3	NO	64"*	AS SHOWN
CVW	HAWTHORN, WINTER KING	CRATAEGUS VIRIDIS 'WINTER KING'	3T	15'	8'-10' HT CLUMP	B&B	24"	14"	48"	14"	NO	3	NO	64"*	AS SHOWN
SPM	LILAC, CHINA SNOW PEKING	SYRINGA PEKINENSIS 'MORTON'	3T	25'	8'-10' HT CLUMP	B&B	24"	14"	48"	14"	NO	3	NO	72"*	AS SHOWN
PTM	QUAKING ASPEN (SINGLE STEM)	POPULUS TREMULOIDES	3T	60'-80'	2" CAL SINGLE STEM	B&B	24"	14"	48"	14"	NO	3	NO	72"*	AS SHOWN
PTM-C	QUAKING ASPEN (CLUMP)	POPULUS TREMULOIDES	3T	60'-80'	10'-12' HT CLUMP	B&B	24"	14"	48"	14"	NO	3	NO	72"*	AS SHOWN
AGA	SERVICEBERRY, AUTUMN BRILLIANCE	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	3T	20'	10'-12' HT CLUMP	B&B	24"	14"	48"	14"	NO	3	NO	72"*	AS SHOWN
	DECIDUOUS SHRUBS														
HAV	WITCHHAZEL, COMMON	HAMAMELIS VIRGINIANA	3S	10'-30'	36" HT	CG	14"	9"	36"	9"	NO	2	NO	NONE	7'
CSB	DOGWOOD, BERGESON COMPACT	CORNUS SERICEA 'BERGESON COPACT'	3S	4'-6'	24" HT	CG	14"	9"	36"	9"	NO	2	NO	NONE	6'
FMM	FOTHERGILLA, MOUNT AIRY	FOTHERGILLA MAJOR 'MOUNT AIRY'	3S	5'	24" HT	CG	14"	9"	36"	9"	NO	2	NO	NONE	5'
DVL	HONEYSUCKLE, DWARF BUSH	DIERVILLA LONICERA	3S	4'	18" HT	CG	14"	9"	36"	9"	NO	2	NO	NONE	4'
HPL	HYDRANGREA, LIMELIGHT	HYDRANGEA PANICULATA 'LIMELIHGT'	3S	6'-8'	30" HT	CG	14"	9"	36"	9"	NO	2	NO	NONE	6'
RRD	RUGOSA ROSE, DWARF PAVEMENT	ROSA RUGOSA 'DWARD PAVEMENT'	3S	2'-3'	18" HT	CG	14"	9"	36"	9"	NO	2	NO	NONE	4'
RTD	SUMAC, CUTLEAF (LACELEAF) STAGHORN	RHUS TYPHINA 'DISSECTA' (R.T. DISSECTA')	3S	8'	24" HT	CG	14"	9"	36"	9"	NO	2	NO	NONE	6'
RAG	SUMAC, GRO LOW	RHUS AROMATICA 'GRO LO'	3S	2'	24" SPREAD	CG	14"	9"	36"	9"	NO	2	NO	NONE	5'
VDC	VIBURNUM, CHICAGO LUSTRE ARROWWOOD	VIBURNUM DENTATUM ' CHICAGO LUSTRE'	3S	10'	36" HT	CG	14"	9"	36"	9"	NO	2	NO	NONE	7'
VJD	VIBURNUM, JUDD	VIBURNUM x JUDII	3S	7'	36" HT	CG	14"	9"	36"	9"	NO	2	NO	NONE	6'
	PERENNIALS														
NWL	CATMINT, WALKER'S LOW'	NEPETA 'WALKER'S LOW'	1S	24"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
CVM	COREOPSIS, MOONBEAM	COREOPSIS VERTICILLATA 'MOONBEAM'	1S	12"-15"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
HMS	DAYLILY, STRAWBERRY CANDY	HEMEROCALLIS 'STRAWBERRY CANDY'	1S	26"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
SRF	GOLDENROD, FIREWORKS	SOLIDAGO RUGOSA 'FIREWORKS'	1S	3'-4'	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
ASP	NEW ENGLAND ASTER, PURPLE DOME	ASTER NOVAE-ANGLIAE 'PURPLE DOME'	1S	18"	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	18"
	ORNAMENTAL GRASSES														
CAK	FEATHER REED GRASS	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	1S	5'	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	36"
SON	INDIANGRASS	SORGHASTRUM NUTANS	1S	4'-6'	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
SCC	LITTLE BLUESTEM, CAROUSEL	SCHIZACHYRIUM SCOPARIUM 'CAROUSEL'	1S	30"	4" POT	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
SCB	LITTLE BLUESTEM, THE BLUES	SCHIZACHYRIUM SCOPARIUM 'THE BLUES'	1S	18"	4" POT	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
SPT	PRAIRIE DROPSEED, TARA DWARF	SPOROBOLUS HETEROLEPSIS 'TARA'	1S	18"	4" POT	CG	8"	8"	18"	8"	NO	1	NO	NONE	24"
PVN	SWITCH GRASS, NORTHWIND	PANICUM VIRGATUM 'NORTHWIND'	1S	6'	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	36"
PVS	SWITCH GRASS, SHENANDOAH	PANICUM VIRGATUM 'SHENADOAH'	1S	3'	1 GAL.	CG	8"	8"	18"	8"	NO	1	NO	NONE	30"

B&B: BALLED AND BURLAPED
CG: CONTAINER GROWN
HT: HEIGHT
BR: BARE ROOT
* MULCH RING ONLY APPLICABLE IF PLANTED OUTSIDE OF A PLANTING BED

NOTE: PTM SMALL DECIDUOUS TREES ARE TO BE PROVIDED IN A RANDOM 50/50 MIX OF SINGLE STEM (PTM) AND CLUMP FORM (PTM-C). SEE LANDSCAPE PLANS FOR QUANTITIES OF EACH ROOT CONDITION TYPE AND RANDOMLY LOCATE BOTH AT EACH LOCATION WHERE PTM ARE INDICATED.

2

2

STREETSCAPE LAYOUT NOTES

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE RESIDENT ENGINEER.

ALL DIMENSIONS SHOWN ARE IN FEET AND INCHES.

UNLESS INDICATED OTHERWISE, ALL DIMENSIONS SHOWN ALONG THE ROADWAYS ARE TAKEN FROM THE BACK OF THE CURB.

UNLESS SHOWN OTHERWISE, ALL DIMENSIONS AND LAYOUT INFORMATION ARE GIVEN FOR THE OUTSIDE EDGE OF PRECAST CONCRETE CURBING, CONCRETE HEADER AND CAST-IN-PLACE SALT LIP CURB.

LOCATE EXPANSION AND CONTROL JOINTS PER PLANS AND DETAILS.

REFER TO ROADWAY PLANS FOR THE LOCATIONS OF PROPOSED UTILITY LINES, STRUCTURES, GRADING AND SITE ELEVATIONS.

ALL SAND-SET CONCRETE PAVER PAVING SURFACES SHALL BE FLUSH AND MEET SMOOTHLY AND EVENLY.

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. POTHOLEAS NECESSARY.

ALL UTILITIES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

SMOOTH, SQUARE AND EVEN JOINTS SHALL BE PROVIDED WHERE MATCHING EXISTING PAVEMENT AND SIDEWALK BY SAWCUTTING.

CONTRACTOR TO STAY WITHIN PUBLIC R.O.W. UNLESS OTHERWISE NOTED AND ALL NECESSARY EASEMENTS HAVE BEEN AQUIRED.

PROVIDE ALL SUBMITTALS TO RESIDENT ENGINEER AND/OR JEFFREY S. POLENSKE, CITY OF MILWAUKEE ENGINEER (414-289-2400), FOR REVIEW AND APPROVAL AS IDENTIFIED IN THE SPECIAL PROVISIONS.

CONSTRUCT MOCK-UPS OF ALL PAVING AND HARDSCAPE ELEMENTS FOR REVIEW AND APPROVAL AS IDENTIFIED IN THE SPECIAL PROVISIONS.

KEY MAP

N

MATCH LINE - STA. 109+50 LM

FENCING - SEE FENCING PLANS

209+00 LE

794 WB EXIT RAMP

+50 LE

210+00 LE

110+00 LM

794 EB ENTRANCE RAMP

+50 LM

111+00 LM

30'

RAD.=19.8'

EXTENTS OF DECOMPOSED GRANITE STONE MULCH TO FOLLOW EDGE OF HIGHWAY OVERPASS (TYP.)

RIPRAP MEDIUM EXTEND TO CENTER OF BASIN, 10' LONG

SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION

BIOFILTRATION BASIN

326+00 LS

+50 LS

327+00 LS

STA. 26+28.01
ALUM. EDGER

8'

PROVIDE CONTINUOUS PRECAST CONCR. CURB PIECES AT ANGLE LOCATIONS. 18" MIN. LENGTH ON BOTH SIDES OF BEND.

4 CONCR. PAVERS AT PRECAST CONCR.

MATCH LINE - STA. 27+50 LM

+00 LM

+50 LM

24+00 LM

+50 LM

25+00 LM

+50 LM

26+00 LM

+50 LM

27+00 LM

+50

6 CONCR. PAVERS AT CONCR. HEADER

90°

90°

3 CONCR. PAVERS AT CONCR. PAVING

STA. 25+14.81
ALUM. EDGER

STA. 25+50.13
CONCR. HEADER

STA. 26+05.45
PRELAST CURB

STA. 26+24.33
ALUM. EDGER

STA. 26+50.43
ALUM. EDGER

LINCOLN MEMORIAL DR

22'

13.8'

25.3'

N

425+00 LN

+50 LN

426+00 LN

+50 LN

427+00 LN

+50

BIOFILTRATION BASINS

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

LEGEND

- SAND-SET CONCR. PAVERS OVER CONCR. BASE - SEE SPV'S (1)
- DECORATIVE STONE MULCH, 3" TH. SEE SPV'S
- DECOMPOSED GRANITE STONE MULCH, 3" TH. SEE SPV'S
- BACKFILL FOR PLANT BEDS, 24" TH. MIN. SEE SPV'S
- RIPRAP MEDIUM
- EXTENT OF SURFACE-LEVEL STRUCTURAL SOIL AT STREET TREES. SEE BMP - PERMEABLE PAVEMENT PLANS
- PERMEABLE CONCRETE PAVERS IN ROADWAY, SEE BMP - PERMEABLE PAVEMENT PLAN
- PERMEABLE CONCRETE PAVERS IN TERRACE, SEE BMP - PERMEABLE PAVEMENT PLAN
- PRECAST CONCR. PLANTER CURB IN MEDIANS (4)
- SALT LIP CONCRETE CURB & 12" MIN. TH. BACKFILL FOR PLANT BEDS AT STREET TREE, SEE BMP - PERMEABLE PAVEMENT PLANS (16)
- ALUMINUM EDGER, SEE SPV'S & INSTALL PER LANDSCAPE DETAILS
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT AND MATERIALS PLAN	SHEET	E

FILE NAME : c:\pwv8i-local\baker_projects\joe.komorowski\d0330711\023111_lm.dgn
PLOT DATE : 7/29/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 30.0000 sf / in.
WISDOT/CADDS SHEET 42

794 EB ENTERANCE RAMP

+50 LS

328+00 LS

+50 LS

329+00 LS

+50 LS

330+00 LS

+50 LS

OVERHEAD SIGNAGE
SEE SIGNING PLANS

STA. 28+37.01
ALUM. EDGER

STA. 29+08.34
ALUM. EDGER

STA. 29+67.73
ALUM. EDGER

STA. 29+91.53
ALUM. EDGER

STA. 30+63.16
CONCR. HEADER

(4) CONCR. PAVERS AT PRECAST CONCR.

(6) CONCR. PAVERS AT CONCR. HEADER

(6) CONCR. PAVERS AT CONCR. HEADER

(3) CONCR. PAVERS AT CONCR. PAVING

(3) CONCRETE PAVERS AT CONCR. PAVING

MATCH LINE - STA. 29+00 CL

CLYBOURN ST

+50 CL

30+00 CL

MATCH LINE - STA. 32+00 LM

+50 CL

MATCH LINE - STA. 27+50 LM

LM

28+00 LM

+50 LM

29+00 LM

+50 LM

30+00 LM

+50 LM

31+00 LM

+50 LM

32+0

90°

90°

LINCOLN MEMORIAL DR

STA. 27+50.00
ALUM. EDGER

STA. 27+74.53
ALUM. EDGER

STA. 28+59.15
PRECAST CURB

STA. 29+02.50
ALUM. EDGER

STA. 30+07.19
ALUM. EDGER

STA. 30+48.24
ALUM. EDGER

11'

5'

19'

13'

8'

595
596
597
598
599
600
594
593
592
591
587

LN

428+00 LN

+50 LN

429+00 LN

+50 LN

430+00 LN

+50 LN

431+00 LN

+50 LN

794 WB EXIT RAMP

STA. 430+07.13
ALUM. EDGER

STA. 430+14.33
ALUM. EDGER

HARBOR DR. SIDEWALK & CURB AND GUTTER, BY OTHERS

STA. 431+07.30
ALUM. EDGER

STA. 430+48.69
ALUM. EDGER

BIOFILTRATION BASIN

9.5' (TYP.)

7.8'

N

KEY MAP

N

LEGEND

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

- SAND-SET CONCR. PAVERS OVER CONCR. BASE - SEE SPV'S (1)
- DECORATIVE STONE MULCH, 3" TH. SEE SPV'S
- DECOMPOSED GRANITE STONE MULCH, 3" TH. SEE SPV'S
- BACKFILL FOR PLANT BEDS, 24" TH. MIN. SEE SPV'S
- RIPRAP MEDIUM
- EXTENT OF SURFACE-LEVEL STRUCTURAL SOIL AT STREET TREES. SEE BMP - PERMEABLE PAVEMENT PLANS
- PERMEABLE CONCRETE PAVERS IN ROADWAY, SEE BMP - PERMEABLE PAVEMENT PLAN
- PERMEABLE CONCRETE PAVERS IN TERRACE, SEE BMP - PERMEABLE PAVEMENT PLAN
- PRECAST CONCR. PLANTER CURB IN MEDIANS (4)
- SALT LIP CONCRETE CURB & 12" MIN. TH. BACKFILL FOR PLANT BEDS AT STREET TREE, SEE BMP - PERMEABLE PAVEMENT PLANS (16)
- ALUMINUM EDGER, SEE SPV'S & INSTALL PER LANDSCAPE DETAILS
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT AND MATERIALS PLAN	SHEET 159 E

FILE NAME : c:\pwv8i-local\baker_projects\joe.komorowski\d0330711\023112_lm.dgn PLOT DATE : 7/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 30.0000 sf / in.

WISDOT/CADDS SHEET 42

CLYBOURN STREET

21+00 CL +50 CL 22+00 CL +50 CL 23+00 CL +50 CL 24+00 CL +50 CL 25+00

65+00 VB +50 VB 64+00 VB 63+00 VB

STA. 23+11.50 SALT LIP CURB

STA. 22+51.50 SALT LIP CURB

CONCR. PAVERS AT PRECAST CONCR. 4

PROVIDE CONTINUOUS PRECAST CONCR. CURB PIECES AT ANGLE LOCATIONS. 18" MIN. LENGTH ON BOTH SIDES OF BEND.

STA. 23+88.50 SALT LIP CURB

STA. 24+23.50 SALT LIP CURB

OUTLET CONTROL STRUCTURE SEE BMP-PERMEABLE PAVEMENT PLANS (TYP.)

CONCR. PAVERS AT CONCR. PAVING 3

CONCR. PAVERS AT HEADER 6

STA. 22+40.74 CONCR. HEADER

STA. 22+59.57 PRECAST CURB

STA. 22+76.50 SALT LIP CURB

STA. 23+11.50 SALT LIP CURB

STA. 23+29.00

STA. 23+54.50 SALT LIP CURB

STA. 23+72.57 PRECAST CURB

STA. 24+20.50 SALT LIP CURB

STA. 24+41.00

STA. 24+56.60 CONCR. HEADER

STA. 24+73.50 SALT LIP CURB

MATCH LINE - STA. 25+00 CL

GUY

+50 JE

63+00 JE

101+00 LW

+50 LW

102+00 LW

IH 794 WB ENTRANCE RAMP (ABOVE)

JACKSON EB EXIT RAMP - VAN BUREN STREET

STA. 22+79.80 CONCR. HEADER

71' RAD. AT OUTSIDE CONCR. HEADER EDGE

CAST-IN-PLACE CONCRETE HEADER, PAID AS CONCRETE CURB TYPE D

80'

128'

15'

EXTENT OF STRUCTURAL SOIL AT SURFACE (TYP.)

ALUMINUM EDGER (TYP.)

RAD.=50.7'

SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION

EXTENTS OF DECOMPOSED GRANITE STONE MULCH TO FOLLOW EDGE OF HIGHWAY OVERPASS (TYP.)

STA. 63+23.29 SALT LIP CURB

STA. 63+15.48 CONCR. HEADER

5' 10' 5'

15'

60'

37'

15'

VAN BUREN STREET

103+00 LW

104+00 LW

+50 LW

IH 794 WB (ABOVE)

N

MATCH LINE - STA. 62+09.83

KEY MAP

N

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

LEGEND

- SAND-SET CONCR. PAVERS OVER CONCR. BASE - SEE SPV'S (1)
- DECORATIVE STONE MULCH, 3" TH. SEE SPV'S
- DECOMPOSED GRANITE STONE MULCH, 3" TH. SEE SPV'S
- BACKFILL FOR PLANT BEDS, 24" TH. MIN. SEE SPV'S
- RIPRAP MEDIUM
- EXTENT OF SURFACE-LEVEL STRUCTURAL SOIL AT STREET TREES. SEE BMP - PERMEABLE PAVEMENT PLANS
- PERMEABLE CONCRETE PAVERS IN ROADWAY, SEE BMP - PERMEABLE PAVEMENT PLAN
- PERMEABLE CONCRETE PAVERS IN TERRACE, SEE BMP - PERMEABLE PAVEMENT PLAN
- PRECAST CONCR. PLANTER CURB IN MEDIANS (4)
- SALT LIP CONCRETE CURB & 12" MIN. TH. BACKFILL FOR PLANT BEDS AT STREET TREE, SEE BMP - PERMEABLE PAVEMENT PLANS (16)
- ALUMINUM EDGER, SEE SPV'S & INSTALL PER LANDSCAPE DETAILS
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT AND MATERIALS PLAN	SHEET 160	E

FILE NAME : c:\pwv8i-local\baker_projects\joe.komorowski\d0330711\023114_lm.dgn PLOT DATE : 7/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 30.0000 sf / in.

WISDOT/CADDS SHEET 42

2

2

CLYBOURN ST

WV

PROVIDE CONTINUOUS PRECAST CONCR. CURB PIECES AT ANGLE LOCATIONS. 18" MIN. LENGTH ON BOTH SIDES OF BEND. (TYP.)

CONCR. PAVERS AT CONCR. HEADER (6)

0 CL | +50 CL | 26+00 CL | +50 CL | 27+00 CL | +50 CL | 28+00 CL | +50 CL | 29+0

MATCH LINE - STA. 25+00 CL

MATCH LINE - STA. 29+00 CL

STA. 25+77.98
CONCR. HEADER

STA. 25+36.50 SALT LIP CURB

STA. 25+64.00

STA. 25+86.50 SALT LIP CURB

STA. 26+46.50 SALT LIP CURB

STA. 26+88.00

STA. 28+09.00

CONCR. PAVERS AT CONCR. HEADER (6)

OVERHEAD SIGNAGE
SEE ROADWAY SIGNAGE PLANS

STA. 28+42.76
ALUM. EDGER

STA. 28+63.42

10' | 5' | 18' | 5' | 10' | 15' | 10' | 15' | 10'

5' | 5' | 5' | 5' | 5'

7.42' (TYP.)

49.06'

OUTLET CONTROL STRUCTURE, SEE BMP-PERMEABLE PAVEMENT PLANS (TYP.)

SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION

N

KEY MAP

N

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

LEGEND

- SAND-SET CONCR. PAVERS OVER CONCR. BASE - SEE SPV'S (1)
- DECORATIVE STONE MULCH, 3" TH. SEE SPV'S
- DECOMPOSED GRANITE STONE MULCH, 3" TH. SEE SPV'S
- BACKFILL FOR PLANT BEDS, 24" TH. MIN. SEE SPV'S
- RIPRAP MEDIUM
- EXTENT OF SURFACE-LEVEL STRUCTURAL SOIL AT STREET TREES. SEE BMP - PERMEABLE PAVEMENT PLANS
- PERMEABLE CONCRETE PAVERS IN ROADWAY, SEE BMP - PERMEABLE PAVEMENT PLAN
- PERMEABLE CONCRETE PAVERS IN TERRACE, SEE BMP - PERMEABLE PAVEMENT PLAN
- PRECAST CONCR. PLANTER CURB IN MEDIANS (4)
- SALT LIP CONCRETE CURB & 12" MIN. TH. BACKFILL FOR PLANT BEDS AT STREET TREE, SEE BMP - PERMEABLE PAVEMENT PLANS (16)
- ALUMINUM EDGER, SEE SPV'S & INSTALL PER LANDSCAPE DETAILS
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT AND MATERIALS PLAN	SHEET 161 E

FILE NAME : c:\pwv8i-local\baker_projects\nicole.schneider\d0330711\023115_lm.dgn | PLOT DATE : 7/31/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 30.0000 sf / in.

WISDOT/CADDS SHEET 42

KEY MAP

MATCH LINE - STA. 62+09.83

STA. 61+58.44
ALUM. EDGER

62+00 VB

+50 LE

202+00 LE

+50 LE

+50 VB

203+00 LE

+50 LE

204+00 LE

61+00 VB

VAN BUREN STREET

32.5'

+50 LE

794 WB EXIT RAMP

205+00 LE

FENCING - SEE
FENCING PLANS

105+00 LW

+50 LW

794 EB ENTRANCE RAMP

106+00 LW

SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION

EXTENTS OF DECOMPOSED GRANITE STONE MULCH TO FOLLOW EDGE OF HIGHWAY OVERPASS (TYP.)

+50 VB

+50 VB

+00 VB

N

LEGEND

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

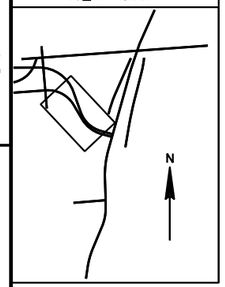
- SAND-SET CONCR. PAVERS OVER CONCR. BASE - SEE SPV'S (1)
- DECORATIVE STONE MULCH, 3" TH. SEE SPV'S
- DECOMPOSED GRANITE STONE MULCH, 3" TH. SEE SPV'S
- BACKFILL FOR PLANT BEDS, 24" TH. MIN. SEE SPV'S
- RIPRAP MEDIUM
- EXTENT OF SURFACE-LEVEL STRUCTURAL SOIL AT STREET TREES. SEE BMP - PERMEABLE PAVEMENT PLANS
- PERMEABLE CONCRETE PAVERS IN ROADWAY, SEE BMP - PERMEABLE PAVEMENT PLAN
- PERMEABLE CONCRETE PAVERS IN TERRACE, SEE BMP - PERMEABLE PAVEMENT PLAN
- PRECAST CONCR. PLANTER CURB IN MEDIANS (4)
- SALT LIP CONCRETE CURB & 12" MIN. TH. BACKFILL FOR PLANT BEDS AT STREET TREE, SEE BMP - PERMEABLE PAVEMENT PLANS (16)
- ALUMINUM EDGER, SEE SPV'S & INSTALL PER LANDSCAPE DETAILS
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT AND MATERIALS PLAN	SHEET 162 E

FILE NAME : c:\pwv8i-local\baker_projects\joe.komorowski\d0330711\023116_1m.dgn PLOT DATE : 7/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 30.0000 sf / in.

WISDOT/CADDS SHEET 42

KEY MAP



2

2

RAD.=1040.9'

RAD.=965.7'

EXTENTS OF DECOMPOSED GRANITE STONE MULCH TO FOLLOW EDGE OF HIGHWAY OVERPASS (TYP.)

FENCING - SEE FNCING PLANS

MATCH LINE - STA. 106+13

794 EB ENTRANCE RAMP

794 WB EXIT RAMP

+50 LW

107+00 LW

+50 LW

+50 LE

206+00 LE

108+00 LW

+50 LW

109+00 LW

+50 LE

207+00 LE

+50 LE

208+00 LE

+50 LE

MATCH LINE - STA. 109+50

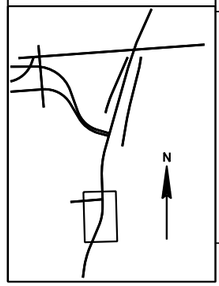
FENCING - SEE FENCING PLANS

N

LEGEND	
(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)	
SAND-SET CONCR. PAVERS OVER CONCR. BASE - SEE SPV'S (1)	PERMEABLE CONCRETE PAVERS IN ROADWAY, SEE BMP - PERMEABLE PAVEMENT PLAN
DECORATIVE STONE MULCH, 3" TH. SEE SPV'S	PERMEABLE CONCRETE PAVERS IN TERRACE, SEE BMP - PERMEABLE PAVEMENT PLAN
DECOMPOSED GRANITE STONE MULCH, 3" TH. SEE SPV'S	PRECAST CONCR. PLANTER CURB IN MEDIANS (4)
BACKFILL FOR PLANT BEDS, 24" TH. MIN. SEE SPV'S	SALT LIP CONCRETE CURB & 12" MIN. TH. BACKFILL FOR PLANT BEDS AT STREET TREE, SEE BMP - PERMEABLE PAVEMENT PLANS (16)
RIPRAP MEDIUM	ALUMINUM EDGER, SEE SPV'S & INSTALL PER LANDSCAPE DETAILS
EXTENT OF SURFACE-LEVEL STRUCTURAL SOIL AT STREET TREES, SEE BMP - PERMEABLE PAVEMENT PLANS	ROADWAY LIGHTING - SEE ELECTRICAL PLANS

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT AND MATERIALS PLAN	SHEET 163	E

KEY MAP

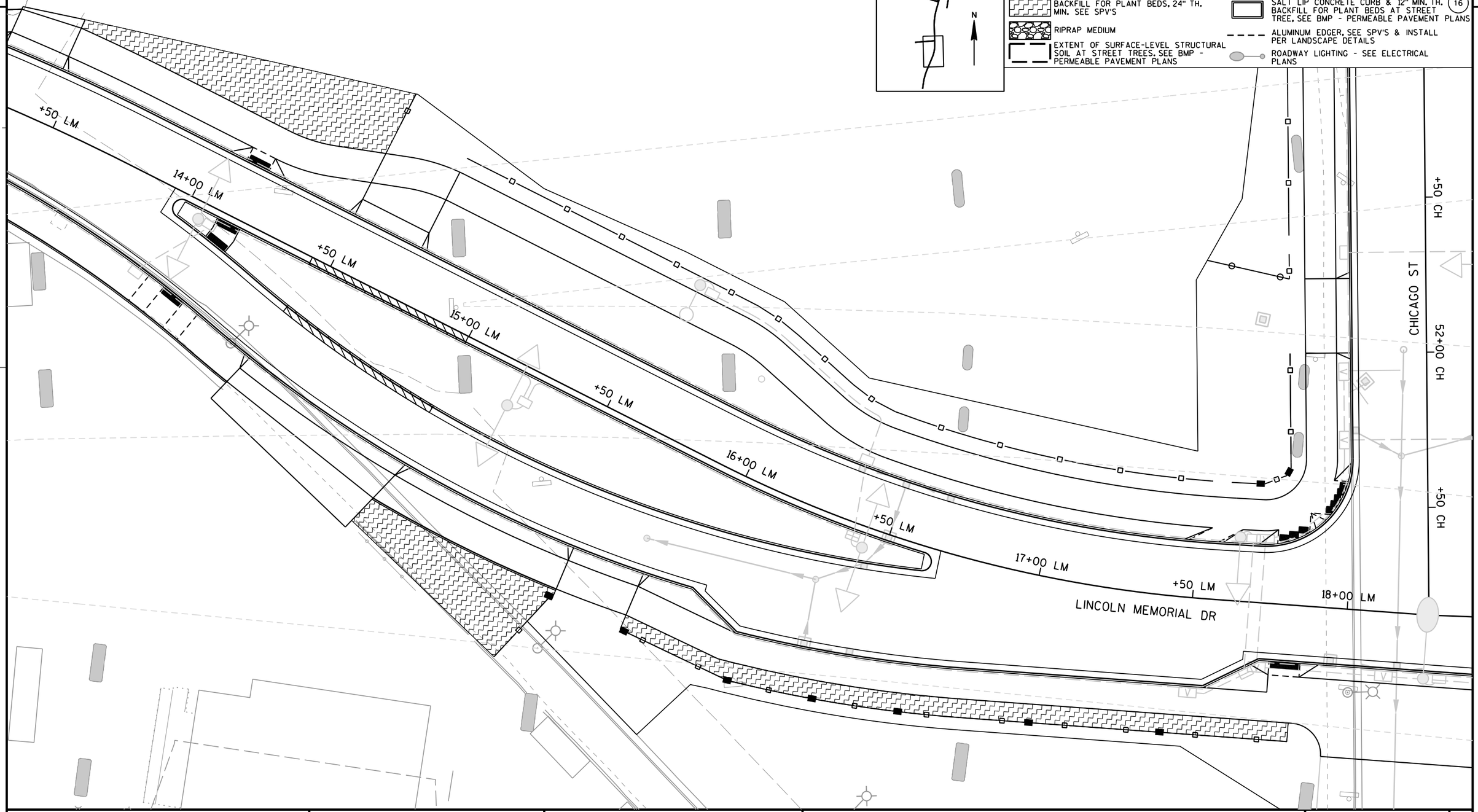


LEGEND

(XX) DETAIL CALLOUTS SHOWN ON PLAN DETAILS AND IN LEGEND REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER. SEE STREETSCAPE DETAIL SHEETS (TYP)

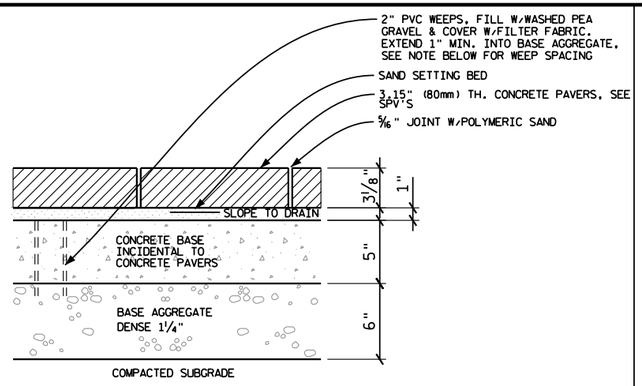
- SAND-SET CONCR. PAVERS OVER CONCR. BASE - SEE SPV'S (1)
- DECORATIVE STONE MULCH, 3" TH. SEE SPV'S
- DECOMPOSED GRANITE STONE MULCH, 3" TH. SEE SPV'S
- BACKFILL FOR PLANT BEDS, 24" TH. MIN. SEE SPV'S
- RIPRAP MEDIUM
- EXTENT OF SURFACE-LEVEL STRUCTURAL SOIL AT STREET TREES. SEE BMP - PERMEABLE PAVEMENT PLANS
- PERMEABLE CONCRETE PAVERS IN ROADWAY, SEE BMP - PERMEABLE PAVEMENT PLAN
- PERMEABLE CONCRETE PAVERS IN TERRACE, SEE BMP - PERMEABLE PAVEMENT PLAN
- PRECAST CONCR. PLANTER CURB IN MEDIANS (4)
- SALT LIP CONCRETE CURB & 12" MIN. TH. BACKFILL FOR PLANT BEDS AT STREET TREE, SEE BMP - PERMEABLE PAVEMENT PLANS (16)
- ALUMINUM EDGER, SEE SPV'S & INSTALL PER LANDSCAPE DETAILS
- ROADWAY LIGHTING - SEE ELECTRICAL PLANS

2



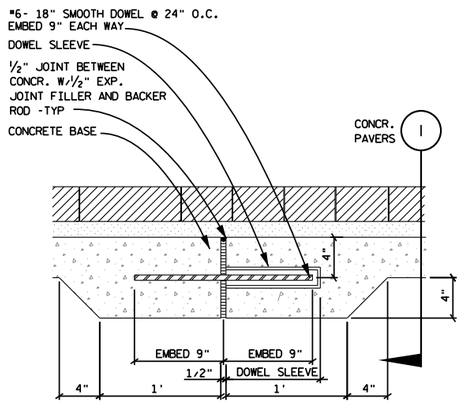
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	STREETSCAPE LAYOUT AND MATERIALS PLAN	SHEET 164 E

FILE NAME : c:\pwv8i-local\baker_projects\joe.komorowski\d0330711\023118_lm.dgn PLOT DATE : 7/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 30.0000 sf / in.



(1) SAND-SET CONCRETE PAVERS - 80mm

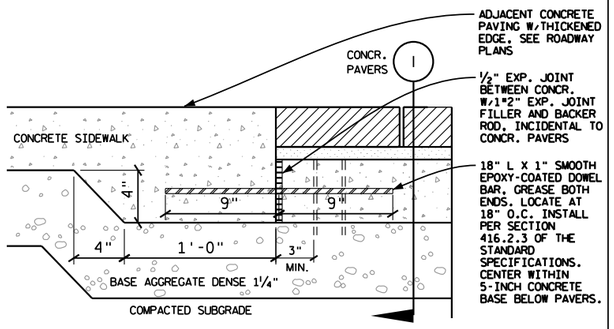
REFER TO STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATION OF PAVERS. PROVIDE WEEPS IN GRID LAYOUT AT 4' O.C. STARTING AT LOW END. SLOPE CONCRETE BASE TO WEEPS AT 1% MIN. PROVIDE CONTROL JOINTS IN CONCRETE BASE AT 4' O.C. PROVIDE EXPANSION JOINTS AT 24'-0" O.C. MAX. UNLESS OTHERWISE NOTED ON DRAWINGS. ALL ITEMS INDICATED ABOVE ARE INCIDENTAL TO SAND-SET CONCRETE PAVERS.



(2) SAND-SET CONCRETE PAVERS CONSTRUCTION/EXPANSION JOINT

ALL ITEMS ABOVE ARE INCIDENTAL TO CONCRETE PAVERS. PROVIDE AT 25' O.C. UNLESS OTHEWISE NOTED ON STREETSCAPE LAYOUT AND MATERIALS PLANS

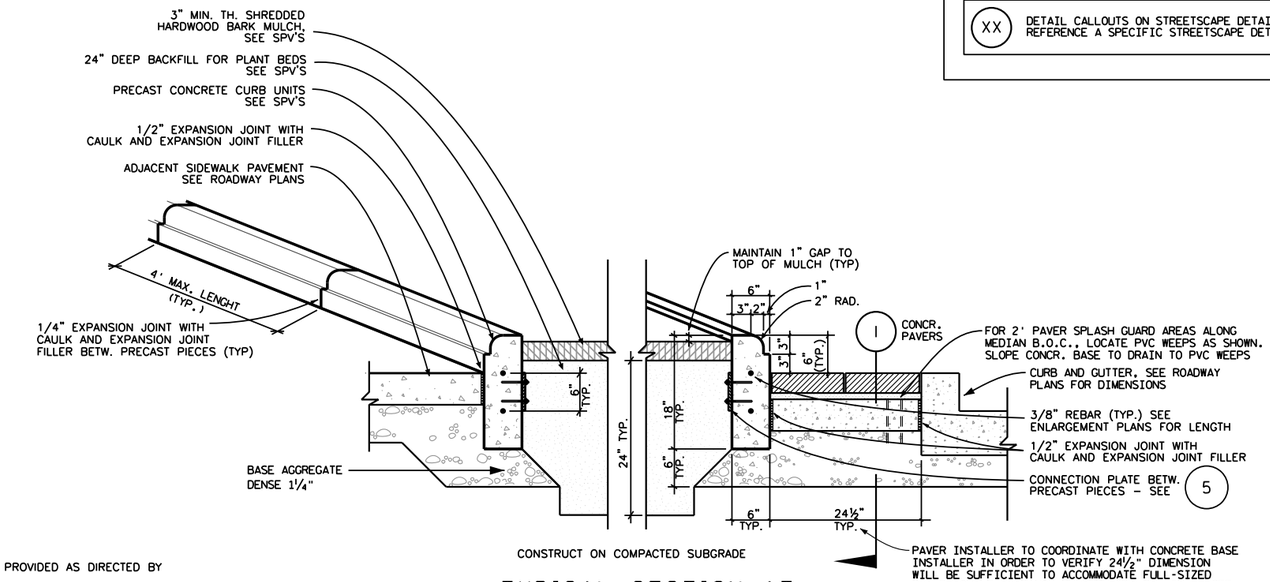
N.T.S.



(3) TYPICAL SECTION - CONCRETE PAVERS AT CONCRETE PAVING

SEE STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATIONS

1" = 1'-0"



TYPICAL SECTION AT PRECAST CONCRETE PLANTER

NOTES:
REPLACEMENT PRECAST CURB PIECES TO BE PROVIDED AS DIRECTED BY OWNER.

TOP OF ALL PRECAST CONCRETE PLANTERS TO BE HELD CONSISTENT AT 6" ABOVE F.G. AT ADJCACENT PAVING (TYP). PRECAST PIECES TO BE MANUFACTURED TO MATCH ADJACENT F.G. AS CLOSELY AS POSSIBLE. REFER TO GRADING PLANS AND FIELD-VERYFY TO CONFIRM ACTUAL CONDITIONS OF FINISHED PAVEMENT GRADES.

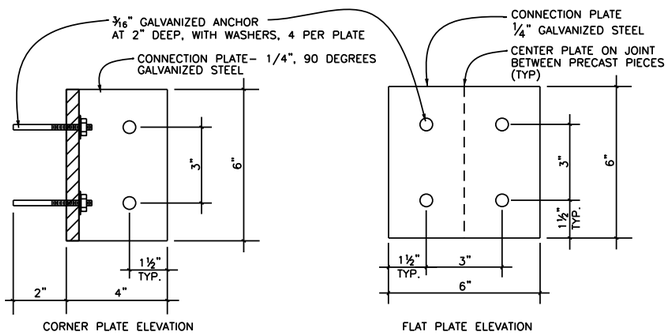
CAULK COLOR BETWEEN PRECAST CONCRETE PIECES SHALL MATCH COLOR OF PRECAST CONCRETE. SUBMIT SAMPLES TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO CONSTRUCTION.

(4) TYPICAL SECTION - PRECAST CONCRETE PLANTER

1" = 2'-0"

DETAIL SHEET NOTE:

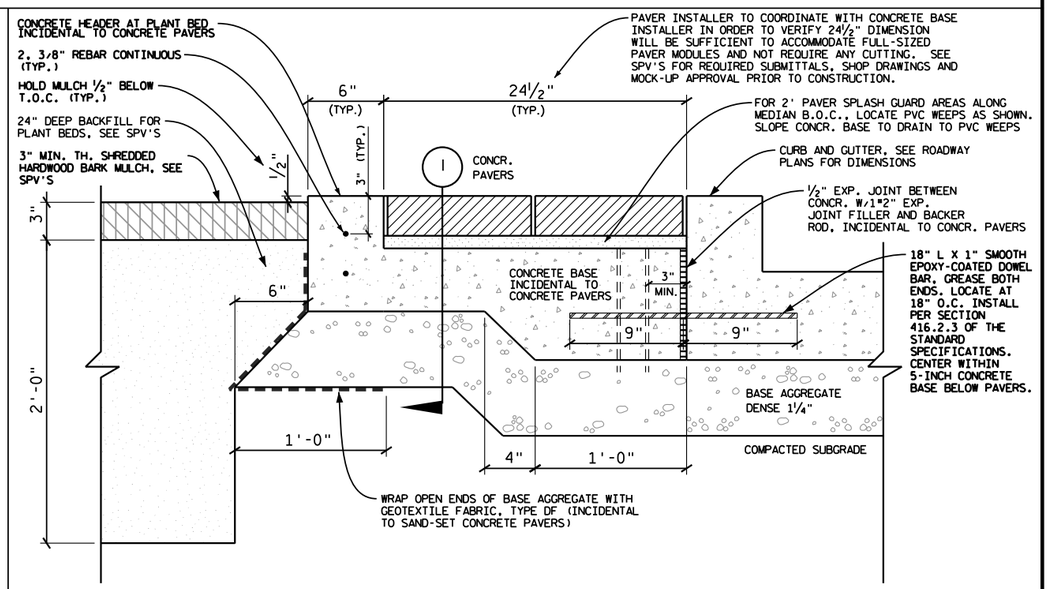
(XX) DETAIL CALLOUTS ON STREETSCAPE DETAIL SHEETS REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER (TYP)



(5) PRECAST CONCRETE PLANTER CONNECTION PLATE DETAIL

CONNECTION PLATES ARE INCIDENTAL TO PRECAST CONCRETE CURBING

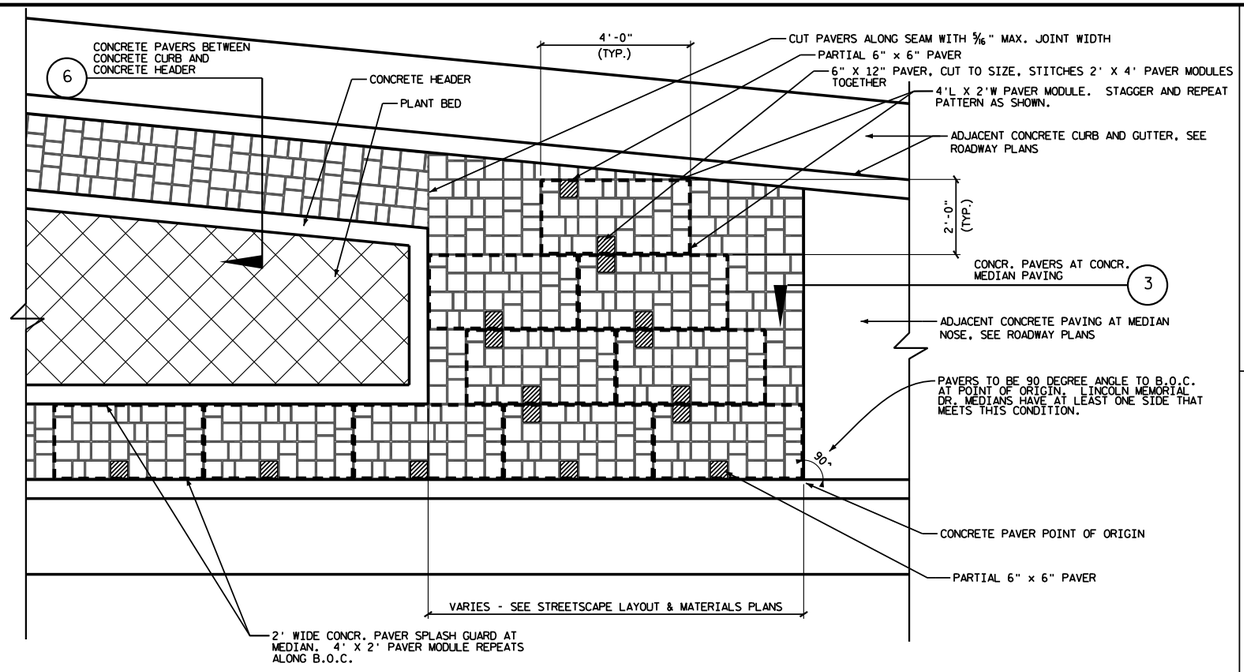
N.T.S.



(6) TYPICAL SECTION - CONCRETE PAVERS & CONCRETE HEADER AT BACK OF CURB

SEE STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATIONS

1" = 1'-0"



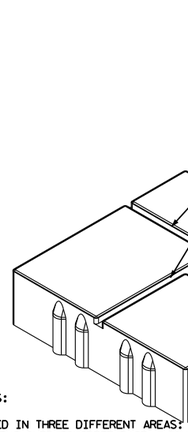
7 TYPICAL ENLARGEMENT - CONCRETE PAVERS AT ROADWAY MEDIAN

REFER TO STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATION OF PAVERS.

DETAIL SHEET NOTE:

(XX) DETAIL CALLOUTS ON STREETSCAPE DETAIL SHEETS REFERENCE A SPECIFIC STREETSCAPE DETAIL NUMBER (TYP)

10 NOT USED

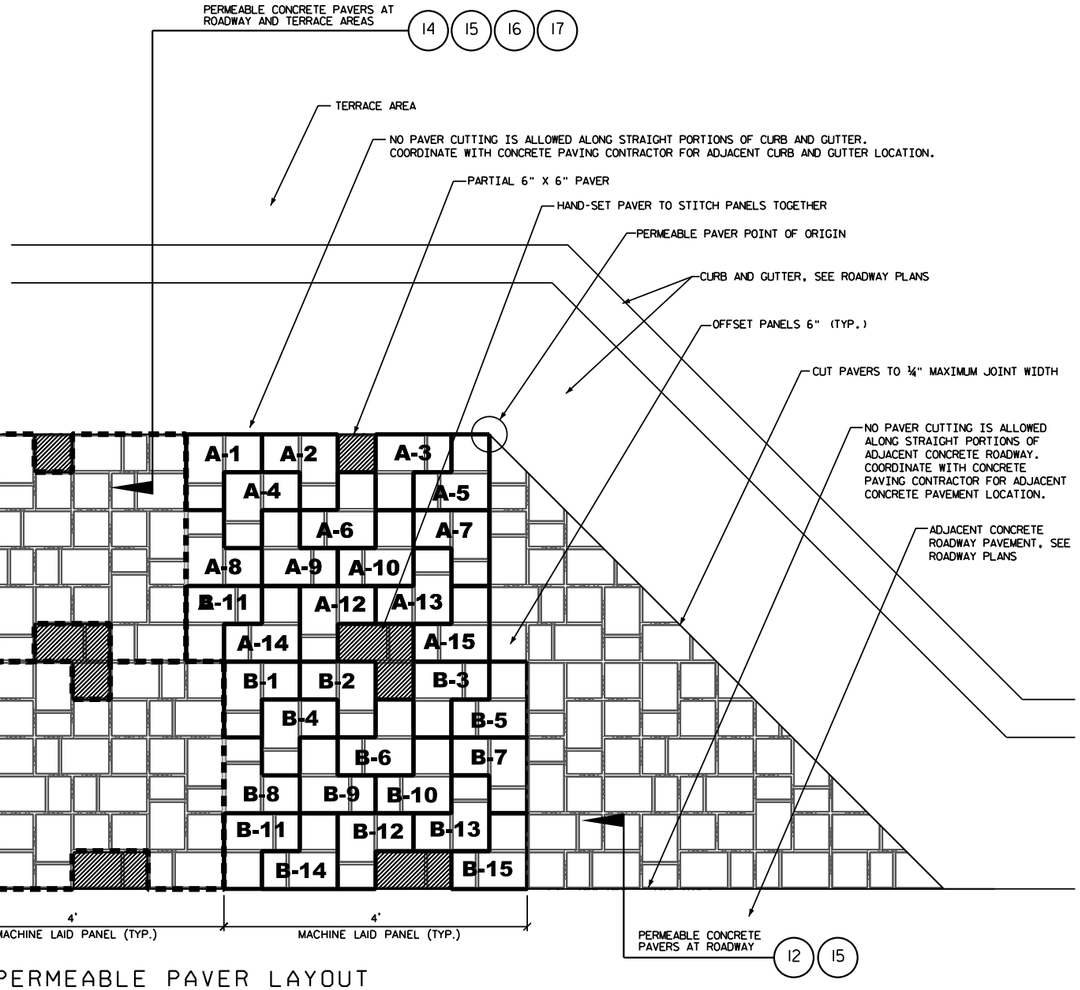


BELGARD AQUALINE SERIES PAVERS

- MULTI-COBBLE PERMEABLE PAVER SIZES:
  12" X 12" X 80MM
- THE TWO PAVERS SIZES ARE TO BE USED IN THREE DIFFERENT AREAS:
  1. SAND-SET CONCRETE PAVER PAVING OVER CONCRETE BASE - 80MM, ITEM SPV.0165.1001; USED IN ROADWAY MEDIAN AREAS.
  2. PERMEABLE CONCRETE PAVERS - 80MM, COLOR A, ITEM SPV.0165.1002; USED IN SIDEWALK TERRACE AREAS.
  3. PERMEABLE CONCRETE PAVERS - 80MM, COLOR B, ITEM SPV.0165.1003; USED IN ON-STREET ROADWAY AREAS.
- SEE SPV'S FOR SPECIFIC PAVER INFORMATION AND COLORS

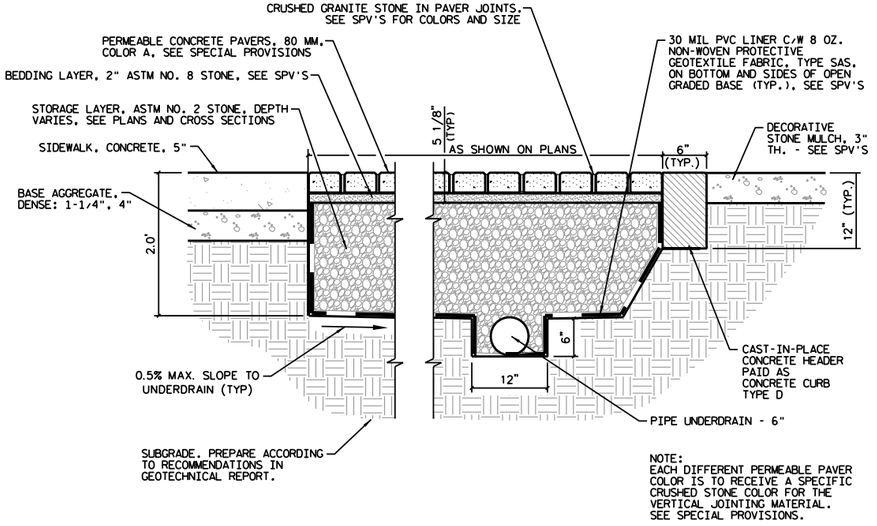
8 PERMEABLE CONCRETE PAVER

REFER TO BMP - PERMEABLE PAVEMENT UNDERDRAIN PLAN AND STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATION OF PAVERS.



9 TYPCIAL ENLARGEMENT - PERMEABLE PAVER LAYOUT

REFER TO BMP - PERMEABLE PAVEMENT PLANS AND STREETSCAPE LAYOUT AND MATERIALS PLANS FOR LOCATION OF PERMEABLE PAVERS.

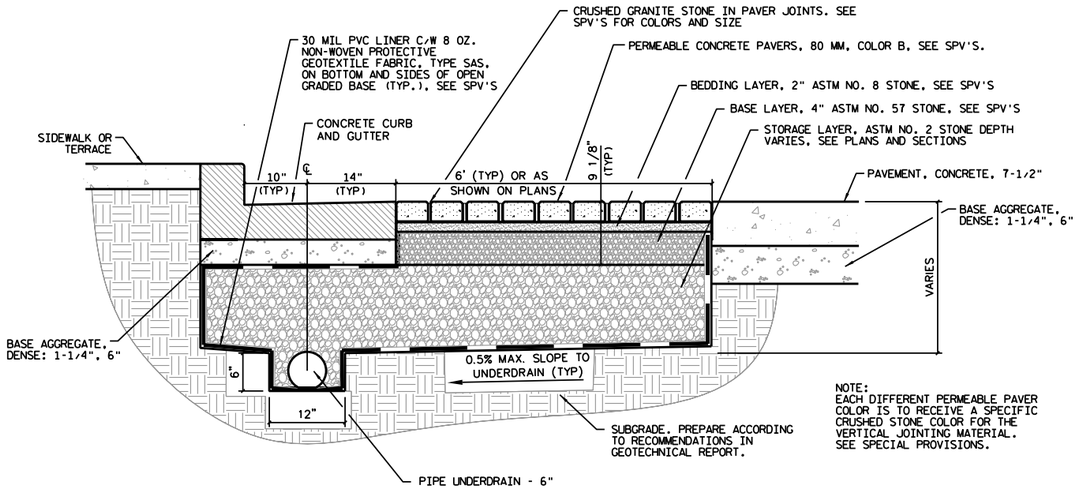


11 TYPICAL SECTION - PERMEABLE CONCRETE PAVERS IN PLAZA

N.T.S.

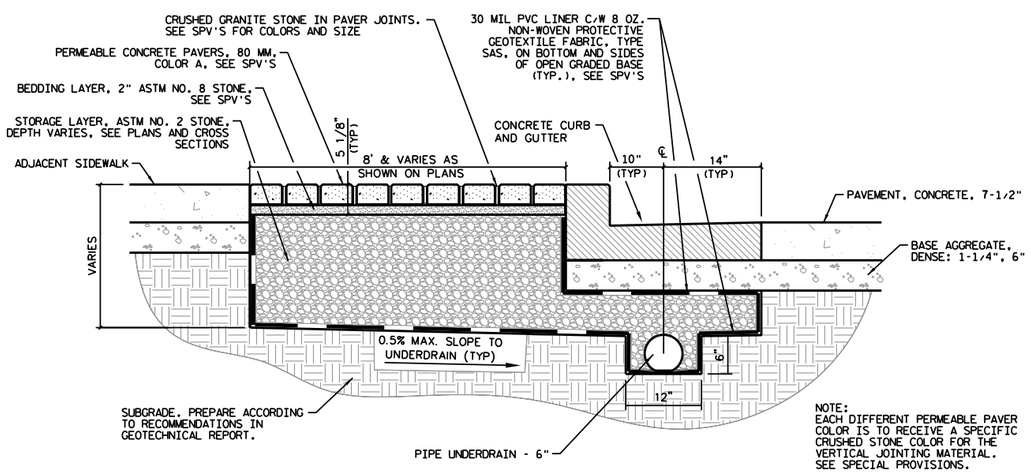
13 NOT USED

N.T.S.



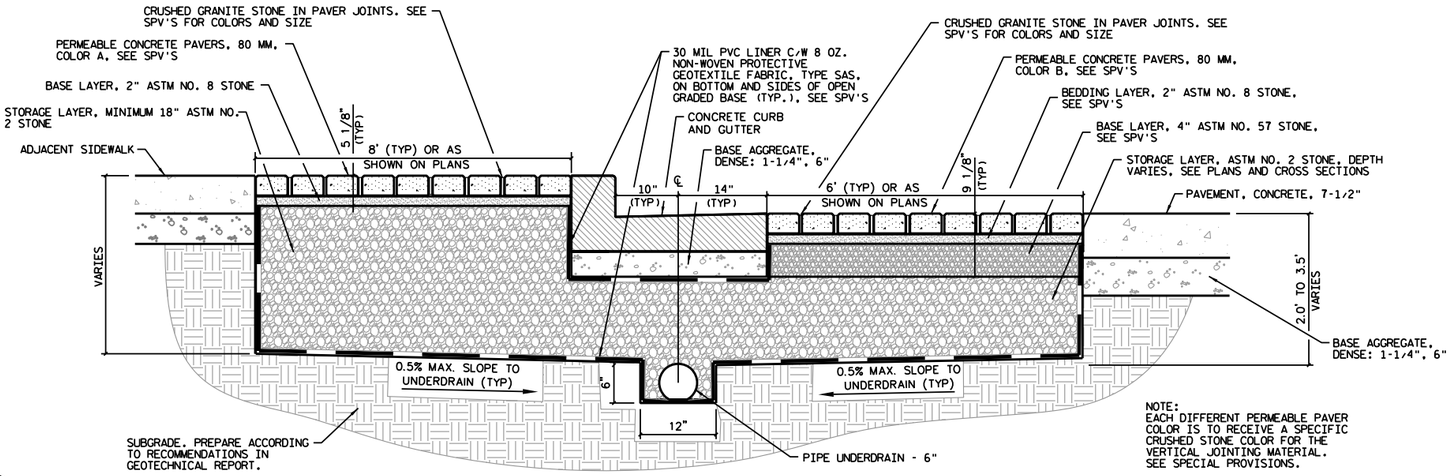
12 TYPICAL SECTION - PERMEABLE CONCRETE PAVERS IN ROADWAY

N.T.S.



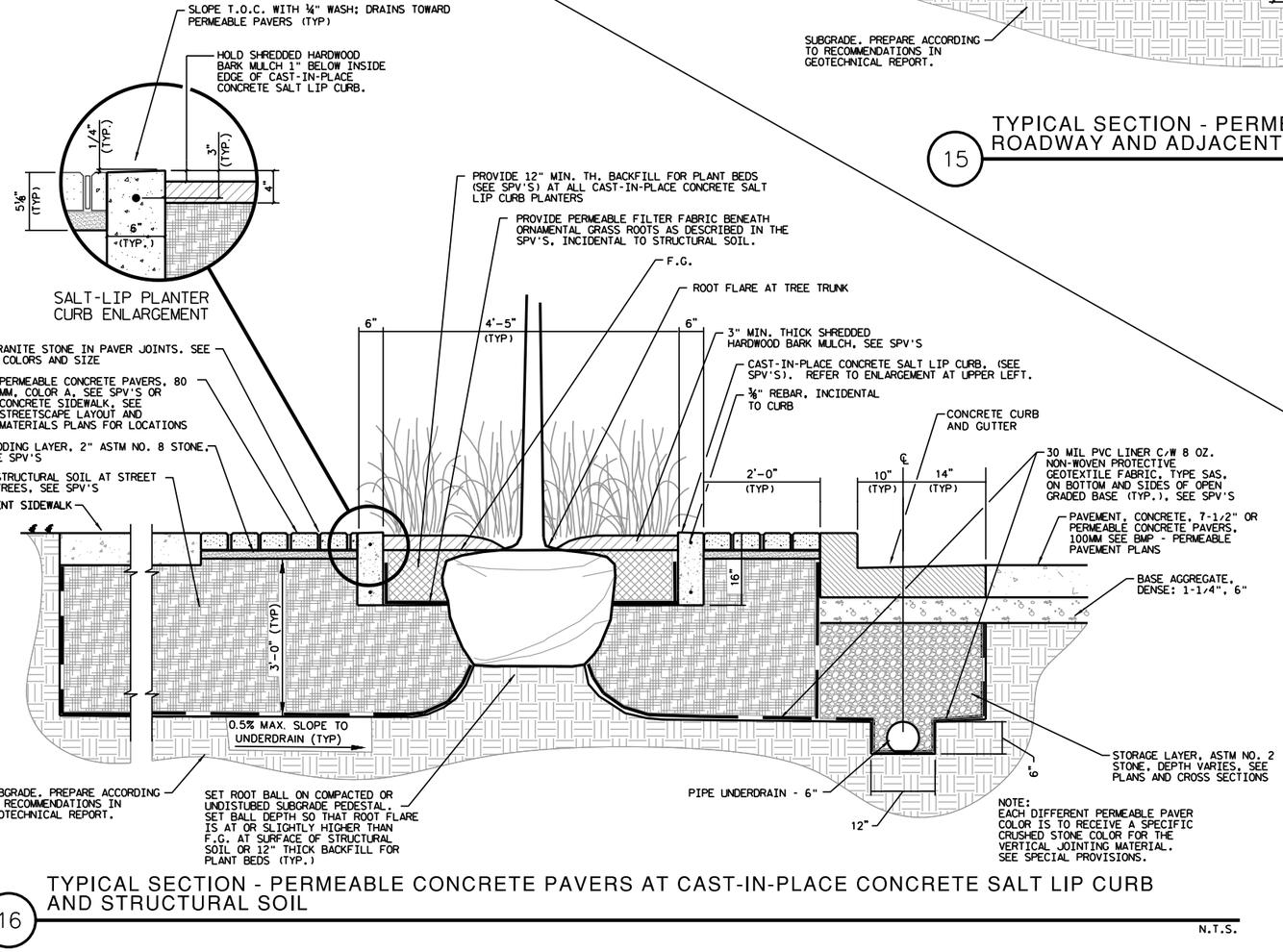
14 TYPICAL SECTION - PERMEABLE CONCRETE PAVERS IN TERRACE AREAS

N.T.S.



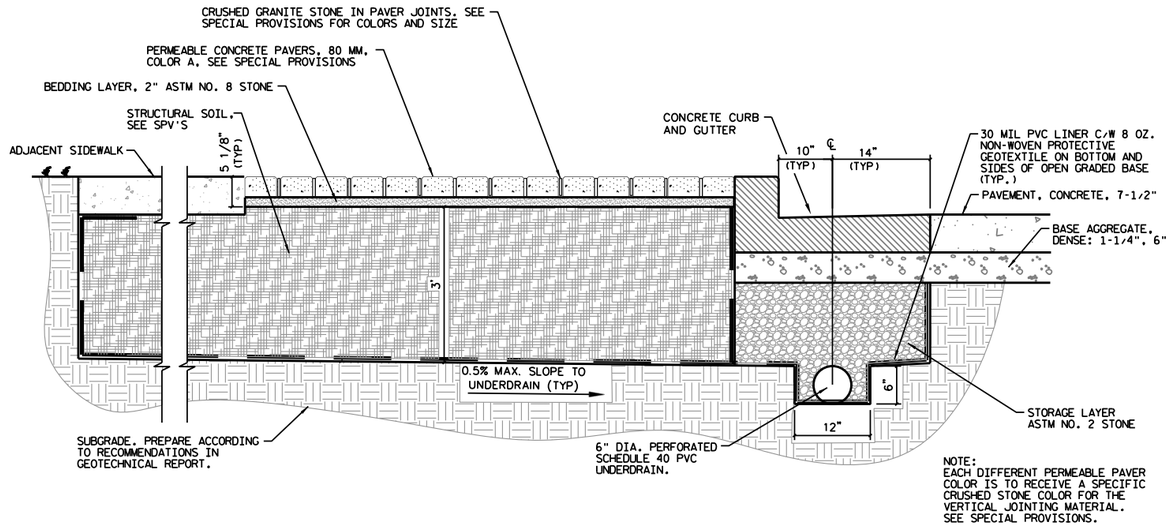
15 TYPICAL SECTION - PERMEABLE CONCRETE PAVERS IN ROADWAY AND ADJACENT TERRACE AREAS

N.T.S.



16 TYPICAL SECTION - PERMEABLE CONCRETE PAVERS AT CAST-IN-PLACE CONCRETE SALT LIP CURB AND STRUCTURAL SOIL

N.T.S.



17 TYPICAL SECTION - PERMEABLE CONCRETE PAVERS IN TERRACE AREAS WITH STRUCTURAL SOIL

2

2

2

794 WB EXIT RAMP

794 EB ENTRANCE RAMP

209+00 LE

+50 LE

210+00 LE

110+00 LM

+50 LM

111+00 LM

+00 LM

+50 LM

24+00 LM

+50 LM

25+00 LM

+50 LM

26+00 LM

+50 LM

27+00 LM

+50

326+00 LS

+50 LS

327+00 LS

MATCH LINE - STA. 27+50 LM

1835sf

1" X 2-1

63 L.F. OF 4" AND 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

75' 2" PIPE

1" X 1-8

3788sf

336sf

1" X 1-7

34 L.F. OF 4" AND 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

LINCOLN MEMORIAL DR

45' 2" PIPE

1" X 1-6

3675sf

2978sf

425+00 LN

+50 LN

426+00 LN

+50 LN

427+00 LN

+50

N

IRRIGATION LEGEND

- POINT OF CONNECTION
- IRRIGATION SYSTEM CONTROLLER
- DRIP LINE IRRIGATION
- SPRAY IRRIGATION
- Valve Size / Zone GPM (1" | 35) / Zone GPM (1-24) / Station Number / Controller Number
- PROPOSED RPZ
- PROPOSED ELECTRIC VALVE
- PROPOSED BLOW-OUT TAP
- PROPOSED ISOLATION VALVE
- PROPOSED QUICK COUPLER
- PROPOSED PRECAST VALVE MH.
- PROPOSED IRRIGATION PIPING
- PROP. IRR. PIPING W/3" PVC SLEEVE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	IRRIGATION PLAN	SHEET B	E

FILE NAME : c:\pwv8i-local\baker_projects\scott.kurtz\d0330711\023141_Ir.dgn PLOT DATE : 7/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 30.0000 sf / in.

WISDOT/CADDS SHEET 42

2

794 EB ENTERANCE RAMP

794 WB EXIT RAMP

LINCOLN MEMORIAL DR

CLYBOURN ST

CLYBOURN ST

MATCH LINE - STA. 29+30 CL

MATCH LINE - STA. 32+00 LM

MATCH LINE - STA. 27+50 LM

+50 LS

328+00 LS

+50 LS

329+00 LS

+50 LS

330+00 LS

+50 LS

+50 CL

30+00 CL

+50 CL

28+00 LM

+50 LM

29+00 LM

+50 LM

30+00 LM

+50 LM

31+00 LM

+50 LM

32+0

365' 2" PIPE

365' 2" PIPE

360' 2" PIPE

360' 2" PIPE

40' 2" PIPE

63' 2" PIPE

77' 2" PIPE

44' 1.5" PIPE

31 L.F. OF 4" AND 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

34 L.F. OF 4" AND 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

53 L.F. OF 4" AND 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

60 L.F. OF 4" AND 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

1" X 2-5

1" X 2-4

1" X 2-3

1" X 2-2

1" X 1-5

1.5" X 1-4

1" X 1-3

1" X 1-2

1" X 1-1

1640sf

965sf

5468sf

1345sf

690sf

1132sf

4395sf

2577sf

950sf

1478sf

1578sf

880sf

70' OF 2" CONNECTION PIPE

CURB STOP W/ 2" SERVICE BOX

CONNECT TO EXISTING 8-INCH WATERMAIN STA 430+34.97LN 89.51RT. FURNISH & INSTALL WET TAP HEAVY BRONZE SERVICE SADDLE 2" CORPERATION STOP AND FITTINGS AS REQUIRED TO CONNECT TO PROPOSED 2" COPPER SERVICE

IRRIGATION LEGEND

- POINT OF CONNECTION
- IRRIGATION SYSTEM CONTROLLER
- DRIP LINE IRRIGATION
- SPRAY IRRIGATION
- Valve Size / Zone GPM / Zone GPM / Station Number / Controller Number (1" 35 / 1-24)
- PROPOSED RPZ
- PROPOSED ELECTRIC VALVE
- PROPOSED BLOW-OUT TAP
- PROPOSED ISOLATION VALVE
- PROPOSED QUICK COUPLER
- PROPOSED PRECAST VALVE MH.
- PROPOSED IRRIGATION PIPING
- PROP. IRR. PIPING W/3" PVC SLEEVE

N

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	IRRIGATION PLAN	SHEET A	E

FILE NAME : c:\pwv8i-local\baker_projects\scott.kurtz\d0330711\023142_Ir.dgn PLOT DATE : 7/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 30.0000 sf / in.

WISDOT/CADDS SHEET 42

2

16 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

16 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

40 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

80 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

CLYBOURN STREET

65+00 VB

+50 CL

22+00 CL

+50 CL

23+00 CL

+50 CL

24+00 CL

+50 CL

25+00

MATCH LINE - STA. 25+00 CL

346sf

1631sf

631sf

52' 2" PIPE

47 L.F. OF 4" AND 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

17 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

45 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

20 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

20 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

40 L.F. OF 2" SCHEDULE 40 PVC

900sf

203+00 LE

ENLARGEMENT

+50 JE

64+00 VB

IH 794 WB ENTRANCE RAMP (ABOVE)

101+00 LW

63+00 JE

+50 LW

102+00 LW

16' 2" PIPE

43' 2" PIPE

12 L.F. OF 4" AND 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

122' 2" PIPE

3160sf

38 L.F. OF 4" AND 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

+50 JE

JACKSON EB EXIT RAMP - TO VAN BUREN STREET

10 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

103+00 LW

+50 LW

VAN BUREN STREET

63+00 VB

IH 794 WB (ABOVE)

65 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

918sf

40 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

SEE ENLARGEMENT ABOVE

104+00 LW

+50 LW

N

IRRIGATION LEGEND

- POINT OF CONNECTION
- IRRIGATION SYSTEM CONTROLLER
- DRIP LINE IRRIGATION
- SPRAY IRRIGATION
- PROPOSED RPZ
- PROPOSED ELECTRIC VALVE
- PROPOSED BLOW-OUT TAP
- PROPOSED ISOLATION VALVE
- PROPOSED QUICK COUPLER
- PROPOSED PRECAST VALVE MH.
- PROPOSED IRRIGATION PIPING
- PROP. IRR. PIPING W/3" PVC SLEEVE

Valve Size
Zone GPM
1" 35
1-24
Zone GPM
Station Number
Controller Number

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	IRRIGATION PLAN	SHEET C	E

FILE NAME : c:\pwv8i-local\baker_projects\scott.kurtz\d0330711\023144_Ir.dgn PLOT DATE : 7/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 30.0000 sf / in.

2

2

CLYBOURN ST

MATCH LINE - STA. 25+00 CL

MATCH LINE - STA. 29+30 CL

0 CL | +50 CL | 26+00 CL | +50 CL | 27+00 CL | +50 CL | 28+00 CL | +50 CL | 29+00 CL

1" X 4-6 | 1" X 4-5 | 1" X 4-4 | 1" X 4-3 | 1" X 4-2 | 1" X 2-7 | 1" X 2-6

546sf | 392sf | 747sf | 368sf | 625sf | 216sf

132' 1.5" PIPE

65 L.F. OF 4" AND 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

46 L.F. OF DUAL 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

50' 1.5" PIPE

42 L.F. OF 4" AND 3" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

40sf | 40sf | 40sf | 40sf

52' 2" PIPE

76' 2" PIPE

17 L.F. OF 4" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

17 L.F. OF 2" DIAMETER SCHEDULE 40 PVC IRRIGATION SLEEVES

N

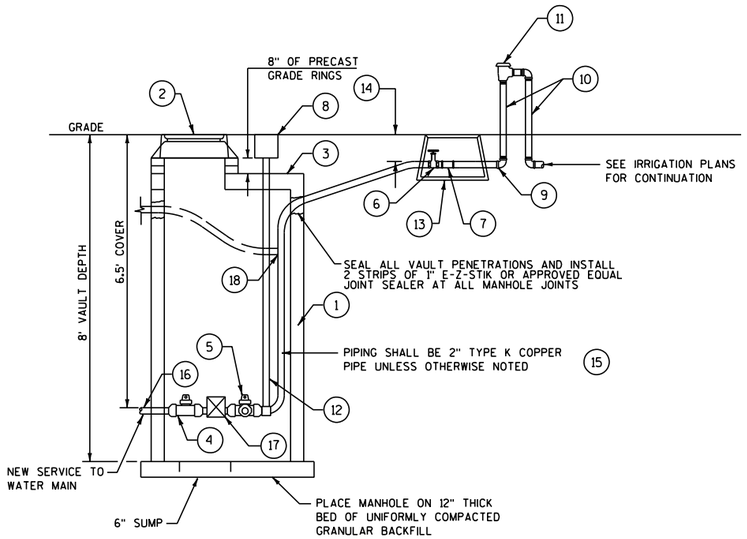
IRRIGATION LEGEND

- POINT OF CONNECTION
- IRRIGATION SYSTEM CONTROLLER
- DRIP LINE IRRIGATION
- SPRAY IRRIGATION
- Valve Size / Zone GPM / Zone GPM / Station Number / Controller Number (1" 35 / 1-24)
- PROPOSED RPZ
- PROPOSED ELECTRIC VALVE
- PROPOSED BLOW-OUT TAP
- PROPOSED ISOLATION VALVE
- PROPOSED QUICK COUPLER
- PROPOSED PRECAST VALVE MH.
- PROPOSED IRRIGATION PIPING
- PROP. IRR. PIPING W/3" PVC SLEEVE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	IRRIGATION PLAN	SHEET D	E

FILE NAME : c:\pwv8i-local\baker_projects\scott.kurtz\d0330711\023145_Ir.dgn PLOT DATE : 7/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 30.0000 sf / in.

WISDOT/CADDS SHEET 42



IRRIGATION SERVICE 1&2 DETAIL

N.T.S.

LEGEND

(1) 4'-0" DIAMETER WISDOT, TYPE I PRECAST MANHOLE. BACKFILL PER SEWER MANHOLE SPECIFICATIONS AND AS NOTED ON DETAIL.

(2) WISDOT TYPE "L" MANHOLE FRAME AND LID.

(3) FLAT TOP SLAB REQUIRED.

(4) CURB STOP, MUELLER OR EQUAL; SIZE TO PIPE.

(5) COPPER TEE WITH CURB STOP (SAME MODEL AS NOTE 4) FOR DRAINAGE PIPING.

(6) BRONZE GATE VALVE, MILWAUKEE VALVE OR EQUAL; SIZE TO PIPE.

(7) COPPER TEE WITH ¾" BRONZE GATE VALVE, (MILWAUKEE VALVE OR EQUAL) AND DIELECTRIC FITTING FOR GALVANIZED STEEL HOSE BIB RISER.

(8) 10" ROUND VALVE BOX

(9) DIELECTRIC FITTING.

(10) GALVANIZED STEEL PIPING.

(11) REDUCED PRESSURE VACUUM BREAKER 'RPZ', WATTS OR EQUAL. INSTALL 12" MINIMUM ABOVE HIGHEST SPRAY HEAD. VERIFY SPRAY HEAD ELEVATIONS WITH IRRIGATION CONTRACTOR. SIZE TO PIPE. INSTALL IN ALUMINUM ENCLOSURE.

(12) 1" BLOW OUT TEE WITH RISER BROUGHT TO SURFACE WITH THREADED 1" PLUG

(13) IRRIGATION VALVE BOX AND COVER. "JUMBO" SIZE. APPROXIMATE DIMENSIONS: LENGTH 24" BY WIDTH 16" BY HEIGHT 13". INSTALL VALVE BOX ON SUPPORT BRICKS AND PLACED CRUSHED STONE UP TO BOTTOM OF PIPING.

(14) 12" MINIMUM COVER ON PIPING AFTER VAULT. INSTALL PIPE BELOW AGGREGATE BASE UNDER PAVED AREAS. SLEEVE PIPE THROUGH SITE WALL FOOTINGS.

(15) ALL PIPE SHALL BE 2" DIAMETER UNLESS OTHERWISE NOTED.

(16) MAINTAIN 6.5 FEET (MINIMUM) COVER ON SERVICE FROM WATER MAIN TAP TO VAULT.

(17) WATER METER SUPPLIED AND INSTALLED BY CITY OF MILWAUKEE. CONTRACTOR SHALL VERIFY EXACT METER BRANDS/TYPES/SIZES WITH THE CITY PRIOR TO MOBILIZING FOR WORK AND COORDINATE METER INSTALLATION WITH THE CITY. SEE IRRIGATION SPV'S FOR CONTACT INFORMATION. METER INSTALLATION IS EXPECTED TO OCCUR AT THE SAME TIME AS PIPING INSTALLATION BY THE CONTRACTOR. FOR 2" DIAMETER SERVICES, CONTRACTOR SHALL PROVIDE 2" BRASS METER FLANGES (2 BOLT ELLIPTICAL FLANGES) ON EACH SIDE OF THE METER (ALLOW 13" FOR LENGTH OF METER).

(18) **FOR OPTIONAL MULTIPLE SERVICE BRANCHES**
PROVIDE 1-1/2"x1-1/2" TEE, FITTINGS, 1-1/2"TYPE K COPPER PIPE, AND WALL PENETRATIONS AS REQUIRED FOR ADDITONAL VAULT BOX FEEDS. ADDITIONAL VALVE BOXES, VACUUM BREAKERS, AND ASSOCIATED PIPING SHALL CONFORM TO LAYOUT AS SHOWN FOR SINGLE SERVICE APPLICATIONS AND ARE INCIDENTAL TO THE WORK.

IRRIGATION NOTES

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT.

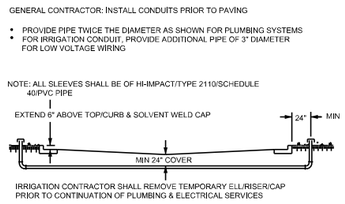
2. ALL LATERALS TO SPRINKLERS SHALL BE P.E. TUBING

3. IRRIGATION CLASS 200 PIPING. ALIGNMENT OF THE WATER LINE, AS SHOWN ON DRAWINGS, IS APROXIMATE AND MAY BE CHANGED AT THE TIME OF CONSTRUCTION IN ORDER TO AVOID TREES, SHRUBS, PLANTINGS AND/OR OTHER SITE OBSTACLES.

4. ADJUST SPRINKLER HEAD LOCATION OR RADIUS TO KEEP WATER OFF ALL PAVEMENT.

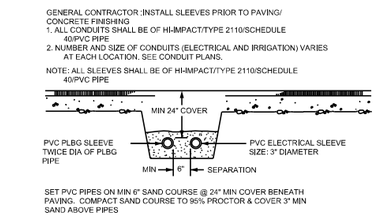
5. ADJUST SPRINKLER HEAD LOCATION TO EQUALLY DISTRIBUTE WATER.

6. UNLESS OTHERWISE SPECIFIED, IRRIGATION PIPE IN LAWN AREAS SHALL BE INSTALLED APROX. 6-INCHES FROM BACK OF CURB.

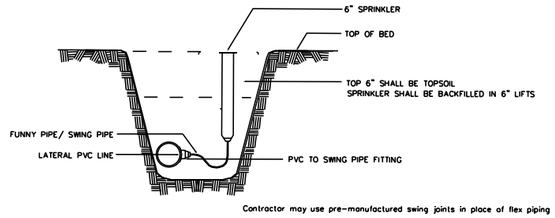


1 CROSSING @ PAVED SURFACES

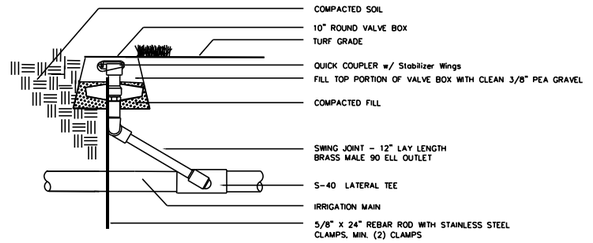
REFER TO GRADING & IRRIGATION PLAN FOR ELEVATION OF LINE AT CROSSING. NOT ALL CROSSINGS ARE WITHIN 24" OF SURFACE.



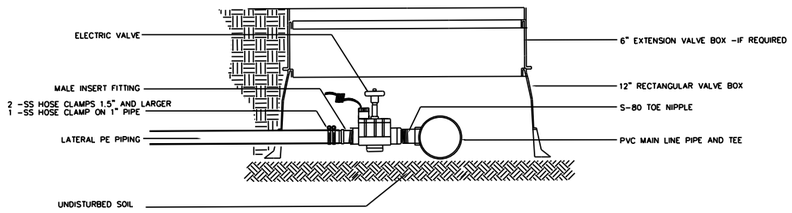
2 PIPING DETAIL BENEATH PAVING



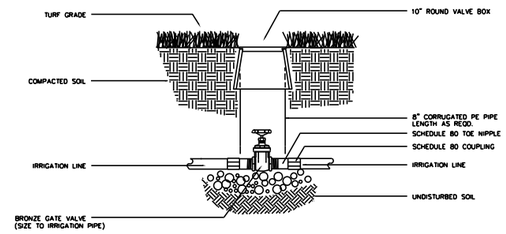
3 6" SPRAY HEAD



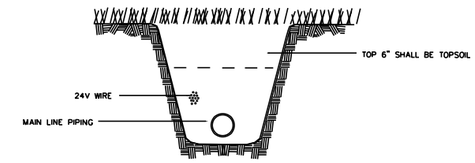
4 QUICK COUPLER VALVE



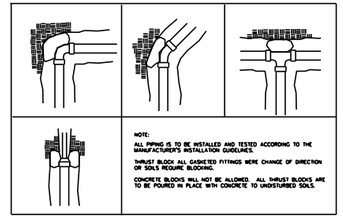
5 ELECTRIC VALVE



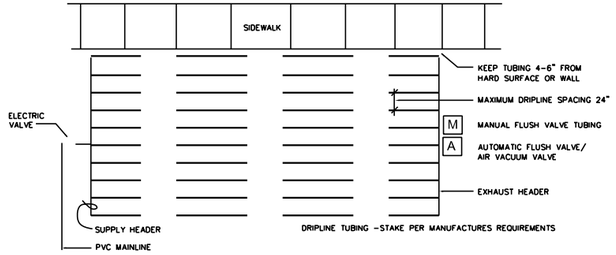
6 ISOLATION VALVE 3" AND SMALLER



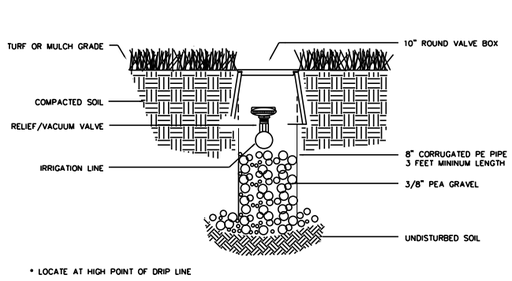
7 WIRE TRENCH



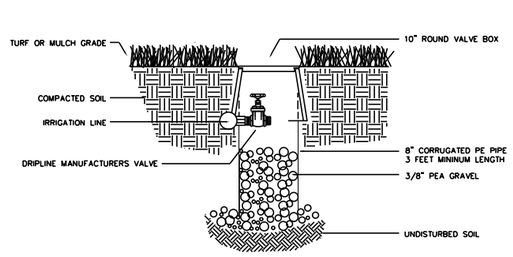
8 THRUST BLOCKING



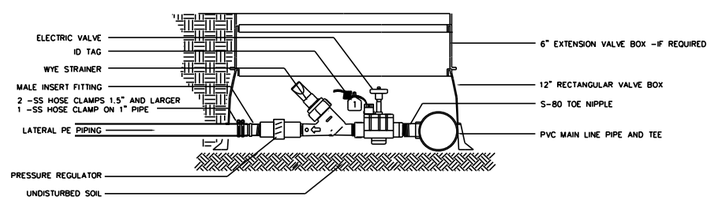
9 DRIPLINE GENERAL LAYOUT



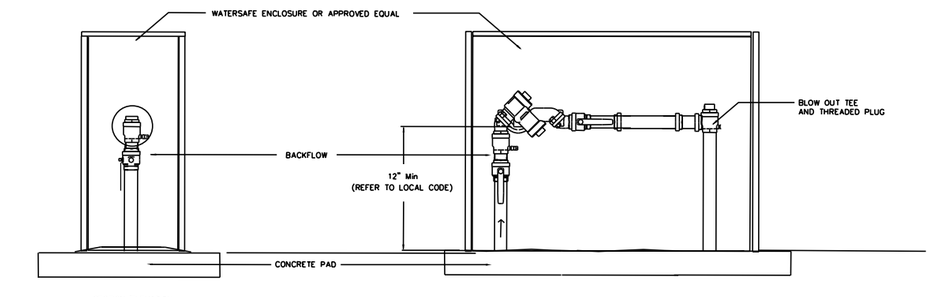
10 DRIPLINE AIR-VACUUM RELIEF VALVE



11 DRIPLINE MANUAL FLUSH VALVE



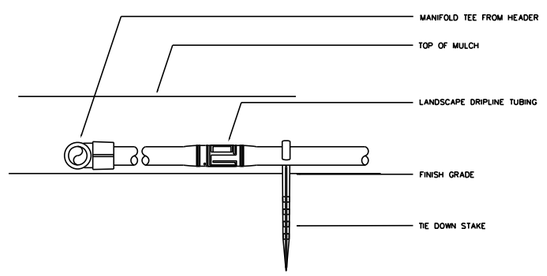
12 ELECTRIC VALVE-PE PIPE-DRIP ZONE



FEBCO MODEL 825YA RPZ or approved equal

FOLLOW ALL STATE AND LOCAL CODES FOR RPZ AND METER INSTALLATION
CONTRACTOR IS TO VERIFY ALL DIMENSIONS AND CONFIRM THAT ALL EQUIPMENT WILL FIT IN THE ENCLOSURE. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A LARGE ENOUGH ENCLOSURE.
MAXIMUM ALLOWABLE RPZ PRESSURE LOSS IS 12PSI.
WATER METER WILL BE PROVIDED BY OWNER.
PROVIDE A BLOWOUT TAP BETWEEN THE TAP AND RPZ FOR WINTERIZATION.

13 BACKFLOW/ENCLOSURE



14 DRIPLINE IRRIGATION

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	IRRIGATION DETAILS	SHEET F	E

FILE NAME : c:\pwv8i-local\baker_projects\scott.kurtz\d0330711\023147_Ir Det.dgn PLOT DATE : 7/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 30.0000 sf / in.

WISDOT/CADDS SHEET 42

2

N

367+00 CS 368+00 CS 369+00 CS 370+00 CS 371+00 CS 372+00 CS 373+00 CS 374+00 CS 375+00 CS 376+00 CS 377+00 CS

00 LF 68+00 LF 69+00 LF 70+00 LF 71+00 LF 72+00 LF 73+00 LF 74+00 LF 75+00 LF 76+00 LF 77+00 LF 78+00 LF 79+00 LF 80+00 LF 81+00 LF 82+00 LF

IH 794

IH 794

S-40-852

Michigan St 2
Milwaukee St 2 1/4
43 94 41 2 3/4

(NB)
S-40-852
ESTR

COVER PLAQUE

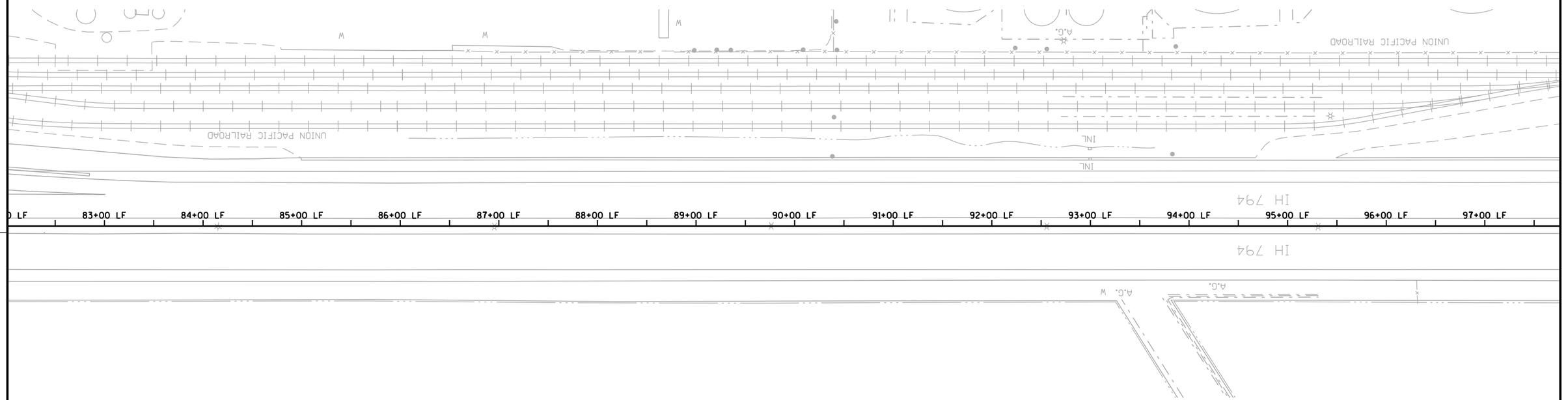
LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

SHEET 1 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGN REMOVAL PLAN	SHEET	E

2



LEGEND

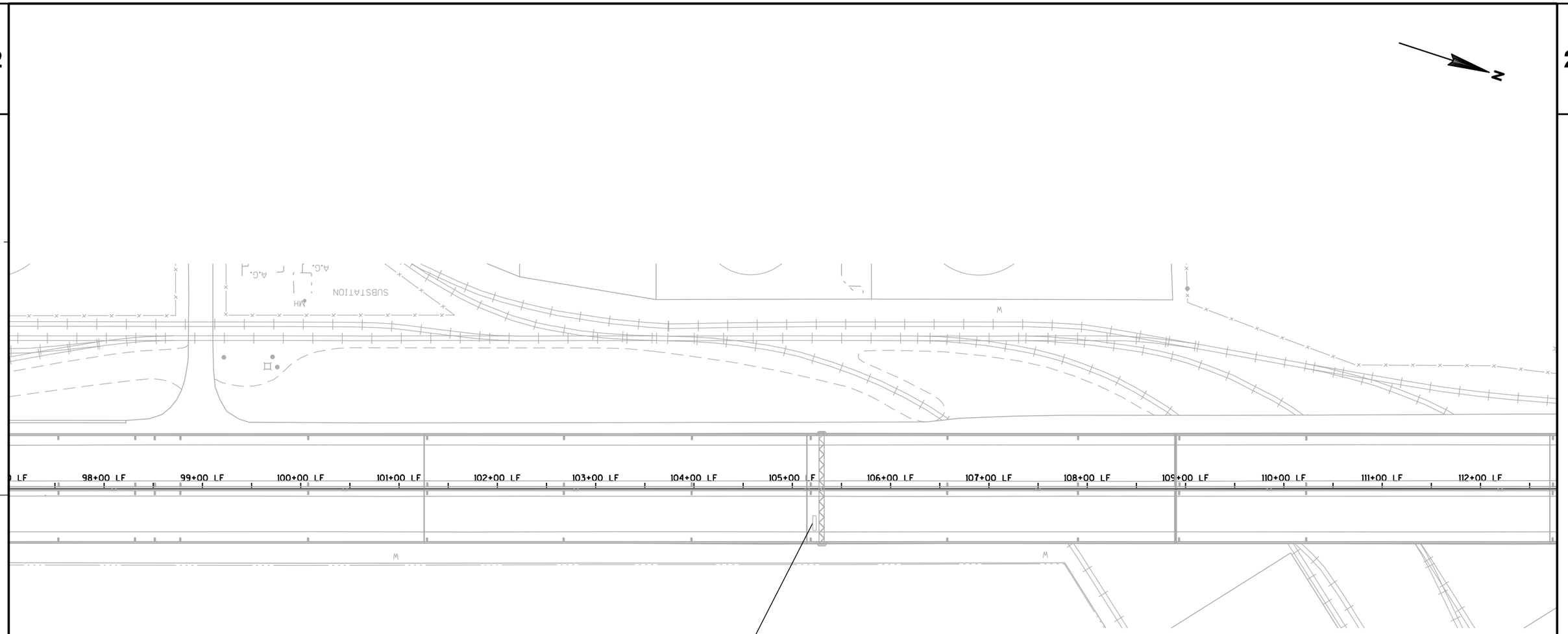
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

SHEET 2 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGN REMOVAL PLAN	SHEET	E

FILE NAME : J:\projects\d2_130013794\74\023102_PS.dgn PLOT DATE : 16-JUL-2015 11:11 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

2



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN



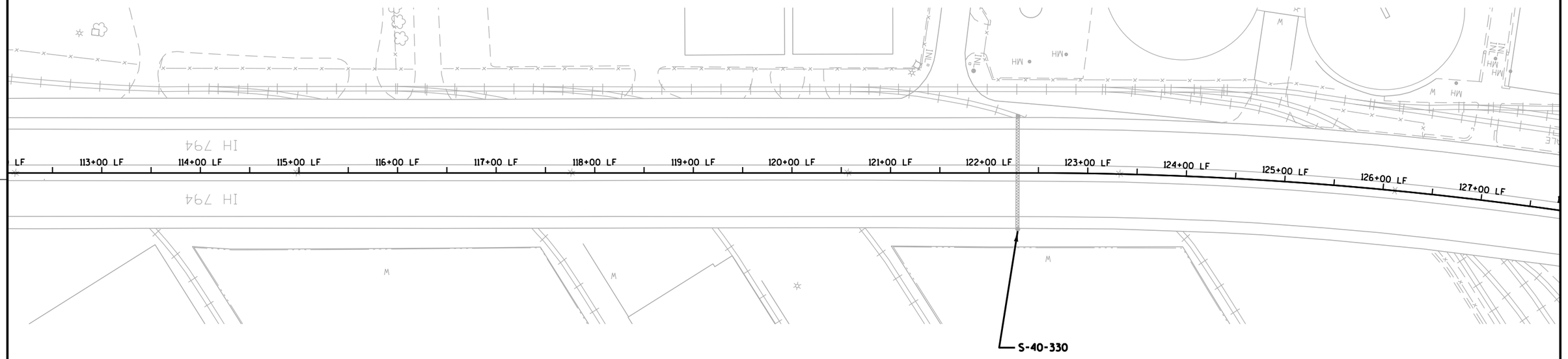
TYPE I SIGN
REMOVE

SHEET 3 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGN REMOVAL PLAN	SHEET	E

FILE NAME : J:\projects\d2_130013794\74\023103_PS.dgn PLOT DATE : 16-JUL-2015 11:11 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

2



LEGEND

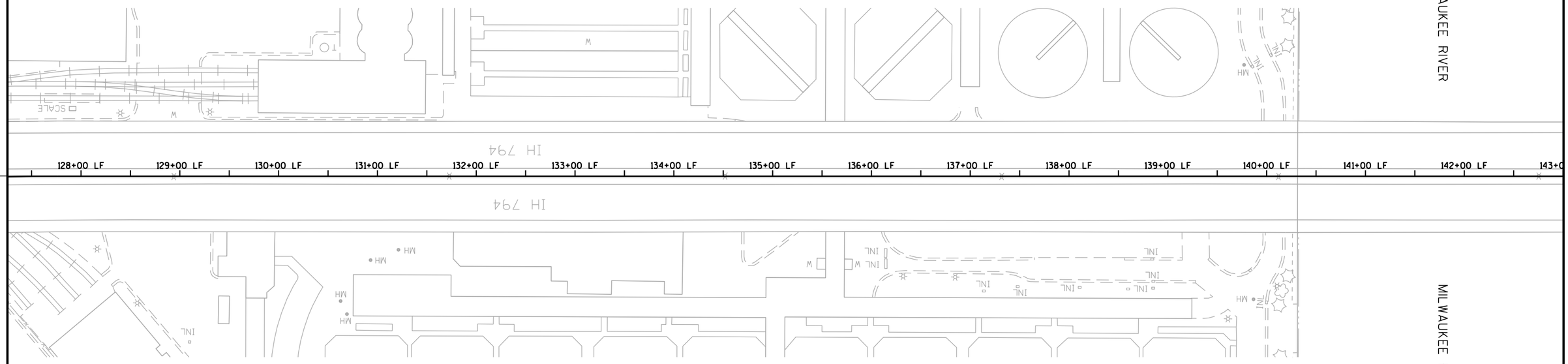
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGN REMOVAL PLAN	SHEET	E

FILE NAME : J:\projects\d2_130013794\74\023104_PS.dgn PLOT DATE : 16-JUL-2015 11:11 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

2

N



MILWAUKEE RIVER

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

FILE NAME : J:\projects\d2_130013794\74\023105_PS.dgn PLOT DATE : 16-JUL-2015 11:11 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

2

2

MILWAUKEE RIVER

IH 794

143+00 LF 144+00 LF 145+00 LF 146+00 LF 147+00 LF 148+00 LF 149+00 LF 150+00 LF 151+00 LF 152+00 LF 153+00 LF 154+00 LF 155+00 LF 156+00 LF 157+00 LF 158+00 LF

IH 794

MILWAUKEE RIVER

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

SHEET 6 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

FILE NAME : J:\projects\d2_130013794\74\023106_PS.dgn PLOT DATE : 16-JUL-2015 11:11 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

N

2

SEE SHEET 8 FOR SIGNS ON CITY STREETS BELOW INTERSTATE STRUCTURES.

158+00 LF 159+00 LF 160+00 SB 161+00 SB 162+00 SB 163+00 SB 164+00 SB 165+00 SB 166+00 SB 167+00 SB 168+00 SB 169+00 SB

150+00 NB 151+00 NB 152+00 NB 153+00 NB 164+00 NB 165+00 NB 166+00 NB 167+00 NB 168+00 NB 169+00 NB 170+00 NB 171+00 NB

170+00 LS 171+00 LS 172+00 LS 173+00 LS

172+00 LN 173+00 LN

763+00 WB 764+00 WB

663+00 EB 662+00 EB 661+00 EB

IH 794

CHICAGO ST.

HARBOR DR.

S-40-331

S-40-850

TYPE I SIGN
ESTR

EXIT 1 F
Michigan St
EXIT ONLY
3R
TYPE I SIGN
REMOVE

TYPE I SIGN
ESTR

4R
EXIT 1 F
Michigan St
EXIT ONLY
TYPE I SIGN
REMOVE

SHEET 7 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGN REMOVAL PLAN	SHEET E

FILE NAME : J:\projects\d2_130013794\74\023107_PS.dgn PLOT DATE : 16-JUL-2015 11:11 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

N

HARBOR DR.

IH 794

CHICAGO ST.

TURN OVER TO CITY OF MILWAUKEE
20R 21R 22R 23R
R7-1D(2S)
REMOVE

TURN OVER TO CITY OF MILWAUKEE
19R
R7-4(2S) R7-1R(2S) (MOD)
REMOVE

TURN OVER TO CITY OF MILWAUKEE
18R
R3-7R(3)
W5-52R(2S)
REMOVE

D11-1(2)
R7-2(MOD)
MOVE
SEE PERMANENT SIGNING PLAN

R7-1L(2S) R7-2(2S) (MOD)
MOVE
SEE PERMANENT SIGNING PLAN

TURN OVER TO CITY OF MILWAUKEE
KEVIN ANTZAK
(414) 286-3236
17R
R7-2(2S)(MOD)
REMOVE

R3-17(2S)
BIKE LANE BEGINS
R3-17A(MOD)
MOVE
SEE PERMANENT SIGNING PLAN

R3-17(2S)
BIKE LANE ENDS
16R 15R
R3-17B(MOD)

TURN OVER TO CITY OF MILWAUKEE
HANK AARON STATE TRAIL
14R
REMOVE

R1-1(2S)
R1-3P(2S)
ESTR

5R 6R 7R
R7-1D(2S)
REMOVE
TURN OVER TO CITY OF MILWAUKEE

8R
R7-4(2S)(MOD)
REMOVE
TURN OVER TO CITY OF MILWAUKEE

9R
R2-1(2S)
REMOVE
TURN OVER TO CITY OF MILWAUKEE

10R 11R
R7-1D(2S)
REMOVE
TURN OVER TO CITY OF MILWAUKEE

12R 13R
R1-1(2S)
R1-3P(2S)
REMOVE
TURN OVER TO CITY OF MILWAUKEE

R1-1(2S)
REMOVE

R1-1(2S)
ESTR

R7-2(2S)(MOD)
ESTR

SHEET 8 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGN REMOVAL PLAN	SHEET	E

FILE NAME : J:\projects\d2_130013794\74\023108_PS.dgn PLOT DATE : 16-JUL-2015 11:11 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIZE
- ESTR — EXISTING SIGN TO REMAIN

SEE SHEET 10 FOR SIGNS ON CITY STREETS BELOW INTERSTATE STRUCTURES.

25R — Lakefront / SIGNAL AHEAD — TYPE I SIGN — REMOVE

35 MPH — TYPE I SIGN — ESTR

S-40-362

24R — EXIT 1F — E5-1A(5) — REMOVE

S-40-854

S-40-367

JACKSON ST

VAN BUREN ST

CLYBOURN ST.

HARBOR DR.

39R 40R — W3-3(3) — REMOVE

26R — ONE WAY — R6-2L — REMOVE

29R — DEAD END — W14-1 — REMOVE

ONE WAY — R6-2R — REMOVE

27R — ONE WAY — R6-2L — REMOVE

28R 100R — NO PARKING ANY TIME — R7-1D — REMOVE

30R — NO PARKING ANY TIME — R7-1D — REMOVE

34R — W6-3 — REMOVE

31R 32R 33R — NO PARKING ANY TIME — R7-1D — REMOVE

TURN OVER TO CITY OF MILWAUKEE

35R — W2-6 — REMOVE

37R — STOP — R1-1 — REMOVE

ONE WAY — R6-2R — REMOVE

38R — ONE WAY — R6-2L — REMOVE

SHEET 9 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGN REMOVAL PLAN	SHEET	E

FILE NAME : J:\projects\d2_130013794\74\023109_PS.dgn PLOT DATE : 16-JUL-2015 11:12 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

N

MSOE
Van Buren St
Clybourn St
D1-2
MOVE
SEE PERMANENT SIGNING PLAN

City of Milwaukee
NO PARKING XAM to XAM
MOVE
SEE PERMANENT SIGNING PLAN

43R 42R WRONG WAY R5-1A(3) REMOVE

41R RIDESHARE INFO CALL 1-800-455-POOL D12-2A REMOVE

FESTIVAL PARKING
MOVE ON COLUMN SEE PERM SIGN PLAN

NO PARKING ANY TIME R7-1D(2S) ESTR

NO PARKING EXCEPT AUTHORIZED VEHICLES ESTR

56R TO 32 M4-5 M1-6 M6-1 J3-1(2S) REMOVE

W12-1D(2S) REMOVE

NO PARKING ANY TIME R7-1D(2S) REMOVE 47R

54R VELO R1-2(2S) REMOVE

TO WEST INTERSTATE 43 INTERSTATE 794 INTERSTATE 94 J2-2(2S) ESTR

WRONG WAY R5-1A(3) REMOVE 46R

DO NOT ENTER R5-1(3) 52R 53R

WRONG WAY R5-1A(2M) REMOVE ON SIGNAL POLE

NO TURN ON RED R10-11B(2S) REMOVE 51R

ONLY R3-8B(2S) REMOVE 49R 50R

WRONG WAY R5-1A(2M) REMOVE

JACKSON ST

VAN BUREN

CLYBOURN ST.

S-40-367

SHEET 10 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGN REMOVAL PLAN	SHEET	E

FILE NAME : J:\projects\d2_130013794\74\023110_PS.dgn PLOT DATE : 16-JUL-2015 11:12 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

2

2

CLYBOURN ST.

HARBOR DR.

HARBOR DR.

MICHIGAN ST.

USH 18

S-40-367

S-40-853

S-40-191

S-40-192

S-40-193

83R 84R — R3-8Y(2S) ONLY ONLY — REMOVE

WRONG WAY — R5-1A(3) — REMOVE WITH SIGNS 83R & 84R

86R 87R — W3-3(3) — REMOVE

80R — PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED — R5-57(S) — REMOVE

79R — R3-1(2S) — REMOVE ON SIGNAL POLE

85R — RIGHT LANE ENDS — W9-1R(3) — REMOVE

88R — W4-2R(3) — REMOVE

77R 78R — DO NOT ENTER — R5-1(3)

WRONG WAY — R5-1A(2M) — 3' HEIGHT — REMOVE ON SIGNAL POLE

70R — EAST 794 — TYPE I SIGN S-40-191 — REMOVE

71R — TO EAST 43 94 ONLY

93R 94R — NO TURN ON RED ARROW — R10-11(2S)(MOD) — ON SIGNAL POLE

ONLY — R3-5L — TYPE II SIGN — ESTR

TO 43 94 — TYPE I SIGN — ESTR

Clybourn St ONLY — TYPE I SIGN — ESTR

EAST 794 — TYPE I SIGN — ESTR

76R — FORM SINGLE LINE — R3-58(2S) — REMOVE

72R 73R — NO PARKING ANY TIME — R7-1D — REMOVE

WRONG WAY — R5-1A — 75R — REMOVE

89R — R3-18(2S) — REMOVE

90R — R3-2(2S) — REMOVE

91R 92R — WRONG WAY — R5-1A(3) — REMOVE

67R — SPEED LIMIT 30 — REMOVE

To Harbor / Lakefront / East Town / Third Ward — MOVE SEE PERMANENT SIGNING PLAN

Lakeshore State Park — ESTR

Michigan St — TYPE I SIGN — 57R — REMOVE

Lincoln Mem Drive — TYPE I SIGN — MOVE SEE PERMANENT SIGNING PLAN

59R — ONE WAY — R6-2L(2M) — REMOVE

58R — DO NOT ENTER — R5-1(3)

WRONG WAY — R5-1A(2M) — REMOVE

60R — W1-6(2S) — REMOVE

61R — ONE WAY — R6-2L(2M) — REMOVE

62R — DO NOT ENTER — R5-1(3) — REMOVE

63R — AHEAD SIGNAL — R10-10A(2S) — REMOVE

64R — DO NOT ENTER — R5-1(3) — REMOVE

War Memorial / Betty Brinn Museum / Lakefront Museums / Lakeshore State Park — TYPE II SIGN — MOVE SEE PERMANENT SIGNING PLAN

Michigan St WEST — TYPE I SIGN — 65R — REMOVE

66R — Lincoln Mem Dr — TYPE I SIGN — REMOVE

SHEET 11 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGN REMOVAL PLAN	SHEET	E

FILE NAME : J:\projects\d2_130013794\74\023111_PS.dgn PLOT DATE : 16-JUL-2015 11:12 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

SEE SHEET 13 FOR SIGNS
ON CITY STREETS BELOW
INTERSTATE STRUCTURES.

N

W4-1(5)
ESTR

BROADWAY ST
MILWAUKEE ST
JEFFERSON ST
JACKSON ST
CLYBOURN AVE.
ST PAUL AVE

5-40-856
S-40-857
S-40-855
S-40-362

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

EXIT 1E
E5-1A(5)
ESTR

Van Buren Street NORTH
TYPE I SIGN
ESTR

Jackson Street SOUTH RIGHT LANE
TYPE I SIGN
ESTR

W3-3(3)
ESTR

LEFT EXIT 1F
Lakefront
TYPE I SIGN
ESTR

INTERSTATE 794 TO 794
Port of Milw
35 MPH
TYPE I SIGN
ESTR

SPEED LIMIT 50
R2-1(5)
ESTR

SHEET 12 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGN REMOVAL PLAN	SHEET E

FILE NAME : J:\projects\d2_130013794\74\023112_PS.dgn PLOT DATE : 16-JUL-2015 11:12 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

N

ONE WAY 98R
R6-2L(2S)
REMOVE ON LIGHT POLE

ESTR

ESTR

ONE WAY
R6-2L(2S)
ESTR

DO NOT ENTER 97R
R5-1(3)
REMOVE ON LIGHT POLE

DO NOT ENTER 95R 96R
R5-1(3)
WRONG WAY
R5-1A(2M)
REMOVE ON LIGHT POLE

WRONG WAY
R5-1A(3)
ESTR

S-40-854
S-40-856
S-40-857
S-40-855
S-40-362

MILWAUKEE ST
JEFFERSON ST
JACKSON ST
ST PAUL AVE

U PARK
NO TURNS
R3-3(2S)
MOVE ON LIGHT POLE SEE PERMANENT SIGNING PLAN

East Town
Third Ward
WAYFINDER
FESTIVAL PARKING
MOVE SEE PERMANENT SIGNING PLAN

W12-1D(2S)
MOVE SEE PERMANENT SIGNING PLAN

99R ONE WAY
R6-2L(2S)
REMOVE ON LIGHT POLE

LEGEND

- SIGN TO BE REMOVED
- SIGN TO BE REMOVED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 13 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGN REMOVAL PLAN	SHEET E

FILE NAME : J:\projects\d2_130013794\74\023113_PS.dgn PLOT DATE : 16-JUL-2015 11:12 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

2

N

CLYBOURN AVE

ST PAUL AVE

JACKSON ST

CANOPY ST

DOCK

S-40-857

S-40-856

S-40-855

S-40-362

SEE SIGNS SHEET 11

EXIT 1F
Lakefront
ESTR

TO 794 Port of Milw
35 MPH
ESTR

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

SHEET 14 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET E

FILE NAME : J:\projects\d2_130013794\74\023114_PS.dgn PLOT DATE : 16-JUL-2015 11:12 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

35 MPH

TYPE I SIGN
ESTR

Lakefront
SIGNAL AHEAD

SEE SHEET 9 OF 15
FOR REMOVAL ITEM

S-40-362

S-40-854

S-40-367

JACKSON ST

VAN BUREN ST

CLYBOURN ST.

N

2

SHEET 15 OF 15

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	SIGNING REMOVAL PLAN	SHEET	E

FILE NAME : J:\projects\d2_130013794\74\023115_PS.dgn PLOT DATE : 16-JUL-2015 11:12 PLOT BY : MSCBXD PLOT NAME : PLOT SCALE : 100:1

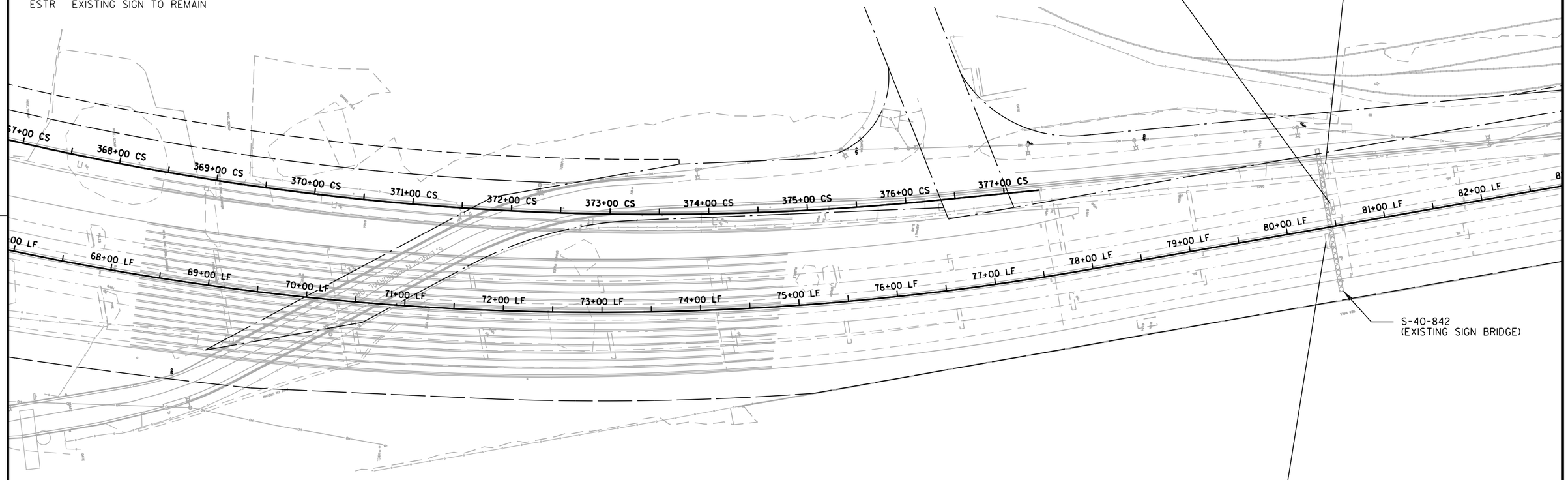
WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

N



794 SOUTH
Lake Parkway

ESTR
TYPE I SIGN
(SB)

EXIT 3
Port of Milwaukee
EXIT ONLY

ESTR
TYPE I SIGN
(SB)

S-40-842
(EXISTING SIGN BRIDGE)

Michigan St 2
Milwaukee St 2 1/4
43 94 41 2 3/4
1

ESTR
(NB)

ADD COVER PLAQUE
OVER USH 41 SHIELD

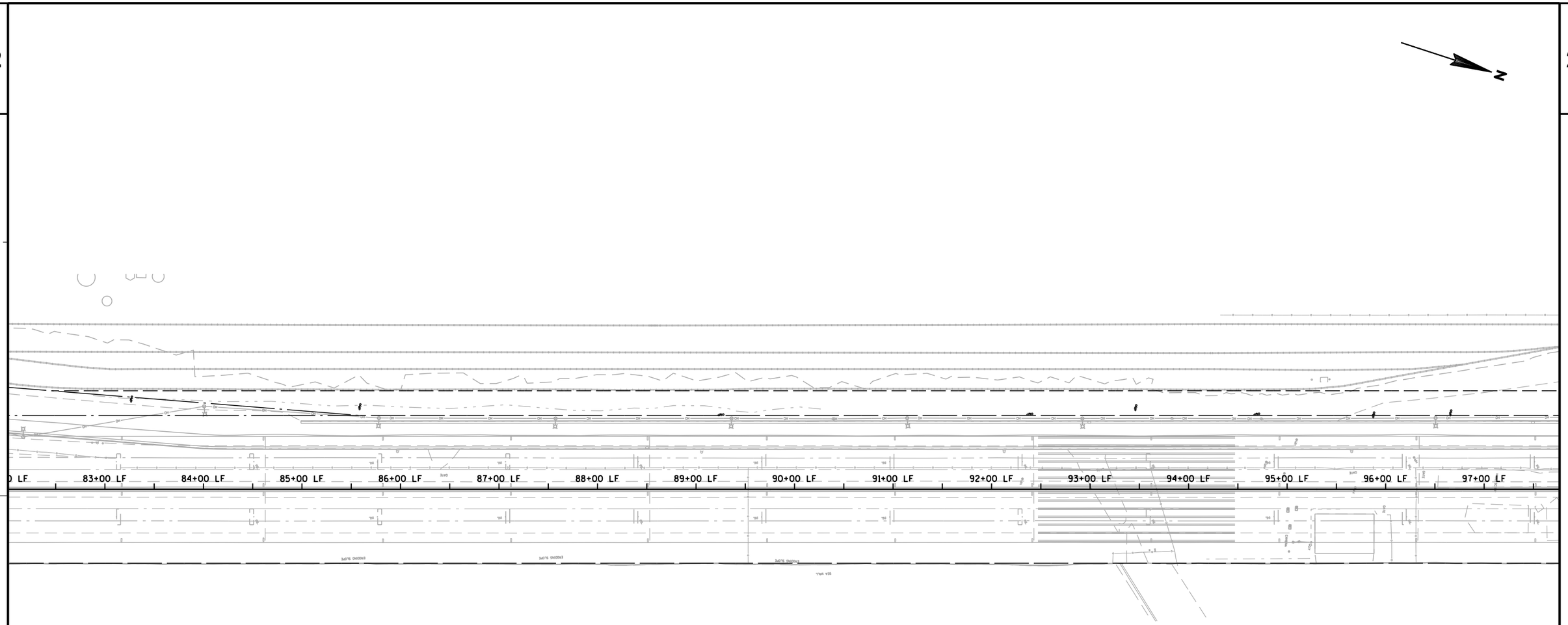
SHEET 1 OF 17

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 191	E

FILE NAME : J:\projects\d2_130013794\74\023201_ps.dgn PLOT DATE : 23-JUL-2015 09:40 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

SHEET 2 OF 17

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 192	E

2

EXIT 3
Port of Milwaukee
1/2 MILE
EXIT ONLY

ESTR
TYPE I SIGN
(SB)

794 SOUTH
Lake Parkway

ESTR
TYPE I SIGN
(SB)

98+00 LF | 99+00 LF | 100+00 LF | 101+00 LF | 102+00 LF | 103+00 LF | 104+00 LF | 105+00 LF | 106+00 LF | 107+00 LF | 108+00 LF | 109+00 LF | 110+00 LF | 111+00 LF | 112+00 LF

S-40-851
(EXISTING SIGN BRIDGE)

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

MOUNT OVER LANE 3

EXIT 1F (2a)

Michigan St
Clybourn St (2)
1 1/2 MILES

TYPE I SIGN
ON SIGN BRIDGE
(NB)

CRASH INVESTIGATION SITE AHEAD (269)

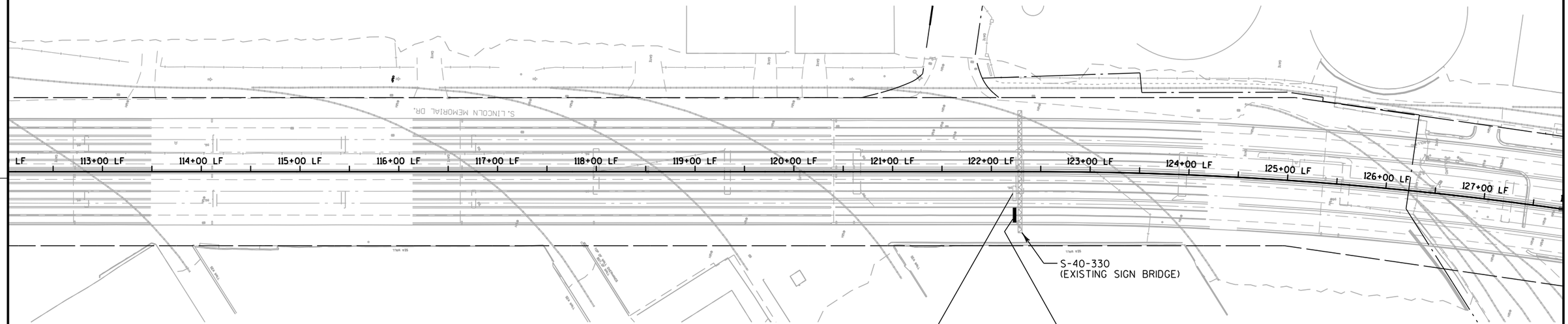
D4-54A(2)

TYPE II SIGN
MOUNT ON COLUMN

SHEET 3 OF 17

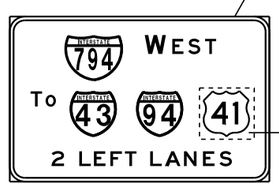
PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 193	E

2



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN



COVER PLAQUE (4)

ESTR



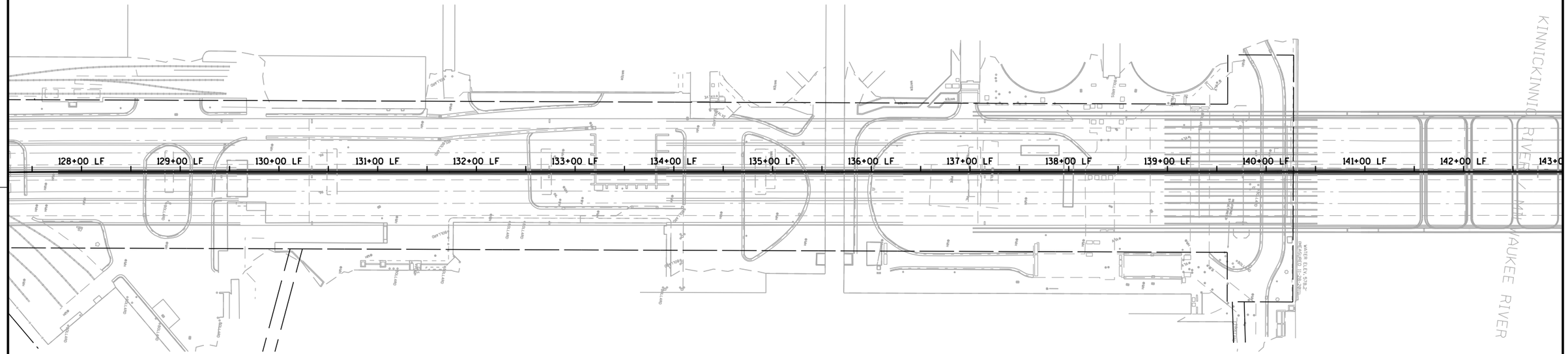
(3) MOUNT OVER LANE 3

TYPE I SIGN
ON SIGN BRIDGE

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

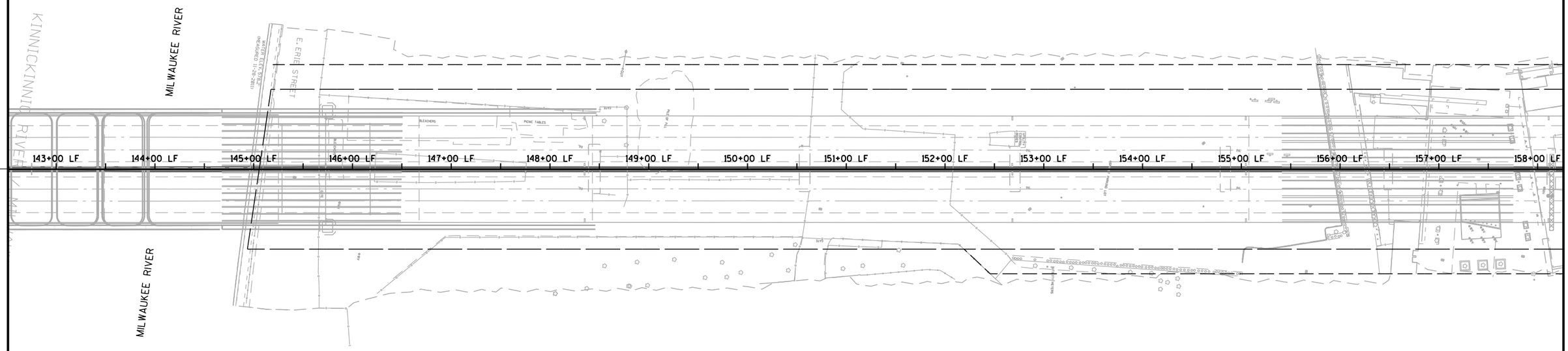


2

SHEET 5 OF 17

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 195	E

2



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

SHEET 6 OF 17

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 196	E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

N

Port of Milwaukee	1 3/4
FREEWAY ENDS	1 3/4
Oklahoma Ave	3

ESTR
TYPE I SIGN
(NB)

S-40-331
EXISTING SIGN BRIDGE

158+00 LF 159+00 LF 160+00 SB 161+00 SB 162+00 SB 163+00 SB 164+00 SB 165+00 SB 166+00 SB 167+00 SB 168+00 SB 169+00 SB 160+00 NB 161+00 NB 162+00 NB 163+00 NB 164+00 NB 165+00 NB 166+00 NB 167+00 NB 168+00 NB 169+00 NB 170+00 NB 171+00 NB 663+00 EB 662+00 EB 661+00 EB 660+00 EB 170+00 LS 171+00 LS 172+00 LS 173+00 LS 16+00 LM 17+00 LM 18+00 LM 19+00 LM 418+00 LN 419+00 LN 420+00 LN 172+00 LN 173+00 LN 764+00 WB 763+00 WB

INTERSTATE 794 WEST
To INTERSTATE 43 INTERSTATE 94 41 — COVER PLAQUE
7

ESTR
TYPE I SIGN
(NB)

SEE SHEET 8 FOR SIGNS
ON CITY STREETS BELOW
INTERSTATE STRUCTURES.

EXIT 1 F — 6a
Michigan St
Clybourn St — 6
EXIT ONLY

TYPE I SIGN
CENTER OVER LANE 3
(NB)

INTERSTATE 794 WEST
To INTERSTATE 43 INTERSTATE 94 41 — COVER PLAQUE
5

ESTR
TYPE I SIGN
(NB)

Clybourn St
Michigan St

CENTER OVER LANE 8

Lincoln
Memorial
Drive

CENTER OVER LANE 9

EXIT
35
M.P.H.
W13-2(5)
ESTR
ON UPRIGHT

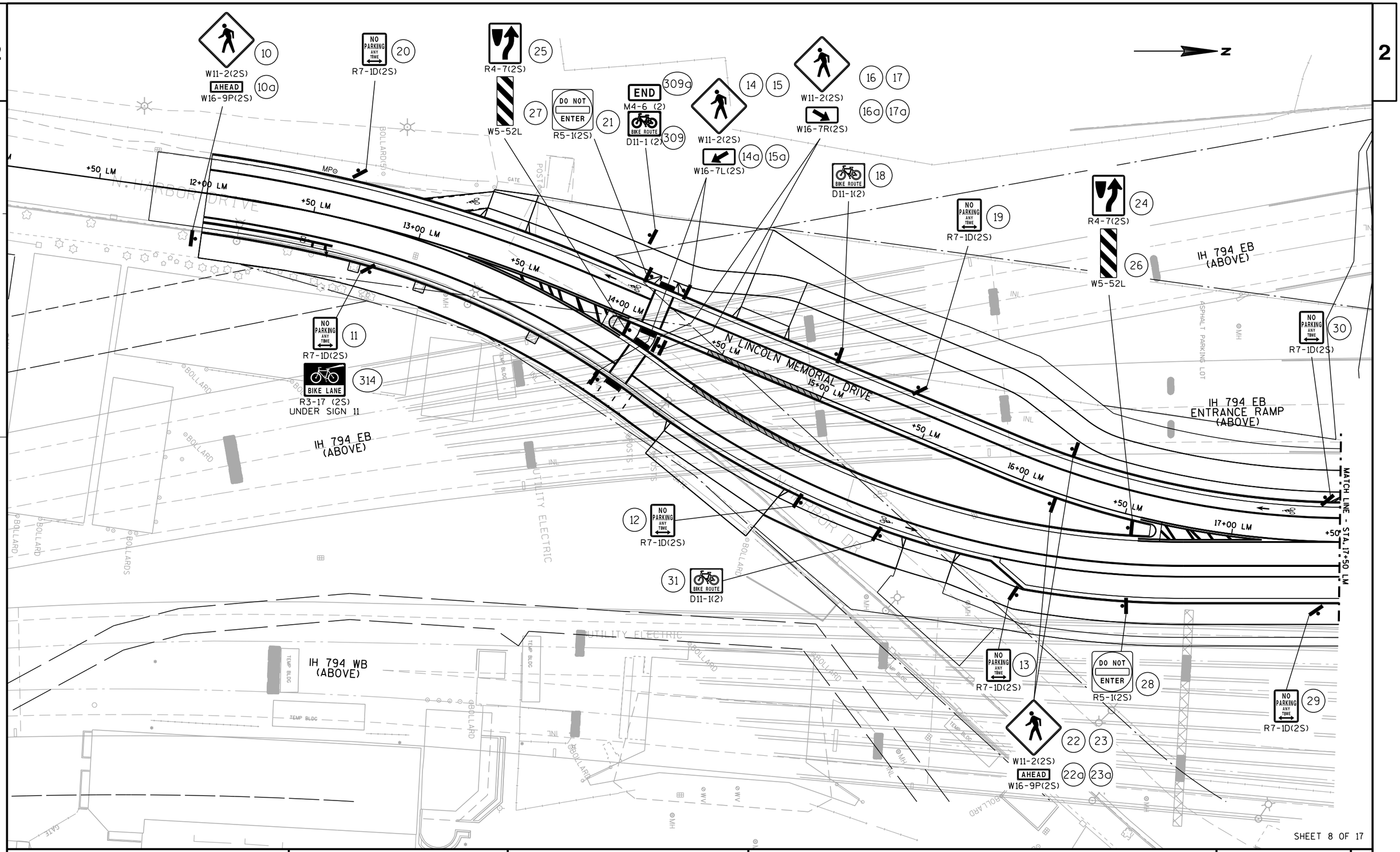
S-40-850
EXISTING SIGN BRIDGE

SHEET 7 OF 17

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 197 E

FILE NAME : J:\projects\d2_130013794\74\023207_ps.dgn PLOT DATE : 23-JUL-2015 09:40 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42



SHEET 8 OF 17

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMANENT SIGNING - LINCOLN MEMORIAL DRIVE	SHEET 198 E

2

N

IH 794 EB (ABOVE)

BIKE LANE 53 R3-17(2S)

2 HOUR PARKING 52 R7-1D(2S)(MOD) MOVE

2 HR METER PARKING 56 R7-1R

NO PARKING ANY TIME 57 R7-1L MOVE

E CHICAGO STREET

51+00 CH

52+00 CH

+50 CH

308 BIKE LANE BEGINS 308A R3-17 R3-17A (MOD)

BIKE ROUTE 51 D11-1

51a MG6-1

R4-7(2S) 34

35 W5-52L

DO NOT ENTER 50 R5-1(2S)

IH 794 EB ENTRANCE RAMP (ABOVE)

49 NO PARKING ANY TIME R7-1D(2S)

40 To INTERSTATE 43 To INTERSTATE 94

WRONG WAY 47 48 R5-1A

SPEED LIMIT 30 46 R2-1(2S)

NO PARKING ANY TIME 45 R7-1D(2S)

54 STOP R1-1(2S)

MATCH LINE - STA. 17+50 LM

N LINCOLN MEMORIAL DRIVE

18+00 LM

19+00 LM

20+00 LM

21+00 LM

22+00 LM

+50 LM

MATCH LINE - STA. 23+00 LM

32 BIKE ROUTE D11-1

32a MG6-1

W1-7 55

SIGNING BY CITY OF MILWAUKEE

IH 794 WB (ABOVE)

SPEED LIMIT 30 33 R2-1(2S)

NO PARKING ANY TIME 38 R7-1D(2S)

418+00 LN

419+00 LN

420+00 LN

421+00 LN

422+00 LN

+50 LN

W3-3(2S) 36 37

IH 794 WB EXIT RAMP (ABOVE)

MOUNT ON WALL W1-8(4) 41 42 43 44

NO PARKING ANY TIME 39 R7-1D(2S)

SHEET 9 OF 17

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMANENT SIGNING - LINCOLN MEMORIAL DRIVE	SHEET 199 E

FILE NAME : J:\projects\d2_130013794\74\023209_ps.dgn PLOT DATE : 23-JUL-2015 09:41 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 40:1

2

MATCH LINE - STA. 208+50 LE

MATCH LINE - STA. 109+50 LW

IH 794 EB EXIT RAMP

IH 794 WB ENTRANCE RAMP

IH 794 WB (ABOVE)

IH 794 EB ENTRANCE RAMP (ABOVE)

N LINCOLN MEMORIAL DRIVE

IH 794 WB EXIT RAMP

MATCH LINE - STA. 328+00 LS

MATCH LINE - STA. 28+00 LM

MATCH LINE - STA. 428+00 LN

83 84 WRONG WAY R5-1A(3) ON POLE

85 86 STOP R1-1F(2S) MOUNT ON SIGNAL POLE

95 STOP R1-1F(3) MOUNT ON SIGNAL POLE

96 W12-1D(2M) 2' MOUNT HEIGHT

94 DO NOT ENTER R5-1(3)

87 88 DO NOT ENTER R5-1(3)

91 WRONG WAY R5-1A(2M) MOUNT ON SIGNAL POLE R5-1A 3' HEIGHT

92 ONE WAY R6-2L(2M)

93 R3-1(2M) MOUNT ON SIGNAL ARM

LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-5OL MOUNT ON MAST ARM

73

99 R4-7 MOUNT ON STEEL POST

98 97 R4-7 MOUNT ON SIGNAL POLE

101 STOP R1-1F(2S) MOUNT ON SIGNAL POLE

81 NO TURN ON RED FROM LEFT LANE R10-11F(2S) MOUNT ON SIGNAL POLE

82 Freeway Entrance

77 78 79 80 STOP R1-1F(2S) MOUNT ON SIGNAL POLE

72 N. Harbor Drive NORTH TYPE I SIGN ON OVERHEAD SIGN SUPPORT

71 Lincoln Memorial Drive TYPE I SIGN ON OVERHEAD SIGN SUPPORT

70 WEST IH 794 TO US 43 US 94 ONLY TYPE I SIGN ON OVERHEAD SIGN SUPPORT

69 WEST IH 794 TO US 43 US 94 ONLY TYPE I SIGN ON OVERHEAD SIGN SUPPORT

68 RIGHT LANE ENDS W9-1R(5) EASTBOUND ENTRANCE RAMP

106 WRONG WAY R5-1A(2S) MOUNT ON LIGHT POLE

107 W12-1D(2M) 2' MOUNT HEIGHT

67 WRONG WAY R5-1A(2S) MOUNT ON UPRIGHT

S-40-794

89 DO NOT ENTER R5-1 ON SIG POLE

104 R4-7(2S)

105 DO NOT ENTER R5-1(2S)

64 SPEED LIMIT 30 R2-1(2S)

N Harbor Dr M1-94H MOUNT ON SIGNAL ARM 259

58 ONE WAY R6-2L(2M) MOUNT ON SIGNAL POLE

59 60 W1-8(4) MOUNT ON RAISED MEDIAN

SIGNING BY CITY OF MILWAUKEE

103 ONE WAY R6-2L(2M) MOUNT ON SIGNAL POLE

N Harbor Dr M1-94H MOUNT ON SIGNAL ARM 260

102 R3-2(2S) MOUNT ON SIGNAL ARM

Clybourn St TYPE II SIGNS 65

265 SITE IF TYPE II SIGN ON COLUMN

Lincoln Mem Drive 62 MOVE TYPE I SIGN CENTER OVER LANE

61 Clybourn St Michigan St TYPE I SIGN CENTER OVER LANE

266 D4-56L TYPE II SIGN MOUNT ON RAISED MEDIAN

267 NO PARKING EXCEPT CRASH INVESTIGATION VEHICLES

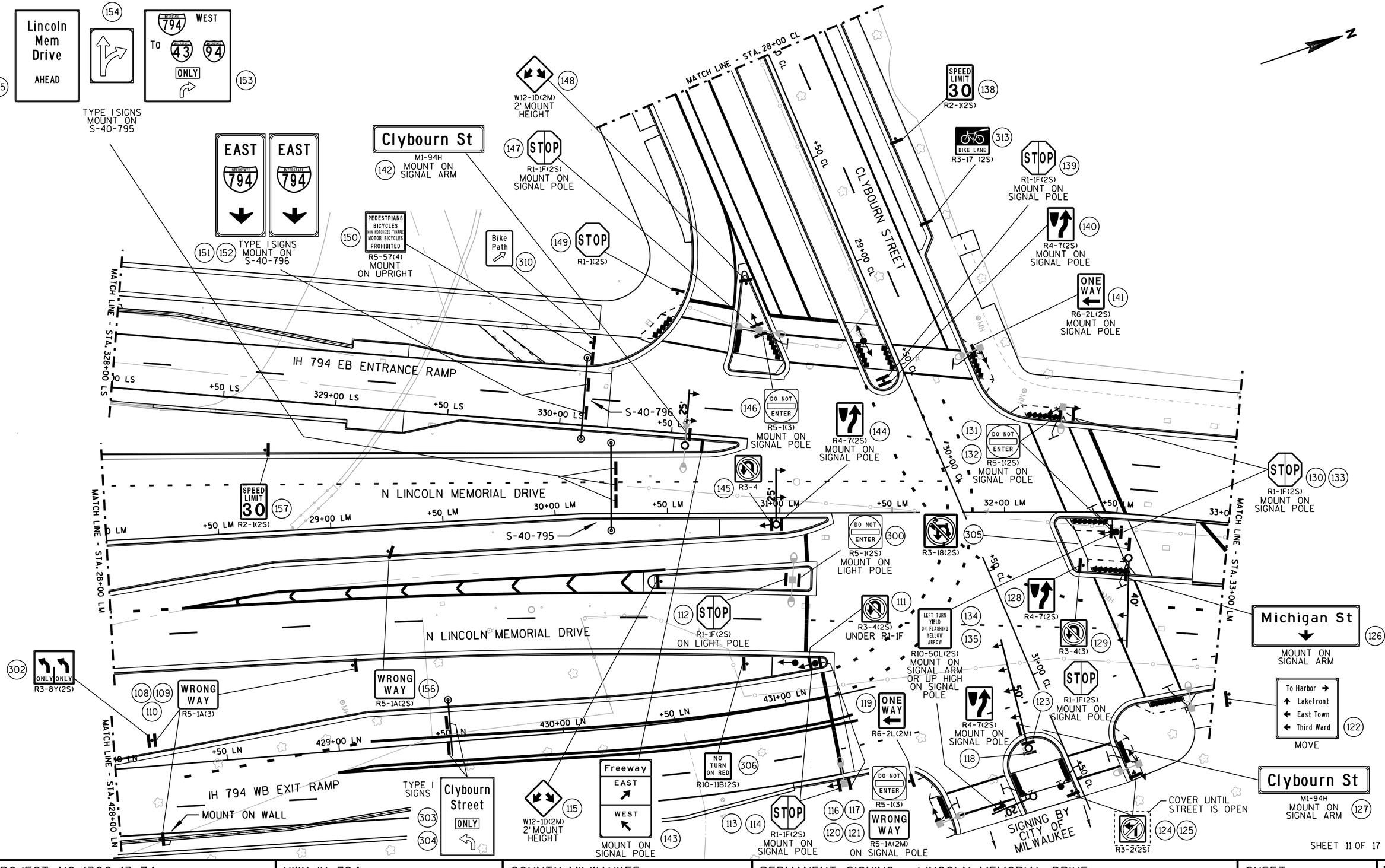
268 2 HOUR LIMIT TYPE II SIGN MOUNT ON BACK OF WALL (SEE DETAIL)

TO MB4-5 WEST MB3-4 IH 794 M1-1A

63 MB6-1 J3-1(2S)

SHEET 10 OF 17

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMANENT SIGNING - LINCOLN MEMORIAL DRIVE	SHEET	E



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMANENT SIGNING - LINCOLN MEMORIAL DRIVE	SHEET E

2

(173) WEST / 794 / TO 43 94 / Lincoln Mem Dr — MOUNT ON S-40-641

(172) EAST — WEST / 794 / TO 43 94 — MOUNT ON S-40-641

(171) EAST / 794 — MOUNT ON S-40-641

(170) Clybourn Street — MOUNT ON S-40-641

(174) SPEED LIMIT 30 — R2-1(2S) ON UPRIGHT

(169) STOP — R1-1(2S)

MICHIGAN STREET (USH 18)

TO 43 94 — ESTR ON S-40-193

Clybourn St / ONLY — COVER "ONLY" 794-EAST ADD PLAQUE (262) — ESTR ON S-40-193

EAST / 794 — ESTR ON S-40-193

ONLY — R3-5L(3) ESTR ON S-40-193

WEST / M3-4 / 18 / M1-4 / M6-1 (164) — J3-1(2S) ON UPRIGHT

EAST / MB3-2 / 794 / M1-1A (261) / MB6-1 — J3-1(2S)

S-40-193 EXISTING SIGN SUPPORT

S-40-641

MATCH LINE - STA. 33+00 LM

0 LM +50 LM 34+00 LM +50 LM 35+00 LM +50 LM 36+00 LM +50 LM 37+00 LM +50 LM 38+00 LM

N LINCOLN MEMORIAL DRIVE

(175) R4-7(2S)

SPEED LIMIT 30 (163) — R2-1(2S) MOUNT ON LIGHT POLE

TO / MB4-5 / 43 / M1-1 / 94 / M1-1 / MIDDLE LANE (263) — J3-1(2S)

Michigan St / M1-94H — MOUNT ON SIGNAL ARM (161) (162)

STA 185+00

(159) War Memorial / Betty Brinn Museum / Lakefront Museums / Lakeshore State Park — MOVE

WEST / M3-4 / 18 / M1-4 / M6-1 (158) — J3-1(2S) ON UPRIGHT

(264) Historic Third Ward — MOUNT ON UPRIGHT

DO NOT ENTER (160) — R5-1(2S)

MICHIGAN STREET

SHEET 12 OF 17

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMANENT SIGNING - LINCOLN MEMORIAL DRIVE	SHEET 202 E

2

CLYBOURN STREET

IH 794 WB ENTRANCE RAMP (ABOVE)

IH 794 WB (ABOVE)

JACKSON EB EXIT RAMP - TO VAN BUREN STREET

JACKSON STREET

VAN BUREN STREET

MATCH LINE - STA. 23+00 CL

215 216 DO NOT ENTER R5-1(3)

217 218 WRONG WAY R5-1A(2S) 3' MOUNT HEIGHT

213 DO NOT ENTER R5-1(3)

301 WRONG WAY R5-1A(2S) 3' MOUNT HEIGHT

211 ONE WAY R6-2R(2M)

209 ONE WAY R6-2L(2S) MOUNT ON LIGHT POLE

208 NO TURN ON RED R10-11B(2S)

207 ONE WAY R6-2L(2S) MOUNT ON SIGNAL POLE

205 ONE WAY R6-2R(2S) MOUNT ON SIGNAL POLE

204 DO NOT ENTER R5-1(2S)

206 DO NOT ENTER R5-1(2S)

203 R4-7(2S)

202 BEGIN LEFT TURN LANE R3-20L(2S)

201 2 HOUR PARKING R7-1L(2S)(MOD)

311 BIKE LANE R3-17 (2S) MOUNTED UNDER SIGN 201

307 NO TURN ON RED R10-11B MOUNT ON SIGNAL POLE

199 200 DO NOT ENTER R5-1(3)

197 R3-8(MOD) MOUNT ON LIGHT POLE

195 196 NO PARKING ANY TIME R7-1D

198 NO TURN ON RED R10-11B(2S)

192 LEFT LANE MUST TURN LEFT R3-7L(2M)

191 RIDESHARE INFO CALL 1-800-455-POOL D12-2A(2)

193 RIGHT LANE MUST TURN RIGHT R3-7R(2M)

187 W12-1D(2M) 2' MOUNT HEIGHT

194 Festival Parking MOVE

214 WRONG WAY R5-1A(2S) 3' MOUNT HEIGHT

210 R3-2(2S)

212 YIELD R1-2(2S)

186 TO M4-5 32 M1-6 M6-1 J3-1(2S)

188 189 WRONG WAY R5-1A(3

182 DO NOT ENTER R5-1(2S)

185 City of Milwaukee NO PARKING 2AM TO 6AM MOVE

179 180 DO NOT ENTER R5-1(3)

178 181 WRONG WAY R5-1A(2M) 3' MOUNT HEIGHT

219 W12-1D(2M) 2' MOUNT HEIGHT

U-PARK MG6-1 NO TURNS R3-3 MOVE 177

183 184 ONE WAY R6-2L(2M)

176 East Town Third Ward MOVE

MSOE Van Buren St Clybourn St ESTR

190 ADD ARROW

98+00 LW 99+00 LW 100+00 LW 101+00 LW 102+00 LW 103+00 LW +50 LW

20+00 CL 21+00 CL 22+00 CL 23+00 CL +50 CL

60+00 JE 61+00 JE 62+00 JE 63+00 JE +50 JE

64+00 VB 63+00 VB 62+00 VB 65+00 VB +50 VB

40'

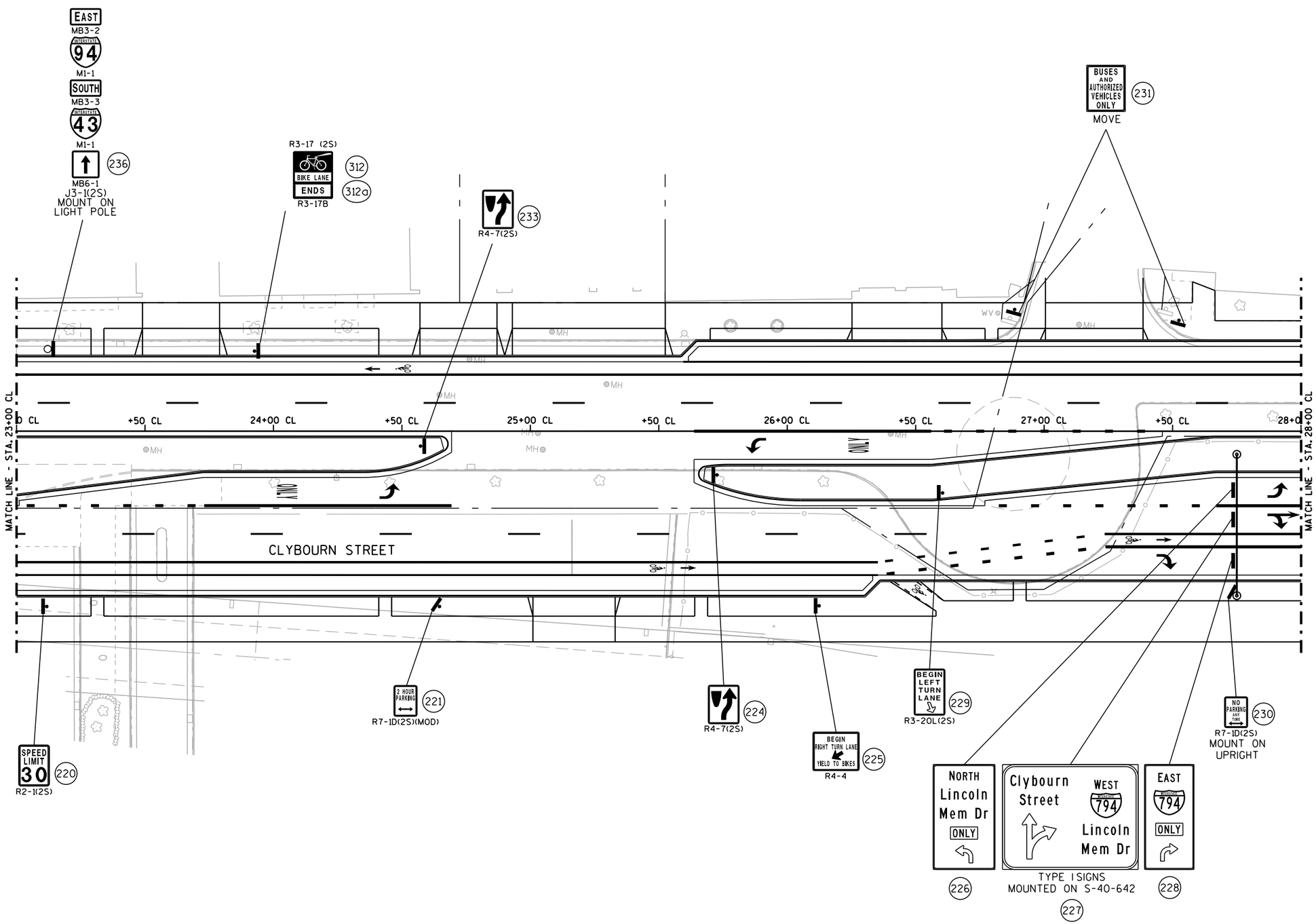
ONLY

SHEET 13 OF 17

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMANENT SIGNING - CLYBOURN STREET	SHEET 203 E

FILE NAME : J:\projects\d2_130013794\74\023213_ps.dgn PLOT DATE : 23-JUL-2015 09:41 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMANENT SIGNING - CLYBOURN STREET	SHEET 204	E

FILE NAME : J:\projects\d2_130013794\74\023214_ps.dgn PLOT DATE : 23-JUL-2015 09:41 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

N

+50 LW
104+00 LW
+50 LW
105+00 LW
+50 LW
106+00 LW
+50 LW
107+00 LW
+50 LW
108+00 LW
+50 LW
109+00 LW
+50 LW
MATCH LINE - STA. 109+50 LW

IH 794 WB

IH 794 WB ENTRANCE RAMP

ASPHALT PARKING LOT

W4-2R(5)
MOUNT
ON WALL
239

LEFT LANE
MUST
TURN LEFT
238
R3-7L(3)
MOUNT
ON WALL

+50 LE
204+00 LE
+50 LE
205+00 LE
+50 LE
206+00 LE
+50 LE
207+00 LE
+50 LE
208+00 LE
+50
MATCH LINE - STA. 208+50 LE

IH 794 EB EXIT RAMP

LEFT LANE
MUST
TURN LEFT
237
R3-7L(3)
MOUNT
ON WALL

+50 LE
203+00 LE

VAN BUREN STREET

+50 VB
VB 00+19
+50 VB

IH 794 EB

SHEET 15 OF 17

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PERMANENT SIGNING - IH 794 EB EXIT AND WB ENTRANCE RAMP	SHEET 205 E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

SPEED LIMIT 50
R2-1
ESTR

35 MPH
TYPE I SIGN
ESTR

256
Lakefront
SIGNAL AHEAD
25 MPH
TYPE I SIGN
MOUNT ON
S-40-362

249 250 251 252 253
W1-8(4)
BLINKER CHEVRON
MOUNT ON WALL
STEEL POSTS

S-40-362

S-40-854

EXIT
1F
255
E5-1B(5)

254
W1-3R(5)
25 MPH
254a
W13-1(5)
MOUNT
ON POLE

N. VAN BUREN ST

240
NORTH
Lincoln
Mem Dr
ONLY

241
NORTH
Lincoln
Mem Dr
Harbor
Drive

242
SOUTH
Lincoln
Mem Dr
ONLY

TYPE I SIGNS
MOUNT ON S-40-793

257
W1-6(3)
MOUNT
ON WALL

258
W3-3(2S)
MOUNT
ON WALL

WRONG
WAY
243 244
R5-1A(3)

S-40-367

S-40-793

247
W1-6(3)

ONLY ONLY
245
R3-8P(2S)

248
W1-6(3)
MOUNT
ON WALL

PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
246
R5-57(4)

N

SHEET 16 OF 17

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 206 E

FILE NAME : J:\projects\d2_130013794\74\023216_PS.dgn PLOT DATE : 23-JUL-2015 09:41 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

N

BROADWAY ST

MILWAUKEE ST

JEFFERSON ST

JACKSON ST

CLYBOURN AVE

CLYBOURN ST.

IH 94/794 WB

IH 94/794 EB

IH 794 EAST OFF RAMP

IH 794 WEST ON RAMP

ST PAUL AVE

E. ST. PAUL AVE.

S-40-856

S-40-857

S-40-855

S-40-362

LEGEND

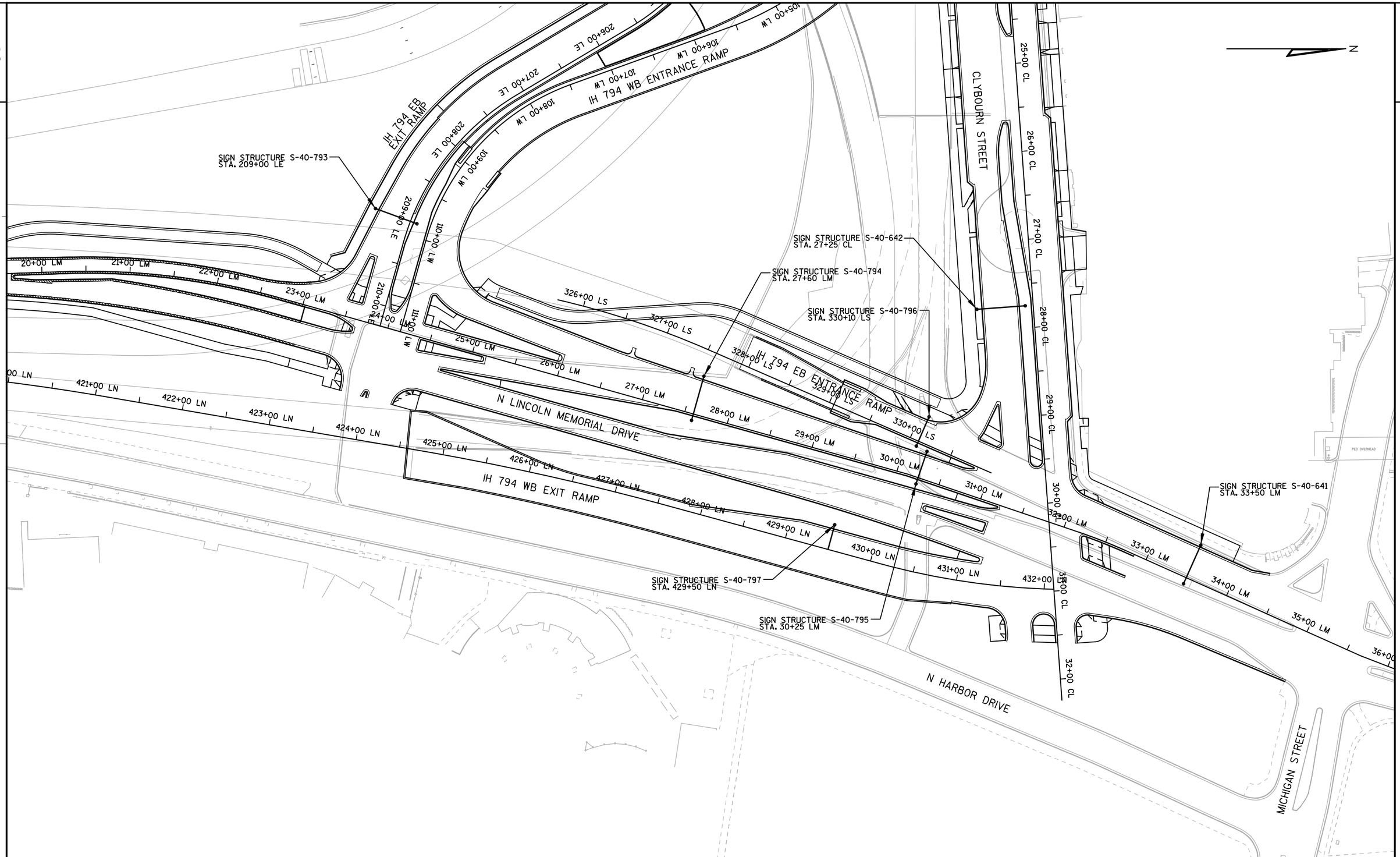
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

SHEET 17 OF 17

PROJECT NO: 1300-13-74	HWY: IH-794	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 207 E

FILE NAME : J:\projects\d2_130013794\74\023217_PS.dgn PLOT DATE : 23-JUL-2015 09:41 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 100:1

2



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	OVERHEAD SIGN SUPPORT LOCATIONS	SHEET 208	E

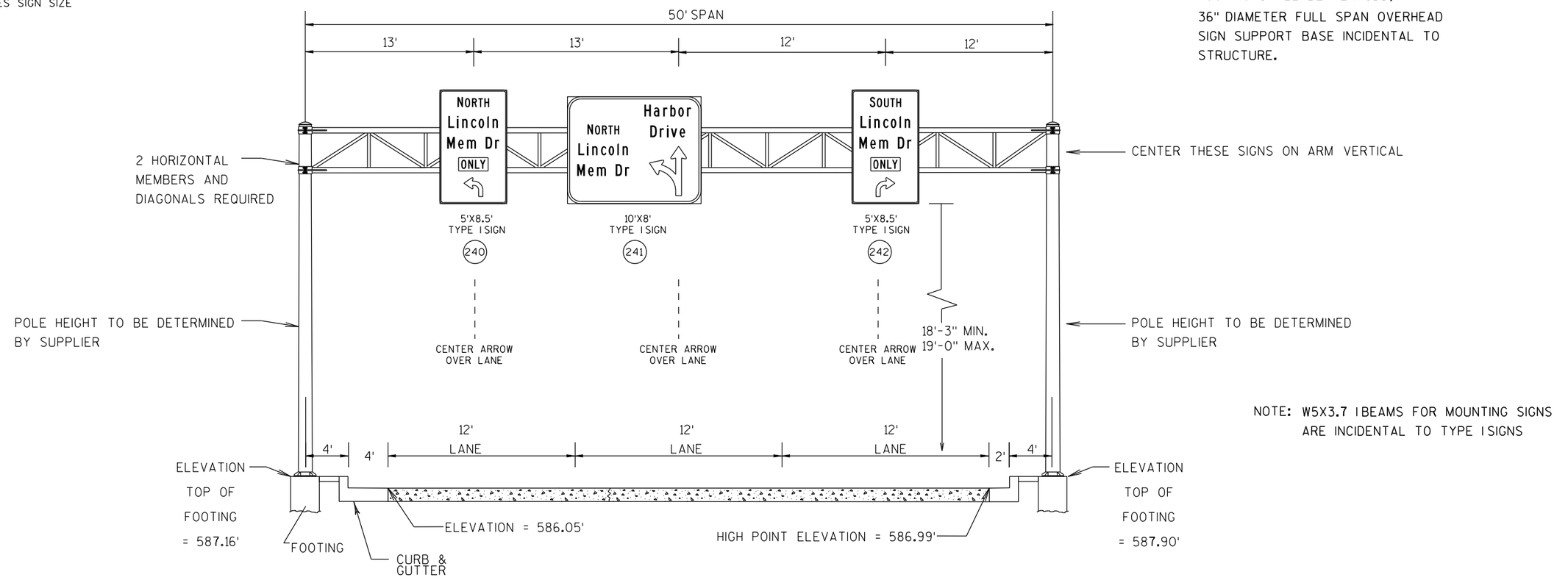
FILE NAME : 023200_ps.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

NOTE: FOOTING SHALL BE PER SDD, 36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE INCIDENTAL TO STRUCTURE.



NOTE: W5X3.7 I BEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

OVERHEAD SIGN SUPPORTS DETAIL
S-40-793
EXIT RAMP 794 EASTBOUND
STATION 209+00LE
(SEE SIGNING PLAN FOR LOCATION)

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS TO TOM HEYDEL SE REGION TRAFFIC OPERATION WISDOT OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
5.) 6 ANCHOR RODS MINIMUM PER STANDARD DETAIL DRAWINGS

GERNERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFATIONS

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

SHEET 1 OF 7

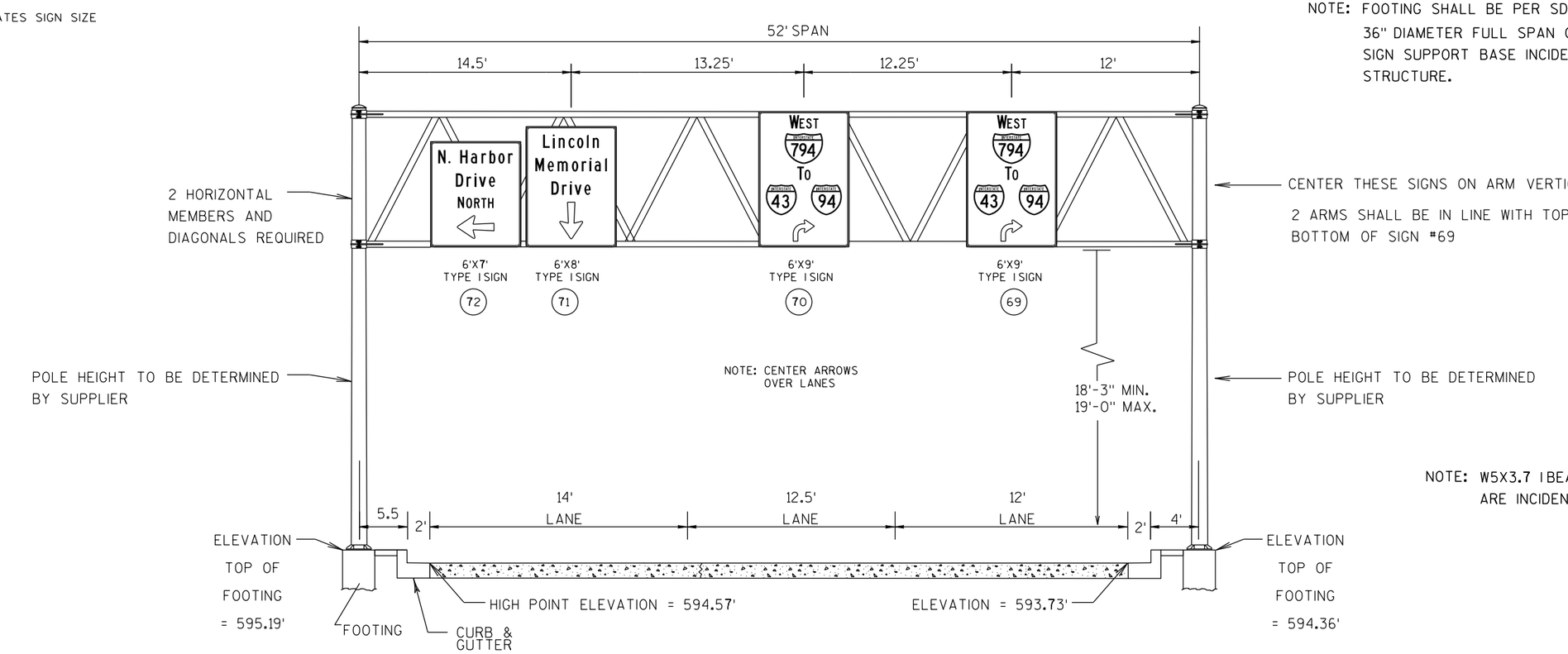
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	OVERHEAD SIGN SUPPORT S-40-793 FULL SPAN	SHEET	E

2

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE



NOTE: FOOTING SHALL BE PER SDD, 36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE INCIDENTAL TO STRUCTURE.

NOTE: W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

OVERHEAD SIGN SUPPORTS DETAIL
S-40-794
LINCOLN MEMORIAL DRIVE SOUTHBOUND
STATION 27+60LM
(SEE SIGNING PLAN FOR LOCATION)

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS TO TOM HEYDEL SE REGION TRAFFIC OPERATION WISDOT OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
5.) 6 ANCHOR RODS MINIMUM PER STANDARD DETAIL DRAWINGS

GERNERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFATIONS

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

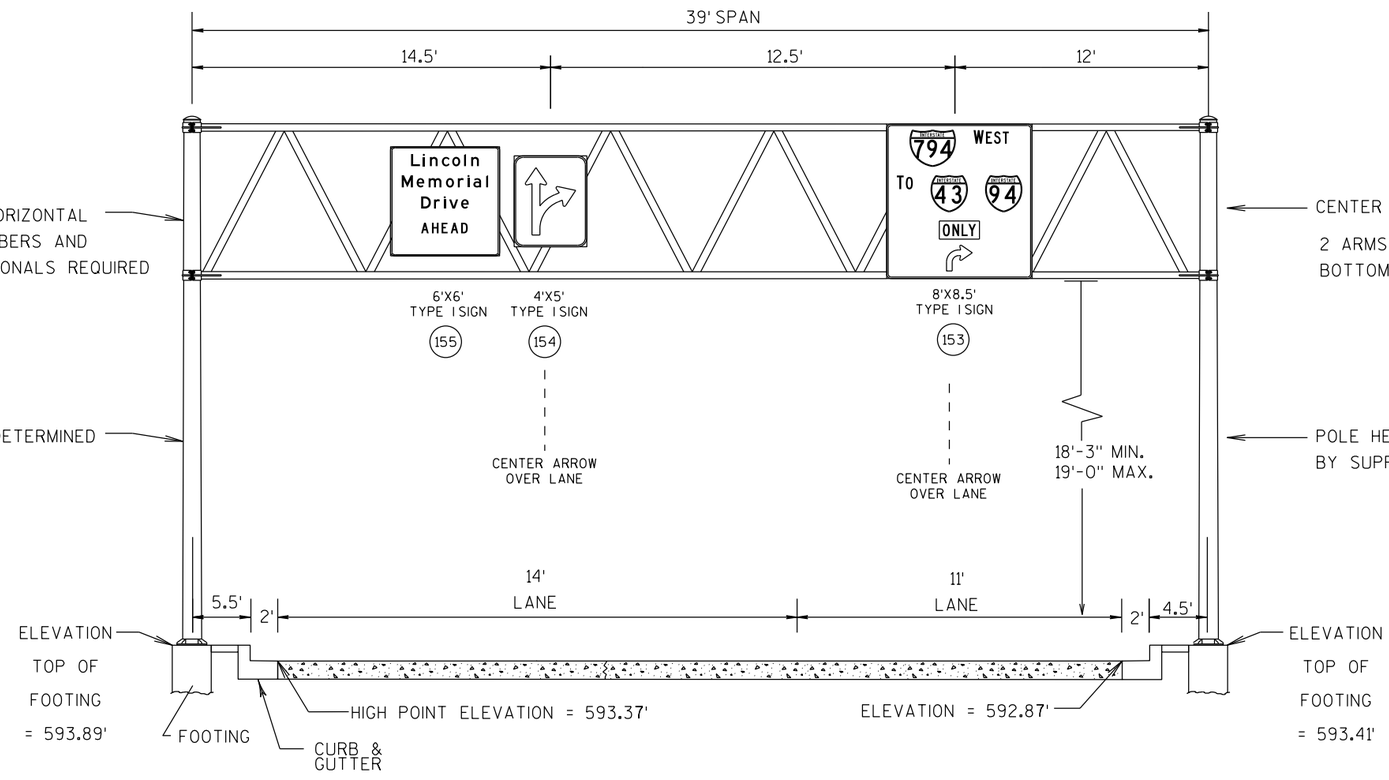
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	OVERHEAD SIGN SUPPORT S-40-794 FULL SPAN	SHEET	E

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

NOTE: FOOTING SHALL BE PER SDD, 36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE INCIDENTAL TO STRUCTURE.



NOTE: W5X3.7 I BEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

OVERHEAD SIGN SUPPORTS DETAIL
S-40-795
LINCOLN MEMORIAL DRIVE
SOUTHBOUND ON RAMP TO WEST IH 794
STATION 30+25LM
(SEE SIGNING PLAN FOR LOCATION)

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS TO TOM HEYDEL SE REGION TRAFFIC OPERATION WISDOT OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
5.) 6 ANCHOR RODS MINIMUM PER STANDARD DETAIL DRAWINGS

GERNERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFATIONS

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

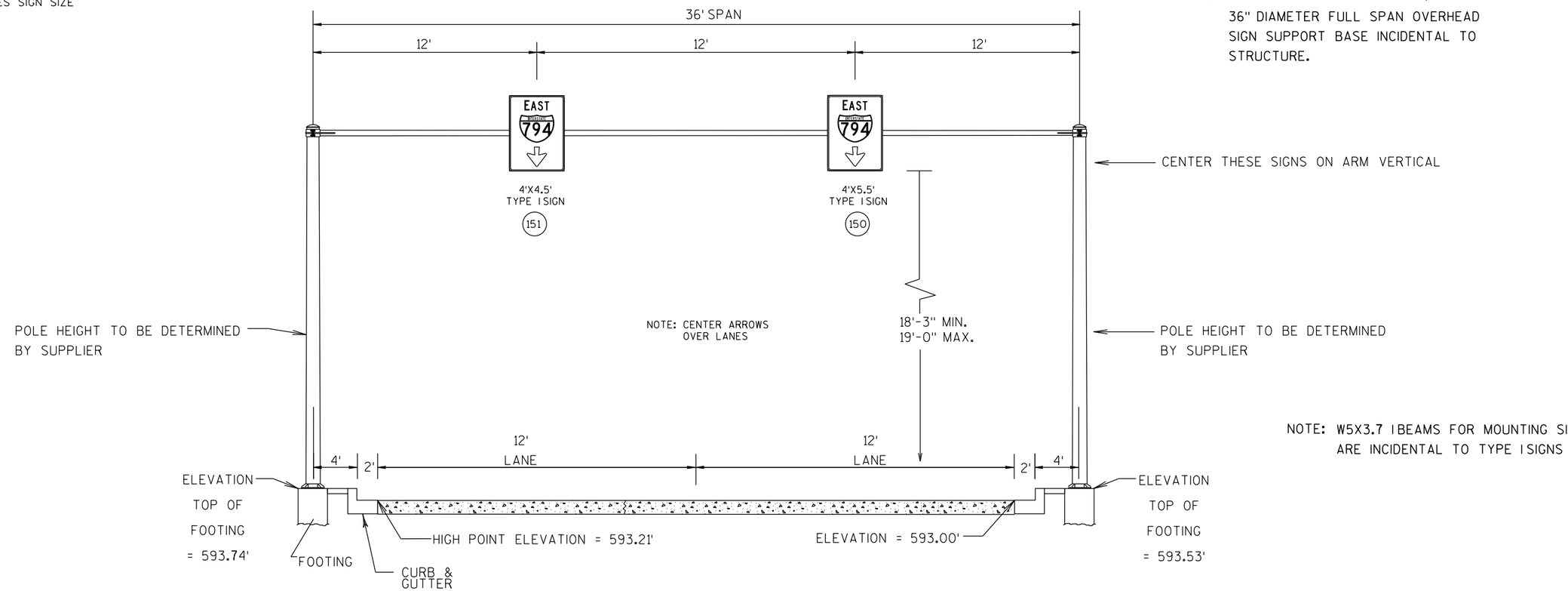
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	OVERHEAD SIGN SUPPORT S-40-795 FULL SPAN	SHEET	E

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

NOTE: FOOTING SHALL BE PER SDD, 36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE INCIDENTAL TO STRUCTURE.



NOTE: W5X3.7 I BEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

OVERHEAD SIGN SUPPORTS DETAIL
S-40-796
794 EASTBOUND RAMP
SOUTHBOUND
STATION 330+10LS
(SEE SIGNING PLAN FOR LOCATION)

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS TO TOM HEYDEL SE REGION TRAFFIC OPERATION WISDOT OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
5.) 6 ANCHOR RODS MINIMUM PER STANDARD DETAIL DRAWINGS

GERNERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFATIONS

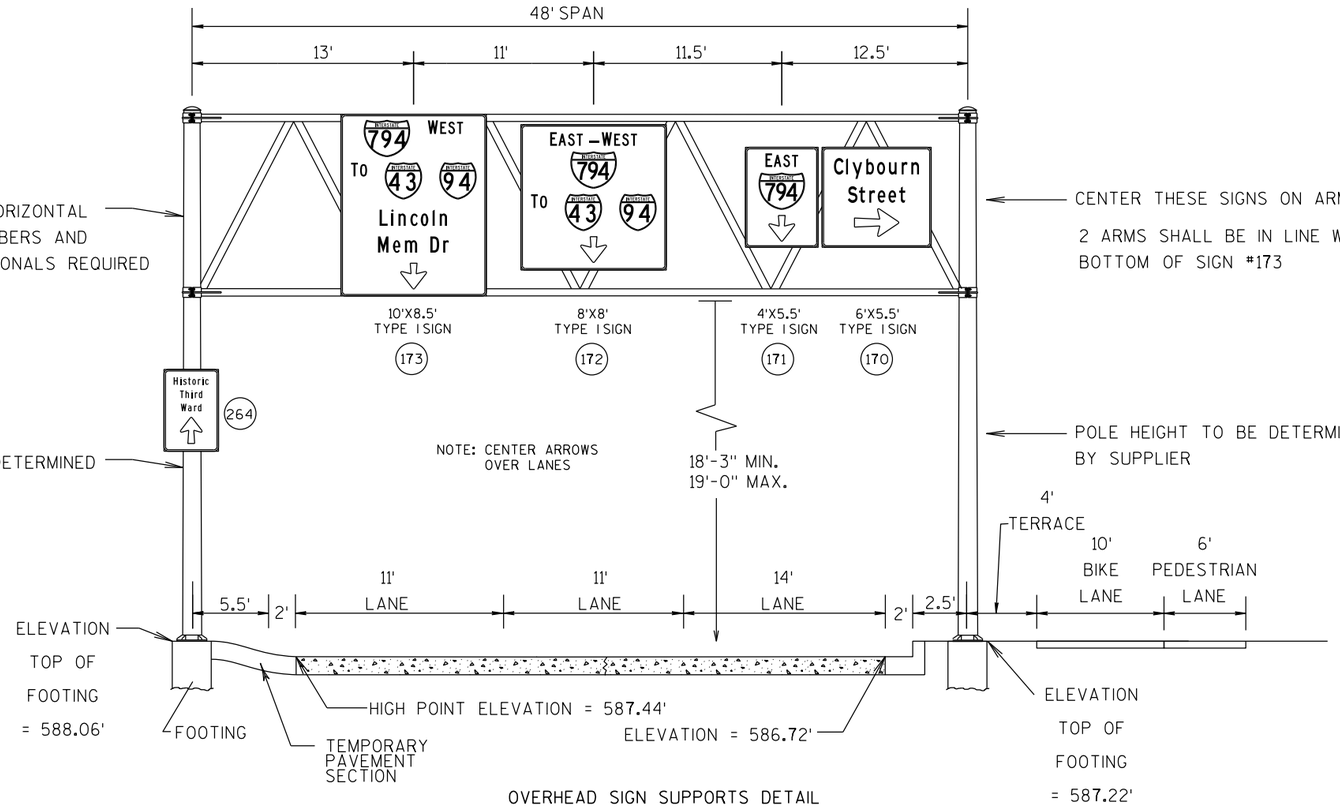
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	OVERHEAD SIGN SUPPORT S-40-796 FULL SPAN	SHEET	E

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE



OVERHEAD SIGN SUPPORTS DETAIL
S-40-641
LINCOLN MEMORIAL DRIVE
SOUTHBOUND
STATION 33+50LM
(SEE SIGNING PLAN FOR LOCATION)

NOTE: FOOTING SHALL BE PER SDD, 36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE INCIDENTAL TO STRUCTURE.

NOTE: W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

NOTE, CONTRACTOR SHALL:

1.) SUBMIT SHOP DRAWINGS TO TOM HEYDEL SE REGION TRAFFIC OPERATION WISDOT OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
5.) 6 ANCHOR RODS MINIMUM PER STANDARD DETAIL DRAWINGS

GERNERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFATIONS

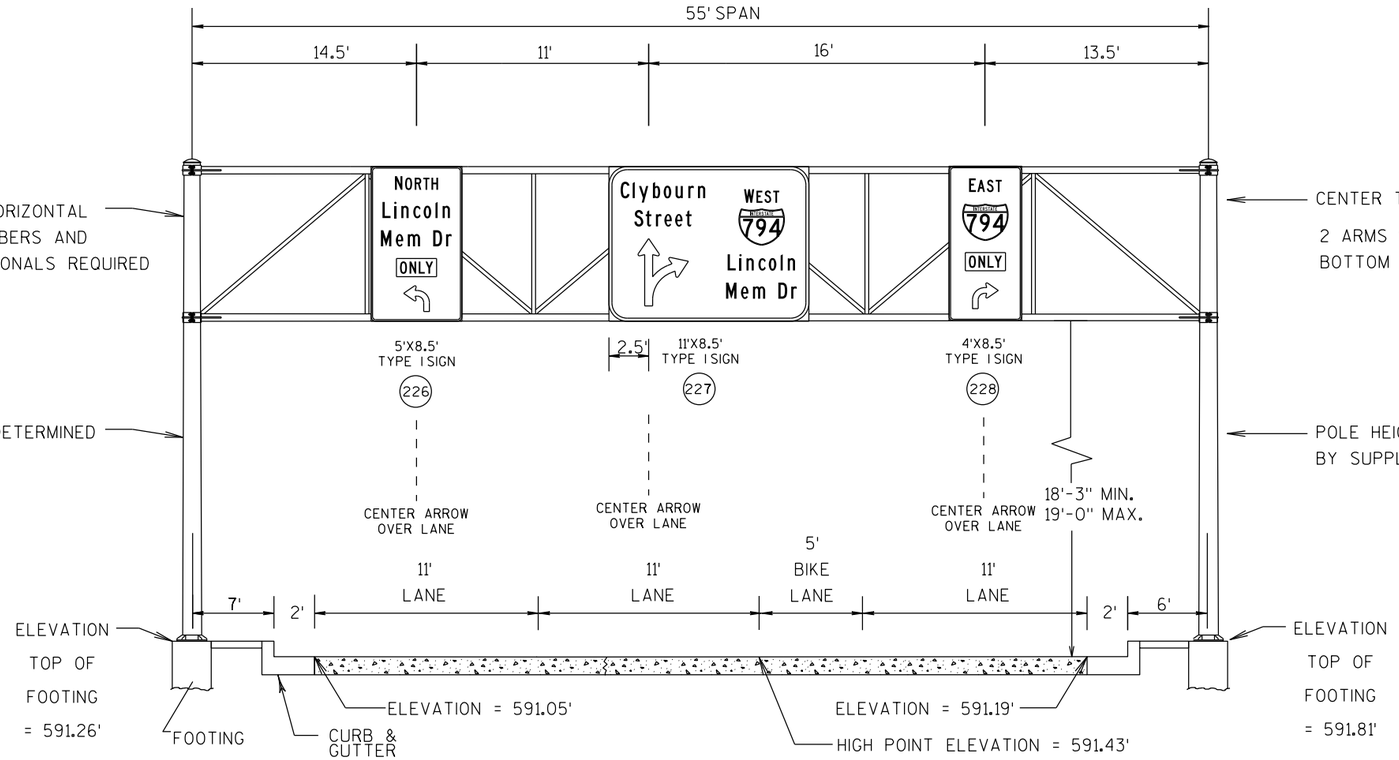
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	OVERHEAD SIGN SUPPORT S-40-641 FULL SPAN	SHEET	E

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE



NOTE: FOOTING SHALL BE PER SDD, 36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE INCIDENTAL TO STRUCTURE.

NOTE: W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

OVERHEAD SIGN SUPPORTS DETAIL
S-40-642
CLYBOURN STREET
EASTBOUND
STATION 27+75CL
(SEE SIGNING PLAN FOR LOCATION)

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS TO TOM HEYDEL SE REGION TRAFFIC OPERATION WISDOT OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
5.) 6 ANCHOR RODS MINIMUM PER STANDARD DETAIL DRAWINGS

GERNERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

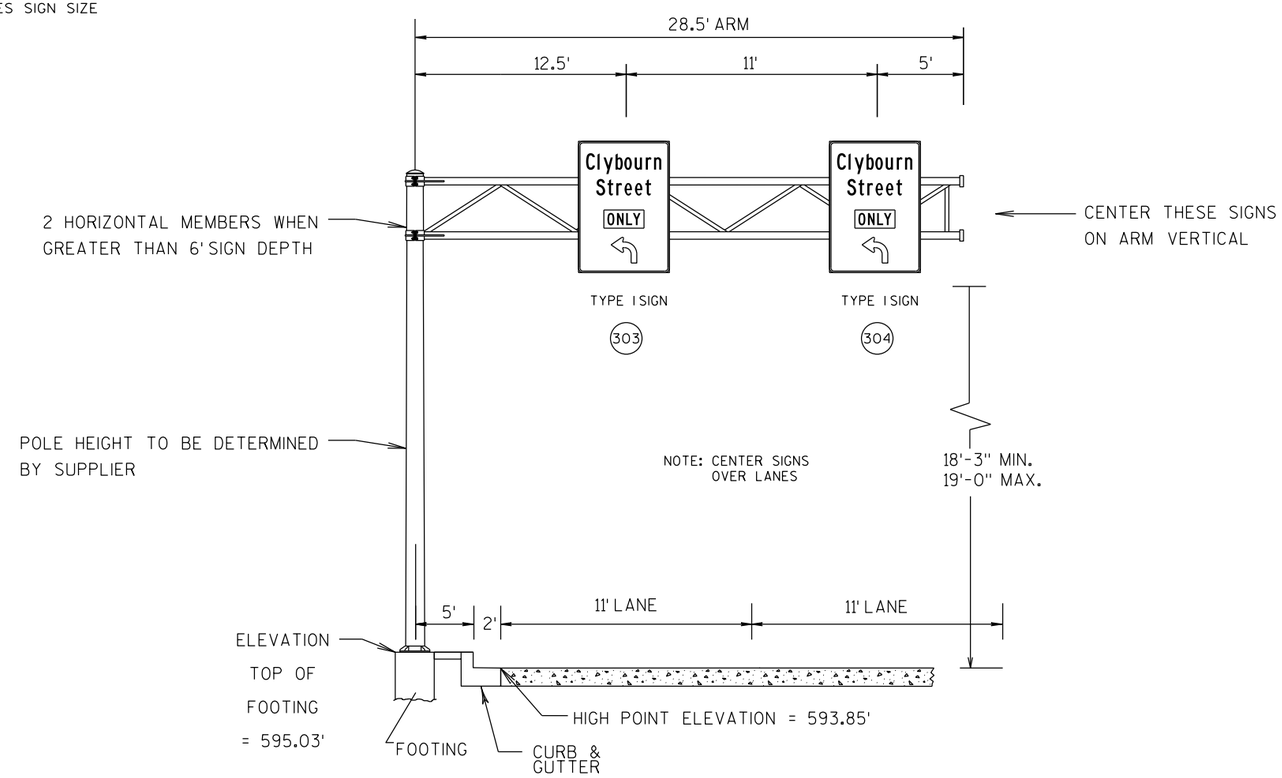
WIND VELOCITY PER WISDOT STD SPECIFATIONS

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE



NOTE: FOOTING SHALL BE PER SDD, 36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE.

NOTE: W5X3.7 I BEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

OVERHEAD SIGN SUPPORTS DETAIL
S-40-797
IH 794 WB EXIT RAMP
STATION 429+50
(SEE SIGNING PLAN FOR LOCATION)

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS TO TOM HEYDEL SE REGION TRAFFIC OPERATION WISDOT OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) 6 ANCHOR RODS MINIMUM PER STANDARD DETAIL DRAWINGS
5.) ID PLAQUE INCIDENTAL TO SIGN SUPPORT.

GERNERAL NOTES

DRAWINGS NOT TO SCALE

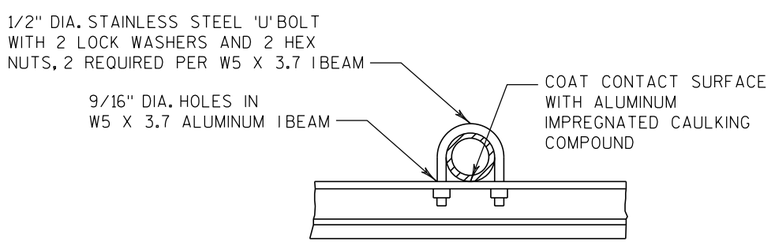
DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

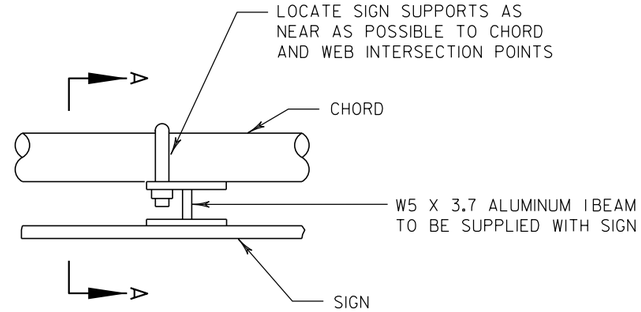
WIND VELOCITY PER WISDOT STD SPECIFATIONS

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

2



SECTION A-A



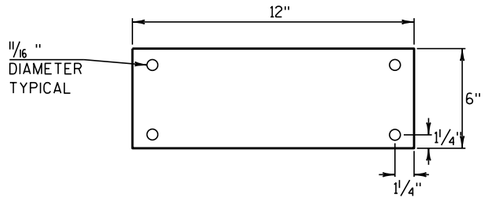
TYPICAL SIGN CONNECTION

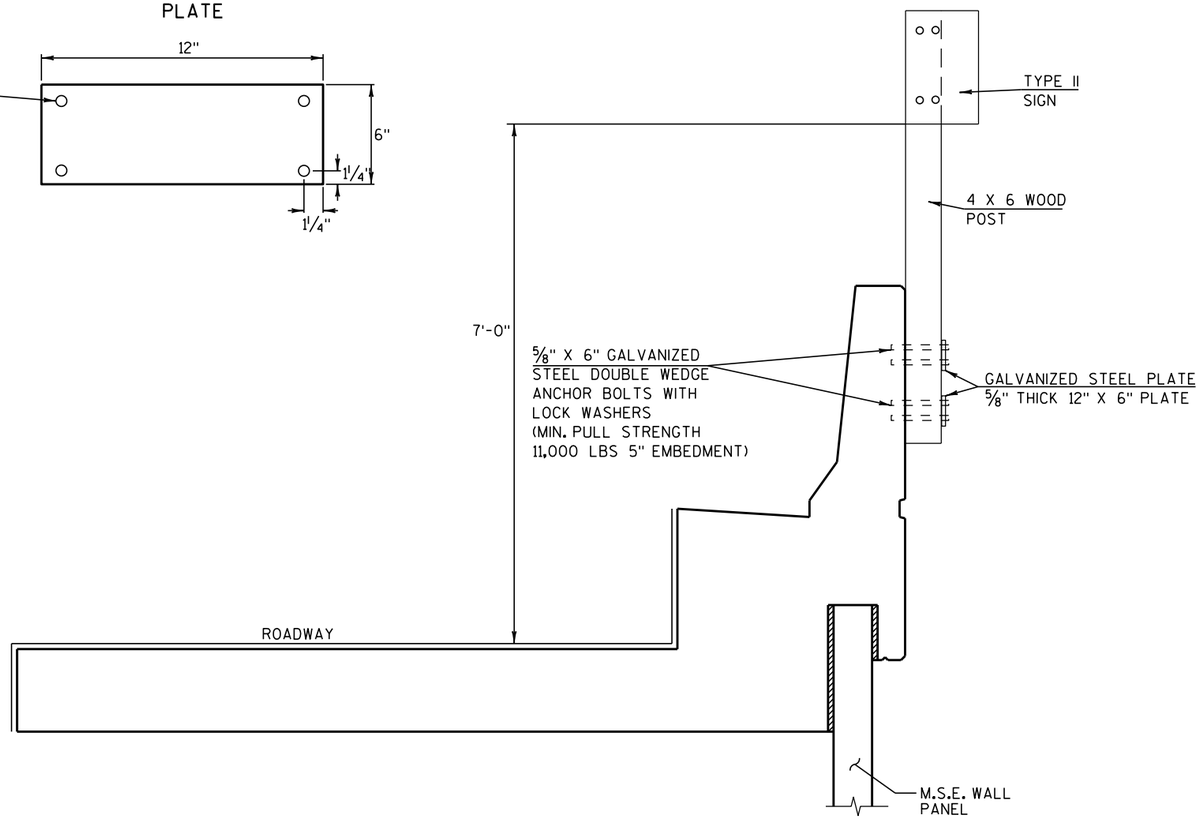
FOR USE WHEN MOUNTING SIGNS TO EXISTING SIGN BRIDGE TRUSS
INCIDENTAL TO OTHER SIGN ITEMS

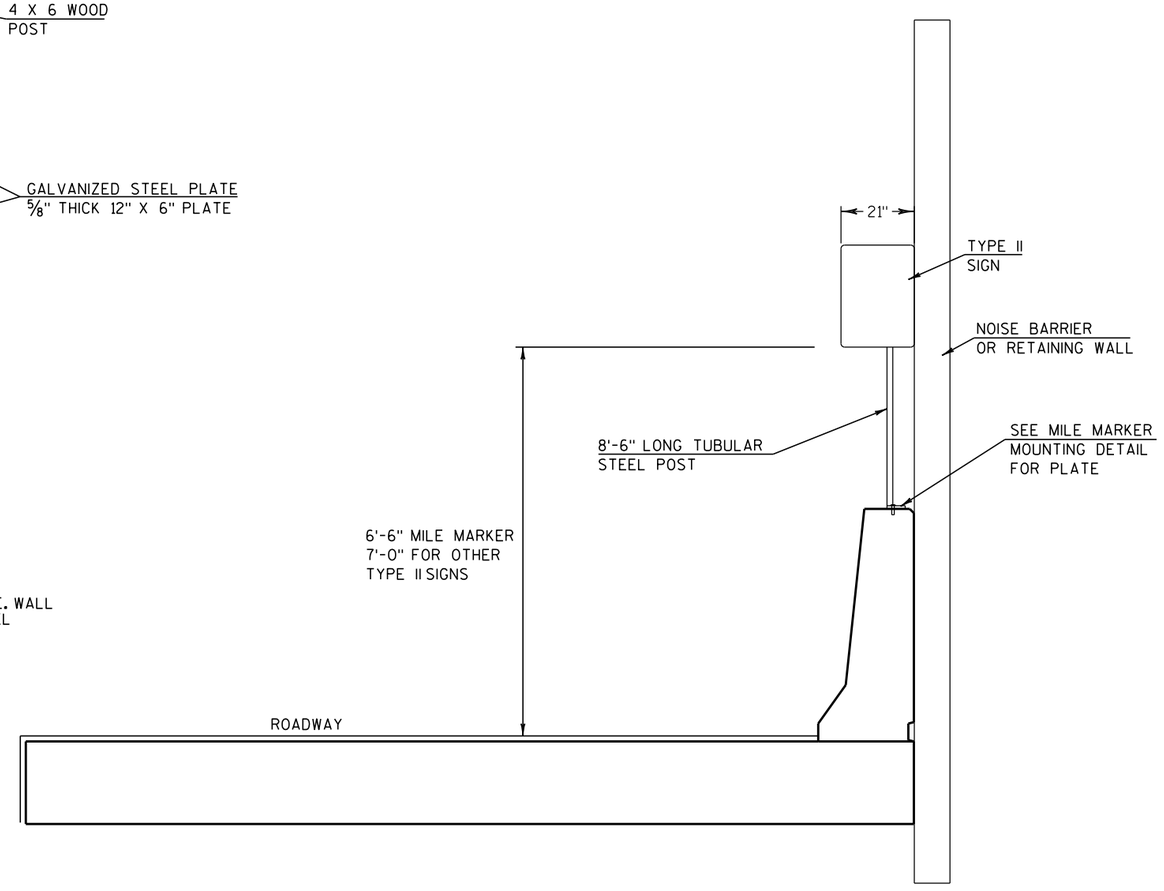
NOTE TO DESIGNER:
For mounting signs to existing overhead sign supports,
utilize sign plate A4-7.1

2

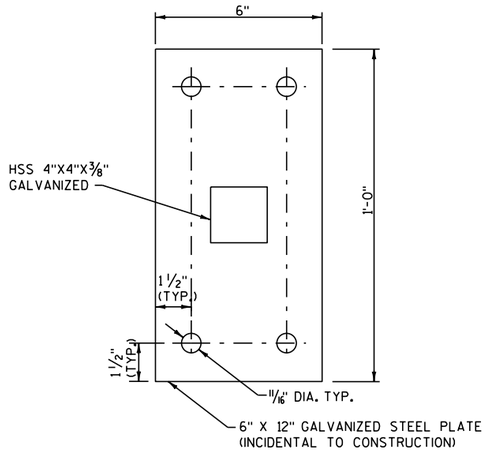
PLATE







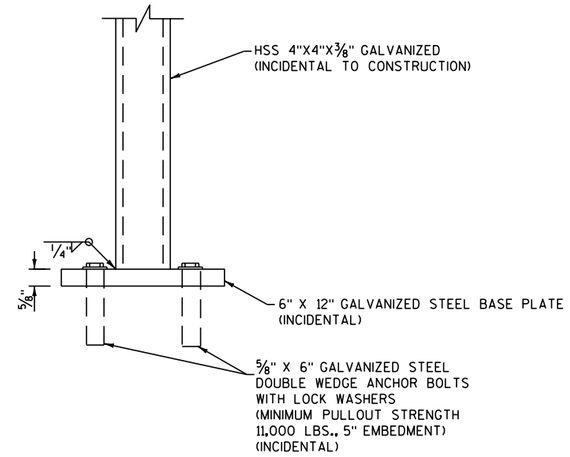
TYPE II SIGN AT NOISE WALL OR RETAINING WALL APPLICATION



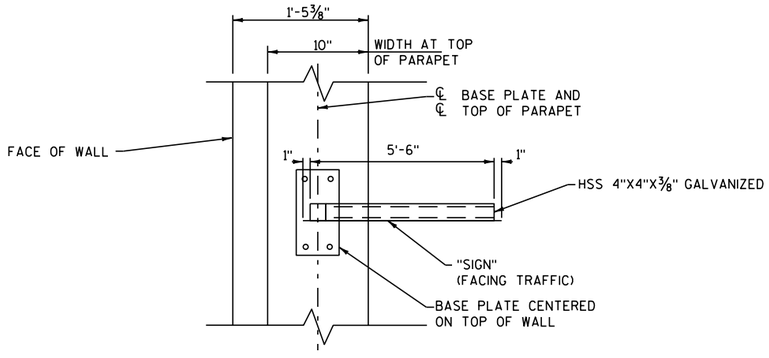
PLAN VIEW - BASE PLATE

NOTES:

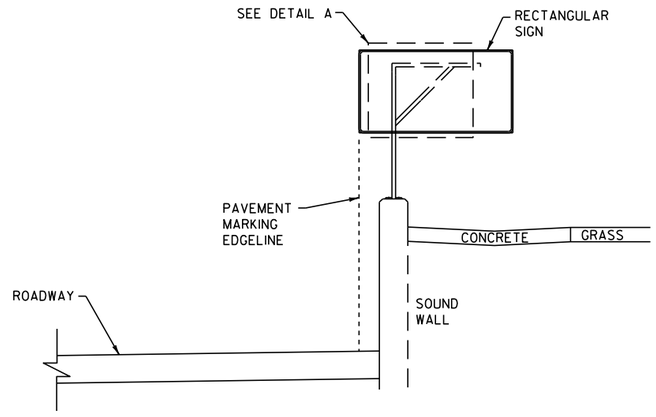
1. MOUNTING HARDWARE, FABRICATING, FURNISHING, AND INSTALLATION ARE INCIDENTAL.



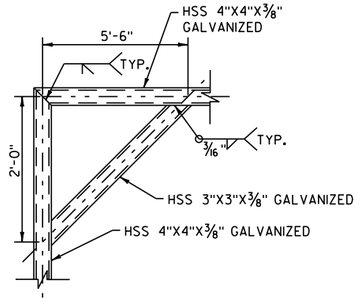
SIDE VIEW - SIGN POST & BASE PLATE



PLAN VIEW - OVERALL



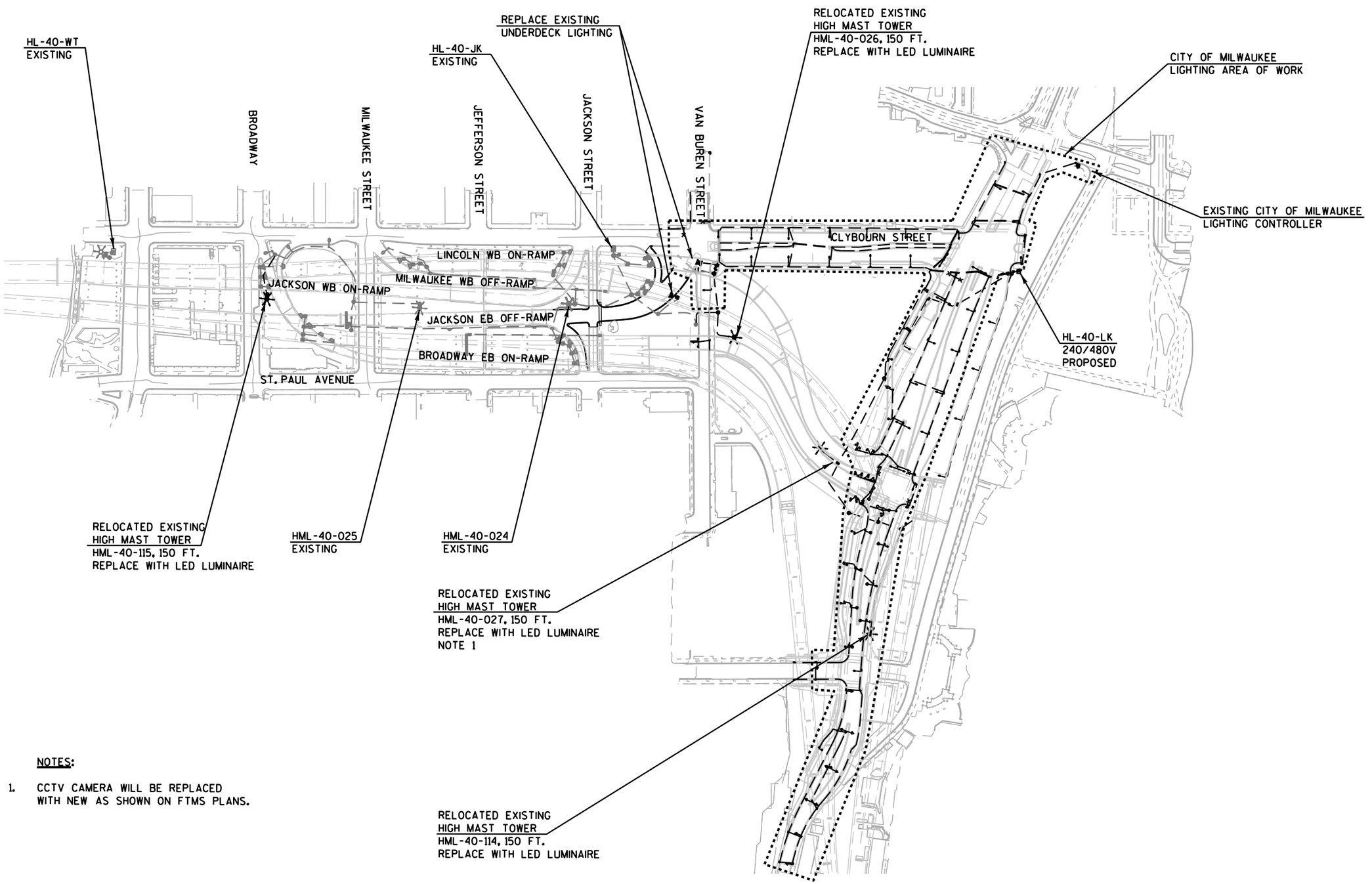
SIDE VIEW - OVERALL



DETAIL A
SIGN NOT SHOWN FOR CLARITY

MOUNTING TRAFFIC SIGNS ON TOP OF WALL

N.T.S.



NOTES:

1. CCTV CAMERA WILL BE REPLACED WITH NEW AS SHOWN ON FTMS PLANS.

RL-1

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING SYSTEM - OVERVIEW	SHEET 219	E

FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023501_lp.dgn PLOT DATE : 27-JUL-2015 15:11 PLOT BY : jholt PLOT NAME : PLOT SCALE : 300:1
WISDOT/CADDS SHEET 42

GENERAL NOTES:

FREEWAY LIGHTING SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTIONS 652 TO 657 AND 659 EXCEPT:

1. DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

2. LOCATIONS OF THE PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION WILL REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE ENGINEER, APPROPRIATE ADJUSTMENT OF CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.

3. THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION ON THE CONDUIT.

4. ALL OPEN AND UN-TERMINATED CONDUITS SHALL BE CAPPED OR PLUGGED WITH ENGINEER APPROVED FITTINGS IMMEDIATELY AFTER INSTALLATION.

5. BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

6. ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

7. PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT THAT CAN BE EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

8. CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX-TO-PULL BOX, JUNCTION BOX OR BASE-TO-BASE, ETC.) UNLESS OTHERWISE NOTED ON PLANS.

9. PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUITS.

10. CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS (.PDF FORMAT) FOR ALL THE WORK BEING DONE.

11. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.

12. UNDERGROUND WIRE & CONDUIT SHOWN ON REMOVAL PLANS FOR REMOVAL SHALL BE ABANDONED IN PLACE UNLESS DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.

13. PROVIDE MINIMUM CABLE SLACK AS MENTIONED BELOW:

PULL BOXES:	5-FT ONE WAY IN OR OUT
EMBEDDED JUNCTION BOXES:	3-FT
DISTRIBUTION CENTER/LOAD CENTER:	10-FT

14. AT EVERY BRIDGE JOINT, EXPANSION/DEFLECTION FITTINGS MUST BE USED TO PREVENT DAMAGE TO CONDUIT AND LIGHTING CIRCUITS. THIS ITEM IS INCIDENTAL TO THE CONDUIT BID ITEM.

15. THE SUPPORT CHANNELS FOR INSTALLATION OF CONDUITS, LUMINAIRES, JUNCTION BOXES AND ENCLOSURES SHALL BE STAINLESS STEEL UNISTRUT P1000 SERIES OR APPROVED EQUAL. CHANNELS SHALL BE SLOTTED OR PERFORATED.

16. PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AT THE CABINETS, PULL BOXES AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH THE CONDUITS DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO ASSOCIATED CONDUIT PAY ITEM.

LIGHTING PLAN FINAL - GENERAL NOTES

1. INSTALLATION OF UNDERGROUND CONDUIT LATERAL UNDER PAVEMENT SHALL BE INSTALLED MINIMUM 30 INCH BELOW PROPOSED GRADE. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ROADWAY CONSTRUCTION FOR CONDUIT LATERALS INSTALLATION.

2. PROVIDE 3 INCH PVC CONDUIT ELBOWS IN ALL GROUND MOUNTED CONCRETE BASES FOR CABLE IN DUCT TYPE INSTALLATION. THIS WORK IS INCIDENTAL TO CONCRETE BASES PAY ITEMS.

3. AT EACH SIGN STRUCTURE BASE PROVIDE 2" PVC CONDUIT FROM JUNCTION BOX TO SIGN STRUCTURE. INSTALLATION OF JUNCTION BOX AND CONDUIT ARE INCIDENTAL TO SIGN STRUCTURE INSTALLATION WORK.

4. INSTALL COMMON GROUND CONDUCTOR IN CONDUIT WHERE MULTIPLE BRANCH CIRCUITS CONDUCTORS ARE INSTALLED IN SAME CONDUIT AND SPLICE THE GROUND CONDUCTOR WITH TAP CONNECTOR IN PULLBOX.

5. ALL CONDUITS AND JUNCTION BOXES EMBEDDED IN STRUCTURE SHALL BE PAID UNDER STRUCTURE PAY ITEMS. CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EMBEDDED CONDUITS.

LEGEND : GENERAL

SYMBOL	DESCRIPTION
	LIGHTING DISTRIBUTION CENTER, BASE MOUNTED
	ELECTRIC UTILITY TRANSFORMER
	ELECTRIC UTILITY METER
	PHOTOCELL
	SIGN STRUCTURE BRIDGE, SOLID SQUARES INDICATE LUMINAIRE
	PULLBOX (24" x 36" GROUNDED)
	PULLBOX (24" x 42" GROUNDED)
	JUNCTION BOX EMBEDDED IN STRUCTURE, (PART OF STRUCTURE)
JB	JUNCTION BOX ATTACHED, SIZE AND TYPE AS NOTED
	EXISTING HIGH MAST LIGHTING TOWER, ARROW INDICATE QUANTITY OF LUMINAIRES AND AIMING DIRECTION
	EXISTING DOT LIGHT POLE UNIT, SINGLE ARM
	EXISTING DOT LIGHT POLE UNIT, TWIN ARM
	EXISTING UDL (UNDERDECK LUMINAIRE) FOR FREEWAY
	NEW HIGH MAST LIGHTING TOWER, ARROW INDICATE QUANTITY OF LUMINAIRES AND AIMING DIRECTION
	NEW LIGHT POLE UNIT, SINGLE ARM
	NEW LIGHT POLE UNIT, TWIN ARM
	NEW UDL (UNDERDECK LUMINAIRE) FOR FREEWAY
	NEW UNDERSTRUCTURE LUMINAIRE
	PAD MOUNTED TRANSFORMER
	CONDUIT 2-INCH, EMBEDDED OR UNDERGROUND, UNLESS NOTED OTHERWISE
	TEMPORARY WOOD POLE
OH	AERIAL CABLE

LIGHTING PLAN REMOVAL - GENERAL NOTES

1. WIRE AND CONDUIT SHOWN TO BE REMOVED SHALL BE ABANDONED IN PLACE UNLESS OTHERWISE SPECIFIED. CONTRACTOR MAY CHOOSE TO REMOVE WIRES FROM ABANDONED CONDUIT AT OWN EXPENSE.

2. CONTRACTOR SHALL DISPOSE OF REMOVED EXISTING LAMPS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

3. CONTRACTOR SHALL COORDINATE LIGHTING WORK WITH ROADWAY TRAFFIC STAGING AND STRUCTURE WORK.

RL-2

ABBREVIATIONS

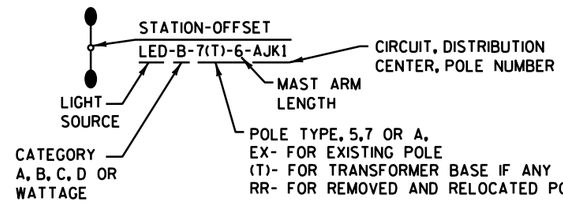
ABBREVIATION	DESCRIPTION
1P	1 PHASE
2W	2 WIRE
A	AMPERES
A.I.C.	AMPS INTERRUPTING CURRENT
AN	ABOVE NORMAL
AWG	AMERICAN WIRE GAUGE
B.N.	BELOW NORMAL
C	CONDUIT
CKT. OR CIRC.	CIRCUIT
DIA.	DIAMETER
EB	EAST BOUND
EXLPB	EXISTING LIGHTING PULL BOX
FT.	FEET
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HPS	HIGH PRESSURE SODIUM
JB	JUNCTION BOX
L.E.D.	LIGHT EMITTING DIODE
LPB	LIGHTING PULL BOX
LT	LEFT
M.B.	MAIN BREAKER
M.L.O.	MAIN LUGS ONLY
NB	NORTH BOUND
NEMA	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION
No. / #	NUMBER
N.T.S.	NOT TO SCALE
P	POLE WHEN USED WITH CIRCUIT BREAKER
RT	RIGHT
RTRC	CONDUIT REINFORCED THERMOSETTING RESIN 1-INCH
SB	SOUTH BOUND
SPD	SURGE- PROTECTION DEVICES
SS	STAINLESS STEEL
STA.	STATION
UDL	UNDERDECK LIGHTING
VAC	VOLTS ALTERNATING CURRENT
WB	WEST BOUND
W.S.C.S.	WISCONSIN STATE ELECTRICAL CODE
X'MER	TRANSFORMER

LEGEND : LIGHTING PLAN - REMOVAL

SYMBOL	DESCRIPTION
— — — — — —	CONDUIT 2-INCH, EMBEDDED OR UNDERGROUND TO BE ABANDONED, UNLESS NOTED OTHERWISE
XYYZ	POLE LABEL. X- CIRCUIT, YY-DISTRIBUTION CENTER, Z-POLE NUMBER
#6 A,B,N	#6 - CONDUCTOR SIZE (AWG) A,B,C,D,E,F,G,H,I,J,K - CIRCUIT LABELS N - NEUTRAL CONDUCTOR
S-40-245 / 1 MV-D/PR	SIGN STRUCTURE NUMBER NUMBER OF LAMPS (TYPE) - CKT./CONTROLLER (1 MERCURY VAPOR - CKT.D/HL-40-PR)

LEGEND : LIGHTING PLAN - FINAL

SYMBOL	DESCRIPTION
— — — — — —	CONDUIT 2-INCH, EMBEDDED OR UNDERGROUND TO BE ABANDONED, UNLESS NOTED OTHERWISE

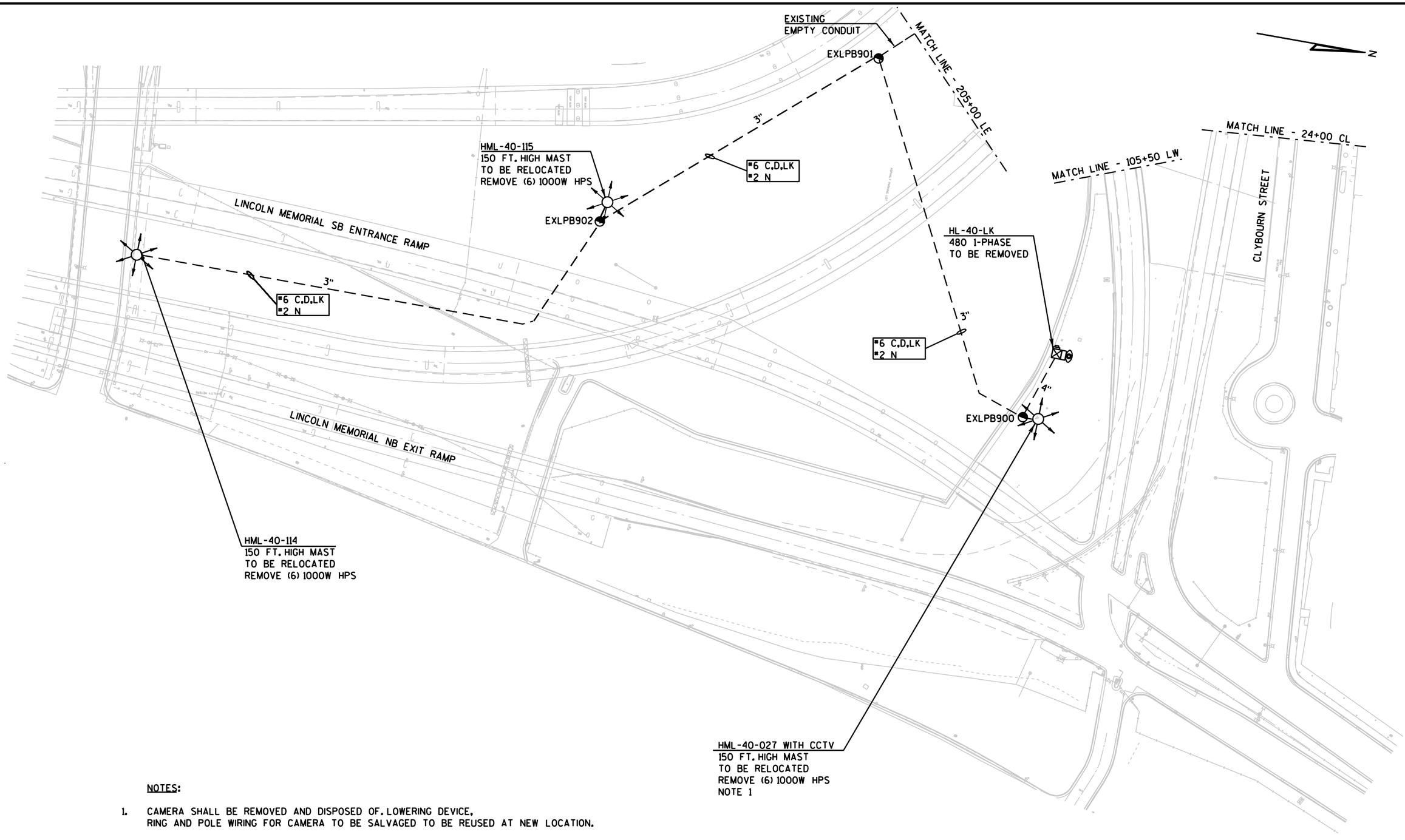


CIRCUIT CALLOUT LEGEND

3 # 2 A,B,N, 1 # 8 GND, CID	PROPOSED CABLE IN DUCT WITH 3 # 2 AWG CONDUCTORS (HOT LEG A, HOT LEG B, NEUTRAL) AND 1 # 8 AWG GROUND CONDUCTOR
2" C, 3 # 6 C,D,N, 1 # 8 GND	PROPOSED 2 INCH CONDUIT WITH PROPOSED 3 # 6 AWG CONDUCTORS (HOT LEG C, HOT LEG D, NEUTRAL) AND 1 # 8 AWG GROUND CONDUCTOR
2" C EXISTING 3 # 4 A,B,N 1 # 8 GND	EXISTING CONDUIT WITH PROPOSED 3 # 4 AWG CONDUCTORS AND 1 # 8 AWG GROUND CONDUCTOR
3 # 8 G,H,N, 1 # 8 GND, CID EXISTING	EXISTING CABLE IN DUCT WITH EXISTING 3 # 8 AWG CONDUCTORS AND 1 # 8 AWG GROUND CONDUCTOR
2" C, 3 # 2 J,K,N, 1 # 8 GND (EXISTING)	EXISTING 2 INCH CONDUIT WITH EXISTING 3 # 2 AWG CONDUCTORS AND 1 # 8 AWG GROUND CONDUCTOR

RL-3

2



NOTES:

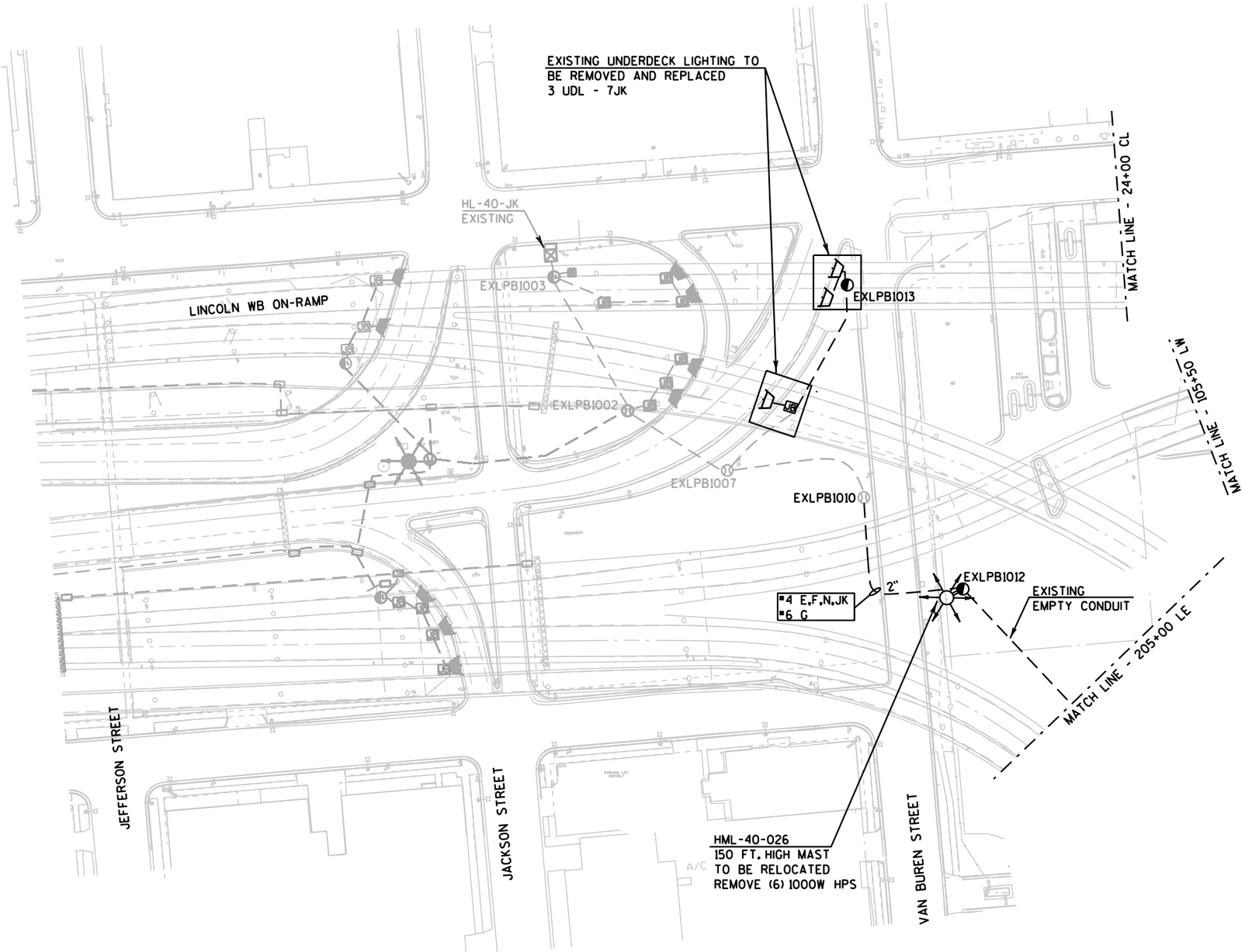
1. CAMERA SHALL BE REMOVED AND DISPOSED OF. LOWERING DEVICE, RING AND POLE WIRING FOR CAMERA TO BE SALVAGED TO BE REUSED AT NEW LOCATION.

RL-4

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - REMOVAL	SHEET 222	E

2

N



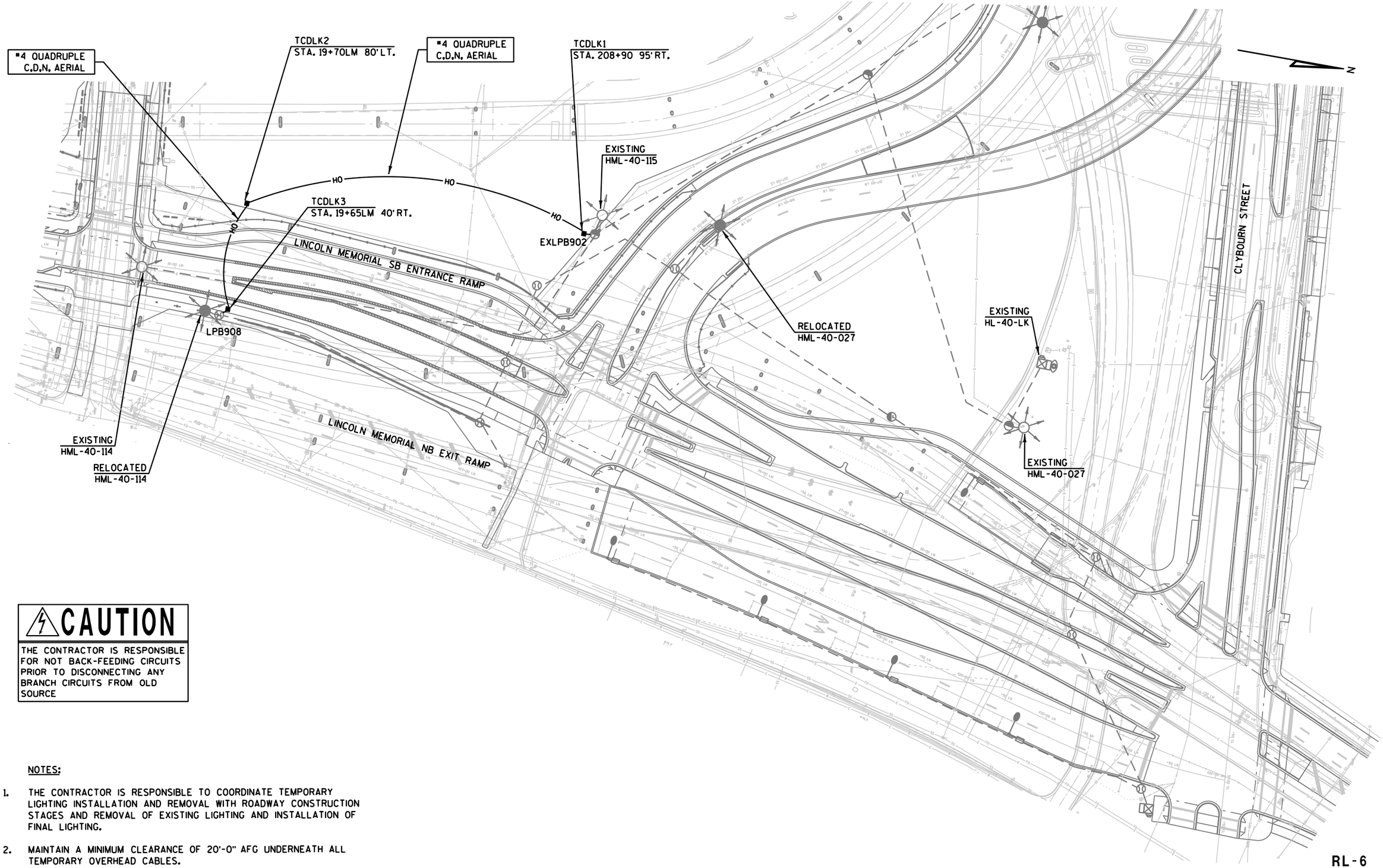
RL-5

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - REMOVAL	SHEET 223	E

FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023602_lp.dgn PLOT DATE : 27-JUL-2015 15:11 PLOT BY : jholt PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



⚠ CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

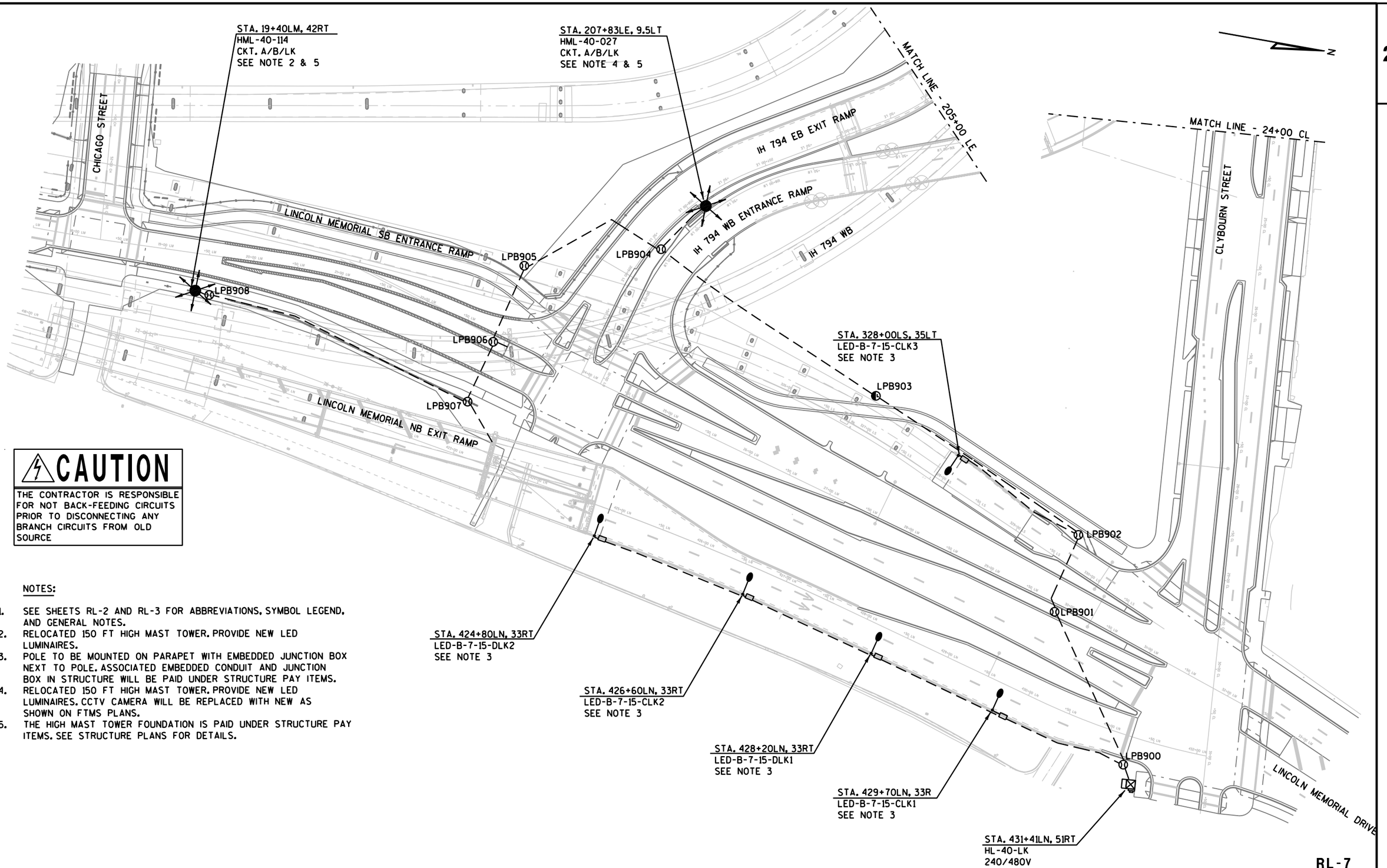
NOTES:

1. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE TEMPORARY LIGHTING INSTALLATION AND REMOVAL WITH ROADWAY CONSTRUCTION STAGES AND REMOVAL OF EXISTING LIGHTING AND INSTALLATION OF FINAL LIGHTING.
2. MAINTAIN A MINIMUM CLEARANCE OF 20'-0" AFG UNDERNEATH ALL TEMPORARY OVERHEAD CABLES.

RL-6

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - TEMPORARY	SHEET 224	E

2



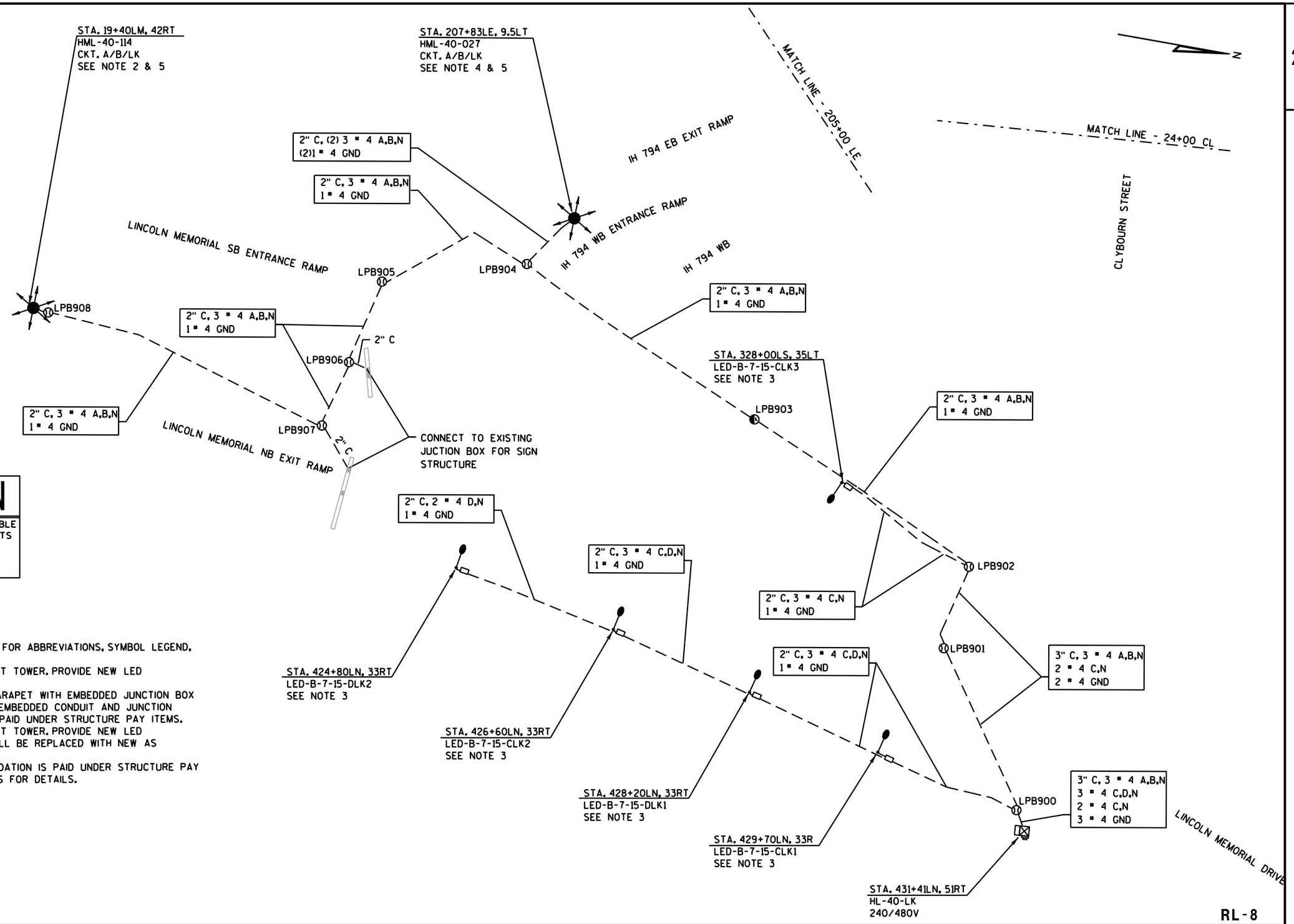
CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

NOTES:

1. SEE SHEETS RL-2 AND RL-3 FOR ABBREVIATIONS, SYMBOL LEGEND, AND GENERAL NOTES.
2. RELOCATED 150 FT HIGH MAST TOWER. PROVIDE NEW LED LUMINAIRES.
3. POLE TO BE MOUNTED ON PARAPET WITH EMBEDDED JUNCTION BOX NEXT TO POLE. ASSOCIATED EMBEDDED CONDUIT AND JUNCTION BOX IN STRUCTURE WILL BE PAID UNDER STRUCTURE PAY ITEMS.
4. RELOCATED 150 FT HIGH MAST TOWER. PROVIDE NEW LED LUMINAIRES. CCTV CAMERA WILL BE REPLACED WITH NEW AS SHOWN ON FTMS PLANS.
5. THE HIGH MAST TOWER FOUNDATION IS PAID UNDER STRUCTURE PAY ITEMS. SEE STRUCTURE PLANS FOR DETAILS.

RL-7



⚠ CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

NOTES:

1. SEE SHEETS RL-2 AND RL-3 FOR ABBREVIATIONS, SYMBOL LEGEND, AND GENERAL NOTES.
2. RELOCATED 150 FT HIGH MAST TOWER. PROVIDE NEW LED LUMINAIRES.
3. POLE TO BE MOUNTED ON PARAPET WITH EMBEDDED JUNCTION BOX NEXT TO POLE. ASSOCIATED EMBEDDED CONDUIT AND JUNCTION BOX IN STRUCTURE WILL BE PAID UNDER STRUCTURE PAY ITEMS.
4. RELOCATED 150 FT HIGH MAST TOWER. PROVIDE NEW LED LUMINAIRES. CCTV CAMERA WILL BE REPLACED WITH NEW AS SHOWN ON FTMS PLANS.
5. THE HIGH MAST TOWER FOUNDATION IS PAID UNDER STRUCTURE PAY ITEMS. SEE STRUCTURE PLANS FOR DETAILS.

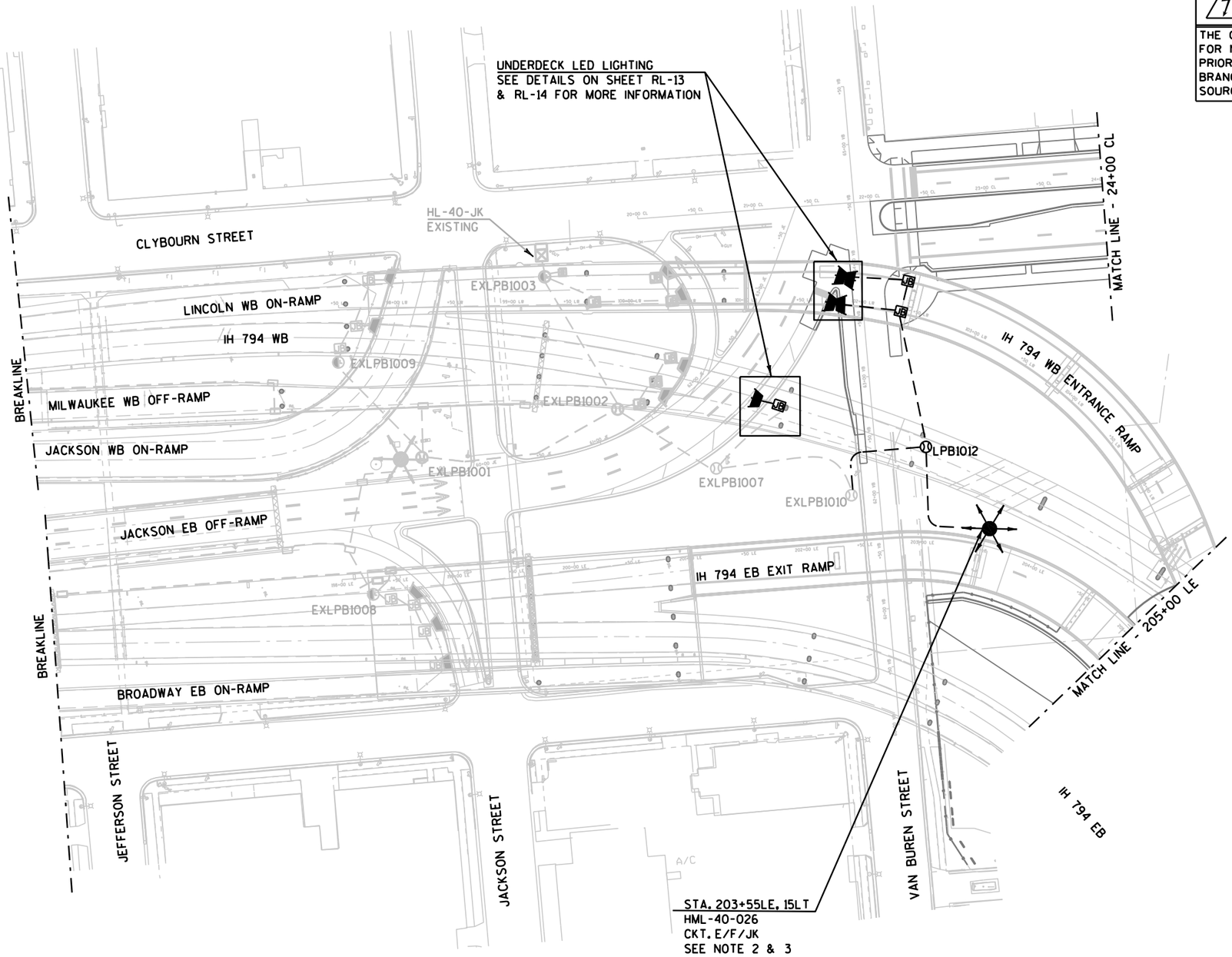
RL-8

2

⚠ CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

N



NOTES:

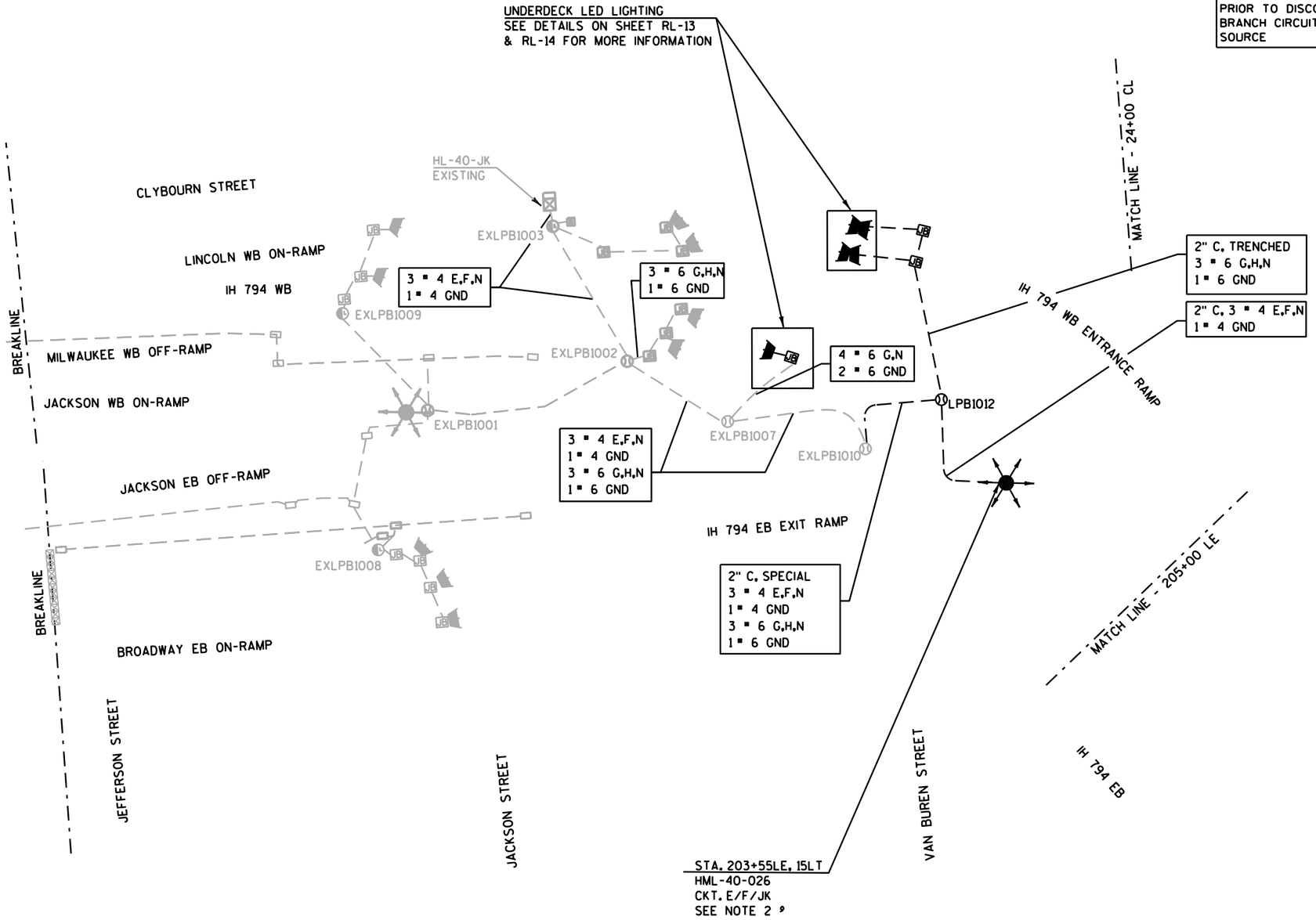
1. SEE SHEETS RL-2 AND RL-3 FOR ABBREVIATIONS, SYMBOL LEGEND, AND GENERAL NOTES.
2. RELOCATED 150 FT HIGH MAST TOWER. PROVIDE NEW LED LUMINAIRES.
5. THE HIGH MAST TOWER FOUNDATION IS PAID UNDER STRUCTURE PAY ITEMS. SEE STRUCTURE PLANS FOR DETAILS.

2

CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

N



NOTES:

1. SEE SHEETS RL-2 AND RL-3 FOR ABBREVIATIONS, SYMBOL LEGEND, AND GENERAL NOTES.
2. RELOCATED 150 FT HIGH MAST TOWER. PROVIDE NEW LED LUMINAIRES.
5. THE HIGH MAST TOWER FOUNDATION IS PAID UNDER STRUCTURE PAY ITEMS. SEE STRUCTURE PLANS FOR DETAILS.

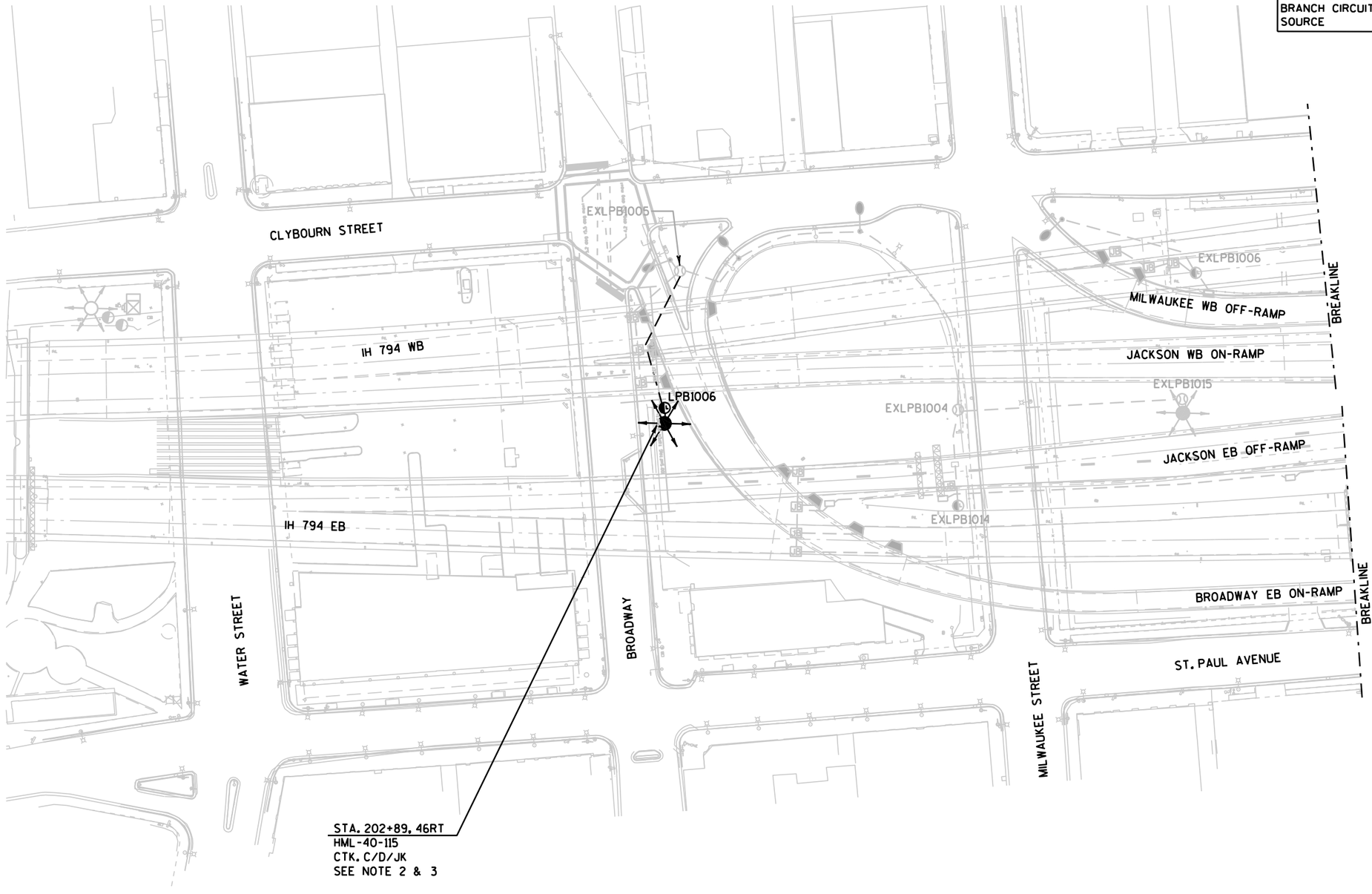
NOTES:

1. SEE SHEETS RL-2 AND RL-3 FOR ABBREVIATIONS, SYMBOL LEGEND, AND GENERAL NOTES.
2. RELOCATED 150 FT HIGH MAST TOWER. PROVIDE NEW LED LUMINAIRES.
3. THE HIGH MAST TOWER FOUNDATION IS PAID UNDER STRUCTURE PAY ITEMS. SEE STRUCTURE PLANS FOR DETAILS.

⚠ CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

N



RL-11

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - FINAL	SHEET 229	E

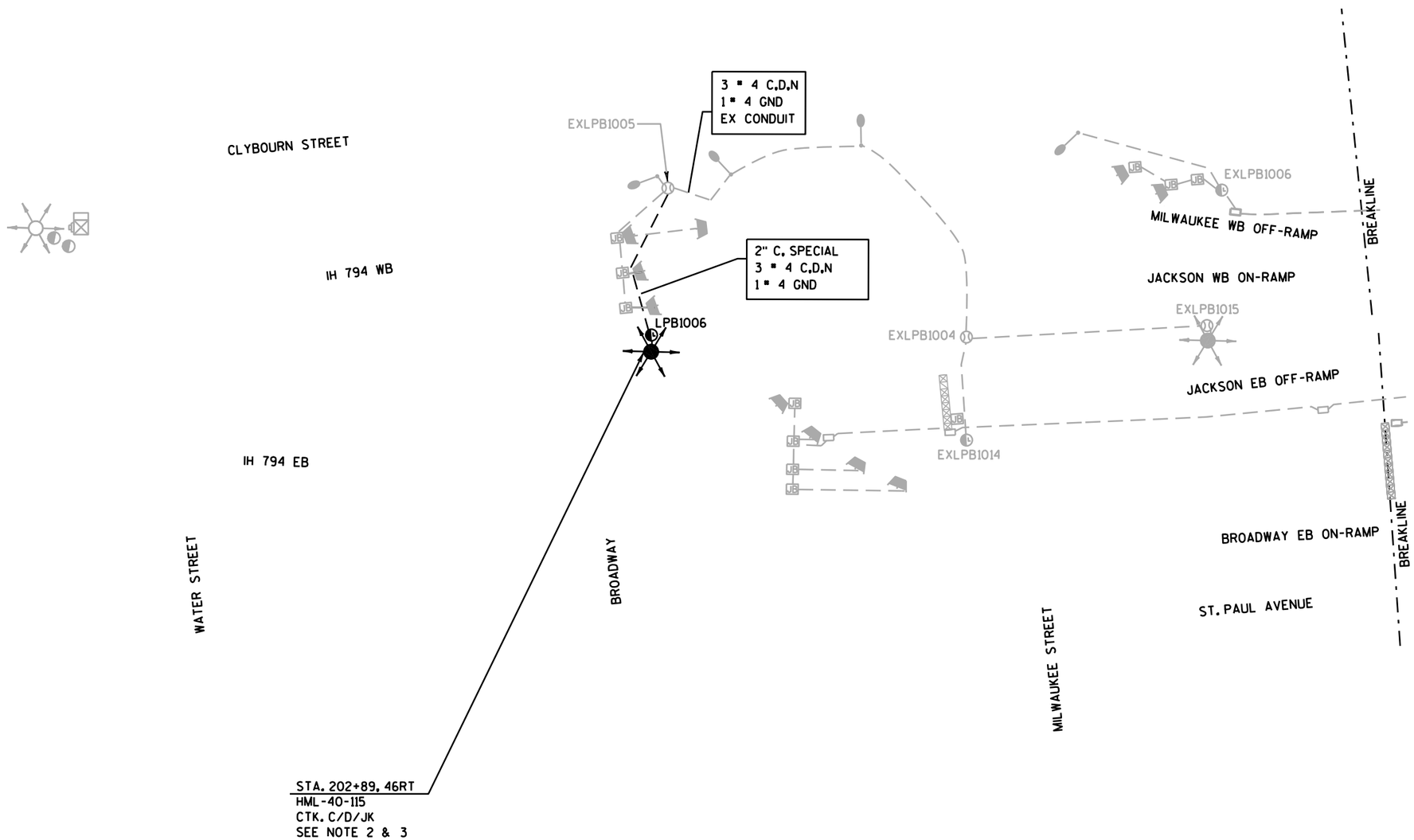
NOTES:

1. SEE SHEETS RL-2 AND RL-3 FOR ABBREVIATIONS, SYMBOL LEGEND, AND GENERAL NOTES.
2. RELOCATED 150 FT HIGH MAST TOWER. PROVIDE NEW LED LUMINAIRES.
3. THE HIGH MAST TOWER FOUNDATION IS PAID UNDER STRUCTURE PAY ITEMS. SEE STRUCTURE PLANS FOR DETAILS.

CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

N

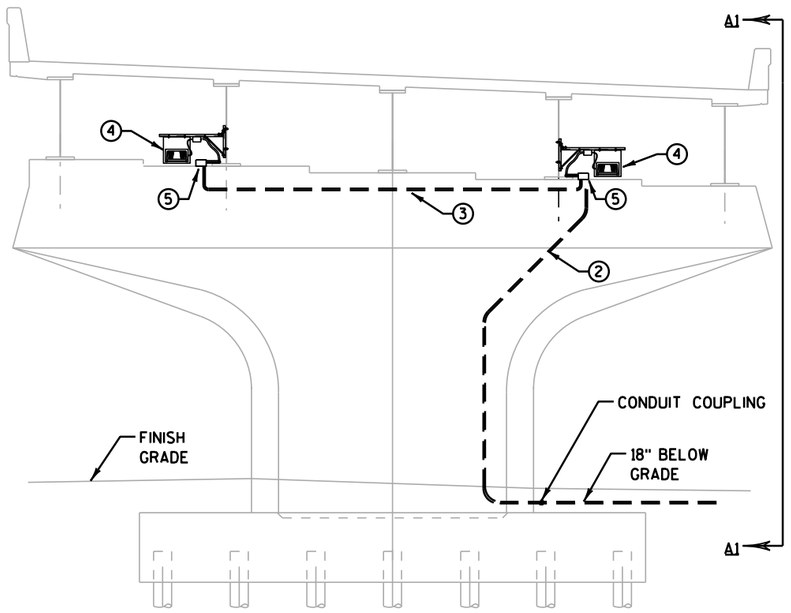


RL-12

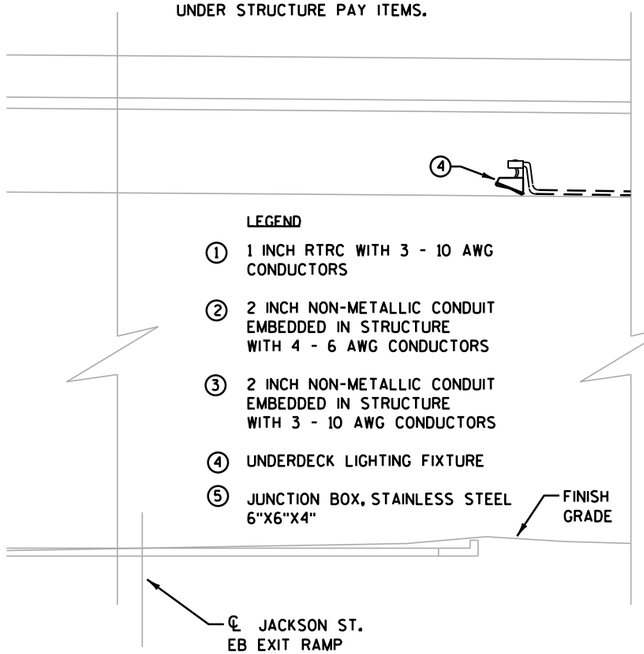
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - SCHEMATIC	SHEET 230	E

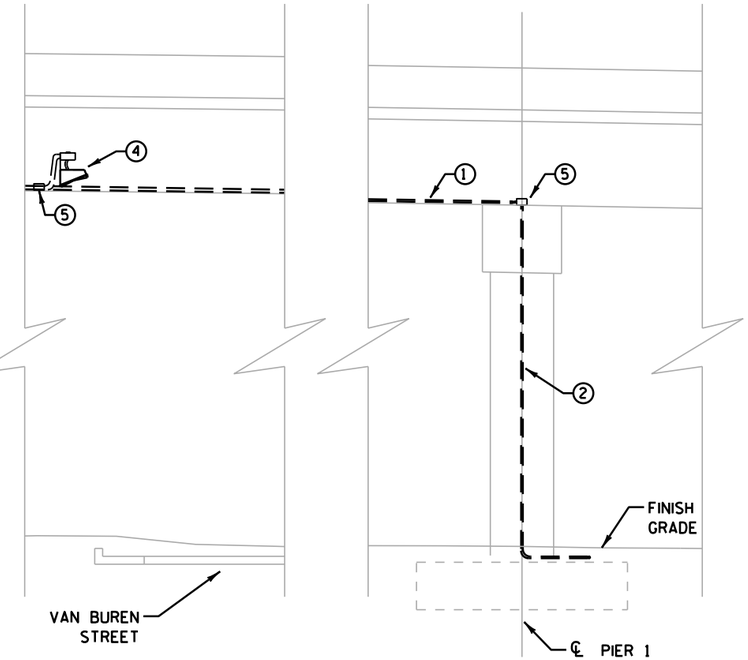
NOTES:

1. EMBEDDED CONDUIT IN STRUCTURE WILL BE PAID UNDER STRUCTURE PAY ITEMS.

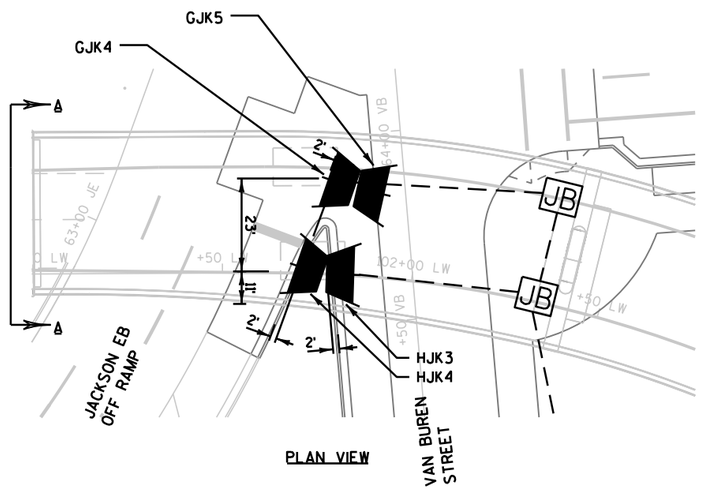


SECTION A-A
UNDERDECK LIGHTING INSTALLATION DETAIL
STRUCTURE B-40-916 PIER 1 ELEVATION VIEW LOOKING EAST
STA. 102+40.01 LW
N.T.S.

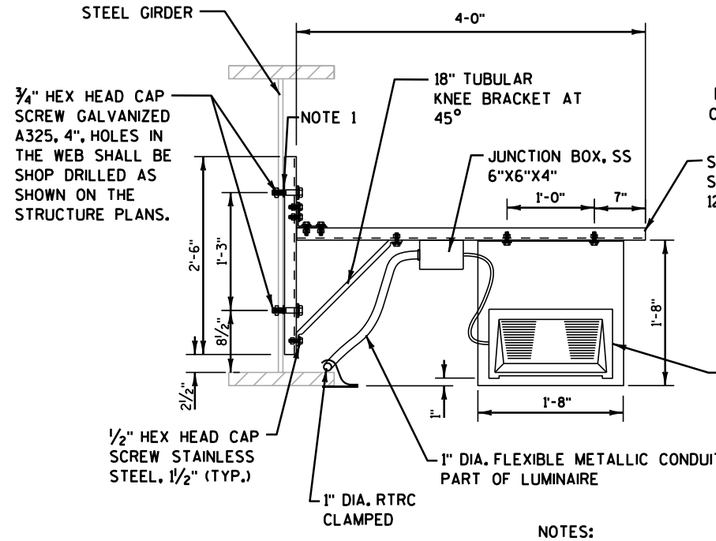


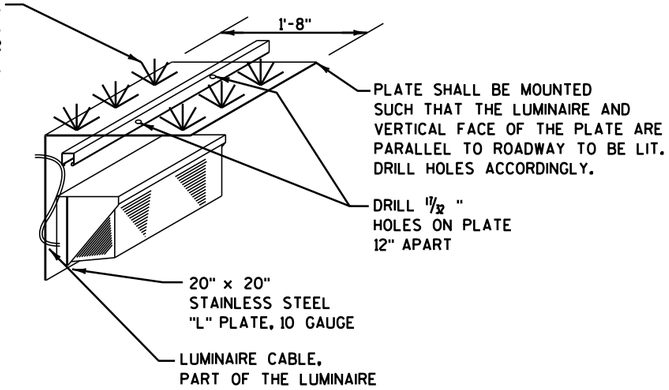


SECTION A1-A1
N.T.S.



PLAN VIEW





DETAIL "A"
UNDERDECK MOUNTING DETAILS-FOR LIGHTING UNDER RAMPS ALONG IH-794
N.T.S.

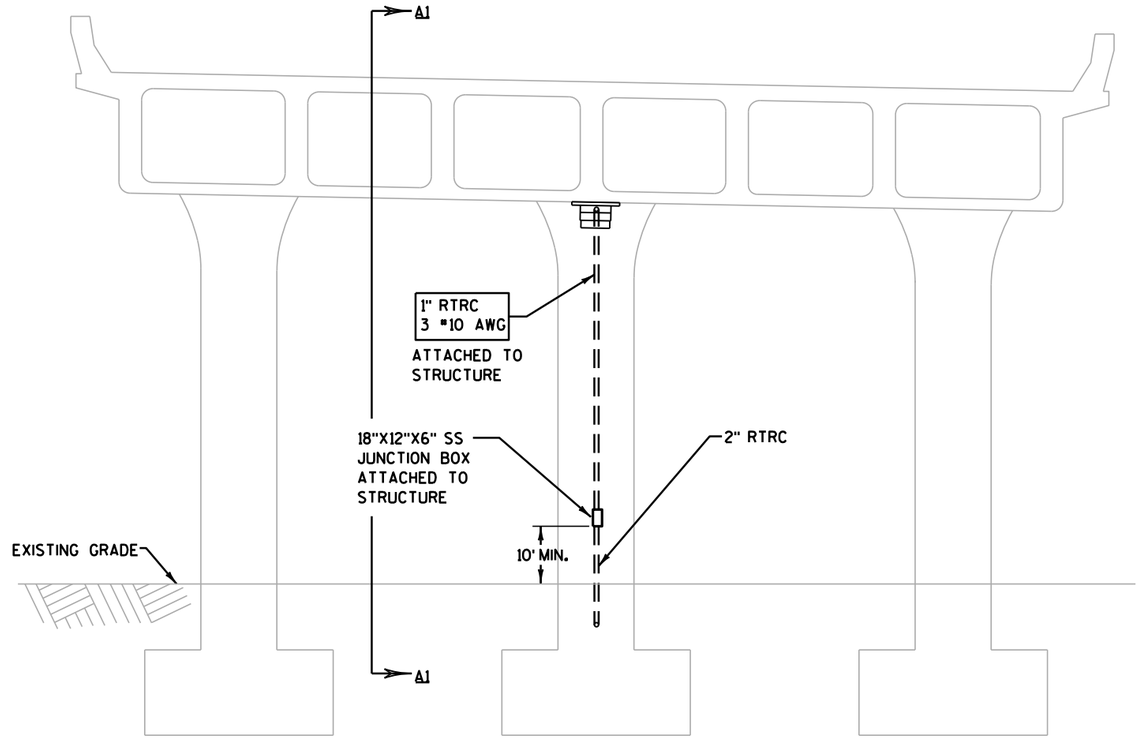
NOTES:

1. PROVIDE ½" NEOPRENE OR EQUAL WASHER AS DESCRIBED IN THE SPECIAL PROVISION TO AVOID CONTACT WITH DISSIMILAR METALS.
2. THE BOTTOM EDGE OF THE PLATE SHALL NOT BE LOWER THAN BOTTOM SURFACE OF THE GIRDER FLANGE.

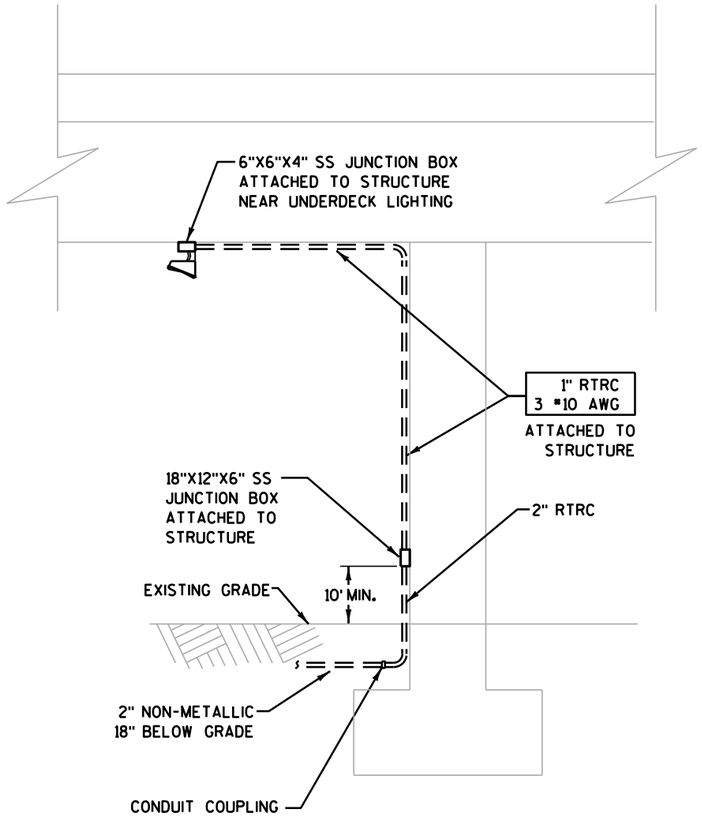
RL-13

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - UNDERDECK DETAILS	SHEET 231	E

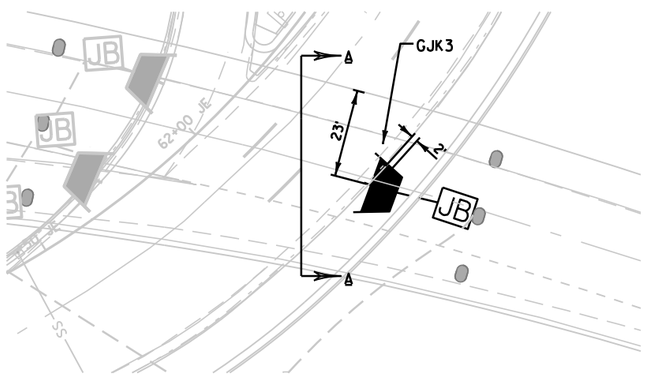
FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023851_lp.dgn PLOT DATE : 27-JUL-2015 15:12 PLOT BY : jholt PLOT NAME : PLOT SCALE : 10:1
WISDOT/CADDS SHEET 42



SECTION A-A
TYPICAL CONDUIT TRANSITION DETAIL FOR
UNDERDECK LIGHTING ON EXISTING STRUCTURE
N.T.S.



SECTION A1-A1
N.T.S.

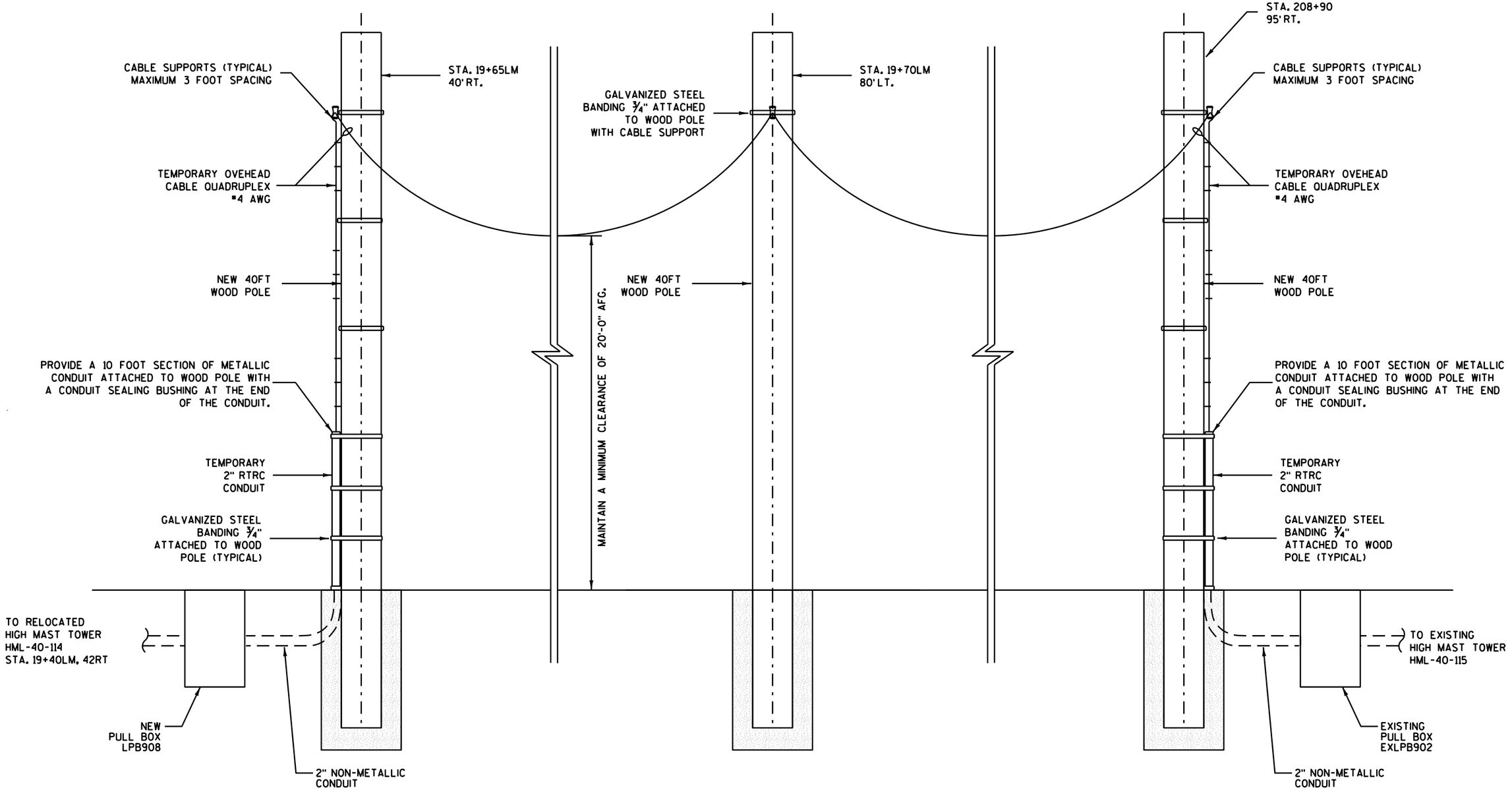


PLAN VIEW

RL-14

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - UNDERDECK DETAILS	SHEET 232	E

2



RL-15

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - TEMPORARY WOOD POLE INSTALLATION DETAIL	SHEET 233	E

FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023853_lp.dgn PLOT DATE : 27-JUL-2015 15:12 PLOT BY : jholt PLOT NAME : PLOT SCALE : 10:1

LEGEND - LIGHTING PLAN

SYMBOL	DESCRIPTION
	30 FT MONOTUBE POLE WITH PHILIPS 180W98LED4KES-LE3 (SEE LOCATION ON SIGNAL PLAN)
	29 FT WHITE SO POLE WITH PEDESTAL AND PHILIPS 180W98LED4KES-LE3 (MOUNTING HEIGHT 31')
	HOLOPHANE WALLPACK IV W4G-20C-1000-40k-T3M-240-SC-DF-WH
	20 FT WHITE SO POLE WITH PEDESTAL AND PHILIPS 105W79LED4KES-LE3 (MOUNTING HEIGHT 22')
	20 FT WHITE SO POLE WITH PEDESTAL (5' SETBACK) AND PHILIPS 105W79LED4KES-LE3 (MOUNTING HEIGHT 22')
	25 FT WHITE SQ POLE WITH PEDESTAL AND PHILIPS 105W79LED4KES-LE3 (MOUNTING HEIGHT 27')
	20 FT WHITE SQ POLE WITH PEDESTAL AND PHILIPS 40W49LED4KES-LE2 (MOUNTING HEIGHT 22')
	20 FT WHITE SQ POLE WITH PEDESTAL (5' SETBACK) WITH PHILIPS 105W79LED4KES-LE3 (ROAD SIDE) AND PHILIPS 40W49LED4K ES-LE2 (SIDEWALK SIDE) WITH MOUNTING HEIGHT 22'
	KENALL WALLPACK TD17H00M5STPMW47L40K7DCCDVBGDS

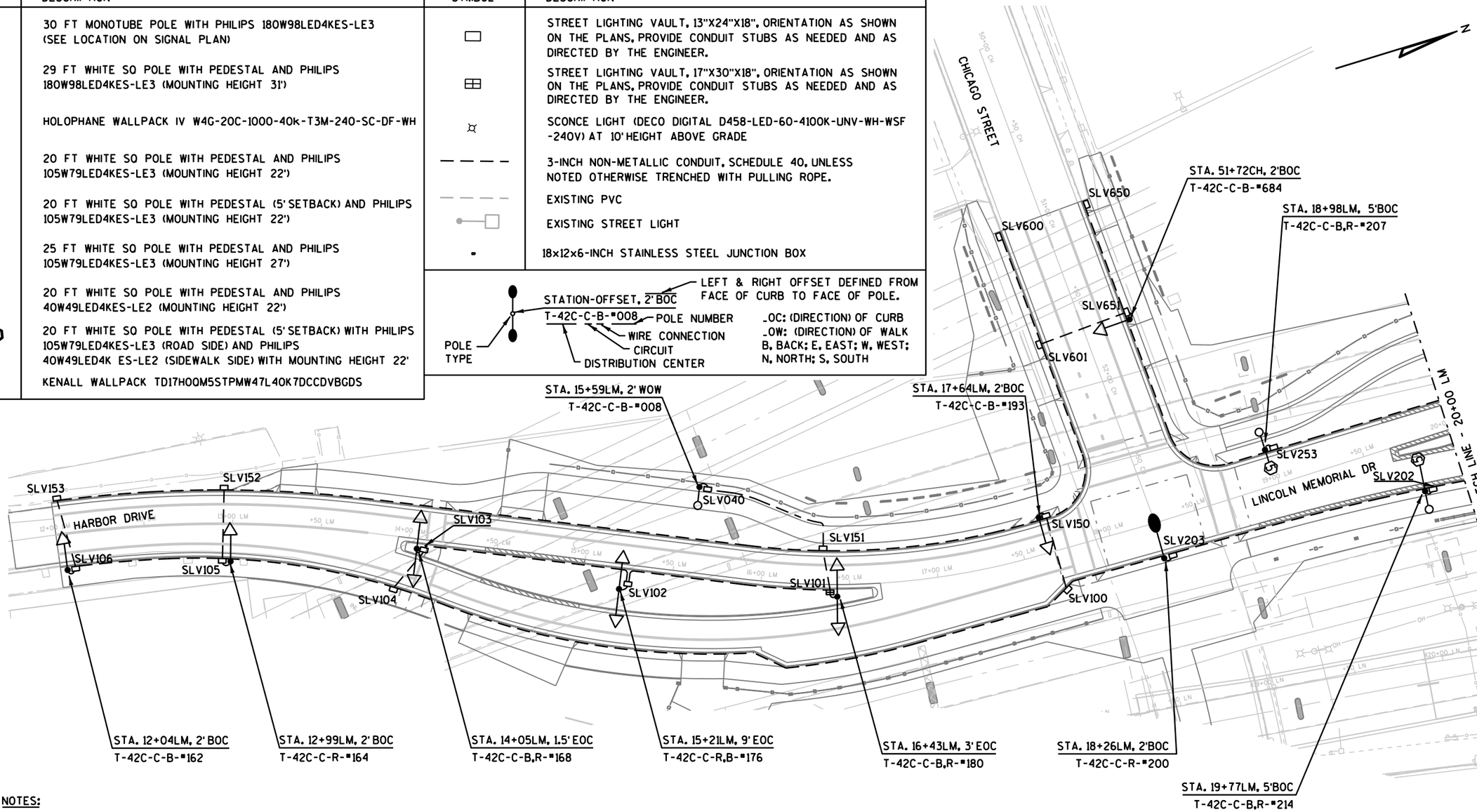
SYMBOL	DESCRIPTION
	STREET LIGHTING VAULT, 13"X24"X18", ORIENTATION AS SHOWN ON THE PLANS, PROVIDE CONDUIT STUBS AS NEEDED AND AS DIRECTED BY THE ENGINEER.
	STREET LIGHTING VAULT, 17"X30"X18", ORIENTATION AS SHOWN ON THE PLANS, PROVIDE CONDUIT STUBS AS NEEDED AND AS DIRECTED BY THE ENGINEER.
	SCONCE LIGHT (DECO DIGITAL D458-LED-60-4100K-UNV-WH-WSF -240V) AT 10' HEIGHT ABOVE GRADE
	3-INCH NON-METALLIC CONDUIT, SCHEDULE 40, UNLESS NOTED OTHERWISE TRENCHED WITH PULLING ROPE.
	EXISTING PVC
	EXISTING STREET LIGHT
	18x12x6-INCH STAINLESS STEEL JUNCTION BOX

POLE TYPE

STATION-OFFSET, 2' BOC — LEFT & RIGHT OFFSET DEFINED FROM FACE OF CURB TO FACE OF POLE.

T-42C-C-B-#008 — POLE NUMBER; WIRE CONNECTION; CIRCUIT; DISTRIBUTION CENTER

_OC: (DIRECTION) OF CURB
_OW: (DIRECTION) OF WALK
B, BACK; E, EAST; W, WEST; N, NORTH; S, SOUTH



NOTES:

1. ALL THE WIRING, LUMINAIRES, POLES AND NECESSARY HARDWARE SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR. FINAL TERMINATION AT THE EXISTING CONTROLLER SHALL BE BY THE CITY OF MILWAUKEE.
2. CONDUITS, VAULTS, AND CONCRETE BASES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF MILWAUKEE STANDARDS.
3. PROVIDE AND INSTALL LUMINAIRE, ARM AND WIRING TO BE MOUNTED TO MONOTUBE. COORDINATE FINAL MONOTUBE LOCATION WITH TRAFFIC SIGNAL INSTALLER PRIOR TO INSTALLATION.

ALL PURPOSE ANTI SEIZE (OR EQUIVALENT) TO BE APPLIED ON ALL BOLTS AND SCREWS, ESPECIALLY THE STREET LIGHTING PEDESTAL AND HAND HOLE PANEL ON STREET LIGHT POLE. OXIDE INHIBITOR OX-4 (OR EQUIVALENT) TO BE APPLIED ON ALL WIRE CONNECTIONS (ALUMINUM OR COPPER) AND WIRE NUTS.

⚠ CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

RL-16

2

CIRCUIT CALLOUT LEGEND

3*2/1*8LTP C(R,B,N,G)

PROPOSED CABLE: 3*2/1*8, 3*2 AWG CONDUCTORS (R-HOT LEG RED, B-HOT LEG BLACK, N-NEUTRAL) AND G-GROUND, 1*8 AWG CONDUCTOR

N

CHICAGO STREET

HARBOR DRIVE

LINCOLN MEMORIAL DR

MATCH LINE - 420+25 LM

MATCH LINE - 20+00 LM

SLV153 SLV152 SLV106 SLV105 SLV104 SLV103 SLV102 SLV101 SLV100 SLV151 SLV150 SLV040 SLV600 SLV650 SLV651 SLV601 SLV253 SLV202 SLV203

3*4/1*8LTP C(R,B,N,G)

3*6/1*8LTP C(R,B,N,G)

STA. 12+04LM, 2' BOC
T-42C-C-B-*162

STA. 12+99LM, 2' BOC
T-42C-C-R-*164

STA. 14+05LM, 1.5' EOC
T-42C-C-B,R-*168

STA. 15+21LM, 9' EOC
T-42C-C-R,B-*176

STA. 15+59LM, 2' WOW
T-42C-C-B-*008

STA. 16+43LM, 3' EOC
T-42C-C-B,R-*180

STA. 17+64LM, 2'BOC
T-42C-C-B-*193

STA. 18+26LM, 2'BOC
T-42C-C-R-*200

STA. 18+98LM, 5'BOC
T-42C-C-B,R-*207

STA. 19+77LM, 5'BOC
T-42C-C-B,R-*214

STA. 51+72CH, 2'BOC
T-42C-C-B-*684

ALL PURPOSE ANTI SEIZE (OR EQUIVALENT) TO BE APPLIED ON ALL BOLTS AND SCREWS, ESPECIALLY THE STREET LIGHTING PEDESTALAND HAND HOLE PANEL ON STREET LIGHT POLE. OXIDE INHIBITOR OX-4 (OR EQUIVALENT) TO BE APPLIED ON ALL WIRE CONNECTIONS (ALUMINUM OR COPPER) AND WIRE NUTS.

CAUTION

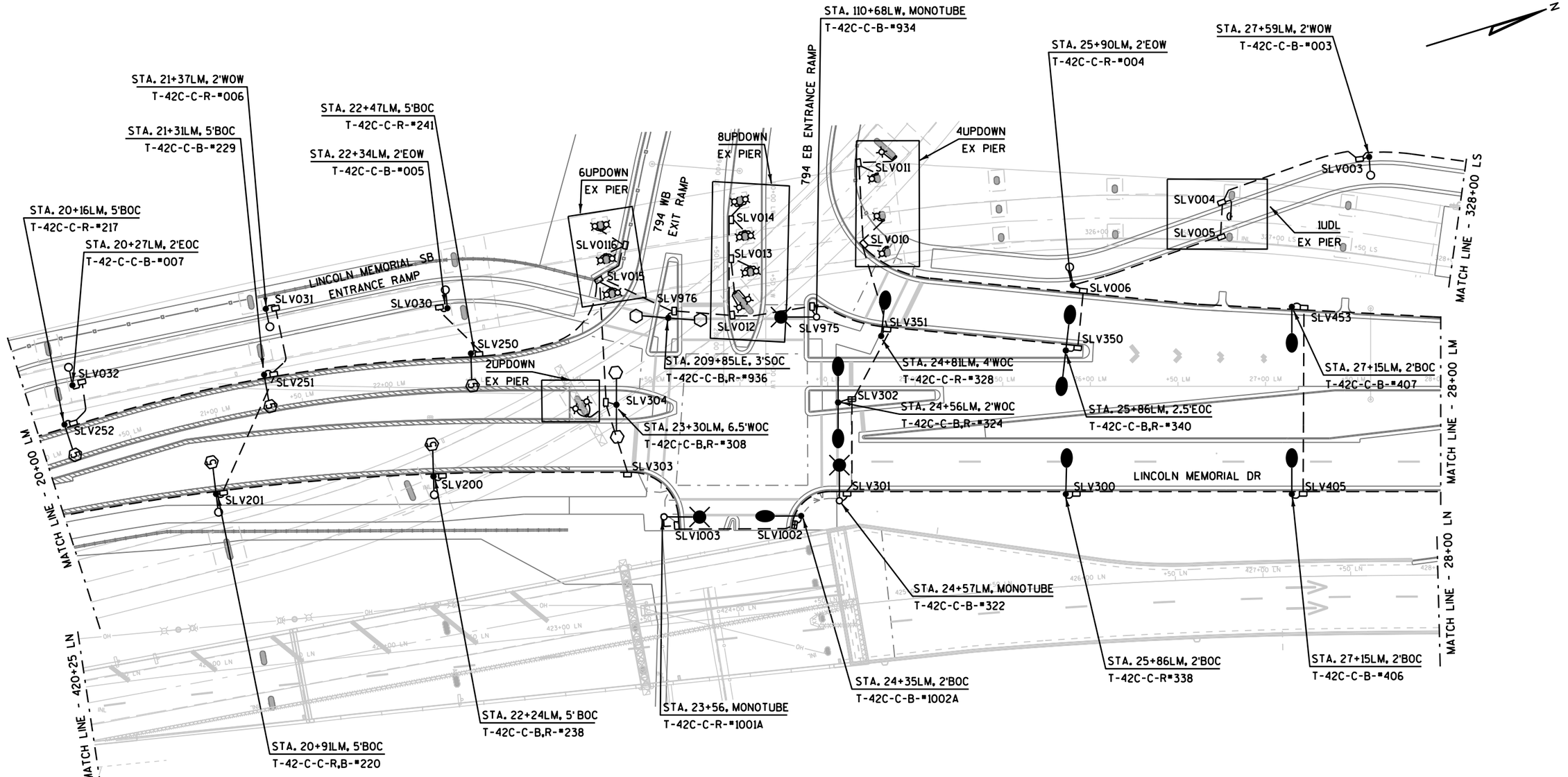
THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

RL-17

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - CITY OF MILWAUKEE SCHEMATIC	SHEET 235	E

FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023902_lp.dgn PLOT DATE : 27-JUL-2015 15:13 PLOT BY : jholt PLOT NAME : PLOT SCALE : 59.999988:1

WISDOT/CADDS SHEET 42



NOTES:

1. SEE SHEET RL-16 FOR CITY OF MILWAUKEE LEGEND.
2. ALL THE WIRING, LUMINAIRES, POLES AND NECESSARY HARDWARE SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR. FINAL TERMINATION AT THE EXISTING CONTROLLER SHALL BE BY THE CITY OF MILWAUKEE.
3. CONDUITS, VAULTS, AND CONCRETE BASES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF MILWAUKEE STANDARDS.
4. PROVIDE AND INSTALL LUMINAIRE, ARM AND WIRING TO BE MOUNTED TO MONOTUBE. COORDINATE FINAL MONOTUBE LOCATION WITH TRAFFIC SIGNAL INSTALLER PRIOR TO INSTALLATION.
5. SEE UP/DOWN SCONE DEATILS ON SHEETS RL-31 - RL-33 AND UNDERDECK DETAILS RL-36.
6. THE "A" ON POLE 1001A AND 1002A ARE USED FOR SCHEDULING PURPOSES ONLY. DO NOT INCLUDE THE "A" WHEN LABELING THE POLES.

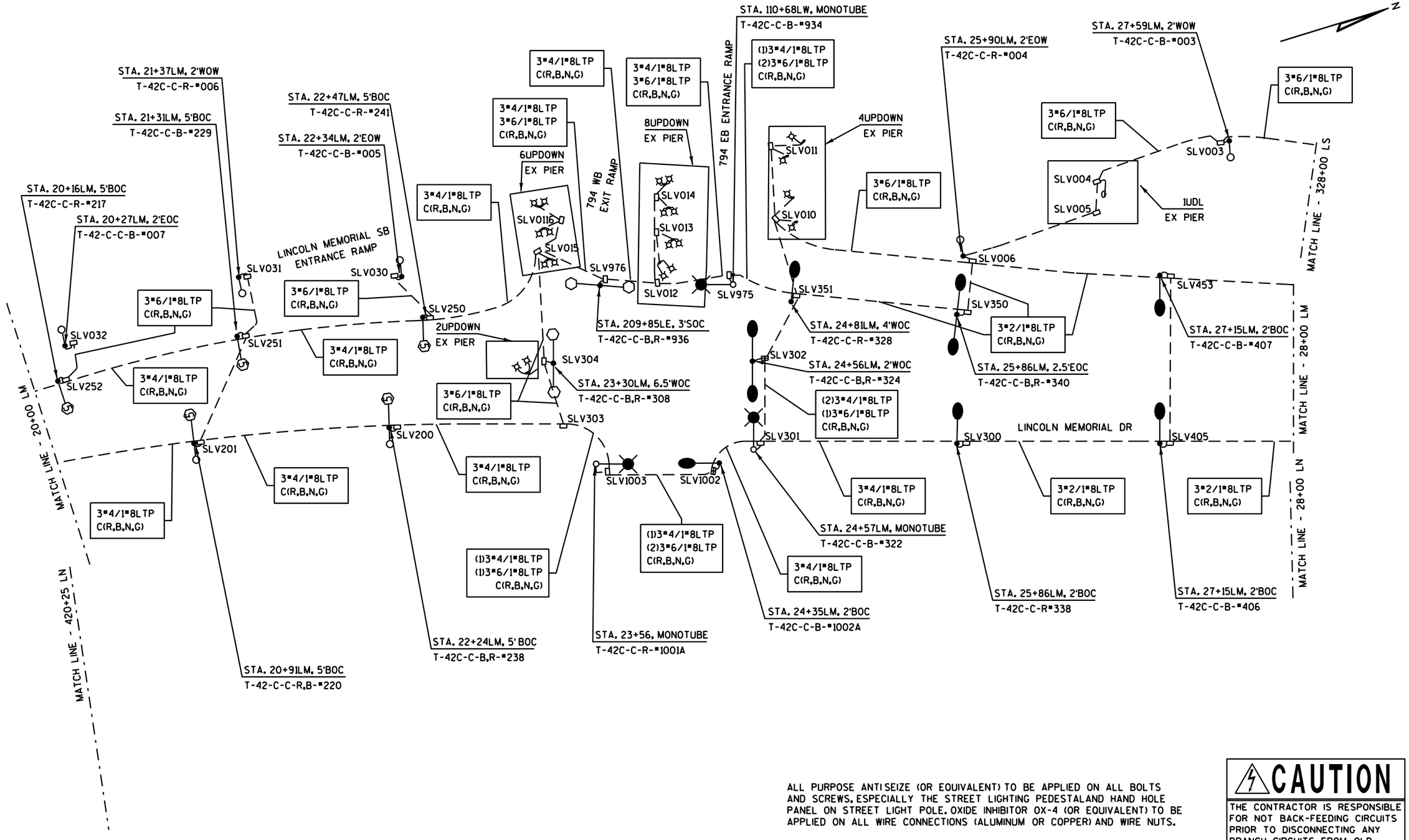
ALL PURPOSE ANTISEIZE (OR EQUIVALENT) TO BE APPLIED ON ALL BOLTS AND SCREWS, ESPECIALLY THE STREET LIGHTING PEDESTALAND HAND HOLE PANEL ON STREET LIGHT POLE. OXIDE INHIBITOR OX-4 (OR EQUIVALENT) TO BE APPLIED ON ALL WIRE CONNECTIONS (ALUMINUM OR COPPER) AND WIRE NUTS.

CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

RL-18

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - CITY OF MILWAUKEE	SHEET 236	E



ALL PURPOSE ANTISEIZE (OR EQUIVALENT) TO BE APPLIED ON ALL BOLTS AND SCREWS, ESPECIALLY THE STREET LIGHTING PEDESTALAND HAND HOLE PANEL ON STREET LIGHT POLE. OXIDE INHIBITOR OX-4 (OR EQUIVALENT) TO BE APPLIED ON ALL WIRE CONNECTIONS (ALUMINUM OR COPPER) AND WIRE NUTS.

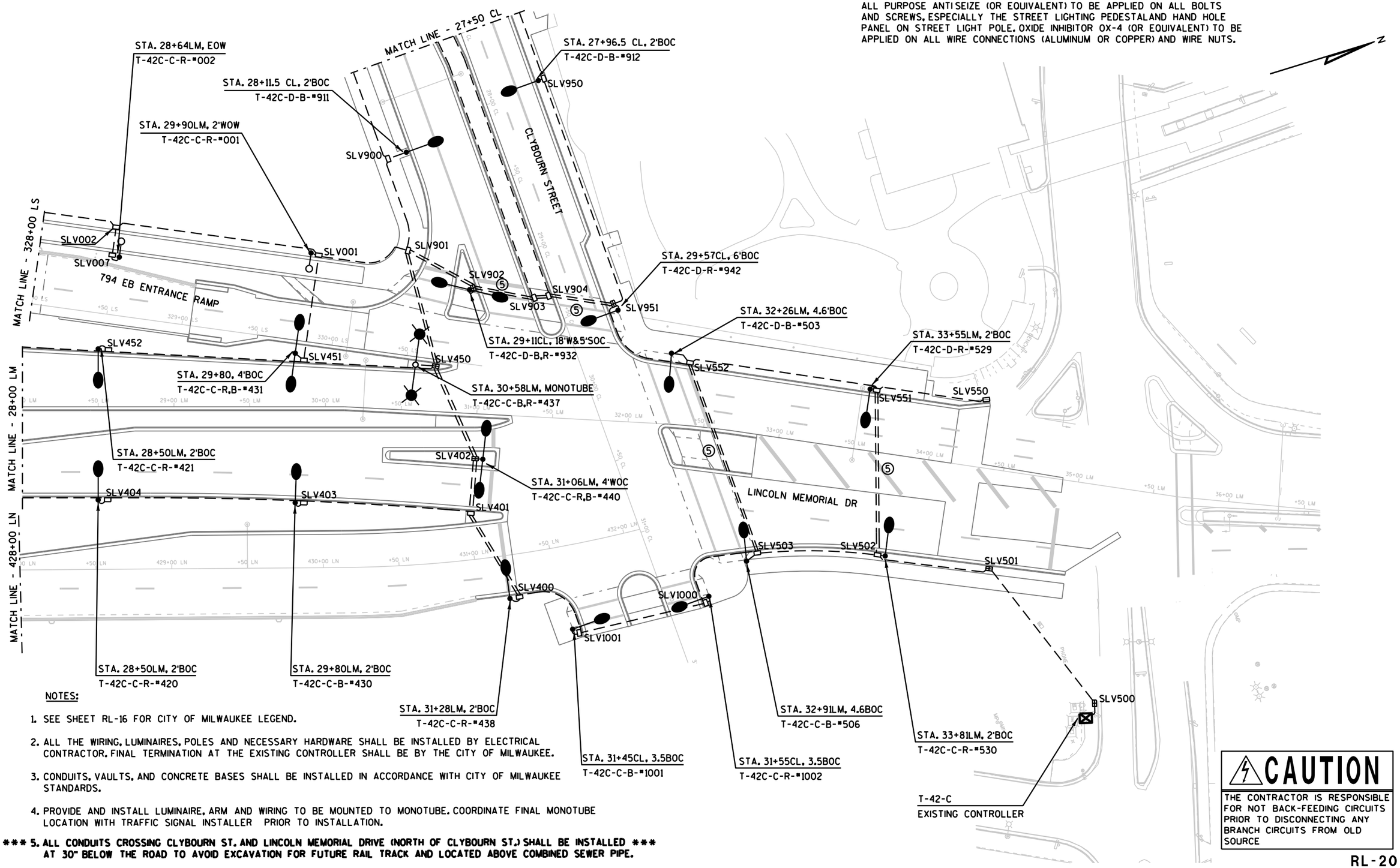
⚠ CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

RL-19

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - CITY OF MILWAUKEE SCHEMATIC	SHEET 237	E

ALL PURPOSE ANTI SEIZE (OR EQUIVALENT) TO BE APPLIED ON ALL BOLTS AND SCREWS, ESPECIALLY THE STREET LIGHTING PEDESTAL AND HAND HOLE PANEL ON STREET LIGHT POLE. OXIDE INHIBITOR OX-4 (OR EQUIVALENT) TO BE APPLIED ON ALL WIRE CONNECTIONS (ALUMINUM OR COPPER) AND WIRE NUTS.



NOTES:

1. SEE SHEET RL-16 FOR CITY OF MILWAUKEE LEGEND.
2. ALL THE WIRING, LUMINAIRES, POLES AND NECESSARY HARDWARE SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR. FINAL TERMINATION AT THE EXISTING CONTROLLER SHALL BE BY THE CITY OF MILWAUKEE.
3. CONDUITS, VAULTS, AND CONCRETE BASES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF MILWAUKEE STANDARDS.
4. PROVIDE AND INSTALL LUMINAIRE, ARM AND WIRING TO BE MOUNTED TO MONOTUBE. COORDINATE FINAL MONOTUBE LOCATION WITH TRAFFIC SIGNAL INSTALLER PRIOR TO INSTALLATION.

***** 5. ALL CONDUITS CROSSING CLYBOURN ST. AND LINCOLN MEMORIAL DRIVE (NORTH OF CLYBOURN ST.) SHALL BE INSTALLED *** AT 30" BELOW THE ROAD TO AVOID EXCAVATION FOR FUTURE RAIL TRACK AND LOCATED ABOVE COMBINED SEWER PIPE.**

CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

RL-20

ALL PURPOSE ANTI SEIZE (OR EQUIVALENT) TO BE APPLIED ON ALL BOLTS AND SCREWS, ESPECIALLY THE STREET LIGHTING PEDESTAL AND HAND HOLE PANEL ON STREET LIGHT POLE. OXIDE INHIBITOR OX-4 (OR EQUIVALENT) TO BE APPLIED ON ALL WIRE CONNECTIONS (ALUMINUM OR COPPER) AND WIRE NUTS.

N

MATCH LINE - 27+50 CL

MATCH LINE - 328+00 LS

MATCH LINE - 28+00 LM

MATCH LINE - 428+00 LN

CLYBOURN STREET

794 EB ENTRANCE RAMP

CIRCUIT C

CIRCUIT D

LINCOLN MEMORIAL DR

STA. 28+64LM, EOW
T-42C-C-R-*002

(2) 3*6/1*8LTP
C(R,B,N,G)

3*6/1*8LTP
C(R,B,N,G)

3*4/1*8LTP
D(R,B,N,G)

STA. 28+11.5 CL, 2'BOC
T-42C-D-B-*911

STA. 29+90LM, 2'WOW
T-42C-C-R-*001

3*6/1*8LTP
C(R,B,N,G)

3*6/1*8LTP
C(R,B,N,G)

3*2/1*8LTP
C(R,B,N,G)

3*2/1*8LTP
C(R,B,N,G)

3*2/1*8LTP
C(R,B,N,G)

3*2/1*8LTP
D(R,B,N,G)

STA. 27+96.5 CL, 2'BOC
T-42C-D-B-*912

3*2/1*8LTP
D(R,B,N,G)

3*4/1*8LTP
D(R,B,N,G)

STA. 29+57CL, 6'BOC
T-42C-D-R-*942

3*2/1*8LTP
D(R,B,N,G)

STA. 32+26LM, 4.6'BOC
T-42C-D-B-*503

STA. 33+55LM, 2'BOC
T-42C-D-R-*529

STA. 29+11CL, 18'W&5'SOC
T-42C-D-B,R-*932

STA. 29+80, 4'BOC
T-42C-C-R,B-*431

STA. 30+58LM, MONOTUBE
T-42C-C-B,R-*437

(1) 3*2/1*8LTP
(2) 3*6/1*8LTP
C(R,B,N,G)

STA. 28+50LM, 2'BOC
T-42C-C-R-*421

3*2/1*8LTP
C(R,B,N,G)

STA. 31+06LM, 4'WOC
T-42C-C-R,B-*440

3*2/1*8LTP
C(R,B,N,G)

3*2/1*8LTP
C(R,B,N,G)

(2) 3*2/1*8LTP
C(R,B,N,G)

3*2/1*8LTP
C(R,B,N,G)

3*2/1*8LTP
D(R,B,N,G)

3*2/1*8LTP
C(R,B,N,G)
3*2/1*8LTP
D(R,B,N,G)

3*2/1*8LTP
C(R,B,N,G)
3*2/1*8LTP
D(R,B,N,G)

STA. 28+50LM, 2'BOC
T-42C-C-R-*420

STA. 29+80LM, 2'BOC
T-42C-C-B-*430

STA. 31+28LM, 2'BOC
T-42C-C-R-*438

STA. 31+45CL, 3.5BOC
T-42C-C-B-*1001

STA. 31+55CL, 3.5BOC
T-42C-C-R-*1002

STA. 32+91LM, 4.6BOC
T-42C-C-B-*506

STA. 33+81LM, 2'BOC
T-42C-C-R-*530

SLV001 SLV002 SLV007 SLV900 SLV901 SLV902 SLV903 SLV904 SLV951 SLV950 SLV452 SLV451 SLV450 SLV552 SLV551 SLV550 SLV404 SLV403 SLV402 SLV401 SLV400 SLV1001 SLV1000 SLV503 SLV502 SLV501 SLV500

T-42-C
EXISTING CONTROLLER
PROVIDE 20' OF SLACK FOR EACH LIGHTING CIRCUIT. FINAL TERMINATIONS BY THE CITY OF MILWAUKEE.

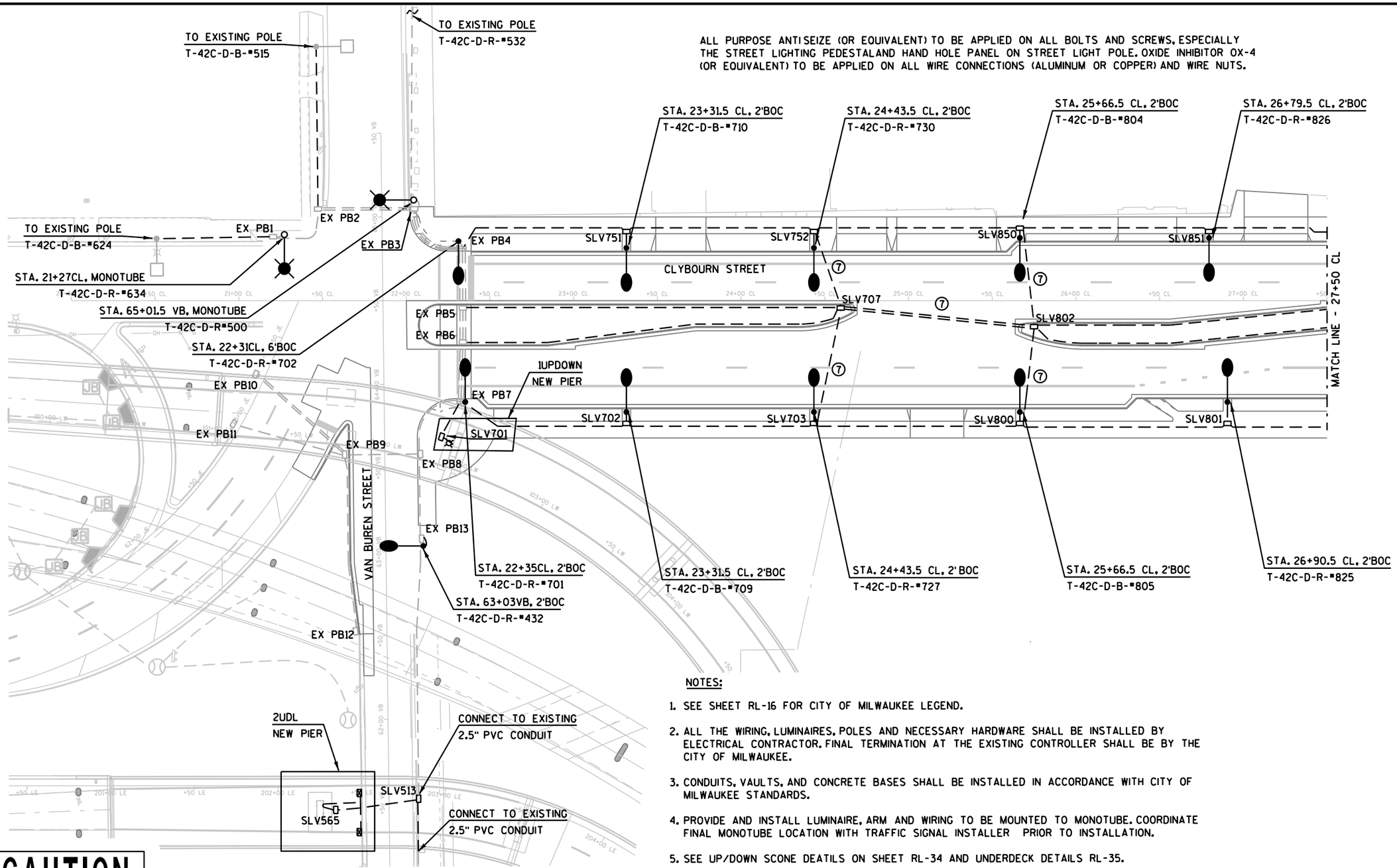
CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

RL-21

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - CITY OF MILWAUKEE SCHEMATIC	SHEET 239	E

ALL PURPOSE ANTISEIZE (OR EQUIVALENT) TO BE APPLIED ON ALL BOLTS AND SCREWS, ESPECIALLY THE STREET LIGHTING PEDESTALAND HAND HOLE PANEL ON STREET LIGHT POLE. OXIDE INHIBITOR OX-4 (OR EQUIVALENT) TO BE APPLIED ON ALL WIRE CONNECTIONS (ALUMINUM OR COPPER) AND WIRE NUTS.



CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

NOTES:

1. SEE SHEET RL-16 FOR CITY OF MILWAUKEE LEGEND.
2. ALL THE WIRING, LUMINAIRES, POLES AND NECESSARY HARDWARE SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR. FINAL TERMINATION AT THE EXISTING CONTROLLER SHALL BE BY THE CITY OF MILWAUKEE.
3. CONDUITS, VAULTS, AND CONCRETE BASES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF MILWAUKEE STANDARDS.
4. PROVIDE AND INSTALL LUMINAIRE, ARM AND WIRING TO BE MOUNTED TO MONOTUBE. COORDINATE FINAL MONOTUBE LOCATION WITH TRAFFIC SIGNAL INSTALLER PRIOR TO INSTALLATION.
5. SEE UP/DOWN SCONE DEATILS ON SHEET RL-34 AND UNDERDECK DETAILS RL-35.
6. PROVIDE 3" CONDUIT FROM VAULT TO LIGHT POLE

*** 7. **ALL CONDUITS CROSSING CLYBOURN ST. AND LINCOLN MEMORIAL DRIVE (NORTH OF CLYBOURN ST.) SHALL BE INSTALLED AT 30" BELOW THE ROAD TO AVOID EXCAVATION FOR FUTURE RAIL TRACK AND LOCATED ABOVE COMBINED SEWER PIPE.** ***

RL-22

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - CITY OF MILWAUKEE	SHEET 240	E

ALL PURPOSE ANTISEIZE (OR EQUIVALENT) TO BE APPLIED ON ALL BOLTS AND SCREWS, ESPECIALLY THE STREET LIGHTING PEDESTALAND HAND HOLE PANEL ON STREET LIGHT POLE. OXIDE INHIBITOR OX-4 (OR EQUIVALENT) TO BE APPLIED ON ALL WIRE CONNECTIONS (ALUMINUM OR COPPER) AND WIRE NUTS.

N

TO EXISTING POLE
T-42C-D-B-*515

TO EXISTING POLE
T-42C-D-R-*532

3" C, SPECIAL
(2) 3*2/1*8LTP
3*6/1*8LTP
D(R,B,N,G)

EX 3" C.
3*2/1*8LTP
D(R,B,N,G)

EX 2.5" C
3*6/1*8LTP
D(R,B,N,G)

EX 3" C.
3*2/1*8LTP
(2)3*6/1*8LTP
D(R,B,N,G)

3" C, SPECIAL
3*2/1*8LTP
D(R,B,N,G)

EX 3" C.
3*2/1*8LTP
3*6/1*8LTP
D(R,B,N,G)

3*2/1*8LTP
D(R,B,N,G)

STA. 23+31.5 CL. 2'BOC
T-42C-D-B-*710

3*2/1*8LTP
D(R,B,N,G)

STA. 24+43.5 CL. 2'BOC
T-42C-D-R-*730

3*2/1*8LTP
D(R,B,N,G)

STA. 25+66.5 CL. 2'BOC
T-42C-D-B-*804

3*2/1*8LTP
D(R,B,N,G)

STA. 26+79.5 CL. 2'BOC
T-42C-D-R-*826

3*2/1*8LTP
D(R,B,N,G)

TO EXISTING POLE
T-42C-D-B-*624

EX PB1

EX PB2

EX PB3

EX PB4

SLV751

SLV752

SLV850

SLV851

CLYBOURN STREET

STA. 21+27CL, MONOTUBE
T-42C-D-R-*634

STA. 65+01.5 VB, MONOTUBE
T-42C-D-R*500

STA. 22+31CL, 6'BOC
T-42C-D-R-*702

SLV707

SLV802

EX PB5

EX PB6

MATCH LINE - 27+50 CL

EX PB10

EX PB7

1UPDOWN
NEW PIER

EX 3" C.
3*6/1*8LTP
D(R,B,N,G)

EX PB11

EX PB9

EX PB8

SLV701

SLV702

SLV703

SLV800

SLV801

3*4/1*8LTP
D(R,B,N,G)

3*4/1*8LTP
D(R,B,N,G)

3*4/1*8LTP
D(R,B,N,G)

3*4/1*8LTP
D(R,B,N,G)

3*4/1*8LTP
D(R,B,N,G)

VAN BUREN STREET

EX PB13

STA. 22+35CL, 2'BOC
T-42C-D-R-*701

STA. 63+03VB, 2'BOC
T-42C-D-R-*432

STA. 23+31.5 CL, 2'BOC
T-42C-D-B-*709

STA. 24+43.5 CL, 2'BOC
T-42C-D-R-*727

STA. 25+66.5 CL, 2'BOC
T-42C-D-B-*805

STA. 26+90.5 CL, 2'BOC
T-42C-D-R-*825

EX PB12

EX 2.5" C.
3*6/1*8LTP
D(R,B,N,G)

2UDL
NEW PIER

CONNECT TO EXISTING
2.5" PVC CONDUIT

2.5" C

SLV513

SLV565

CONNECT TO EXISTING
2.5" PVC CONDUIT

3*6/1*8LTP
D(R,B,N,G)

EX 2.5" C

CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE

RL-23

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - CITY OF MILWAUKEE SCHEMATIC	SHEET 241	E

TRAFFIC & STREET LIGHTING GENERAL NOTES:

PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE."

STREET LIGHTING & TRAFFIC SIGNALS SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 652 EXCEPT:

THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF STREET LIGHTING OR TRAFFIC SIGNAL FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING OR TRAFFIC SIGNAL DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED PERMISSION.

1 DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

2 LOCATIONS OF THE PVC CONDUITS WHERE THEY ARE REQUIRED ARE IDENTIFIED IN THE PRINTS. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. ANY RELOCATIONS MUST BE APPROVED BY THE ENGINEER. FIELD MARK EACH CONDUIT LOCATION BY STAMPING AND PAINTING WITH RED PAINT ON TOP AND BACKSIDE OF CURB.

3 TYPICAL CONDUIT INSTALLED UP TO DIRECT BURIED STREET LIGHT POLES IS AS FOLLOWS 3-INCH OR 2.5-INCH (AS NOTED) SCHEDULE 40 RIGID PVC TO STREET LIGHTING METAL HOUSING (PEDESTAL), THE 2-INCH SCHEDULE 40 RIGID PVC TO STREET LIGHT POLE CABLE SLOT, AND THE 2-INCH SCHEDULE 40 RIGID PVC TO SIGNAL STANDARD BASE AND RISER FOR TRAFFIC SIGNAL ON STREET LIGHT POLE.

4 DEPTH OF CONDUIT INSTALLED BELOW THE STREETS, HIGHWAYS, ROADS, AND ALLEYS SHALL BE 30-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE)

5 CONDUIT INSTALLED BEHIND CURB, AND UNDER DRIVEWAYS SHALL BE INSTALLED AT THE BASE OF THE BACKSIDE OF THE CURB/GUTTER SECTION.

6 WHEN THERE IS MORE THAN ONE CONDUIT TO BE LAID BEHIND THE CURB, PLACE ALL CONDUITS IN THE SAME TRENCH.

7 ANY EXCEPTION TO THE MINIMUM OR MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

8 THE CONTRACTOR OR HIS SUBCONTRACTOR MUST MAKE SURE THE AREA BEHIND CURB AND/OR TRENCH SHALL BE FREE OF DEBRIS AND OVERPOUR AND SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

9 BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

10 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS. (SEE NEC 352.28 2008 CODE)

11 PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED IN THE FUTURE. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

12 ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

13 CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX OR JUNCTION BOX OR BASE TO BASE, ETC.).

14 PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.

15 ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS UNLESS OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

16 WHEN ENDS OF CONDUIT DO NOT CONNECT TO A VAULT AND WILL END UP UNDER CONCRETE WALK. THE CONTRACTOR IS REQUIRED TO LEAVE A 24" X 24" BOX FORM CENTERED OVER THE END OF CONDUIT AND FILL THE BOXFORM WITH CRUSHED GRAVEL. (PER WISDOT SPEC 209.2.1(1) GRANULAR BACKFILL)

17 ALL PIPE CROSSINGS AND VAULTS SHALL BE AT LEAST SIX (6) FEET AWAY FROM FIRE HYDRANTS, UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

18 ALL POLES AND TRAFFIC STANDARDS IN CONCRETE ARE REQUIRED TO HAVE A 30"X30" BOX SHAPED JOINT PLACED AROUND THEM USING AN EXPANSION JOINT FILLER. UNLESS NOTED OTHERWISE (SEE DETAIL 122)

19 TYPICAL RECTANGULAR VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

20 COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISORSTREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251 OR DISPATCHER @ 414-286-5944 TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148 OR DISPATCHER @ 414-286-3687

21 IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL VAULT, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - GEORGE BERDINE (OFFICE) 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - THOMAS HUGHES (OFFICE) 414-286-3457 (CELL) 414-708-3175
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

22 CONDUIT WILL ONLY BE INSTALLED AFTER THE CURB IS POURED, UNLESS APPROVED BY BOTH THE ENGINEER & STREET LIGHTING SHOP SUPERVISOR.

23 ALL PURPOSE ANTI SEIZE (OR EQUIVALENT) TO BE APPLIED ON ALL BOLTS AND SCREWS, ESPECIALLY THE STREET LIGHTING PEDESTAL AND HAND HOLE PANEL ON STREET LIGHT POLE. OXIDE INHIBITOR OX-4 (OR EQUIVALENT) TO BE APPLIED ON ALL WIRE CONNECTIONS (ALUMINUM OR COPPER) AND WIRE NUTS.

24 CONTACT ENG-KIE LEE @ 414-286-2174 FOR A COPY OF STREET LIGHTING ELECTRICAL CIRCUIT MAP (FOR AS-BUILT) PRIOR TO ANY STREET LIGHTING WORK.

ELECTRICAL AS-BUILT REQUIREMENTS:

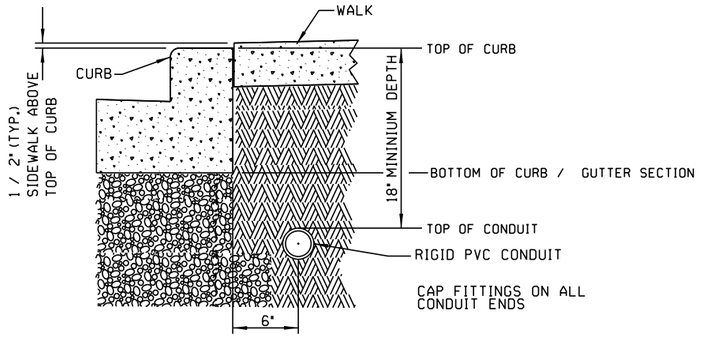
- LOCATE AND CLEARLY DIMENSION ALL CONDUIT RUNS, FITTINGS, SPLICE VAULTS, PULL BOXES, METER PEDESTALS, LIGHT BASES, TRANSFORMER, POLES AND OTHER APPURTENANCES IN TWO (2) DIRECTIONS. SWING TIES SHOULD BE MADE FROM OBJECTS THAT ARE PERMANENT IN NATURE AND VISIBLE ON THE FINISHED SURFACE.
- STREET NAMES SHALL BE ON ALL SHEETS.
- SHOW ALL SIZES AND MATERIAL TYPES OF PIPES AND CONDUITS.
- ALL HORIZONTAL DISTANCES SHALL BE SHOWN TO THE NEAREST TENTH OF A FOOT (I.E., 205.3'). ALL VERTICAL DISTANCES SHALL BE SHOWN TO THE NEAREST INCH (I.E. 24").
- SHOW LOCATION AND ELEVATIONS OF PIPES AND FITTINGS WHERE CHANGES OR DEFLECTIONS IN DIRECTION OCCUR.
- SPECIAL DETAIL DRAWINGS WILL BE SUPPLIED WHERE REQUIRED FOR CLARITY.
- DEVIATIONS FROM ORIGINAL PLANS OR STANDARD DETAILS SHALL BE NOTED ON AS-BUILT DRAWINGS.

CITY OF MILWAUKEE

RL-24

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - DETAIL	SHEET 242	E

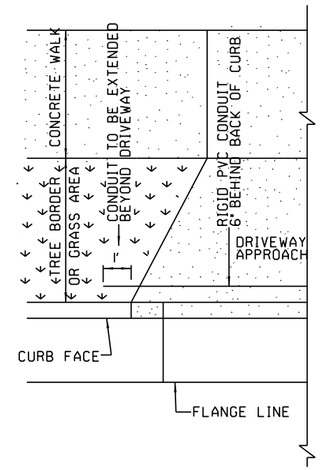
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2.) CONDUIT TO BE PLACED 6 INCHES ON CENTER DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



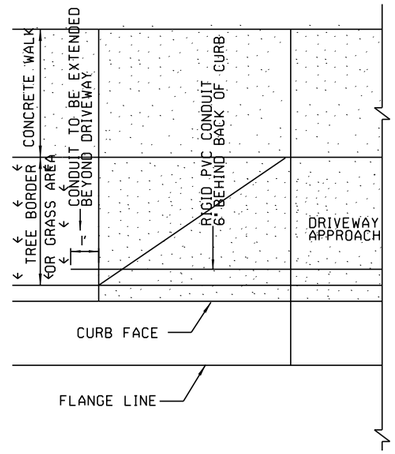
100 DETAIL "A" NOT TO SCALE

TYPICAL CONDUIT INSTALLATION BEHIND CURB

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



TYPICAL PLAN VIEW FOR FLARED DRIVEWAY

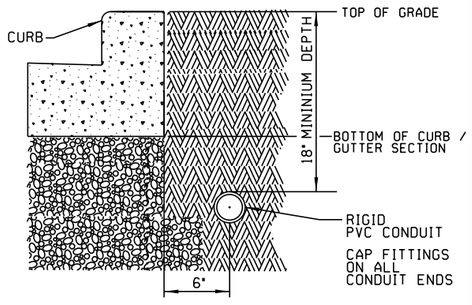


TYPICAL PLAN VIEW FOR DEPRESSED DRIVEWAY

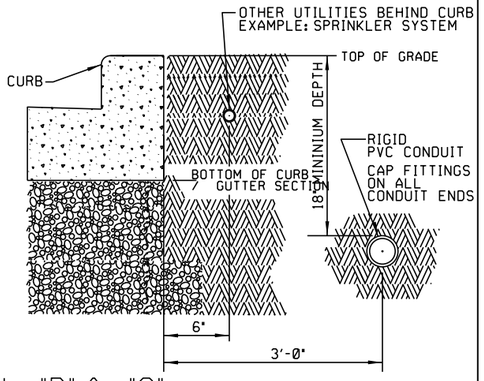
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.

DETAIL "B"

CONDUIT TO BE PLACED 6" ON CENTER DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



DETAIL "C"



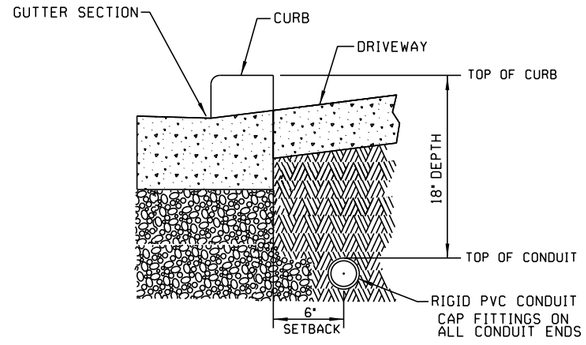
100 DETAIL "B" & "C" NOT TO SCALE

TYPICAL CONDUIT INSTALLATION BEHIND CURB

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

PLOTDATE

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2.) CONDUIT TO BE PLACED 6 INCHES ON CENTER DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



101 DETAIL NOT TO SCALE

TYPICAL CONDUIT INSTALLATION UNDER DRIVEWAYS OR PEDESTRIAN RAMPS

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

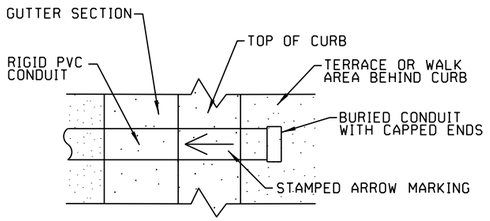
PLOTDATE

CITY OF MILWAUKEE - STANDARD DETAILS

RL-25

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - DETAIL	SHEET 243	E

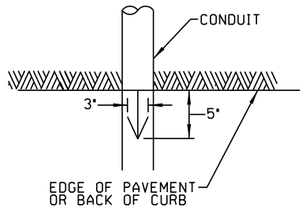
FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023952_lp.dgn PLOT DATE : 27-JUL-2015 15:13 PLOT BY : jholt PLOT NAME : PLOT SCALE : 100:1
WISDOT/CADDS SHEET 42



TOP VIEW OF CURB STAMPING

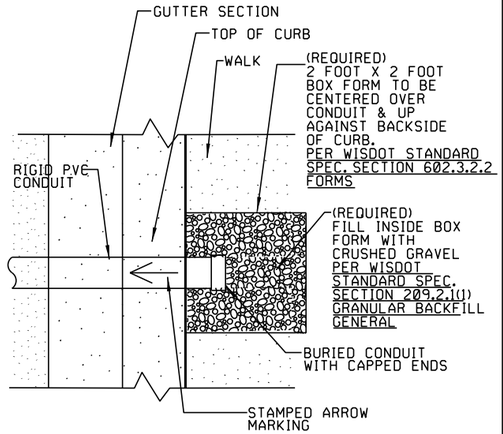
NOT TO SCALE

NOTE:
ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1 / 4-INCH TO 3 / 8-INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.



ARROW MARK

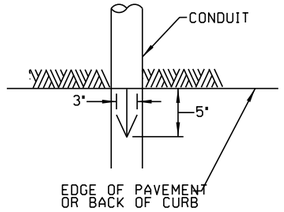
NOT TO SCALE



TOP VIEW OF CURB STAMPING

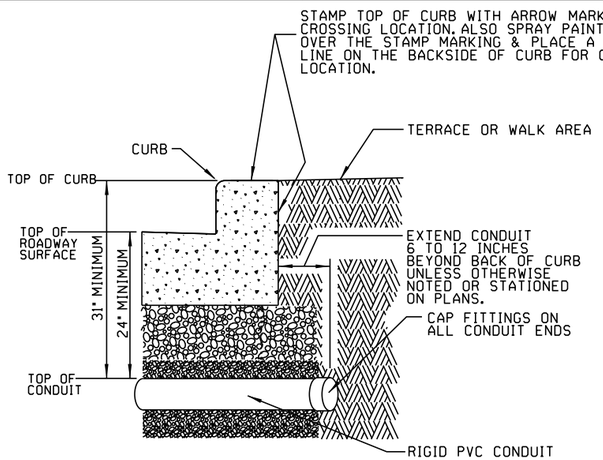
NOT TO SCALE

NOTE:
ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1 / 4-INCH TO 3 / 8-INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.



ARROW MARK

NOT TO SCALE



102 DETAIL VERSION #1

TYPICAL CONDUIT INSTALLATION FOR CROSSING ROADWAYS

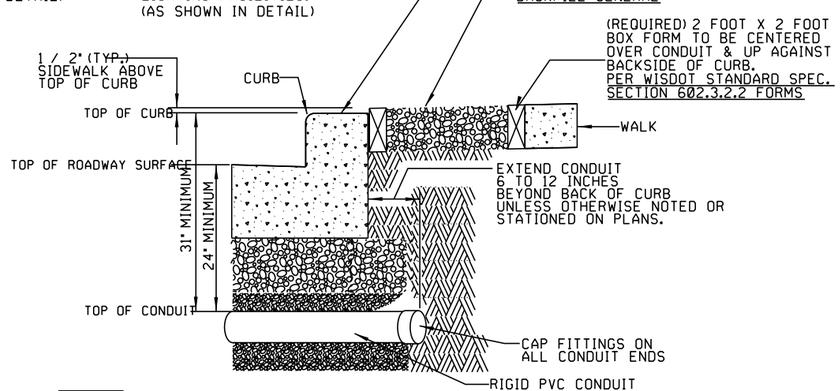
NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

PLOTDATE

THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH CRUSHED GRAVEL, AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)



103 DETAIL VERSION #1

TYPICAL CONDUIT INSTALLATION FOR CROSSING ROADWAYS FROM FULL WALK AREAS

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

PLOTDATE

CITY OF MILWAUKEE - STANDARD DETAILS

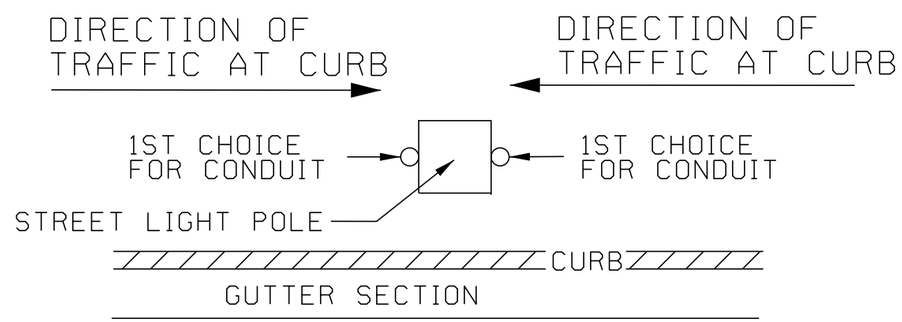
RL-26

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - DETAIL	SHEET 244	E

FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023953_lp.dgn PLOT DATE : 27-JUL-2015 15:13 PLOT BY : jholt PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

NOTE: CAP FITTINGS ON CONDUIT ENDS



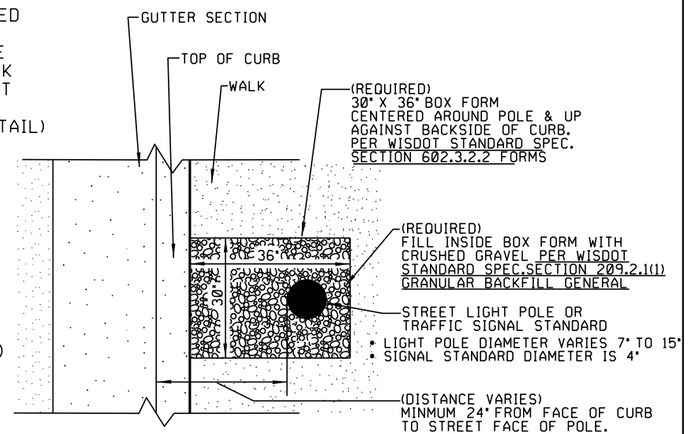
104 DETAIL — NOT TO SCALE

TYPICAL TRAFFIC SIGNAL RISER CONDUIT LOCATIONS ON STREET LIGHT POLE DEPENDING ON DIRECTION OF TRAFFIC AT CURB

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM TRAFFIC / STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN ADJACENT DETAIL)

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH CRUSHED GRAVEL, AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN ADJACENT DETAIL)

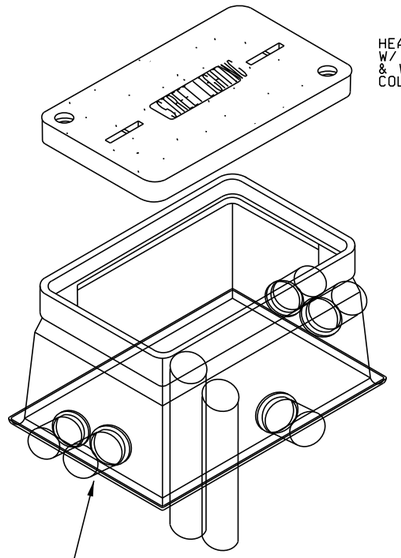


105 DETAIL — NOT TO SCALE

TYPICAL 30" X 36" BOX FORM AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL STANDARD

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

PLOTDATE



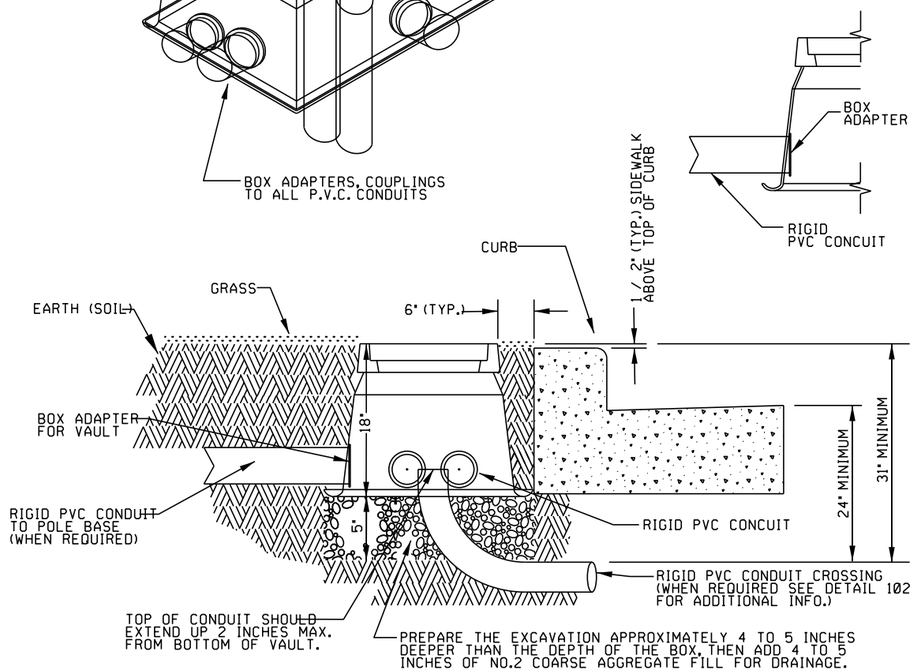
HEAVY DUTY COVER W/ STREETLIGHTING LOGO & W / 2 BOLTS COLOR: GRAY

ELECTRICAL VAULT FLARED WALL BOX W / NO BASE COLOR: GRAY

(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS TO ALL P.V.C. CONDUITS



121 DETAIL — NOT TO SCALE

TYPICAL VAULT INSTALLATION IN GRASS AREA

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

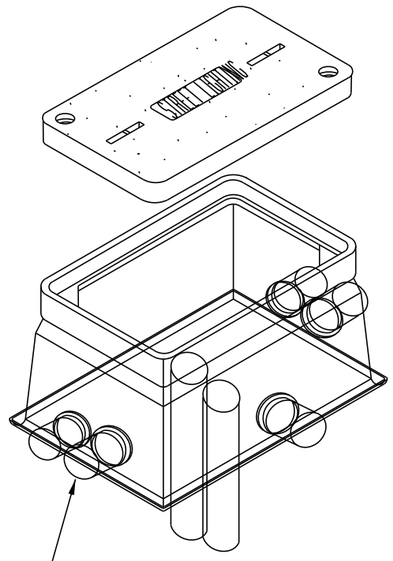
PLOTDATE

CITY OF MILWAUKEE - STANDARD DETAILS

RL-27

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - DETAIL	SHEET 245	E

FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023954_lp.dgn PLOT DATE : 27-JUL-2015 15:13 PLOT BY : jholt PLOT NAME : PLOT SCALE : 100:1



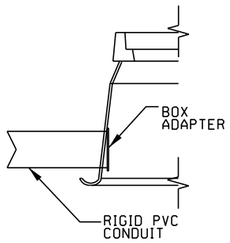
HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W / 2 BOLTS
COLOR: GRAY

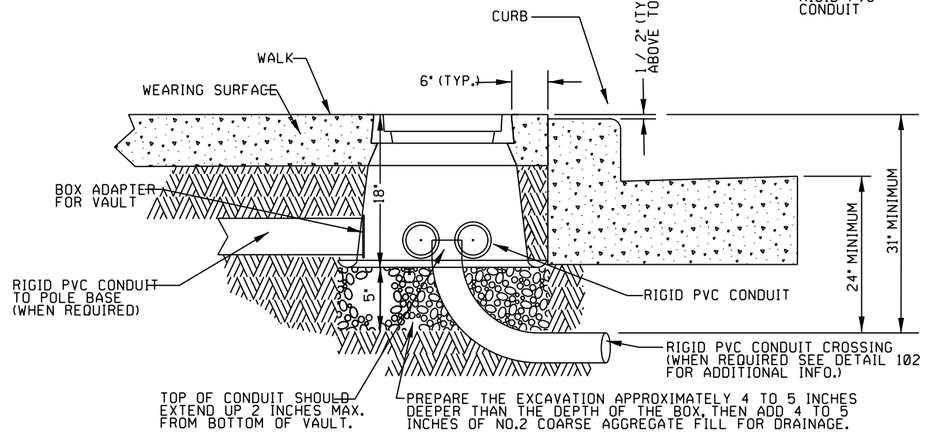
ELECTRICAL VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY

(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL PVC CONDUITS

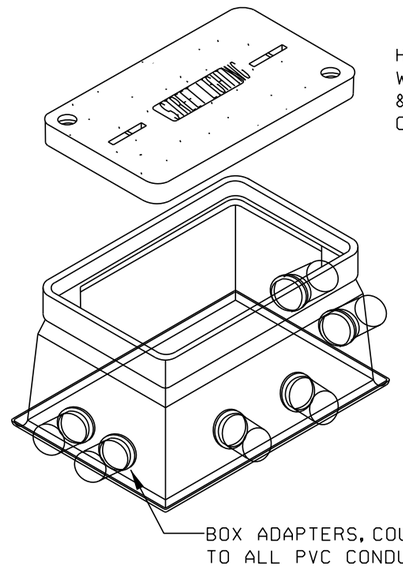




112 DETAIL
TYPICAL VAULT INSTALLATION IN WALK
NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

PLOTDATE

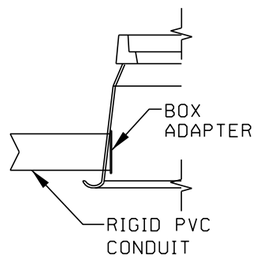


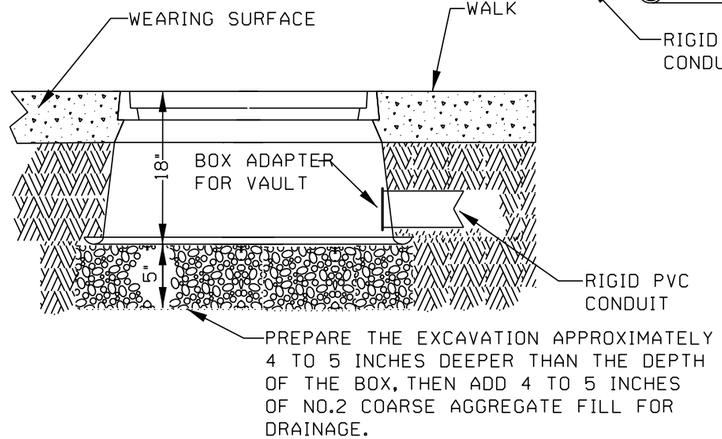
HEAVY DUTY COVER
W/ ELECTRIC LOGO
& W / 2 BOLTS
COLOR: GRAY

ELECTRICAL VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY
(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL PVC CONDUITS





113 DETAIL
TYPICAL VAULT INSTALLATION
IN SIDEWALK

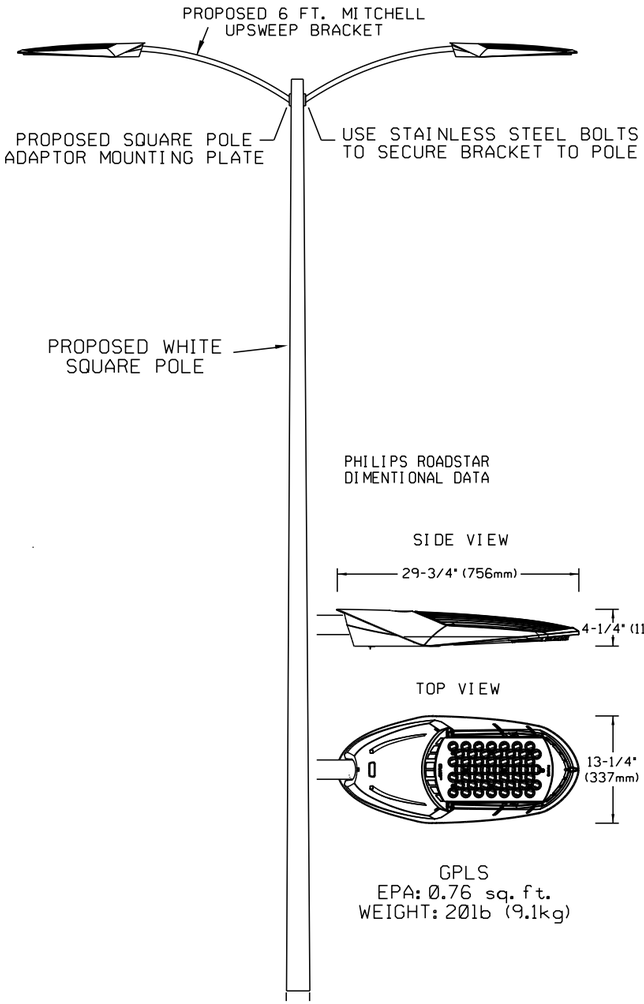
ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.
NOT TO SCALE

PLOTDATE

CITY OF MILWAUKEE - STANDARD DETAILS

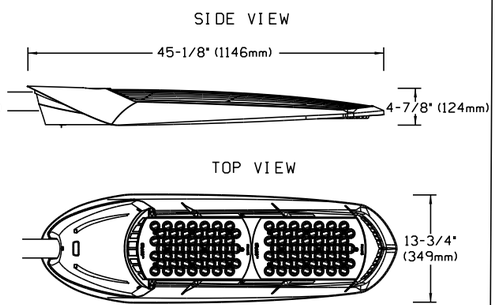
RL-28

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - DETAIL	SHEET 246	E



PHILIPS ROADSTAR
DIMENTIONAL DATA

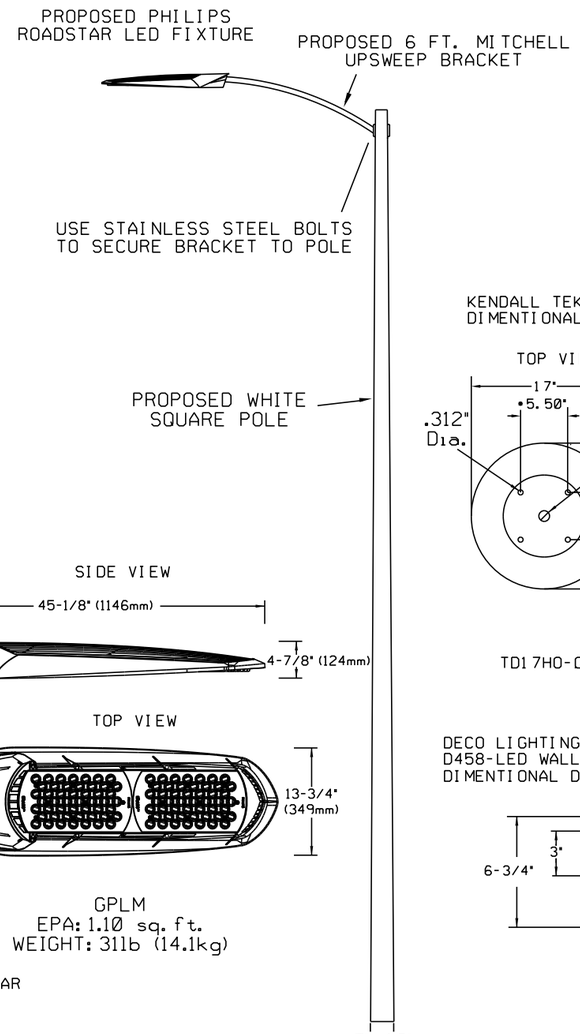
GPLS
EPA: 0.76 sq. ft.
WEIGHT: 20lb (9.1kg)



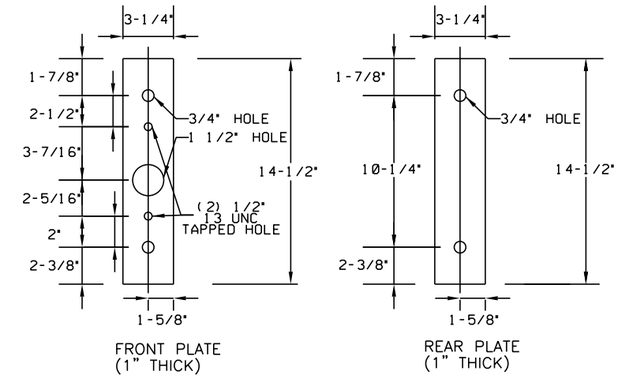
GPLM
EPA: 1.10 sq. ft.
WEIGHT: 31lb (14.1kg)

PHILIPS ROADSTAR

7'-10"
SQUARE CONCRETE POLE WITH
DOUBLE PHILIPS ROADSTAR FIXTURE



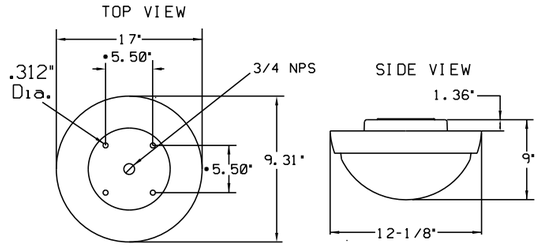
7'-10"
SQUARE CONCRETE POLE WITH
SINGLE PHILIPS ROADSTAR FIXTURE



MATERIAL: ALUM 6061-T6

STRESSCRETE SQUARE POLE MOUNTING PLATE SET

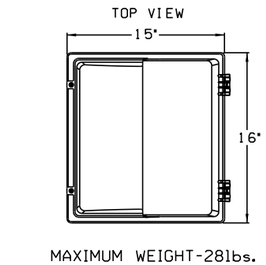
KENDALL TEKDEK
DIMENTIONAL DATA



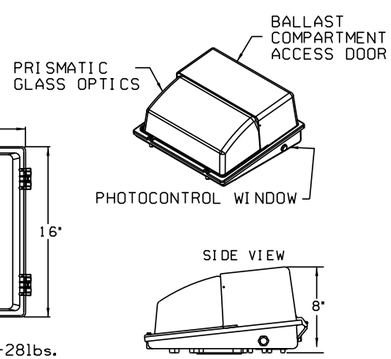
•DTS MOUNTING ONLY

KENALL TEKDEK
TD17HO-QM-5S-TP-MW-47L-40K7-DCC-DV-BG-SA

HOLOPHANE
WALL PACK IV
DIMENTIONAL DATA

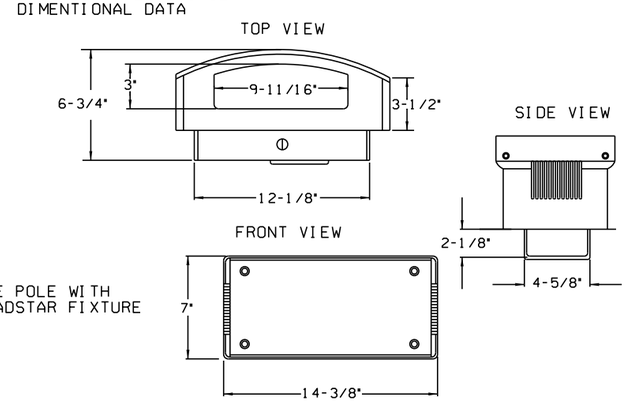


MAXIMUM WEIGHT-28lbs.

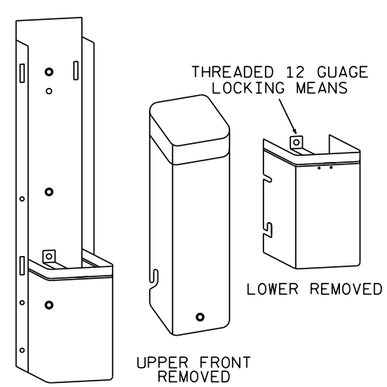


HOLOPHANE LED WALLPACK
W4G-20C-1000-40K-T3M-240-SC-DF-TP-WH

DECO LIGHTING
D458-LED WALL SCONCE
DIMENTIONAL DATA



DECO DIGITAL
D458-LED-60-4100K-UNV-WH-WSF-240V SCONCE LIGHT



METAL HOUSING

TRAFFIC AND LIGHTING DESIGN

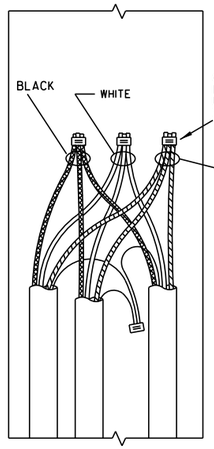
CITY OF MILWAUKEE - STANDARD DETAILS

RL-29

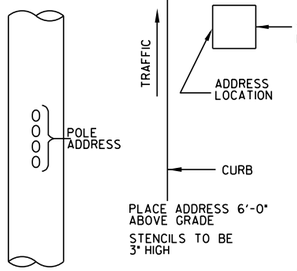
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - DETAIL	SHEET 247	E

FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023956_lp.dgn PLOT DATE : 27-JUL-2015 15:14 PLOT BY : jholt PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42



CONNECTOR - 3 CONDUCTOR WITH INSULATED COVER #1/0 - #14 AL-CU UTILCO #SLC-3-0 1/2"X5/8"X1 3/4" WITH 3 SET SCREWS OR APPROVED EQUAL

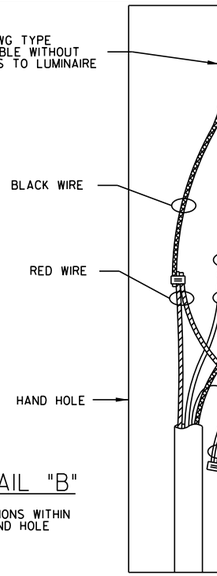


DETAIL "A"

CONNECTIONS WITHIN PEDESTAL CABINET

2#12 AWG TYPE "UF" CABLE WITHOUT SPLICES TO LUMINAIRE

#8 AWG BARE COPPER TO GROUND SCREW ON FIXTURE



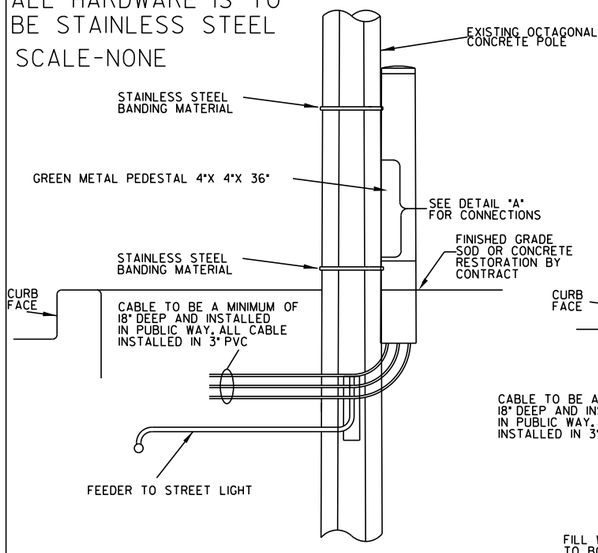
CONNECTOR - 3 CONDUCTOR WITH INSULATED COVER #1/0 - #14 AL-CU UTILCO #SLC-3-0 1/2"X5/8"X1 3/4" WITH 3 SET SCREWS OR APPROVED EQUAL

DETAIL "B"

CONNECTIONS WITHIN HAND HOLE

NOTE:
ALL HARDWARE IS TO BE STAINLESS STEEL

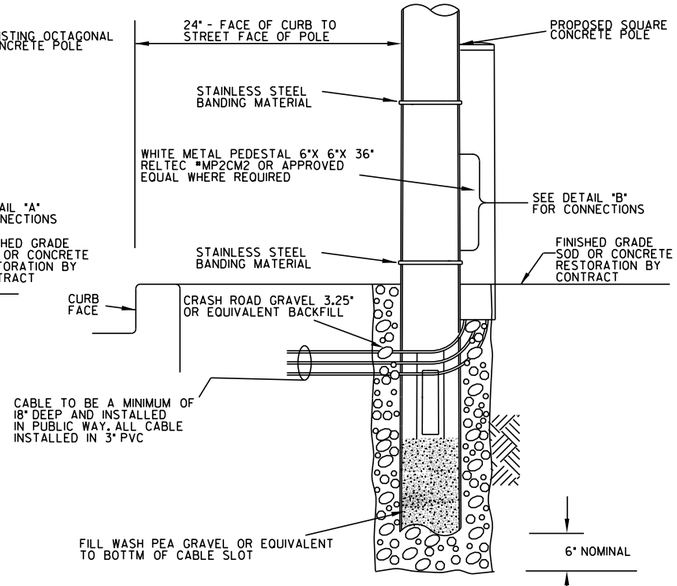
SCALE-NONE



TYPICAL INSTALLATION

PEDESTAL SPLICE ON POLE

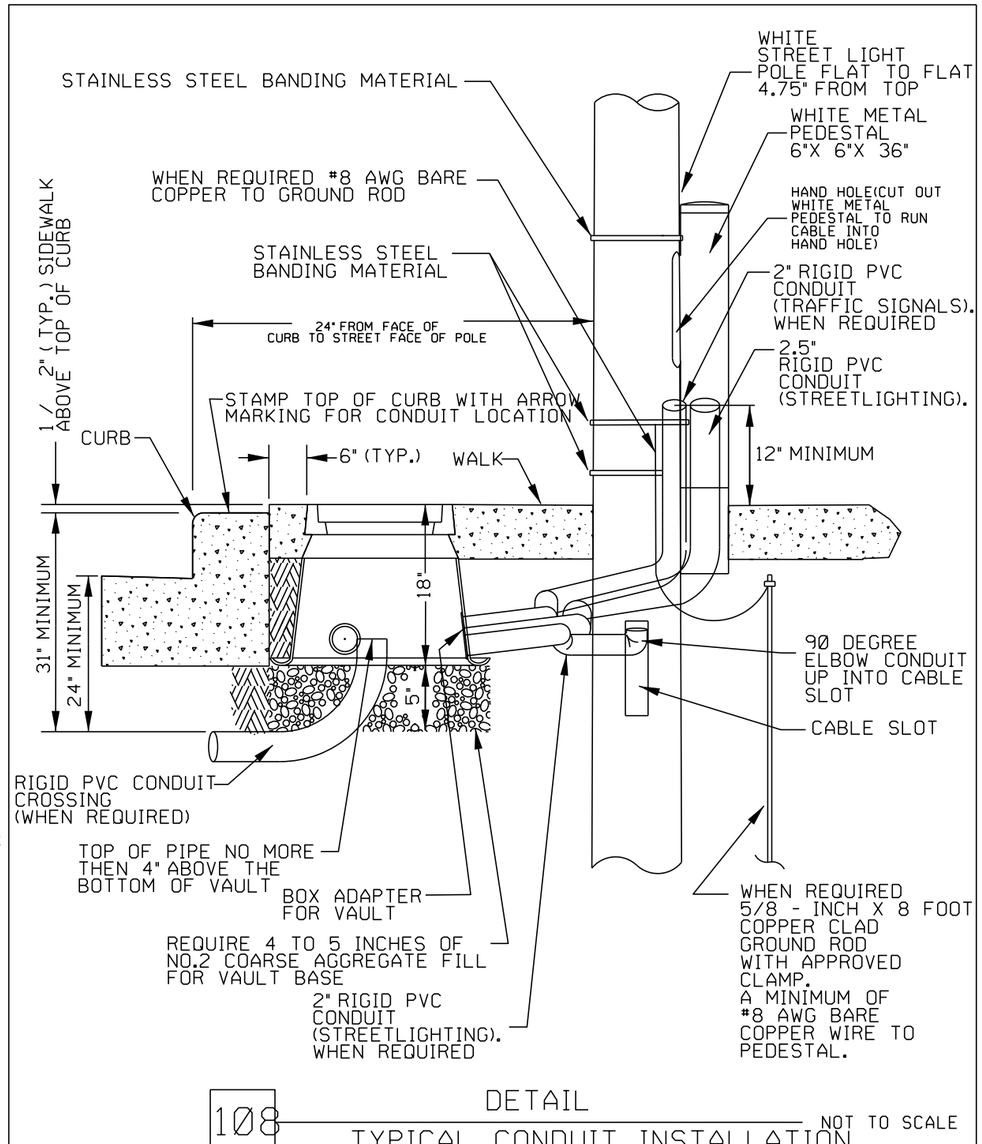
•ALSO REFER TO CONDUIT PLAN FOR DETAILED CONDUIT INSTALLATION•



TYPICAL INSTALLATION

PROPOSED SQUARE CONCRETE POLE

•ALSO REFER TO CONDUIT PLAN FOR DETAILED CONDUIT INSTALLATION•



108 DETAIL — NOT TO SCALE

TYPICAL CONDUIT INSTALLATION FROM VAULT TO POLE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

PLOTDATE

CITY OF MILWAUKEE - STANDARD DETAILS

RL-30

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN - DETAIL	SHEET 248	E

2

T-42C-C-B
T-42C-C-R
T-42C-C-R
T-42C-C-B
T-42C-C-R
T-42C-C-B
T-42C-C-B
T-42C-C-R
T-42C-C-R
T-42C-C-B
T-42C-C-R
T-42C-C-B
T-42C-C-B
T-42C-C-R
T-42C-C-R
T-42C-C-B
T-42C-C-R
T-42C-C-B
T-42C-C-B
T-42C-C-R

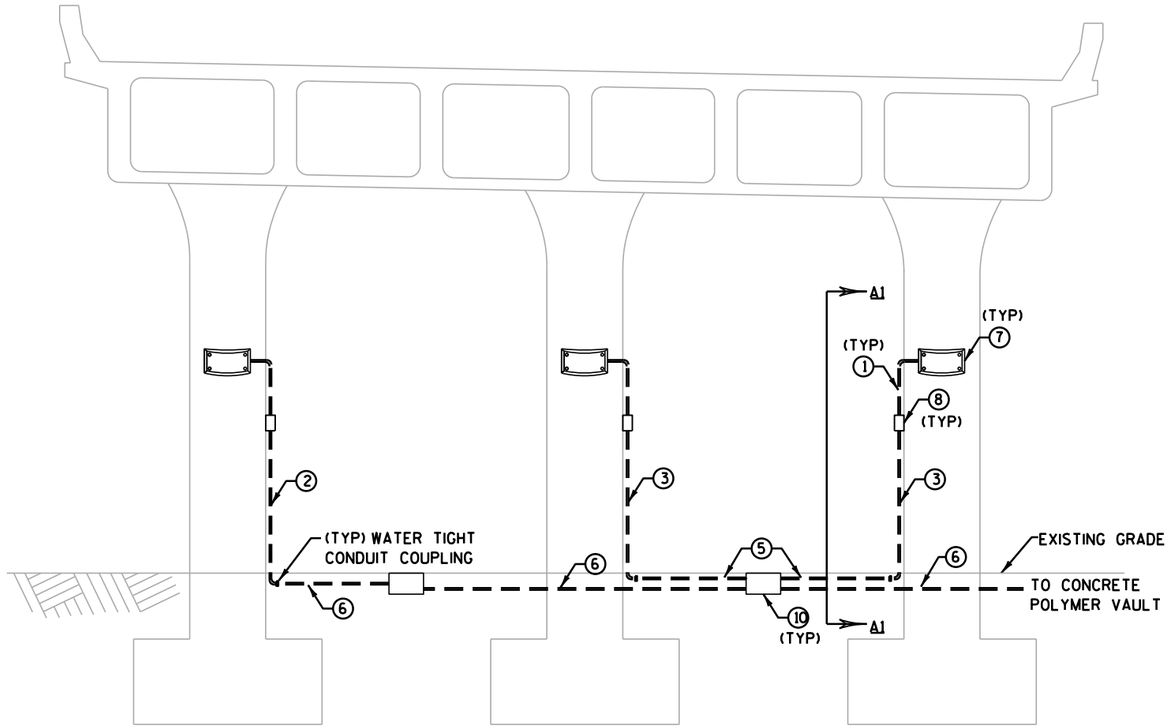
209+00 LE
110+00 LW
+50 LE
210+00 LE
111+00 LW
+50 LM
23+00 LM
+50 LM
24+00 LM
+50 LM
25+00 LM
+50

RL-31

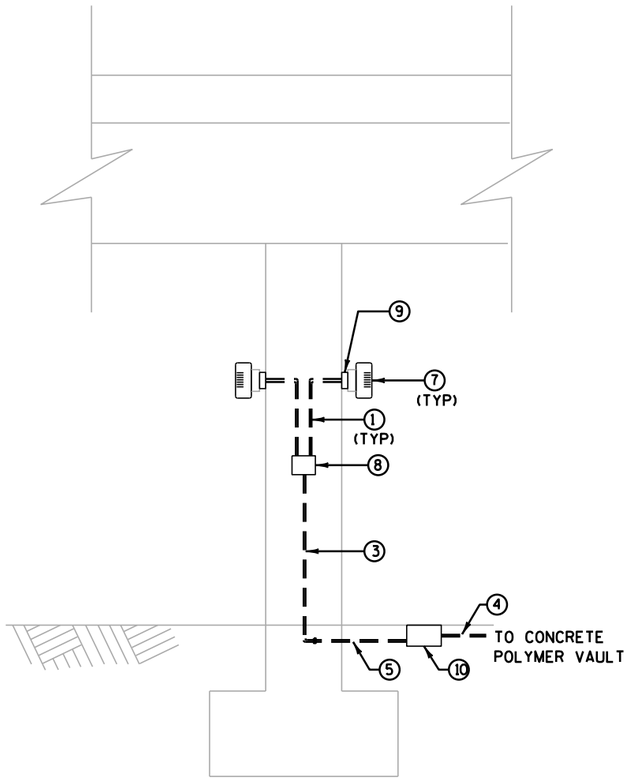
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN COM - UP/DOWN SCONCE DETAILS	SHEET 249	E

FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023970_lp.dgn PLOT DATE : 27-JUL-2015 15:14 PLOT BY : jholt PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 42



SECTION A-A
TYPICAL WALL SCONCE INSTALLATION
DETAIL ON EXISTING STRUCTURE
N.T.S.



SECTION A1-A1
N.T.S.

LEGEND

1. 1 INCH RTRC WITH 2 - #12 UF WITH GROUND STREET LIGHTING CABLE
2. 2 INCH RTRC WITH 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE
3. 2 INCH RTRC WITH (2) 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE
4. 2 INCH NON-METALLIC CONDUIT WITH 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE
5. 2 INCH NON-METALLIC CONDUIT WITH (2) 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE
6. 3 INCH NON-METALLIC CONDUIT WITH 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE
7. WALL SCONCE UP/DOWN LIGHTING FIXTURE MOUNTED 10'-0" AFG
8. JUNCTION BOX, STAINLESS STEEL 18"X12"X6"
9. JUNCTION BOX, STAINLESS STEEL 4"X4"X2"
10. 13"X24"X18" CONCRETE POLYMER VAULT

NOTES:

1. ALL CONNECTIONS TO AND FROM JUNCTION BOXES MUST BE WATER TIGHT.
2. NO SPLICES SHALL BE MADE INSIDE THE VAULTS.

RL-32

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN COM - UP/DOWN SCONCE DETAILS	SHEET 250	E

2

LEGEND

① 1 INCH RTRC WITH 2 - #12 UF WITH GROUND STREET LIGHTING CABLE

② 2 INCH RTRC WITH 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE

③ 2 INCH NON-METALLIC CONDUIT WITH 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE

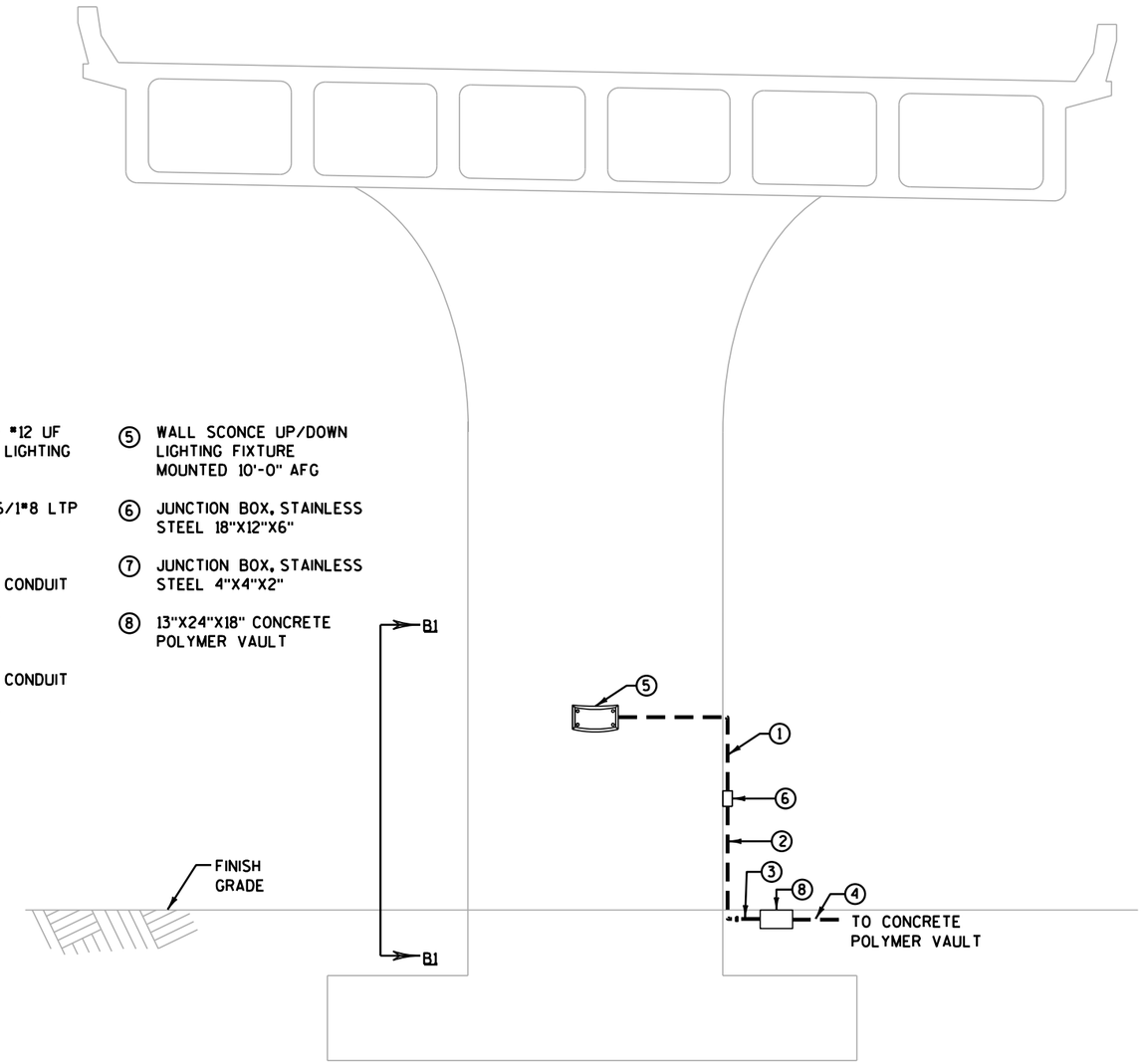
④ 3 INCH NON-METALLIC CONDUIT WITH 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE

⑤ WALL SCONCE UP/DOWN LIGHTING FIXTURE MOUNTED 10'-0" AFG

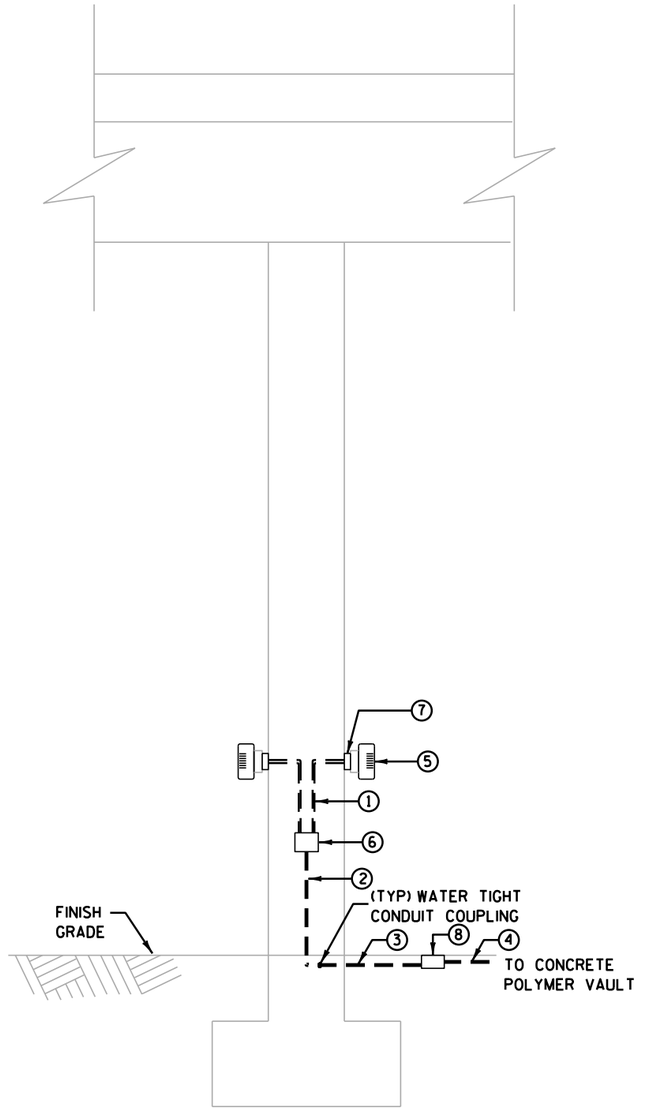
⑥ JUNCTION BOX, STAINLESS STEEL 18"X12"X6"

⑦ JUNCTION BOX, STAINLESS STEEL 4"X4"X2"

⑧ 13"X24"X18" CONCRETE POLYMER VAULT



SECTION B-B
TYPICAL WALL SCONCE INSTALLATION
DETAIL ON EXISTING STRUCTURE
N.T.S.



SECTION B1-B1
N.T.S.

NOTES:

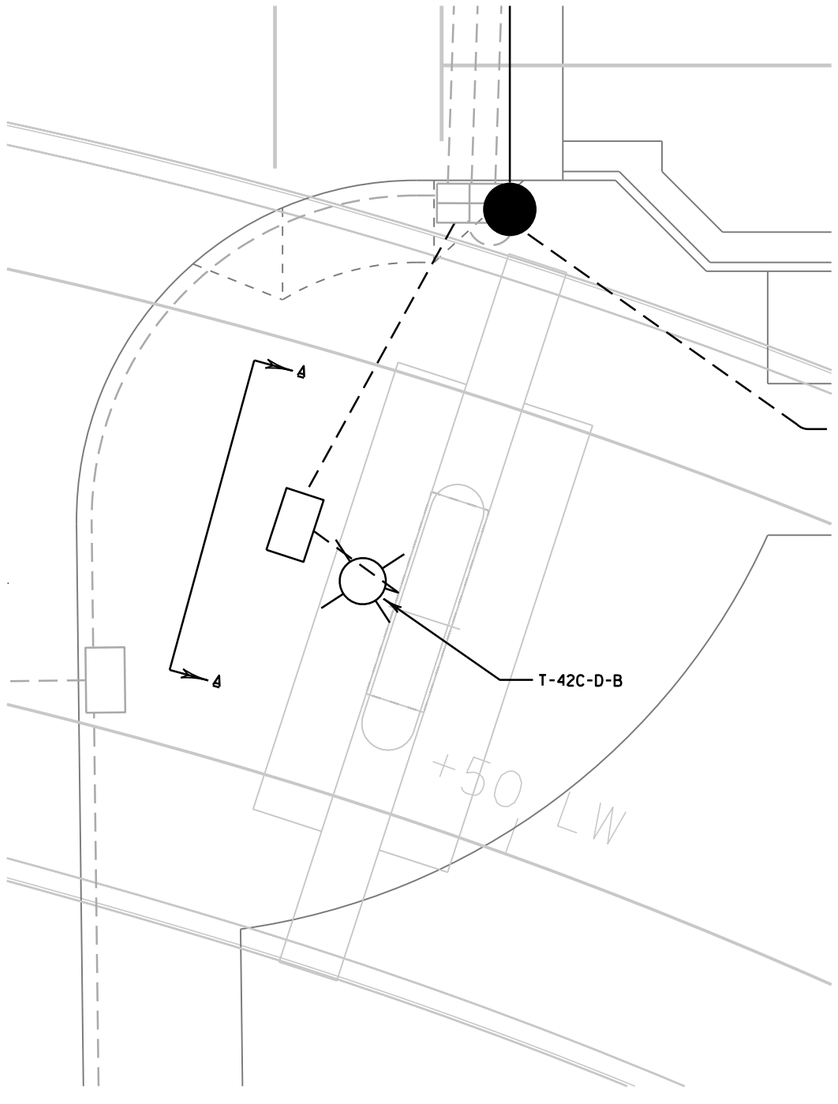
1. ALL CONNECTIONS TO AND FROM JUNCTION BOXES MUST BE WATER TIGHT.
2. NO SPLICES SHALL BE MADE INSIDE THE VAULTS.

RL-33

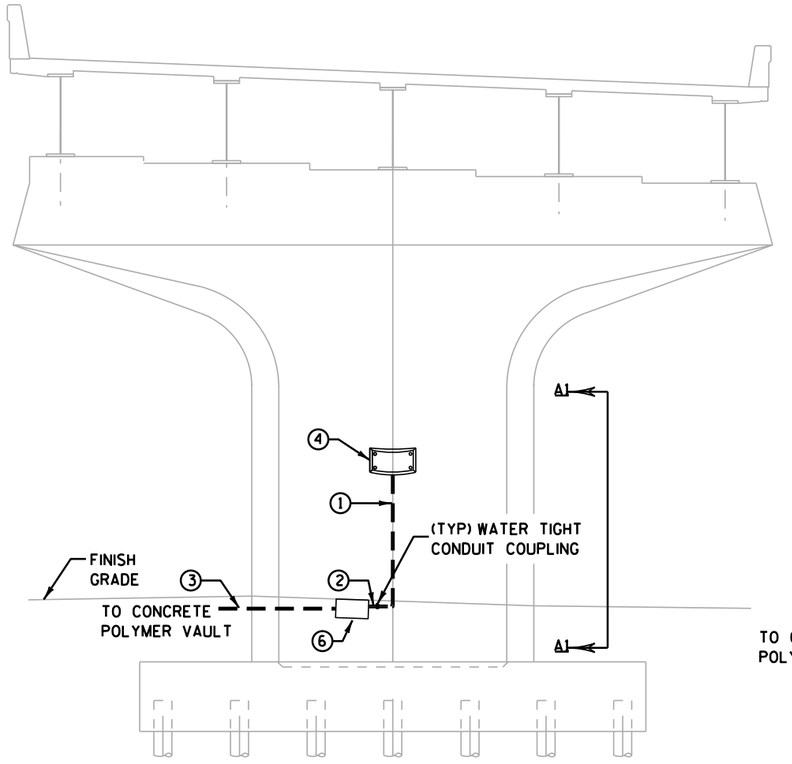
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN COM - UP/DOWN SCONCE DETAILS	SHEET 251	E

FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023972_lp.dgn PLOT DATE : 27-JUL-2015 15:14 PLOT BY : jholt PLOT NAME : PLOT SCALE : 10:1

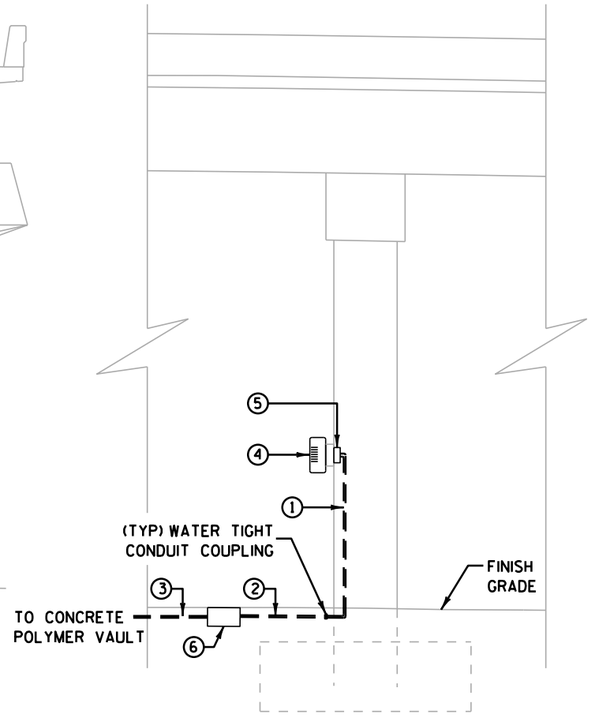
WISDOT/CADDS SHEET 42



PLAN VIEW
N.T.S.



SECTION A-A
TYPICAL WALL SCONCE INSTALLATION
DETAIL ON NEW STRUCTURE
N.T.S.



SECTION A1-A1
N.T.S.

LEGEND

1. 2 INCH NON-METALLIC CONDUIT EMBEDDED IN STRUCTURE WITH 3#6/1#8 LTP STREET LIGHTING CABLE
2. 2 INCH NON-METALLIC CONDUIT WITH 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE
3. 3 INCH NON-METALLIC CONDUIT WITH 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE
4. WALL SCONCE UP/DOWN LIGHTING FIXTURE MOUNTED 10'-0" AFG
5. JUNCTION BOX, STAINLESS STEEL EMBEDDED IN STRUCTURE 4"X4"X2" WITH 2 - #12 UF WITH GROUND UNDERGROUND STREET LIGHTING CABLE TO FIXTURE
6. 13"X24"X18" CONCRETE POLYMER VAULT

NOTES:

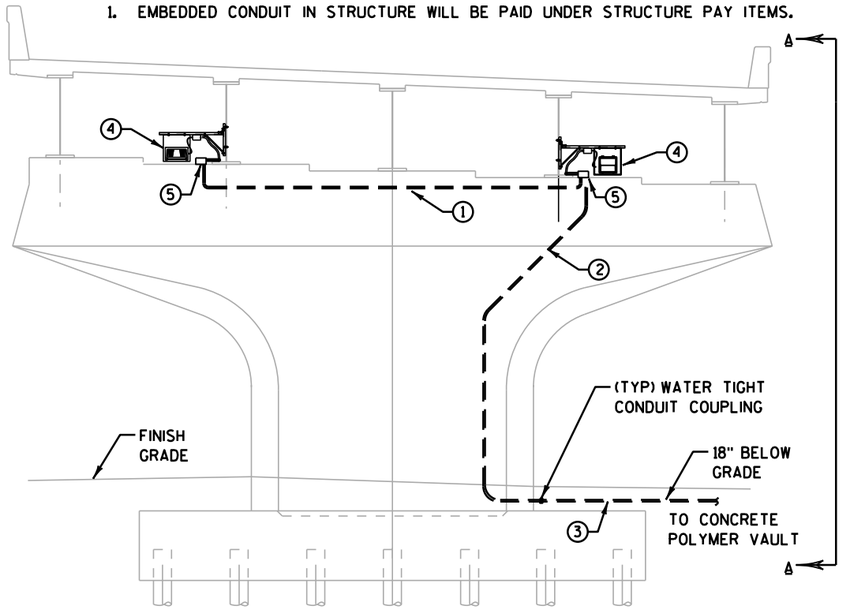
1. ALL CONNECTIONS TO AND FROM JUNCTION BOXES MUST BE WATER TIGHT.
2. NO SPLICES SHALL BE MADE INSIDE THE VAULTS.
3. EMBEDDED CONDUIT IN STRUCTURE WILL BE PAID UNDER STRUCTURE PAY ITEMS.

RL-34

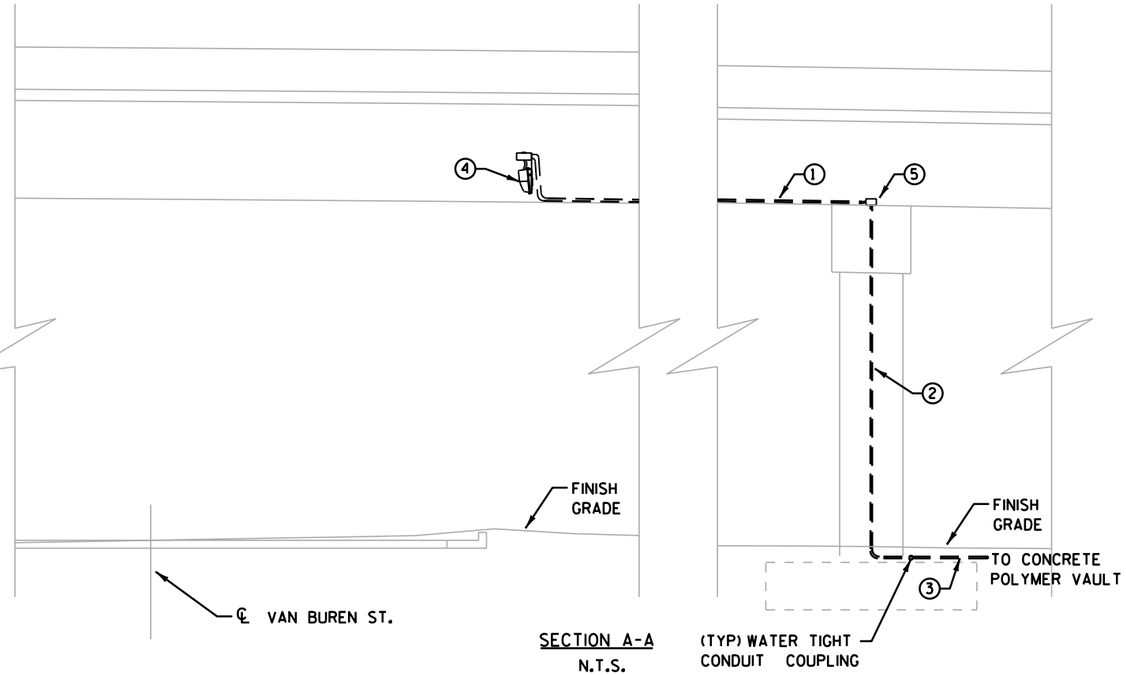
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN COM - UP/DOWN SCONCE DETAILS	SHEET 252	E

NOTES:

1. EMBEDDED CONDUIT IN STRUCTURE WILL BE PAID UNDER STRUCTURE PAY ITEMS.



SECTION "A-A"
UNDERDECK LIGHTING INSTALLATION
DETAIL ON NEW STRUCTURE
N.T.S.



SECTION A-A
N.T.S.

LEGEND

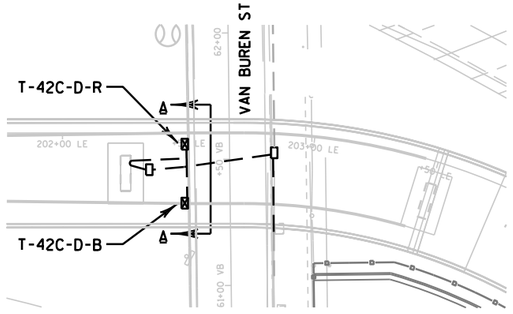
① 2 INCH NON-METALLIC CONDUIT EMBEDDED IN STRUCTURE WITH 2 - #12 UF WITH GROUND STREET LIGHTING CABLE

② 2 INCH NON-METALLIC CONDUIT EMBEDDED IN STRUCTURE WITH 3#6/1#8 LTP STREET LIGHTING CABLE

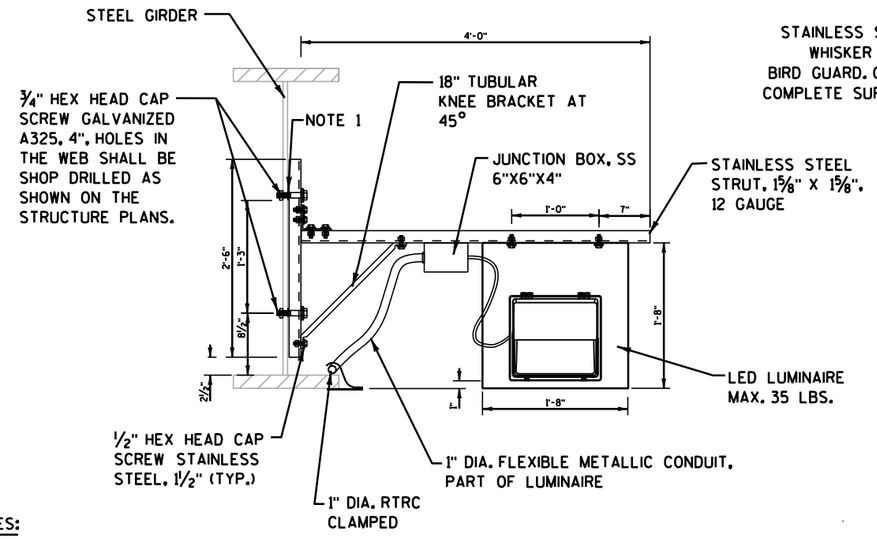
③ 2 INCH NON-METALLIC CONDUIT WITH 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE

④ HOLOPHANE WALLPACK IV

⑤ JUNCTION BOX, STAINLESS STEEL 6"X6"X4"

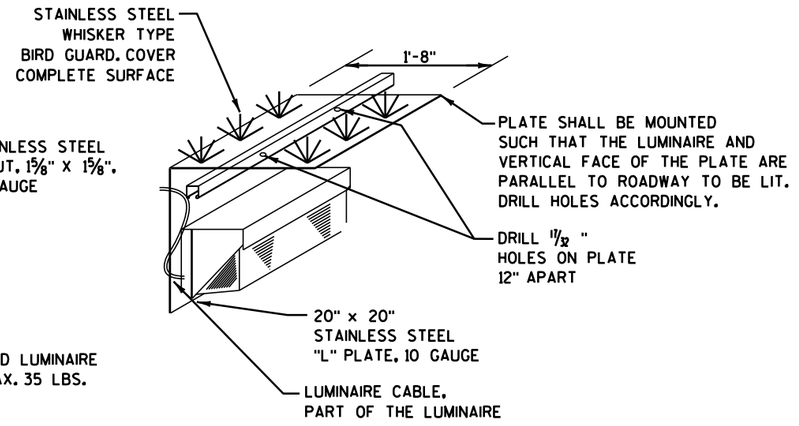


PLAN VIEW



NOTES:

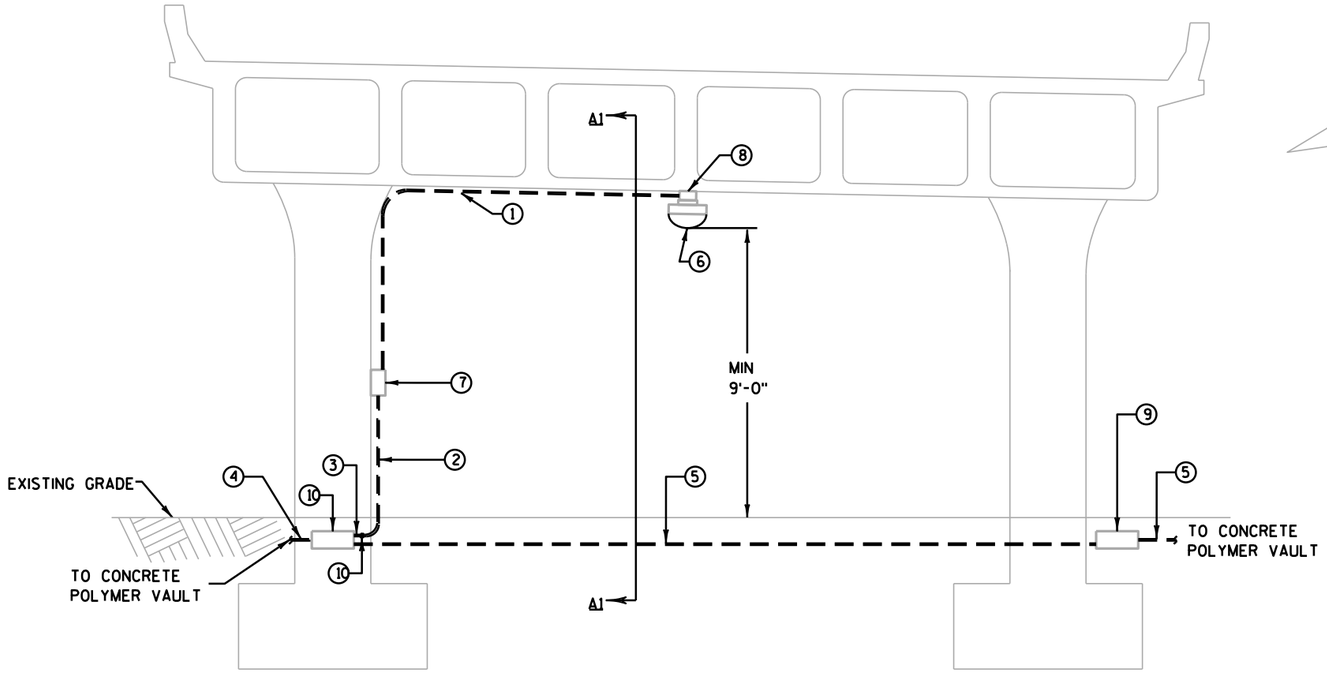
1. PROVIDE ½" NEOPRENE OR EQUAL WASHER AS DESCRIBED IN THE SPECIAL PROVISION TO AVOID CONTACT WITH DISSIMILAR METALS.
2. THE BOTTOM EDGE OF THE PLATE SHALL NOT BE LOWER THAN BOTTOM SURFACE OF THE GIRDER FLANGE.
3. ALL CONNECTIONS TO AND FROM JUNCTION BOXES MUST BE WATER TIGHT.
4. NO SPLICES SHALL BE MADE INSIDE THE VAULTS.



DETAIL "A"
UNDERDECK MOUNTING DETAILS-FOR LIGHTING ON VAN BUREN STREET UNDER IH-794
N.T.S.

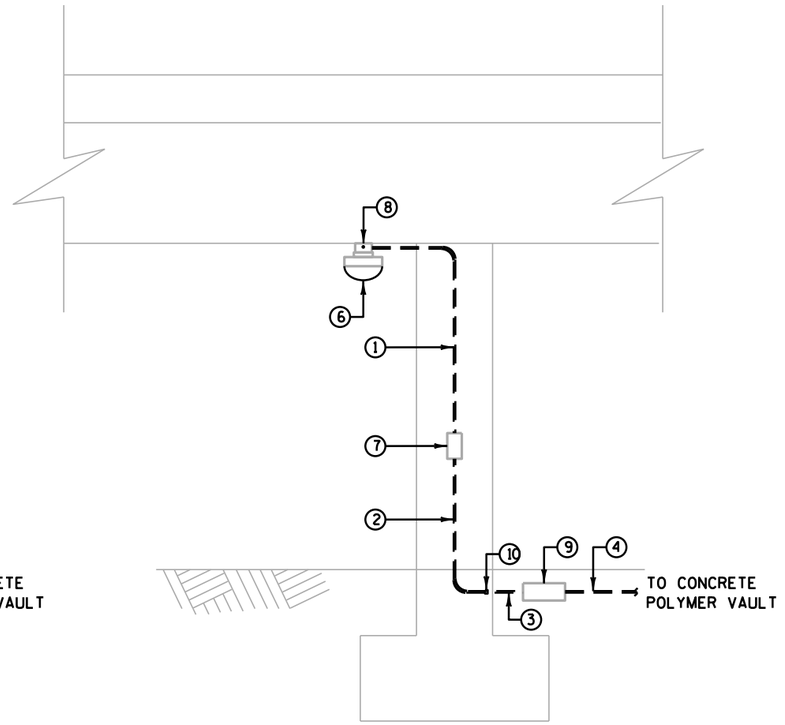
RL-35

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN COM - UNDERDECK LIGHTING INSTALLATION DETAIL	SHEET 253	E

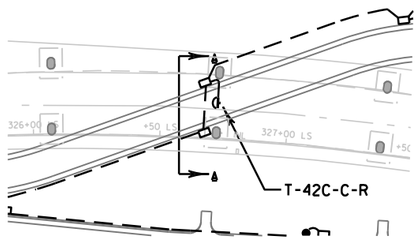


A1

SECTION A1-A1
TYPICAL CONDUIT TRANSITION DETAIL FOR
UNDERDECK LIGHTING ON EXISTING STRUCTURE
N.T.S.



SECTION A1-A1
N.T.S.



PLAN VIEW

LEGEND

1. 1 INCH RTRC WITH 2 - #12 UF WITH GROUND STREET LIGHTING CABLE
2. 2 INCH RTRC WITH 3#6/1#8 LTP AWG CONDUCTORS
3. 2 INCH NON-METALLIC CONDUIT WITH 3#6/1#8 LTP AWG CONDUCTORS
4. 3 INCH NON-METALLIC CONDUIT WITH 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE
5. 3 INCH NON-METALLIC CONDUIT WITH PULL STRING
6. KENALL LED WALLPACK
7. JUNCTION BOX, STAINLESS STEEL 18"X12"X6"
8. JUNCTION BOX, STAINLESS STEEL 4"X4"X2"
9. 13"X24"X18" CONCRETE POLYMER VAULT
10. WATER TIGHT CONDUIT COUPLING

NOTES:

1. ALL CONNECTIONS TO AND FROM JUNCTION BOXES MUST BE WATER TIGHT.
2. NO SPLICES SHALL BE MADE INSIDE THE VAULTS.

RL-36

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	LIGHTING PLAN COM - UNDERDECK LIGHTING INSTALLATION DETAIL	SHEET 254	E

FILE NAME : C:\Users\jholt\Desktop\Project Folders\Project 14081 Gateway\14081 Exported files\023975_lp.dgn PLOT DATE : 27-JUL-2015 15:14 PLOT BY : jholt PLOT NAME : PLOT SCALE : 59.999988:1
WISDOT/CADDS SHEET 42

2

TRAFFIC SIGNAL GENERAL NOTES:

PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE."

STREET LIGHTING & TRAFFIC SIGNALS SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 652 EXCEPT:

THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF STREET LIGHTING OR TRAFFIC SIGNAL FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING OR TRAFFIC SIGNAL DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED PERMISSION.

1. DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

2. LOCATIONS OF THE PVC CONDUITS WHERE THEY ARE REQUIRED ARE IDENTIFIED IN THE PRINTS. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. ANY RELOCATIONS MUST BE APPROVED BY THE ENGINEER. FIELD MARK EACH CONDUIT LOCATION BY STAMPING AND PAINTING WITH RED PAINT ON TOP AND BACKSIDE OF CURB.

3. TYPICAL CONDUIT INSTALLED UP TO DIRECT BURIED STREET LIGHT POLES IS AS FOLLOWS 3-INCH OR 2.5-INCH (AS NOTED) SCHEDULE 40 RIGID PVC TO STREET LIGHTING METAL HOUSING (PEDESTAL), THE 1.5-INCH SCHEDULE 40 RIGID PVC TO STREET LIGHT POLE CABLE SLOT, AND THE 2-INCH SCHEDULE 40 RIGID PVC TO SIGNAL STANDARD BASE AND RISER FOR TRAFFIC SIGNAL ON STREET LIGHT POLE.

4. DEPTH OF CONDUIT INSTALLED BELOW THE STREETS, HIGHWAYS, ROADS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE)

5. CONDUIT INSTALLED BEHIND CURB, AND UNDER DRIVEWAYS SHALL BE INSTALLED AT THE BASE OF THE BACKSIDE OF THE CURB/GUTTER SECTION.

6. WHEN THERE IS MORE THAN ONE CONDUIT TO BE LAID BEHIND THE CURB, PLACE ALL CONDUITS IN THE SAME TRENCH.

7. ANY EXCEPTION TO THE MINIMUM OR MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

8. THE CONTRACTOR OR HIS SUBCONTRACTOR MUST MAKE SURE THE AREA BEHIND CURB AND/OR WITHIN TRENCH SHALL BE FREE OF DEBRIS AND OVERPOUR AND SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

9. BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSON TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

10. ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS. (SEE NEC 352.28 2008 CODE)

11. PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED IN THE FUTURE. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

12. ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

13. CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX OR JUNCTION BOX OR BASE TO BASE, ETC.).

14. PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.

15. ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS UNLESS OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

16. WHEN ENDS OF CONDUIT DO NOT CONNECT TO A VAULT AND WILL END UP UNDER CONCRETE WALK. THE CONTRACTOR IS REQUIRED TO LEAVE A 24" X 24" BOX FORM CENTERED OVER THE END OF CONDUIT AND FILL THE BOXFORM WITH CRUSHED GRAVEL. (PER WISDOT SPEC 209.2.1(1) GRANULAR BACKFILL)

17. ALL PIPE CROSSINGS AND VAULTS SHALL BE AT LEAST SIX (6) FEET AWAY FROM FIRE HYDRANTS, UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

18. ALL POLES AND TRAFFIC STANDARDS IN CONCRETE ARE REQUIRED TO HAVE A 30"X30" BOX SHAPED JOINT PLACED AROUND THEM USING AN EXPANSION JOINT FILLER. UNLESS NOTED OTHERWISE (SEE DETAIL 122)

19. TYPICAL RECTANGULAR VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

20. COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR
    STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251 OR DISPATCHER @ 414-286-5944
    TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148 OR DISPATCHER @ 414-286-3687

21. IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL VAULT, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONCRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
    STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251
    STREET LIGHTING - GEORGE BERDINE (OFFICE) 414-286-5943 (CELL) 414-708-4245
    STREET LIGHTING - THOMAS HUGHES (OFFICE) 414-286-3457 (CELL) 414-708-3175
    STREET LIGHTING - DISPATCHER @ 414-286-5944
    TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148
    TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

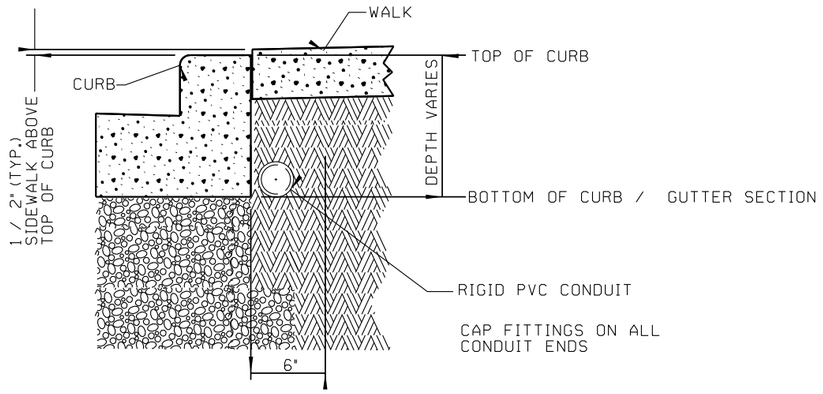
22. CONDUIT WILL ONLY BE INSTALLED AFTER THE CURB IS POURED, UNLESS APPROVED BY BOTH THE ENGINEER & STREET LIGHTING SHOP SUPERVISOR.

23. CONDUIT INSTALLATION FOR CONTROLLER BASES SHALL BE APPROVED BY CITY PRIOR TO POURING CONCRETE. COORDINATE VENTING OF TES CONDUIT AT EACH CONTROLLER BASE PRIOR TO INSTALLATION.

2

2

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2.) CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



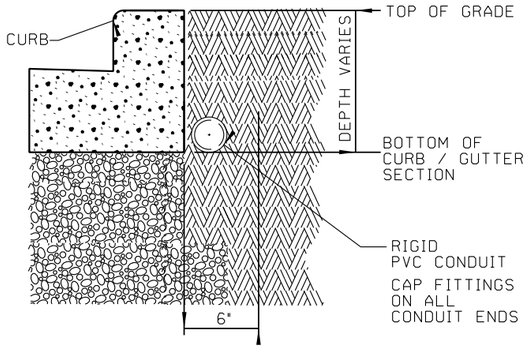
100 DETAIL "A"
NOT TO SCALE
TYPICAL CONDUIT INSTALLATION BEHIND CURB

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

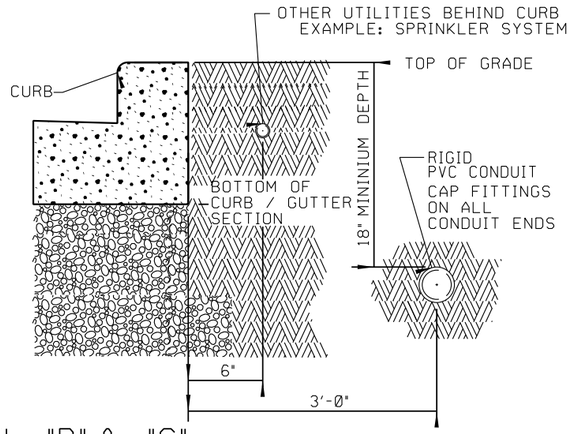
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.

DETAIL "B"

CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.

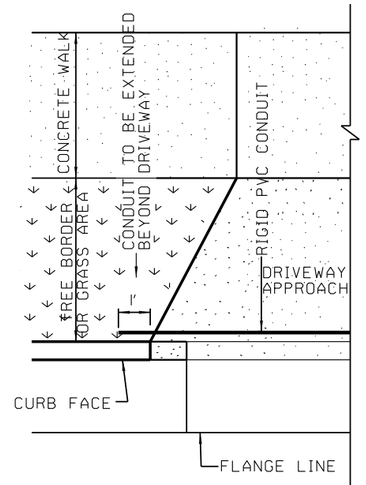


DETAIL "C"

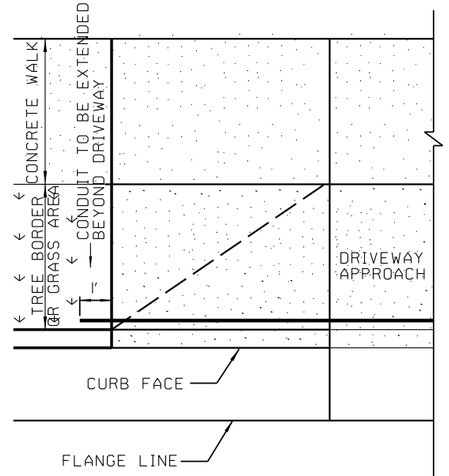


100 DETAIL "B" & "C"
NOT TO SCALE
TYPICAL CONDUIT INSTALLATION BEHIND CURB

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

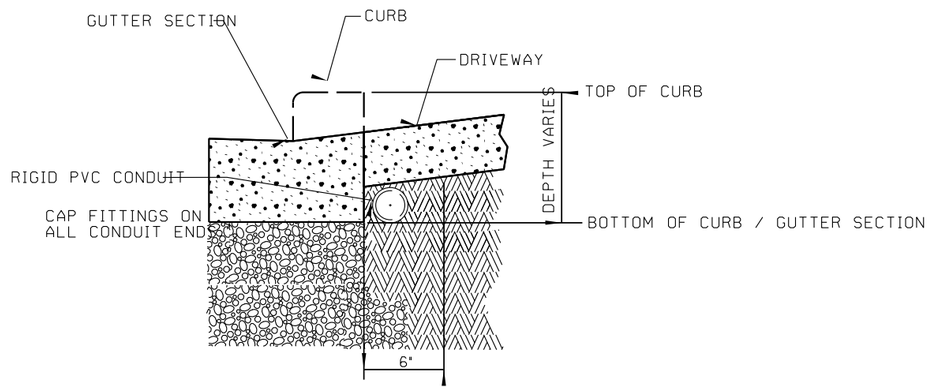


TYPICAL PLAN VIEW FOR FLARED DRIVEWAY



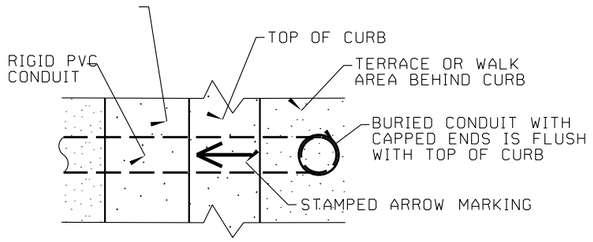
TYPICAL PLAN VIEW FOR DEPRESSED DRIVEWAY

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2.) CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



101 DETAIL
NOT TO SCALE
TYPICAL CONDUIT INSTALLATION UNDER DRIVEWAYS OR PEDESTRIAN RAMPS

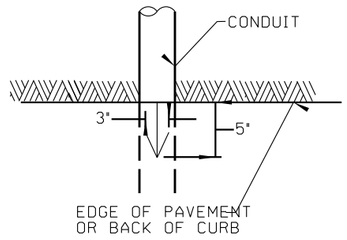
ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



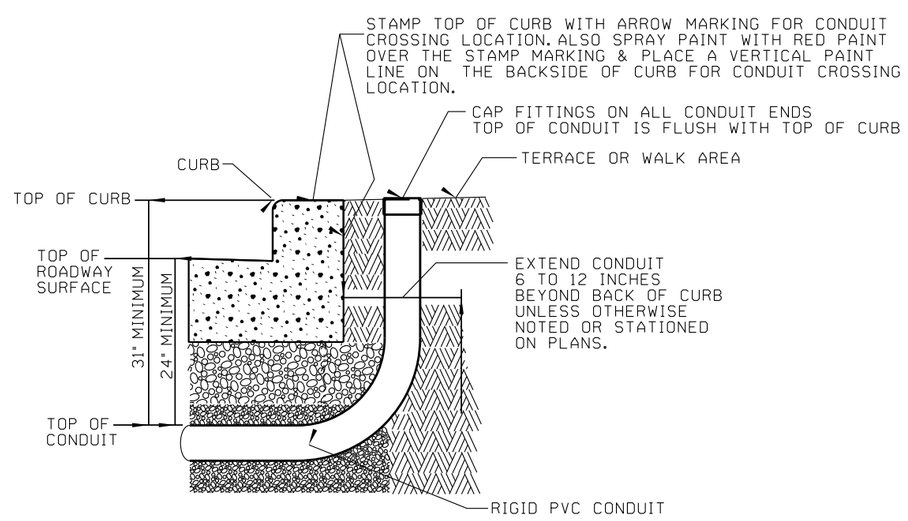
TOP VIEW OF CURB STAMPING
NOT TO SCALE

NOTE:

ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1 / 4-INCH TO 3 / 8-INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.

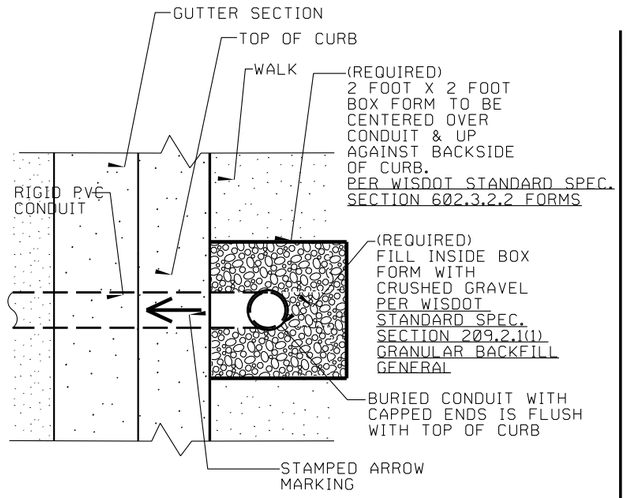


ARROW MARK
NOT TO SCALE



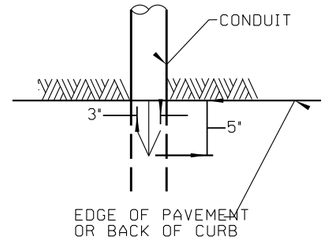
102 DETAIL VERSION #2
TYPICAL CONDUIT INSTALLATION FOR CROSSING ROADWAYS
NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



TOP VIEW OF CURB STAMPING
NOT TO SCALE

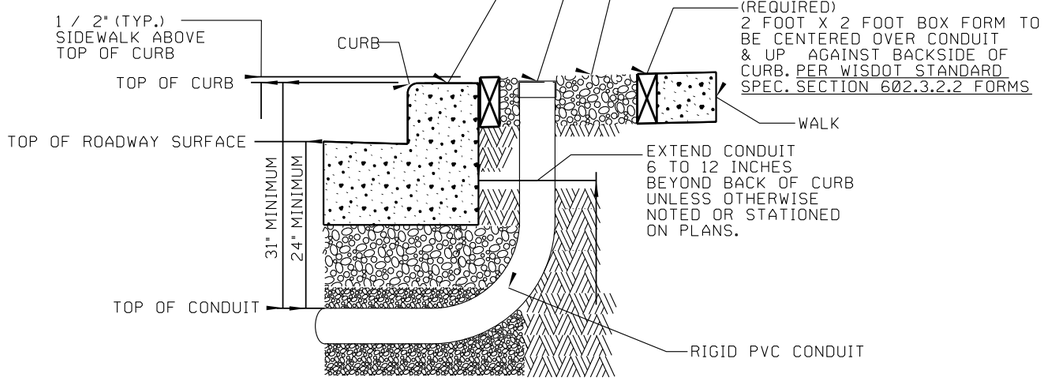
NOTE:



ARROW MARK
NOT TO SCALE

THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)

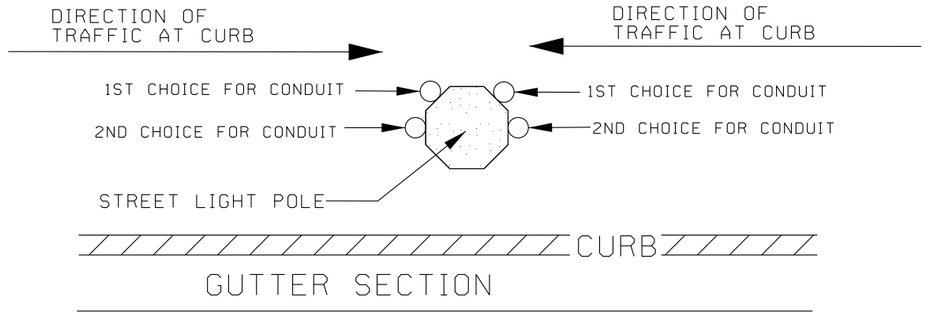
THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH CRUSHED GRAVEL, AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)



103 DETAIL VERSION #2
TYPICAL CONDUIT INSTALLATION FOR CROSSING ROADWAYS FROM FULL WALK AREAS
NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

NOTE: CAP FITTINGS ON CONDUIT ENDS

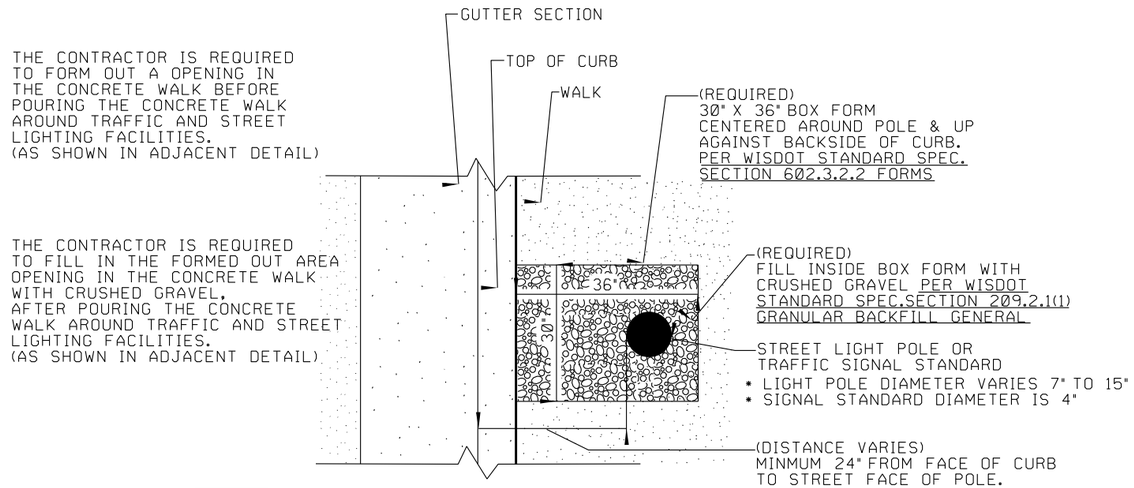


104 DETAIL

NOT TO SCALE

TYPICAL TRAFFIC SIGNAL RISER CONDUIT LOCATIONS ON STREET LIGHT POLE DEPENDING ON DIRECTION OF TRAFFIC AT CURB

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM TRAFFIC / STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

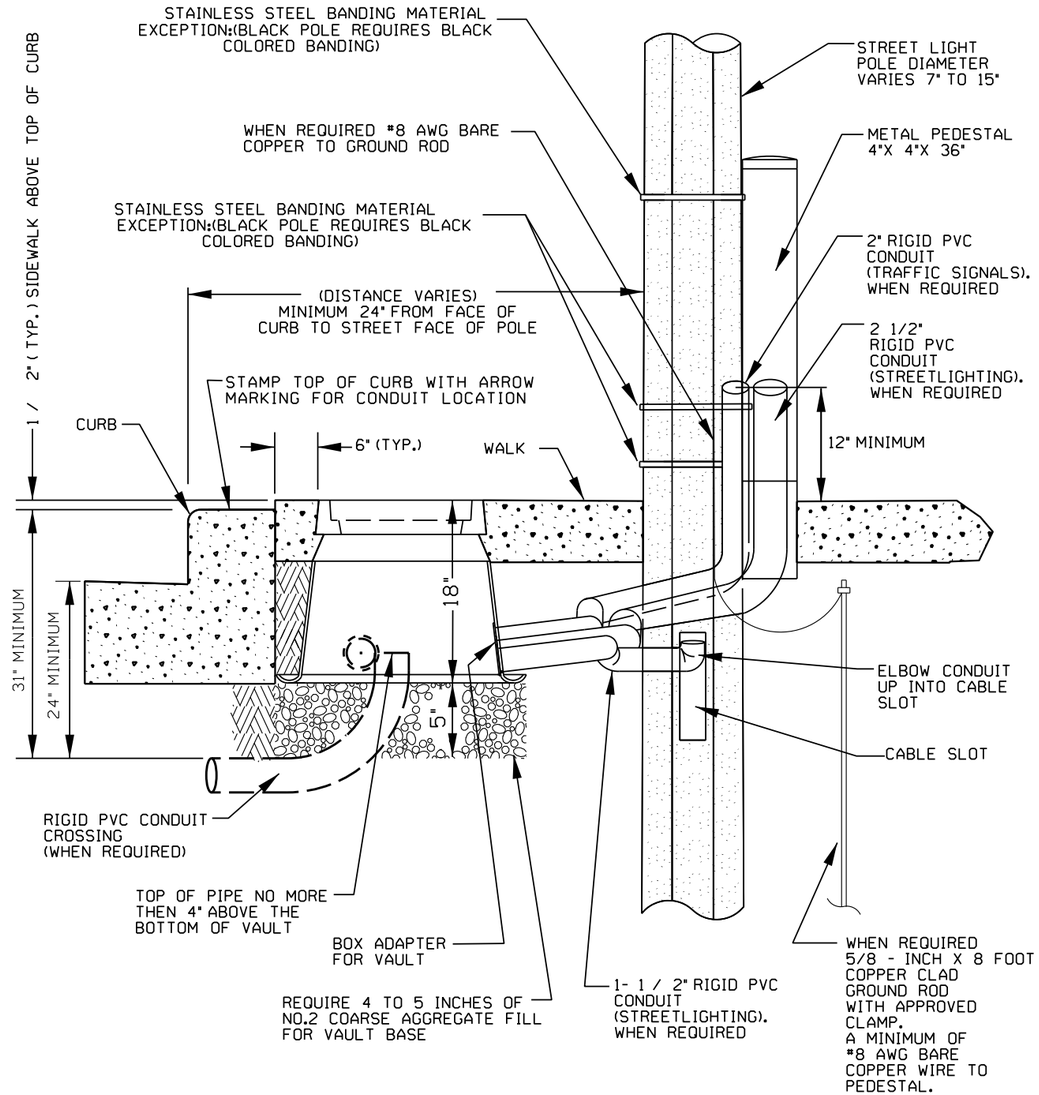


105 DETAIL

NOT TO SCALE

TYPICAL 30" X 36" BOX FORM AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL STANDARD

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

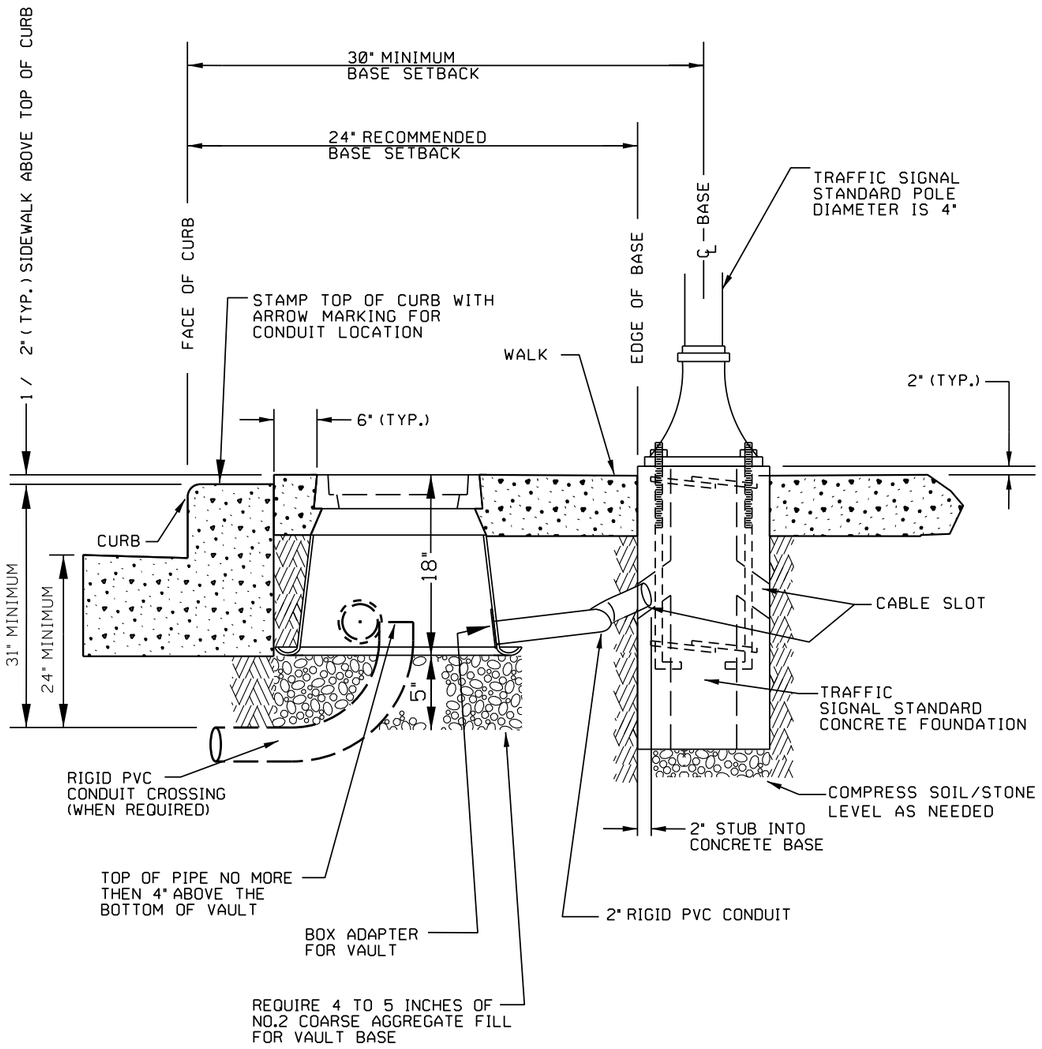


108 DETAIL

NOT TO SCALE

TYPICAL CONDUIT INSTALLATION FROM VAULT TO POLE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

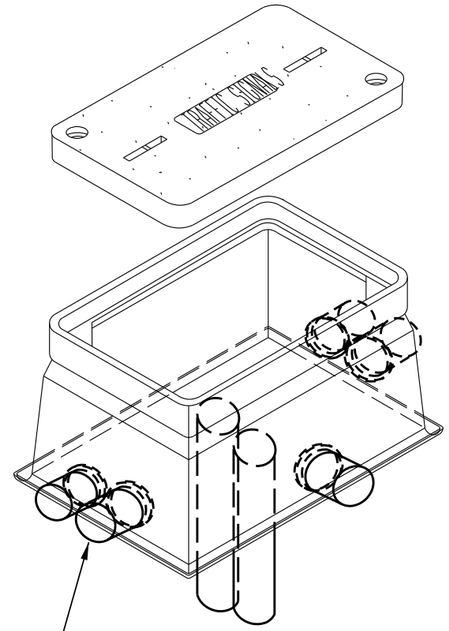


109 DETAIL — NOT TO SCALE

TYPICAL CONDUIT INSTALLATION FROM VAULT TO SIGNAL STANDARD AND TYPICAL BASE INSTALLATION

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM TRAFFIC & LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

2



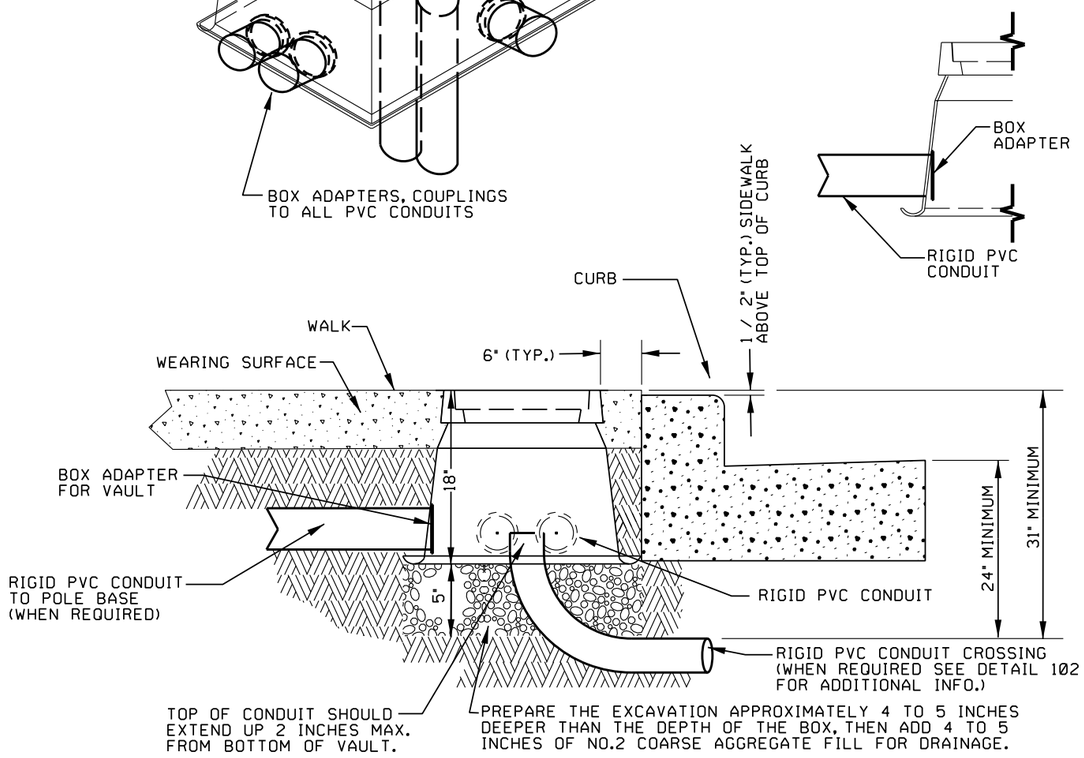
HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W / 2 BOLTS
COLOR: GRAY

ELECTRICAL VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY

(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL UNUSED CONDUITS IN THE ENCLOSURE

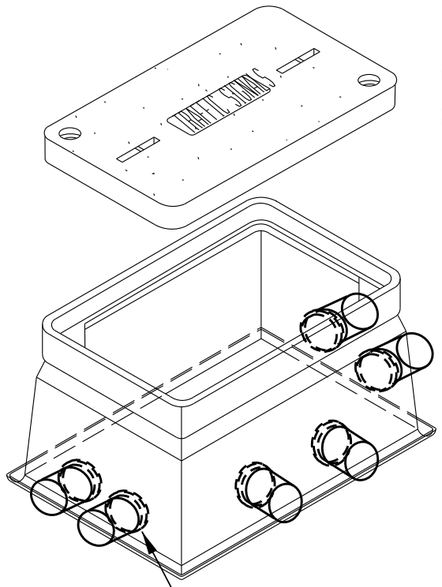
BOX ADAPTERS, COUPLINGS TO ALL PVC CONDUITS



112 DETAIL — NOT TO SCALE

TYPICAL VAULT INSTALLATION IN WALK

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



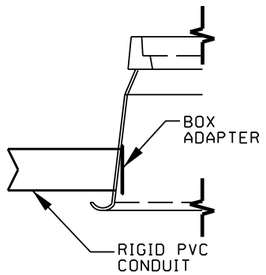
HEAVY DUTY COVER
W/ ELECTRIC LOGO
& W / 2 BOLTS
COLOR: GRAY

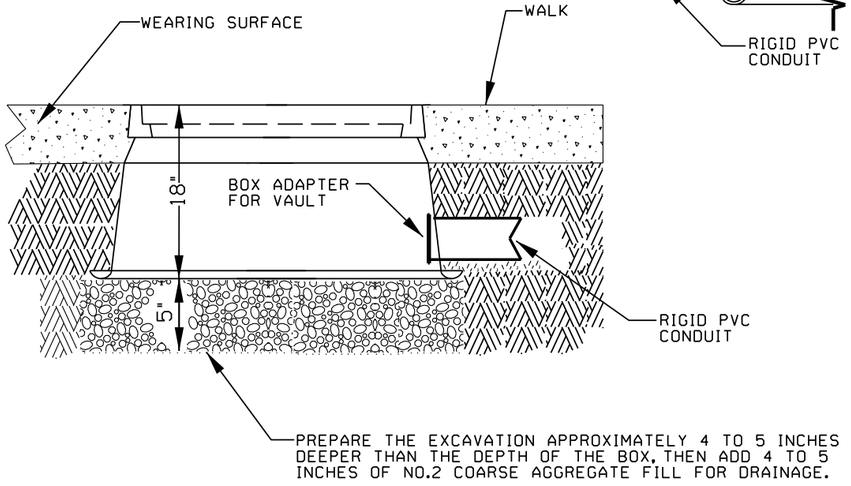
ELECTRICAL VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY

(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL PVC CONDUITS



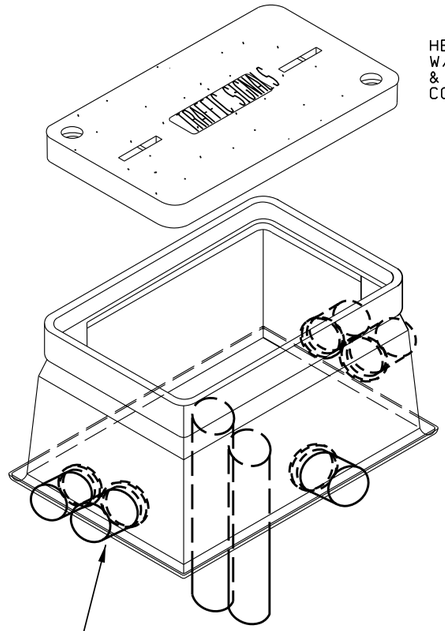


113 DETAIL — NOT TO SCALE

TYPICAL VAULT INSTALLATION IN SIDEWALK

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

2



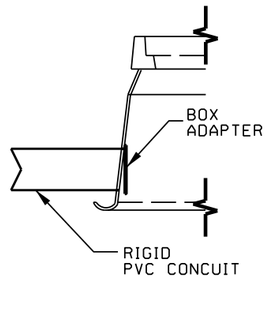
HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W / 2 BOLTS
COLOR: GRAY

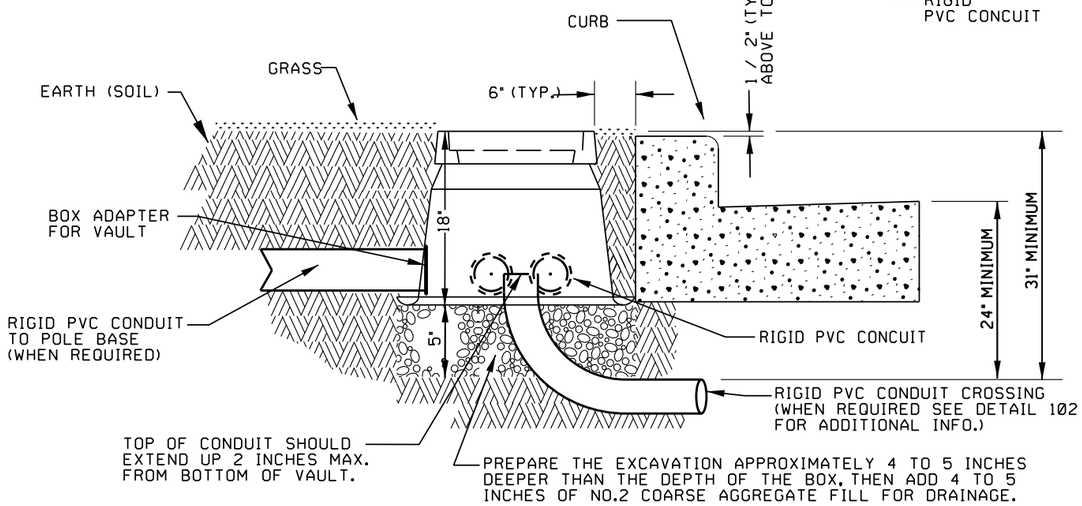
ELECTRICAL VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY

(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL P.V.C. CONDUITS





121 DETAIL — NOT TO SCALE

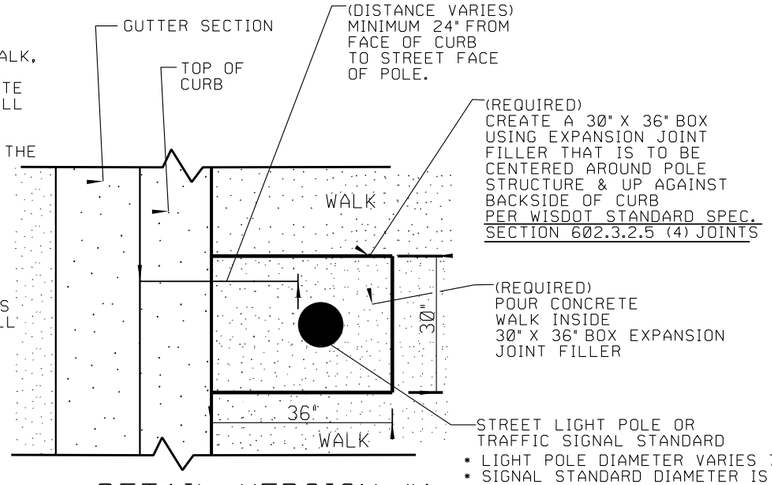
TYPICAL VAULT INSTALLATION IN GRASS AREA

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

2

THE CONTRACTOR IS REQUIRED TO INSTALL EXPANSION JOINT FILLER INTO THE CONCRETE WALK, WHICH SHALL BE 1/2" WIDE MINIMUM TO BE USED TO CREATE A SEPARATION BETWEEN A SMALL CONCRETE AREA AROUND THE TRAFFIC & STREET LIGHTING FACILITIES AND THE REST OF THE CONCRETE WALK.

THE BOX SIZE OF THE AREA CREATED USING THE EXPANSION JOINT FILLER IS STANDARD AROUND LIGHT POLES AND TRAFFIC SIGNALS, BUT WILL VARY WHEN PLACED AROUND TRAFFIC & LIGHTING CONTROL CABINETS.



122 DETAIL VERSION #1

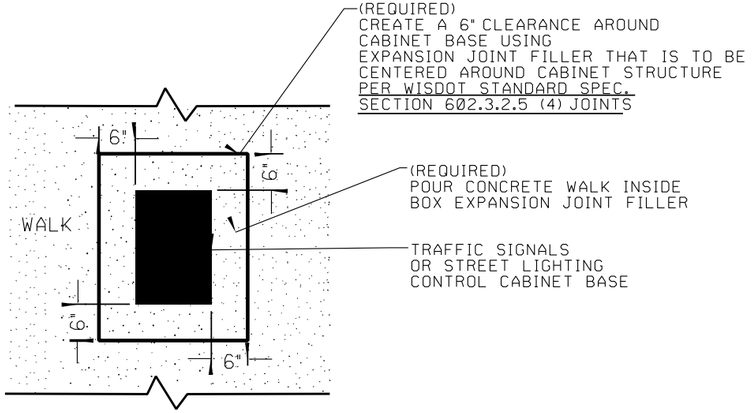
NOT TO SCALE

TYPICAL 30" X 36" BOX EXPANSION JOINT FILLER AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL STANDARD

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

THE CONTRACTOR IS REQUIRED TO INSTALL EXPANSION JOINT FILLER INTO THE CONCRETE WALK, WHICH SHALL BE 1/2" WIDE MINIMUM TO BE USED TO CREATE A SEPARATION BETWEEN A SMALL CONCRETE AREA AROUND THE TRAFFIC & STREET LIGHTING FACILITIES AND THE REST OF THE CONCRETE WALK.

THE BOX SIZE OF THE AREA CREATED USING THE EXPANSION JOINT FILLER IS STANDARD AROUND LIGHT POLES AND TRAFFIC SIGNALS, BUT WILL VARY WHEN PLACED AROUND TRAFFIC & LIGHTING CONTROL CABINETS.

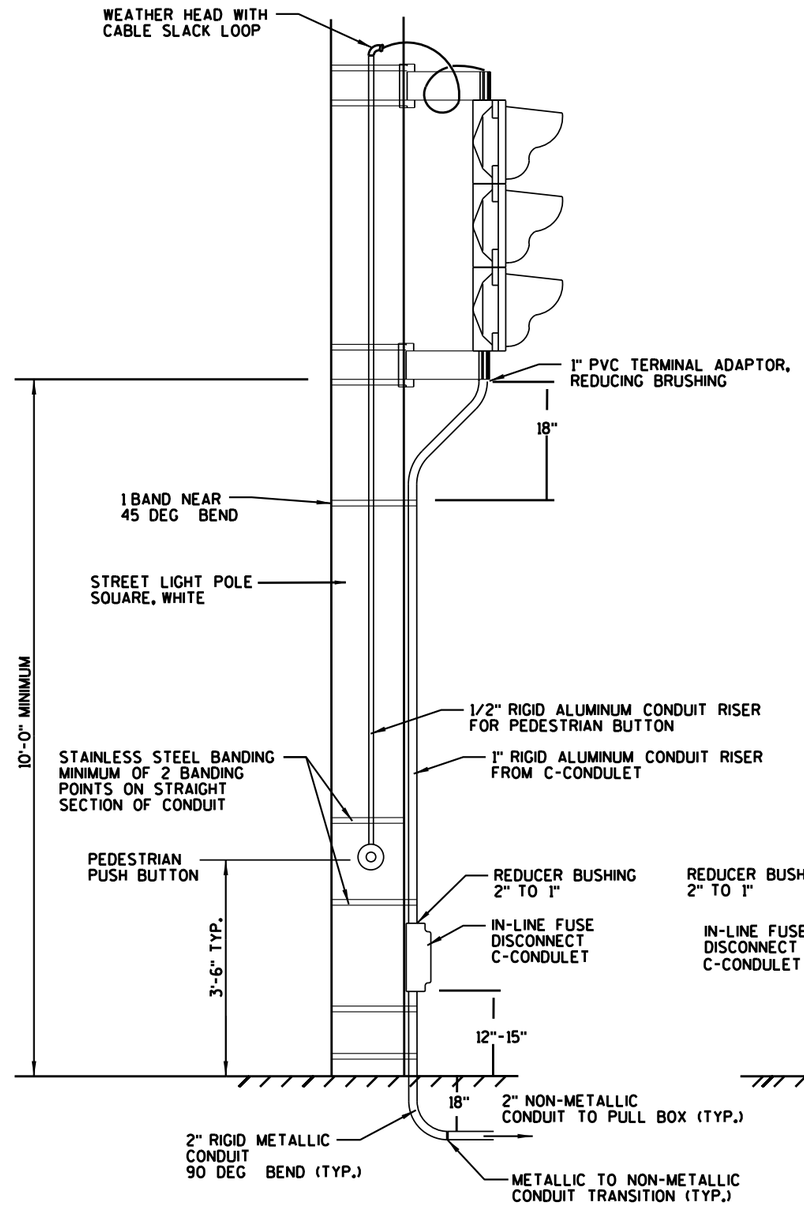


122 DETAIL VERSION #2

NOT TO SCALE

TYPICAL BOX EXPANSION JOINT FILLER AROUND TRAFFIC SIGNAL OR STREET LIGHTING CONTROL CABINET

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



OPTION 1 OPTION 2

ELECTRICAL RISER

NTS

SHEET 7 OF 12

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONSTRUCTION DETAILS	SHEET 261	E

2

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER. CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

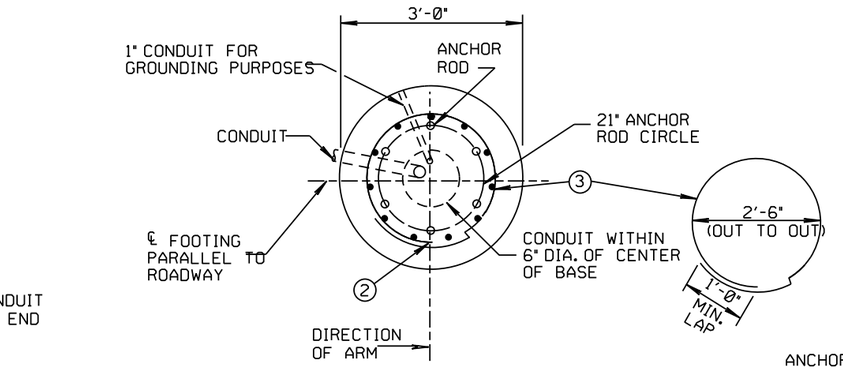
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

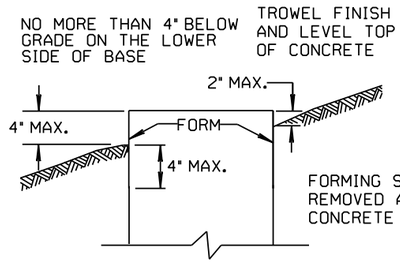
(2) (11) NO. 8 X 16'-1" BAR STEEL REINFORCEMENT.

(3) (17) NO. 4 X 9'-0" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

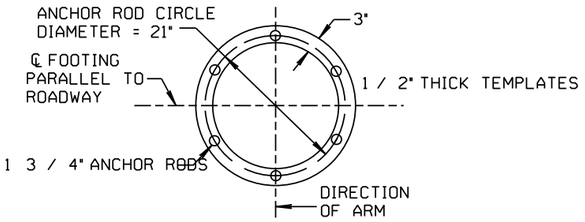
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



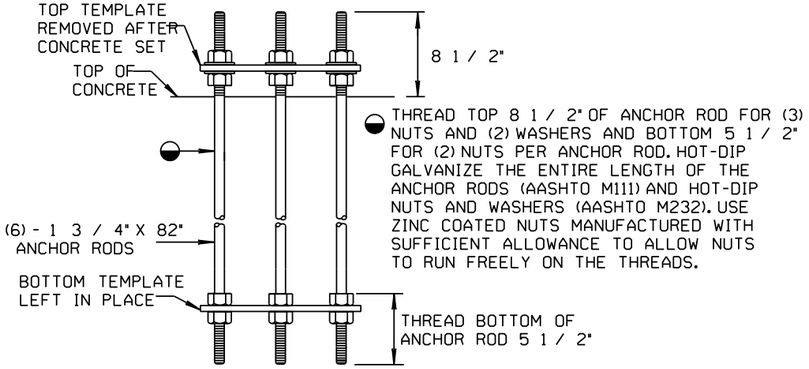
CONCRETE BASE TYPE 10 SPECIAL



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10 SPECIAL

ANCHOR ASSEMBLY

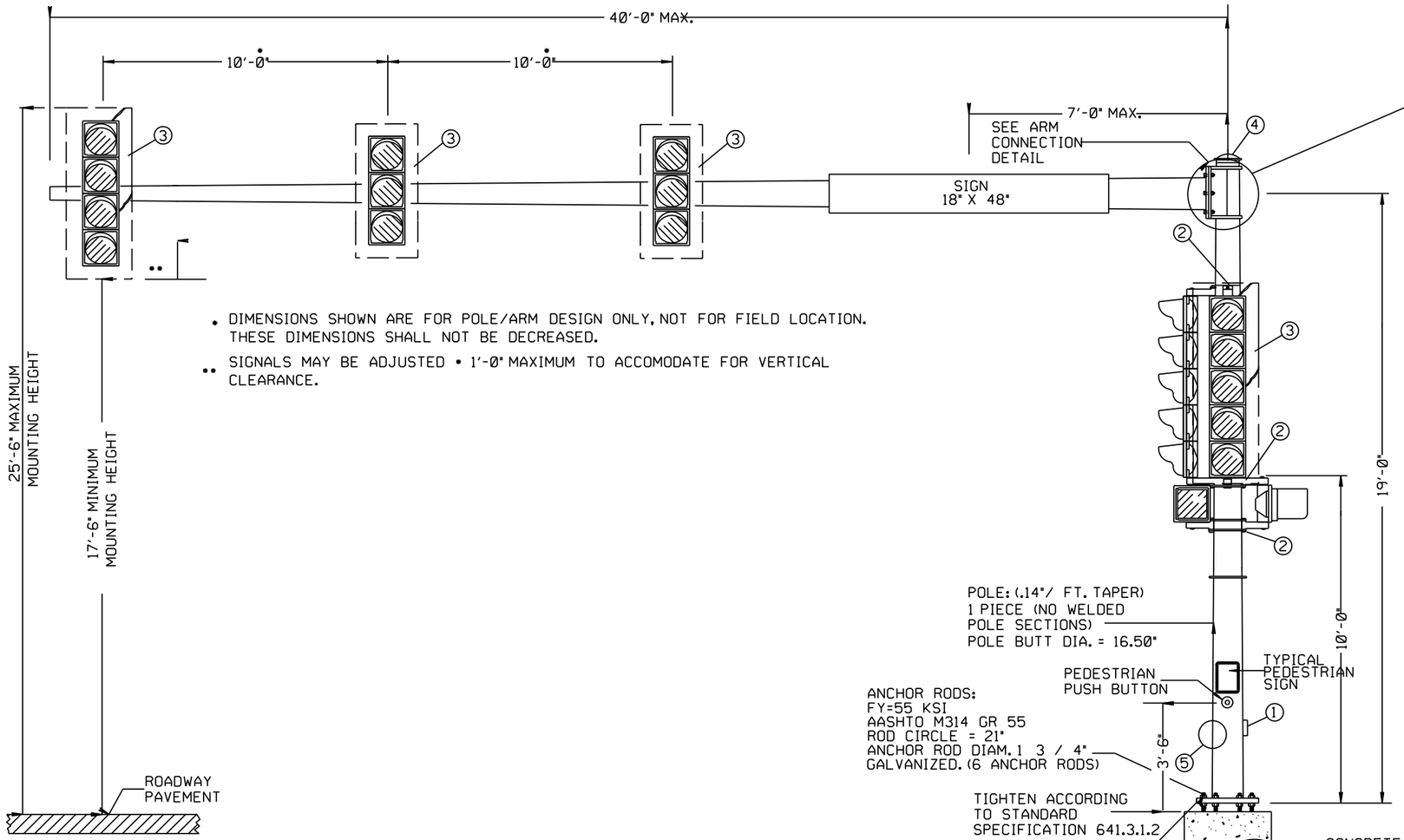
QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	4.32
LBS. OF HOOP BAR STEEL	103
LBS. OF VERTICAL BAR STEEL	473

CONCRETE BASE TYPE 10 SPECIAL

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

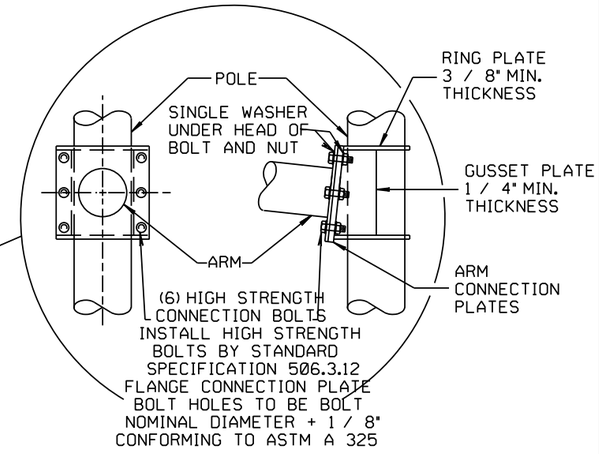
REVISED: DECEMBER 2014 (DATE) — 2013 AASHTO (REVISION)

2

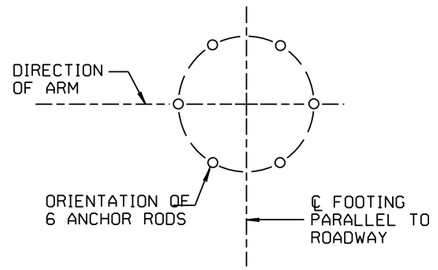


• DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

•• SIGNALS MAY BE ADJUSTED • 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 12 POLE SPECIAL
35'- 40' MONOTUBE ARM

SHEET 9 OF 12

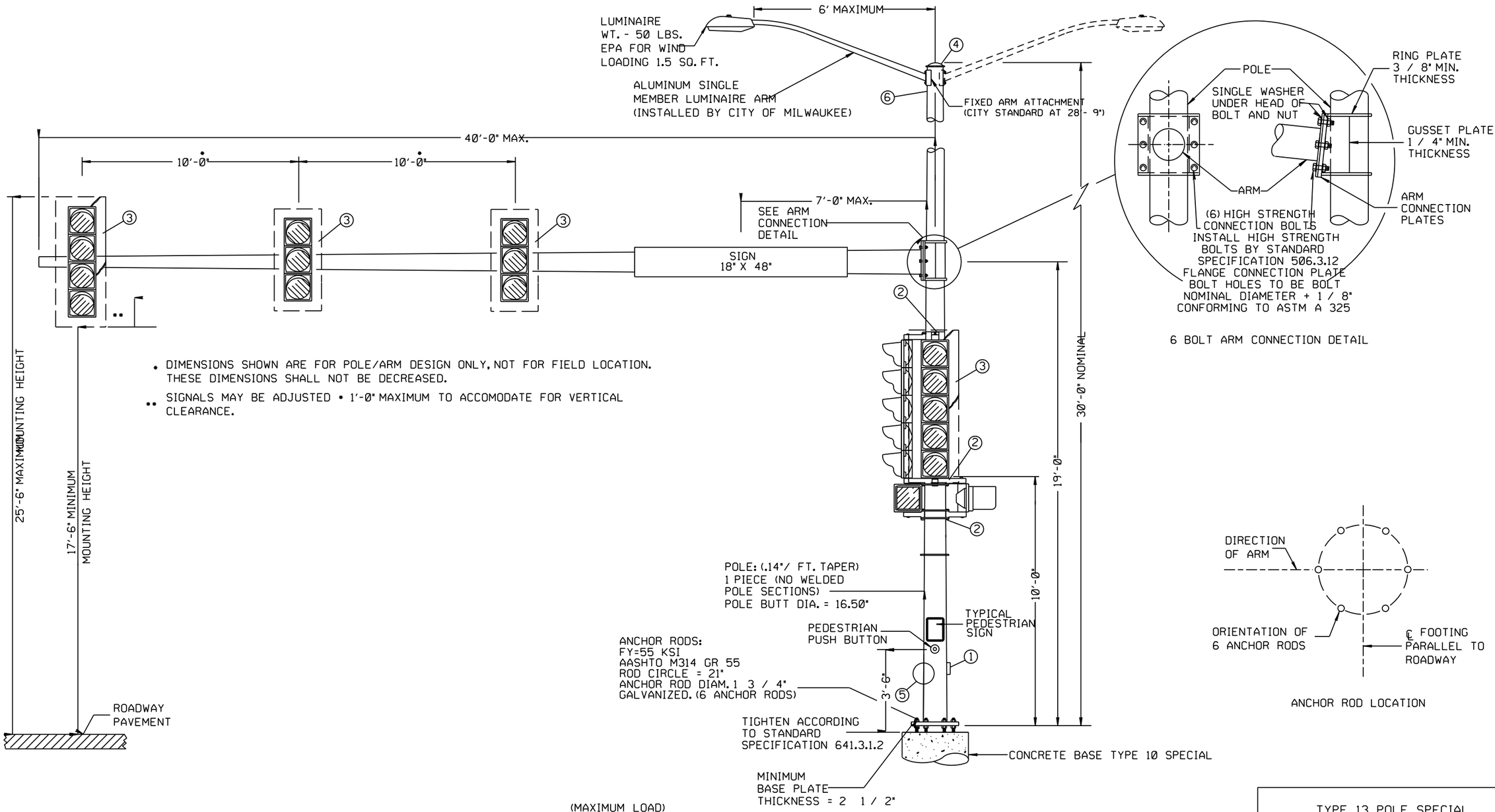
TYPE 12 POLE SPECIAL
35'- 40' MONOTUBE ARM

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

REVISED: DECEMBER 2014 (DATE) 2013 AASHTO (REVISION)

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONSTRUCTION DETAILS	SHEET 263	E

2



• DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

•• SIGNALS MAY BE ADJUSTED • 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

6 BOLT ARM CONNECTION DETAIL

ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 13 POLE SPECIAL
35'- 40' MONOTUBE ARM

TYPE 13 POLE SPECIAL
35'- 40' MONOTUBE ARM

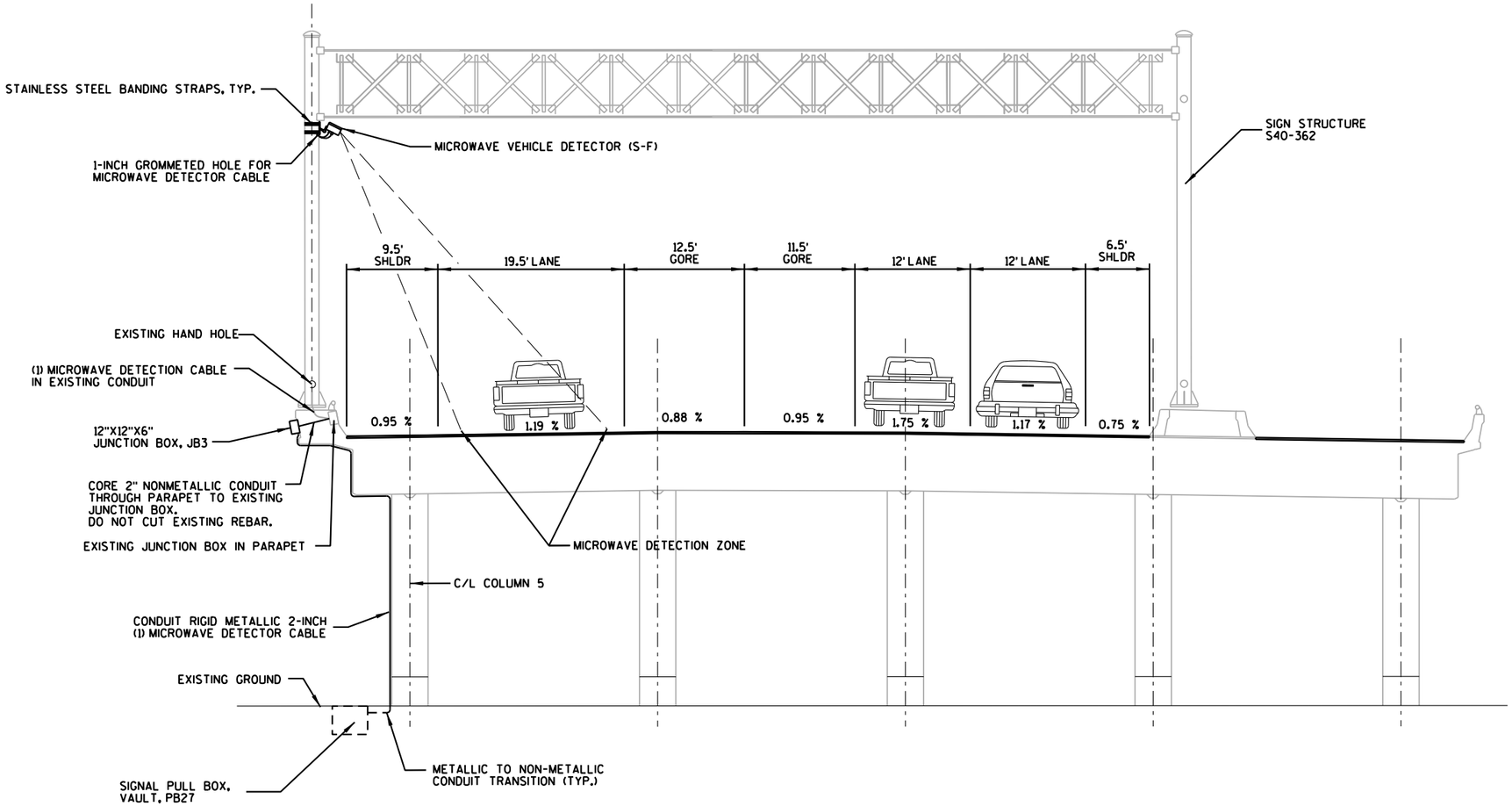
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

REVISED: DECEMBER 2014 (DATE) — 2013 AASHTO (REVISION)

SHEET 10 OF 12

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONSTRUCTION DETAILS	SHEET 264 E

2

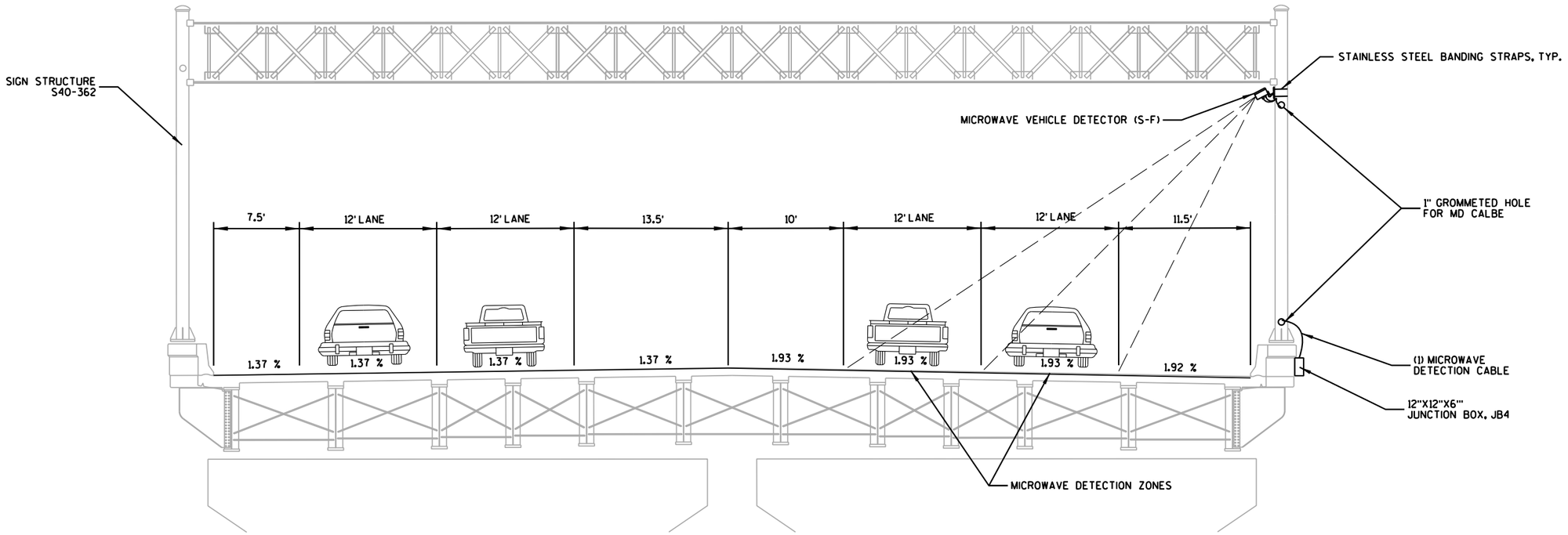


INSTALL S-F MICROWAVE DETECTOR S40-362

ON STRUCTURE B-10-4003C PIER 2

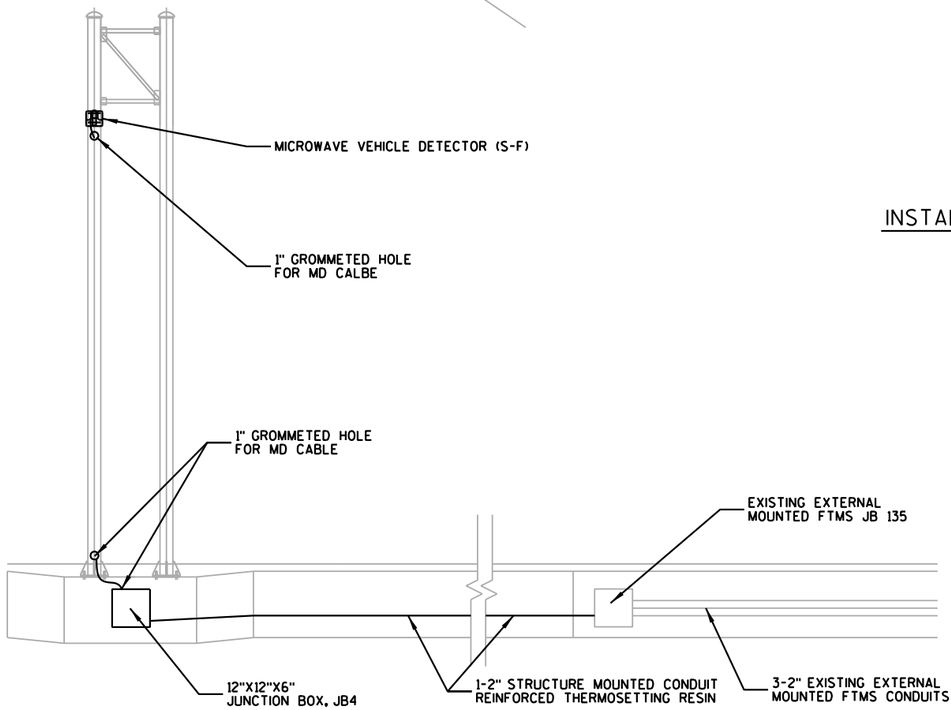
(LOOKING EAST) - NTS

2



INSTALL S-F MICROWAVE DETECTOR S40-850

(LOOKING NORTH) - NTS



PARAPET SIDE VIEW

2

LEGEND

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

LOOP DETECTOR IN 1" NONMETALLIC CONDUIT

VAULT, 17" X 30" X 18"

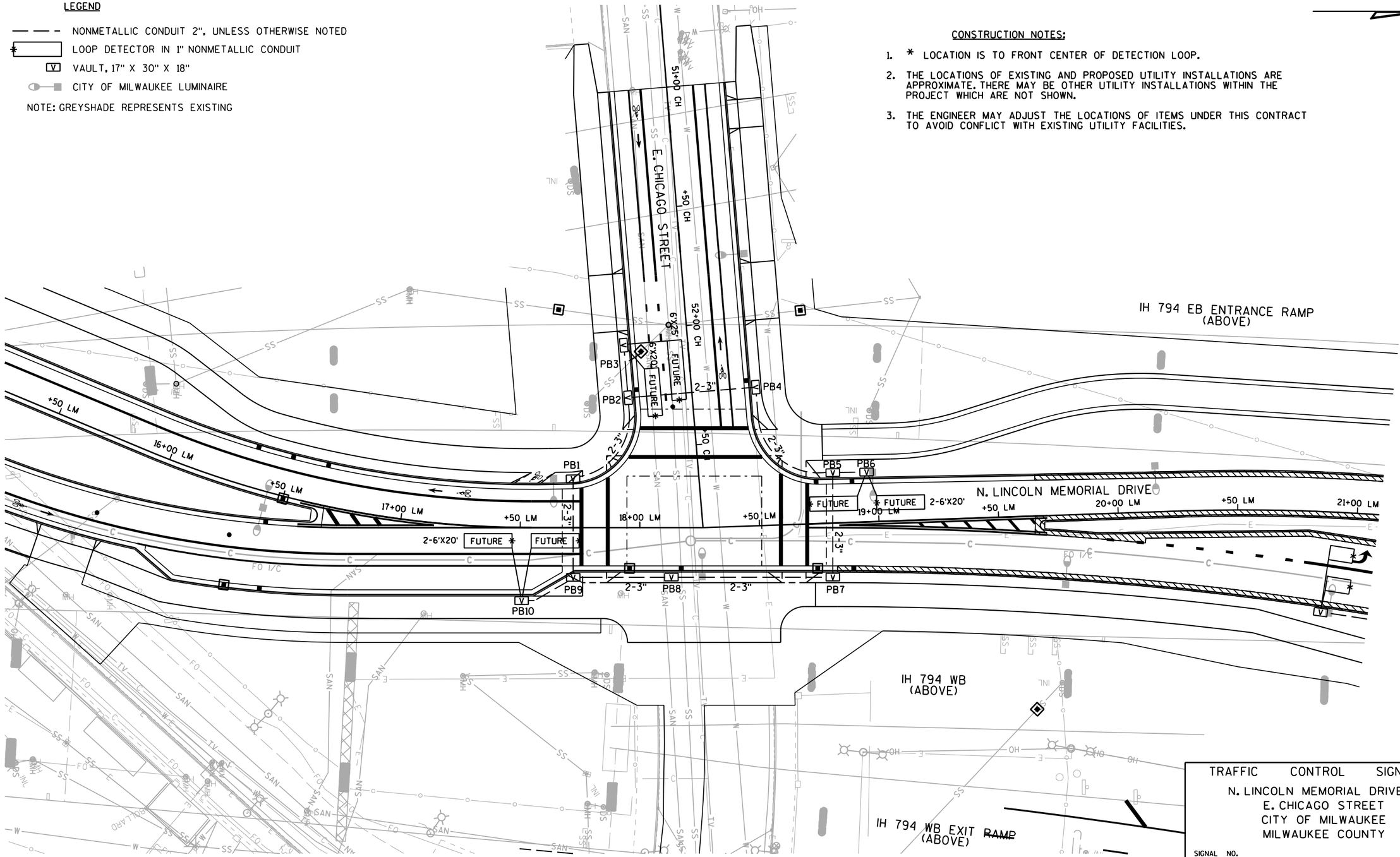
CITY OF MILWAUKEE LUMINAIRE

NOTE: GREYSHADE REPRESENTS EXISTING

N

CONSTRUCTION NOTES;

1. * LOCATION IS TO FRONT CENTER OF DETECTION LOOP.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.



TRAFFIC CONTROL SIGNAL

N. LINCOLN MEMORIAL DRIVE &
E. CHICAGO STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CONDUIT LAYOUT PLAN	SHEET 267 E

FILE NAME : 024001_sp.dgn PLOT DATE : 7/30/2015 PLOT BY : 1494 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

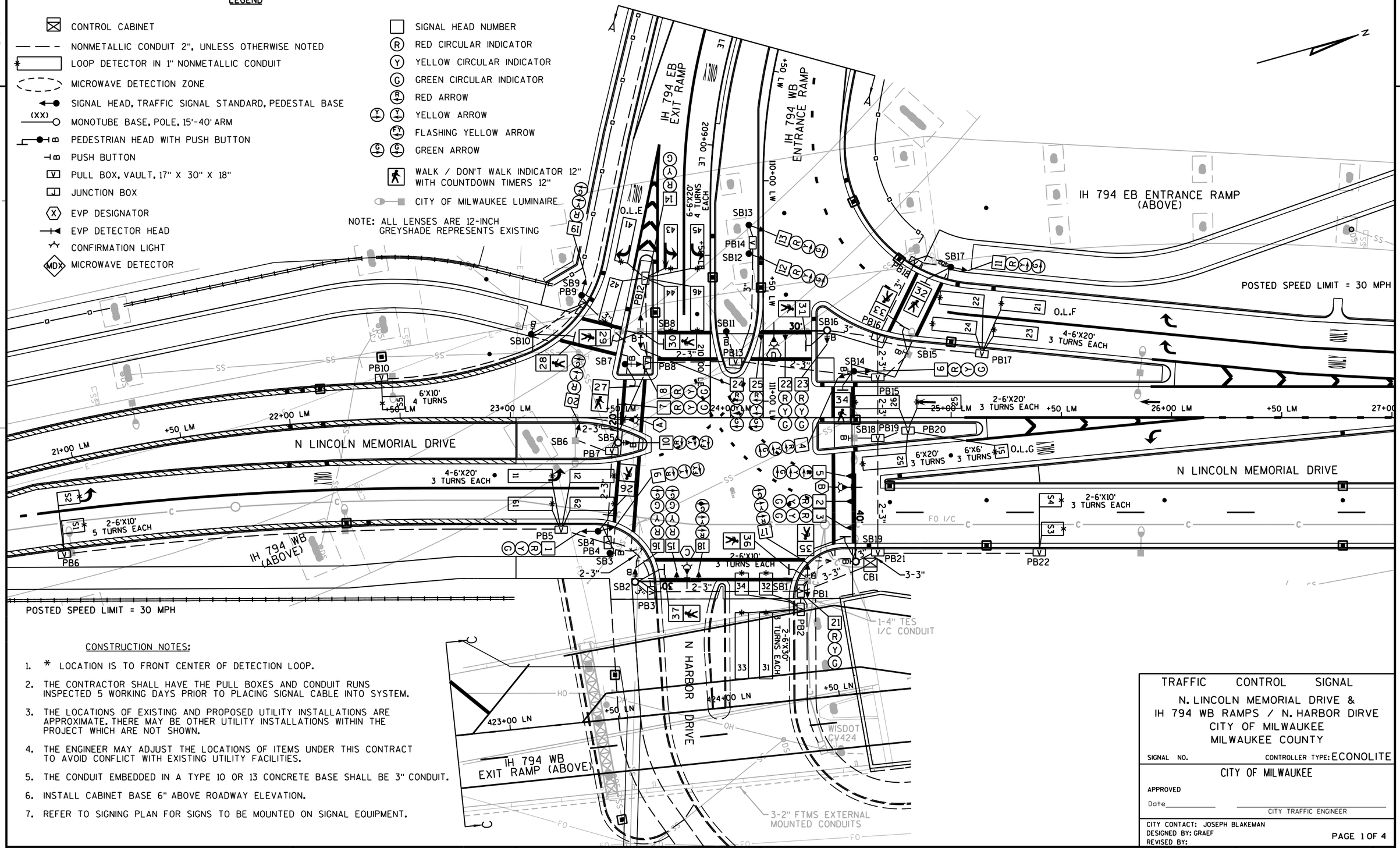
2

2

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- MICROWAVE DETECTION ZONE
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-40' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- PULL BOX, VAULT, 17" X 30" X 18"
- JUNCTION BOX
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT
- MICROWAVE DETECTOR
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- FLASHING YELLOW ARROW
- GREEN ARROW
- WALK / DON'T WALK INDICATOR 12" WITH COUNTDOWN TIMERS 12"
- CITY OF MILWAUKEE LUMINAIRE

NOTE: ALL LENSES ARE 12-INCH
GREYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTION LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. THE CONDUIT EMBEDDED IN A TYPE 10 OR 13 CONCRETE BASE SHALL BE 3" CONDUIT.
6. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
7. REFER TO SIGNING PLAN FOR SIGNS TO BE MOUNTED ON SIGNAL EQUIPMENT.

TRAFFIC CONTROL SIGNAL

N. LINCOLN MEMORIAL DRIVE &
IH 794 WB RAMPS / N. HARBOR DIRVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. CONTROLLER TYPE: ECONOLITE

CITY OF MILWAUKEE

APPROVED

Date _____ CITY TRAFFIC ENGINEER

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 4

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 268	E

FILE NAME : 024021_sp.dgn PLOT DATE : 7/30/2015 PLOT BY : 1494 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

2

N

IH 794 WB (ABOVE)

IH 794 WB ENTRANCE RAMP

IH 794 EB EXIT RAMP

IH 794 EB (ABOVE)

N. VAN BUREN STREET

W. ST PAUL AVENUE

JACKSON STREET

+50 LW

101+00 LW

108+00 LW

109+00 LW

204+00 LE

203+00 LE

205+00 LE

206+00 LE

207+00 LE

208+00 LE

198+00 LE

199+00 LE

200+00 LE

201+00 LE

202+00 LE

+50 LE

JB1

JB2

JB3

PB11

PB23

PB24

PB25

PB26

PB27

SEE STRUCTURE PLANS FOR JUNCTION BOX DETAIL

2-6"X18" S TURNS EACH

MATCH EXISTING 2" CONDUIT IN RETAINING WALL PARAPET

INSTALL STATE FURNISHED MICROWAVE DETECTOR (MD) ON SIGN BRIDGE SUPPORT S-40-362 SEE DETAIL

2" RIGID METALLIC CONDUIT UP COLUMN TO JB3 ON OUTSIDE OF BRIDGE PARAPET. SEE DETAIL.

TRAFFIC CONTROL SIGNAL

N. LINCOLN MEMORIAL DRIVE &
IH 794 WB RAMPS / N. HARBOR DIRVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

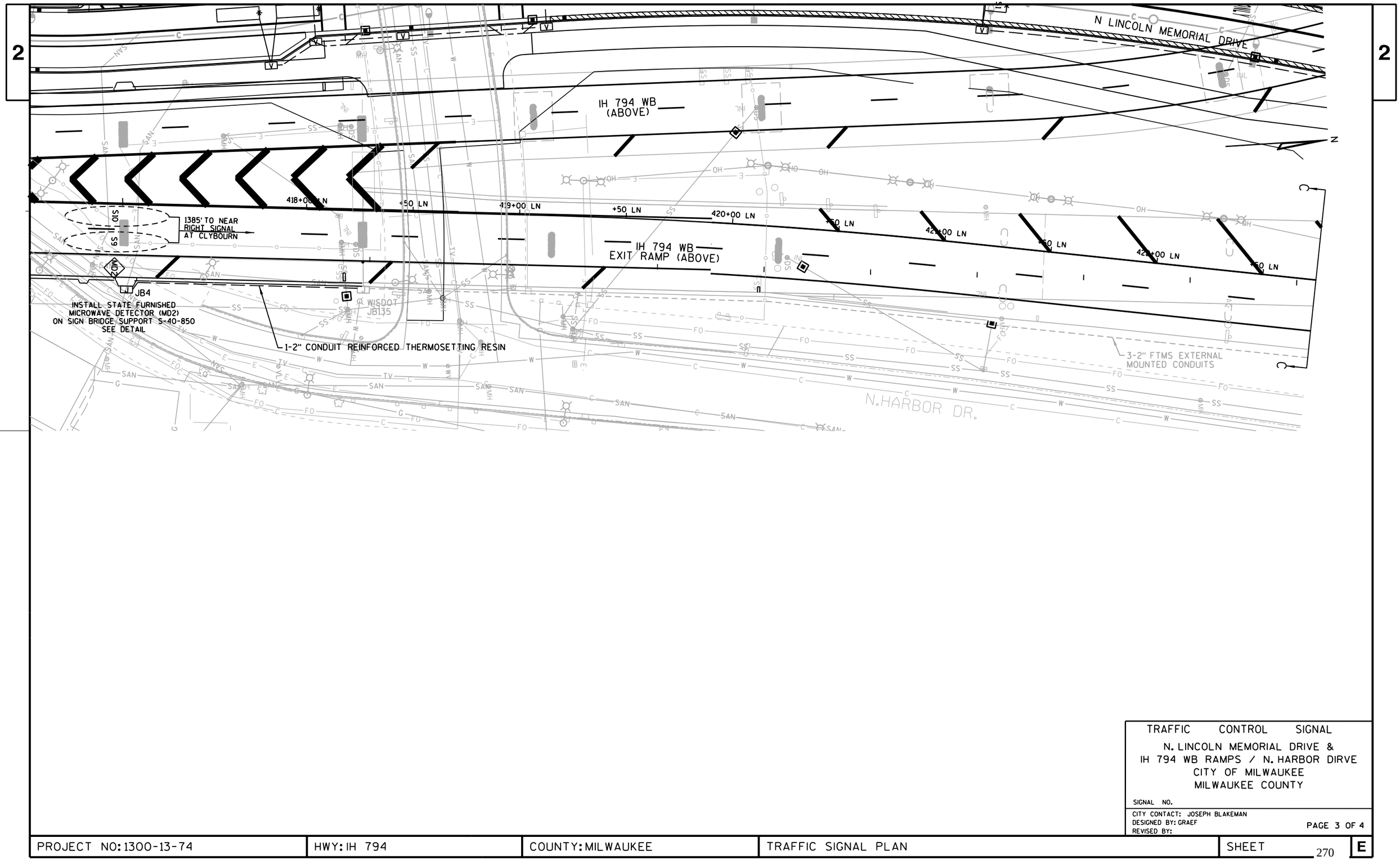
CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 269	E

FILE NAME : 024021A_sp.dgn PLOT DATE : 7/29/2015 PLOT BY : 1494 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42



TRAFFIC CONTROL SIGNAL

N. LINCOLN MEMORIAL DRIVE &
IH 794 WB RAMPS / N. HARBOR DIRVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

PAGE 3 OF 4

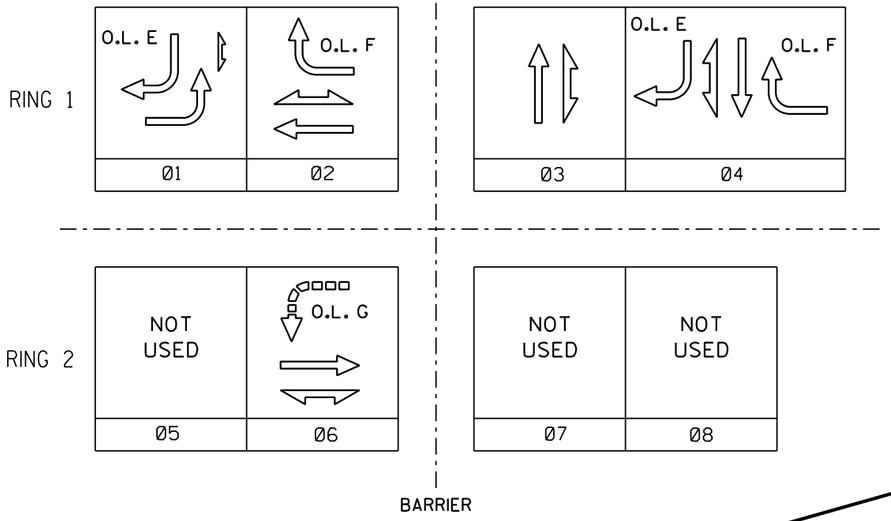
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 270	E

FILE NAME : 024021C_sp.dgn PLOT DATE : 7/28/2015 PLOT BY : 1494 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4,5	R
Ø2	6,7,8	R
Ø3	21,22,23,24,25	A
Ø4	14,15,16,17,18	A
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8		
Ø1P	32,33	
Ø2P	28,29,30,31	
Ø3P	32,33,34,35	
Ø4P	26,27	
Ø6P	36,37	
OLE	19,20	R
OLF	11,12,13	R
OLG	9,10	R
OLH		

A= R, R



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		x
2	X	6	MIN	x
3				x
4				x
5				
6	X	2	MIN	x
7				
8				

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	x
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	x
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM *:	SS- -

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	x
GTT	x
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE CITY LIGHTING CABINET	x

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	11, 12	23, 24	31, 32	41, 42	45, 46	61, 62	S2	S4
CALLED PHASE	1	2	3	4	4	6		
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR *(S)	S6	*S8	*S10					
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)	21, 22	25, 26	33, 34	43, 44	51, 52	S1	S3	S5
CALLED PHASE	2	2	3	4	6			
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR *(S)	S7	*S9						
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

*=MICROWAVE DETECTION

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT	←	↱	↓	↑
PHASE	2	1+6	4	3

AFTER PREEMPTION SEQUENCE 2 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASES 4.

AFTER PREEMPTION SEQUENCE 3, CONTROLLER SHALL RETURN TO PHASES 3.

N. LINCOLN MEMORIAL DRIVE &
IH 794 RAMPS / N. HARBOR DRIVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. | CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 7/15 | PAGE NO. 4 OF 4

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET 271	E

PROJECT ID:	1300-14-74
INTERSECTION:	N. LINCOLN MEMORIAL DRIVE & IH 794 RAMPS

SIGNAL WIRE COLOR CODING	BLK-BLACK WHT-WHITE	RED-RED BLU-BLUE	GRN-GREEN ORG-ORANGE

CB1 TO	NO. OF 14 AWG CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON
SB1	12	17				RED	ORG	GRN				
		21	RED/BLK	ORG/BLK	GRN/BLK							
		36								BLK	BLU	
		B										WHT/BLK
SB2	15	15	RED	ORG	GRN			GRN				
		16	RED/BLK	ORG/BLK	GRN/BLK			GRN/BLK				
		18				RED/WHT	BLU/WHT	GRN/WHT				
		37								BLK	BLU	
		B										WHT/BLK
SB3	7	B										WHT/BLK
SB4	12	1	RED	ORG	GRN							
		9				RED/BLK	ORG/BLK		BLK/WHT			
		26								BLK	BLU	
SB5	12	7	RED	ORG	GRN							
		10				RED/BLK	ORG/BLK		BLK/WHT			
		B										WHT/BLK
SB6	7	20	RED				ORG	GRN				
SB7	12	8	RED	ORG	GRN							
		27								BLK	BLU	
		B										WHT/BLK
SB8	15	14	RED	ORG	GRN							
		24				RED/BLK	ORG/BLK	GRN/BLK				
		29								BLK/WHT	BLU/BLK	
		30								BLK	BLU	
		B										WHT/BLK
SB9	7	19	RED				ORG	GRN				
SB10	7	28								BLK	BLU	
		B										WHT/BLK
SB11	7	B										WHT/BLK
SB12	7	12	RED				ORG	GRN				
SB13	7	13	RED				ORG	GRN				
SB14	12	4				RED	ORG	GRN				
		6	RED/BLK	ORG/BLK	GRN/BLK							
		34								BLK	BLU	
		B										WHT/BLK
SB15	7	33								BLK	BLU	
		B										WHT/BLK
SB16	15	22	RED	ORG	GRN							
		23	RED/BLK	ORG/BLK	GRN/BLK							
		25				RED/WHT	BLU/WHT	GRN/WHT				
		31								BLK	BLU	
		B										WHT/BLK
SB17	12	11	RED	ORG	GRN							
		32								BLK	BLU	
		B										WHT/BLK
SB18	7	B										WHT/BLK
SB19	15	2	RED	ORG	GRN							
		3	RED/BLK	ORG/BLK	GRN/BLK							
		5				RED/WHT	BLU/WHT	GRN/WHT				
		35								BLK	BLU	
		B										WHT/BLK

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	SB16
SB16	SB17
SB17	SB18
SB18	SB19
SB19	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A(SB5)
CB1	HEAD B(SB19)
CB1	HEAD C(SB2)
CB1	HEAD D(SB16)

MICROWAVE DETECTION CABLE	
FROM	TO
CB1	MD1
CB1	MD2

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

TRAFFIC CONTROL SIGNAL

N. LINCOLN MEMORIAL DRIVE &
IH 794 WB RAMPS / N. HARBOR DIRVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 1

2

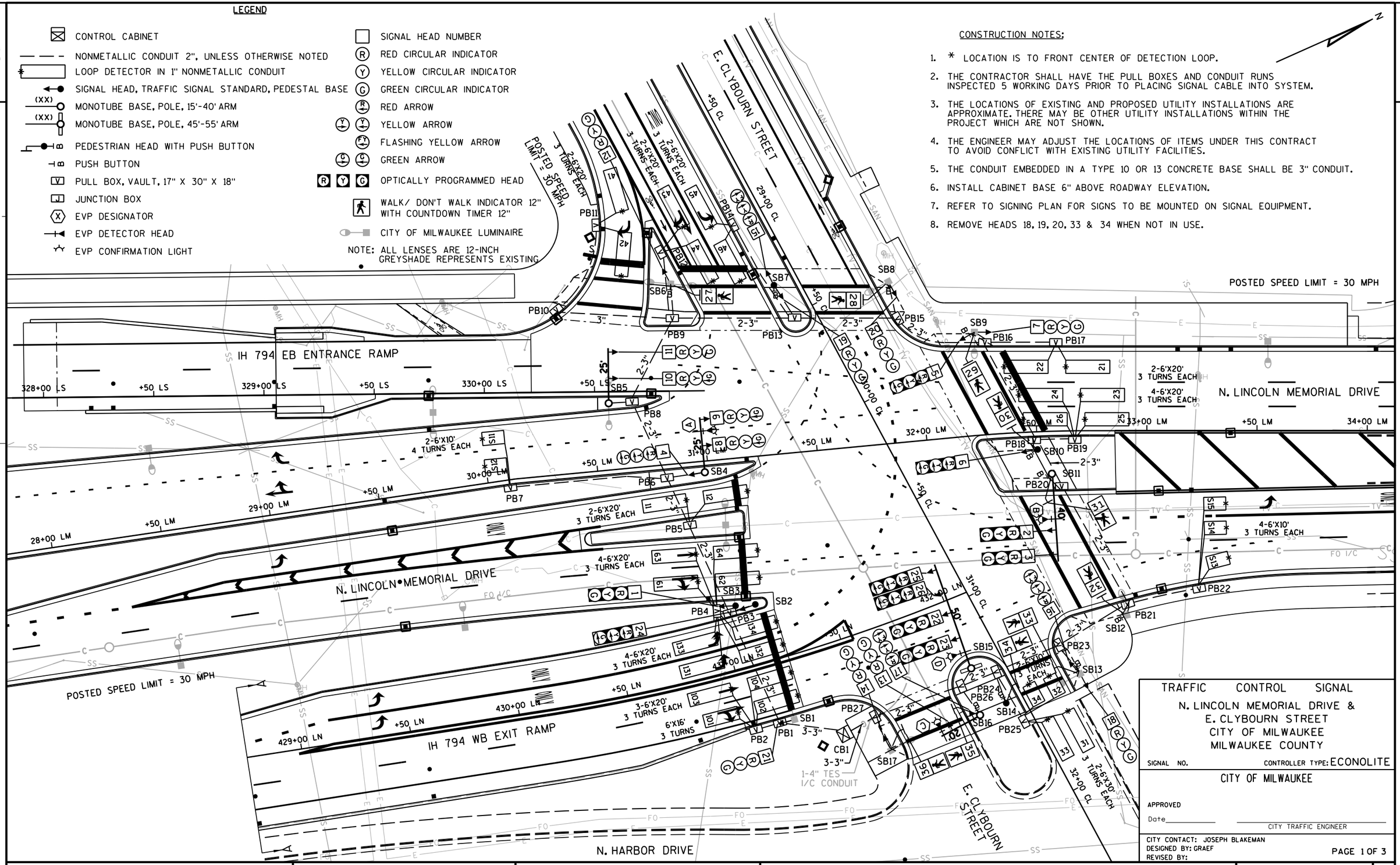
LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-40' ARM
- (XX) MONOTUBE BASE, POLE, 45'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- PULL BOX, VAULT, 17" X 30" X 18"
- JUNCTION BOX
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- EVP CONFIRMATION LIGHT
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- FLASHING YELLOW ARROW
- GREEN ARROW
- OPTICALLY PROGRAMMED HEAD
- WALK/ DON'T WALK INDICATOR 12" WITH COUNTDOWN TIMER 12"
- CITY OF MILWAUKEE LUMINAIRE

NOTE: ALL LENSES ARE 12-INCH GREYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTION LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. THE CONDUIT EMBEDDED IN A TYPE 10 OR 13 CONCRETE BASE SHALL BE 3" CONDUIT.
6. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
7. REFER TO SIGNING PLAN FOR SIGNS TO BE MOUNTED ON SIGNAL EQUIPMENT.
8. REMOVE HEADS 18, 19, 20, 33 & 34 WHEN NOT IN USE.



TRAFFIC CONTROL SIGNAL

N. LINCOLN MEMORIAL DRIVE & E. CLYBOURN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. CONTROLLER TYPE: ECONOLITE

CITY OF MILWAUKEE

APPROVED

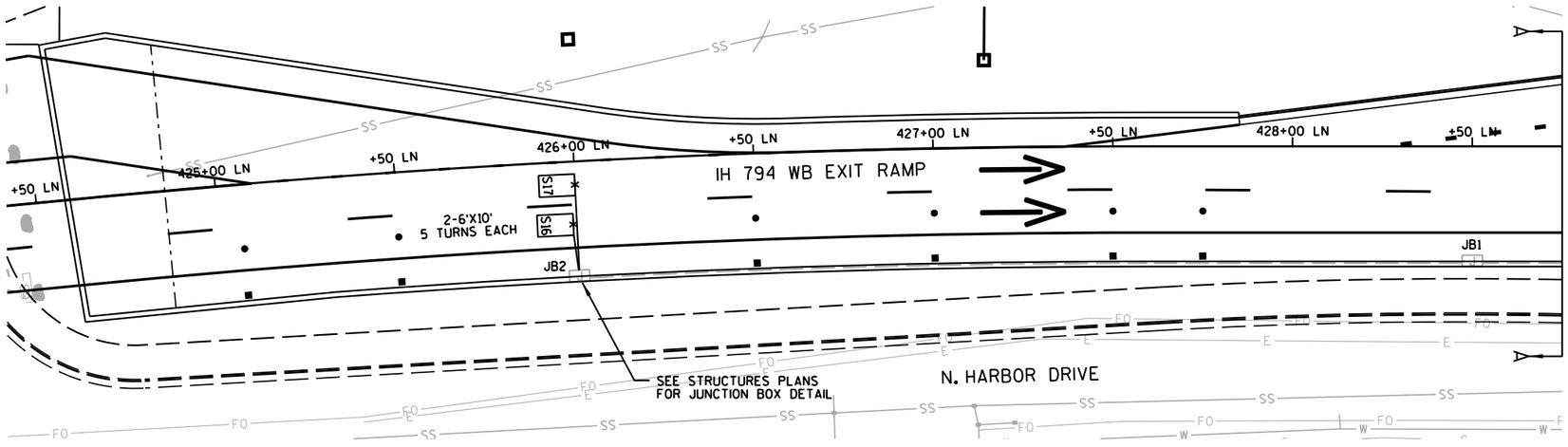
Date _____ CITY TRAFFIC ENGINEER

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 273	E

2



TRAFFIC CONTROL SIGNAL

N. LINCOLN MEMORIAL DRIVE &
E. CLYBOURN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

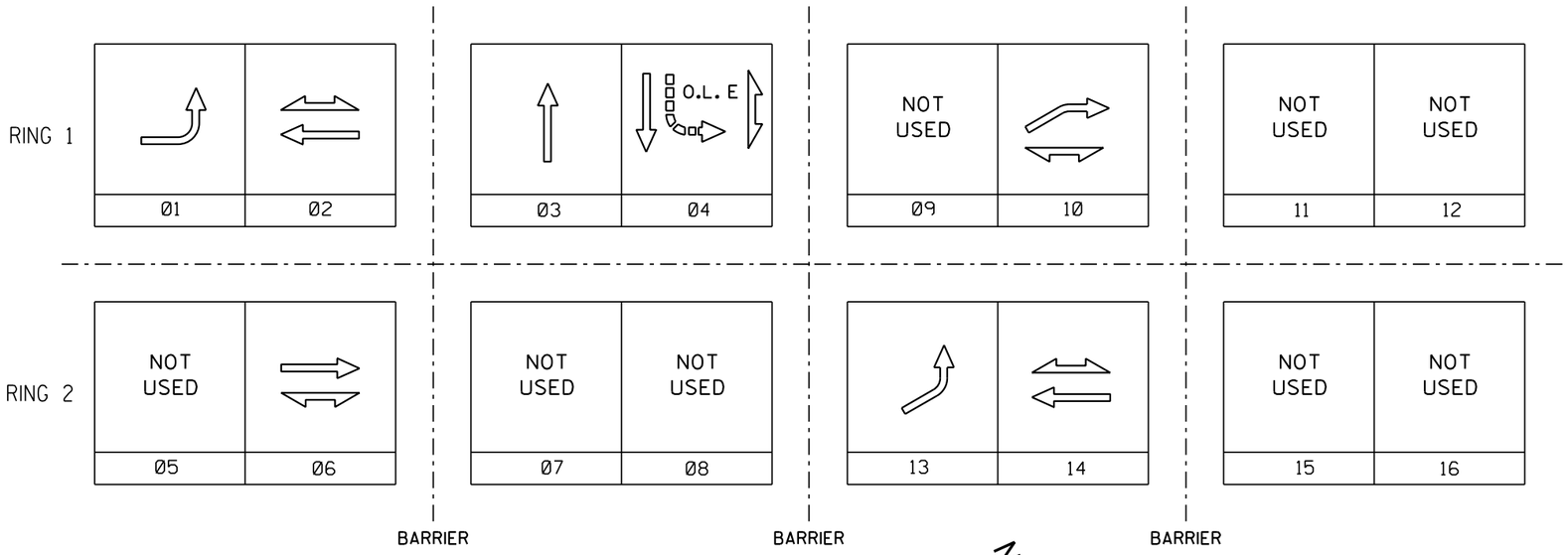
CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 274	E

	HEAD NUMBERS	FLASH
Ø1	4,5,6	R
Ø2	7,8,9,10,11	R
Ø3	18,19,20	R
Ø4	12,13,14,15,16,17	A
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8		
Ø9		
10	21,22,23	R
11		
12		
13	24,25,26	R
14	7,8,9,10,11	R
15		
16		
02P	27,28	
04P	29,30,31,32	
06P	33,34,35,36	
10P	33,34,35,36	
OLE	15,16,17	-

A = R, R



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3				X
4		8		X
5				
6	X	2	MIN	X
7				
8				
9				
10	X	14	MIN	X
11				
12				
13		10		X
14	X	10	MIN	X
15				
16				

N

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11,12	23,24	25,26	33,34	43,44	61,62	101,102	131,132
CALLED PHASE	1	2&14	2&14	3	4	6	10	13
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	19	17	23	21	27	25	31	29	DETECTOR INPUT
PLAN LOOP DETECTOR #(S)	S11	S13	S15	S17					PLAN LOOP DETECTOR #(S)
CALLED PHASE									CALLED PHASE
CALL OPTION									CALL OPTION
DELAY TIME									DELAY TIME
EXTEND OPTION									EXTEND OPTION
EXTEND TIME									EXTEND TIME
USE ADDED INITIAL									USE ADDED INITIAL
CROSS SWITCH PHASE									CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21,22	24,25	31,32	41,42	45,46	63,64	103,104	133,134
CALLED PHASE	2&14	2&14	3	4	4	6	10	13
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30	DETECTOR INPUT
PLAN LOOP DETECTOR #(S)	S12	S14	S16						PLAN LOOP DETECTOR #(S)
CALLED PHASE									CALLED PHASE
CALL OPTION									CALL OPTION
DELAY TIME									DELAY TIME
EXTEND OPTION									EXTEND OPTION
EXTEND TIME									EXTEND TIME
USE ADDED INITIAL									USE ADDED INITIAL
CROSS SWITCH PHASE									CROSS SWITCH PHASE

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	X
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	X
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE CITY LIGHTING CABINET	X

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT	←	↗	↓	↱
PHASE	2 OR 14	1+6	4	10+13

AFTER PREEMPTION SEQUENCE 2 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASES 4.

AFTER PREEMPTION SEQUENCE 10+13 OR 14, CONTROLLER SHALL RETURN TO PHASES 10+14.

N. LINCOLN MEMORIAL DRIVE / IH 794 RAMPS & CLYBOURN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. | CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 7/15 | PAGE NO. 3 OF 3

PROJECT NO: 1300-13-74 | HWY: IH 794 | COUNTY: MILWAUKEE | SEQUENCE OF OPERATIONS | SHEET 275 | E

2

PROJECT ID:	1300-14-74
INTERSECTION:	N. LINCOLN MEMORIAL DRIVE & E. CLYBOURN STREET

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	NO. OF 14 AWG CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON
SB1	12	21	RED	ORG	GRN							
SB2	12	24				RED	ORG	GRN				
SB3	12	1	RED	ORG	GRN							WHT/BLK
SB4	15	4				RED	ORG	GRN				
		8	RED/BLK	ORG/BLK				GRN/BLK				
		9	RED/WHT	BLU/WHT				GRN/WHT				
SB5	12	10	RED	ORG				GRN				
		11	RED/BLK	ORG/BLK				GRN/BLK				
SB6	12	12	RED	ORG	GRN							
		27								BLK	BLU	
		B										WHT/BLK
SB7	12	15				RED	ORG		GRN			
		19	RED/BLK	ORG/BLK	GRN/BLK							
		B										WHT/BLK
SB8	12	20	RED	ORG	GRN							
		28								BLK	BLU	
		B										WHT/BLK
SB9	12	5				RED	ORG	GRN				
		7	RED/BLK	ORG/BLK	GRN/BLK							
		29								BLK	BLU	
		B										WHT/BLK
SB10	12	6				RED	ORG	GRN				
		30								BLK	BLU	
		B										WHT/BLK
SB11	12	2	RED	ORG	GRN							WHT/BLK
		3	RED/BLK	ORG/BLK	GRN/BLK							
		31								BLK	BLU	
		B										WHT/BLK
SB12	7	32								BLK	BLU	
		B										WHT/BLK
SB13	12	16				RED	ORG		GRN			
		18	RED/BLK	ORG/BLK	GRN/BLK							
		33								BLK	BLU	
		B										WHT/BLK
SB14	7	34								BLK	BLU	
		B										WHT/BLK
SB15	15	22	RED	ORG	GRN							
		23	RED/BLK	ORG/BLK	GRN/BLK							
		25				RED/WHT	BLU/WHT	GRN/WHT				
		26				BLK	BLU	WHT/BLK				
SB16	12	13	RED	ORG	GRN							
		17				RED/BLK	ORG/BLK		GRN/BLK			
		35								BLK	BLU	
		B										WHT/BLK
SB17	12	14	RED	ORG	GRN							
		36								BLK	BLU	
		B										WHT/BLK

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	SB16
SB16	SB17
SB17	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	HEAD A(SB4)
CB1	HEAD B(SB11)
CB1	HEAD C(SB16)
CB1	HEAD D(SB15)

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

TRAFFIC CONTROL SIGNAL

N. LINCOLN MEMORIAL DRIVE &
E. CLYBOURN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 1

2

LEGEND

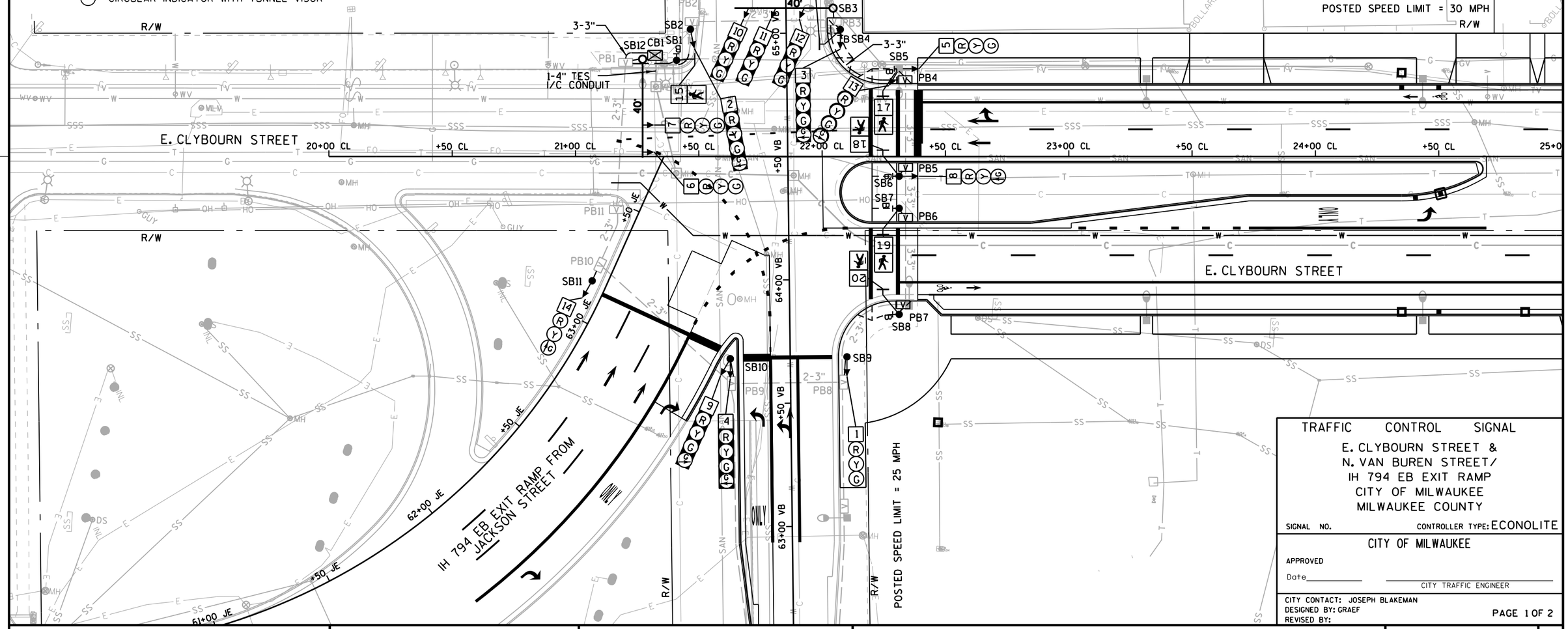
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD
- (XX) MONOTUBE BASE, POLE, 15'-40' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- PULL BOX, VAULT, 17" X 30" X 18"
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- GREEN ARROW
- OPTICALLY PROGRAMMED HEAD
- CIRCULAR INDICATOR WITH TUNNEL VISOR
- WALK/DON'T WALK INDICATOR 12" WITH COUNTDOWN TIMER 12"
- CITY OF MILWAUKEE LUMINAIRE

NOTE: ALL LENSES ARE 12-INCH
GREYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTION LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. THE CONDUIT EMBEDDED IN A TYPE 10 OR 13 CONCRETE BASE SHALL BE 3" CONDUIT.
6. REFER TO SIGNING PLAN FOR SIGNS TO BE MOUNTED ON SIGNAL EQUIPMENT.

N



TRAFFIC CONTROL SIGNAL

E. CLYBOURN STREET &
N. VAN BUREN STREET/
IH 794 EB EXIT RAMP
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. CONTROLLER TYPE: ECONOLITE

CITY OF MILWAUKEE

APPROVED

Date _____ CITY TRAFFIC ENGINEER

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

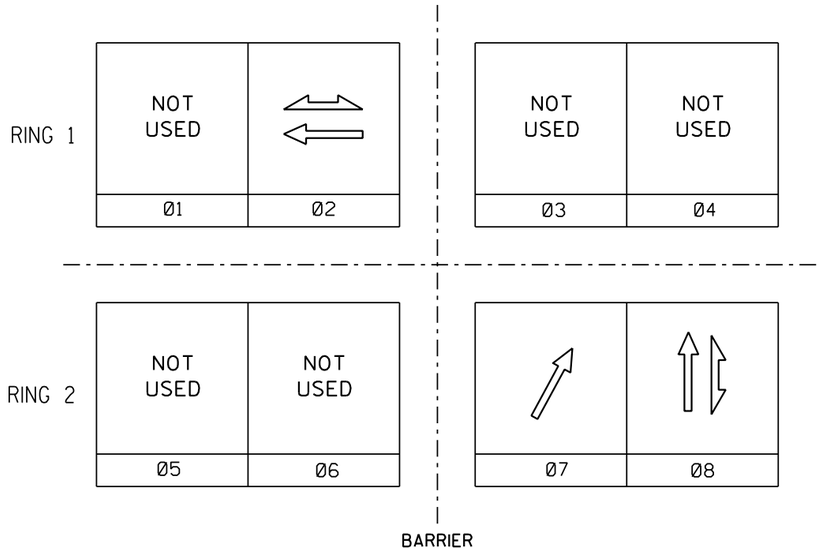
PAGE 1 OF 2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 277	E

FILE NAME : 024041_sp.dgn PLOT DATE : 7/30/2015 PLOT BY : 1494 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1		
Ø2	5,6,7,8	R
Ø3		
Ø4		
Ø5		
Ø6		
Ø7	9,10,11,12,13,14	R
Ø8	1,2,3,4	R
Ø2P	15,16	
Ø7P		
Ø8P	17,18,19,20	





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2	X		MAX	x
3				
4				
5				
6				
7	X		MAX	x
8	X		MAX	x

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	x
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	x
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM *:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE CITY LIGHTING CABINET	x

TYPE OF PRE-EMPT	
NONE	x
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

E. CLYBOURN STREET &
N. VAN BUREN STREET/
IH 794 EB EXIT RAMP
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 7/15 PAGE NO. 2 OF 2

PROJECT ID:	1300-14-74
INTERSECTION:	E. CLYBOURN STREET & N. VAN BUREN STREET

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	NO. OF 14 AWG CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON
SB1	7	15								BLK	BLU	
		B										WHT/BLK
SB2	12	2	RED	ORG	GRN			GRN				
SB3	12	10	RED	ORG	GRN							
		11	RED	ORG	GRN							
		12	RED/BLK	ORG/BLK	GRN/BLK							
SB4	12	3	RED	ORG	GRN			GRN				
		16								BLK	BLU	
		B										WHT/BLK
SB5	12	5	RED	ORG	GRN							
		13	RED/BLK	ORG/BLK	ORG/BLK			GRN/BLK				
		17								BLK	BLU	
		B										WHT/BLK
SB6	12	8	RED	ORG				GRN				
		18								BLK	BLU	
		B										WHT/BLK
SB7	7	19								BLK	BLU	
		B										WHT/BLK
SB8	7	20								BLK	BLU	
		B										WHT/BLK
SB9	12	1	RED	ORG	GRN							
SB10	12	4	RED	ORG	GRN			GRN				
		9	RED/BLK	ORG/BLK	GRN/BLK			GRN/BLK				
SB11	12	14	RED	ORG				GRN				
SB12	12	6	RED	ORG	GRN							
		7	RED/BLK	ORG/BLK	GRN/BLK							

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB9	SB10
SB10	SB11
SB11	SB12
SB12	CB1

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

TRAFFIC CONTROL SIGNAL

E. CLYBOURN STREET &
N. VAN BUREN STREET/
IH 794 EB EXIT RAMP
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 1

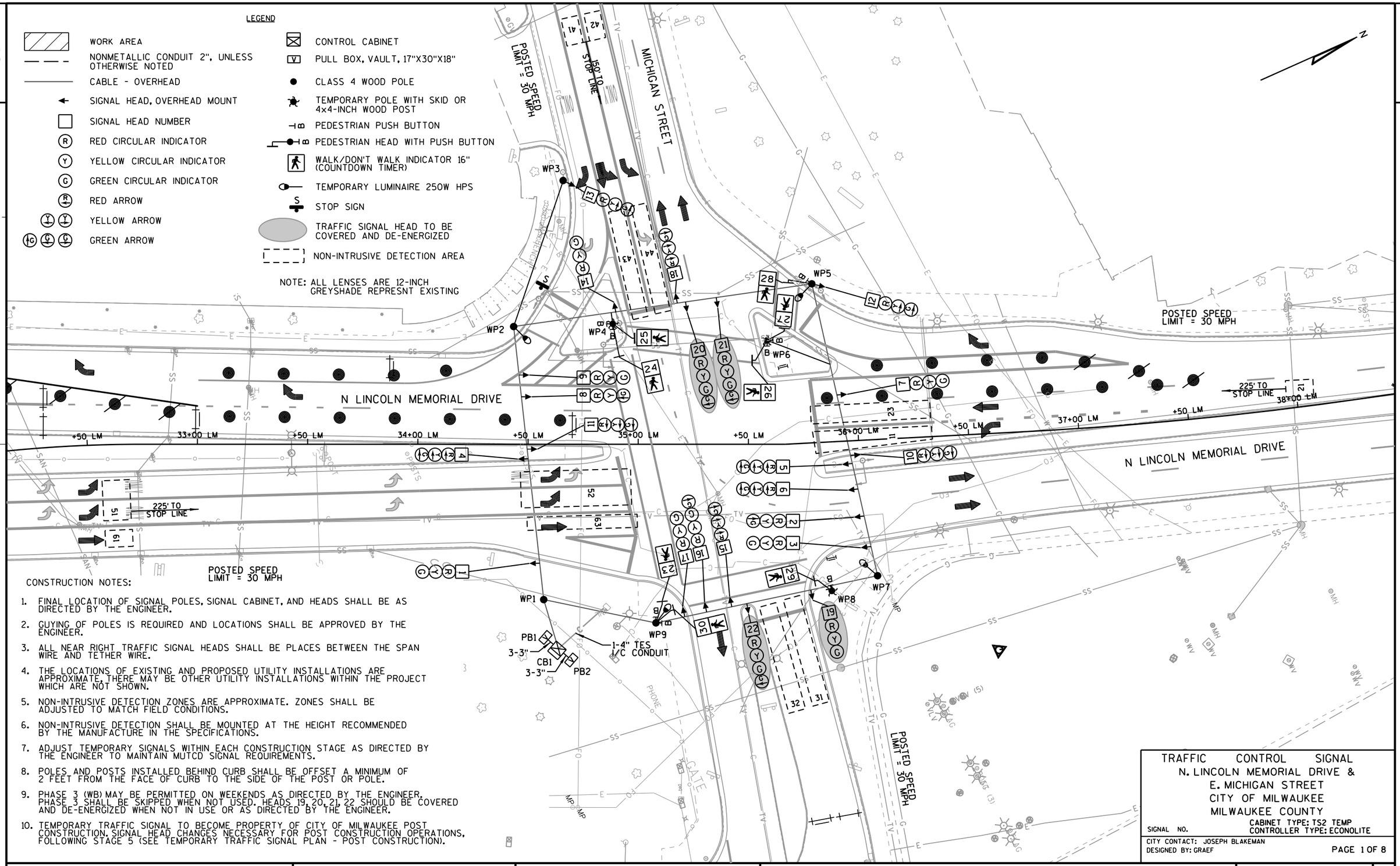
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CABLE ROUTING CHART	SHEET 279	E

2

LEGEND

- WORK AREA
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- CABLE - OVERHEAD
- SIGNAL HEAD, OVERHEAD MOUNT
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- CONTROL CABINET
- PULL BOX, VAULT, 17"X30"X18"
- CLASS 4 WOOD POLE
- TEMPORARY POLE WITH SKID OR 4x4-INCH WOOD POST
- PEDESTRIAN PUSH BUTTON
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- NON-INTRUSIVE DETECTION AREA

NOTE: ALL LENSES ARE 12-INCH GREYSHADE REPRESNT EXISTING



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, AND HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACES BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. NON-INTRUSIVE DETECTION ZONES ARE APPROXIMATE. ZONES SHALL BE ADJUSTED TO MATCH FIELD CONDITIONS.
6. NON-INTRUSIVE DETECTION SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURE IN THE SPECIFICATIONS.
7. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
8. POLES AND POSTS INSTALLED BEHIND CURB SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
9. PHASE 3 (WB) MAY BE PERMITTED ON WEEKENDS AS DIRECTED BY THE ENGINEER. PHASE 3 SHALL BE SKIPPED WHEN NOT USED. HEADS 19, 20, 21, 22 SHOULD BE COVERED AND DE-ENERGIZED WHEN NOT IN USE OR AS DIRECTED BY THE ENGINEER.
10. TEMPORARY TRAFFIC SIGNAL TO BECOME PROPERTY OF CITY OF MILWAUKEE POST CONSTRUCTION. SIGNAL HEAD CHANGES NECESSARY FOR POST CONSTRUCTION OPERATIONS, FOLLOWING STAGE 5 (SEE TEMPORARY TRAFFIC SIGNAL PLAN - POST CONSTRUCTION).

TRAFFIC CONTROL SIGNAL
N. LINCOLN MEMORIAL DRIVE &
E. MICHIGAN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CABINET TYPE: TS2 TEMP
CONTROLLER TYPE: ECONOLITE

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF

PAGE 1 OF 8

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1	SHEET 280	E

2

LEGEND

- WORK AREA
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- CABLE - OVERHEAD
- SIGNAL HEAD, OVERHEAD MOUNT
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- CONTROL CABINET
- PULL BOX, VAULT, 17"X30"X18"
- CLASS 4 WOOD POLE
- TEMPORARY POLE WITH SKID OR 4x4-INCH WOOD POST
- PEDESTRIAN PUSH BUTTON
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- NON-INTRUSIVE DETECTION AREA

NOTE: ALL LENSES ARE 12-INCH GREYSHADE REPRESNT EXISTING

N

POSTED SPEED LIMIT = 30 MPH

MICHIGAN STREET

150' TO STOP LINE

N LINCOLN MEMORIAL DRIVE

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

PB1 PB2 CB1

3-3"

3-3"

1-4" TES I/C CONDUIT

+50 LM 33+00 LM +50 LM 34+00 LM +50 LM 35+00 LM +50 LM 36+00 LM +50 LM 37+00 LM +50 LM 38+00 LM

225' TO STOP LINE

POSTED SPEED LIMIT = 30 MPH

POSTED SPEED LIMIT = 30 MPH

N LINCOLN MEMORIAL DRIVE

TRAFFIC CONTROL SIGNAL
N. LINCOLN MEMORIAL DRIVE &
E. MICHIGAN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CABINET TYPE: TS2 TEMP
CONTROLLER TYPE: ECONOLITE

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF

PAGE 2 OF 8

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET 281	E

FILE NAME : c:\pwv8i-local\baker_projects\ben.bieberitz\d0330711\024051b_sp_s2.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- CABLE - OVERHEAD
- SIGNAL HEAD, OVERHEAD MOUNT
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- CONTROL CABINET
- PULL BOX, VAULT, 17"X30"X18"
- CLASS 4 WOOD POLE
- TEMPORARY POLE WITH SKID OR 4x4-INCH WOOD POST
- PEDESTRIAN PUSH BUTTON
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- NON-INTRUSIVE DETECTION AREA

NOTE: ALL LENSES ARE 12-INCH GREYSHADE REPRESNT EXISTING

N

MICHIGAN STREET

POSTED SPEED LIMIT = 30 MPH

150' TO STOP LINE

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

PB1 PB2 CB1

3-3"

1-4" TES I/C CONDUIT

N LINCOLN MEMORIAL DRIVE

225' TO STOP LINE

+50 LM 33+00 LM +50 LM 34+00 LM +50 LM 35+00 LM +50 LM 36+00 LM +50 LM 37+00 LM +50 LM 38+00 LM

TRAFFIC CONTROL SIGNAL
N. LINCOLN MEMORIAL DRIVE &
E. MICHIGAN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CABINET TYPE: TS2 TEMP
CONTROLLER TYPE: ECONOLITE

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF

PAGE 3 OF 8

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 3	SHEET 282 E

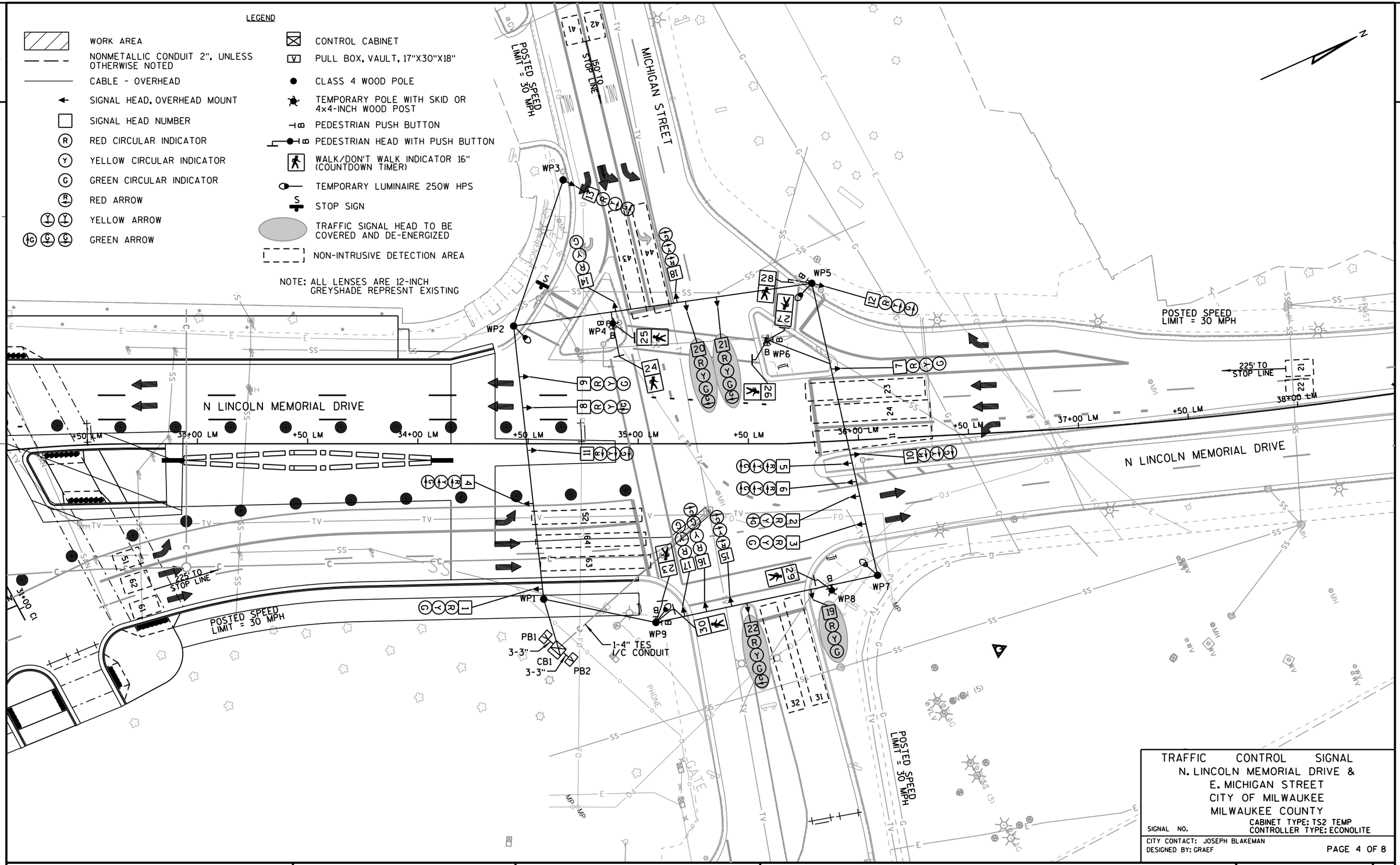
FILE NAME : c:\pwv8i-local\baker_projects\ben.bieberitz\d0330711\024051c_sp_s3.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- CABLE - OVERHEAD
- SIGNAL HEAD, OVERHEAD MOUNT
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- CONTROL CABINET
- PULL BOX, VAULT, 17"X30"X18"
- CLASS 4 WOOD POLE
- TEMPORARY POLE WITH SKID OR 4x4-INCH WOOD POST
- PEDESTRIAN PUSH BUTTON
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- NON-INTRUSIVE DETECTION AREA

NOTE: ALL LENSES ARE 12-INCH GREYSHADE REPRESNT EXISTING



TRAFFIC CONTROL SIGNAL
N. LINCOLN MEMORIAL DRIVE &
E. MICHIGAN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CABINET TYPE: TS2 TEMP
CONTROLLER TYPE: ECONOLITE

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF

PAGE 4 OF 8

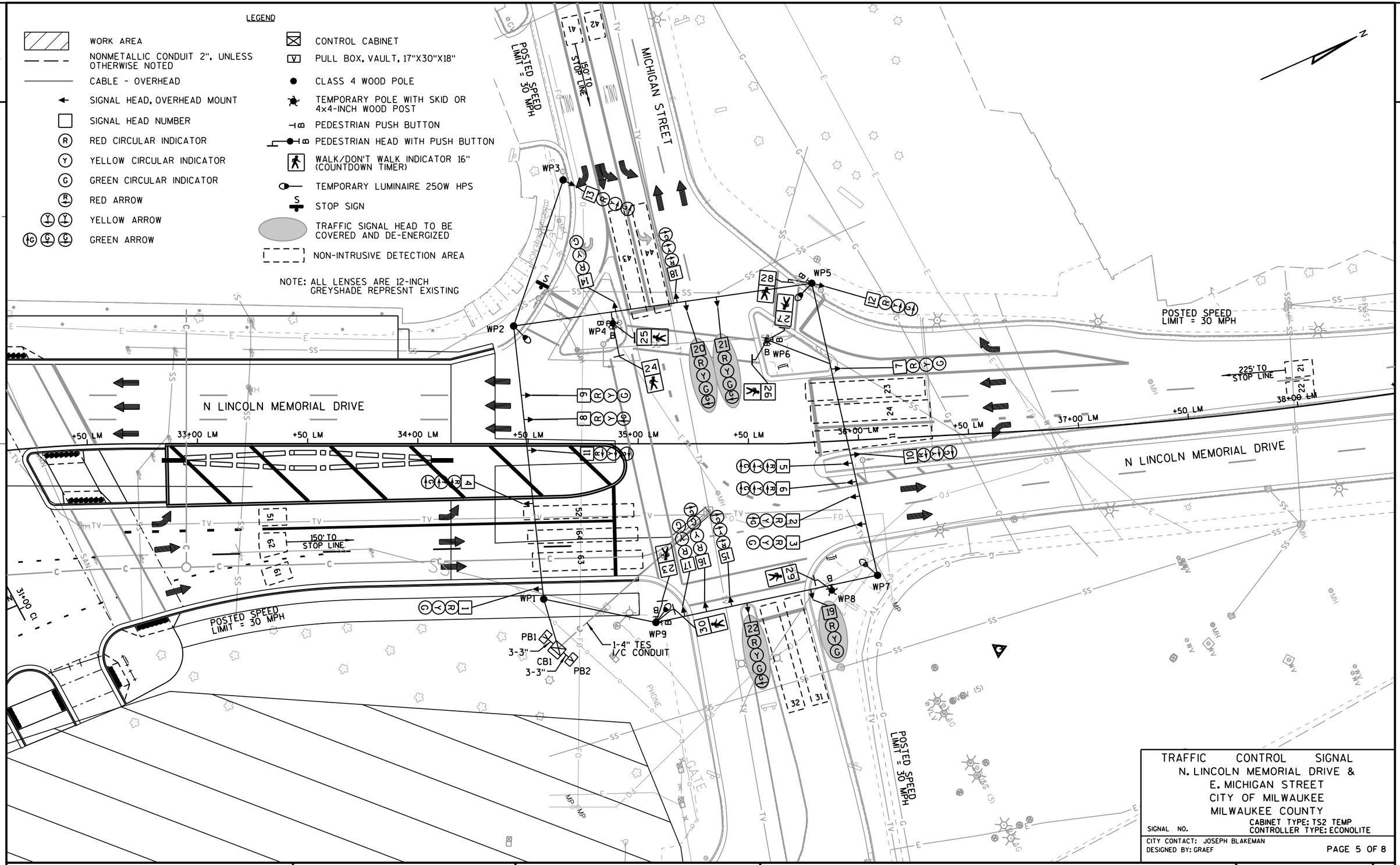
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 4	SHEET 283	E

2

LEGEND

- WORK AREA
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- CABLE - OVERHEAD
- SIGNAL HEAD, OVERHEAD MOUNT
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- CONTROL CABINET
- PULL BOX, VAULT, 17"X30"X18"
- CLASS 4 WOOD POLE
- TEMPORARY POLE WITH SKID OR 4x4-INCH WOOD POST
- PEDESTRIAN PUSH BUTTON
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- NON-INTRUSIVE DETECTION AREA

NOTE: ALL LENSES ARE 12-INCH GREYSHADE REPRESNT EXISTING



TRAFFIC CONTROL SIGNAL
N. LINCOLN MEMORIAL DRIVE &
E. MICHIGAN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CABINET TYPE: TS2 TEMP
CONTROLLER TYPE: ECONOLITE

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF

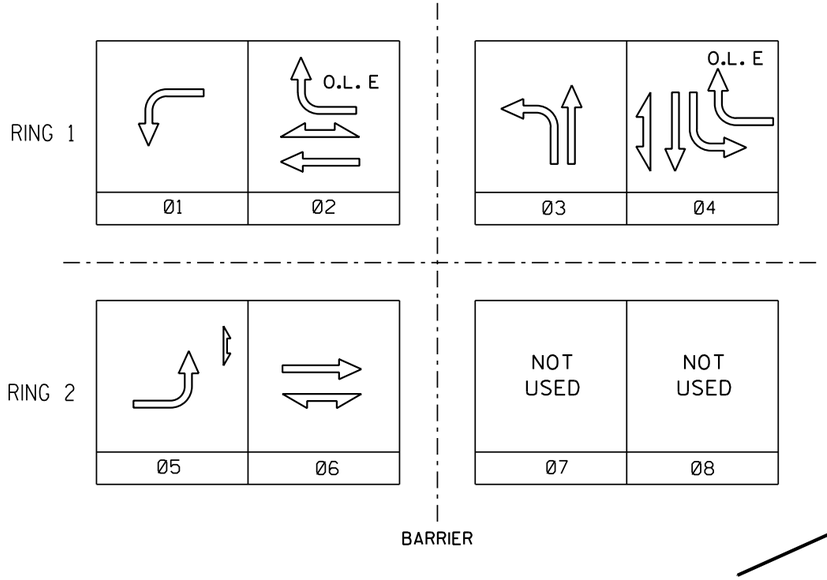
PAGE 5 OF 8

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 5	SHEET 284	E

FILE NAME : c:\pwv8i-local\baker_projects\ben.bieberitz\d0330711\024051e_sp_s5.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	10,11	R
Ø2	7,8,9,12,13	R
Ø3	19,20,21,22	R
Ø4	14,16,16,17,18	R
Ø5	4,5,6	R
Ø6	1,2,3	R
Ø7		
Ø8		
Ø2P	25,26	
Ø4P	23,24	
Ø5P	27,28	
Ø6P	29,30	
OLE	12,13	
OLF		
OLG		
OLH		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		2		x
2	X	6	MIN	x
3				x
4				x
5		6		x
6	X	2	MIN	x
7				
8				

GENERAL NOTES:

1. ANY ACTUATED PHAES FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. PHASES 1& 5 ARE IN CONFLICT AND NOT ALLOWED TO TIME CONCURENTLY.
3. PHASE 3 (WB) MAY BE PERMITTED ON WEEKENDS AS DIRECTED BY THE ENGINEER. PHASE 3 SHALL BE SKIPED WHEN NOT USED.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	x
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	x
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	x
IN SEPARATE CITY LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	x
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	22	32	42	44	52	62	64
CALLED PHASE	1	2	3	4	4	5	6	6
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR #(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	21	31	41	43	51	61	63	
CALLED PHASE	2	3	4	4	5	6	6	
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR #(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

N. LINCOLN MEMORIAL DRIVE &
E. MICHIGAN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 7/15 PAGE NO. 6 OF 8

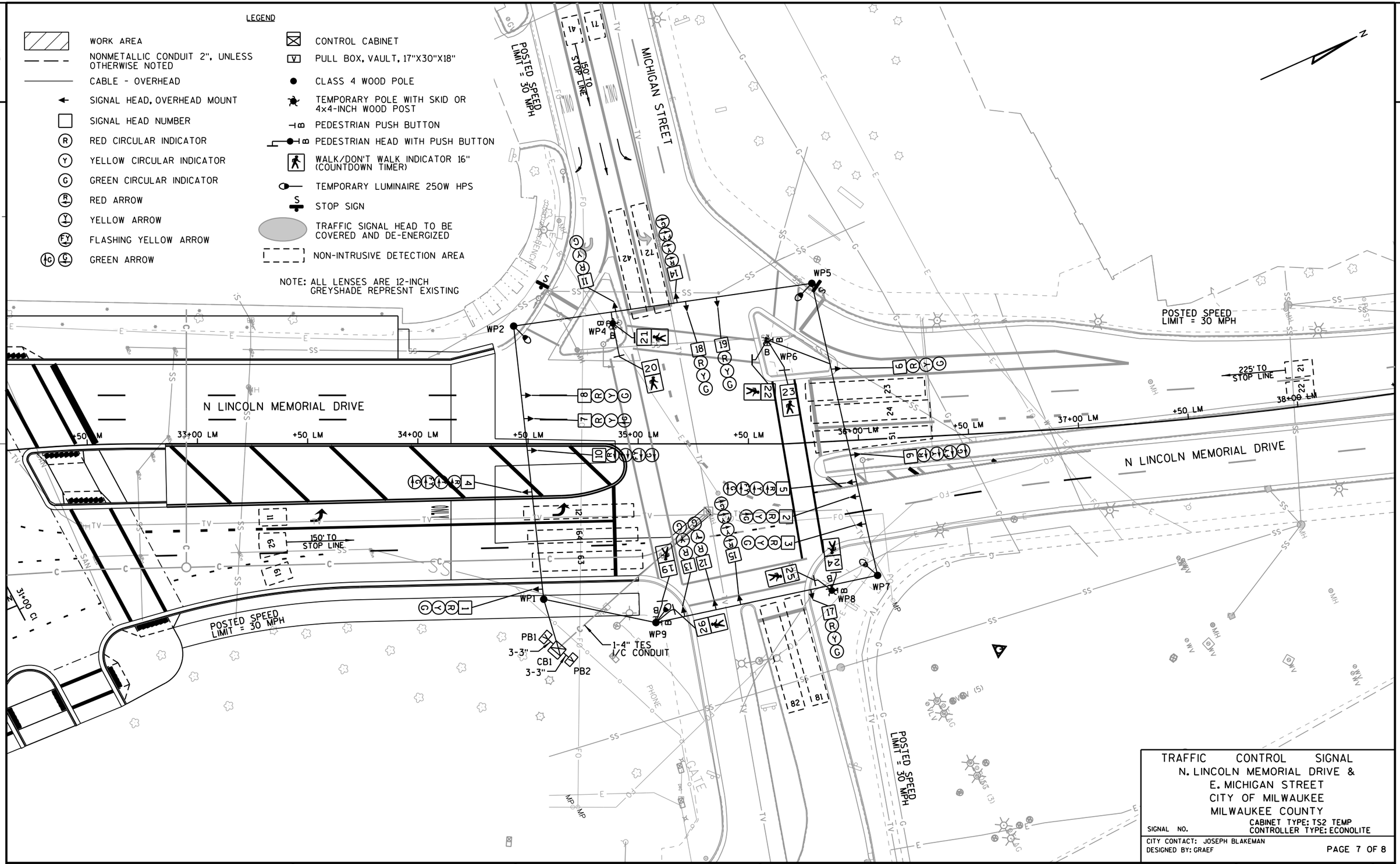
FILE NAME : c:\pwv8i-local\baker_projects\ben.bieberitz\d0330711\024051a_sp_s1.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

2

LEGEND

- WORK AREA
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- CABLE - OVERHEAD
- SIGNAL HEAD, OVERHEAD MOUNT
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- FLASHING YELLOW ARROW
- GREEN ARROW
- CONTROL CABINET
- PULL BOX, VAULT, 17"X30"X18"
- CLASS 4 WOOD POLE
- TEMPORARY POLE WITH SKID OR 4x4-INCH WOOD POST
- PEDESTRIAN PUSH BUTTON
- PEDESTRIAN HEAD WITH PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- TEMPORARY LUMINAIRE 250W HPS
- STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- NON-INTRUSIVE DETECTION AREA

NOTE: ALL LENSES ARE 12-INCH GREYSHADE REPRESNT EXISTING



TRAFFIC CONTROL SIGNAL
N. LINCOLN MEMORIAL DRIVE &
E. MICHIGAN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

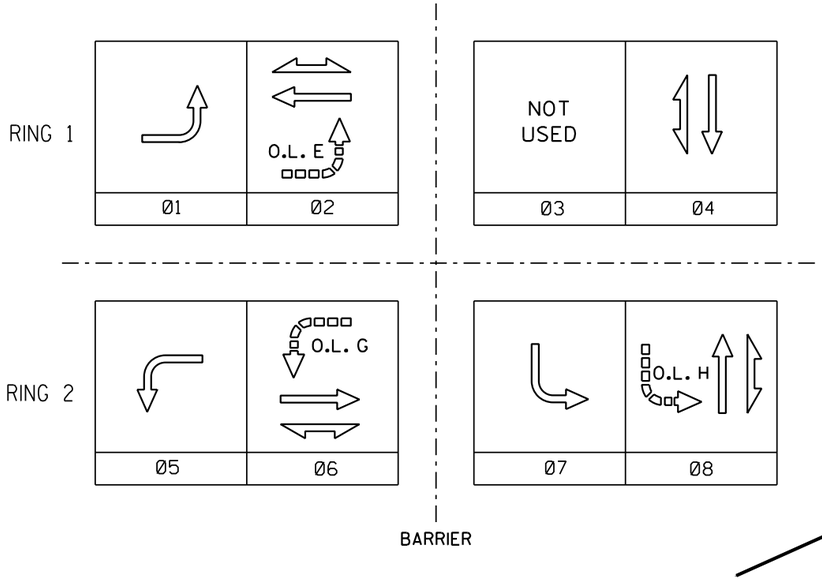
CABINET TYPE: TS2 TEMP
CONTROLLER TYPE: ECONOLITE

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF

PAGE 7 OF 8

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - POST CONSTRUCTION	SHEET 286	E

	HEAD NUMBERS	FLASH
Ø1	4,5	R
Ø2	6,7,8	R
Ø3		
Ø4		R
Ø5	11,12,13	R
Ø6	1,2,3	R
Ø7	14,15	R
Ø8	17,18,19	R
Ø2P	21,22	
Ø4P	19,20	
Ø6P	25,26	
Ø8P	23,24	
OLE	4,5	-
OLF		
OLG	9,10	-
OLH	14,15	-



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		x
2	X	6	MIN	x
3				
4		8		x
5		2		x
6	X	2	MIN	x
7		4		x
8		4		x

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	x
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	x
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	x
IN SEPARATE CITY LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	x
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
	11	21	23	41	51	62	64	72
CALLED PHASE	1	2	2	4	5	6	6	7
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

19	17	23	21	27	25	31	29	DETECTOR INPUT
82								PLAN LOOP DETECTOR #(S)
8								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
	12	22	24	42	61	63	71	81
CALLED PHASE	1	2	2	4	6	6	7	8
CALL OPTION								
DELAY TIME								
EXTEND OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

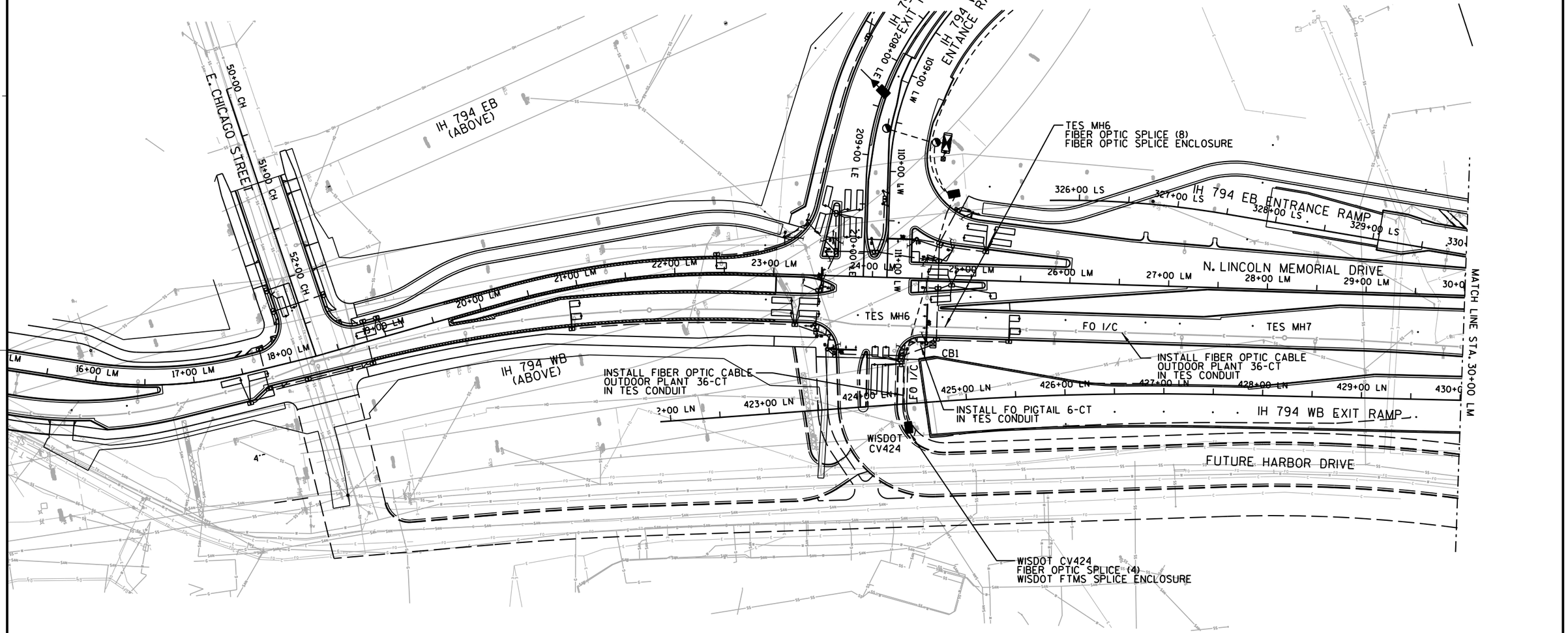
N. LINCOLN MEMORIAL DRIVE &
E. MICHIGAN STREET
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. | CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 7/15 | PAGE NO. 8 OF 8

2



CONSTRUCTION NOTES;

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT CABLE COILED IN EACH COMMUNICATIONS VAULT AND TES MANHOLE.
5. MAINLINE SPLICES SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD.
6. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
7. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
8. SEE FTMS PLANS COMMUNICATIONS DETAILS FOR FIBER ASSIGNMENTS.

LEGEND

- WISDOT FTMS CONDUIT
- C — TES CEMENT ENCASED PVC CONDUIT
- WISDOT COMMUNICATION VAULT, TYPE 1
- TES 4' MANHOLE
- CONTROL CABINET

NOTE: GREYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL INTERCONNECT

N. LINCOLN MEMORIAL DRIVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

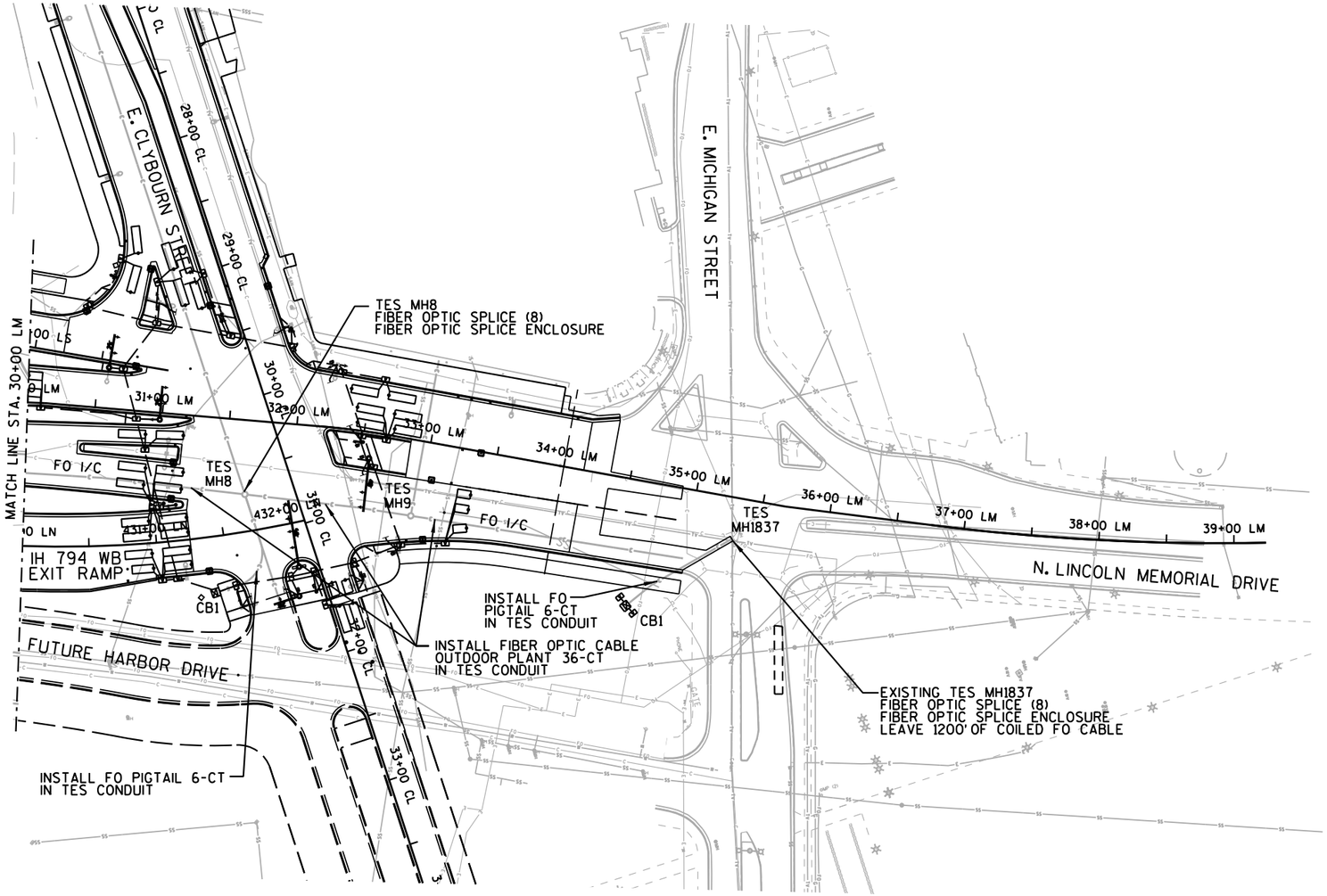
CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 288	E

FILE NAME : 024091_sp.dgn | PLOT DATE : 7/30/2015 | PLOT BY : 1494 | PLOT NAME : | PLOT SCALE : 1:100

2



LEGEND

- WISDOT FTMS CONDUIT
- TES CEMENT ENCASED PVC CONDUIT
- WISDOT COMMUNICATION VAULT, TYPE 1
- TES 4' MANHOLE
- CONTROL CABINET

NOTE: GREYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL INTERCONNECT

N. LINCOLN MEMORIAL DRIVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CITY CONTACT: JOSEPH BLAKEMAN
DESIGNED BY: GRAEF
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 289	E

FILE NAME : 024092_sp.dgn PLOT DATE : 7/30/2015 PLOT BY : 1494 PLOT NAME : PLOT SCALE : 1:100

2

LEGEND — EXISTING — PROPOSED

FTMS CONVENTIONAL SYMBOLS

JUNCTION BOX

CAMERA CABINET AND BASE

METER BREAKER PEDESTAL

24X42-INCH STEEL PULL BOX

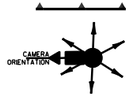
FTMS (ITS) CONDUIT

BREAKER DISCONNECT BOX

COMMUNICATIONS VAULT, TYPE 1

RETAINING WALL

CCTV CAMERA ON HIGH MAST LIGHT TOWER



SUMMARY OF SLACK CABLE IN PULL BOXES AND VAULTS

	SLACK	
CABLE OR WIRE	PULL BOX	VAULT
POWER WIRES (NO. 6 AND LARGER)	NONE	N/A
TRACER WIRE (NO. 12)	9-FT	9-FT
MULTI-CONDUCTOR TRAFFIC SIGNAL CABLE	6-FT	N/A
LOOP DETECTOR LEAD-IN CABLE	NONE	N/A
MICROWAVE DETECTOR CABLE	6-FT	N/A
CAMERA CABLE	6-FT	N/A
FIBER OPTIC CABLE	50-FT	100-FT

PLACE THE ABOVE QUANTITIES OF EACH RESPECTIVE CABLE TYPE IN EACH PULL BOX OR VAULT AS SLACK.

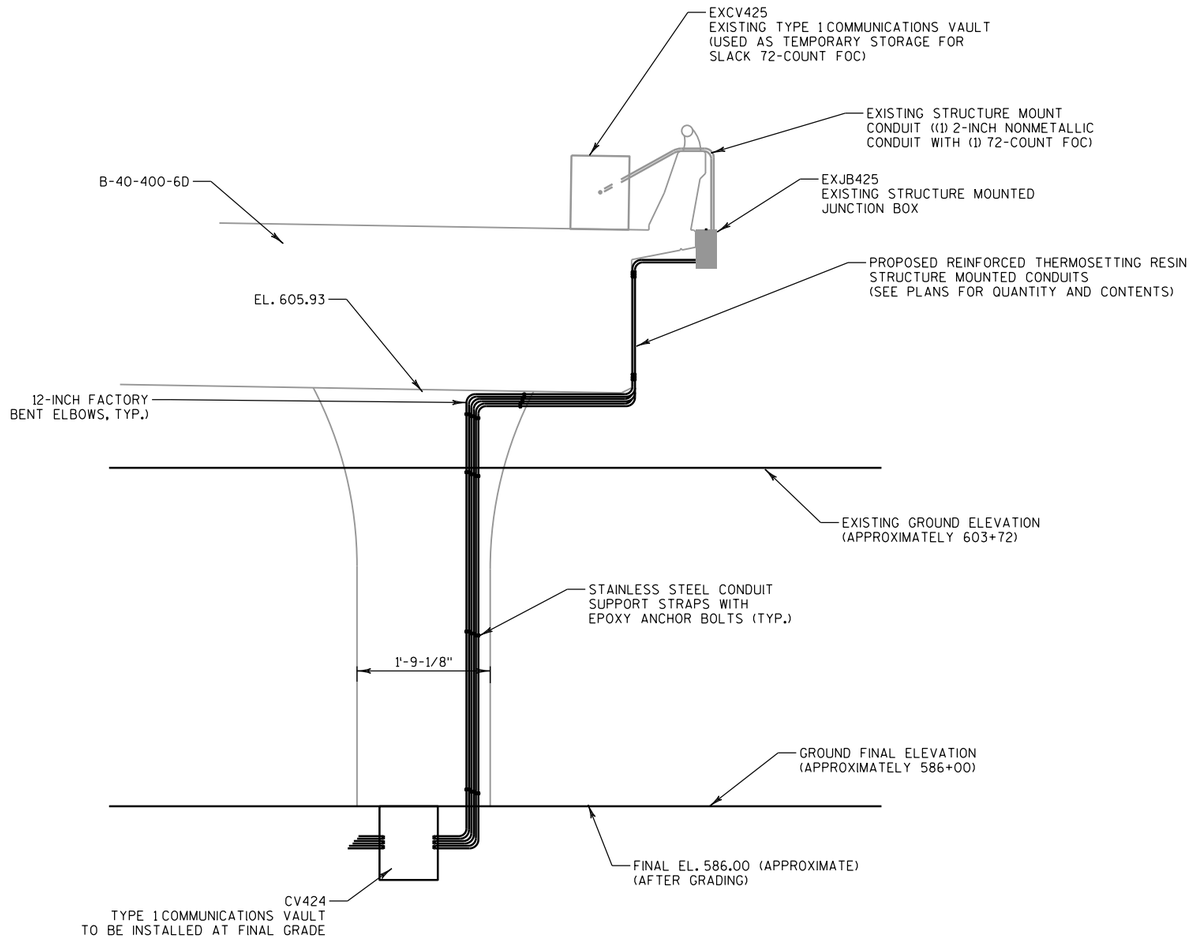
FTMS STANDARD ABBREVIATIONS

CB — CONTROLLER CABINET
CCTV — CLOSED CIRCUIT TELEVISION SITE
CV — COMMUNICATIONS VAULT
PB — PULL BOX

FTMS GENERAL NOTES

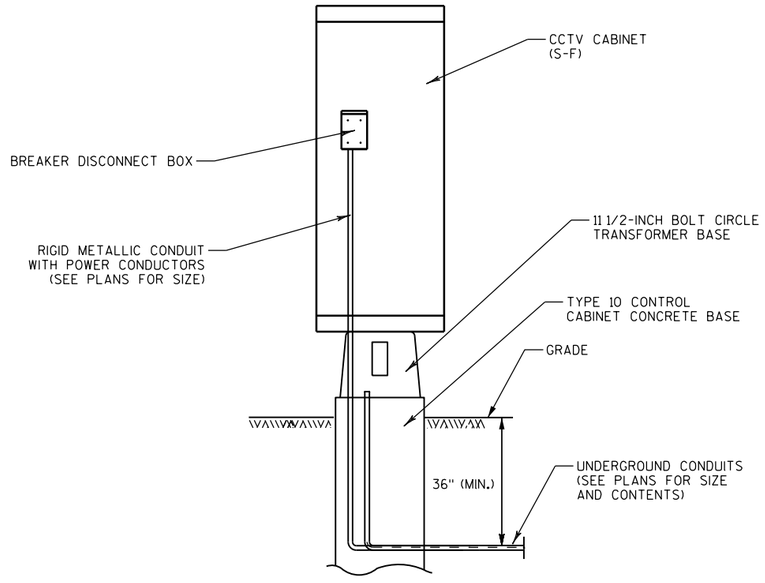
1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEMS. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.
6. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.

2

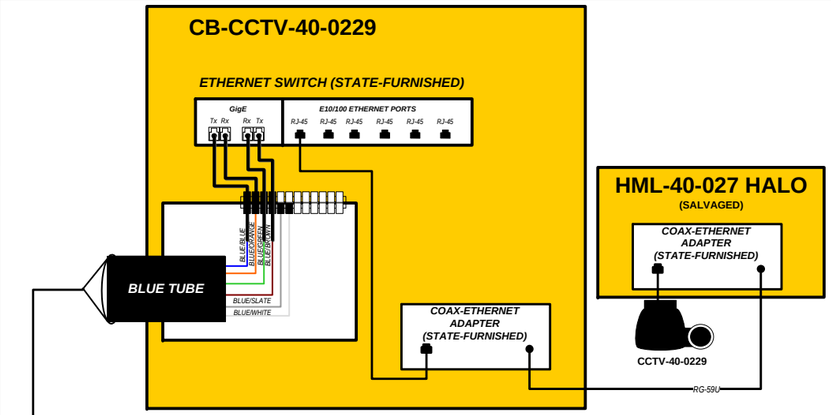


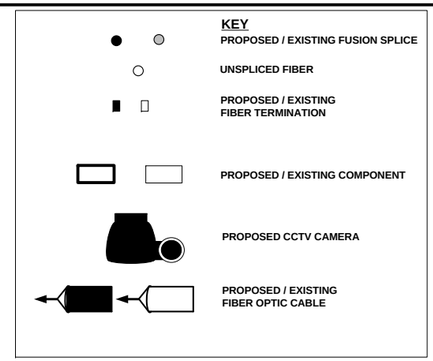
PIER 3 CONDUIT AND COMMUNICATIONS VAULTS DETAIL

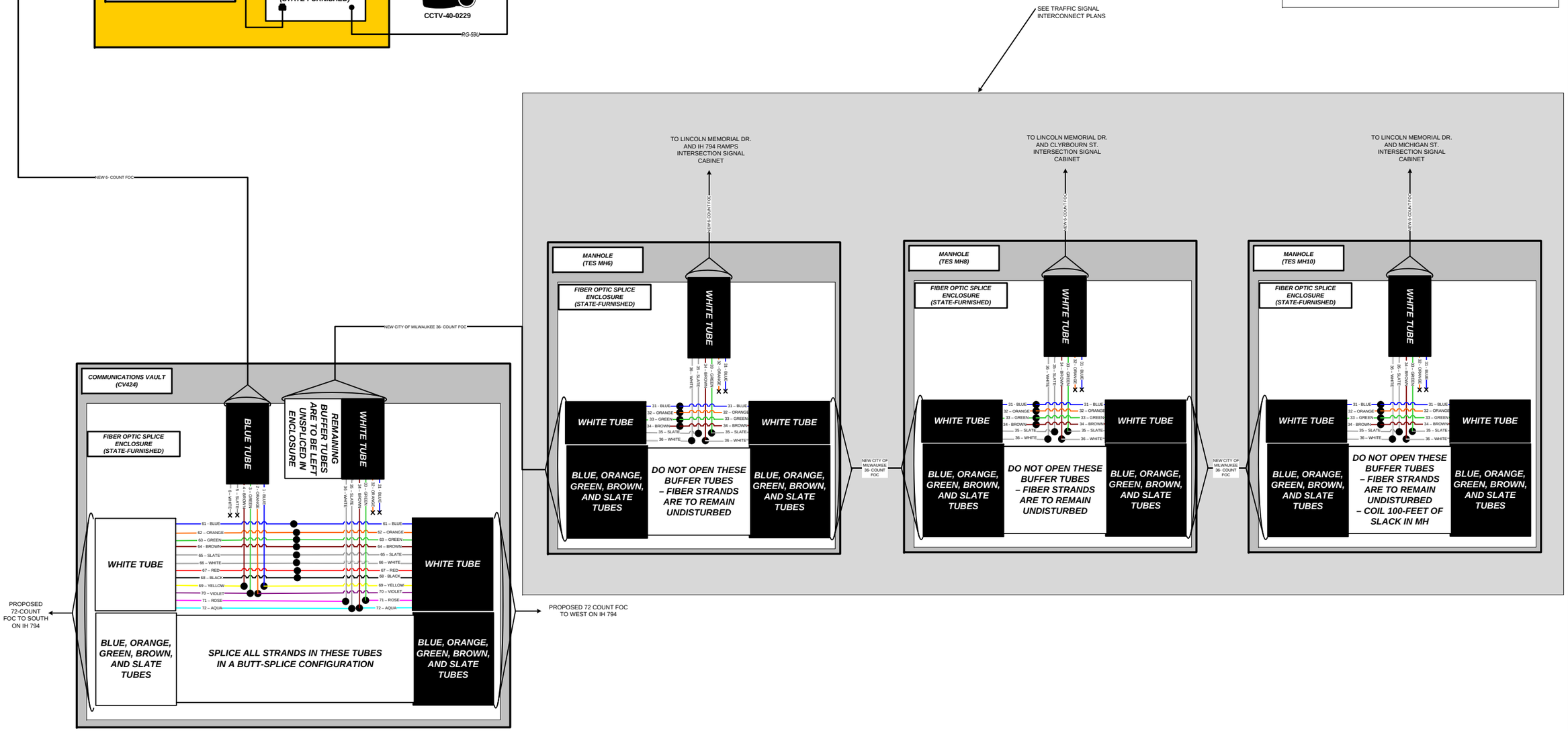
2



CCTV CABINET ON TYPE 10 CONTROL CABINET CONCRETE BASE


CB-CCTV-40-0229
ETHERNET SWITCH (STATE-FURNISHED)
GigE
Tx Rx Rx Tx
E10/100 ETHERNET PORTS
RJ-45 RJ-45 RJ-45 RJ-45 RJ-45 RJ-45
BLUE/BLUE
BLUE/ORANGE
BLUE/GREEN
BLUE/BROWN
BLUE TUBE
BLUE/SLATE
BLUE/WHITE
COAX-ETHERNET ADAPTER (STATE-FURNISHED)
HML-40-027 HALO
(SALVAGED)
COAX-ETHERNET ADAPTER (STATE-FURNISHED)
CCTV-40-0229
RG-59U


KEY
PROPOSED / EXISTING FUSION SPLICE
UNSPLICED FIBER
PROPOSED / EXISTING FIBER TERMINATION
PROPOSED / EXISTING COMPONENT
PROPOSED CCTV CAMERA
PROPOSED / EXISTING FIBER OPTIC CABLE


SEE TRAFFIC SIGNAL INTERCONNECT PLANS
NEW 6- COUNT FOC
NEW CITY OF MILWAUKEE 36- COUNT FOC
COMMUNICATIONS VAULT (CV424)
FIBER OPTIC SPLICE ENCLOSURE (STATE-FURNISHED)
BLUE TUBE
REMAINING BUFFER TUBES ARE TO BE LEFT UNSPLICED IN ENCLOSURE
WHITE TUBE
WHITE TUBE
BLUE, ORANGE, GREEN, BROWN, AND SLATE TUBES
SPLICE ALL STRANDS IN THESE TUBES IN A BUTT-SPLICE CONFIGURATION
BLUE, ORANGE, GREEN, BROWN, AND SLATE TUBES
PROPOSED 72-COUNT FOC TO SOUTH ON IH 794
PROPOSED 72 COUNT FOC TO WEST ON IH 794
TO LINCOLN MEMORIAL DR. AND IH 794 RAMPS INTERSECTION SIGNAL CABINET
TO LINCOLN MEMORIAL DR. AND CLYRBOURN ST. INTERSECTION SIGNAL CABINET
TO LINCOLN MEMORIAL DR. AND MICHIGAN ST. INTERSECTION SIGNAL CABINET
MANHOLE (TES MH6)
MANHOLE (TES MH8)
MANHOLE (TES MH10)
FIBER OPTIC SPLICE ENCLOSURE (STATE-FURNISHED)
WHITE TUBE
WHITE TUBE
WHITE TUBE
BLUE, ORANGE, GREEN, BROWN, AND SLATE TUBES
DO NOT OPEN THESE BUFFER TUBES – FIBER STRANDS ARE TO REMAIN UNDISTURBED
BLUE, ORANGE, GREEN, BROWN, AND SLATE TUBES
DO NOT OPEN THESE BUFFER TUBES – FIBER STRANDS ARE TO REMAIN UNDISTURBED – COIL 100-FEET OF SLACK IN MH
BLUE, ORANGE, GREEN, BROWN, AND SLATE TUBES

2

MATCHLINE 201LE+50

N

CCTV-40-0229
(1) CCTV CAMERA (S-F)
(1) COAX-ETHERNET ADAPTER (S-F)
ON SALVAGED HIGH MAST LIGHT
TOWER (HML-40-027) HALO

NOTE: ORIENT HML-40-027 HALO TO PLACE CCTV CAMERA TO THE NORTHEAST AND THE CCTV CAMERA BLINDSPOT TO THE SOUTHWEST

PROPOSED LIGHTING CONDUIT (SEE LIGHTING PLANS) (1) WITH (1) CAMERA CABLE

PROPOSED LIGHTING PULL BOX (SEE LIGHTING PLANS)

(1) 2-INCH NONMETALLIC CONDUIT WITH (1) CAMERA CABLE AND (1) NO. 12 AWG TRAFFIC SIGNAL WIRE

PB209LE

(2) 2-INCH NONMETALLIC CONDUITS (1) WITH (1) CAMERA CABLE AND (1) NO. 12 AWG TRAFFIC SIGNAL WIRE

(3) 2-INCH HDPE DUCTS (1) WITH (1) 72-COUNT FOC (S-F) AND (1) NO. 12 AWG TRAFFIC SIGNAL WIRE

(4) 2-INCH NONMETALLIC CONDUITS (1) WITH (1) CAMERA CABLE (1) WITH (1) 6-COUNT FOC (S-F) AND (1) NO. 12 AWG TRAFFIC SIGNAL WIRE

(3) 2-INCH HDPE DUCTS (1) WITH (1) 72-COUNT FOC (S-F) AND (1) NO. 12 AWG TRAFFIC SIGNAL WIRE

CV104LW

CB-CCTV-40-0229
(1) CONCRETE CONTROL CABINET BASE TYPE 10
(1) 11 1/2-INCH TRANSFORMER BASE
(1) CCTV CABINET (S-F)
(1) BREAKER DISCONNECT BOX
(1) 12-COUNT F.O. TERMINATION PANEL (S-F)
(1) ETHERNET SWITCH (S-F)
(1) COAX-ETHERNET ADAPTER (S-F)
(6) F.O. TERMINATIONS

PB110LW

(1) 2-INCH METALLIC CONDUIT WITH (3) NO. 6 AWG TRAFFIC SIGNAL WIRES

(1) 2-INCH METALLIC CONDUIT WITH (3) NO. 6 AWG TRAFFIC SIGNAL WIRES

MB110LW

CV110LW

(2) 2-INCH NONMETALLIC CONDUITS (1) WITH (1) 6-COUNT FOC (S-F) AND (1) NO. 12 AWG TRAFFIC SIGNAL WIRE

(3) 2-INCH HDPE DUCTS (1) WITH (1) 72-COUNT FOC (S-F), (1) 6-COUNT FOC (S-F), AND (1) NO. 12 TRAFFIC SIGNAL WIRE

CV424
SPLICE PROPOSED 72-COUNT FOC TO THE WEST TO THE EXISTING 72-COUNT FOC TO THE SOUTH AND SPLICE A PROPOSED 6-COUNT FOC TO CB-CCTV-40-0229 AND A PROPOSED 6-COUNT FOC TO TRAFFIC SIGNAL SYSTEM IN PROPOSED F.O. SPLICE ENCLOSURE (S-F) (QTY. 76 F.O. SPLICES)

EXJB425

(3) 2-INCH REINFORCED THERMOSETTING RESIN CONDUITS, STRUCTURE MOUNTED (1) WITH (1) 72-COUNT FOC (REINSTALLED)

EXCV425
(EXISTING COMMUNICATIONS VAULT WITH SLACK 72-COUNT FOC) AFTER BUILDING NEW CONDUIT FROM EXJB425 TO CV424 AND REMOVING AND REINSTALLING 72-COUNT FOC FROM EXCV425 TO CV424, REMOVE EXCV425 (QTY. 1) AND EXISTING STRUCTURE MOUNTED CONDUIT FROM EXJB425 TO EXCV425

EXISTING EXTERNAL MOUNTED CONDUITS WITH (1) 72-COUNT FOC

EXCB-CCTV-40-0229

EXPB150

HML-40-027

EXMD181

EXPB149

EXMD180

N. LINCOLN MEMORIAL DR

E. CLYBOURN ST.

NOTES:

1. THE LOCATION OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS.
2. FOR REMOVAL OF LIGHTING, BRIDGE, SIGN, OR OTHER ITEMS, REFER TO THE RESPECTIVE REMOVAL PLAN SECTIONS.
3. REMOVALS AND DISCONNECTION OF EQUIPMENT OR UTILITY SERVICES MUST BE PROPOSED TO WISDOT STOC A MINIMUM OF TWO WEEKS PRIOR TO SCHEDULED REMOVAL WORK. UNLESS FTMS REMOVAL IS DEMONSTRATED TO BE CRITICAL TO PROJECT COMPLETION SCHEDULE, STOC MAY DENY PROPOSED SCHEDULE AND REQUIRE THAT LOCATIONS BE MAINTAINED UNTIL REMOVALS ARE NECESSARY.

REMOVALS NOTES:

1. REMOVE EXISTING MICROWAVE DETECTOR
2. REMOVE EXISTING POLE
3. REMOVE CABLE
4. REMOVE PULL BOX
5. REMOVE ITS CABINET AND BASE
6. REMOVE CONCRETE BASE

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	FTMS DESIGN	SHEET 294 E

2

N

E. CLYBOURN ST.

N. BROADWAY ST.

N. MILWAUKEE ST.

IH 794/EAST-WEST FREEWAY

IH 794 WEST OFF RAMP

IH 794 WEST ON RAMP

IH 794 SOUTH ON RAMP

IH 794 EAST OFF RAMP

E. ST. PAUL AVE.

N. JACKSON ST

E. CLYBOURN ST. 00 CL

98+00 LW

99+00 LW

100+00 LW

EXCV230
IN EXISTING F.O. SPLICE ENCLOSURE
SPLICE NEW 72-COUNT FOC TO THE
SOUTH TO EXISTING 72-COUNT FOC
TO THE WEST AND MAINTAIN EXISTING
DROP SPLICE TO EX-CB-SDS-40-0200
(QTY. 72 F.O. SPLICES)

E. 00 LE

(3) 2-INCH HDPE DUCTS, DIRECTIONAL BORE
(1) WITH (1) 72-COUNT FOC (S-F) AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

CV199LE

198+00 LE

199+00 LE

200+00 LE

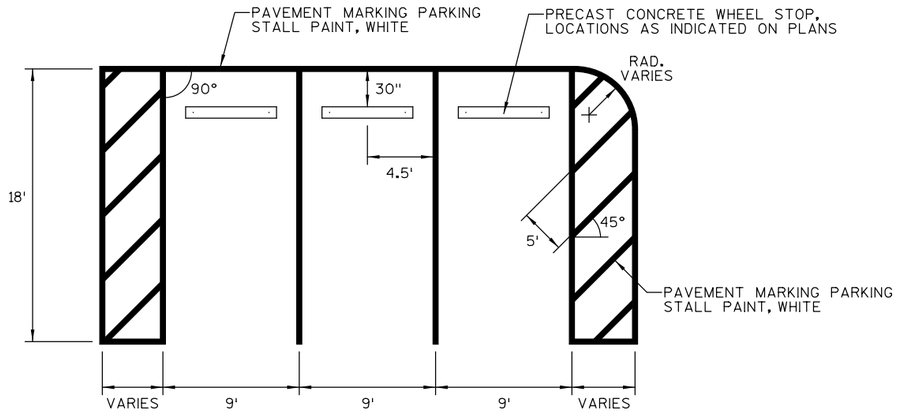
201+00 LE

MATCHLINE 201LE+50

(3) 2-INCH HDPE DUCTS, DIRECTIONAL BORE
(1) WITH (1) 72-COUNT FOC (S-F) AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

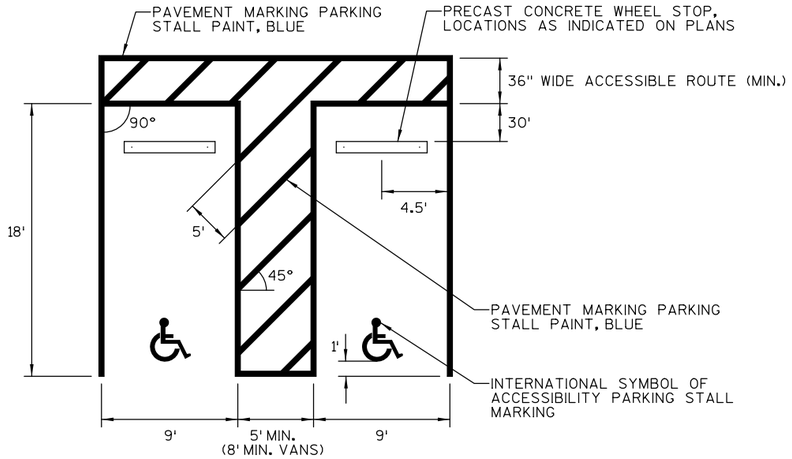
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	FTMS DESIGN	SHEET 295	E

FILE NAME : \\mlww400\ingrproj\63099\13001374_lakefront_gateway\cds\13001374_FM_15.dgn PLOT DATE : 7/28/2015 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1



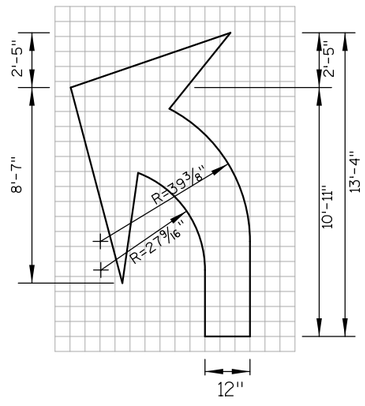
STANDARD VEHICLE PARKING STALL

N.T.S.



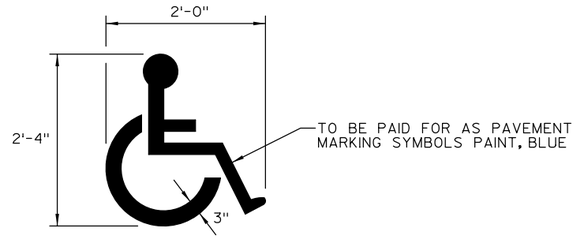
STANDARD ADA ACCESSIBLE PARKING STALL

N.T.S.



PAVEMENT MARKING ARROWS
EPOXY TYPE 2 MODIFIED

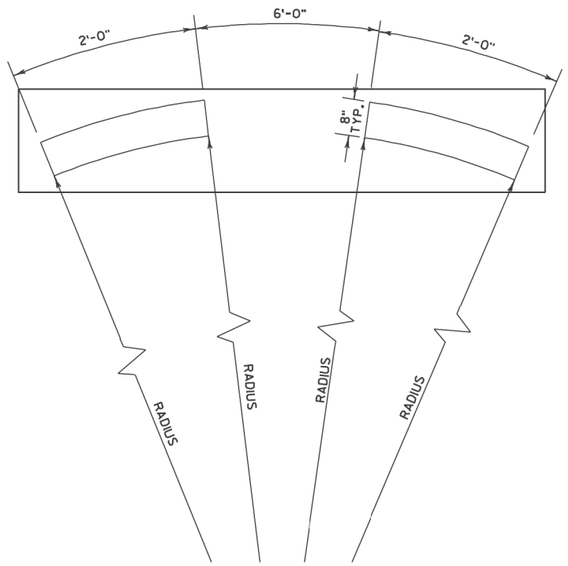
N.T.S.



INTERNATIONAL SYMBOL OF
ACCESSIBILITY PARKING STALL MARKING

N.T.S.

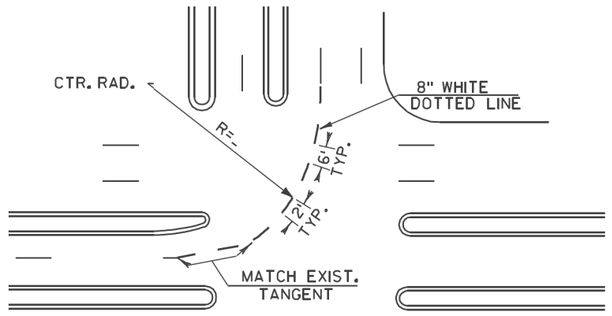
2



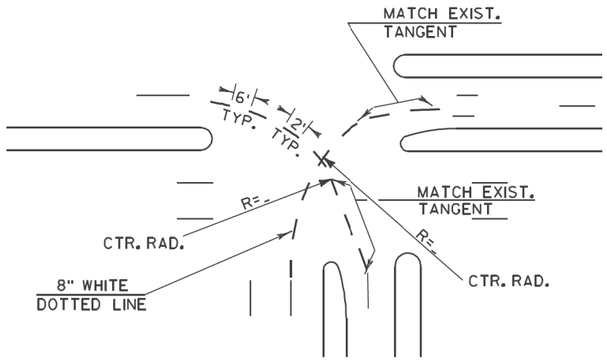
DOTTED TEMPLATE

NOTE: CONTRACTOR TO BUILD TEMPLATE BASED ON RADIUS SHOWN. TEMPLATES ARE TO BE CONSTRUCTED OF PLYWOOD, PLASTIC, OR SUITABLE MATERIAL APPROVED BY THE ENGINEER IN THE FIELD.

INTERSECTING HIGHWAYS
(DOTTED PATTERN)
DOUBLE LEFT-TURNING MOVEMENTS



INTERSECTING HIGHWAYS
(DOTTED PATTERN)
DOUBLE LEFT-TURNING MOVEMENTS



2

GENERAL NOTES

1. DOTTED PAVEMENT MARKING PATTERNS SHALL BE INSTALLED WITH A 2-FOOT SEGMENT AND A 6-FOOT GAP.

2. EXISTING MARKINGS THRU INTERSECTIONS DO NOT ALWAYS HAVE THE 2-FOOT X 6-FOOT CYCLE. IF THE EXISTING MARKINGS ARE OF THE 5-FOOT CYCLE, THEY WILL BE BRUSH BLASTED AND PAVEMENT MARKED WITH A 380 WR TAPE GROOVED IN.

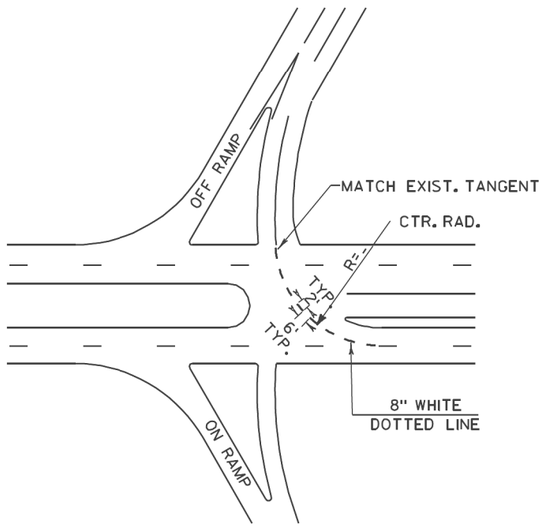
   IF THE EXISTING MARKINGS ARE NOT OF THE 2-FOOT CYCLE, THE CONTRACTOR WILL LAY OUT THE NEW MARKINGS, PREPARE THE EXISTING PAVMENT BY BRUSH PLASTING, AND A 380 WR TAPE PAVEMENT MARK THE NEW CYCLE.

3. IF THE DOTTED PAVEMENT MARKINGS ARE NON-EXISTING, THE CONTRACTOR SHALL LAY OUT THE RADIUS, AS BEING USED BY THE PRESENT TRAFFIC, WITH THE MINIMUM LANE WIDTHS AS SHOWN ON THE PLANS.

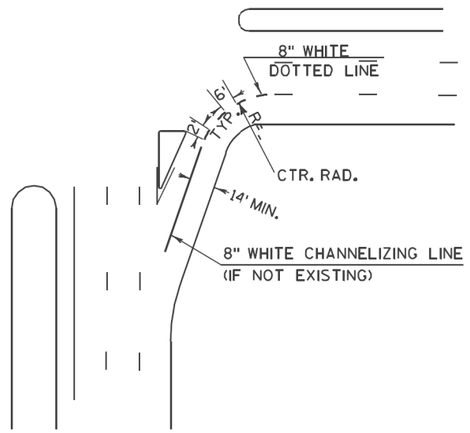
4. THE CONTRACTOR SHALL CONSTRUCT AND USE ONE OF THE TWO DOTTED TEMPLATES WHICH MOST CLOSELY MATCH THE FIELD CONDITIONS.

5. THE CONTRACTOR SHALL PROTECT THE TAPE LINES UNTIL DRY, BY THE USE OF TRAFFIC CONTROLS AND TRAFFIC CONES AS SHOWN ON THE TRAFFIC CONTROL PLANS.

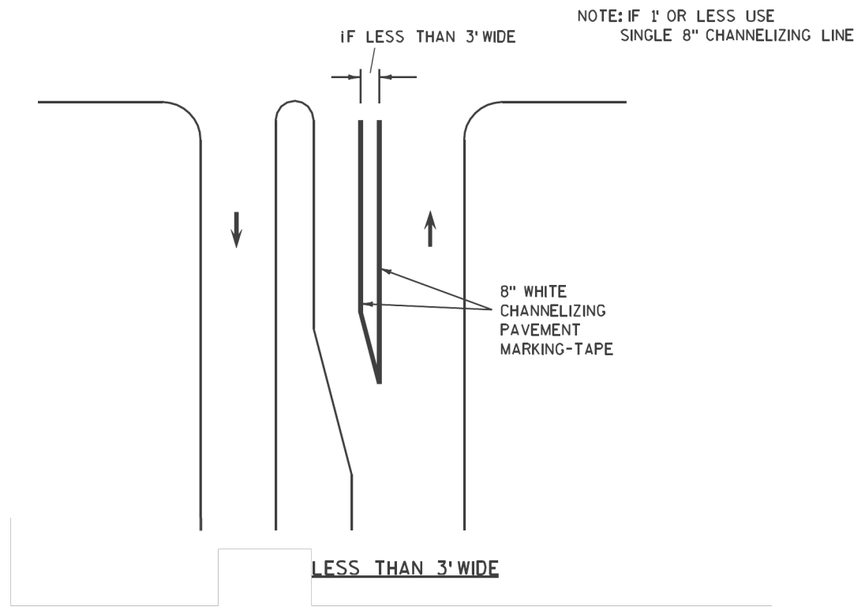
FREEWAY EXIT RAMPS
(DOTTED PATTERN)
DOUBLE LEFT-TURNING MOVEMENTS

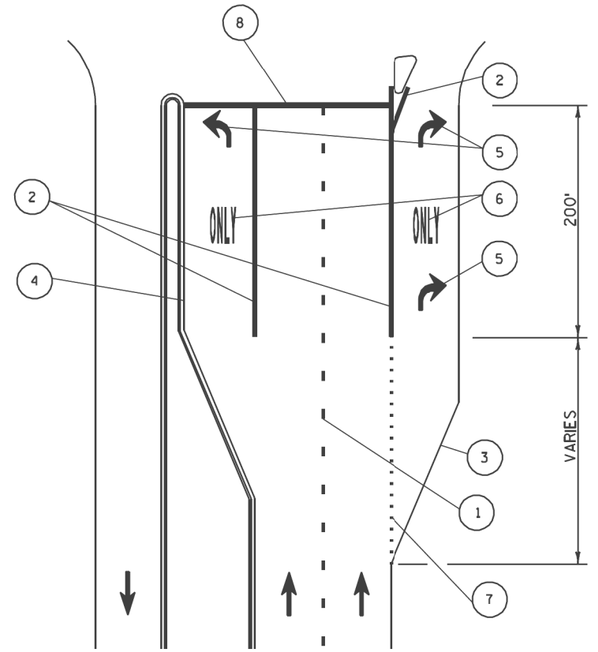


INTERSECTIIONS & EXIT RAMPS
(DOTTED PATTERN)
DOUBLE RIGHT-TURNING MOVEMENTS



STANDARD DETAIL DRAWINGS
15 C 12-2 TRAFFIC CONTROL FOR LANE CLOSURES
(SUITABLE FOR MOVING OPERATIONS)



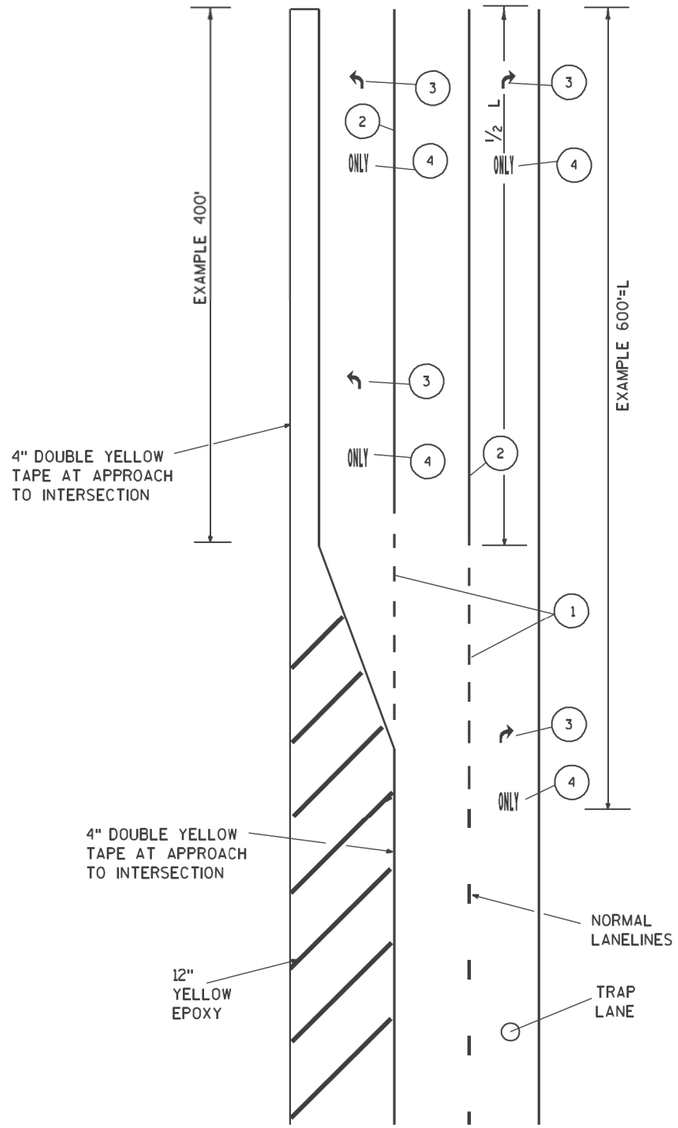


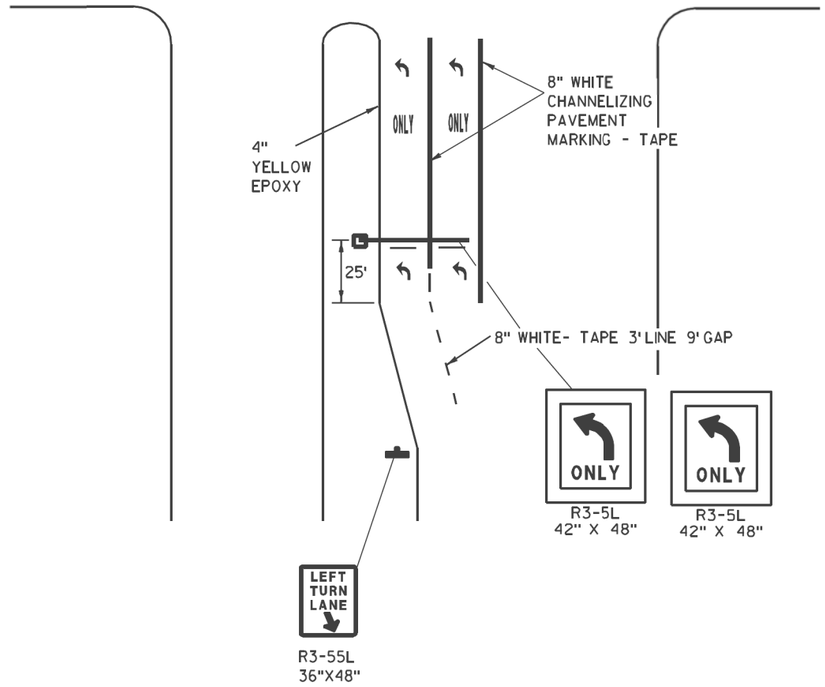
NOTE: SIGNALIZED INTERSECTION

TYPICAL MARKING AT SIGNALIZED INTERSECTION CURB & GUTTER MEDIAN

LEGEND

1. PAVEMENT MARKING 4" LANE LINE WHITE TAPE (12.5' LINE, 37.5' SPACE)
2. PAVEMENT MARKING 8" CHANNELIZING WHITE
3. PAVEMENT MARKING 4" WHITE EDGELINE 45 MPH & GREATER
4. PAVEMENT MARKING 4" YELLOW EDGELINE 45 MPH & GREATER
5. PAVEMENT MARKING TYPE 2 ARROW
6. PAVEMENT MARKING WORDS
7. PAVEMENT MARKING 8" WHITE (3' LINE, 12' SPACE)
8. PAVEMENT MARKING 18" STOP LINE

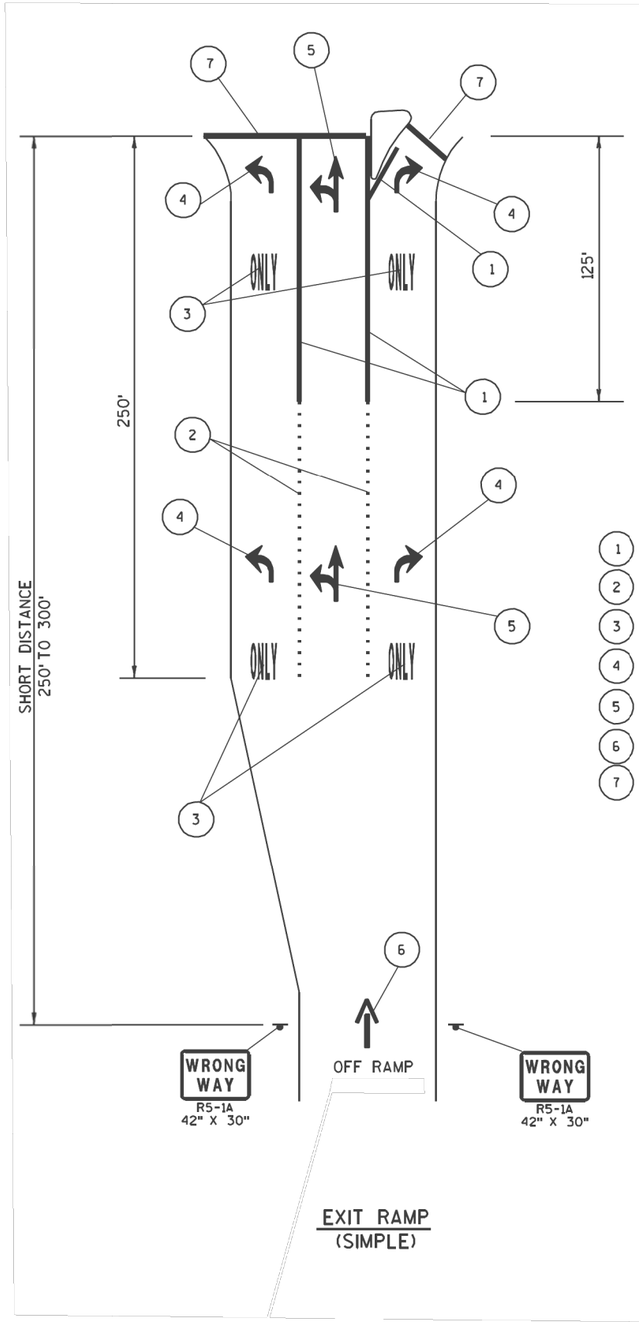




1. 8" WHITE (3'LINE, 9'GAP)-TAPE (A380 WET REFLECTIVE GROOVED IN) 646-018 STSP
2. 8" SOLID WHITE-TAPE (A380 WET REFLECTIVE GROOVED IN) 646-018 STSP
3. ARROW TYPE 2-THERMOPLASTIC GROOVED IN
4. WORD- THERMOPLASTIC GROOVED IN

PROJECT NO:1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING DETAILS	SHEET 299	E

2



LEGEND

1. PAVEMENT MARKING 8" CHANNELIZING WHITE
2. PAVEMENT MARKING 8" WHITE (3'LINE, 9'SPACE)
3. PAVEMENT MARKING WORDS
4. PAVEMENT MARKING TYPE 2 ARROW
5. PAVEMENT MARKING TYPE 3 ARROW
6. PAVEMENT MARKING TYPE 4 ARROW
7. 18" STOP BAR

PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	PAVEMENT MARKING DETAILS	SHEET 300	E

2

N

+50 LM
12+00 LM
DOUBLE (2)
+50 LM
13+00 LM
+50 LM
DOUBLE (2)
DOUBLE (2)
+50 LM
14+00 LM
9'
10'
9'
+50 LM
N LINCOLN MEMORIAL DRIVE
15+00 LM
+50 LM
5'
11'
16+00 LM
11'
5'
+50 LM
DOUBLE (2)
10'
17+00 LM
11'
5'
10'
MATCH LINE - STA. 17+50 LM
INL

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (10'LINE - 30'GAP, WHITE)
4. PAVEMENT MARKING EPOXY 6-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6. PAVEMENT MARKING EPOXY 8-INCH (3'LINE - 9'GAP, WHITE)
7. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
8. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2'LINE - 6'GAP, WHITE)
9. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3'LINE - 9'GAP, WHITE)
10. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5'LINE - 37.5'GAP, WHITE)
11. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
12. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2'LINE - 6'GAP, WHITE)
13. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3'LINE - 9'GAP, WHITE)
14. PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
15. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
16. PAVEMENT MARKING STOP LINE EPOXY 24-INCH
17. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
18. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
19. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20. PAVEMENT MARKING WORDS EPOXY
21. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
22. PAVEMENT MARKING ARROWS EPOXY TYPE 2
23. PAVEMENT MARKING ARROWS EPOXY TYPE 3
24. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
25. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
26. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
27. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
28. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29. PAVEMENT MARKING ARROWS BIKE LANE EPOXY
30. PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
31. PAVEMENT MARKING SYMBOLS PAINT
32. PAVEMENT MARKING PARKING STALL PAINT

KEY MAP

N

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING - LINCOLN MEMORIAL DRIVE	SHEET 301	E

2

NOTE:
SEE TRAFFIC SIGNAL PLAN FOR STOP BAR LOCATIONS

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (10'LINE - 30'GAP, WHITE)
4. PAVEMENT MARKING EPOXY 6-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6. PAVEMENT MARKING EPOXY 8-INCH (3'LINE - 9'GAP, WHITE)
7. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
8. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2'LINE - 6'GAP, WHITE)
9. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3'LINE - 9'GAP, WHITE)
10. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5'LINE - 37.5'GAP, WHITE)
11. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
12. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2'LINE - 6'GAP, WHITE)
13. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3'LINE - 9'GAP, WHITE)
14. PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
15. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
16. PAVEMENT MARKING STOP LINE EPOXY 24-INCH
17. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
18. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
19. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20. PAVEMENT MARKING WORDS EPOXY
21. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
22. PAVEMENT MARKING ARROWS EPOXY TYPE 2
23. PAVEMENT MARKING ARROWS EPOXY TYPE 3
24. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
25. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
26. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
27. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
28. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29. PAVEMENT MARKING ARROWS BIKE LANE EPOXY
30. PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
31. PAVEMENT MARKING SYMBOLS PAINT
32. PAVEMENT MARKING PARKING STALL PAINT

E CHICAGO STREET
51+00 CH
+10
+22
+50 CH
12.5' LINE, 37.5' GAP (2)
6' 5' 11' 11' 5' 6'
3' LINE, 9' GAP (1)
3' LINE, 9' GAP (4)
52+00 CH
+08
+20
+50 CH
12'
MATCH LINE - STA. 17+50 LM
DOUBLE (2)
LM
18+00 LM
+50 LM
11'
19+00 LM
DOUBLE (2)
+50 LM
10'
20+00 LM
+50 LM
21+00 LM
+50 LM
22+00 LM
14'
+50 LM
+78
N LINCOLN MEMORIAL DRIVE
MATCH LINE - STA. 23+00 LM
11'
14'
IH 794 WB
(ABOVE)
1,400' RAD.
418+00 LN
+50 LN
419+00 LN
+50 LN
420+00 LN
+50 LN
12'
12'
421+00 LN
+50 LN
IH 794 WB EXIT RAMP
50'
422+00 LN
+50 LN
423+00
+88
3' LINE, 12' GAP
MATCH LINE - STA. 423+00 LN

KEY MAP
N

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING - LINCOLN MEMORIAL DRIVE	SHEET 302	E

NOTE:
SEE TRAFFIC SIGNAL PLANS FOR STOP BAR LOCATIONS

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (10'LINE - 30'GAP, WHITE)
4. PAVEMENT MARKING EPOXY 6-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6. PAVEMENT MARKING EPOXY 8-INCH (3'LINE - 9'GAP, WHITE)
7. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
8. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2'LINE - 6'GAP, WHITE)
9. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3'LINE - 9'GAP, WHITE)
10. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5'LINE - 37.5'GAP, WHITE)
11. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
12. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2'LINE - 6'GAP, WHITE)
13. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3'LINE - 9'GAP, WHITE)
14. PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
15. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
16. PAVEMENT MARKING STOP LINE EPOXY 24-INCH
17. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
18. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
19. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20. PAVEMENT MARKING WORDS EPOXY
21. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
22. PAVEMENT MARKING ARROWS EPOXY TYPE 2
23. PAVEMENT MARKING ARROWS EPOXY TYPE 3
24. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
25. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
26. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
27. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
28. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29. PAVEMENT MARKING ARROWS BIKE LANE EPOXY
30. PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
31. PAVEMENT MARKING SYMBOLS PAINT
32. PAVEMENT MARKING PARKING STALL PAINT

DL DELINEATORS @ 50 FT SPACING WHITE W/ RED WRONG-WAY REFLECTORS

MATCH LINE - STA. 208+50 LE
MATCH LINE - STA. 109+50 LW
SIGN STRUCTURE S-40-793
IH 794 EB EXIT RAMP
IH 794 WB ENTRANCE RAMP
23+44.72 LM 49.00 LT
25+12.67 LM 121.51 LT
24+68.76 LM 47.00 LT
R=75'
R=70'
R=90'
R=79'
YELLOW
N LINCOLN MEMORIAL DRIVE
IH 794 WB EXIT RAMP
3' LINE, 12' GAP
MATCH LINE - STA. 23+00 LM
MATCH LINE - STA. 28+00 LM
MATCH LINE - STA. 328+00 LS
SIGN STRUCTURE S-40-794
MATCH LINE - STA. 423+00 LN
MATCH LINE - STA. 428+00 LN

KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING - LINCOLN MEMORIAL DRIVE	SHEET 303 E

FILE NAME : 024503_pm.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

LEGEND

23 TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
24 TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
25 TEMPORARY PAVEMENT MARKING 8-INCH (WHITE)
26 TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH (YELLOW)
27 TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
28 TEMPORARY PAVEMENT MARKING ARROWS
29 TEMPORARY PAVEMENT MARKING WORDS

NOTE:
SEE TRAFFIC SIGNAL PLAN FOR STOP BAR LOCATIONS

LEGEND

1 PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2 PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3 PAVEMENT MARKING EPOXY 4-INCH (10'LINE - 30'GAP, WHITE)
4 PAVEMENT MARKING EPOXY 6-INCH (WHITE)
5 PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6 PAVEMENT MARKING EPOXY 8-INCH (3'LINE - 9'GAP, WHITE)
7 PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
8 PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2'LINE - 6'GAP, WHITE)
9 PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3'LINE - 9'GAP, WHITE)
10 PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5'LINE - 37.5'GAP, WHITE)
11 PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
12 PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2'LINE - 6'GAP, WHITE)
13 PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3'LINE - 9'GAP, WHITE) *
14 PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
15 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
16 PAVEMENT MARKING STOP LINE EPOXY 24-INCH
17 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
18 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
19 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20 PAVEMENT MARKING WORDS EPOXY
21 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
22 PAVEMENT MARKING ARROWS EPOXY TYPE 2
23 PAVEMENT MARKING ARROWS EPOXY TYPE 3
24 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
25 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
26 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
27 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
28 PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29 PAVEMENT MARKING ARROWS BIKE LANE EPOXY
30 PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
31 PAVEMENT MARKING SYMBOLS PAINT
32 PAVEMENT MARKING PARKING STALL PAINT
DL DELINEATORS @ 50 FT SPACING WHITE W/ RED WRONG-WAY REFLECTORS

* OR YELLOW, AS NOTED

MATCH LINE - STA. 328+00 LS
IH 794 EB ENTRANCE RAMP
SIGN STRUCTURE S-40-796
CLYBOURN STREET
MATCH LINE - STA. 28+00 CL
N LINCOLN MEMORIAL DRIVE
SIGN STRUCTURE S-40-795
SIGN STRUCTURE S-40-797
IH 794 WB EXIT RAMP
MATCH LINE - STA. 428+00 LN
MATCH LINE - STA. 33+00 LM
24 DOUBLE
R=40'
R=60'
R=86'
YELLOW

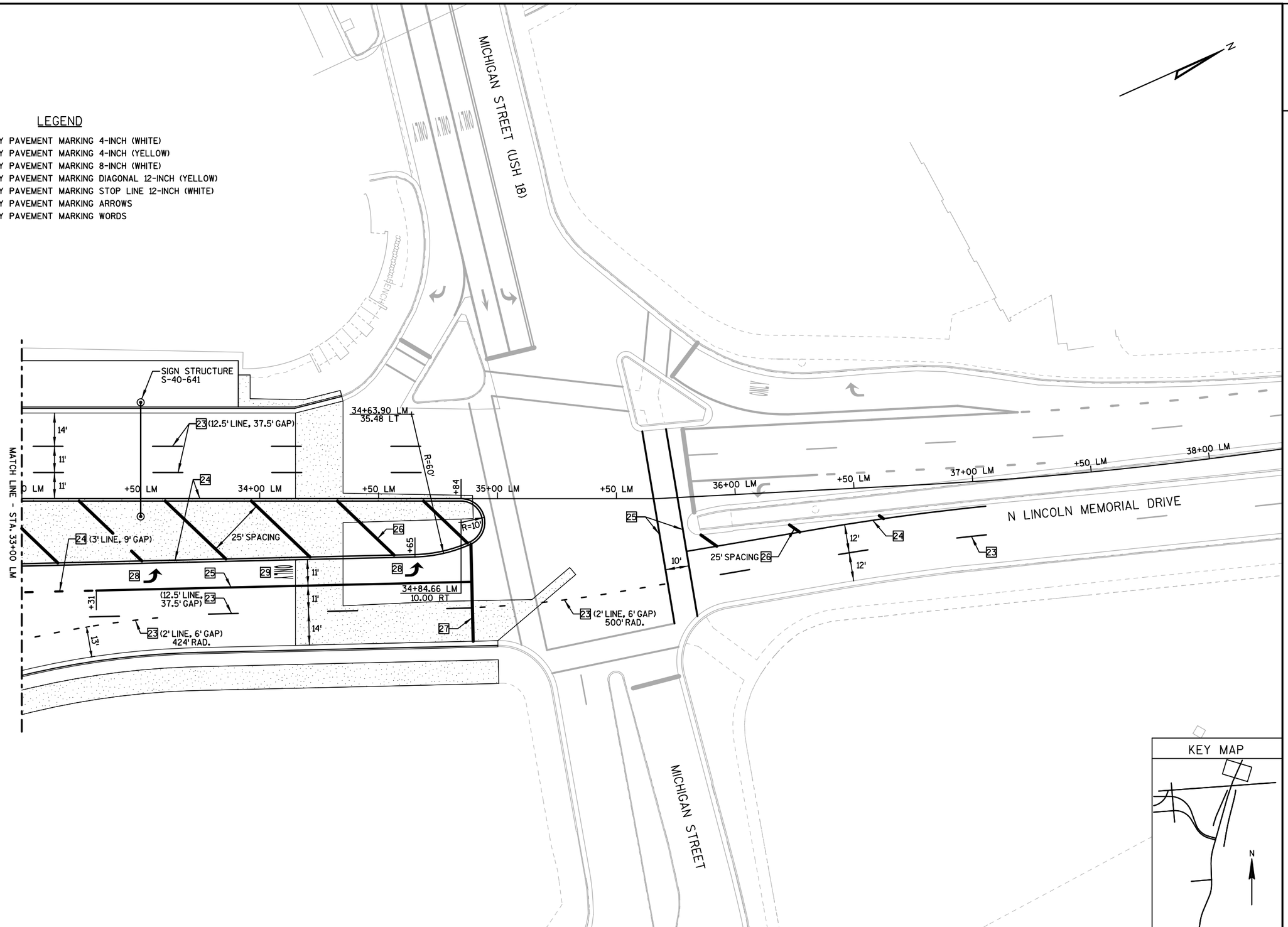
KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING - LINCOLN MEMORIAL DRIVE	SHEET 304	E

2

LEGEND

23 TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
24 TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
25 TEMPORARY PAVEMENT MARKING 8-INCH (WHITE)
26 TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH (YELLOW)
27 TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE)
28 TEMPORARY PAVEMENT MARKING ARROWS
29 TEMPORARY PAVEMENT MARKING WORDS

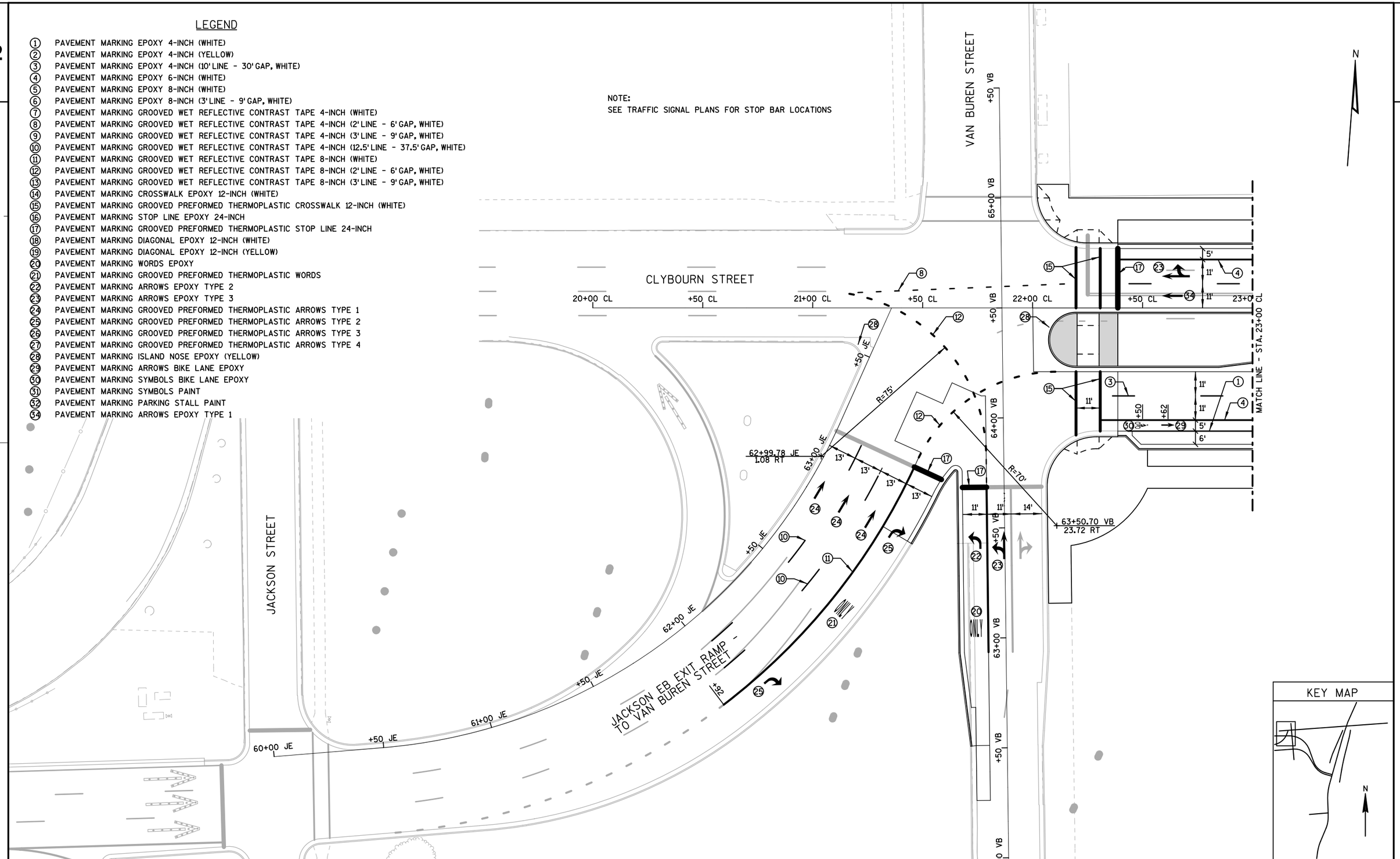


PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING - LINCOLN MEMORIAL DRIVE	SHEET 305	E

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (10'LINE - 30'GAP, WHITE)
4. PAVEMENT MARKING EPOXY 6-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6. PAVEMENT MARKING EPOXY 8-INCH (3'LINE - 9'GAP, WHITE)
7. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
8. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2'LINE - 6'GAP, WHITE)
9. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3'LINE - 9'GAP, WHITE)
10. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5'LINE - 37.5'GAP, WHITE)
11. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
12. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2'LINE - 6'GAP, WHITE)
13. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3'LINE - 9'GAP, WHITE)
14. PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
15. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
16. PAVEMENT MARKING STOP LINE EPOXY 24-INCH
17. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
18. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
19. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20. PAVEMENT MARKING WORDS EPOXY
21. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
22. PAVEMENT MARKING ARROWS EPOXY TYPE 2
23. PAVEMENT MARKING ARROWS EPOXY TYPE 3
24. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
25. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
26. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
27. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
28. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29. PAVEMENT MARKING ARROWS BIKE LANE EPOXY
30. PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
31. PAVEMENT MARKING SYMBOLS PAINT
32. PAVEMENT MARKING PARKING STALL PAINT
34. PAVEMENT MARKING ARROWS EPOXY TYPE 1

NOTE:
SEE TRAFFIC SIGNAL PLANS FOR STOP BAR LOCATIONS



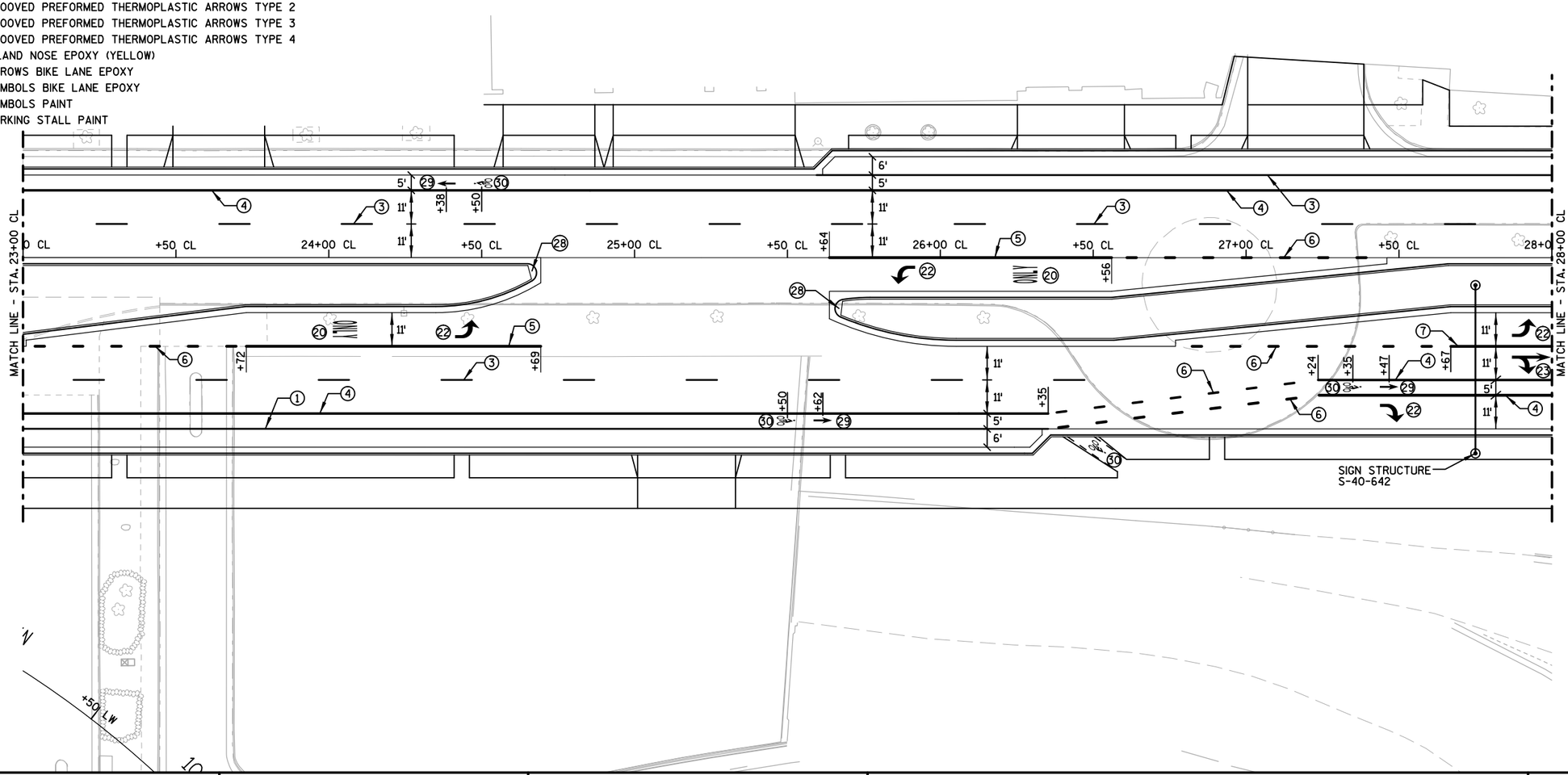
KEY MAP

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING - CLYBOURN STREET	SHEET 306 E

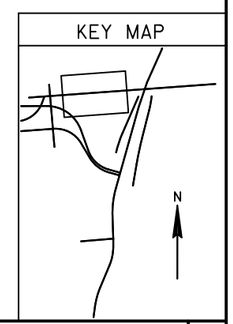
2

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (10' LINE - 30' GAP, WHITE)
4. PAVEMENT MARKING EPOXY 6-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6. PAVEMENT MARKING EPOXY 8-INCH (3' LINE - 9' GAP, WHITE)
7. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
8. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2' LINE - 6' GAP, WHITE)
9. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3' LINE - 9' GAP, WHITE)
10. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE - 37.5' GAP, WHITE)
11. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
12. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE - 6' GAP, WHITE)
13. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE - 9' GAP, WHITE)
14. PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
15. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
16. PAVEMENT MARKING STOP LINE EPOXY 24-INCH
17. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
18. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
19. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20. PAVEMENT MARKING WORDS EPOXY
21. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
22. PAVEMENT MARKING ARROWS EPOXY TYPE 2
23. PAVEMENT MARKING ARROWS EPOXY TYPE 3
24. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
25. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
26. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
27. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
28. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29. PAVEMENT MARKING ARROWS BIKE LANE EPOXY
30. PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
31. PAVEMENT MARKING SYMBOLS PAINT
32. PAVEMENT MARKING PARKING STALL PAINT



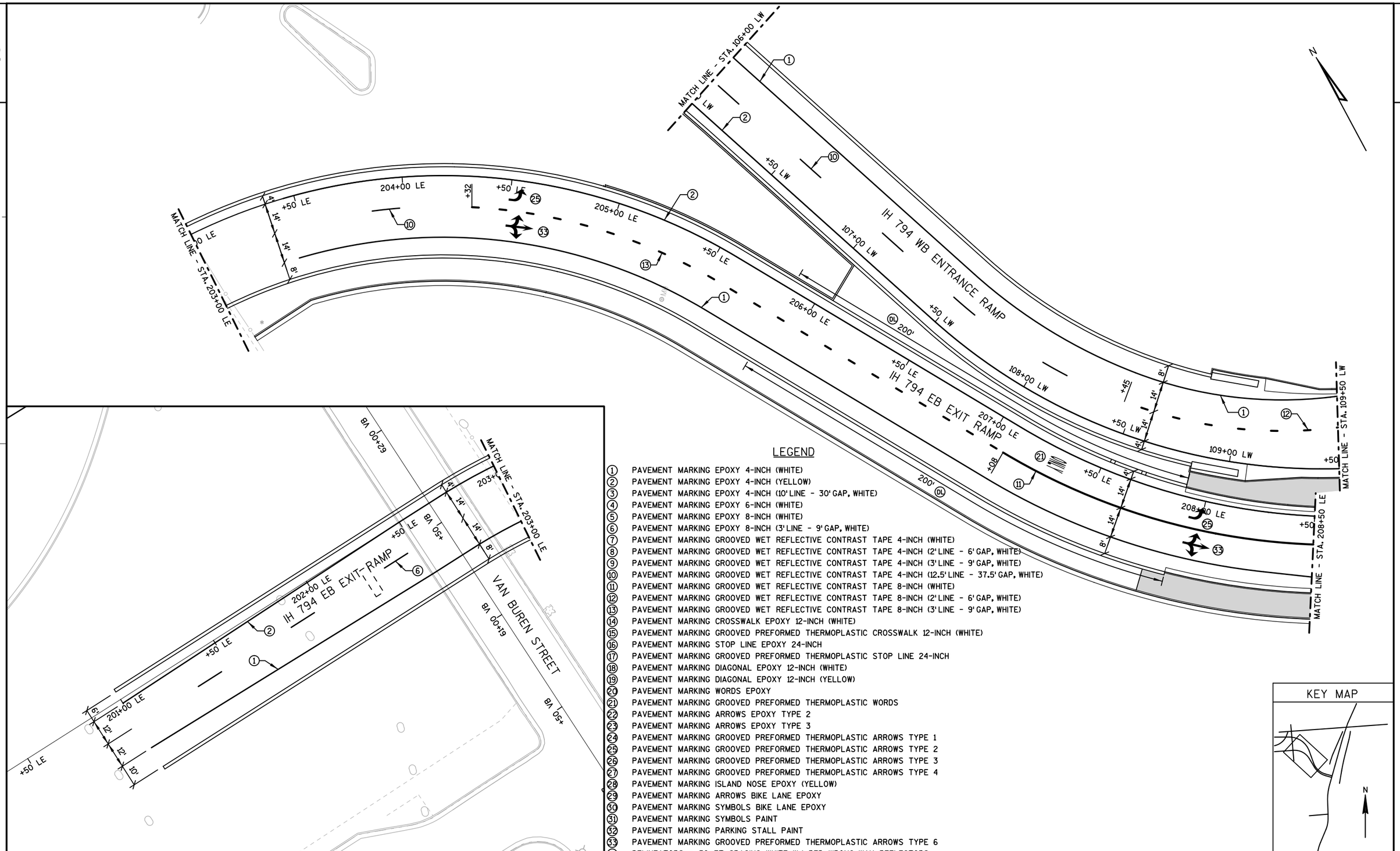
KEY MAP



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING - CLYBOURN STREET	SHEET 307	E

FILE NAME : 024507_pm.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

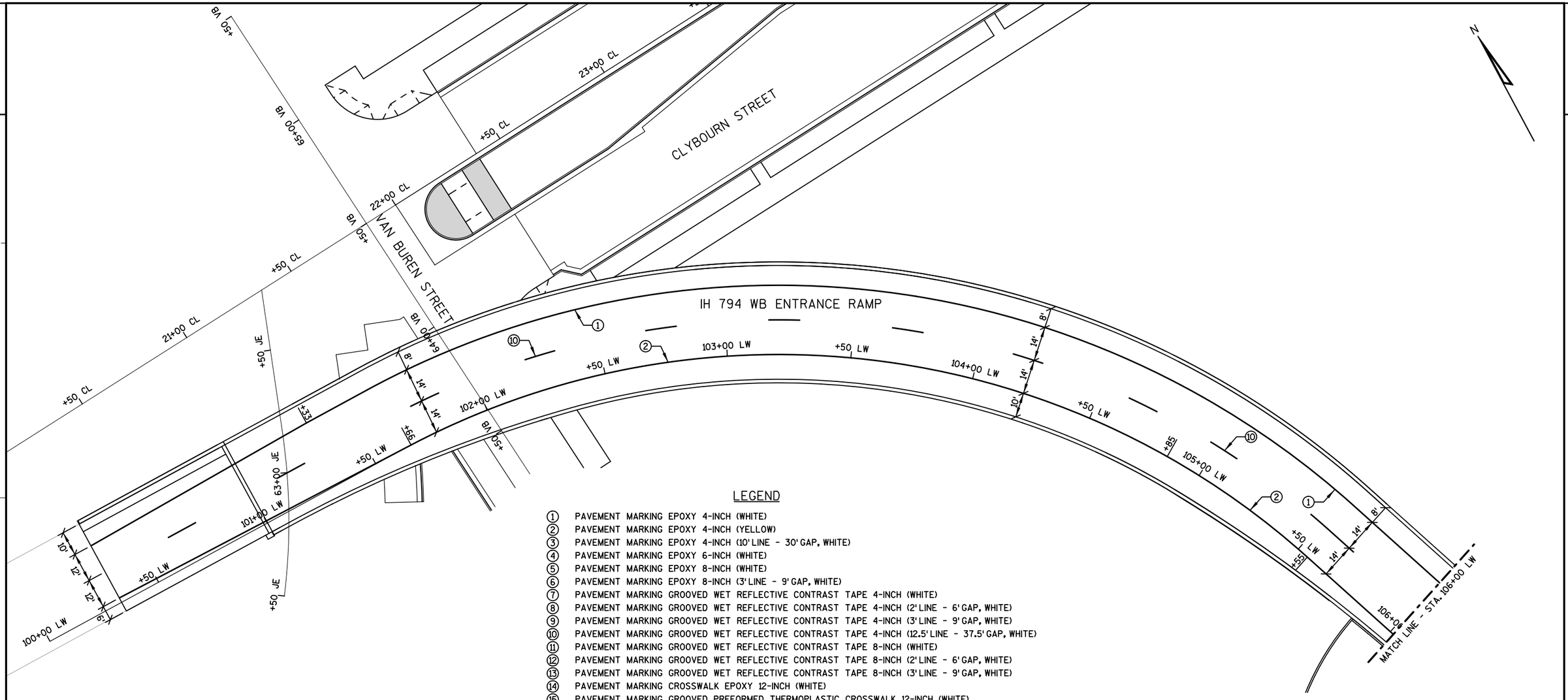


LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3	PAVEMENT MARKING EPOXY 4-INCH (10'LINE - 30'GAP, WHITE)
4	PAVEMENT MARKING EPOXY 6-INCH (WHITE)
5	PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6	PAVEMENT MARKING EPOXY 8-INCH (3'LINE - 9'GAP, WHITE)
7	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
8	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2'LINE - 6'GAP, WHITE)
9	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3'LINE - 9'GAP, WHITE)
10	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5'LINE - 37.5'GAP, WHITE)
11	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
12	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2'LINE - 6'GAP, WHITE)
13	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3'LINE - 9'GAP, WHITE)
14	PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
15	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
16	PAVEMENT MARKING STOP LINE EPOXY 24-INCH
17	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
18	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
19	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20	PAVEMENT MARKING WORDS EPOXY
21	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
22	PAVEMENT MARKING ARROWS EPOXY TYPE 2
23	PAVEMENT MARKING ARROWS EPOXY TYPE 3
24	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
25	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
26	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
27	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
28	PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29	PAVEMENT MARKING ARROWS BIKE LANE EPOXY
30	PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
31	PAVEMENT MARKING SYMBOLS PAINT
32	PAVEMENT MARKING PARKING STALL PAINT
33	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 6
DL	DELINEATORS @ 50 FT SPACING WHITE W/ RED WRONG-WAY REFLECTORS

KEY MAP

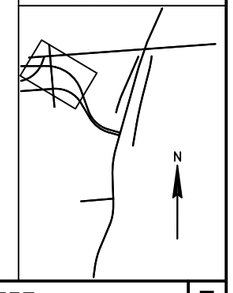
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING - IH 794 EB EXIT AND WB ENTRANCE RAMPS	SHEET 308 E



LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE)
② PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
③ PAVEMENT MARKING EPOXY 4-INCH (10'LINE - 30'GAP, WHITE)
④ PAVEMENT MARKING EPOXY 6-INCH (WHITE)
⑤ PAVEMENT MARKING EPOXY 8-INCH (WHITE)
⑥ PAVEMENT MARKING EPOXY 8-INCH (3'LINE - 9'GAP, WHITE)
⑦ PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2'LINE - 6'GAP, WHITE)
⑨ PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3'LINE - 9'GAP, WHITE)
⑩ PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5'LINE - 37.5'GAP, WHITE)
⑪ PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
⑫ PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2'LINE - 6'GAP, WHITE)
⑬ PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3'LINE - 9'GAP, WHITE)
⑭ PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
⑮ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
⑯ PAVEMENT MARKING STOP LINE EPOXY 24-INCH
⑰ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
⑱ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
⑲ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
⑳ PAVEMENT MARKING WORDS EPOXY
㉑ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
㉒ PAVEMENT MARKING ARROWS EPOXY TYPE 2
㉓ PAVEMENT MARKING ARROWS EPOXY TYPE 3
㉔ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
㉕ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
㉖ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
㉗ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
㉘ PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
㉙ PAVEMENT MARKING ARROWS BIKE LANE EPOXY
㉚ PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
㉛ PAVEMENT MARKING SYMBOLS PAINT
㉜ PAVEMENT MARKING PARKING STALL PAINT

KEY MAP



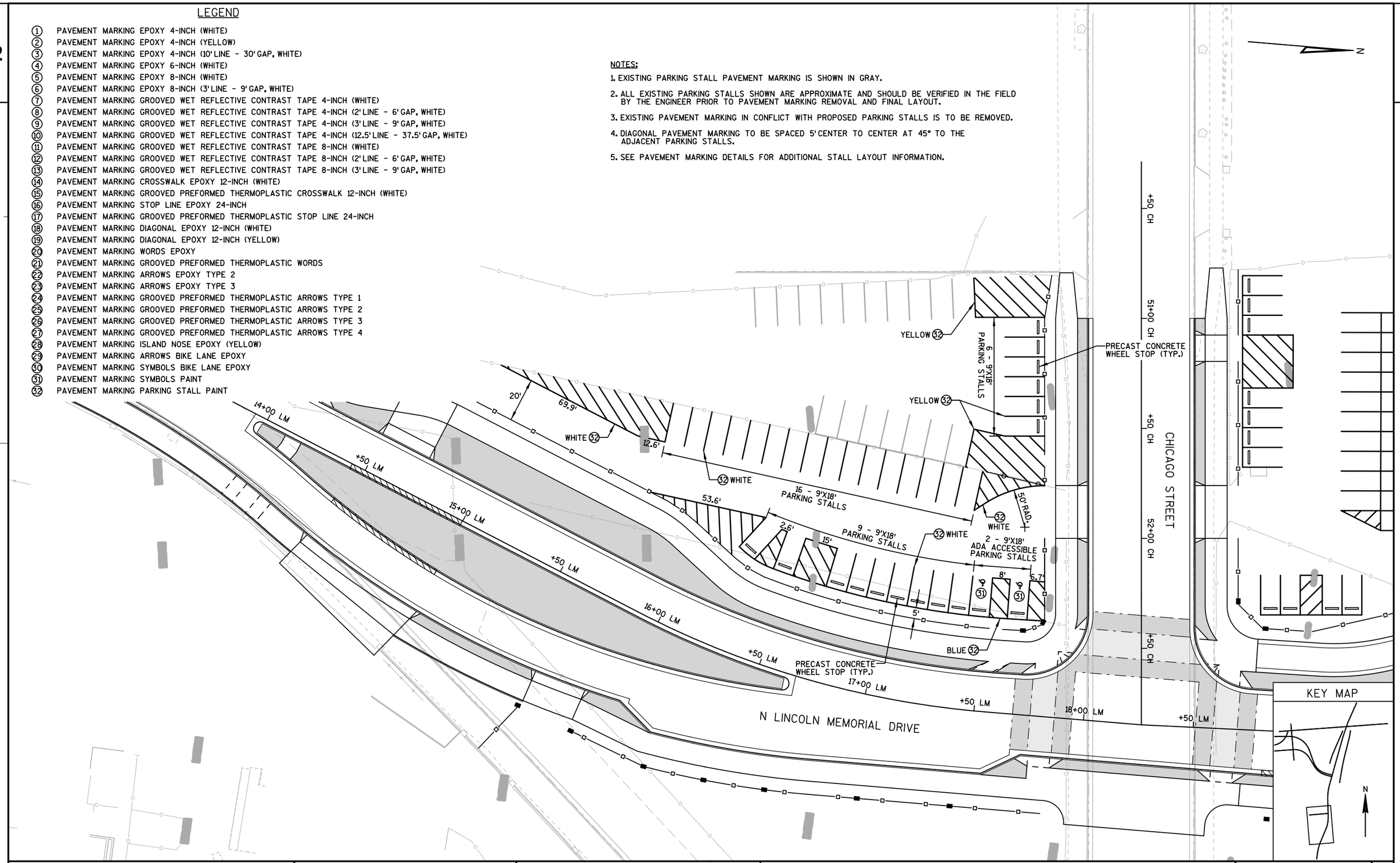
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING - IH 794 WB ENTRANCE RAMP	SHEET 309	E

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (10'LINE - 30'GAP, WHITE)
4. PAVEMENT MARKING EPOXY 6-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6. PAVEMENT MARKING EPOXY 8-INCH (3'LINE - 9'GAP, WHITE)
7. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
8. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2'LINE - 6'GAP, WHITE)
9. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3'LINE - 9'GAP, WHITE)
10. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5'LINE - 37.5'GAP, WHITE)
11. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
12. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2'LINE - 6'GAP, WHITE)
13. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3'LINE - 9'GAP, WHITE)
14. PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
15. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
16. PAVEMENT MARKING STOP LINE EPOXY 24-INCH
17. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
18. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
19. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20. PAVEMENT MARKING WORDS EPOXY
21. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
22. PAVEMENT MARKING ARROWS EPOXY TYPE 2
23. PAVEMENT MARKING ARROWS EPOXY TYPE 3
24. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
25. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
26. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
27. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
28. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29. PAVEMENT MARKING ARROWS BIKE LANE EPOXY
30. PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
31. PAVEMENT MARKING SYMBOLS PAINT
32. PAVEMENT MARKING PARKING STALL PAINT

NOTES:

1. EXISTING PARKING STALL PAVEMENT MARKING IS SHOWN IN GRAY.
2. ALL EXISTING PARKING STALLS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD BY THE ENGINEER PRIOR TO PAVEMENT MARKING REMOVAL AND FINAL LAYOUT.
3. EXISTING PAVEMENT MARKING IN CONFLICT WITH PROPOSED PARKING STALLS IS TO BE REMOVED.
4. DIAGONAL PAVEMENT MARKING TO BE SPACED 5'CENTER TO CENTER AT 45° TO THE ADJACENT PARKING STALLS.
5. SEE PAVEMENT MARKING DETAILS FOR ADDITIONAL STALL LAYOUT INFORMATION.



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING - CHICAGO STREET PARKING LOTS	SHEET 310 E

2

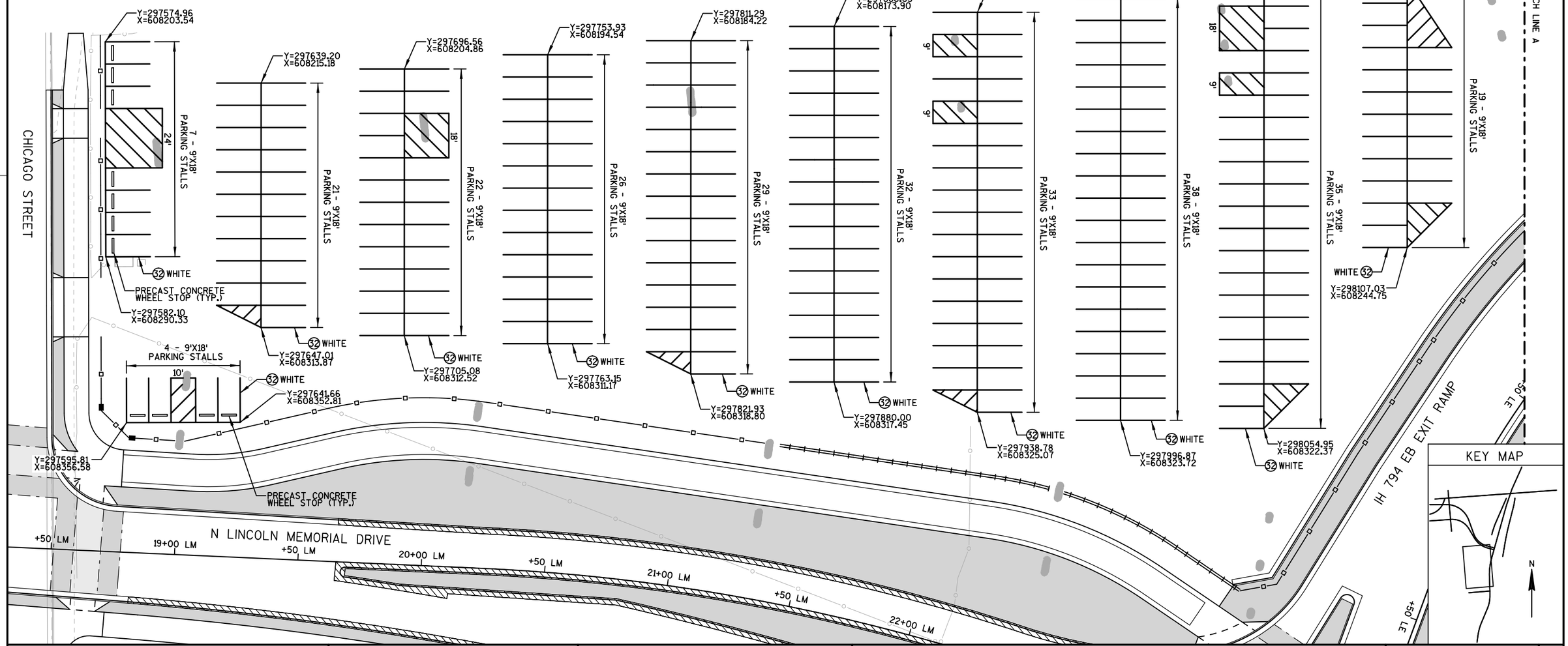
LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (10'LINE - 30'GAP, WHITE)
4. PAVEMENT MARKING EPOXY 6-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6. PAVEMENT MARKING EPOXY 8-INCH (3'LINE - 9'GAP, WHITE)
7. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
8. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2'LINE - 6'GAP, WHITE)
9. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3'LINE - 9'GAP, WHITE)
10. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5'LINE - 37.5'GAP, WHITE)
11. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
12. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2'LINE - 6'GAP, WHITE)
13. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3'LINE - 9'GAP, WHITE)
14. PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
15. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
16. PAVEMENT MARKING STOP LINE EPOXY 24-INCH
17. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
18. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
19. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20. PAVEMENT MARKING WORDS EPOXY
21. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
22. PAVEMENT MARKING ARROWS EPOXY TYPE 2
23. PAVEMENT MARKING ARROWS EPOXY TYPE 3
24. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
25. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
26. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
27. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
28. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29. PAVEMENT MARKING ARROWS BIKE LANE EPOXY
30. PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
31. PAVEMENT MARKING SYMBOLS PAINT
32. PAVEMENT MARKING PARKING STALL PAINT

N

NOTES:

1. EXISTING PARKING STALL PAVEMENT MARKING IS SHOWN IN GRAY.
2. ALL EXISTING PARKING STALLS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD BY THE ENGINEER PRIOR TO PAVEMENT MARKING REMOVAL AND FINAL LAYOUT.
3. EXISTING PAVEMENT MARKING IN CONFLICT WITH PROPOSED PARKING STALLS IS TO BE REMOVED.
4. DIAGONAL PAVEMENT MARKING TO BE SPACED 5'CENTER TO CENTER AT 45° TO THE ADJACENT PARKING STALLS.
5. SEE PAVEMENT MARKING DETAILS FOR ADDITIONAL STALL LAYOUT INFORMATION.



PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	PAVEMENT MARKING - LAKE INTERCHANGE PARKING LOT	SHEET 311 E

NOTES:

1. EXISTING PARKING STALL PAVEMENT MARKING IS SHOWN IN GRAY.
2. ALL EXISTING PARKING STALLS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD BY THE ENGINEER PRIOR TO PAVEMENT MARKING REMOVAL AND FINAL LAYOUT.
3. EXISTING PAVEMENT MARKING IN CONFLICT WITH PROPOSED PARKING STALLS IS TO BE REMOVED.
4. DIAGONAL PAVEMENT MARKING TO BE SPACED 5' CENTER TO CENTER AT 45° TO THE ADJACENT PARKING STALLS.
5. SEE PAVEMENT MARKING DETAILS FOR ADDITIONAL STALL LAYOUT INFORMATION.

N

ST PAUL AVENUE

VAN BUREN STREET

61+00 VB

+50 VB

60+00 VB

204+00 LE

+50 LE

205+00 LE

+50 LE

206+00 LE

+50 LW

107+00 LW

IH 794 WB ENTRANCE RAMP

IH 794 EB EXIT RAMP

+50 LE

+50 LW

108+00 LW

207+00 LE

+50 LW

+50 LE

109+00 LW

208+00 LE

+50 LE

32 WHITE

Y=298420.27
X=607965.14

Y=298421.70
X=607983.09

2 - 9'X18'
PARKING STALLS

32 WHITE

12.1'

15 - 9'X18'
PARKING STALLS

32 WHITE

24'

Y=298366.91
X=608050.94

Y=298360.48
X=607970.24

16 - 9'X18'
PARKING STALLS

Y=298294.72
X=607975.84

7 - 9'X18'
PARKING STALLS

32 WHITE

37'

29'

Y=298303.37
X=608084.50

BLUE 32

5'

31 .6

3'

5'

31 .6

6 - 9'X18'
ADA ACCESSIBLE
PARKING STALLS

3'

5'

31 .6

32 WHITE

31 .6

5'

5'

9 - 9'X18'
PARKING STALLS

8 - 9'X18'
PARKING STALLS

22'

2 - 9'X18'
ADA ACCESSIBLE
PARKING STALLS

32 BLUE

PRECAST CONCRETE
WHEEL STOP (TYP.)

31 .6

8'

31 .6

Y=298240.05
X=607970.98

32 BLUE

Y=298241.24
X=608065.82

Y=298245.37
X=608117.66

32 WHITE

Y=298224.73
X=608085.20

32 WHITE

Y=298177.81
X=608099.32

27'

Y=298182.81
X=608162.12

12 - 9'X18'
PARKING STALLS

KEY MAP

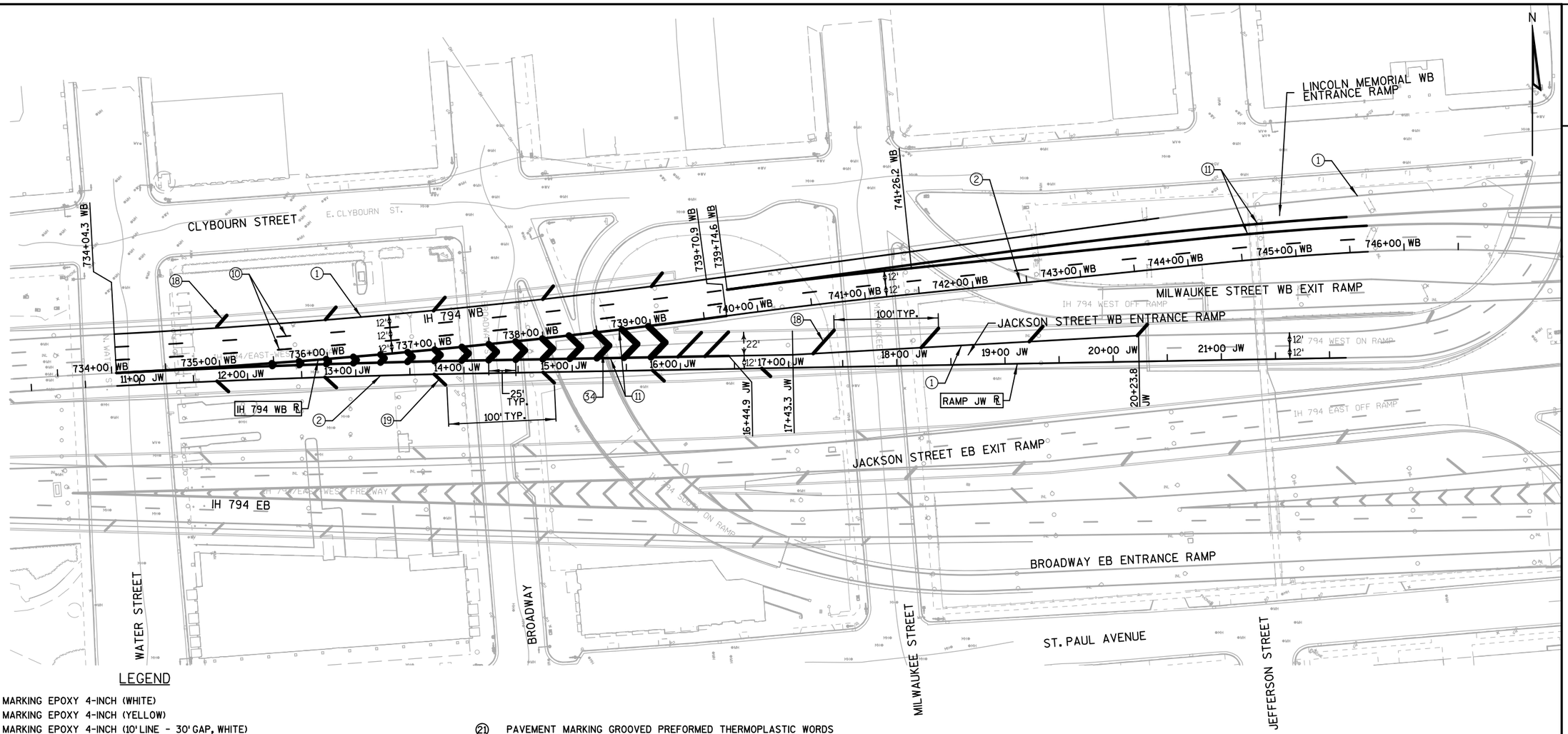
N

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (10' LINE - 30' GAP, WHITE)
4. PAVEMENT MARKING EPOXY 6-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6. PAVEMENT MARKING EPOXY 8-INCH (3' LINE - 9' GAP, WHITE)
7. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
8. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2' LINE - 6' GAP, WHITE)
9. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3' LINE - 9' GAP, WHITE)
10. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE - 37.5' GAP, WHITE)
11. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
12. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE - 6' GAP, WHITE)
13. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE - 9' GAP, WHITE)
14. PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
15. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
16. PAVEMENT MARKING STOP LINE EPOXY 24-INCH
17. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
18. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
19. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20. PAVEMENT MARKING WORDS EPOXY
21. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
22. PAVEMENT MARKING ARROWS EPOXY TYPE 2
23. PAVEMENT MARKING ARROWS EPOXY TYPE 3
24. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
25. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
26. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
27. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
28. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29. PAVEMENT MARKING ARROWS BIKE LANE EPOXY
30. PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
31. PAVEMENT MARKING SYMBOLS PAINT
32. PAVEMENT MARKING PARKING STALL PAINT

MATCH LINE A

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING - LAKE INTERCHANGE PARKING LOT	SHEET 312	E



LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (10'LINE - 30'GAP, WHITE)
4. PAVEMENT MARKING EPOXY 6-INCH (WHITE)
5. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6. PAVEMENT MARKING EPOXY 8-INCH (3'LINE - 9'GAP, WHITE)
7. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
8. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (2'LINE - 6'GAP, WHITE)
9. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (3'LINE - 9'GAP, WHITE)
10. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5'LINE - 37.5'GAP, WHITE)
11. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
12. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2'LINE - 6'GAP, WHITE)
13. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3'LINE - 9'GAP, WHITE)
14. PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE)
15. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
16. PAVEMENT MARKING STOP LINE EPOXY 24-INCH
17. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH
18. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
19. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20. PAVEMENT MARKING WORDS EPOXY
21. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
22. PAVEMENT MARKING ARROWS EPOXY TYPE 2
23. PAVEMENT MARKING ARROWS EPOXY TYPE 3
24. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
25. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
26. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
27. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
28. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
29. PAVEMENT MARKING ARROWS BIKE LANE EPOXY
30. PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
31. PAVEMENT MARKING SYMBOLS PAINT
32. PAVEMENT MARKING PARKING STALL PAINT
34. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)

IH 794 WB CURVE DATA

P.I. = 732+14.70
Y = 298,549.93
X = 605,964.02
DELTA = 2° 17'23" (RT)
T = 189.60'
L = 379.16'
R = 9,488.00'
P.C. = 730+25.10
P.T. = 734+04.26

P.I. = 736+89.57
Y = 298,574.72
X = 606,438.29
DELTA = 4° 43'39" (LT)
T = 285.32'
L = 570.31'
R = 6,912.00'
P.C. = 734+04.26
P.T. = 739+74.57

P.I. = 740+50.38
Y = 298,623.23
X = 606,796.15
DELTA = 1° 53'42" (RT)
T = 75.81'
L = 151.61'
R = 4,583.66'
P.C. = 739+74.57
P.T. = 741+26.18

P.I. = 744+94.04
Y = 298,668.25
X = 607,237.53
DELTA = 2° 54'22" (RT)
T = 72.67'
L = 145.31'
R = 2,864.79'
P.C. = 744+21.37
P.T. = 745+66.68

RAMP JW CURVE DATA

P.I. = 12+01.73
Y = 298,555.60
X = 606,276.41
DELTA = 2° 26'21" (RT)
T = 201.73'
L = 403.39'
R = 9,476.00'
P.C. = 10+00.00
P.T. = 14+03.39

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PAVEMENT MARKING PLAN	SHEET 313	E

GENERAL NOTES FOR TRAFFIC CONTROL

1) THE EXACT NUMBER, LOCATION , AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

2) CONFLICTING TRAFFIC SIGNS SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER. COVERING OR REMOVAL OF SIGNS SHALL BE PAID FOR AS TRAFFIC CONTROL COVERING SIGNS TYPE I OR II.

3) A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE WORK AREAS, IS WARRANTED BY CONDITIONS, OR AS DIRECTED BY THE ENGINEER. HOWEVER, CONTRACTOR SHALL NOT USE FLAG PERSONS TO DIRECT, STOP OR CONTROL TRAFFIC ON IH 794 AT ANY TIME.

4) ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

5) "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.

6) FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A TYPE C STEADY BURN WARNING LIGHT.

7) ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, AND EQUIPPED WITH TWO TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

8) DIMENSIONS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER ADJACENT TO TRAFFIC. STATION CALL-OUTS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE CENTER OF THE BARRIER.

9) COVER DETOUR SIGNING WHEN NOT IN USE. INCIDENTAL TO "TRAFFIC CONTROL DETOUR SIGNS" ITEM.

10) WORK AREAS SHOWN ARE NOT DEMONSTRATED TO REFLECT ALL REMOVALS. SEE BRIDGE REMOVAL OVERVIEW SHEETS FOR ADDITIONAL INFORMATION.

GENERAL NOTES FOR FIXED MESSAGE SIGNS FOUND ON TRAFFIC CONTROL SHEETS

1) CONTRACTOR SHALL LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY TYPE I SIGN AND A MINIMUM OF 200' FROM ANY TYPE II SIGN.

2) ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.

3) SEE FIXED MESSAGE SIGN LAYOUT SHEETS FOR MORE INFORMATION.

4) PORTABLE CHANGEABLE MESSAGE SIGNS NOTING RAMP CLOSURES OR TRAFFIC PATTERN CHANGES SHALL BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

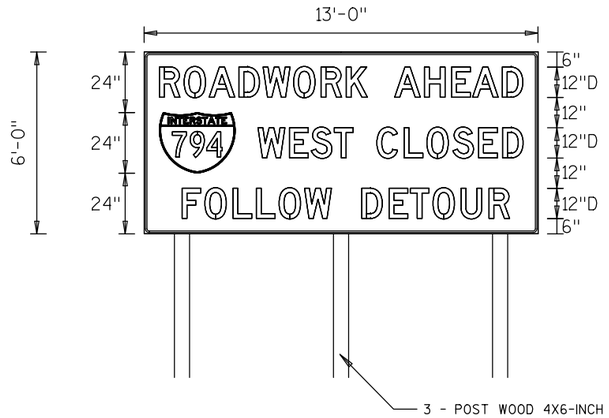
STANDARD WISDOT WORK ZONE TRAFFIC CONTROL SYMBOLS

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- FLEXIBLE TUBULAR MARKER
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

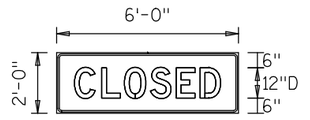
NON-STANDARD WORK ZONE TRAFFIC CONTROL SYMBOLS

- PW4 — PAVEMENT MARKING PAINT, 4-INCH (WHITE)
- PY4 — PAVEMENT MARKING PAINT, 4-INCH (YELLOW)
- PW8 — PAVEMENT MARKING PAINT, 8-INCH (WHITE)
- PW12 — PAVEMENT MARKING PAINT, 12-INCH (WHITE)
- TW4 — TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (WHITE)
- TY4 — TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 4-INCH (YELLOW)
- TW8 — TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 8-INCH (WHITE)
- TW12 — TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, 12-INCH (WHITE)
- PA2 — PAVEMENT MARKING ARROWS PAINT, TYPE 2
- PW — PAVEMENT MARKING WORDS PAINT

2



500



501

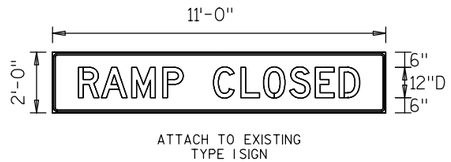
ATTACH TO EXISTING
TYPE I SIGN



502

504

MOUNT ON EXISTING SIGN BRIDGE POST



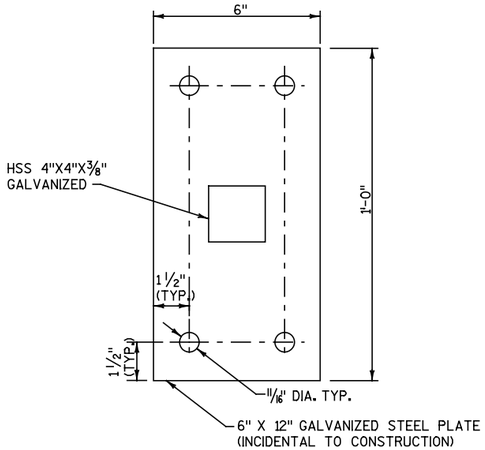
503

505

ATTACH TO EXISTING
TYPE I SIGN

GENERAL NOTES:

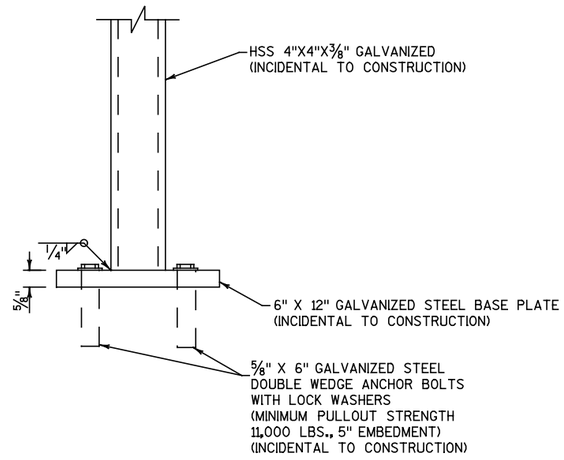
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIRMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD , BUT BEFORE INSTALLATION, THE PROJECT ENGINEER SHALL VERIFY EACH SIGN LOCATION.
3. ALL SIGNS TO BE MOUNTED ON WOOD POST SUPPORTS (4" x 6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN. SIGNS WHERE NO POSTS ARE SHOWN TO BE MOUNTED AS NOTED.
4. SIGNS ON THIS SHEET TO BE PAID UNDER THE BID ITEM "TRAFFIC CONTROL SIGNS FIXED MESSAGE".
5. SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND WITH BLACK BORDER UNLESS OTHERWISE NOTED.
6. ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS"
   12" CAPS SHALL BE SERIES "D"
   8" CAPS SHALL BE SERIES "D"
   6" CAPS SHALL BE SERIES "C"
7. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.
8. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. DO NOT SCALE.



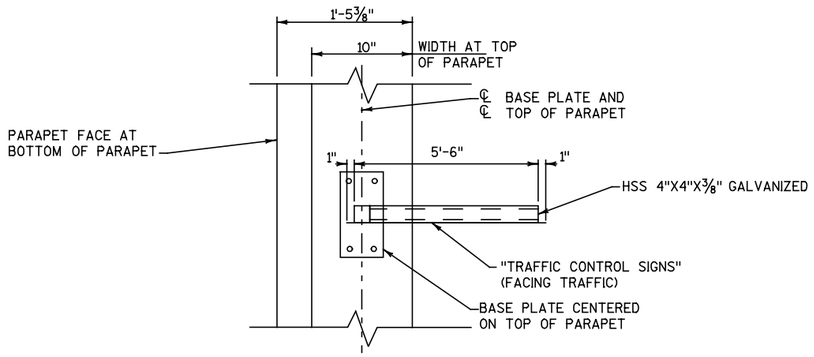
PLAN VIEW - BASE PLATE

NOTES:

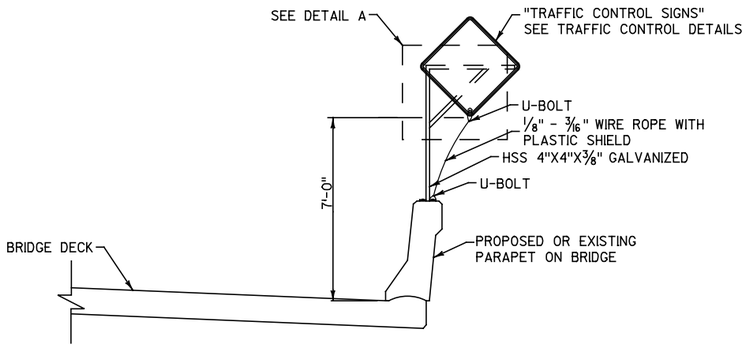
1. BRIDGE PARAPET SIGN POSTS ARE TEMPORARY.
2. ON PERMANANT PARAPETS, REMOVE THE BASE PLATES AND ANCHOR BOLTS, COMPLETELY FILL REMAINING HOLES WITH A NON-SHIRNK COMMERCIAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST. (INCIDENTAL TO CONSTRUCTION)
3. MOUNTING HARDWARE, FABRICATING, FURNISHING, INSTALLATION, AND REMOVAL OF THE BARRIER WALL SIGN BRACKETS ARE INCIDENTAL TO "TRAFFIC CONTROL SIGNS".



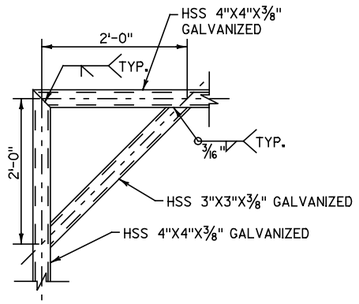
SIDE VIEW - SIGN POST & BASE PLATE



PLAN VIEW - OVERALL



SIDE VIEW - OVERALL



DETAIL A
SIGN NOT SHOWN FOR CLARITY

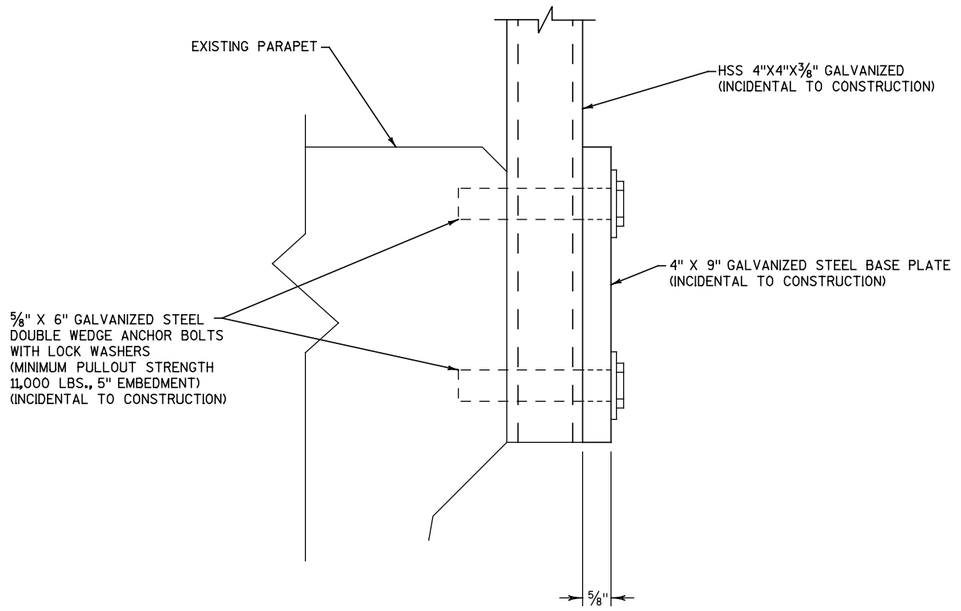
MOUNTING TRAFFIC CONTROL SIGNS TO BRIDGE PARAPET - TOP

N.T.S.

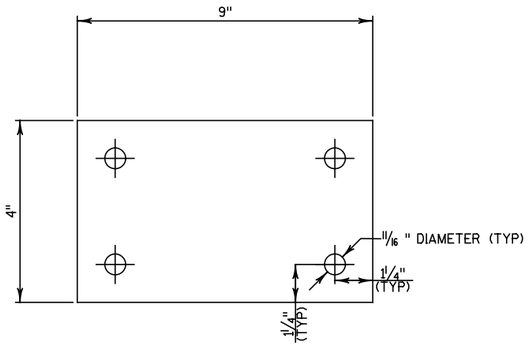
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS - TRAFFIC CONTROL SIGN MOUNTING	SHEET 316	E

NOTES:

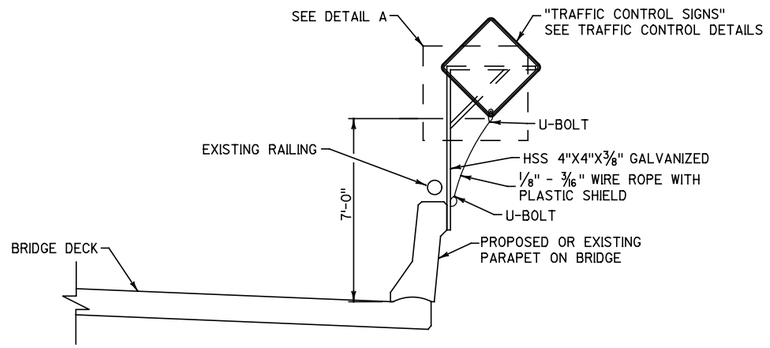
1. BRIDGE PARAPET SIGN POSTS ARE TEMPORARY.
2. ON PERMANANT PARAPETS, REMOVE THE BASE PLATES AND ANCHOR BOLTS, COMPLETELY FILL REMAINING HOLES WITH A NON-SHIRNK COMMERCIAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST. (INCIDENTAL TO CONSTRUCTION)
3. MOUNTING HARDWARE, FABRICATING, FURNISHING, INSTALLATION, AND REMOVAL OF THE BARRIER WALL SIGN BRACKETS ARE INCIDENTAL TO "TRAFFIC CONTROL SIGNS".



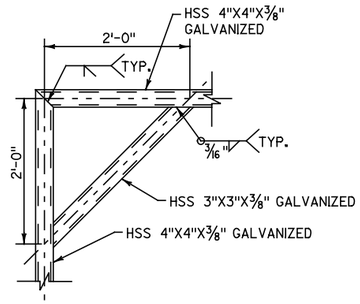
SIDE VIEW - SIGN POST & BASE PLATE



6" x 9" GALVANIZED STEEL PLATE DETAIL



SIDE VIEW - OVERALL



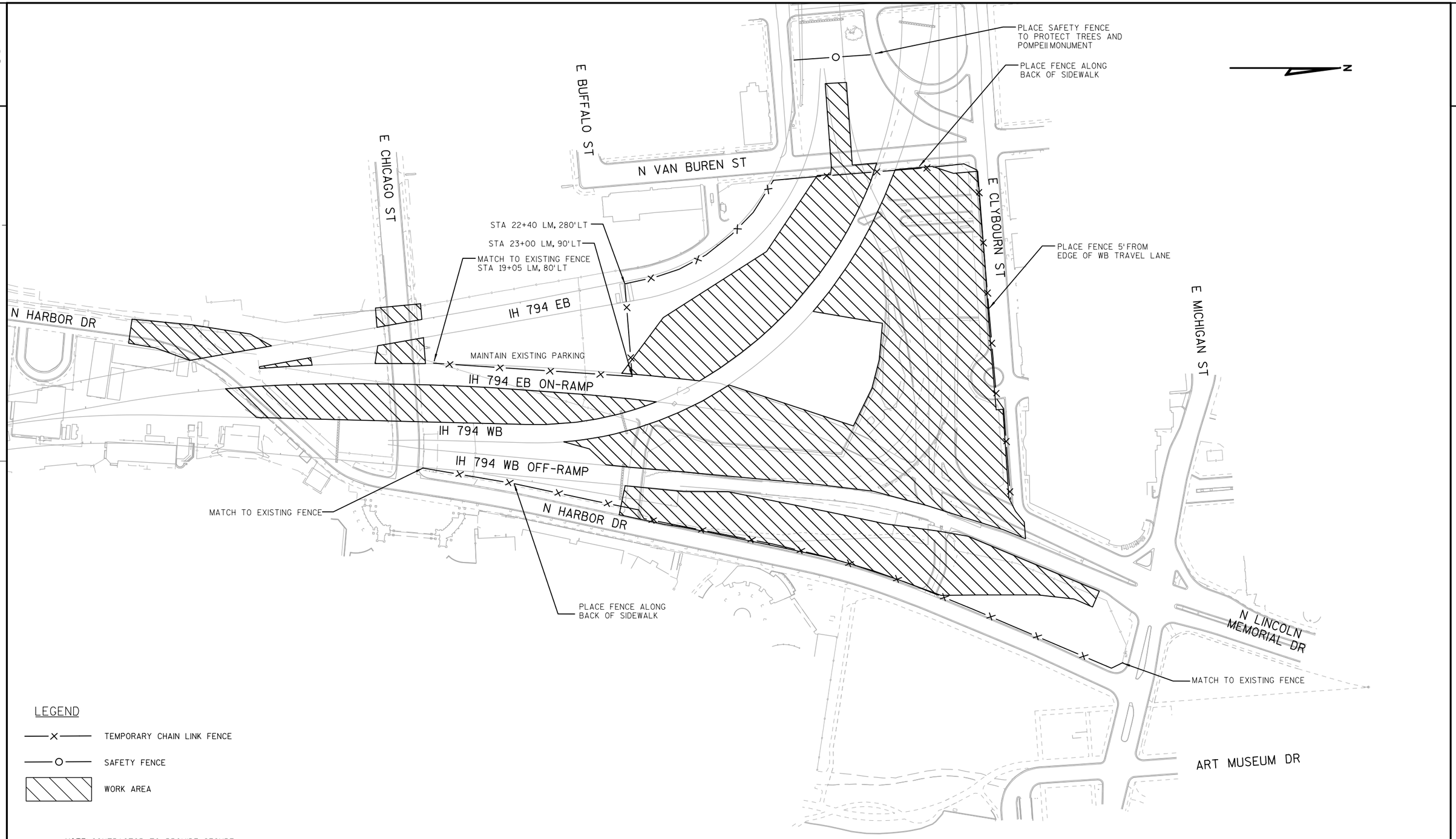
DETAIL A
SIGN NOT SHOWN FOR CLARITY

MOUNTING TRAFFIC CONTROL SIGNS TO BRIDGE PARAPET - SIDE

N.T.S.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS - TRAFFIC CONTROL SIGN MOUNTING	SHEET 317 E

2



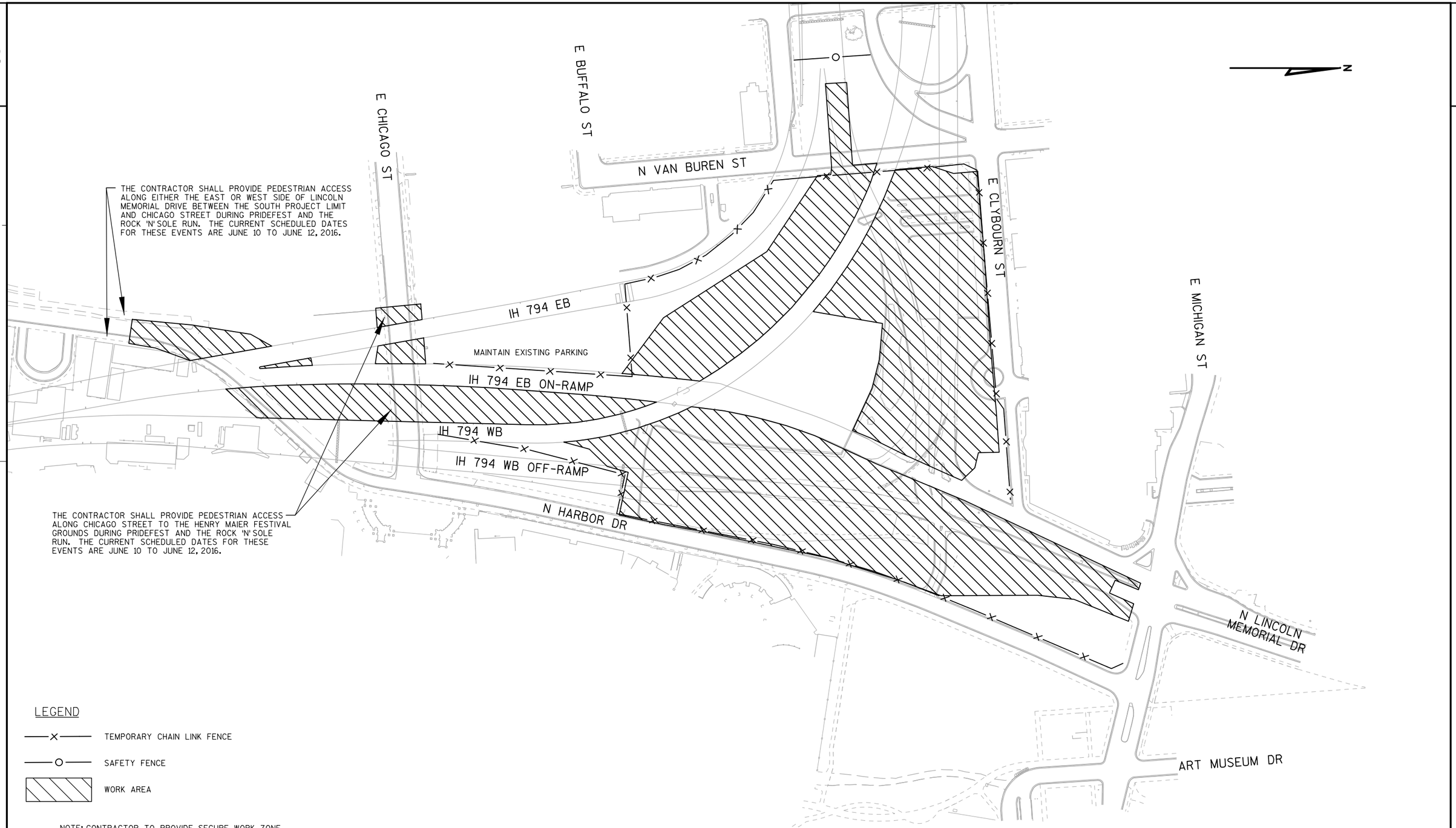
LEGEND

- TEMPORARY CHAIN LINK FENCE
- SAFETY FENCE
- WORK AREA

NOTE: CONTRACTOR TO PROVIDE SECURE WORK ZONE. TEMPORARY FENCE MAY BE REVISED BASED ON CONTRACTOR OPERATIONS.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY FENCE PLAN - TRAFFIC CONTROL STAGE 1	SHEET 318	E

2



LEGEND

—×— TEMPORARY CHAIN LINK FENCE

—○— SAFETY FENCE

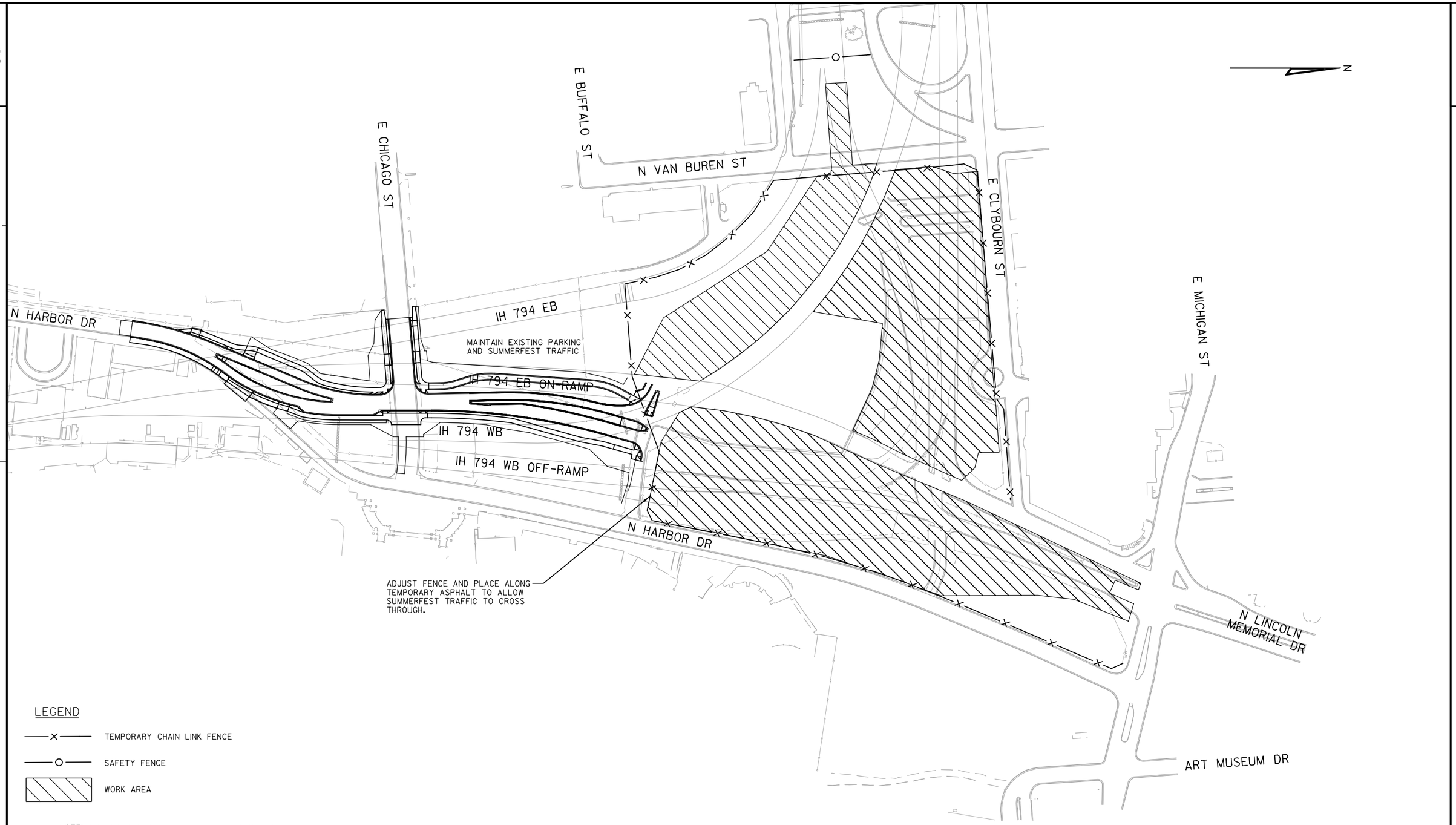
▨ WORK AREA

NOTE: CONTRACTOR TO PROVIDE SECURE WORK ZONE. TEMPORARY FENCE MAY BE REVISED BASED ON CONTRACTOR OPERATIONS.

FENCING PLAN SHOWN SHALL ONLY BE USED UNTIL JUNE 15, 2016. USE LAYOUT IN STAGE 2B AFTER JUNE 15, 2016.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY FENCE PLAN - TRAFFIC CONTROL STAGE 2A	SHEET 319	E

2



LEGEND

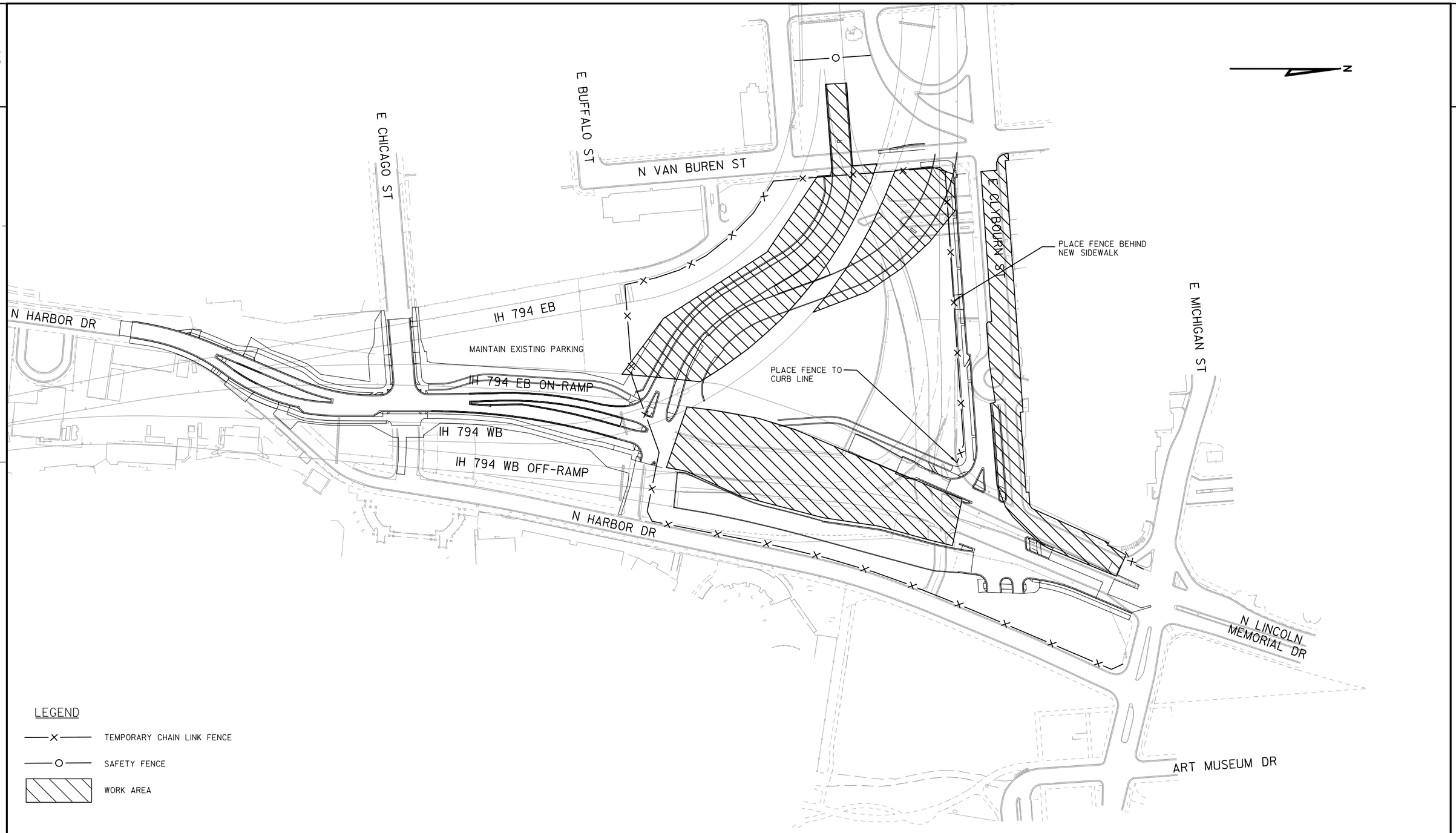
- TEMPORARY CHAIN LINK FENCE
- SAFETY FENCE
- WORK AREA

NOTE: CONTRACTOR TO PROVIDE SECURE WORK ZONE. TEMPORARY FENCE MAY BE REVISED BASED ON CONTRACTOR OPERATIONS.

FENCING PLAN SHOWN SHALL BE IN PLACE BY JUNE 15, 2016.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY FENCE PLAN - TRAFFIC CONTROL STAGE 2B	SHEET 320	E

2



LEGEND

—×— TEMPORARY CHAIN LINK FENCE

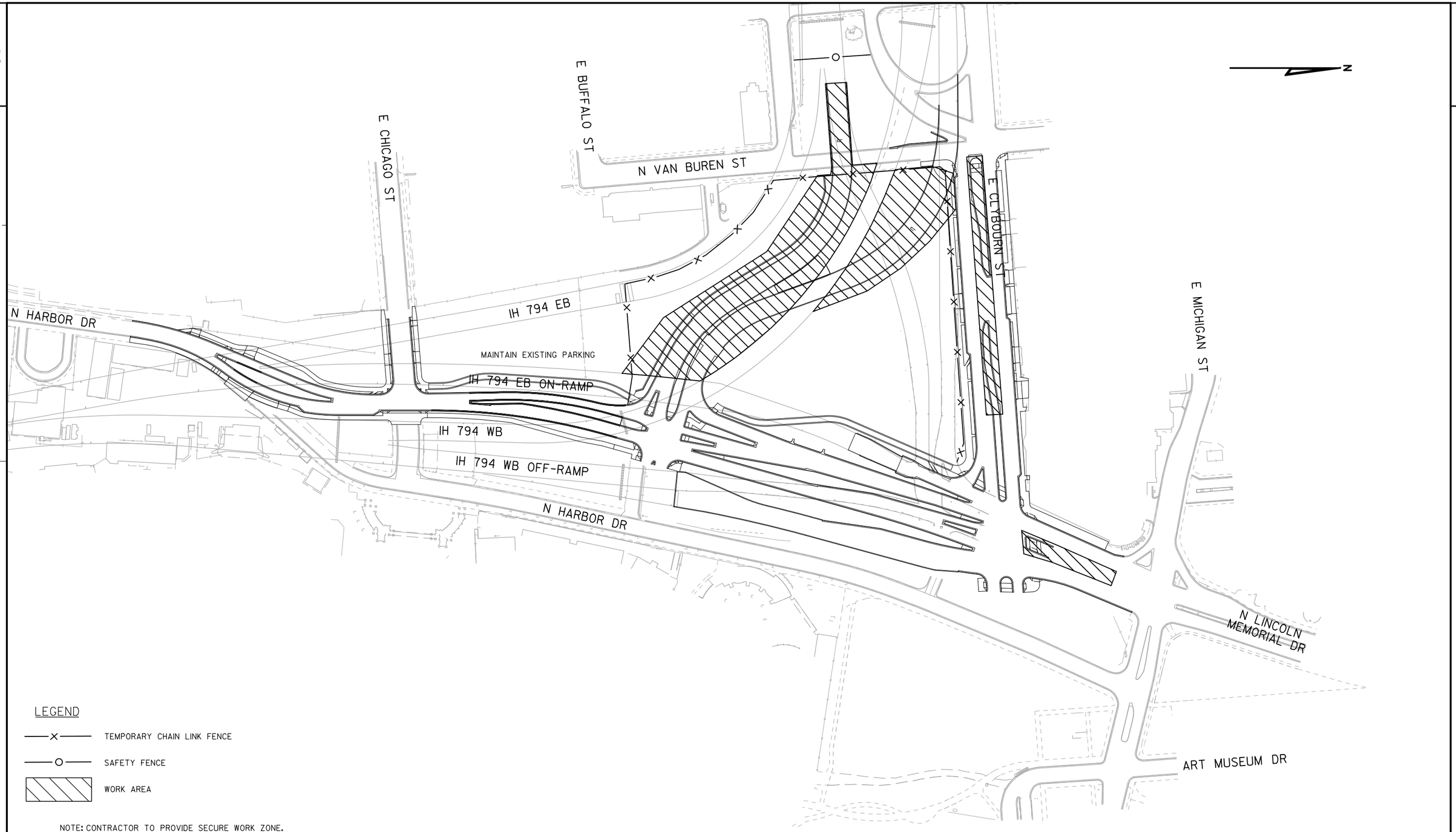
—○— SAFETY FENCE

▨ WORK AREA

NOTE: CONTRACTOR TO PROVIDE SECURE WORK ZONE. TEMPORARY FENCE MAY BE REVISED BASED ON CONTRACTOR OPERATIONS.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY FENCE PLAN - TRAFFIC CONTROL STAGE 3	SHEET 321	E

2



LEGEND

—×— TEMPORARY CHAIN LINK FENCE

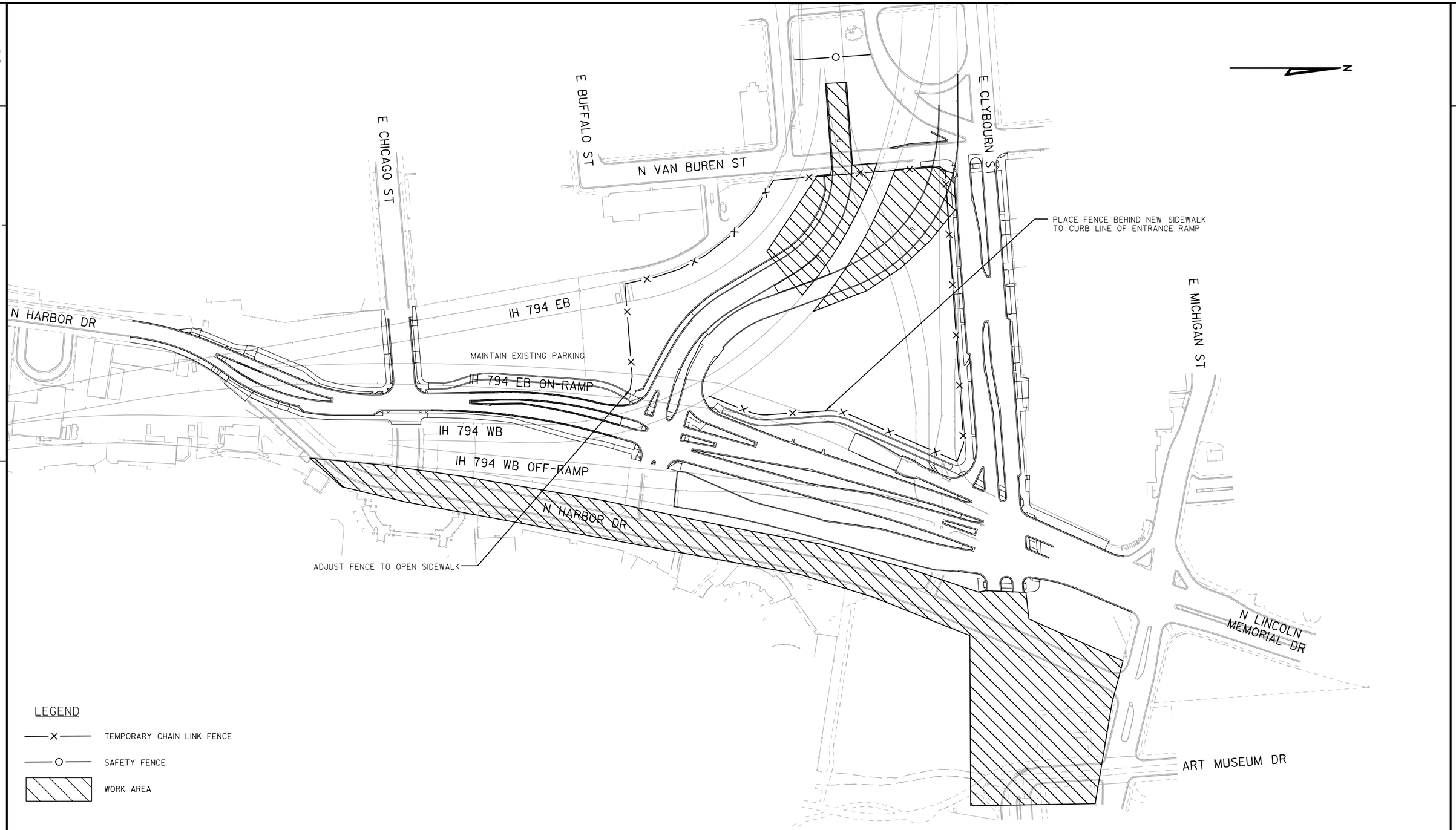
—○— SAFETY FENCE

▨ WORK AREA

NOTE: CONTRACTOR TO PROVIDE SECURE WORK ZONE. TEMPORARY FENCE MAY BE REVISED BASED ON CONTRACTOR OPERATIONS.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY FENCE PLAN - TRAFFIC CONTROL STAGE 4	SHEET 322	E

2

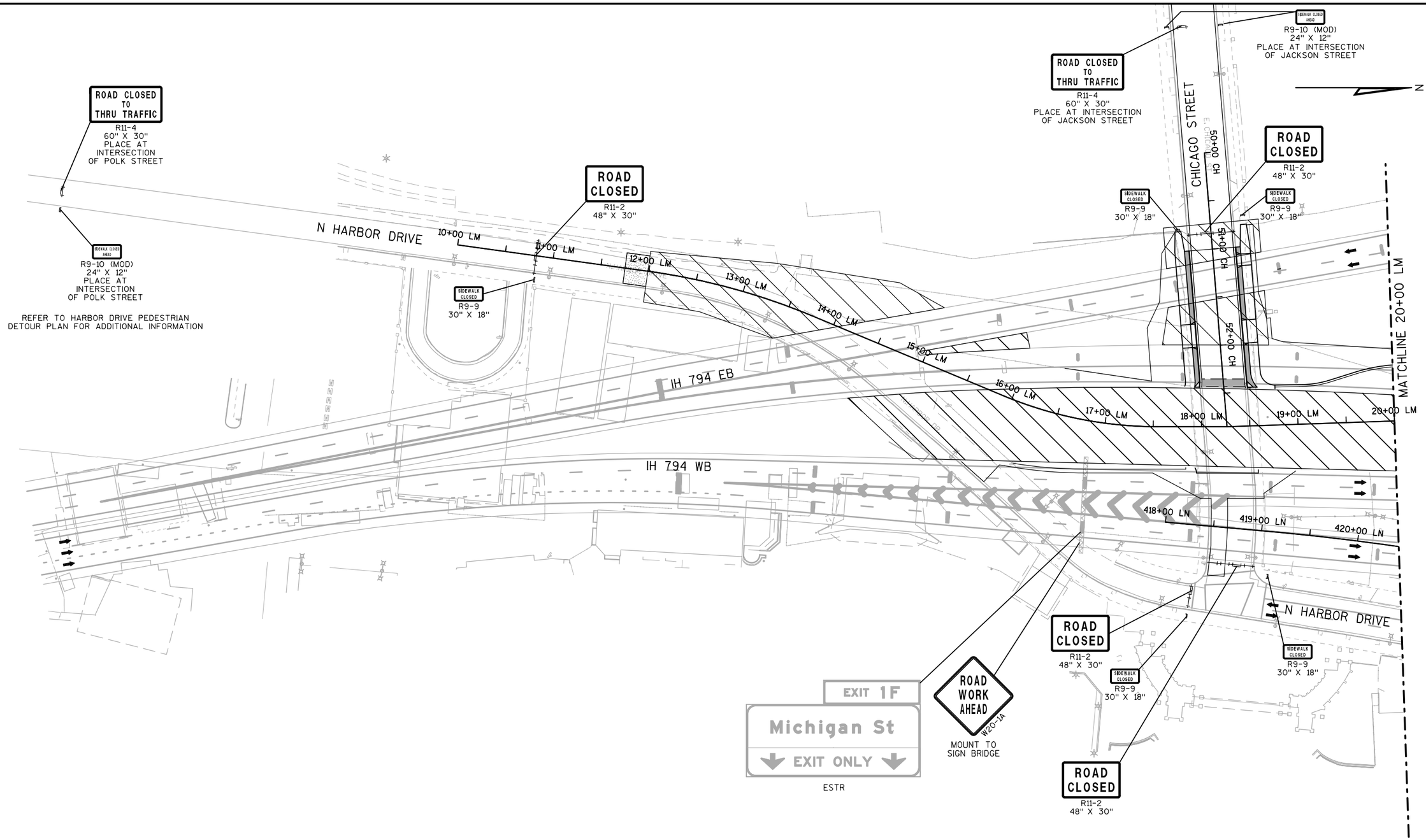


LEGEND

- TEMPORARY CHAIN LINK FENCE
- SAFETY FENCE
- WORK AREA

NOTE: CONTRACTOR TO PROVIDE SECURE WORK ZONE. TEMPORARY FENCE MAY BE REVISED BASED ON CONTRACTOR OPERATIONS.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TEMPORARY FENCE PLAN - TRAFFIC CONTROL STAGE 5	SHEET 323	E



STAGING NOTES

- SEE DETOUR PLAN FOR ADDITIONAL SIGNING

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 324	E

2

MATCHLINE E

IH 794 EB

IH 794 WB

IH 794 EB ENTRANCE RAMP

IH 794 WB EXIT RAMP

N HARBOR DRIVE

N LINCOLN MEMORIAL DRIVE

CLYBOURN STREET

MATCHLINE STA. 20+00 LM

MATCHLINE STA. 33+00 LM

N

ESTR

DO NOT ENTER
R5-1
36" X 36"

ROAD CLOSED
R11-2
48" X 30"

RAMP CLOSED
R11-2R
48" X 30"

W01-6
48" X 24"

BEGIN LANE SHIFT
STA. 32+10 LM

END LANE SHIFT
STA. 33+00 LM

PCMS

RAMP CLOSING
BEGINS XXX XX

PLACE SIGN 10 CALENDAR DAYS PRIOR TO CLOSING RAMP FOR STAGE 2

LANE CLOSED
R11-2L
48" X 30"

25' TYP.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 325	E

2

N

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48" X 24"

ONLY ONLY
R3-8P
54" X 30"

REMOVE ARROW

REMOVE WORD

MICHIGAN STREET

LANE CLOSED
R11-2L
48" X 30"

REMOVE ARROW

WO1-6
48" X 24"

SIDEWALK CLOSED CROSS HERE
R9-11a
24" X 12"

WO1-3R

25 M.P.H.
WO13-1
24" X 24"

ONLY
ESTR

TO 43 94
REMOVE SIGN

Clybourn St ONLY
MOVE SIGN OVER THROUGH LANE

MATCHLINE STA. 33+00 LM

25' TYP.

34+00 LM

35+00 LM

36+00 LM

37+00 LM

38+00 LM

39+00 LM

SHOULDER WORK
W21-5

N HARBOR DRIVE

N LINCOLN MEMORIAL DRIVE

SIDEWALK CLOSED CROSS HERE
R9-11a
24" X 12"

REMOVE CROSSWALK

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

R3-2
24" X 24"

R9-10(MOD)
24" X 12"

M4-9BR
30" X 24"

DETOUR

REFER TO HARBOR DRIVE PEDESTRIAN DETOUR PLAN FOR ADDTIONAL INFORMATION

ROAD CLOSED
R11-2
48" X 30"

Michigan St Downtown
ONLY ONLY
ESTR

Lincoln Mem Dr
ESTR

R3-8
36" X 30"

END ROAD WORK
G20-2A
48" X 24"

CLYBOURN ST
USE LEFT LANE
D1-1
48" X 12"
R3-54L
24" X 24"

RIGHT LANE MUST TURN RIGHT
R3-7R
30" X 30"

250'

1250'

PCMS

ROADWORK AHEAD
INTERSTATE 794 WEST CLOSED
FOLLOW DETOUR
500
FIXED MESSAGE SIGN
COVER WORD

TRAFFIC PATTERN CHANGE
BEGINS
XXX XX
PLACE SIGN 5 CALENDAR DAYS PRIOR TO CONSTRUCTION

N ART MUSEUM DRIVE

END ROAD WORK
G20-2A
48" X 24"

ROAD CLOSED AHEAD
W20-3

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

STAGING NOTES

- SEE DETOUR PLAN FOR ADDITIONAL SIGNING

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 326	E

2

2

N 6TH STREET

N 5TH STREET

N 4TH STREET

N 2ND STREET

N

N 3RD STREET

PLANKINTON AVENUE

Jackson St LEFT 1/2
Lakefront CLOSED
Port Of Milwaukee 3

SIGN COVERED IN PREVIOUS PROJECT

LAKEFRONT TRAFFIC USE NEXT EXIT

SIGN FROM PREVIOUS PROJECT

CLYBOURN STREET

IH 794 WB

IH 794 EB

MATCHLINE C

LAKEFRONT TRAFFIC USE NEXT EXIT

SIGN FROM PREVIOUS PROJECT

ST. PAUL AVENUE

LEFT EXIT 1E

Jackson St
Van Buren St
EXIT ONLY

ESTR

EXIT 1F

Lakefront
RAMP CLOSED

SIGN COVERED IN PREVIOUS PROJECT

INTERSTATE 794 EAST
Port Of Milw
2 RIGHT LANES

ESTR

INTERSTATE 794 EAST
Lakefront

ESTR

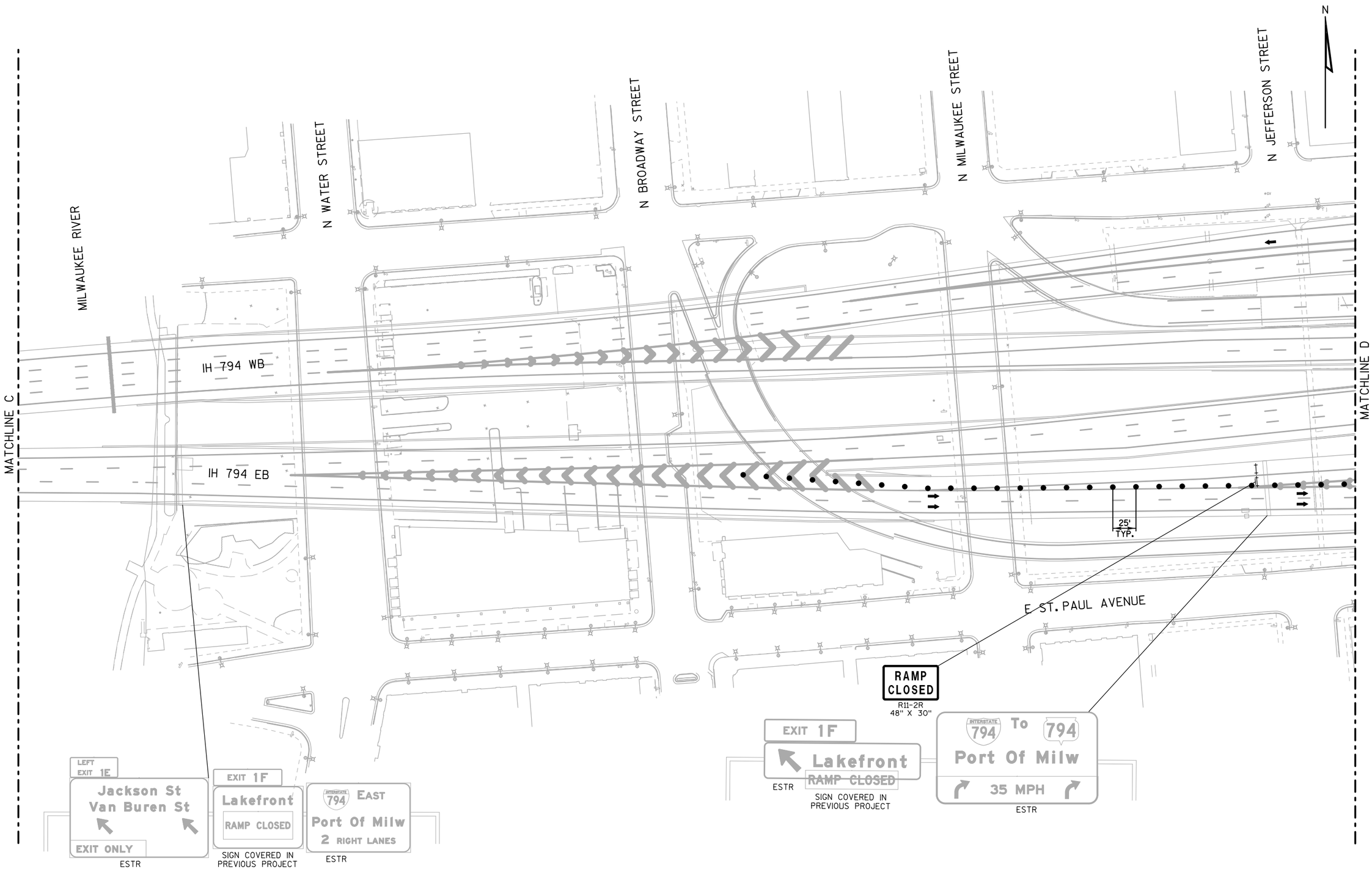
EXIT 1D

Plankinton Avenue

ESTR

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 327	E

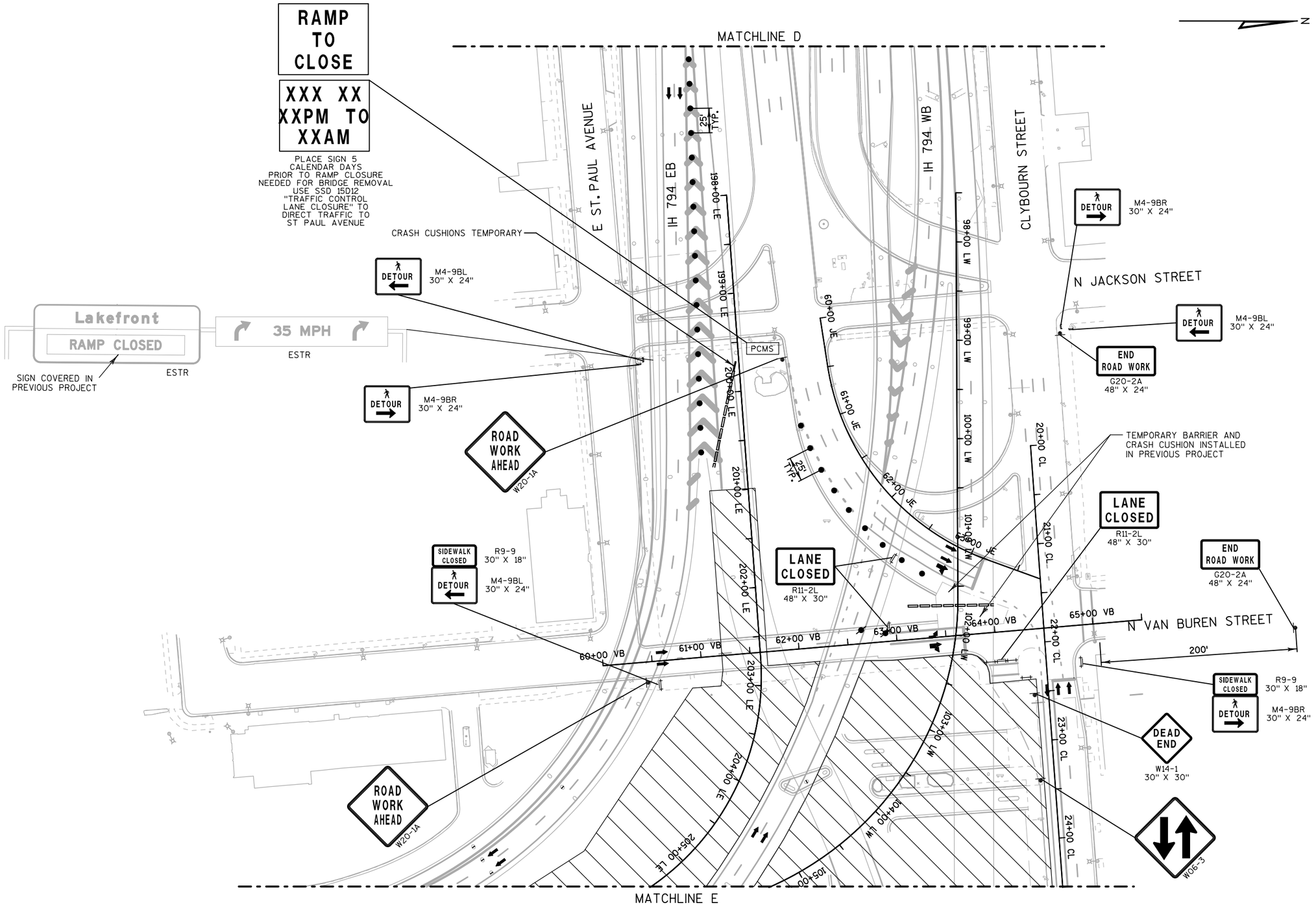
2



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 328	E

FILE NAME : 026017_S1.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

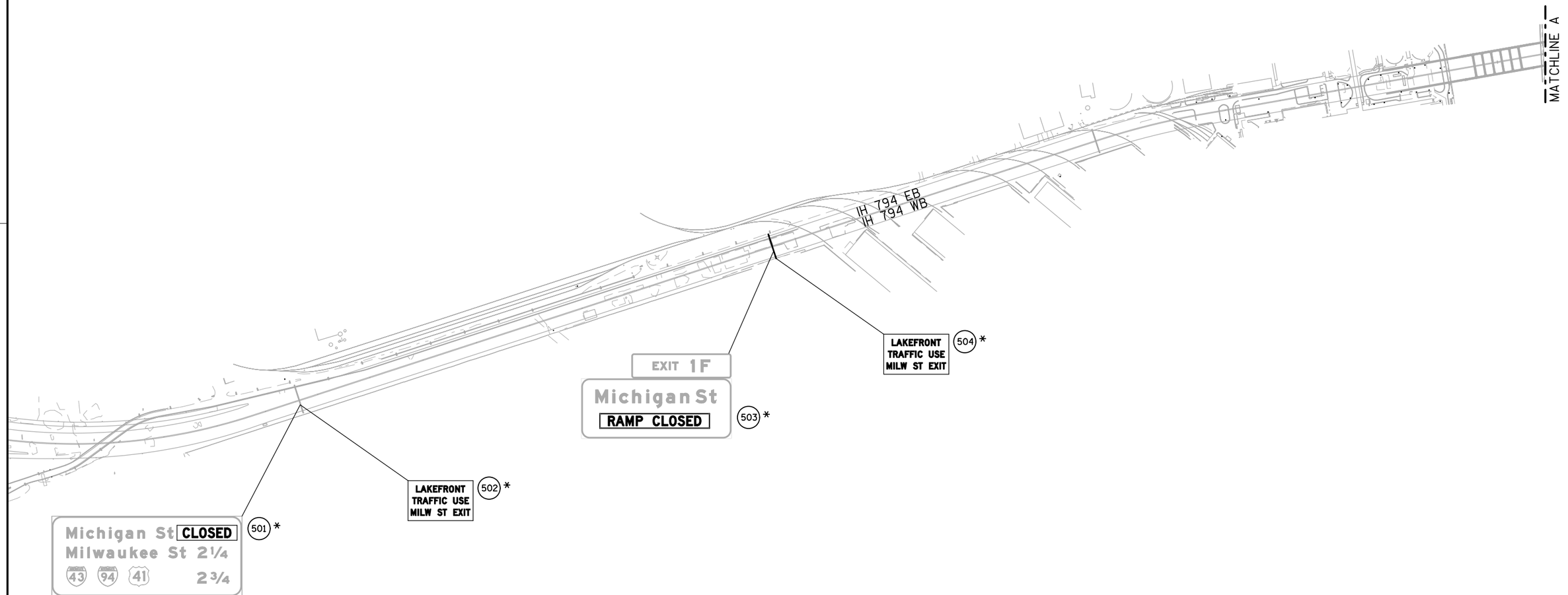


PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 329	E

FILE NAME : 026018_S1.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

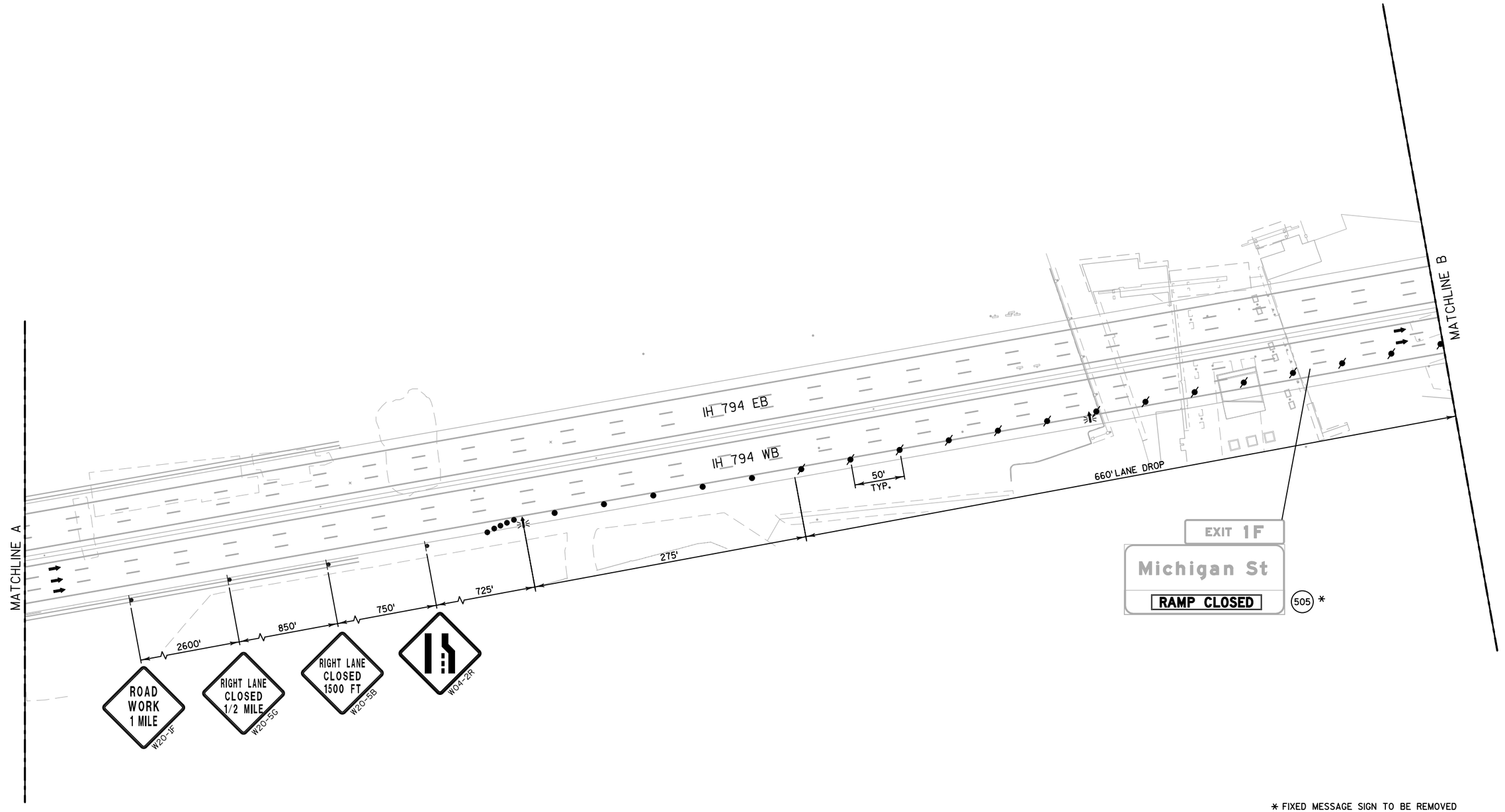
2



* FIXED MESSAGE SIGN TO BE REMOVED
WHEN MICHIGAN STREET RAMP IS REOPENED.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 330	E

2



* FIXED MESSAGE SIGN TO BE REMOVED
WHEN MICHIGAN STREET RAMP IS REOPENED.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 331	E

2

THE CONTRACTOR SHALL PROVIDE PEDESTRIAN ACCESS ALONG EITHER THE EAST OR WEST SIDE OF LINCOLN MEMORIAL DRIVE BETWEEN THE SOUTH PROJECT LIMIT AND CHICAGO STREET DURING PRIDEFEST AND THE ROCK 'N' SOLE RUN. THE CURRENT SCHEDULED DATES FOR THESE EVENTS ARE JUNE 10 TO JUNE 12, 2016.

THE CONTRACTOR SHALL PROVIDE PEDESTRIAN ACCESS ALONG CHICAGO STREET TO THE HENRY MAIER FESTIVAL GROUNDS DURING PRIDEFEST AND THE ROCK 'N' SOLE RUN. THE CURRENT SCHEDULED DATES FOR THESE EVENTS ARE JUNE 10 TO JUNE 12, 2016.

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"
PLACE AT INTERSECTION OF POLK STREET

SIDEWALK CLOSED AHEAD
R9-10 (MOD)
24" X 12"
PLACE AT INTERSECTION OF POLK STREET

REFER TO HARBOR DRIVE PEDESTRIAN DETOUR PLAN FOR ADDITIONAL INFORMATION

ROAD CLOSED
R11-2
48" X 30"

SIDEWALK CLOSED
R9-9
30" X 18"

N HARBOR DRIVE

10+00 LM
11+00 LM
12+00 LM
13+00 LM
14+00 LM
15+00 LM
16+00 LM
17+00 LM
18+00 LM
19+00 LM
20+00 LM

MATCHLINE 20+00 LM

IH 794 EB

LANE CLOSED
R11-2L
48" X 30"

MATCHLINE B

25' TYP.

IH 794 WB

700'

RAMP CLOSED
R11-2R
48" X 30"

SIDEWALK CLOSED AHEAD
R9-10 (MOD)
24" X 12"
PLACE AT INTERSECTION OF JACKSON STREET

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"
PLACE AT INTERSECTION OF JACKSON STREET

CHICAGO STREET

50+00 CH
51+00 CH
52+00 CH

ROAD CLOSED
R11-2
48" X 30"

SIDEWALK CLOSED
R9-9
30" X 18"

SIDEWALK CLOSED
R9-9
30" X 18"

EXIT 1F
Michigan St
EXIT ONLY

REMOVE SIGN

418+00 LN
419+00 LN
420+00 LN

RAMP CLOSED
R11-2R
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

SIDEWALK CLOSED
R9-9
30" X 18"

ROAD CLOSED
R11-2
48" X 30"

N HARBOR DRIVE

SIDEWALK CLOSED
R9-9
30" X 18"

STAGING NOTES

- SEE DETOUR PLAN FOR ADDITIONAL SIGNING

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 332	E

MATCHLINE E

IH 794 EB

IH 794 WB

IH 794 EB ENTRANCE RAMP

MATCHLINE STA. 20+00 LM

N HARBOR DRIVE

CLYBOURN STREET

MATCHLINE STA. 33+00 LM

FINAL PAVEMENT MARKING
SEE PAVEMENT MARKING
PLANS

DO NOT ENTER
R5-1
36" X 36"

EAST 794

EAST 794

NEW SIGNS AND SIGN BRIDGE
SEE SIGNING PLAN

ROAD CLOSED
R11-2
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

LANE CLOSED
R11-2L
48" X 30"

TW4 ON NEW PAVEMENT

TY4 ON NEW PAVEMENT

TW8

PW4
ON EXISTING PAVEMENT

PY4
ON EXISTING PAVEMENT

25' TYP.

12'

STAGING NOTES

- PLACE ASPHALTIC SURFACE TERMPORARY IN MEDIAN FROM STA. 32+20 LM TO 32+85 LM TO ACCOMMODATE STAGE 3 TRAFFIC.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 333	E

FILE NAME : 026114_S2.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

N

ROAD WORK AHEAD
W20-1A

R3-8P
54" X 30"

END ROAD WORK
G20-2A
48" X 24"

MICHIGAN STREET

MATCHLINE STA. 33+00 LM

PW4

PY4

ANGLE POINT
STA. 34+40 LM, 26.7'LT

TW4 3'LINE 9'GAP

SIDEWALK CLOSED CROSS HERE
R9-11a
24" X 12"

END PAVEMENT MARKING
STA. 35+60 LM, 17.2'LT

LM

34+00 LM

2'-12"

25' TYP.

35+00 LM

36+00 LM

37+00 LM

38+00 LM

39+00 LM

LANE CLOSED
R11-2(MOD)
48" X 30"

SHOULDER WORK
W21-5

N HARBOR DRIVE

N LINCOLN MEMORIAL DRIVE

SIDEWALK CLOSED CROSS HERE
R9-11a
24" X 12"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

R3-2
24" X 24"

R9-10(MOD)
24" X 12"
SIDEWALK CLOSED AT CHERRY ST

M4-9BR
30" X 24"
DETOUR

REFER TO HARBOR DRIVE PEDESTRIAN DETOUR PLAN FOR ADDTIONAL INFORMATION

ROAD CLOSED
R11-2
48" X 30"

N ART MUSEUM DRIVE

END ROAD WORK
G20-2A
48" X 24"

ROAD CLOSED AHEAD
W20-3

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

ONLY
ESTR

EAST
INTERSTATE 794

NEW SIGN
SEE SIGNING PLAN

Clybourn St
794 - EAST

MOVE SIGN OVER
RIGHT LANE
ADD PLAQUE
SEE SIGNING PLAN

END ROAD WORK
G20-2A
48" X 24"

PCMS

TRAFFIC PATTERN CHANGE

PLACE SIGN FOR 5 CALENDAR DAYS PRIOR TO TRAFFIC SWITCH

BEGINS XX/XX

ROADWORK AHEAD
INTERSTATE 794 WEST CLOSED
FOLLOW DETOUR
ESTR

STAGING NOTES

- SEE DETOUR PLAN FOR ADDITIONAL SIGNING

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 334	E

2

2

N 6TH STREET

N 5TH STREET

N 4TH STREET

N 2ND STREET

N

N 3RD STREET

PLANKINTON AVENUE

Jackson St LEFT 1/2
Lakefront CLOSED
Port Of Milwaukee 3
ESTR

LAKEFRONT TRAFFIC USE NEXT EXIT
ESTR

CLYBOURN STREET

IH 794 WB

IH 794 EB

MATCHLINE C

LAKEFRONT TRAFFIC USE NEXT EXIT
ESTR

ST. PAUL AVENUE

LEFT EXIT 1E
Jackson St
Van Buren St
EXIT ONLY
ESTR

EXIT 1F
Lakefront
RAMP CLOSED
ESTR

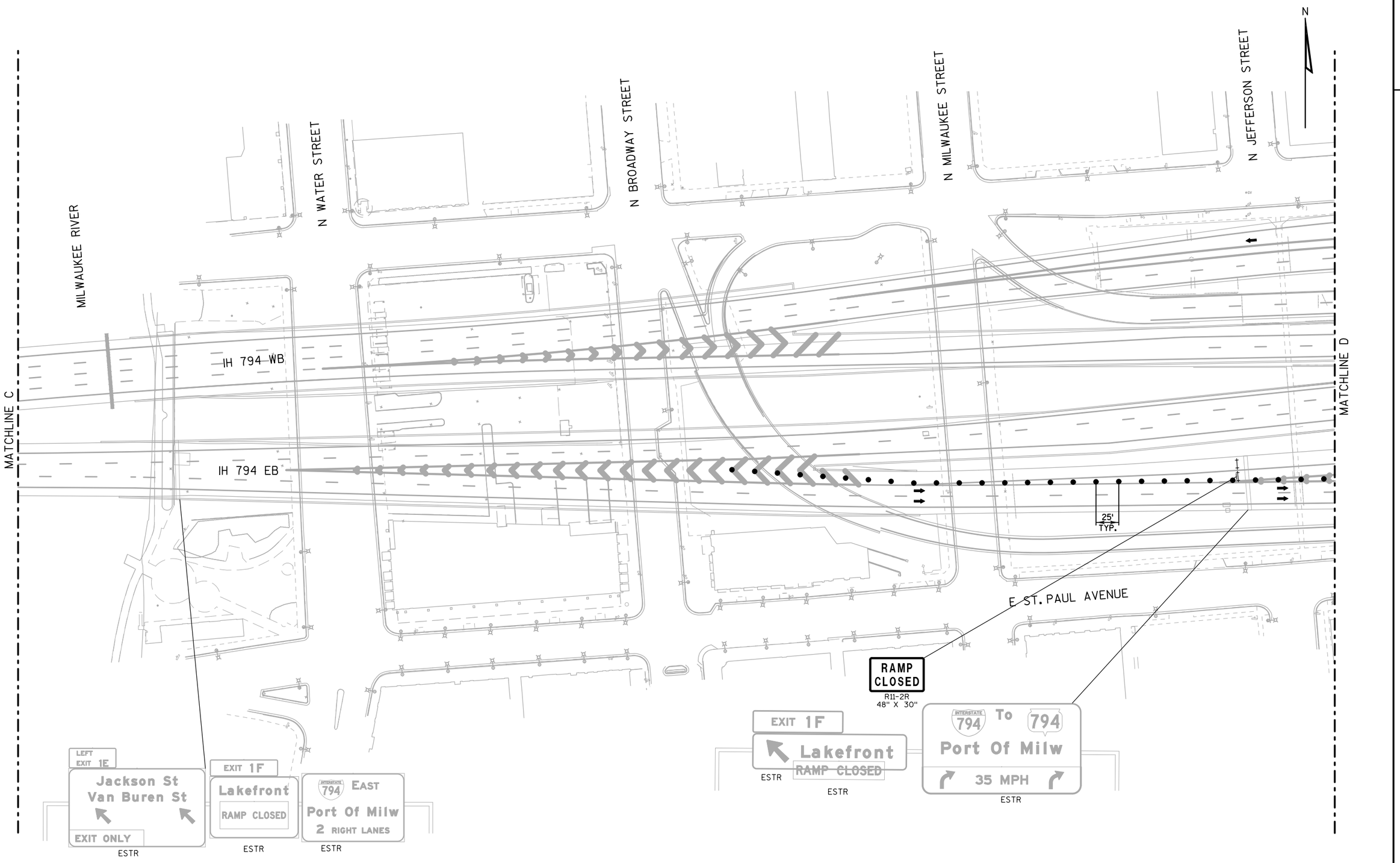
INTERSTATE 794 EAST
Port Of Milw
2 RIGHT LANES
ESTR

INTERSTATE 794 EAST
Lakefront
ESTR

EXIT 1D
Plankinton Avenue
ESTR

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 335	E

2

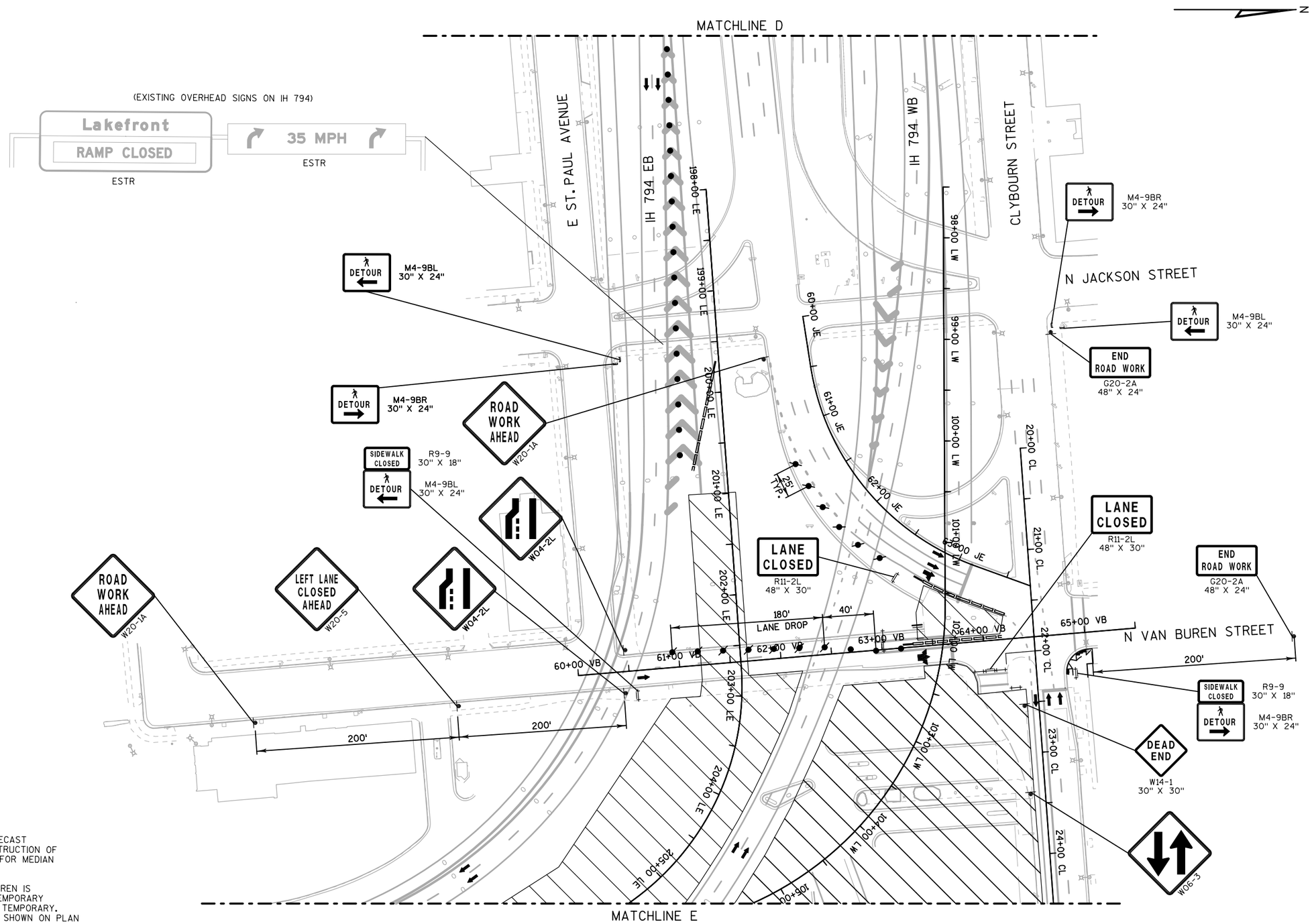


2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 336	E

FILE NAME : 026117_S2.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



STAGING NOTES

MOVE CONCRETE BARRIER TEMPORARY PRECAST ON VAN BUREN STREET TO ALLOW CONSTRUCTION OF MEDIAN LANES. SEE SPECIAL PROVISIONS FOR MEDIAN COMPLETION DATES.

AFTER MEDIAN CONSTRUCTION ON VAN BUREN IS COMPLETE, REMOVE CONCRETE BARRIER TEMPORARY PRECAST AND SALVAGE CRASH CUSHIONS TEMPORARY. RECONFIGURE TRAFFIC ON VAN BUREN AS SHOWN ON PLAN SHEET "TRAFFIC CONTROL - STAGE 3".

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 337	E

2

BROADWAY

MILWAUKEE STREET

JEFFERSON STREET

MICHIGAN STREET

JACKSON STREET

VAN BUREN STREET

CLYBOURN STREET

E ST. PAUL AVENUE

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

LANE CLOSED
R11-2L
48" X 30"

R3-1
24" X 24"

ONLY
ESTR

ONLY
ESTR

ESTR

ONLY
ESTR

25' TYP.

ROAD CLOSED
R11-2
48" X 30"

R3-1
24" X 24"

SIDEWALK CLOSED CROSS HERE
R9-11a
24" X 12"

SIDEWALK CLOSED CROSS HERE
R9-11a
24" X 12"

25' TYP.

R3-2
24" X 24"

ROAD CLOSED
R11-2
48" X 30"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

SIGN

A/C

INL

W

N

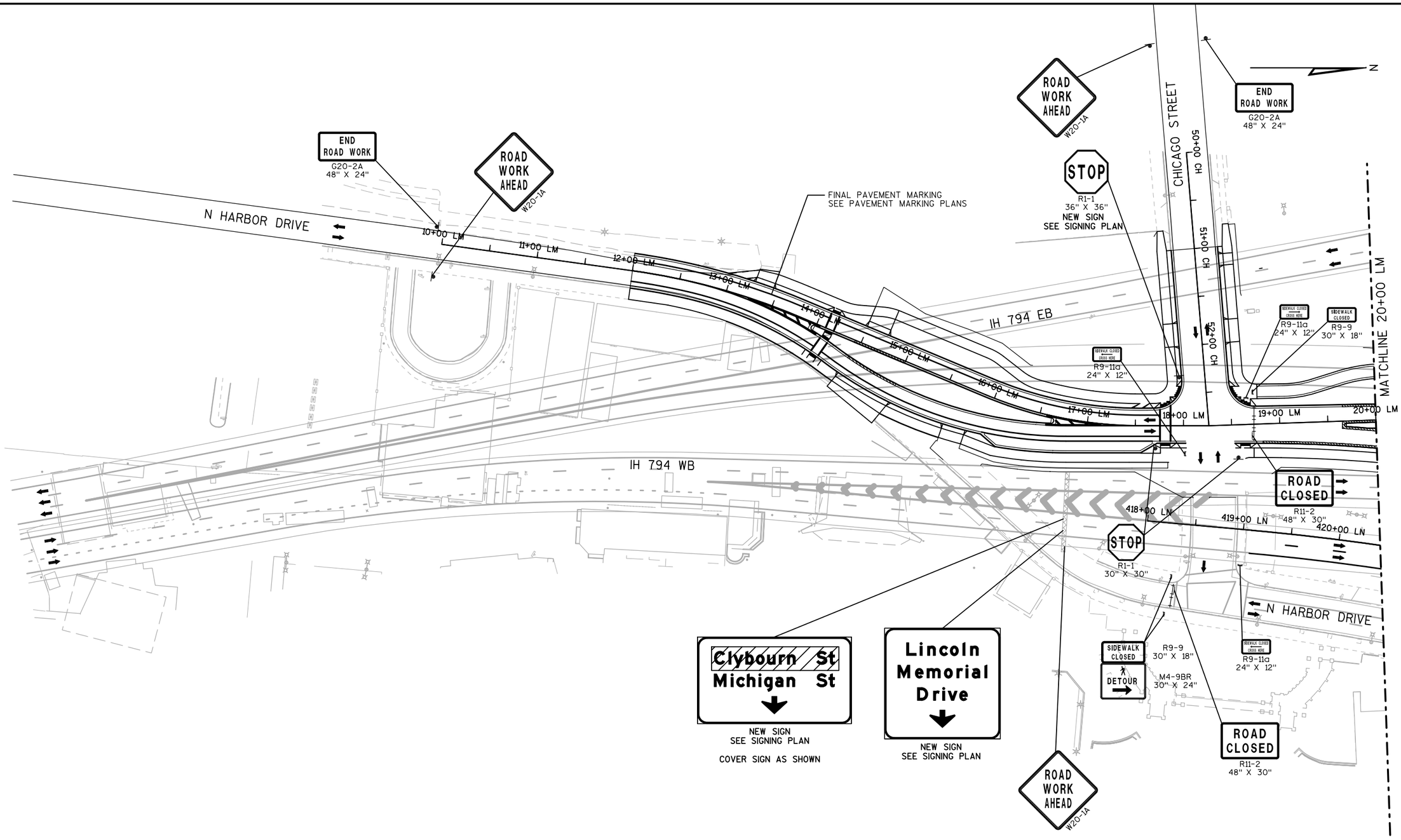
STAGING NOTES

- SEE DETOUR PLAN FOR ADDITIONAL SIGNING.

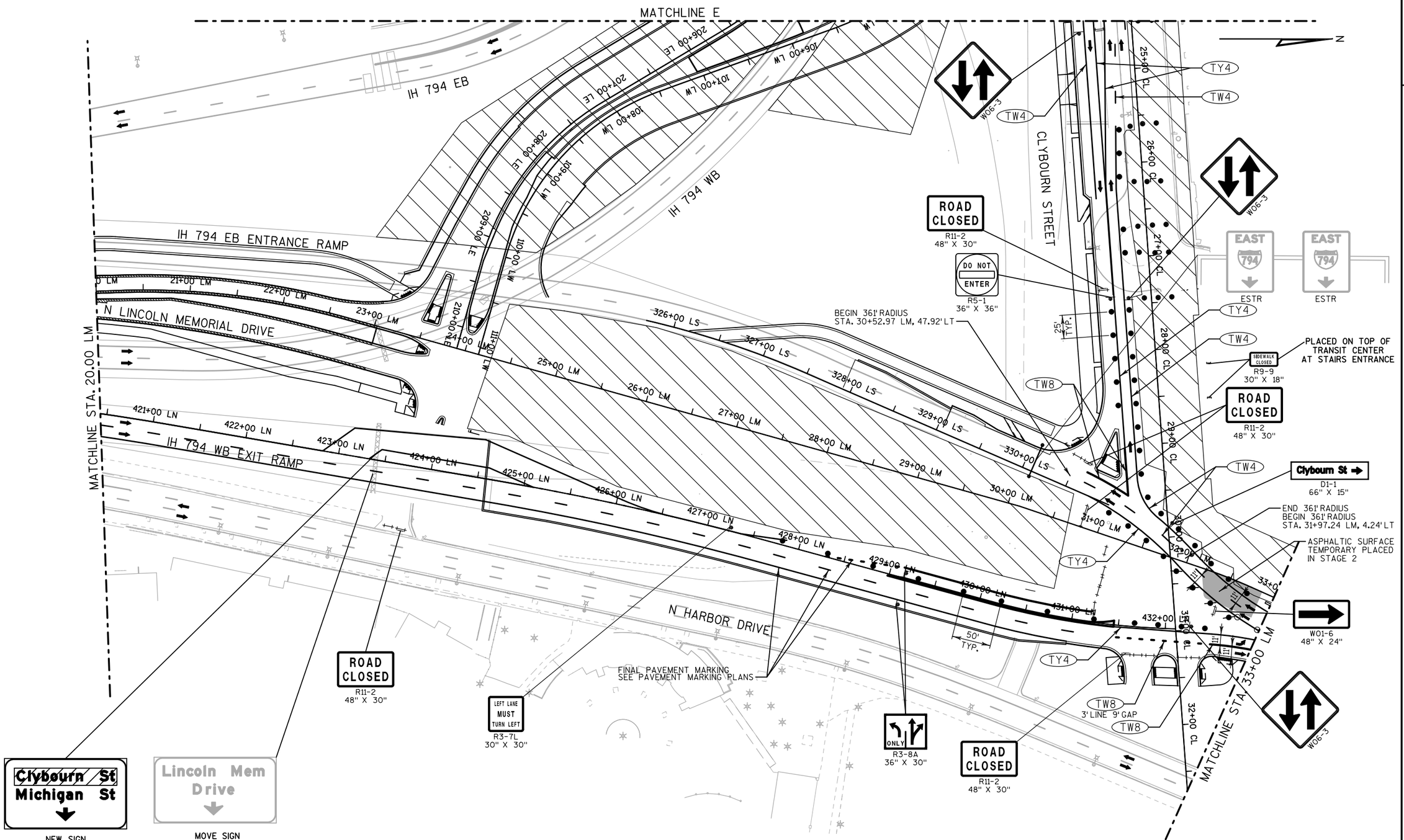
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 338	E

FILE NAME : 026119_S2.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

2

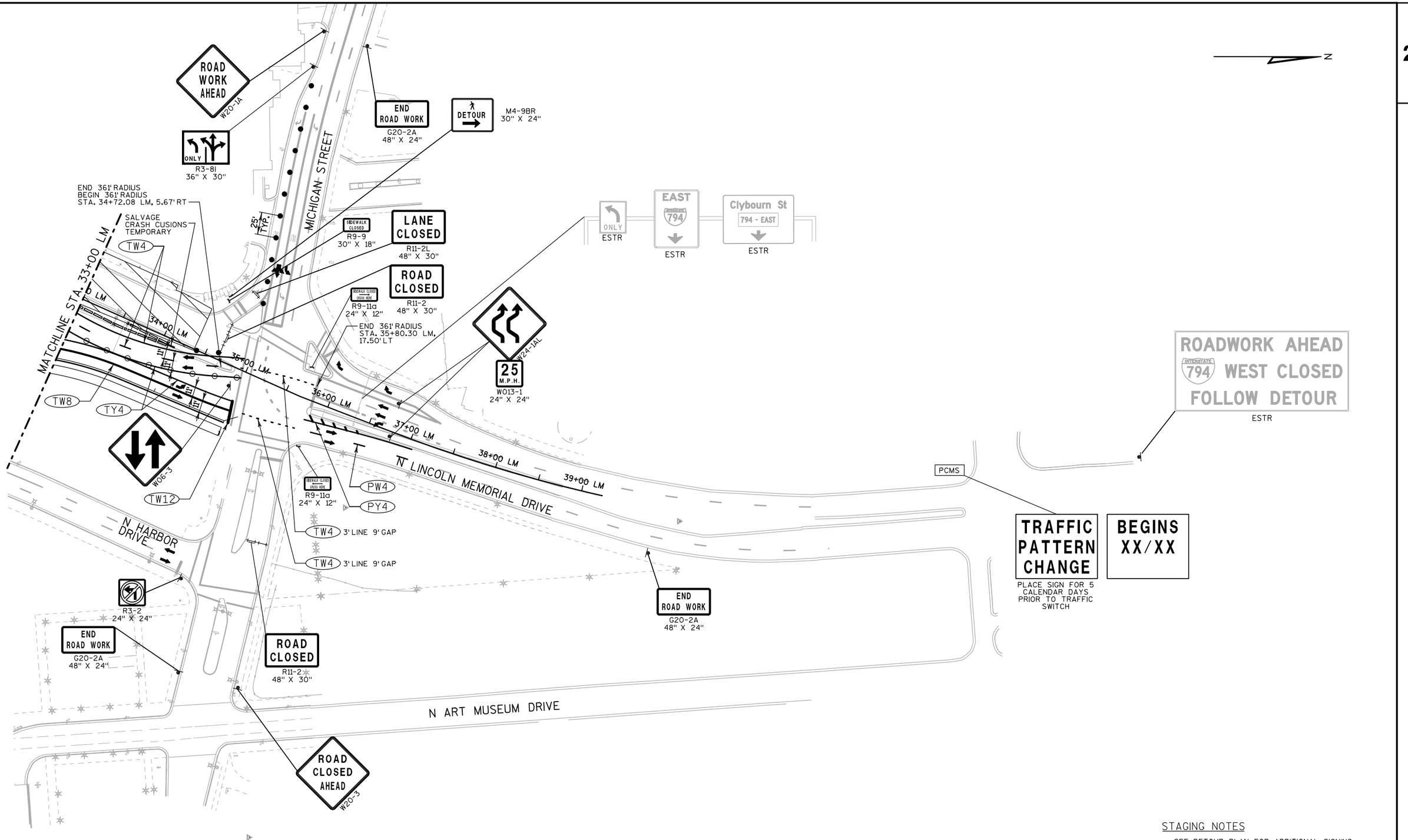


PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 339	E



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 340	E

FILE NAME : 026214_S3.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100



STAGING NOTES

- SEE DETOUR PLAN FOR ADDITIONAL SIGNING

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 341	E

2

2

N 6TH STREET

N 5TH STREET

N 4TH STREET

N 2ND STREET

N

N 3RD STREET

PLANKINTON AVENUE

Jackson St LEFT 1/2
Lakefront CLOSED
Port Of Milwaukee 3
ESTR

LAKEFRONT TRAFFIC USE NEXT EXIT
ESTR

CLYBOURN STREET

IH 794 WB

IH 794 EB

MATCHLINE C

LAKEFRONT TRAFFIC USE NEXT EXIT
ESTR

ST. PAUL AVENUE

LEFT EXIT 1E
Jackson St
Van Buren St
EXIT ONLY
ESTR

EXIT 1F
Lakefront
RAMP CLOSED
ESTR

INTERSTATE 794 EAST
Port Of Milw
2 RIGHT LANES
ESTR

INTERSTATE 794 EAST
Lakefront
ESTR

EXIT 1D
Plankinton Avenue
ESTR

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 342	E

FILE NAME : 026216_S3.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

2

2

N

MILWAUKEE RIVER

N WATER STREET

N BROADWAY STREET

N MILWAUKEE STREET

N JEFFERSON STREET

MATCHLINE C

MATCHLINE D

IH 794 WB

IH 794 EB

25'
TYP.

E ST. PAUL AVENUE

RAMP
CLOSED
R11-2R
48" X 30"

LEFT
EXIT 1E
Jackson St
Van Buren St
EXIT ONLY
ESTR

EXIT 1F
Lakefront
RAMP CLOSED
ESTR

INTERSTATE 794 EAST
Port Of Milw
2 RIGHT LANES
ESTR

EXIT 1F
Lakefront
RAMP CLOSED
ESTR

INTERSTATE 794 To 794
Port Of Milw
35 MPH
ESTR

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 343	E

FILE NAME : 026217_S3.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

MATCHLINE D

E ST. PAUL AVENUE

IH 794 EB

IH 794 WB

N JACKSON STREET

N VAN BUREN STREET

Lakefront
RAMP CLOSED
ESTR

35 MPH
ESTR

DETOUR
M4-9BL
30" X 24"

DETOUR
M4-9BR
30" X 24"

ROAD WORK AHEAD
W20-1A

DEAD END
W14-1
30" X 30"

END ROAD WORK
G20-2A
48" X 24"

FINAL PAVEMENT MARKING SEE PAVEMENT MARKING PLANS

3'LINE 9'GAP

LANE CLOSED
R11-2L
48" X 30"

SIDEWALK CLOSED
R9-9
30" X 18"

M4-9BR
30" X 24"
PLACE SIGN AT MICHIGAN STREET

M4-9BL
30" X 24"
PLACE SIGN AT MICHIGAN STREET

200'

TW4

TW12

TY4

25' TYP.

198+00 LE

199+00 LE

200+00 LE

201+00 LE

202+00 LE

203+00 LE

204+00 LE

205+00 LE

60+00 JE

61+00 JE

62+00 JE

101+00 LW

102+00 LW

103+00 LW

104+00 LW

98+00 LW

99+00 LW

100+00 LW

20+00 CL

21+00 CL

22+00 CL

23+00 CL

24+00 CL

60+00 VB

61+00 VB

62+00 VB

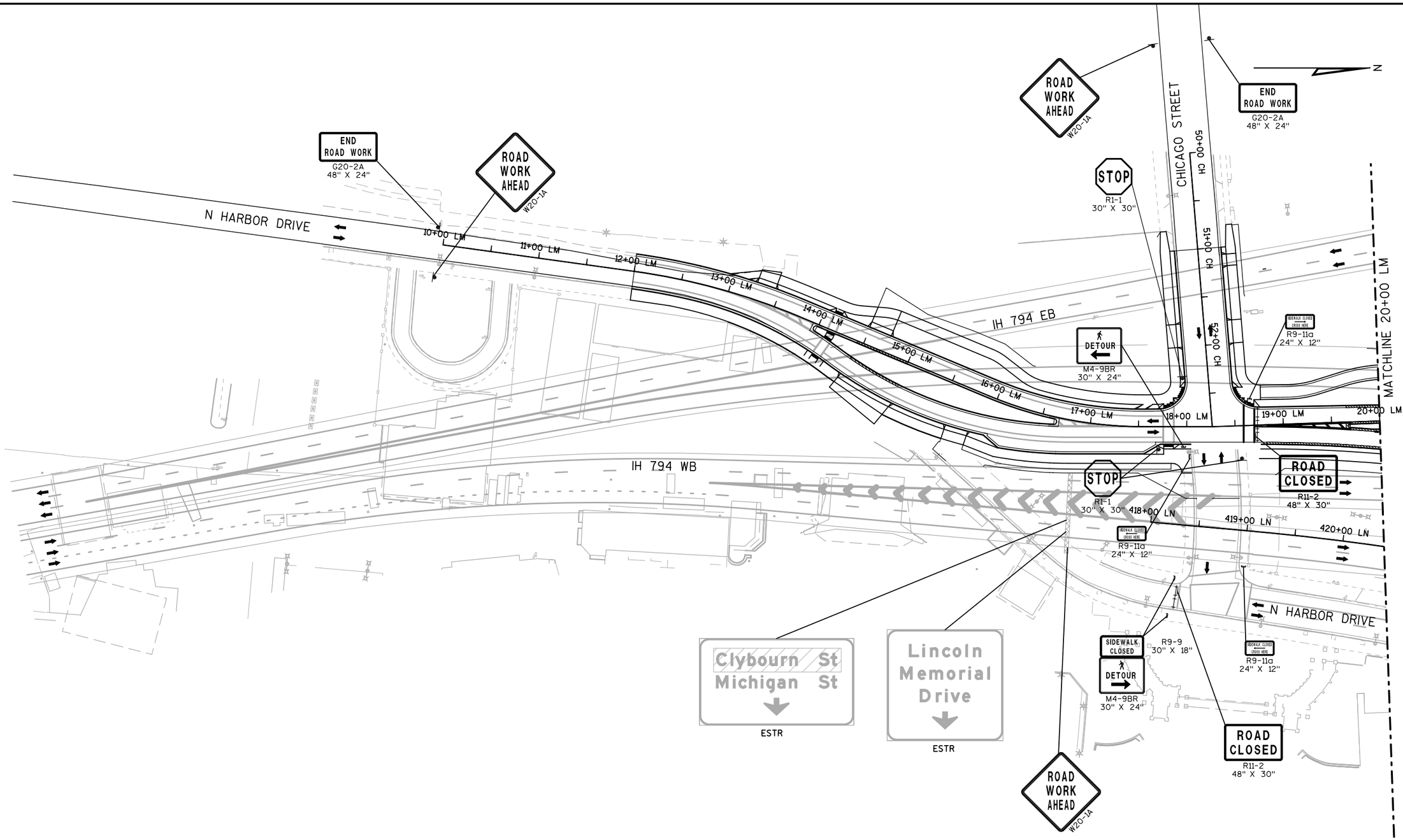
63+00 VB

64+00 VB

65+00 VB

MATCHLINE E

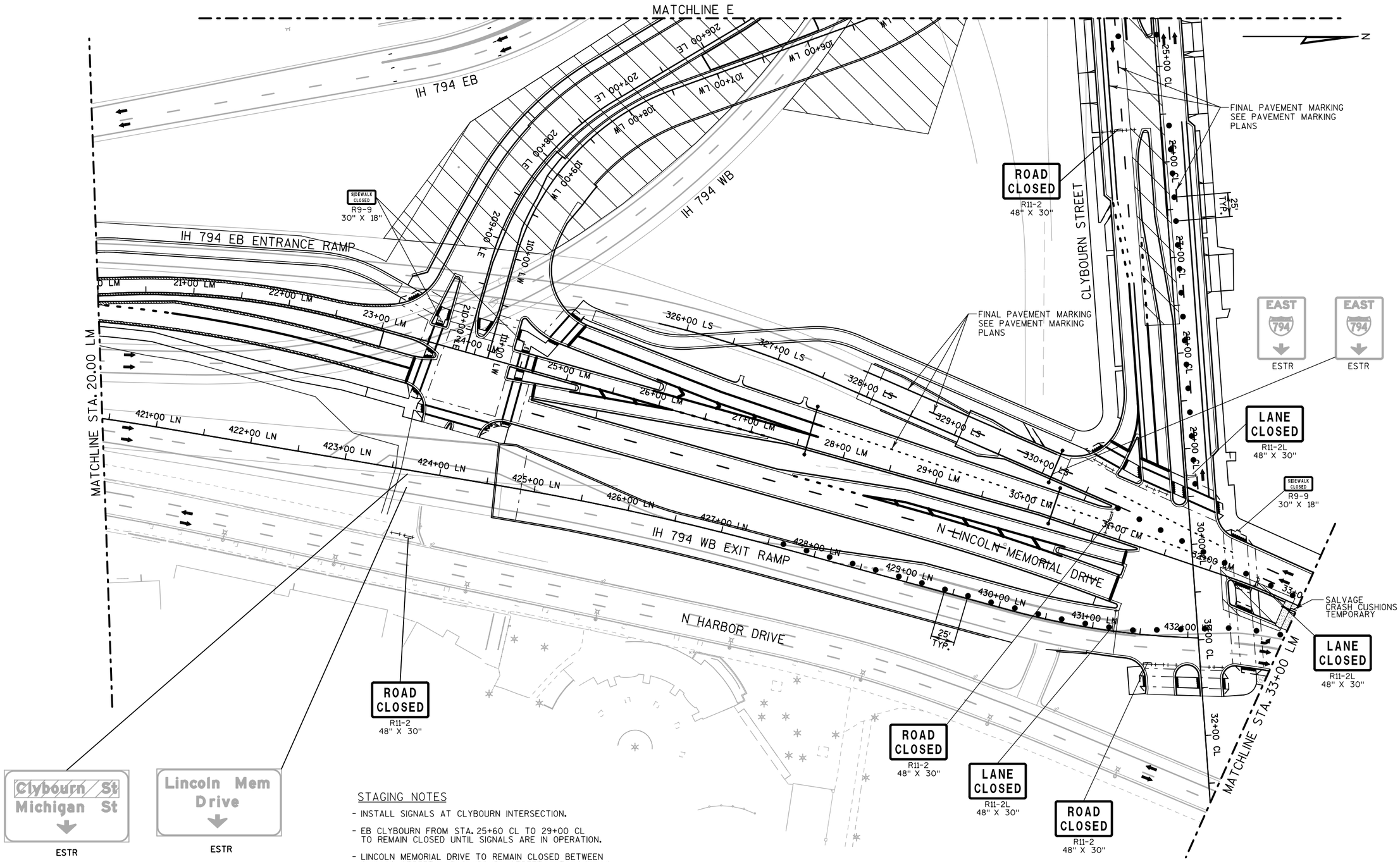
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3	SHEET 344	E



STAGING NOTES

- LINCOLN MEMORIAL DRIVE TO REMAIN CLOSED BETWEEN CHICAGO STREET AND CLYBOURN STREET UNTIL SIGNALS ARE IN OPERATION.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 4	SHEET 345	E



STAGING NOTES

- INSTALL SIGNALS AT CLYBOURN INTERSECTION.
- EB CLYBOURN FROM STA. 25+60 CL TO 29+00 CL TO REMAIN CLOSED UNTIL SIGNALS ARE IN OPERATION.
- LINCOLN MEMORIAL DRIVE TO REMAIN CLOSED BETWEEN CHICAGO STREET AND CLYBOURN STREET UNTIL SIGNALS ARE IN OPERATION.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 4	SHEET 346	E

2

N

ROAD WORK AHEAD
W20-1A

R3-8P
54" X 30"

END ROAD WORK
G20-2A
48" X 24"

MICHIGAN STREET

FINAL PAVEMENT MARKING SEE PAVEMENT MARKING PLANS

SALVAGE CRASH CUSHIONS TEMPORARY

LANE CLOSED
R11-2L
48" X 30"

TW4 3' LINE 9' GAP

SIDEWALK CLOSED CROSS HERE
R9-11a
24" X 12"

MATCHLINE STA. 33+00 LM

34+00 LM

25' TYP.

35+00 LM

36+00 LM

37+00 LM

38+00 LM

39+00 LM

EAST
794
NEW SIGN SEE SIGNING PLAN

Clybourn Street
NEW SIGN SEE SIGNING PLAN

SIDEWALK CLOSED
R9-9
30" X 18"

SIDEWALK CLOSED CROSS HERE
R9-11a
24" X 12"

N LINCOLN MEMORIAL DRIVE

N HARBOR DRIVE

ROAD CLOSED
R11-2
48" X 30"

R3-2
24" X 24"

END ROAD WORK
G20-2A
48" X 24"

END ROAD WORK
G20-2A
48" X 24"

N ART MUSEUM DRIVE

ROAD CLOSED AHEAD
W20-3

ONLY
ESTR

EAST
794
ESTR

Clybourn St
794 - EAST
ESTR

ROADWORK AHEAD
794 WEST CLOSED
FOLLOW DETOUR
ESTR

PCMS

TRAFFIC PATTERN CHANGE
PLACE SIGN FOR 5 CALENDAR DAYS PRIOR TO TRAFFIC SWITCH

BEGINS XX/XX

STAGING NOTES

- SEE DETOURN PLAN FOR ADDITIONAL SIGNING.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 4	SHEET 347	E

2

2

N

N 6TH STREET

N 5TH STREET

N 4TH STREET

N 2ND STREET

N 3RD STREET

PLANKINTON AVENUE

CLYBOURN STREET

MATCHLINE C

IH 794 WB

IH 794 EB

ST. PAUL AVENUE

Jackson St LEFT 1/2
Lakefront CLOSED
Port Of Milwaukee 3
ESTR

LAKEFRONT TRAFFIC USE NEXT EXIT
ESTR

LAKEFRONT TRAFFIC USE NEXT EXIT
ESTR

INTERSTATE 794 EAST
Lakefront
ESTR

EXIT 1D
Plankinton Avenue
ESTR

LEFT EXIT 1E
Jackson St
Van Buren St
EXIT ONLY
ESTR

EXIT 1F
Lakefront
RAMP CLOSED
* ESTR

INTERSTATE 794 EAST
Port Of Milw
2 RIGHT LANES
ESTR

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 4	SHEET 348	E

FILE NAME : 026316_S4.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

2

2

N

MILWAUKEE RIVER

N WATER STREET

N BROADWAY STREET

N MILWAUKEE STREET

N JEFFERSON STREET

MATCHLINE C

MATCHLINE D

IH 794 WB

IH 794 EB

25'
TYP.

E ST. PAUL AVENUE

RAMP
CLOSED
R11-2R
48" X 30"

LEFT
EXIT 1E
Jackson St
Van Buren St
EXIT ONLY
ESTR

EXIT 1F
Lakefront
RAMP CLOSED
ESTR

INTERSTATE 794 EAST
Port Of Milw
2 RIGHT LANES
ESTR

EXIT 1F
Lakefront
RAMP CLOSED
ESTR

INTERSTATE 794 To 794
Port Of Milw
35 MPH
ESTR

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 4	SHEET 349	E

FILE NAME : 026317_S4.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

2

MATCHLINE D

E ST. PAUL AVENUE

IH 794 EB

IH 794 WB

N JACKSON STREET

N VAN BUREN STREET

Lakefront
RAMP CLOSED
ESTR

35 MPH
ESTR

DETOUR
M4-9BL
30" X 24"

DETOUR
M4-9BR
30" X 24"

ROAD WORK AHEAD
W20-1A

SIDEWALK CLOSED
R9-9
30" X 18"

DETOUR
M4-9BL
30" X 24"

DEAD END
W14-1
30" X 30"

DETOUR
M4-9BR
30" X 24"

DETOUR
M4-9BL
30" X 24"

END ROAD WORK
G20-2A
48" X 24"

LANE CLOSED
R11-2L
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

SIDEWALK CLOSED
R9-9
30" X 18"

DETOUR
M4-9BR
30" X 24"

TY4

TW4

25' TYP.

11' 11'

200'

198+00 LE
199+00 LE
200+00 LE
201+00 LE
202+00 LE
203+00 LE
204+00 LE
205+00 LE

60+00 JE
61+19 JE
62+00 JE
101+00 LW

98+00 LW
99+00 LW
100+00 LW
102+00 LW
103+00 LW
104+00 LW

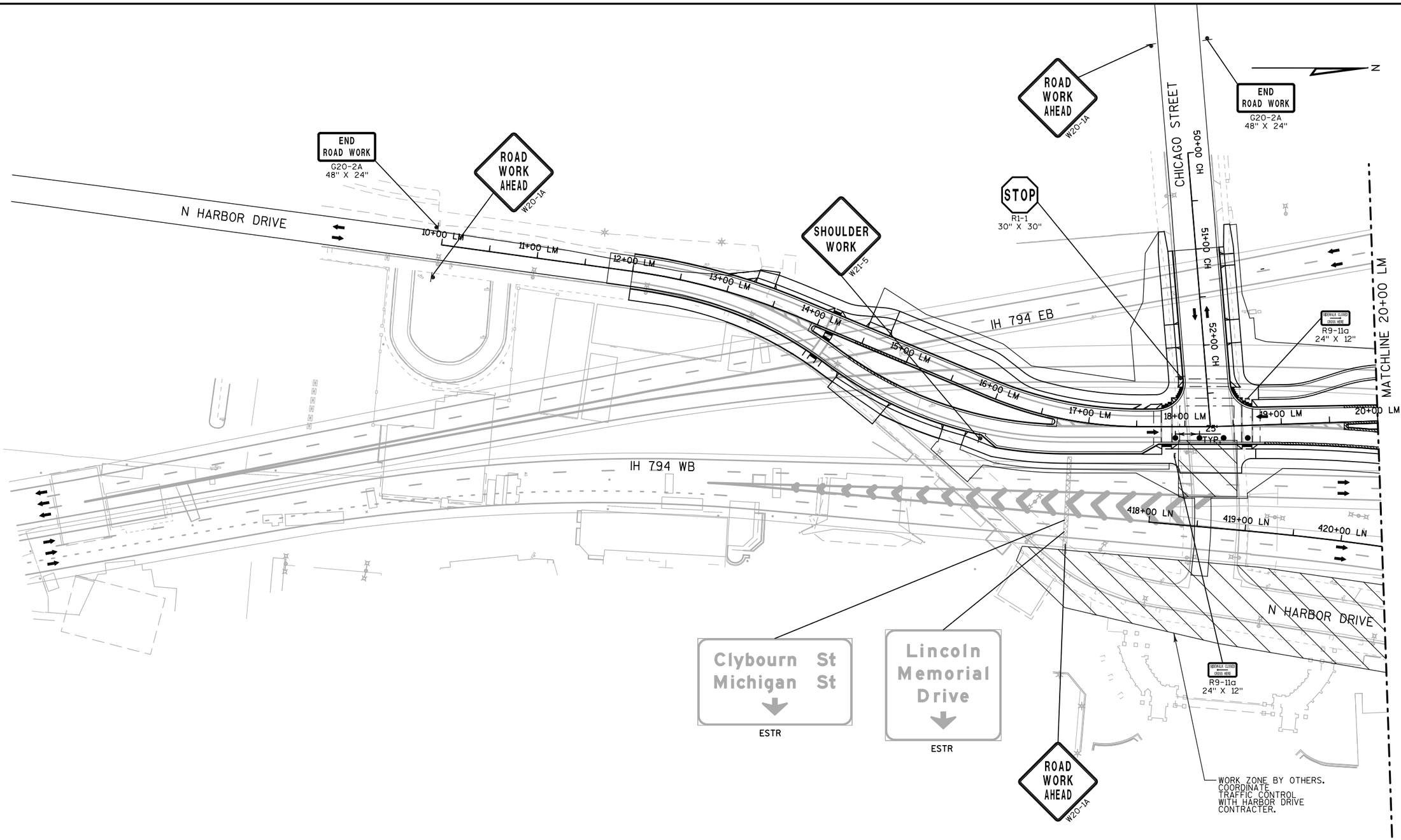
20+00 CL
21+00 CL
22+00 CL
23+00 CL
24+00 CL

60+00 VB
61+00 VB
62+00 VB
63+00 VB
64+00 VB
65+00 VB

MATCHLINE E

PROJECT NO:1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 4	SHEET 350	E

2



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 5	SHEET 351	E

MATCHLINE E

IH 794 EB

IH 794 EB ENTRANCE RAMP

IH 794 WB

IH 794 WB EXIT RAMP

N LINCOLN MEMORIAL DRIVE

N HARBOR DRIVE

CLYBOURN STREET

MATCHLINE STA. 20+00 LM

MATCHLINE STA. 33+00 LM

RAMP CLOSED
R11-2R
48" X 30"

SIDEWALK CLOSED
R9-9
30" X 18"

LANE CLOSED
R11-2L
48" X 30"

R3-1
24" X 24"

RAMP CLOSED
R11-2R
48" X 30"

R3-2
24" X 24"

LANE CLOSED
R11-2L
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

NEW SIGN
SEE SIGNING
PLAN

Lincoln
Memorial
Drive

NEW SIGN
SEE SIGNING
PLAN

EAST
794
ONLY

NEW SIGN
SEE SIGNING
PLAN

COVER
SIGN

Clybourn
Street

WEST
794

Lincoln
Mem Dr

ONLY

R3-5OR
30" X 36"
PLACE OVER
ARROW

NORTH
Lincoln
Mem Dr
ONLY

NEW SIGN
SEE SIGNING
PLAN

ESTR
EAST
794

ESTR
EAST
794

SIDEWALK CLOSED
R9-9
30" X 18"

WORK ZONE BY OTHERS.
COORDINATE TRAFFIC
CONTROL WITH
HARBOR DRIVE
CONTRACTOR.

Clybourn St
Michigan St

ESTR

Lincoln Mem
Drive

ESTR

Lincoln
Memorial
Drive
AHEAD

NEW SIGN
SEE SIGNING
PLAN

LANE CLOSED
R11-2L
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 5	SHEET 352	E

2

N

ROAD WORK AHEAD
W20-1A

ONLY ONLY
R3-8P
54" X 30"

END ROAD WORK
G20-2A
48" X 24"

MICHIGAN STREET

MATCHLINE STA. 33+00 LM

FINAL PAVEMENT MARKING SEE PAVEMENT MARKING PLANS

SIDEWALK CLOSED CROSS HERE
R9-11a
24" X 12"

WEST 794 TO 43 94 Lincoln Mem Dr
NEW SIGN SEE SIGNING PLAN COVER AS SHOWN

EAST - WEST 794 TO 43 94
NEW SIGN SEE SIGNING PLAN COVER AS SHOWN

EAST 794
ESTR

Clybourn Street
ESTR

ONLY
ESTR

EAST 794
ESTR

Clybourn St
794 - EAST
ESTR

ROADWORK AHEAD
INTERSTATE 794 WEST CLOSED
FOLLOW DETOUR
ESTR

N LINCOLN MEMORIAL DRIVE

N HARBOR DRIVE

SIDEWALK CLOSED CROSS HERE
R9-11a
24" X 12"

WORK ZONE BY OTHERS. COORDINATE TRAFFIC CONTROL WITH HARBOR DRIVE CONTRACTOR.

END ROAD WORK
G20-2A
48" X 24"

END ROAD WORK
G20-2A
48" X 24"

ROAD CLOSED
R11-2
48" X 30"

N ART MUSEUM DRIVE

ROAD CLOSED AHEAD
W20-3

STAGING NOTES

- SEE DETOUR PLAN FOR ADDITIONAL SIGNING.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 5	SHEET 353	E

2

2

N 6TH STREET

N 5TH STREET

N 4TH STREET

N 2ND STREET

N 3RD STREET

PLANKINTON AVENUE

CLYBOURN STREET

IH 794 WB

IH 794 EB

ST. PAUL AVENUE

MATCHLINE C

N

Jackson St LEFT 1/2
Lakefront CLOSED
Port Of Milwaukee 3
ESTR

*

LAKEFRONT TRAFFIC USE NEXT EXIT

*

LAKEFRONT TRAFFIC USE NEXT EXIT

*

INTERSTATE 794 EAST
Lakefront
ESTR

EXIT 1D
Plankinton Avenue
ESTR

LEFT EXIT 1E
Jackson St
Van Buren St
EXIT ONLY
ESTR

EXIT 1F
Lakefront
RAMP CLOSED
* ESTR

INTERSTATE 794 EAST
Port Of Milw
2 RIGHT LANES
ESTR

* REMOVE FIXED MESSAGE SIGN WHEN LAKEFRONT RAMP IS REOPENED. TO BE PAID FOR AS "REMOVING TRAFFIC CONTROL SIGNS FIXED MESSAGE LEFT IN PLACE BY OTHERS".

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 5	SHEET 354	E

FILE NAME : 026416_S5.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

2

N

MILWAUKEE RIVER

N WATER STREET

N BROADWAY STREET

N MILWAUKEE STREET

N JEFFERSON STREET

MATCHLINE C

MATCHLINE D

IH 794 WB

IH 794 EB

25'
TYP.

E ST. PAUL AVENUE

RAMP
CLOSED
R11-2R
48" X 30"

EXIT 1F
Lakefront
RAMP CLOSED
ESTR
*

INTERSTATE 794 To 794
Port Of Milw
35 MPH
ESTR

LEFT
EXIT 1E
Jackson St
Van Buren St
EXIT ONLY
ESTR

EXIT 1F
Lakefront
RAMP CLOSED
* ESTR

INTERSTATE 794 EAST
Port Of Milw
2 RIGHT LANES
ESTR

* REMOVE FIXED MESSAGE SIGN WHEN LAKEFRONT RAMP IS REOPENED. TO BE PAID FOR AS "REMOVING TRAFFIC CONTROL SIGNS FIXED MESSAGE LEFT IN PLACE BY OTHERS".

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 5	SHEET 355	E

2

N

E ST. PAUL AVENUE

IH 794 EB

25'-0" TYP.

IH 794 WB

N JACKSON STREET

Lakefront
RAMP CLOSED
REMOVE SIGN

35 MPH
ESTR

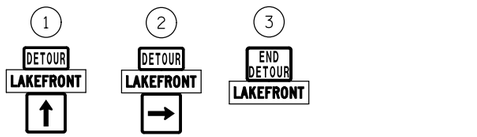
ROAD WORK AHEAD
W20-1A

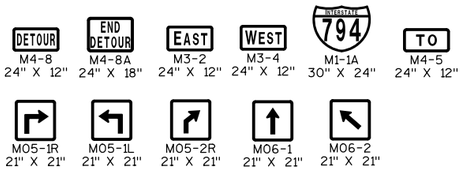
N VAN BUREN STREET

END ROAD WORK
G20-2A
48" X 24"

MATCHLINE E

PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	TRAFFIC CONTROL - STAGE 5	SHEET 356	E





LAKEFRONT
42" x 12"
ORANGE BACKGROUND
WITH 6" BLACK LETTERS.
PAID FOR AS TRAFFIC
CONTROL DETOUR SIGNS.

HARBOR DR
42" x 12"
ORANGE BACKGROUND
WITH 6" BLACK LETTERS.
PAID FOR AS TRAFFIC
CONTROL DETOUR SIGNS.

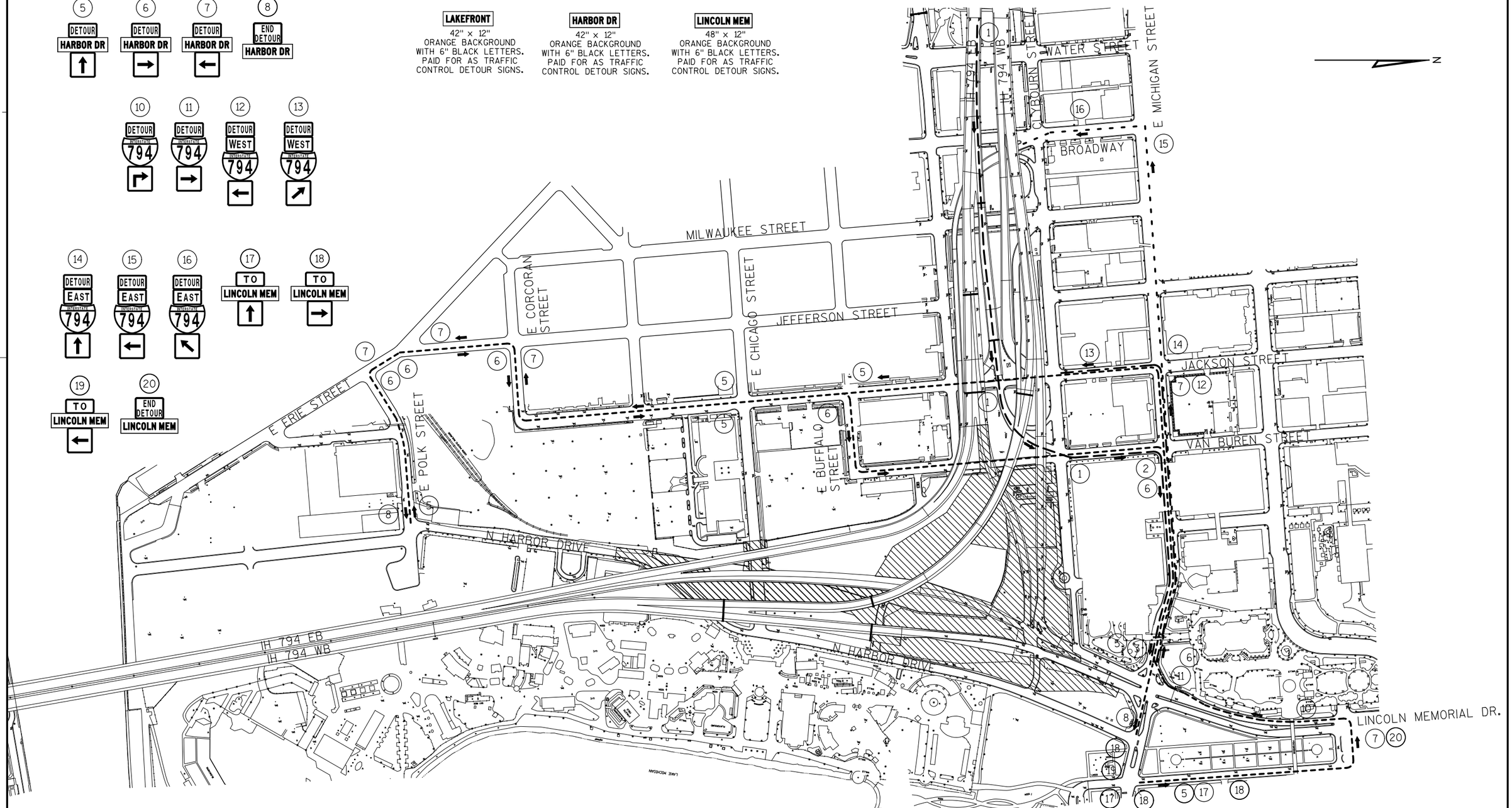
LINCOLN MEM
48" x 12"
ORANGE BACKGROUND
WITH 6" BLACK LETTERS.
PAID FOR AS TRAFFIC
CONTROL DETOUR SIGNS.

LEGEND

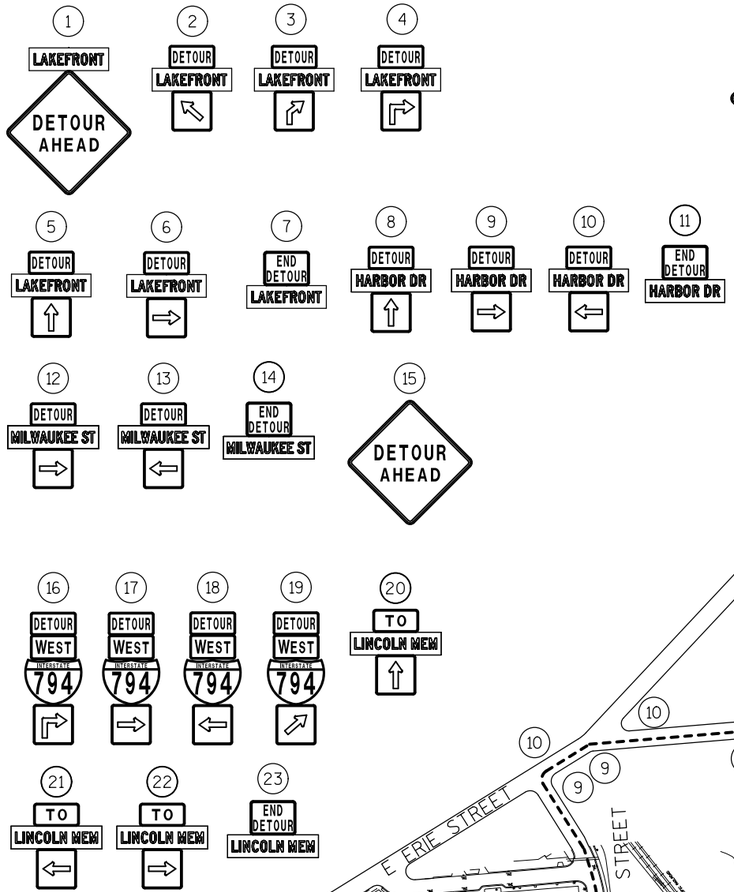
- DETOUR: EB IH794 OFF RAMP TO LAKEFRONT
- DETOUR: SB LINCOLN MEMORIAL DRIVE TO WB IH794
- DETOUR: SB LINCOLN MEMORIAL DRIVE TO EB IH794
- DETOUR: HARBOR DRIVE
- WORK ZONE

NOTES

1. ALL EXISTING SIGN MESSAGES IN CONFLICT WITH TRAFFIC CONTROL DETOUR SIGNS SHALL BE COVERED OR REMOVED.
2. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. SIGNS MAY BE MOUNTED ON EXISTING POSTS, LIGHTS, OR TEMPORARY SIGN SUPPORTS AS APPROVED BY THE ENGINEER.



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	DETOUR PLAN - STAGE 1	SHEET 357	E





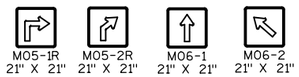
DETOUR M4-8 24" X 12"

END DETOUR M4-8A 24" X 18"

WEST M3-4 24" X 12"

INTERSTATE 794 M1-1A 30" X 24"

TO M4-5 24" X 12"



LAKEFRONT
42" x 12"
ORANGE BACKGROUND WITH 6" BLACK LETTERS. PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.

HARBOR DR
42" x 12"
ORANGE BACKGROUND WITH 6" BLACK LETTERS. PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.

MILWAUKEE ST
48" x 12"
ORANGE BACKGROUND WITH 6" BLACK LETTERS. PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.

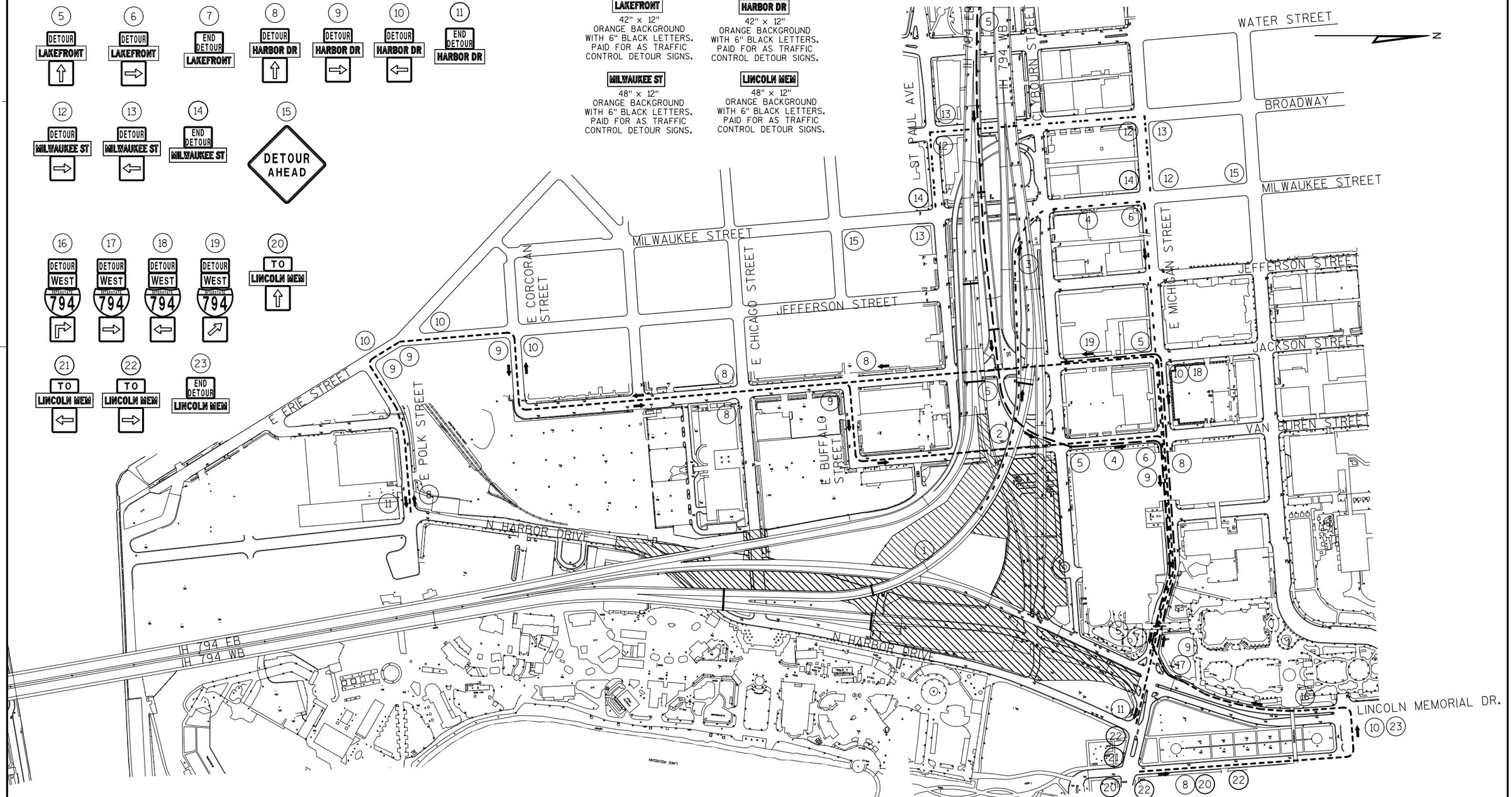
LINCOLN MEM
48" x 12"
ORANGE BACKGROUND WITH 6" BLACK LETTERS. PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.

LEGEND

- DETOUR: EB IH794 OFF RAMP TO LAKEFRONT
- DETOUR: SB LINCOLN MEMORIAL DRIVE TO WB IH794
- DETOUR: WB IH794 OFF RAMP TO LAKEFRONT
- DETOUR: HARBOR DRIVE
- DETOUR: MILWAUKEE STREET
- WORK ZONE

NOTES

1. ALL EXISTING SIGN MESSAGES IN CONFLICT WITH TRAFFIC CONTROL DETOUR SIGNS SHALL BE COVERED OR REMOVED.
2. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. SIGNS MAY BE MOUNTED ON EXISTING POSTS, LIGHTS, OR TEMPORARY SIGN SUPPORTS AS APPROVED BY THE ENGINEER.



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	DETOUR PLAN - STAGE 2	SHEET 358	E

FILE NAME : 027002_dt.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:400

WISDOT/CADDS SHEET 42

LAKEFRONT
42" x 12"
ORANGE BACKGROUND
WITH 6" BLACK LETTERS.
PAID FOR AS TRAFFIC
CONTROL DETOUR SIGNS.

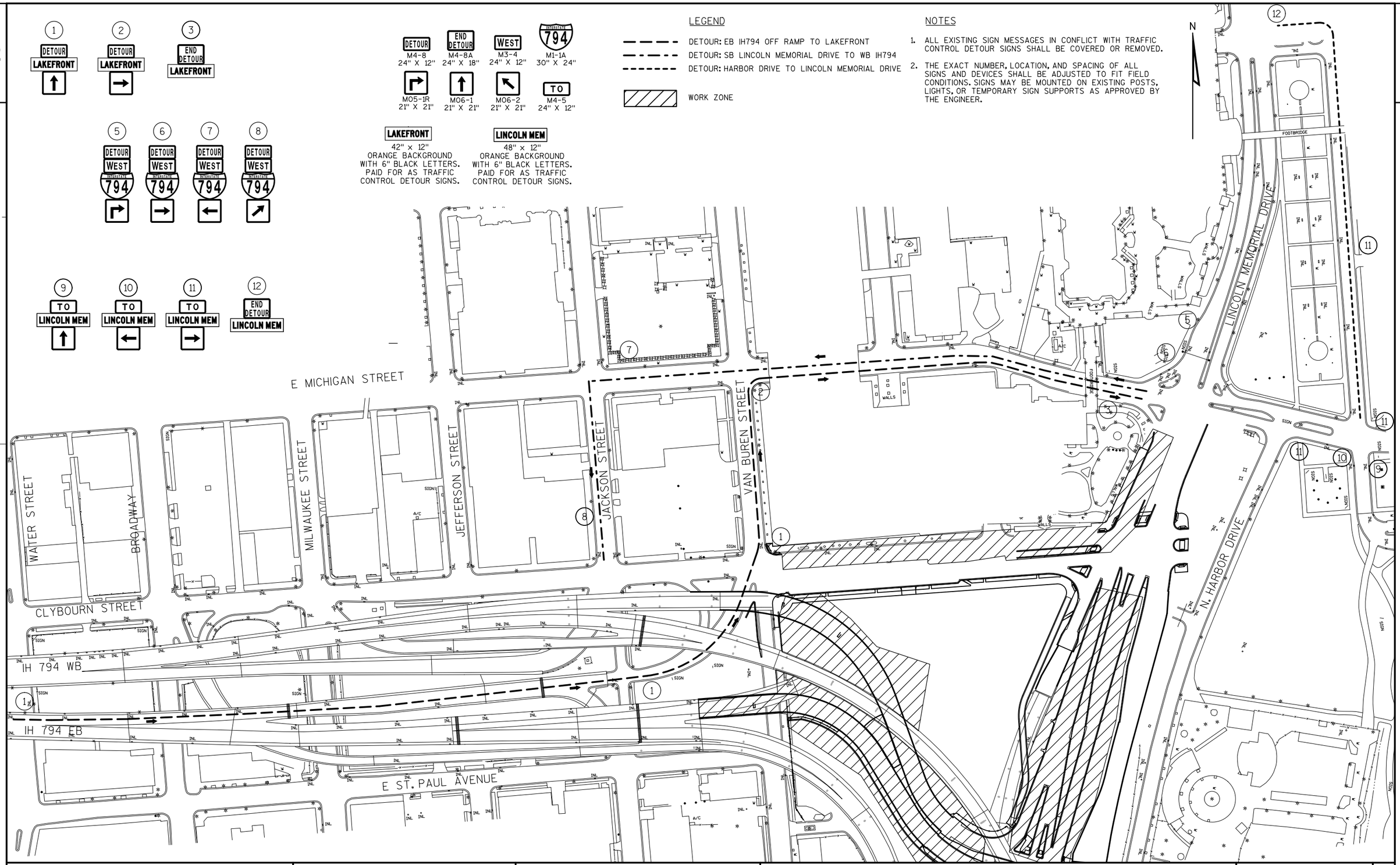
LINCOLN MEM
48" x 12"
ORANGE BACKGROUND
WITH 6" BLACK LETTERS.
PAID FOR AS TRAFFIC
CONTROL DETOUR SIGNS.

LEGEND

- DETOUR: EB IH794 OFF RAMP TO LAKEFRONT
- DETOUR: SB LINCOLN MEMORIAL DRIVE TO WB IH794
- DETOUR: HARBOR DRIVE TO LINCOLN MEMORIAL DRIVE
- WORK ZONE

NOTES

1. ALL EXISTING SIGN MESSAGES IN CONFLICT WITH TRAFFIC CONTROL DETOUR SIGNS SHALL BE COVERED OR REMOVED.
2. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. SIGNS MAY BE MOUNTED ON EXISTING POSTS, LIGHTS, OR TEMPORARY SIGN SUPPORTS AS APPROVED BY THE ENGINEER.



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	DETOUR PLAN - STAGE 3, 4 & 5	SHEET 359	E

2

LEGEND

PEDESTRIAN DETOUR: HARBOR DRIVE

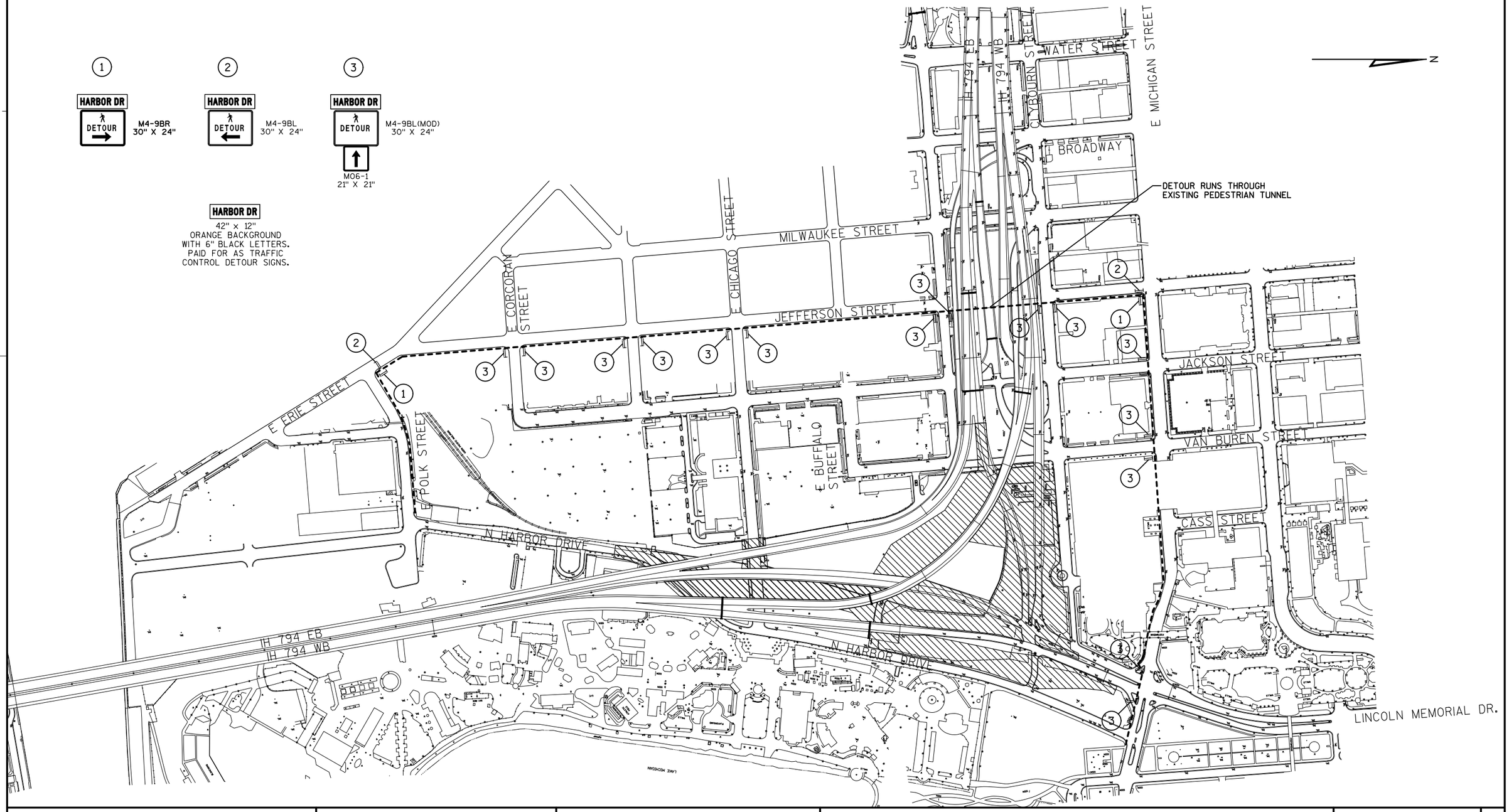
WORK ZONE

DETOUR SIGNS ON TYPE II BARRICADE OR TEMPORARY POST

NOTES

1. ALL EXISTING SIGN MESSAGES IN CONFLICT WITH TRAFFIC CONTROL DETOUR SIGNS SHALL BE COVERED OR REMOVED.
2. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. SIGNS MAY BE MOUNTED ON EXISTING POSTS, LIGHTS, OR TEMPORARY SIGN SUPPORTS AS APPROVED BY THE ENGINEER.

HARBOR DR
42" x 12"
ORANGE BACKGROUND
WITH 6" BLACK LETTERS.
PAID FOR AS TRAFFIC
CONTROL DETOUR SIGNS.



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PEDESTRIAN DETOUR PLAN - HARBOR DRIVE (STAGE 1 & 2)	SHEET 360	E





TRAIL CLOSED
R9-9 (Mod.)
24" X 12"

M06-1
21" X 21"

OAK LEAF TRAIL
24" X 12"

END DETOUR
M4-8A
24" X 18"

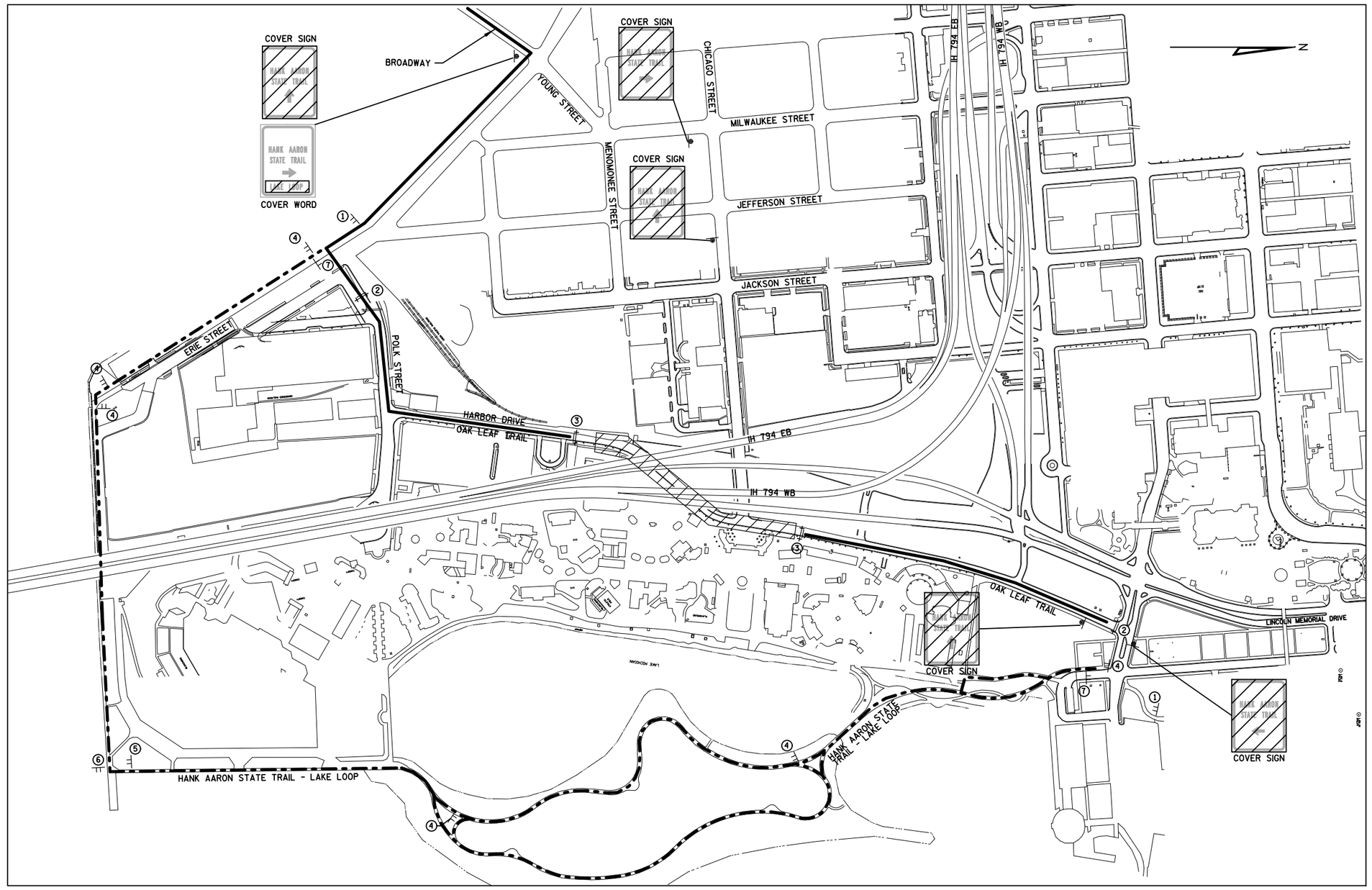
DETOUR
M4-8
24" X 12"

DO NOT ENTER
R5-1
36" X 36"

① OAK LEAF TRAIL
DETOUR AHEAD

② TRAIL CLOSED 1500 FT
TYPE III BARRICADE

③ TRAIL CLOSED
DO NOT ENTER
TYPE III BARRICADE



④ DETOUR
OAK LEAF TRAIL

⑤ DETOUR
OAK LEAF TRAIL

⑥ DETOUR
OAK LEAF TRAIL

⑦ OAK LEAF TRAIL
END DETOUR

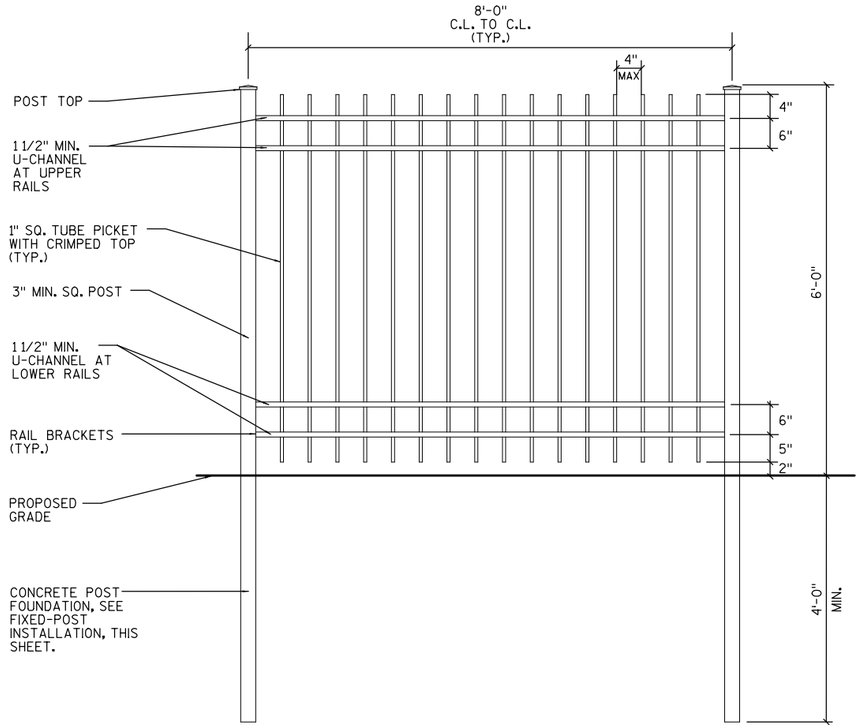
NOTES:

1. FINAL SIGN LOCATIONS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS. SIGNS MAY BE MOUNTED ON EXISTING POSTS, LIGHTS, OR TEMPORARY SIGN SUPPORTS AS APPROVED BY THE ENGINEER.
2. MINIMUM SIGN MOUNTING HEIGHT IS 7 FEET.
3. ALL SIGNS MUST BE RETROREFLECTIVE OR ILLUMINATED. ORANGE WARNING FLAGS SHALL ALSO BE INSTALLED ON EACH BARRICADE.
4. ALL WARNING SIGNS SHALL BE 30" X 30" UNLESS OTHERWISE NOTED.

LEGEND:

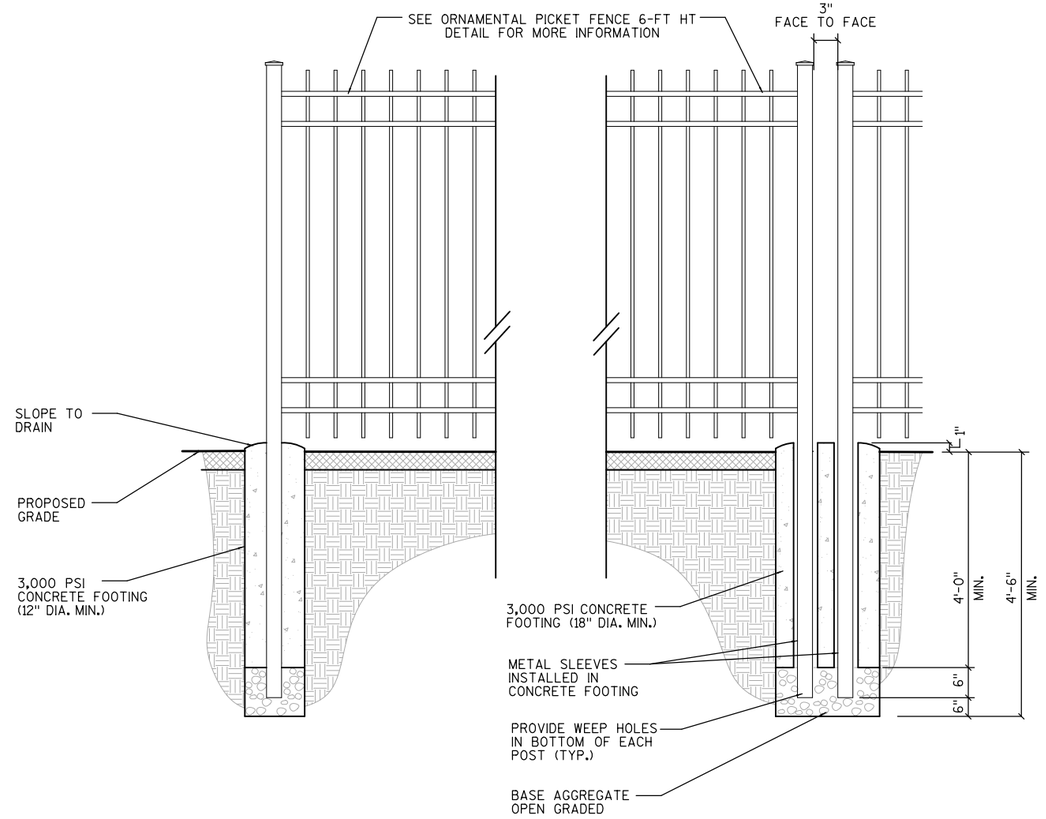
- WORK AREA
- OAK LEAF TRAIL
- OAK LEAF TRAIL DETOUR (HANK AARON STATE TRAIL - LAKE LOOP)
- TEMPORARY SIGN SUPPORT
- TYPE III BARRICADE WITH ATTACHED SIGN

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	DETOUR PLAN - STAGE 1 - 4, OAK LEAF TRAIL	SHEET 361	E



TYPICAL PANEL SECTION - ORNAMENTAL PICKET FENCE 6-FT HT

REFER TO ROADWAY PLANS FOR LOCATIONS (TYP.) N.T.S.



FIXED POST INSTALLATION

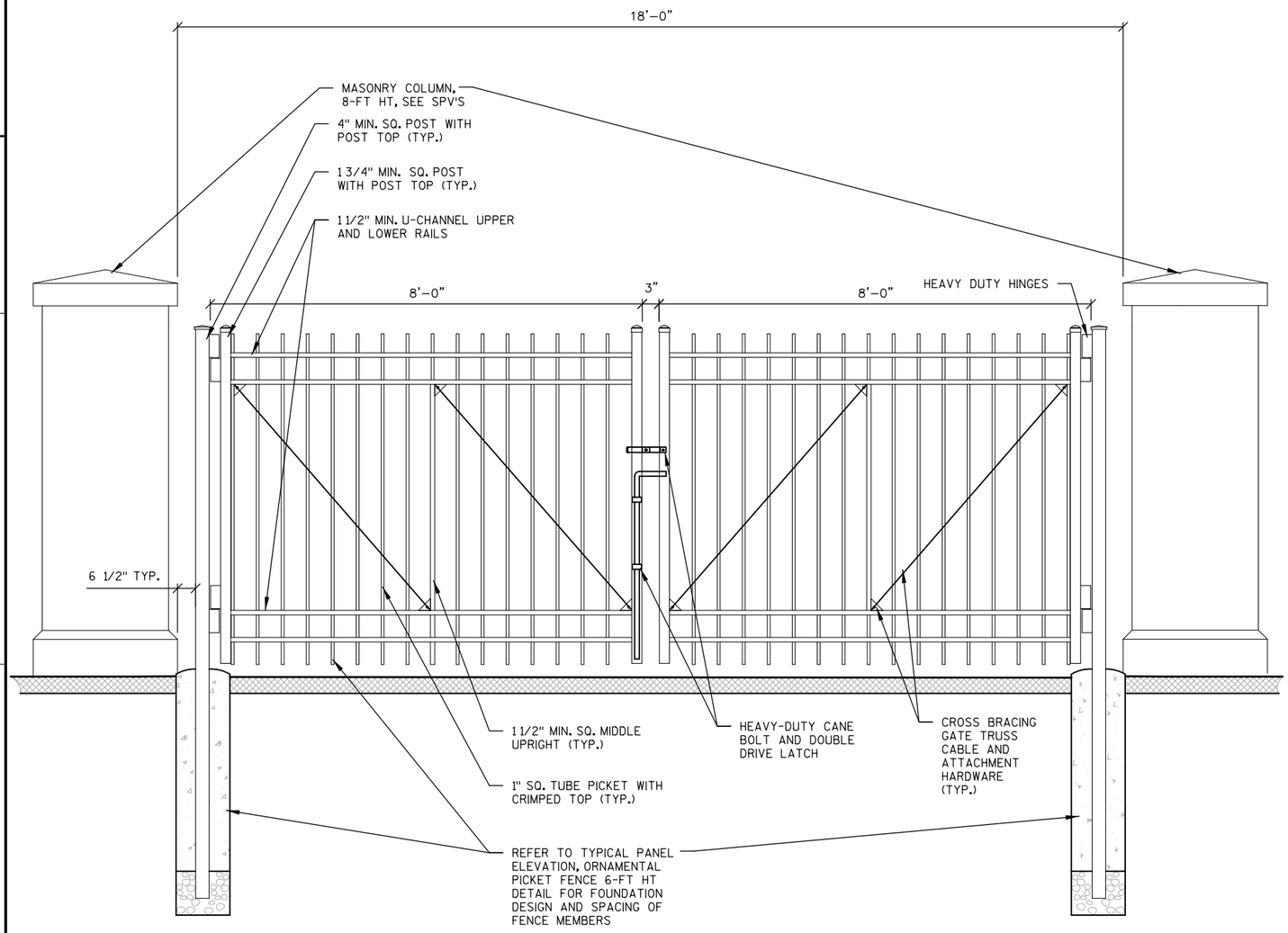
REMOVABLE POST INSTALLATION

TYPICAL POST SECTION - ORNAMENTAL PICKET FENCE 6-FT HT

REFER TO ROADWAY PLANS FOR LOCATIONS (TYP.) N.T.S.

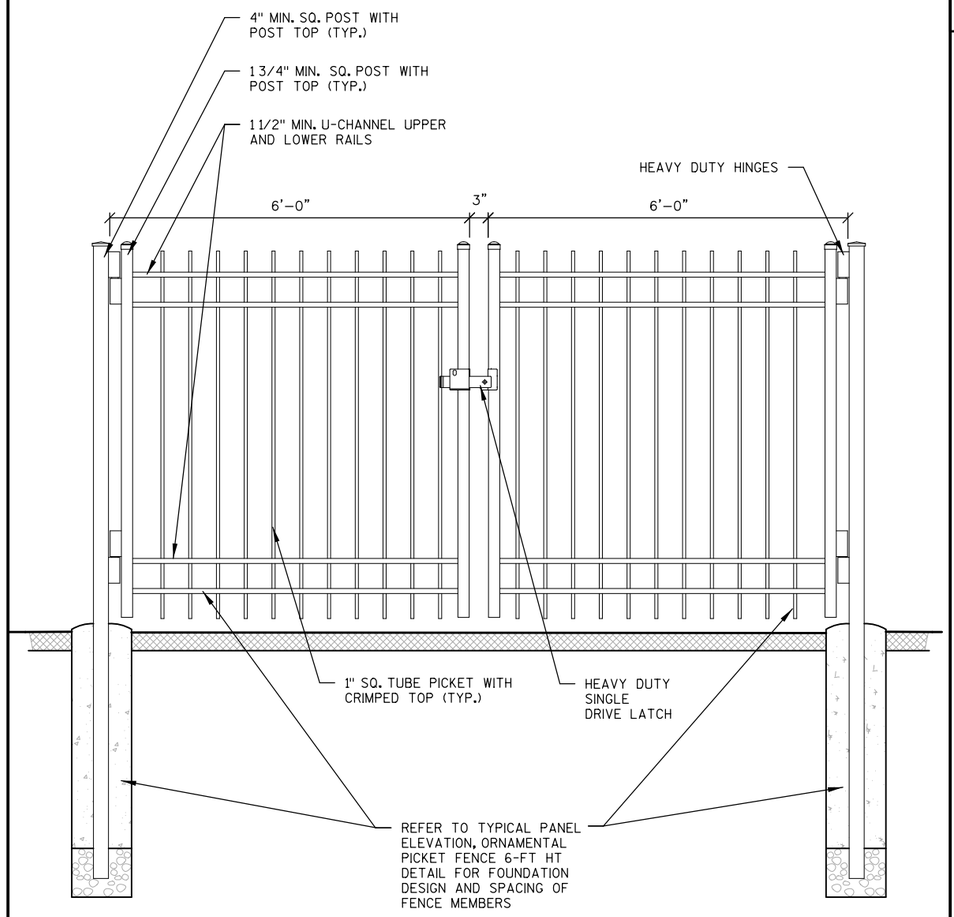
FENCE AND GATE DESIGN SHALL MATCH EXISTING SUMMERFEST 6-FT HT. ORNAMENTAL PICKET FENCING AS CLOSELY AS POSSIBLE. ORNAMENTAL PICKET FENCING AND GATE DRAWING DETAILS HAVE BEEN PROVIDED BY SUMMERFEST FOR REFERENCE AND TO SHOW GENERAL DESIGN INTENT. CONTRACTOR SHALL FIELD-VERIFY AND MATCH ALL EXISTING FENCE AND GATE MEMBERS, SIZES, HARDWARE, SPACING, GAGE, COLOR, FINISH, AND STYLES WITH NEW FENCING. REFER TO SPV'S FOR REQUIRED SUBMITTALS AND SHOP DRAWINGS.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	FENCE DETAILS	SHEET 362	E



DOUBLE SWING GATE WITH 16-FT OPENING

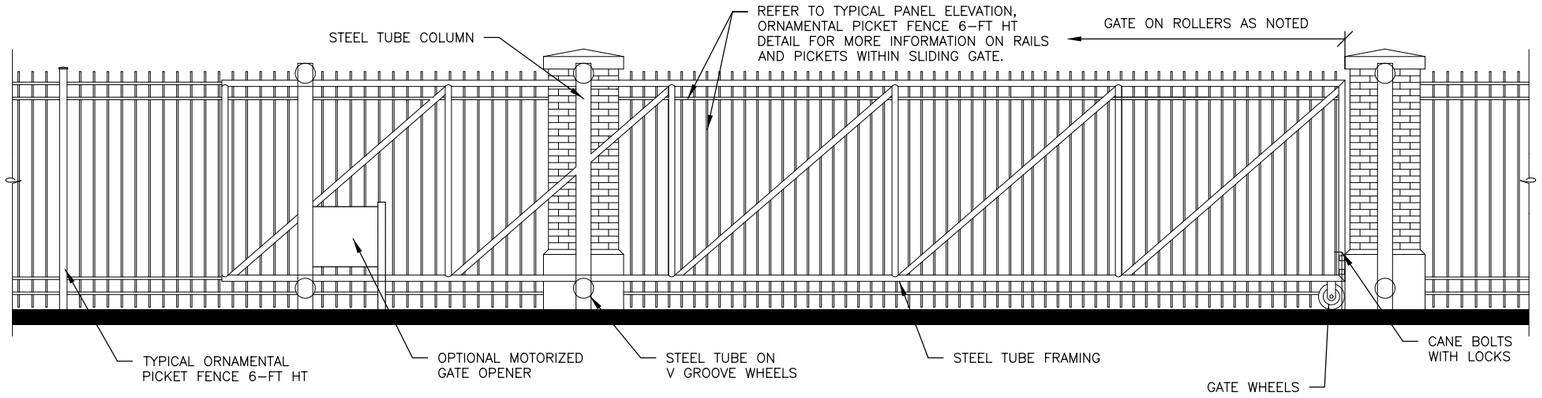
REFER TO ROADWAY PLANS FOR LOCATIONS



DOUBLE SWING GATE WITH 12-FT OPENING

REFER TO ROADWAY PLANS FOR LOCATIONS

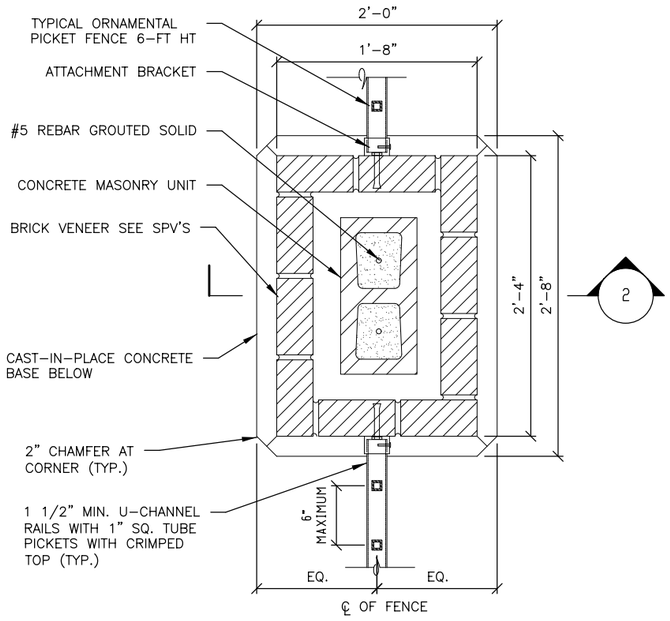
FENCE AND GATE DESIGN SHALL MATCH EXISTING SUMMERFEST 6-FT HT. ORNAMENTAL PICKET FENCING AS CLOSELY AS POSSIBLE. ORNAMENTAL PICKET FENCING, GATE DRAWING DETAILS, AND SPV'S HAVE BEEN PROVIDED BY SUMMERFEST FOR REFERENCE AND TO SHOW GENERAL DESIGN INTENT. CONTRACTOR SHALL FIELD-VERIFY AND MATCH ALL FENCE AND GATE MEMBERS, SIZES, HARDWARE, SPACEING, GAGE, COLOR, FINISH, AND STYLES WITH NEW FENCING. REFER TO SPV'S FOR REQUIRED SUBMITTALS AND SHOP DRAWINGS.



FENCE AND GATE DESIGN SHALL MATCH EXISTING SUMMERFEST 6-FT HT ORNAMENTAL PICKET FENCING AS CLOSELY AS POSSIBLE. ORNAMENTAL PICKET FENCING, GATE DRAWING DETAILS, AND SPV'S HAVE BEEN PROVIDED BY SUMMERFEST FOR REFERENCE AND TO SHOW GENERAL DESIGN INTENT. CONTRACTOR SHALL FIELD-VERIFY AND MATCH ALL EXISTING FENCE AND GATE MEMBERS, SIZES, HARDWARE, SPACING, GAGE, COLOR, FINISH, AND STYLES WITH NEW FENCING. REFER TO SPV'S FOR REQUIRED SUBMITTALS AND SHOP DRAWINGS.

1 SLIDING GATE, 24-FT OPENING

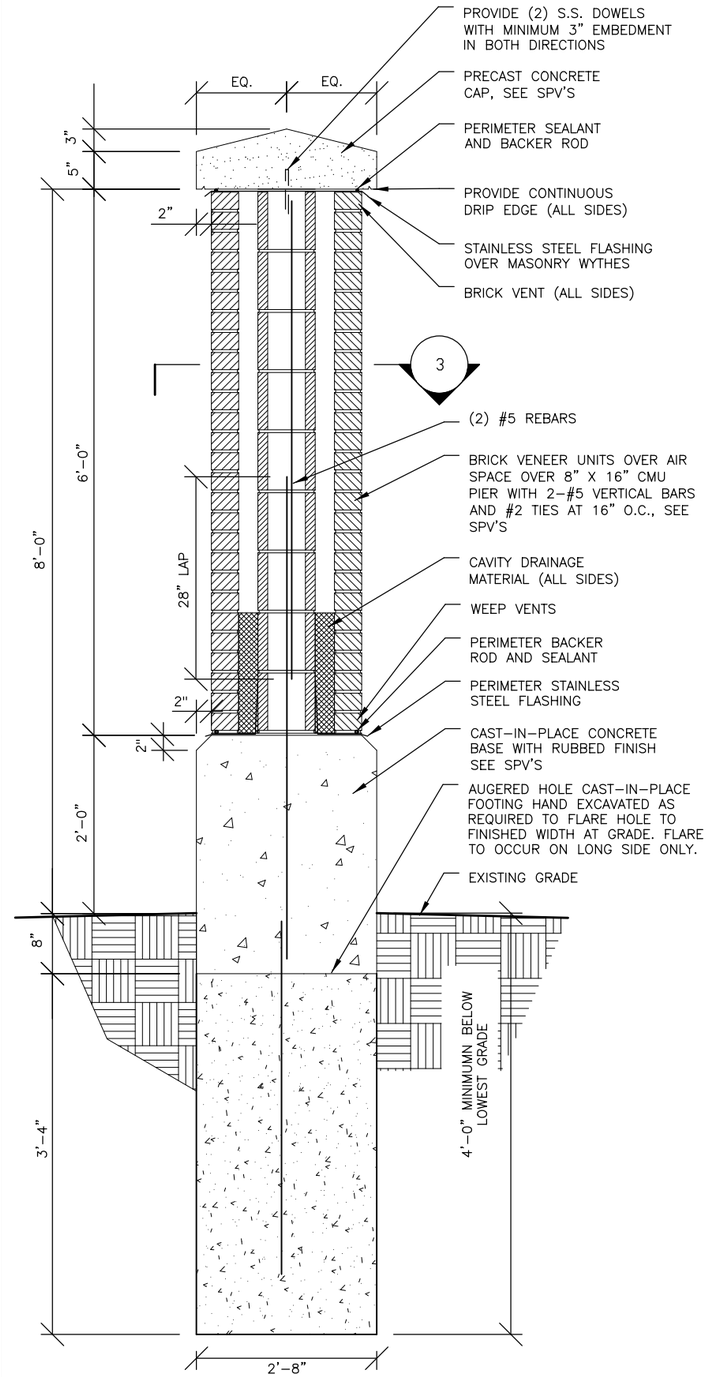
REFER TO ROADWAY PLANS FOR LOCATIONS — N.T.S.



MASONRY COLUMN, 8-FT HT, SHALL MATCH EXISTING SUMMERFEST 6-FT HT ORNAMENTAL PICKET FENCING AS CLOSELY AS POSSIBLE. ORNAMENTAL PICKET FENCING, GATE DRAWING DETAILS, AND SPV'S HAVE BEEN PROVIDED BY SUMMERFEST FOR REFERENCE AND TO SHOW GENERAL DESIGN INTENT. CONTRACTOR SHALL FIELD-VERIFY AND MATCH ALL EXISTING FENCE AND GATE MEMBERS, SIZES, HARDWARE, SPACING, GAGE, COLOR, FINISH, AND STYLES WITH NEW FENCING. REFER TO SPV'S FOR REQUIRED SUBMITTALS AND SHOP DRAWINGS.

3 TYPICAL SECTION - MASONRY COLUMN, 8-FT HT

N.T.S.

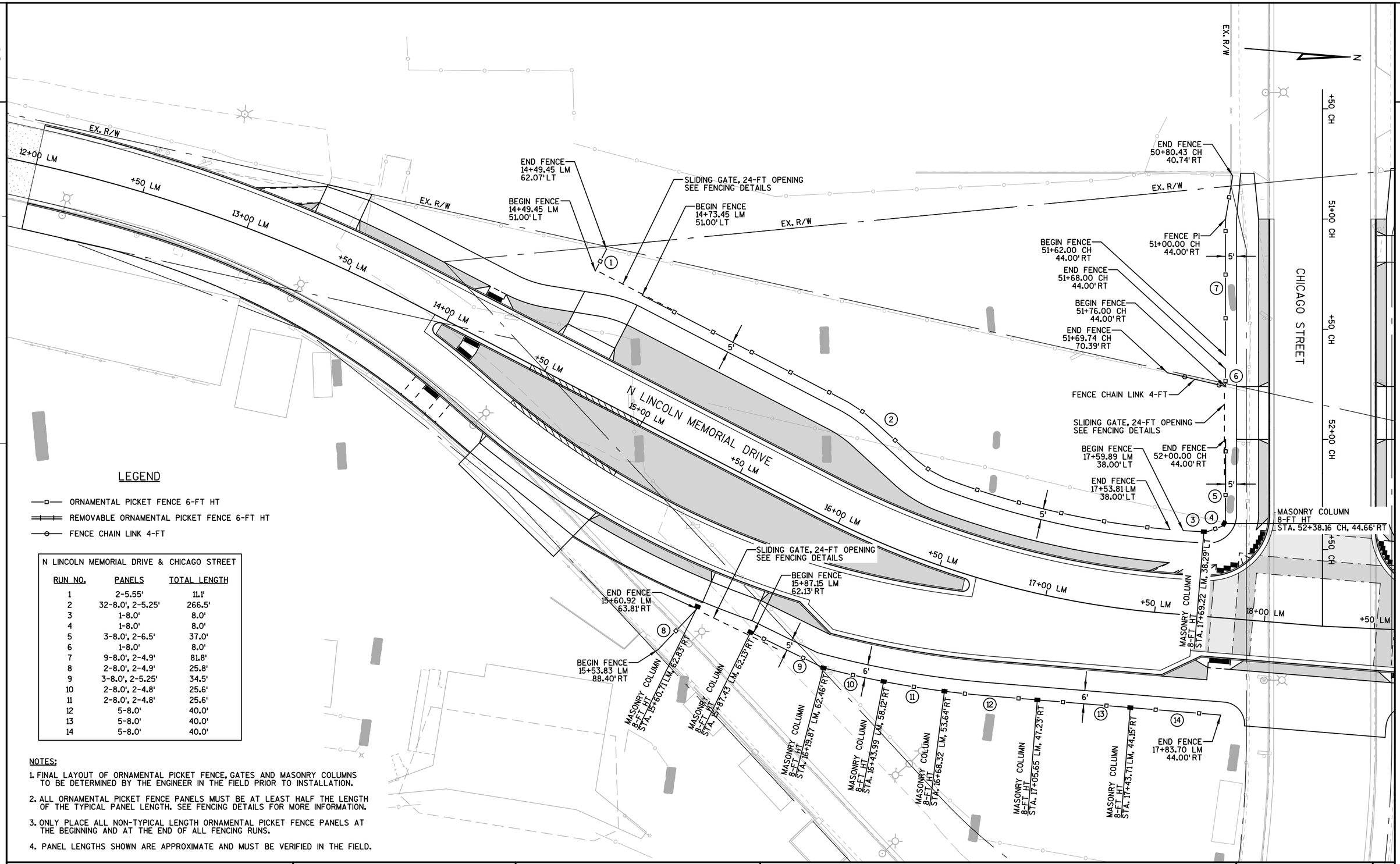


2 TYPICAL SECTION - MASONRY COLUMN, 8-FT HT

REFER TO ROADWAY PLANS FOR LOCATIONS — N.T.S.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	FENCE DETAILS	SHEET 364	E

2



LEGEND

- ORNAMENTAL PICKET FENCE 6-FT HT
- REMOVABLE ORNAMENTAL PICKET FENCE 6-FT HT
- FENCE CHAIN LINK 4-FT

N LINCOLN MEMORIAL DRIVE & CHICAGO STREET

RUN NO.	PANELS	TOTAL LENGTH
1	2-5.55'	11.1'
2	32-8.0', 2-5.25'	266.5'
3	1-8.0'	8.0'
4	1-8.0'	8.0'
5	3-8.0', 2-6.5'	37.0'
6	1-8.0'	8.0'
7	9-8.0', 2-4.9'	81.8'
8	2-8.0', 2-4.9'	25.8'
9	3-8.0', 2-5.25'	34.5'
10	2-8.0', 2-4.8'	25.6'
11	2-8.0', 2-4.8'	25.6'
12	5-8.0'	40.0'
13	5-8.0'	40.0'
14	5-8.0'	40.0'

NOTES:

1. FINAL LAYOUT OF ORNAMENTAL PICKET FENCE, GATES AND MASONRY COLUMNS TO BE DETERMINED BY THE ENGINEER IN THE FIELD PRIOR TO INSTALLATION.
2. ALL ORNAMENTAL PICKET FENCE PANELS MUST BE AT LEAST HALF THE LENGTH OF THE TYPICAL PANEL LENGTH. SEE FENCING DETAILS FOR MORE INFORMATION.
3. ONLY PLACE ALL NON-TYPICAL LENGTH ORNAMENTAL PICKET FENCE PANELS AT THE BEGINNING AND AT THE END OF ALL FENCING RUNS.
4. PANEL LENGTHS SHOWN ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	FENCING PLAN	SHEET 365	E

2

LEGEND

ORNAMENTAL PICKET FENCE 6-FT HT

REMOVABLE ORNAMENTAL PICKET FENCE 6-FT HT

FENCE CHAIN LINK 4-FT

N LINCOLN MEMORIAL DRIVE & CHICAGO STREET		
RUN NO.	PANELS	TOTAL LENGTH
1	2-8.0', 2-6.85'	29.7'
2	6-8.0', 2-4.2'	56.4'
3	2-8.0', 2-5.6'	27.2'
4	2-8.0'	16.0'
5	2-8.0'	16.0'
6	28-8.0', 2-7.0'	238.0'
7	13-8.0' *	110.25'
8	9-8.0', 1-5.25' *	82.0'
9	2-7.55'	15.1'
10	22-8.0', 2-4.4'	184.8'
11	2-8.0'	16.0'
12	1-8.0'	8.0'
13	1-8.0'	8.0'
14	7-8.0', 2-6.93' *	74.1'
15	27-8.0' *	229.3'

*INDICATES REMOVABLE INSTALLATION

NOTES:

1. FINAL LAYOUT OF ORNAMENTAL PICKET FENCE, GATES AND MASONRY COLUMNS TO BE DETERMINED BY THE ENGINEER IN THE FIELD PRIOR TO INSTALLATION.
2. ALL ORNAMENTAL PICKET FENCE PANELS MUST BE AT LEAST HALF THE LENGTH OF THE TYPICAL PANEL LENGTH. SEE FENCING DETAILS FOR MORE INFORMATION.
3. ONLY PLACE ALL NON-TYPICAL LENGTH ORNAMENTAL PICKET FENCE PANELS AT THE BEGINNING AND AT THE END OF ALL FENCING RUNS.
4. PANEL LENGTHS SHOWN ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD.

BEGIN FENCE 50+77.88 CH 44.00' LT

EX. R/W

END FENCE 51+07.56 CH 44.00' LT

DOUBLE SWING GATE WITH 12-FT OPENING SEE FENCING DETAILS

BEGIN FENCE 51+19.56 CH 44.00' LT

END FENCE 51+76.00 CH 44.00' LT

SLIDING GATE, 24-FT OPENING SEE FENCING DETAILS

BEGIN FENCE 52+00.00 CH 44.00' LT

CHICAGO STREET

52+00 CH

END FENCE 18+98.05 LM 46.08' LT

BEGIN FENCE 19+01.99 LM 46.02' LT

MASONRY COLUMN 8-FT HT STA. 52+28.57 CH, 44.00' LT

+50 CH

MASONRY COLUMN 8-FT HT STA. 18+80.72 LM, 46.37' LT

19+00 LM

+50 LM

20+00 LM

21+00 LM

22+00 LM

23+00 LM

24+00 LM

N LINCOLN MEMORIAL DRIVE

CENTER OF FENCE 19+08.62 LM 41.17' RT

CENTER OF FENCE 19+55.17 LM 44.51' RT

MASONRY COLUMN 8-FT HT STA. 18+85.31 LM, 40.09' RT

MASONRY COLUMN 8-FT HT STA. 19+31.91 LM, 42.64' RT

MASONRY COLUMN 8-FT HT STA. 19+78.39 LM, 46.77' RT

DOUBLE SWING GATE WITH 16-FT OPENING SEE FENCING DETAILS

DOUBLE SWING GATE WITH 16-FT OPENING SEE FENCING DETAILS

BEGIN FENCE 19+80.21 LM 46.96' RT

FENCE PI 20+55.50 LM 56.23' RT

END FENCE 21+28.73 LM 63.14' LT

BEGIN FENCE 21+34.56 LM 63.35' LT

END FENCE 22+35.83 LM 73.02' LT

BEGIN FENCE 22+41.62 LM 73.17' LT

FENCE PI 23+19.62 LM 60.00' LT

FENCE PI 23+32.60 LM 67.63' LT

END FENCE 23+01.91 LM 82.00' RT

END FENCE 207+81.10 LE 36.99' RT

FENCE PI 207+93.52 LE 44.39' RT

IH 794 EB EXIT RAMP

205+00 LE

+50 LE

210+00 LE

+50 LM

110+00 LM

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	FENCING PLAN	SHEET 366	E

2

LEGEND

ORNAMENTAL PICKET FENCE 6-FT HT

REMOVABLE ORNAMENTAL PICKET FENCE 6-FT HT

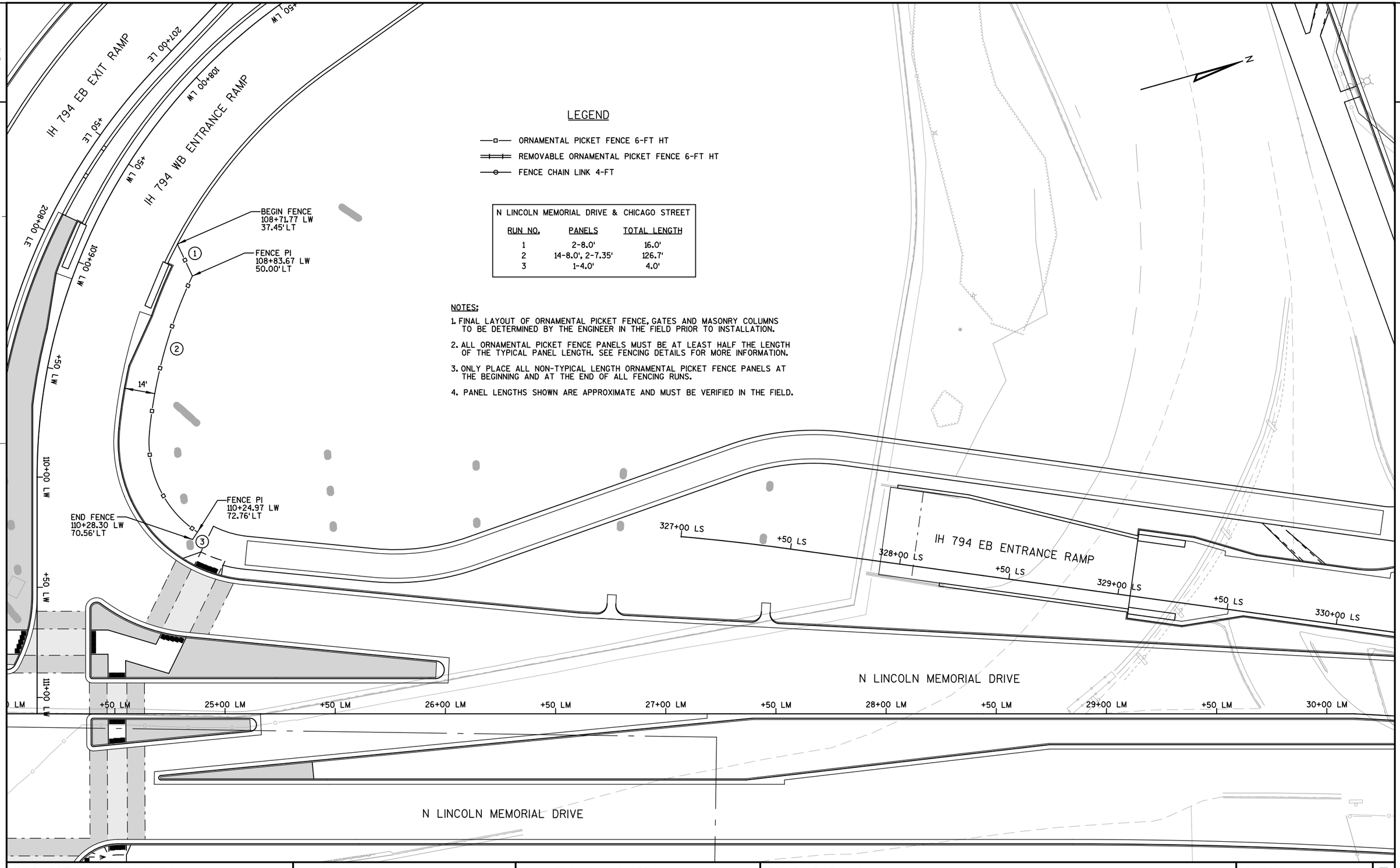
FENCE CHAIN LINK 4-FT

N LINCOLN MEMORIAL DRIVE & CHICAGO STREET

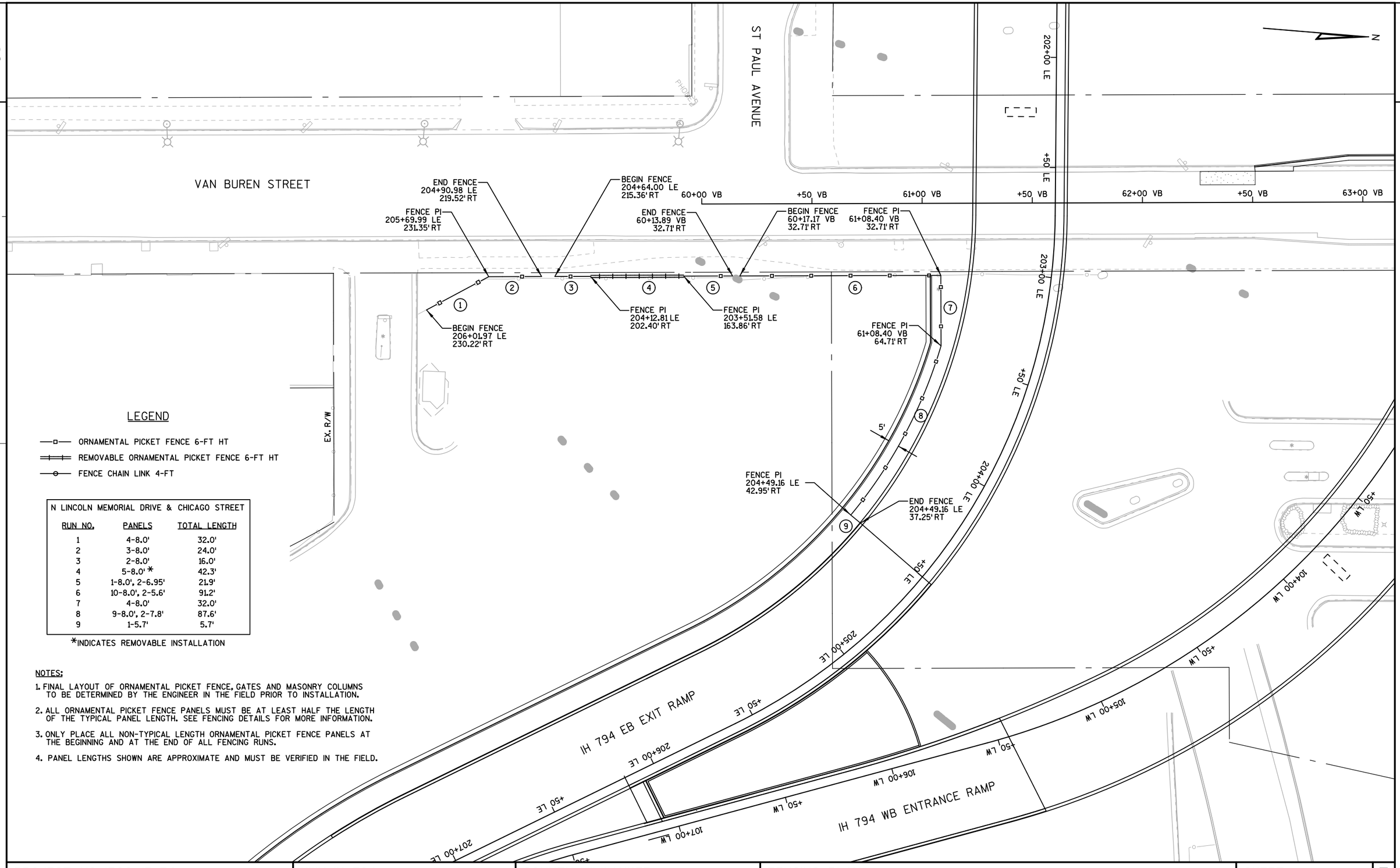
RUN NO.	PANELS	TOTAL LENGTH
1	2-8.0'	16.0'
2	14-8.0', 2-7.35'	126.7'
3	1-4.0'	4.0'

NOTES:

1. FINAL LAYOUT OF ORNAMENTAL PICKET FENCE, GATES AND MASONRY COLUMNS TO BE DETERMINED BY THE ENGINEER IN THE FIELD PRIOR TO INSTALLATION.
2. ALL ORNAMENTAL PICKET FENCE PANELS MUST BE AT LEAST HALF THE LENGTH OF THE TYPICAL PANEL LENGTH. SEE FENCING DETAILS FOR MORE INFORMATION.
3. ONLY PLACE ALL NON-TYPICAL LENGTH ORNAMENTAL PICKET FENCE PANELS AT THE BEGINNING AND AT THE END OF ALL FENCING RUNS.
4. PANEL LENGTHS SHOWN ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD.



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	FENCING PLAN	SHEET 367	E



LEGEND

- ORNAMENTAL PICKET FENCE 6-FT HT
- REMOVABLE ORNAMENTAL PICKET FENCE 6-FT HT
- FENCE CHAIN LINK 4-FT

N LINCOLN MEMORIAL DRIVE & CHICAGO STREET

RUN NO.	PANELS	TOTAL LENGTH
1	4-8.0'	32.0'
2	3-8.0'	24.0'
3	2-8.0'	16.0'
4	5-8.0' *	42.3'
5	1-8.0', 2-6.95'	21.9'
6	10-8.0', 2-5.6'	91.2'
7	4-8.0'	32.0'
8	9-8.0', 2-7.8'	87.6'
9	1-5.7'	5.7'

*INDICATES REMOVABLE INSTALLATION

NOTES:

1. FINAL LAYOUT OF ORNAMENTAL PICKET FENCE, GATES AND MASONRY COLUMNS TO BE DETERMINED BY THE ENGINEER IN THE FIELD PRIOR TO INSTALLATION.
2. ALL ORNAMENTAL PICKET FENCE PANELS MUST BE AT LEAST HALF THE LENGTH OF THE TYPICAL PANEL LENGTH. SEE FENCING DETAILS FOR MORE INFORMATION.
3. ONLY PLACE ALL NON-TYPICAL LENGTH ORNAMENTAL PICKET FENCE PANELS AT THE BEGINNING AND AT THE END OF ALL FENCING RUNS.
4. PANEL LENGTHS SHOWN ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD.

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	FENCING PLAN	SHEET 368	E

2

CONCRETE MONUMENT WITH BRASS CAP Y=296,900.29 X=606,295.17

NORTH WITNESS MONUMENT Y=299,550.74 X=606,316.14

PLASTIC PIPE MONUMENT IN AN ALUMINUM HAND HOLE Y=296,883.82 X=608,935.01

CONCRETE MONUMENT WITH BRASS CAP Y=299,520.59 X=608,954.01

IH 794 EB EXIT RAMP

CURVE = P_RAMPLE_1-1
P.I. = 204+31.93 LE
Y = 298,524.79
X = 608,044.69
DELTA = 63° 25' 19" (RT)
D = 22° 07' 19"
T = 160.03'
L = 286.69'
R = 259.00'
P.C. = 202+71.90 LE
P.T. = 205+58.59 LE
S.E. = 6%
DESIGN SPEED = 30 MPH

CURVE = P_RAMPLE_1-2
P.I. = 208+23.21 LE
Y = 298,160.01
X = 608,262.09
DELTA = 43° 32' 16" (LT)
D = 20° 06' 14"
T = 113.81'
L = 216.56'
R = 285.00'
P.C. = 207+09.40 LE
P.T. = 209+25.97 LE
S.E. = 2%
DESIGN SPEED = 30 MPH

N LINCOLN MEMORIAL DRIVE

CURVE = P_LMD_1-1
P.I. = 12+88.88 LM
Y = 297,035.00
X = 608,261.99
DELTA = 14° 48' 24" (RT)
D = 8° 22' 36"
T = 88.88'
L = 176.76'
R = 684.00'
P.C. = 12+00.00 LM
P.T. = 13+76.76 LM
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

CURVE = P_LMD_1-2
P.I. = 16+73.59 LM
Y = 297,390.86
X = 608,410.77
DELTA = 22° 39' 48" (LT)
D = 13° 46' 23"
T = 83.36'
L = 164.55'
R = 416.00'
P.C. = 15+90.23 LM
P.T. = 17+54.78 LM
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

CURVE = P_LMD_1-3
P.I. = 21+48.49 LM
Y = 297,867.74
X = 608,399.74
DELTA = 17° 38' 34" (RT)
D = 7° 09' 43"
T = 124.15'
L = 246.34'
R = 800.00'
P.C. = 20+24.33 LM
P.T. = 22+70.67 LM
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

CURVE = P_LMD_1-4
P.I. = 32+46 LM
Y = 298,922.55
X = 608,708.49
DELTA = 5° 23' 09" (RT)
D = 9° 32' 57"
T = 28.22'
L = 56.40'
R = 600.00'
P.C. = 32+17.63 LM
P.T. = 32+74.03 LM
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

CURVE = P_LMD_1-5
P.I. = 38+00 LM
Y = 299,432.86
X = 608,923.46
DELTA = 8° 22' 20" (LT)
D = 3° 22' 13"
T = 124.43'
L = 248.41'
R = 1,700.00'
P.C. = 36+75.30 LM
P.T. = 39+23.71 LM
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

IH 794 WB ENTRANCE RAMP

CURVE = P_RAMPLW_1-1
P.I. = 103+87.32 LW
Y = 298,714.81
X = 608,049.32
DELTA = 70° 28' 18" (RT)
D = 17° 54' 18"
T = 226.04'
L = 393.59'
R = 320.00'
P.C. = 101+61.28 LW
P.T. = 105+54.87 LW
S.E. = 4%
DESIGN SPEED = 30 MPH

CURVE = P_RAMPLW_1-2
P.I. = 108+84.87 LW
Y = 298,191.70
X = 608,237.81
DELTA = 54° 31' 03" (LT)
D = 21° 42' 11"
T = 136.02'
L = 251.20'
R = 264.00'
P.C. = 107+48.85 LW
P.T. = 110+00.04 LW
S.E. = NORMAL CROWN
DESIGN SPEED = 25 MPH

IH 794 EB ENTRANCE RAMP

CURVE = P_RAMPLS_1-1
P.I. = 326+59.38 LS
Y = 298,391.83
X = 608,456.16
DELTA = 10° 27' 15" (RT)
D = 5° 51' 52"
T = 89.38'
L = 178.26'
R = 976.99'
P.C. = 325+70.00 LS
P.T. = 327+48.26 LS
S.E. = 4.2%
DESIGN SPEED = 35 MPH

IH 794 WB EXIT RAMP

CURVE = P_RAMPLN_1-1
P.I. = 420+09.04 LN
Y = 297,690.41
X = 608,528.47
DELTA = 4° 34' 50" (RT)
D = 2° 16' 12"
T = 100.95'
L = 201.78'
R = 2,524.00'
P.C. = 419+08.10 LN
P.T. = 421+09.88 LN
S.E. = RC (1.5%)
DESIGN SPEED = 35 MPH

CURVE = P_RAMPLN_1-2
P.I. = 426+14.19 LN
Y = 298,286.97
X = 608,630.67
DELTA = 5° 30' 49" (RT)
D = 1° 53' 41"
T = 145.61'
L = 291.00'
R = 3,024.00'
P.C. = 424+68.58 LN
P.T. = 427+59.57 LN
S.E. = RC (2.0%)
DESIGN SPEED = 35 MPH

CURVE = P_RAMPLN_1-3
P.I. = 431+12.12 LN
Y = 298,767.62
X = 608,761.58
DELTA = 13° 46' 56" (LT)
D = 6° 56' 12"
T = 99.83'
L = 198.69'
R = 826.00'
P.C. = 430+12.29 LN
P.T. = 432+10.98 LN
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

JACKSON EB EXIT RAMP

CURVE = P_RAMPJE-1
P.I. = 61+97.46 JE
Y = 298,603.99
X = 607,734.53
DELTA = 61° 12' 54" (LT)
D = 22° 55' 06"
T = 147.89'
L = 267.10'
R = 250.00'
P.C. = 60+49.56 JE
P.T. = 63+16.66 JE
S.E. = NORMAL CROWN
DESIGN SPEED = 25 MPH

BEGIN CONSTRUCTION STA. 12+00.00 LM

END CONSTRUCTION STA. 34+45.08 LM

POT 10+00.00 LM
Y=296748.85 X=608222.38
STA. 11+40.63 LM
PC 12+00.00 LM
PI 12+88.88 LM
CURVE P_LMD_1-1
PT 13+76.76 LM
N 22° 41' 19" E
N LINCOLN MEMORIAL DRIVE
PC 15+90.23 LM
PI 16+73.59 LM
CURVE P_LMD_1-2
PT 17+54.78 LM
N 0° 01' 30" E
POT 52+84.77 CH = PI 18+26.42 LM
N 1° 58' 30" W
PC 20+24.33 LM
PI 21+48.49 LM
CURVE P_LMD_1-3
PT 22+70.67 LM
POT 210+23.61 LE = STA. 23+90.76 LM
PT 209+25.97 LE
Y=297522.51 X=608127.03
50 POT 50+00.00 CH
N 85° 17' 48" E
CHICAGO STREET
51 CH
52 CH
Y=297482.21 X=608509.74
418 LN
419 LN
420 LN
421 LN
422 LN
423 LN
424 LN
425 LN
426 LN
427 LN
428 LN
429 LN
430 LN
431 LN
432 LN
N 5° 08' 27" E
POT 418+00.00 LN
PC 419+08.10 LN
PI 420+09.04 LN
PT 421+09.88 LN
CURVE P_RAMPLN_1-1
N 9° 43' 18" E
IH 794 WB EXIT RAMP
PC 424+68.58 LN
PI 426+14.19 LN
PT 427+59.57 LN
CURVE P_RAMPLN_1-2
N 15° 14' 06" E
PC 430+12.29 LN
PI 431+12.12 LN
CURVE P_RAMPLN_1-3
Y=298867.41 X=608764.11
PT 432+10.98 LN
POT 198+00.00 LE
Y=298478.33 X=607414.47
198 LE
199 LE
200 LE
201 LE
202 LE
203 LE
204 LE
205 LE
206 LE
207 LE
208 LE
209 LE
210 LE
211 LE
N 85° 47' 01" E
IH 794 EB EXIT RAMP
JACKSON EB EXIT RAMP
POT 97+50.00 LW
Y=298711.63 X=607412.01
Y=298573.56 X=607539.43
60 JE
POT 60+00.00 JE
PC 60+49.56 JE
61 JE
62 JE
63 JE
64 JE
PI 61+97.46 JE
N 89° 42' 49" E
98 LW
99 LW
100 LW
101 LW
102 LW
103 LW
104 LW
105 LW
106 LW
107 LW
108 LW
109 LW
110 LW
111 LW
CURVE P_RAMPJE-1
Y=298787.58 X=607669.13
20 CL
POT 20+00.00 CL
21 CL
Y=298797.46 X=607804.63
POT 63+74.55 JE = STA. 21+35.86 CL
PC 101+61.28 LW
Y=298900.75 X=607846.20
POT 65+50.00 VB
POT 60+00.00 VB
Y=298352.74 X=607892.91
60 VB
61 VB
62 VB
63 VB
64 VB
65 VB
N 4° 52' 18" W
VAN BUREN STREET
PC 202+71.90 LE
STA. 21+86.06 CL = STA. 64+50.00 VB
22 CL
23 CL
24 CL
25 CL
26 CL
27 CL
28 CL
29 CL
30 CL
31 CL
32 CL
33 LM
34 LM
35 LM
36 LM
37 LM
38 LM
39 LM
PT 63+16.66 JE
PI 103+87.32 LW
CURVE P_RAMPLE_1-1
PC 205+58.59 LE
PI 204+31.93 LE
PC 207+09.40 LE
PI 208+84.87 LW
PI 208+23.21 LE
CURVE P_RAMPLW_1-1
PC 107+48.85 LW
CURVE P_RAMPLW_1-2
Y=298304.76 X=608435.96
PC 325+70.00 LS
CURVE P_RAMPLS_1-1
PI 326+59.38 LS
PT 327+48.26 LS
POT 331+00.00 LS
Y=298796.32 X=608632.15
326 LS
327 LS
328 LS
329 LS
330 LS
N 23° 30' 49" E
IH 794 EB ENTRANCE RAMP
PT 110+00.04 LW
POT 111+07.43 LW = STA. 24+14.72 LM
N 15° 40' 04" E
PI 30+12.58 LM
N 18° 43' 10" E
CLYBOURN STREET
N 85° 49' 47" E
STA. 31+81.77 LM = STA. 30+21.50 CL
PC 32+17.63 LM
CURVE P_LMD_1-4
PI 32+45.85 LM
PT 32+74.03 LM
N 24° 06' 19" E
PI 35+66.69 LM
STA. 38+89.29 LM
CURVE P_LMD_1-5
N 21° 06' 19" E
PC 36+75.30 LM
PT 39+23.71 LM
Y=299554.22 X=608950.88
STA. 32+83.67 CL
Y=298910.47 X=609354.66
PI 37+99.73 LM
POT 36+90.00 CL

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SHEET 369	E

2

CONCRETE MONUMENT WITH BRASS CAP
Y=296,900.29
X=606,295.17

NORTH WITNESS MONUMENT
BRASS CAP IN CONCRETE SIDEWALK
Y=299,550.74
X=606,316.14

CP220
BERNTSEN FENO MON.
ALONG FENCE LINE
W OF HARBOR DR.,
44'N OF DRIVEWAY
STA 11+18.71 LM, 23.84' LT
N 296869.706
E 608215.042
ELEV 586.15

CP222
BERNTSEN FENO MON.
WEST OF DRIVEWAY,
18'SE OF LIGHT POLE
STA 50+51.13 CH, 41.48' RT
N 297485.367
E 608181.392
ELEV 587.04

CP225
BERNTSEN FENO MON.
SOUTH OF PARKING LOT
ENTRANCE, IN GRASS
TERRACE 3' SOUTH OF CURB
STA 206+73.73 LE, 168.96' RT
N 298201.914
E 608040.422
ELEV 586.97

CP226
BERNTSEN FENO MON.
139' WEST OF VAN BUREN ST.
AND 34' SE OF JACKSON ST.
EB EXIT RAMP
STA 201+09.70 LE, 50.07' LT
N 298551.036
E 607719.648
ELEV 589.61

CP221
BERNTSEN FENO MON.
WEST OF HARBOR DR.,
37' FROM LIGHT POLE
STA 15+74.82 LM, 44.66' RT
N 297282.497
E 608413.870
ELEV 585.34

CP223
BERNTSEN FENO MON.
27' NORTH OF PARKING
LOT ENTRANCE ALONG
FENCE LINE
STA 24+00.65 LM, 32.65' RT
N 298103.611
E 608499.801
ELEV 585.93

CP233
BERNTSEN FENO MON.
IN GRASS, 660' SOUTH
OF INT. MICHIGAN ST. AND
NORTH ART MUSEUM DR.,
460' EAST OF EAST CURB ALONG
HARBOR DR. AND 13' NORTHEAST
OF NORTHEAST CORNER FENCE
AROUND SUMMERFEST GROUNDS.
STA. 35+68.85 CL, 458.31' RT
N 298444.569
E 609267.149
ELEV 584.38

CP234
BERNTSEN FENO MON.
IN GRASS ONTOP OF HILL
BETWEEN OAK LEAF TR.
AND NORTH HARBOR DR.,
135 FEET NORTHEAST OF INT.
MICHIGAN ST. AND NORTH
ART MUSEUM DR.
STA. 36+87.48 CL, 248.29' LT
N 299157.921
E 609334.083
ELEV 592.87

CP235
BERNTSEN FENO MON.
IN GRASS AT THE NORTHEAST
CORNER OF THE INT. OF LINCOLN
MEMORIAL DR. AND MICHIGAN ST.,
60 FEET NORTH OF NORTH EDGE
SIDEWALK AND 44 FEET EAST
OF EAST EDGE SIDEWALK.
STA. 36+58.68 LM, 98.22' RT
N 299265.905
E 608964.295
ELEV 588.87

CP232
BERNTSEN FENO MON.
IN GRASS MEDIAN, 137' SOUTH
OF SOUTH EDGE OVERHEAD
FOOT BRIDGE AND 36'
SOUTHWEST OF AN INLET
BEYOND ALIGNMENT
N 299640.395
E 608979.516
ELEV 588.28

CONCRETE MONUMENT
WITH BRASS CAP
Y=299,520.59
X=608,954.01

PLASTIC PIPE MONUMENT
IN AN ALUMINUM HAND HOLE
Y=296,883.82
X=608,935.01

JACKSON ST
VAN BUREN ST
CHICAGO STREET
CLYBOURN STREET
MICHIGAN ST
N ART MUSEUM DR
IH 794
IH 794 EB EXIT RAMP
IH 794 EB ENTRANCE RAMP
IH 794 WB ENTRANCE RAMP
IH 794 WB EXIT RAMP
N LINCOLN MEMORIAL DRIVE
HARBOR DR

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE ZONE, NAD83(2007), NAVD88(1991)

WISCORS BASE STATIONS USED TO ESTABLISH CONTROL ARE; RASN, SIW2

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	SURVEY CONTROL PLAN	SHEET 370	E

FILE NAME : 027203_cd.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:200

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
0010	201.0110	Clearing	SY	7,790.000	7,790.000
0020	201.0120	Clearing	ID	739.000	739.000
0030	201.0210	Grubbing	SY	7,790.000	7,790.000
0040	201.0220	Grubbing	ID	739.000	739.000
0050	203.0200	Removing Old Structure (station) 2001. 100+66 LW	LS	1.000	1.000
0060	203.0200	Removing Old Structure (station) 2002. 102+00 LW	LS	1.000	1.000
0070	203.0200	Removing Old Structure (station) 2003. 104+00 LW 135' LT	LS	1.000	1.000
0080	203.0200	Removing Old Structure (station) 2004. 200+85 LE	LS	1.000	1.000
0090	203.0200	Removing Old Structure (station) 2005. 202+00 LE	LS	1.000	1.000
0100	203.0200	Removing Old Structure (station) 2006. 203+25 LE 30' LT	LS	1.000	1.000
0110	203.0200	Removing Old Structure (station) 2007. 328+00 LS	LS	1.000	1.000
0120	203.0200	Removing Old Structure (station) 2008. 419+90 LN	LS	1.000	1.000
0130	203.0200	Removing Old Structure (station) 2009. 423+40 LN	LS	1.000	1.000
0140	203.0210.S	Abatement of Asbestos Containing Material (structure) 2001. B-40-400-1D	LS	1.000	1.000
0150	203.0210.S	Abatement of Asbestos Containing Material (structure) 2002. B-40-400-1E	LS	1.000	1.000
0160	203.0210.S	Abatement of Asbestos Containing Material (structure) 2003. B-40-400-1F	LS	1.000	1.000
0170	203.0210.S	Abatement of Asbestos Containing Material (structure) 2005. B-40-400-3D	LS	1.000	1.000
0180	203.0210.S	Abatement of Asbestos Containing Material (structure) 2006. B-40-400-3E	LS	1.000	1.000
0190	203.0210.S	Abatement of Asbestos Containing Material (structure) 2007. B-40-400-5E	LS	1.000	1.000
0200	203.0210.S	Abatement of Asbestos Containing Material (structure) 2008. B-40-400-6C	LS	1.000	1.000
0210	203.0210.S	Abatement of Asbestos Containing Material (structure) 2009. B-40-400-6D	LS	1.000	1.000
0220	203.0225.S	Debris Containment (structure) 2001. B-40-915	LS	1.000	1.000
0230	203.0225.S	Debris Containment (structure) 2002. B-40-916	LS	1.000	1.000
0240	203.0225.S	Debris Containment (structure) 2003. B-40-400-1D	LS	1.000	1.000
0250	203.0225.S	Debris Containment (structure) 2004. B-40-400-1E	LS	1.000	1.000
0260	203.0225.S	Debris Containment (structure) 2005. B-40-400-3D	LS	1.000	1.000
0270	203.0225.S	Debris Containment (structure) 2006. B-40-400-3E	LS	1.000	1.000
0280	203.0225.S	Debris Containment (structure) 2007. B-40-400-3C	LS	1.000	1.000
0290	203.0225.S	Debris Containment (structure) 2008. B-40-400-6C	LS	1.000	1.000
0300	203.0225.S	Debris Containment (structure) 2009. B-40-400-6D	LS	1.000	1.000
0310	204.0100	Removing Pavement **P**	SY	11,634.000	11,634.000
0320	204.0115	Removing Asphaltic Surface Butt Joints	SY	88.000	88.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
0330	204.0150	Removing Curb & Gutter **P**	LF	2,529.000	2,529.000
0340	204.0155	Removing Concrete Sidewalk **P**	SY	3,970.000	3,970.000
0350	204.0157	Removing Concrete Barrier **P**	LF	235.000	235.000
0360	204.0170	Removing Fence **P**	LF	5,542.000	5,542.000
0370	204.0195	Removing Concrete Bases	EACH	3.000	3.000
0380	204.0210	Removing Manholes	EACH	14.000	14.000
0390	204.0220	Removing Inlets	EACH	68.000	68.000
0400	204.0245	Removing Storm Sewer (size) 1001. 6-INCH	LF	716.000	716.000
0410	204.0245	Removing Storm Sewer (size) 1002. 8-INCH	LF	36.000	36.000
0420	204.0245	Removing Storm Sewer (size) 1003. 10-INCH	LF	487.000	487.000
0430	204.0245	Removing Storm Sewer (size) 1004. 12-INCH	LF	2,087.000	2,087.000
0440	204.0245	Removing Storm Sewer (size) 1005. 15-INCH	LF	613.000	613.000
0450	204.0245	Removing Storm Sewer (size) 1006. 18-INCH	LF	639.000	639.000
0460	204.0245	Removing Storm Sewer (size) 1007. 21-INCH	LF	56.000	56.000
0470	204.0245	Removing Storm Sewer (size) 1008. 24-INCH	LF	1,290.000	1,290.000
0480	204.0245	Removing Storm Sewer (size) 1009. 36-INCH	LF	230.000	230.000
0490	204.0280	Sealing Pipes	EACH	10.000	10.000
0500	204.9060.S	Removing (item description) 0001. BOLLARDS	EACH	24.000	24.000
0510	204.9060.S	Removing (item description) 0002. TRAFFIC CONTROL SIGNS FIXED MESSAGE LEFT IN PLACE BY OTHERS	EACH	6.000	6.000
0520	204.9090.S	Removing (item description) 0003. CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE BY OTHERS	LF	87.500	87.500
0530	205.0100	Excavation Common	CY	74,724.000	74,724.000
0540	205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	TON	9,369.000	9,369.000
0550	205.2000.S	Settlement Gauges	EACH	2.000	2.000
0560	206.1000	Excavation for Structures Bridges (structure) 2001. B-40-915	LS	1.000	1.000
0570	206.1000	Excavation for Structures Bridges (structure) 2002. B-40-916	LS	1.000	1.000
0580	208.0100	Borrow	CY	1,516.000	1,516.000
0590	213.0100	Finishing Roadway (project) 0001. 1300-13-74	EACH	1.000	1.000
0600	305.0120	Base Aggregate Dense 1 1/4-Inch **P**	TON	17,474.000	17,474.000
0610	310.0110	Base Aggregate Open Graded	TON	543.000	543.000
0620	311.0110	Breaker Run	TON	14,624.000	14,624.000
0630	415.0070	Concrete Pavement 7-Inch **P**	SY	5,339.000	5,339.000
0640	415.0075	Concrete Pavement 7 1/2-Inch **P**	SY	8,698.000	8,698.000
0650	415.0080	Concrete Pavement 8-Inch **P**	SY	15,760.000	15,760.000
0660	415.0085	Concrete Pavement 8 1/2-Inch **P**	SY	323.000	323.000
0670	415.0210	Concrete Pavement Gaps	EACH	10.000	10.000
0680	415.0410	Concrete Pavement Approach Slab **P**	SY	291.000	291.000
0690	416.0170	Concrete Driveway 7-Inch	SY	1,016.000	1,016.000
0700	416.0610	Drilled Tie Bars	EACH	77.000	77.000
0710	416.0620	Drilled Dowel Bars	EACH	64.000	64.000
0720	416.1010	Concrete Surface Drains	CY	4.000	4.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
0730	440.4410.S	Incentive IRI Ride	DOL	5,400.000	5,400.000
0740	455.0605	Tack Coat	GAL	168.000	168.000
0750	465.0105	Asphaltic Surface	TON	1,318.000	1,318.000
0760	465.0125	Asphaltic Surface Temporary	TON	407.000	407.000
0770	465.0310	Asphaltic Curb	LF	270.000	270.000
0780	502.0100	Concrete Masonry Bridges **P**	CY	927.000	927.000
0790	502.0717.S	Crack Sealing Epoxy	LF	30.000	30.000
0800	502.3100	Expansion Device (structure) 2001. B-40-400-6D	LS	1.000	1.000
0810	502.3100	Expansion Device (structure) 2002. B-40-915	LS	1.000	1.000
0820	502.3100	Expansion Device (structure) 2003. B-40-916	LS	1.000	1.000
0830	502.3200	Protective Surface Treatment **P**	SY	7,498.000	7,498.000
0840	502.3210.S	Pigmented Protective Surface Treatment	SY	1,714.000	1,714.000
0850	502.6500	Protective Coating Clear	GAL	3.000	3.000
0860	503.0136	Prestressed Girder Type I 36-Inch **P**	LF	354.000	354.000
0870	504.0500	Concrete Masonry Retaining Walls **P**	CY	1,198.000	1,198.000
0880	505.0405	Bar Steel Reinforcement HS Bridges **P**	LB	52,550.000	52,550.000
0890	505.0605	Bar Steel Reinforcement HS Coated Bridges **P**	LB	447,560.000	447,560.000
0900	505.0615	Bar Steel Reinforcement HS Coated Retaining Walls **P**	LB	132,350.000	132,350.000
0910	505.0800.S	Bar Steel Reinforcement HS Stainless Structures **P**	LB	1,520.000	1,520.000
0920	506.0605	Structural Steel HS **P**	LB	1,391,929.000	1,391,929.000
0930	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	12.000	12.000
0940	506.3015	Welded Stud Shear Connectors 7/8x6-Inch **P**	EACH	10,248.000	10,248.000
0950	506.4000	Steel Diaphragms (structure) 2001. B-40-916 **P**	EACH	5.000	5.000
0960	509.0301	Preparation Decks Type 1	SY	504.000	504.000
0970	509.0302	Preparation Decks Type 2	SY	201.000	201.000
0980	509.0500	Cleaning Decks	SY	3,292.000	3,292.000
0990	509.1000	Joint Repair	SY	79.000	79.000
1000	509.2000	Full-Depth Deck Repair	SY	6.000	6.000
1010	509.2500	Concrete Masonry Overlay Decks	CY	270.000	270.000
1020	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 2001. B-40-400-1D	SY	299.000	299.000
1030	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 2003. B-40-400-6C	SY	771.000	771.000
1040	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 2004. B-40-400-6D	SY	2,252.000	2,252.000
1050	513.9005.S	Removing and Resetting Tubular Railing (structure) 2003. B-40-400-6C	LS	1.000	1.000
1060	513.9005.S	Removing and Resetting Tubular Railing (structure) 2004. B-40-400-6D	LS	1.000	1.000
1070	514.0460	Floor Drains Type H	EACH	2.000	2.000
1080	514.0900	Adjusting Floor Drains	EACH	4.000	4.000
1090	514.2608	Downspout 8-Inch **P**	LF	98.000	98.000
1100	514.2625	Downspout 6-Inch	LF	70.000	70.000
1110	516.0500	Rubberized Membrane Waterproofing **P**	SY	278.000	278.000
1120	517.0600	Painting Epoxy System (structure) 2001. B-40-915	LS	1.000	1.000
1130	517.0600	Painting Epoxy System (structure) 2002. B-40-916	LS	1.000	1.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
1140	517.1010.S	Concrete Staining (structure) 2001. R-40-627 **P**	SF	930.000	930.000
1150	517.1010.S	Concrete Staining (structure) 2002. R-40-628 **P**	SF	17,478.000	17,478.000
1160	517.1010.S	Concrete Staining (structure) 2003. R-40-629 **P**	SF	13,726.000	13,726.000
1170	520.8000	Concrete Collars for Pipe	EACH	2.000	2.000
1180	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	3.000	3.000
1190	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	1.000	1.000
1200	532.0750.S	Temporary Wall Wire Faced Mechanically Stabilized Earth	SF	1,609.000	1,609.000
1210	550.2146	Piling CIP Concrete 14 X 0.375-Inch	LF	16,055.000	16,055.000
1220	550.2148	Piling CIP Concrete 14 X 0.50-Inch	LF	1,610.000	1,610.000
1230	601.0110	Concrete Curb Type D	LF	87.000	87.000
1240	601.0331	Concrete Curb & Gutter 31-Inch **P**	LF	11,521.000	11,521.000
1250	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	2,662.000	2,662.000
1260	601.0580	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type R	LF	12.000	12.000
1270	601.0600	Concrete Curb Pedestrian	LF	128.000	128.000
1280	602.0410	Concrete Sidewalk 5-Inch **P**	SF	62,079.000	62,079.000
1290	602.0420	Concrete Sidewalk 7-Inch **P**	SF	27,857.000	27,857.000
1300	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	830.000	830.000
1310	602.1500	Concrete Steps	SF	53.000	53.000
1320	603.1132	Concrete Barrier Type S32 **P**	LF	302.000	302.000
1330	603.1142	Concrete Barrier Type S42 **P**	LF	222.000	222.000
1340	603.3111	Concrete Barrier Transition Type NJ32SF to S32	EACH	1.000	1.000
1350	603.8000	Concrete Barrier Temporary Precast Delivered	LF	412.500	412.500
1360	603.8125	Concrete Barrier Temporary Precast Installed	LF	500.000	500.000
1370	604.0400	Slope Paving Concrete	SY	84.000	84.000
1380	606.0200	Riprap Medium	CY	58.000	58.000
1390	607.0406	Storm Sewer Pipe Composite 6-Inch	LF	102.000	102.000
1400	607.0408	Storm Sewer Pipe Composite 8-Inch	LF	323.000	323.000
1410	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	2,235.000	2,235.000
1420	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	217.000	217.000
1430	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	135.000	135.000
1440	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	1,286.000	1,286.000
1450	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	1,286.000	1,286.000
1460	608.0336	Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	LF	262.000	262.000
1470	608.0348	Storm Sewer Pipe Reinforced Concrete Class III 48-Inch	LF	648.000	648.000
1480	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	370.000	370.000
1490	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	16.000	16.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
1500	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	5.000	5.000
1510	608.0442	Storm Sewer Pipe Reinforced Concrete Class IV 42-Inch	LF	230.000	230.000
1520	608.0448	Storm Sewer Pipe Reinforced Concrete Class IV 48-Inch	LF	431.000	431.000
1530	608.0512	Storm Sewer Pipe Reinforced Concrete Class V 12-Inch	LF	366.000	366.000
1540	608.0515	Storm Sewer Pipe Reinforced Concrete Class V 15-Inch	LF	30.000	30.000
1550	608.0518	Storm Sewer Pipe Reinforced Concrete Class V 18-Inch	LF	73.000	73.000
1560	611.0420	Reconstructing Manholes	EACH	3.000	3.000
1570	611.0530	Manhole Covers Type J	EACH	52.000	52.000
1580	611.0610	Inlet Covers Type BW	EACH	16.000	16.000
1590	611.0612	Inlet Covers Type C	EACH	16.000	16.000
1600	611.0624	Inlet Covers Type H	EACH	2.000	2.000
1610	611.0660	Inlet Covers Type WM	EACH	1.000	1.000
1620	611.1004	Catch Basins 4-FT Diameter	EACH	3.000	3.000
1630	611.2004	Manholes 4-FT Diameter	EACH	23.000	23.000
1640	611.2005	Manholes 5-FT Diameter	EACH	18.000	18.000
1650	611.2006	Manholes 6-FT Diameter	EACH	4.000	4.000
1660	611.2007	Manholes 7-FT Diameter	EACH	9.000	9.000
1670	611.2008	Manholes 8-FT Diameter	EACH	1.000	1.000
1680	611.2604	Manholes Variable Special 4-FT Diameter	EACH	6.000	6.000
1690	611.3004	Inlets 4-FT Diameter	EACH	59.000	59.000
1700	611.3225	Inlets 2x2.5-FT	EACH	14.000	14.000
1710	611.3230	Inlets 2x3-FT	EACH	1.000	1.000
1720	611.8110	Adjusting Manhole Covers	EACH	12.000	12.000
1730	611.8120.S	Cover Plates Temporary	EACH	50.000	50.000
1740	612.0104	Pipe Underdrain 4-Inch	LF	708.000	708.000
1750	612.0106	Pipe Underdrain 6-Inch	LF	1,265.000	1,265.000
1760	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	223.000	223.000
1770	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	2,195.000	2,195.000
1780	614.0805	Crash Cushions Permanent Low Maintenance	EACH	4.000	4.000
1790	614.0905	Crash Cushions Temporary	EACH	3.000	3.000
1800	616.0204	Fence Chain Link 4-FT	LF	27.000	27.000
1810	616.0700.S	Fence Safety	LF	350.000	350.000
1820	619.1000	Mobilization	EACH	1.000	1.000
1830	620.0300	Concrete Median Sloped Nose **P**	SF	915.000	915.000
1840	624.0100	Water	MGAL	174.000	174.000
1850	625.0105	Topsoil	CY	2,478.000	2,478.000
1860	627.0200	Mulching	SY	14,871.000	14,871.000
1870	628.1104	Erosion Bales	EACH	600.000	600.000
1880	628.1504	Silt Fence	LF	670.000	670.000
1890	628.1520	Silt Fence Maintenance	LF	670.000	670.000
1900	628.1905	Mobilizations Erosion Control	EACH	16.000	16.000
1910	628.1910	Mobilizations Emergency Erosion Control	EACH	13.000	13.000
1920	628.2006	Erosion Mat Urban Class I Type A	SY	7,983.000	7,983.000
1930	628.7005	Inlet Protection Type A	EACH	118.000	118.000
1940	628.7010	Inlet Protection Type B	EACH	192.000	192.000
1950	628.7015	Inlet Protection Type C	EACH	3.000	3.000
1960	628.7020	Inlet Protection Type D	EACH	19.000	19.000
1970	628.7570	Rock Bags	EACH	100.000	100.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
1980	629.0205	Fertilizer Type A	CWT	9.000	9.000
1990	630.0130	Seeding Mixture No. 30	LB	268.000	268.000
2000	630.0200	Seeding Temporary	LB	198.000	198.000
2010	631.0300	Sod Water	MGAL	0.049	0.049
2020	631.1000	Sod Lawn	SY	726.000	726.000
2030	632.0101	Trees (species) (size) (root) 0001. BALDCYPRESS, B&B, 2.5" CAL.	EACH	4.000	4.000
2040	632.0101	Trees (species) (size) (root) 0002. COFFEETREE, ESPRESSO KENTUCKY B&B 2.5" CAL.	EACH	1.000	1.000
2050	632.0101	Trees (species) (size) (root) 0003. ELM, FRONTIER, B&B, 2.5" CAL.	EACH	1.000	1.000
2060	632.0101	Trees (species) (size) (root) 0004. HACKBERRY, CHICAGOLAND, B&B, 2.5" CAL.	EACH	14.000	14.000
2070	632.0101	Trees (species) (size) (root) 0005. HONEYLOCUST, SKYLINE, B&B 2.5" CAL.	EACH	14.000	14.000
2080	632.0101	Trees (species) (size) (root) 0006. LINDEN, STERLING SILVER, B&B, 2.5" CAL.	EACH	12.000	12.000
2090	632.0101	Trees (species) (size) (root) 0007. MAPLE, GREEN MOUNTAIN SUGAR, B&B, 2.5" CAL.	EACH	3.000	3.000
2100	632.0101	Trees (species) (size) (root) 0008. MAPLE, NORWEGIAN SUNSET SHANTUNG HYBRID, B&B, 2.5" CAL.	EACH	1.000	1.000
2110	632.0101	Trees (species) (size) (root) 0009. MAPLE, SIENNA GLEN, B&B, 2.5" CAL.	EACH	14.000	14.000
2120	632.0101	Trees (species) (size) (root) 0010. OAK, SWAMP WHITE, B&B, 2" CAL.	EACH	4.000	4.000
2130	632.0101	Trees (species) (size) (root) 0011. SPRUCE, BLACK HILLS, B&B, 8' HT.	EACH	3.000	3.000
2140	632.0101	Trees (species) (size) (root) 0012. SPRUCE, BLACK HILLS, B&B, 10' HT.	EACH	3.000	3.000
2150	632.0101	Trees (species) (size) (root) 0013. CRABAPPLE, RED JEWEL, B&B SINGLE STEM, 2" CAL.	EACH	17.000	17.000
2160	632.0101	Trees (species) (size) (root) 0014. HAWTHORN, WINTER KING, B&B CLUMP, 8'-10' HT.	EACH	6.000	6.000
2170	632.0101	Trees (species) (size) (root) 0015. LILAC, CHINA SNOW PEKING, B&B CLUMP 8'-10' HT.	EACH	14.000	14.000
2180	632.0101	Trees (species) (size) (root) 0016. QUAKING ASPEN, B&B SINGLE STEM, 2" CAL.	EACH	15.000	15.000
2190	632.0101	Trees (species) (size) (root) 0017. QUAKING ASPEN, B&B CLUMP, 10'-12' HT.	EACH	16.000	16.000
2200	632.0101	Trees (species) (size) (root) 0018. SERVICEBERRY, AUTUMN BRILLIANCE, B&B CLUMP, 10'-12' HT.	EACH	2.000	2.000
2210	632.0201	Shrubs (species) (size) (root) 0001. WITCHHAZEL, COMMON, CG 36" HT.	EACH	5.000	5.000
2220	632.0201	Shrubs (species) (size) (root) 0002. DOGWOOD, BERGESON COMPACT, CG 24" HT	EACH	99.000	99.000
2230	632.0201	Shrubs (species) (size) (root) 0003. FOTHERGILLA, MOUNT AIRY, CG 24" HT	EACH	22.000	22.000
2240	632.0201	Shrubs (species) (size) (root) 0004. HONEYSUCKLE, DWARF BUSH, CG 18" HT	EACH	204.000	204.000
2250	632.0201	Shrubs (species) (size) (root) 0005. HYDRANGEA, LIMELIGHT, CG 30" HT.	EACH	9.000	9.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
2260	632.0201	Shrubs (species) (size) (root) 0006. RUGOSA ROSE, DWARF PAVEMENT CG 18" HT.	EACH	225.000	225.000
2270	632.0201	Shrubs (species) (size) (root) 0007. SUMAC, CUTLEAF (LACELEAF) STAGHORN CG 24" HT.	EACH	30.000	30.000
2280	632.0201	Shrubs (species) (size) (root) 0008. SUMAC, GRO LOW, CG 24" SPREAD	EACH	389.000	389.000
2290	632.0201	Shrubs (species) (size) (root) 0009. VIBURNUM, CHICAGO LUSTRE ARROWWOOD CG 36" HT.	EACH	15.000	15.000
2300	632.0201	Shrubs (species) (size) (root) 0010. VIBURNUM, JUDD, CG 36" HT.	EACH	34.000	34.000
2310	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	26.000	26.000
2320	633.0500	Delineator Reflectors	EACH	32.000	32.000
2330	633.1000	Delineator Brackets	EACH	16.000	16.000
2340	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	37.000	37.000
2350	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	34.000	34.000
2360	637.1220	Signs Type I Reflective SH	SF	1,961.500	1,961.500
2370	637.2210	Signs Type II Reflective H	SF	1,240.665	1,240.665
2380	637.2215	Signs Type II Reflective H Folding	SF	85.160	85.160
2390	637.2230	Signs Type II Reflective F	SF	302.630	302.630
2400	638.2101	Moving Signs Type I	EACH	3.000	3.000
2410	638.2102	Moving Signs Type II	EACH	16.000	16.000
2420	638.2601	Removing Signs Type I	EACH	9.000	9.000
2430	638.2602	Removing Signs Type II	EACH	76.000	76.000
2440	638.3000	Removing Small Sign Supports	EACH	54.000	54.000
2450	641.8100	Overhead Sign Support (structure) 0001. S-40-793	LS	1.000	1.000
2460	641.8100	Overhead Sign Support (structure) 0002. S-40-794	LS	1.000	1.000
2470	641.8100	Overhead Sign Support (structure) 0003. S-40-795	LS	1.000	1.000
2480	641.8100	Overhead Sign Support (structure) 0004. S-40-796	LS	1.000	1.000
2490	641.8100	Overhead Sign Support (structure) 0005. S-40-641	LS	1.000	1.000
2500	641.8100	Overhead Sign Support (structure) 0006. S-40-642	LS	1.000	1.000
2510	641.8100	Overhead Sign Support (structure) 0007. S-40-797	LS	1.000	1.000
2520	642.5401	Field Office Type D	EACH	1.000	1.000
2530	643.0200	Traffic Control Surveillance and Maintenance (project) 0001. 1300-13-74	DAY	305.000	305.000
2540	643.0300	Traffic Control Drums	DAY	44,152.000	44,152.000
2550	643.0410	Traffic Control Barricades Type II	DAY	8,439.000	8,439.000
2560	643.0420	Traffic Control Barricades Type III	DAY	12,802.000	12,802.000
2570	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	10.000	10.000
2580	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	10.000	10.000
2590	643.0705	Traffic Control Warning Lights Type A	DAY	25,604.000	25,604.000
2600	643.0715	Traffic Control Warning Lights Type C	DAY	3,682.000	3,682.000
2610	643.0800	Traffic Control Arrow Boards	DAY	154.000	154.000
2620	643.0900	Traffic Control Signs	DAY	18,008.000	18,008.000
2630	643.0910	Traffic Control Covering Signs Type I	EACH	10.000	10.000
2640	643.0920	Traffic Control Covering Signs Type II	EACH	8.000	8.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
2650	643.1000	Traffic Control Signs Fixed Message	SF	186.000	186.000
2660	643.1050	Traffic Control Signs PCMS	DAY	45.000	45.000
2670	643.2000	Traffic Control Detour (project) 0001. 1300-13-74	EACH	1.000	1.000
2680	643.3000	Traffic Control Detour Signs	DAY	51,904.000	51,904.000
2690	645.0135	Geotextile Fabric Type SR	SY	16,249.000	16,249.000
2700	646.0106	Pavement Marking Epoxy 4-Inch	LF	12,450.000	12,450.000
2710	646.0116	Pavement Marking Epoxy 6-Inch	LF	2,864.000	2,864.000
2720	646.0126	Pavement Marking Epoxy 8-Inch	LF	1,169.000	1,169.000
2730	646.0600	Removing Pavement Markings	LF	22,039.000	22,039.000
2740	646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch **P**	LF	2,535.000	2,535.000
2750	646.0843.S	Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch **P**	LF	4,936.000	4,936.000
2760	647.0156	Pavement Marking Arrows Epoxy Type 1	EACH	1.000	1.000
2770	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	15.000	15.000
2780	647.0176	Pavement Marking Arrows Epoxy Type 3	EACH	6.000	6.000
2790	647.0206	Pavement Marking Arrows Bike Lane Epoxy	EACH	12.000	12.000
2800	647.0253	Pavement Marking Symbols Paint	EACH	10.000	10.000
2810	647.0306	Pavement Marking Symbols Bike Lane Epoxy	EACH	16.000	16.000
2820	647.0356	Pavement Marking Words Epoxy	EACH	8.000	8.000
2830	647.0576	Pavement Marking Stop Line Epoxy 24-Inch	LF	163.000	163.000
2840	647.0606	Pavement Marking Island Nose Epoxy	EACH	13.000	13.000
2850	647.0653	Pavement Marking Parking Stall Paint	LF	12,346.000	12,346.000
2860	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	682.000	682.000
2870	647.0746	Pavement Marking Diagonal Epoxy 24-Inch	LF	296.000	296.000
2880	647.0776	Pavement Marking Crosswalk Epoxy 12-Inch	LF	308.000	308.000
2890	647.0955	Removing Pavement Markings Arrows	EACH	12.000	12.000
2900	647.0965	Removing Pavement Markings Words	EACH	7.000	7.000
2910	649.0100	Temporary Pavement Marking 4-Inch	LF	2,421.000	2,421.000
2920	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	4,057.000	4,057.000
2930	649.0701	Temporary Pavement Marking 8-Inch	LF	687.000	687.000
2940	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	411.000	411.000
2950	649.0900	Temporary Pavement Marking Stop Line 12-Inch	LF	141.000	141.000
2960	649.1000	Temporary Pavement Marking Stop Line Removable Tape 12-Inch	LF	47.000	47.000
2970	649.1500	Temporary Pavement Marking Diagonal 12-Inch	LF	218.000	218.000
2980	649.1700	Temporary Pavement Marking Arrows	EACH	6.000	6.000
2990	649.1900	Temporary Pavement Marking Words	EACH	5.000	5.000
3000	652.0125	Conduit Rigid Metallic 2-Inch	LF	45.000	45.000
3010	652.0210	Conduit Rigid Nonmetallic Schedule 40 1-Inch	LF	32.000	32.000
3020	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	7,257.000	7,257.000
3030	652.0230	Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	LF	35.000	35.000
3040	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	15,571.000	15,571.000
3050	652.0405	Conduit Reinforced Thermosetting Resin 2-Inch	LF	392.000	392.000
3060	652.0605	Conduit Special 2-Inch	LF	274.000	274.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
3070	652.0615	Conduit Special 3-Inch	LF	175.000	175.000
3080	652.0700.S	Install Conduit into Existing Item	EACH	1.000	1.000
3090	652.0800	Conduit Loop Detector	LF	4,529.000	4,529.000
3100	653.0135	Pull Boxes Steel 24x36-Inch	EACH	2.000	2.000
3110	653.0140	Pull Boxes Steel 24x42-Inch	EACH	11.000	11.000
3120	653.0222	Junction Boxes 18x12x6-Inch	EACH	9.000	9.000
3130	653.0905	Removing Pull Boxes	EACH	7.000	7.000
3140	654.0101	Concrete Bases Type 1	EACH	24.000	24.000
3150	654.0110	Concrete Bases Type 10	EACH	6.000	6.000
3160	654.0113	Concrete Bases Type 13	EACH	1.000	1.000
3170	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	4.000	4.000
3180	654.0220	Concrete Control Cabinet Bases Type 10	EACH	1.000	1.000
3190	654.0230	Concrete Control Cabinet Bases Type L30	EACH	1.000	1.000
3200	655.0230	Cable Traffic Signal 5-14 AWG	LF	2,384.000	2,384.000
3210	655.0240	Cable Traffic Signal 7-14 AWG	LF	2,959.000	2,959.000
3220	655.0260	Cable Traffic Signal 12-14 AWG	LF	5,305.000	5,305.000
3230	655.0270	Cable Traffic Signal 15-14 AWG	LF	875.000	875.000
3240	655.0510	Electrical Wire Traffic Signals 12 AWG	LF	1,800.000	1,800.000
3250	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	3,875.000	3,875.000
3260	655.0525	Electrical Wire Traffic Signals 6 AWG	LF	150.000	150.000
3270	655.0610	Electrical Wire Lighting 12 AWG	LF	990.000	990.000
3280	655.0615	Electrical Wire Lighting 10 AWG	LF	720.000	720.000
3290	655.0625	Electrical Wire Lighting 6 AWG	LF	2,610.000	2,610.000
3300	655.0630	Electrical Wire Lighting 4 AWG	LF	16,820.000	16,820.000
3310	655.0700	Loop Detector Lead In Cable	LF	11,726.000	11,726.000
3320	655.0800	Loop Detector Wire	LF	13,200.000	13,200.000
3330	655.0900	Traffic Signal EVP Detector Cable	LF	1,551.000	1,551.000
3340	656.0200	Electrical Service Meter Breaker Pedestal (location) 0001. HL-40-LK	LS	1.000	1.000
3350	656.0200	Electrical Service Meter Breaker Pedestal (location) 0002. MB110LW	LS	1.000	1.000
3360	656.0200	Electrical Service Meter Breaker Pedestal (location) 5001. LINCOLN MEMORIAL DR & IH 794 RAMPS	LS	1.000	1.000
3370	656.0200	Electrical Service Meter Breaker Pedestal (location) 5002. LINCOLN MEMORIAL DR & CLYBOURN ST	LS	1.000	1.000
3380	656.0200	Electrical Service Meter Breaker Pedestal (location) 5003. LINCOLN MEMORIAL DR & MICHIGAN ST	LS	1.000	1.000
3390	656.0200	Electrical Service Meter Breaker Pedestal (location) 5004. CLYBOURN ST & VAN BUREN ST	LS	1.000	1.000
3400	656.0500	Electrical Service Breaker Disconnect Box (location) 0001. CCTV-40-0229	LS	1.000	1.000
3410	657.0100	Pedestal Bases	EACH	15.000	15.000
3420	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	1.000	1.000
3430	657.0330	Poles Type 7	EACH	5.000	5.000
3440	657.0405	Traffic Signal Standards Aluminum 3.5-FT	EACH	1.000	1.000
3450	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	11.000	11.000
3460	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	3.000	3.000
3470	657.0725	Luminaire Arms Truss Type 6-Inch Clamp 15-FT	EACH	5.000	5.000

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

1300-13-74

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
3480	657.6005.S	Anchor Assemblies Light Poles on Structures	EACH	5.000	5.000
3490	658.0110	Traffic Signal Face 3-12 Inch Vertical	EACH	45.000	45.000
3500	658.0115	Traffic Signal Face 4-12 Inch Vertical	EACH	3.000	3.000
3510	658.0215	Backplates Signal Face 3 Section 12-Inch	EACH	58.000	58.000
3520	658.0220	Backplates Signal Face 4 Section 12-Inch	EACH	7.000	7.000
3530	658.0412	Pedestrian Signal Face 12-Inch	EACH	28.000	28.000
3540	658.0500	Pedestrian Push Buttons	EACH	31.000	31.000
3550	658.0600	Led Modules 12-Inch Red Ball	EACH	36.000	36.000
3560	658.0605	Led Modules 12-Inch Yellow Ball	EACH	31.000	31.000
3570	658.0610	Led Modules 12-Inch Green Ball	EACH	27.000	27.000
3580	658.0615	Led Modules 12-Inch Red Arrow	EACH	12.000	12.000
3590	658.0620	Led Modules 12-Inch Yellow Arrow	EACH	22.000	22.000
3600	658.0625	Led Modules 12-Inch Green Arrow	EACH	19.000	19.000
3610	658.0660	Led Modules Countdwn Timer 12-Inch	EACH	28.000	28.000
3620	658.1110	Programmable Traffic Signal Face 3-12 Vertical	EACH	13.000	13.000
3630	658.1115	Programmable Traffic Signal Face 4-12 Vertical	EACH	4.000	4.000
3640	658.5069	Signal Mounting Hardware (location) 5001. LINCOLN MEMORIAL DR & IH 794 RAMPS	LS	1.000	1.000
3650	658.5069	Signal Mounting Hardware (location) 5002. LINCOLN MEMORIAL DR & CLYBOURN ST	LS	1.000	1.000
3660	659.0802	Plaques Sequence Identification	EACH	91.000	91.000
3670	659.1120	Luminaires Utility LED B	EACH	5.000	5.000
3680	659.1215	Luminaires Underdeck LED C	EACH	5.000	5.000
3690	659.2230	Lighting Control Cabinets 240/480 30-Inch	EACH	1.000	1.000
3700	660.0100	High Mast Foundation (location) 0001. HML-40-026	LS	1.000	1.000
3710	660.0100	High Mast Foundation (location) 0002. HML-40-027	LS	1.000	1.000
3720	660.0100	High Mast Foundation (location) 0003. HML-40-114	LS	1.000	1.000
3730	660.0100	High Mast Foundation (location) 0004. HML-40-115	LS	1.000	1.000
3740	670.0100	Field System Integrator 0001. FTMS	LS	1.000	1.000
3750	670.0100	Field System Integrator 0002. TRAFFIC SIGNALS	LS	1.000	1.000
3760	670.0200	ITS Documentation 0001. FTMS	LS	1.000	1.000
3770	671.0132	Conduit HDPE 3-Duct 2-Inch	LF	245.000	245.000
3780	671.0232	Conduit HDPE Directional Bore 3-Duct 2-Inch	LF	1,280.000	1,280.000
3790	673.0105	Communication Vault Type 1	EACH	4.000	4.000
3800	674.0300	Remove Cable	LF	240.000	240.000
3810	675.0400.S	Install Ethernet Switch	EACH	1.000	1.000
3820	678.0006	Install Fiber Optic Cable Outdoor Plant 6-CT	LF	540.000	540.000
3830	678.0036	Install Fiber Optic Cable Outdoor Plant 36-CT	LF	2,884.000	2,884.000
3840	678.0072	Install Fiber Optic Cable Outdoor Plant 72-CT	LF	2,115.000	2,115.000
3850	678.0300	Fiber Optic Splice	EACH	172.000	172.000
3860	678.0400	Fiber Optic Termination	EACH	24.000	24.000
3870	678.0500	Communication System Testing 0001. FTMS	LS	1.000	1.000
3880	690.0150	Sawing Asphalt	LF	3,192.000	3,192.000

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
3890	690.0250	Sawing Concrete	LF	1,677.000	1,677.000
3900	715.0415	Incentive Strength Concrete Pavement	DOL	1,900.000	1,900.000
3910	715.0502	Incentive Strength Concrete Structures	DOL	19,490.000	19,490.000
3920	999.1500.S	Crack and Damage Survey 0001. U.S. BANK PARKING STRUCTURE 716 E CLYBOURN STREET	LS	1.000	1.000
3930	999.1500.S	Crack and Damage Survey 0002. MILWAUKEE COUNTY TRANSIT CENTER 909 E. MICHIGAN	LS	1.000	1.000
3940	SPV.0035	Special 1001. BACKFILL FOR PLANT BEDS-24 INCH DEPTH	CY	1,470.000	1,470.000
3950	SPV.0035	Special 1002. STRUCTURAL SOIL AT STREET TREES	CY	1,306.000	1,306.000
3960	SPV.0035	Special 1003. DECORATIVE STONE MULCH, 3-INCH	CY	124.000	124.000
3970	SPV.0035	Special 1004. DECOMPOSED GRANITE STONE MULCH, 3-INCH	CY	698.000	698.000
3980	SPV.0035	Special 1005. DRAINAGE BLANKET	CY	1,520.000	1,520.000
3990	SPV.0035	Special 1006. BEDDING LAYER, 2" ASTM NO. 8 STONE	CY	65.000	65.000
4000	SPV.0035	Special 1007. BASE LAYER, 4" ASTM NO. 57 STONE	CY	135.000	135.000
4010	SPV.0035	Special 1008. STORAGE LAYER, ASTM NO. 2 STONE	CY	1,963.000	1,963.000
4020	SPV.0035	Special 1009. ENGINEERED SOIL FOR BIO-FILTRATION BASINS	CY	351.000	351.000
4030	SPV.0035	Special 1010. LIGHTWEIGHT FOAMED CONCRETE FILL GRADE 1	CY	1,394.000	1,394.000
4040	SPV.0035	Special 1011. COLORING CONCRETE DARK GRAY	CY	990.000	990.000
4050	SPV.0035	Special 1012. COLORING CONCRETE LIGHT GRAY	CY	172.000	172.000
4060	SPV.0035	Special 2001. CONCRETE MASONRY OVERLAY DECKS UNIT B-40-400-1D	CY	40.000	40.000
4070	SPV.0035	Special 2002. EXPANDED POLYSTYRENE (EPS) GEOFOAM	CY	3,450.000	3,450.000
4080	SPV.0035	Special 2003. HPC MASONRY STRUCTURE **P**	CY	1,448.000	1,448.000
4090	SPV.0060	Special 1001. TRENCH DRAIN	EACH	4.000	4.000
4100	SPV.0060	Special 1002. PERMEABLE PAVEMENT OUTLET CONTROL STRUCTURE	EACH	8.000	8.000
4110	SPV.0060	Special 1003. BIO-FILTRATION OUTLET CONTROL STRUCTURE	EACH	4.000	4.000
4120	SPV.0060	Special 1004. MANHOLE 9-FT DIAMETER	EACH	1.000	1.000
4130	SPV.0060	Special 1005. MANHOLE 10-FT DIAMETER	EACH	1.000	1.000
4140	SPV.0060	Special 1006. ENHANCED CATCH BASIN, TYPE 44A STRUCTURE	EACH	6.000	6.000
4150	SPV.0060	Special 1007. ENHANCED CATCH BASIN, TRAPPED STORM STRUCTURE	EACH	4.000	4.000
4160	SPV.0060	Special 1008. STORM CASTING, TYPE MKE	EACH	98.000	98.000
4170	SPV.0060	Special 1009. STORM CASTING, TYPE R-1878-A9L	EACH	4.000	4.000
4180	SPV.0060	Special 1010. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1 **P**	EACH	8.000	8.000
4190	SPV.0060	Special 1011. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 **P**	EACH	19.000	19.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
4200	SPV.0060	Special 1012. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3 **P**	EACH	4.000	4.000
4210	SPV.0060	Special 1013. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4 **P**	EACH	2.000	2.000
4220	SPV.0060	Special 1014. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 6 **P**	EACH	2.000	2.000
4230	SPV.0060	Special 1015. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS **P**	EACH	17.000	17.000
4240	SPV.0060	Special 1017. REMOVING DOWNSPOUT, FROM CLEANOUT TO BEND	EACH	13.000	13.000
4250	SPV.0060	Special 1018. DOWNSPOUT CONNECTION, FROM CLEANOUT TO BEND	EACH	11.000	11.000
4260	SPV.0060	Special 1019. DOWNSPOUT OUTFALL ABOVE GRADE	EACH	2.000	2.000
4270	SPV.0060	Special 1020. CATMINT, WALKER'S LOW, CG 1 GAL.	EACH	285.000	285.000
4280	SPV.0060	Special 1021. COREOPSIS, MOONBEAM, CG 1 GAL.	EACH	100.000	100.000
4290	SPV.0060	Special 1022. DAYLILY, STRAWBERRY CANDY, CG 1 GAL.	EACH	816.000	816.000
4300	SPV.0060	Special 1023. GOLDENROD, FIREWORKS, CG 1 GAL.	EACH	95.000	95.000
4310	SPV.0060	Special 1024. NEW ENGLAND ASTER, PURPLE DOME, CG 1 GAL.	EACH	106.000	106.000
4320	SPV.0060	Special 1025. FEATHER REED GRASS, CG 1 GAL.	EACH	285.000	285.000
4330	SPV.0060	Special 1026. INDIANGRASS, CG 1 GAL.	EACH	307.000	307.000
4340	SPV.0060	Special 1027. LITTLE BLUESTEM, CAROUSEL, CG 4" POT	EACH	311.000	311.000
4350	SPV.0060	Special 1028. LITTLE BLUESTEM, THE BLUES, CG 4" POT	EACH	300.000	300.000
4360	SPV.0060	Special 1029. PRAIRIE DROPSEED, TARA DWARF, CG 4" POT	EACH	1,101.000	1,101.000
4370	SPV.0060	Special 1030. SWITCH GRASS, NORTHWIND, CG 1 GAL.	EACH	141.000	141.000
4380	SPV.0060	Special 1031. SWITCH GRASS, SHENANDOAH, CG 1 GAL.	EACH	63.000	63.000
4390	SPV.0060	Special 1032. ADJUSTING WATER BOXES	EACH	5.000	5.000
4400	SPV.0060	Special 1033. ADJUSTING TES MANHOLE COVERS	EACH	1.000	1.000
4410	SPV.0060	Special 1034. REMOVING TES MANHOLE	EACH	1.000	1.000
4420	SPV.0060	Special 1035. VIBRATING WIRE PIEZOMETER INSTRUMENTATION SYSTEM, DELIVERED	EACH	1.000	1.000
4430	SPV.0060	Special 1036. PRECAST CONCRETE WHEEL STOP	EACH	34.000	34.000
4440	SPV.0060	Special 1037. SIGN SUPPORTS, ALUMINIUM ROUND PIPE, 2 INCH X 9.5 FEET	EACH	82.000	82.000
4450	SPV.0060	Special 1038. SIGN SUPPORTS, SPECIAL MOUNTING	EACH	22.000	22.000
4460	SPV.0060	Special 1039. INTERNAL SANITARY MANHOLE SEAL	EACH	10.000	10.000
4470	SPV.0060	Special 1040. 4-FT DIAMETER SANITARY MANHOLE WITH INTERNAL SEAL	EACH	2.000	2.000
4480	SPV.0060	Special 1041. MASONRY COLUMN 8-FT HT	EACH	14.000	14.000

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
4490	SPV.0060	Special 1043. SALVAGE CRASH CUSHIONS TEMPORARY	EACH	2.000	2.000
4500	SPV.0060	Special 1044. ENHANCED CATCH BASIN, TYPE 44A MODIFIED STRUCTURE	EACH	33.000	33.000
4510	SPV.0060	Special 1045. 4' DIAMETER "DOGHOUSE" MANHOLE TYPE TES	EACH	1.000	1.000
4520	SPV.0060	Special 1046. 5' DIAMETER "DOGHOUSE" MANHOLE TYPE TES	EACH	1.000	1.000
4530	SPV.0060	Special 1047. 4' DIAMETER MANHOLE TYPE TES	EACH	6.000	6.000
4540	SPV.0060	Special 2001. FLOOR DRAIN SPECIAL	EACH	5.000	5.000
4550	SPV.0060	Special 2002. FLOOR DRAIN GRATE STEEL	EACH	4.000	4.000
4560	SPV.0060	Special 2003. BEARING ELASTOMERIC EXPANSION	EACH	30.000	30.000
4570	SPV.0060	Special 2004. BEARING ELASTOMERIC FIXED	EACH	10.000	10.000
4580	SPV.0060	Special 3001. LAMP DISPOSAL HIGH INTENSITY DISCHARGE	EACH	27.000	27.000
4590	SPV.0060	Special 3002. CABLE SPLICE AT HANDHOLE OR LIGHT POLE PEDESTAL	EACH	108.000	108.000
4600	SPV.0060	Special 3003. REMOVING DISTRIBUTION CENTERS FOR STOCKPILE	EACH	1.000	1.000
4610	SPV.0060	Special 3004. REMOVING UNDERDECK LIGHTING	EACH	3.000	3.000
4620	SPV.0060	Special 3005. REMOVING AND RELOCATING EXISTING HIGH MAST TOWER	EACH	4.000	4.000
4630	SPV.0060	Special 3006. REMOVING CONCRETE FOUNDATION HIGH MAST TOWER	EACH	4.000	4.000
4640	SPV.0060	Special 3007. JUNCTION BOXES 18X12X6-INCH STAINLESS STEEL	EACH	14.000	14.000
4650	SPV.0060	Special 3008. JUNCTION BOXES 6X6X4-INCH STAINLESS STEEL	EACH	13.000	13.000
4660	SPV.0060	Special 3009. JUNCTION BOXES 4X4X2-INCH STAINLESS STEEL	EACH	21.000	21.000
4670	SPV.0060	Special 3010. LUMINAIRES HIGH MAST TOWERS LED	EACH	24.000	24.000
4680	SPV.0060	Special 3011. UNDERDECK LUMINAIRE MOUNTING ASSEMBLY	EACH	7.000	7.000
4690	SPV.0060	Special 3012. TEMPORARY WOOD POLE	EACH	3.000	3.000
4700	SPV.0060	Special 3013. STREET LIGHTING POLYMER CONCRETE VAULT 13-INCH X 24-INCH X 18-INCH	EACH	81.000	81.000
4710	SPV.0060	Special 3014. STREET LIGHTING POLYMER CONCRETE VAULT 17-INCH X 30-INCH X 18-INCH	EACH	9.000	9.000
4720	SPV.0060	Special 3015. PEDESTAL HOUSING 6-INCH X 6-INCH X 36-INCH	EACH	59.000	59.000
4730	SPV.0060	Special 3016. LUMINAIRES CITY OF MILWAUKEE LED STREET LIGHT 180W	EACH	49.000	49.000
4740	SPV.0060	Special 3017. LUMINAIRES CITY OF MILWAUKEE LED STREET LIGHT 105W	EACH	25.000	25.000
4750	SPV.0060	Special 3018. LUMINAIRES CITY OF MILWAUKEE LED STREET LIGHT 40W	EACH	15.000	15.000
4760	SPV.0060	Special 3019. LUMINAIRES CITY OF MILWAUKEE UNDERDECK WALLPACK LED 72W	EACH	4.000	4.000
4770	SPV.0060	Special 3020. LUMINAIRES CITY OF MILWAUKEE UNDERDECK PATH LIGHTING LED 47W	EACH	2.000	2.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

1300-13-74

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	
4780	SPV.0060	Special 3021. LIGHT POLE CITY OF MILWAUKEE WHITE SQUARE TAPERED CONCRETE 36FT	EACH	40.000	40.000
4790	SPV.0060	Special 3022. LIGHT POLE CITY OF MILWAUKEE WHITE SQUARE TAPERED CONCRETE 31FT	EACH	12.000	12.000
4800	SPV.0060	Special 3023. LIGHT POLE CITY OF MILWAUKEE WHITE SQUARE TAPERED CONCRETE 26FT	EACH	22.000	22.000
4810	SPV.0060	Special 3024. WHITE SQUARE TAPERED CONCRETE POLE MOUNTING PLATE SET	EACH	73.000	73.000
4820	SPV.0060	Special 3025. DECORATIVE SCONCE LED LUMINAIRE FOR BRIDGE STRUCTURE LIGHTING	EACH	24.000	24.000
4830	SPV.0060	Special 3026. STREET LIGHTING BRACKET ARM 2-INCH DIA. 6-FT, INSTALL ONLY	EACH	80.000	80.000
4840	SPV.0060	Special 3027. STREET LIGHTING BRACKET ADAPTER PLATE 1 1/4-INCH THICK, INSTALL ONLY	EACH	7.000	7.000
4850	SPV.0060	Special 4001. REMOVING MICROWAVE DETECTOR	EACH	2.000	2.000
4860	SPV.0060	Special 4002. REMOVING CONTROLLER CABINET	EACH	1.000	1.000
4870	SPV.0060	Special 4003. REMOVING CONTROLLER CABINET BASE	EACH	1.000	1.000
4880	SPV.0060	Special 4004. REMOVING POLE	EACH	2.000	2.000
4890	SPV.0060	Special 4005. INSTALL CCTV CABINET	EACH	1.000	1.000
4900	SPV.0060	Special 4006. GROUND ROD	EACH	1.000	1.000
4910	SPV.0060	Special 4007. INSTALL HIGH MAST LIGHT TOWER CCTV CAMERA	EACH	1.000	1.000
4920	SPV.0060	Special 5001. PEDESTAL BASES BLACK	EACH	9.000	9.000
4930	SPV.0060	Special 5002. TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT BLACK	EACH	3.000	3.000
4940	SPV.0060	Special 5003. TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT BLACK	EACH	3.000	3.000
4950	SPV.0060	Special 5004. TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT BLACK	EACH	3.000	3.000
4960	SPV.0060	Special 5005. PULL BOX VAULT 17"X30"X18"	EACH	64.000	64.000
4970	SPV.0060	Special 5006. CONCRETE BASES TYPE 10 SPECIAL	EACH	4.000	4.000
4980	SPV.0060	Special 5007. POLES TYPE 12 SPECIAL	EACH	1.000	1.000
4990	SPV.0060	Special 5008. POLES TYPE 13 SPECIAL	EACH	1.000	1.000
5000	SPV.0060	Special 5009. POLES TYPE 13 SPECIAL BLACK	EACH	2.000	2.000
5010	SPV.0060	Special 5010. MONOTUBE ARMS 40-FT	EACH	2.000	2.000
5020	SPV.0060	Special 5011. MONOTUBE ARMS 40-FT BLACK	EACH	2.000	2.000
5030	SPV.0060	Special 5012. ELECTRICAL RISER	EACH	13.000	13.000
5040	SPV.0060	Special 5013. JUNCTION BOX 12"X12"X6"	EACH	2.000	2.000
5050	SPV.0060	Special 5014. POLES TYPE 9	EACH	4.000	4.000
5060	SPV.0060	Special 5015. POLES TYPE 10	EACH	2.000	2.000
5070	SPV.0060	Special 5016. POLES TYPE 12	EACH	1.000	1.000
5080	SPV.0060	Special 5017. MONOTUBE ARMS 20-FT	EACH	3.000	3.000
5090	SPV.0060	Special 5018. MONOTUBE ARMS 25-FT	EACH	2.000	2.000
5100	SPV.0060	Special 5019. MONOTUBE ARMS 30-FT	EACH	1.000	1.000
5110	SPV.0060	Special 5020. MONOTUBE ARMS 50-FT	EACH	1.000	1.000
5120	SPV.0085	Special 1001. NO-MOW FESCURE SEED MIX	LB	30.000	30.000

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
5130	SPV.0090	Special 1001. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH	LF	333.000	333.000
5140	SPV.0090	Special 1002. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH	LF	1,127.000	1,127.000
5150	SPV.0090	Special 1003. ALUMINUM EDGER	LF	2,213.000	2,213.000
5160	SPV.0090	Special 1004. PRECAST CONCRETE CURBING	LF	786.000	786.000
5170	SPV.0090	Special 1005. CAST-IN-PLACE CONCRETE SALT LIP CURB	LF	496.000	496.000
5180	SPV.0090	Special 1006. 6-DUCT CONDUIT, CEMENT ENCASED, 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	3,230.000	3,230.000
5190	SPV.0090	Special 1007. 2-DUCT CONDUIT, CEMENT ENCASED, 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	51.000	51.000
5200	SPV.0090	Special 1008. 1-DUCT CONDUIT, CEMENT ENCASED, 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	498.000	498.000
5210	SPV.0090	Special 1009. STRIP DRAINS	LF	23,571.000	23,571.000
5220	SPV.0090	Special 1010. PRE-BORED STRIP DRAINS	LF	2,619.000	2,619.000
5230	SPV.0090	Special 1011. IRRIGATION SLEEVE, 2-INCH	LF	392.000	392.000
5240	SPV.0090	Special 1012. IRRIGATION SLEEVE, 3-INCH	LF	525.000	525.000
5250	SPV.0090	Special 1013. IRRIGATION SLEEVE, 4-INCH	LF	620.000	620.000
5260	SPV.0090	Special 1014. IRRIGATION MAIN LINE, 1.5-INCH DIA.	LF	302.000	302.000
5270	SPV.0090	Special 1015. IRRIGATION MAIN LINE, 2-INCH DIA.	LF	1,370.000	1,370.000
5280	SPV.0090	Special 1016. ORNAMENTAL PICKET FENCE 6-FT HT	LF	1,725.000	1,725.000
5290	SPV.0090	Special 1017. REMOVABLE ORNAMENTAL PICKET FENCE 6-FT HT	LF	539.000	539.000
5300	SPV.0090	Special 1018. DOUBLE SWING GATE WITH 12-FT OPENING	LF	12.000	12.000
5310	SPV.0090	Special 1019. DOUBLE SWING GATE WITH 16-FT OPENING	LF	64.000	64.000
5320	SPV.0090	Special 1020. SLIDING GATE, 24-FT OPENING	LF	96.000	96.000
5330	SPV.0090	Special 1021. CHAIN LINK FENCE, TEMPORARY 6-FT DELIVERED	LF	3,827.000	3,827.000
5340	SPV.0090	Special 1022. CHAIN LINK FENCE, TEMPORARY 6-FT INSTALLED	LF	5,318.000	5,318.000
5350	SPV.0090	Special 1023. 10-INCH DIAMETER SANITARY LATERAL	LF	168.000	168.000
5360	SPV.0090	Special 1024. CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE	LF	225.000	225.000
5370	SPV.0090	Special 3001. CONDUIT REINFORCED THERMOSETTING RESIN 1-INCH	LF	330.000	330.000
5380	SPV.0090	Special 3002. TEMPORARY OVERHEAD CABLE QUADRUPLEX 4 AWG	LF	635.000	635.000
5390	SPV.0090	Special 3003. 3#2/1#8 LTP UNDERGROUND STREET LIGHTING CABLE	LF	4,085.000	4,085.000
5400	SPV.0090	Special 3004. 3#4/1#8 LTP UNDERGROUND STREET LIGHTING CABLE	LF	3,770.000	3,770.000
5410	SPV.0090	Special 3005. 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE	LF	3,265.000	3,265.000
5420	SPV.0090	Special 3006. 2#12UF WITH GROUND STREET LIGHTING RISER CABLE	LF	450.000	450.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
5430	SPV.0090	Special 3007. 3#12UF WITH GROUND STREET LIGHTING RISER CABLE	LF	60.000	60.000
5440	SPV.0090	Special 5001. TYPE UF CABLE 2 CONDUCTOR NO 14	LF	1,551.000	1,551.000
5450	SPV.0105	Special 1001. IRRIGATION SERVICE #1	LS	1.000	1.000
5460	SPV.0105	Special 1002. IRRIGATION SERVICE #2	LS	1.000	1.000
5470	SPV.0105	Special 1003. SURVEY PROJECT 1300-13-74	LS	1.000	1.000
5480	SPV.0105	Special 1004. CONCRETE PAVEMENT JOINT LAYOUT	LS	1.000	1.000
5490	SPV.0105	Special 1005. PAVEMENT CLEANUP PROJECT 1300-13-74	LS	1.000	1.000
5500	SPV.0105	Special 1006. GEOTECHNICAL INSTRUMENTATION	LS	1.000	1.000
5510	SPV.0105	Special 2001. RAILING TUBULAR TYPE H MODIFIED B-40-400-1D	LS	1.000	1.000
5520	SPV.0105	Special 3001. LIGHTING SYSTEM INTEGRATOR	LS	1.000	1.000
5530	SPV.0105	Special 3002. MAINTENANCE OF LIGHTING SYSTEMS	LS	1.000	1.000
5540	SPV.0105	Special 5001. TEMPORARY VEHICLE DETECTION SYSTEM LINCOLN MEMORIAL DR & MICHIGAN ST	LS	1.000	1.000
5550	SPV.0105	Special 5002. INSTALL FIBER OPTIC IN CABINET, LINCOLN MEMORIAL DR & IH 794 RAMPS	LS	1.000	1.000
5560	SPV.0105	Special 5003. INSTALL FIBER OPTIC IN CABINET, LINCOLN MEMORIAL DR & CLYBOURN ST	LS	1.000	1.000
5570	SPV.0105	Special 5004. INSTALL FIBER OPTIC IN CABINET, LINCOLN MEMORIAL DR & MICHIGAN ST	LS	1.000	1.000
5580	SPV.0105	Special 5007. INSTALL TRAFFIC SIGNAL CABINET, LINCOLN MEMORIAL DR & IH 794 RAMPS	LS	1.000	1.000
5590	SPV.0105	Special 5008. INSTALL TRAFFIC SIGNAL CABINET, LINCOLN MEMORIAL DR & CLYBOURN ST	LS	1.000	1.000
5600	SPV.0105	Special 5009. INSTALL TRAFFIC SIGNAL CABINET, LINCOLN MEMORIAL DR & MICHIGAN ST	LS	1.000	1.000
5610	SPV.0105	Special 5010. INSTALL TRAFFIC SIGNAL CABINET, CLYBOURN ST & VAN BUREN ST	LS	1.000	1.000
5620	SPV.0105	Special 5011. EVP DETECTOR HEAD INSTALLATION LINCOLN MEMORIAL DR & IH 794 RAMPS	LS	1.000	1.000
5630	SPV.0105	Special 5012. EVP DETECTOR HEAD INSTALLATION LINCOLN MEMORIAL DR & CLYBOURN ST	LS	1.000	1.000
5640	SPV.0105	Special 5013. TEMPORARY TRAFFIC SIGNALS, SPECIAL LINCOLN MEMORIAL DR & MICHIGAN ST	LS	1.000	1.000
5650	SPV.0105	Special 5014. INSTALL S-F MICROWAVE DETECTOR S-40-362	LS	1.000	1.000
5660	SPV.0105	Special 5015. INSTALL S-F MICROWAVE DETECTOR S-40-850	LS	1.000	1.000
5670	SPV.0165	Special 1001. SAND-SET CONCRETE PAVER PAVING OVER CONCRETE BASE - 80MM	SF	4,902.000	4,902.000
5680	SPV.0165	Special 1002. PERMEABLE CONCRETE PAVERS - 80MM, COLOR A	SF	7,503.000	7,503.000

3

DATE 27AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1300-13-74 QUANTITY
5690	SPV.0165	Special 1003. PERMEABLE CONCRETE PAVERS - 80MM, COLOR B	SF	4,366.000	4,366.000
5700	SPV.0165	Special 1004. IRRIGATION ZONES - DRIP	SF	41,760.000	41,760.000
5710	SPV.0165	Special 1005. IRRIGATION ZONES - SPRAY	SF	5,740.000	5,740.000
5720	SPV.0165	Special 2001. PRESTRESSED PRECAST CONCRETE WALL PANEL **P**	SF	12,386.000	12,386.000
5730	SPV.0165	Special 2002. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP **P**	SF	17,130.000	17,130.000
5740	SPV.0165	Special 2003. WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/QMP **P**	SF	5,722.000	5,722.000
5750	SPV.0180	Special 1001. SHREDDED HARDWOOD BARK MULCH	SY	3,672.000	3,672.000
5760	SPV.0195	Special 1001. MANAGEMENT OF SOLID WASTE	TON	28,553.000	28,553.000

3

3

CLEARING AND GRUBBING

LOCATION	FROM			TO		OFFSET	CATEGORY 0020 201.0110 CLEARING SY	CATEGORY 0020 201.0210 GRUBBING SY	CATEGORY 0020 201.0120 CLEARING ID	CATEGORY 0020 201.0220 GRUBBING ID
LINCOLN MEMORIAL DRIVE	23+96	LM	-	30+17	LM	LT/RT	6297	6297	391	391
CLYBOURN STREET	23+25	CL	-	29+31	CL	RT	1493	1493	332	332
VAN BUREN STREET	62+89	VB	-	63+35	VB	RT	--	--	16	16
						PROJECT TOTALS	7790	7790	739	739

REMOVING PAVEMENT

LOCATION	FROM			TO		OFFSET	CAT. 0010 204.0100 REMOVING PAVEMENT SY	CAT. 0020 204.0100 REMOVING PAVEMENT SY
LINCOLN MEMORIAL DRIVE	29+54	LM	-	34+90	LM	LT/RT	--	4525
CLYBOURN STREET	22+59	CL	-	29+71	CL	LT/RT	--	3684
IH 794 WB EXIT RAMP	424+67	LN	-	426+40	LN	LT	--	626
IH 794 EB EXIT RAMP	23+89	CL	-	26+66	CL	RT	1109	--
CHICAGO STREET	51+00	CH	-	18+23	LM	LT/RT	--	1564
VAN BUREN STREET	62+51	VB	-	63+43	LM	LT	--	90
JACKSON EB EXIT RAMP	63+20	CH	-	63+44	LM	RT	--	35
						PROJECT TOTALS	1,109	10,525

REMOVING ASPHALTIC SURFACE BUTT JOINTS

LOCATION	FROM		TO	CAT. 0020 204.0115 REMOVING ASPALTIC SURFACE BUTT JOINTS SY
LINCOLN MEMORIAL DRIVE	11+75 LM	-	12+00 LM	88
			PROJECT TOTAL	88

REMOVING CURB & GUTTER

LOCATION	FROM		TO	CAT. 0020 204.0150 REMOVING CURB & GUTTER LF
LINCOLN MEMORIAL DRIVE	12+00 LM	-	35+00 LM	1668
CLYBOURN STREET	22+39 CL	-	23+81 CL	861
			PROJECT TOTAL	2529

REMOVING CONCRETE SIDEWALK

LOCATION	FROM		TO	CAT. 0020 204.0155 REMOVING CONCRETE SIDEWALK SY
LINCOLN MEMORIAL DRIVE	12+00 LM	-	34+34 LM	450
CLYBOURN STREET	22+39 CL	-	29+67 CL	1091
CHICAGO STREET	50+77 CH	-	18+62 LM	516
			PROJECT TOTAL	3970

REMOVING CONCRETE BARRIER

LOCATION	FROM		TO	CAT. 0020 204.0157 REMOVING CONCRETE BARRIER LF
IH 794 WB EXIT RAMP	424+66 LN	-	425+85 LN	235
			PROJECT TOTAL	235

3

REMOVING FENCE

LOCATION	FROM			TO		CAT. 0010 204.0170 REMOVING FENCE LF	CAT. 0020 204.0170 REMOVING FENCE LF
LINCOLN MEMORIAL DRIVE	13+46	LM	-	33+42	LM	-	1841
CLYBOURN STREET	23+70	CL	-	330+52	LS	-	719
IH 794 WB EXIT RAMP	327+88	LS	-	35+21	LM	-	1925
IH 794 EB EXIT RAMP	24+80	CL	-	327+89	LS	330	-
VAN BUREN STREET	206+06	LE	-	61+80	VB	-	306
CHICAGO STREET	50+78	CH	-	17+98	LM	-	421
				PROJECT TOALS		330	5212

STORM SEWER REMOVALS

ITEM	DESCRIPTION	SIZE	UNIT	CATEGORY 0010	CATEGORY 0020
204.0210*	REMOVING MANHOLES		EACH	7	5
204.0220	REMOVING INLETS		EACH	25	43
204.0245.1001	REMOVING STORM SEWER	6"	LF	489	227
204.0245.1002	REMOVING STORM SEWER	8"	LF	--	36
204.0245.1003	REMOVING STORM SEWER	10"	LF	377	110
204.0245.1004	REMOVING STORM SEWER	12"	LF	427	1660
204.0245.1005	REMOVING STORM SEWER	15"	LF	222	391
204.0245.1006	REMOVING STORM SEWER	18"	LF	291	348
204.0245.1007	REMOVING STORM SEWER	21"	LF	56	--
204.0245.1008	REMOVING STORM SEWER	24"	LF	458	832
204.0245.1009	REMOVING STORM SEWER	36"	LF	--	230
204.0280	SEALING PIPES		EACH	--	10
SPV.0060.1017	REMOVING DOWNSPOUT, FROM CLEANOUT TO BEND		EACH	8	5

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SETTLEMENT GAUGE

LOCATION	STATION	OFFSET	CAT. 0010 205.2000.S SETTLEMENT GAUGE EACH
IH 794 EB EXIT RAMP	205+05 LE	40' RT	1
	206+00 LE	20' LT	1
		PROJECT TOTAL	2

3

REMOVING BOLLARDS

LOCATION	STATION		OFFSET		CATEGORY 0020 REMOVING BOLLARDS 204.9060.S.0001 EACH
LINCOLN MEMORIAL DRIVE					
	23+57	LM	3'	RT	1
	23+61	LM	3'	RT	1
	23+56	LM	21'	RT	1
	23+60	LM	21'	RT	1
	23+75	LM	7'	RT	1
	23+81	LM	8'	RT	1
	23+88	LM	8'	RT	1
	26+83	LM	83'	RT	1
CLYBOURN STREET					
	23+13	CL	233'	RT	1
	23+14	CL	236'	RT	1
	23+12	CL	183'	RT	1
	23+14	CL	183'	RT	1
	23+26	CL	175'	RT	1
	23+29	CL	172'	RT	1
	23+11	CL	165'	RT	1
	23+14	CL	166'	RT	1
	23+79	CL	170'	RT	1
	25+51	CL	82'	RT	1
	25+51	CL	85'	RT	1
	23+78	CL	73'	RT	1
	23+56	CL	57'	RT	1
	23+58	CL	57'	RT	1
	23+56	CL	40'	RT	1
	23+58	CL	40'	RT	1
			PROJECT TOTAL		24

CONTAMINATED SOIL EXCAVATION

LOCATION	FROM			TO		CAT. 0010 SPV.0195.1001 MANAGEMENT OF SOLID WASTE TONS	CAT. 0020 205.0501.S EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL TONS	CAT. 0020 SPV.0195.1001 MANAGEMENT OF SOLID WASTE TONS
LINCOLN MEMORIAL DRIVE	12+00	LM	-	16+00	LM	--	--	2082
	16+00	LM	-	22+25	LM	--	3190	--
	22+25	LM	-	23+50	LM	--	1208	--
	23+50	LM	-	31+80	LM	--	--	2393
	31+80	LM	-	34+15	LM	--	342	--
CLYBOURN STREET	22+39	CL	-	31+00	CL	--	--	13132
	31+00	CL	-	32+50	CL	--	1193	--
IH 794 WB ENTRANCE RAMP	100+33	LW	-	111+07	LW	4196	--	--
IH 794 WB EXIT RAMP	418+00	LN	-	426+75	LN	--	--	113
	426+75	LN	-	431+40	LN	--	2578	--
IH 794 EB ENTRANCE RAMP	327+92	LS	-	330+80	LS	--	--	611
IH 794 EB EXIT RAMP	201+00	LE	-	210+23	LE	4384	--	--
CHICAGO STREET	51+00	CH	-	52+84	CH	--	858	--
PIERS & WALL B-40-629 UNDERCUT						1642	--	--
				PROJECT TOTALS		10223	9369	18330

3

3

EARTHWORK SUMMARY

Division	From/To Station	Location	Common Excavation (1) Cut (2)	(item # 205.0100) EBS Excavation (3)	Salvaged/ Unusable Pavement Material (4)	Excavation for Structures	Available Material (5)	Unexpanded Fill	Expanded Fill (13) Factor 1.20	Mass Ordinate +/- (14)	Waste	Borrow (15) (item #208.0100)	Comment:
CATEGORY 0010													
EB Ramp	203+50 to 209+74 LE	Mainline	3315	0	3315	0	0	1263	1516	-1516	-	1516	
WB Ramp	105+00 to 110+50 LW	Mainline	2733	2388	0	0	2733	1268	1522	1211	1211	-	
			6048	2388									
CATEGORY 0010 SUBTOTAL			Total Common Exc 8436		3315	0	2733	2531	3037	-304	1211	1516	
CATEGORY 0020													
NB Ramp	424+63 to 431+00 LN	Mainline	14712	528	66	3138	17784	304	365	17419	17419	-	
Clybourn Street	22+00 to 29+23 CL	Mainline	5540	0	1044	0	4496	34	41	4455	4455	-	
Lincoln Memorial Drive & SB Ramp	12+00 to 34+45 LM	Mainline	24477	0	970	0	23507	3852	4623	18884	18884	-	
Chicago Street	51+00 to 52+50 CH	Mainline	724	0	206	0	518	0	0	518	518	-	
Van Buren Street	62+51 to 63+54 VB	Mainline	47	0	35	0	12	7	8	4	4	-	
Site Grading			13607	0	0	0	13607	2233	2680	10927	10927	-	
	Undistributed	EBS	0	6653	0	0	0	0	0	0	-	-	
			59107	7181									
CATEGORY 0020 SUBTOTAL			Total Common Exc 66288		2321	3138	59925	6431	7717	52208	52208	0	0
			65155	9568									
PROJECT TOTALS			Total Common Exc 74724		5636	3138	62658	8962	10754	51903	53419	1516	0

1) Common Excavation is the sum of the Cut and EBS Excavation columns minus the Excavation for Structures column. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Breaker Run. See quantities elsewhere for Item number 311.0110
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut + Excavation for Structures - Salvaged/Unusable Pavement Material
13) Expanded Fill. Factor = 1.20
Depending on selections:

Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
Expanded Fill = Unexpanded Fill * Fill Factor

14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.
15) Borrow Excavation

BASE AGGREGATE

LOCATION	FROM	TO	CAT. 0010 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	CAT. 0020 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	CAT. 0020 310.0110 BASE AGGREGATE OPEN GRADED TON
LINCOLN MEMORIAL DRIVE	12+00 LM	35+00 LM	--	10088	--
CLYBOURN STREET	21+14 CL	23+00 CL	--	2278	543
IH 794 WB ENTRANCE RAMP	150+13 LW	110+66 LW	746	--	--
IH 794 WB EXIT RAMP	424+58 LN	431+30 LN	--	1159	--
IH 794 EB ENTRANCE RAMP	327+91 LS	330+21 LS	--	253	--
IH 794 EB EXIT RAMP	203+76 LE	209+77 LE	2204	--	--
CHICAGO STREET	51+00 CH	52+35 CH	--	746	--
	PROJECT TOTALS		2950	14524	543

CONCRETE PAVEMENT APPROACH SLAB

LOCATION	FROM	TO	OFFSET	CATEGORY 0020 415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
IH 794 WB EXIT RAMP	424+59 LN	424+86 LN	LT/RT	225
IH 794 EB ENTRANCE RAMP	327+92 LS	328+06 LS	LT/RT	67
		PROJECT TOTAL		291

COLORING CONCRETE

LOCATION	FROM	TO	OFFSET	CATEGORY 0010 SPV.0035.1011 COLORING CONCRETE DARK GRAY CY	CATEGORY 0010 SPV.0035.1012 COLORING CONCRETE LIGHT GRAY CY	CATEGORY 0020 SPV.0035.1011 COLORING CONCRETE DARK GRAY CY	CATEGORY 0020 SPV.0035.1012 COLORING CONCRETE LIGHT GRAY CY
LINCOLN MEMORIAL DRIVE	12+00 LM	34+15 LM	LT/RT	--	--	780	110
CLYBOURN STREET	22+20 CL	31+65 CL	LT/RT	--	--	71	34
IH 794 WB ENTRANCE RAMP	105+64 LW	110+89 LW	LT/RT	62	15	--	--
IH 794 EB EXIT RAMP	204+81 LE	210+05 LE	LT/RT	62	13	--	--
CHICAGO STREET	51+00 CH	52+35 CH	LT/RT	--	--	16	--
		PROJECT TOTALS		124	28	866	144

3

CONCRETE PAVEMENT

LOCATION	FROM	TO	OFFSET	CATEGORY 0010 415.0075 CONCRETE PAVEMENT 7 1/2-INCH SY	CATEGORY 0020 415.0070 CONCRETE PAVEMENT 7-INCH SY	CATEGORY 0020 415.0075 CONCRETE PAVEMENT 7 1/2-INCH SY	CATEGORY 0020 415.0080 CONCRETE PAVEMENT 8-INCH SY	CATEGORY 0020 415.0085 CONCRETE PAVEMENT 8.5-INCH SY
LINCOLN MEMORIAL DRIVE	12+00 LM	34+15 LM	LT/RT	--	--	--	14994	--
CLYBOURN STREET	22+20 CL	31+65 CL	LT/RT	--	5339	--	--	--
IH 794 WB ENTRANCE RAMP	105+64 LW	110+89 LW	LT/RT	2238	--	--	--	--
IH 794 WB EXIT RAMP	424+86 LN	431+25 LN	LT/RT	--	--	3476	--	--
IH 794 EB ENTRANCE RAMP	328+06 LS	330+21 LS	LT/RT	--	--	758	--	--
IH 794 EB EXIT RAMP	204+81 LE	210+05 LE	LT/RT	2226	--	--	--	--
CHICAGO STREET	51+00 CH	52+35 CH	LT/RT	--	--	--	766	--
VAN BUREN STREET	62+51 VB	64+16 VB	LT	--	--	--	--	323
		PROJECT TOTALS		4464	5339	4234	15760	323

CONCRETE PAVEMENT GAPS

CATEGORY 0020

LOCATION	FROM	TO	OFFSET	415.0210 CONCRETE PAVEMENT GAPS EACH
LINCOLN MEMORIAL DRIVE	12+00 LM	34+50 LM	LT/RT	1
CLYBOURN STREET	22+00 CL	29+00 CL	LT/RT	7
CHICAGO STREET	51+00 CH	53+00 CH	LT/RT	2
		PROJECT TOTAL		10

CONCRETE DRIVEWAY 7-INCH

CATEGORY 0020

LOCATION	FROM	TO	OFFSET	416.0170 CONCRETE DRIVEWAY 7-INCH SY
LINCOLN MEMORIAL DRIVE	13+24 LM	15+87 LM	LT/RT	291
CLYBOURN STREET	23+46 CL	27+40 CL	LT/RT	525
CHICAGO STREET	51+00 CH	52+02 CH	LT/RT	99
ART MUSEUM DRIVE	N/A	N/A		101
		PROJECT TOTAL		1016

DRILLED TIE BARS AND DOWEL BARS

CATEGORY 0020

LOCATION	STATION	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH
CLYBOURN STREET	22+38.74 CL	77	32
CHICAGO STREET	51+00.00 CH	--	32
	PROJECT TOTALS	77	64

CONCRETE SURFACE DRAINS

CATEGORY 0020

LOCATION	STATION	OFFSET	416.1010 CONCRETE SURFACE DRAINS CY
LINCOLN MEMORIAL DRIVE	26+75 LM	54' LT	2
	27+45 LM	50' LT	2
		PROJECT TOTAL	4

INCENTIVE IRI RIDE

LOCATION	FROM	TO	CAT. 0010 440.4410.S INCENTIVE IRI RIDE DOL	CAT. 0020 440.4410.S INCENTIVE IRI RIDE DOL
LINCOLN MEMORIAL DRIVE	12+00 LM	34+15 LM	--	2425
CLYBOURN STREET	22+20 CL	31+65 CL	--	1175
IH 794 WB ENTRANCE RAMP	105+64 LW	110+89 LW	385	--
IH 794 WB EXIT RAMP	424+86 LN	431+25 LN	--	655
IH 794 EB ENTRANCE RAMP	328+06 LS	330+21 LS	--	225
IH 794 EB EXIT RAMP	204+81 LE	210+05 LE	430	--
CHICAGO STREET	51+00 CH	52+35 CH	--	105
		PROJECT TOTALS	815	4585

TACK COAT

LOCATION	FROM	TO	OFFSET	CAT. 0010 455.0605 TACK COAT GAL	CAT. 0020 455.0605 TACK COAT GAL
LINCOLN MEMORIAL DRIVE	12+00 LM	17+50 LM	LT/RT	--	104
IH 794 EB EXIT RAMP	209+48 LE	210+06 LE	LT/RT	50	--
CHICAGO STREET	51+00 CH	53+00 CH	LT/RT	--	14
		PROJECT TOTALS		50	118

ASPHALTIC SURFACE

LOCATION	FROM	TO	OFFSET	CAT. 0010 465.0105 ASPHALTIC SURFACE TON	CAT. 0020 465.0105 ASPHALTIC SURFACE TON
LINCOLN MEMORIAL DRIVE	12+00 LM	17+50 LM	LT/RT	--	815
IH 794 EB EXIT RAMP	209+48 LE	210+06 LE	LT/RT	392	--
CHICAGO STREET	51+00 CH	53+00 CH	LT/RT	--	112
		PROJECT TOTALS		392	926

3

ASPHALTIC SURFACE TEMPORARY

STREET	FROM			TO		LOCATION	CAT. 0020 465.0125 ASPHALTIC SURFACE TEMPORARY TON
LINCOLN MEMORIAL DRIVE	32+86	LM	-	35+00	LM	SIDEWALKS	42
LINCOLN MEMORIAL DRIVE	32+86	LM	-	35+00	LM	MAINLINE	224
LINCOLN MEMORIAL DRIVE	12+00	LM	-	24+25	LM	TEMPORARY	141
						PROJECT TOTALS	407

ASPHALTIC CURB

STREET	FROM			TO		LOCATION	CAT. 0020 465.0310 ASPHALTIC CURB LF
LINCOLN MEMORIAL DRIVE	12+00	LM	-	24+25	LM	TEMPORARY	270
						PROJECT TOTALS	270

CONCRETE CURB PEDESTRIAN

LOCATION	FROM			TO		OFFSET	CAT.0020 601.0600 CONCRETE CURB PEDESTRIAN LF
LINCOLN MEMORIAL DRIVE	13+09	LM	-	14+37	LM	RT	128
						PROJECT TOTAL	128

CONCRETE SIDEWALK

LOCATION	FROM			TO		OFFSET	CAT. 0010 CONCRETE SIDEWALK 5-INCH 602.0410 SF	CATEGORY 0020 CONCRETE SIDEWALK 5-INCH 602.0410 SF	CONCRETE SIDEWALK 7-INCH 602.0420 SF
LINCOLN MEMORIAL DRIVE	13+99	LM	-	33+00	LM	LT/RT	--	35252	27857
CLYBOURN STREET	21+14	CL	-	23+00	CL	LT/RT	--	17298	--
IH 794 EB EXIT RAMP	209+48	LE	-	210+06	LE	LT/RT	5766	--	--
CHICAGO STREET	51+00	CH	-	53+00	CH	LT/RT	--	3763	--
						PROJECT TOTALS	5766	56313	27857

CONCRETE CURB & GUTTER

LOCATION	FROM			TO		OFFSET	CAT. 0010 601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	CAT. 0020 601.0331 CONCRETE CURB & GUTTER 31-INCH LF	CAT. 0020 601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	CAT. 0020 601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R LF
LINCOLN MEMORIAL DRIVE										
	12+00	LM	-	17+50	LM	LT/RT	--	1760	--	--
	17+50	LM	-	23+00	LM	LT/RT	--	1853	--	--
	23+00	LM	-	28+00	LM	LT/RT	--	1966	--	12
	28+00	LM	-	33+00	LM	LT/RT	--	1869	--	--
	33+00	LM	-	35+09	LM	LT/RT	--	654	--	--
ART MUSEUM DRIVE										
	N/A			N/A			--	126	--	--
CLYBOURN STREET										
	62+87	JE	-	23+00	CL	LT/RT	--	682	--	--
	23+00	CL	-	28+00	CL	LT/RT	--	1437	--	--
	28+00	CL	-	31+65	CL	LT/RT	--	899	--	--
IH 7949 WB ENTRANCE RAMP										
	108+83	LW	-	110+86	LW	LT/RT	741	--	--	--
IH 794 WB EXIT RAMP										
	427+75	LN	-	431+31	LN	LT/RT	--	--	605	--
IH 794 EB ENTRANCE RAMP										
	329+06	LS	-	330+21	LS	LT/RT	--	--	296	--
IH 794 EB EXIT RAMP										
	209+48	LE	-	210+06	LE	LT/RT	1020	--	--	--
CHICAGO STREET										
	51+00	CH	-	53+00	CH	LT/RT	--	275	--	--
						PROJECT TOTALS	1761	11521	901	12

CURB RAMP DETECTABLE WARNING FIELD

LOCATION	FROM			TO		OFFSET	CAT. 0010 602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF	CAT. 0020 602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF
LINCOLN MEMORIAL DRIVE								
	12+00	LM	-	17+50	LM	LT/RT	--	56
	17+50	LM	-	23+00	LM	LT/RT	--	72
	23+00	LM	-	28+00	LM	LT/RT	--	140
	28+00	LM	-	33+00	LM	LT/RT	--	192
CLYBOURN STREET								
	21+14	CL	-	23+00	CL	LT/RT	--	90
	28+00	CL	-	31+65	CL	LT/RT	--	120
IH 794 WB ENTRANCE RAMP								
	108+83	LW	-	110+86	LW	LT/RT	80	--
IH 794 EB EXIT RAMP								
	209+48	LE	-	210+06	LE	LT/RT	80	--
						PROJECT TOTALS	160	670

3

TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH

CATEGORY 0010

LOCATION	FROM		TO		OFFSET	532.0750.S TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH SF
IH 794 EB EXIT RAMP	205+00	LE -	207+42	LE	LT/RT	1609
PROJECT TOTAL						1609

CONCRETE STEPS

CAT. 0020

LOCATION	STATION		OFFSET	602.1500 CONCRETE STEPS SF
CLYBOURN STREET	29+12	CL	LT	53
PROJECT TOTAL				53

CONCRETE BARRIER

					CATEGORY 0010		CATEGORY 0020
LOCATION	FROM		TO		OFFSET	603.1132 CONCRETE BARRIER TYPE S32 LF	603.1142 CONCRETE BARRIER TYPE S42 LF	603.1132 CONCRETE BARRIER TYPE S32 LF
IH 794 WB ENTRANCE RAMP	107+15	LW -	108+83	LW	RT	168	--	--
	108+37	LW -	108+83	LW	LT	--	46	--
IH 794 EB ENTRANCE RAMP	328+19	LS -	329+05	LS	RT	--	--	86
IH 794 EB EXIT RAMP	206+14	LE -	207+90	LE	LT	--	176	--
	207+42	LE -	207+90	LE	RT	48	--	--
PROJECT TOTALS						216	222	86

CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S32

CATEGORY 0020

LOCATION	STATION	OFFSET	603.3111 CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S32 EACH
IH 794 EB ENTRANCE RAMP	328+20 LS	RT	1
PROJECT TOTAL			1

CONCRETE BARRIER TEMPORARY PRECAST

CATEGORY 0010

LOCATION	204.9090.S REMOVING CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE BY OTHERS LF	603.8000 DELIVERED LF	603.8125 INSTALLED LF	SPV.0090.1024 CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE LF
STAGE 1				
STA 199+78 - 200+75 LE	--	100	100	--
STAGE 2				
STA 63+30 - 64+18 VB	--	88	87.5	--
STA 62+89 - 63+60 JE	87.5	--	87.5	--
STAGE 3				
STA 32+94 - 33+06 LM	--	162.5	162.5	162.5
STAGE 4				
STA 32+94 - 33+56 LM	--	62.5	62.5	62.5
PROJECT TOTALS	87.5	412.5	500	225

COVER PLATES TEMPORARY

LOCATION	CAT. 0010 611.8120.S COVER PLATES TEMPORARY EACH	CAT. 0020 611.8120.S COVER PLATES TEMPORARY EACH
UNDISTRIBUTED	25	25
PROJECT TOTALS	25	25

PERMEABLE PAVEMENT SYSTEMS AND BIOFILTRATION BASINS

ALL ITEMS CATAGORY 0020

LOCATION	612.0106 PIPE UNDERDRAIN 6-INCH LF	612.0206* PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH LF	SPV.0035.1006 BEDDING LAYER 2" ASTM NO. 8 STONE CY	SPV.0035.1007 BASE LAYER 4" ASTM NO. 57 STONE CY	SPV.0035.1008 STORAGE LAYER ASTM NO. 2 STONE CY	SPV.0035.1009 ENGINEERED SOIL FOR BIO-FILTRATION BASINS CY	SPV.0060.1002 PERMEABLE PAVEMENT OUTLET CONTROL STRUCTURE EACH	SPV.0060.1003 BIO-FILTRATION OUTLET CONTROL STRUCTURE EACH
CL-1	204	-	-	9	0	259	-	1	-
CL-2	196	-	-	9	35	379	-	1	-
CL-3	169	-	-	6	29	153	-	1	-
CL-4	245	-	-	16	47	277	-	1	-
CL-5	133	-	-	10	25	174	-	1	-
CL-6	132	-	-	2	-	265	-	1	-
CL-7	116	-	-	4	-	99	-	1	-
CL-8	70	22	-	10	-	61	-	1	-
BF-1	-	-	70	-	-	25	35	-	1
BF-2	-	-	120	-	-	120	110	-	1
BF-3	-	-	72	-	-	38	53	-	1
BF-4	-	-	113	-	-	111	153	-	1
PROJECT TOTALS	1265	22	375	65	135	1963	351	8	4

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

UTILITY ADJUSTMENTS

CATEGORY 0020

LOCATION	FROM	TO	OFFSET	611.8110* ADJUSTING MANHOLE COVERS EACH	SPV.0060.1032 ADJUSTING WATER BOXES EACH	SPV.0060.1039 INTERNAL SANITARY MANHOLE SEAL EACH
LINCOLN MEMORIAL DRIVE	12+00 LM	34+15 LM	LT/RT	4	1	4
CLYBOURN STREET	22+20 CL	31+65 CL	LT/RT	5	4	5
CHICAGO STREET	51+00 CH	52+35 CH	LT/RT	1	--	1
		PROJECT TOTALS		10	5	10

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SANITARY SEWER

CATEGORY 0020

LOCATION	FROM	TO	OFFSET	SPV.0060.1040 4-FT DIAMETER SANITARY MANHOLE WITH INTERNAL SEAL EACH	SPV.0090.1023 10-INCH DIAMETER SANITARY LATERAL LF
CLYBOURN STREET	22+20 CL	31+65 CL	00+00	2	168
		PROJECT TOTALS		2	168

STORM SEWER SUMMARY

ITEM	DESCRIPTION	UNIT	CATEGORY 0010	CATEGORY 0020
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	94	--
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	3090	--
520.8000	CONCRETE COLLARS FOR PIPE	EACH	--	2
522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	--	3
522.1015	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	EACH	--	1
607.0406	STORM SEWER PIPE COMPOSITE 6-INCH	LF	24	78
607.0408	STORM SEWER PIPE COMPOSITE 8-INCH	LF	299	24
608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	486	1749
608.0315	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	109	108
608.0318	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	135	--
608.0324	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	242	1044
608.0330	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	LF	689	597
608.0336	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	LF	262	--
608.0348	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH	LF	--	648
608.0412	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	--	370
608.0415	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH	LF	--	16
608.0424	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH	LF	--	5
608.0442	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 42-INCH	LF	--	230
608.0448	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 48-INCH	LF	--	431
608.0512	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH	LF	--	366
608.0515	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 15-INCH	LF	--	30
608.0518	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 18-INCH	LF	--	73
611.0420	RECONSTRUCTING MANHOLES	EACH	--	3
611.0530	MANHOLE COVERS TYPE J	EACH	12	40
611.0610	INLET COVERS TYPE BW	EACH	4	12
611.0612	INLET COVERS TYPE C	EACH	9	7
611.0624	INLET COVERS TYPE H	EACH	--	2
611.0660	INLET COVERS TYPE WM	EACH	--	1
611.1004	CATCH BASINS 4-FT DIAMETER	EACH	--	3
611.2004	MANHOLES 4-FT DIAMETER	EACH	2	21
611.2005	MANHOLES 5-FT DIAMETER	EACH	8	10
611.2006	MANHOLES 6-FT DIAMETER	EACH	2	2
611.2007	MANHOLES 7-FT DIAMETER	EACH	2	7
611.2008	MANHOLES 8-FT DIAMETER	EACH	--	1
611.2604	MANHOLES VARIABLE SPECIAL 4-FT DIAMETER	EACH	--	6
611.3004	INLETS 4-FT DIAMETER	EACH	7	52
611.3225	INLETS 2X2.5-FT	EACH	2	12
611.3230	INLETS 2X3-FT	EACH	--	1
611.8110*	ADJUSTING MANHOLE COVERS	EACH	--	2
612.0104	PIPE UNDERDRAIN 4-INCH	LF	--	708
612.0206*	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	56	145
SPV.0060.1001	TRENCH DRAIN	EACH	4	--
SPV.0060.1004	MANHOLE 9-FT DIAMETER	EACH	--	1
SPV.0060.1005	MANHOLE 10-FT DIAMETER	EACH	--	1
SPV.0060.1006	ENHANCED CATCH BASIN, TYPE 44A STRUCTURE	EACH	6	--
SPV.0060.1007	ENHANCED CATCH BASIN, TRAPPED STORM STRUCTURE	EACH	3	1
SPV.0060.1008	STORM CASTING, TYPE MKE	EACH	12	86
SPV.0060.1009	STORM CASTING, TYPE R-1878-A9L	EACH	1	3
SPV.0060.1018	DOWNSPOUT CONNECTION, FROM CLEANOUT TO BEND	EACH	9	2
SPV.0060.1019	DOWNSPOUT OUTFALL ABOVE GRADE	EACH	1	1
SPV.0060.1044	ENHANCED CATCH BASIN, TYPE 44A MODIFIED STRUCTURE	EACH	7	26

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

CRASH CUSHIONS PERMANENT LOW MAINTENANCE

LOCATION	STATION	CAT. 0010 614.0805 CRASH CUSHIONS PERMANENT LOW MAINTENANCE EACH	CAT. 0020 614.0805 CRASH CUSHIONS PERMANENT LOW MAINTENANCE EACH
IH 794 WB ENTRANCE RAMP	108+83 LW	2	--
IH 794 EB ENTRANCE RAMP	329+06 LS	--	2
PROJECT TOTALS		2	2

CRASH CUSHIONS TEMPORARY

CATEGORY 0010

LOCATION	614.0905 CRASH CUSHIONS TEMPORARY EACH	SPV.0060.1043 SALVAGE CRASH CUSHIONS TEMPORARY EACH
STAGE 1		
STA 199+75 LE	1	--
STAGE 2		
STA 63+30 VB	1	--
STA 62+89 JE	1	--
STAGE 3		
STA 34+05 LM	--	1
STAGE 4		
STA 32+94 LM	--	1
PROJECT TOTALS	3	2

FENCE CHAIN LINK 4-FT

CAT. 0020

LOCATION	616.0204 FENCE CHAIN LINK 4-FT LF
CHICAGO STREET	27
PROJECT TOTAL	27

CHAIN LINK FENCE, TEMPORARY 6-FT

CATEGORY 0010

LOCATION		SPV.0090.1021 CHAIN LINK FENCE, TEMPORARY 6-FT DELIVERED LF	SPV.0090.1022 CHAIN LINK FENCE, TEMPORARY 6-FT INSTALLED LF
LINCOLN MEMORIAL DRIVE	STAGE 1	3827	3827
	STAGE 2A	--	--
	STAGE 2B	--	267
	STAGE 3	--	653
	STAGE 4	--	--
	STAGE 5	--	571
	PROJECT TOTALS	3827	5318

FENCE SAFETY

CAT. 0020

LOCATION	616.0700.S FENCE SAFETY LF
JACKSON EB EXIT RAMP	150
UNDISTRIBUTED	200
PROJECT TOTAL	350

MOBILIZATION

PROJECT	CAT. 0010 619.0100 MOBILIZATION EACH	CAT. 0020 619.0100 MOBILIZATION EACH
1300-13-74	0.5	0.5
PROJECT TOTALS	0.5	0.5

CONCRETE MEDIAN SLOPED NOSE

LOCATION	FROM			TO		OFFSET	CAT. 0010 620.0300 CONCRETE MEDIAN SLOPED NOSE SF	CAT. 0020 620.0300 CONCRETE MEDIAN SLOPED NOSE SF
LINCOLN MEMORIAL DRIVE								
	12+00	LM	-	17+50	LM	LT/RT	--	96
	17+50	LM	-	23+00	LM	LT/RT	--	31
	23+00	LM	-	28+00	LM	LT/RT	--	180
	28+00	LM	-	33+00	LM	LT/RT	--	100
	33+00	LM	-	35+09	LM	LT/RT	--	48
CLYBOURN STREET								
	22+00	CL	-	28+00	CL	LT/RT	--	264
	28+00	CL	-	31+65	CL	LT/RT	--	115
IH 794 WB EXIT RAMP								
	427+75	LN	-	431+31	LN	LT/RT	81	--
PROJECT TOTALS							81	834

3

MOBILIZATIONS EROSION CONTROL

LOCATION	FROM	TO	CATEGORY 0010 628.1905 MOBILIZATIONS EROSION CONTROL EACH	CATEGORY 0010 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	CATEGORY 0020 628.1905 MOBILIZATIONS EROSION CONTROL EACH	CATEGORY 0020 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
LINCOLN MEMORIAL DRIVE	12+00 LM	35+09 LM	-	-	3	3
CLYBOURN STREET	21+14 CL	31+65 CL	-	-	3	2
IH 794 WB ENTRANCE RAMP	108+83 LW	110+86 LW	2	2	-	-
IH 794 WB EXIT RAMP	427+75 LN	431+31 LN	-	-	2	2
IH 794 EB ENTRANCE RAMP	329+06 LS	330+21 LS	-	-	2	1
IH 794 EB EXIT RAMP	209+48 LE	210+06 LE	2	1	-	-
CHICAGO STREET	51+00 CH	53+00 CH	-	-	2	2
PROJECT TOTALS			4	3	12	10

SUBGRADE STABILIZATION ITEMS

LOCATION	FROM	TO	CAT. 0010 311.0110 BREAKER RUN TON	CAT. 0020 311.0111 BREAKER RUN TON	CAT. 0010 645.0135 GEOTEXTILE FABRIC TYPE SR SY	CAT. 0020 645.0135 GEOTEXTILE FABRIC TYPE SR SY
IH 794 EB EXIT RAMP	207+90 LE	210+00 LE	896	--	996	--
IH 794 WB ENTRANCE RAMP	108+83 LW	110+85 LW	758	--	842	--
LINCOLN MEMORIAL DRIVE	12+00 LM	16+00 LM	--	1641	--	1823
	16+00 LM	22+25 LM	--	2862	--	3180
	22+25 LM	23+50 LM	--	758	--	842
	23+50 LM	31+80 LM	--	1042	--	1158
CLYBOURN STREET	22+00 CL	29+05 CL	--	5825	--	6472
CHICAGO STREET	51+00 CH	52+61 CH	--	843	--	937
PROJECT TOTALS			1654	12970	1838	14411

3

EROSION CONTROL

LOCATION	FROM	TO	OFFSET	606.0200 RIPRAP MEDIUM CY	624.0100 WATER MGAL	625.0105 TOPSOIL CY	627.0200 MULCHING SY	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2006* EROSION MAT URBAN CLASS I TYPE A SY	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7570 ROCK BAGS EACH	629.0205 FERTILIZER TYPE A CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
CATEGORY 0010																						
IH 794 EB EXIT RAMP	209+48 LE	210+06 LE	LT/RT	--	22	--	--	--	--	--	--	11	10	--	1	--	--	--	--	--	--
IH 794 WB ENTRANCE RAMP	108+83 LW	110+86 LW	LT/RT	--	7	--	--	--	--	--	--	11	8	--	2	--	--	--	--	--	--
CATEGORY 0010 SUBTOTALS				0	29	0	0	0	0	0	0	22	18	0	3	0	0	0	0	0	0
CATEGORY 0020																						
LINCOLN MEMORIAL DRIVE	12+00 LM	34+50 LM	LT/RT	28	100	--	--	--	--	--	2995	58	85	--	6	--	--	--	81	0.034	507
CLYBOURN STREET	21+14 CL	31+65 CL	LT/RT	30	23	2478	14871	--	--	--	--	20	50	--	10	--	9	268	--	0.011	168
IH 794 WB EXIT RAMP	427+75 LN	431+31 LN	LT/RT	--	12	--	--	--	670	670	2620	11	23	2	--	--	--	--	71	--	--
IH 794 EB ENTRANCE RAMP	329+06 LS	330+21 LS	LT/RT	--	3	--	--	--	--	--	1734	5	13	1	--	--	--	--	47	--	--
CHICAGO STREET	51+00 CH	53+00 CH	LT/RT	--	7	--	--	--	--	--	--	2	3	--	--	--	--	--	--	0.002	26
UNDISTRIBUTED				0	--	--	--	600	--	--	--	--	--	--	--	100	--	--	--	0.002	25
CATEGORY 0020 SUBTOTALS				58	145	2478	14871	600	670	670	7349	96	174	3	16	100	9	268	198	0.049	726
PROJECT TOTALS				58	174	2478	14871	600	670	670	7349	118	192	3	19	100	9	268	198	0.049	726

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LANDSCAPING AND STREETSCAPING

LOCATION	CATEGORY 0020 601.0110 CONCRETE CURB TYPE D LF	CATEGORY 0020 628.2006 EROSION MAT URBAN CLASS I TYPE A SY	CATEGORY 0020 632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES EACH	CATEGORY 0020 SPV.0035.1001 BACKFILL FOR PLANT BEDS - 24 INCH DEPTH CY	CATEGORY 0020 SPV.0035.1002 STRUCTURAL SOIL AT STREET TREES CY	CATEGORY 0020 SPV.0035.1003 DECORATIVE STONE MULCH, 3-INCH CY	CATEGORY 0020 SPV.0035.1004 DECOMPOSED GRANITE STONE MUCLH, 3-INCH CY	CATEGORY 0020 SPV.0085.1001 NO-MOW FESCUE SEED MIX LB
PROJECT ID 1300-13-74	87	634	26	1,470	1,306	124	698	30
PROJECT TOTAL:	87	634	26	1,470	1,306	124	698	30

LANDSCAPING AND STREETSCAPING (CONTINUED)

LOCATION	CATEGORY 0020 SPV.0090.1003 ALUMINUM EDGER LF	CATEGORY 0020 SPV.0090.1004 PRECAST CONCRETE CURBING LF	CATEGORY 0020 SPV.0090.1005 CAST-IN-PLACE CONCRETE SALT LIP CURB LF	CATEGORY 0020 SPV.0165.1001 SAND-SET CONCRETE PAVER PAVING OVER CONCRETE BASE - 80MM SF	CATEGORY 0020 SPV.0165.1002 PERMEABLE CONCRETE PAVERS - 80MM, COLOR A SF	CATEGORY 0020 SPV.0165.1003 PERMEABLE CONCRETE PAVERS - 80MM, COLOR B SF	CATEGORY 0020 SPV.0180.1001 SHREDDED HARDWOOD BARK MULCH SY
PROJECT ID 1300-13-74	2,213	786	496	4,902	7,503	4,366	3,672
PROJECT TOTAL:	2,213	786	496	4,902	7,503	4,366	3,672

IRRIGATION

CATEGORY	LOCATION	SPV.0090.1011 IRRIGATION SLEEVE, 2" DIA. (LF)	SPV.0090.1012 IRRIGATION SLEEVE, 3" DIA. (LF)	SPV.0090.1013 IRRIGATION SLEEVE, 4" DIA. (LF)	SPV.0090.1014 IRRIGATION MAIN LINE, 1.5" DIA. (LF)	SPV.0090.1015 IRRIGATION MAIN LINE, 2" DIA. (LF)	SPV.0105.1001 IRRIGATION SERVICE #1 (LS)	SPV.0105.1002 IRRIGATION SERVICE #2 (LS)	SPV.0165.1004 IRRIGATION ZONES - DRIP (SF)	SPV.0165.1005 IRRIGATION ZONES - SPRAY (SF)
0020	STA 24+00 - STA 32+00 LM	0	275	275	44	1,025	1	0	29,970	5,740
0020	STA 22+00 - STA 29+50 CL	392	250	345	258	345	0	1	11,790	0
	PROJECT TOTAL:	392	525	620	302	1,370	1	1	41,760	5,740

TREES, SHRUBS, PERENNIALS AND ORNAMENTAL GRASSES

CATEGORY 0020

BID ITEM NUMBER	SYMBOL	COMMON NAME	SIZE WHEN PLANTED	ROOT CONDITION	LOCATION STA 22+00- STA 29+50 CL	LOCATION STA 12+00- STA 18+00 LM1	LOCATION STA 24+00- STA 32+00 LM2	LOCATION STA 60+00- STA 63+70 VB	TOTALS
		LARGE DECIDUOUS TREES							
632.0101.0001	TXD	BALDCYPRESS	2.5" CAL	B&B			4		4
632.0101.0002	GDE	COFFEETREE, ESPRESSO KENTUCKY	2.5" CAL	B&B			1		1
632.0101.0003	ULF	ELM, FONTIER	2.5" CAL	B&B			1		1
632.0101.0004	COC	HACKBERRY, CHICAGOLAND	2.5" CAL	B&B	12		2		14
632.0101.0005	GTK	HONEYLOCUST, SKYLINE	2.5" CAL	B&B	8		6		14
632.0101.0006	TTS	LINDEN, STERLING SILVER	2.5" CAL	B&B	9		3		12
632.0101.0007	ASG	MAPLE, GREEN MOUNTAIN SUGAR	2.5" CAL	B&B				3	3
632.0101.0008	ANW	MAPLE, NORWEGIAN SUNSET SHANTUNG HYBRID	2.5" CAL	B&B			1		1
632.0101.0009	AFS	MAPLE, SIENNA GLEN	2.5" CAL	B&B	6		8		14
632.0101.0010	QBC	OAK, SWAMP WHITE	2.5" CAL	B&B			4		4
		LARGE EVERGREEN TREES							
632.0101.0011	PGD	SPRUCE, BLACK HILLS	8' HT	B&B			3		3
632.0101.0012	PGD	SPRUCE, BLACK HILLS	10' HT	B&B			3		3
		SMALL DECIDUOUS TREES							
632.0101.0013	MRJ	CRABAPPLE, RED JEWEL	2" CAL, SINGLE STEM	B&B	12		5		17
632.0101.0014	CVW	HAWTHORN, WINTER KING	8'-10' HT, CLUMP	B&B			6		6
632.0101.0015	SPM	LILAC, CHINA SNOW PEKING	8'-10' HT, CLUMP	B&B			14		14
632.0101.0016	PTM	QUAKING ASPEN (SINGLE STEM)	2" CAL, SINGLE STEM	B&B			15		15
632.0101.0017	PTM-C	QUAKING ASPEN (CLUMP)	10'-12' HT, CLUMP	B&B			16		16
632.0101.0018	AGA	SERVICEBERRY, AUTUMN BRILLIANCE	10'-12' HT, CLUMP	B&B			2		2
		DECIDUOUS SHRUBS							
632.0201.0001	HAV	WITCHHAZEL, COMMON	36" HT	CG			5		5
632.0201.0002	CSB	DOGWOOD, BERGESON COMPACT	24" HT	CG			99		99
632.0201.0003	FMM	FOTHERGILLA, MOUNT AIRY	24" HT	CG			22		22
632.0201.0004	DVL	HONEYSUCKLE, DWARF BUSH	18" HT	CG			204		204
632.0201.0005	HPL	HYDRANGREA, LIMELIGHT	30" HT	CG	9				9
632.0201.0006	RRD	RUGOSA ROSE, DWARF PAVEMENT	18" HT	CG	85		140		225
632.0201.0007	RTD	SUMAC, CUTLEAF (LACELEAF) STAGHORN	24" HT	CG			30		30
632.0201.0008	RAG	SUMAC, GRO LOW	24" SPREAD	CG	84	97	184	24	389
632.0201.0009	VDC	VIBURNUM, CHICAGO LUSTRE ARROWWOOD	36" HT	CG		15			15
632.0201.0010	VJD	VIBURNUM, JUDD	36" HT	CG			34		34
		PERENNIALS							
SPV.0060.1020	NWL	CATMINT, WALKER'S LOW', 1 GAL.	1 GAL.	CG	126		159		285
SPV.0060.1021	CVM	COREOPSIS, MOONBEAM, 1 GAL.	1 GAL.	CG			100		100
SPV.0060.1022	HMS	DAYLILY, STRAWBERRY CANDY, 1 GAL.	1 GAL.	CG	310		506		816
SPV.0060.1023	SRF	GOLDENROD, FIREWORKS, 1 GAL.	1 GAL.	CG			95		95
SPV.0060.1024	ASP	NEW ENGLAND ASTER, PURPLE DOME, 1 GAL.	1 GAL.	CG			106		106
		ORNAMENTAL GRASSES							
SPV.0060.1025	CAK	FEATHER REED GRASS, 1 GAL.	1 GAL.	CG	181			104	285
SPV.0060.1026	SON	INDIANGRASS, 1 GAL.	1 GAL.	CG	44		263		307
SPV.0060.1027	SCC	LITTLE BLUESTEM, CAROUSEL, 4" POT	4" POT	CG			311		311
SPV.0060.1028	SCB	LITTLE BLUESTEM, THE BLUES, 4" POT	4" POT	CG			300		300
SPV.0060.1029	SPT	PRAIRIE DROPSEED, TARA DWARF, 4" POT	4" POT	CG	192		901	8	1101
SPV.0060.1030	PVN	SWITCH GRASS, NORTHWIND, 1 GAL.	1 GAL.	CG		54	87		141
SPV.0060.1031	PVS	SWITCH GRASS, SHENANDOAH, 1 GAL.	1 GAL.	CG			63		63

TYPE I & TYPE II SIGN REMOVAL **CATEGORY 0010** **IH 794 1300-13-74**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUPPORT [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	REMARKS / NEW SIGN LOCATION
1R	NOT USED	--	--	--	--	--	--
2R	E6-51	MICHIGAN ST 1 1/2 MILES	--	--	1	--	ON SIGN BRIDGE
3R	E6-1	MICHIGAN ST EXIT [A] ONLY	--	--	1	--	ON SIGN BRIDGE S-40-331
4R	E6-1	MICHIGAN ST [A] EXIT ONLY [A]	--	--	1	--	ON SIGN BRIDGE S-40-850
5R	R7-1D	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
6R	R7-1D	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
7R	R7-1D	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
8R	R7-4	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
9R	R2-1	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
10R	NONE	OAK LEAF TRAIL [A]	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
11R	R7-1D	--	--	--	--	--	TURN OVER TO CITY OF MILWAUKEE
12R	R1-1	--	1	--	--	--	ON LIGHT POLE. TURN OVER TO CITY OF MILWAUKEE.
13R	R1-3P	--	--	--	--	--	ON LIGHT POLE. TURN OVER TO CITY OF MILWAUKEE.
14R	NONE	HANK AARON STATE TRAIL [A]	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
15R	R3-17B	--	--	--	--	--	TURN OVER TO CITY OF MILWAUKEE
16R	R3-17	--	1	--	--	--	TURN OVER TO CITY OF MILWAUKEE
17R	R7-2	--	1	--	--	--	ON LIGHT POLE. TURN OVER TO CITY OF MILWAUKEE.
18R	R3-7R	--	1	--	--	--	TURN OVER TO CITY OF MILWAUKEE. REMOVE W5-52R ON SAME POST
19R	R7-1D	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE. REMOVE R7-4 (MOD) ON SAME POST
20R	R7-1D	--	1	--	--	--	ON LIGHT POLE. TURN OVER TO CITY OF MILWAUKEE.
21R	R7-1D	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
22R	R7-1D	--	1	--	--	--	ON LIGHT POLE. TURN OVER TO CITY OF MILWAUKEE.
23R	R7-1D	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
24R	E5-1A	EXIT [A] 1F	1	2	--	--	--
25R	E6-1	LAKEFRONT [A] SIGNAL AHEAD [A]	--	--	1	--	ON SIGN BRIDGE S-40-362
26R	R6-2L	--	1	--	--	--	ON POLE
27R	R6-2L	--	1	--	--	--	ON LIGHT POLE. REMOVE OTHER R6-2R ON SAME LIGHT POLE.
28R	R7-1D	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
29R	W14-1	--	1	--	--	--	ON LIGHT POLE
30R	R7-1L	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE

TYPE I & TYPE II SIGN REMOVAL **CATEGORY 0010** **IH 794 1300-13-74**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUPPORT [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	REMARKS / NEW SIGN LOCATION
31R	R7-1D	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
32R	R7-1D	--	1	1	--	--	ON LIGHT POLE. TURN OVER TO CITY OF MILWAUKEE.
33R	R7-1D	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
34R	W6-2	--	1	--	--	--	ON LIGHT POLE
35R	W2-6	--	1	1	--	--	--
36R	NOT USED	--	--	--	--	--	--
37R	R1-1 & R6-3R	--	1	1	--	--	REMOVE R6-2R WITH IT - ONE REMOVAL PER SPECS
38R	R7-1L	--	1	1	--	--	--
39R	W3-3	--	1	1	--	--	--
40R	W3-3	--	1	1	--	--	--
41R	D12-2A	RIDESHARE INFO [NUMBER]	1	2	--	--	--
42R	R5-1A	--	1	--	--	--	--
43R	R5-1A	--	1	1	--	--	--
44R	NOT USED	--	--	--	--	--	--
45R	NOT USED	--	--	--	--	--	--
46R	R5-1A	--	1	1	--	--	REMOVE W12-1D ON SAME POST
47R	R7-1D	--	1	1	--	--	--
48R	NOT USED	--	--	--	--	--	--
49R	R3-8B	--	1	1	--	--	REMOVE R7-1D ON SAME POST
50R	R3-8B	--	1	1	--	--	--
51R	R10-11B	--	1	--	--	--	ON LIGHT POLE
52R	R5-1	--	1	--	--	--	ON LIGHT POLE. REMOVE R5-1A ON SAME LIGHT POLE.
53R	R5-1	--	1	1	--	--	REMOVE R5-1A ON SAME POST
54R	R1-2	--	1	1	--	--	REMOVE R5-1 AND R5-1A ON SAME POST
55R	NOT USED	--	--	--	--	--	--
56R	J3-1	EXISTING ASSEMBLY	1	1	--	--	--
57R	E6-51	MICHIGAN ST [A]	--	--	1	--	ON SIGN BRIDGE S-40-853
58R	R5-1	--	1	1	--	--	REMOVE R5-1A ALSO
59R	R6-2L	--	1	--	--	--	ON SIGNAL POLE
60R	W1-6	--	1	1	--	--	

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUPPORT [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	REMARKS / NEW SIGN LOCATION
61R	R6-2L	--	1	--	--	--	ON SIGNAL POLE
62R	R5-1	--	1	--	--	--	ON SIGNAL POLE
63R	R10-10A	--	1	--	--	--	ON SIGNAL POLE
64R	R5-1	--	1	--	--	--	ON SIGNAL POLE
65R	E6-51	MICHIGAN ST [A] WEST	--	--	1	--	ON SIGN BRIDGE S-40-192
66R	E6-51	[A] LINCOLN MEM DR [A]	--	--	1	--	ON SIGN BRIDGE S-40-192
67R	R2-1	--	1	1	--	--	--
68R	NOT USED	--	--	--	--	--	--
69R	NOT USED	--	--	--	--	--	--
70R	E6-51	EAST [794] [A]	--	--	1	--	ON SIGN BRIDGE S-40-191
71R	E6-51	TO [A] [43] NORTH [94] ONLY	--	--	1	--	ON SIGN BRIDGE S-40-191
72R	R7-1D	--	1	1	--	--	--
73R	R7-1D	--	1	1	--	--	--
74R	NOT USED	--	--	--	--	--	--
75R	R5-1A	--	1	1	--	--	--
76R	R3-58	--	1	1	--	--	--
77R	R5-1	--	1	--	--	--	ON SIGNAL POLE. REMOVED R5-1A ON SAME SIGNAL POLE.
78R	R5-1	--	1	--	--	--	ON SIGNAL POLE. REMOVED R5-1A ON SAME SIGNAL POLE.
79R	R3-1	--	1	--	--	--	ON SIGNAL POLE
80R	R5-57	--	1	--	--	--	ON SIGNAL POLE
81R	NOT USED	--	--	--	--	--	--
82R	NOT USED	--	--	--	--	--	--
83R	R3-8Y	--	1	1	--	--	--
84R	R3-8Y	--	1	1	--	--	--
85R	W9-1	--	1	1	--	--	--
86R	W3-3	--	1	1	--	--	--
87R	W3-3	--	1	1	--	--	--
88R	W4-2R	--	1	1	--	--	--
89R	R3-18	--	1	--	--	--	ON SIGNAL POLE
90R	R3-2	--	1	--	--	--	ON SIGNAL POLE

TYPE I & TYPE II SIGN REMOVAL **CATEGORY 0010** **IH 794 1300-13-74**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUPPORT [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	REMARKS / NEW SIGN LOCATION
91R	R5-1A	--	1	1	--	--	--
92R	R5-1A	--	1	1	--	--	--
93R	R10-11	--	1	--	--	--	ON SIGNAL POLE
94R	R10-11	--	1	--	--	--	ON SIGNAL POLE
95R	R5-1	--	1	--	--	--	ON LIGHT POLE. REMOVED R5-1A ON SAME LIGHT POLE.
96R	R5-1	--	1	--	--	--	ON LIGHT POLE. REMOVED R5-1A ON SAME LIGHT POLE.
97R	R5-1	--	1	--	--	--	ON LIGHT POLE
98R	R6-2L	--	1	--	--	--	ON LIGHT POLE
99R	R6-2L	--	1	--	--	--	ON LIGHT POLE
100R	R7-1D	--	1	1	--	--	TURN OVER TO CITY OF MILWAUKEE
TOTALS			76	47*	9	0	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F [SF]	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	SPV.0060.1038 SIGN SUPPORT SPECIAL MOUNTING [EA]	SPV.0060.1037 SIGN SUPPORTS ALUMINUM ROUND PIPE 2 INCH X 9.5 FT [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
1	E8-1	MICHIGAN ST 2 MILWAUKEE ST 2 1/4 [43] [94] [41] 2 3/4												MOUNTED ON SIGN BRIDGE S-40-852				1													
2	E6-51	MICHIGAN ST CLYBOURN ST 1 1/2 MILES												MOUNT ON SIGN BRIDGE S-40-851 I BEAMS INCIDENTAL MOUNT OVER LANE 3	16 X 8.5	136.00													
2A	E1-5P	EXIT 1 F													9 X 2.5	22.50													
3	E6-51	LINCOLN MEMORIAL DRIVE NEXT EXIT												MOUNT ON SIGN BRIDGE S-40-330 I BEAMS INCIDENTAL MOUNT OVER LANE 3, 6 INCHES FROM SIGN 4	21 X 8	168.00													
4	E6-51	[794] WEST ... 2 LEFT LANES												MOUNTED ON SIGN BRIDGE S-40-330				1											
5	E6-51	[794] WEST TO [43] [94] [41] [A] [A]												MOUNTED ON SIGN BRIDGE S-40-331				1											
6	E6-1	MICHIGAN ST CLYBOURN ST EXIT [A] ONLY												MOUNT ON SIGN BRIDGE S-40-331 I BEAMS INCIDENTAL	16 X 9	144.00													
6A	E1-5P	EXIT 1 F													9 X 2.5	22.50													
7	E6-51	[794] WEST TO [43] [94] [41] [A] [A]												MOUNTED ON SIGN BRIDGE S-40-850				1											
8	E6-51	CLYBOURN ST MICHIGAN ST [A]												MOUNT ON SIGN BRIDGE S-40-850 I BEAMS INCIDENTAL CENTER OVER LANES	16 X 9	144.00													
9	E6-51	LINCOLN MEMORIAL DRIVE [A]												MOUNT ON SIGN BRIDGE S-40-850 I BEAMS INCIDENTAL	12 X 11.5	138.00													
10	W11-2 (2S)	PEDESTRIAN CROSSING SYME	30 x 30		6.250																					1				
10A	W16-9P (2S)	AHEAD PLAQUE	24 X 12		2.000								10																	
11	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																						1				
12	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																						1				
13	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																						1				
14	W11-2 (2S)	PEDESTRIAN CROSSING SYME	30 x 30		6.250																					1				
14A	W16-7L (2S)	LEFT DIAGONAL DOWNWARD	24 X 12		2.000								14																	
15	W11-2 (2S)	PEDESTRIAN CROSSING SYME	30 x 30		6.250																					1				
15A	W16-7L (2S)	LEFT DIAGONAL DOWNWARD	24 X 12		2.000								15																	
16	W11-2 (2S)	PEDESTRIAN CROSSING SYME	30 x 30		6.250								17																	
16A	W16-7R (2S)	RIGHT DIAGONAL DOWNWARD	24 X 12		2.000								16																	
17	W11-2 (2S)	PEDESTRIAN CROSSING SYME	30 x 30		6.250																					1				
17A	W16-7R (2S)	RIGHT DIAGONAL DOWNWARD	24 X 12		2.000								17																	
18	D11-1 (2)	BIKE ROUTE	24 X 18	3.000																						1				
19	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																						1				
20	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																						1				
21	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250																						1				
22	W11-2 (2S)	PEDESTRIAN CROSSING SYME	30 x 30		6.250																					1				
22A	W16-9P (2S)	AHEAD PLAQUE	24 X 12		2.000								22																	
23	W11-2 (2S)	PEDESTRIAN CROSSING SYME	30 x 30		6.250																					1				
23A	W16-9P (2S)	AHEAD PLAQUE	24 X 12		2.000								23																	
24	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000																						1				
25	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000																						1				
26	W5-52L (2S)	CLEARANCE STRIPER DOWN F	12 X 36		3.000								24																	
27	W5-52L (2S)	CLEARANCE STRIPER DOWN F	12 X 36		3.000								25																	
28	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250																						1				
29	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																						1				
30	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																						1				
31	D11-1 (2)	BIKE ROUTE	24 X 18	3.000																						1				
32	D11-1 (2)	BIKE ROUTE	24 X 18	3.000																						1				
32A	MG6-1 (2)	LEFT ARROW	21 X 21	3.063									32																	
33	R2-1 (2S)	SPEED LIMIT 30	24 X 30	5.000																						1				
34	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000										REMOVEABLE POST NEEDED												1				
35	W5-52L (2S)	CLEARANCE STRIPER DOWN F	12 X 36		3.000								34																	
36	W3-3 (2S)	SIGNAL AHEAD	36 X 36		9.000							1															1				
37	W3-3 (2S)	SIGNAL AHEAD	36 X 36		9.000							1															1				
38	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																						1				
39	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																						1				
40	A11-17 (MOD)	TO [43] [94] [A]	60 X 84	35.000								2																		

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F [SF]	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	SPV.0060.1038 SIGN SUPPORT SPECIAL MOUNTING [EA]	SPV.0060.1037 SIGN SUPPORTS ALUMINUM ROUND PIPE 2 INCH X 9.5 FT [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
41	W1-8 (4)	CHEVRON	30 X 36		7.500						1			MOUNT ON BARRIER WALL												1				
42	W1-8 (4)	CHEVRON	30 X 36		7.500						1			MOUNT ON BARRIER WALL												1				
43	W1-8 (4)	CHEVRON	30 X 36		7.500						1			MOUNT ON BARRIER WALL												1				
44	W1-8 (4)	CHEVRON	30 X 36		7.500						1			MOUNT ON BARRIER WALL												1				
45	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																							1				
46	R2-1 (2S)	SPEED LIMIT 30	24 X 30	5.000									47																		
47	R5-1A (2S)	WRONG WAY	36 X 24	6.000										REMOVEABLE POST NEEDED													1				
48	R5-1A (2S)	WRONG WAY	36 X 24	6.000										REMOVEABLE POST NEEDED													1				
49	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																							1				
50	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250																							1				
51	D11-1 (2)	BIKE ROUTE	24 X 18	3.000																							1				
51A	M6-1 (2)	LEFT ARROW	21 X 21	3.063									51																		
52		2 HOUR METER PARKING [A]						1																			1				
53	R3-17 (2S)	BIKE LANE SYMBOL	30 X 24	5.000																							1				
54	R1-1 (2S)	STOP	30 X 30	5.180																							1				
55	W1-7 (2S)	NIGHT ARROW - DOUBLE	48 X 24		8.000																						2				
56		2 HOUR METER PARKING [A]						1																			1				
57	R7-1L (2S)	NO PARKING ANY TIME LEFT ARROW						1			1																				
58	R6-2L (2M)	ONE WAY LEFT ARROW	30 X 36	7.500										MOUNT ON SIGNAL POLE																	
59	W1-8 (4)	CHEVRON	30 X 36		7.500						1			MOUNT ON RAISED MEDIAN.												1				
60	W1-8 (4)	CHEVRON	30 X 36		7.500						1			MOUNT ON RAISED MEDIAN.												1				
61	E6-51	CLYBOURN ST MICHIGAN ST [A]												MOUNT ON SIGN BRIDGE S-40-853 I BEAMS INCIDENTAL CENTER OVER LANES	13 X 7.5	97.50														
62	E6-51	LINCOLN MEM DRIVE [A]												MOUNT ON SIGN BRIDGE S-40-853 I BEAMS INCIDENTAL CENTER OVER LANES					1											
63	J3-1 (2S)		30 X 69	14.375							1																				
	MB4-5	TO - BLUE	24 X 12																												
	MB3-4	WEST - BLUE	24 X 12																												
	M1-1A	IH 794	30 X 24																												
	MB6-1	AHEAD ARROW - BLUE	21 X 21																												
64	R2-1 (2S)	SPEED LIMIT 30	24 X 30	5.000																							1				
65	M1-94 (MOD)	CLYBOURN ST [A]	90 X 42	26.250																							2				
66	NOT USED																														
67	R5-1A (2S)	WRONG WAY	36 X 24	6.000										MOUNT ON POLE																	
68	W9-1R (5)	RIGHT LANE ENDS	48 X 48		16.000						2																				
69	A11-17 (MOD)	WEST [794] TO [43] [94] [A]												MOUNT ON SIGN BRIDGE S-40-794 I BEAMS INCIDENTAL	6 X 9	54.00														
70	A11-17 (MOD)	WEST [794] TO [43] [94] [A]												MOUNT ON SIGN BRIDGE S-40-794 I BEAMS INCIDENTAL	6 X 9	54.00														
71	A11-17 (MOD)	LINCOLN MEMORIAL DRIVE [A]												MOUNT ON SIGN BRIDGE S-40-794 I BEAMS INCIDENTAL	6 X 8	48.00														
72	A11-17 (MOD)	N. HARBOR DRIVE NORTH [A]												MOUNT ON SIGN BRIDGE S-40-794 I BEAMS INCIDENTAL	6 X 7	42.00														
73	R10-50L (2S)	LEFT TURN YIELD ON FLASHIN	30 X 36	7.500										MOUNT ON SIGNAL MAST ARM																
74	NOT USED																														
75	NOT USED																														
76	NOT USED																														
77	R1-1F (2S)	FOLDING STOP	30 X 30			5.180								MOUNT ON SIGNAL POLE																	
78	R1-1F (2S)	FOLDING STOP	30 X 30			5.180								MOUNT ON SIGNAL POLE																	
79	R1-1F (2S)	FOLDING STOP	30 X 30			5.180								MOUNT ON SIGNAL POLE																	
80	R1-1F (2S)	FOLDING STOP	30 X 30			5.180								MOUNT ON SIGNAL POLE																	
81	R10-11F (2S)	NO TURN ON RED FROM LEFT	30 X 36	7.500										MOUNT ON SIGNAL POLE																	
82	D13-3 (2S)	FREEWAY ENTRANCE	60 X 30	12.500					2																						

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F [SF]	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	SPV.0060.1038 SIGN SUPPORT SPECIAL MOUNTING [EA]	SPV.0060.1037 SIGN SUPPORTS ALUMINUM ROUND PIPE 2 INCH X 9.5 FT [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
83	R5-1A (3)	WRONG WAY	42 X 30	8.750										MOUNT ON POLE																
84	R5-1A (3)	WRONG WAY	42 X 30	8.750										MOUNT ON POLE																
85	R1-1F (2S)	FOLDING STOP	30 X 30			5.180								MOUNT ON SIGNAL POLE																
86	R1-1F (2S)	FOLDING STOP	30 X 30			5.180								MOUNT ON SIGNAL POLE																
87	R5-1 (3)	DO NOT ENTER	36 X 36	9.000									85	MOUNT ON SIGNAL POLE																
88	R5-1 (3)	DO NOT ENTER	36 X 36	9.000									86	MOUNT ON SIGNAL POLE																
89	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250									80	MOUNT ON SIGNAL POLE																
90	R5-1A (2S)	WRONG WAY	36 X 24	6.000									87	MOUNT ON SIGNAL POLE. 3 FOOT MOUNTING HEIGHT.																
91	R5-1A (2S)	WRONG WAY	36 X 24	6.000									88	MOUNT ON SIGNAL POLE. 3 FOOT MOUNTING HEIGHT.																
92	R6-2L (2M)	ONE WAY LEFT ARROW	30 X 36	7.500										MOUNT ON SIGNAL POLE																
93	R3-1 (2M)	NO RIGHT TURN SYMBOL	36 X 36	9.000										MOUNT ON MAST ARM																
94	R5-1 (3)	DO NOT ENTER	36 X 36	9.000					1																					
95	R1-1F (3)	FOLDING STOP	36 X 36			7.460								MOUNT ON SIGNAL POLE																
96	W12-1D (2M)	DOUBLE DOWN ARROWS	24 X 24		4.000				1					2 FOOT MOUNTING HEIGHT																
97	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000										MOUNT ON SIGNAL POLE																
98	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000									86	MOUNT ON SIGNAL POLE																
99	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000																								1		
100	NOT USED																													
101	R1-1F (2S)	FOLDING STOP	30 X 30			5.180								MOUNT ON SIGNAL POLE																
102	R3-2 (2S)	NO LEFT TURN SYMBOL	24 X 24	4.000										MOUNT ON SIGNAL ARM																
103	R6-2L (2M)	ONE WAY LEFT ARROW	30 X 36	7.500																								1		
104	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000																								1		
105	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250																								1		
106	R5-1A (2S)	WRONG WAY	36 X 24	6.000										MOUNT ON LIGHT POLE																
107	W12-1D (2M)	DOUBLE DOWN ARROWS	24 X 24		4.000									2 FOOT MOUNTING HEIGHT														1		
108	R5-1A (3)	WRONG WAY	42 X 30	8.750							1																			
109	R5-1A (3)	WRONG WAY	42 X 30	8.750							1																			
110	R5-1A (3)	WRONG WAY	42 X 30	8.750										MOUNT ON WALL												1	1			
111	R3-4 (2S)	NO U TURN SYMBOL	24 X 24	4.000									113	MOUNT ON SIGNAL POLE UNDER FOLDING STOP																
112	R1-1F (2S)	FOLDING STOP	30 X 30			5.180								MOUNT ON SIGNAL POLE																
113	R1-1F (2S)	FOLDING STOP	30 X 30			5.180								MOUNT ON SIGNAL POLE																
114	R1-1F (2S)	FOLDING STOP	30 X 30			5.180								MOUNT ON SIGNAL POLE																
115	W12-1D (2M)	DOUBLE DOWN ARROWS	24 X 24		4.000									2 FOOT MOUNTING HEIGHT														1		
116	R5-1 (3)	DO NOT ENTER	36 X 36	9.000									113	MOUNT ON SIGNAL POLE																
117	R5-1 (3)	DO NOT ENTER	36 X 36	9.000									114	MOUNT ON SIGNAL POLE																
118	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000										MOUNT ON SIGNAL POLE																
119	R6-2L (2M)	ONE WAY LEFT ARROW	30 X 36	7.500																								1		
120	R5-1A (2M)	WRONG WAY	42 X 30	8.750									117	MOUNT ON SIGNAL POLE. 3 FOOT MOUNTING HEIGHT.																
121	R5-1A (2M)	WRONG WAY	42 X 30	8.750									118	MOUNT ON SIGNAL POLE. 3 FOOT MOUNTING HEIGHT.																
122	D1-4	TO HARBOR [A]						1			2																			
		[A] LAKEFRONT																												
		[A] EAST TOWN																												
		[A] THIRD WARD																												
123	R1-1F (2S)	FOLDING STOP	30 X 30			5.180							118	MOUNT ON SIGNAL POLE																
124	R3-2 (2S)	NO LEFT TURN SYMBOL	24 X 24	4.000								1																1		
125	R3-2 (2S)	NO LEFT TURN SYMBOL	24 X 24	4.000								1																1		
126	M1-94H	MICHIGAN ST	90 X 30	18.750										MOUNT ON SIGNAL ARM																
		[A]																												
127	M1-94H	CLYBOURN ST	90 X 18	11.250										MOUNT ON SIGNAL ARM																
128	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000																								1		
129	R3-4 (3)	NO U TURN SYMBOL	36 X 36	9.000									128																	
130	R1-1F (2S)	FOLDING STOP	30 X 30			5.180							131	MOUNT ON SIGNAL POLE																
131	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250										MOUNT ON SIGNAL POLE																
132	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250										MOUNT ON SIGNAL POLE																
133	R1-1F (2S)	FOLDING STOP	30 X 30			5.180							132	MOUNT ON SIGNAL POLE																
134	R10-50L (2S)	LEFT TURN YIELD ON FLASHIN	30 X 36	7.500										MOUNT ON SIGNAL ARM																
135	R10-50L (2S)	LEFT TURN YIELD ON FLASHIN	30 X 36	7.500										MOUNT ON SIGNAL ARM																
136	NOT USED																													
137	NOT USED																													
138	R2-1 (2S)	SPEED LIMIT 30	24 X 30	5.000																								1		
139	R1-1F (2S)	FOLDING STOP	30 X 30			5.180							140	MOUNT ON SIGNAL POLE																
140	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000										MOUNT ON SIGNAL POLE																
141	R6-2L (2S)	ONE WAY LEFT ARROW	24 X 30	5.000										MOUNT ON SIGNAL POLE																
142	M1-94H	CLYBOURN ST	90 X 18	11.250										MOUNT ON MAST ARM																
143	E5-1B (MOD)	FREEWAY	36 X 72	18.000										MOUNT ON SIGNAL POLE																
		EAST																												
		[A]																												
		WEST																												
		[A]																												

3

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F [SF]	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	SPV.0060.1038 SIGN SUPPORT SPECIAL MOUNTING [EA]	SPV.0060.1037 SIGN SUPPORTS ALUMINUM ROUND PIPE 2 INCH X 9.5 FT [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
144	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000										MOUNT ON SIGNAL POLE																
145	R3-4 (2S)	NO U TURN SYMBOL	24 X 24	4.000									144	MOUNT ON SIGNAL POLE																
146	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250										MOUNT ON SIGNAL POLE																
147	R1-1F (2S)	FOLDING STOP	30 X 30			5.180							146	MOUNT ON SIGNAL POLE																
148	W12-1D (2M)	DOUBLE DOWN ARROWS	24 X 24		4.000									2 FOOT MOUNTING HEIGHT														1				
149	R1-1 (2S)	STOP	30 X 30	5.180																								1				
150	R5-57 (4)	PEDS, ETC PROHIBITED	36 X 36	9.000										MOUNT ON SIGN BRIDGE S-40-796 UPRIGHT																
151	A11-17 (MOD)	EAST [794] [A]												MOUNT ON SIGN BRIDGE S-40-796 I BEAMS INCIDENTAL	4 X 5.5	22.00														
152	A11-17 (MOD)	EAST [794] [A]												MOUNT ON SIGN BRIDGE S-40-796 I BEAMS INCIDENTAL	4 X 5.5	22.00														
153	A11-17 (MOD)	[794] WEST TO [43] [94] ONLY [A]												MOUNT ON SIGN BRIDGE S-40-795 I BEAMS INCIDENTAL	8 X 8.5	68.00														
154	R3-6R	[A]												MOUNT ON SIGN BRIDGE S-40-795 I BEAMS INCIDENTAL	4 X 5	20.00														
155	A11-17 (MOD)	LINCOLN MEMORIAL DRIVE [A]												MOUNT ON SIGN BRIDGE S-40-795 I BEAMS INCIDENTAL	6 X 8	48.00														
156	R5-1A (2S)	WRONG WAY	36 X 24	6.000																								1				
157	R2-1 (2S)	SPEED LIMIT 30	24 X 30	5.000																								1				
158	J3-1 (2S)		24 X 57	9.500										MOUNT ON SIGN BRIDGE S-40-461 UPRIGHT																	
	M3-4	WEST	24 X 12																												
	M1-4	USH 18	24 X 24																												
	M6-1	LEFT ARROW	21 X 21																												
159	D1-4	[A] WAR MEMORIAL						1			2																				
		[A] BETTY BRINN MUSEUM																													
		LAKEFRONT MUSEUMS [A]																													
		LAKESHORE STATE PARK [A]																													
160	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250																								1				
161	M1-94H	MICHIGAN ST	72 X 18	9.000										MOUNT ON SIGNAL ARM																
162	M1-94H	MICHIGAN ST	72 X 18	9.000										MOUNT ON SIGNAL ARM																
163	R2-1 (2S)	SPEED LIMIT 30	24 X 30	5.000										MOUNT ON LIGHT POLE																
164	J3-1 (2S)		24 X 57	9.500										MOUNT ON LIGHT POLE																
	M3-4	WEST	24 X 12																												
	M1-4	USH 18	24 X 24																												
	M6-1	RIGHT ARROW	21 X 21																												
165	NOT USED																														
166	NOT USED																														
167	NOT USED																														
168	NOT USED																														
169	R1-1 (2S)	STOP	30 X 30	5.180																								1				
170	A11-17 (MOD)	CLYBOURN STREET [A]												MOUNT ON SIGN BRIDGE S-40-641 I BEAMS INCIDENTAL	6 X 5.5	33.00														
171	A11-17 (MOD)	EAST [794] [A]												MOUNT ON SIGN BRIDGE S-40-641 I BEAMS INCIDENTAL	4 X 5.5	22.00														
172	A11-17 (MOD)	EAST - WEST [794] TO [43] [94] [A]												MOUNT ON SIGN BRIDGE S-40-641 I BEAMS INCIDENTAL	8 X 8	64.00														
173	A11-17 (MOD)	[794] WEST TO [43] [94] LINCOLN MEM DR [A]												MOUNT ON SIGN BRIDGE S-40-641 I BEAMS INCIDENTAL	10 X 8.5	85.00														
174	R2-1 (2S)	SPEED LIMIT 30	24 X 30	5.000										MOUNT ON SIGN BRIDGE S-40-641 UPRIGHT																
175	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000																								1				
176	D1-2	[A] EAST TOWN						1	1	2																					
		THIRD WARD [A]																													
177		U PARK						1	1	1																					
		[A]																													
		NO TURNS																													

SHEET: 4 OF 7

3

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F [SF]	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	SPV.0060.1038 SIGN SUPPORT SPECIAL MOUNTING [EA]	SPV.0060.1037 SIGN SUPPORTS ALUMINUM ROUND PIPE 2 INCH X 9.5 FT [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
178	R5-1 (3)	DO NOT ENTER	36 X 36	9.000									177																	
179	R5-1A (2M)	WRONG WAY	42 X 30	8.750									177																	
180	R5-1 (3)	DO NOT ENTER	36 X 36	9.000					1																					
181	R5-1A (2M)	WRONG WAY	42 X 30	8.750									180																	
182	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250					1																					
183	R6-2L (2M)	ONE WAY LEFT ARROW	30 X 36	7.500									182																	
184	R6-2L (2M)	ONE WAY LEFT ARROW	30 X 36	7.500					1																					
185		CITY OF MILWAUKEE NO PARKING X AM - X PM					1	1	1																					
186	J3-1 (2S) M4-5 M1-6 M6-1	 TO STH 32 RIGHT ARROW	24 X 57 24 X 12 24 X 24 21 X 21	9.500					1																					
187	W12-1D (2M)	DOUBLE DOWN ARROWS	24 X 24		4.000				1					2 FOOT MOUNTING HEIGHT																
188	R5-1A (3)	WRONG WAY	42 X 30	8.750					1																					
189	R5-1A (3)	WRONG WAY	42 X 30	8.750					1																					
190	D1-3	[A] MSOE VAN BUREN ST [A] CLYBOURN ST [A]						1	2					ADD ARROW																
191	D12-2A (2)	RIDESHARE INFO CALL	60 X 42	17.500					2																					
192	R3-7L (2M)	LEFT LANE MUST TURN LEFT	30 X 30	6.250																									1	
193	R3-7R (2M)	RIGHT LANE MUST TURN RIGH	30 X 30	6.250					1																					
194		FESTIVAL PARKING [A]					1	1	1																					
195	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																									1	
196	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000																									1	
197	R3-8N (MOD) (2S)	LEFT ONLY, LEFT/AHEAD, AHE	48 X 30	10.000										MOUNT ON LIGHT POLE																
198	R10-11B (2S)	NO TURN ON RED	24 X 24	4.000																									1	
199	R5-1 (3)	DO NOT ENTER	36 X 36	9.000																									1	
200	R5-1 (3)	DO NOT ENTER	36 X 36	9.000							1																			
201	R7-1L (MOD) (2S)	2 HOUR PARKING	18 X 24	3.000																									1	
202	R3-20L (2S)	BEGIN LEFT TURN LANE DOWN	24 X 36	6.000																									1	
203	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000																									1	
204	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250																									1	
205	R6-2R (2S)	ONE WAY RIGHT ARROW	24 X 30	5.000										MOUNT ON SIGNAL POLE																
206	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250									205																	
207	R6-2L (2S)	ONE WAY LEFT ARROW	24 X 30	5.000									205	MOUNT ON SIGNAL POLE																
208	R10-11B (2S)	NO TURN ON RED	24 X 24	4.000																									1	
209	R6-2L (2S)	ONE WAY LEFT ARROW	24 X 30	5.000										MOUNT ON LIGHT POLE																
210	R3-2 (2S)	NO LEFT TURN SYMBOL	24 X 24	4.000					1																					
211	R6-2R (2M)	ONE WAY RIGHT ARROW	30 X 36	7.500					1																					
212	R1-2 (2S)	YIELD	36 X 31		3.880				1																					
213	R5-1 (3)	DO NOT ENTER	36 X 36	9.000					1																					
214	R5-1A (2S)	WRONG WAY	36 X 24	6.000									213	3 FOOT MOUNTING HEIGHT																
215	R5-1 (3)	DO NOT ENTER	36 X 36	9.000					1																					
216	R5-1 (3)	DO NOT ENTER	36 X 36	9.000					1				212																	
217	R5-1A (2S)	WRONG WAY	36 X 24	6.000									215	3 FOOT MOUNTING HEIGHT																
218	R5-1A (2S)	WRONG WAY	36 X 24	6.000									216	3 FOOT MOUNTING HEIGHT																
219	W12-1D (2M)	DOUBLE DOWN ARROWS					1	1	1					2 FOOT MOUNTING HEIGHT																
220	R2-1 (2S)	SPEED LIMIT 30	24 X 30	5.000																									1	
221	R7-1D (MOD) (2S)	2 HOUR PARKING	18 X 24	3.000																									1	
222	NOT USED		X																											
223	NOT USED																													
224	R4-7 (2S)		24 X 30	5.000																									1	
225	R4-4 (2S)	BEGIN RIGHT TURN LANE - YIE	36 X 30	7.500																									1	
226	A11-17 (MOD)	NORTH LINCOLN MEM DR ONLY [A]												MOUNT ON SIGN BRIDGE S-40-642 I BEAMS INCIDENTAL	5 X 8.5	42.50														
227	E6-51 (MOD)	CLYBOURN WEST STREET [794] [A] LINCOLN MEM DR												MOUNT ON SIGN BRIDGE S-40-642 I BEAMS INCIDENTAL	11 X 8.5	93.50														

3

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F [SF]	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	SPV.0060.1038 SIGN SUPPORT SPECIAL MOUNTING [EA]	SPV.0060.1037 SIGN SUPPORTS ALUMINUM ROUND PIPE 2 INCH X 9.5 FT [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
228	A11-17 (MOD)	EAST [794] ONLY [A]												MOUNT ON SIGN BRIDGE S-40-642 I BEAMS INCIDENTAL	4 X 8.5	34.00													
229	R3-20L (2S)	BEGIN LEFT TURN LANE DOWN	24 X 36	6.000																					1				
230	R7-1D (2S)	NO PARKING ANY TIME DOUBL	18 X 24	3.000										MOUNT ON SIGN BRIDGE S-40-642 UPRIGHT															
231		BUSES AND AUTHORIZED VEHICLES ONLY					1	1			1														1				
232	NOT USED																												
233	R4-7 (2S)	KEEP RIGHT	24 X 30	5.000																					1				
234	NOT USED																												
235	NOT USED																												
236	J3-1 (2S)		24 X 93	15.500										MOUNT ON LIGHT POLE															
	MB3-2	EAST - BLUE	24 X 12																										
	M1-1	IH 94	24 X 24																										
	MB3-3	SOUTH - BLUE	24 X 12																										
	M1-1	IH 43	24 X 24																										
	MB6-1	AHEAD ARROW - BLUE	21 X 21																										
237	R3-7L (3)	LEFT LANE MUST TURN LEFT	36 X 36	9.000							1			MOUNT ON WALL WITH SPECIAL MOUNTING BRACKET											1				
238	R3-7L (3)	LEFT LANE MUST TURN LEFT	36 X 36	9.000							1			MOUNT ON WALL WITH SPECIAL MOUNTING BRACKET											1				
239	W4-2R (5)	LANE REDUCTION TRANSITION	48 X 48		16.000						1			MOUNT ON WALL WITH SPECIAL MOUNTING BRACKET											1				
240	A11-17 (MOD)	NORTH LINCOLN MEM DR ONLY [A]												MOUNT ON SIGN BRIDGE S-40-793 I BEAMS INCIDENTAL	5 X 8.5	42.50													
241	E6-51 (MOD)	NORTH HARBOR LINCOLN DRIVE MEM DR [A]												MOUNT ON SIGN BRIDGE S-40-793 I BEAMS INCIDENTAL	10 X 8	80.00													
242	A11-17 (MOD)	SOUTH LINCOLN MEM DR ONLY [A]												MOUNT ON SIGN BRIDGE S-40-793 I BEAMS INCIDENTAL	5 X 8.5	42.50													
243	R5-1A (3)	WRONG WAY	42 X 30	8.750					1																				
244	R5-1A (3)	WRONG WAY	42 X 30	8.750									245																
245	R3-8P (2S)	LEFT ONLY, LEFT/AHEAD, RIGH	54 X 30	11.250					2																				
246	R5-57 (4)	PEDS, ETC PROHIBITED	36 X 36	9.000					1																				
247	W1-6 (3)	NIGHT ARROW	60 X 30		12.500				1																				
248	W1-6 (3)	NIGHT ARROW	60 X 30		12.500						1			MOUNT ON WALL WITH SPECIAL MOUNTING BRACKET											1				
249	W1-8 (4)	CHEVRON	30 X 36		7.500						1			BLINKER SIGN (SEE OTHER QTYS). MOUNT ON WALL WITH SPECIAL MOUNTING BRACKET.											1				
250	W1-8 (4)	CHEVRON	30 X 36		7.500						1			BLINKER SIGN (SEE OTHER QTYS). MOUNT ON WALL WITH SPECIAL MOUNTING BRACKET.											1				
251	W1-8 (4)	CHEVRON	30 X 36		7.500						1			BLINKER SIGN (SEE OTHER QTYS). MOUNT ON WALL WITH SPECIAL MOUNTING BRACKET.											1				
252	W1-8 (4)	CHEVRON	30 X 36		7.500						1			BLINKER SIGN (SEE OTHER QTYS). MOUNT ON WALL WITH SPECIAL MOUNTING BRACKET.											1				
253	W1-8 (4)	CHEVRON	30 X 36		7.500						1			BLINKER SIGN (SEE OTHER QTYS). MOUNT ON WALL WITH SPECIAL MOUNTING BRACKET.											1				
254	W1-3R (5)	RIGHT REVERSE TURN	48 X 48		16.000									MOUNT ON LIGHT POLE															
254A	W13-1 (5)	ADVISORY SPEED - 25 MPH	36 X 36		9.000								254																
255	E5-1B (5)	EXIT [A] 1 F	78 X 60	32.500					2					LEFT ARROW															
256	E6-51 (MOD)	LAKEFRONT [A] SIGNAL AHEAD [A] 25 MPH												MOUNT ON SIGN BRIDGE S-40-362 I BEAMS INCIDENTAL	16 X 5.5	88.00													
257	W1-6 (3)	NIGHT ARROW	60 X 30		12.500				1					MOUNT ON WALL WITH SPECIAL MOUNTING BRACKET											1				
258	W3-3 (2S)	SIGNAL AHEAD	36 X 36		9.000						1			MOUNT ON WALL WITH SPECIAL MOUNTING BRACKET											1				
259	M1-94H	N HARBOR DR	84 X 18	10.500										MOUNT ON MAST ARM															
260	M1-94H	N HARBOR DR	84 X 18	10.500										MOUNT ON MAST ARM															
261	J3-1 (2S)		30 X 57	11.875										MOUNT ON LIGHT POLE															
	MB3-2	EAST - BLUE	24 X 12																										
	M1-1A	IH 794	30 X 24																										
	MB6-1	AHEAD ARROW - BLUE	21 X 21																										
262		794 - EAST	48 X 18	6.000										COVER ONLY PLAQUE ON CLYBOURN ST ONLY [A] ON SIGN BRIDGE S-40-193															
263	J3-1 (2S)		24 X 81	13.500							1																		
	MB4-5	TO - BLUE	24 X 12																										
	M1-1	IH 43	24 X 24																										
	M1-1	IH 94	24 X 24																										
	MB4-22 (MOD)	MIDDLE LANE - BLUE	24 X 21																										
264		HISTORIC THIRD WARD [A]	36 X 54	13.500										MOUNT ON SIGN BRIDGE S-40-641 UPRIGHT BROWN BACKGROUND. WHITE LETTERS.															

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F [SF]	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	SPV.0060.1038 SIGN SUPPORT SPECIAL MOUNTING [EA]	SPV.0060.1037 SIGN SUPPORTS ALUMINUM ROUND PIPE 2 INCH X 9.5 FT [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
265		CRASH INVESTIGATION SYMBO SITE 1 F	42 X 36	10.500										MOUNT ON SIGN BRIDGE S-40-853 COLUMN BLUE BACKGROUND. WHITE LETTERS.																		
266	D4-56L (2)	CRASH INVESTIGATION SYMBO DOWN LEFT ARROW [A]	36 X 36	9.000										MOUNT ON RAISED MEDIAN BLUE BACKGROUND. WHITE LETTERS.																		
267	R8-55 (2S)	NO PARKING EXCEPT CRASH INVESTIGATION VEHICLES	42 X 36	10.500					1					MOUNT ON BACK OF WALL WHITE BACKGROUND. BLACK LETTERS.												1						
268	R10-6 (2S)	2 HOUR LIMIT	24 X 18	3.000									267													1						
269	D4-54A (2)	CRASH INVESTIGATION SITE AHEAD	60 X 48	20.000										MOUNT ON SIGN BRIDGE S-40-851 COLUMN BLUE BACKGROUND. WHITE LETTERS. BRACKET INCIDENTAL																		
300	R5-1 (2S)	DO NOT ENTER	30 X 30	6.250										MOUNT ON BACK OF FOLD UP STOP SIGN																		
301	R5-1A (2S)	WRONG WAY	36 X 24	6.000									213																			
302	R3-8Y (2S)	LEFT ONLY, LEFT ONLY	36 X 30	7.500									108																			
303	A11-17 (MOD)	CLYBOURN STREET ONLY [A]												MOUNT ON SIGN BRIDGE S-40-797 BRACKET INCIDENTAL	6 X 7	42.00															
304	A11-17 (MOD)	CLYBOURN STREET ONLY [A]												MOUNT ON SIGN BRIDGE S-40-797 BRACKET INCIDENTAL	6 X 7	42.00															
305	R3-18 (2S)	NO LEFT & U TURN SYMBOL	24 X 24	4.000										SHEET 11													1				
306	R10-11B (2S)	NO TURN ON RED	24 X 24	4.000										SHEET 11													1				
307	R10-11B (2S)	NO TURN ON RED	24 X 24	4.000										MOUNT ON SIGNAL POLE. SHEET 13.																		
308	R3-17	BIKE LANE					1	1			1																					
308A	R3-17A	BEGINS						1						ON SIGN 308																		
309	D11-1	BIKE ROUTE	24 X 18	3.000				1						SHEET 8													1				
309A	M4-6	END	24 X 12	2.000				1					309	SHEET 8																		
310		BIKE PATH	18 X 24	3.000										SHEET 11																		
311	R3-17 (2S)		30 X 24	5.000									201	SHEET 13													1				
312	R3-17 (2S)		30 X 24	5.000										SHEET 14													1				
312A	R3-17BP (2S)		30 X 12	2.500									312																			
313	R3-17 (2S)		30 X 24	5.000										SHEET 11													1				
314	R3-17 (2S)		30 24	5.000									11	SHEET 8													1				
	TOTALS			1240.665	302.630	85.160	7*	16	37	0	34	2	--	--		1961.500	0.000	4	1	0	--	0	0	0	0	22	82				

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

OVERHEAD SIGN SUPPORTS - MISC QUANTITIES | CATEGORY CODE 0020 | 1300-13-74 IH 794

LOCATION	OVERHEAD SIGN SUPPORT STRUCTURE S-40-794 L.S. 641.8100.0002	OVERHEAD SIGN SUPPORT STRUCTURE S-40-795 L.S. 641.8100.0003	OVERHEAD SIGN SUPPORT STRUCTURE S-40-796 L.S. 641.8100.0004	OVERHEAD SIGN SUPPORT STRUCTURE S-40-641 L.S. 641.8100.0005	OVERHEAD SIGN SUPPORT STRUCTURE S-40-642 L.S. 641.8100.0006	OVERHEAD SIGN SUPPORT STRUCTURE S-40-797 L.S. 641.8100.0007
LINCOLN MEMORIAL DRIVE SOUTHBOUND	1					
LINCOLN MEMORIAL DRIVE SOUTHBOUND + ON RAMP TO WEST 794		1				
SOUTHBOUND TO 794 EB ON RAMP			1			
LINCOLN MEMORIAL DRIVE SOUTHBOUND				1		
CYBOURN STREET EASTBOUND					1	
794 WESTBOUND EXIT RAMP						1
TOTAL	1	1	1	1	1	1

CATEGORY CODE 0020

LOCATION	OVERHEAD SIGN SUPPORT STRUCTURE S40-793 L.S. 641.8100.0001
794 EASTBOUND EXIT RAMP	1
TOTAL	1

SHEET: 1 OF 1

PROJECT NO:1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – OVERHEAD SIGN SUPPORTS	SHEET:	E

3

DELINEATORS

LOCATION	FROM	TO	OFFSET	CATEGORY 0010 REFLECTORS 633.0500 EACH	CATEGORY 0010 BRACKETS 633.1000 EACH	CATEGORY 0020 REFLECTORS 633.0500 EACH	CATEGORY 0020 BRACKETS 633.1000 EACH
IH 794 WB EXIT RAMP	425+85 LN	430+50 LN	LT/RT	--	--	16	8
IH 794 EB EXIT RAMP	203+00 LE	208+50 LE	LT/RT	16	8	--	--
PROJECT TOTALS				16	8	16	8

MOVING SIGNS

CATEGORY 0010

LOCATION	638.2101* MOVING SIGNS TYPE I EACH
STAGE 1	1
STAGE 2	1
PROJECT TOTAL	2

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FIELD OFFICE TYPE D

PROJECT	CAT. 0010 642.5401 FIELD OFFICE TYPE D EACH	CAT. 0020 642.5401 FIELD OFFICE TYPE D EACH
1300-13-74	0.5	0.5
PROJECT TOTALS	0.5	0.5

3

TRAFFIC CONTROL

CATEGORY 0010

LOCATION	DAYS	204.9060.S.02 REMOVING TRAFFIC CONTROL SIGNS FIXED MESSAGE LEFT IN PLACE BY OTHERS EACH	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE EACH	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS EACH	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	643.0910* TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	643.0920* TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAY
STAGE 1	133	--	--	147	19,551	34	4,522	35	4,655	--	--	70	9,310	12	1,596	--	--	60	7,980	1	--	78	30	168	22,344
STAGE 2	77	--	--	194	14,938	36	2,772	58	4,466	--	--	116	8,932	26	2,002	2	154	72	5,544	--	--	108	5	205	15,785
STAGE 3	21	--	--	119	2,499	21	441	35	735	10	10	70	1,470	4	84	--	--	74	1,554	2	--	--	5	47	987
STAGE 4	14	--	--	126	1,764	16	224	29	406	--	--	58	812	--	--	--	--	55	770	--	--	--	5	47	658
STAGE 5	60	6	--	90	5,400	8	480	26	1,560	--	--	52	3,120	--	--	--	--	36	2,160	3	--	--	--	47	2,820
OAK LEAF TRAIL	245	--	--	--	--	--	--	4	980	--	--	8	1,960	--	--	--	--	--	--	--	6	--	--	38	9,310
UNDISTRIBUTED	--	--	305	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PROJECT TOTALS		6	305		44,152		8,439		12,802	10	10		25,604		3,682		154		18,008	6	6	186	45		51,904

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAVEMENT MARKING REMOVAL

LOCATION	CAT. 0010 646.0600 REMOVING PAVEMENT MARKINGS LF	CAT. 0010 647.0955 REMOVING PAVEMENT MARKINGS ARROWS EACH	CAT. 0010 647.0965 REMOVING PAVEMENT MARKINGS WORDS EACH
STAGE 1	450	2	1
STAGE 2	520	--	--
MICHIGAN STREET	1,627	4	4
BROADWAY	1,902	6	2
PARKING LOTS	11,345	--	--
IH 794 MAINLINE / WB ENTRANCE RAMPS	6,195	--	--
PROJECT TOTALS	22,039	12	7

PAVEMENT MARKING

LOCATION	FROM			TO STATION		646.0106 PAVEMENT MARKING EPOXY 4-INCH (WHITE) LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH (YELLOW) LF	646.0116 PAVEMENT MARKING EPOXY 6-INCH (WHITE) LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH (WHITE) LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE) LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE) LF	647.0156 PAVEMENT MARKING ARROWS EPOXY TYPE 1 (WHITE) EACH	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE) EACH	647.0176 PAVEMENT MARKING ARROWS EPOXY TYPE 3 (WHITE) EACH
CATEGORY 0010														
IH 794 EB EXIT RAMP	201+59	LE	-	210+03	LE	553	629	0	0	88	432	-	-	-
CHICAGO STREET PARKING LOT	14+83	LM	-	61+02	VB	-	-	0	0	0	0	-	-	-
IH 794 WB ENTRANCE RAMP	100+33	LW	-	110+81	LW	470	568	0	0	141	0	-	-	-
IH 794 MAINLINE / WB ENTRANCE RAMPS	734+04	WB	-	746+00	WB	1350	1731	0	0	433	2303	-	-	-
CATEGORY 0010 SUBTOTALS						2373	2928	0	0	662	2735	0	0	0
CATEGORY 0010 TOTALS						5301								
CATEGORY 0020														
LINCOLN MEMORIAL DRIVE	12+00	LM	-	37+05	LM	178	1342	1141	277	1408	1277	-	2	-
CHICAGO STREET	51+00	CH	-	52+52	CH	236	34	236	0	0	0	-	-	-
IH 794 EB ENTRANCE RAMP	330+84	LS	-	372+86	LS	219	298	0	0	75	0	-	-	-
IH 794 WB EXIT RAMP	419+91	LN	-	431+45	LN	1312	992	0	0	284	784	-	-	-
CLYBOURN STREET	21+14	CL	-	29+58	CL	741	-	1487	389	0	0	1	6	3
VAN BUREN STREET	63+00	VB	-	64+58	JE	-	-	0	75	0	0	-	1	1
JACKSON EASTBOUND EXIT RAMP	61+92	JE	-	63+13	JE	-	-	0	0	61	140	-	-	-
BROADWAY	-	-	-	-	-	103	1151	0	308	45	0	-	4	1
MICHIGAN STREET	-	-	-	-	-	96	447	0	120	0	0	-	2	1
CATEGORY 0020 SUBTOTALS						2885	4264	2864	1169	1873	2201	1	15	6
CATEGORY 0020 TOTALS						7149								
PROJECT TOTALS						5258	7192	2864	1169	2534	4936	1	15	6
						12450								

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAVEMENT MARKING CONTINUED

LOCATION	FROM			TO STATION		647.0206 PAVEMENT MARKING ARROWS BIKE LANE EPOXY (WHITE) EACH	647.0306 PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY (WHITE) EACH	647.0253 PAVEMENT MARKING SYMBOLS PAINT (BLUE) EACH	647.0356 PAVEMENT MARKING WORDS EPOXY (WHITE) EACH	647.0576 PAVEMENT MARKING STOP LINE 24-INCH (WHITE) LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW) EACH	647.0653 PAVEMENT MARKING PARKING STALL PAINT (WHITE) LF	647.0653 (YELLOW) LF	647.0653 (BLUE) LF	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE) LF	647.0726 (YELLOW) LF
CATEGORY 0010																
IH 794 EB EXIT RAMP	201+59	LE	-	210+03	LE	-	-	-	-	-	1	-	-	-	34	-
CHICAGO STREET PARKING LOT	14+83	LM	-	61+02	VB	-	-	10	-	-	-	11059	444	843	-	-
IH 794 WB ENTRANCE RAMP	100+33	LW	-	110+81	LW	-	-	-	-	-	-	-	-	-	-	-
IH 794 MAINLINE / WB ENTRANCE RAMPS	734+04	WB	-	746+00	WB	-	-	-	-	-	-	-	-	-	225	82
CATEGORY 0010 SUBTOTALS						0	0	10	0	0	1	11059	444	843	259	82
CATEGORY 0010 TOTALS												12346				
CATEGORY 0020																
LINCOLN MEMORIAL DRIVE	12+00	LM	-	37+05	LM	4	6	-	1	-	8	-	-	-	127	70
CHICAGO STREET	51+00	CH	-	52+52	CH	2	2	-	-	22	-	-	-	-	-	-
IH 794 EB ENTRANCE RAMP	330+84	LS	-	372+86	LS	-	1	-	-	-	-	-	-	-	`	-
IH 794 WB EXIT RAMP	419+91	LN	-	431+45	LN	-	-	-	-	-	-	-	-	-	-	144
CLYBOURN STREET	21+14	CL	-	29+58	CL	6	7	-	4	-	4	-	-	-	-	-
VAN BUREN STREET	63+00	VB	-	64+58	JE	-	-	-	1	11	-	-	-	-	-	-
JACKSON EASTBOUND EXIT RAMP	61+92	JE	-	63+13	JE	-	-	-	-	-	-	-	-	-	-	-
BROADWAY	-	-	-	-	-	-	-	-	2	68	-	-	-	-	-	-
MICHIGAN STREET	-	-	-	-	-	-	-	-	-	62	-	-	-	-	-	-
CATEGORY 0020 SUBTOTALS						12	16	0	8	163	12	0	0	0	127	214
CATEGORY 0020 TOTALS												0				
PROJECT TOTALS						12	16	10	8	163	13	11059	444	843	386	296
												12346				

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAVEMENT MARKING CONTINUED

LOCATION	FROM			TO STATION		647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE) LF	647.0776 PAVEMENT MARKING CROSSWALK EPOXY 12-INCH (WHITE) LF	649.0100* TEMPORARY PAVEMENT MARKING 4-INCH (WHITE) LF	649.0100* TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW) LF	649.0701* TEMPORARY PAVEMENT MARKING 8-INCH (WHITE) LF	649.0900* TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH (WHITE) LF	649.1500 TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH (YELLOW) LF	649.1700* TEMPORARY PAVEMENT MARKING ARROWS EACH	649.1900* TEMPORARY PAVEMENT MARKING WORDS EACH
CATEGORY 0010														
IH 794 EB EXIT RAMP	201+59	LE	-	210+03	LE	-	-	-	-	-	-	-	-	-
CHICAGO STREET PARKING LOT	14+83	LM	-	61+02	VB	-	-	-	-	-	-	-	-	-
IH 794 WB ENTRANCE RAMP	100+33	LW	-	110+81	LW	-	-	-	-	-	-	-	-	-
IH 794 MAINLINE / WB ENTRANCE RAMPS	734+04	WB	-	746+00	WB	296	-	-	-	-	-	-	-	-
CATEGORY 0010 SUBTOTALS						296	0	0	0	0	0	0	0	0
CATEGORY 0010 TOTALS								0						
CATEGORY 0020														
LINCOLN MEMORIAL DRIVE	12+00	LM	-	37+05	LM	-	207	250	909	320	81	218	2	1
CHICAGO STREET	51+00	CH	-	52+52	CH	-	101	-	-	-	-	-	-	-
IH 794 EB ENTRANCE RAMP	330+84	LS	-	372+86	LS	-	-	-	-	-	-	-	-	-
IH 794 WB EXIT RAMP	419+91	LN	-	431+45	LN	-	-	-	-	-	-	-	-	-
CLYBOURN STREET	21+14	CL	-	29+58	CL	-	-	-	-	-	-	-	-	-
VAN BUREN STREET	63+00	VB	-	64+58	JE	-	-	-	-	-	-	-	-	-
JACKSON EASTBOUND EXIT RAMP	61+92	JE	-	63+13	JE	-	-	-	-	-	-	-	-	-
BROADWAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MICHIGAN STREET	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CATEGORY 0020 SUBTOTALS						0	308	250	909	320	81	218	2	1
CATEGORY 0020 TOTALS								1159						
PROJECT TOTALS						296	308	250	909	320	81	218	2	1
								1159						

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAVEMENT MARKING CONTINUED

LOCATION	FROM			TO STATION		SPV.0060.1010 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1 EACH	SPV.0060.1011 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 EACH	SPV.0060.1012 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3 EACH	SPV.0060.1013 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4 EACH	SPV.0060.1014 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 6 EACH	SPV.0060.1015 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS EACH	SPV.0090.1001 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH (WHITE) LF	SPV.0090.1002 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE) LF
CATEGORY 0010													
IH 794 EB EXIT RAMP	201+59	LE	-	210+03	LE	-	4	1	-	2	3	39	97
CHICAGO STREET PARKING LOT	14+83	LM	-	61+02	VB	-	-	-	-	-	-	-	-
IH 794 WB ENTRANCE RAMP	100+33	LW	-	110+81	LW	-	-	-	-	-	-	-	52
IH 794 MAINLINE / WB ENTRANCE RAMPS	734+04	WB	-	746+00	WB	-	-	-	-	-	-	-	-
CATEGORY 0010 SUBTOTALS						0	4	1	0	2	3	39	149
CATEGORY 0010 TOTALS													
CATEGORY 0020													
LINCOLN MEMORIAL DRIVE	12+00	LM	-	37+05	LM	4	9	2	-	-	4	156	692
CHICAGO STREET	51+00	CH	-	52+52	CH	-	-	-	-	-	-	-	-
IH 794 EB ENTRANCE RAMP	330+84	LS	-	372+86	LS	-	-	-	-	-	2	-	-
IH 794 WB EXIT RAMP	419+91	LN	-	431+45	LN	1	4	1	2	-	2	46	-
CLYBOURN STREET	21+14	CL	-	29+58	CL	0	-	-	-	-	4	78	286
VAN BUREN STREET	63+00	VB	-	64+58	JE	-	-	-	-	-	1	-	-
JACKSON EASTBOUND EXIT RAMP	61+92	JE	-	63+13	JE	3	2	-	-	-	1	14	-
BROADWAY	-	-	-	-	-	-	-	-	-	-	-	-	-
MICHIGAN STREET	-	-	-	-	-	-	-	-	-	-	-	-	-
CATEGORY 0020 SUBTOTALS						8	15	3	2	0	14	294	978
CATEGORY 0020 TOTALS													
PROJECT TOTALS						8	19	4	2	2	17	333	1127

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

TEMPORARY PAVEMENT MARKING

CATEGORY 0020

LOCATION	649.0100* TEMPORARY PAVEMENT MARKING 4-INCH (WHITE) LF	649.0100* TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW) LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW) LF	649.0701* TEMPORARY PAVEMENT MARKING 8-INCH LF	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH LF	649.0900* TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH LF	649.1000 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH LF	649.1700* TEMPORARY PAVEMENT MARKING ARROWS LF	649.1900* TEMPORARY PAVEMENT MARKING WORDS LF
STAGE 1	114	576	--	--	367	--	60	--	4	4
STAGE 2	66	323	52	88	--	40	--	--	--	--
STAGE 3	30	153	1,672	1,950	--	371	--	47	--	--
STAGE 4	--	--	60	235	--	--	--	--	--	--
STAGE 5	--	--	--	--	--	--	--	--	--	--
CATEGORY 0020 SUBTOTALS	210	1,052	1,784	2,273	367	411	60	47	4	4
PROJECT TOTAL	1,262		4,057		367	411	60	47	4	4

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

LIGHTING REMOVALS

SYSTEM	DESCRIPTION	CAT. 0010 204.0195* REMOVING CONCRETE BASES EACH	CAT. 0010 653.0905* REMOVING PULL BOXES EACH	CAT. 0010 SPV.0060.3001 LAMP DISPOSAL HIGH INTENSITY DISCHARGE EACH	CAT. 0010 SPV.0060.3003 REMOVING DISTRIBUTION CENTERS FOR STOCKPILE EACH	CAT. 0010 SPV.0060.3004 REMOVING UNDERDECK LIGHTING EACH	CAT. 0010 SPV.0060.3005 REMOVING AND RELOCATING EXISTING HIGH MAST TOWER EACH	CAT. 0010 SPV.0060.3006 REMOVING CONCRETE FOUNDATION HIGH MAST TOWER EACH
HL-40-LK	HL-40-LK	1	--	--	1	--	--	
	EXLP900	--	1	--	--	--	--	--
	EXLP901	--	1	--	--	--	--	--
	EXLP902	--	1	--	--	--	--	--
	HML-40-027	--	--	6	--	--	1	1
	HML-40-114	--	--	6	--	--	1	1
	HML-40-115	--	--	6	--	--	1	1
	--	--	--	--	--	--	--	--
HL-40-JK	EXLPB1012	--	1	--	--	--	--	--
	EXLPB1013	--	1	--	--	--	--	--
	HML-40-026	--	--	6	--	--	1	1
	3UDL7JK	--	--	3	--	3	--	--
	--	--	--	--	--	--	--	--
	PROJECT TOTAL	1	5	27	1	3	4	4

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING TEMPORARY LIGHTING

SYSTEM	DESCRIPTION	FROM	TO	CAT. 0010 652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	CAT. 0010 652.0405* CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH LF	CAT. 0010 SPV.0060.3012 TEMPORARY WOOD POLE EACH	CAT. 0010 SPV.0090.3002 TEMPORARY OVERHEAD CABLE QUADRUPLEX 4 AWG LF
HL-40-LK							
	TCDLK1	--	--	--	--	1	--
	TCDLK2	--	--	--	--	1	--
	TCDLK2	--	--	--	--	1	--
	--	EXLPB902	TCDLK1	15	10	--	25
	--	TCDLK1	TCDLK2	--	--	--	410
	--	TCDLK2	TCDLK3	--	--	--	155
	--	TLCDLK3	LPB908	15	10	--	25
	--	LPB908	HML-40-114	20	--	--	20
	--	--	--	--	--	--	--
			PROJECT TOTAL	50	20	3	635

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

				LIGHTING CONDUIT				
				CAT. 0010	CAT. 0010	CAT. 0010	CAT. 0010	CAT. 0010
				652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	652.0405* CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH	652.0605 CONDUIT SPECIAL 2-INCH	SPV.0090.3001 CONDUIT REINFORCED THERMOSETTING RESIN 1-INCH
SYSTEM	DESCRIPTION	FROM	TO	LF		LF		LF
HL-40-LK	--	HL-40-LK	LPB900	--	30	--	--	--
	--	LPB900	PARAPET	35	--	--	--	--
	--	LPB900	LPB901	--	195	--	--	--
	--	LPB901	LBP902	95	--	--	--	--
	--	LPB902	PARAPET	60	--	--	--	--
	--	LPB902	LPB903	280	--	--	--	--
	--	LPB903	LBP904	295	--	--	--	--
	--	LPB904	HML-40-027	70	--	--	--	--
	--	LPB904	LPB905	180	--	--	--	--
	--	LBP905	LPB906	95	--	--	--	--
	--	LBP906	PIER	25	--	10	--	--
	--	LPB906	LPB907	75	--	--	--	--
	--	LPB907	PIER	55	--	10	--	--
	--	LPB907	LPB908	320	--	--	--	--
	--	LPB908	HML-40-114	20	--	--	--	--
	--	--	--	--	--	--	--	--
HL-40-JK	--	EXLPB1005	LPB1006	--	--	--	135	--
	--	LPB1006	HML-40-115	20	--	--	--	--
	--	--	--	--	--	--	--	--
	--	EXLPB1010	LPB1012	--	--	--	100	--
	--	LPB1012	HML-40-026	120	--	--	--	--
	--	LPB1012	PIER	120	--	--	--	--
	--	--	--	--	--	--	--	--
	4UDLGHJK	--	--	--	--	--	--	135
	1UDLGJK	--	--	--	--	10	--	50
	--	--	--	--	--	--	--	--
			PROJECT TOTAL	1,865	225	30	235	185

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING PULL BOXES AND JUNCTION BOXES CONTINUED

SYSTEM	DESCRIPTION	STATION	OFFSET	CAT. 0010 653.0135 PULL BOXES STEEL 24X36-INCH EACH	CAT. 0010 653.0140* PULL BOXES STEEL 24X42-INCH EACH	CAT. 0010 SPV.0060.3007 JUNCTION BOXES 18X12X6-INCH STAINLESS STEEL EACH	CAT. 0010 SPV.0060.3008 JUNCTION BOXES 6X6X4-INCH STAINLESS STEEL EACH
HL-40-LK	LPB900	431+26 LN	33 RT	--	1	--	--
	LPB901	29+84 LM	9 RT	--	1	--	--
	LPB902	329+61 LS	35 LT	--	1	--	--
	LPB903	326+90 LS	41 LT	1	--	--	--
	LPB904	208+55 LE	11 LT	--	1	--	--
	LPB905	22+83 LM	82 LT	--	1	--	--
	LPB906	22+86 LM	10 RT	--	1	--	--
	LPB907	22+87 LM	82 RT	--	1	--	--
	LPB908	19+56 LM	43 RT	--	1	--	--
	--	--	--	--	--	--	--
HL-40-JK	LPB1006	203+00	48 RT	1	--	--	--
	LPB1012	62+36 VB	44 RT	--	1	--	--
	--	--	--	--	--	--	--
	4UDLGHJK	--	--	--	--	--	8
	1UDLGJK	--	--	--	--	1	1
	--	--	--	--	--	--	--
			PROJECT TOTAL	2	9	1	9

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING WIRES

SYSTEM	DESCRIPTION	FROM	TO	CAT. 0010 655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	CAT. 0010 655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	CAT. 0010 655.0630* ELECTRICAL WIRE LIGHTING 4 AWG LF
HL-40-LK	--	HL-40-LK	CLK1	--	--	720
	--	CKL1	DLK1	--	--	660
	--	DKL1	CLK2	--	--	680
	--	CKL2	DLK2	--	--	570
	--	HL-40-LK	CLK3	--	--	1,410
	--	HL-40-LK	HML-40-027	--	--	3,860
	--	HML-40-027	HML-40-114	--	--	2,940
	--	--	--	--	--	--
HL-40-JK	--	HL-40-JK	HML-40-026	--	--	2,460
	--	EX UDL	4UDLGHJK	--	2,040	--
	--	EXLPB1007	1UDLGJK	--	570	--
	4UDLGHJK	--	--	540	--	--
	1UDLGJK	--	--	180	--	--
	--	EX UDL	HML-40-115	--	--	1,040
	--	--	--	--	--	--
			PROJECT TOTAL	720	2,610	14,340

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

LIGHTING LUMINAIRES, ARMS AND POLES

SYSTEM	DESCRIPTION		CAT. 0010 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	CAT. 0010 655.0630* ELECTRICAL WIRE LIGHTING 4 AWG LF	CAT. 0010 657.0330 POLES TYPE 7 EACH	CAT. 0010 657.0725 LUMINAIRE ARMS TRUSS TYPE 6-INCH CLAMP 15-FT EACH	CAT. 0010 659.0802* PLAQUES SEQUENCE IDENTIFICATION EACH	CAT. 0010 659.1120 LUMINAIRES UTILITY LED CATEGORY B EACH	CAT. 0010 659.1215 LUMINAIRE UNDERDECK LED C EACH	CAT. 0010 SPV.0060.3010 LUMINAIRES HIGH MAST TOWERS LED EACH
HL-40-LK	HML-40-027	--	--	620	--	--	1	--	--	6
	HML-40-114	--	--	620	--	--	1	--	--	6
	CLK1	--	165	--	1	1	1	1	--	--
	DLK1	--	165	--	1	1	1	1	--	--
	CLK2	--	165	--	1	1	1	1	--	--
	DLK2	--	165	--	1	1	1	1	--	--
	CLK3	--	165	--	1	1	1	1	--	--
	--	--	--	--	--	--	--	--	--	--
HL-40-JK	HML-40-026	--	--	620	--	--	1	--	--	6
	HML-40-115	--	165	620	--	--	1	--	--	6
	4UDLGHJK	--	--	--	--	--	1	--	4	--
	1UDLGJK	--	--	--	--	--	1	--	1	--
	--	--	--	--	--	--	--	--	--	--
	PROJECT TOTAL		990	2,480	5	5	11	5	5	24

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING CONTROLLER AND MISC.

SYSTEM	DESCRIPTION	CAT. 0010 654.0230 CONCRETE CONTROL CABINET BASES TYPE L30 EACH	CAT. 0010 656.0200.0001 ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH	CAT. 0010 659.0802* PLAQUES SEQUENCE IDENTIFICATION EACH	CAT. 0010 659.2230 LIGHTING CONTROL CABINETS 240/480 30-INCH EACH	CAT. 0010 SPV.0060.3011* UNDERDECK LUMINAIRE MOUNTING ASSEMBLY EACH	CAT. 0010 SPV.0105.3001 LIGHTING SYSTEM INTEGRATOR LS	CAT. 0010 SPV.0105.3002 MAINTENACE OF LIGHTING SYSTEMS LS
PROJECT	--	--	--	--	--	--	1	1
HL-40-LK	HL-40-LK	1	1	4	1	--	--	--
		--	--	--	--	--	--	--
HL-40-JK	4UDLGHJK	--	--	--	--	4	--	--
	1UDLGJK	--	--	--	--	1	--	--
	--	--	--	--	--	--	--	--
	PROJECT TOTAL	1	1	4	1	5	1	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CITY OF MILWAUKEE - LIGHTING CONDUIT

SYSTEM	DESCRIPTION	FROM	TO	CAT. 0020 652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	CAT. 0020 652.0230 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-1/2 INCH LF	CAT. 0020 652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	CAT. 0020 652.0405* CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH LF	CAT. 0020 652.0615 CONDUIT SPECIAL 3-INCH LF	CAT. 0020 SPV.0090.3001* CONDUIT REINFORCED THERMOSETTING RESIN 1-INCH LF
T-42-C	--	T-42-C	SLV500	--	--	20	--	--	--
	--	SLV500	SLV501	--	--	115	--	--	--
	--	SLV501	SLV502	--	--	75	--	--	--
	--	SLV502	SLV551	--	--	220	--	--	--
	--	SLV502	SLV503	--	--	90	--	--	--
	--	SLV503	SLV552	--	--	280	--	--	--
	--	SLV550	SLV551	--	--	65	--	--	--
	--	SLV551	SLV552	--	--	130	--	--	--
	--	SLV503	SLV1000	--	--	70	--	--	--
	--	SLV552	SLV951	--	--	80	--	--	--
	--	SLV1000	SLV1001	--	--	90	--	--	--
	--	SLV1001	SLV400	--	--	55	--	--	--
	--	SLV400	SLV401	--	--	130	--	--	--
	--	SLV401	SLV402	--	--	80	--	--	--
	--	SLV402	SLV450	--	--	140	--	--	--
	--	SLV401	SLV403	--	--	125	--	--	--
	--	SLV403	SLV404	--	--	135	--	--	--
	--	SLV404	SLV405	--	--	135	--	--	--
	--	SLV405	SLV453	--	--	110	--	--	--
	--	SLV450	SLV451	--	--	90	--	--	--
	--	SLV451	SLV452	--	--	135	--	--	--
	--	SLV452	SLV453	--	--	135	--	--	--
	--	SLV450	SLV901	--	--	160	--	--	--
	--	SLV451	SLV001	--	--	75	--	--	--
	--	SLV901	SLV001	--	--	75	--	--	--
	--	SLV001	SLV002	--	--	140	--	--	--
	--	SLV002	SLV003	--	--	110	--	--	--
	--	SLV003	SLV004	--	--	90	--	--	--
	--	SLV004	SLV005	--	--	25	--	--	--
	--	SLV005	SLV006	--	--	95	--	--	--
	--	SLV006	SLV350	--	--	35	--	--	--
	--	SLV405	SLV300	--	--	135	--	--	--
	--	SLV300	SLV301	--	--	130	--	--	--
	--	SLV301	SLV302	--	--	55	--	--	--
	--	SLV302	SLV351	--	--	50	--	--	--
	--	SLV301	SLV1002	--	--	40	--	--	--
	--	SLV1002	SLV1003	--	--	75	--	--	--
			SUBTOTAL TOTAL	0	0	3,795	0	0	0

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CITY OF MILWAUKEE - LIGHTING CONDUIT CONTINUED

SYSTEM	DESCRIPTION	FROM	TO	CAT. 0020 652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	CAT. 0020 652.0230 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-1/2 INCH LF	CAT. 0020 652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	CAT. 0020 652.0405* CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH LF	CAT. 0020 652.0615 CONDUIT SPECIAL 3-INCH LF	CAT. 0020 SPV.0090.3001* CONDUIT REINFORCED THERMOSETTING RESIN 1-INCH LF
T-42-C	--	SLV1003	SLV303	--	--	50	--	--	--
	--	SLV303	SLV304	--	--	50	--	--	--
	--	SLV304	SLV015	--	--	75	--	--	--
	--	SLV303	SLV200	--	--	115	--	--	--
	--	SLV200	SLV201	--	--	130	--	--	--
	--	SLV201	SLV251	--	--	75	--	--	--
	--	SLV201	SLV202	--	--	115	--	--	--
	--	SLV202	SLV203	--	--	155	--	--	--
	--	SLV203	SLV100	--	--	65	--	--	--
	--	SLV100	SLV150	--	--	45	--	--	--
	--	SLV100	SLV104	--	--	410	--	--	--
	--	SLV104	SLV103	--	--	30	--	--	--
	--	SLV103	SLV102	--	--	125	--	--	--
	--	SLV102	SLV101	--	--	125	--	--	--
	--	SLV101	SLV151	--	--	30	--	--	--
	--	SLV104	SLV105	--	--	100	--	--	--
	--	SLV105	SLV152	--	--	45	--	--	--
	--	SLV105	SLV106	--	--	90	--	--	--
	--	SLV106	SLV153	--	--	45	--	--	--
	--	SLV453	SLV006	--	--	140	--	--	--
	--	SLV006	SLV010	--	--	135	--	--	--
	--	SLV010	SLV351	--	--	55	--	--	--
	--	SLV351	SLV975	--	--	45	--	--	--
	--	SLV975	SLV012	--	--	55	--	--	--
	--	SLV012	SLV976	--	--	45	--	--	--
	--	SLV976	SLV015	--	--	55	--	--	--
	--	SLV015	SLV250	--	--	100	--	--	--
	--	SLV250	SLV030	--	--	35	--	--	--
	--	SLV250	SLV251	--	--	120	--	--	--
	--	SLV251	SLV031	--	--	45	--	--	--
	--	SLV251	SLV252	--	--	120	--	--	--
	--	SLV252	SLV032	--	--	30	--	--	--
	--	SLV252	SLV253	--	--	120	--	--	--
	--	SLV253	SLV651	--	--	140	--	--	--
	--	SLV651	SLV650	--	--	70	--	--	--
	--	SLV651	SLV601	--	--	55	--	--	--
	--	SLV601	SLV600	--	--	70	--	--	--
			SUBTOTAL TOTAL	0	0	3,310	0	0	0

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CITY OF MILWAUKEE - LIGHTING CONDUIT CONTINUED

SYSTEM	DESCRIPTION	FROM	TO	CAT. 0020 652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	CAT. 0020 652.0230 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-1/2 INCH LF	CAT. 0020 652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	CAT. 0020 652.0405* CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH LF	CAT. 0020 652.0615 CONDUIT SPECIAL 3-INCH LF	CAT. 0020 SPV.0090.3001* CONDUIT REINFORCED THERMOSETTING RESIN 1-INCH LF
T-42-C		SLV601	SLV150	--	--	120	--	--	--
	--	SLV150	SLV151	--	--	130	--	--	--
	--	SLV151	SLV040	--	--	85	--	--	--
	--	SLV151	SLV152	--	--	350	--	--	--
	--	SLV152	SLV153	--	--	110	--	--	--
	--	EX PB7	SLV701	40	--	--	--	--	--
	--	EX PB6	SLV707	--	--	230	--	--	--
	--	EX PB5	SLV707	--	--	230	--	--	--
	--	EX PB7	SLV702	--	--	100	--	--	--
	--	SLV702	SLV703	--	--	115	--	--	--
	--	SLV703	SLV707	--	--	80	--	--	--
	--	SLV707	SLV752	--	--	50	--	--	--
	--	SLV707	SLV802	--	--	240	--	--	--
	--	SLV703	SLV800	--	--	130	--	--	--
	--	SLV800	SLV802	--	--	60	--	--	--
	--	SLV802	SLV903	--	--	360	--	--	--
	--	SLV802	SLV850	--	--	65	--	--	--
	--	SLV802	SLV904	--	--	360	--	--	--
	--	SLV800	SLV801	--	--	125	--	--	--
	--	SLV801	SLV900	--	--	125	--	--	--
	--	SLV900	SLV901	--	--	65	--	--	--
	--	SLV901	SLV902	--	--	100	--	--	--
	--	SLV902	SLV903	--	--	90	--	--	--
	--	SLV903	SLV904	--	--	30	--	--	--
	--	SLV904	SLV951	--	--	100	--	--	--
	--	EX PB2	EX 515	--	--	--	--	100	--
	--	SLV750	SLV751	--	--	105	--	--	--
	--	SLV751	SLV752	--	--	115	--	--	--
	--	EX PB1	EX 624	--	--	--	--	75	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
			SUBTOTAL TOTAL	40	0	3,670	0	175	0

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CITY OF MILWAUKEE - LIGHTING CONDUIT CONTINUED

SYSTEM	DESCRIPTION	FROM	TO	CAT. 0020 652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	CAT. 0020 652.0230 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-1/2 INCH LF	CAT. 0020 652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	CAT. 0020 652.0405* CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH LF	CAT. 0020 652.0615 CONDUIT SPECIAL 3-INCH LF	CAT. 0020 SPV.0090.3001* CONDUIT REINFORCED THERMOSETTING RESIN 1-INCH LF
T-42-C	--	SLV752	SLV850	--	--	130	--	--	--
	--	SLV850	SLV851	--	--	115	--	--	--
	--	SLV851	SLV950	--	--	135	--	--	--
	--	SLV950	SLV951	--	--	165	--	--	--
	--	SLV562	SLV563	--	--	70	--	--	--
	--	SLV563	SLV564	--	--	115	--	--	--
	--	SLV563	SLV511	--	--	50	--	--	--
	--	SLV511	SLV512	--	--	55	--	--	--
	--	SLV513	SLV565	--	--	60	--	--	--
	--	SLV513	EX CONDUIT	--	35	60	--	--	--
	--	SLV010	SLV011	--	--	50	--	--	--
	--	SLV012	SLV013	--	--	45	--	--	--
	--	SLV013	SLV014	--	--	25	--	--	--
	--	SLV015	SLV016	--	--	30	--	--	--
	1UDL EX PIER			20	--	--	20	--	20
	4UPDOWN			50	--	--	40	--	25
	8UPDOWN			50	--	--	40	--	50
	6UPDOWN			30	--	--	30	--	30
	2UPDOWN			10	--	--	10	--	20
	1UPDOWN			10	--	--	--	--	--
	2UDL NEW PIER			10	--	--	--	--	--
	--			--	--	--	--	--	--
	--			--	--	--	--	--	--
	--			--

3

CITY OF MILWAUKEE - LIGHTING PULL BOXES AND JUNCTION BOXES

SYSTEM	DESCRIPTION	STATION	OFFSET	CAT. 0020 SPV.0060.3007* JUNCTION BOXES 18X12X6-INCH STAINLESS STEEL EACH	CAT. 0020 SPV.0060.3008* JUNCTION BOXES 6X6X4-INCH STAINLESS STEEL EACH	CAT. 0020 SPV.0060.3009 JUNCTION BOXES 4X4X2-INCH STAINLESS STEEL EACH	CAT. 0020 SPV.0060.3013 STREET LIGHTING POLY. CONCRETE VAULT 13-INCH X 24-INCH X 18-INCH EACH	CAT. 0020 SPV.0060.3014 STREET LIGHTING POLY. CONCRETE VAULT 17-INCH X 30-INCH X 18-INCH EACH
T-42-C	SLV001	329+84 LS	58 LT	--	--	--	1	--
	SLV002	328+48 LS	58 LT	--	--	--	1	--
	SLV003	327+40 LS	54 LT	--	--	--	1	--
	SLV004	326+67 LS	3 LT	--	--	--	1	--
	SLV005	326+67 LS	22 LT	--	--	--	1	--
	SLV006	325+89 LS	29 RT	--	--	--	1	--
	SLV010	110+26 LW	56 LT	--	--	--	1	--
	SLV011	109+80 LW	52 LT	--	--	--	1	--
	SLV012	209+83 LE	5 LT	--	--	--	1	--
	SLV013	209+50 LE	4 LT	--	--	--	1	--
	SLV014	209+29 LE	4 LT	--	--	--	1	--
	SLV015	209+63 LE	72 RT	--	--	--	1	--
	SLV016	209+43 LE	56 RT	--	--	--	1	--
	SLV030	22+30 LM	46 LT	--	--	--	1	--
	SLV031	21+43 LM	55 LT	--	--	--	1	--
	SLV032	20+33 LM	39 LT	--	--	--	1	--
	SLV040	15+64 LM	48 LT	--	--	--	1	--
	SLV100	17+69 LM	23 RT	--	--	--	1	--
	SLV101	16+39 LM	4.5 RT	--	--	--	--	1
	SLV102	15+25 LM	11 RT	--	--	--	1	--
	SLV103	14+09 LM	5.5 RT	--	--	--	1	--
	SLV104	13+95 LM	30 RT	--	--	--	1	--
	SLV105	12+95 LM	21 RT	--	--	--	1	--
	SLV106	12+08 LM	20 RT	--	--	--	1	--
	SLV150	17+68 LM	20.5 LT	--	--	--	1	--
	SLV151	16+35 LM	20.5 LT	--	--	--	1	--
	SLV152	12+95 LM	20.5 LT	--	--	--	1	--
	SLV153	12+03 LM	20.5 LT	--	--	--	1	--
	SLV200	22+29 LM	50 RT	--	--	--	1	--
	SLV201	20+95 LM	42.5 RT	--	--	--	1	--
	SLV202	19+82 LM	29.5 RT	--	--	--	1	--
	SLV203	18+30 LM	20.5 RT	--	--	--	1	--
	SLV250	22+51 LM	18.5 LT	--	--	--	1	--
	SLV251	21+36 LM	18.5 LT	--	--	--	1	--
	SLV252	20+21 LM	18.5 LT	--	--	--	1	--
	SLV253	19+03 LM	20.5 LT	--	--	--	1	--
	SLV300	25+92 LM	61.5 RT	--	--	--	1	--
	SLV301	24+61 LM	61.5 RT	--	--	--	1	--
	SLV302	24+64 LM	7.5 RT	--	--	--	--	1
	SLV303	23+36 LM	50.5 RT	--	--	--	1	--
	SLV304	23+23 LM	9 RT	--	--	--	1	--
	SLV350	25+93 LM	22 LT	--	--	--	1	--
	SLV351	24+84 LM	32.5 LT	--	--	--	1	--
	SLV400	431+27 LN	28.5 RT	--	--	--	1	--
	SLV401	31+00 LM	66 RT	--	--	--	1	--
	SLV402	31+00 LM	29.5 RT	--	--	--	--	1
	SLV403	29+86 LM	63.5 RT	--	--	--	1	--
	SLV404	28+56 LM	61.5 RT	--	--	--	1	--
			SUBTOTAL	0	0	0	45	3

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CITY OF MILWAUKEE - LIGHTING PULL BOXES AND JUNCTION BOXES CONTINUED

SYSTEM	DESCRIPTION	STATION	OFFSET	CAT. 0020 SPV.0060.3007* JUNCTION BOXES 18X12X6-INCH STAINLESS STEEL EACH	CAT. 0020 SPV.0060.3008* JUNCTION BOXES 6X6X4-INCH STAINLESS STEEL EACH	CAT. 0020 SPV.0060.3009 JUNCTION BOXES 4X4X2-INCH STAINLESS STEEL EACH	CAT. 0020 SPV.0060.3013 STREET LIGHTING POLY. CONCRETE VAULT 13-INCH X 24-INCH X 18-INCH EACH	CAT. 0020 SPV.0060.3014 STREET LIGHTING POLY. CONCRETE VAULT 17-INCH X 30-INCH X 18-INCH EACH
T-42-C	SLV405	27+21 LM	61.5 RT	--	--	--	1	--
	SLV450	30+71 LM	30 LT	--	--	--	--	1
	SLV451	29+85 LM	31 LT	--	--	--	1	--
	SLV452	28+57 LM	37.5 LT	--	--	--	1	--
	SLV453	27+22 LM	45 LT	--	--	--	1	--
	SLV500	35+32 LM	143 RT	--	--	--	--	1
	SLV501	34+50 LM	65.5 RT	--	--	--	--	1
	SLV502	33+76 LM	67 RT	--	--	--	1	--
	SLV503	32+97 LM	77.5 RT	--	--	--	1	--
	SLV513	61+52 VB	17.5 RT	--	--	--	1	--
	SLV550	34+32 LM	45 LT	--	--	--	1	--
	SLV551	33+59 LM	40.5 LT	--	--	--	1	--
	SLV552	32+37 LM	42 LT	--	--	--	1	--
	SLV565	61+46 VB	31.5 LT	--	--	--	1	--
	SLV600	51+03 CH	26.5 RT	--	--	--	1	--
	SLV601	51+68 CH	26.5 RT	--	--	--	1	--
	SLV650	51+03 CH	26 LT	--	--	--	1	--
	SLV651	51+68 CH	26 LT	--	--	--	1	--
	SLV701	63+68 VB	34 RT	--	--	--	1	--
	SLV702	23+31.5 CL	73.5 RT	--	--	--	1	--
	SLV703	24+43.5 CL	73.5 RT	--	--	--	1	--
	SLV707	24+59.5 CL	4.5 RT	--	--	--	1	--
	SLV751	23+31.5 CL	41 LT	--	--	--	1	--
	SLV752	24+43.5 CL	41 LT	--	--	--	1	--
	SLV800	25+66.5 CL	73.5 RT	--	--	--	1	--
	SLV801	26+90.5 CL	73.5 RT	--	--	--	1	--
	SLV802	25+74.5 CL	`	--	--	--	1	--
	SLV850	25+66.5 CL	43 LT	--	--	--	1	--
	SLV851	26+79.5 CL	41 LT	--	--	--	1	--
	SLV900	28+11.5 CL	73.5 RT	--	--	--	1	--
	SLV901	28+73 CL	81.5 RT	--	--	--	1	--
	SLV902	29+11 CL	49.5 RT	--	--	--	--	1
	SLV903	29+30.5 CL	13.5 RT	--	--	--	1	--
	SLV904	29+32.5 CL	4.5 RT	--	--	--	1	--
	SLV950	27+96.5 CL	41.5 LT	--	--	--	1	--
	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--

CITY OF MILWAUKEE - LIGHTING PULL BOXES AND JUNCTION BOXES CONTINUED

SYSTEM	DESCRIPTION	STATION	OFFSET	CAT. 0020 SPV.0060.3007* JUNCTION BOXES 18X12X6-INCH STAINLESS STEEL EACH	CAT. 0020 SPV.0060.3008* JUNCTION BOXES 6X6X4-INCH STAINLESS STEEL EACH	CAT. 0020 SPV.0060.3009 JUNCTION BOXES 4X4X2-INCH STAINLESS STEEL EACH	CAT. 0020 SPV.0060.3013 STREET LIGHTING POLY. CONCRETE VAULT 13-INCH X 24-INCH X 18-INCH EACH	CAT. 0020 SPV.0060.3014 STREET LIGHTING POLY. CONCRETE VAULT 17-INCH X 30-INCH X 18-INCH EACH
T-42-C	SLV951	29+52 CL	34 LT	--	--	--	--	1
	SLV975	110+62 LW	26.5 LT	--	--	--	1	--
	SLV976	209+82 LE	28 RT	--	--	--	1	--
	SLV1000	31+58 CL	24.5 LT	--	--	--	1	--
	SLV1001	31+49 CL	61 RT	--	--	--	1	--
	SLV1002	24+31.5 LM	79 RT	--	--	--	--	1
	SLV1003	23+64 LM	79 RT	--	--	--	1	--
	1UDL EX PIER	--	--	1	--	1	--	--
	4UPDOWN	--	--	4	--	4	--	--
	8UPDOWN	--	--	4	--	8	--	--
	6UPDOWN	--	--	3	--	6	--	--
	2UPDOWN	--	--	1	--	2	--	--
	2UDL NEW PIER	--	--	--	4	--	--	--
	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
	--	--	--	--	--

CITY OF MILWAUKEE - LIGHTING ARMS AND POLES

SYSTEM	DESCRIPTION	CAT. 0020 659.0802* PLAQUES SEQUENCE IDENTIFICATION EACH	CAT. 0020 SPV.0060.3002 CABLE SPLICE AT HANDHOLE OR LIGHT POLE PEDESTAL EACH	CAT. 0020 SPV.0060.3015 PEDETAL HOUSING 6-INCH X 6-INCH X 36-INCH EACH	CAT. 0020 SPV.0060.3021 LIGHT POLE CITY OF MILWAUKEE WHITE SQUARE TAPERED CONCRETE 36FT EACH	CAT. 0020 SPV.0060.3022 LIGHT POLE CITY OF MILWAUKEE WHITE SQUARE TAPERED CONCRETE 31FT EACH	CAT. 0020 SPV.0060.3023 LIGHT POLE CITY OF MILWAUKEE WHITE SQUARE TAPERED CONCRETE 26FT EACH	CAT. 0020 SPV.0060.3024 WHITE SQUARE TAPERED CONCRETE POLE MOUNTING PLATE SET EACH	CAT. 0020 SPV.0060.3026 STREET LIGHTING BRACKET ARM 2-INCH DIA 6 FT - INSTALL ONLY EACH	CAT. 0020 SPV.0060.3027 STREET LIGHTING BRACKET ADAPTOR PLATE 1 1/4-INCH THICK - INSTALL ONLY EACH
T-42-C	#001	1	1	1	--	--	1	1	1	--
	#002	1	1	1	--	--	1	1	1	--
	#003	1	1	1	--	--	1	1	1	--
	#004	1	1	1	--	--	1	1	1	--
	#005	1	1	1	--	--	1	1	1	--
	#006	1	1	1	--	--	1	1	1	--
	#007	1	1	1	--	--	1	1	1	--
	#008	1	1	1	--	--	1	1	1	--
	#162	1	1	1	--	1	--	1	1	--
	#164	1	1	1	--	1	--	1	1	--
	#168	1	2	1	--	1	--	2	2	--
	#176	1	2	1	--	1	--	2	2	--
	#180	1	2	1	--	1	--	2	2	--
	#193	1	1	1	--	1	--	1	1	--
	#200	1	1	1	1	--	--	1	1	--
	#207	1	2	1	--	--	1	2	2	--
	#214	1	2	1	--	--	1	2	2	--
	#217	1	1	1	--	--	1	1	1	--
	#220	1	2	1	--	--	1	2	2	--
	#229	1	1	1	--	--	1	1	1	--
	#238	1	2	1	--	--	1	2	2	--
	#241	1	1	1	--	--	1	1	1	--
	#308	1	2	1	--	--	1	2	2	--
	#322	1	1	--	--	--	--	--	1	1
	#324	1	2	1	1	--	--	2	2	--
	#328	1	1	1	1	--	--	1	1	--
	#338	1	1	1	1	--	--	1	1	--
	#340	1	2	1	1	--	--	2	2	--
	#406	1	1	1	1	--	--	1	1	--
	#407	1	1	1	1	--	--	1	1	--
	#420	1	1	1	1	--	--	1	1	--
	#421	1	1	1	1	--	--	1	1	--
	#430	1	1	1	1	--	--	1	1	--
	#431	1	2	1	1	--	--	2	2	--
	#432	1	1	1	1	--	--	1	1	--
	#437	1	2	--	--	--	--	--	2	2
	#438	1	1	1	1	--	--	1	1	--
	#440	1	2	1	1	--	--	2	2	--
	#503	1	1	1	1	--	--	1	1	--
	#506	1	1	1	1	--	--	1	1	--
	#529	1	1	1	1	--	--	1	1	--
	--	--	--	--	--	--	--	--	--	--
	SUBTOTAL	41	54	39	17	6	16	51	54	3

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CITY OF MILWAUKEE - LIGHTING ARMS AND POLES CONTINUED

SYSTEM	DESCRIPTION	CAT. 0020 659.0802* PLAQUES SEQUENCE IDENTIFICATION	CAT. 0020 SPV.0060.3002 CABLE SPLICE AT HANDHOLE OR LIGHT POLE PEDESTAL	CAT. 0020 SPV.0060.3015 PEDETAL HOUSING 6-INCH X 6-INCH X 36-INCH	CAT. 0020 SPV.0060.3021 LIGHT POLE CITY OF MILWAUKEE WHITE SQUARE TAPERED CONCRETE 36FT	CAT. 0020 SPV.0060.3022 LIGHT POLE CITY OF MILWAUKEE WHITE SQUARE TAPERED CONCRETE 31FT	CAT. 0020 SPV.0060.3023 LIGHT POLE CITY OF MILWAUKEE WHITE SQUARE TAPERED CONCRETE 26FT	CAT. 0020 SPV.0060.3024 WHITE SQUARE TAPERED CONCRETE POLE MOUNTING PLATE SET	CAT. 0020 SPV.0060.3026 STREET LIGHTING BRACKET ARM 2-INCH DIA 6 FT - INSTALL ONLY	CAT. 0020 SPV.0060.3027 STREET LIGHTING BRACKET ADAPTOR PLATE 1 1/4-INCH THICK - INSTALL ONLY
		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
T-42-C	#530	1	1	1	1	--	--	1	1	--
	#500	1	1	--	--	--	--	--	1	1
	#634	1	1	--	--	--	--	--	1	1
	#684	1	1	1	--	1	--	1	1	--
	#701	1	1	1	1	--	--	1	1	--
	#702	1	1	1	1	--	--	1	1	--
	#709	1	1	1	1	--	--	1	1	--
	#710	1	1	1	1	--	--	1	1	--
	#727	1	1	1	1	--	--	1	1	--
	#730	1	1	1	1	--	--	1	1	--
	#804	1	1	1	1	--	--	1	1	--
	#805	1	1	1	1	--	--	1	1	--
	#825	1	1	1	1	--	--	1	1	--
	#826	1	1	1	1	--	--	1	1	--
	#911	1	1	1	1	--	--	1	1	--
	#912	1	1	1	1	--	--	1	1	--
	#932	1	2	1	1	--	--	2	2	--
	#942	1	1	1	1	--	--	1	1	--
	#934	1	1	--	--	--	--	--	1	1
	#936	1	2	1	--	--	1	2	2	--
	#1001	1	1	1	1	--	--	1	1	--
	#1001A	1	1	--	--	--	--	--	1	1
	#1002	1	1	1	1	--	--	1	1	--
	#1002A	1	1	1	1	--	--	1	1	--
	EX #432	1	1	--	--	--	--	--	--	--
	EX #515	1	1	--	--	--	--	--	--	--
	EX #532	1	1	--	--	--	--	--	--	--
	1UDL EX PIER	1	1	--	--	--	--	--	--	--
	4UPDOWN	1	4	--	--	--	--	--	--	--
	8UPDOWN	1	8	--	--	--	--	--	--	--
	6UPDOWN	1	6	--	--	--	--	--	--	--
	2UPDOWN	1	3	--	--	--	--	--	--	--
	1UPDOWN	1	1	--	--	--	--	--	--	--
	2UDL NEW PIER	1	2	--	--	--	--	--	--	--
	SPARE	--	--	--	5	5	5	--	--	--
	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
	SUBTOTAL	34	54	20	23	6	6	22	26	4
	PROJECT TOTAL	75	108	59	40	12	22	73	80	7

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CITY OF MILWAUKEE - LIGHTING LUMINAIRES

SYSTEM	DESCRIPTION	CAT.0020 SPV.0060.3011* UNDERDECK LUMINAIRE MOUNTING ASSEMBLY EACH	CAT. 0020 SPV.0060.3016 LUMINAIRES CITY OF MILWAUKEE LED STREET LIGHT 180W EACH	CAT. 0020 SPV.0060.3017 LUMINAIRES CITY OF MILWAUKEE LED STREET LIGHT 105W EACH	CAT. 0020 SPV.0060.3018 LUMINAIRES CITY OF MILWAUKEE LED STREET LIGHT 40W EACH	CAT. 0020 SPV.0060.3019 LUMINAIRES CITY OF MILWAUKEE UNDERDECK WALKPACK LED 72W EACH	CAT. 0020 SPV.0060.3020 LUMINAIRES CITY OF MILWAUKEE UNDERDECK WALKPACK LED 47W EACH	CAT. 0020 SPV.0060.3025 DECORATIVE SCONCE LED LUMINAIRE FOR BRIDGE STRUCTURE LIGHTING EACH
T-42-C	#001	--	--	--	1	--	--	--
	#002	--	--	--	1	--	--	--
	#003	--	--	--	1	--	--	--
	#004	--	--	--	1	--	--	--
	#005	--	--	--	1	--	--	--
	#006	--	--	--	1	--	--	--
	#007	--	--	--	1	--	--	--
	#008	--	--	--	1	--	--	--
	#126	--	--	1	--	--	--	--
	#138	--	--	1	--	--	--	--
	#154	--	--	2	--	--	--	--
	#170	--	--	2	--	--	--	--
	#186	--	--	2	--	--	--	--
	#193	--	--	1	--	--	--	--
	#200	--	--	1	--	--	--	--
	#207	--	--	1	1	--	--	--
	#214	--	--	1	1	--	--	--
	#217	--	--	1	--	--	--	--
	#220	--	--	1	1	--	--	--
	#229	--	--	1	--	--	--	--
	#238	--	--	1	1	--	--	--
	#241	--	--	1	--	--	--	--
	#308	--	--	2	--	--	--	--
	#322	--	1	--	--	--	--	--
	#432	--	1	--	--	--	--	--
	#324	--	2	--	--	--	--	--
	#328	--	1	--	--	--	--	--
	#338	--	1	--	--	--	--	--
	#340	--	2	--	--	--	--	--
	#406	--	1	--	--	--	--	--
	#407	--	1	--	--	--	--	--
	#420	--	1	--	--	--	--	--
	#421	--	1	--	--	--	--	--
	#430	--	1	--	--	--	--	--
	#431	--	2	--	--	--	--	--
	#437	--	2	--	--	--	--	--
	#438	--	1	--	--	--	--	--
	#440	--	2	--	--	--	--	--
	#503	--	1	--	--	--	--	--
	#506	--	1	--	--	--	--	--
	#529	--	1	--	--	--	--	--
	SUBTOTAL	0	23	19	12	0	0	0

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CITY OF MILWAUKEE - LIGHTING LUMINAIRES CONTINUED

SYSTEM	DESCRIPTION	CAT.0020 SPV.0060.3011* UNDERDECK LUMINAIRE MOUNTING ASSEMBLY EACH	CAT. 0020 SPV.0060.3016 LUMINAIRES CITY OF MILWAUKEE LED STREET LIGHT 180W EACH	CAT. 0020 SPV.0060.3017 LUMINAIRES CITY OF MILWAUKEE LED STREET LIGHT 105W EACH	CAT. 0020 SPV.0060.3018 LUMINAIRES CITY OF MILWAUKEE LED STREET LIGHT 40W EACH	CAT. 0020 SPV.0060.3019 LUMINAIRES CITY OF MILWAUKEE UNDERDECK WALKPACK LED 72W EACH	CAT. 0020 SPV.0060.3020 LUMINAIRES CITY OF MILWAUKEE UNDERDECK WALKPACK LED 47W EACH	CAT. 0020 SPV.0060.3025 DECORATIVE SCONCE LED LUMINAIRE FOR BRIDGE STRUCTURE LIGHTING EACH
T-42-C	#530	--	1	--	--	--	--	--
	#500	--	1	--	--	--	--	--
	#634	--	1	--	--	--	--	--
	#684	--	--	1	--	--	--	--
	#701	--	1	--	--	--	--	--
	#702	--	1	--	--	--	--	--
	#709	--	1	--	--	--	--	--
	#710	--	1	--	--	--	--	--
	#727	--	1	--	--	--	--	--
	#730	--	1	--	--	--	--	--
	#804	--	1	--	--	--	--	--
	#805	--	1	--	--	--	--	--
	#825	--	1	--	--	--	--	--
	#826	--	1	--	--	--	--	--
	#911	--	1	--	--	--	--	--
	#912	--	1	--	--	--	--	--
	#932	--	2	--	--	--	--	--
	#942	--	1	--	--	--	--	--
	#934	--	1	--	--	--	--	--
	#936	--	--	2	--	--	--	--
	#1001	--	1	--	--	--	--	--
	#1001A	--	1	--	--	--	--	--
	#1002	--	1	--	--	--	--	--
	#1002A	--	1	--	--	--	--	--
	1UDL EX PIER	--	--	--	--	--	1	--
	4UPDOWN	--	--	--	--	--	--	4
	8UPDOWN	--	--	--	--	--	--	8
	6UPDOWN	--	--	--	--	--	--	6
	2UPDOWN	--	--	--	--	--	--	2
	1UPDOWN	--	--	--	--	--	--	1
	2UDL NEW PIER	2	--	--	--	2	--	--
	SPARE	--	3	3	3	2	1	3
	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
	SUBTOTAL	2	26	6	3	4	2	24
	PROJECT TOTAL	2	49	25	15	4	2	24

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CITY OF MILWAUKEE - LIGHTING WIRES

SYSTEM	DESCRIPTION	FROM	TO	CAT. 0020 SPV.0090.3003 3#2/1#8 LTP UNDERGROUND STREET LIGHTING CABLE LF	CAT. 0020 SPV.0090.3004 3#4/1#8 LTP UNDERGROUND STREET LIGHTING CABLE LF	CAT. 0020 SPV.0090.3005 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE LF	CAT. 0020 SPV.0090.3006 2#12UF WITH GROUND STREET LIGHTING RISER CABLE LF	CAT. 0020 SPV.0090.3007 3#12UF WITH GROUND STREET LIGHTING RISER CABLE LF
T-42-C		T-42-C	#530	220	--	--	--	--
		#530	#506	110	--	--	--	--
		#506	#1002	75	--	--	--	--
		#1002	#1001	110	--	--	--	--
		#1001	#438	75	--	--	--	--
		#438	#440	120	--	--	--	--
		#440	#001	--	--	245	--	--
		#001	#002	--	--	165	--	--
		#002	#003	--	--	145	--	--
		#003	1UDL EX PIER	--	--	105	--	--
		#440	#437	--	--	95	--	--
		#440	#431	180	--	--	--	--
		#431	#421	155	--	--	--	--
		#421	#407	155	--	--	--	--
		#407	#004	160	--	--	--	--
		#004	#340	55	--	--	--	--
		#004	4UPDOWN	--	--	150	--	--
		#340	#328	120	--	--	--	--
		#328	#934	--	--	65	--	--
		#328	8UPDOWN	--	--	170	--	--
		#328	#936	--	150	--	--	--
		#936	6UPDOWN	--	--	75	--	--
		#936	#241	--	160	--	--	--
		#241	#005	--	--	55	--	--
		#241	#229	--	140	--	--	--
		#229	#006	--	--	65	--	--
		#229	#217	--	140	--	--	--
		#217	#007	--	--	55	--	--
		#217	#207	--	140	--	--	--
		#207	#684	--	160	--	--	--
		#438	#430	205	--	--	--	--
		#430	#420	155	--	--	--	--
		#420	#406	155	--	--	--	--
		#406	#338	155	--	--	--	--
		#338	#322	--	150	--	--	--
		#322	#324	--	75	--	--	--
		#324	#322	--	75	--	--	--
		#332	#1002A	--	60	--	--	--
		#1002A	#1001A	--	--	95	--	--
		#1002A	#308	--	--	175	--	--
		#308	2UPDOWN	--	--	45	--	--
		#1002A	#238	--	245	--	--	--
		#238	#220	--	145	--	--	--
		#220	#214	--	135	--	--	--
		#214	#200	--	175	--	--	--
		--	--	--	--	--	--	--
			SUBTOTAL	2,205	1,950	1,705	0	0

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CITY OF MILWAUKEE - LIGHTING WIRES CONTINUED

SYSTEM	DESCRIPTION	FROM	TO	CAT. 0020 SPV.0090.3003 3#2/1#8 LTP UNDERGROUND STREET LIGHTING CABLE LF	CAT. 0020 SPV.0090.3004 3#4/1#8 LTP UNDERGROUND STREET LIGHTING CABLE LF	CAT. 0020 SPV.0090.3005 3#6/1#8 LTP UNDERGROUND STREET LIGHTING CABLE LF	CAT. 0020 SPV.0090.3006 2#12UF WITH GROUND STREET LIGHTING RISER CABLE LF	CAT. 0020 SPV.0090.3007 3#12UF WITH GROUND STREET LIGHTING RISER CABLE LF
T-42-C	--	#200	#193	--	120	--	--	--
	--	#193	#186	--	175	--	--	--
	--	#186	#008	--	--	130	--	--
	--	#186	#170	--	140	--	--	--
	--	#170	#154	--	140	--	--	--
	--	#154	#138	--	145	--	--	--
	--	#138	#126	--	110	--	--	--
	--	T-42-C	#529	330	--	--	--	--
	--	#529	#503	150	--	--	--	--
	--	#503	#942	100	--	--	--	--
	--	#942	#912	170	--	--	--	--
	--	#912	#826	130	--	--	--	--
	--	#826	#804	135	--	--	--	--
	--	#804	#730	140	--	--	--	--
	--	#730	#710	135	--	--	--	--
	--	#710	#702	125	--	--	--	--
	--	#702	EX #532	--	--	285	--	--
	--	#702	EX #515	220	--	--	--	--
	--	EX #515	#643	150	--	150	--	--
	--	EX #515	EX #624	95	--	--	--	--
	--	#942	#932	--	125	--	--	--
	--	#932	#911	--	135	--	--	--
	--	#911	#825	--	145	--	--	--
	--	#825	#805	--	155	--	--	--
	--	#805	#727	--	155	--	--	--
	--	#727	#709	--	150	--	--	--
	--	#709	#701	--	125	--	--	--
	--	#701	1UPDOWN	--	--	60	--	--
	--	#701	EX 432	--	--	125	--	--
	--	EX 432	2UDL NEW PIER	--	--	270	--	--
	1UDL EX PIER	--	--	--	--	--	40	--
	4UPDOWN	--	--	--	--	210	80	--
	8UPDOWN	--	--	--	--	200	160	--
	6UPDOWN	--	--	--	--	130	120	--
	2UPDOWN	--	--	--	--	--	40	--
	1UPDOWN	--	--	--	--	--	10	--
	2UDL NEW PIER	--	--	--	--	--	--	60
	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
			SUBTOTAL	1,880	1,820	1,560	450	60
			PROJECT TOTAL	4,085	3,770	3,265	450	60

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

HIGH MAST FOUNDATIONS

LOCATION	STATION	OFFSET	CATEGORY 0010 660.0100.0001 HIGH MAST FOUNDATION HML-40-026 EACH	CATEGORY 0010 660.0100.0002 HIGH MAST FOUNDATION HML-40-027 EACH	CATEGORY 0010 660.0100.0003 HIGH MAST FOUNDATION HML-40-114 EACH	CATEGORY 0010 660.0100.0004 HIGH MAST FOUNDATION HML-40-115 EACH
1300-13-74	61+60.94 VB	91.78' RT	1	--	--	--
1300-13-74	208+39.35 LE	10.55' LT	--	1	--	--
1300-13-74	19+39.81 LM	41.75' RT	--	--	1	--
1300-13-74	BETWEEN BROADWAY & IH 794 EB ENTRANCE RAMP		--	--	--	1
	PROJECT TOTALS		1	1	1	1

SAWING CONCRETE

LOCATION	FROM			TO		OFFSET	CAT. 0020 690.0250 SAWING CONCRETE LF
LINCOLN MEMORIAL DRIVE	15+53	LM	-	35+00	LM	LT/RT	560
CLYBOURN STREET	22+00	CL	-	27+39	CL	LT	447
JACKSON RAMP & VAN BUREN	63+20	JE	-	63+44	JE	RT	150
DRY DETENTION BASIN							520
						PROJECT TOTAL	1677

SAWING ASPHALT

LOCATION	FROM			TO		OFFSET	CAT. 0010 690.0150 SAWING ASPHALT LF	CAT. 0020 690.0150 SAWING ASPHALT LF
LINCOLN MEMORIAL DRIVE	11+75	LM	-	36+89	LM	LT/RT	-	1888
IH 794 EB EXIT RAMP	203+10	LE	-	209+55	LE	RT	969	-
CHICAGO STREET	50+77	CH	-	52+35	CH	LT/RT	-	335
						PROJECT TOTALS	969	2223

CRACK AND DAMAGE SURVEY

PROJECT NUMBER	CAT. 0020 999.1500.S.0001 U.S. BANK PARKING STRUCTURE 716 E. CLYBOURN STREET LS	CAT. 0020 999.1500.S.0002 MILWAUKEE COUNTY TRANSIT CENTER 909 E. MICHIGAN LS
1300-13-74	1.0	1.0
PROJECT TOTALS	1.0	1.0

INCENTIVE STRENGTH CONCRETE PAVEMENT & STRUCTURES

LOCATION	FROM			TO		OFFSET	CATEGORY 0010 715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT DOL	CATEGORY 0010 715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES DOL	CATEGORY 0020 715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT DOL	CATEGORY 0020 715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES DOL
LINCOLN MEMORIAL DRIVE	12+00	LM	-	34+15	LM	LT/RT	--	--	1000	--
CLYBOURN STREET	22+20	CL	-	31+65	CL	LT/RT	--	--	310	--
IH 794 WB ENTRANCE RAMP	105+64	LW	-	110+89	LW	LT/RT	140	12175	--	--
IH 794 WB EXIT RAMP	424+86	LN	-	431+25	LN	LT/RT	--	--	215	1760
IH 794 EB ENTRANCE RAMP	328+06	LS	-	330+21	LS	LT/RT	--	--	45	310
IH 794 EB EXIT RAMP	204+81	LE	-	210+05	LE	LT/RT	140	5245	--	--
CHICAGO STREET	51+00	CH	-	52+35	CH	LT/RT	--	--	50	--
						PROJECT TOTALS	280	17420	1620	2070

DRAINAGE BLANKET

LOCATION	STATION		STATION	OFFSET	CATEGORY 0010 SPV.0035.1005 DRAINAGE BLANKET CY
IH 794 EB EXIT RAMP	204+93 LE	-	207+42 LE	LT/RT	981
IH 794 WB ENTRANCE RAMP	107+00 LW	-	108+37 LW	LT/RT	539
			PROJECT TOTAL		1520

3

LIGHTWEIGHT FOAMED CONCRETE FILL GRADE 1

CATEGORY 0010

LOCATION	STATION	TO	STATION	OFFSET	SPV.0035.1010 LIGHTWEIGHT FOAMED CONCRETE FILL GRADE 1 CY
IH 794 EB EXIT RAMP	204+81 LE	-	207+42 LE	LT/RT	277
IH 794 WB ENTRANCE RAMP	107+00 LW	-	108+37 LW	LT/RT	1117
			PROJECT TOTAL		1394

CITY OF MILWAUKEE UNDERGROUND CONDUIT

CATEGORY 0020

LOCATION	FROM	TO	204.0210* REMOVING MANHOLES EACH	SPV.0060.1033 ADJUSTING TES MANHOLE COVERS EACH	SPV.0060.1034 REMOVING TES MANHOLE EACH	SPV.0060.1045 4' DIAMETER "DOGHOUSE" MANHOLE TYPE TES EACH	SPV.0060.1046 5' DIAMETER "DOGHOUSE" MANHOLE TYPE TES EACH	SPV.0060.1047 4' DIAMETER MANHOLE TYPE TES EACH	SPV.0090.1006 6-DUCT CONDUIT, CEMENT ENCASED, 4-INCH RIGID NONMETALLIC CONDUIT DB-60 LF	SPV.0090.1007 2-DUCT CONDUIT, CEMENT ENCASED, 4-INCH RIGID NONMETALLIC CONDUIT DB-60 LF	SPV.0090.1008 1-DUCT CONDUIT, CEMENT ENCASED, 4-INCH RIGID NONMETALLIC CONDUIT DB-60 LF
LINCOLN MEMORIAL DRIVE	12+00 LM	- 34+15 LM	1	1	1	1	1	5	2321	--	404
CLYBOURN STREET	22+20 CL	- 31+65 CL	1	--	--	--	--	1	909	51	94
		PROJECT TOTALS	2	1	1	1	1	6	3230	51	498

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

PRECAST CONCRETE WHEEL STOP

CAT. 0010

LOCATION	SPV.0060.1036 PRECAST CONCRETE WHEEL STOP EACH
PARKING LOT-SOUTH OF CHICAGO STREET	17
PARKING LOT-NORTH OF CHICAGO STREET	11
PARKING LOT-EAST OF VAN BUREN STREET	6
PROJECT TOTAL	34

VIBRATING WIRE PIEZOMETER INSTRUMENTATION SYSTEM, DELIVERED

CATEGORY 0010

LOCATION	SPV.0060.1035 VIBRATING WIRE PIEZOMETER INSTRUMENTATION SYSTEM, DELIVERED EACH
IH 794 EB EXIT RAMP & IH 794 WB ENTRANCE RAMP	1
PROJECT TOTAL	1

STRIP DRAINS

CATEGORY 0010

LOCATION	STATION	TO	STATION	OFFSET	SPV.0090.1009 STRIP DRAINS LF	SPV.0090.1010 PRE-BORED STRIP DRAINS LF
IH 794 EB EXIT RAMP	204+93 LE	-	207+42 LE	LT/RT	23571	2619
			PROJECT TOTALS		23571	2619

ORNAMENTAL PICKET FENCE 6-FT

CATEGORY 0020

LOCATION	STATION	TO	STATION	SPV.0060.1041 MASONRY COLUMN 8-FT HT EACH	SPV.0090.1016 ORNAMENTAL PICKET FENCE 6-FT HT LF	SPV.0090.1017 REMOVABLE ORNAMENTAL PICKET FENCE 6-FT HT LF
LINCOLN MEMORIAL DRIVE	12+00 LM	-	23+32 LM	12	811	496
IH 794 WB ENTRANCE RAMP	108+72 LW	-	110+28 LW	--	147	--
IH 794 EB EXIT RAMP	207+81 LE	-	209+50 LE	--	216	--
VAN BUREN STREET	206+02 LE	-	204+49 LE	--	311	43
CHICAGO STREET	50+78 CH	-	52+00 CH	2	240	--
			PROJECT TOTALS	14	1725	539

FENCE GATES

CATEGORY 0020

LOCATION	STATION	TO	STATION	SPV.0090.1018 DOUBLE SWING GATE WITH 12-FT OPENING LF	SPV.0090.1019 DOUBLE SWING GATE WITH 16-FT OPENING LF	SPV.0090.1020 SLIDING GATE 24-FT OPENING LF
LINCOLN MEMORIAL DRIVE	12+00 LM	-	23+32 LM	--	64	48
CHICAGO STREET	50+78 CH	-	52+00 CH	12	--	48
			PROJECT TOTALS	12	64	96

INTERSECTION OF
LINCOLN MEMORIAL DR & CHICAGO ST
ALL ITEMS ARE CATEGORY 0020

3

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.
PB1	PB2		80
PB2	PB3	20	
PB2	PB4		104
PB4	PB5		110
PB5	PB6	10	
PB5	PB7		86
PB7	PB8		128
PB8	PB9		74
PB9	PB10	21	
PB9	PB1		80
	*** TOTALS	51	662

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PULL BOXES, VAULT, 17"X30"X18"

PULL BOX NO.	STATION	LOCATION	SPV.0060.5005 PULL BOX VAULT 17"X30"X18" EACH
PB1	17+72.1	20.4' LT	1
PB2	52+28.1	26.8' RT	1
PB3	52+06.0	26.7' RT	1
PB4	52+28.1	26.7' LT	1
PB5	18+81.4	21.0' LT	1
PB6	18+95.5	20.9' LT	1
PB7	18+79.9	22.5' RT	1
PB8	18+13.2	20.7' RT	1
PB9	17+72.2	20.8' RT	1
PB10	17+50.9	30.5' RT	1
		*** TOTALS	10

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

CONDUIT LOOP DETECTOR

HOME RUN PB	STATION	LOCATION	SIZE	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.
PB3	52+30.7	5.5' RT	6'X25'	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	99
PB3	52+36.6	16.0' RT	6'X20'	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	78
PB6	52+78.6	45.3' LT	6'X20'	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	74
PB6	52+80.8	74.5' LT	6'X20'	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	74
PB10	17+46.7	5.6' RT	6'X20'	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	97
PB10	17+74.6	5.5' RT	6'X20'	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	97
				*** TOTALS	519

* STATION AND LOCATION IS TO FRONT CENTER OF DETECTION LOOP
** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 1

INTERSECTION OF
LINCOLN MEMORIAL DR & IH 794 RAMPS
ALL ITEMS ARE CATEGORY 0020

3

CONDUIT RIGID METALLIC 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH
CONDUIT SPECIAL 2-INCH

FROM	TO	652.0125 CONDUIT RIGID METALLIC 2-INCH L.F.	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0405 CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH L.F.	652.0605 CONDUIT SPECIAL 2-INCH L.F.
CB1	PB1			102		
PB1	PB2		8			
PB1	PB3			136		
PB3	PB4			66		
PB4	PB5		22			
PB5	PB6		224			
PB4	PB7			84		
PB7	PB8			86		
PB8	PB9			80		
PB9	PB10		97			
PB9	PB11		200			
PB8	PB12		38			
PB8	PB13			80		
PB13	PB14			54		
PB13	PB15			130		
PB15	PB16			36		
PB16	PB17		43			
PB16	PB18			38		
PB15	PB19			56		
PB19	PB20		14			
PB19	PB21			106		
PB21	PB22		74			
PB21	CB1			18		
PB1	SB1		6			
PB3	SB2			9		
PB4	SB3		5			
PB4	SB4		7			
PB7	SB5			5		
PB7	SB6		17			
PB8	SB7		10			
PB8	SB8		15			
PB9	SB9		3			
PB9	SB10		16			
PB11	PB23		247			
PB23	PB24		222			
PB24	PB25					39
PB25	PB26		113			
PB26	PB27		188			
PB27	JB3	35				
PB13	SB11		15			
PB14	SB12		5			
PB14	SB13		8			
PB8	SB14		11			
PB15	SB15		18			
PB16	SB16			24		
PB18	SB17		16			
PB19	SB18		11			
PB21	SB19			11		
WISDOT JB135	SB4				112	
	*** TOTALS	35	1653	1121	112	39

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES TYPE 1
CONCRETE BASES TYPE 10
CONCRETE BASES TYPE 10 SPECIAL
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	SPV.0060.5006 CONCRETE BASES TYPE 10 SPECIAL EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	24+63.4 LM	65.8' RT				1
SB2	23+56.6 LM	74.5' RT		1		
SB3	23+45.1 LM	61.5' RT	1			
SB4	23+39.8 LM	51.6' RT	1			
SB5	23+48.9 LM	11.4' RT		1		
SB7	23+52.0 LM	24.2' LT	1			
SB9	23+32.3 LM	55.5' LT	1			
SB10	23+09.5 LM	37.8' LT	1			
SB11	23+98.0 LM	39.0' LT	1			
SB12	24+08.2 LM	74.4' LT	1			
SB13	24+08.2 LM	87.4' LT	1			
SB14	24+55.9 LM	21.0' LT	1			
SB16	24+43.7 LM	39.5' LT		1		
SB17	24+99.9 LM	68.3' LT	1			
SB19	24+56.8 LM	65.3' RT			1	
		*** TOTALS	10	3	1	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 5

PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET 434	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\Signals\02_030201_mq_Ramps.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 34.0000 sf / in.

WISDOT/CADDS SHEET 43

3

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	57
SB1	SB2	97
SB2	SB3	67
SB3	SB4	26
SB4	SB5	74
SB5	SB6	36
SB6	SB7	90
SB7	SB8	38
SB8	SB9	77
SB9	SB10	46
SB10	SB11	150
SB11	SB12	94
SB12	SB13	27
SB13	SB14	164
SB14	SB15	39
SB15	SB16	79
SB16	SB17	98
SB17	SB18	143
SB18	SB19	95
SB19	CB1	34
	*** TOTAL	1531

* INCLUDE GROUNDING ROD FOR SB1, SB6, SB8, SB15, AND SB18
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 7-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG
CABLE TRAFFIC SIGNAL 15-14 AWG

INTERSECTION OF
LINCOLN MEMORIAL DR & IH 794 RAMPS
ALL ITEMS ARE CATEGORY 0020

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG L.F.
CB1	SB1			57	
SB1	HEAD 17				
SB1	HEAD 21				
SB1	HEAD 36	19			
CB1	SB2				134
SB2	HEAD 15	44			
SB2	HEAD 16	20			
SB2	HEAD 18	54			
SB2	HEAD 37	18			
CB1	SB3		169		
SB3	B	14			
CB1	SB4			171	
SB4	HEAD 1	19			
SB4	HEAD 9	19			
SB4	HEAD 26	18			
CB1	SB5			217	
SB5	HEAD 7	42			
SB5	HEAD 10	25			
CB1	SB6		229		
SB6	HEAD 20	19			
CB1	SB7			243	
SB7	HEAD 8	19			
SB7	HEAD 27	18			
CB1	SB8				247
SB8	HEAD 14	19			
SB8	HEAD 24	19			
SB8	HEAD 29	18			
SB8	HEAD 30	18			
CB1	SB9		282		
SB9	HEAD 19	19			
CB1	SB10		308		
SB10	HEAD 28	18			
CB1	SB11		202		
SB11	B	6			
CB1	SB12		252		
SB12	HEAD 12	19			
CB1	SB13		255		
SB13	HEAD 13	19			
CB1	SB14			127	
SB14	HEAD 4	19			
SB14	HEAD 6	19			
SB14	HEAD 34	18			
CB1	SB15		133		
SB15	HEAD 33	18			
CB1	SB16				164
SB14	HEAD 22	44			
SB14	HEAD 23	19			
SB14	HEAD 25	55			
SB14	HEAD 31	18			
CB1	SB17			200	
SB17	HEAD 11	19			
SB17	HEAD 32	18			
CB1	SB18		93		
SB18	B	6			
CB1	SB19				34
SB19	HEAD 2	52			
SB19	HEAD 3	40			
SB19	HEAD 5	64			
SB19	HEAD 35	18			
	*** TOTALS	930	1923	1015	579

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

SHEET 2 OF 5

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\Signals\02_030201_mq_Ramps.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 34.0000 sf / in.
WISDOT/CADDS SHEET 43

INTERSECTION OF
LINCOLN MEMORIAL DR & IH 794 RAMPS
ALL ITEMS ARE CATEGORY 0020

CONDUIT LOOP DETECTOR
LOOP DETECTOR LEAD IN CABLE
LOOP DETECTOR WIRE

LOOP NO.	HOME RUN PB	STATION	LOCATION	SIZE	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.
11	PB5	23+19.0 LM	26.5' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	96	185	298
12	PB5	23+47.0 LM	26.5' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	96	185	298
21	PB17	25+22.8 LM	51.8' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	96	176	298
22	PB17	24+94.9 LM	54.5' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	94	176	292
23	PB17	25+19.4 LM	39.9' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	72	176	226
24	PB17	24+91.5 LM	42.6' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	72	176	226
25	PB20	24+84.5 LM	7.1' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	73	101	229
26	PB20	24+56.5 LM	7.0' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	74	101	232
32	PB2	24+16.0 LM	74.5' RT	6'X10'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	62	70	196
34	PB2	24+05.0 LM	74.5' RT	6'X10'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	82	70	256
41	PB12	23+50.2 LM	70.7' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	74	258	232
42	PB12	23+42.9 LM	43.4' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	73	258	229
43	PB12	23+72.8 LM	67.5' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	72	258	226
44	PB12	23+72.8 LM	39.5' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	71	258	223
45	PB12	23+84.8 LM	67.5' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	94	258	292
46	PB12	23+84.8 LM	39.5' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	94	258	292
51	PB20	25+19.9 LM	15.6' RT	6'X6'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	104	101	322
52	PB20	24+59.8 LM	21.0' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	73	101	229
61	PB5	23+19.0 LM	39.1' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	72	185	226
62	PB5	23+47.0 LM	39.1' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	72	185	226
S1	PB6	20+98.7 LM	31.0' RT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	51	405	265
S2	PB6	20+99.4 LM	18.0' RT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	77	405	395
S3	PB22	25+51.0 LM	50.5' RT	6'X10'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	48	108	154
S4	PB22	25+50.0 LM	37.5' RT	6'X10'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	74	108	232
S5	PB10	22+42.2 LM	7.0' LT	6'X10'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	50	385	210
S6	PB11	205+24.9 LE	7.0' RT	6'X18'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	72	723	370
S7	PB11	205+24.9 LE	21.0' RT	6'X18'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	100	723	510
						*** TOTALS	2,088	6,393	7,184

NOTE: LOOPS 31 & 32 TO BE INSTALLED WITH FUTURE CITY PROJECT
* STATION AND LOCATION IS TO FRONT CENTER OF DETECTION LOOP
** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE
TYPE UF CABLE, 2 CONDUCTOR, NO. 14

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.	SPV.0090.5001 TYPE UF CABLE 2 CONDUCTOR NO. 14 L.F.
CB1	SB5 (HEAD A)	246	246
CB1	SB19 (HEAD B)	94	94
CB1	SB2 (HEAD C)	173	173
CB1	SB16 (HEAD D)	213	213
	*** TOTAL	726	726

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
INTERSECTION OF LINCOLN MEMORIAL DR & IH 794 RAMPS

BASE NO.	656.0200.5001 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE INTERSECTION OF LINCOLN MEMORIAL DR & IH 794 RAMPS

LOCATION	658.5069.5001 SIGNAL MOUNTING HARDWARE L.S.
LINCOLN MEMORIAL DR & IH 794 RAMPS	1
TOTAL	1

SHEET 3 OF 5

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\Signals\02_030201_mq_Ramps.dgn PLOT DATE : 8/10/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 34.0000 sf / in.
WISDOT/CADDS SHEET 43

INTERSECTION OF
LINCOLN MEMORIAL DR & IH 794 RAMPS
ALL ITEMS ARE CATEGORY 0020

TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL
TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL
BACKPLATES SIGNAL FACE 3 SECTION 12-INCH
BACKPLATES SIGNAL FACE 4 SECTION 12-INCH
PEDESTRIAN SIGNAL FACE 12-INCH
LED MODULES 12-INCH RED BALL
LED MODULES 12-INCH YELLOW BALL
LED MODULES 12-INCH GREEN BALL
LED MODULES 12-INCH RED ARROW
LED MODULES 12-INCH YELLOW ARROW
LED MODULES 12-INCH GREEN ARROW
LED MODULES COUNTDOWN TIMER 12-INCH

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0412 PEDESTRIAN SIGNAL FACE 12-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0660 LED MODULES COUNTDOWN TIMER 12-INCH EACH
1	SB4	1		1			1	1	1				
2	SB19	1		1			1	1	1				
3	SB19	1		1			1	1	1				
4	SB14	1		1						1	1	1	
5	SB19	1		1						1	1	1	
6	SB14	1		1			1	1	1				
7	SB5	1		1			1	1	1				
8	SB7	1		1			1	1	1				
9	SB4	1		1						1	2		
10	SB5	1		1						1	2		
11	SB17	1		1			1				1	1	
12	SB12	1		1			1				1	1	
13	SB13	1		1			1				1	1	
14	SB8	1		1			1	1	1				
15	SB2		1		1		1	1	1			1	
16	SB7		1		1		1	1	1			1	
17	SB1	1		1						1	1	1	
18	SB2	1		1						1	1	1	
19	SB9	1		1			1				1	1	
20	SB6	1		1			1				1	1	
21	SB1	1		1			1	1	1				
22	SB16	1		1			1	1	1				
23	SB16	1		1			1	1	1				
24	SB8	1		1						1	1	1	
25	SB16	1		1						1	1	1	
26	SB4					1							1
27	SB7					1							1
28	SB10					1							1
29	SB8					1							1
30	SB8					1							1
31	SB16					1							1
32	SB17					1							1
33	SB15					1							1
34	SB14					1							1
35	SB19					1							1
36	SB1					1							1
37	SB2					1							1
	*** TOTALS	23	2	23	2	12	17	12	12	8	15	13	12

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\Signals\02_030201_mq_Ramps.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 34.0000 sf / in.
WISDOT/CADDS SHEET 43

PEDESTAL BASES
TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT
TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT
TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT
POLES TYPE 9
POLES TYPE 10
POLES TYPE 13 SPECIAL
MONOTUBE ARMS 20-FT
MONOTUBE ARMS 30-FT
MONOTUBE ARMS 40-FT
PEDESTRIAN PUSH BUTTONS
ELECTRICAL RISER

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	SPV.0060.5014 POLES TYPE 9 EACH	SPV.0060.5015 POLES TYPE 10 EACH	SPV.0060.5008 POLES TYPE 13 SPECIAL EACH	SPV.0060.5017 MONOTUBE ARMS 20-FT EACH	SPV.0060.5019 MONOTUBE ARMS 30-FT EACH	SPV.0060.5010 MONOTUBE ARMS 40-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	SPV.0060.5012 ELECTRICAL RISER EACH
SB1											1	1
SB2						1			1		1	
SB3	1			1							1	
SB4	1		1									
SB5					1			1			1	
SB6												1
SB7	1		1								1	
SB8											1	1
SB9	1		1									
SB10	1			1							1	
SB11	1	1									1	
SB12	1		1									
SB13	1		1									
SB14	1		1								1	
SB15											1	1
SB16					1			1			1	
SB17	1		1								1	
SB18											1	1
SB19							1			1	1	
*** TOTALS	10	1	7	2	2	1	1	2	1	1	14	5

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE
SIGNAL BASES SB1, SB6, SB8, SB15, AND SB18 ARE CITY OF MILWAUKEE LIGHT POLES. SEE LIGHTING PLAN.

INSTALL TRAFFIC SIGNAL CABINET, LINCOLN MEMORIAL DR & IH 794 RAMPS

LOCATION	SPV.0105.5007 INSTALL TRAFFIC SIGNAL CABINET L.S.
LINCOLN MEMORIAL DR & IH 794 RAMPS	1
TOTAL	1

EVP DETECTOR HEAD INSTALLATION AT LINCOLN MEMORIAL DR & IH 794 RAMPS

LOCATION	SPV.0105.5011 EVP DETECTOR HEAD INSTALLATION L.S.
LINCOLN MEMORIAL DR & IH 794 RAMPS	1
TOTAL	1

INSTALL S-F MICROWAVE DETECTOR

SIGN STRUCTURE NO.	DETECTOR NO.	SPV.0105.5014 INSTALL S-F MICROWAVE DETECTOR S40-362 L.S.	SPV.0105.5015 INSTALL S-F MICROWAVE DETECTOR S40-850 L.S.
S40-362	MD1	1	
S40-850	MD2		1
TOTAL		1	1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	LS	TRAFFIC SIGNAL CONTROLLER AND CABINET
1	LS	EVP DETECTION SYSTEM
1	LS	MICROWAVE DETECTION FOR S40-362
1	LS	MICROWAVE DETECTION FOR S40-850

INTERSECTION OF
LINCOLN MEMORIAL DR & IH 794 RAMPS
ALL ITEMS ARE CATEGORY 0020

PULL BOXES, VAULT, 17"X30"X18"
JUCTION BOX 12"x12"X6"

PULL BOX NO.	STATION	LOCATION	SPV.0060.5005 PULL BOX, VAULT 17"X30"X18" EACH	SPV.0060.5013 JUNCTION BOX 12"X12"X6" EACH
PB1	24+31.8 LM	78.7' RT	1	
PB2	24+31.7 LM	87.0' RT	1	
PB3	23+64.0 LM	79.5' RT	1	
PB4	23+44.1 LM	56.7' RT	1	
PB5	23+23.0 LM	50.8' RT	1	
PB6	20+86.4 LM	42.1' RT	1	
PB7	23+46.1 LM	15.2' RT	1	
PB8	23+62.1 LM	24.9' LT	1	
PB9	23+33.6 LM	52.9' LT	1	
PB10	22+42.2 LM	18.7' LT	1	
PB11	207+92.9 LE	37.8' RT	1	
PB12	23+61.4 LM	63.2' LT	1	
PB13	24+02.2 LM	25.3' LT	1	
PB14	24+09.9 LM	79.3' LT	1	
PB15	24+66.7 LM	18.2' LT	1	
PB16	24+66.8 LM	36.2' LT	1	
PB17	25+13.9 LM	29.0' LT	1	
PB18	24+83.7 LM	70.4' LT	1	
PB19	24+66.8 LM	9.4' RT	1	
PB20	24+80.4 LM	6.0' RT	1	
PB21	24+66.8 LM	61.3' RT	1	
PB22	25+40.0 LM	61.2' RT	1	
PB23	205+57.0 LE	45.0' RT	1	
PB24	202+87.0 LE	54.0' RT	1	
PB25	202+48.0 LE	54.0' RT	1	
PB26	199+60.7 LE	2.5' LT	1	
JB3	OUTSIDE OF PARAPET AT S40-362			1
JB4	OUTSIDE OF PARAPET AT S40-850			1
		*** TOTALS	26	2

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 5 OF 5

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET 438	E

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.
CB1	PB1		87
PB1	PB2	12	
PB1	PB3		110
PB3	PB4	6	
PB3	PB5		88
PB5	PB6		48
PB6	PB7	72	
PB6	PB8		76
PB8	PB9		84
PB9	PB10		53
PB9	PB12	31	
PB9	PB13		112
PB10	PB11	42	
PB13	PB14	51	
PB13	PB15		94
PB15	PB16		84
PB16	PB17	33	
PB16	PB18		100
PB18	PB19	19	
PB18	PB20		50
PB20	PB21		124
PB21	PB22	33	
PB21	PB23		74
PB23	PB24		62
PB24	PB25	26	
PB24	PB26	17	
PB26	PB27		84
PB27	CB1		51
PB1	SB1	7	
PB3	SB2	12	
PB3	SB3	4	
PB6	SB4		18
PB8	SB5		11
PB9	SB6	16	
PB13	SB7	18	
PB15	SB8	17	
PB16	SB9	7	
PB18	SB10	5	
PB20	SB11		7
PB21	SB12	5	
PB23	SB13	16	
PB24	SB14	15	
PB26	SB15		9
PB26	SB16		16
PB27	SB17	17	
*** TOTALS		481	1442

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
LINCOLN MEMORIAL DR & CLYBOURN ST
ALL ITEMS ARE CATEGORY 0020

3

CONCRETE BASES TYPE 1
CONCRETE BASES TYPE 10
CONCRETE BASES TYPE 10 SPECIAL
CONCRETE BASES TYPE 13
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	SPV.0060.5006 CONCRETE BASES TYPE 10 SPECIAL EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	431+37.9 LN	41.6' RT					1
SB2	431+17.2 LN	26.6' LT	1				
SB3	431+08.1 LN	28.5' LT	1				
SB4	30+98.4 LM	5.0' RT		1			
SB5	30+57.9 LM	30.2' LT		1			
SB7	29+33.8 CL	11.0' RT	1				
SB10	32+50.1 LM	8.0' RT	1				
SB11	32+56.4 LM	19.3' RT			1		
SB14	31+50.8 CL	8.0' RT	1				
SB15	31+29.3 CL	14.5' RT				1	
SB16	31+49.9 CL	21.0' RT		1			
*** TOTALS			5	3	1	1	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 6

3

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	53
SB1	SB2	97
SB2	SB3	30
SB3	SB4	116
SB4	SB5	87
SB5	SB6	89
SB6	SB7	110
SB7	SB8	102
SB8	SB9	80
SB9	SB10	82
SB10	SB11	57
SB11	SB12	94
SB12	SB13	72
SB13	SB14	82
SB14	SB15	61
SB15	SB16	39
SB16	SB17	95
SB17	CB1	51
	*** TOTAL	1397

* INCLUDE GROUNDING ROD FOR SB1, SB6, SB8, SB9, SB13 & SB17
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 7-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG
CABLE TRAFFIC SIGNAL 15-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG L.F.
CB1	SB1			53	
SB1	HEAD 21	19			
CB1	SB2			119	
SB2	HEAD 24	19			
CB1	SB3			111	
SB3	HEAD 1	14			
CB1	SB4				205
SB4	HEAD 4	19			
SB4	HEAD 8	37			
SB4	HEAD 9	49			
CB1	SB5			242	
SB5	HEAD 10	36			
SB5	HEAD 11	48			
CB1	SB6			295	
SB6	HEAD 12	19			
SB6	HEAD 27	18			
CB1	SB7			359	
SB7	HEAD 15	19			
SB7	HEAD 19	19			
CB1	SB8			405	
SB8	HEAD 20	19			
SB8	HEAD 28	18			
CB1	SB9			347	
SB9	HEAD 5	19			
SB9	HEAD 7	19			
SB9	HEAD 29	18			
CB1	SB10			289	
SB10	HEAD 6	19			
SB10	HEAD 30	18			
CB1	SB11			260	
SB11	HEAD 2	50			
SB11	HEAD 3	61			
SB11	HEAD 31	18			
CB1	SB12		184		
SB12	HEAD 32	15			
CB1	SB13			158	
SB13	HEAD 16	19			
SB13	HEAD 18	19			
SB13	HEAD 33	18			
CB1	SB14		120		
SB14	HEAD 34	15			
CB1	SB15				91
SB15	HEAD 22	52			
SB15	HEAD 23	40			
SB15	HEAD 25	73			
SB15	HEAD 26	62			
CB1	SB16			98	
SB14	HEAD 13	39			
SB14	HEAD 17	28			
SB14	HEAD 35	18			
CB1	SB17			45	
SB17	HEAD 14	19			
SB17	HEAD 16	18			
	*** TOTALS	1010	304	2781	296

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\Signals\03_030201_mq_Clybourn.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 34.0000 sf / in.
WISDOT/CADDS SHEET 43

INTERSECTION OF
LINCOLN MEMORIAL DR & CLYBOURN ST
ALL ITEMS ARE CATEGORY 0020

CONDUIT LOOP DETECTOR
LOOP DETECTOR LEAD IN CABLE
LOOP DETECTOR WIRE

LOOP NO.	HOME RUN PB	STATION	LOCATION	SIZE	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.
11	PB5	30+88.8 LM	16.8' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	69	156	217
12	PB5	31+16.8 LM	15.4' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	76	156	238
21	PB17	32+63.7 LM	29.1' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	76	342	238
22	PB17	32+37.1 LM	30.2' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	70	342	220
23	PB19	32+70.0 LM	16.2' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	88	278	274
24	PB19	32+42.8 LM	17.0' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	88	278	274
25	PB19	32+71.9 LM	5.2' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	68	278	214
26	PB19	32+44.2 LM	6.0' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	66	278	208
31	PB25	31+67.1 CL	15.0' LT	6'X30'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	113	130	349
32	PB25	31+53.1 CL	15.0' LT	6'X10'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	130	208
33	PB25	31+66.1 CL	5.0' LT	6'X30'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	88	130	274
34	PB25	31+52.1 CL	5.0' LT	6'X10'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	48	130	154
41	PB11	28+71.6 CL	55.7' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	74	355	232
42	PB11	28+97.3 CL	70.1' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	74	355	232
43	PB12	28+91.1 CL	34.5' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	78	291	244
44	PB12	29+19.1 CL	34.5' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	76	291	238
45	PB14	28+97.0 CL	23.5' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	66	367	208
46	PB14	29+25.0 CL	23.5' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	66	367	208
61	PB4	30+90.6 LM	54.2' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	79	118	247
62	PB4	31+18.6 LM	55.0' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	74	118	232
63	PB4	30+90.9 LM	41.7' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	102	118	316
64	PB4	31+18.9 LM	42.5' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	99	118	307
101	PB2	430+96.6 LN	18.7' RT	6'X16'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	62	69	196
102	PB2	431+24.0 LN	18.5' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	69	208
103	PB2	430+96.3 LN	7.6' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	90	69	280
104	PB2	431+24.1 LN	7.5' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	88	69	274
131	PB4	430+95.9 LN	5.5' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	118	286
132	PB4	431+24.2 LN	5.6' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	93	118	289
133	PB4	430+95.6 LN	16.4' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	72	118	226
134	PB4	431+24.2 LN	16.6' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	72	118	226
S11	PB7	30+00.3 LM	20.1' LT	6'X10'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	73	252	302
S12	PB7	30+00.0 LM	7.7' LT	6'X10'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	48	252	202
S13	PB22	33+37.1 LM	57.6' RT	6'X10'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	52	205	166
S14	PB22	33+36.1 LM	44.0' RT	6'X10'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	82	205	256
S15	PB22	33+35.8 LM	33.0' RT	6'X10'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	104	205	322
S16	JB2	425+99.0 LN	17.5' RT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	56	519	290
S17	JB2	426+00.0 LN	6.5' RT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	77	519	395
						*** TOTALS	1,922	5,333	6,016

* STATION AND LOCATION IS TO FRONT CENTER OF DETECTION LOOP
** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE
TYPE UF CABLE, 2 CONDUCTOR, NO. 14

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.	SPV.0090.5001 TYPE US CABLE 2 CONDUCTOR NO. 14 L.F.
CB1	SB4 (HEAD A)	250	250
CB1	SB11 (HEAD B)	307	307
CB1	SB16 (HEAD C)	143	143
CB1	SB14 (HEAD D)	125	125
	*** TOTAL	825	825

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
INTERSECTION OF LINCOLN MEMORIAL DR & CLYBOURN ST

BASE NO.	656.0200.5002 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE INTERSECTION OF LINCOLN MEMORIAL DR & CLYBOURN ST

LOCATION	658.5069.5002 SIGNAL MOUNTING HARDWARE L.S.
LINCOLN MEMORIAL DR & CLYBOURN ST	1
TOTAL	1

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\Signals\03_030201_mq_Clybourn.dgn PLOT DATE : 8/10/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 34.0000 sf / in.
WISDOT/CADDS SHEET 43

INTERSECTION OF
LINCOLN MEMORIAL DR & CLYBOURN ST
ALL ITEMS ARE CATEGORY 0020

3

3

TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL
BACKPLATES SIGNAL FACE 3 SECTION 12-INCH
PEDESTRIAN SIGNAL FACE 12-INCH
LED MODULES 12-INCH RED BALL
LED MODULES 12-INCH YELLOW BALL
LED MODULES 12-INCH GREEN BALL
LED MODULES 12-INCH RED ARROW
LED MODULES 12-INCH YELLOW ARROW
LED MODULES 12-INCH GREEN ARROW
LED MODULES COUNTDOWN TIMER 12-INCH
PROGRAMMABLE TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0412 PEDESTRIAN SIGNAL FACE 12-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0660 LED MODULES COUNTDOWN TIMER 12-INCH EACH	658.1110 PROGRAMMABLE TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH
1	SB3		1									1
2	SB11		1									1
3	SB11		1									1
4	SB4	1	1					1	1	1		
5	SB9		1									1
6	SB10		1									1
7	SB9	1	1		1	1	1					
8	SB4	1	1		1	1				1		
9	SB4	1	1		1	1				1		
10	SB5	1	1		1	1				1		
11	SB5	1	1		1	1	1					
12	SB6	1	1		1	1	1					
13	SB16	1	1		1	1	1					
14	SB17	1	1		1	1	1					
15	SB7	1	1					1	2			
16	SB13	1	1					1	2			
17	SB16	1	1					1	2			
18	SB13	1	1		1	1	1					
19	SB7	1	1		1	1	1					
20	SB8	1	1		1	1	1					
21	SB1	1	1		1	1	1					
22	SB15		1									1
23	SB15		1									1
24	SB2		1									1
25	SB15		1									1
26	SB15		1									1
27	SB6			1							1	
28	SB8			1							1	
29	SB9			1							1	
30	SB10			1							1	
31	SB11			1							1	
32	SB12			1							1	
33	SB13			1							1	
34	SB14			1							1	
35	SB16			1							1	
36	SB17			1							1	
	*** TOTALS	16	26	10	12	12	9	4	7	4	10	10

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
LINCOLN MEMORIAL DR & CLYBOURN ST
ALL ITEMS ARE CATEGORY 0020

PEDESTAL BASES
TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT
TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT
POLES TYPE 9
POLES TYPE 10
POLES TYPE 12
POLES TYPE 12 SPECIAL
MONOTUBE ARMS 20-FT
MONOTUBE ARMS 25-FT
MONOTUBE ARMS 40-FT
MONOTUBE ARMS 50-FT
PEDESTRIAN PUSH BUTTONS
ELECTRICAL RISER

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	SPV.0060.5014 POLES TYPE 9 EACH	SPV.0060.5015 POLES TYPE 10 EACH	SPV.0060.5016 POLES TYPE 12 EACH	SPV.0060.5007 POLES TYPE 12 SPECIAL EACH	SPV.0060.5017 MONOTUBE ARMS 20-FT EACH	SPV.0060.5018 MONOTUBE ARMS 25-FT EACH	SPV.0060.5010 MONOTUBE ARMS 40-FT EACH	SPV.0060.5020 MONOTUBE ARMS 50-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	SPV.0060.5012 ELECTRICAL RISER EACH
SB1													1
SB2	1		1										
SB3	1		1										
SB4				1					1				
SB5					1				1				
SB6												1	1
SB7	1		1									1	
SB8												1	1
SB9												1	1
SB10	1		1									1	
SB11							1			1		1	
SB12												1	1
SB13												1	1
SB14	1	1										1	
SB15						1					1		
SB16				1				1				1	
SB17												1	1
*** TOTALS	5	1	4	2	1	1	1	1	2	1	1	11	7

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE
SIGNAL BASES SB1, SB6, SB8, SB9, SB12, SB13 AND SB17 ARE CITY OF MILWAUKEE LIGHT POLES. SEE LIGHTING PLAN.

PULL BOXES, VAULT, 17"X30"X18"

PULL BOX NO.	STATION	LOCATION	SPV.0060.5005 PULL BOX VAULT 17"X30"X18" EACH
PB1	431+13.1 LN	28.1' RT	1
PB2	431+02.2 LN	28.3' RT	1
PB3	431+04.6 LN	26.1' LT	1
PB4	430+99.1 LN	28.4' LT	1
PB5	30+89.4 LM	28.3' RT	1
PB6	30+81.1 LM	5.9' RT	1
PB7	30+09.7 LM	3.6' RT	1
PB8	30+68.5 LM	30.0' LT	1
PB9	30+90.2 LM	66.0' LT	1
PB10	330+33.1 LS	37.3' LT	1
PB11	28+71.5 CL	69.3' RT	1
PB12	28+96.3 CL	49.2' RT	1
PB13	29+51.2 CL	9.7' RT	1
PB14	29+01.0 CL	14.4' RT	1
PB15	29+73.8 CL	31.4' LT	1
PB16	32+29.5 LM	41.9' LT	1
PB17	32+59.7 LM	40.5' LT	1
PB18	32+48.8 LM	3.7' RT	1
PB19	32+67.3 LM	4.1' RT	1
PB20	32+60.8 LM	25.0' RT	1
PB21	32+91.4 LM	78.7' RT	1
PB22	32+23.7 LM	71.7' RT	1
PB23	32+57.3 LM	97.0' RT	1
PB24	31+36.2 CL	5.3' RT	1
PB25	31+62.0 CL	4.8' RT	1
PB26	31+34.3 CL	22.3' RT	1
PB27	431+53.6 LN	38.3' RT	1
		*** TOTALS	22

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
LINCOLN MEMORIAL DR & CLYBOURN ST
ALL ITEMS ARE CATEGORY 0020

3

INSTALL TRAFFIC SIGNAL CABINET, LINCOLN MEMORIAL DR & CLYBOURN ST

LOCATION	SPV.0105.5008 INSTALL TRAFFIC SIGNAL CABINET L.S.
LINCOLN MEMORIAL DR & CLYBOURN ST	1
TOTAL	1

EVP DETECTOR HEAD INSTALLATION AT LINCOLN MEMORIAL DR & IH 794 RAMPS/CLYBOURN ST

LOCATION	SPV.0105.5012 EVP DETECTOR HEAD INSTALLATION L.S.
LINCOLN MEMORIAL DR & IH 794 RAMPS/CLYBOURN ST	1
TOTAL	1

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	LS	TRAFFIC SIGNAL CONTROLLER AND CABINET
1	LS	EVP DETECTION SYSTEM

SHEET 6 OF 6

3

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.
CB1	PB1		42
PB3	PB4		138
PB1	SB1	21	
PB2	SB2	4	
PB3	SB3		6
PB3	SB4	4	
PB4	SB5	5	
PB5	SB6	5	
PB6	SB7	5	
PB7	SB8	5	
PB8	SB9	11	
PB9	SB10	10	
PB10	SB11	7	
PB1	SB12		7
	*** TOTALS	77	193

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES TYPE 1
CONCRETE BASES TYPE 10 SPECIAL
CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	SPV.0060.5006 CONCRETE BASES TYPE 10 SPECIAL EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	21+32.3 CL	41.0' LT			1
SB1	21+41.0 CL	39.0' LT	1		
SB2	21+46.6 CL	51.6' LT	1		
SB3	22+04.5 CL	60.1' LT		1	
SB4	22+07.4 CL	51.5' LT	1		
SB6	22+31.2 CL	8.0' RT	1		
SB7	22+31.2 CL	21.0' RT	1		
SB8	22+31.2 CL	64.0' RT	1		
SB9	63+68.5 VB	23.0' RT	1		
SB10	63+68.3 VB	24.3' LT	1		
SB11	63+16.7 JE	6.0' LT	1		
SB12	21+27.2 CL	39.5' LT		1	
		*** TOTALS	9	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELETRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	53
SB1	SB2	87
SB2	SB3	88
SB3	SB4	24
SB4	SB5	75
SB5	SB6	66
SB6	SB7	51
SB7	SB8	65
SB8	SB9	82
SB9	SB10	87
SB10	SB11	109
SB11	SB12	124
SB12	CB1	36
	*** TOTAL	947

* INCLUDE GROUNDING ROD FOR SB5
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
CLYBOURN ST & VAN BUREN ST
ALL ITEMS ARE CATEGORY 0020

3

CABLE TRAFFIC SIGNAL 5-14 AWG
CABLE TRAFFIC SIGNAL 7-14 AWG
CABLE TRAFFIC SIGNAL 12-14 AWG

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB1		53	
SB1	HEAD 15	18		
CB1	SB2			84
SB2	HEAD 2		22	
CB1	SB3			150
SB3	HEAD 10	60		
SB3	HEAD 11	48		
SB3	HEAD 13	36		
CB1	SB4			148
SB4	HEAD 3		22	
SB4	HEAD 16	18		
CB1	SB5			201
SB5	HEAD 5	21		
SB5	HEAD 13		22	
SB5	HEAD 17	18		
CB1	SB6			243
SB6	HEAD 8	19		
SB6	HEAD 18	18		
CB1	SB7		264	
SB7	HEAD 19	18		
CB1	SB8		305	
SB8	HEAD 20	18		
CB1	SB9			275
SB9	HEAD 1	19		
CB1	SB10			222
SB9	HEAD 4		22	
SB10	HEAD 9		22	
CB1	SB11			141
SB11	HEAD 14	19		
CB1	SB12			45
SB12	HEAD 6	63		
SB12	HEAD 7	51		
	*** TOTALS	444	732	1509

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 1 OF 3

INTERSECTION OF
CLYBOURN ST & VAN BUREN ST
ALL ITEMS ARE CATEGORY 0020

3

3

TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL
TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL
BACKPLATES SIGNAL FACE 3 SECTION 12-INCH
BACKPLATES SIGNAL FACE 4 SECTION 12-INCH
PEDESTRIAN SIGNAL FACE 12-INCH
LED MODULES 12-INCH RED BALL
LED MODULES 12-INCH YELLOW BALL
LED MODULES 12-INCH GREEN BALL
LED MODULES 12-INCH GREEN ARROW
LED MODULES COUNTDOWN TIMER 12-INCH
PROGRAMMABLE TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL
PROGRAMMABLE TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0412 PEDESTRIAN SIGNAL FACE 12-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0660 LED MODULES COUNTDOWN TIMER 12-INCH EACH	658.1110 PROGRAMMABLE TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.1115 PROGRAMMABLE TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH
1	SB9	1		1			1	1	1				
2	SB1				1								1
3	SB4				1								1
4	SB10				1								1
5	SB5	1		1			1	1	1				
6	SB12	1		1			1	1	1				
7	SB12	1		1			1	1	1				
8	SB6	1		1			1	1	1				
9	SB10				1								1
10	SB3			1								1	
11	SB3			1								1	
12	SB3			1								1	
13	SB5		1		1		1	1	1	1			
14	SB11	1		1			1	1		1			
15	SB2					1					1		
16	SB4					1					1		
17	SB5					1					1		
18	SB6					1					1		
19	SB7					1					1		
20	SB8					1					1		
	*** TOTALS	6	1	9	5	6	7	7	6	2	6	3	4

NOTE: SIGNAL HEAD 13 REQUIRES CIRCULAR INDICATOR WITH TUNNEL VISOR
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

ELECTRICAL SERVICE METER BREAKER PEDESTAL
INTERSECTION OF CLYBOURN ST & VAN BUREN ST

BASE NO.	656.0200.5004 ELETRICAL SERVICE METER BREAKER PEDESTAL L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

INTERSECTION OF
CLYBOURN ST & VAN BUREN ST
ALL ITEMS ARE CATEGORY 0020

3

PULL BOXES, VAULT, 17"X30"X18"

PULL BOX NO.	STATION	LOCATION	SPV.0060.5005 PULL BOX VAULT 17"X30"X18" EACH
PB4	22+33.6 CL	31.1' LT	1
PB5	22+33.8 CL	4.4' RT	1
PB6	22+33.8 CL	24.7' RT	1
PB7	22+32.8 CL	60.1' RT	1
		*** TOTALS	4

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER N THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PEDESTAL BASES BLACK
TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT BLACK
TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT BLACK
TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT BLACK
POLES TYPE 13 SPECIAL BLACK
MONOTUBE ARMS 40-FT BLACK
PEDESTRIAN PUSH BUTTONS
ELECTRICAL RISER

SIGNAL BASE NO.	SPV.0060.5001 PEDESTAL BASES BLACK EACH	SPV.0060.5002 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT BLACK EACH	SPV.0060.5003 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT BLACK EACH	SPV.0060.5004 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT BLACK EACH	SPV.0060.5009 POLES TYPE 13 SPECIAL BLACK EACH	SPV.0060.5011 MONOTUBE ARMS 40-FT BLACK EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	SPV.0060.5012 ELECTRICAL RISER EACH
SB1	1	1					1	
SB2	1			1				
SB3					1	1		
SB4	1			1			1	
SB5							1	1
SB6	1		1				1	
SB7	1	1					1	
SB8	1	1					1	
SB9	1		1					
SB10	1			1				
SB11	1		1					
SB12					1	1		
*** TOTALS	9	3	3	3	2	2	6	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE
SIGNAL BASE SB5 IS A CITY OF MILWAUKEE LIGHT POLE. SEE LIGHTING PLAN.

INSTALL TRAFFIC SIGNAL CABINET, CLYBOURN ST & VAN BUREN ST

INSTALL TRAFFIC SIGNAL CABINET, CLYBOURN ST & VAN BUREN ST

LOCATION	SPV.0105.5010 INSTALL TRAFFIC SIGNAL CABINET L.S.
CLYBOURN ST & VAN BUREN ST	1
TOTAL	1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	LS	TRAFFIC SIGNAL CONTROLLER AND CABINET

SHEET 3 OF 3

3

652.0235
CONDUIT
RIGID NONMETALLIC
SCHEDULE 40
3-INCH

FROM	TO	L.F.
CB1	PB1	24
PB2	CB1	24
*** TOTALS		48

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INTERSECTION OF
LINCOLN MEMORIAL DR & MICHIGAN ST
ALL ITEMS ARE CATEGORY 0020

CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL

654.0217
CONCRETE CONTROL
CABINET BASES
TYPE 9 SPECIAL

BASE NO.	STATION	LOCATION	EACH
CB1	34+63.8 LM	92.7' RT	1
		*** TOTALS	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

ELECTRICAL SERVICE METER BREAKER PEDESTAL
INTERSECTION OF LINCOLN MEMORIAL DR & MICHIGAN ST

656.0200.5003
ELETRICAL SERVICE
METER BREAKER
PEDESTAL

BASE NO.	L.S.
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

TEMPORARY TRAFFIC SIGNALS SPECIAL,
LINCOLN MEMORIAL DR & MICHIGAN ST

SPV.0105.5013
TEMPORARY TRAFFIC SIGNALS SPECIAL

LOCATION	L.S.
LINCOLN MEMORIAL DR & MICHIGAN ST	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

PULL BOXES, VAULT, 17"X30"X18"

SPV.0060.5005
PULL BOX,
VAULT
17"X30"X18"

PULL BOX NO.	STATION	LOCATION	EACH
PB1	34+57.9 LM	87.6' RT	1
PB2	34+69.6 LM	97.8' RT	1
		*** TOTALS	2

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TEMPORARY VEHICLE DETECTION SYSTEM, LINCOLN MEMORIAL DR & MICHIGAN ST

SPV.0105.5001
TEMPORARY VEHICLE
DETECTION SYSTEM

LOCATION	L.S.
LINCOLN MEMORIAL DR & MICHIGAN ST	1
TOTAL	1

INSTALL TRAFFIC SIGNAL CABINET, LINCOLN MEMORIAL DR & MICHIGAN ST

SPV.0105.5009
INSTALL
TRAFFIC SIGNAL CABINET

LOCATION	L.S.
LINCOLN MEMORIAL DR & MICHIGAN ST	1
TOTAL	1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	LS	TRAFFIC SIGNAL CONTROLLER AND CABINET

SHEET 1 OF 1

3

TRAFFIC SIGNAL INTERCONNECT QUANTITIES
ALL ITEMS ARE CATEGORY 0020

FIELD SYSTEM INTEGRATOR

LOCATION	670.0100.0002 FIELD SYSTEM INTEGRATOR LS
TRAFFIC SIGNALS	1
TOTALS	1

INSTALL FIBER CABLE OUTDOOR PLANS 36-CT

FROM	TO	678.0036 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 36-CT L.F.
WISDOT CV 424	TES MH 6	275
TES MH6	TES MH7	445
TES MH7	TES MH8	445
TES MH8	TES MH9	224
TES MH9	TES MH1837	1495
	TOTALS	2884

NOTE: ALL FIBER OPTIC CABLE WILL BE STATE FURNISHED
LEAVE 1200' OF FO CABLE UNCUT IN TES MH1837

3

INSTALL FIBER OPTIC IN CABINET LINCOLN MEMORIAL DR & IH 794 RAMPS

LOCATION	SPV.0105.5002
CB1	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
55	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 6-CT
1	EACH	IP ETHERNET SWITCH WITH SINGLE MODE FIBER PORTS

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
3	EACH	CAT-5E CABLE 1-METER

INSTALL FIBER OPTIC IN CABINET LINCOLN MEMORIAL DR & CLYBOURN ST

LOCATION	SPV.0105.5003
CB1	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
125	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 6-CT
1	EACH	IP ETHERNET SWITCH WITH SINGLE MODE FIBER PORTS

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
3	EACH	CAT-5E CABLE 1-METER

INSTALL FIBER OPTIC IN CABINET LINCOLN MEMORIAL DR & MICHIGAN ST

LOCATION	SPV.0105.5004
CB1	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
80	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 6-CT
1	EACH	IP ETHERNET SWITCH WITH SINGLE MODE FIBER PORTS

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
3	EACH	CAT-5E CABLE 1-METER

SHEET 1 OF 1

3

FTMS CABLE REMOVALS

CATEGORY	ROADWAY	ITEM ID	674.0300* REMOVE CABLE LF
0010	IH 794		
		EXMD180 - EXPB149	30
		EXPB149 - EXMD181	25
		EXPB149 - EXPB150	165
		EXPB150 - EXCB-CCTV-40-0229	10
		EXPB150 - HML-40-027	10
		TOTAL	240

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

FTMS REMOVALS

CATEGORY	ROADWAY	ITEM	204.0195* REMOVING CONCRETE BASE EACH	653.0905 REMOVING PULL BOXES EACH	SPV.0060.4001 REMOVING MICROWAVE DETECTOR EACH	SPV.0060.4002 REMOVING CONTROLLER CABINET EACH	SPV.0060.4003 REMOVING CONTROLLER CABINET BASE EACH	SPV.0060.4004 REMOVING POLE EACH
0010	IH 794							
		EXMD180	1	--	1	--	--	1
		EXPB149	--	1	--	--	--	--
		EXMD181	1	--	1	--	--	1
		EXPB150	--	1	--	--	--	--
		EXCB-CCTV-40-0229	--	--	--	1	1	--
		TOTALS	2	2	2	1	1	2

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

3

FTMS CONDUIT AND CABLE

CATEGORY	ROADWAY	ITEM ID	652.0125* CONDUIT RIGID METALLIC 2-INCH LF	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0405 CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH LF	655.0510 ELECTRICAL WIRE TRAFFIC SIGNALS 12 AWG LF	655.0525 ELECTRICAL WIRE TRAFFIC SIGNALS 6 AWG LF	671.0132 CONDUIT HDPE 3-DUCT 2-INCH LF	671.0232 CONDUIT HDPE DIRECTIONAL BORE 3-DUCT 2-INCH LF	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT LF	678.0072 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT LF
0010	IH 794										
		EXJB425 - CV424	--	--	90	90	--	--	--	--	190
		CV424 - CV110LW	--	--	--	245	--	245	--	345	345
		CV110LW - PB110LW	--	170	--	85	--	--	--	135	--
		PB110LW - PB209LE	--	140	--	70	--	--	--	--	--
		PB209LE - LIGHTING PULL BOX	--	20	--	10	--	--	--	--	--
		PB110LW - CB-CCTV-40-0229	--	80	--	20	--	--	--	60	--
		CV110LW - CV104LW	--	--	--	580	--	--	580	--	680
		CV104LW - CV199LE	--	--	--	600	--	--	600	--	700
		CV199LE - EXCV230	--	--	--	100	--	--	100	--	200
		MB110LW - CB-CCTV-40-0229	10	40	--	--	150	--	--	--	--
		TOTALS	10	450	90	1800	150	245	1280	540	2115

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FTMS COMMUNICATIONS AND CABINETS

CATEGORY	ROADWAY	ITEM ID	654.0220 CONCRETE CONTROL CABINET BASES TYPE 10 EACH	656.0200.0002 ELECTRICAL SERVICE METER BREAKER PEDESTAL (MB110LW) L.S.	656.0500.0001 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CCTV-40-0229) L.S.	657.0255 TRANSFORMER BASES 11 1/2-INCH INCH BOLT CIRCLE EACH	659.0802* PLAQUES SEQUENCE IDENTIFICATION EACH	675.0400.S INSTALL ETHERNET SWITCH EACH	678.0400 FIBER OPTIC TERMINATION EACH	SPV.0060.4005 INSTALL CCTV CABINET EACH	SPV.0060.4006 GROUND ROD EACH	SPV.0060.4007 INSTALL HIGH MAST LIGHT TOWER CCTV CAMERA EACH
0010	IH 794											
		CB-CCTV-40-0229	1	--	1	1	1	1	6	1	1	--
		HML-40-027	--	--	--	--	--	--	--	--	--	1
		MB110LW	--	1	--	--	--	--	--	--	--	--
		CB1 (IH 794 RAMPS)	--	--	--	--	--	--	6	--	--	--
		CB1 (CLYBOURN ST.)	--	--	--	--	--	--	6	--	--	--
		CB1 (MICHGAN ST.)	--	--	--	--	--	--	6	--	--	--
		TOTALS	1	1	1	1	1	1	24	1	1	1

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FTMS PULLBOXES & COMMUNICATION VAULTS

CATEGORY	ROADWAY	ITEM ID	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	653.0140* PULL BOXES STEEL 24 X 42- INCH EACH	673.0105 COMMUNICATION VAULT TYPE 1 EACH	678.0300 FIBER OPTIC SPLICE EACH
0010	IH 794					
		CV424	--	--	1	76
		CV110LW	--	--	1	--
		PB110LW	--	1	--	--
		PB209LE	--	1	--	--
		CV104LW	--	--	1	--
		CV199LE	--	--	1	--
		EXCV230	1	--	--	72
		TES MH6	--	--	--	8
		TES MH8	--	--	--	8
		TES MH10	--	--	--	8
	TOTALS		1	2	4	172

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

FTMS LUMP SUM ITEMS

CATEGORY	ROADWAY	670.0100.0001 FIELD SYSTEM INTEGRATOR LS	670.0200 ITS DOCUMENTATION LS	678.0500 COMMUNICATION SYSTEM TESTING LS
0010	IH 794			
	PROJECT	1	1	1
	TOTALS	1	1	1

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	FTMS MISCELLANEOUS QUANTITIES	SHEET:	E

PLOT DATE : PLOT BY : PLOT NAME : PLOT SCALE : 1:1

3

SURVEY PROJECT

PROJECT NUMBER	CAT. 0010 SPV.0105.1003 SURVEY PROJECT LS	CAT. 0020 SPV.0105.1003 SURVEY PROJECT LS
1300-13-74	0.5	0.5
PROJECT TOTALS	0.5	0.5

CONCRETE PAVEMENT JOINT LAYOUT

CATEGORY 0020

PROJECT	SPV.0105.1004 CONCRETE PAVEMENT JOINT LAYOUT LS
1300-13-74	1
PROJECT TOTAL	1

3

PAVEMENT CLEANUP PROJECT

CATEGORY 0020

PROJECT	SPV.0105.1005 PAVEMENT CLEANUP PROJECT LS
1300-13-74	1
PROJECT TOTAL	1

GEOTECHNICAL INSTRUMENTATION

CATEGORY 0010

PROJECT	SPV.0105.1006 GEOTECHNICAL INSTRUMENTATION LS
1300-13-74	1
PROJECT TOTAL	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION PROJECT PLAT TITLE SHEET

1300-13-21

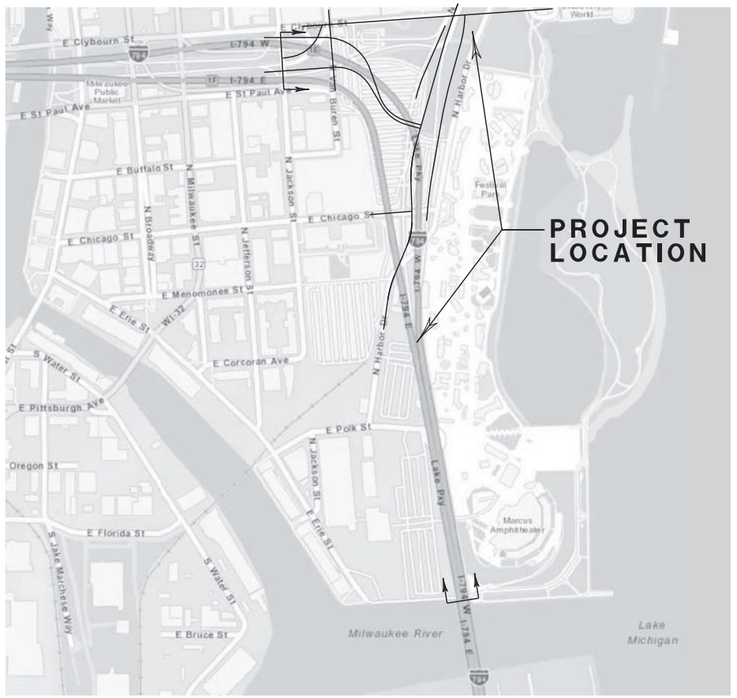
MILWAUKEE RIVER TO NORTH JACKSON STREET

IH 794

MILWAUKEE COUNTY



GN



LAYOUT
SCALE 0 0.10 MILES

CONVENTIONAL ABBREVIATIONS

ACRES	AC.
AND OTHERS	ET.AL.
CENTERLINE	C/L
CERTIFIED SURVEY MAP	CSM
CORNER	COR.
COUNTY	CO.
DOCUMENT	DOC.
HIGHWAY EASEMENT	H.E.
MONUMENT	MON.
PAGE	P.
PROPERTY LINE	PL
RECORDED AS	(100')
REFERENCE LINE	R/L
RIGHT-OF-WAY	R/W
SECTION	SEC.
STATION	STA.
WISCONSIN	WI.

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN (1" UNLESS NOTED)
FOUND CHISELED CROSS
PROPOSED REFERENCE LINE
PARALLEL OFFSET
R/W MONUMENT ○ • (SET)
R/W STANDARD △ ▲ (SET)
SECTION CORNER MONUMENT
SECTION CORNER SYMBOL
R/W BOUNDARY POINT (100)
PROPOSED R/W LINE
EXISTING H.E. LINE
PROPERTY LINE
LOT & TIE LINES
CORPORATE LIMITS
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
EXISTING CENTERLINE
RECORDED AS ( )

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

NOTES:

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR IH 794 ESTABLISHED FROM WISCONSIN DOT PROJECT 1300-13-20.

A **HIGHWAY EASEMENT** (HE) IS AN EASEMENT FOR HIGHWAY PURPOSES, AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION REGIONAL OFFICE IN WAUKESHA.

UTILITY INFORMATION IS NOT SHOWN ON THIS PLAT.

RESERVED FOR REGISTER OF DEEDS
TPP NUMBER 1300-13-21 - 4.01
SHEET 2 OF 2
AMMENDMENT NO:

REFER TO TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF THIS DOCUMENT IN THE ---------- FOR ADDITIONAL INFORMATION.

ALIGNMENTS LF, SB, NB ARE FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION CONSTRUCTION PROJECT NUMBER 1300-13-70. ALIGNMENT LM IS FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION CONSTRUCTION PROJECT NUMBER 1300-13-74.

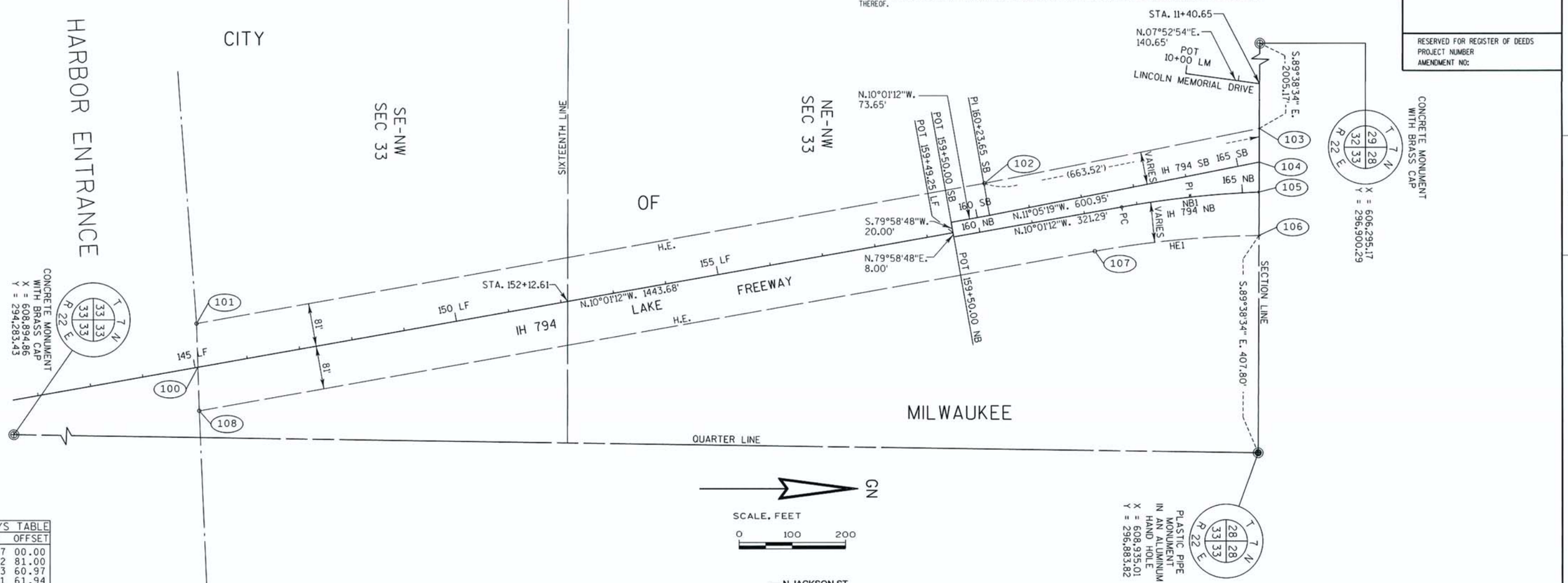
TRANSPORTATION PROJECT PLAT NO: 1300-13-21 - 4.01

IH 794 MILWAUKEE COUNTY MILWAUKEE RIVER TO N. JACKSON STREET.

THAT PART OF THE SE 1/4 OF THE NW 1/4, AND THE NE 1/4 OF THE NW 1/4 OF SECTION 33, TOWNSHIP 7 NORTH, RANGE 22 EAST, IN THE CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN.

THE STATE OF WISCONSIN HAS DEEMED IT NECESSARY TO MONUMENT RIGHT-OF-WAY INTERESTS PREVIOUSLY ACQUIRED UNDER SECTIONS 82.01, 82.310, 82.312, AND 84.09 OF THE WISCONSIN STATE STATUTES AND DOES HEREBY CERTIFY THE DEPARTMENT OF TRANSPORTATION HAS SURVEYED THE HIGHWAY RIGHT-OF-WAY; THAT THIS PLAT IS A TRUE AND CORRECT REPRESENTATION OF THE EXTERIOR BOUNDARIES OF THE LAND SURVEYED AND SHOWS ACCURATE MEASUREMENTS THEREOF.

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER
AMENDMENT NO:



SCALE, FEET
0 100 200

GN

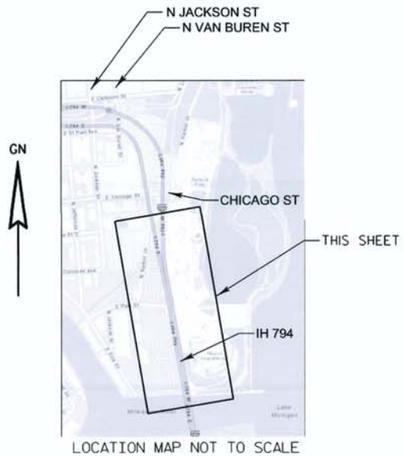
R/W STA. & O/S TABLE		
POINT	STATION	OFFSET
100	145+05.57	00.00
101	145+17.52	81.00
102	160+26.03	60.97
103	165+53.81	61.94
104	165+41.27	00.00
105	165+31.85	00.00
106	165+28.02	81.81
107	162+06.95	72.99
108	144+93.62	81.00

R/W COURSE TABLE		
LINE	LENGTH	DIRECTION
100-101	81.88'	S.88°22'26"W.
101-102	1,506.62'	N.10°01'12"W.
102-103	527.79'	N.11°11'39"W.
103-104	63.20'	S.89°38'34"E.
104-105	56.32'	S.89°38'34"E.
105-106	81.90'	S.89°38'34"E.
107-108	1,712.58'	S.10°01'12"E.
108-100	81.87'	S.88°22'26"W.

R/W - H.E. CURVE TABLE				
CURVE	LCH	LCB	R	L
HE1	310.37'	N.05°20'32"W.	1,872.86'	310.73'

ALIGNMENT CURVE TABLE									
CURVE	PC STATION	PI STATION	PI COORDINATES	PT STATION	DELTA	D	TAN	L	R
NB1	162+71.29NB	164+01.77NB	Y = 296,756.50 X = 608,450.34	165+31.85NB	7°49'00" (RT)	3°00'00"	130.48'	260.55'	1,909.86'

HIGHWAY	BASIS OF EXISTING RIGHT-OF WAY	WIDTH	DATE
IH 794	I-794-8(12)310/1300-1-21	VARIES	4-8-1977



LOCATION MAP NOT TO SCALE

WISCONSIN
DAVID L. KOSLO
S-2437-008
KEWASKUM, WI
LAND SURVEYOR
8/13/15

GRÄEF
One Honey Creek Corporate Center
125 South 84th Street,
Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

I HEREBY CERTIFY THAT THIS PLAT MEETS ALL REQUIREMENTS OF SECTION 84.095, WISCONSIN STATUTES. THIS PLAT WAS PREPARED BY OR UNDER THE DIRECTION OF

PRINTED NAME SIGNATURE DATE

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

PRINTED NAME SIGNATURE E

FILE NAME : 040401_rp.dgn
APPRAISAL PLAT DATE :
PLOT DATE : 8/13/2015
PLOT BY : 1178
PLOT NAME :
PLOT SCALE : 1:100

TRANSPORTATION PROJECT PLAT NO: 1300-13-21 - 4.02

IH 794 MILWAUKEE COUNTY MILWAUKEE RIVER TO N. JACKSON STREET.

THAT PART OF THE NW 1/4 OF THE SW 1/4, THE NE 1/4 OF THE SW 1/4 AND THE SE 1/4 OF THE SW 1/4 OF SECTION 28, TOWNSHIP 7 NORTH, RANGE 22 EAST, IN THE CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN.

THE STATE OF WISCONSIN HAS DEEMED IT NECESSARY TO MONUMENT RIGHT-OF-WAY INTERESTS PREVIOUSLY ACQUIRED UNDER SECTIONS 82.01, 82.31(1), 82.31(2), AND 84.09 OF THE WISCONSIN STATE STATUTES AND DOES HEREBY CERTIFY THE DEPARTMENT OF TRANSPORTATION HAS SURVEYED THE HIGHWAY RIGHT-OF-WAY; THAT THIS PLAT IS A TRUE AND CORRECT REPRESENTATION OF THE EXTERIOR BOUNDARIES OF THE LAND SURVEYED AND SHOWS ACCURATE MEASUREMENTS THEREOF.

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER
AMENDMENT NO:

REFER TO TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF THIS DOCUMENT IN _____ FOR ADDITIONAL INFORMATION.

ALIGNMENTS SB, NB, EB, WB ARE FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION CONSTRUCTION PROJECT NUMBER 1300-13-70. ALIGNMENTS LM, CH, VB, CL ARE FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION CONSTRUCTION PROJECT NUMBER 1300-13-74.

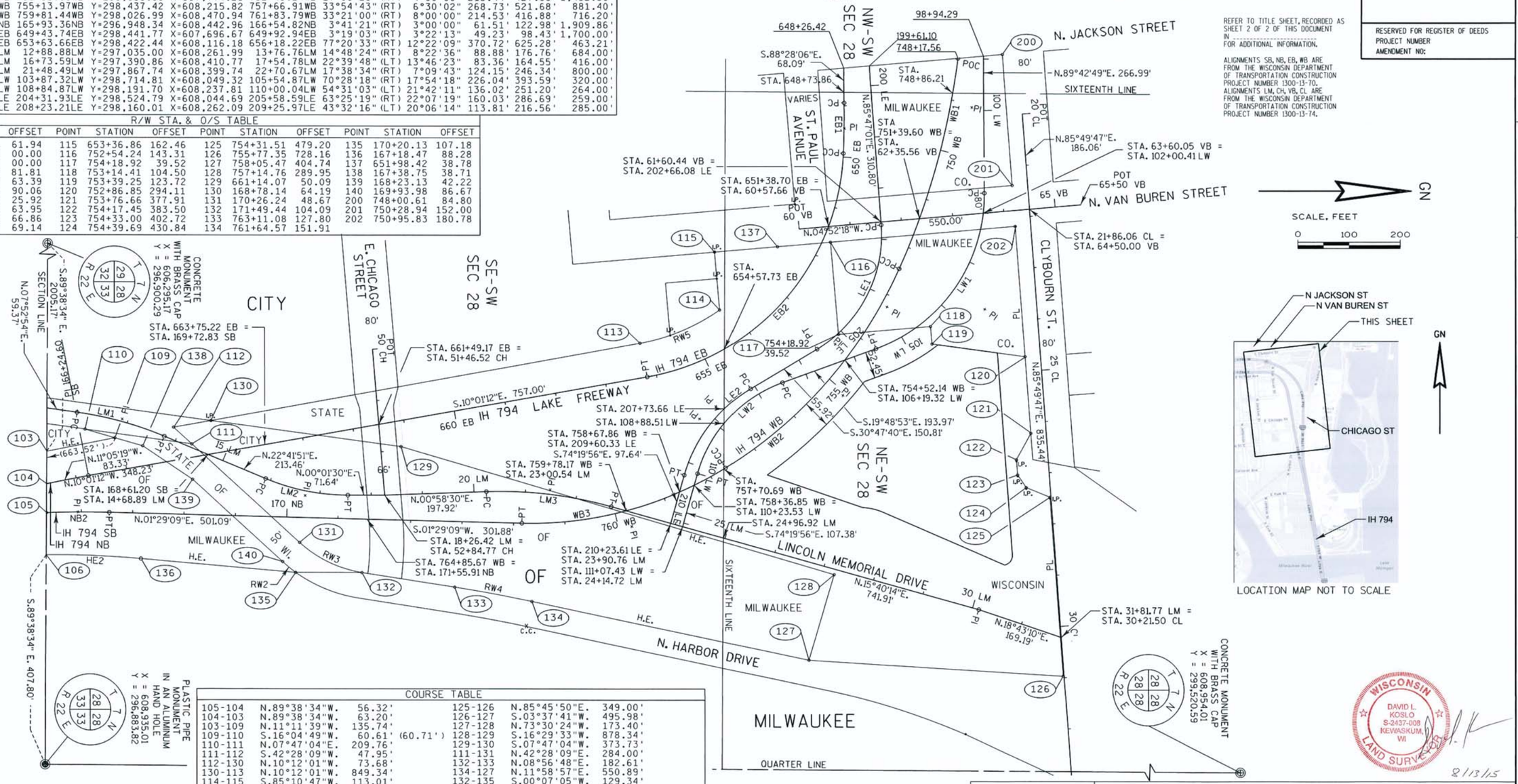
R/W - H.E. CURVE TABLE				
CURVE	LCH	LCB	R	L
HE2	184.94'	N.02°14'27"E.	1,872.86'	185.02'
RW2	33.23'	S.39°35'10"W.	286.11'	33.25'
RW3	135.09'	S.25°42'29"W.	236.11'	137.00'
RW4	152.46'	S.10°27'52"W.	2,877.79'	152.48'
RW5	167.85'	N.22°42'12"W.	387.70'	169.19'

HIGHWAY	BASIS OF EXISTING RIGHT-OF WAY	WIDTH	DATE
IH 794	I-794-8(12)310/1300-1-21	VARIES	4-8-1977
IH 794	QUIT CLAIM DEED DOC. 6149930	VARIES	2-5-1988
N. JACKSON STREET	PLAT OF MILWAUKEE EAST OF THE RIVER	80'	DEC., 1859
N. VAN BUREN STREET	PLAT OF MILWAUKEE EAST OF THE RIVER	80'	DEC., 1859
E. CLYBOURN STREET	PLAT OF MILWAUKEE EAST OF THE RIVER	80'	DEC., 1859
E. ST. PAUL AVENUE	PLAT OF MILWAUKEE EAST OF THE RIVER	VARIES	DEC., 1859

ALIGNMENT CURVE TABLE									
CURVE	PC STA.	PI STA.	PI COORD.	PI COORD.	PT STA.	DELTA	D	TAN	L	R
WB1	748+17.56WB	750+33.00WB	Y=298,636.08	X=607,774.28	752+45.24WB	17°06'26" (RT)	4°00'00"	215.44'	427.68'	1,432.39'
WB2	752+45.24WB	755+13.97WB	Y=298,437.42	X=608,215.82	757+66.91WB	33°54'43" (RT)	6°30'02"	268.73'	521.68'	881.40'
WB3	757+66.91WB	759+81.44WB	Y=298,026.99	X=608,470.94	761+83.79WB	33°21'00" (RT)	8°00'00"	214.53'	416.88'	716.20'
NB2	165+31.85NB	165+93.36NB	Y=296,948.34	X=608,442.96	166+54.82NB	3°41'21" (RT)	3°00'00"	61.51'	122.98'	1,909.86'
EB1	648+94.50EB	649+43.74EB	Y=298,441.77	X=607,696.67	649+92.94EB	3°19'03" (RT)	3°22'13"	49.23'	98.43'	1,700.00'
EB2	649+92.94EB	653+63.66EB	Y=298,422.44	X=608,116.18	656+18.22EB	77°20'33" (RT)	12°22'09"	370.72'	625.28'	463.21'
LM1	12+00.00LM	12+88.88LM	Y=297,035.00	X=608,261.99	13+76.76LM	14°48'24" (RT)	8°22'36"	88.88'	176.76'	684.00'
LM2	15+90.23LM	16+73.59LM	Y=297,390.86	X=608,410.77	17+54.78LM	22°39'48" (LT)	13°46'23"	83.36'	164.55'	416.00'
LM3	20+24.33LM	21+48.49LM	Y=297,867.74	X=608,399.74	22+70.67LM	17°38'34" (RT)	7°09'43"	124.15'	246.34'	800.00'
LW1	101+61.28LW	103+87.32LW	Y=298,714.81	X=608,049.32	105+54.87LW	70°28'18" (RT)	17°54'18"	226.04'	393.59'	320.00'
LW2	107+48.85LW	108+84.87LW	Y=298,191.70	X=608,237.81	110+00.04LW	54°31'03" (LT)	21°42'11"	136.02'	251.20'	264.00'
LE1	202+71.90LE	204+31.93LE	Y=298,524.79	X=608,044.69	205+58.59LE	63°25'19" (RT)	22°07'19"	160.03'	286.69'	259.00'
LE2	207+09.40LE	208+23.21LE	Y=298,160.01	X=608,262.09	209+25.97LE	43°32'16" (LT)	20°06'14"	113.81'	216.56'	285.00'

R/W STA. & O/S TABLE											
POINT	STATION	OFFSET	POINT	STATION	OFFSET	POINT	STATION	OFFSET	POINT	STATION	OFFSET
103	165+53.81	61.94	115	653+36.86	162.46	125	754+31.51	479.20	135	170+20.13	107.18
104	165+41.27	00.00	116	752+54.24	143.31	126	755+77.35	728.16	136	167+18.47	88.28
105	165+31.85	00.00	117	754+18.92	39.52	127	758+05.47	404.74	137	651+98.42	38.78
106	165+28.02	81.81	118	753+14.41	104.50	128	757+14.76	289.95	138	167+38.75	38.71
109	166+88.38	63.39	119	753+39.25	123.72	129	661+14.07	50.09	139	168+23.13	42.22
110	166+33.95	90.06	120	752+86.85	294.11	130	168+78.14	64.19	140	169+93.98	86.67
111	168+33.67	25.92	121	753+76.66	377.91	131	170+26.24	48.67	200	748+00.61	84.80
112	168+04.47	63.95	122	754+17.45	383.50	132	171+49.44	104.09	201	750+28.94	152.00
113	656+20.57	66.86	123	754+33.00	402.72	133	763+11.08	127.80	202	750+95.83	180.78
114	654+22.74	69.14	124	754+39.69	430.84	134	761+64.57	151.91			

COURSE TABLE							
105-104	N.89°38'34"W.	56.32'		125-126	N.85°45'50"E.	349.00'	
104-103	N.89°38'34"W.	63.20'		126-127	S.03°37'41"W.	495.98'	
103-109	N.11°11'39"W.	135.74'		127-128	N.73°30'24"W.	173.40'	
109-110	S.16°04'49"W.	60.61'	(60.71')	128-129	S.16°29'33"W.	878.34'	
110-111	N.07°47'04"E.	209.76'		129-130	S.07°47'04"W.	373.73'	
111-112	S.42°28'09"W.	47.95'		111-131	N.42°28'09"E.	284.00'	
112-130	N.10°12'01"W.	73.68'		132-133	N.08°56'48"E.	182.61'	
130-113	N.10°12'01"W.	849.34'		134-127	N.11°58'57"E.	550.89'	
114-115	S.85°10'47"W.	113.01'		132-135	S.00°07'05"W.	129.34'	
115-137	N.04°49'13"W.	163.14'		135-136	S.05°04'16"W.	302.25'	(297.61')
137-116	N.04°52'19"W.	62.75'		106-105	N.89°38'34"W.	81.90'	
116-117	N.85°07'42"E.	180.00'		116-202	N.04°52'18"W.	360.90'	
117-118	N.04°52'19"W.	180.00'		202-120	N.85°49'47"E.	254.00'	
118-119	N.85°07'42"E.	34.00'		200-201	N.85°49'47"E.	255.86'	(255.69')
119-120	N.07°48'07"E.	182.23'		109-138	N.16°04'49"E.	56.09'	
120-121	N.85°49'47"E.	149.60'		138-139	N.33°47'11"E.	116.92'	
121-122	S.61°22'30"E.	58.66'	(59.10')	139-140	N.42°28'09"E.	236.94'	
122-123	N.85°24'53"E.	29.58'					
123-124	N.55°57'48"E.	29.80'					
124-125	N.22°12'20"E.	49.93'					



GRAEF
One Honey Creek Corporate Center
125 South 84th Street,
Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

I HEREBY CERTIFY THAT THIS PLAT MEETS ALL REQUIREMENTS OF SECTION 84.095, WISCONSIN STATUTES. THIS PLAT WAS PREPARED BY OR UNDER THE DIRECTION OF

PRINTED NAME _____ SIGNATURE _____ DATE _____

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

PRINTED NAME _____ SIGNATURE _____ DATE _____

WISCONSIN DAVID L. KOSLO S-2437-008 KEWASKUM, WI LAND SURVEYOR

8/13/15

FILE NAME : 040402_rp.dgn
APPRAISAL PLAT DATE :
PLOT DATE : 8/13/2015
PLOT BY : 1178
PLOT NAME :
PLOT SCALE : 1:100

4.02

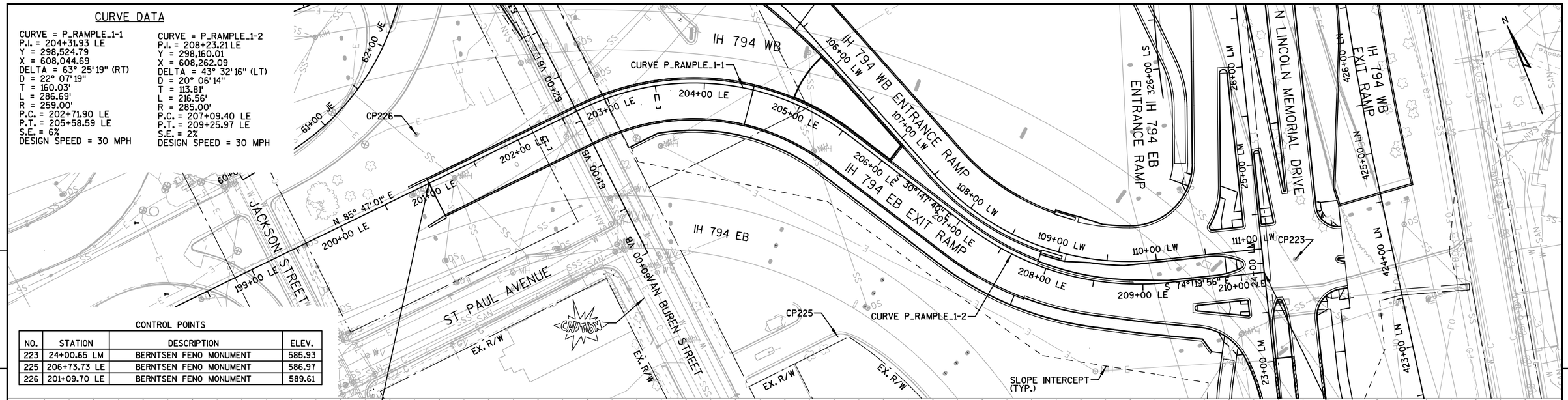
CURVE DATA

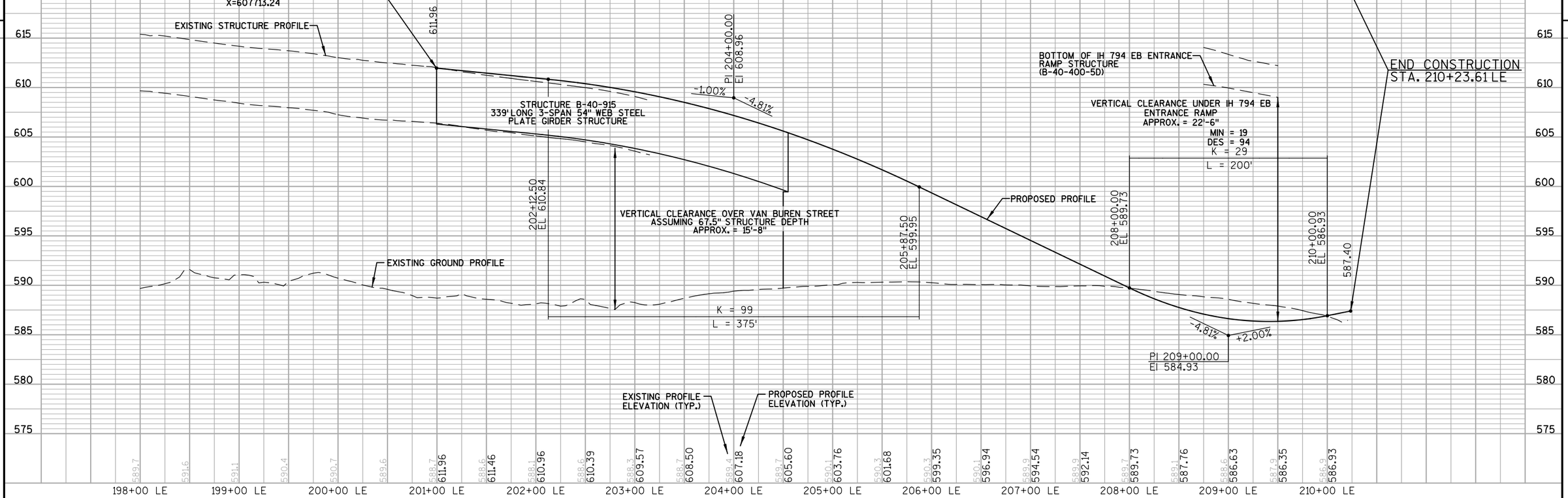
CURVE = P_RAMPLE_1-1
P.I. = 204+31.93 LE
Y = 298,524.79
X = 608,044.69
DELTA = 63° 25' 19" (RT)
D = 22° 07' 19"
T = 160.03'
L = 286.69'
R = 259.00'
P.C. = 202+71.90 LE
P.T. = 205+58.59 LE
S.E. = 6%
DESIGN SPEED = 30 MPH

CURVE = P_RAMPLE_1-2
P.I. = 208+23.21 LE
Y = 298,160.01
X = 608,262.09
DELTA = 43° 32' 16" (LT)
D = 20° 06' 14"
T = 113.81'
L = 216.56'
R = 285.00'
P.C. = 207+09.40 LE
P.T. = 209+25.97 LE
S.E. = 2%
DESIGN SPEED = 30 MPH

CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
223	24+00.65 LM	BERNTSEN FENO MONUMENT	585.93
225	206+73.73 LE	BERNTSEN FENO MONUMENT	586.97
226	201+09.70 LE	BERNTSEN FENO MONUMENT	589.61





PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN AND PROFILE - IH 794 EB EXIT RAMP (LE)	SHEET 456	E

FILE NAME : 050101_pp.dgn PLOT DATE : 7/31/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

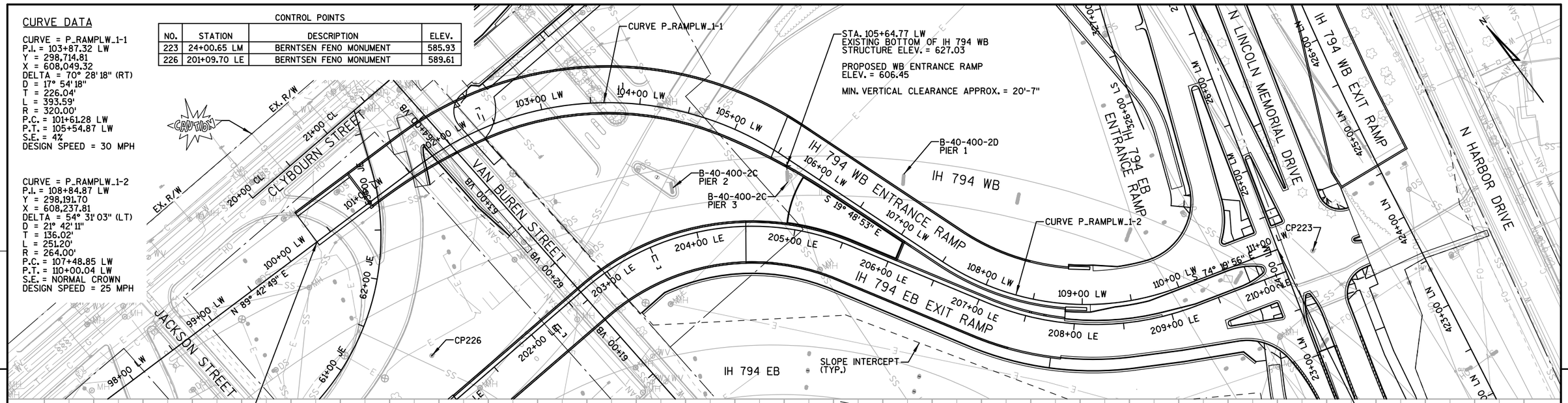
CURVE DATA

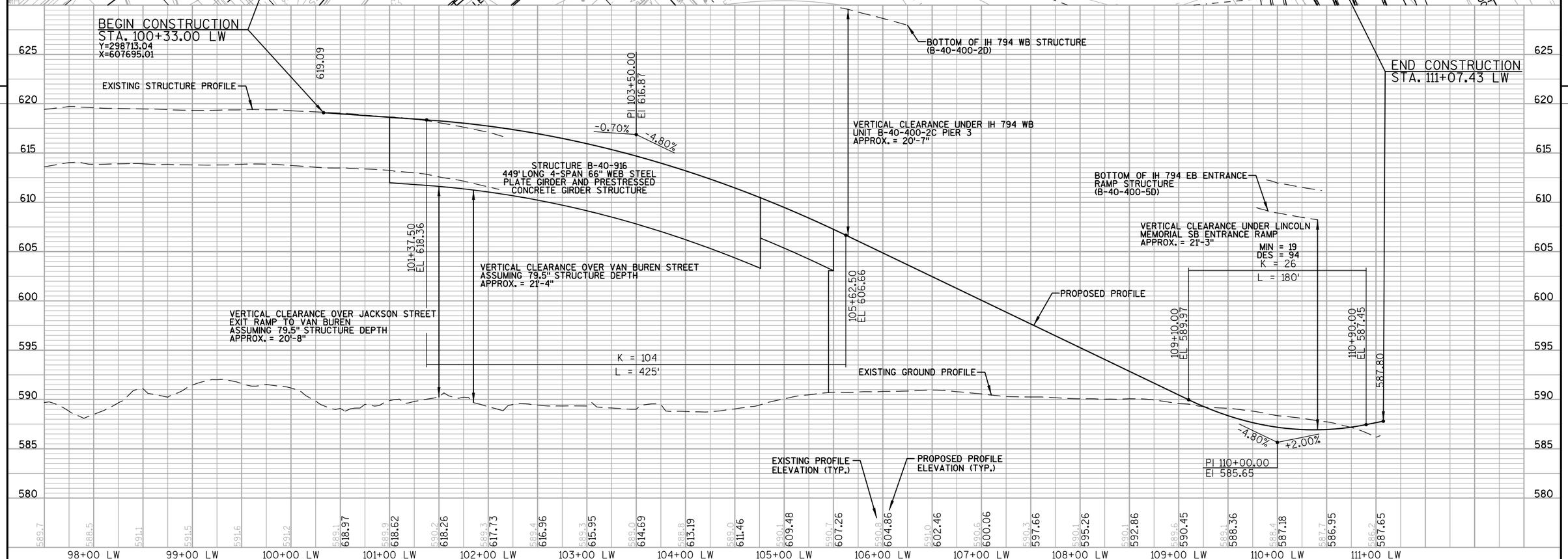
CURVE = P_RAMPLW_1-1
P.I. = 103+87.32 LW
Y = 298,714.81
X = 608,049.32
DELTA = 70° 28' 18" (RT)
D = 17° 54' 18"
T = 226.04'
L = 393.59'
R = 320.00'
P.C. = 101+61.28 LW
P.T. = 105+54.87 LW
S.E. = 4%
DESIGN SPEED = 30 MPH

CURVE = P_RAMPLW_1-2
P.I. = 108+84.87 LW
Y = 298,191.70
X = 608,237.81
DELTA = 54° 31' 03" (LT)
D = 21° 42' 11"
T = 136.02'
L = 251.20'
R = 264.00'
P.C. = 107+48.85 LW
P.T. = 110+00.04 LW
S.E. = NORMAL CROWN
DESIGN SPEED = 25 MPH

CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
223	24+00.65 LM	BERNTSEN FENO MONUMENT	585.93
226	201+09.70 LE	BERNTSEN FENO MONUMENT	589.61





PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN AND PROFILE - IH 794 WB ENTRANCE RAMP (LW)	SHEET 457	E

CURVE DATA

CURVE = P_RAMPLN_1-1
P.I. = 420+09.04 LN
Y = 297,690.41
X = 608,528.47
DELTA = 4° 34' 50" (RT)
D = 2° 16' 12"
T = 100.95'
L = 201.78'
R = 2,524.00'
P.C. = 419+08.10 LN
P.T. = 421+09.88 LN
S.E. = RC (1.5%)
DESIGN SPEED = 35 MPH

CURVE = P_RAMPLN_1-2
P.I. = 426+14.19 LN
Y = 298,286.97
X = 608,630.67
DELTA = 5° 30' 49" (RT)
D = 1° 53' 41"
T = 145.61'
L = 291.00'
R = 3,024.00'
P.C. = 424+68.58 LN
P.T. = 427+59.57 LN
S.E. = RC (2.0%)
DESIGN SPEED = 35 MPH

CURVE = P_RAMPLN_1-3
P.I. = 431+12.12 LN
Y = 298,767.62
X = 608,761.58
DELTA = 13° 46' 56" (LT)
D = 6° 56' 12"
T = 99.83'
L = 198.69'
R = 826.00'
P.C. = 430+12.29 LN
P.T. = 432+10.98 LN
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

N LINCOLN MEMORIAL DRIVE
IH 794 EB ENTRANCE RAMP
IH 794 WB EXIT RAMP
N HARBOR DRIVE
CLYBOURN STREET
SLOPE INTERCEPT (TYP.)
BEGIN CONCRETE OVERLAY STA. 419+90.29 LN
END OF DECK B-40-400-6D
BEGIN RETAINING WALL R-40-628
CURVE P_RAMPLN_1-1
CURVE P_RAMPLN_1-2
CURVE P_RAMPLN_1-3
CAUTION
N 5° 08' 27" E
N 9° 43' 18" E
N 15° 14' 06" E
CP223

BEGIN CONSTRUCTION
STA. 419+90.29 LN
Y=297671.60
X=608528.12

END CONSTRUCTION
STA. 431+25.00 LN

CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
223	24+00.65 LM	BERNTSEN FENO MONUMENT	585.93

PROPOSED PROFILE
EXISTING PROFILE ELEVATION (TYP.)
PROPOSED PROFILE ELEVATION (TYP.)
EXISTING GROUND PROFILE

PI 424+67.89
El 611.32
PI 426+25.00
El 606.61
PI 430+00.00
El 592.50

-3.01%
-3.00%
-3.00%
-3.76%
-3.76%
-2.60%

425+25.00 EL 609.61
427+25.00 EL 602.85
429+25.00 EL 595.33
430+75.00 EL 590.55

K = 263
L = 200'
K = 129
L = 150'

589.25

625.98

625.70 624.17 622.63 621.09 619.56 618.02 616.48 614.95 613.41 611.87 610.36 608.85 607.25 605.56 603.78 601.91 600.03 598.15 596.27 594.41 592.72 591.23 589.90

418+00 LN 419+00 LN 420+00 LN 421+00 LN 422+00 LN 423+00 LN 424+00 LN 425+00 LN 426+00 LN 427+00 LN 428+00 LN 429+00 LN 430+00 LN 431+00 LN

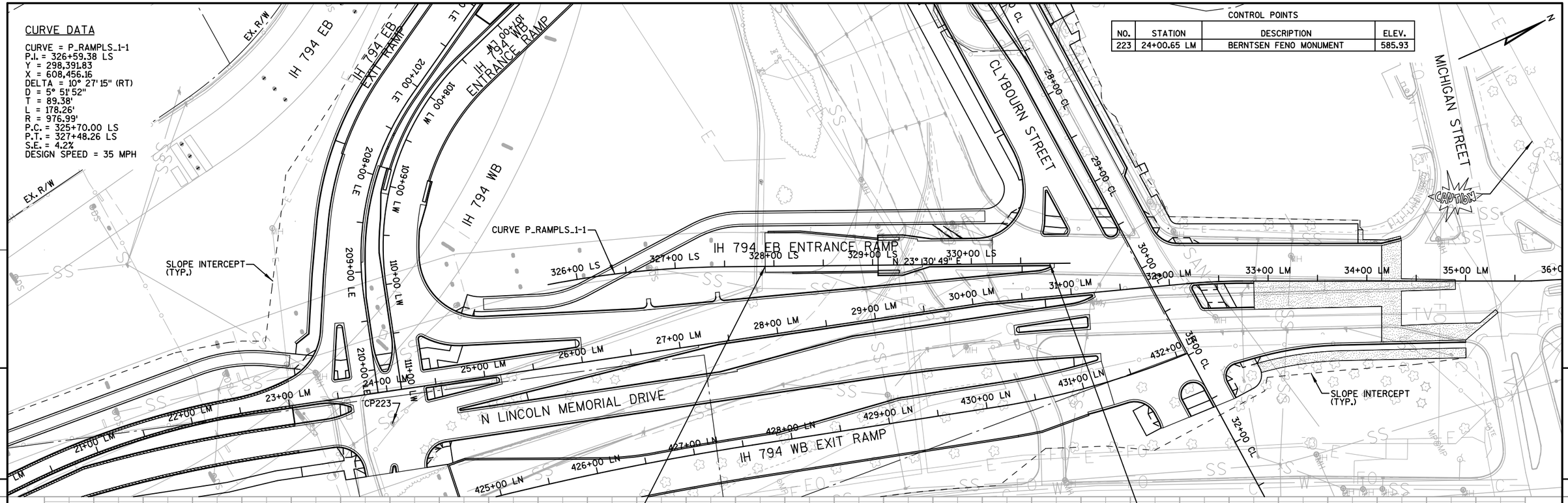
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN AND PROFILE - IH 794 WB EXIT RAMP (LN)	SHEET 458	E

CURVE DATA

CURVE = P_RAMPLS_1-1
P.I. = 326+59.38 LS
Y = 298,391.83
X = 608,456.16
DELTA = 10° 27' 15" (RT)
D = 5° 51' 52"
T = 89.38'
L = 178.26'
R = 976.99'
P.C. = 325+70.00 LS
P.T. = 327+48.26 LS
S.E. = 4.2%
DESIGN SPEED = 35 MPH

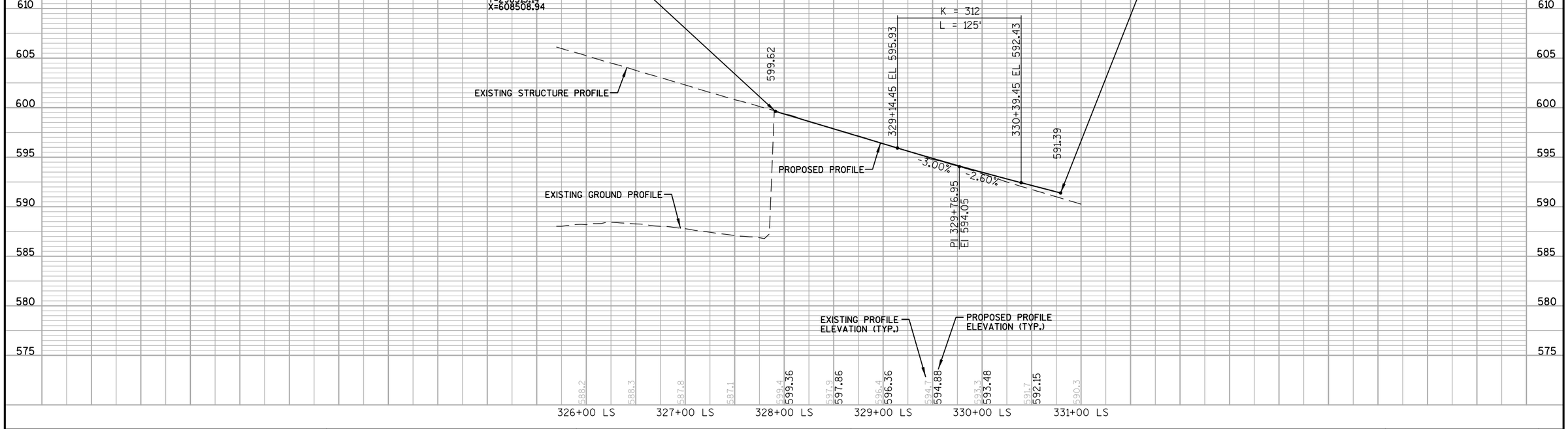
CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
223	24+00.65 LM	BERNTSEN FENO MONUMENT	585.93



BEGIN CONSTRUCTION
STA. 327+91.18 LS
Y=298513.14
X=608508.94

END CONSTRUCTION
STA. 330+79.31 LS



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN AND PROFILE - IH 794 EB ENTRANCE RAMP	SHEET 459	E

CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
226	201+09.70 LE	BERNTSEN FENO MONUMENT	589.61

JACKSON STREET

VAN BUREN STREET

CAUTION

CAUTION

EX. R/W

EX. R/W

EX. R/W

SLOPE INTERCEPT (TYP.)

N LINCOLN MEMORIAL DRIVE

N HARBOR DRIVE

CLYBOURN STREET

N 85° 49' 47" E

20+00 CL 21+00 CL 22+00 CL 23+00 CL 24+00 CL 25+00 CL 26+00 CL 27+00 CL 28+00 CL 29+00 CL 30+00 CL 31+00 CL 32+00 CL 33+00 CL

98+00 LW 99+00 LW 100+00 LW 101+00 LW 102+00 LW 103+00 LW 104+00 LW 105+00 LW

60+00 JE 61+00 JE 62+00 JE 63+00 JE

62+00 VB 63+00 VB 64+00 VB 65+00 VB

329+00 LS 330+00 LS

29+00 LM 30+00 LM 31+00 LM 33+00 LM

430+00 LN 431+00 LN 432+00 LN

BEGIN CONSTRUCTION
STA. 22+38.74 CL
Y=298804.94
X=607907.23

END CONSTRUCTION
STA. 31+58.62 CL

CP226

5

5

N

MIN = 49
DES = 124
K = 131
L = 275'

MIN = 29
DES = 128
K = 61
L = 200'

23+47.50 EL 588.66

26+22.50 EL 589.35

26+80.00 EL 590.10

28+80.00 EL 589.40

PI 24+85.00
El 587.56

PI 27+80.00
El 591.40

PI 29+20.00
El 588.60

PI 30+21.50
El 589.44

589.53

585.77

-0.80% +1.30% +1.30% -2.00% -2.00% +0.83% +0.83% -2.68%

VAN BUREN STREET

PROPOSED PROFILE

EXISTING GROUND PROFILE

N LINCOLN MEMORIAL DRIVE

CLYBOURN STREET IMPROVEMENTS
EAST OF N LINCOLN MEMORIAL DRIVE
TO BE COMPLETED UNDER SEPARATE
CITY OF MILWAUKEE CONTRACT

EXISTING PROFILE ELEVATION (TYP.)

PROPOSED PROFILE ELEVATION (TYP.)

605 600 595 590 585 580 575 570

590.1 589.98 589.84 589.44 589.04 588.64 588.35 588.25 588.33 588.61 589.08 589.71 590.33 590.61 590.47 589.93 589.00 588.85 589.26 588.68 587.34 586.00

21+00 CL 22+00 CL 23+00 CL 24+00 CL 25+00 CL 26+00 CL 27+00 CL 28+00 CL 29+00 CL 30+00 CL 31+00 CL

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN AND PROFILE - CLYBOURN STREET (CL)	SHEET 460	E

FILE NAME : 050105_pp.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

CURVE DATA

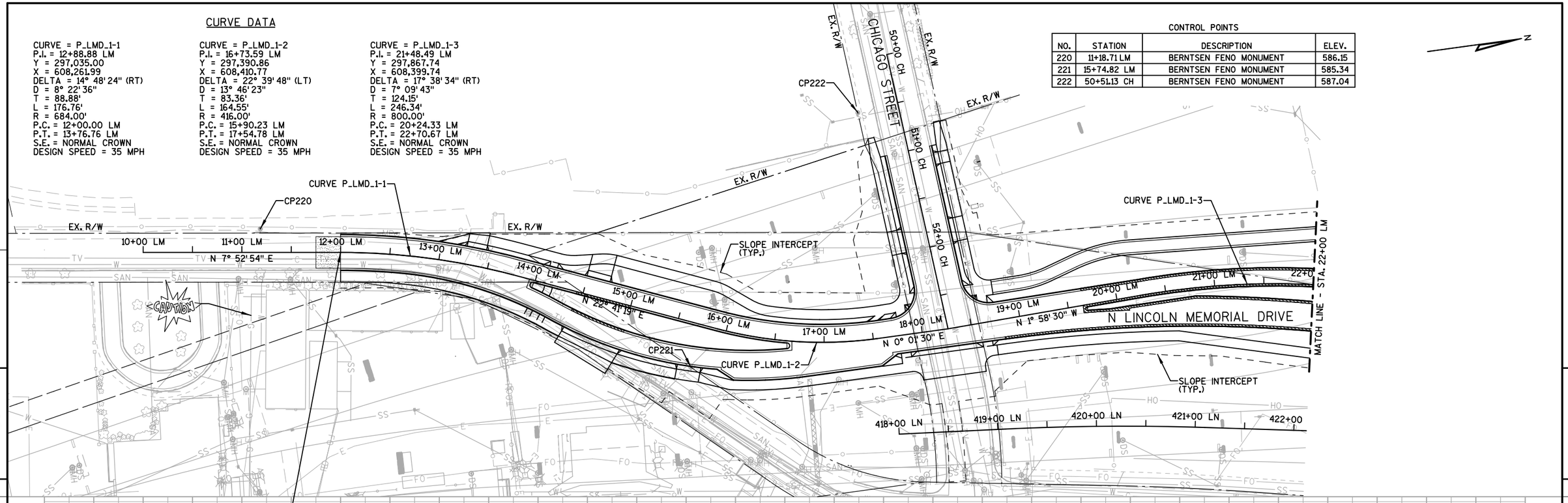
CURVE = P_LMD_1-1
P.I. = 12+88.88 LM
Y = 297,035.00
X = 608,261.99
DELTA = 14° 48' 24" (RT)
D = 8° 22' 36"
T = 88.88'
L = 176.76'
R = 684.00'
P.C. = 12+00.00 LM
P.T. = 13+76.76 LM
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

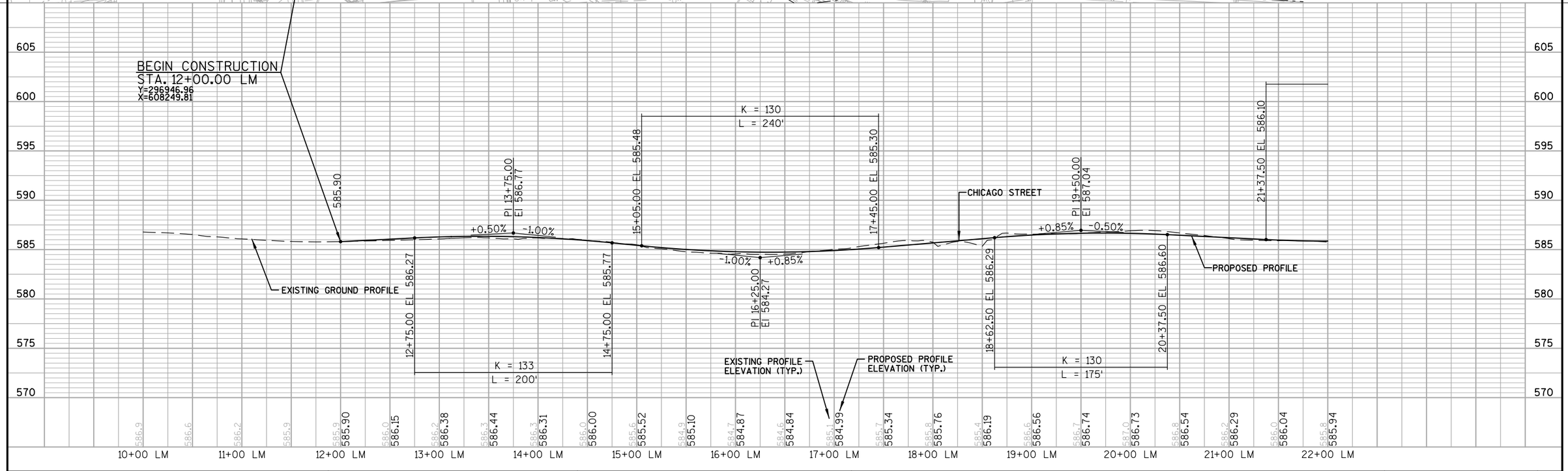
CURVE = P_LMD_1-2
P.I. = 16+73.59 LM
Y = 297,390.86
X = 608,410.77
DELTA = 22° 39' 48" (LT)
D = 13° 46' 23"
T = 83.36'
L = 164.55'
R = 416.00'
P.C. = 15+90.23 LM
P.T. = 17+54.78 LM
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

CURVE = P_LMD_1-3
P.I. = 21+48.49 LM
Y = 297,867.74
X = 608,399.74
DELTA = 17° 38' 34" (RT)
D = 7° 09' 43"
T = 124.15'
L = 246.34'
R = 800.00'
P.C. = 20+24.33 LM
P.T. = 22+70.67 LM
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
220	11+18.71 LM	BERNTSEN FENO MONUMENT	586.15
221	15+74.82 LM	BERNTSEN FENO MONUMENT	585.34
222	50+51.13 CH	BERNTSEN FENO MONUMENT	587.04





PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN AND PROFILE - LINCOLN MEMORIAL DRIVE (LM)	SHEET 461	E

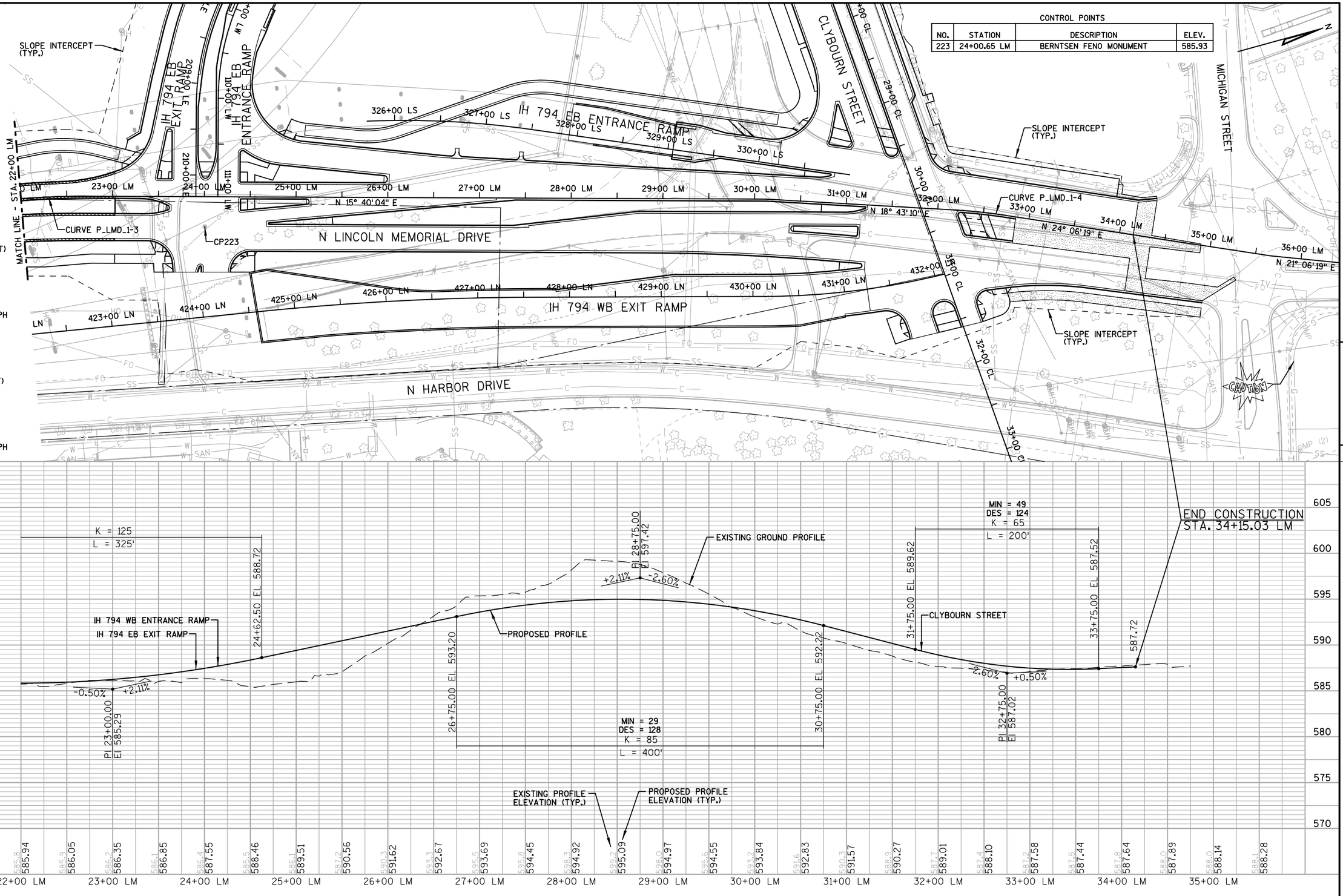
CURVE DATA

CURVE = P_LMD_1-3
P.I. = 21+48.49 LM
Y = 297,867.74
X = 608,399.74
DELTA = 17° 38' 34" (RT)
D = 7° 09' 43"
T = 124.15'
L = 246.34'
R = 800.00'
P.C. = 20+24.33 LM
P.T. = 22+70.67 LM
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

CURVE = P_LMD_1-4
P.I. = 32+46 LM
Y = 298,922.55
X = 608,708.49
DELTA = 5° 23' 09" (RT)
D = 9° 32' 57"
T = 28.22'
L = 56.40'
R = 600.00'
P.C. = 32+17.63 LM
P.T. = 32+74.03 LM
S.E. = NORMAL CROWN
DESIGN SPEED = 35 MPH

CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
223	24+00.65 LM	BERNTSEN FENO MONUMENT	585.93



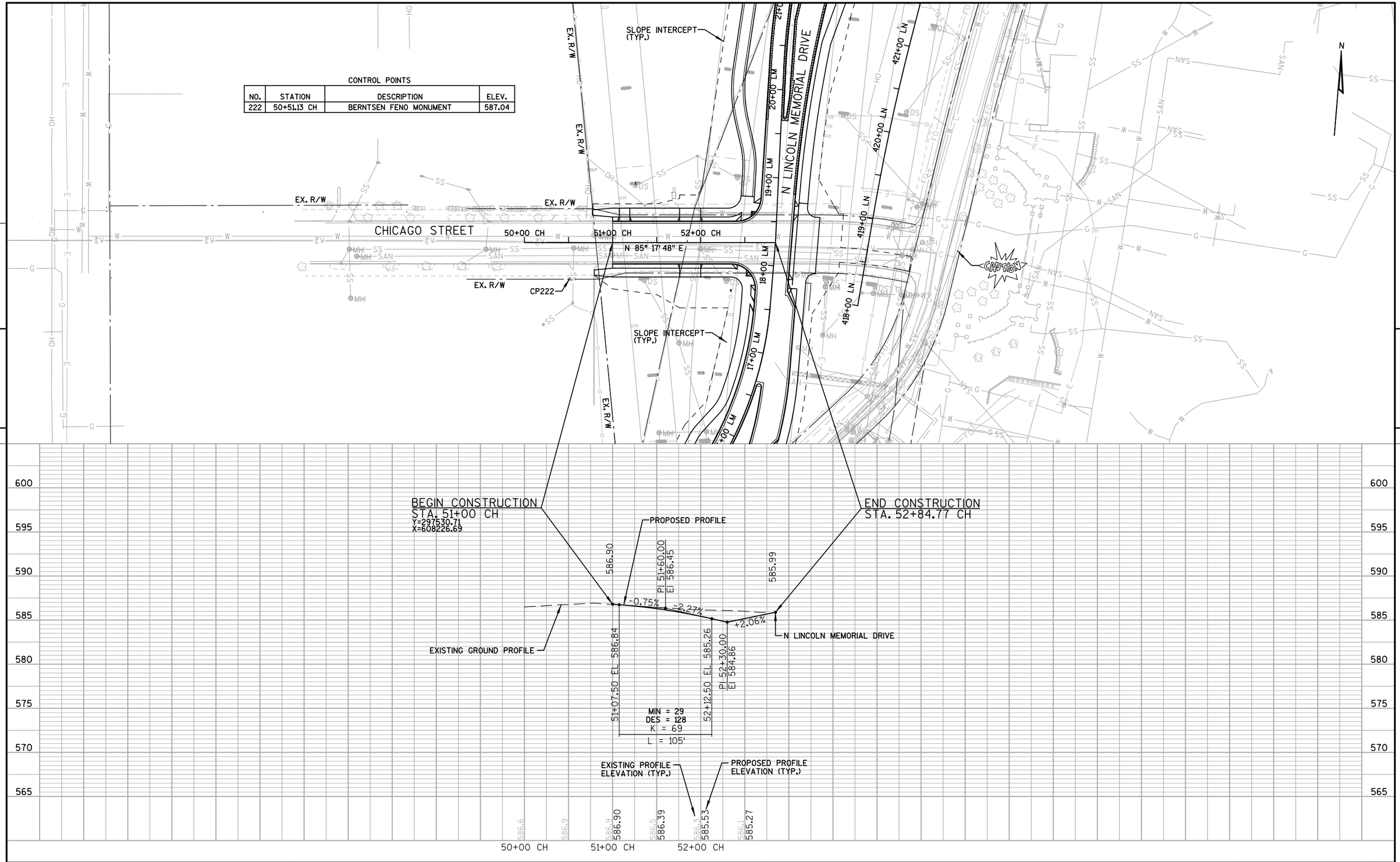
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN AND PROFILE - LINCOLN MEMORIAL DRIVE (LM)	SHEET 462 E

FILE NAME : 050107_pp.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
222	50+51.13 CH	BERNTSEN FENO MONUMENT	587.04



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	PLAN AND PROFILE - CHICAGO STREET (CH)	SHEET 463	E

FILE NAME : 050108_pp.dgn PLOT DATE : 7/29/2015 PLOT BY : 1141 PLOT NAME : PLOT SCALE : 1:100

Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-01	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08B11-01	MANHOLES VARIABLE TEE AND SPECIAL 4-FT DIAMETER
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08D17-06	MANHOLES, MANHOLE & INLET COVERS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F05-01	CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER
09B02-08	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-06	CONCRETE BASE TYPE 10
09C12-06A	CONCRETE BASE TYPE 13
09C12-06B	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09C14-02	CONCRETE CONTROL CABINET BASE, TYPE L
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09D04-01	LIGHTING CONTROL CABINET
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E02-04	FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-06A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-06B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-06C	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-06D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-06E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09G01-03A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09H09-01	COMMUNICATION VAULT
10A01-03	ELECTRICAL HANDHOLE WIRING
10A02-03	IDENTIFICATION PLAQUES LIGHT POLES
10A04-02	IDENTIFICATION PLAQUES UNDERDECK AND HIGH MAST LIGHTING
10A05-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A08-02	ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A11-02	ELECTRICAL DETAILS MEDIAN MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A14-02A	ELECTRICAL DETAILS HIGH MAST LIGHTING
10A14-02B	ELECTRICAL DETAILS HIGH MAST LIGHTING
10A15-04A	ELECTRICAL DETAILS UNDERDECK LIGHTING
10A15-04B	ELECTRICAL DETAILS UNDERDECK LIGHTING
10A17-04A	POLES, TYPES 7 ALUMINUM - 35'-10" SHAFT
10A18-05B	LUMINAIRE ARMS, TRUSS TYPE 6-INCH CLAMP
11B02-02	CONCRETE MEDIAN NOSE

6

Standard Detail Drawing List

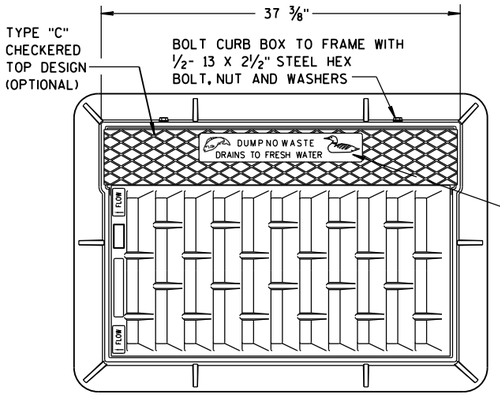
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A03-05	CONCRETE PAVEMENT SHOULDERS
13B02-07A	CONCRETE BRIDGE APPROACH
13B02-07B	STRUCTURAL APPROACH SLAB AND CONCRETE BRIDGE APPROACH
13C01-17	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C17-01A	CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI
13C17-01B	CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14A01-03	TREE PRESERVATION DETAILS
14A02-01	TREE PLANTING DETAIL
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B32-03A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-03B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-03C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-03D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B35-01A	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B35-01B	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B35-01C	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
14B35-01D	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
14B35-01E	42-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B35-01F	42-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B37-01C	32-INCH DOUBLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
14B37-01D	32-INCH DOUBLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12A	PAVEMENT MARKING SYMBOLS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C15-03	36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE
15C18-03	MEDIAN ISLAND MARKING
15C24-02	36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE
15C27-01	DOUBLE ARROW WARNING SIGN PLACEMENT
15C29-03A	BICYCLE LANE MARKING
15C29-03B	BICYCLE LANE MARKING
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D06-03	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D12-05A	TRAFFIC CONTROL, LANE CLOSURE
15D14-02	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D20-03	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-03	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

6

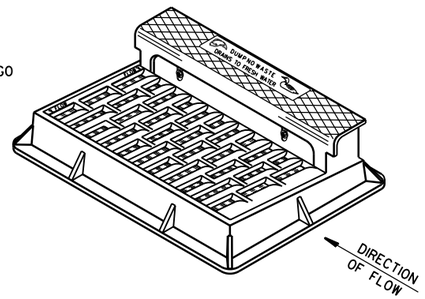
Standard Detail Drawing List

15D28-02	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE

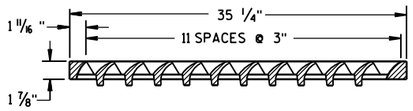
6

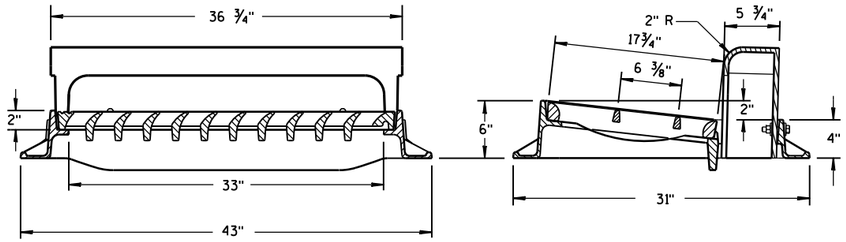


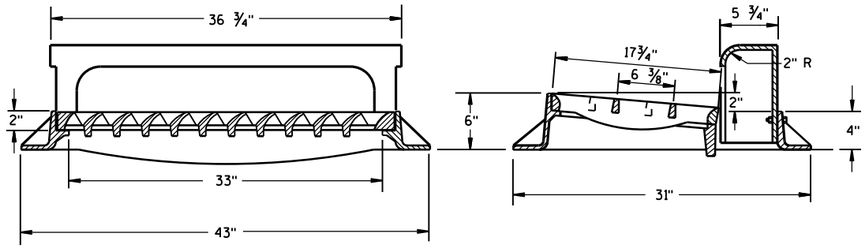
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

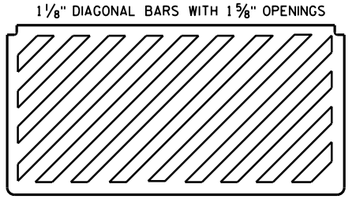






TYPE "H"

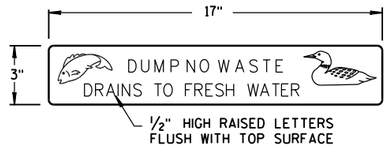
NOTE: EITHER CASTING IS ACCEPTABLE



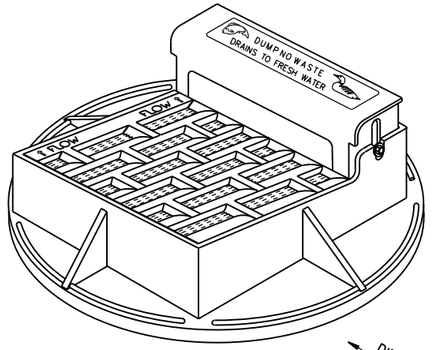
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

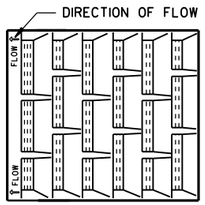
NOTE:
GRATE IS REVERSIBLE.

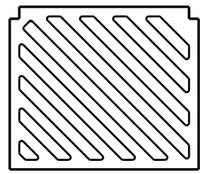
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

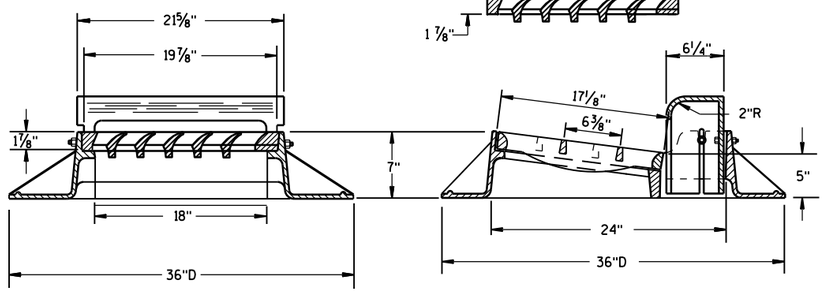




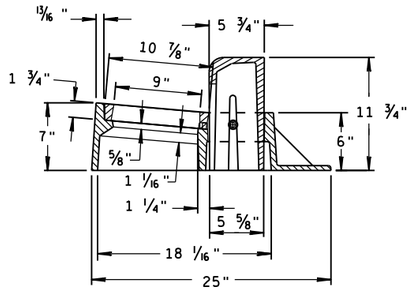
SPECIAL GRATE FOR TYPE "A" COVER

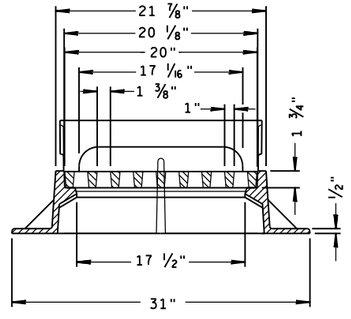
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

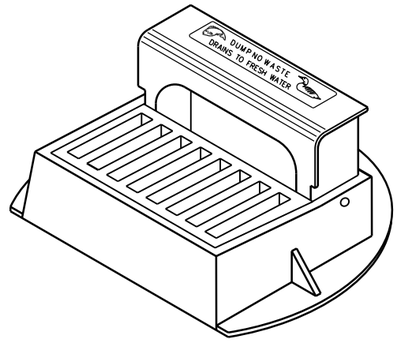


TYPE "A"





TYPE "Z"



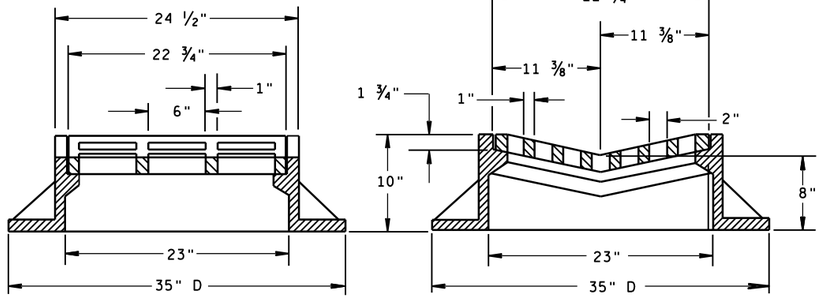
INLET COVERS
TYPE A, H, A-S, H-S & Z

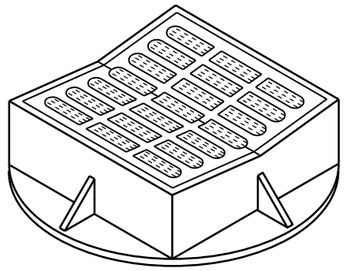
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

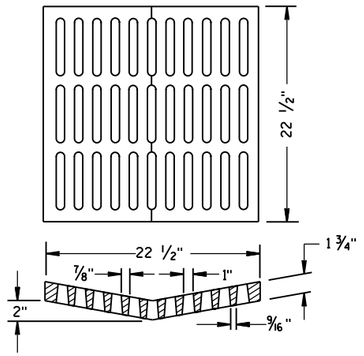
6

S.D.D. 8 A 5-19a



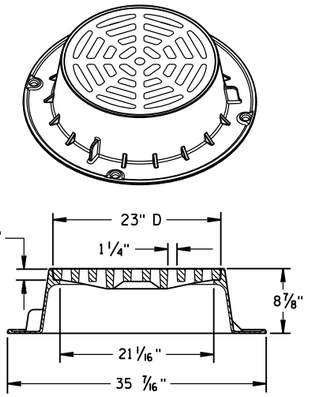


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

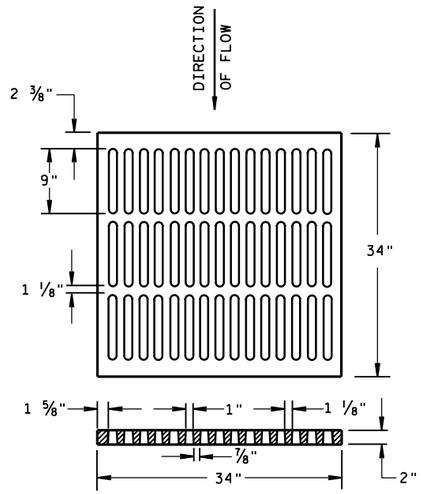
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

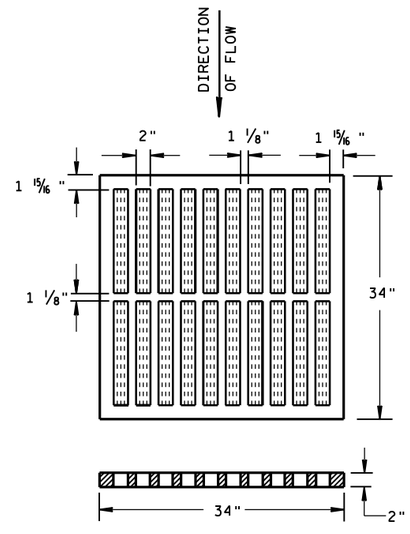
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



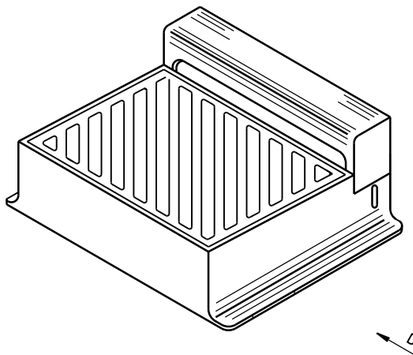
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

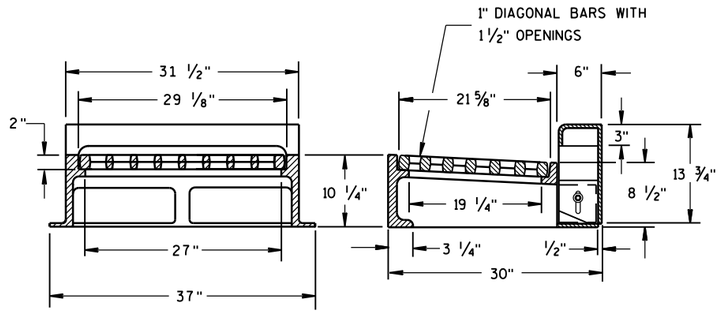


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

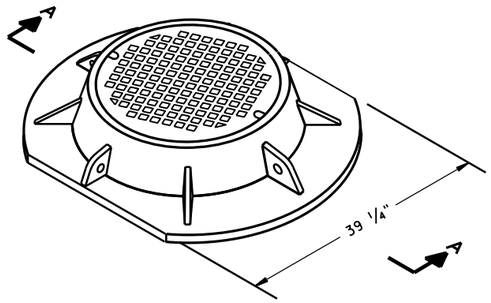
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

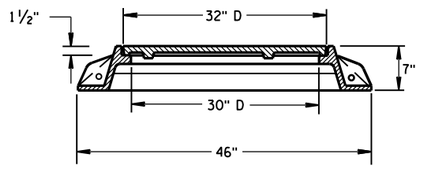
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

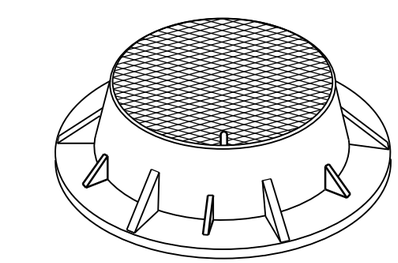
6

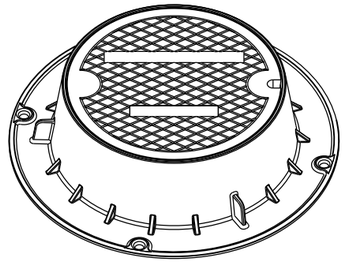
S.D.D. 8 A 5-19b

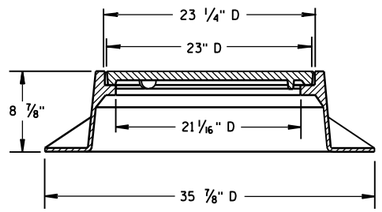


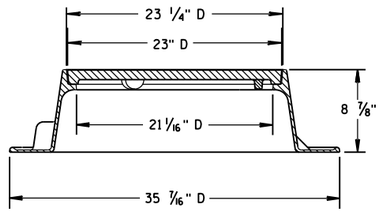


SECTION A-A
TYPE "K"









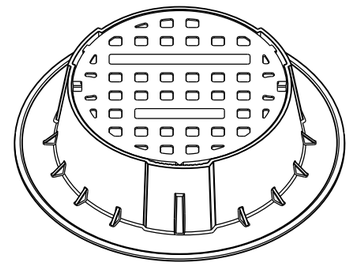
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

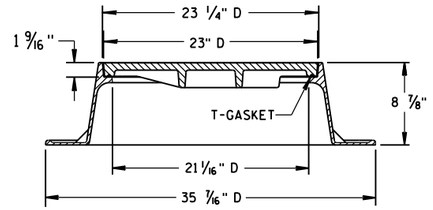
GENERAL NOTES

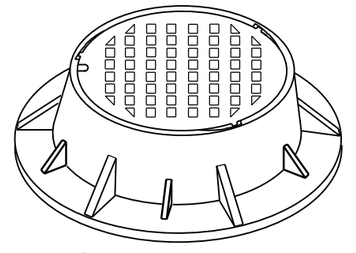
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

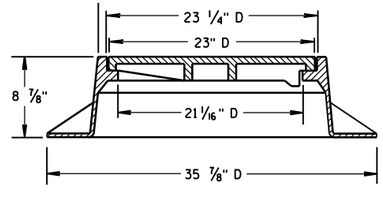
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

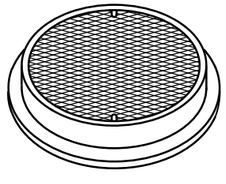


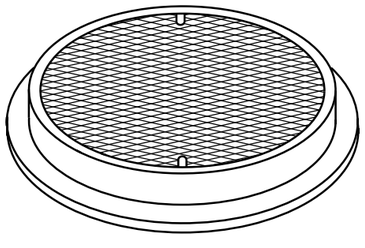


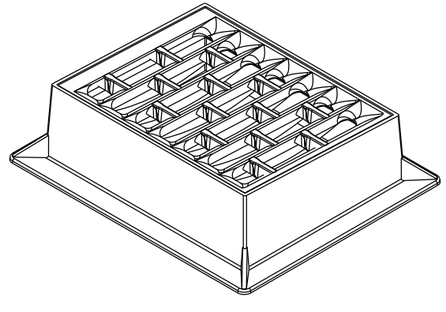


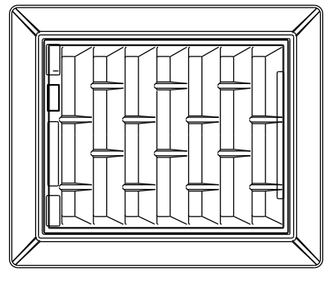


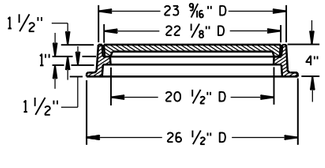
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



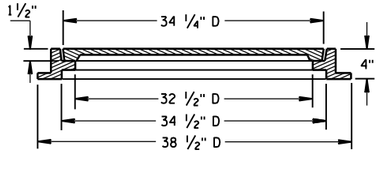




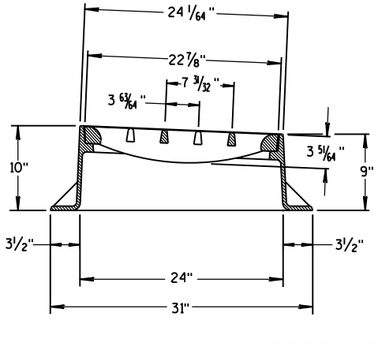


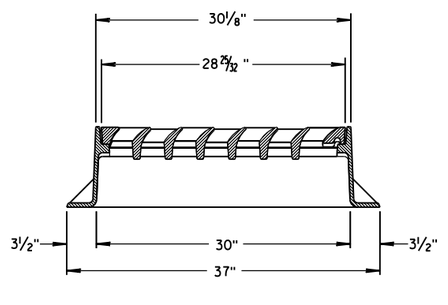


TYPE "L"



TYPE "M"





INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

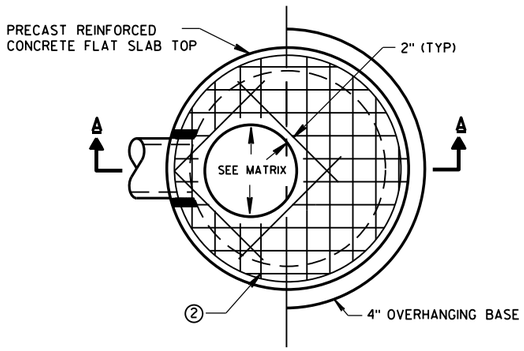
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

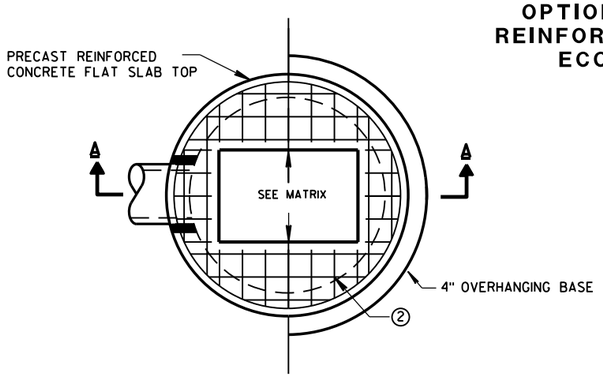
S.D.D. 8 A 5-19d

6

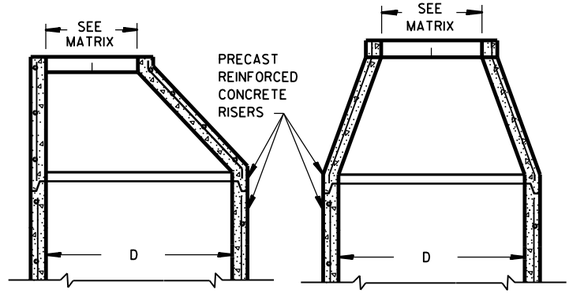
S.D.D. 8 A 5-19d



PLAN VIEW CIRCULAR OPENING

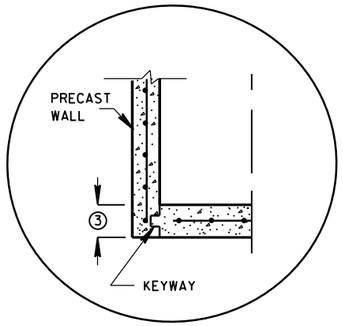


PLAN VIEW RECTANGULAR OPENING

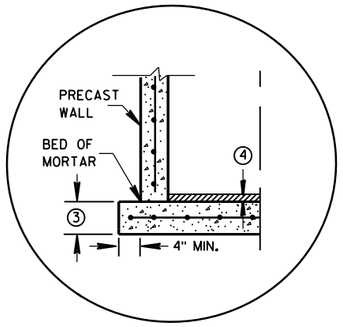


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

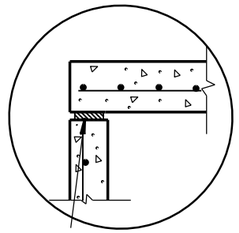


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



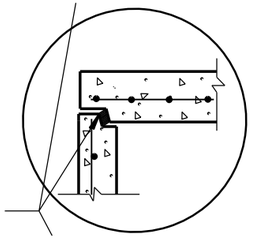
SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

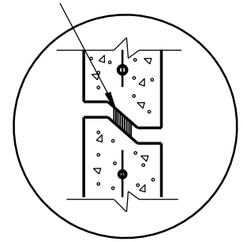


TOP WITH PLAIN END JOINT

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

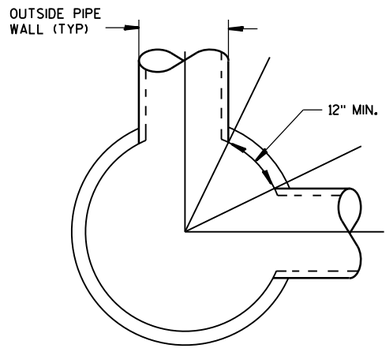


TOP WITH TONGUE AND GROOVE JOINT

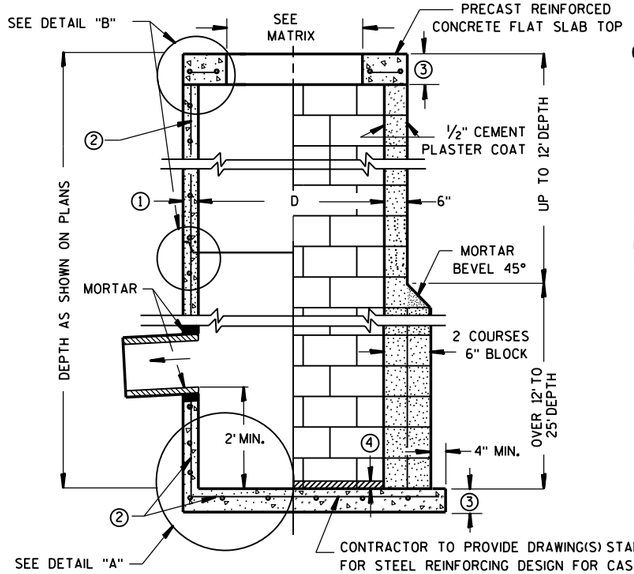


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT)											
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

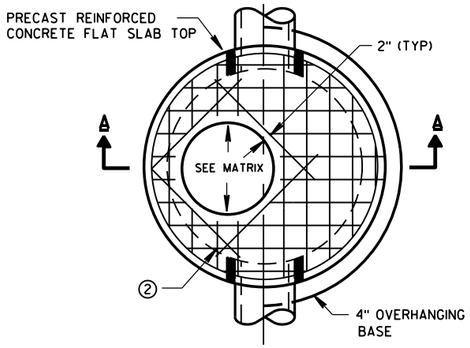
CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

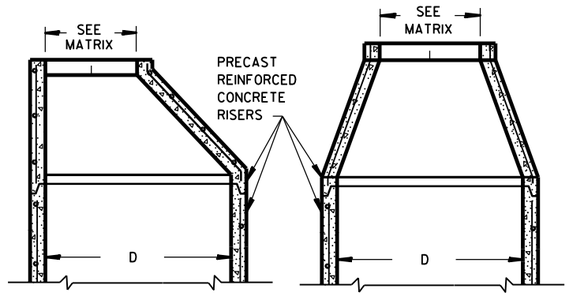
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

S.D.D. 8 A 8-1

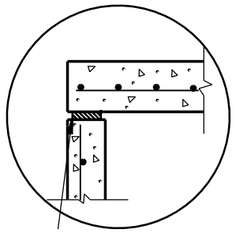


PLAN VIEW CIRCULAR OPENING

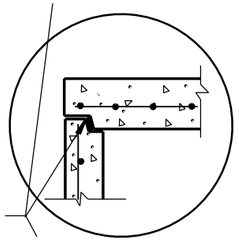


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

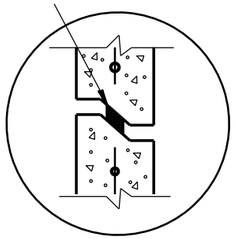


TOP WITH PLAIN END JOINT



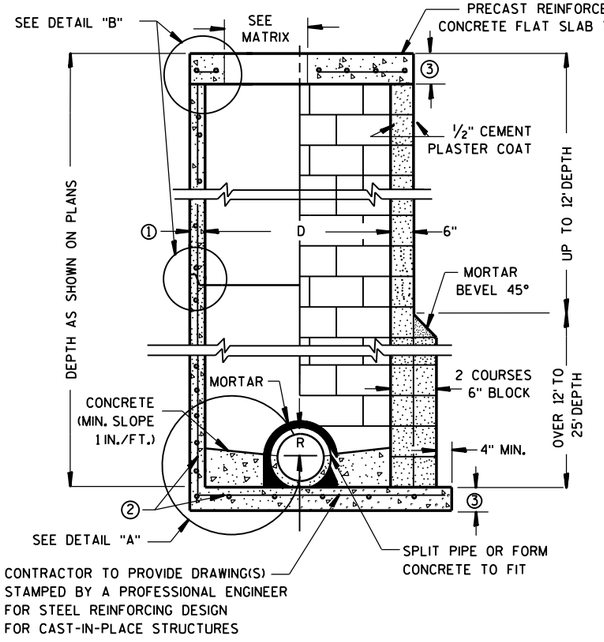
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



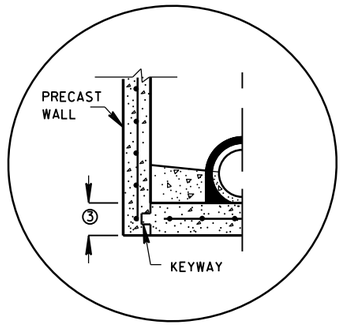
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

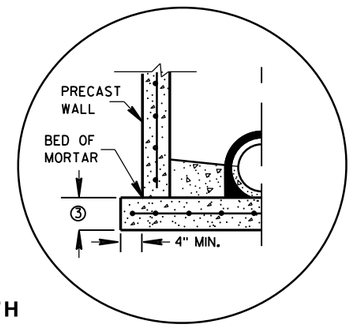


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

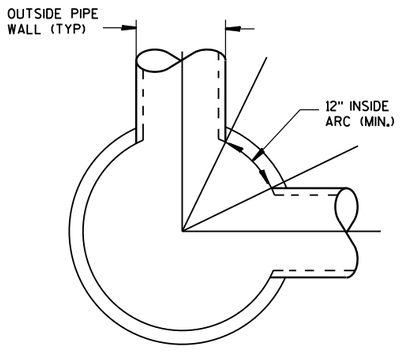


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

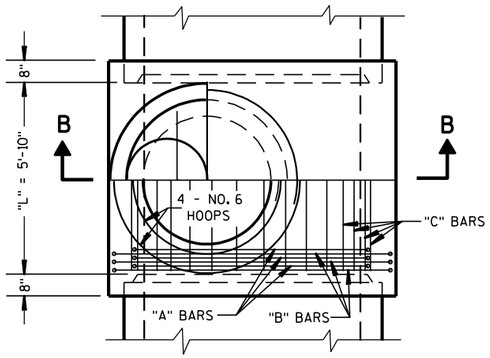
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

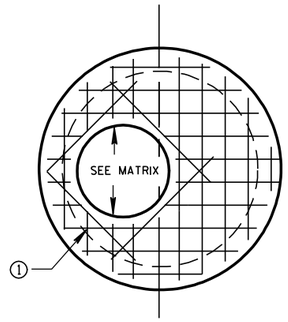
APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

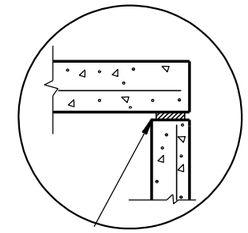
6
S.D.D. 8 B 9-1



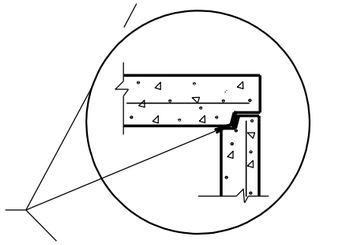
HALF SECTION A-A



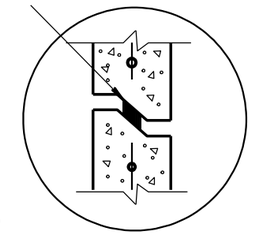
PLAN VIEW PRECAST REINFORCED CONCRETE FLAT SLAB TOP WITH ECCENTRIC OPENING



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "A"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 4T-L", "MANHOLES 4S-M", ETC. THE VARIABLE TEE IS DENOTED BY 4T AND THE VARIABLE SPECIAL IS DENOTED BY 4S. THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF $\frac{1}{2}$ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

PRECAST SECTIONS SHALL BE INSTALLED ON A BED OF MORTAR.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE OR CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

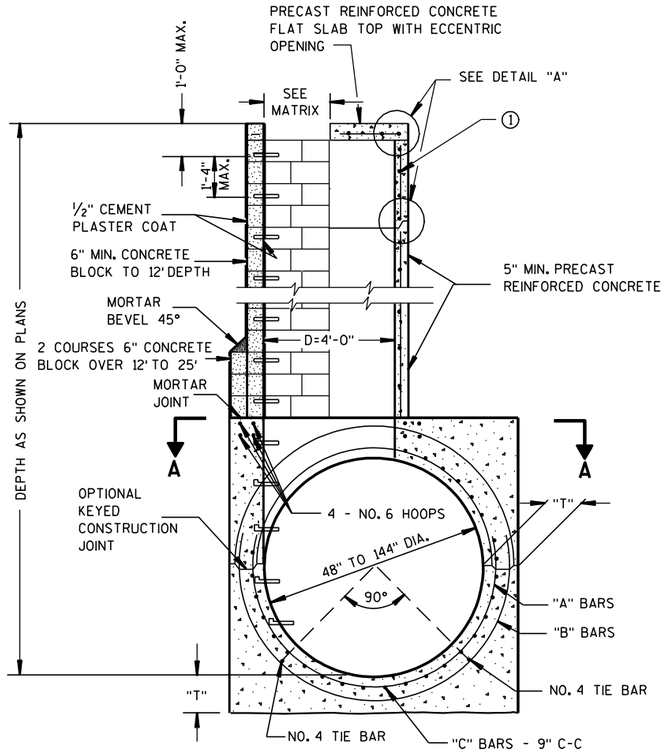
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST MANHOLES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE WITH AASHTO M 199.

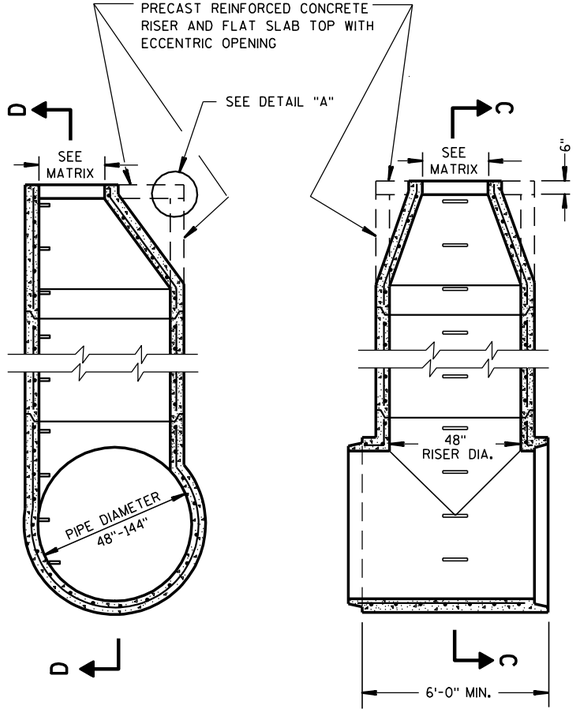
MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X



SECTION B-B

MANHOLE VARIABLE SPECIAL 4-FT DIAMETER



SECTION C-C SECTION D-D

MANHOLE VARIABLE TEE 4-FT DIAMETER

NOTES FOR MANHOLE VARIABLE SPECIAL 4-FT DIAMETER

NOTE: ALL "A", "B", AND "C" BAR STEEL REINFORCING IS THE SAME DIAMETER WHICH VARIES WITH DEPTH.
NO. 5 BARS TO 20' DEPTH
NO. 6 BARS OVER 20' TO 30' DEPTH
NO. 7 BARS OVER 30' TO 40' DEPTH

THE "A" AND "B" BARS MAY BE PLACED IN ONE OR TWO SEGMENTS, AND SHALL LAP 24 BAR DIAMETERS.

"C" BARS SHALL HAVE STANDARD HOOKED ENDS.

NOTE: "T" THROUGHOUT LENGTH "L" SHALL BE 13" FOR PIPE DIAMETER 48" TO 84" AND 15" FOR PIPE DIAMETER GREATER THAN 84".

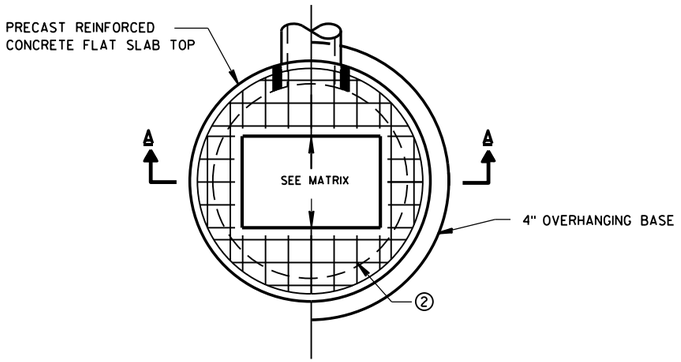
MANHOLE VARIABLE TEE AND SPECIAL 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

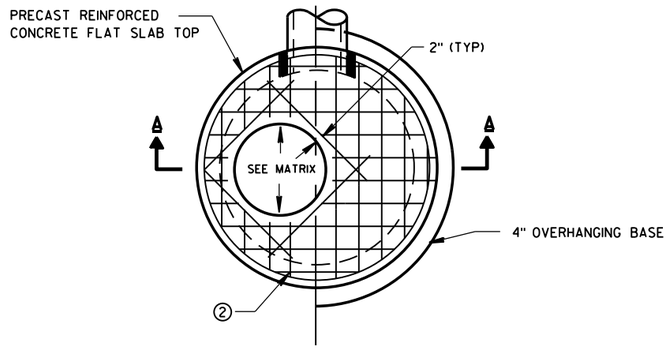
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

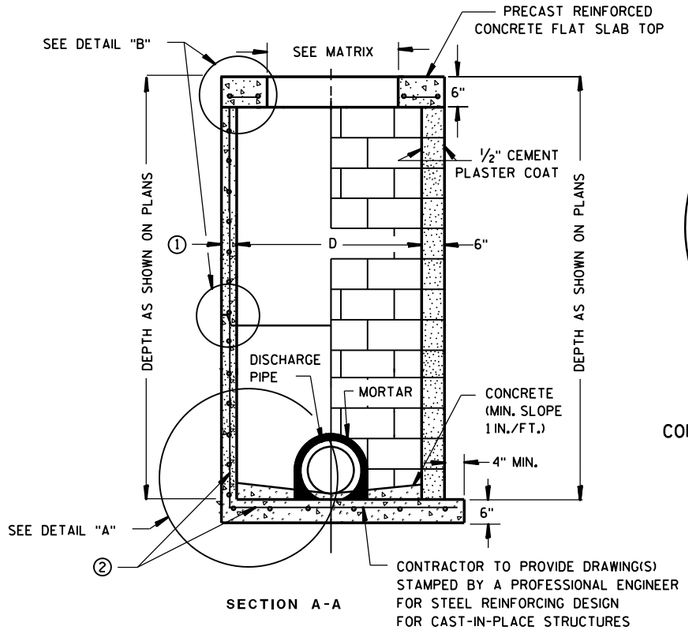
S.D.D. 8 B 11-1



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

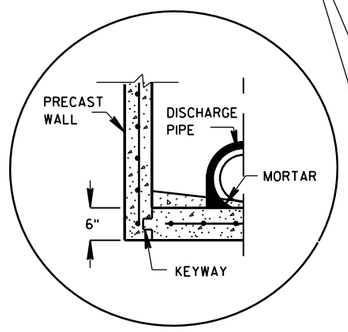


SECTION A-A

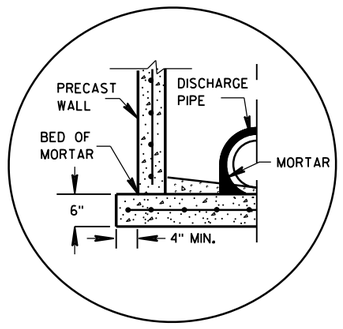
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

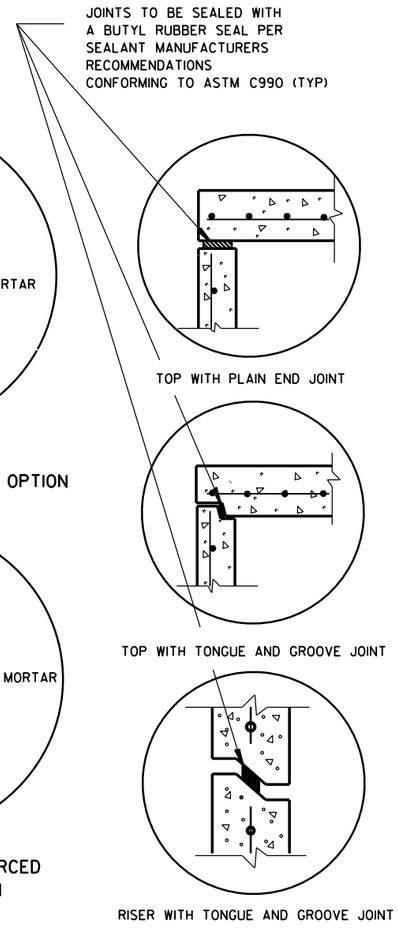


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

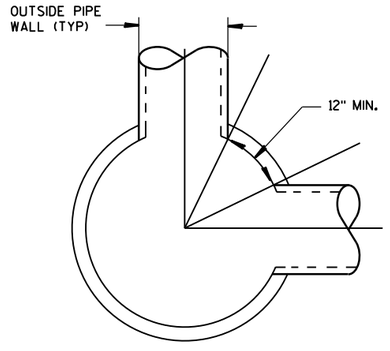
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

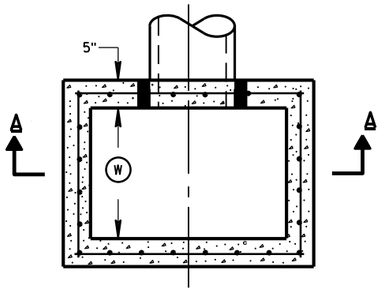
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

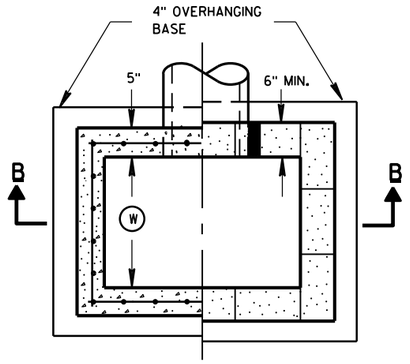
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

INLETS 3-FT AND 4-FT DIAMETER

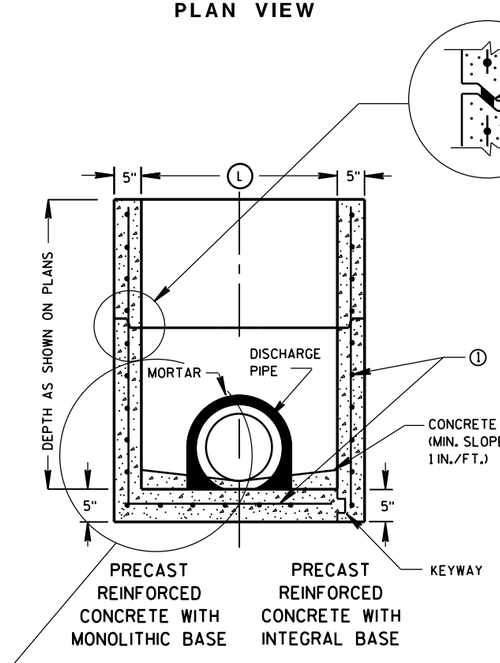
6
S.D.D. 8 C 6-1



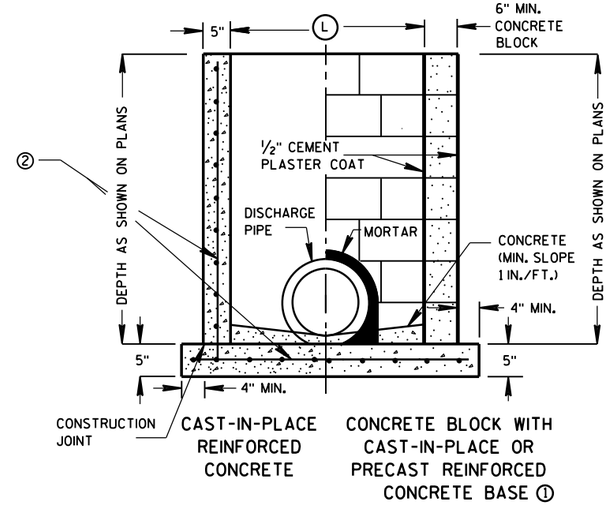
PLAN VIEW



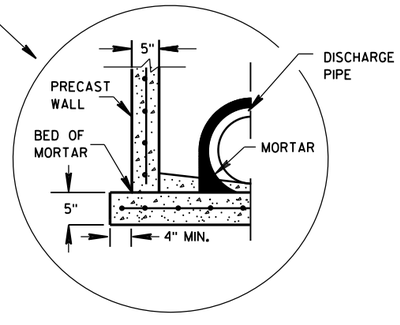
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

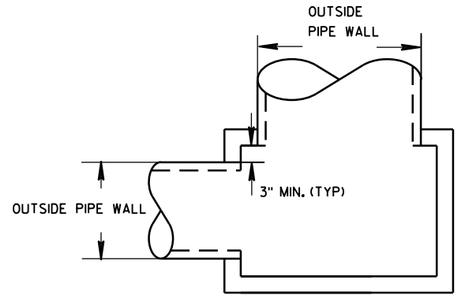
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

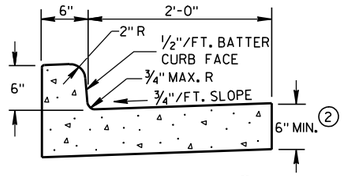
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
FHWA

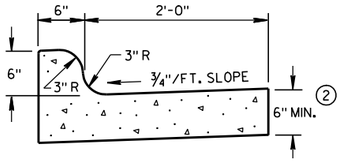
/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER

6

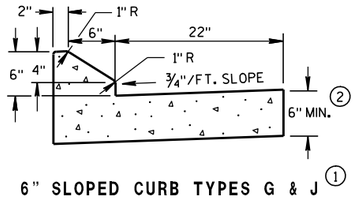
S.D.D. 8 C 7-1



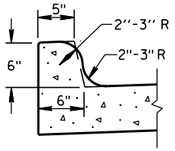
TYPES A & D (1)



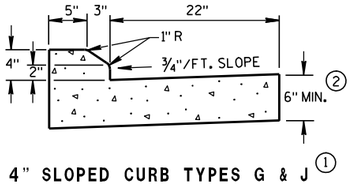
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

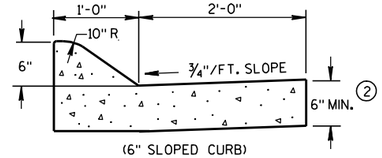


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

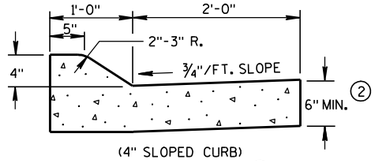


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

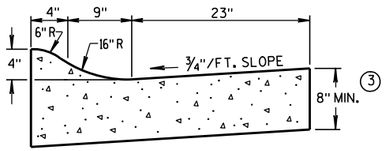


(6" SLOPED CURB)



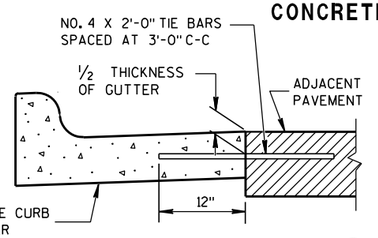
(4" SLOPED CURB)

TYPES A & D (1)

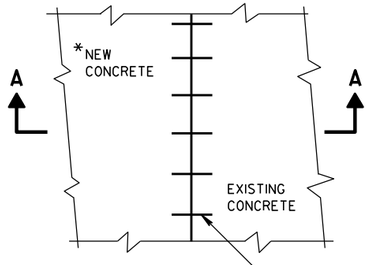


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

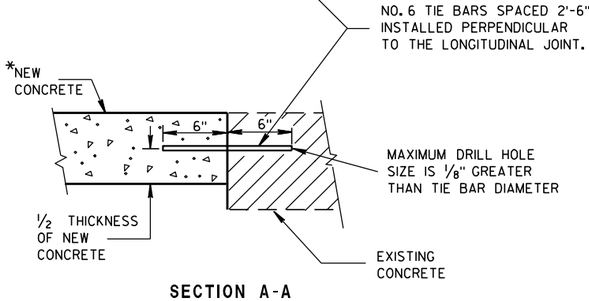


TYPICAL TIE BAR LOCATION (1)



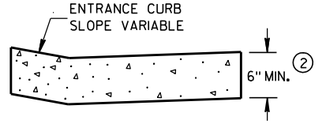
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW



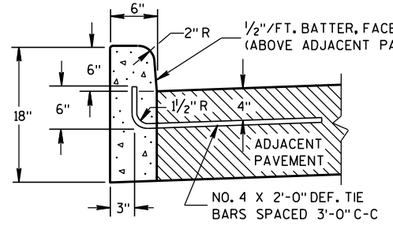
SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

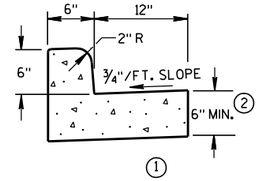


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

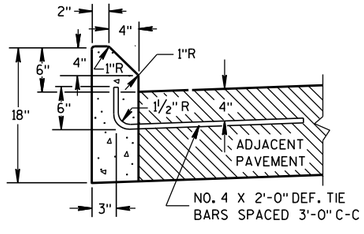


(1)
TYPES A & D



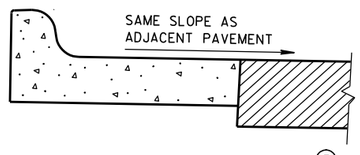
(1)
TYPES A & D

CONCRETE CURB & GUTTER 18"



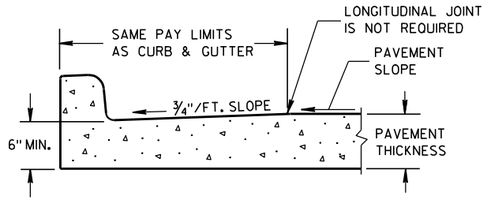
(1)
TYPES G & J

CONCRETE CURB

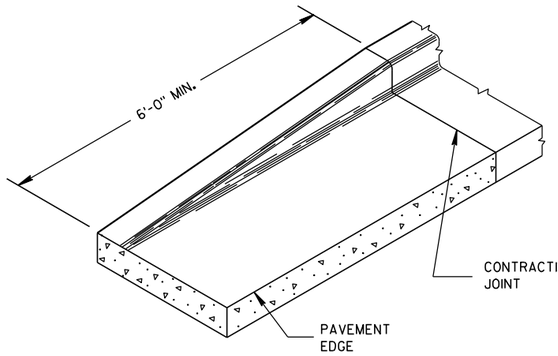


REVERSE SLOPE GUTTER (5)

(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

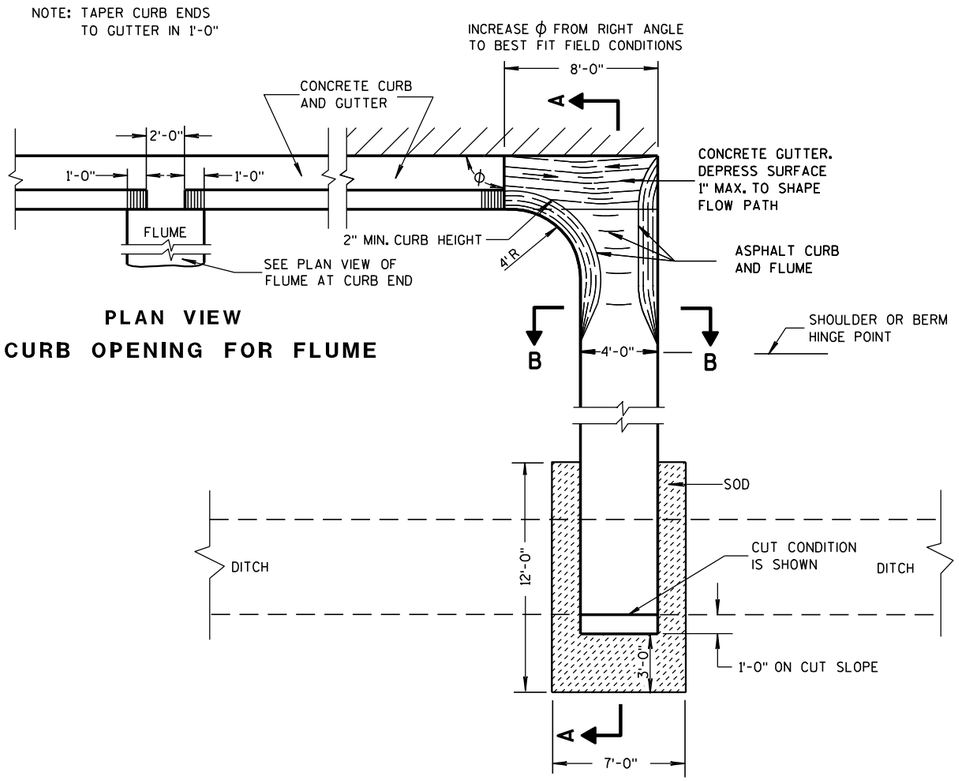
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
475
FHWA

6

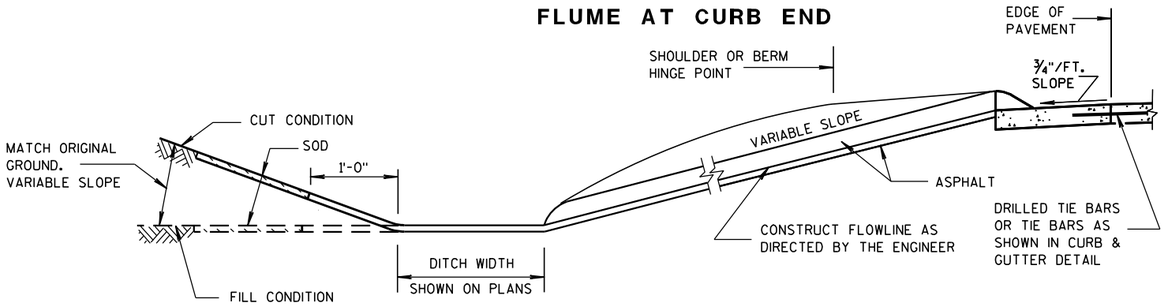
S.D.D. 8 D 1-17

ASPHALTIC FLUME

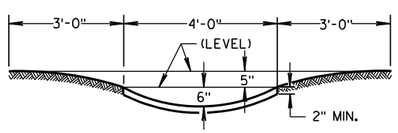


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

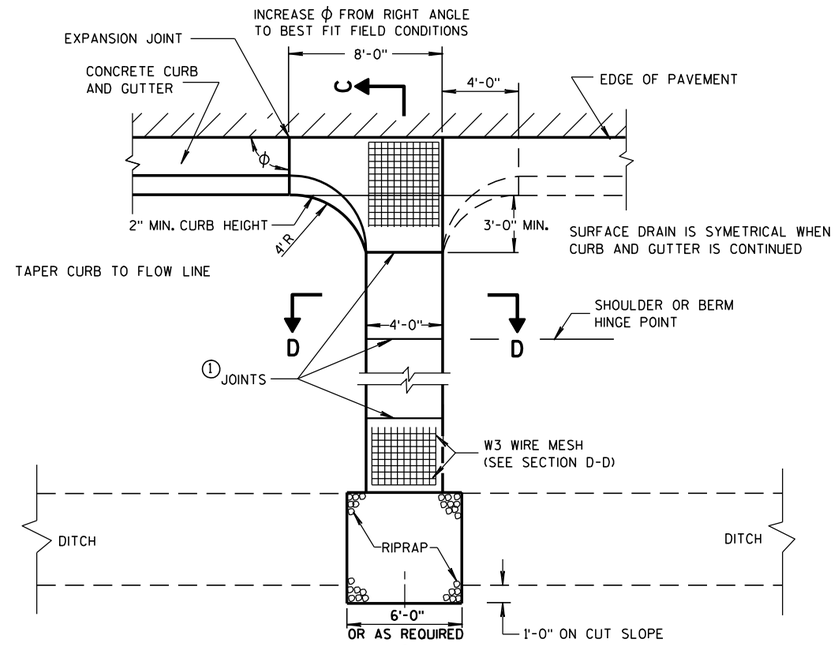
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

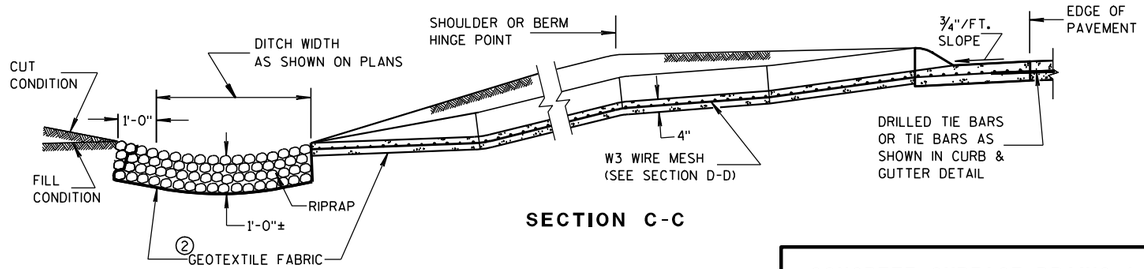
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

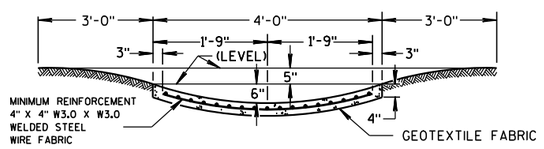
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

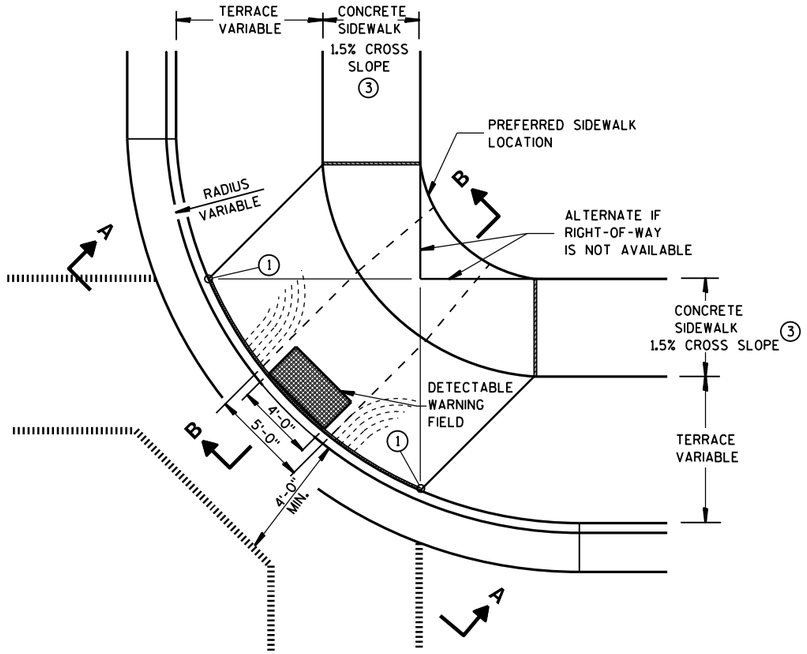
APPROVED
9-4-08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
476
MENT
FHWA

6

S.D.D. 8 D 4-5

6

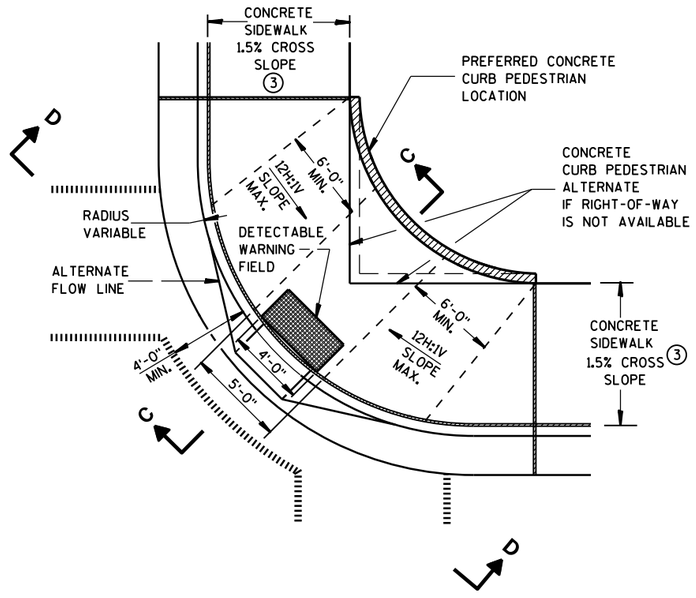
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

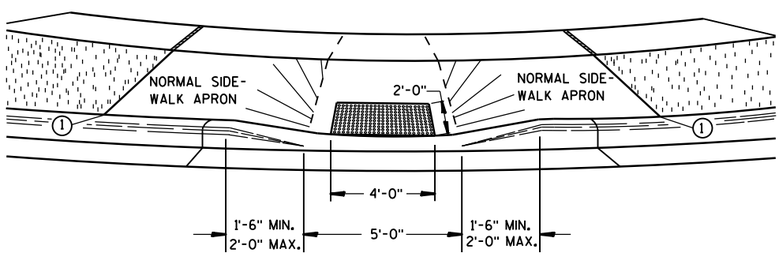
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

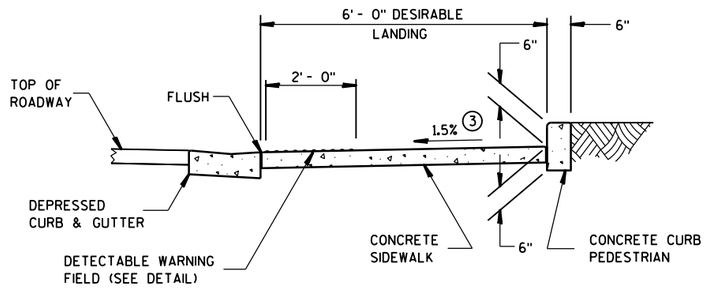
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

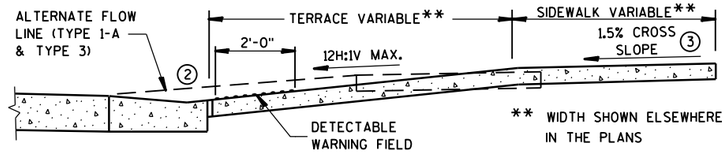
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



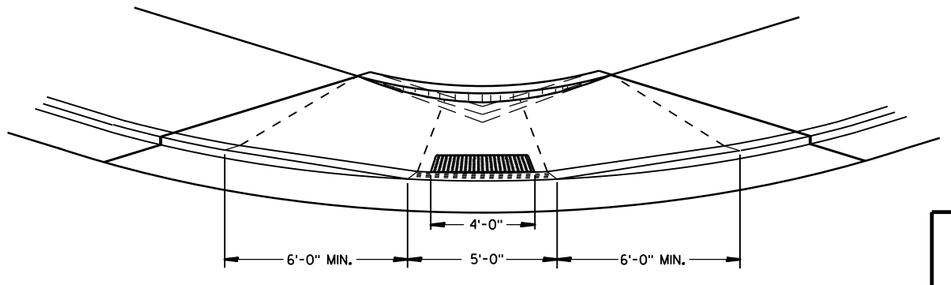
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

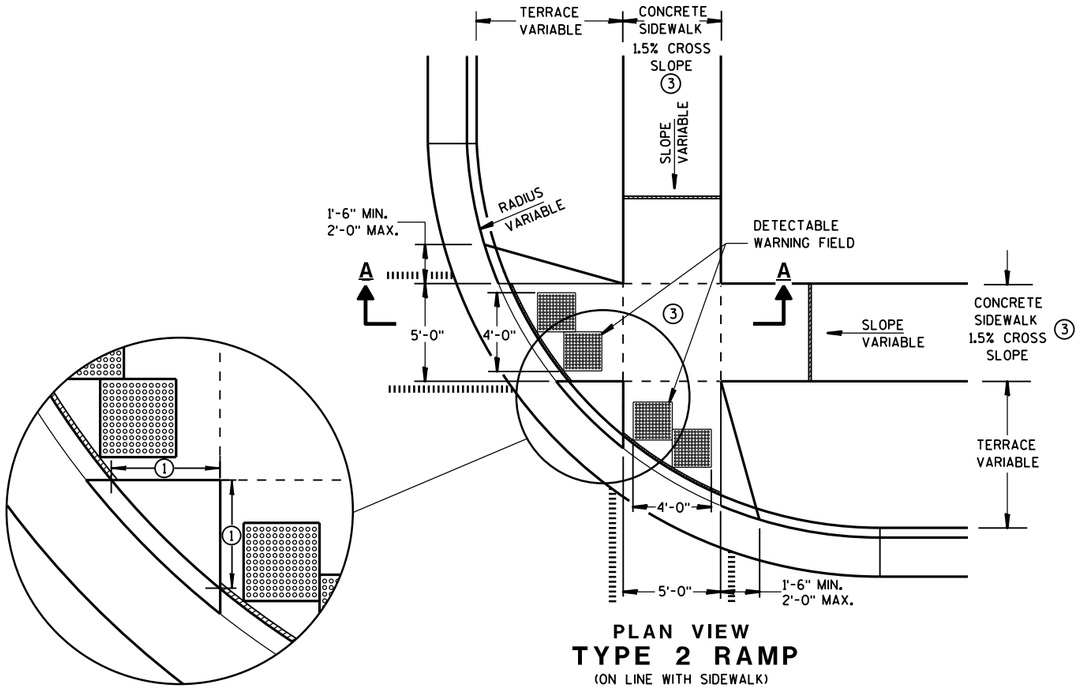
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 477

6

S.D.D. 8 D 5-15a

6

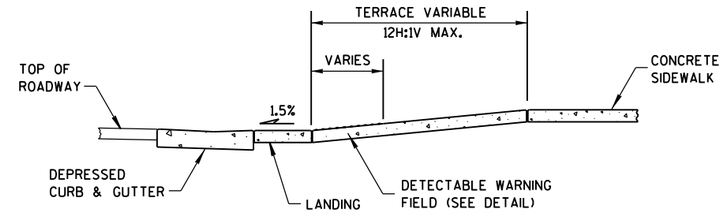
S.D.D. 8 D 5-15a



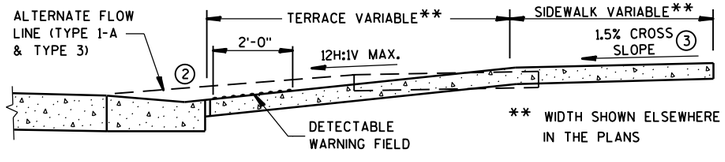
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

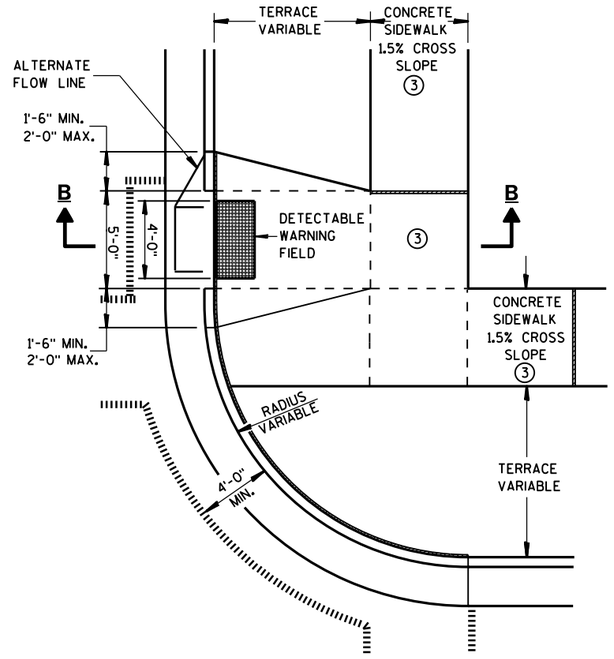
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW

TYPE 3 RAMP

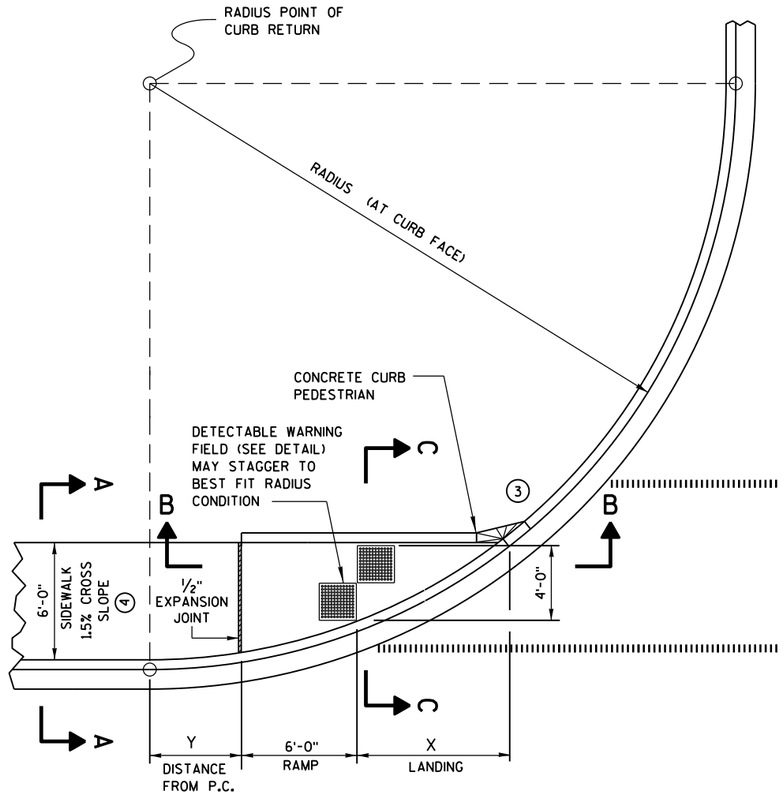
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

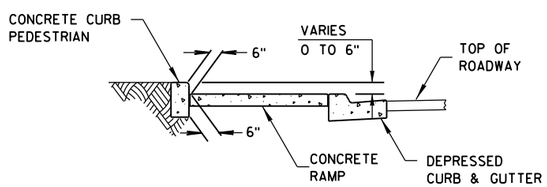
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

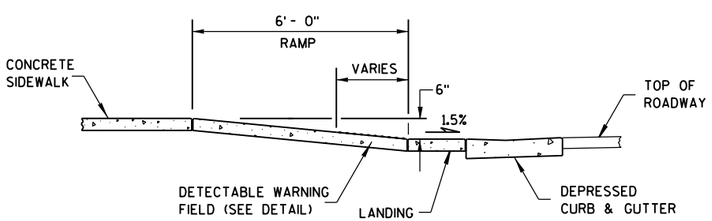
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



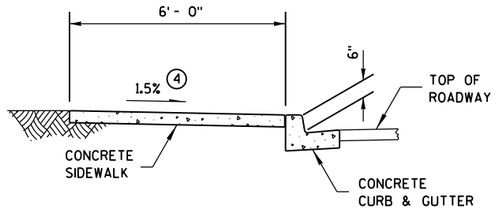
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

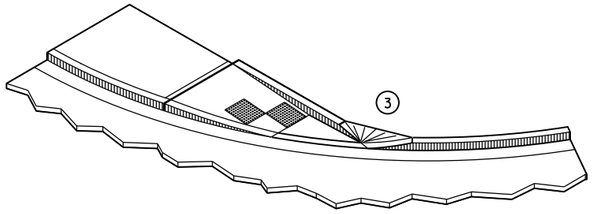
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

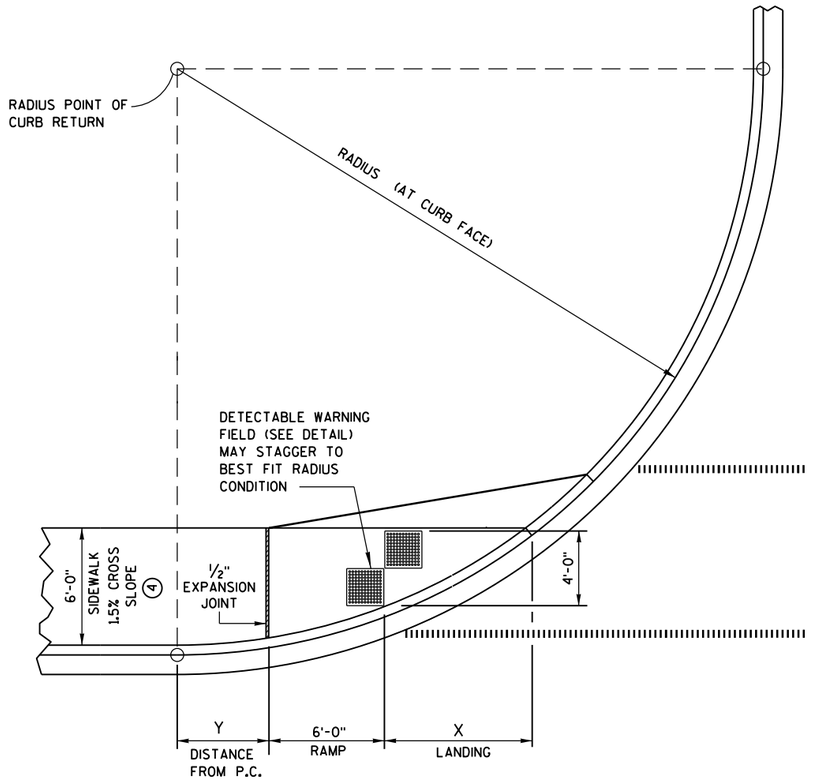
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

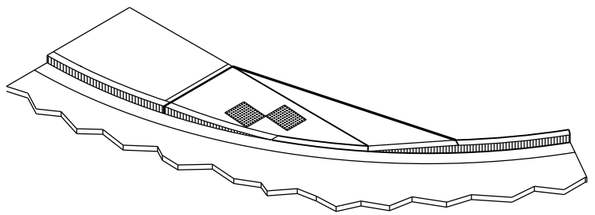
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

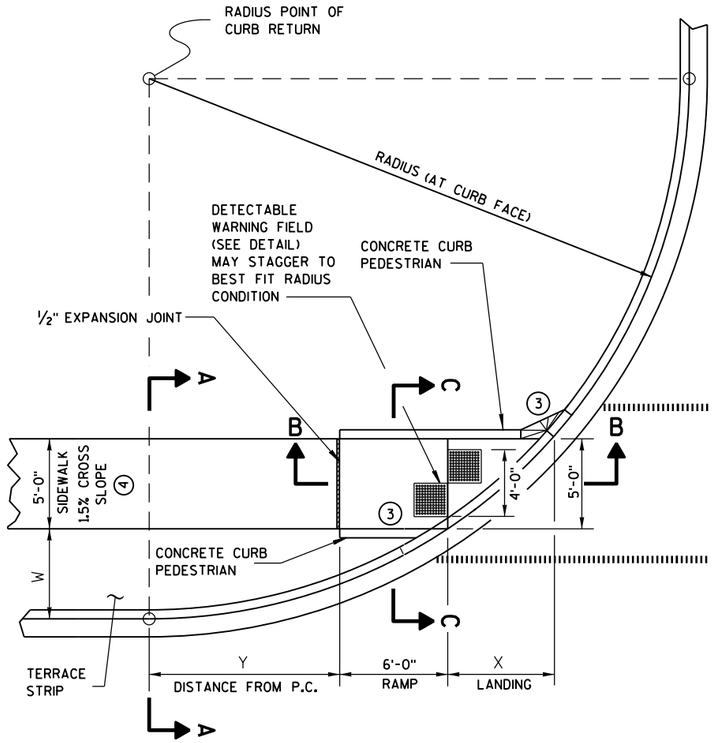
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

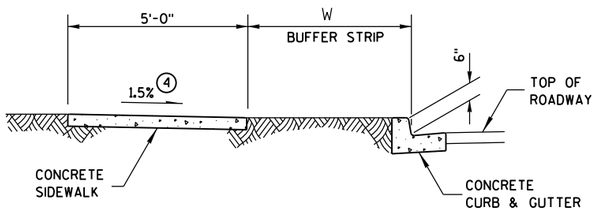
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

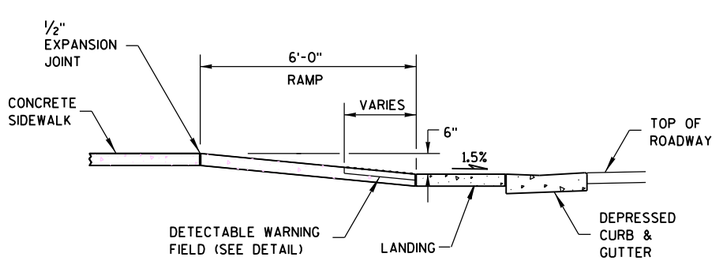
S.D.D. 8 D 5-15c



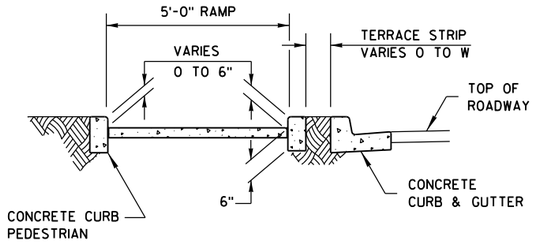
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

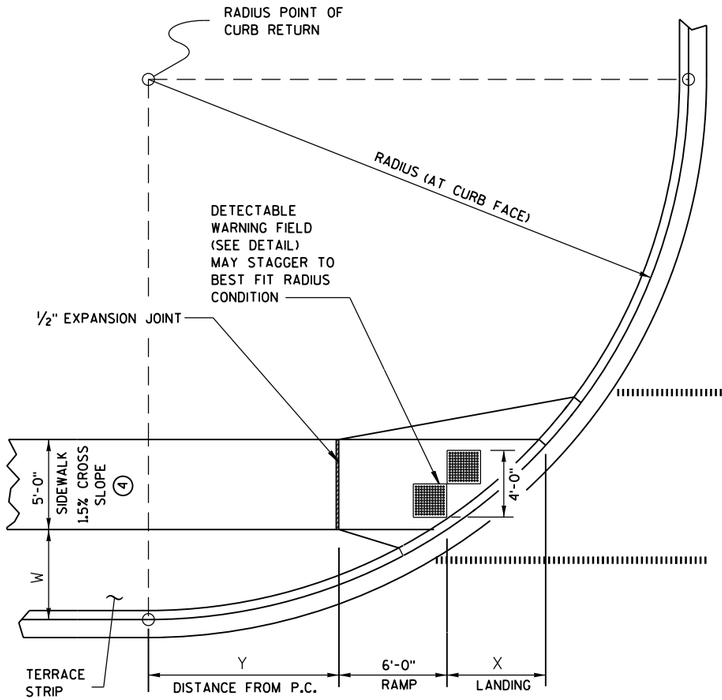
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

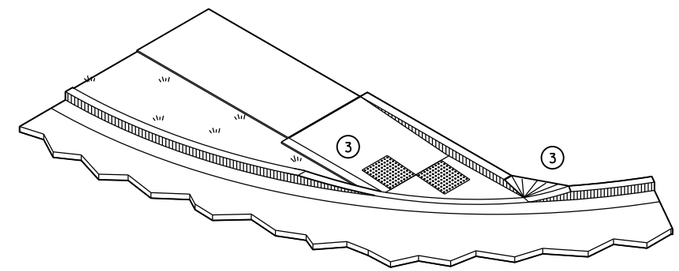
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

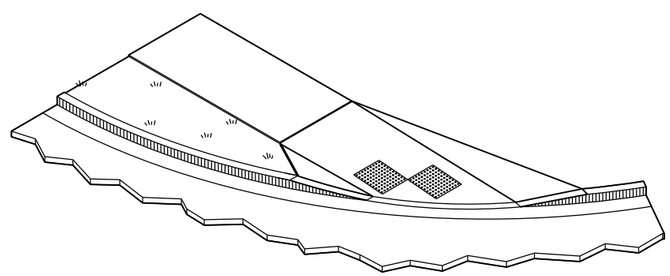
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B

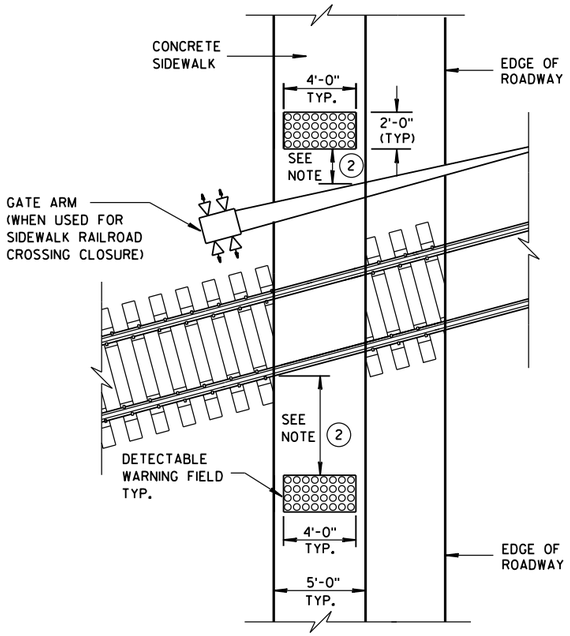


ISOMETRIC VIEW FOR TYPE 4B1

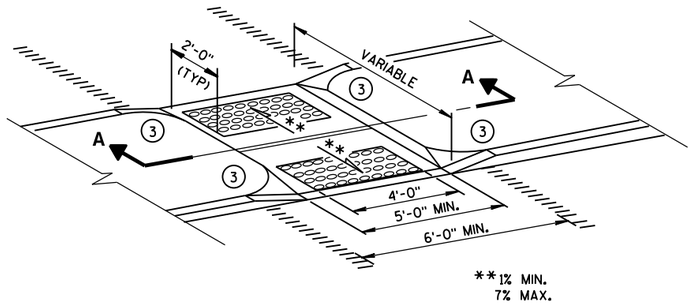
CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 8 D 5-15d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

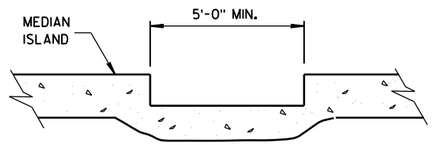
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

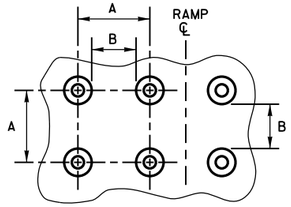
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



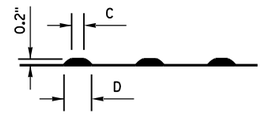
SECTION A-A



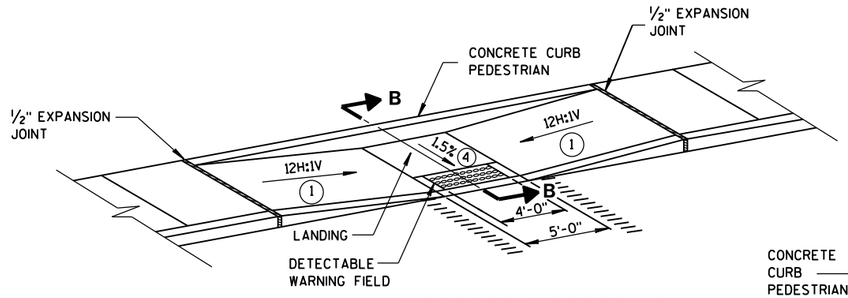
PLAN VIEW

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

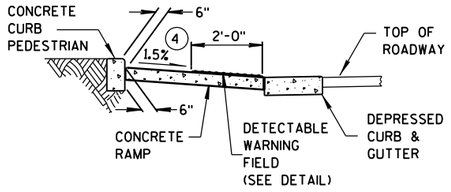
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

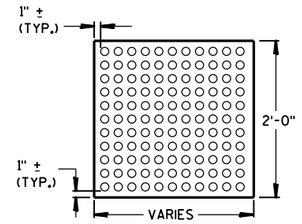


MID-BLOCK CROSSING
TYPE 7A



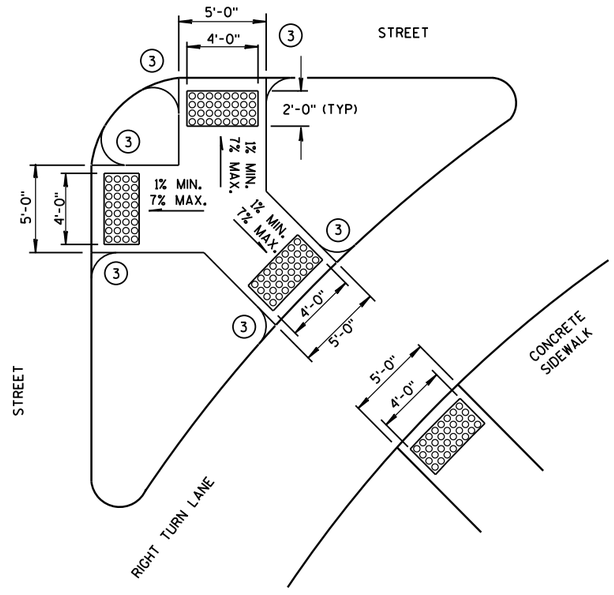
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

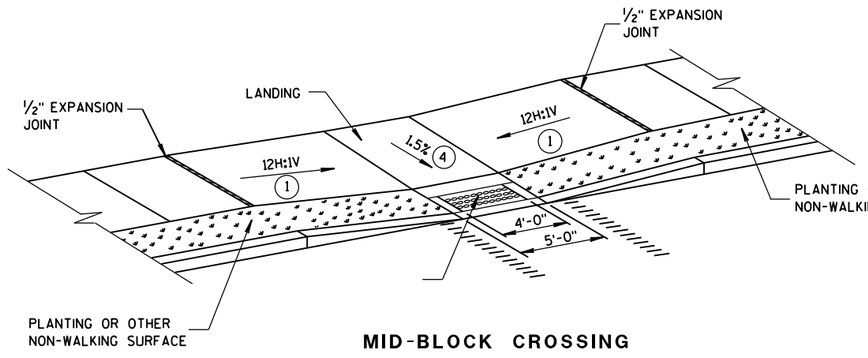


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

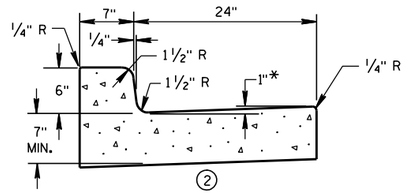
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS [illegible] ENGINEER
FHWA

6

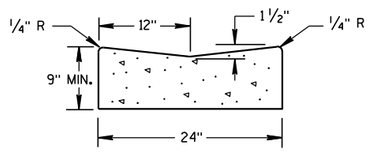
S.D.D. 8 D 5-15e

6

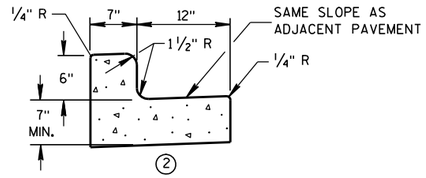
S.D.D. 8 D 5-15e



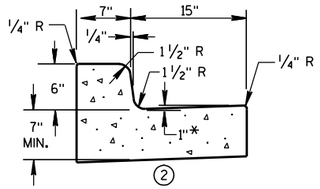
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

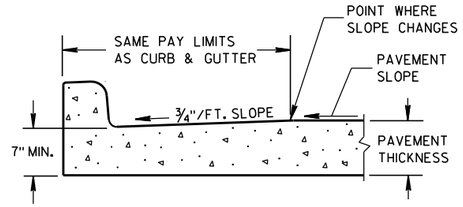


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

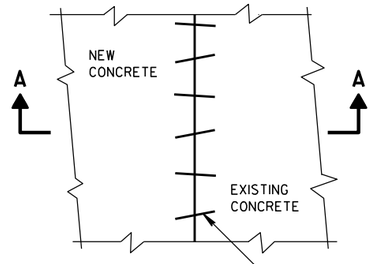
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

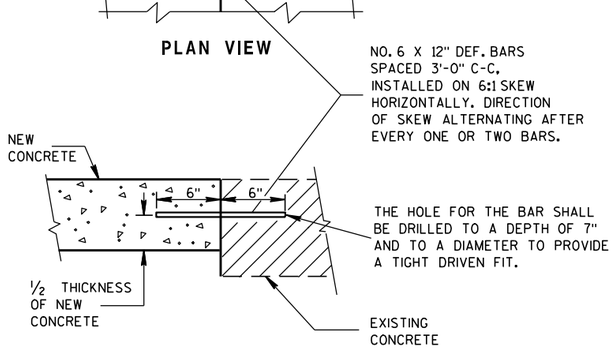
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MIMIMUM GUTTER THICKNESS IS MAINTAINED.

③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



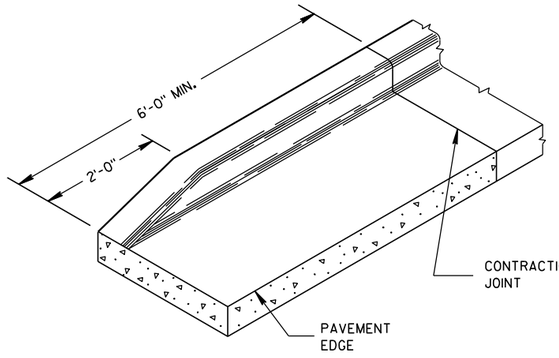
PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

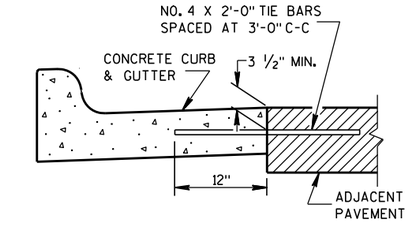


SECTION A-A

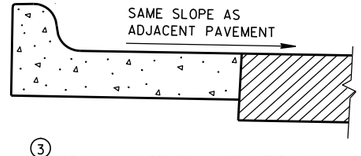
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010 — DATE

/S/ Jerry Zogg — ROADWAY STANDARDS ENGINEER

482

ENT

FHWA

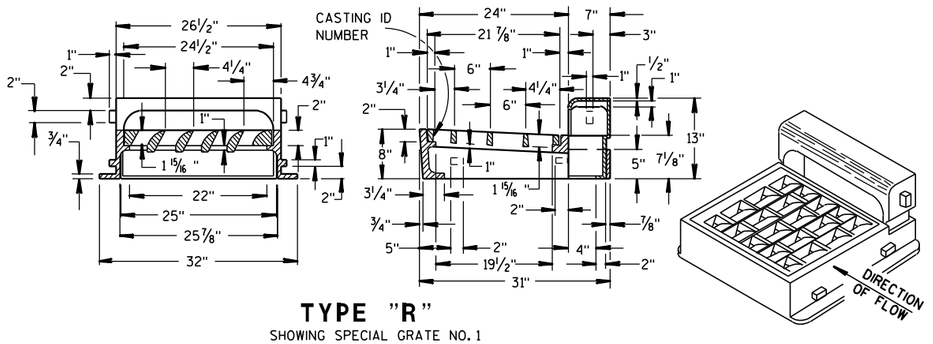
6

S.D.D. 8 D 16-10

6

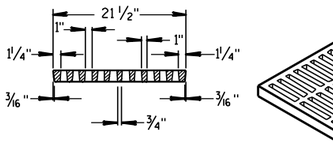
S.D.D. 8 D 16-10

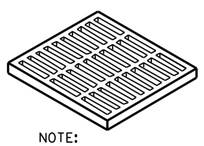
INLET COVERS



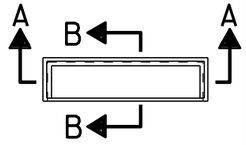
TYPE "R"

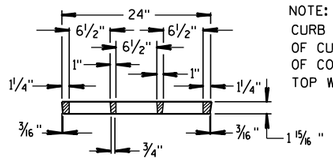
SHOWING SPECIAL GRATE NO. 1
(TO BE NOTED AS R-1 IN DRAINAGE TABLE)



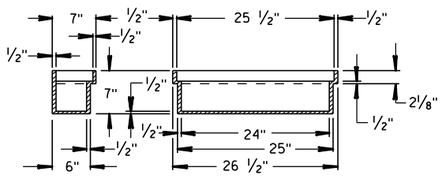


(APPROX. WEIGHT - 510 LBS.)
FRAME..... 245 LBS.
CURB..... 120 LBS.
GRATE..... 145 LBS.





NOTE:
CURB PLUG USED IN PLACE OF CURB BOX IN ABSENCE OF CONC. CURB. FILL TO TOP WITH CONCRETE.



GRATE FOR TYPE "R" INLET COVER

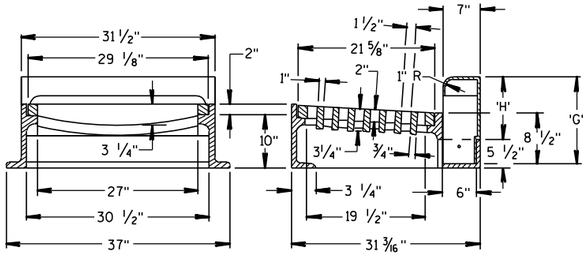
(GRATE..... 150 LBS.)
(TO BE USED UNLESS OTHERWISE NOTED IN DRAINAGE TABLE)

SECTION B-B SECTION A-A

SPECIAL CURB PLUG "P"

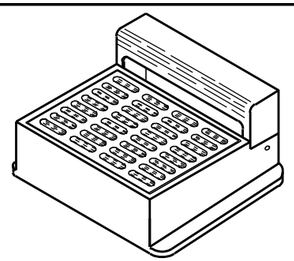
(CURB PLUG..... 85 LBS.)
(TO BE NOTED AS R-P IN DRAINAGE TABLE)

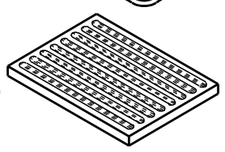
'H' = 9" FOR 6" CURB
'H' = 11" FOR 8" CURB
'G' = 13 3/4" FOR 6" CURB
'G' = 15 3/4" FOR 8" CURB



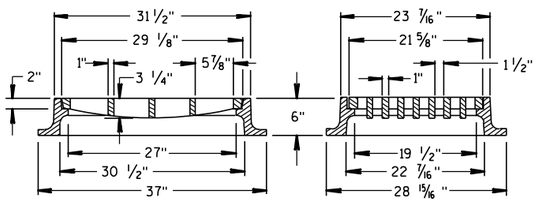
TYPE "W"

(APPROX. WEIGHT - 670 LBS.)
FRAME..... 350 LBS.
CURB BOX..... 135 LBS.
GRATE..... 185 LBS.





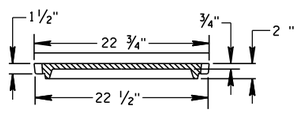
ALTERNATE GRATE
(FOR EXPRESSWAY RAMPS)
TYPES "W" & "X"



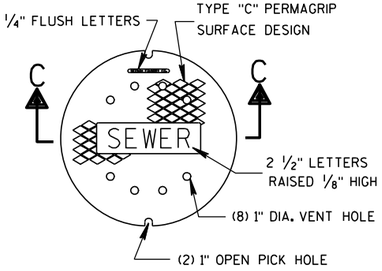
TYPE "X"

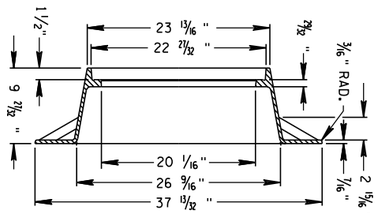
(APPROX. WEIGHT - 470 LBS.)

MANHOLE COVER



SECTION C-C

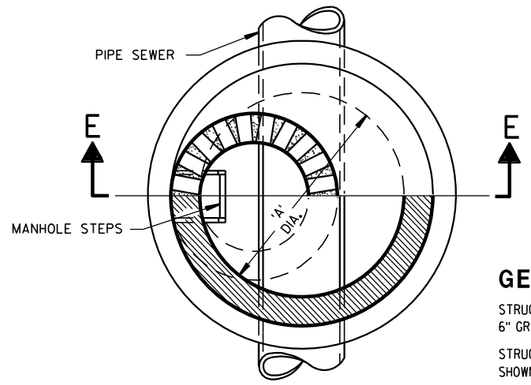




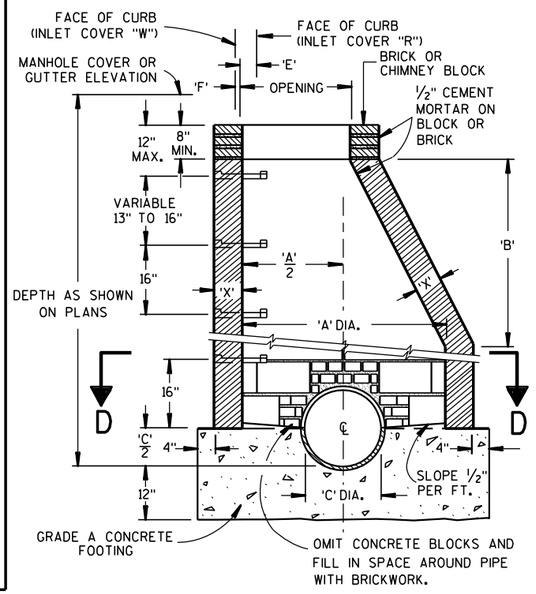
TYPE "Q"

(APPROX. WEIGHT - 290 LBS.)

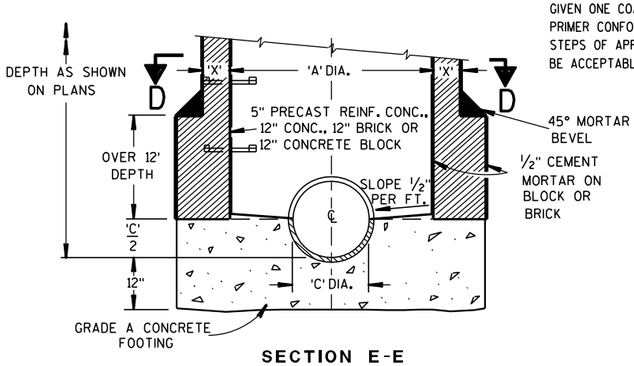
MANHOLE



HALF SECTION D-D



SECTION E-E



SECTION E-E

TYPES 11, 12, 13 & 14

TABLE OF OPENING DIMENSIONS

COVER TYPE	COVER DESCRIPTION	OPENING	'E'	'F'
"O"	ROUND	2'-2" DIA.	—	—
"W"	CURB BOX	1'-8" X 2'-6"	—	1"
"X"	INLET	1'-10" X 2'-6"	—	—
"R"	CURB BOX	2'-0" X 2'-1"	4"	—

TABLE OF DIMENSIONS

TYPE	'A'	'B'	'C'
11	3'-6"	2'-8"	12" - 36"*
12	4'-0"	3'-8"	12" - 42"**
13	5'-0"	5'-8"	42" - 48"
14	6'-0"	7'-8"	54" - 60"

* 12" - 21" FOR PRECAST MANHOLES
** 12" - 24" FOR PRECAST MANHOLES

THE FIRST STEP SHALL BE PLACED 16" ABOVE THE BENCH.

GENERAL NOTES

STRUCTURE WALL THICKNESS 'X' TO BE 8" BRICK, 6" CONCRETE BLOCK, 6" GRADE A CONCRETE OR 5" PRECAST REINFORCED CONCRETE.

STRUCTURE FOOTINGS ARE TO BE GRADE A CONCRETE OF THE THICKNESS SHOWN IN THE DETAIL OR 5" PRECAST REINFORCED CONCRETE.

REINFORCEMENT FOR 5" PRECAST REINFORCED CONCRETE SHALL BE 6" X 6" W16 X W16 WELDED SREEL WIRE FABRIC AND SHALL BE EMBEDDED 2" CLEAR.

PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

PRECAST CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6" IN DEPTH, WHICH MEETS THE REQUIREMENTS FOR GRANULAR BACK-FILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON THE PLANS.

THE CONTRACTOR MAY FORM AND POUR MONOLITHIC CONCRETE INVERT PROVIDED THE PIPE ENDS ARE EXTENDED INTO THE M.H. AND NOT TERMINATED WITHIN THE M.H. WALLS.

MANHOLE STEPS

STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH; 16 INCH C-C MAX. SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM WALL EMBEDMENT OF 3 INCHES IN PRECAST MANHOLE AND 6 INCHES IN 8 INCH BRICK OR 6 INCH BLOCK MANHOLE; TREAD OF STEP SHALL HAVE A NON-SKID SURFACE AND BE FLANKED BY CLEATS, WITH A MINIMUM OF 10 INCHES CLEAR BETWEEN CLEATS, TO PREVENT FOOT SLIPPING OFF THE EDGE CLEATS SHALL BE A MINIMUM OF 3/4 INCH HIGH BY 3/4 INCH WIDE HAVING A MINIMUM THICKNESS OF 3/8 INCH. STEPS SHALL BE CAPABLE OF SUPPORTING A CONCENTRATED LOAD OF 300 LBS. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

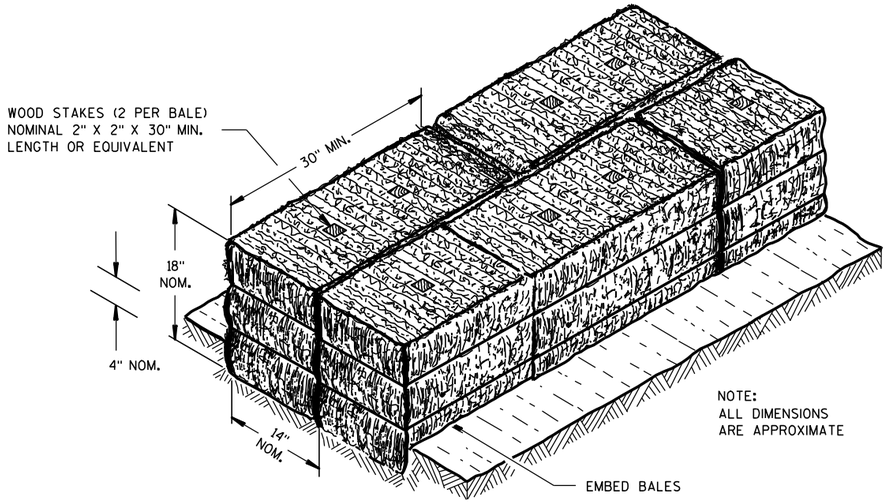
SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCING BAR WILL BE ACCEPTABLE.

MANHOLES, MANHOLE & INLET COVERS

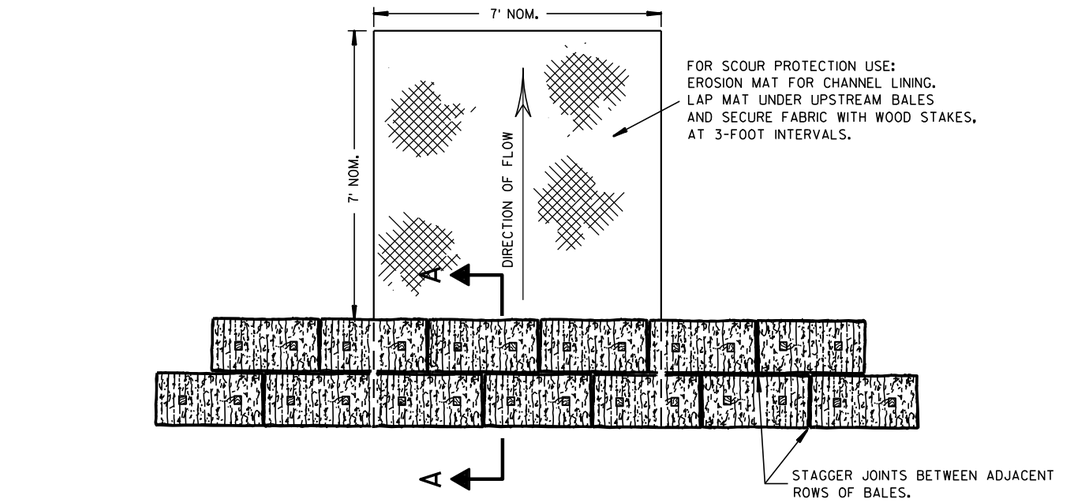
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/12/2011 — DATE
/S/ Jerry H. Zogg — ROADSIDE STANDARDS ENGINEER
FHWA

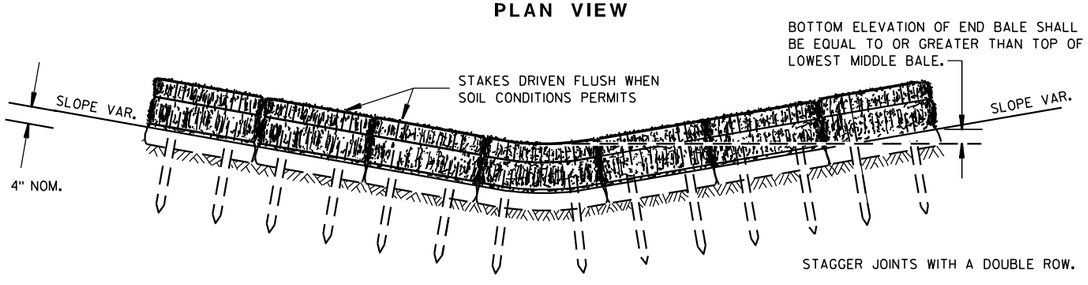
6
S.D.D. 8 D 17-6



SECTION A-A



PLAN VIEW



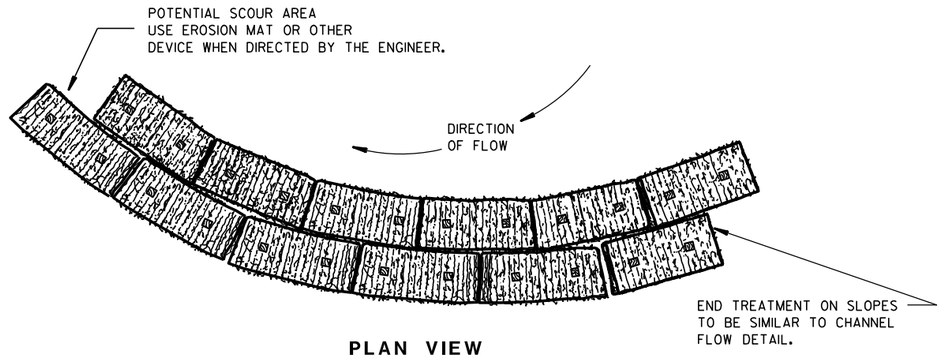
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

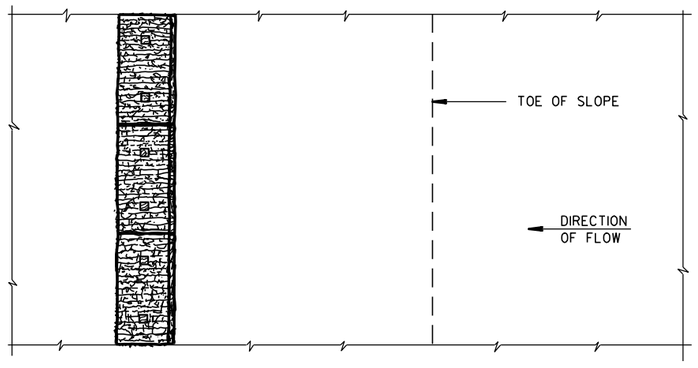
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

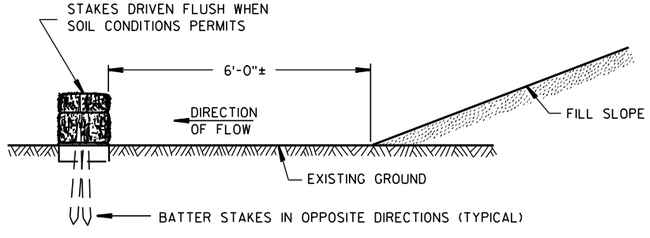


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

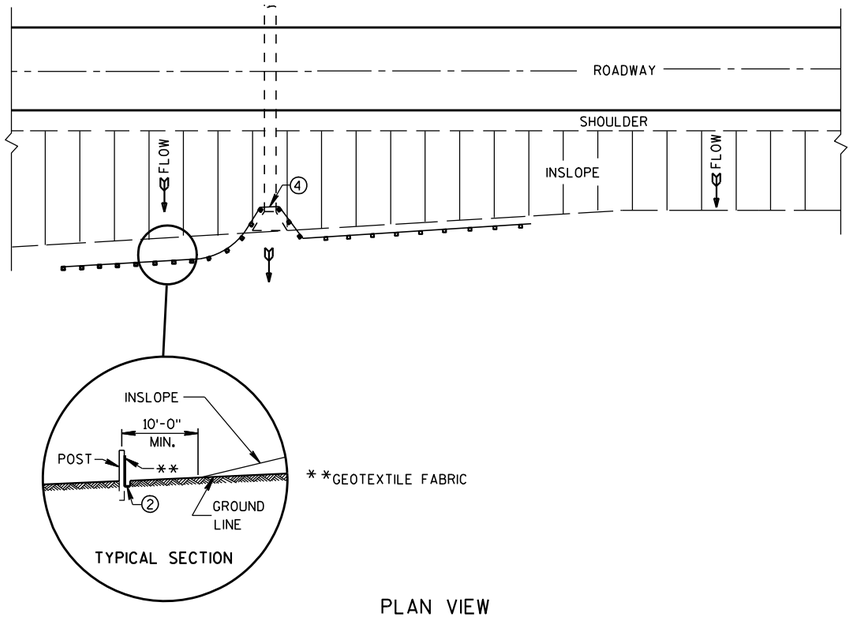
FHWA

6

S.D.D. 8 E 8-3

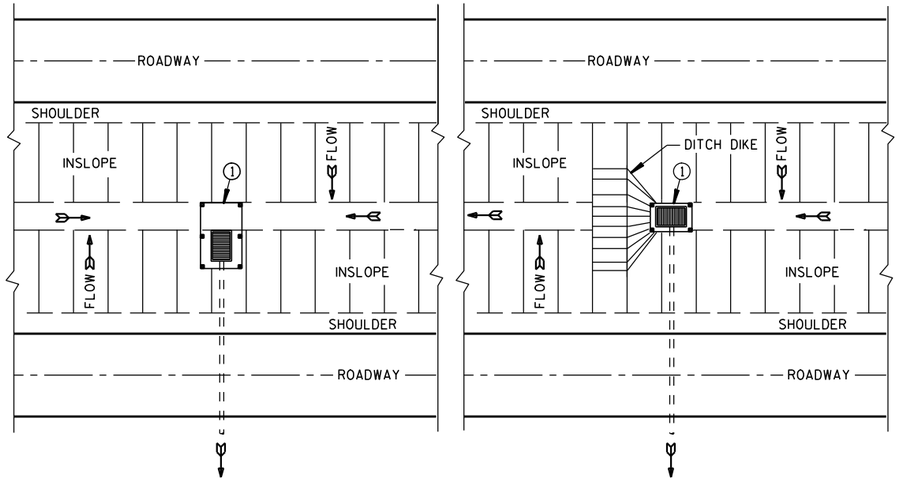
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



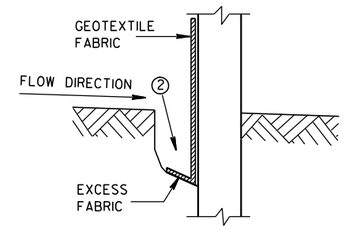
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

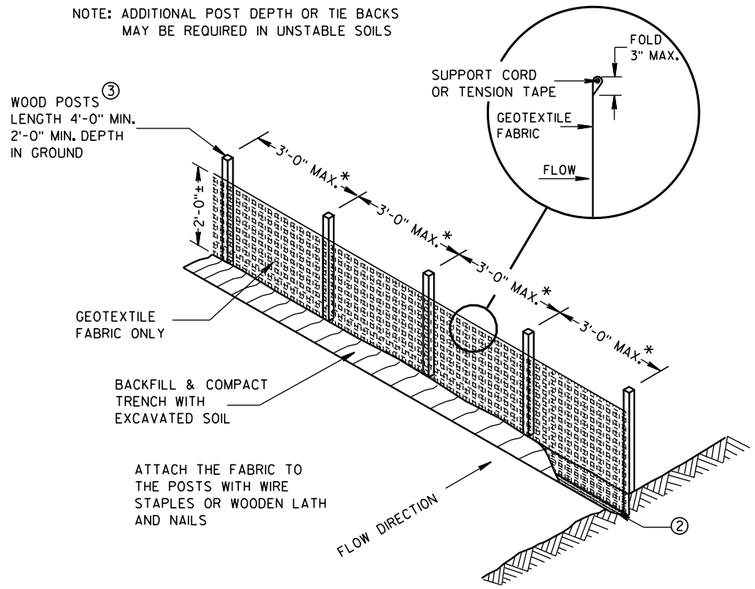
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

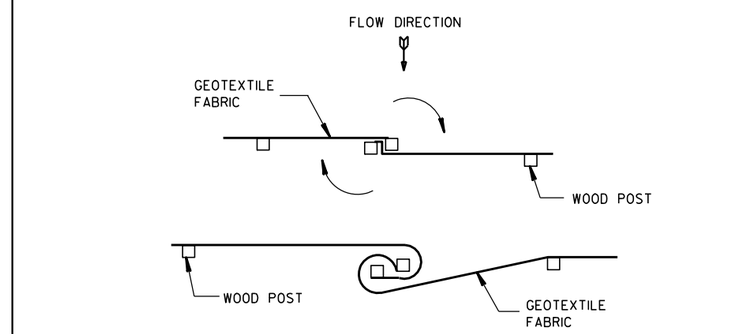
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



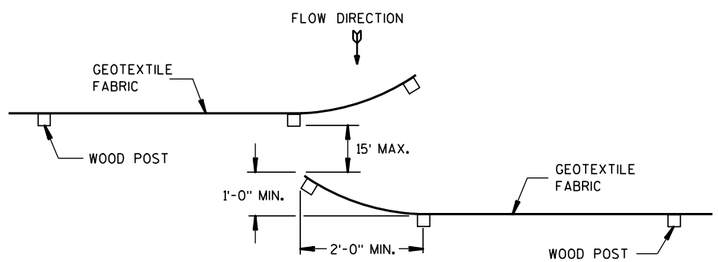
TRENCH DETAIL



SILT FENCE

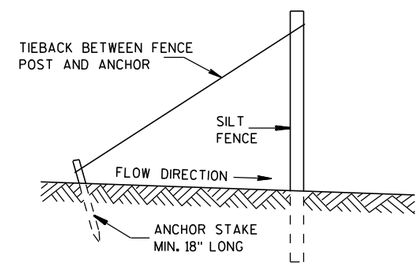


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

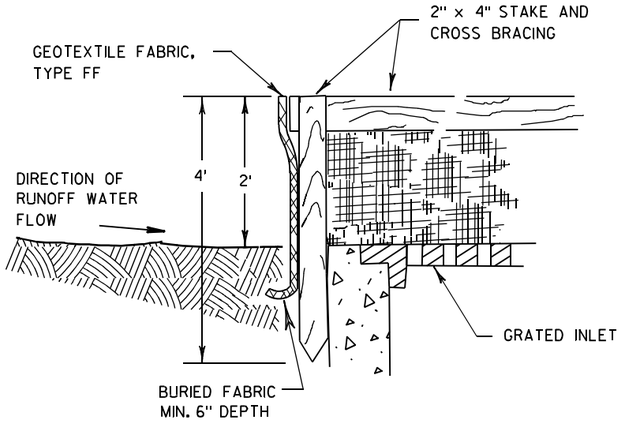
485

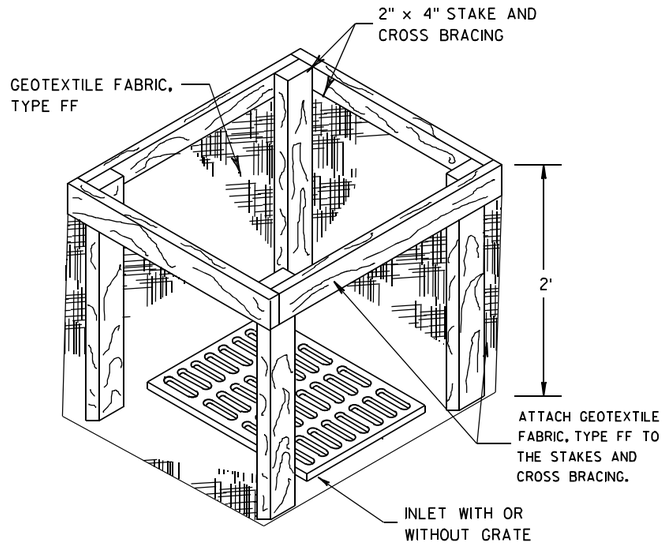
6

S.D.D. 8 E 9-6

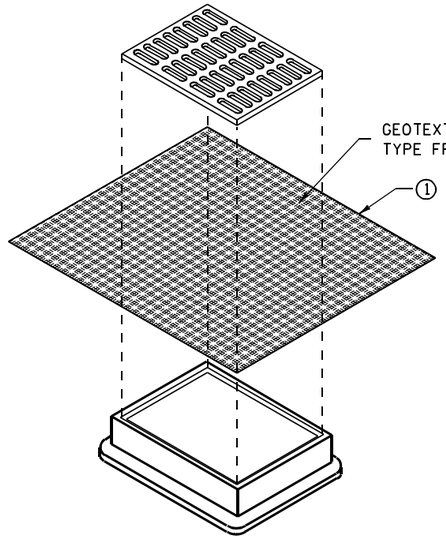
6

S.D.D. 8 E 9-6



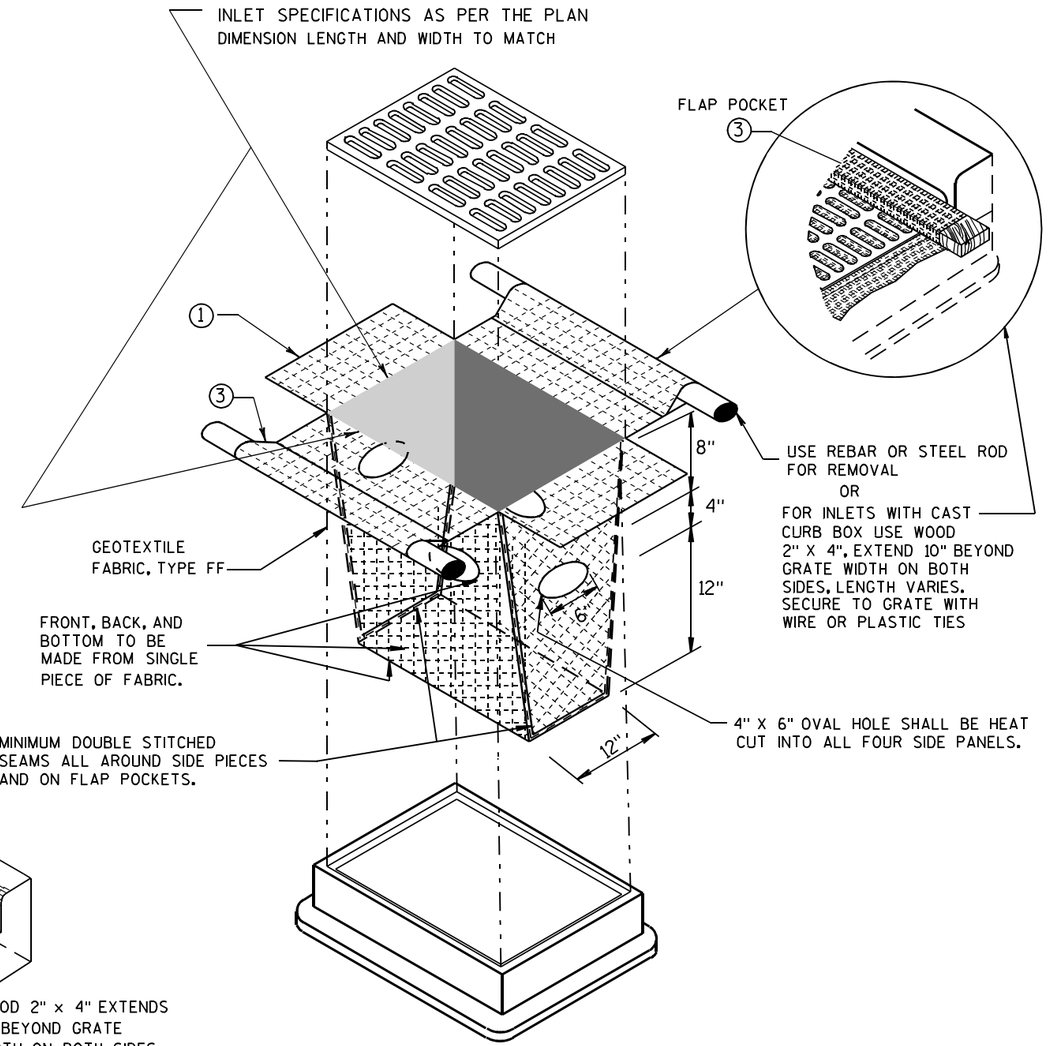


INLET PROTECTION, TYPE A



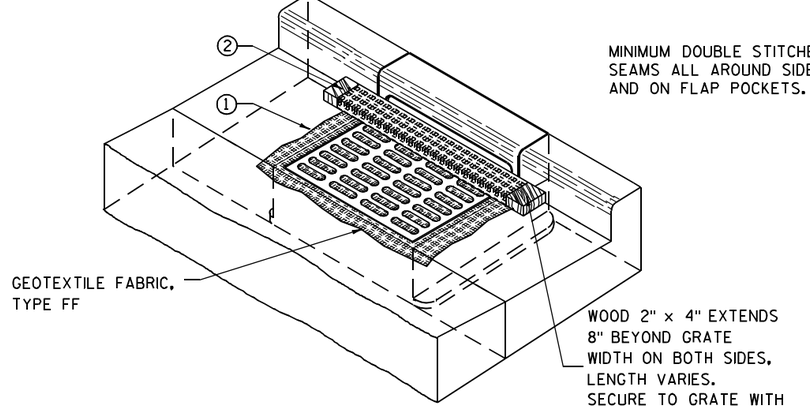
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2

METAL APRON ENDWALLS

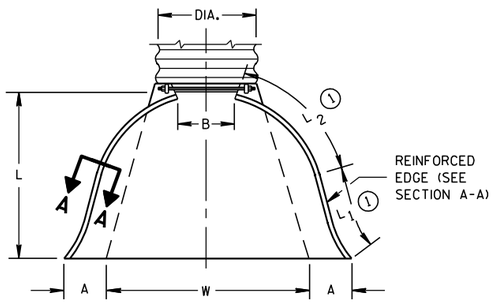
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

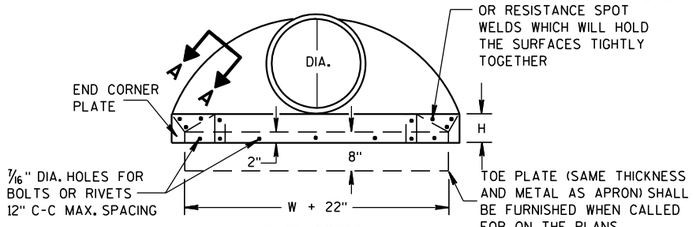
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

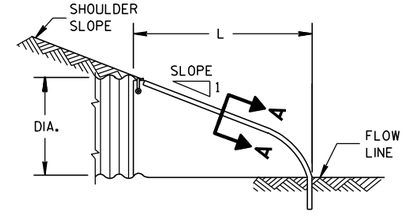
*MINIMUM
**MAXIMUM



PLAN VIEW

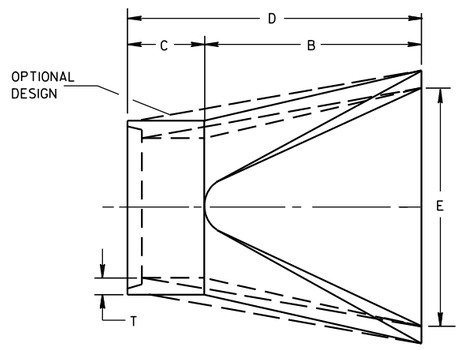


END VIEW

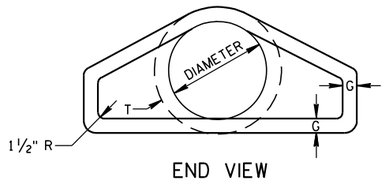


SIDE ELEVATION

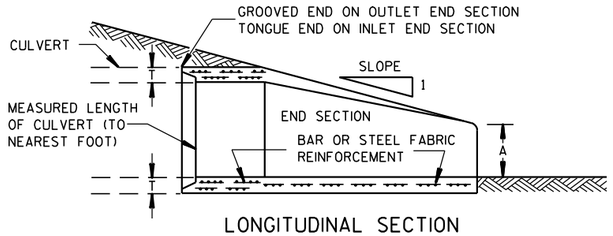
METAL ENDWALLS



PLAN

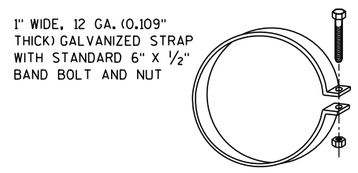


END VIEW



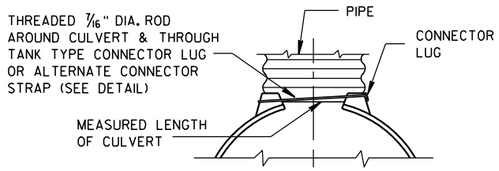
LONGITUDINAL SECTION

CONCRETE ENDWALLS

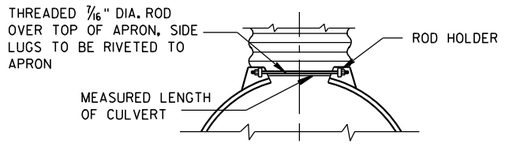


ALTERNATE FOR TYPE 1 CONNECTION

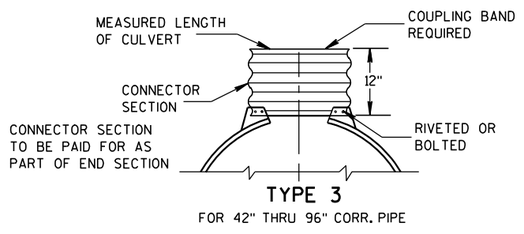
END SECTION CONNECTOR STRAP



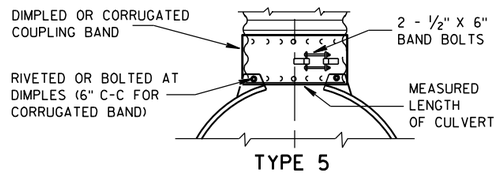
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

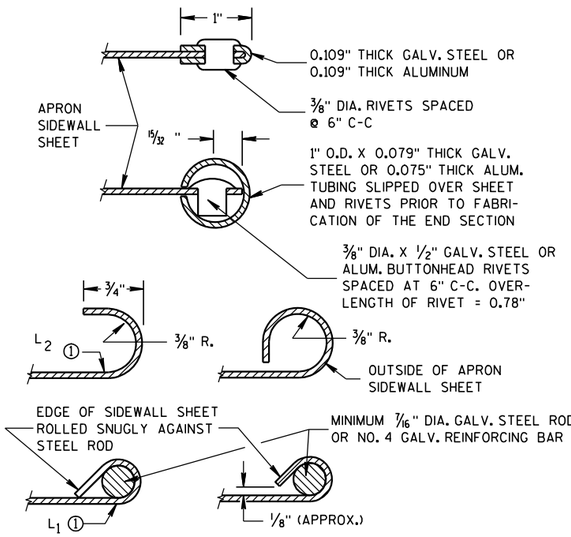
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

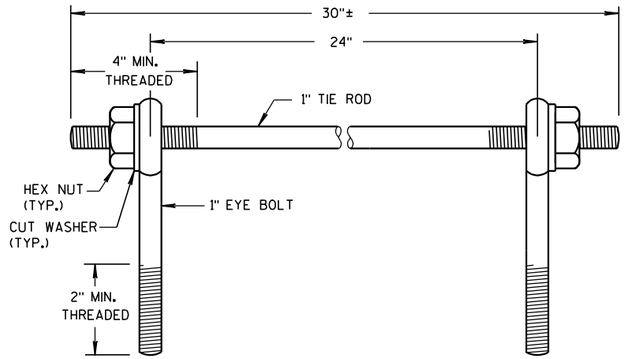
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

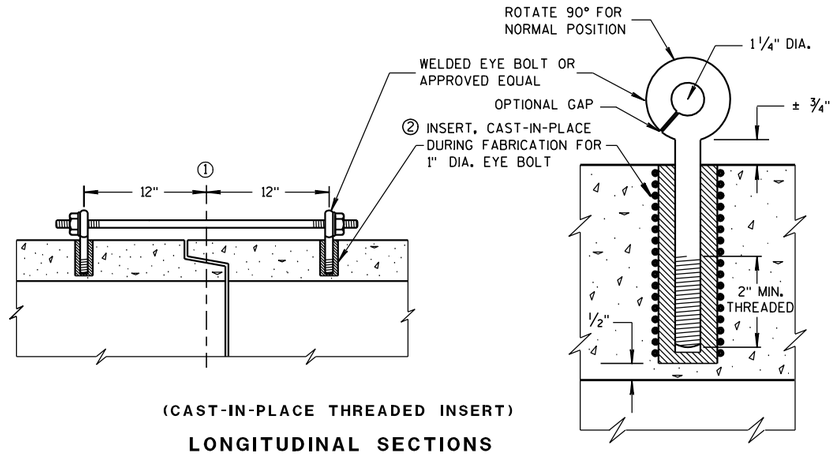
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

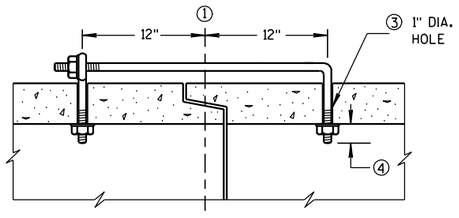
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

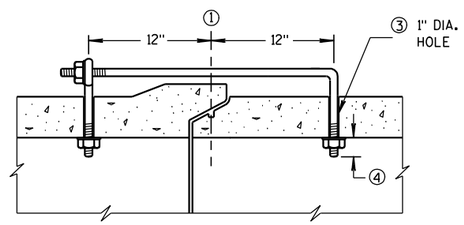
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

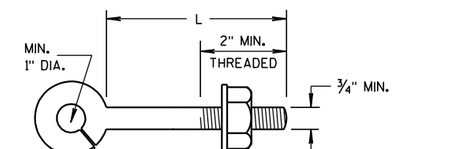


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

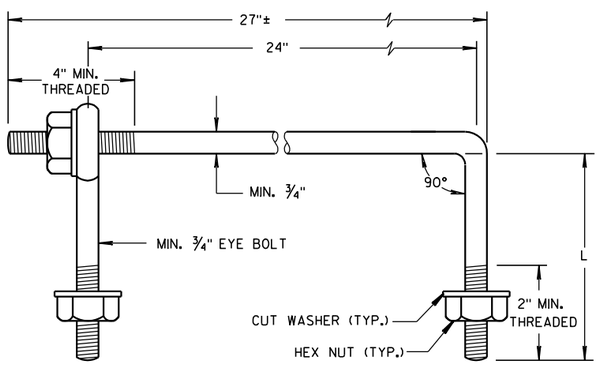
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

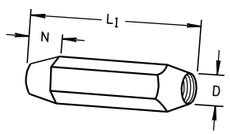
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

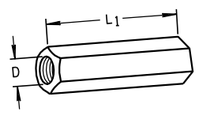
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



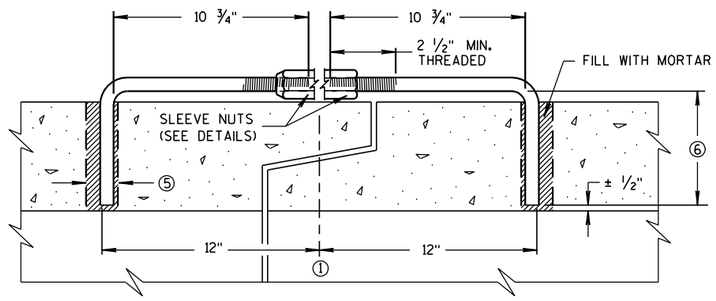
TAPERED



PLAIN

RIGHT AND LEFT THREADS

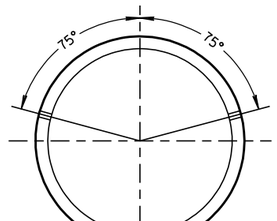
SLEEVE NUTS



LONGITUDINAL SECTION

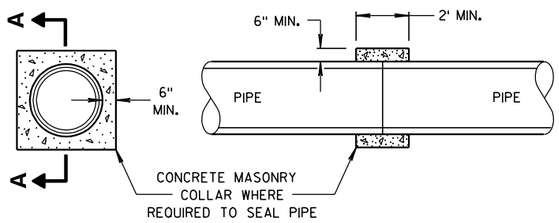
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
488
FHWA

6

S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7

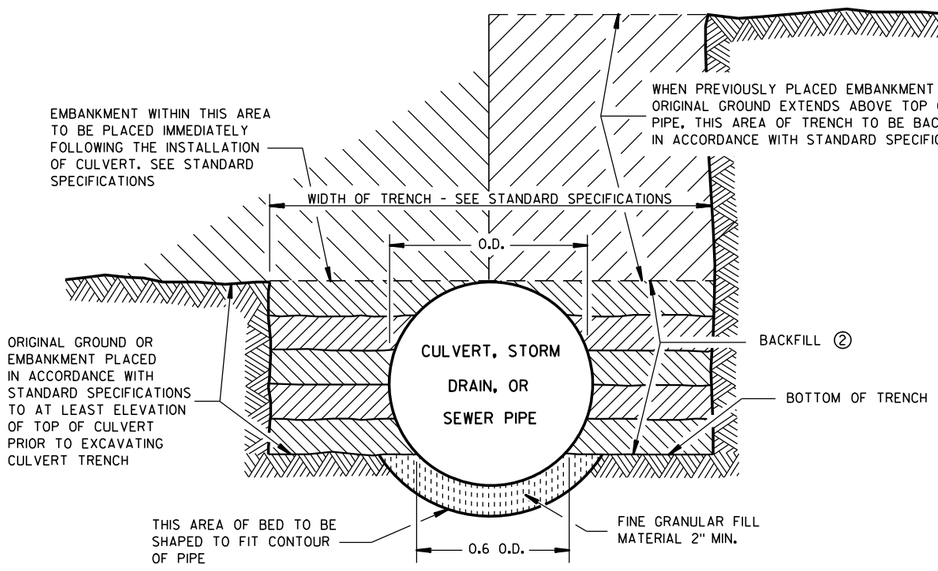
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

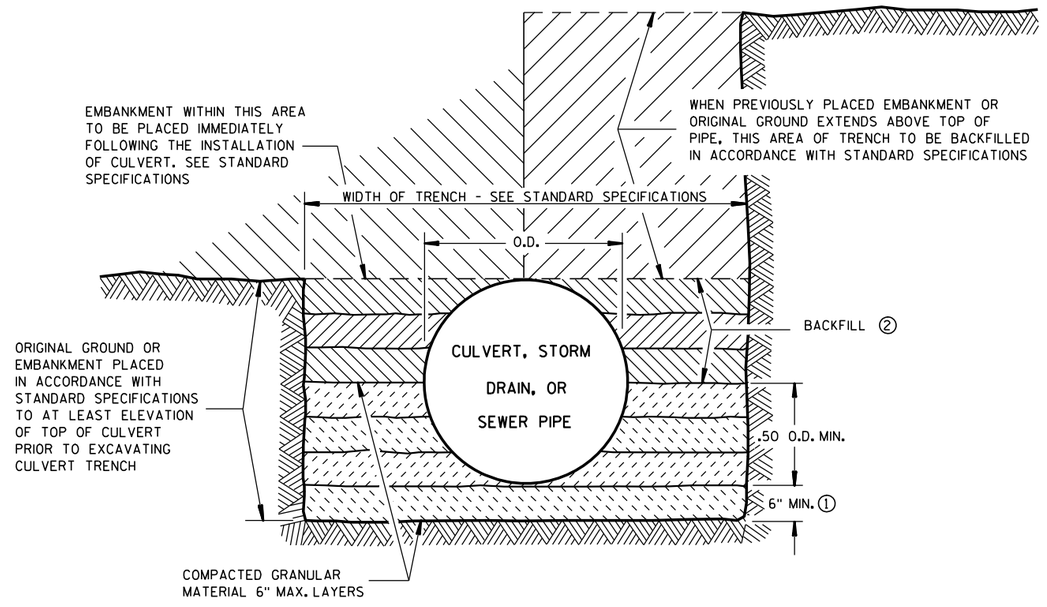
THE SHAPED SUBGRADE WITH GRANULAR FOUNDATION IS AN EQUAL ALTERNATE TO THE GRANULAR FOUNDATION EXCEPT WHERE ROCK IS ENCOUNTERED.

① WHERE ROCK, HARD PAN OR FRAGMENTED MATERIAL IS ENCOUNTERED, THE TRENCH SHALL BE EXCAVATED BELOW THE BOTTOM OF THE PIPE AN AMOUNT EQUAL TO ½ INCH PER FOOT OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE, BUT NOT LESS THAN 6 INCHES.

② TRENCH SHALL BE BACKFILLED AS REQUIRED BY STANDARD SPECIFICATIONS; SECTION 520 FOR PIPE CULVERTS AND SECTION 607 FOR STORM SEWERS.



SHAPED SUBGRADE WITH GRANULAR FOUNDATION



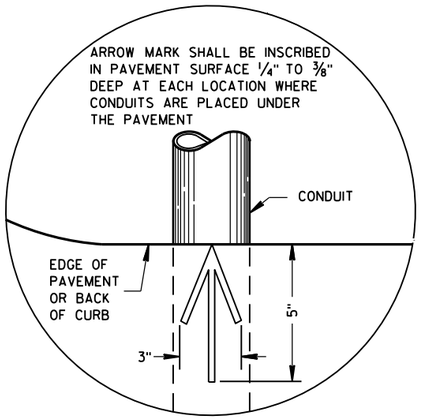
GRANULAR FOUNDATION

CLASS "B" BEDDING

CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4/7/83 DATE	/S/ D. L. Strand STATE DESIGN ENGINEER
FHWA	HWYS

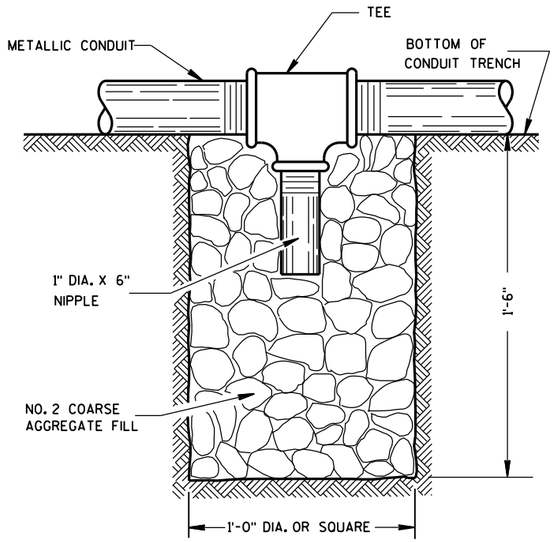
6

S.D.D. 8 F 5-1



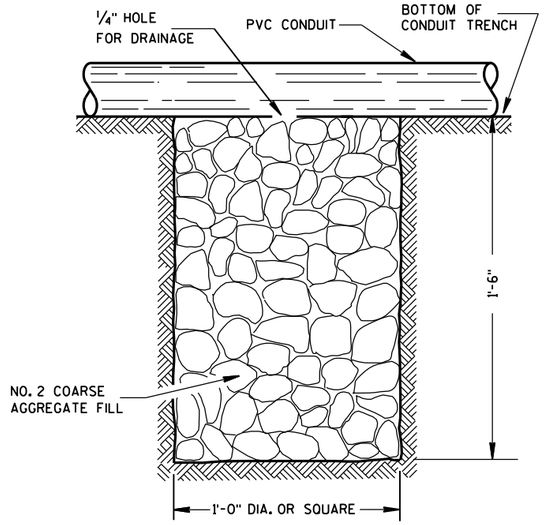
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

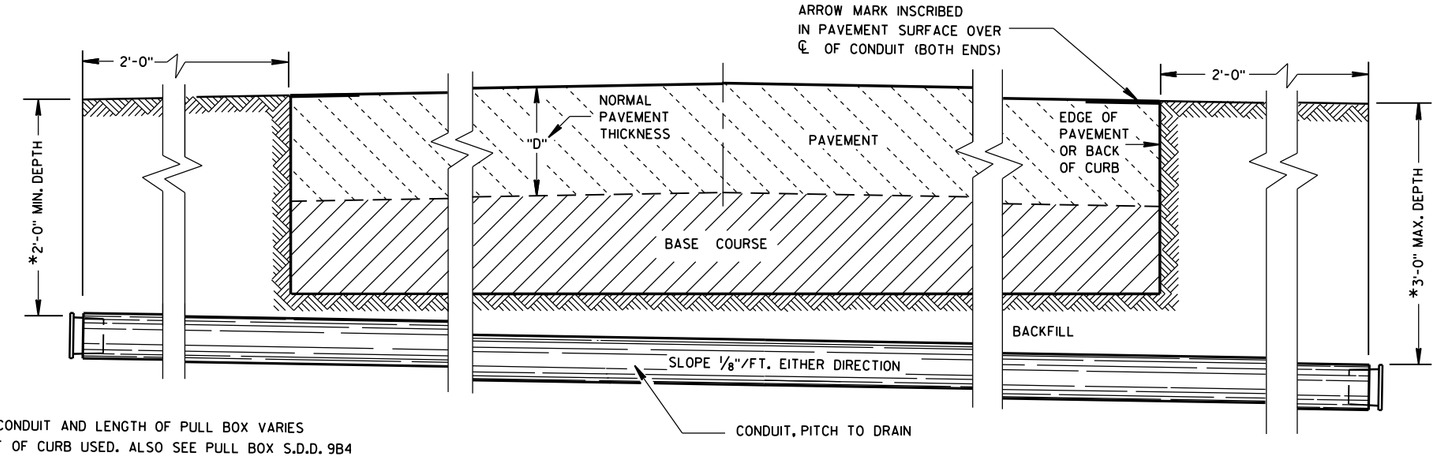
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

6

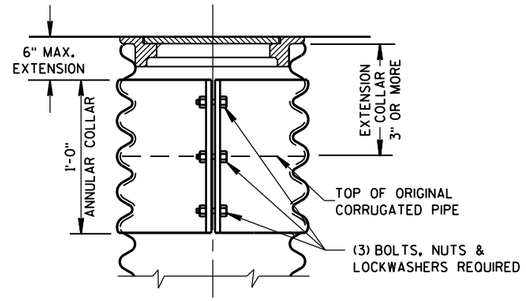
S.D.D. 9 B 2-8

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

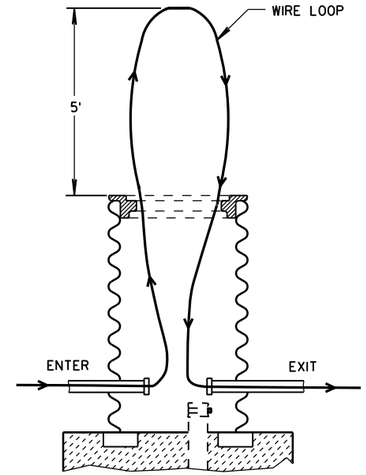
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

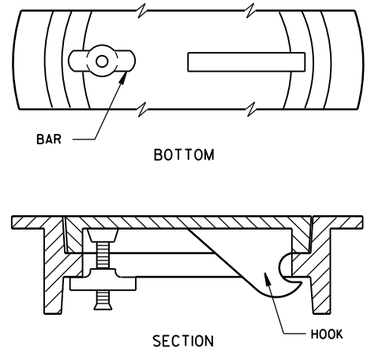
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

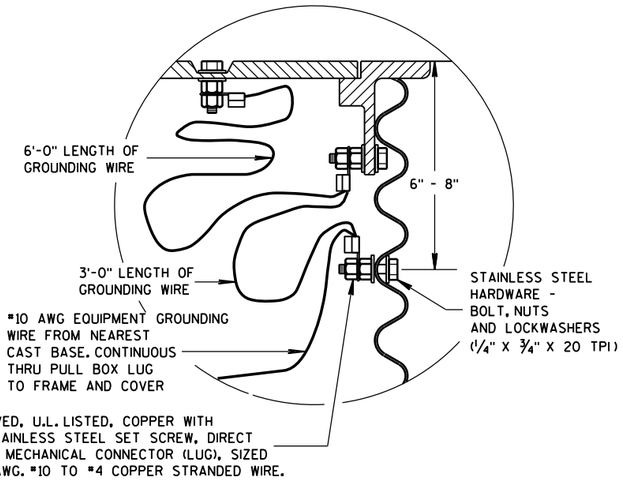


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

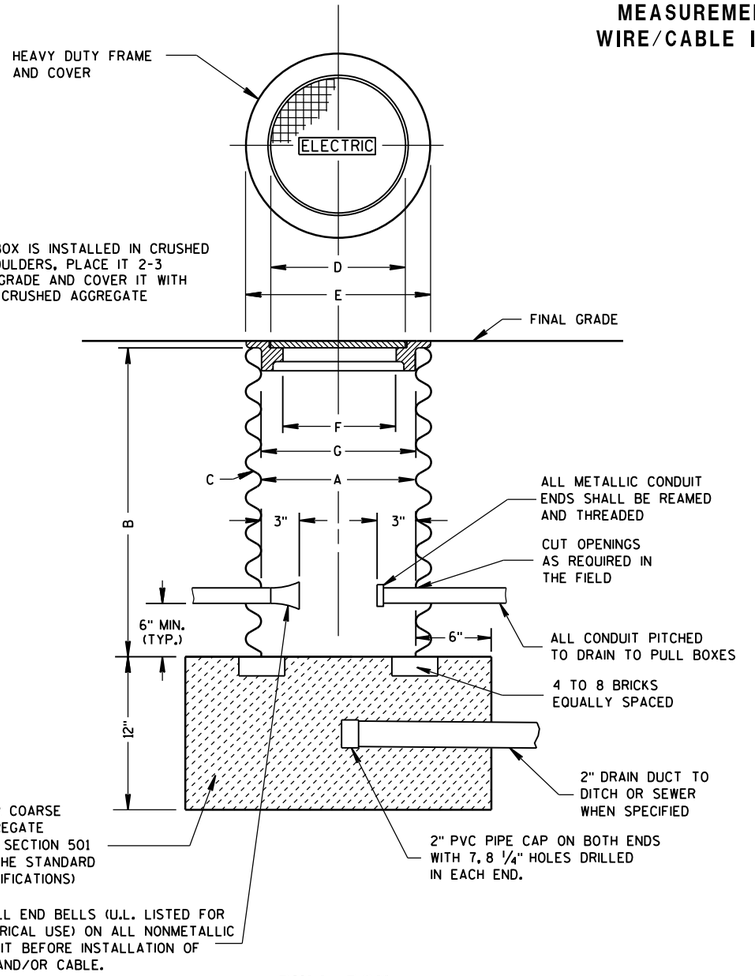


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

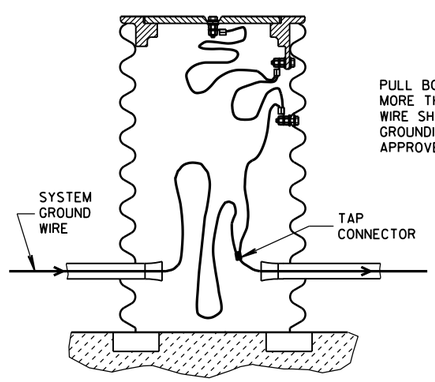
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

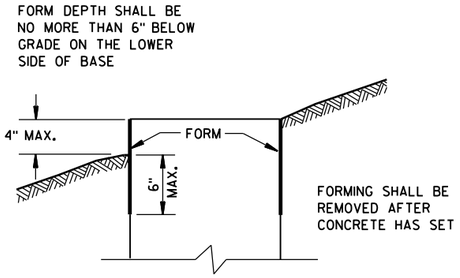
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 491
FHWA

6

S.D.D. 9 B 4-11



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

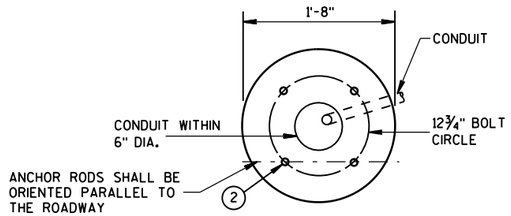
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

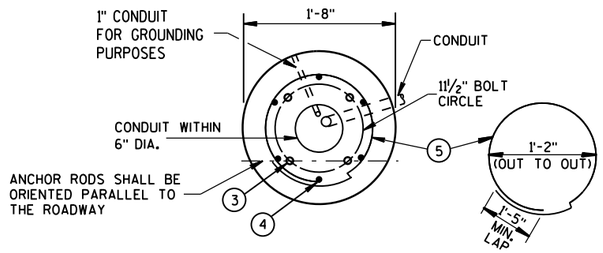
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

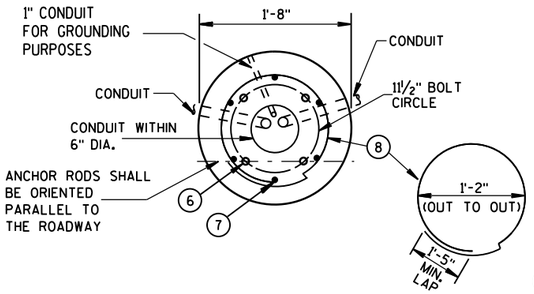
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

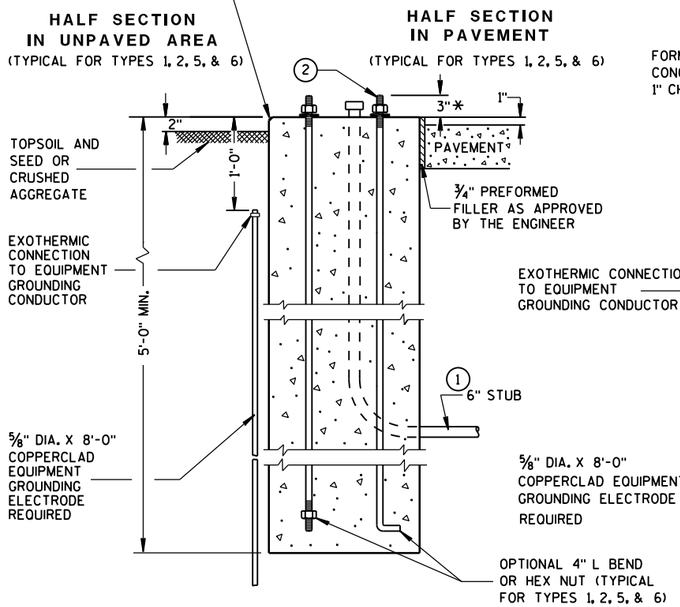






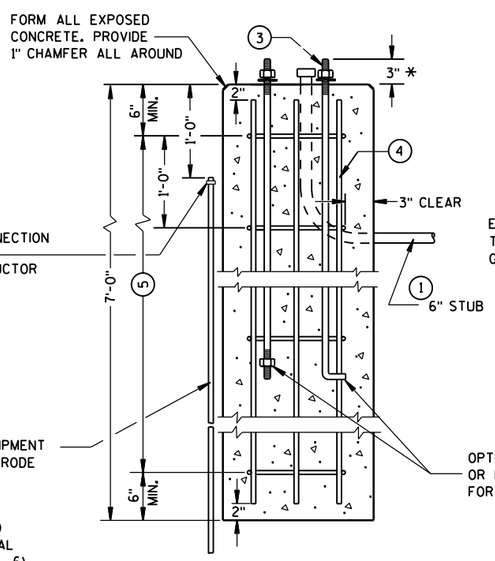
HALF SECTION IN UNPAVED AREA

(TYPICAL FOR TYPES 1, 2, 5, & 6)

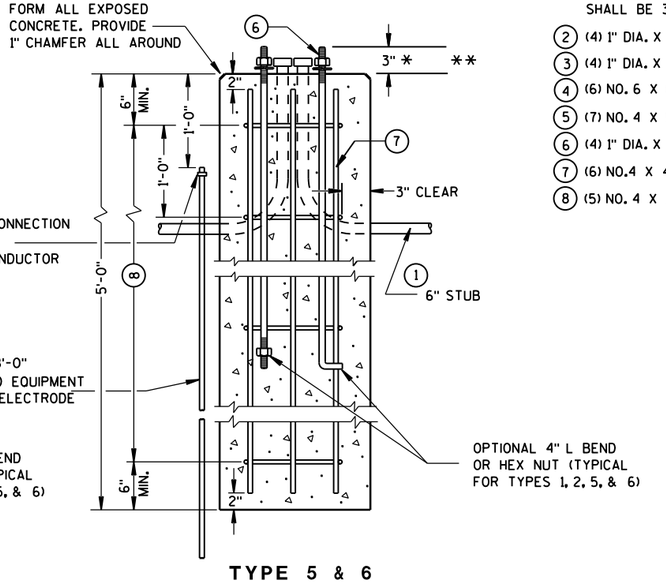


HALF SECTION IN PAVEMENT

(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 2-7

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

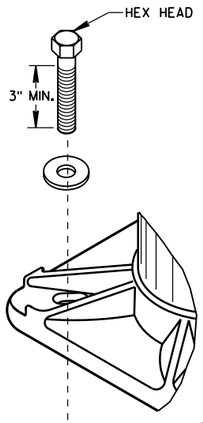
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

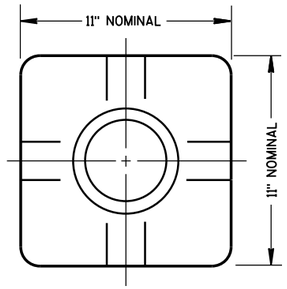
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

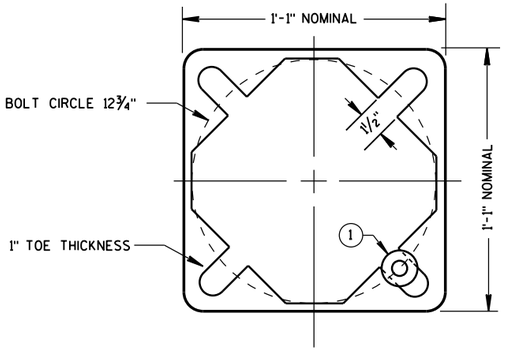
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

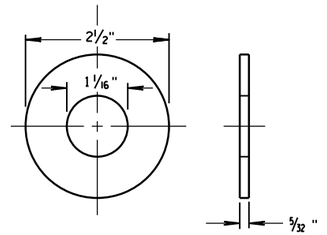




TOP VIEW
(PEDESTAL BASE)

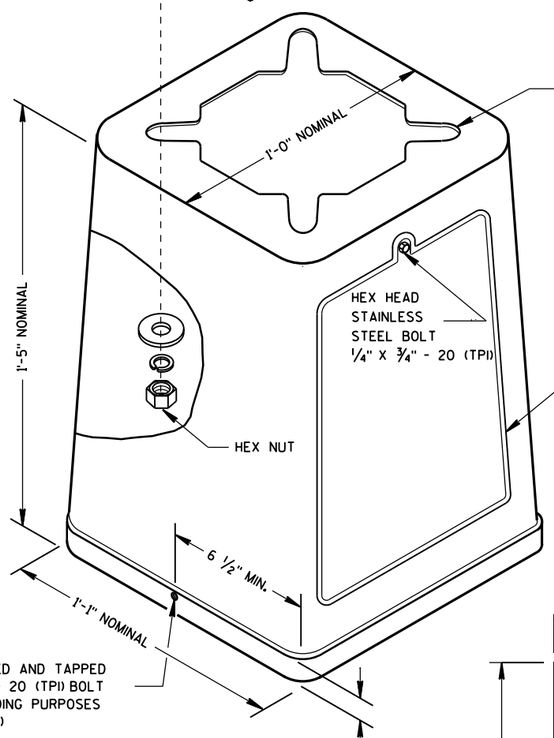


BOTTOM VIEW
(PEDESTAL BASE)

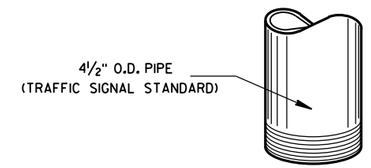


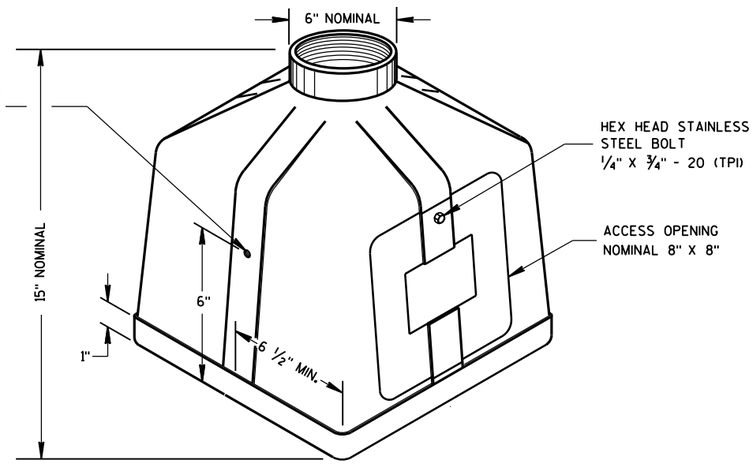
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)



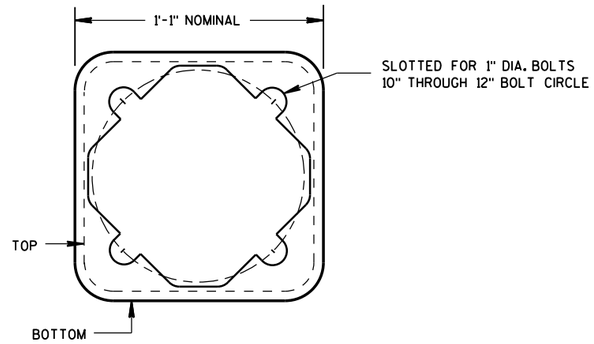
ISOMETRIC VIEW



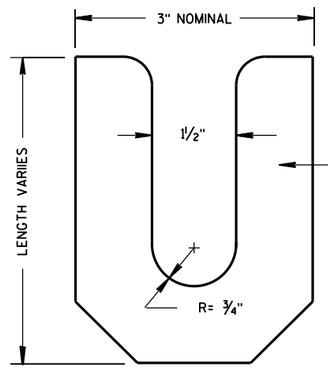


ISOMETRIC VIEW

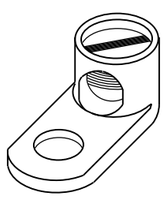
PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)



LEVELING SHIM



TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

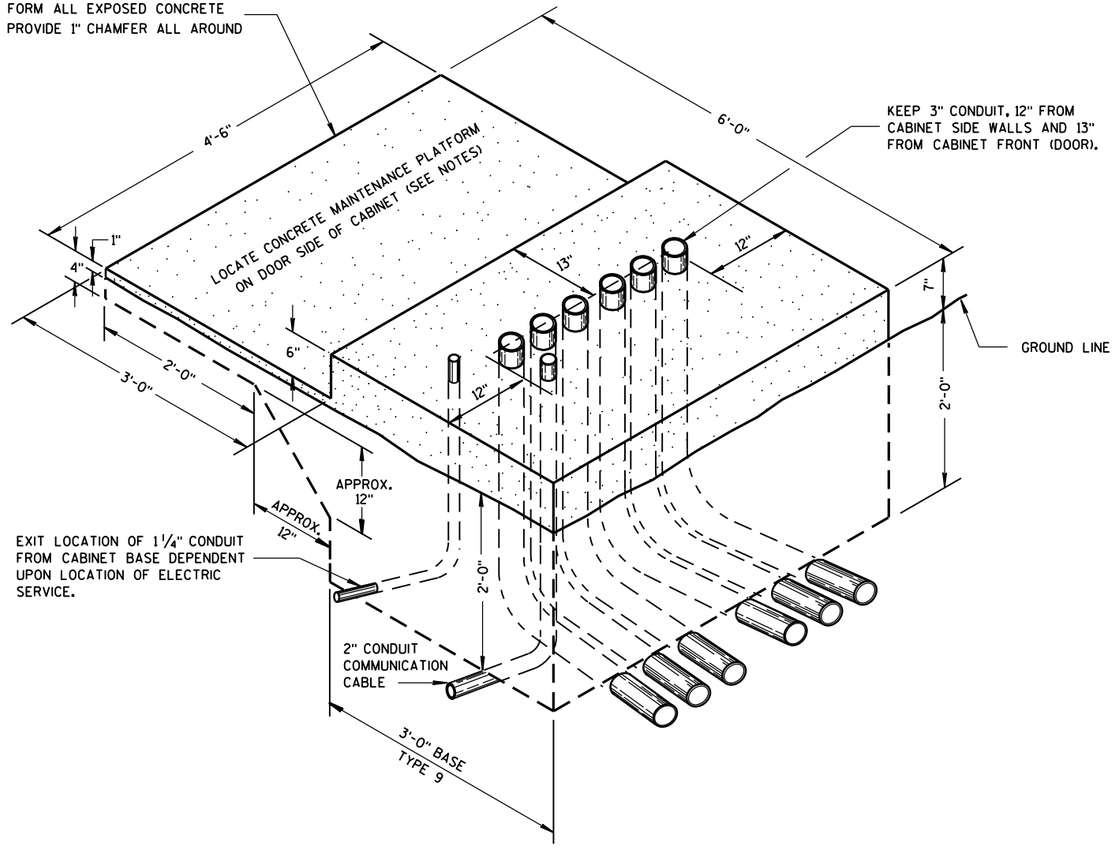
TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

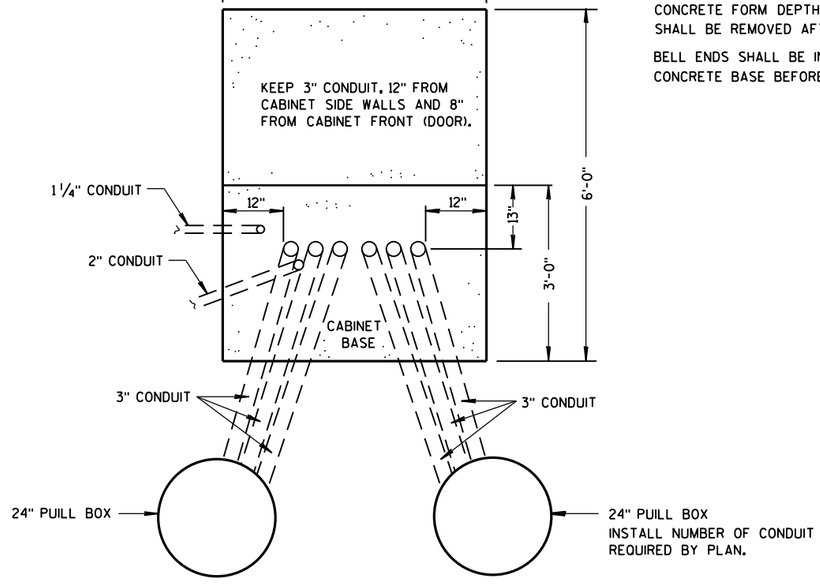
S.D.D. 9 C 3-4



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 494
FHWA

6
S.D.D. 9 C 6-7

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

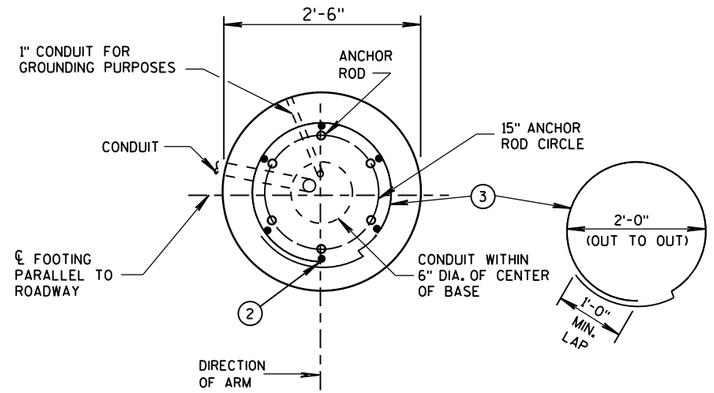
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

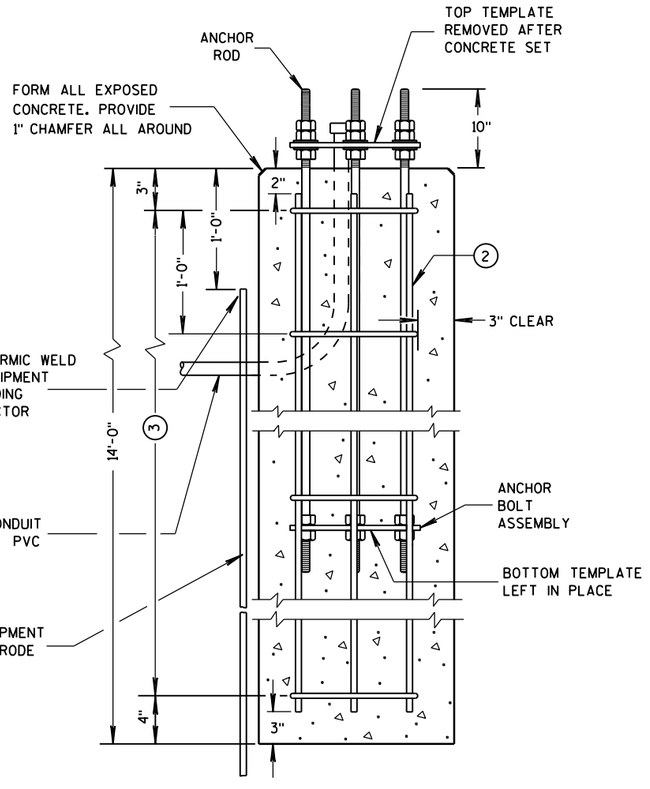
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

(3) (15) NO. 4 X 7'-4" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

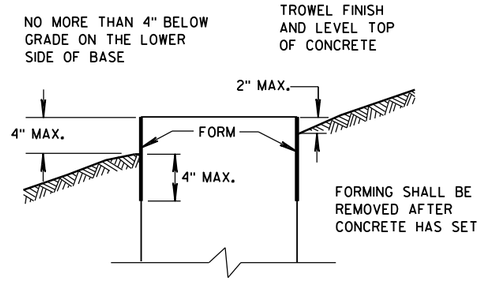
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



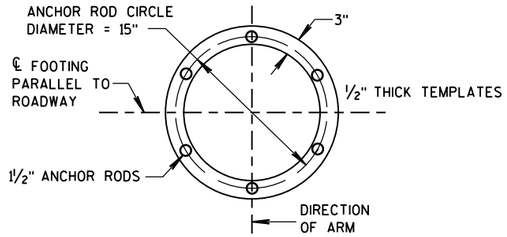


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

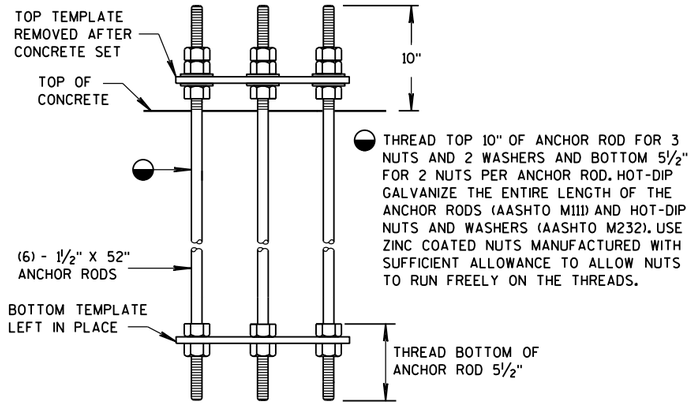
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10 ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	69
LBS. OF VERTICAL BAR STEEL	122

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

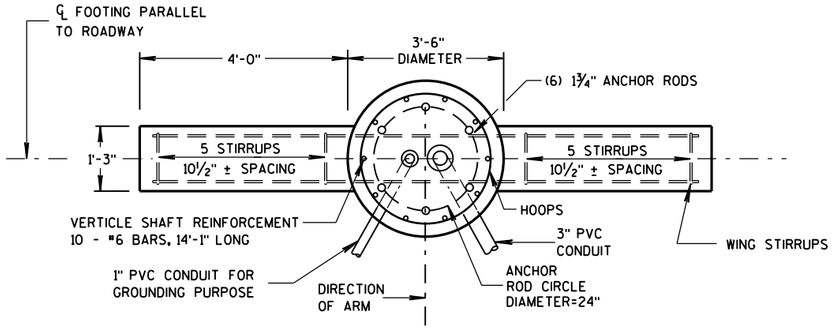
Feb. 2015 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

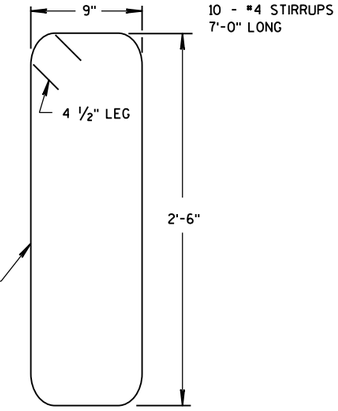
FHWA

6

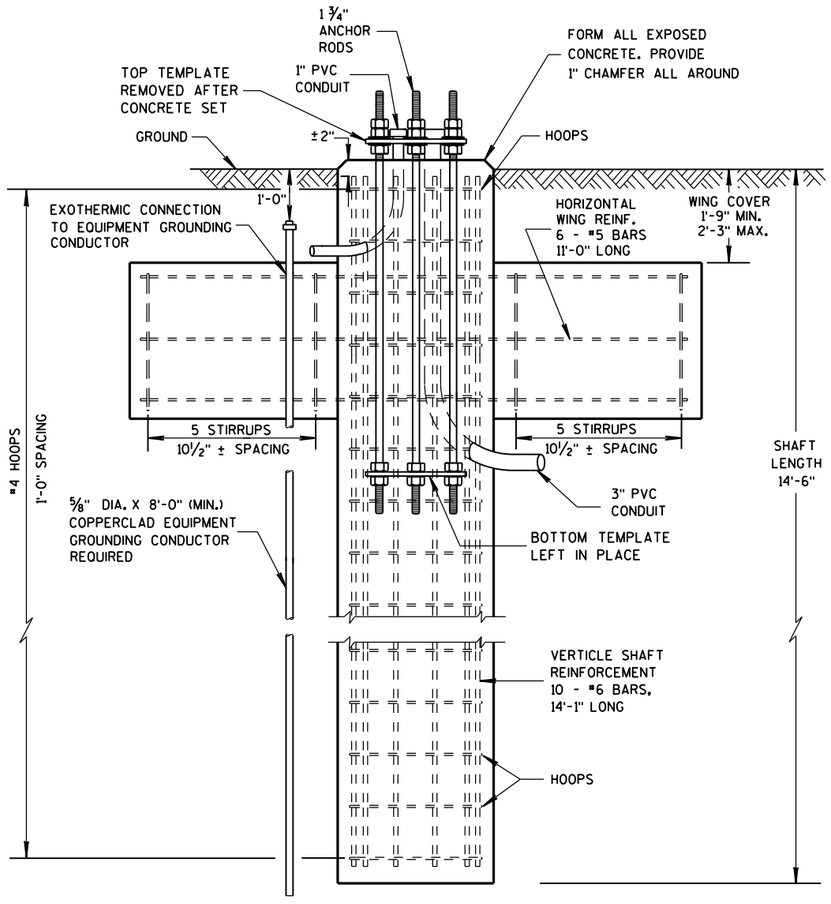
S.D.D. 9 C 11-6



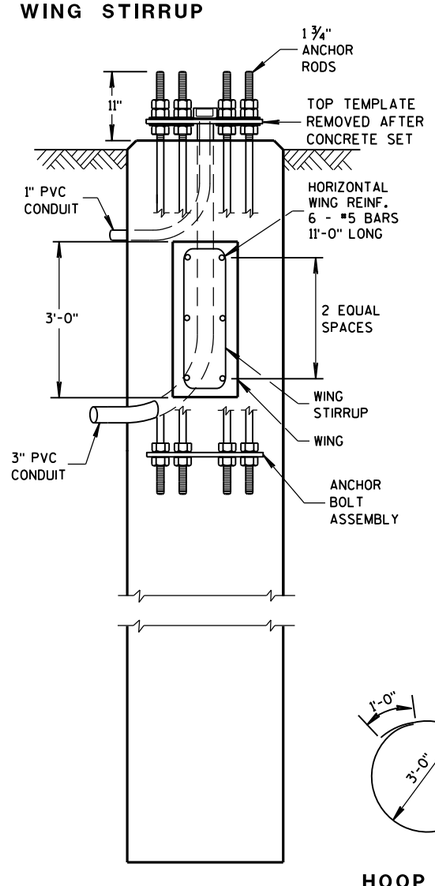
PLAN VIEW



WING STIRRUP

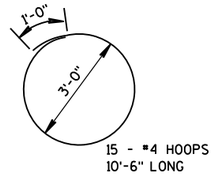


ELEVATION VIEW



SIDE VIEW

DOES NOT SHOW HOOPS OR VERTICAL SHAFT REINFORCEMENT



15 - #4 HOOPS 10'-6" LONG

HOOP DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF THE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE ABOVE THE CONCRETE BASE, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 POLES)

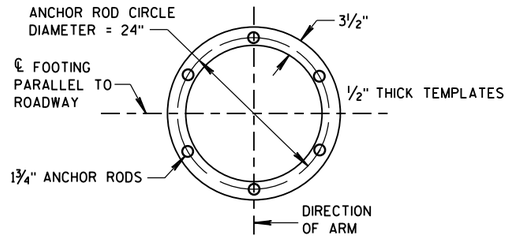
CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

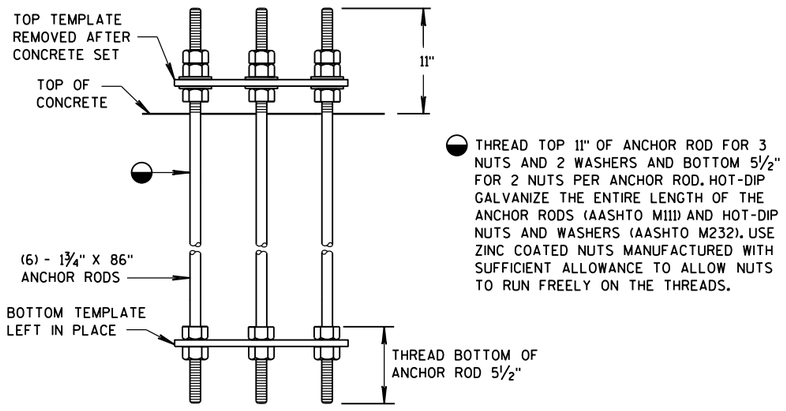
CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 9 C 12-6a

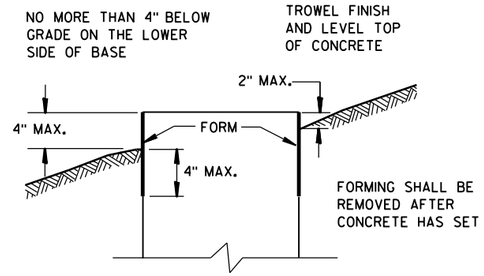


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

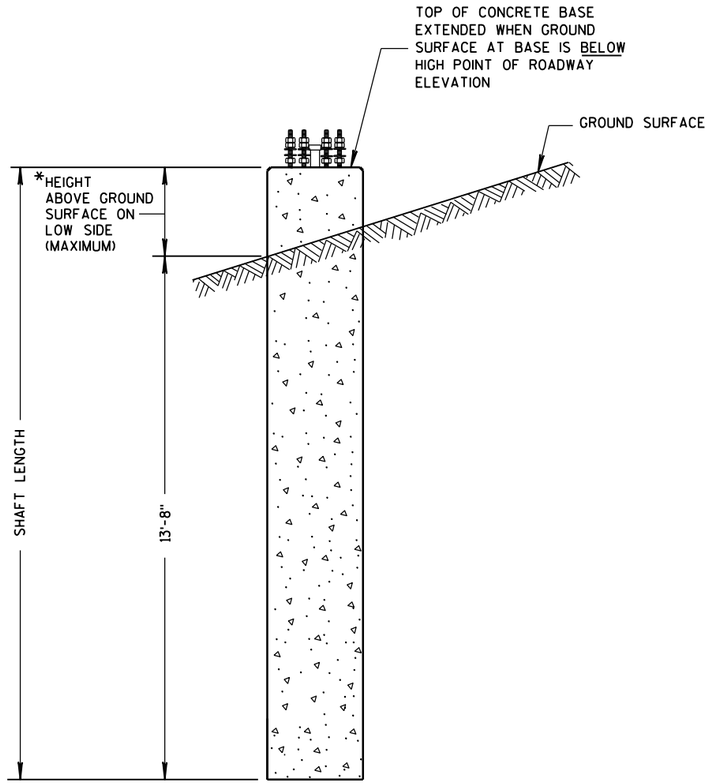
CONCRETE BASE TYPE 13	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Feb. 2015 DATE FHWA	/S/ Ahmet Demirbilek STATE ELECTRICAL

6

S.D.D. 9 C 12-6b

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

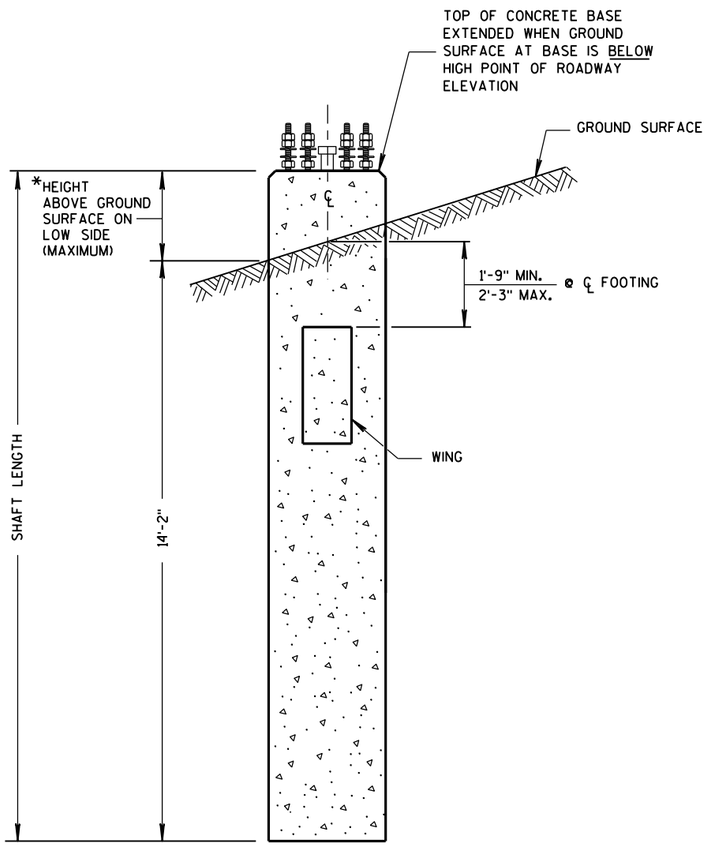
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

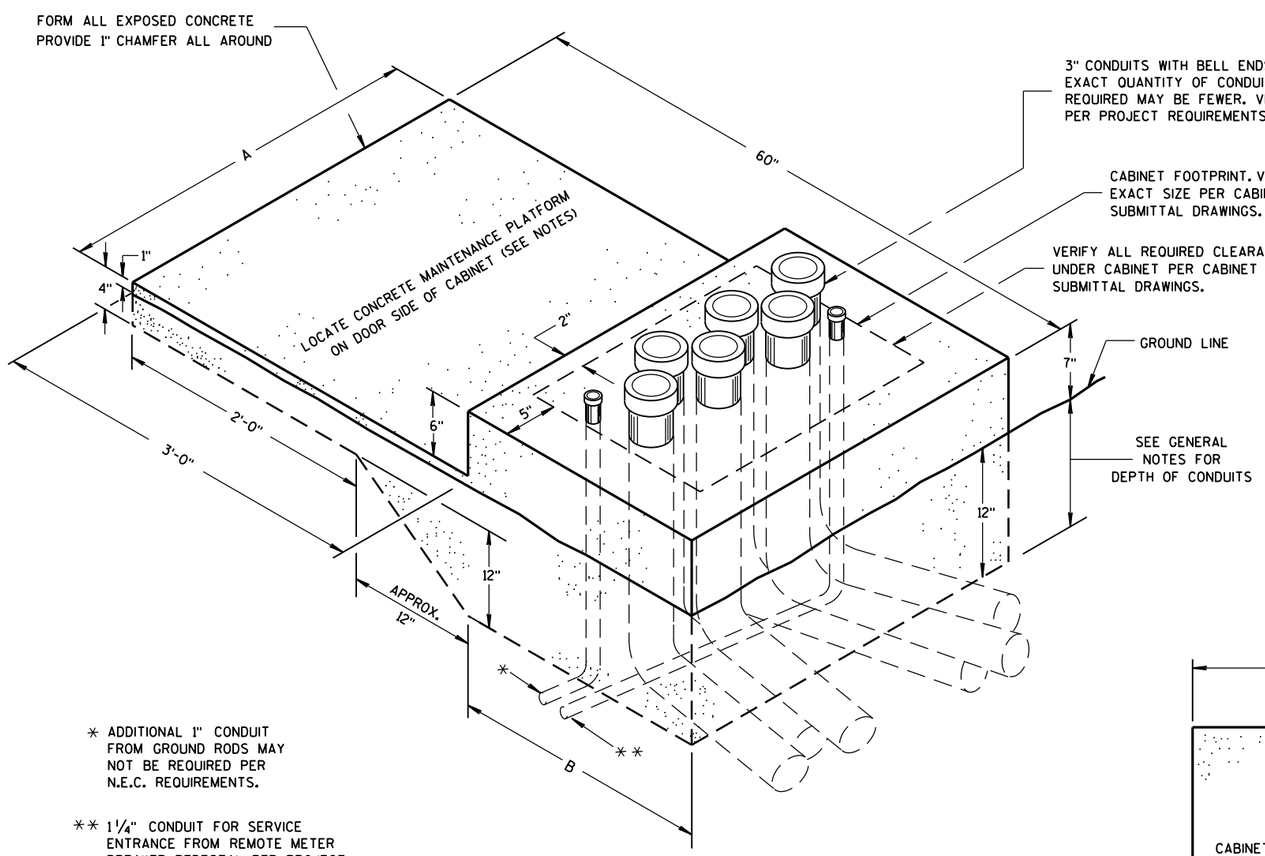
APPROVED
11-26-2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 13-2

6

S.D.D. 9 C 13-2



* ADDITIONAL 1" CONDUIT FROM GROUND RODS MAY NOT BE REQUIRED PER N.E.C. REQUIREMENTS.

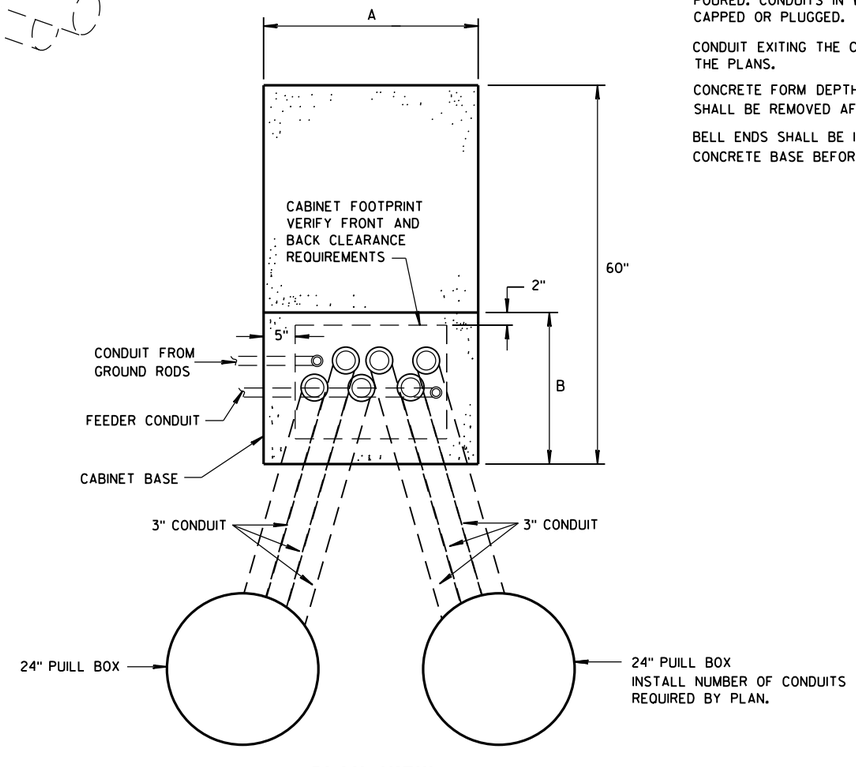
** 1¼" CONDUIT FOR SERVICE ENTRANCE FROM REMOTE METER BREAKER PEDESTAL PER PROJECT REQUIREMENTS. VERIFY LOCATION OF CONDUIT DEPENDENT UPON LOCATION OF INCOMING FEEDER AND FOR EASE OF CONNECTION TO LOAD CENTER.

ISOMETRIC VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

(C.Y. CONCRETE = APPROX. 0.4)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSIONS		MAXIMUM 3" CONDUITS
		A	B	
L24	24"	34"	24"	4
L30	30"	40"	24"	6



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

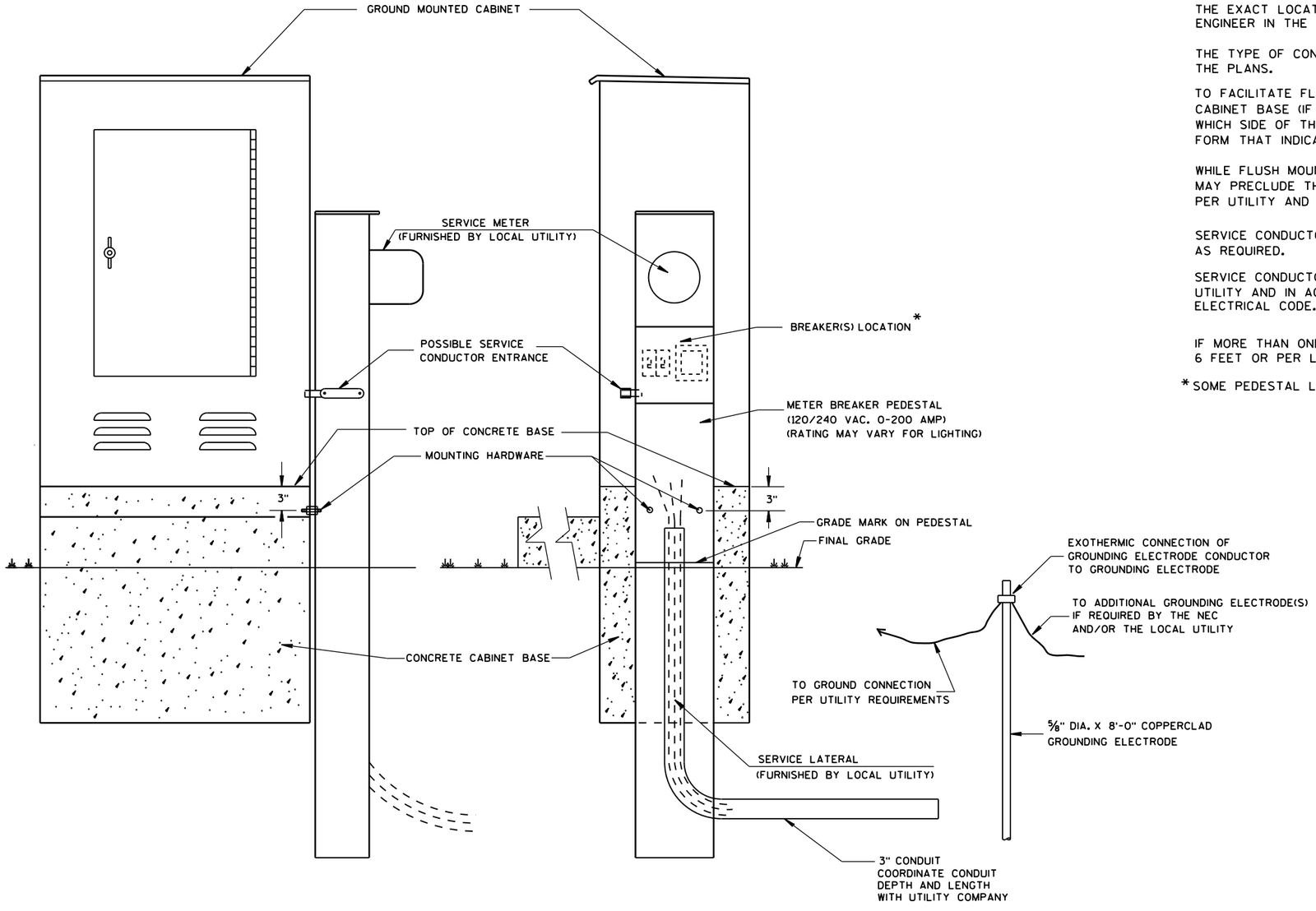
BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE L

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Nov. 2014 — DATE
/S/ Thomas Gonring — STATE LIGHTING ENGINE
499
WYS
FHWA

6
S.D.D. 9 C 14-2



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

*SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

6

S.D.D. 9 D 1-5

6

S.D.D. 9 D 1-5

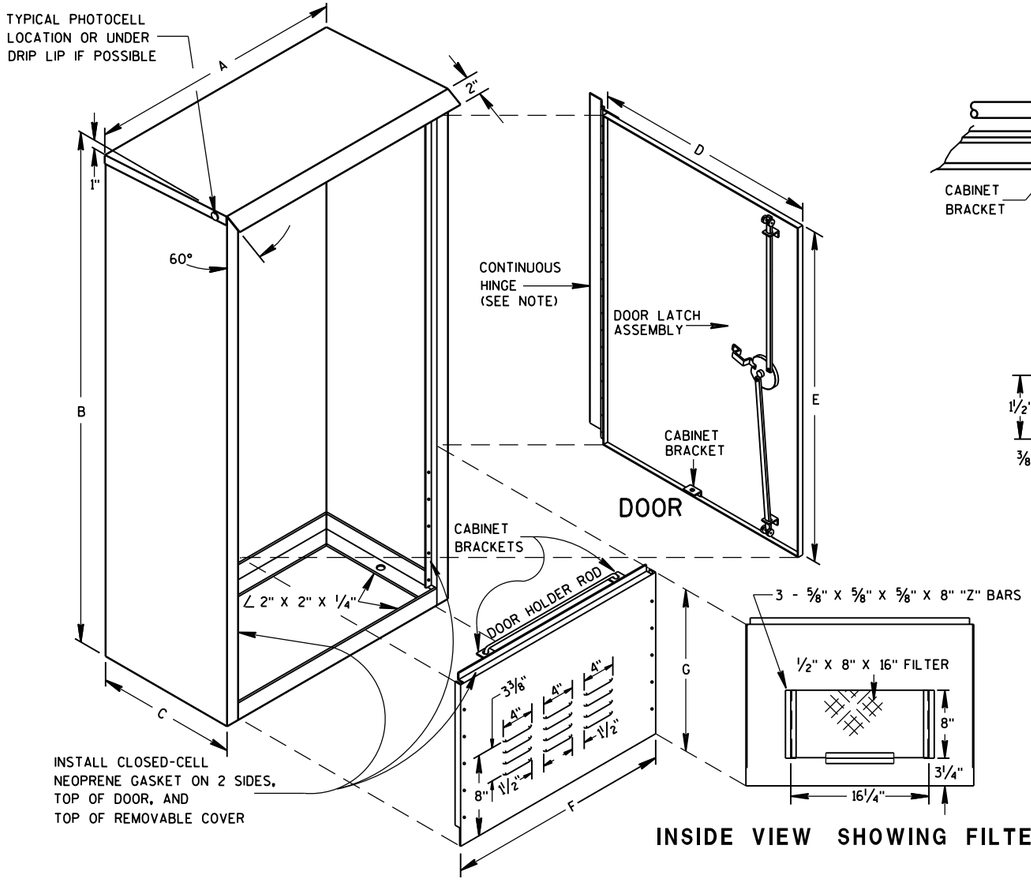
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

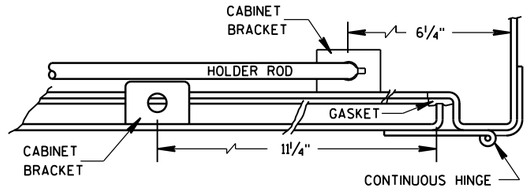
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

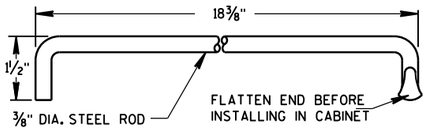


REMOVABLE COVER

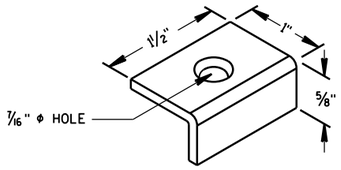
INSIDE VIEW SHOWING FILTER



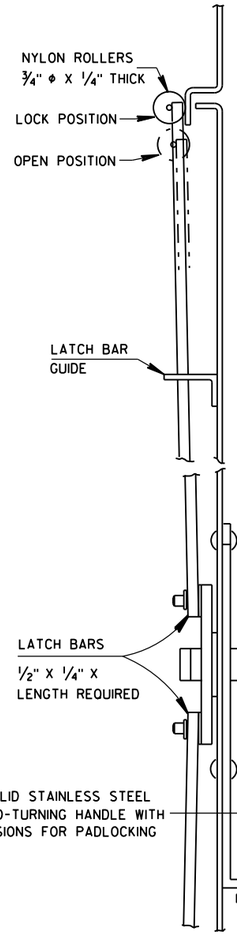
HINGE & DOOR HOLDER



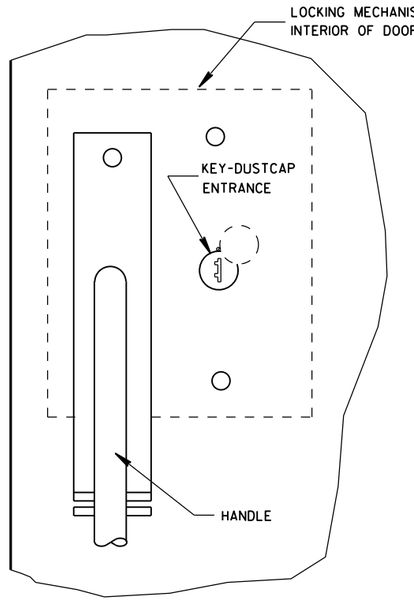
HOLDER ROD



CABINET BRACKET



SIDE VIEW



FRONT VIEW

LATCH ASSEMBLY

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

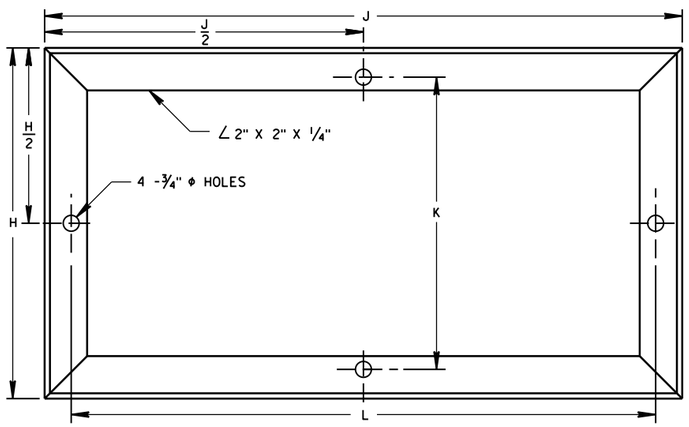
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

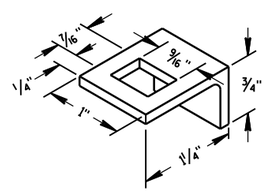
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



LATCH BAR GUIDE

SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 501
FHWA

6

S.D.D. 9 D 2-3

6

S.D.D. 9 D 2-3

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE-WIRED BY THE CABINET FABRICATOR.

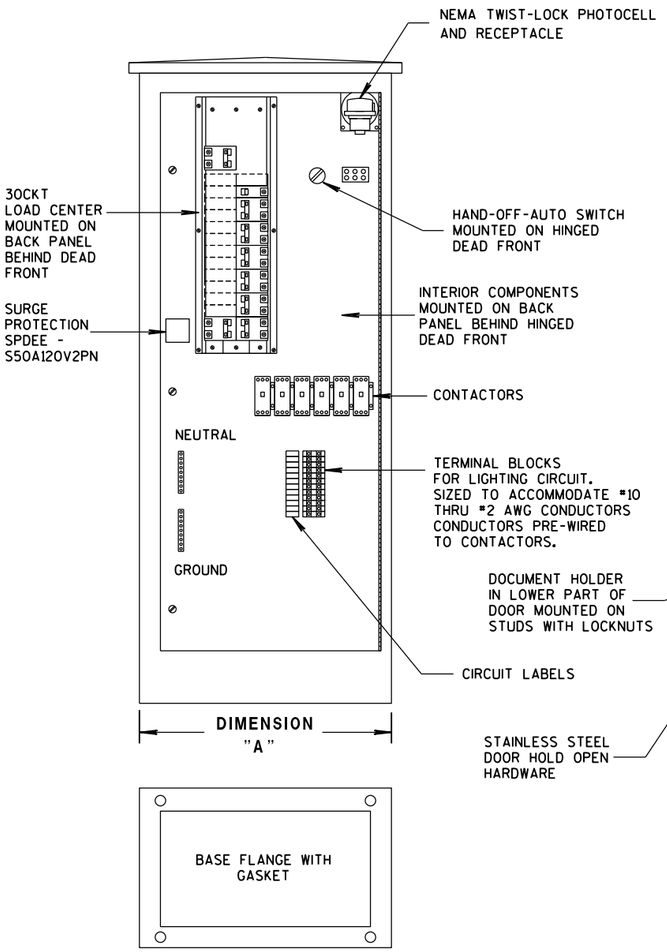
ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS.

THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

FRONT INTERIOR ELEVATION



SIDE VIEW

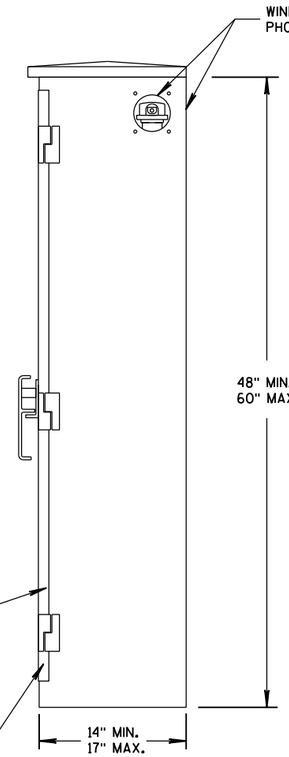
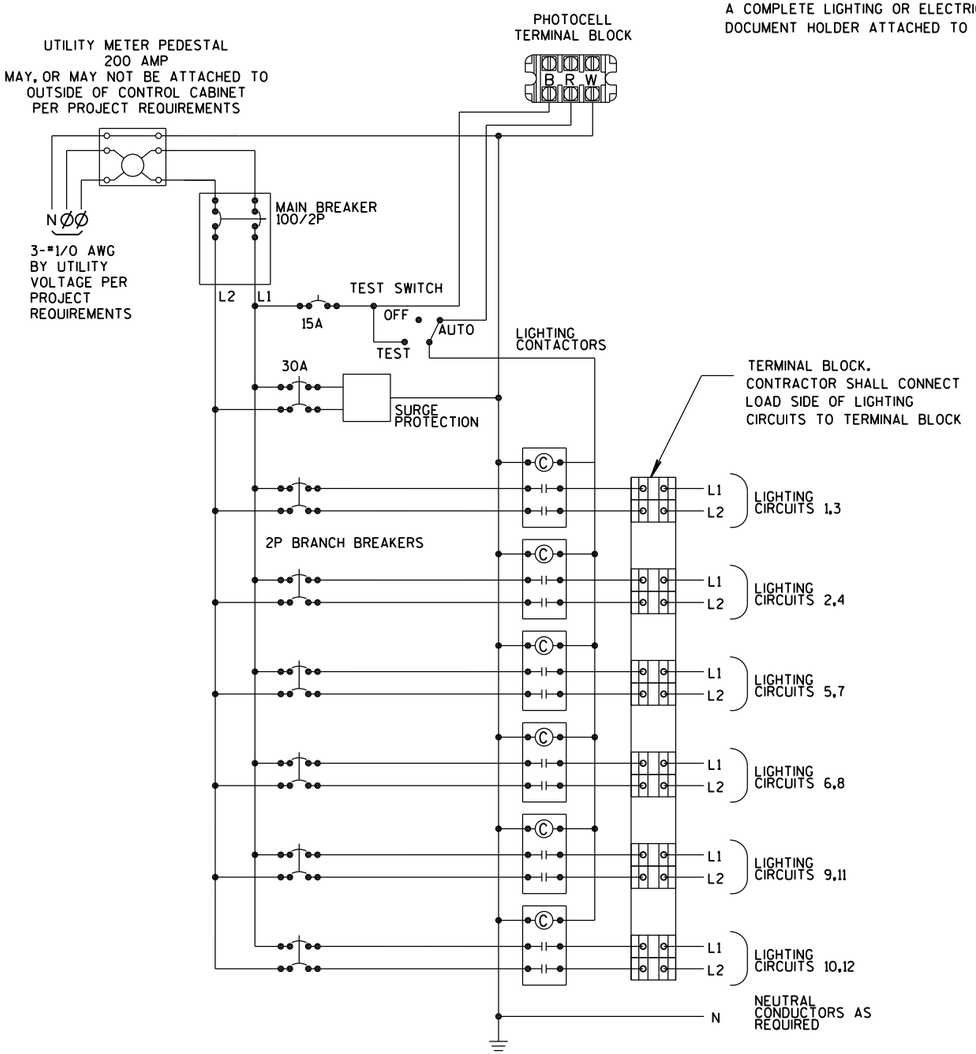


TABLE OF DIMENSIONS (INCHES)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"



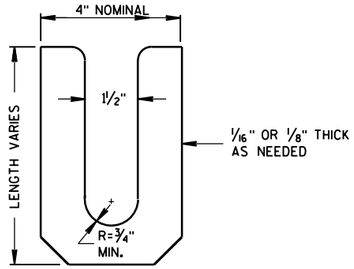
CONTROL CABINET SCHEMATIC

LIGHTING CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

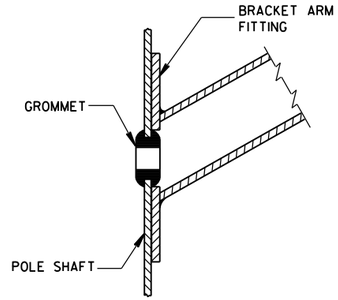
APPROVED
June 2014 — DATE
/S/ Thomas Gonring — STATE LIGHTING ENGINEER
FHWA

6
S.D.D. 9 D 4-1

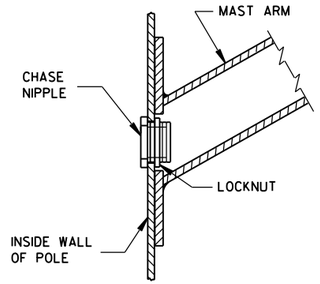


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

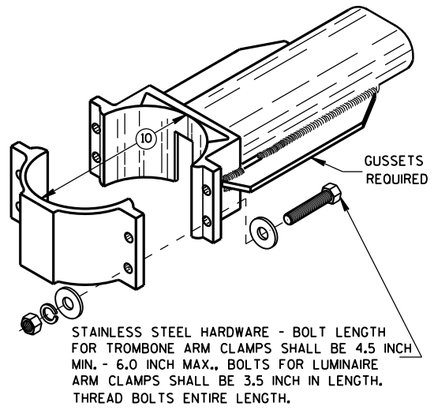
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

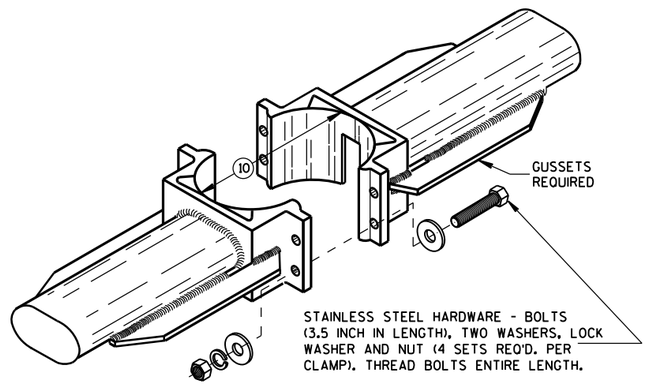
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

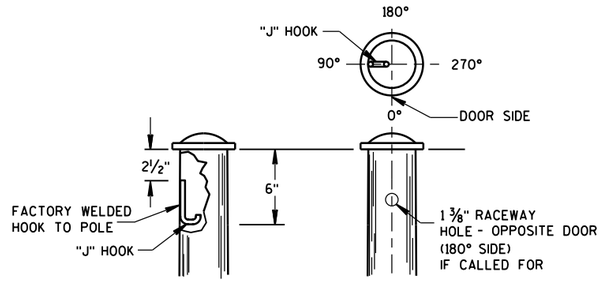
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



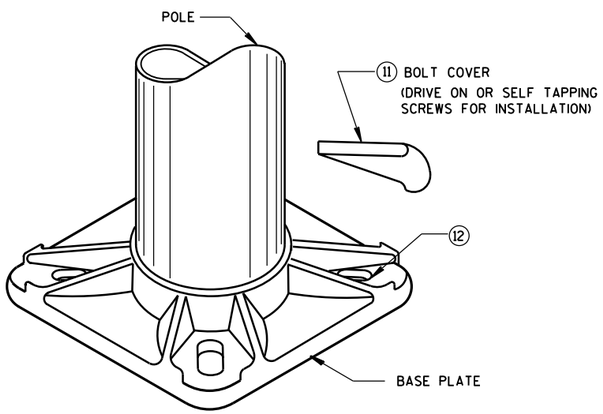
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



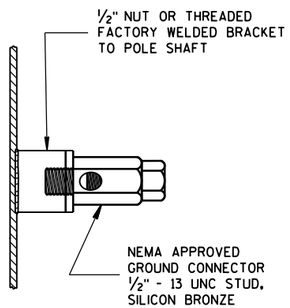
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

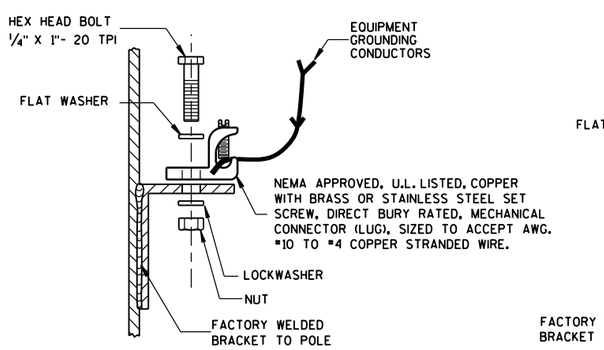


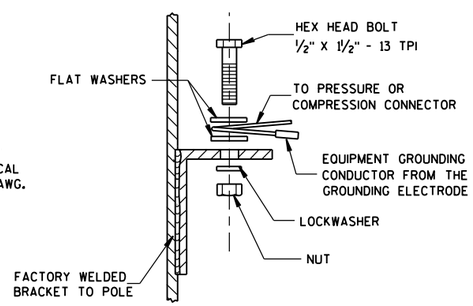
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

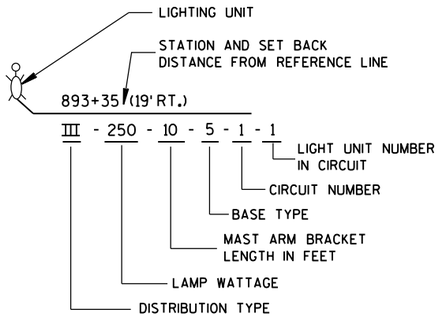
APPROVED
Feb. 2015
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

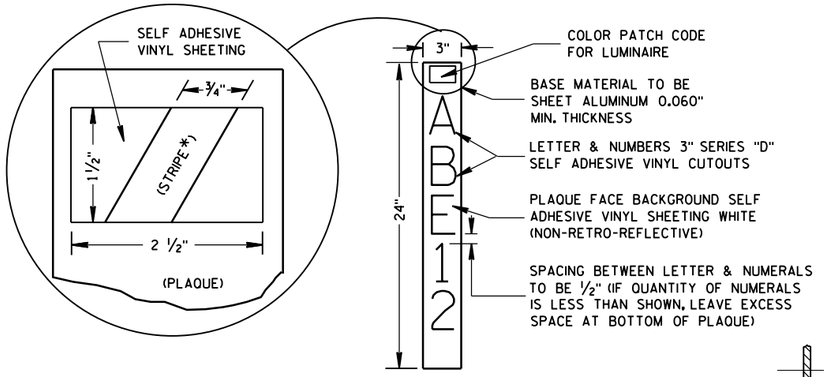
FHWA

6

S.D.D. 9 E 1-14g



LIGHTING UNIT CODE
(TYPICAL)



COLOR PATCH CODE FOR LUMINAIRES

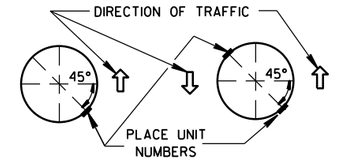
(HIGH PRESSURE SODIUM)

1000 WATT - NO PATCH
400 WATT - ORANGE
310 WATT - BLUE
250 WATT - ORANGE W/WHITE STRIPE*
200 WATT - RED
150 WATT - GREEN
100 WATT - BROWN

(MERCURY VAPOR)

400 WATT - (NO PATCH)
250 WATT - YELLOW

IDENTIFICATION PLAQUE



NOTES:

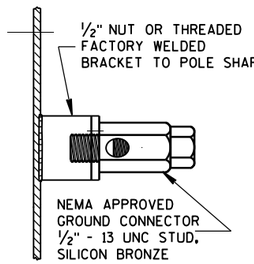
1) PLACE BOTTOM OF UNIT NUMBER PLAQUE 5'-0" ABOVE ELEVATION OF ADJACENT CURB OR SHOULDER.

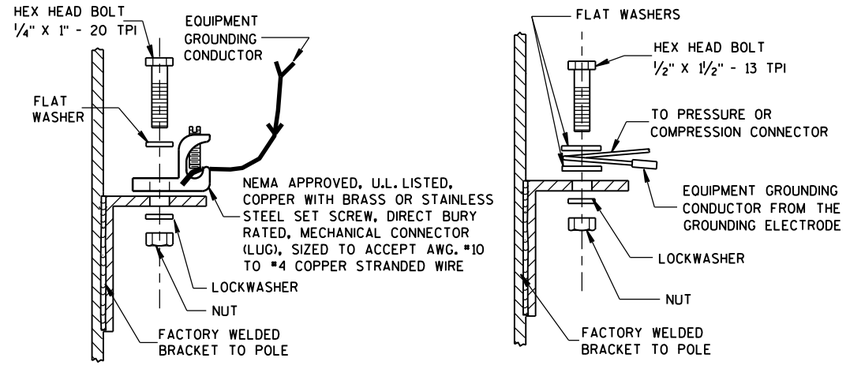
2) UNIT NUMBERS: ONE REQUIRED FOR SINGLE ARM POLES TWO REQUIRED FOR MEDIAN MOUNT POLES.

LIGHTING UNIT IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENT

(TYPICAL ALL LIGHTING UNITS)

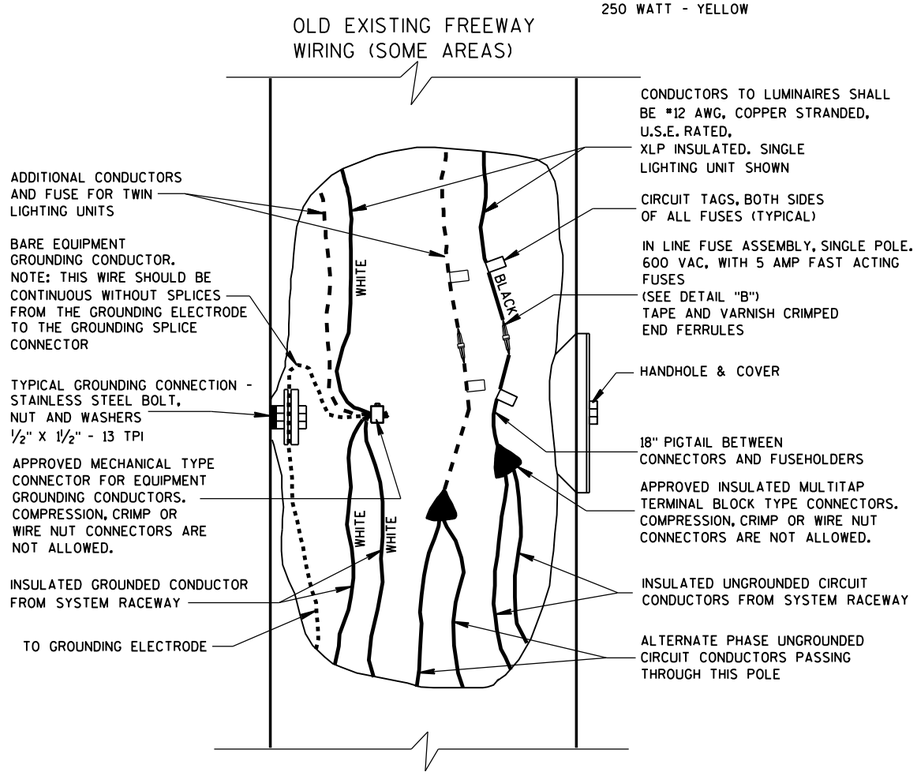
FURNISH PLAQUE WHEN CALLED FOR BY SPECIAL PROVISIONS



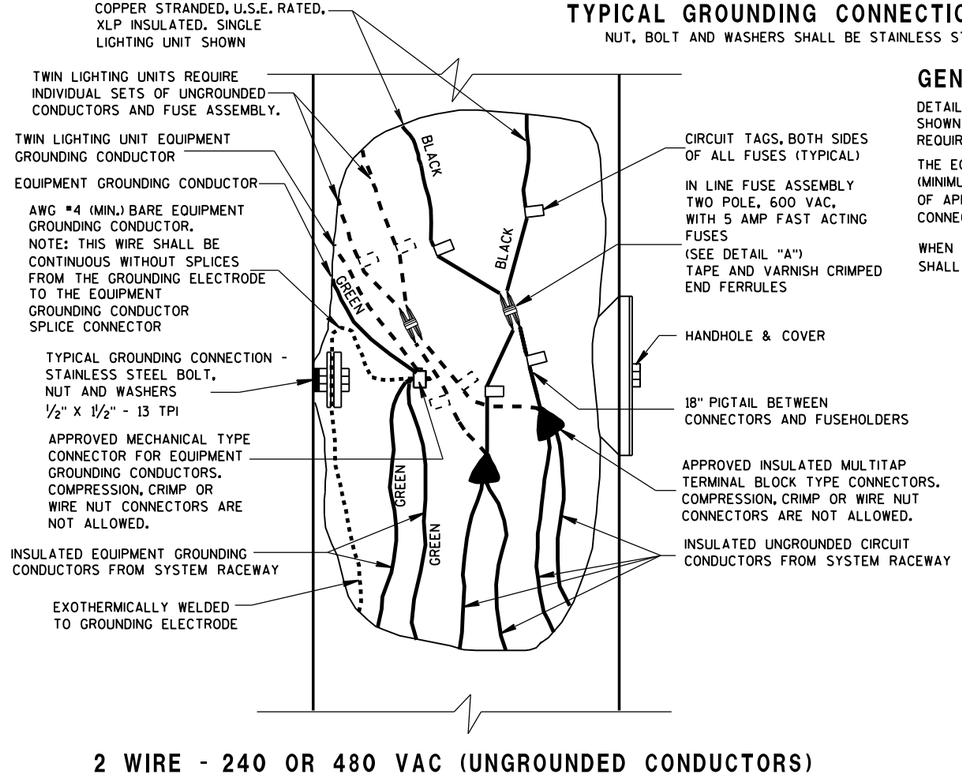


TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



2 WIRE - 120, 240 OR 480 VAC TO GROUND



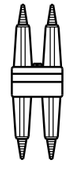
2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

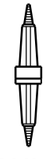
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



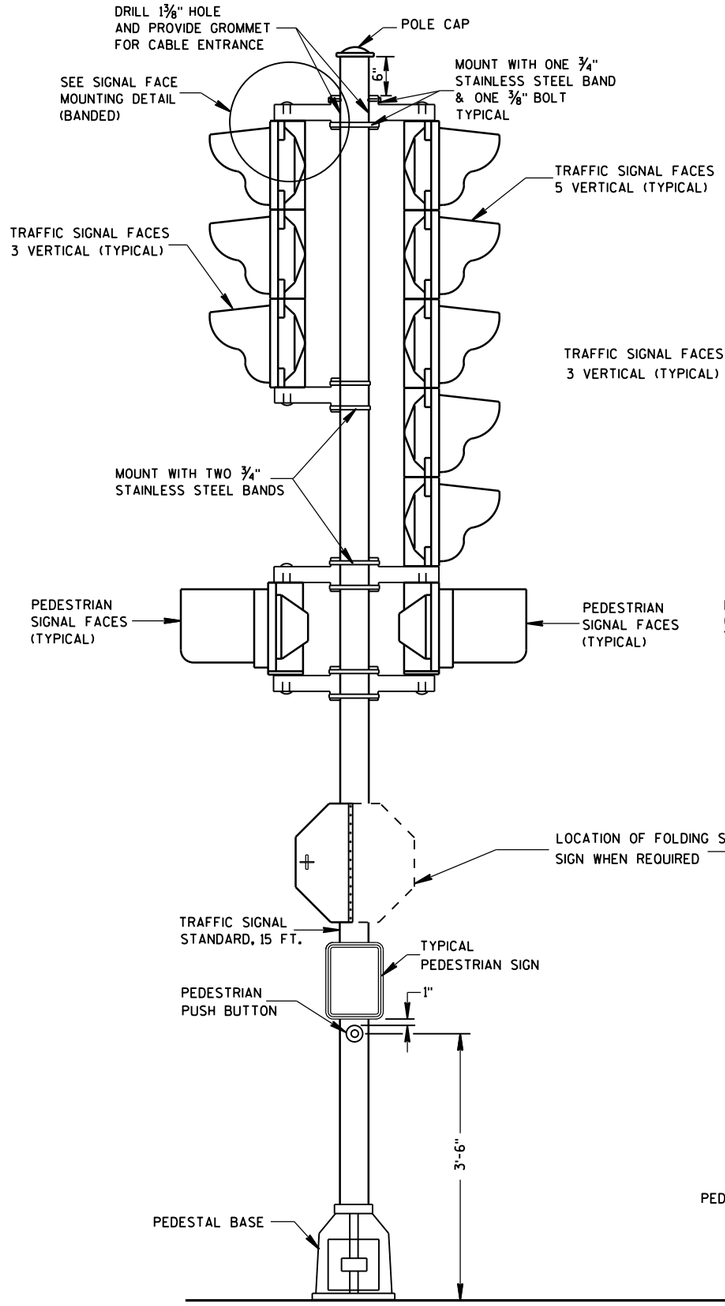
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT

FREEWAY LIGHTING UNIT POLE WIRING

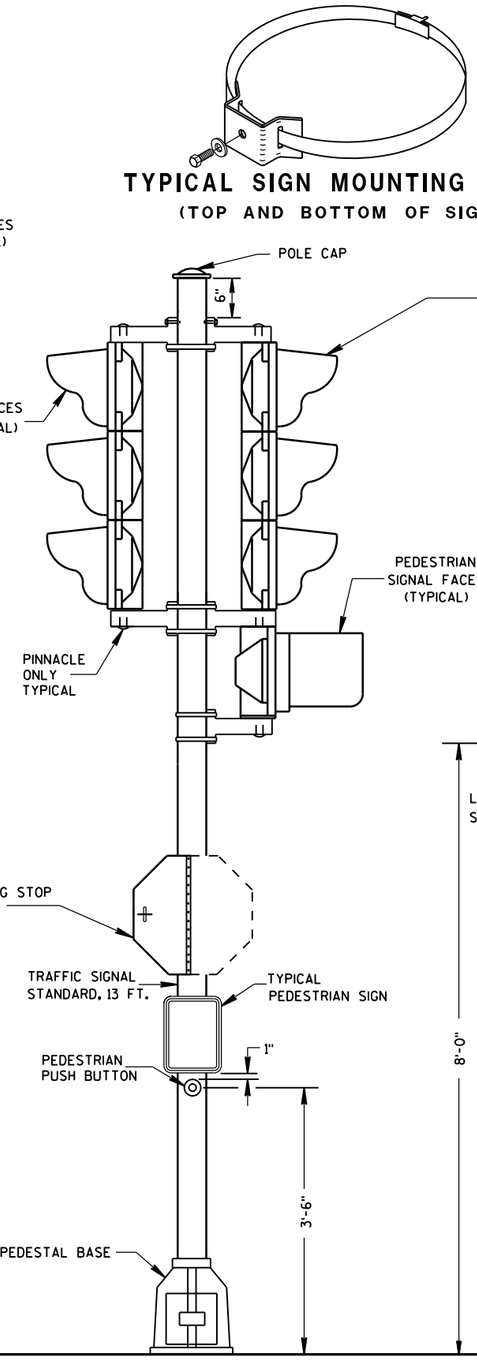
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6
S.D.D. 9 E 2-4

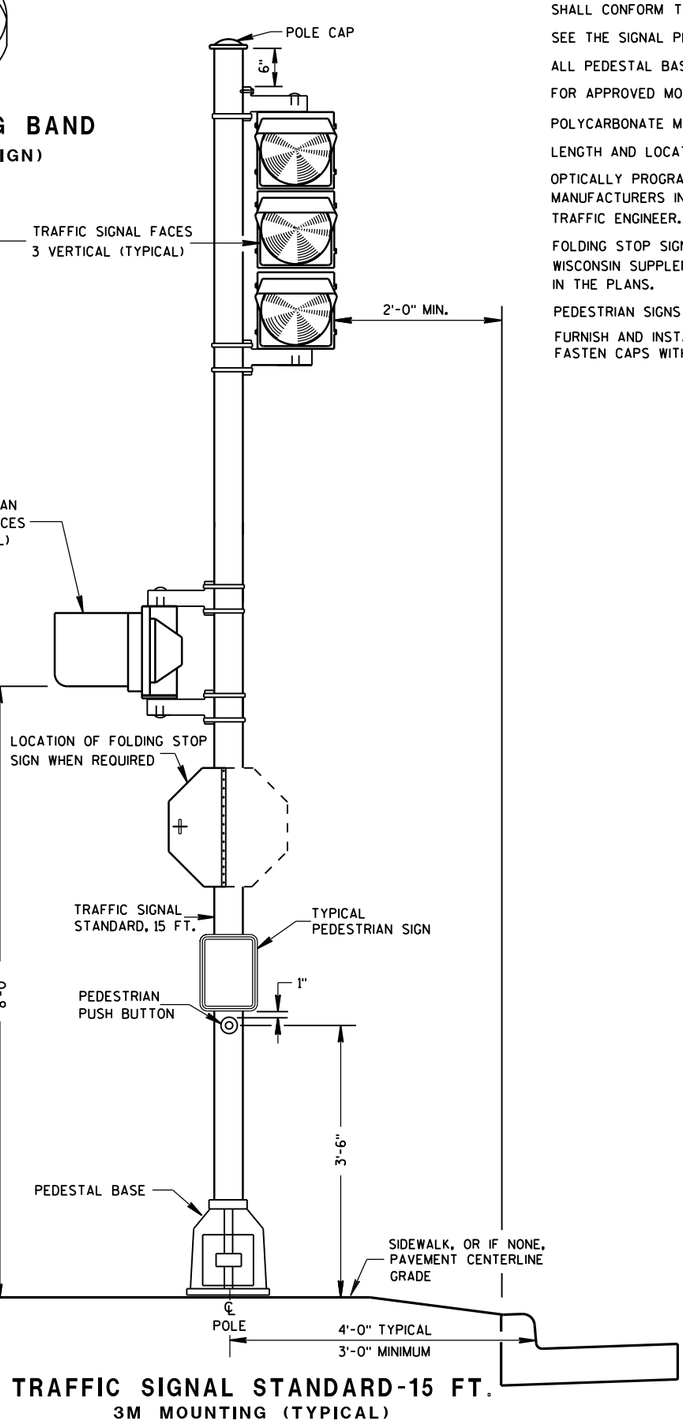


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

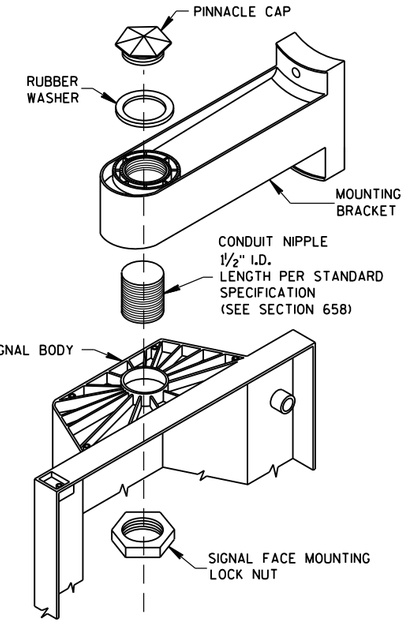
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(BANDED)

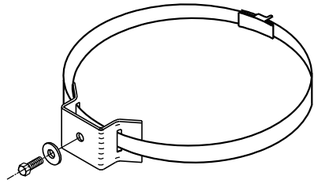
TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

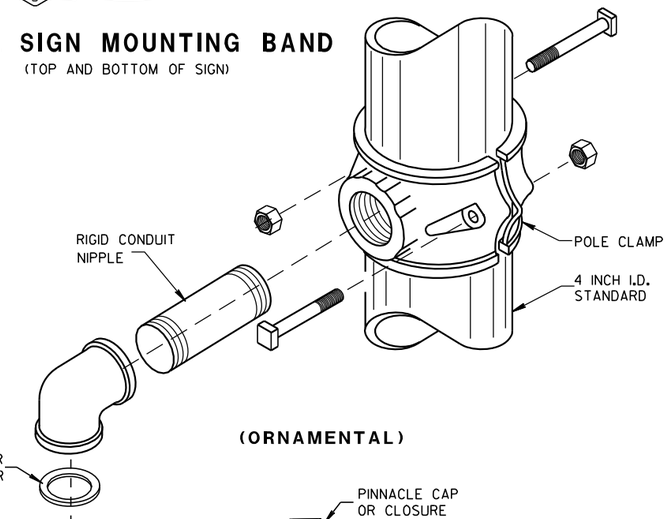
APPROVED
2/28/2013 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

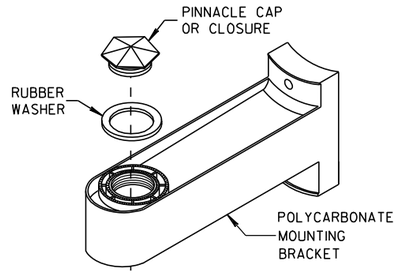
S.D.D. 9 E 6-5



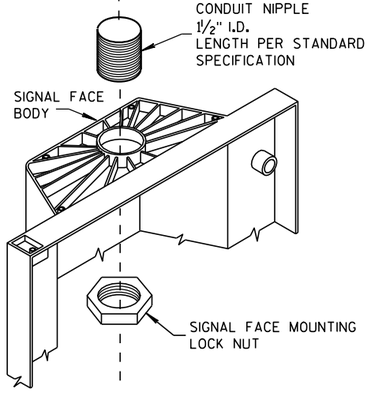
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



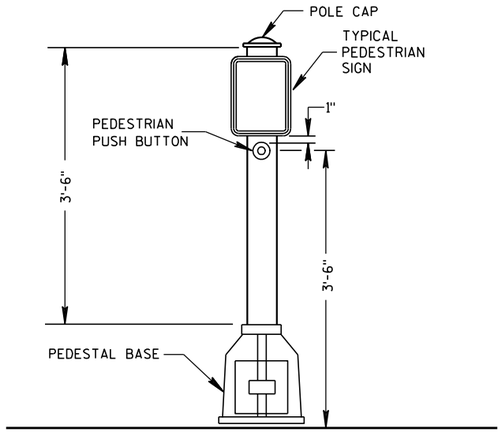
(ORNAMENTAL)



(BANDED)



SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

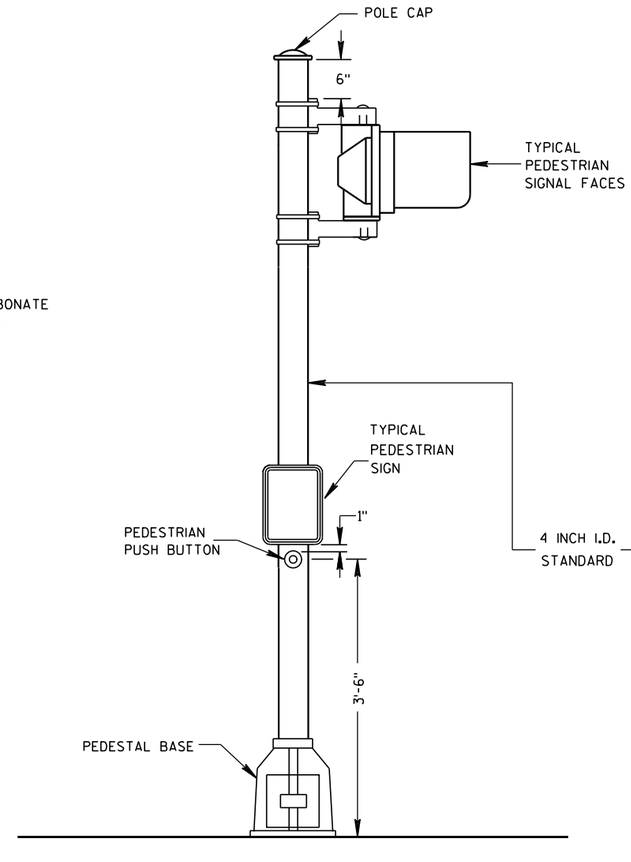
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

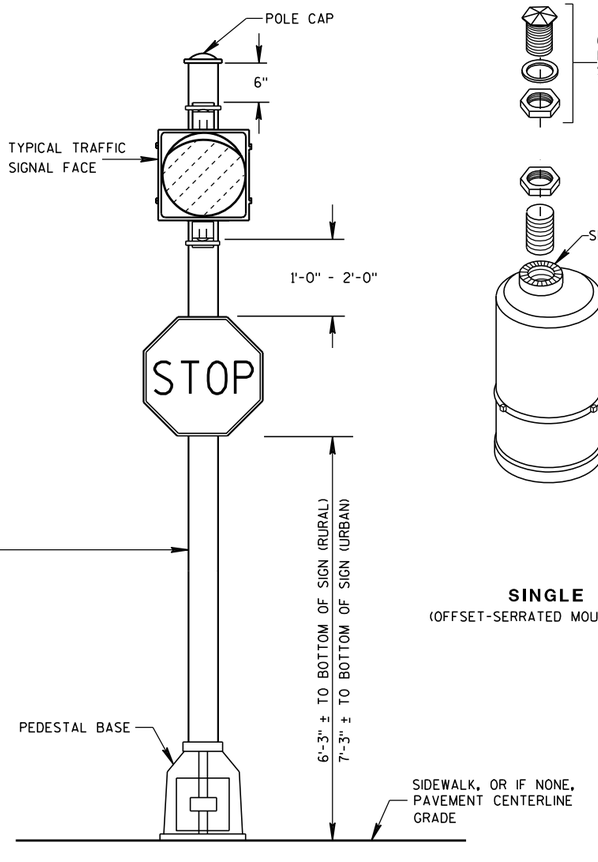
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

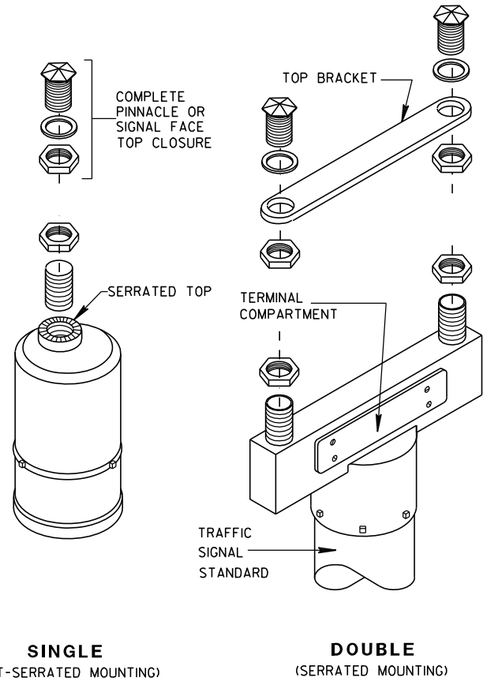
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



PEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)



STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED



SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10
DATE

/S/ John Corbin
STATE ELECTRICAL ENGI

506

HWYS

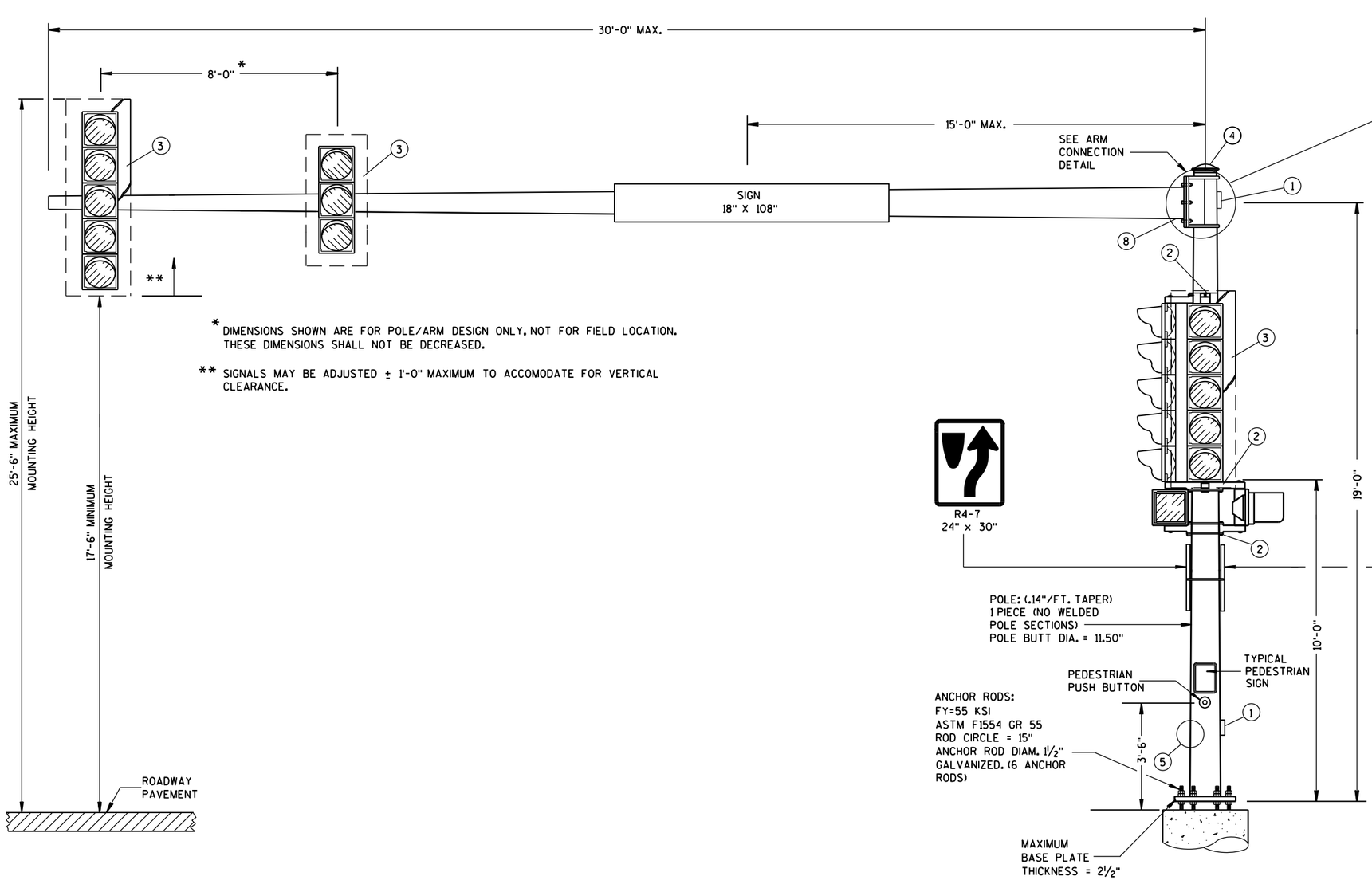
FHWA

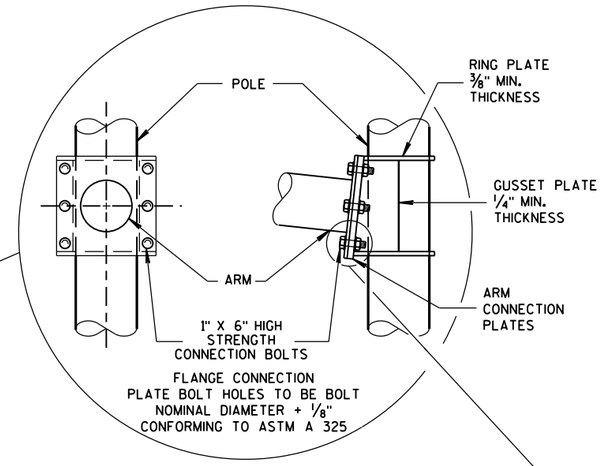
6

S.D.D. 9 E 7-5

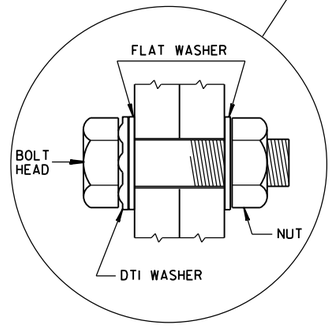
6

S.D.D. 9 E 7-5

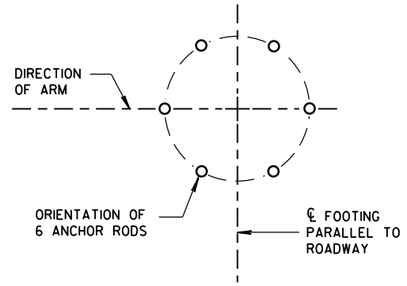




6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

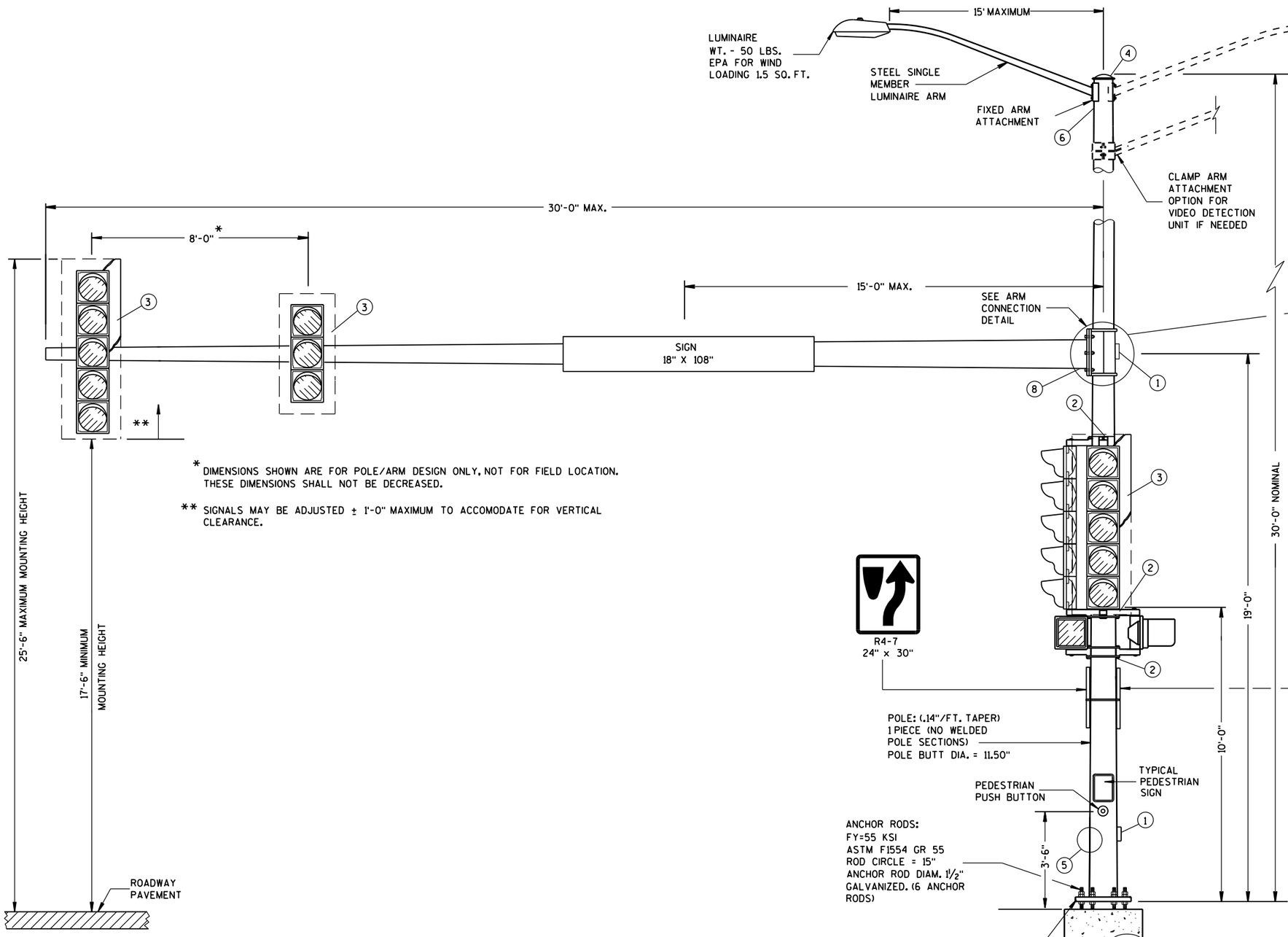
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

(MAXIMUM LOAD)

TYPE 9 POLE 15'- 30' MONOTUBE ARM

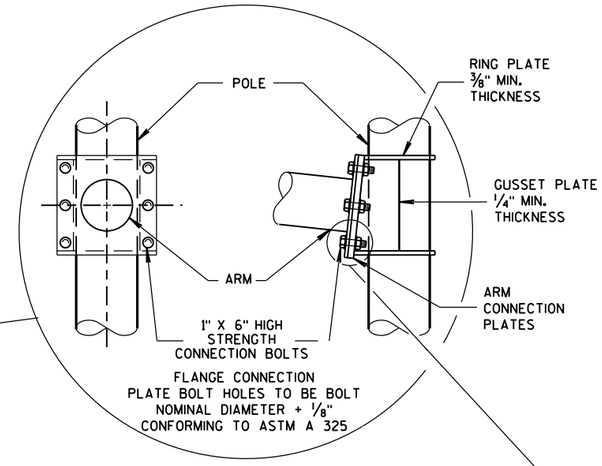
TYPE 9 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE FHWA	/S/ Ahmet Demirbilek STATE ELECTRICAL 507

6
S.D.D. 9 E 8-6a

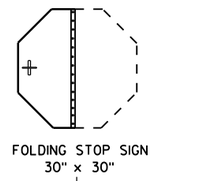


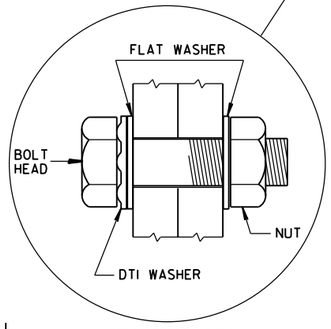
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

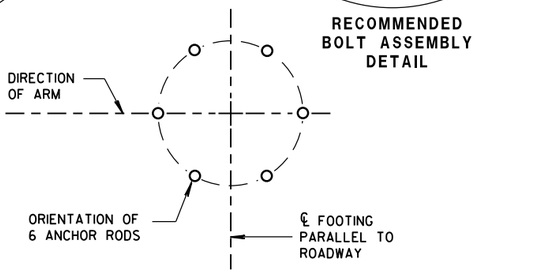


6 BOLT ARM CONNECTION DETAIL





RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 10 POLE
15'- 30' MONOTUBE ARM

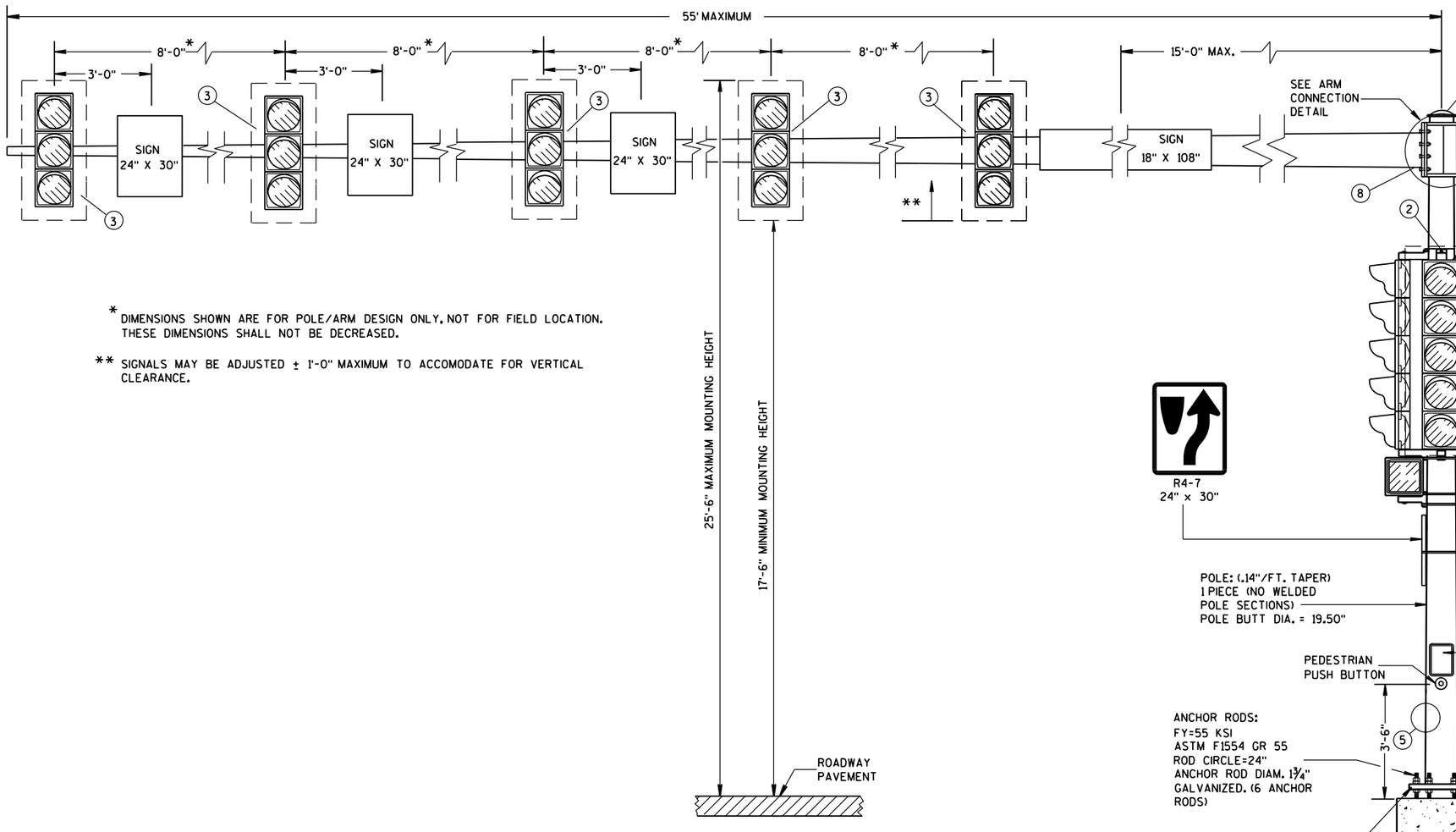
TYPE 10 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

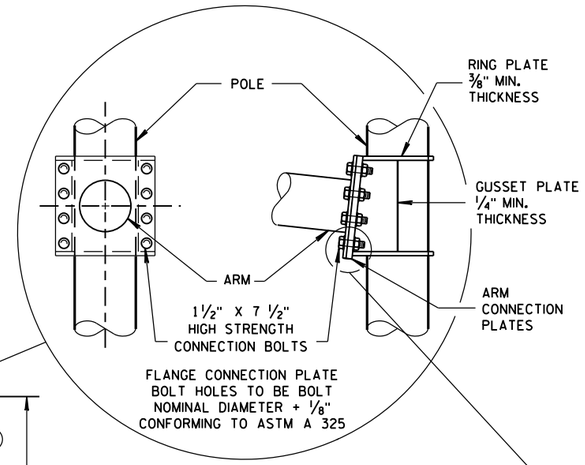
6

S.D.D. 9 E 8-6b

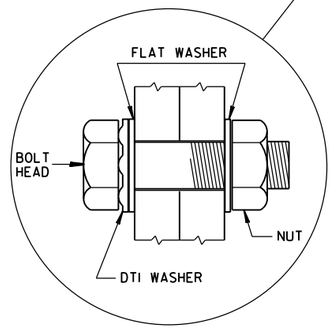


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

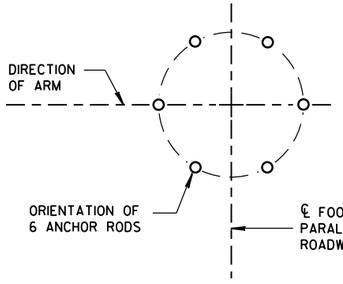
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



8 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 12 POLE 35'- 55' MONOTUBE ARM

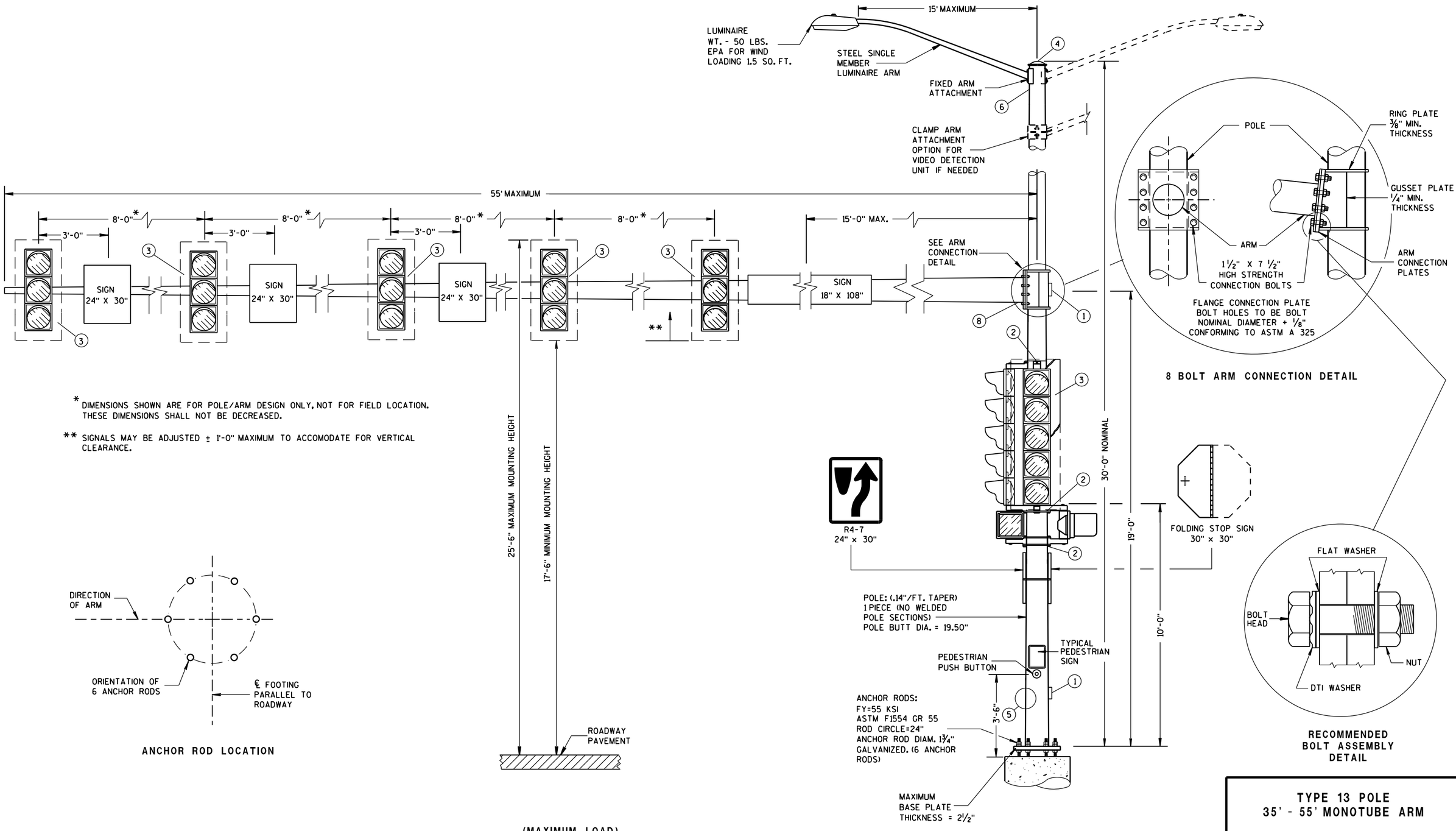
TYPE 12 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 E 8-6c



* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

8 BOLT ARM CONNECTION DETAIL

RECOMMENDED
BOLT ASSEMBLY
DETAIL

ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 13 POLE 35'- 55' MONOTUBE ARM

TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL 510

FHWA

6

S.D.D. 9 E 8-6d

6

S.D.D. 9 E 8-6d

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

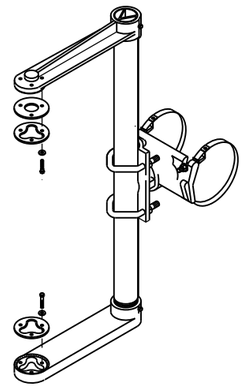
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

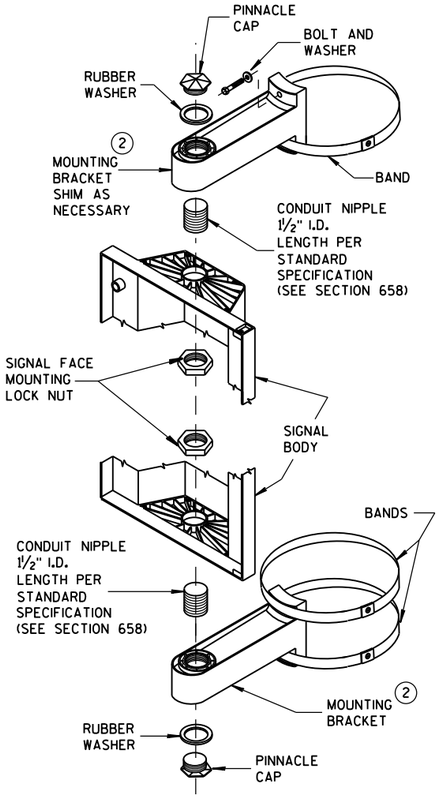
MOUNTING HEIGHT SHALL BE 5'-0" ABOVE THE CURB OR SHOULDER . ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

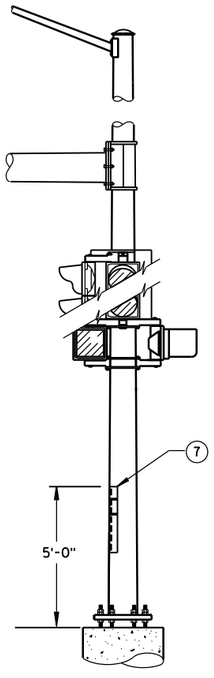


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

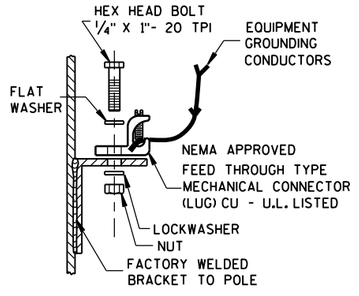
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



SIGNAL FACE VERTICAL MOUNTING DETAIL

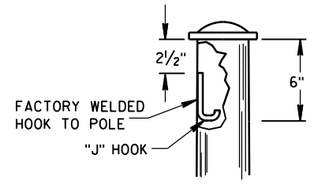


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



"J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

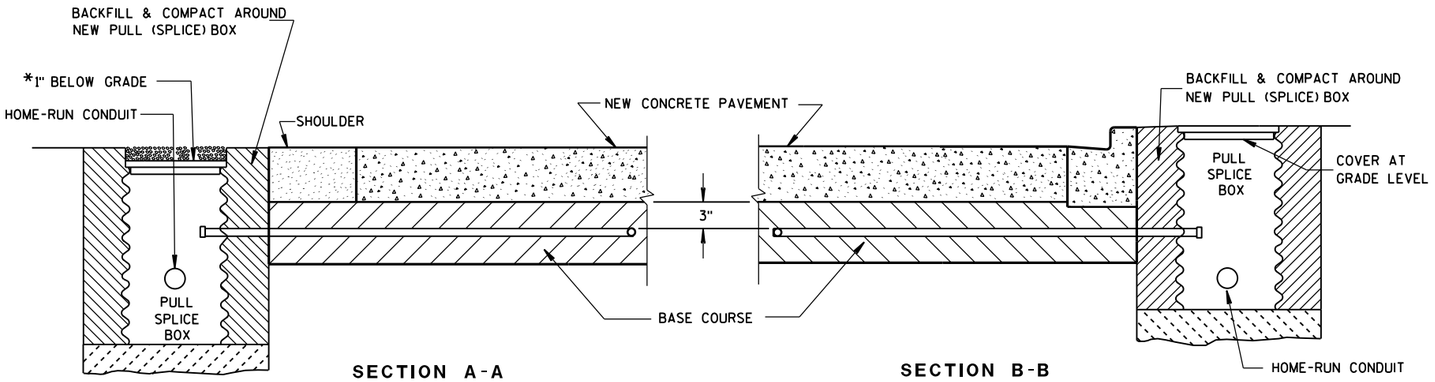
Sept. 2014 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

6

S.D.D. 9 E 8-6e



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

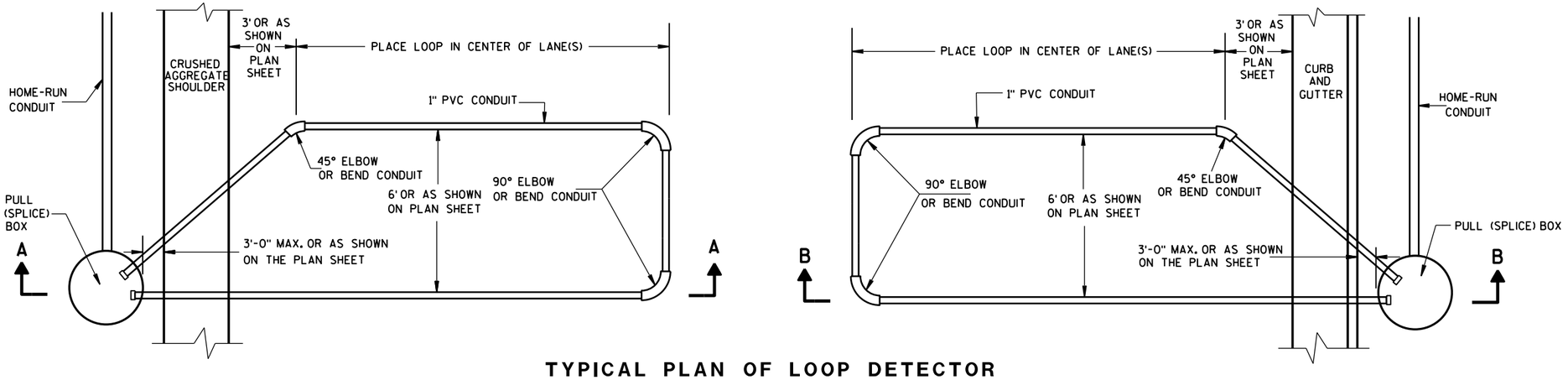
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICE CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE, SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

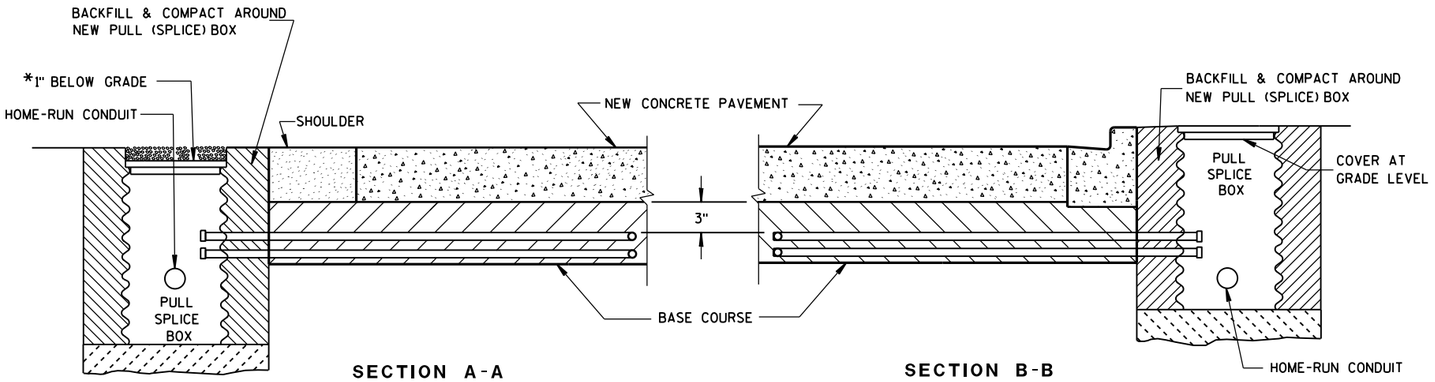
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 F 15-4a

6

S.D.D. 9 F 15-4a



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

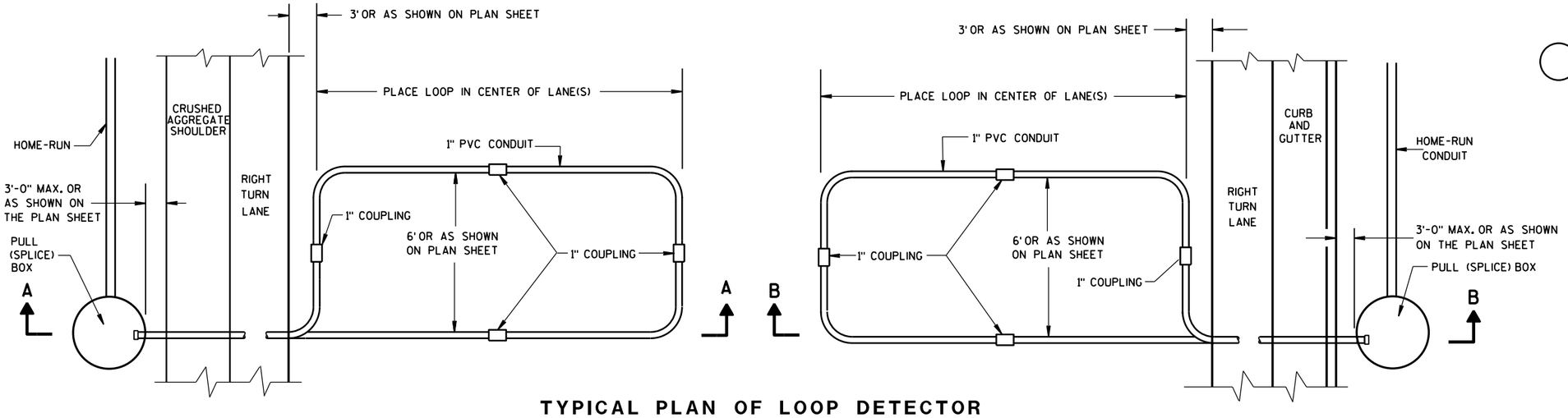
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

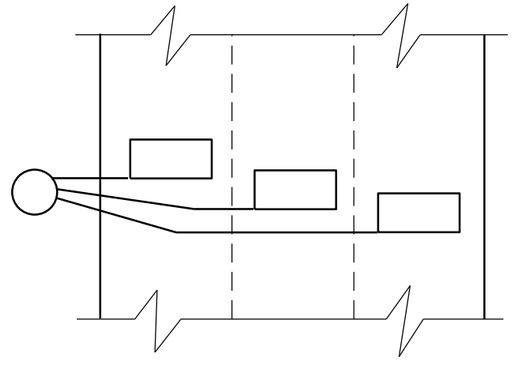
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 — DATE /S/ Ahmet Demirbilek — STATE ELECTRICAL FHWA

6

S.D.D. 9 F 15-4b

6

S.D.D. 9 F 15-4b

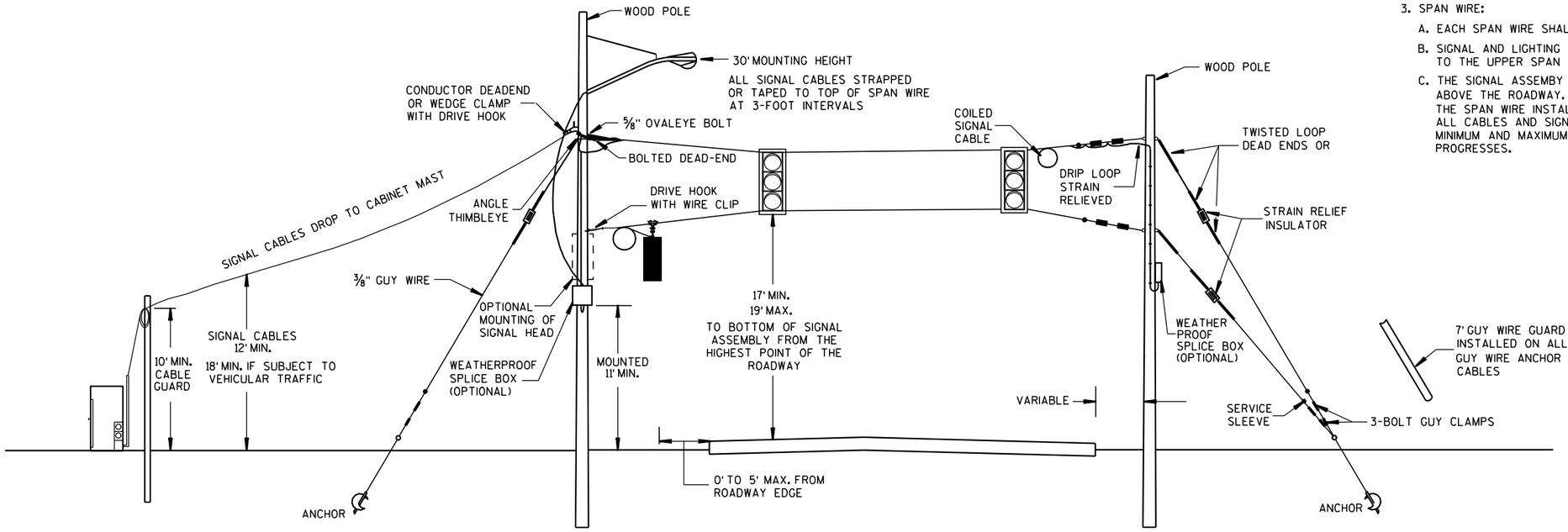
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.

3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS

MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

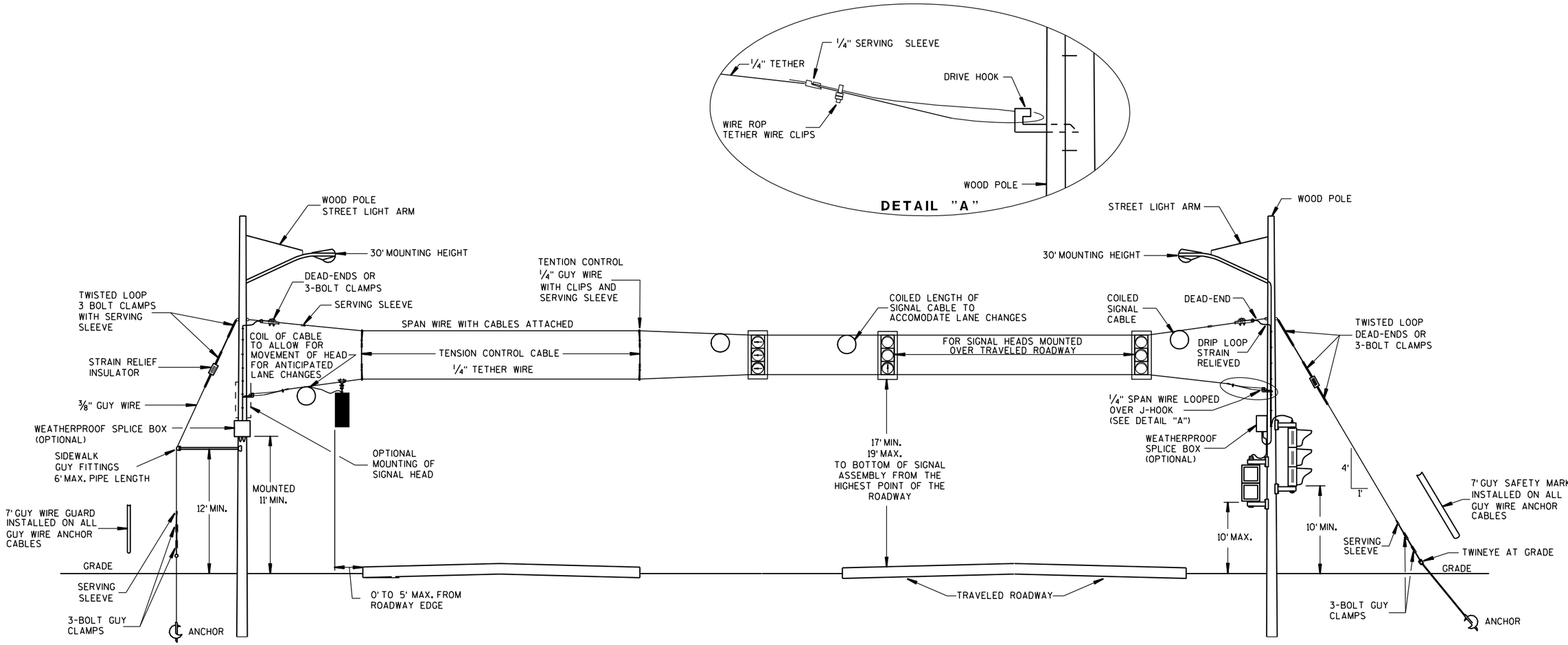
APPROVED

7-14-08 DATE

/S/ Balu Ananthar [illegible] n
STATE ELECTRICAL ENGI 514 HWYS

FHWA

6
S.D.D. 9 G 1-3a



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 515 HWYS

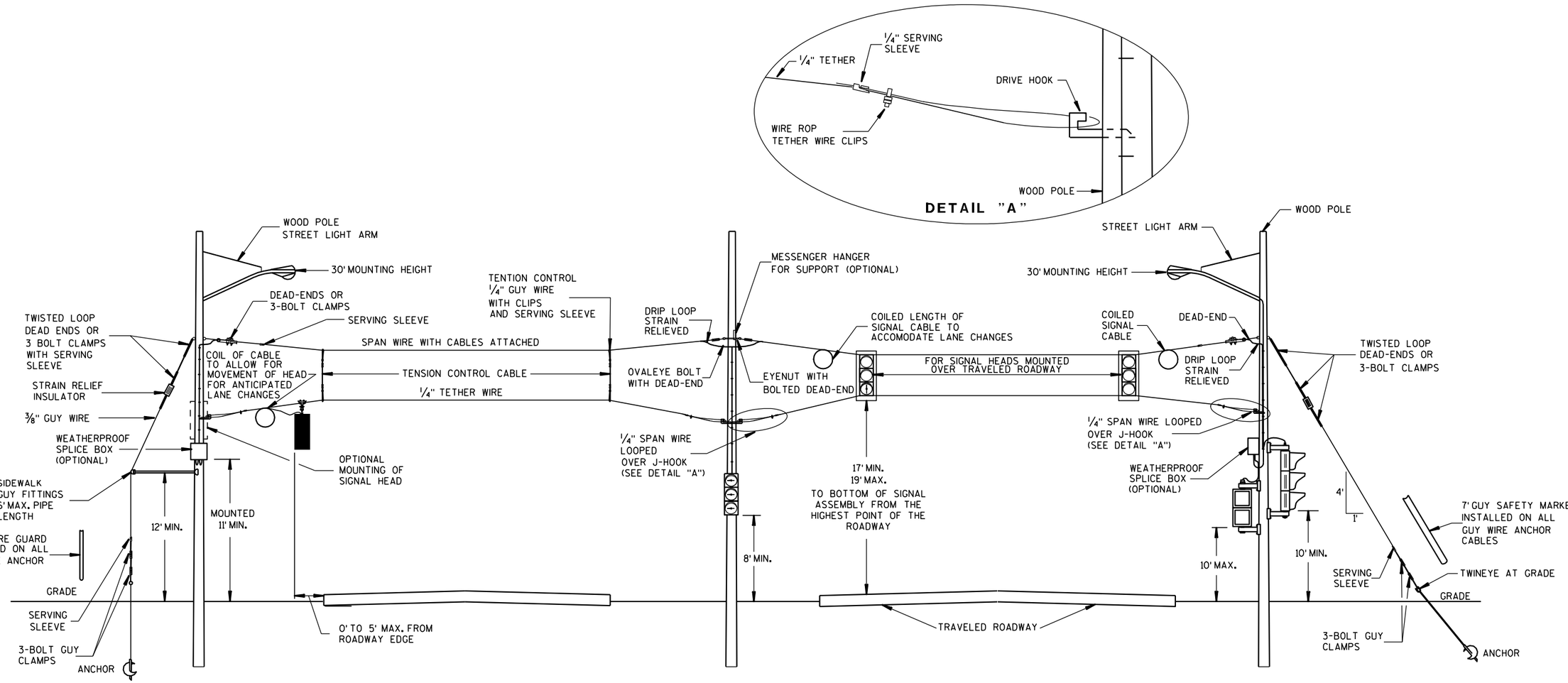
FHWA

6

S.D.D. 9 G 1-3b

6

S.D.D. 9 G 1-3b



SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.

3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Aganthanarayanan
STATE ELECTRICAL ENGI 516 HWYS

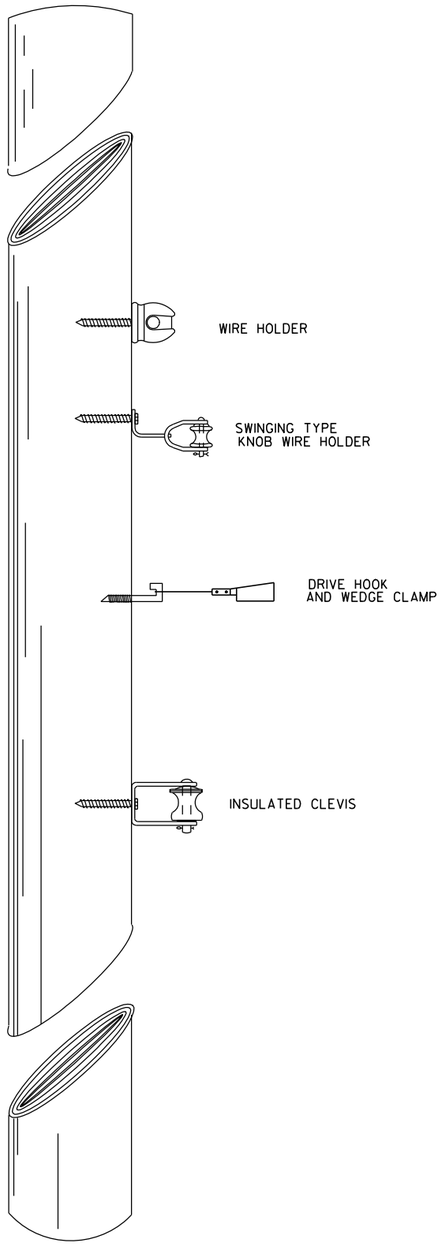
FHWA

6

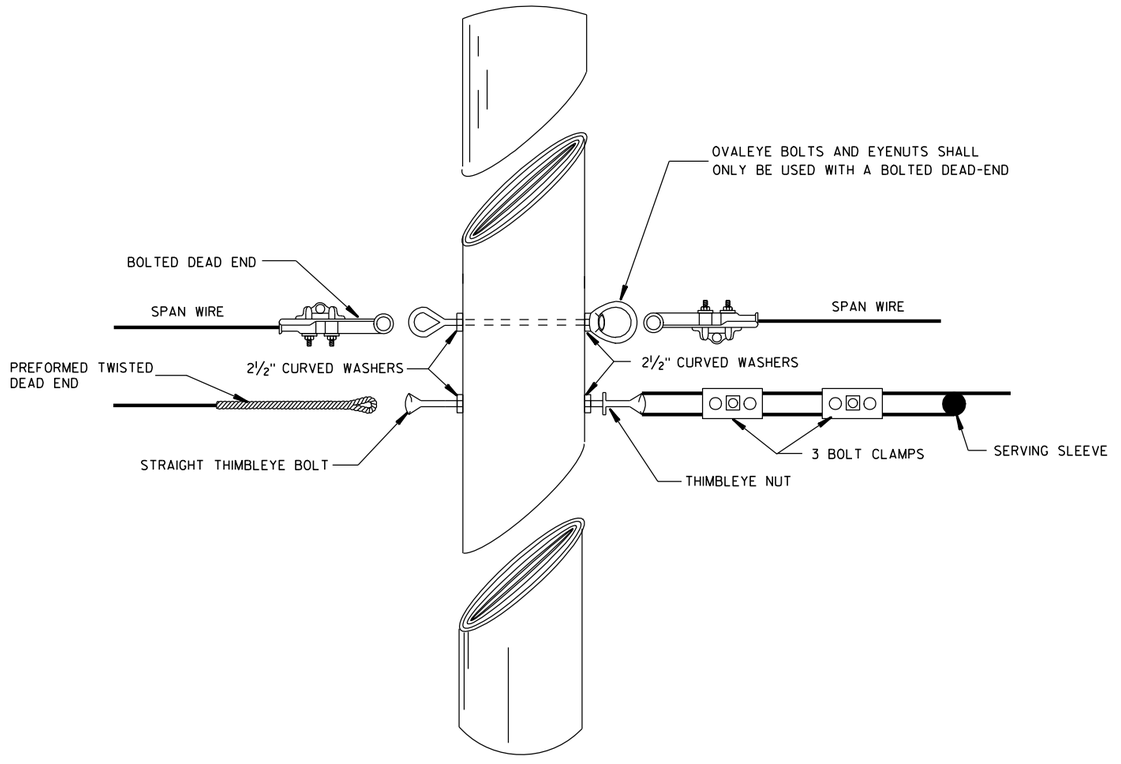
S.D.D. 9 G 1-3c

6

S.D.D. 9 G 1-3c



TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

6

6

S.D.D. 9 G 1-3d

S.D.D. 9 G 1-3d

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

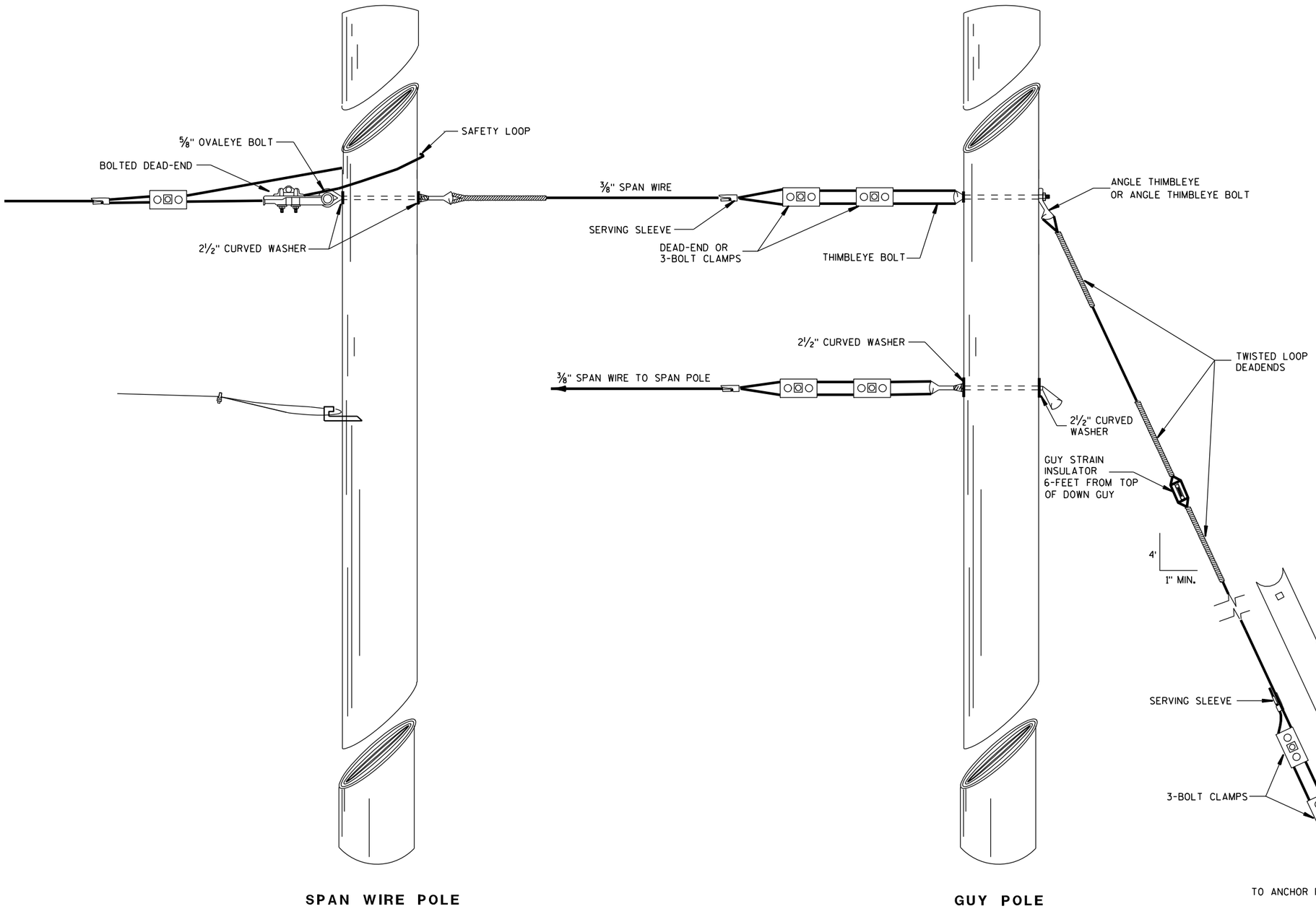
7-14-08
DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 517 HWYS

FHWA

GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE HOLE FOR ⅝" BOLTS.
2. SAFTY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE

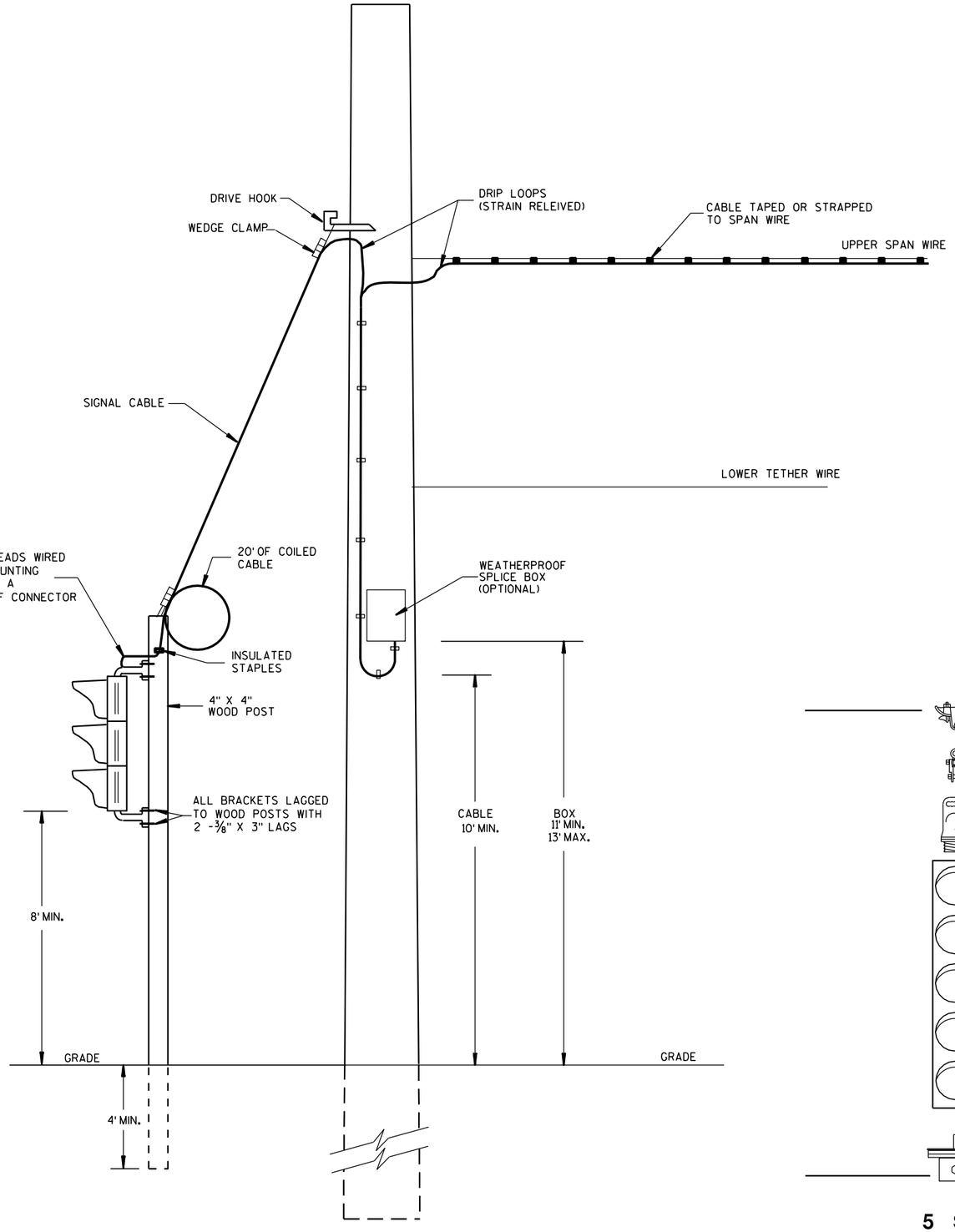
GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

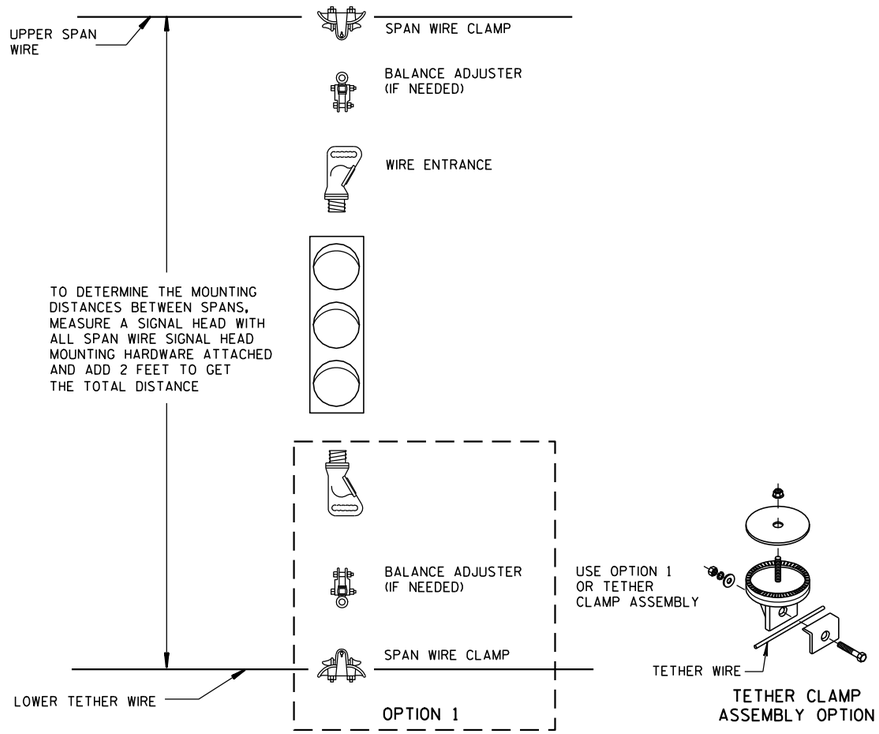
SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

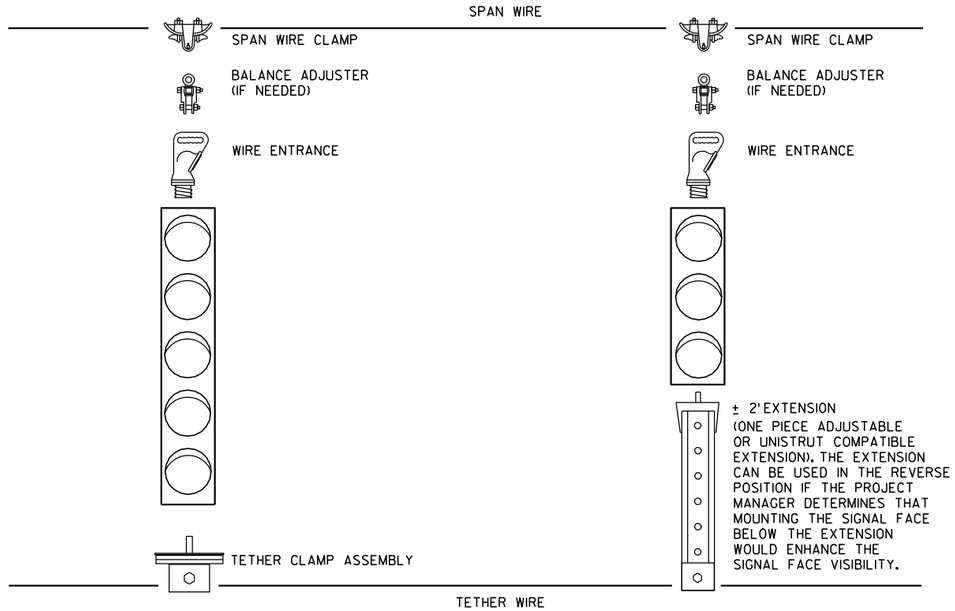
APPROVED
7-14-08 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 518 HWYS
FHWA



TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

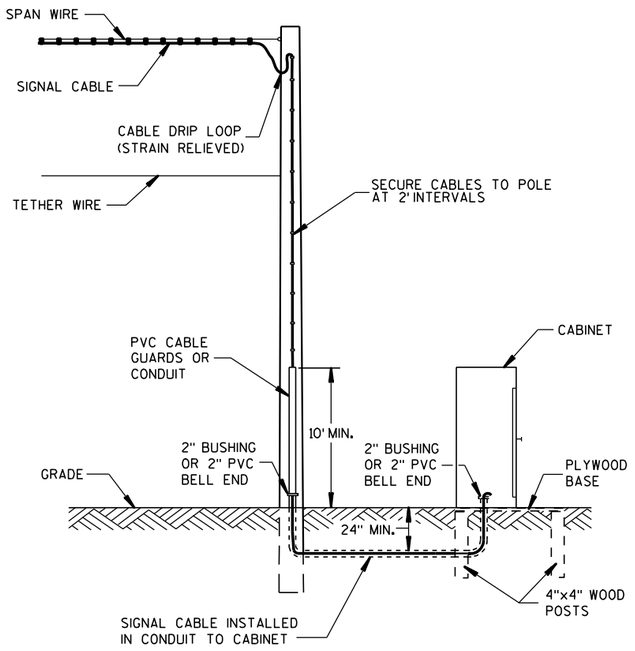
APPROVED
7-14-08 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 519 HWYS
FHWA

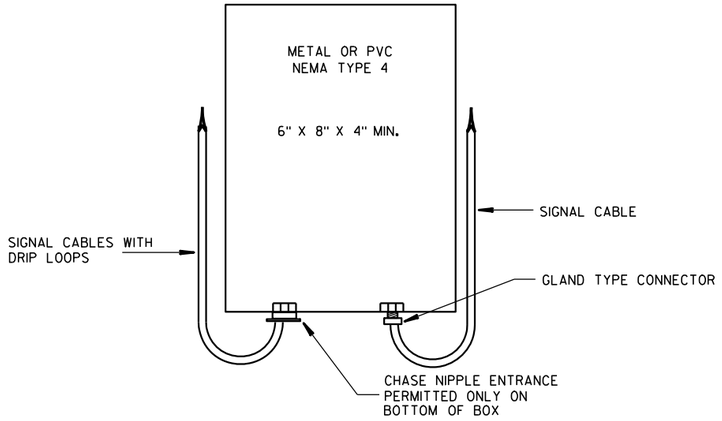
6

S.D.D. 9 G 1-3f

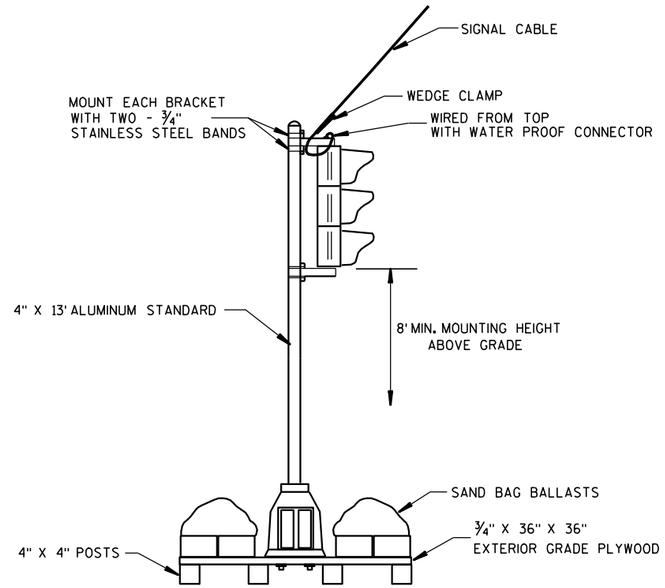
6

S.D.D. 9 G 1-3f

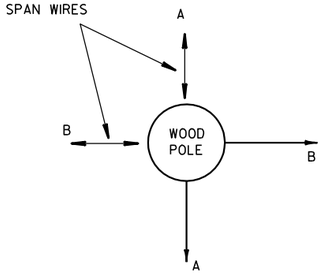




SPLICE BOX

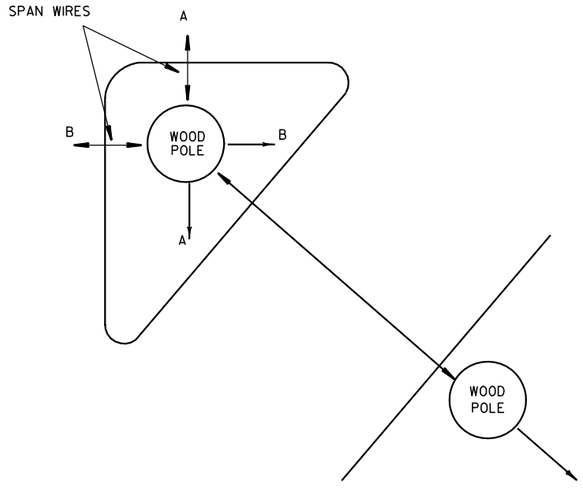


TYPICAL SKID TYPE TEMPORARY

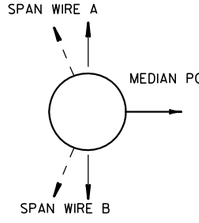


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



GUY AWAY FROM
INTERSECTION OR IN
OPPOSITE DIRECTION OF THE
SPAN LOADING

MEDIAN POLES

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08
DATE

/S/ Balu Aganthangayagan
STATE ELECTRICAL ENGI 520 HWYS

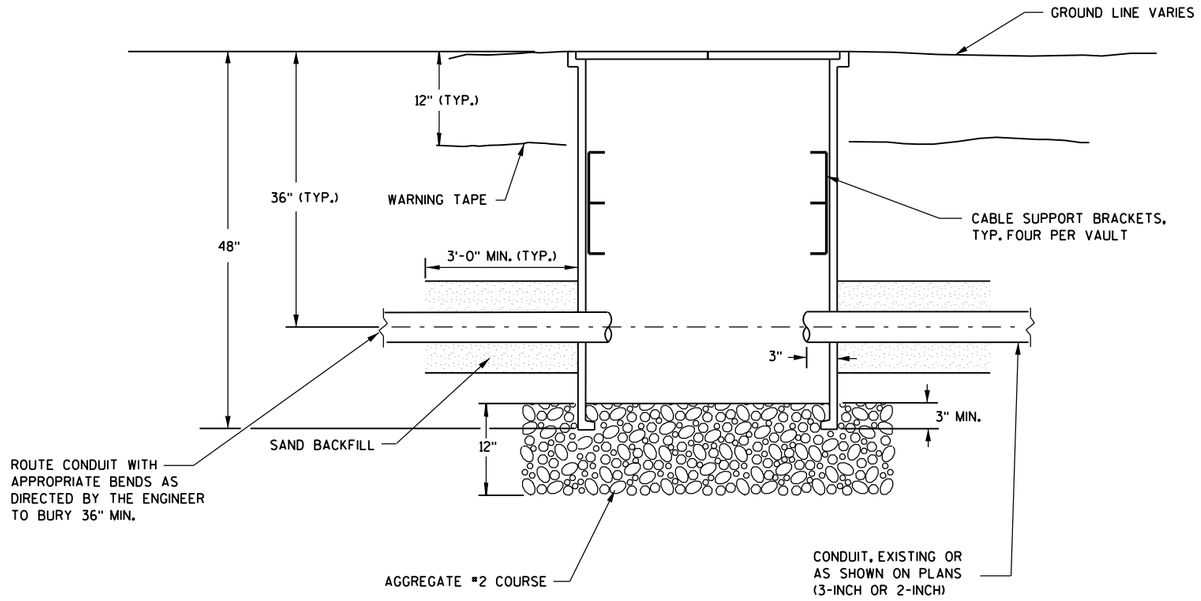
FHWA

6

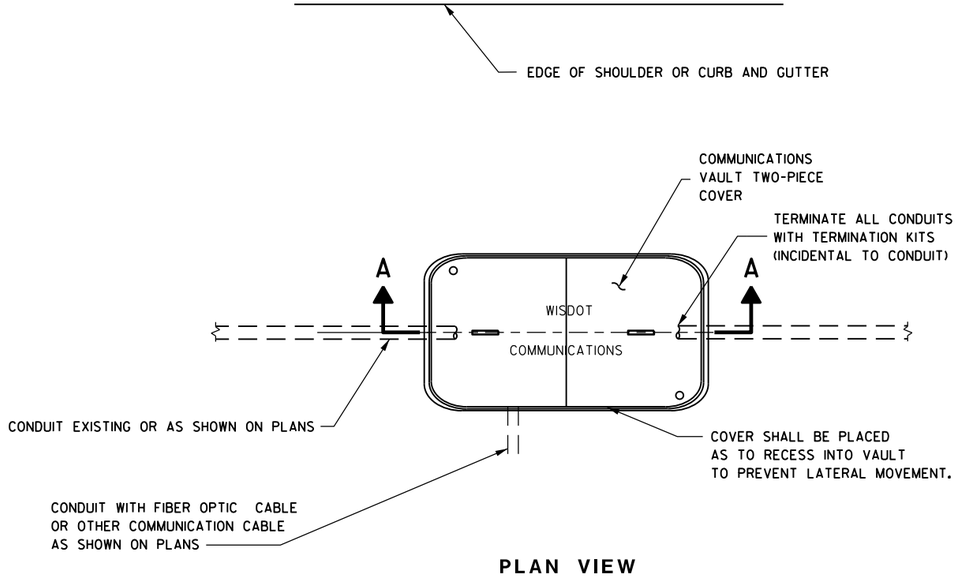
S.D.D. 9 G 1-3g

6

S.D.D. 9 G 1-3g



SECTION A-A



PLAN VIEW

COMMUNICATIONS VAULT

GENERAL NOTES

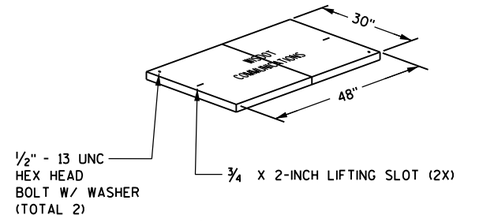
BOX SHALL HAVE AN OPEN BASE.

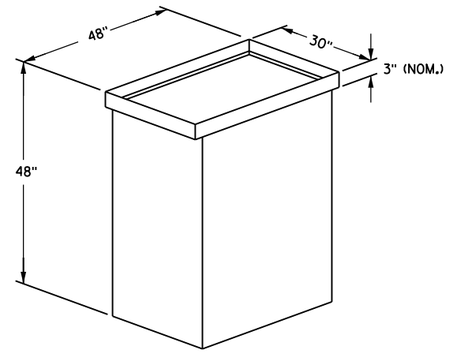
COVER SHALL BE DETECTABLE, AND HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.

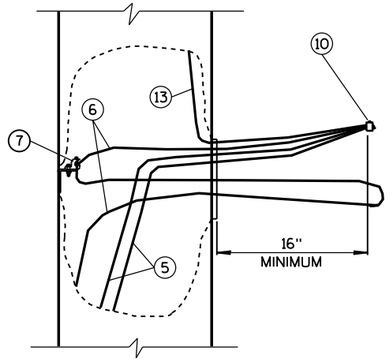




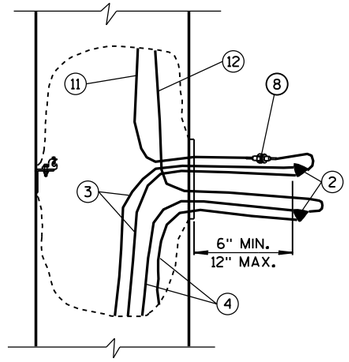
ISOMETRIC VIEW

COMMUNICATION VAULT
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 — DATE /S/ Ahmet Demirbilek — STATE ELECTRICAL FHWA

6
S.D.D. 9 H 9-1

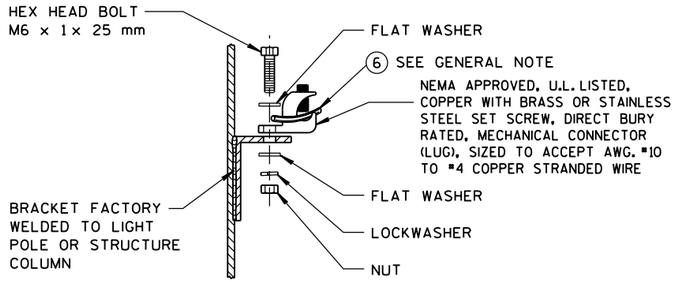


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



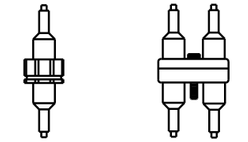
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



1 POLE (1P) 2 POLE (2P)

FUSE ASSEMBLIES

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

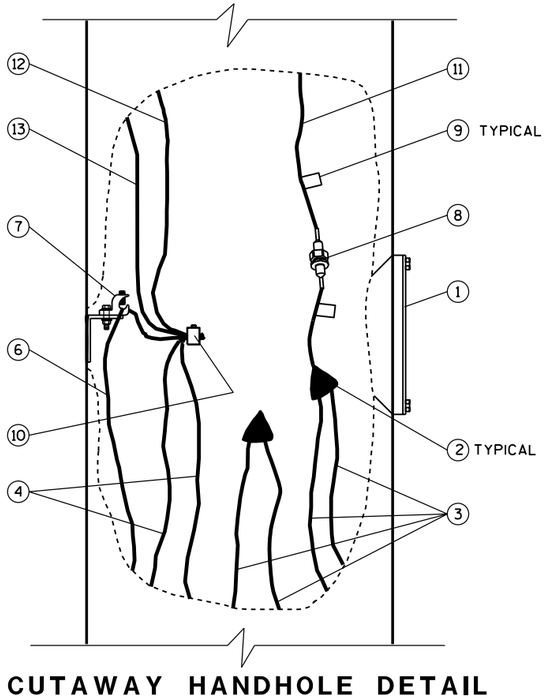
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

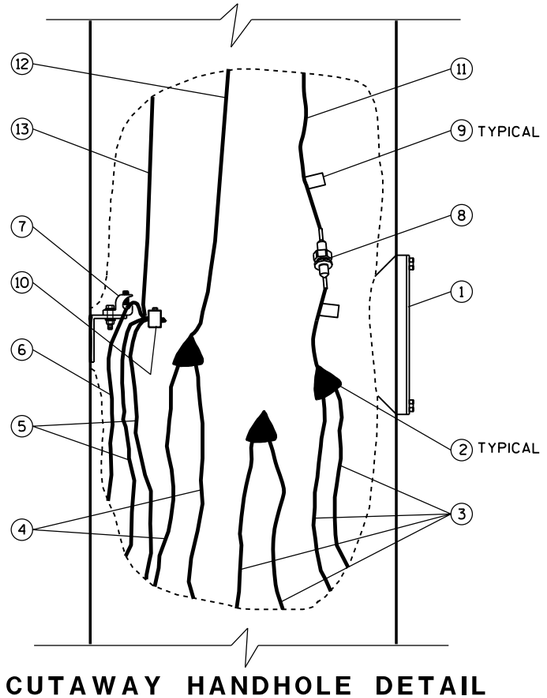
THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

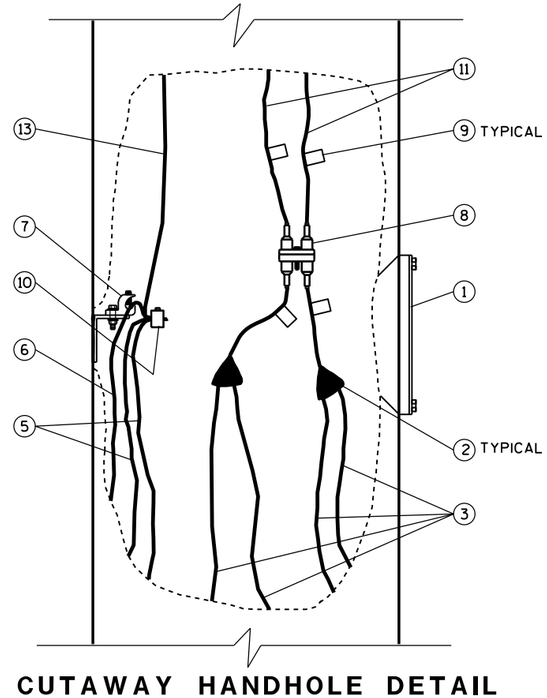
CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



CUTAWAY HANDHOLE DETAIL
GROUNDED NEUTRAL SYSTEMS
1-Φ



CUTAWAY HANDHOLE DETAIL
ISOLATED NEUTRAL SYSTEMS
1-Φ SHOWN; 3-Φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL
PHASE-TO-PHASE SYSTEMS
1-Φ SHOWN; 3-Φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED LINE WIRE
4. GROUNDED LINE WIRE
5. SYSTEM GROUNDING LINE WIRE
6. GROUNDING ELECTRODE CONDUCTOR
7. HANDHOLE GROUNDING LUG
8. FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
9. CIRCUIT TAG (SEE GENERAL NOTE)
10. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
11. UNGROUNDED POLE WIRE
12. GROUNDED POLE WIRE
13. EQUIPMENT GROUNDING POLE WIRE

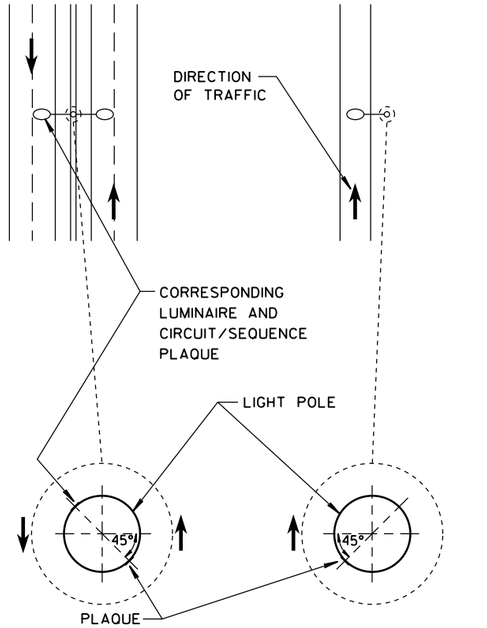
ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 10 A 1-3



MEDIAN POLE SINGLE ARM POLE

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

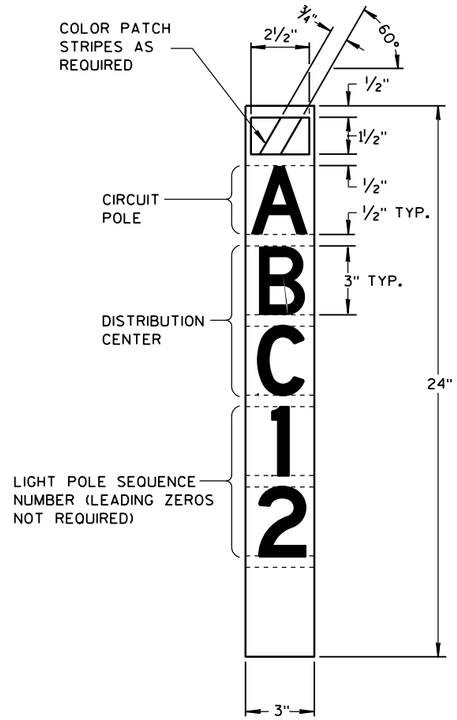
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS AND LED LUMINAIRES

HPS	LED	COLOR PATCH CODE
1000 WATT		NO PATCH
400 WATT	CATEGORY D	ORANGE
310 WATT		BLUE
250 WATT	CATEGORY C	ORANGE WITH WHITE STRIPE
200 WATT		RED
150 WATT	CATEGORY B	GREEN
100 WATT	CATEGORY A	BROWN
70 WATT	CATEGORY UDL	BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

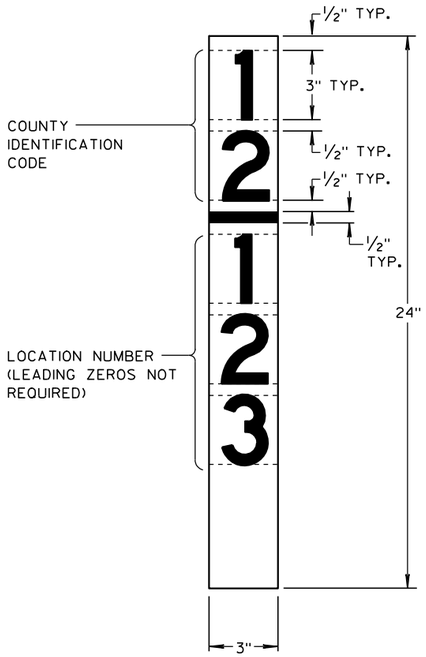
IDENTIFICATION PLAQUES LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

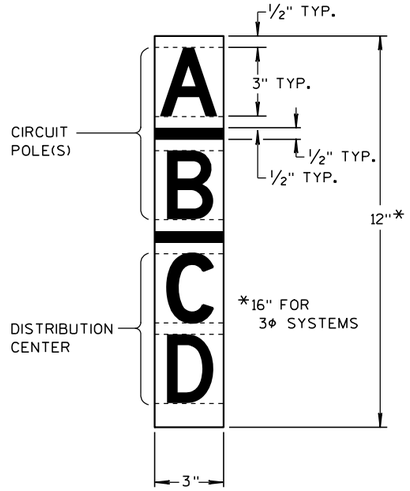
APPROVED
Feb. 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

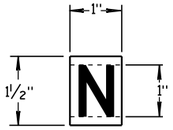
S.D.D. 10 A 2-3



HIGH MAST LIGHT TOWER STRUCTURE PLAQUE

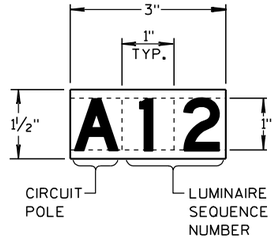


UNDERDECK LIGHTING OR HIGH MAST LIGHT TOWER CIRCUIT PLAQUE



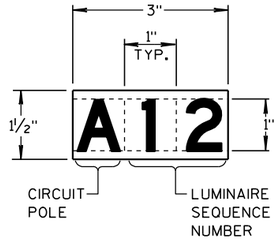
HIGH MAST LIGHT TOWER NORTH PLAQUE

(MOUNT ON LOWERING RING - INDICATING NORTH HEADING ^{2} ± $10^{\circ 3}$ WHEN RING IS RAISED AND LATCHED)



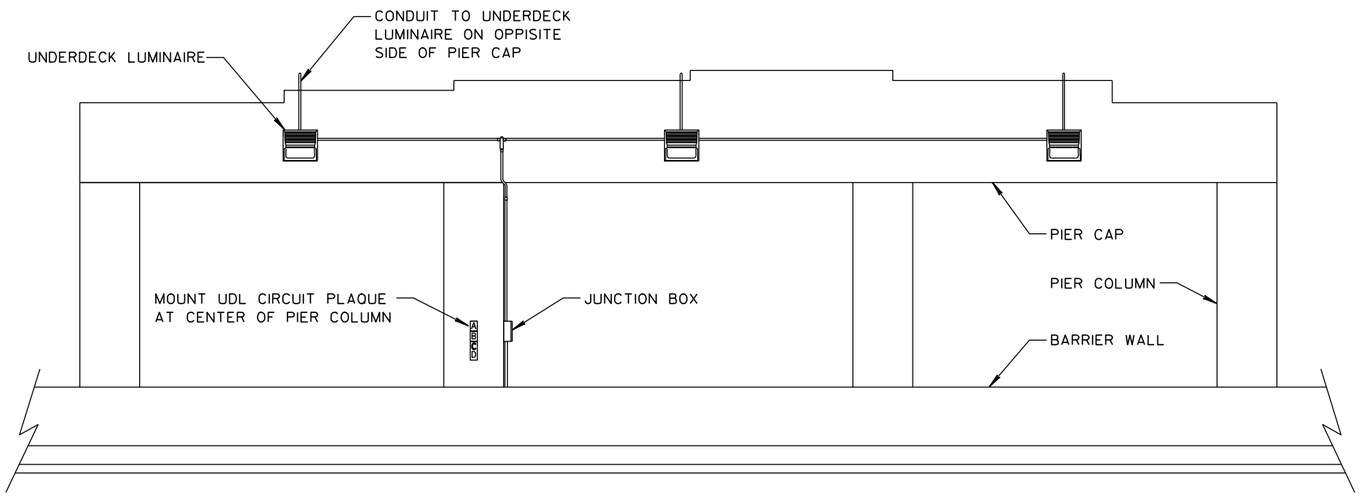
HIGH MAST LIGHT TOWER LUMINAIRE SEQUENCE PLAQUE

(MOUNT ON LUMINAIRE RING)



UNDER DECK LUMINAIRE SEQUENCE DECAL

(MOUNT ON LUMINAIRE)



LOCATION OF UNDERDECK LIGHTING CIRCUIT PLAQUE

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

CONCRETE SURFACE - MASONRY ANCHORS

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

PLAQUE MATERIALS:

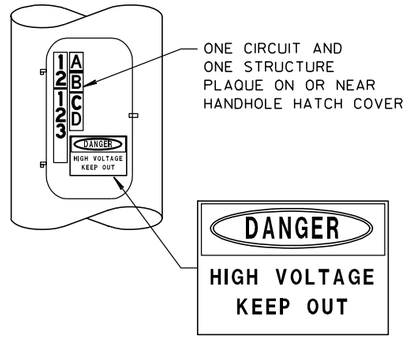
BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.



NOTE: NEMA PLAQUE SHOWN ABOVE IS REQUIRED ONLY IN PARK AND RIDE LOTS OR IN OTHER PEDESTRIAN ACCESSIBLE AREAS.

LOCATION OF HIGH MAST LIGHT TOWER STRUCTURE PLAQUE AND CIRCUIT PLAQUE

IDENTIFICATION PLAQUES UNDERDECK AND HIGH MAST LIGHTING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/25/2010 DATE	/S/ John Corbin STATE ELECTRICAL ENGI 524 HWYS
FHWA	

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

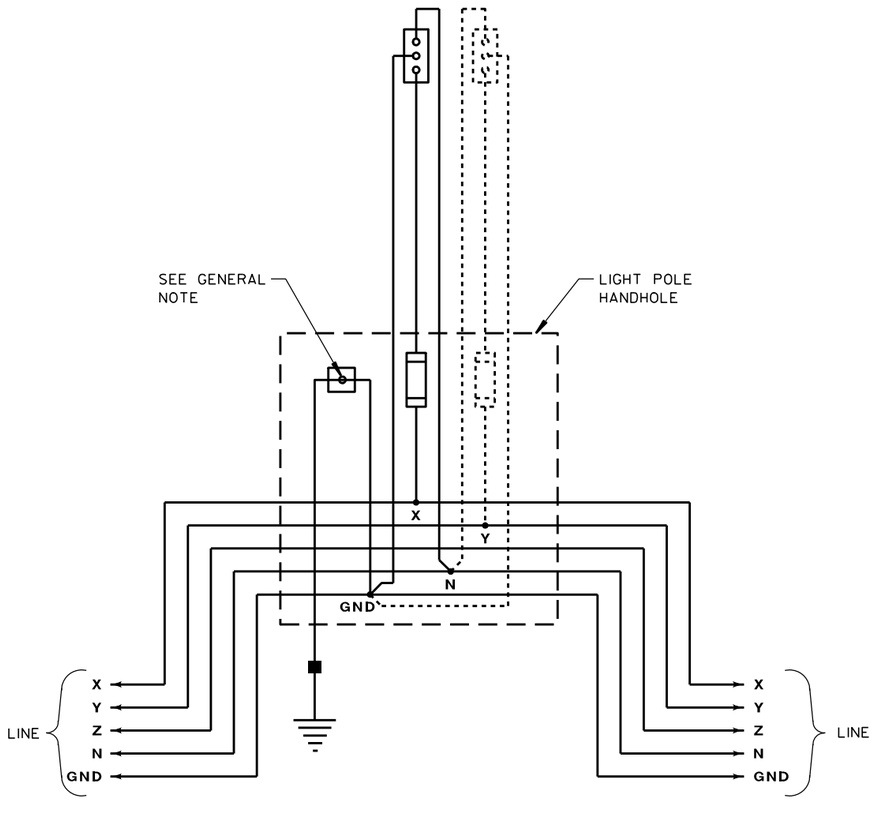
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

HANDHOLE FUSE SCHEDULES

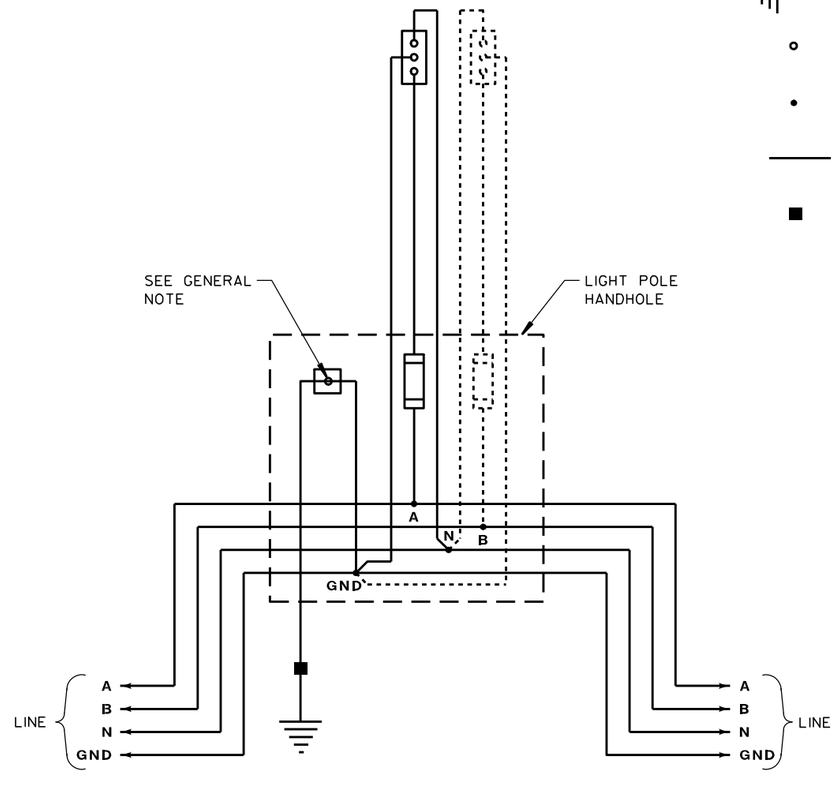
LINE VOLTAGE	BALLAST WATTAGE	
φ-GROUND	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
3-φ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
1-φ 120/240VAC OR 240/480VAC 3 WIRE

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 DATE
/S/ John Corbin
STATE ELECTRICAL ENGI 525
FHWA HWYS

6

S.D.D. 10 A 5-2

6

S.D.D. 10 A 5-2

HANDHOLE FUSE SCHEDULES

LINE VOLTAGE φ-GROUND	BALLAST WATTAGE	
	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

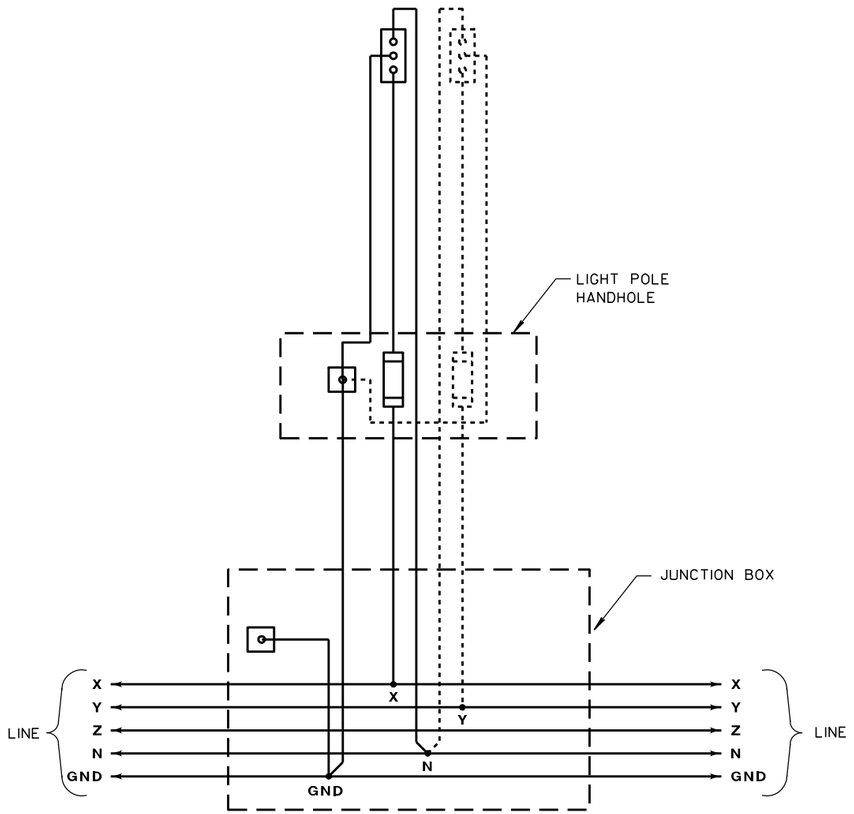
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

WIRE SIZE FROM THE JUNCTION BOX TO THE POLE HANDHOLE SHALL EQUAL THE SIZE OF THE POLE WIRE.

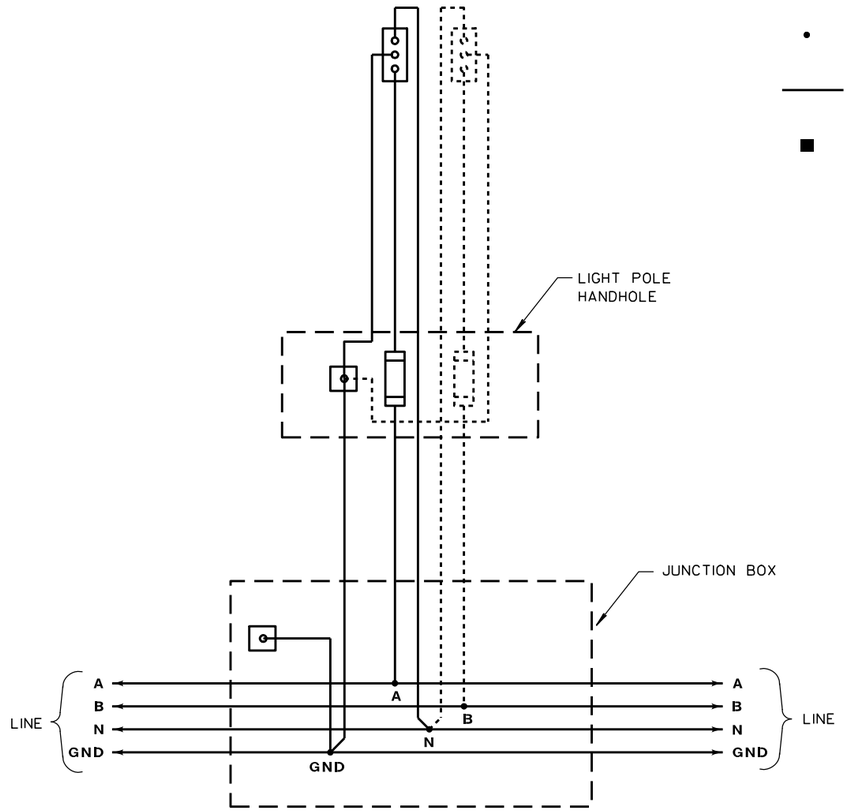
THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C., AND/OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE LINE WIRE IS LIGHTER, SUCH AS SMALLER SYSTEMS OR TOWARD THE FURTHEST END OF A LARGER SYSTEM, PULL THE LINE WIRE INTO THE POLE HANDHOLE FOR SPLICING.

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
3-φ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
1-φ 120/240VAC OR 240/480VAC 3 WIRE

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 — DATE
/S/ John Corbin — STATE ELECTRICAL ENGI
526
HWYS
FHWA

6

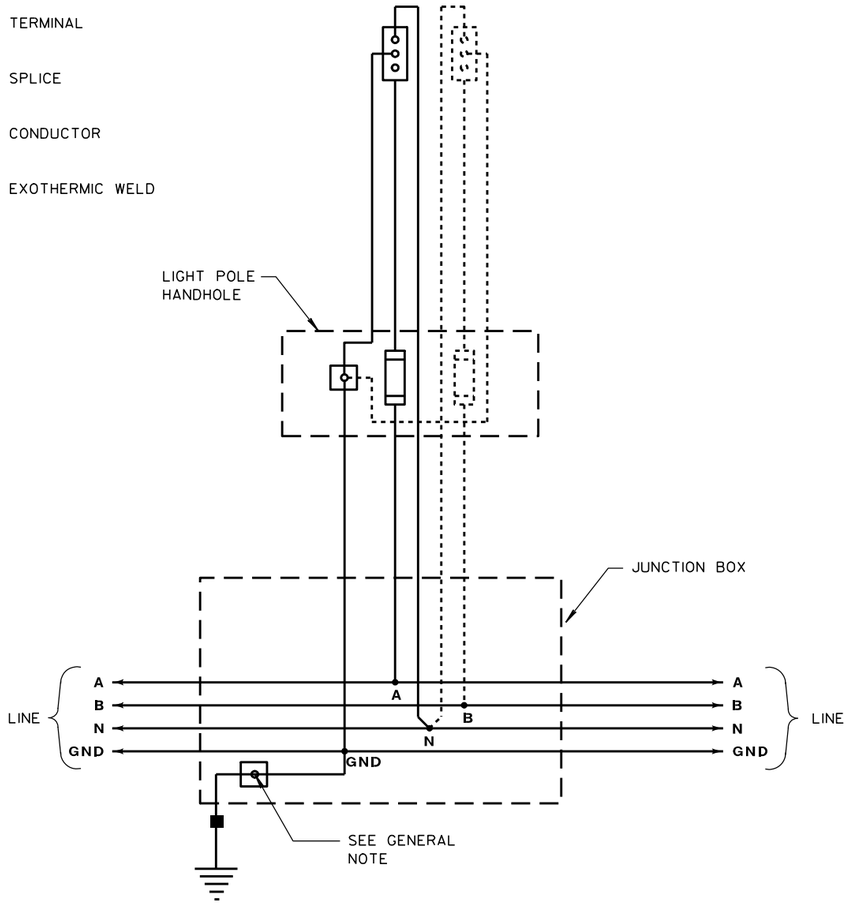
S.D.D. 10 A 8-2

6

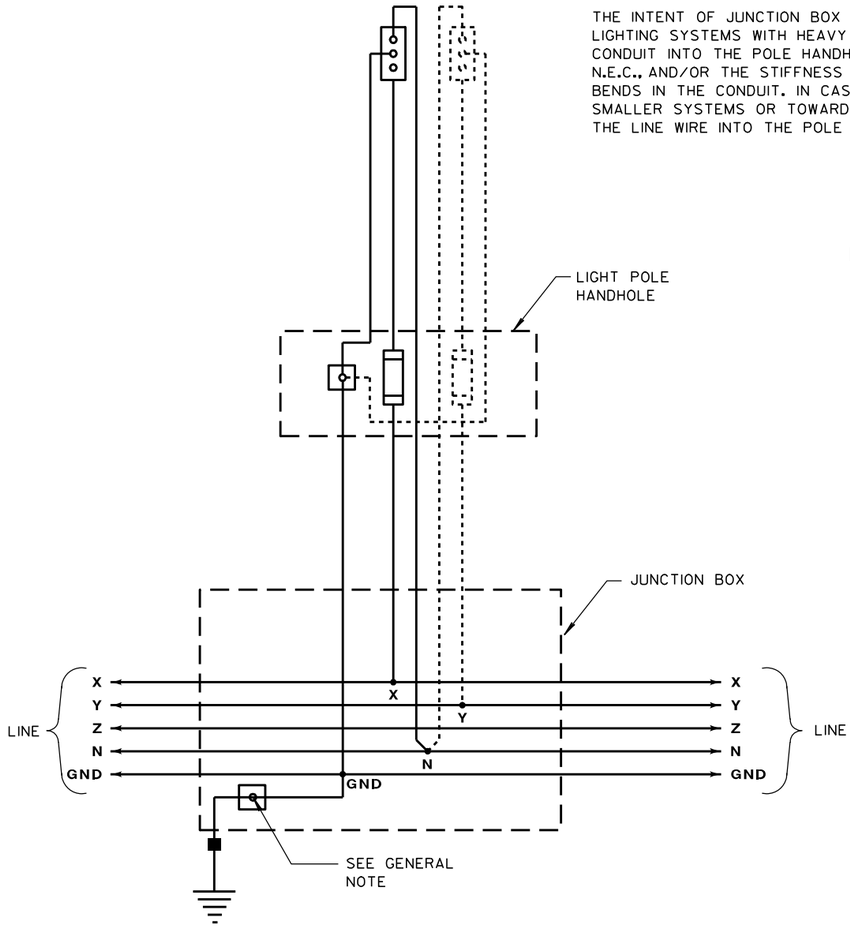
S.D.D. 10 A 8-2

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	UNFUSED LUMINAIRE
	SINGLE POLE (1P) FUSE ASSEMBLY
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
1-ϕ 240/480VAC 3 WIRE



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
3-ϕ 480Y/277VAC 4 WIRE

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

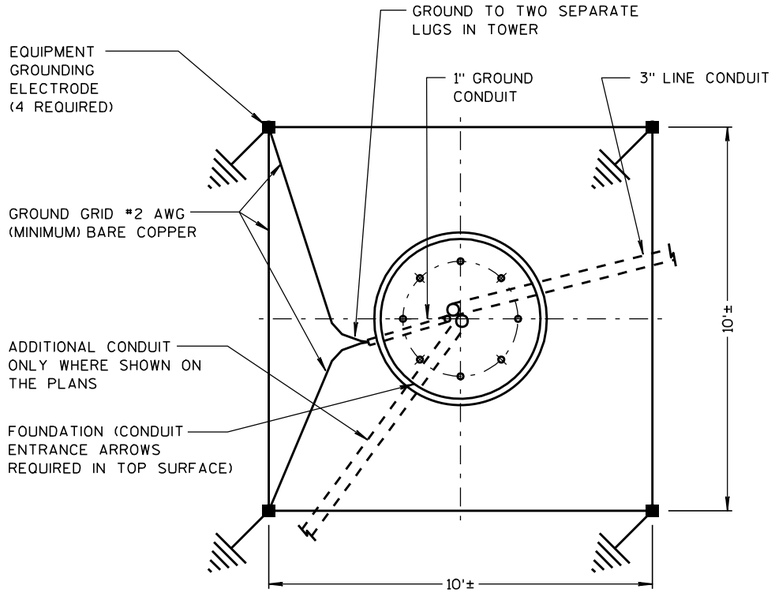
WIRE SIZE FROM THE JUNCTION BOX TO THE POLE HANDHOLE SHALL EQUAL THE SIZE OF THE POLE WIRE.

THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C., AND/OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE LINE WIRE IS LIGHTER, SUCH AS SMALLER SYSTEMS OR TOWARD THE FURTHEST END OF A LARGER SYSTEM, PULL THE LINE WIRE INTO THE POLE HANDHOLE FOR SPLICING.

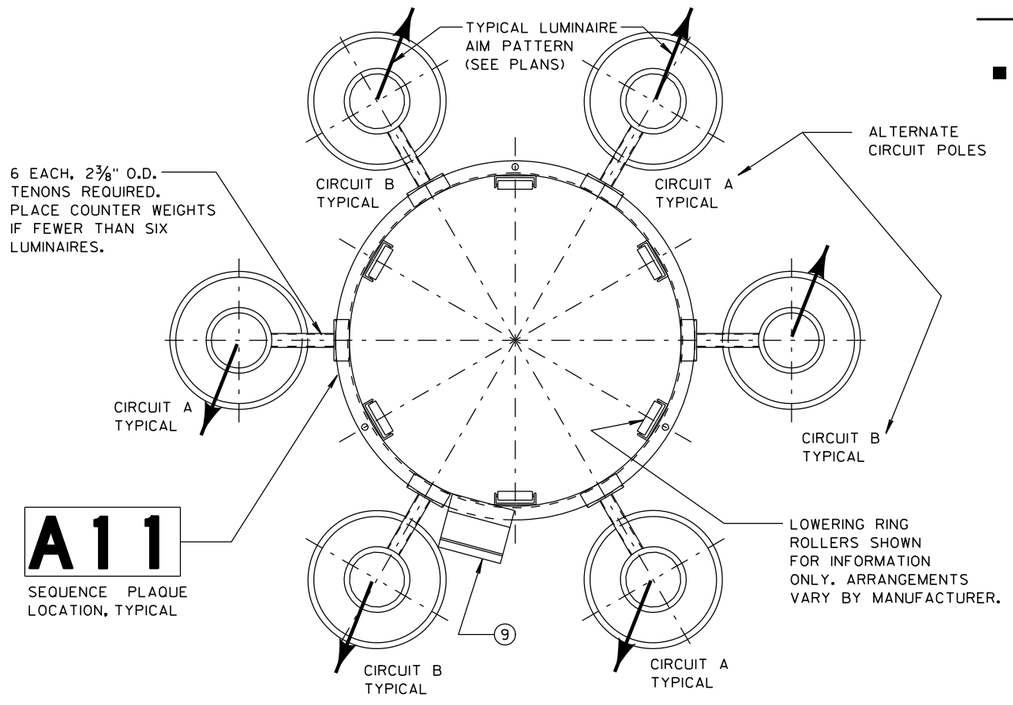
HANDHOLE FUSE SCHEDULES

LINE VOLTAGE ϕ-GROUND	BALLAST WATTAGE 150-200 W	BALLAST WATTAGE 250-400 W
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

ELECTRICAL DETAILS MEDIAN MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 10/25/2010 DATE /S/ John Corbin STATE ELECTRICAL ENGI 527 HWYS FHWA



EQUIPMENT GROUNDING GRID AND FOUNDATION ELECTRICAL DETAILS



LOWERING RING OPTICS PLAN

1-φ CASE SHOWN; 3-φ CASE SIMILAR

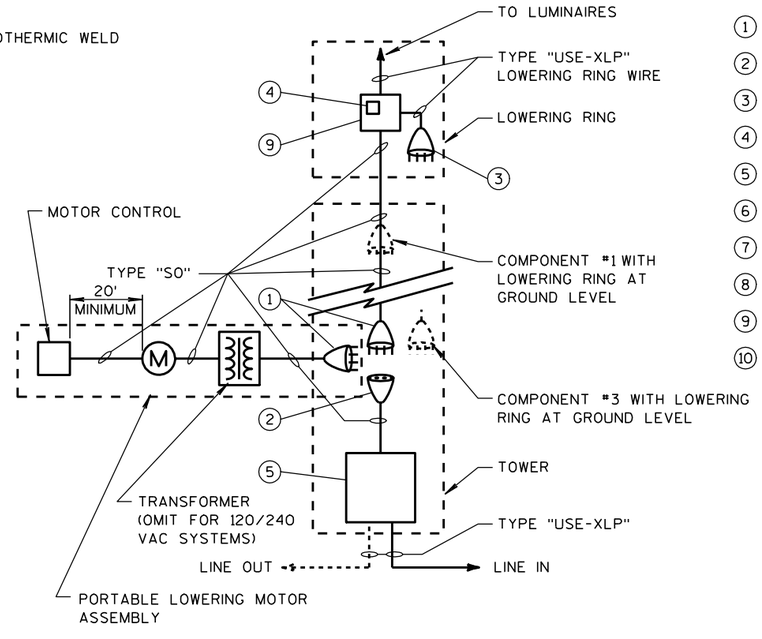
OVER CURRENT AND POWER CORD SCHEDULE

LINE VOLTAGE	HAND HOLE BREAKERS	INDIVIDUAL LUMINAIRE FUSES	POWER CORD	PRONGS ON LOAD BREAK DISCONNECT
1-φ 120/240VAC: 3 WIRE	2-30A, 1P, 277VAC	20A	10-3 + GND "SO"	A,B,N,GND
1-φ 240/480VAC: 3 WIRE	2-30A, 1P, 277VAC	10A	10-3 + GND "SO"	A,B,N,GND
3-φ 480Y/277VAC: 4 WIRE	3-30A, 1P, 277VAC	10A	10-4 + GND "SO"	X,Y,Z,N,GND
3-φ 208Y/120VAC: 4 WIRE	3-30A, 1P, 277VAC	20A	10-4 + GND "SO"	X,Y,Z,N,GND
1-φ 480VAC: 2 WIRE	1-20A, 2P, 600VAC	5A	10-3 + GND "SO"	A,B,N,GND

LEGEND

- HANDHOLE GROUND LUG
- CIRCUIT BREAKER 1P
- SURGE ARRESTOR
- FUSED LUMINAIRE
- EQUIPMENT GROUNDING ELECTRODE
- TERMINAL
- SPLICE
- CONDUCTOR
- EXOTHERMIC WELD

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
AIC	AMPERE INTERUPTING CAPACITY



ONE LINE DIAGRAM

ANY LINE VOLTAGE PER OVER CURRENT AND POWER CORD SCHEDULE

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

IN CASES WHERE THE PLANS SHOW LINE IN/LINE OUT DISTRIBUTION SYSTEMS, FURNISH FEED-THROUGH LUGS IN THE CIRCUIT BREAKER ENCLOSURE.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

FIELD RECODING OF UNGROUNDED CONDUCTORS IN TYPE "SO" CABLE MAY BE REQUIRED TO CONFORM TO SYSTEM COLOR CODING AS SHOWN IN THE PLANS.

CIRCUIT BREAKERS SHALL BE MINIMUM 14 kAIC AT THE VOLTAGE SHOWN.

LOADBREAK DISCONNECTS SHALL BE MELTRIC TYPE "DR", 30 AMP, 600 VOLT. DO NOT SUBSTITUTE. FURNISH "FDP" FINGER/PALM DRAW PLATES (APPLIES TO THE PLUG AND RECEPTACLE ONLY, NOT TO THE APPLIANCE INLET). FURNISH "LP" MOISTURE PROTECTION (APPLIES TO THE PLUG ONLY, NOT TO THE RECEPTACLE OR THE APPLIANCE INLET).

SURGE ARRESTORS SHALL BE 650 VAC, 2P OR 3P AS REQUIRED.

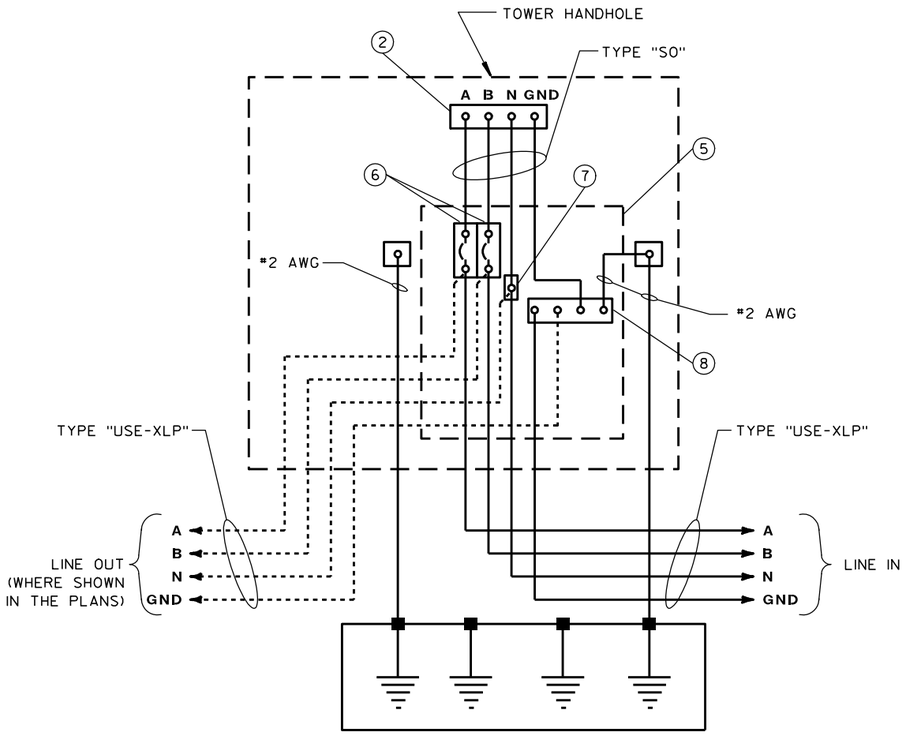
CIRCUIT BREAKER ENCLOSURES SHALL BE NEMA 1, 100 AMP, 600 VOLT, 2P OR 3P AS REQUIRED, SURFACE MOUNT. IN ALL SYSTEMS, FURNISH A MINIMUM 4-TERMINAL GROUND BUS. IN ISOLATED NEUTRAL SYSTEMS, ADDITIONALLY FURNISH A MINIMUM 1-TERMINAL NEUTRAL BUS. BUSSES SHALL BE RATED FOR NO. 10 AWG THROUGH NO. 2 AWG CU.

1. LOADBREAK DISCONNECT - MALE PLUG
2. LOADBREAK DISCONNECT - FEMALE RECEPTACLE
3. LOADBREAK DISCONNECT - MALE APPLIANCE INLET
4. SURGE ARRESTOR - 2P OR 3P AS REQUIRED
5. CIRCUIT BREAKER ENCLOSURE
6. CIRCUIT BREAKER
7. CIRCUIT BREAKER ENCLOSURE NEUTRAL BUS
8. CIRCUIT BREAKER ENCLOSURE EQUIPMENT GROUNDING BUS
9. LOWERING RING JUNCTION BOX (WEEP HOLE REQUIRED)
10. TERMINAL STRIP

ELECTRICAL DETAILS
HIGH MAST LIGHTING

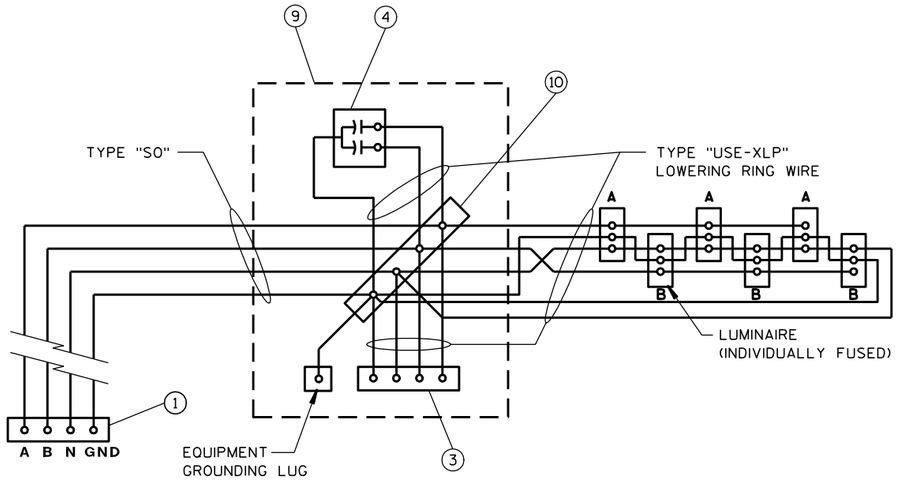
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 10 A 14-2a



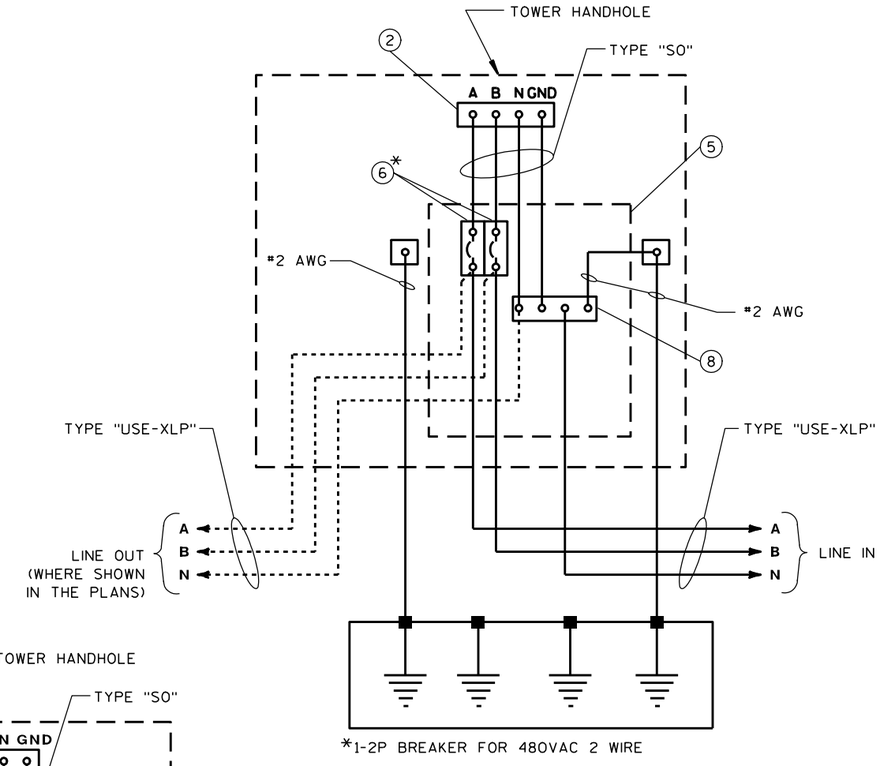
TYPICAL WIRING DIAGRAM-HANDHOLE

ISOLATED NEUTRAL SYSTEM
1-ϕ 120/240VAC OR 240/480VAC 3 WIRE



LOWERING RING JUNCTION BOX WIRING DIAGRAM

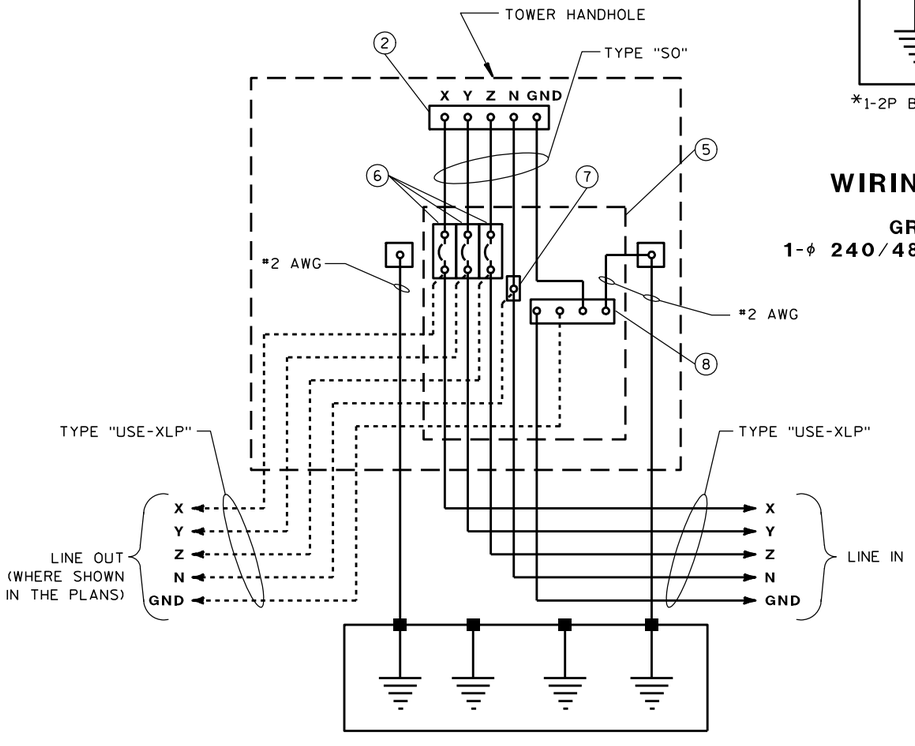
TYPICAL 1-ϕ CASE SHOWN; 3-ϕ CASE SIMILAR



*1-2P BREAKER FOR 480VAC 2 WIRE

TYPICAL WIRING DIAGRAM-HANDHOLE

GROUNDED NEUTRAL SYSTEM
1-ϕ 240/480VAC 3 WIRE OR 480VAC 2 WIRE



TYPICAL WIRING DIAGRAM-HANDHOLE

ISOLATED NEUTRAL SYSTEM
3-ϕ 480Y/277VAC 4 WIRE
OR 3-ϕ 208Y/120VAC 4 WIRE

ELECTRICAL DETAILS
HIGH MAST LIGHTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

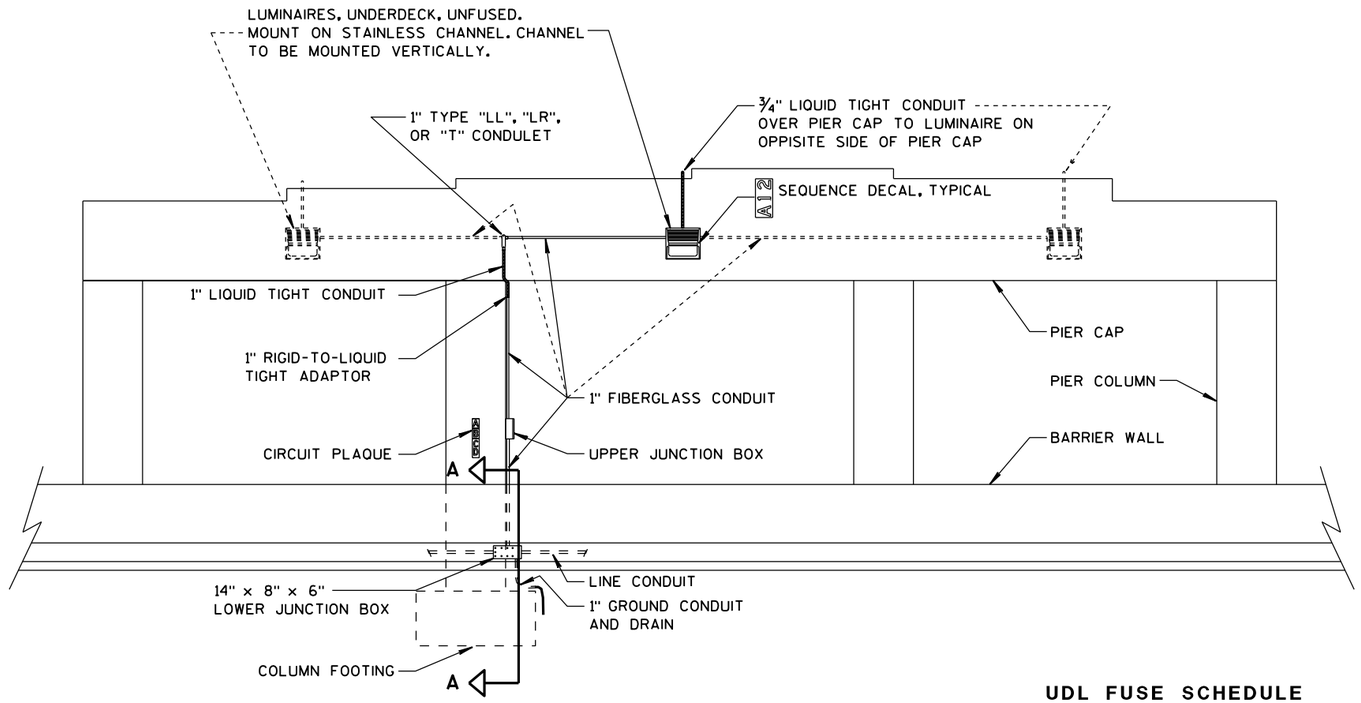
APPROVED
10/25/2010 DATE
/S/ John Corbin
STATE ELECTRICAL ENGI 529 HWYS
FHWA

6

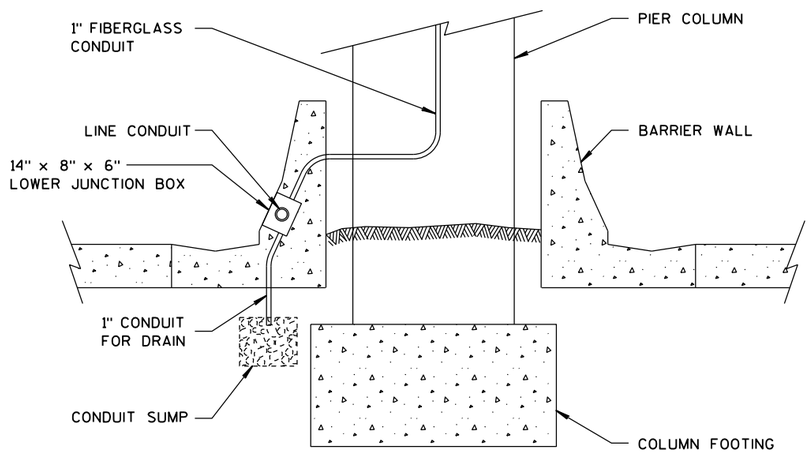
S.D.D. 10 A 14-2b

6

S.D.D. 10 A 14-2b



TYPICAL UNDERDECK LIGHTING INSTALLATION



SECTION "A-A"

UDL FUSE SCHEDULE

LINE VOLTAGE ϕ-GROUND	TOP JUNCTION BOX FUSES
120VAC	5 A
208VAC	5 A
240VAC	5 A
480VAC	3 A

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING, SUBSTITUTING THE LOWER JUNCTION BOX FOR THE HANDHOLE SHOWN IN THAT DETAIL.

THE PLANS WILL SHOW WHICH CIRCUIT LEGS(S) ARE CONNECTED TO EACH INSTALLATION AND THE REQUIRED NUMBER OF LUMINAIRES.

THE UPPER JUNCTION BOX (FOR FUSE ASSEMBLIES) SHALL CONFORM TO THE APPLICABLE PROVISIONS OF SECTION 653.2.2 OF THE STANDARD SPECIFICATIONS; SHALL BE SUITABLE FOR SURFACE MOUNTING WITH EXTERNAL MOUNTING LUGS; AND SHALL HAVE A HINGED COVER, WING-NUT FASTENERS, AND PADLOCK HASP. ALL HARDWARE SHALL BE STAINLESS STEEL. FURNISH O-Z/GEDNEY YW-120603, SPRING CITY HC-12-06-04, CROUSE-HINDS WTB-120604, OR APPROVED EQUAL.

MEDIAN CONFIGURATIONS VARY; NOT ALL CASES CAN BE SHOWN IN THIS DETAIL.

WIRING FOR THE FIRST LUMINAIRE PAIR IS SHOWN IN SOLID LINES. WIRING FOR ADDITIONAL LUMINAIRE PAIRS, WHERE REQUIRED, IS SHOWN IN DOTTED LINES.

LEGEND

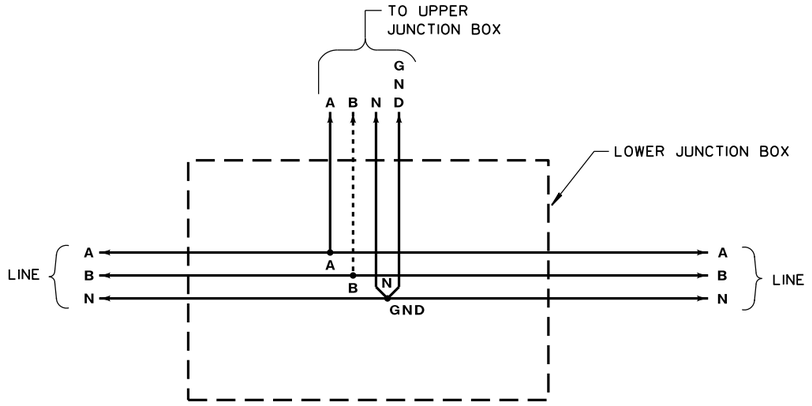
A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	UNFUSED LUMINAIRE
	SINGLE POLE (1P) FUSE ASSEMBLY
	TERMINAL
	SPLICE
	CONDUCTOR

ELECTRICAL DETAILS
UNDERDECK LIGHTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

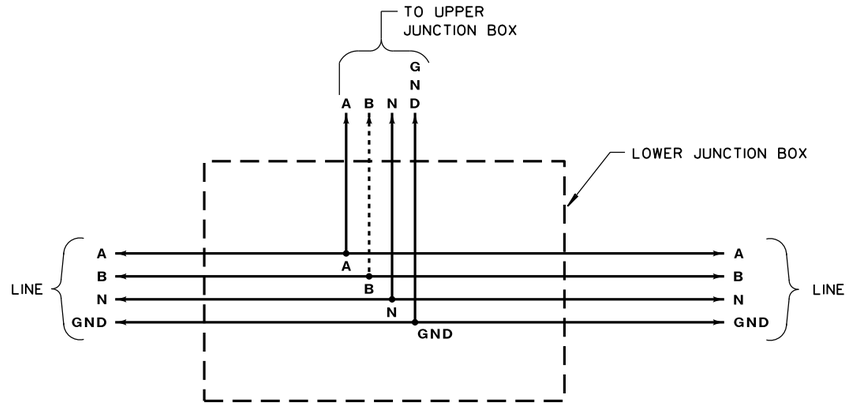
6

S.D.D. 10 A 15-4a



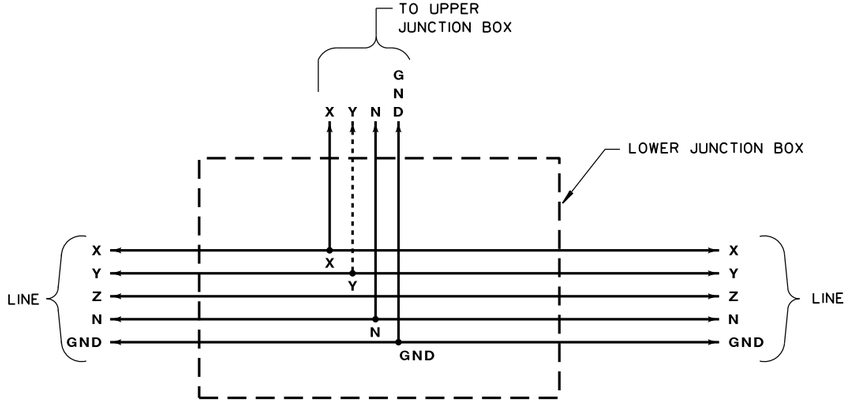
TYPICAL WIRING DIAGRAM, LOWER JUNCTION BOX

GROUNDED NEUTRAL SYSTEM
1-ϕ 240/480VAC OR 3 WIRE OR 480VAC 2 WIRE



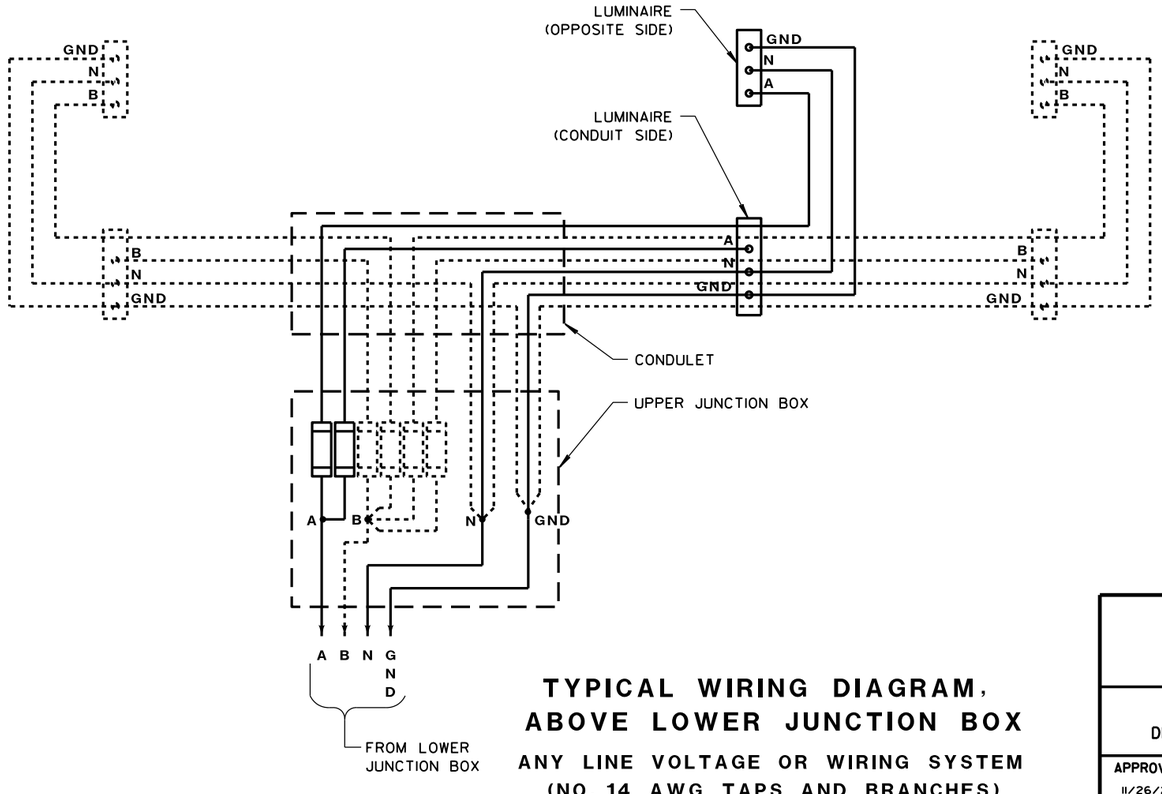
TYPICAL WIRING DIAGRAM, LOWER JUNCTION BOX

ISOLATED NEUTRAL SYSTEM
1-ϕ 120/240VAC OR 240/480VAC 3 WIRE



TYPICAL WIRING DIAGRAM, LOWER JUNCTION BOX

ISOLATED NEUTRAL SYSTEM
3-ϕ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM, ABOVE LOWER JUNCTION BOX

ANY LINE VOLTAGE OR WIRING SYSTEM
(NO. 14 AWG TAPS AND BRANCHES)

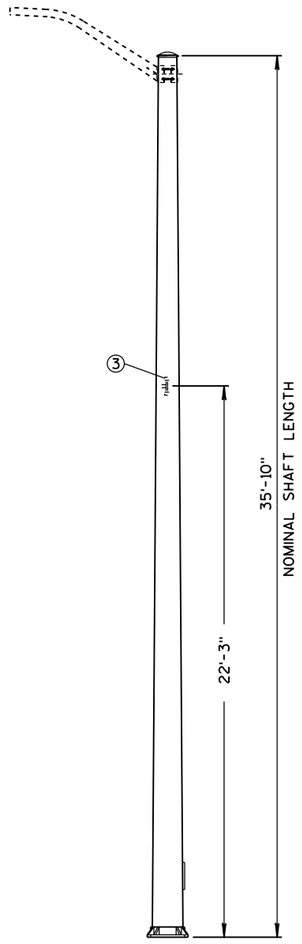
ELECTRICAL DETAILS
UNDERDECK LIGHTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

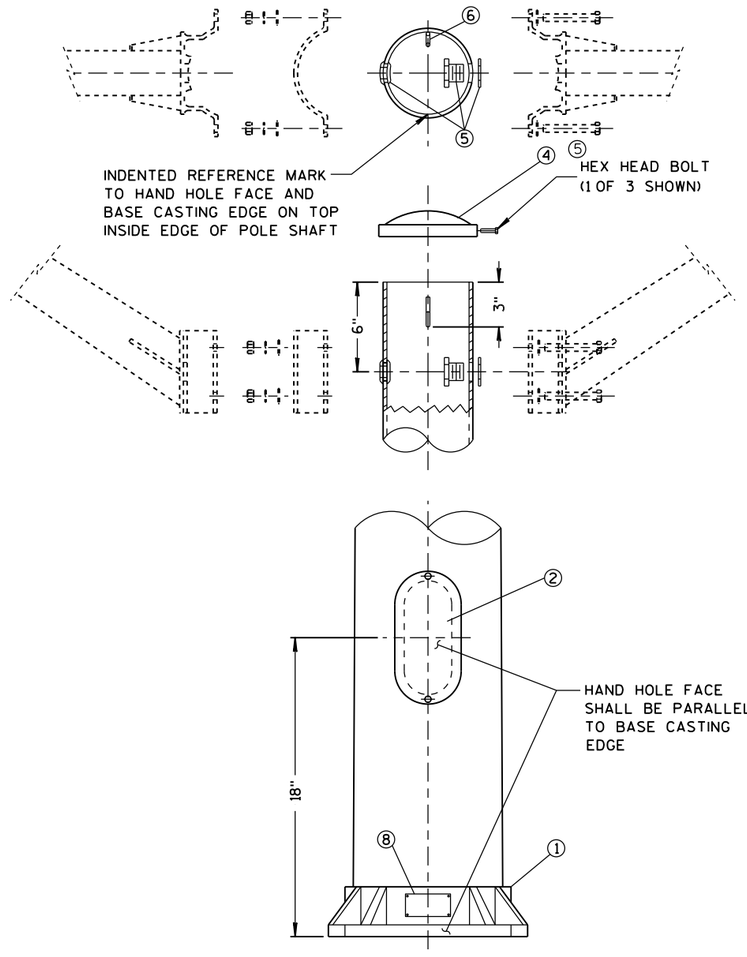
APPROVED
11/26/2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

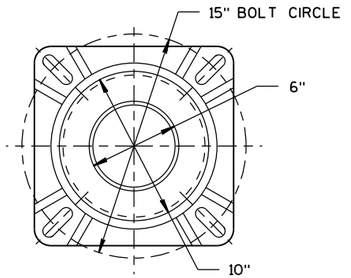
6

S.D.D. 10 A 15-4b

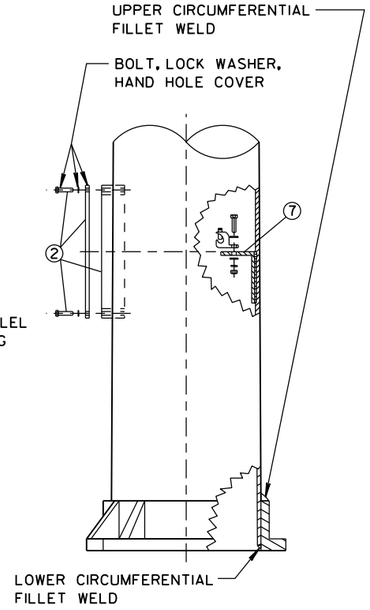


POLE, TYPE 7





(TOP VIEW)



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SLOTTED ANCHOR ROD HOLES FOR 1"-8 UNC ANCHOR RODS (4 EACH, 15" BOLT CIRCLE), SHALL BE PROVIDED IN BASE CASTING.

POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM.
EXCEPT THAT BASE CASTINGS SHALL BE CONSTRUCTED OF 356-T6 ALUMINUM.
THE SHAFT SHALL BE ROUND AND UNIFORMLY TAPERED FROM A 10" O.D. BUTT TO A 6" O.D. TOP.

HEAT TREATMENT OF WELDMENTS IN STRUCTURAL AREAS (e.g. BASE CASTING, HAND HOLE, BRACKET FOR GROUNDING LUG) REQUIRED.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

LUMINAIRE ARMS AND CLAMP ASSEMBLIES SHOWN FOR INFORMATION ONLY (PAID SEPARATELY).

LUMINAIRE LOADING FOR DESIGN CALCULATION SHALL BE 50 LBS. IN WEIGHT AND 1.5 SQ. FT. FOR E.P.A.

① SHOE BASE.

② 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY SECURED BY TWO (2) 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

HANDHOLE SHALL BE 90 DEGREES FROM LUMINAIRE ARMS OF TWIN LUMINAIRE POLES; 180 DEGREES FROM LUMINAIRE ARM OF SINGLE LUMINAIRE POLES; 0 DEGREES FROM LUMINAIRE ARM FOR STRUCTURE MOUNTED POLES.

③ INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

④ FURNISH AND INSTALL CAST OR METALLIC (ALUMINUM ALLOY) POLE CAP. FASTEN CAP WITH THREE 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

⑤ 1 3/8" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET), PER EACH REQUIRED LUMINAIRE ARM.

⑥ FACTORY-WELDED "J" HOOK FOR POLE WIRE STRAIN RELIEF.

⑦ FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE. (LUG AND HARDWARE PAID UNDER SEPARATE ITEMS; SHOWN FOR INFORMATION ONLY). PROVIDE HOLE IN BRACKET FOR 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

⑧ MANUFACTURER'S PLATE SHOWING WisDOT POLE TYPE, MANUFACTURER, AND DATE.

POLE TYPE (NOM. SHAFT LENGTH)	TYPICAL APPLICATION	ARM & LUMINAIRE LOADS (MAX.)	ADDITIONAL (MAX.) LOADS
TYPE 7 (35'-10")	ARTERIALS	TWIN ARMS UP TO 10 FT. (SINGLE MEMBER)	UP TO 20 SQ. FT. ON TRAFFIC SIGNS, MOUNTED AS HIGH AS 15 FT. TO TOP OF SIGN, PLUS 1-3 SECTION, 1-5 SECTION, AND 2-PED. TRAFFIC HEAD
	FREEWAY	SINGLE ARM, UP TO 20 FT. TRUSS TYPE	UP TO 20 SQ. FT. OF TRAFFIC SIGNS, MOUNTED AS HIGH AS 15 FT. TO TOP OF SIGN

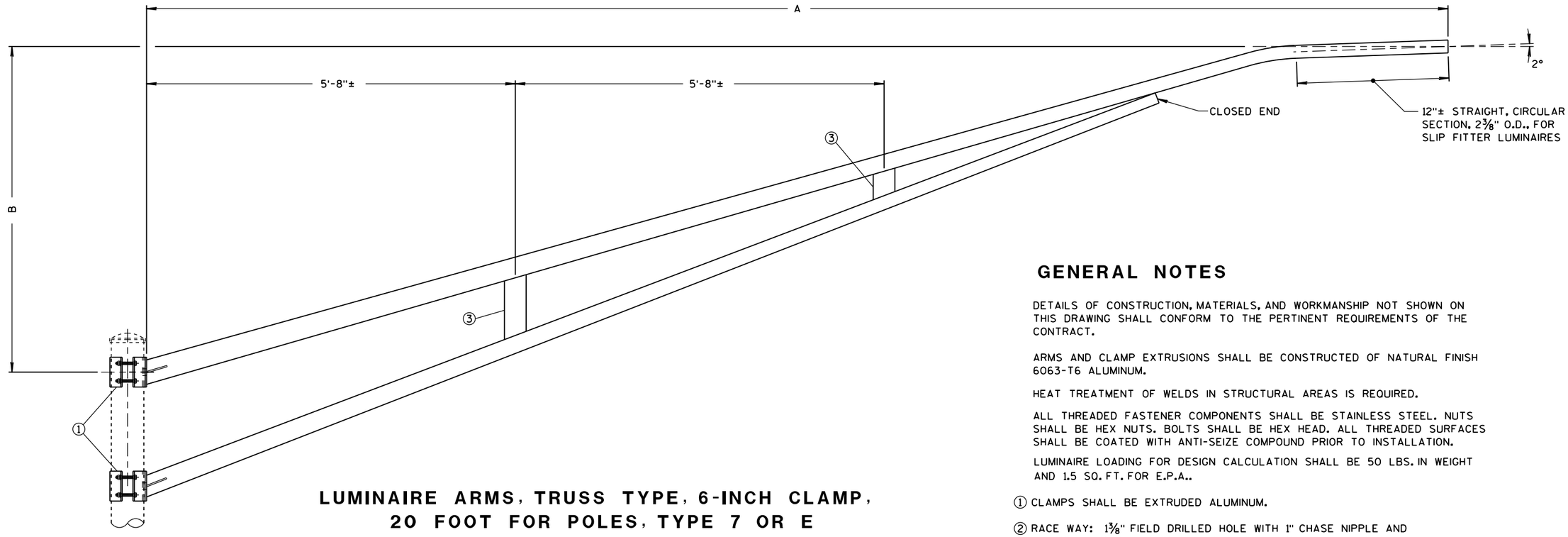
POLES, TYPE 7
ALUMINUM - 35'-10" SHAFT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 10 A 17-4a



LUMINAIRE ARMS, TRUSS TYPE, 6-INCH CLAMP, 20 FOOT FOR POLES, TYPE 7 OR E

UPPER AND LOWER TRUSS CHORD CLAMPS SIMILIAR

TYPE	DIM. A NOMINAL ARM LENGTH (FT)	DIM. B APPROX. RISE (FT)
TRUSS TYPE	20.0	5.0

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ARMS AND CLAMP EXTRUSIONS SHALL BE CONSTRUCTED OF NATURAL FINISH 6063-T6 ALUMINUM.

HEAT TREATMENT OF WELDS IN STRUCTURAL AREAS IS REQUIRED.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

LUMINAIRE LOADING FOR DESIGN CALCULATION SHALL BE 50 LBS. IN WEIGHT AND 1.5 SQ. FT. FOR E.P.A..

① CLAMPS SHALL BE EXTRUDED ALUMINUM.

② RACE WAY: 1⅜" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET) PER EACH REQUIRED LUMINAIRE ARM. PROVIDE 1½" HOLE IN CLAMP EXTRUSION TO CONTINUE RACEWAY. NOTE: NO RACEWAY ON LOWER TRUSS CORD CLAMP. FOR INFORMATION ONLY.

③ STIFFENER.

④ GUSSETS REQUIRED.

⑤ CLAMP BOLT ASSEMBLY (BOLT - ½"-13 UNC, 2 EACH - FLAT WASHER, LOCK WASHER, NUT) - 4 EACH PER CLAMP.

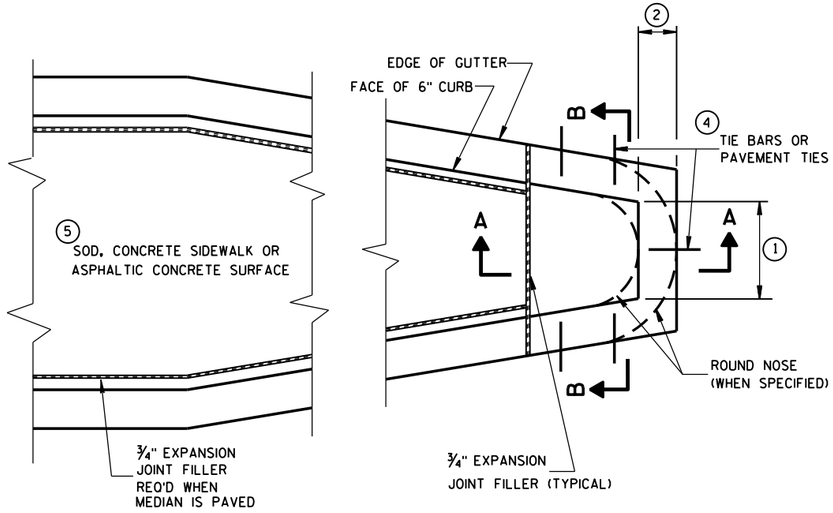
LUMINAIRE ARMS, TRUSS TYPE 6-INCH CLAMP

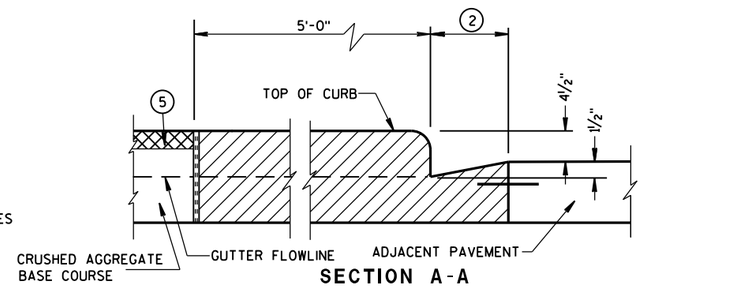
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

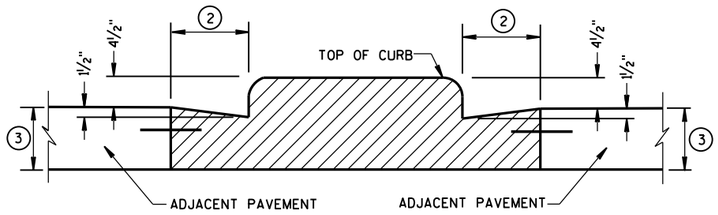
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 10 A 18-5b







CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

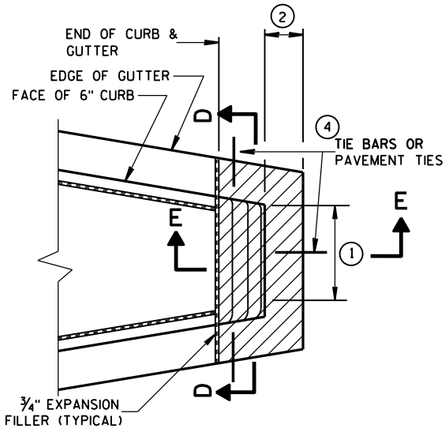
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

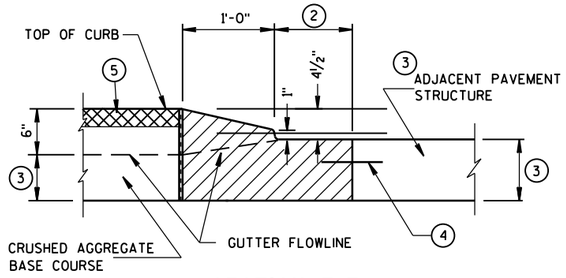
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

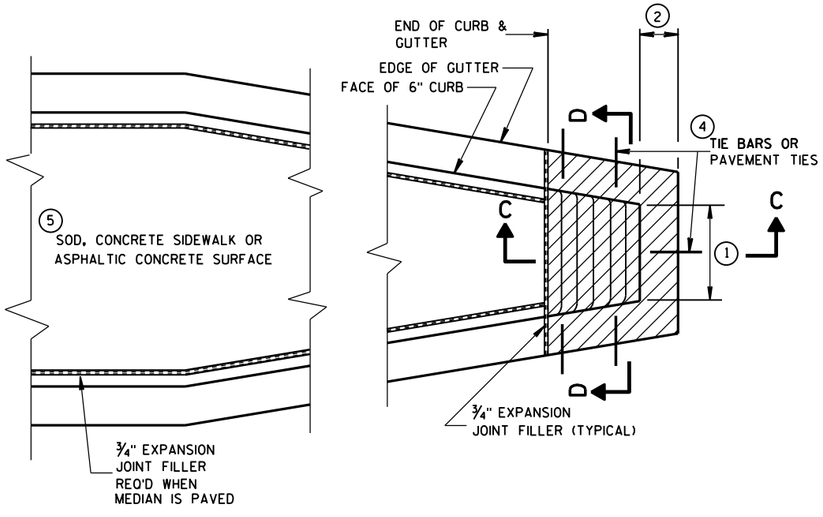
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



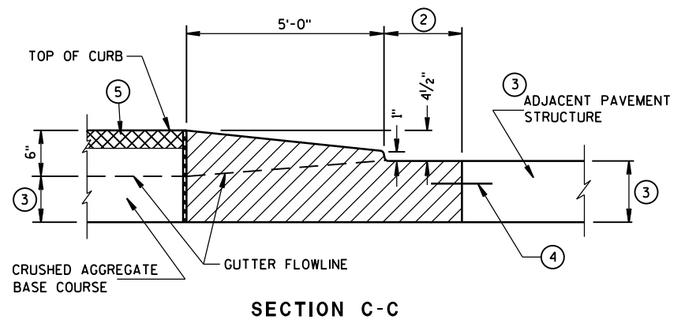


SECTION E-E

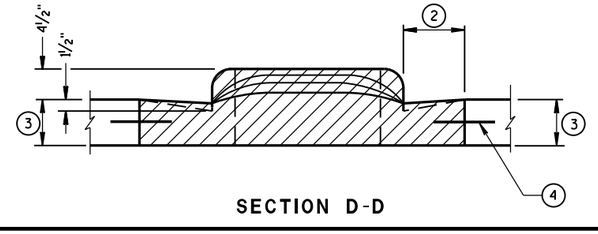
CONCRETE MEDIAN SLOPED NOSE TYPE 2



CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION C-C



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

534

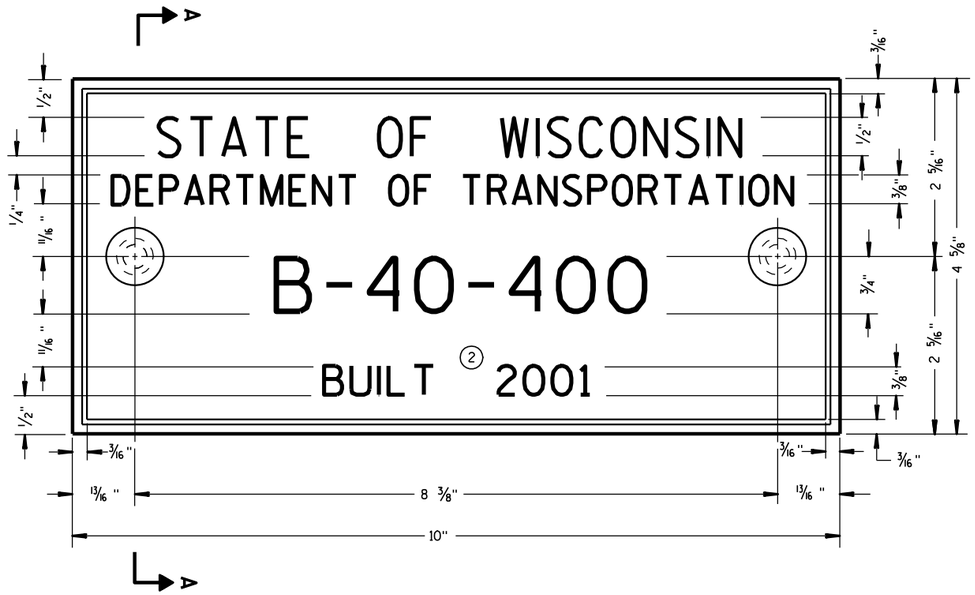
FHWA

6

S.D.D. 11 B 2-2

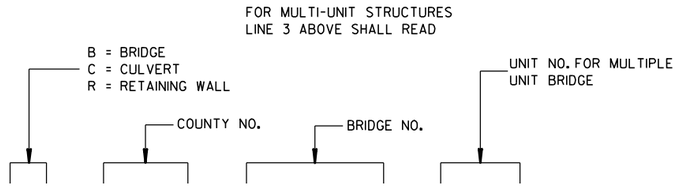
6

S.D.D. 11 B 2-2



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

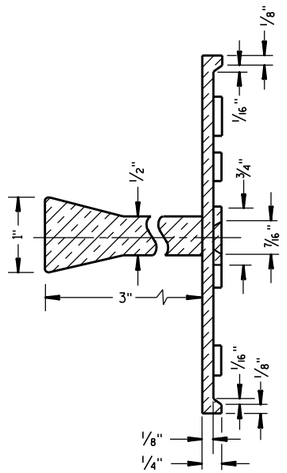
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

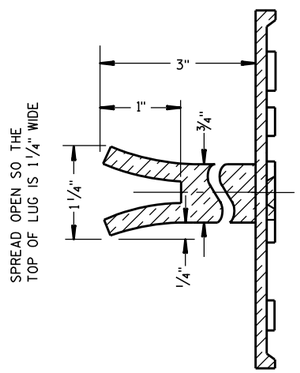
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

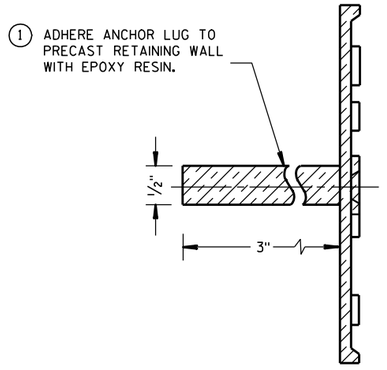
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP 535 ENGINEER

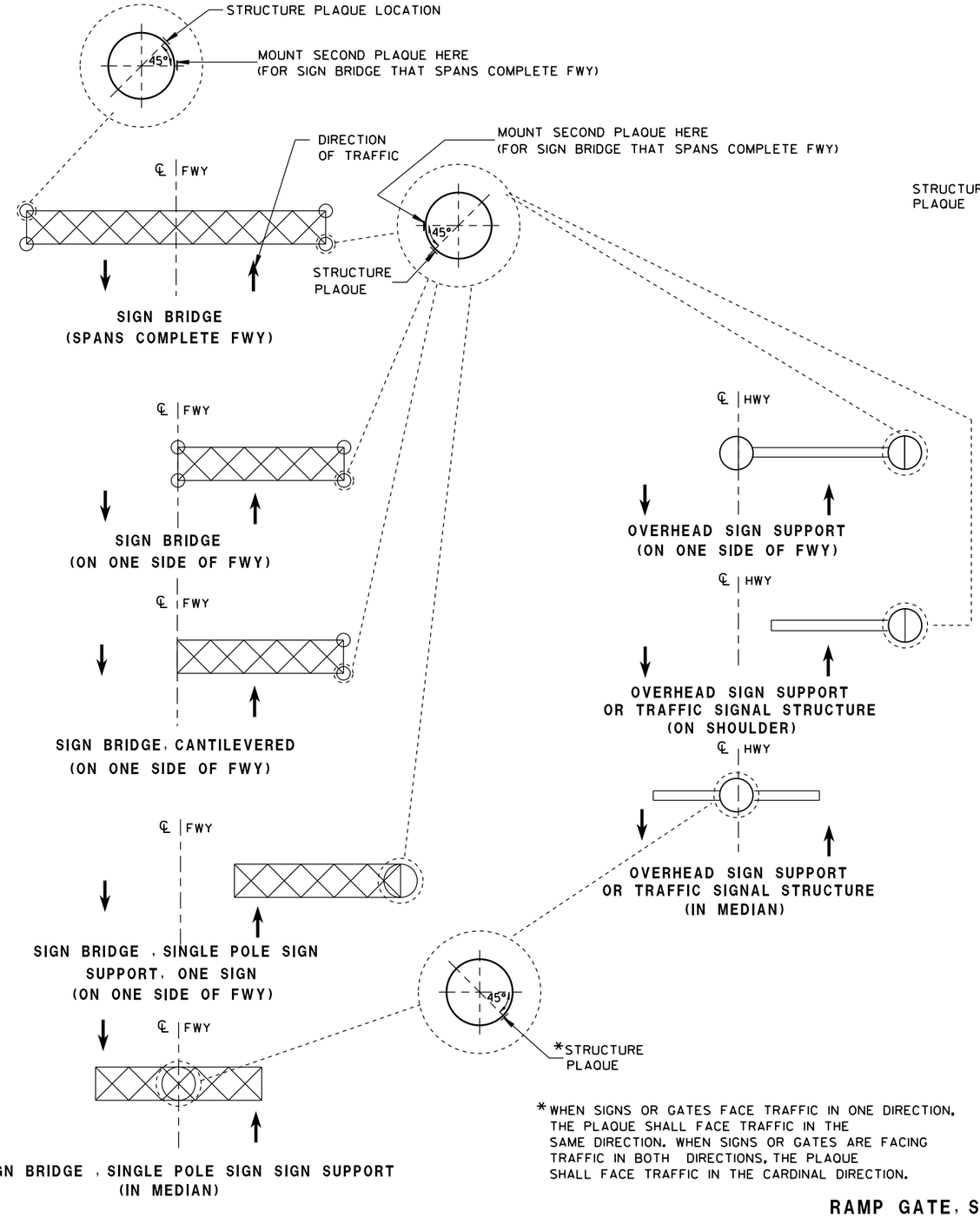
FHWA

6

S.D.D. 12 A 3-10

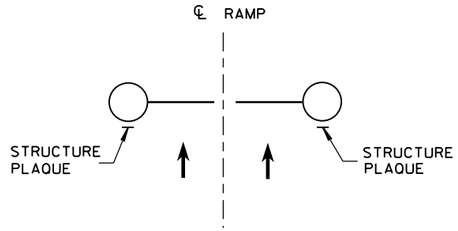
6

S.D.D. 12 A 3-10

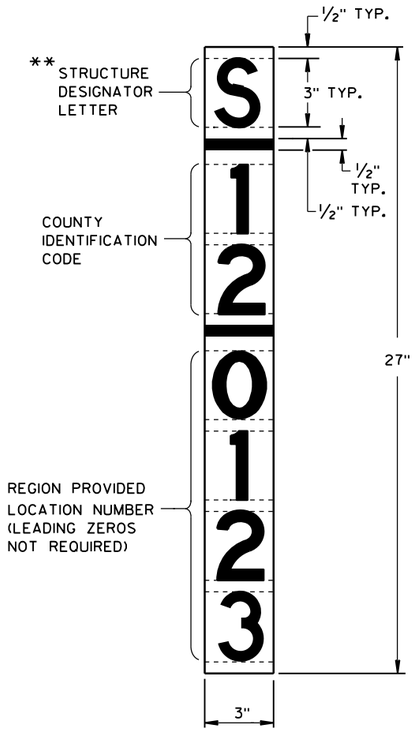


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



RAMP GATE
(ACROSS FWY ON-RAMP)



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

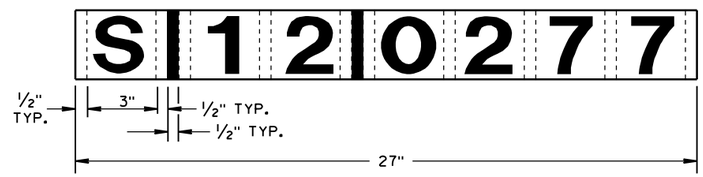
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

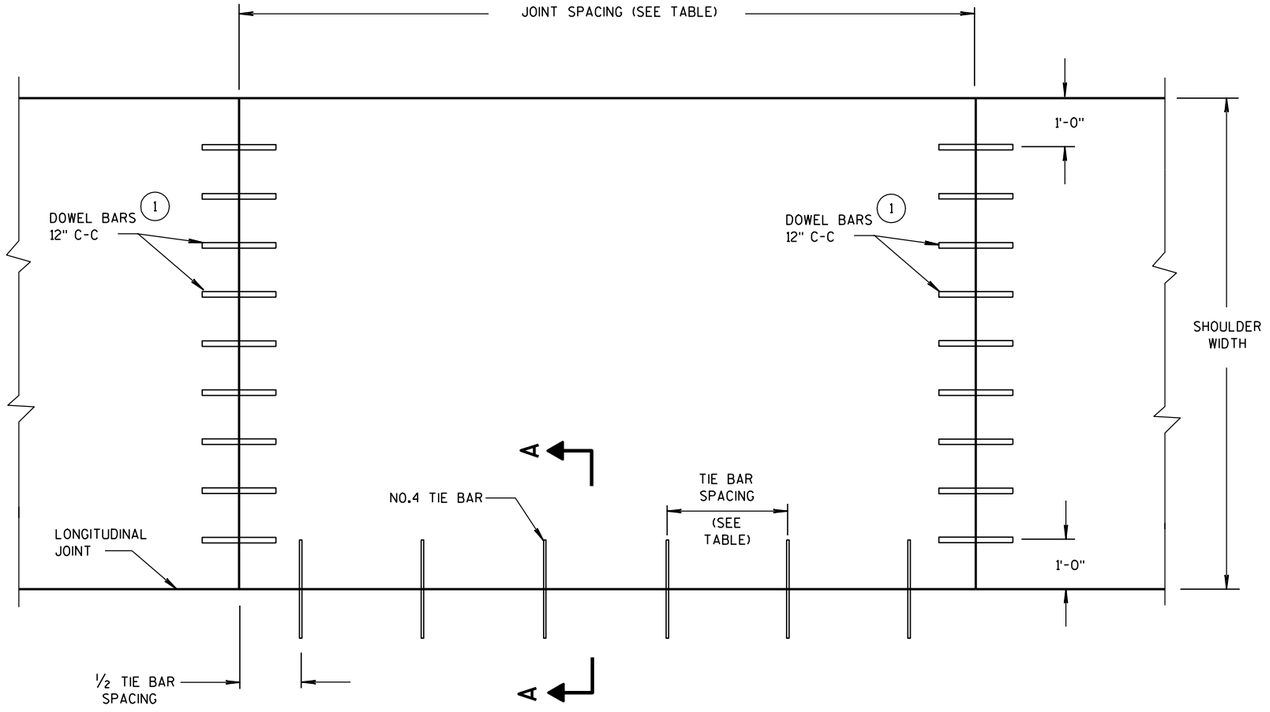
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 12 A 4-3

6

S.D.D. 12 A 4-3



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

PAVEMENT TYPE OF TRAFFIC LANES	TIE BAR SPACING	SHOULDER JOINT SPACING
NON-REINFORCED	30"	MATCH JOINT SPACING OF ADJACENT TRAFFIC LANE
CONTINUOUSLY REINFORCED	30"	15' FOR 6' TO 10' WIDE SHOULDERS
CONTINUOUSLY REINFORCED	36"	12' FOR 3' WIDE SHOULDERS

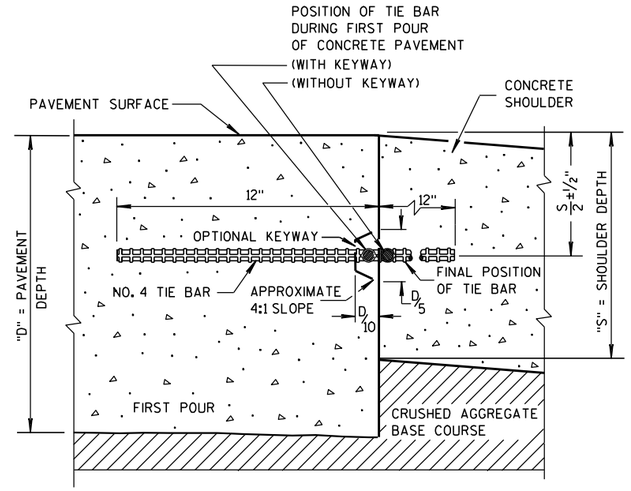
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

(1) **PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE**

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

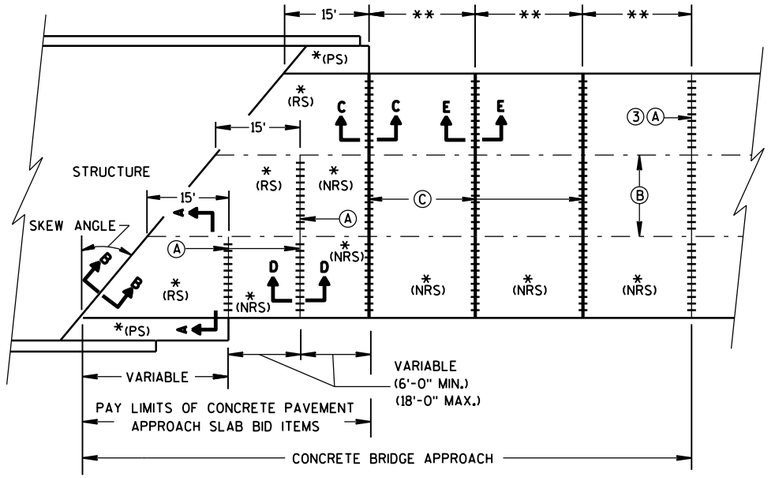
CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

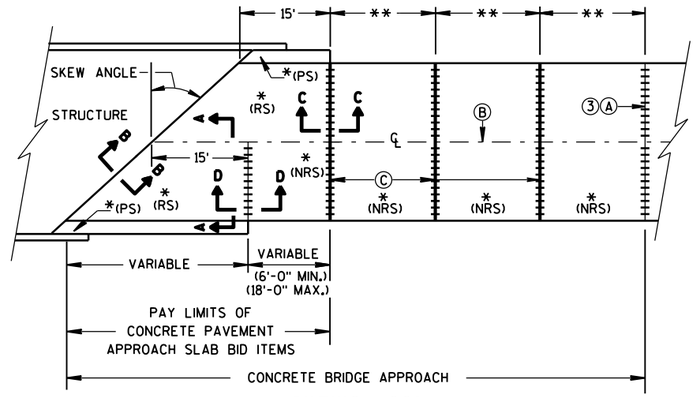
APPROVED
8/15/2011 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & D — ENGINEER
FHWA

6

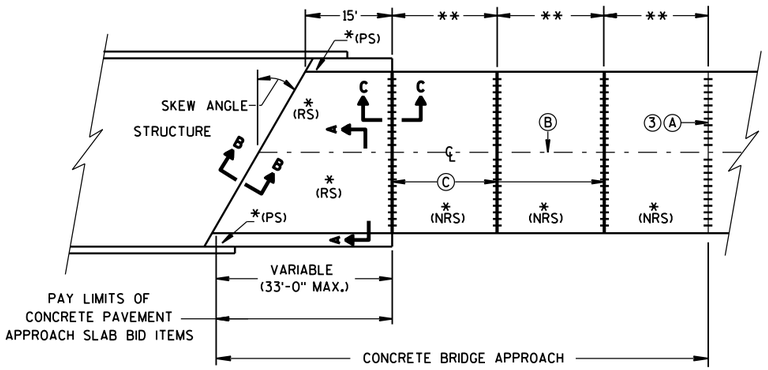
S.D.D. 13 A 3-5



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



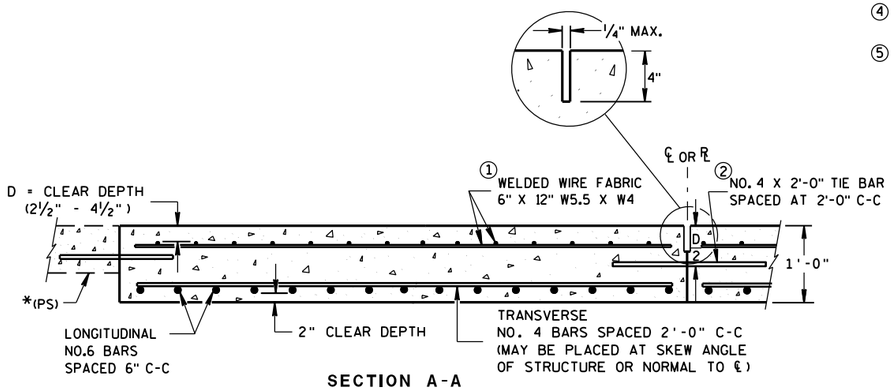
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

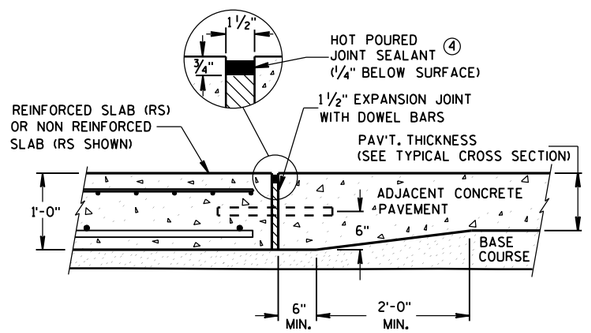
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN (SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

**STANDARD TRANSVERSE JOINT SPACING (SEE SDD 13C4, SDD 13C11, & SDD 13C13)
***STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11, & SDD 13C13)

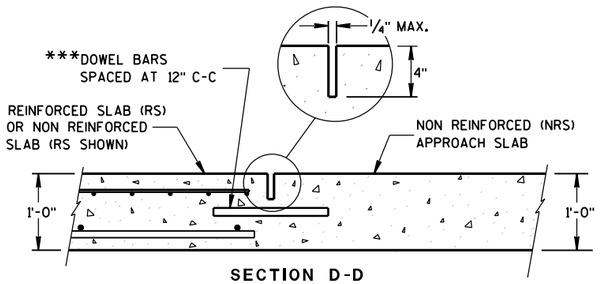
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) STANDARD LONGITUDINAL JOINT AND TIE BARS.
(C) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



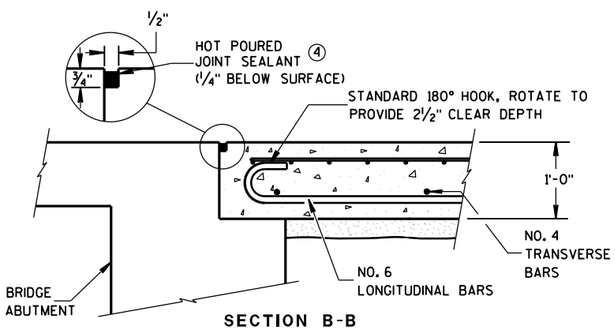
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

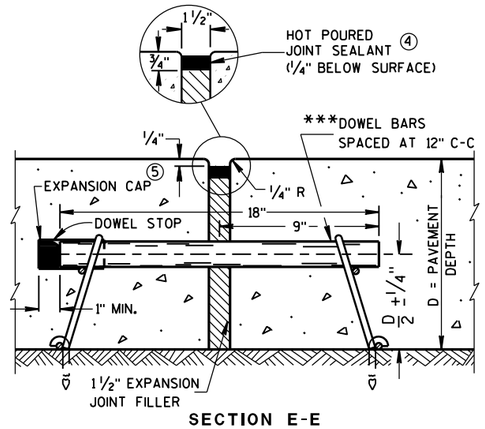
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

1. THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
2. THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
3. DO NOT DOWEL A CONTRACTION JOINT THAT ABUTS AN HMA PAVEMENT.
4. USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.
5. PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION E-E
EXPANSION JOINT

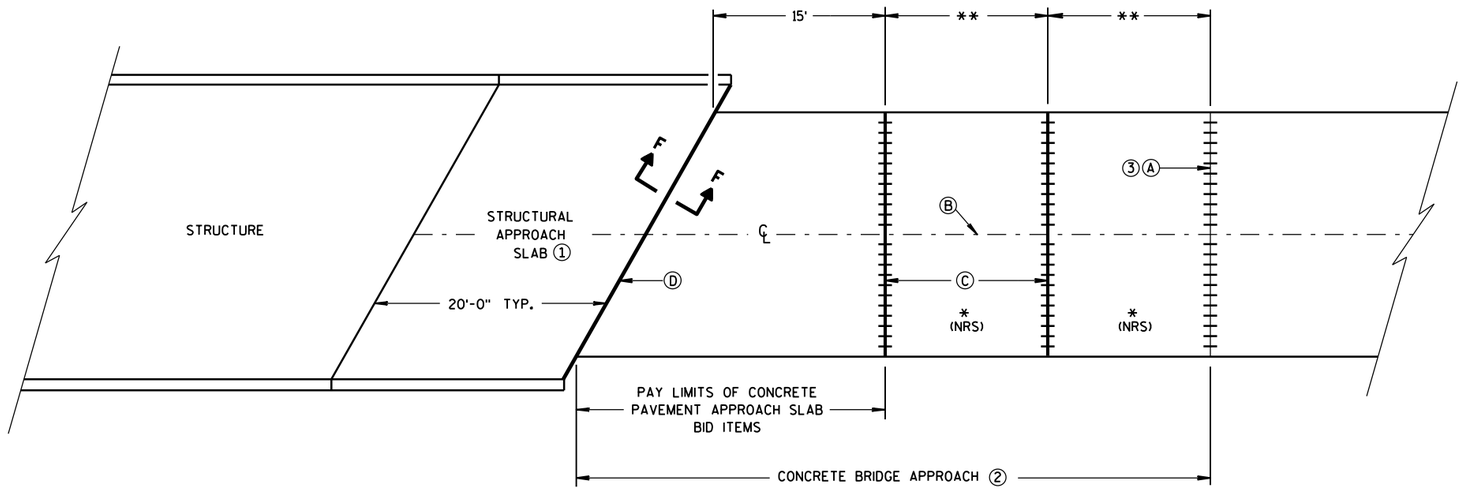
CONCRETE BRIDGE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2014 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DE
EER
FHWA

6

S.D.D. 13 B 2-7a



BRIDGE APPROACHES

GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE BRIDGE APPROACH.

① CONFORM TO APPLICABLE BRIDGE MANUAL STANDARD DRAWINGS FOR *STRUCTURAL APPROACH SLABS* (SEE CHAPTER 12 - ABUTMENTS).

② CONFORM TO SHEET (a) OF THIS SET FOR *CONCRETE BRIDGE APPROACH* DETAILS, WITH ONE EXCEPTION — WHEN CONSTRUCTING A *CONCRETE BRIDGE APPROACH* NEXT TO A *STRUCTURAL APPROACH SLAB*, AS SHOWN IN THE DETAIL DRAWING, THE *CONCRETE BRIDGE APPROACH* WILL ONLY HAVE TWO EXPANSION JOINTS; THE THIRD EXPANSION JOINT IS AT THE END OF THE *STRUCTURAL APPROACH SLAB*.

③ DO NOT DOWEL A CONTRACTION JOINT THAT ABUTS AN HMA PAVEMENT.

*(NRS) = NON-REINFORCED CONCRETE SLAB

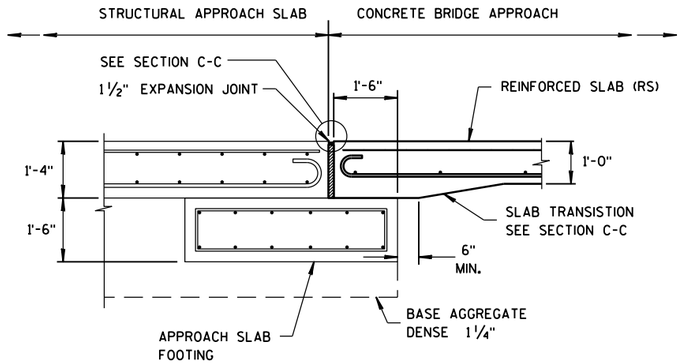
**STANDARD TRANSVERSE JOINT SPACING (SEE SDD 13C4, SDD 13C11, & SDD 13C13)

Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT AND TIE BARS.

Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄

Ⓓ 1½" EXPANSION JOINT (NO DOWELS)



SECTION F-F

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

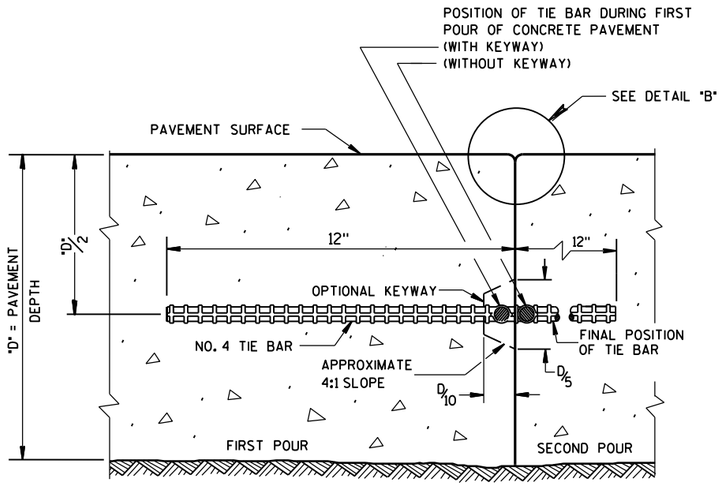
STRUCTURAL APPROACH SLAB AND CONCRETE BRIDGE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

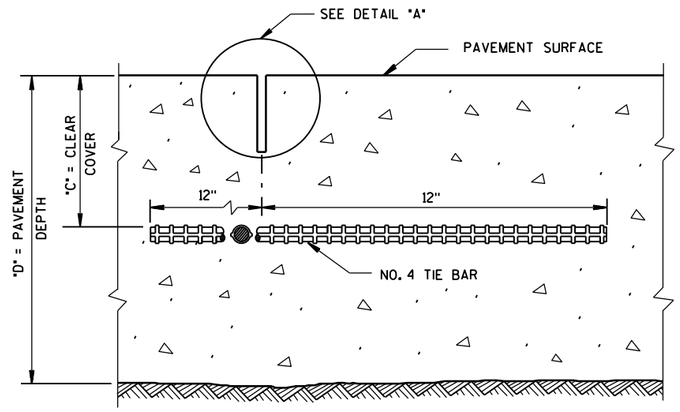
APPROVED
June, 2014 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DE
FHWA
EER

6

S.D.D. 13 B 2-7b



CONSTRUCTION JOINT



SAWED JOINT

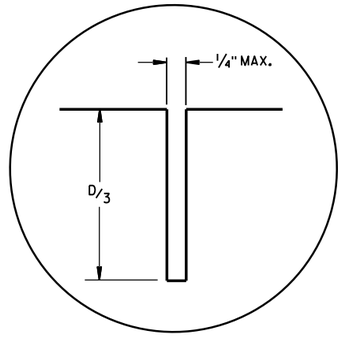
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

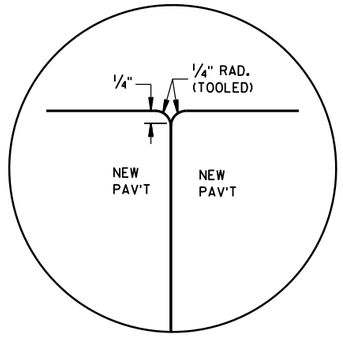
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

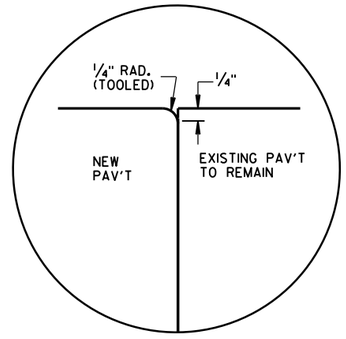
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



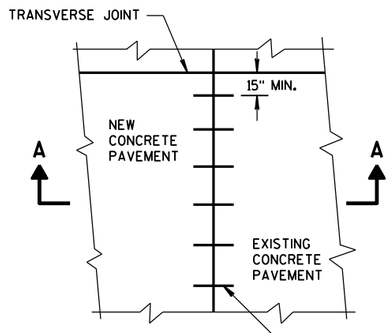
DETAIL "A"



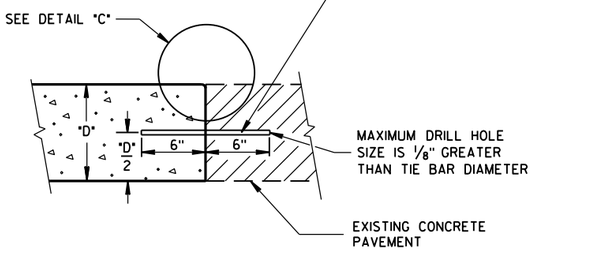
DETAIL "B"



DETAIL "C"



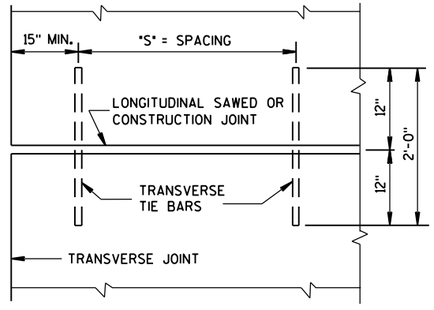
PLAN VIEW



SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/2014 — DATE

/S/ Deb Bischoff — PAVEMENT POLICY & DE ... NEER

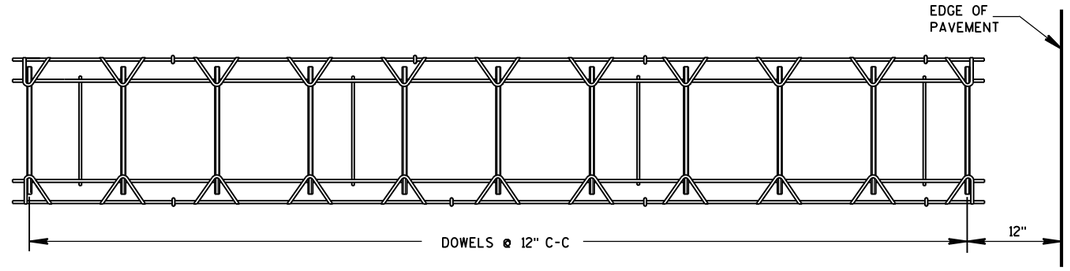
FHWA

6

S.D.D. 13 C 1-17

6

S.D.D. 13 C 1-17

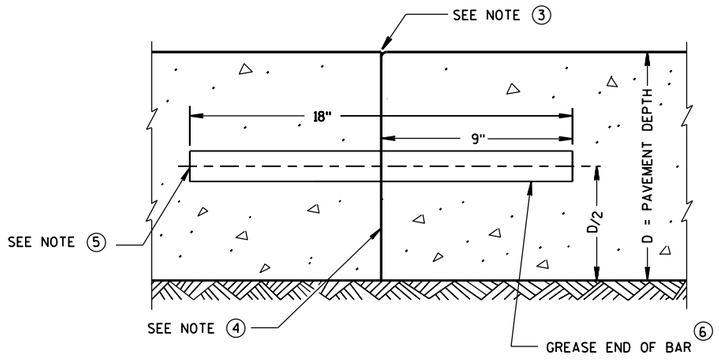


PLAN VIEW

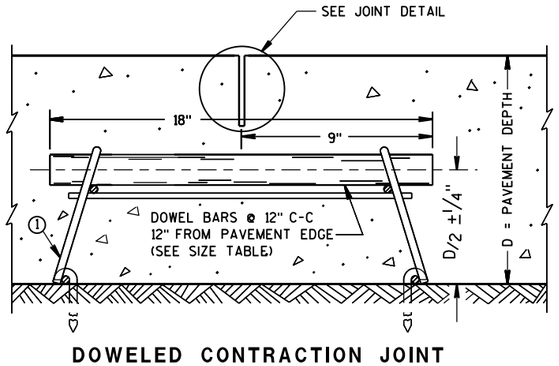


SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



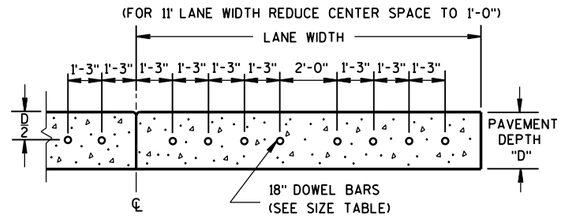
TRANSVERSE CONSTRUCTION JOINT



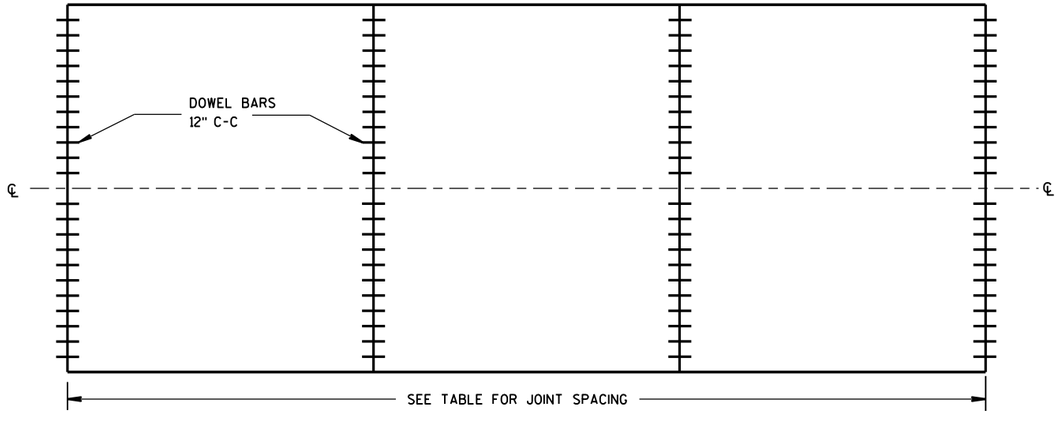
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① **OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.**

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

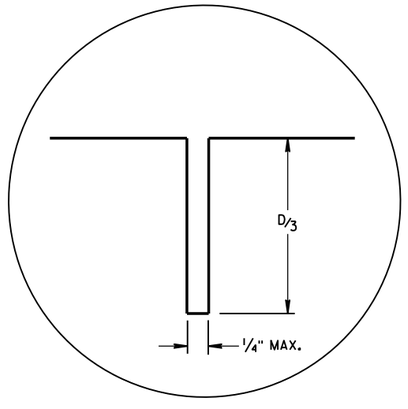
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



JOINT DETAIL

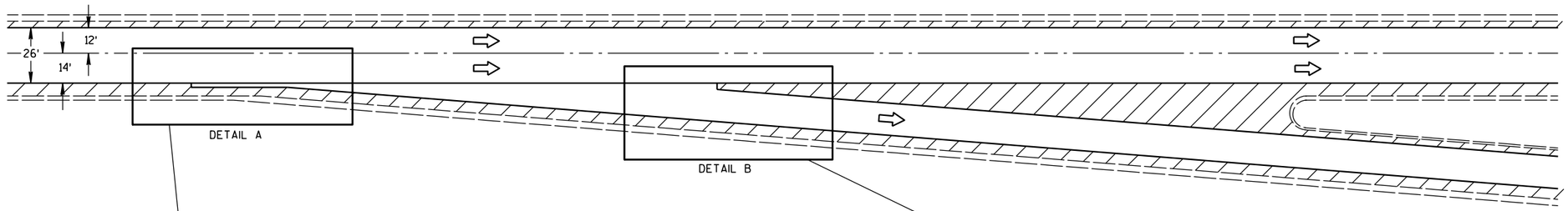
URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

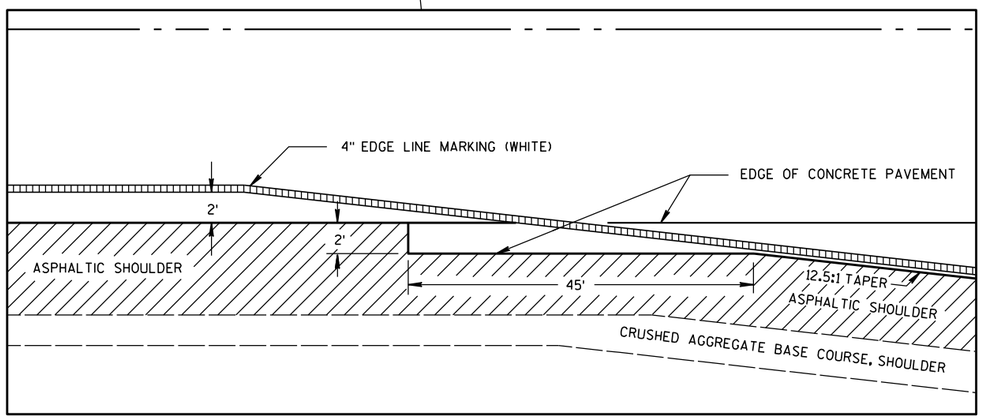
APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER
FHWA

6

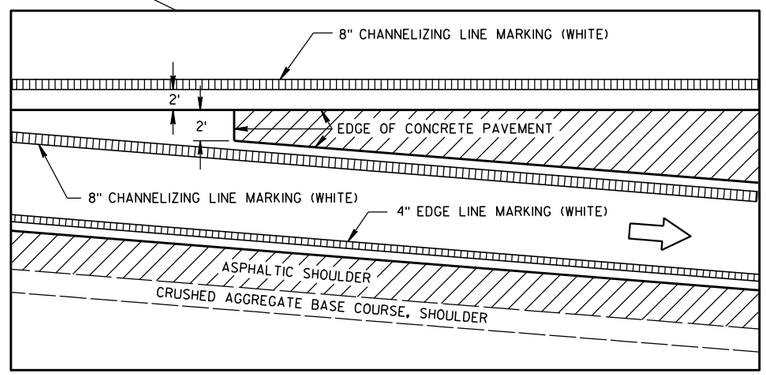
S.D.D. 13 C 13-8



EXIT RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI

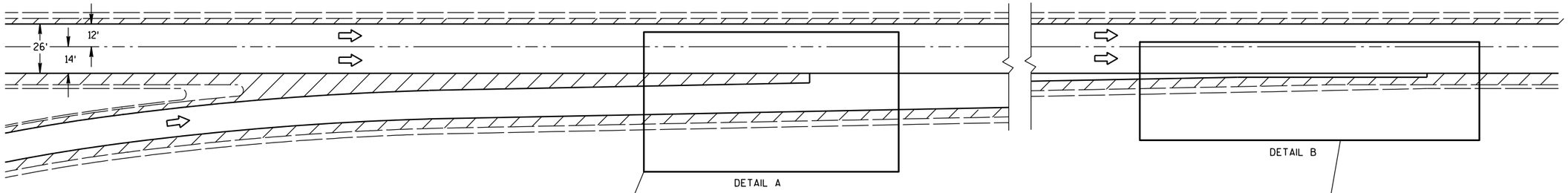
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

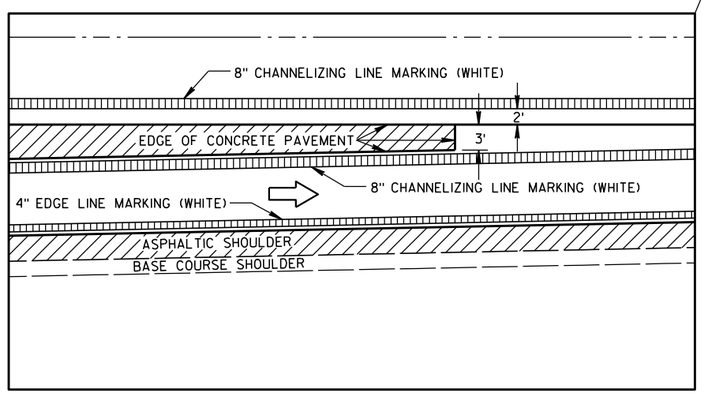
S.D.D. 13 C 17-1a

6

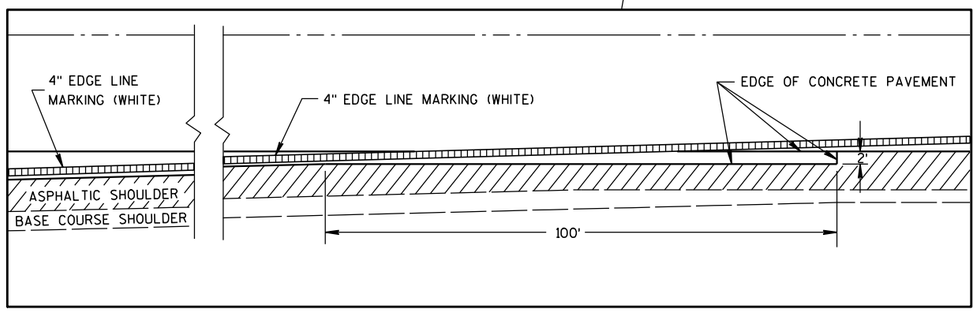
S.D.D. 13 C 17-1a



ENTRANCE RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

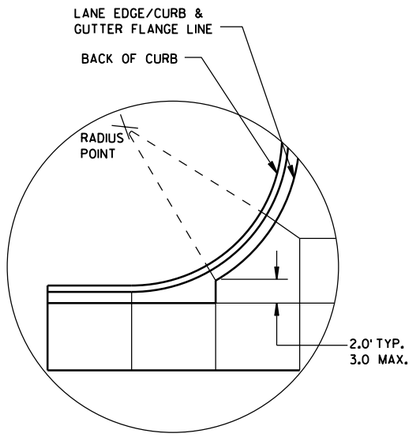
5/27/98
DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

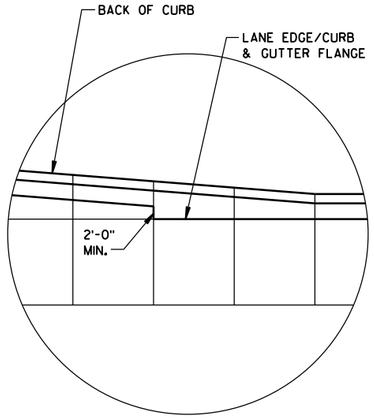
FHWA

6

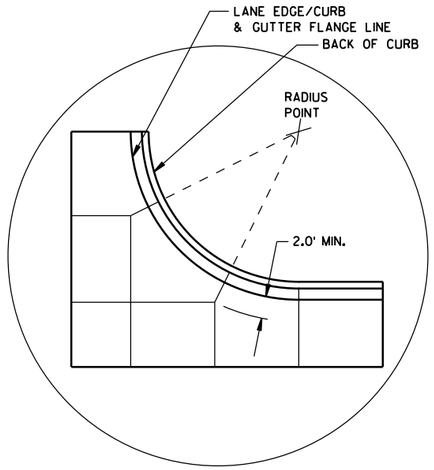
S.D.D. 13 C 17-1b



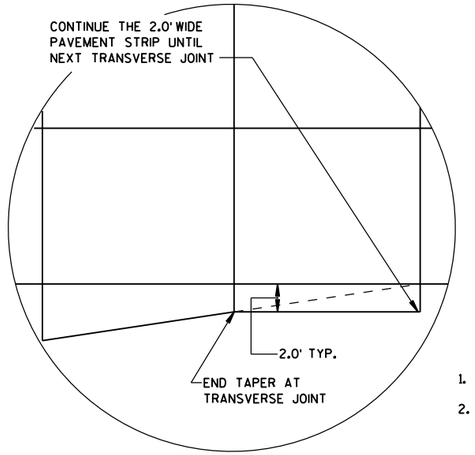
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

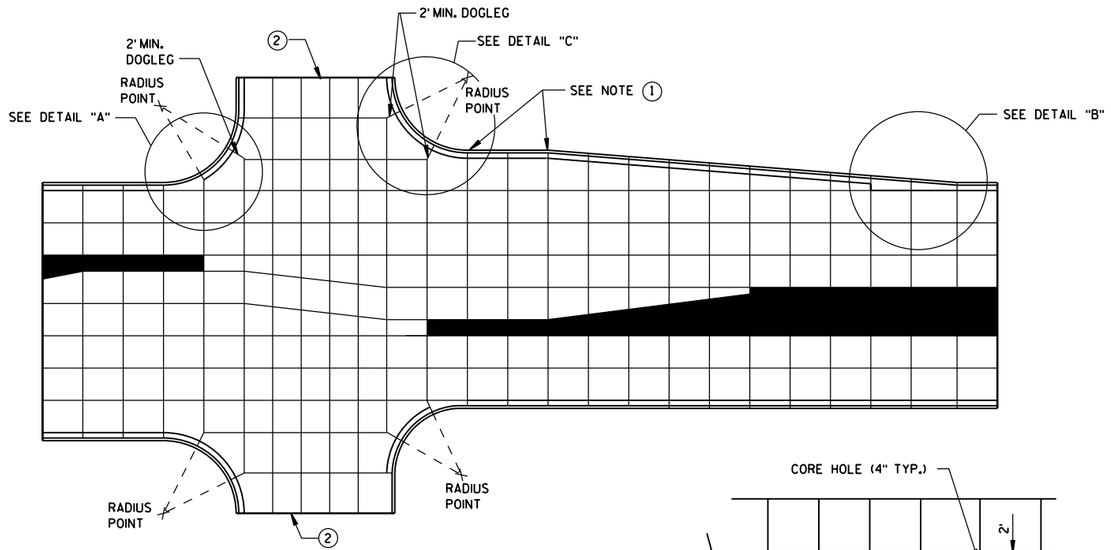
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.

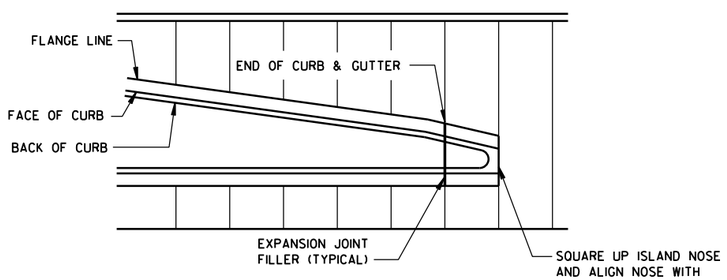


STANDARD INTERSECTION

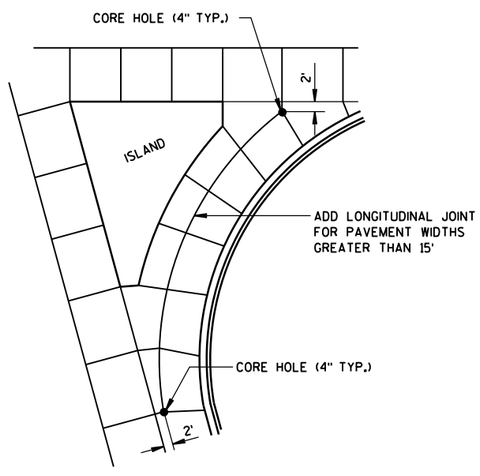
PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'

SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

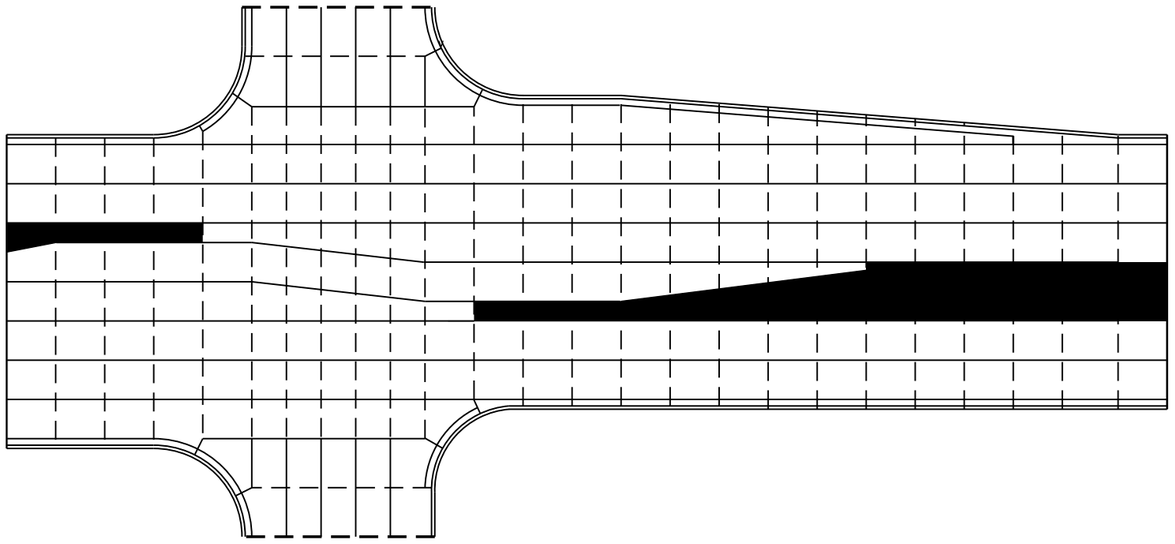
6
S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

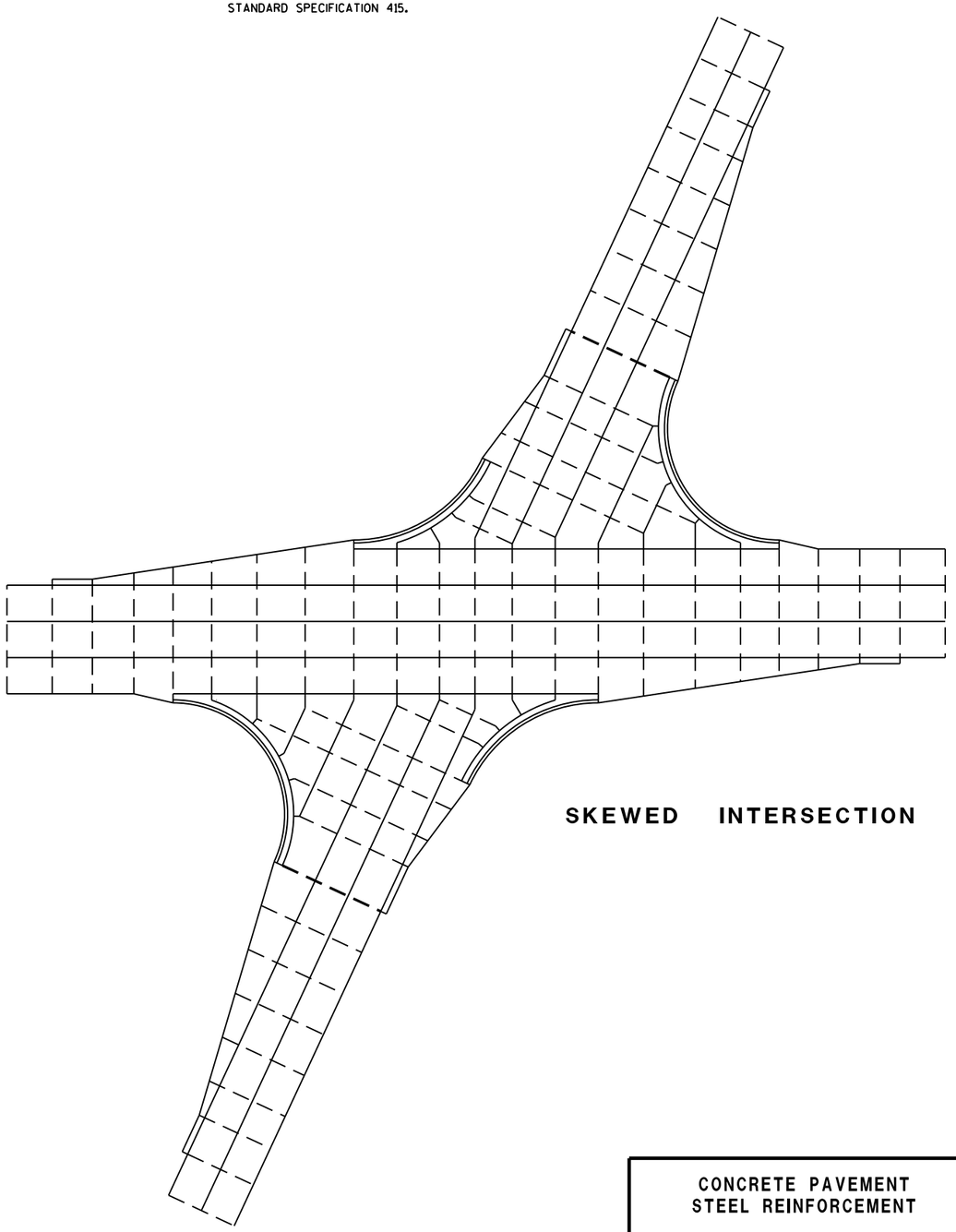
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

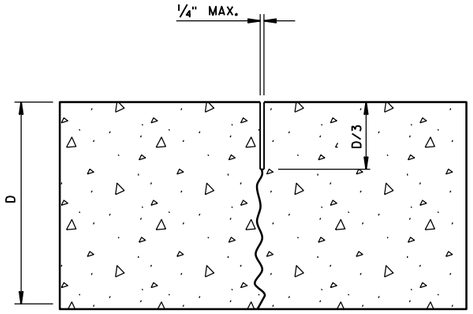
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

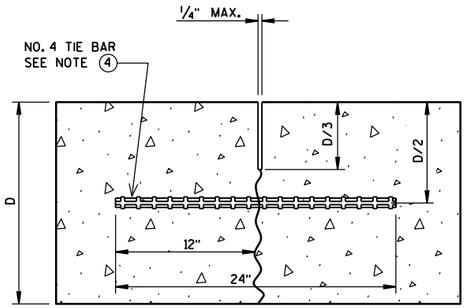
S.D.D. 13 C 18-2b

6

S.D.D. 13 C 18-2b



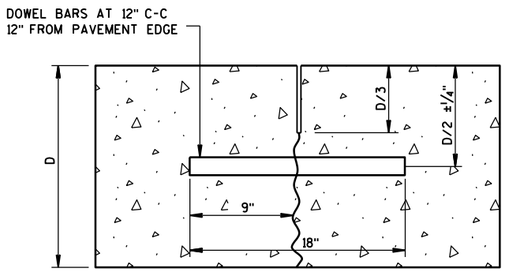
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

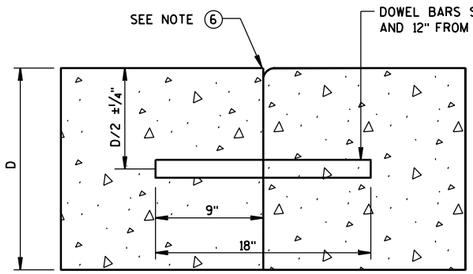
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



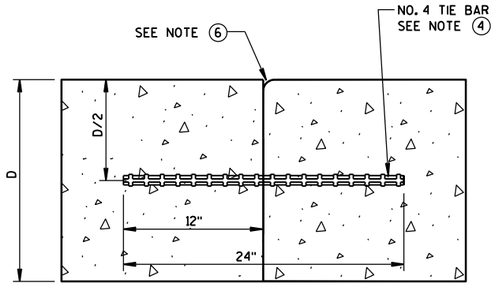
DOWELED-TRANSVERSE

CONTRACTION JOINTS

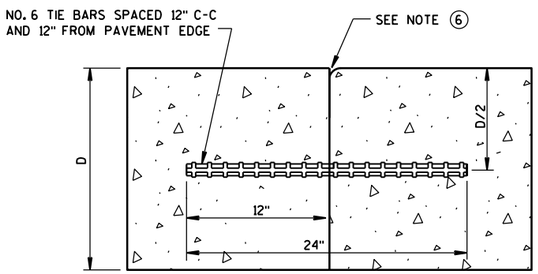
SEE NOTE (2)



DOWELED TRANSVERSE

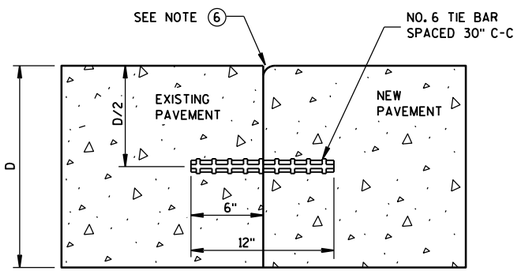


TIED LONGITUDINAL



TIED TRANSVERSE

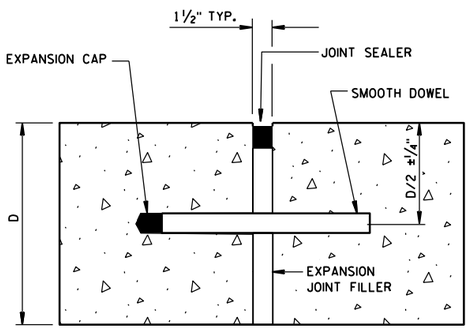
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

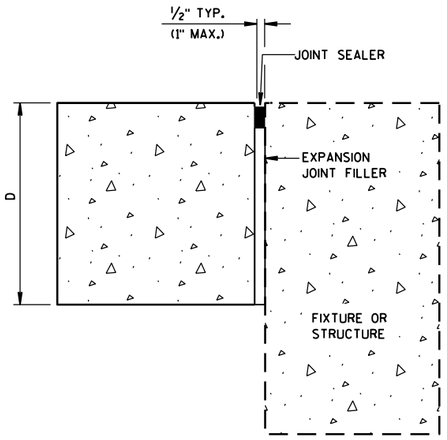
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

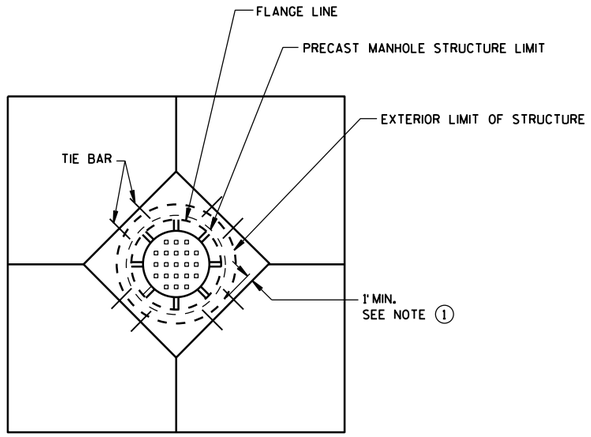
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

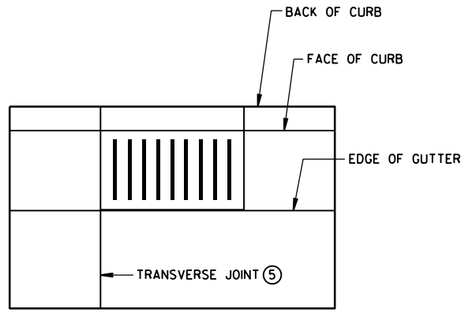
S.D.D. 13 C 18-2c

6

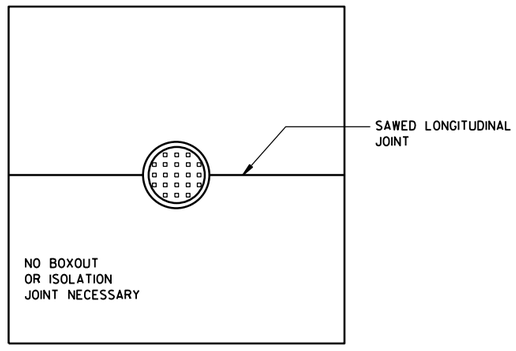
S.D.D. 13 C 18-2c



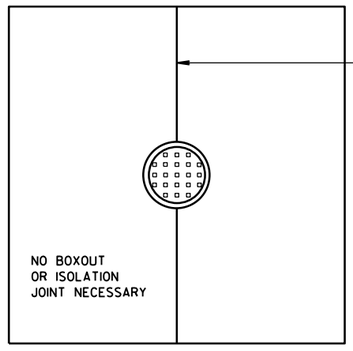
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



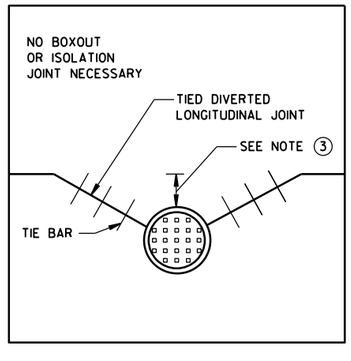
INLET WITH TRANSVERSE JOINT



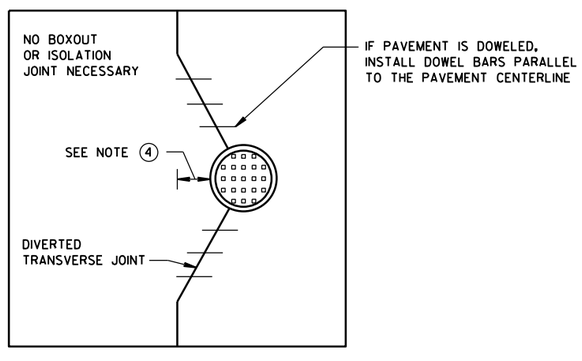
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

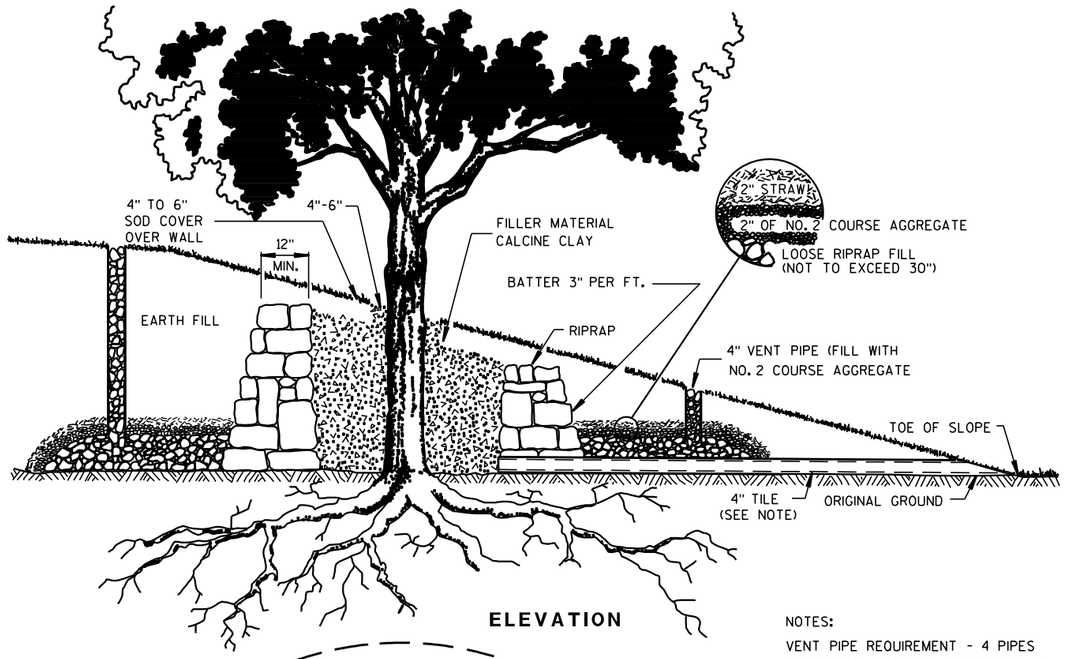
/S/ Deb Bischoff
PAVEMENT POLICY & DE

NEER

FHWA

6

S.D.D. 13 C 18-2d



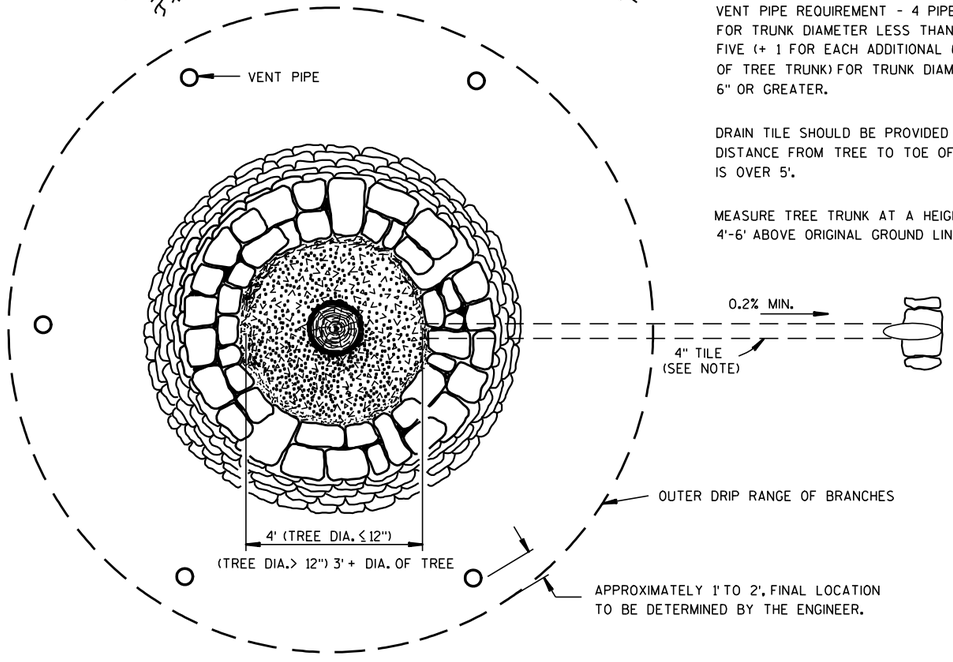
ELEVATION

NOTES:

VENT PIPE REQUIREMENT - 4 PIPES FOR TRUNK DIAMETER LESS THAN 6". FIVE (+ 1 FOR EACH ADDITIONAL 6" OF TREE TRUNK) FOR TRUNK DIAMETER 6" OR GREATER.

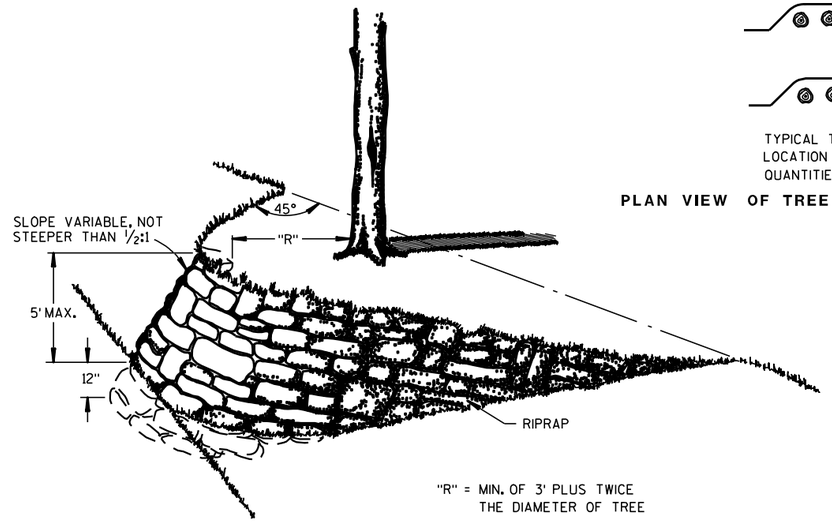
DRAIN TILE SHOULD BE PROVIDED IF DISTANCE FROM TREE TO TOE OF SLOPE IS OVER 5'.

MEASURE TREE TRUNK AT A HEIGHT 4'-6' ABOVE ORIGINAL GROUND LINE.



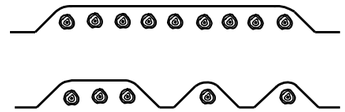
PLAN

FULL TREE WELL WITH RIPRAP WALL



"R" = MIN. OF 3' PLUS TWICE THE DIAMETER OF TREE

DETAILS OF TREE ISLAND AND ROOT PROTECTION



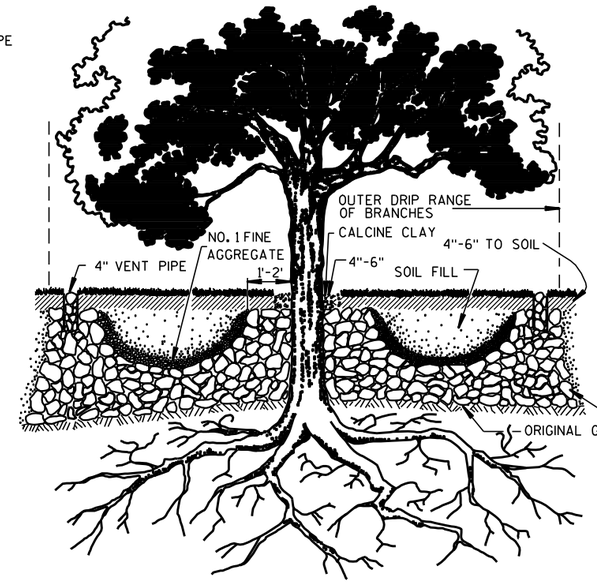
TYPICAL TREATMENTS OF ROOT PROTECTION. LOCATION SHOWN ON MISCELLANEOUS QUANTITIES SHEET.

PLAN VIEW OF TREE ISLANDS FOR ONE OR MORE TREES

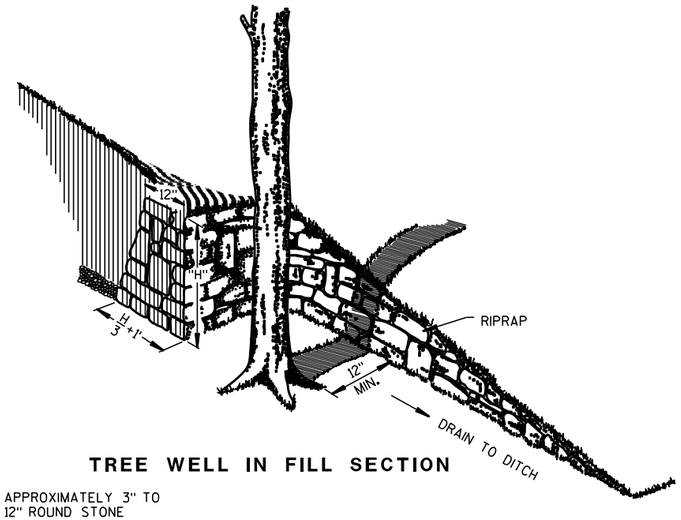
GENERAL NOTES

WALLS TO BE BUILT TO APPROXIMATE SHAPE AND DIMENSIONS SHOWN. STONE TO CONFORM TO SPECIFICATIONS FOR RIPRAP.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.



TREE WELL WITHOUT WALL



TREE WELL IN FILL SECTION

DETAILS FOR TREE WELLS

TREE PRESERVATION DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

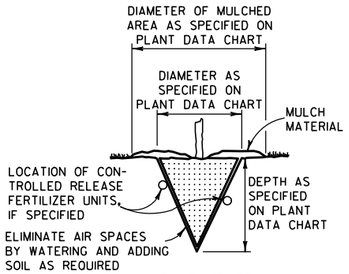
APPROVED
8/25/76 DATE
/S/ D. L. Strand STATE DESIGN ENGINEER
548 WYS
FHWA

6

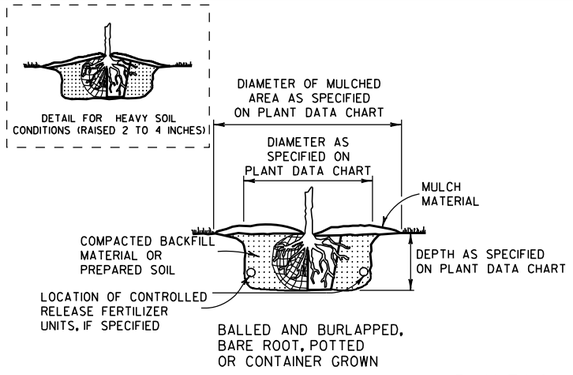
S.D.D. 14 A 1-3

6

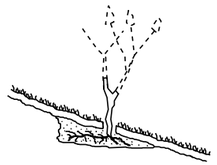
S.D.D. 14 A 1-3



MACHINE MOVED

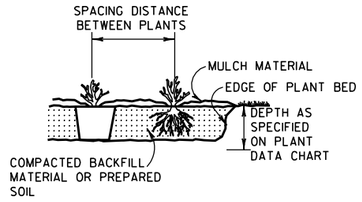


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



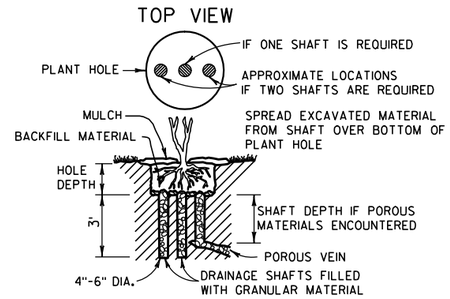
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



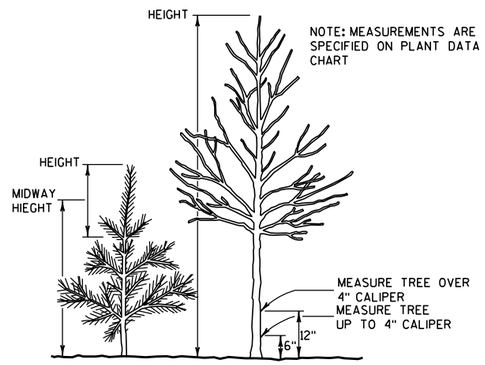
PREPARED BED (BARE ROOT AND POTTED)

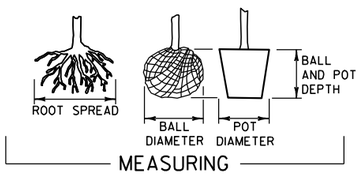
PLANTING



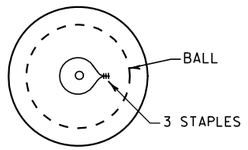
NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

DRAINING

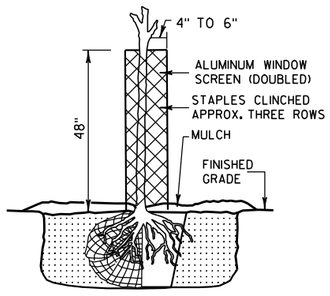




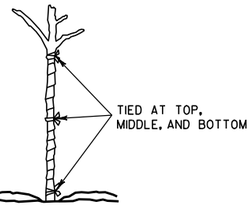
MEASURING



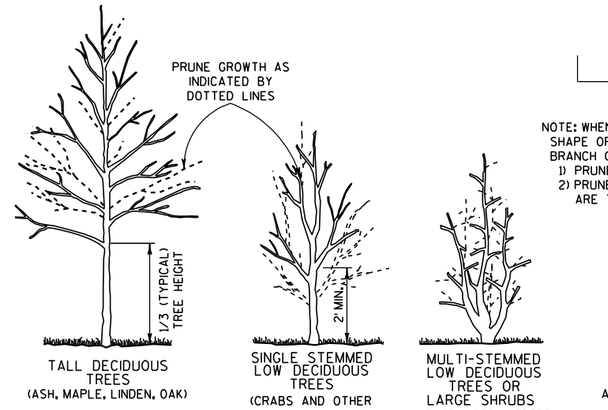
TOP VIEW



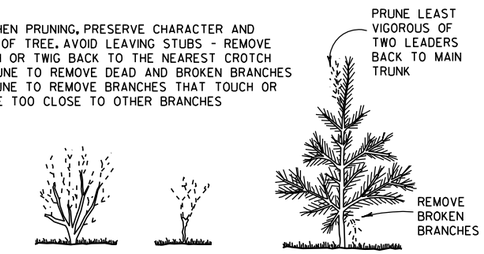
RODENT PROTECTION



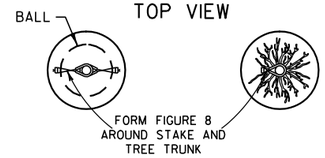
WRAPPING

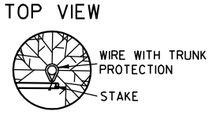


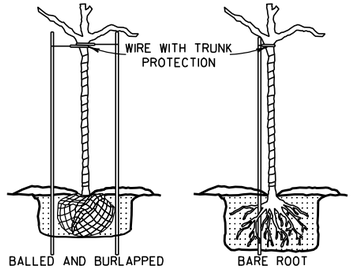
NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

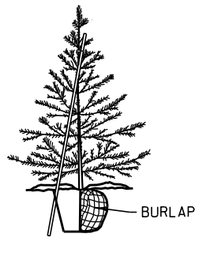


PRUNING



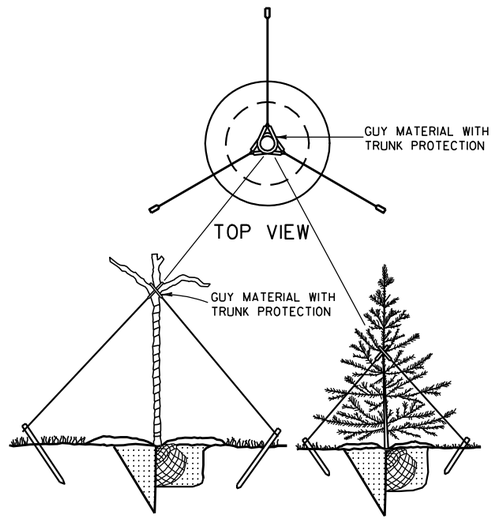






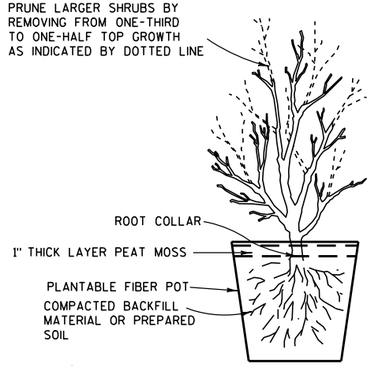
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



POTTING

NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

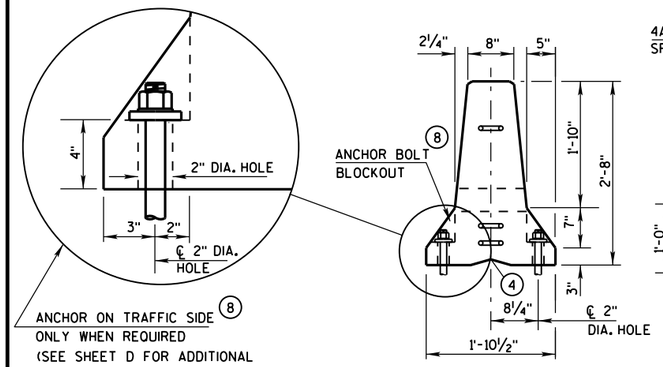
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

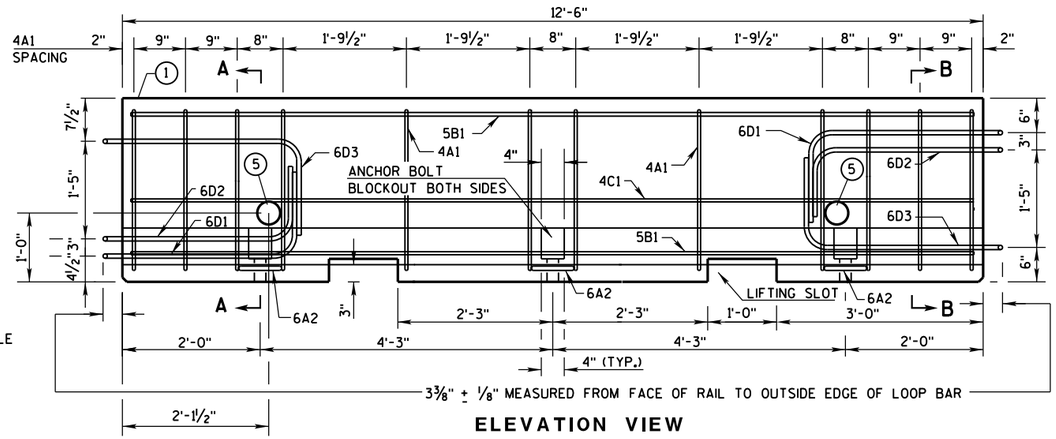
APPROVED
4/11/94 DATE
/S/ Rory L. Rhinesmith
CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

6

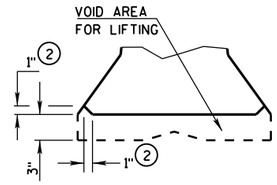
S.D.D. 14 A 2-1



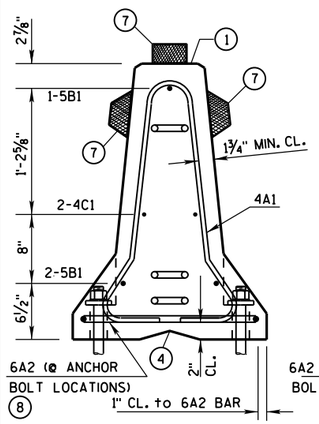
END VIEW



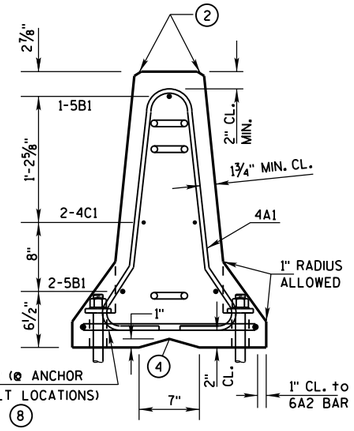
ELEVATION VIEW



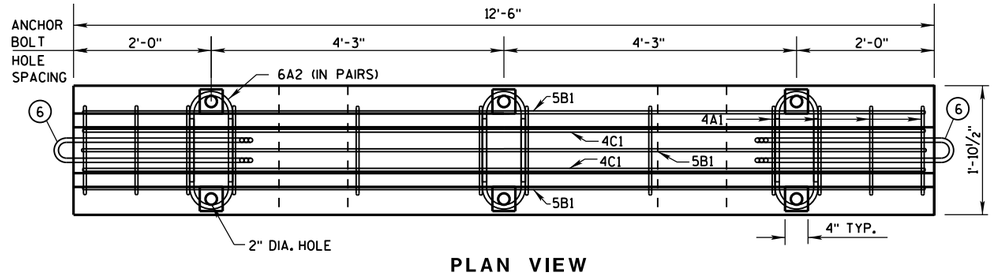
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

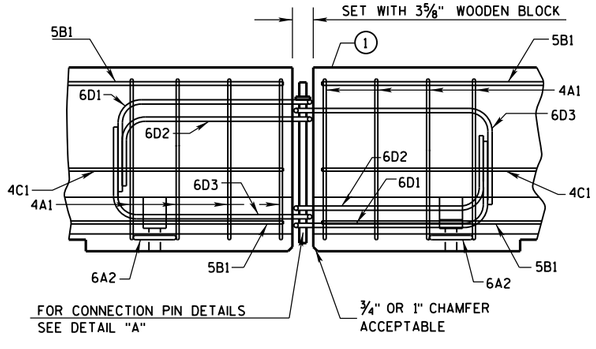


SECTION B-B
(STIRRUP PLACEMENT)

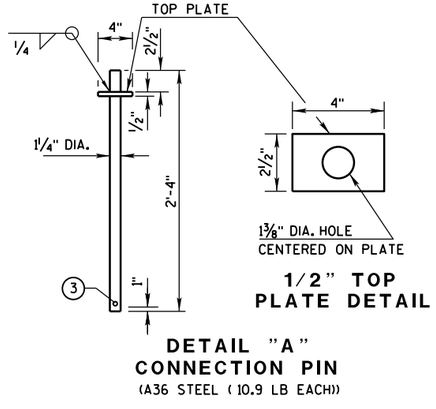


PLAN VIEW

DETAILS OF BARRIER SECTION

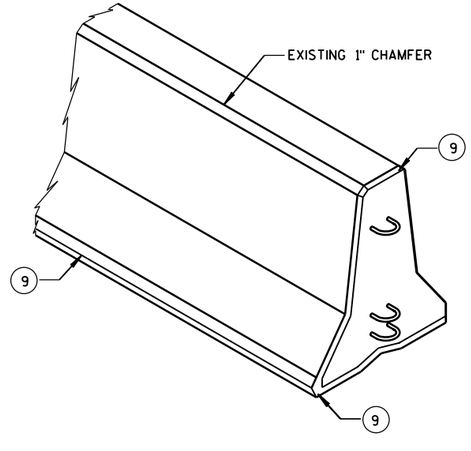


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

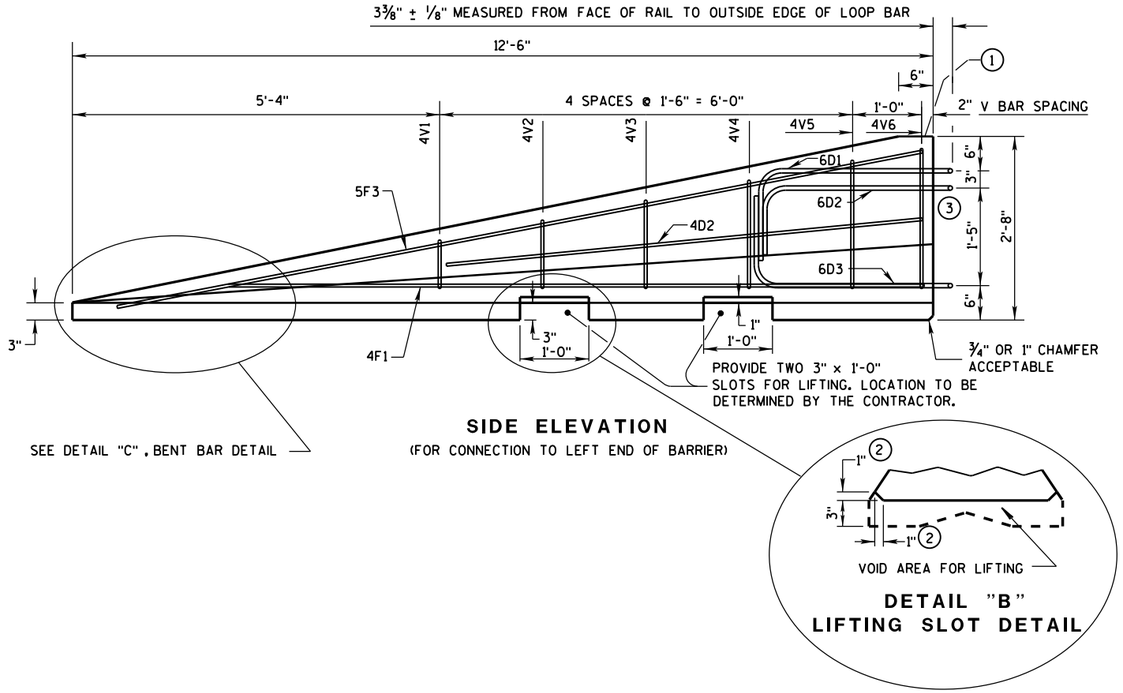
(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

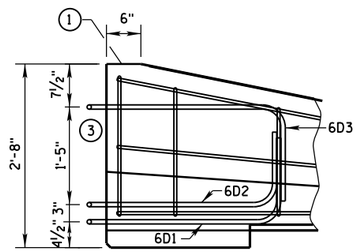
(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

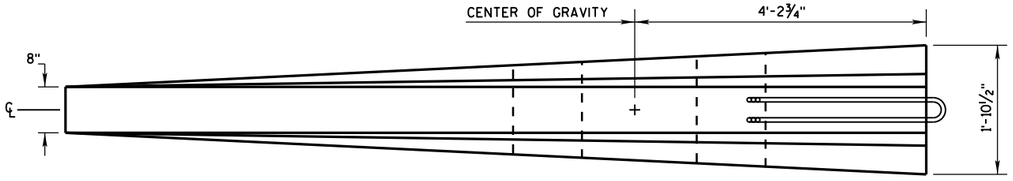
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 550

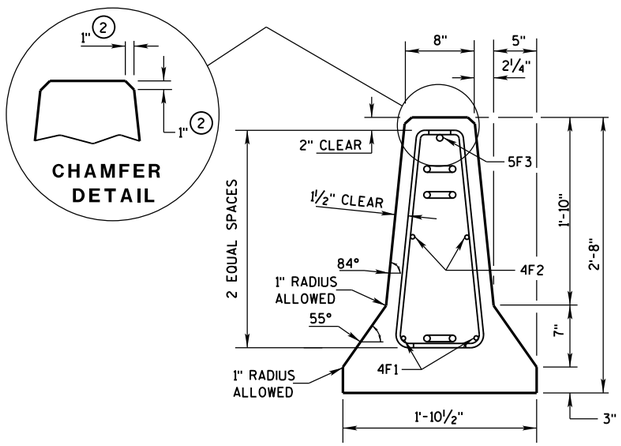


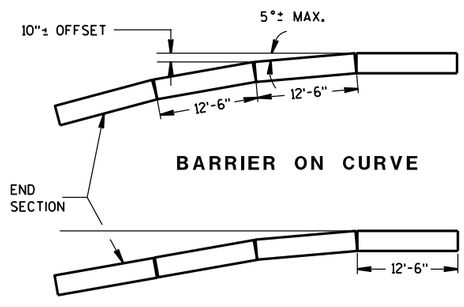


GENERAL NOTES

1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.







POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

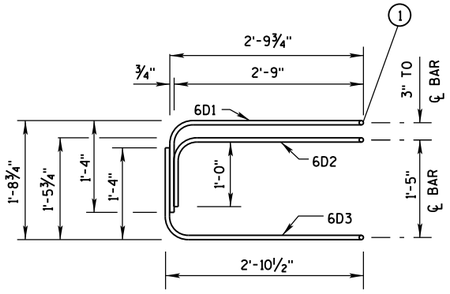
6

S.D.D. 14 B 7-14b

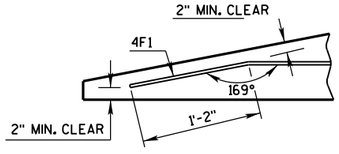
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

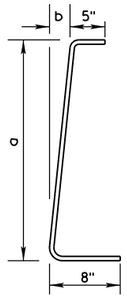
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

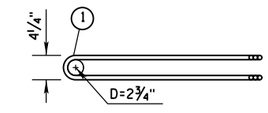
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION BILL OF MATERIALS

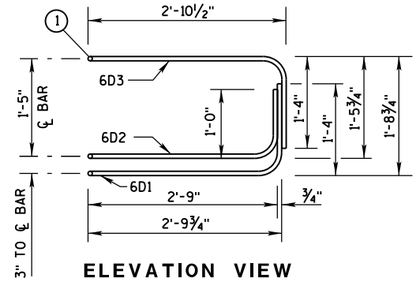
(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

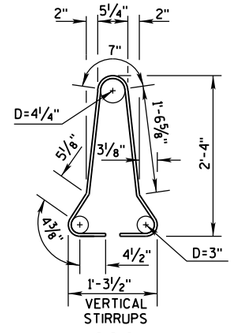


PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)

6A2



ELEVATION VIEW



4A1

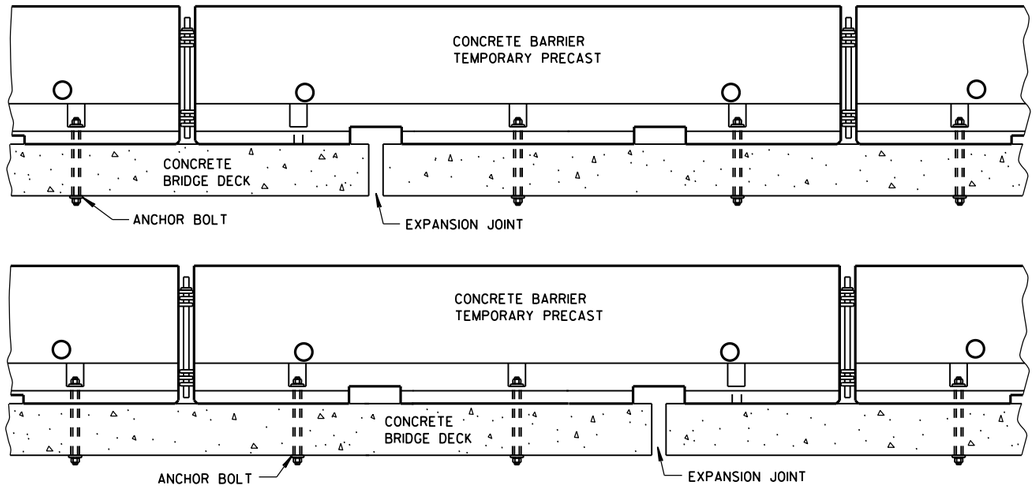
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

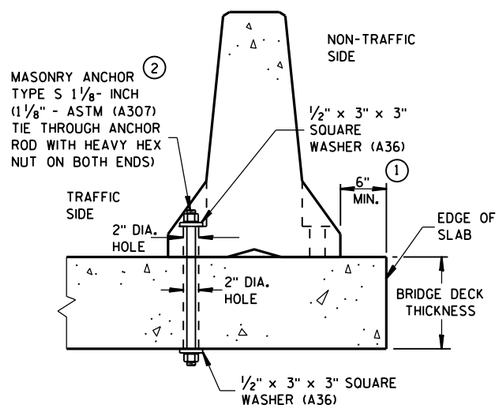
6

S.D.D. 14 B 7-14c



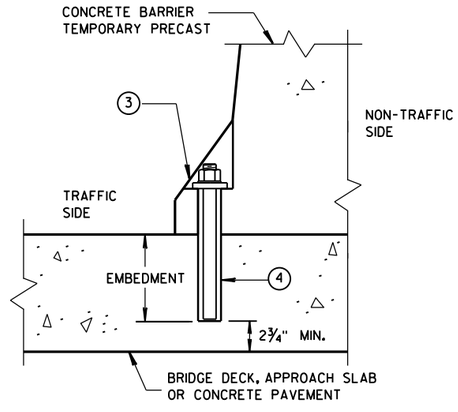
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT ②

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

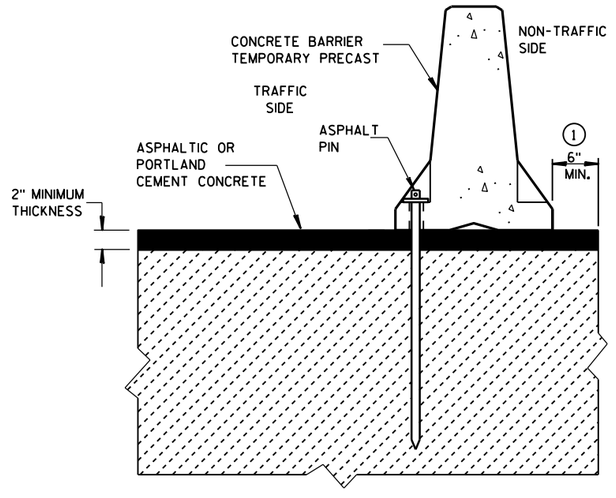
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

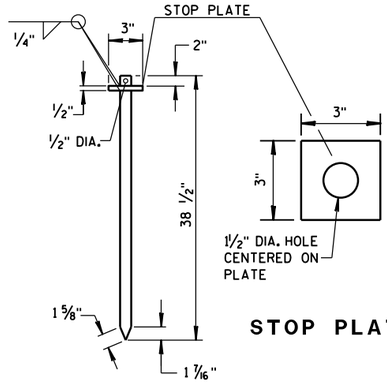
③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)

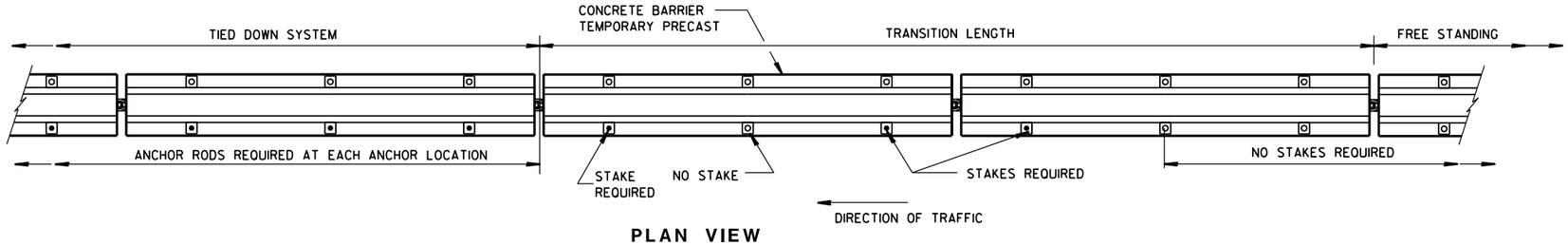


STOP PLATE



ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

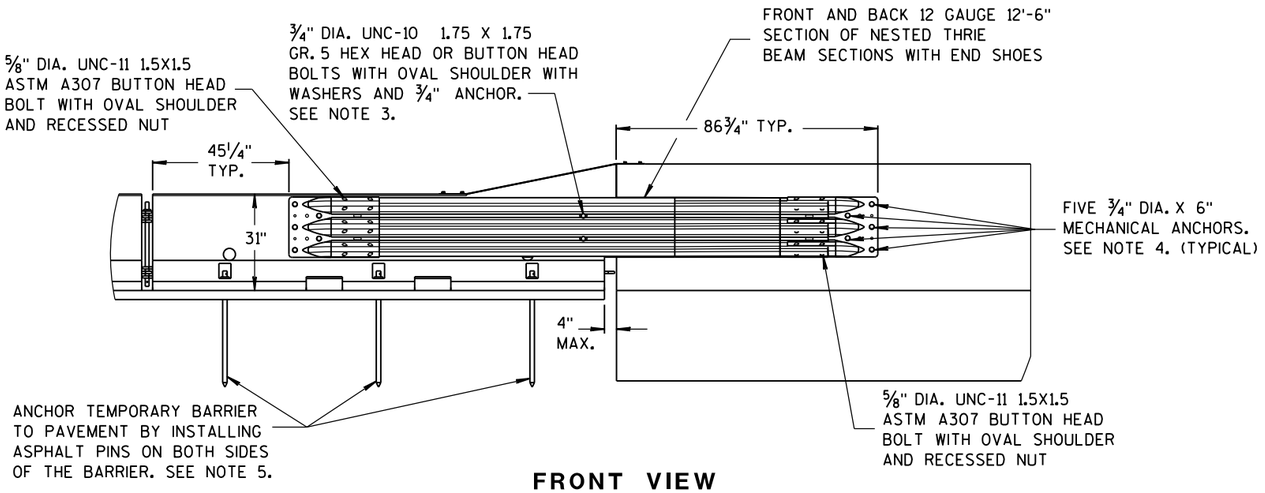
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 553

6

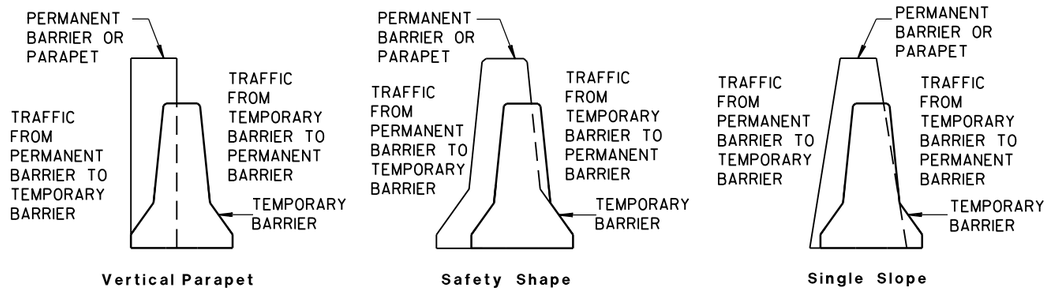
S.D.D. 14 B 7-14d

6

S.D.D. 14 B 7-14d



FRONT VIEW

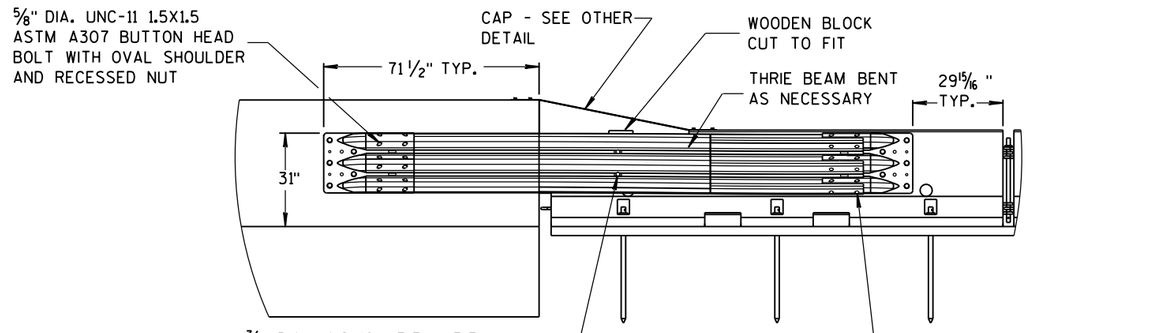


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

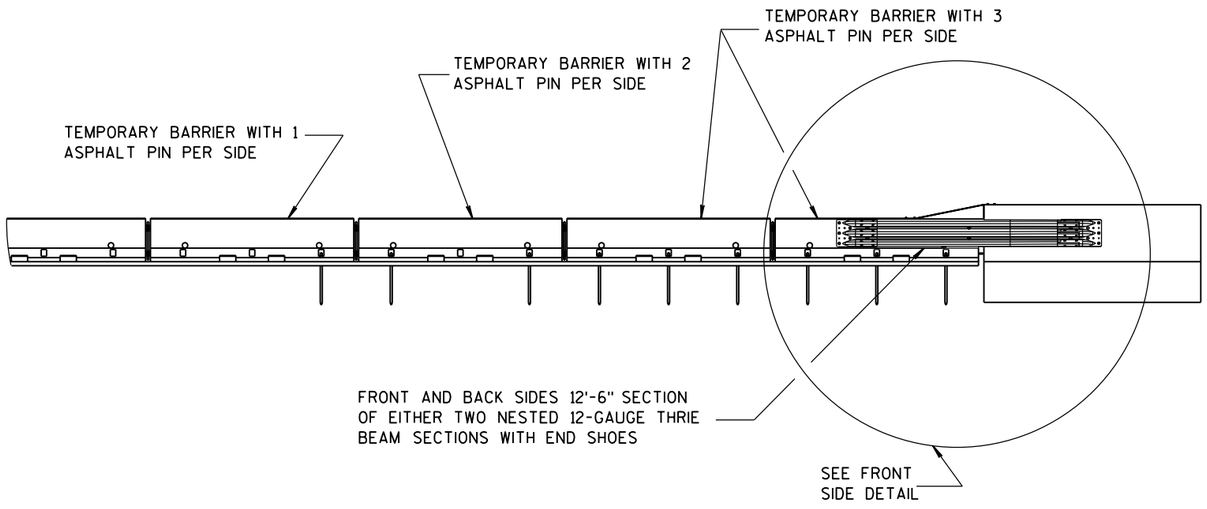
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

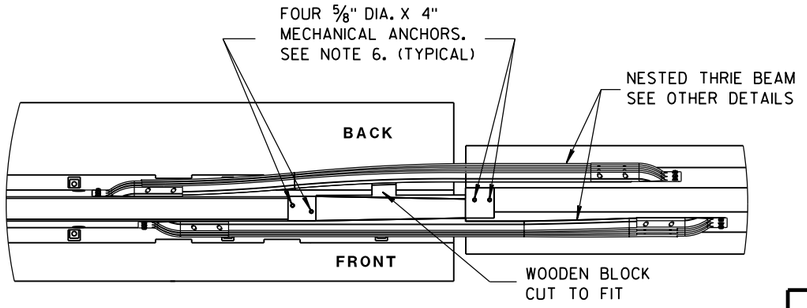
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BACK VIEW



FRONT VIEW



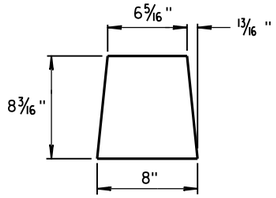
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

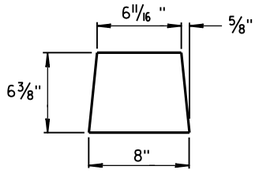
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

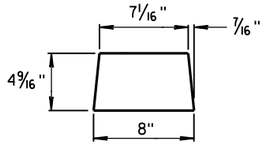
6
S.D.D. 14 B 7-14e



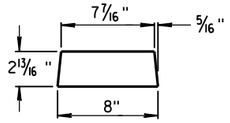
GUSSET 1



GUSSET 2

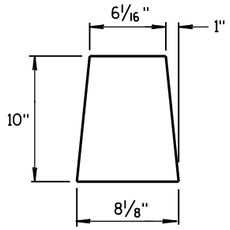


GUSSET 3

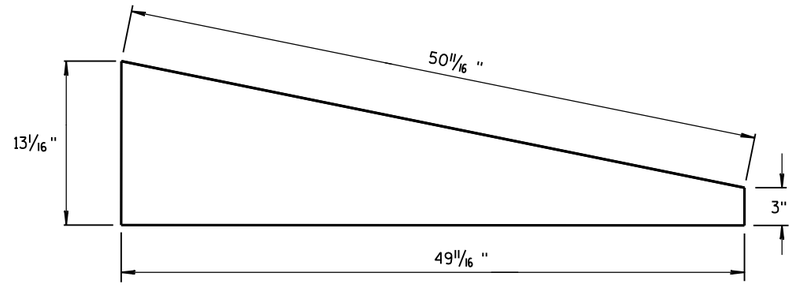


GUSSET 4

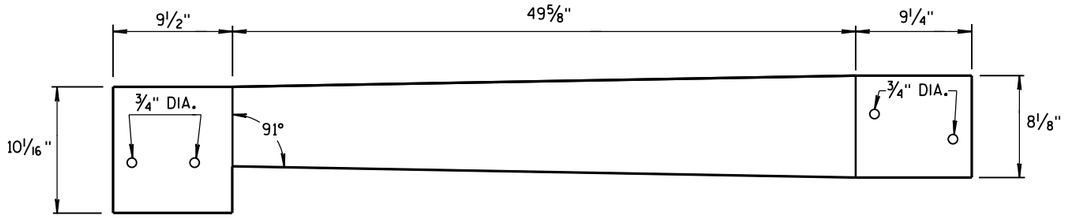
GUSSETS

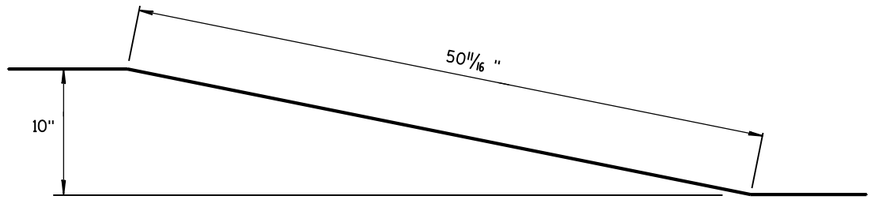


END PLATE



SIDE PLATE

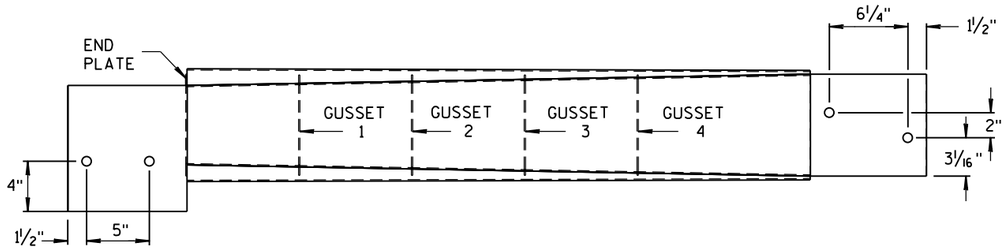


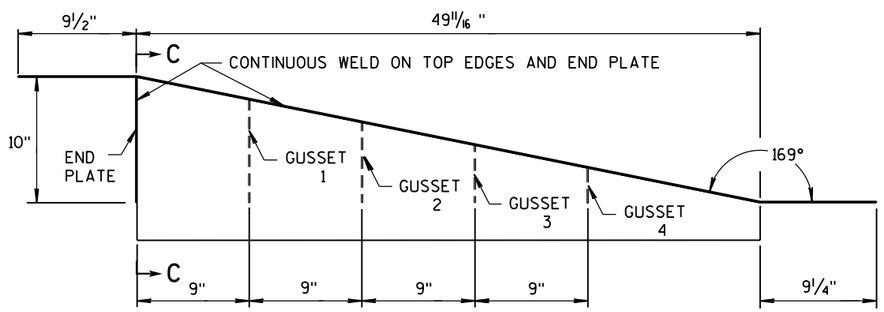


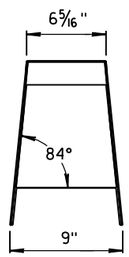
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

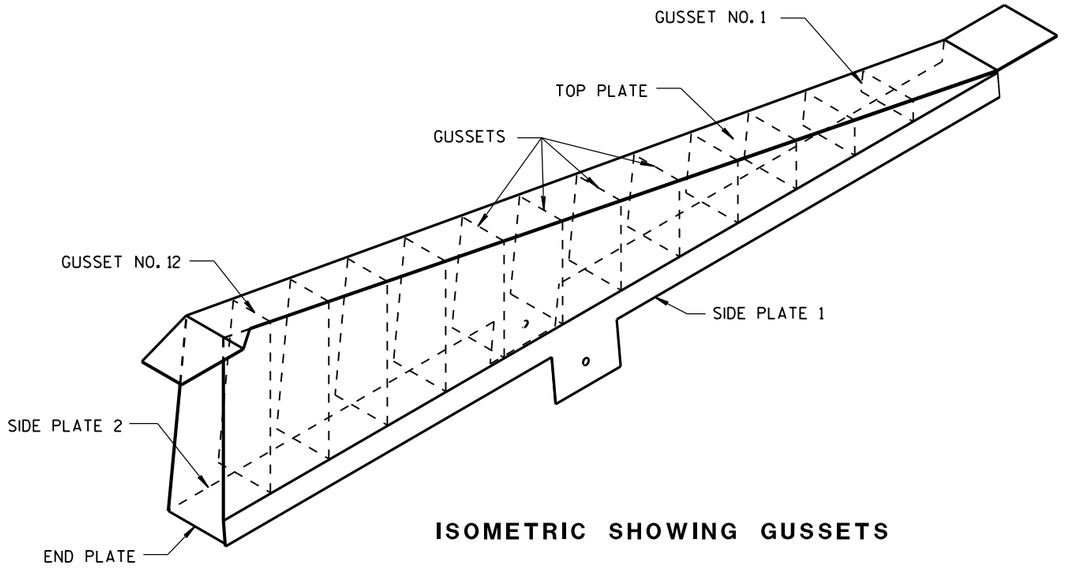
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

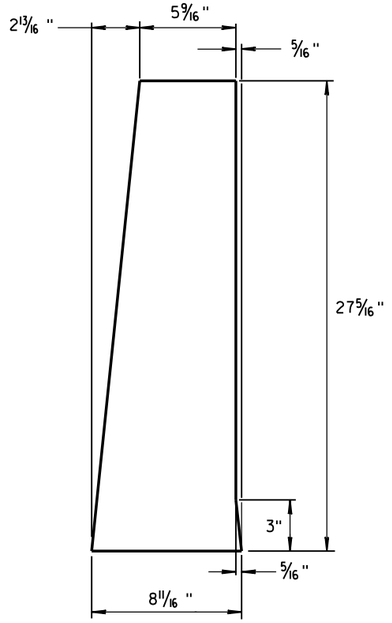
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14f

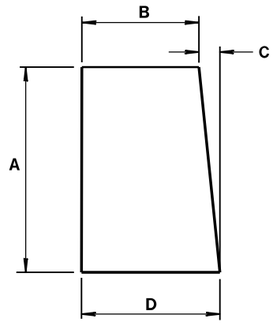


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



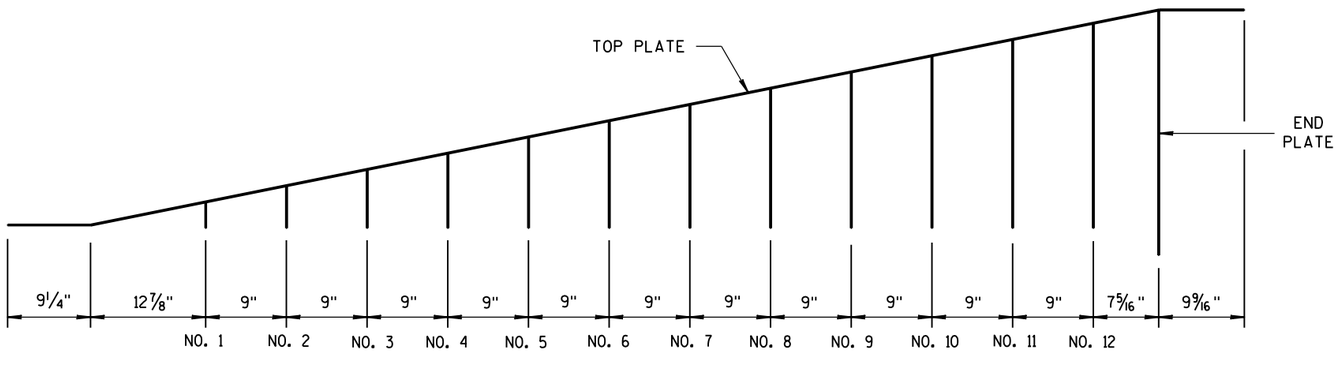
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

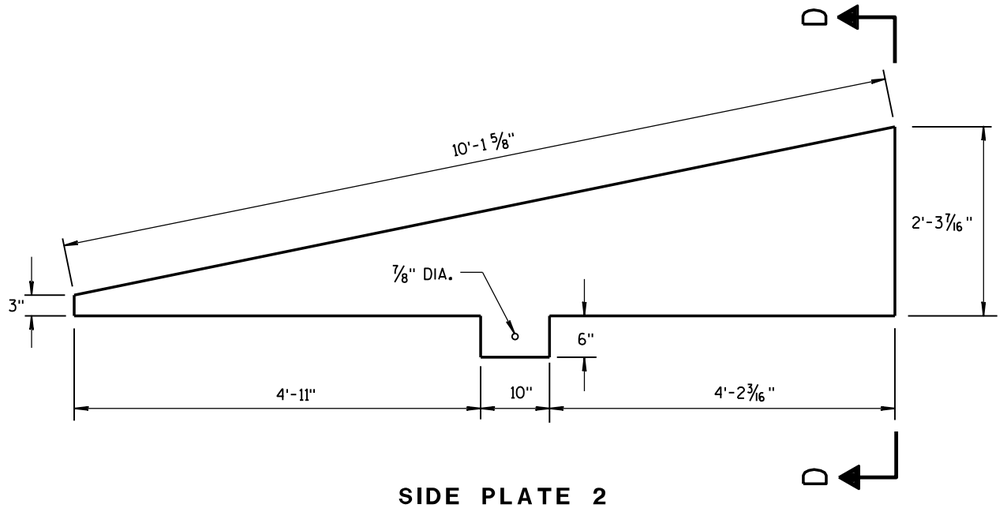
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

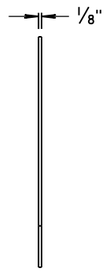
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

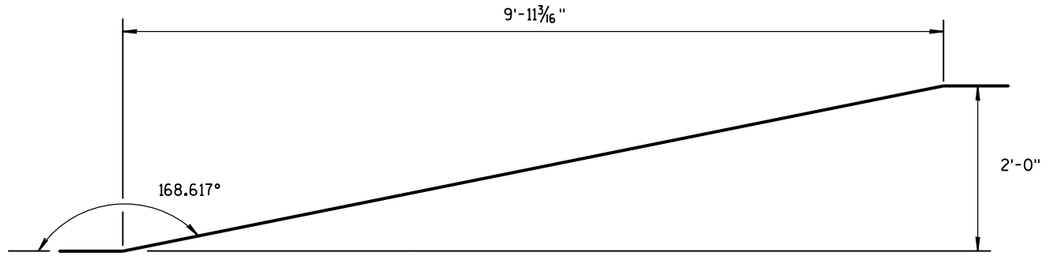
S.D.D. 14 B 7-14g



SIDE PLATE 2

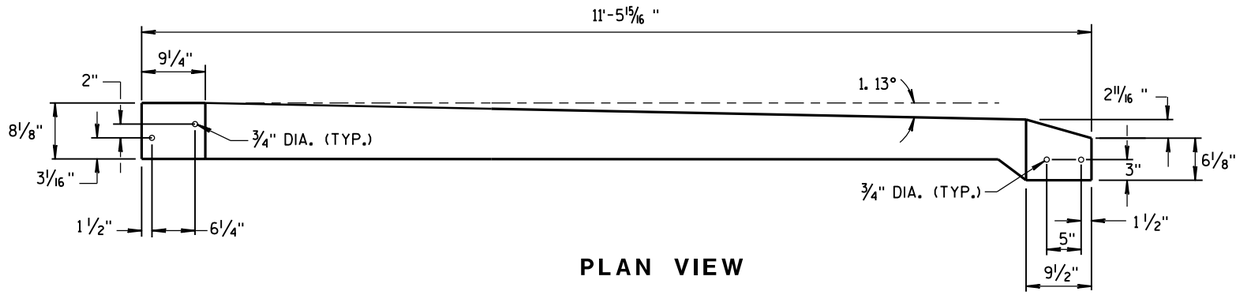


END VIEW



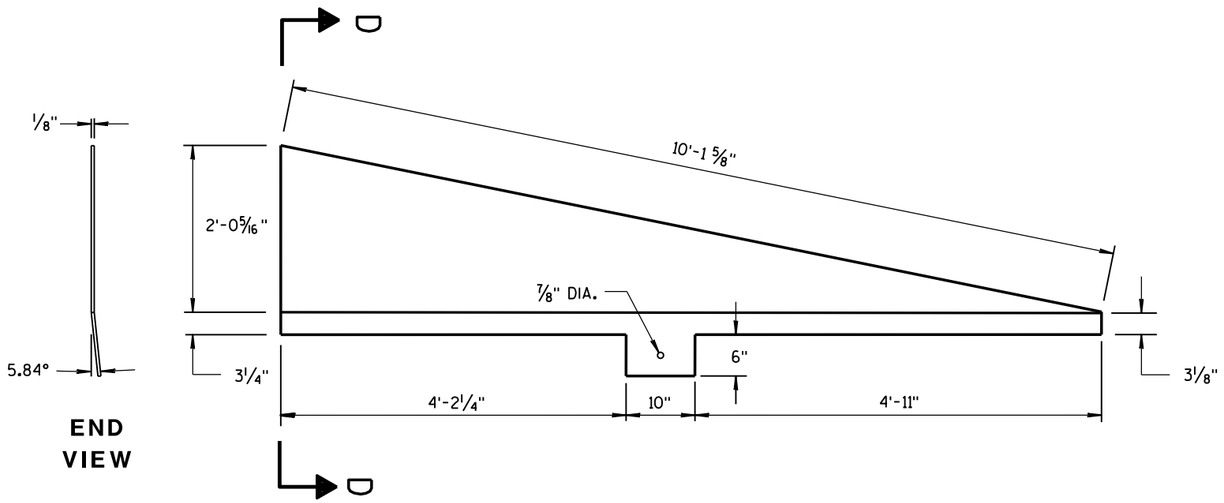
SIDE VIEW

TOP PLATE



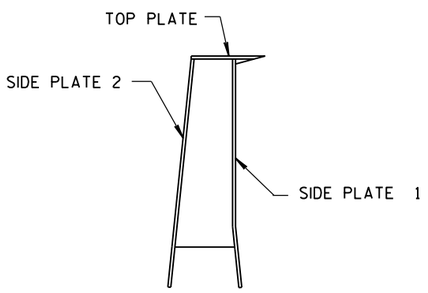
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

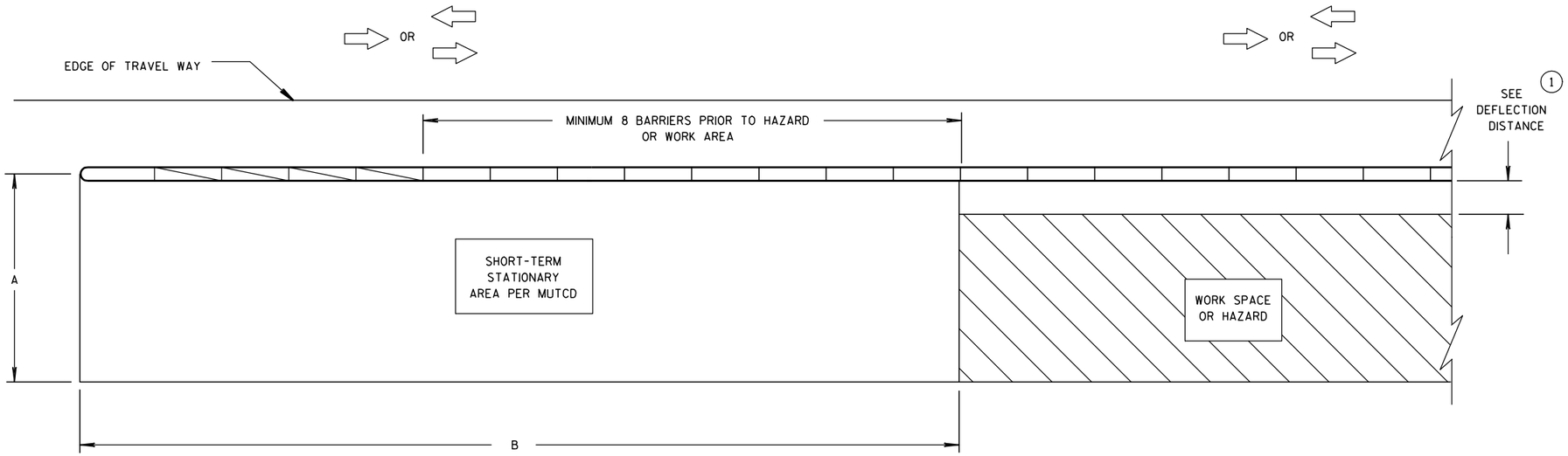
557

6

S.D.D. 14 B 7-14h

6

S.D.D. 14 B 7-14h



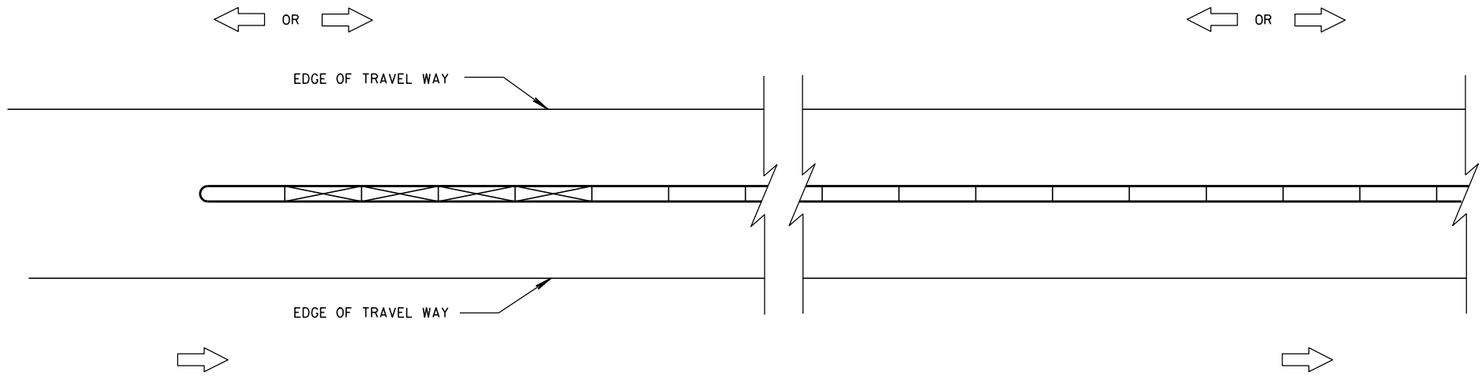
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

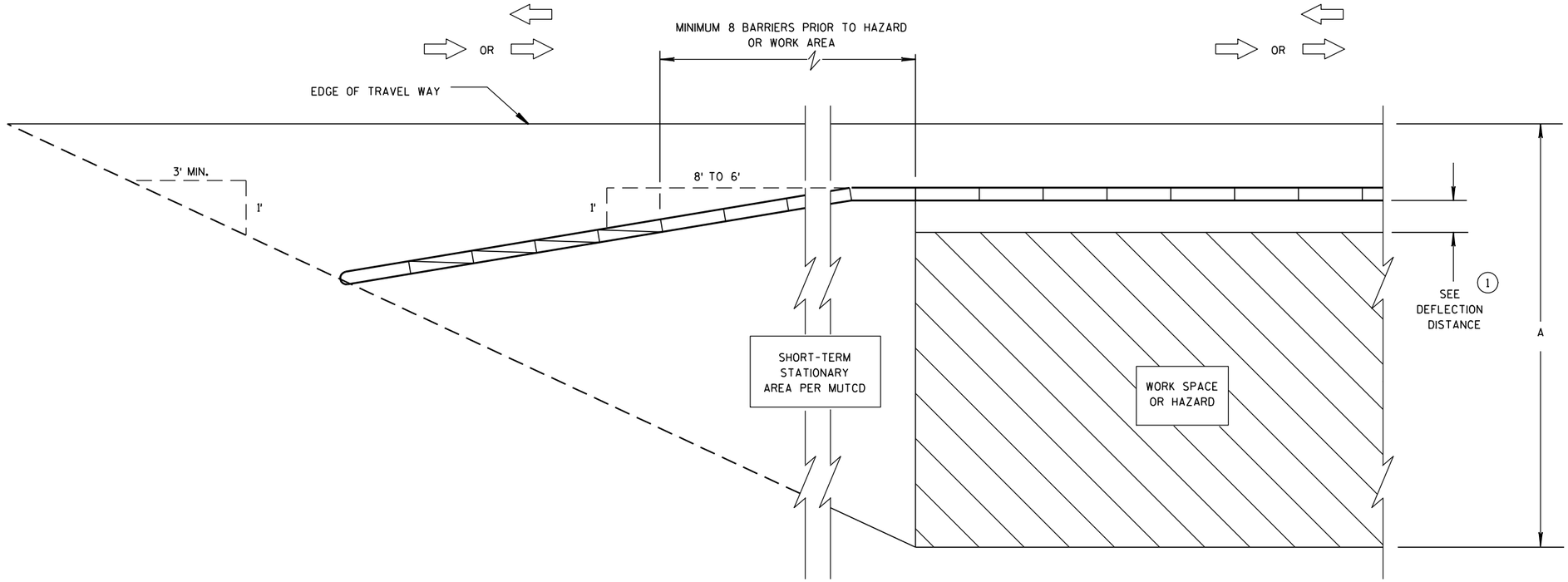
(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

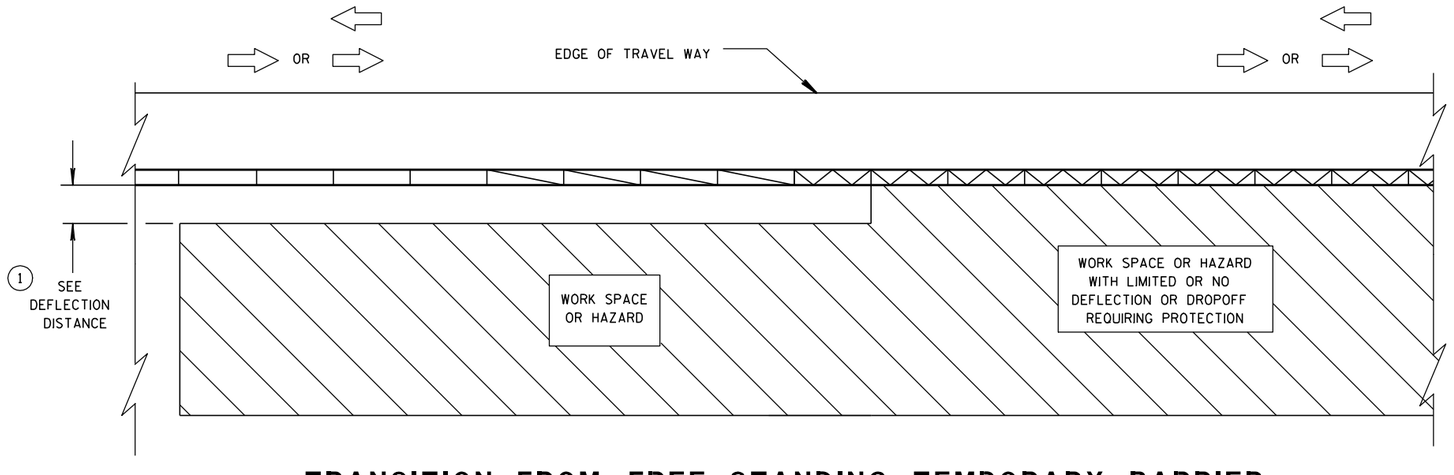
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6
S.D.D. 14 B 8-1a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

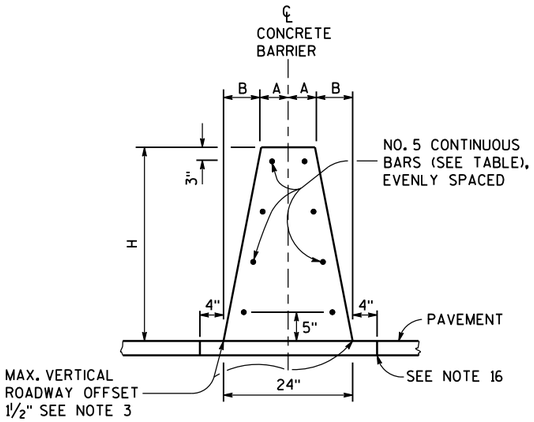
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

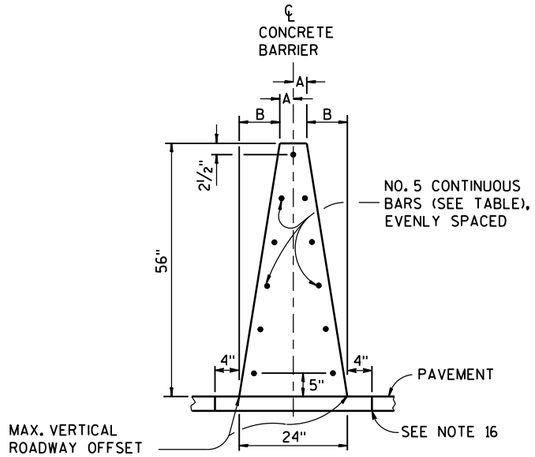
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

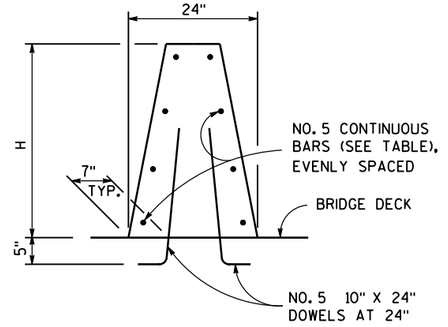
S.D.D. 14 B 8-1b



32-INCH, 36-INCH OR 42-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S32, TYPE S36, AND TYPE S42)



56-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S56)



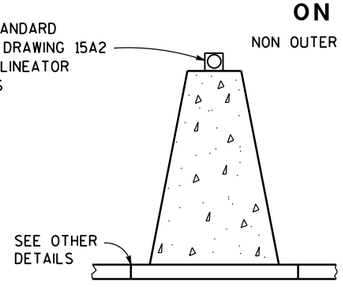
SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

NON OUTER PARAPET APPLICATION

GENERAL NOTES

1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR ½" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1½", USE TYPE A
4. PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.
5. EXCEPT IN ANCHORS, VERTICAL REINFORCING STIRRUP NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 1'-0".
6. FOR TYPE S32, TYPE S36, TYPE S42, AND S56 MONOLITHIC FOOTING OR DOWELED FOOTING WITH 2-#8 x 8" @ 2'-0".
7. STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL 2 FEET. BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
8. 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.
9. WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.
10. USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
11. 2" CLEAR COVER TYPICAL.
12. COLD-JOINTS MAY BE USED BETWEEN ANCHOR INSTALLATIONS. WHEN A COLD JOINT IS NEEDED, 3 FEET OF LAP OF LONGITUDINAL STEEL IS REQUIRED. LAPS TO BE FIRMLY TIED.
13. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 NO ADDITIONAL VERTICAL STEEL NEEDED. IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A REQUIRES VERTICAL STEEL. SEE OTHER DETAIL.
14. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 DEPTH OF FOOTING 10". IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A MATCH TOTAL HEIGHT OF SINGLE SLOPE BARRIER RETAINING WALL.
15. FOR ALL BARRIER TYPES SHOWN, ANCHOR IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN ON DRAWING OR DETAILS SHOWN ON S.D.D. 14B33. ANCHORS INCIDENTAL TO CBSS.
16. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



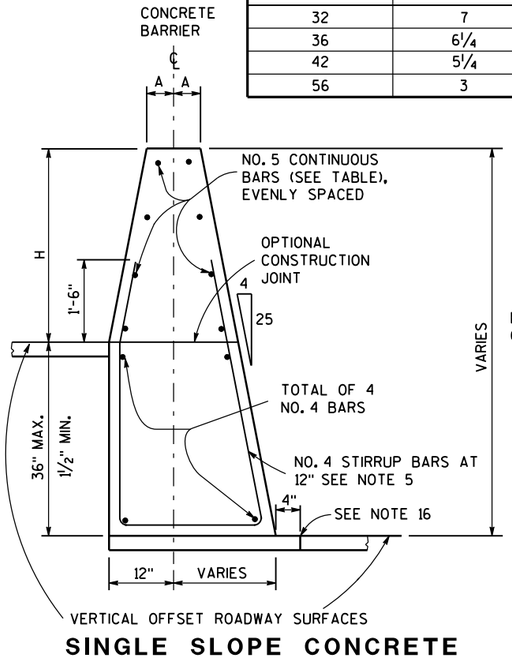
DELINEATION

DELINEATOR SPACING ON HORIZONTAL CURVES

RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

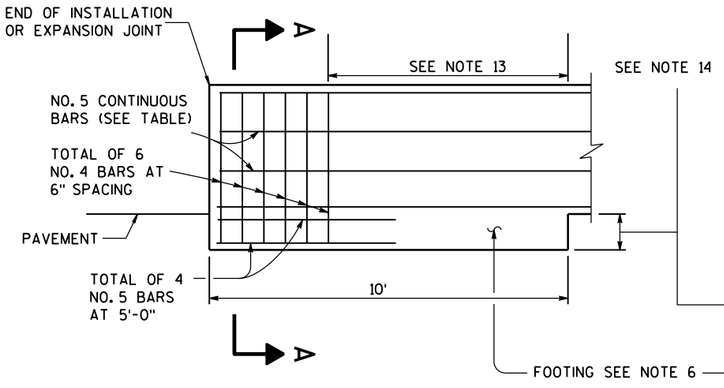
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	LENGTH OF BARRIER	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	



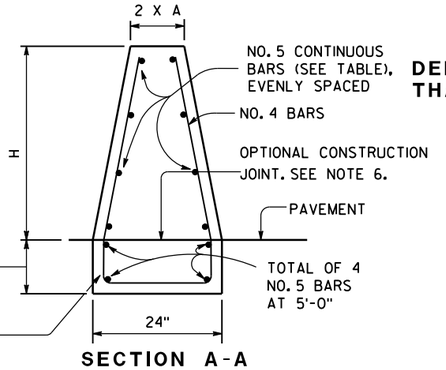
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(BETWEEN ADJACENT ROADWAYS)



END ANCHOR SINGLE SLOPE CONCRETE BARRIER

AT CONSTRUCTION JOINT



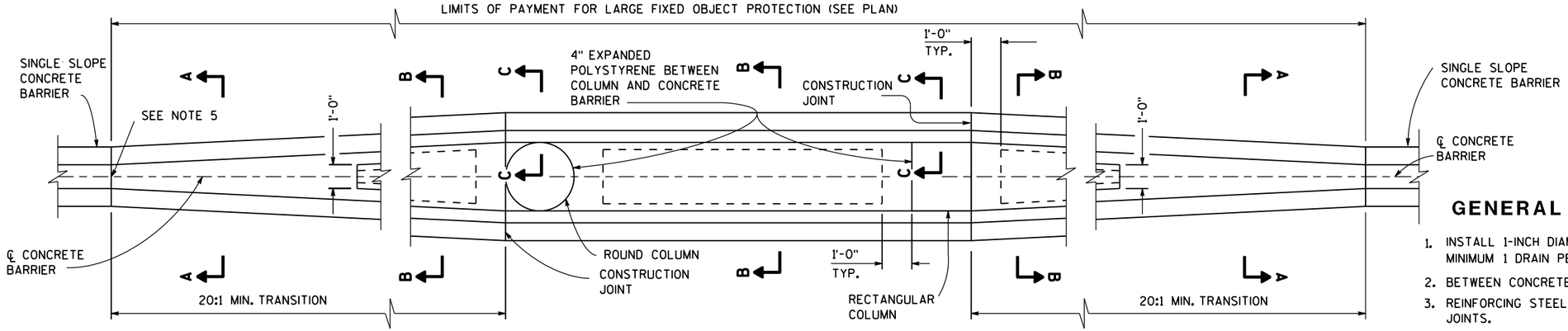
SECTION A-A

CONCRETE BARRIER SINGLE SLOPE (CBSS)

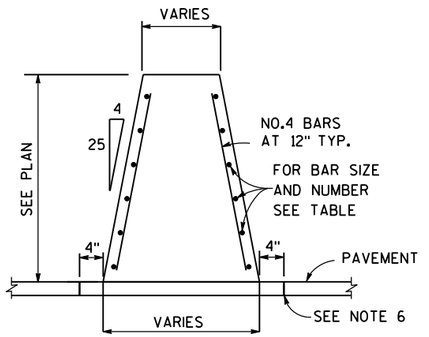
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

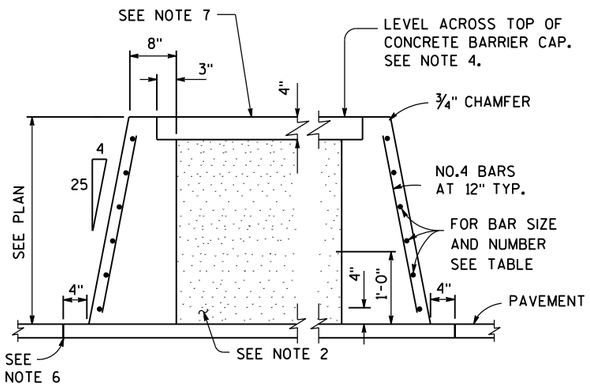
S.D.D. 14 B 32-3a



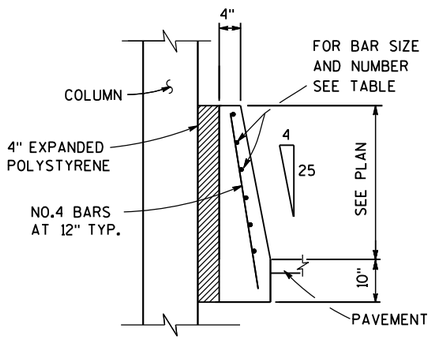
LARGE FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56



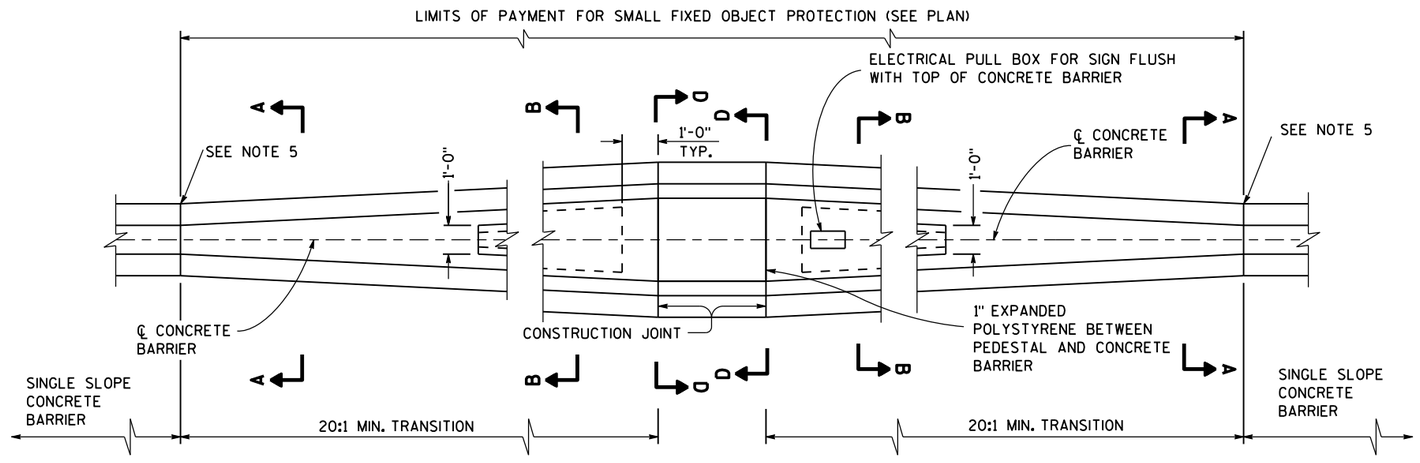
SECTION A-A



SECTION B-B



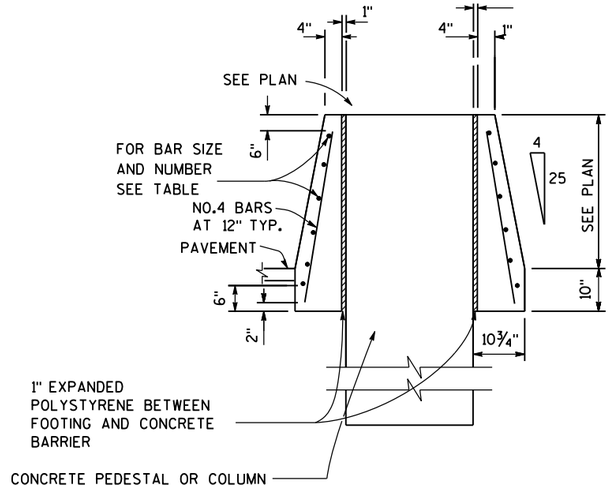
SECTION C-C



SMALL FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56

GENERAL NOTES

1. INSTALL 1-INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B-B. MINIMUM 1 DRAIN PER CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH GRANULAR BACKFILL GRADE 2
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.
5. IF FIXED OBJECT PROTECTION IS INSTALLED FIRST, USE COLD JOINTS. IF CBSS PLACED FIRST, USE EXPANSION JOINT.
6. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
7. USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.



SECTION D-D

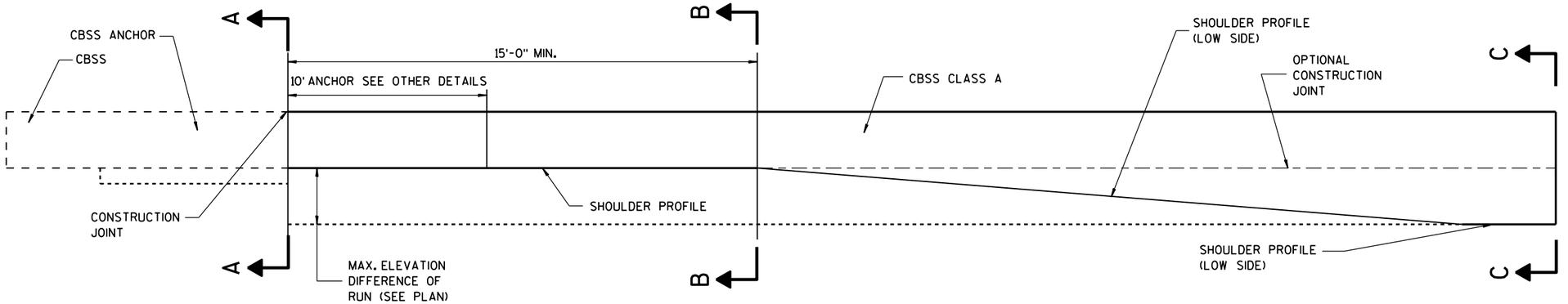
BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	9

CONCRETE BARRIER SINGLE SLOPE (CBSS)

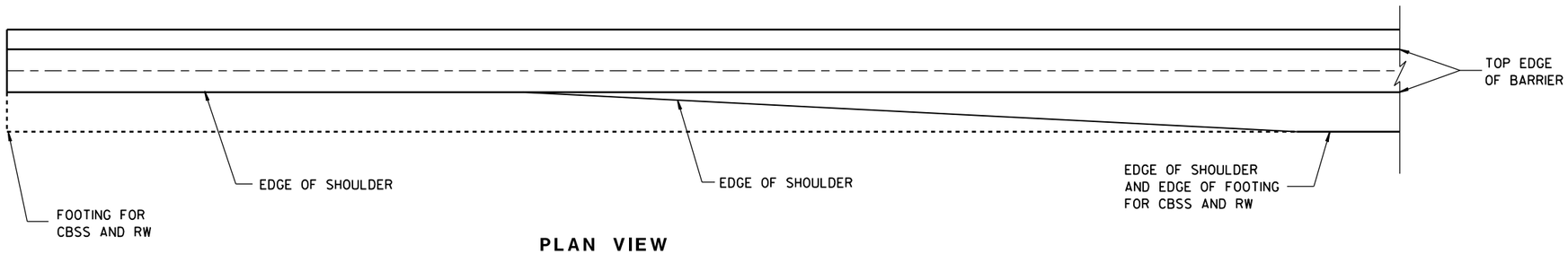
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

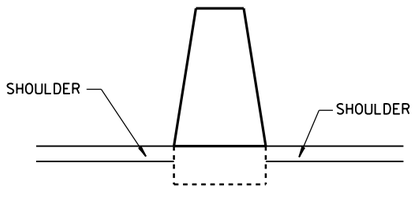
S.D.D. 14 B 32-3b



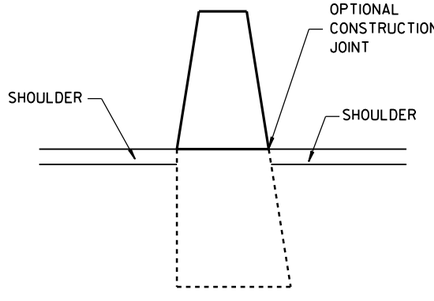
ELEVATION VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



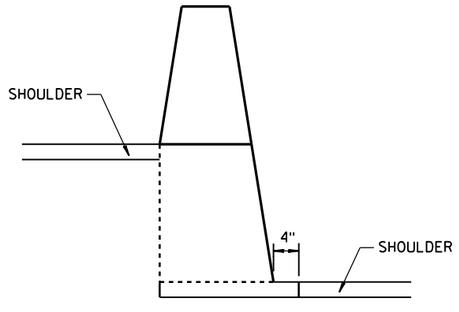
PLAN VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



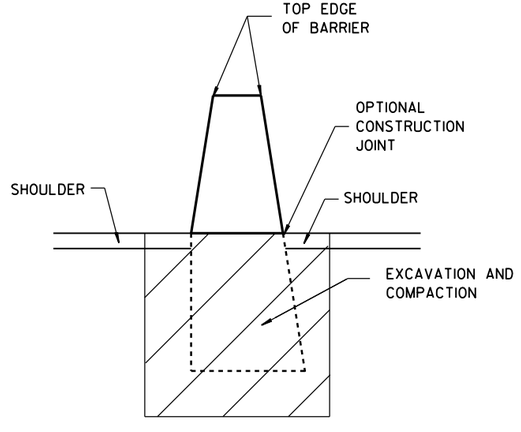
SECTION A-A



SECTION B-B



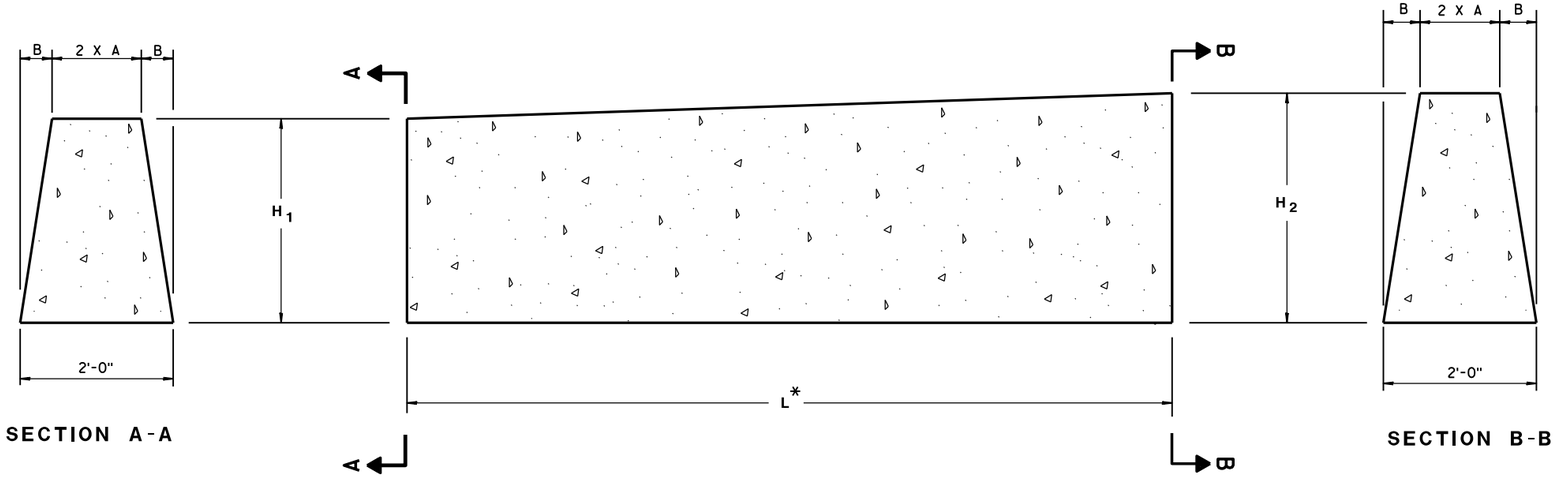
SECTION C-C



CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 32-3c



SECTION A-A

SECTION B-B

DOUBLE COLD JOINT HEIGHT TRANSITION

BARRIER DIMENSIONS

BARRIER HEIGHT INCHES	A INCHES	B INCHES
32	7	5
36	6 1/4	5 3/4
42	5 1/4	6 3/4
56	3	9

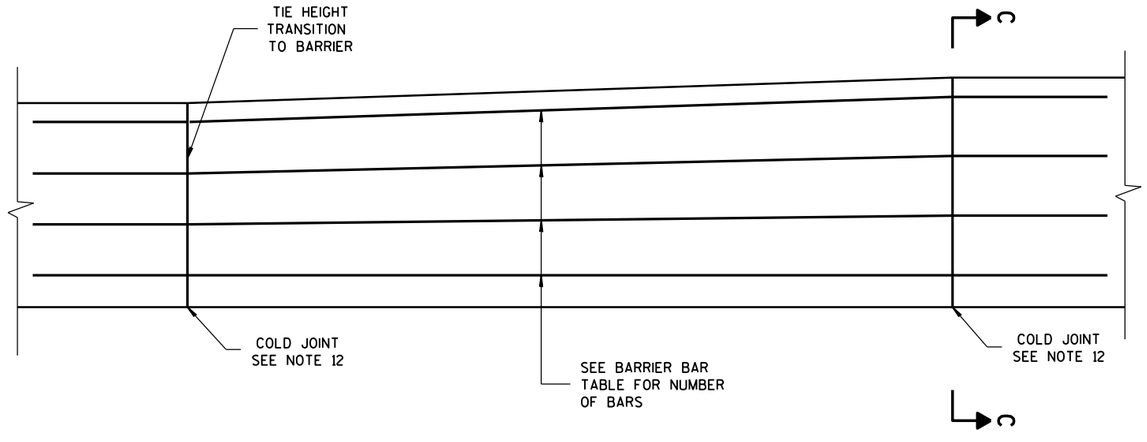
MULTIPLE HEIGHT TRANSITIONS MAY BE USED IN SEQUENCE TO GET TO APPROPRIATE HEIGHT.

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

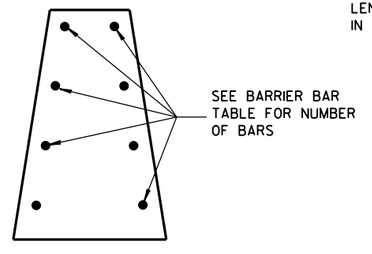
BARRIER BARS

H_1	H_2	L*	NUMBER OF NO. 5 BARS
32"	36"	10'-0"	8
36"	42"	10'-6"	10
42"	56"	24'-6"	11

* LENGTH OF DOUBLE COLD JOINT INCLUDED IN THE TOTAL LENGTH OF CBSS.



STEEL REINFORCEMENT DETAIL



SECTION C-C

CONCRETE BARRIER SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2014 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

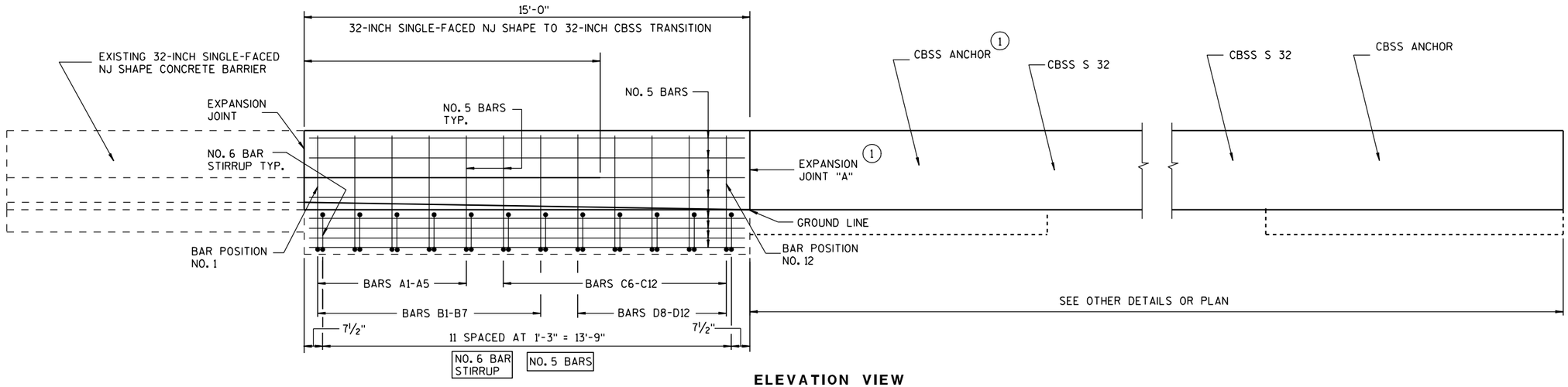
FHWA

6

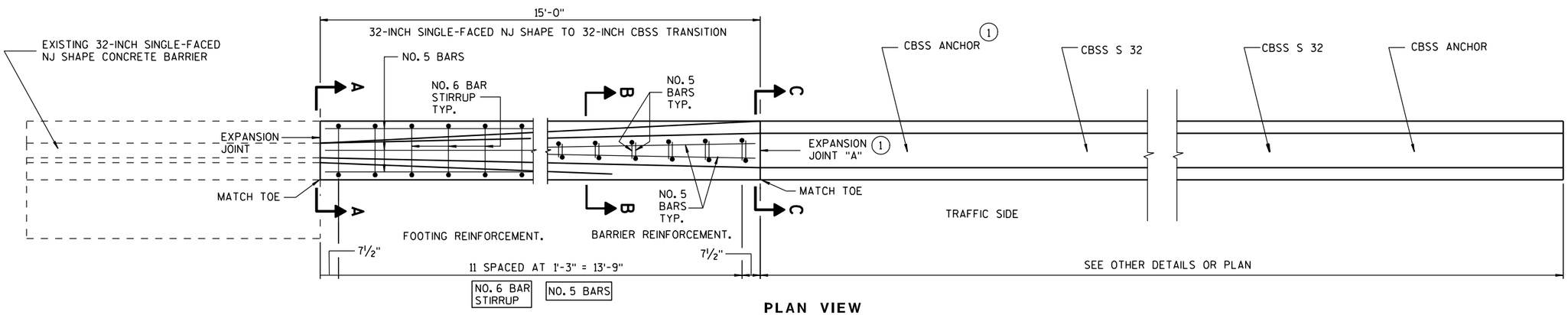
S.D.D. 14 B 32-3d

6

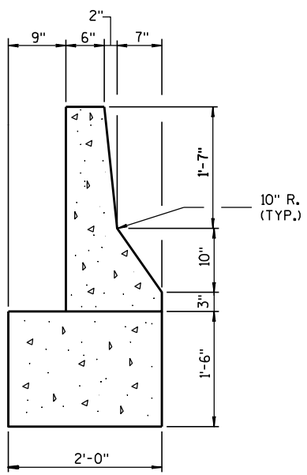
S.D.D. 14 B 32-3d



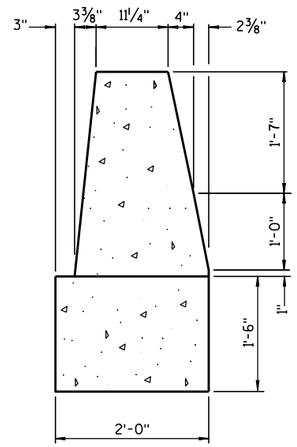
ELEVATION VIEW



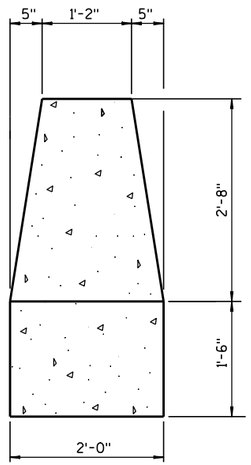
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD -JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

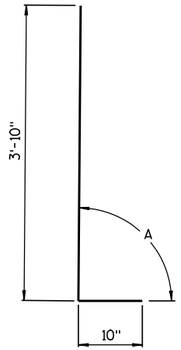
32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 35-1a

"A" BAR CHART
BAR POSITIONS NO.1 - NO.5

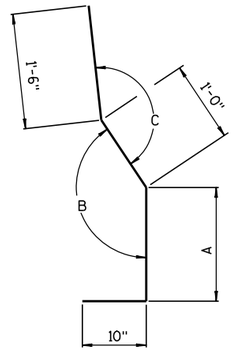
BAR	A
A1	90°
A2	89°-15'
A3	88°-50'
A4	88°-15'
A5	87°-50'



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS NO.1 - NO. 7

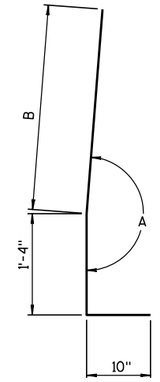
BAR	A	B	C
B1	1'-6"	146°-20'	152°-40'
B2	1'-6"	149°-25'	156°-35'
B3	1'-6"	152°-35'	160°-30'
B4	1'-5½"	155°-20'	163°-55'
B5	1'-5½"	158°-30'	167°-50'
B6	1'-5"	161°-45'	171°-50'
B7	1'-5"	164°-20'	175°-10'



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS NO. 6 - NO. 12

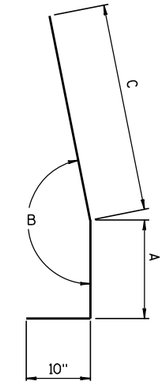
BAR	A	B
C6	176°	2'-6"
C7	175°-05'	2'-6"
C8	174°-25'	2'-6"
C9	173°-45'	2'-6¼"
C10	172°-50'	2'-6¼"
C11	172°-10'	2'-6½"
C12	171°-30'	2'-6½"



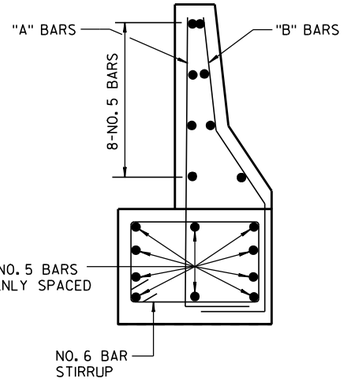
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS NO. 8 - NO. 12

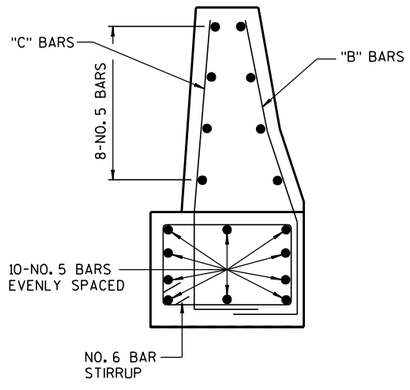
BAR	A	B	C
D8	1'-5"	168°-05'	2'-6"
D9	1'-5"	168°-50'	2'-6"
D10	1'-5"	169°-25'	2'-6"
D11	1'-4"	170°-10'	2'-6½"
D12	1'-4"	170°-50'	2'-6½"



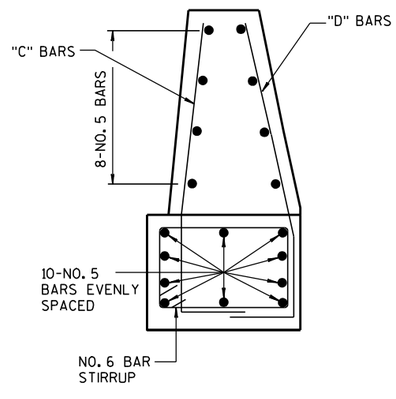
"D" BAR
BENDING DETAIL



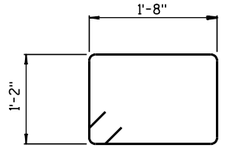
BAR DETAIL
BAR POSITIONS NO. 1 - NO. 5



BAR DETAIL
BAR POSITION NO. 6 - NO. 8



BAR DETAIL
BAR POSITIONS NO. 9 - NO. 12



STIRRUP BAR
BENDING DETAIL

32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

565

FHWA

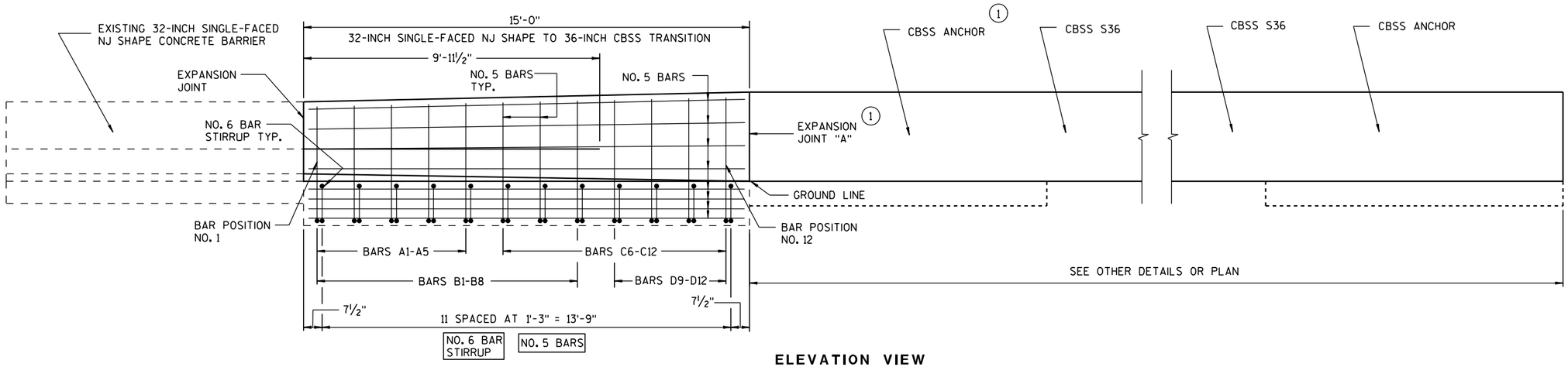
ENT

6

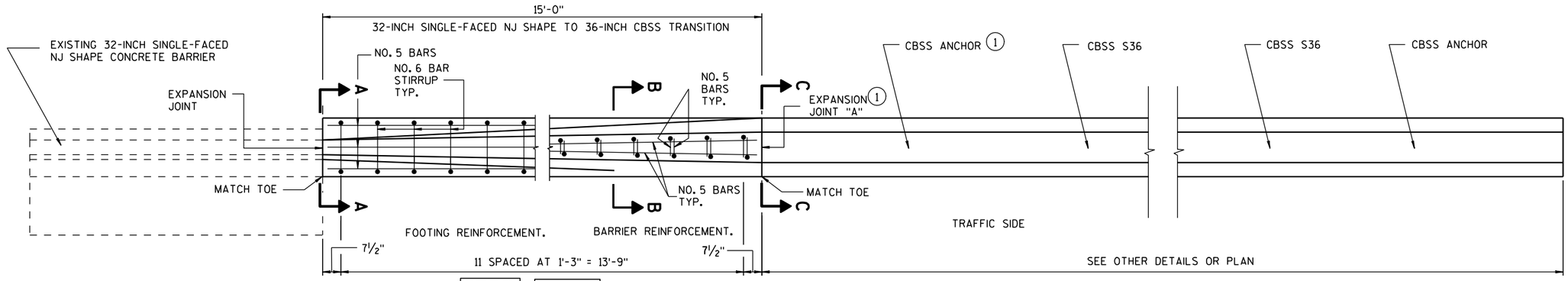
S.D.D. 14 B 35-1b

6

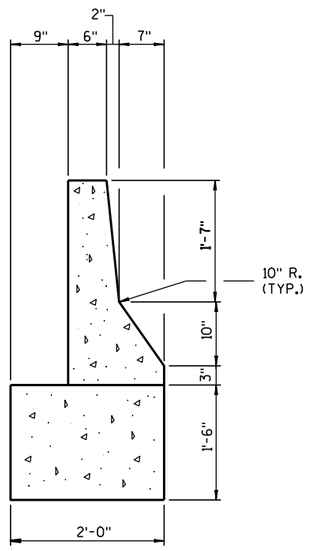
S.D.D. 14 B 35-1b



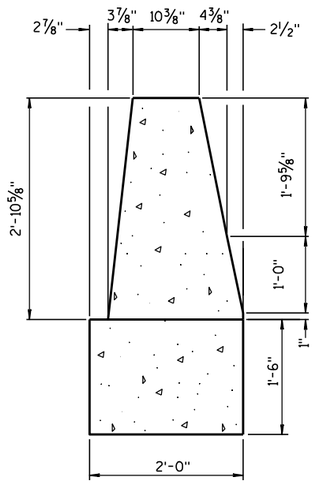
ELEVATION VIEW



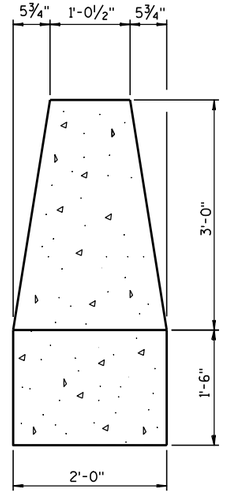
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

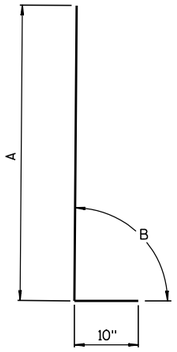
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

S.D.D. 14 B 35-1c

"A" BAR CHART
BAR POSITIONS NO.1 - NO.5

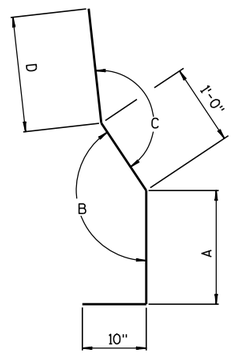
BAR	A	B
A1	3'-10"	89°-35'
A2	3'-10"	88°-40'
A3	3'-11"	87°-50'
A4	3'-11"	87°-10'
A5	3'-11½"	86°-15'



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS NO.1 - NO. 8

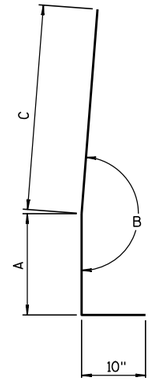
BAR	A	B	C	D
B1	1'-6"	146°-20'	152°-40'	1'-6"
B2	1'-6"	149°-25'	156°-45'	1'-6"
B3	1'-6"	152°-40'	160°-55'	1'-6½"
B4	1'-6"	155°-40'	164°-30'	1'-7"
B5	1'-5½"	158°-30'	167°-55'	1-'7"
B6	1'-5"	161°-45'	172°	1'-7½
B7	1'-5"	164°-25'	175°-05'	1'-8"
B8	1'-5"	167°-30'	179°	1'-8"



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS NO. 6 - NO. 12

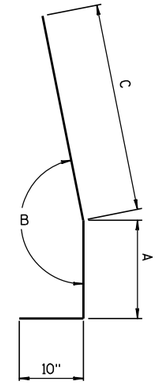
BAR	A	B	C
C6	1'-4"	175°-35'	2'-8"
C7	1'-4"	174°-45'	2'-8"
C8	1'-4"	174°	2'-8½"
C9	1'-4"	173°-15'	2'-9"
C10	1'-4"	172°-45'	2'-9½"
C11	1'-3½"	172°	2'-9½"
C12	1'-3½"	171°-15'	2'-10"



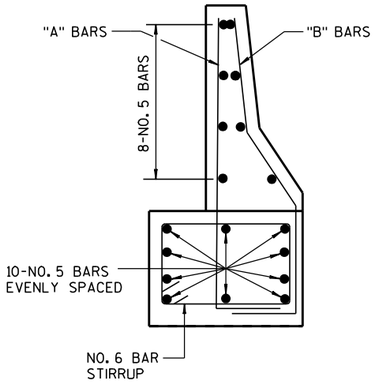
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS NO. 9 - NO. 12

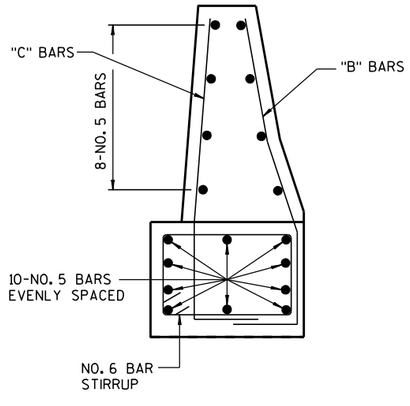
BAR	A	B	C
D9	1'-5"	168°-45'	2'-8½"
D10	1'-4½"	169°-30'	2'-9"
D11	1'-4"	170°-15'	2'-9½"
D12	1'-4"	170°-40'	2'-10"



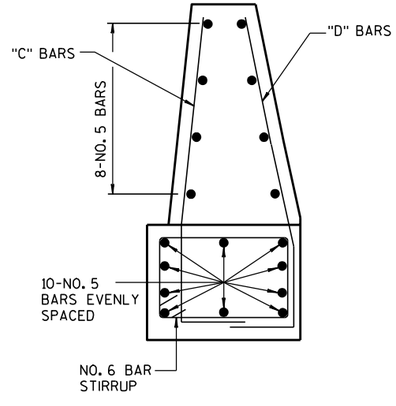
"D" BAR
BENDING DETAIL



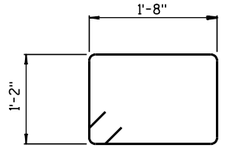
BAR DETAIL
BAR POSITIONS NO. 1 - NO. 5



BAR DETAIL
BAR POSITION NO. 6 - NO. 8



BAR DETAIL
BAR POSITIONS NO. 9 - NO. 12



STIRRUP BAR
BENDING DETAIL

32-INCH SINGLE-FACED NJ SHAPE
CONCRETE BARRIER TO 36-INCH SINGLE
SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

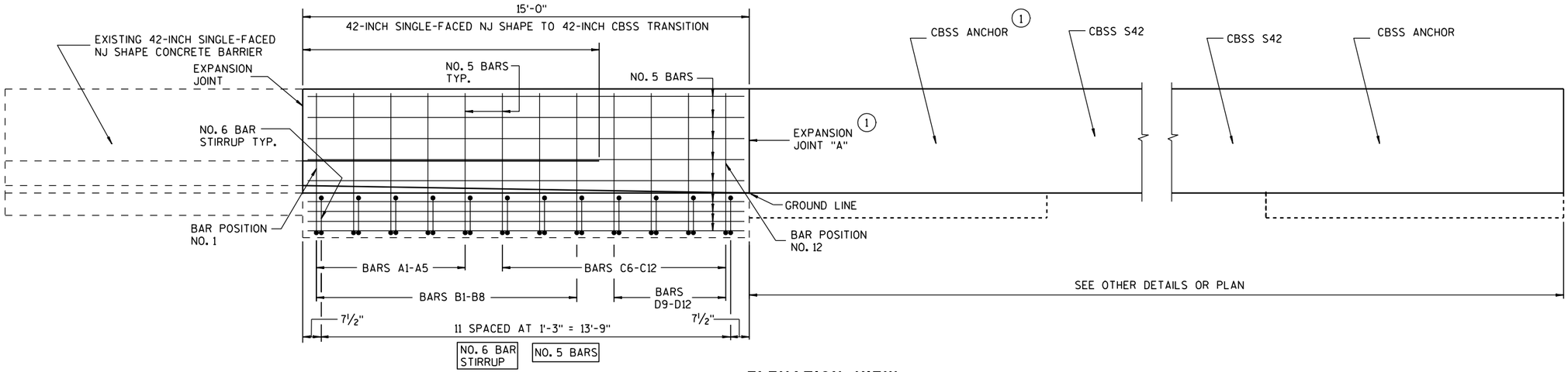
APPROVED
6-3-2010
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

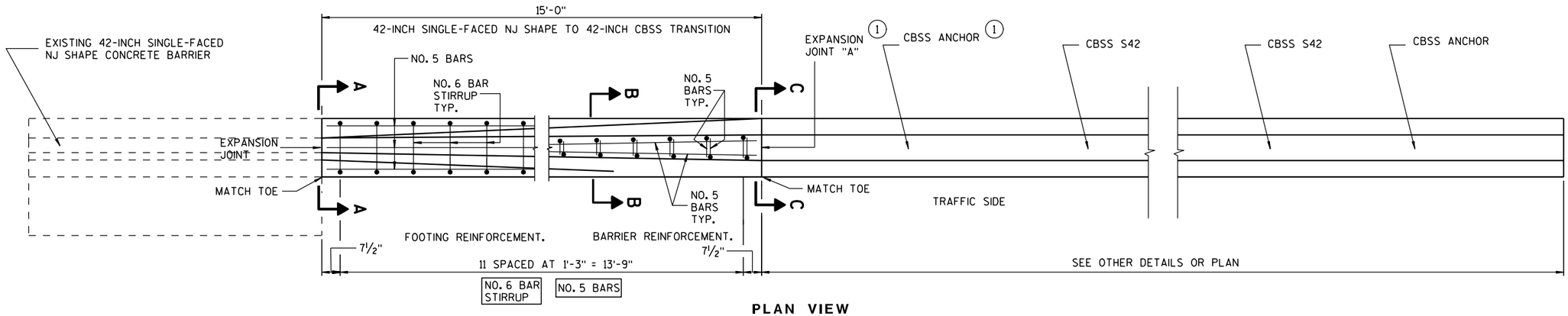
S.D.D. 14 B 35-1d

6

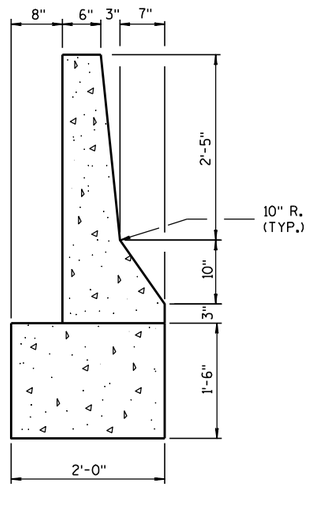
S.D.D. 14 B 35-1d



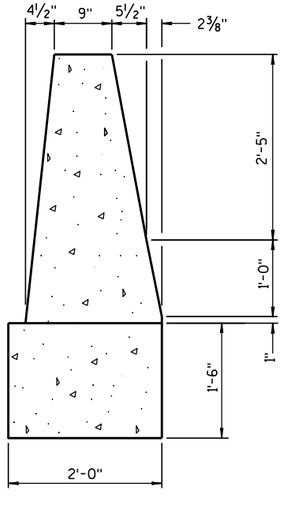
ELEVATION VIEW



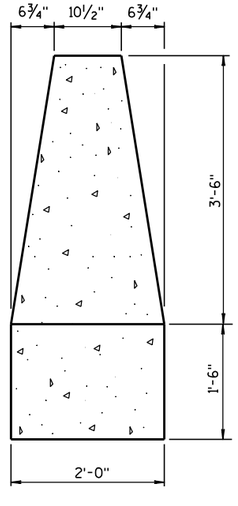
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

42-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 42-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

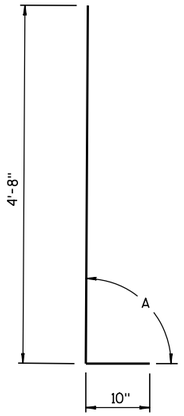
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 35-1e

"A" BAR CHART
BAR POSITIONS NO.1 - NO.5

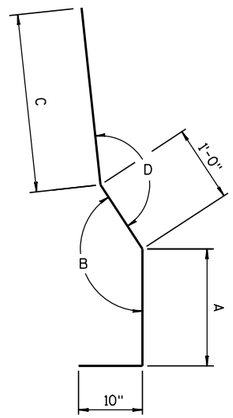
BAR	A
A1	89°-40'
A2	89°-05'
A3	88°-30'
A4	88°-05'
A5	87°-35'



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS NO.1 - NO. 8

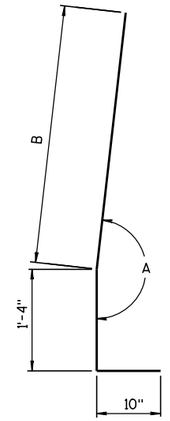
BAR	A	B	C	D
B1	1'-6"	146°-50'	2'-3 7/8"	152°-55'
B2	1'-6"	150°-30'	2'-3 1/2"	157°-20'
B3	1'-6"	152°-40'	2'-3 1/2"	160°
B4	1'-6"	155°-20'	2'-3 1/2"	163°-10'
B5	1'-5 1/2"	158°-30'	2'-3 1/2"	167°-05'
B6	1'-5 1/4"	161°-10'	2'-4"	170°-30'
B7	1'-5"	164°-55'	2'-4"	174°-45'
B8	1'-5"	167°-30'	2'-3 1/2"	176°-50'



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS NO. 6 - NO. 12

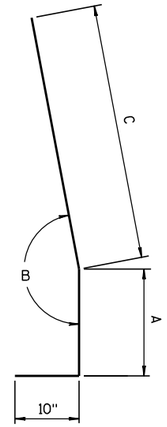
BAR	A	B
C6	175°-45'	3'-4 1/4"
C7	174°-55'	3'-4 1/4"
C8	175°-05'	3'-4 1/4"
C9	173°-35'	3'-4 1/4"
C10	172°-40'	3'-4 1/2"
C11	171°-50'	3'-4 1/2"
C12	171°-15'	3'-4 1/2"



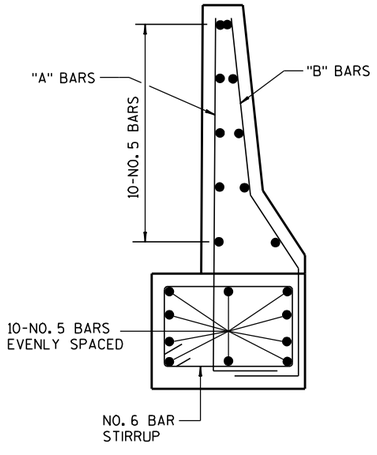
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS NO. 9 - NO. 12

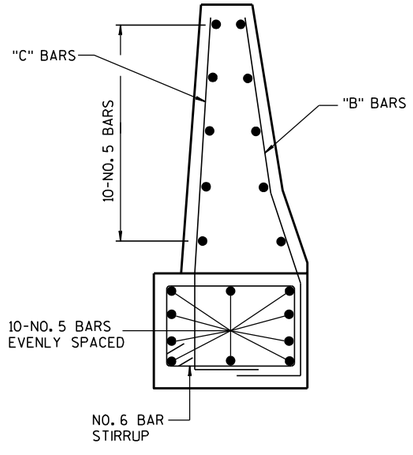
BAR	A	B	C
D9	1'-4 1/2"	169°-20'	3'-4"
D10	1'-4 1/2"	169°-55'	3'-4"
D11	1'-4 1/2"	170°-15'	3'-4 1/4"
D12	1'-4"	170°-30'	3'-4 1/2"



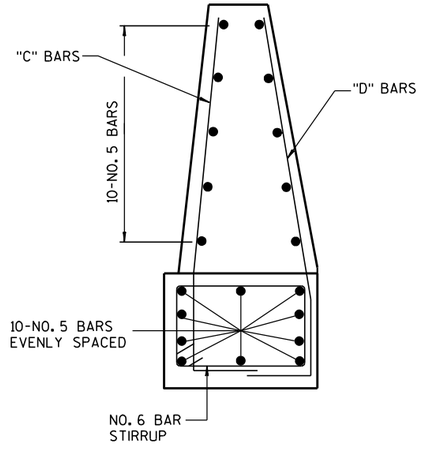
"D" BAR
BENDING DETAIL



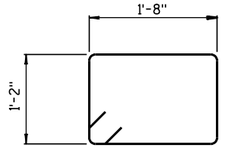
BAR DETAIL
BAR POSITIONS NO. 1 - NO. 5



BAR DETAIL
BAR POSITION NO. 6 - NO. 8



BAR DETAIL
BAR POSITIONS NO. 9 - NO. 12



STIRRUP BAR
BENDING DETAIL

42-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 42-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

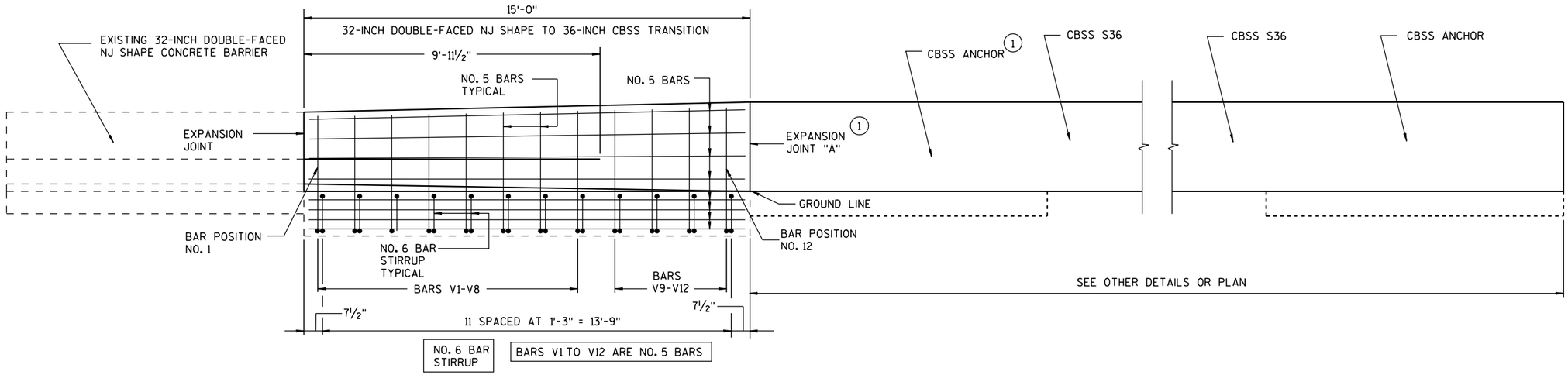
6-3-2010
DATE

/S/ Jerry H. Zoss
ROADWAY STANDARDS DEVELOPMENT ENGINEER

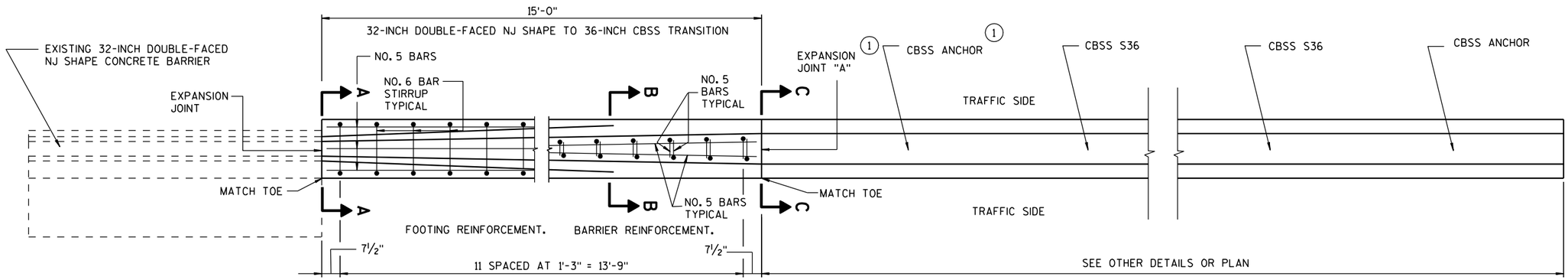
FHWA

S.D.D. 14 B 35-1f

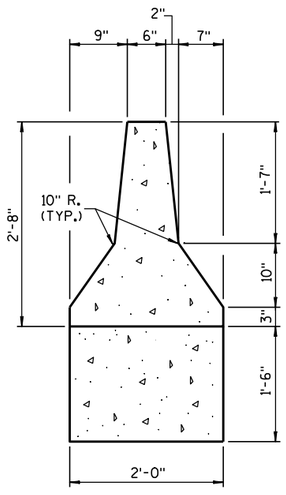
6



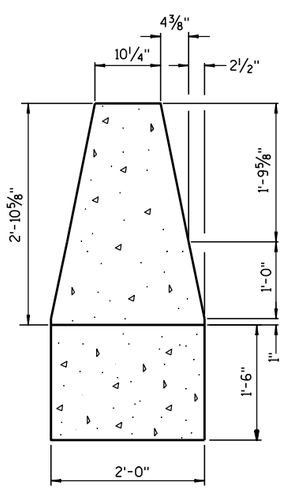
ELEVATION VIEW



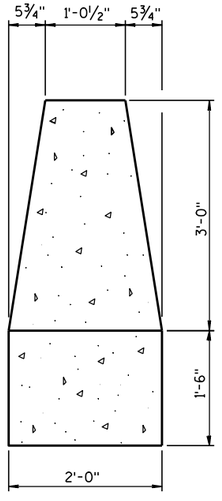
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

32-INCH DOUBLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

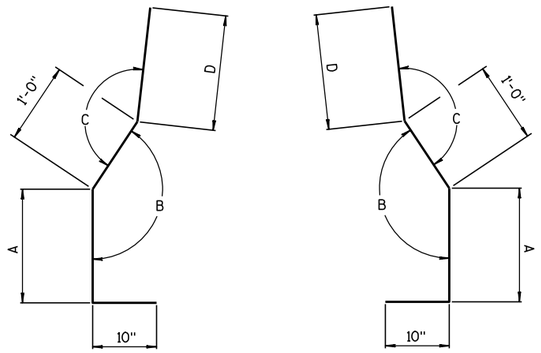
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 37-1c

BAR CHART
BARS V1 - V8

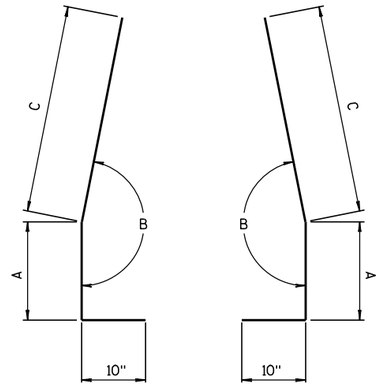
BAR	A	B	C	D
V1	1'-6"	146°-20'	152°-40'	1'-6"
V2	1'-6"	149°-25'	156°-45'	1'-6"
V3	1'-6"	152°-40'	160°-55'	1'-6½"
V4	1'-6"	155°-40'	164°-30'	1'-7"
V5	1'-5½"	158°-30'	167°-55'	1'-7"
V6	1'-5"	161°-45'	172°	1'-7½
V7	1'-5"	164°-25'	175°-05'	1'-8"
V8	1'-5"	167°-30'	179°	1'-8"



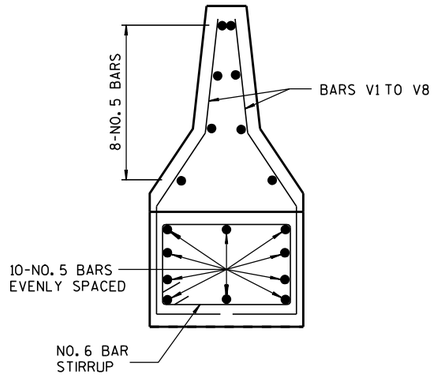
BAR BENDING DETAIL
FOR BARS V1 - V8

BAR CHART
BARS V9 - V12

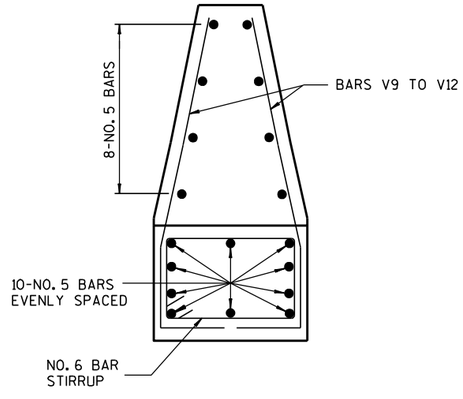
BAR	A	B	C
V9	1'-5"	167°-45'	2'-8½"
V10	1'-4½"	169°-30'	2'-9"
V11	1'-4"	170°-15'	2'-9½"
V12	1'-4"	170°-40'	2'-10"



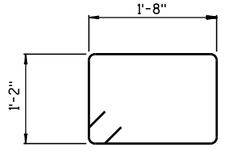
BAR BENDING DETAIL
FOR BARS V9 - V12



BAR DETAIL
BARS V1 - V8



BAR DETAIL
BARS V9 - V12



STIRRUP BAR
BENDING DETAIL

32-INCH DOUBLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

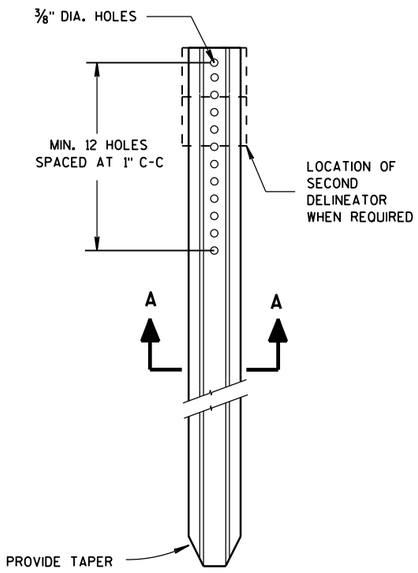
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

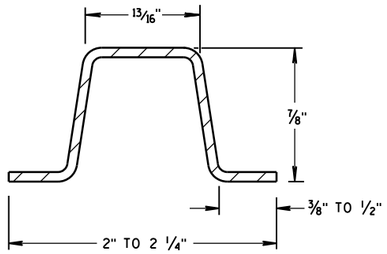
ENT

6

S.D.D. 14 B 37-1d

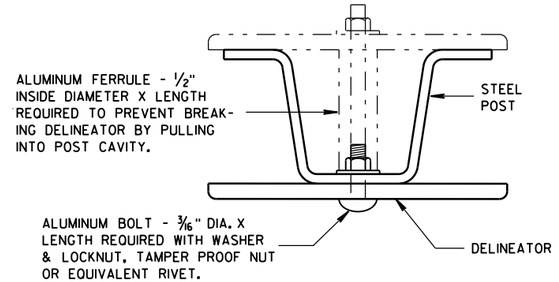


DELINEATOR POST

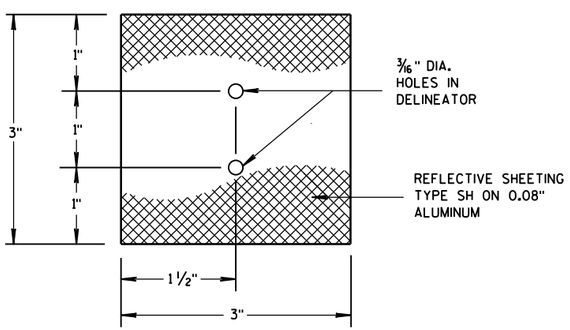


SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

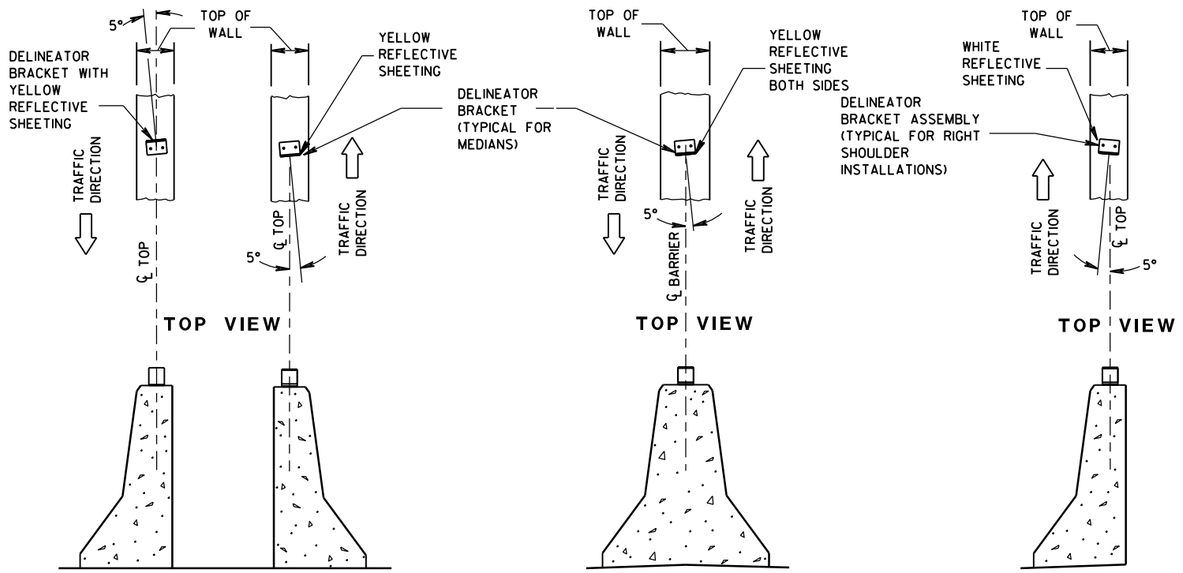


MOUNTING DETAIL FOR DELINEATOR



3"x 3" DELINEATOR

TYPICAL INSTALLATIONS OF DELINEATOR POSTS



DOUBLE BARRIERS IN MEDIAN

MEDIAN BARRIER

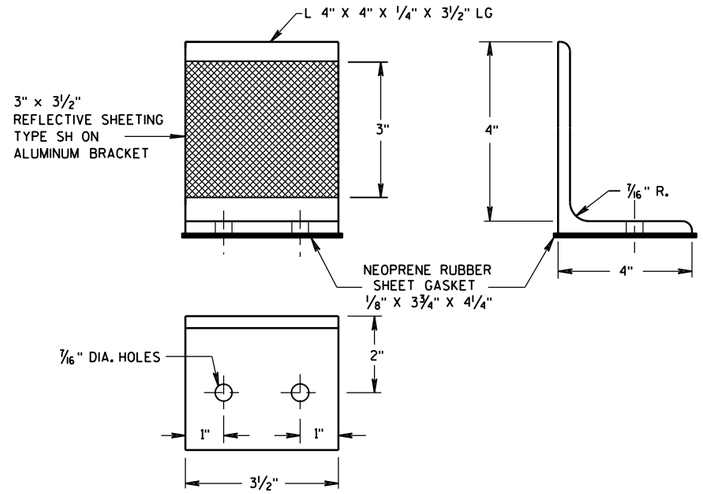
BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS

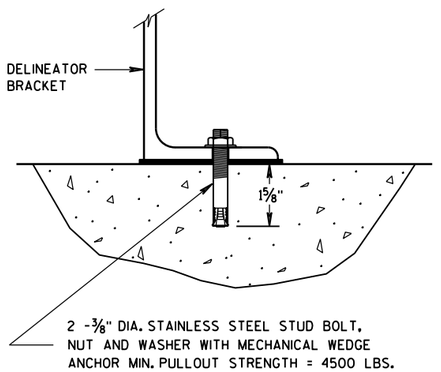
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



DELINEATOR BRACKET



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

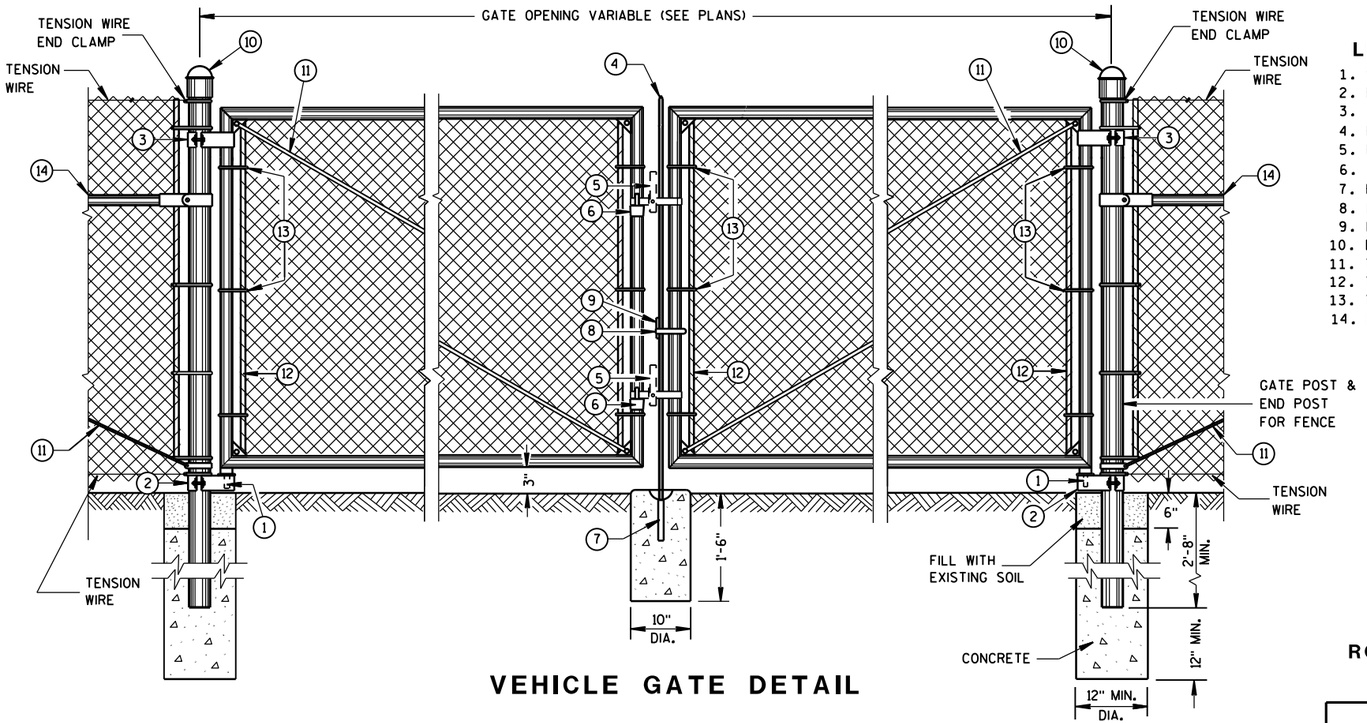
APPROVED
7/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E572
FHWA

6

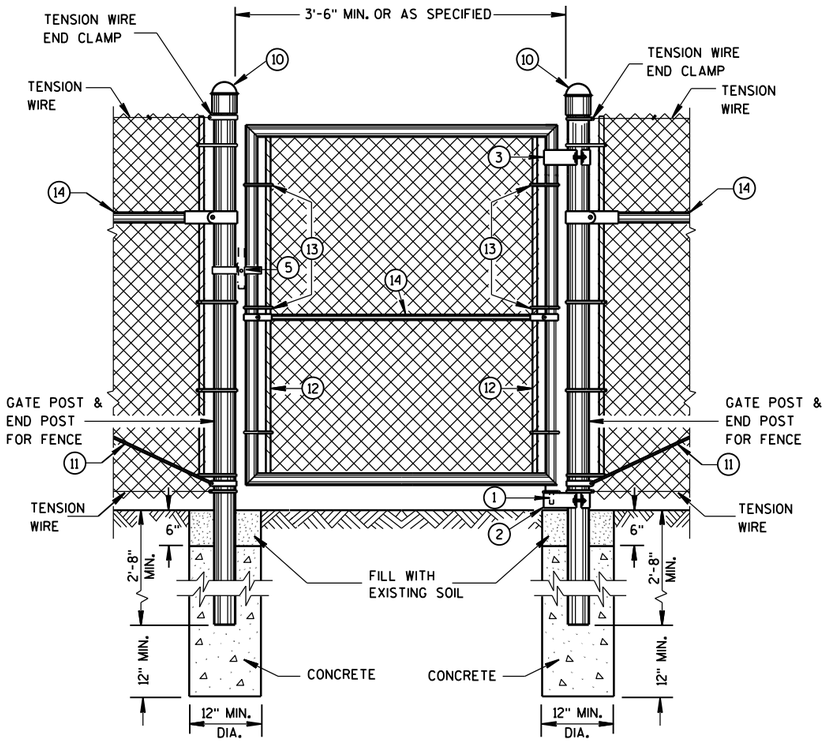
S.D.D. 15 A 2-8

6

S.D.D. 15 A 2-8



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

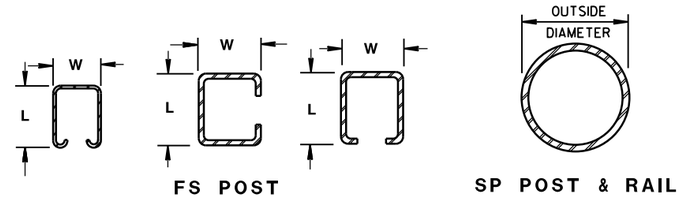
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



FS POST

SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

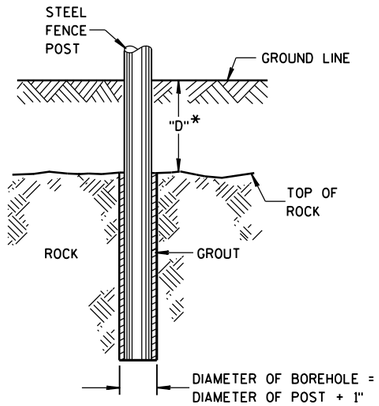
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

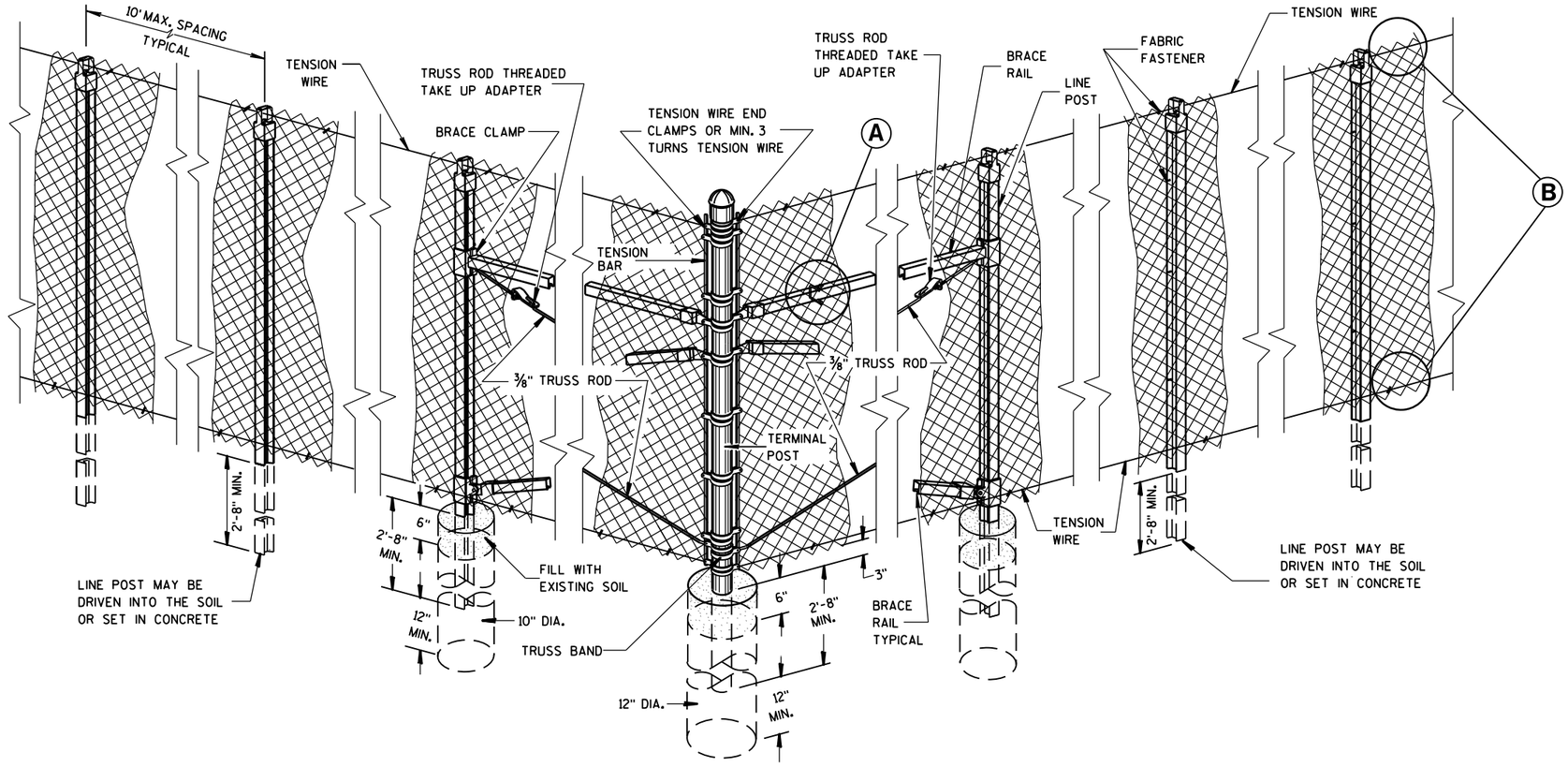
6

S.D.D. 15 B 3-15a

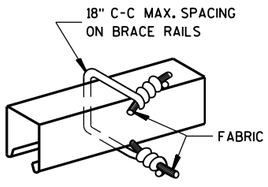


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



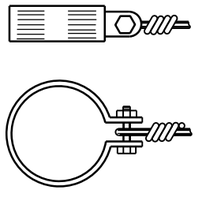
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



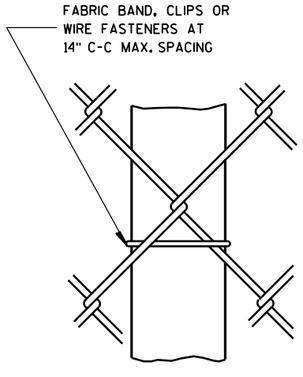
BRACE RAIL

FABRIC FASTENER

Ⓐ



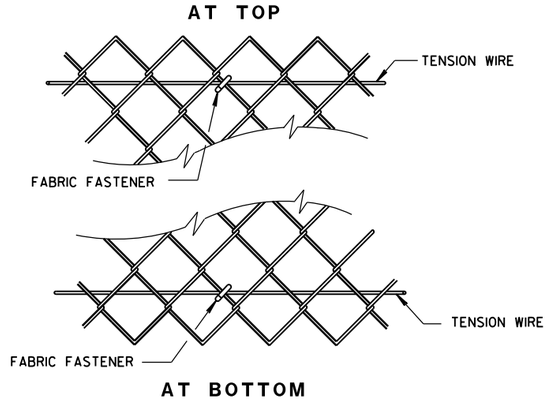
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

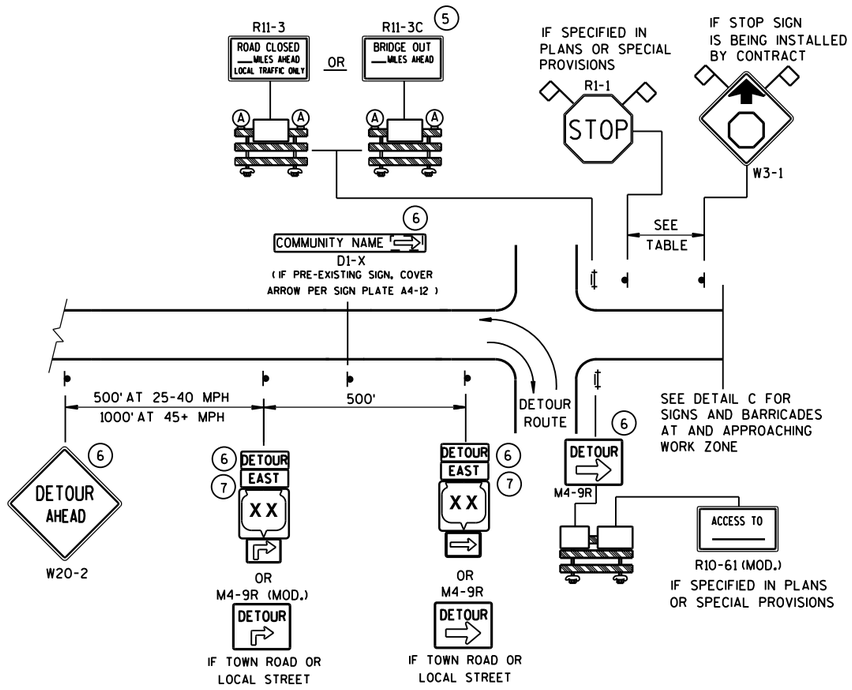
Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

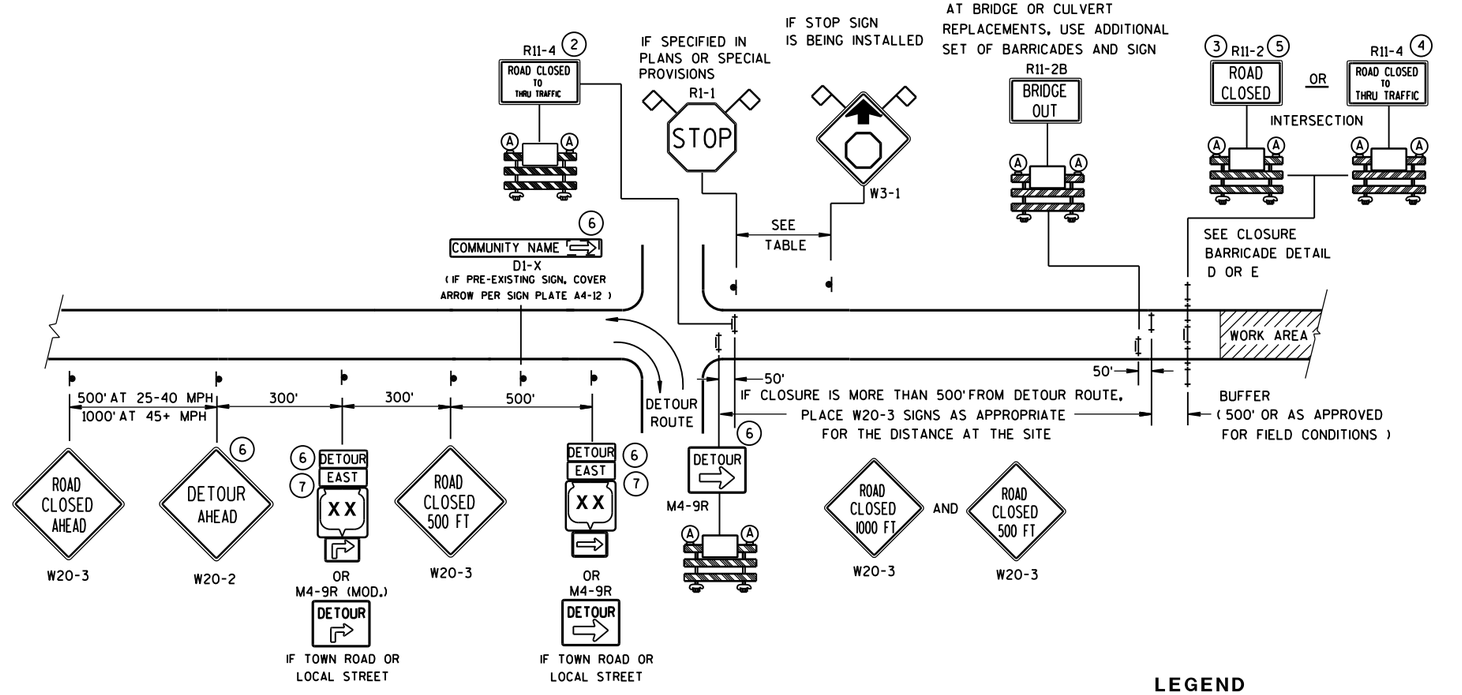
APPROVED
FEB. 2015 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 15 B 3-15b



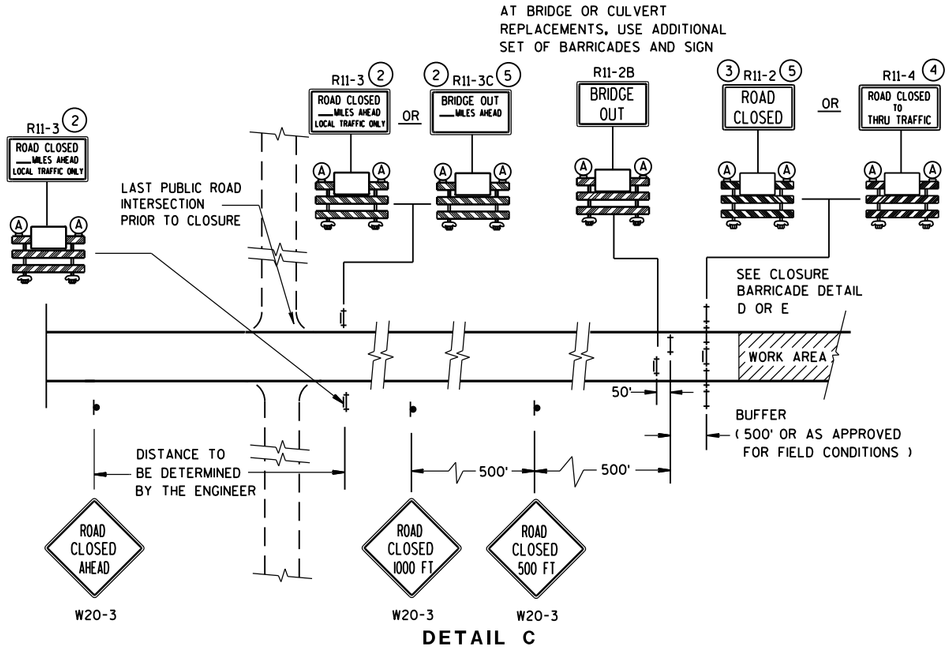
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE

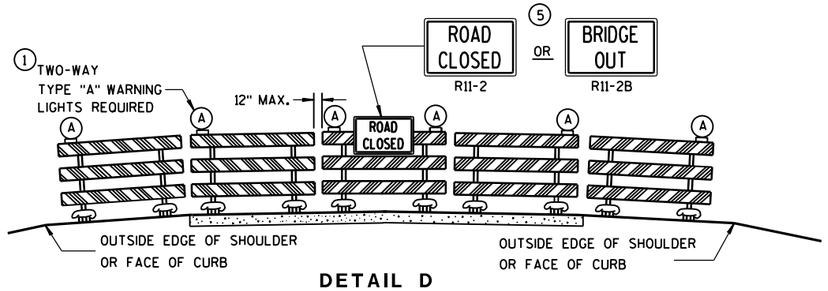
/S/ Travis Feltes
STATE TRAFFIC ENGINEER

575

FHWA

6

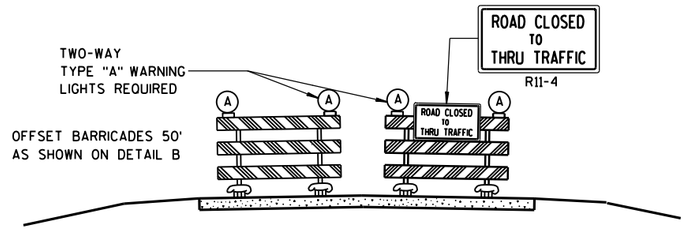
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 2-5b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

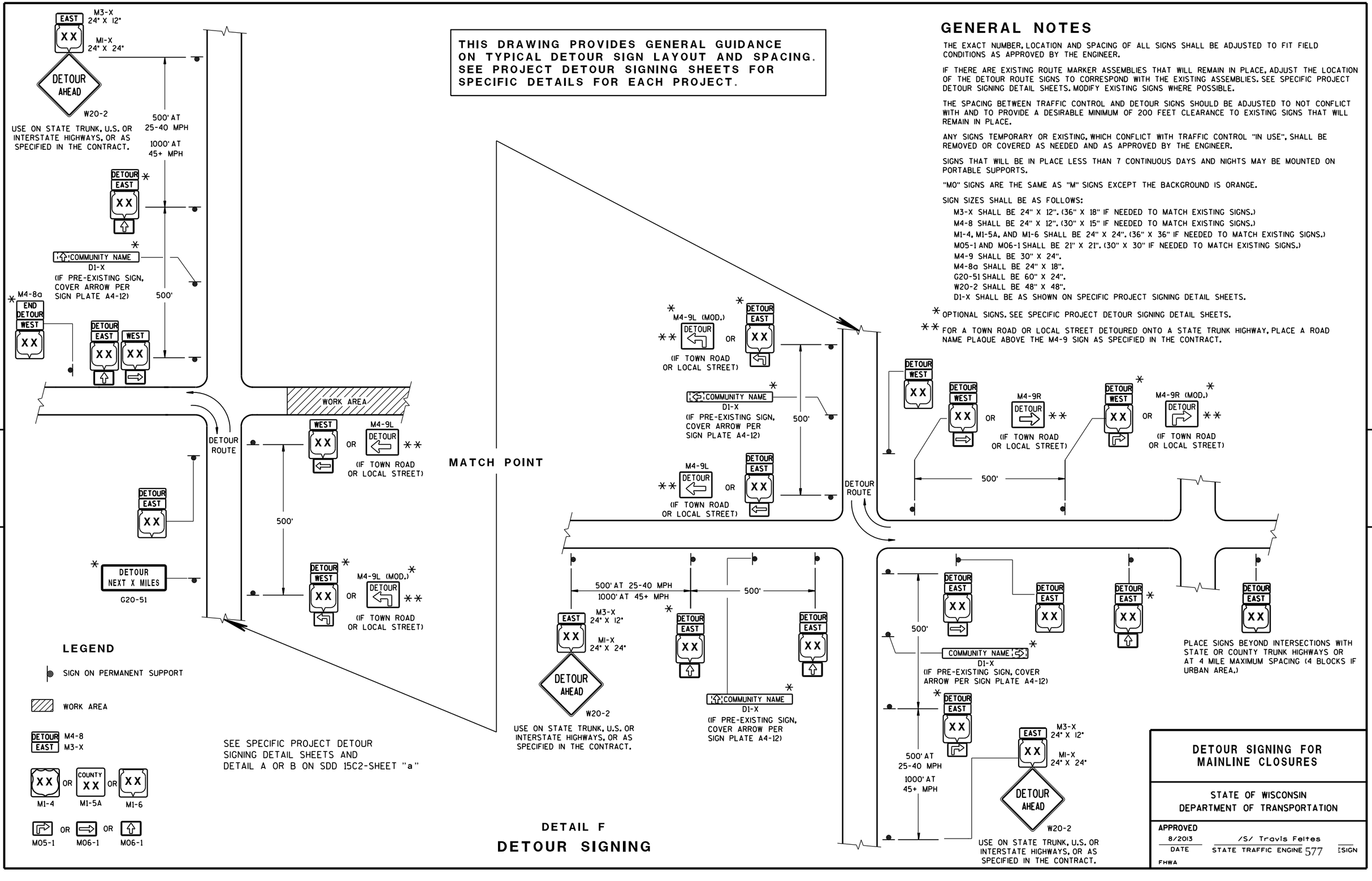
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST — M4-8, M3-X
- XX OR COUNTY XX OR XX — M1-4, M1-5A, M1-6
- M05-1 OR M06-1 OR M06-1

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

DETOUR SIGNING

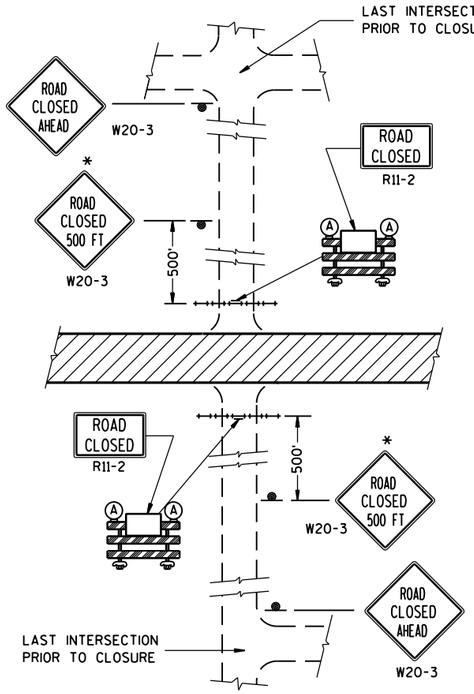
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

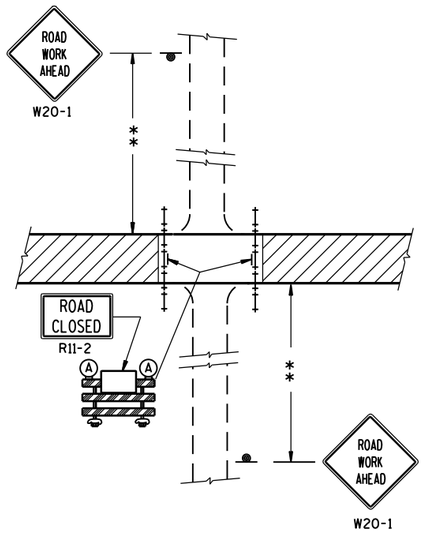
S.D.D. 15 C 2-5c

6



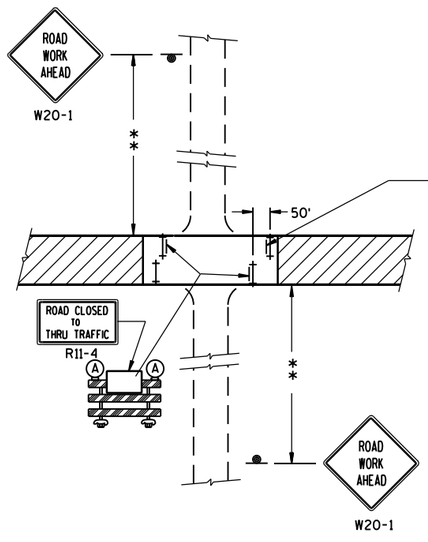
DETAIL 1

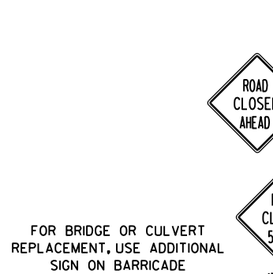
(NO ACCESS TO PROJECT)



DETAIL 2

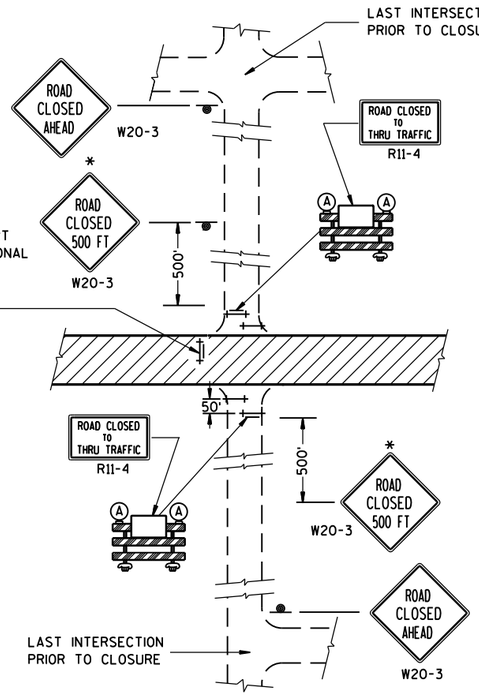
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

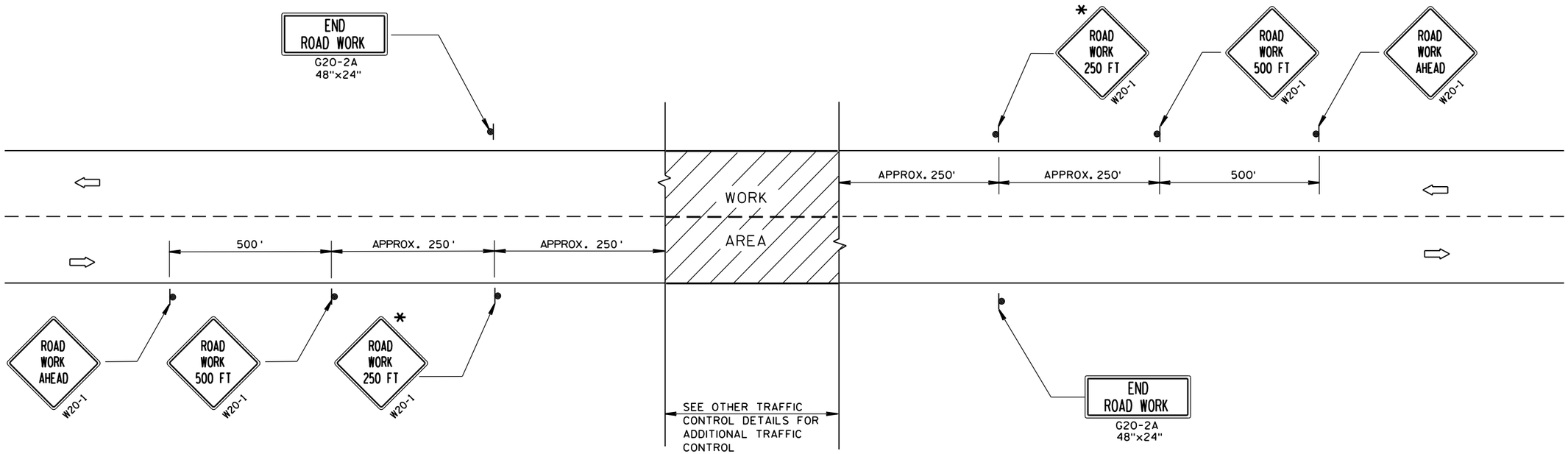
APPROVED
8/2013
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
DESIGN
FHWA

6

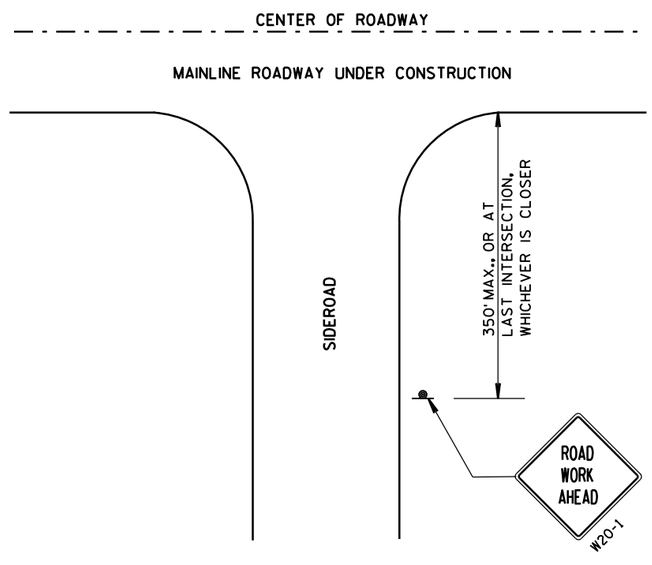
S.D.D. 15 C 3-2

6

S.D.D. 15 C 3-2



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

579 — SIGN

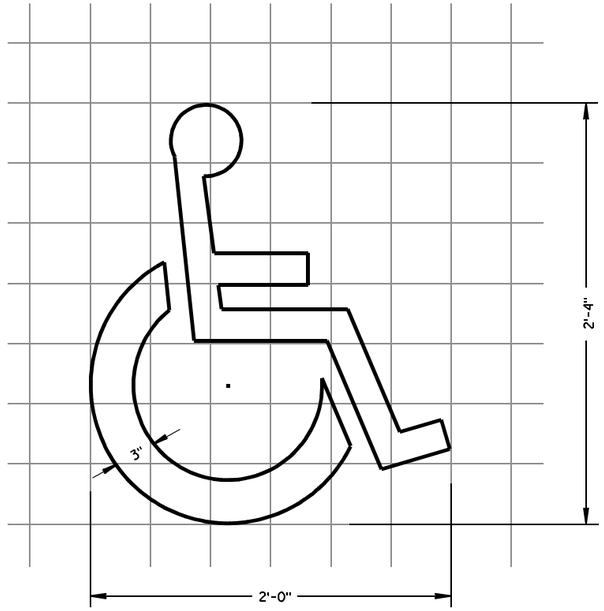
FHWA

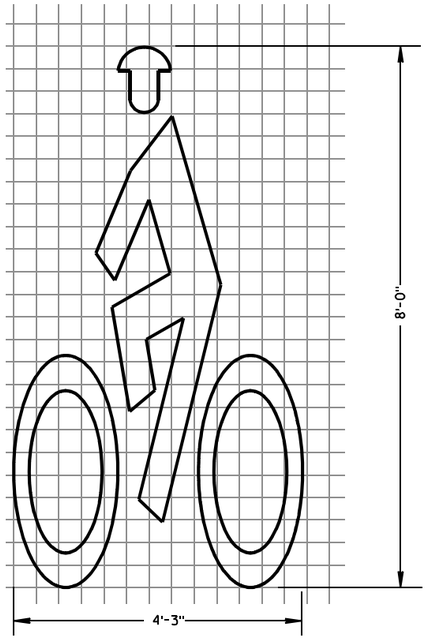
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

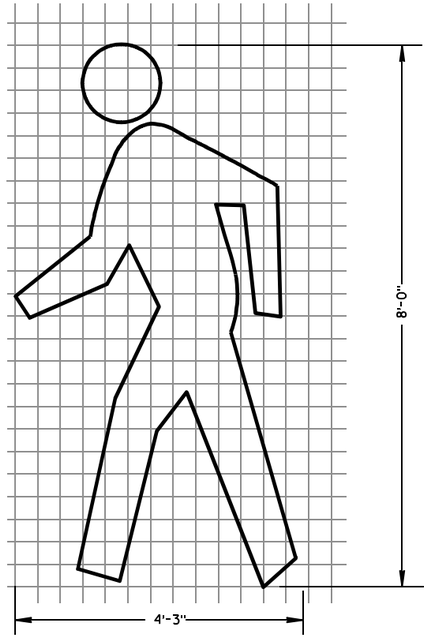
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

A DETAILED DRAWING OF THE HANDICAPPED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.

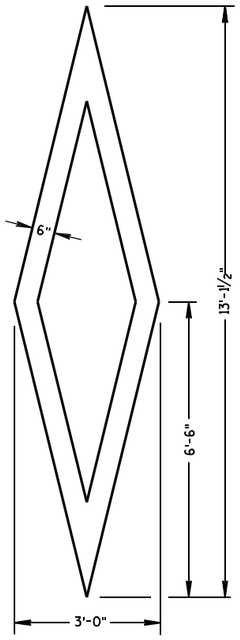




BIKE CROSSING SYMBOL



PEDESTRIAN SYMBOL



PREFERENTIAL LANE SYMBOL

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N Nathan — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 7-12a

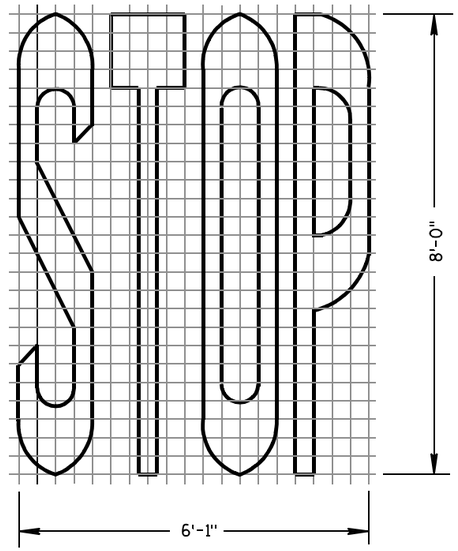
6

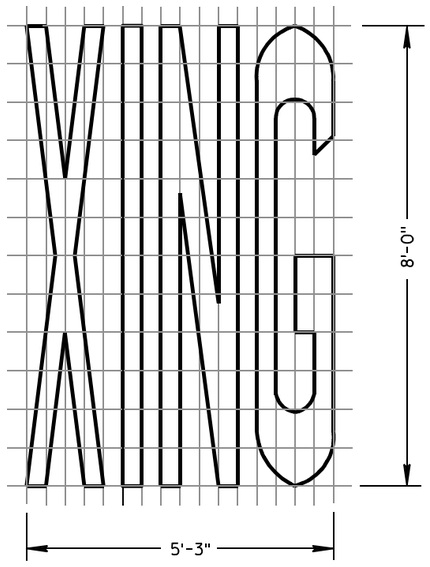
S.D.D. 15 C 7-12a

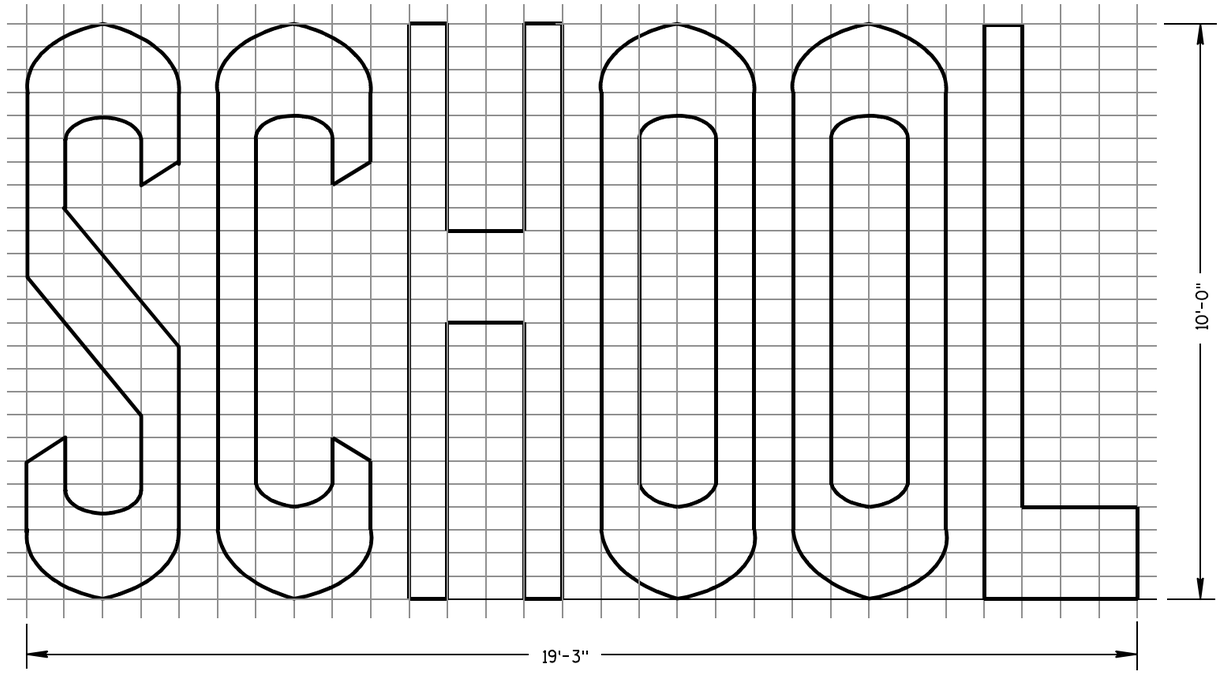
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

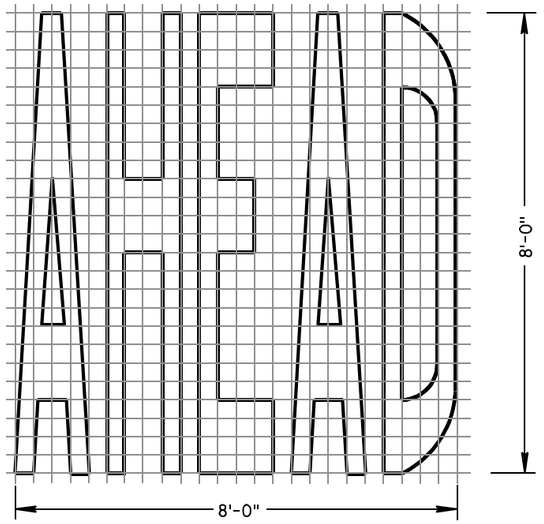
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

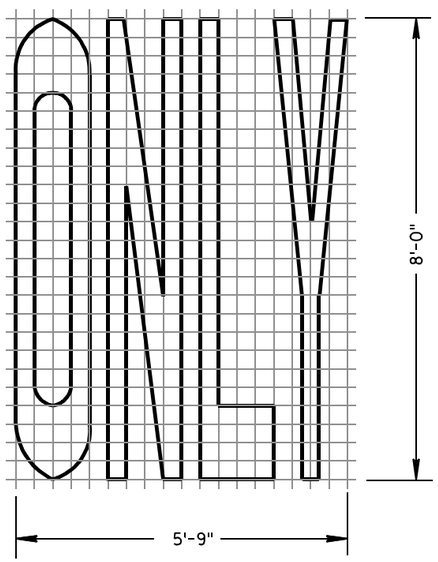


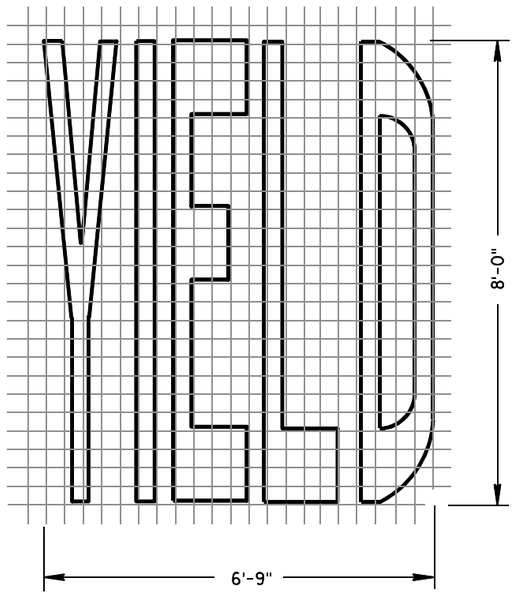


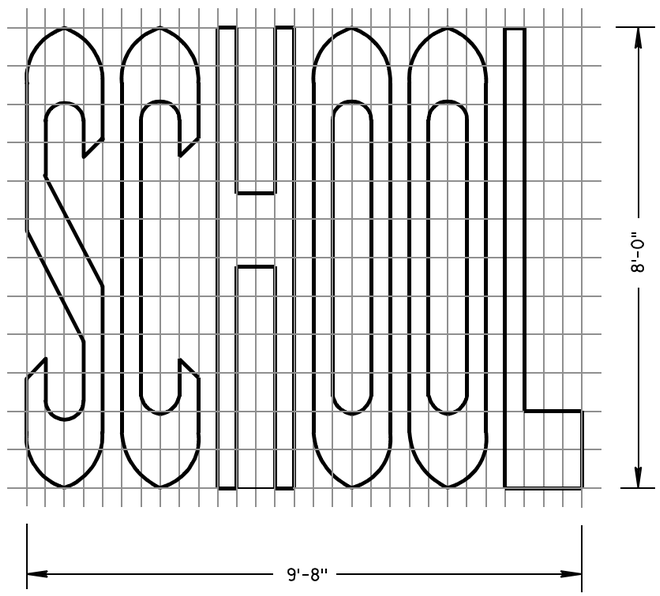


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 — DATE

/S/ Thomas N. Nothohm — STATE TRAFFIC ENGINEER

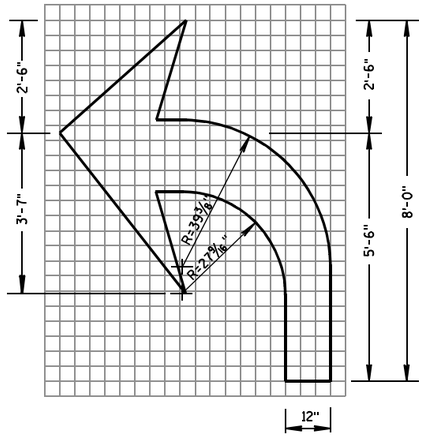
FHWA

6

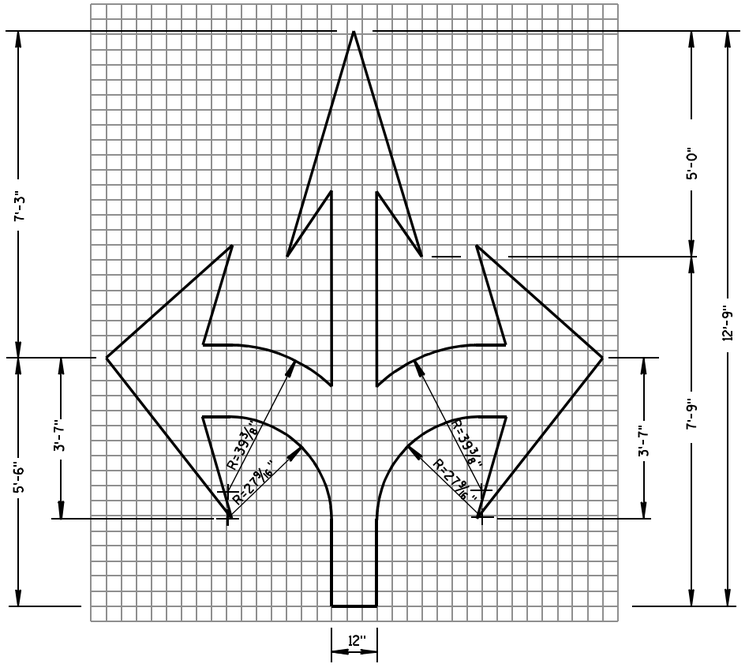
S.D.D. 15 C 7-12b

6

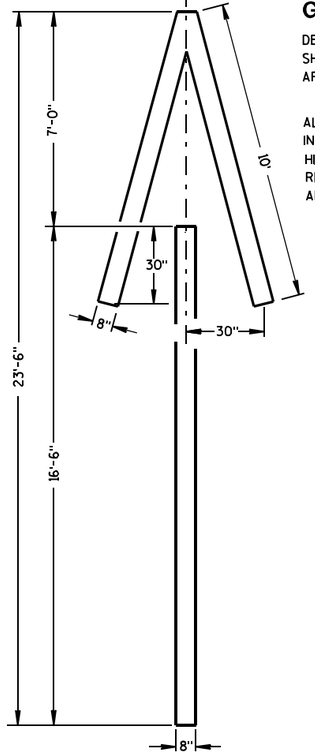
S.D.D. 15 C 7-12b



TYPE 2



TYPE 6

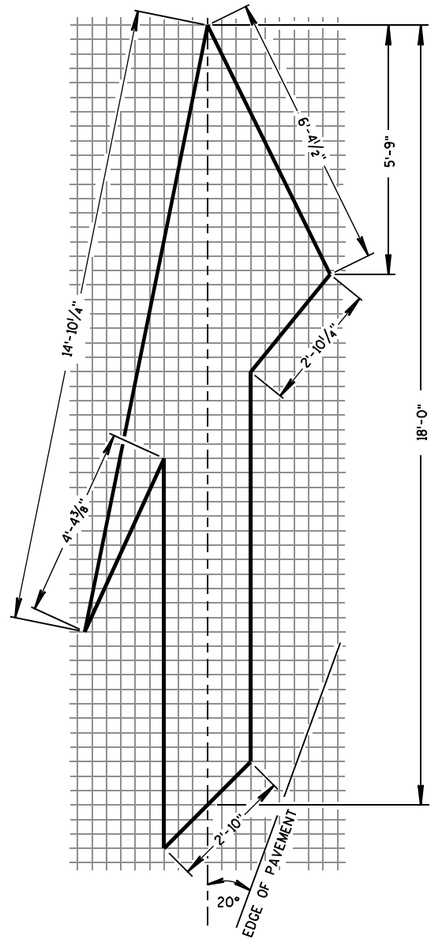


TYPE 4

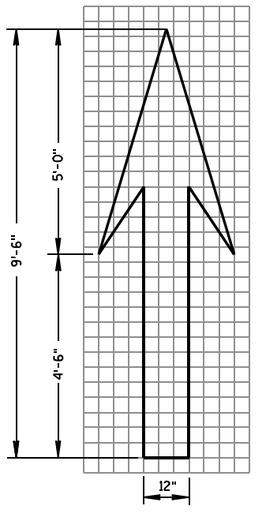
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

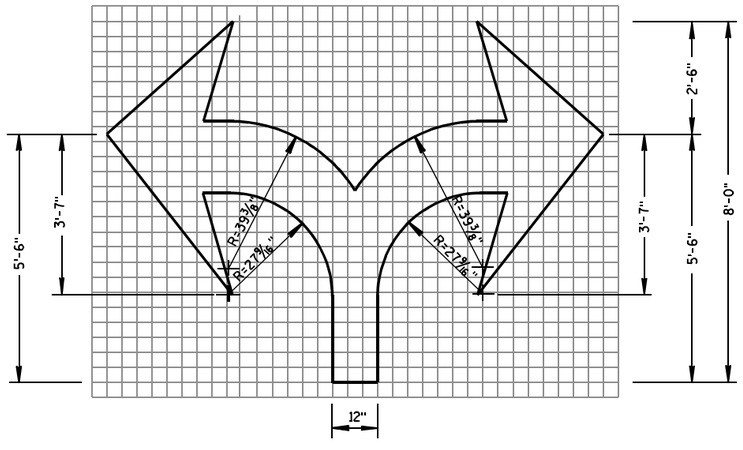
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



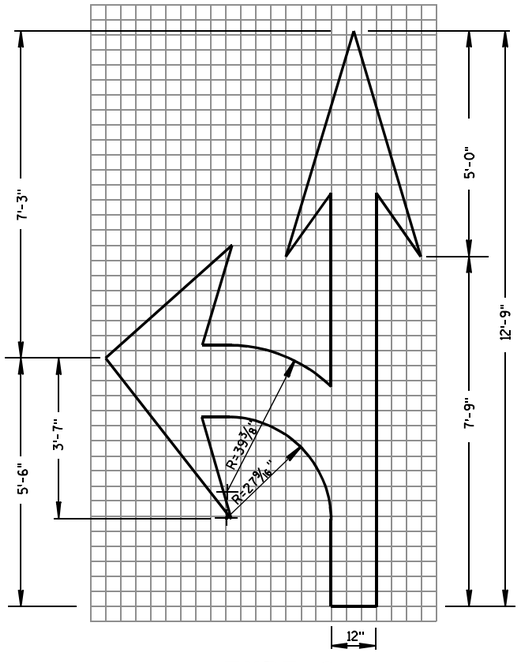
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

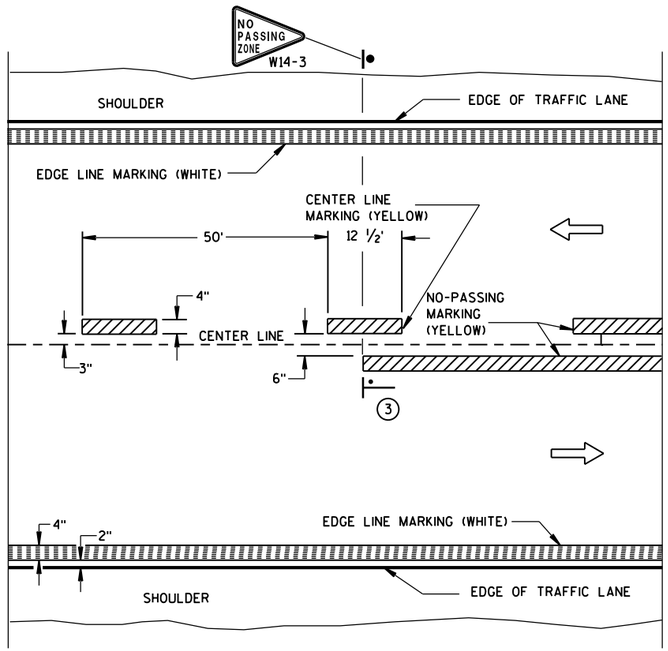
PAVEMENT MARKING ARROWS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7/1/11 DATE	/S/ Thomas N. Nothdurft STATE TRAFFIC ENGINEER
FHWA	

6

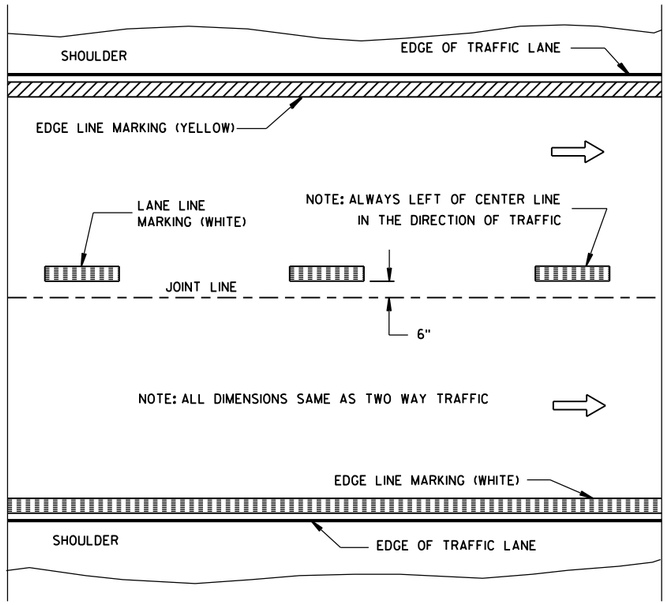
S.D.D. 15 C 7-12c

6

S.D.D. 15 C 7-12c

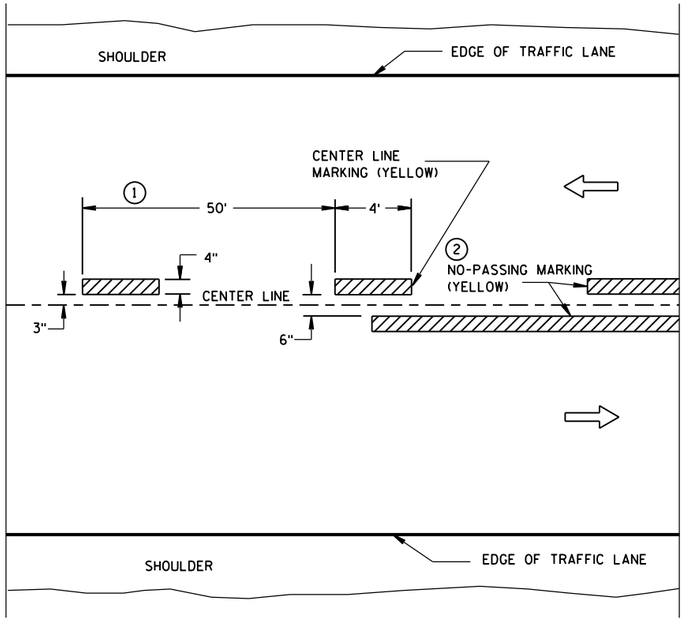


TWO WAY TRAFFIC

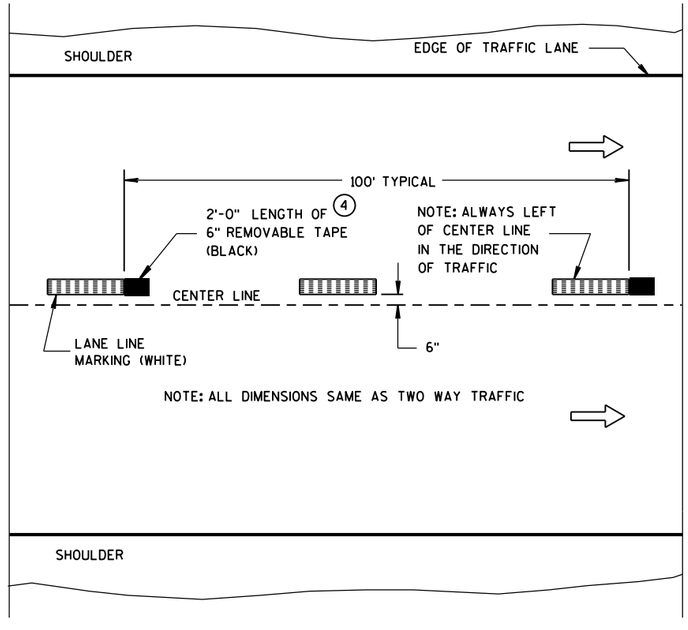


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

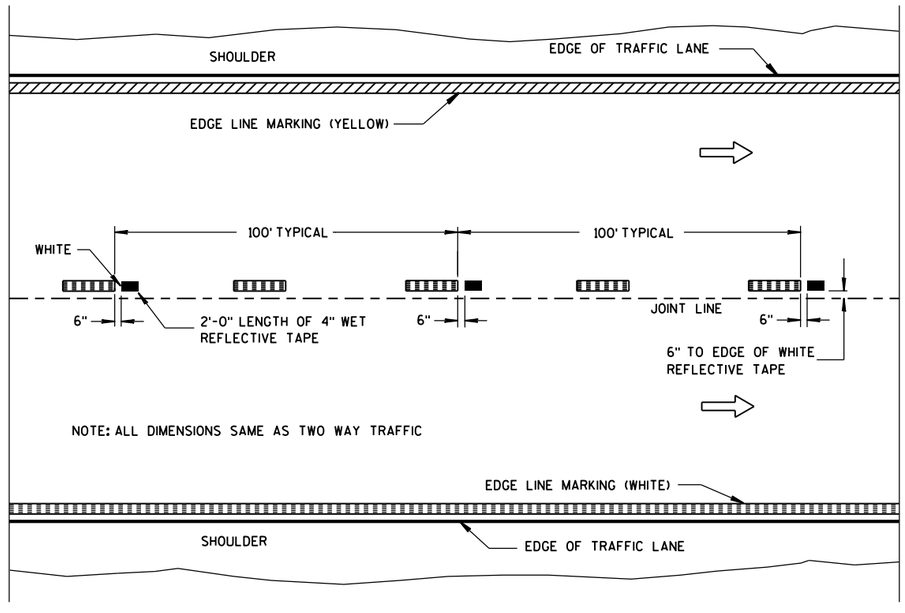
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

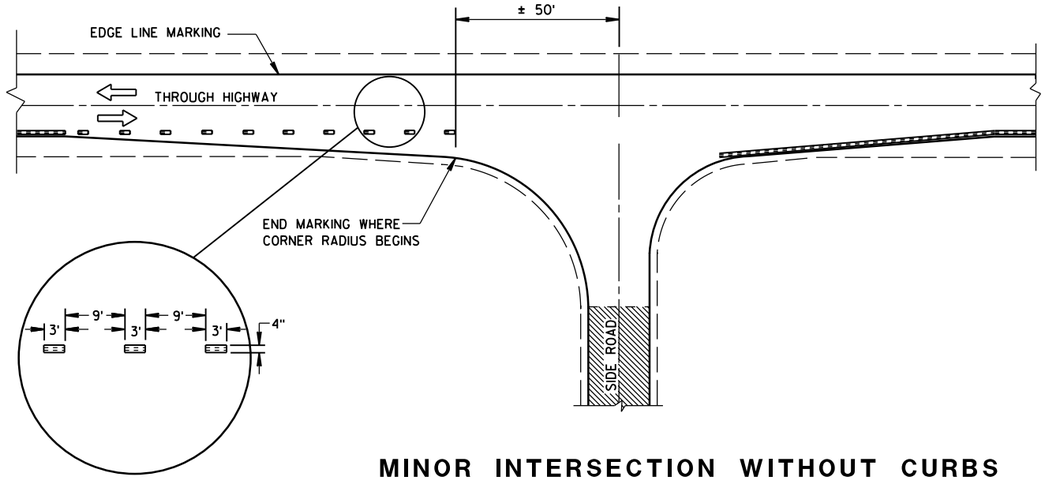
583

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

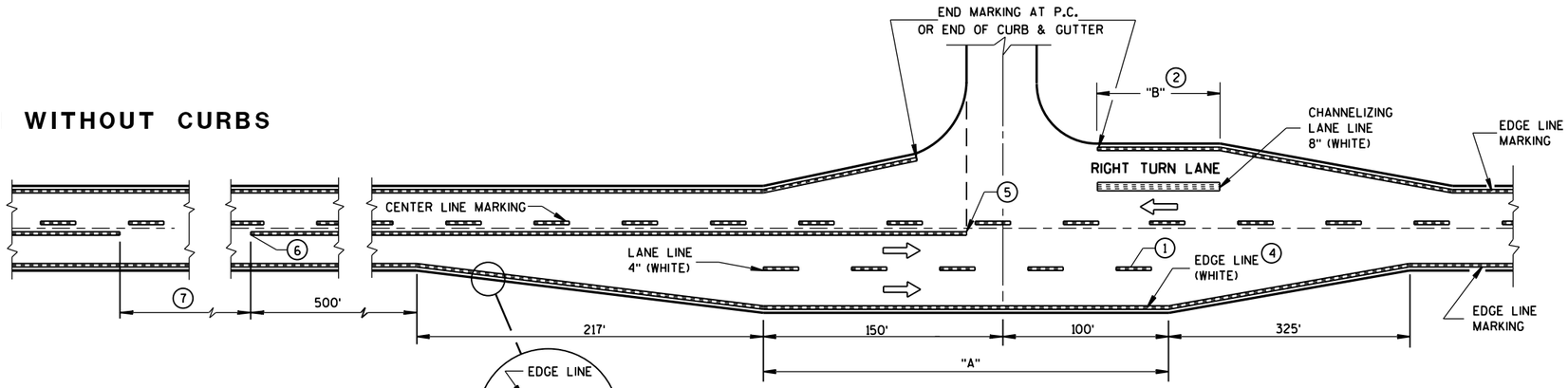
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

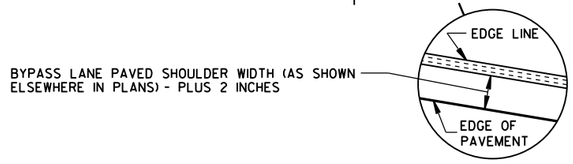
(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

(7)

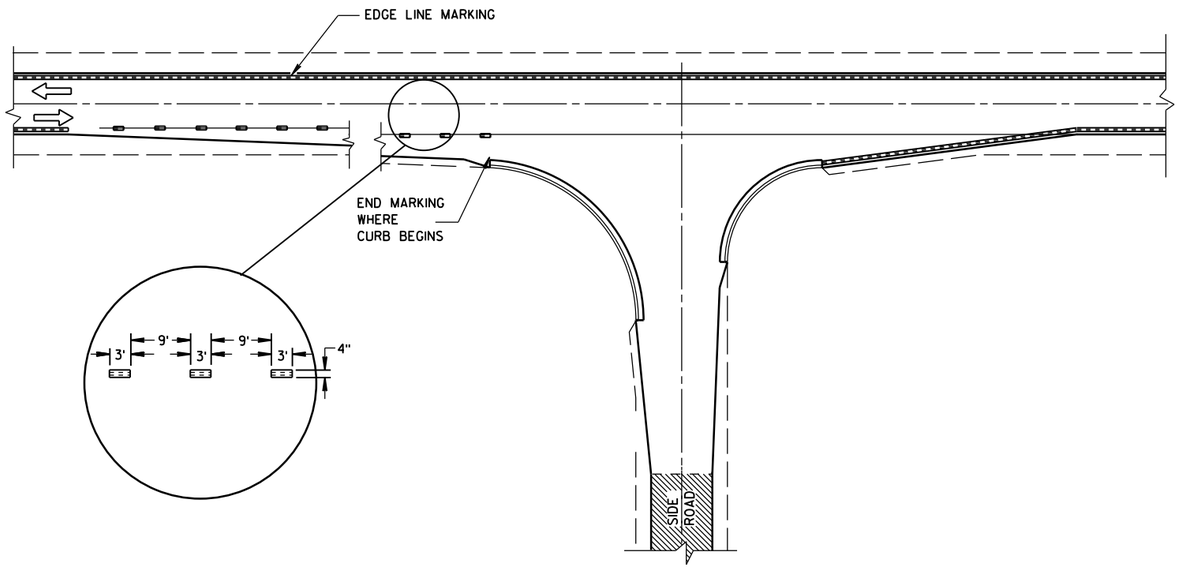
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792





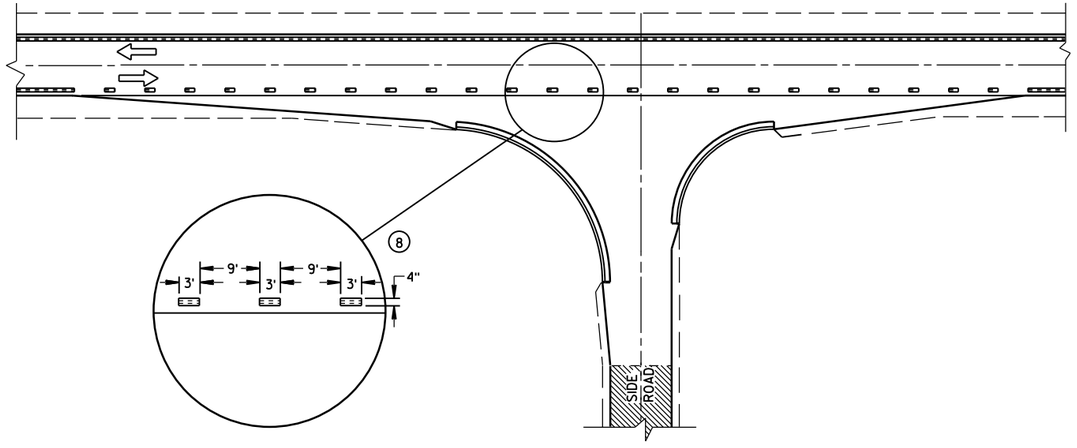
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

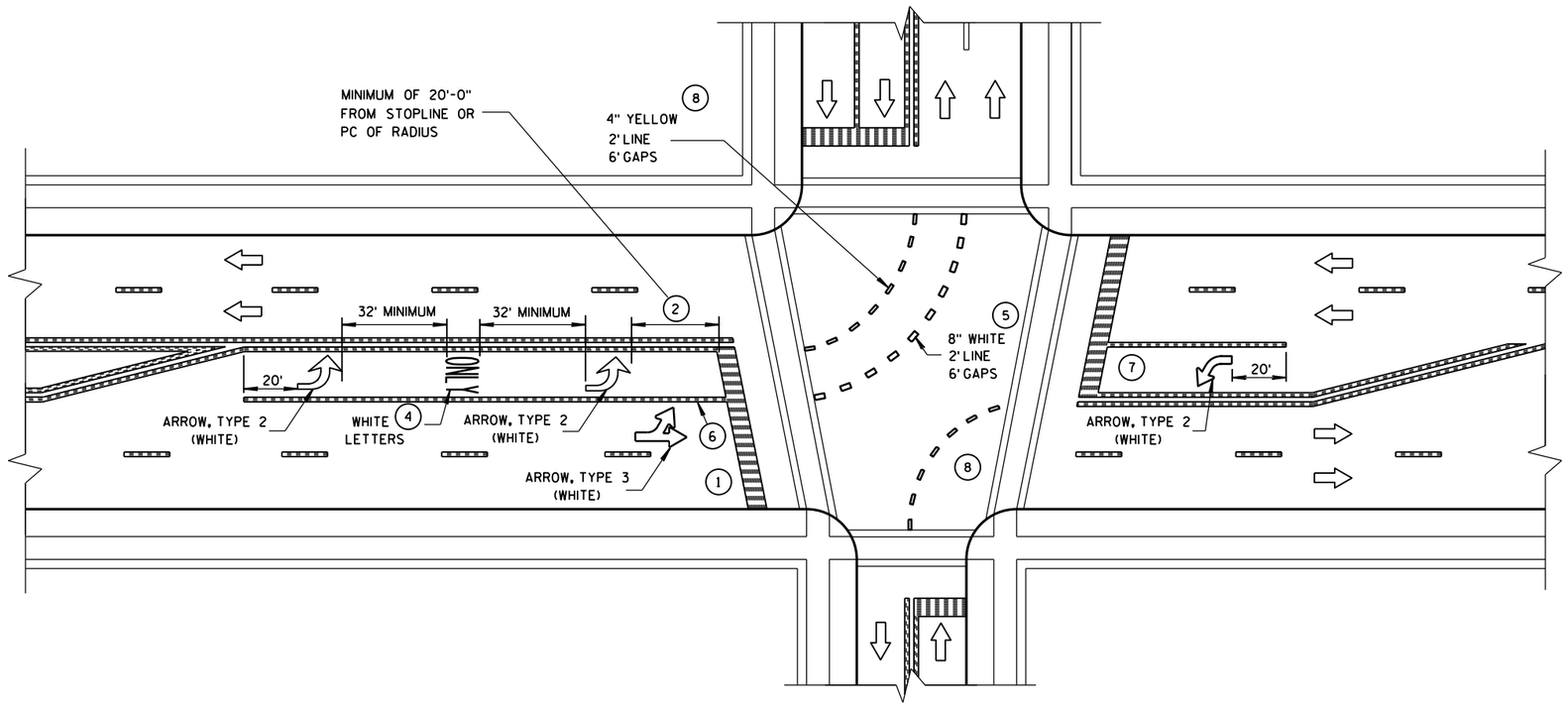
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 C 8-16b

6

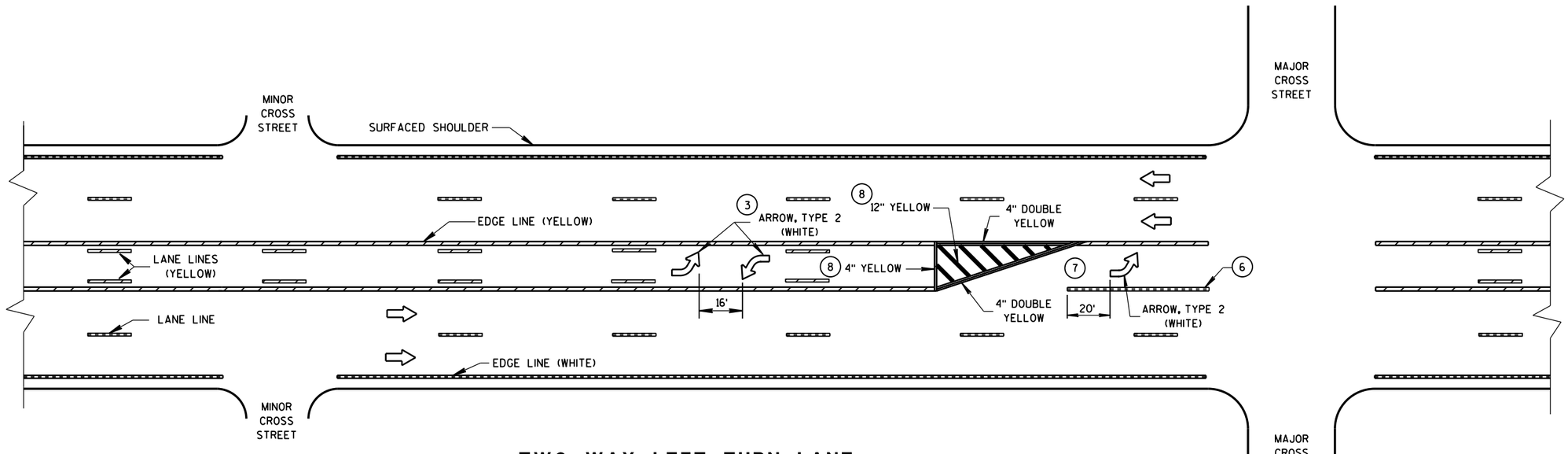
S.D.D. 15 C 8-16b



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



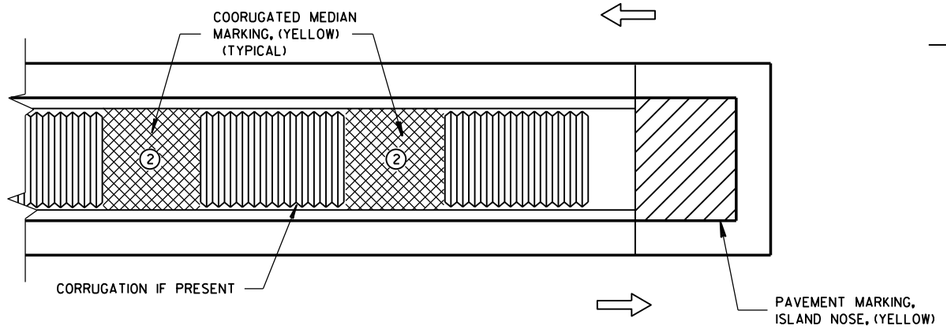
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

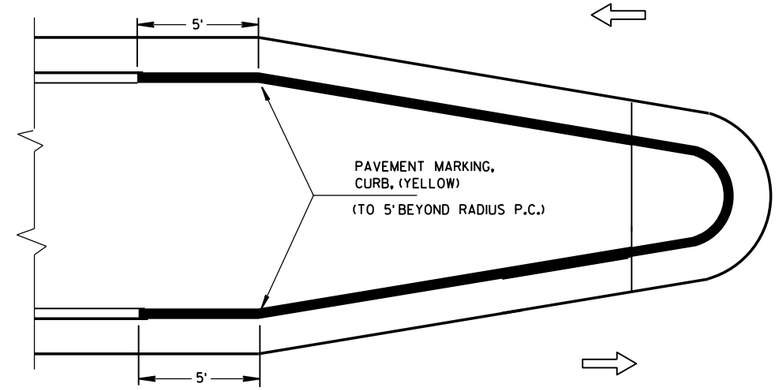
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

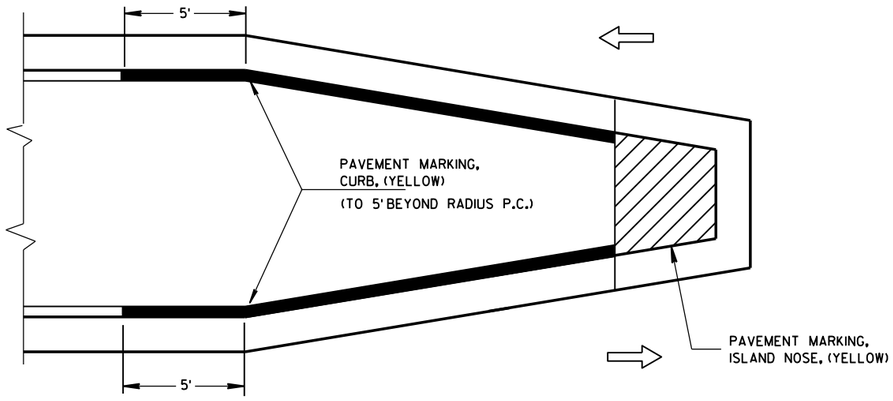
S.D.D. 15 C 8-16e
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

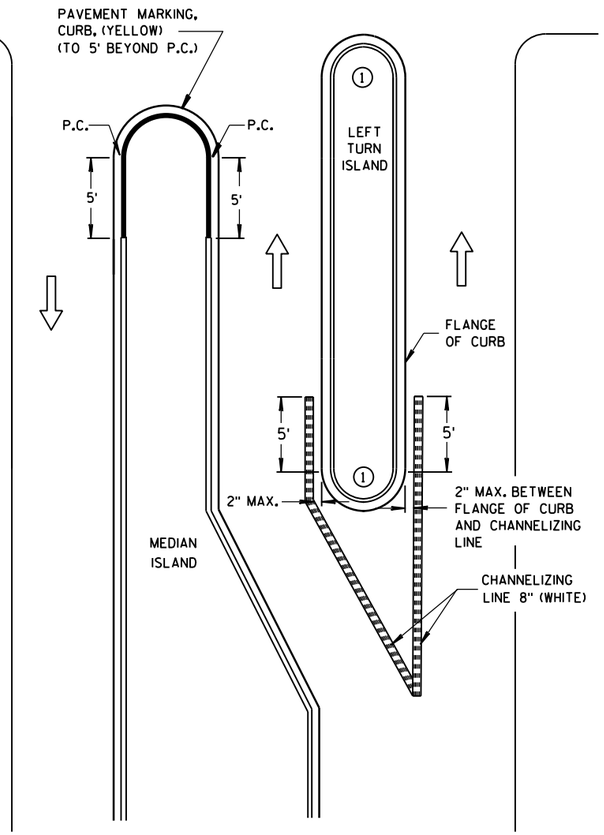


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

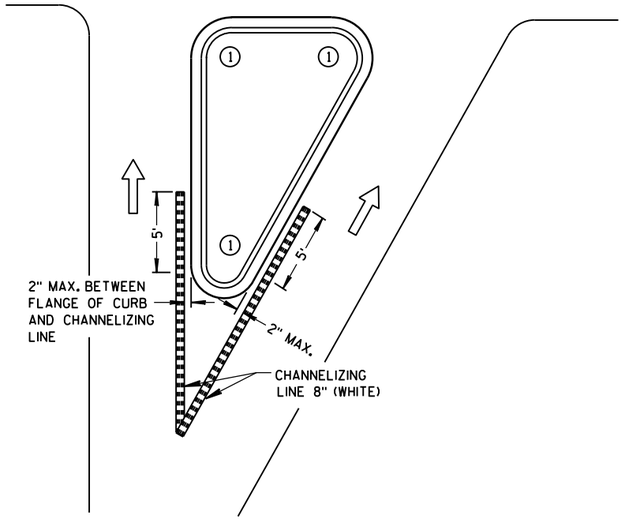


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

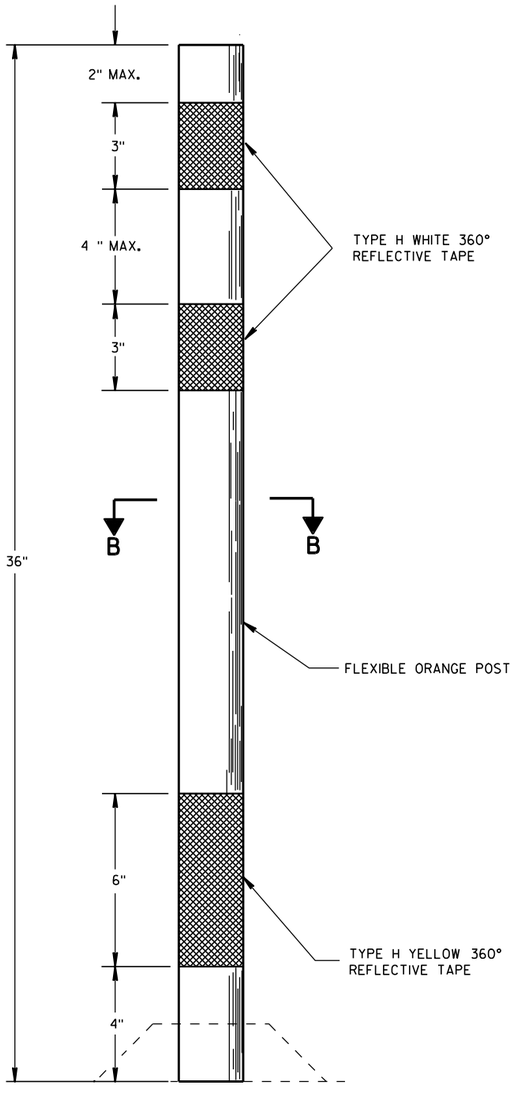
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

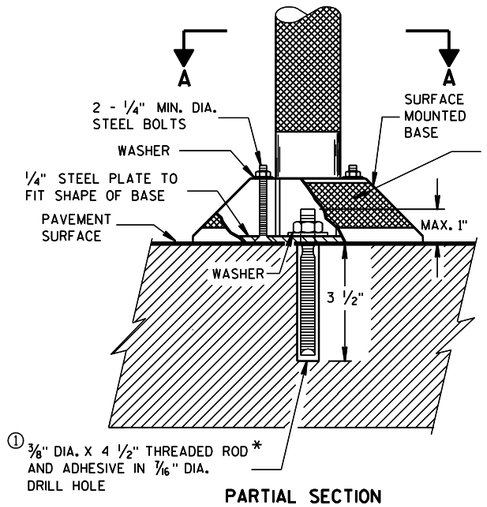
S.D.D. 15 C 8-16f

6

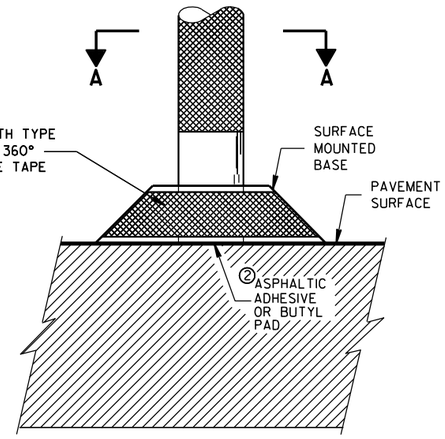
S.D.D. 15 C 8-16f



FLEXIBLE TUBULAR MARKER POST



PARTIAL SECTION TO SHOW BOLTS



POST BASES ON NEW OR EXISTING PAVEMENT

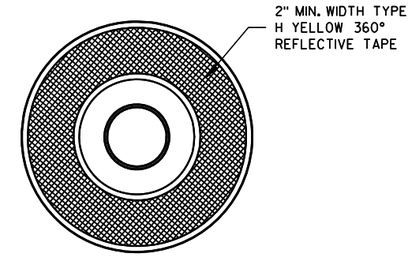
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

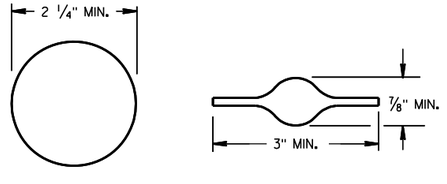
① THREADED ROD SHALL BE MACHINED DOWN TO 0.280 INCH DIA. 1 1/4 INCHES FROM THE TOP.

② THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



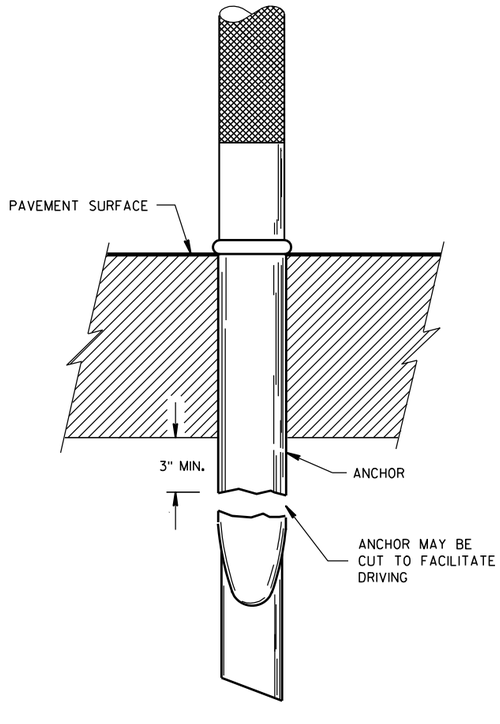
SECTION A-A

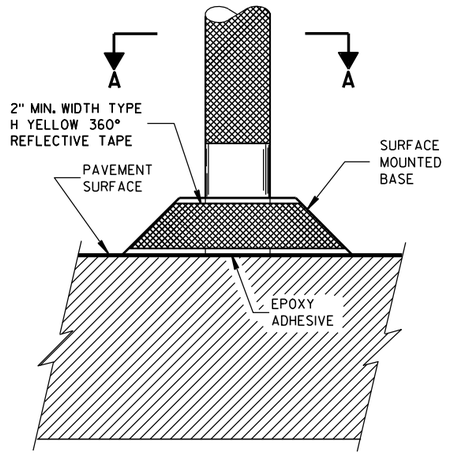
SURFACE MOUNTED BASE



SECTION B-B

ALTERNATIVE SHAPES





POST ANCHOR AND BASE ON PAVEMENT WHICH WILL BE REMOVED

FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2/17/94 DATE

/S/ Chester J. [illegible] DIRECTOR, OFFICE O

FHWA

6

S.D.D. 15 C 11-5

6

S.D.D. 15 C 11-5

GENERAL NOTES

ORIENT ANCHOR BOLTS IN FOOTING AND PROVIDE ANCHOR BOLT STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

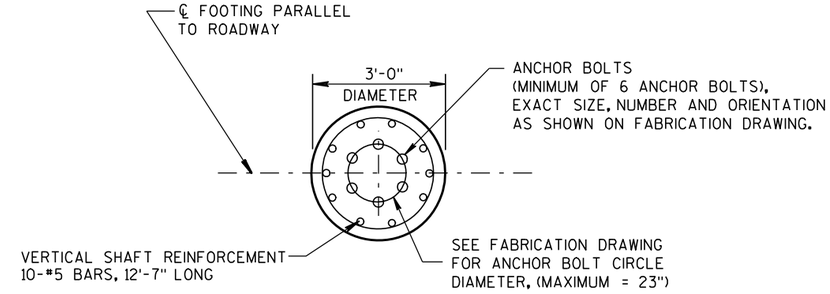
IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

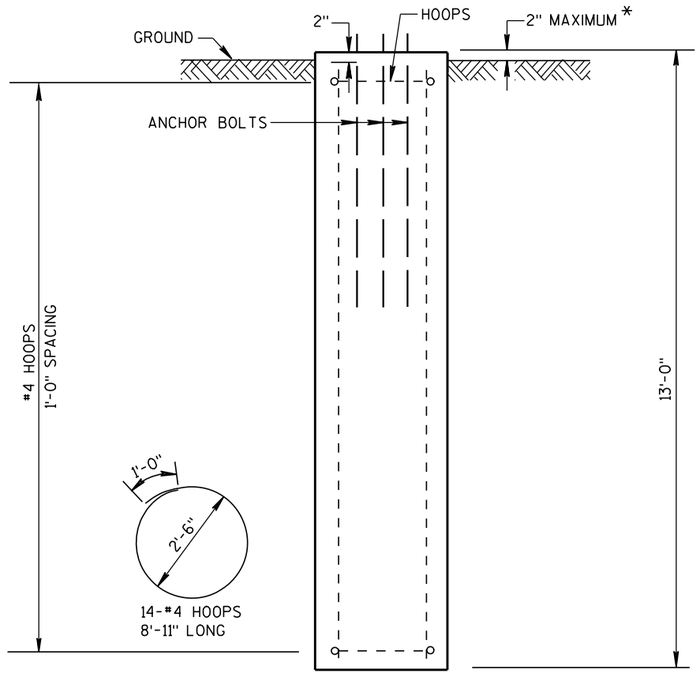
ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR BOLTS	AASHTO M314 GRADE 55

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



PLAN VIEW



ELEVATION VIEW

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.

CONCRETE - 3.4 C.Y. PER FOOTING
H.S. REINFORCEMENT - 215 LBS. PER FOOTING

36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/17/09 — DATE

/S/ Thomas N. Nothohm — STATE TRAFFIC ENGINEER

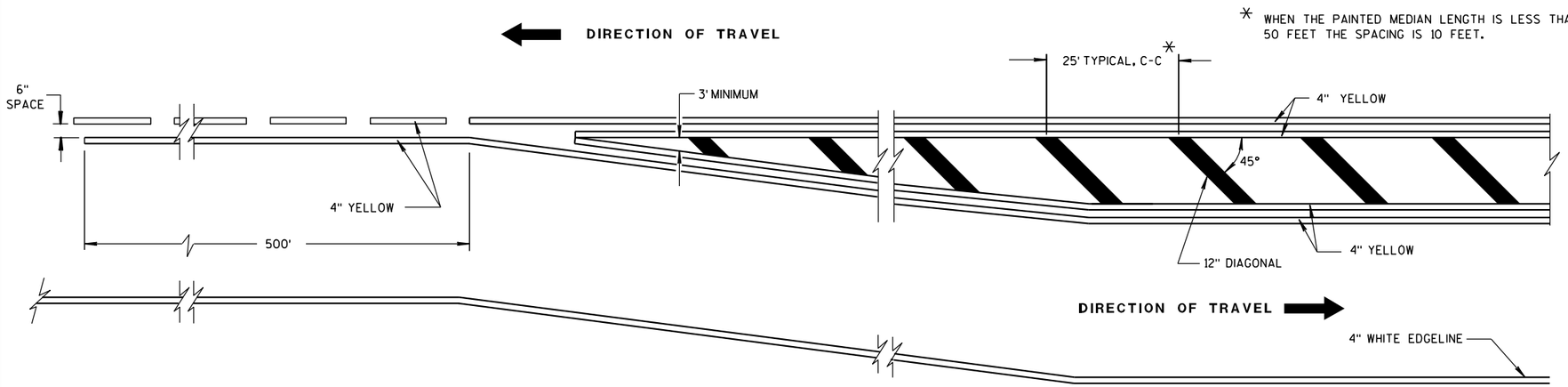
FHWA

6

S.D.D. 15 C 15-3

6

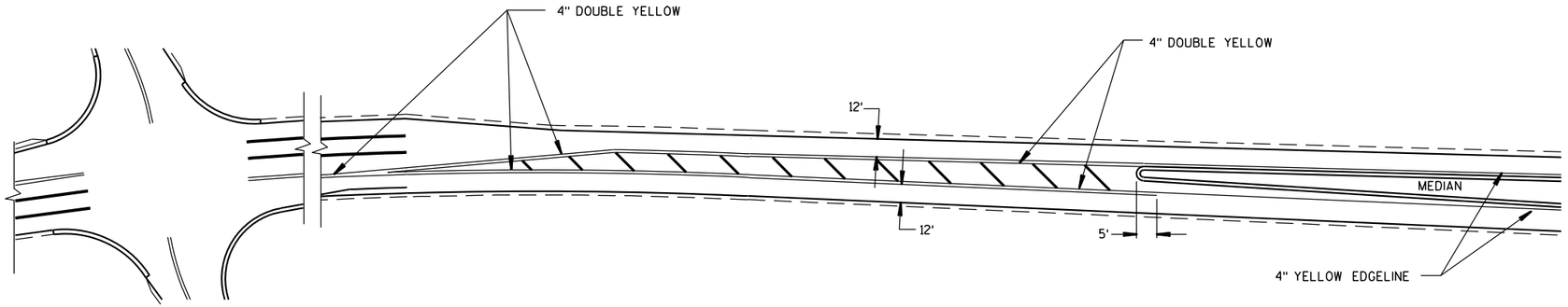
S.D.D. 15 C 15-3



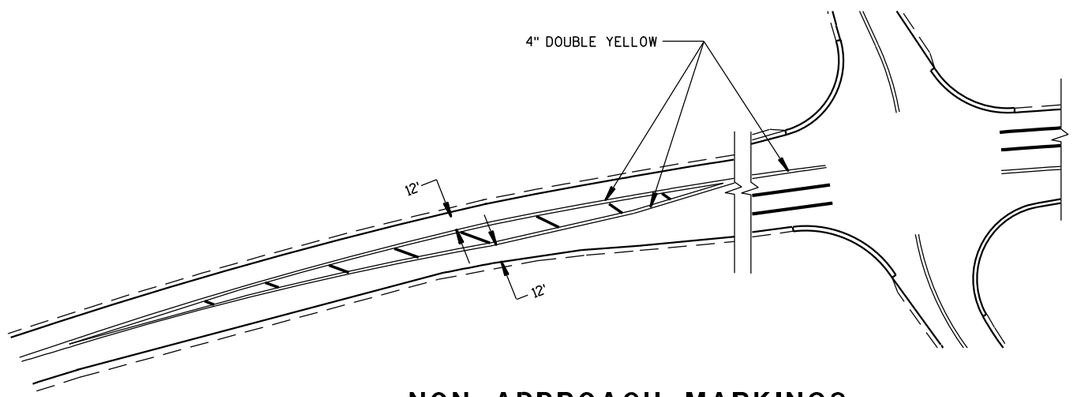
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER
FHWA	589 IGN

6

S.D.D. 15 C 18-3

6

S.D.D. 15 C 18-3

GENERAL NOTES

ORIENT ANCHOR BOLTS IN FOOTING AND PROVIDE ANCHOR BOLT STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

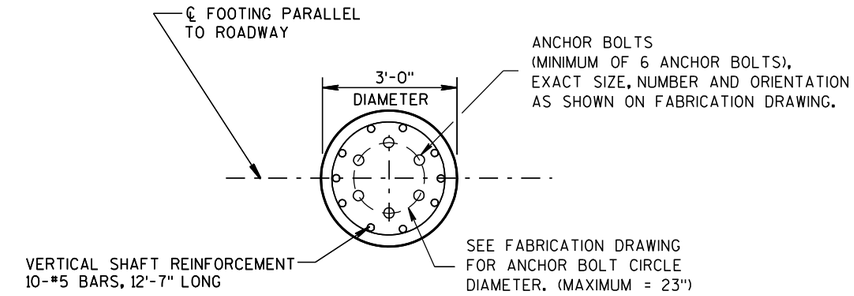
IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

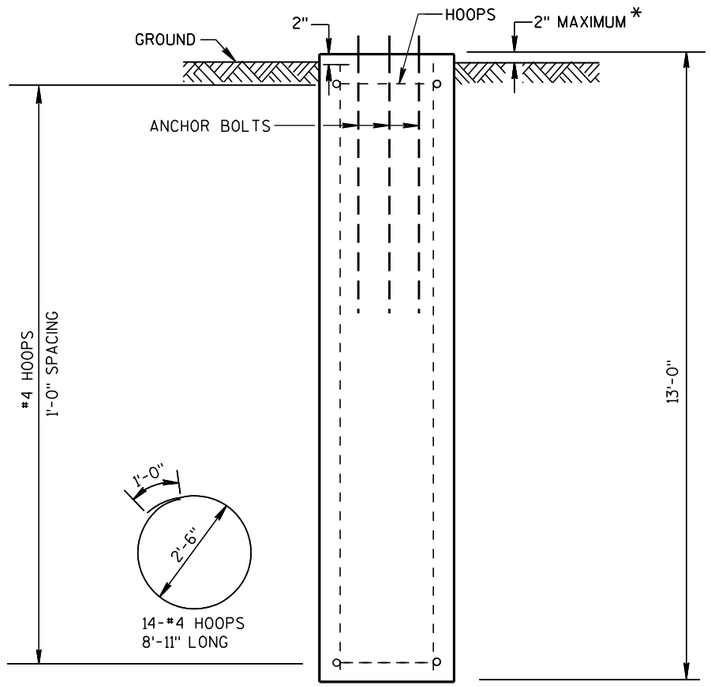
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR BOLTS	AASHTO M314 GRADE 55

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



PLAN VIEW

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.



ELEVATION VIEW

CONCRETE - 3.4 C.Y. PER FOOTING
H.S. REINFORCEMENT - 215 LBS. PER FOOTING

36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/17/2009 DATE
/S/ Thomas N. N[illegible] STATE TRAFFIC ENGINEE 590 IGN
FHWA

6

S.D.D. 15 C 24-2

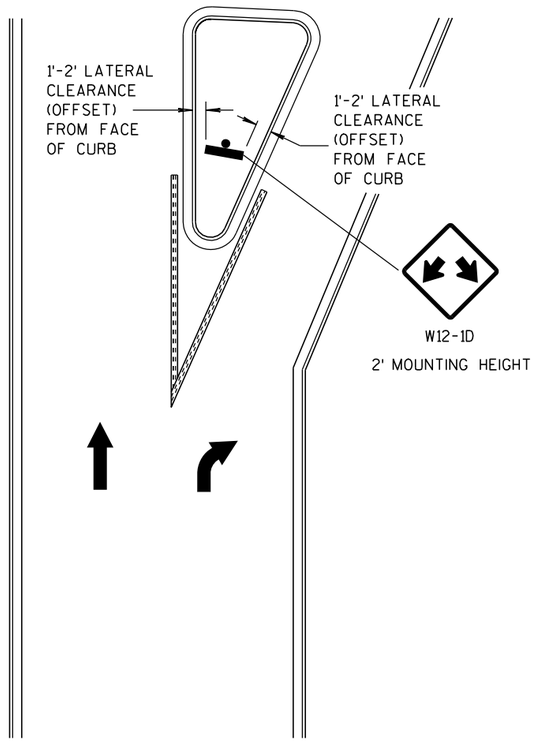
6

S.D.D. 15 C 24-2

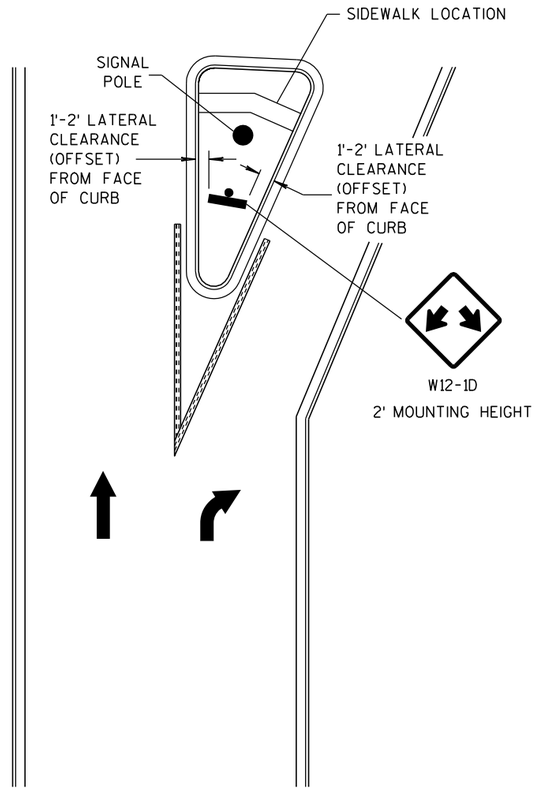
GENERAL NOTE

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

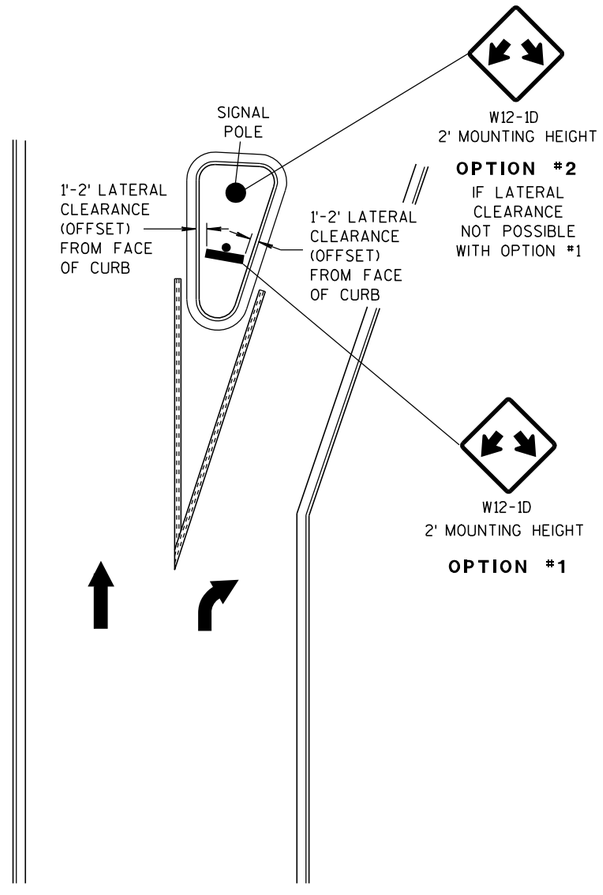
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.



LARGE RIGHT TURN ISLAND



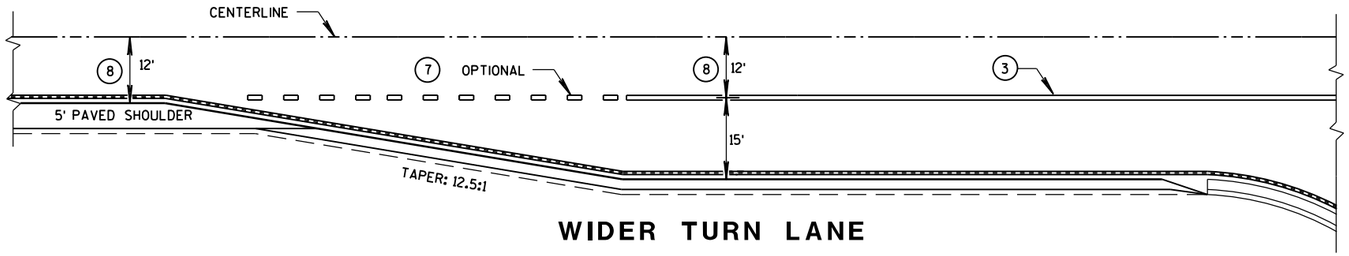
LARGE RIGHT TURN ISLAND
WITH SIGNAL POLE



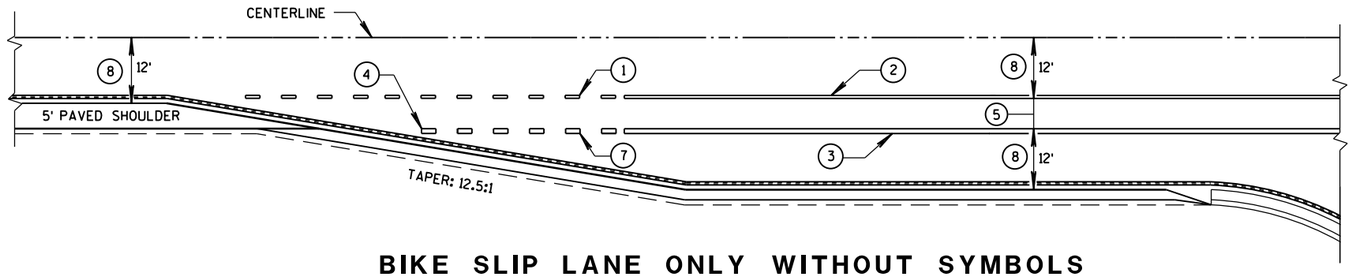
SMALL RIGHT TURN ISLAND

DOUBLE ARROW WARNING SIGN PLACEMENT

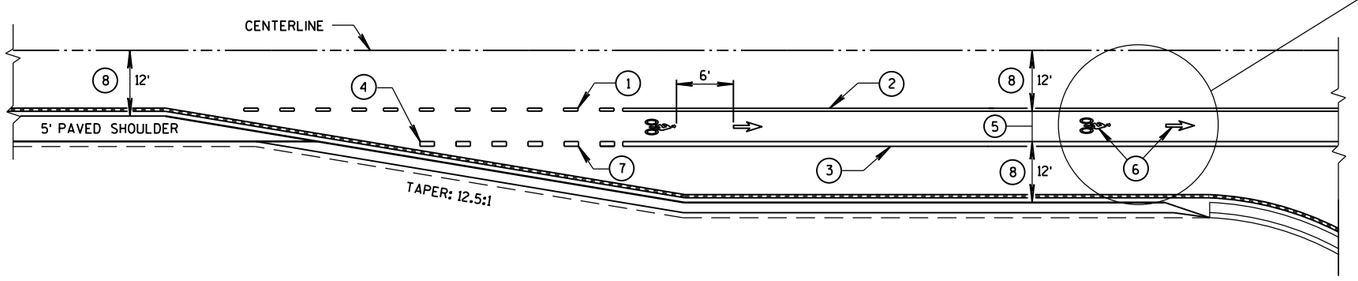
DOUBLE ARROW WARNING SIGN PLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
10-22-08 DATE	/S/ Thomas N. Nothem STATE TRAFFIC ENGINEER 591 IGN
FHWA	



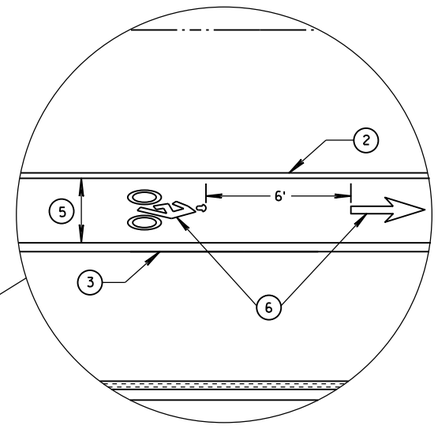
WIDER TURN LANE



BIKE SLIP LANE ONLY WITHOUT SYMBOLS



BIKE LANE WITH SYMBOLS



GENERAL NOTES

1. 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.
2. 4-INCH, WHITE.
3. 8-INCH, WHITE.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. BIKE ACCOMMODATION FOR CONCRETE PAVEMENT IS 5' WIDE. BIKE ACCOMMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4', 5' AT ≥ 45 MPH.
6. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
7. 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.
8. REFER TO CONTRACT PLANS.

6

S.D.D. 15 C 29-3a

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

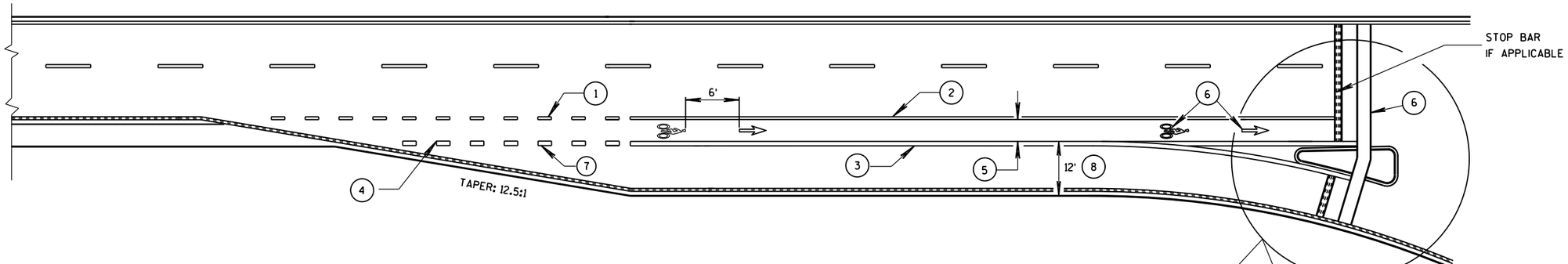
FHWA

6

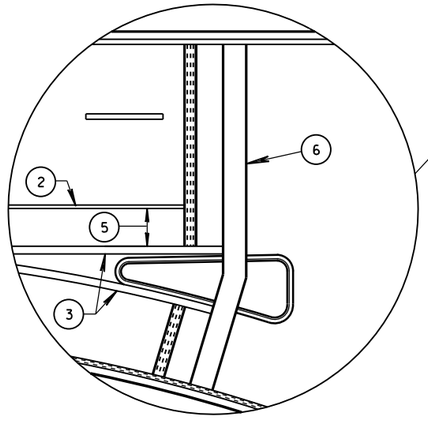
S.D.D. 15 C 29-3a

GENERAL NOTES

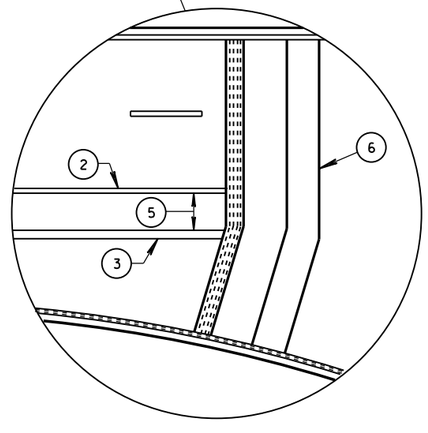
1. 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.
2. 4-INCH, WHITE.
3. 8-INCH, WHITE.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. 5' TYPICAL.
6. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
7. 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.
8. REFER TO CONTRACT PLANS.



BIKE LANE - 4-LANE DIVIDED WITH RIGHT TURN LANE



4 LANE DIVIDED WITH ISLAND



4 LANE DIVIDED WITHOUT ISLAND

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

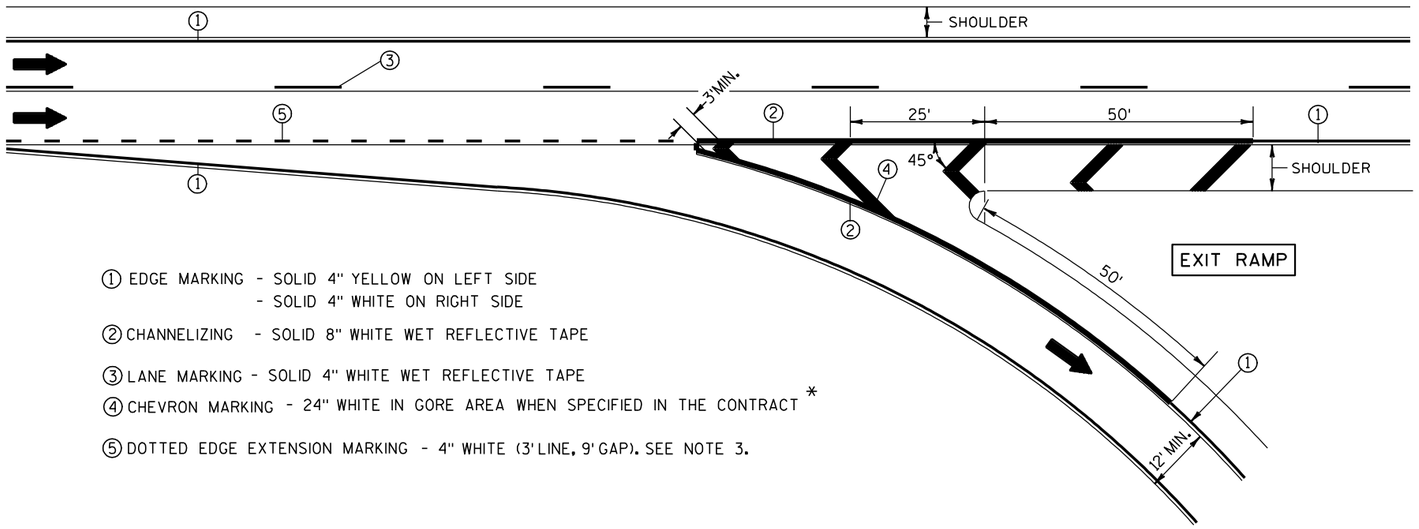
FHWA

6

S.D.D. 15 C 29-3b

6

S.D.D. 15 C 29-3b



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE

② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE

③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE

④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *

⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

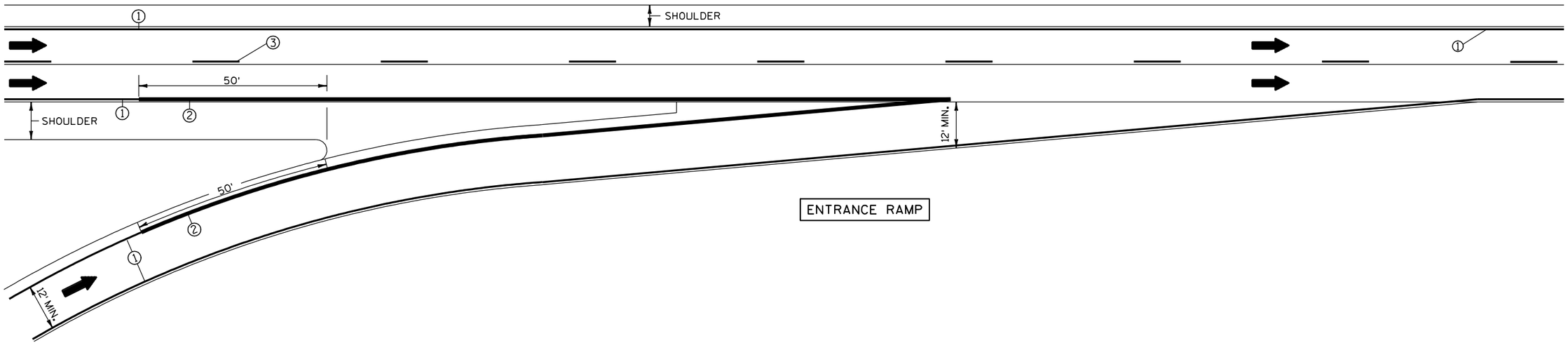
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

3. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



6

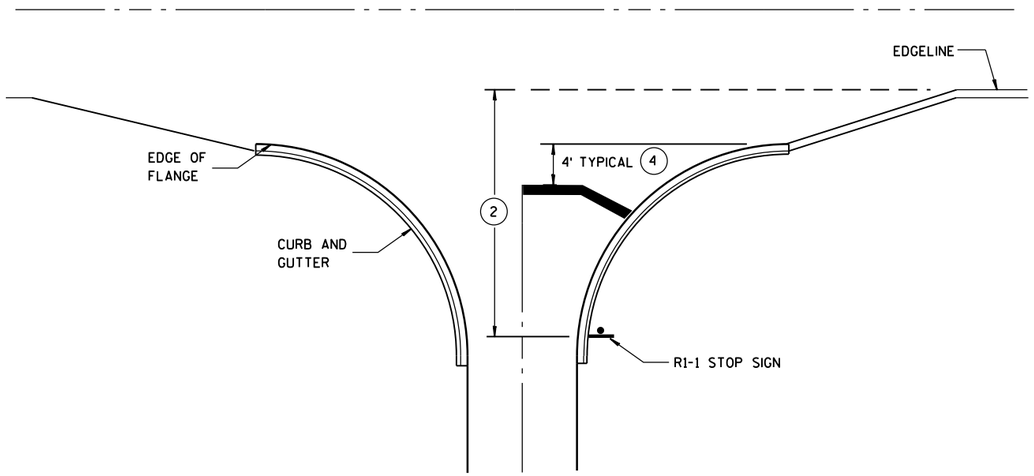
S.D.D. 15 C 31-1a

PAVEMENT MARKING
(RAMPS AND GORES)

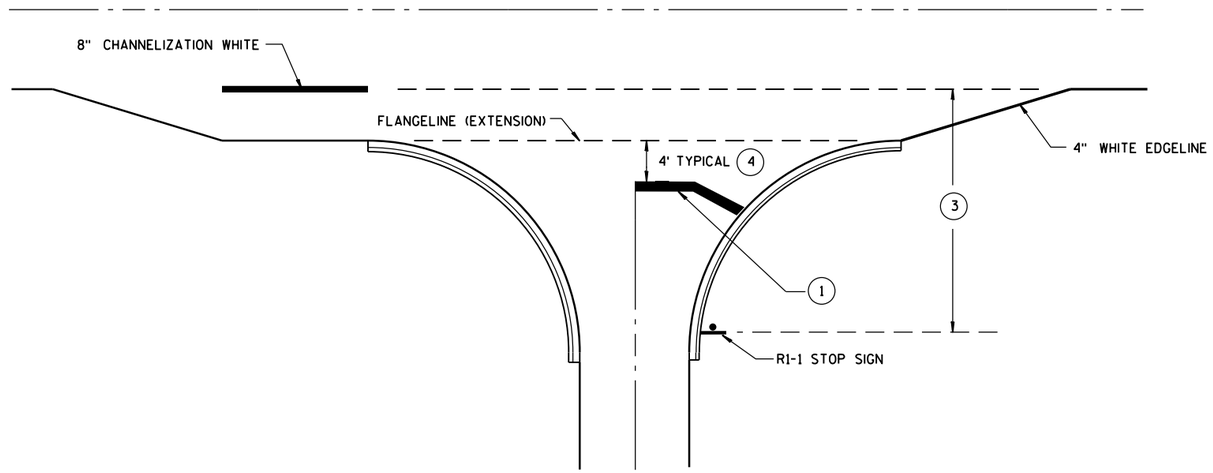
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

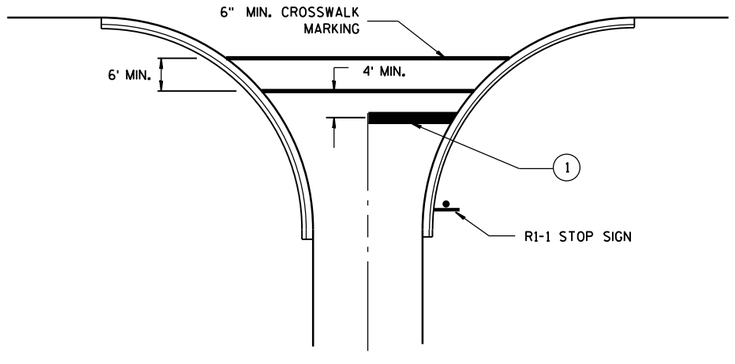
S.D.D. 15 C 31-1a



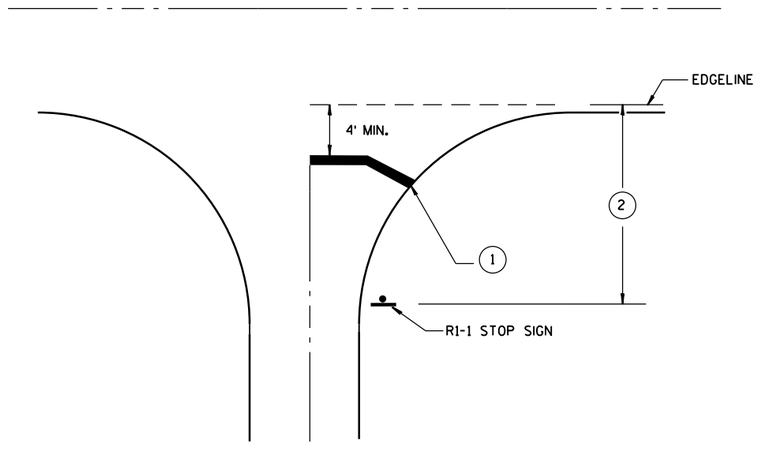
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

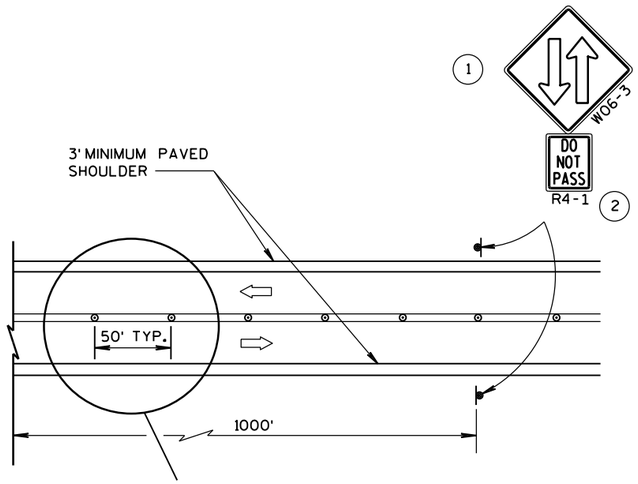
/S/ Travis Feltes
STATE TRAFFIC EI

FHWA

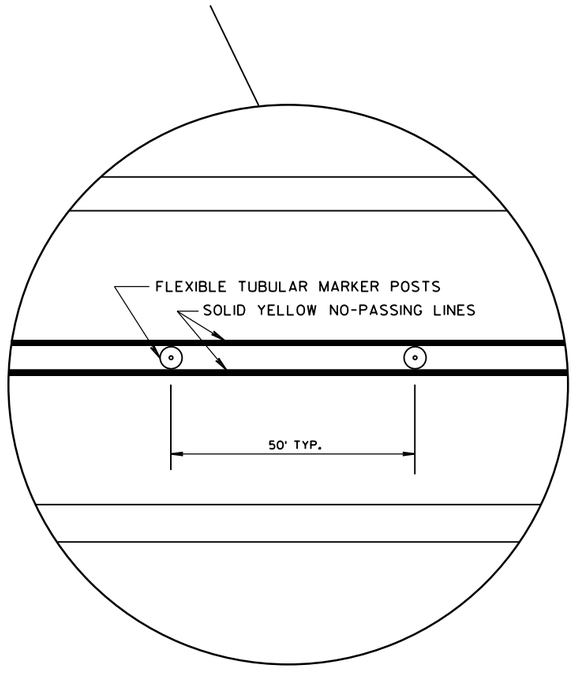
595

6

S.D.D. 15 C 33-1



TWO LANE, TWO WAY OPERATION



GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERS NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC AT 50-FOOT SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW.



THE W06-3 WITH THE W057-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND/OR 500 FEET BEYOND ANY SIDEROAD. THE W06-3 WITH THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE W06-3 AND THE W057-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN W06-3 SIGNS.

(2) CONVENTIONAL: 24"x30"
FREEWAY AND EXPRESSWAY: 36"x48"

LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 DATE
/S/ Travis Feltes STATE TRAFFIC ENGINEER
SIGN
FHWA

6

S.D.D. 15 D 6-3

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

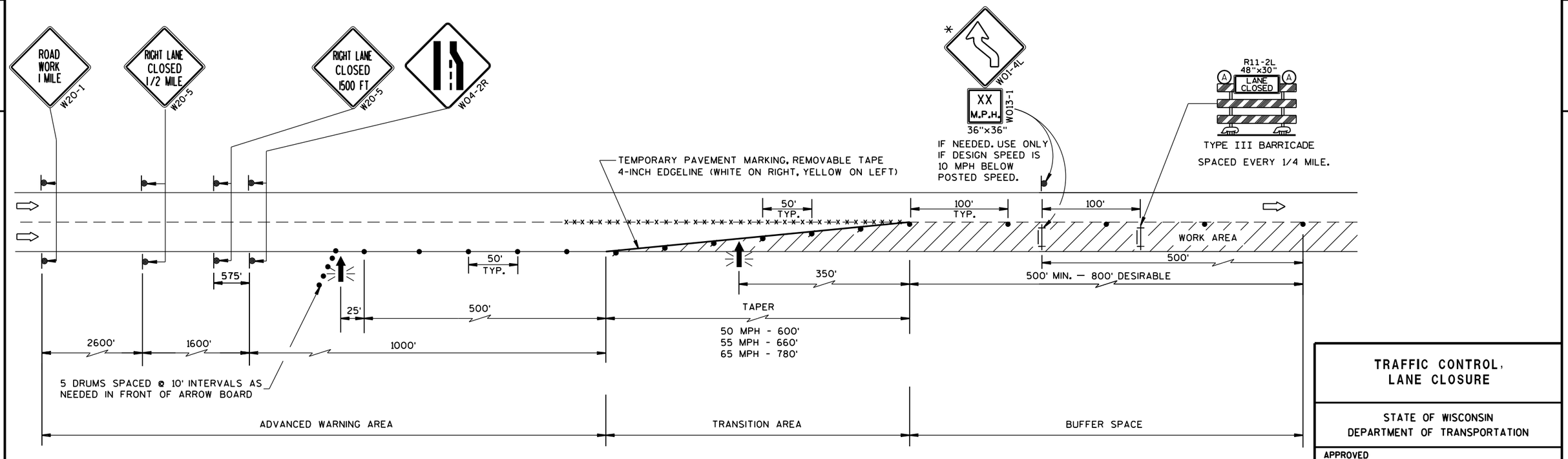
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



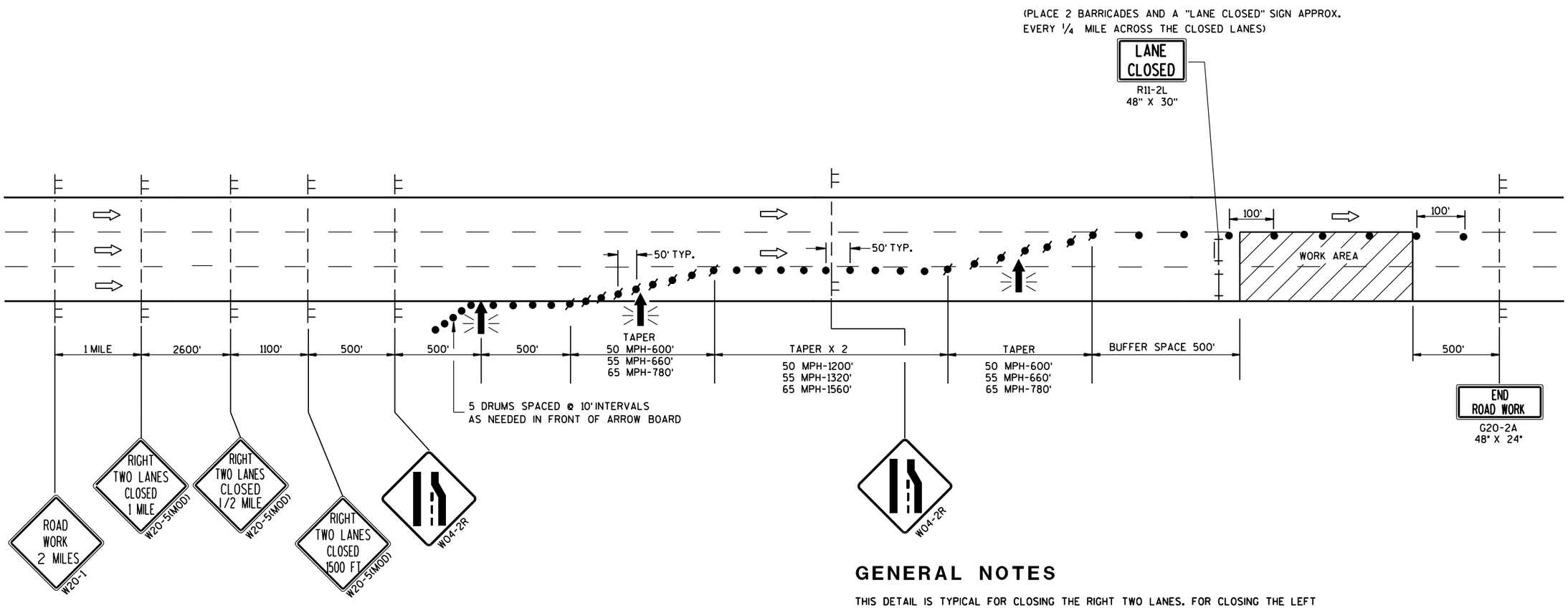
TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

S.D.D. 15 D 12-5a

S.D.D. 15 D 12-5a



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 D 14-2

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

SIGN ON PERMANENT SUPPORT

TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

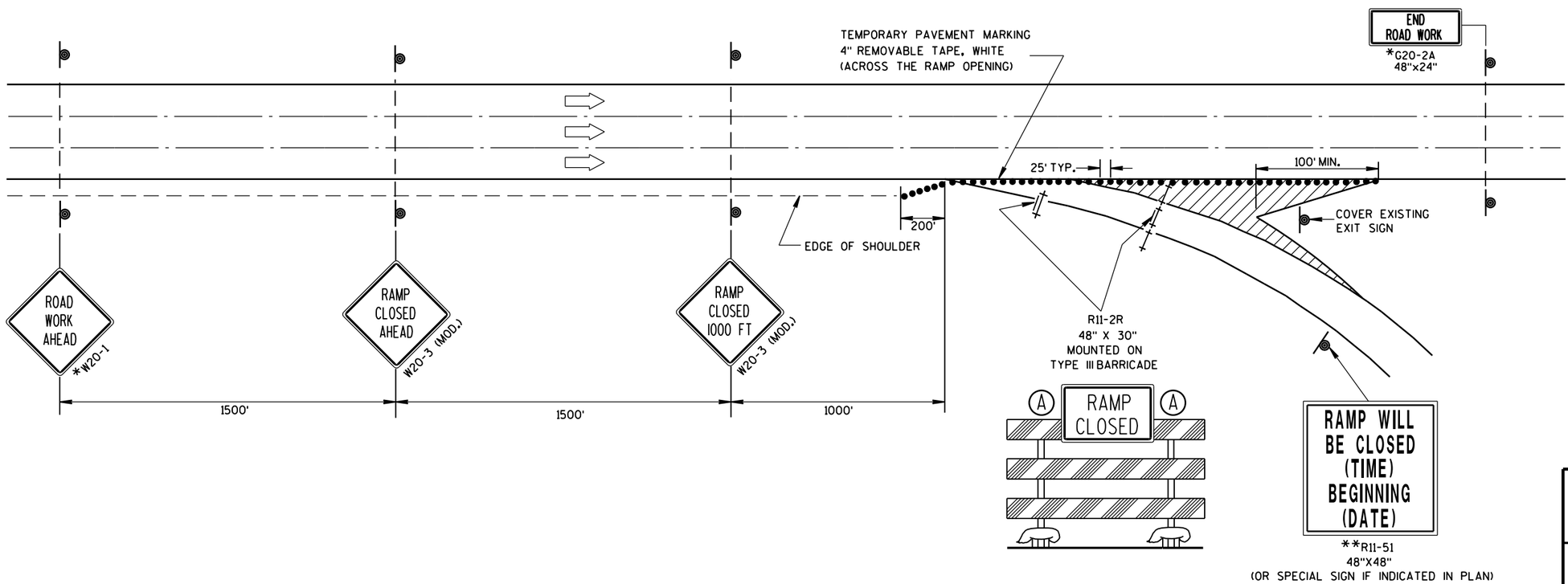
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

*W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

599

DESIGN

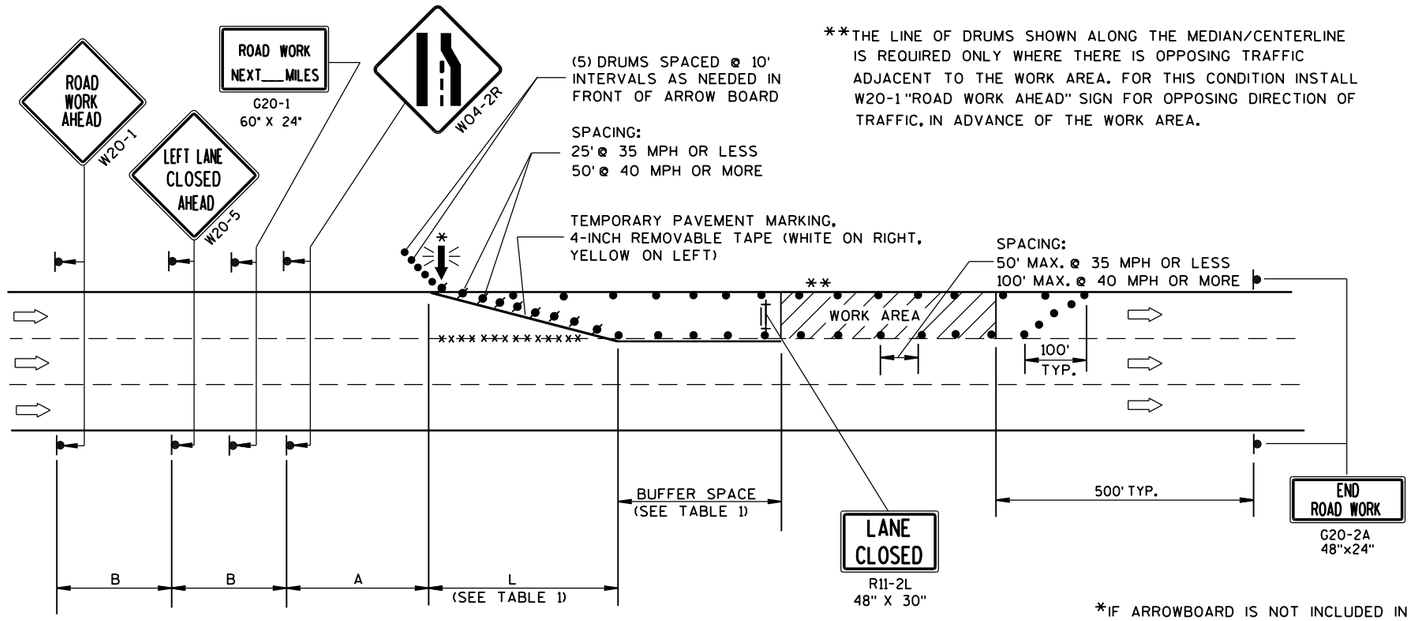
FHWA

6

S.D.D. 15 D 16-2

6

S.D.D. 15 D 16-2



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

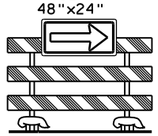


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

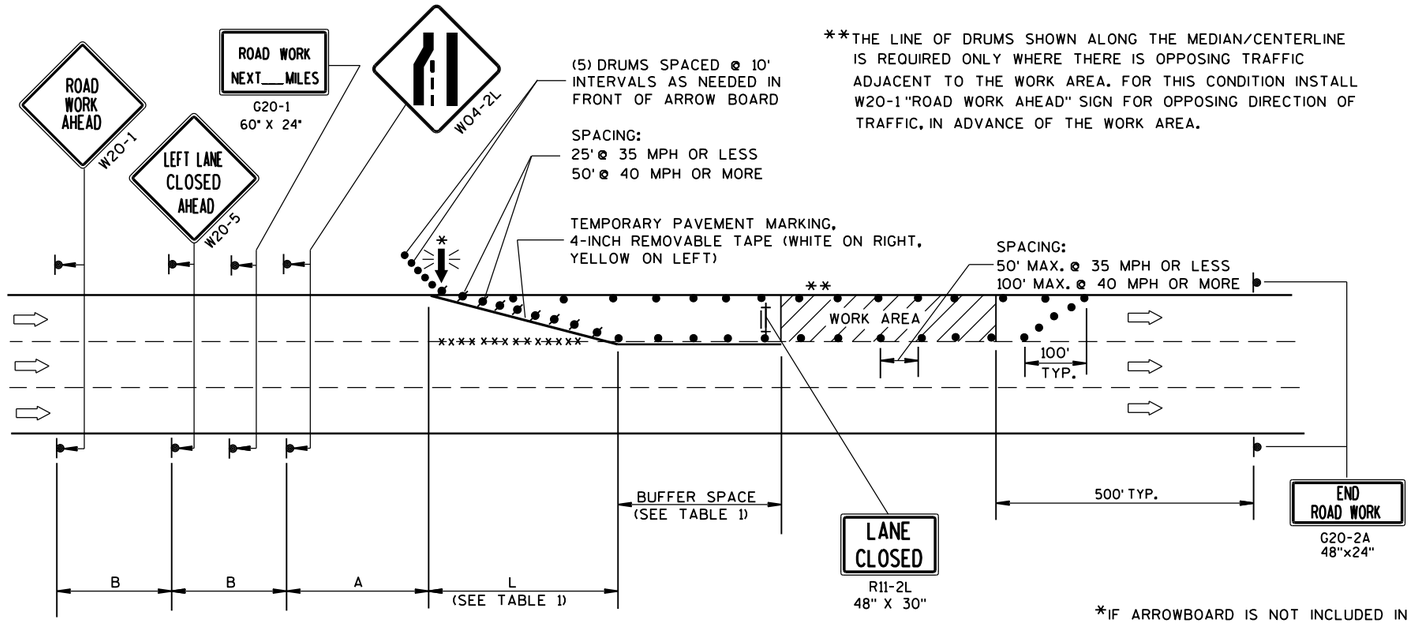
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6
S.D.D. 15 D 20-2



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

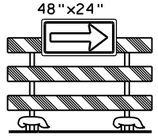


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

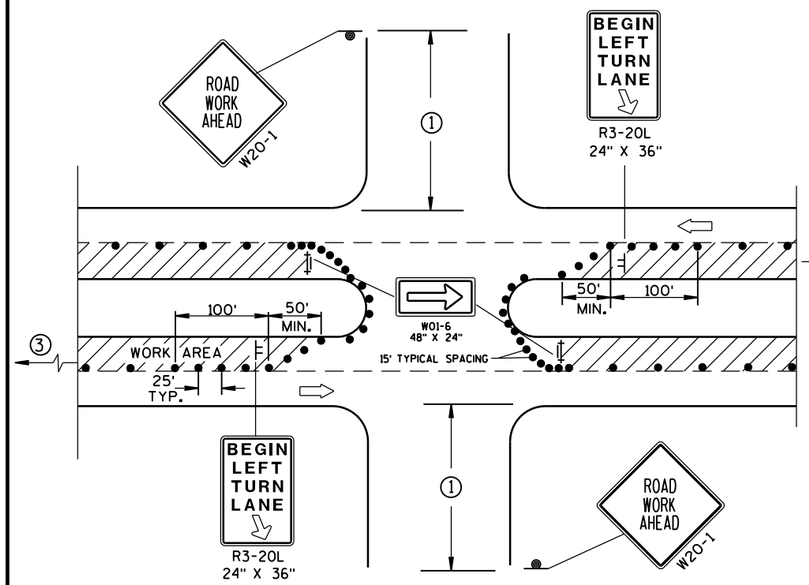
APPROVED
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 20-3

6

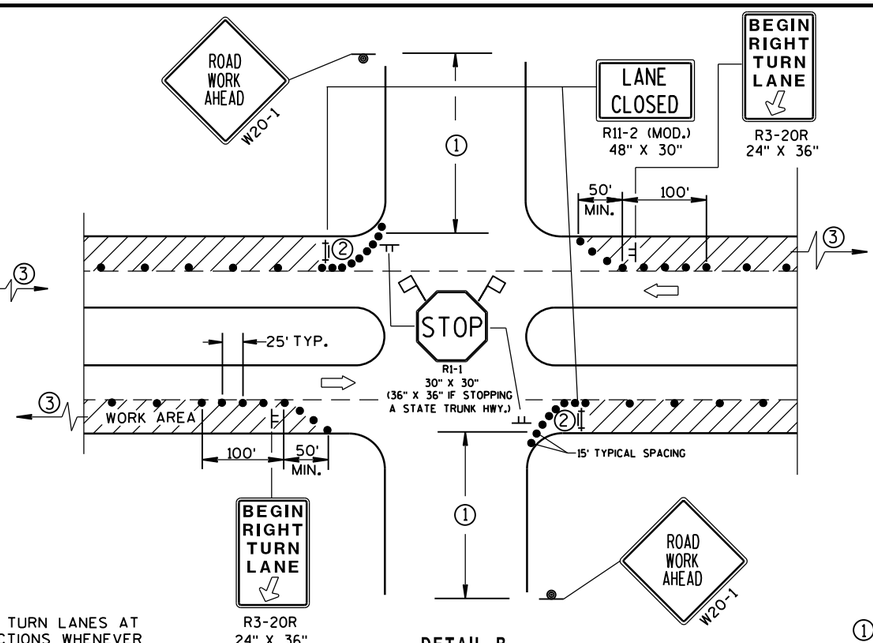
S.D.D. 15 D 20-3



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

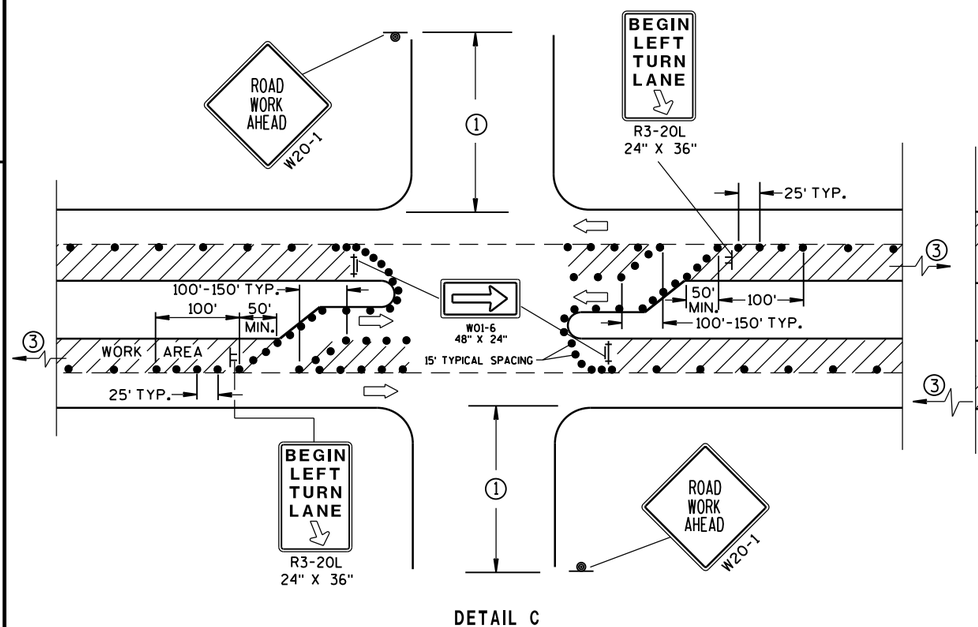
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

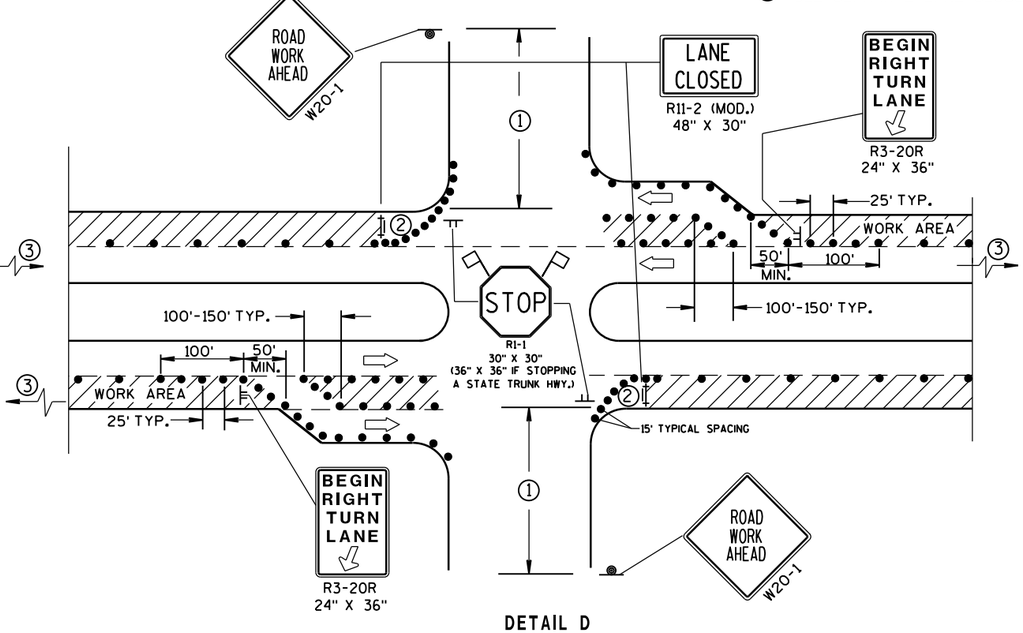
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Nov. 2014 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 21-3

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

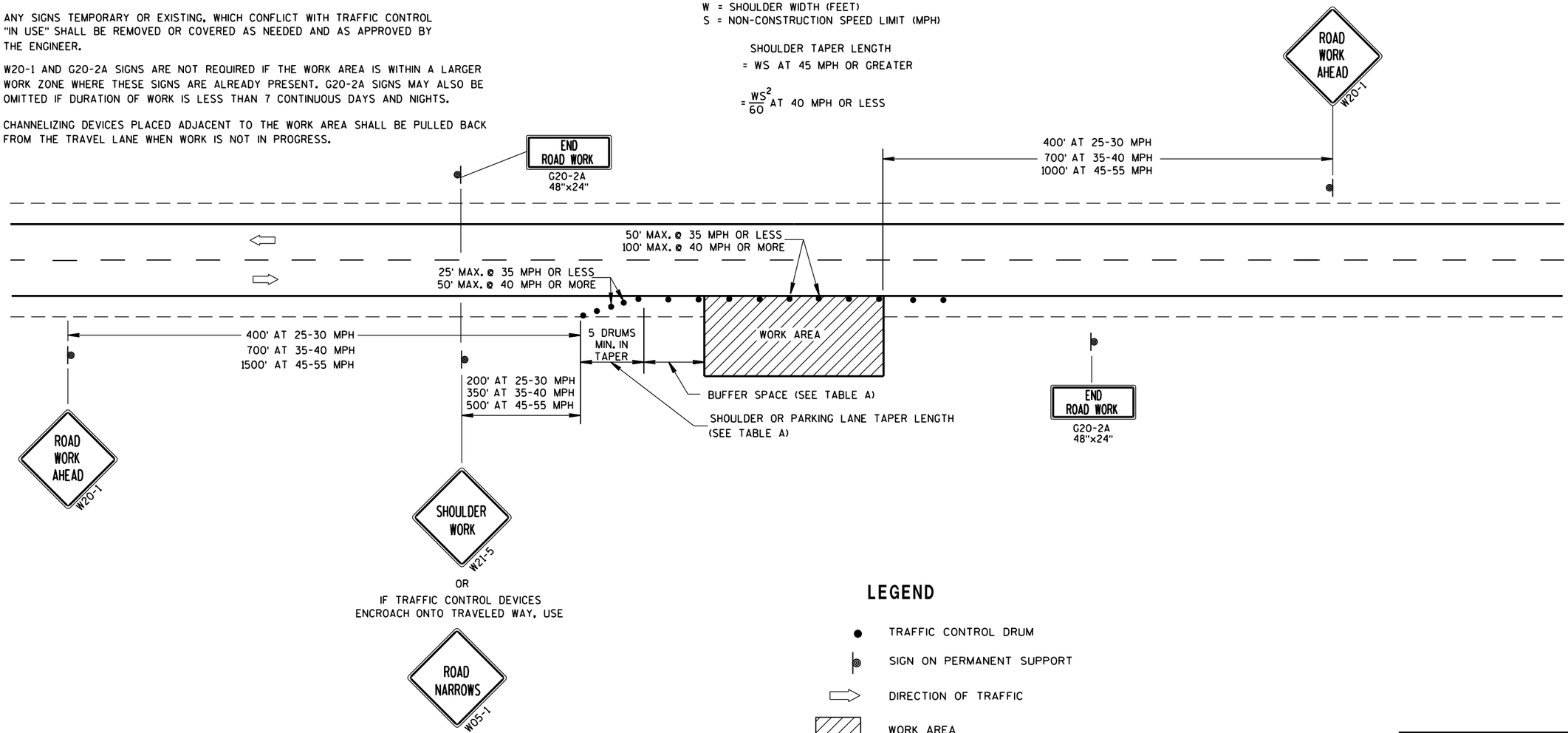
TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

SHOULDER TAPER LENGTH
= WS AT 45 MPH OR GREATER

$= \frac{WS^2}{60}$ AT 40 MPH OR LESS



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

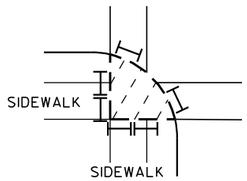
6

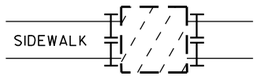
S.D.D. 15 D 28-2

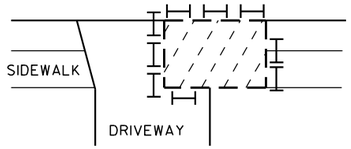
6

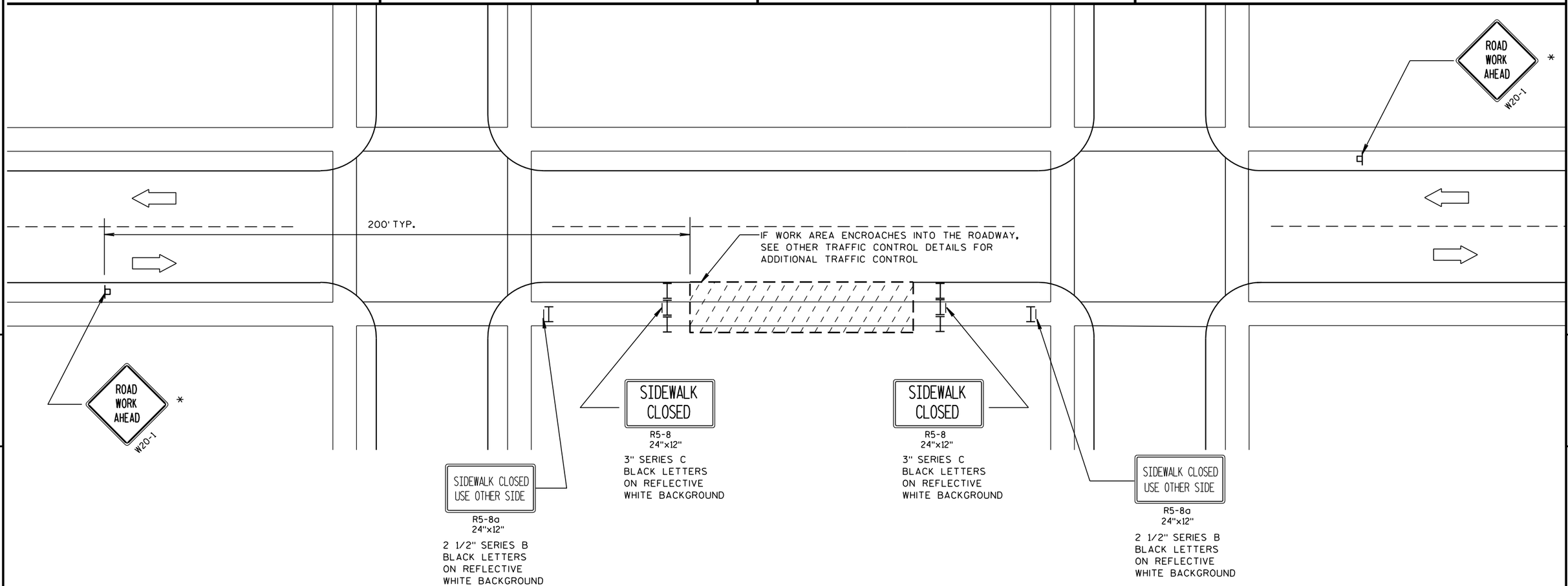
S.D.D. 15 D 28-2

WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

- POST MOUNTED SIGN
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

THE EXACT LOCATION AND PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

* "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

TRAFFIC CONTROL, SIDEWALK CLOSURE

TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

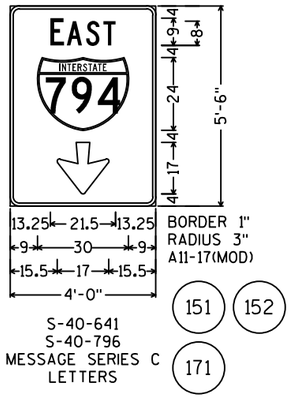
APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK 604 NEER
FHWA

6

S.D.D. 15 D 30-1

6

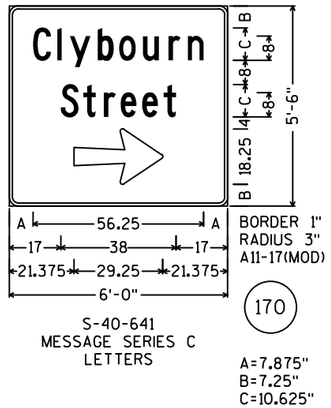
S.D.D. 15 D 30-1



BORDER 1"
RADIUS 3"
A11-17(MOD)

151 152 171

S-40-641
S-40-796
MESSAGE SERIES C
LETTERS

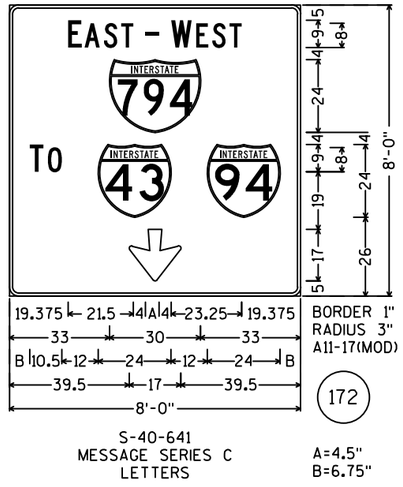


BORDER 1"
RADIUS 3"
A11-17(MOD)

170

A=7.875"
B=7.25"
C=10.625"

S-40-641
MESSAGE SERIES C
LETTERS

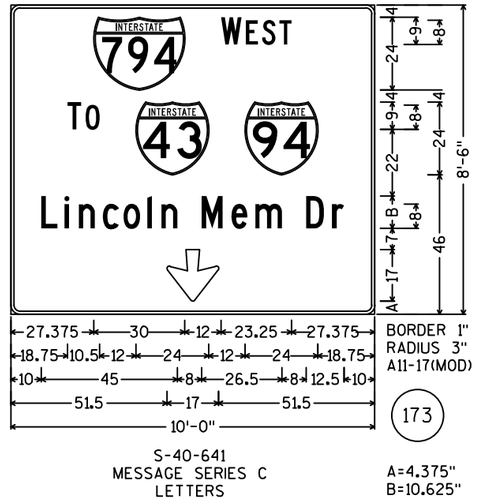


BORDER 1"
RADIUS 3"
A11-17(MOD)

172

A=4.5"
B=6.75"

S-40-641
MESSAGE SERIES C
LETTERS

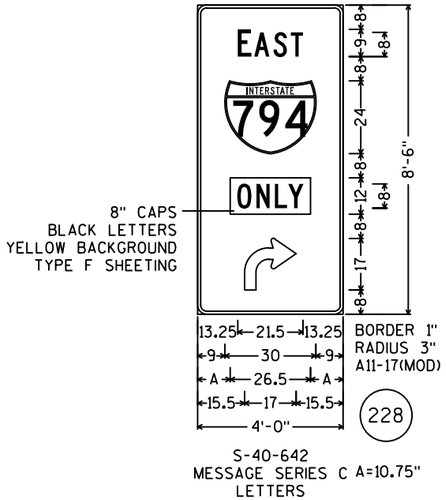


BORDER 1"
RADIUS 3"
A11-17(MOD)

173

A=4.375"
B=10.625"

S-40-641
MESSAGE SERIES C
LETTERS



BORDER 1"
RADIUS 3"
A11-17(MOD)

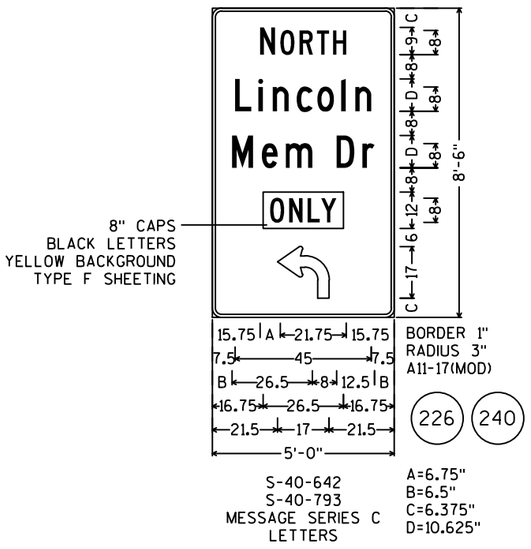
228

S-40-642
MESSAGE SERIES C
LETTERS

A=10.75"

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE "TYPE SH REFLECTIVE SHEETING".
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E MODIFIED". ALL CAP WORDS ARE "SERIES E".
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.
11. DO NOT SCALE.

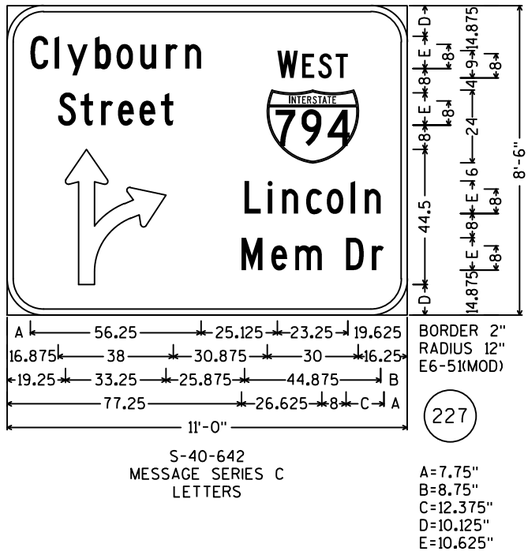


BORDER 1"
RADIUS 3"
A11-17(MOD)

226 240

A=6.75"
B=6.5"
C=6.375"
D=10.625"

S-40-642
S-40-793
MESSAGE SERIES C
LETTERS

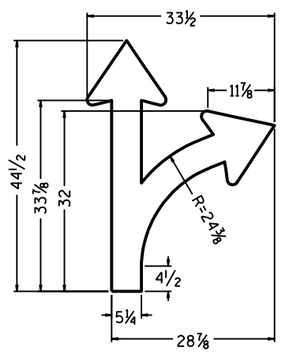


BORDER 2"
RADIUS 12"
E6-51(MOD)

227

A=7.75"
B=8.75"
C=12.375"
D=10.125"
E=10.625"

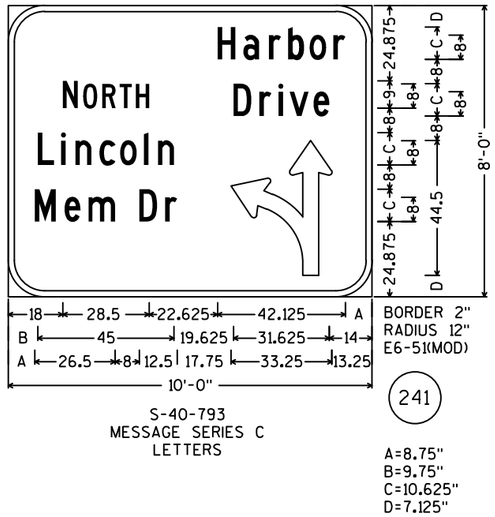
S-40-642
MESSAGE SERIES C
LETTERS

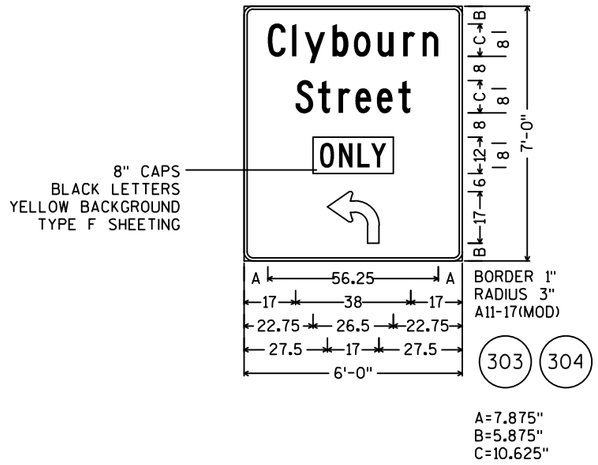


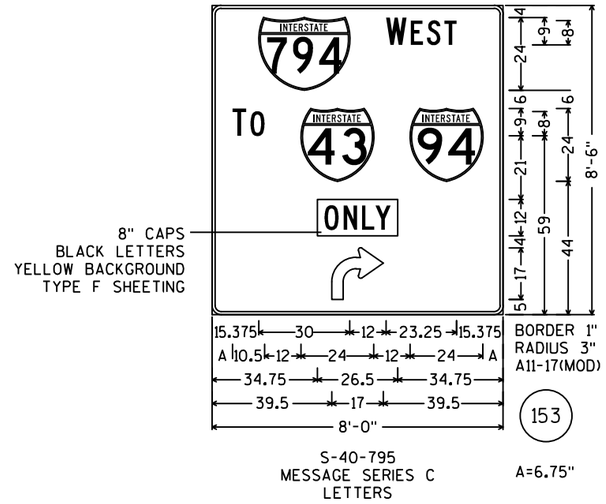
SHEET 1 OF 8

PROJECT NO:1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I SIGNS	SCALE: 0 ½" 1"	SHEET 605	E

FILE NAME : J:\PROJECTS\D2_130013794\74\070101_MS.DWG PLOT DATE : 11/24/2014 9:33 AM PLOT BY : DODGE, BRIAN M PLOT NAME : ---------- PLOT SCALE : ******* WISDOT/CADDS SHEET 47

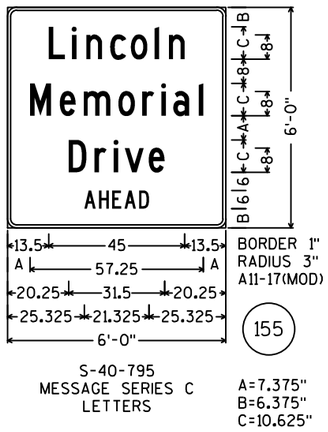

NORTH
Lincoln
Mem Dr
Harbor
Drive
18
28.5
22.625
42.125
A
B
45
19.625
31.625
14
A
26.5
8
12.5
17.75
33.25
13.25
10'-0"
24.875
C
8
9
8
8
8

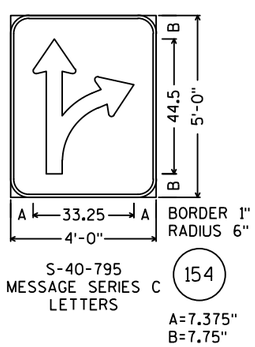




GENERAL NOTES:

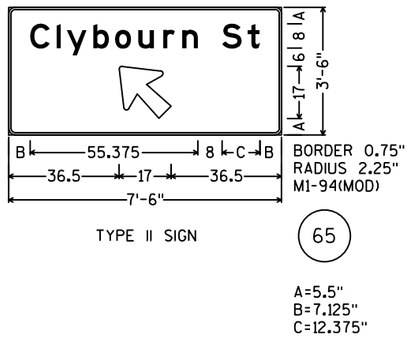
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE "TYPE SH REFLECTIVE SHEETING".
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E MODIFIED". ALL CAP WORDS ARE "SERIES E".
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.
11. DO NOT SCALE.





PROJECT NO:1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I SIGNS	SCALE: 0 ½" 1"	SHEET 607	E

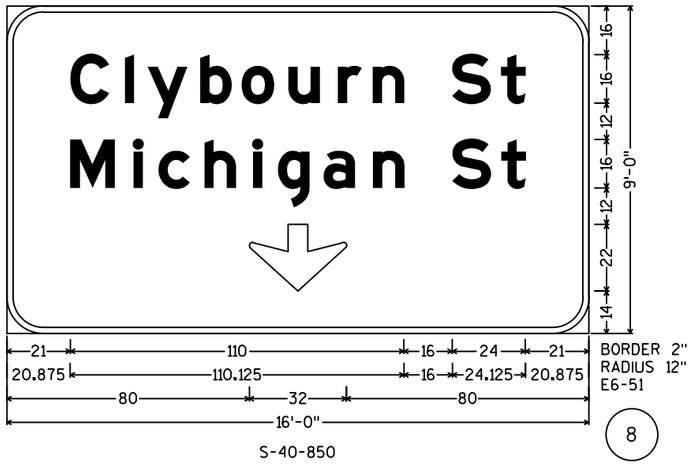
FILE NAME : J:\PROJECTS\D2_130013794\74\070101_MS.DWG PLOT DATE : 11/24/2014 9:33 AM PLOT BY : DODGE, BRIAN M PLOT NAME : ---------- PLOT SCALE : ******* WISDOT/CADDS SHEET 47



TYPE II SIGN

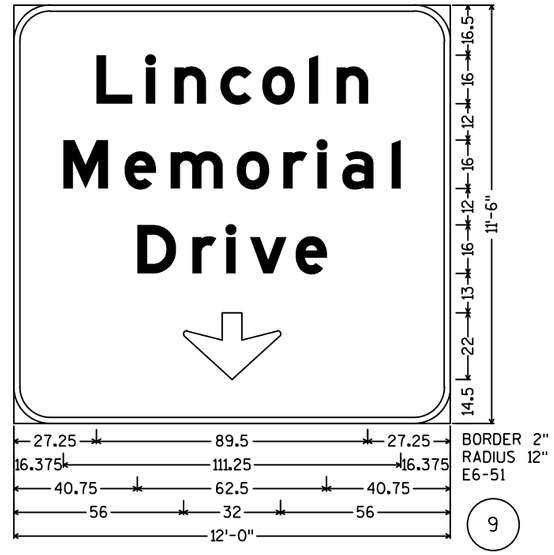
65

A=5.5"
B=7.125"
C=12.375"



S-40-850

8

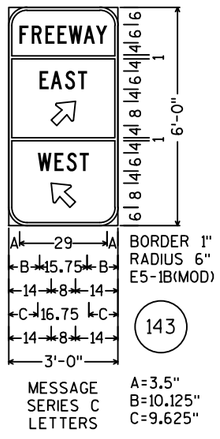


S-40-850

9

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE "TYPE SH REFLECTIVE SHEETING".
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E MODIFIED". ALL CAP WORDS ARE "SERIES E".
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.
11. DO NOT SCALE.

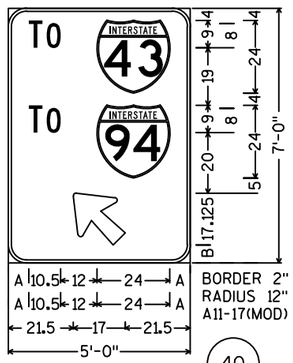


MESSAGE SERIES C LETTERS

TYPE II SIGN

143

A=3.5"
B=10.125"
C=9.625"

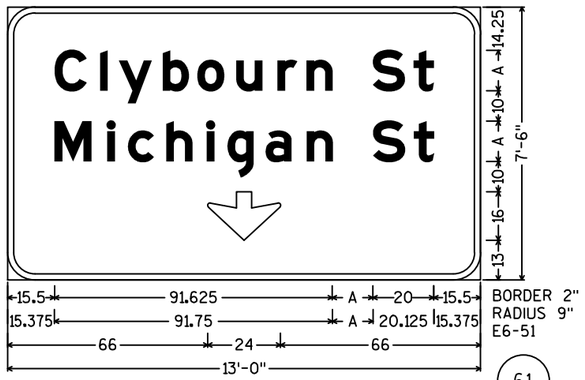


MESSAGE SERIES C LETTERS

TYPE II SIGN

40

A=6.75"
B=5.875"



S-40-853

61

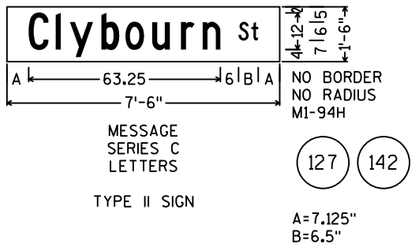
A=13.375"

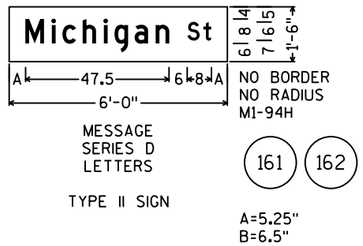
SHEET 4 OF 8

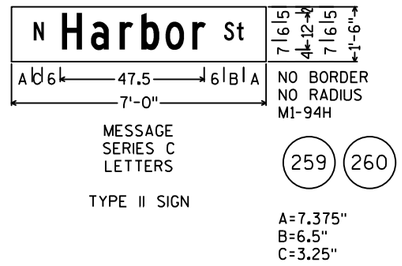
PROJECT NO:1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 608	E

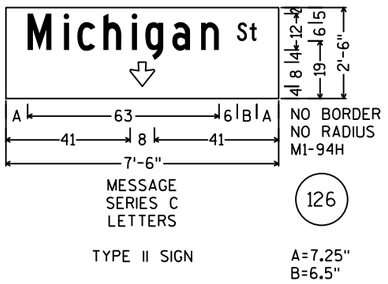
FILE NAME : J:\PROJECTS\D2_130013794\74\070101_MS.DWG PLOT DATE : 11/24/2014 9:33 AM PLOT BY : DODGE, BRIAN M PLOT NAME : ---------- PLOT SCALE : *******

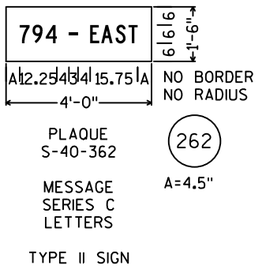
WISDOT/CADDS SHEET 47

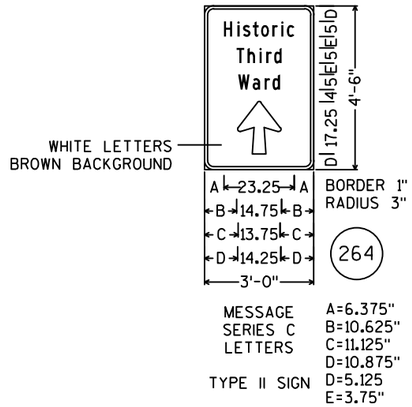


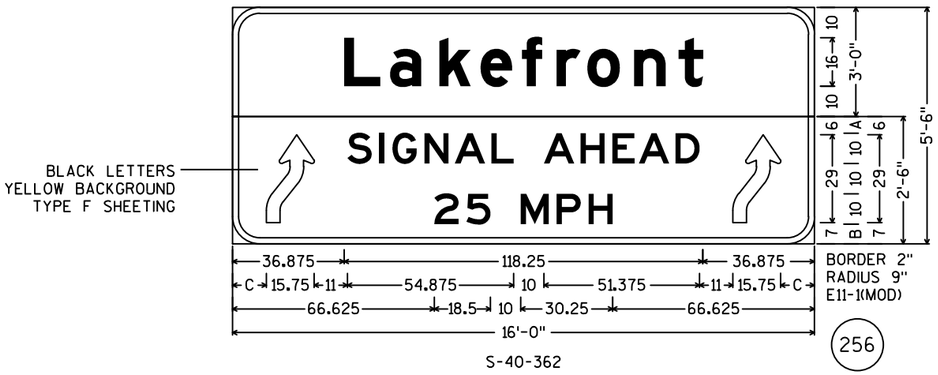


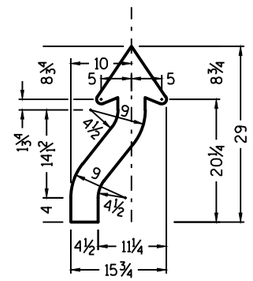






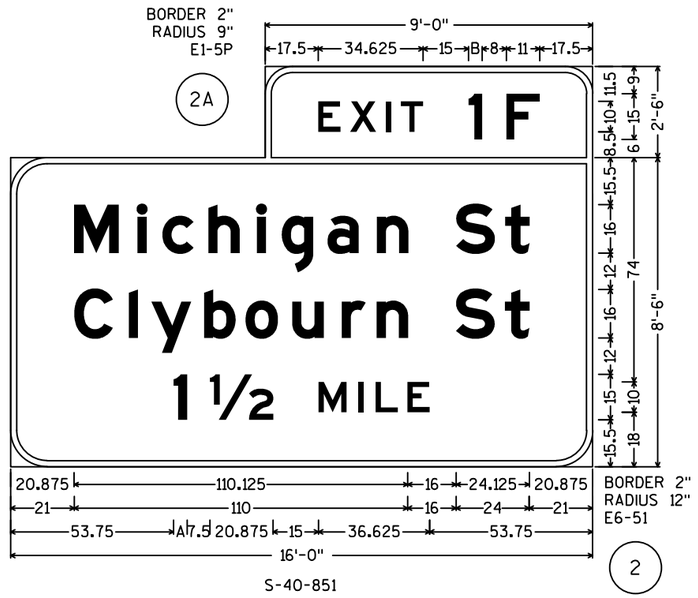


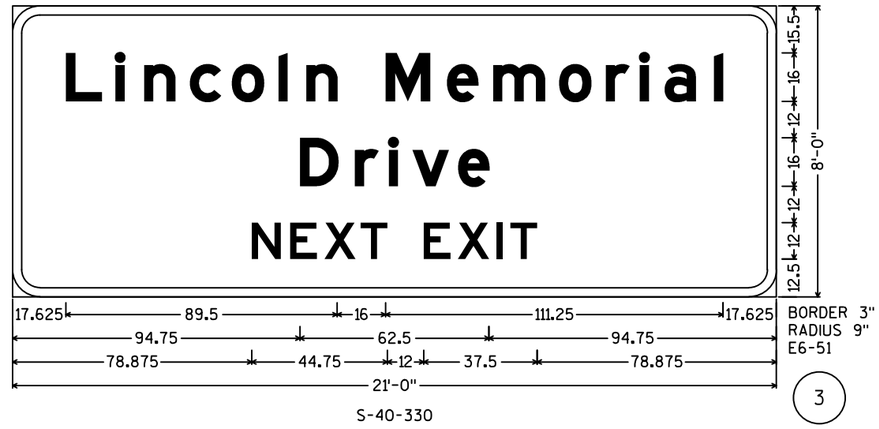




GENERAL NOTES:

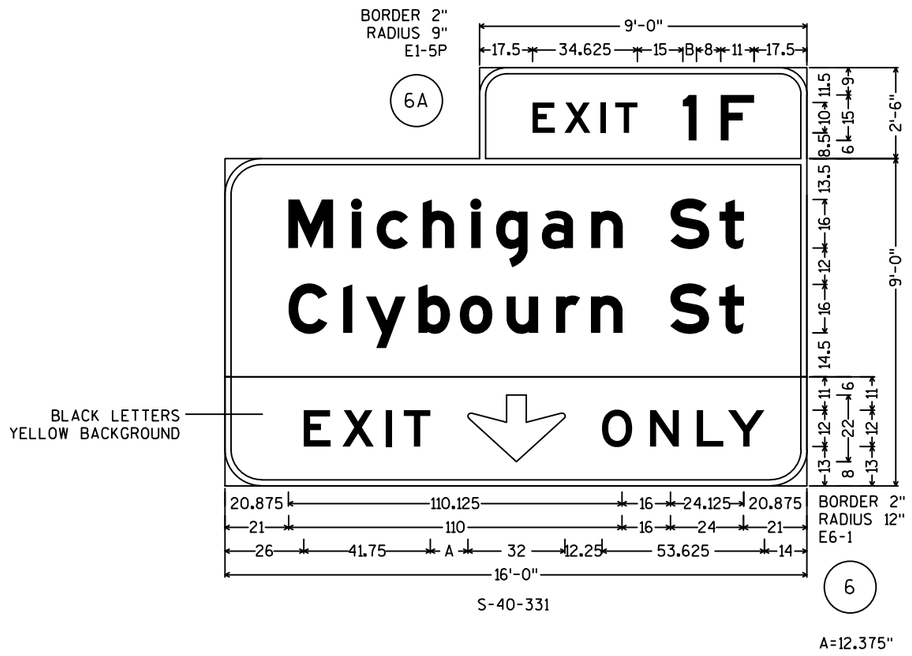
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE "TYPE SH REFLECTIVE SHEETING".
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E MODIFIED". ALL CAP WORDS ARE "SERIES E".
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.
11. DO NOT SCALE.





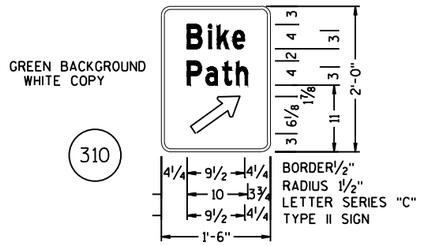
GENERAL NOTES:

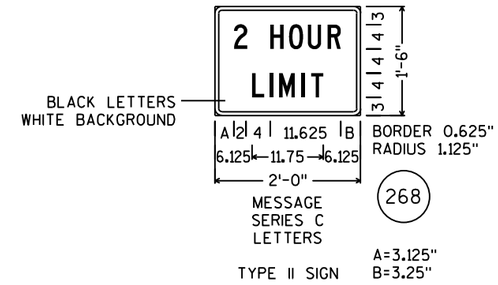
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE "TYPE SH REFLECTIVE SHEETING".
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E MODIFIED". ALL CAP WORDS ARE "SERIES E".
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.
11. DO NOT SCALE.



PROJECT NO:1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I SIGNS	SCALE: 0 ½" 1"	SHEET 610	E

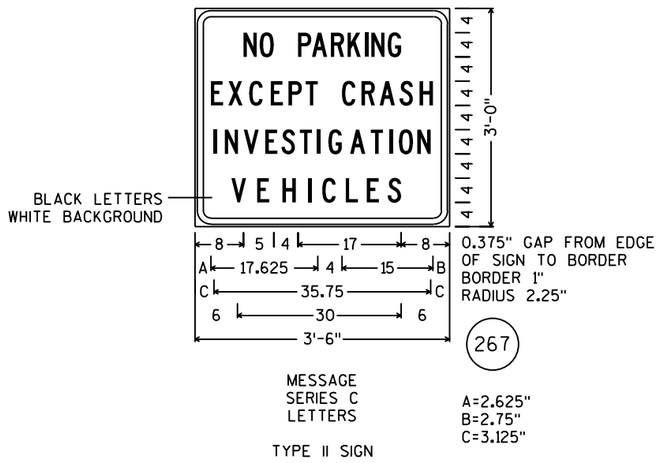
FILE NAME : J:\PROJECTS\D2_130013794\74\070101_MS.DWG PLOT DATE : 11/24/2014 9:33 AM PLOT BY : DODGE, BRIAN M PLOT NAME : ---------- PLOT SCALE : *******
WISDOT/CADDS SHEET 47

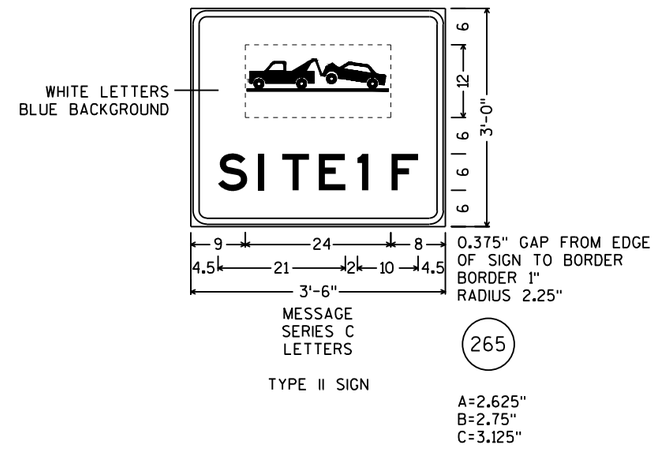




GENERAL NOTES:

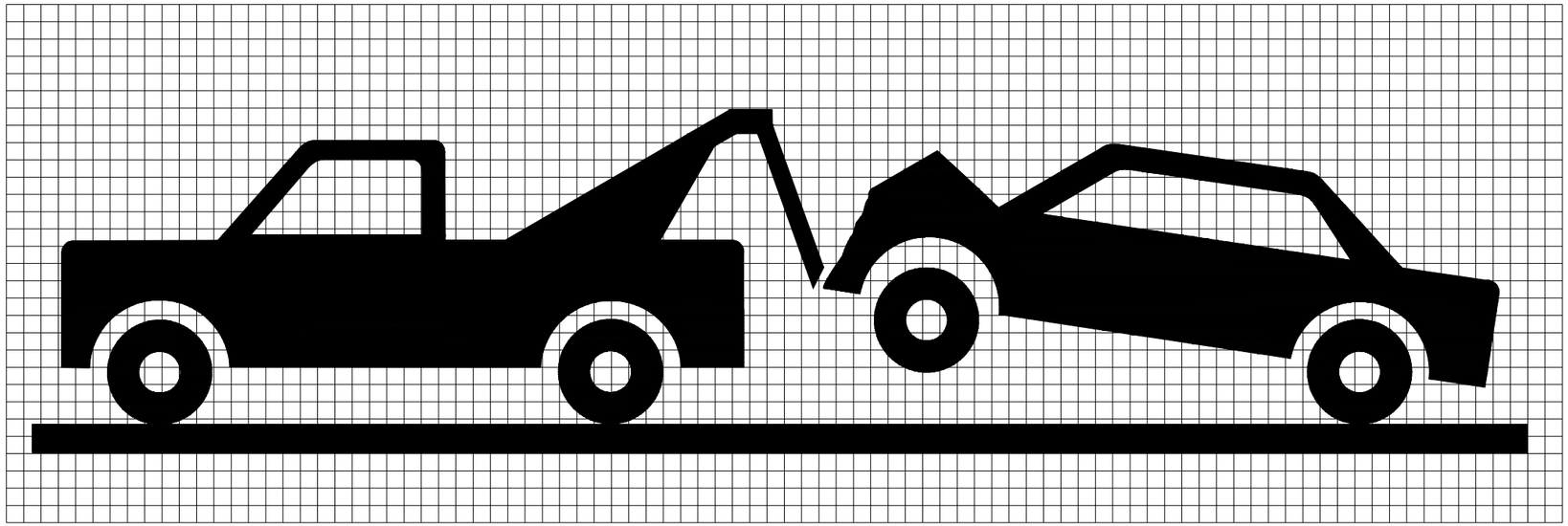
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE "TYPE SH REFLECTIVE SHEETING".
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E MODIFIED". ALL CAP WORDS ARE "SERIES E".
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.
11. DO NOT SCALE.





PROJECT NO:1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CRASH INVESTIGATION SIGN DETAILS	SCALE: 0 ½" 1"	SHEET 611	E

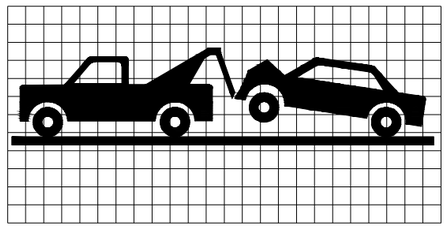
FILE NAME : J:\PROJECTS\D2_130013794\74\070101_MS.DWG PLOT DATE : 11/24/2014 9:33 AM PLOT BY : DODGE, BRIAN M PLOT NAME : ---------- PLOT SCALE : ******* WISDOT/CADDS SHEET 47



DETAIL "A"

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE "TYPE SH REFLECTIVE SHEETING".
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E MODIFIED". ALL CAP WORDS ARE "SERIES E".
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.
11. DO NOT SCALE.



DETAIL "B"

PROJECT NO:1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CRASH INVESTIGATION SIGN DETAILS	SCALE: 0 ½" 1"	SHEET 612	E

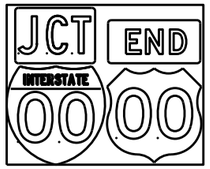
FILE NAME : J:\PROJECTS\D2_130013794\74\070101_MS.DWG PLOT DATE : 11/24/2014 9:33 AM PLOT BY : DODGE, BRIAN M PLOT NAME : ---------- PLOT SCALE : *******

WISDOT/CADDS SHEET 47

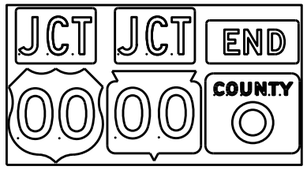
TYPICAL ASSEMBLIES



J1-1



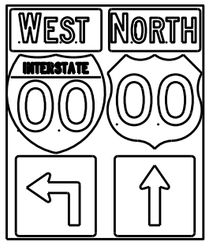
J1-2



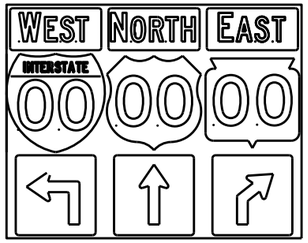
J1-3



J2-1



J2-2

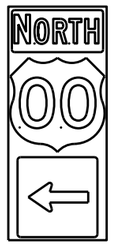


J2-3

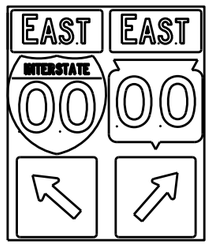


JV

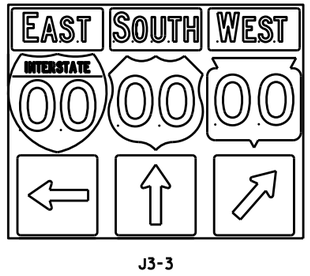
(Typical Vertical J-Assembly
See Note 10 and 11)



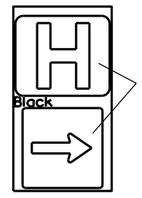
J3-1



J3-2



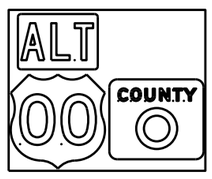
J3-3



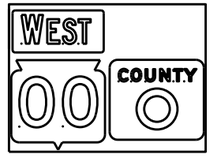
JH-1



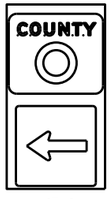
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

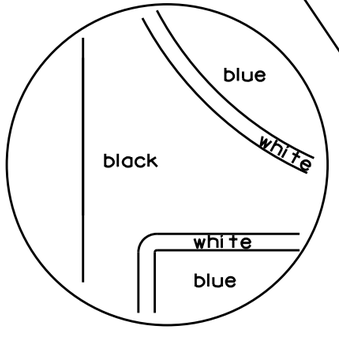


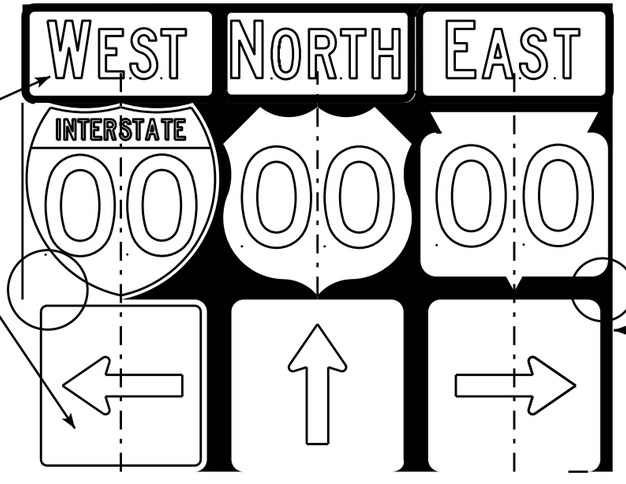
J23-1

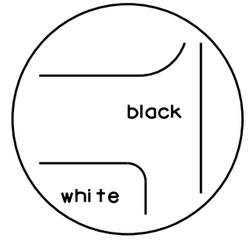


J22-1

blue background
with interstate







black background

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

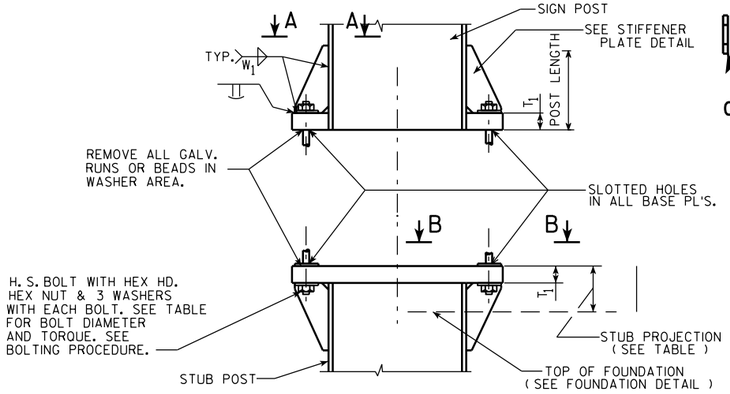
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

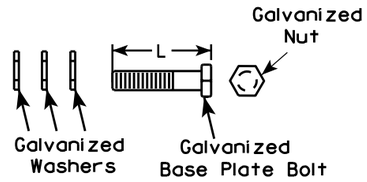
PROJECT NO: | SHEET NO: E

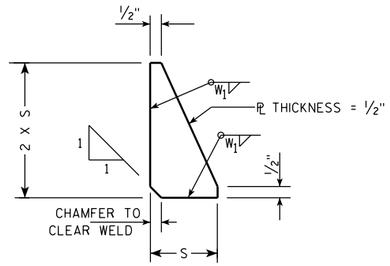
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42



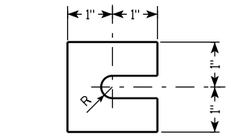
SIGN POST AND STUB POST ELEVATION





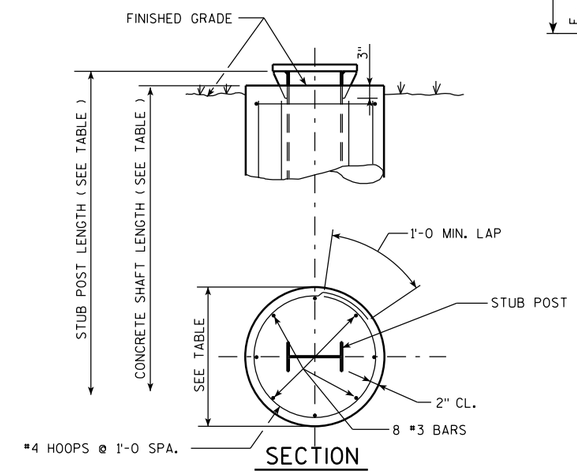
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)

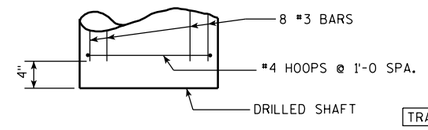


FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

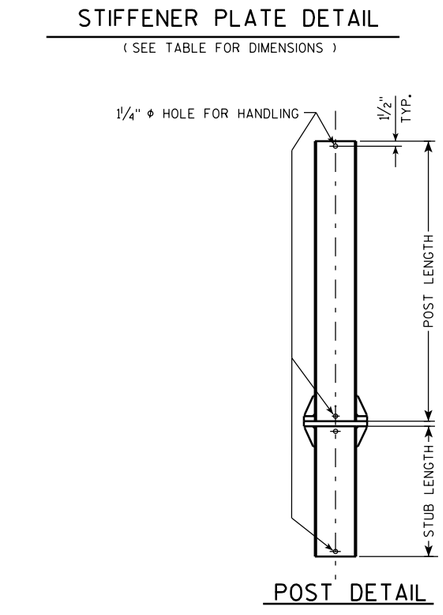
SHIM DETAIL



SECTION



FOUNDATION DETAIL



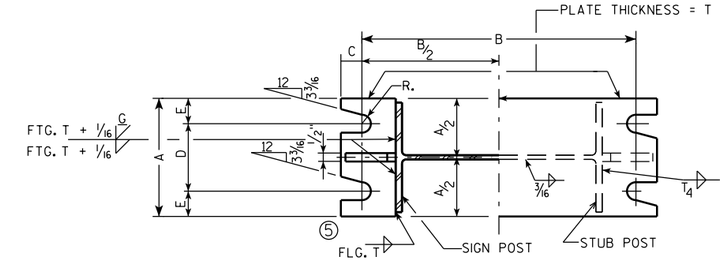
POST DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

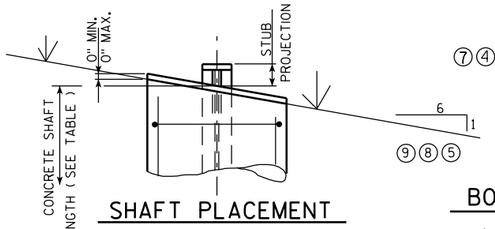
⑦

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3

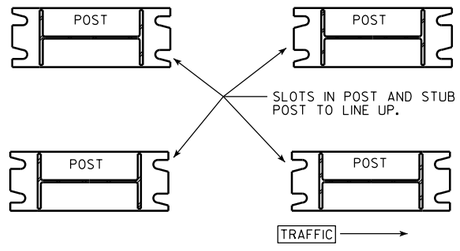
⑦



SECTION A-A SECTION B-B



SHAFT PLACEMENT



POST SLOT ORIENTATION ⑦

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & ½ WIND[4]	140 [4]25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.
⑨ THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

BASE CONNECTION DATA TABLE														FOUNDATION DATA				②
L	X	TYPE	DIMENSION / POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K	
3 ¾	④	A	W10"X12.0 #/FT.	¾" Φ @ 75#-FT.	5¼"	1'-0⅜	⅞"	3½"	⅞"	1"	3/16"	5/16"	13/32"	2⅛"	3'-6	3"	2'-0 Φ	5'-0	76.0#	④
4 ¾	④	B	W12"X16.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼	1"	3½"	1"	1¼"	¼"	5/16"	15/32"	3"	5'-6	3"	2'-0 Φ	7'-0	146.5#	④
5		C	W12"X19.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼	1"	3½"	1"	1½"	5/16"	5/16"	15/32"	3"	6'-0	3"	2'-0 Φ	7'-6	182.1#	
5		D	W12"X22.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼	1"	3½"	1"	1½"	⅜"	5/16"	15/32"	3"	6'-6	3"	2'-0 Φ	8'-0	210.5#	
5	③	E	W12"X26.0 #/FT.	1" Φ @ 90#-FT.	7"	1'-4¼	1¼"	4"	1½"	1½"	⅜"	5/16"	11/32"	3"	7'-0	3"	2'-0 Φ	8'-6	293.0#	③

① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION
APPROVED Matthew R Rauch for State Traffic Engineer
DATE 6/30/14 PLATE NO. A3-1.15

NO.	DATE	REVISION
⑩	1-21-14	LUBRICATION OF BASE BOLTS
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T_1 , T_2 & W_1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC. 2011	DRAWN BY JPH	PLANS CK'D.

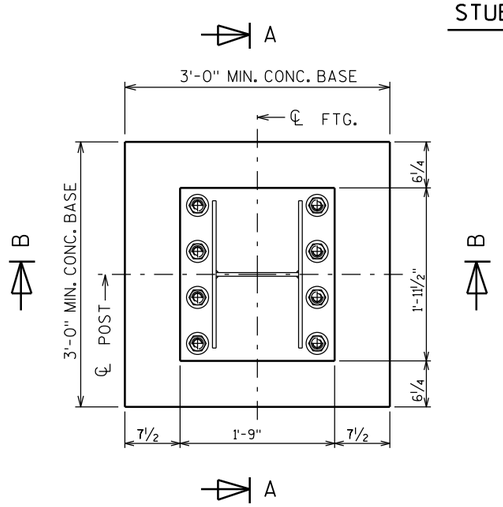
FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS
SHEET 614

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

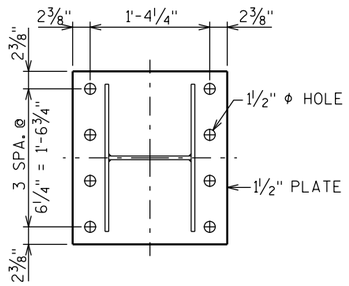
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A31.DGN PLOT DATE : 30-JUN-2014 10:43 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.351066:1.000000

WISDOT/CADDS SHEET 42

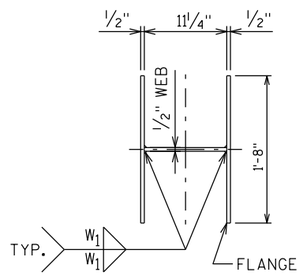
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



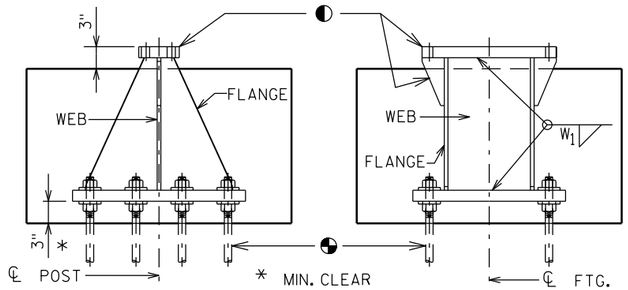
BASE PLATE



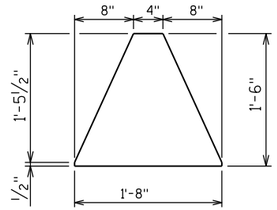
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



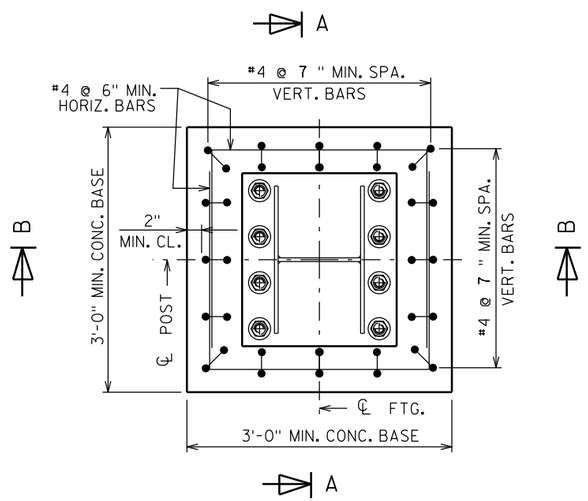
FLANGE

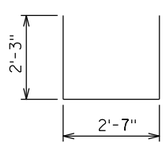
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

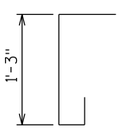
CONCRETE BASE SECTION





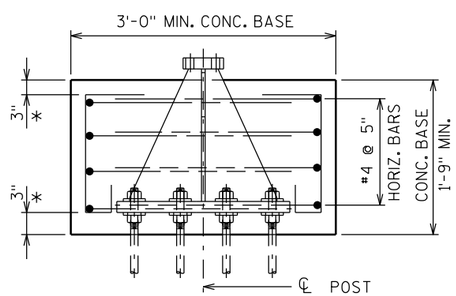
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



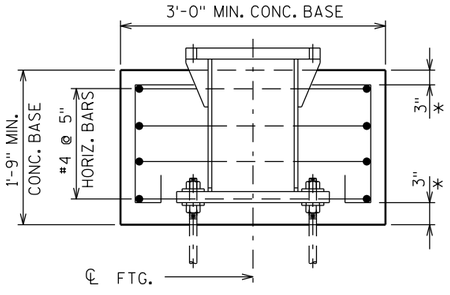
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

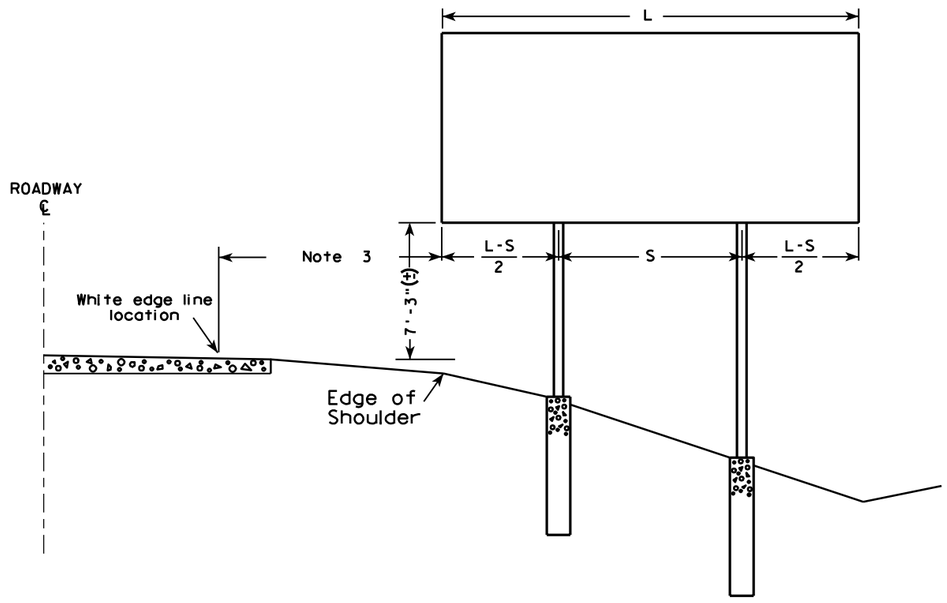
APPROVED Matthew R Rauch
for State Traffic Engineer

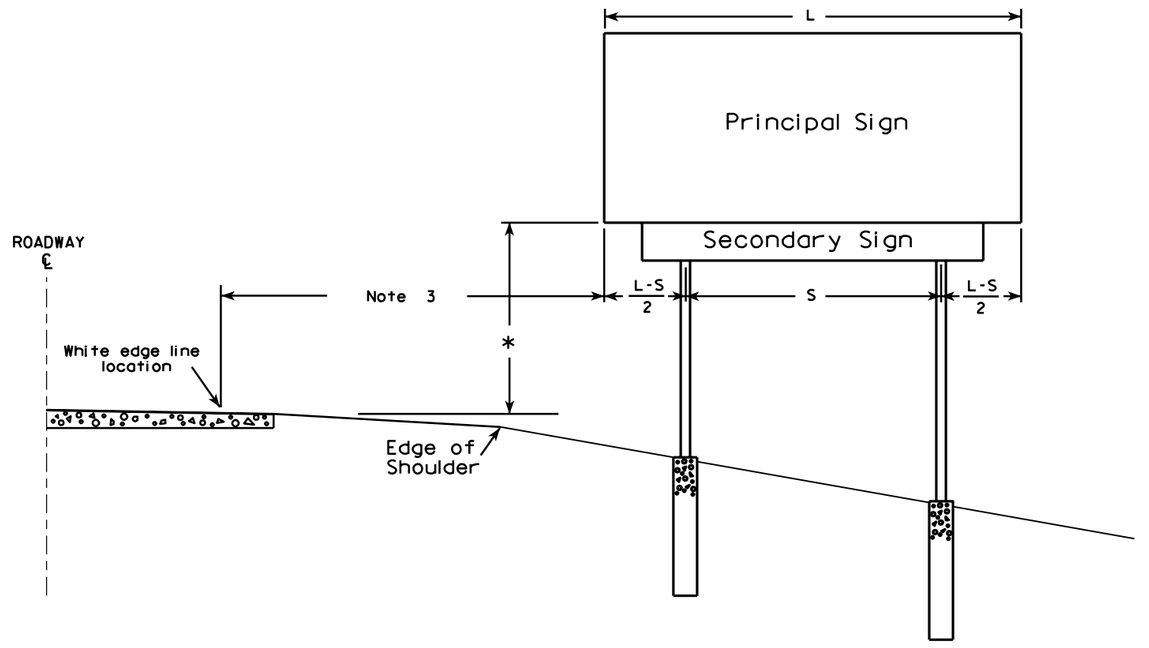
DATE 2/06/2014 PLATE A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31M.DGN PLOT DATE : 10-MAR-2014 15:16 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.556674:1.000000

WISDOT/CADDS SHEET 42





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

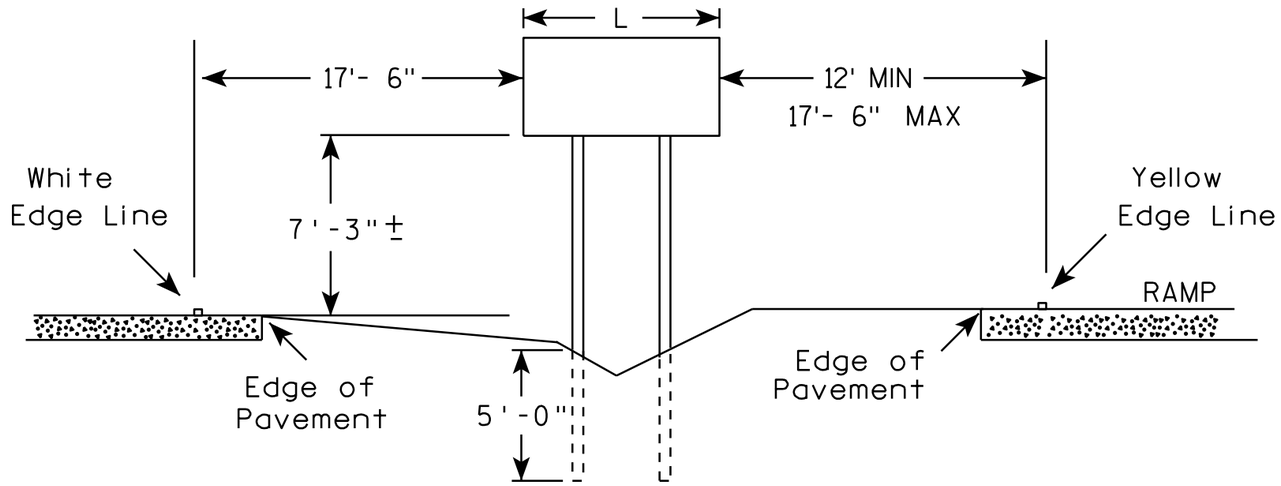
TYPICAL INSTALLATION
OF TYPE I SIGNS

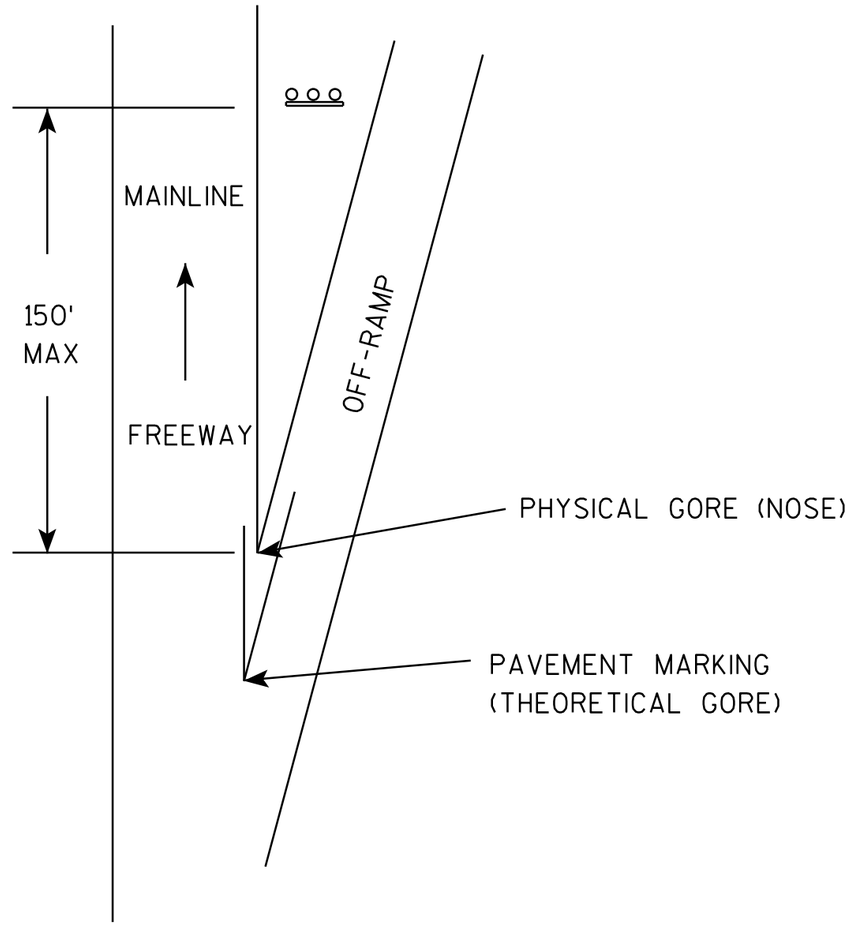
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 616	E





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The (∓) tolerance for the mounting height is 3 inches.

7

7

TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

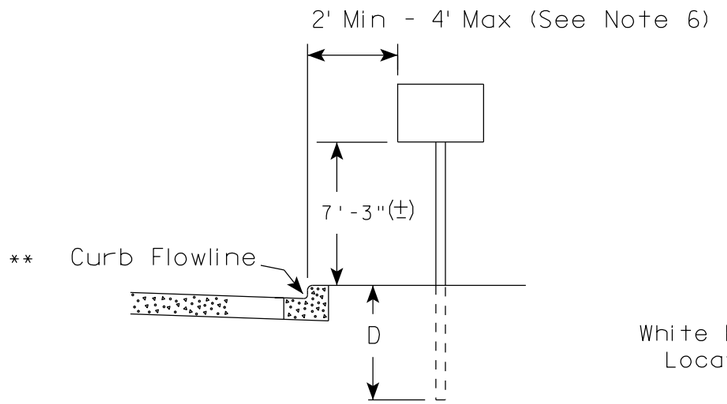
DATE 2/06/14 PLA... A4-2.3

PROJECT NO: | SHEET NO: E

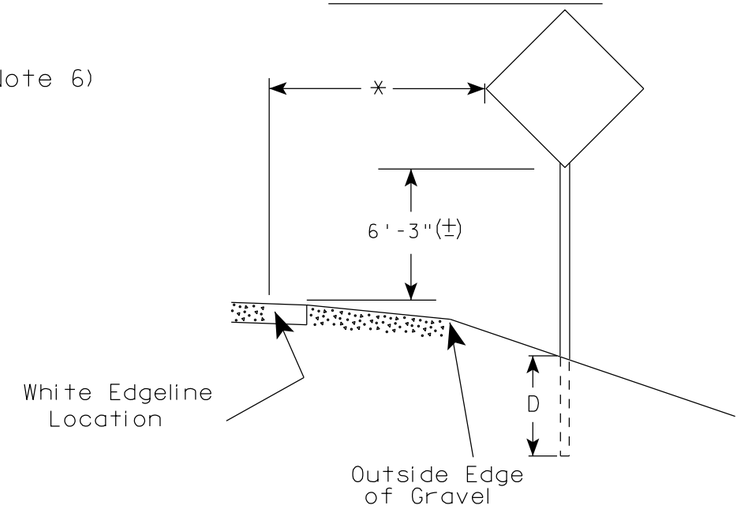
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A42.DGN PLOT DATE : 06-FEB-2014 12:36 PLOT BY : mscsja

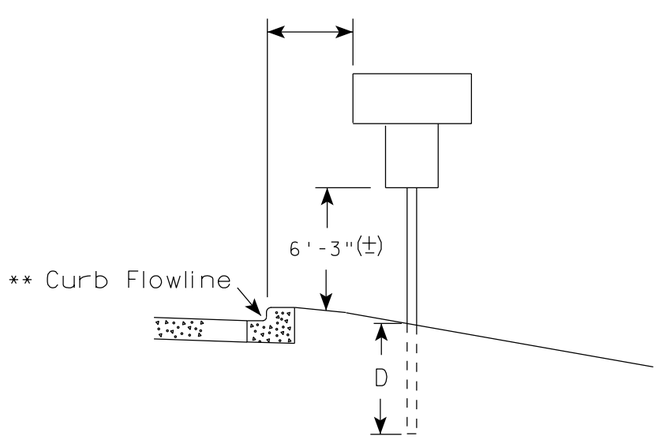
WISDOT/CADDS SHEET 42

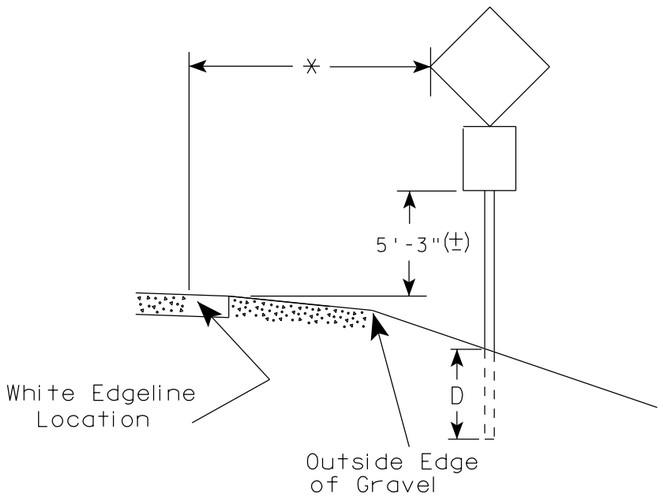
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

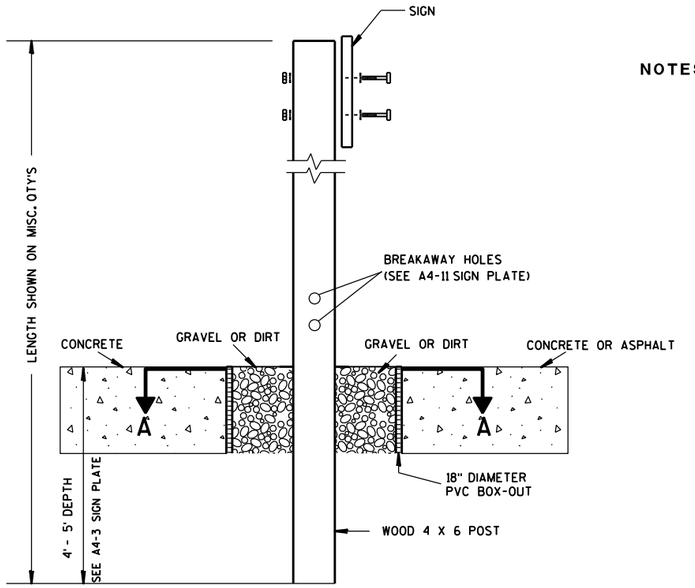
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

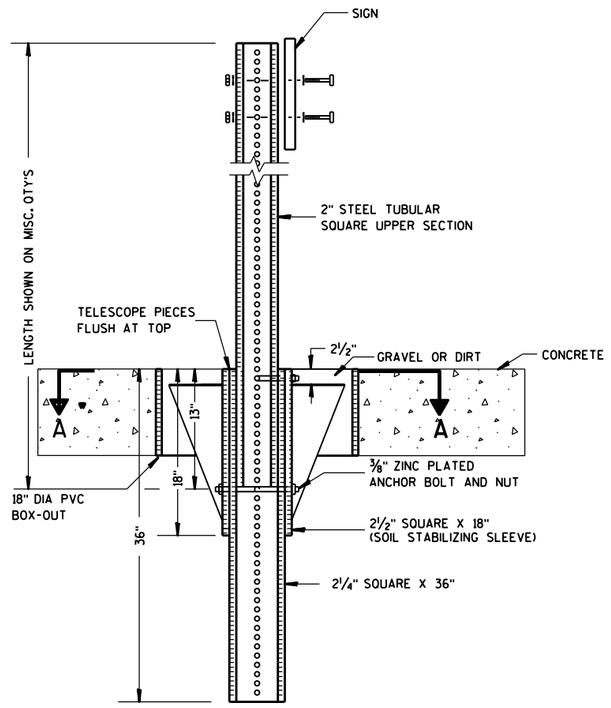
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

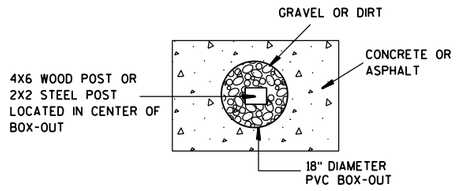
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

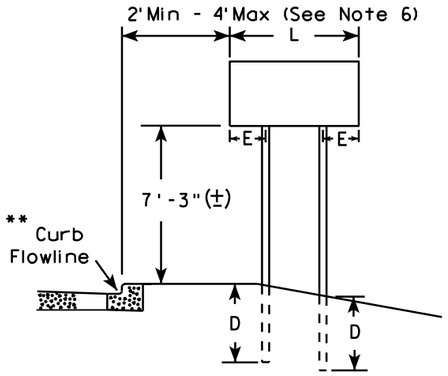
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

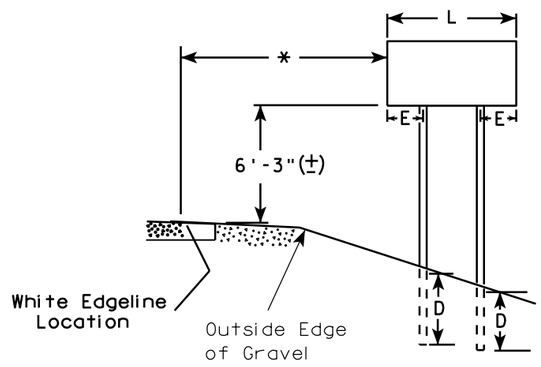
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

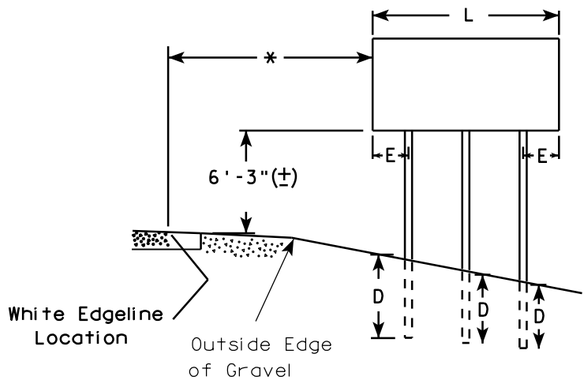
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

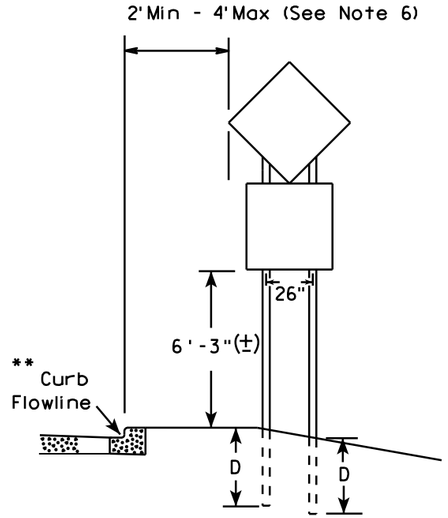
URBAN AREA



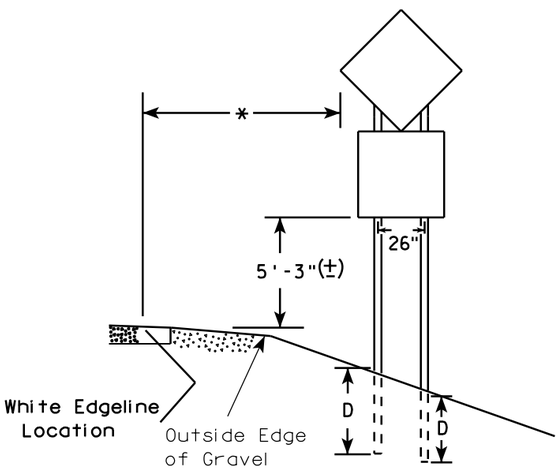
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

***

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

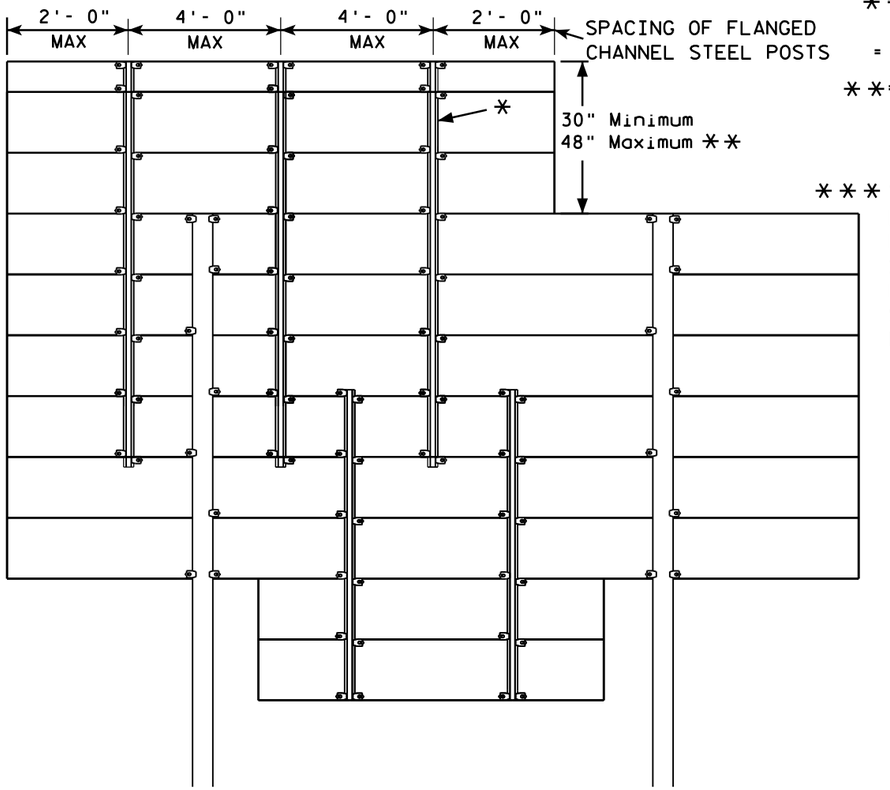
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. AA-A 620 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

GROUND MOUNTED SIGN

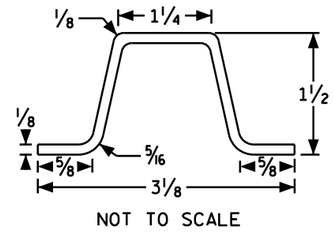


*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

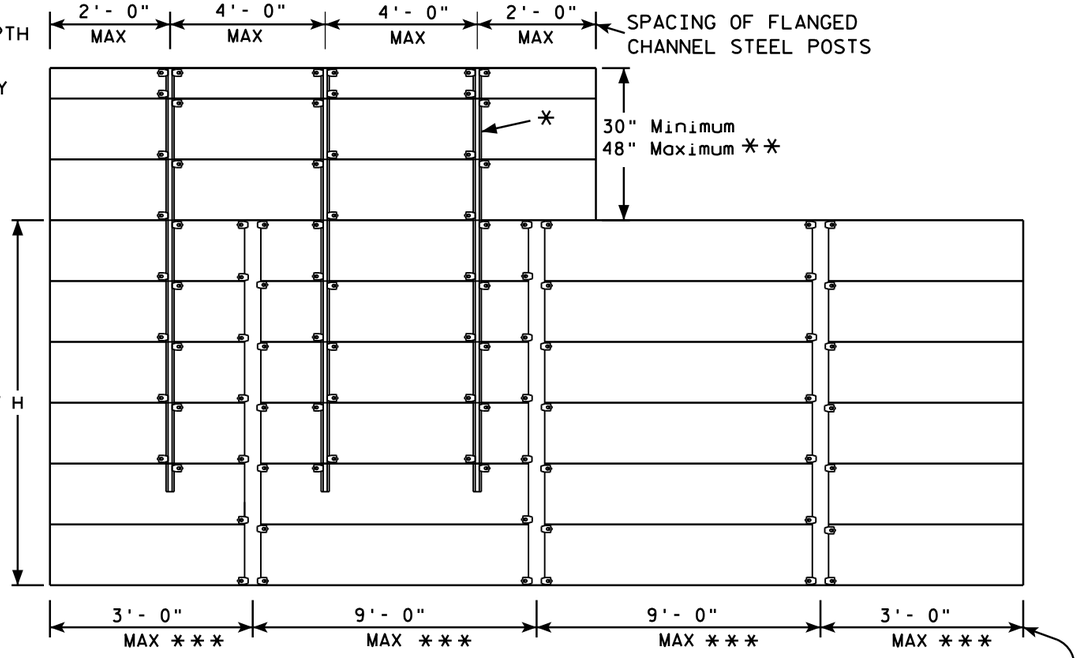
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

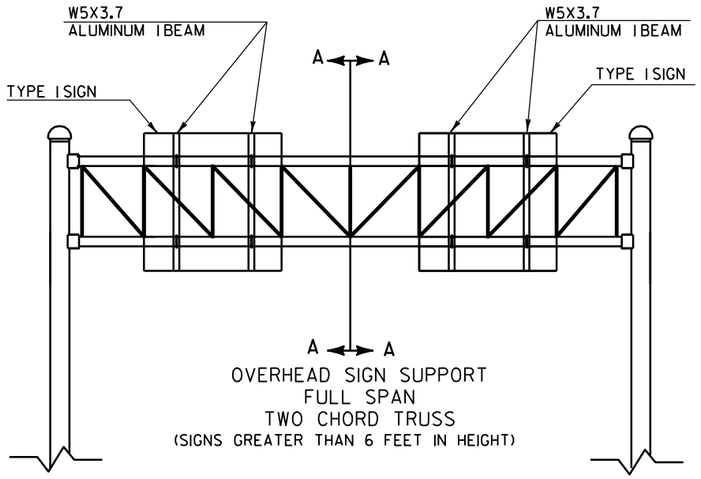
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

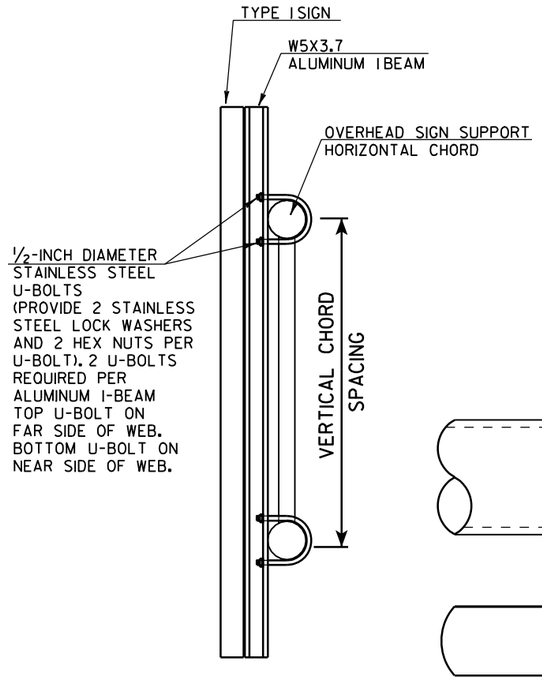
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 621 A4-6.12

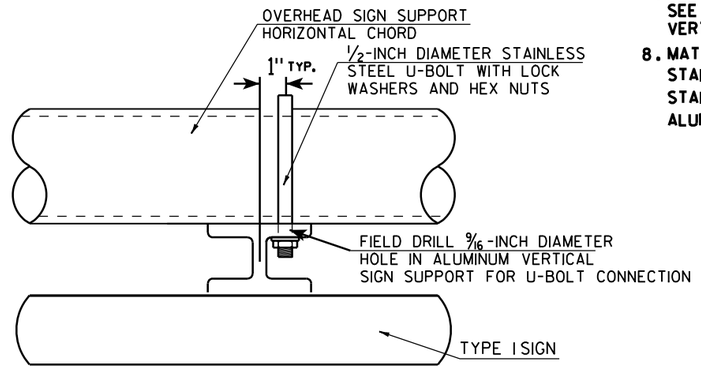
PROJECT NO:				SHEET NO:	E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



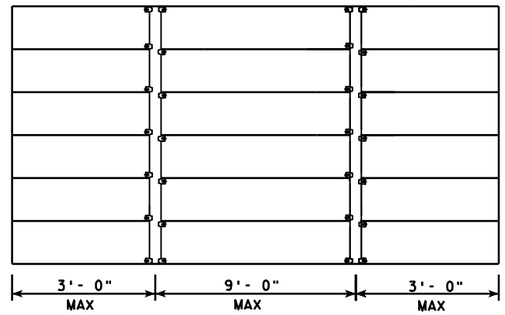
CUT SECTION A-A



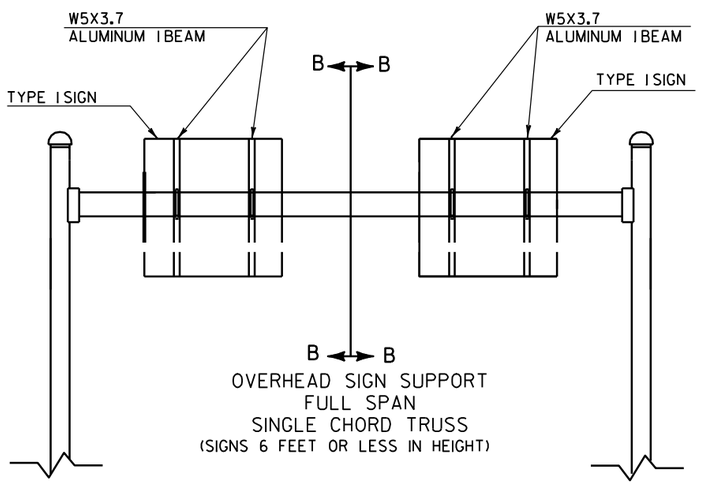
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

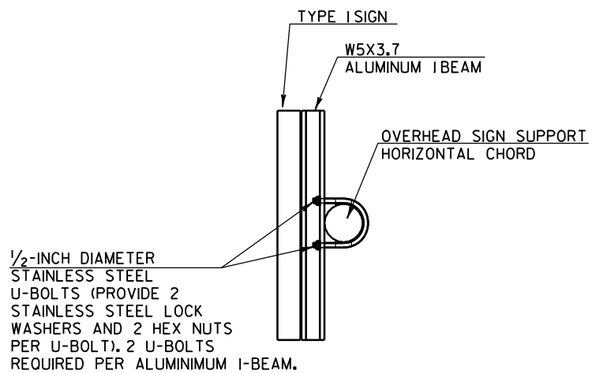
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



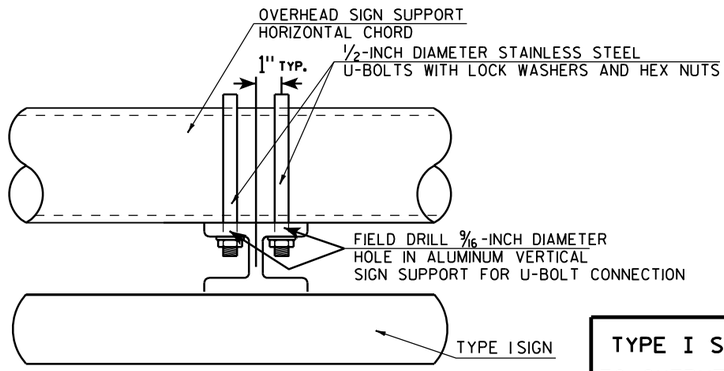
SPACING OF W5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

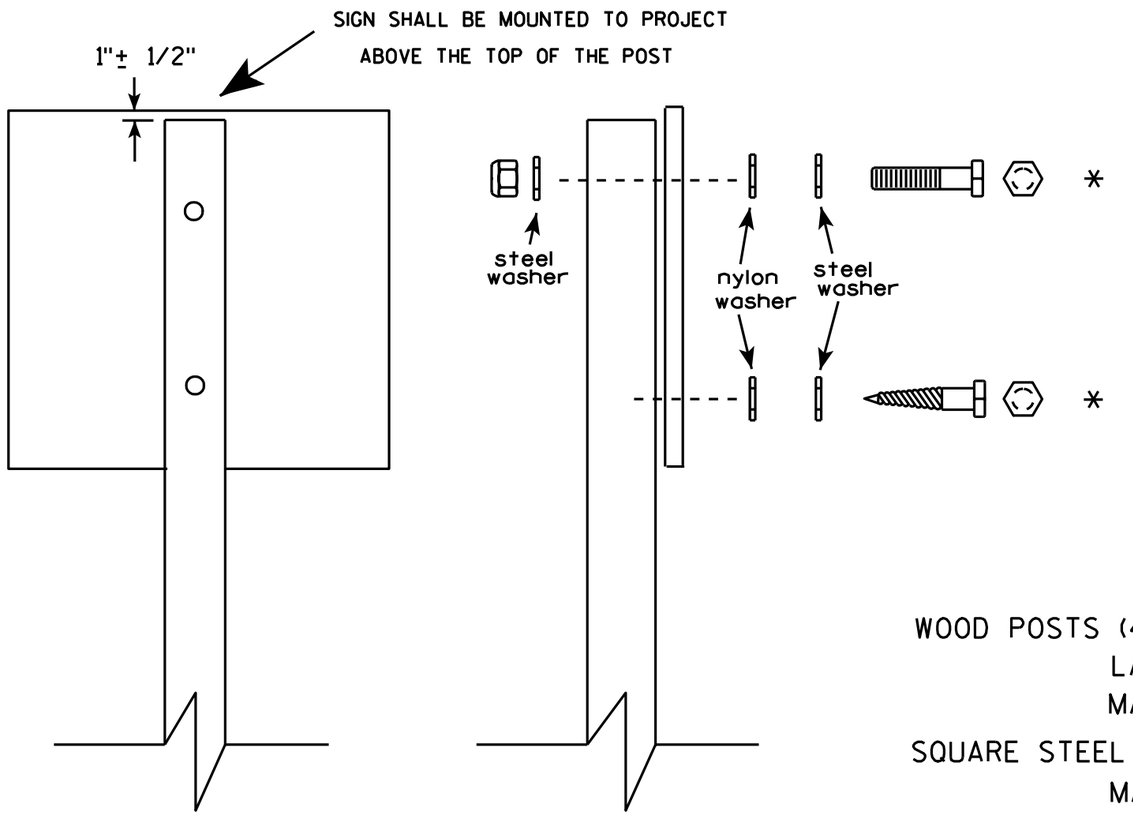
TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/12 PLATE NO. A4-7.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 622	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")

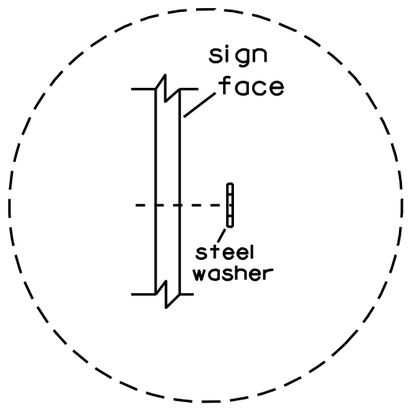
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts

RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

7

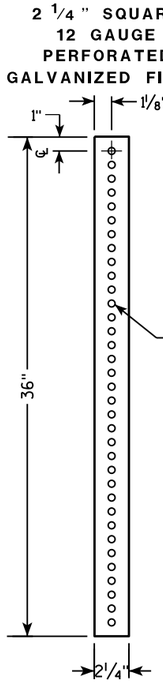
7

PROJECT NO:

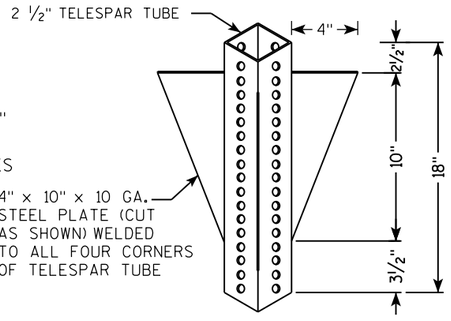
SHEET NO: 623 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

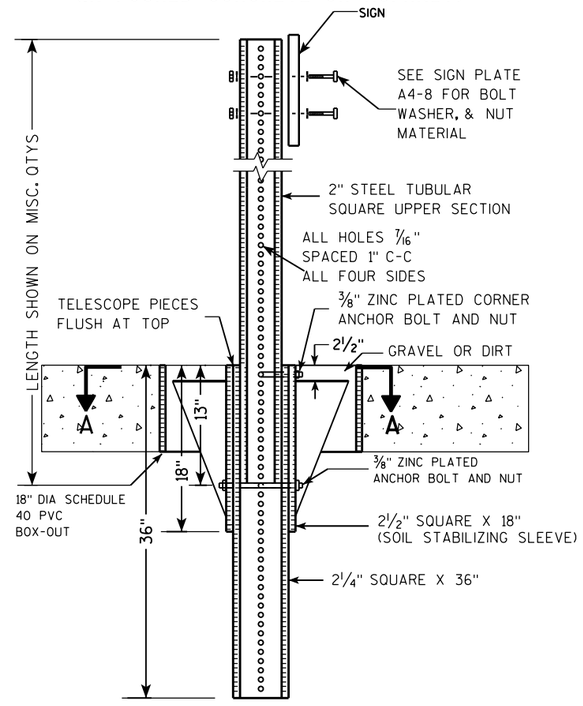
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



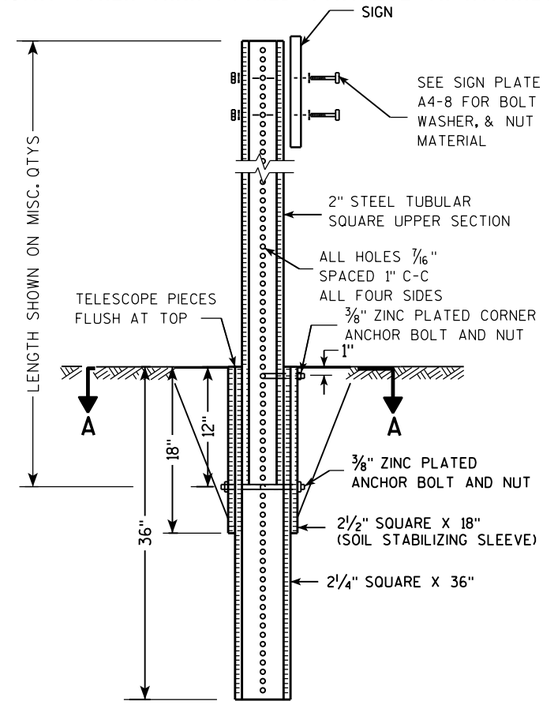
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

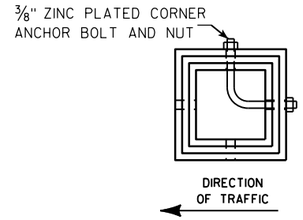


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

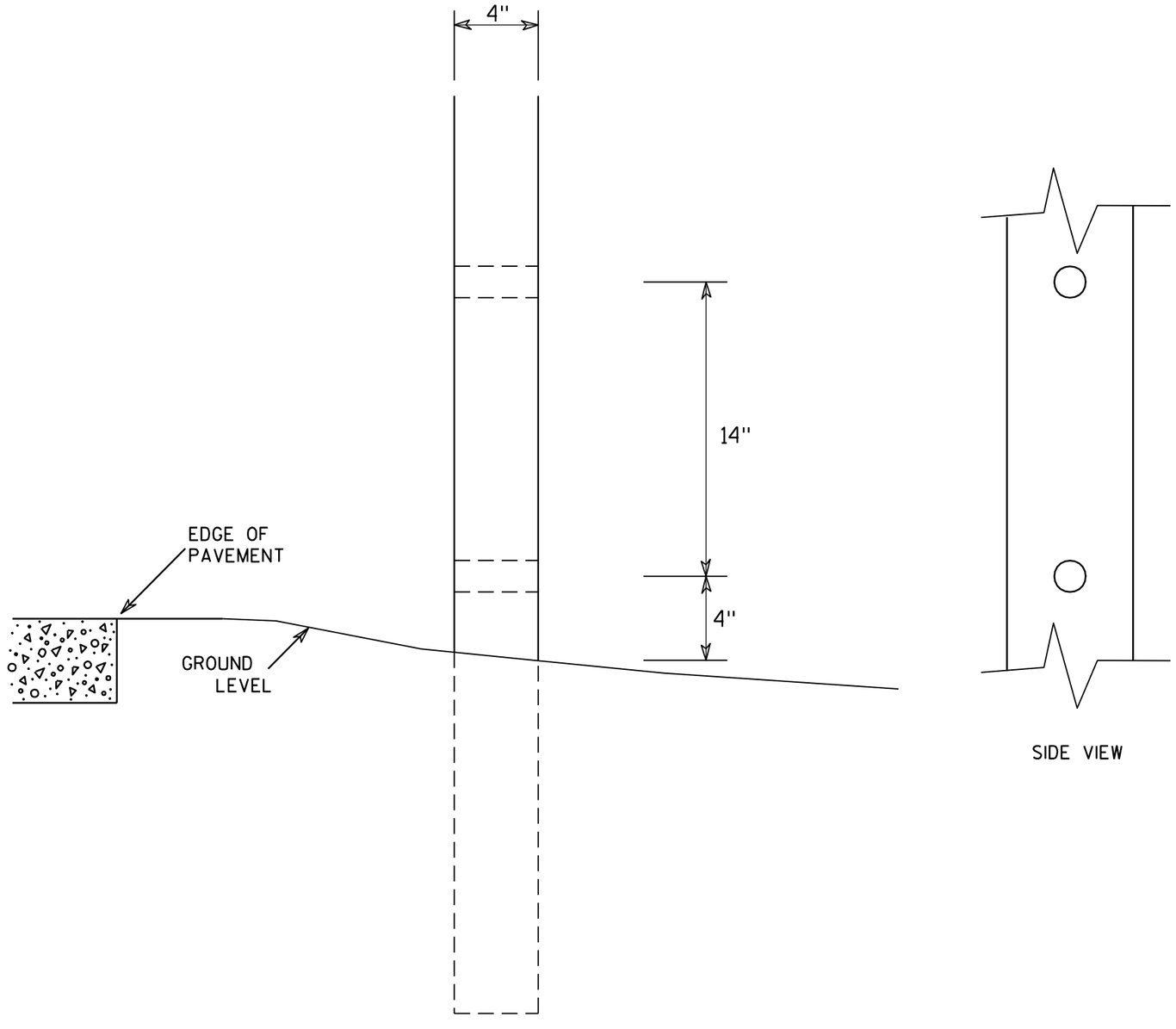
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 624 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

4 X 6 WOOD POST MODIFICATIONS

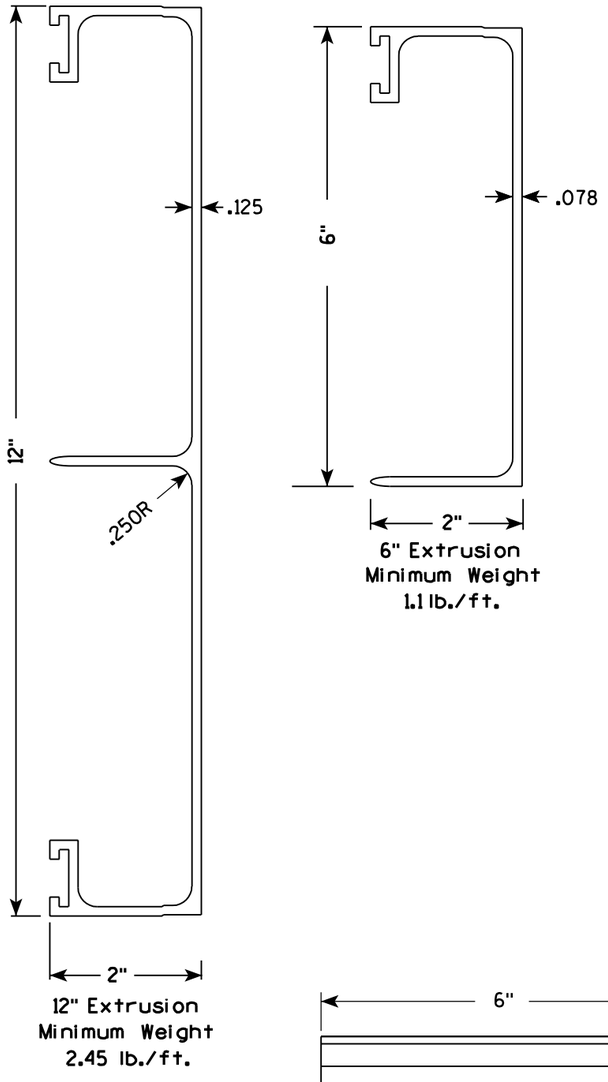
WISCONSIN DEPT OF TRANSPORTATION

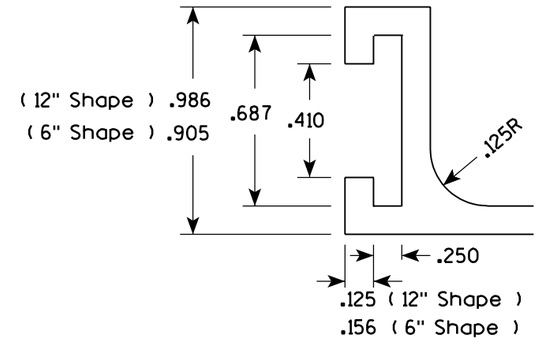
APPROVED Chester J Spang
for State Traffic Engineer

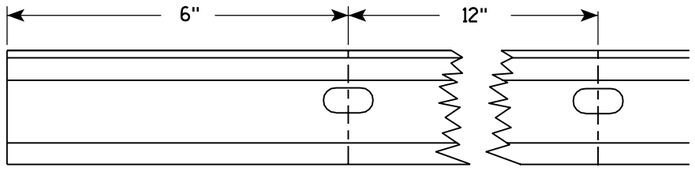
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 625	E

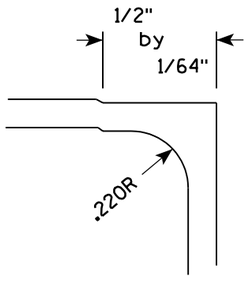
Extruded Shape







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

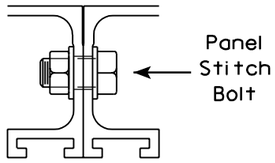


Hardware

STITCH BOLT, WASHER & NUT

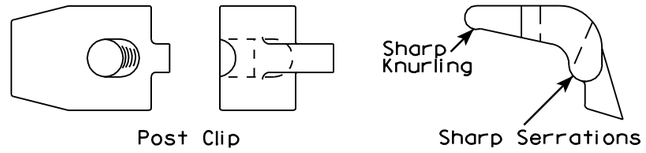
The hardware includes:

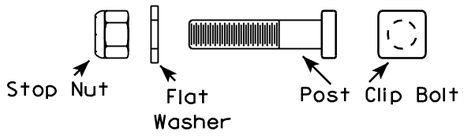
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

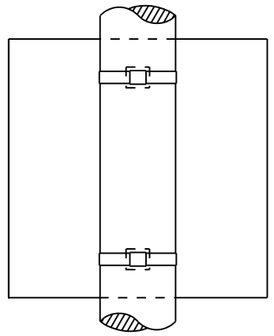
DATE 11/18/99 PLATE NO. A5-2.9

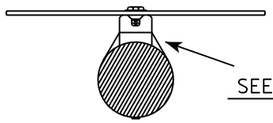
PROJECT NO:

SHEET NO: 626 E

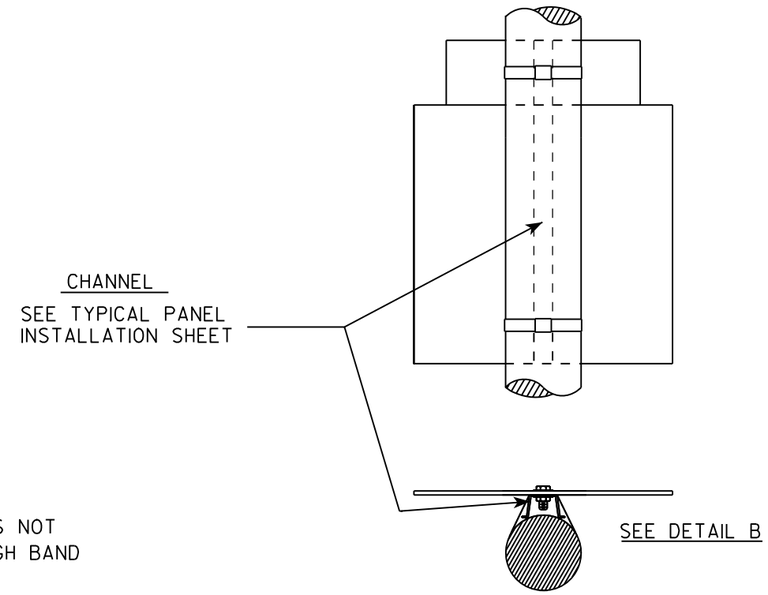
BANDING

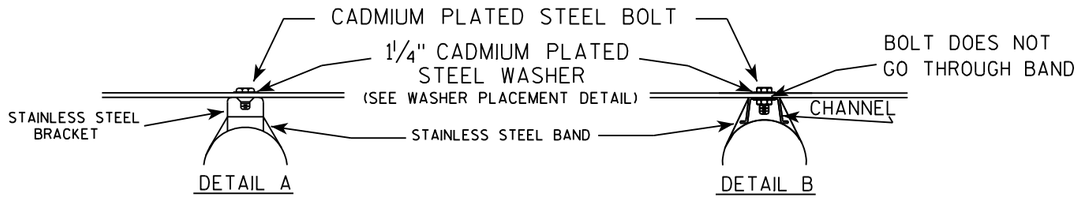
SINGLE SIGN



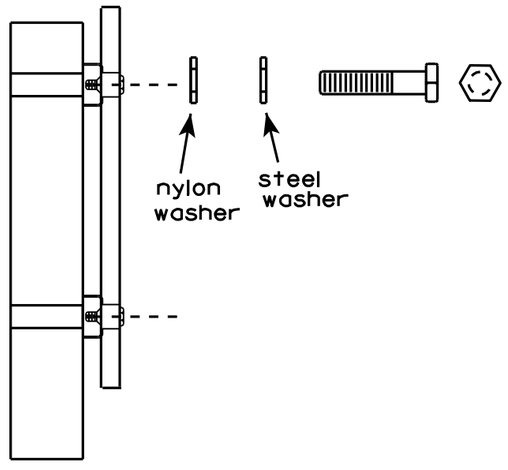


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

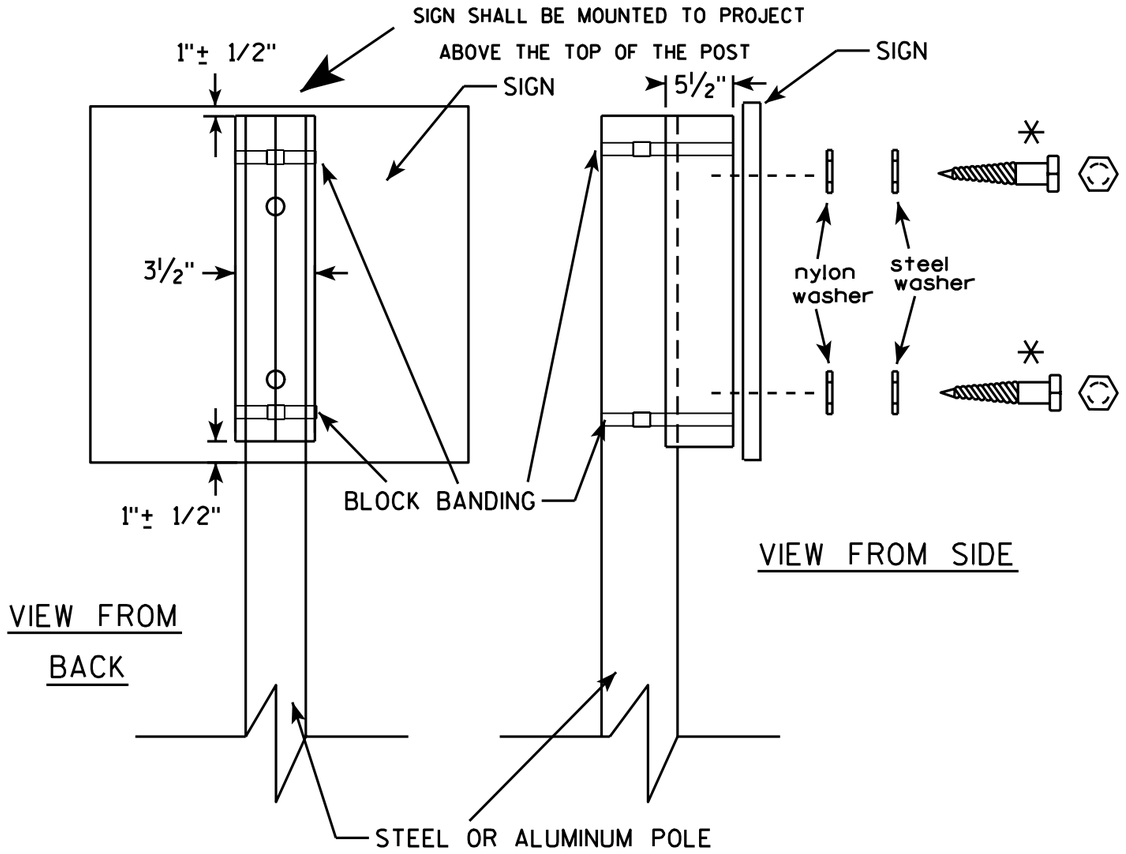
STANDARD SIGN
SIGN BANDING DETAILS

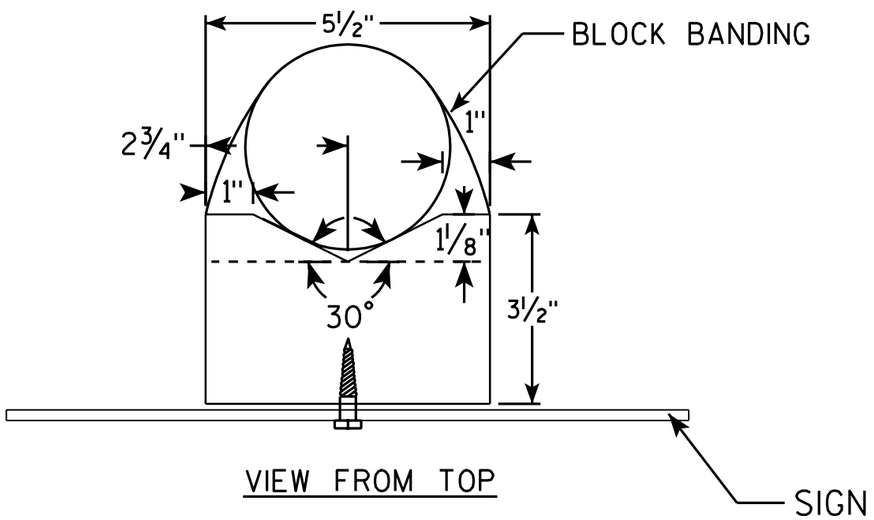
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 627	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

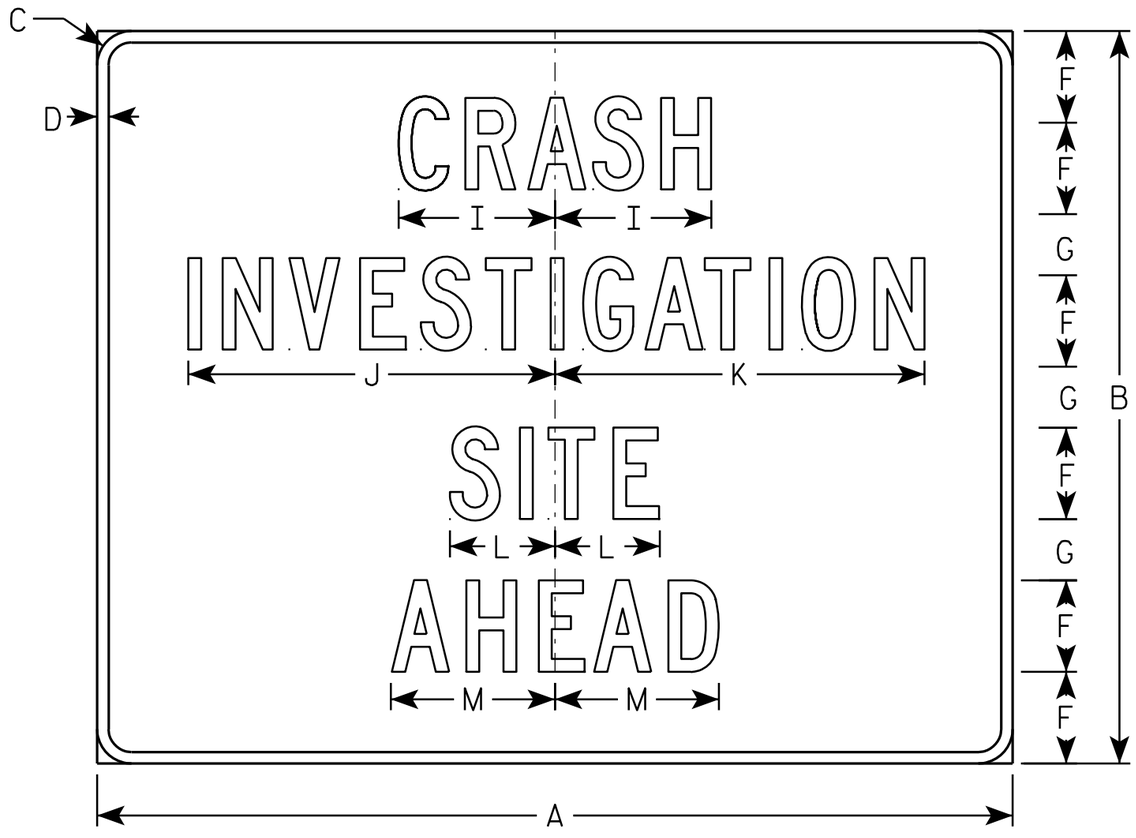
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO: | SHEET NO: 628 | E



D4-54A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - BLUE
   Message - WHITE
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	48	2 1/4	3/4		6	4		10 1/4	24	24 1/4	6 7/8	10 3/4														20.0
3																											
4																											
5																											

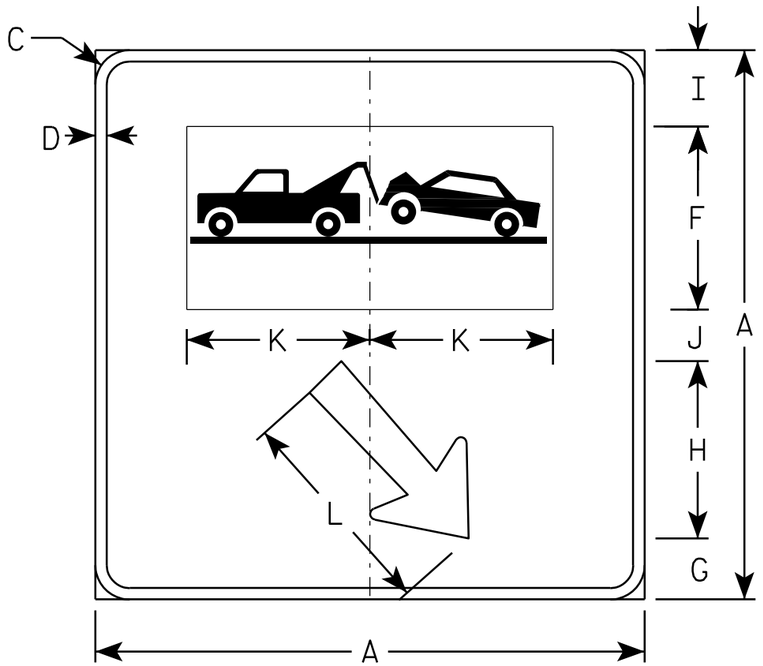
STANDARD SIGN
D4-54A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2011 PLATE NO. D4-54A.1

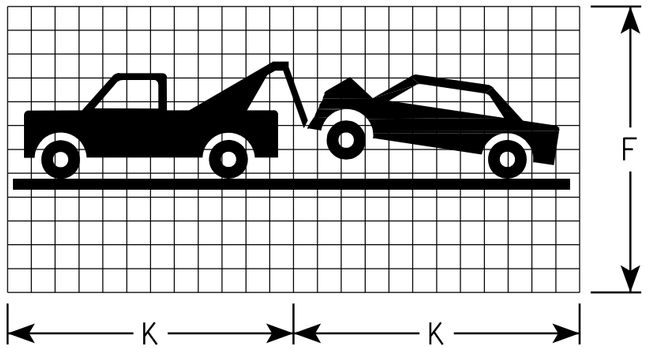
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 629	E



D4-56R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - BLUE
   Message - WHITE
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. D4-56L is same as D4-56R except arrow is reversed.
6. Arrow is from A1-2 Lower Case 4½ Series D & E, with a modified length.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	36		2 1/4	3/4		12	4	11 5/8	5	3 3/8	12	14															9.0
3																											
4																											
5																											

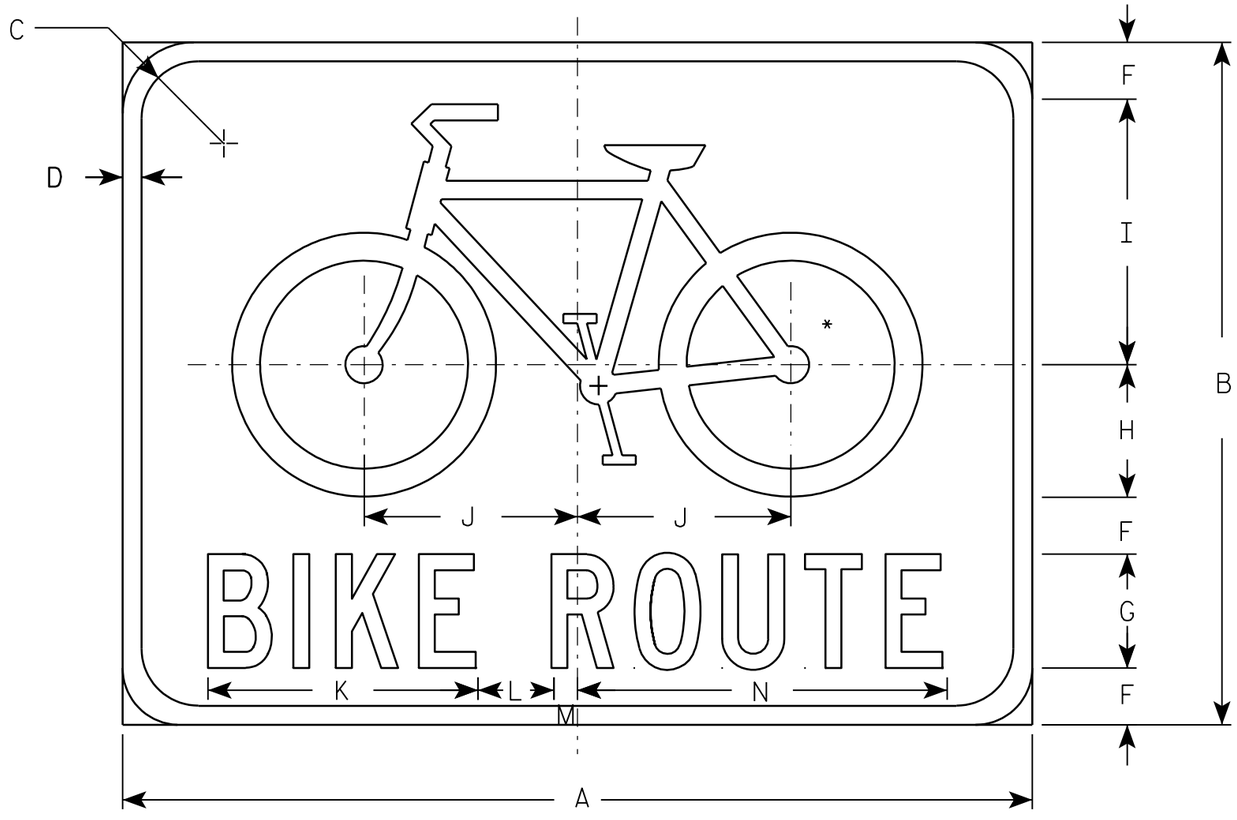
STANDARD SIGN
D4-56 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/14/2011 PLATE NO. D4-56.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 630	E



D11-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

* See W11-1 for symbol design

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 450 mm
3	750 mm X 600 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	18	1 1/2	1/2		1 1/2	3	3 1/2	7	5 5/8	7 1/8	2	5/8	9 3/4													3.0	0.27
3	30	24	1 1/4	5/8		2	4	4 3/4	9 1/4	7 1/2	9 1/2	2 5/8	7/8	13													5.0	0.45
4																												
5																												

STANDARD SIGN
D11-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/04 PLATE NO. D11-1.1

PROJECT NO:

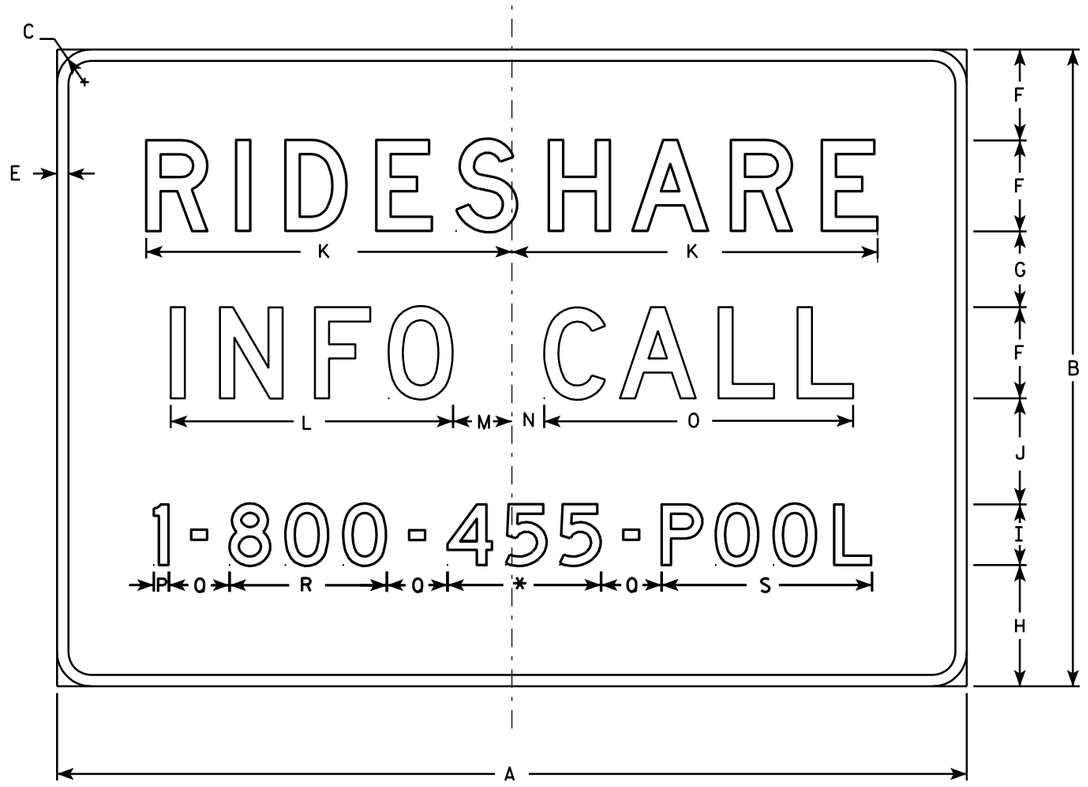
SHEET NO: 631 E

FILE NAME : C:\Users\Projects\tr_stdplate\D111.DGN PLOT DATE : 17-MAR-2005 10:38 PLOT BY : DOTDZK

WISDOT/CADDS SHEET 42

7

7



D12-2A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust spacing as required to achieve proper balance.

* Variable (See note 5)

Metric equivalent for this sign is:

SIZE	
1	1200 mm X 525 mm
2	1500 mm X 1050 mm
3	
4	1500 mm X 1050 mm
5	1950 mm X 1350 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	48	21	1 1/2		1/2	3	2 3/4	3 1/2	3	2 3/4	12 1/8	9 3/8	2	1 1/8	10 1/4	3/4	3	7 3/4	10 5/8								7.0	0.63
2	60	42	2 1/4		3/4	6	5	8	4	7	24 1/8	18 5/8	3 7/8	2 1/8	20 1/8	1	4	10 3/8	13 7/8								17.5	1.58
3																												
4	60	42	2 1/4		3/4	6	5	8	4	7	24 1/8	18 5/8	3 7/8	2 1/8	20 1/8	1	4	10 3/8	13 7/8								17.5	1.58
5	78	54	3		1	8	6	10	6	8	30 7/8	23 5/8	4 7/8	2 1/8	26 3/8	1 1/2	5	15 1/2	21 1/4								29.25	2.63

STANDARD SIGN
D12-2A

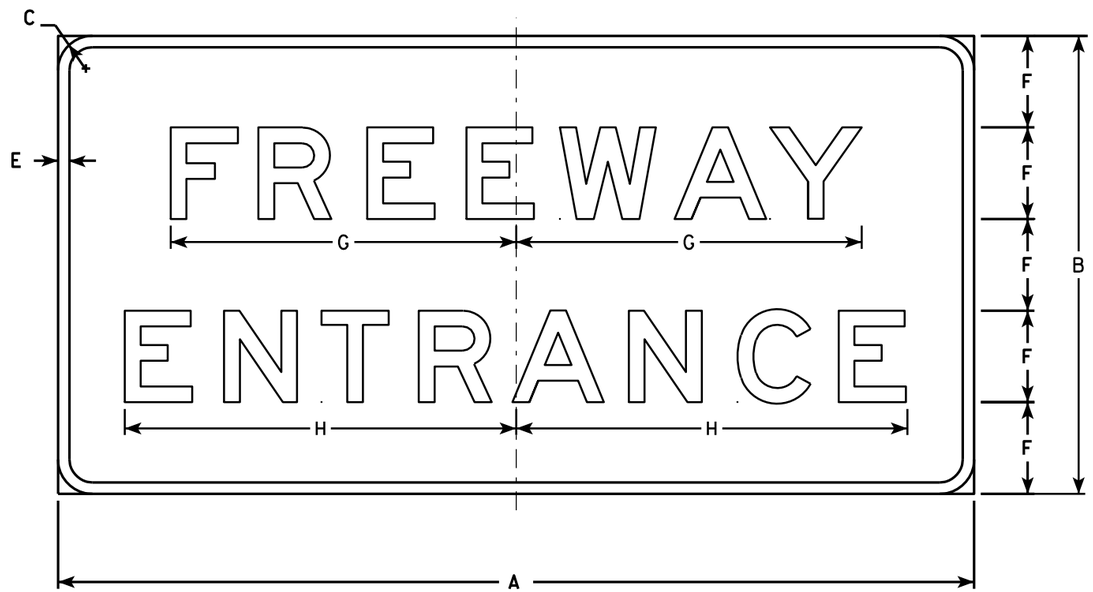
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spay for State Traffic Engineer

DATE 1/16/02 PLATE NO. D12-2A.3

PROJECT NO:

SHEET NO: 632 E



D13-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	30	2 1/4		3/4	6	22 5/8	25 5/8																			12.5
3																											
4																											
5																											

STANDARD SIGN
D13-3

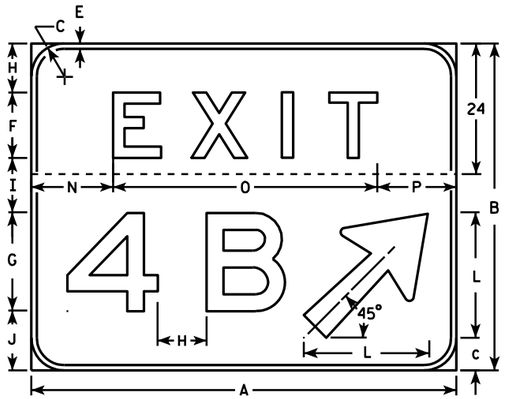
WISCONSIN DEPT OF TRANSPORTATION

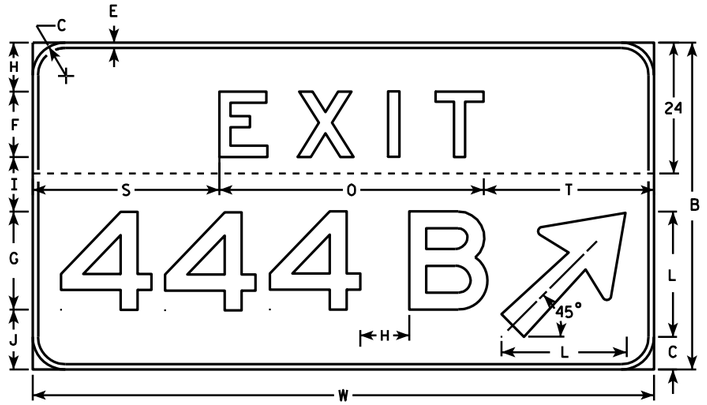
APPROVED Matthew R Rauch
for State Traffic Engineer

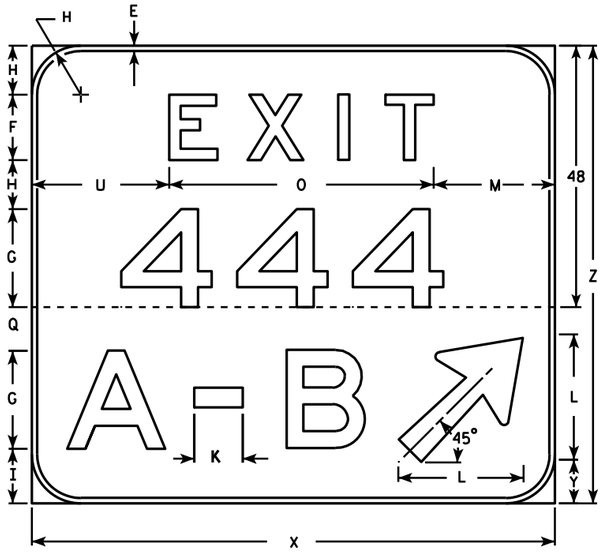
DATE 3/12/13 PLATE NO. D13-3.1

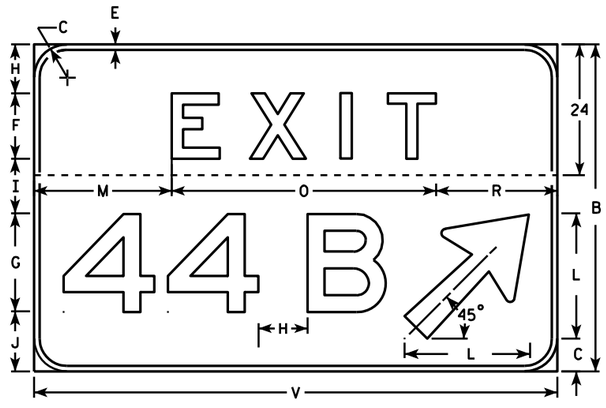
PROJECT NO:

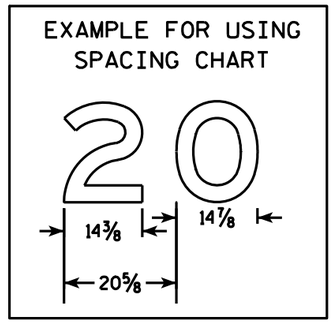
SHEET NO: 633 E











NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces as shown on each detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. When two letters are hyphenated, the distance between them should be equal to two letter heights and the hyphen is spaced optically between them.
9. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8	19 7/8	22 1/8	22 1/8
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14	9 7/8	14	14
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8	20 1/4	21 1/8	21 1/8
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4	20 1/4	21 1/8	21 1/8
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8	22 1/2	25 1/2	23 3/8
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8	19 1/4	20 5/8	20 5/8
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8	18	20 3/4	20 3/4
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/4	21 1/2	21 1/2
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18	21 3/4	21 3/4
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2																										
3																										
4																										
5	78	60	6		1	12	18	9	10	11	8 7/8	23	25 1/4	15	48 1/2	14 1/2	8	22 1/4	34 1/4	31 1/4	25 1/4	96	114	96	7 1/2	84

2 Digit Bid Area	3 Digit Bid Area	4 Digit Bid Area	5 Digit Bid Area
Sq. Ft.			
32.5	40.0	47.5	56.0

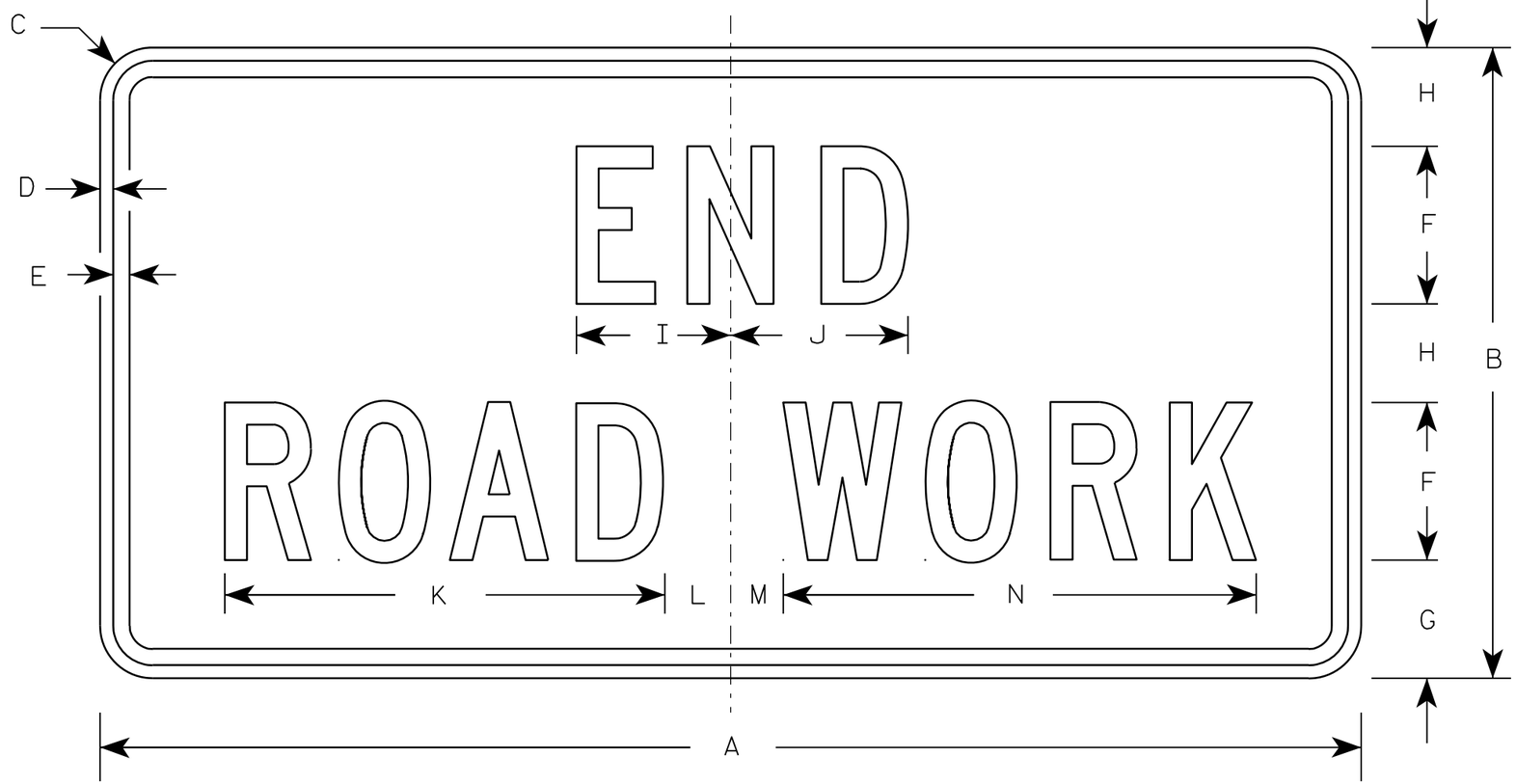
STANDARD SIGN
E5-1B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/8/10 PLATE NO. E5-1B.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 634 | E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

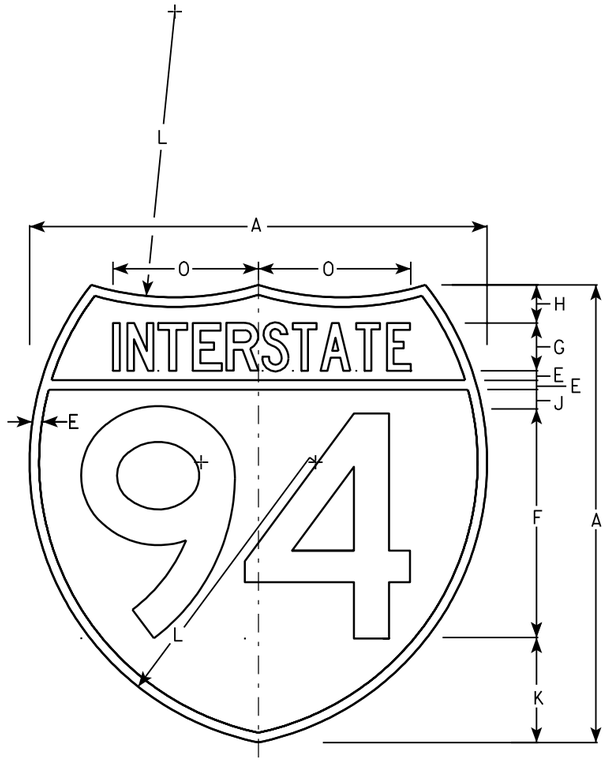
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

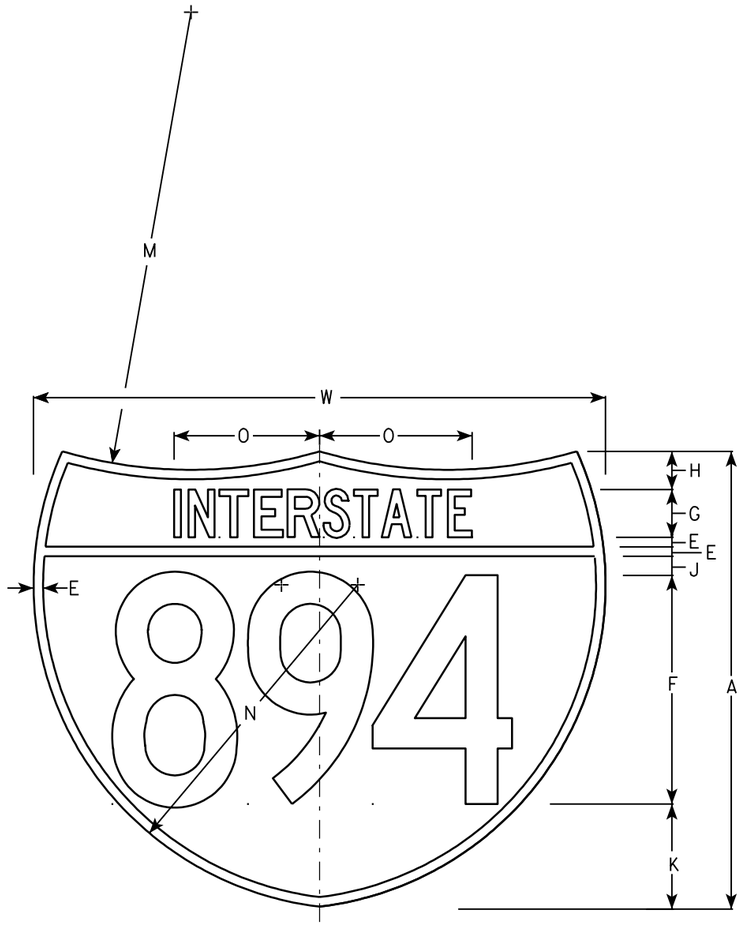
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 635	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

7

7

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

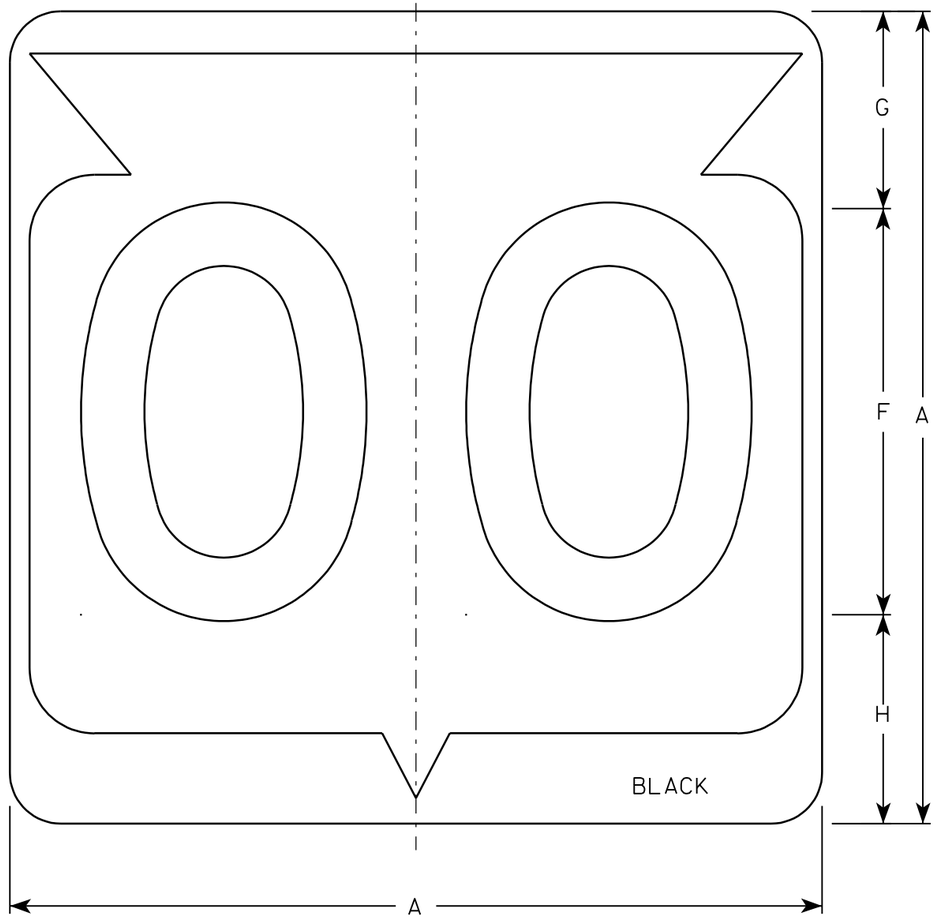
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

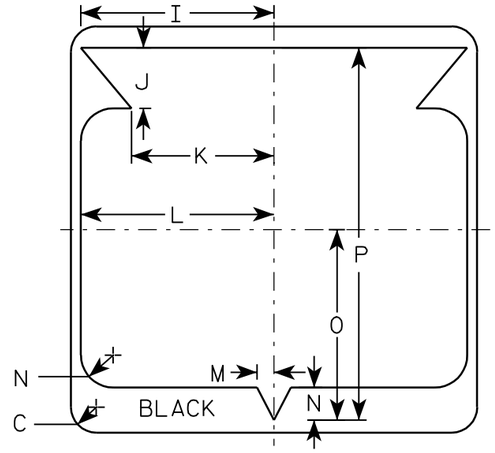
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 636	E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

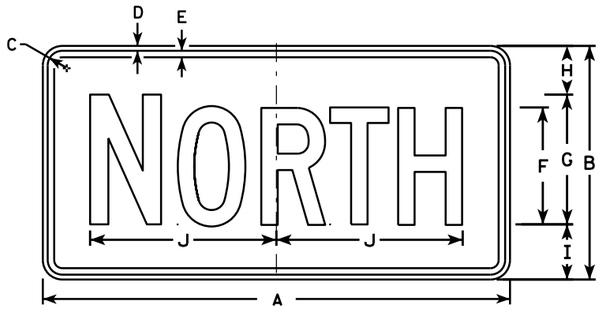
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

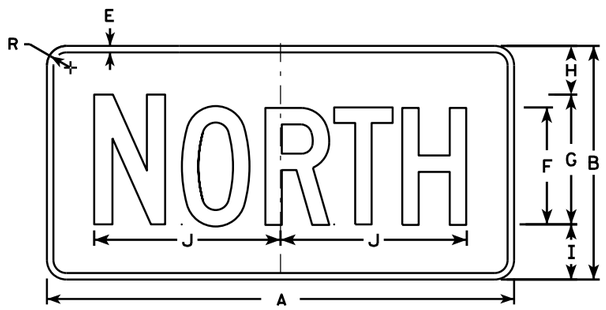
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 637	E



M3-1
MK3-1
MM3-1
MN3-1



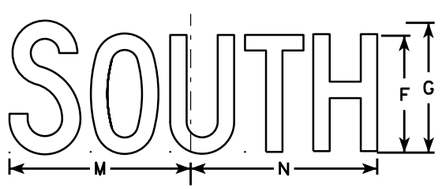
MB3-1



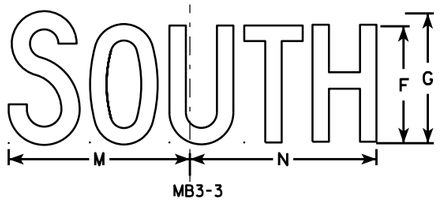
M3-2
MK3-2
MM3-2
MN3-2



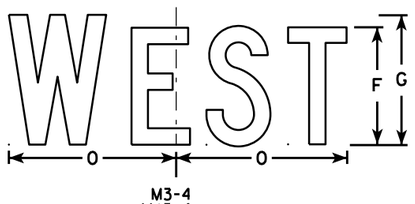
MB3-2



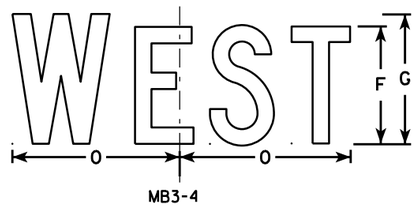
M3-3
MK3-3
MM3-3
MN3-3



MB3-3



M3-4
MK3-4
MM3-4
MN3-4



MB3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

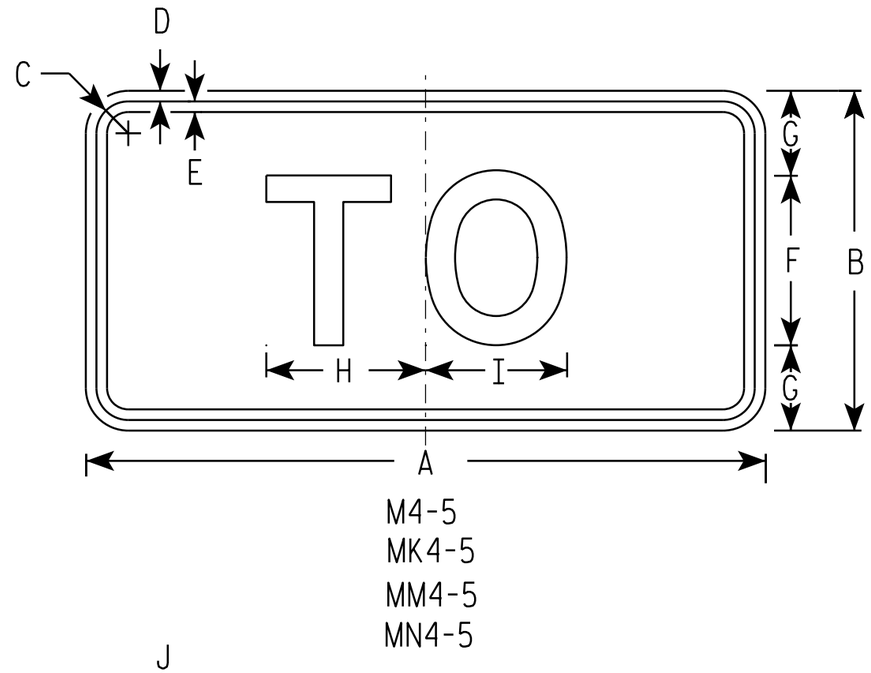
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

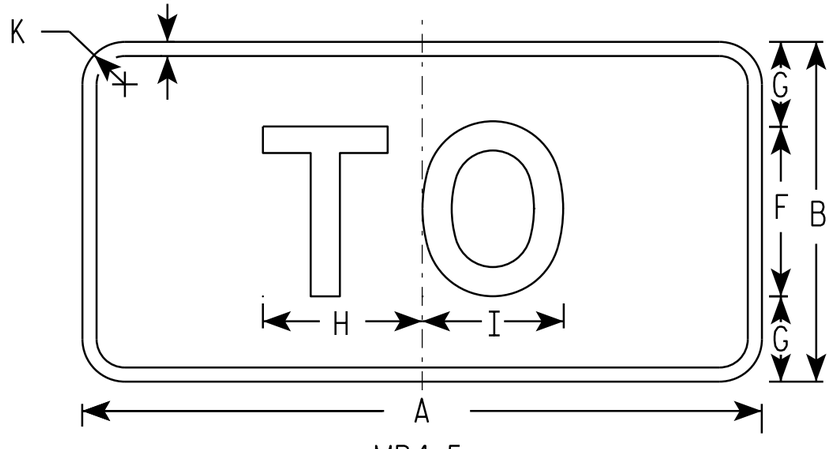
DATE 6/30/14 PLATE NO M3-1.13

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E

7



M4-5
MK4-5
MM4-5
MN4-5



MB4-5

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

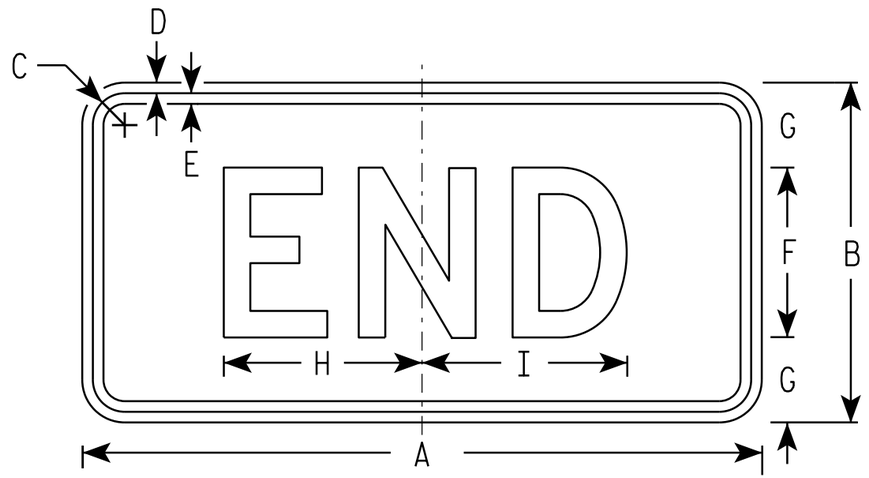
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

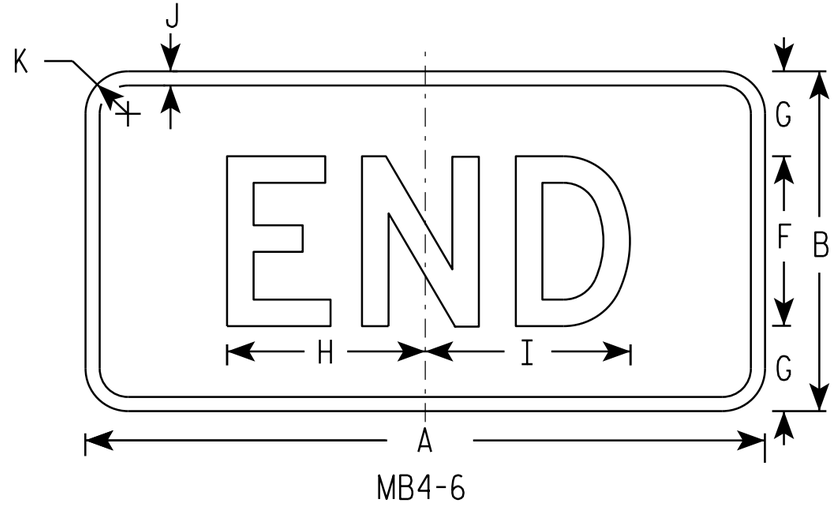
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE 639 M4-5.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



M4-6
MK4-6
MM4-6
MN4-6
MR4-6



MB4-6

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-6 Background - White
   Message - Black

   MB4-6 Background - Blue
   Message - White

   MK4-6 Background - Green
   Message - White

   MM4-6 Background - White
   Message - Green

   MN4-6 Background - Brown
   Message - White

   MR4-6 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

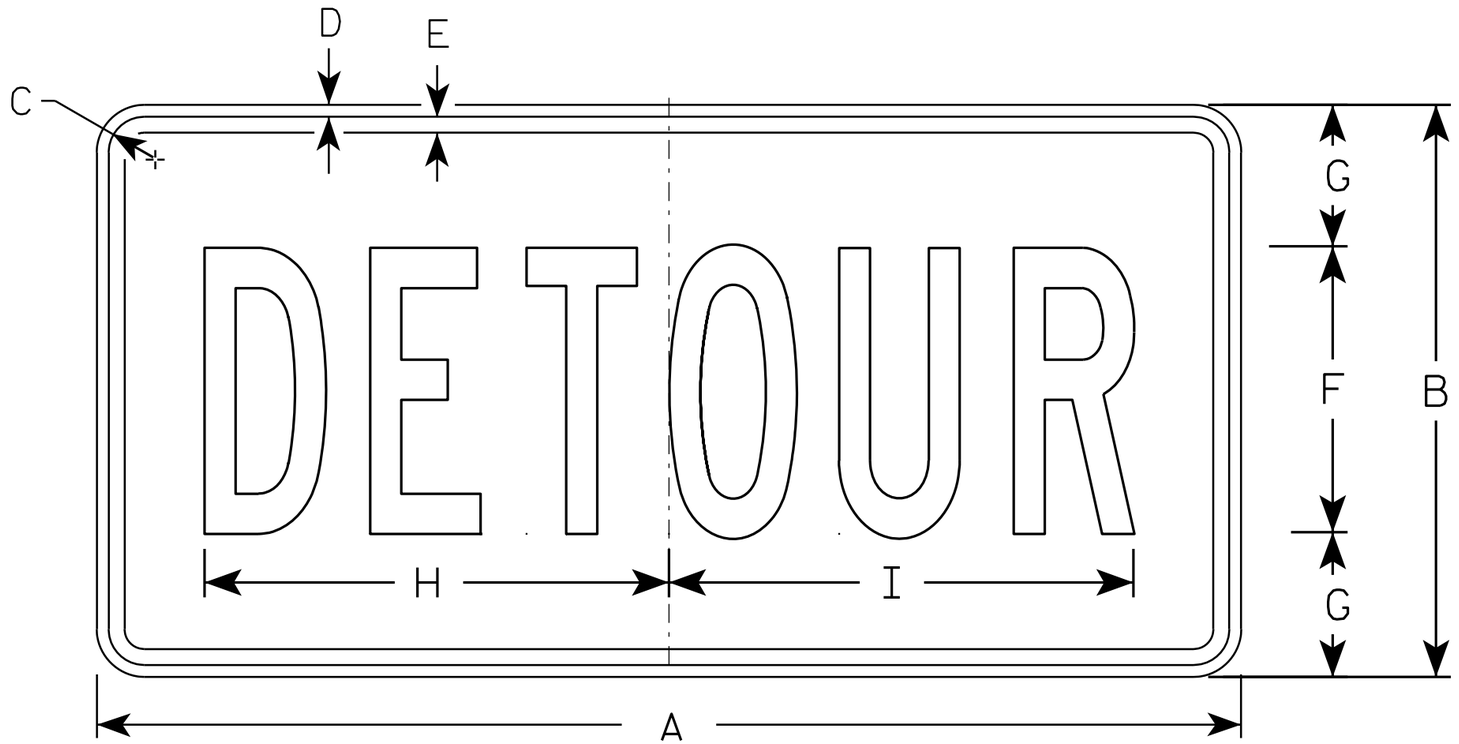
STANDARD SIGN
M4-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE 640 '14-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

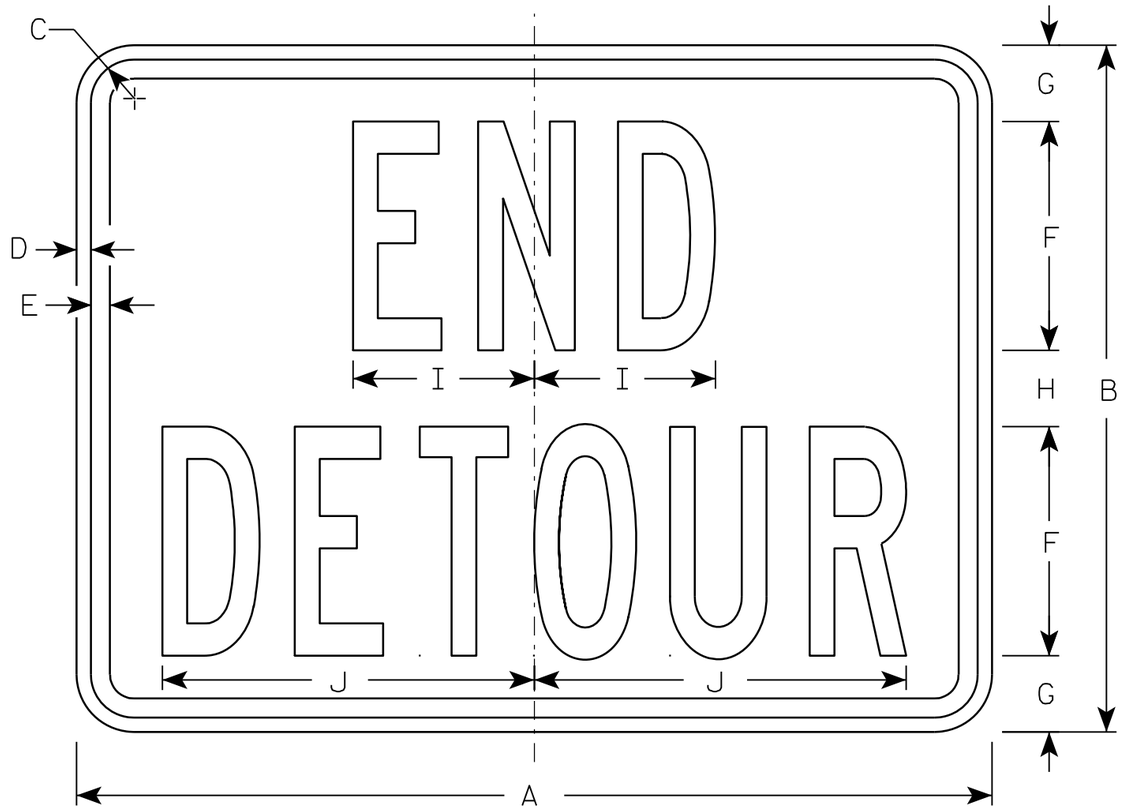
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 641	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

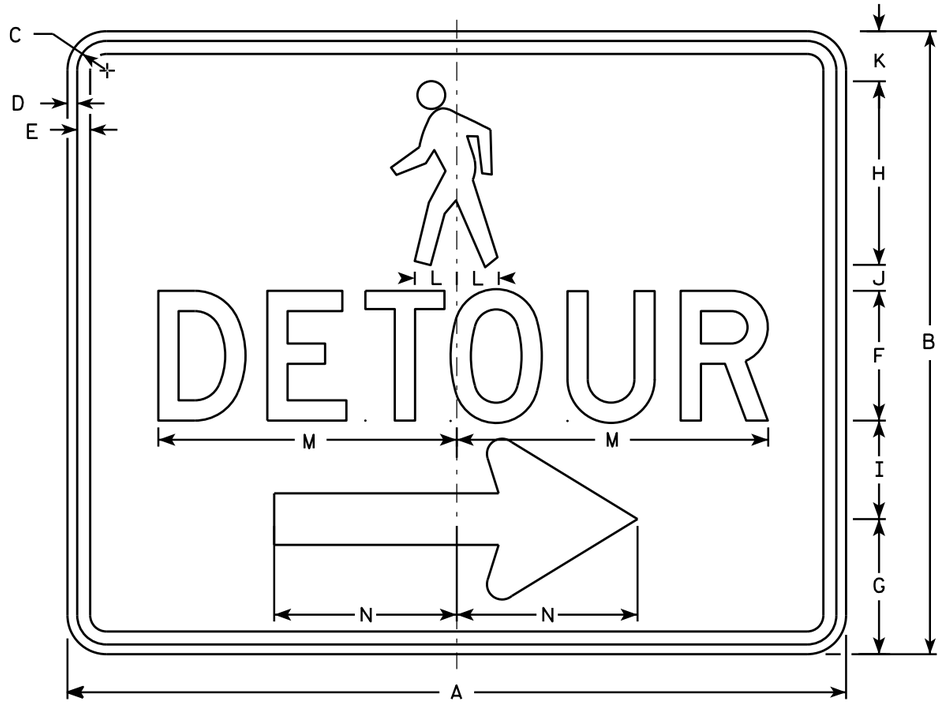
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

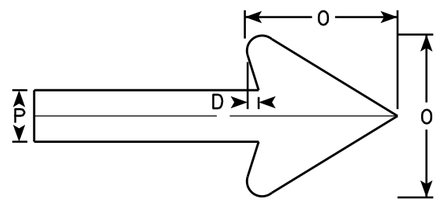
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 642	E



M4-9BR

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9BL is the same as M4-9BR except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.00
3																											
4																											
5																											

STANDARD SIGN
M4-9B L&R

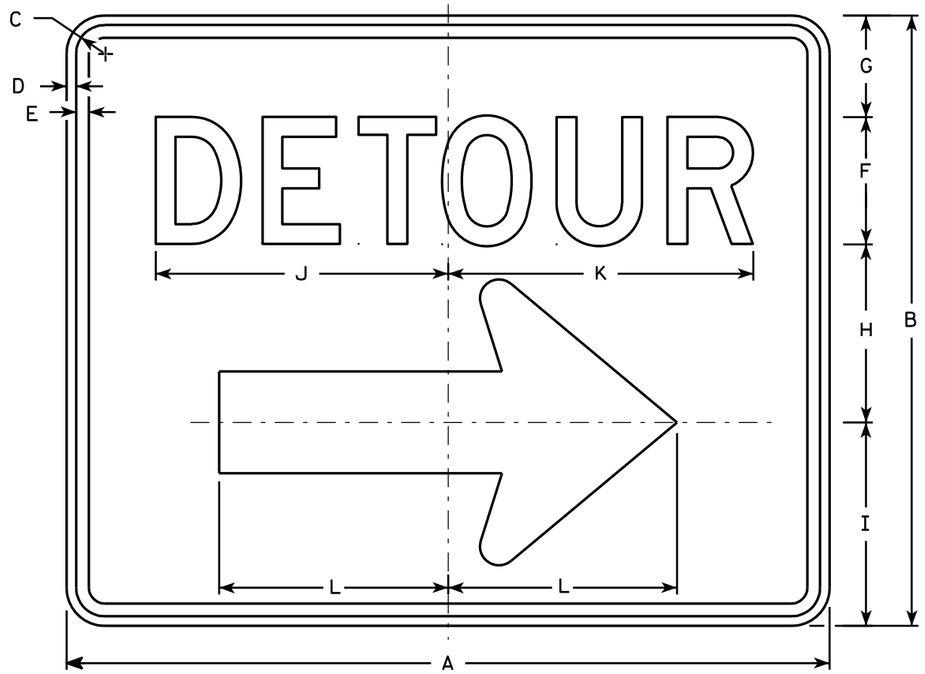
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. M4-9B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

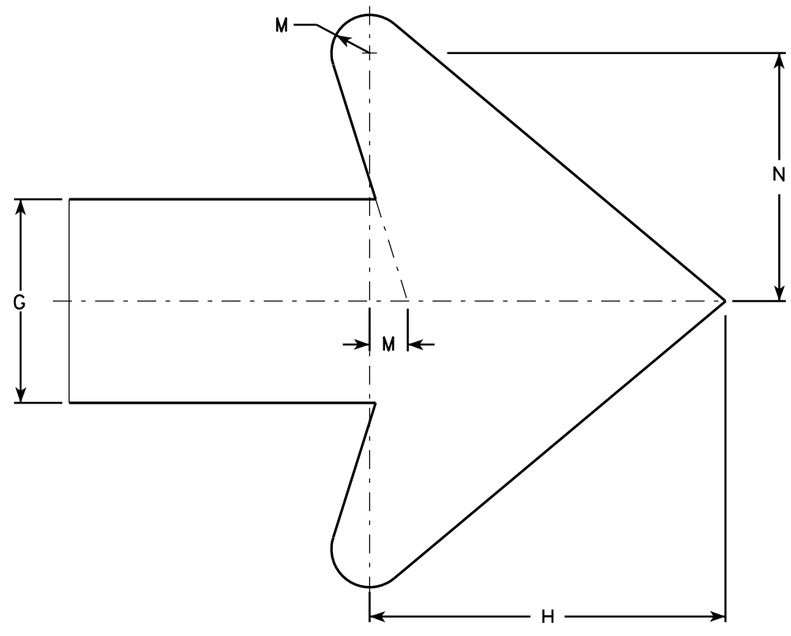
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M49B.DGN PLOT DATE : 01-OCT-2013 13:44 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



M4-9R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

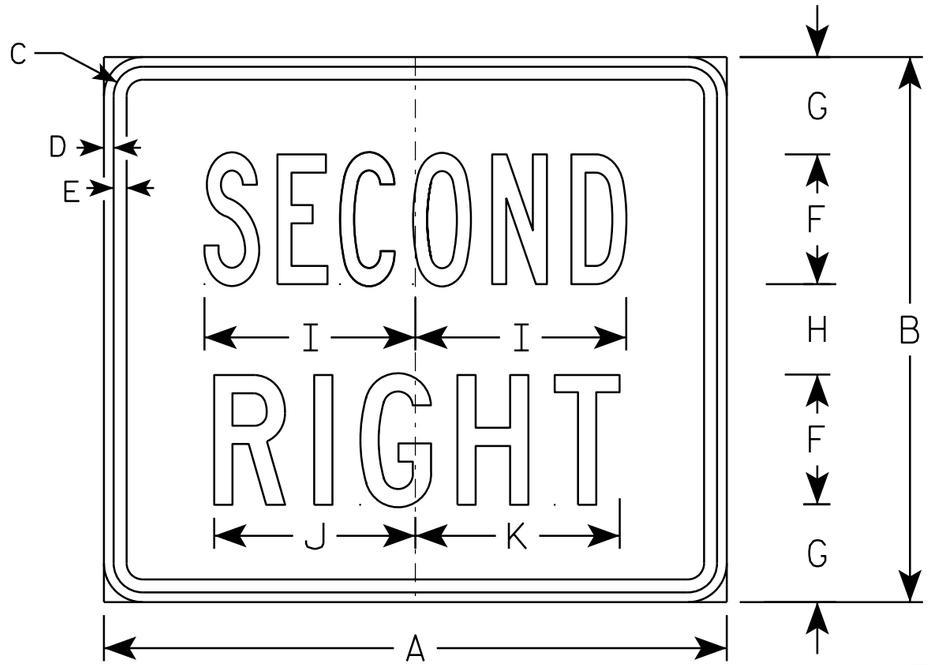
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

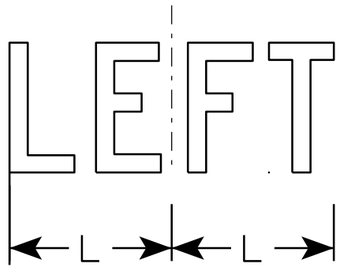
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 644 | E



M4-22R
MB4-22R
MK4-22R
MM4-22R
MN4-22R
MO4-22R
MP4-22R
MR4-22R



M4-22L
MB4-22L
MK4-22L
MM4-22L
MN4-22L
MO4-22L
MP4-22L
MR4-22L

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-22 Background - White
   Message - Black
   MB4-22 Background - Blue
   Message - White
   MK4-22 Background - Green
   Message - White
   MM4-22 Background - White
   Message - Green
   MN4-22 Background - Brown
   Message - White
   MO4-22 Background - Orange - Type F Reflective
   Message - Black
   MP4-22 Background - White
   Message - Blue
   MR4-22 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	21	1 1/8	3/8	1/2	5	3 3/4	3 1/2	8 1/8	7 3/4	7 7/8																3.5
3	36	30	1 5/8	5/8	3/4	8	4 3/4	4 1/2	13 1/8	12 5/8	12 1/2																7.5
4																											
5																											

STANDARD SIGN
M4-22

WISCONSIN DEPT OF TRANSPORTATION

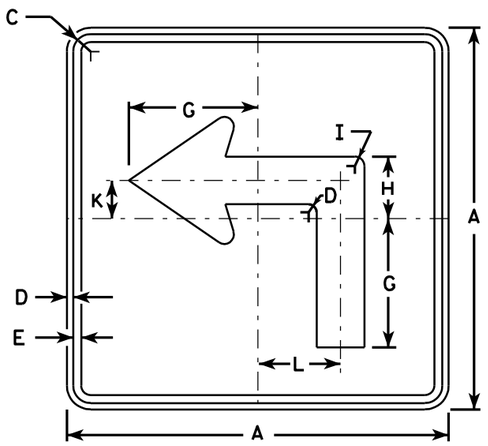
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/26/14 PLATE NO. M4-22.3

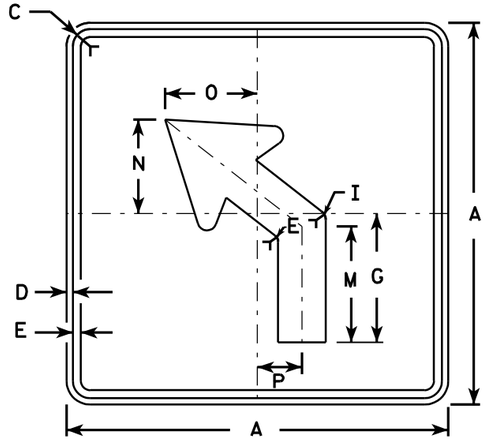
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M422.DGN PLOT DATE : 02-JUL-2014 15:21 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42

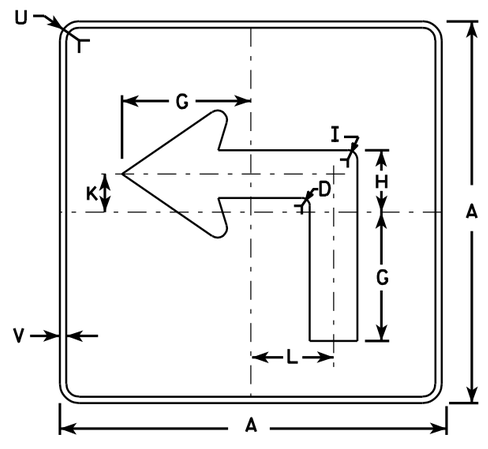
7



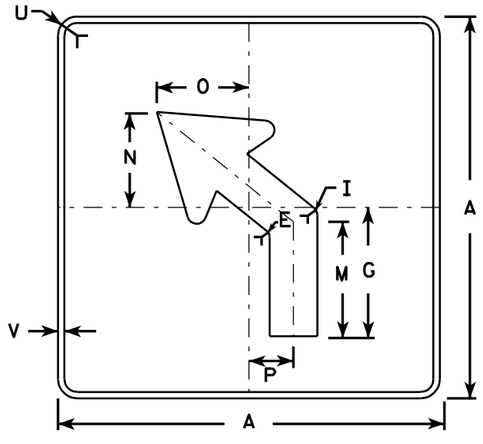
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



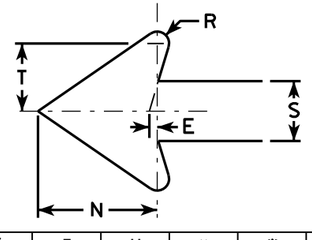
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

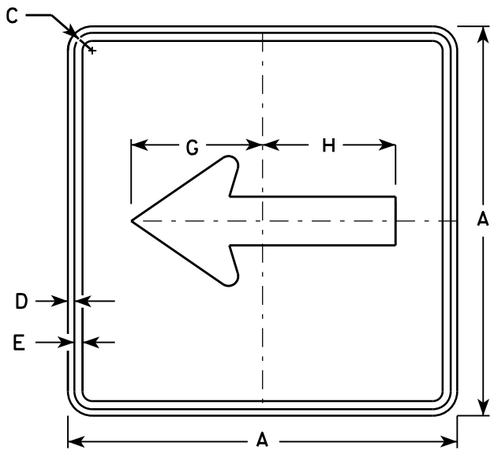
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

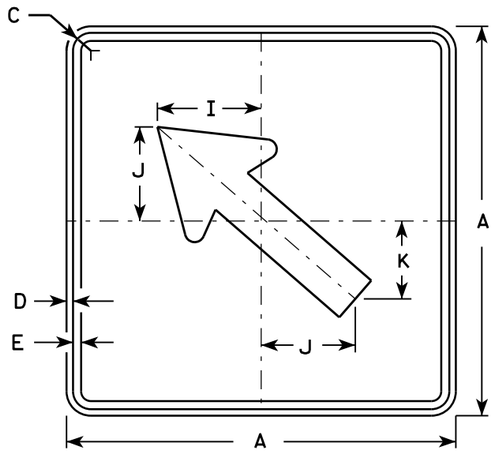
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 646	E

7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 29-JUL-2013 13:34 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.908552:1.000000
WISDOT/CADDS SHEET 42



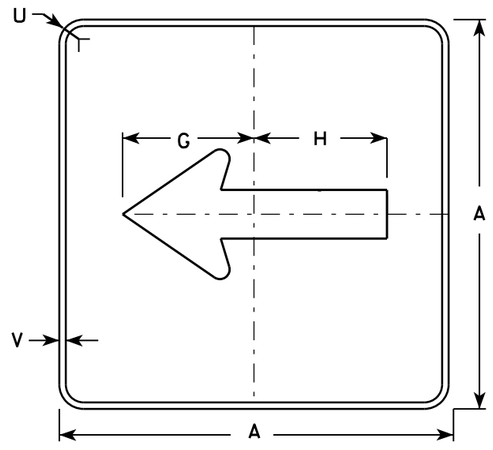
M6-1
MK6-1
MM6-1
MN6-1
MO6-1
MP6-1
MR6-1



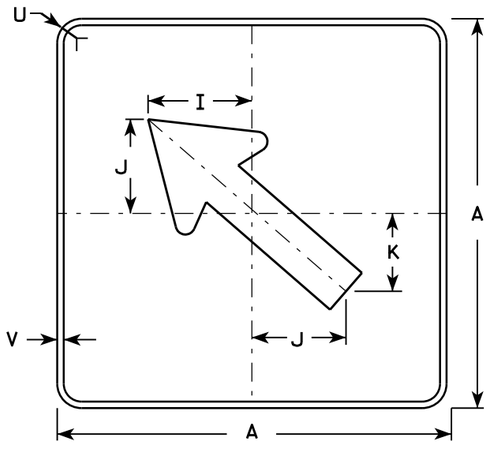
M6-2
MK6-2
MM6-2
MN6-2
MO6-2
MP6-2
MR6-2

NOTES

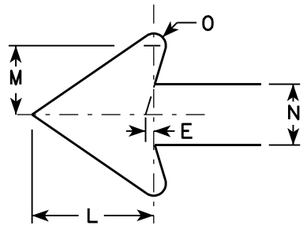
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MG6-1 and MG6-2 Background - Green
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1



MB6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN M6-1 & M6-2 SERIES

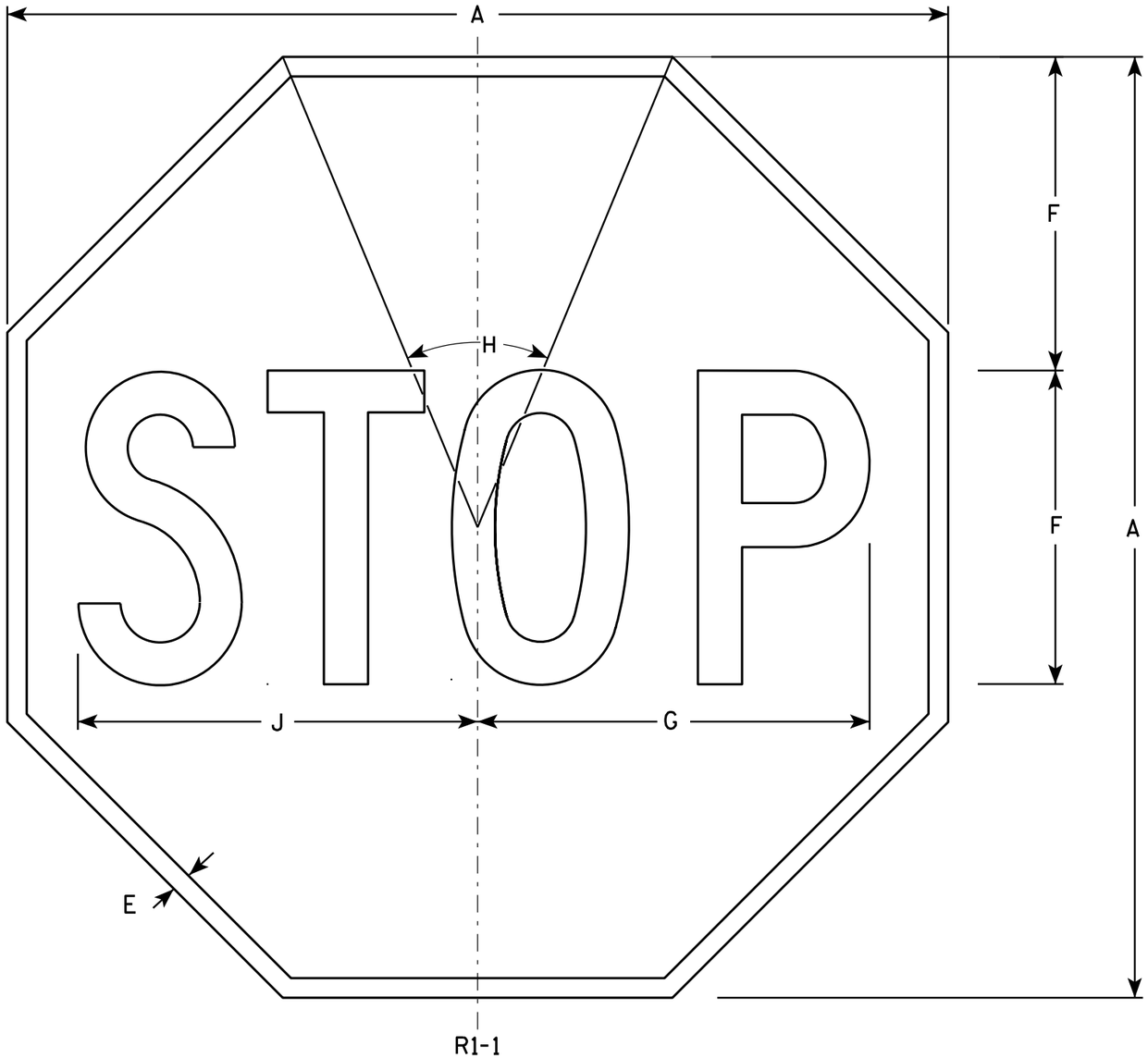
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/03/14 PLATE 647 M6-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 03-JUL-2014 14:28 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 11.675051:1.000000



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

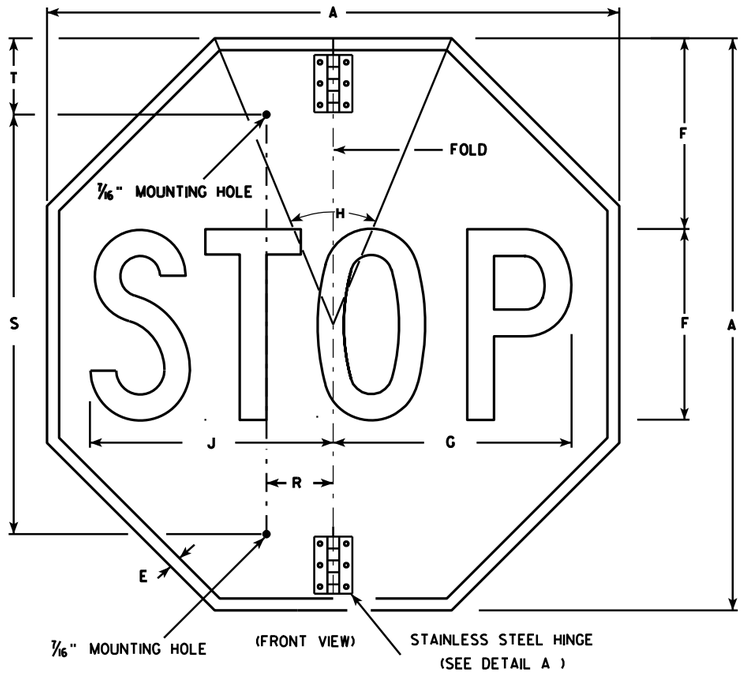
STANDARD SIGN
R1-1

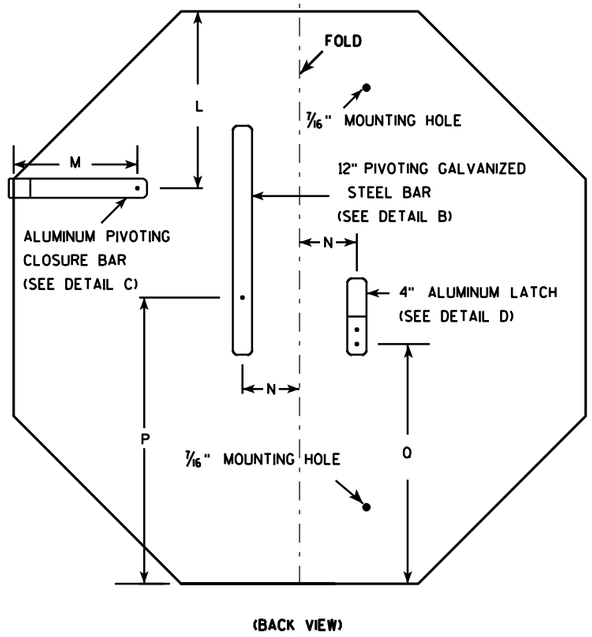
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

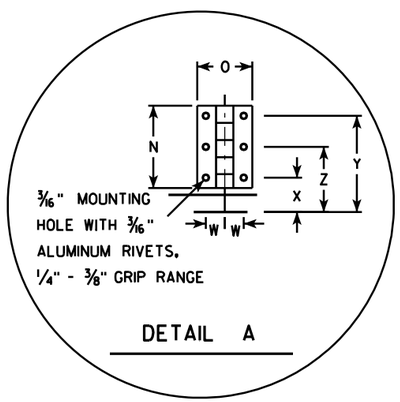
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 648	E



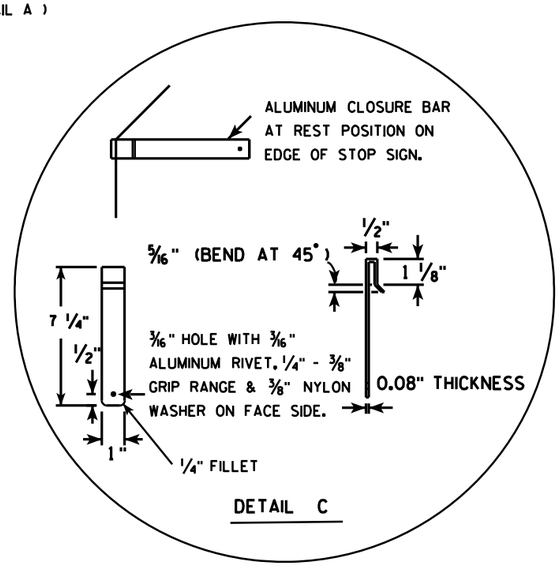


NOTES

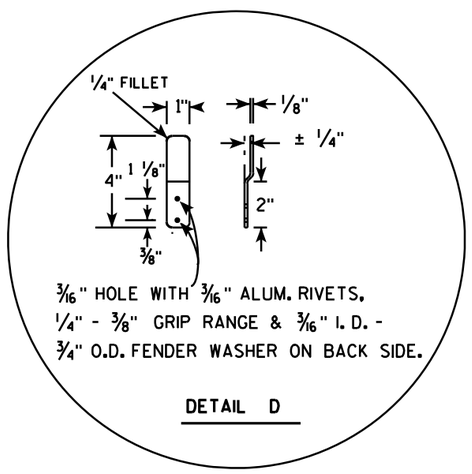
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



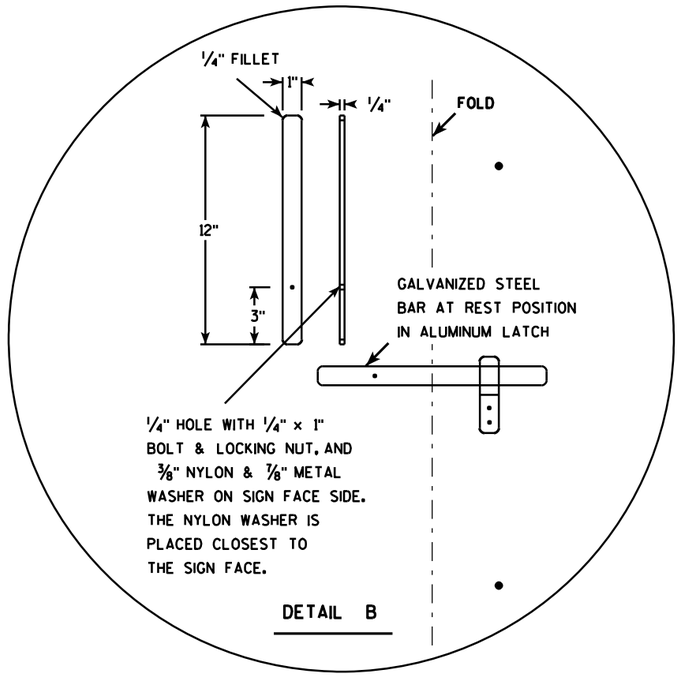
DETAIL A



DETAIL C



DETAIL D



DETAIL B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

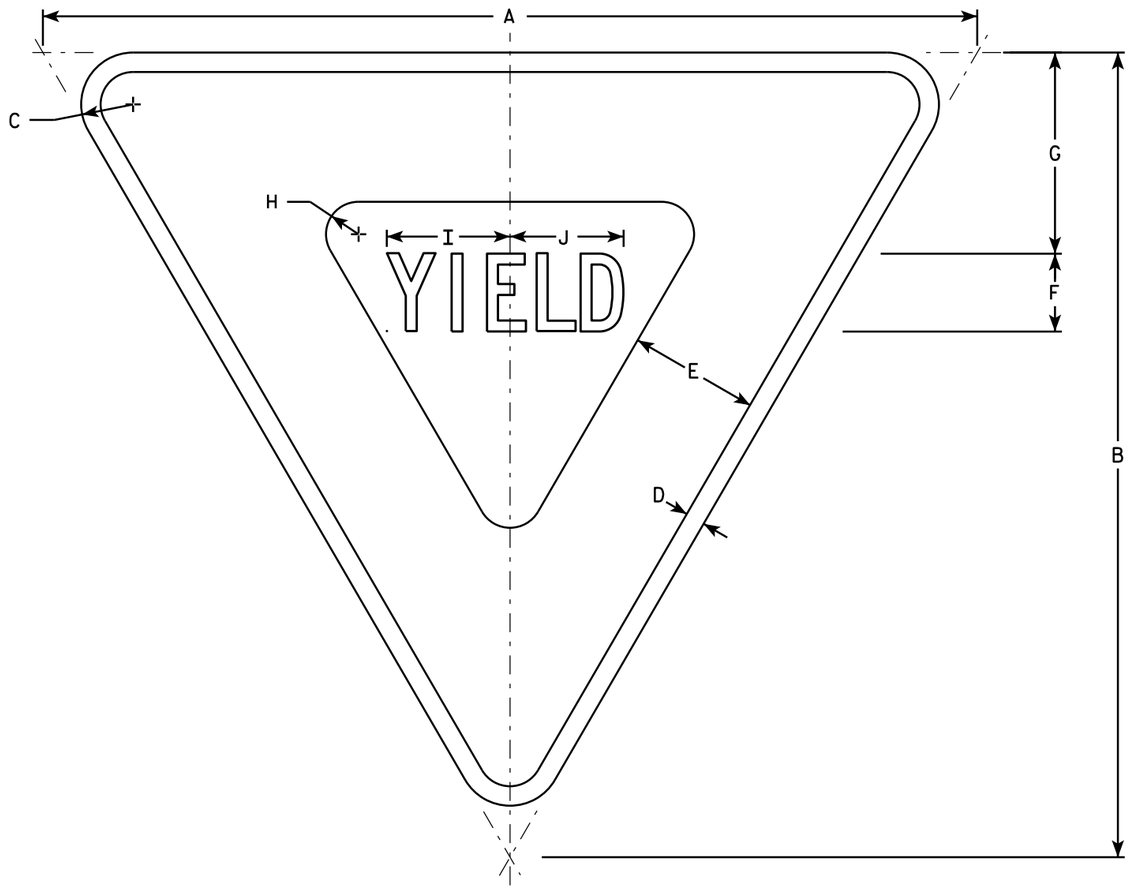
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 649	E



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

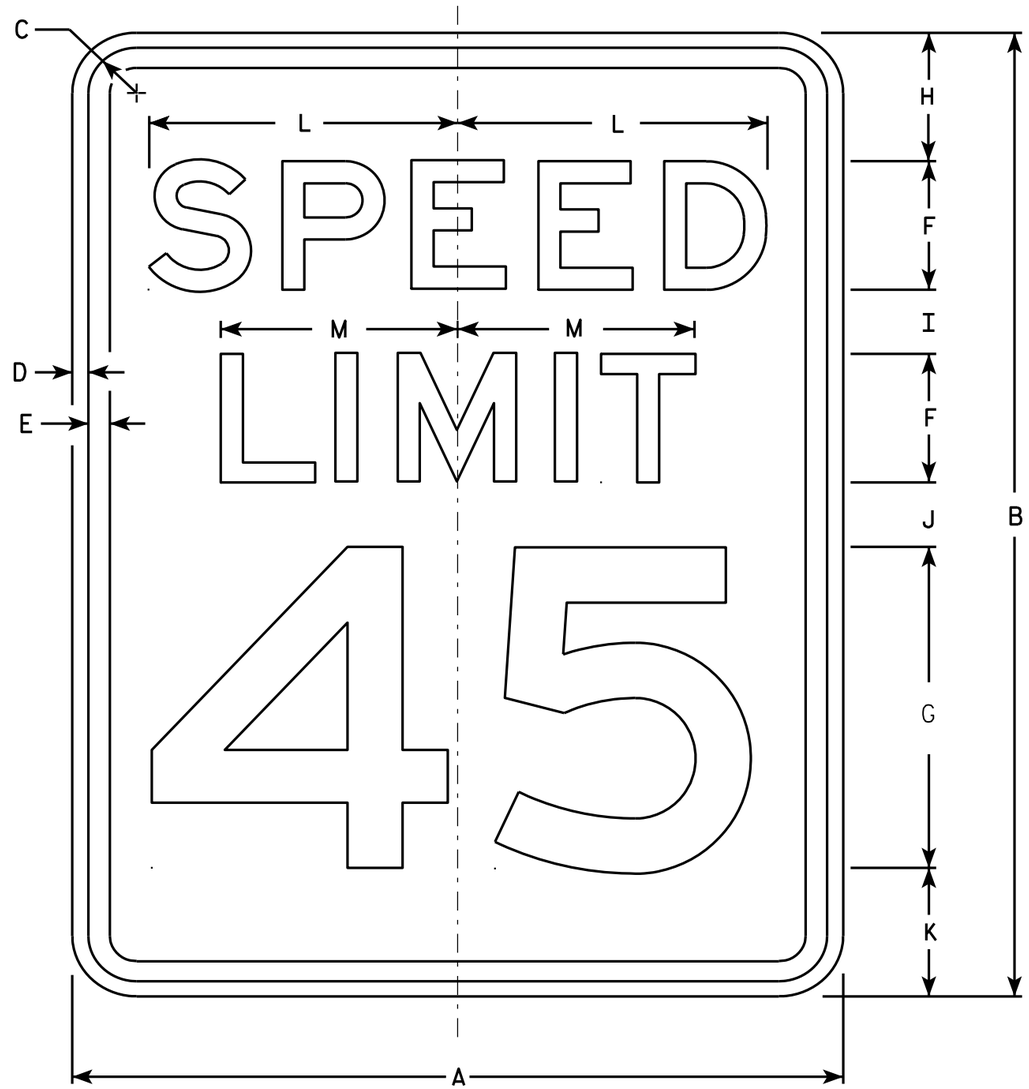
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE P1-2.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

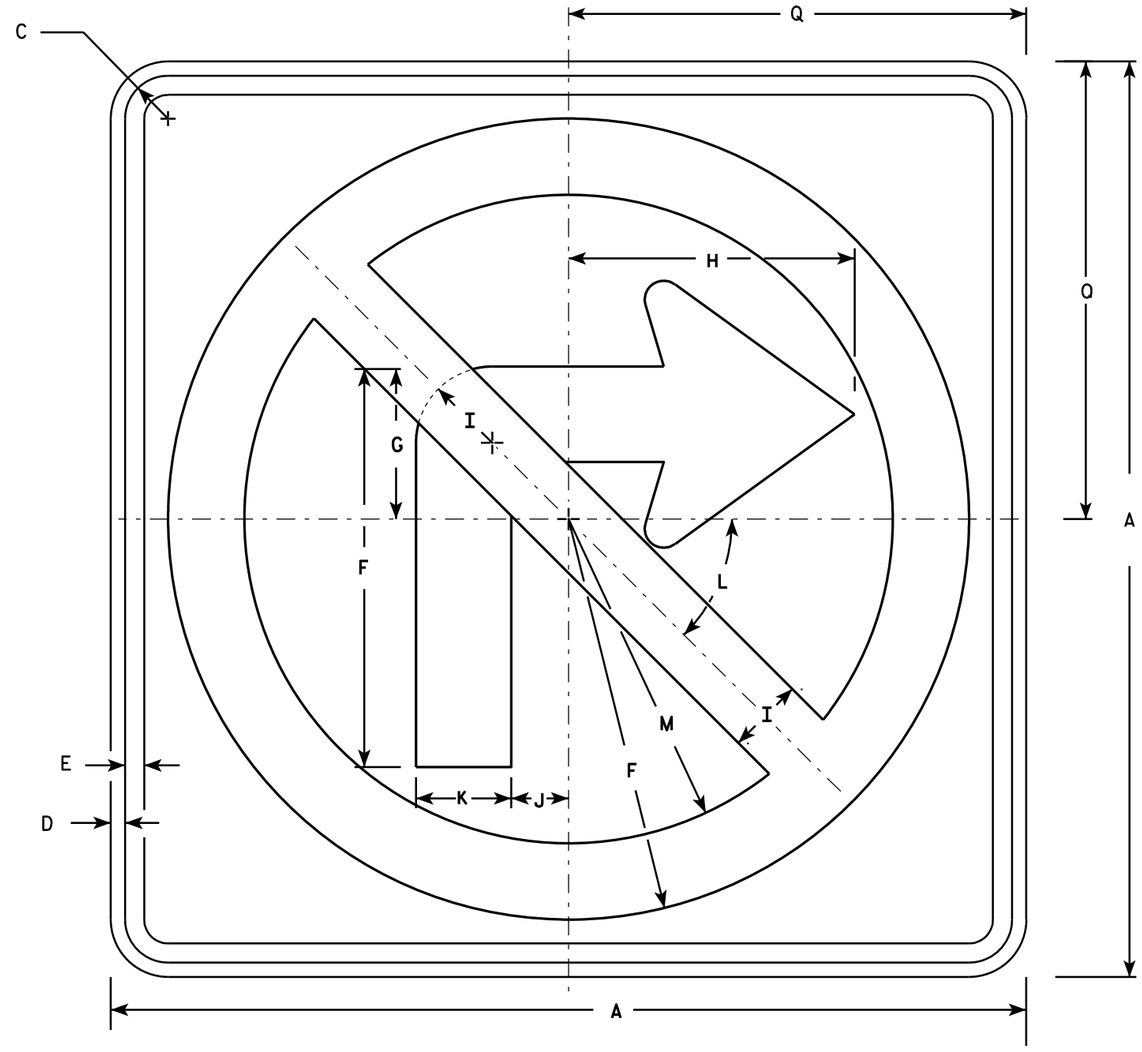
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

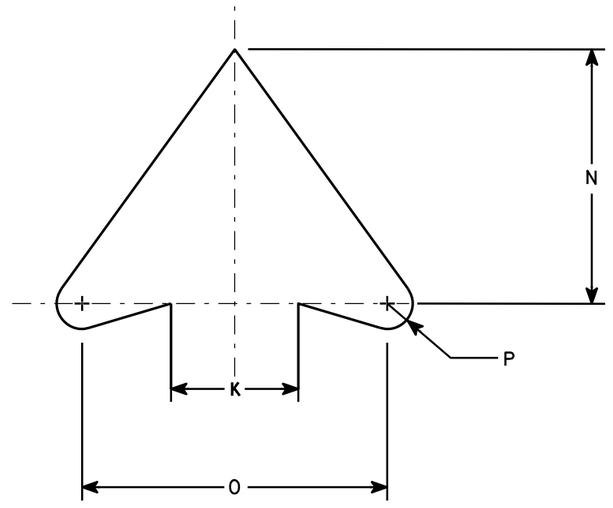
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 651 | E



R3-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

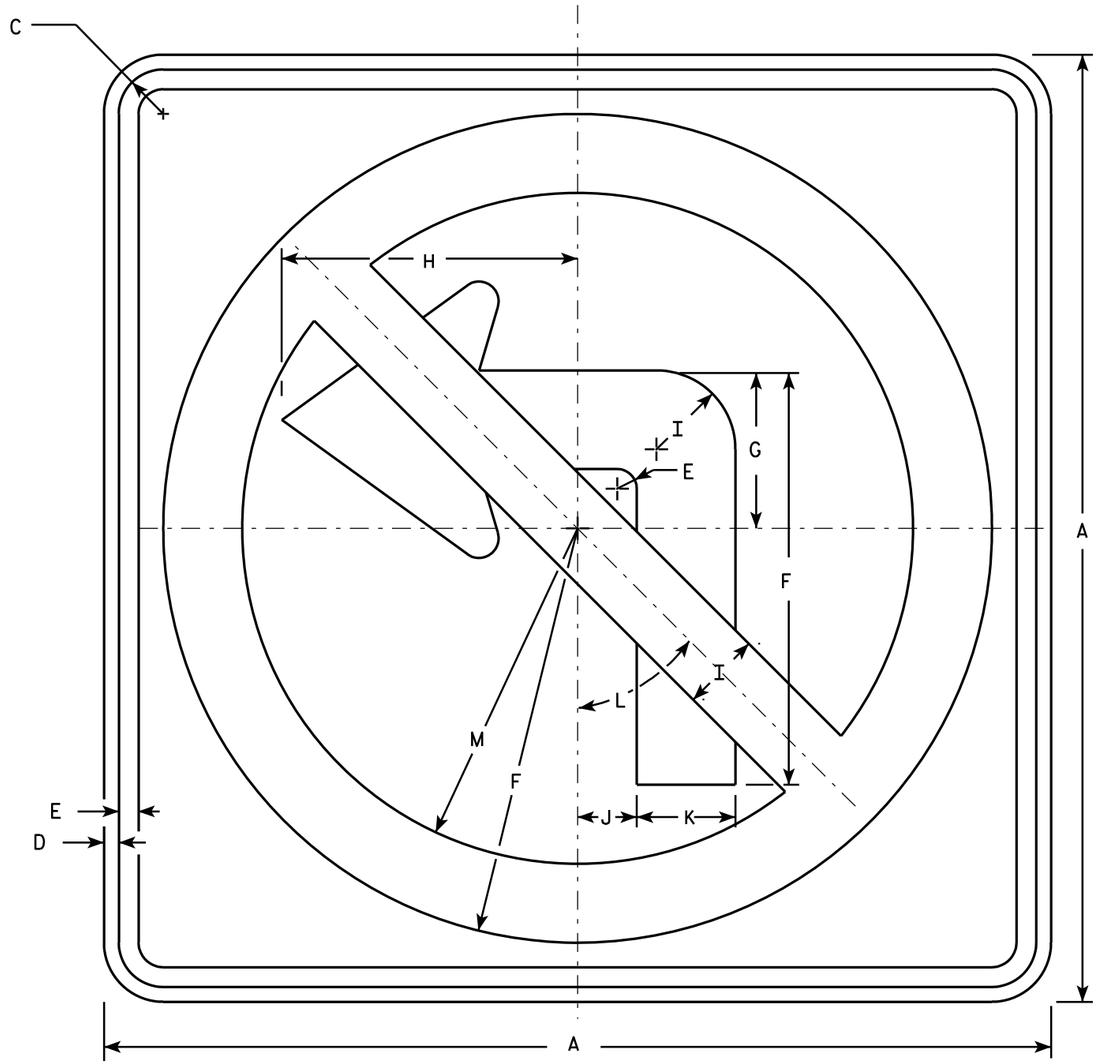
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

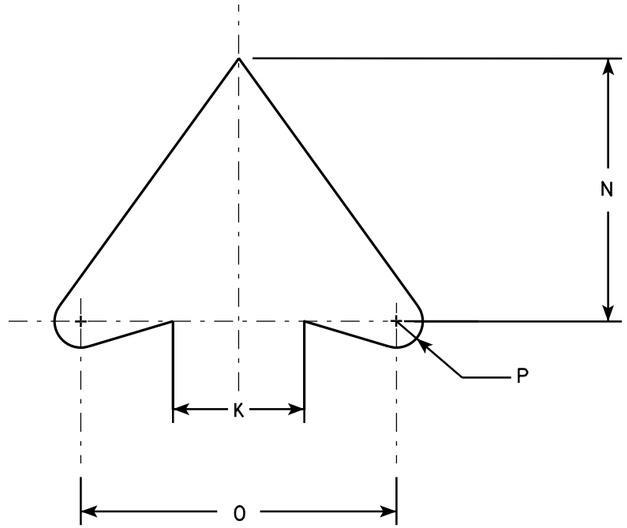
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 652	E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

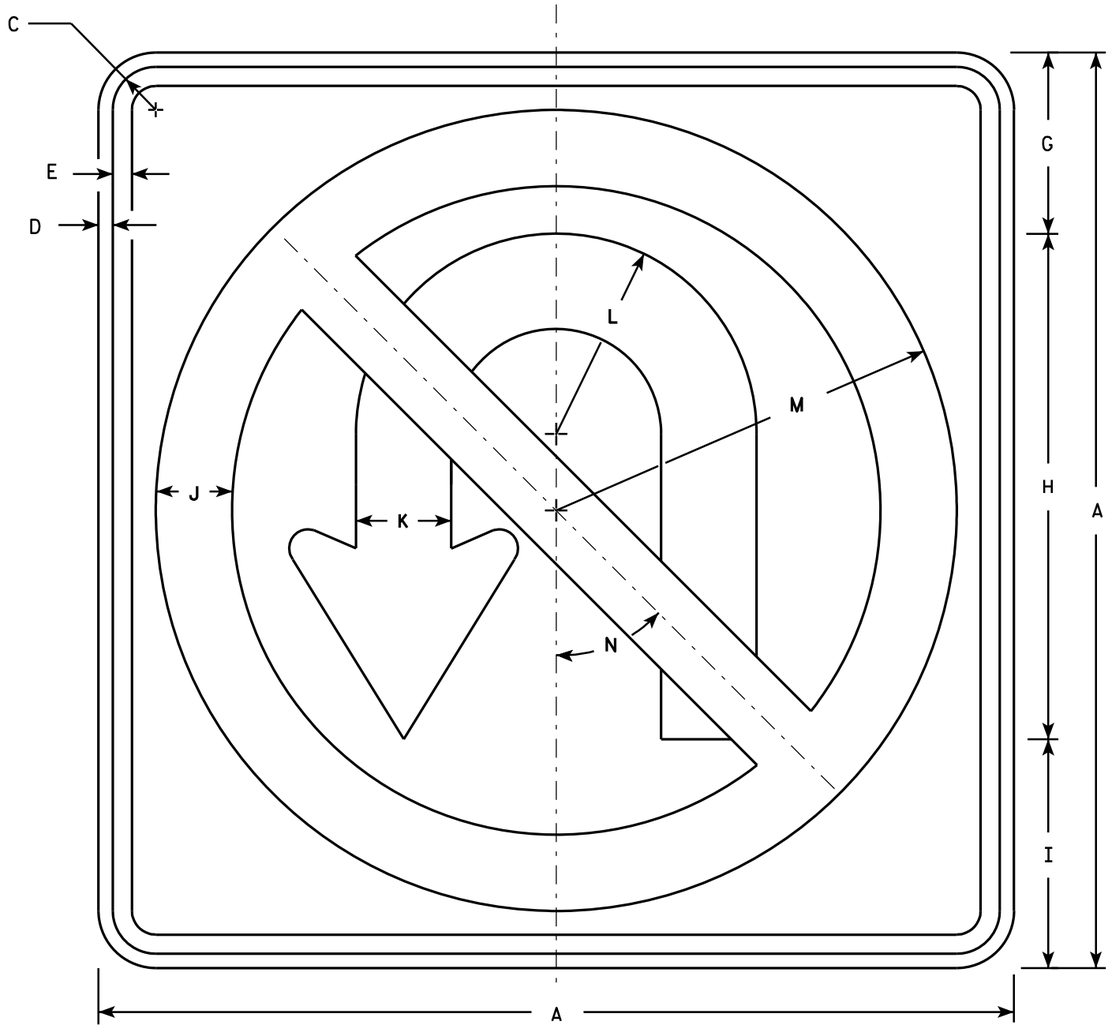
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

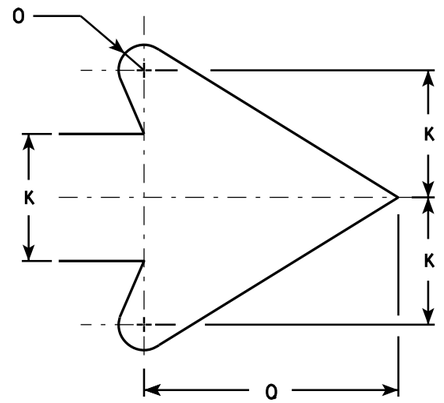
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 653 | E



R3-4

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		4 3/4	13 1/4	6	2	2 1/2	5 1/4	10 1/2	45°	1/2		5										4.0
2M	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
3	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
4	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
5	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0

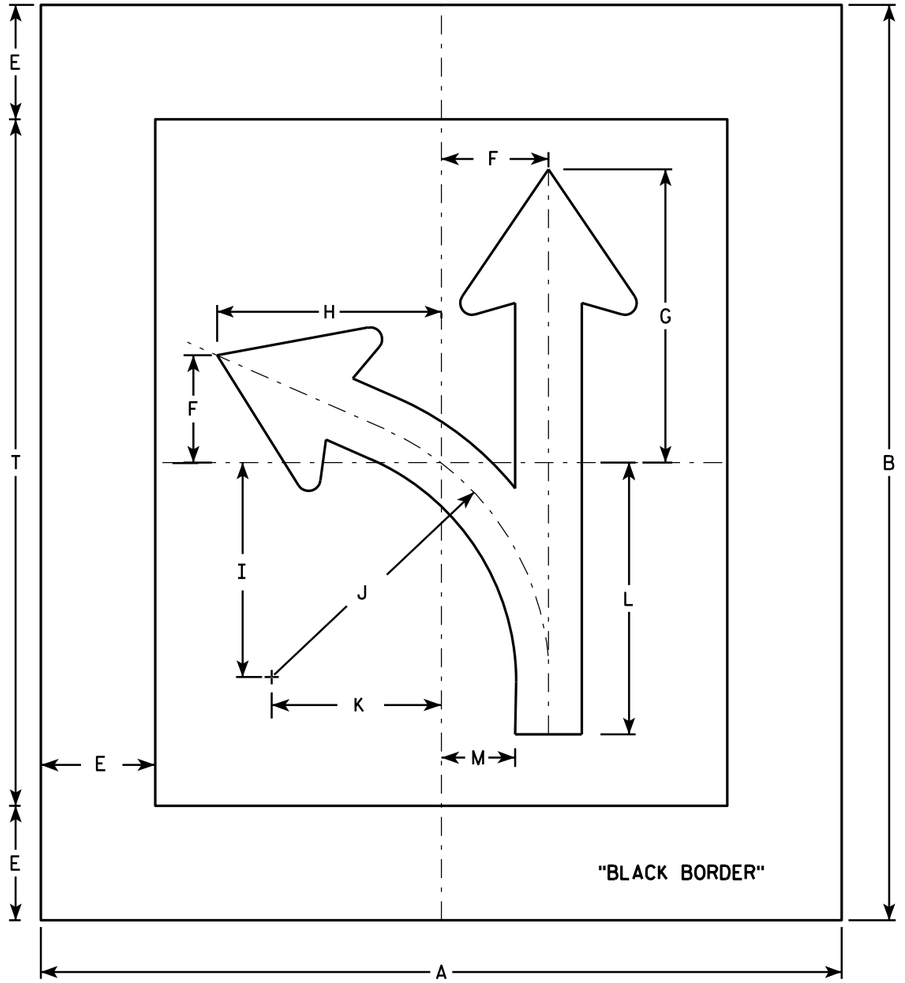
STANDARD SIGN
R3-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-4.11

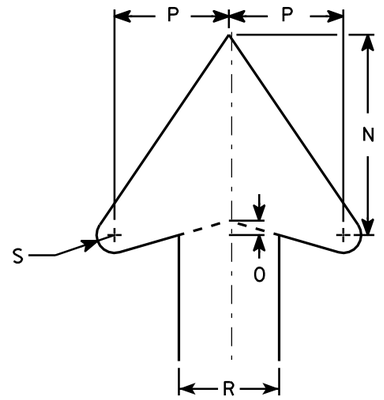
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 654	E



R3-6L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
4. R3-6R is the same as R3-6L except curved portion of arrow points right.
5. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
2M	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
3																											
4																											
5																											

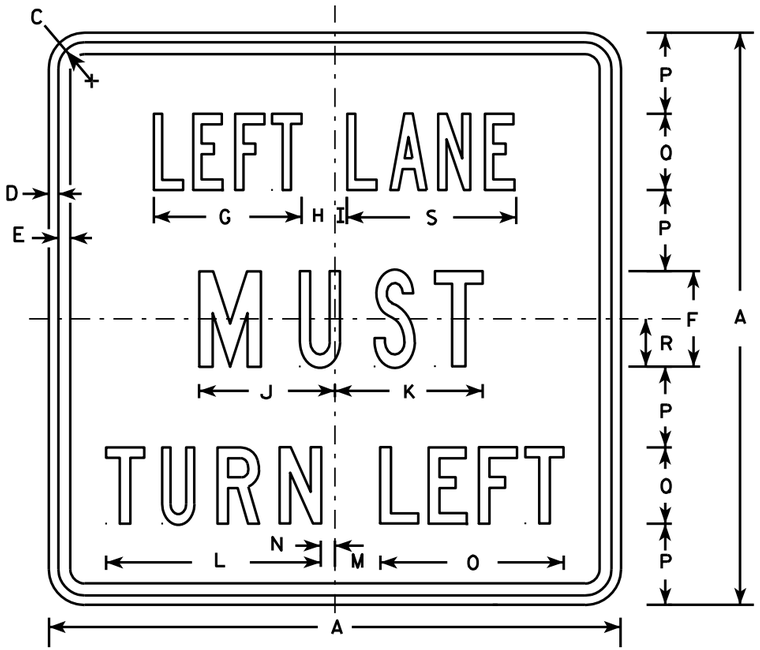
STANDARD SIGN
R3-6

WISCONSIN DEPT OF TRANSPORTATION

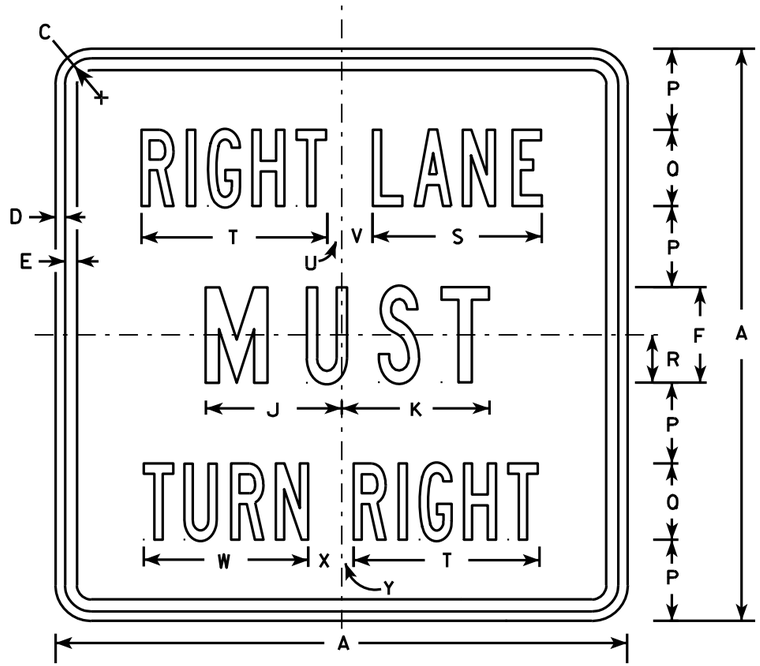
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-6.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 655 | E



R3-7L



R3-7R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

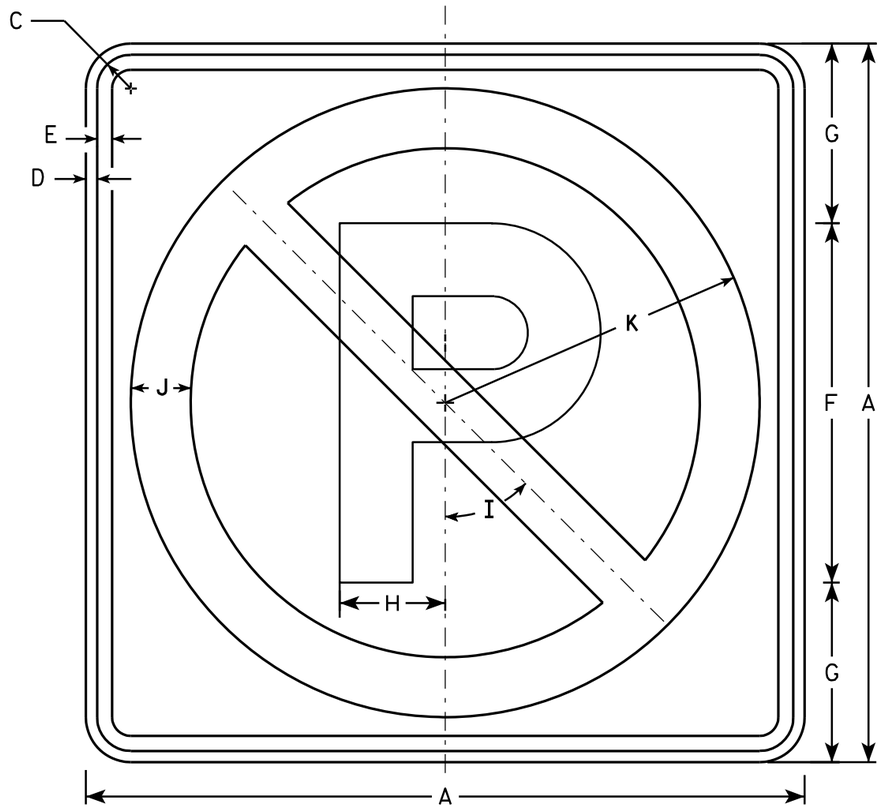
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 656	E



R3-8A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Letter P are non reflective black, the circle with diagonal bar is reflective red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2	12	6	3 1/2	45°	2	10 1/2																4.0
2M	24		1 1/8	3/8	1/2	12	6	3 1/2	45°	2	10 1/2																4.0
3																											
4																											
5																											

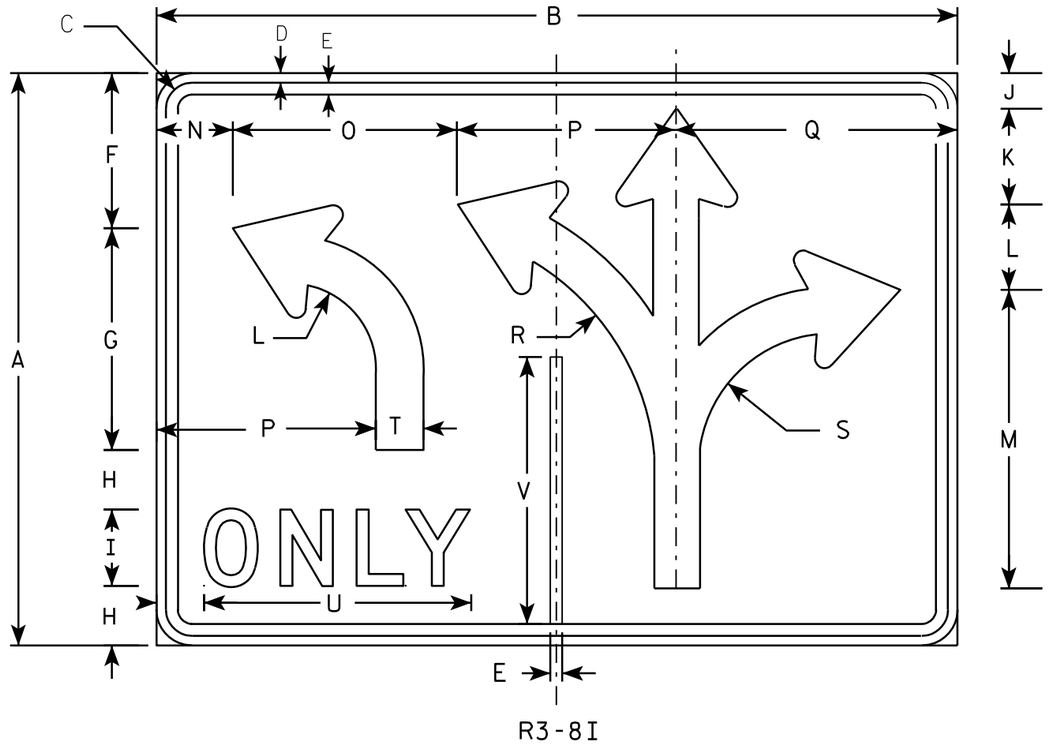
STANDARD SIGN
R3-8A

WISCONSIN DEPT OF TRANSPORTATION

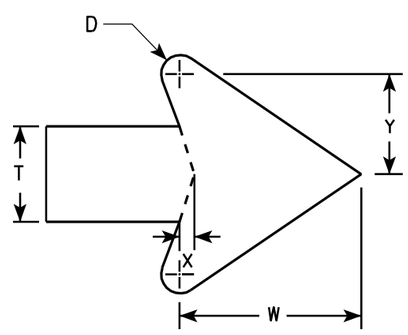
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/01/12 PLATE NO. R3-8A.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 657 | E



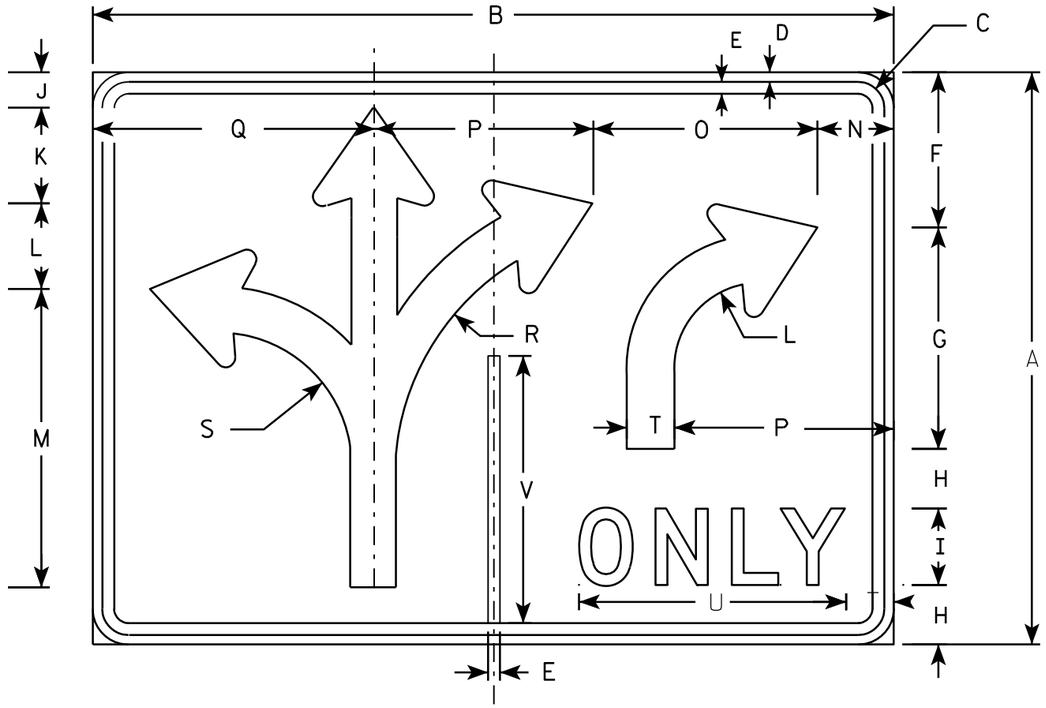
R3-8I



ARROW DETAIL

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-8J

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	42	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	1 7/8	5	4 1/2	15 5/8	4	11 3/4	11 1/2	14 3/4	13 1/4	7	2 1/2	14	14	4 3/4	3/8	2 5/8		8.75
2M	30	42	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	1 7/8	5	4 1/2	15 5/8	4	11 3/4	11 1/2	14 3/4	13 1/4	7	2 1/2	14	14	4 3/4	3/8	2 5/8		8.75
3																											
4	48	66	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/8	7 7/8	7 1/4	24 7/8	6 1/4	18 1/2	18	23 1/8	21 1/4	11 1/8	3 3/4	20 5/8	22 3/8	7 1/8	5/8	4		22.0
5	48	66	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/8	7 7/8	7 1/4	24 7/8	6 1/4	18 1/2	18	23 1/8	21 1/4	11 1/8	3 3/4	20 5/8	22 3/8	7 1/8	5/8	4		22.0

STANDARD SIGN
R3-8I & R3-8J

WISCONSIN DEPT OF TRANSPORTATION

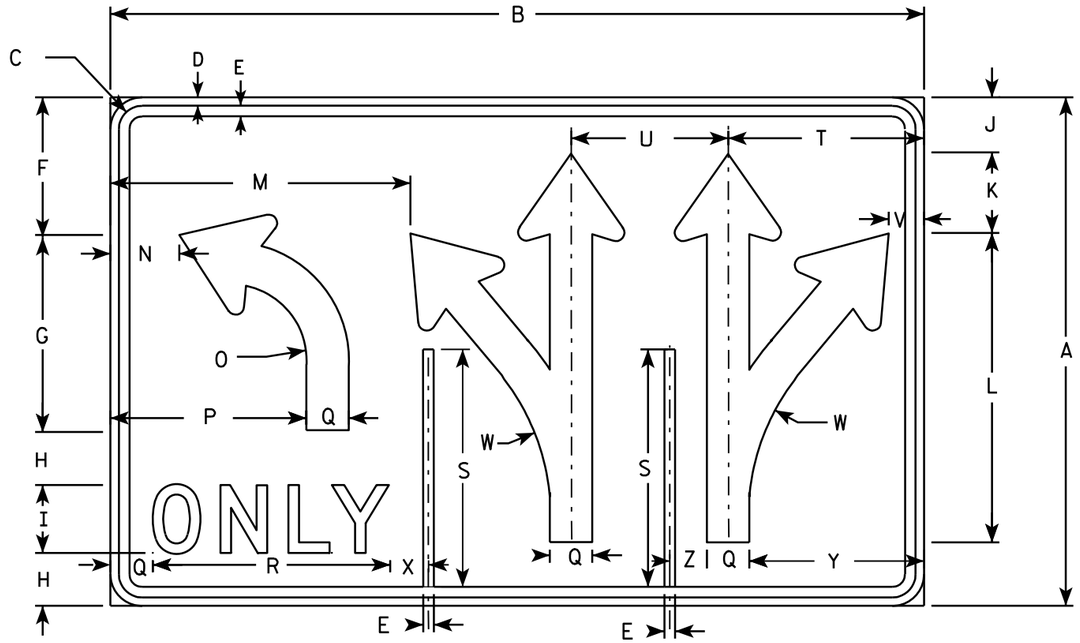
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8I.2

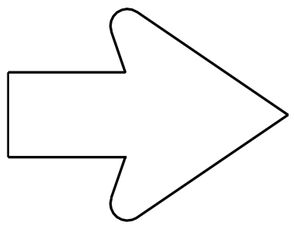
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 658	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R38I.DGN PLOT DATE : 18-MAR-2011 14:21 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.945391:1.000000

WISDOT/CADDS SHEET 42



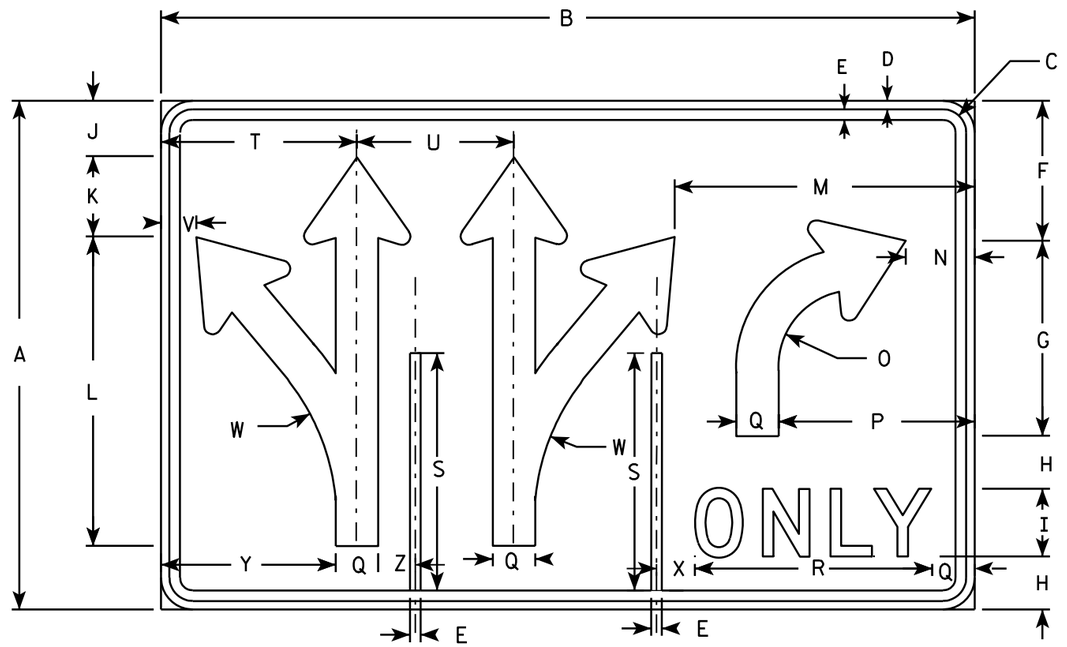
R3-8N



SEE R3-8 FOR ARROW DETAIL

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-80

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	48	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	17 3/4	4	4 1/2	11 1/2	2 1/2	14	14	11 1/2	9 1/4	2 1/8	13 1/4	2 1/4	10 1/4	2 1/4	10.0
2M	30	48	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	17 3/4	4	4 1/2	11 1/2	2 1/2	14	14	11 1/2	9 1/4	2 1/8	13 1/4	2 1/4	10 1/4	2 1/4	10.0
3																											
4	48	72	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7	29 1/8	26 1/2	6	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	17 3/8	13 7/8	3 1/8	21 7/8	3 3/4	15 1/2	3 1/4	24.0
5	48	72	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7	29 1/8	26 1/2	6	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	17 3/8	13 7/8	3 1/8	21 7/8	3 3/4	15 1/2	3 1/4	24.0

STANDARD SIGN
R3-8N & R3-80

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

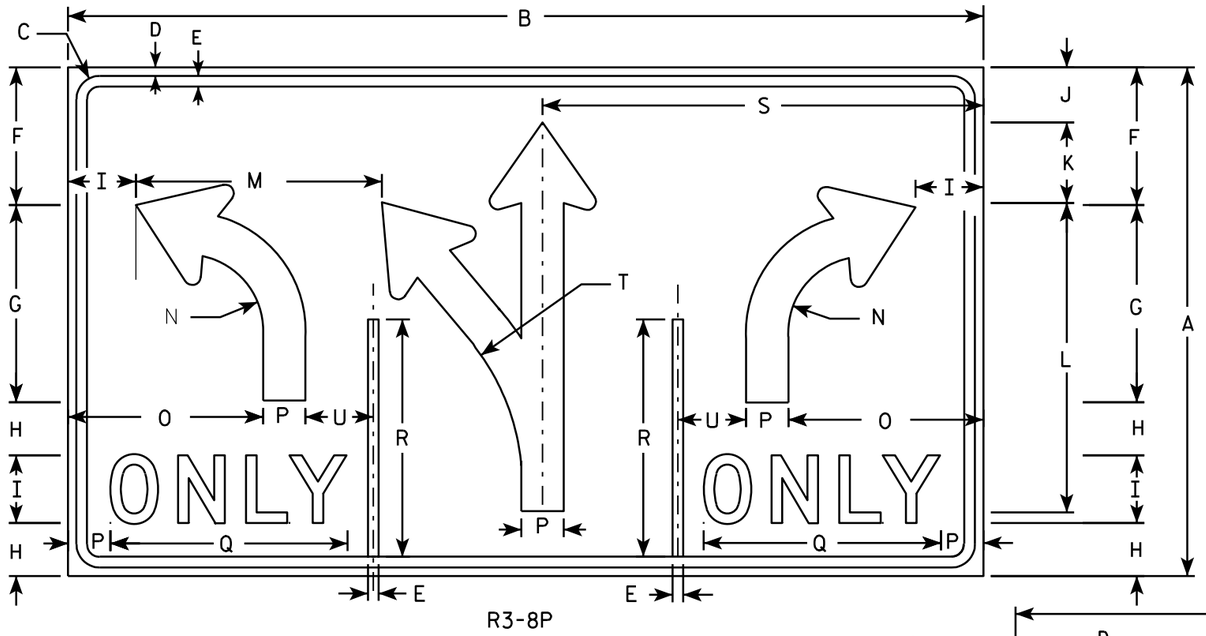
DATE 3/21/2011 PLATE NO. R3-8N.2

PROJECT NO:

SHEET NO: 659 E

7

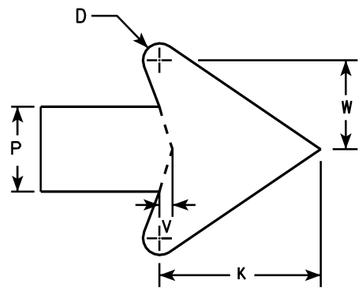
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R38N.DGN PLOT DATE : 21-MAR-2011 15:20 PLOT BY : mscsja PLOT NAME :



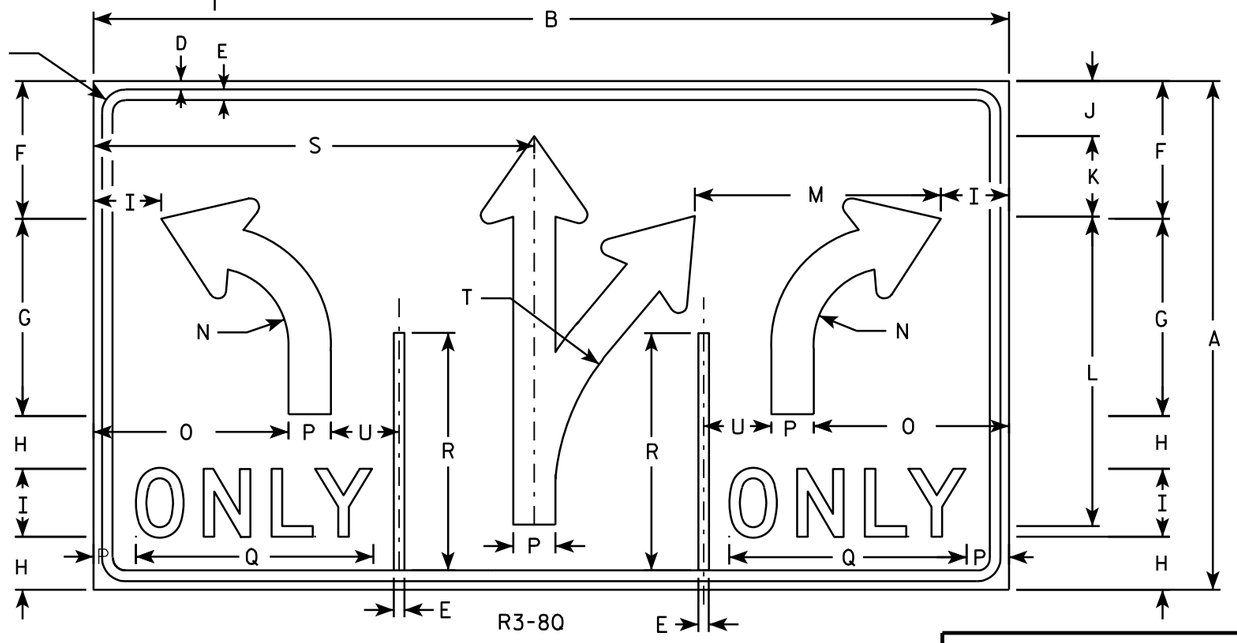
R3-8P

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL



R3-8Q

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14 1/2	4 1/2	11 1/2	2 1/2	14	14	26	13 1/4	4	3/8	2 5/8				11.25
2M	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14 1/2	4 1/2	11 1/2	2 1/2	14	14	26	13 1/4	4	3/8	2 5/8				11.25
3																											
4	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	22 5/8	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	40 3/4	21 7/8	7	5/8	4				28.0
5	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	22 5/8	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	40 3/4	21 7/8	7	5/8	4				28.0

STANDARD SIGN
R3-8P & R3-8Q

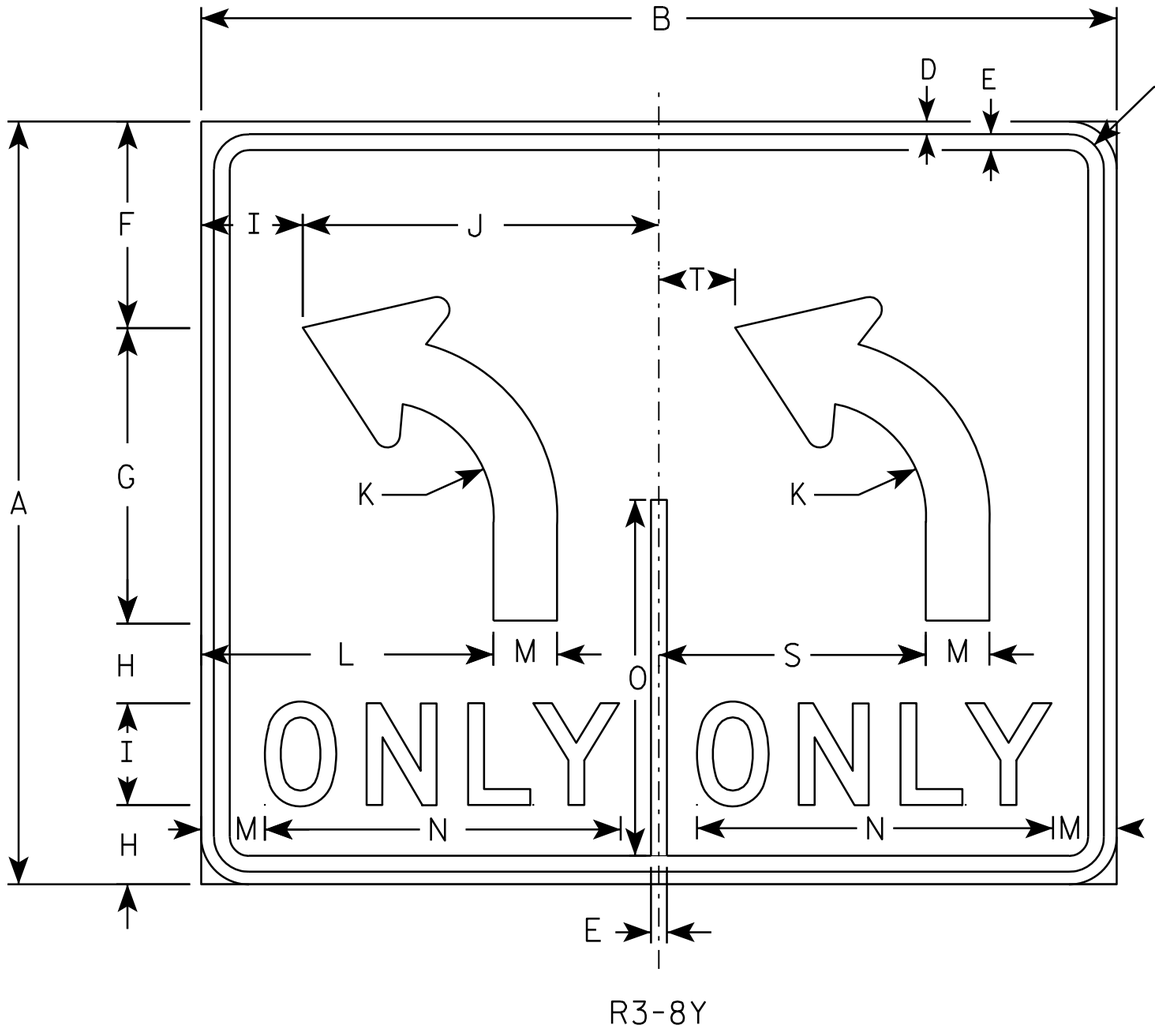
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-8P.2

PROJECT NO:

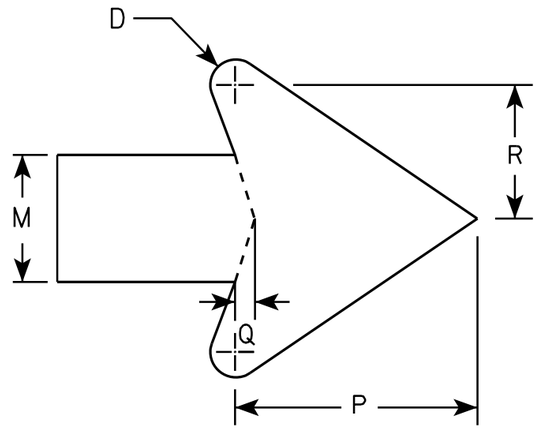
SHEET NO: 660 E



R3-8Y

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	14	4 1/2	11 1/2	2 1/2	14	14	4 3/4	3/8	2 5/8	10 1/2	3							7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	14	4 1/2	11 1/2	2 1/2	14	14	4 3/4	3/8	2 5/8	10 1/2	3							7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	21	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	7 1/8	5/8	4	15 3/4	4 1/2							18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	21	7 1/4	17 1/4	3 3/4	20 5/8	22 3/8	7 1/8	5/8	4	15 3/4	4 1/2							18.0

STANDARD SIGN
R3-8Y

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-8Y.2

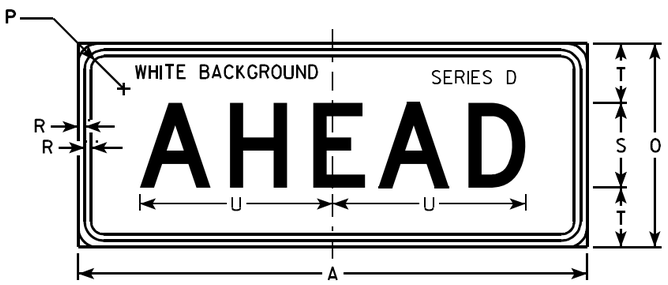
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 661	E



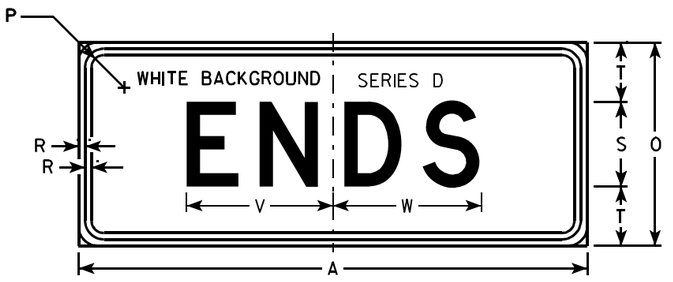
R3-17

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - AS SHOWN
   Message - BLACK
3. Message Series - C or as noted on the Signs.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-17ap



R3-17bp

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	R3-17 Area sq. ft.	R3-17ap Area sq. ft.	R3-17bp Area sq. ft.
1																													
2S	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
2M	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
3																													
4																													
5																													

STANDARD SIGN
R3-17 & R3-17a&bp

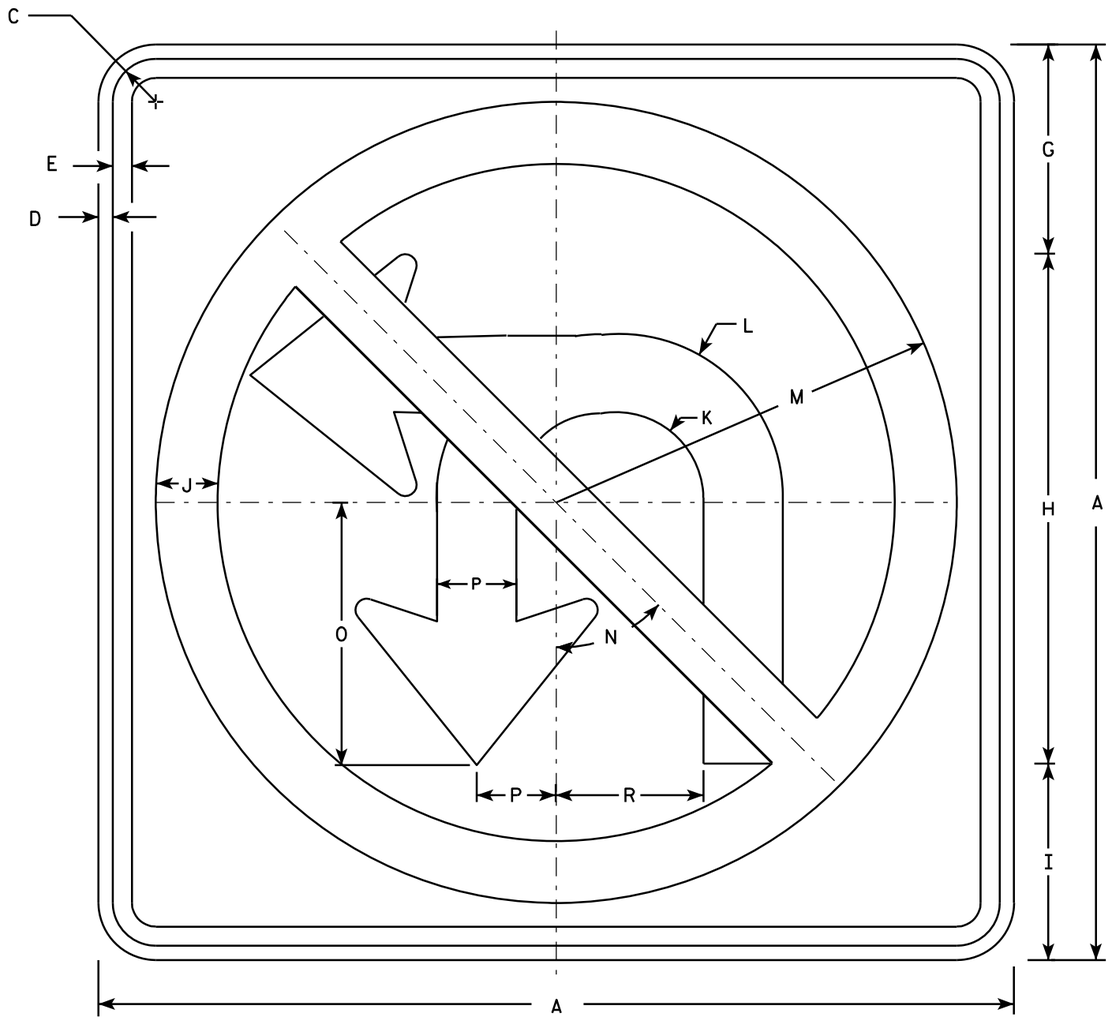
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/12/2011 PLATE NO. R3-17.2

PROJECT NO:

SHEET NO: 662 E



R3-18

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

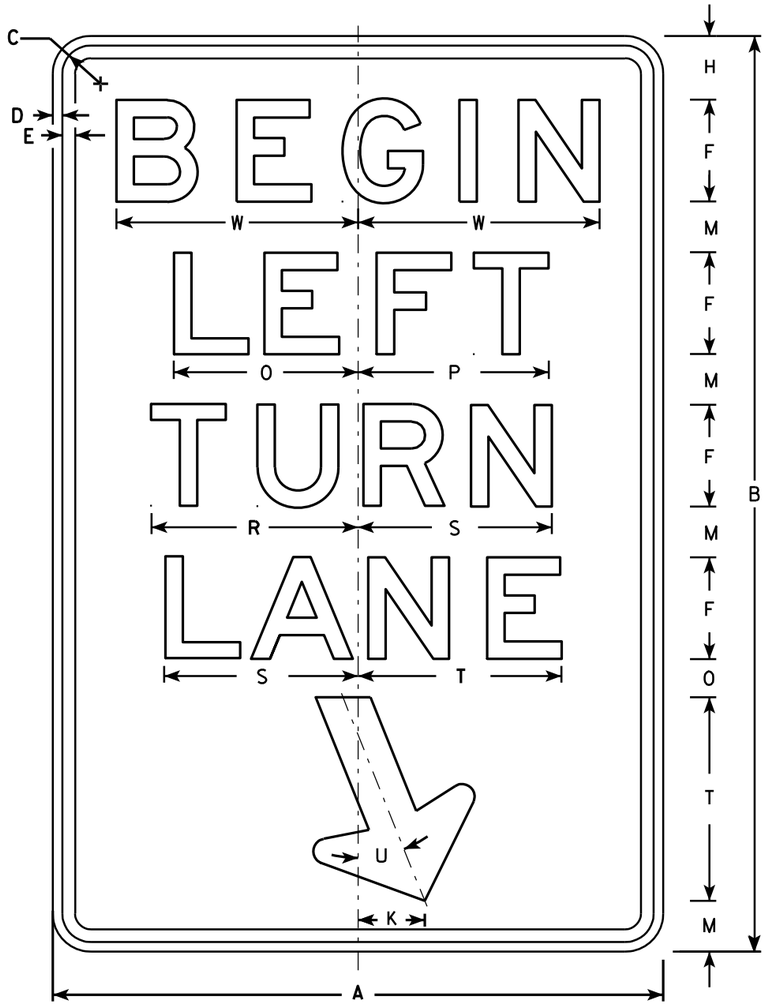
STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

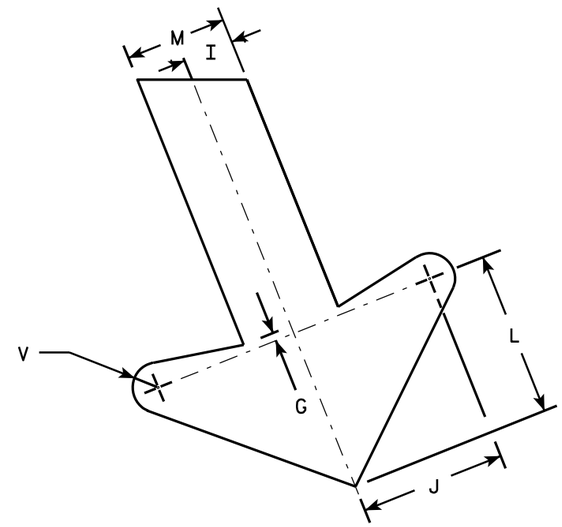
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 663	E



R3-20L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

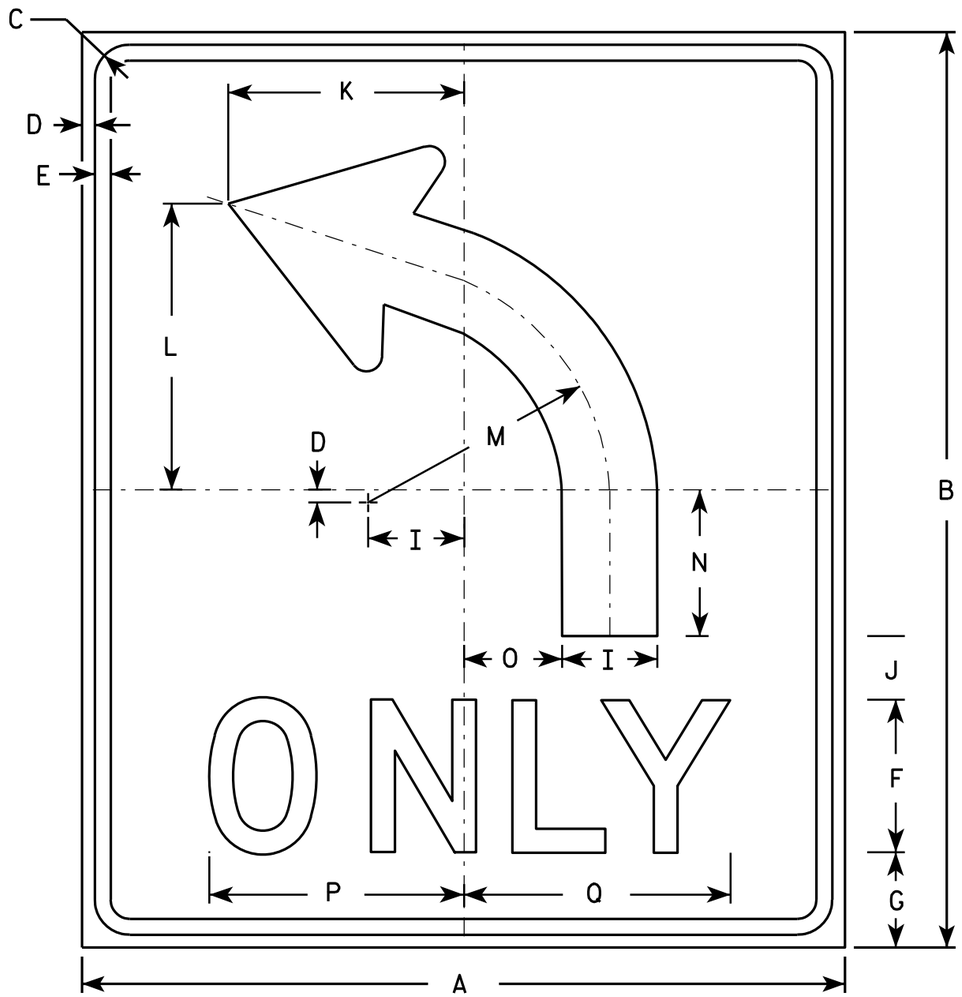
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

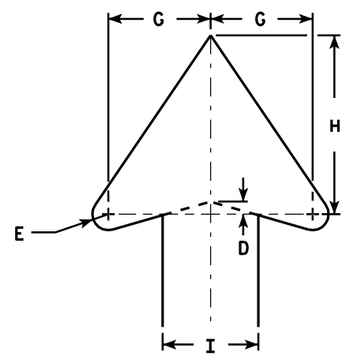
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 664 | E



R3-50L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R3-50R is the same as R3-50L except curved portion of arrow points right.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
2M	30	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
3																											
4																											
5																											

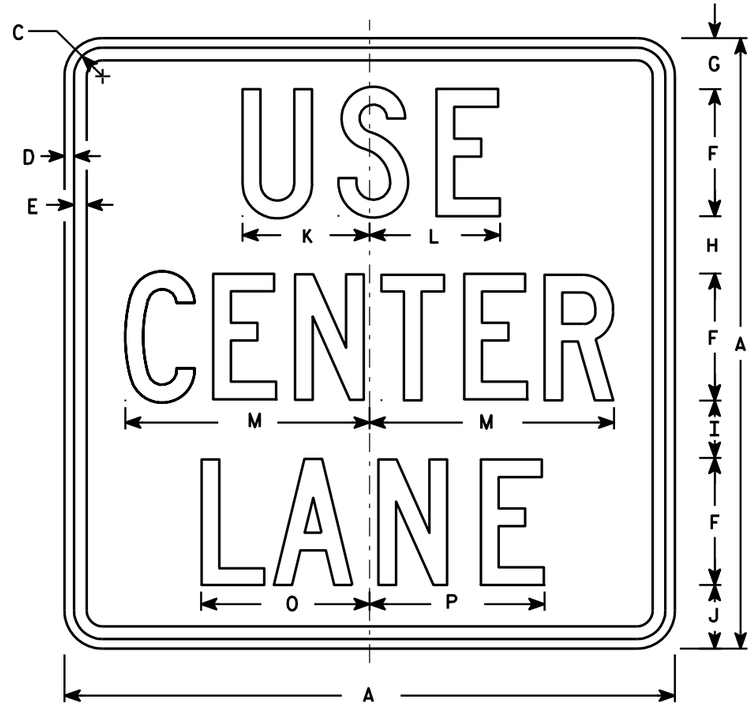
STANDARD SIGN
R3-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-50.2

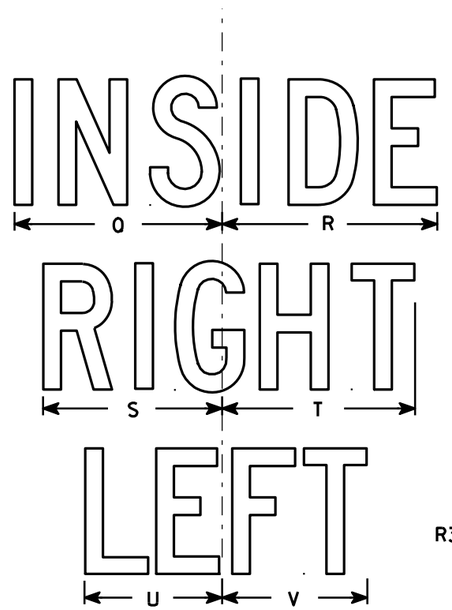
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 665 | E



R3-54C

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-54I

R3-54R

R3-54L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	9 5/8		6 5/8	6 7/8	8 1/8	8 1/2	7	7 5/8	5 3/8	5 3/4					4.0
2M	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	9 5/8		6 5/8	6 7/8	8 1/8	8 1/2	7	7 5/8	5 3/8	5 3/4					4.0
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	14 3/8		9 7/8	10 1/4	12 1/8	12 3/4	10 3/8	11 3/8	8	8 5/8					9.0
4																											
5																											

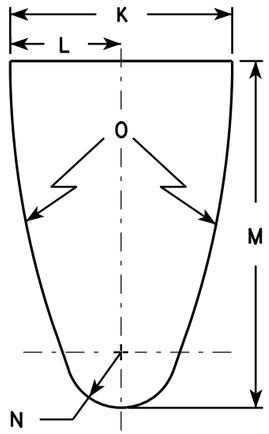
STANDARD SIGN
R3-54C, I ,L & R

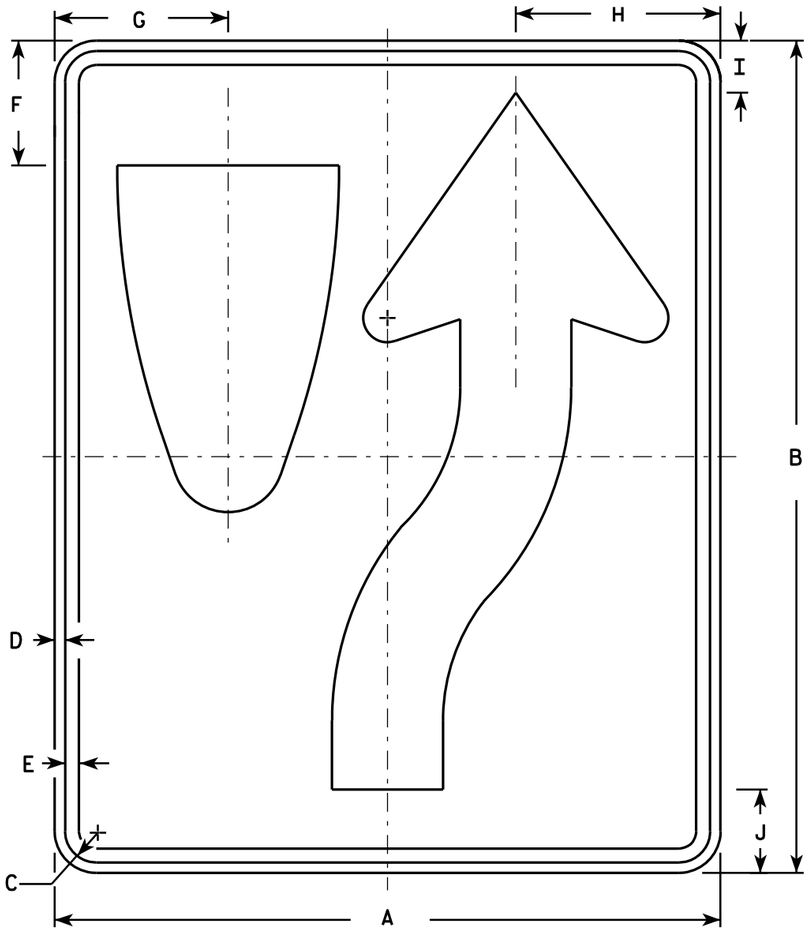
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-54.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 666 | E

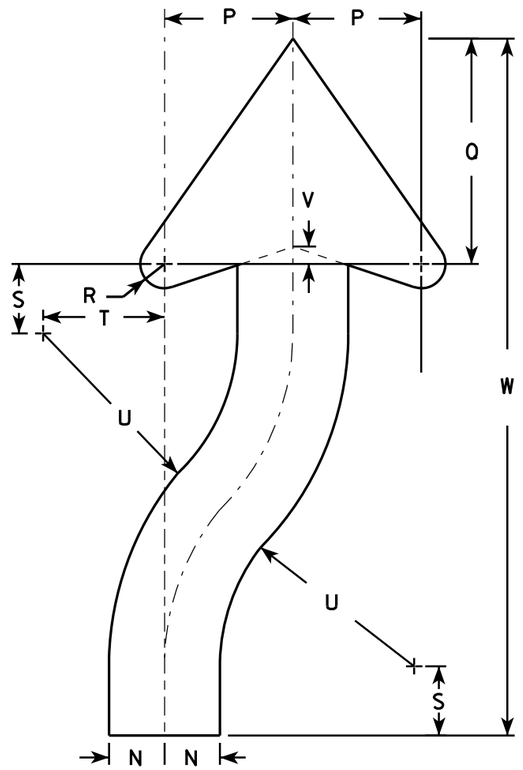




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

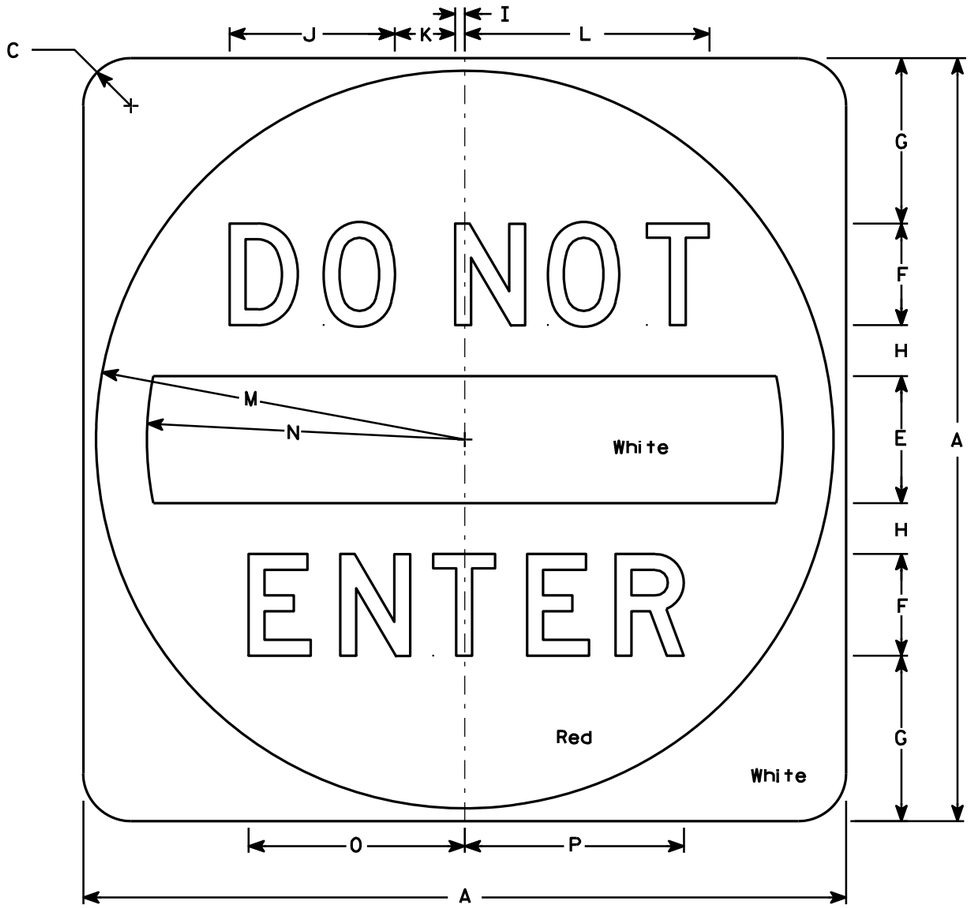
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 667	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

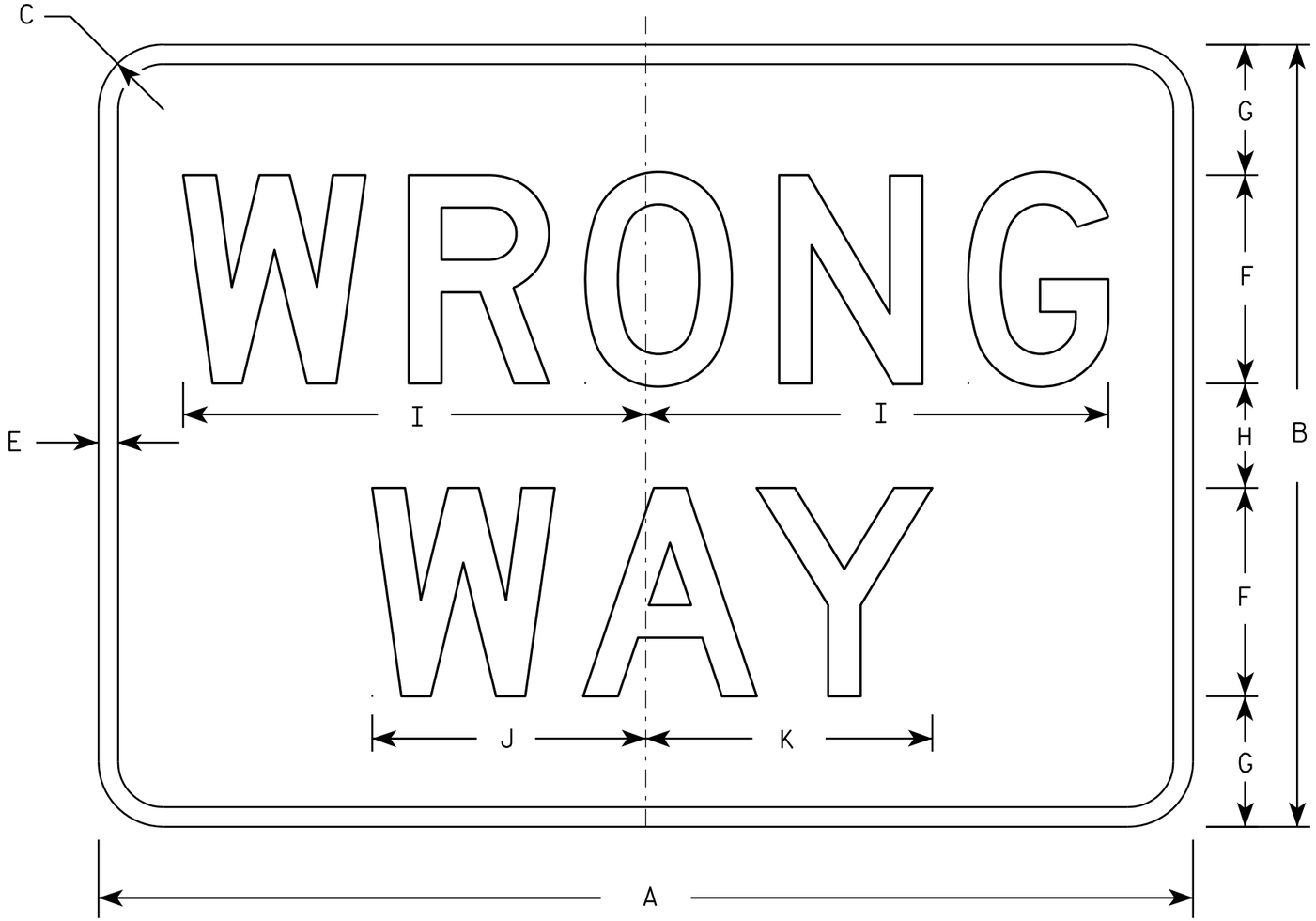
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 668 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 669	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R51A.DGN PLOT DATE : 17-DEC-2010 12:42 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.462457:1.000000

WISDOT/CADDS SHEET 42

7

7



R5-57

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Lines 1, 2, and 5 are Series C.
   Lines 3 and 4 are Series B.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0
5	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0

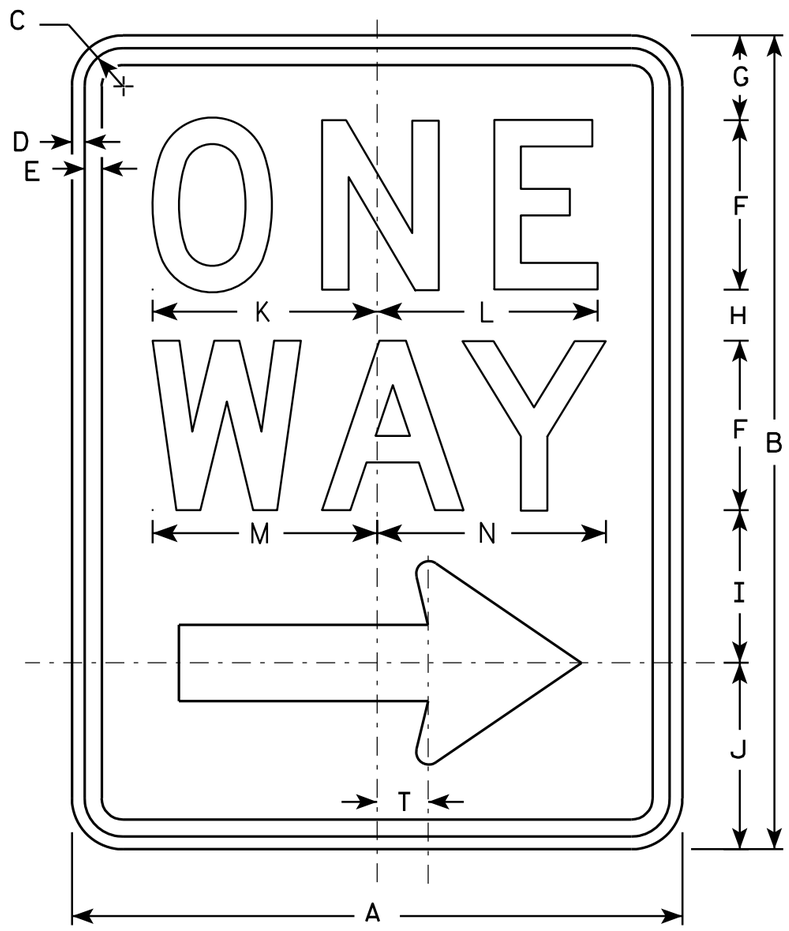
STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

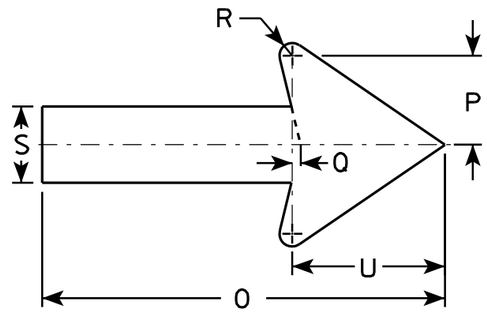
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 670	E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

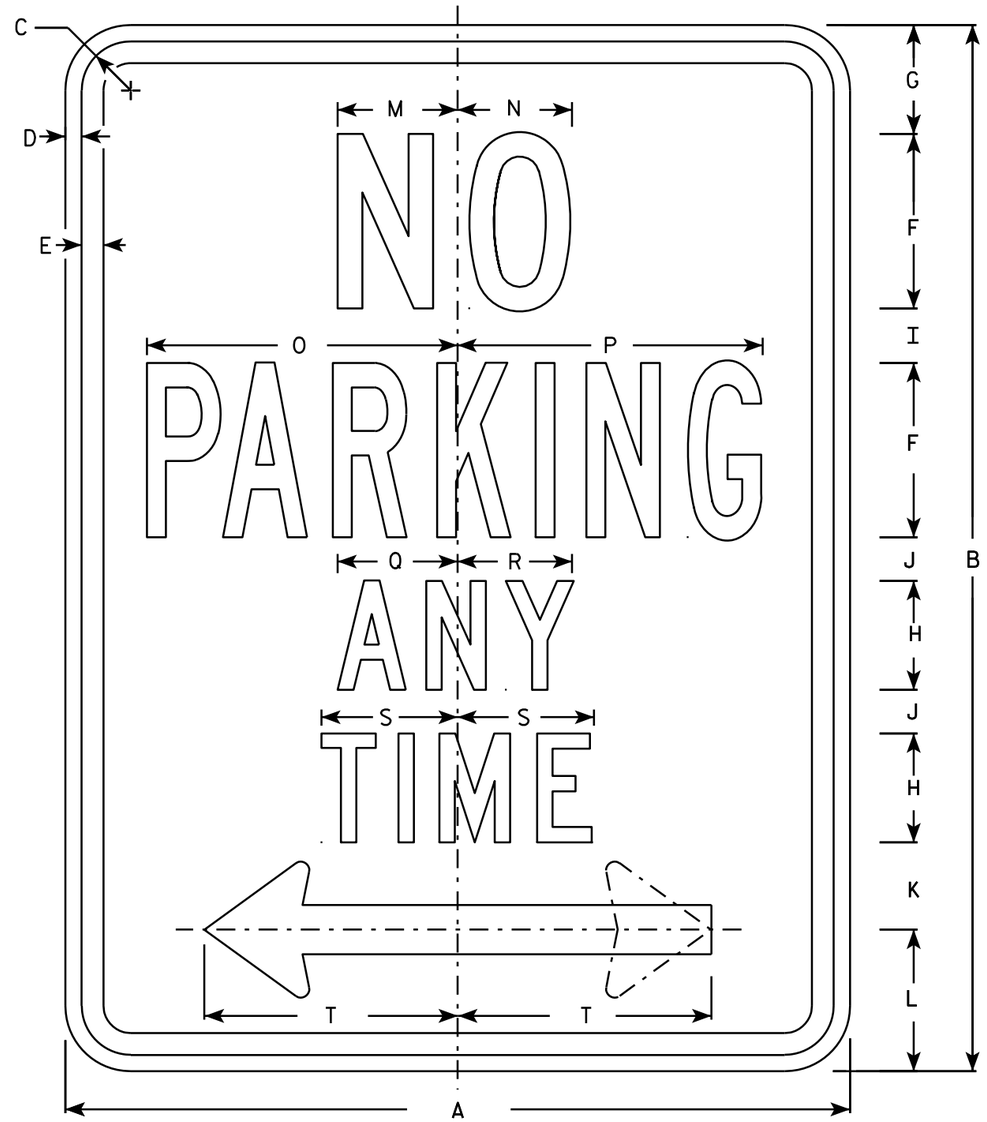
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

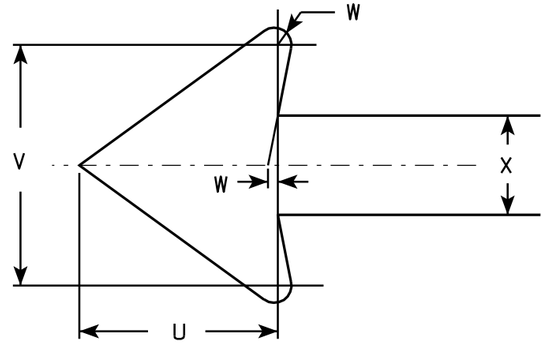
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 671	E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 672	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42



R8-55

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	36	1 3/8	1/2	5/8	4	5 3/8	3	5	13 1/4	16 1/4	14	10 1/2														10.5
2M	42	36	1 3/8	1/2	5/8	4	5 3/8	3	5	13 1/4	16 1/4	14	10 1/2														10.5
3																											
4																											
5																											

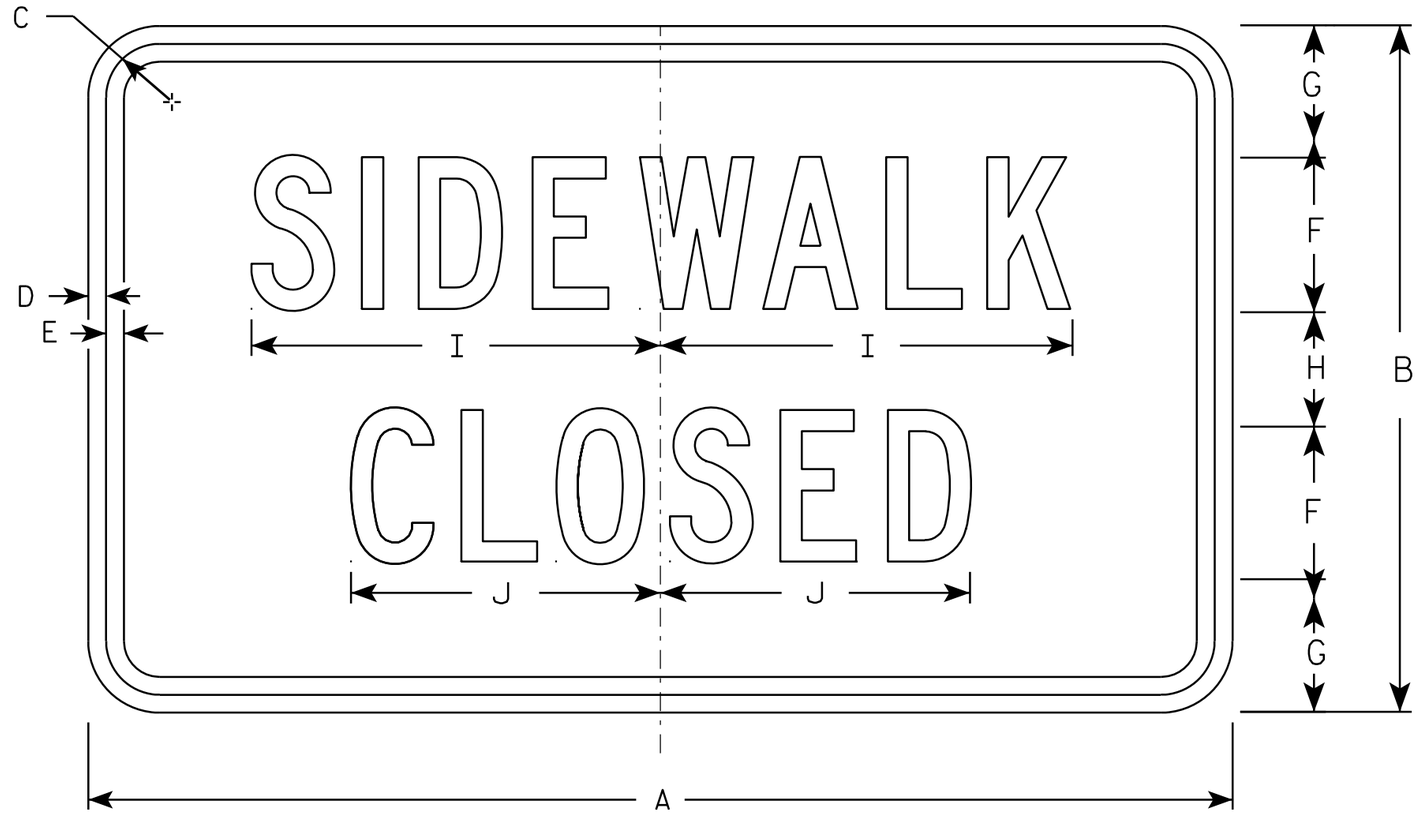
STANDARD SIGN
R8-55

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/18/2011 PLATE NO. R8-55.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 673	E



R9-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/4	1/2	1/2	4	3 1/2	3	10 3/4	8 1/8																	3.75
2M	30	18	1 3/4	1/2	1/2	4	3 1/2	3	10 3/4	8 1/8																	3.75
3																											
4																											
5																											

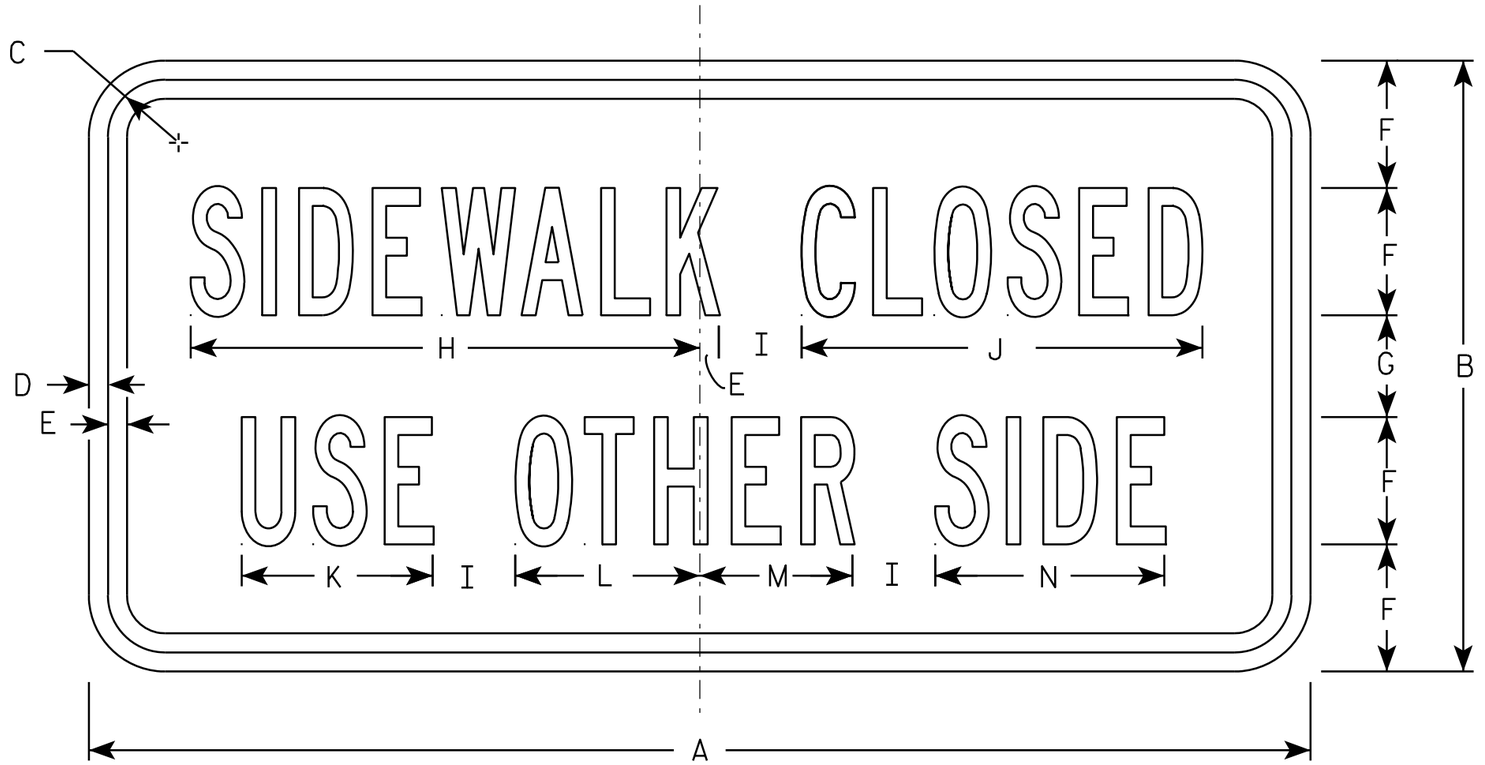
STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/2011 PLATE NO. R9-9.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 674	E



R9-10

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	12	1 1/8	3/8	3/8	2 1/2	2	10	1 5/8	7 7/8	3 3/4	3 5/8	3	4 1/2													2.0
2S	48	24	2 3/4	3/4	3/4	5	4	20	3 1/4	15 3/4	7 1/2	7 1/4	6	9													8.0
2M	48	24	2 3/4	3/4	3/4	5	4	20	3 1/4	15 3/4	7 1/2	7 1/4	6	9													8.0
3																											
4																											
5																											

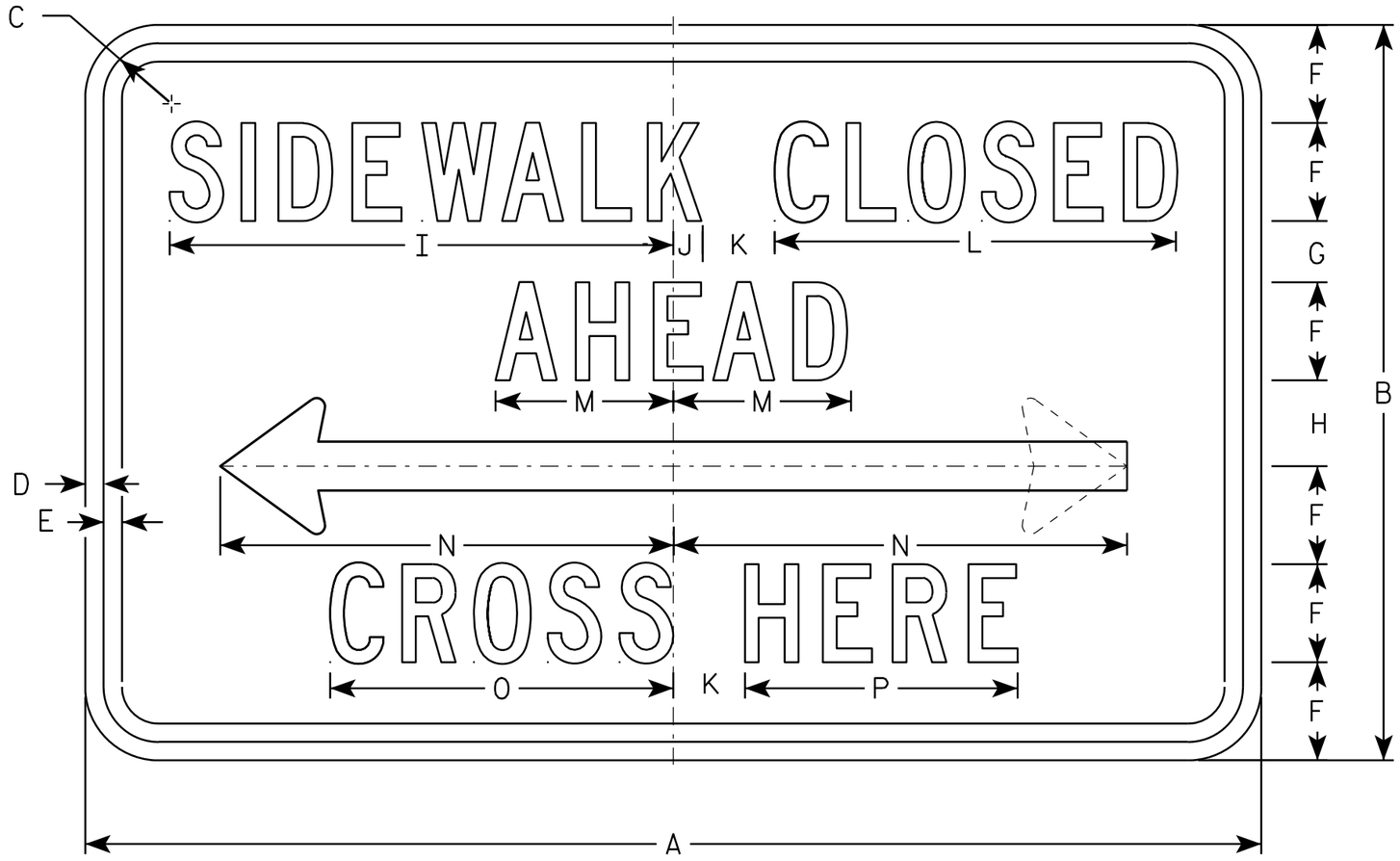
STANDARD SIGN
R9-10

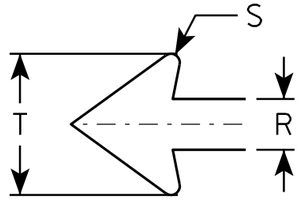
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/2012 PLATE NO. R9-10.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 675	E





R9-11

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C except Size 1 is Series D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	12	1 1/8	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
2S	48	30	2 3/4	3/4	3/4	4	2 1/2	3 1/2	20 1/2	1 1/4	3	16 3/8	7 1/4	18 1/2	14	11 1/8		2	3/8	5 1/2							10.0
2M	48	30	2 3/4	3/4	3/4	4	2 1/2	3 1/2	20 1/2	1 1/4	3	16 3/8	7 1/4	18 1/2	14	11 1/8		2	3/8	5 1/2							10.0
3																											
4																											
5																											

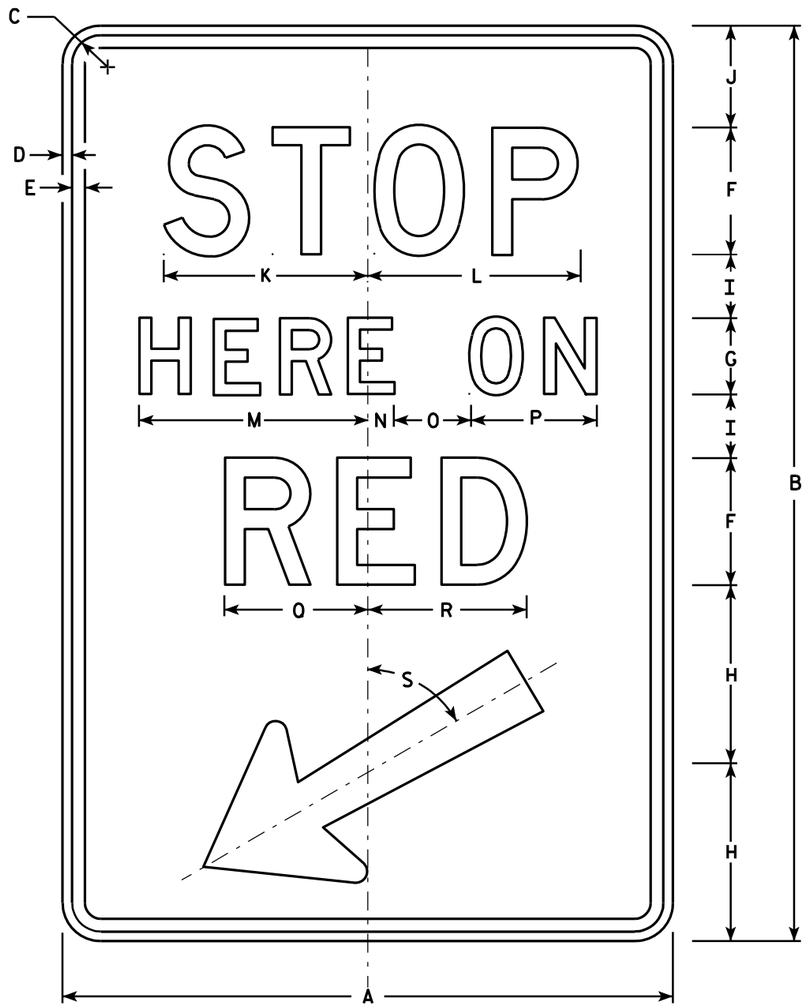
STANDARD SIGN
R9-11

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/2012 PLATE NO. R9-11.2

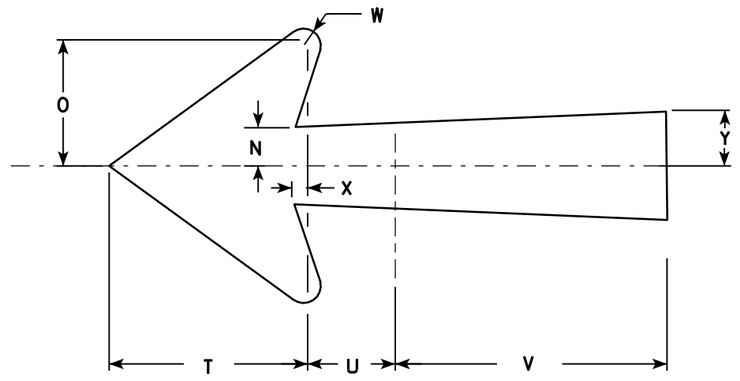
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 676	E



R10-6

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

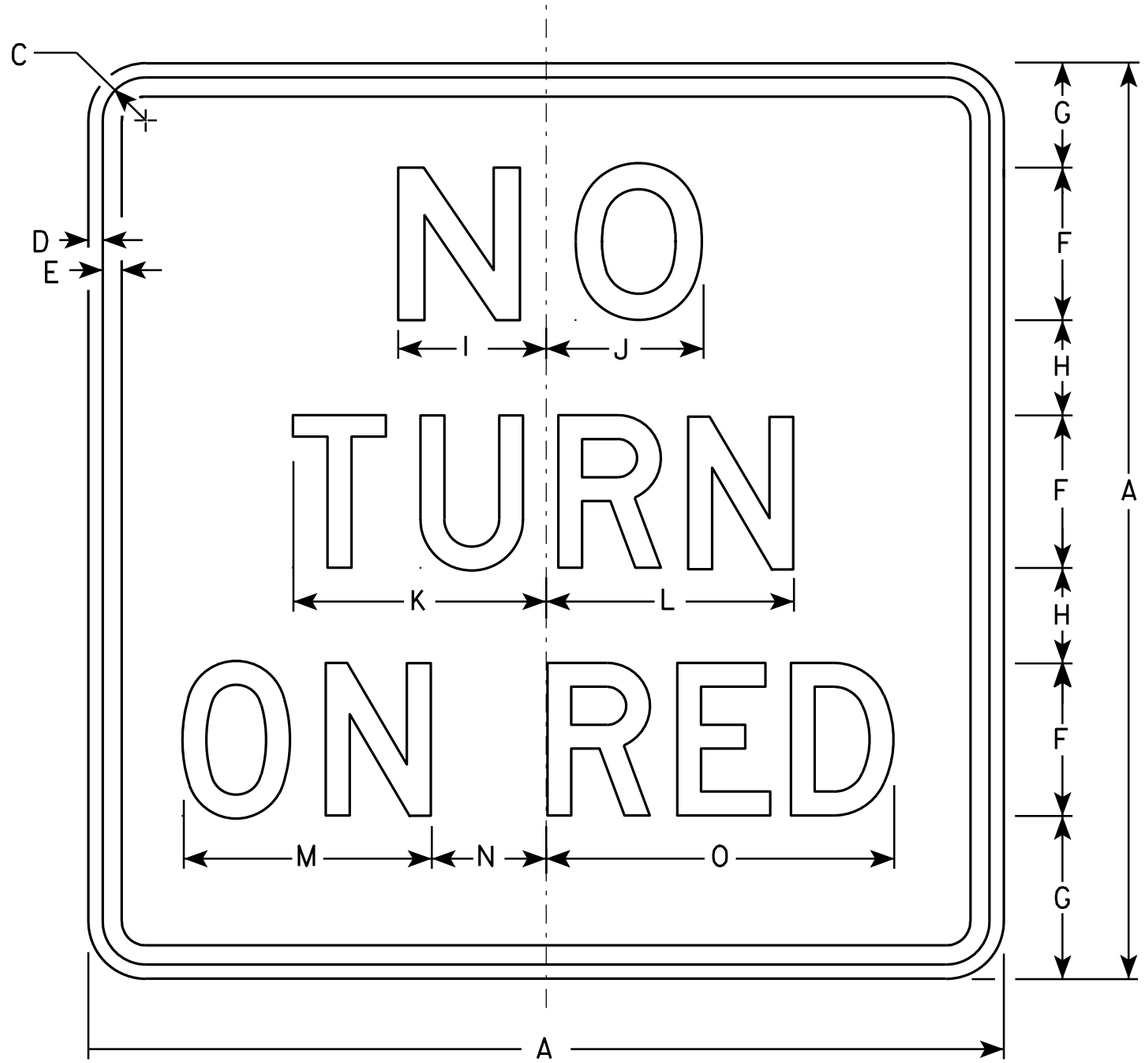
STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 677	E



R10-11B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - See Note 5.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series E.
   Lines 2 and 3 are Series D.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8	3/8	3/8	3	2 3/4	1 3/4	3	3 1/8	5	4 7/8	5 1/4	1 7/8	7 1/8												2.25
2S	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
2M	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
3	30		1 3/8	1/2	5/8	5	4 1/2	3	4 7/8	5 1/4	8 1/4	8 1/8	7 3/4	4 1/8	11 7/8												6.25
4																											
5																											

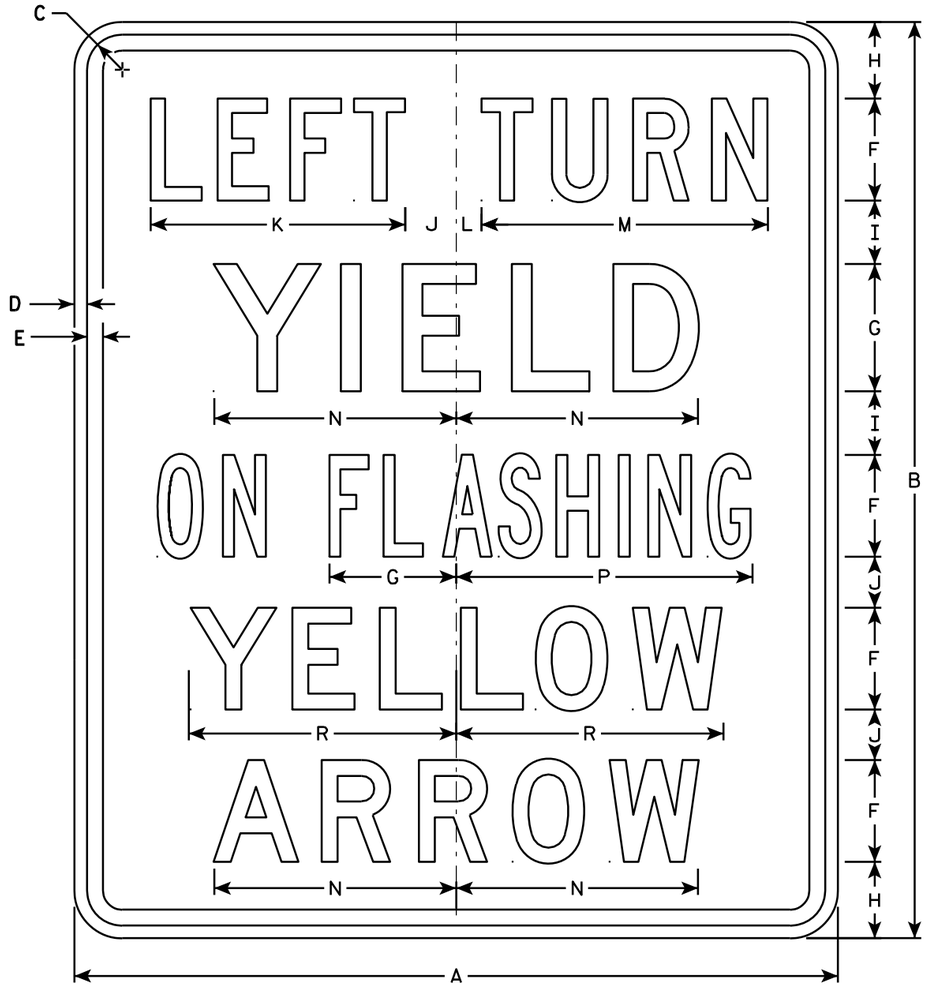
STANDARD SIGN
R10-11B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-11B.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 678 | E

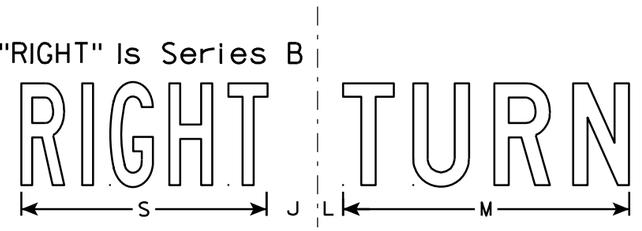


R10-50L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series C.
   Lines 2, 4 and 5 are Series D.
   Line 3 is Series B.

"RIGHT" Is Series B



R10-50R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
2M	30	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
3																											
4																											
5																											

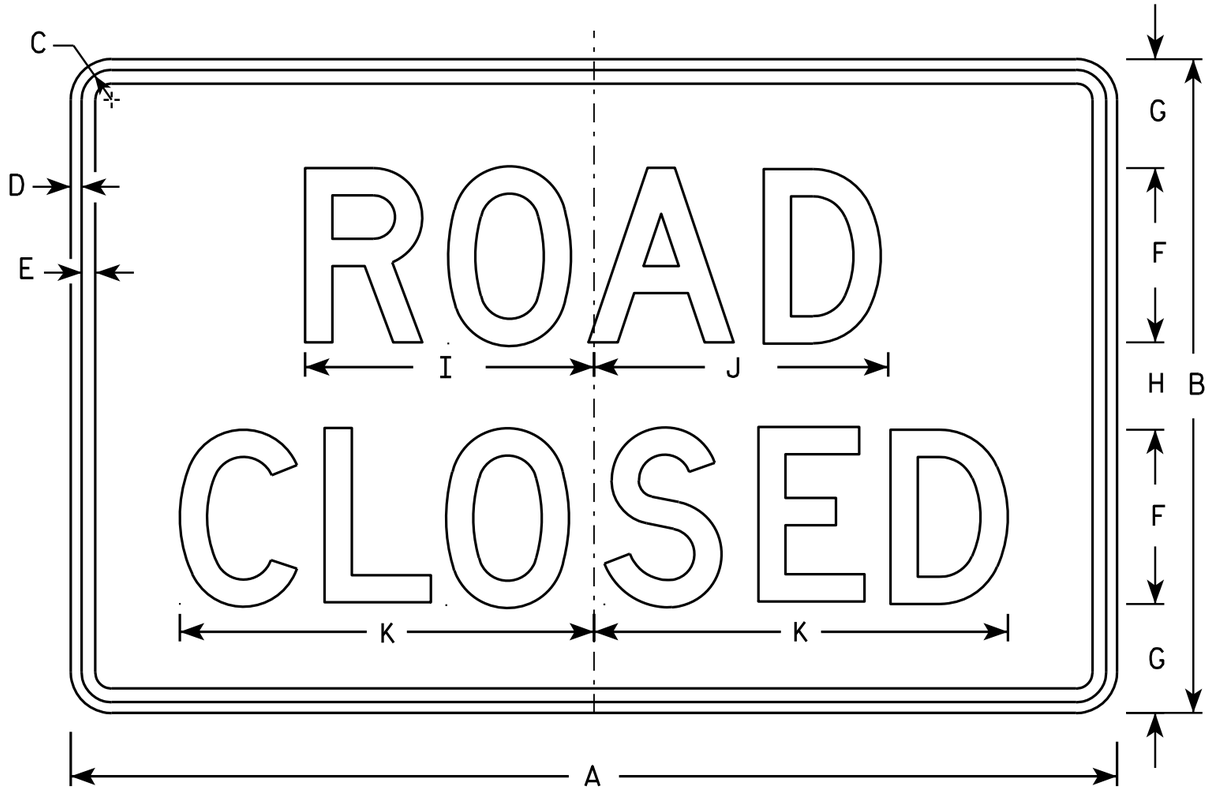
STANDARD SIGN
R10-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/11/13 PLATE NO. R10-50.2

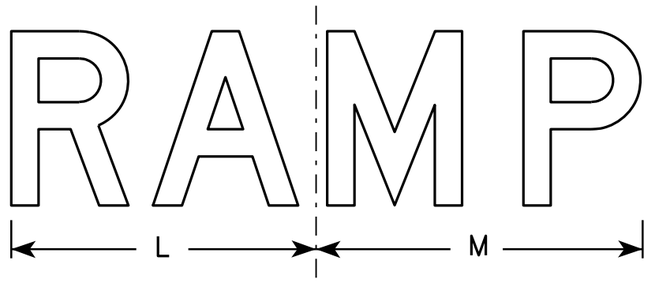
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 679	E



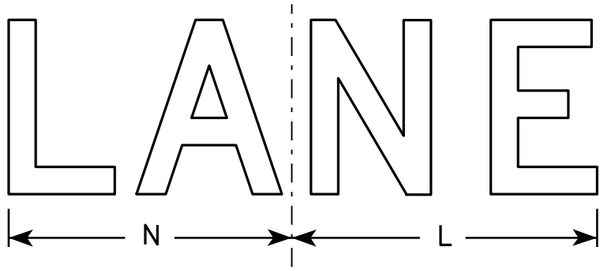
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

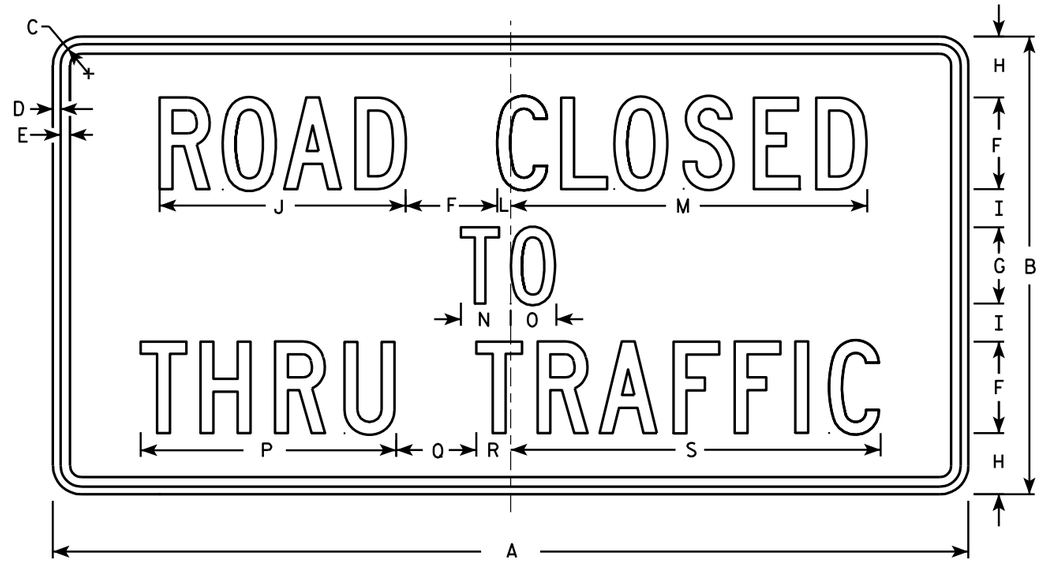
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 680	E



R11-4

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

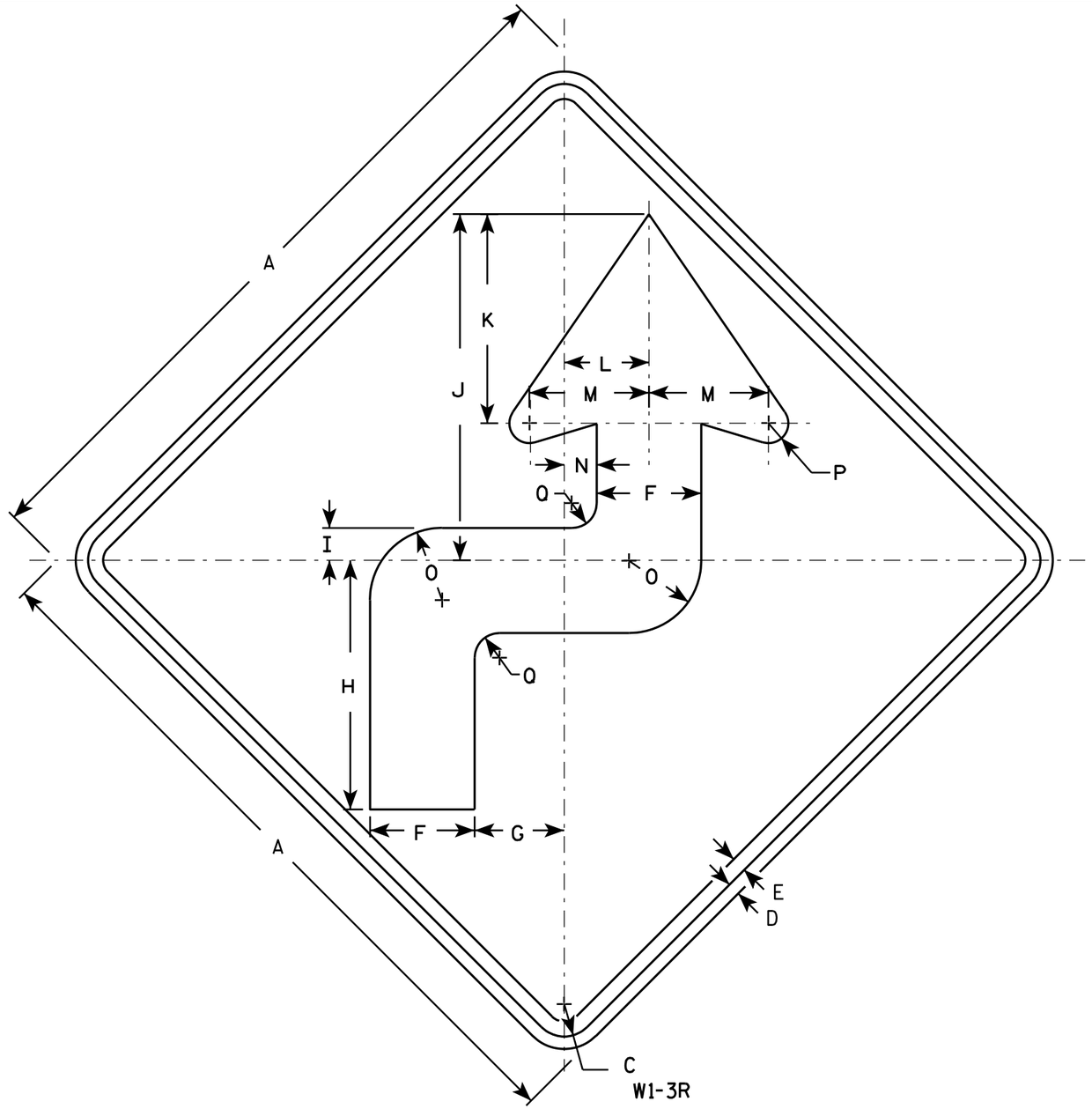
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 681 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-3L is the same as W1-3R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	3 1/2	3	8 3/8	1 1/8	11 5/8	7	2 3/4	4	1 1/8	2 1/2	5/8	7/8										4.0
2S	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2M	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
3	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
4	36		1 5/8	5/8	3/4	5 1/4	6	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
5	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

STANDARD SIGN
W1-3

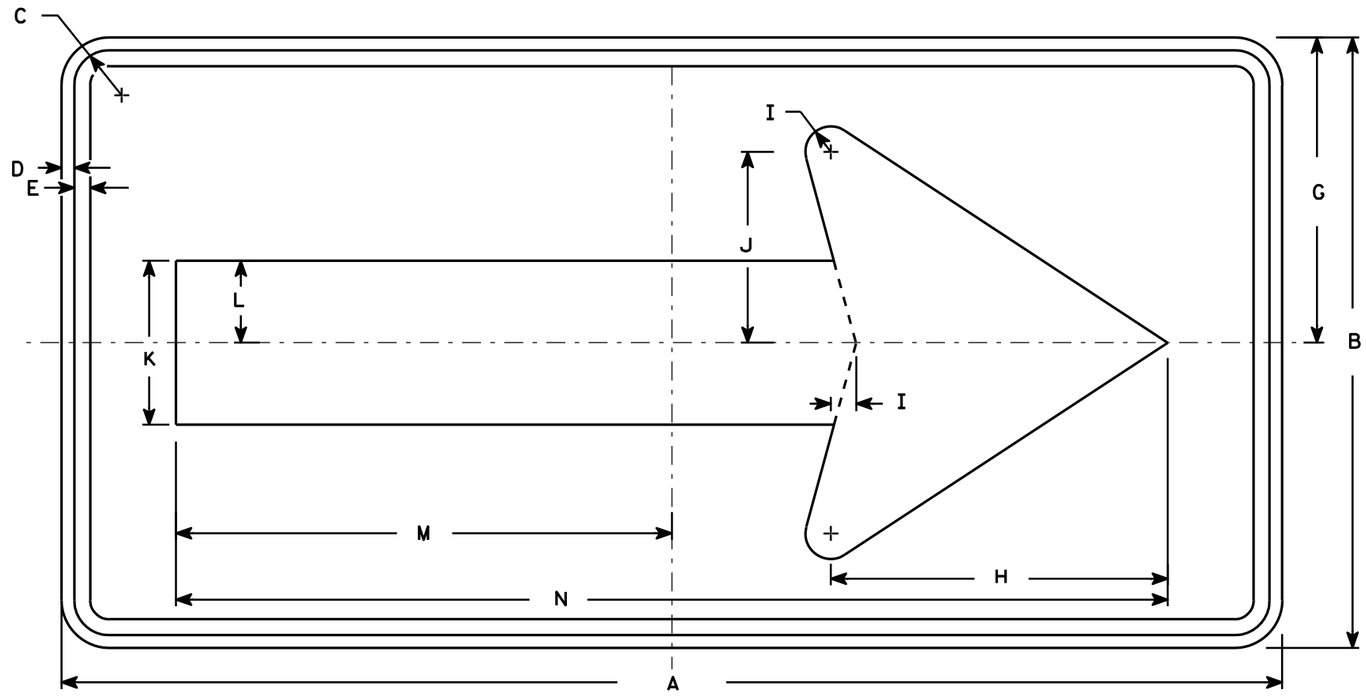
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-3.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 682 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W13.DGN PLOT DATE : 17-MAY-2012 13:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.698561:1.000000 WISDOT/CADDS SHEET 42



W1-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

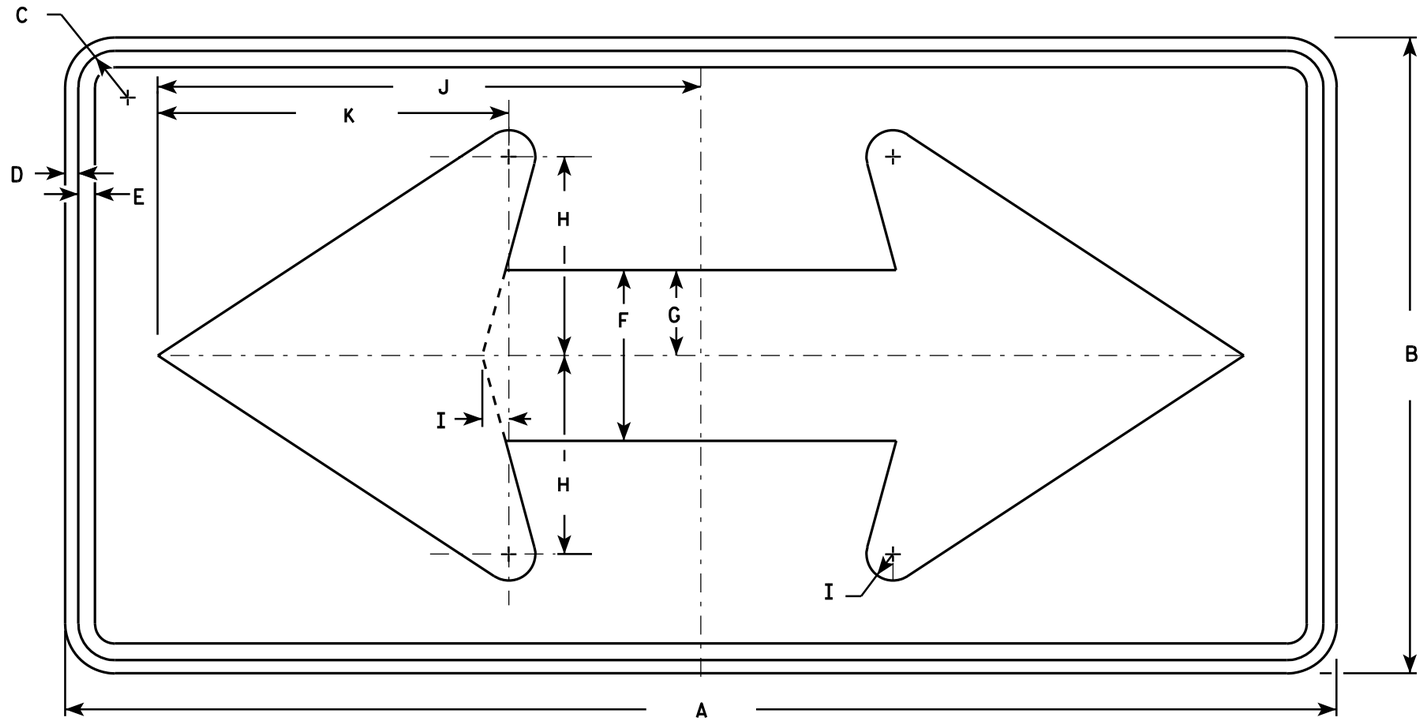
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 683



W1-7

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

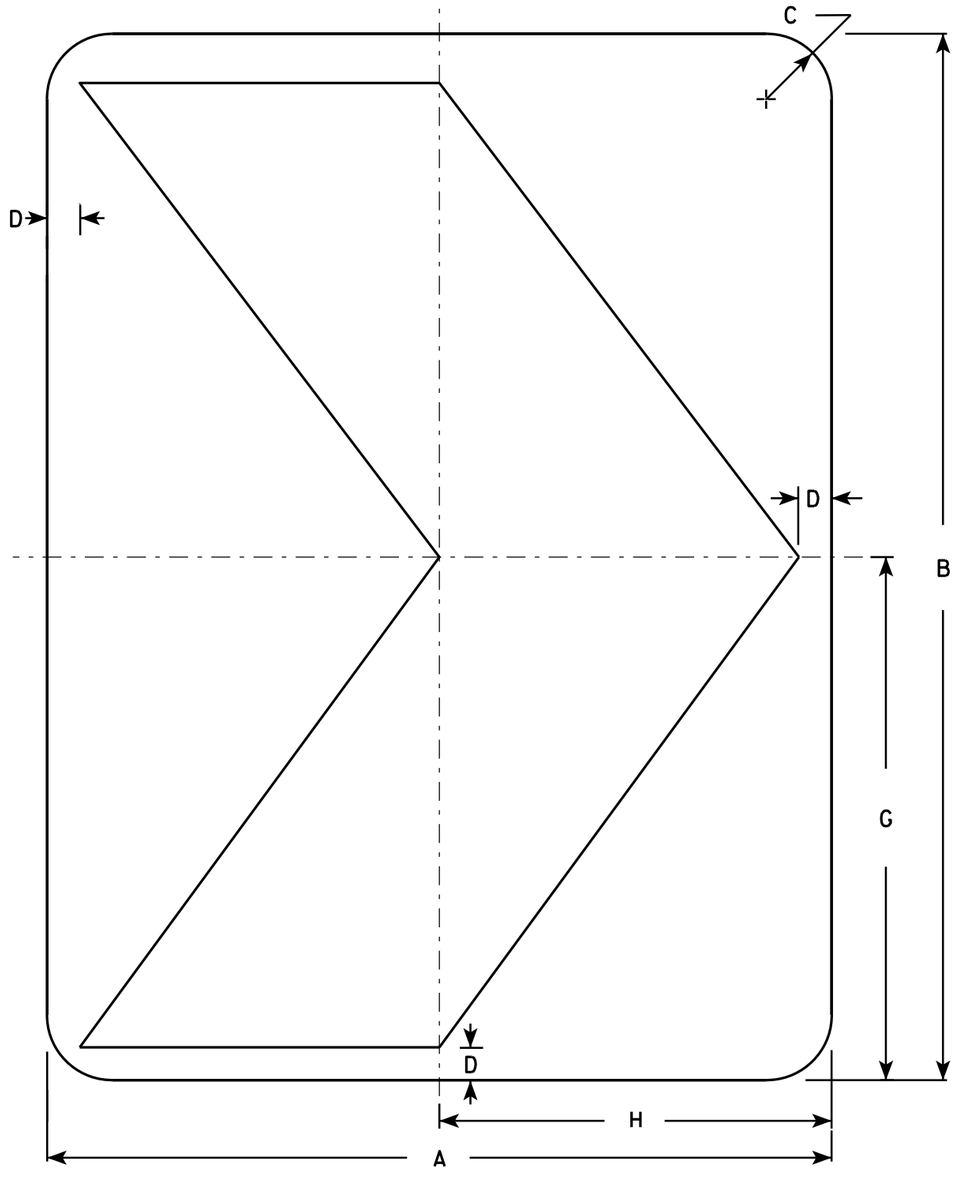
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 684	E



W1-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 ½	½			9	6																			1.5
2S	18	24	1 ½	¾			12	9																			3.0
2M	18	24	1 ½	¾			12	9																			3.0
3	24	30	1 ½	1			15	12																			5.0
4	30	36	1 ⅞	1 ¼			18	15																			7.5
5	36	48	2 ¼	1 ½			24	18																			12.0

STANDARD SIGN
W1-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

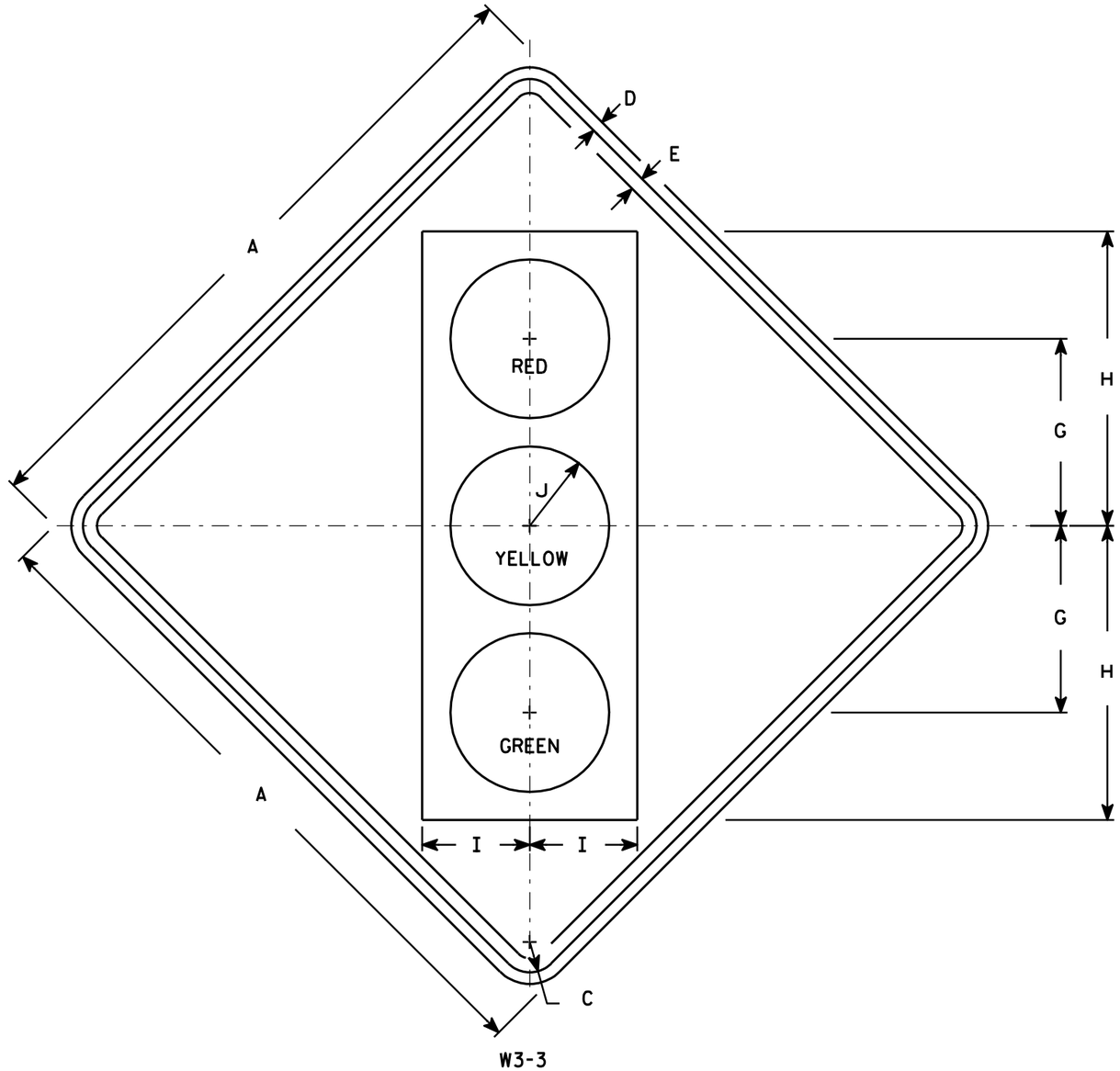
SHEET NO: 685 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W18.DGN PLOT DATE : 07-JUN-2010 12:55 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

7

7



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

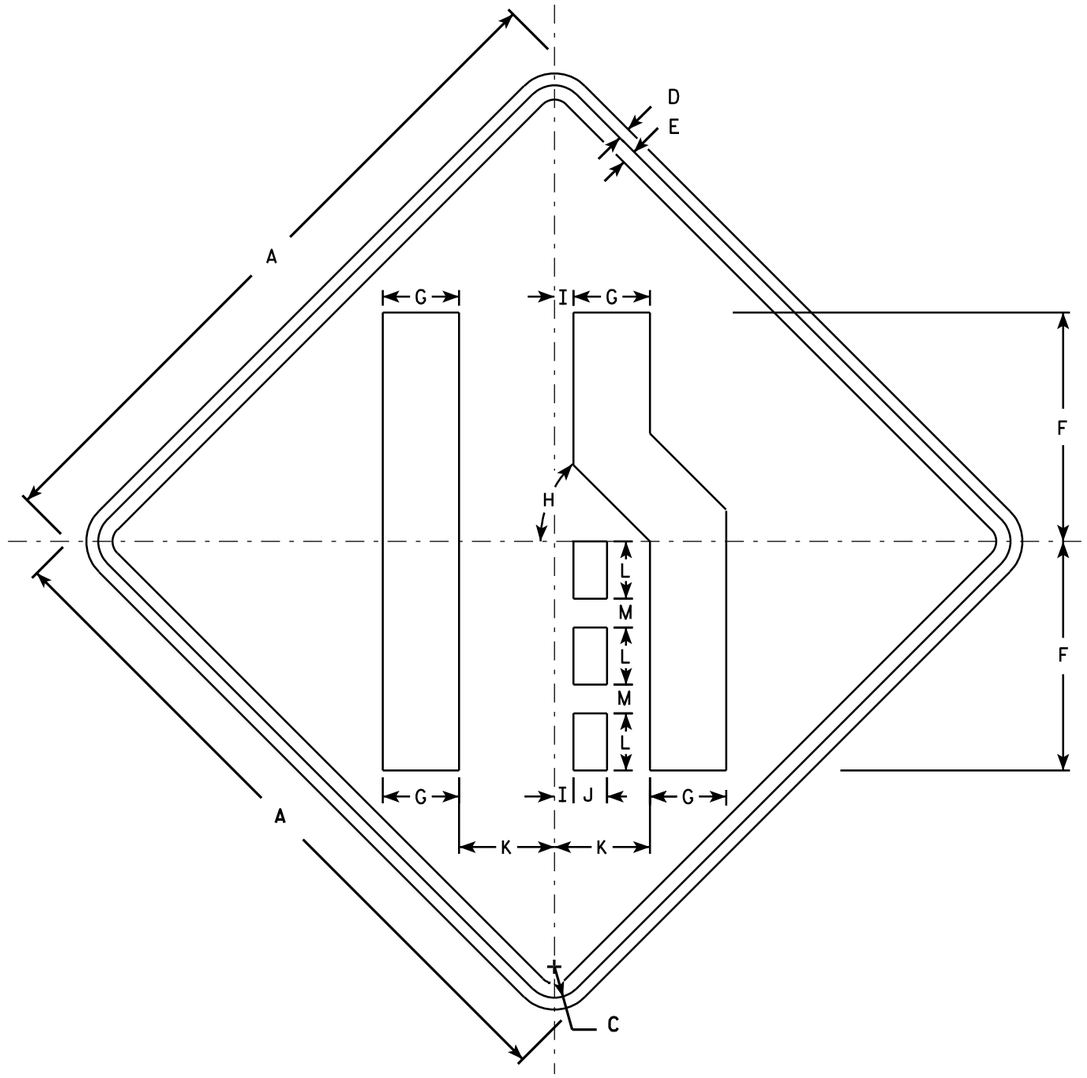
STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 686 | E



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-2L is the same as W4-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W4-2

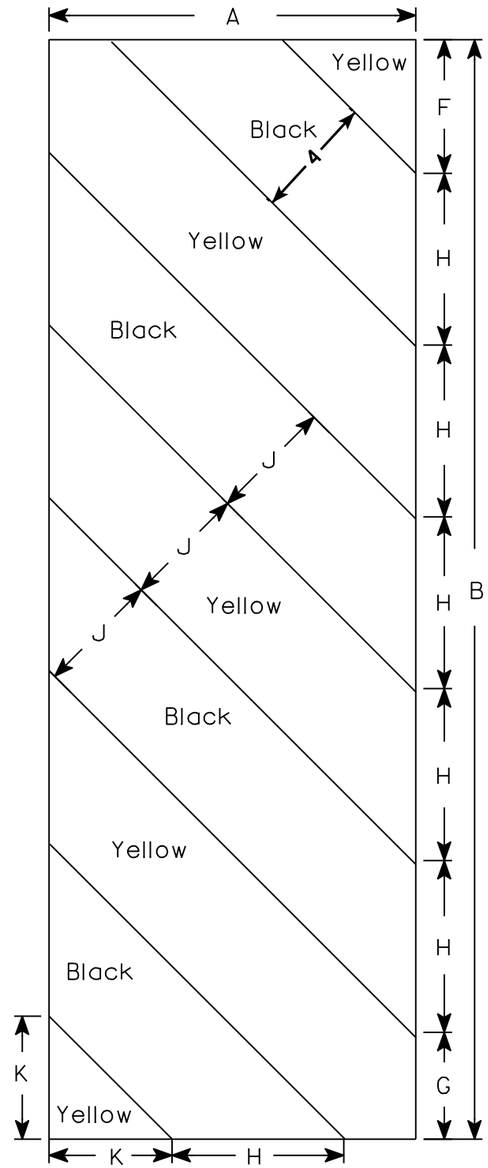
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

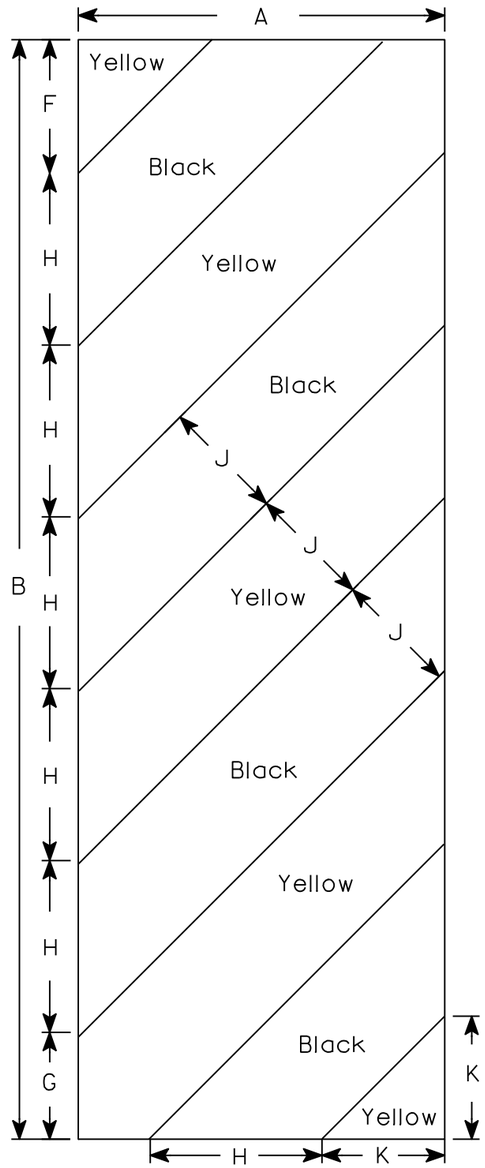
DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

SHEET NO: 687 E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

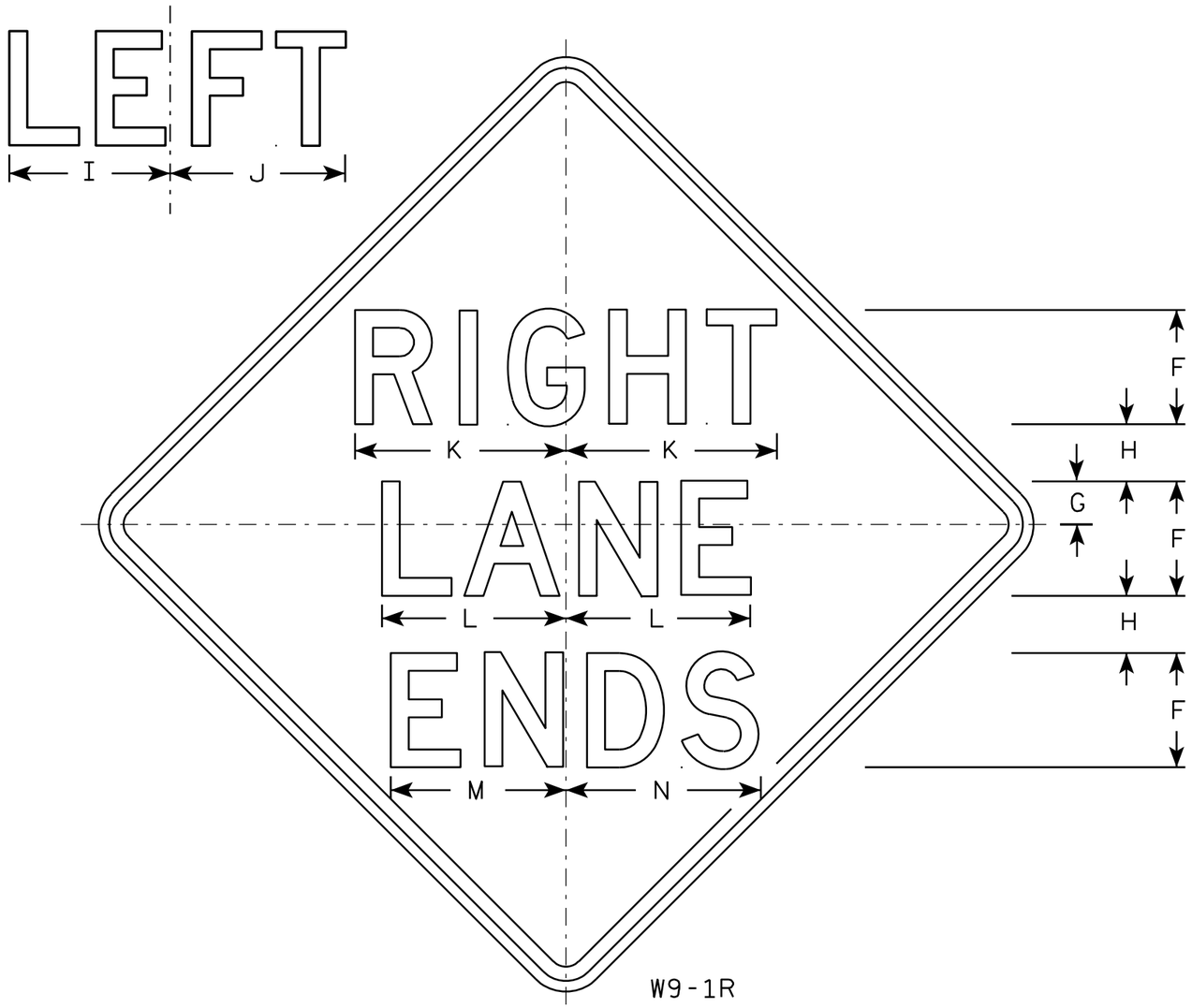
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 688	E



W9-1R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. W9-1L same as W9-1R except the word Left replaces Right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	1 1/2	2 1/2	7 1/8	7 5/8	9 1/4	8 1/8	7 5/8	8 5/8													6.25
2S	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
2M	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
3	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
4	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
5	48		2 1/4	3/4	1	8	3	4	11 1/4	12 1/4	14 3/4	12 7/8	12 1/4	13 5/8													16.0

STANDARD SIGN
W9-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

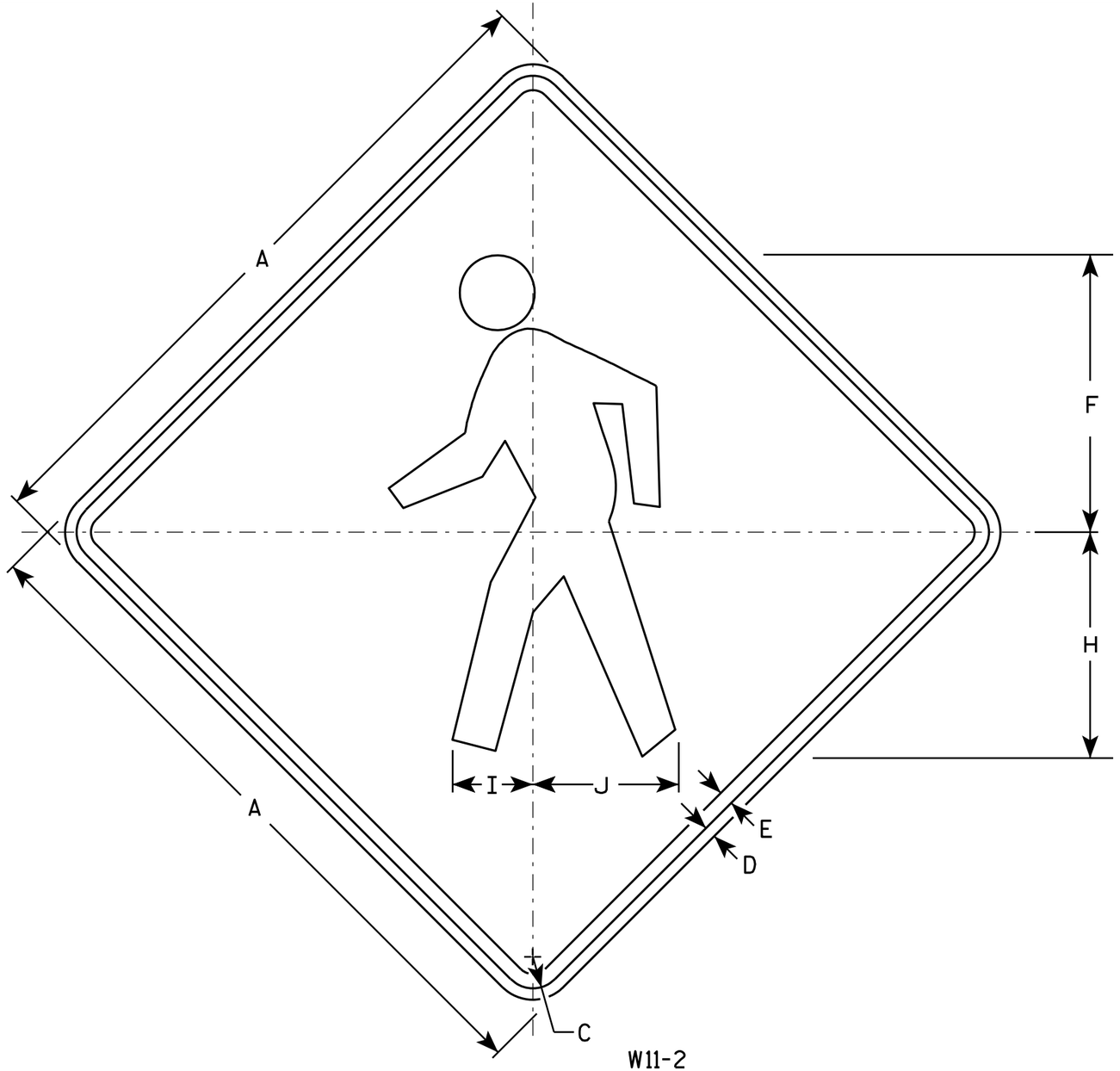
DATE 03/18/13 PLATE NO. W9-1.8

PROJECT NO:

SHEET NO: 689 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W91.DGN PLOT DATE : 18-MAR-2013 11:42 PLOT BY : mscsja

WISDOT/CADDS SHEET 42



W11-2

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

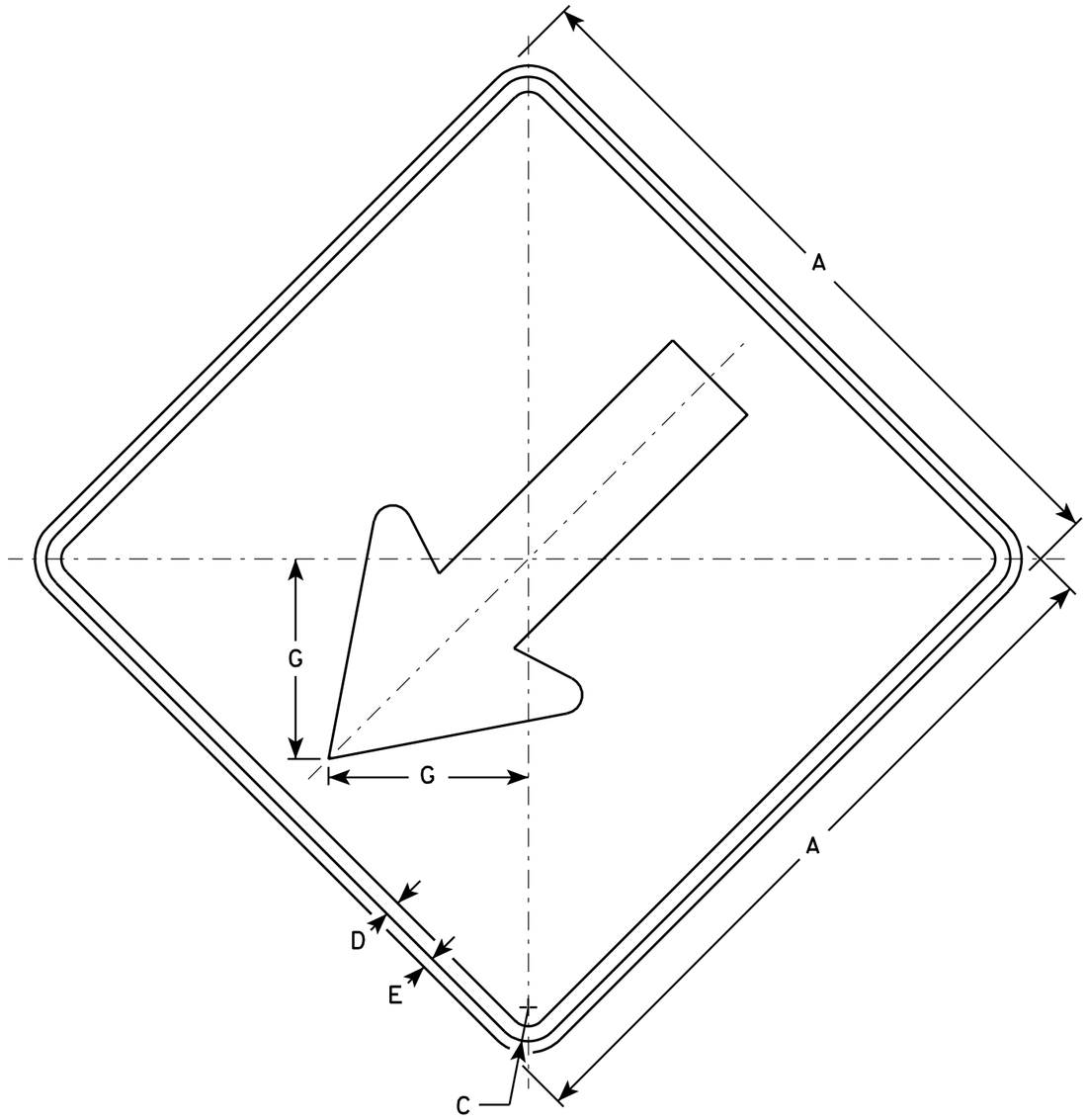
STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

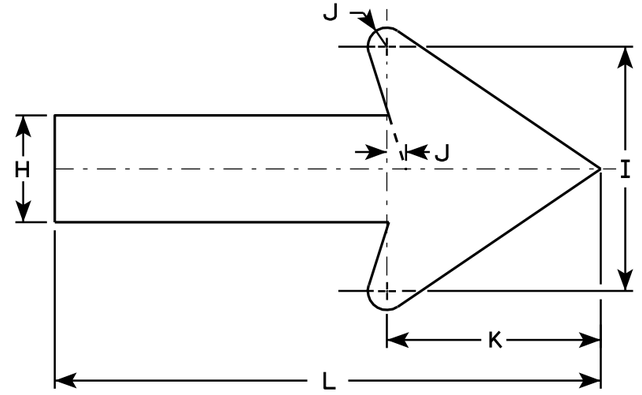
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 690	E



W12-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
2M	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
3	30		1 3/8	5/8	1/2		8 1/4	4 3/8	10	3/4	8 3/4	22 3/8															6.25
4	36		1 3/4	3/4	5/8		10 3/8	5 1/2	12 1/2	1	11	27 7/8															9.0
5	48		2 1/4	3/4	1		12 1/2	6 5/8	15	1 1/4	13 1/4	33 1/2															16

STANDARD SIGN
W12-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1.12

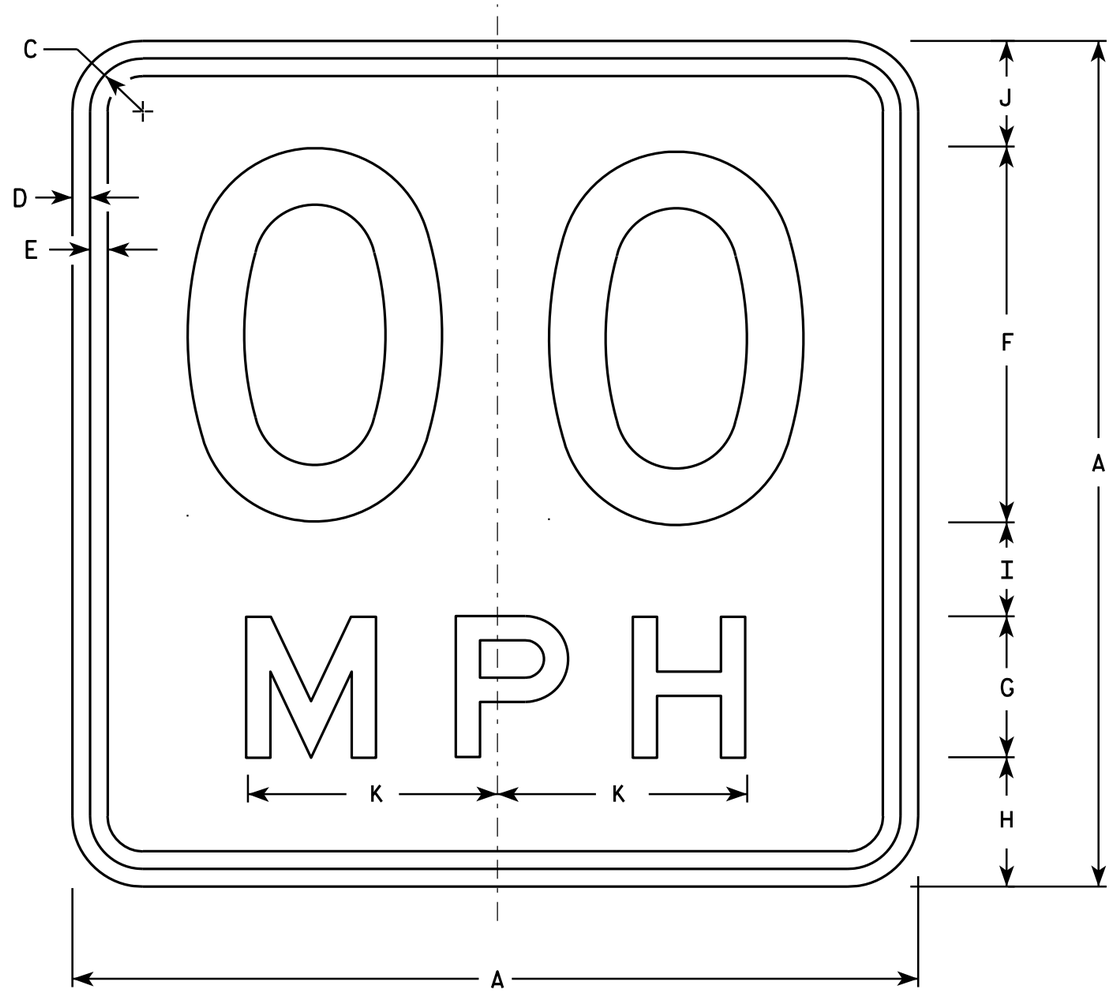
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 691	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W121.DGN PLOT DATE : 13-MAR-2013 13:26 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.961899:1.000000

WISDOT/CADDS SHEET 42

7

7



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

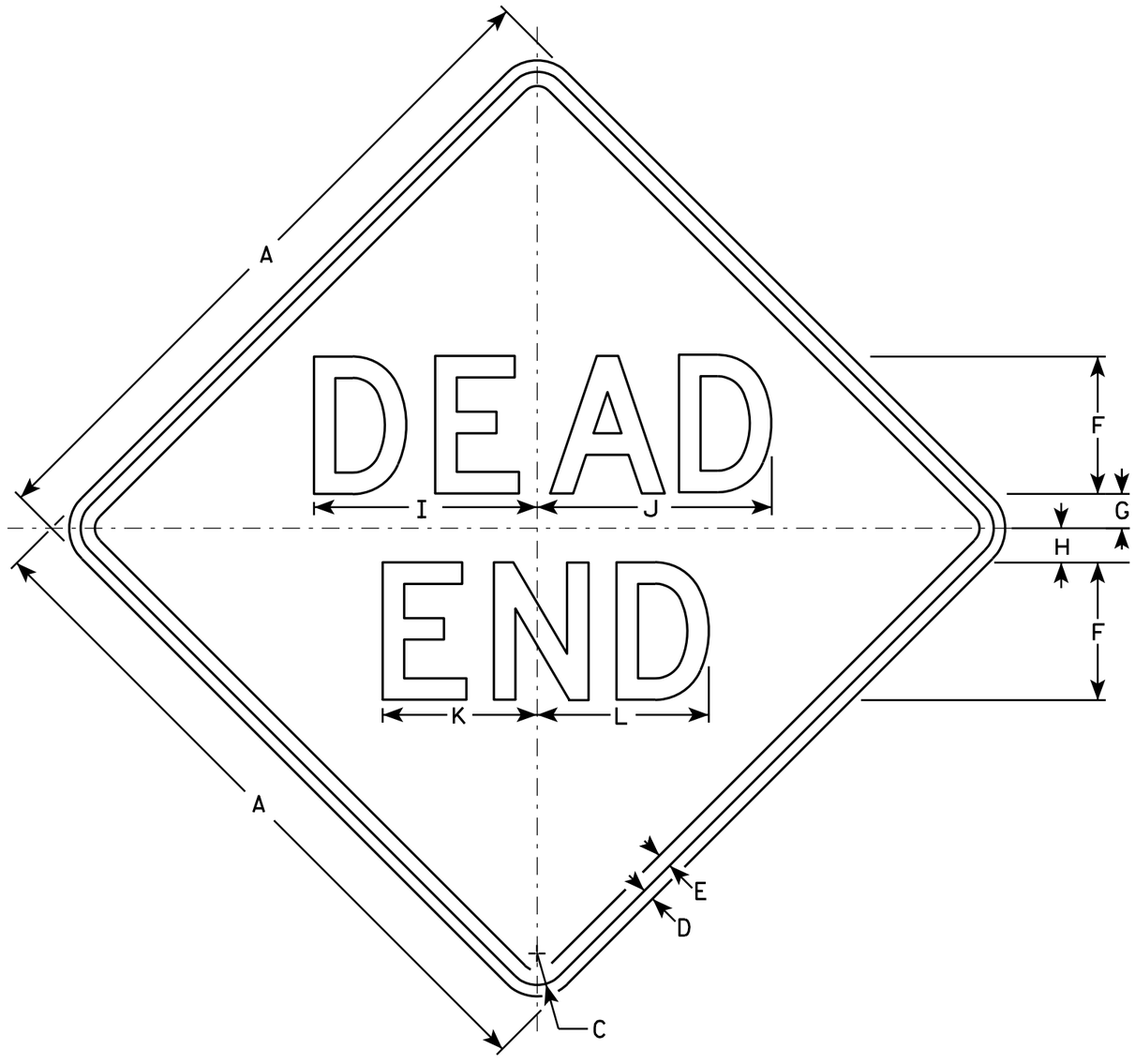
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 692 | E



W14-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	5	1	2	8 1/4	8 5/8	5 5/8	6 1/4															4.0
2S	30		1 3/8	1/2	5/8	6	1 1/2	2 1/2	9 3/4	10 1/4	6 3/4	7 1/2															6.25
2M	30		1 3/8	1/2	5/8	6	1 1/2	2 1/2	9 3/4	10 1/4	6 3/4	7 1/2															6.25
3	36		1 5/8	5/8	3/4	7	2	3	11 3/8	12	7 7/8	8 3/4															9.0
4																											
5																											

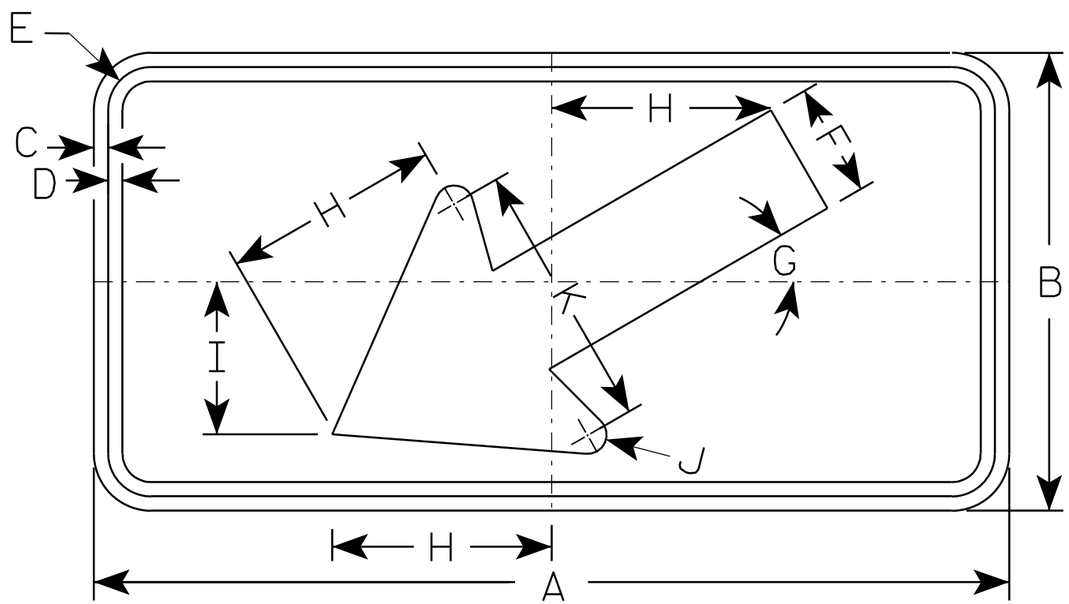
STANDARD SIGN
W14-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W14-1.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 693	E



W16-7L

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4																											8
5																											8

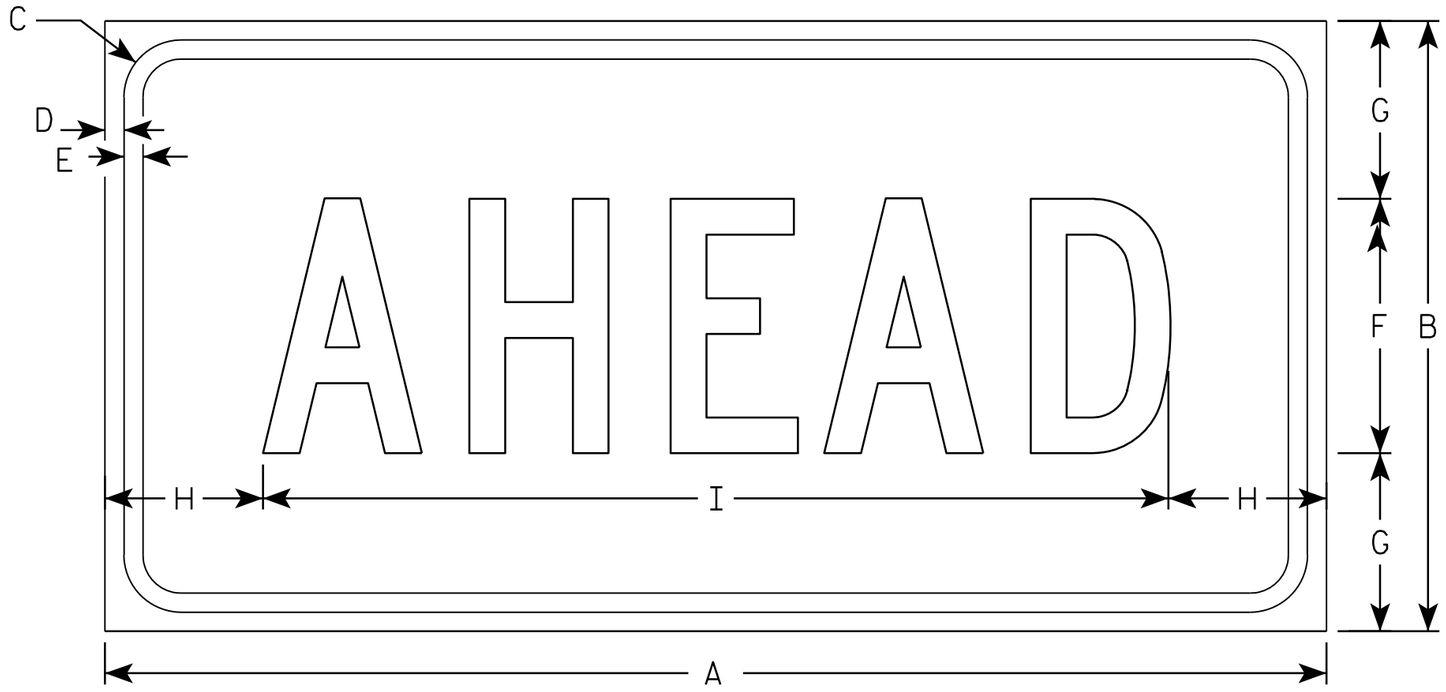
STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. W16-7.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 694	E



W16-9P

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

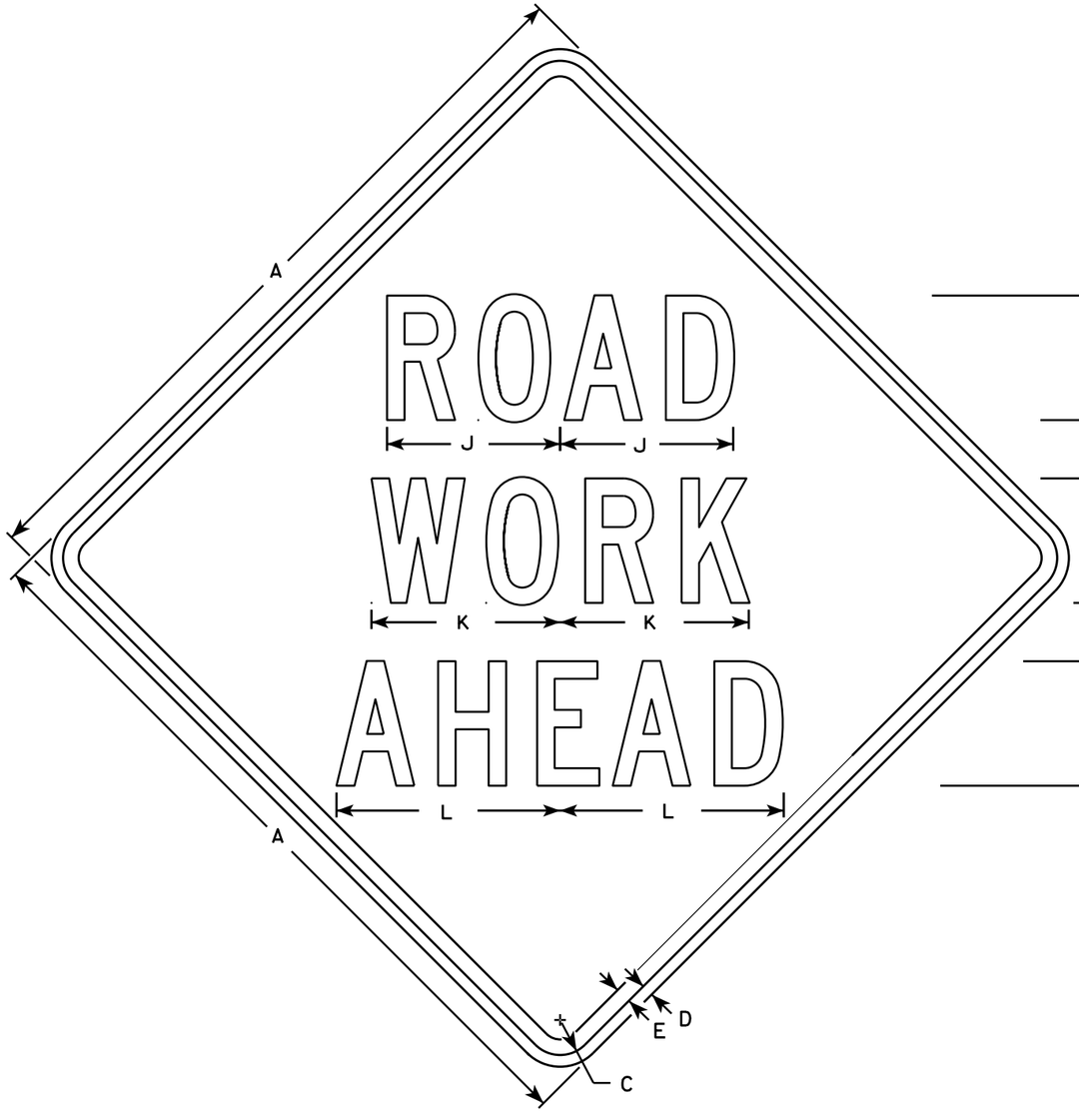
STANDARD SIGN
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

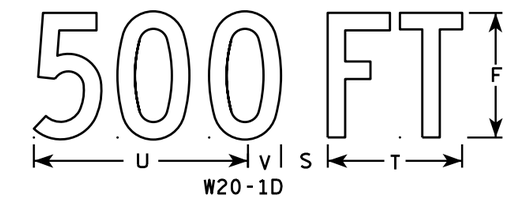
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/28/10 PLATE NO. W16-9P.6

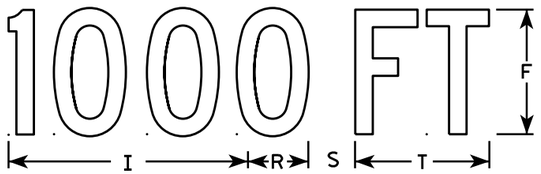
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 695 | E



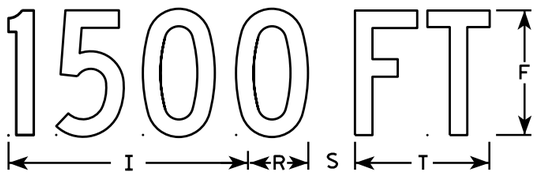
W20-1A



W20-1D



W20-1C



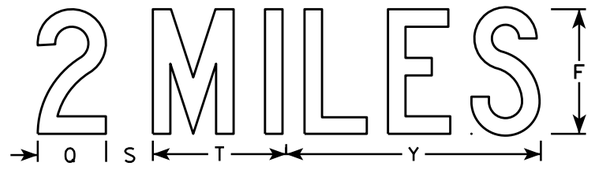
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

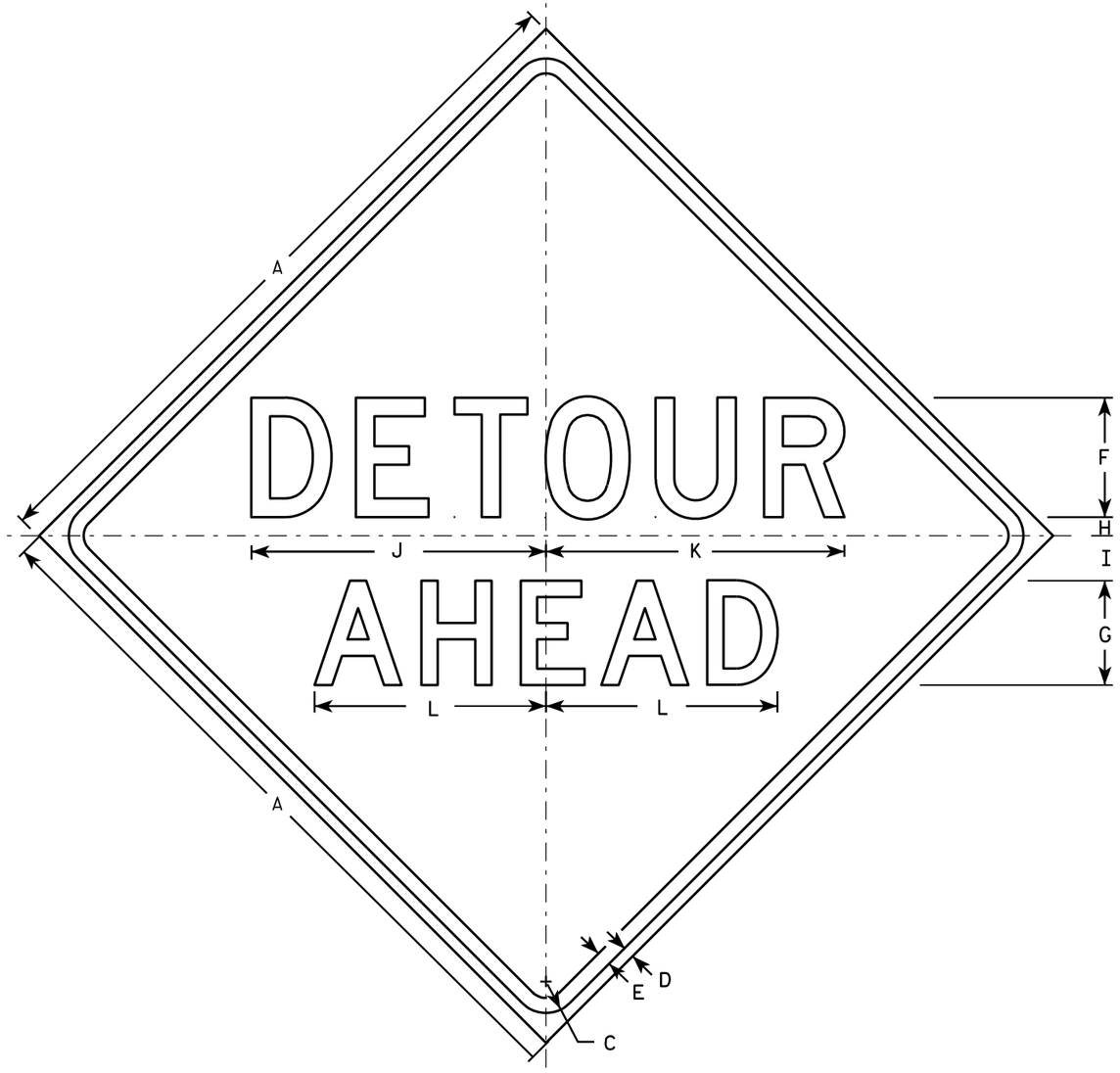
APPROVED

State Traffic Engineer

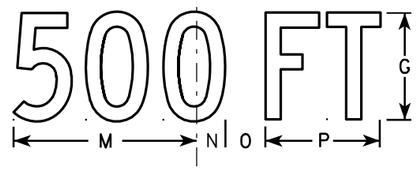
DATE 5/07/15 PLATE NO. W20-1.10

PROJECT NO:

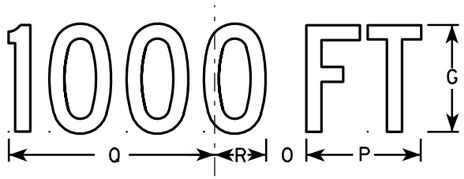
SHEET NO: E



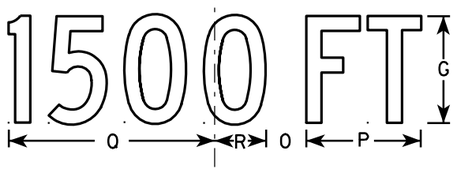
W20-2A



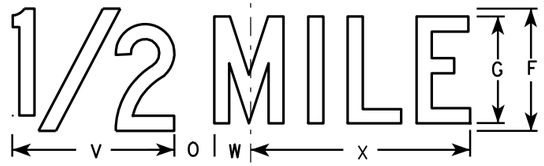
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

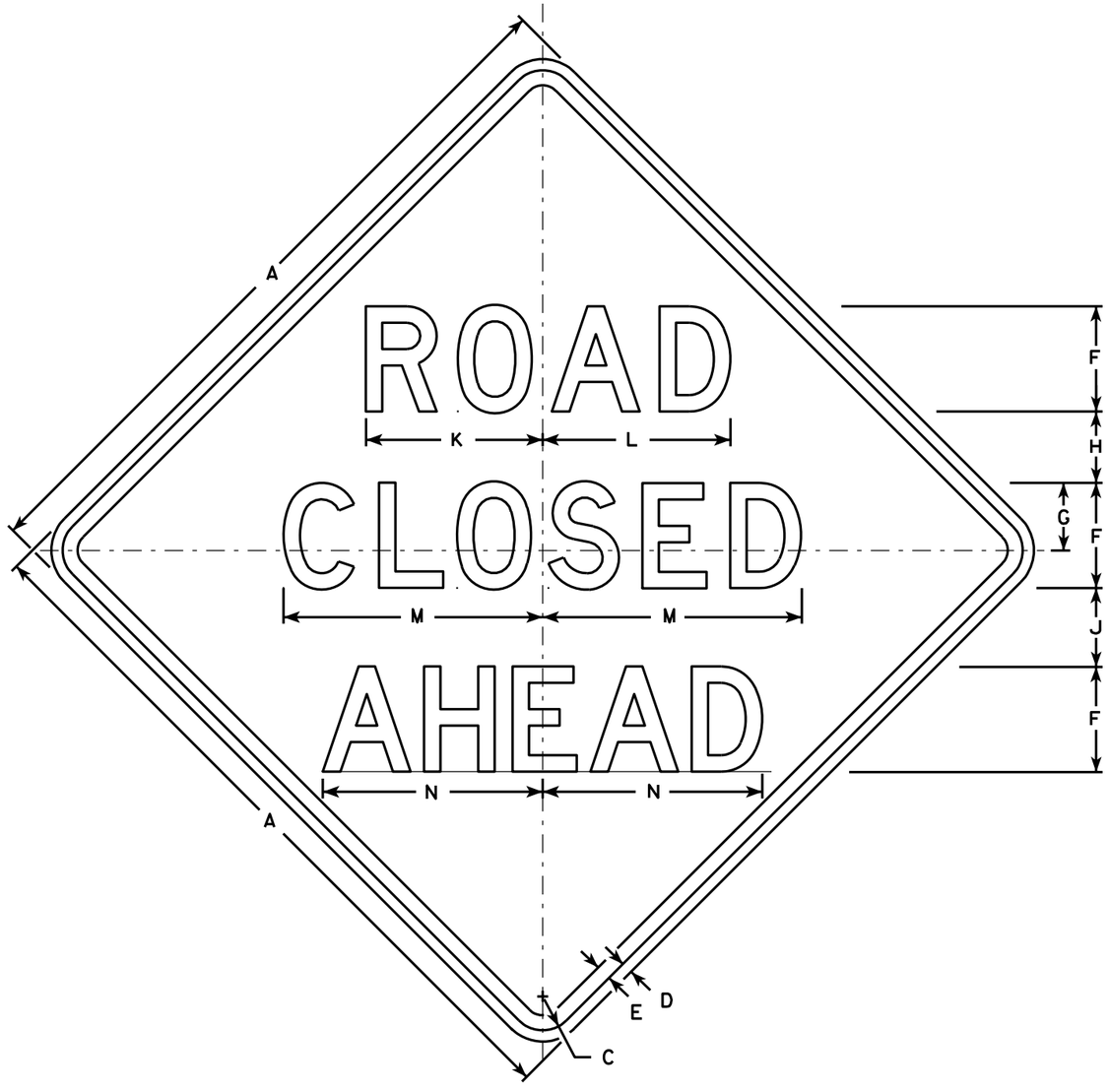
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

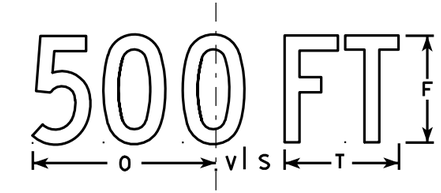
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

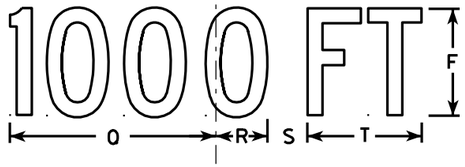
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 697	E



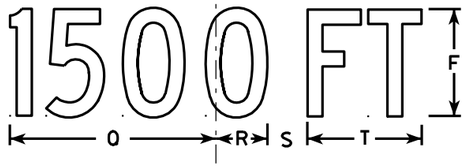
W20-3A



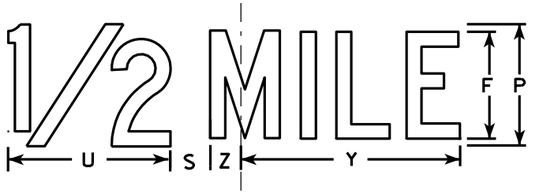
W20-3D



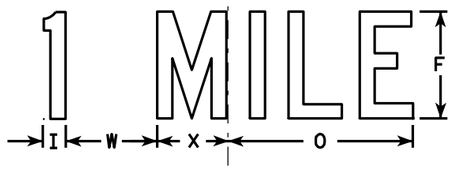
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

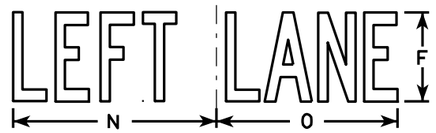
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

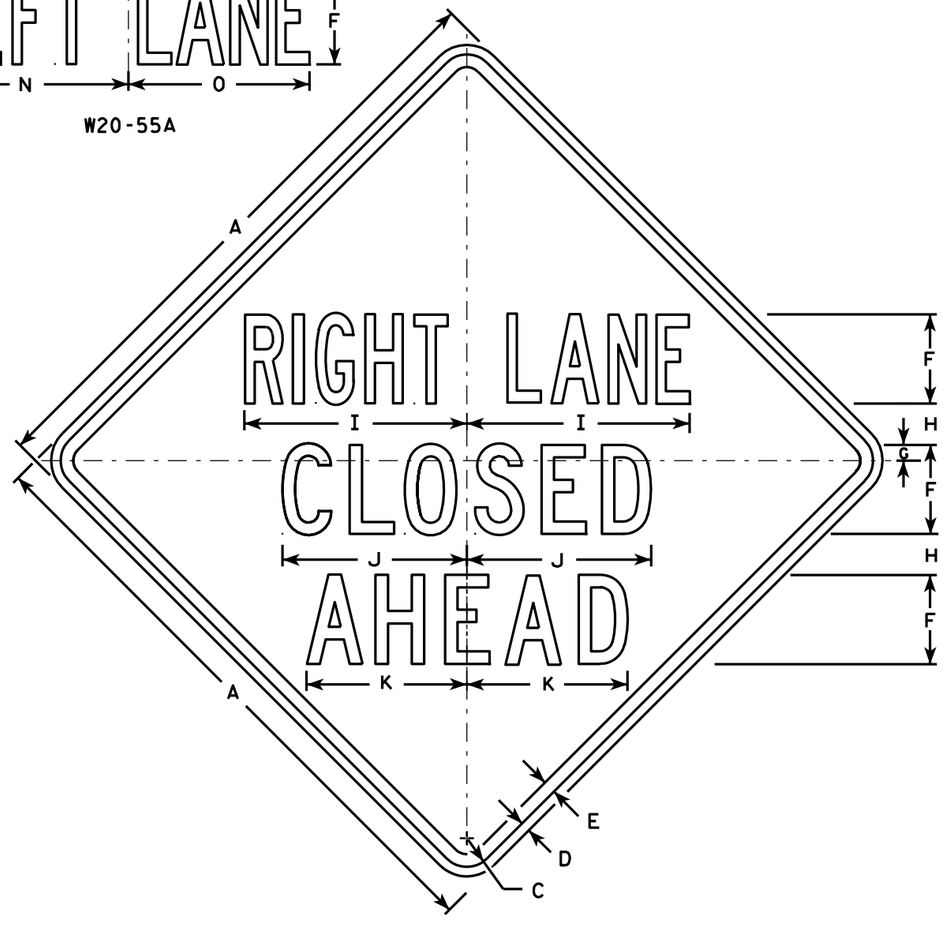
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 698 | E



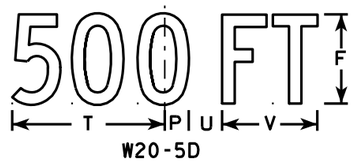
W20-56A



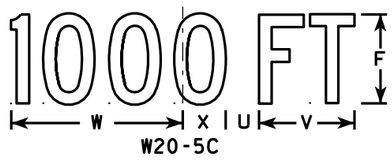
W20-55A



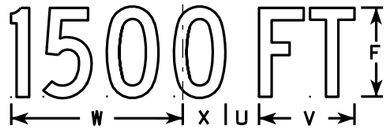
W20-5A



W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

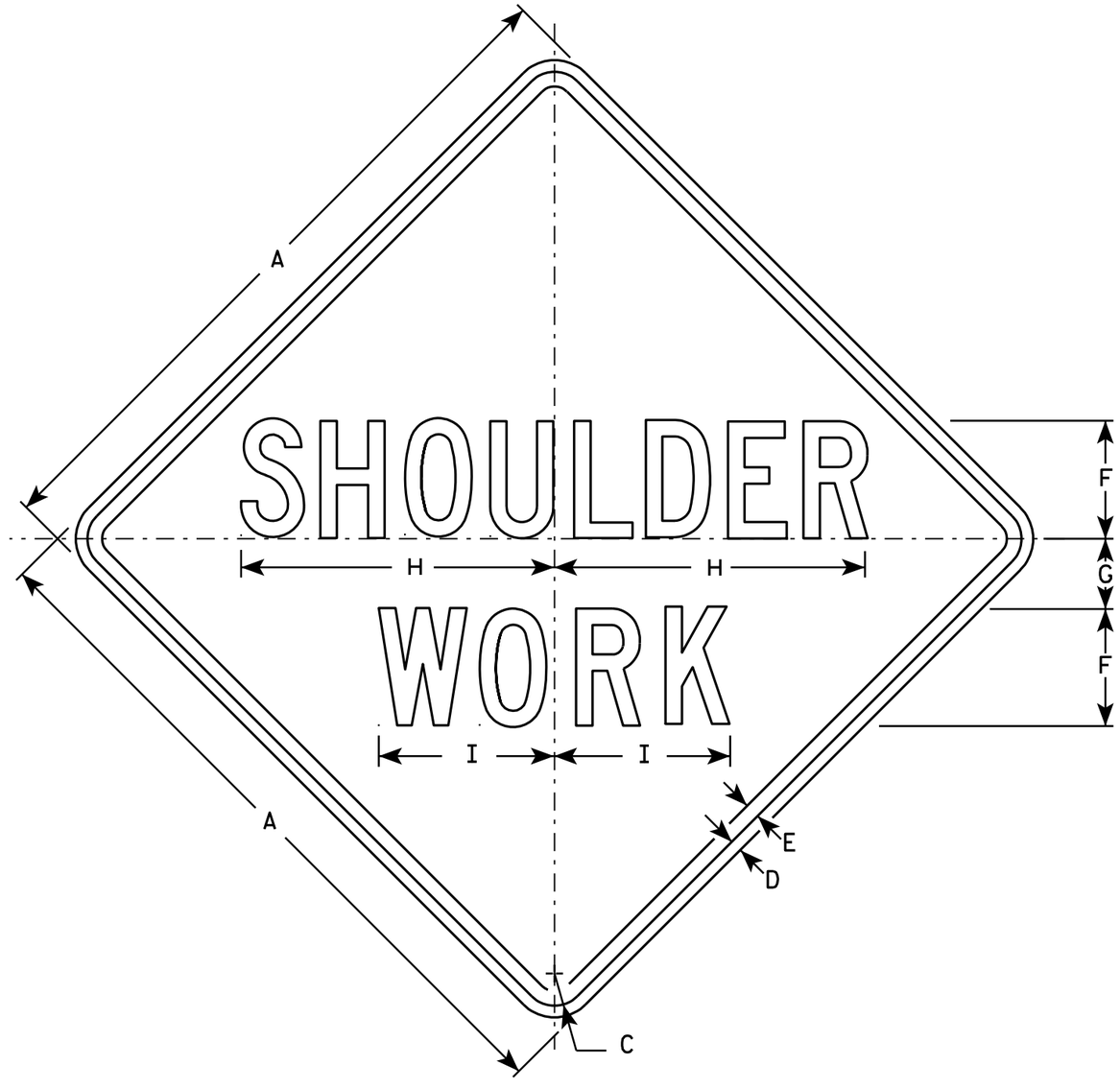
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 699 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W21-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

STANDARD SIGN
W21-5

WISCONSIN DEPT OF TRANSPORTATION

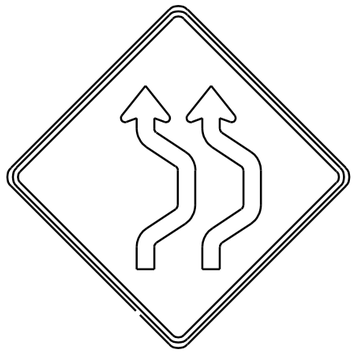
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5.5

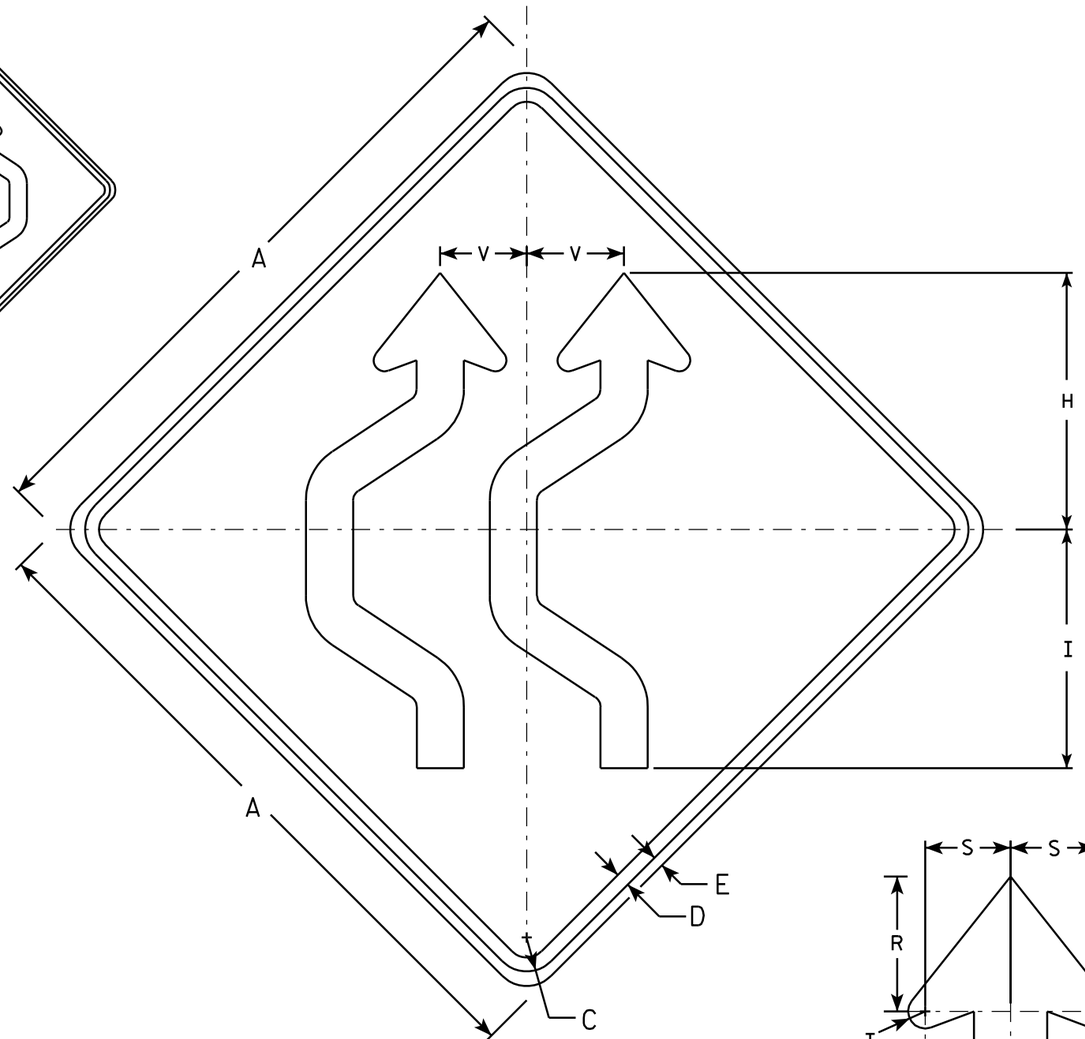
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 700	E

7

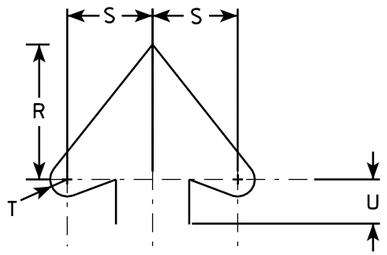
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W215.DGN PLOT DATE : 21-MAR-2011 08:01 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.207338:1.000000



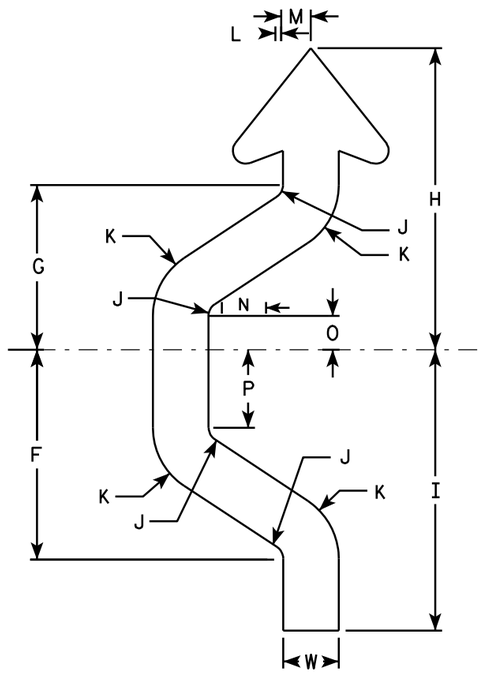
W24-1AR



W24-1AL



Arrowhead Detail



Arrow Detail

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W24-1R is the same as W24-1L except reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	5/8	1/2	9 1/2	7 1/2	13 3/4	12 3/4	5/8	3 1/8	3/8	1 5/8	2 3/8	1 1/2	3 1/2		4 5/8	3	5/8	1 1/2	4 3/4	2 1/2				9
2S	48		2 1/4	1	3/4	12 7/8	10 1/8	18 1/2	17 1/4	7/8	4 1/4	3/8	2 1/8	3 1/4	2	4 3/4		6 1/4	4	3/4	2 1/8	6 1/4	3 3/8				16
2M	48		2 1/4	1	3/4	12 7/8	10 1/8	18 1/2	17 1/4	7/8	4 1/4	3/8	2 1/8	3 1/4	2	4 3/4		6 1/4	4	3/4	2 1/8	6 1/4	3 3/8				16
3	48		2 1/4	1	3/4	12 7/8	10 1/8	18 1/2	17 1/4	7/8	4 1/4	3/8	2 1/8	3 1/4	2	4 3/4		6 1/4	4	3/4	2 1/8	6 1/4	3 3/8				16
4	48		2 1/4	1	3/4	12 7/8	10 1/8	18 1/2	17 1/4	7/8	4 1/4	3/8	2 1/8	3 1/4	2	4 3/4		6 1/4	4	3/4	2 1/8	6 1/4	3 3/8				16
5	48		2 1/4	1	3/4	12 7/8	10 1/8	18 1/2	17 1/4	7/8	4 1/4	3/8	2 1/8	3 1/4	2	4 3/4		6 1/4	4	3/4	2 1/8	6 1/4	3 3/8				16

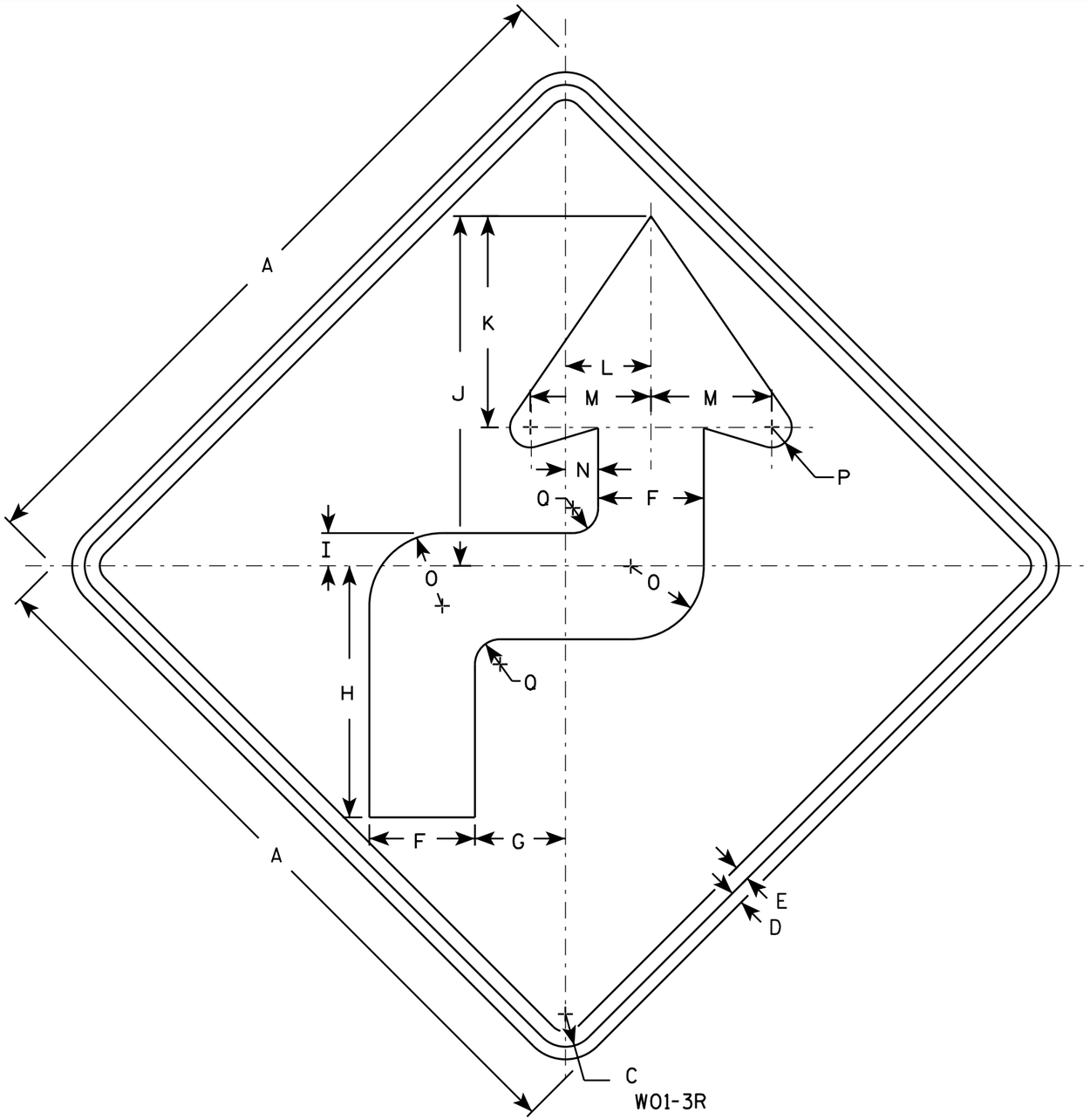
STANDARD SIGN
W24-1AL

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W24-1AL.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 701 | E



W01-3R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-3L is the same as W01-3R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2S	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
2M	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
3	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
4	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
5	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

STANDARD SIGN
W01-3

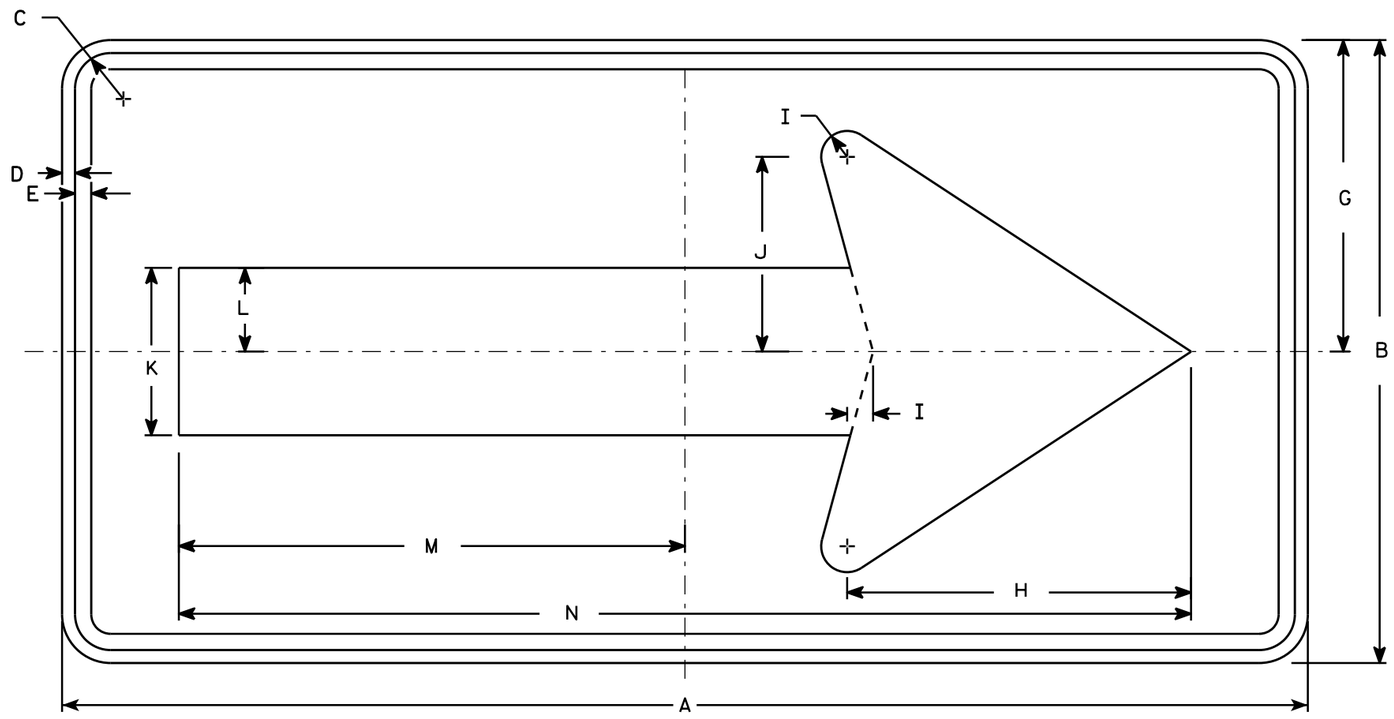
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-3.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W013.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.567217:1.000000 WISDOT/CADDS SHEET 42



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

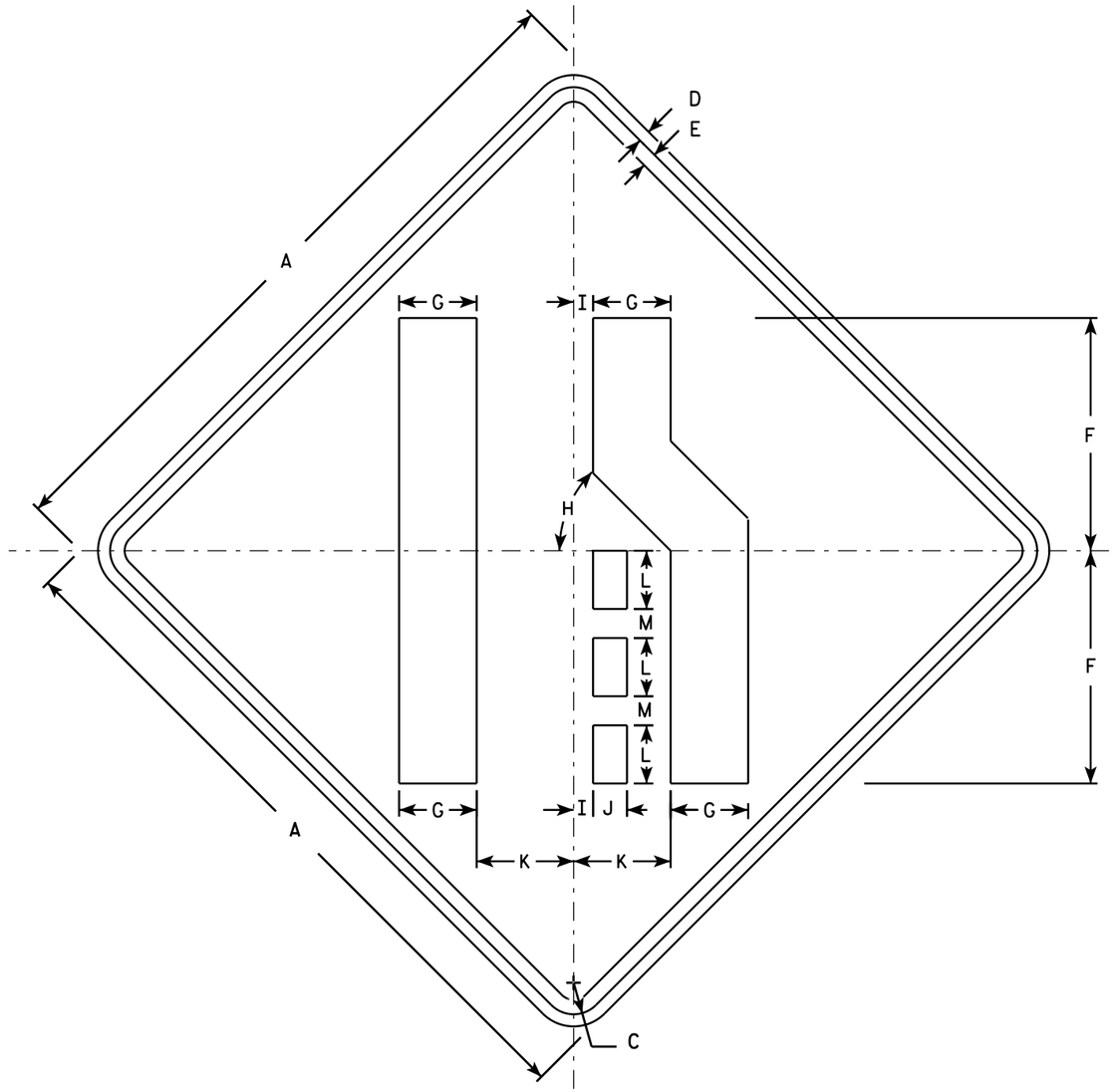
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

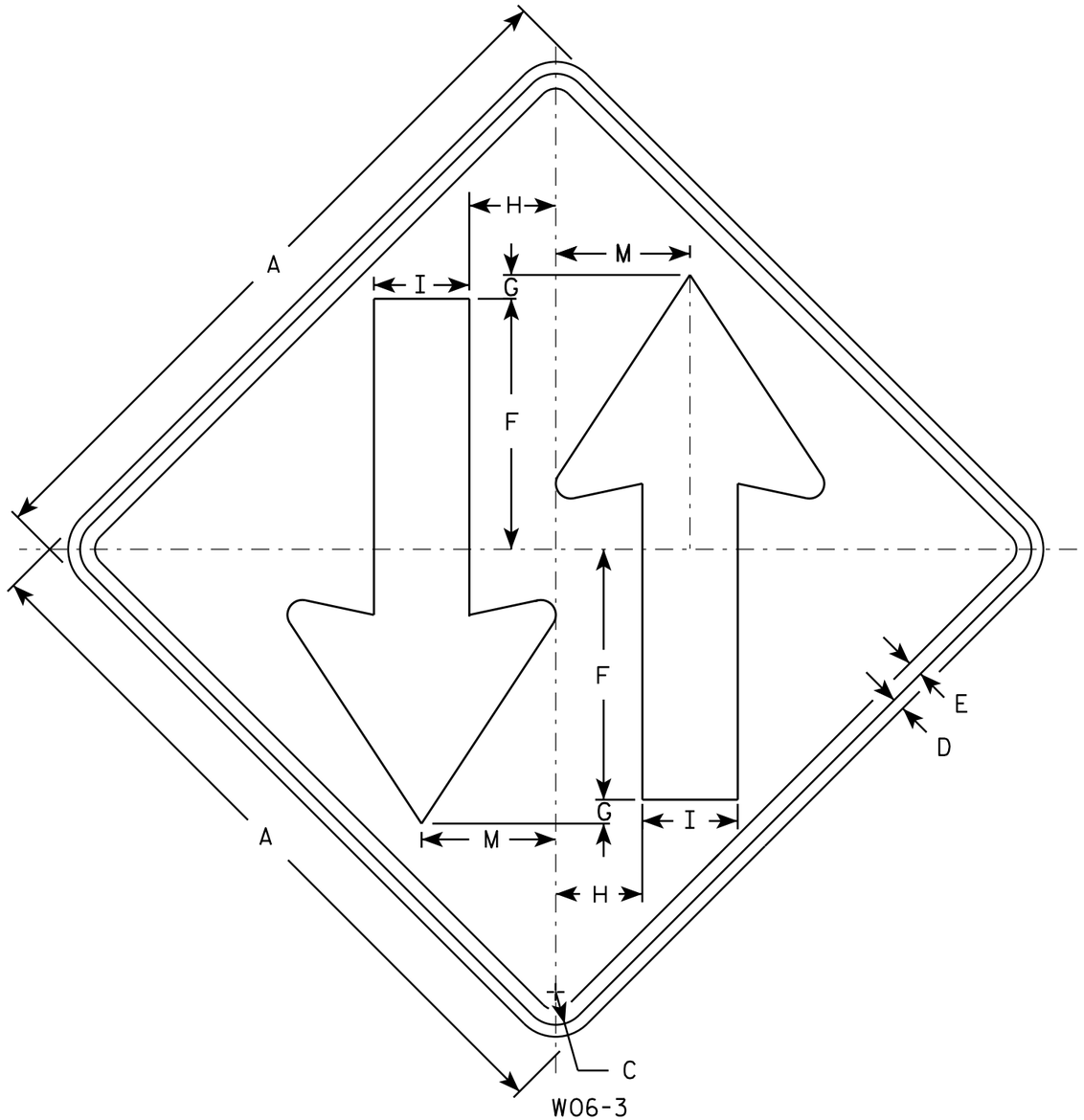
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 704 W04-2.1

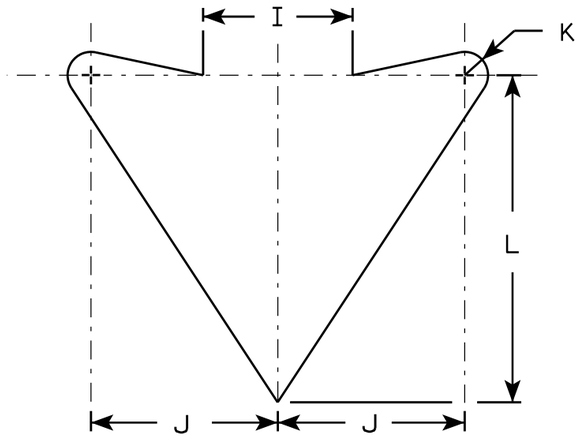
PROJECT NO: | SHEET NO: E



W06-3

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2S	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
2M	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
3	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
4	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

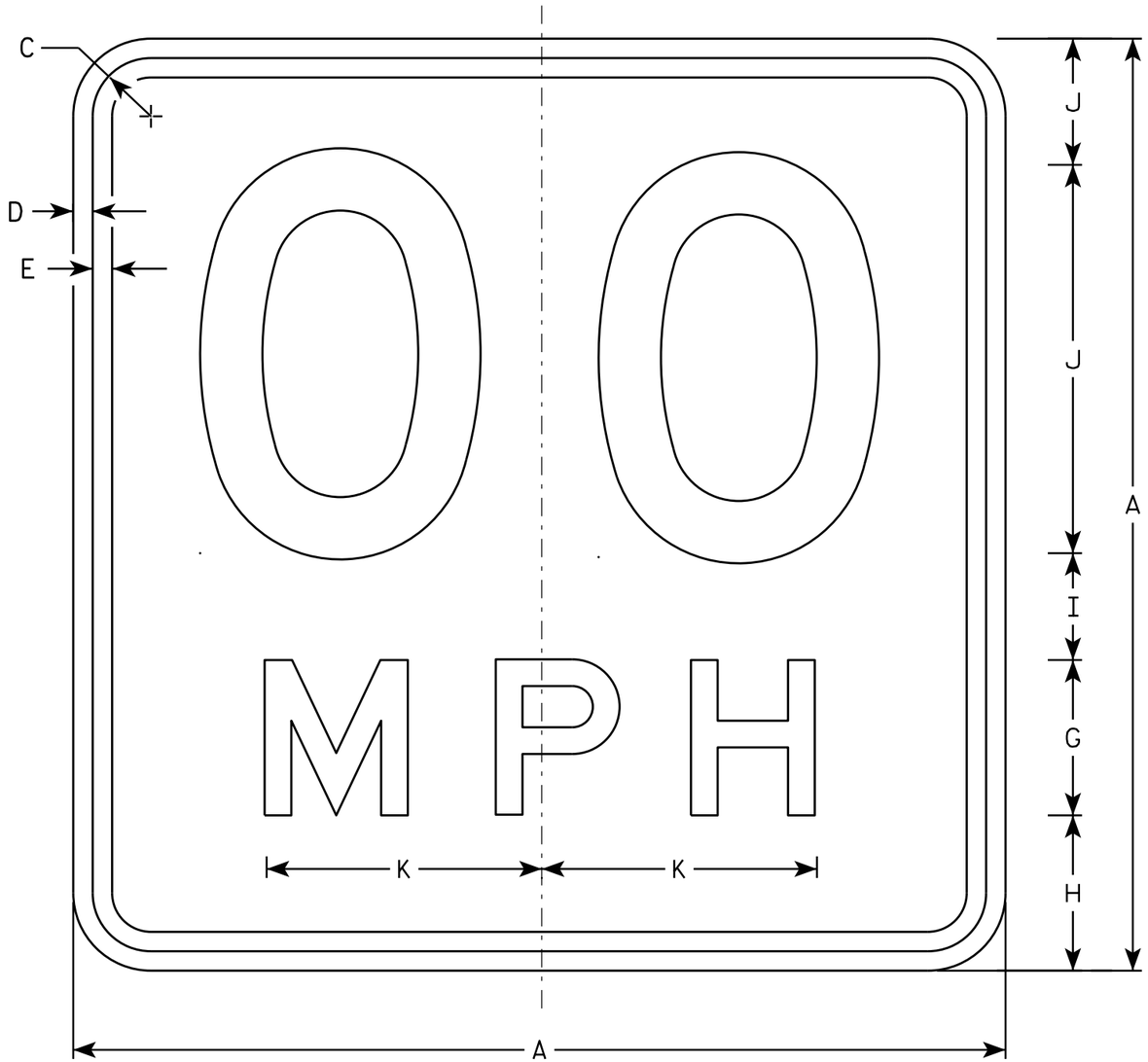
STANDARD SIGN
W06-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 705 W06-3.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

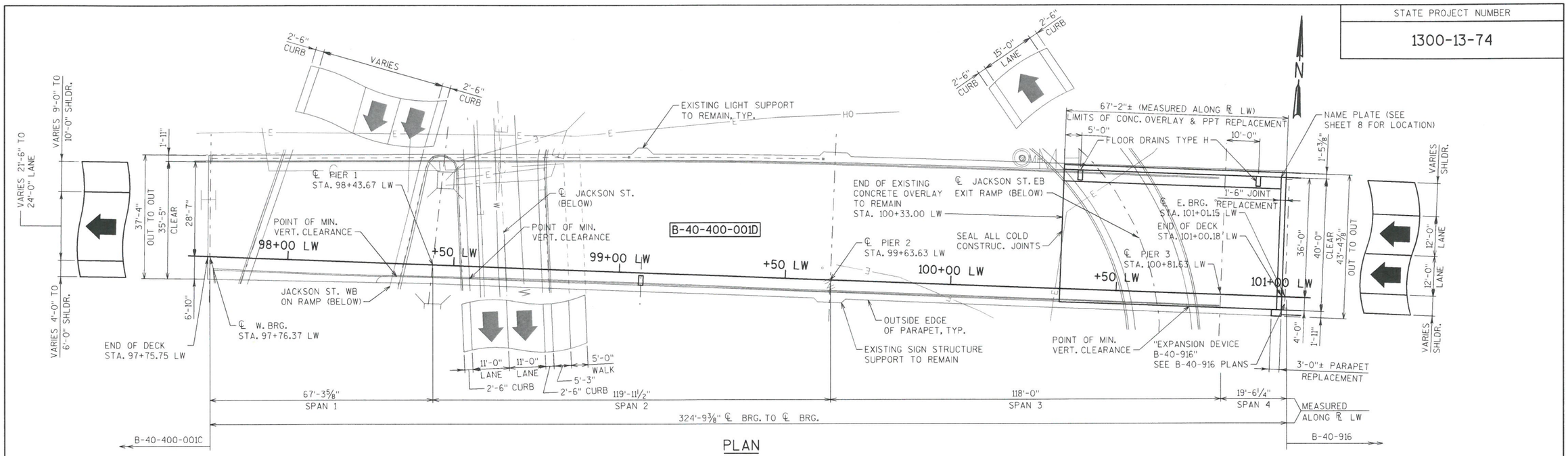
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 706 W013-1.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

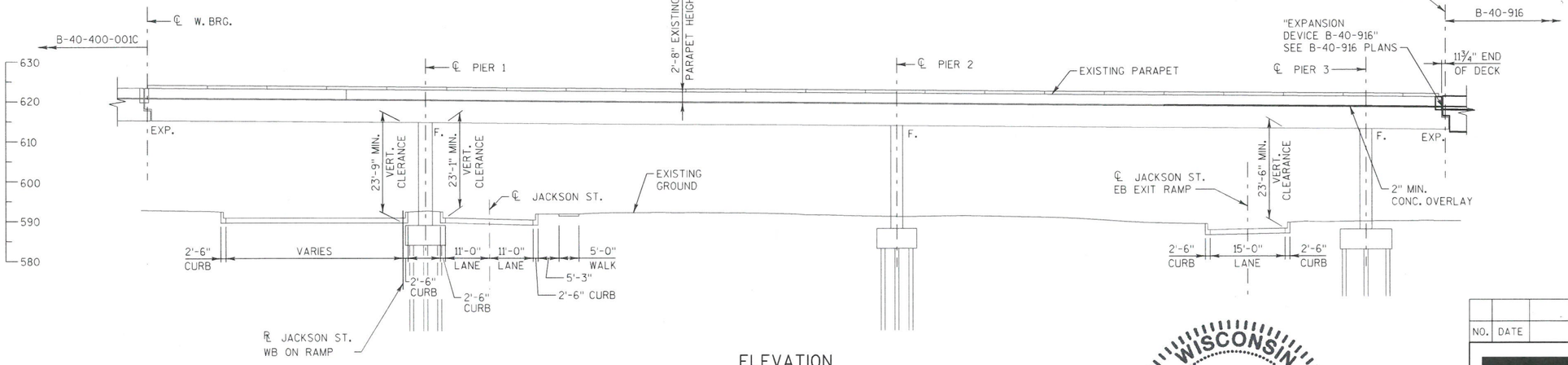
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W0131.DGN PLOT DATE : 02-DEC-2013 13:55 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.794391:1.000000
WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER
1300-13-74



PLAN

4-SPAN POST-TENSIONED CONC. BOX
PARTIAL CONC. OVERLAY



ELEVATION

(LOOKING NORTH)

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES AND QUANTITIES
3. TYPICAL SECTION
4. REMOVAL DETAILS
5. THERMOGRAPHIC INVESTIGATION
6. SUPERSTRUCTURE DETAILS 1
7. SUPERSTRUCTURE DETAILS 2
8. SINGLE SLOPED PARAPET 42SS
9. SINGLE SLOPED PARAPET 32SS MODIFIED
10. FLOOR DRAIN TYPE H
11. DOWNSPOUT DETAILS
12. DRAINAGE MODIFICATIONS
13. TUBULAR RAILING TYPE H (ALUM) MODIFIED

WISCONSIN
CHAD D. HALVERSON
E-34364
MADISON, WI
PROFESSIONAL ENGINEER
5/20/15

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
CHAD HALVERSON (608) 821-8700

NO.	DATE	REVISION	BY

Baker
MICHAEL BAKER JR., INC
7633 GANSER WAY, SUITE 206
MADISON, WI 53719

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/04/15
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-400-1D

RAMP LAKE FRWY-IH 794 WB OVER N. JACKSON ST.

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MSC	ABP	MMW	LMK

GENERAL PLAN

SHEET 1 OF 13

707

8

8

IP_PWP:d0330713\080101_gp.dgn 26-MAY-2015 12:01

STATE PROJECT NUMBER
1300-13-74

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE EXISTING STRUCTURE, B-40-400-001D IS A 4 SPAN CONCRETE MULTICELL BOX BRIDGE WITH AN AVERAGE CLEAR WIDTH OF 37'-9" AND A DECK LENGTH OF 324'-5". THE EASTERN 67'± OF THE BRIDGE DECK IS TO BE PREPARED FOR A NEW VARIABLE DEPTH CONCRETE OVERLAY. THE NORTH PARAPET AND OVERHANG ARE TO BE REPLACED. THE EAST END OF DECK AND S. PARAPET TO BE REMOVED FOR A NEW EXP. JOINT.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR OF 1975.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT.

CLEAN AND FILL EXISTING LONGITUDINAL AND TRANSVERSE CRACKS IN THE OVERLAY PORTION OF THE DECK WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER. SEALED CRACKS IN DECK PRIOR TO CONCRETE OVERLAY TO BE PAID FOR UNDER BID ITEM "CRACK SEALING EPOXY".

"PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED TO THE ENTIRE CONCRETE DECK OVERLAY. "PIGMENTED PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED TO THE TOP AND ROADWAY FACES OF THE PARAPETS REPLACED.

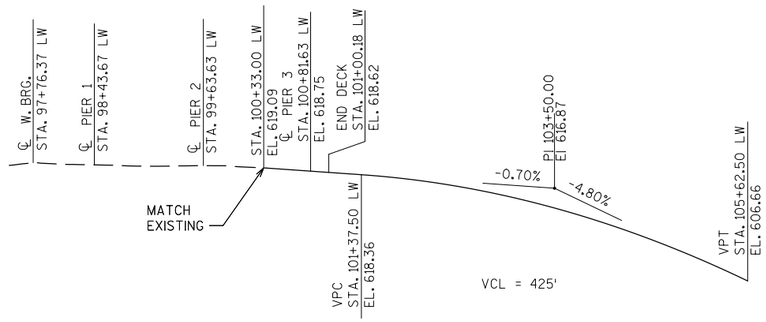
A MINIMUM OF ½" OF CONCRETE SHALL BE REMOVED FROM THE OVERLAY PORTION OF THE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

EXERCISE CAUTION WHILE PERFORMING ANY CONCRETE REPAIR IN A POST-TENSIONED REGION TO AVOID DAMAGE TO THE POST-TENSIONING STRANDS OR ANCHORAGES. SEE ORIGINAL PLANS DATED 1970 FOR POST-TENSIONING INFORMATION.

"CONCRETE MASONRY BRIDGES" SHALL BE USED FOR PARAPETS, DECK AND OVERHANG AND END OF DECK BLOCK AT EXPANSION DEVICE. ALL OTHER CONCRETE ITEMS SHALL BE PAID UNDER BID ITEM "CONCRETE MASONRY OVERLAY DECKS UNIT B-40-400-1D."

PERFORM "PREPARATION DECKS TYPE 1," "PREPARATION DECKS TYPE 2," AND "FULL-DEPTH DECK REPAIR" AS DIRECTED BY THE FIELD ENGINEER. QUANTITIES SHOWN ON THE PLANS ARE APPROXIMATE.

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-916." THE BID ITEM IS INCLUDED WITH THE B-40-916 PLANS.



PROFILE GRADE LINE
IH 794 ENTRANCE RAMP (LW)

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS-20
INVENTORY RATING: HS-21
OPERATING RATING: HS-35
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 220 KIPS

ULTIMATE DESIGN STRESSES:
CONCRETE MASONRY BRIDGES
SUPERSTRUCTURE.....f'c = 4,000 P.S.I.
CONCRETE MASONRY OVERLAY DECKS.....f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT
HIGH STRENGTH, GRADE 60.....fy = 60,000 P.S.I.

TRAFFIC DATA

IH 794 WB ON-RAMP
A.D.T. = 10,700 (2016)
A.D.T. = 14,600 (2036)
RDS = 30 MPH

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
226	201+09.70 LE	50.07' LT	BERNTSEN FENO MONUMENT WITH ALUMINUM CAP	589.61

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	SUPER.	TOTAL
203.0200.2001	REMOVING OLD STRUCTURE STATION 100+66 LW	LS	1	1
203.0210.S.2001	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-400-1D	LS	1	1
203.0225.S.2003	DEBRIS CONTAINMENT STRUCTURE B-40-400-1D	LS	1	1
502.0100	CONCRETE MASONRY BRIDGES	CY	26	26
502.0717.S	CRACK SEALING EPOXY	LF	10	10
502.3200	PROTECTIVE SURFACE TREATMENT	SY	299	299
502.3210.S	PIGMENTED PROTECTIVE SURFACE TREATMENT	SY	34	34
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	5,110	5,110
509.0301	PREPARATION DECKS TYPE 1	SY	40	40
509.0302	PREPARATION DECKS TYPE 2	SY	16	16
509.0500	CLEANING DECKS	SY	269	269
509.1000	JOINT REPAIR	SY	7	7
509.2000	FULL-DEPTH DECK REPAIR	SY	1	1
509.9010.S.2001	REMOVING ASPHALTIC CONCRETE DECK OVERLAY B-40-400-1D	SY	299	299
514.0460	FLOOR DRAINS TYPE H	EACH	2	2
514.2625	DOWNSPOUT 6-INCH	LF	70	70
SPV.0035.2001	CONCRETE MASONRY OVERLAY DECKS UNIT B-40-400-1D	CY	40	40
SPV.0105.2001	RAILING TUBULAR TYPE H MODIFIED B-40-400-1D	LS	1	1
	NON-BID ITEMS			
	FILLER	SIZE		½ " & ¾ "
	BRIDGE SEAT PROTECTION			

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

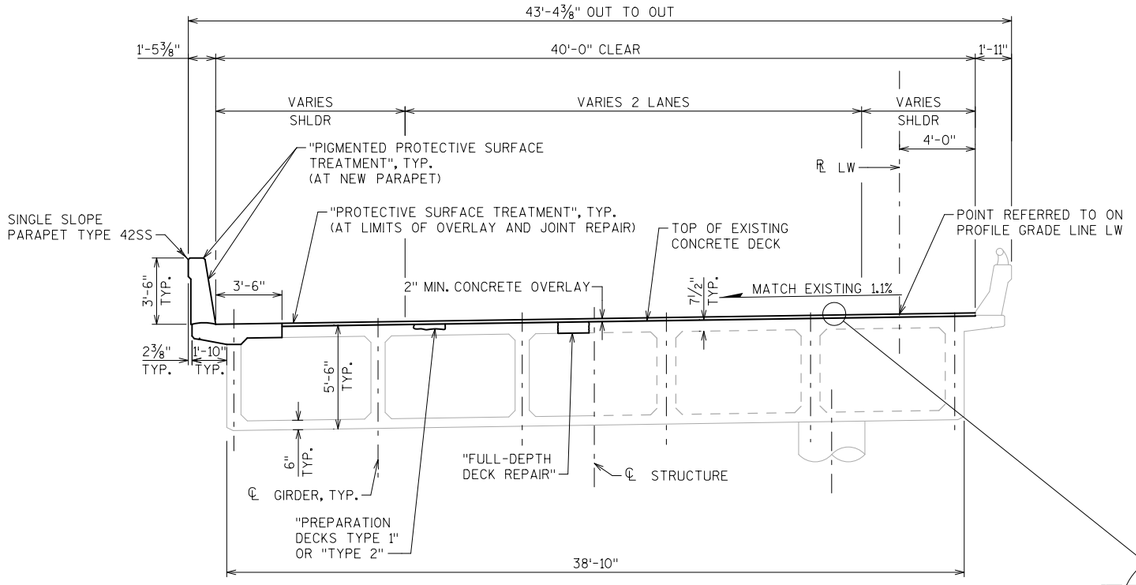
STRUCTURE B-40-400-1D

DRAWN BY ABP | PLANS CK'D. LMK

GENERAL NOTES AND QUANTITIES

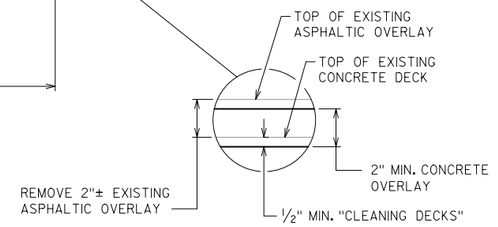
SHEET 2 OF 13
708

STATE PROJECT NUMBER
1300-13-74



TYPICAL SECTION

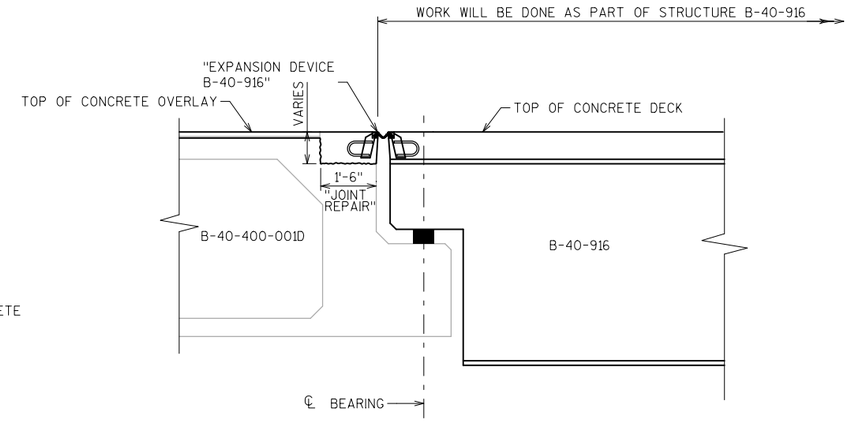
(STATION 100+33.00 LW)
(LOOKING EAST)



SUPERELEVATION TABLE

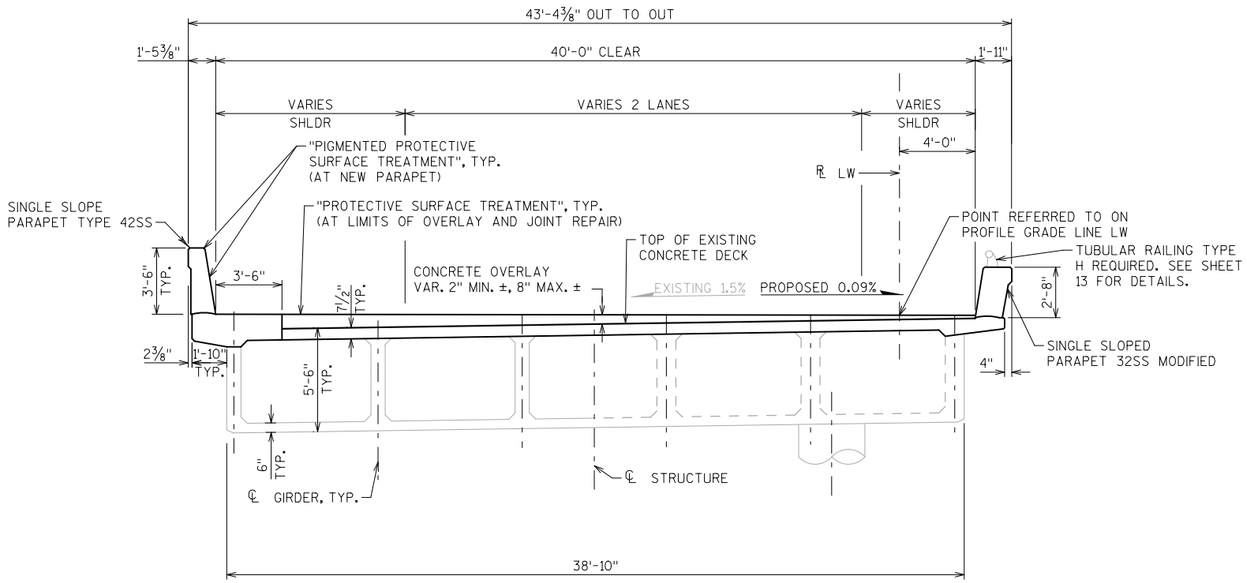
LOCATION	EXISTING CROSS SLOPE (%)	PROPOSED CROSS SLOPE (%)
STA. 100+33.00 LW	-1.1	-1.1
STA. 101+00.18 LW	-1.5	+0.09

1. ALL CROSS SLOPES ARE ±.
2. NEGATIVE VALUE INDICATES A SLOPE DOWNWARD TO THE NORTH.
3. POSITIVE VALUE INDICATES A SLOPE DOWNWARD TO THE SOUTH.



AT EAST EXPANSION JOINT

(LOOKING NORTH)



TYPICAL SECTION

(STATION 101+00.18 LW)
(LOOKING EAST)

NOTES

"PREPARATION DECKS TYPE 1", "PREPARATION DECKS TYPE 2", "FULL-DEPTH DECK REPAIR", LOCATIONS TO BE DETERMINED BY ENGINEER IN THE FIELD.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-1D

DRAWN BY MMW | PLANS CK'D. LMK

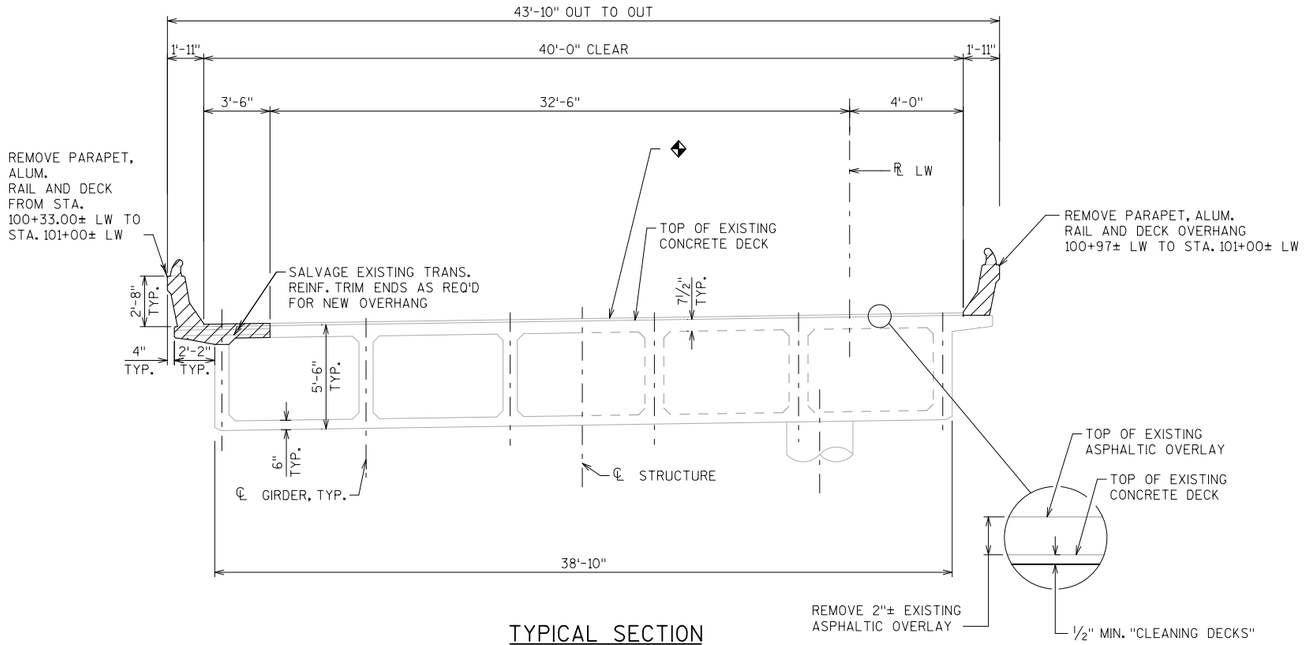
TYPICAL SECTION

SHEET 3 OF 13
709

IP_PWP:d0330713\080103_xs.dgn 26-MAY-2015 12:02

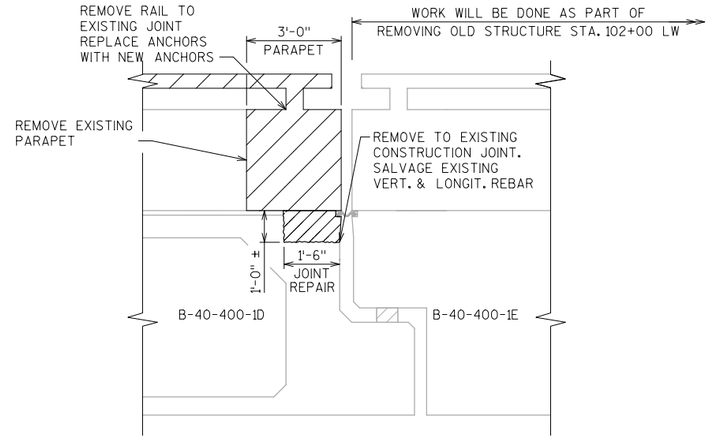
STATE PROJECT NUMBER

1300-13-74



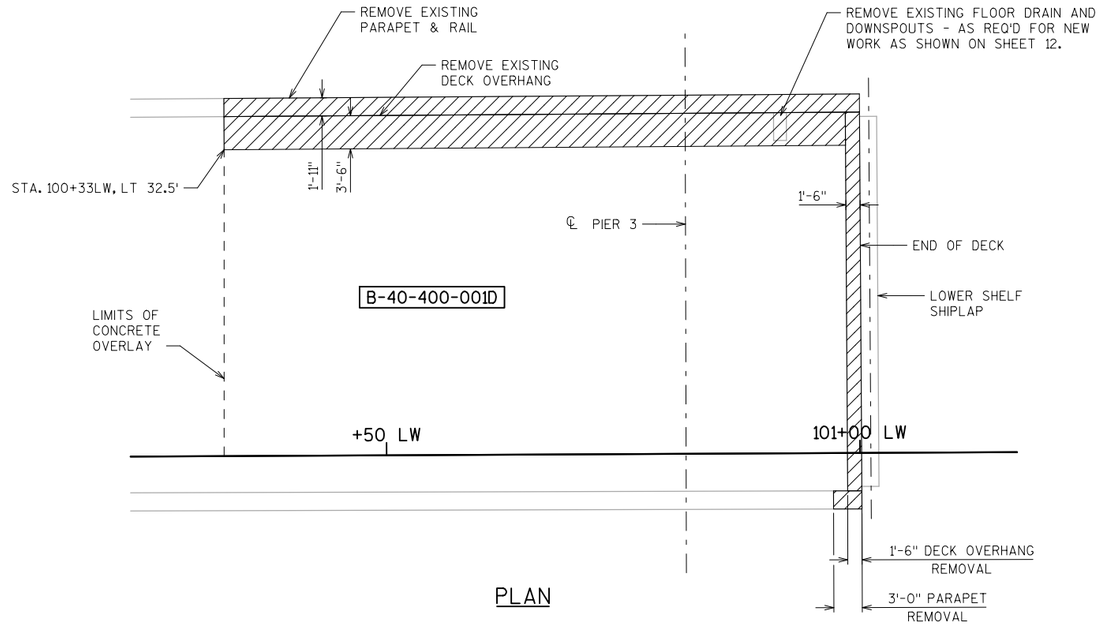
TYPICAL SECTION

(STA. 100+33.00 LW TO 101+00.18 LW)
(LOOKING EAST)

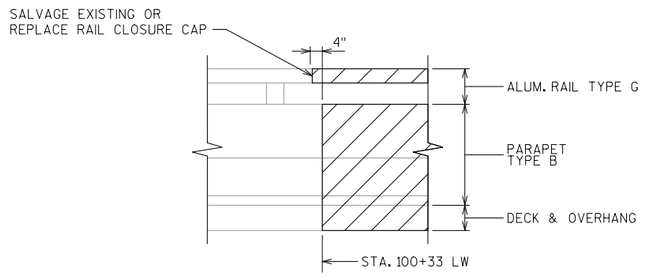


AT EAST EXPANSION JOINT

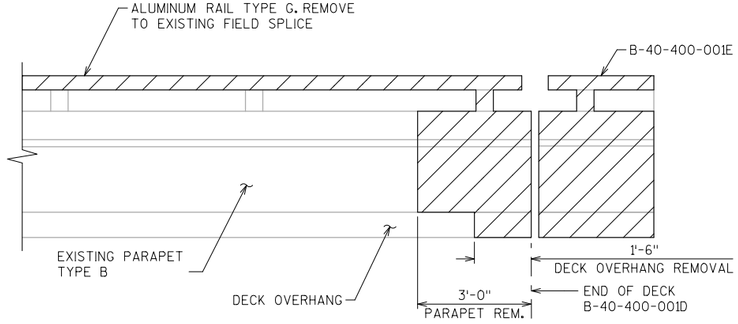
(LOOKING NORTH)



PLAN



NORTH PARAPET INSIDE ELEVATION



SOUTH PARAPET OUTSIDE ELEVATION

LEGEND

REMOVE EXISTING 2" ± ASPHALTIC CONCRETE OVERLAY AND SHEET MEMBRANE TO SOUND CONCRETE.

CONCRETE REMOVAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-1D

DRAWN BY MMW | PLANS CK'D. LMK

REMOVAL DETAILS

SHEET 4 OF 13

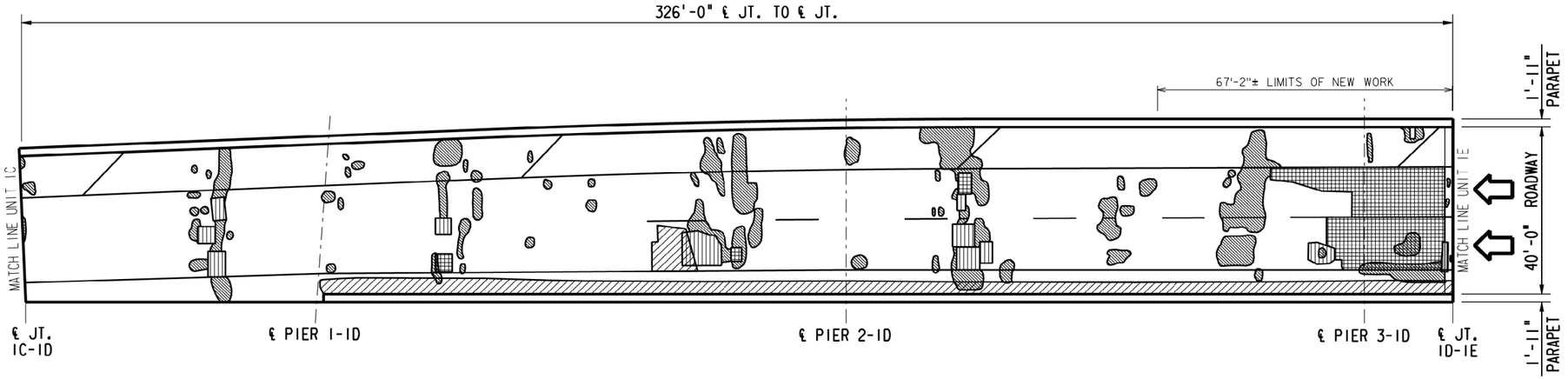
710

8

8

IP_PWP:d0330713\080104_re.dgn 26-MAY-2015 12:03

STATE PROJECT NUMBER
1300-13-74



PLAN

DECK INSPECTION RESULTS



FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-40-400-1D	
ITEM	UNIT	QUANT.	%
TOTAL AREA	ft^2	12290	
SHADE/DEBRIS	ft^2	908	
DELAMINATION	ft^2	1121	9.8
SPALL	ft^2	0	0
DEBOND	ft^2	0	0
ASPHALT PATCH	ft^2	700	6.2
CONCRETE PATCH	ft^2	254	2.2

LEGEND

DELAMINATION
SPALL
DEBOND
ASPHALT PATCH
CONCRETE PATCH
SHADE/DEBRIS

SCALE 0' 5' 15' 30'

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATES: 10/29/12 & 11/2/12

NOTES

THIS SHEET IS FOR INFORMATION ONLY.

INFRARED THERMOGRAPHIC DECK INSPECTION RESULTS REPORTED BY AECOM ON 12/12/2012.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-1D

DRAWN BY ABP | PLANS CK'D. LMK

THERMOGRAPHIC INVESTIGATION

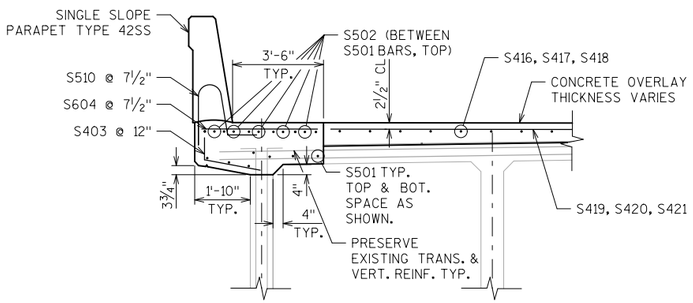
SHEET 5 OF 13
711

8

8

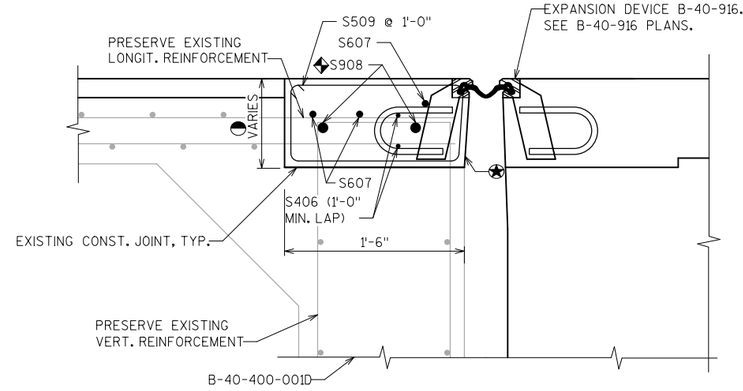
IP_PWP:d0330713\080105_ti.dgn 26-MAY-2015 12:03

STATE PROJECT NUMBER
1300-13-74



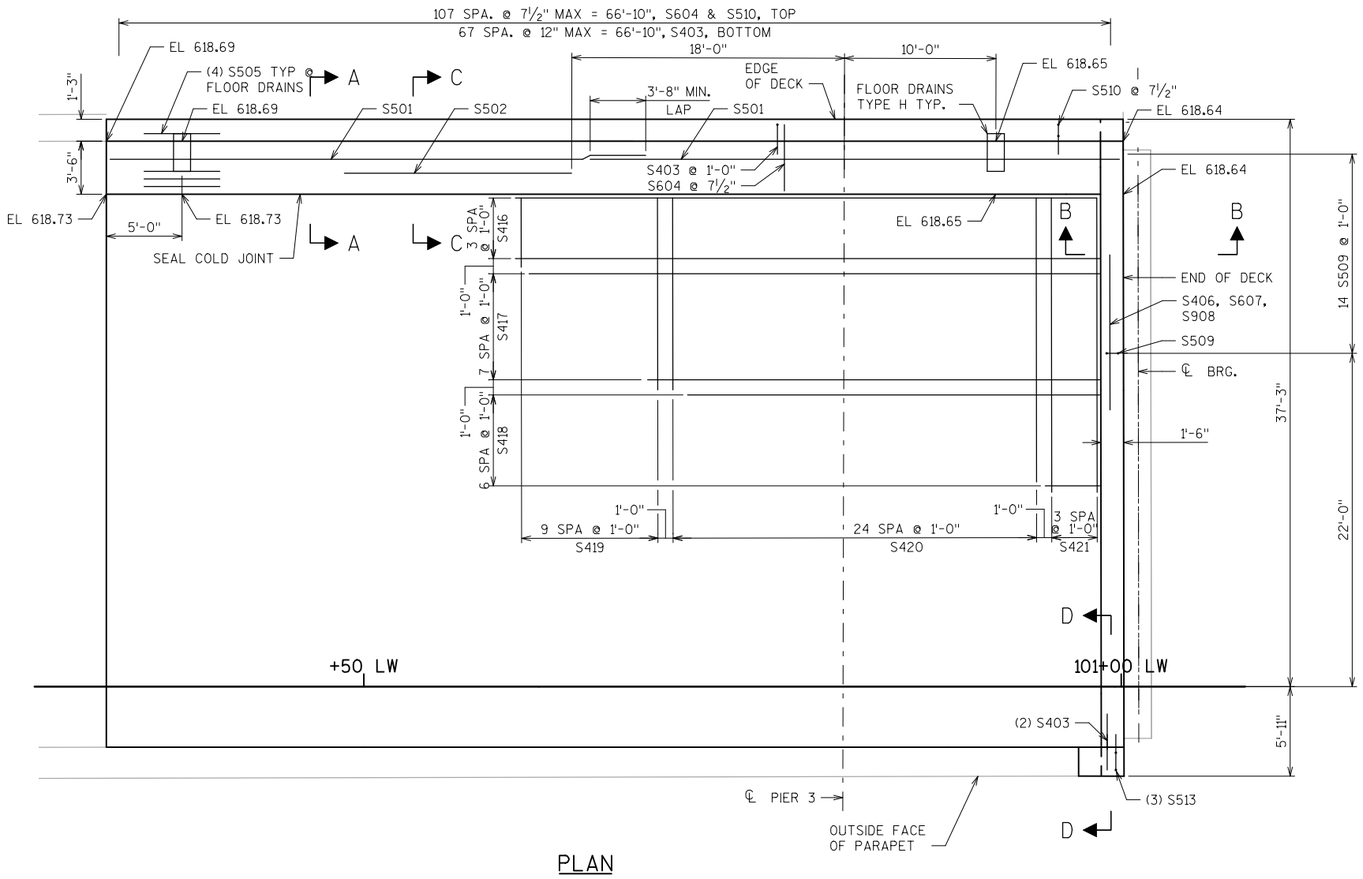
SECTION A-A

(NORTH PARAPET AND OVERHANG)



SECTION B-B

NORMAL TO ℄ JOINT



PLAN

NOTES

SEE SHEET 8 FOR SECTION C-C
SEE SHEET 9 FOR SECTION D-D

LEGEND

- CONCRETE DEPTH REMOVAL AT JOINT LOCATIONS TO MATCH DEPTH OF BLOCK-OUT FROM ORIGINAL CONSTRUCTION. DO NOT REMOVE ANY CONCRETE BEYOND THE ORIGINAL CONSTRUCTION BLOCK-OUT LIMITS.
- TAPER CONCRETE TO MATCH SPECIFIED JOINT OPENING.
- CONTRACTOR MAY USE SHORTER BARS WITH APPROVAL OF THE FIELD ENGINEER. USE MIN. LAP 3'-9" FOR #9 BARS. BARS SHALL BE PAID FOR USING THE LENGTHS PROVIDED IN BILL OF BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-1D

DRAWN BY MMW | PLANS CK'D. LMK

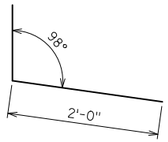
SUPERSTRUCTURE DETAILS 1

SHEET 6 OF 13
712

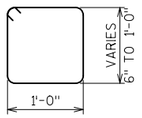
8

8

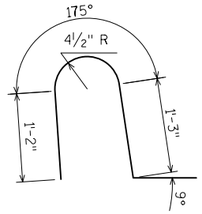
STATE PROJECT NUMBER
1300-13-74



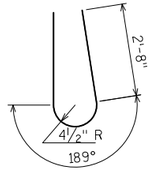
S403



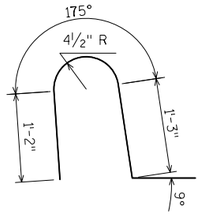
S509



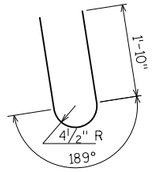
S510



S511



S513



S514

BILL OF BARS

TOTAL COATED = 5,110 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
S501	26	35'-3"	X			DECK OVERHANG - LONGIT
S502	5	15'-0"	X			DECK OVERHANG - LONGIT - TOP
S403	70	2'-11"	X	X		DECK OVERHANG - TRANS - BOTTOM
S604	108	4'-5"	X			DECK OVERHANG - TRANS - TOP
S505	8	5'-0"	X			DECK OVERHANG - FLOOR DRAINS
S406	10	9'-0"	X			EXP. DEVICE - LONGIT
S607	3	42'-6"	X			END OF DECK - TRANS.
S908	2	38'-6"	X			END OF DECK - TRANS.
S509	14	4'-1"	X	X	X	END OF DECK - VERT.
S510	108	4'-5"	X	X		NORTH PARAPET - DOWELS
S511	108	6'-8"	X	X		NORTH PARAPET - VERT.
S512	16	34'-4"	X			NORTH PARAPET - HORIZ.
S513	3	4'-5"	X	X		SOUTH PARAPET - DOWELS
S514	6	5'-0"	X	X		SOUTH PARAPET - VERT.
S515	6	2'-8"	X			SOUTH PARAPET - HORIZ.
S416	4	38'-4"	X			OVERLAY - LONGIT.
S417	8	33'-3"	X		X	OVERLAY - LONGIT.
S418	7	15'-0"	X		X	OVERLAY - LONGIT.
S419	10	8'-3"	X		X	OVERLAY - TRANS.
S420	25	15'-8"	X		X	OVERLAY - TRANS.
S421	4	19'-0"	X			OVERLAY - TRANS.

NOTE: LENGTH SHOWN FOR ANY BAR IN A BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
S509	1 SERIES OF 14	3'-7" TO 4'-7"
S417	1 SERIES OF 8	29'-0" TO 37'-6"
S418	1 SERIES OF 7	3'-0" TO 27'-0"
S419	1 SERIES OF 10	4'-6" TO 12'-0"
S420	1 SERIES OF 25	12'-8" TO 18'-8"

LEGEND

◆ CONTRACTOR MAY USE SHORTER BARS WITH APPROVAL OF THE FIELD ENGINEER. USE MIN. LAP 3'-9" FOR #9 BARS. BARS SHALL BE PAID FOR USING THE LENGTHS PROVIDED IN BILL OF BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-1D

DRAWN BY MMW | PLANS CK'D. LMK

SUPERSTRUCTURE DETAILS 2

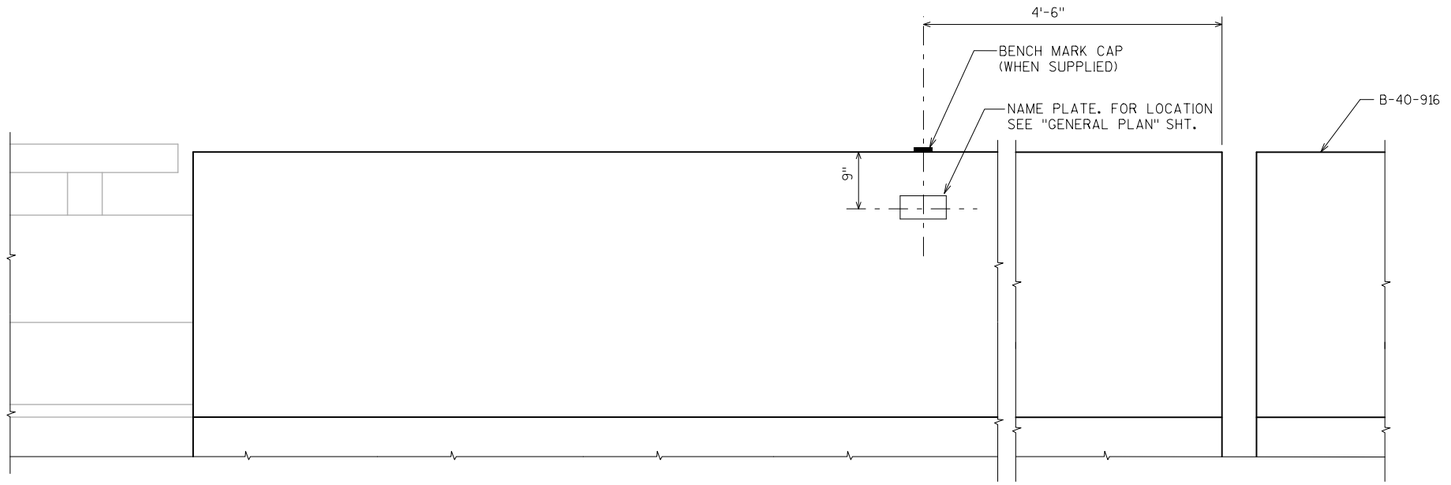
SHEET 7 OF 13
713

8

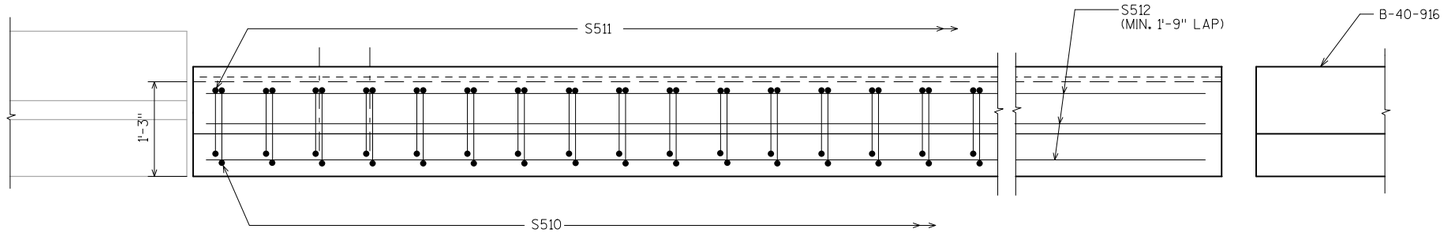
8

STATE PROJECT NUMBER

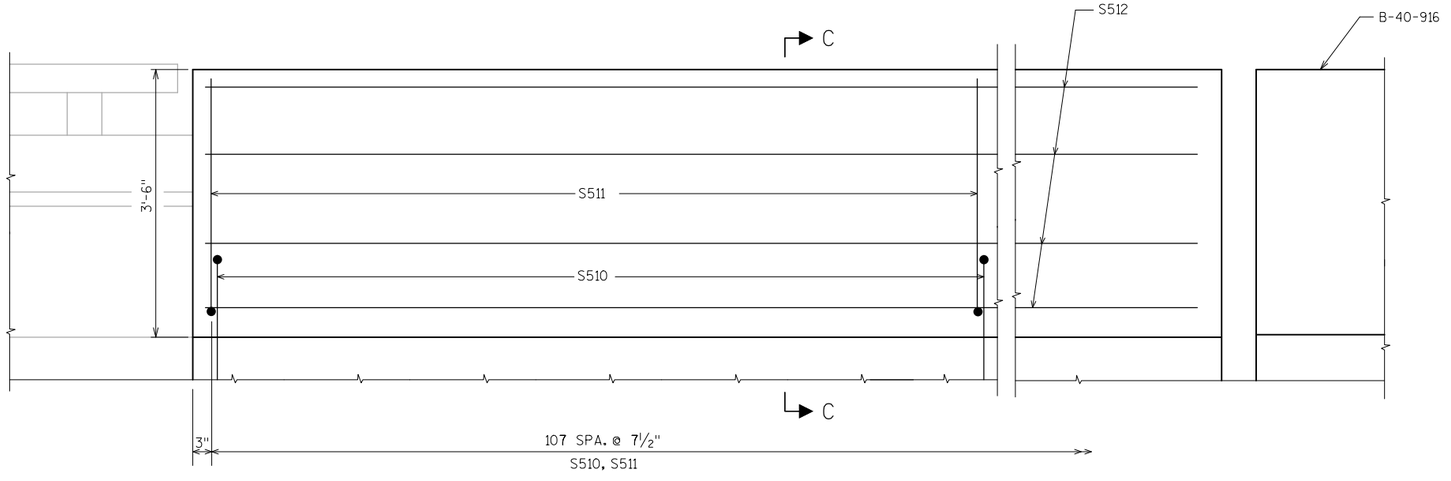
1300-13-74



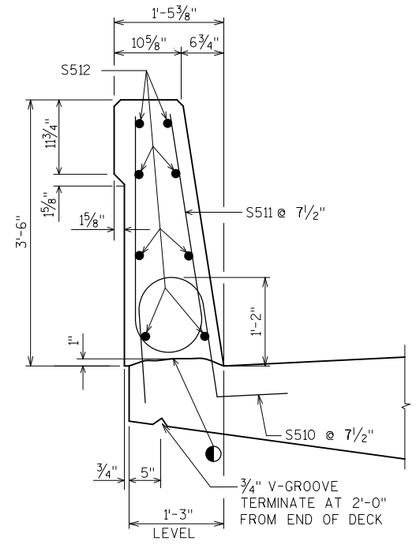
INSIDE ELEVATION



PLAN



INSIDE ELEVATION
(NORTH PARAPET)



SECTION C

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-1D

DRAWN BY MMW | PLANS CK'D. LMK

SINGLE SLOPED PARAPET 42SS

SHEET 8 OF 13
714

8

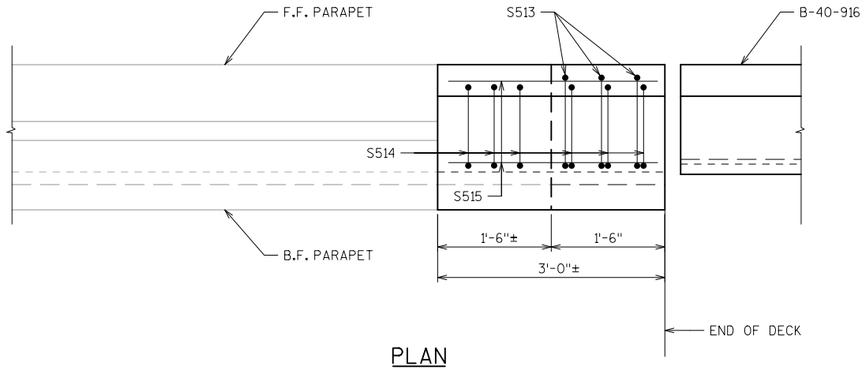
8

1 2 3 5

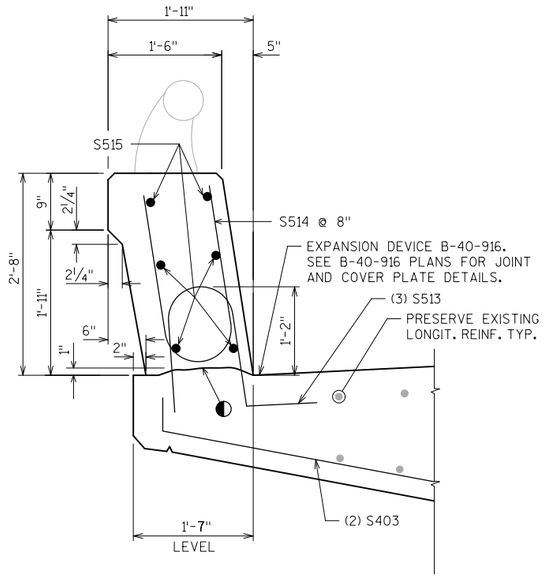
IP_PWP:d0330713\080108_pp2.dgn 26-MAY-2015 12:04

STATE PROJECT NUMBER

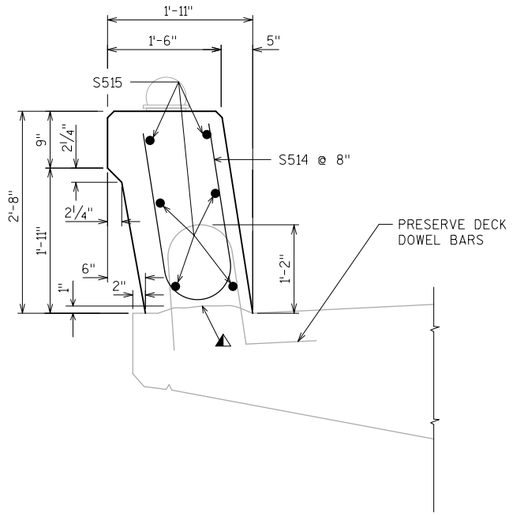
1300-13-74



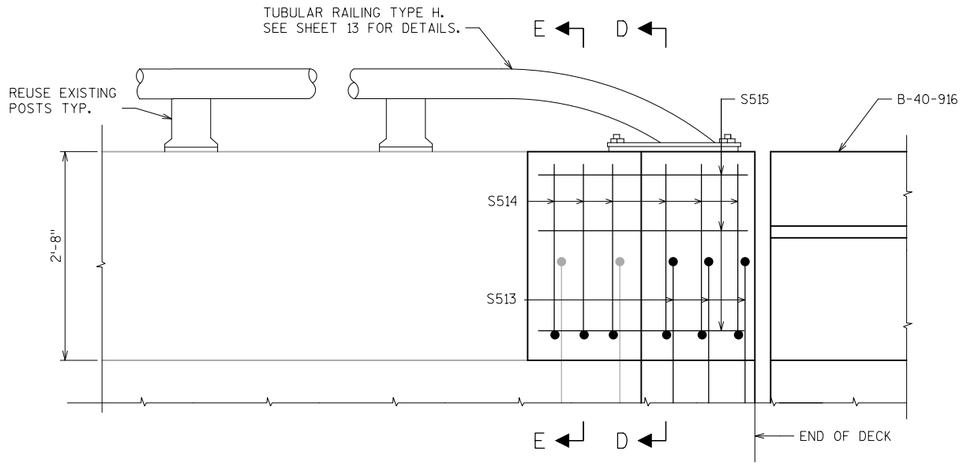
PLAN



SECTION D-D



SECTION E-E



OUTSIDE ELEVATION

(SOUTH PARAPET)

LEGEND

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◭ CLEAN EXISTING CONST. JOINT PRIOR TO PLACING NEW PARAPET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-1D

DRAWN BY MMW | PLANS CK'D. LMK

SINGLE SLOPED PARAPET 32SS MODIFIED

SHEET 9 OF 13

715

8

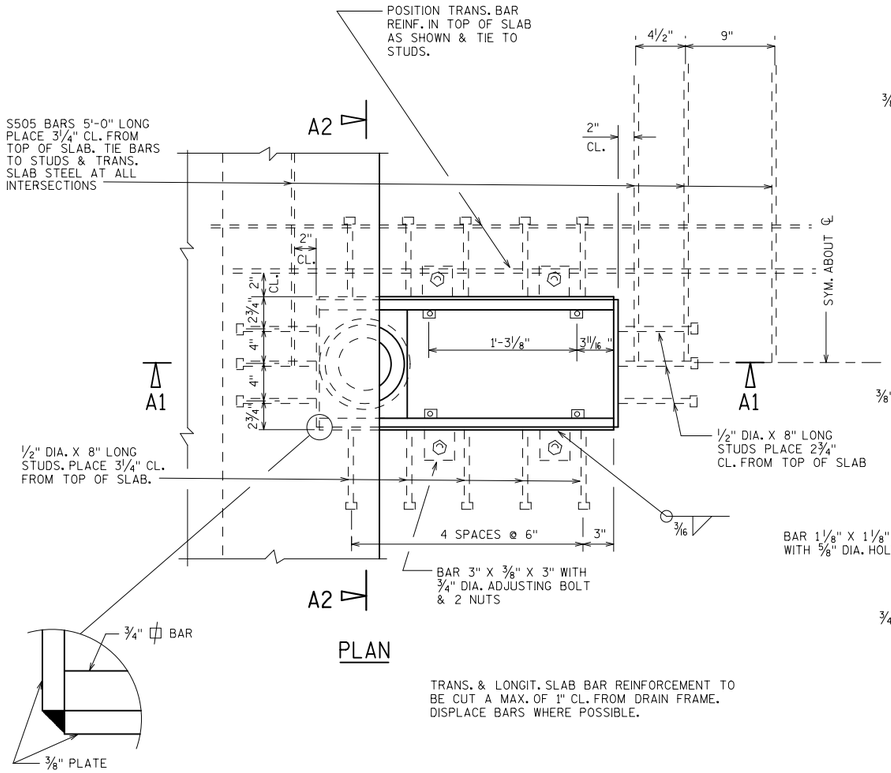
8

1 2 3 5

IP_PWP:d0330713\080109_pp.dan.DGN 26-MAY-2015 12:04

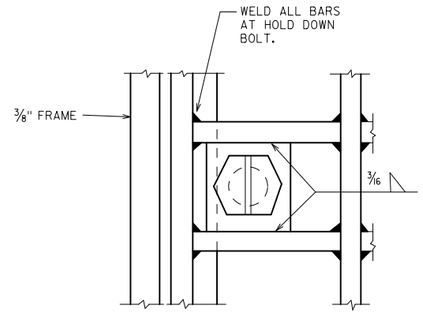
STATE PROJECT NUMBER

1300-13-74

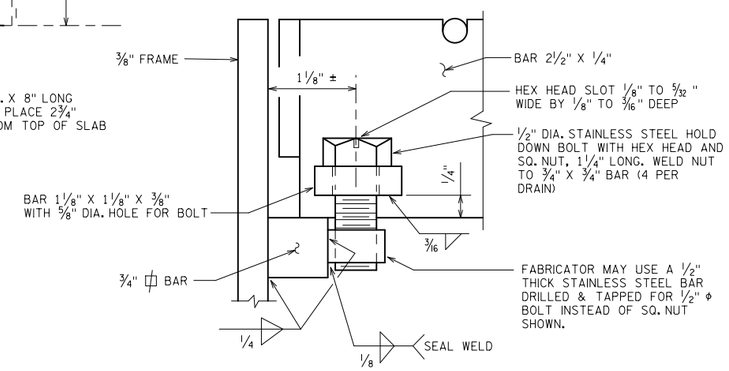


PLAN

TRANS. & LONGIT. SLAB BAR REINFORCEMENT TO BE CUT A MAX. OF 1" CL. FROM DRAIN FRAME. DISPLACE BARS WHERE POSSIBLE.



PART PLAN



SECTION AT HOLD DOWN BOLT

GENERAL NOTES

ALL DRAIN MATERIAL INCLUDING GRATE, EXCLUDING PIPE & GRATE HOLD DOWN BOLTS, SHALL BE ASTM A36 STEEL.

MATERIAL FOR BRACKETS SHALL CONFORM TO ASTM A36.

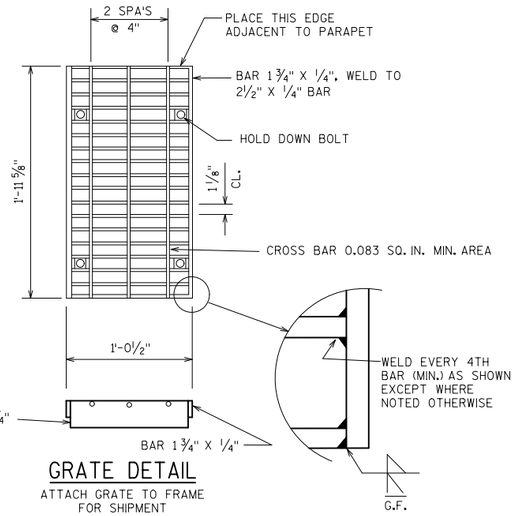
THE CONTRACTOR MAY PROPOSE AN ALTERNATE TYPE OF BRACKET. THE PROPOSED ALTERNATE DETAILS SHALL BE SUBMITTED AND SUBJECT TO THE APPROVAL OF THE ENGINEER.

ALL STEEL SHALL BE GALVANIZED. WELDS SHALL BE MADE WITH LOW HYDROGEN ELECTRODES.

SEAL WELD INSIDE OF DRAIN.

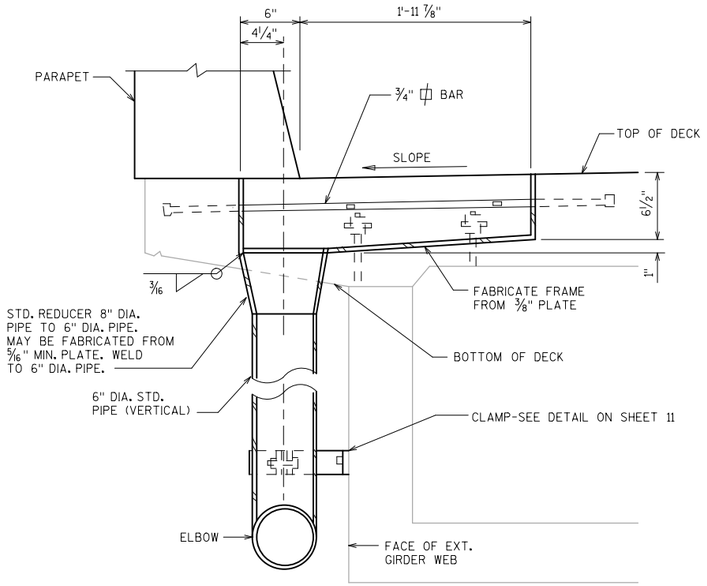
FLANGED 6" DIA. FIBERGLASS PIPE CONFORMING TO ASTM D2996, GRADE 1, CLASS A, MAY BE USED AS AN ALTERNATE TO GALVANIZED STANDARD PIPE CONFORMING TO ASTM A53.

PRIOR TO GALVANIZING A NO. 6 BLAST CLEANING IS REQ'D.

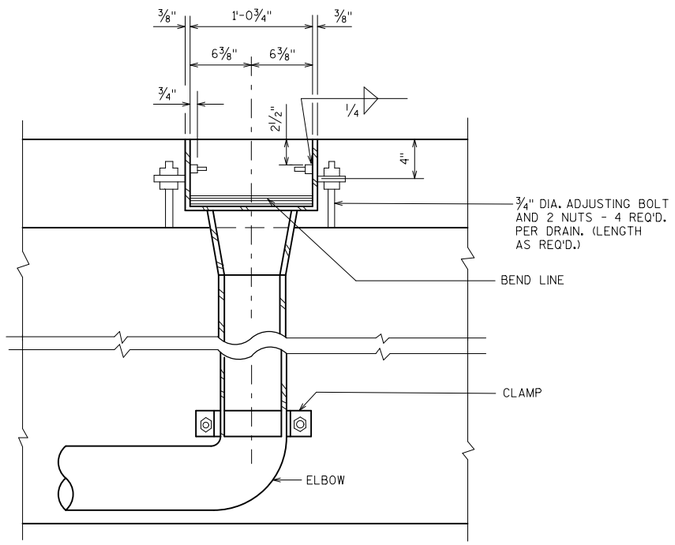


GRATE DETAIL

ATTACH GRATE TO FRAME FOR SHIPMENT



SECTION A1



SECTION A2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-1D

DRAWN BY MMW | PLANS CK'D. LMK

FLOOR DRAIN TYPE H

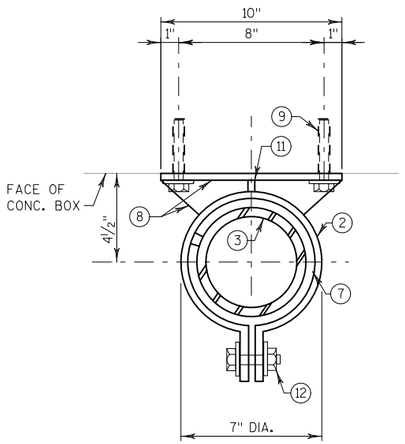
SHEET 10 OF 13

716

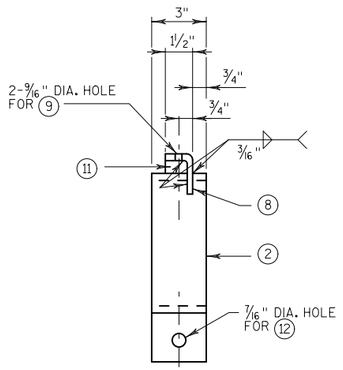
8

8

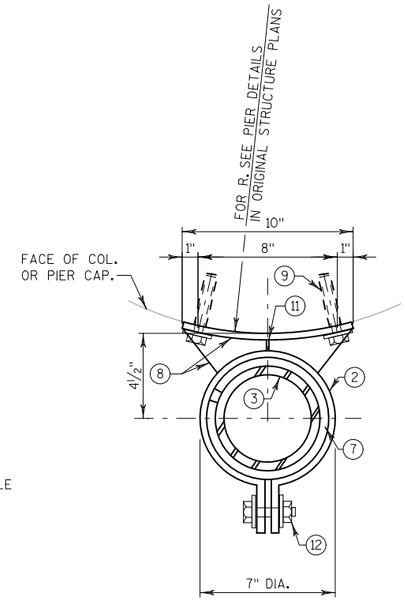
STATE PROJECT NUMBER
1300-13-74



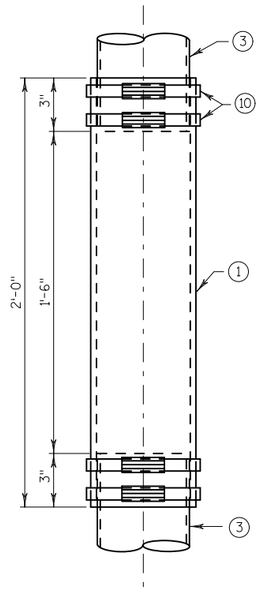
PIPE CLAMP DETAILS
(FLAT SURFACE)



PIPE CLAMP SIDE ELEVATION



PIPE CLAMP DETAILS
(ROUND SURFACE)



FLEXIBLE CONNECTION

NOTES

PIPE CLAMPS, HANGERS, PIPE COUPLINGS, CLEANOUTS, FLEXIBLE CONNECTIONS AND MISC. ITEMS ARE INCLUDED IN BID ITEM "DOWNSPOUT 6-INCH".

TIGHTEN CLAMPS TO A TIGHT SLIP FIT (FOR THERMAL EXPANSION).

ALL ELBOWS TO BE LONG RADIUS TYPE.

A CLAMP OF EQUAL STRENGTH MAY BE USED AS AN ALTERNATE.

RTRP DOWNSPOUT TO BE SUPPORTED AT 8'-0" MAX. SPACING USING THE APPROPRIATE PIPE CLAMPS, APPLICABLE TO FLAT AND CURVED SURFACES, AND HANGERS.

INSTALL CLEAN-OUTS AT ELBOWS AS DIRECTED IN DRAINAGE MODIFICATION SHEET(S).

DRAIN WORK TO BE COMPLETED AS DIRECTED BY THE FIELD ENGINEER.

LEGEND

(1) FLEXIBLE RUBBER HOSE, MIN. ⅜" THICK WALL. I.D. TO SUIT DOWNSPOUT.

(2) 10 GAUGE STAINLESS STEEL CLAMP GRADE 304.

(3) NEW 6" DIA. DOWNSPOUT PIPING SHALL BE REINFORCED, THERMOSETTING RESIN PIPING (RTRP) CONFORMING TO ASTM D2996 AND 2310.

(4) 10 GAUGE GALV. STEEL SADDLE.

(5) ⅝" STAINLESS STEEL THREADED ROD (GRADE 304) WITH STAINLESS STEEL HEX NUTS AND WASHERS.

(6) ½" STAINLESS STEEL THREADED ROD (GRADE 304) WITH STAINLESS STEEL HEX NUTS AND WASHERS.

(7) 6" LONG SPLIT RTRP STRIP BOND TO #3, PLACE AT ALL CLAMP LOCATIONS.

(8) BENT ANCHOR PLATES - 7 GAUGE STAINLESS STEEL GRADE 304.

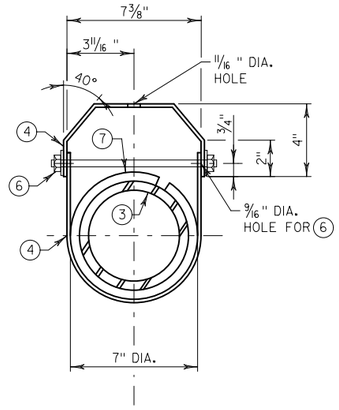
(9) ½" DIA. ADHESIVE ANCHOR BOLTS. (STAINLESS STEEL BOLT AND WASHER, TYP.)

(10) HIGH-TORQUE (150 INCH-POUNDS) WORM-DRIVE HOSE CLAMP. 410 STAINLESS STEEL HEX SCREW OF 5/16" DIAMETER, 304 HALF HARD STAINLESS STEEL BAND OF ⅝" WIDTH AND ADJUSTABLE CLAMPING DIAMETER FROM 6¼" TO 7⅛" (4 REQUIRED PER EACH #1 FLEXIBLE CONNECTION).

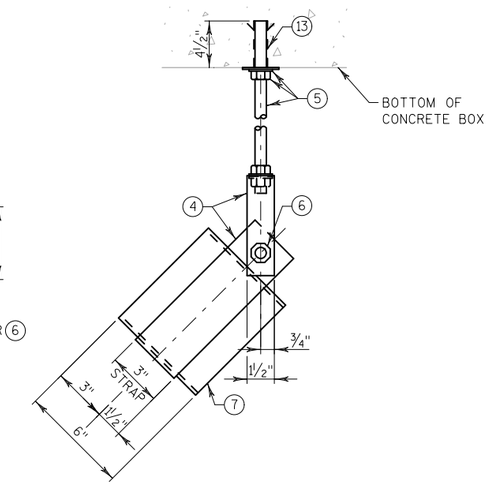
(11) 7 GAUGE STAINLESS STEEL GUSSET PLATE, WELD TO #2 AND #8.

(12) ⅜" x 1" LONG STAINLESS STEEL HEX HEAD BOLT WITH NUT AND LOCK WASHER.

(13) STAINLESS STEEL MASONRY MECHANICAL WEDGE ANCHOR TYPE S ⅝-INCH. MINIMUM PULLOUT CAPACITY OF 7.0 KIPS. EMBED 4½" IN CONCRETE.



SADDLE



ADJUSTABLE CLEVIS DETAIL
AND PIPE HANGER DETAILS

AT BOX FLOOR

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

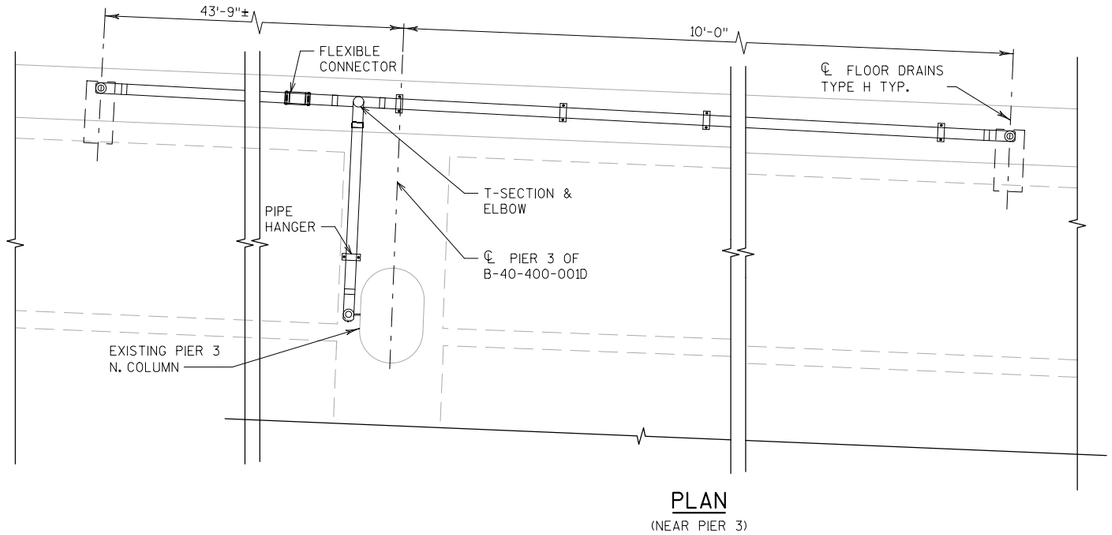
STRUCTURE B-40-400-1D

DRAWN BY	MMW	PLANS CK'D.	LMK

DOWNSPOUT DETAILS

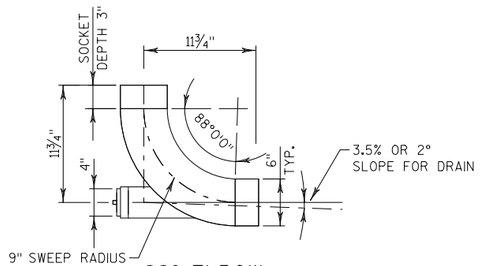
SHEET 11 OF 13
717

STATE PROJECT NUMBER
1300-13-74

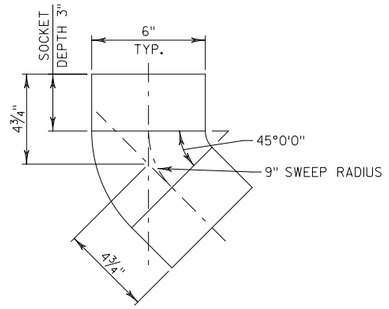


PLAN
(NEAR PIER 3)

N



88° ELBOW WITH CLEANOUT



45° ELBOW

NOTES

REMOVAL OF EXISTING PIPES AND FITTINGS IS INCLUDED IN BID ITEM "REMOVING OLD STRUCTURES STA 100+66 LW".

ALL OTHER WORK AND MATERIALS SHOWN ON THIS SHEET IS INCLUDED IN BID ITEM "DOWNSPOUT 6-INCH" FOR B-40-400-001D.

FOR LOCATIONS OF ACCESS HATCHES IN THE BOTTOM SLAB AND INTERIOR OPENINGS IN WEBS AND DIAPHRAGMS, SEE ORIGINAL STRUCTURE PLANS DATED 1970.

MAXIMIZE CLEARANCE BELOW NEW EXTERNAL DRAINAGE PIPES. CLEARANCE BELOW PIPES AS A MINIMUM SHALL MATCH CLEARANCE BELOW EXISTING PIPES.

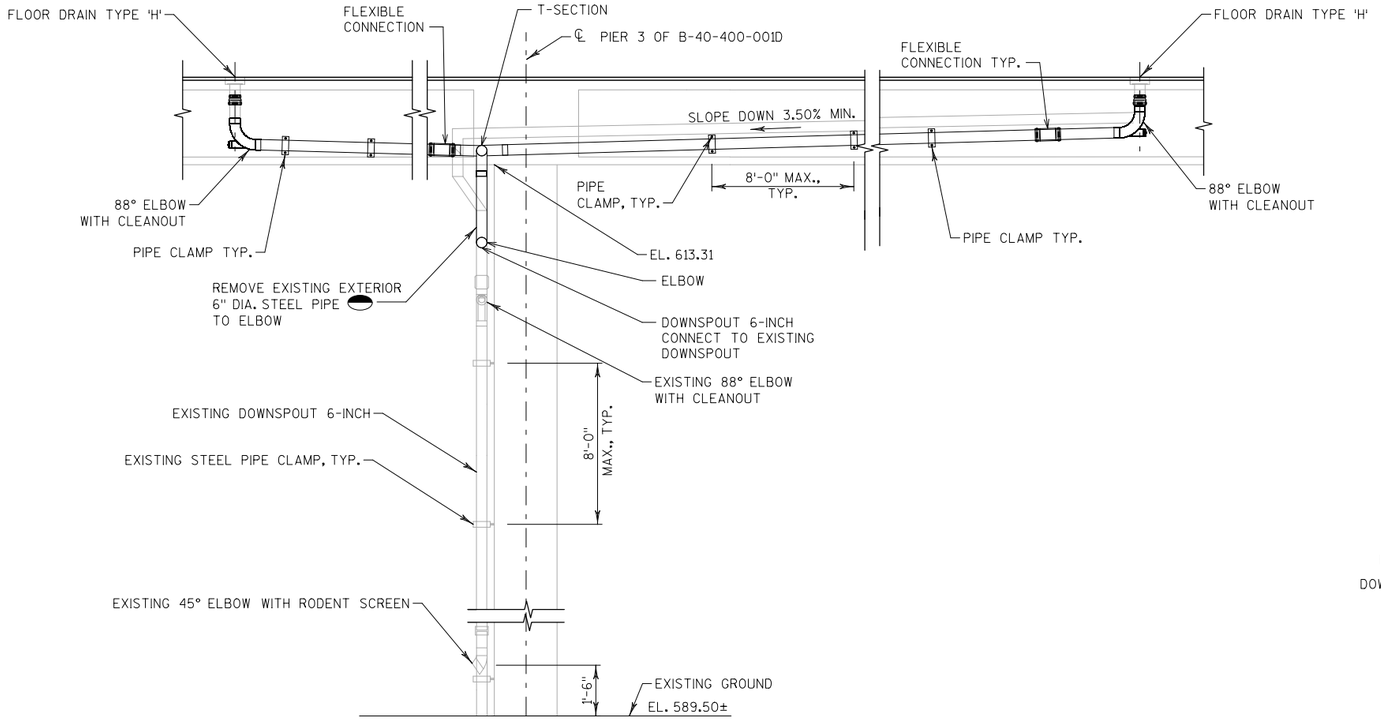
FILL ANY ABANDONED PIPE HOLE IN THE EXISTING STRUCTURE WITH SECURELY FASTENED GALVANIZED WIRE MESH TO PREVENT INTRUSIONS OF ANIMALS OR DEBRIS INTO THE CONCRETE SUPERSTRUCTURE.

FOR ALL REPLACEMENT DOWNSPOUTS AND FITTINGS, PROVIDE GRAY REINFORCED THERMOSETTING RESIN PIPE (RTRP) COLORED UNIFORMLY THROUGHOUT THE CROSS-SECTION WITH PIGMENTATION ADDED TO THE FIBERGLASS DURING MANUFACTURE.

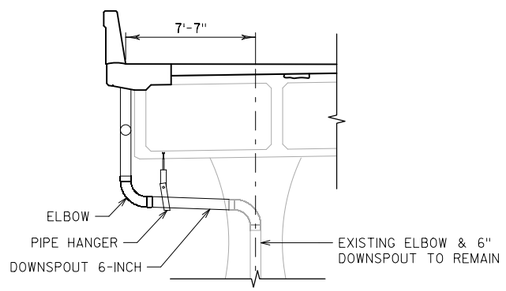
FOR "DOWNSPOUT 6-INCH" DETAILS, SEE SHEET 11.

LEGEND

INTERIOR STEEL PIPE MAY BE DISCONNECTED AND ABANDONED.



ELEVATION
DOWNSPOUT DETAILS
(LOOKING NORTH, NEAR PIER 3)



LOOKING EAST

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-1D

DRAWN BY MMW | PLANS CK'D. LMK

DRAINAGE MODIFICATIONS

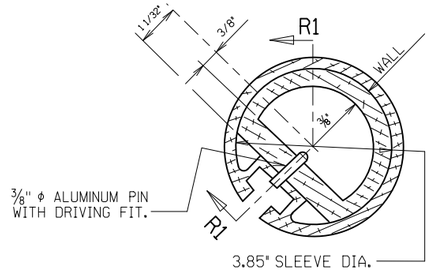
SHEET 12 OF 13
718

8

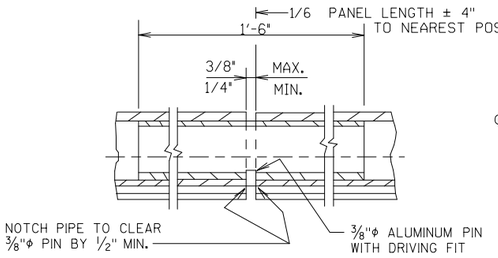
8

STATE PROJECT NUMBER

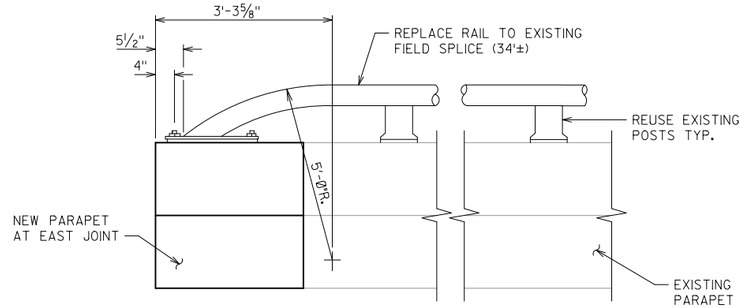
1300-13-74



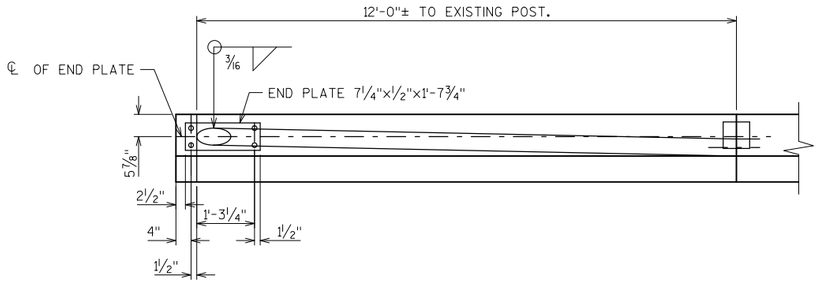
RAIL SPLICE DETAIL



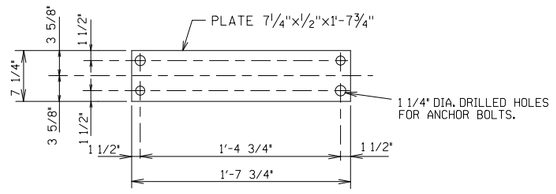
SECTION R1



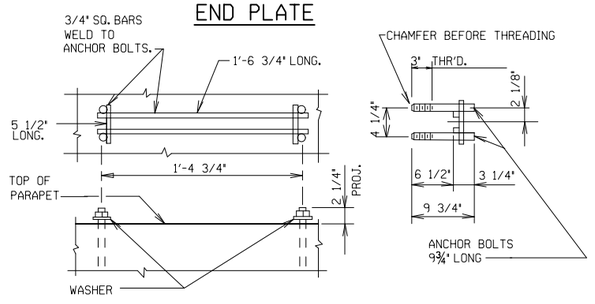
AT SOUTHEAST RAILING TERMINATION



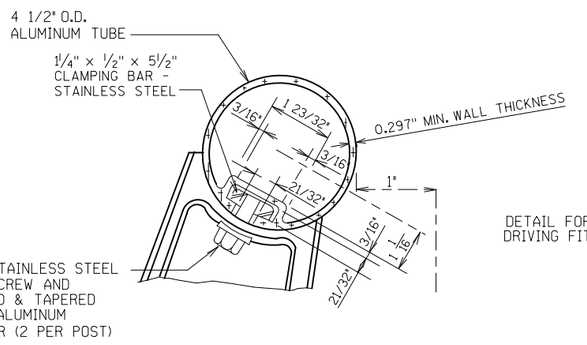
DETAIL OF RAIL BEND AT SOUTH EAST PARAPET



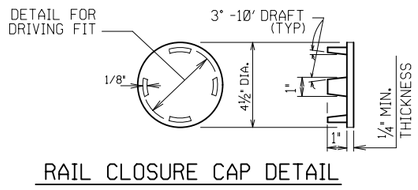
END PLATE



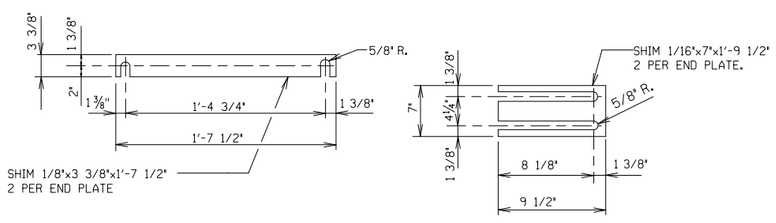
ANCHOR BOLTS AT END PLATE



DETAIL OF RAIL ATTACHMENT TO POST



RAIL CLOSURE CAP DETAIL



END PLATE SHIM DETAILS

GENERAL NOTES

BID ITEM SHALL BE "RAILING TUBULAR TYPE H B-40-400-1D MODIFIED" WHICH INCLUDES ALL ITEMS SHOWN.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.

SHIMS SHALL CONFORM TO SAME MATERIAL AS POSTS.

RAILINGS SHALL BE FABRICATED IN 2 AND 3 PANEL LENGTHS.

RAILING POSTS SHALL BE SET NORMAL TO GRADE LINE.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG CENTERLINE OF THE POST BASE.

SHIMS SHALL BE USED UNDER POSTS AND END PLATES WHERE REQ'D. FOR ALIGNMENT.

FILL ALL EXPOSED OPENINGS BETWEEN SHIMS AND POST ANCHOR BOLT HOLES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

RAILS SHALL BE BUILT STRAIGHT AND SPRUNG INTO PLACE FOR STRUCTURES CURVED UP TO 3°. FOR STRUCTURES CURVED GREATER THAN 3°, RAILS SHALL BE CURVED TO FIT.

8

8

LV = 1 2 3 4 6 7 8 9

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-1D

DRAWN BY MMW | PLANS CK'D. LMK

TUBULAR RAILING TYPE 'H' (ALUM) MODIFIED

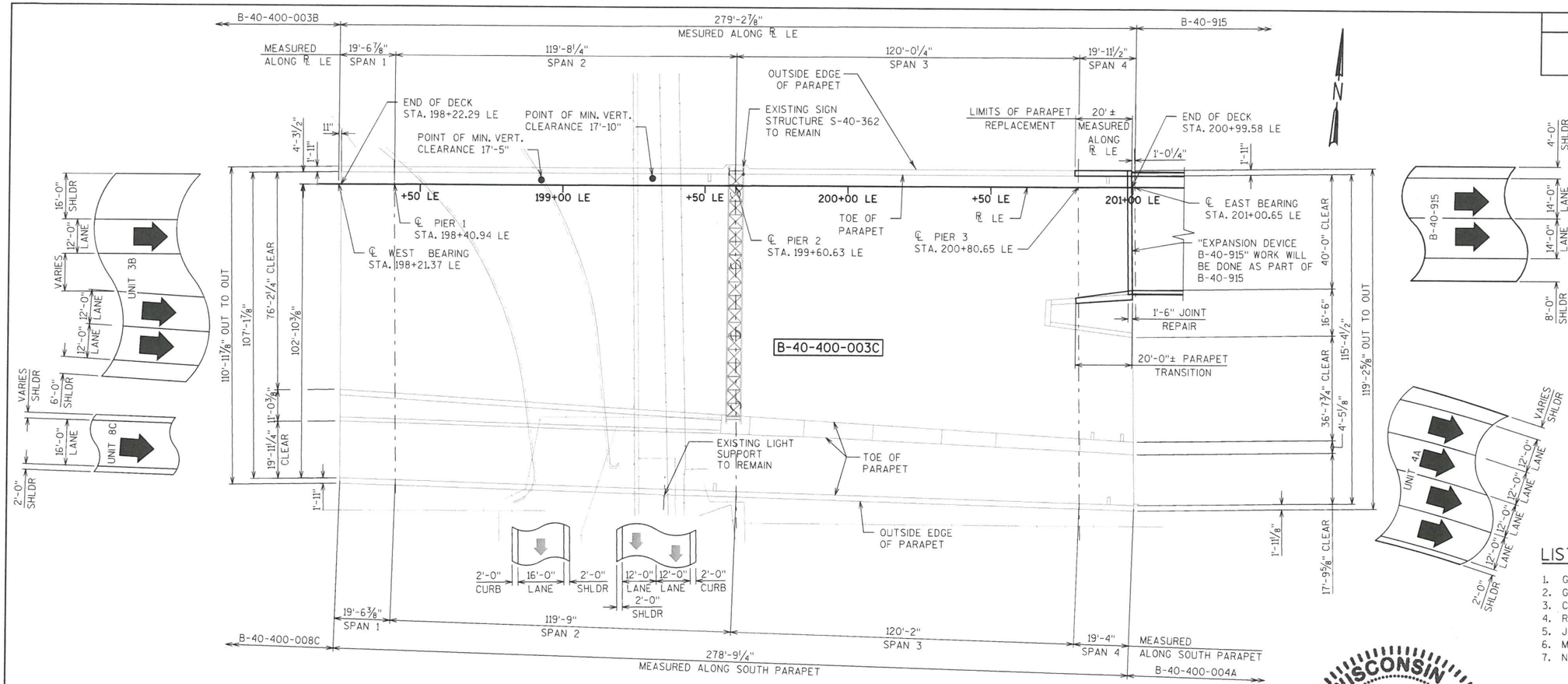
SHEET 13 OF 13

719

IP_PWP:d0330713\080113_rh.dgn 26-MAY-2015 12:06

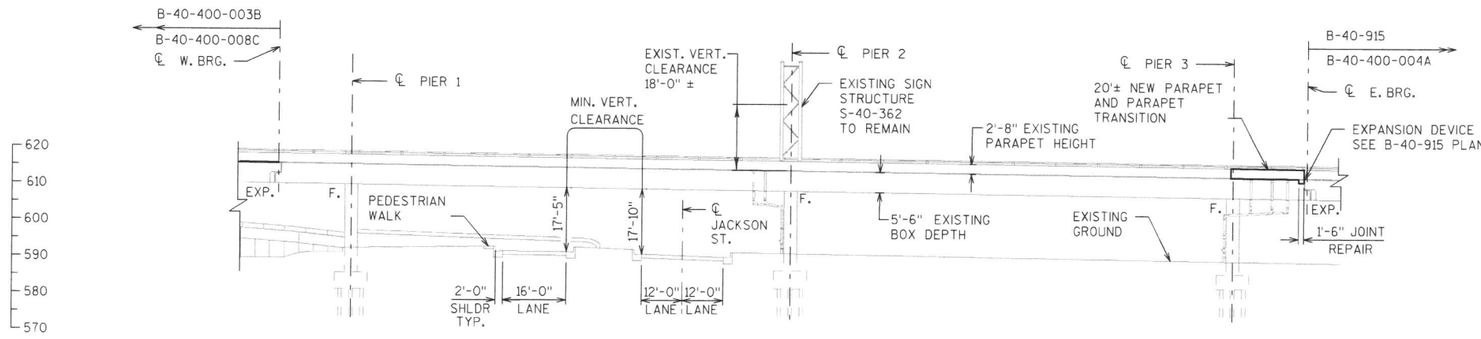
STATE PROJECT NUMBER

1300-13-74



PLAN

4-SPAN POST-TENSIONED CONC. MULTI-CELL BOX
JOINT REPAIR



ELEVATION

(LOOKING NORTH)

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES AND QUANTITIES
3. CROSS SECTION
4. REMOVAL DETAILS
5. JOINT DETAILS
6. MEDIAN PARAPET TRANSITION DETAILS
7. NORTH PARAPET TRANSITION DETAILS

WISCONSIN
CHAD D. HALVERSON
E-34364
MADISON, WI
PROFESSIONAL ENGINEER
4/22/15

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER P.E. (608) 266-8489
CONSULTANT:
CHAD HALVERSON P.E. (608) 821-8700

NO.	DATE	REVISION	BY

Baker
MICHAEL BAKER JR., INC
7633 GANSER WAY, SUITE 206
MADISON, WI 53719

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/04/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-400-3C

IH 794 EB OVER JACKSON ST.

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MSC	ABP	ABP	CDH

GENERAL PLAN

SHEET 1 OF 7

720

8

8

c:\pwv8i-local\baker_projects\kevin.frank\d0330714\080201_gp.dgn 28-JUL-2015 13:18

STATE PROJECT NUMBER
1300-13-74

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE EXISTING STRUCTURE, B-40-400-003C, IS A 4 SPAN CONCRETE MULTI-CELL BOX GIRDER BRIDGE WITH AN AVERAGE CLEAR WIDTH OF 111 FEET 1 INCH AND A DECK LENGTH OF 277'-4"±. THE NORTHEAST EXPANSION JOINT IS TO BE REPLACED. THE PARAPETS IN THE NE SECTION OF THE DECK SHALL BE REMOVED. ADDITIONAL REMOVAL THAT IS NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS TO BE REMOVED FOR CONSTRUCTION OF THE NEW WORK IS TO BE INCLUDED UNDER THE BID ITEM "REMOVING OLD STRUCTURE STA. 200+85 LE."

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1 INCH DEEP SAW CUT.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

"PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED TO THE JOINT REPAIR AREA.

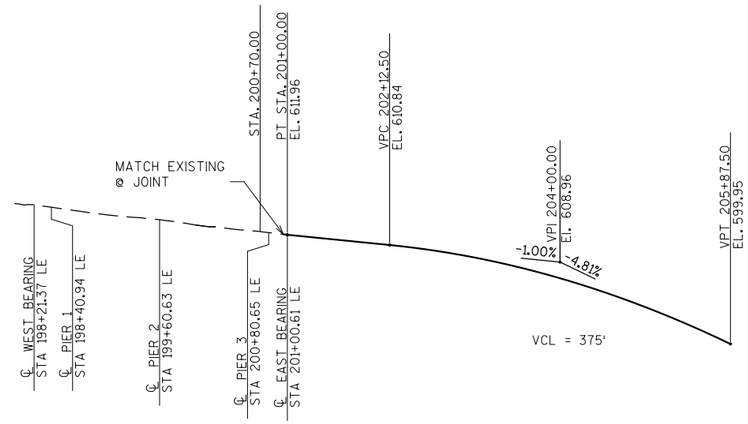
"PIGMENTED PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED TO THE TOP AND ROADWAY FACES OF RECONSTRUCTED PARAPETS.

EXISTING FLOOR DRAINS TO REMAIN IN PLACE.

EXERCISE CAUTION WHILE PERFORMING ANY CONCRETE REPAIR IN A POST-TENSIONED REGION TO AVOID DAMAGE TO THE POST-TENSIONING STRANDS OR ANCHORAGES. SEE ORIGINAL PLANS DATED 1970 FOR POST-TENSIONING INFORMATION.

CONCRETE FOR JOINT REPAIR SHALL BE PAID AS "CONCRETE MASONRY OVERLAY DECKS." CONCRETE FOR PARAPETS SHALL BE PAID AS "CONCRETE MASONRY BRIDGES."

EXPANSION JOINT ASSEMBLY INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID FOR IN THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-915". THE BID ITEM IS INCLUDED WITH THE B-40-915 PLANS.



PROFILE GRADE LINE 'LE' I-794 EB EXIT RAMP

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
226	201+09.70 LE	50.07' LT.	BERNTSEN FENO MONUMENT WITH ALUMINUM CAP	589.61

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	SUPER.	TOTAL
203.0200.2004	REMOVING OLD STRUCTURE STATION 200+85 LE	LS	---	1
203.0225.S.2007	DEBRIS CONTAINMENT STRUCTURE B-40-400-3C	LS	---	1
502.0100	CONCRETE MASONRY BRIDGES	CY	7	7
502.3200	PROTECTIVE SURFACE TREATMENT	SY	7	7
502.3210.S	PIGMENTED PROTECTIVE SURFACE TREATMENT	SY	20	20
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1,390	1,390
509.1000	JOINT REPAIR	SY	8	8
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	3	3
	NON-BID ITEMS			
	FILLER	SIZE		½ " & ¾ "

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS-20
INVENTORY RATING: HS-21
OPERATING RATING: HS-36
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 200 KIPS

ULTIMATE DESIGN STRESSES:
CONCRETE MASONRY BRIDGES
SUPERSTRUCTURE.....f'c = 4,000 P.S.I.

CONCRETE MASONRY OVERLAY DECKS.....f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT
HIGH STRENGTH, GRADE 60.....fy = 60,000 P.S.I.

TRAFFIC DATA

IH 794 EB EXIT RAMP
A.D.T. = 9,200 (2016)
A.D.T. = 12,500 (2036)
RDS = 30 MPH

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-3C

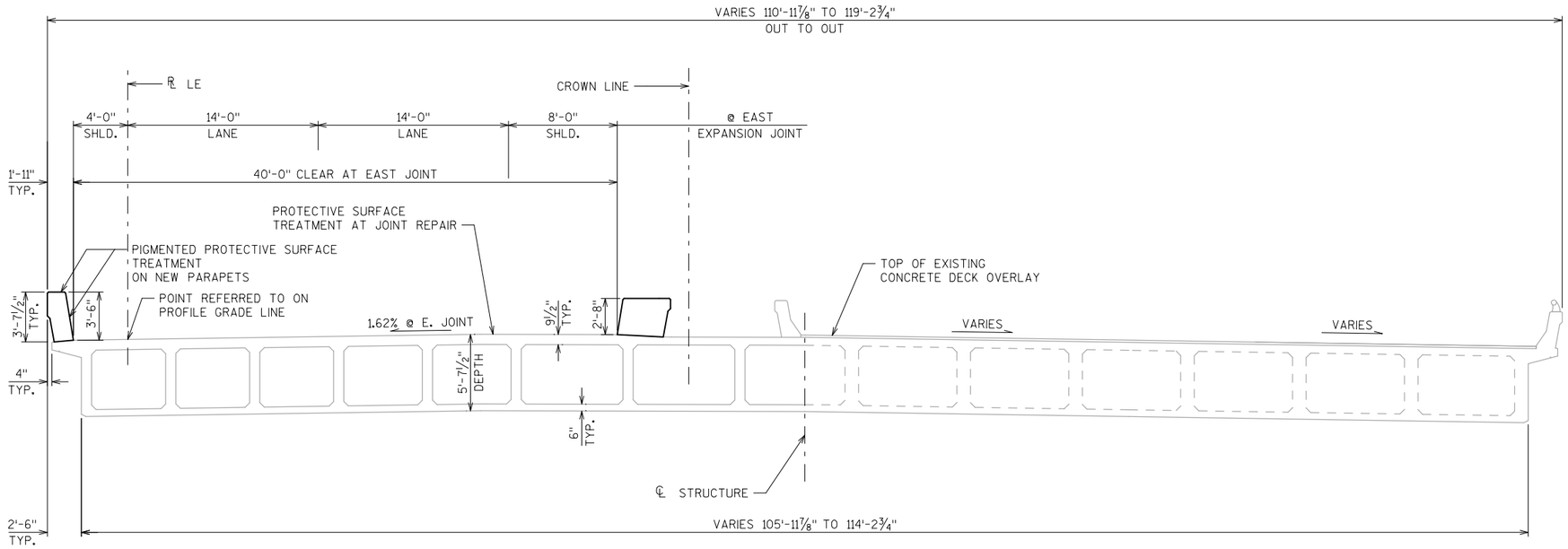
DRAWN BY ABP | PLANS CK'D. CDH

GENERAL NOTES AND QUANTITIES

SHEET 2 OF 7
721

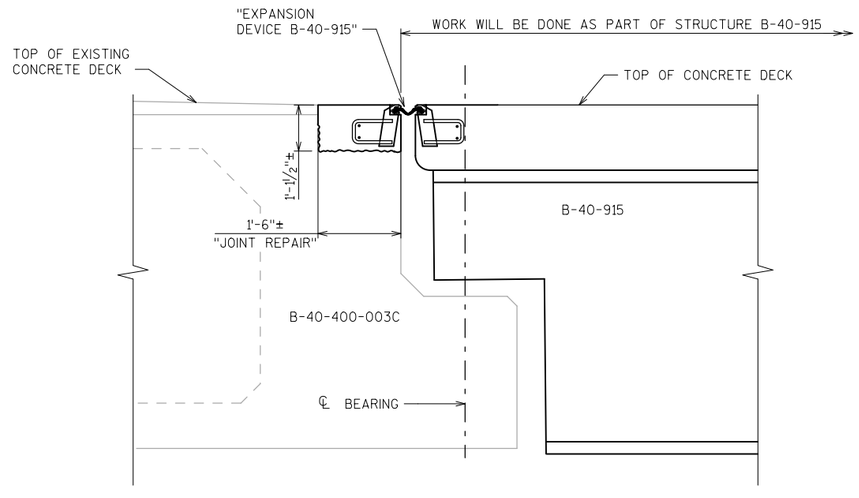
c:\pwv8i-local\baker_projects\kevin.frank\d0330714\080202_gn.dgn 28-JUL-2015 13:23

STATE PROJECT NUMBER
1300-13-74



CROSS SECTION

(℄ EAST JOINT STA. 200+99±)
(LOOKING EAST)



AT EAST EXPANSION JOINT

(LOOKING NORTH)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-3C

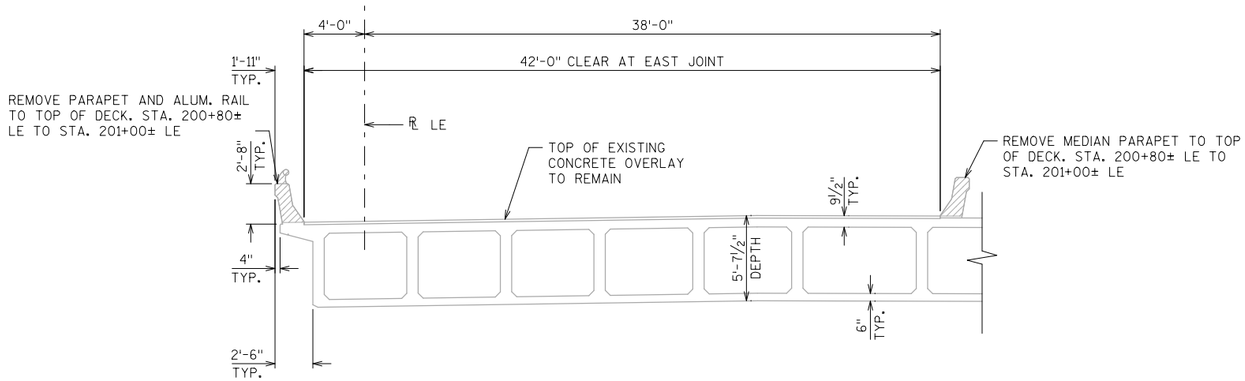
DRAWN BY ABP | PLANS CK'D. CDH

CROSS SECTION

SHEET 3 OF 7
722

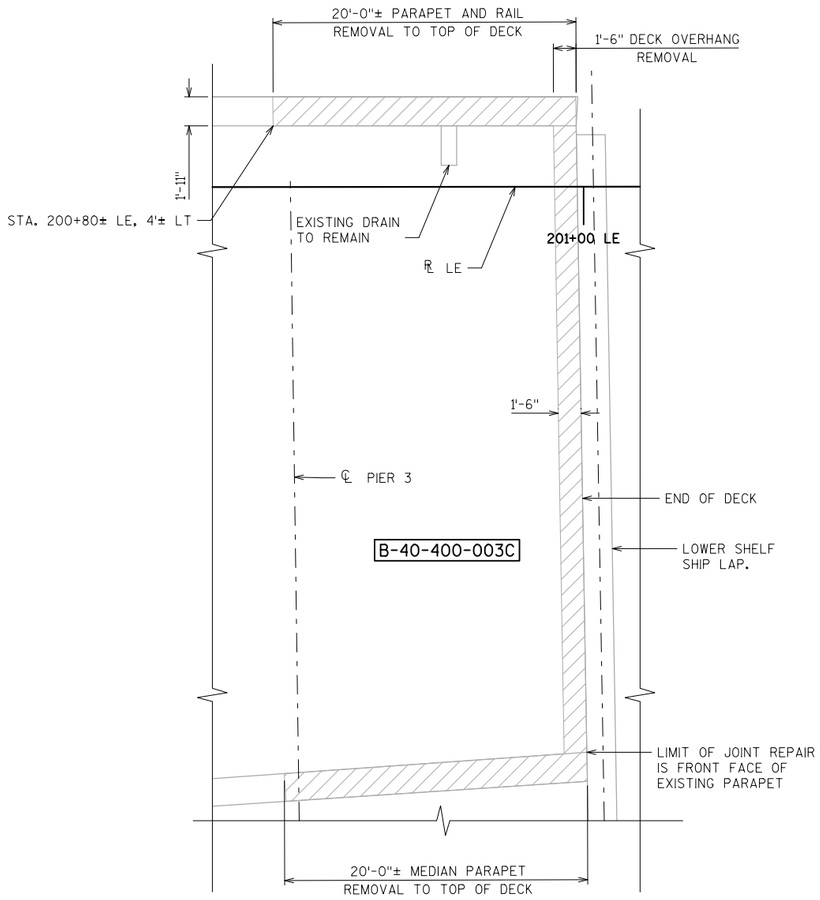
IP_PWP:d0330714\080203_xs.dgn 26-MAY-2015 12:07

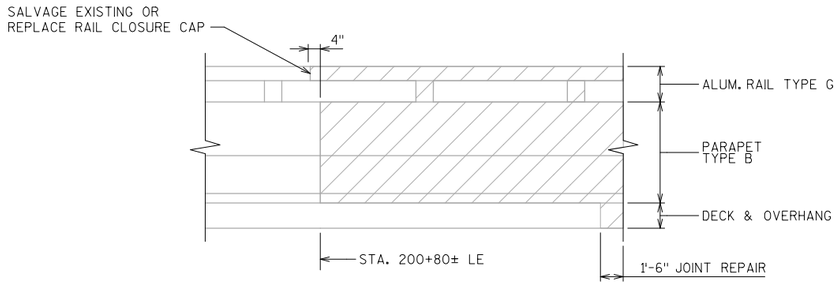
STATE PROJECT NUMBER
1300-13-74



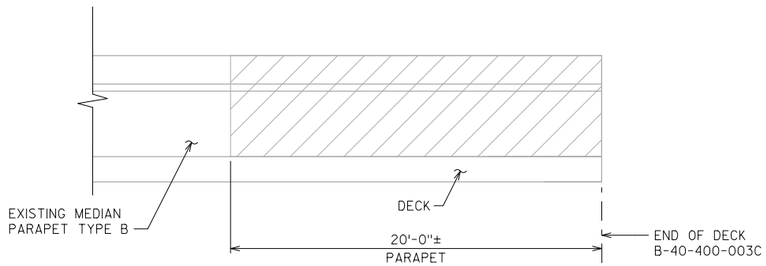
CROSS SECTION

(STA. 200+80± TO STA. 201+00±)
(LOOKING EAST)





NORTH PARAPET INSIDE ELEVATION



MEDIAN PARAPET OUTSIDE ELEVATION

LEGEND

CONCRETE REMOVAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-3C

DRAWN BY ABP | PLANS CK'D. CDH

REMOVAL DETAILS

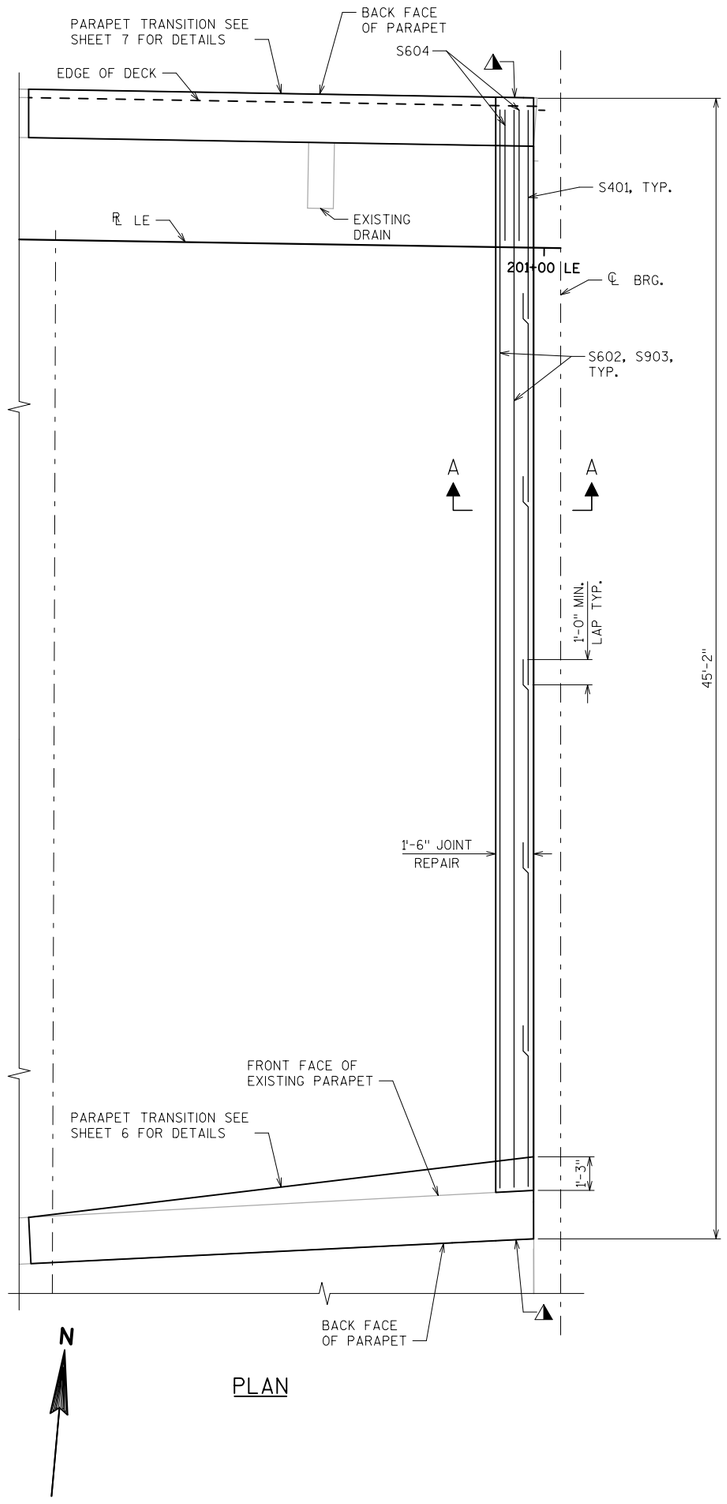
SHEET 4 OF 7
723

8

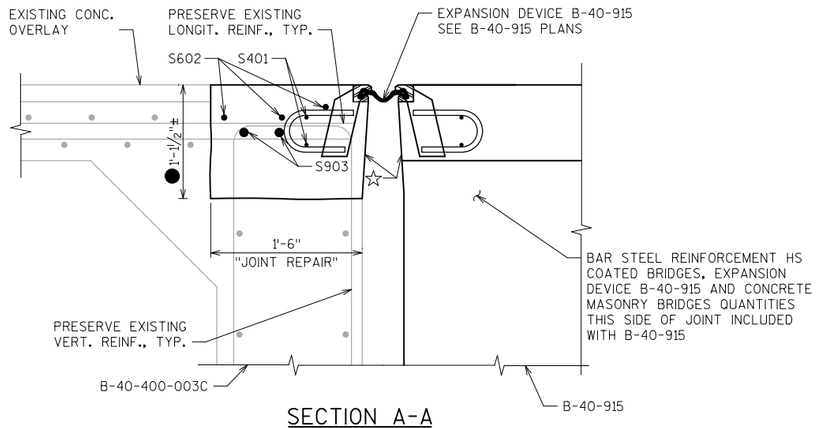
8

STATE PROJECT NUMBER

1300-13-74



PLAN



SECTION A-A

(ROADWAY JOINT AT B-40-400-3C & B-40-915)

NOTES

REMOVAL OF CONCRETE AT EXISTING JOINTS IS INCIDENTAL TO BID ITEM "JOINT REPAIR".

REPLACEMENT OF CONCRETE AT EXISTING JOINTS IS INCIDENTAL TO BID ITEM " CONCRETE MASONRY OVERLAY DECKS".

EXERCISE CAUTION WHILE REMOVING CONCRETE AT THE JOINT LOCATIONS TO AVOID DAMAGE TO THE POST-TENSIONED STRANDS AND ANCHORAGES. SEE ORIGINAL PLANS DATED 1970 FOR POST TENSIONING INFORMATION.

LEGEND

△ REMOVE CONCRETE FOR INSTALLATION OF EXPANSION DEVICE, INCIDENTAL TO "JOINT REPAIR", AND REPLACE JOINT AND DECK OVERHANG WITH "CONCRETE MASONRY OVERLAY DECKS" TO MATCH EXISTING.

☆ TAPER CONCRETE TO MATCH SPECIFIED JOINT OPENING. SEE B-40-915 PLANS, FOR SPECIFIED JOINT OPENING VALUES.

● CONCRETE DEPTH REMOVAL AT JOINT LOCATIONS TO MATCH DEPTH OF BLOCK-OUT FROM ORIGINAL CONSTRUCTION. DO NOT REMOVE ANY CONCRETE BEYOND THE ORIGINAL CONSTRUCTION BLOCK-OUT LIMITS.

◆ CONTRACTOR MAY USE SHORTER BARS WITH APPROVAL OF THE FIELD ENGINEER. USE MIN. LAP OF 3'-1" FOR #6 BARS AND 3'-9" FOR #9 BARS. BARS SHALL BE PAID FOR USING THE LENGTHS PROVIDED IN BILL OF BARS.

BILL OF BARS

TOTAL COATED = 1,390 LBS

	BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
	S401	12	8'-0"	X			JOINT TRANSVERSE
◆	S602	3	42'-7"	X			JOINT TRANSVERSE TOP
◆	S903	2	40'-4"	X			JOINT TRANSVERSE
	S604	2	5'-6"	X			JOINT TRANSVERSE OVERHANG BOTTOM
	S505	7	19'-8"	X			SOUTH PARAPET LONGIT.
	S506	40	4'-4"	X	X		SOUTH PARAPET VERTICALS
	S407	5	17'-4"	X			SOUTH PARAPET FACING LONGIT.
	S408	18	3'-10"	X	X	X	SOUTH PARAPET FACING VERT.
	S509	8	19'-8"	X			NORTH PARAPET LONGIT.
	S510	13	4'-8"	X	X	X	NORTH PARAPET VERT.
	S511	13	5'-5"	X	X	X	NORTH PARAPET VERT.
	S512	14	6'-3"	X	X	X	NORTH PARAPET VERT.
	S513	3	4'-5"	X	X		NORTH PARAPET DOWELS

NOTES:

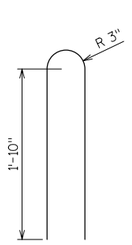
LENGTH SHOWN FOR ANY BAR IN A BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BEND DETAILS ARE OUT TO OUT OF BAR

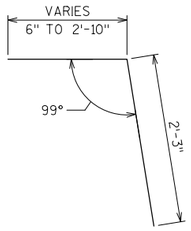
BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
S408	1 SET OF 18	2'-8" TO 5'-0"
S510	1 SET OF 13	4'-4" TO 5'-0"
S511	1 SET OF 13	5'-0" TO 5'-10"
S512	1 SET OF 14	5'-11" TO 6'-7"

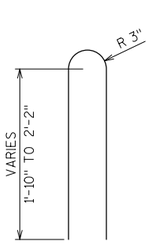
BUNDLE AND TAG EACH SERIES SEPARATELY.



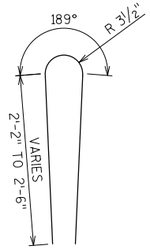
S506



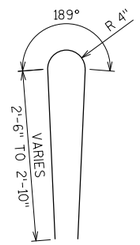
S408



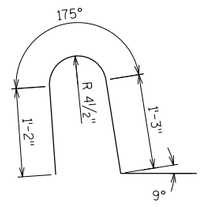
S510



S511



S512



S513

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-3C

DRAWN BY ABP | PLANS CK'D. CDH

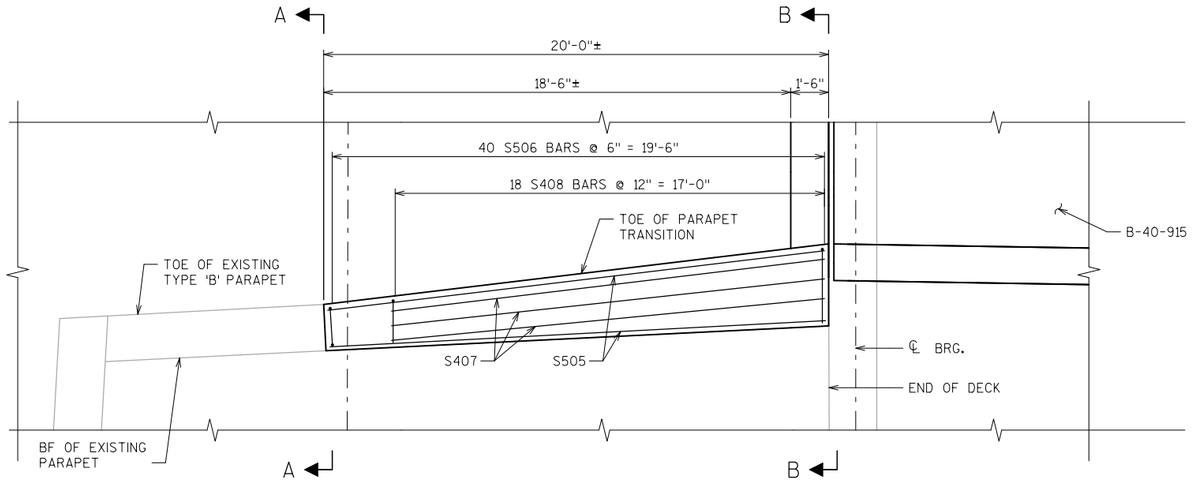
JOINT DETAILS

SHEET 5 OF 7

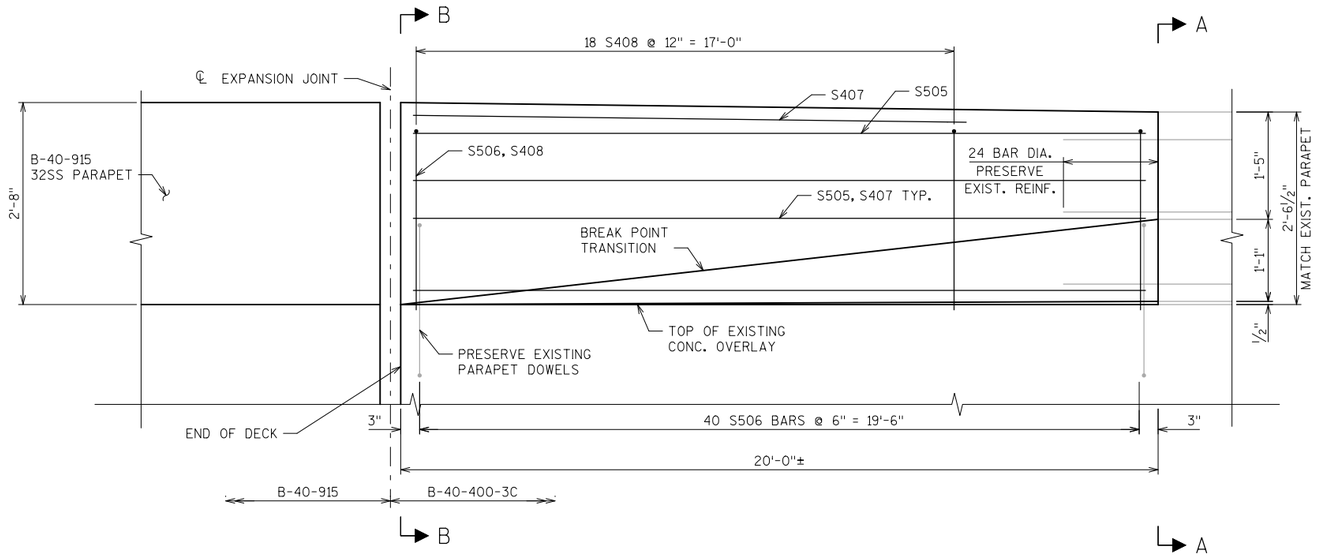
724

IP_PWP:d0330714\080205_ ip.dan 26-MAY-2015 12:08

STATE PROJECT NUMBER
1300-13-74



MEDIAN PARAPET PLAN



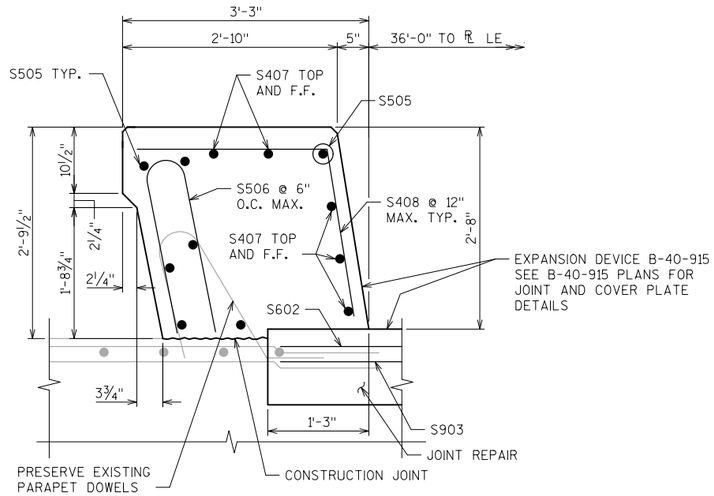
MEDIAN BARRIER ELEVATION

(LOOKING SOUTH)

N

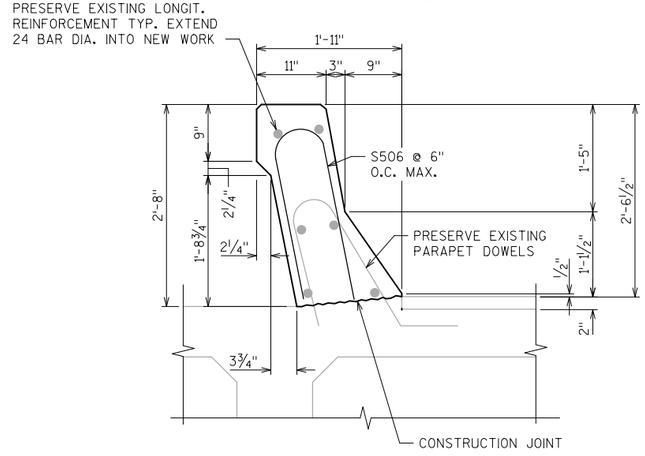
NOTES

PLACEMENT OF CONCRETE AT PARAPET TRANSITION TO BE PAID AS BID ITEM "CONCRETE MASONRY BRIDGES."



SECTION B-B

(MATCH 32SS PARAPET @ F.F.)



SECTION A-A

(MATCH EXISTING)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-3C

DRAWN BY ABP | PLANS CK'D. CDH

MEDIAN PARAPET TRANSITION DETAILS

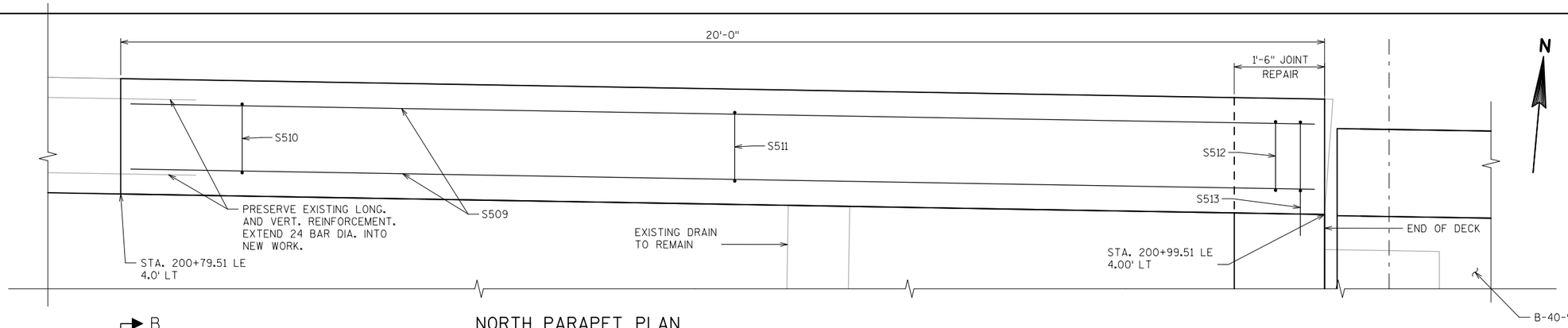
SHEET 6 OF 7

725

IP_PWP:d0330714\080206_pd.dgn 26-MAY-2015 12:08

STATE PROJECT NUMBER

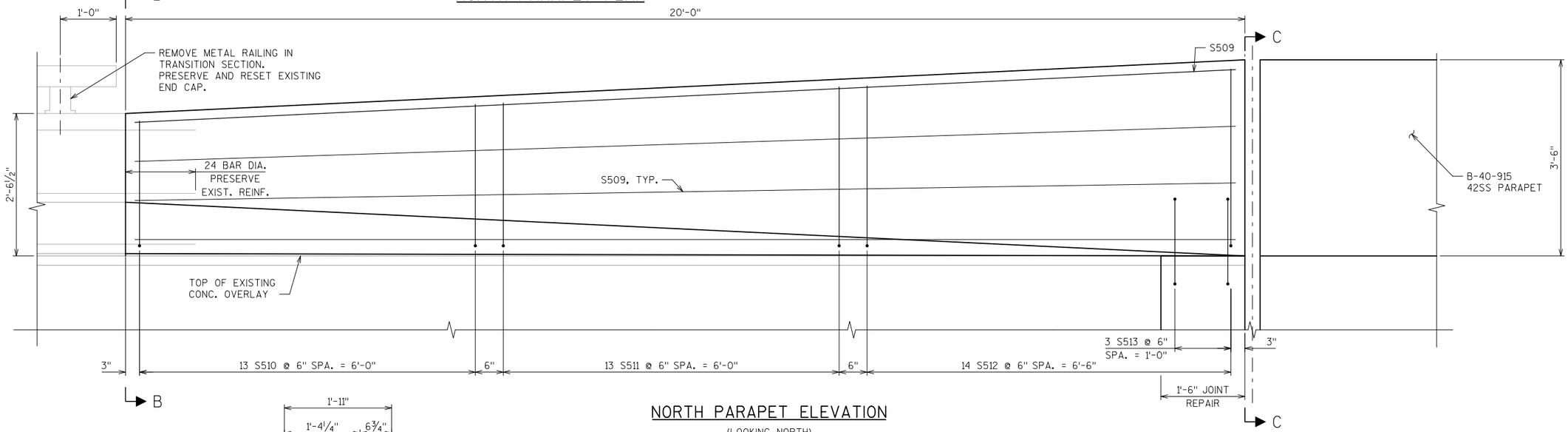
1300-13-74



NOTES

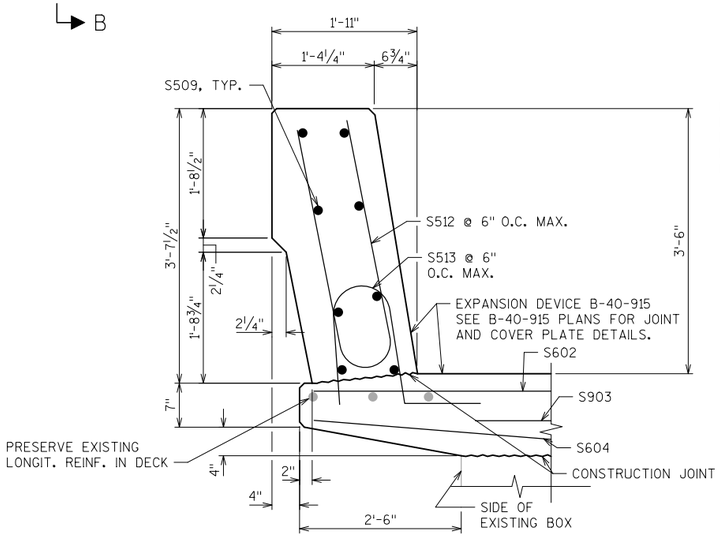
PLACEMENT OF CONCRETE AT PARAPET TRANSITION TO BE PAID AS BID ITEM "CONCRETE MASONRY BRIDGES".

NORTH PARAPET PLAN

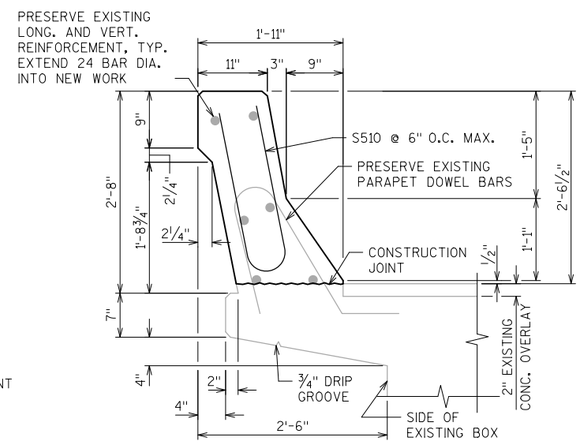


NORTH PARAPET ELEVATION

(LOOKING NORTH)



SECTION C-C



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-3C

DRAWN BY ABP | PLANS CK'D. CDH

NORTH PARAPET TRANSITION DETAILS

SHEET 7 OF 7

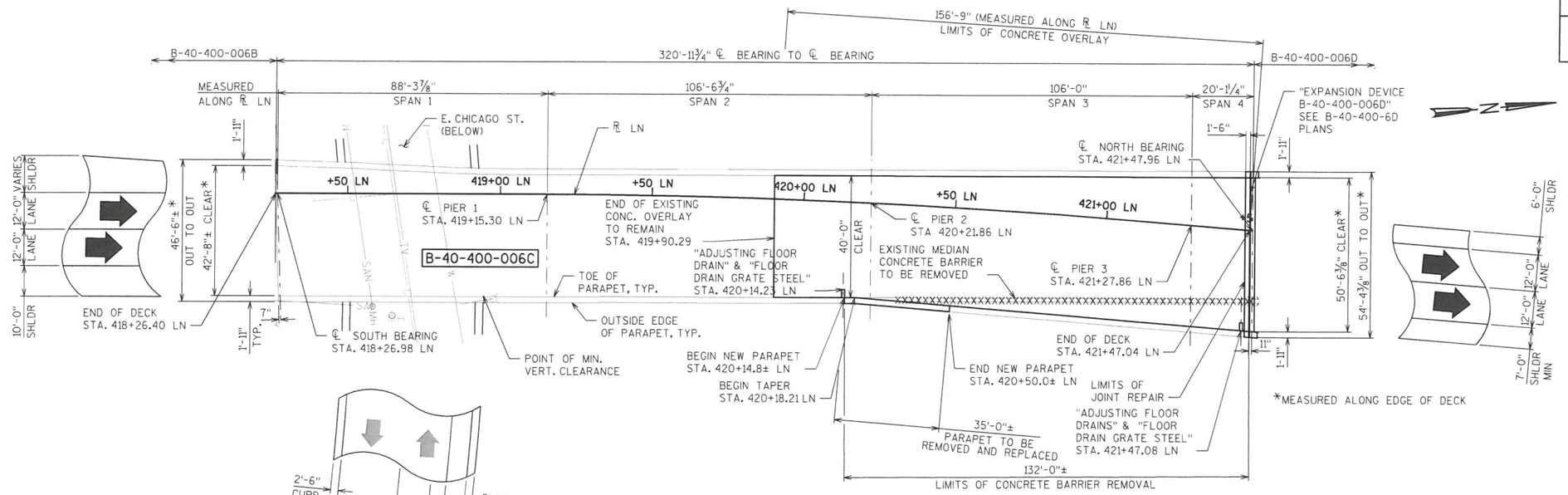
726

8

8

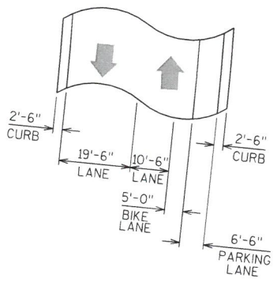
STATE PROJECT NUMBER

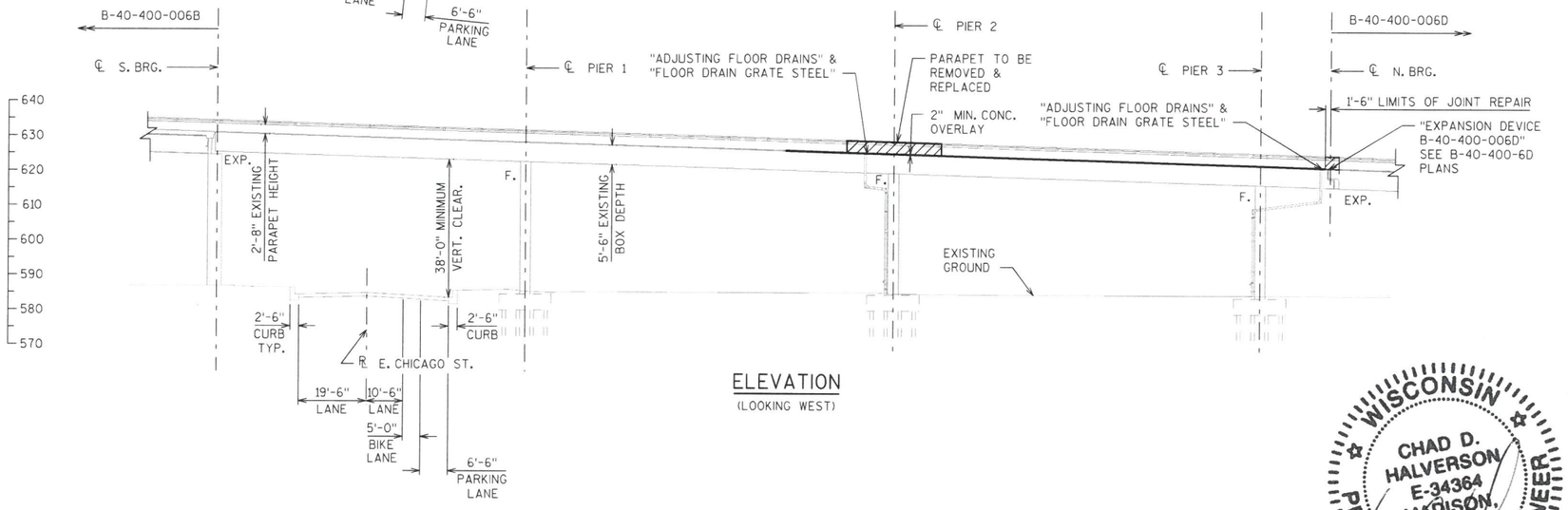
1300-13-74



PLAN

4-SPAN POST-TENSIONED CONC. MULTI-CELL BOX
PARTIAL CONC. OVERLAY





ELEVATION

(LOOKING WEST)

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES AND QUANTITIES
3. CROSS SECTION
4. THERMOGRAPHIC INVESTIGATION
5. EXPANSION JOINT DETAILS
6. PARAPET DETAILS
7. DRAIN DETAILS



STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER P.E. (608) 266-8489
CONSULTANT:
CHAD HALVERSON P.E. (608) 821-8700

NO.	DATE	REVISION	BY

Baker
MICHAEL BAKER JR., INC
7633 GANSER WAY, SUITE 206
MADISON, WI 53719

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/04/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-400-6C

IH 794 NB OVER E. CHICAGO ST.

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MSC	ABP	MMW	LMK

GENERAL PLAN

SHEET 1 OF 7

727

8

8

STATE PROJECT NUMBER
1300-13-74

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE EXISTING STRUCTURE, B-40-400-006C, IS A 4 SPAN CONCRETE MULTI-CELL BOX GIRDER BRIDGE WITH AN AVERAGE CLEAR WIDTH OF 42 FEET 4 INCHES AND A DECK LENGTH OF 320 FEET 6 INCHES. 156 FEET 9 INCHES± OF THE NORTHERN PORTION OF THE BRIDGE DECK IS TO BE PREPARED FOR A NEW CONCRETE OVERLAY AND MODIFICATIONS OF THE PARAPET. ADDITIONAL REMOVAL THAT IS NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS TO BE REMOVED FOR CONSTRUCTION OF THE NEW WORK OR CONCRETE OVERLAY IS TO BE INCLUDED UNDER THE BID ITEM "REMOVING OLD STRUCTURES STA. 419+90 LN".

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON MINIMUM OVERLAY THICKNESS OF 2" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2½". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION. PROPOSED PROFILE TO MATCH EXISTING PROFILE MINUS ½".

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1 INCH DEEP SAW CUT.

CLEAN AND FILL EXISTING LONGITUDINAL AND TRANSVERSE CRACKS WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER. SEALED CRACKS IN DECK PRIOR TO CONCRETE OVERLAY SHALL BE PAID FOR UNDER BID ITEM "CRACK SEALING EPOXY".

"PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED TO THE ENTIRE ROADWAY CONCRETE DECK OVERLAY. "PIGMENTED PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED TO THE TOP AND ROADWAY FACES OF REPLACED PARAPETS.

A MINIMUM OF ½ INCH OF CONCRETE SHALL BE REMOVED FROM THE AREA OF THE BRIDGE DECK RECEIVING THE CONCRETE OVERLAY UNDER THE BID ITEM, "CLEANING DECKS".

EXISTING FLOOR DRAINS TO REMAIN IN PLACE. REMOVE TOP OF DECK IN DRAIN AREA AS DIRECTED BY THE FIELD ENGINEER TO ALLOW PLACING AND SLOPING OF 1½" MINIMUM CONCRETE OVERLAY AROUND THE RIM OF THE DRAIN.

THE FRAMES AROUND THE EXISTING FLOOR DRAINS SHALL BE MODIFIED WITH BID ITEM "ADJUSTING FLOOR DRAINS".

THE GRATES OF THE EXISTING FLOOR DRAINS SHALL BE REMOVED AND REPLACED WITH BID ITEM "FLOOR DRAIN GRATE STEEL".

EXERCISE CAUTION WHILE PERFORMING ANY CONCRETE REPAIR IN A POST-TENSIONED REGION TO AVOID DAMAGE TO THE POST-TENSIONING STRANDS OR ANCHORAGES. SEE ORIGINAL PLANS DATED 1970 FOR POST-TENSIONING INFORMATION.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE FOR THE PARAPET REPLACEMENT SHALL BE PAID AS "CONCRETE MASONRY BRIDGES." ALL OTHER CONCRETE REPAIR SHALL BE PAID AS "CONCRETE MASONRY OVERLAY DECKS."

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
221	15+74.82 LM	44.66' RT.	BERNTSEN FENO MONUMENT WITH ALUMINUM CAP	585.34
223	24+00.65 LM	32.65' RT	BERNTSEN FENO MONUMENT WITH ALUMINUM CAP	585.93

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL
203.0200.2008	REMOVING OLD STRUCTURE STATION 419+90 LN	LS	1
203.0210.S.2008	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-400-6C	LS	1
203.0225.S.2008	DEBRIS CONTAINMENT STRUCTURE B-40-400-6C	LS	1
502.0100	CONCRETE MASONRY BRIDGES	CY	4
502.0717.S	CRACK SEALING EPOXY	LF	10
502.3200	PROTECTIVE SURFACE TREATMENT	SY	771
502.3210.S	PIGMENTED PROTECTIVE SURFACE TREATMENT	SY	15
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1,230
509.0301	PREPARATION DECKS TYPE 1	SY	124
509.0302	PREPARATION DECKS TYPE 2	SY	49
509.0500	CLEANING DECKS	SY	771
509.1000	JOINT REPAIR	SY	9
509.2000	FULL-DEPTH DECK REPAIR	SY	2
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	67
509.9010.S.2003	REMOVING ASPHALTIC CONCRETE DECK OVERLAY B-40-400-6C	SY	771
513.9005.S.2003	REMOVING AND RESETTING TUBULAR RAILING B-40-400-6C	LS	1
514.0900	ADJUSTING FLOOR DRAINS	EACH	2
SPV.0060.2002	FLOOR DRAIN GRATE STEEL	EACH	2
	NON-BID ITEMS		
	FILLER	SIZE	½ " & ¾ "

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS-20
INVENTORY RATING: HS-20
OPERATING RATING: HS-33
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 190 KIPS

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY BRIDGES
SUPERSTRUCTURE.....f'c = 4,000 P.S.I.

CONCRETE MASONRY OVERLAY DECKS.....f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT
HIGH STRENGTH, GRADE 60.....fy = 60,000 P.S.I.

TRAFFIC DATA

NB OFF-RAMP TO LINCOLN MEMORIAL DRIVE
ADT (2014) = 6,600
ADT (2036) = 9,000
RDS = 35 MPH

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

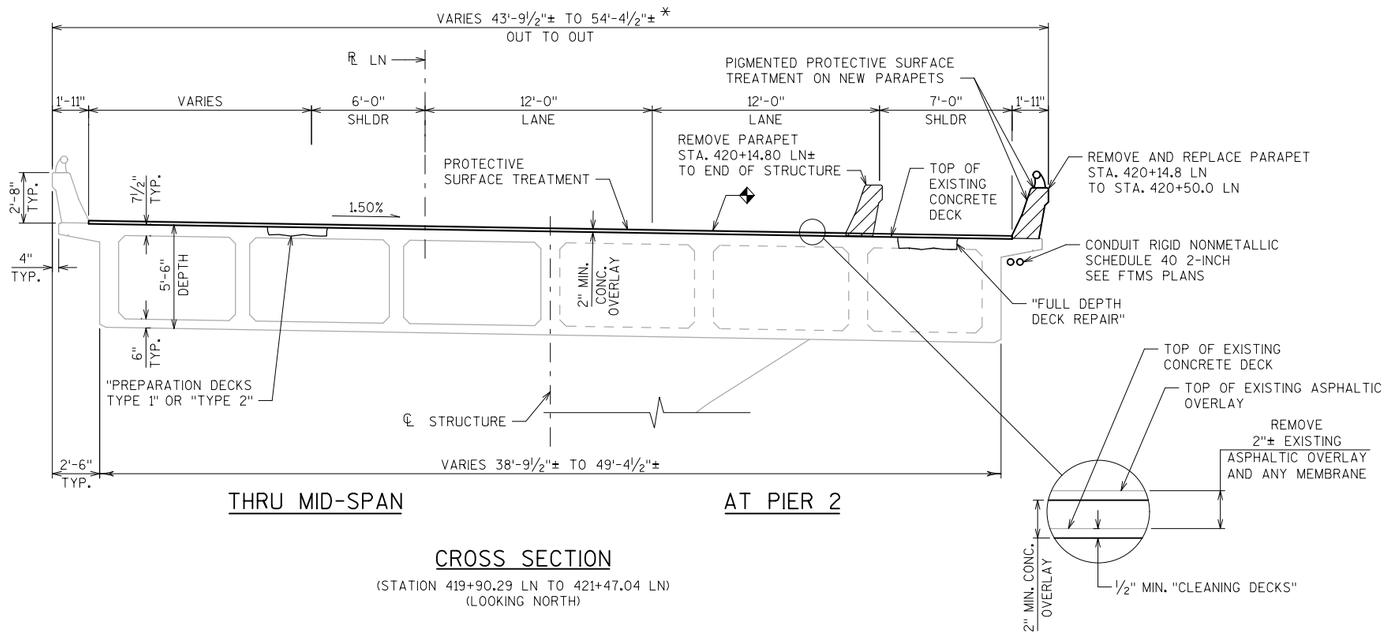
STRUCTURE B-40-400-6C

DRAWN BY ABP | PLANS CK'D. LMK

GENERAL NOTES AND QUANTITIES

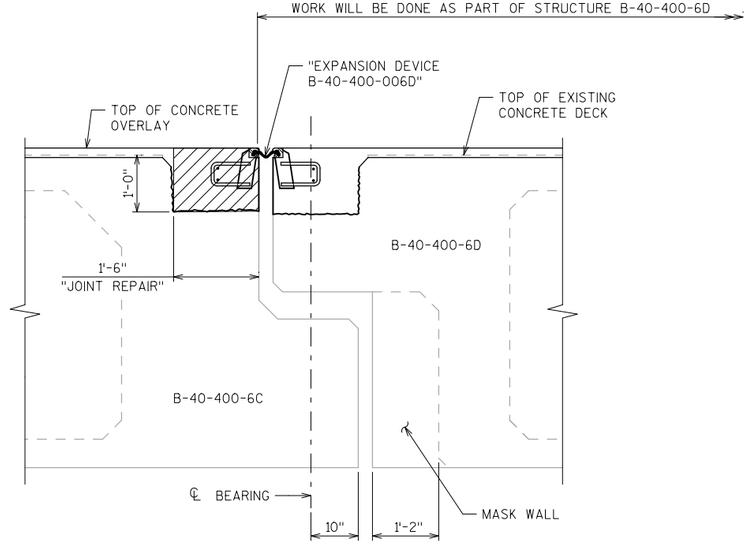
SHEET 2 OF 7
728

STATE PROJECT NUMBER
1300-13-74



CROSS SECTION

(STATION 419+90.29 LN TO 421+47.04 LN)
(LOOKING NORTH)



AT NORTH EXPANSION JOINT

(LOOKING WEST)

LEGEND

◆ REMOVE EXISTING 2" ± ASPHALTIC CONCRETE OVERLAY AND SHEET MEMBRANE TO SOUND CONCRETE.

* DIMENSIONS MEASURED ALONG SOUTH END OF OVERLAY OR NORTH END OF DECK

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6C

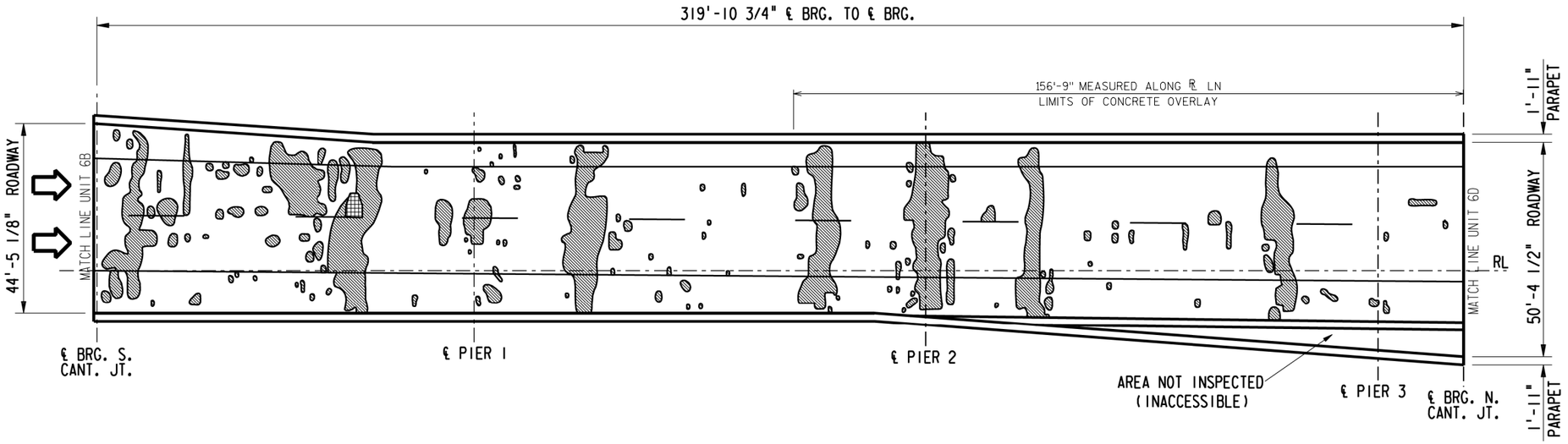
DRAWN BY ABP | PLANS CK'D. LMK

CROSS SECTION

SHEET 3 OF 7
729

IP_PWP:d0330715\080303_xs.dgn 26-MAY-2015 12:10

STATE PROJECT NUMBER
1300-13-74



PLAN

DECK INSPECTION RESULTS

N

FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-40-400-6C	
ITEM	UNIT	QUANT.	%
TOTAL AREA	ft^2	13175	
SHADE/DEBRIS	ft^2	0	
DELAMINATION	ft^2	2095	15.9
SPALL	ft^2	0	0
DEBOND	ft^2	0	0
ASPHALT PATCH	ft^2	19	0.1
CONCRETE PATCH	ft^2	0	0

LEGEND
- DELAMINATION
- SPALL
- DEBOND
- ASPHALT PATCH
- CONCRETE PATCH
- SHADE/DEBRIS

SCALE 0' 5' 15' 30'

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATES: 11/2/12 & 11/27/12

NOTES
THIS SHEET IS FOR INFORMATION ONLY.

INFRARED THERMOGRAPHIC DECK INSPECTION RESULTS REPORTED BY AECOM ON 12/12/2012.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6C

DRAWN BY ABP | PLANS CK'D. LMK

THEMOGRAPHIC INVESTIGATION

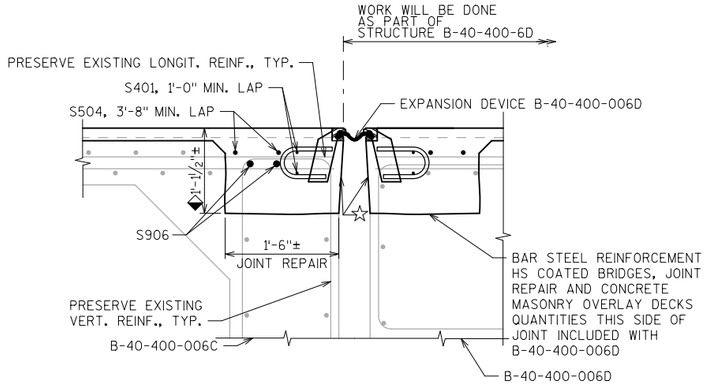
SHEET 4 OF 7
730

8

8

IP_PWP:d0330715\080304_ti.dgn 26-MAY-2015 12:10

STATE PROJECT NUMBER
1300-13-74



SECTION THROUGH JOINT

(LOOKING WEST)

NOTES

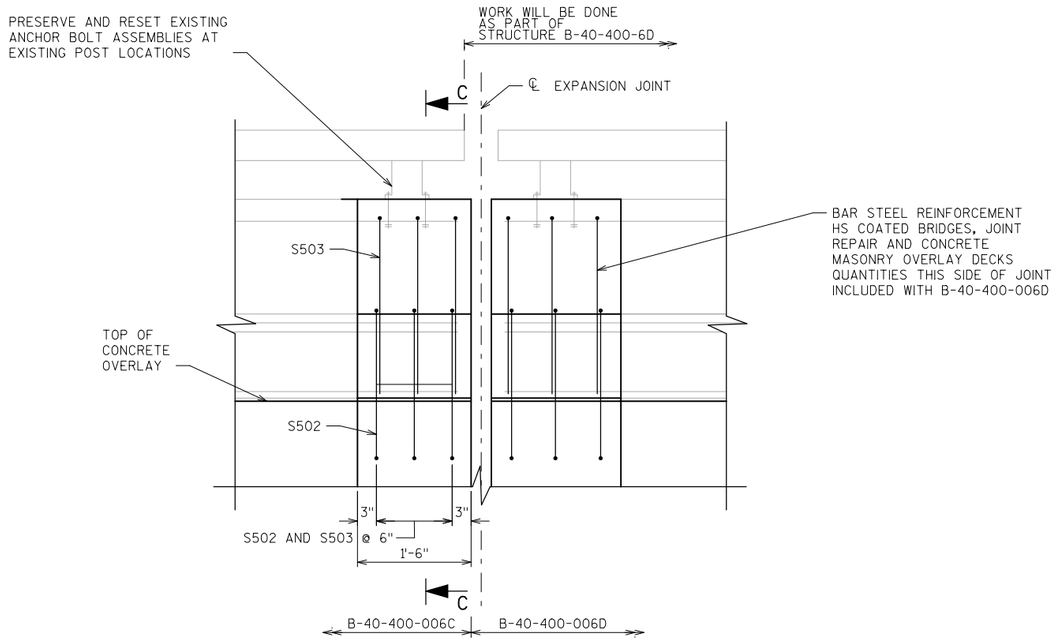
REMOVAL OF CONCRETE AT EXISTING JOINTS IS INCIDENTAL TO BID ITEM "JOINT REPAIR".

REPLACEMENT OF CONCRETE AT EXISTING JOINTS IS PAID UNDER BID ITEM " CONCRETE MASONRY OVERLAY DECKS".

EXERCISE CAUTION WHILE REMOVING CONCRETE AT THE JOINT LOCATIONS TO AVOID DAMAGE TO THE POST-TENSIONED STRANDS AND ANCHORAGES. SEE ORIGINAL PLANS DATED 1970 FOR POST TENSIONING INFORMATION.

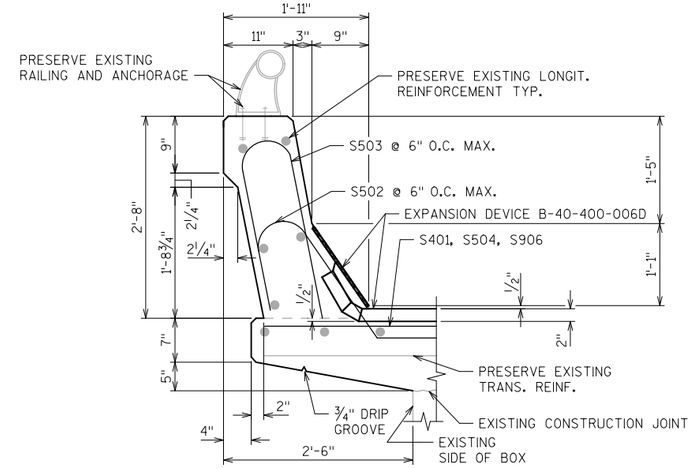
LEGEND

- ◆ REMOVE CONCRETE FOR INSTALLATION OF EXPANSION DEVICE, INCIDENTAL TO "JOINT REPAIR", AND REPLACE DECK WITH "CONCRETE MASONRY OVERLAY DECKS" AND PARAPET WITH "CONCRETE MASONRY BRIDGES."
- ☆ TAPER CONCRETE TO MATCH SPECIFIED JOINT OPENING. SEE PLANS OF THE UNIT WHICH INCLUDES THE EXPANSION DEVICE BID ITEM, FOR SPECIFIED JOINT OPENING VALUES.
- ◆ CONCRETE REMOVAL FOR "JOINT REPAIR" TO MATCH EXISTING CONSTRUCTION JOINT LOCATIONS, WHERE INDICATED. DO NOT REMOVE ANY CONCRETE BEYOND THE ORIGINAL CONSTRUCTION BLOCK-OUT LIMITS.



EAST PARAPET ELEVATION AT 6C-6D

(JOINT COVER PLATE NOT SHOWN, SEE PLANS OF B-40-400-006D)
(WEST PARAPET SIMILAR)



◆ SECTION C-C

(FOR PARAPET COVER PLATE DETAILS, SEE B-40-400-6D PLANS)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6C

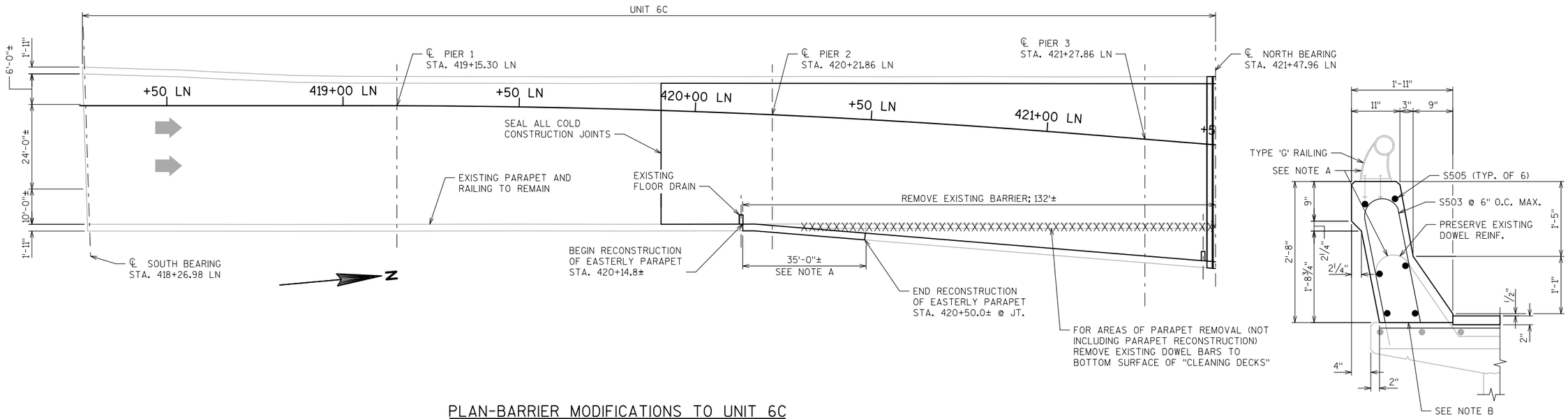
DRAWN BY ABP | PLANS CK'D. LMK

EXPANSION JOINT DETAILS

SHEET 5 OF 7
731

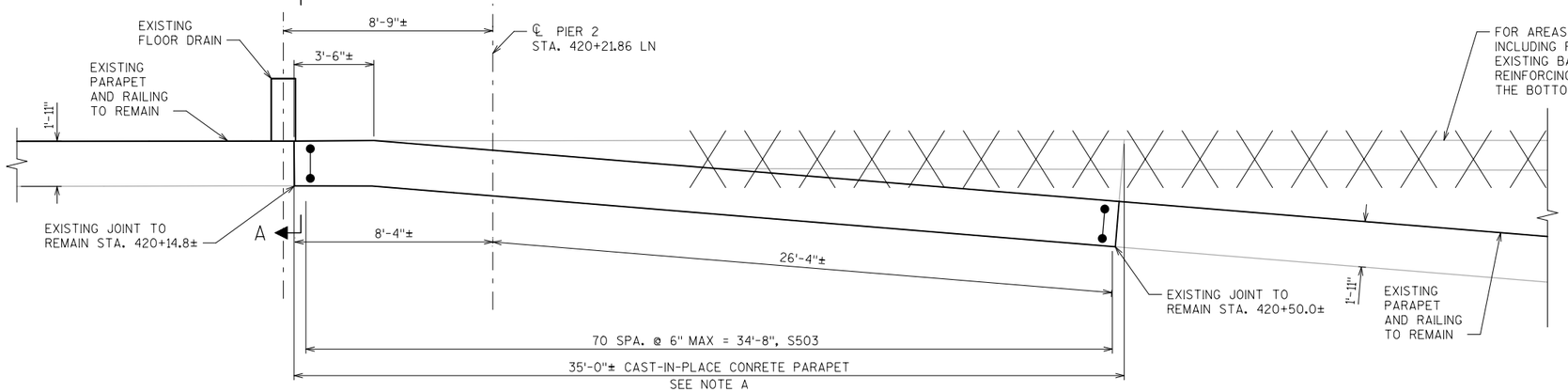
IP_PWP:d0330715\080305_xi.dgn 26-MAY-2015 12:10

STATE PROJECT NUMBER
1300-13-74



PLAN-BARRIER MODIFICATIONS TO UNIT 6C

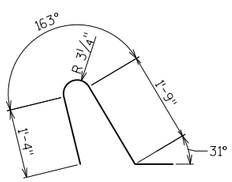
SECTION A-A



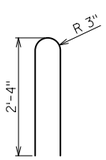
CAST-IN-PLACE PARAPET MODIFICATION DETAIL

BILL OF BARS — TOTAL COATED = 1,230 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
S401	16	8'-0"	X			JOINT TRANSVERSE
S502	6	4'-9"	X	X		PARAPET DOWEL
S503	77	4'-10"	X	X		PARAPET VERTICAL
S504	4	28'-6"	X			TOP SLAB TRANSVERSE
S505	6	34'-6"	X			PARAPET HORIZONTAL
◆ S906	4	28'-7"	X			JOINT TRANSVERSE



S502



S503

NOTES

A. EXISTING PARAPET AND RAILING TO BE REMOVED IN AREA BETWEEN EXISTING PARAPET JOINTS. FOR DETAILS OF CAST-IN-PLACE CONCRETE PARAPET MODIFICATION, SEE DETAIL. REMOVAL OF CONCRETE PARAPET TO BE INCLUDED IN BID ITEM REMOVING OLD STRUCTURE STA. 419+90 LN.
REMOVE EXISTING TYPE 'G' RAILING AND SAVE. REMOVE EXISTING CONCRETE PARAPET; PRESERVE AND CLEAN EXISTING REBAR AND ANCHOR BOLTS. REPLACE CONCRETE PARAPET AS SHOWN AND REINSTALL EXISTING RAILING, USING EXISTING RAILING POST ANCHORAGE ASSEMBLIES. COST OF REINSTALLING EXISTING RAILING (35 FT. ±) TO BE PAID AS "REMOVING AND RESETTING TUBULAR RAILING B-40-400-6C."

B. BEFORE CONCRETE IS POURED, CLEAN AND ROUGHEN EXISTING BRIDGE DECK FOR GOOD BOND.

LEGEND

◆ CONTRACTOR MAY USE SHORTER BARS WITH APPROVAL OF THE FIELD ENGINEER. USE MIN. LAP OF 3'-9" FOR #9 BARS. BARS SHALL BE PAID FOR USING LENGTHS PROVIDED IN BILL OR BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6C

DRAWN BY ABP | PLANS CK'D. LMK

PARAPET DETAILS

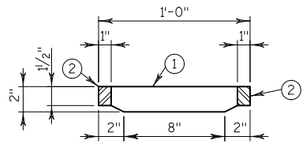
SHEET 6 OF 7
732

8

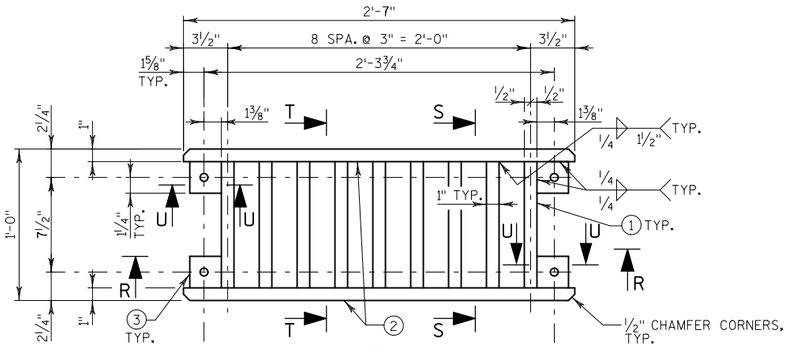
8

IP_PWP:d0330715\080306_pd.dan 26-MAY-2015 12:11

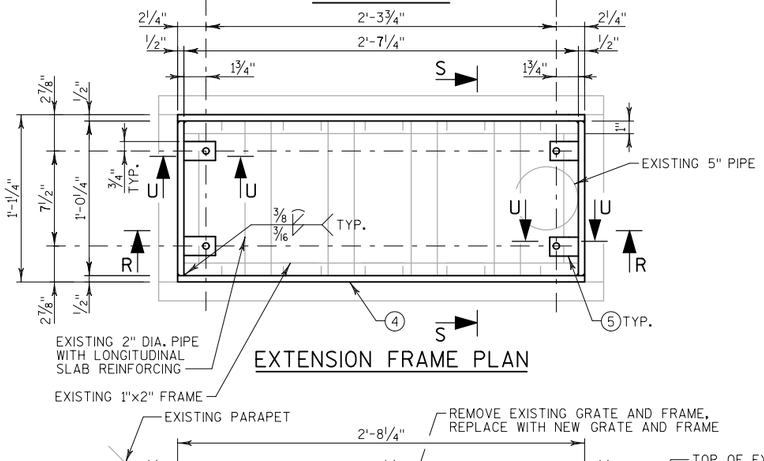
STATE PROJECT NUMBER
1300-13-74



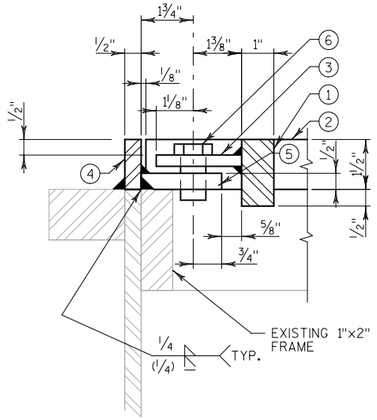
SECTION T-T



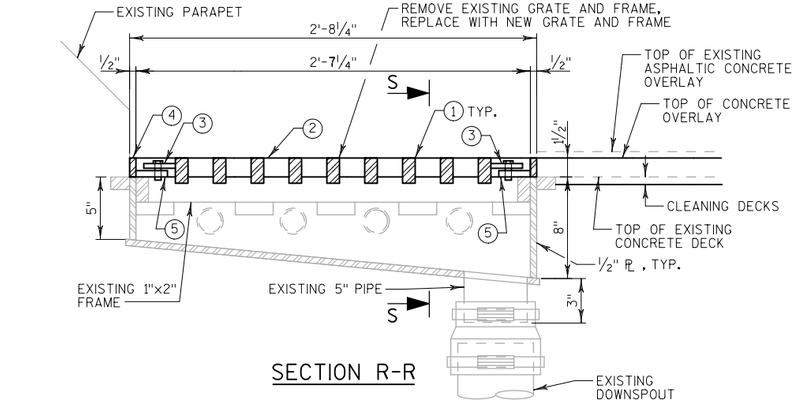
GRATE PLAN



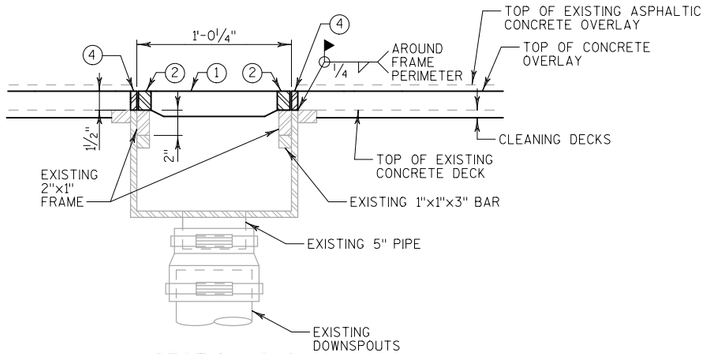
EXTENSION FRAME PLAN



SECTION U-U



SECTION R-R



SECTION S-S

NOTES

ALL GRATE AND FRAME MATERIAL, UNLESS NOTED OTHERWISE, SHALL BE ASTM A36 STEEL.

ALL STEEL SHALL BE GALVANIZED. WELDS SHALL BE MADE WITH LOW HYDROGEN ELECTRODES.

PRIOR TO GALVANIZING A NO. 6 BLAST CLEANING IS REQ'D.

SEAL WELD INSIDE OF DRAIN.

FABRICATION AND INSTALLATION OF NO. 1 THROUGH 3 SHALL BE INCLUDED WITH BID ITEM "FLOOR DRAIN GRATE STEEL".

FABRICATION AND INSTALLATION OF NO. 4 THROUGH 6 SHALL BE INCLUDED WITH BID ITEM "ADJUSTING FLOOR DRAINS".

THE FRAME FOR "ADJUSTING FLOOR DRAINS" AND THE "FLOOR DRAIN GRATE STEEL" SHALL BE ASSEMBLED AND BOLTED TOGETHER PRIOR TO SHIPPING.

LEGEND

1. 1" X 2" STEEL BAR.
2. 1" X 1½" STEEL BAR.
3. 2½" X 2½" X ⅜" STEEL PLATE WITH ⅝" DIA. HOLE FOR BOLT.
4. FRAME OF ½" X 1½" STEEL BARS.
5. 1½" X 2½" X ½" STEEL PLATE TAPPED FOR NO. 6.
6. ½" DIA. (13 THREADS PER INCH) HOT-DIPPED GALVANIZED STEEL BOLT WITH ANTI-SEIZE LUBRICANT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6C

DRAWN BY ABP | PLANS CK'D. LMK

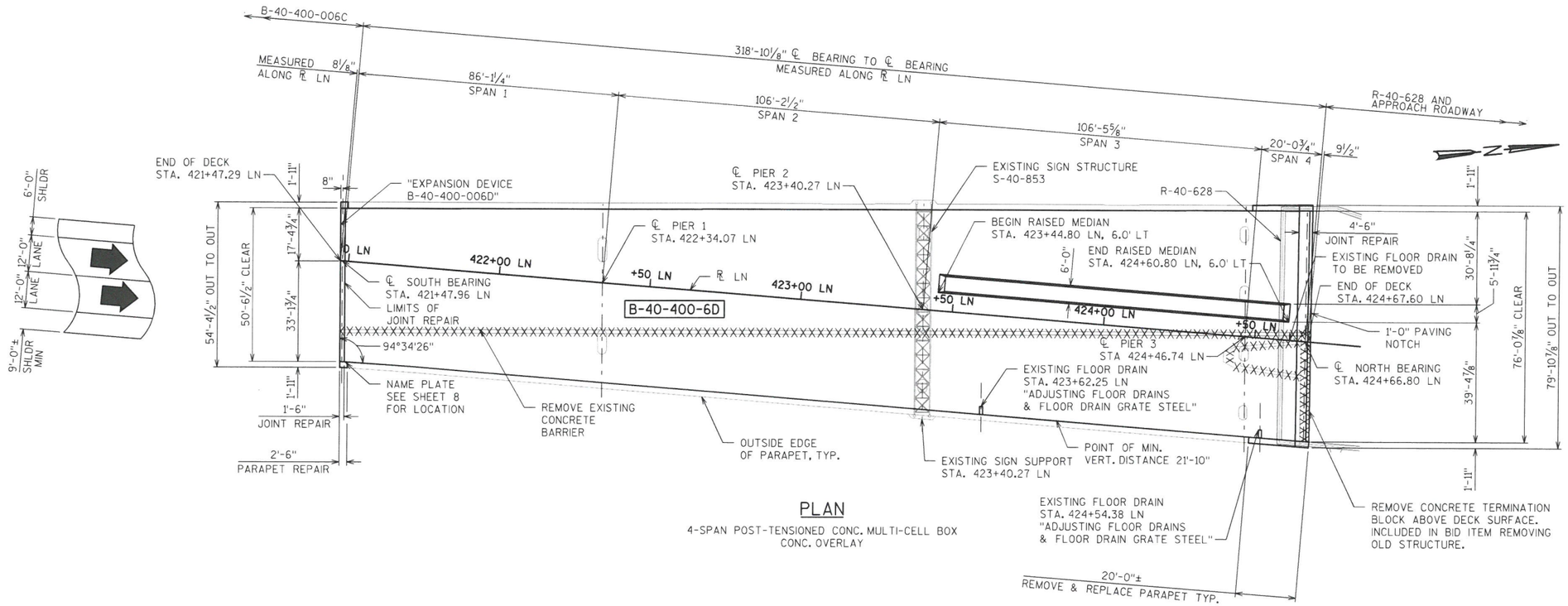
DRAIN DETAILS

SHEET 7 OF 7
733

IP_PWP:d0330715\080307_fd.dgn 26-MAY-2015 12:11

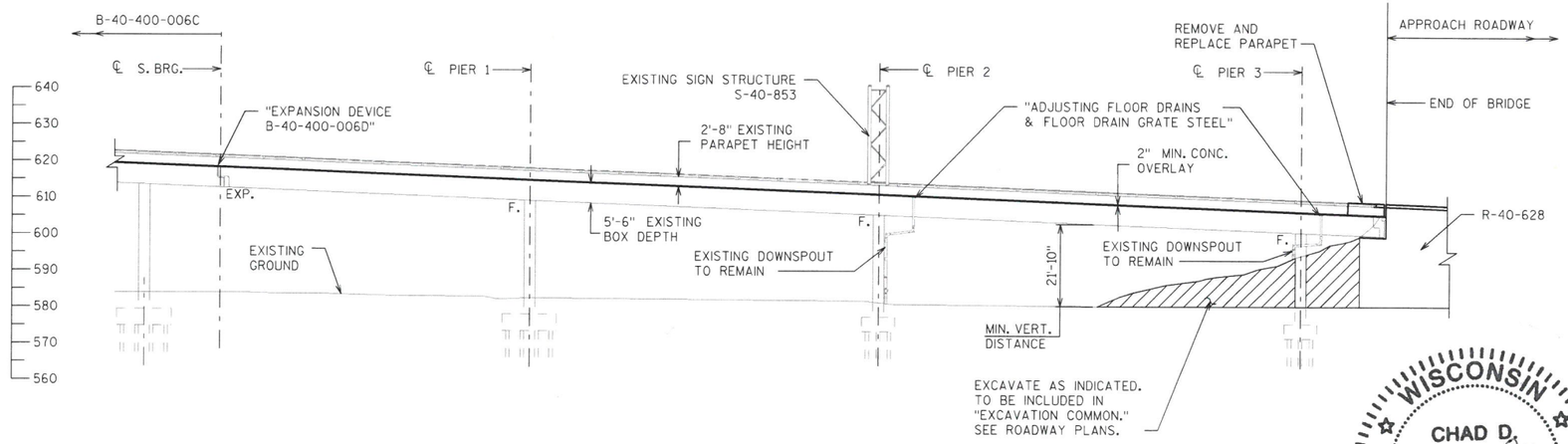
STATE PROJECT NUMBER

1300-13-74



PLAN

4-SPAN POST-TENSIONED CONC. MULTI-CELL BOX CONC. OVERLAY



ELEVATION

(LOOKING WEST)

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES AND QUANTITIES
3. TYPICAL SECTION
4. REMOVAL DETAILS
5. THERMOGRAPHIC INVESTIGATION
6. RAISED MEDIAN DETAILS
7. SOUTH EXPANSION JOINT DETAILS
8. PARAPET EXPANSION JOINT DETAILS
9. SUPERSTRUCTURE DETAILS
10. PARAPET TRANSITION
11. DRAIN DETAILS

NO.	DATE	REVISION	BY

Baker

MICHAEL BAKER JR., INC
7633 GANSER WAY, SUITE 206
MADISON, WI 53719

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/04/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-400-6D

IH 794 LAKE FREEWAY OVER LAND

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MSC	ABP	MMW	LMK

GENERAL PLAN

SHEET 1 OF 11

734

WISCONSIN
CHAD D. HALVERSON
E-34364
MADISON, WI
PROFESSIONAL ENGINEER
7/28/15

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
CHAD HALVERSON (608) 821-8700

8

8

c:\bwv8i-local\baker_projects\kevin.frank\d0330716\080401_gp.dgn 28-JUL-2015 13:31

STATE PROJECT NUMBER
1300-13-74

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE EXISTING STRUCTURE, B-40-400-006D, IS A 4 SPAN CONCRETE MULTI-CELL BOX GIRDER BRIDGE WITH AN AVERAGE CLEAR WIDTH OF 63 FEET 4 INCHES AND A DECK LENGTH OF 320 FEET 4± INCHES. THE ENTIRE BRIDGE DECK IS TO BE PREPARED FOR A NEW CONCRETE OVERLAY AND MODIFICATION OF THE PARAPETS. ADDITIONAL REMOVAL THAT IS NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS TO BE REMOVED FOR CONSTRUCTION OF THE NEW WORK OR CONCRETE OVERLAY IS TO BE INCLUDED UNDER THE BID ITEM "REMOVING OLD STRUCTURE STA. 423+40 LN".

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 2" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2½". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION. PROPOSED PROFILE TO MATCH EXISTING PROFILE MINUS ½"

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1 INCH DEEP SAW CUT.

CLEAN AND FILL EXISTING LONGITUDINAL AND TRANSVERSE CRACKS WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER. SEAL CRACKS IN DECK PRIOR TO CONCRETE OVERLAY SHALL BE PAID FOR UNDER BID ITEM "CRACK SEALING EPOXY".

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-400-006D".

"PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED TO THE ENTIRE ROADWAY CONCRETE DECK OVERLAY AND RAISED MEDIAN. "PIGMENTED PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED TO THE TOP AND ROADWAY FACES OF REPLACED PARAPETS.

A MINIMUM OF ½ INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM, "CLEANING DECKS".

EXERCISE CAUTION WHILE PERFORMING ANY CONCRETE REPAIR IN A POST-TENSIONED REGION TO AVOID DAMAGE TO THE POST-TENSIONING STRANDS OR ANCHORAGES. SEE ORIGINAL PLANS DATED 1970 FOR POST-TENSIONING INFORMATION.

EXISTING FLOOR DRAINS TO REMAIN IN PLACE. REMOVE TOP OF DECK IN DRAIN AREA AS DIRECTED BY THE FIELD ENGINEER TO ALLOW PLACING AND SLOPING OF 1½" MINIMUM CONCRETE OVERLAY AROUND THE RIM OF THE DRAIN.

THE FRAMES AROUND THE EXISTING FLOOR DRAINS SHALL BE MODIFIED UNDER THE BID ITEM "ADJUSTING FLOOR DRAINS".

THE GRATES OF THE EXISTING FLOOR DRAINS SHALL BE REMOVED AND REPLACED UNDER THE BID ITEM "FLOOR DRAIN GRATE STEEL".

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1975.

CONCRETE FOR THE PARAPET REPAIR AND RAISED MEDIAN SHALL BE PAID AS "CONCRETE MASONRY BRIDGES". ALL OTHER CONCRETE REPAIR SHALL BE PAID AS "CONCRETE MASONRY OVERLAY DECKS."

PERFORM "PREPARATION DECKS TYPE 1", "PREPARATION DECKS TYPE 2" AND "FULL-DEPTH DECK REPAIR" AS DIRECTED BY THE FIELD ENGINEER. QUANTITIES SHOWN ON THE PLANS ARE APPROXIMATE.

DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECK".

DRAINS REMOVED OR CLOSED IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
223	24+00.65 LM	32.65' RT.	BERNTSEN FENO MONUMENT WITH ALUMINUM CAP	585.93

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL
203.0200.2009	REMOVING OLD STRUCTURE STATION 423+40 LN	LS	1
203.0210.S.2009	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-400-6D	LS	1
203.0225.S.2009	DEBRIS CONTAINMENT STRUCTURE B-40-400-6D	LS	1
502.0100	CONCRETE MASONRY BRIDGES	CY	22
502.0717.S	CRACK SEALING EPOXY	LF	10
502.3100.2001	EXPANSION DEVICE STRUCTURE B-40-400-6D	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,258
502.3210.S	PIGMENTED PROTECTIVE SURFACE TREATMENT	SY	18
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1,800
509.0301	PREPARATION DECKS TYPE 1	SY	340
509.0302	PREPARATION DECKS TYPE 2	SY	136
509.0500	CLEANING DECKS	SY	2,252
509.1000	JOINT REPAIR	SY	55
509.2000	FULL-DEPTH DECK REPAIR	SY	3
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	200
509.9010.S.2004	REMOVING ASPHALTIC CONCRETE DECK OVERLAY B-40-400-6D	SY	2,252
513.9005.S.2004	REMOVING AND RESETTING TUBULAR RAILING B-40-400-6D	LS	1
514.0900	ADJUSTING FLOOR DRAINS	EACH	2
SPV.0060.2002	FLOOR DRAIN GRATE STEEL	EACH	2
	NON-BID ITEMS		
	FILLER	SIZE	½ " & ¾ "

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS-20
INVENTORY RATING: HS-20
OPERATING RATING: HS-34
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 205 KIPS

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY BRIDGES
SUPERSTRUCTURE.....f'c = 4,000 P.S.I.

CONCRETE MASONRY OVERLAY DECKS.....f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT
HIGH STRENGTH, GRADE 60.....fy = 60,000 P.S.I.

TRAFFIC DATA:

NB OFF-RAMP TO LINCOLN MEMORIAL DRIVE

ADT (2014) = 6,600
ADT (2036) = 9,000
RDS = 35 MPH

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6D

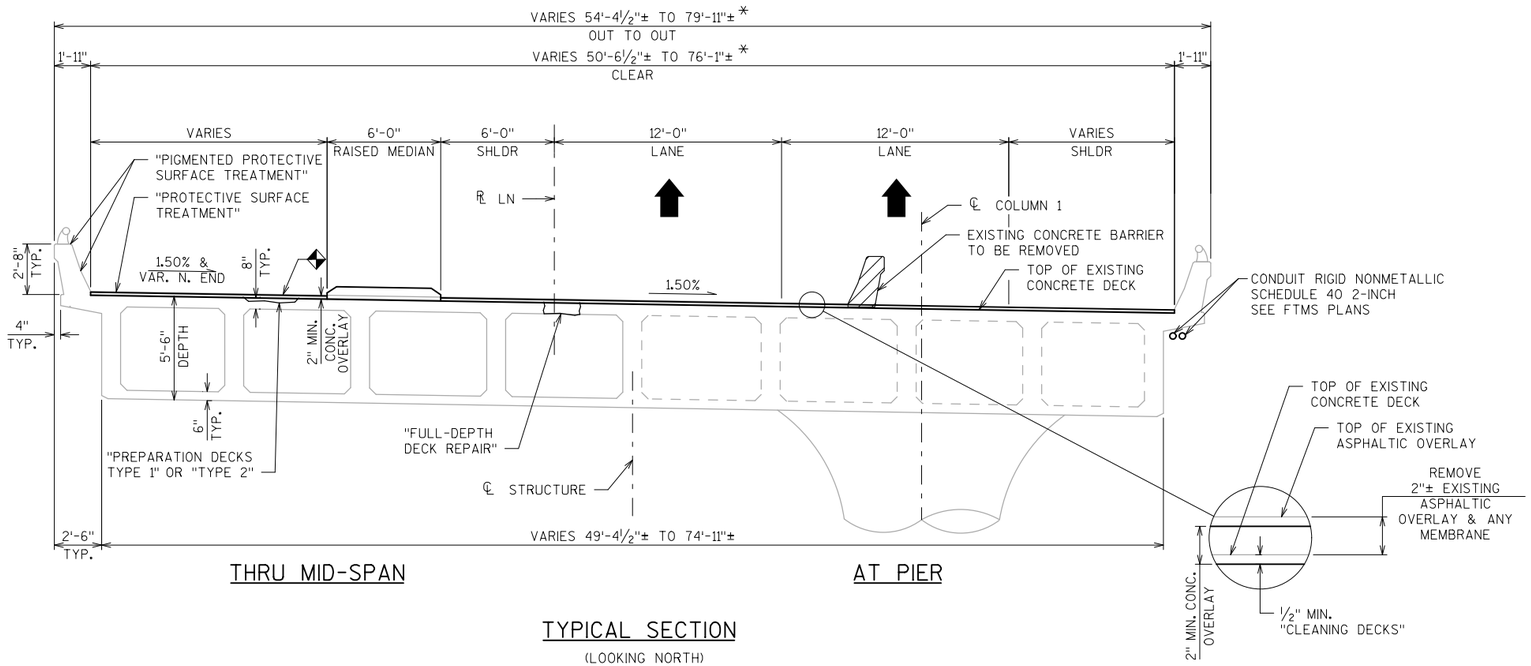
DRAWN BY MMW | PLANS CK'D. LMK

GENERAL NOTES AND QUANTITIES

SHEET 2 OF 11
735

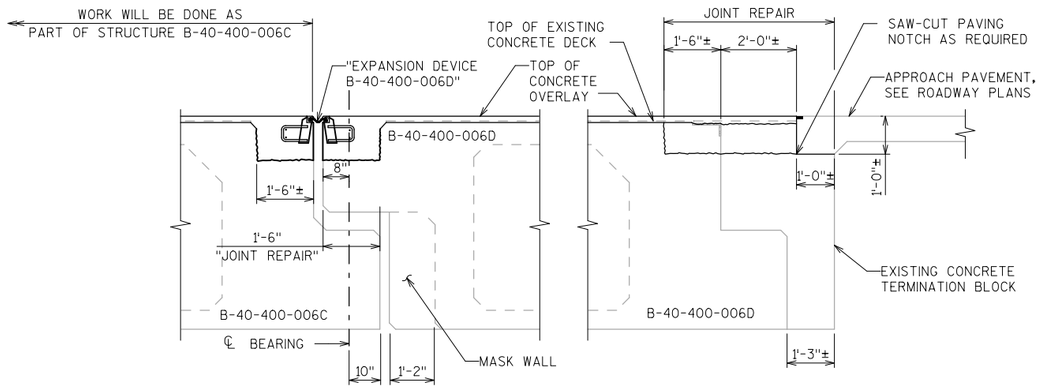
c:\pwv8i-local\baker_projects\kevin.frank\d0330716\080402_gn.dgn 28-JUL-2015 13:33

STATE PROJECT NUMBER
1300-13-74



TYPICAL SECTION

(LOOKING NORTH)



AT SOUTH EXPANSION JOINT

(LOOKING WEST)

AT NORTH CANTILEVER JOINT

(LOOKING WEST)

LEGEND

◆ REMOVE EXISTING 2" ± ASPHALTIC CONCRETE OVERLAY AND SHEET MEMBRANE TO SOUND CONCRETE.

* DIMENSIONS MEASURED NORMAL TO THE WEST DECK EDGE

▨ CONCRETE REMOVAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6D

DRAWN BY MMW | PLANS CK'D. LMK

TYPICAL SECTION

SHEET 3 OF 11

736

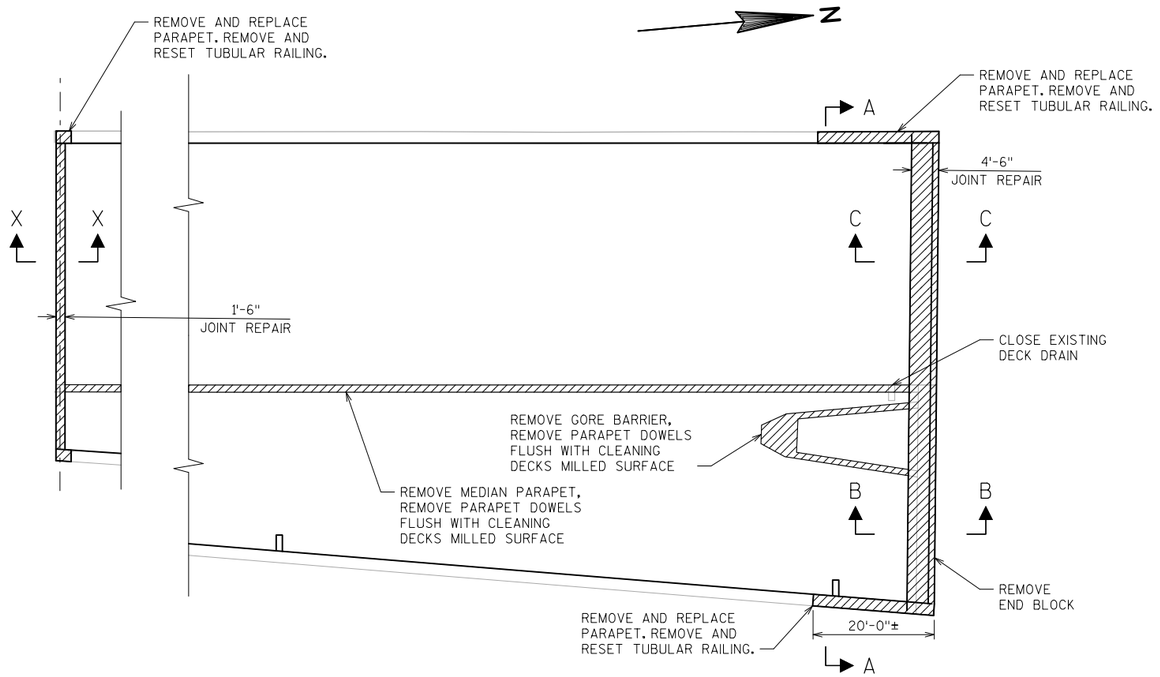
8

8

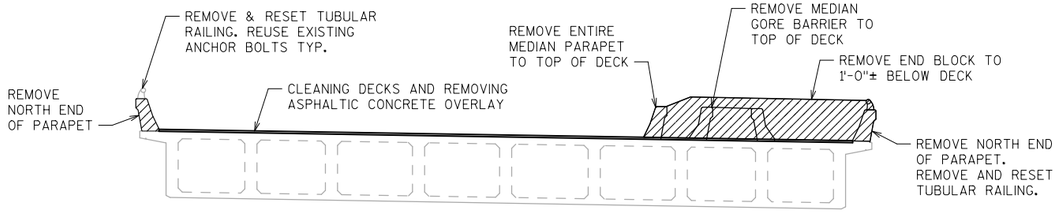
IP_PWP:d0330716\080403_xs.dgn 26-MAY-2015 12:12

STATE PROJECT NUMBER

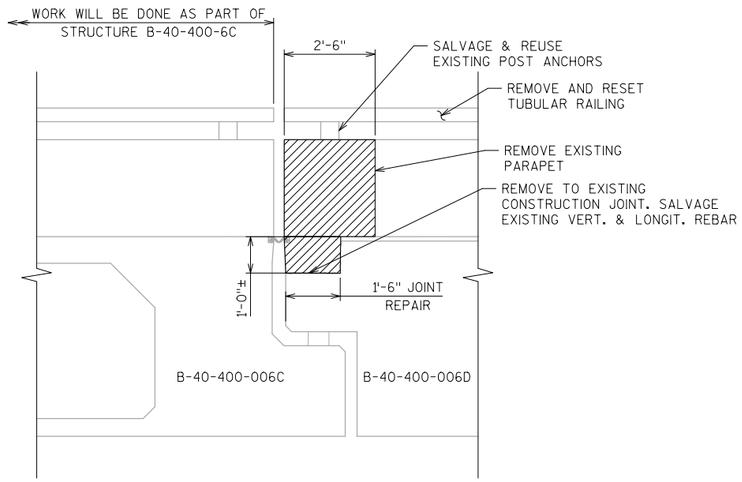
1300-13-74



PLAN VIEW

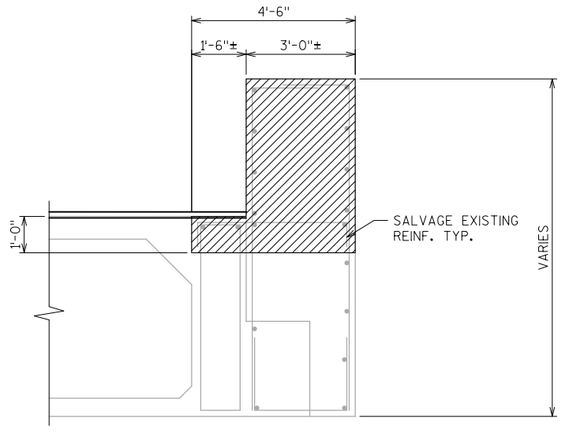


SECTION A-A

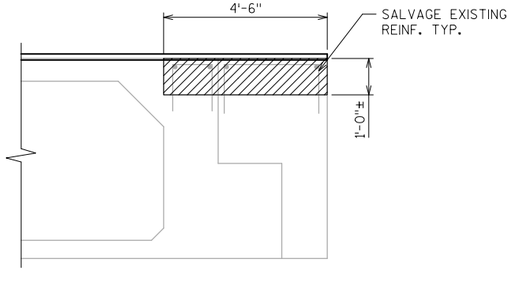


SECTION X-X

(AT SOUTH EXPANSION JOINT, LOOKING WEST)



SECTION B-B



SECTION C-C

LEGEND

CONCRETE REMOVAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6D

DRAWN BY ABP | PLANS CK'D. LMK

REMOVAL DETAILS

SHEET 4 OF 11

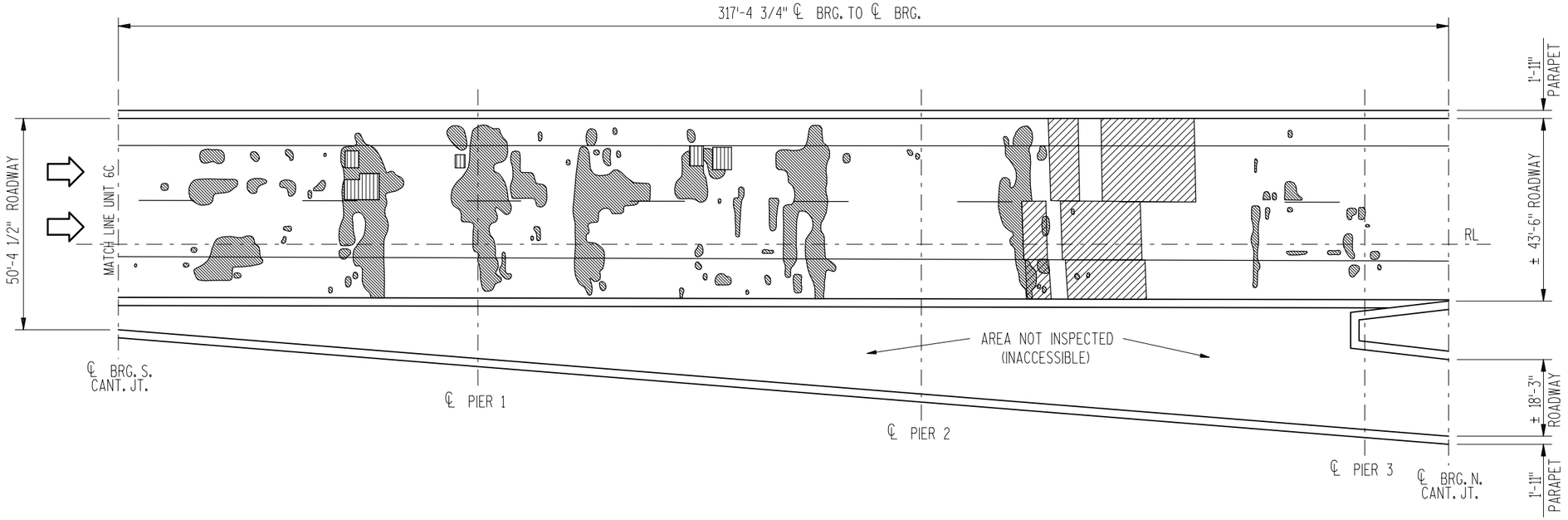
737

8

8

IP_PWP:d0330716\080404_re.dgn 26-MAY-2015 12:13

STATE PROJECT NUMBER
1300-13-74



PLAN

DECK INSPECTION RESULTS

FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-40-400-6D	
ITEM	UNIT	QUANT.	%
TOTAL AREA	ft^2	13627	
SHADE/DEBRIS	ft^2	1153	
DELAMINATION	ft^2	1851	14.8
SPALL	ft^2	0	0
DEBOND	ft^2	0	0
ASPHALT PATCH	ft^2	0	0
CONCRETE PATCH	ft^2	107	0.9

LEGEND

DELAMINATION
SPALL
DEBOND
ASPHALT PATCH
CONCRETE PATCH
SHADE/DEBRIS

N

SCALE 0' 5' 15' 30'

SURFACE TYPE: BITUMINOUS OVERLAY
INFRARED INSPECTION DATES: 10/29/12, 11/2/12 & 11/27/12

NOTES

THIS SHEET IS FOR INFORMATION ONLY.

INFRARED THERMOGRAPHIC DECK INSPECTION RESULTS REPORTED BY AECOM ON 12/12/2012.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6D

DRAWN BY ABP | PLANS CK'D. LMK

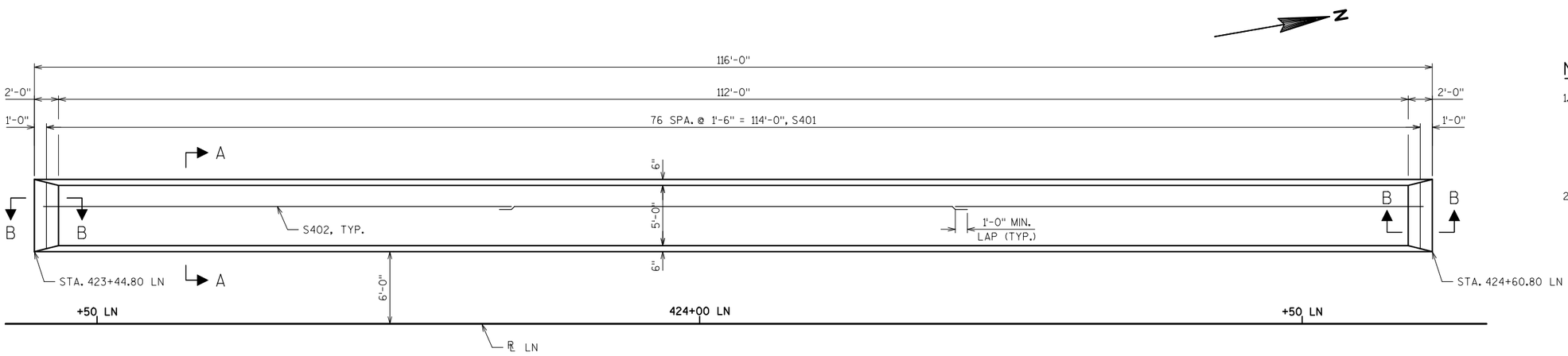
THERMOGRAPHIC INVESTIGATION

SHEET 5 OF 11
738

8

8

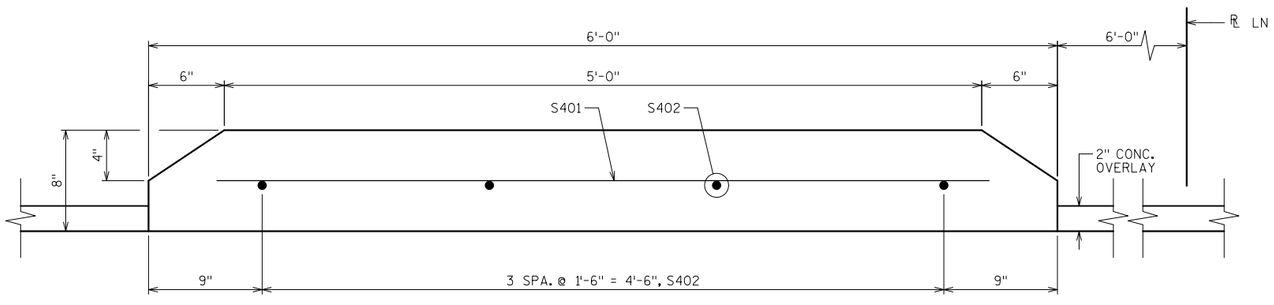
STATE PROJECT NUMBER
1300-13-74



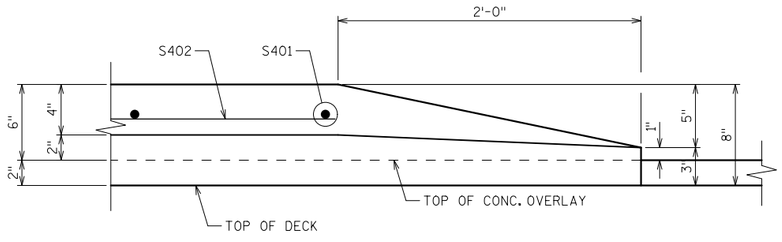
PLAN

NOTES

1. CLEAN ALL LOOSE MATERIAL ON THE DECK AT THE MEDIAN LOCATION PRIOR TO MEDIAN PLACEMENT USING HIGH PRESSURE WATER OR AIR, ENSURING ALL FREE-STANDING WATER IS REMOVED PRIOR TO MEDIAN PLACEMENT. NEAT CEMENT IS REQUIRED AS PER 509.3.9.2 OF THE STANDARD SPECIFICATIONS.
2. PLACE CONCRETE OVERLAY AFTER RAISED MEDIAN.



SECTION A-A



SECTION B-B

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6D

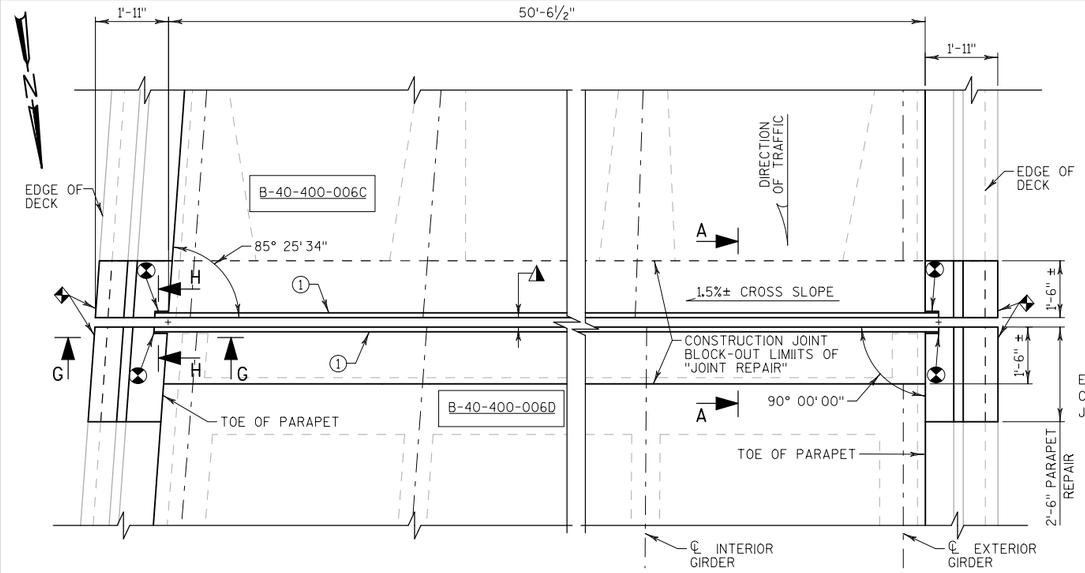
DRAWN BY MDM | PLANS CK'D. LMK

RAISED MEDIAN DETAILS

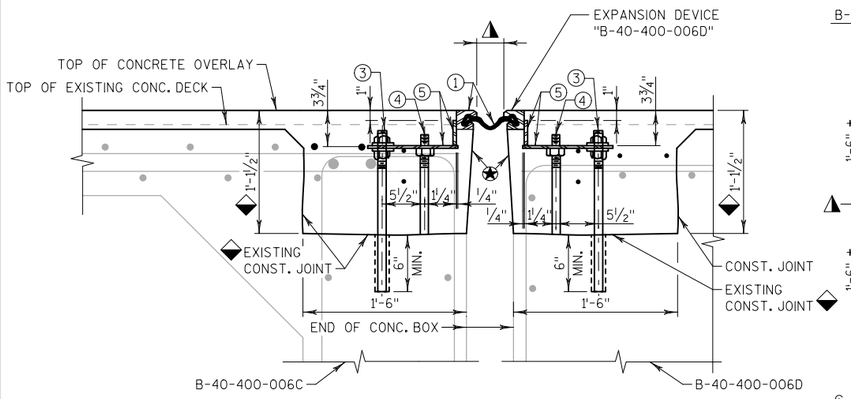
SHEET 6 OF 11
739

IP_PWP:d0330716\080406_md.dgn 26-MAY-2015 12:13

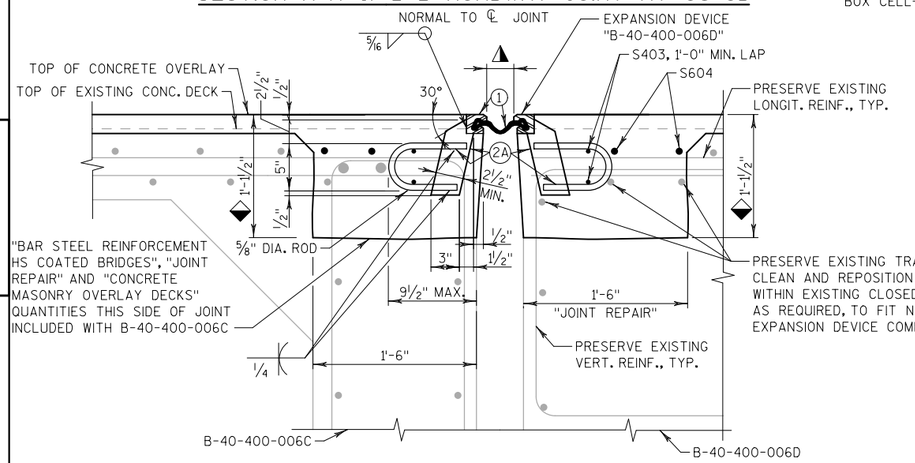
STATE PROJECT NUMBER
1300-13-74



EXPANSION DEVICE PLAN

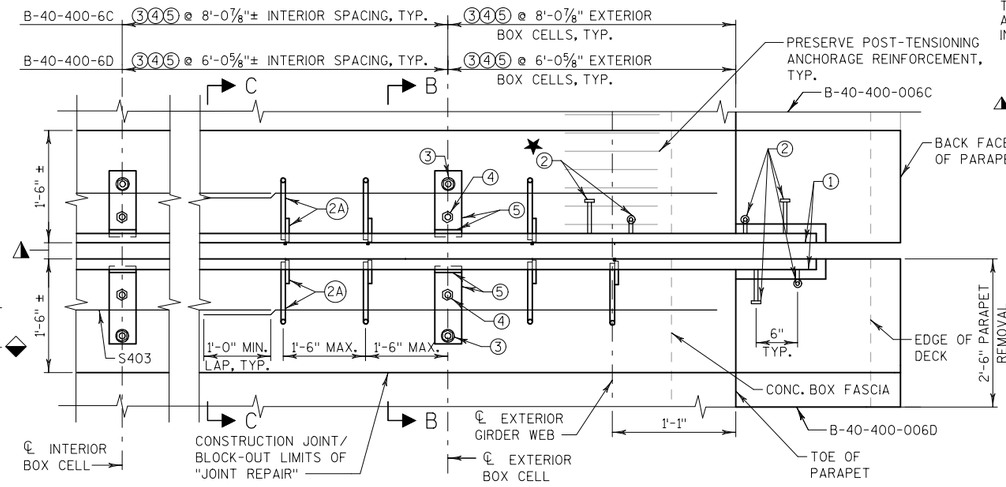


SECTION A-A & B-B ROADWAY JOINT AT 6C-6D

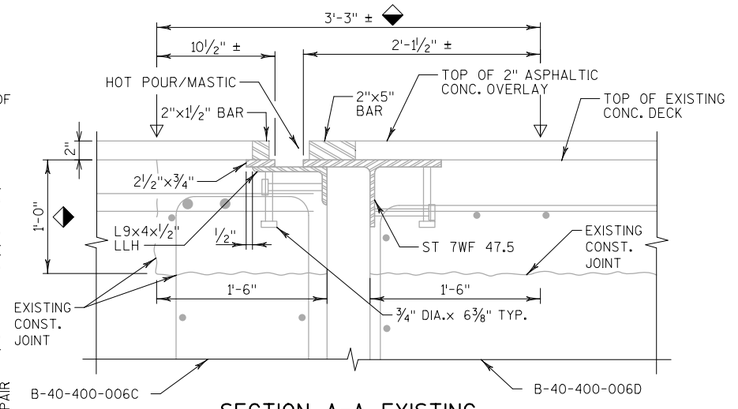


SECTION A-A & C-C ROADWAY JOINT AT 6C-6D

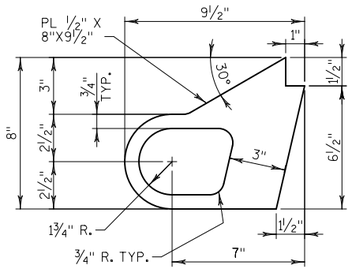
NORMAL TO ℄ JOINT



PARTIAL PLAN



SECTION A-A EXISTING



ALTERNATE STRIP SEAL ANCHOR

TEMP	6C-6D
85°	1¼"
75°	1½"
65°	1¾"
55°	2"
45°	2¼"
35°	2½"
25°	2¾"
15°	3"
5°	3¼"

▲ SHADED UNDERSIDE OF DECK TEMPERATURE (°F)

TEMPERATURE TABLE ◨

NOTES

REPLACE THE ENTIRE STRIP SEAL FROM EDGE TO EDGE OF BRIDGE. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE A MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATIONS IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS, HARDWARE, AND ALL ITEMS SHOWN ON THIS SHEET WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-400-006D".

APPLY CORROSION INHIBITOR COATING TO ANY BARE METAL, INCIDENTAL TO BID ITEM "JOINT REPAIR".

REMOVAL OF CONCRETE AT EXISTING JOINTS IS INCIDENTAL TO BID ITEM "JOINT REPAIR".

REPLACEMENT OF CONCRETE AT EXISTING JOINTS IS INCIDENTAL TO BID ITEM " CONCRETE MASONRY OVERLAY DECKS".

FOR SECTIONS G-G AND H-H, SEE SHEET 8.

EXERCISE CAUTION WHILE REMOVING CONCRETE AT THE JOINT LOCATIONS TO AVOID DAMAGE TO THE POST-TENSIONED STRANDS AND ANCHORAGES. SEE ORIGINAL PLANS DATED 1970 FOR POST TENSIONING INFORMATION.

LEGEND

▲ ① NEOPRENE STRIP SEAL 4-INCH AND STEEL EXTRUSIONS. SET JOINT OPENING ACCORDING TO TEMPERATURE TABLE. JOINT OPENINGS ARE GIVEN NORMAL TO JOINT.

② STUDS ⅝" DIA. X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

③ ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD IN FIELD DRILLED HOLES AT MIDPOINT OF BOX CELLS.

④ ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT. PLACE AT MIDPOINT OF BOX CELLS. DO NOT PLACE IN VICINITY OF GIRDER/BOX WEBS. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.

▲ JOINT OPENING MEASURED NORMAL TO JOINT.

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING IN PARAPET.

◆ CONCRETE REMOVAL FOR "JOINT REPAIR" TO MATCH EXISTING CONSTRUCTION JOINT LOCATIONS, WHERE INDICATED. OBTAIN APPROVAL FROM THE FIELD ENGINEER FOR REMOVAL BEYOND THE ORIGINAL CONSTRUCTION BLOCK-OUT LIMITS.

★ WELD NO. 2 TO EXTRUSIONS IN REGIONS OF POST-TENSIONING ANCHORAGE REINFORCEMENT CENTERED OVER EXISTING GIRDERS, TO MINIMIZE DISPLACEMENT OF EXISTING REINFORCEMENT.

◆ REMOVE CONCRETE FOR INSTALLATION OF EXPANSION DEVICE, INCIDENTAL TO "JOINT REPAIR", AND REPLACE PARAPET AND DECK OVERHANG WITH "CONCRETE MASONRY BRIDGES" TO MATCH EXISTING.

▽▽ REMOVE CONCRETE AND EMBEDDED STEEL COMPONENTS BETWEEN EXISTING AND NEW VERTICAL CONSTRUCTION JOINTS AND ABOVE EXISTING HORIZONTAL CONSTRUCTION JOINTS, AS SHOWN, WHILE PRESERVING ALL LONGITUDINAL REINFORCEMENT, CLOSED STIRRUPS, AND TRANSVERSE REINFORCEMENT WITHIN CLOSED STIRRUPS. SAW CUT TOP 1" OF CONCRETE AT VERTICAL CONSTRUCTION JOINTS.

✪ TAPER CONCRETE TO MATCH SPECIFIED JOINT OPENING.

◨ A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6D

DRAWN BY	ABP	PLANS CK'D.	LMK

SOUTH EXPANSION JOINT DETAILS

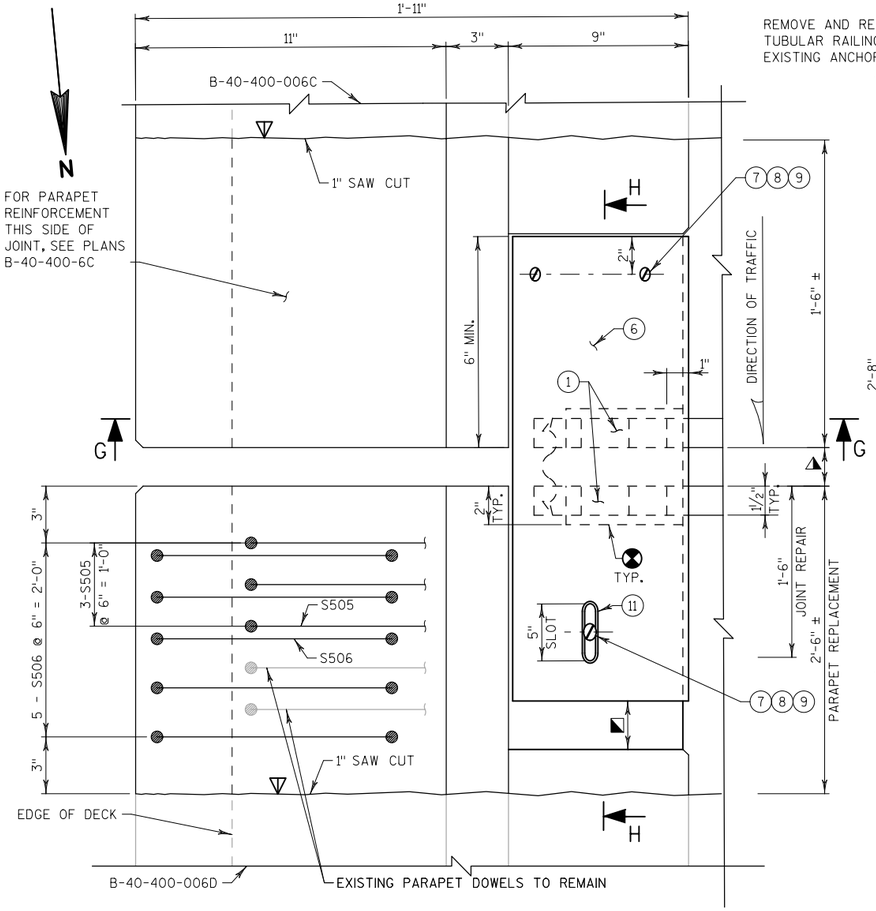
SHEET 7 OF 11
740

8

8

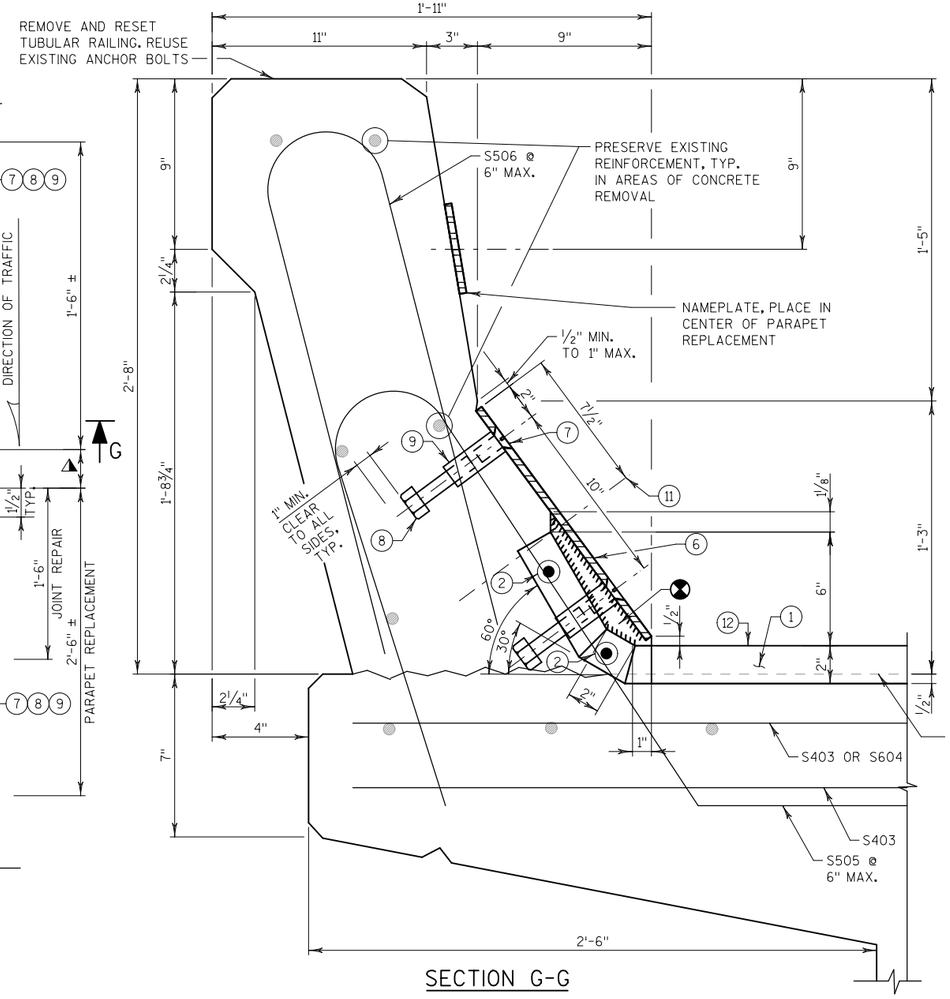
IP_PWP:d0330716\080407_xi.dgn 26-MAY-2015 12:14

STATE PROJECT NUMBER
1300-13-74



PLAN AT PARAPET

(EAST PARAPET SHOWN, WEST PARAPET SIMILAR)



SECTION G-G

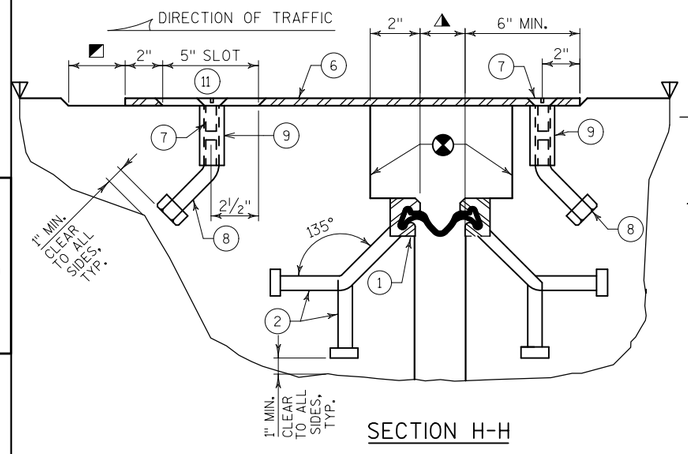
TYPICAL AT PARAPET JOINT

NOTES

SEE SHEET 7 FOR NOTES.

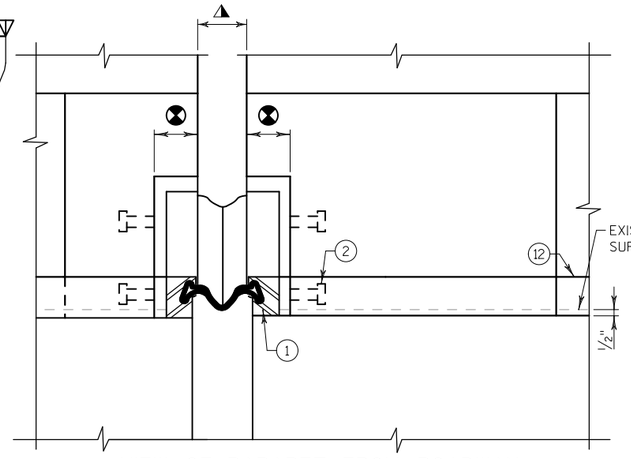
LEGEND

- ▲ (1) NEOPRENE STRIP SEAL 4-INCH AND STEEL EXTRUSIONS. SET JOINT OPENING ACCORDING TO TEMPERATURE TABLE. JOINT OPENINGS ARE GIVEN NORMAL TO JOINT. SEE SHEET 7 FOR TEMPERATURE TABLE.
- (2) STUDS ⅝" DIA. × 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- (6) GALVANIZED PLATE ⅜" × 15" × 2'-0" LONG WITH HOLES FOR NO.7.
- (7) ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
- (8) ¾" DIA. × 4" GALVANIZED HEX HEAD BOLT, BEND 45°.
- (9) ¾" DIA. × 2¼" GALVANIZED THREADED COUPLING.
- (11) 1" × 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.
- (12) TOP OF 2" CONCRETE OVERLAY.
- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.
- ▽ SAW CUT PARAPET 1" MAX. DEPTH & REMOVE CONCRETE. PRESERVE EXISTING REINFORCEMENT.
- ◩ JOINT OPENING DIM. ALONG SKEW PLUS ½".
- ▲ JOINT OPENING MEASURED NORMAL TO JOINT.



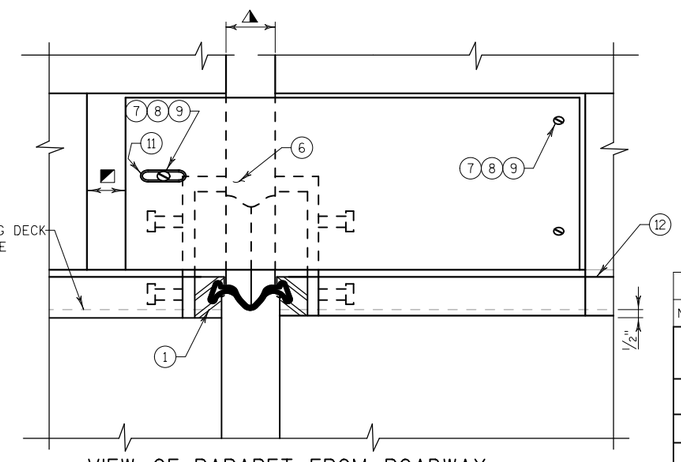
SECTION H-H

ITEM (2) ONLY USED IN PARAPET



VIEW OF PARAPET FROM ROADWAY

WITHOUT COVER PLATE



VIEW OF PARAPET FROM ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6D

DRAWN BY ABP | PLANS CK'D. LMK

PARAPET EXPANSION JOINT DETAILS

SHEET 8 OF 11

741

8

8

IP_PWP:d0330716\080408_xi.dan 26-MAY-2015 12:14

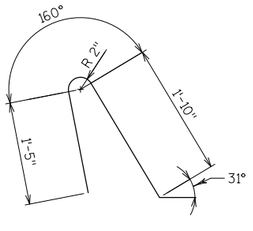
STATE PROJECT NUMBER
1300-13-74

BILL OF BARS

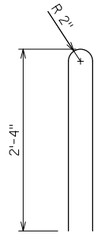
TOTAL COATED = 1,800 LBS

BAR MARK	NO. REQ'D	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
S401	77	5'-0"	X				RAISED MEDIAN - TRANSVERSE
S402	12	38'-8"	X				RAISED MEDIAN - LONGITUDINAL
S403	16	7'-6"	X				SOUTH JOINT REPAIR - TRANSVERSE
S604	2	50'-0	X				SOUTH JOINT REPAIR - TRANSVERSE
S505	6	4'-9	X		X		SOUTH JOINT REPAIR - PARAPET DOWELS
S506	10	4'-10	X		X		SOUTH JOINT REPAIR - PARAPET VERTICAL
S507	44	7'-10	X				NORTH JOINT REPAIR - TRANSVERSE
S508	12	19'-6	X				PARAPET TRANSISTION - HORIZONTAL
S509	60	5'-0	X		X		PARAPET TRANSISTION - VERTICAL

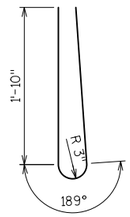
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR SIZE SIGNIFIES THE BAR SIZE.
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.



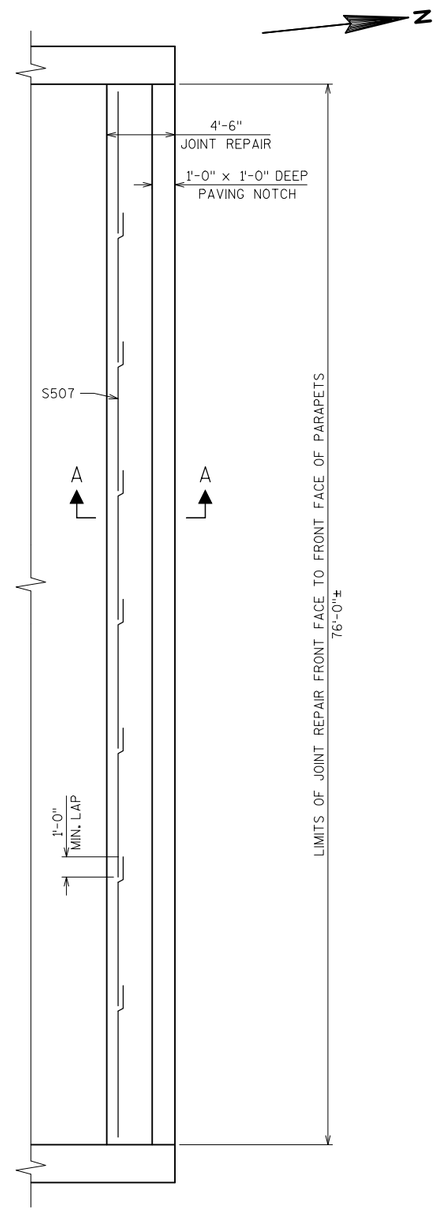
S505



S506

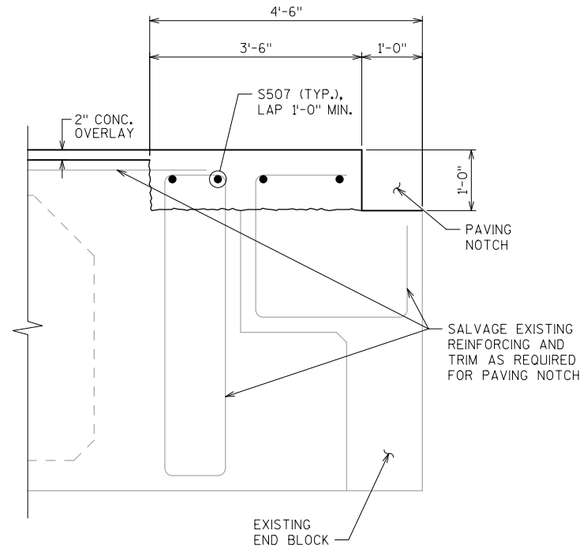


S509



PLAN

(AT NORTH CANTILEVER JOINT)



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6D

DRAWN BY MDM | PLANS CK'D. LMK

SUPERSTRUCTURE DETAILS

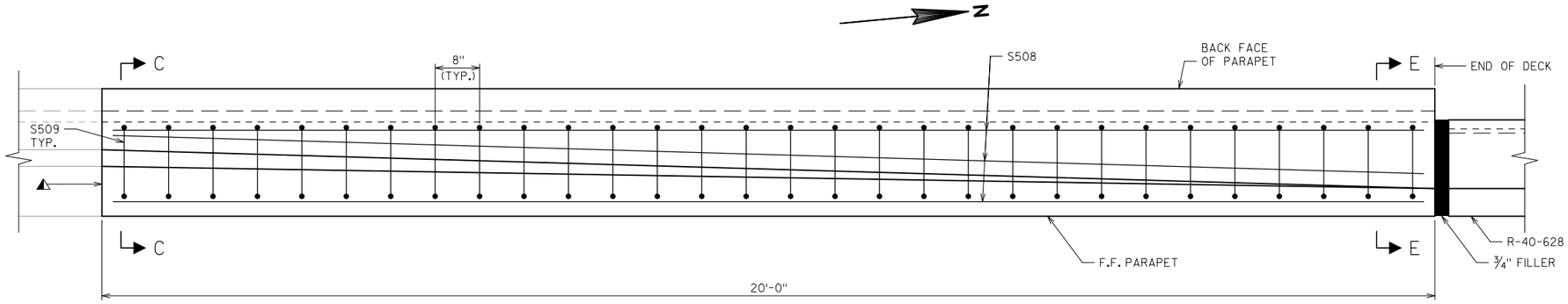
SHEET 9 OF 11

742

8

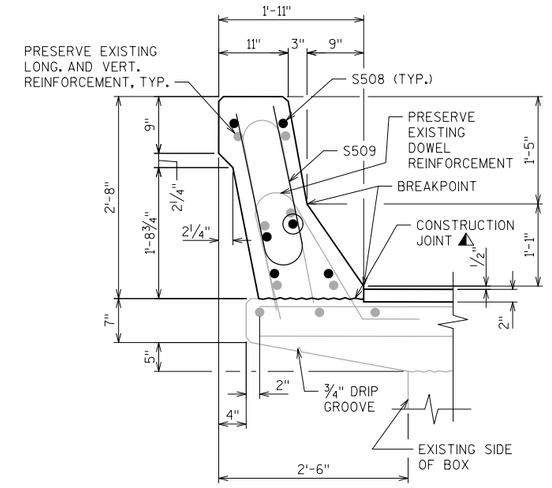
8

STATE PROJECT NUMBER
1300-13-74

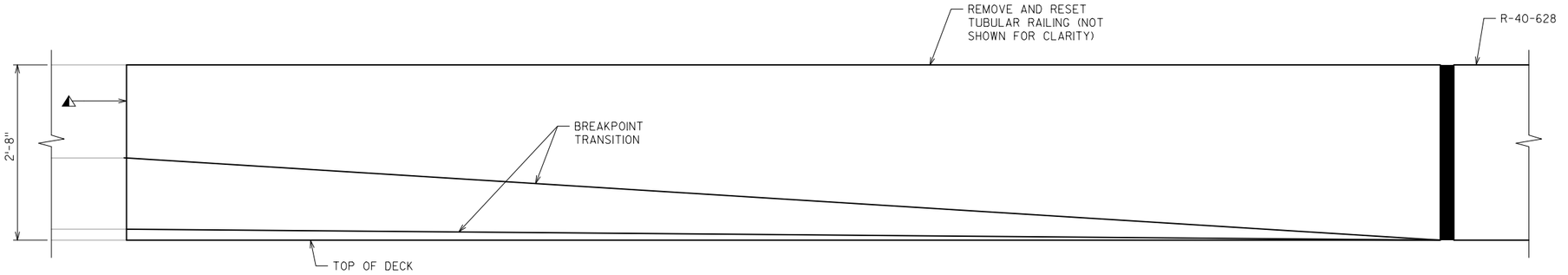


PLAN

WEST PARAPET SHOWN, EAST PARAPET SIMILAR

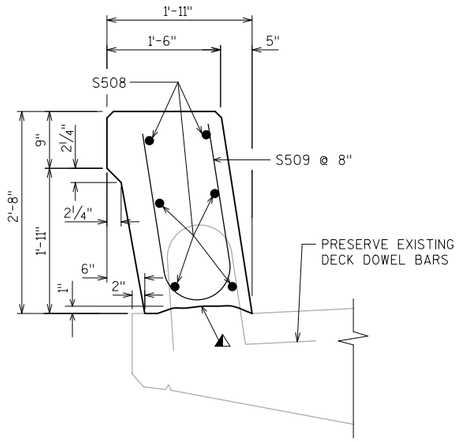


SECTION C-C

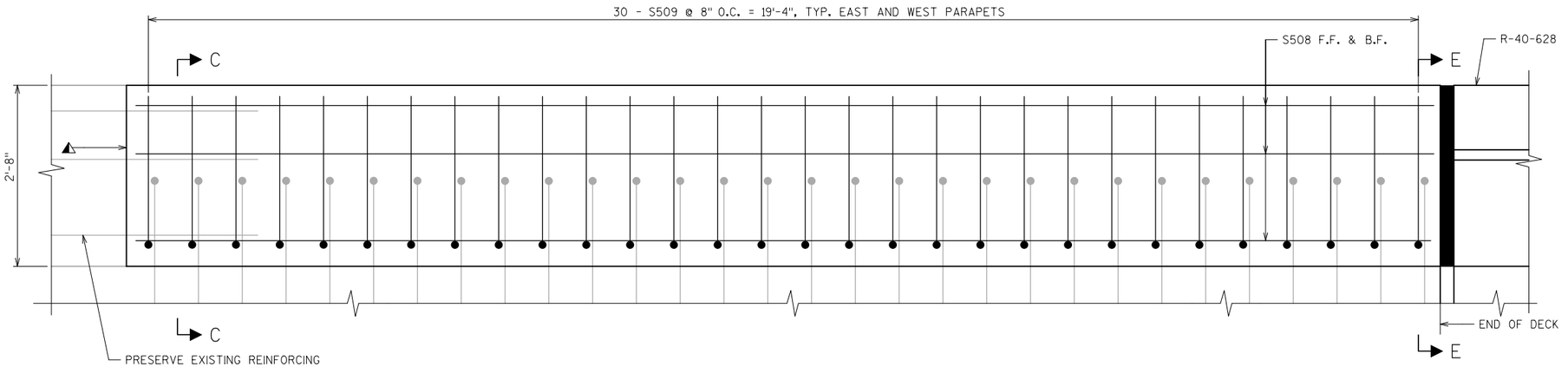


INSIDE ELEVATION

(SHOWING TRANSITION)



SECTION E-E



INSIDE ELEVATION

(SHOWING REINFORCEMENT)

LEGEND

⚠ CLEAN EXISTING CONST. JOINT PRIOR TO PLACING NEW PARAPET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6D

DRAWN BY ABP | PLANS CK'D. LMK

PARAPET TRANSITION

SHEET 10 OF 11

743

8

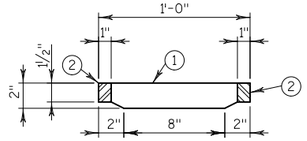
8

1 2 3 5

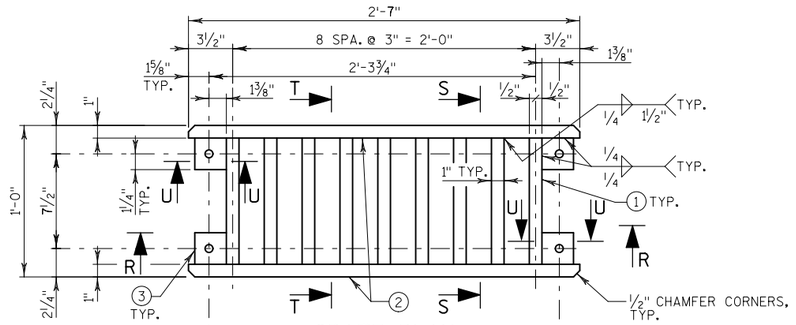
IP_PWP:d0330716\080410_pp.dgn.DGN 26-MAY-2015 12:15

STATE PROJECT NUMBER

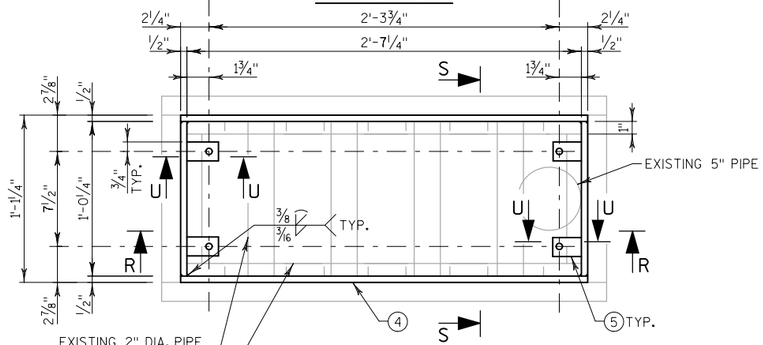
1300-13-74



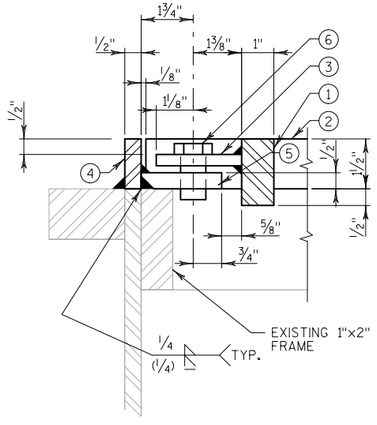
SECTION T-T



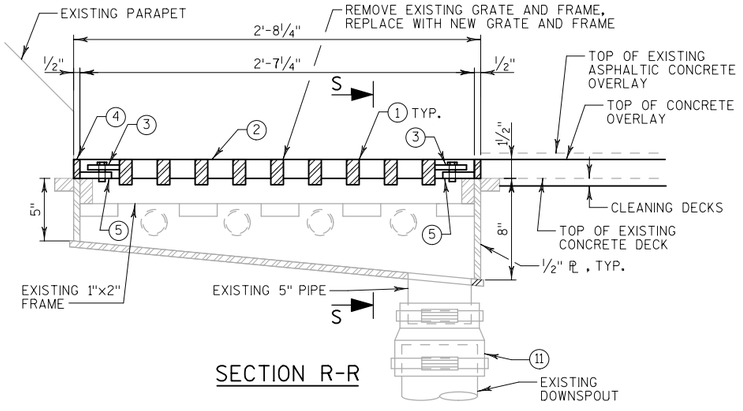
GRATE PLAN



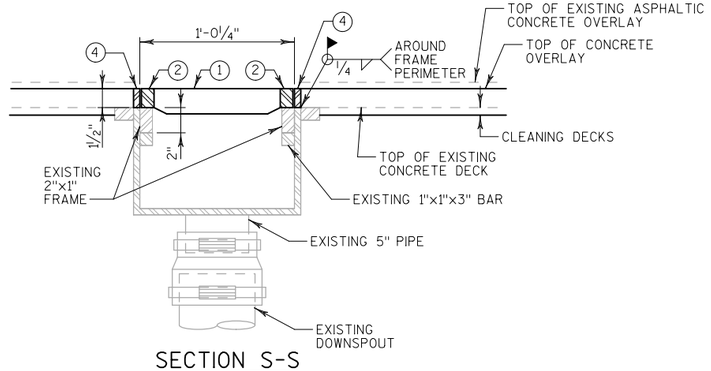
EXTENSION FRAME PLAN



SECTION U-U



SECTION R-R



SECTION S-S

NOTES

ALL GRATE AND FRAME MATERIAL, UNLESS NOTED OTHERWISE, SHALL BE ASTM A36 STEEL.

ALL STEEL SHALL BE GALVANIZED. WELDS SHALL BE MADE WITH LOW HYDROGEN ELECTRODES.

PRIOR TO GALVANIZING A NO. 6 BLAST CLEANING IS REQ'D.

SEAL WELD INSIDE OF DRAIN.

FABRICATION AND INSTALLATION OF NO. 1 THROUGH 3 SHALL BE INCLUDED WITH BID ITEM "FLOOR DRAIN GRATE STEEL".

FABRICATION AND INSTALLATION OF NO. 4 THROUGH 6 SHALL BE INCLUDED WITH BID ITEM "ADJUSTING FLOOR DRAINS".

THE FRAME FOR "ADJUSTING FLOOR DRAINS" AND THE "FLOOR DRAIN GRATE STEEL" SHALL BE ASSEMBLED AND BOLTED TOGETHER PRIOR TO SHIPPING.

LEGEND

1. 1" X 2" STEEL BAR.
2. 1" X 1½" STEEL BAR.
3. 2½" X 2½" X ⅜" STEEL PLATE WITH ⅝" DIA. HOLE FOR BOLT.
4. FRAME OF ½" X 1½" STEEL BARS.
5. 1½" X 2½" X ½" STEEL PLATE TAPPED FOR NO. 6.
6. ½" DIA. (13 THREADS PER INCH) HOT-DIPPED GALVANIZED STEEL BOLT WITH ANTI-SEIZE LUBRICANT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-400-6D

DRAWN BY ABP | PLANS CK'D. LMK

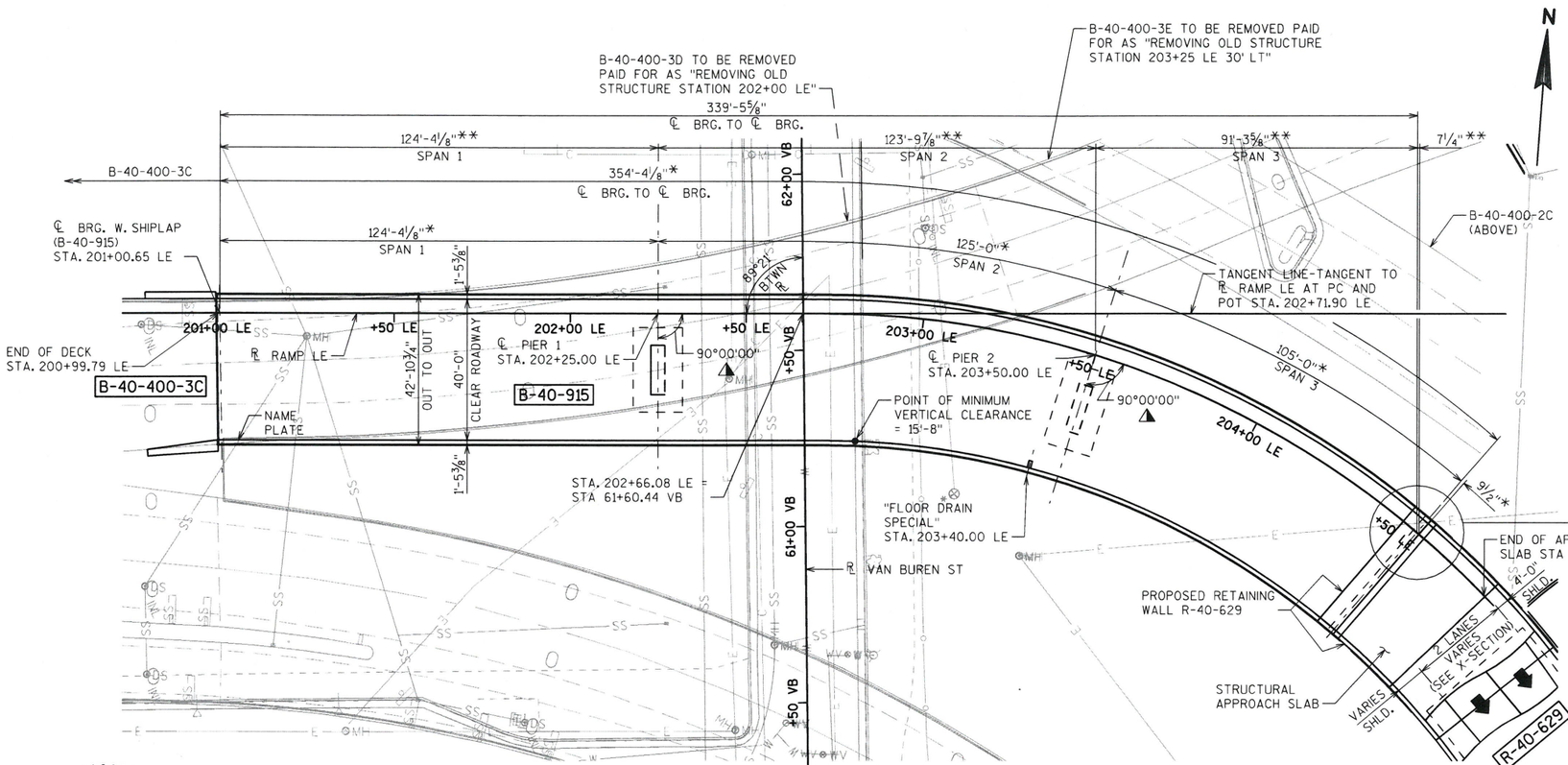
DRAIN DETAILS

SHEET 11 OF 11

744

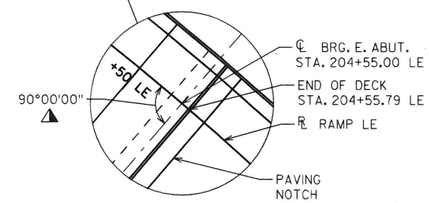
IP_PWP:d0330716\080411_fd.dgn 26-MAY-2015 12:15

STATE PROJECT NUMBER
1300-13-74



LIST OF DRAWINGS

1 GENERAL PLAN
2 GENERAL NOTES AND QUANTITIES
3 TYPICAL CROSS SECTION
4 SUBSURFACE EXPLORATION
5 PIER 1 PLAN & ELEVATION
6 PIER 1 REINFORCING DETAILS
7 PIER 1 FOOTING DETAILS
8 PIER 1 BILL OF BARS
9 PIER 2 PLAN & ELEVATION
10 PIER 2 REINFORCING DETAILS
11 PIER 2 FOOTING DETAILS
12 PIER 2 BILL OF BARS
13 EAST ABUTMENT
14 EAST ABUTMENT REINFORCING SCHEDULE
15 APPROACH SLAB PLAN
16 APPROACH SLAB DETAILS
17 FRAMING PLAN
18 GIRDER ELEVATIONS (1 OF 2)
19 GIRDER ELEVATIONS (2 OF 2)
20 SHIPLAP DETAILS
21 DIAPHRAGMS
22 STEEL DETAILS
23 GIRDER SPLICES
24 CAMBER AND BLOCKING
25 DEFLECTIONS
26 SUPERSTRUCTURE PLAN (1 OF 2)
27 SUPERSTRUCTURE PLAN (2 OF 2)
28 TANGENT OFFSETS
29 SUPERSTRUCTURE CROSS SECTION
30 SUPERSTRUCTURE DETAILS
31 SUPERSTRUCTURE BILL OF BARS
32 PARAPET DETAILS
33 DECK POUR SEQUENCE
34 ELASTOMERIC BEARING DETAILS (1 OF 2)
35 ELASTOMERIC BEARING DETAILS (2 OF 2)
36 BEARING ALIGNMENT PLAN
37 EXPANSION JOINT DETAIL
38 COVER PLATES FOR PARAPET
39 FLOOR DRAIN SPECIAL
40 SUPERSTRUCTURE DRAINAGE DETAIL



CURVE DATA

CURVE = P_RAMPLE_1-1
P.I. = 204+32.93 LE
Y = 298,524.79
X = 608,044.69
DELTA = 63°25'19" (RT)
D = 22°07'19"
T = 160.03'
L = 286.69'
R = 259.00'
P.C. = 202+71.90 LE
P.T. = 205+58.59 LE

PLAN

3-SPAN CONTINUOUS STEEL PLATE GIRDER STRUCTURE

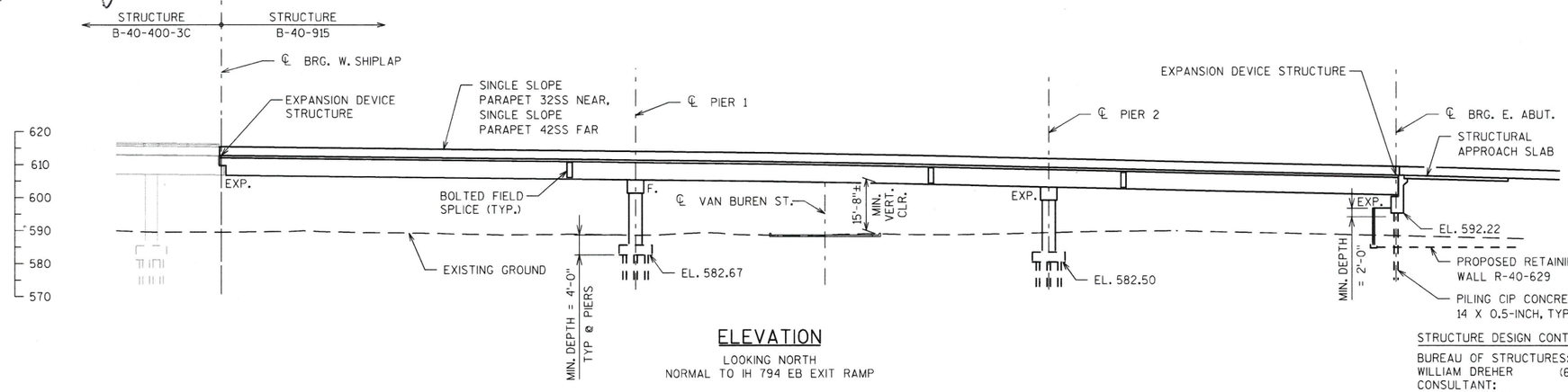
LEGEND

* DIMENSION MEASURED ALONG ℞ RAMP LE FROM ℄ BRG. TO ℄ BRG.

** DIMENSION MEASURED ALONG TANGENT LINE

▲ MEASURED FROM ℄ SUBSTRUCTURE TO A LINE TANGENT TO ℞ 'LE' AT ℄ SUBSTRUCTURE.

WISCONSIN CHAD D. HALVERSON E-34364 MADISON, WI PROFESSIONAL ENGINEER
8/4/15



ELEVATION

LOOKING NORTH
NORMAL TO IH 794 EB EXIT RAMP

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
CHAD HALVERSON (608) 821-8703

NO.	DATE	REVISION	BY

Baker
MICHAEL BAKER JR., INC
7633 GANSER WAY, SUITE 206
MADISON, WI 53719

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 08/05/15
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-915

IH 794 EASTBOUND RAMP OVER VAN BUREN ST.

COUNTY	TOWN/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	MJN	DESIGN CK'D.	PAT	DRAWN BY	CEM	PLANS CK'D.	MJN

GENERAL PLAN

SHEET 1 OF 40

745

8

8

STATE PROJECT NUMBER
1300-13-74

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	PIER 1	PIER 2	E. ABUT.	SUPER.	APP. SLAB	TOTAL
203.0200.2005	REMOVING OLD STRUCTURE STATION 202+00 LE	LS	---	---	---	---	---	1
203.0200.2006	REMOVING OLD STRUCTURE STATION 203+25 LE 30' LT	LS	---	---	---	---	---	1
203.0210.S.2005	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-400-3D	LS	---	---	---	---	---	1
203.0210.S.2006	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-400-3E	LS	---	---	---	---	---	1
203.0225.S.2001	DEBRIS CONTAINMENT STRUCTURE B-40-915	LS	---	---	---	---	---	1
203.0225.S.2005	DEBRIS CONTAINMENT STRUCTURE B-40-400-3D	LS	---	---	---	---	---	1
203.0225.S.2006	DEBRIS CONTAINMENT STRUCTURE B-40-400-3E	LS	---	---	---	---	---	1
206.1000.2001	EXCAVATION FOR STRUCTURES BRIDGES STRUCTURE B-40-915	LS	---	---	---	---	---	1
502.0100	CONCRETE MASONRY BRIDGES	CY	134	117	57	---	---	308
502.3100.2002	EXPANSION DEVICE STRUCTURE B-40-915	LS	---	---	---	---	---	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	---	1,540	99	1,639
502.3210.S	PIGMENTED PROTECTIVE SURFACE TREATMENT	SY	---	---	---	314	21	335
502.6500	PROTECTIVE COATING CLEAR	GAL	---	---	3	---	---	3
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	8,340	5,540	2,490	---	---	16,370
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	18,010	14,310	2,080	115,610	13,590	163,600
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	---	---	700	---	---	700
506.0605	STRUCTURAL STEEL HS	LB	---	---	---	570,060	---	570,060
506.3015	WELDED STUD SHEAR CONNECTORS 7/8X6-INCH	EACH	---	---	---	4,626	---	4,626
514.2608	DOWNSPOUT 8-INCH	LF	---	26	---	---	---	26
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	---	7	---	---	7
517.0600.2001	PAINTING EPOXY SYSTEM B-40-915	LS	1	---	---	---	---	1
550.2146	PILING CIP CONCRETE 14 X 0.375-INCH	LF	2,860	2,640	---	---	---	5,500
550.2148	PILING CIP CONCRETE 14 X 0.50-INCH	LF	---	---	805	---	---	805
SPV.0035.2003	HPC MASONRY STRUCTURES	CY	---	---	---	493	67	560
SPV.0060.2001	FLOOR DRAIN SPECIAL	EACH	---	---	---	1 ☆	---	1
SPV.0060.2003	BEARING ELASTOMERIC EXPANSION	EACH	---	5	5	5	---	15
SPV.0060.2004	BEARING ELASTOMERIC FIXED	EACH	5	---	---	---	---	5
	NON-BID ITEMS							
	FILLER	SIZE						½ " & ¾ "

☆ QUANTITY REPRESENTS THE BEARINGS AT THE WEST SHIPLAP

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
226	201+09.70 LE	50.07' LT	BERNTSEN FENO MONUMENT WITH ALUMINUM CAP	589.61

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.16
OPERATING RATING FACTOR: RF = 1.51

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

WISCONSIN STANDARD PERMIT
VEHICLE (WIS-SPV) = 250 KIPS

ULTIMATE DESIGN STRESSES:
CONCRETE MASONRY BRIDGES
SUBSTRUCTURES.....f'c = 3,500 P.S.I
(HPC) SUPERSTRUCTURE.....f'c = 4,000 P.S.I
(HPC) APPROACH SLAB.....f'c = 4,000 P.S.I

BAR STEEL REINFORCEMENT
HIGH STRENGTH, GRADE 60.....fy = 60,000 P.S.I.

STRUCTURAL STEEL
ASTM A709 GRADE 36.....fy = 36,000 P.S.I.
ASTM A709 GRADE 50 T2.....fy = 50,000 P.S.I.
ASTM A572 GRADE 50.....fy = 50,000 P.S.I.

TRAFFIC DATA

IH 794 EB EXIT RAMP
AADT (2016) = 9,200
AADT (2036) = 13,300
RDS = 30 MPH

VAN BUREN ST,
AADT (2016) = 3,400
AADT (2036) = 3,600
RDS = 35 MPH

FOUNDATION DATA

PIER FOUNDATIONS TO BE SUPPORTED ON PILING CIP CONCRETE 14 X 0.375-INCH. DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200* TONS PER PILE AS DETERMINED BY THE MODIFED GATES DYNAMIC FORMULA. ESTIMATED LENGTH OF PILES IS GIVEN ON EACH INDIVIDUAL FOUNDATION SHEET.

E. ABUTMENT FOUNDATION TO BE SUPPORTED ON PILING CIP CONCRETE 14 X 0.5-INCH. DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 190 TONS AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH OF PILES IS 115'.

*THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.50 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND ROADWAY FACE OF THE PARAPET.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

ALL STATIONS AND ELEVATIONS ARE IN US SURVEY FEET. ELEVATIONS ARE REFERENCED NAVD 88 (1991)

BEVEL EXPOSED EDGES ¾" UNLESS OTHERWISE NOTED.

APPLY BRIDGE SEAT PROTECTION AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP OF THE PIER AND ABUTMENT BELOW EXPANSION DEVICES.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.

THE TOP LAYER OF BAR STEEL REINFORCEMENT IN THE DECK SHALL BE PLACED WITH 2½" OF CLEAR COVER.

EXISTING STRUCTURE, B-40-0400-003D, IS A 3 SPAN CONCRETE MULTI-CELL BOX GIRDER STRUCTURE WITH AN AVERAGE DECK WIDTH OF 40 FEET AND 7 INCHES AND A DECK LENGTH OF 219 FEET. THE STRUCTURE IS TO BE REMOVED ENTIRELY.

EXISTING STRUCTURE, B-40-0400-003E, IS A 2 SPAN MULTI-CELL BOX GIRDER STRUCTURE WITH AN AVERAGE CLEAR WIDTH OF 40 FEET AND A DECK LENGTH OF 159 FEET AND 9 INCHES. THE STRUCTURE IS TO BE REMOVED ENTIRELY.

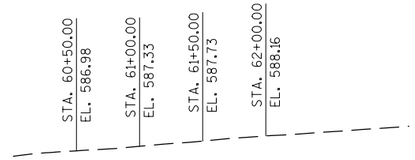
THE CONTRACTOR SHALL SUBMIT A REMOVAL PLAN TO THE ENGINEER FOR APPROVAL.

ALL FIELD CONNECTIONS SHALL BE MADE WITH ⅞" DIAMETER, FRICTION TYPE, HIGH TENSILE STRENGTH BOLTS UNLESS SHOWN OR NOTED OTHERWISE.

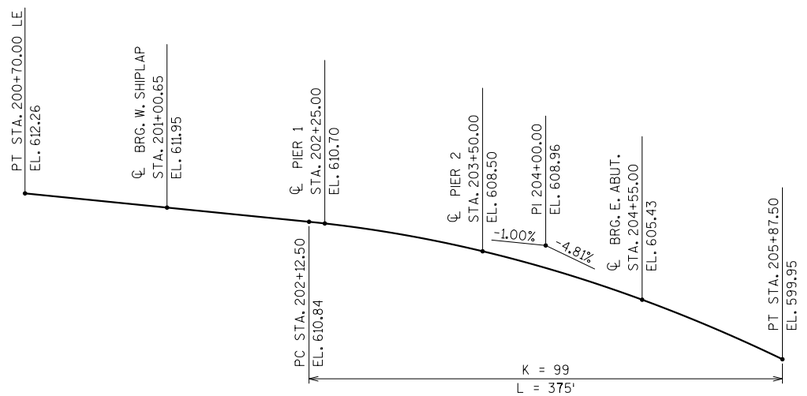
STEEL GIRDERS SHALL BE PAINTED FEDERAL COLOR NUMBER 25177 DENIM.

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-915".

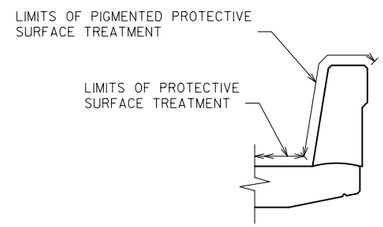
THE WISCONSIN DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR WITH BENCHMARK CAPS TO BE INSTALLED AS SHOWN ON THE PLANS.



EXISTING PROFILE GRADE LINE - VB
VAN BUREN STREET



PROFILE GRADE LINE - LE
IH 794 EB EXIT RAMP



PROTECTIVE SURFACE TREATMENT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MJN

GENERAL NOTES AND QUANTITIES

SHEET 2 OF 40
746

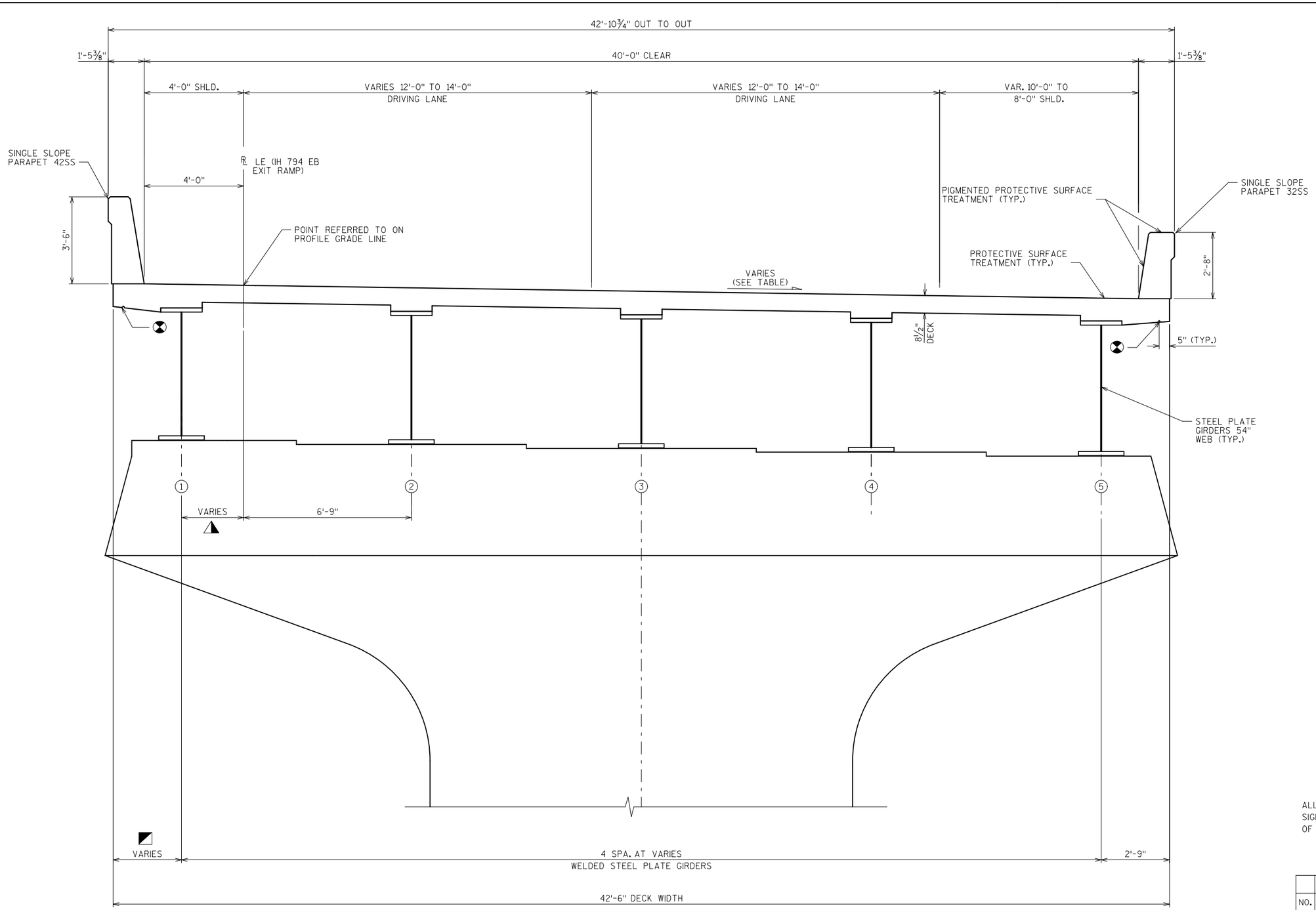
8

8

c:\pw8i-local\baker_projects\apschorr\d0349325\080502_GN.dgn 04-AUG-2015 12:33

STATE PROJECT NUMBER

1300-13-74



TYPICAL SECTION THRU EB RAMP

STA. 201+00.65 LE TO STA. 204+55.00 LE
LOOKING EAST

LEGEND

- ◓ ¾" V-GROOVE, TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENTS OR 6" FROM FRONT FACE OF END DIAPHRAGM TYP., REQUIRED ALONG ALL EDGES OF DECK.
- ◪ OVERHANG VARIES FROM 2'-9" TO 3'-9⅞".
- ◭ VARIES FROM 1'-5¼" TO 2'-6".

SUPERELEVATION TABLE

LOCATION	CROSS SLOPE (%)
STA. 201+00.00 LE	-2.55
STA. 201+70.00 LE	0.00
STA. 202+71.90 LE	3.18
STA. 203+61.90 LE	6.00
STA. 204+63.73 LE	6.00
STA. 205+58.59 LE	4.00

ALL CROSS-SLOPES ARE APPROXIMATE. A NEGATIVE SIGN INDICATES CROSS-SLOPE DIRECTION OPPOSITE OF THAT SHOWN IN TYPICAL SECTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MJN

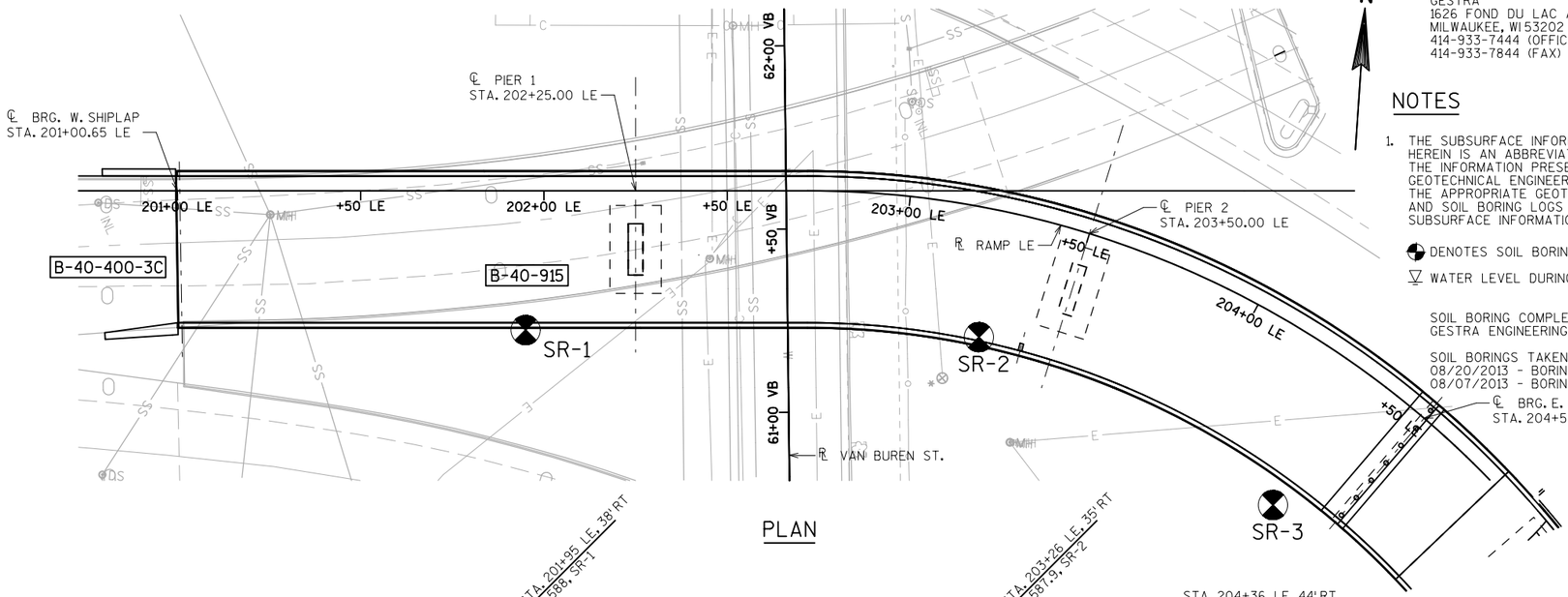
TYPICAL CROSS SECTION

SHEET 3 OF 40
747

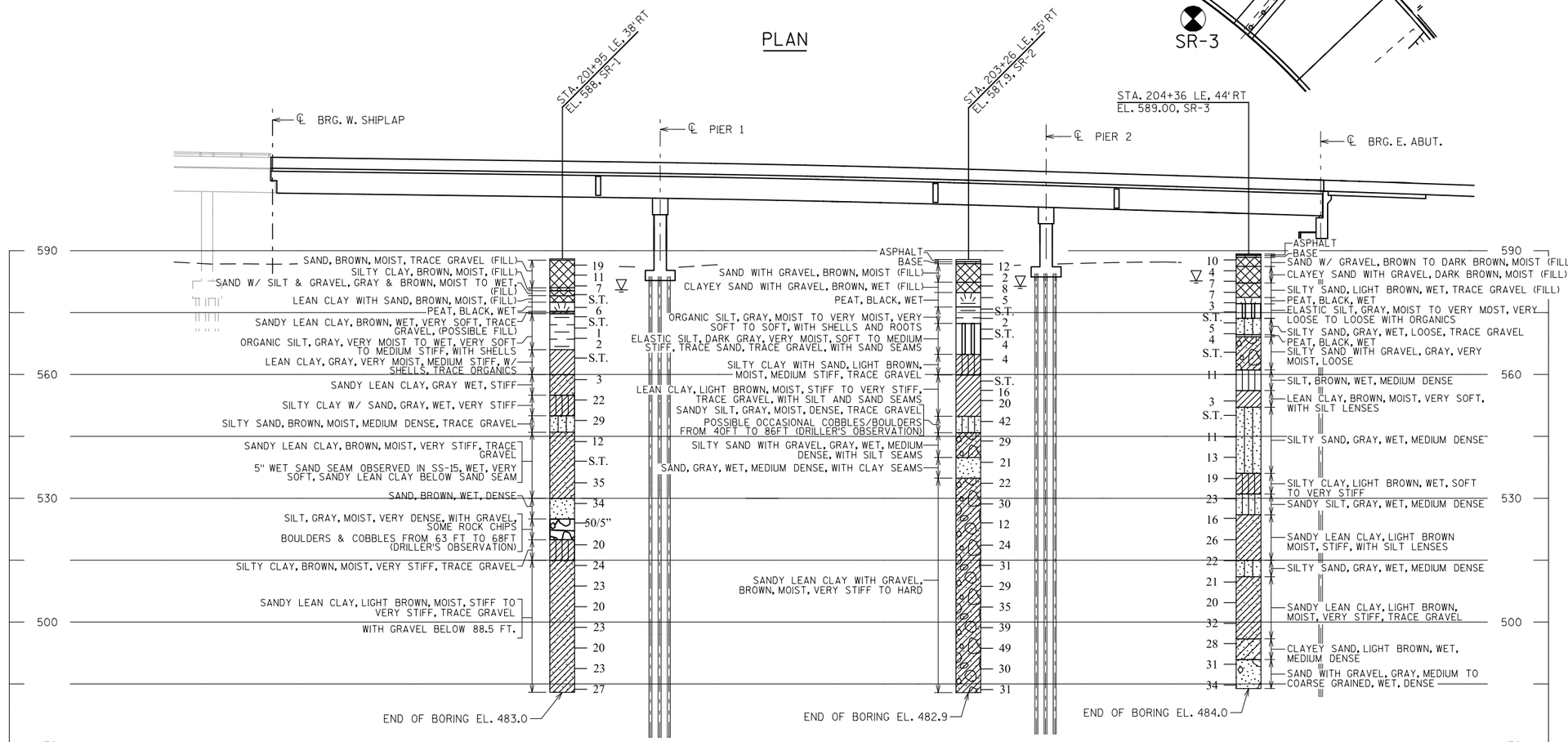
8

8

IP_PWP:d0349325\080503_XS.dgn 24-JUL-2015 08:19



PLAN



SOIL EXPLORATION PERFORMED BY:
GESTRA
1626 FOND DU LAC AVE.
MILWAUKEE, WI 53202
414-933-7444 (OFFICE)
414-933-7844 (FAX)

NOTES

1. THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

◓ DENOTES SOIL BORING LOCATION

▽ WATER LEVEL DURING DRILLING

SOIL BORING COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
08/20/2013 - BORING SR-1
08/07/2013 - BORING SR-2

STATE PROJECT NUMBER

1300-13-74

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

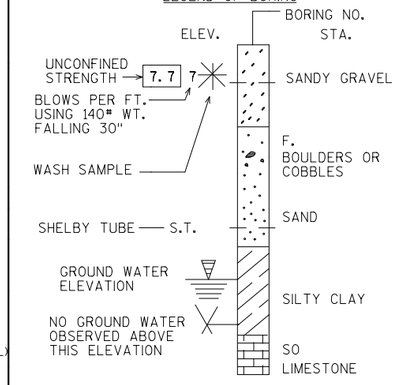
TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MJN

SUBSURFACE EXPLORATION

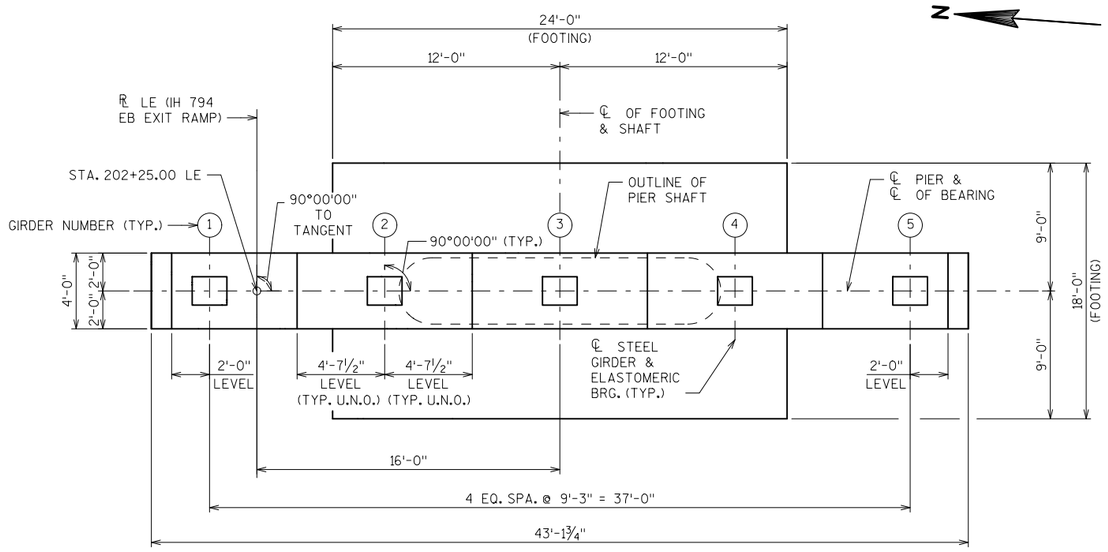
SHEET 4 OF 40
748

8

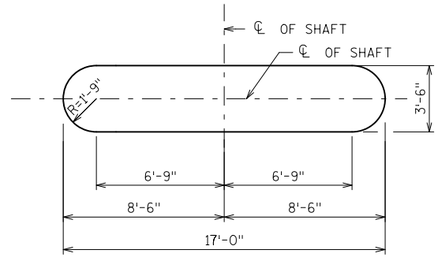
8

STATE PROJECT NUMBER

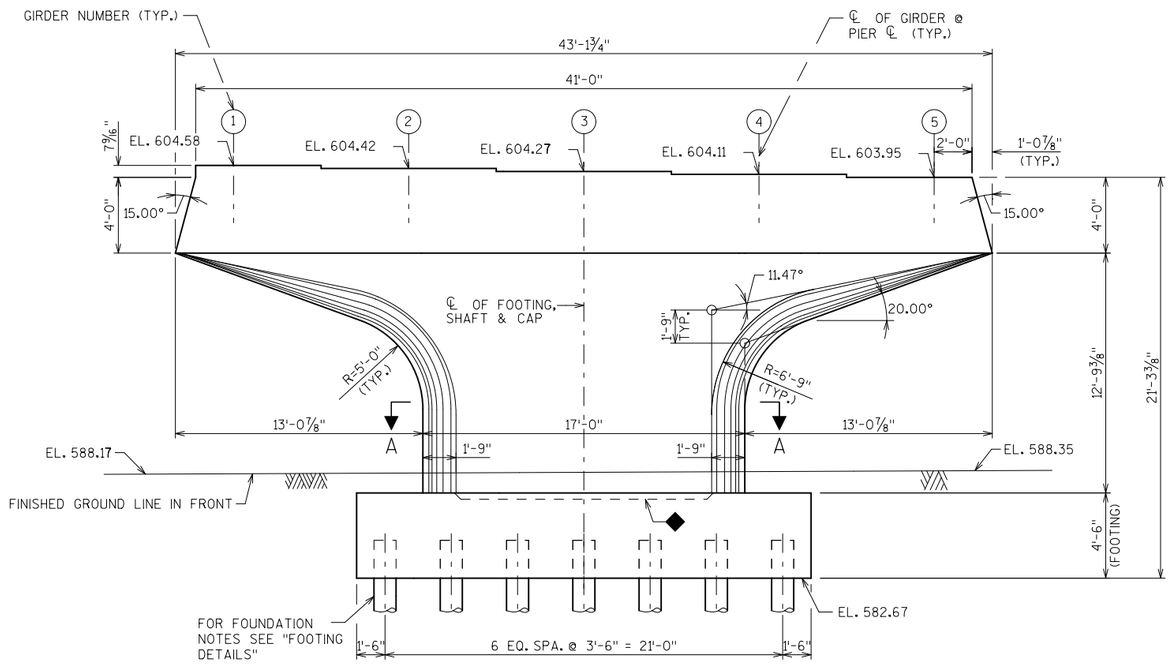
1300-13-74



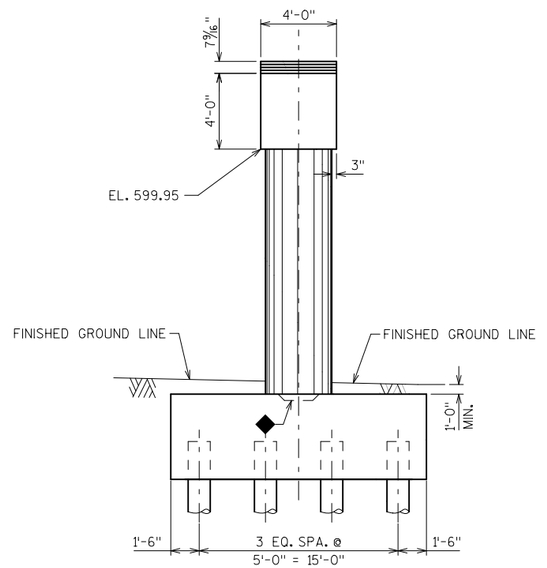
PLAN



SECTION A-A



ELEVATION
(LOOKING UPSTATION)



END VIEW
(LOOKING NORTH)

NOTES

FOR BAR STEEL REINFORCEMENT DETAILS, SEE SHEETS "PIER 1 REINFORCING DETAILS".

FOR FOOTING LAYOUT DETAILS, SEE SHEET "PIER 1 FOOTING DETAILS".

FOR ORIENTATION OF BEARING AND LOCATION OF ANCHOR BOLTS, SEE "ELASTOMERIC BEARING DETAILS (1 OF 2)".

LEGEND

◆ KEYED CONST. JOINT FORMED BY BEVELED 4" X 1'-6" X 13'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY MDM | PLANS CK'D. MA

PIER 1
PLAN & ELEVATION

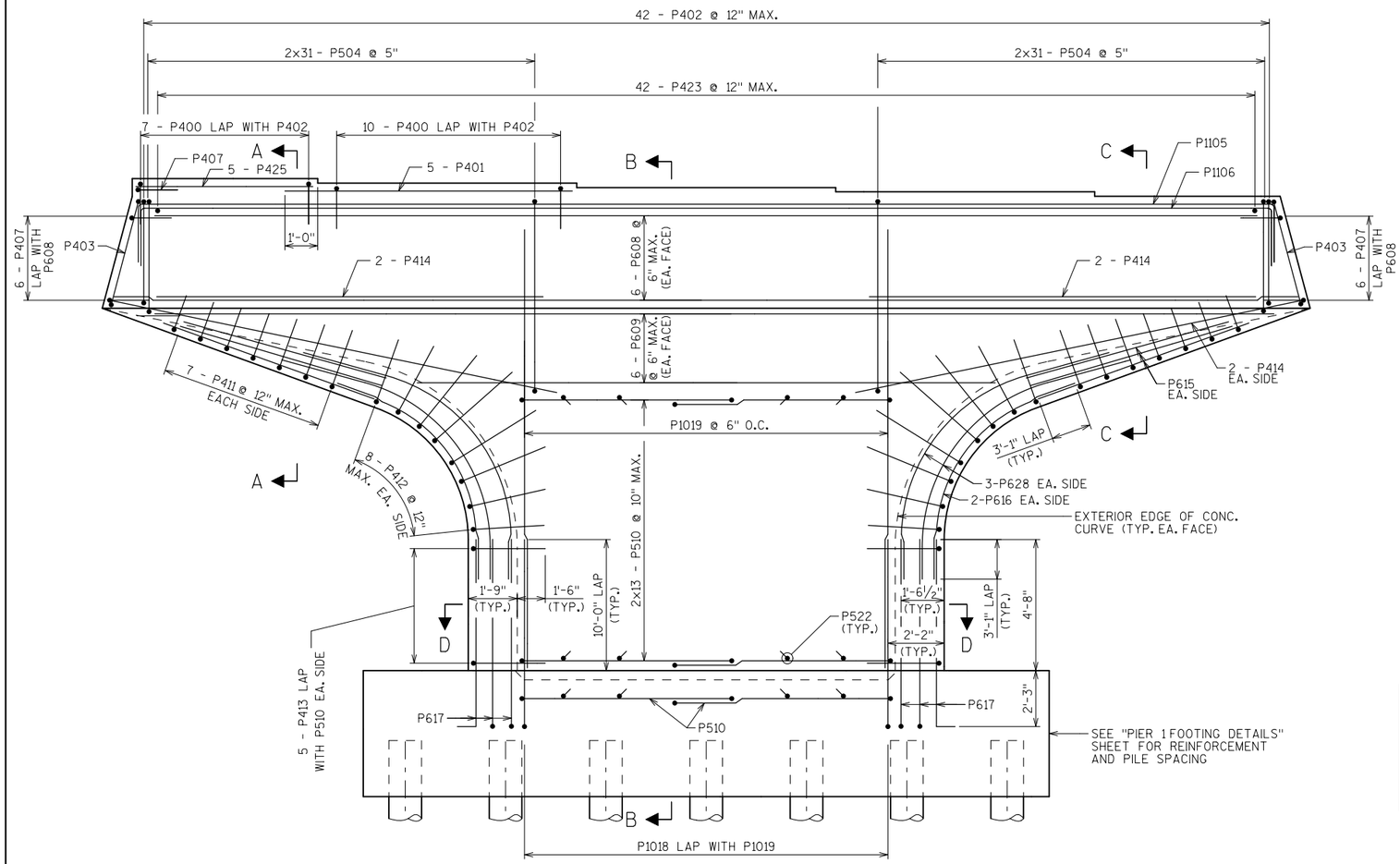
SHEET 5 OF 40
749

8

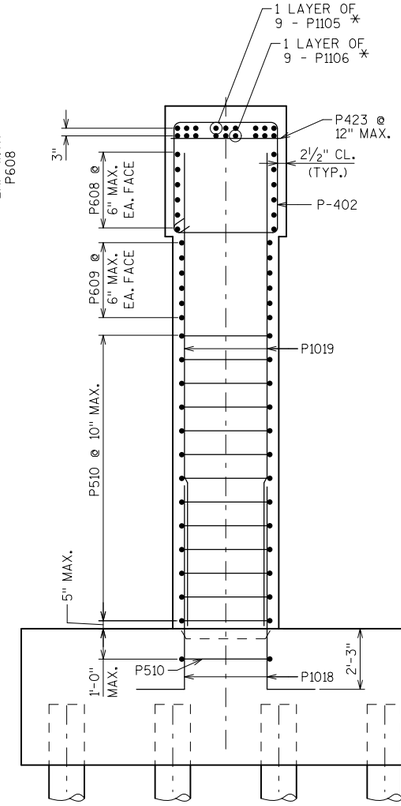
8

IP_PWP:d0349325\080505_p1.DGN 24-JUL-2015 08:19

STATE PROJECT NUMBER
1300-13-74

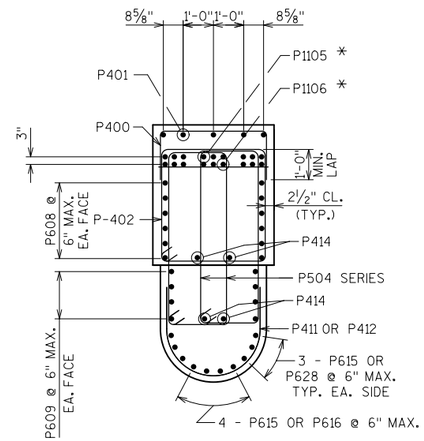


ELEVATION



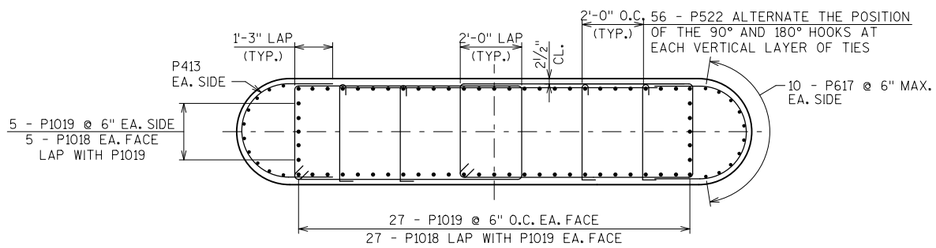
SECTION B-B

* SEE SECTION C-C FOR SPACING OF P1105 & P1106 BARS

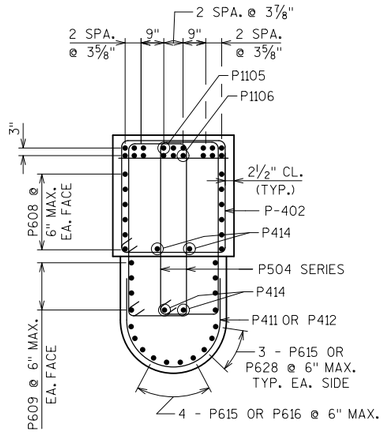


SECTION A-A

* SEE SECTION C-C FOR SPACING OF P1105 & P1106 BARS



SECTION D-D



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY MDM | PLANS CK'D. MA

PIER 1 REINFORCING DETAILS

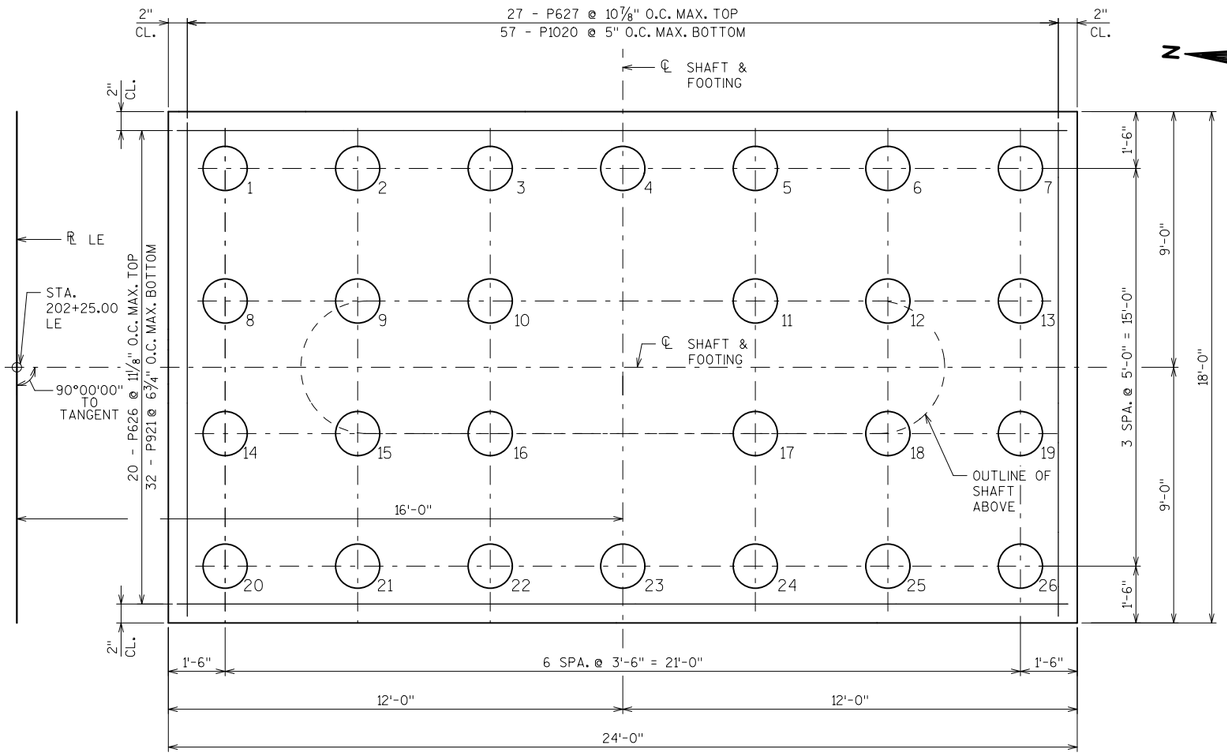
SHEET 6 OF 40

750

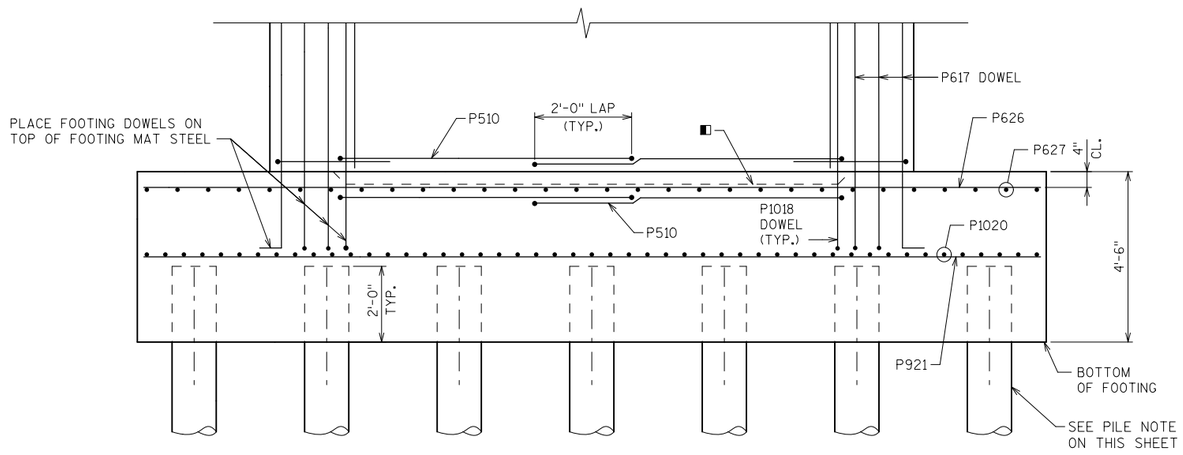
8

8

IP_PWP:d0349325\080506_pd.DGN 24-JUL-2015 08:20



PIER 1 FOOTING PLAN



PIER 1 FOOTING ELEVATION

◧ 1'-6" x 13'-0" x 4" DEEP CONSTRUCTION JOINT IN SHAFT AND FOOTING FORMED BY BEVELED KEYWAY.

PILE RESISTANCE			
CAST-IN-PLACE PILE SIZE	SHELL THICKNESS (INCHES) CLOSED-END	FACTORED AXIAL COMPRESSION RESISITANCE (Pr) (TONS)	REQUIRED DRIVING RESISTANCE R_{NDYN} (TONS)
14"	0.375	100	200

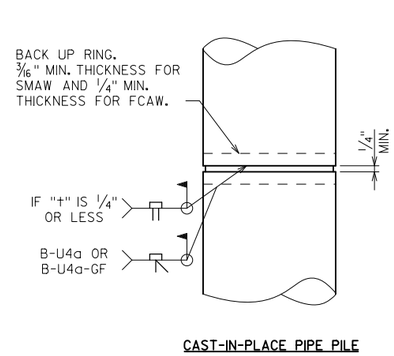
ESTIMATED PILE LENGTH	
LOCATION	ESTIMATED DRIVEN PILE LENGTH (FEET)
PIER 1	110

PIER NO.	COMPETENT STIFF TO HARD COHESIVE SOIL EL.
1	482.9

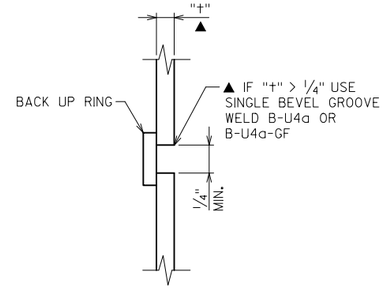
THE ESTIMATED ELEVATIONS OF VERY STIFF TO HARD CLAY PILE SUPPORT LAYER ARE BASED ON THE AVAILABLE BORING INFORMATION. HARD PRE-BORING MAY BE REQUIRED ABOVE OR BELOW THE ESTIMATED COMPETENT LAYER ELEVATIONS BECAUSE OF VARIABILITY IN SOIL PROFILE WITH THE POSSIBILITY OF PRESENCE OF EARLY REFUSAL SUCH AS COBBLES, BOULDERS AND/OR VERY DENSE GRAVEL LAYERS.

NOTES

1. PIER IS TO BE SUPPORTED ON CIP 14" CLOSED-END PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. SEE TABLE ON THIS SHEET FOR ESTIMATED LENGTHS.
2. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING THE MODIFIED GATES DYNAMIC EQUATION.
3. ESTIMATED NOMINAL LATERAL CAPACITY FOR INDIVIDUAL FIXED PILE HEAD OF BOTH STRONG AND WEAK AXIS IS 16 KIP.
4. SEE SHEET "PIER 1 BILL OF BARS" FOR BAR BILL AND BAR BENT DETAILS.
5. SEE SHEET "PIER 1 REINFORCING DETAILS" FOR FOOTING DOWEL BARS.

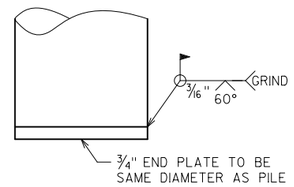


CAST-IN-PLACE PIPE PILE



CAST-IN-PLACE PIPE WELD DETAIL

PILE SPLICE DETAILS



END PLATE DETAIL FOR CIP PILING IN ARTESIAN CONDITIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY MDM | PLANS CK'D. MA

PIER 1 FOOTING DETAILS

SHEET 7 OF 40
751

8

8

STATE PROJECT NUMBER
1300-13-74

TOTAL COATED = 18,010 LBS
TOTAL UNCOATED = 8,340 LBS

BILL OF BARS

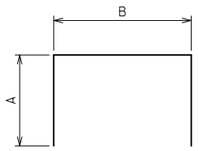
BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
P400	17	6'-9"	X		X		PIER CAP - BEARING SEAT ADDITIONAL U-BARS
P401	5	10'-1"	X				PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
P402	42	14'-10"	X		X		PIER CAP STIRRUP
P403	2	15'-1"	X		X		PIER CAP STIRRUP
P504	124	15'-8"	X		X	X	PIER CAP STIRRUP
P1105	9	43'-11"	X		X		PIER CAP TOP BARS - 1ST LAYER FROM TOP
P1106	9	42'-11"	X		X		PIER CAP TOP BARS - 2ND LAYER FROM TOP
P407	13	7'-7"	X		X		CAP - SIDE HORIZONTAL U-BARS
P608	12	40'-7"	X				CAP - HORIZONTAL FACE BARS
P609	12	30'-2"	X			X	TOP SHAFT HORIZONTAL SIDE BARS
P510	28	21'-9"	X		X		BOTTOM SHAFT HORIZONTAL TIE BARS
P411	14	6'-10"	X		X		TOP SHAFT HORIZONTAL SIDE U-BARS
P412	16	8'-7"	X		X	X	MIDDLE SHAFT HORIZONTAL SIDE U-BARS
P413	10	7'-10"	X		X		BOTTOM SHAFT HORIZONTAL SIDE U-BARS
P414	8	13'-4"	X				TOP SHAFT HORIZONTAL BAR BETWEEN STIRRUPS
P615	20	8'-0"	X				TOP SHAFT STRAIGHT BAR AT THE CURVED CONCRETE
P616	8	12'-8"	X		X		MIDDLE SHAFT CURVED BAR AT THE CURVED CONCRETE
P617	20	7'-9"	X		X		BOTTOM SHAFT DOWEL BAR AT THE CURVED CONCRETE
P1018	64	13'-10"	X		X		FOOTING DOWEL
P1019	64	14'-5"	X				SHAFT VERTICAL BAR
P1020	57	17'-8"					TRANSVERSE FOOTING HORIZONTAL BAR
P921	32	23'-8"					LONGITUDINAL FOOTING HORIZONTAL BAR
P522	56	4'-3"	X		X		SHAFT HOOK BARS
P423	42	3'-7"	X				BAR HOLDERS
P425	5	6'-3"	X				PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
P626	20	23'-8"					TOP LONGITUDINAL FOOTING HORIZONTAL BAR
P627	27	17'-8"					TOP TRANSVERSE FOOTING HORIZONTAL BAR
P628	12	14'-1"	X		X		MIDDLE SHAFT CURVED BAR AT THE CURVED CONCRETE

NOTE: LENGTH SHOWN FOR ANY BAR IN A BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

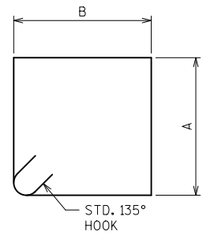
MARK	NO. REQ'D.	LENGTH
P504	4 SETS OF 31	13'-0" TO 18'-4"
P609	2 SETS OF 6	20'-4" TO 40'-1/2"
P412	4 SETS OF 4	6'-11" TO 10'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.



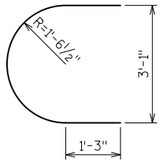
MARK	A	B
P400	1'-8"	3'-7"
P407	2'-1"	3'-7"
P1105	2'-0"	40'-7"
P1106	2'-0"	39'-7"

P400, P407, P1105 & P1106

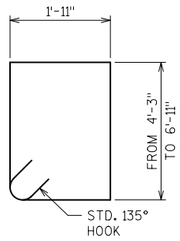


MARK	A	B
P402	3'-7"	3'-7"
P403	3'-9"	3'-7"
P510	7'-6"	3'-1"

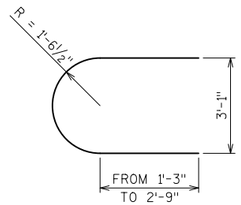
P402, P403 & P510



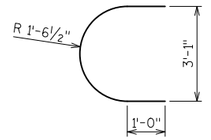
P413



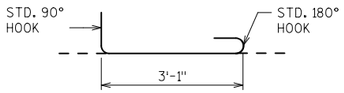
P504



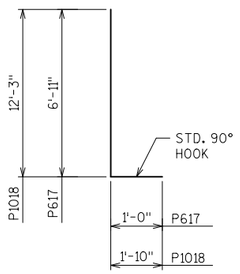
P412



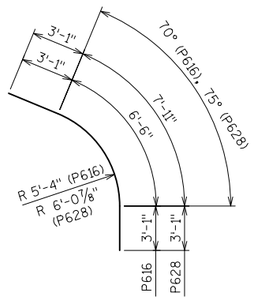
P411



P522



P617 & P1018



P616, P628

NOTES

1. DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
2. FOR BARS IN SERIES: LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

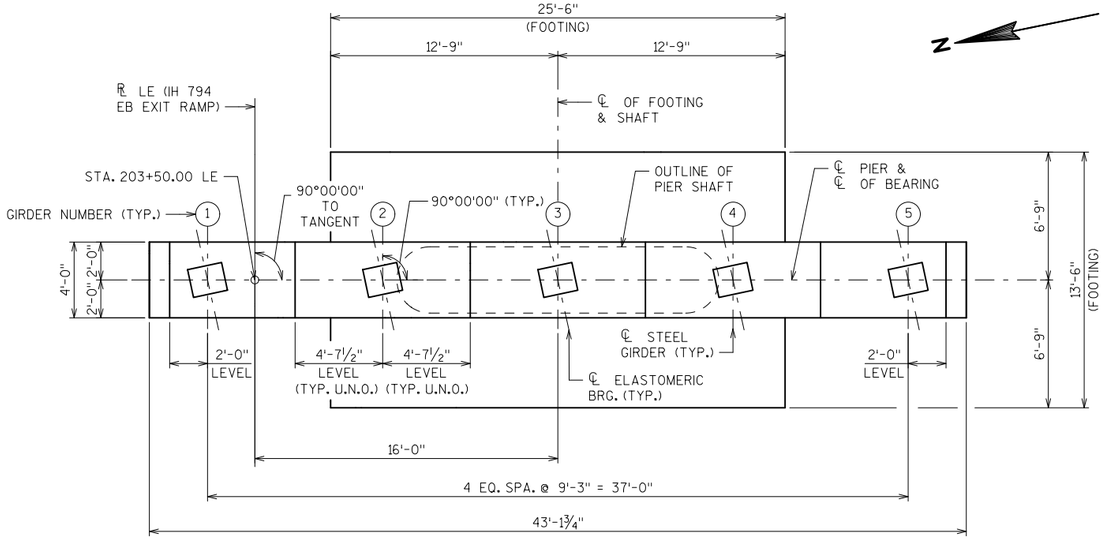
DRAWN BY MDM | PLANS CK'D. MA

PIER 1
BILL OF BARS

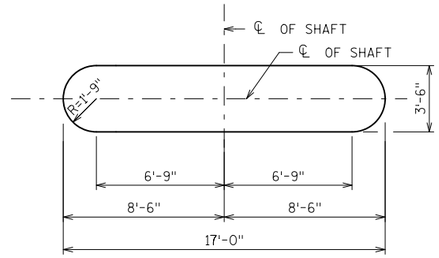
SHEET 8 OF 40
752

STATE PROJECT NUMBER

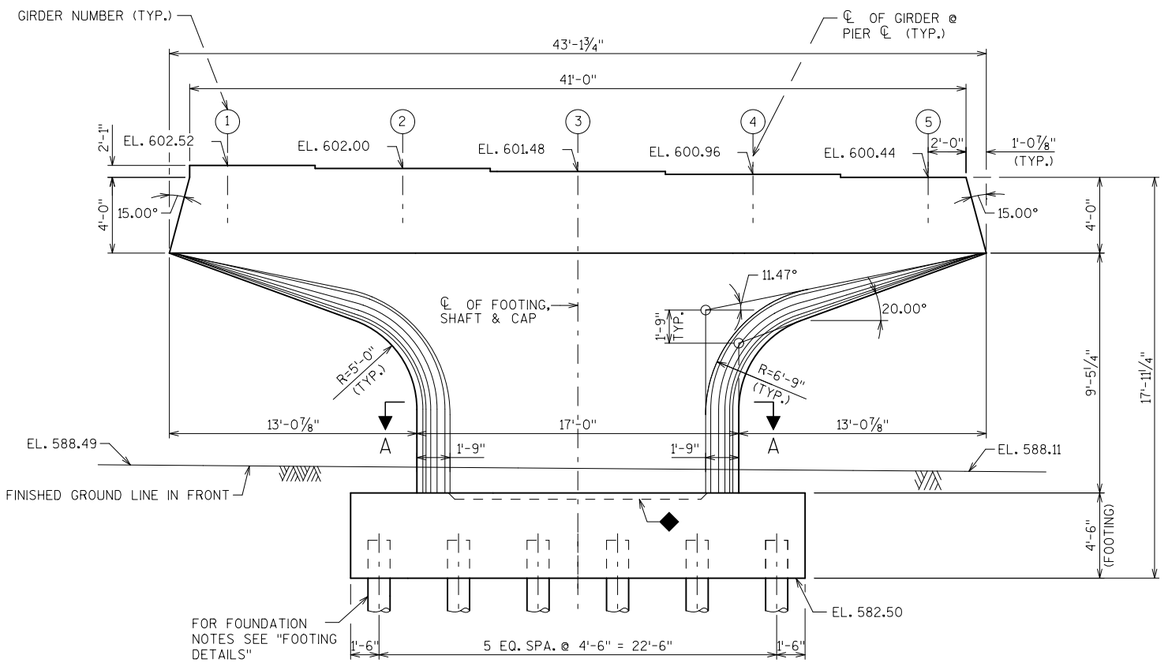
1300-13-74



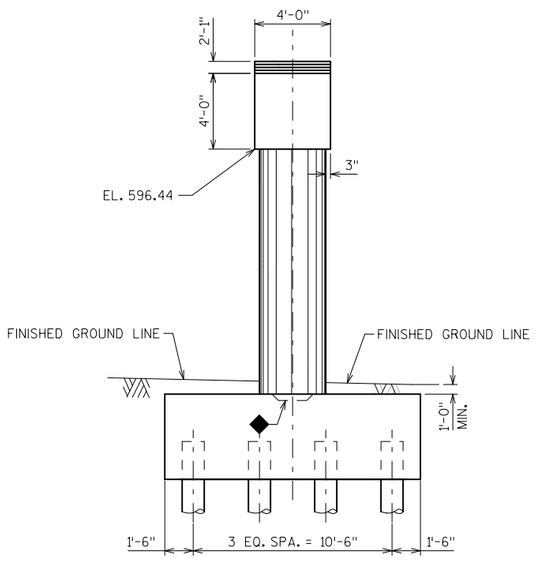
PLAN



SECTION A-A



ELEVATION
(LOOKING UPSTATION)



END VIEW
(LOOKING NORTH)

NOTES

FOR BAR STEEL REINFORCEMENT DETAILS, SEE SHEETS "PIER 2 REINFORCING DETAILS".

FOR FOOTING LAYOUT DETAILS. SEE SHEET "PIER 2 FOOTING DETAILS".

FOR ORIENTATION OF BEARING AND LOCATION OF ANCHOR BOLTS, SEE "BEARING ALIGNMENT PLAN".

LEGEND

◆ KEYED CONST. JOINT FORMED BY BEVELED 4" X 1'-6" X 13'-0".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY TJN | PLANS CK'D. MA

PIER 2
PLAN & ELEVATION

SHEET 9 OF 40
753

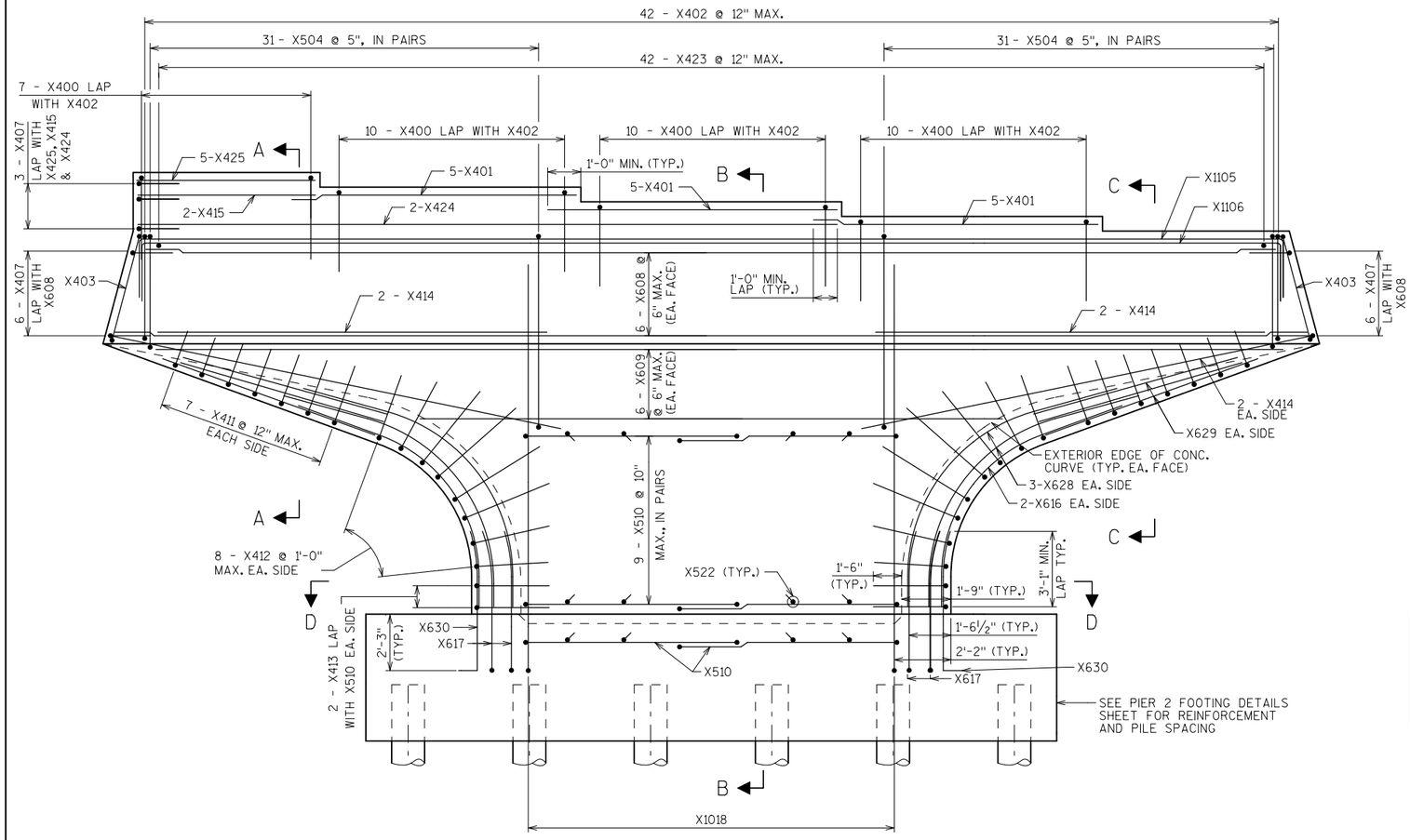
8

8

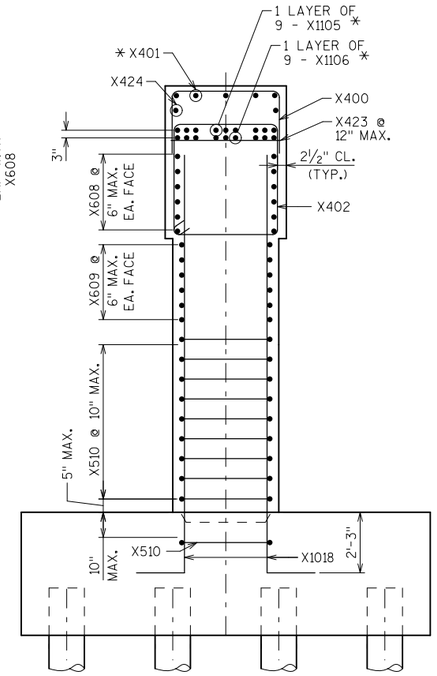
IP_PWP:d0349325\080509_p2.DGN 24-JUL-2015 08:20

STATE PROJECT NUMBER

1300-13-74

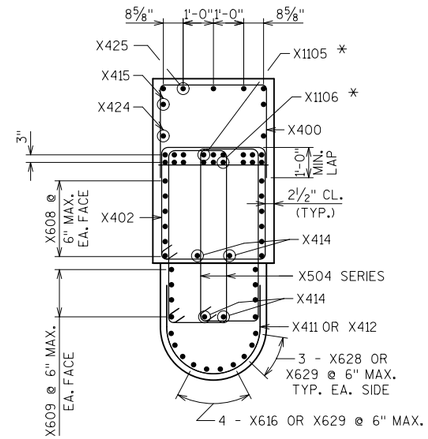


ELEVATION



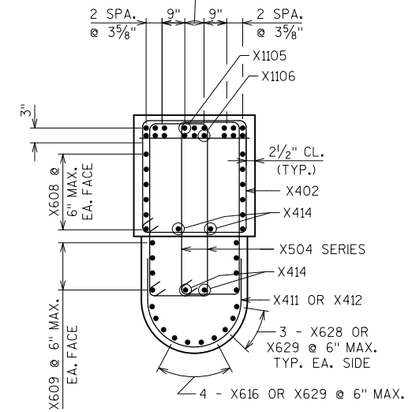
SECTION B-B

* SEE SECTION C-C FOR SPACING OF X1105 & X1106 BARS, SEE SECTION A-A FOR SPACING OF X401 BARS

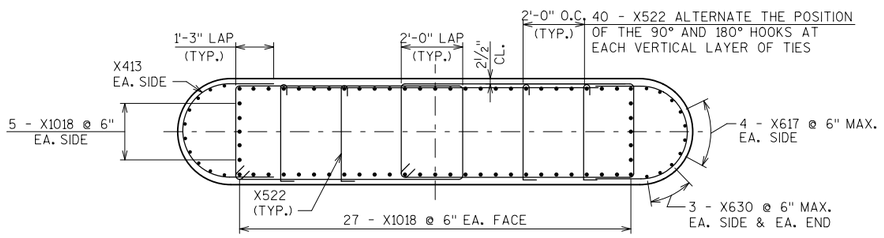


SECTION A-A

* SEE SECTION C-C FOR SPACING OF X1105 & X1106 BARS



SECTION C-C



SECTION D-D

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY TJN | PLANS CK'D. MA

PIER 2 REINFORCING DETAILS

SHEET 10 OF 40

754

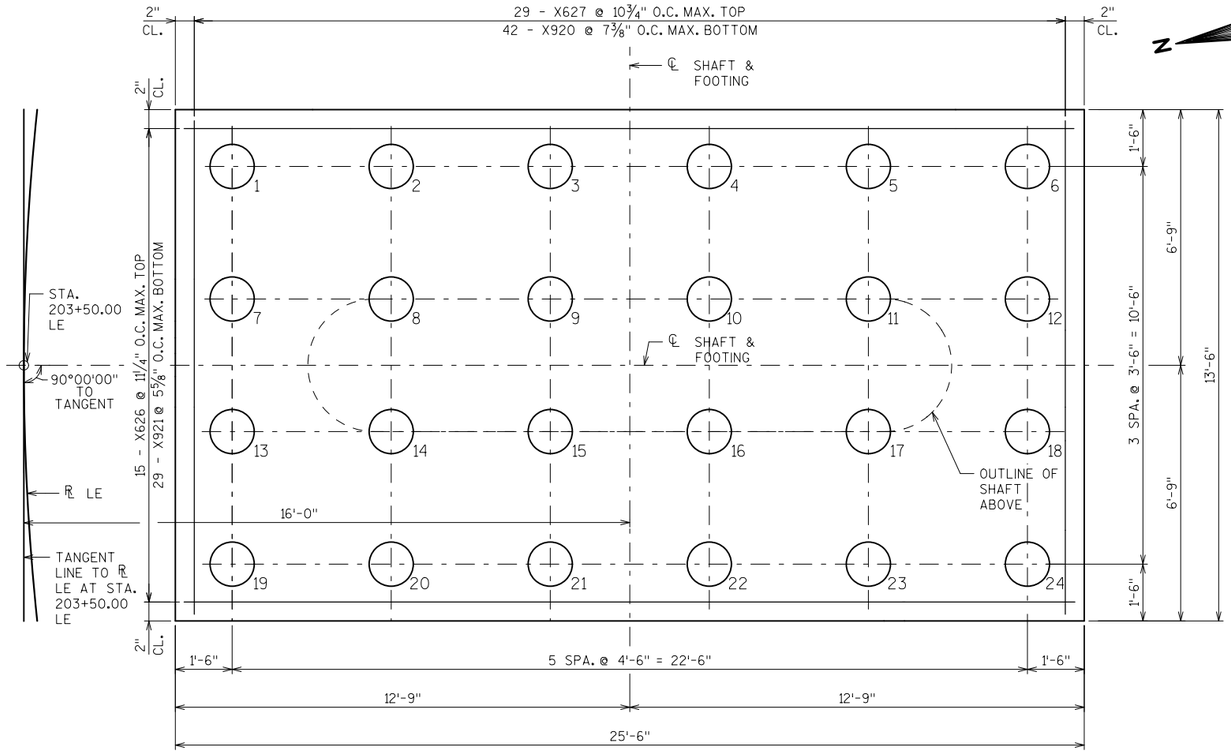
8

8

IP_PWP:d0349325\080510_pd.DGN 24-JUL-2015 08:21

STATE PROJECT NUMBER

1300-13-74



PIER 2 FOOTING PLAN

PILE RESISTANCE			
CAST-IN-PLACE PILE SIZE	SHELL THICKNESS (INCHES) CLOSED-END	FACTORED AXIAL COMPRESSION RESISITANCE (Pr) (TONS)	REQUIRED DRIVING RESISTANCE R_{NDYN} (TONS)
14"	0.375	100	200

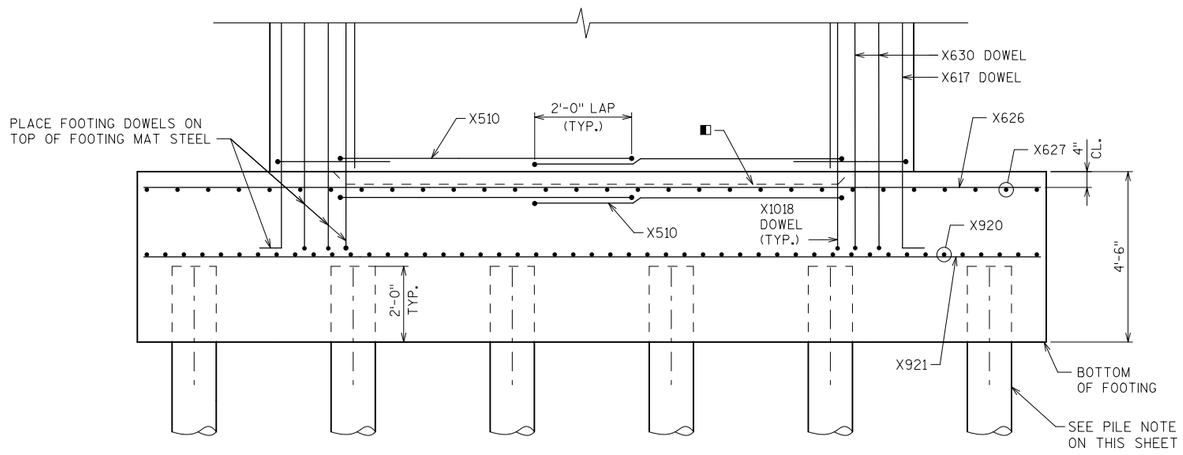
ESTIMATED PILE LENGTH	
LOCATION	ESTIMATED DRIVEN PILE LENGTH (FEET)
PIER 2	110

PIER NO.	COMPETENT STIFF TO HARD COHESIVE SOIL EL.
2	484.5

THE ESTIMATED ELEVATIONS OF VERY STIFF TO HARD CLAY PILE SUPPORT LAYER ARE BASED ON THE AVAILABLE BORING INFORMATION. HARD PRE-BORING MAY BE REQUIRED ABOVE OR BELOW THE ESTIMATED COMPETENT LAYER ELEVATIONS BECAUSE OF VARIABILITY IN SOIL PROFILE WITH THE POSSIBILITY OF PRESENCE OF EARLY REFUSAL SUCH AS COBBLES, BOULDERS AND/OR VERY DENSE GRAVEL LAYERS.

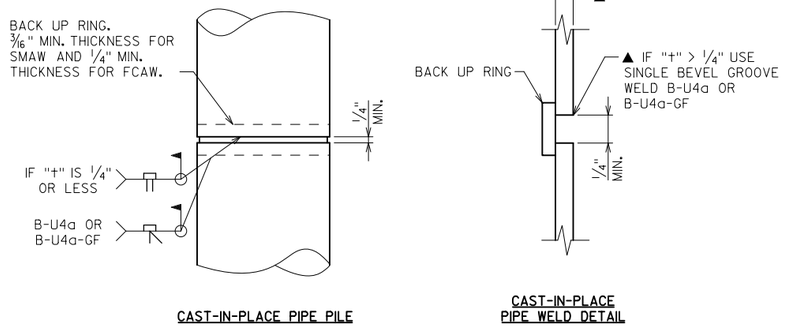
NOTES

1. PIER IS TO BE SUPPORTED ON CIP 14" CLOSED-END PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. SEE TABLE ON THIS SHEET FOR ESTIMATED LENGTHS.
2. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING THE MODIFIED GATES DYNAMIC EQUATION.
3. ESTIMATED NOMINAL LATERAL CAPACITY FOR INDIVIDUAL FIXED PILE HEAD OF BOTH STRONG AND WEAK AXIS IS 13 KIP.
4. SEE SHEET "PIER 2 BILL OF BARS" FOR BAR BILL AND BAR BENT DETAILS.
5. SEE SHEET "PIER 2 REINFORCING DETAILS" FOR FOOTING DOWEL BARS.

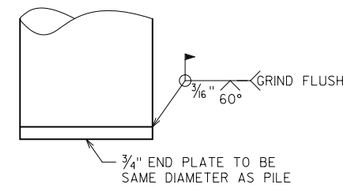


PIER 2 FOOTING ELEVATION

◧ 1'-6" x 13'-0" x 4" DEEP CONSTRUCTION JOINT IN SHAFT AND FOOTING FORMED BY BEVELED KEYWAY.



PILE SPLICE DETAILS



END PLATE DETAIL FOR CIP PILING IN ARTESIAN CONDITIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY TJN | PLANS CK'D. MA

PIER 2 FOOTING DETAILS

SHEET 11 OF 40

755

8

8

IP_PWP:d0349325\080511_pd.DGN 24-JUL-2015 08:21

STATE PROJECT NUMBER
1300-13-74

TOTAL COATED = 14,310 LBS
TOTAL UNCOATED = 5,540 LBS

BILL OF BARS

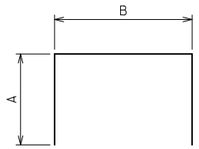
BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
X400	37	9'-3"	X		X		PIER CAP - BEARING SEAT ADDITIONAL U-BARS
X401	15	10'-1"	X				PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
X402	42	14'-10"	X		X		PIER CAP STIRRUP
X403	2	15'-1"	X		X		PIER CAP STIRRUP
X504	124	15'-8"	X		X	X	PIER CAP STIRRUP
X1105	9	43'-11"	X		X		PIER CAP TOP BARS - 1ST LAYER FROM TOP
X1106	9	42'-11"	X		X		PIER CAP TOP BARS - 2ND LAYER FROM TOP
X407	15	7'-7"	X		X		CAP - SIDE HORIZONTAL U-BARS
X608	12	40'-7"	X				CAP - HORIZONTAL FACE BARS
X609	12	30'-2"	X			X	TOP SHAFT HORIZONTAL SIDE BARS
X510	20	21'-9"	X		X		BOTTOM SHAFT HORIZONTAL TIE BARS
X411	14	6'-10"	X		X		TOP SHAFT HORIZONTAL SIDE U-BARS
X412	16	8'-7"	X		X	X	MIDDLE SHAFT HORIZONTAL SIDE U-BARS
X413	4	7'-10"	X		X		BOTTOM SHAFT HORIZONTAL SIDE U-BARS
X414	8	13'-4"	X				TOP SHAFT HORIZONTAL BAR BETWEEN STIRRUPS
X415	2	6'-5"	X				PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
X616	8	10'-10"	X		X		MIDDLE SHAFT CURVED BAR AT THE CURVED CONCRETE
X617	8	6'-4"	X		X		BOTTOM SHAFT DOWEL BAR AT THE CURVED CONCRETE
X1018	64	15'-4"	X		X		FOOTING DOWEL
X920	42	13'-2"					TRANSVERSE FOOTING HORIZONTAL BAR
X921	29	25'-2"					LONGITUDINAL FOOTING HORIZONTAL BAR
X522	40	4'-3"	X		X		SHAFT HOOK BARS
X423	42	3'-7"	X				BAR HOLDERS
X424	2	23'-10"					PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
X425	5	6'-3"	X				PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
X626	15	25'-2"					TOP LONGITUDINAL FOOTING HORIZONTAL BAR
X627	29	13'-2"					TOP TRANSVERSE FOOTING HORIZONTAL BAR
X628	12	12'-3"	X		X		MIDDLE SHAFT CURVED BAR AT THE CURVED CONCRETE
X629	20	8'-0"	X				TOP SHAFT STRAIGHT BAR AT THE CURVED CONCRETE
X630	12	6'-4"	X		X		BOTTOM SHAFT DOWEL BAR AT THE CURVED CONCRETE

NOTE: LENGTH SHOWN FOR ANY BAR IN A BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

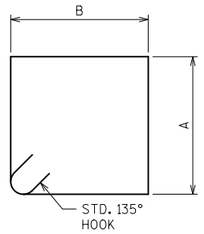
MARK	NO. REQ'D.	LENGTH
X504	4 SETS OF 31	13'-0" TO 18'-4"
X609	2 SETS OF 6	20'-4" TO 40'-1/2"
X412	4 SETS OF 4	6'-11" TO 10'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.



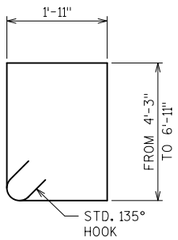
MARK	A	B
X400	2'-11"	3'-7"
X407	2'-1"	3'-7"
X1105	2'-0"	40'-7"
X1106	2'-0"	39'-7"

X400, X407, X1105 & X1106

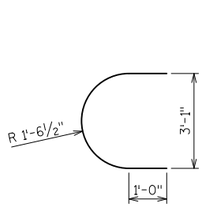


MARK	A	B
X402	3'-7"	3'-7"
X403	3'-9"	3'-7"
X510	7'-6"	3'-1"

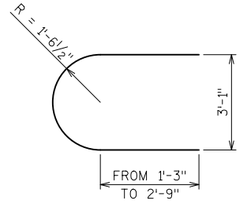
X402, X403 & X510



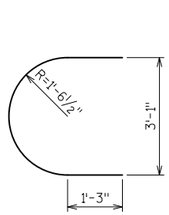
X504



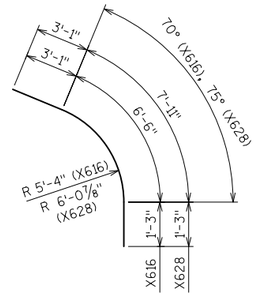
X411



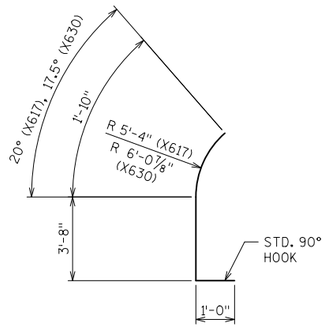
X412



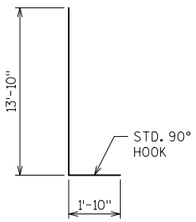
X413



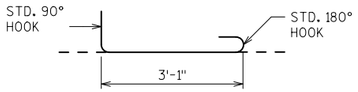
X616, X628



X617, X630



X1018



X522

NOTES

1. DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
2. FOR BARS IN SERIES: LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY TJN | PLANS CK'D. MA

PIER 2
BILL OF BARS

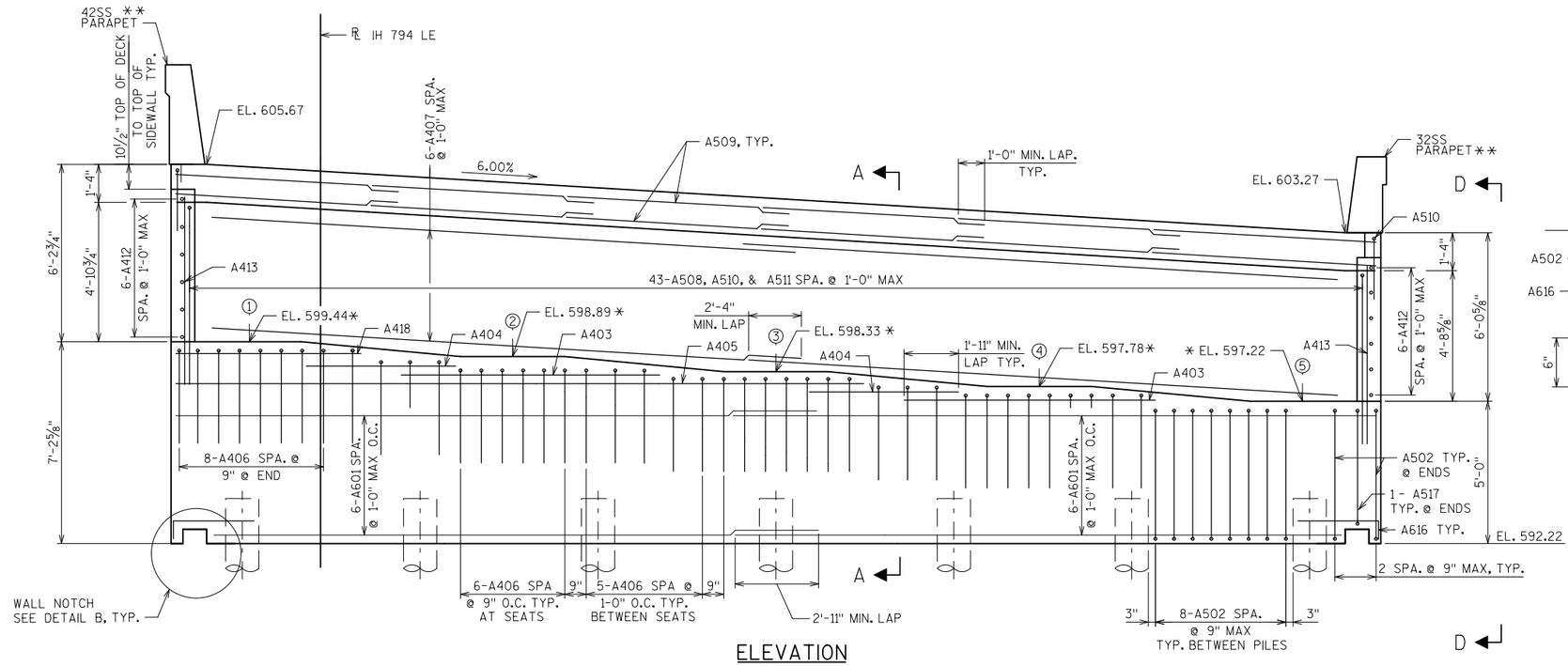
SHEET 12 OF 40
756

8

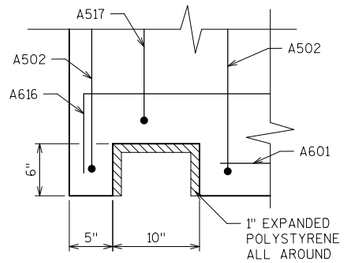
8

STATE PROJECT NUMBER

1300-13-74

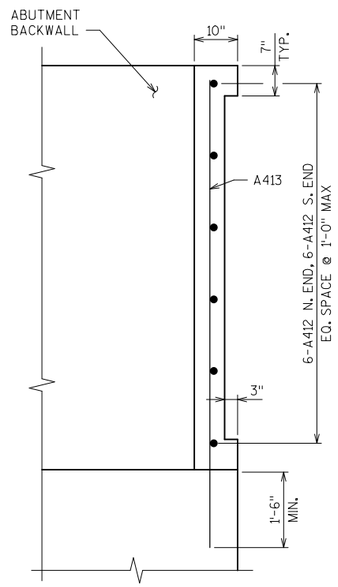


ELEVATION



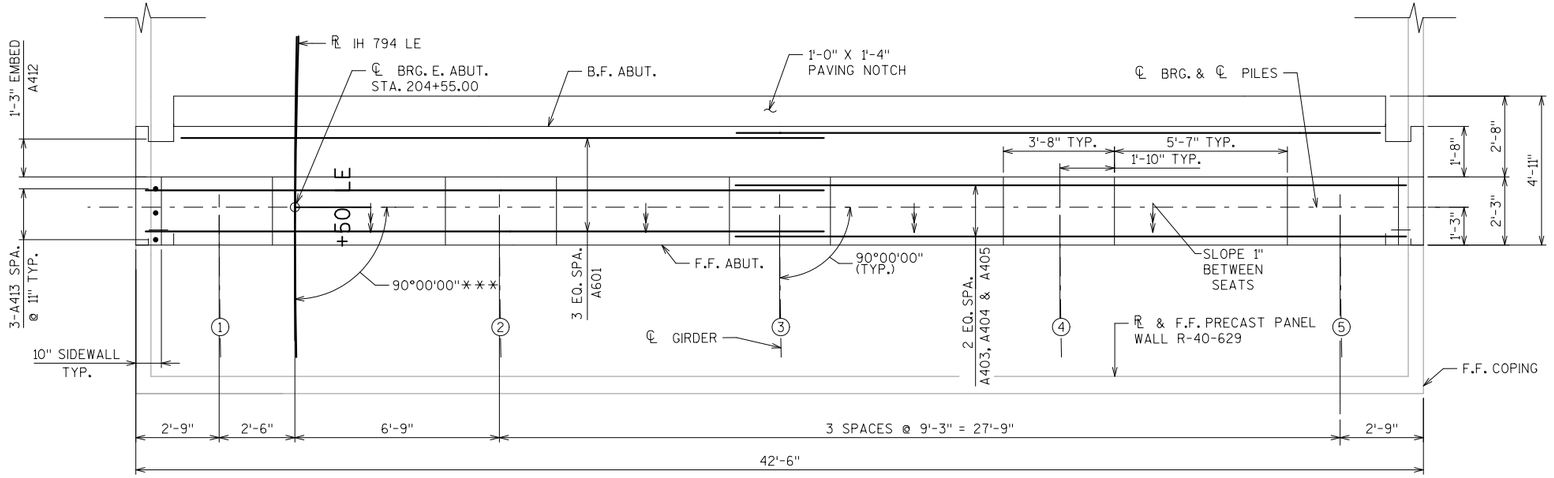
DETAIL B

WALL NOTCH (TYP.)

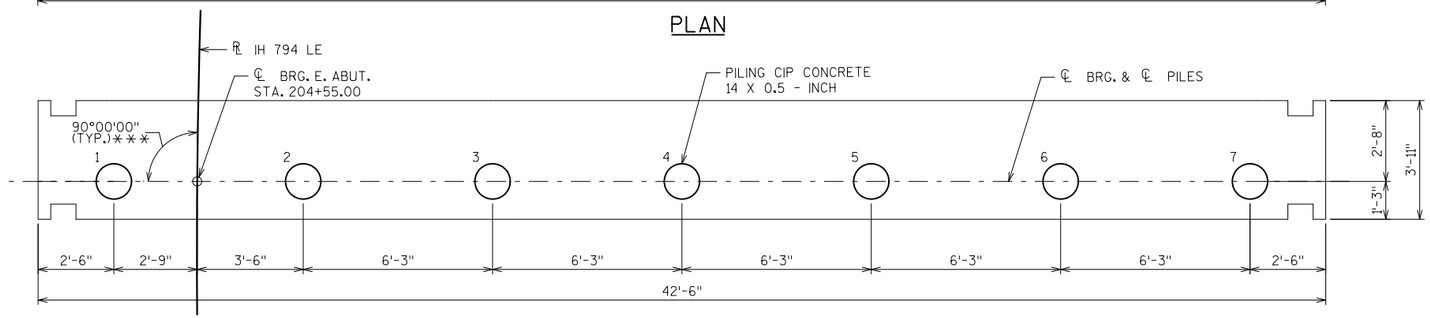


SECTION

(THRU SIDEWALL)



PLAN



PILE PLAN

LEGEND

* ELEVATIONS ARE GIVEN AT THE TOP OF CONCRETE AT THE INTERSECTION OF THE ℄ GIRDER AND ℄ BRG.

** SEE SUPERSTRUCTURE DETAILS FOR DIMENSIONS.

*** ANGLE IS MEASURED BETWEEN THE ℄ OF BRG. E. ABUT. AND THE TANGENT OF ℞ IH 794 LE AT THE ℄ OF BRG. E. ABUT.

SLOPE 1" BETWEEN BEARING SEATS.

(#) GIRDER NUMBER

NOTES

1. ABUTMENT TO BE SUPPORTED ON 14 X 0.5 - INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 190 TONS AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 115' LONG.

2. SEE SHEET 14 FOR SECTION A-A & D-D.

N

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MSC

EAST ABUTMENT

SHEET 13 OF 40

757

8

8

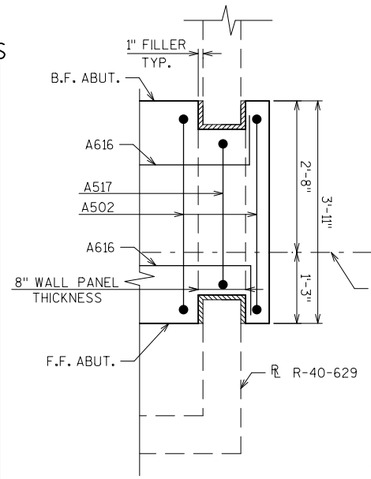
IP_PWP:d0349325\080513_EA.DGN 24-JUL-2015 08:21

STATE PROJECT NUMBER
1300-13-74

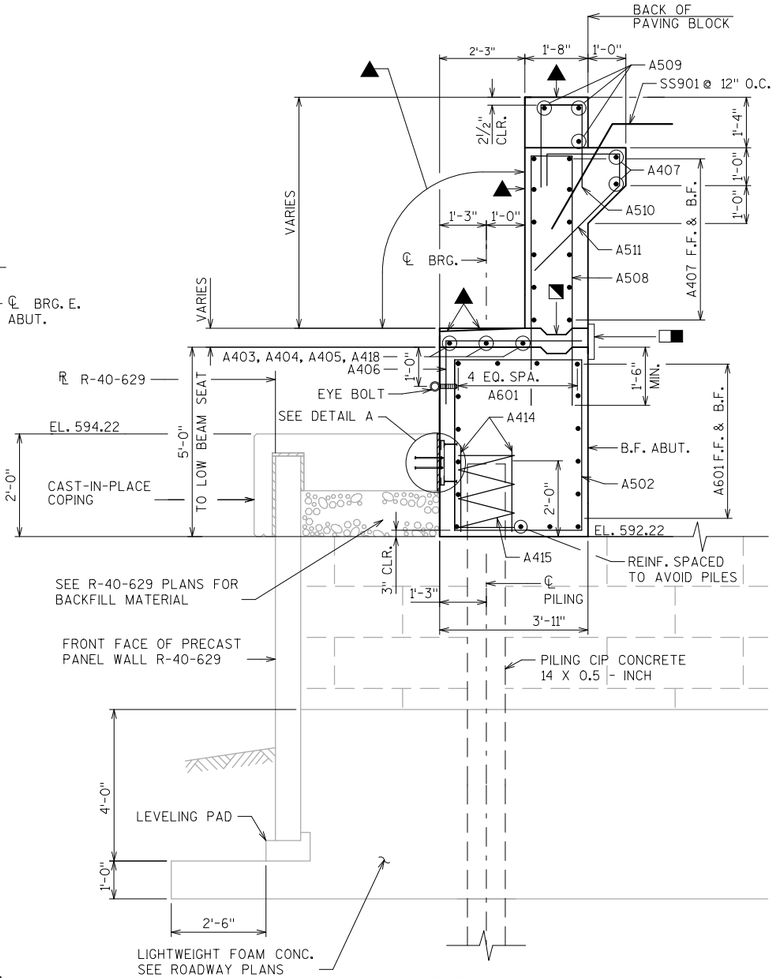
TOTAL STAINLESS = 700 LBS
TOTAL COATED = 2,080 LBS
TOTAL UNCOATED = 2,490 LBS

BILL OF BARS

BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
SS901	41	5'-0"		X	X		CONC. ABUT. DIAPH. TO APPROACH SLAB
A601	32	22'-7"					ABUT. - BODY - HORIZ.
A502	52	16'-10"			X		ABUT. - BODY - STIRRUP
A403	6	9'-2"					ABUT. - STEP - HORIZ.
A404	6	5'-3"					ABUT. - STEP - HORIZ.
A405	3	24'-2"					ABUT. - STEP - HORIZ.
A406	42	6'-9"			X		ABUT. - STEP - VERT.
A407	28	21'-6"	X				ABUT. - BACKWALL - HORIZ.
A508	43	17'-7"	X		X		ABUT. - BACKWALL - VERT.
A509	18	7'-11"	X				ABUT. - PAV. BLOCK - HORIZ.
A510	43	5'-5"	X		X		ABUT. - PAV. BLOCK - VERT.
A511	43	6'-0"	X		X		ABUT. - CORBEL
A412	12	3'-4"	X				ABUT. - SIDEWALL - HORIZ.
A413	6	6'-8"	X				ABUT. - SIDEWALL - VERT.
A414	14	2'-3"					ABUT. - PILE
A415	7	28'-0"			X		ABUT. - PILE - SPIRAL
A616	33	3'-6"	X		X		ABUT. - HORIZ. - WALL
A517	2	13'-10"			X		ABUT. - BODY - STIRRUP AT WALL
A418	3	6'-6"			X		ABUT. - STEP - HORIZ.



SECTION B-B



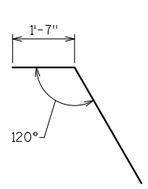
SECTION A-A

NOTES

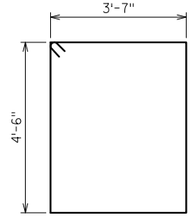
1. ALL BENDS AND BAR EXTENSIONS ARE STANDARD AASHTO DIMENSIONS UNLESS OTHERWISE NOTED.
2. FOR APPROACH SLAB, SEE SHEET 15 & 16.
3. STAINLESS STEEL UNISTRUT P3772-12 (OR APPROVED EQUIVALENT) CHANNEL WITH (2) P1023 STAINLESS STEEL NUTS WITH SPRINGS, SPACED AT 2'-0".
4. (2) 3/4" DIA. x 10" LONG 18-8 ASTM A304 STAINLESS STEEL BOLTS WITH 2" x 2" x 1/4" PLATE STAINLESS STEEL WASHERS.
5. DOUBLE 3/4" 18-8 ASTM A304 STAINLESS STEEL NUTS WITH TEFLON COATED WASHER. FINGER TIGHTEN FIRST NUT AND HOLD IN POSITION UNTIL SECOND IS TIGHTENED TO 75 FT-LBS TORQUE. BOLT ASSEMBLY SHOULD SLIDE IN UNISTRUT AFTER TIGHTENING SECOND NUT (LOCK-IN).

LEGEND

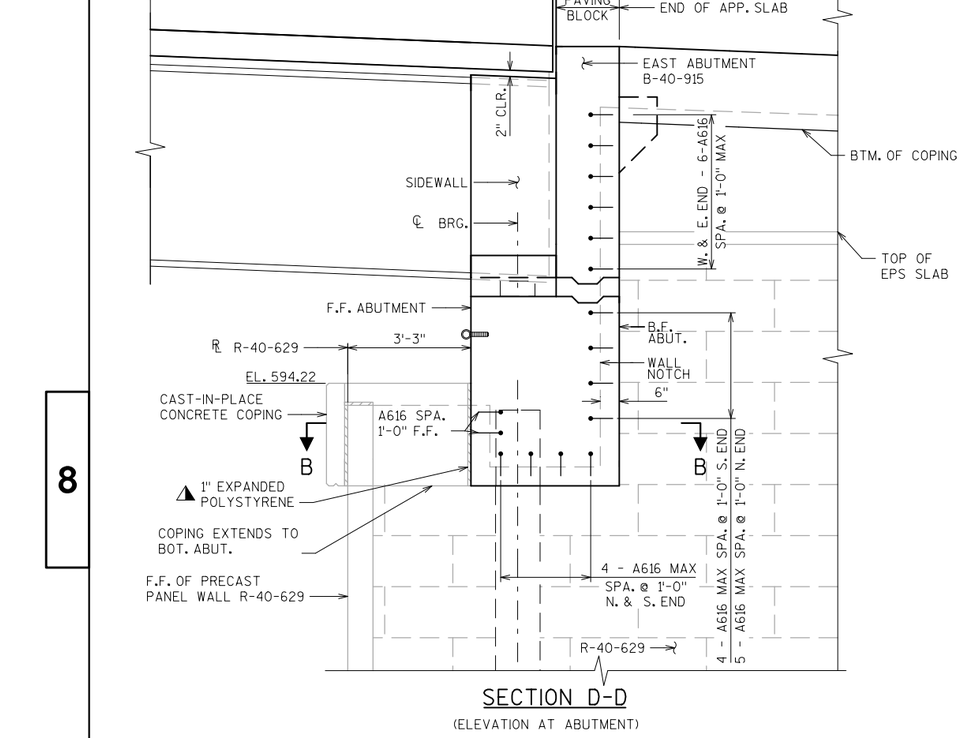
- 18" RUBBERIZED MEMBRANE WATERPROOFING, SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE
- KEYED CONST. JOINT FORMED BY BEVELED 2" X 6".
- COAT SURFACES WITH "PROTECTIVE COATING, CLEAR".
- SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).



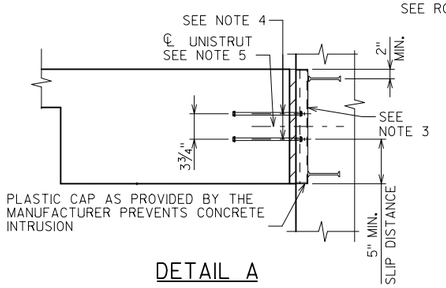
SS901



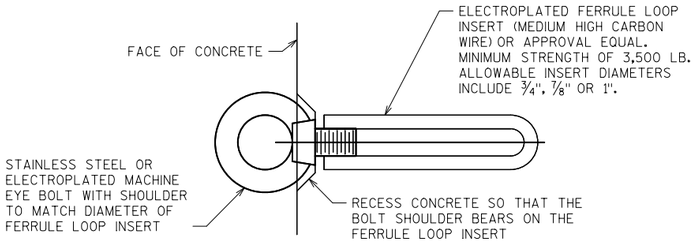
A502



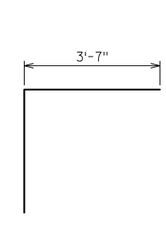
SECTION D-D
(ELEVATION AT ABUTMENT)



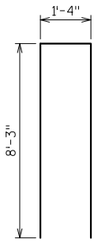
DETAIL A



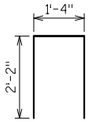
EYE BOLT DETAIL
COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".



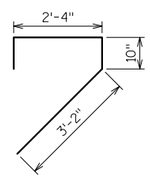
A406



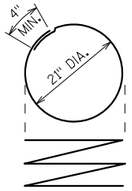
A508



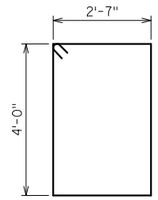
A510



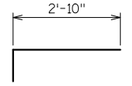
A511



A415



A517



A616

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY TJN | PLANS CK'D. MSC

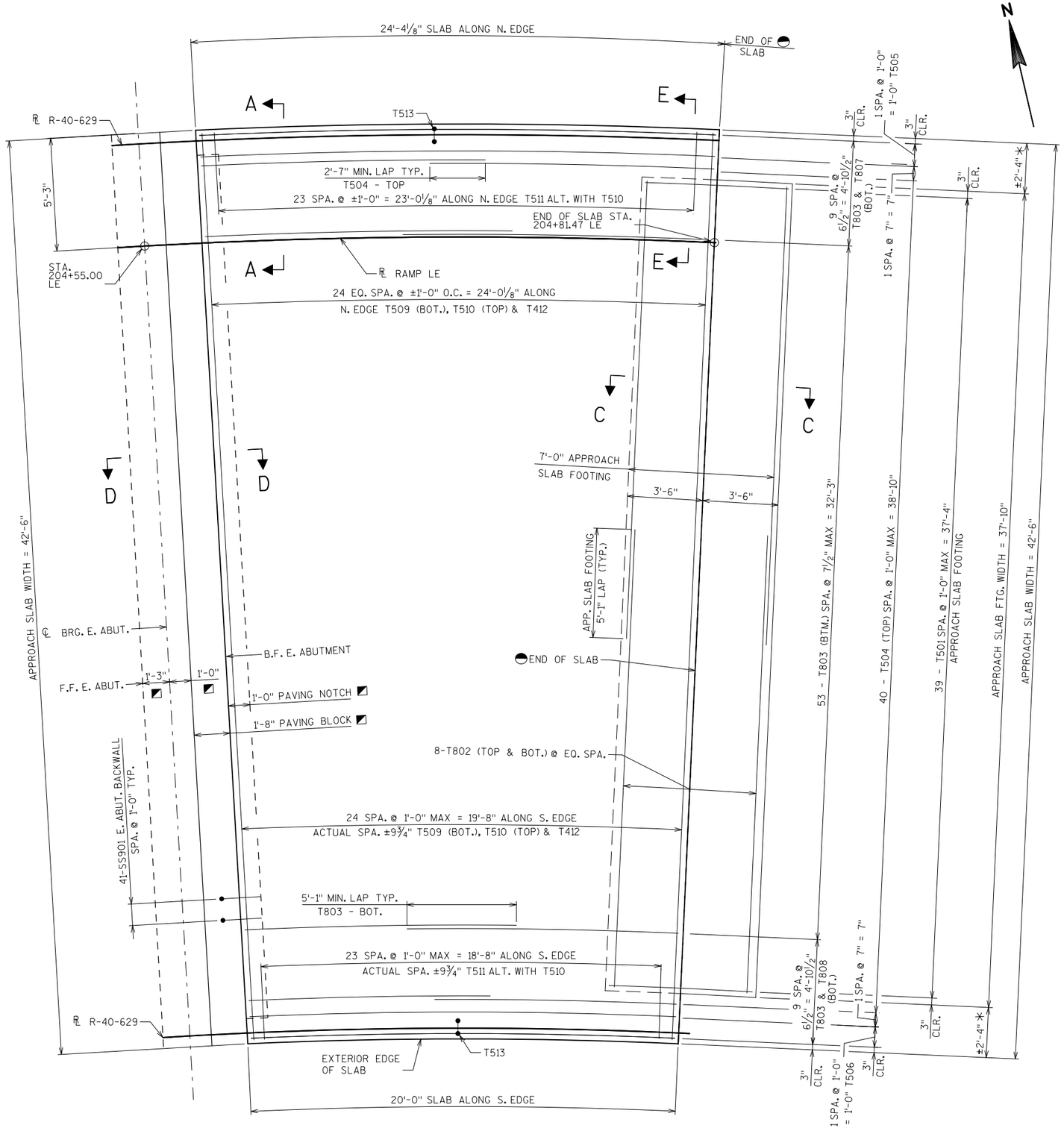
EAST ABUTMENT REINFORCING SCHEDULE

SHEET 14 OF 40
758

8

8

STATE PROJECT NUMBER
1300-13-74



LEGEND

- ◪ MEASURED NORMAL TO ABUTMENT.
- ◓ END OF SLAB LINE IS NORMAL TO ℄ RAMP LE AT STA. 204+81.47 LE.
- ✳ DIMENSION ASSUMES WALL PANEL THICKNESS OF 8".

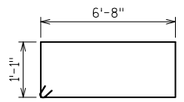
NOTES

1. SEE "APPRAOCH SLAB DETAILS" SHEET FOR LOCATIONS OF SECTIONS A-A, C-C, D-D AND E-E.
2. FOR PARAPET DETAILS SEE SHEET 32.

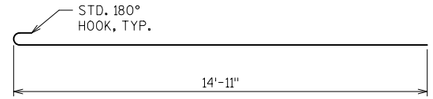
BILL OF BARS

TOTAL COATED = 13,590 LBS

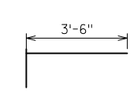
BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
T501	39	16'-2"	X		X		APPROACH SLAB FTG. - STIRRUP
T802	32	21'-6"	X				APPROACH SLAB FTG. - TRANS.
T803	142	15'-6"	X		X		APPROACH SLAB - LONG. - BOT.
T504	80	13'-4"	X				APPROACH SLAB - LONG. - TOP
T505	4	24'-0"	X				APPROACH SLAB - LONG. - WALL - N. EDGE
T506	4	19'-8"	X				APPROACH SLAB - LONG. - WALL - S. EDGE
T807	3	24'-0"	X				APPROACH SLAB - LONG. - BOT. - N. EDGE
T808	3	19'-8"	X				APPROACH SLAB - LONG. - BOT. - S. EDGE
T509	25	42'-2"	X				APPROACH SLAB - TRANS. - BOT.
T510	25	42'-2"	X				APPROACH SLAB - TRANS. - TOP
T511	48	4'-3"	X		X		APPROACH SLAB - TRANS. - TOP - WALL
T412	50	3'-0"	X		X		APPROACH SLAB - TRANS. - WALL
T513	68	4'-5"	X		X		APPROACH SLAB - PARAPET 32SS, 42SS - VERT.
T514	31	5'-0"	X		X		APPROACH SLAB - PARAPET 32SS - VERT.
T515	37	6'-8"	X		X		APPROACH SLAB - PARAPET 42SS - VERT.
T516	6	19'-8"	X				APPROACH SLAB - PARAPET 32SS - HORIZ.
T517	8	24'-0"	X				APPROACH SLAB - PARAPET 42SS - HORIZ.



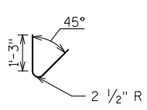
T501



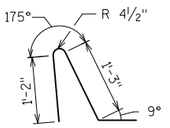
T803



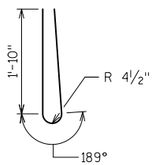
T511



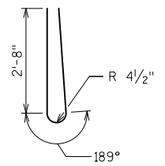
T412



T513



T514



T515

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY TJN | PLANS CK'D. MSC

APPROACH SLAB PLAN

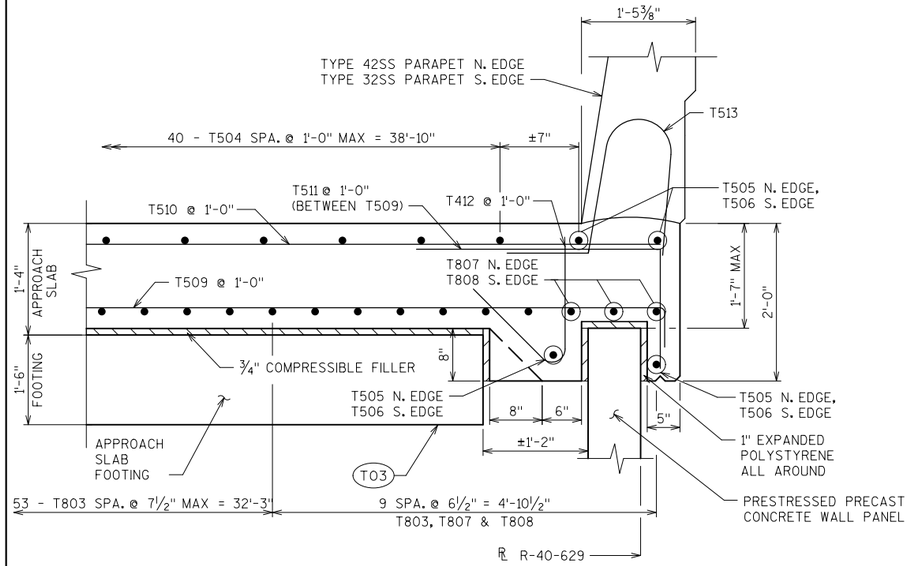
SHEET 15 OF 40
759

8

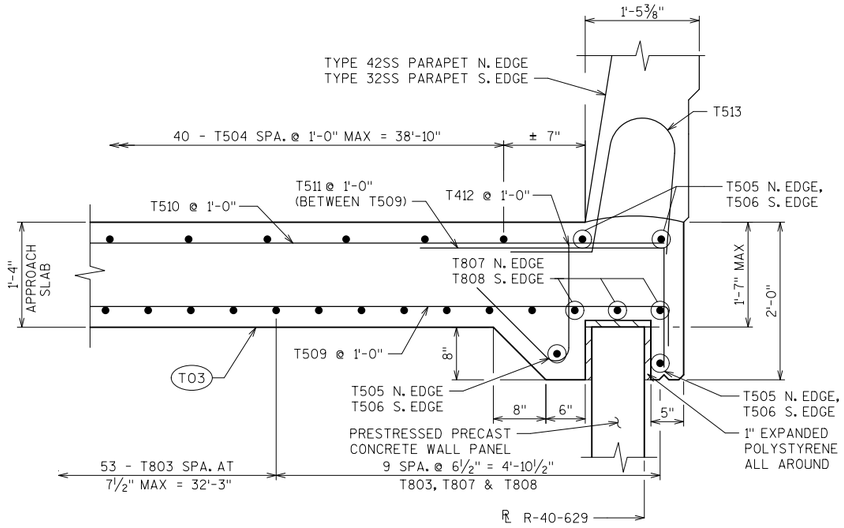
8

STATE PROJECT NUMBER

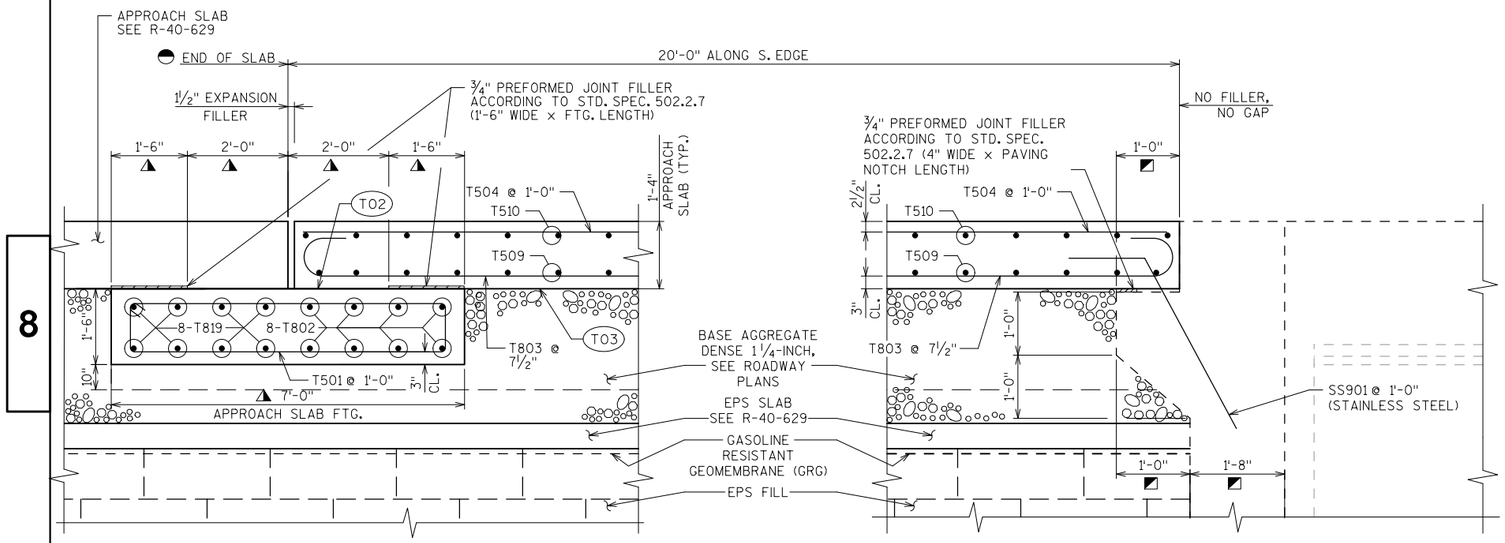
1300-13-74



SECTION E-E



SECTION A-A



SECTION C-C

SECTION D-D

SECTION THRU APPROACH SLAB

LEGEND

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03 INCH MIN. TOTAL THICKNESS) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03 INCH MIN. TOTAL THICKNESS) OF POLYETHYLENE SHEETS OVER THE ENTIRE SUBGRADE BENEATH.

▣ ROADWAY APPROACH PAVEMENT.

◩ MEASURED NORMAL TO ABUTMENT.

▲ MEASURED NORMAL TO END OF SLAB.

◓ END OF SLAB LINE IS NORMAL TO ℄ RAMP LE AT STA. 204+81.47 LE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY MDM | PLANS CK'D. MSC

APPROACH SLAB DETAILS

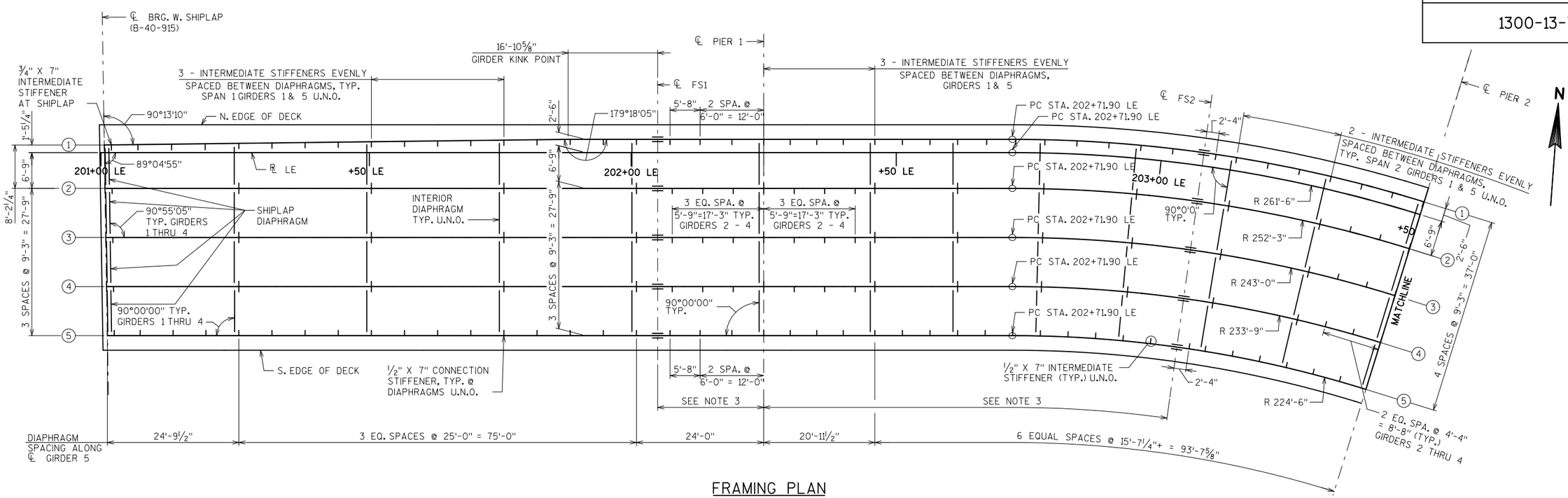
SHEET 16 OF 40
760

8

8

STATE PROJECT NUMBER

1300-13-74



FRAMING PLAN
(SPANS 1 & 2)

GENERAL SUPERSTRUCTURE NOTES

1. STRUCTURAL STEEL FOR FLANGES, WEBS, BEARING STIFFENERS, INTERMEDIATE STIFFENERS AND DIAPHRAGM CONNECTION PLATES SHALL BE HIGH STRENGTH STRUCTURAL STEEL ASTM A709, GRADE 50 T2.

2. ALL DIAPHRAGMS AND CHANNELS SHALL BE EITHER ASTM A709, GRADE 50 T2 OR ASTM A572, GRADE 50 CONFORMING TO ZONE 2 TOUGHNESS REQUIREMENTS PER WISDOT STANDARD SPECIFICATION 506.2.2.1.

3. SEE GIRDER ELEVATION SHEETS FOR LOCATION OF EACH FIELD SPLICE.

4. ALL STRUCTURAL STEEL SHALL BE PAINTED, SEE THE SPECIAL PROVISIONS.

5. ALL DIMENSIONS ARE MEASURED ALONG A HORIZONTAL PLANE. LONGITUDINAL AND TRANSVERSE GRADE EFFECTS ARE NOT INCLUDED IN DIMENSIONS. THIS NOTE ALSO APPLIES TO ALL DIMENSIONS AND PLATE LENGTHS GIVEN ON THE GIRDER ELEVATION SHEETS.

6. SEE SHEETS 20 AND 21 FOR DIAPHRAGM DETAILS.

7. ALL CONNECTIONS SHALL BE MADE WITH 7/8"Φ FRICTION TYPE HIGH STRENGTH BOLTS (ASTM A325-X).

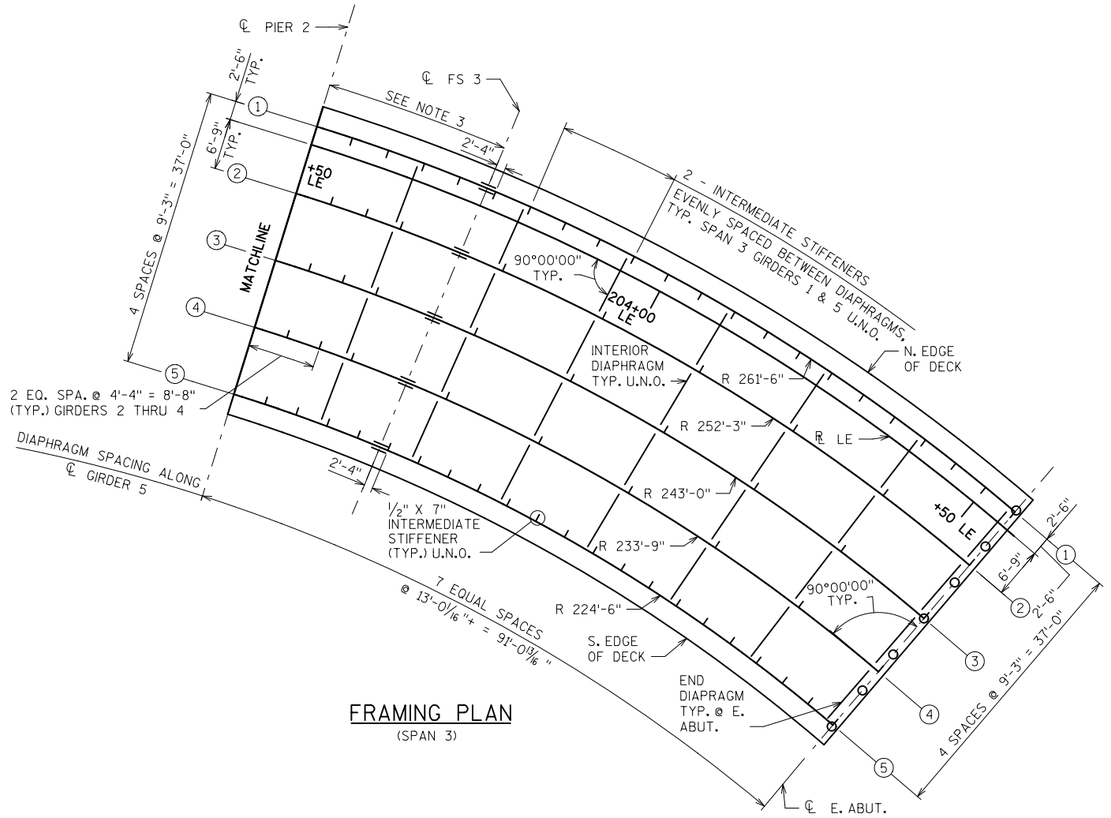
8. CAMBER ORDINATES, AS SHOWN ON THE PLANS, ARE CALCULATED TO COMPENSATE FOR ALL DEAD LOAD DEFLECTIONS, EXCLUDING FUTURE WEARING SURFACE, AND FOR THE FINISHED VERTICAL PROFILE. DETAIL DIAPHRAGM AND CROSS-FRAME MEMBERS TO FIT THE CAMBERED, STEEL DEAD LOAD FIT POSITION OF THE GIRDERS.

9. ALL STEEL SHALL BE DETAILED AND FABRICATED FOR 45°F TEMPERATURE.

10. ENSURE THE STABILITY OF ALL COMPONENTS DURING ERECTION UNTIL THE STRUCTURAL STEEL IS IN ITS FINAL POSITION WITH ALL PERMANENT BRACING IN-PLACE. DESIGN AND PROVIDE TEMPORARY BRACES, SHORING, AND ANY OTHER MEANS DEEMED NECESSARY TO ENSURE STABILITY AND PROPER FIT-UP.

11. BEGIN ERECTION STARTING AT THE EAST ABUTMENT AND PROCEED BACK STATION. THE FIELD SECTION AT THE WEST SHIPLAP BEARING SHALL BE ERECTED LAST.

12. THE COST FOR ERECTION AND TEMPORARY BRACING AND SUPPORT OF THE SUPERSTRUCTURE SHALL BE INCLUDED IN "STRUCTURAL STEEL HS."



FRAMING PLAN
(SPAN 3)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MJN

FRAMING PLAN

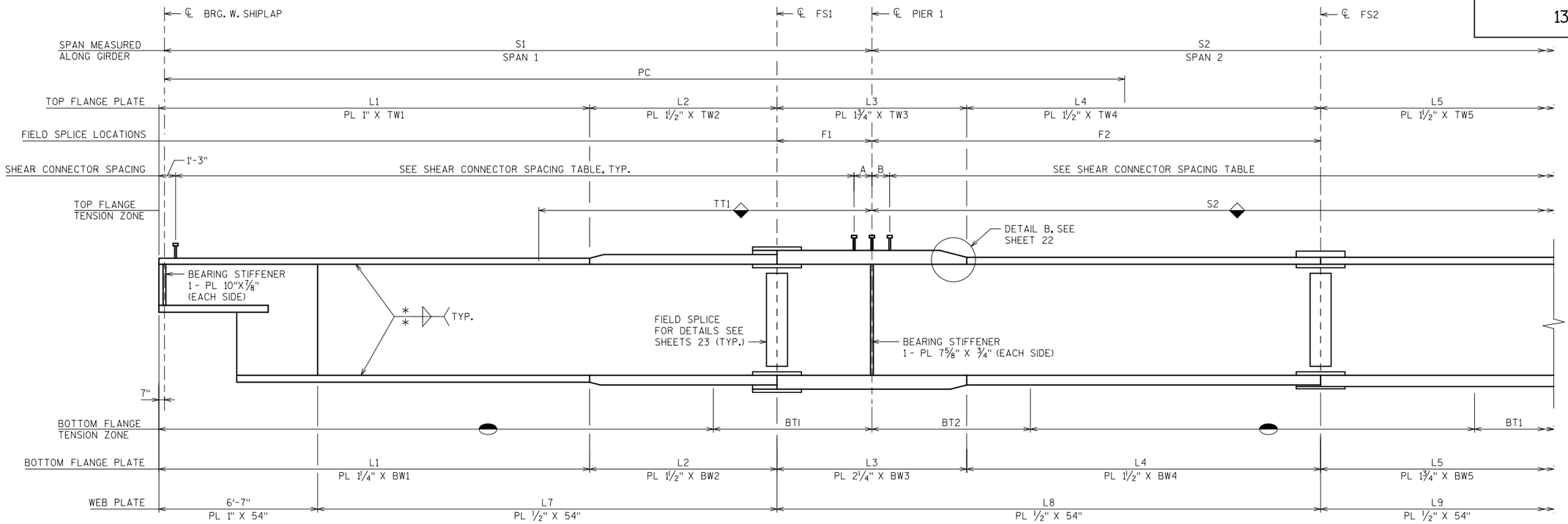
SHEET 17 OF 40
761

8

8

STATE PROJECT NUMBER

1300-13-74



GIRDER ELEVATION

TOP FLANGE WIDTH						
GIRDER	TW1	TW2	TW3	TW4	TW5	TW6
1	18	18	18	18	18	18
2	16	16	16	16	16	16
3	16	16	16	16	16	16
4	16	16	16	16	16	16
5	16	16	16	16	16	16

BOTTOM FLANGE WIDTH						
GIRDER	BW1	BW2	BW3	BW4	BW5	BW6
1	20	20	20	20	20	20
2	18	18	18	18	18	18
3	18	18	18	18	18	18
4	18	18	18	18	18	18
5	18	18	18	18	18	18

FIELD SPLICE DIMENSIONS			
GIRDER	F1	F2	F3
1	20'-0"	83'-1 15/16"	25'-0 1/2"
2	20'-0"	81'-10 1/2"	24'-1 7/8"
3	20'-0"	80'-7 1/8"	23'-3 1/4"
4	20'-0"	79'-3 3/4"	22'-4 5/8"
5	20'-0"	78'-0 5/16"	21'-6"

PLATE LENGTHS										
GIRDER	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
1	70'-7"	34'-4 1/2"	40'-0"	63'-1 15/16"	67'-7 5/8"	80'-11 11/16"	98'-4 1/2"	103'-1 15/16"	67'-7 5/8"	81'-8 11/16"
2	70'-7"	34'-2 7/8"	40'-0"	61'-10 1/2"	65'-2 15/16"	78'-1 5/16"	98'-2 7/8"	101'-10 1/2"	65'-2 15/16"	78'-10 5/16"
3	70'-7"	34'-1 1/16"	40'-0"	60'-7 1/8"	62'-10 1/4"	75'-2 15/16"	98'-1 1/16"	100'-7 1/8"	62'-10 1/4"	75'-11 15/16"
4	70'-7"	33'-11 5/16"	40'-0"	59'-3 3/4"	60'-5 1/2"	72'-4 9/16"	97'-11 5/16"	99'-3 3/4"	60'-5 1/2"	73'-1 9/16"
5	70'-7"	33'-9 9/16"	40'-0"	58'-0 5/16"	58'-0 13/16"	69'-6 3/16"	97'-9 9/16"	98'-0 5/16"	58'-0 13/16"	70'-3 3/16"

	TOP FLANGE TENSION ZONE DIMENSIONS (FT)		BOTTOM FLANGE COMPRESSION ZONE DIMENSIONS (FT)			
GIRDER	TT1	TT2	BT1	BT2	BT3	BT4
1	56'-0"	55'-0"	14'-0"	16'-0"	14'-0"	10'-0"
2	50'-0"	46'-0"	15'-0"	15'-0"	12'-0"	10'-0"
3	46'-0"	43'-0"	15'-0"	16'-0"	12'-0"	9'-0"
4	43'-0"	43'-0"	15'-0"	15'-0"	10'-0"	8'-0"
5	45'-0"	49'-0"	15'-0"	15'-0"	9'-0"	6'-0"

SPAN LENGTHS (BRG. TO BRG.)				
GIRDER	S1	S2	S3	TOTAL
1	124'-4 1/2"	125'-9 1/16"	106'-0 3/16"	356'-1 3/4"
2	124'-2 7/8"	122'-11 9/16"	102'-3 3/16"	349'-5 5/8"
3	124'-1 1/16"	120'-2 1/8"	98'-6 3/16"	342'-9 3/8"
4	123'-11 5/16"	117'-4 5/8"	94'-9 3/16"	336'-1 1/16"
5	123'-9 9/16"	114'-7 1/8"	91'-0 3/16"	329'-4 7/8"

WELDED STUD SHEAR CONNECTORS 7/8" x 6" SPACING TABLE																	
GIRDER	WEST SHIPLAP	SPAN 1			A	PIER 1	B	SPAN 2			C	PIER 2	D	SPAN 3			EAST ABUTMENT
1		12 SPA. @ 1'-0"	102 SPA. @ 1'-1"	-	1'-2"		1'-2"	62 SPA. @ 1'-0"	67 SPA. @ 11"	-	1-2"		10"	14 SPA. @ 9"	113 SPA. @ 10"	-	
2		9 SPA. @ 1'-3"	83 SPA. @ 1'-4"	-	1'-8"		10"	112 SPA. @ 1'-1"	-	-	10"		1'-5"	56 SPA. @ 1'-1"	34 SPA. @ 1'-2"	-	
3		12 SPA. @ 1'-0"	79 SPA. @ 1'-3"	12 SPA. @ 1'-0"	8"		1'-0"	109 SPA. @ 1'-1"	-	-	1'-1"		1'-0"	54 SPA. @ 1'-1"	33 SPA. @ 1'-2"	-	
4		9 SPA. @ 1'-3"	70 SPA. @ 1'-5"	9 SPA. @ 1'-4"	10"		9"	96 SPA. @ 1'-1"	12 SPA. @ 1'-0"	-	8"		1'-5"	56 SPA. @ 1'-0"	34 SPA. @ 1'-1"	-	
5		12 SPA. @ 1'-0"	82 SPA. @ 1'-2"	13 SPA. @ 1'-1"	1'-4"		9"	14 SPA. @ 1'-1"	62 SPA. @ 1'-4"	14 SPA. @ 1'-1"	10"		1'-2"	16 SPA. @ 1'-1"	47 SPA. @ 1'-4"	8 SPA. @ 1'-2"	

GIRDER PC POINTS	
GIRDER	PC
1	171'-3 1/4"
2	171'-1 5/8"
3	170'-11 7/8"
4	170'-10 1/16"
5	170'-8 5/16"

GIRDER NOTES

1. OPTIONAL WELDED SHOP SPLICES MAY BE USED FOR ALL FLANGE AND WEB PLATES OVER 60'-0" LONG. IF USED, THE LOCATION OF SPLICE SHALL BE SHOWN ON THE SHOP DRAWINGS AND WILL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL DESIGN SECTION.
2. OPTIONAL FLANGE BUTT SPLICE. A FLANGE PLATE OF THE LARGER SIZE MAY BE FURNISHED FULL LENGTH, BUT PAY WEIGHT SHALL BE BASED ON SECTION AS DETAILED.
3. SHEAR STUDS SHALL NOT BE PLACED ON SPLICE PLATES. STUDS THAT FALL OVER SPLICE PLATES SHALL BE DISTRIBUTED EVENLY TO EACH SIDE OF THE SPLICE. RESPACE STUDS EQUALLY OVER A DISTANCE OF APPROXIMATELY 10 FEET EACH SIDE OF SPLICE TO ACCOMODATE DISPLACED STUDS.
4. SEE TABLE FOR GIRDER DIMENSIONS AND SHEAR CONNECTOR SPACINGS.
5. THE BEARING STIFFENERS SHALL BE DETAILED SUCH THAT THEY ARE PLUMB AFTER DEAD LOAD DEFLECTION OF THE STRUCTURE.

LEGEND

- BOTTOM FLANGE TENSION ZONE. FIELD WELDING ON THE BOTTOM FLANGE IS PROHIBITED IN THIS AREA.
- TOP FLANGE TENSION ZONE. FIELD WELDING ON THE TOP FLANGE FOR ANY PURPOSE IS PROHIBITED IN THIS AREA, EXCEPT FOR SHEAR STUD CONNECTIONS.
- ∗ SEE TABLE OF FILLET WELD SIZES SHEET 22

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MJN

GIRDER ELEVATIONS (1 OF 2)

SHEET 18 OF 40

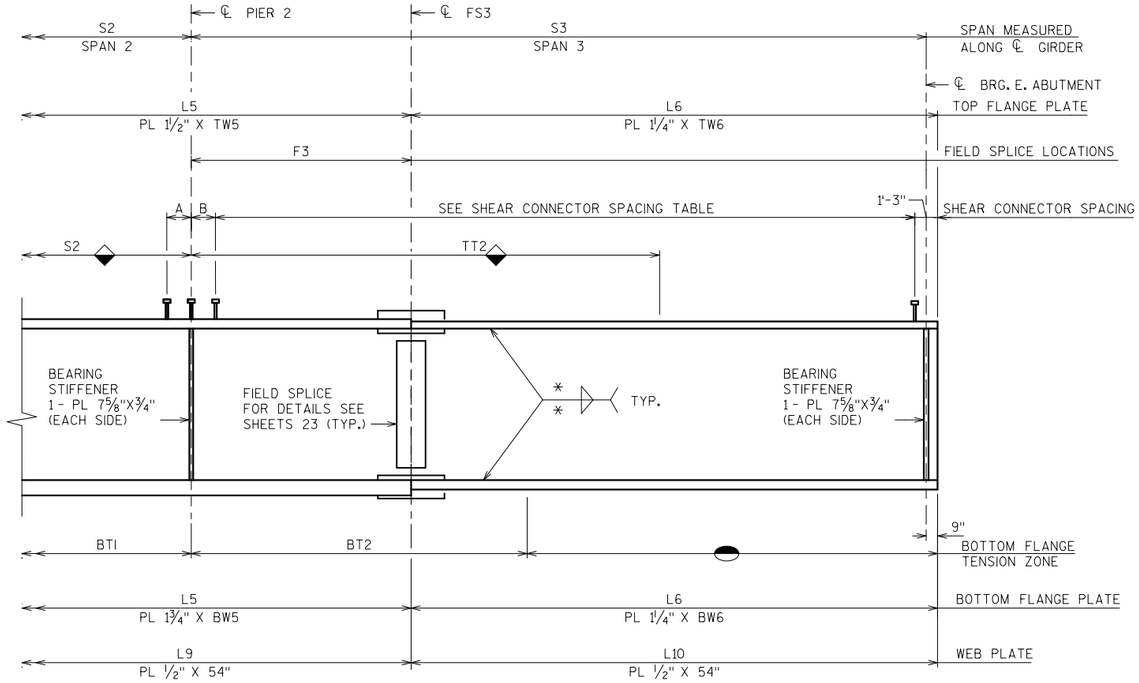
762

8

8

STATE PROJECT NUMBER

1300-13-74



GIRDER ELEVATION

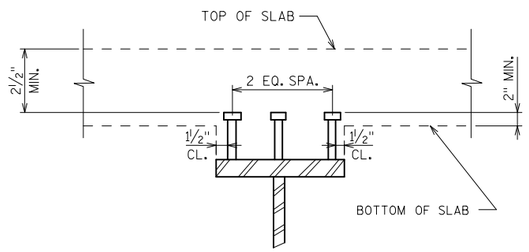
NOTES

1. SEE SHEET 18 FOR GIRDER NOTES.

LEGEND

- BOTTOM FLANGE TENSION ZONE. FIELD WELDING ON THE BOTTOM FLANGE IS PROHIBITED IN THIS AREA.
- TOP FLANGE TENSION ZONE. FIELD WELDING ON THE TOP FLANGE FOR ANY PURPOSE IS PROHIBITED IN THIS AREA, EXCEPT FOR SHEAR STUD CONNECTIONS.
- SEE TABLE OF FILLET WELD SIZES SHEET 22.

NOTE: USE THREE SHOP OR FIELD WELDED ⅞" DIA. X 6" LONG STUDS EQUALLY SPACED WITH A MIN. OF 1½" CL. FROM THE FLANGE EDGE. STUDS SHALL NOT BE PLACED OVER FIELD SPLICE PLATES.



SHEAR CONNECTOR DETAILS

"WELDED STUD SHEAR CONNECTIONS ⅞" x 6-INCH"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MJN

GIRDER ELEVATIONS (2 OF 2)

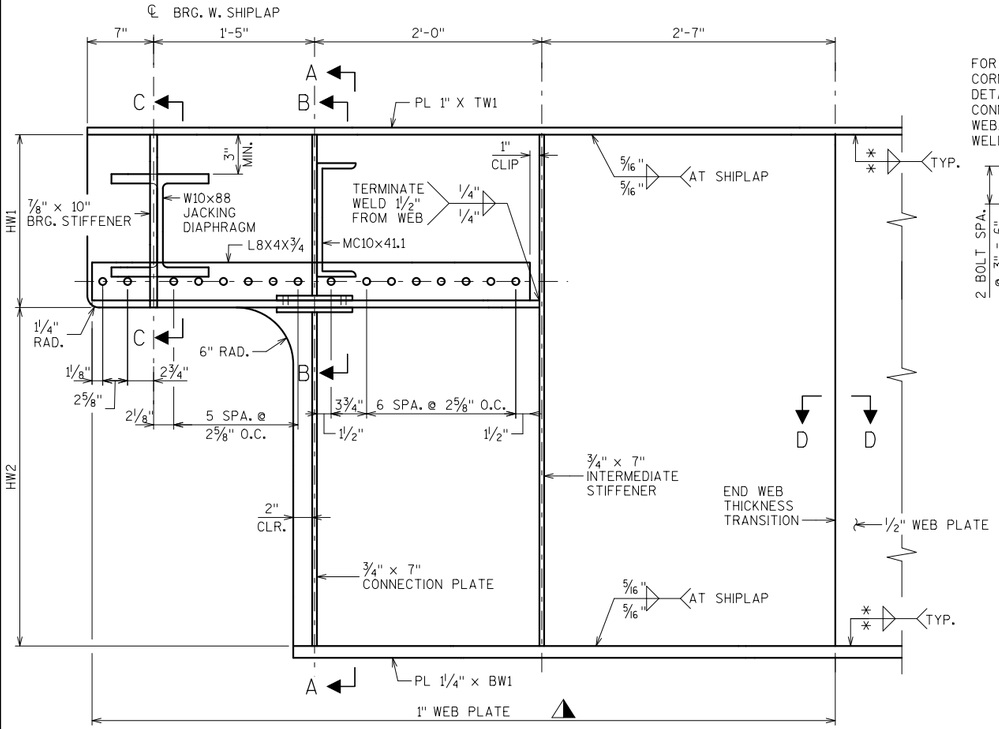
SHEET 19 OF 40

763

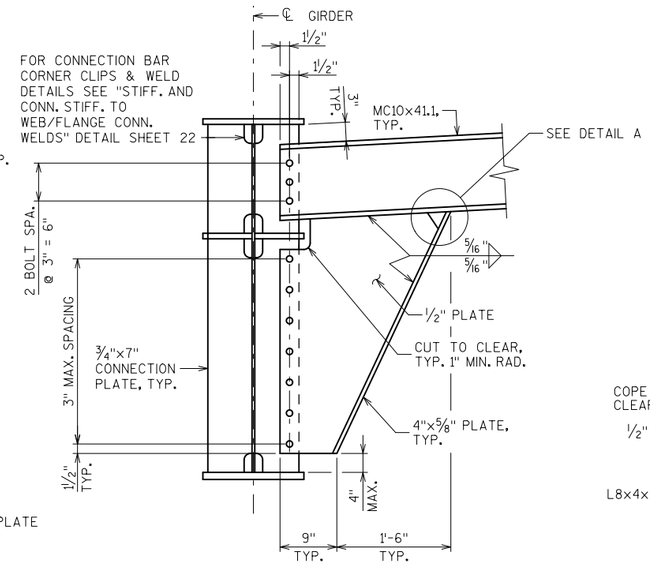
IP_PWP:d0349325\080519_GE.dgn 24-JUL-2015 08:23

STATE PROJECT NUMBER

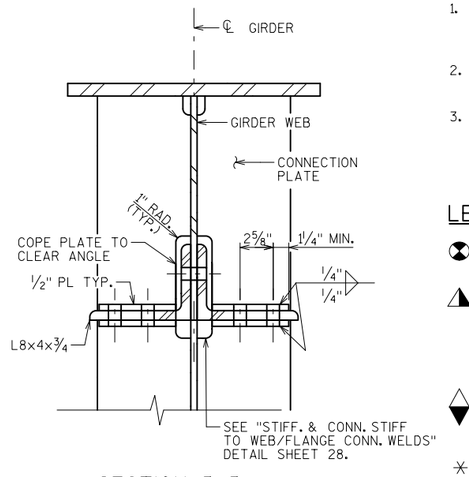
1300-13-74



W. SHIPLAP DETAIL



SECTION A-A SHIPLAP DIAPHRAGM



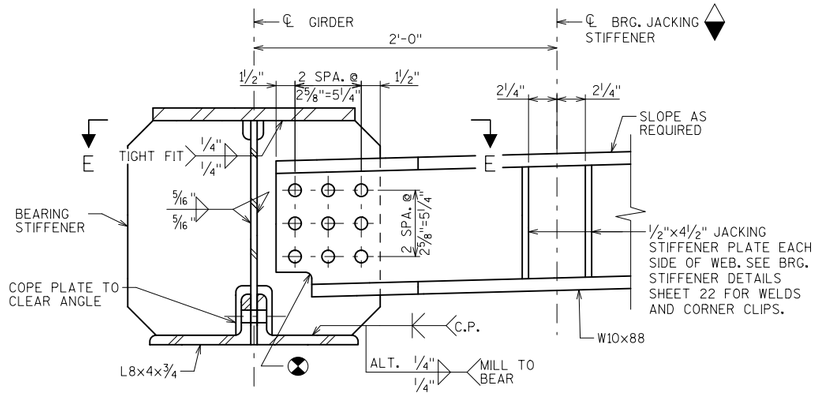
SECTION B-B

NOTES

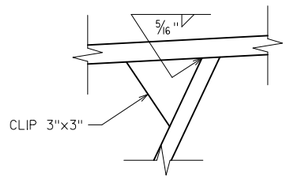
1. ALL CONNECTIONS SHALL BE MADE WITH 7/8"ϕ FRICTION TYPE HIGH STRENGTH BOLTS (ASTM A325).
2. PROVIDE STEEL PER NOTES 1 & 2 ON SHEET 17.
3. BOLTED CONNECTIONS ON GALVANIZED SURFACES REQUIRE CLASS C SURFACE PREPARATION.

LEGEND

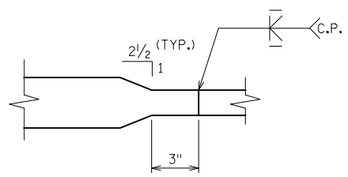
- COPE CHANNEL TO CLEAR BOLTED CONNECTIONS AS NECESSARY. 1" MIN. RADIUS.
- GALVANIZE FIRST 6'-7" OF GIRDER. ALL BOLTS, DIAPHRAGMS AND CONNECTING ELEMENTS ATTACHED TO THIS SECTION OF THE GIRDER SHALL BE HOT DIP GALVANIZED. GALVANIZING IS INCLUDED IN THE BID ITEM "STRUCTURAL STEEL HS".
- EACH DIAPHRAGM MEMBER HAS TWO JACKING LOCATIONS OFFSET AS SHOWN FOR EACH GIRDER
- SEE TABLE OF FILLET WELD SIZES ON SHEET 22.



SECTION C-C JACKING DIAHPHRAGM

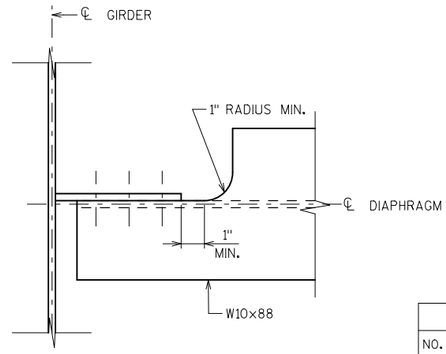


DETAIL A



SECTION D-D

WEB PLATE THICKNESS TRANSITION



SECTION E-E

WEB HEIGHT		
GIRDER	HW1	HW2
G1	1'-7"	2'-11"
G2	1'-8"	2'-10"
G3	1'-9"	2'-9"
G4	1'-10"	2'-8"
G5	1'-11"	2'-7"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. PAT

SHIPLAP DETAILS

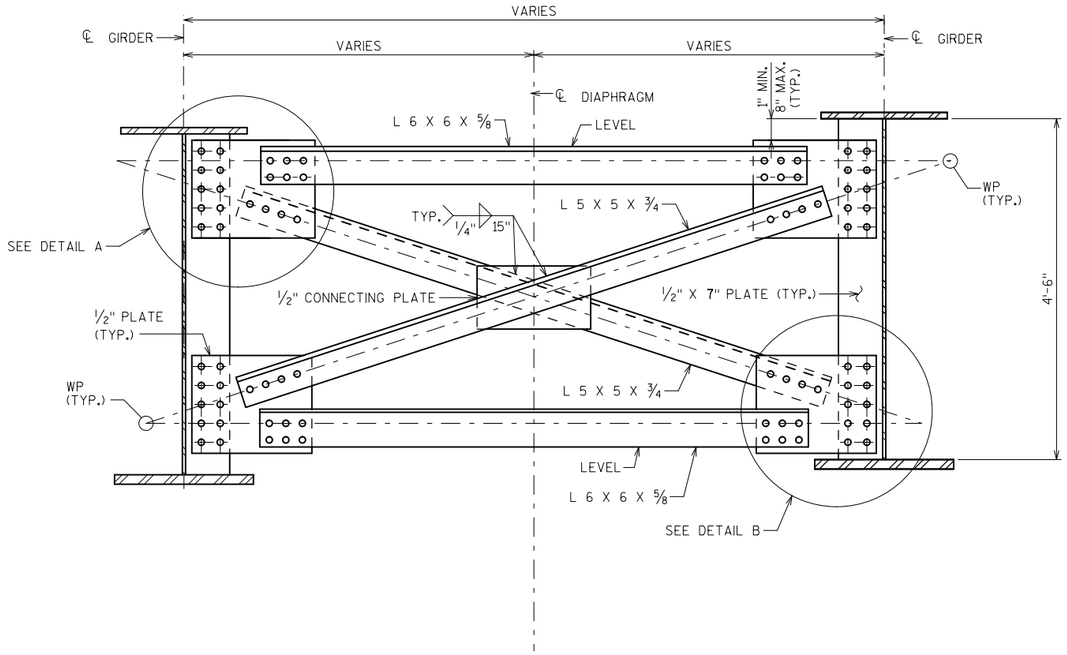
SHEET 20 OF 40

764

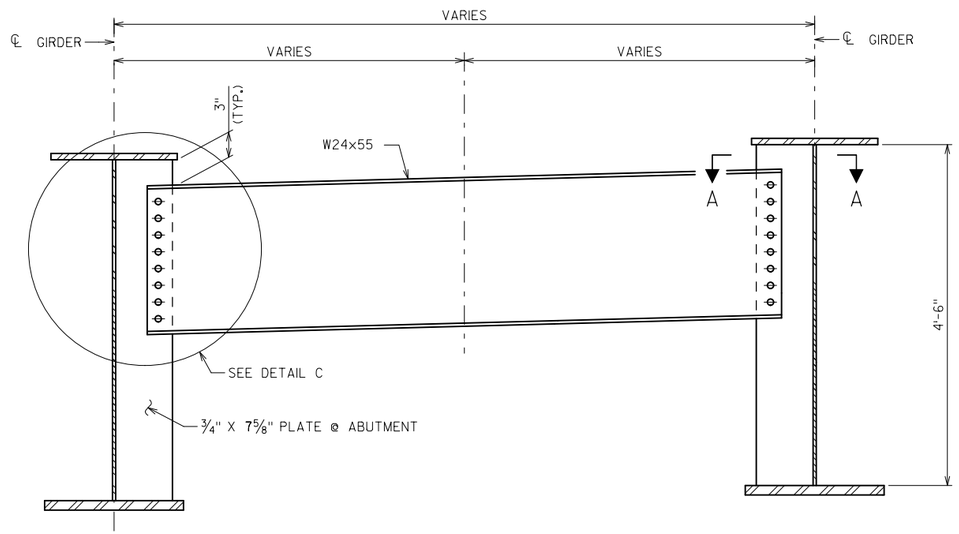
8

8

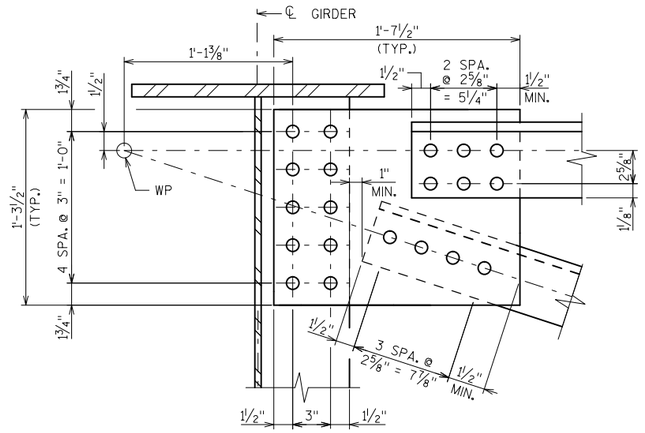
IP_PWP:d0349325\080520_SD.dgn.DGN 24-JUL-2015 08:23



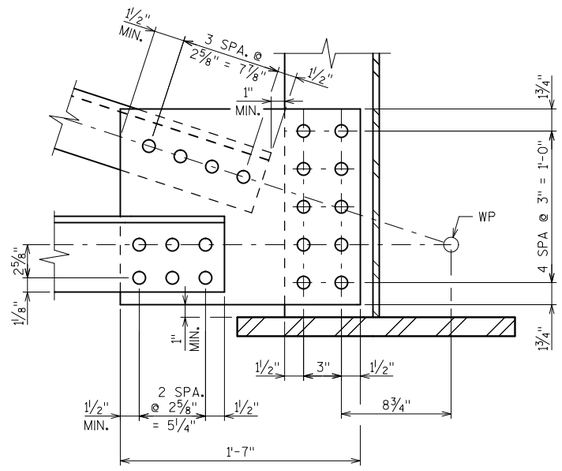
INTERIOR DIAPHRAGM



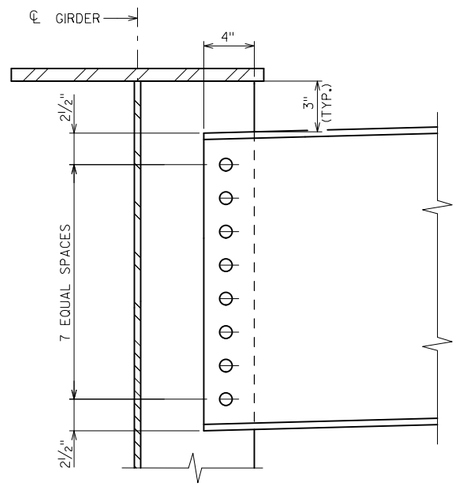
END DIAPHRAGM
AT EAST ABUT.



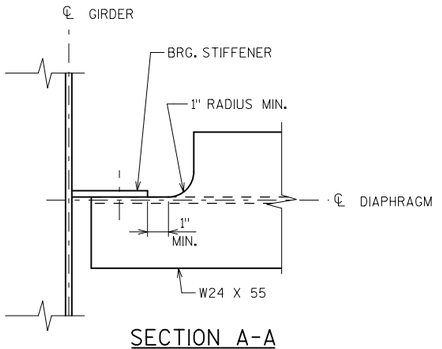
DETAIL A



DETAIL B



DETAIL C



SECTION A-A

STATE PROJECT NUMBER

1300-13-74

NOTES

1. ALL CONNECTIONS SHALL BE MADE WITH 7/8"ϕ FRICTION TYPE HIGH STRENGTH BOLTS (ASTM A325).
2. PROVIDE STEEL PER NOTES 1& 2 ON SHEET 17.
3. BOLTED CONNECTIONS REQUIRE CLASS B SURFACE PREPARATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. PAT

DIAPHRAGMS

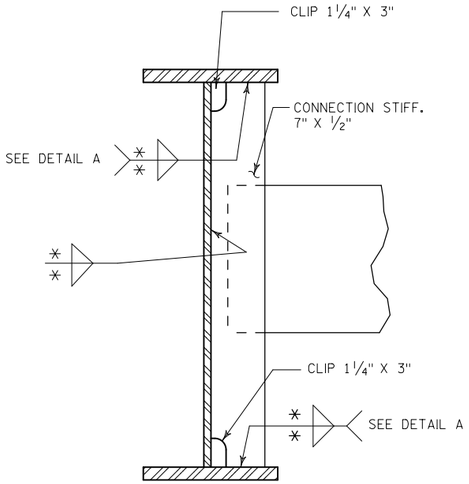
SHEET 21 OF 40
765

8

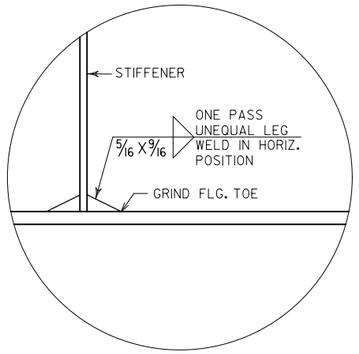
8

STATE PROJECT NUMBER

1300-13-74

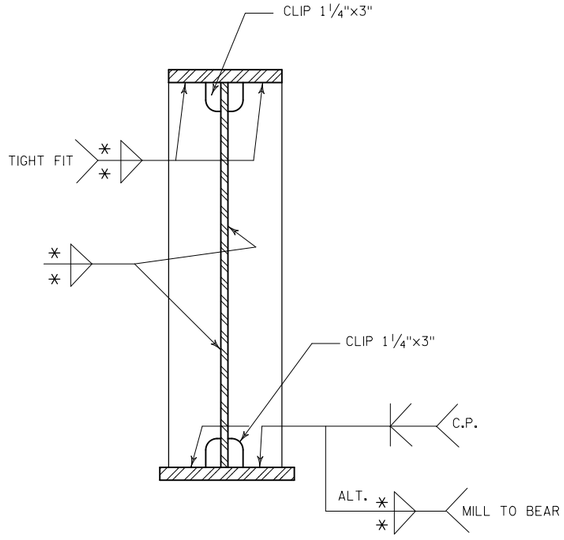


CONNECTION STIFF. DETAILS

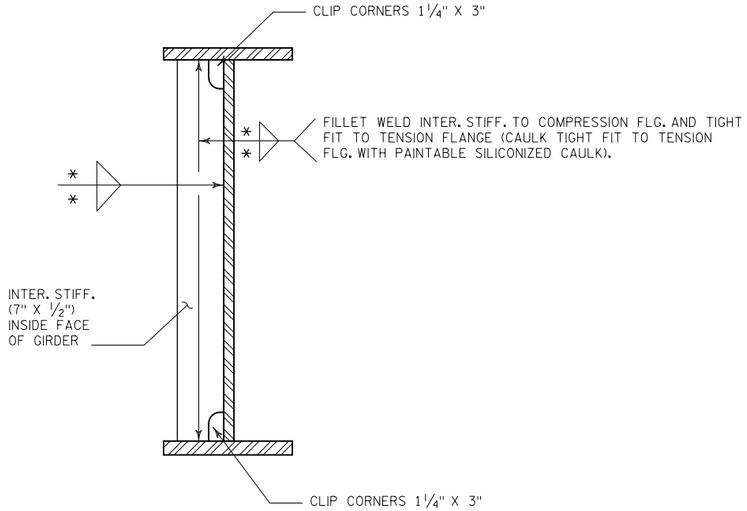


DETAIL A

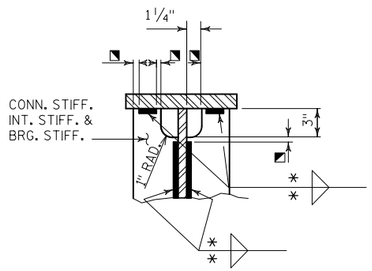
CONNECTION STIFFENER
DETAIL @ TENSION FLANGE



BRG. STIFF. DETAILS



INTERMEDIATE STIFF. DETAILS



STIFF. & CONN. STIFF. TO WEB
FLANGE CONN. WELDS

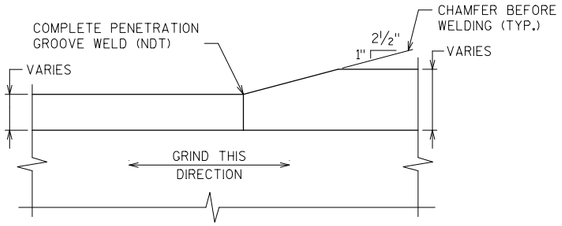
⬔ ⅛" MIN., ¼" MAX. TYP.

✳ TABLE OF FILLET WELD SIZES (UNLESS NOTED OTHERWISE)

MATERIAL THICKNESS OF THICKER PART JOINED.	‡ MIN. SIZE OF FILLET WELD
TO ½" INCLUSIVE	3/16"
OVER ½" TO ¾"	¼"
OVER ¾" TO 1½"	△ 5/16"
OVER 1½" TO 2¼"	△ 3/8"
OVER 2¼" TO 6"	△ ½"

‡ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"



DETAIL B

FLANGE THICKNESS TRANSITION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MJN

STEEL DETAILS

SHEET 22 OF 40

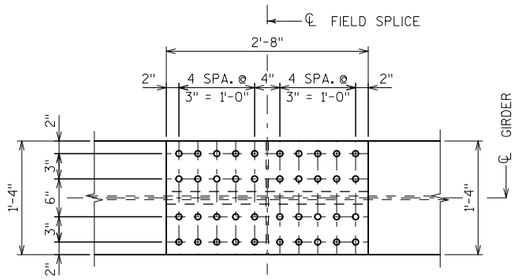
766

8

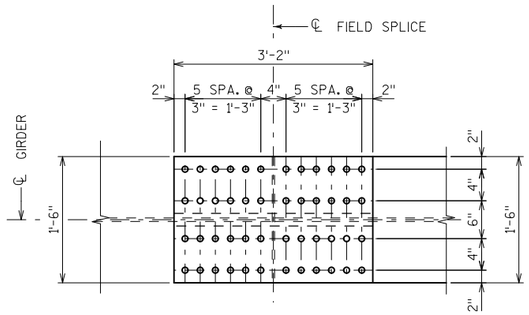
8

STATE PROJECT NUMBER

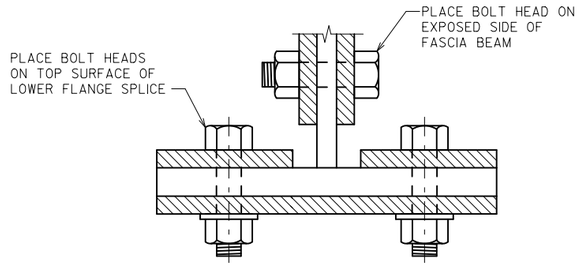
1300-13-74



TOP FLANGE

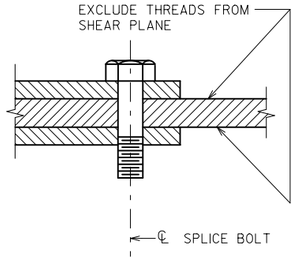


TOP FLANGE



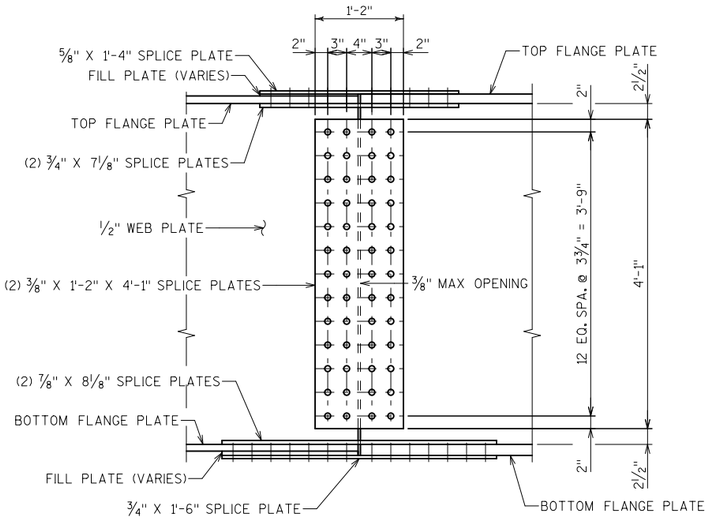
BOLTED SPLICE DETAIL

(NOT TO SCALE)

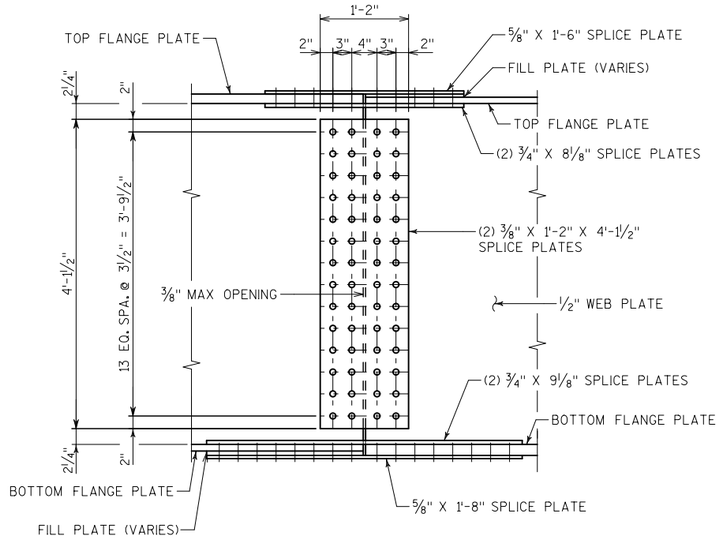


SPLICE BOLT THREAD DETAIL

(NOT TO SCALE)



WEB

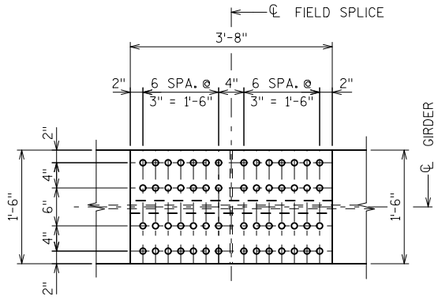


WEB

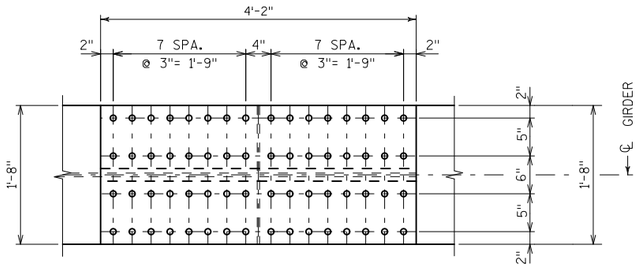
NOTES

1. FLANGE AND WEB SPLICE PLATES SHALL BE ASTM A709, GRADE 50.
2. ALL FIELD SPLICE CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER FRICTION TYPE HIGH-TENSILE STRENGTH BOLTS (ASTM A325).
3. FILL PLATES TO MATCH WIDTH OF CORRESPONDING SPLICE PLATE.
4. BOLTED CONNECTIONS REQUIRE CLASS B SURFACE PREPARATION.
5. NEGATIVE SIGN INDICATES THAT THE FILL PLATE IS ON THE WEST SIDE OF THE SPLICE.

FILL PLATE THICKNESS (INCHES)				
	GIRDER	TOP FLANGE	BOTTOM FLANGE	WEB PLATE
FS1	1 - 5	-1/4	- 3/4	NONE
FS2	1 - 5	NONE	- 1/4	NONE
FS3	1 - 5	1/4	1/2	NONE



BOTTOM FLANGE
FIELD SPLICE FS-1, FS2 & FS3
AT GIRDERS 2-5



BOTTOM FLANGE
FIELD SPLICE FS-1, FS-2 & FS3
AT GIRDER 1

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

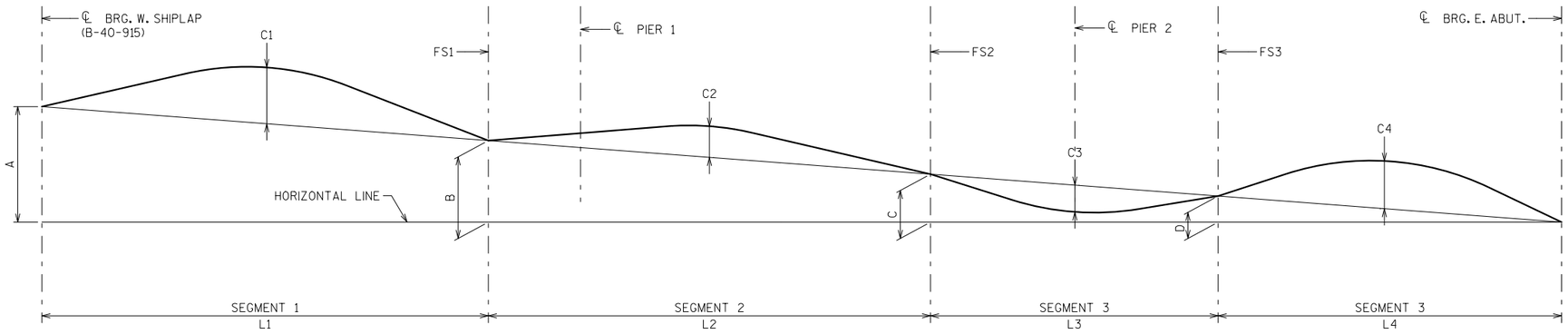
DRAWN BY CEM | PLANS CK'D. PAT

GIRDER SPLICES

SHEET 23 OF 40
767

IP_PWP:d0349325\080523_FS.dgn 24-JUL-2015 08:24

STATE PROJECT NUMBER
1300-13-74



CAMBER AND BLOCKING DIAGRAM

ELEVATIONS AT TOP OF DECK (T.O.D.) & TOP OF STEEL (T.O.S.)

		W. SHIPLAP	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	FS1	0.9	PIER 1	1.1	1.2	1.3	1.4	1.5	1.6	FS2	1.7	1.8	1.9	PIER 2	2.1	2.2	FS3	2.3	2.4	2.5	2.6	2.7	2.8	2.9	E. ABUT.
LT. GUTTERLINE	T.O.D.	611.85	611.75	611.64	611.53	611.43	611.32	611.21	611.11	611.00	#N/A	610.89	610.77	610.64	610.49	610.32	610.14	609.94	609.73	#N/A	609.50	609.26	609.00	608.73	608.48	608.21	#N/A	607.94	607.64	607.34	607.03	606.71	606.37	606.02	605.67
GIRDER 1	T.O.D.	611.92	611.80	611.68	611.56	611.44	611.33	611.21	611.10	610.98	610.94	610.87	610.75	610.61	610.45	610.28	610.09	609.89	609.67	609.53	609.44	609.19	608.92	608.64	608.39	608.13	608.03	607.85	607.55	607.25	606.94	606.62	606.28	605.93	605.58
	T.O.S.	611.07	-	-	-	-	-	-	-	-	610.11	-	609.85	-	-	-	-	-	-	608.68	-	-	-	607.72	-	-	607.18	-	-	-	-	-	-	-	604.64
ALONG P.G.L.	T.O.D.	611.95	611.83	611.70	611.58	611.46	611.33	611.21	611.08	-	#N/A	610.83	610.70	610.55	610.39	610.21	-	609.80	609.57	#N/A	609.33	609.07	608.79	608.50	608.24	607.98	#N/A	607.70	607.40	607.10	606.79	606.47	606.13	605.78	605.43
GIRDER 2	T.O.D.	612.12	611.97	611.81	611.66	611.50	611.35	611.20	611.05	610.90	610.84	610.75	610.59	610.41	610.23	610.02	609.80	609.57	609.31	609.13	609.04	608.75	608.44	608.12	607.84	607.57	607.47	607.29	607.00	606.70	606.38	606.06	605.73	605.38	605.02
	T.O.S.	611.28	-	-	-	-	-	-	-	-	610.01	-	609.69	-	-	-	-	-	-	608.28	-	-	-	607.20	-	-	606.62	-	-	-	-	-	-	-	604.08
GIRDER 3	T.O.D.	612.35	612.16	611.96	611.77	611.57	611.37	611.18	610.99	610.81	610.74	610.62	610.43	610.22	610.01	609.77	609.53	609.25	608.95	608.73	608.64	608.31	607.96	607.60	607.29	607.02	606.91	606.73	606.44	606.14	605.83	605.50	605.17	604.82	604.47
	T.O.S.	611.51	-	-	-	-	-	-	-	-	609.91	-	609.53	-	-	-	-	-	-	607.88	-	-	-	606.68	-	-	606.06	-	-	-	-	-	-	-	603.53
GIRDER 4	T.O.D.	612.58	612.35	612.11	611.87	611.63	611.39	611.17	610.94	610.72	610.63	610.50	610.27	610.03	609.79	609.53	609.26	608.94	608.60	608.33	608.25	607.87	607.49	607.08	606.74	606.46	606.36	606.18	605.59	605.89	605.27	604.95	604.62	604.27	603.91
	T.O.S.	611.74	-	-	-	-	-	-	-	-	609.81	-	609.37	-	-	-	-	-	-	607.48	-	-	-	606.16	-	-	605.50	-	-	-	-	-	-	-	602.97
GIRDER 5	T.O.D.	612.81	612.53	612.25	611.98	611.70	611.42	611.15	610.89	610.63	610.53	610.38	610.11	609.85	609.58	609.29	608.99	608.63	608.26	607.94	607.86	607.44	607.01	606.56	606.19	605.91	605.80	605.63	605.33	605.03	604.72	604.40	604.06	603.71	603.36
	T.O.S.	611.97	-	-	-	-	-	-	-	-	609.71	-	609.21	-	-	-	-	-	-	607.08	-	-	-	605.64	-	-	604.95	-	-	-	-	-	-	-	602.42
RT. GUTTERLINE	T.O.D.	612.85	612.56	612.28	611.99	611.71	611.42	611.14	610.88	610.62	#N/A	610.35	610.08	609.82	609.54	609.25	608.95	608.59	608.20	#N/A	607.80	607.37	606.93	606.48	606.10	605.82	#N/A	605.54	605.24	604.94	604.63	604.31	603.97	603.62	603.27

BLOCKING DIMENSIONS

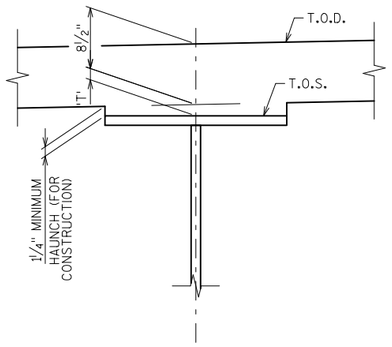
GIRDER	A	B	C	D
1	6'-5 1/2"	5'-4 5/16"	3'-11 7/16"	2'-5 3/8"
2	7'-2 5/8"	5'-9 13/16"	4'-1 5/16"	2'-5 3/8"
3	8'-0 1/16"	6'-3 1/4"	4'-3 1/4"	2'-5 3/8"
4	8'-9 7/16"	6'-8 11/16"	4'-5 1/16"	2'-5 3/8"
5	9'-6 7/8"	7'-2 1/8"	4'-6 15/16"	2'-5 3/8"

SEGMENT LENGTHS

GIRDER	L1	L2	L3	L4
1	104'-4 1/2"	103'-1 15/16"	67'-7 5/8"	80'-11 11/16"
2	104'-2 7/8"	101'-10 1/2"	65'-2 15/16"	78'-1 5/16"
3	104'-1 1/16"	100'-7 1/8"	62'-10 1/4"	75'-2 15/16"
4	103'-11 5/16"	99'-3 3/4"	60'-5 1/2"	72'-4 9/16"
5	103'-9 9/16"	98'-0 5/16"	58'-0 13/16"	69'-6 3/16"

CAMBER DIMENSIONS (INCHES)

GIRDER	C1	C2	C3	C4
1	2.3	1.3	0.1	2.5
2	2.4	1.2	-0.2	2.2
3	2.4	1.2	-0.5	2.0
4	2.4	1.1	-0.8	1.7
5	2.2	1.1	-1.1	1.5



HAUNCH DETAIL

NOTES

1. 'T' = HAUNCH HEIGHT AT CENTERLINE OF GIRDER.
2. TO DETERMINE 'T':
   ELEVATIONS OF THE TOP FLANGE SHALL BE TAKEN AT CENTERLINE OF BEARING AND AT 0.1 POINTS.

   TOP OF DECK ELEV. AT FINAL GRADE

   \- TOP OF STEEL ELEV. AS ERECTED

   \+ CONC. ONLY DEFLECTION; DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED

   \- DECK THICKNESS

   = 'T' VALUE FOR SETTING HAUNCH
3. CAMBER ORDINATES WERE DEVELOPED ASSUMING THAT THE WEIGHT OF THE SLAB IS APPLIED INSTANTANEOUSLY TO THE NON-COMPOSITE SECTION. CONSIDERING THE EFFECT OF THE POUR SEQUENCE RESULTS IN DEVIATIONS TO THE CAMBER ORDINATES LESS THAN 1/4". SHOULD THE CONTRACTOR ELECT TO USE A DIFFERENT POURING SEQUENCE THAN THE ONE SHOWN IN THE PLANS THE CAMBER TABLES SHOULD BE ADJUSTED AS NECESSARY FOR ANY VARIATIONS EXCEEDING 1/4".
4. ELEVATIONS ARE TO TOP OF STEEL (SPLICE AND COVER PLATE THICKNESS, IF APPLICABLE, ARE ACCOUNTED FOR) AND THEY ARE FOR THE MATERIAL AS ERECTED. THE ELEVATION OF THE TOP OF STEEL AT THE FIELD SPLICE POINTS SHALL BE CHECKED, AND CORRECTED, IF POSSIBLE, AFTER ERECTION AND BEFORE PERMANENTLY BOLTING THE DIAPHRAGMS IN PLACE.
5. BLOCKING DIMENSIONS MEASURED FROM HORIZONTAL LINE (PASSING THROUGH LOWEST TOP OF GIRDER WEB) TO TOP OF WEB AT POINT UNDER CONSIDERATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MJN

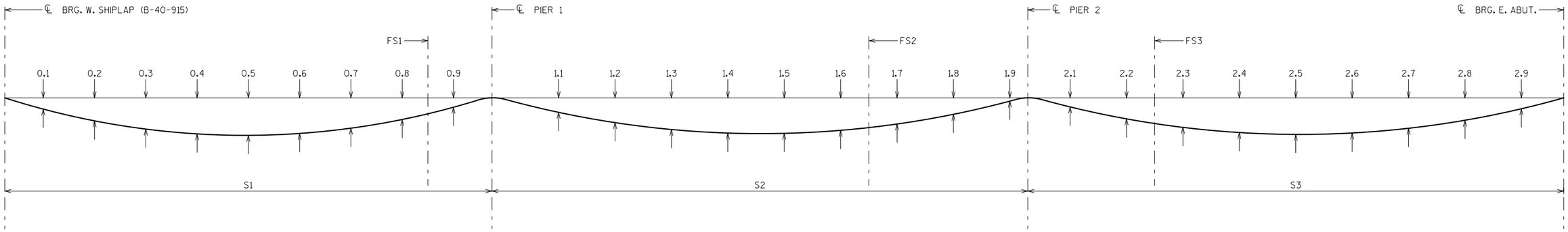
CAMBER AND BLOCKING

SHEET 24 OF 40
768

8

8

STATE PROJECT NUMBER
1300-13-74



DEAD LOAD DEFLECTION DIAGRAM

DEFLECTION NOTES

1. DEFLECTIONS ARE GIVEN IN DECIMALS OF AN INCH.
2. NEGATIVE VALUE INDICATES UPWARD DEFLECTION.
3. CONCRETE DEFLECTION INCLUDES CONCRETE SLAB, HAUNCH, AND BARRIERS.
4. TOTAL DEFLECTION INCLUDES ALL OF THE ABOVE PLUS DEFLECTIONS DUE TO SELF WEIGHT OF STEEL.
5. SEE GIRDER ELEVATION SHEET FOR SPAN LENGTHS.

DEAD LOAD DEFLECTIONS (INCHES)

	SPAN POINT	W. SHIPLAP	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	FS1	0.9	PIER 1	1.1	1.2	1.3	1.4	1.5	1.6	FS2	1.7	1.8	1.9	PIER 2	2.1	2.2	FS3	2.3	2.4	2.5	2.6	2.7	2.8	2.9	E. ABUT.
GIRDER 1	CONC. DEFL.	0.0	0.9	1.5	2.0	2.2	2.2	1.9	1.4	0.9	0.7	0.4	0.0	-0.1	0.0	0.1	0.2	0.3	0.3	0.2	0.2	0.0	-0.1	0.0	0.2	0.6	0.7	1.0	1.3	1.5	1.6	1.4	1.1	0.6	0.0
	TOTAL DEFL.	0.0	1.1	1.9	2.5	2.8	2.7	2.3	1.8	1.1	0.8	0.5	0.0	-0.1	0.0	0.2	0.4	0.5	0.5	0.4	0.3	0.1	0.0	0.0	0.3	0.7	0.9	1.2	1.7	1.9	2.0	1.8	1.4	0.7	0.0
GIRDER 2	CONC. DEFL.	0.0	0.9	1.6	2.1	2.3	2.3	2.0	1.5	0.9	0.7	0.4	0.0	-0.1	-0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.2	0.5	0.6	0.8	1.1	1.2	1.3	1.1	0.9	0.5	0.0
	TOTAL DEFL.	0.0	1.2	2.0	2.6	2.9	2.9	2.5	1.9	1.1	0.9	0.5	0.0	-0.1	-0.1	0.2	0.3	0.4	0.4	0.3	0.3	0.1	0.0	0.0	0.2	0.6	0.8	1.0	1.4	1.6	1.6	1.4	1.1	0.6	0.0
GIRDER 3	CONC. DEFL.	0.0	1.0	1.7	2.2	2.4	2.4	2.0	1.6	1.0	0.7	0.5	0.0	-0.1	-0.1	0.0	0.2	0.2	0.3	0.2	0.2	0.1	0.0	0.0	0.2	0.4	0.5	0.7	0.9	1.0	1.0	0.9	0.7	0.4	0.0
	TOTAL DEFL.	0.0	1.2	2.1	2.7	3.0	3.0	2.6	2.0	1.2	0.9	0.6	0.0	-0.2	-0.1	0.1	0.2	0.4	0.4	0.3	0.3	0.1	0.0	0.0	0.2	0.5	0.6	0.8	1.1	1.3	1.3	1.2	0.9	0.5	0.0
GIRDER 4	CONC. DEFL.	0.0	1.0	1.7	2.2	2.5	2.4	2.1	1.6	1.0	0.8	0.5	0.0	-0.2	-0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.3	0.4	0.5	0.7	0.8	0.8	0.7	0.5	0.3	0.0
	TOTAL DEFL.	0.0	1.2	2.1	2.8	3.1	3.0	2.6	2.0	1.2	1.0	0.6	0.0	-0.2	-0.2	0.0	0.2	0.3	0.3	0.3	0.2	0.1	0.0	0.0	0.2	0.4	0.5	0.6	0.9	1.0	1.0	0.9	0.7	0.4	0.0
GIRDER 5	CONC. DEFL.	0.0	1.0	1.7	2.2	2.5	2.4	2.1	1.6	1.0	0.8	0.5	0.0	-0.2	-0.2	-0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.6	0.5	0.4	0.2	0.0
	TOTAL DEFL.	0.0	1.2	2.1	2.8	3.1	3.0	2.6	2.0	1.2	1.0	0.6	0.0	-0.2	-0.2	-0.1	0.0	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.3	0.3	0.5	0.6	0.7	0.7	0.6	0.5	0.3	0.0

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

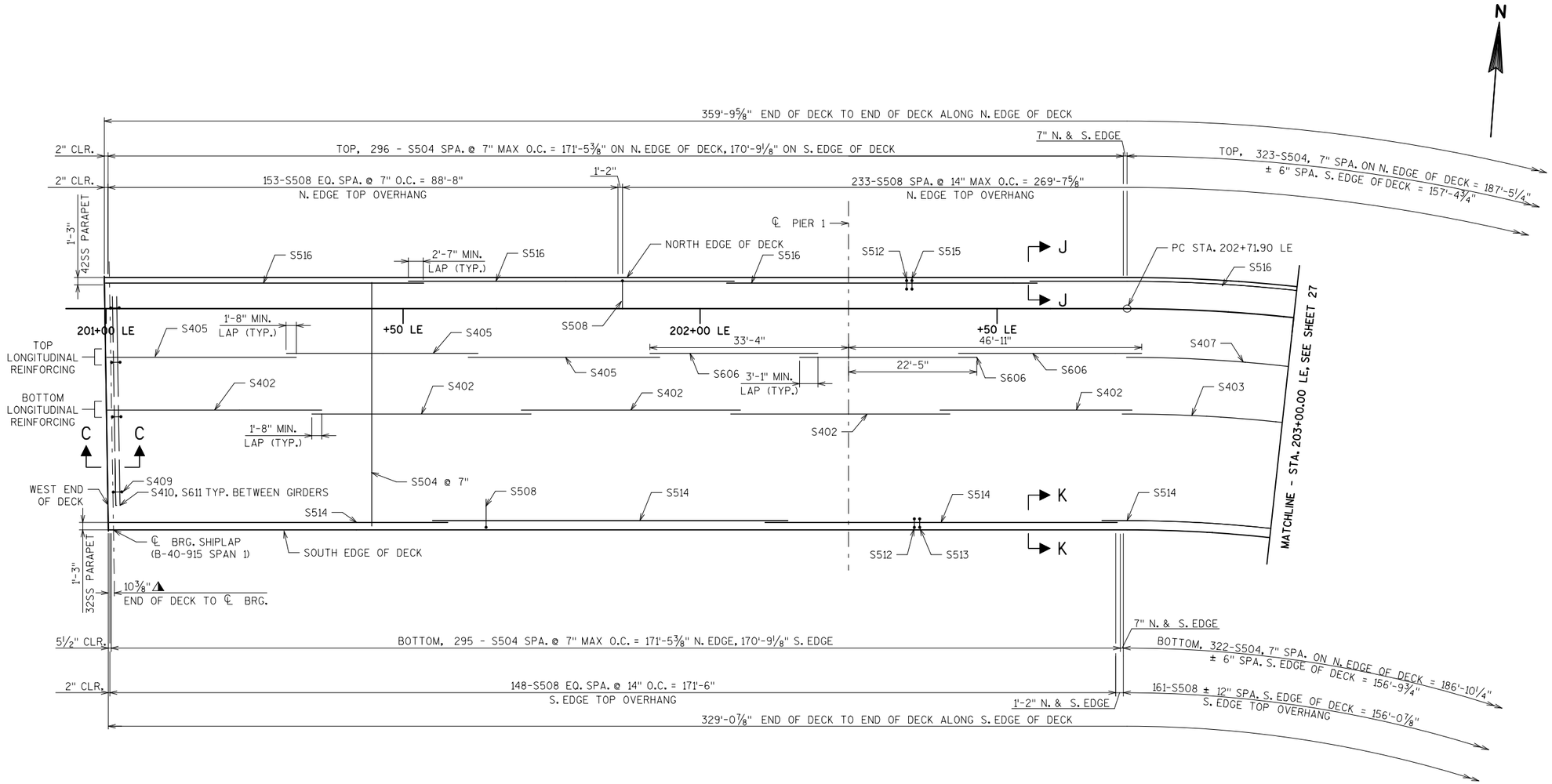
DRAWN BY CEM | PLANS CK'D. MJN

DEFLECTIONS

SHEET 25 OF 40
769

8

STATE PROJECT NUMBER
1300-13-74



DECK PLAN

LEGEND

▲ END OF DECK IS PARALLEL TO ℄ OF BRG. WEST SHIPLAP AND END OF DECK OF B-40-400-3C. DIMENSION SHOWN IS BASED ON A 2½" JOINT OPENING.

NOTES

1. SEE EXPANSION JOINT DETAILS FOR OTHER DETAILS REQUIRED AT EXPANSION JOINTS.
2. ALL TRANVERSE BAR STEEL SHALL BE PLACED RADIALLY TO ℄ RAMP LW IN THE CURVED PORTION OF THE DECK FROM STA 202+71.90 TO STA 204+55.79.
3. ALL LONGITUDINAL BAR STEEL SHALL BE PLACED CONCENTRIC TO ℄ RAMP LE IN THE CURVED PORTION OF THE DECK FROM STA 202+71.90 TO STA 204+55.79.
4. FOR SECTIONS C-C AND F-F SEE SUPERSTRUCTURE DETAILS SHEET.
5. FOR SECTIONS J-J AND K-K SEE PARAPET DETAILS SHEET.
6. FOR TABLE OF TANGENT OFFSETS SEE TANGENT OFFSETS SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MSC

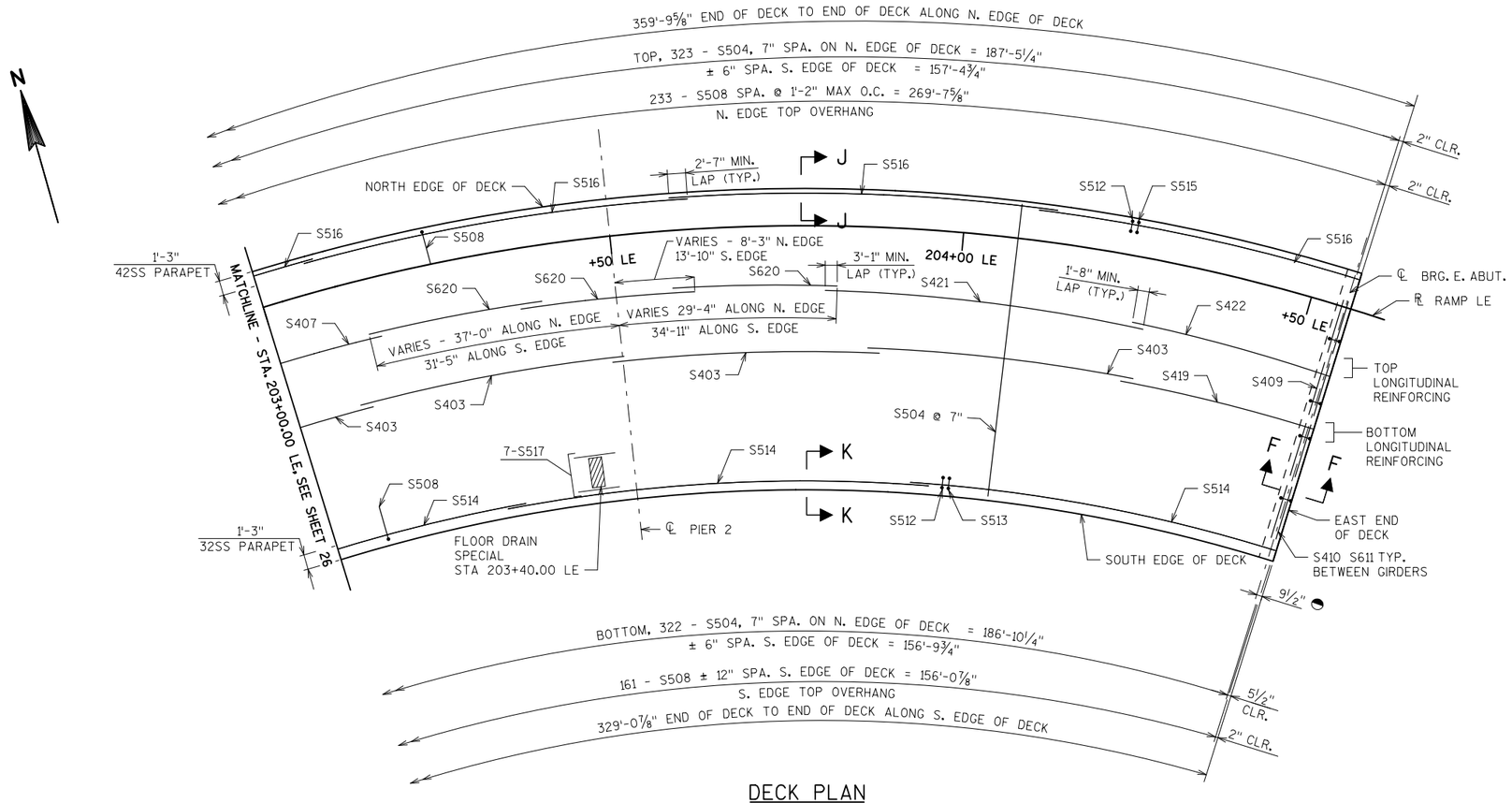
SUPERSTRUCTURE PLAN (1 OF 2)

SHEET 26 OF 40
770

8

8

STATE PROJECT NUMBER
1300-13-74



DECK PLAN

NOTES

1. SEE EXPANSION JOINT DETAILS FOR OTHER DETAILS REQUIRED AT EXPANSION JOINTS.
2. ALL TRANVERSE BAR STEEL SHALL BE PLACED RADIALLY TO ℞ RAMP LW IN THE CURVED PORTION OF THE DECK FROM STA 202+71.90 TO STA 204+55.79.
3. ALL LONGITUDINAL BAR STEEL SHALL BE PLACED CONCENTRIC TO ℞ RAMP LE IN THE CURVED PORTION OF THE DECK FROM STA 202+71.90 TO STA 204+55.79.
4. FOR SECTIONS C-C AND F-F SEE SUPERSTRUCTURE DETAILS SHEET.
5. FOR SECTIONS J-J AND K-K SEE PARAPET DETAILS SHEET.
6. FOR TABLE OF TANGENT OFFSETS SEE TANGENT OFFSETS SHEET.

LEGEND

◓ END OF DECK IS PARALLEL TO ℄ OF BRG. EAST ABUTMENT. DIMENSION SHOWN IS BASED ON A 2½" JOINT OPENING.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY TJN | PLANS CK'D. MSC

SUPERSTRUCTURE PLAN (2 OF 2)

SHEET 27 OF 40
771

IP_PWP:d0349325\080527_SP.dgn 24-JUL-2015 08:25

STATE PROJECT NUMBER
1300-13-74

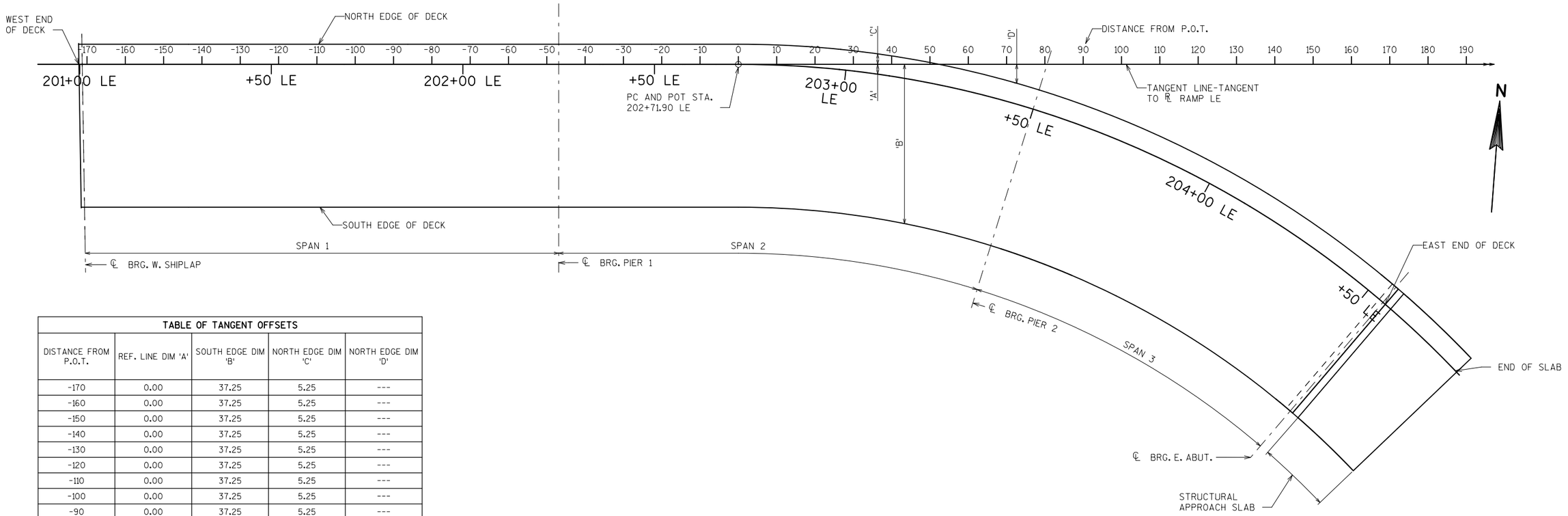


TABLE OF TANGENT OFFSETS				
DISTANCE FROM P.O.T.	REF. LINE DIM 'A'	SOUTH EDGE DIM 'B'	NORTH EDGE DIM 'C'	NORTH EDGE DIM 'D'
-170	0.00	37.25	5.25	---
-160	0.00	37.25	5.25	---
-150	0.00	37.25	5.25	---
-140	0.00	37.25	5.25	---
-130	0.00	37.25	5.25	---
-120	0.00	37.25	5.25	---
-110	0.00	37.25	5.25	---
-100	0.00	37.25	5.25	---
-90	0.00	37.25	5.25	---
-80	0.00	37.25	5.25	---
-70	0.00	37.25	5.25	---
-60	0.00	37.25	5.25	---
-50	0.00	37.25	5.25	---
-40	0.00	37.25	5.25	---
-30	0.00	37.25	5.25	---
-20	0.00	37.25	5.25	---
-10	0.00	37.25	5.25	---
0	0.00	37.25	5.25	---
10	0.19	37.48	5.06	---
20	0.77	38.15	4.49	---
30	1.74	39.29	3.54	---
40	3.11	40.89	2.21	---
50	4.87	42.96	0.48	---
60	7.05	45.52	---	1.65
70	9.64	48.59	---	4.19
80	12.66	52.18	---	7.15
90	16.14	56.34	---	10.55
100	20.08	61.08	---	14.40
110	24.52	66.46	---	18.73
120	29.48	72.52	---	23.57
130	34.99	79.35	---	28.94
140	41.10	87.03	---	34.88
150	47.86	95.68	---	41.45
160	55.33	105.46	---	48.69
170	63.60	---	---	56.69
180	72.77	---	---	65.54
190	82.99	---	---	75.35

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

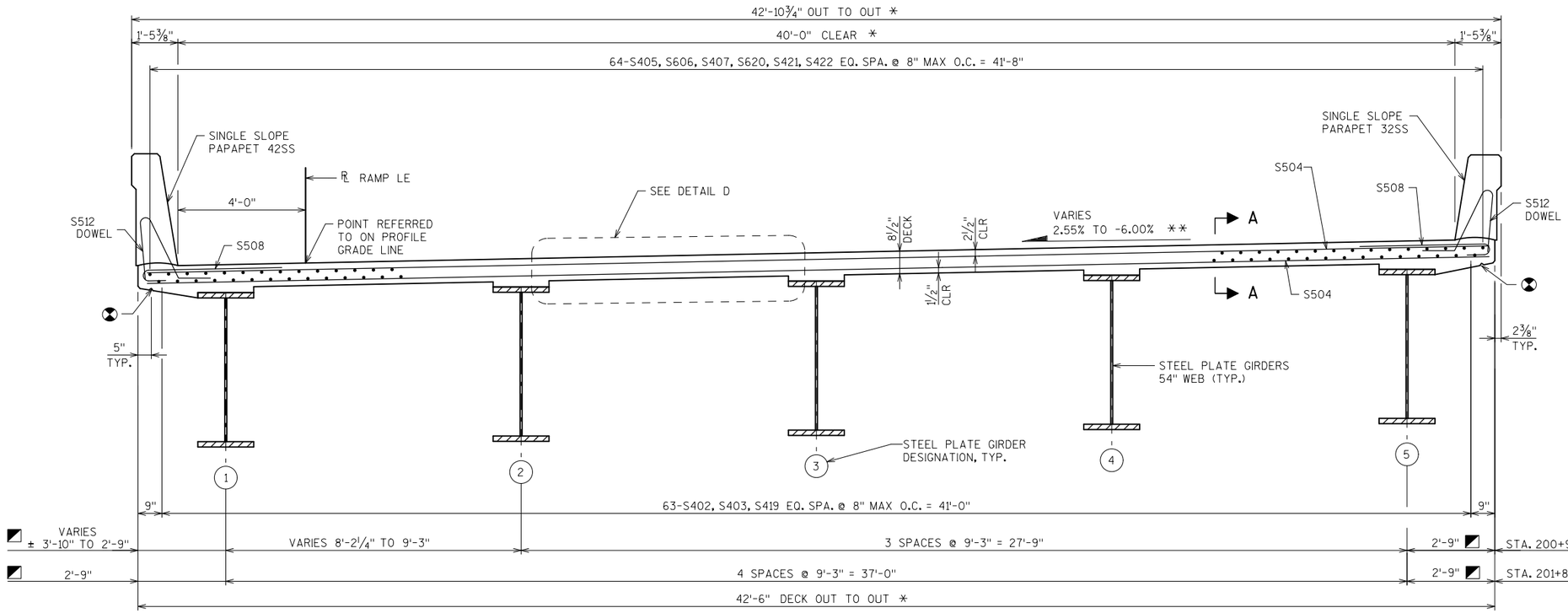
DRAWN BY TJN | PLANS CK'D. MSC

TANGENT OFFSETS

SHEET 28 OF 40
772

IP_PWP:d0349325\080528_TO.dgn 24-JUL-2015 08:25

STATE PROJECT NUMBER
1300-13-74



TYPICAL SECTION - STA. 200+99.79 LE TO ± STA. 204+55.79 LE

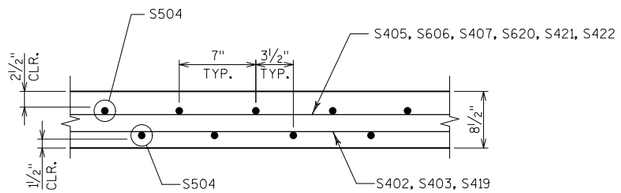
(LOOKING EAST)

NOTES

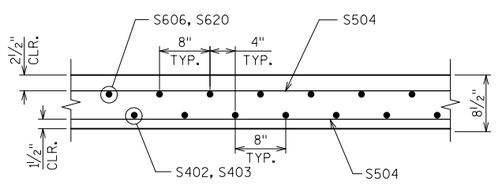
1. SEE SHEET 32 FOR PARAPET DETAILS.
2. SEE SHEET 37 FOR EXPANSION DEVICE DETAILS.
3. SEE GENERAL PLAN FOR SUPERELEVATION TRANSITIONS.
4. SEE FRAMING PLAN FOR GIRDER SPACINGS.

LEGEND

- ◪ DIMENSION TAKEN NORMAL TO ℄ GIRDER
- ✠ ¾" V-GROOVE. V-GROOVES ARE REQUIRED.
- * DIMENSION IS TAKEN NORMAL TO ℞ OF RAMP LE
- ** A NEGATIVE SIGN INDICATES CROSS-SLOPE DIRECTION OPPOSITE OF THAT SHOWN IN TYPICAL SECTION.



SECTION A-A



DETAIL D - REINFORCEMENT OVER PIER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

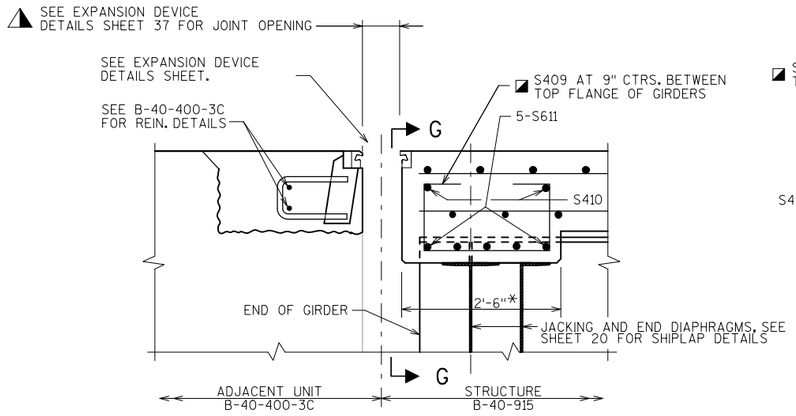
DRAWN BY CEM | PLANS CK'D. MSC

SUPERSTRUCTURE CROSS SECTION

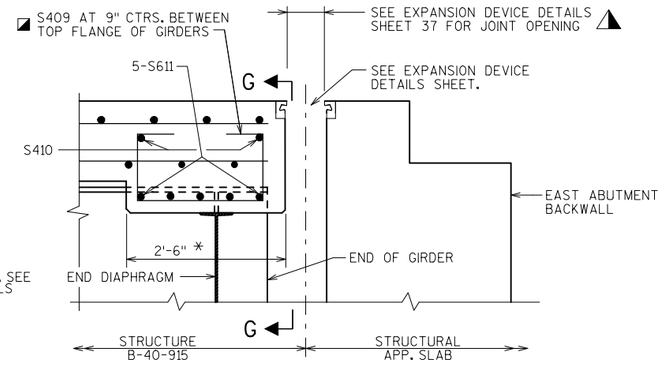
SHEET 29 OF 40
773

8

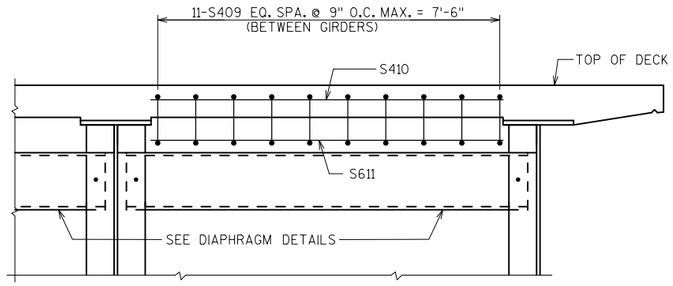
8



SECTION C-C THRU EXPANSION JOINT



SECTION F-F THRU EXPANSION JOINT



SECTION G-G PART TRANSVERSE SECTION AT DIAPHRAGM

(BOTH ENDS OF STRUCTURE)

NOTES

1. SEE SHEETS 26 & 27 SUPERSTRUCTURE PLAN FOR LOCATIONS OF SECTIONS C-C AND F-F.

LEGEND

- ◪ DIMENSION TAKEN NORMAL TO ℄ GIRDER
- ✳ DIMENSION IS TAKEN NORMAL TO ℄ OF JOINT.
- ◭ STRIP SEAL EXPANSION DEVICE OPENING.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MSC

SUPERSTRUCTURE DETAILS

SHEET 30 OF 40
774

STATE PROJECT NUMBER
1300-13-74

BILL OF BARS

TOTAL COATED = 115,610 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
S402	315	36'-11"	X				DECK LONGITUDINAL BOTTOM IN SPAN
S403	252	37'-10"	X				DECK LONGITUDINAL BOTTOM IN SPAN
S504	1236	42'-2"	X				DECK TRANSVERSE TOP & BOTTOM
S405	192	32'-4"	X				DECK LONGITUDINAL TOP SPAN 1
S606	192	29'-5"	X				DECK LONGITUDINAL TOP PIER 1
S407	64	44'-3"	X				DECK LONGITUDINAL TOP SPAN 2
S508	695	5'-9"	X		X		DECK TRANSVERSE TOP OVERHANG
S409	88	3'-10"	X		X		END OF DECK LONGITUDINAL STIRRUP
S410	16	7'-8"	X				END OF DECK TRANSVERSE
S611	40	7'-8"	X				END OF DECK TRANSVERSE
S512	1036	4'-5"	X		X		PARAPET 32SS, 42SS - VERT.
S513	495	5'-0"	X		X		PARAPET 32SS - VERT.
S514	36	57'-0"	X				PARAPET 32SS - HORIZ.
S515	541	6'-8"	X		X		PARAPET 42SS - VERT.
S516	56	53'-7"	X				PARAPET 42SS - HORIZ.
S517	7	5'-10"	X				DECK LONGITUDINAL AT DRAIN LOCATIONS
S419	63	29'-6"	X			X	DECK LONGITUDINAL BOTTOM SPAN 2
S620	192	24'-2"	X				DECK LONGITUDINAL TOP PIER 2
S421	64	45'-0"	X				DECK LONGITUDINAL TOP SPAN 3
S422	64	25'-5"	X			X	DECK LONGITUDINAL TOP SPAN 3

NOTE: LENGTH SHOWN FOR ANY BAR IN A BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

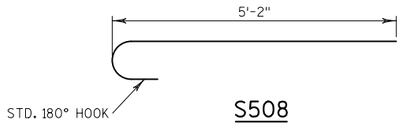
BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
S419	1 SERIES OF 83	15'-0" TO 44'-0"
S422	1 SERIES OF 64	14'-2" TO 36'-8"

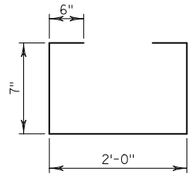
BUNDLE AND TAG EACH SERIES SEPARATELY.

NOTES

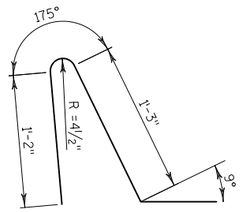
1. SEE SHEETS 26 & 27 FOR SUPERSTRUCTURE PLAN.
2. SEE SHEET 29 FOR SUPERSTRUCTURE CROSS SECTION.



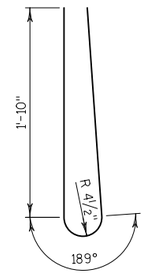
S508



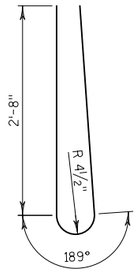
S409



S512



S513



S515

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

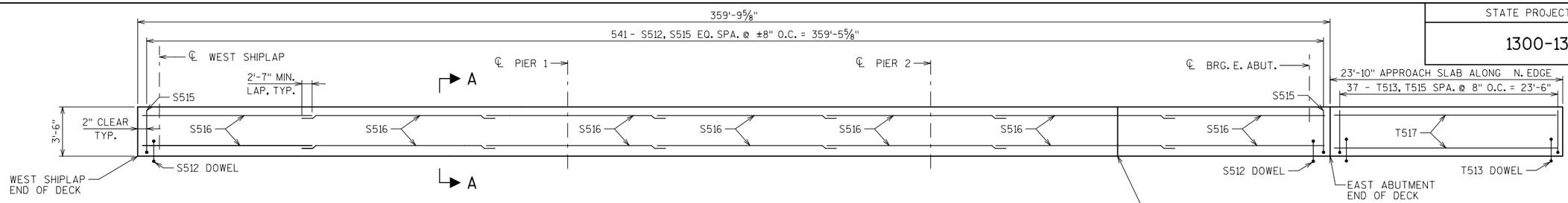
STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MSC

SUPERSTRUCTURE BILL OF BARS

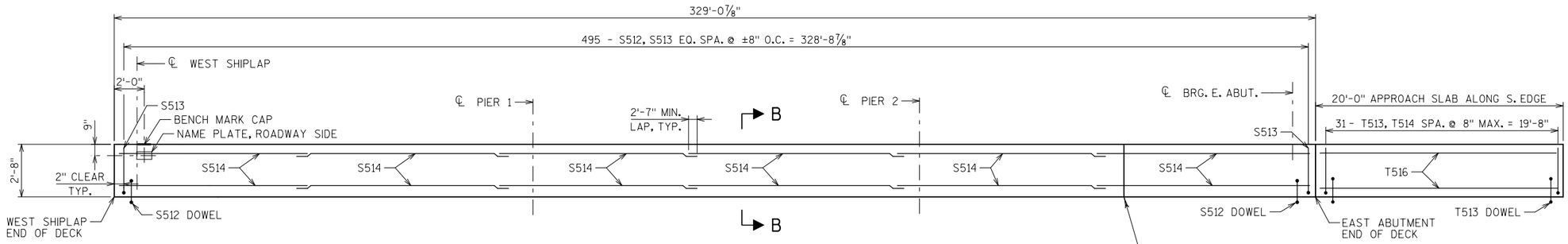
SHEET 31 OF 40
775

STATE PROJECT NUMBER
1300-13-74



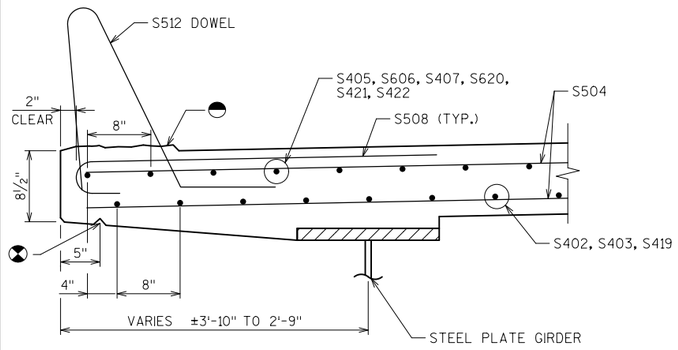
SECTION C-C NORTH PARAPET 42SS REINFORCING ELEVATION

(LOOKING AT ROADWAY FACE)



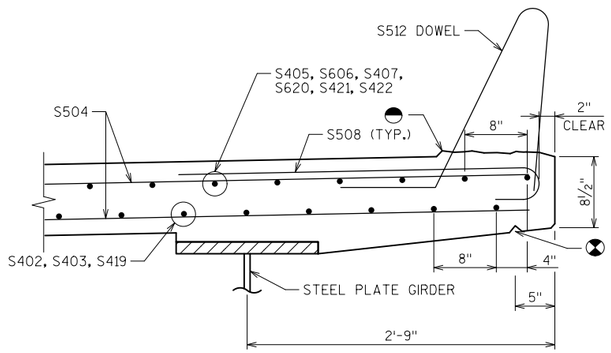
SECTION D-D SOUTH PARAPET 32SS REINFORCING ELEVATION

(LOOKING AT OUTSIDE FACE)



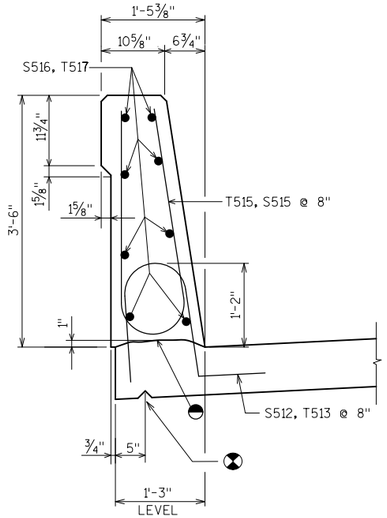
SECTION J-J EDGE OF DECK DETAIL

PARAPET NOT SHOWN FOR CLARITY

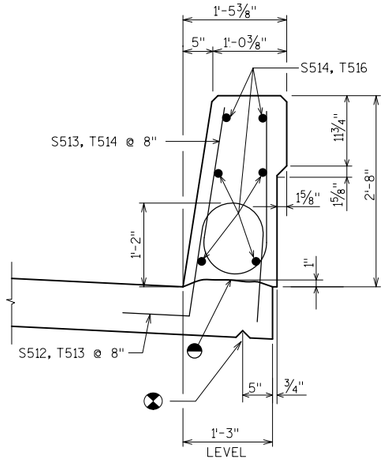


SECTION K-K EDGE OF DECK DETAIL

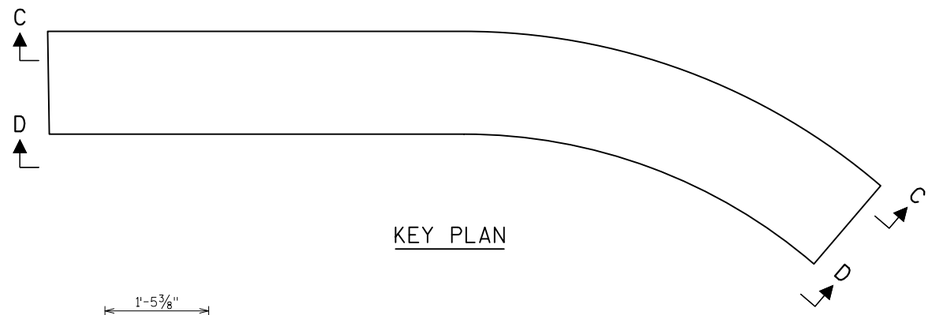
PARAPET NOT SHOWN FOR CLARITY



SECTION A-A THRU 42SS PARAPET



SECTION B-B THRU 32SS PARAPET



KEY PLAN

LEGEND

- ¾" V-GROOVE. TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENTS OR 3" FROM FRONT FACE OF END DIAPHRAGMS. V-GROOVES ARE REQUIRED.
- CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH.

NOTES

1. SEE SHEET 15 FOR APPROACH SLAB BILL OF BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY: CEM | PLANS CK'D.: MSC

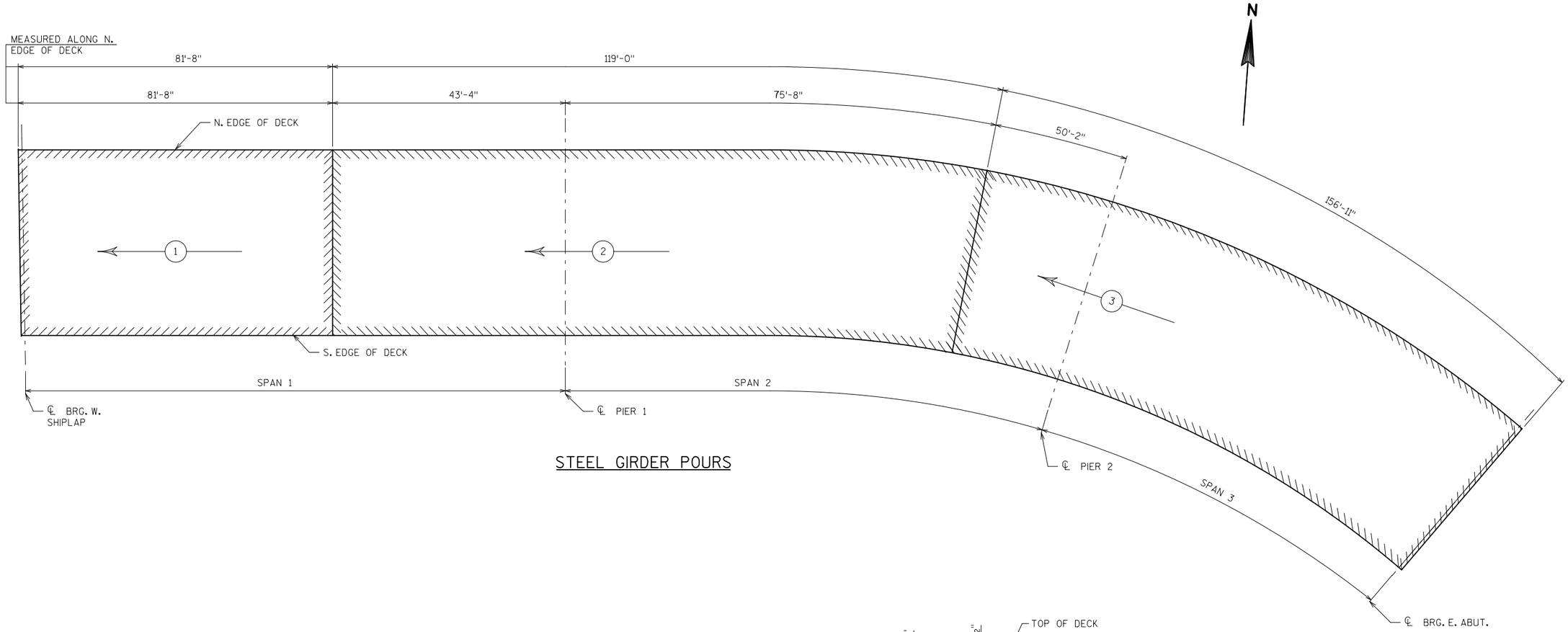
PARAPET DETAILS

SHEET 32 OF 40
776

8

8

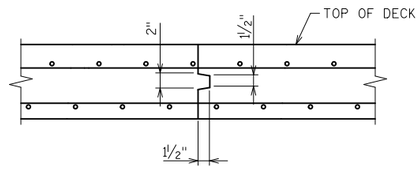
STATE PROJECT NUMBER
1300-13-74



STEEL GIRDER POURS

LEGEND

2 — INDICATES POUR NUMBER AND DIRECTION



SECTION THRU TRANSVERSE JOINT

NOTES

1. THE RATE OF PLACING CONCRETE SHALL EQUAL OR EXCEED ½ SPAN LENGTH PER HOUR BUT NEED NOT EXCEED 100 CU. YDS. PER HOUR.
2. TWO OR MORE ALTERNATE POURS MAY BE PLACED ON THE SAME DAY.
3. THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE POURING SEQUENCE SUBJECT TO THE APPROVAL OF THE STRUCTURES DESIGN SECTION. THE ALTERNATIVE POURING SEQUENCE MUST HAVE ZERO UPLIFT AT ALL BEARING LOCATIONS.
4. CONTRACTOR MAY PLACE DECK CONTINUOUSLY FROM EITHER END OF THE STRUCTURE. IF MORE THAN ONE POUR IS REQUIRED, BULKHEADS BETWEEN POURS SHALL BE POSITIONED AT THE LOCATIONS IDENTIFIED ON THIS PLAN.
5. PREVIOUSLY PLACED CONCRETE MUST HAVE ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI BEFORE AREAS IMMEDIATELY ADJACENT MAY BE PLACED.
6. FOLLOW PROCEDURES OUTLINED IN THE SPECIAL PROVISIONS FOR PROMPTLY FOGGING, COVERING AND CURING FRESHLY PLACED CONCRETE.
7. MEASUREMENTS TAKEN ALONG N. EDGE OF DECK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MJN

DECK POUR SEQUENCE

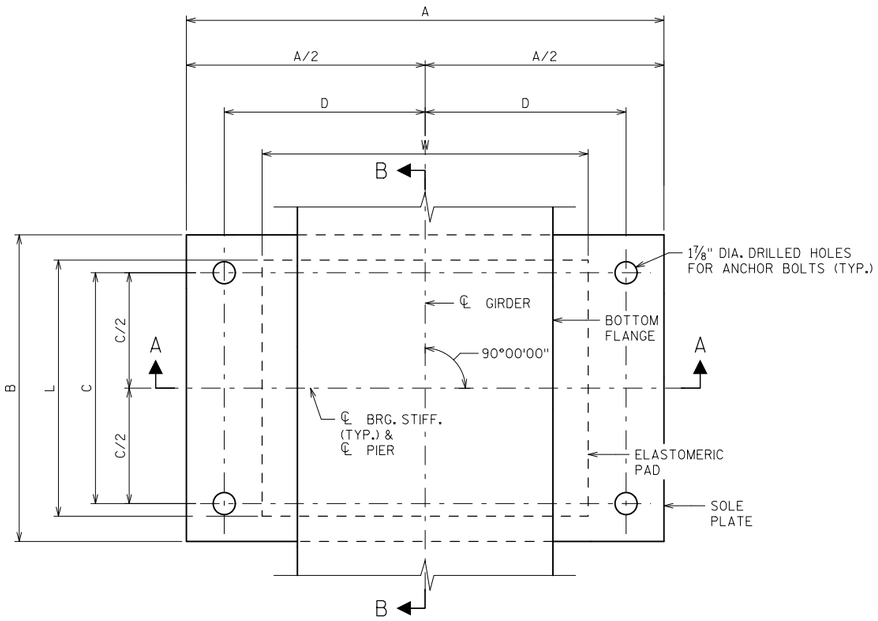
SHEET 33 OF 40
777

8

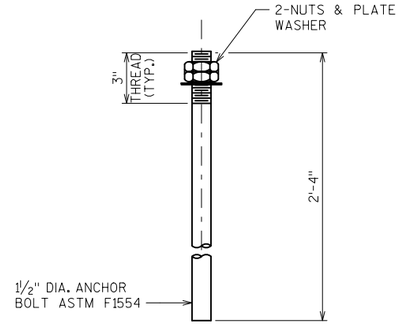
8

STATE PROJECT NUMBER
1300-13-74

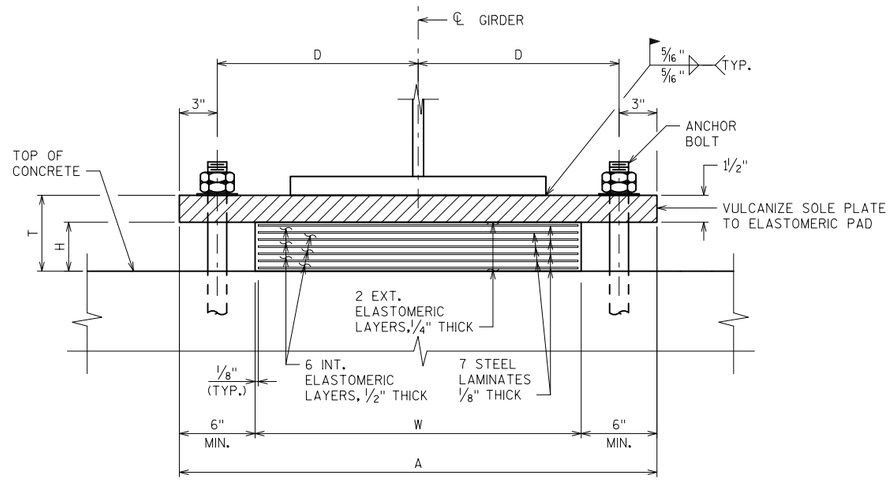
FIXED BEARING DETAILS									
SUPPORT	GIRDER	L	W	A	B	C	D	H	T @ CL
PIER 1	1	1'-6"	1'-10"	2'-10"	2'-0"	1'-6"	1'-2"	3 3/4"	.438'
	2	1'-6"	1'-10"	2'-10"	2'-0"	1'-6"	1'-2"	3 3/4"	.438'
	3	1'-6"	1'-10"	2'-10"	2'-0"	1'-6"	1'-2"	3 3/4"	.438'
	4	1'-6"	1'-10"	2'-10"	2'-0"	1'-6"	1'-2"	3 3/4"	.438'
	5	1'-6"	1'-10"	2'-10"	2'-0"	1'-6"	1'-2"	3 3/4"	.438'



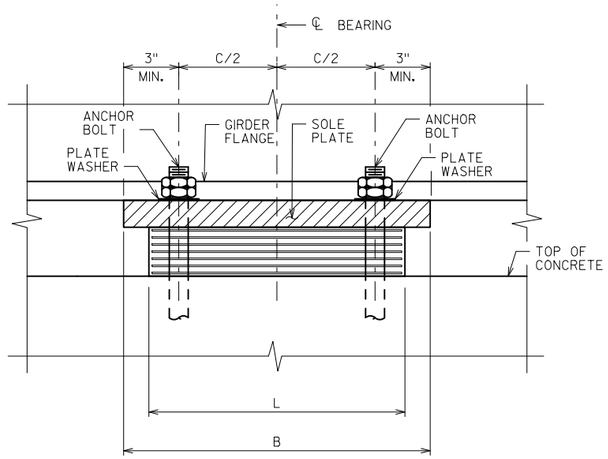
FIXED ELASTOMERIC BEARING PLAN AT PIER 1



ANCHOR BOLT DETAIL



SECTION A-A



SECTION B-B

BEARING NOTES

1. ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARINGS.
2. ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.
3. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.
4. ANCHOR BOLTS, NUTS & WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C.
5. ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM F1554 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.
6. SOLE PLATE SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER.
7. ALL MATERIAL IN FIXED ELASTOMERIC BEARINGS INCLUDING ANCHOR BOLTS, GROUT, AND FIELD WELDING SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ELASTOMERIC FIXED".
8. ALL MATERIAL IN BEARINGS, BUT EXCLUDING ANCHOR BOLTS, NUTS, AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.
9. CHAMFER ANCHOR BOLTS PRIOR TO THREADING.
10. ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.
11. PROVIDE ⅛" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE FOR BEARINGS AT W. SHIPLAP.
12. ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND TWO HEX NUTS PER BOLT FOR FIXED BEARING AND ONE NUT PER BOLT FOR EXPANSION BEARINGS. PROJECT ANCHOR BOLTS 2¼" ABOVE TOP OF SOLE PLATE FOR FIXED BEARINGS AND 2¼" ABOVE TOP OF RETAINER FOR EXPANSION BEARINGS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY MDM | PLANS CK'D. PAT

ELASTOMERIC BEARING DETAILS (1 OF 2)

SHEET 34 OF 40
778

8

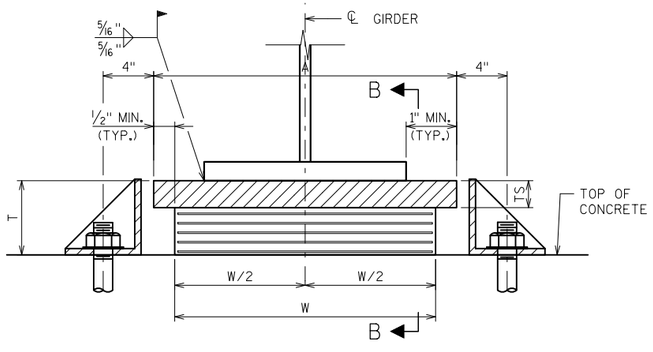
8

STATE PROJECT NUMBER
1300-13-74

EXPANSION BEARING DETAILS															
SUPPORT	GIRDER	L	W	A	B	C	D	E	F	TS	TM1	TM2	No. 1/2"	H	T @ CL
W. SHIPLAP	1	1'-2"	1'-2"	1'-10"	1'-3"	1'-3"	7"	3'-0"	1'-3"	3/4"	1 1/4"	3/4"	6	4 3/8"	.510'
	2	1'-2"	1'-2"	1'-8"	1'-3"	1'-3"	7"	2'-10"	1'-3"	3/4"	1 1/4"	3/4"	6	4 3/8"	.510'
	3	1'-2"	1'-2"	1'-8"	1'-3"	1'-3"	7"	2'-10"	1'-3"	3/4"	1 1/4"	3/4"	6	4 3/8"	.510'
	4	1'-2"	1'-2"	1'-8"	1'-3"	1'-3"	7"	2'-10"	1'-3"	3/4"	1 1/4"	3/4"	6	4 3/8"	.510'
	5	1'-2"	1'-2"	1'-8"	1'-3"	1'-3"	7"	2'-10"	1'-3"	3/4"	1 1/4"	3/4"	6	4 3/8"	.510'
PIER 2	1	1'-6"	1'-10"	1'-11"	1'-7"	2'-2 3/8"	1'-6 3/8"	-	-	1 1/2"	-	-	5	3 3/4"	.438'
	2	1'-6"	1'-10"	1'-11"	1'-7"	2'-2 3/8"	1'-6 3/8"	-	-	1 1/2"	-	-	5	3 3/4"	.438'
	3	1'-6"	1'-10"	1'-11"	1'-7"	2'-2 3/8"	1'-6 3/8"	-	-	1 1/2"	-	-	5	3 3/4"	.438'
	4	1'-6"	1'-10"	1'-11"	1'-7"	2'-2 7/16"	1'-6 7/16"	-	-	1 1/2"	-	-	5	3 3/4"	.438'
	5	1'-6"	1'-10"	1'-11"	1'-7"	2'-2 7/16"	1'-6 7/16"	-	-	1 1/2"	-	-	5	3 3/4"	.438'
E. ABUTMENT	1	1'-2"	1'-2"	1'-10"	1'-3"	1'-4 13/16"	8 13/16"	-	-	1 1/2"	-	-	6	4 3/8"	.490'
	2	1'-2"	1'-2"	1'-8"	1'-3"	1'-4 13/16"	8 13/16"	-	-	1 1/2"	-	-	6	4 3/8"	.490'
	3	1'-2"	1'-2"	1'-8"	1'-3"	1'-4 13/16"	8 13/16"	-	-	1 1/2"	-	-	6	4 3/8"	.490'
	4	1'-2"	1'-2"	1'-8"	1'-3"	1'-4 13/16"	8 13/16"	-	-	1 1/2"	-	-	6	4 3/8"	.490'
	5	1'-2"	1'-2"	1'-8"	1'-3"	1'-4 13/16"	8 13/16"	-	-	1 1/2"	-	-	6	4 3/8"	.490'

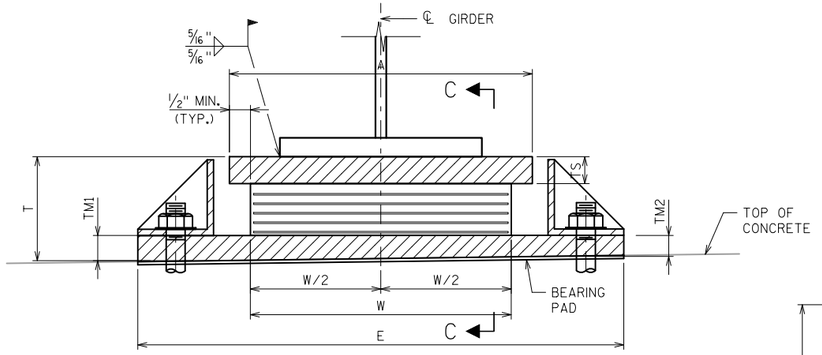
NOTES

1. SEE "ELASTOMERIC BEARING DETAILS, SHEET 1 OF 2" FOR ADDITIONAL NOTES.
2. WHERE THE THICKNESS OF THE SOLE PLATE IS LESS THAN 1½" WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY THE SURFACE IN CONTACT WITH THE ELASTOMER TO 200°F (93°C), TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURES INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.
3. ALL MATERIAL IN ELASTOMERIC EXPANSION BEARINGS INCLUDING SIDE RETAINERS, ANCHOR BOLTS, MASONRY PLATES, AND FIELD WELDING SHALL BE PAID FOR AT THE UNIT BID PRICE FOR "BEARING ELASTOMERIC EXPANSION".
4. L6 X 6 X ½ ANGLES MAY BE SUBSTITUTED FOR THE WELDED PLATE IN THE SIDE RETAINERS.
5. SEE SHEET 36 FOR BEARING ORIENTATION.



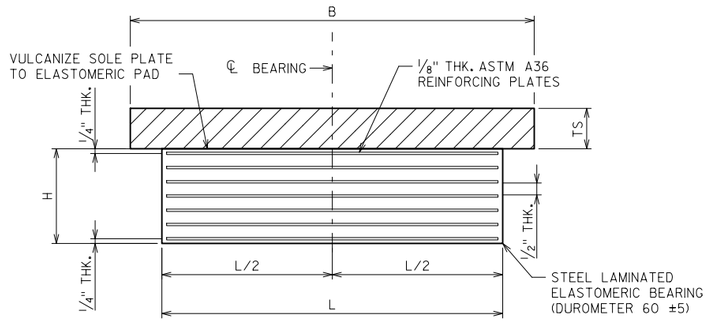
ELASTOMERIC EXPANSION BEARING END VIEW

(PIER 2 AND E. ABUT., LOOKING UP-STATION)

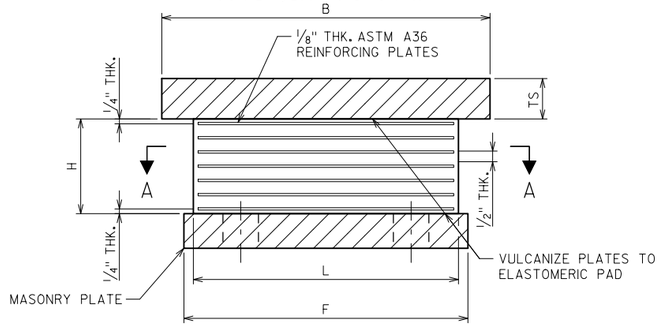


ELASTOMERIC EXPANSION BEARING END VIEW

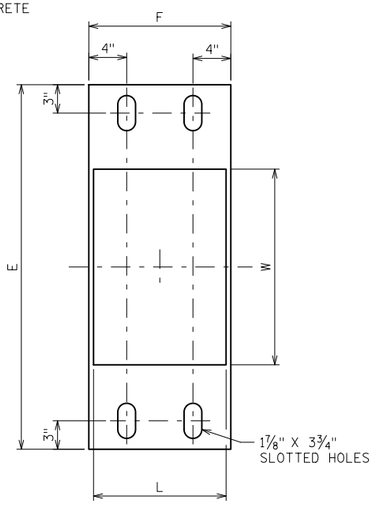
(W. SHIPLAP, LOOKING UP-STATION)



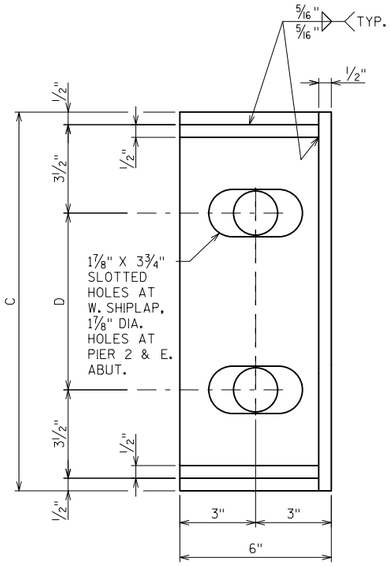
SECTION B-B THRU ELASTOMERIC BEARING



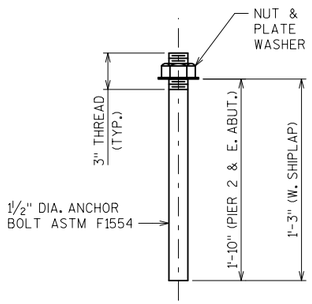
SECTION C-C THRU ELASTOMERIC BEARING



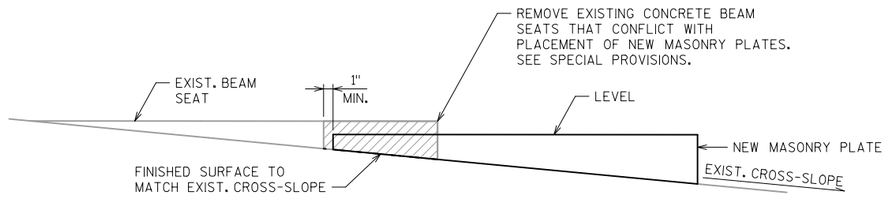
SECTION A-A



PLAN SIDE RETAINER

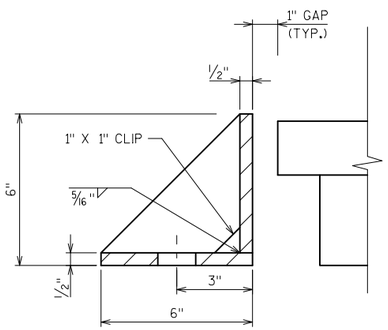


ANCHOR BOLT DETAIL



BEAM SEAT REMOVAL AT SHIPLAP

(LOOKING WEST)



SECTION SIDE RETAINER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY MDM | PLANS CK'D. PAT

ELASTOMERIC BEARING DETAILS (2 OF 2)

SHEET 35 OF 40
779

8

8

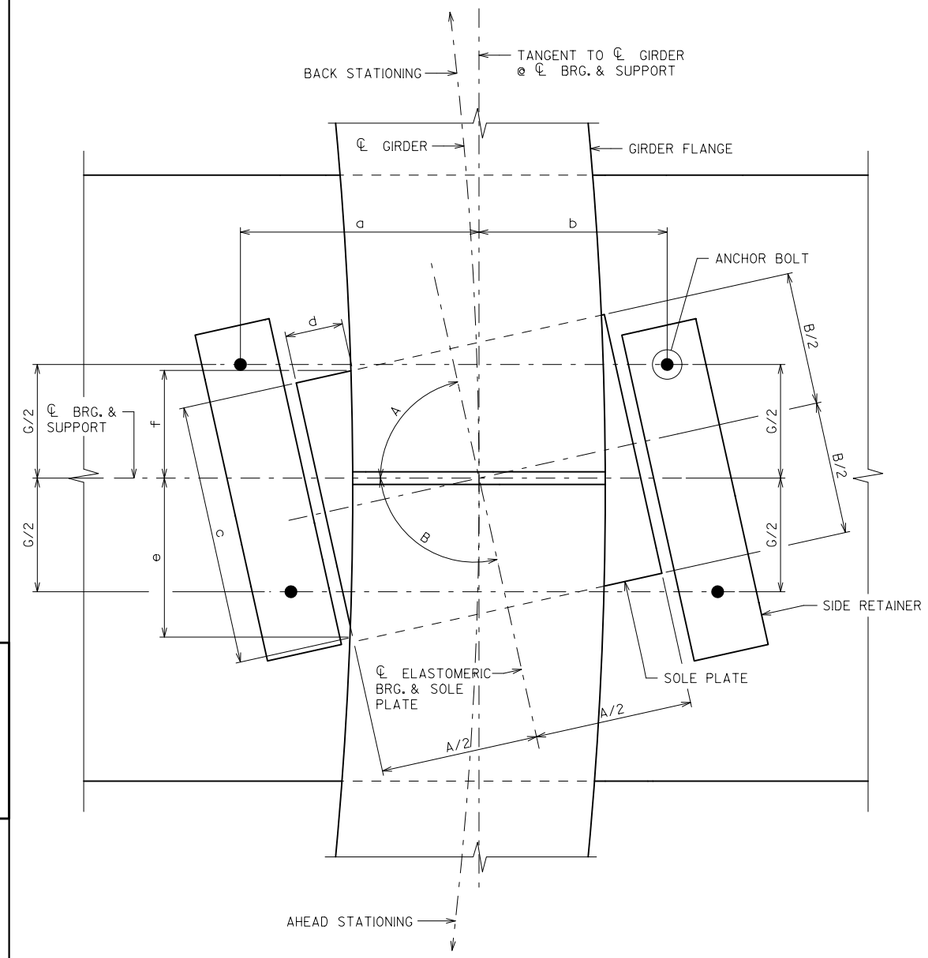
IP_PWP:d0349325\080535_BD.dgn 24-JUL-2015 08:27

STATE PROJECT NUMBER
1300-13-74

BEARING ORIENTATION DETAILS										
SUPPORT	GIRDER	A	B	G	a	b	c	d	e	f
W. SHIPLAP	1	90°13'10"	89°46'50"	7"	1'-3"	1'-3"	1'-3"	1"	7 1/2"	7 1/2"
	2	90°55'5"	89°4'55"	7"	1'-1 15/16"	1'-2 1/16"	1'-3"	1 1/8"	7 1/2"	7 1/2"
	3	90°55'5"	89°4'55"	7"	1'-1 15/16"	1'-2 1/16"	1'-3"	1 1/8"	7 1/2"	7 1/2"
	4	90°55'5"	89°4'55"	7"	1'-1 15/16"	1'-2 1/16"	1'-3"	1 1/8"	7 1/2"	7 1/2"
	5	90°55'5"	89°4'55"	7"	1'-1 15/16"	1'-2 1/16"	1'-3"	1 1/8"	7 1/2"	7 1/2"
PIER 2	1	78°8'1"	101°51'59"	1'-6"	1'-5 3/4"	1'-1 15/16"	1'-3 5/8"	3 1/4"	8 5/16"	7 5/8"
	2	78°3'37"	101°56'23"	1'-6"	1'-5 3/4"	1'-1 15/16"	1'-7"	5/16"	9 1/2"	9 15/16"
	3	77°59'1"	102°0'59"	1'-6"	1'-5 3/4"	1'-1 15/16"	1'-7"	1/4"	9 1/2"	9 15/16"
	4	77°54'12"	102°5'48"	1'-6"	1'-5 3/4"	1'-1 15/16"	1'-7"	1/4"	9 1/2"	9 15/16"
	5	77°49'9"	102°10'51"	1'-6"	1'-5 13/16"	1'-1 15/16"	1'-7"	1/4"	9 1/2"	9 15/16"
E. ABUTMENT	1	65°37'16"	114°22'44"	8"	1'-6 1/4"	1'-2 5/8"	7 9/16"	3 7/16"	4 9/16"	3 11/16"
	2	65°30'2"	114°29'58"	8"	1'-5 3/16"	1'-1 9/16"	7 3/4"	3 1/2"	4 3/8"	4 1/8"
	3	65°22'22"	114°37'38"	8"	1'-5 1/4"	1'-1 9/16"	7 11/16"	3 9/16"	4 3/8"	4 1/8"
	4	65°14'15"	114°45'45"	8"	1'-5 1/4"	1'-1 9/16"	7 11/16"	3 9/16"	4 3/8"	4 1/8"
	5	65°5'36"	114°54'24"	8"	1'-5 5/16"	1'-1 9/16"	7 11/16"	3 9/16"	4 3/8"	4 1/16"

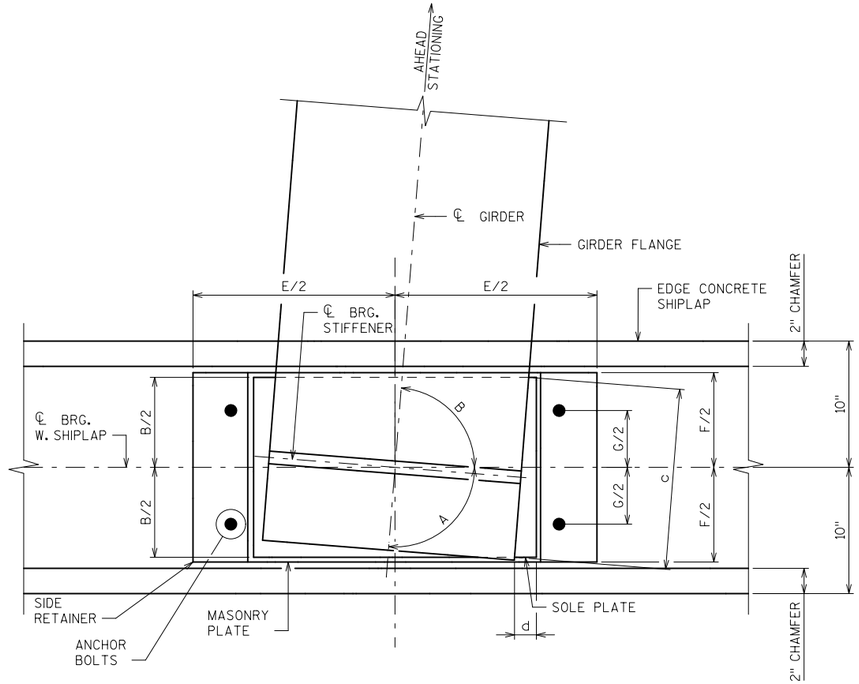
NOTES

1. SEE SHEET 35 FOR ANCHOR BOLT SPACING DETAILS AND DIMENSIONS A THRU F.
2. SEE SHEET 34 FOR ADDITIONAL NOTES.



EXPANSION BEARING ALIGNMENT PLAN

(PIER 2 AND E. ABUT.)



EXPANSION BEARING ALIGNMENT PLAN

(W. SHIPLAP)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

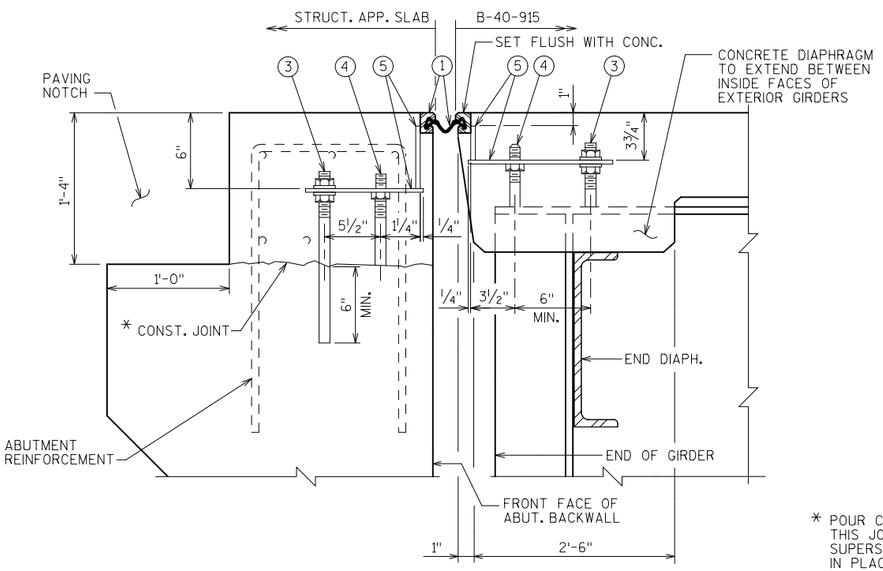
DRAWN BY CEM | PLANS CK'D. JMK

BEARING ALIGNMENT PLAN

SHEET 36 OF 40
780

8

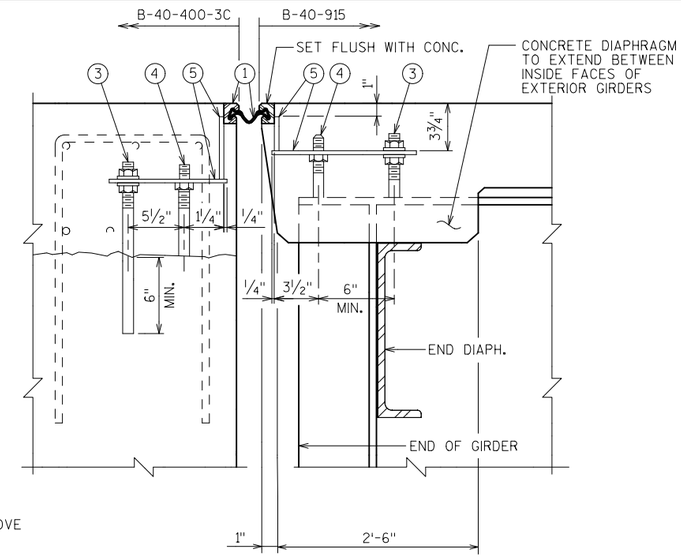
8



SECTION THRU JOINT AT ABUTMENT

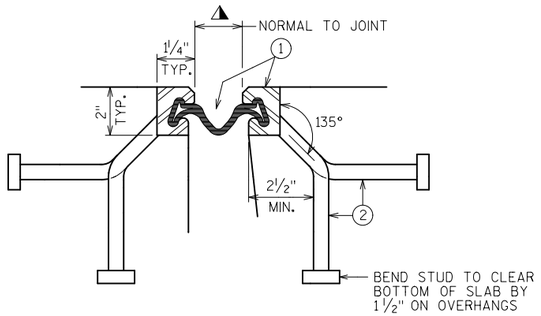
NORMAL TO ℄ SUBSTRUCTURE

* POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.



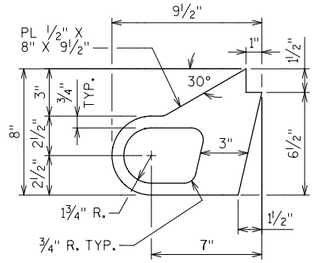
SECTION THRU JOINT AT SHIPLAP

NORMAL TO ℄ SUBSTRUCTURE

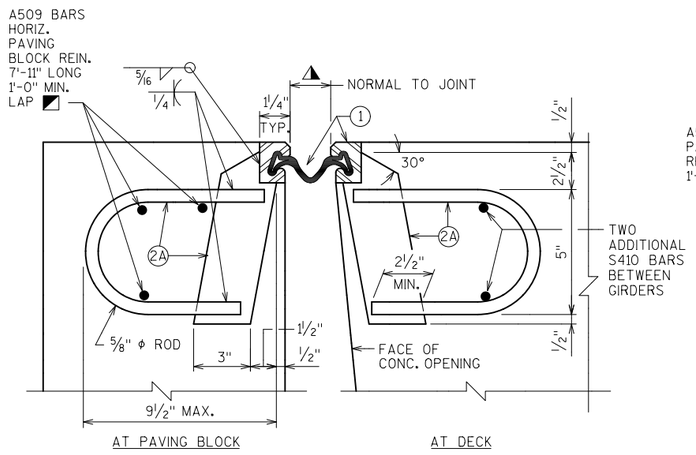


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS



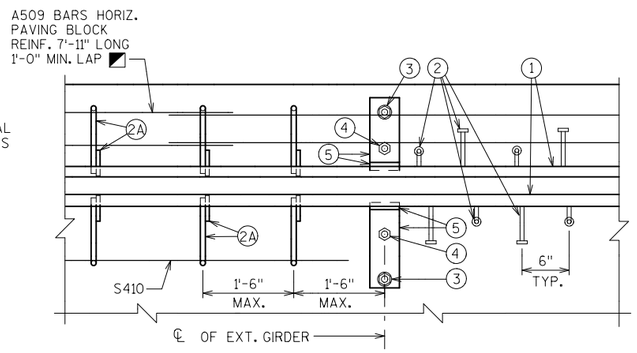
ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

SYMMETRICAL ABOUT ℄ JOINT UNLESS OTHERWISE NOTED



PART PLAN

GENERAL NOTES

1. ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.
2. AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.
3. FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.
4. SANDBLAST BARS, PLATES, SUPPORTS & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THIS ASSEMBLY SHALL BE HOT DIPPED GALVANIZED.
5. STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-915".

LEGEND

△ (1) NEOPRENE STRIP SEAL (5-INCH) AND STEEL EXTRUSIONS. SET JOINT OPENING GAP AT 2½" FOR THE EAST ABUTMENT AND AT THE DISTANCE DETERMINED USING THE TEMPERATURE TABLE SHOWN FOR THE WEST SHIPLAP.

(2) STUDS ⅝" X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE AT NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) ¾" ϕ THREADED ROD WITH NUT. TACK WELDED TO NO. (5).

(5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 AND 1" ϕ HOLE FOR NO. 4.

◩ SEE B-40-400-3C PLANS FOR REINFORCMENT AT THE WEST SHIPLAP.

TEMPERATURE TABLE - EAST ABUTMENT

INSTALLATION DIMENSION △ AT VARIOUS TEMPERATURES

	TEMPERATURE								
°F	5	15	25	35	45	55	65	75	85
△	3 3/16 ''	3''	2 13/16 ''	2 11/16 ''	2½''	2 5/16 ''	2 3/16 ''	2''	1 13/16 ''

TEMPERATURE TABLE - WEST SHIPLAP

INSTALLATION DIMENSION △ AT VARIOUS TEMPERATURES

	TEMPERATURE								
°F	5	15	25	35	45	55	65	75	85
△	3 5/16 ''	3 1/8''	2 15/16 ''	2 11/16 ''	2½''	2 5/16 ''	2 1/16''	1 7/8''	1 11/16 ''

NOTE:
A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.

STATE PROJECT NUMBER

1300-13-74

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D MJN

EXPANSION JOINT DETAIL

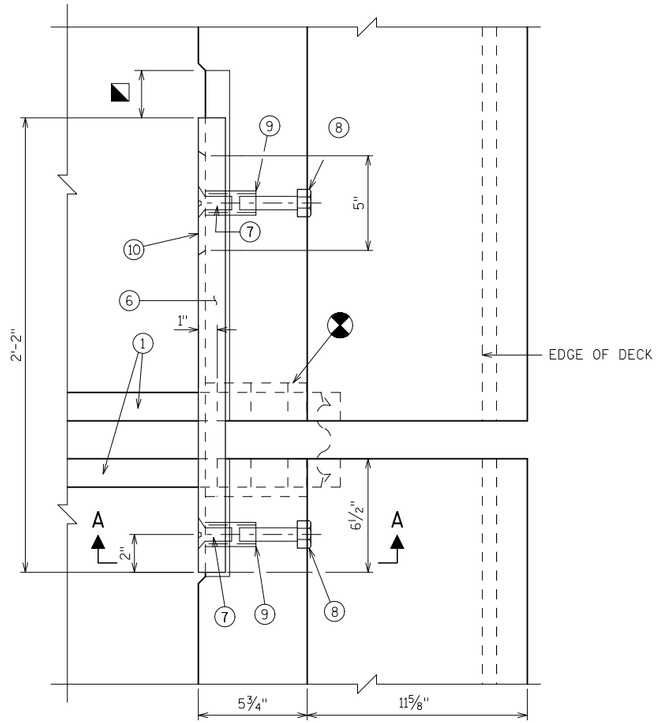
SHEET 37 OF 40
781

8

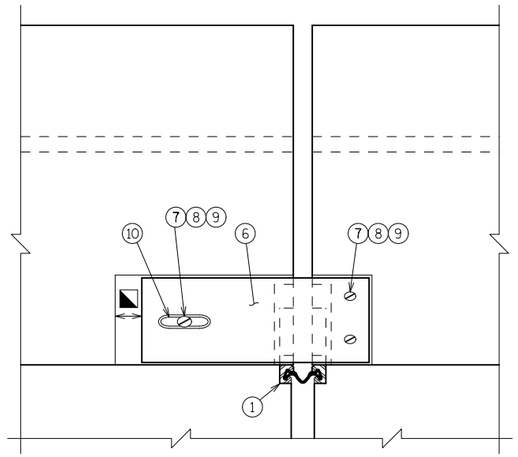
8

IP_PWP:d0349325\080537_XJ.dgn 24-JUL-2015 08:28

STATE PROJECT NUMBER
1300-13-74



PLAN



VIEW OF PARAPET PLATE FROM ROADWAY

LEGEND

(1) NEOPRENE STRIP SEAL (5 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS $\frac{5}{8}$"ϕ X 6$\frac{3}{8}$" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) $\frac{1}{2}$" THICK ANCHOR PLATE WITH $\frac{5}{8}$"ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) $\frac{3}{4}$" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) $\frac{3}{4}$"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" X $\frac{1}{2}$" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1$\frac{1}{2}$" ϕ HOLE FOR NO. 3 AND 1" ϕ HOLE FOR NO. 4.

(6) GALVANIZED PLATE $\frac{3}{8}$" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.

(7) $\frac{3}{4}$"ϕ X 1$\frac{1}{2}$" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS $\frac{1}{16}$" BELOW PLATE SURFACE.

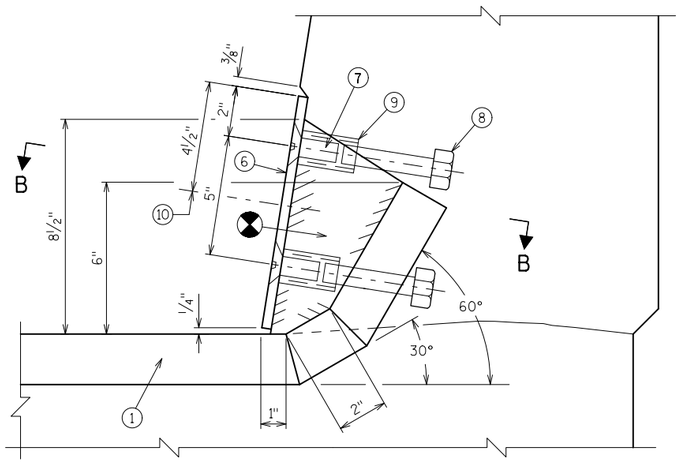
(8) $\frac{3}{4}$"ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) $\frac{3}{4}$"ϕ X 2$\frac{1}{4}$" GALVANIZED THREADED COUPLING.

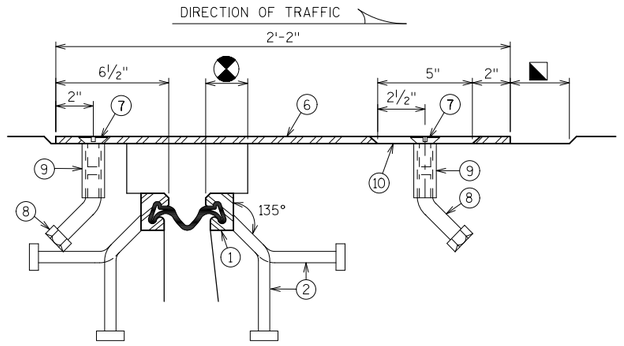
(10) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION PLUS $\frac{1}{2}$".



SECTION A-A



SECTION B-B

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

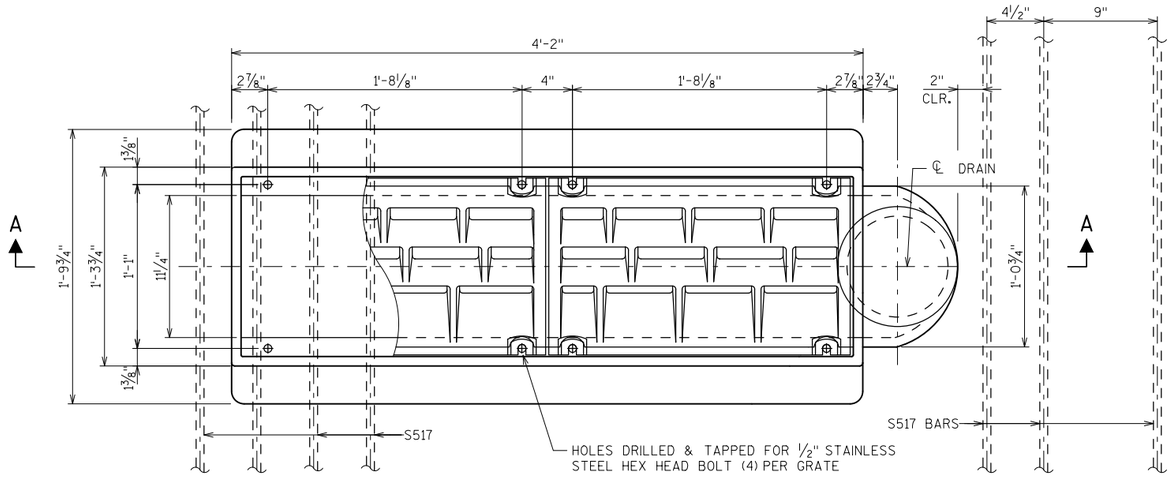
DRAWN BY TJN | PLANS CK'D. MJN

COVER PLATES FOR PARAPET

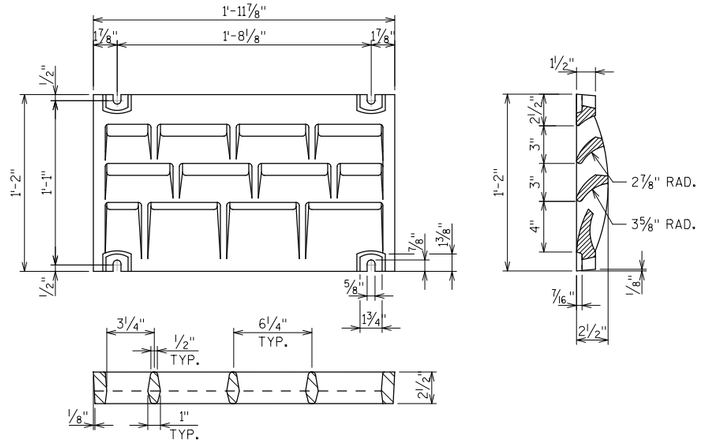
SHEET 38 OF 40
782

STATE PROJECT NUMBER

1300-13-74



PLAN



GRATE CASTING DETAIL

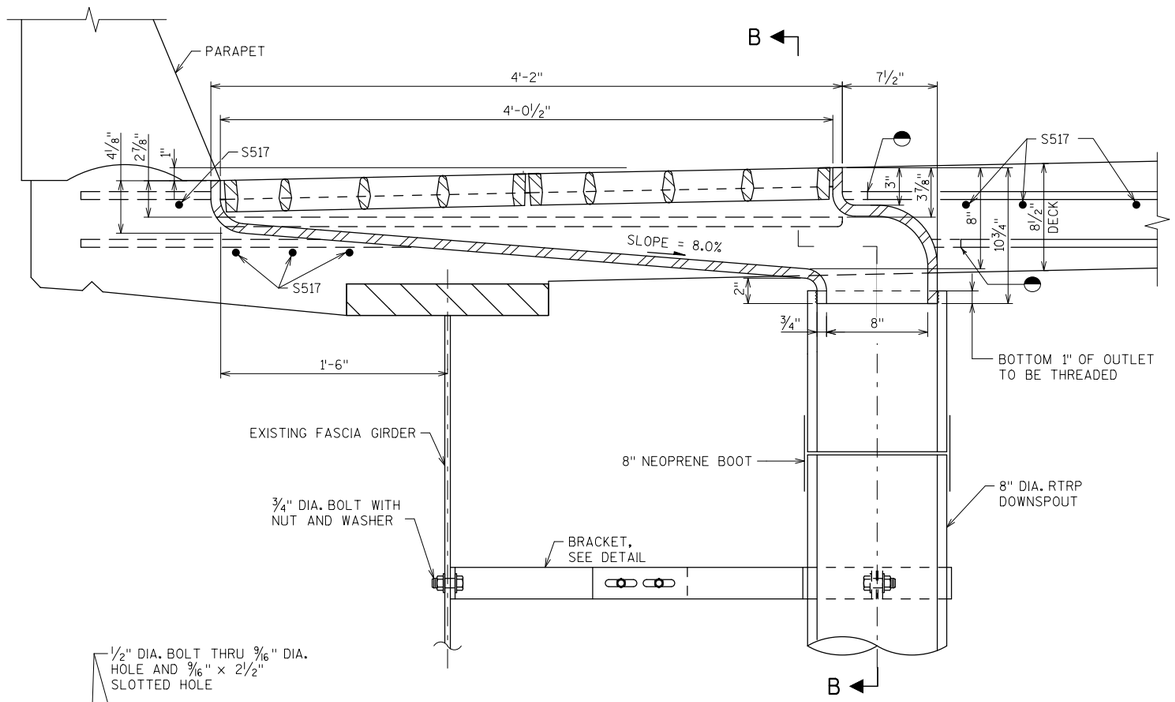
ATTACH GRATE TO FRAME FOR SHIPMENT

NOTES

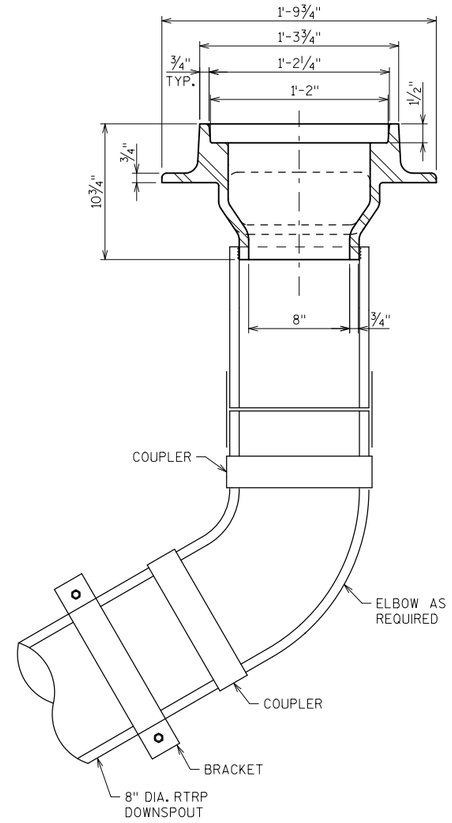
1. THE DRAIN CASTING SHOWN IS BASED ON PART NUMBER R-3951 FROM THE NEENAH FOUNDRY COMPANY WITH MODIFICATIONS AS REQUIRED TO PROVIDE A BOTTOM SLOPE OF DRAIN OF 8%.
2. A FABRICATED DRAIN ASSEMBLY MAY BE SUBSTITUTED IF THE HYDRAULIC PROPERTIES OF THE SPECIFIED CASTING CAN BE MAINTAINED, IF THE GEOMETRY OF THE REPLACEMENT IS ACCEPTABLE AND IF APPROVED BY THE ENGINEER. FABRICATED DRAINS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153.
3. ALL MATERIAL FOR FLOOR DRAIN CASTING, EXCLUDING GRATE HOLD DOWN SCREWS, SHALL BE GRAY IRON CONFORMING TO ASTM A48, CLASS 35B.
4. "DOWNSPOUTS 8-INCH" SHALL BE EITHER CAST MATERIAL OR FIBERGLASS CONFORMING TO ASTM 02996, GRADE 1, CLASS A.
5. MATERIAL FOR BRACKETS SHALL CONFORM TO ASTM A36.
6. ALL MATERIAL FOR FLOOR DRAINS SHALL BE INCLUDED IN THE BID ITEM "FLOOR DRAIN SPECIAL".

LEGEND

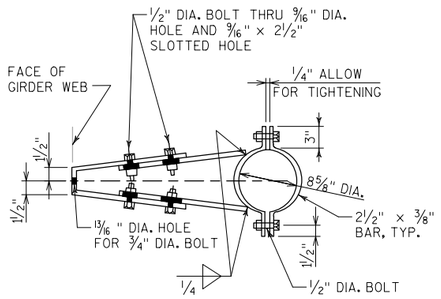
◓ TRANSVERSE AND LONGITUDINAL SLAB BAR REINFORCEMENT TO BE CUT A MAX. OF 1" CL. FROM DRAIN FRAME. DISPLACE BARS WHERE POSSIBLE.



SECTION A-A



SECTION B-B



BRACKET DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY CEM | PLANS CK'D. MSC

FLOOR DRAIN SPECIAL

SHEET 39 OF 40

783

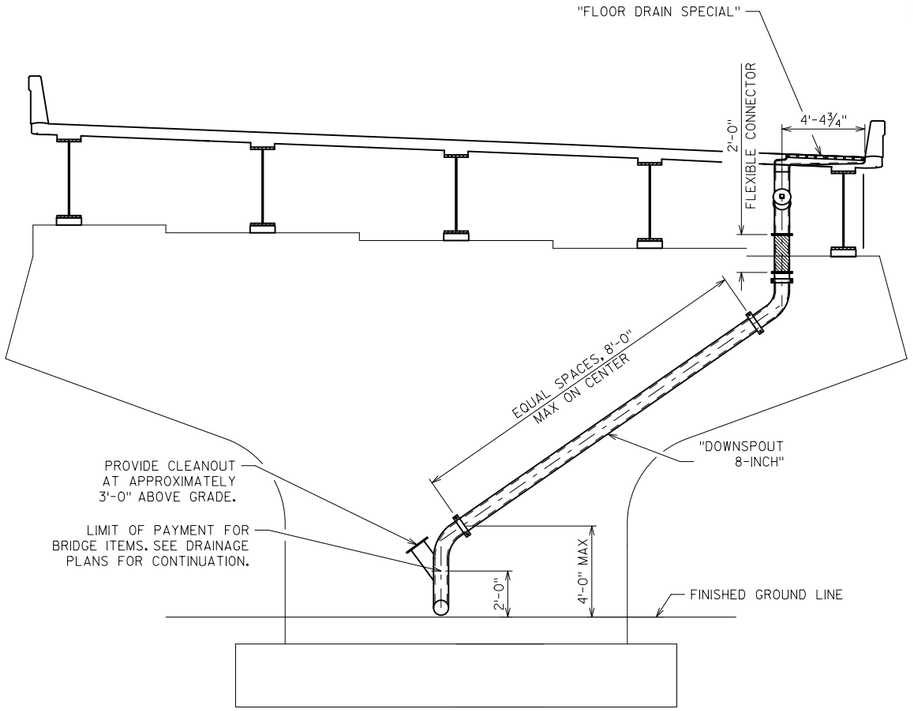
8

8

IP_PWP:d0349325\080539_FD.dgn 24-JUL-2015 08:28

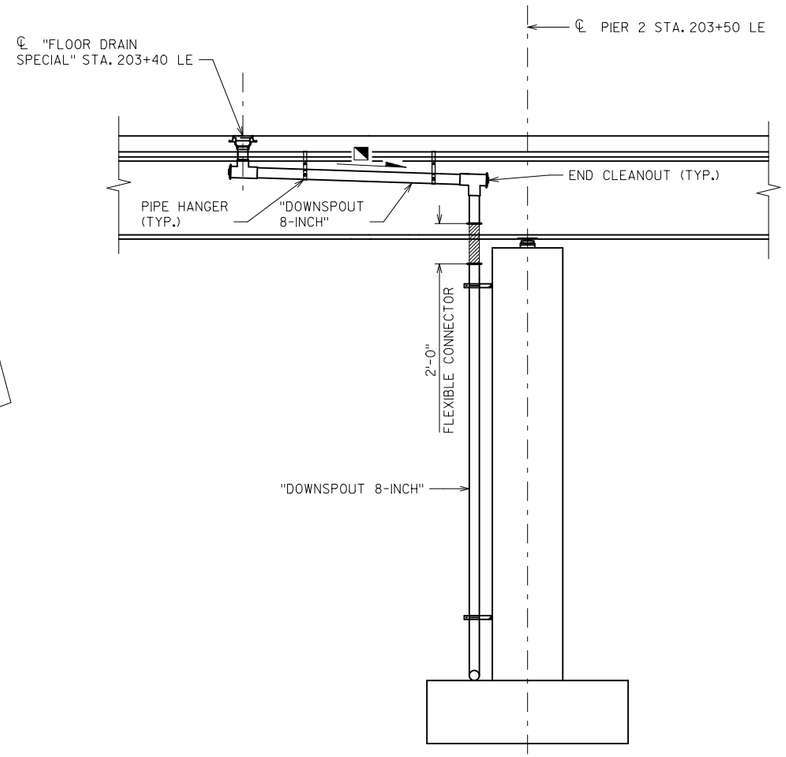
STATE PROJECT NUMBER

1300-13-74



ELEVATION

(PIER 2 LOOKING SOUTHEAST)



ELEVATION

(PIER 2 LOOKING NORTHEAST)

NOTES

1. "DOWNSPOUTS 8-INCH" AND FITTINGS SHALL BE REINFORCED THERMOSETTING RESIN PIPING (RTRP).
2. VERIFY ALL DIMENSIONS PRIOR TO FABRICATING DOWNSPOUT.
3. CONNECTION HARDWARE SHALL BE STAINLESS STEEL. ALL OTHER CONNECTION ELEMENTS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
4. MASONRY ANCHORS SHALL MEET THE REQUIREMENTS FOR TYPE 'S' AS PER THE STANDARD SPECIFICATIONS.
5. FOR PAYMENT PURPOSES, FLEXIBLE CONNECTORS AND ALL CONNECTION AND INSTALLATION HARDWARE (INCLUDING MASONRY ANCHORS) ARE CONSIDERED INCIDENTAL TO "DOWNSPOUT 8-INCH".

LEGEND

(1) FLEXIBLE RUBBER HOSE, MIN. 3/16" THICK WALL TO SUIT DOWNSPOUT.

(2) 10 GAGE STAINLESS STEEL CLAMP GRADE 304.

(3) NEW 6" DIA. DOWNSPOUT PIPING SHALL BE REINFORCED THERMOSETTING RESIN PIPING (RTRP) CONFORMING TO ASTM D2996 & 2310.

(4) 10 GAGE GALV. STEEL SADDLE.

(5) 5/8" DIA. STAINLESS STEEL THREADED ROD (GRADE 304) WITH STAINLESS STEEL HEX. NUTS & WASHERS OR GALV. ROD.

(6) 1/2" DIA. X 8" LONG STAINLESS STEEL THREADED ROD (GRADE 304) WITH STAINLESS STEEL HEX. NUTS & WASHERS.

(7) 6" LONG SPLIT RTRP STRIP. BOND TO #3, PLACE AT ALL CLAMP LOCATIONS.

(8) BENT ANCHOR PLATE-7 GAGE STAINLESS STEEL GRADE 304.

(9) 1/2" DIA. ADHESIVE ANCHOR BOLTS. (STAINLESS STEEL BOLT & WASHER-TYP.)

(10) BREEZE "HI-TORQUE CLAMP #HTM-700 304 HALF HARD STAINLESS STEEL OR EQUIV. (4 REQ'D. PER EACH #1).

(11) 7 GAGE STAINLESS STEEL GUSSET PLATE. WELD TO #2 & 8.

(12) 3/8" X 1" LG. STAINLESS STEEL HEX HEAD BOLT WITH NUT & LOCK WASHER.

◩ THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE DOWNSPOUT MAY BE ALTERED TO AVOID INTERFERENCE WITH THE GIRDER CROSS FRAME DIAPHRAGMS. MAINTAIN 2% MINIMUM SLOPE AND TRANSITION TO STEEPER SLOPE AS SOON AS POSSIBLE.

DOWNSPOUT NOTES

CLEVIS, PIPE CLAMPS, HANGERS & MISS. ITEMS ARE INCLUDED IN BID ITEM "RTRP DOWNSPOUT.

TIGHTEN CLAMPS TO A TIGHT SLIP FIT (FOR TEMP. EXPANSION).

ALL ELBOWS TO BE LONG RADIUS TYPE.

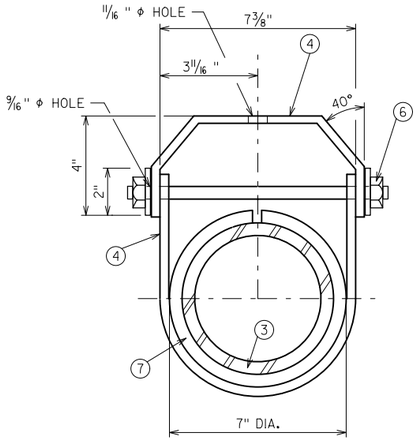
CONTRACTOR TO FIELD VERFIY ALL DIMENSIONS.

A CLAMP OF EQUAL STRENGTH MAY BE USED AS AN ALTERNATE.

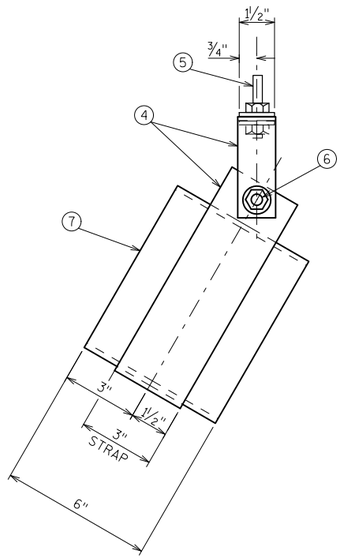
RTRP DOWNSPOUT TO BE SUPPORTED AT 8'-0" MAX. SPACING USING ONE OF THE SHOWN BRACKETS. REPLACE DOWNSPOUT SYSTEM FROM EXIST. REDUCER TO THE NEW FLOOR DRAIN.

INSTALL CLEAN-OUTS AT ELBOWS AS NEEDED.

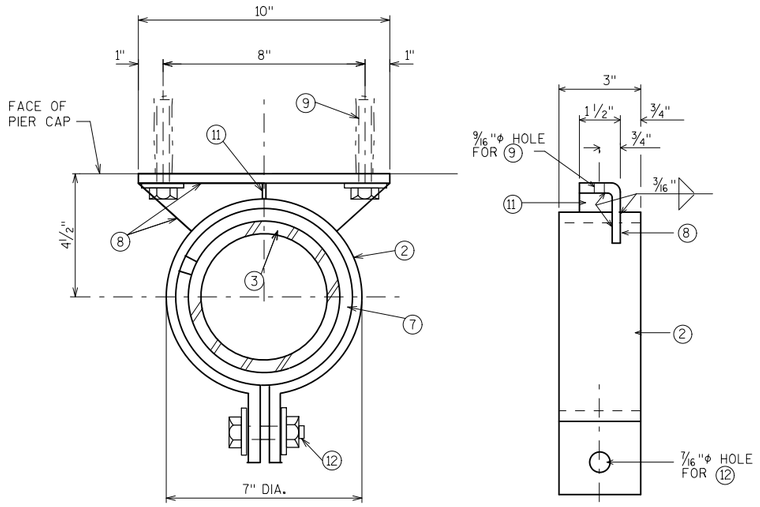
DRAIN WORK TO BE COMPLETED AS DIRECTED BY THE ENGINEER.



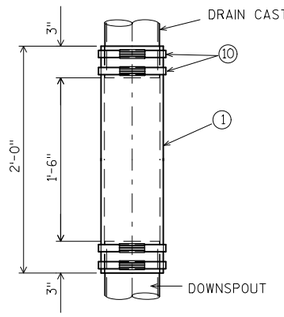
SADDLE



ADJUSTABLE CLEVIS DETAIL & PIPE HANGER DETAILS



PIPE CLAMP DETAILS



FLEXIBLE CONNECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-915

DRAWN BY TJN | PLANS CK'D. MJN

SUPERSTRUCTURE DRAINAGE DETAIL

SHEET 40 OF 40

784

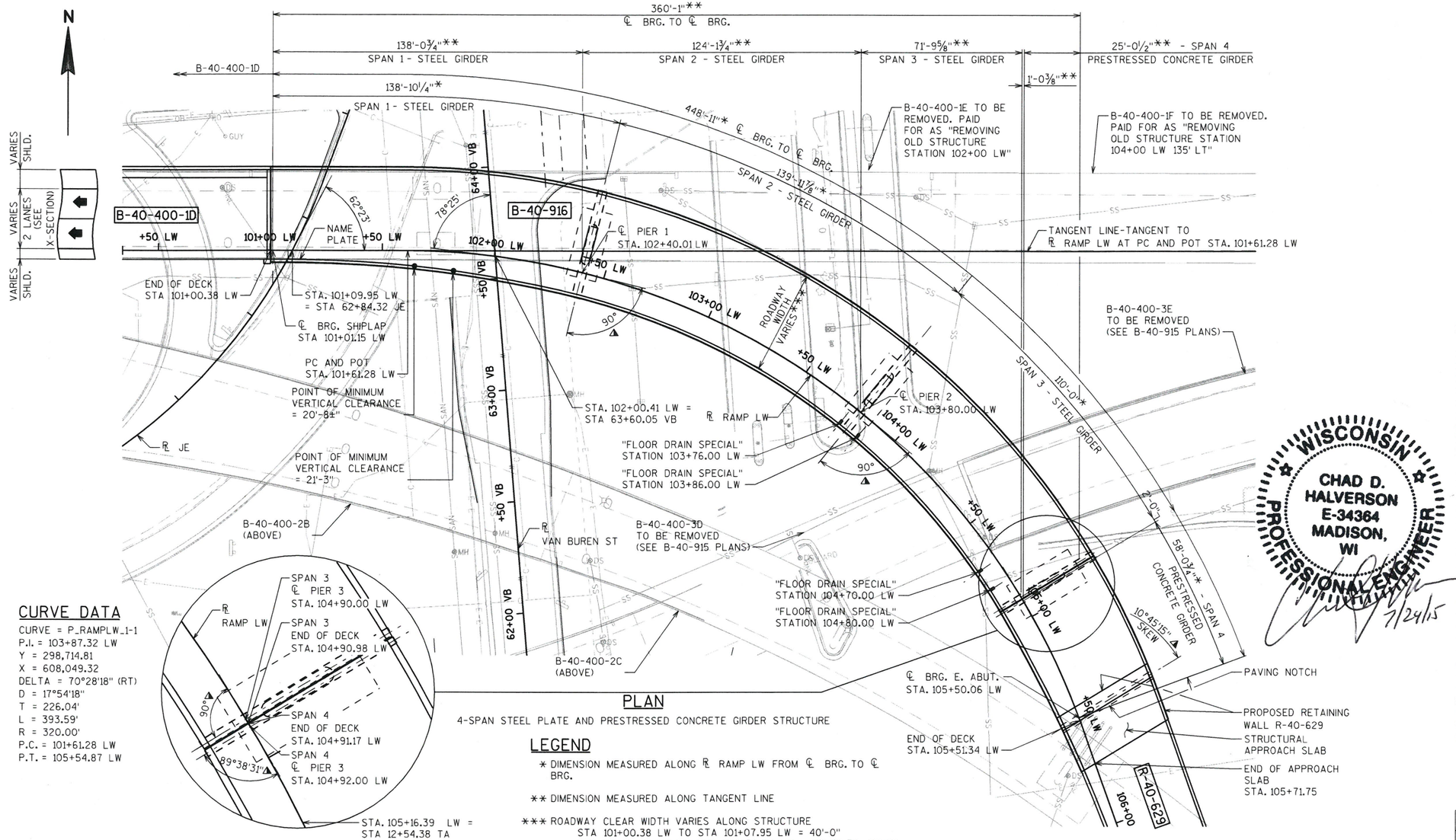
8

8

STATE PROJECT NUMBER
1300-13-74

LIST OF DRAWINGS

1 GENERAL PLAN & ELEVATION
2 GENERAL NOTES AND QUANTITIES
3 TYPICAL SECTIONS (1 OF 2)
4 TYPICAL SECTIONS (2 OF 2)
5 TYPICAL SECTIONS (3 OF 3)
6 SUBSURFACE EXPLORATION (1 OF 2)
7 SUBSURFACE EXPLORATION (2 OF 2)
8 PIER 1 PLAN & ELEVATION
9 PIER 2 PLAN & ELEVATION
10 PIER 1 & 2 REINFORCING DETAILS
11 PIER 1 & 2 FOOTING DETAILS
12 PIER 1 & 2 BILL OF BARS
13 PIER 3 PLAN & ELEVATION
14 PIER 3 REINFORCING DETAILS
15 PIER 3 FOOTING DETAILS
16 PIER 3 BILL OF BARS
17 EAST ABUTMENT
18 EAST ABUTMENT DETAILS
19 APPROACH SLAB PLAN
20 APPROACH SLAB DETAILS
21 FRAMING PLAN (SPANS 1 - 3)
22 FRAMING PLAN (SPANS 1 - 3)
23 GIRDER ELEVATIONS (1 OF 2)
24 GIRDER ELEVATIONS (2 OF 2)
25 SHIPLAP DETAILS
26 DIAPHRAGMS (1 OF 2)
27 DIAPHRAGMS (2 OF 2)
28 STEEL DETAILS
29 GIRDER SPLICES (1 OF 2)
30 GIRDER SPLICES (2 OF 2)
31 CAMBER AND BLOCKING
32 DEFLECTIONS
33 36" PRESTRESSED GIRDER DETAILS
34 STEEL DIAPHRAGMS
35 TANGENT OFFSETS
36 SUPERSTRUCTURE PLAN (1 OF 3)
37 SUPERSTRUCTURE PLAN (2 OF 3)
38 SUPERSTRUCTURE PLAN (3 OF 3)
39 SUPERSTRUCTURE CROSS SECTION (1 OF 2)
40 SUPERSTRUCTURE CROSS SECTION (2 OF 2)
41 SUPERSTRUCTURE DETAILS
42 SUPERSTRUCTURE BILL OF BARS
43 PARAPET DETAILS (1 OF 2)
44 PARAPET DETAILS (2 OF 2)
45 DECK POUR SEQUENCE
46 ELASTOMERIC BEARING DETAILS (1 OF 2)
47 ELASTOMERIC BEARING DETAILS (2 OF 2)
48 BEARING ALIGNMENT PLAN
49 EXPANSION JOINT DETAIL
50 COVER PLATES FOR PARAPET
51 FLOOR DRAIN SPECIAL
52 SUPERSTRUCTURE DRAINAGE DETAIL (1 OF 2)
53 SUPERSTRUCTURE DRAINAGE DETAIL (2 OF 2)



CURVE DATA

CURVE = P_RAMPLW_1-1
P.I. = 103+87.32 LW
Y = 298,714.81
X = 608,049.32
DELTA = 70°28'18" (RT)
D = 17°54'18"
T = 226.04'
L = 393.59'
R = 320.00'
P.C. = 101+61.28 LW
P.T. = 105+54.87 LW

PLAN

4-SPAN STEEL PLATE AND PRESTRESSED CONCRETE GIRDER STRUCTURE

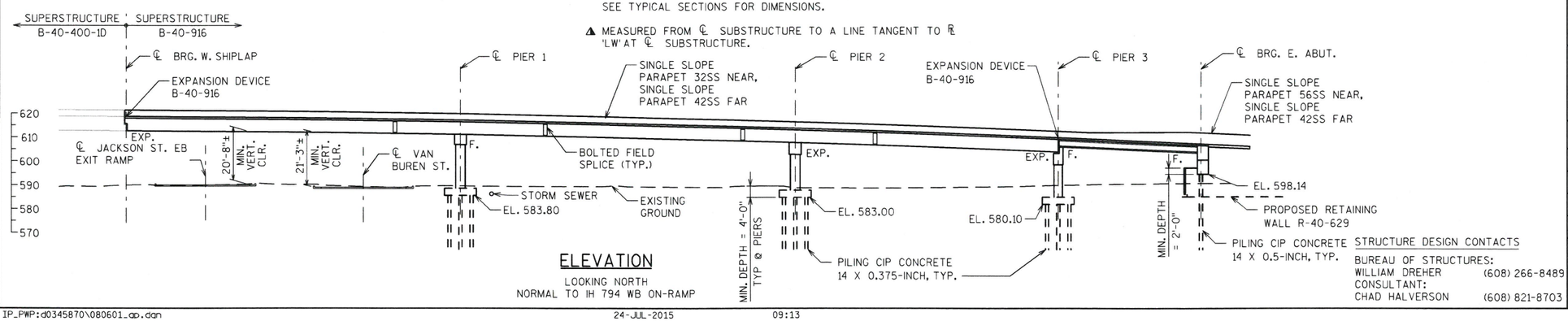
LEGEND

* DIMENSION MEASURED ALONG ℞ RAMP LW FROM ℄ BRG. TO ℄ BRG.

** DIMENSION MEASURED ALONG TANGENT LINE

*** ROADWAY CLEAR WIDTH VARIES ALONG STRUCTURE
STA 101+00.38 LW TO STA 101+07.95 LW = 40'-0"
STA 101+07.95 LW TO STA 102+32.79 LW = 40'-0" TO 46'-0"
STA 102+32.99 LW TO STA 104+94.67 LW = 46'-0"
STA 104+94.67 LW TO STA 106+18.46 LW = 46'-0" TO 40'-0"
SEE TYPICAL SECTIONS FOR DIMENSIONS.

◭ MEASURED FROM ℄ SUBSTRUCTURE TO A LINE TANGENT TO ℞ 'LW' AT ℄ SUBSTRUCTURE.



ELEVATION

LOOKING NORTH
NORMAL TO IH 794 WB ON-RAMP

WISCONSIN
CHAD D. HALVERSON E-34364 MADISON, WI
PROFESSIONAL ENGINEER
7/24/15

NO.	DATE	REVISION	BY

Baker
MICHAEL BAKER JR., INC
7633 GANSER WAY, SUITE 206
MADISON, WI 53719

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SOR 08/04/15
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-916

IH 794 WESTBOUND RAMP OVER VAN BUREN ST.

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	MJN	DESIGN CK'D.	PAT	DRAWN BY	CEM	PLANS CK'D.	MJN

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
CHAD HALVERSON (608) 821-8703

GENERAL PLAN & ELEVATION

SHEET 1 OF 53

785

IP_PWP:d0345870\080601_gp.dgn 24-JUL-2015 09:13

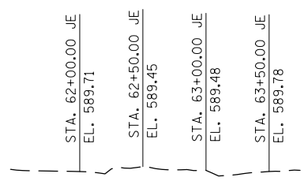
TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	PIER 1	PIER 2	PIER 3	E. ABUT.	SUPER.	APP. SLAB	TOTAL
203.0200.2002	REMOVING OLD STRUCTURE STATION 102+00 LW	LS	---	---	---	---	---	---	1
203.0200.2003	REMOVING OLD STRUCTURE STATION 104+00 LW 135' LT	LS	---	---	---	---	---	---	1
203.0210.S.2002	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-400-1E	LS	---	---	---	---	---	---	1
203.0210.S.2003	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-400-1F	LS	---	---	---	---	---	---	1
203.0225.S.2002	DEBRIS CONTAINMENT STRUCTURE B-40-916	LS	---	---	---	---	---	---	1
203.0225.S.2004	DEBRIS CONTAINMENT STRUCTURE B-40-400-1E	LS	---	---	---	---	---	---	1
206.1000.2002	EXCAVATION FOR STRUCTURES BRIDGES STRUCTURE B-40-916	LS	---	---	---	---	---	---	1
502.0100	CONCRETE MASONRY BRIDGES	CY	184	170	171	35	---	---	560
502.3100.2003	EXPANSION DEVICE STRUCTURE B-40-916	LS	---	---	---	---	---	---	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	---	---	2,322	97	2,419
502.3210.S	PIGMENTED PROTECTIVE SURFACE TREATMENT	SY	---	---	---	---	429	23	452
503.0136	PRESTRESSED GIRDER TYPE I 36-INCH	LF	---	---	---	---	354	---	354
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	13,440	11,120	8,600	3,020	---	---	36,180
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	24,990	23,860	22,440	---	192,310	10,830	274,430
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	---	---	---	---	820	---	820
506.0605	STRUCTURAL STEEL HS	LB	---	---	---	---	821,869	---	821,869
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	---	---	6	6	---	---	12
506.3015	WELDED STUD SHEAR CONNECTORS 7/8X6-INCH	EACH	---	---	---	---	5,622	---	5,622
506.4000.2001	STEEL DIAPHRAGMS B-40-916	EACH	---	---	---	---	5	---	5
514.2608	DOWNSPOUT 8-INCH	LF	---	33	39	---	---	---	72
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	---	---	8	---	---	8
517.0600.2002	PAINTING EPOXY SYSTEM B-40-916	LS	---	---	---	---	---	---	1
550.2146	PILING CIP CONCRETE 14 X 0.375-INCH	LF	3,800	3,675	3,080	---	---	---	10,555
550.2148	PILING CIP CONCRETE 14 X 0.50-INCH	LF	---	---	---	805	---	---	805
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	53	---	---	---	---	---	53
SPV.0035.2003	HPC MASONRY STRUCTURES	CY	---	---	---	---	824	64	888
SPV.0060.2001	FLOOR DRAIN SPECIAL	EACH	---	---	---	---	4	---	4
SPV.0060.2003	BEARING ELASTOMERIC EXPANSION	EACH	---	5	5	---	5 ☆	---	15
SPV.0060.2004	BEARING ELASTOMERIC FIXED	EACH	5	---	---	---	---	---	5
	NON-BID ITEMS								
	FILLER								1/2" & 3/4"
	BRIDGE SEAT PROTECTION								---

☆ QUANTITY REPRESENTS THE BEARINGS AT THE WEST SHIPLAP.

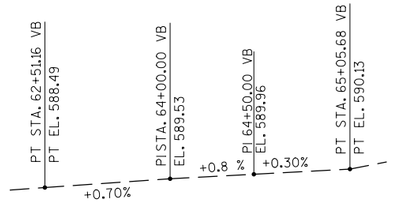
BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
226	201+09.70 LE	50.07' LT	BERNTSEN FENO MONUMENT WITH ALUMINUM CAP	589.61



PROFILE GRADE LINE - JE

JACKSON STREET EB EXIT RAMP



PROFILE GRADE LINE - VB

VAN BUREN STREET

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.25
OPERATING RATING FACTOR: RF = 1.62

STRUCTURE IS DESIGNED FOR FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

WISCONSIN STANDARD PERMIT
VEHICLE (WIS-SPV) = 250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY BRIDGES
- SUBSTRUCTURE.....f'c = 3,500 P.S.I.
- (HPC) SUPERSTRUCTURE.....f'c = 4,000 P.S.I.
- (HPC) APPROACH SLAB.....f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT
- HIGH STRENGTH, GRADE 60.....fy = 60,000 P.S.I.

STRUCTURAL STEEL
- ASTM A709 GRADE 36.....fy = 36,000 P.S.I.
- ASTM A709 GRADE 50 T2.....fy = 50,000 P.S.I.
- ASTM A572 GRADE 50.....fy = 50,000 P.S.I.

36-INCH PRESTRESSED GIRDERS
CONCRETE MASONRY.....f'c = 8,000 P.S.I.

TRAFFIC DATA

IH 794 WB ENTRANCE RAMP
AADT (2016) = 10,700
AADT (2036) = 14,600
RDS = 30 MPH

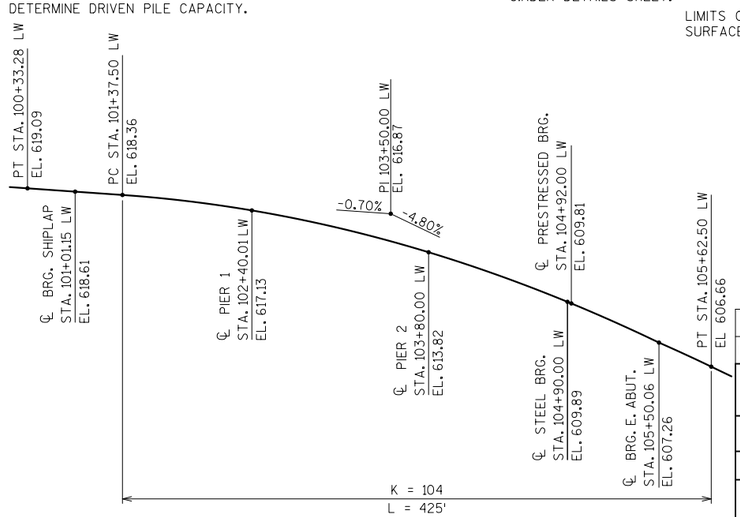
VAN BUREN ST.
AADT (2016) = 3,400
AADT (2036) = 3,600
RDS = 35 MPH

FOUNDATION DATA

PIER FOUNDATIONS TO BE SUPPORTED ON PILING CIP CONCRETE 14 X 0.375-INCH. DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200* TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH OF PILES IS GIVEN ON EACH INDIVIDUAL FOUNDATION SHEET.

E. ABUTMENT FOUNDATION TO BE SUPPORTED ON PILING CIP CONCRETE 14 X 0.5-INCH. DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170* TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH OF PILES IS 115'.

* THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.50 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.



PROFILE GRADE LINE - LW

IH 794 WB ON RAMP

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE. PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND ROADWAY FACE OF THE PARAPET.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

ALL STATIONS AND ELEVATIONS ARE IN U.S. SURVEY FEET. ELEVATIONS ARE REFERENCED NAVD 88 (1991)

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

APPLY BRIDGE SEAT PROTECTION AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP OF THE PIERS AND ABUTMENT BELOW EXPANSION DEVICES.

THE CONTRACTOR SHALL SUPPLY AND INSTALL A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.

THE TOP LAYER OF BAR STEEL REINFORCEMENT IN THE DECK SHALL BE PLACED WITH 2 1/2" OF CLEAR COVER.

EXISTING STRUCTURE, B-40-0400-001E, IS A 4 SPAN CONCRETE MULTI-CELL BOX GIRDER BRIDGE WITH A CLEAR WIDTH OF 40'-0" AND A DECK LENGTH OF 304'-10". THE STRUCTURE IS TO BE REMOVED ENTIRELY.

EXISTING STRUCTURE, B-40-0400-001F, IS A 2 SPAN CONCRETE MULTI-CELL BOX GIRDER BRIDGE WITH A CLEAR WIDTH OF 40'-0" AND A DECK LENGTH OF 161'-8". THE STRUCTURE IS TO BE REMOVED ENTIRELY.

THE CONTRACTOR SHALL SUBMIT A REMOVAL PLAN TO THE ENGINEER FOR APPROVAL.

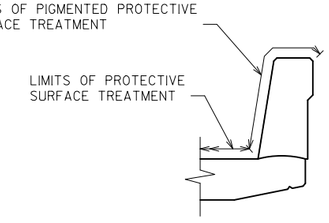
ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER, FRICTION TYPE, HIGH TENSILE STRENGTH BOLTS UNLESS SHOWN OR NOTED OTHERWISE.

STEEL GIRDERS SHALL BE PAINTED FEDERAL COLOR NUMBER 25177 DENIM.

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-916".

THE WISCONSIN DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR WITH BENCHMARK CAPS TO BE INSTALLED AS SHOWN ON THE PLANS.

HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE GIRDER DETAILS SHEET.



PROTECTIVE SURFACE TREATMENT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY ABP | PLANS CK'D. MSC

GENERAL NOTES AND QUANTITIES

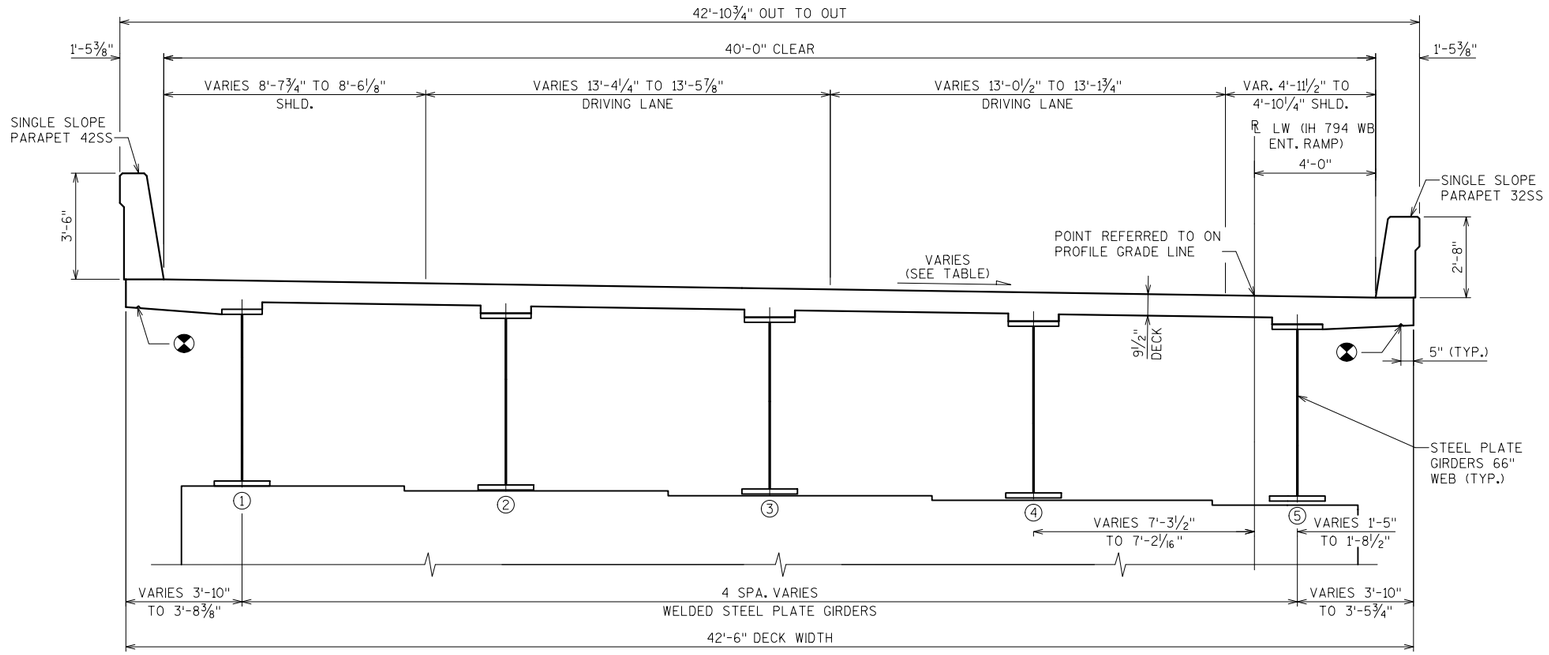
SHEET 2 OF 53
786

STATE PROJECT NUMBER
1300-13-74

8

8

STATE PROJECT NUMBER
1300-13-74



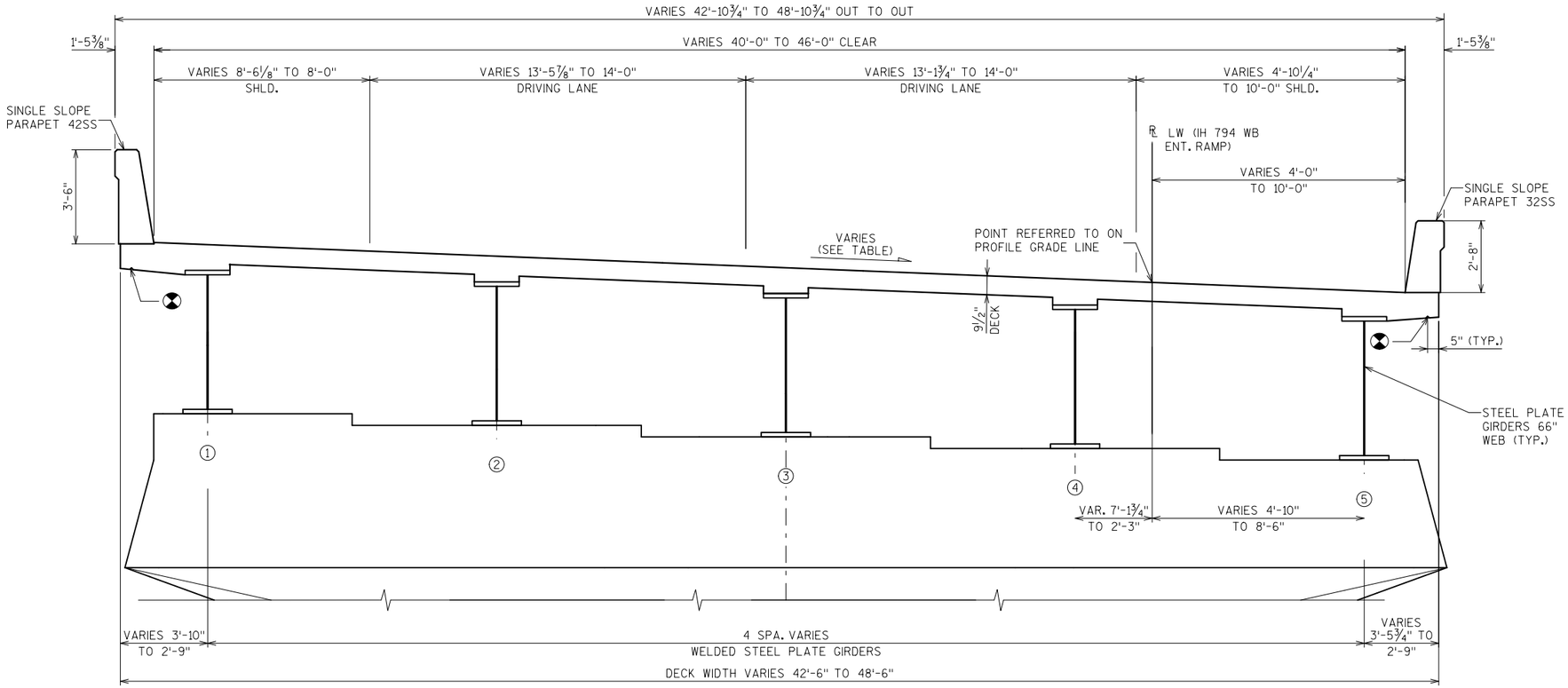
TYPICAL SECTION THRU WB RAMP

STA. 101+01.15 LW TO STA. 101+07.95 LW
LOOKING EAST

SUPERELEVATION TABLE

LOCATION	CROSS SLOPE (%)
STA. 100+33.28 LW	-1.10%
STA. 100+97.28 LW	0.00%
STA. 101+61.28 LW	2.00%
STA. 102+25.28 LW	4.00%
STA. 104+90.87 LW	4.00%
STA. 105+54.87 LW	2.00%
STA. 106+18.87 LW	0.00%

ALL CROSS-SLOPES ARE APPROXIMATE. A NEGATIVE SIGN INDICATES CROSS-SLOPE DIRECTION OPPOSITE OF THAT SHOWN IN TYPICAL SECTION.



TYPICAL SECTION THRU WB RAMP

STA. 101+07.95 LW TO STA. 102+32.79 LW
LOOKING EAST

LEGEND

- ¾" V-GROOVE, TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENTS OR 6" FROM FRONT FACE OF END DIAPHRAGM TYP., REQUIRED ALONG ALL EDGES OF DECK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. DRH

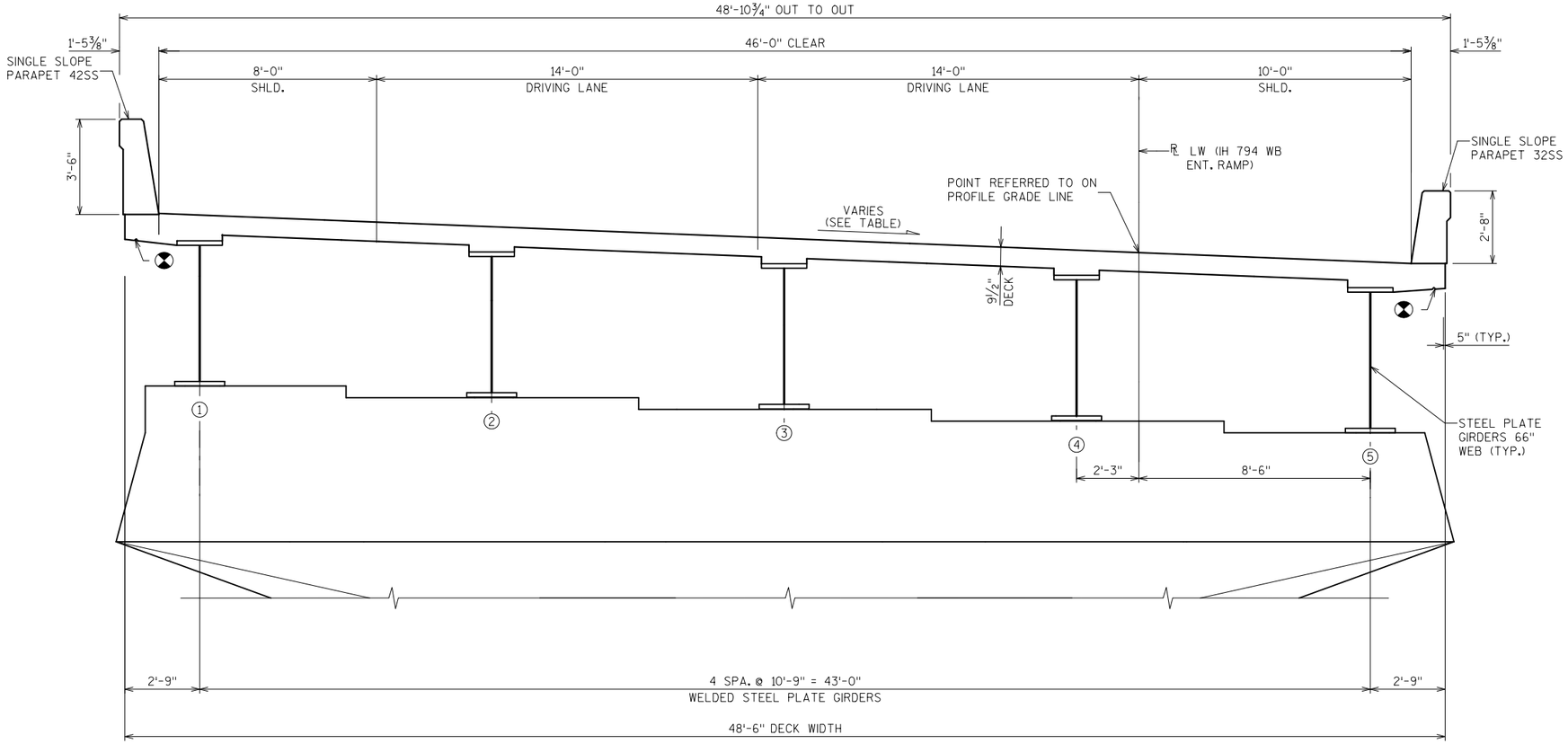
TYPICAL CROSS SECTION (1 OF 3)

SHEET 3 OF 53
787

8

8

STATE PROJECT NUMBER
1300-13-74



TYPICAL SECTION THRU WB RAMP

STA. 102+32.79 LW TO STA. 104+90.00 LW
LOOKING EAST

NOTES

SEE "TYPICAL CROSS SECTION (1 OF 3)" SHEET FOR SUPERELEVATION TABLE.

LEGEND

⧓ ¾" V-GROOVE, TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENTS OR 6" FROM FRONT FACE OF END DIAPHRAGM TYP., REQUIRED ALONG ALL EDGES OF DECK.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

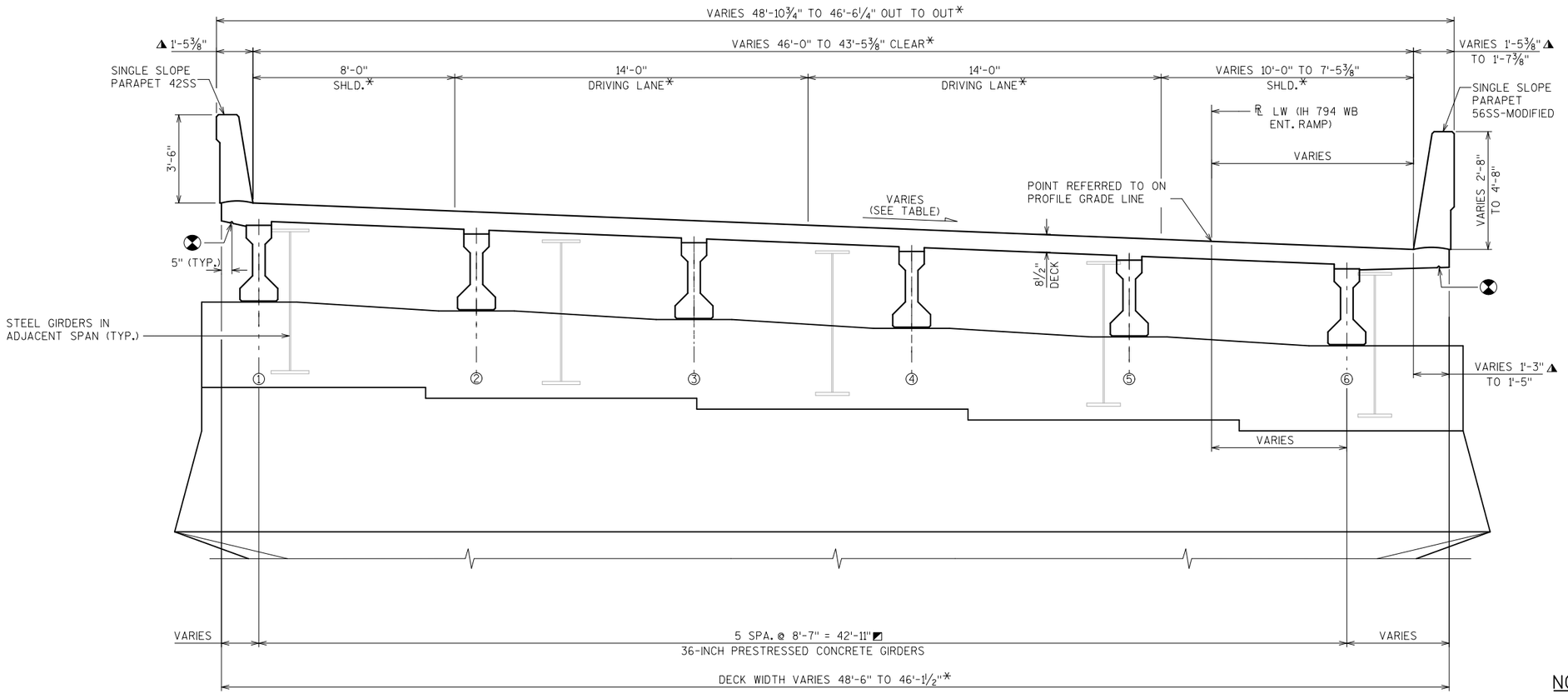
DRAWN BY CEM | PLANS CK'D. DRH

TYPICAL CROSS SECTION (2 OF 3)

SHEET 4 OF 53
788

IP_PWP:d0345870\080604_XS.dgn 24-JUL-2015 09:14

STATE PROJECT NUMBER
1300-13-74



TYPICAL SECTION THRU WB RAMP

STA. 104+91.17 LW TO 105+51.34 LW
LOOKING EAST

NOTES

SEE TYPICAL CROSS SECTION (1 OF 3) FOR SUPERELEVATION TABLE.

LEGEND

- ⌧ ¾" V-GROOVE, TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENTS OR 3" FROM FRONT FACE OF END DIAPHRAGM TYP., REQUIRED ALONG ALL EDGES OF DECK.
- ◩ DIMENSION IS TAKEN NORMAL TO ℄ GIRDER.
- * DIMENSION IS TAKEN NORMAL TO ℄ RAMP LW.
- ▲ DIMENSION IS TAKEN NORMAL TO DECK EDGE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

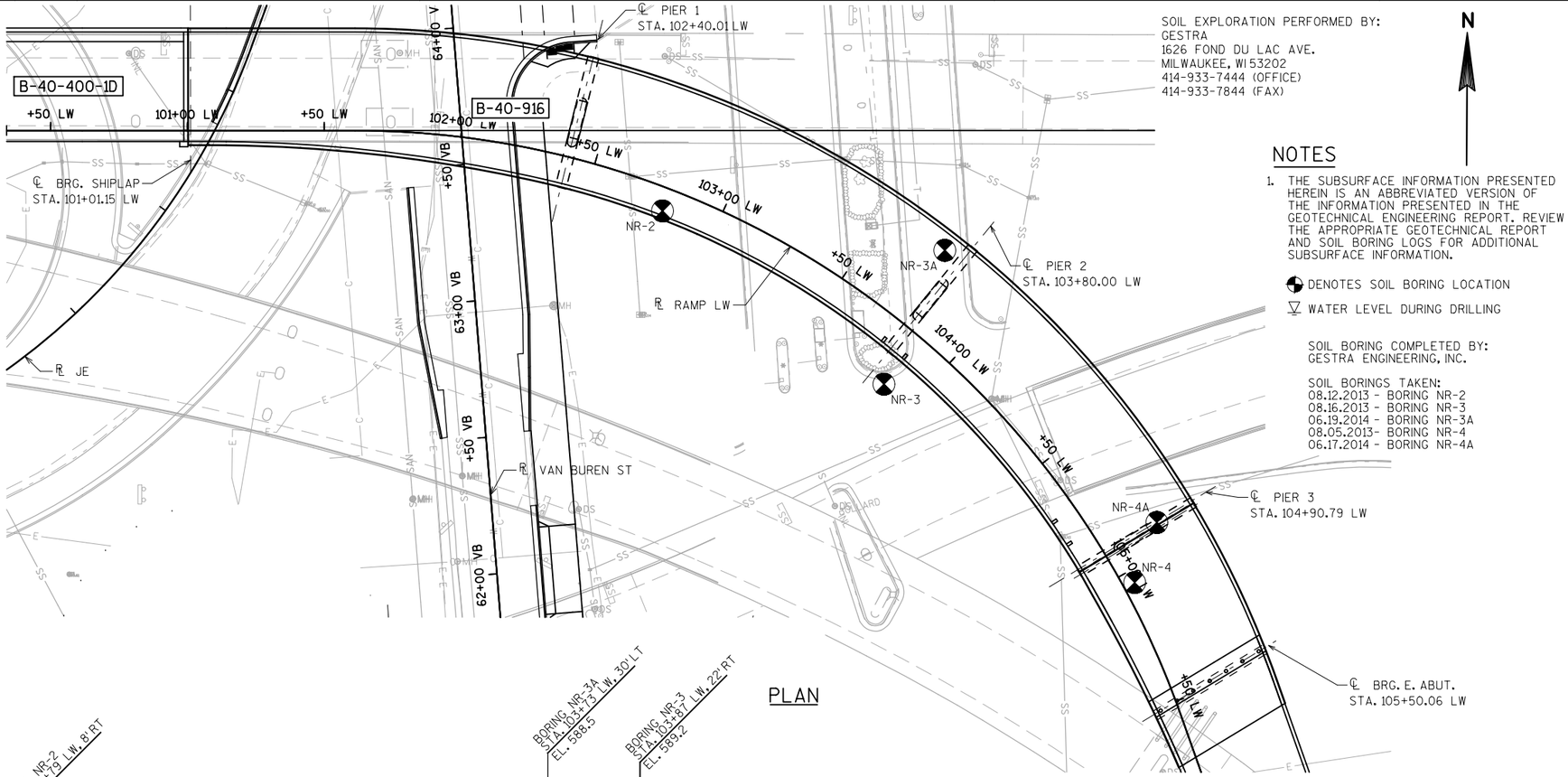
DRAWN BY DRH | PLANS CK'D. MSC

TYPICAL CROSS SECTION (3 OF 3)

SHEET 5 OF 53
789

8

8



PLAN

SOIL EXPLORATION PERFORMED BY:
GESTRA
1626 FOND DU LAC AVE.
MILWAUKEE, WI 53202
414-933-7444 (OFFICE)
414-933-7844 (FAX)

N

NOTES

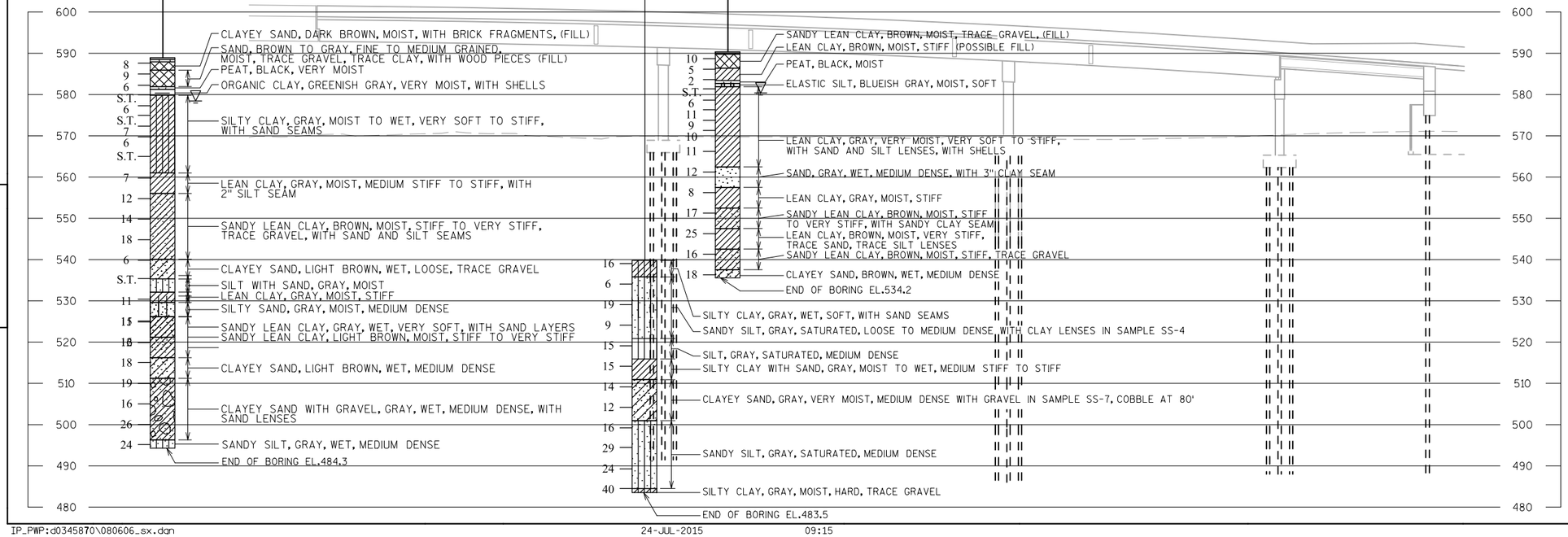
1. THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

DENOTES SOIL BORING LOCATION

WATER LEVEL DURING DRILLING

SOIL BORING COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
08.12.2013 - BORING NR-2
08.16.2013 - BORING NR-3
06.19.2014 - BORING NR-3A
08.05.2013- BORING NR-4
06.17.2014 - BORING NR-4A



STATE PROJECT NUMBER

1300-13-74

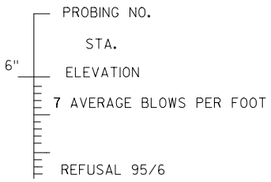
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

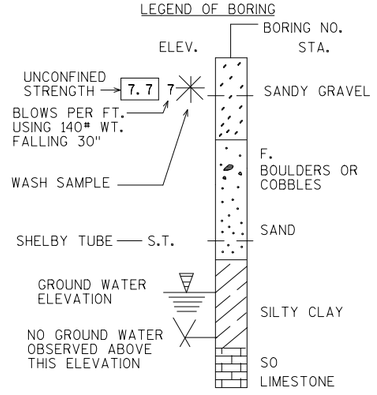
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. DRH

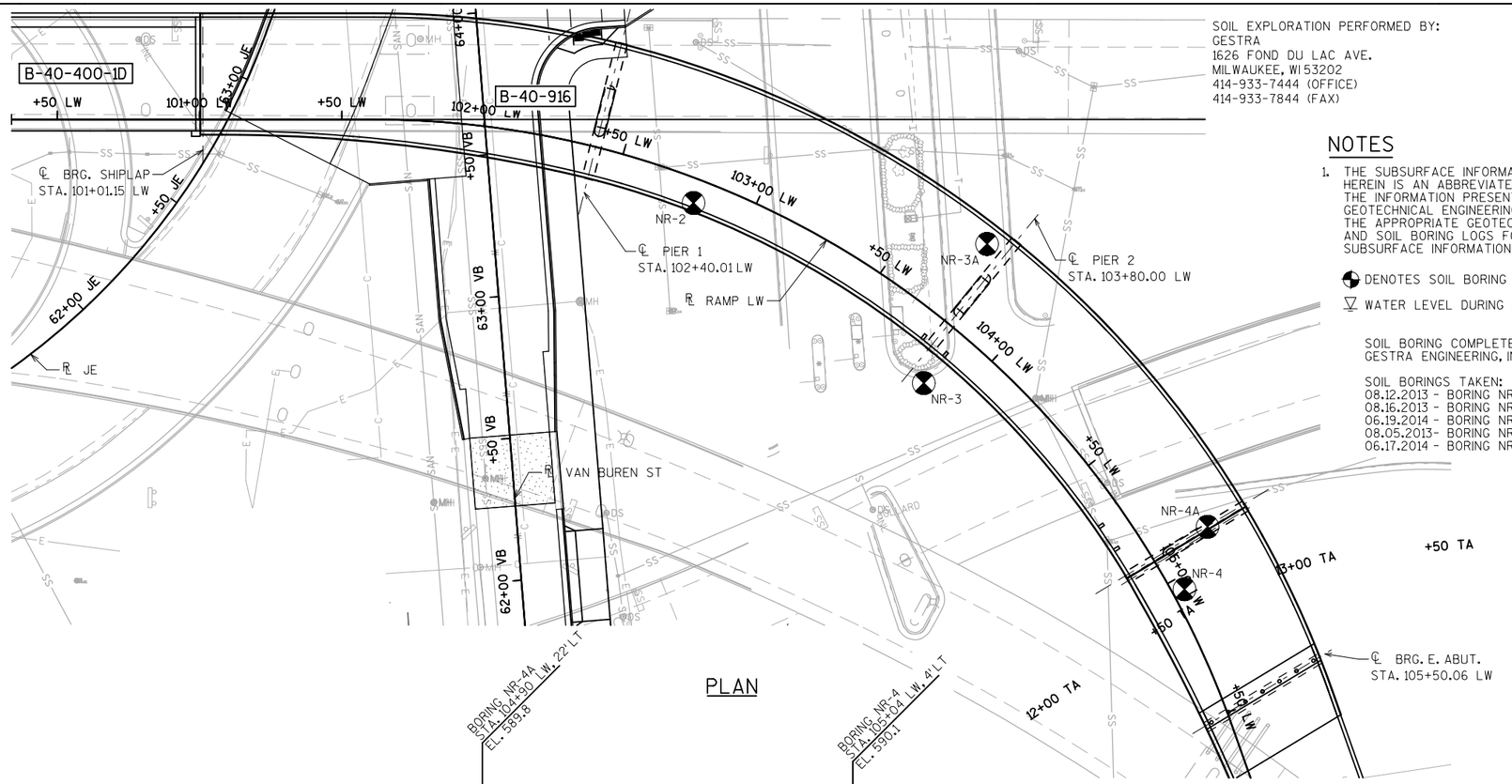
SUBSURFACE EXPLORATION (1 OF 2)

SHEET 6 OF 52
790

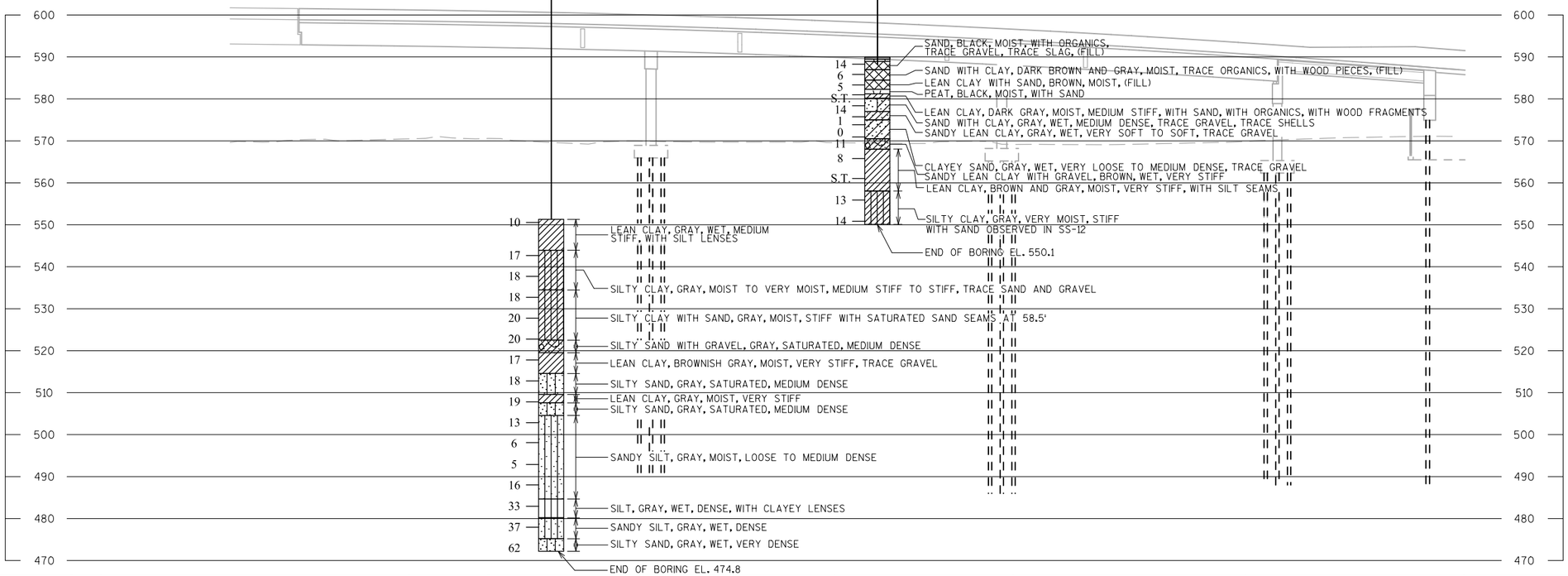
8

8

IP_PWP:d0345870\080606_sx.dan 24-JUL-2015 09:15



PLAN



SOIL EXPLORATION PERFORMED BY:
GESTRA
1626 FOND DU LAC AVE.
MILWAUKEE, WI 53202
414-933-7444 (OFFICE)
414-933-7844 (FAX)

N

NOTES

1. THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

DENOTES SOIL BORING LOCATION

WATER LEVEL DURING DRILLING

SOIL BORING COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
08.12.2013 - BORING NR-2
08.16.2013 - BORING NR-3
06.19.2014 - BORING NR-3A
08.05.2013- BORING NR-4
06.17.2014 - BORING NR-4A

STATE PROJECT NUMBER

1300-13-74

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. DRH

SUBSURFACE EXPLORATION (2 OF 2)

SHEET 7 OF 52
791

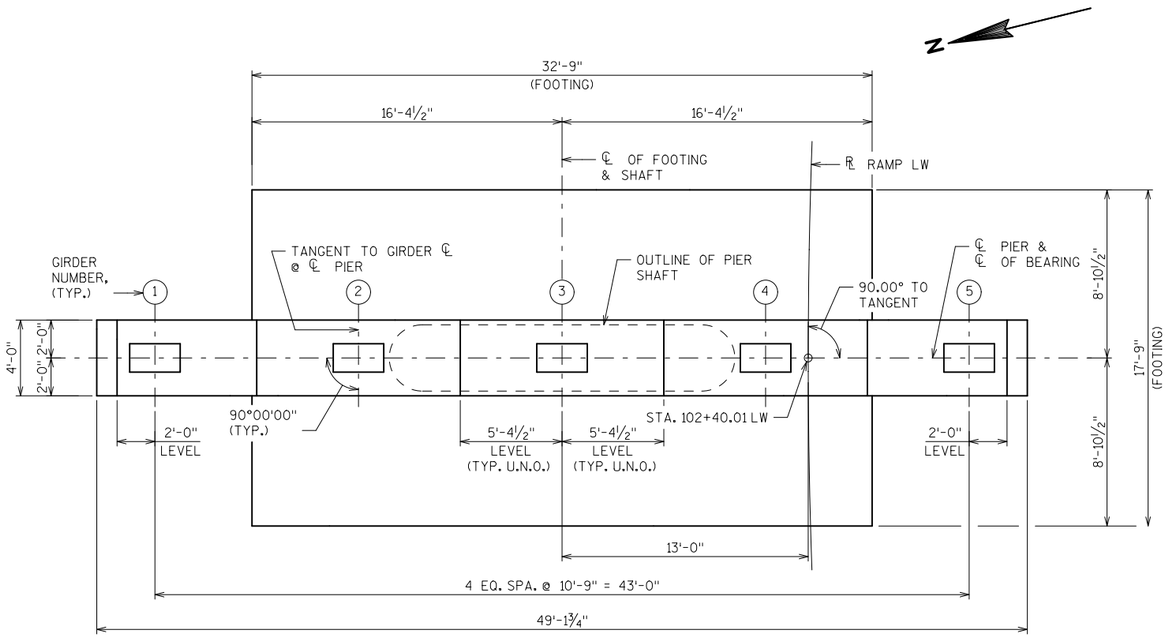
8

8

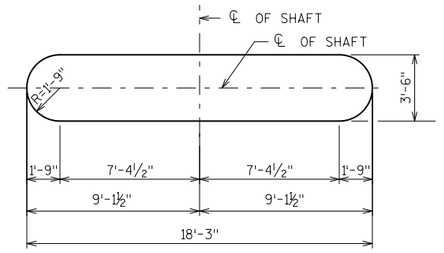
IP_PWP:d0345870\080607_sx.dgn 24-JUL-2015 09:16

STATE PROJECT NUMBER

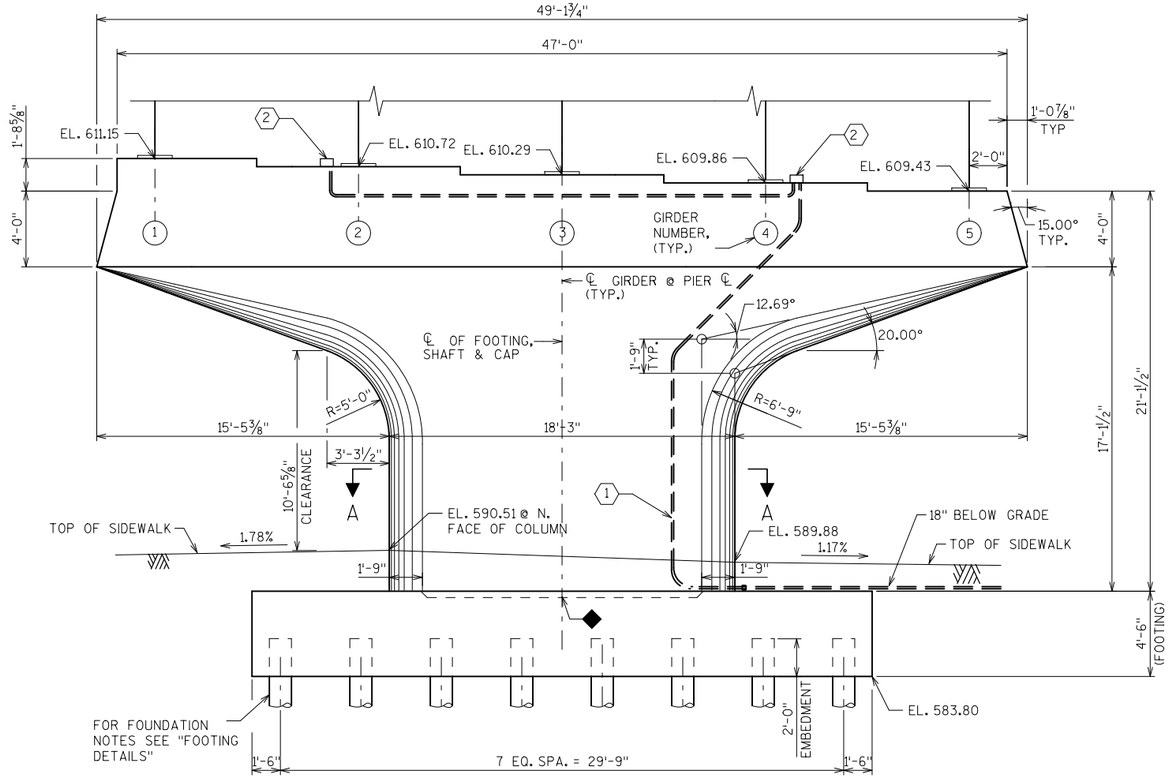
1300-13-74



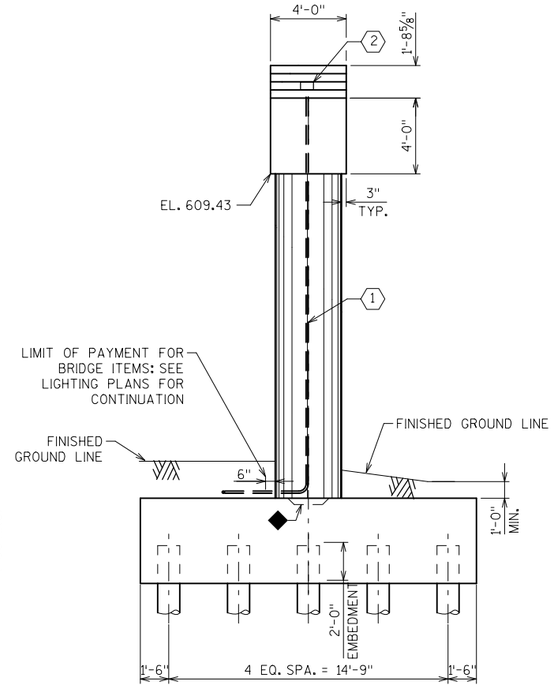
PLAN



SECTION A-A



ELEVATION
(LOOKING UPSTATION)



END VIEW
(LOOKING NORTH)

NOTES

1. FOR BAR STEEL REINFORCEMENT DETAILS, SEE SHEETS "PIER 1 & 2 BILL OF BARS".
2. FOR FOOTING LAYOUT DETAILS, SEE SHEET "PIER 1 & 2 FOOTING DETAILS".
3. SEE "GIRDER ELEVATION" SHEET 23 FOR LOCATION OF HOLES FOR UNDERDECK LIGHTING FIXTURE.

LEGEND

◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 1'-6" X 14'-3".

(1) 2 INCH NON-METALLIC CONDUIT EMBEDDED IN PIER

(2) JUNCTION BOX, SEE LIGHTING PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. MA

PIER 1
PLAN & ELEVATION

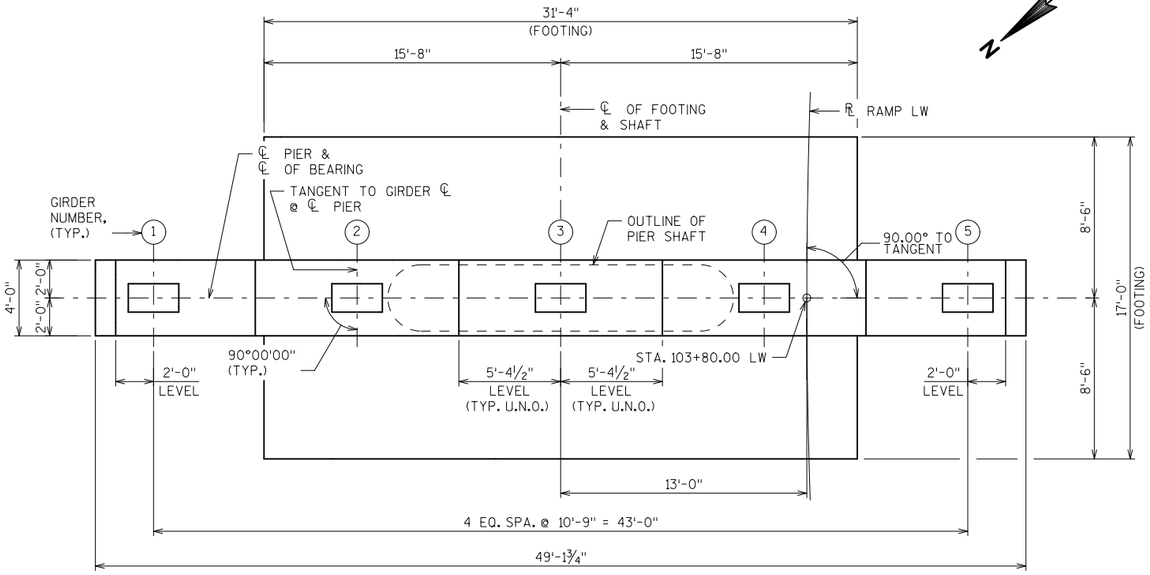
SHEET 8 OF 53
792

8

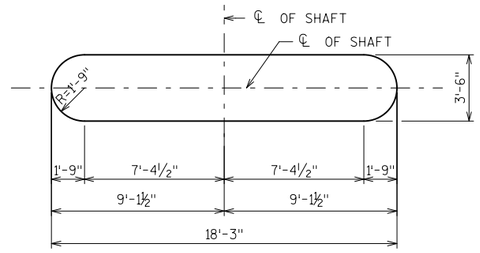
8

STATE PROJECT NUMBER

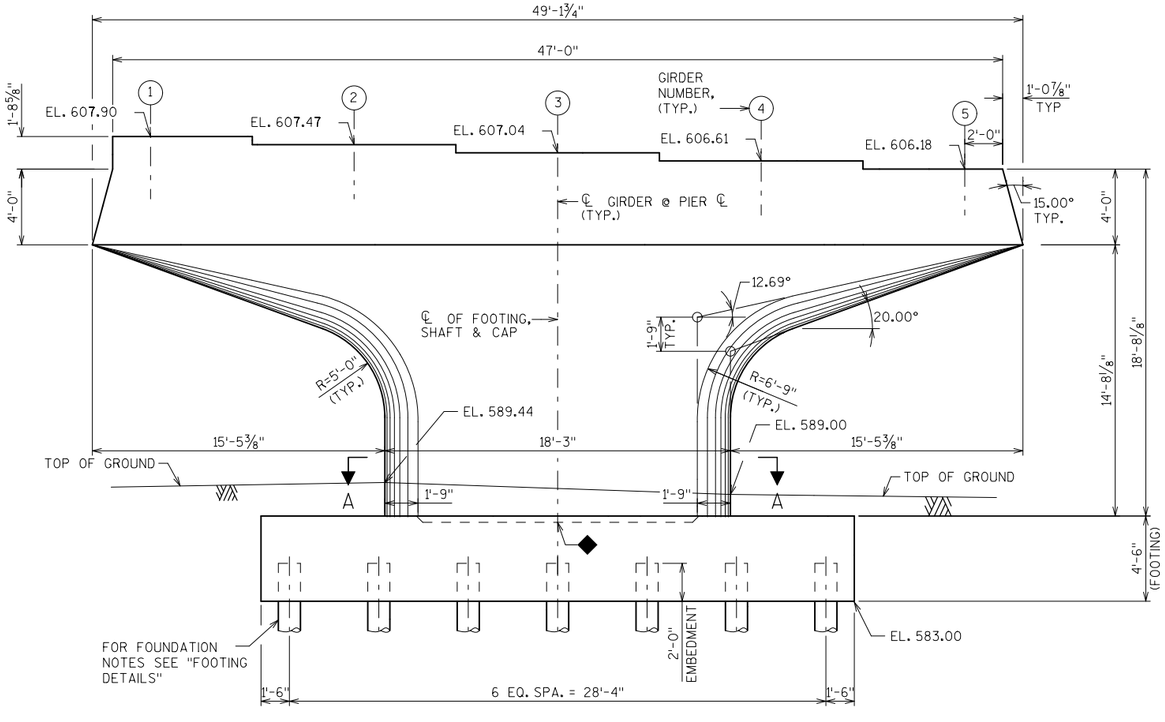
1300-13-74



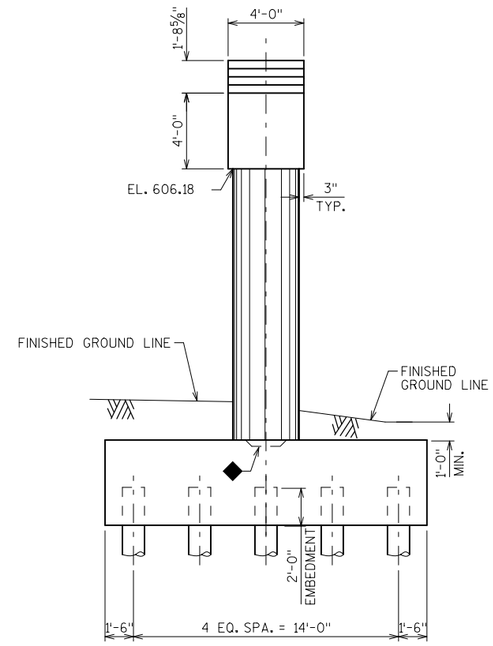
PLAN



SECTION A-A



ELEVATION
(LOOKING UPSTATION)



END VIEW
(LOOKING NORTH)

NOTES

1. FOR BAR STEEL REINFORCEMENT DETAILS, SEE SHEETS "PIER 1 & 2 BILL OF BARS".
2. FOR FOOTING LAYOUT DETAILS. SEE SHEET "PIER 1 & 2 FOOTING DETAILS".

LEGEND

◆ KEYED CONST. JOINT FORMED BY BEVELED 4" X 1'-6" X 14'-3".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. MA

PIER 2
PLAN & ELEVATION

SHEET 9 OF 53
793

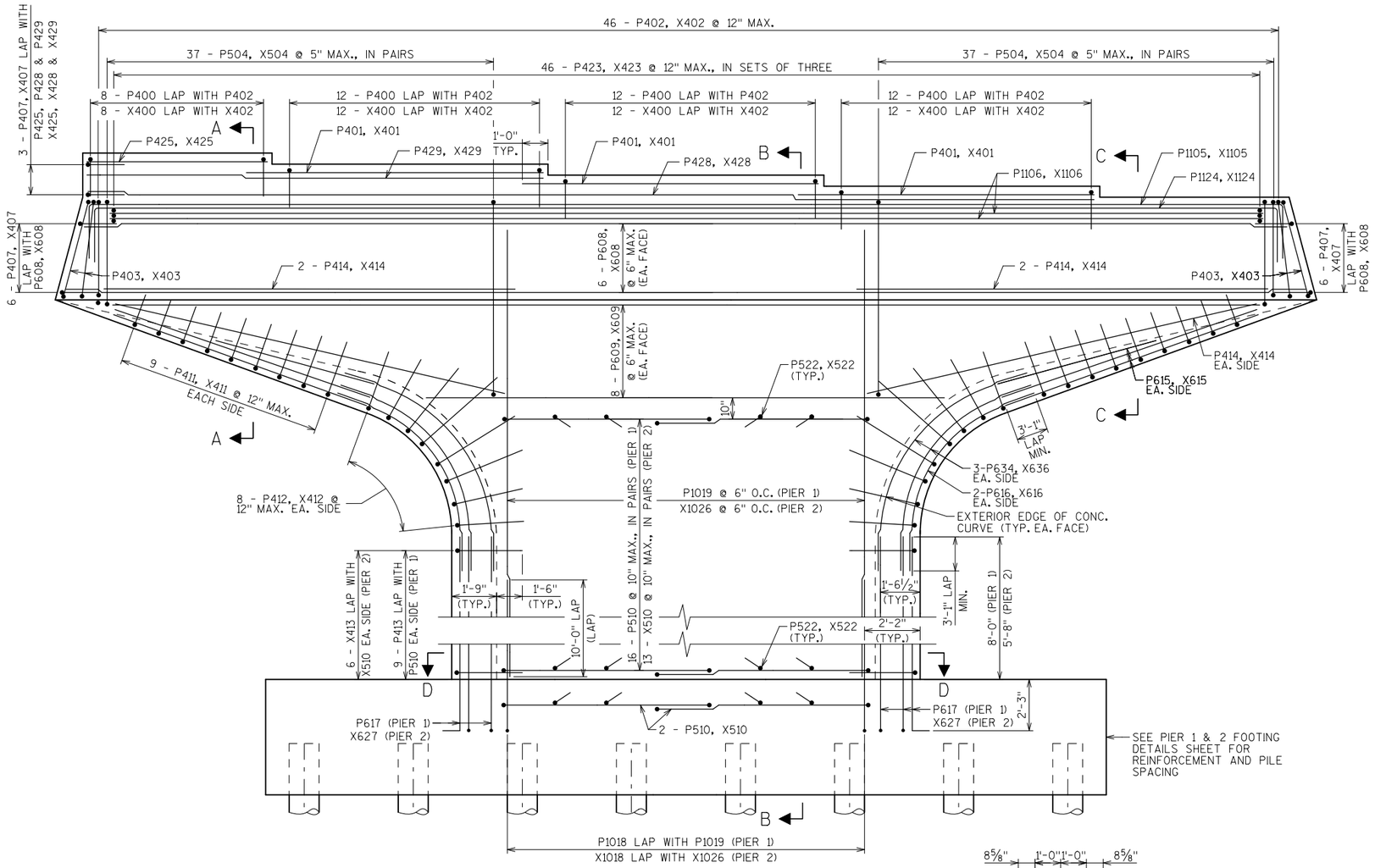
8

8

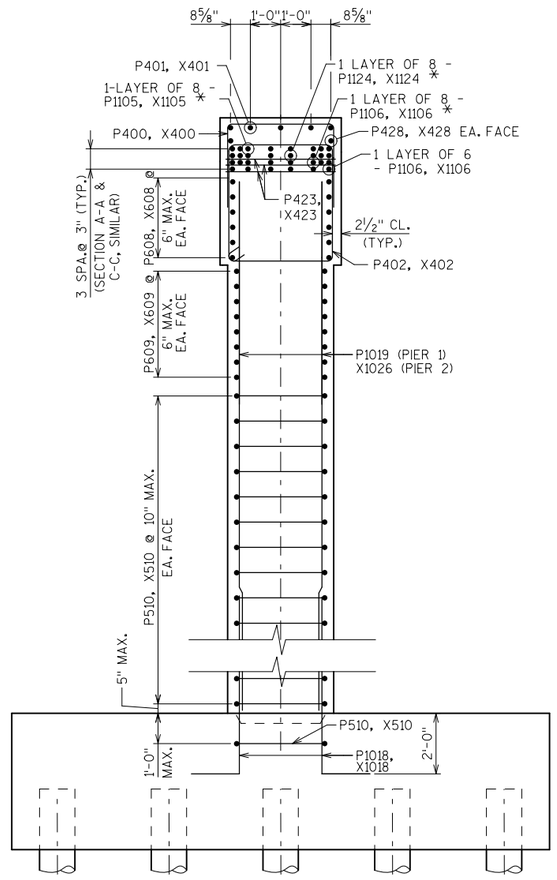
IP_PWP:d0345870\080609_p2.DGN 24-JUL-2015 09:17

STATE PROJECT NUMBER

1300-13-74

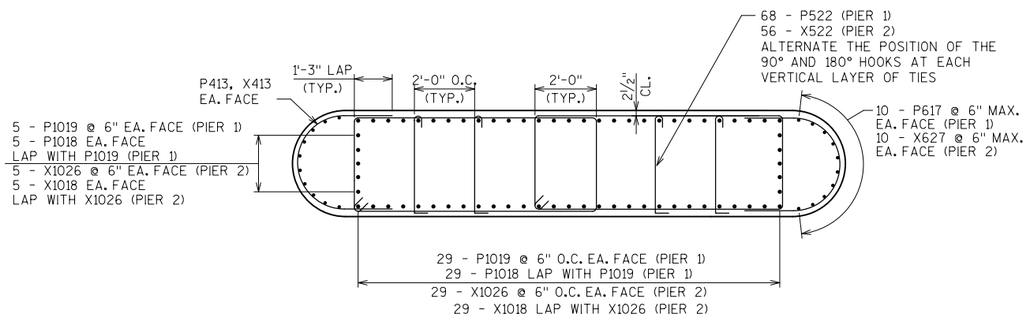


ELEVATION

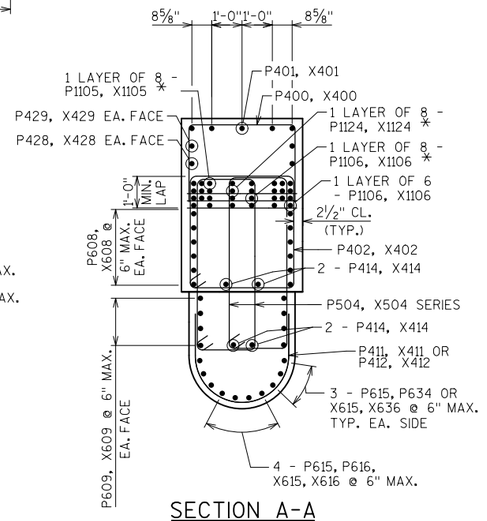


SECTION B-B

* SEE SECTION C-C FOR SPACING OF P1006, P1105, P1124, X1006, X1105 & X1124 BARS

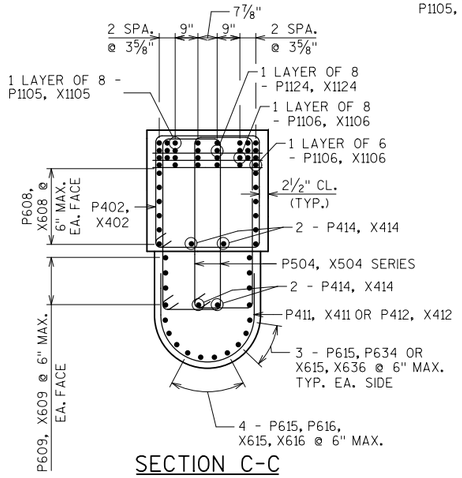


SECTION D-D



SECTION A-A

* SEE SECTION C-C FOR SPACING OF P1006, P1105, P1124, X1006, X1105 & X1124 BARS



SECTION C-C

NOTES

ALL BARS DESIGNATED WITH A 'P' ARE FOR PIER 1
ALL BARS DESIGNATED WITH A 'X' ARE FOR PIER 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. MA

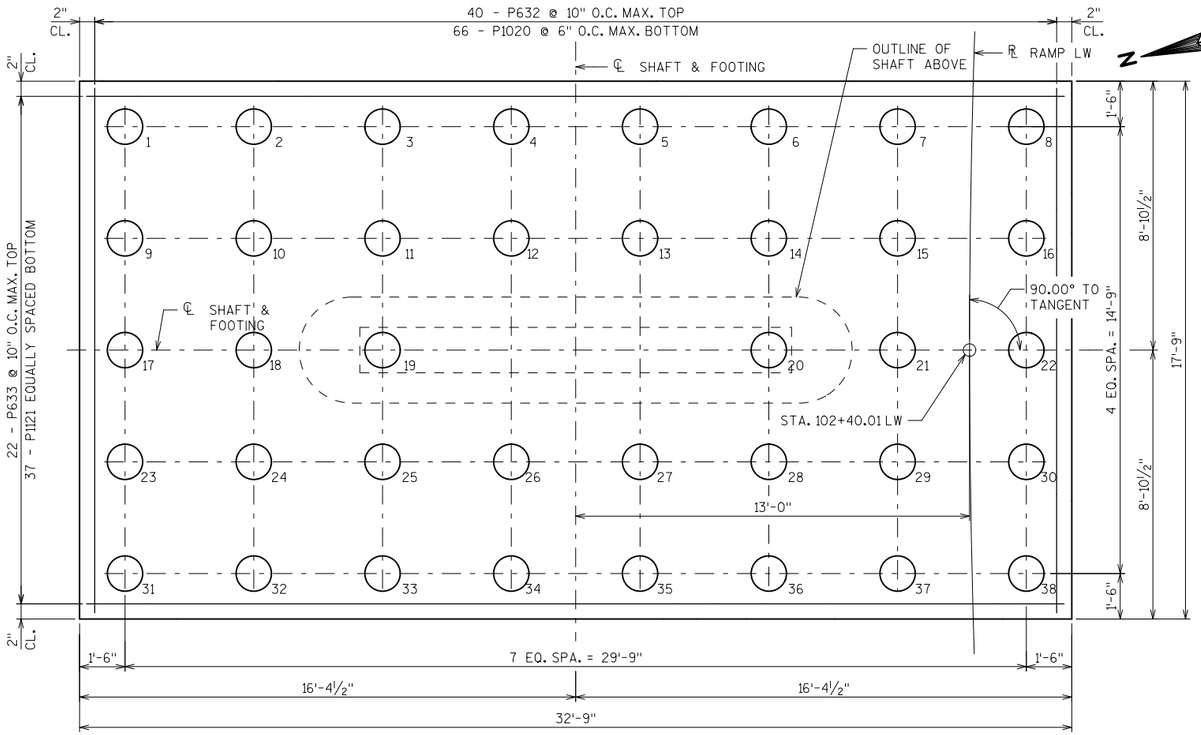
PIER 1 & 2 REINFORCING DETAILS

SHEET 10 OF 53
794

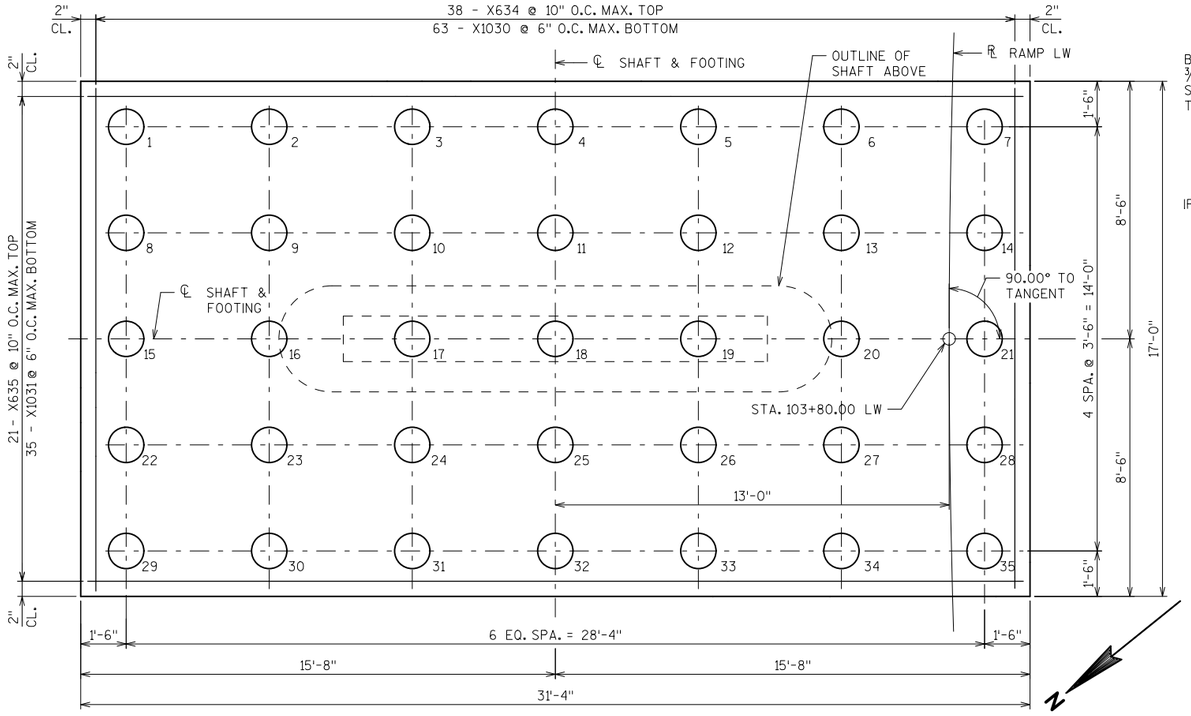
8

8

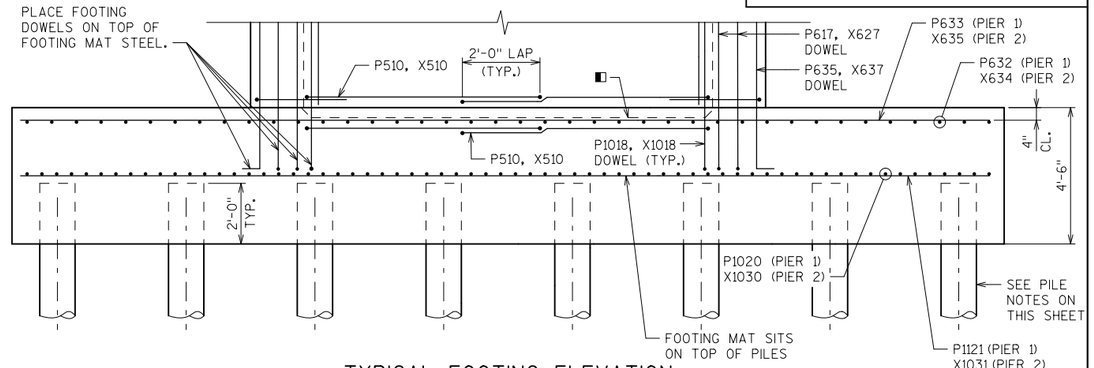
IP_PWP:d0345870\080610_pd.DGN 24-JUL-2015 09:17



PIER 1 FOOTING PLAN



PIER 2 FOOTING PLAN



TYPICAL FOOTING ELEVATION

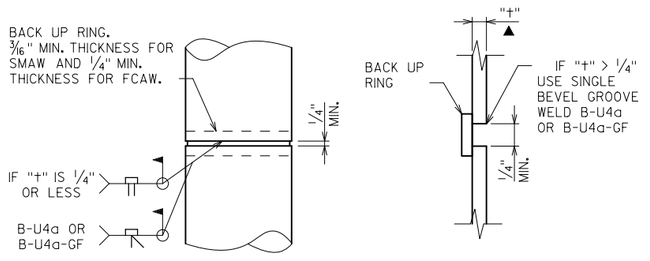
ESTIMATED PILE LENGTH	
LOCATION	ESTIMATED DRIVEN PILE LENGTH (FEET)
PIER 1	100
PIER 2	105

PILE RESISTANCE			
CAST-IN-PLACE PILE SIZE	SHELL THICKNESS (INCHES) CLOSED-END	FACTORED AXIAL COMPRESSION RESISITANCE (Pr) (TONS)	REQUIRED DRIVING RESISTANCE Rndyn (TONS)
14"	0.375	100	200

STEEL PIPE PILES SHALL BE IN ACCORDANCE WITH ASTM A252 GRADE 2.

PIER NO.	COMPETENT STIFF TO HARD COHESIVE SOIL EL.
1	493.6
2	489.8

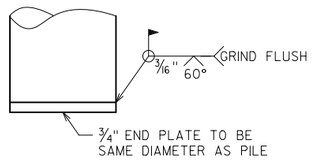
THE ESTIMATED ELEVATIONS OF VERY STIFF TO HARD CLAY PILE SUPPORT LAYER ARE BASED ON THE AVAILABLE BORING INFORMATION. HARD PRE-BORING MAY BE REQUIRED ABOVE OR BELOW THE ESTIMATED COMPETENT LAYER ELEVATIONS BECAUSE OF VARIABILITY IN SOIL PROFILE WITH THE POSSIBILITY OF PRESENCE OF EARLY REFUSAL SUCH AS COBBLES, BOULDERS AND/OR VERY DENSE GRAVEL LAYERS.



CAST-IN-PLACE PIPE PILE

CAST-IN-PLACE PIPE WELD DETAIL

PILE SPLICE DETAIL



END PLATE DETAIL FOR CIP PILING IN ARTESIAN CONDITIONS

(ONLY USE FOR ARTESIAN CONDITIONS)

NOTES

1. PIER IS TO BE SUPPORTED ON CIP 14" CLOSED-END PIPE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. SEE TABLE ON THIS SHEET FOR ESTIMATED LENGTHS.
2. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING THE MODIFIED GATES DYNAMIC EQUATION.
3. ESTIMATED NOMINAL LATERAL CAPACITY FOR INDIVIDUAL FIXED PILE HEAD OF BOTH STRONG AND WEAK AXIS IS 22 KIP FOR PIER 1 AND 27 KIP FOR PIER 2.
4. SEE SHEET "PIER 1 & 2 BILL OF BARS" FOR BAR BILL AND BAR BENT DETAILS.
5. SEE SHEET "PIER 1 & 2 REINFORCING DETAILS" FOR FOOTING DOWEL BARS.

STATE PROJECT NUMBER
1300-13-74

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. MA

PIER 1 & 2 FOOTING DETAILS

SHEET 11 OF 53

795

8

8

STATE PROJECT NUMBER
1300-13-74

TOTAL COATED = 24,990 LBS

BILL OF BARS - PIER 1

TOTAL UNCOATED = 13,440 LBS

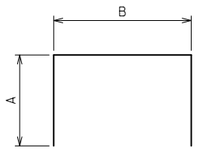
BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
P400	44	8'-11"	X	X		PIER CAP - BEARING SEAT ADDITIONAL U-BARS
P401	15	11'-7"	X			PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
P402	46	14'-10"	X	X		PIER CAP STIRRUP
P403	4	15'-2"	X	X		PIER CAP STIRRUP
P504	148	15'-9"	X	X	X	PIER CAP STIRRUP
P1105	8	49'-11"	X	X		PIER CAP TOP BARS 1ST TOP LAYER
P1106	14	44'-7"	X			PIER CAP TOP BARS 3RD LAYER FROM TOP
P407	15	8'-7"	X	X		CAP - SIDE HORIZONTAL U-BARS
P608	12	46'-7"	X			CAP - HORIZONTAL FACE BARS
P609	16	33'-1"	X		X	TOP SHAFT HORIZONTAL SIDE BARS
P510	32	23'-2"	X	X		BOTTOM SHAFT HORIZONTAL TIE BARS
P411	18	6'-10"	X	X		TOP SHAFT HORIZONTAL SIDE U-BARS
P412	16	8'-5"	X	X	X	MIDDLE SHAFT HORIZONTAL SIDE U-BARS
P413	18	7'-10"	X	X		BOTTOM SHAFT HORIZONTAL SIDE U-BARS
P414	8	16'-9"	X			TOP SHAFT HORIZONTAL BAR BETWEEN STIRRUPS
P615	20	8'-6"	X			TOP SHAFT STRAIGHT BAR AT THE CURVED CONCRETE
P616	8	12'-8"	X	X		MIDDLE SHAFT CURVED BAR AT THE CURVED CONCRETE
P617	20	11'-1"	X	X		BOTTOM SHAFT DOWEL BAR AT THE CURVED CONCRETE
P1018	68	13'-10"	X	X		FOOTING DOWEL
P1019	68	18'-11"	X			SHAFT VERTICAL BAR
P1020	66	17'-5"				TRANSVERSE FOOTING HORIZONTAL BAR
P1121	37	32'-5"				LONGITUDINAL FOOTING HORIZONTAL BAR
P522	68	4'-3"	X	X		SHAFT HOOK BARS
P423	138	3'-7"	X			BAR HOLDERS
P1124	8	48'-11"	X	X		PIER CAP TOP BARS 2ND LAYER FROM TOP
P425	5	7'-0"	X			PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
P428	2	39'-3"	X			BEARING SIDE FACE BAR 1
P429	2	17'-9"	X			BEARING SIDE FACE BAR 2
P632	40	17'-5"				TOP TRANSVERSE FOOTING HORIZONTAL BAR
P633	22	32'-5"				TOP LONGITUDINAL FOOTING HORIZONTAL BAR
P634	12	14'-1"	X	X		MIDDLE SHAFT CURVED BAR AT THE CURVED CONCRETE

TOTAL COATED = 23,860 LBS

BILL OF BARS - PIER 2

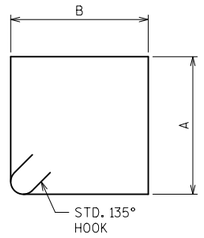
TOTAL UNCOATED = 11,120 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
X400	44	8'-11"	X	X		PIER CAP - BEARING SEAT ADDITIONAL U-BARS
X401	15	11'-7"	X			PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
X402	46	14'-10"	X	X		PIER CAP STIRRUP
X403	4	15'-2"	X	X		PIER CAP STIRRUP
X504	148	15'-9"	X	X	X	PIER CAP STIRRUP
X1105	8	49'-11"	X	X		PIER CAP TOP BARS 1ST TOP LAYER
X1106	14	44'-7"	X			PIER CAP TOP BARS 3RD LAYER FROM TOP
X407	15	8'-7"	X	X		CAP - SIDE HORIZONTAL U-BARS
X608	12	46'-7"	X			CAP - HORIZONTAL FACE BARS
X609	16	33'-1"	X		X	TOP SHAFT HORIZONTAL SIDE BARS
X510	26	23'-2"	X	X		BOTTOM SHAFT HORIZONTAL TIE BARS
X411	18	6'-10"	X	X		TOP SHAFT HORIZONTAL SIDE U-BARS
X412	16	8'-5"	X	X	X	MIDDLE SHAFT HORIZONTAL SIDE U-BARS
X413	12	7'-10"	X	X		BOTTOM SHAFT HORIZONTAL SIDE U-BARS
X414	8	16'-9"	X			TOP SHAFT HORIZONTAL BAR BETWEEN STIRRUPS
X615	20	8'-6"	X			TOP SHAFT STRAIGHT BAR AT THE CURVED CONCRETE
X616	8	12'-8"	X	X		MIDDLE SHAFT CURVED BAR AT THE CURVED CONCRETE
X1018	68	13'-10"	X	X		FOOTING DOWEL
X522	56	4'-3"	X	X		SHAFT HOOK BARS
X423	138	3'-7"	X			BAR HOLDERS
X1124	8	48'-11"	X	X		PIER CAP TOP BARS 2ND LAYER FROM TOP
X425	5	7'-0"	X			PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
X1026	68	16'-1"	X			SHAFT VERTICAL BAR
X627	20	8'-9"	X	X		BOTTOM SHAFT DOWEL BAR AT THE CURVED CONCRETE
X428	2	39'-3"	X			BEARING SIDE FACE BAR 1
X429	2	17'-9"	X			BEARING SIDE FACE BAR 2
X1030	63	16'-8"				TRANSVERSE FOOTING HORIZONTAL BAR
X1031	35	31'-0"				LONGITUDINAL FOOTING HORIZONTAL BAR
X634	38	16'-8"				TOP TRANSVERSE FOOTING HORIZONTAL BAR
X635	21	31'-0"				TOP LONGITUDINAL FOOTING HORIZONTAL BAR
X636	12	14'-1"	X	X		MIDDLE SHAFT CURVED BAR AT THE CURVED CONCRETE



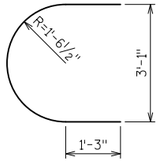
MARK	A	B
P400, X400	2'-9"	3'-7"
P407, X407	2'-7"	3'-7"
P1105, X1105	2'-0"	46'-7"
P1124, X1124	2'-0"	45'-7"

P400, P407, P1105 & P1124
X400, X407, X1105 & X1124

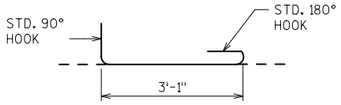


MARK	A	B
P402, X402	3'-7"	3'-7"
P403, X403	3'-9"	3'-7"
P510, X510	8'-2"	3'-1"

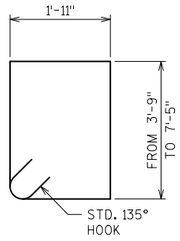
P402, P403 & P510
X402, X403 & X510



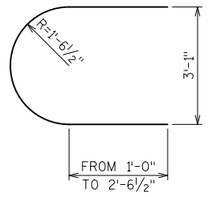
P413, X413



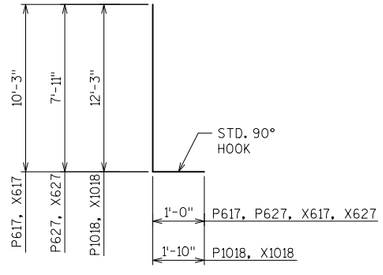
P522, X522



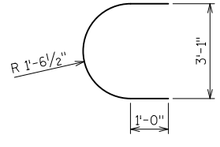
P504, X504



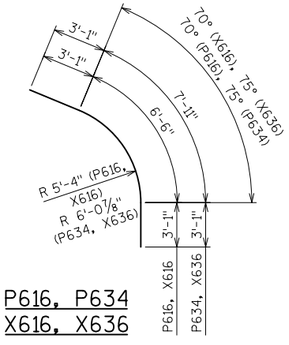
P412, X412



P617, P627 & P1018
X617, X627 & X1018



P411, X411



P616, P634
X616, X636

NOTES

1. DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
2. FOR BARS IN SERIES: LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

PIER 1 - BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
P504	4 SETS OF 37	12'-0" TO 19'-4"
P609	2 SETS OF 8	20'-6" TO 45'-9"
P412	4 SETS OF 4	6'-10" TO 9'-11"

BUNDLE AND TAG EACH SERIES SEPARATELY.

PIER 2 - BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
X504	4 SETS OF 37	12'-0" TO 19'-4"
X609	2 SETS OF 8	20'-6" TO 45'-9"
X412	4 SETS OF 4	6'-10" TO 9'-11"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. MA

PIER 1 & 2
BILL OF BARS

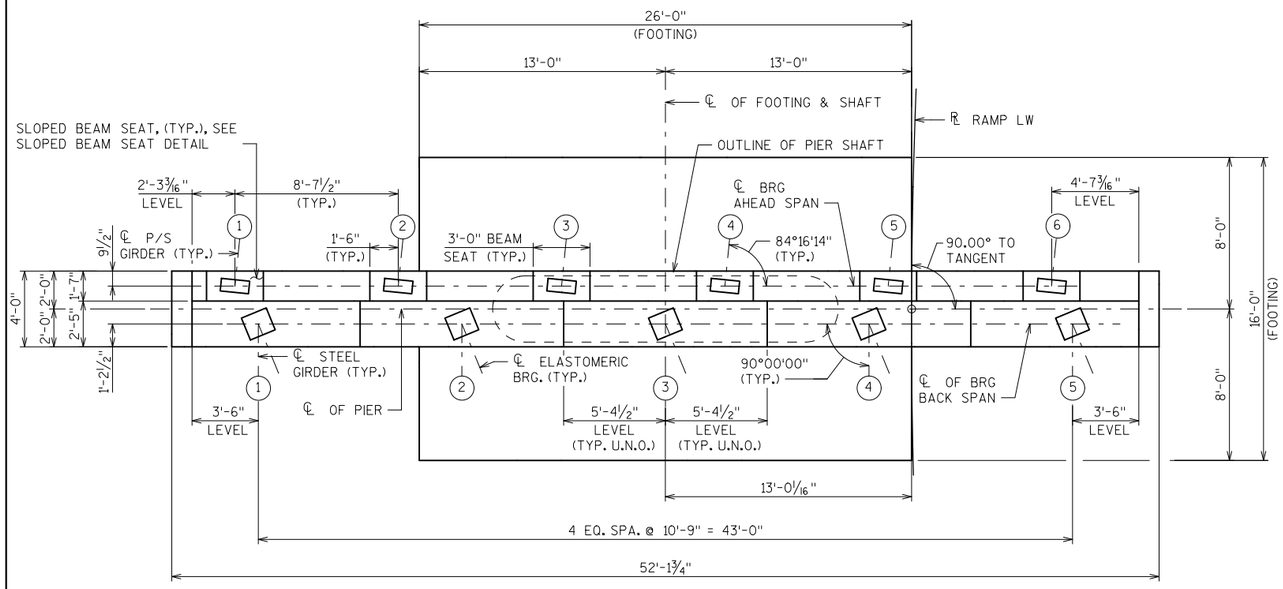
SHEET 12 OF 53
796

8

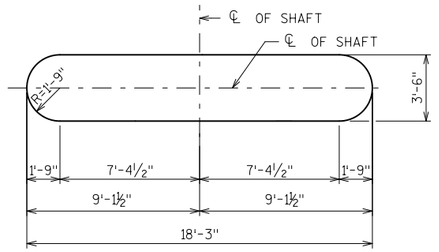
8

STATE PROJECT NUMBER

1300-13-74



PLAN



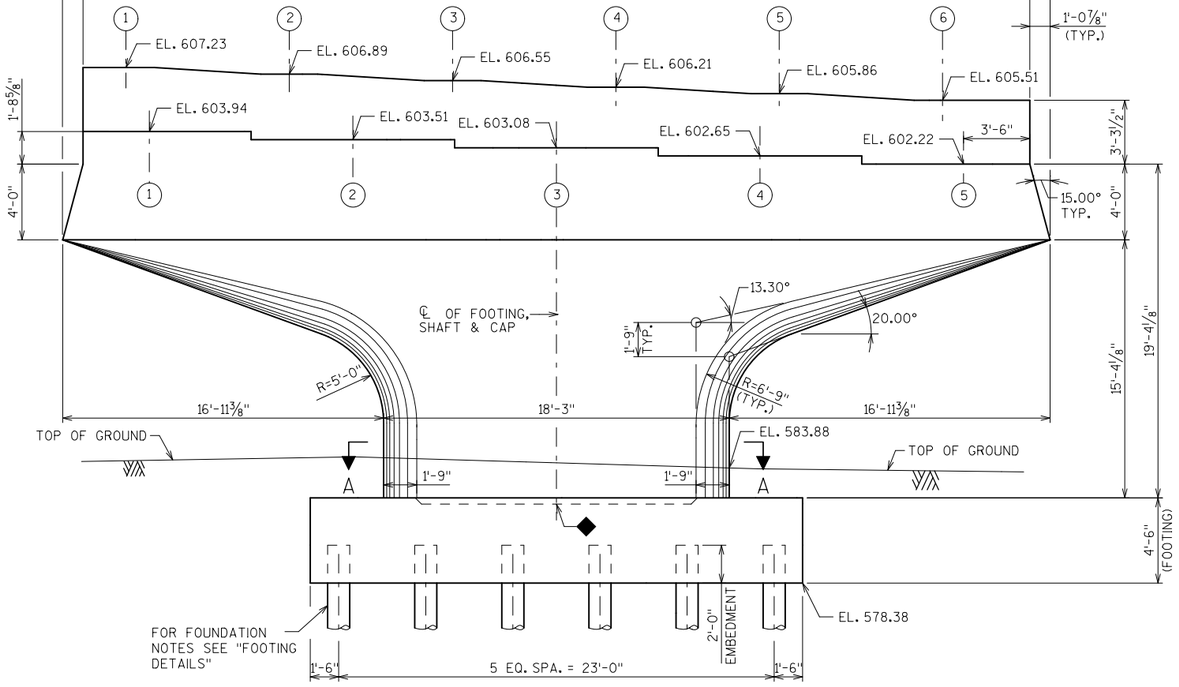
SECTION A-A

NOTES

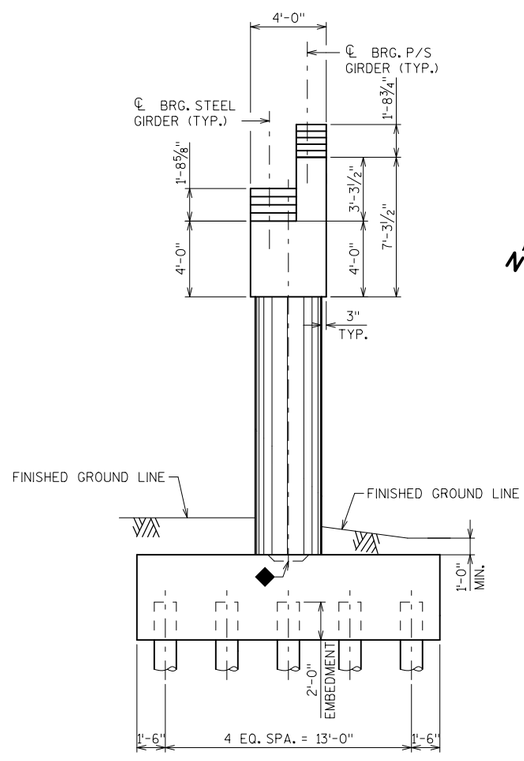
1. FOR BAR STEEL REINFORCEMENT DETAILS, SEE SHEETS "PIER 3 BILL OF BARS".
2. FOR FOOTING LAYOUT DETAILS, SEE SHEET "PIER 3 FOOTING DETAILS".
3. PROVIDE 1/2" NEOPRENE OR EQUAL WASHER AS DESCRIBED IN THE SPECIAL PROVISION TO AVOID CONTACT WITH DISSIMILAR METALS.
4. THE BOTTOM EDGE OF THE PLATE SHALL NOT BE LOWER THAN BOTTOM SURFACE OF THE GIRDER FLANGE.
5. SEE "GIRDER ELEVATION" SHEET 23 FOR LOCATION OF HOLES FOR UNDERDECK LIGHTING FIXTURE.
6. FOR ORIENTATION AND PLACEMENT OF ELASTOMERIC BEARING FOR THE STEEL GIRDERS, SEE SHEET 48.

LEGEND

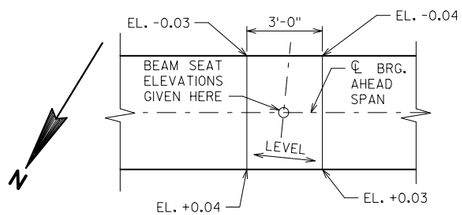
◆ KEYED CONST. JOINT FORMED BY BEVELED 4" x 1'-6" X 14'-3".



ELEVATION
(LOOKING UPSTATION)



END VIEW
(LOOKING EAST)



SLOPED BEAM SEAT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. CWK

PIER 3
PLAN & ELEVATION

SHEET 13 OF 53
797

8

8

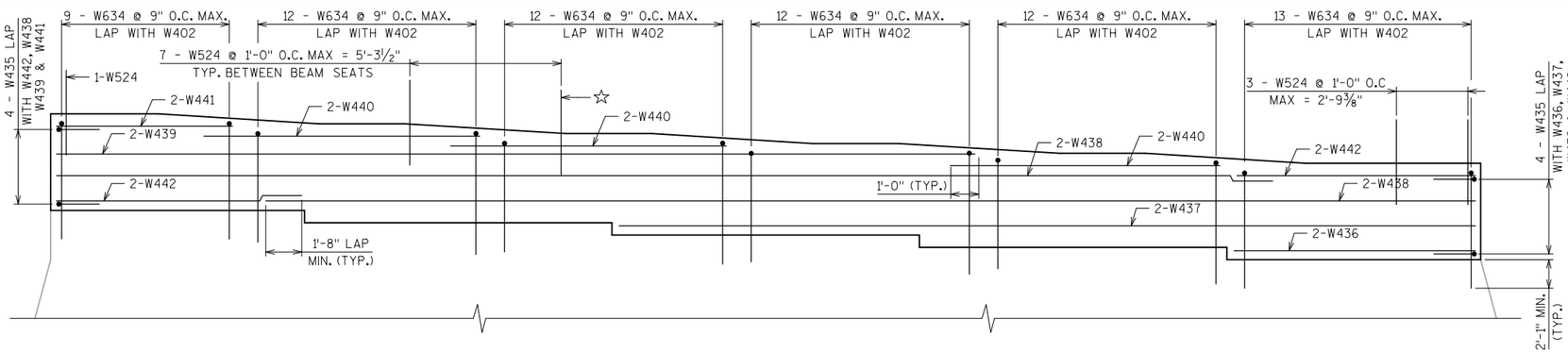
IP_PWP:d0345870\080613_p3.DGN 24-JUL-2015 09:18

STATE PROJECT NUMBER
1300-13-74

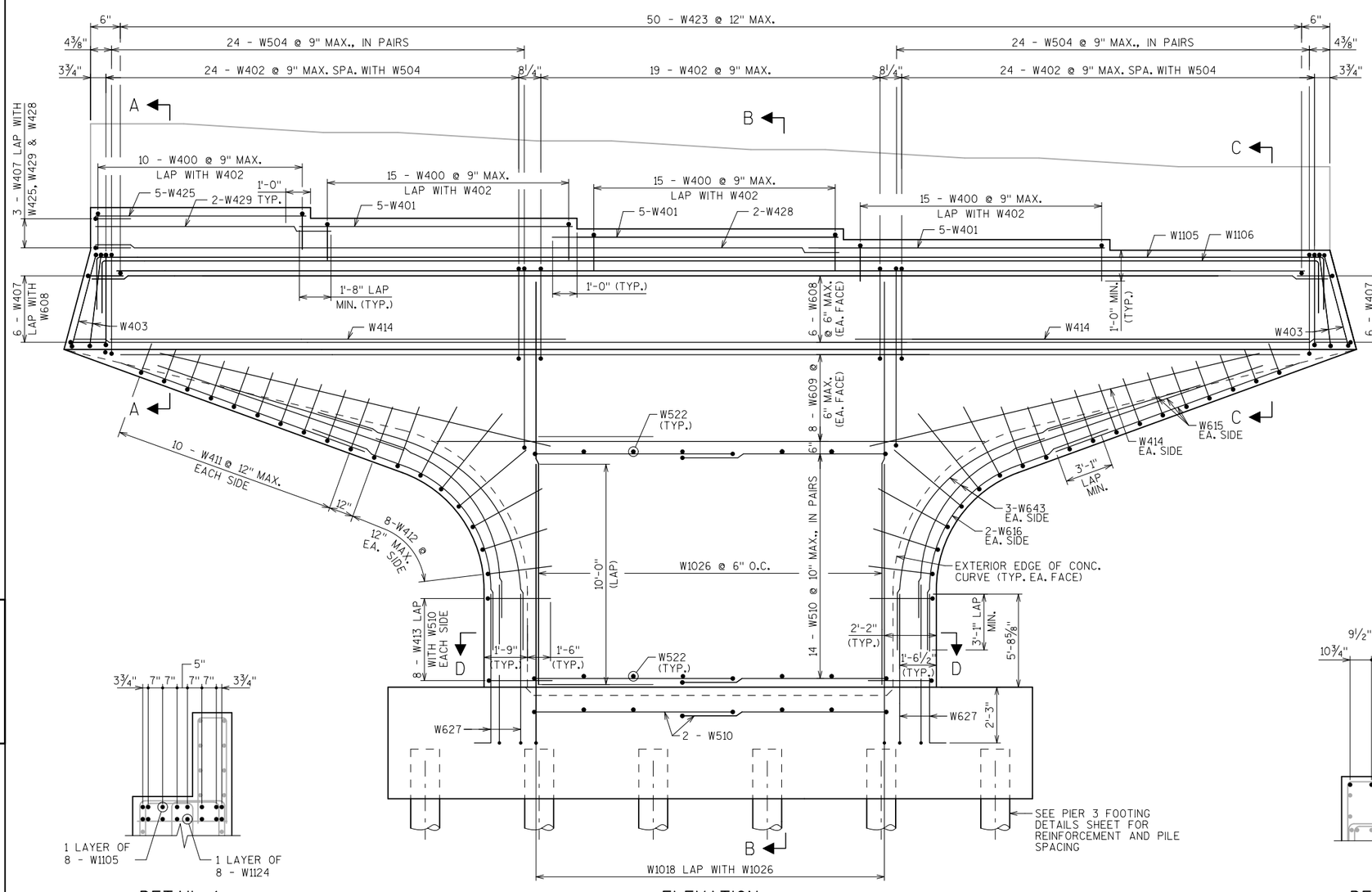
LEGEND

☆ W524 BARS (COATED) AT 1'-0" (2'-0" LONG). THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

◩ KEYED CONST. JOINT FORMED BY BEVELED 2" X 6".

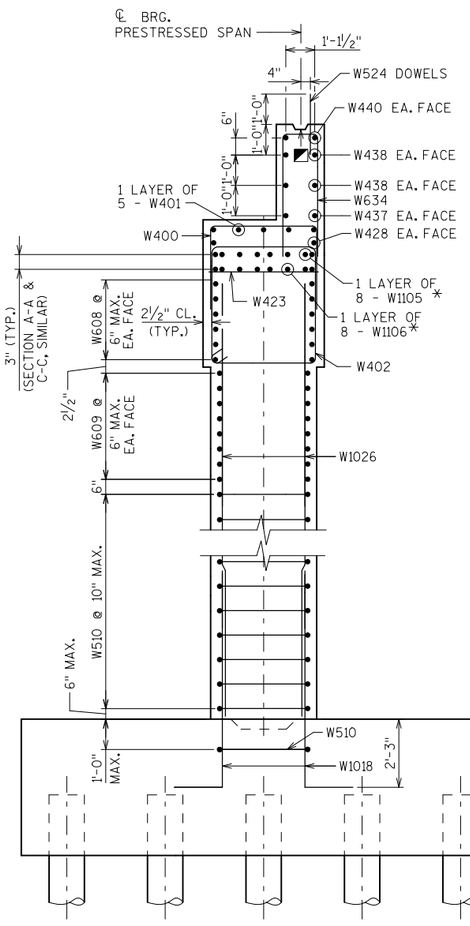


PARTIAL ELEVATION - P/S GIRDER BEARING SEATS



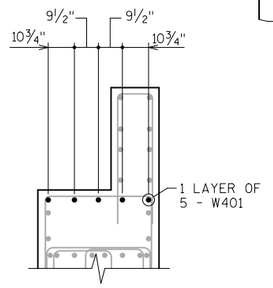
ELEVATION

DETAIL 1



SECTION B-B

* SEE DETAIL 1 FOR SPACING OF W1105 & W1106 BARS



DETAIL 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. CWK

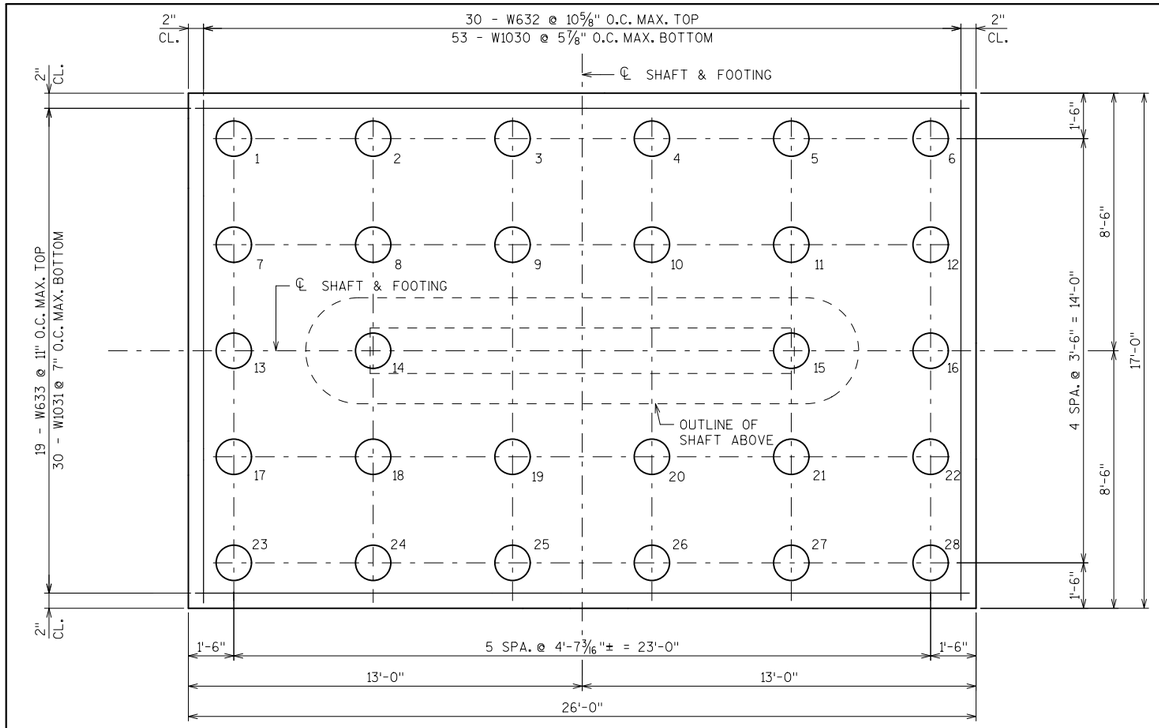
PIER 3 REINFORCING DETAILS

SHEET 14 OF 53
798

8

8

STATE PROJECT NUMBER
1300-13-74



PIER 3 FOOTING PLAN

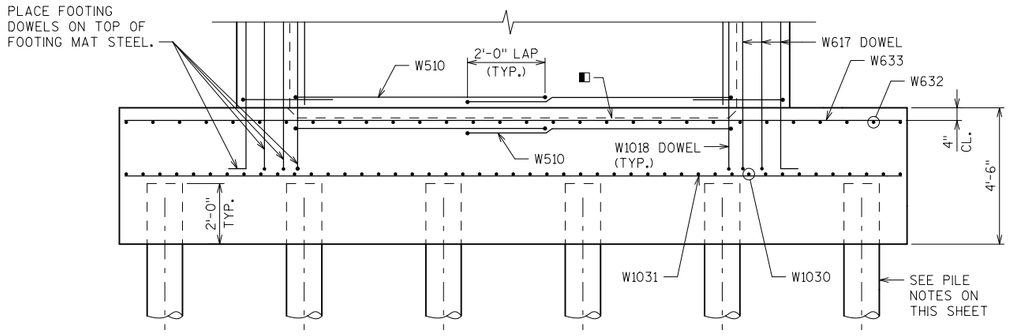
ESTIMATED PILE LENGTH	
LOCATION	ESTIMATED DRIVEN PILE LENGTH (FEET)
PIER 3	110

PILE RESISTANCE			
CAST-IN-PLACE PILE SIZE	SHELL THICKNESS (INCHES) CLOSED-END	FACTORED AXIAL COMPRESSION RESISITANCE (Pr) (TONS)	REQUIRED DRIVING RESISTANCE Rndyn (TONS)
14"	0.375	100	200

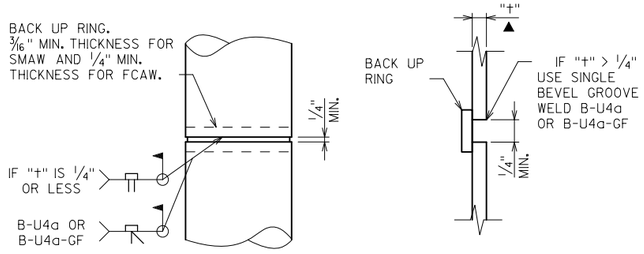
STEEL PIPE PILES SHALL BE IN ACCORDANCE WITH ASTM A252 GRADE 2.

PIER NO.	COMPETENT STIFF TO HARD COHESIVE SOIL EL.
3	484.1

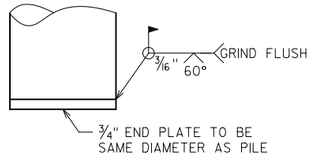
THE ESTIMATED ELEVATIONS OF VERY STIFF TO HARD CLAY PILE SUPPORT LAYER ARE BASED ON THE AVAILABLE BORING INFORMATION. HARD PRE-BORING MAY BE REQUIRED ABOVE OR BELOW THE ESTIMATED COMPETENT LAYER ELEVATIONS BECAUSE OF VARIABILITY IN SOIL PROFILE WITH THE POSSIBILITY OF PRESENCE OF EARLY REFUSAL SUCH AS COBBLES, BOULDERS AND/OR VERY DENSE GRAVEL LAYERS.



PIER 3 FOOTING ELEVATION



PILE SPLICE DETAIL



END PLATE DETAIL FOR CIP PILING IN ARTESIAN CONDITIONS

(ONLY USE FOR ARTESIAN CONDITIONS)

NOTES

1. PIER IS TO BE SUPPORTED ON CIP 14" CLOSED-END PIPE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. SEE TABLE ON THIS SHEET FOR ESTIMATED LENGTHS.
2. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING THE MODIFIED GATES DYNAMIC EQUATION.
3. ESTIMATED NOMINAL LATERAL CAPACITY FOR INDIVIDUAL FIXED PILE HEAD OF BOTH STRONG AND WEAK AXIS IS 11 KIP FOR PIER 3.
4. SEE SHEET "PIER 3 BILL OF BARS" FOR BAR BILL AND BAR BENT DETAILS.
5. SEE SHEET "PIER 3 REINFORCING DETAILS" FOR FOOTING DOWEL BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. CWK

PIER 3
FOOTING DETAILS

SHEET 15 OF 53
799

8

8

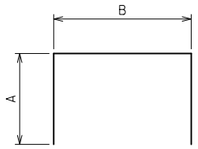
STATE PROJECT NUMBER

1300-13-74

BILL OF BARS - PIER 3

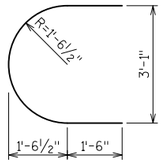
TOTAL COATED = 22,440 LBS
TOTAL UNCOATED = 8,600 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
W400	55	8'-11"	X	X		PIER CAP - BEARING SEAT ADDITIONAL U-BARS
W401	15	11'-7"	X			PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
W402	67	14'-10"	X	X		PIER CAP STIRRUP
W403	4	15'-2"	X	X		PIER CAP STIRRUP
W504	96	16'-7"	X	X	X	PIER CAP STIRRUP
W1105	8	52'-11"	X	X		PIER CAP TOP BARS 1ST TOP LAYER
W1106	8	51'-11"	X	X		PIER CAP TOP BARS 2ND LAYER FROM TOP
W407	15	8'-7"	X	X		PIER CAP - LOWER SEAT SIDE HORIZONTAL U-BARS
W608	12	49'-7"	X			CAP - HORIZONTAL FACE BARS
W609	16	34'-5"	X		X	TOP SHAFT HORIZONTAL SIDE BARS
W510	30	23'-2"	X	X		BOTTOM SHAFT HORIZONTAL TIE BARS
W411	20	1'-10"	X	X		TOP SHAFT HORIZONTAL SIDE U-BARS
W412	16	8'-2"	X	X	X	MIDDLE SHAFT HORIZONTAL SIDE U-BARS
W413	16	7'-10"	X	X		BOTTOM SHAFT HORIZONTAL SIDE U-BARS
W414	8	18'-5"	X			TOP SHAFT HORIZONTAL BAR BETWEEN STIRRUPS
W615	20	8'-6"	X			TOP SHAFT STRAIGHT BAR AT THE CURVED CONCRETE
W616	8	12'-8"	X	X		MIDDLE SHAFT CURVED BAR AT THE CURVED CONCRETE
W1018	68	13'-9"	X	X		FOOTING DOWEL
W522	60	4'-3"	X	X		SHAFT HOOK BARS
W423	50	3'-7"	X			BAR HOLDERS
W524	39	2'-0"	X			PRESTRESS GIRDER DOWELS
W425	5	8'-6"	X			PIER CAP - BEARING SEAT ADDITIONAL HORIZONTAL BAR
W1026	68	17'-1"	X			SHAFT VERTICAL BAR (PIER 3)
W627	20	8'-10"	X	X		BOTTOM SHAFT DOWEL BAR AT THE CURVED CONCRETE (PIER 3)
W428	2	31'-0"	X			BEARING SIDE FACE BAR 1
W429	2	9'-6"	X			BEARING SIDE FACE BAR 2
W1030	53	16'-8"				TRANSVERSE FOOTING HORIZONTAL BAR (PIER 3)
W1031	30	25'-8"				LONGITUDINAL FOOTING HORIZONTAL BAR (PIER 3)
W632	30	16'-8"				TOP TRANSVERSE FOOTING HORIZONTAL BAR (PIER 3)
W633	19	25'-8"				TOP LONGITUDINAL FOOTING HORIZONTAL BAR (PIER 3)
W634	70	14'-9"	X	X		PIER CAP - HIGHER BEARING SEAT ADDITIONAL U-BARS
W435	8	2'-11"	X	X		PIER CAP - HIGHER BEARING SIDE HORIZONTAL U-BARS
W436	2	8'-6"	X			PIER CAP - HIGHER BEARING SEAT ADDITIONAL HORIZONTAL BAR
W437	2	30'-0"	X			PIER CAP - HIGHER BEARING SEAT ADDITIONAL HORIZONTAL BAR
W438	4	40'-0"	X			PIER CAP - HIGHER BEARING SEAT ADDITIONAL HORIZONTAL BAR
W439	2	32'-0"	X			PIER CAP - HIGHER BEARING SEAT ADDITIONAL HORIZONTAL BAR
W440	6	9'-5"	X			PIER CAP - HIGHER BEARING SEAT ADDITIONAL HORIZONTAL BAR
W441	2	6'-2"	X			PIER CAP - HIGHER BEARING SEAT ADDITIONAL HORIZONTAL BAR
W442	4	11'-5"	X			PIER CAP - HIGHER BEARING SEAT ADDITIONAL HORIZONTAL BAR
W643	12	14'-1"	X	X		MIDDLE SHAFT CURVED BAR AT THE CURVED CONCRETE

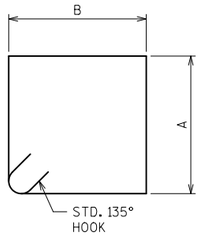


W400, W407, W1105 & W1106
W634, W435

MARK	A	B
W400	2'-9"	3'-7"
W407	2'-7"	3'-7"
W1105	2'-0"	49'-7"
W1106	2'-0"	48'-7"
W634	7'-0"	1'-3"
W435	1'-0"	0'-10"

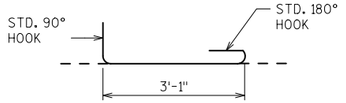


W413

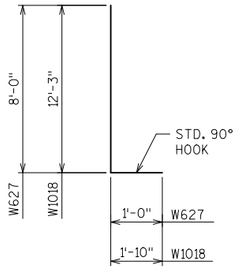


W402, W403 & W510

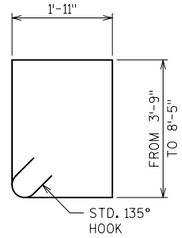
MARK	A	B
W402	3'-7"	3'-7"
W403	3'-9"	3'-7"
W510	8'-2"	3'-1"



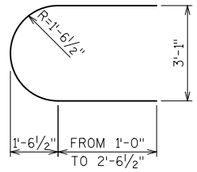
W522



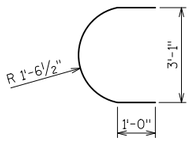
W627 & W1018



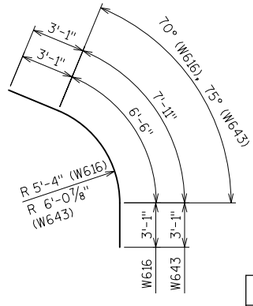
W504



W412



W411



W616, W643

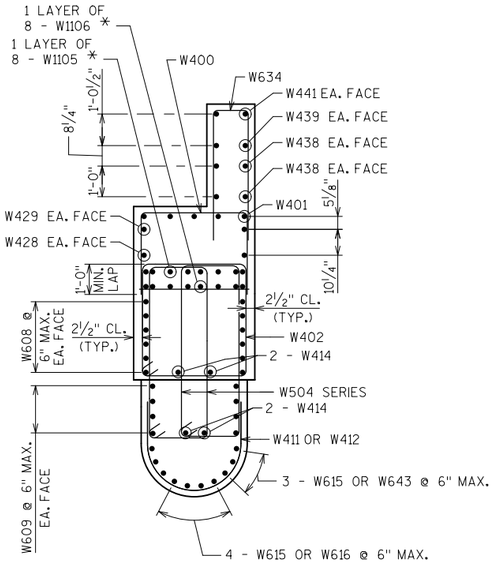
NOTES

1. DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
2. FOR BARS IN SERIES: LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.
3. FOR SECTION CUTS OF A-A, C-C AND D-D, SEE SHEET 13 "PIER 3 REINFORCING DETAILS".
4. FOR DETAIL 1 & DETAIL 2, SEE SHEET 13 "PIER 3 REINFORCING DETAILS".

PIER 3 - BAR SERIES TABLE

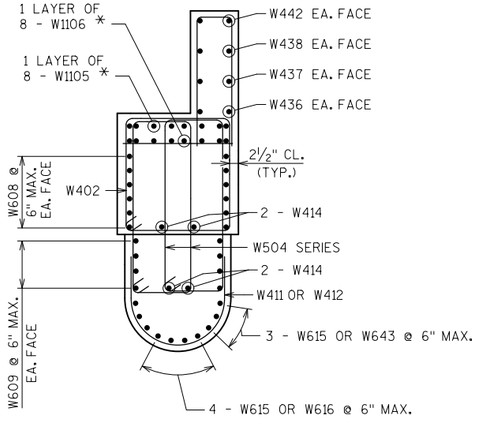
MARK	NO. REQ'D.	LENGTH
W504	4 SETS OF 24	11'-11" TO 21'-3"
W609	2 SETS OF 8	19'-10" TO 49'-0"
W412	4 SETS OF 4	6'-5" TP 9'-11"

BUNDLE AND TAG EACH SERIES SEPARATELY.



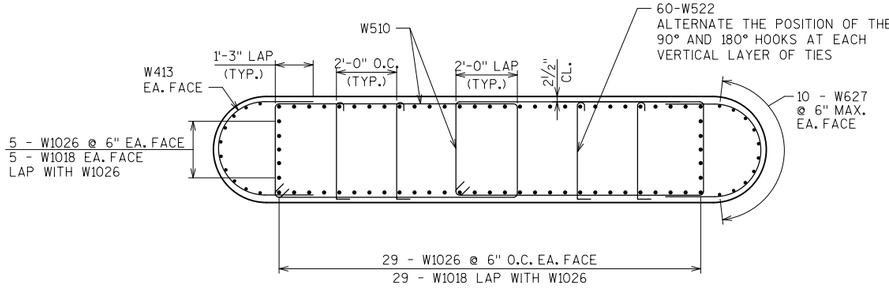
SECTION A-A

* SEE DETAIL 1 FOR SPACING OF W1105 & W1106 BARS & SEE DETAIL 2 FOR W401 SPACING



SECTION C-C

* SEE DETAIL 2 FOR W401 SPACING



SECTION D-D

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. CWK

PIER 3
BILL OF BARS

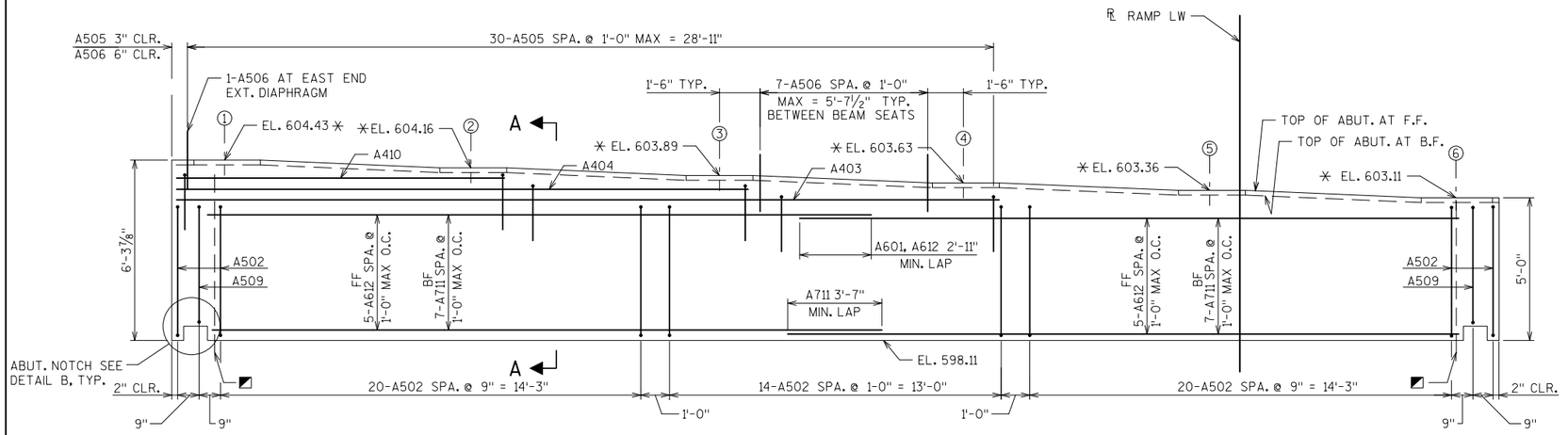
SHEET 16 OF 53
800

8

8

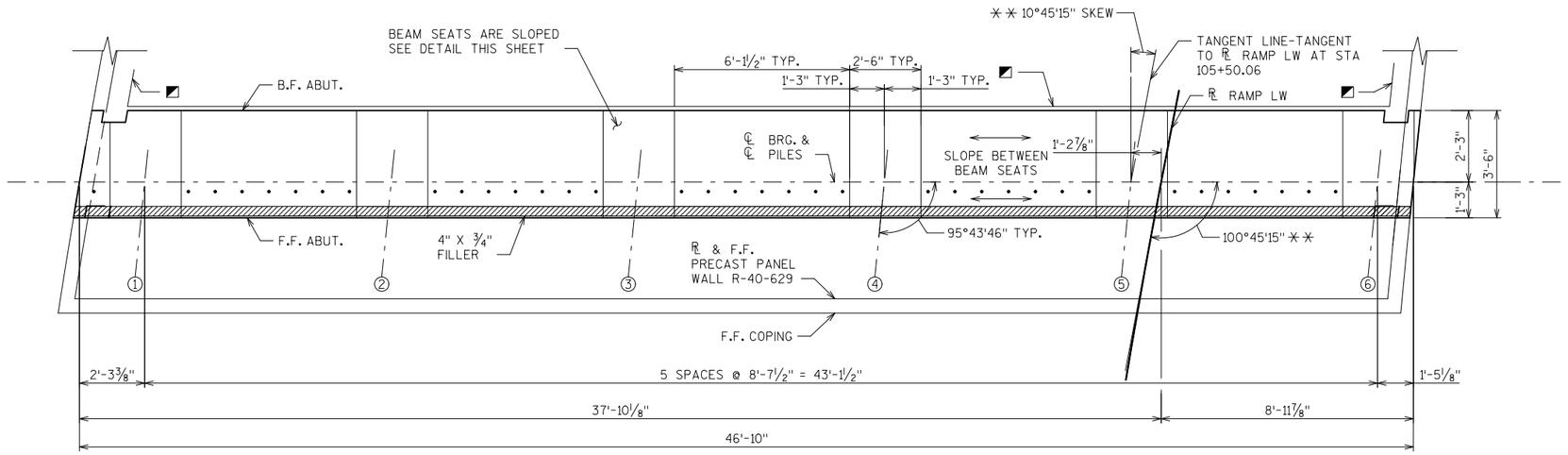
STATE PROJECT NUMBER

1300-13-74

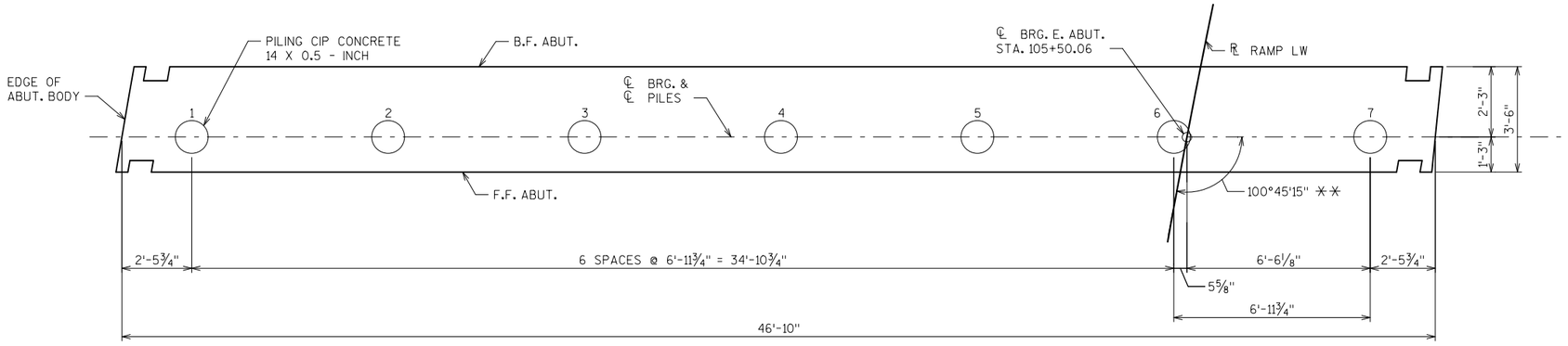


ELEVATION

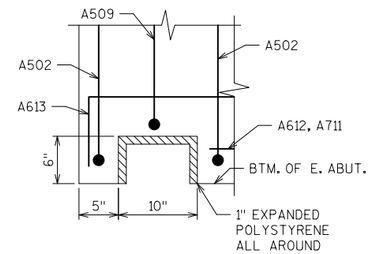
(LOOKING SOUTHEAST)



PLAN

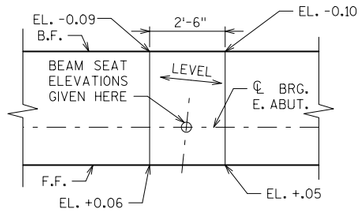


PILE PLAN



DETAIL B

WALL PANEL NOTCH (TYP.)



SLOPED BEAM SEAT DETAIL

LEGEND

✳ ELEVATIONS ARE GIVEN AT THE TOP OF CONCRETE AT THE INTERSECTION OF THE ℄ GIRDER AND ℄ BRG. SEE SLOPED BEAM SEAT DETAIL.

✳✳ ANGLE IS MEASURED BETWEEN THE ℄ BRG. E. ABUT. AND THE TANGENT OF ℄ RAMP LW AT THE ℄ BRG. E. ABUT.

(#) GIRDER NUMBER.

◩ 18" RUBBERIZED MEBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

NOTES

1. ABUTMENT TO BE SUPPORTED ON 14 X 0.5 - INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 115' LONG.
2. SEE SHEET 18 FOR SECTION A-A.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY TJN | PLANS CK'D. MSC

EAST ABUTMENT

SHEET 17 OF 53

801

8

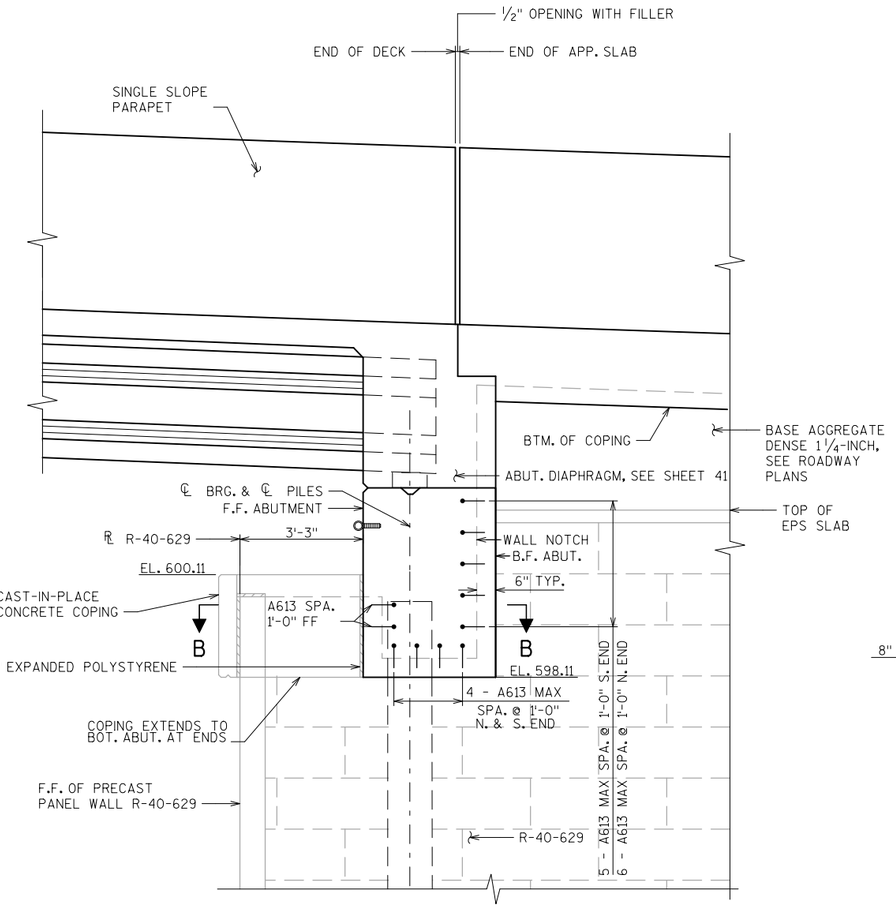
8

STATE PROJECT NUMBER
1300-13-74

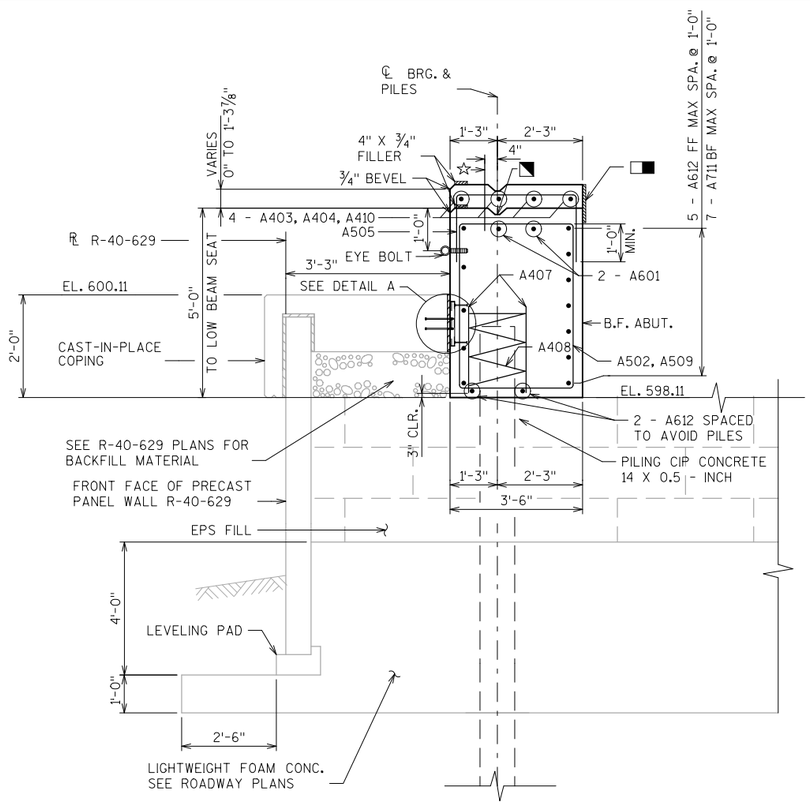
BILL OF BARS

TOTAL UNCOATED = 3,020 LBS

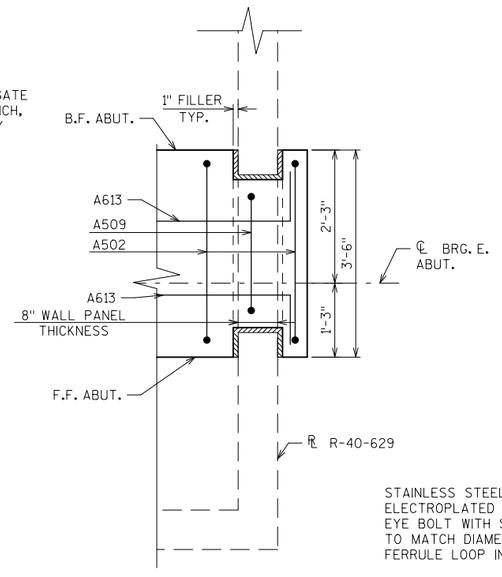
BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
T901	0	5'-0"		X	X		CONC. ABUT. DIAPH. TO APPROACH SLAB
A601	4	24'-9"					ABUT. - BODY - HORIZ. - TOP
A502	56	15'-11"			X		ABUT. - BODY - STIRRUP
A403	4	29'-0"					ABUT. - STEP - HORIZ.
A404	4	20'-6"					ABUT. - STEP - HORIZ.
A505	30	7'-7"			X		ABUT. - STEP - VERT.
A506	36	2'-0"					ABUT. - DOWEL
A407	14	2'-3"					ABUT. - PILE
A408	7	28'-0"			X		ABUT. - PILE - SPIRAL
A509	2	12'-3"			X		ABUT. - BODY - STIRRUP AT WALL
A410	4	11'-5"					ABUT. - STEP - HORIZ.
A711	14	23'-9"					ABUT. - BODY - HORIZ. - B.F.
A612	14	23'-5"					ABUT. - BODY - HORIZ. - F.F. & BOTTOM
A613	23	3'-3"			X		ABUT. - HORIZ. - WALL



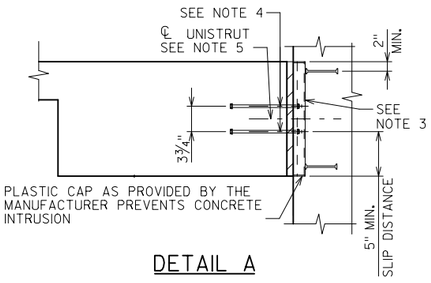
ELEVATION AT ABUTMENT



SECTION A-A



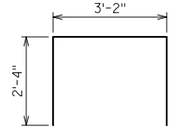
SECTION B-B



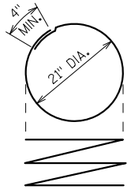
DETAIL A



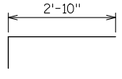
A502, A509



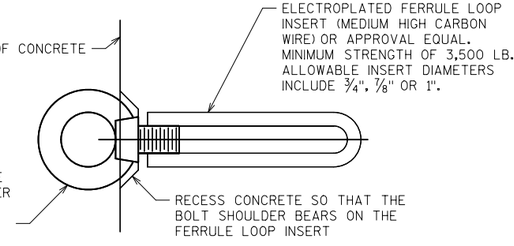
A505



A408



A613



EYE BOLT DETAIL

COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

NOTES

1. ALL BENDS AND BAR EXTENSIONS ARE STANDARD AASHTO DIMENSIONS UNLESS OTHERWISE NOTED.
2. FOR APPROACH SLAB, SEE SHEET 19 & 20.
3. STAINLESS STEEL UNISTRUT P3772-12 (OR APPROVED EQUIVALENT) CHANNEL WITH (2) P1023 STAINLESS STEEL NUTS WITH SPRINGS, SPACED AT 2'-0".
4. (2) 3/4" DIA. x 10" LONG 18-8 ASTM A304 STAINLESS STEEL BOLTS WITH 2" x 2" x 1/4" PLATE STAINLESS STEEL WASHERS.
5. DOUBLE 3/4" 18-8 ASTM A304 STAINLESS STEEL NUTS WITH TEFLON COATED WASHER. FINGER TIGHTEN FIRST NUT AND HOLD IN POSITION UNTIL SECOND IS TIGHTENED TO 75 FT-LBS TORQUE. BOLT ASSEMBLY SHOULD SLIDE IN UNISTRUT AFTER TIGHTENING SECOND NUT (LOCK-IN).

LEGEND

- ◨ 18" RUBBERIZED MEMBRANE WATERPROOFING, SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE
- ◥ KEYED CONST. JOINT FORMED BY BEVELED 2" X 6".
- ◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ☆ A506 BARS (COATED) AT 1'-0" (2'-0" LONG). THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

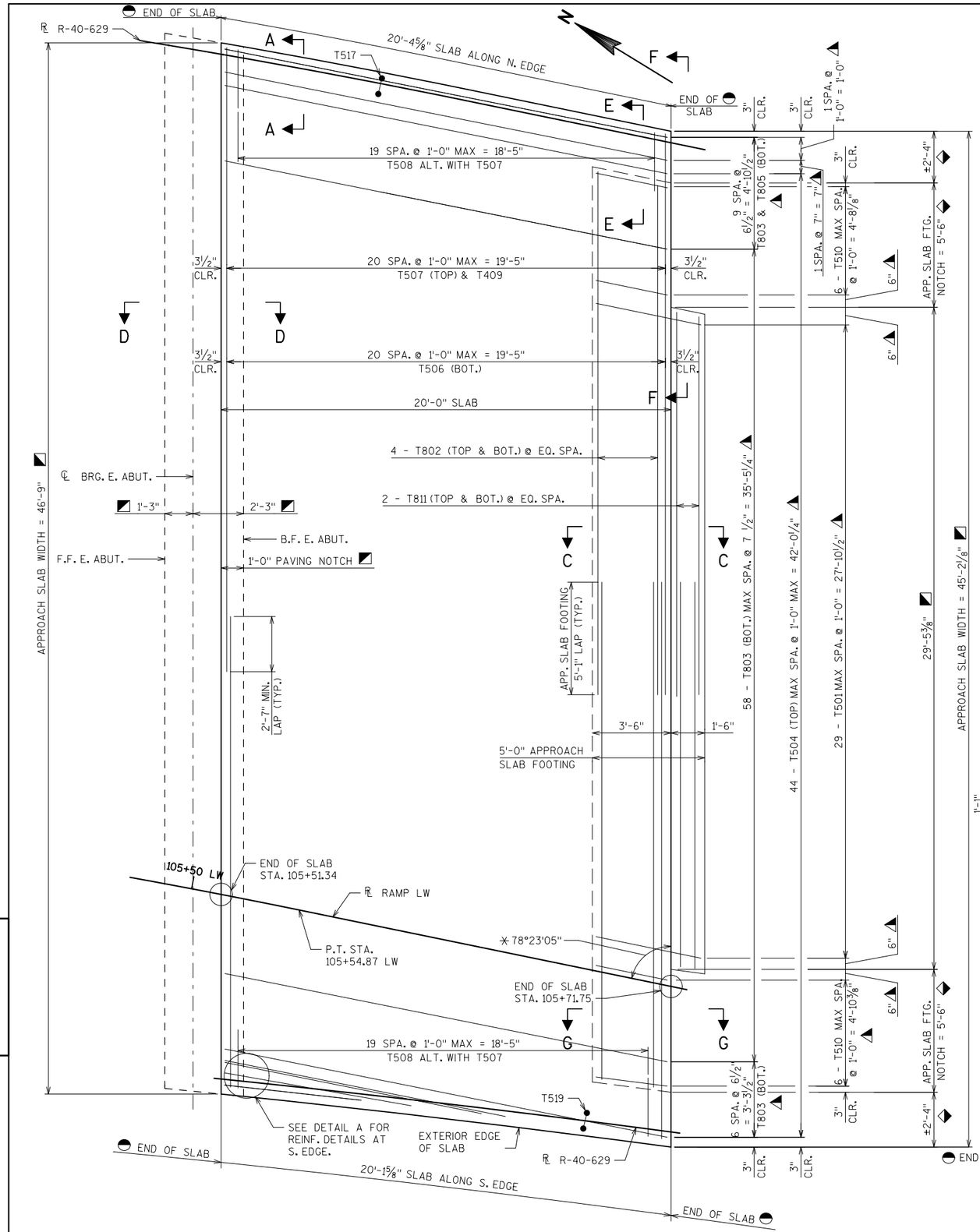
DRAWN BY TJN | PLANS CK'D. MSC

EAST ABUTMENT DETAILS

SHEET 18 OF 53
802

8

8



LEGEND

- MEASURED NORMAL TO ABUTMENT.
- END OF SLAB LINE IS PARALLEL TO ℄ BRG. E. ABUT.
- MEASURED NORMAL TO ℄ RAMP LW AT STA. 105+53.07 LW.
- ℀ MEASURED BETWEEN THE END OF SLAB AND ℄ RAMP LW AT STA. 105+71.75.
- MEASURED NORMAL TO DECK EDGE.

NOTES

1. SEE "APPROACH SLAB DETAILS" SHEET 20 FOR CROSS-SECTIONS A-A, C-C, D-D, E-E, F-F & G-G.
2. SEE SHEET 44 FOR PARAPET LAYOUT.

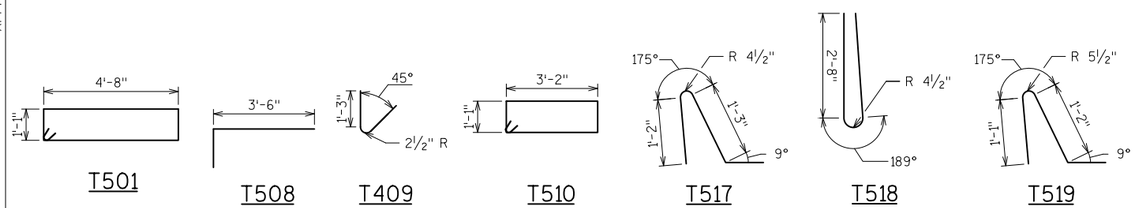
STATE PROJECT NUMBER

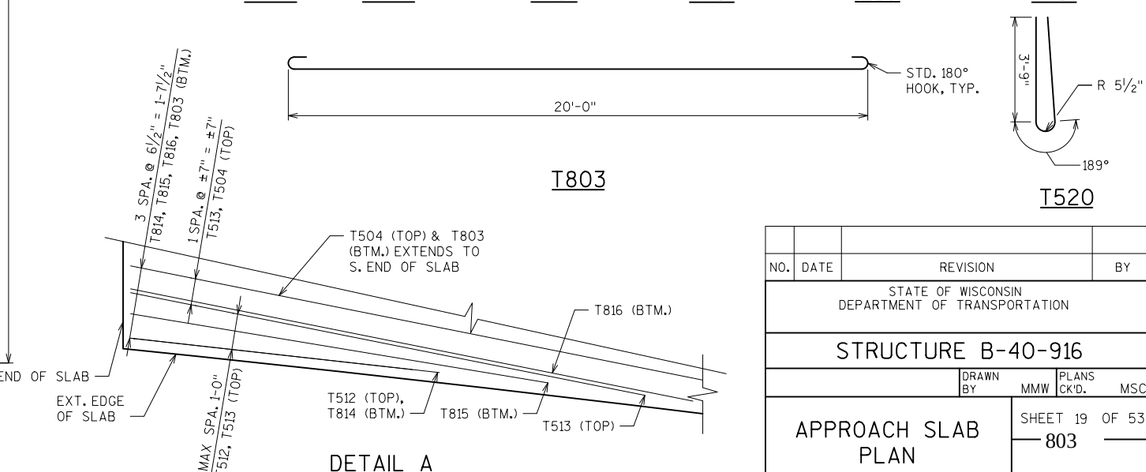
1300-13-74

BILL OF BARS

TOTAL COATED = 10,830 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	LOCATION
T501	29	12'-2"	X		X	APPROACH SLAB FTG. - STIRRUP
T802	16	23'-4"	X			APPROACH SLAB FTG. - TRANS.
T803	70	21'-10"	X		X	APPROACH SLAB - LONG. - BOT.
T504	50	20'-0"	X			APPROACH SLAB - LONG. - TOP
T805	3	20'-0"	X			APPROACH SLAB - LONG. - BOT. - EDGE
T506	42	24'-5"	X			APPROACH SLAB - TRANS. - BOT.
T507	42	24'-5"	X			APPROACH SLAB - TRANS. - TOP
T508	40	4'-3"	X		X	APPROACH SLAB - TRANS. - TOP - WALL
T409	42	3'-0"	X		X	APPROACH SLAB - TRANS. - WALL
T510	12	9'-2"	X		X	APPROACH SLAB FTG. - STIRRUP
T811	8	17'-2"	X			APPROACH SLAB FTG. - TRANS.
T512	1	6'-2"	X			APPROACH SLAB - LONG. - TOP - EDGE
T513	1	11'-8"	X			APPROACH SLAB - LONG. - TOP. - EDGE
T814	1	6'-2"	X			APPROACH SLAB - LONG. - BOT. - EDGE
T815	1	8'-6"	X			APPROACH SLAB - LONG. - BOT. - EDGE
T816	1	12'-9"	X			APPROACH SLAB - LONG. - BOT. - EDGE
T517	32	4'-5"	X		X	APPROACH SLAB - PARAPET 42SS - VERT.
T518	32	6'-8"	X		X	APPROACH SLAB - PARAPET 42SS - VERT.
T519	32	4'-6"	X		X	APPROACH SLAB - PARAPET 56SS - VERT.
T520	32	9'-1"	X		X	APPROACH SLAB - PARAPET 56SS - VERT.
T521	8	20'-1"	X			APPROACH SLAB - PARAPET 42SS - HORIZ.
T522	10	19'-10"	X			APPROACH SLAB - PARAPET 56SS - HORIZ.





NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY: MMW | PLANS CK'D.: MSC

APPROACH SLAB PLAN

SHEET 19 OF 53
803

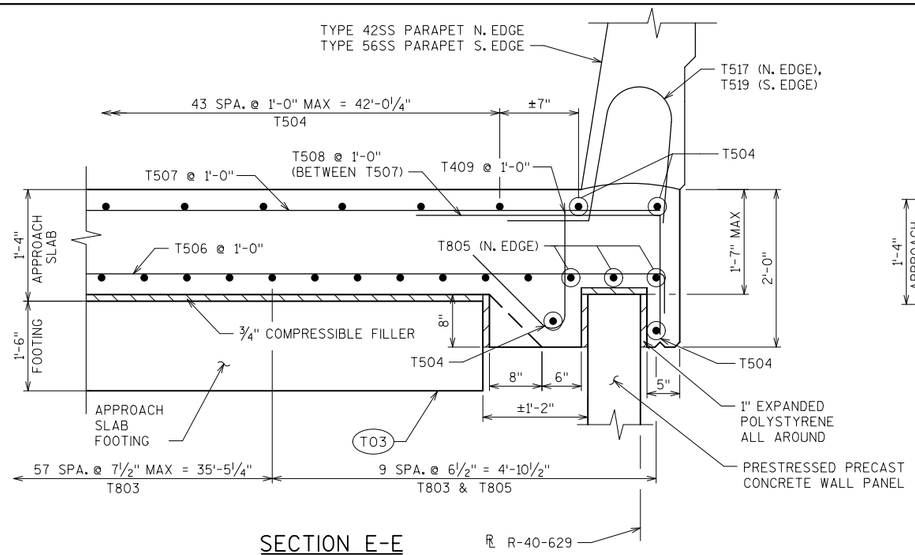
8

8

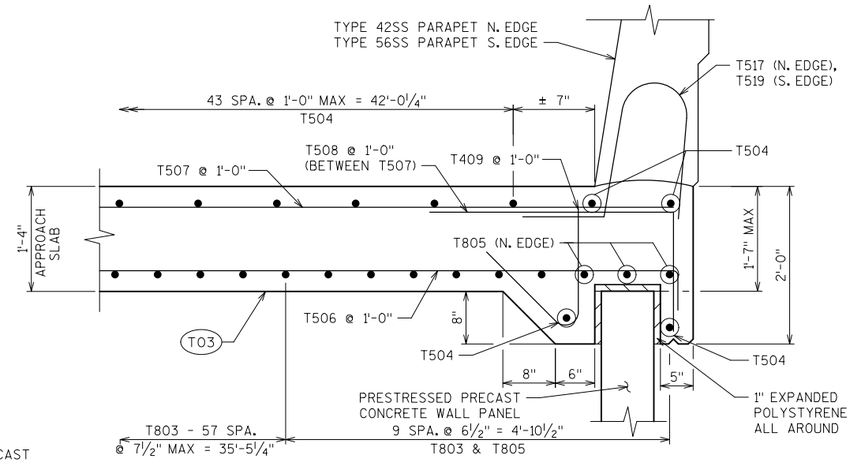
IP_PWP:d0345870\080619_AS.dan.DGN 24-JUL-2015 09:21

STATE PROJECT NUMBER

1300-13-74



SECTION E-E



SECTION A-A

LEGEND

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03 INCH MIN. TOTAL THICKNESS) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03 INCH MIN. TOTAL THICKNESS) OF POLYETHYLENE SHEETS OVER THE ENTIRE SUBGRADE BENEATH.

▣ ROADWAY APPROACH PAVEMENT.

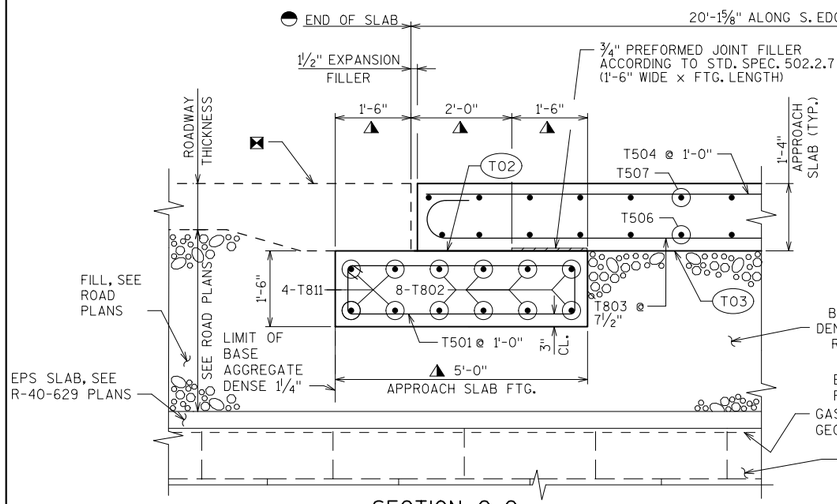
◩ MEASURED NORMAL TO ABUTMENT.

◭ MEASURED NORMAL TO END OF SLAB.

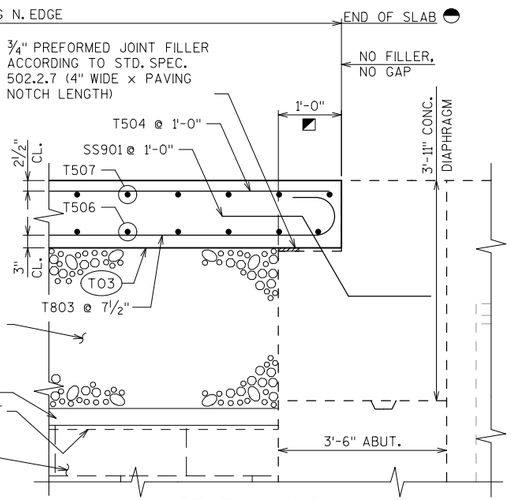
◓ END OF SLAB LINE IS PARALLEL TO ℄ BRG. E. ABUT.

NOTE

1. SEE SHEET 44 FOR PARAPET BAR LAYOUT.

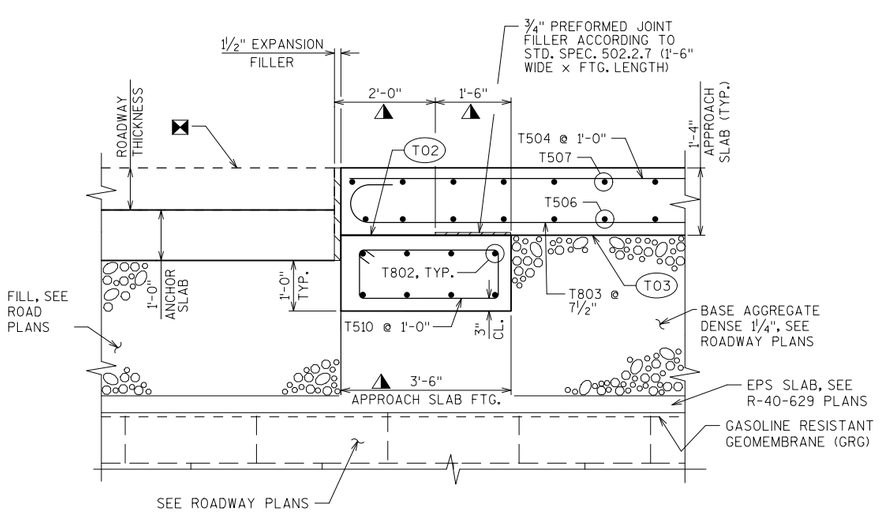


SECTION C-C

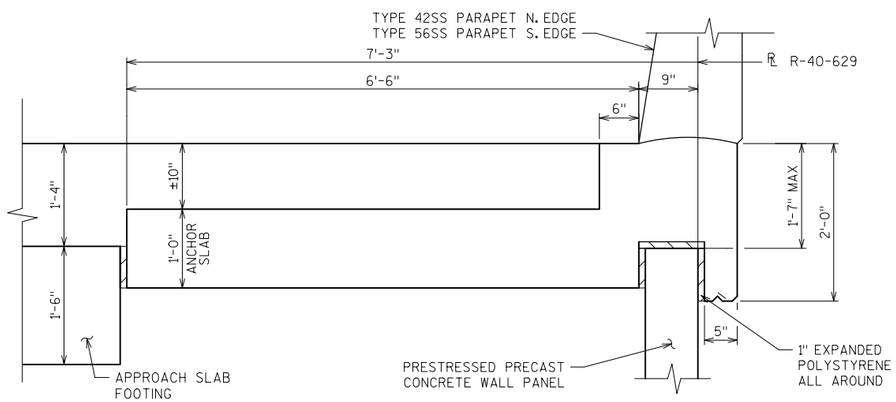


SECTION D-D

SECTION THRU APPROACH SLAB



SECTION G-G



SECTION F-F

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. MSC

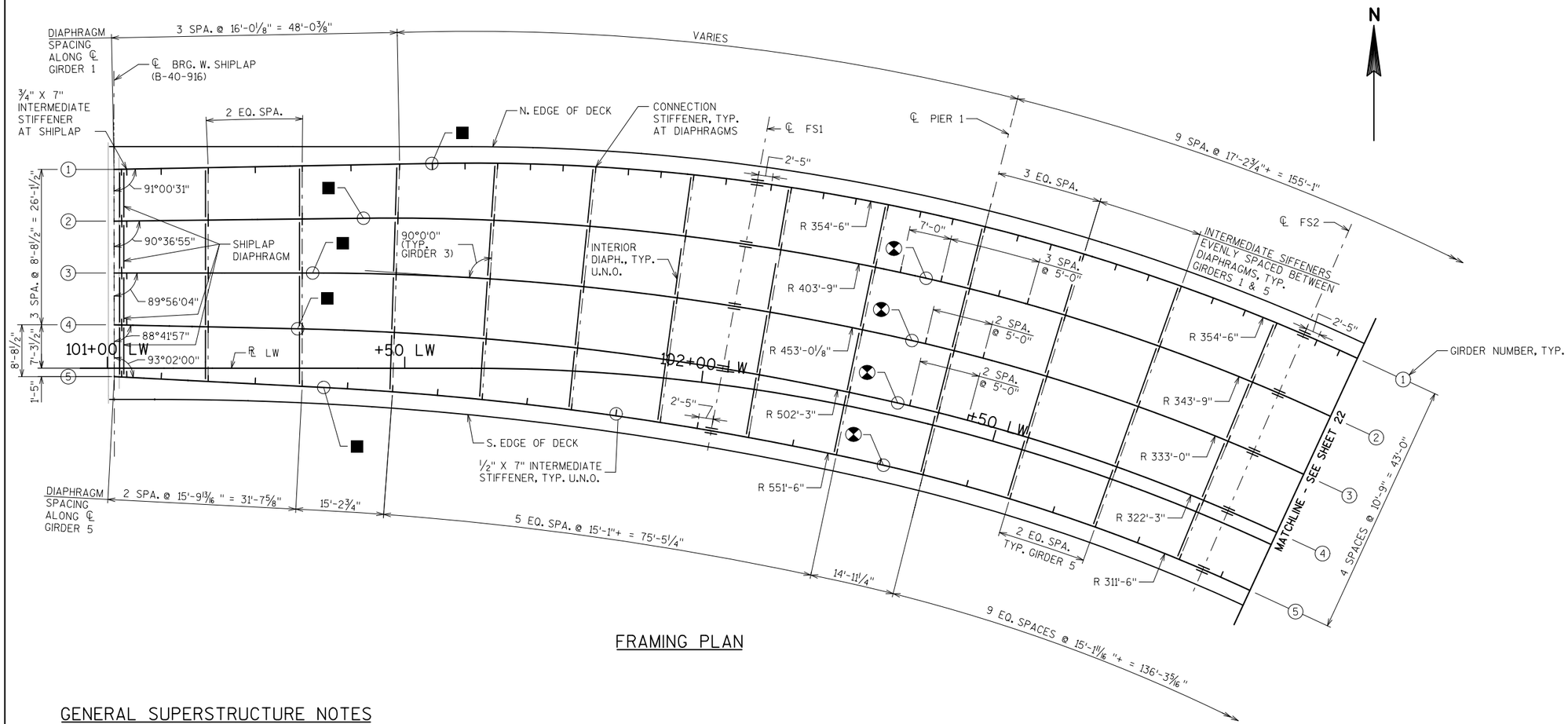
APPROACH SLAB DETAILS

SHEET 20 OF 53
804

8

8

STATE PROJECT NUMBER
1300-13-74



FRAMING PLAN

LEGEND

- ■ GIRDER POINT OF TANGENCY, SEE TABLE.
- ⊠ GIRDER POINT OF COMPOUND CURVATURE, SEE TABLE

GENERAL SUPERSTRUCTURE NOTES

1. STRUCTURAL STEEL FOR FLANGES, WEBS, BEARING STIFFENERS, INTERMEDIATE STIFFENERS, AND DIAPHRAGM CONNECTION PLATES SHALL BE HIGH STRENGTH STRUCTURAL STEEL ASTM A709, GRADE 50 T2.
2. ALL DIAPHRAGMS AND CHANNELS SHALL BE EITHER ASTM A709, GRADE 50 T2 OR ASTM A572, GRADE 50 CONFORMING TO ZONE 2 TOUGHNESS REQUIREMENTS PER WISDOT STANDARD SPECIFICATION 506.2.2.1.
3. SEE GIRDER ELEVATION SHEETS FOR LOCATION OF EACH FIELD SPLICE.
4. ALL STRUCTURAL STEEL SHALL BE PAINTED, SEE THE SPECIAL PROVISIONS.
5. ALL DIMENSIONS ARE MEASURED ALONG A HORIZONTAL PLANE. LONGITUDINAL AND TRANSVERSE GRADE EFFECTS ARE NOT INCLUDED IN DIMENSIONS. THIS NOTE ALSO APPLIES TO ALL DIMENSIONS AND PLATE LENGTHS GIVEN ON THE GIRDER ELEVATION SHEETS.
6. SEE SHEETS 25, 26, AND 27 FOR DIAPHRAGM DETAILS.
7. ALL CONNECTIONS SHALL BE MADE WITH 7/8"ϕ FRICTION TYPE HIGH STRENGTH BOLTS (ASTM A325-X).
8. CAMBER ORDINATES, AS SHOWN ON THE PLANS, ARE CALCULATED TO COMPENSATE FOR ALL DEAD LOAD DEFLECTIONS, EXCLUDING FUTURE WEARING SURFACE, AND FOR THE FINISHED VERTICAL PROFILE. DETAIL DIAPHRAGM AND CROSS-FRAME MEMBERS TO FIT THE CAMBERED, STEEL DEAD LOAD FIT POSITION OF THE GIRDERS.
9. ALL STEEL SHALL BE DETAILED AND FABRICATED FOR 45°F TEMPERATURE.
10. ENSURE THE STABILITY OF ALL COMPONENTS DURING ERECTION UNTIL THE STRUCTURAL STEEL IS IN ITS FINAL POSITION WITH ALL PERMANENT BRACING IN-PLACE. DESIGN AND PROVIDE TEMPORARY BRACES, SHORING, AND ANY OTHER MEANS DEEMED NECESSARY TO ENSURE STABILITY AND PROPER FIT-UP.
11. BEGIN ERECTION STARTING AT PIER 3 AND PROCEED BACK STATION. THE FIELD SECTION AT THE WEST SHIPLAP BEARING SHALL BE ERECTED LAST.
12. THE COST FOR ERECTION AND TEMPORARY BRACING AND SUPPORT OF THE SUPERSTRUCTURE SHALL BE INCLUDED IN "STRUCTURAL STEEL HS."

GIRDER CHANGE OF HORIZONTAL CURVATURE LOCATION

	■	⊠
GIRDER 1	101+54.55 LW	-----
GIRDER 2	101+43.05 LW	102+32.99 LW
GIRDER 3	101+34.51 LW	102+32.99 LW
GIRDER 4	101+31.99 LW	102+32.99 LW
GIRDER 5	101+36.37 LW	102+32.99 LW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. MJN

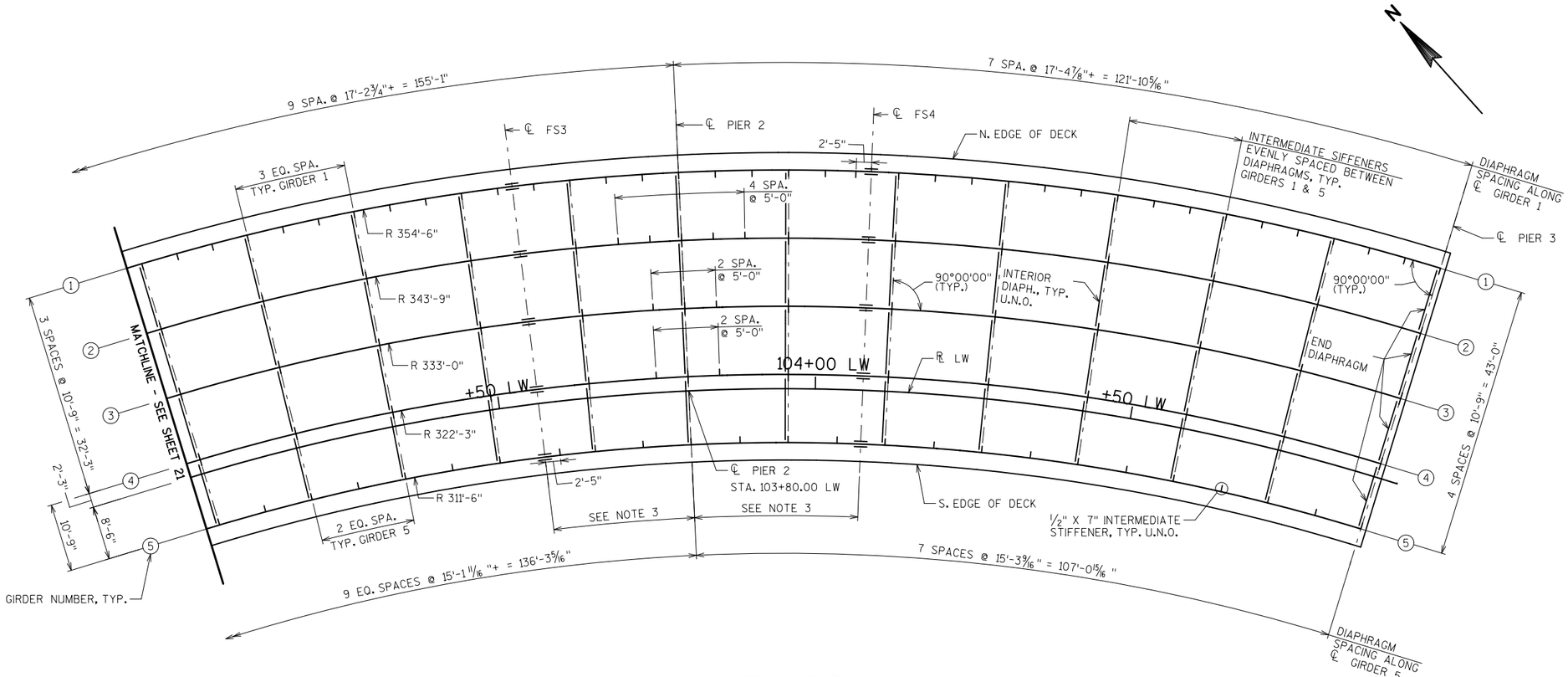
FRAMING PLAN (1 OF 2)

SHEET 21 OF 53
805

8

8

STATE PROJECT NUMBER
1300-13-74



FRAMING PLAN

NOTES

FOR FRAMING PLAN NOTES, SEE SHEET 21.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. MJN

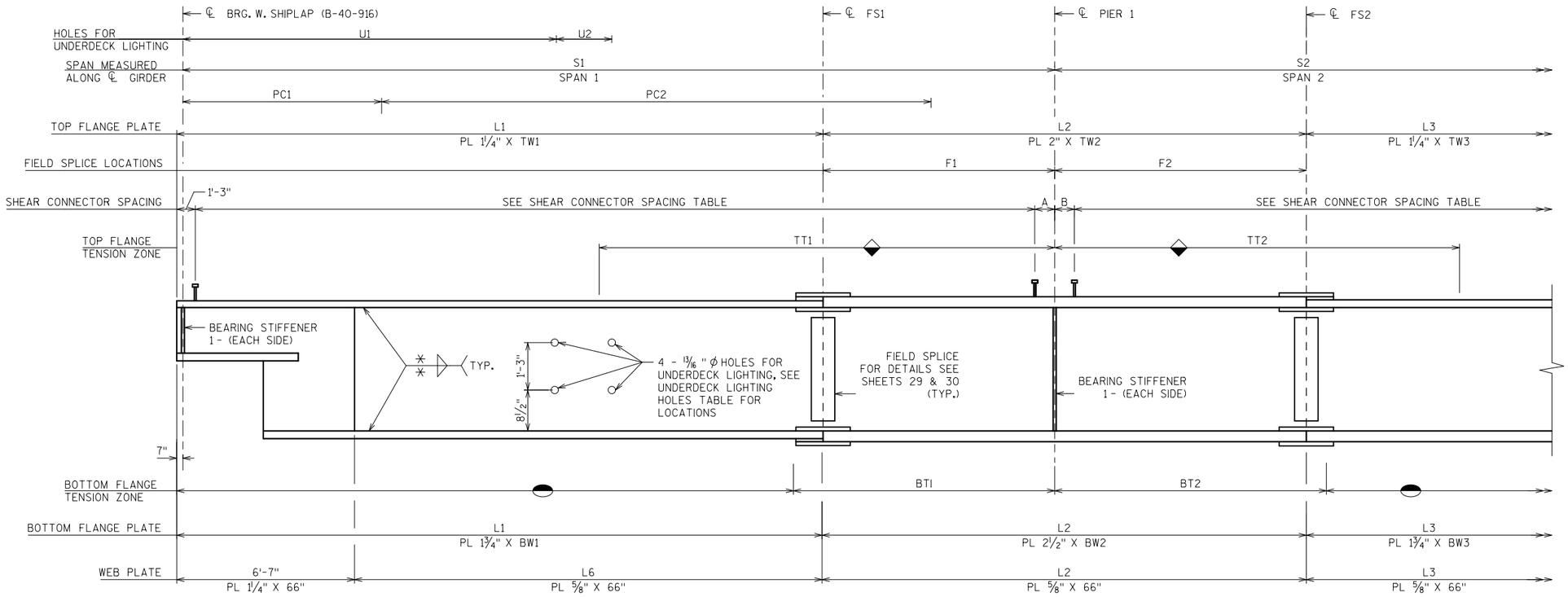
FRAMING PLAN (2 OF 2)

SHEET 22 OF 53
806

IP_PWP:d0345870\080622_fp.dgn 24-JUL-2015 09:22

STATE PROJECT NUMBER

1300-13-74



GIRDER ELEVATION

BEARING STIFFENER SUMMARY TABLE

GIRDER	W. SHIPLAP	PIER 1	PIER 2	PIER 3
1	PL 10" x 7/8"	PL 11 5/8" x 1 1/8"	PL 9 5/8" x 1 1/8"	PL 8 5/8" x 3/4"
2	PL 10" x 7/8"	PL 9 5/8" x 1 1/8"	PL 8 5/8" x 1 1/8"	PL 8 5/8" x 3/4"
3	PL 10" x 7/8"	PL 7 5/8" x 1"	PL 7 5/8" x 7/8"	PL 7 5/8" x 3/4"
4	PL 10" x 7/8"	PL 7 5/8" x 1"	PL 7 5/8" x 7/8"	PL 7 5/8" x 3/4"
5	PL 10" x 7/8"	PL 7 5/8" x 1"	PL 7 5/8" x 7/8"	PL 7 5/8" x 3/4"

UNDERDECK LIGHTING HOLES

GIRDER	U1	U2
2	70'-7 ¾"	6'-5 5/8"
4	70'-1"	6'-1 1/8"

FIELD SPLICE DIMENSIONS

GIRDER	F1	F2	F3	F4
1	39'-0 3/4"	43'-5 1/16"	26'-4 3/8"	30'-5 9/16"
2	38'-4 5/8"	42'-1 1/4"	25'-6 3/4"	29'-6 1/2"
3	37'-8 1/2"	40'-9 1/2"	24'-9 3/16"	28'-7 3/8"
4	37'-0 7/16"	39'-5 11/16"	23'-11 9/16"	27'-8 5/16"
5	36'-4 7/16"	38'-1 7/8"	23'-2"	26'-9 1/4"

PLATE LENGTHS

GIRDER	L1	L2	L3	L4	L5	L6
1	108'-11 1/16"	82'-5 13/16"	85'-3 9/16"	56'-9 15/16"	92'-1 3/4"	102'-4 1/16"
2	107'-0 9/16"	80'-5 7/8"	82'-8 1/2"	55'-1 1/4"	89'-4 1/2"	100'-5 9/16"
3	105'-2 1/8"	78'-6"	80'-1 1/2"	53'-4 5/8"	86'-7 3/16"	98'-7 1/8"
4	103'-3 11/16"	76'-6 1/8"	77'-6 7/16"	51'-7 15/16"	83'-9 15/16"	96'-8 11/16"
5	101'-5 1/2"	74'-6 5/16"	74'-11 7/16"	49'-11 1/4"	81'-0 11/16"	94'-10 1/2"

SPAN LENGTHS (BRG. TO BRG.)

GIRDER	S1	S2	S3	TOTAL
1	147'-4 13/16"	155'-1"	121'-10 5/16"	424'-4 1/8"
2	144'-10 3/16"	150'-4 9/16"	118'-1 15/16"	413'-4 3/4"
3	142'-3 5/8"	145'-8 3/16"	114'-5 5/8"	402'-5 1/2"
4	139'-9 1/8"	140'-11 3/4"	110'-9 1/4"	391'-6 1/8"
5	137'-2 15/16"	136'-3 5/16"	107'-0 15/16"	380'-7 3/16"

	TOP FLANGE TENSION ZONE				BOTTOM FLANGE COMPRESSION ZONE			
GIRDER	TT1	TT2	TT3	TT4	BT1	BT2	BT3	BT4
1	61'	83'	83'	64'	17'	24'	15'	15'
2	53'	75'	57'	54'	17'	22'	14'	14'
3	48'	63'	49'	48'	17'	21'	14'	13'
4	49'	61'	48'	48'	17'	19'	13'	12'
5	52'	63'	51'	51'	18'	17'	13'	11'

GIRDER PC POINTS

GIRDER	PC1	PC2
1	53'-5 7/16"	-
2	41'-11 1/4"	95'-4 7/16"
3	33'-4 1/2"	101'-7 1/2"
4	30'-10 1/4"	101'-10 1/16"
5	35'-3 1/8"	95'-1 13/16"

TOP FLANGE WIDTH

GIRDER	TW1	TW2	TW3	TW4	TW5
1	18	24	18	20	18
2	18	20	18	18	18
3	16	16	16	16	16
4	16	16	16	16	16
5	16	16	16	16	16

BOTTOM FLANGE WIDTH

GIRDER	BW1	BW2	BW3	BW4	BW5
1	22	24	18	22	18
2	18	20	18	20	18
3	16	16	16	16	16
4	16	16	16	16	16
5	16	16	16	16	16

WELDED STUD SHEAR CONNECTORS 7/8" X 6" SPACING TABLE

GIRDER	WEST SHIPLAP	SPAN 1			A	PIER 1	B	SPAN 2			C	PIER 2	D	SPAN 3			PIER 3
1		45 SPA. @ 1'-4"	79 SPA. @ 1'-1"	-	1'-2"		1'-1"	72 SPA. @ 1'-1"	75 SPA. @ 1'-0"	-	1'-0"		1'-1"	111 SPA. @ 1'-1"	-	-	
2		61 SPA. @ 1'-3"	67 SPA. @ 1'-0"	-	11"		1'-2"	148 SPA. @ 1'-0"	-	-	1'-2"		11"	75 SPA. @ 11"	48 SPA. @ 1'-0"	-	
3		59 SPA. @ 1'-3"	67 SPA. @ 1'-0"	-	11"		10"	144 SPA. @ 1'-0"	-	-	10"		1'-3"	75 SPA. @ 11"	44 SPA. @ 1'-0"	-	
4		118 SPA. @ 1'-2"	-	-	1'-5"		1'-0"	139 SPA. @ 1'-0"	-	-	1'-0"		1'-2"	119 SPA. @ 11"	-	-	
5		12 SPA. @ 1'-3"	44 SPA. @ 1'-6"	41 SPA. @ 1'-4"	11"		8"	52 SPA. @ 1'-1"	19 SPA. @ 1'-6"	40 SPA. @ 1'-3"	9"		1-7"	55 SPA. @ 1'-0"	40 SPA. @ 1'-3"	-	

GIRDER NOTES

1. OPTIONAL WELDED SHOP SPLICES MAY BE USED FOR ALL FLANGE AND WEB PLATES OVER 60'-0" LONG. IF USED, THE LOCATION OF SPLICE SHALL BE SHOWN ON THE SHOP DRAWINGS AND WILL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL DESIGN SECTION.
2. OPTIONAL FLANGE BUTT SPLICE. A FLANGE PLATE OF THE LARGER SIZE MAY BE FURNISHED FULL LENGTH, BUT PAY WEIGHT SHALL BE BASED ON SECTION AS DETAILED.
3. SHEAR STUDS SHALL NOT BE PLACED ON SPLICE PLATES. STUDS THAT FALL OVER SPLICE PLATES SHALL BE DISTRIBUTED EVENLY TO EACH SIDE OF THE SPLICE. RESPACE STUDS EQUALLY OVER A DISTANCE OF APPROXIMATELY 10 FEET EACH SIDE OF SPLICE TO ACCOMODATE DISPLACED STUDS.
4. SEE TABLE FOR GIRDER DIMENSIONS AND SHEAR CONNECTOR SPACINGS.
5. SEE BEARING STIFFENER TABLE FOR BEARING STIFFENER DIMENSIONS.
6. THE BEARING STIFFENERS SHALL BE DETAILED SUCH THAT THEY ARE PLUMB AFTER TOTAL DEAD LOAD DEFLECTION OF THE STRUCTURE.

LEGEND

- BOTTOM FLANGE TENSION ZONE. FIELD WELDING ON THE BOTTOM FLANGE IS PROHIBITED IN THIS AREA.
- TOP FLANGE TENSION ZONE. FIELD WELDING ON THE TOP FLANGE FOR ANY PURPOSE IS PROHIBITED IN THIS AREA, EXCEPT FOR SHEAR STUD CONNECTIONS.
- ✳ SEE TABLE OF FILLET WELD SIZES SHEET 28.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. MJN

GIRDER ELEVATIONS (1 OF 2)

SHEET 23 OF 53

807

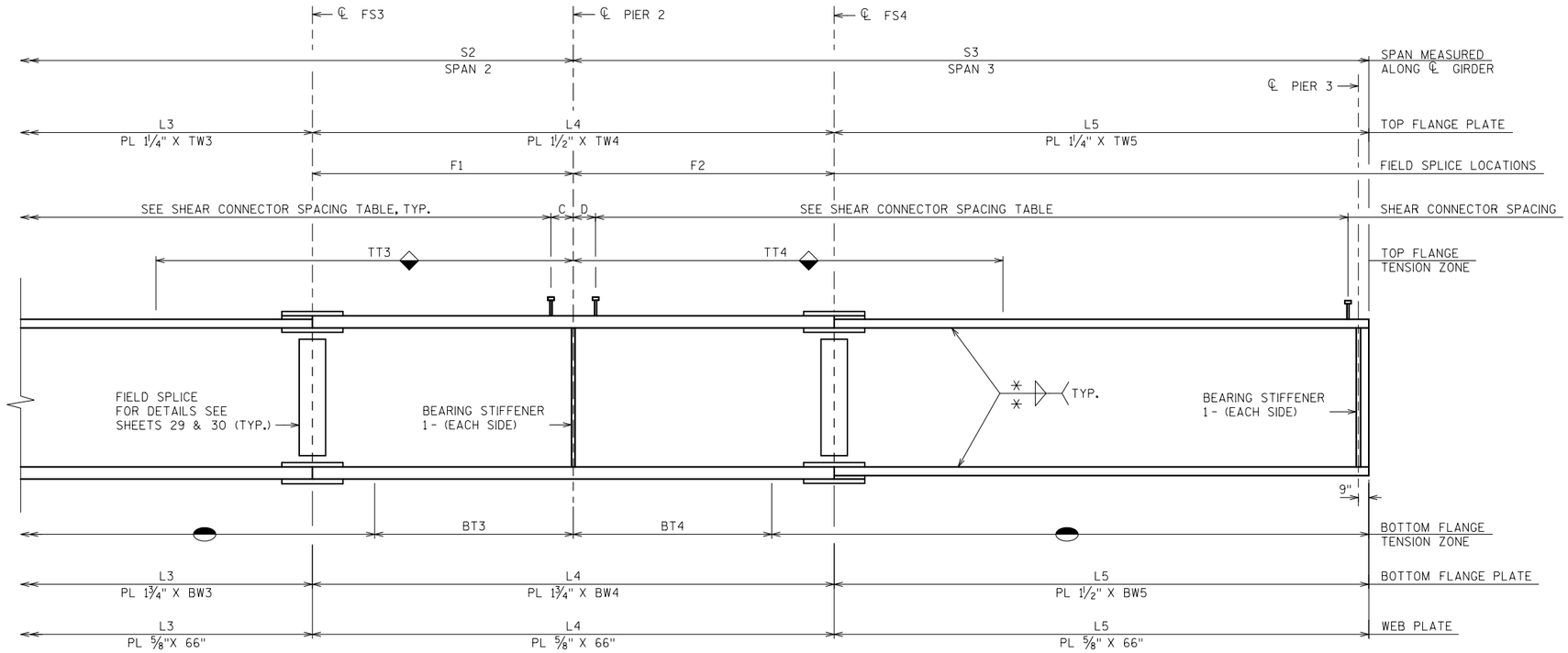
8

8

IP_PWP:d0345870\080623_GE.dgn 24-JUL-2015 09:22

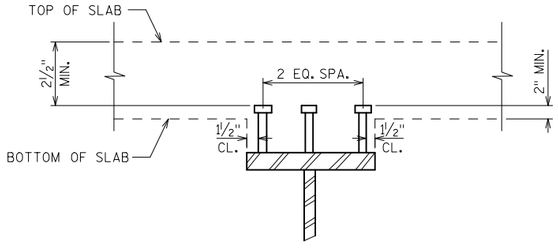
STATE PROJECT NUMBER

1300-13-74



GIRDER ELEVATION

NOTE: USE THREE SHOP OR FIELD WELDED ⅞" DIA. X 6" LONG STUDS EQUALLY SPACED WITH A MIN. OF 1½" CL. FROM THE FLANGE EDGE. STUDS SHALL NOT BE PLACED OVER FIELD SPLICE PLATES.



SHEAR CONNECTION DETAILS

"WELDED STUD SHEAR CONNECTIONS ⅞" x 6-INCH"

NOTES

1. SEE SHEET 23 FOR GIRDER NOTES.

LEGEND

- BOTTOM FLANGE TENSION ZONE. FIELD WELDING ON THE BOTTOM FLANGE IS PROHIBITED IN THIS AREA.
- TOP FLANGE TENSION ZONE. FIELD WELDING ON THE TOP FLANGE FOR ANY PURPOSE IS PROHIBITED IN THIS AREA, EXCEPT FOR SHEAR STUD CONNECTIONS.
- ✳ SEE TABLE OF FILLET WELD SIZES SHEET 28.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. MJN

GIRDER ELEVATIONS (2 OF 2)

SHEET 24 OF 53

808

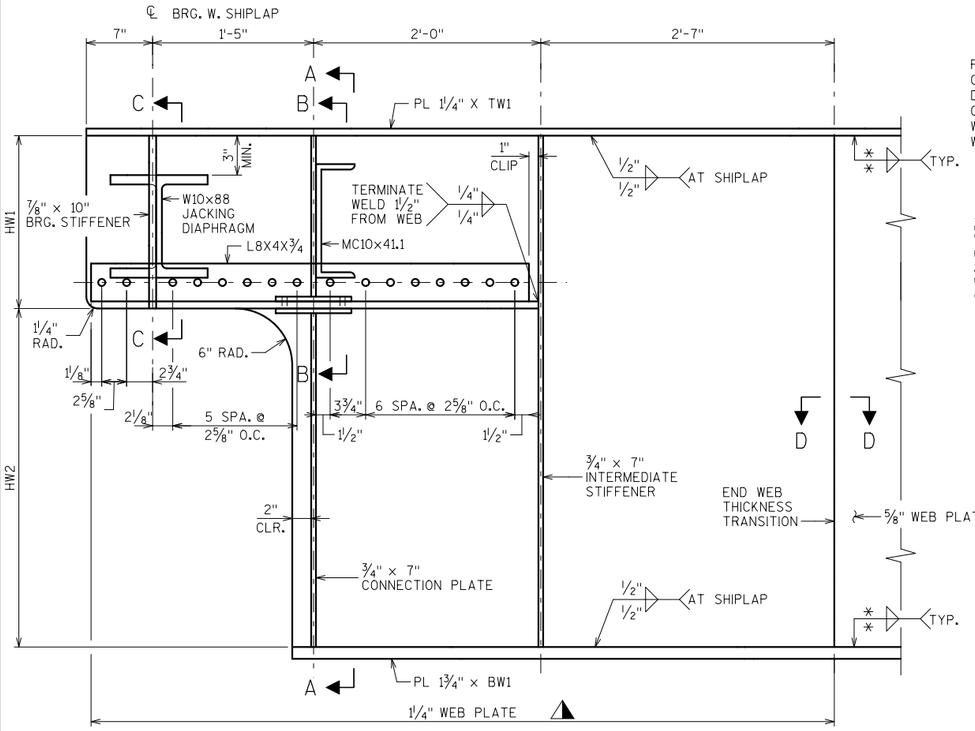
8

8

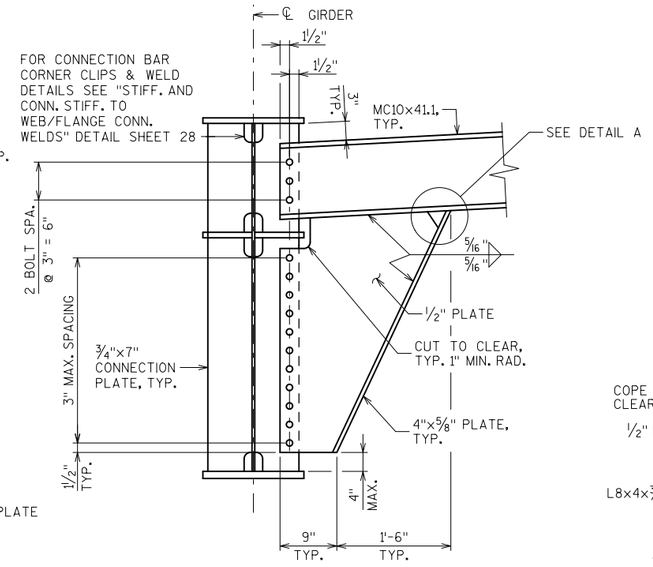
IP_PWP:d0345870\080624_GE.dgn 24-JUL-2015 09:22

STATE PROJECT NUMBER

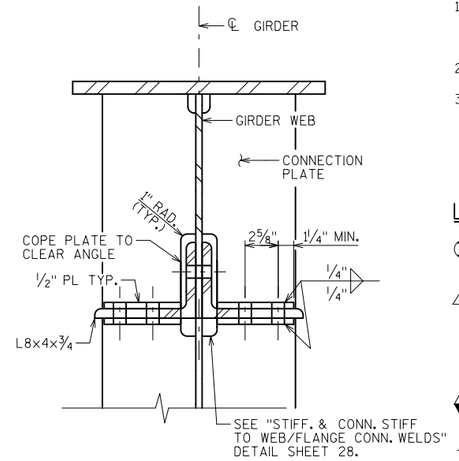
1300-13-74



W. SHIPLAP DETAIL



SECTION A-A SHIPLAP DIAPHRAGM



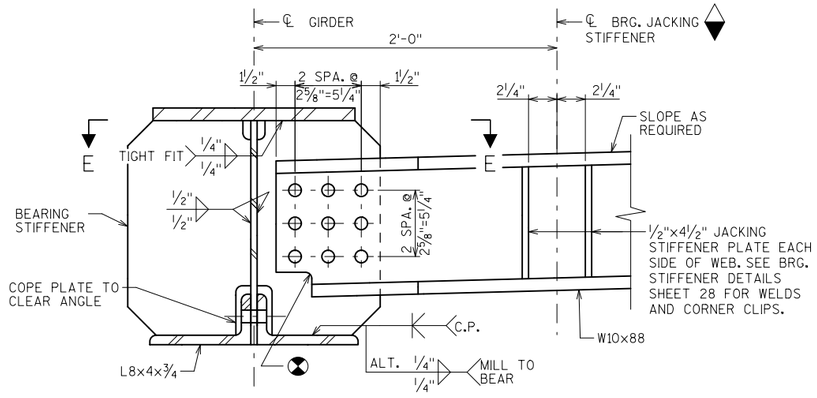
SECTION B-B

NOTES

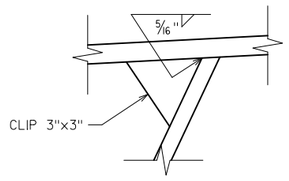
1. ALL CONNECTIONS SHALL BE MADE WITH ⅞"ϕ FRICTION TYPE HIGH STRENGTH BOLTS (ASTM A325).
2. PROVIDE STEEL PER NOTES 1 & 2 ON SHEET 21.
3. BOLTED CONNECTIONS ON GALVANIZED SURFACES REQUIRE CLASS C SURFACE PREPARATION.

LEGEND

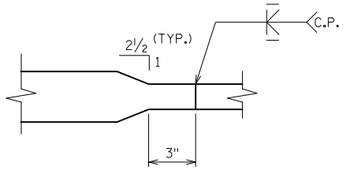
- COPE CHANNEL TO CLEAR BOLTED CONNECTIONS AS NECESSARY. 1" MIN. RADIUS.
- GALVANIZE FIRST 6'-7" OF GIRDER. ALL BOLTS, DIAPHRAGMS AND CONNECTING ELEMENTS ATTACHED TO THIS SECTION OF THE GIRDER SHALL BE HOT DIP GALVANIZED. GALVANIZING IS INCLUDED IN THE BID ITEM "STRUCTURAL STEEL HS".
- EACH DIAPHRAGM MEMBER HAS TWO JACKING LOCATIONS OFFSET AS SHOWN FOR EACH GIRDER
- SEE TABLE OF FILLET WELD SIZES ON SHEET 28.



SECTION C-C JACKING DIAHPHRAGM

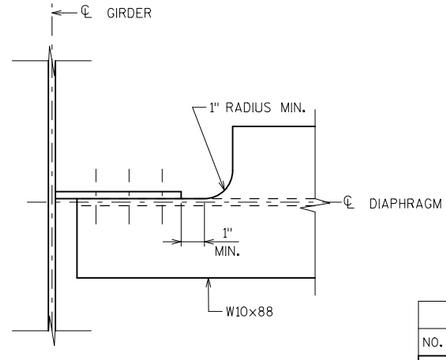


DETAIL A



SECTION D-D

WEB PLATE THICKNESS TRANSITION



SECTION E-E

WEB HEIGHT		
GIRDER	HW1	HW2
1	1'-10"	3'-8"
2	1'-8⅜"	3'-9⅝"
3	1'-6⅝"	3'-11⅜"
4	1'-5"	4'-1"
5	1'-3¼"	4'-2¾"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. PAT

SHIPLAP DETAILS

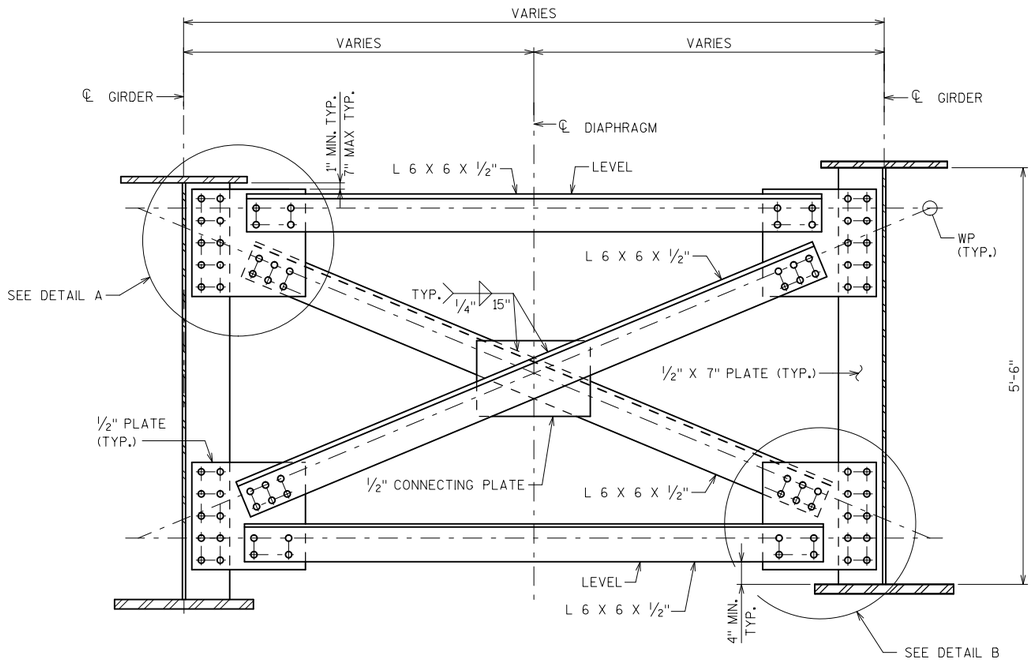
SHEET 25 OF 53

809

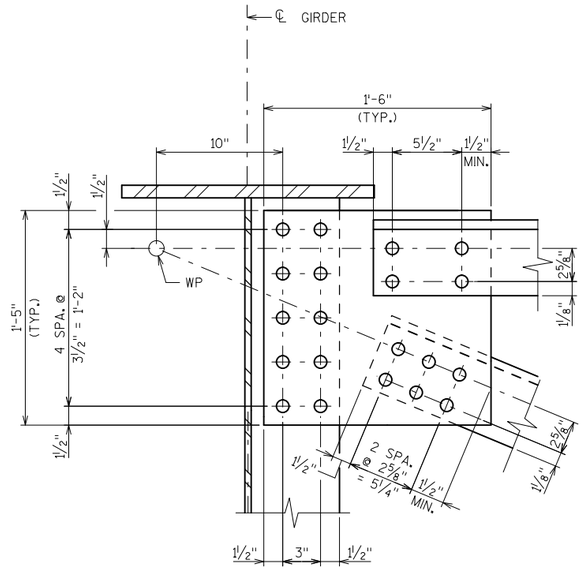
8

8

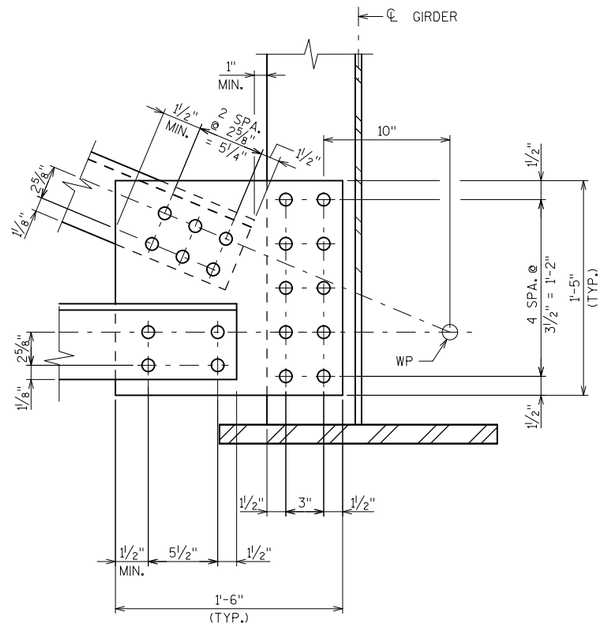
IP_PWP:d0345870\080625_DI.dan.DGN 24-JUL-2015 09:23



INTERMEDIATE DIAPHRAGM



DETAIL A



DETAIL B

STATE PROJECT NUMBER

1300-13-74

NOTES

1. ALL CONNECTIONS SHALL BE MADE WITH ⅞"ϕ FRICTION TYPE HIGH STRENGTH BOLTS (ASTM A325).
2. PROVIDE STEEL PER NOTES 1 & 2 ON SHEET 21.
3. BOLTED CONNECTIONS REQUIRE CLASS B SURFACE PREPARATION.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

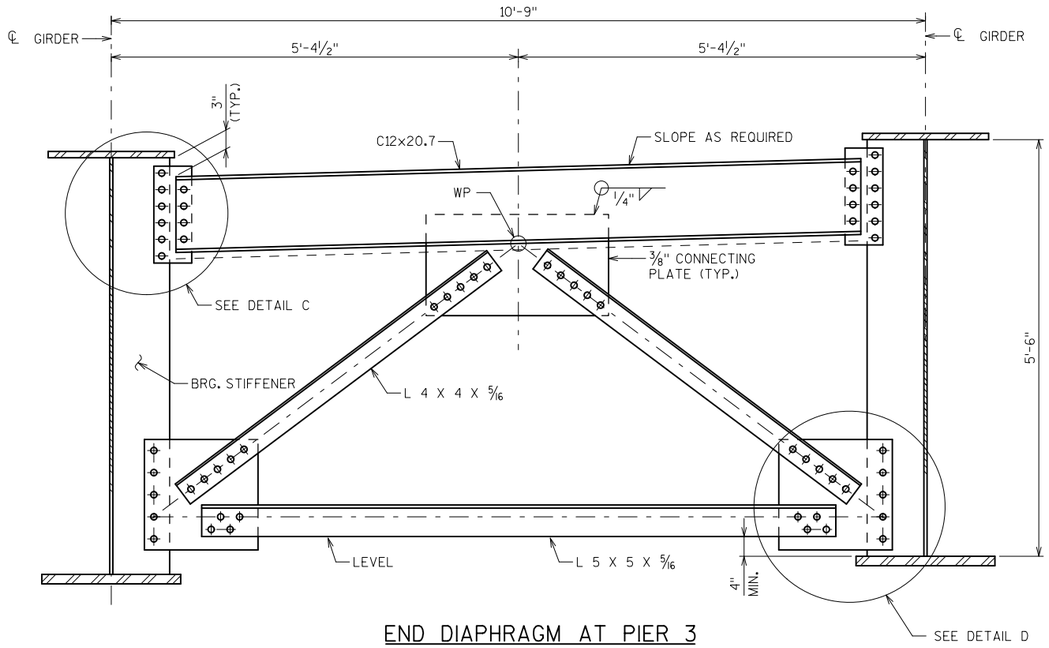
DRAWN BY CEM | PLANS CK'D. PAT

DIAPHRAGMS (SHEET 1 OF 2)

SHEET 26 OF 53
810

STATE PROJECT NUMBER

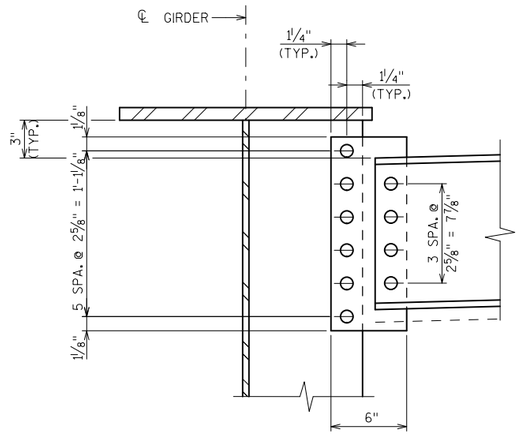
1300-13-74



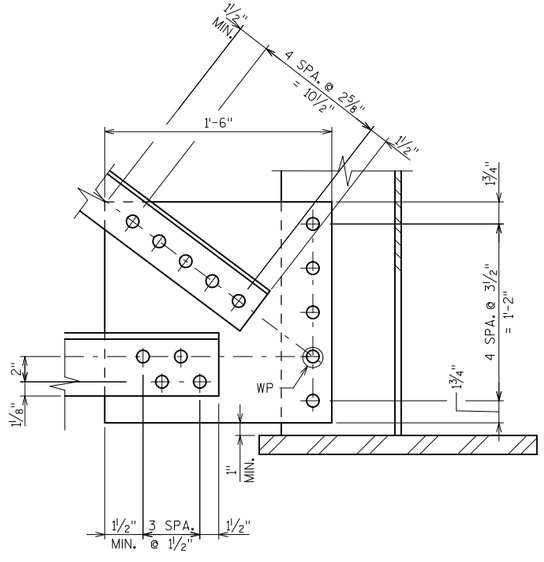
END DIAPHRAGM AT PIER 3

NOTES

1. ALL CONNECTIONS SHALL BE MADE WITH ⅞"ϕ FRICTION TYPE HIGH STRENGTH BOLTS (ASTM A325).
2. PROVIDE STEEL PER NOTES 1 & 2 ON SHEET 21.
3. BOLTED CONNECTIONS REQUIRE CLASS B SURFACE PREPARATION.



DETAIL C



DETAIL D

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. PAT

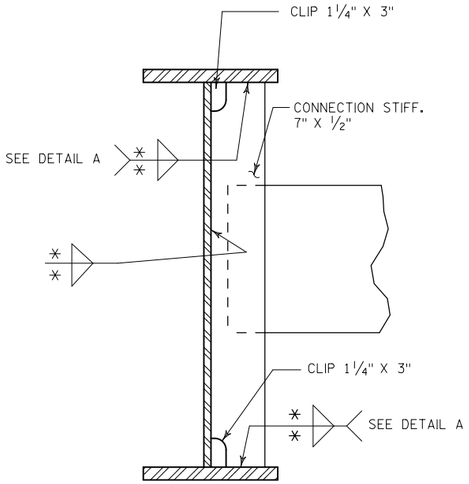
DIAPHRAGMS (SHEET 2 OF 2)

SHEET 27 OF 53
811

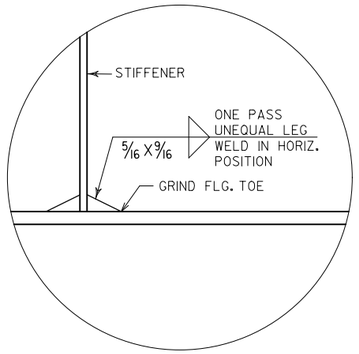
IP_PWP:d0345870\080627_DI.dgn 24-JUL-2015 09:24

STATE PROJECT NUMBER

1300-13-74

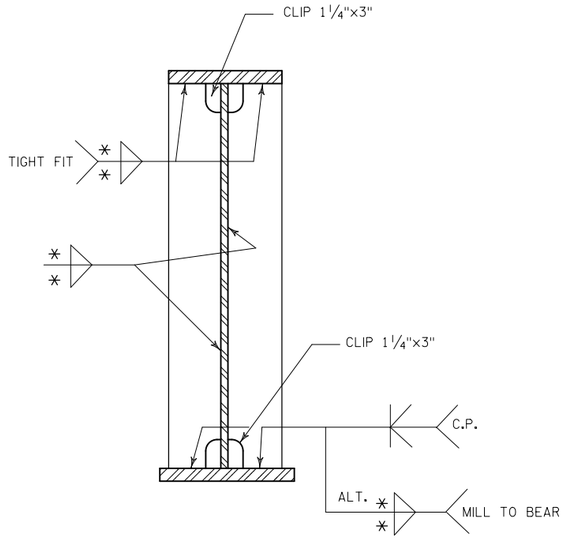


CONNECTION STIFF. DETAILS

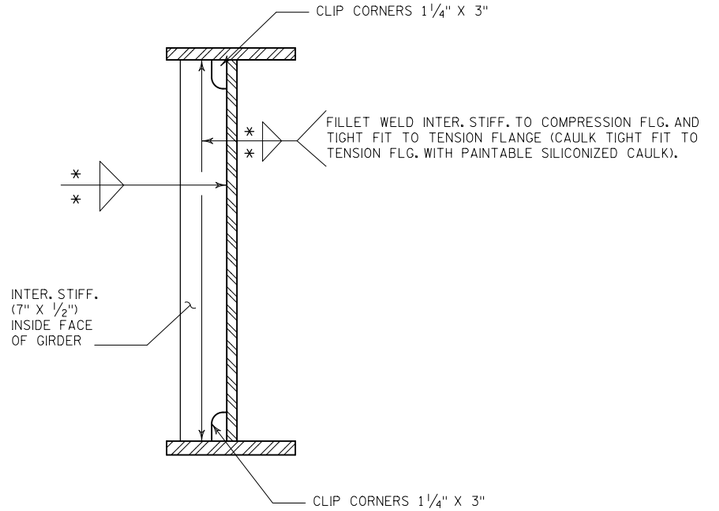


DETAIL A

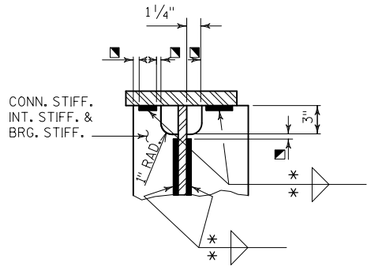
CONNECTION STIFFENER
DETAIL @ TENSION FLANGE



BRG. STIFF. DETAILS



INTERMEDIATE
STIFF. DETAILS



STIFF. & CONN. STIFF. TO WEB
FLANGE CONN. WELDS

⬔ ⅛" MIN., ¼" MAX. TYP.

* TABLE OF FILLET WELD SIZES (UNLESS NOTED OTHERWISE)

MATERIAL THICKNESS OF THICKER PART JOINED.	‡ MIN. SIZE OF FILLET WELD
TO ½" INCLUSIVE	3/16"
OVER ½" TO ¾"	¼"
OVER ¾" TO 1½"	△ 5/16"
OVER 1½" TO 2¼"	△ 3/8"
OVER 2 ¼" TO 6"	△ ½"

‡ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

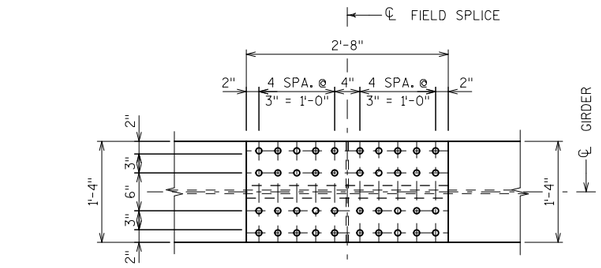
DRAWN BY CEM | PLANS CK'D. MJN

STEEL DETAILS

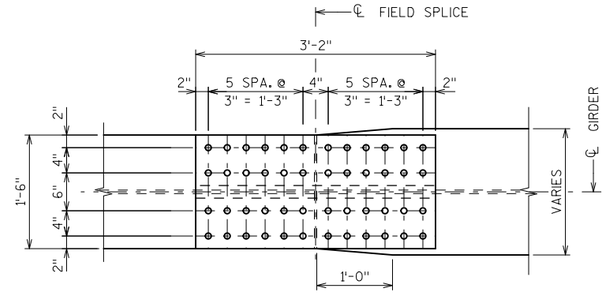
SHEET 28 OF 53
812

STATE PROJECT NUMBER

1300-13-74

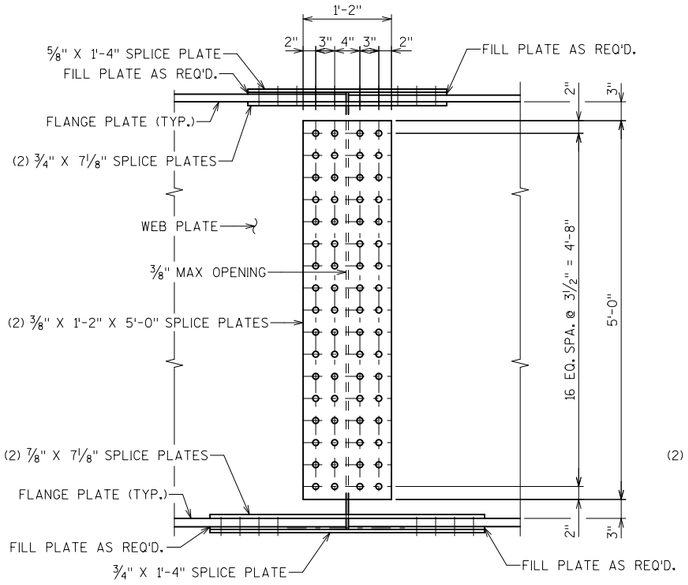


TOP FLANGE

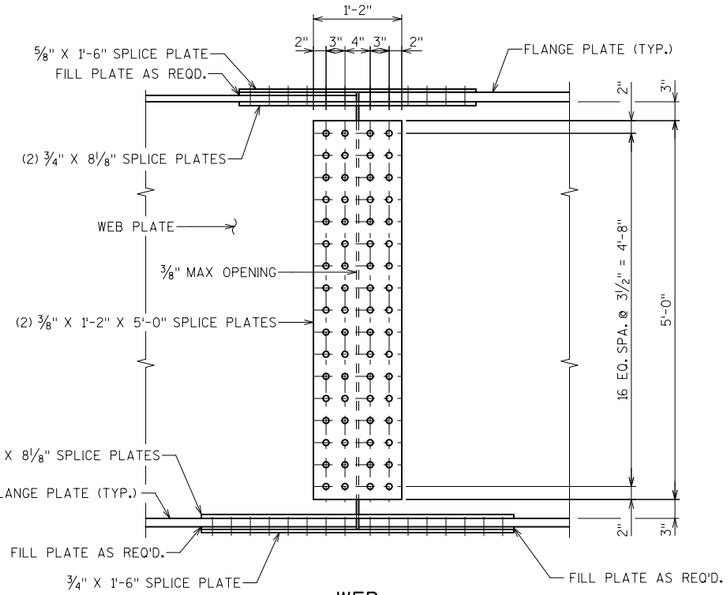


TOP FLANGE

FIELD SPLICE ASSIGNMENT				
GIRDER	FS1	FS2	FS3	FS4
1	TYPE 3	TYPE 4	TYPE 4	TYPE 4
2	TYPE 2	TYPE 2	TYPE 2	TYPE 2
3	TYPE 1	TYPE 1	TYPE 1	TYPE 1
4	TYPE 1	TYPE 1	TYPE 1	TYPE 1
5	TYPE 1	TYPE 1	TYPE 1	TYPE 1



WEB



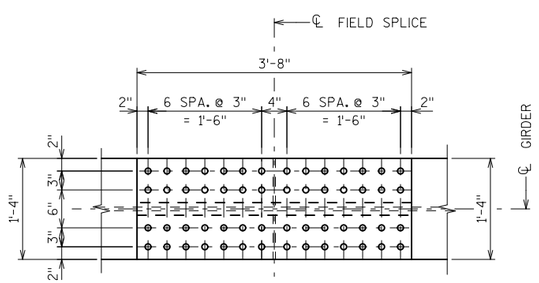
WEB

FILL PLATE THICKNESS (INCHES)				
	GIRDER	TOP FLANGE	BOTTOM FLANGE	WEB PLATE
FS1	1 - 5	- 3/4	- 3/4	NONE
FS2	1 - 5	3/4	3/4	NONE
FS3	1 - 5	- 1/4	NONE	NONE
FS4	1 - 5	1/4	1/4	NONE

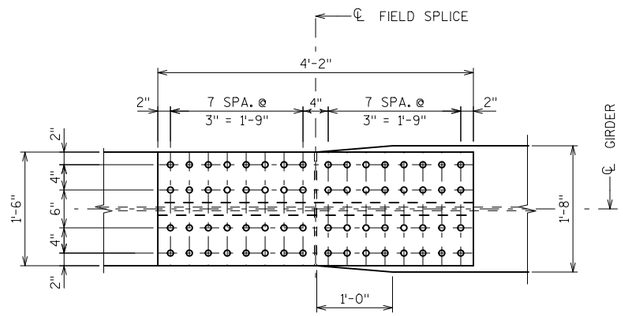
- NEGATIVE VALUE INDICATES THAT THE FILL PLATE IS ON THE WEST SIDE OF THE SPLICE.

NOTES

1. FLANGE AND WEB SPLICE PLATES SHALL BE ASTM A709, GRADE 50.
2. ALL FIELD SPLICE CONNECTIONS SHALL SHALL BE MADE WITH 7/8" DIAMETER FRICTION TYPE HIGH-TENSILE STRENGTH BOLTS (ASTM A325).
3. FILL PLATES TO MATCH WIDTH OF CORRESPONDING SPLICE PLATE.
4. BOLTED CONNECTIONS REQUIRE CLASS B SURFACE PREPARATION.



BOTTOM FLANGE
FIELD SPLICE TYPE 1



BOTTOM FLANGE
FIELD SPLICE TYPE 2

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

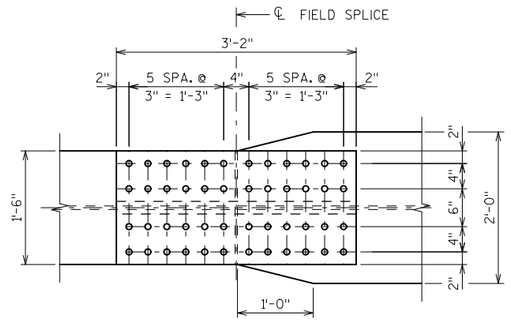
DRAWN BY CEM | PLANS CK'D. PAT

GIRDER SPLICES
(1 OF 2)

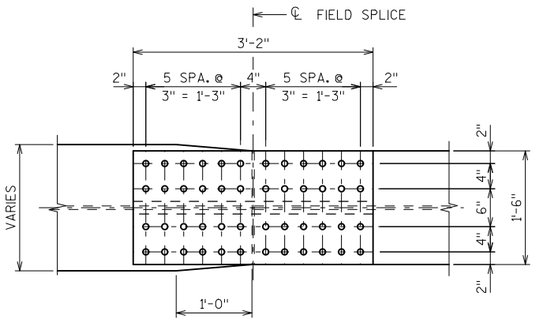
SHEET 29 OF 53
813

STATE PROJECT NUMBER

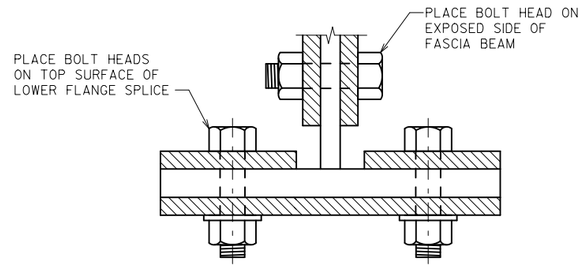
1300-13-74



TOP FLANGE

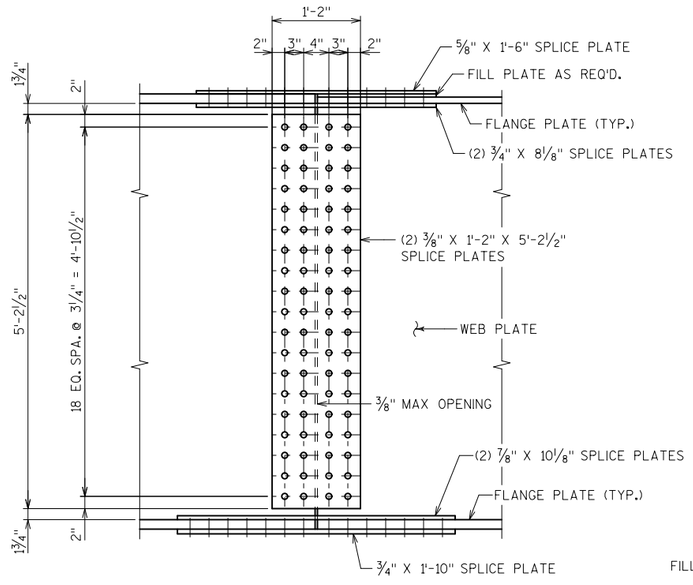


TOP FLANGE

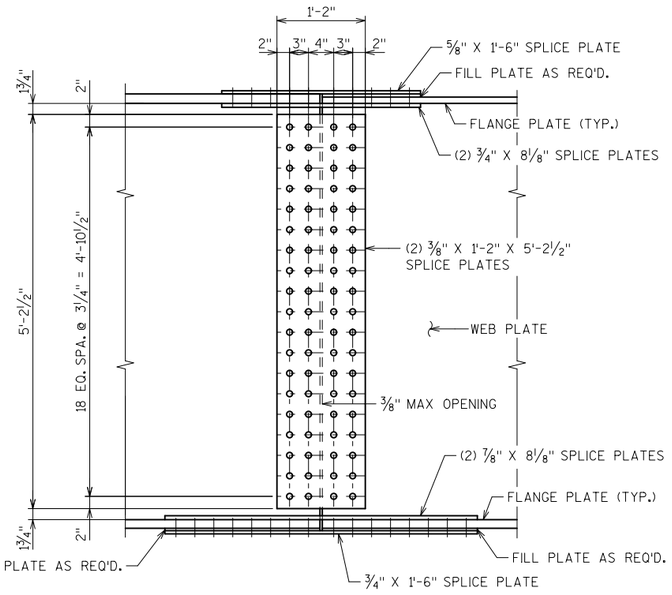


BOLTED SPLICE DETAIL

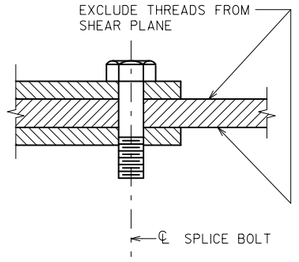
(NOT TO SCALE)



WEB



WEB

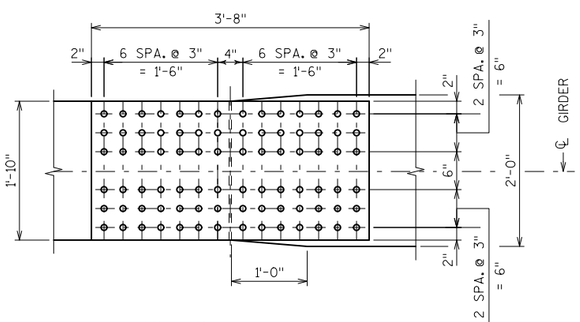


SPLICE BOLT THREAD DETAIL

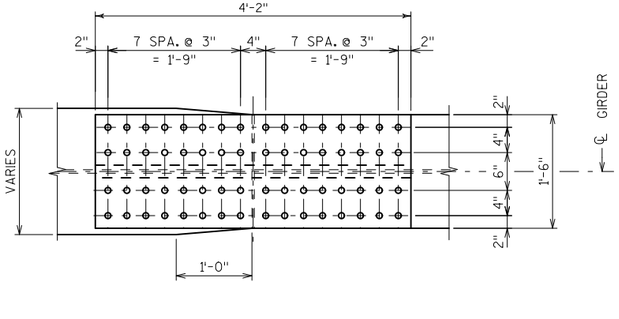
(NOT TO SCALE)

NOTES

1. FLANGE AND WEB SPLICE PLATES SHALL BE ASTM A709, GRADE 50.
2. ALL FIELD SPLICE CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER FRICTION TYPE HIGH-TENSILE STRENGTH BOLTS (ASTM A325).
3. FILL PLATES TO MATCH WIDTH OF CORRESPONDING SPLICE PLATE.
4. BOLTED CONNECTIONS REQUIRE CLASS B SURFACE PREPARATION.



BOTTOM FLANGE
FIELD SPLICE TYPE 3



BOTTOM FLANGE
FIELD SPLICE TYPE 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. PAT

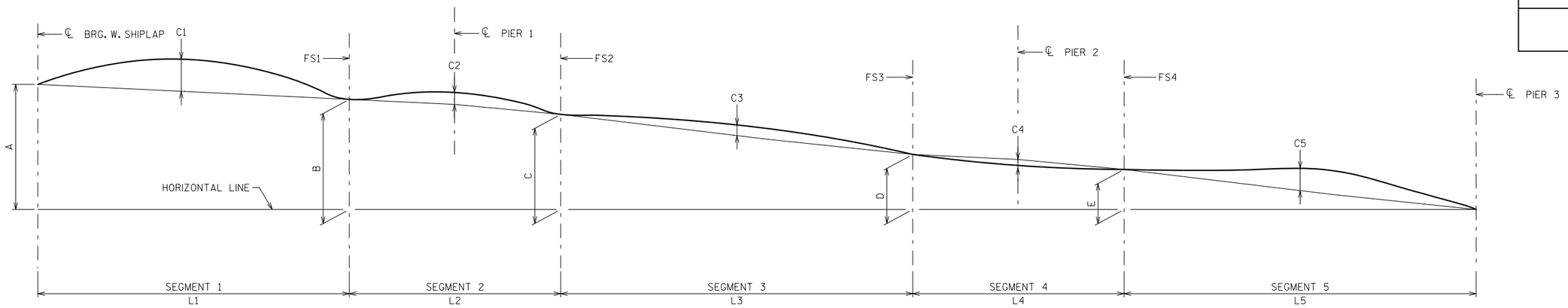
GIRDER SPLICES
(2 OF 2)

SHEET 30 OF 53
814

8

8

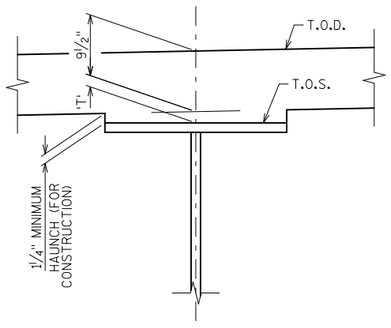
STATE PROJECT NUMBER
1300-13-74



CAMBER AND BLOCKING DIAGRAM

	☆ ELEVATIONS AT TOP OF DECK (T.O.D.) & TOP OF STEEL (T.O.S.)																							
		W. SHIPLAP	0.1	0.2	0.3	0.4	0.5	0.6	0.7	FS1	0.8	0.9	PIER 1	1.1	1.2	1.3	FS2	1.4	1.5	1.6	1.7	1.8	FS3	1.9
LT. GUTTER LINE	T.O.D.	618.66	618.72	618.78	618.84	618.88	618.90	618.90	618.89	-	618.85	618.79	618.57	618.33	618.06	617.78	-	617.47	617.15	616.81	616.45	616.07	-	615.68
GIRDER 1	T.O.D.	618.65	618.71	618.76	618.82	618.85	618.87	618.86	618.84	618.83	618.80	618.73	618.51	618.27	618.00	617.72	617.52	617.42	617.09	616.75	616.39	616.02	615.90	615.62
	T.O.S.	617.74	-	-	-	-	-	-	-	617.87	-	-	617.51	-	-	-	616.58	-	-	-	-	-	614.89	-
GIRDER 2	T.O.D.	618.64	618.66	618.67	618.68	618.67	618.63	618.58	618.50	618.48	618.42	618.30	618.08	617.84	617.57	617.29	617.09	616.99	616.66	616.32	615.96	615.59	615.47	615.19
	T.O.S.	617.73	-	-	-	-	-	-	-	617.51	-	-	617.08	-	-	-	616.15	-	-	-	-	-	614.46	-
GIRDER 3	T.O.D.	618.63	618.60	618.58	618.55	618.49	618.41	618.30	618.17	618.13	618.03	617.88	617.65	617.41	617.14	616.86	616.66	616.56	616.23	615.89	615.53	615.16	615.04	614.76
	T.O.S.	617.71	-	-	-	-	-	-	-	617.15	-	-	616.65	-	-	-	615.72	-	-	-	-	-	614.03	-
GIRDER 4	T.O.D.	618.62	618.55	618.48	618.41	618.30	618.17	618.02	617.85	617.78	617.65	617.45	617.22	616.98	616.71	616.43	616.23	616.13	615.80	615.46	615.10	614.73	614.61	614.33
	T.O.S.	617.70	-	-	-	-	-	-	-	616.80	-	-	616.22	-	-	-	615.29	-	-	-	-	-	613.60	-
ALONG P.G.L.	T.O.D.	618.61	618.52	618.42	618.32	618.21	618.07	617.92	617.75	-	617.57	617.36	617.13	616.89	616.62	616.34	-	616.04	615.71	615.37	615.01	614.64	-	614.24
GIRDER 5	T.O.D.	618.61	618.51	618.39	618.27	618.13	617.95	617.75	617.52	617.44	617.28	617.02	616.79	616.55	616.28	616.00	615.80	615.70	615.37	615.03	614.67	614.30	614.18	613.90
	T.O.S.	617.69	-	-	-	-	-	-	-	616.45	-	-	615.79	-	-	-	614.86	-	-	-	-	-	613.17	-
RT. GUTTER LINE	T.O.D.	618.61	618.49	618.38	618.25	618.10	617.92	617.71	617.47	-	617.22	616.96	616.73	616.49	616.22	615.94	-	615.63	615.31	614.97	614.61	614.23	-	613.84

	ELEVATIONS AT TOP OF DECK (T.O.D.) & TOP OF STEEL (T.O.S.)											
	PIER 2	2.1	2.2	FS4	2.3	2.4	2.5	2.6	2.7	2.8	2.9	PIER 3
LT. GUTTER LINE	615.26	614.92	614.57	-	614.20	613.83	613.44	613.04	612.63	612.21	611.78	611.33
GIRDER 1	615.20	614.86	614.51	614.33	614.15	613.77	613.38	612.99	612.57	612.15	611.72	611.27
	614.16	-	-	613.36	-	-	-	-	-	-	-	-
GIRDER 2	614.77	614.43	614.08	613.90	613.72	613.34	612.95	612.56	612.14	611.72	611.29	610.84
	613.73	-	-	612.93	-	-	-	-	-	-	-	-
GIRDER 3	614.34	614.00	613.65	613.47	613.29	612.91	612.52	612.13	611.71	611.29	610.86	610.41
	613.30	-	-	612.50	-	-	-	-	-	-	-	-
GIRDER 4	613.91	613.57	613.22	613.04	612.86	612.48	612.09	611.70	611.28	610.86	610.43	609.98
	612.87	-	-	612.06	-	-	-	-	-	-	-	-
ALONG P.G.L.	613.82	613.48	613.13	-	612.77	612.39	612.00	611.61	611.19	610.77	610.34	609.89
GIRDER 5	613.48	613.14	612.79	612.61	612.43	612.05	611.66	611.27	610.85	610.43	610.00	609.55
	612.44	-	-	611.63	-	-	-	-	-	-	-	-
RT. GUTTER LINE	613.42	613.08	612.73	-	612.36	611.99	611.60	611.20	610.79	610.37	609.94	609.49



HAUNCH DETAIL

NOTES

1. 'T' = HAUNCH HEIGHT AT CENTERLINE OF GIRDER.
2. TO DETERMINE 'T':
   ELEVATIONS OF THE TOP FLANGE SHALL BE TAKEN AT CENTERLINE OF BEARING AND AT 0.1 POINTS.

   TOP OF DECK ELEV. AT FINAL GRADE

   \- TOP OF STEEL ELEV. AS ERECTED

   \+ CONC. ONLY DEFLECTION; DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED

   \- DECK THICKNESS

   = 'T' VALUE FOR SETTING HAUNCH
3. CAMBER ORDINATES WERE DEVELOPED ASSUMING THAT THE WEIGHT OF THE SLAB IS APPLIED INSTANTANEOUSLY TO THE NON-COMPOSITE SECTION. CONSIDERING THE EFFECT OF THE POUR SEQUENCE RESULTS IN DEVIATIONS TO THE CAMBER ORDINATES LESS THAN 1/4". SHOULD THE CONTRACTOR ELECT TO USE A DIFFERENT POURING SEQUENCE THAN THE ONE SHOWN IN THE PLANS THE CAMBER TABLES SHOULD BE ADJUSTED AS NECESSARY FOR ANY VARIATIONS EXCEEDING 1/4".
4. ELEVATIONS ARE TO TOP OF STEEL (SPLICE AND COVER PLATE THICKNESS, IF APPLICABLE, ARE ACCOUNTED FOR) AND THEY ARE FOR THE MATERIAL AS ERECTED. THE ELEVATION OF THE TOP OF STEEL AT THE FIELD SPLICE POINTS SHALL BE CHECKED, AND CORRECTED, IF POSSIBLE, AFTER ERECTION AND BEFORE PERMANENTLY BOLTING THE DIAPHRAGMS IN PLACE.
5. BLOCKING DIMENSIONS MEASURED FROM HORIZONTAL LINE (PASSING THROUGH LOWEST TOP OF GIRDER WEB) TO TOP OF WEB AT POINT UNDER CONSIDERATION.

BLOCKING DIMENSIONS					
GIRDER	A	B	C	D	E
1	7'-6 5/16"	7'-6 11/16"	6'-3"	4'-7 1/2"	3'-0 11/16"
2	7'-11 3/8"	7'-7 5/8"	6'-3"	4'-7 1/2"	3'-0 11/16"
3	8'-4 3/8"	7'-8 9/16"	6'-3"	4'-7 1/2"	3'-0 11/16"
4	8'-9 3/8"	7'-9 9/16"	6'-3"	4'-7 1/2"	3'-0 11/16"
5	9'-2 7/16"	7'-10 5/8"	6'-3"	4'-7 1/2"	3'-0 11/16"

SEGMENT LENGTHS					
GIRDER	L1	L2	L3	L4	L5
1	108'-4 1/16"	82'-5 13/16"	85'-3 9/16"	56'-9 15/16"	91'-4 3/4"
2	106'-5 9/16"	80'-5 7/8"	82'-8 1/2"	55'-1 1/4"	88'-7 1/2"
3	104'-7 1/8"	78'-6"	80'-1 1/2"	53'-4 5/8"	85'-10 3/16"
4	102'-8 11/16"	76'-6 1/8"	77'-6 7/16"	51'-7 15/16"	83'-0 15/16"
5	100'-10 1/2"	74'-6 5/16"	74'-11 7/16"	49'-11 1/4"	80'-3 11/16"

CAMBER DIMENSIONS (INCHES)					
GIRDER	C1	C2	C3	C4	C5
1	4.2	1.7	1.3	-0.2	2.7
2	4.1	1.1	1.2	-0.2	2.4
3	4.0	0.6	1.2	-0.2	2.2
4	3.8	0.5	1.3	-0.1	2.0
5	3.5	-0.5	1.1	0.0	1.7

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. MJN

CAMBER AND BLOCKING

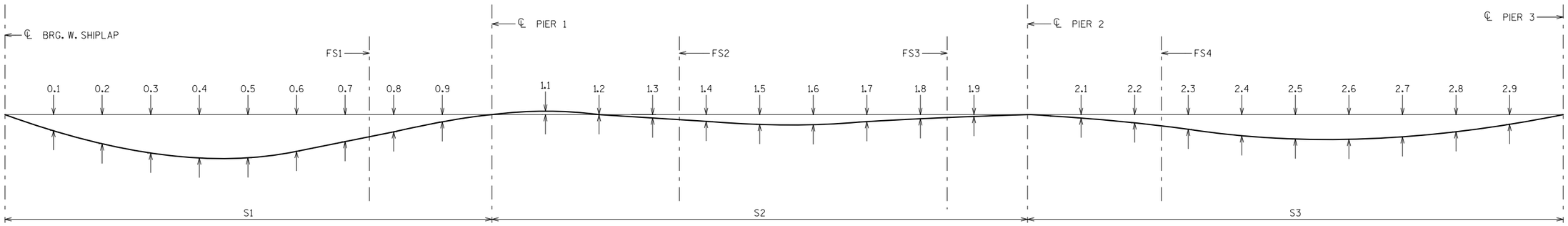
SHEET 31 OF 53

815

8

8

STATE PROJECT NUMBER
1300-13-74



DEAD LOAD DEFLECTION DIAGRAM

DEFLECTION NOTES

1. DEFLECTIONS ARE GIVEN IN DECIMALS OF AN INCH.
2. NEGATIVE VALUE INDICATES UPWARD DEFLECTION.
3. CONCRETE DEFLECTION INCLUDES CONCRETE SLAB, HAUNCH, AND BARRIERS.
4. TOTAL DEFLECTION INCLUDES ALL OF THE ABOVE PLUS DEFLECTIONS DUE TO SELF WEIGHT OF STEEL.

DEAD LOAD DEFLECTIONS (INCHES)

	SPAN POINT	W. SHIPLAP	0.1	0.2	0.3	0.4	0.5	0.6	0.7	FS1	0.8	0.9	PIER 1	1.1	1.2	1.3	FS2	1.4	1.5	1.6	1.7	1.8	FS3	1.9	PIER 2	2.1	2.2	FS4	2.3	2.4	2.5	2.6	2.7	2.8	2.9	PIER 3
GIRDER 1	CONC. DEFL.	0.0	1.2	2.1	2.9	3.2	3.2	2.7	2.1	1.8	1.2	0.5	0.0	-0.2	-0.1	0.1	0.1	0.4	0.6	0.6	0.5	0.2	0.1	0.0	0.0	0.3	0.7	0.9	1.1	1.5	1.7	1.8	1.6	1.2	0.7	0.0
	TOTAL DEFL.	0.0	1.6	2.9	3.9	4.3	4.3	3.7	2.8	2.4	1.7	0.7	0.0	-0.3	-0.2	0.1	0.1	0.5	0.8	0.8	0.6	0.2	0.1	0.0	0.0	0.3	0.9	1.2	1.4	1.9	2.3	2.3	2.1	1.6	0.9	0.0
GIRDER 2	CONC. DEFL.	0.0	1.0	1.9	2.6	2.9	2.8	2.5	1.9	1.6	1.1	0.5	0.0	-0.1	0.0	0.3	0.2	0.5	0.7	0.7	0.5	0.3	0.2	0.0	0.0	0.2	0.6	0.8	0.9	1.3	1.5	1.5	1.4	1.0	0.6	0.0
	TOTAL DEFL.	0.0	1.4	2.6	3.4	3.9	3.8	3.3	2.5	2.2	1.5	0.6	0.0	-0.2	0.0	0.3	0.3	0.6	0.9	0.8	0.6	0.3	0.2	0.0	0.0	0.3	0.7	1.0	1.2	1.6	1.9	1.9	1.7	1.3	0.7	0.0
GIRDER 3	CONC. DEFL.	0.0	0.9	1.7	2.3	2.6	2.5	2.2	1.7	1.4	1.0	0.4	0.0	-0.1	0.1	0.3	0.3	0.6	0.7	0.7	0.6	0.3	0.2	0.1	0.0	0.2	0.5	0.6	0.8	1.1	1.2	1.3	1.2	0.9	0.5	0.0
	TOTAL DEFL.	0.0	1.2	2.3	3.0	3.4	3.4	2.9	2.2	1.9	1.3	0.5	0.0	-0.1	0.1	0.4	0.4	0.7	0.9	0.9	0.7	0.4	0.3	0.1	0.0	0.2	0.6	0.8	1.0	1.4	1.6	1.6	1.5	1.1	0.6	0.0
GIRDER 4	CONC. DEFL.	0.0	0.8	1.5	2.0	2.3	2.2	1.9	1.4	1.2	0.9	0.3	0.0	0.0	0.1	0.4	0.2	0.6	0.7	0.7	0.5	0.3	0.2	0.1	0.0	0.1	0.4	0.5	0.6	0.9	1.0	1.0	0.9	0.7	0.4	0.0
	TOTAL DEFL.	0.0	1.1	2.0	2.6	3.0	2.9	2.5	1.9	1.6	1.1	0.5	0.0	-0.1	0.1	0.5	0.2	0.7	0.9	0.9	0.7	0.4	0.3	0.1	0.0	0.2	0.5	0.6	0.8	1.1	1.3	1.3	1.2	0.9	0.5	0.0
GIRDER 5	CONC. DEFL.	0.0	0.7	1.3	1.7	1.9	1.8	1.6	1.2	1.0	0.7	0.3	0.0	0.0	0.1	0.3	0.3	0.5	0.6	0.6	0.5	0.3	0.2	0.1	0.0	0.1	0.2	0.4	0.4	0.6	0.7	0.8	0.7	0.5	0.3	0.0
	TOTAL DEFL.	0.0	0.9	1.6	2.2	2.4	2.4	2.1	1.6	1.3	0.9	0.4	0.0	0.0	0.2	0.4	0.4	0.7	0.8	0.8	0.6	0.4	0.3	0.1	0.0	0.1	0.3	0.5	0.6	0.8	0.9	1.0	0.9	0.7	0.4	0.0

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

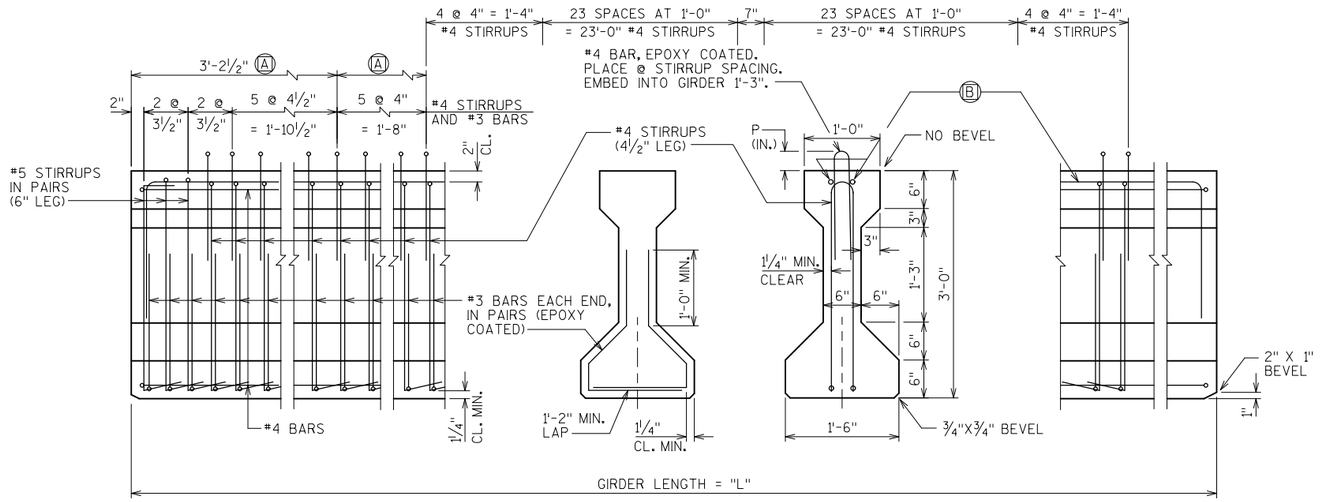
STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. MJN

DEFLECTIONS

SHEET 32 OF 53
816

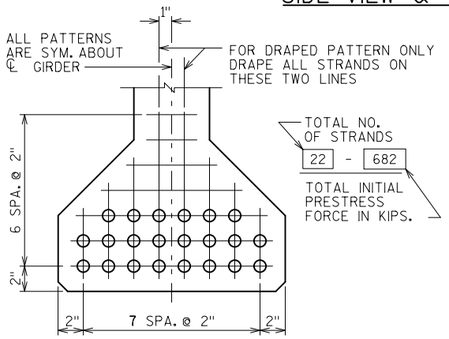
STATE PROJECT NUMBER
1300-13-74



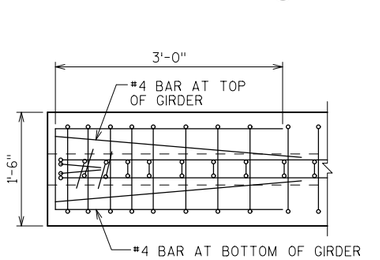
SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

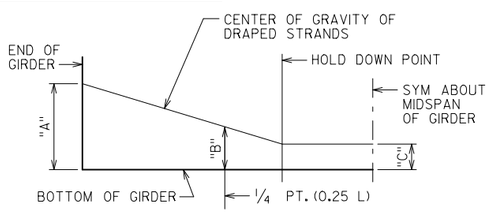
Ⓑ 2- #5 BARS BEND DOWN 16 BAR DIA. AT ENDS



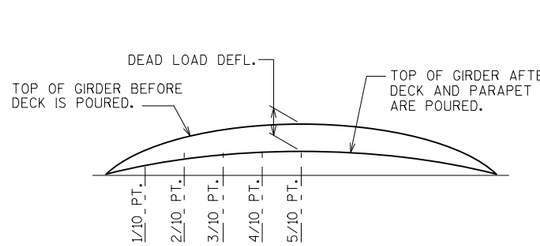
TYP. STRAND PATTERN



TOP VIEW OF GIRDER ENDS



DRAPED STRAND PROFILE



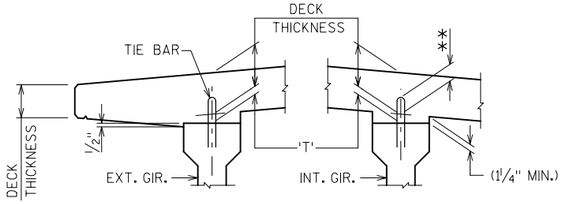
DEAD LOAD DEFLECTION DIAGRAM

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3.7

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DECK HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2½" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.5" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

BEND EACH END OF #4 STIRRUPS 4½" AND #5 STIRRUPS 6".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	DRAPED PATTERN f'ci (P.S.I.) *	DRAPED PATTERN (IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	UNDRAPED PATTERN f'ci (P.S.I.) *
1	1 & 6	59'-0"	0.5	1.0	1.3	1.6	1.6	1.6	1.3	1.0	0.5	8,000	7	6	6.5	0.5	22	6,800	32	11	14	4	---	---
1	2-4	59'-0"	0.6	1.1	1.5	1.8	1.9	1.8	1.5	1.1	0.6	8,000	7	6	6.5	0.5	22	6,800	32	11	14	4	---	---

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY ABP | PLANS CK'D. MSC

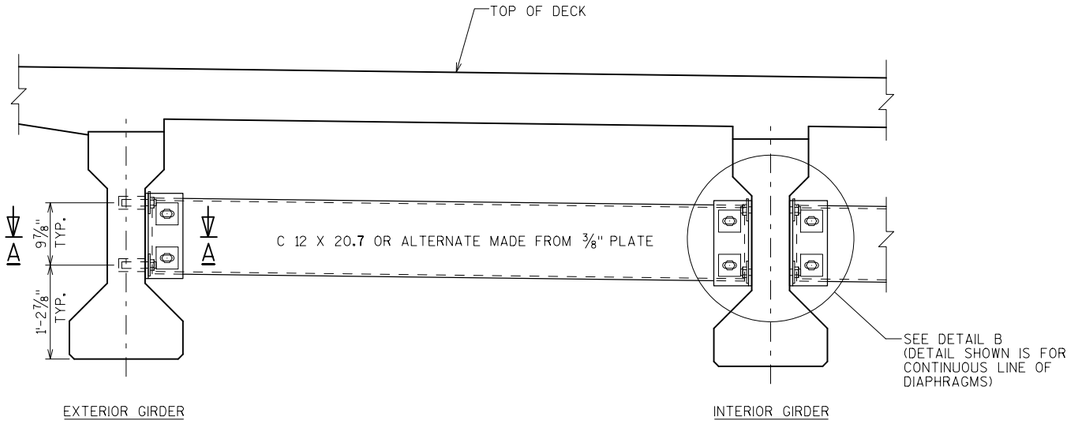
36" PRESTRESSED GIRDER DETAILS

SHEET 33 OF 53
817

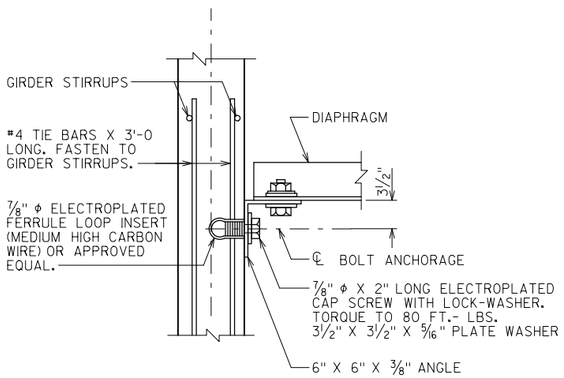
8

8

STATE PROJECT NUMBER
1300-13-74



PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)

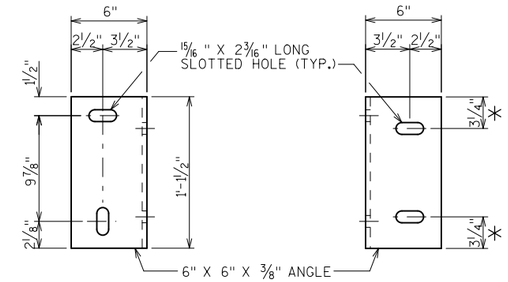
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-916", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

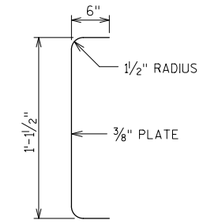
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

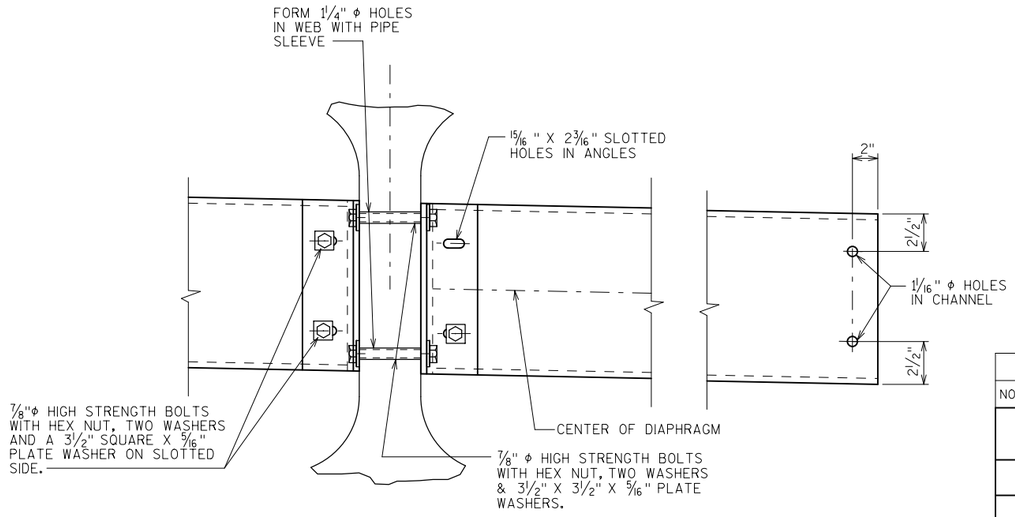


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



SECTION THRU ALTERNATE DIAPHRAGM



DETAIL B

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

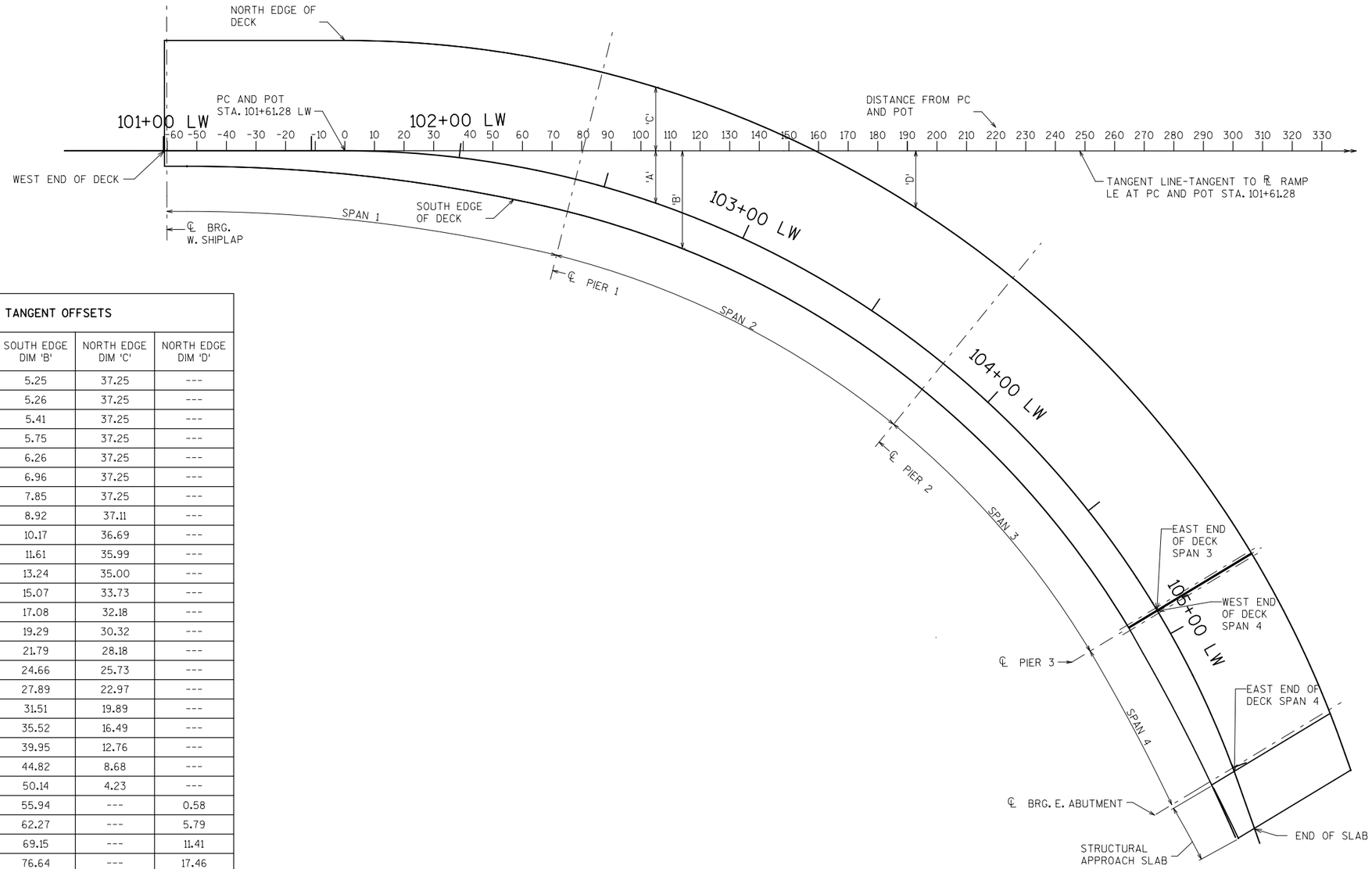
DRAWN BY ABP | PLANS CK'D. MSC

STEEL DIAPHRAGM

SHEET 34 OF 53
818

IP_PWP:d0345870\080634_DD.dgn 24-JUL-2015 09:26

STATE PROJECT NUMBER
1300-13-74



N

TABLE OF TANGENT OFFSETS				
DISTANCE FROM P.O.T.	REF. LINE DIM 'A'	SOUTH EDGE DIM 'B'	NORTH EDGE DIM 'C'	NORTH EDGE DIM 'D'
-60	0.00	5.25	37.25	---
-50	0.00	5.26	37.25	---
-40	0.00	5.41	37.25	---
-30	0.00	5.75	37.25	---
-20	0.00	6.26	37.25	---
-10	0.00	6.96	37.25	---
0	0.00	7.85	37.25	---
10	0.16	8.92	37.11	---
20	0.63	10.17	36.69	---
30	1.41	11.61	35.99	---
40	2.51	13.24	35.00	---
50	3.93	15.07	33.73	---
60	5.68	17.08	32.18	---
70	7.75	19.29	30.32	---
80	10.16	21.79	28.18	---
90	12.92	24.66	25.73	---
100	16.03	27.89	22.97	---
110	19.50	31.51	19.89	---
120	23.35	35.52	16.49	---
130	27.60	39.95	12.76	---
140	32.25	44.82	8.68	---
150	37.33	50.14	4.23	---
160	42.87	55.94	---	0.58
170	48.89	62.27	---	5.79
180	55.42	69.15	---	11.41
190	62.51	76.64	---	17.46
200	70.20	84.78	---	23.98
210	78.55	93.67	---	30.99
220	87.62	103.37	---	38.53
230	97.51	114.02	---	46.64
240	108.34	125.77	---	55.37
250	120.25	138.82	---	64.80
260	133.45	153.49	---	74.99
270	148.24	170.16	---	86.06
280	165.08	188.37	---	98.13
290	184.72	208.09	---	111.37
300	208.64	229.67	---	126.02
310	236.74	---	---	142.44
320	264.93	---	---	161.17
330	293.13	---	---	183.15

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

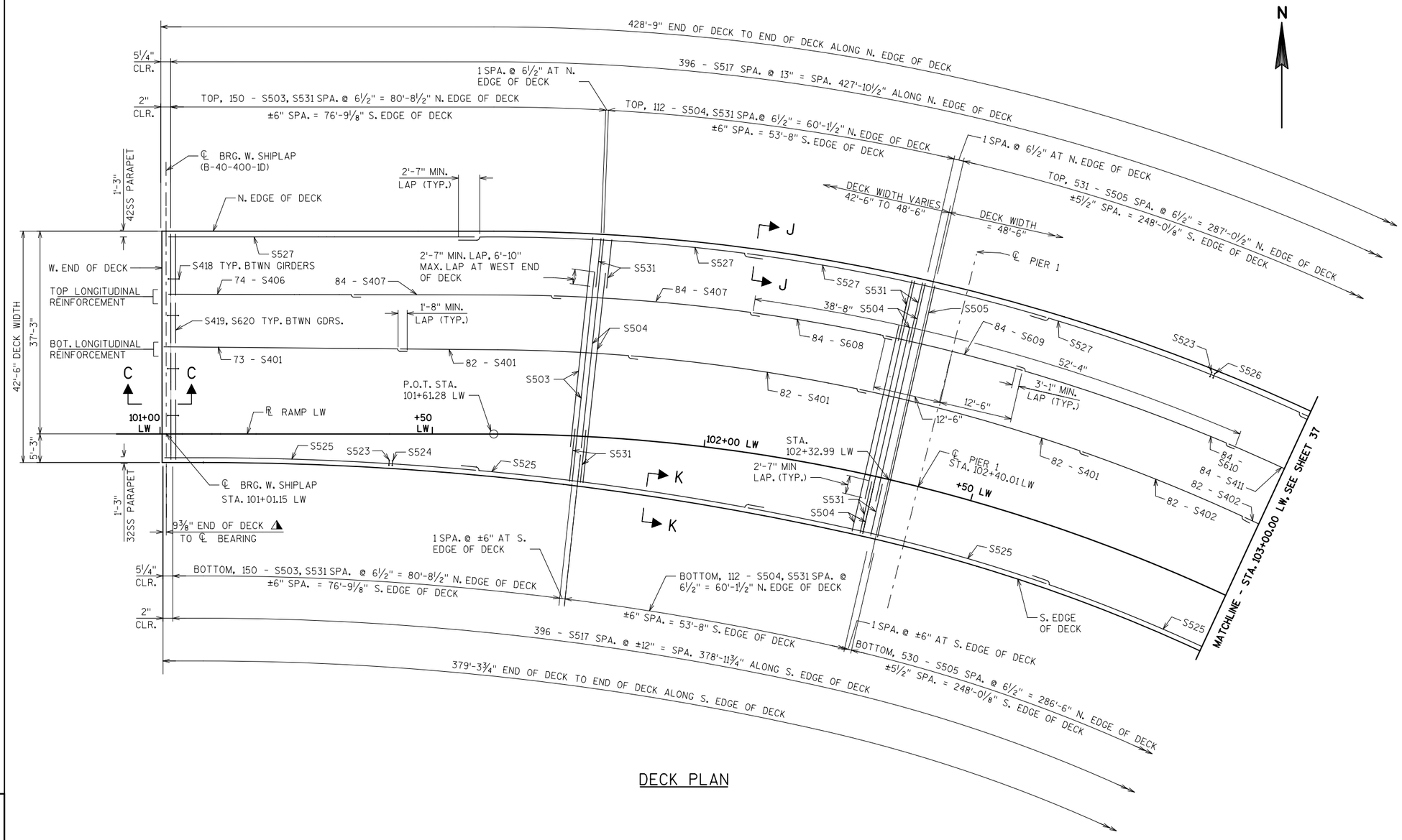
STRUCTURE B-40-916

DRAWN BY TJN | PLANS CK'D. MSC

TANGENT OFFSETS

SHEET 35 OF 53
819

STATE PROJECT NUMBER
1300-13-74



DECK PLAN

NOTES

1. SEE EXPANSION JOINT DETAILS FOR OTHER DETAILS REQUIRED AT EXPANSION JOINTS.
2. FOR SECTION C-C SEE SUPERSTRUCTURE DETAILS SHEET.
3. FOR SECTIONS J-J AND K-K SEE PARAPET DETAILS SHEET.
4. FOR TABLE OF TANGENT OFFSETS SEE SUPERSTRUCTURE BILL OF BARS SHEET.
5. SEE SHEET 43 FOR PARAPET BAR LAYOUT.

LEGEND

⚠ END OF DECK IS PARALLEL TO ℄ OF BRG. WEST SHIPLAP AND END OF DECK B-40-400-1D. DIMENSION SHOWN IS BASED ON A 2 7/16" JOINT OPENING.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

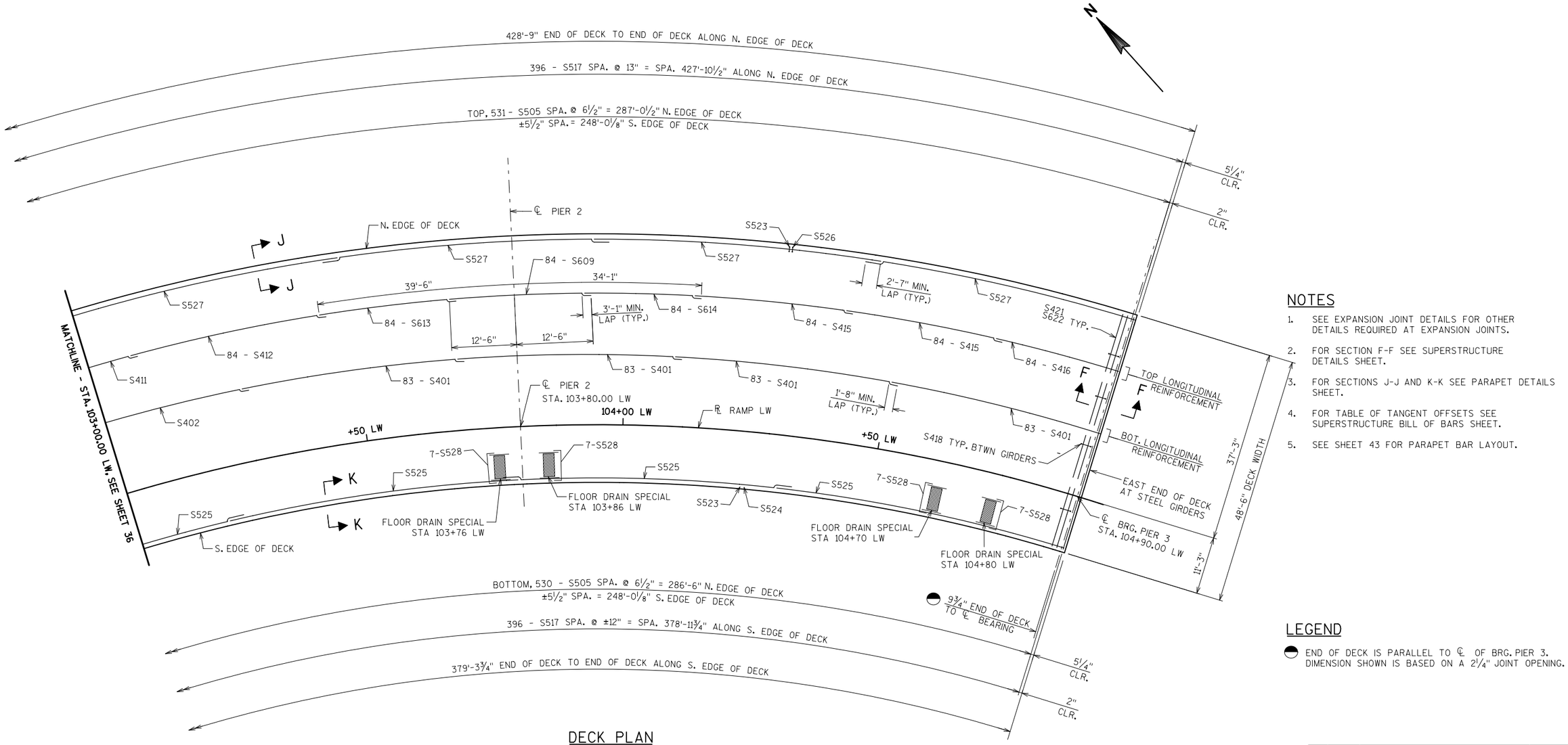
DRAWN BY	CEM	PLANS CK'D.	MSC

SUPERSTRUCTURE PLAN (1 OF 3)

SHEET 36 OF 53
820

IP_PWP:d0345870\080636_sp.dgn 24-JUL-2015 09:27

STATE PROJECT NUMBER
1300-13-74



DECK PLAN

NOTES

1. SEE EXPANSION JOINT DETAILS FOR OTHER DETAILS REQUIRED AT EXPANSION JOINTS.
2. FOR SECTION F-F SEE SUPERSTRUCTURE DETAILS SHEET.
3. FOR SECTIONS J-J AND K-K SEE PARAPET DETAILS SHEET.
4. FOR TABLE OF TANGENT OFFSETS SEE SUPERSTRUCTURE BILL OF BARS SHEET.
5. SEE SHEET 43 FOR PARAPET BAR LAYOUT.

LEGEND

◓ END OF DECK IS PARALLEL TO ℄ OF BRG. PIER 3. DIMENSION SHOWN IS BASED ON A 2¼" JOINT OPENING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. MSC

SUPERSTRUCTURE PLAN (2 OF 3)

SHEET 37 OF 53
821

8

8

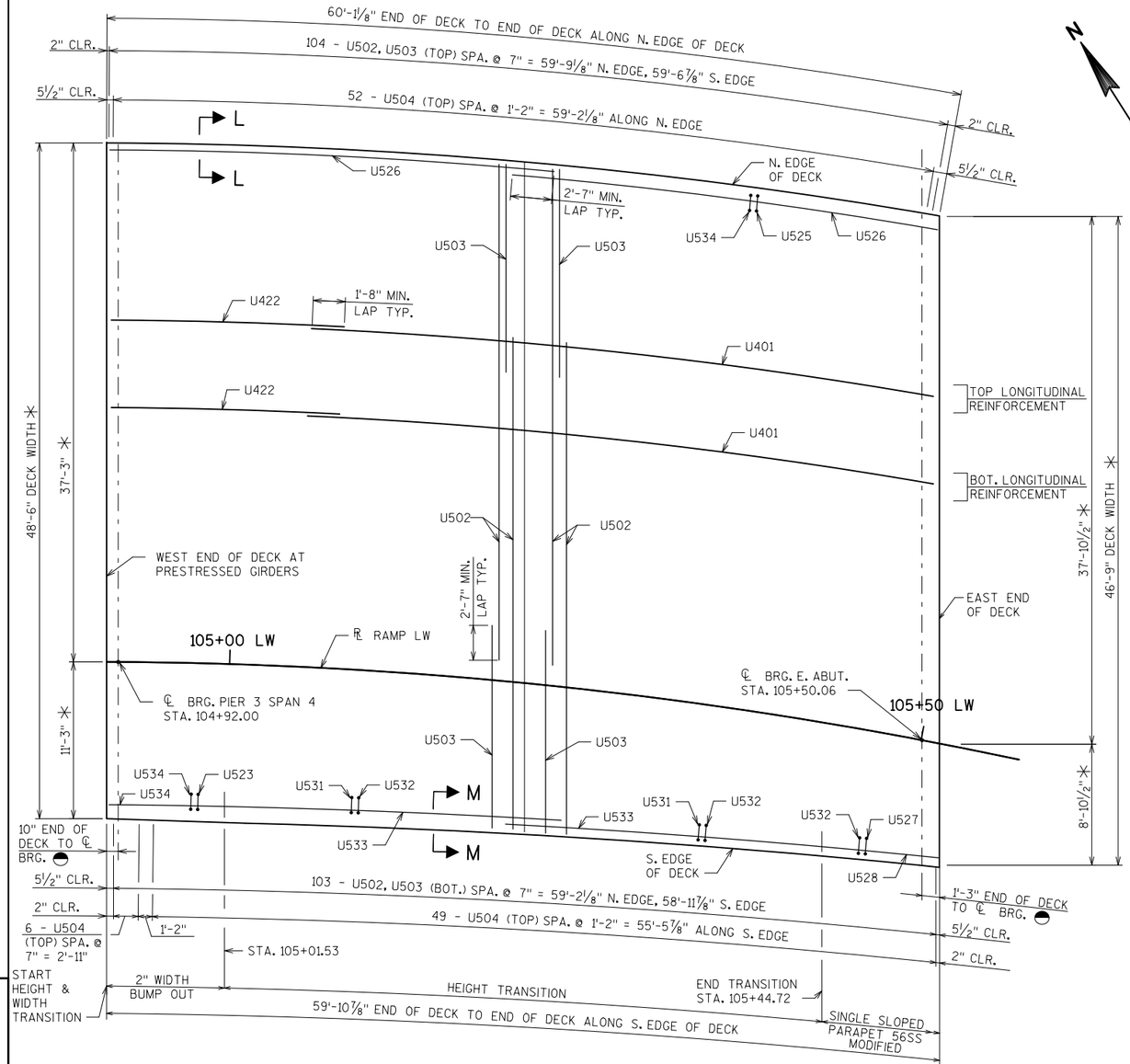
STATE PROJECT NUMBER
1300-13-74

NOTES

1. SEE EXPANSION JOINT DETAILS FOR OTHER DETAILS REQUIRED AT EXPANSION JOINTS.
2. FOR SECTIONS L-L AND M-M SEE PARAPET DETAILS SHEET 2 OF 2.
3. WEST END OF DECK IS PARALLEL TO THE EAST END OF DECK.
4. ALL TRANSVERSE BAR STEEL SHALL BE PLACED PARALLEL TO THE END OF DECK AT BOTH ENDS.
5. FOR PARAPET TRANSITION DETAILS SEE SHEET 43.

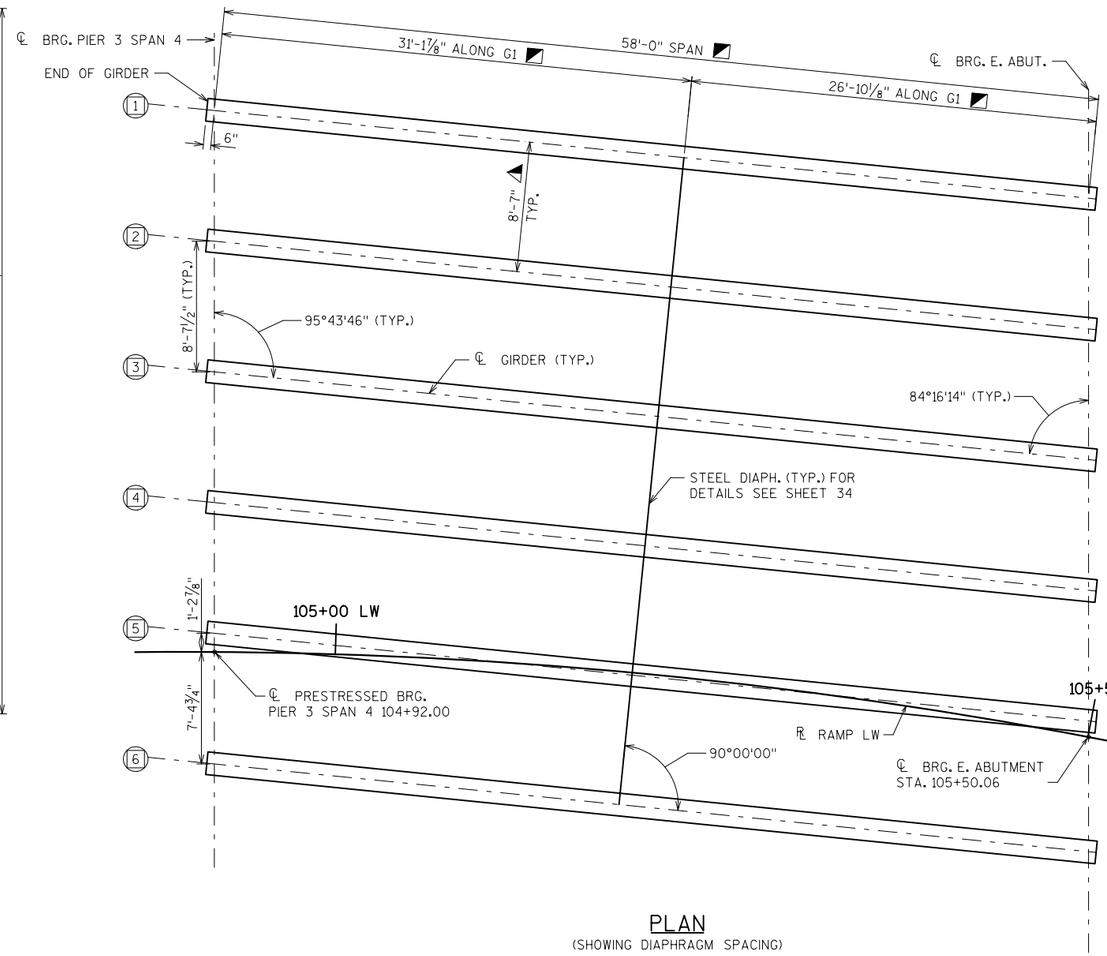
LEGEND

- END OF DECK IS PARALLEL TO ℄ OF BRG. AT BOTH ENDS.
- DIMENSION IS TAKEN PARALLEL TO THE END OF DECK.
- DIMENSION MEASURED PARALLEL TO ℄ GIRDER.
- DIMENSION MEASURED PERPENDICULAR TO ℄ GIRDER.
- GIRDER NUMBER.



DECK PLAN

ELEVATIONS AT TOP OF DECK (T.O.D.)											
	PIER 3 SPAN 4	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	E. ABUT.
LT. EDGE OF DECK	611.24	610.97	610.69	610.41	610.13	609.85	609.56	609.27	608.97	608.68	608.38
GIRDER 1	611.23	610.94	610.65	610.36	610.07	609.78	609.50	609.21	608.92	608.64	608.35
GIRDER 2	610.89	610.60	610.32	610.04	609.76	609.48	609.20	608.92	608.64	608.36	608.08
GIRDER 3	610.55	610.27	609.99	609.72	609.44	609.17	608.90	608.63	608.35	608.08	607.81
GIRDER 4	610.20	609.93	609.67	609.40	609.13	608.87	608.61	608.34	608.08	607.81	607.54
GIRDER 5	609.86	609.60	609.34	609.08	608.82	608.57	608.31	608.06	607.80	607.54	607.28
PGL	609.81	609.57	609.32	609.07	608.82	608.57	608.31	608.05	607.79	607.52	607.25
GIRDER 6	609.51	609.26	609.01	608.76	608.52	608.27	608.02	607.78	607.53	607.28	607.03
RT. EDGE OF DECK	609.41	609.18	608.95	608.72	608.48	608.25	608.01	607.77	607.52	607.28	607.03



PLAN
(SHOWING DIAPHRAGM SPACING)

PARAPET TRANSITION		
	STA.	OFFSET ✳
START TRANSITION	104+91.17	10'
END OF 2" WIDTH TRANSITION	105+01.53	9.96'
END OF HEIGHT TRANSITION	105+44.72	8.01'

✳ OFFSET DISTANCES ARE FROM ℞ RAMP LW TO THE TOE OF THE PARAPET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY TJN | PLANS CK'D. MSC

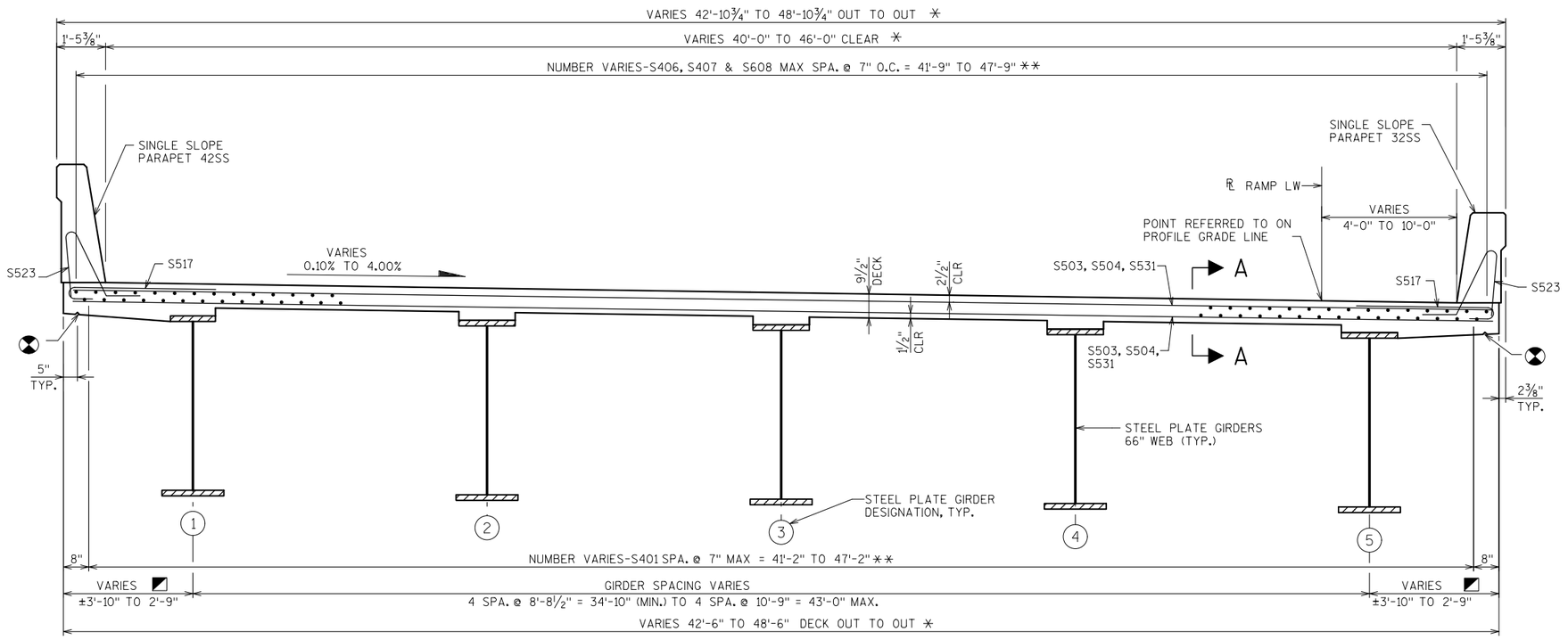
SUPERSTRUCTURE PLAN (3 OF 3)

SHEET 38 OF 53
822

8

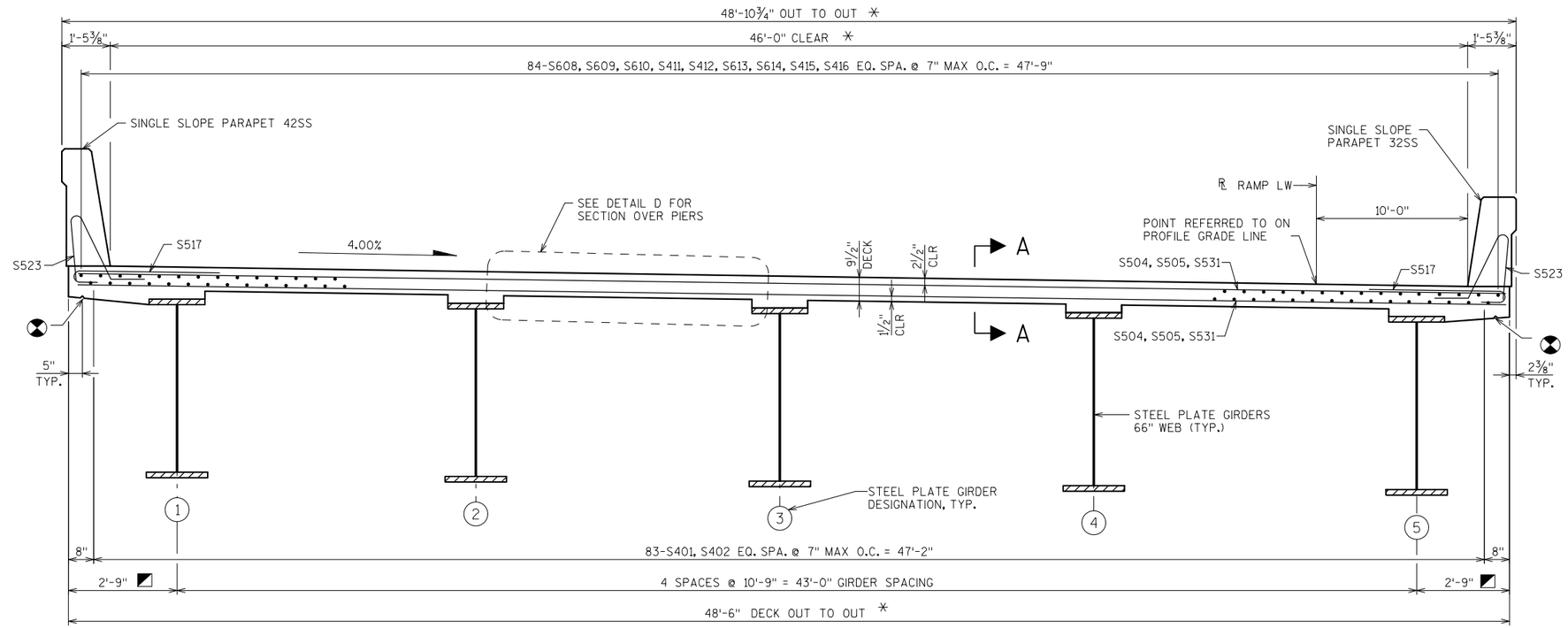
8

STATE PROJECT NUMBER
1300-13-74



TYPICAL SECTION - STA. 101+00.38 TO STA. 102+32.99 LW

LOOKING EAST



TYPICAL SECTION - STA. 102+32.99 LW TO STA. 104+90.82 LW

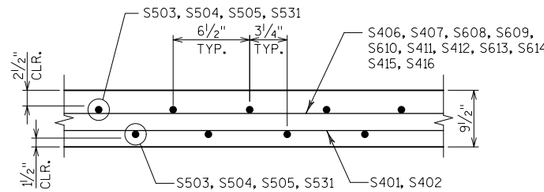
LOOKING EAST

NOTES

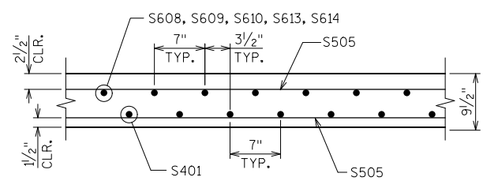
1. SEE SHEET 43 & 44 FOR PARAPET DETAILS.
2. SEE SHEET 49 FOR EXPANSION DEVICE DETAILS.
3. SEE GENERAL PLAN FOR SUPERELEVATION TRANSITIONS.
4. SEE FRAMING PLAN FOR GIRDER SPACINGS.

LEGEND

- ◪ DIMENSION TAKEN NORMAL TO ℄ GIRDER
- ⊗ ¾" V-GROOVE. TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENTS OR 3" FROM FRONT FACE OF END DIAPRAGM TYP., REQUIRED ALONG ALL EDGES OF DECK.
- ✳ DIMENSION IS TAKEN NORMAL TO ℄ RAMP LW
- ✳✳ SEE SUPERSTRUCTURE PLAN FOR NUMBER OF LONGITUDINAL BARS FROM STA. 101+00.38 TO STA. 102+32.99



SECTION A-A



DETAIL D - REINFORCEMENT OVER PIERS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. MSC

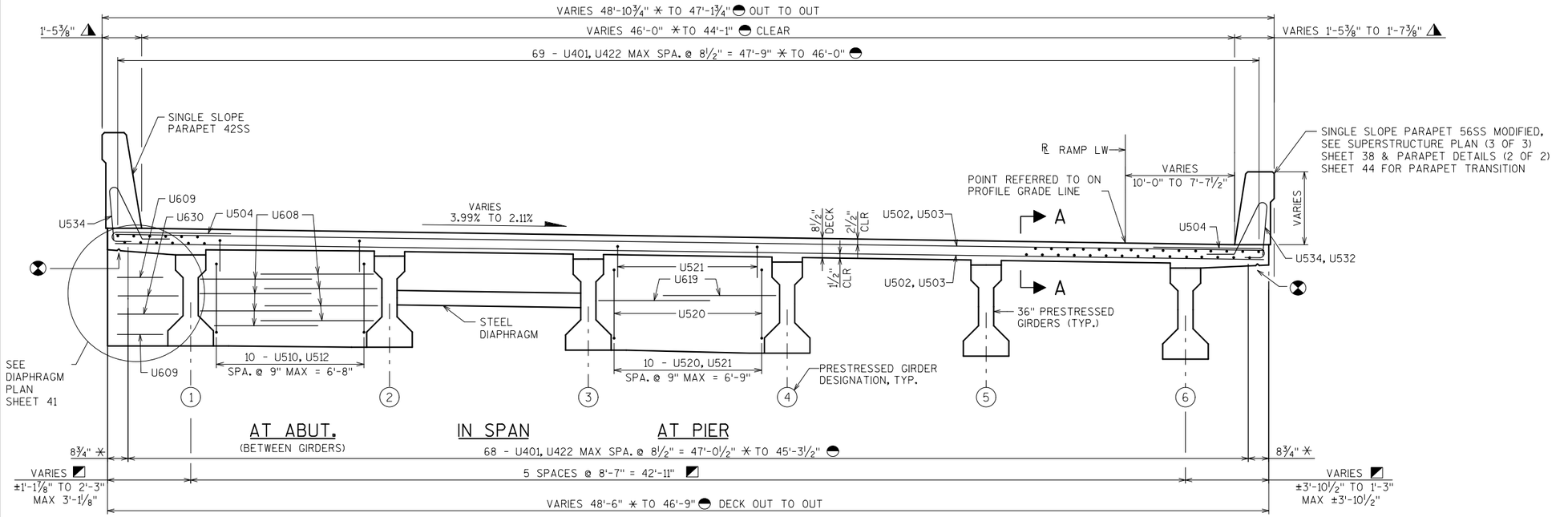
SUPERSTRUCTURE CROSS SECTION (1 OF 2)

SHEET 39 OF 53

823

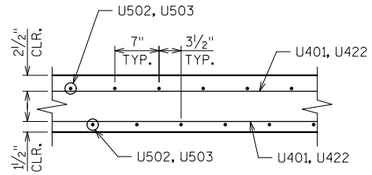
8

8

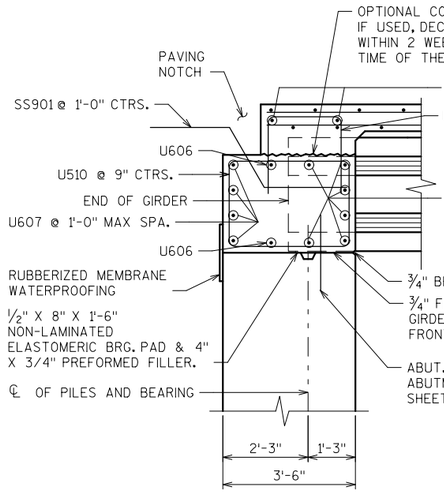


TYPICAL SECTION - STA. 104+91.17 TO STA. 105+51.34 LW

LOOKING EAST

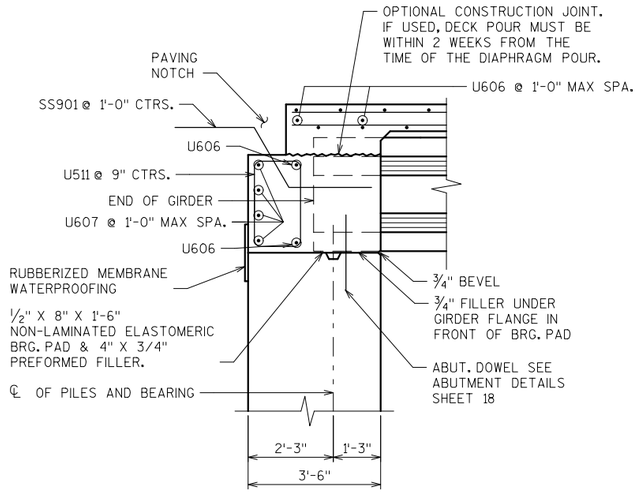


SECTION A-A



AT ABUTMENT

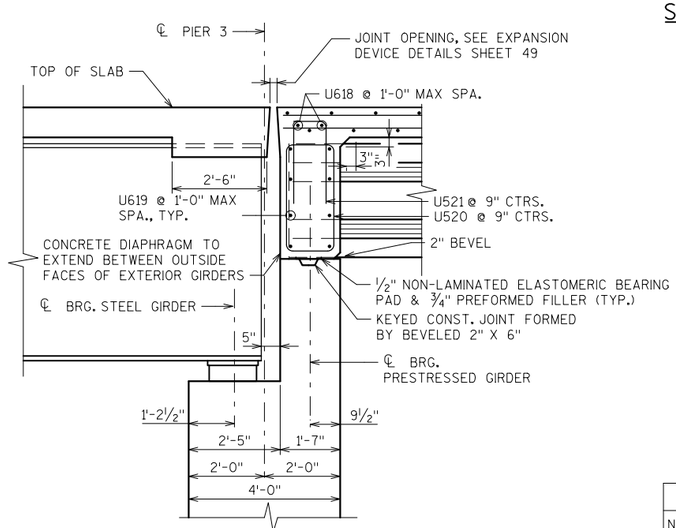
(SECTION BETWEEN GIRDERS)



AT ABUTMENT

(SECTION AT GIRDERS)

PART LONGITUDINAL SECTION



AT PIER DIAPHRAGM

(INTERIOR DIAPHRAGMS ONLY)

STATE PROJECT NUMBER

1300-13-74

NOTES

1. SEE SHEET 43 & 44 FOR PARAPET DETAILS.
2. SEE SHEET 49 FOR EXPANSION DEVICE DETAILS.
3. SEE TYPICAL CROSS SECTION (1 OF 3) SHEET 3 FOR SUPERELEVATION TRANSITIONS.
4. SEE FRAMING PLAN SHEET 38 FOR GIRDER SPACINGS.
5. SEE SHEET 41 FOR DIAPHRAGM DETAILS AT THE E. ABUT.

LEGEND

- ◩ DIMENSION TAKEN NORMAL TO ℄ GIRDER.
- ⊗ ¾" V-GROOVE. TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENTS OR 3" FROM FRONT FACE OF END DIAPHRAGM TYP., REQUIRED ALONG ALL EDGES OF DECK.
- ✳ DIMENSION IS TAKEN NORMAL TO ℄ RAMP LW.
- ◭ DIMENSION IS TAKEN NORMAL TO DECK EDGE.
- ◓ DIMENSION IS TAKEN NORMAL TO THE END OF DECK AT STA. 105+51.34 LW.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY TJN | PLANS CK'D. MSC

SUPERSTRUCTURE CROSS SECTION (2 OF 2)

SHEET 40 OF 53

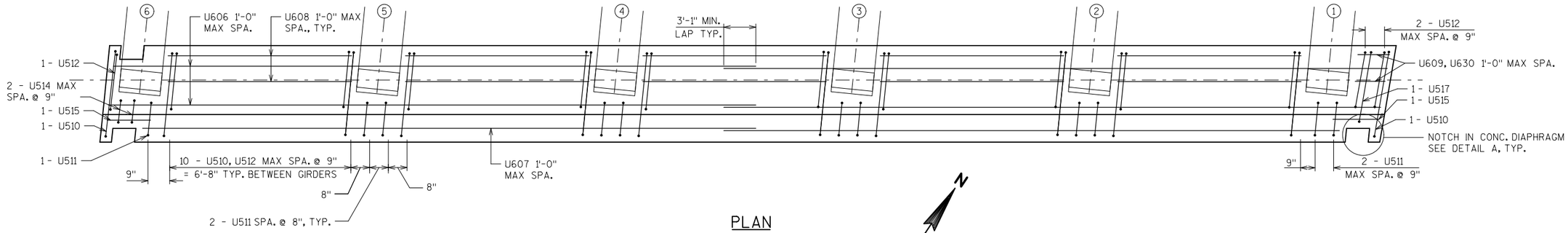
824

8

8

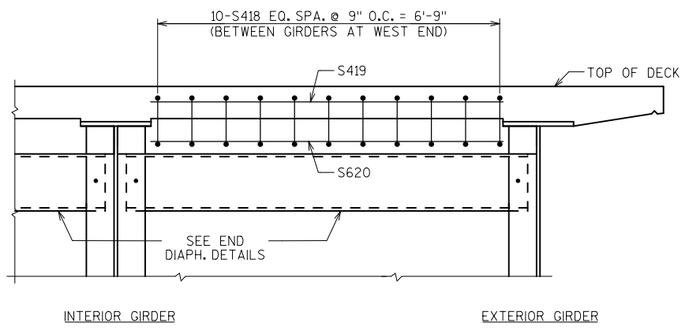
IP_PWP:d0345870\080640_SS.dgn 24-JUL-2015 09:28

STATE PROJECT NUMBER
1300-13-74



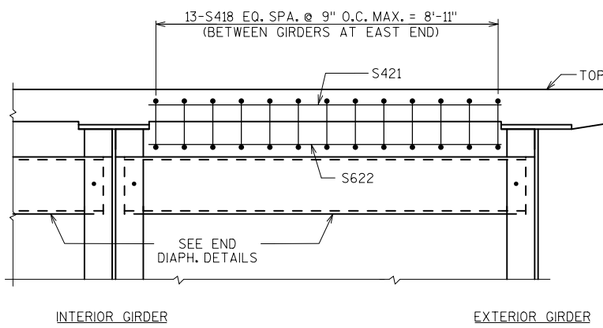
PLAN

DIAPHRAGM AT E. ABUT.



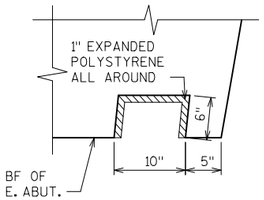
SECTION H-H PART TRANSVERSE SECTION AT DIAPHRAGM

(WEST END OF STRUCTURE)



SECTION G-G PART TRANSVERSE SECTION AT DIAPHRAGM

(EAST END OF STRUCTURE)



DETAIL A

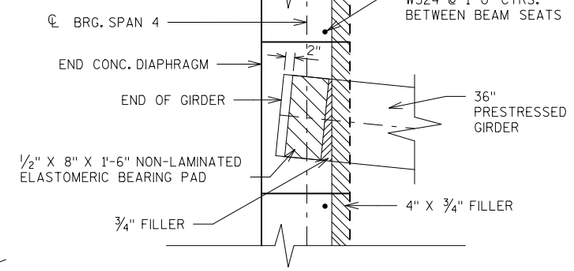
CONC. DIAPHRAGM NOTCH TYP.

NOTES

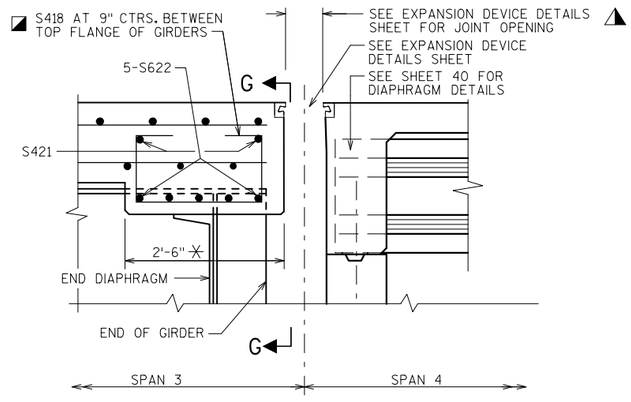
1. SEE SUPERSTRUCTURE PLAN FOR LOCATIONS OF SECTIONS C-C AND F-F.

LEGEND

- ◪ DIMENSION TAKEN NORMAL TO ℄ GIRDER
- ✳ DIMENSION IS TAKEN NORMAL TO ℄ OF JOINT.
- ◭ STRIP SEAL EXPANSION DEVICE OPENING.

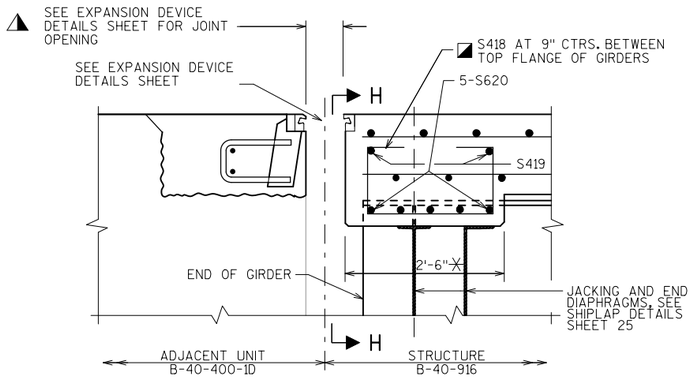


BEARING PAD AT PIER 3



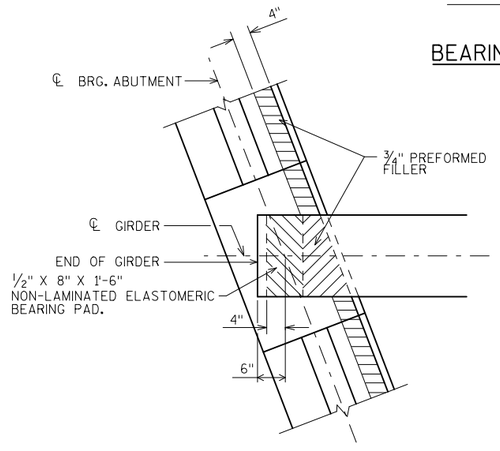
SECTION F-F THRU EXPANSION JOINT

(EAST END OF STRUCTURE)



SECTION C-C THRU EXPANSION JOINT

(WEST END OF STRUCTURE)



BEARING PAD AT EAST ABUTMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY	TJN	PLANS CK'D.	MSC

SUPERSTRUCTURE DETAILS

SHEET 41 OF 53

825

8

8

IP_PWP:d0345870\080641_SS.dgn 24-JUL-2015 09:29

STATE PROJECT NUMBER
1300-13-74

BILL OF BARS

TOTAL COATED = 164,820 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
S401	654	44'-6"	X				DECK LONGITUDINAL BOTTOM IN SPAN
S402	166	32'-6"	X			X	DECK LONGITUDINAL BOTTOM IN SPAN 2
S503	300	38'-9"	X				DECK TRANSVERSE TOP & BOTTOM SPAN 1
S504	224	40'-9"	X				DECK TRANSVERSE TOP & BOTTOM SPAN 1
S505	1061	48'-2"	X				DECK TRANSVERSE TOP & BOTTOM
S406	74	32'-8"	X			X	DECK LONGITUDINAL TOP SPAN 1
S407	168	38'-4"	X				DECK LONGITUDINAL TOP SPAN 1
S608	84	29'-3"	X				DECK LONGITUDINAL TOP PIER 1
S609	168	25'-0"	X				DECK LONGITUDINAL TOP PIER 1 & 2
S610	84	42'-11"	X				DECK LONGITUDINAL TOP PIER 1
S411	84	23'-4"	X				DECK LONGITUDINAL TOP SPAN 2
S412	84	33'-11"	X			X	DECK LONGITUDINAL TOP SPAN 2
S613	84	30'-1"	X				DECK LONGITUDINAL TOP PIER 2
S614	84	24'-8"	X				DECK LONGITUDINAL TOP PIER 2
S415	168	31'-5"	X				DECK LONGITUDINAL TOP SPAN 3
S416	84	23'-3"	X			X	DECK LONGITUDINAL TOP SPAN 3
S517	792	5'-9"	X		X		DECK TRANSVERSE, TOP, OVERHANG
S418	92	3'-10"	X		X		END OF DECK, LONGITUDINAL STIRRUP
S419	8	7'-2"	X				END OF DECK, TRANSVERSE, WEST SHIPLAP
S620	20	7'-2"	X				END OF DECK, TRANSVERSE, WEST SHIPLAP
S421	8	9'-2"	X				END OF DECK, TRANSVERSE, SPAN 3
S622	20	9'-2"	X				END OF DECK, TRANSVERSE, SPAN 3
S523	1214	4'-5"	X		X		PARAPET 32SS, 42SS - VERT.
S524	570	5'-0"	X		X		PARAPET 32SS - VERT.
S525	42	56'-8"	X				PARAPET 32SS - HORIZ.
S526	644	6'-8"	X		X		PARAPET 42SS - VERT.
S527	64	56'-2"	X				PARAPET 42SS - HORIZ.
S528	28	5'-10"	X				DECK LONGITUDINAL AT DRAIN LOCATIONS
S429	8	7'-2"	X				END OF DECK TRANSVERSE - JOINT SHIPLAP
S430	8	9'-2"	X				END OF DECK TRANSVERSE - JOINT - SPAN 3
S531	522	10'-0"	X				DECK TRANSVERSE TOP & BOTTOM SPAN 1

NOTE: LENGTH SHOWN FOR ANY BAR IN A BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQ'D	LENGTH
S402	2 SERIES OF 96	20'-6" TO 44'-6"
S406	1 SERIES OF 74	27'-0" TO 38'-4"
S412	1 SERIES OF 84	23'-5" TO 44'-4"
S416	1 SERIES OF 84	15'-0" TO 31'-5"

BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS

TOTAL STAINLESS = 820 LBS
TOTAL COATED = 27,490 LBS

	BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
	SS901	48	5'-0"		X	X		CONC. ABUT. DIAPH. TO APPROACH SLAB
	U401	137	41'-6"	X				DECK LONGITUDINAL TOP & BOTTOM IN SPAN
	U502	207	35'-9"	X				DECK TRANSVERSE TOP & BOTTOM
	U503	207	15'-0"	X				DECK TRANSVERSE TOP & BOTTOM
	U504	107	5'-9"	X		X		DECK TRANSVERSE, TOP, OVERHANG
	U606	8	24'-9"	X				DIAPHRAGM - HORIZ. - ABUT.
	U607	8	23'-5"	X				DIAPHRAGM - HORIZ. - ABUT.
	U608	60	5'-6"	X				DIAPHRAGM - HORIZ. - ABUT.
	U609	4	1'-4"	X				DIAPHRAGM - HORIZ. - ABUT.
	U510	52	11'-2"	X		X		DIAPHRAGM - VERT. - ABUT.
	U511	11	7'-8"	X		X		DIAPHRAGM - VERT. - ABUT.
	U512	53	5'-7"	X		X		DIAPHRAGM - VERT. - ABUT.
	U514	2	4'-9"	X		X		DIAPHRAGM - VERT. - ABUT. S. END
	U515	2	1'-9"	X				DIAPHRAGM - HORIZ. - ABUT. ENDS
	U517	1	10'-2"	X		X		DIAPHRAGM - VERT. - ABUT. N. END
	U618	4	25'-8"	X				DIAPHRAGM - HORIZ. - PIER
	U619	40	5'-5"	X				DIAPHRAGM - HORIZ. - PIER
	U520	50	6'-6"	X		X		DIAPHRAGM - VERT. - PIER
	U521	50	4'-8"	X		X		DIAPHRAGM - VERT. - PIER
	U422	137	20'-0"	X				DECK LONGITUDINAL TOP & BOTTOM IN SPAN
	U523	16	5'-0"	X		X		PARAPET 32SS - VERT.
◩	U524	6	9'-10"	X				PARAPET TRANSITION HORIZ.
	U525	91	6'-8"	X		X		PARAPET 42SS - VERT.
◩	U526	8	59'-9"	X				PARAPET 42SS - HORIZ.
	U527	13	9'-0"	X		X		PARAPET 56SS MODIFIED - VERT.
◩	U528	10	7'-9"	X				PARAPET 56SS MODIFIED - HORIZ.
	U529	10	8'-2"	X				END OF DECK TRANS. JOINT - PIER 3
	U630	2	1'-10"	X				DIAPHRAGM - HORIZ. - N. END
	U531	64	7'-0"	X		X	X	PARAPET - VERT. TRANSITION
	U532	77	4'-5"	X		X		PARAPET 56SS MODIFIED - VERT.
◩	U533	9	42'-0"	X				PARAPET TRANSITION HORIZ.
	U534	107	4'-5"	X		X		PARAPET 32SS, 42SS - VERT.

NOTE: LENGTH SHOWN FOR ANY BAR IN A BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

◩ OVERALL LENGTH OF BAR IS PROVIDED FOR QUANTITY PURPOSES. CONTRACTOR TO DETERMINE AND ADJUST ACTUAL BAR LENGTHS TO FIT BETWEEN EXPANSION JOINTS. PAY QUANTITY IS BASED ON VALUE SHOWN IN BILL OF BARS.

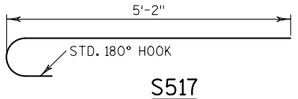
BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
U531	1 SERIES OF 64	5'-0" TO 9'-0"

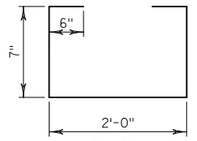
BUNDLE AND TAG EACH SERIES SEPARATELY.

NOTES

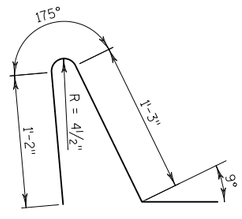
1. LONGEST BAR OF BAR SERIES ON N. SIDE OF THE STRUCTURE UNLESS OTHERWISE INDICATED.



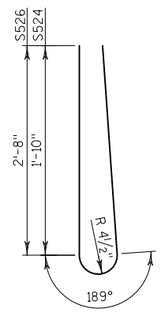
S517



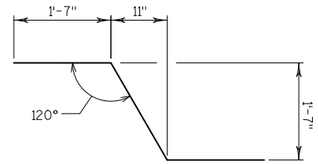
S418



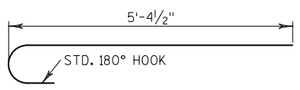
S523



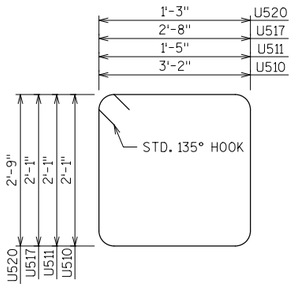
S524, S526



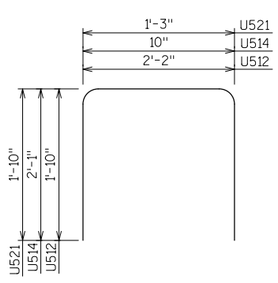
SS901



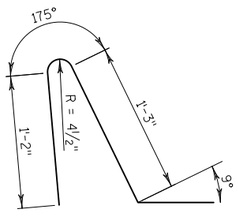
U504



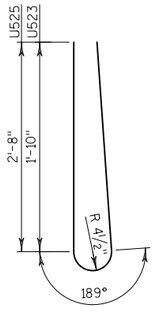
U510, U511, U517, U520



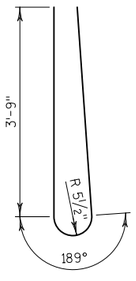
U512, U514, U521



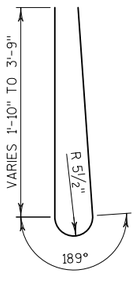
U534



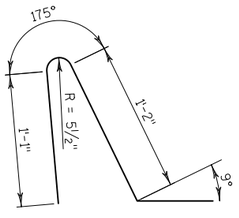
U523, U525



U527



U531



U532

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. MSC

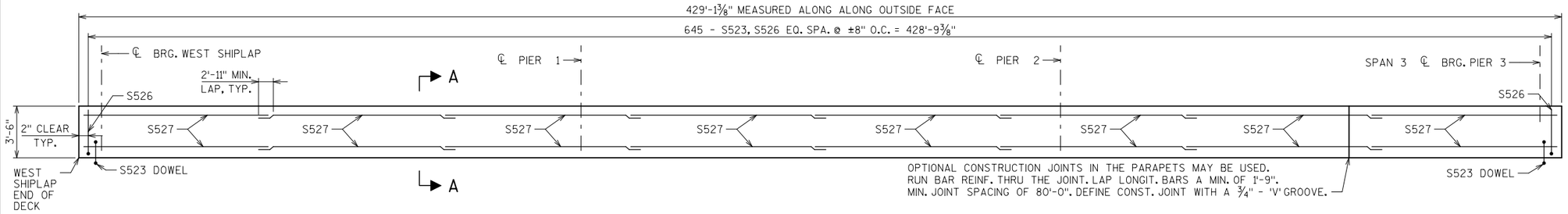
SUPERSTRUCTURE
BILL OF BARS

SHEET 42 OF 53
826

8

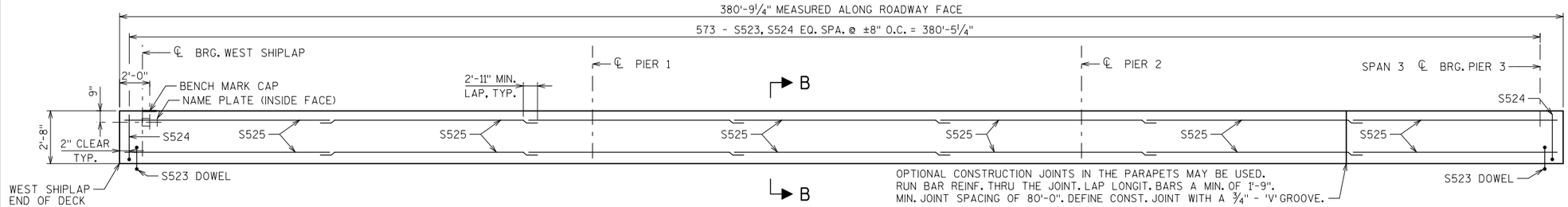
8

STATE PROJECT NUMBER
1300-13-74



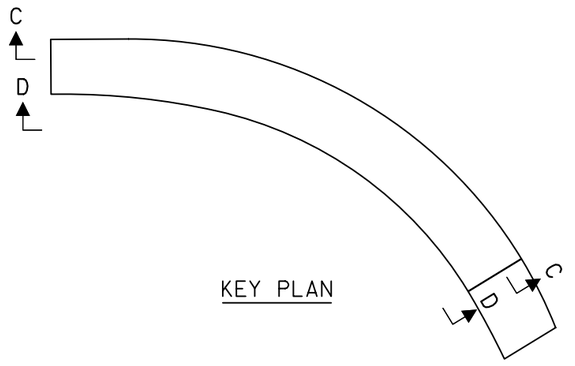
SECTION C-C NORTH PARAPET 42SS REINFORCING ELEVATION

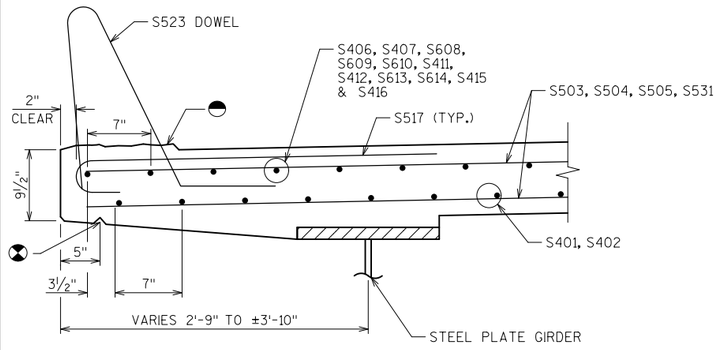
(LOOKING AT ROADWAY FACE)



SECTION D-D SOUTH PARAPET 32SS REINFORCING ELEVATION

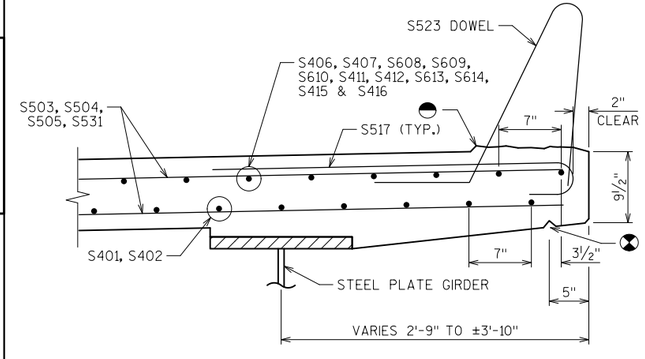
(LOOKING AT OUTSIDE FACE)





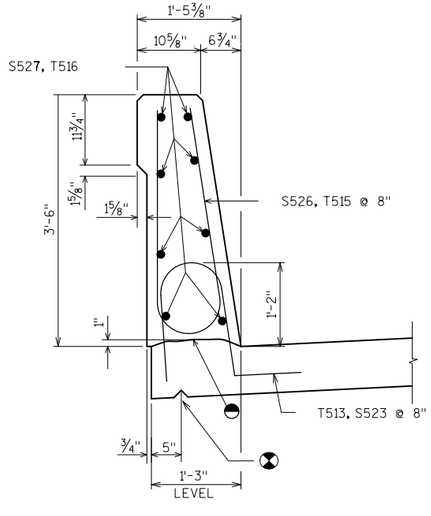
SECTION J-J EDGE OF DECK DETAIL

PARAPET NOT SHOWN FOR CLARITY

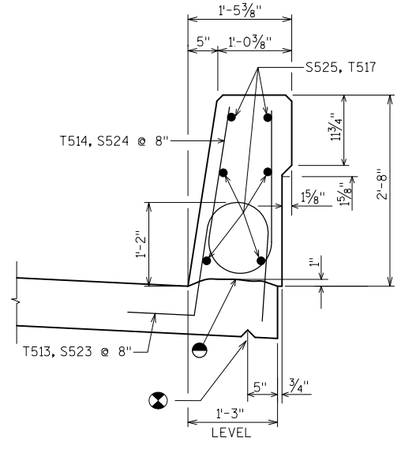


SECTION K-K EDGE OF DECK DETAIL

PARAPET NOT SHOWN FOR CLARITY



SECTION A-A THRU 42SS PARAPET



SECTION B-B THRU 32SS PARAPET

LEGEND

- ¾" V-GROOVE. TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENTS OR 6" FROM FRONT FACE OF END DIAPHRAGMS. V-GROOVES ARE REQUIRED.
- CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH.

NOTES

1. SEE SHEET 19 FOR APPROACH SLAB BILL OF BARS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY: MDM | PLANS CK'D.: MJN

PARAPET DETAILS (1 OF 2)

SHEET 43 OF 53

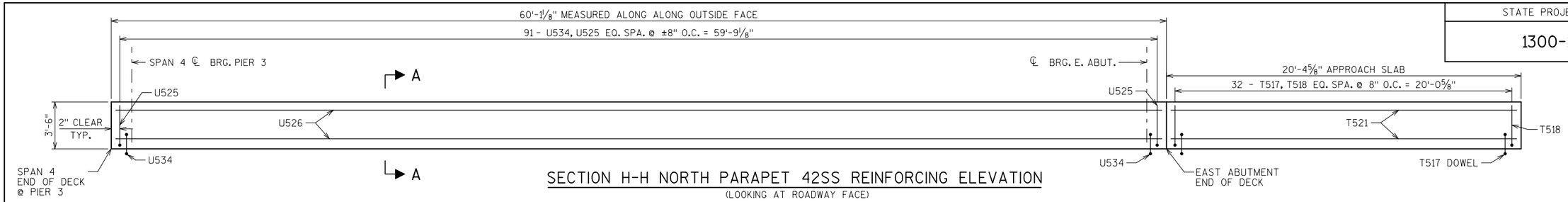
827

8

8

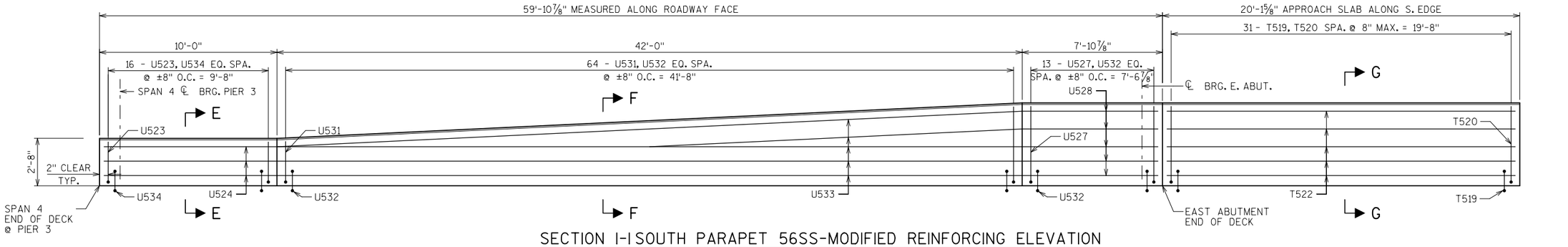
STATE PROJECT NUMBER

1300-13-74



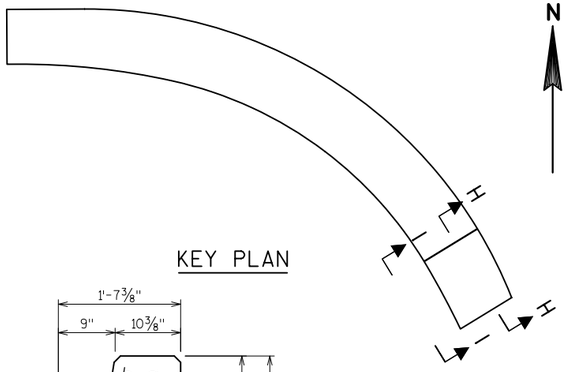
SECTION H-H NORTH PARAPET 42SS REINFORCING ELEVATION

(LOOKING AT ROADWAY FACE)



SECTION I-I SOUTH PARAPET 56SS-MODIFIED REINFORCING ELEVATION

(LOOKING AT OUTSIDE FACE)



SECTION L-L EDGE OF DECK DETAIL

PARAPET NOT SHOWN FOR CLARITY

SECTION M-M EDGE OF DECK DETAIL

PARAPET NOT SHOWN FOR CLARITY

SECTION E-E

SECTION F-F

SECTION G-G

LEGEND

- ¾" V-GROOVE. TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENTS OR 6" FROM FRONT FACE OF END DIAPHRAGMS. V-GROOVES ARE REQUIRED.
- CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH.

NOTES

1. SEE SHEET 19 FOR APPROACH SLAB BILL OF BARS
2. SEE "PARAPET DETAILS (1 OF 2)" SHEET FOR SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY DRH | PLANS CK'D. MJN

PARAPET DETAILS (2 OF 2)

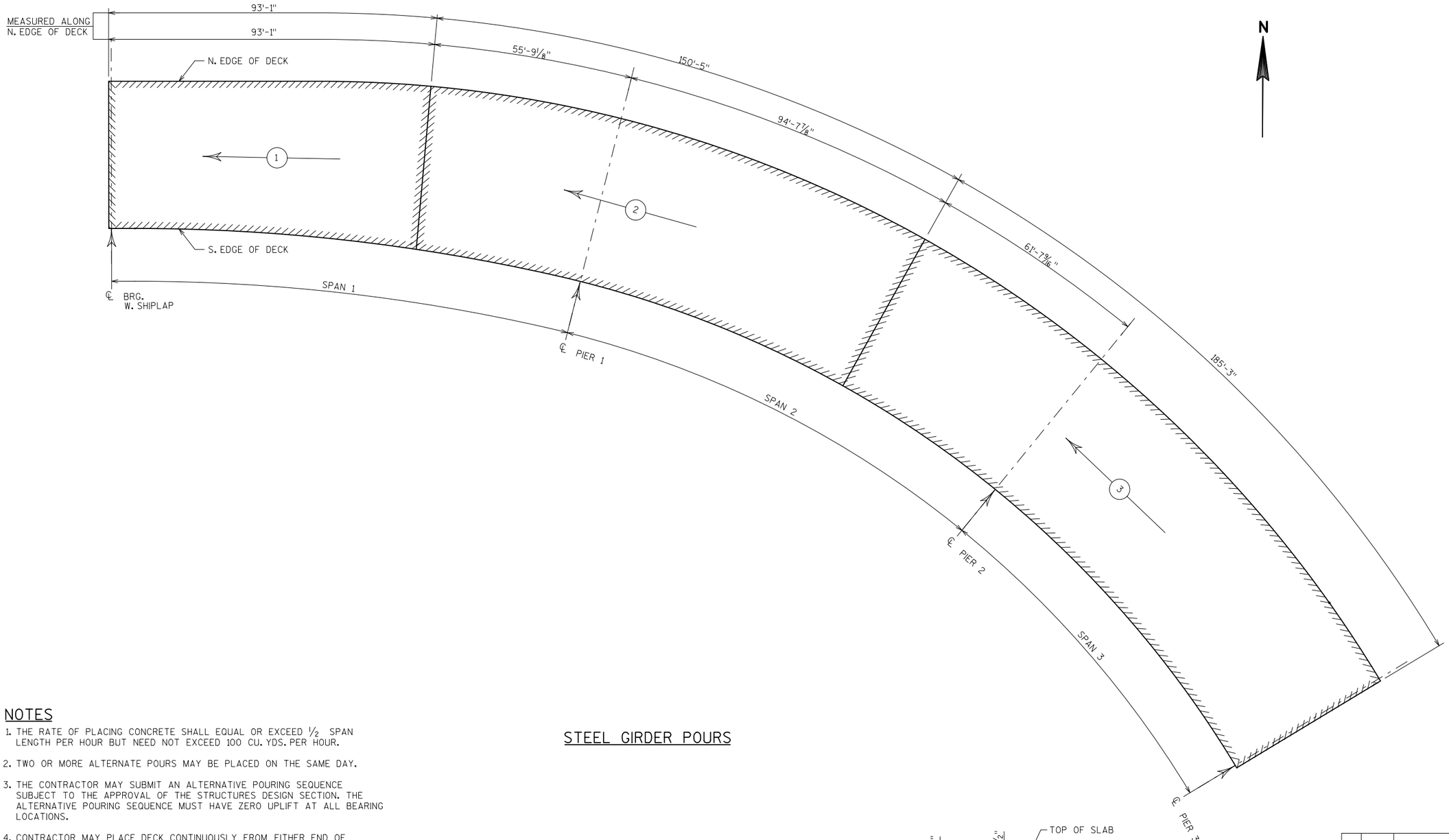
SHEET 44 OF 53

828

8

8

STATE PROJECT NUMBER
1300-13-74



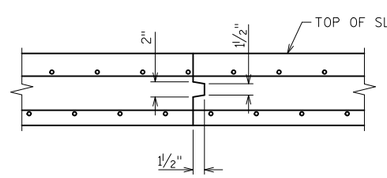
NOTES

1. THE RATE OF PLACING CONCRETE SHALL EQUAL OR EXCEED ½ SPAN LENGTH PER HOUR BUT NEED NOT EXCEED 100 CU. YDS. PER HOUR.
2. TWO OR MORE ALTERNATE POURS MAY BE PLACED ON THE SAME DAY.
3. THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE POURING SEQUENCE SUBJECT TO THE APPROVAL OF THE STRUCTURES DESIGN SECTION. THE ALTERNATIVE POURING SEQUENCE MUST HAVE ZERO UPLIFT AT ALL BEARING LOCATIONS.
4. CONTRACTOR MAY PLACE DECK CONTINUOUSLY FROM EITHER END OF THE STRUCTURE. IF MORE THAN ONE POUR IS REQUIRED, BULKHEADS BETWEEN POURS SHALL BE POSITIONED AT THE LOCATIONS IDENTIFIED ON THIS PLAN.
5. PREVIOUSLY PLACED CONCRETE MUST HAVE ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI BEFORE AREAS IMMEDIATELY ADJACENT MAY BE PLACED.
6. FOLLOW PROCEDURES OUTLINED IN THE SPECIAL PROVISIONS FOR PROMPTLY FOGGING, COVERING AND CURING FRESHLY PLACED CONCRETE.
7. MEASUREMENTS TAKEN ALONG N. EDGE OF DECK.

STEEL GIRDER POURS

LEGEND

(2) INDICATES POUR NUMBER AND DIRECTION



SECTION THRU TRANSVERSE JOINT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. PAT

DECK POUR SEQUENCE

SHEET 45 OF 53
829

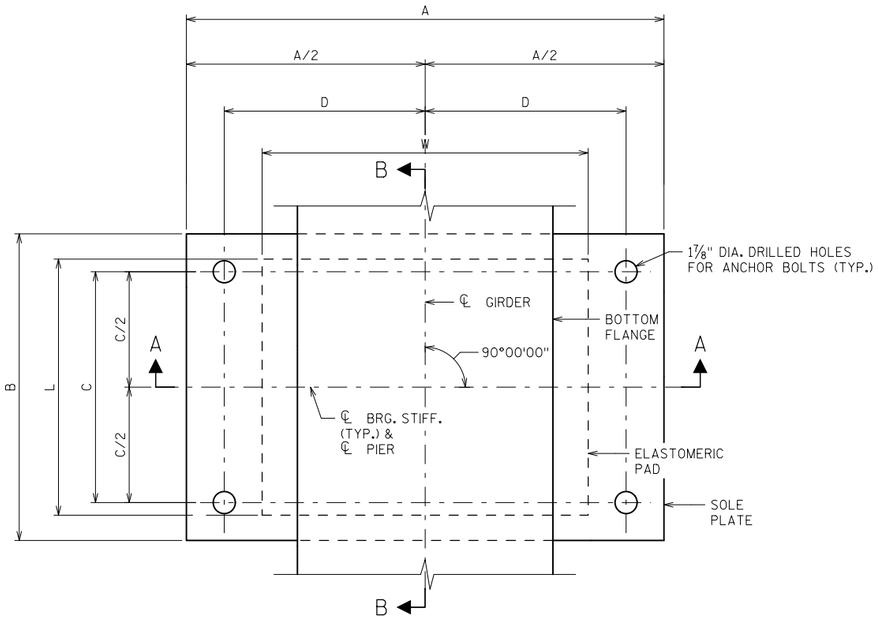
8

8

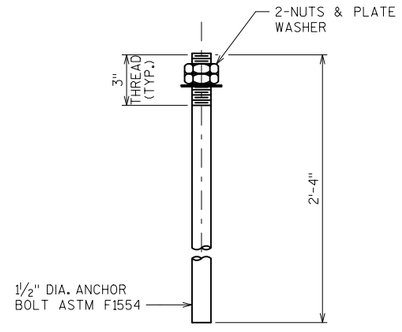
STATE PROJECT NUMBER

1300-13-74

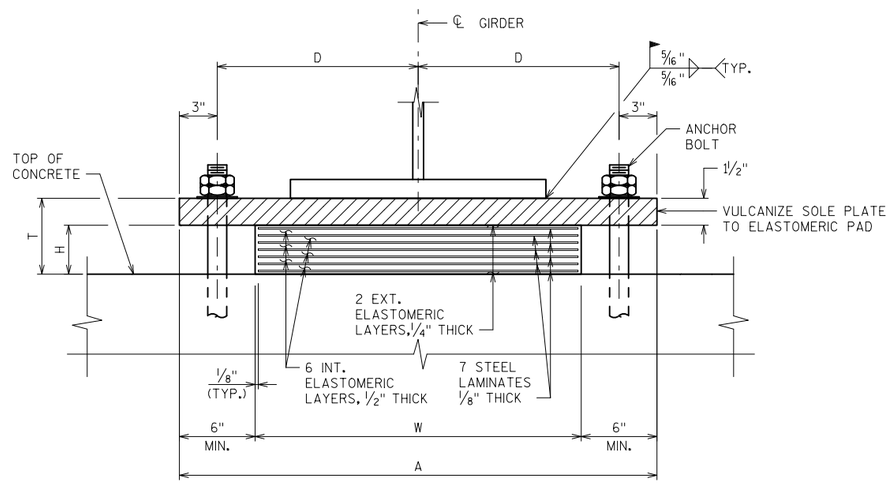
FIXED BEARING DETAILS									
SUPPORT	GIRDER NO.	L	W	A	B	C	D	H	T @ CL GIRDER
PIER 1	1	1'-8"	2'-0"	3'-0"	2'-2"	1'-8"	1'-3"	4 3/8"	.490'
	2	1'-8"	2'-5"	3'-5"	2'-2"	1'-8"	1'-5 1/2"	4 3/8"	.490'
	3	1'-8"	2'-0"	3'-0"	2'-2"	1'-8"	1'-3"	4 3/8"	.490'
	4	1'-8"	2'-0"	3'-0"	2'-2"	1'-8"	1'-3"	4 3/8"	.490'
	5	1'-8"	2'-0"	3'-0"	2'-2"	1'-8"	1'-3"	4 3/8"	.490'



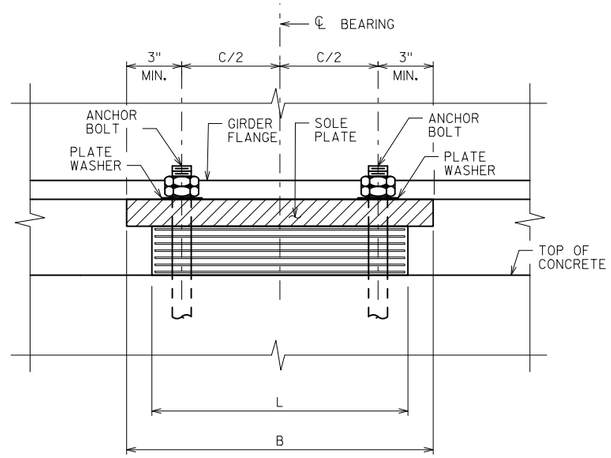
FIXED ELASTOMERIC BEARING PLAN AT PIER 1



ANCHOR BOLT DETAIL



SECTION A-A



SECTION B-B

BEARING NOTES

1. ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARINGS.
2. ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.
3. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.
4. ANCHOR BOLTS, NUTS & WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C.
5. ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM F1554 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.
6. SOLE PLATE SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER.
7. ALL MATERIAL IN FIXED ELASTOMERIC BEARINGS INCLUDING ANCHOR BOLTS, GROUT, AND FIELD WELDING SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ELASTOMERIC FIXED".
8. ALL MATERIAL IN BEARINGS, BUT EXCLUDING ANCHOR BOLTS, NUTS, AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.
9. CHAMFER ANCHOR BOLTS PRIOR TO THREADING.
10. ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.
11. PROVIDE ⅛" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE FOR BEARINGS AT W. SHIPLAP.
12. ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND TWO HEX NUTS PER BOLT FOR FIXED BEARING AND ONE NUT PER BOLT FOR EXPANSION BEARINGS. PROJECT ANCHOR BOLTS 2¼" ABOVE TOP OF SOLE PLATE FOR FIXED BEARINGS AND 2¼" ABOVE TOP OF RETAINER FOR EXPANSION BEARINGS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. PAT

ELASTOMERIC BEARING DETAILS (1 OF 2)

SHEET 46 OF 53

830

8

8

IP_PWP:d0345870\080646_BD.dgn 24-JUL-2015 09:31

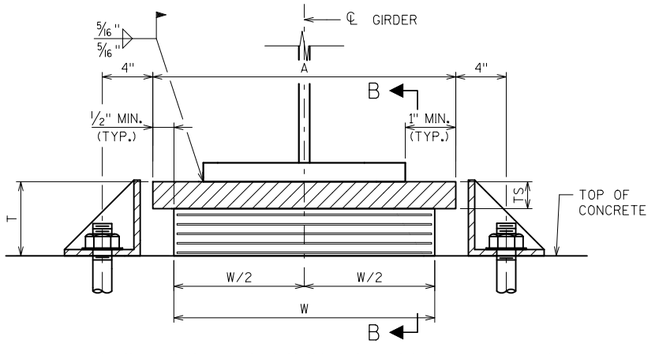
STATE PROJECT NUMBER
1300-13-74

EXPANSION BEARING DETAILS

SUPPORT	GIRDER NO.	L	W	A	B	C	D	E	F	TS	TM1	TM2	NO. 1/2" PLYS	H	T @ CL GIRDER
W. SHIPLAP	1	1'-2"	1'-5"	2'-0"	1'-3"	1'-4"	8"	3'-2"	1'-3"	3/4"	1 1/4"	3/4"	6	4 3/8"	.510'
	2	1'-2"	1'-5"	1'-8"	1'-3"	1'-4"	8"	2'-10"	1'-3"	3/4"	1 1/8"	3/4"	6	4 3/8"	.505'
	3	1'-2"	1'-5"	1'-6"	1'-3"	1'-4"	8"	2'-8"	1'-3"	3/4"	1 1/8"	3/4"	6	4 3/8"	.505'
	4	1'-2"	1'-5"	1'-6"	1'-3"	1'-4"	8"	2'-8"	1'-3"	3/4"	1 1/8"	3/4"	6	4 3/8"	.505'
	5	1'-2"	1'-5"	1'-6"	1'-3"	1'-4"	8"	2'-8"	1'-3"	3/4"	1 1/8"	3/4"	6	4 3/8"	.505'
PIER 2	1	1'-6"	1'-10"	2'-0"	1'-7"	2'-2 7/16"	1'-6 7/16"	-	-	1 1/2"	-	-	6	4 3/8"	.490'
	2	1'-8"	2'-0"	2'-1"	1'-9"	2'-2 7/16"	1'-6 7/16"	-	-	1 1/2"	-	-	6	4 3/8"	.490'
	3	1'-6"	1'-10"	1'-11"	1'-7"	2'-2 7/16"	1'-6 7/16"	-	-	1 1/2"	-	-	6	4 3/8"	.490'
	4	1'-6"	1'-10"	1'-11"	1'-7"	2'-2 7/16"	1'-6 7/16"	-	-	1 1/2"	-	-	6	4 3/8"	.490'
	5	1'-6"	1'-10"	1'-11"	1'-7"	2'-2 7/16"	1'-6 7/16"	-	-	1 1/2"	-	-	6	4 3/8"	.490'
PIER 3	1	1'-3"	1'-5"	1'-8"	1'-4"	1'-3 9/16"	7 9/16"	-	-	1 1/2"	-	-	7	5"	.542'
	2	1'-3"	1'-5"	1'-8"	1'-4"	1'-3 9/16"	7 9/16"	-	-	1 1/2"	-	-	7	5"	.542'
	3	1'-3"	1'-5"	1'-6"	1'-4"	1'-3 9/16"	7 9/16"	-	-	1 1/2"	-	-	7	5"	.542'
	4	1'-3"	1'-5"	1'-6"	1'-4"	1'-3 9/16"	7 9/16"	-	-	1 1/2"	-	-	7	5"	.542'
	5	1'-3"	1'-5"	1'-6"	1'-4"	1'-3 9/16"	7 9/16"	-	-	1 1/2"	-	-	7	5"	.542'

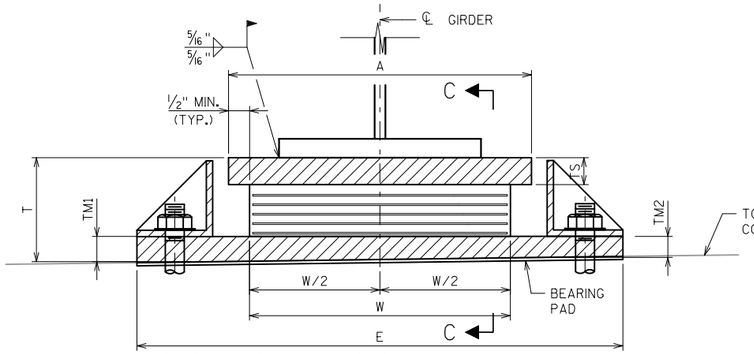
NOTE

1. SEE "ELASTOMERIC BEARING DETAILS, SHEET 1 OF 2" FOR ADDITIONAL NOTES.
2. WHERE THE THICKNESS OF THE SOLE PLATE IS LESS THAN 1½" WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY THE SURFACE IN CONTACT WITH THE ELASTOMER TO 200°F (93°C), TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURES INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.
3. ALL MATERIAL IN ELASTOMERIC EXPANSION BEARINGS INCLUDING SIDE RETAINERS, ANCHOR BOLTS, MASONRY PLATES, AND FIELD WELDING SHALL BE PAID FOR AT THE UNIT BID PRICE FOR "BEARING ELASTOMERIC EXPANSION".
4. L6 X 6 X ½ ANGLES MAY BE SUBSTITUTED FOR THE WELDED PLATE IN THE SIDE RETAINERS.
5. SEE SHEET 48 FOR BEARING ORIENTATION.



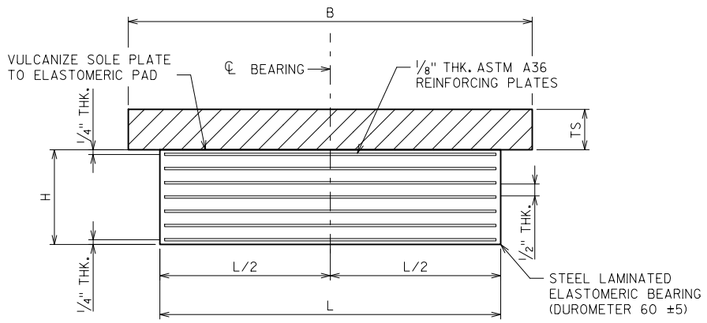
ELASTOMERIC EXPANSION BEARING END VIEW

(PIER 2 AND PIER 3, LOOKING UP-STATION)

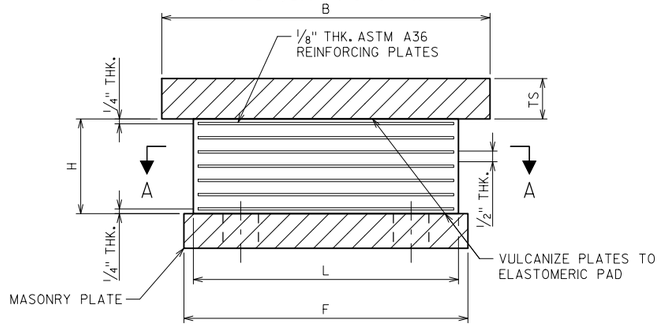


ELASTOMERIC EXPANSION BEARING END VIEW

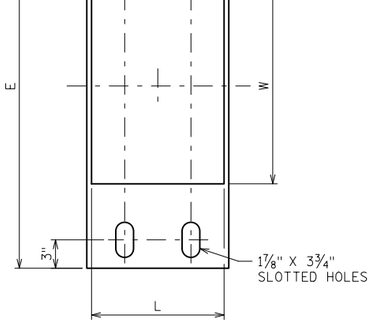
(W. SHIPLAP, LOOKING UP-STATION)



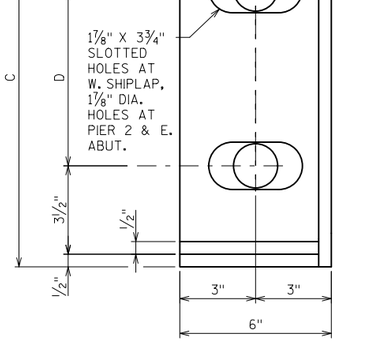
SECTION B-B THRU ELASTOMERIC BEARING



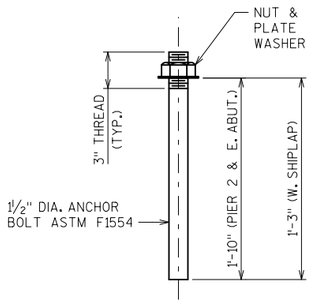
SECTION C-C THRU ELASTOMERIC BEARING



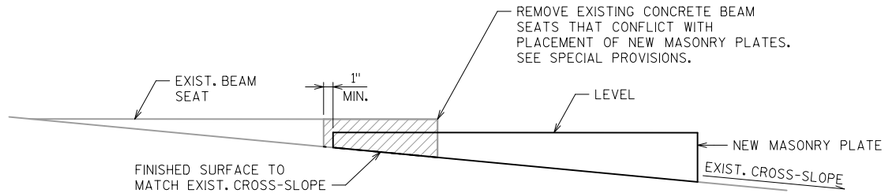
SECTION A-A



PLAN SIDE RETAINER

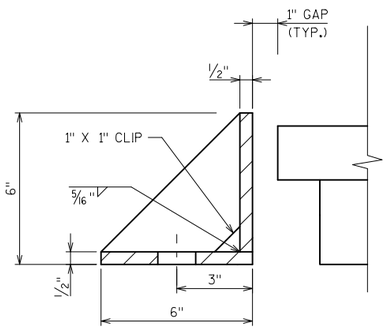


ANCHOR BOLT DETAIL



BEAM SEAT REMOVAL AT SHIPLAP

(LOOKING WEST)



SECTION SIDE RETAINER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY MDM | PLANS CK'D. PAT

ELASTOMERIC BEARING DETAILS (2 OF 2)

SHEET 47 OF 53

831

8

8

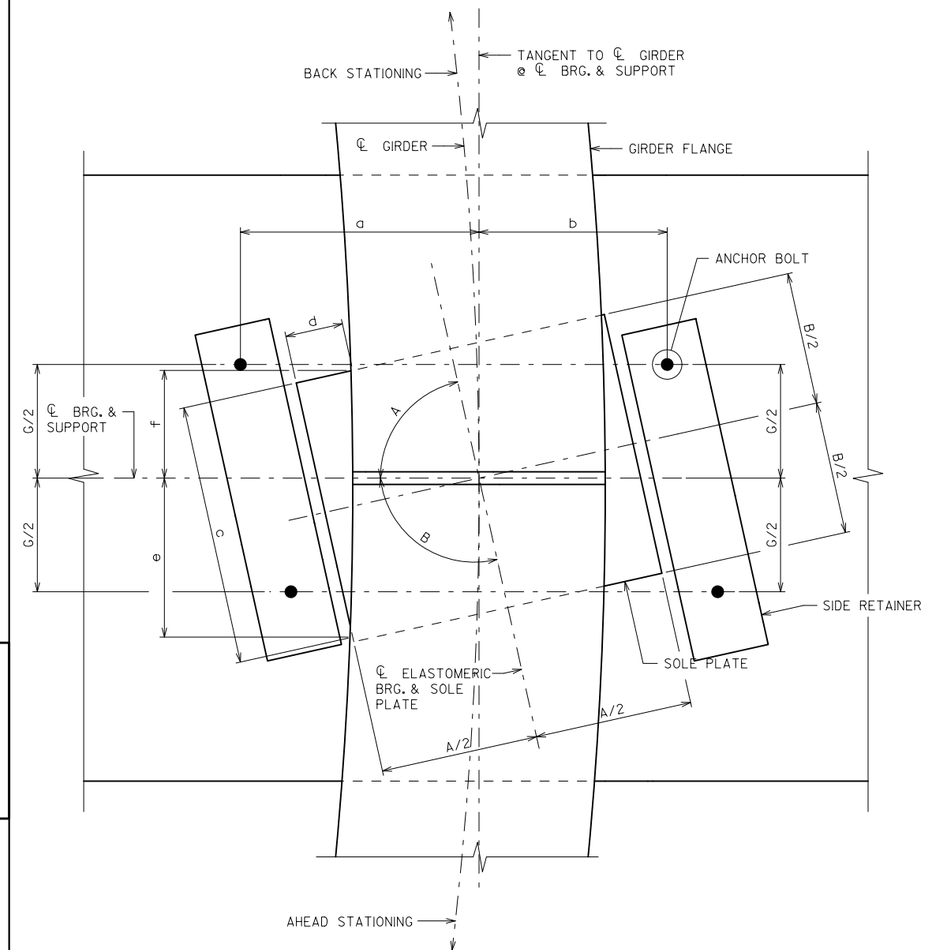
IP_PWP:d0345870\080647_BD.dgn 24-JUL-2015 09:31

STATE PROJECT NUMBER
1300-13-74

BEARING ORIENTATION DETAILS										
SUPPORT	GIRDER	A	B	G	a	b	c	d	e	f
W. SHIPLAP	1	91°0'31"	88°59'29"	8"	1'-3 15/16"	1'-4 1/16"	1'-3"	1 1/8"	7 1/2"	7 1/2"
	2	90°36'55"	89°23'5"	8"	1'-1 15/16"	1'-2 1/16"	1'-3"	1 1/16"	7 1/2"	7 1/2"
	3	89°56'4"	90°3'56"	8"	1'-1"	1'-1"	1'-3"	1"	7 1/2"	7 1/2"
	4	88°41'57"	91°18'3"	8"	1'-1 1/8"	1'-15/16"	1'-3"	13/16"	7 1/2"	7 1/2"
	5	86°58'0"	93°2'0"	8"	1'-1 1/4"	1'-13/16"	1'-3"	9/16"	7 1/2"	7 1/2"
PIER 2	1	77°28'2"	102°31'58"	1'-6"	1'-6 3/8"	1'-2 3/8"	1'-13/16"	2 13/16"	5 13/16"	7 5/16"
	2	77°28'2"	102°31'58"	1'-6"	1'-6 7/8"	1'-2 7/8"	1'-8 5/8"	4 9/16"	10 1/2"	10 5/8"
	3	77°28'17"	102°31'43"	1'-6"	1'-5 7/8"	1'-1 7/8"	1'-7"	1 3/16"	9 1/2"	9 15/16"
	4	77°28'2"	102°31'58"	1'-6"	1'-5 7/8"	1'-1 7/8"	1'-7"	1 3/16"	9 1/2"	9 15/16"
	5	77°28'2"	102°31'58"	1'-6"	1'-5 7/8"	1'-1 7/8"	1'-7"	1 3/16"	9 1/2"	9 15/16"
E. ABUTMENT	1	67°37'10"	112°22'50"	7"	1'-4 9/16"	1'-1 11/16"	8 5/8"	3 9/16"	4 7/16"	4 15/16"
	2	67°37'10"	112°22'50"	7"	1'-4 9/16"	1'-1 11/16"	8 5/8"	3 9/16"	4 7/16"	4 15/16"
	3	67°37'18"	112°22'42"	7"	1'-3 1/2"	1'-5/8"	8 7/8"	3 5/8"	4 3/16"	5 3/8"
	4	67°37'10"	112°22'50"	7"	1'-3 1/2"	1'-5/8"	8 7/8"	3 5/8"	4 3/16"	5 3/8"
	5	67°37'10"	112°22'50"	7"	1'-3 1/2"	1'-5/8"	8 7/8"	3 5/8"	4 3/16"	5 3/8"

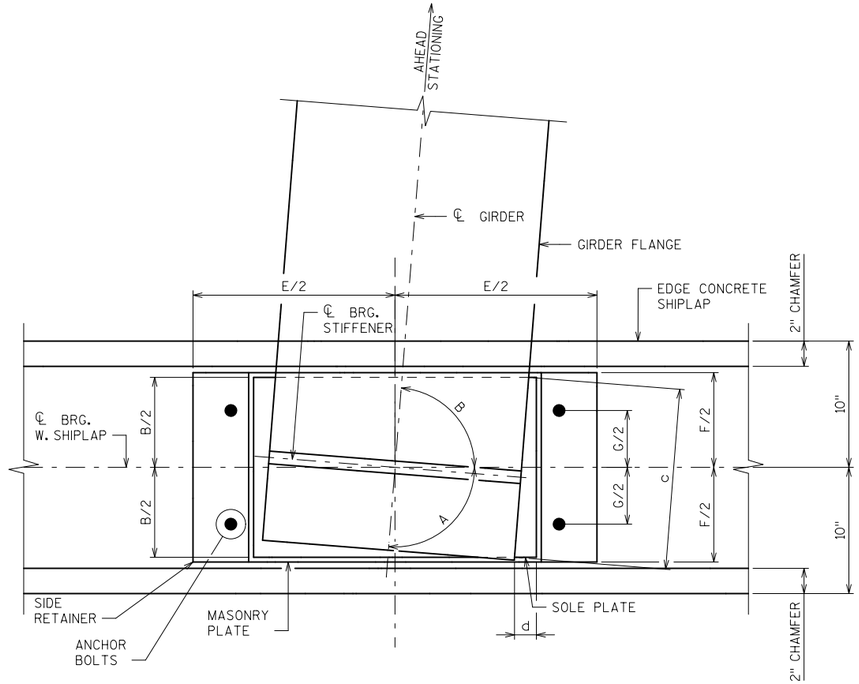
NOTES

1. SEE SHEET 47 FOR ANCHOR BOLT SPACING DETAILS AND DIMENSIONS A THRU F.
2. SEE SHEET 46 FOR ADDITIONAL NOTES.



EXPANSION BEARING ALIGNMENT PLAN

(PIER 2 AND PIER 3)



EXPANSION BEARING ALIGNMENT PLAN

(W. SHIPLAP)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

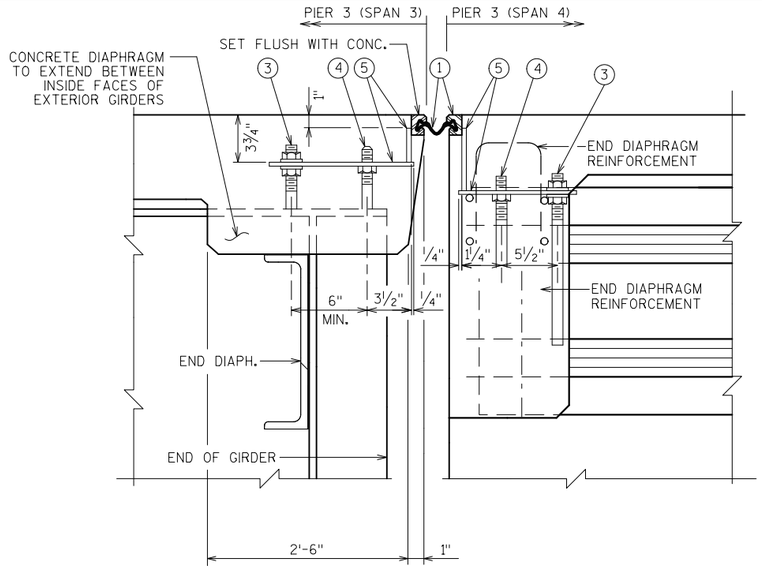
STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. JMK

BEARING ALIGNMENT PLAN

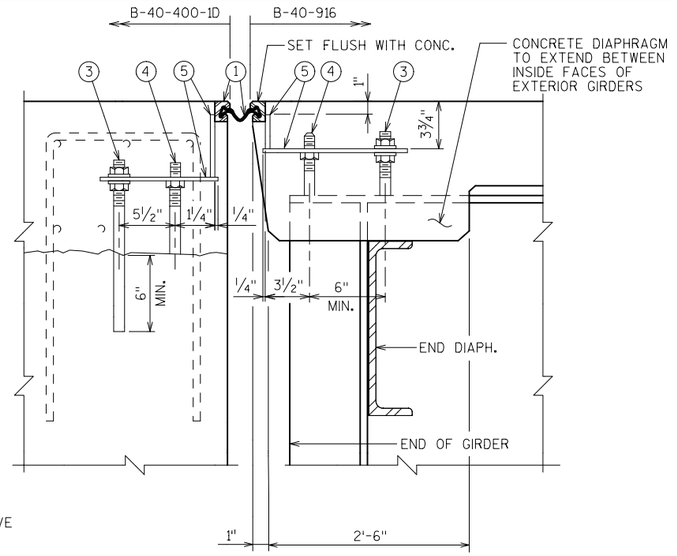
SHEET 48 OF 53
832

STATE PROJECT NUMBER
1300-13-74



SECTION THRU JOINT AT PIER 3

NORMAL TO ℄ SUBSTRUCTURE



POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

SECTION THRU JOINT AT SHIPLAP

NORMAL TO ℄ SUBSTRUCTURE

GENERAL NOTES

1. ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.
2. AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.
3. FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.
4. SANDBLAST BARS, PLATES, SUPPORTS & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THIS ASSEMBLY SHALL BE HOT DIPPED GALVANIZED.
5. STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-916".

LEGEND

▲① NEOPRENE STRIP SEAL (5-INCH) AND STEEL EXTRUSIONS. SET JOINT OPENING GAP AT DISTANCE DETERMINED USING THE TEMPERATURE TABLE SHOWN.

② STUDS ⅝" X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

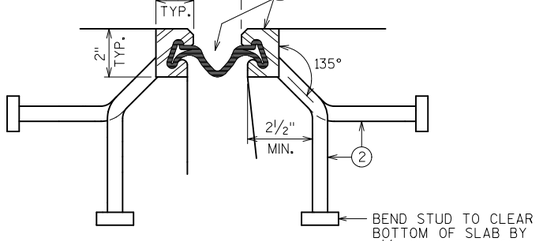
②A ½" THICK ANCHOR PLATE WITH ⅝" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE AT NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

③ ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE.

④ ¾" ϕ THREADED ROD WITH NUT. TACK WELDED TO NO. ⑤.

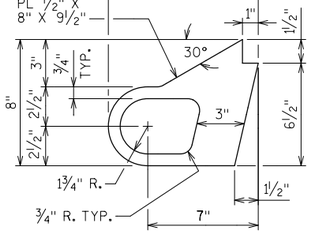
⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WIELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 AND 1" ϕ HOLE FOR NO. 4.

◩ SEE B-40-400-1D PLANS FOR REINFORCEMENT AT THE WEST SHIPLAP.



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS

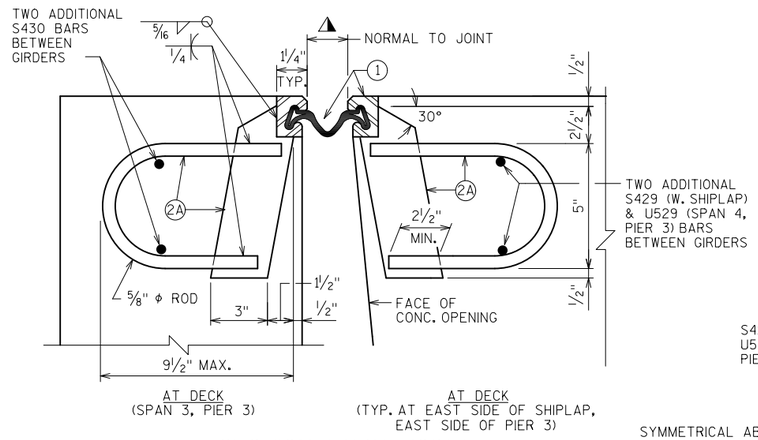


ALTERNATE STRIP SEAL ANCHOR

TEMPERATURE TABLE - PIER 3									
INSTALLATION DIMENSION ▲ AT VARIOUS TEMPERATURES									
	TEMPERATURE								
°F	5	15	25	35	45	55	65	75	85
▲	3 1/16"	2 7/8"	2 5/8"	2 7/16"	2 1/4"	2 1/16"	1 7/8"	1 5/8"	1 7/16"

TEMPERATURE TABLE - WEST SHIPLAP									
INSTALLATION DIMENSION ▲ AT VARIOUS TEMPERATURES									
	TEMPERATURE								
°F	5	15	25	35	45	55	65	75	85
▲	3 5/16"	3 1/8"	2 7/8"	2 11/16"	2 7/16"	2 3/16"	2"	1 3/4"	1 9/16"

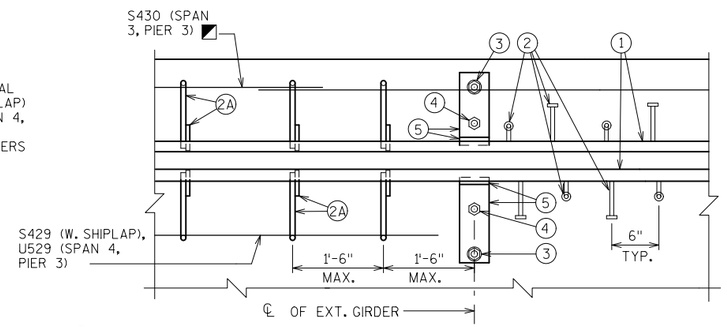
NOTE
A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

SYMMETRICAL ABOUT ℄ JOINT UNLESS OTHERWISE NOTED



PART PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. MJN

EXPANSION JOINT DETAIL

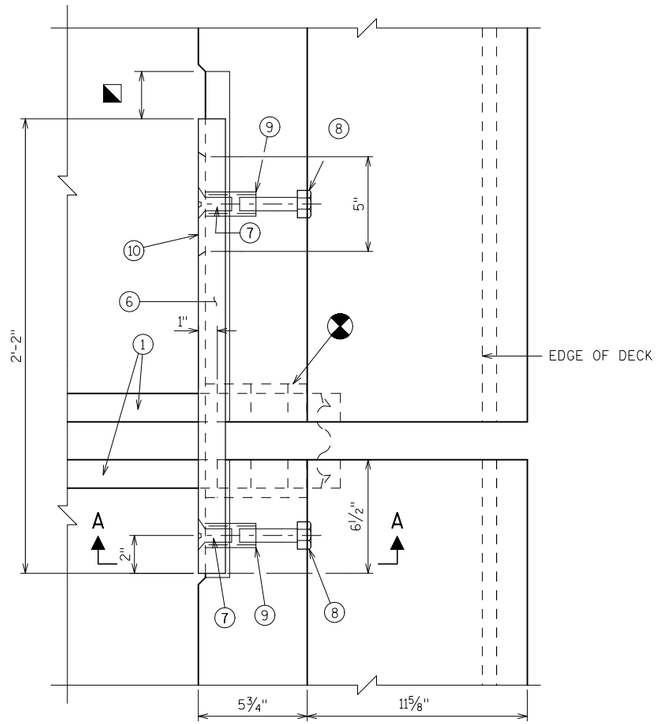
SHEET 49 OF 53
833

8

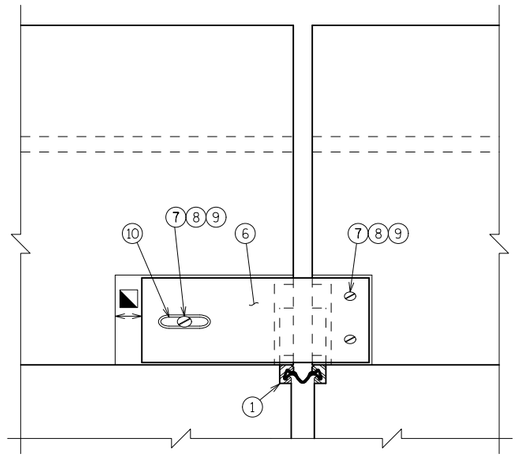
8

STATE PROJECT NUMBER

1300-13-74



PLAN



VIEW OF PARAPET PLATE FROM ROADWAY

LEGEND

(1) NEOPRENE STRIP SEAL (5 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS 5/8"ϕ X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) 1/2" THICK ANCHOR PLATE WITH 5/8"ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) 3/4" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) 3/4"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" X 1/2" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1 1/2" ϕ HOLE FOR NO. 3 AND 1" ϕ HOLE FOR NO. 4.

(6) GALVANIZED PLATE 3/8" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.

(7) 3/4"ϕ X 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

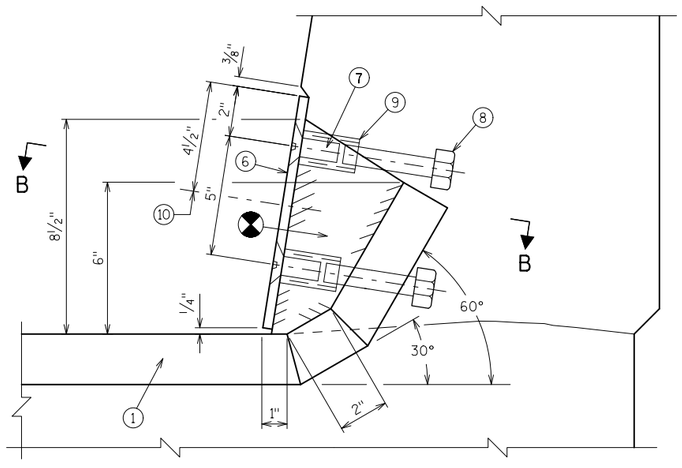
(8) 3/4"ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) 3/4"ϕ X 2 1/4" GALVANIZED THREADED COUPLING.

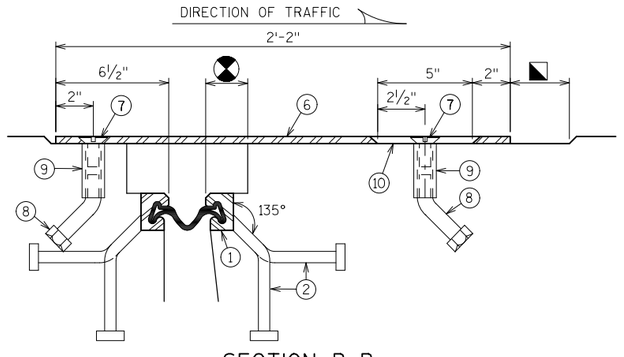
(10) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION PLUS 1/2".



SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY TJN | PLANS CK'D. MSC

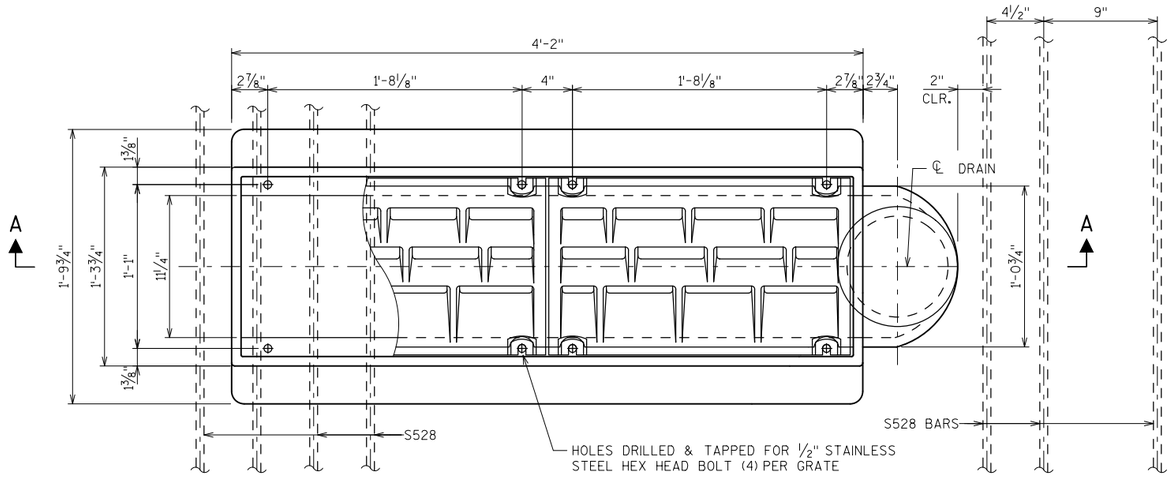
COVER PLATES FOR PARAPET

SHEET 50 OF 53
834

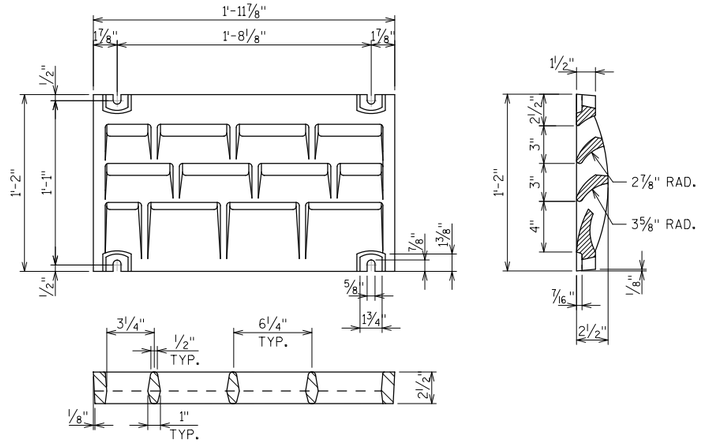
8

8

STATE PROJECT NUMBER
1300-13-74



PLAN



GRATE CASTING DETAIL

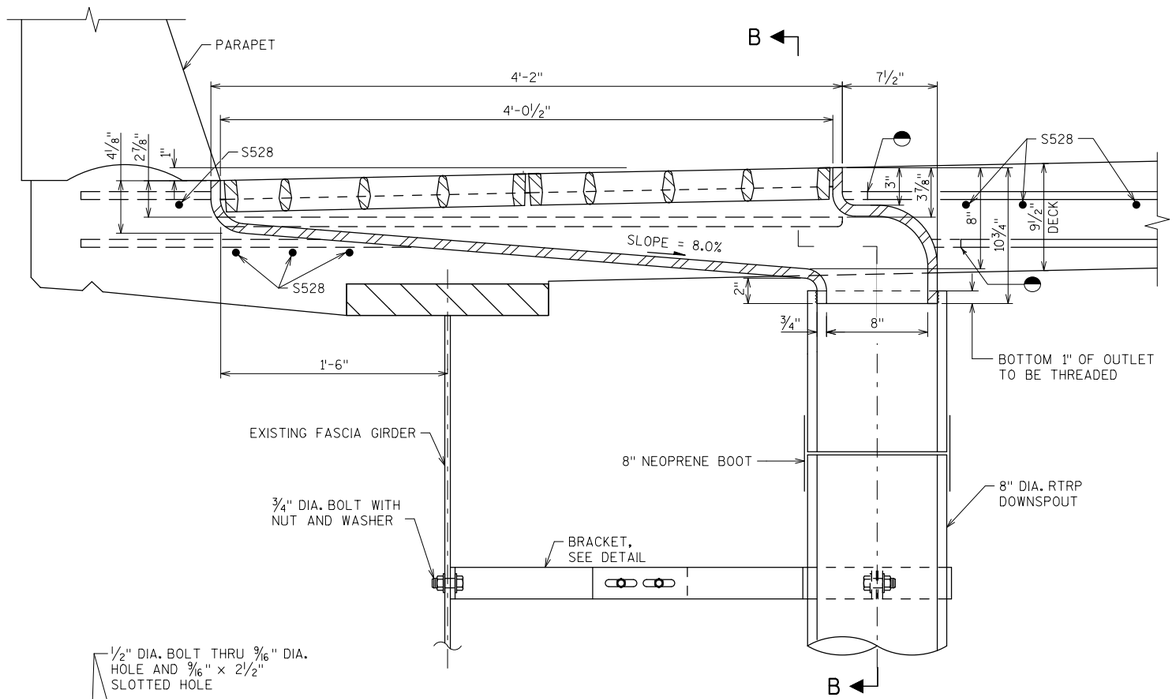
ATTACH GRATE TO FRAME FOR SHIPMENT

NOTES

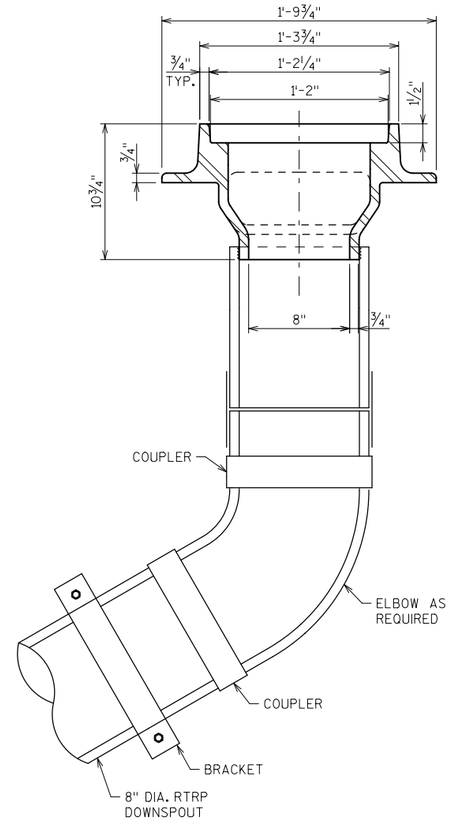
1. THE DRAIN CASTING SHOWN IS BASED ON PART NUMBER R-3951 FROM THE NEENAH FOUNDRY COMPANY WITH MODIFICATIONS AS REQUIRED TO PROVIDE A BOTTOM SLOPE OF DRAIN OF 8%.
2. A FABRICATED DRAIN ASSEMBLY MAY BE SUBSTITUTED IF THE HYDRAULIC PROPERTIES OF THE SPECIFIED CASTING CAN BE MAINTAINED, IF THE GEOMETRY OF THE REPLACEMENT IS ACCEPTABLE AND IF APPROVED BY THE ENGINEER. FABRICATED DRAINS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153.
3. ALL MATERIAL FOR FLOOR DRAIN CASTING, EXCLUDING GRATE HOLD DOWN SCREWS, SHALL BE GRAY IRON CONFORMING TO ASTM A48, CLASS 35B.
4. "DOWNSPOUTS 8-INCH" SHALL BE EITHER CAST MATERIAL OR FIBERGLASS CONFORMING TO ASTM D2996, GRADE 1, CLASS A.
5. MATERIAL FOR BRACKETS SHALL CONFORM TO ASTM A36.
6. ALL MATERIAL FOR FLOOR DRAINS SHALL BE INCLUDED IN THE BID ITEM "FLOOR DRAIN SPECIAL".

LEGEND

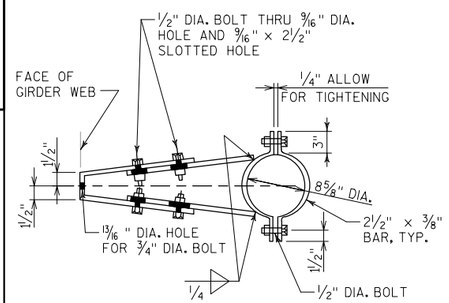
◓ TRANSVERSE AND LONGITUDINAL SLAB BAR REINFORCEMENT TO BE CUT A MAX. OF 1" CL. FROM DRAIN FRAME. DISPLACE BARS WHERE POSSIBLE.



SECTION A-A



SECTION B-B



BRACKET DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY CEM | PLANS CK'D. MSC

FLOOR DRAIN SPECIAL

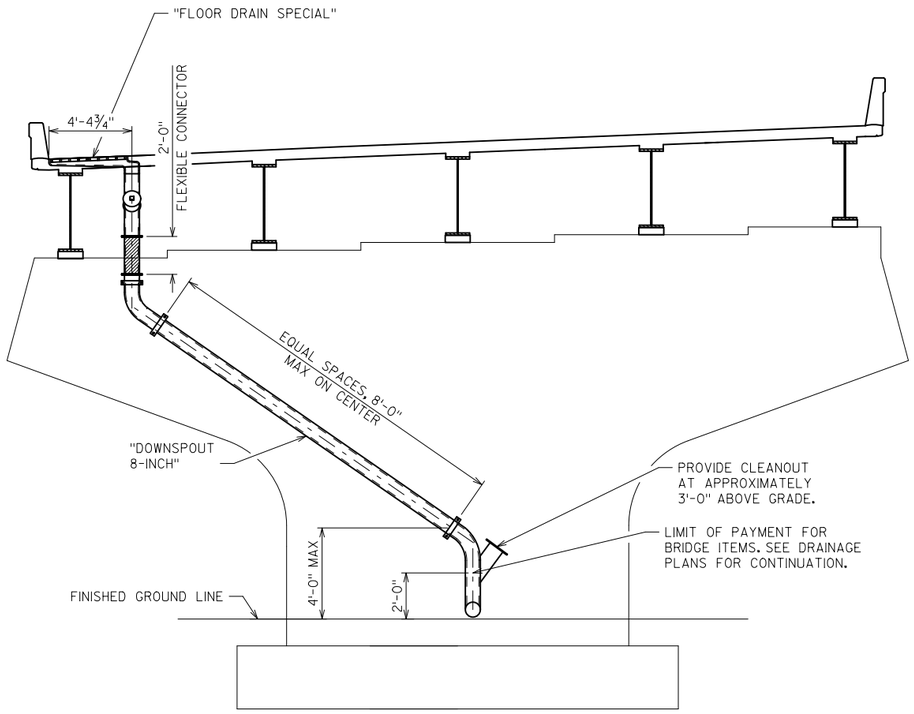
SHEET 51 OF 53
835

8

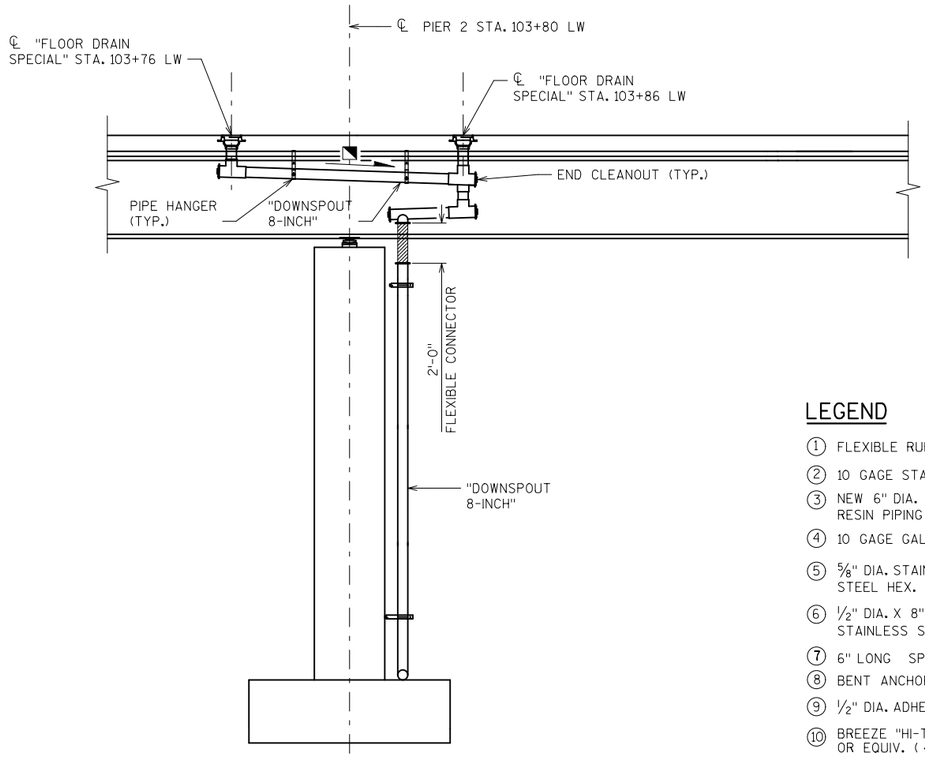
8

IP_PWP:d0345870\080651_FD.dgn 24-JUL-2015 09:33

STATE PROJECT NUMBER
1300-13-74



ELEVATION
(PIER 2 LOOKING NORTHWEST)



ELEVATION
(PIER 2 LOOKING NORTHEAST)

NOTES

1. "DOWNSPOUTS 8-INCH" AND FITTINGS SHALL BE REINFORCED THERMOSETTING RESIN PIPING (RTRP).
2. VERIFY ALL DIMENSIONS PRIOR TO FABRICATING DOWNSPOUT.
3. CONNECTION HARDWARE SHALL BE STAINLESS STEEL. ALL OTHER CONNECTION ELEMENTS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
4. MASONRY ANCHORS SHALL MEET THE REQUIREMENTS FOR TYPE 'S' AS PER THE STANDARD SPECIFICATIONS.
5. FOR PAYMENT PURPOSES, FLEXIBLE CONNECTORS AND ALL CONNECTION AND INSTALLATION HARDWARE (INCLUDING MASONRY ANCHORS) ARE CONSIDERED INCIDENTAL TO "DOWNSPOUT 8-INCH".

LEGEND

(1) FLEXIBLE RUBBER HOSE, MIN. 3/16" THICK WALL TO SUIT DOWNSPOUT.
(2) 10 GAGE STAINLESS STEEL CLAMP GRADE 304.
(3) NEW 6" DIA. DOWNSPOUT PIPING SHALL BE REINFORCED THERMOSETTING RESIN PIPING (RTRP) CONFORMING TO ASTM D2996 & 2310.
(4) 10 GAGE GALV. STEEL SADDLE.
(5) 5/8" DIA. STAINLESS STEEL THREADED ROD (GRADE 304) WITH STAINLESS STEEL HEX. NUTS & WASHERS OR GALV. ROD.
(6) 1/2" DIA. X 8" LONG STAINLESS STEEL THREADED ROD (GRADE 304) WITH STAINLESS STEEL HEX. NUTS & WASHERS.
(7) 6" LONG SPLIT RTRP STRIP. BOND TO #3, PLACE AT ALL CLAMP LOCATIONS.
(8) BENT ANCHOR PLATE-7 GAGE STAINLESS STEEL GRADE 304.
(9) 1/2" DIA. ADHESIVE ANCHOR BOLTS. (STAINLESS STEEL BOLT & WASHER-TYP.)
(10) BREEZE "HI-TORQUE CLAMP #HTM-700 304 HALF HARD STAINLESS STEEL OR EQUIV. (4 REQ'D. PER EACH #1).
(11) 7 GAGE STAINLESS STEEL GUSSET PLATE. WELD TO #2 & 8.
(12) 3/8" X 1" LG. STAINLESS STEEL HEX HEAD BOLT WITH NUT & LOCK WASHER.

◩ THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE DOWNSPOUT MAY BE ALTERED TO AVOID INTERFERENCE WITH THE GIRDER CROSS FRAME DIAPHRAGMS. MAINTAIN 2% MINIMUM SLOPE AND TRANSITION TO STEEPER SLOPE AS SOON AS POSSIBLE.

DOWNSPOUT NOTES

CLEVIS, PIPE CLAMPS, HANGERS & MISS. ITEMS ARE INCLUDED IN BID ITEM "RTRP DOWNSPOUT.

TIGHTEN CLAMPS TO A TIGHT SLIP FIT (FOR TEMP. EXPANSION).

ALL ELBOWS TO BE LONG RADIUS TYPE.

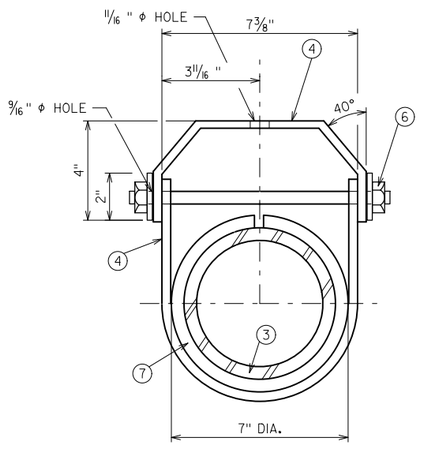
CONTRACTOR TO FIELD VERFIY ALL DIMENSIONS.

A CLAMP OF EQUAL STRENGTH MAY BE USED AS AN ALTERNATE.

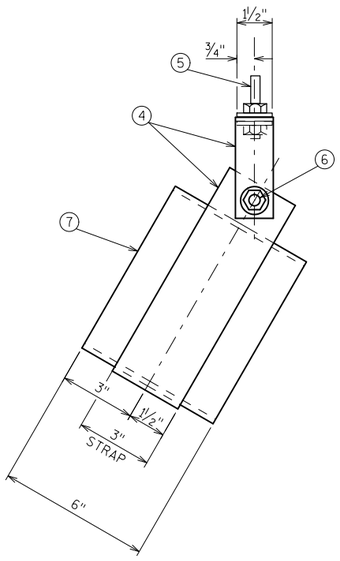
RTRP DOWNSPOUT TO BE SUPPORTED AT 8'-0" MAX. SPACING USING ONE OF THE SHOWN BRACKETS. REPLACE DOWNSPOUT SYSTEM FROM EXIST. REDUCER TO TO NEW FLOOR DRAIN.

INSTALL CLEAN-OUTS AT ELBOWS AS NEEDED.

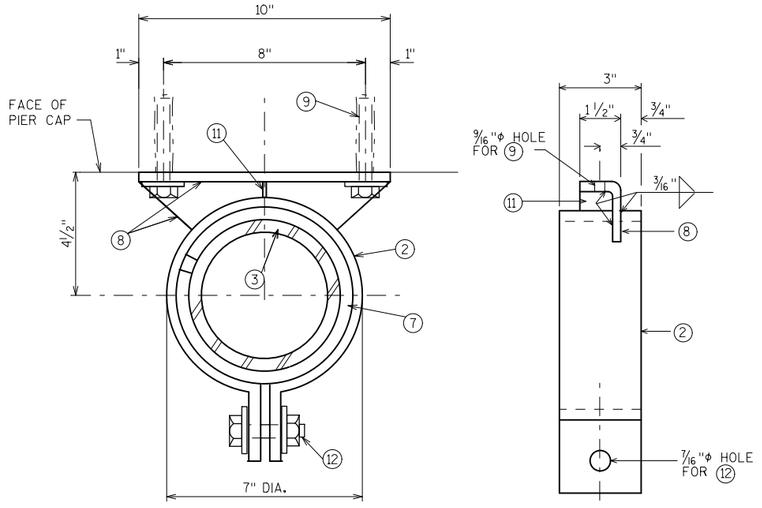
DRAIN WORK TO BE COMPLETED AS DIRECTED BY THE ENGINEER.



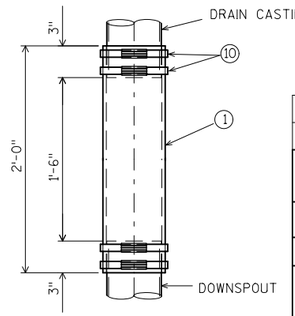
SADDLE



ADJUSTABLE CLEVIS DETAIL & PIPE HANGER DETAILS



PIPE CLAMP DETAILS



FLEXIBLE CONNECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY TJN | PLANS CK'D. MSC

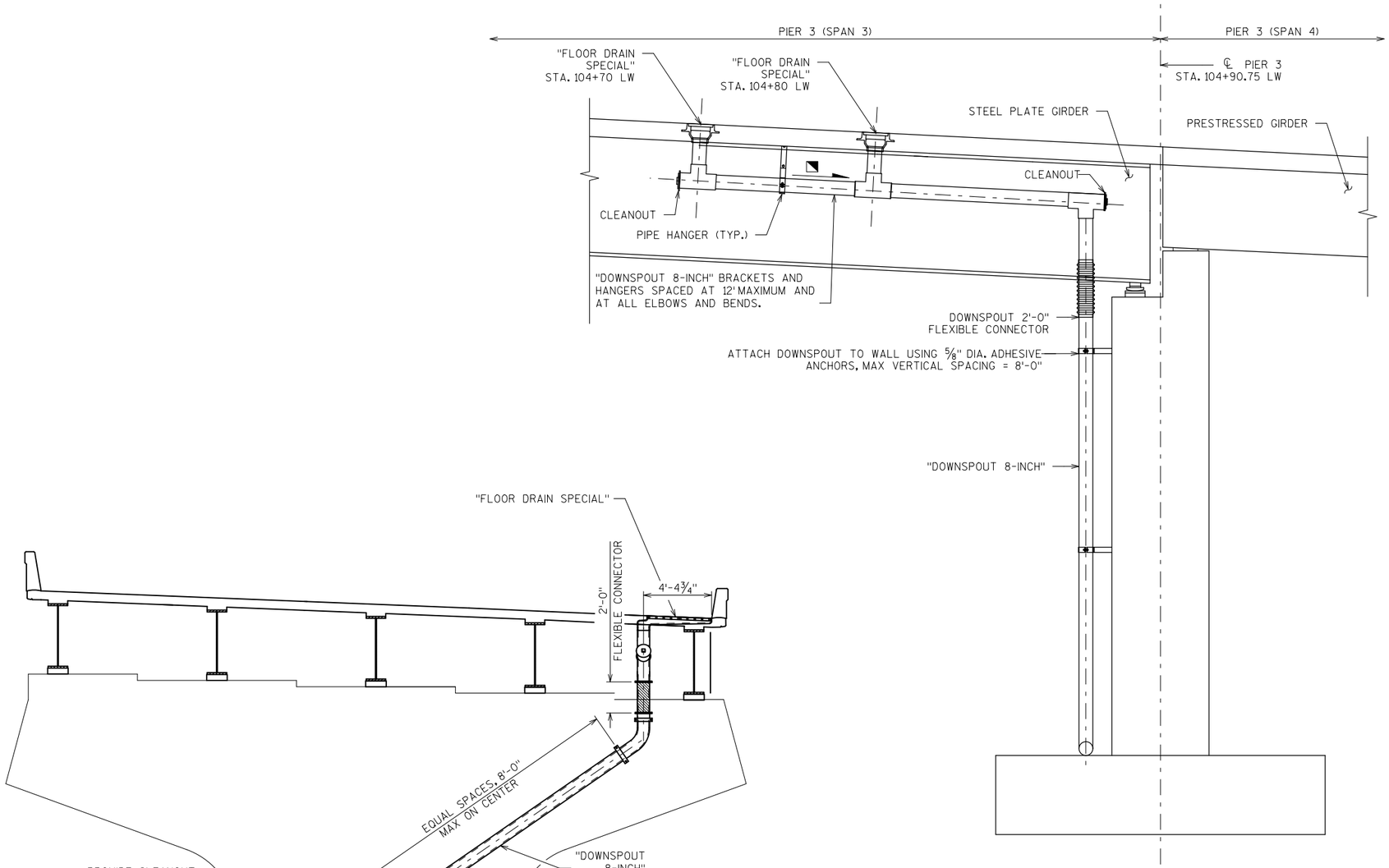
SUPERSTRUCTURE DRAINAGE DETAIL (1 OF 2)

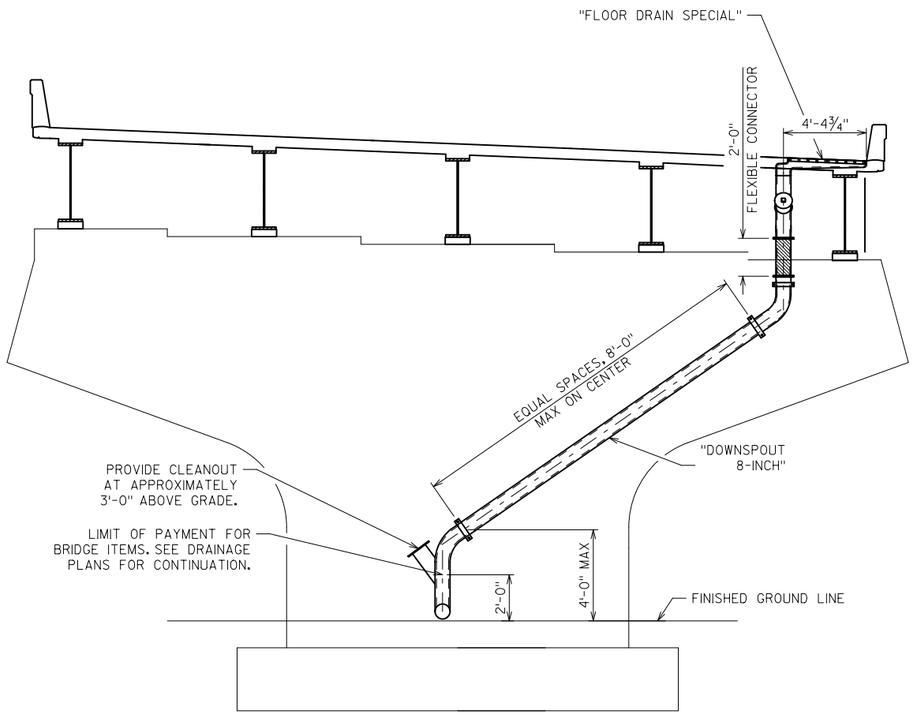
SHEET 52 OF 53
836

8

8

STATE PROJECT NUMBER
1300-13-74





ELEVATION
(PIER 3 LOOKING SOUTHEAST)

PIER 3 ELEVATION
(LOOKING NORTHEAST)

NOTES

1. "DOWNSPOUTS 8-INCH" AND FITTINGS SHALL BE REINFORCED THERMOSETTING RESIN PIPING (RTRP).
2. VERIFY ALL DIMENSIONS PRIOR TO FABRICATING DOWNSPOUT.
3. CONNECTION HARDWARE SHALL BE STAINLESS STEEL. ALL OTHER CONNECTION ELEMENTS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
4. MASONRY ANCHORS SHALL MEET THE REQUIREMENTS FOR TYPE 'S' AS PER THE STANDARD SPECIFICATIONS.
5. FOR PAYMENT PURPOSES, FLEXIBLE CONNECTORS AND ALL CONNECTION AND INSTALLATION HARDWARE (INCLUDING MASONRY ANCHORS) ARE CONSIDERED INCIDENTAL TO "DOWNSPOUT 8-INCH".
6. SEE SUPERSTRUCTURE DRAINAGE DETAIL (1 OF 2) SHEET 52 FOR CONNECTION DETAILS.

LEGEND

◪ THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE DOWNSPOUT MAY BE ALTERED TO AVOID INTERFERENCE WITH THE GIRDER CROSS FRAME DIAPHRAGMS. MAINTAIN 2% MINIMUM SLOPE AND TRANSITION TO STEEPER SLOPE AS SOON AS POSSIBLE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-916

DRAWN BY TJN | PLANS CK'D. MSC

SUPERSTRUCTURE DRAINAGE DETAIL (2 OF 2)

SHEET 53 OF 53
837

STATE PROJECT NUMBER

1300-13-74

BILL OF BARS - HML-40-026/027

BAR MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
H1101	24	32'-6"		FOUNDATION VERT. BARS
H402	68	15'-1"	X	TIES FOR VERT. BARS

THE FIRST DIGIT OR FIRST TWO DIGITS OF A BAR MARK INDICATES THE BAR SIZE.

NUMBER OF BARS IN TABLE IS THE TOTAL NUMBER REQ'D FOR THE FOUNDATIONS SHOWN ON THIS SHEET.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
660.0100.0001	HIGH MAST FOUNDATION HML-40-026	L.S.	1
660.0100.0002	HIGH MAST FOUNDATION HML-40-027	L.S.	1
660.0100.0003	HIGH MAST FOUNDATION HML-40-114	L.S.	1
660.0100.0004	HIGH MAST FOUNDATION HML-40-115	L.S.	1

POLE HEIGHT FEET	TOWER NUMBER	BORING DESIGNATION	HML STATION	HML COORDINATES	GROUND ELEVATION FEET	TOP OF CONCRETE EL. FEET	TOTAL ESTIMATED QUANTITIES: CONCRETE MASONRY C.Y.	TOTAL ESTIMATED QUANTITIES: HIGH STRENGTH BAR STEEL REINFORCEMENT LB.
150	HML-40-026	SR-2	61+60.94 VB 91.78' RT	N=298,520.89 E=607,970.70	589.40	592.40	24	2,410
150	HML-40-027	LS-13	207+83.00 LE 9.50' LT	N=298,207.50 E=608,255.20	591.30	594.30	24	2,410

DESIGN DATA

ULTIMATE DESIGN STRESSES:

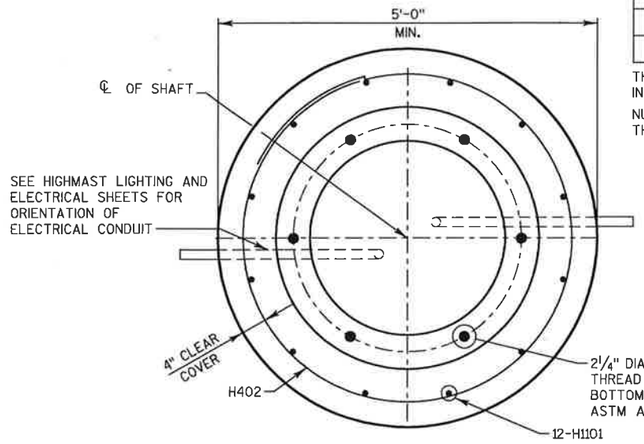
CONCRETE MASONRY ..... fc'=3,500 p.s.i
HIGH STRENGTH
BAR STEEL REINFORCEMENT .....fy=60,000 p.s.i
ANCHOR BOLTS AASHTO F1554..... fy=55,000 p.s.i

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½WIND	133

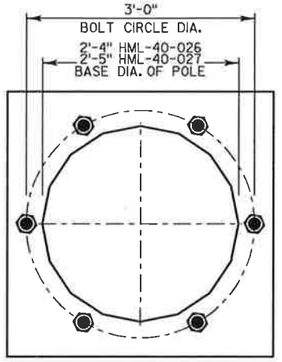
GENERAL NOTES

1. DRAWINGS SHALL NOT BE SCALED.
2. FOUNDATION DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

   WIND VELOCITY = 90 MPH (3-SECOND GUST SPEED)
   EXPOSURE CATEGORY - D.
3. FOUNDATION DESIGN BASED UPON THE FOLLOWING SOIL CRITERIA:
   SEE BORING LOG FOR HML-40-026, SHEET 3 OF 6 (SUBSURFACE EXPLORATION)
   SEE BORING LOG FOR HML-40-027, SHEET 4 OF 6 (SUBSURFACE EXPLORATION)
   SEE BORING LOG FOR HML-40-114, SHEET 5 OF 6 (SUBSURFACE EXPLORATION)
   SEE BORING LOG FOR HML-40-115, SHEET 6 OF 6 (SUBSURFACE EXPLORATION)
   MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 0.9 TSF.
4. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 4" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
5. CONCRETE MAY NOT BE DROPPED DIRECTLY INTO SHAFTS WITHOUT THE AID OF CHUTES.
6. CONCRETE PLACED UNDERWATER MUST BE PLACED IN ACCORDANCE WITH THE STANDARD SPECS.
7. OUTSIDE DIA. OF CAISSON IS DEPENDENT ON ANCHOR BOLT CIRCLE REQUIRED FOR POLE. MAINTAIN 4" MIN. COVER OF REINFORCEMENT.
8. CONTRACTOR SHALL COORDINATE CONDUIT LOCATIONS WITH THE ELECTRICAL PLAN/DETAILS AND THE ELECTRICAL CONTRACTOR.



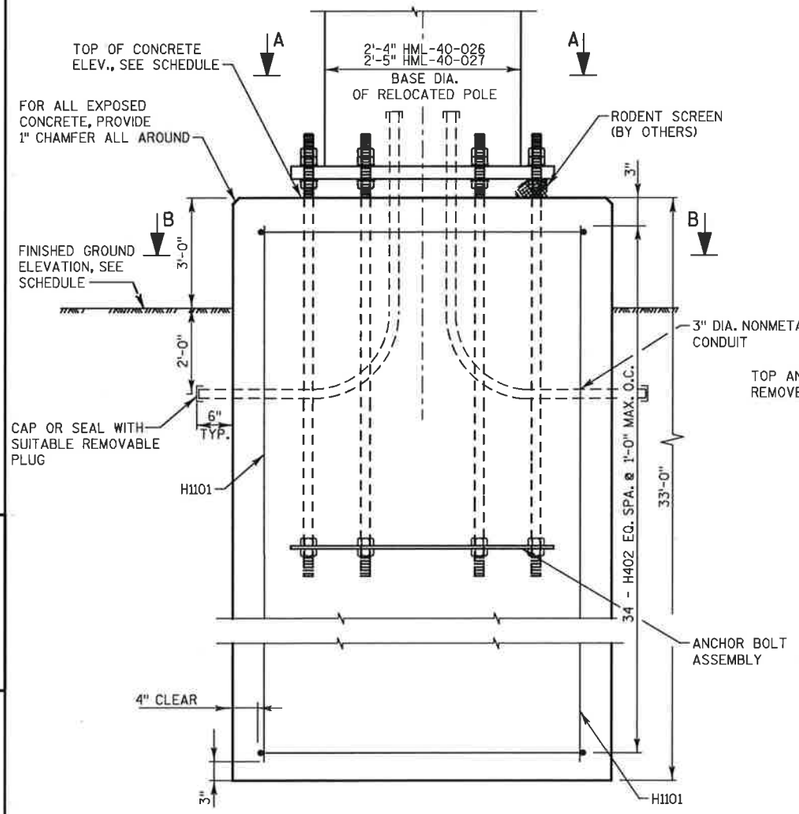
SECTION B-B



SECTION A-A

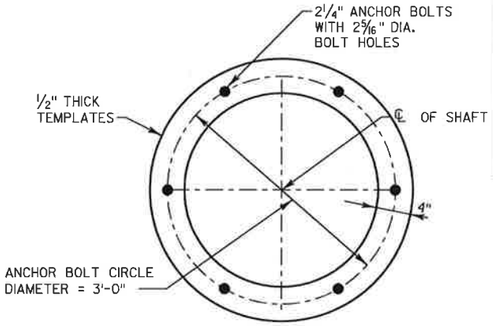
(FOR ILLUSTRATION PURPOSE ONLY)

SEE EXISTING POLES AND BASE PLATES FOR ACTUAL DETAILS.

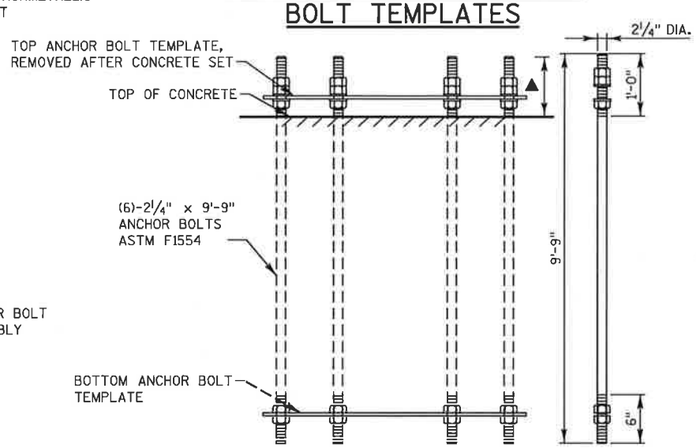


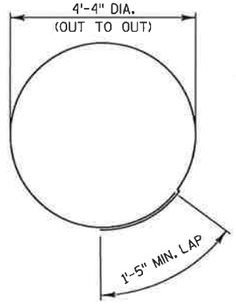
CAISSON FOUNDATION ELEVATION

NOTE: SHAFT CASINGS, IF USED, SHALL BE REMOVED WHILE THE CONCRETE REMAINS WORKABLE.



TOP AND BOTTOM ANCHOR BOLT TEMPLATES





H402

ANCHOR BOLTS ASSEMBLY DETAILS

▲EXTEND TOP OF ANCHOR BOLTS ABOVE CONCRETE 12" TO PROVIDE ATTACHMENT OF LEVELING NUTS, WASHER, BASE PLATE, AND TOP NUTS. PROTECT FROM CONCRETE SPLASH. EXTEND CONDUIT 12" ABOVE CONCRETE

WISCONSIN
KEVIN G. WOOD
E-32070
MILWAUKEE, WI
PROFESSIONAL ENGINEER
7-20-15

LIST OF DRAWINGS

1. HIGH MAST LIGHT POLE FOUNDATIONS HML-40-026/027
2. HIGH MAST LIGHT POLE FOUNDATIONS HML-40-114/115
3. HML-40-026 SUBSURFACE EXPLORATION
4. HML-40-027 SUBSURFACE EXPLORATION
5. HML-40-114 SUBSURFACE EXPLORATION
6. HML-40-115 SUBSURFACE EXPLORATION

NO.	DATE	REVISION	BY

GRÄEF
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/20/15
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE HML-40-026/027/114/115

LAKEFRONT GATEWAY IH 794

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO STD. SPEC FOR STRUCT. SUPPORT FOR SIGNS 6TH EDITION 2013

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
RPB	KGW	RBH	KGW

HIGH MAST LIGHT POLE FOUNDATIONS HML-40-026/027

SHEET 1 OF 6
838

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
KEVIN WOOD, P.E. (414) 259-1500

8

8

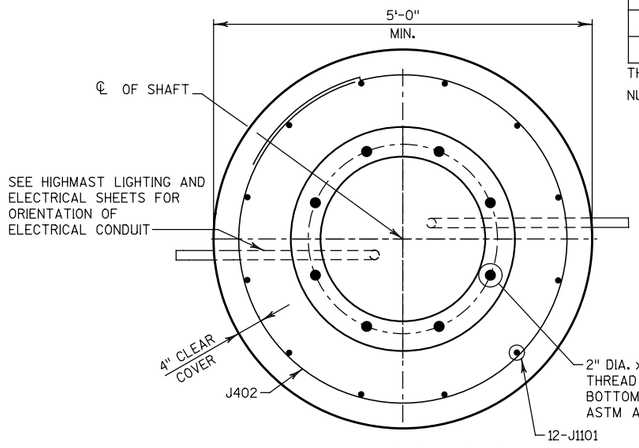
STATE PROJECT NUMBER
1300-13-74

BILL OF BARS - HML-40-114/115

BAR MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
J1101	24	32'-6"		FOUNDATION VERT. BARS
J402	68	15'-1"	X	TIES FOR VERT. BARS

THE FIRST DIGIT OR FIRST TWO DIGITS OF A BAR MARK INDICATES THE BAR SIZE.

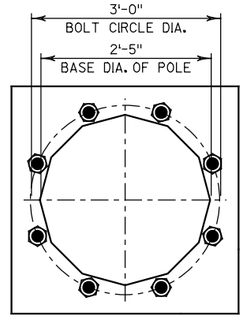
NUMBER OF BARS IN TABLE IS THE TOTAL NUMBER REQ'D FOR THE FOUNDATIONS SHOWN ON THIS SHEET.



SECTION B-B

POLE HEIGHT FEET	TOWER NUMBER	BORING DESIGNATION	HML STATION	HML COORDINATES	GROUND ELEVATION FEET	TOP OF CONCRETE EL. FEET	TOTAL ESTIMATED QUANTITIES	
							CONCRETE MASONRY C.Y.	HIGH STRENGTH BAR STEEL REINFORCEMENT LB.
150	HML-40-114	LS-23	19+39.81 LM 41.75' RT	N=297,660.62 E=608,448.65	586.75	589.75	24	2,410
150	HML-40-115	0	*	N=298,525.23 E=606,556.13	589.90	592.90	24	2,410

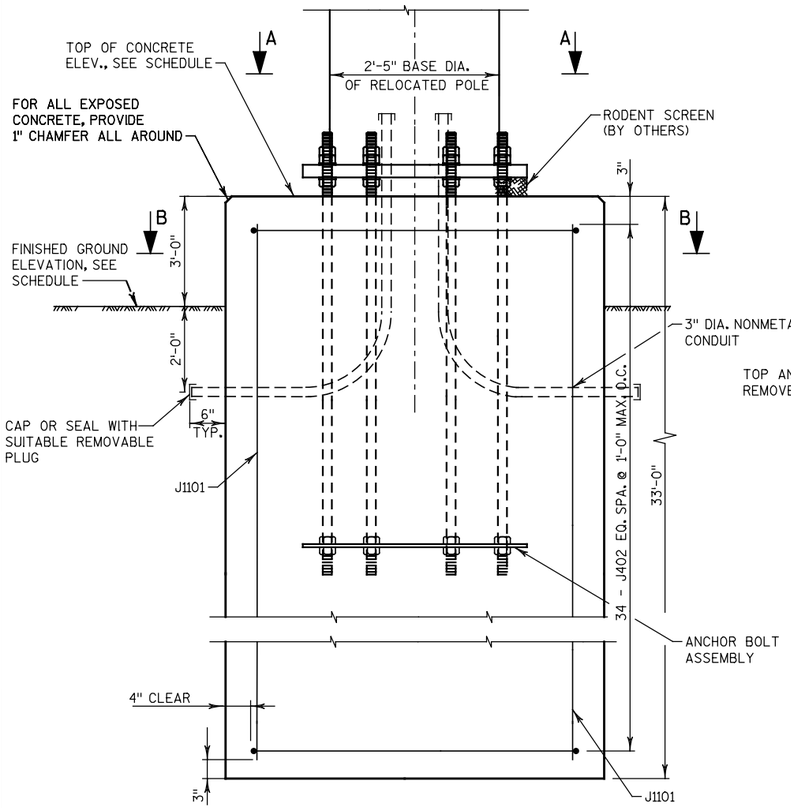
* = FOUNDATION IS LOCATED BETWEEN N. BROADWAY ST. AND IH 794 SOUTH ON RAMP.



SECTION A-A

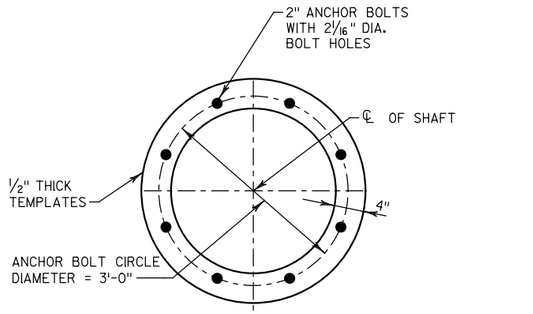
(FOR ILLUSTRATION PURPOSE ONLY)

SEE EXISTING POLES AND BASE PLATES FOR ACTUAL DETAILS.

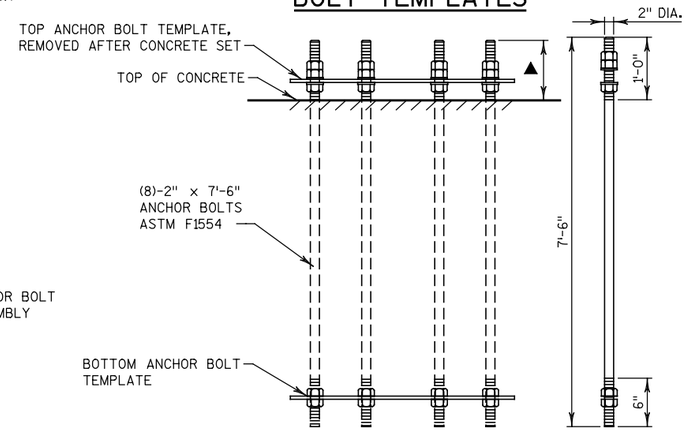


CAISSON FOUNDATION ELEVATION

NOTE: SHAFT CASINGS, IF USED, SHALL BE REMOVED WHILE THE CONCRETE REMAINS WORKABLE.

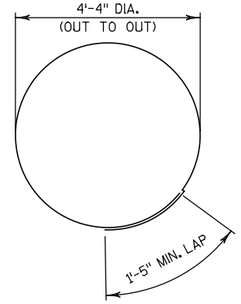


TOP AND BOTTOM ANCHOR BOLT TEMPLATES



ANCHOR BOLTS ASSEMBLY DETAILS

▲ EXTEND TOP OF ANCHOR BOLTS ABOVE CONCRETE 12" TO PROVIDE ATTACHMENT OF LEVELING NUTS, WASHER, BASE PLATE, AND TOP NUTS. PROTECT FROM CONCRETE SPLASH. EXTEND CONDUIT 12" ABOVE CONCRETE.



J402

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE HML-40-026/027/114/115

DRAWN BY RBH | PLANS CK'D. RPB

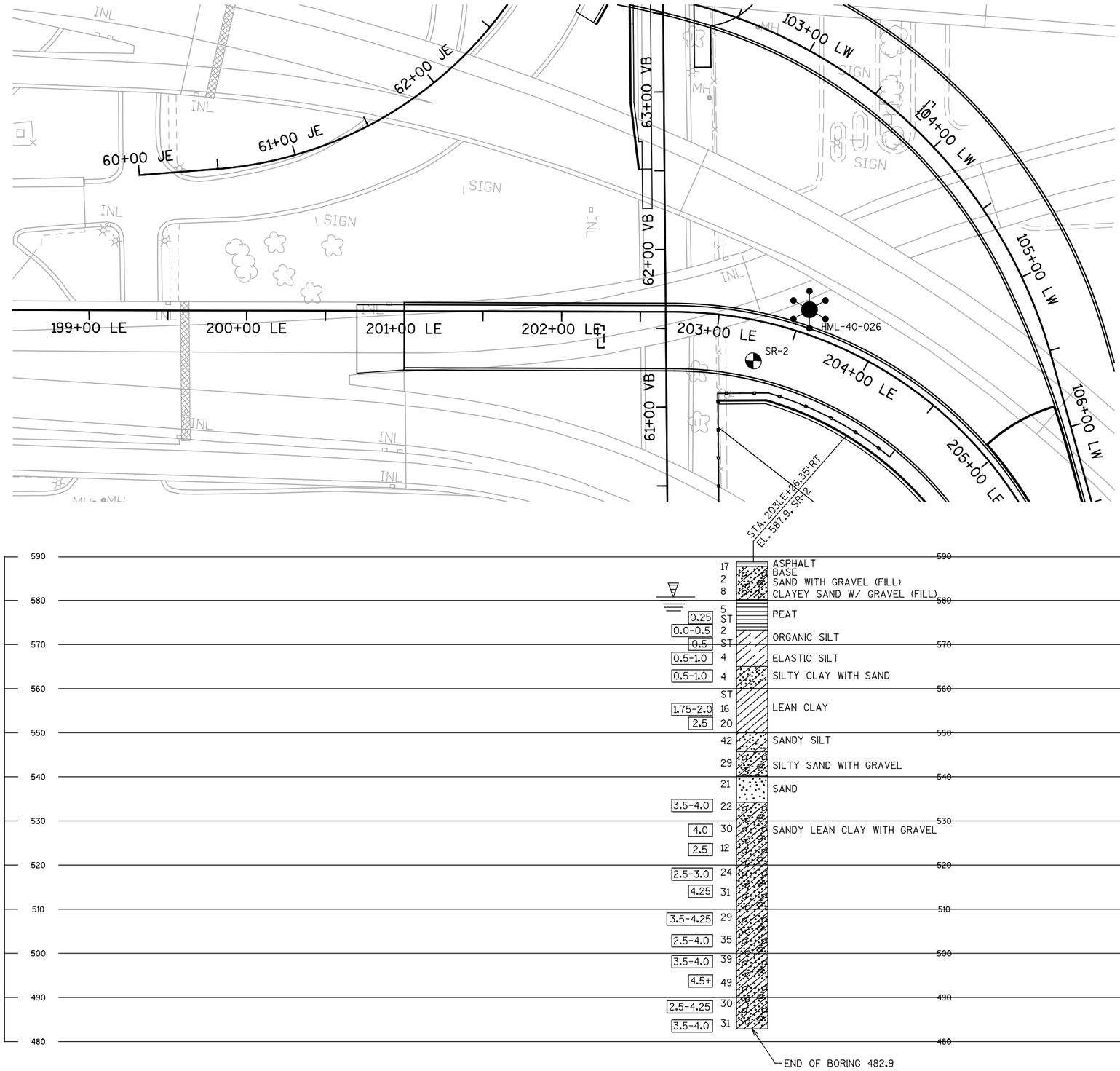
HIGH MAST LIGHT POLE FOUNDATIONS HML-40-114/115

SHEET 2 OF 6
839

8

8

$FILE$ $DATE$ $TIME$



N

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.
1626 W. FOND DU LAC AVENUE
MILWAUKEE, WI 53205

BORING SR-2 TAKEN 08-07-2013

STATE PROJECT NUMBER

1300-13-74

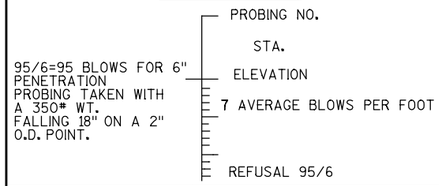
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

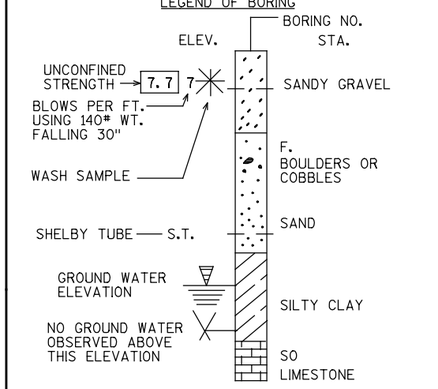
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE HML-40-026/027/114/115

DRAWN BY RBH | PLANS CK'D. KGW

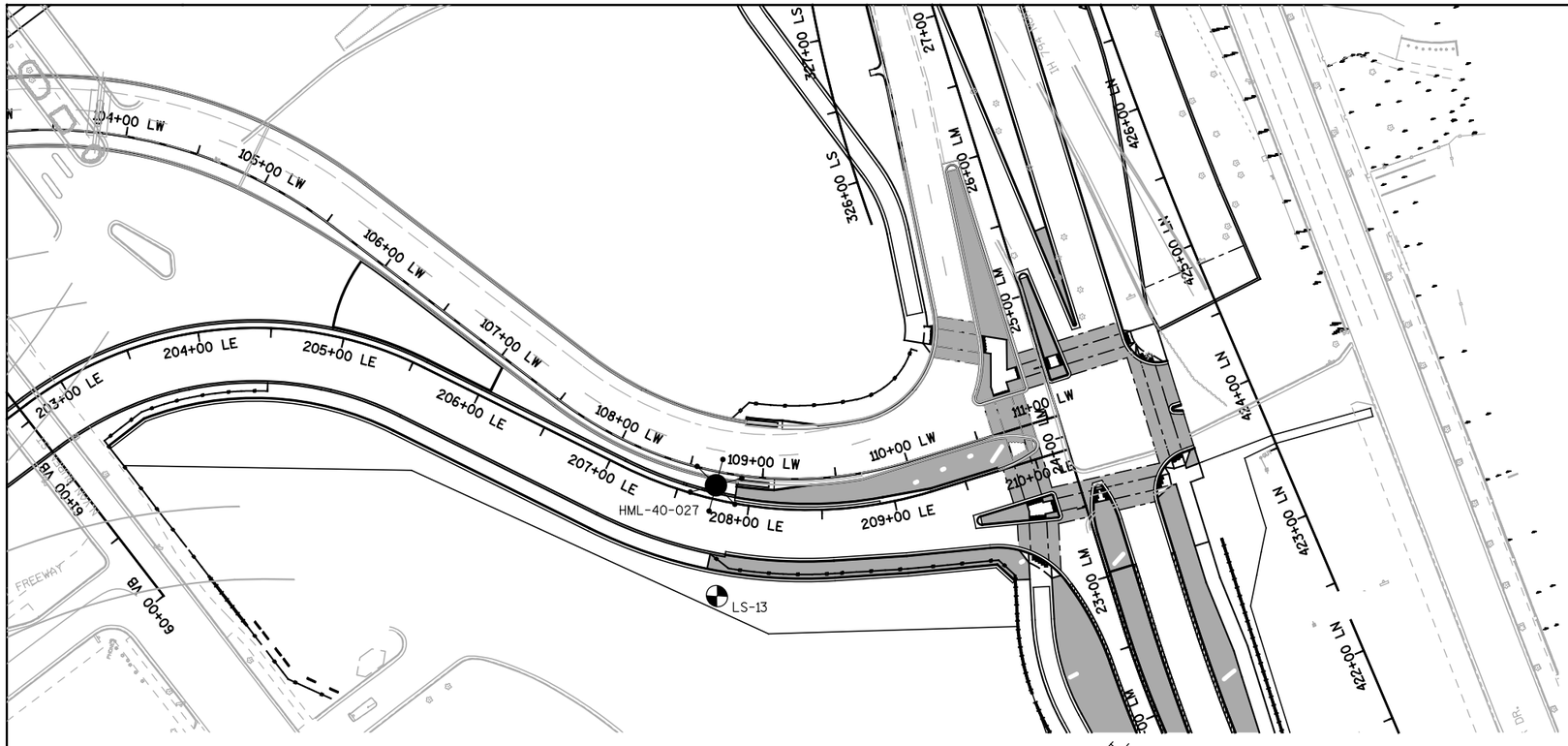
HML-40-026
SUBSURFACE
EXPLORATION

SHEET 3 OF 6
840

8

8

$FILE$ $DATE$ $TIME$





STATE PROJECT NUMBER

1300-13-74

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

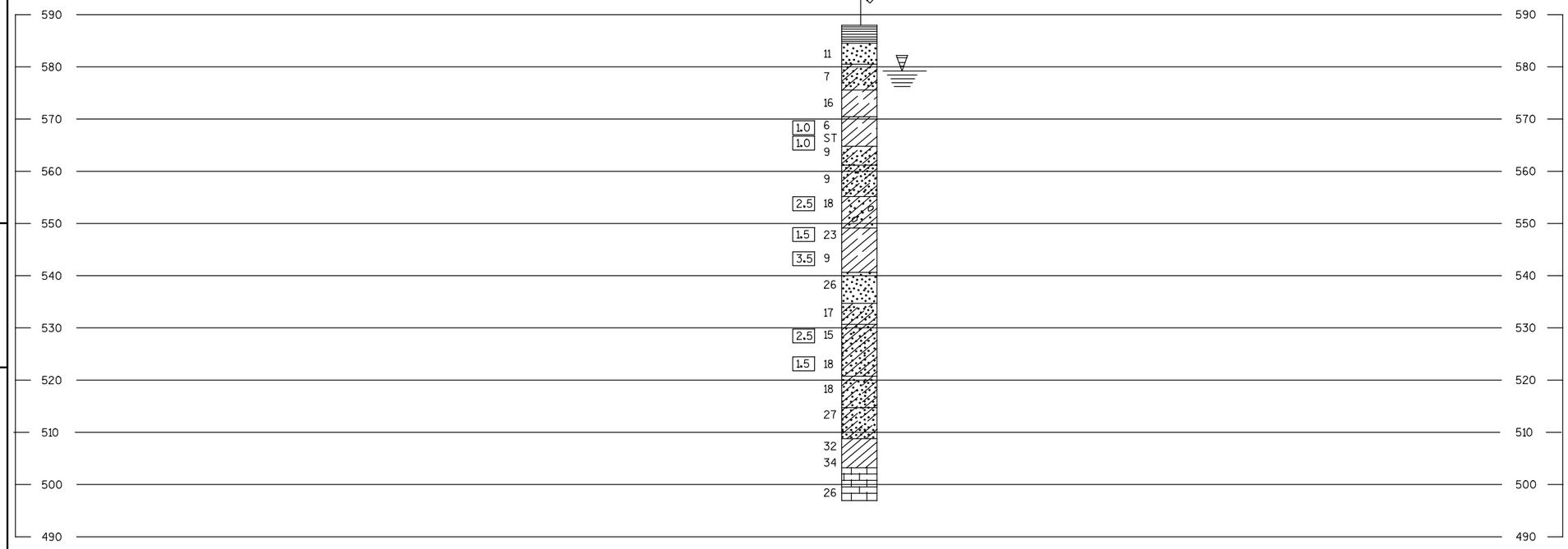
BORING NO.
ELEV. STA.
UNCONFINED STRENGTH → 7.7 7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SOIL BORINGS COMPLETED BY:
WISDOT HISTORICAL BORING

BORING LS-13 TAKEN 1967

STA. 107+95.47, 82.37' LT
EL. 587.4, LS-13



SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE HML-40-026/027/114/115

DRAWN BY RBH PLANS CK'D. KGW

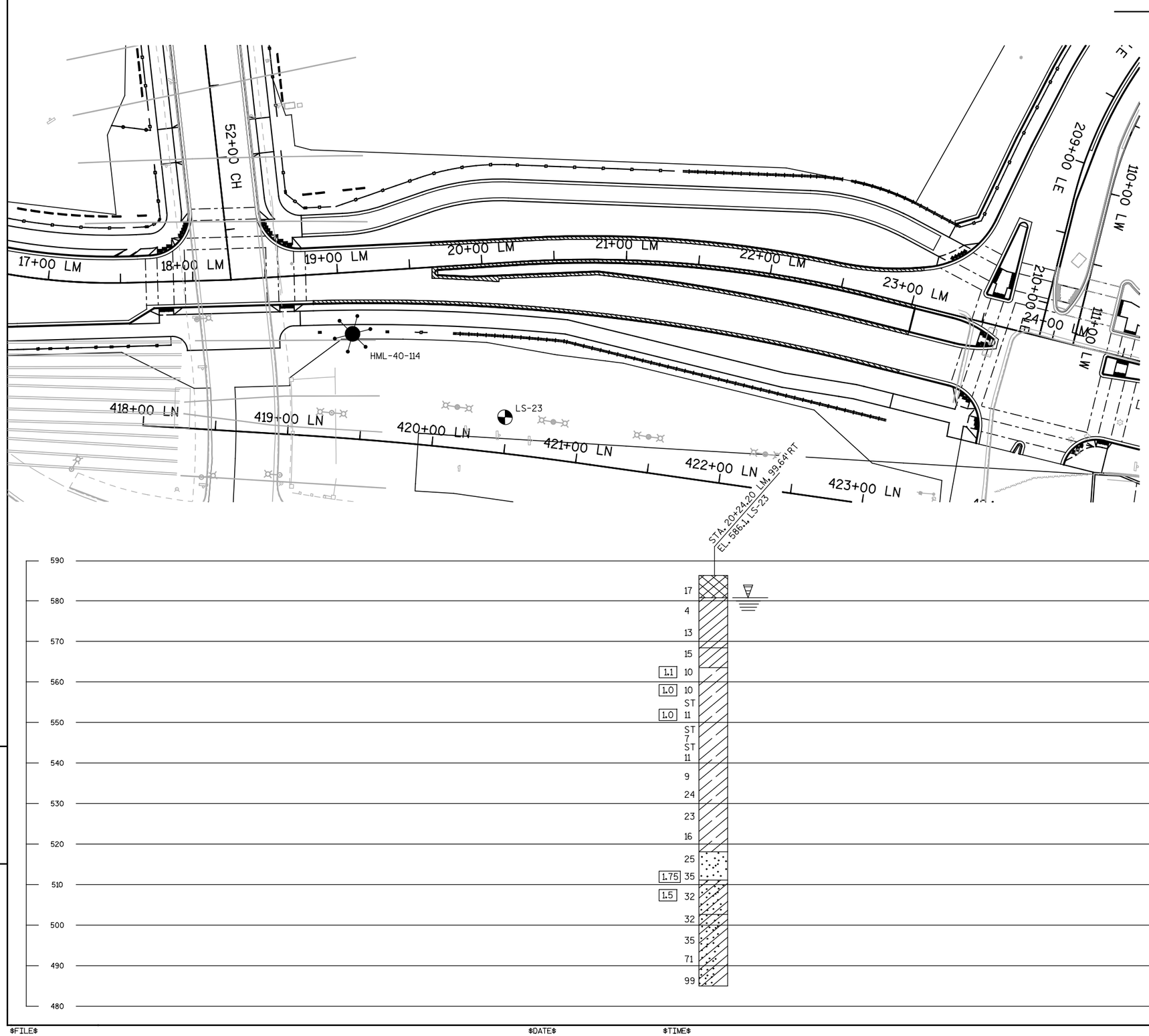
HML-40-027
SUBSURFACE
EXPLORATION

SHEET 4 OF 6
841

8

8

$FILE$ $DATE$ $TIME$



SOIL BORINGS COMPLETED BY:
WISDOT HISTORIC BORING

BORING LS-23 TAKEN 1967

STATE PROJECT NUMBER

1300-13-74

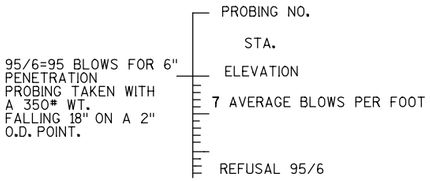
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

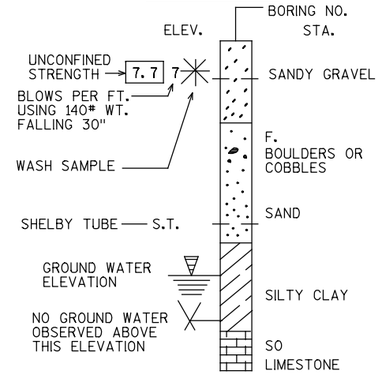
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE HML-40-026/027/114/115

DRAWN BY RBH | PLANS CK'D. KGW

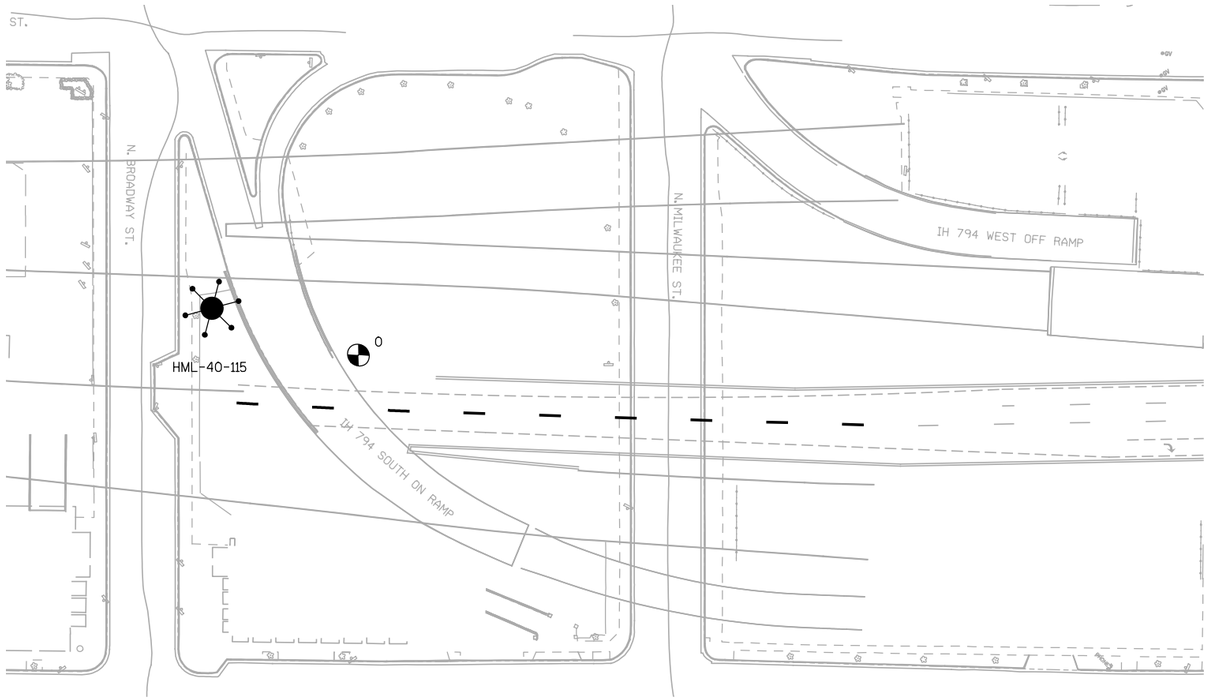
HML-40-114
SUBSURFACE
EXPLORATION

SHEET 5 OF 6
842

8

8

$FILE$ $DATE$ $TIME$





STATE PROJECT NUMBER

1300-13-74

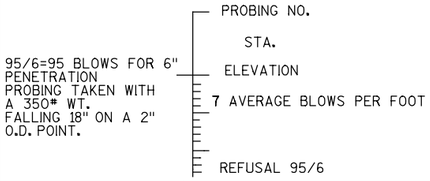
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

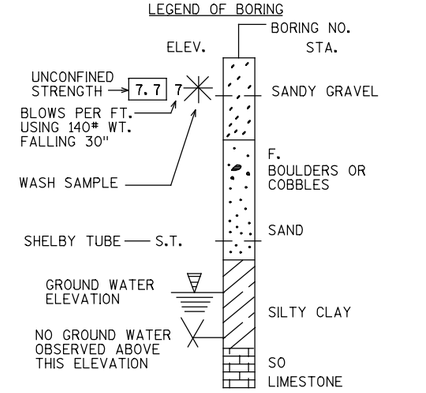
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

SOIL BORINGS COMPLETED BY:
SOILS & ENGINEERING SERVICES, INC.

BORING 0 TAKEN 1-26-2012
HOAN PROJECT - 1300-13-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE HML-40-026/027/114/115

DRAWN BY RBH | PLANS CK'D. KGW

HML-40-115
SUBSURFACE
EXPLORATION

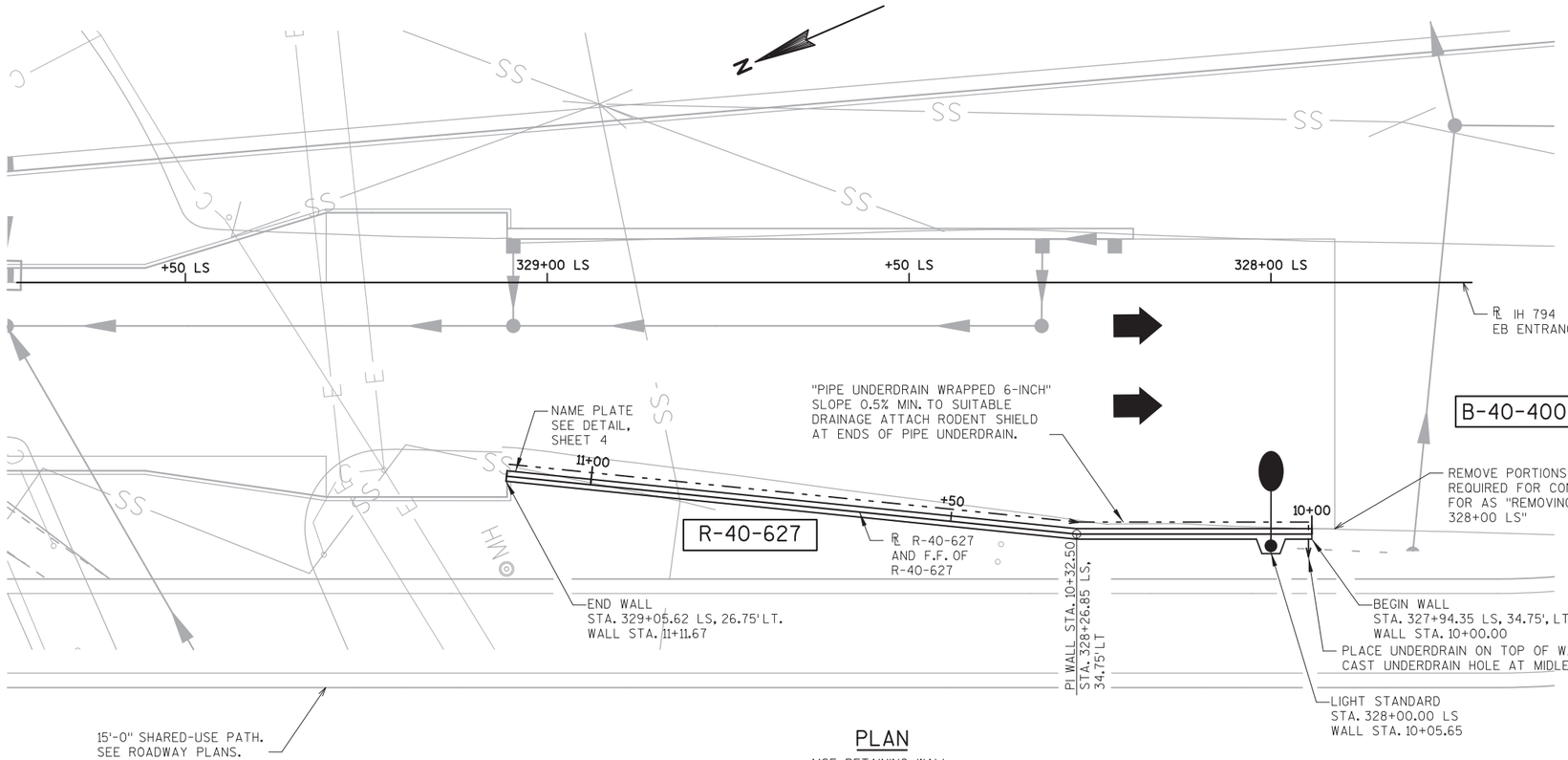
SHEET 6 OF 6
843

8

8

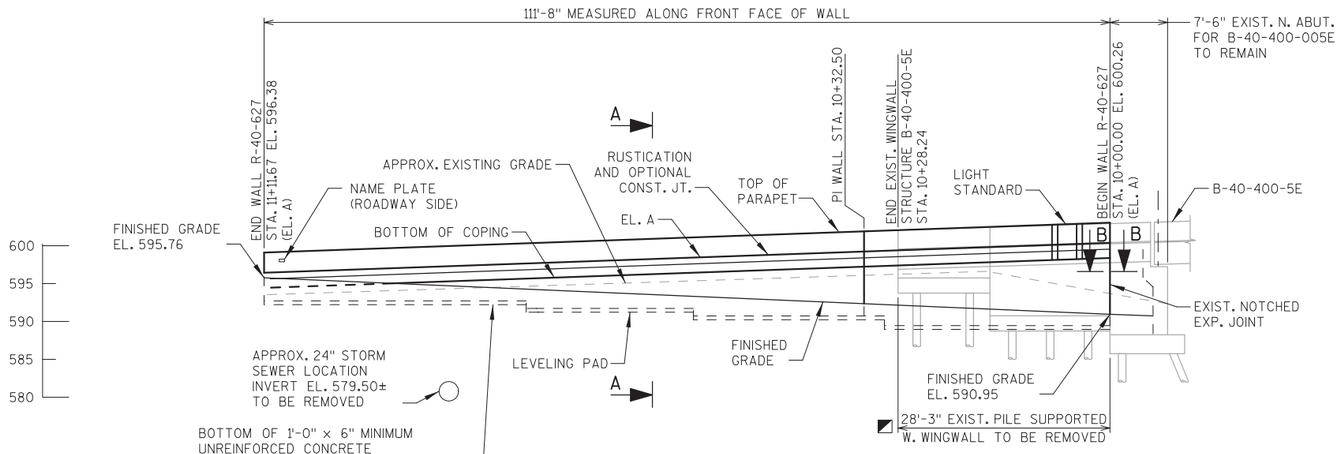
$FILE$ $DATE$ $TIME$

STATE PROJECT NUMBER
1300-13-74



PLAN

MSE RETAINING WALL



ELEVATION

(LOOKING EAST AT FRONT OF WALL)
(DISTANCES AND STATIONS GIVEN ALONG ℄ OF WALL)

DESIGN DATA

LIVE LOAD:
LIVE LOAD SURCHARGE = 240 PSF

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY RETAINING WALLS	f'c = 3,500 PSI
PARAPET, ANCHOR SLAB, AND LIGHT STANDARD CONCRETE	f'c = 4,000 PSI
PRECAST CONCRETE WALL PANEL	f'c = 4,000 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 PSI

ALLOWABLE WALL SYSTEMS

"WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP"

NOTES

SEE SHEET 2 FOR SECTION A-A.

SEE SHEET 3 FOR SECTION B-B.

◪ REMOVE EXISTING WINGWALL AND PILES TO AN ELEVATION ALLOWING FOR UNOBSTRUCTED CONSTRUCTION OF THE MSE RETAINING WALL (APPROX. 2'-6" BELOW FINISHED GRADE). PAID AS "REMOVING OLD STRUCTURE STATION 328+00 LS".

BENCH MARKS

NO.	NORTHING/EASTING	STATION	DESCRIPTION	ELEV.
223	N. 298,103.61 E. 608,499.80	24+00.65 LM 32.65'RT	ALUM. CAP MONUMENT	585.93
225	N. 298,201.91 E. 608,040.42	206+73.73 LE 168.96'RT	ALUM. CAP MONUMENT	586.97

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES & GENERAL NOTES
3. WALL DETAILS
4. SINGLE SLOPE PARAPET 32SS
5. SINGLE SLOPE PARAPET 32SS DETAILS
6. AESTHETIC DETAILS
7. SUBSURFACE EXPLORATION

WISCONSIN
MICHAEL S. CARPENTER
E-36648
LONE ROCK, WI
PROFESSIONAL ENGINEER

7/24/2015

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MIKE CARPENTER (608) 821-8700

NO.	DATE	REVISION	BY

Baker
MICHAEL BAKER JR., INC
7633 GANSER WAY, SUITE 206
MADISON, WI 53719

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/04/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-627

IH 794 EB ENTRANCE RAMP

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DNB	MSC	DNB	LMK

GENERAL PLAN & ELEVATION

SHEET 1 OF 7
844

8

8

STATE PROJECT NUMBER
1300-13-74

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL
203.0200.2007	REMOVING OLD STRUCTURE STATION 328+00 LS	LS	1
203.0210.S.2007	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-400-5E	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	7
502.3210.S	PIGMENTED PROTECTIVE SURFACE TREATMENT	SY	53
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	52
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	6,090
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	26
517.1010.S.2001	CONCRETE STAINING R-40-627	SF	930
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	140
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	230
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	1
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	1
SPV.0165.2002	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP	SF	690
	NON-BID ITEMS		
	CORK FILLER	SIZE	1"
	NON-BITUMINOUS JOINT SEALER	SIZE	1"

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS BORING T-1	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)	
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	130	30	-	
RETAINED SOIL *	120	30	-	
EXISTING UPPER FILL EL. 587 EL. 580	105	28	-	
EXISTING LOWER FILL EL. 580 EL 573	110	30	-	
LOOSE TO M. DENSE SAND WITH GRAVEL, SANDY LEAN CLAY, SILT EL. 573 EL. 554	115	30	-	
STIFF TO V. STIFF SILTY CLAY EL. 554 EL. 549	125	-	1,500	UNDRAINED
		28	-	DRAINED
M. DENSE SAND WITH SILT EL. 549 EL. 544	115	30	-	
STIFF TO V. STIFF SILTY CLAY EL. 544 EL. 488	125	-	1,500	UNDRAINED
		28	-	DRAINED
DENSE SAND EL. 488 EL. 482	130	32	-	

* DESIGN WALL FOR THESE VALUES

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	
WALL HEIGHT (FEET)[1]	10.8
EXPOSED WALL HEIGHT (FEET)	9.3
MINIMUM LENGTH OF REINFORCEMENT (FEET)[4]	11.9
REINFORCEMENT LENGTH/WALL HEIGHT	1.1
WALL STATION	10+00
BORING USED	T-1
CAPACITY TO DEMAND RATIO (CDR)[2]	
SLIDING (CDR>1.0)	1.26
ECCENTRICITY (CDR>1.0)	1.57
GLOBAL STABILITY (CDR>1.0)	1.14[3]
BEARING RESISTANCE (CDR>1.0)	1.23
FACTORED BEARING RESISTANCE (PSF)	3,500

1. THE WALL HEIGHT INCLUDES AN EMBEDMENT OF 1.5 FT.
2. CDR REQUIREMENTS AND LOAD AND RESISTANCE FACTORS ARE PRESENTED IN CHAPTER 14 OF THE BRIDGE MANUAL.
3. A RESISTANCE FACTOR OF 0.75 WAS USED TO ESTIMATE CDR.
4. THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153, TYPES I, II, OR III, OR M213.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION FOR THE WALL.

THE PLAN QUANTITY FOR THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (1991).

ALL WALL STATIONING, OFFSETS, AND DIMENSIONS ARE GIVEN ALONG THE ℄ OF WALL R-40-627, UNLESS OTHERWISE SHOWN.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR, UNLESS OTHERWISE SHOWN OR NOTED.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALL IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON SHEET 1 AND THE GEOMETRY TABLE GIVEN ON THIS SHEET.

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP".

CONTRACTOR SHALL SUPPLY AND INSTALL A NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

QUANTITY FOR "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS" AND "CONCRETE MASONRY RETAINING WALLS" INCLUDES PARAPET, PARAPET FOOTING, LIGHT STANDARD, AND ANCHOR SLAB.

DESIGN THE RETAINING WALL FOR A LEVEL FINISHED GRADE BEHIND THE WALL WITH A LIVE LOAD SURCHARGE OF 240 PSF, UNLESS OTHERWISE NOTED.

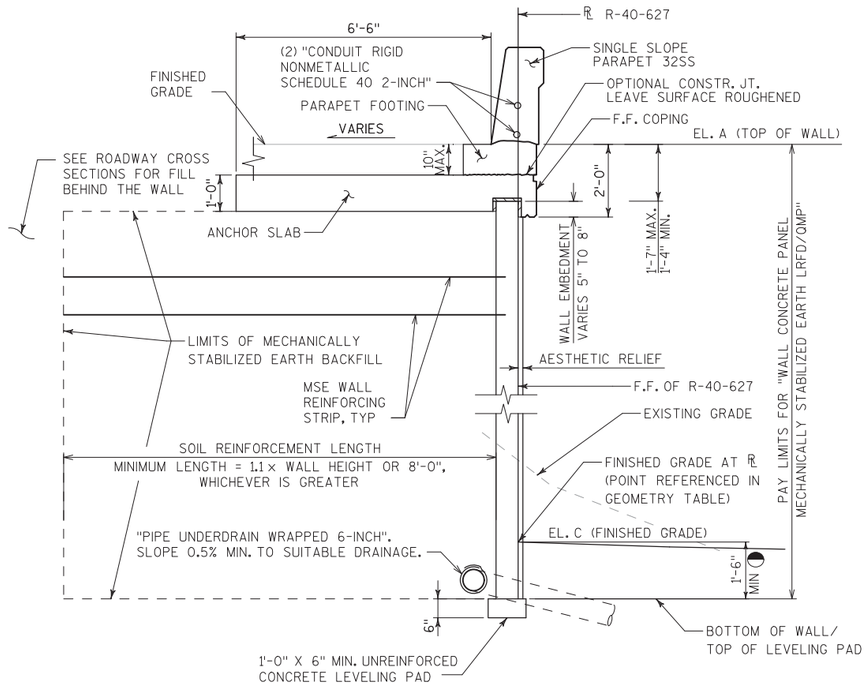
GEOMETRY TABLE ◹

WALL STATION	ROADWAY STATION	OFFSET TO ℄ R-40-627	EL. A	EL. C
10+00.00	327+94.35 LS	34.75 LT	600.24	590.95
10+32.50	328+26.85 LS	34.75 LT	599.13	592.85
10+50.00	328+44.26 LS	32.98 LT	598.51	593.65
11+00.00	328+94.00 LS	27.93 LT	596.77	595.37
11+11.67	329+05.62 LS	26.75 LT	596.37	595.76

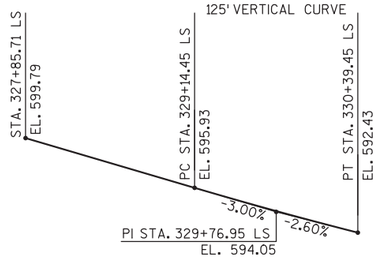
LEGEND

◹ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

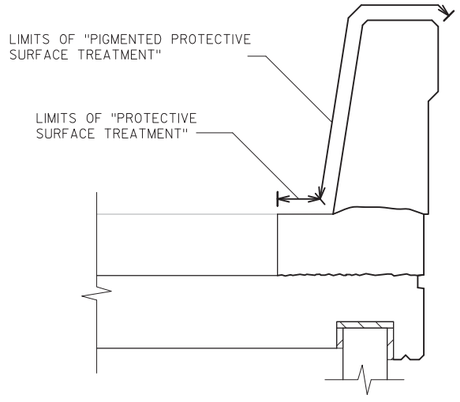
◓ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR WALLS ON LEVEL GROUND). FIELD EMBEDMENT SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.



SECTION A-A



PROFILE GRADE LINE - IH 794 EB ENTRANCE RAMP



PROTECTIVE SURFACE TREATMENT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-627

DRAWN BY DNB | PLANS CK'D. LMK

QUANTITIES & GENERAL NOTES

SHEET 2 OF 7
845

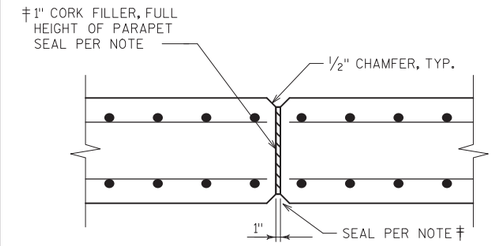
8

8

IP_PWP:d0330719\080702_gn.dgn 23-JUL-2015 10:31

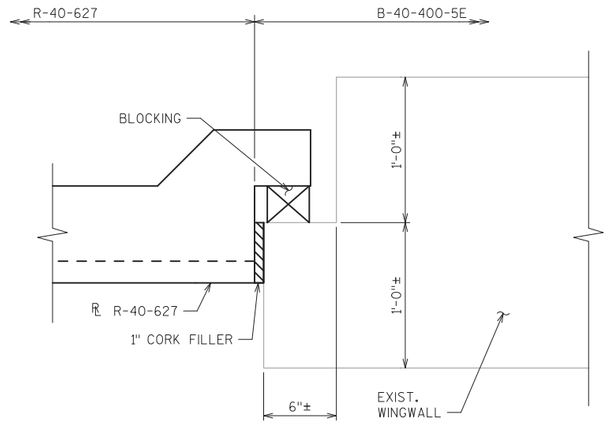
STATE PROJECT NUMBER

1300-13-74



⊛ TRAFFIC BARRIER EXPANSION JOINT DETAIL

PLAN VIEW

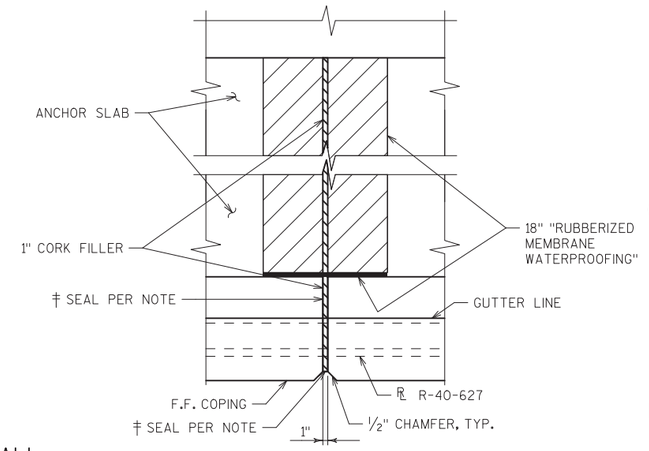


SECTION B-B - CONNECTION TO EXISTING WINGWALL

PLAN VIEW

NOTE:
COST FOR CONNECTION TO THE EXISTING WINGWALL IS INCIDENTAL TO THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP".

SUGGESTED CONNECTION SHOWN. CONTRACTOR TO PROVIDE CONNECTION WHICH PREVENTS DIFFERENTIAL MOVEMENT BETWEEN THE MSE WALL PANEL AND THE EXISTING WINGWALL. SUBMIT CONNECTION DESIGN TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.



⊛ ANCHOR SLAB EXPANSION JOINT DETAIL

PLAN VIEW

LEGEND

† SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

⊛ EXPANSION JOINTS TO BE SPACED AT A MINIMUM OF 20' AND A MAXIMUM OF 30'. LOCATE EXPANSION JOINTS OVER WALL JOINTS. DO NOT RUN BAR STEEL THRU JOINT. JOINT TO EXTEND FULL DEPTH OF PARAPET AND ANCHOR SLAB.

◆ OVERALL LENGTH OF BAR IS PROVIDED FOR QUANTITY PURPOSES ONLY. CONTRACTOR TO DETERMINE AND ADJUST ACTUAL BAR LENGTHS TO FIT BETWEEN EXPANSION JOINTS. PAY QUANTITY IS BASED ON VALUE SHOWN IN BILL OF BARS. BEND BARS AS REQUIRED FOR WALL GEOMETRY.

■ 18" "RUBBERIZED MEMBRANE WATERPROOFING" TO BE PLACED ON THESE SURFACES AT EACH JOINT.

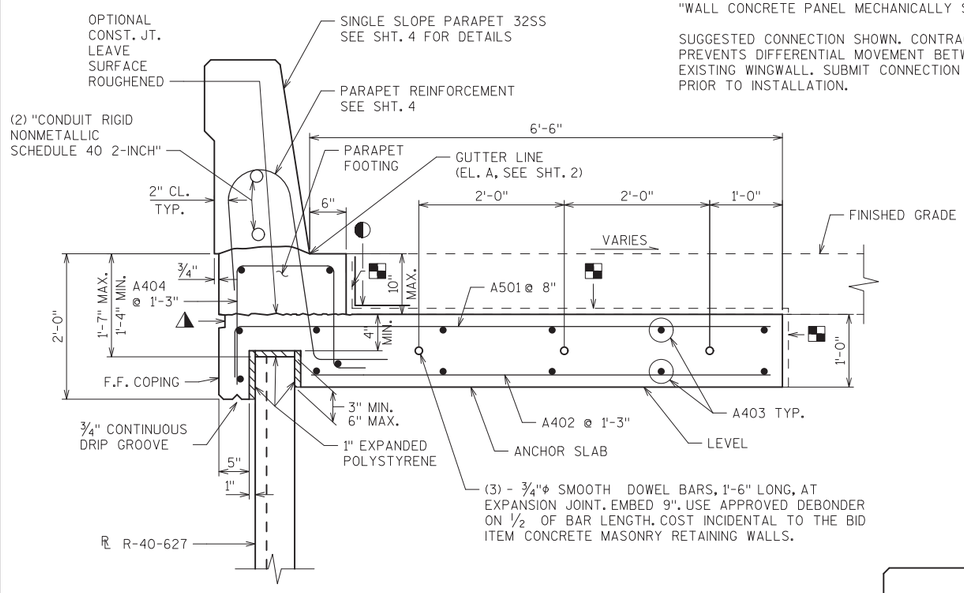
◐ IF THE OPTIONAL CONST. JOINT IS USED, PLACE 18" MEMBRANE WATERPROOFING ALONG THE ENTIRE LONGITUDINAL JOINT. THE MEMBRANE WATERPROOFING SEALING THE OPTIONAL CONST. JOINT IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

NOTES

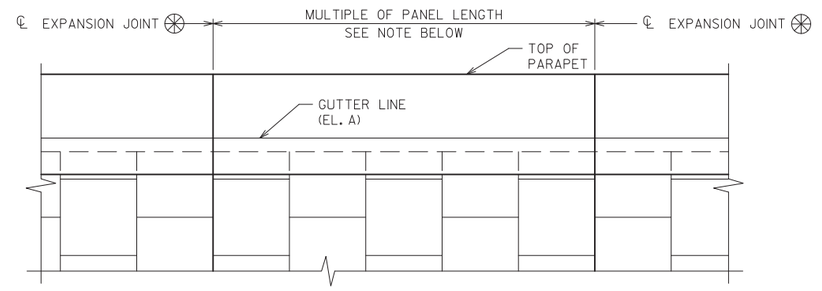
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPET AND ANCHOR SLAB BETWEEN EXPANSION JOINTS MAY BE USED. RUN BAR REINFORCEMENT THRU THE JOINT. DEFINE CONSTRUCTION JOINT WITH A ¾" "V" GROOVE.

LAP LONGITUDINAL A403 BARS A MINIMUM OF 1'-0".

CONCRETE QUANTITY BASED ON 3" PANEL EMBEDMENT AND 5½" PANEL THICKNESS.



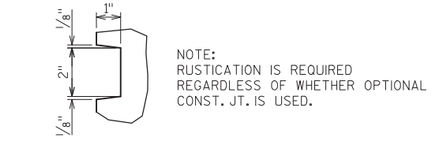
CAST-IN-PLACE CONCRETE TRAFFIC BARRIER DETAIL



C.I.P. TRAFFIC BARRIER PARTIAL ELEVATION

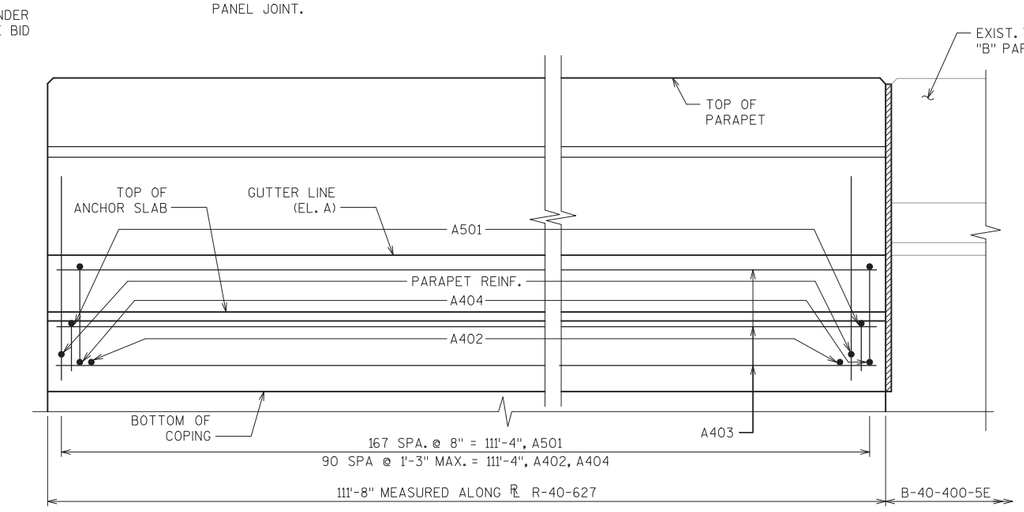
(AESTHETICS NOT SHOWN FOR CLARITY)

NOTE:
ALL JOINTS MUST COINCIDE WITH PANEL JOINT ON FRONT FACE WHERE BOTTOM OF LIP INTERSECTS WITH PANEL JOINT.



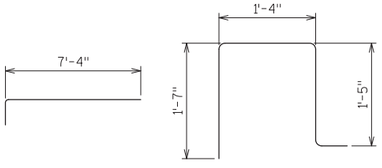
NOTE:
RUSTICATION IS REQUIRED REGARDLESS OF WHETHER OPTIONAL CONST. JT. IS USED.

⚠ RUSTICATION DETAIL



OUTSIDE ELEVATION

(FOR CLARITY, NOT ALL VERTICAL ANCHOR SLAB BARS ARE SHOWN)



A501 A404

TOTAL COATED = 3,190 LBS

BILL OF BARS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
A501	168	8'-0"	X	X		ANCHOR SLAB - TOP - TRANS.
A402	91	6'-3"	X			ANCHOR SLAB - BOT. - TRANS.
◆ A403	15	111'-4"	X			ANCHOR SLAB - TOP & BOT. - LONGIT.
A404	91	4'-9"	X	X		ANCHOR SLAB - VERT.

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-627

DRAWN BY DNB | PLANS CK'D. LMK

WALL DETAILS

SHEET 3 OF 7

846

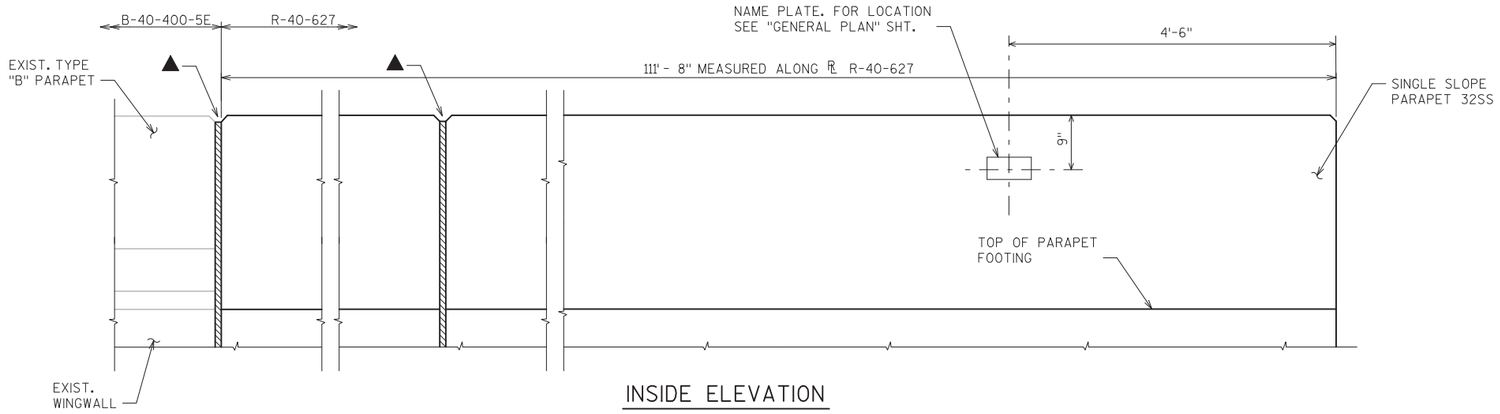
8

8

IP_PWP:d0330719\080703_dt.dgn 23-JUL-2015 10:32

STATE PROJECT NUMBER

1300-13-74



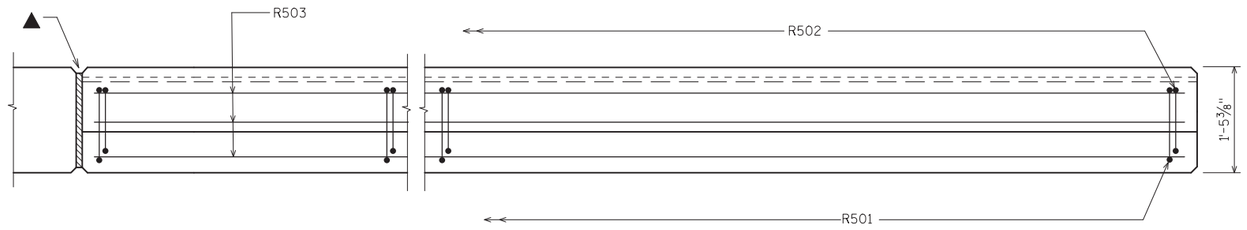
INSIDE ELEVATION

TOTAL COATED = 2,530 LBS

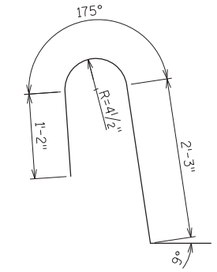
BILL OF BARS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
R501	168	5'-5"	X	X		PARAPET - VERT.
R502	168	5'-0"	X	X		PARAPET - VERT.
◆ R503	6	111'-4"	X			PARAPET - LONGIT.

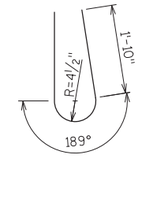
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



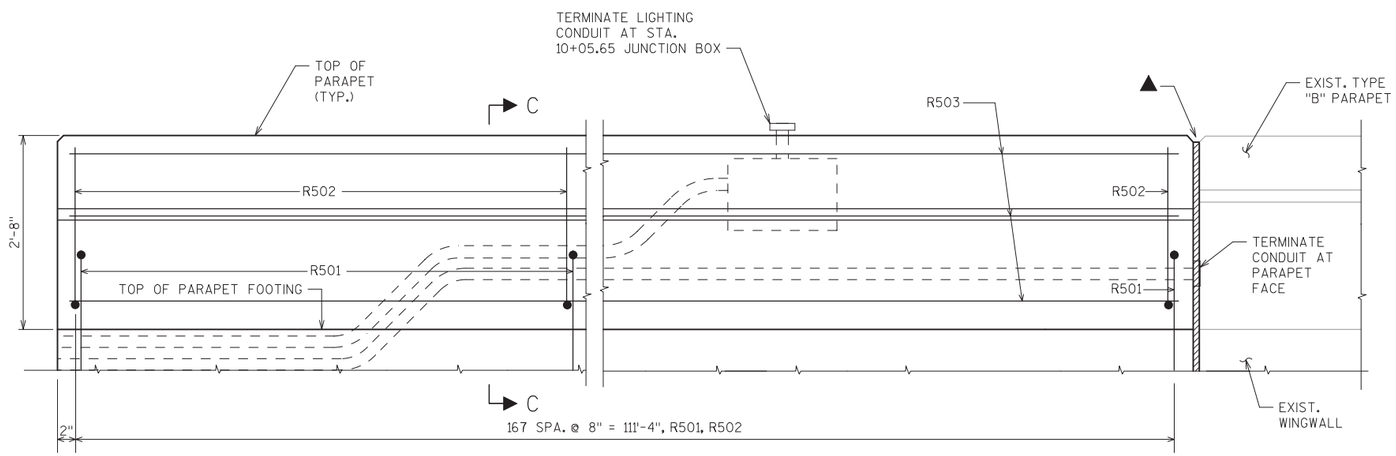
PLAN



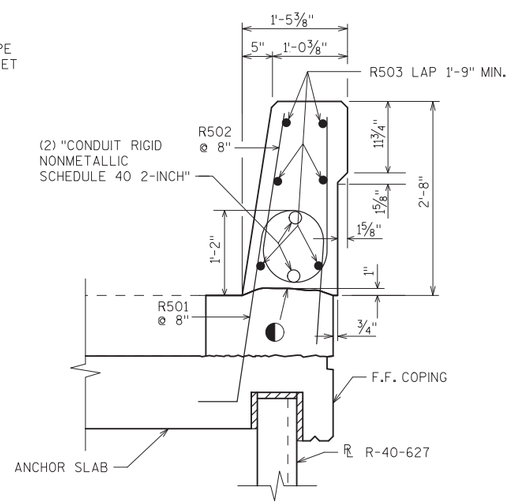
R501



R502



OUTSIDE ELEVATION



SECTION C-C

LEGEND

▲ SEE SHT. 3 FOR JOINT DETAILS AND NOTES.

◐ CONST. JT. - STRIKE OFF AS SHOWN

◆ OVERALL LENGTH OF BAR IS PROVIDED FOR QUANTITY PURPOSES. CONTRACTOR TO ADJUST BAR LENGTHS TO FIT BETWEEN EXPANSION JOINTS. PAY QUANTITY IS BASED ON VALUE SHOWN IN BILL OF BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-627

DRAWN BY MSC | PLANS CK'D. LMK

SINGLE SLOPE PARAPET 32SS

SHEET 4 OF 7

847

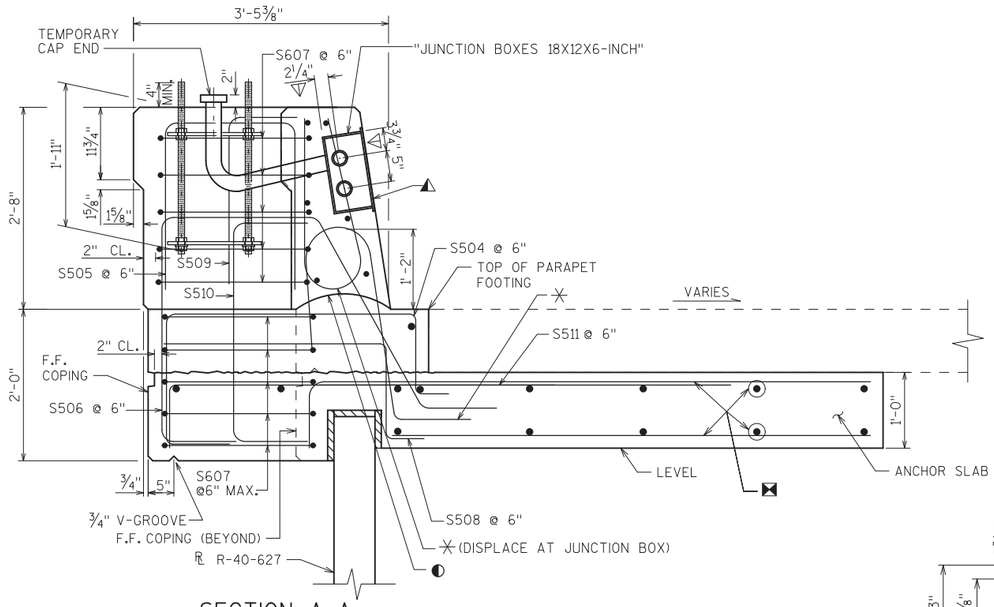
8

8

IP_PWP:d0330719\080704_dt.dgn 23-JUL-2015 10:32

STATE PROJECT NUMBER

1300-13-74



SECTION A-A

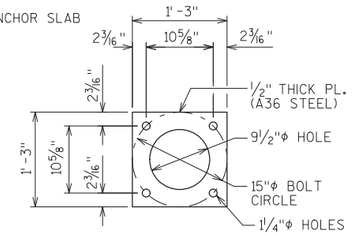
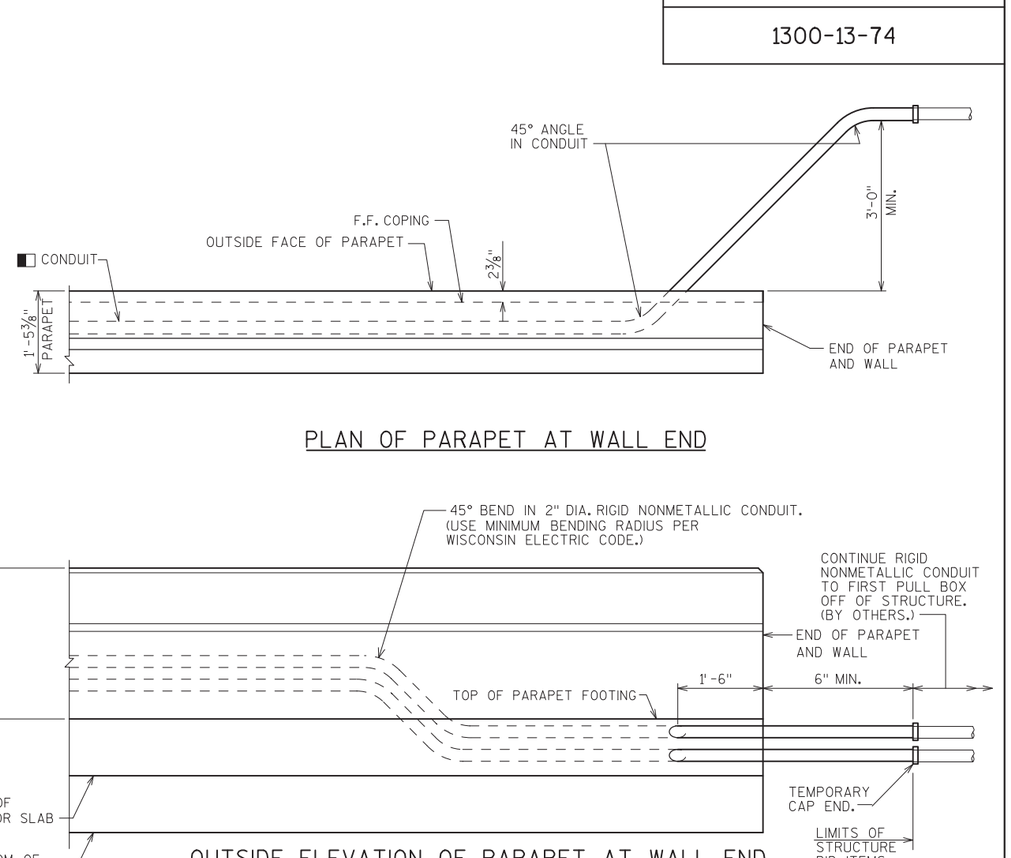


PLATE DETAIL

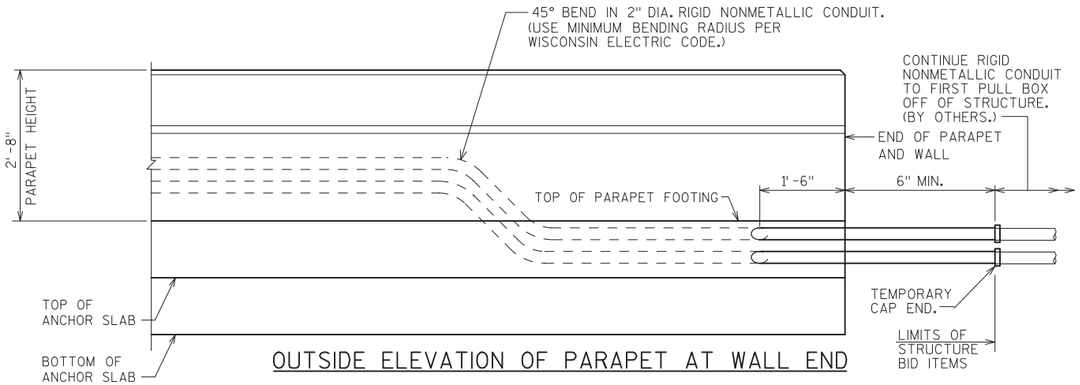
(1 REQ'D.)

ANCHORAGE DETAIL

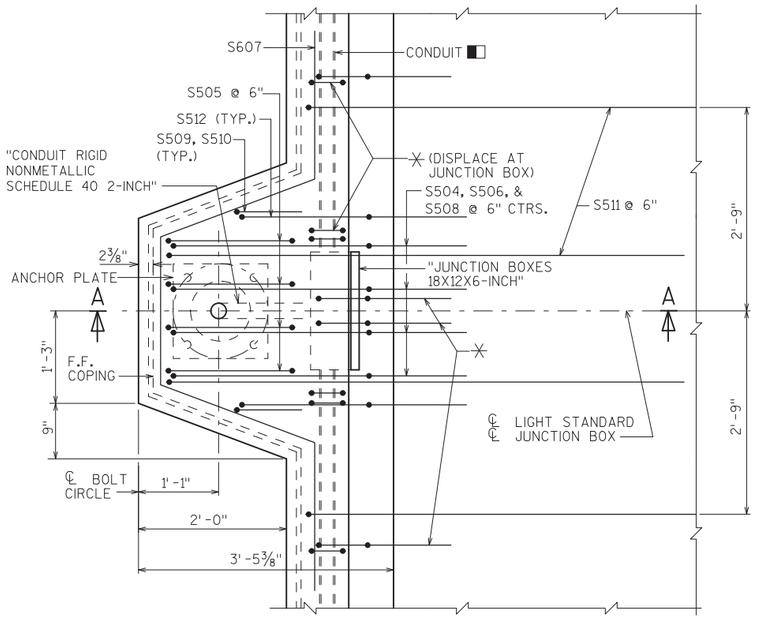
(1 REQ'D.)



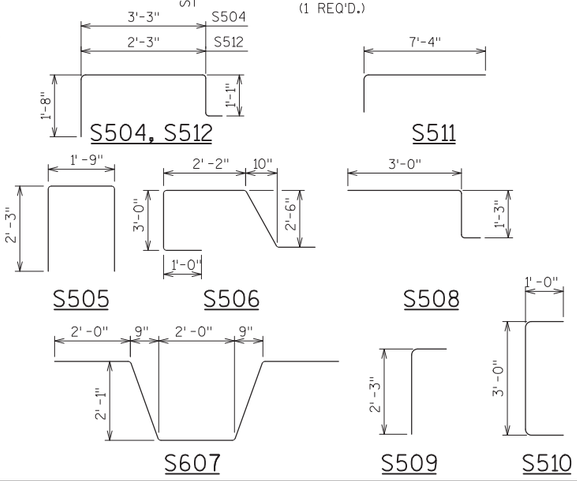
PLAN OF PARAPET AT WALL END



OUTSIDE ELEVATION OF PARAPET AT WALL END



PLAN AT LIGHT STANDARD



NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURE", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

- SEE WALL DETAILS SHEET FOR ADDITIONAL BAR STEEL DETAILS
- USE 2" DIA. RIGID NONMETALLIC CONDUIT.
- CONST. JT. STRIKE OFF AS SHOWN
- CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.
- LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.
- SEE SINGLE SLOPE PARAPET SHEET 4 FOR ADDITIONAL BAR STEEL DETAILS
- 1"ϕ THREADED ANCHOR BOLTS ASTM A449 OR AASHTO M 314-90 GR 55. HOT DIP ASTM A153, CLASS C, UPPER 8" MIN. OF BOLT INCLUDING NUTS & WASHERS. PROVIDE ENLARGED THREAD ON NUTS FOR PROPER FIT AFTER GALVANIZING. PROVIDE DOUBLE FLAT WASHERS & NUTS.

BILL OF BARS

TOTAL COATED = 370 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
S504	4	6'-6"	X	X		TRANSV. @ LIGHT STD.
S505	4	6'-0"	X	X		PARAPET VERT. @ LIGHT STD.
S506	4	9'-2"	X	X		PARAPET VERT. @ LIGHT STD.
S607	10	10'-0"	X	X		PARAPET HORIZ. @ LIGHT STD.
S508	4	4'-10"	X	X		TRANSV. @ LIGHT STD.
S509	2	3'-2"	X	X		PARAPET VERT. @ LIGHT STD.
S510	2	4'-9"	X	X		PARAPET VERT. @ LIGHT STD.
S511	12	5'-11"	X	X		TRANSV. @ LIGHT STD.
S512	2	5'-6"	X	X		TRANSV. @ LIGHT STD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-627

DRAWN BY MSC | PLANS CK'D. LMK

SINGLE SLOPE PARAPET 32SS DETAILS

SHEET 5 OF 7

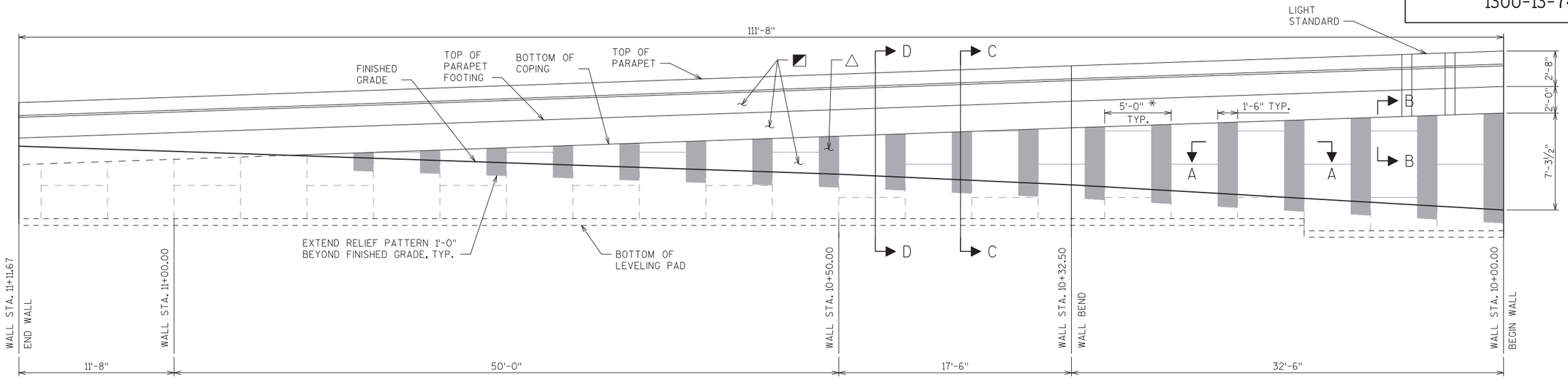
848

8

8

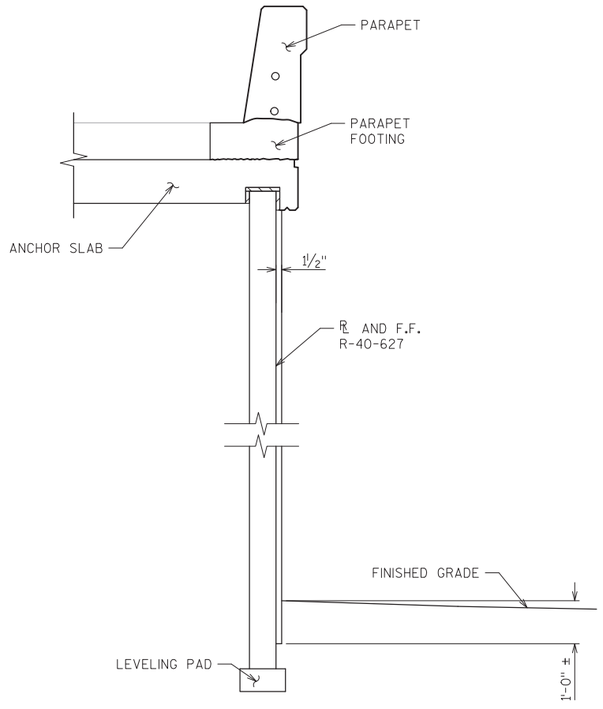
IP_PWP:d0330719\080705_dt.dan.DGN 23-JUL-2015 10:33

STATE PROJECT NUMBER
1300-13-74

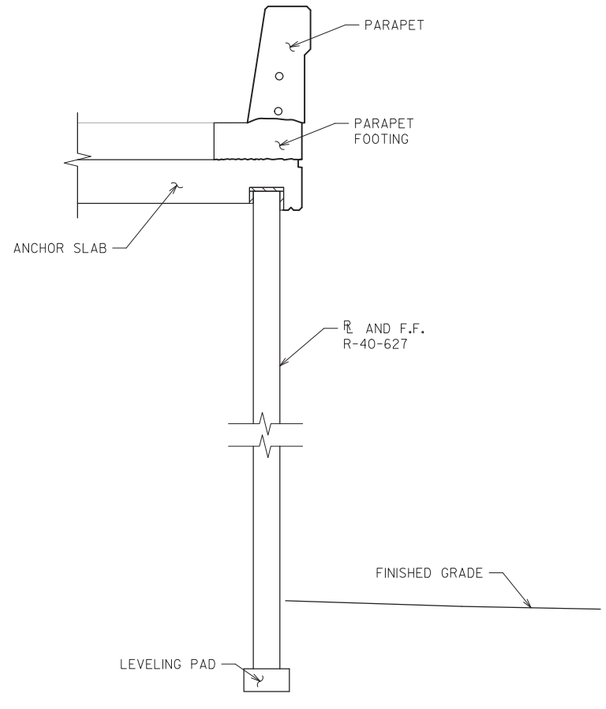


AESTHETIC DETAILS

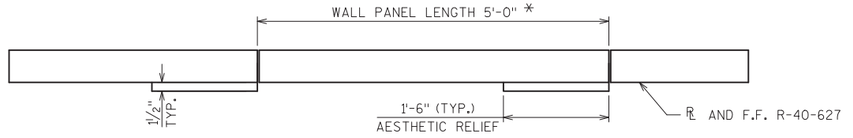
(ELEVATION)



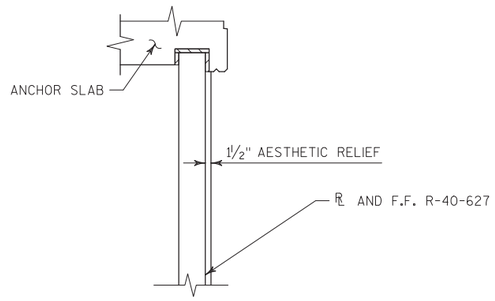
SECTION C-C



SECTION D-D



SECTION A-A



SECTION B-B

LEGEND

- RAISED 1½"
- GRAY (LIGHT GRAY) - FEDERAL COLOR #26293
- GRAY (DARK GRAY) - FEDERAL COLOR #26132

NOTE:

COST FOR AESTHETIC RELIEF IS INCIDENTAL TO THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP".

* AESTHETIC PATTERN BASED ON 5'-0" PANEL WIDTH. IF PANEL WIDTHS DIFFER SUBMIT SHOP DRAWINGS TO THE ENGINEER WITH PROPOSED AESTHETIC TREATMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-627

DRAWN BY	DNB	PLANS CK'D.	LMK

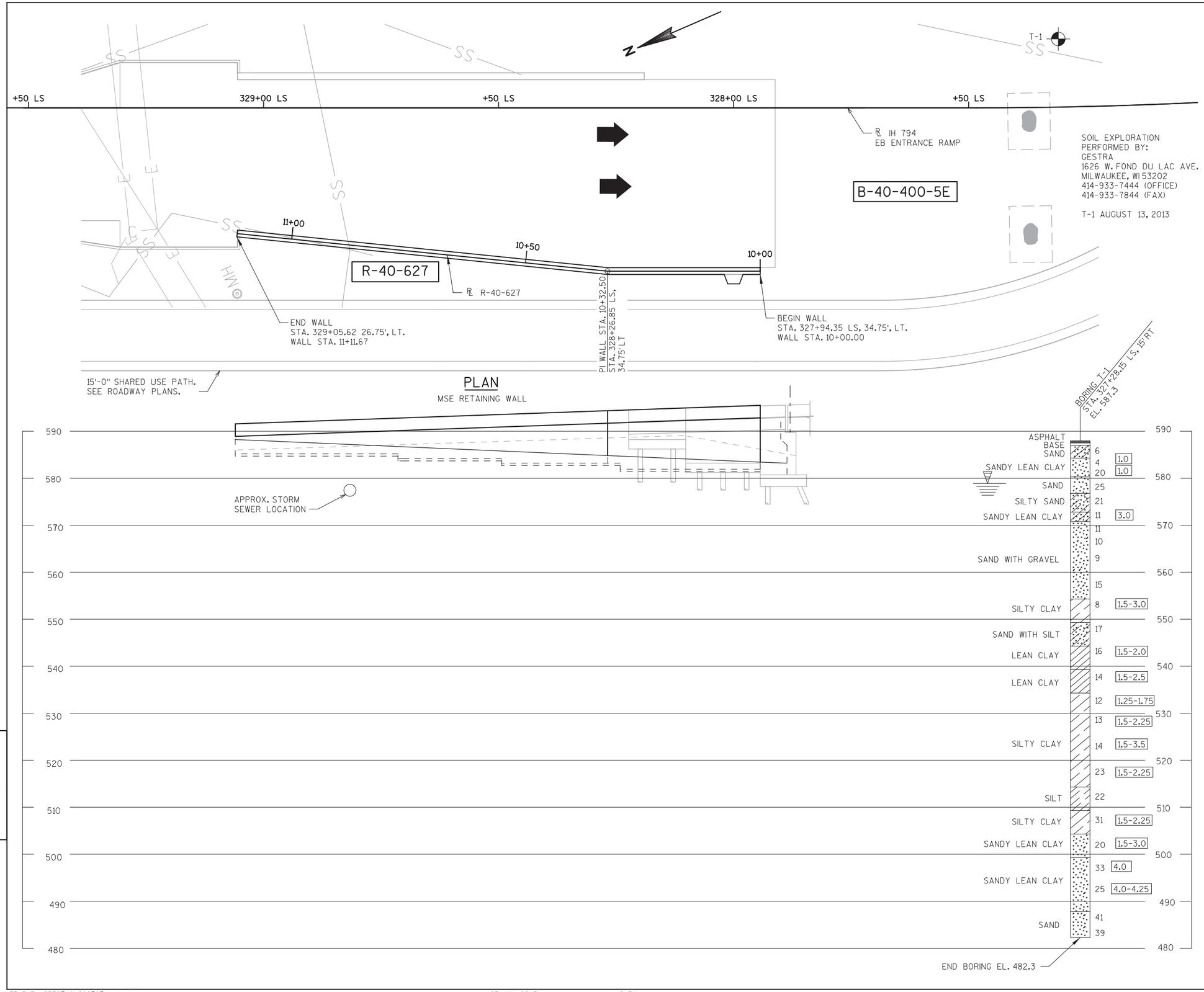
AESTHETIC DETAILS

SHEET 6 OF 7

849

8

8



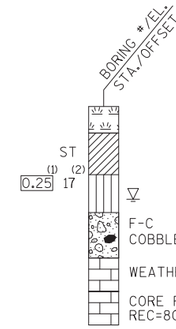
STATE PROJECT NUMBER

1300-13-74

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-627

DRAWN BY DNB | PLANS CK'D. LMK

SUBSURFACE EXPLORATION

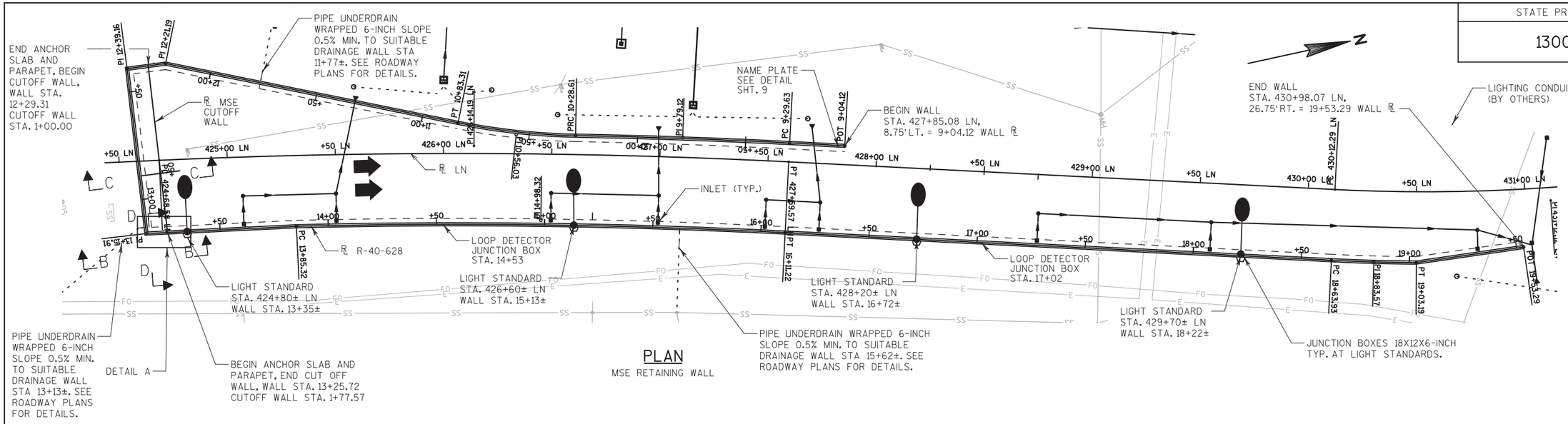
SHEET 7 OF 7

850

8

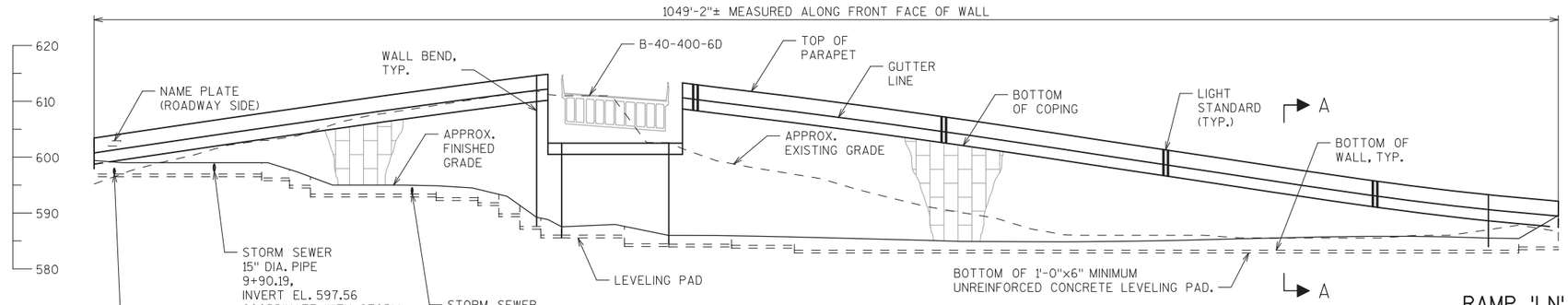
8

STATE PROJECT NUMBER
1300-13-74



PLAN

MSE RETAINING WALL



ELEVATION

(LOOKING AT F.F. OF WALL)

(DISTANCES AND STATIONS GIVEN ALONG FRONT FACE OF WALL)

DESIGN DATA

LIVE LOAD:
LIVE LOAD SURCHARGE = 240 PSF

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY RETAINING WALLS	f'c = 3,500 PSI
PRECAST CONCRETE WALL PANEL	f'c = 4,000 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 PSI

ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP

NOTES

SEE SHEET 4 FOR DETAIL A.
SEE SHEET 4 FOR SECTION A-A.
SEE SHEET 5 FOR SECTIONS B-B, C-C & D-D.

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
223	424+11.36 LN	98.03'LT.	BERNTSEN FENO MONUMENT WITH ALUMINUM CAP	585.93

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GENERAL NOTES
3. QUANTITIES & GEOMETRY
4. WALL SECTIONS 1
5. WALL SECTIONS 2
6. WALL DETAILS 1
7. WALL DETAILS 2
8. ANCHOR SLAB DETAILS
9. PARAPET DETAILS (1 OF 3)
10. PARAPET DETAILS (2 OF 3)
11. PARAPET DETAILS (3 OF 3)
12. AESTHETIC DETAILS 1
13. AESTHETIC DETAILS 2
14. SUBSURFACE EXPLORATION

℄ R-40-628 ALIGNMENT DATA

CURVE = R-40-628-1
P.I. = 9+79.12
Y = 298,382.01
X = 608,647.49
DELTA = 1° 52' 12" (LT)
D = 1° 53' 21"
T = 49.49'
L = 98.98'
R = 3,032.75'
P.C. = 9+29.63
P.T. = 10+28.61

CURVE = R-40-628-2
P.I. = 10+56.03
Y = 298,307.17
X = 608,629.71
DELTA = 10° 25' 26" (RT)
D = 19° 03' 15"
T = 27.43'
L = 54.71'
R = 300.70'
P.C. = 10+28.61
P.T. = 10+83.31

POT = 9+04.12
Y = 298454.38
X = 608667.20

PC = 9+29.63
Y = 298429.77
X = 608660.50

PI = 9+79.12
Y = 298382.01
X = 608647.49

PRC = 10+28.61
Y = 298333.86
X = 608636.05

PI = 10+56.03
Y = 298307.17
X = 608629.71

PT = 10+83.31
Y = 298282.07
X = 608618.64

CURVE = R-40-628-3
P.I. = 14+98.32
Y = 298,309.83
X = 608,670.84
DELTA = 4° 19' 37" (RT)
D = 1° 54' 56"
T = 113.00'
L = 225.90'
R = 2,991.25'
P.C. = 13+85.32
P.T. = 16+11.22

CURVE = R-40-628-4
P.I. = 18+83.57
Y = 298,681.64
X = 608,772.11
DELTA = 2° 37' 10" (LT)
D = 6° 40' 19"
T = 19.63'
L = 39.26'
R = 858.75'
P.C. = 18+63.93
P.T. = 19+03.19

PI = 12+21.19
Y = 298155.91
X = 608563.03

PI = 12+39.16
Y = 298138.00
X = 608561.53

PI = 13+15.91
Y = 298130.43
X = 608637.90

PC = 13+85.32
Y = 298198.86
X = 608649.46

PI = 14+98.32
Y = 298309.83
X = 608670.84

PT = 16+11.22
Y = 298418.86
X = 608700.54

PC = 18+63.93
Y = 298662.70
X = 608766.95

PI = 18+83.57
Y = 298681.64
X = 608772.11

PT = 19+03.19
Y = 298700.80
X = 608776.39

POT = 19+53.29
Y = 298750.77
X = 608779.95

RAMP 'LN' CURVE DATA

CURVE = P_RAMPLN_1-2
P.I. = 426+14.19 LN
Y = 298,286.97
X = 608,630.67
DELTA = 5° 30' 49" (RT)
D = 1° 53' 41"
T = 145.61'
L = 291.00'
R = 3,024.00'
P.C. = 424+68.58 LN
P.T. = 427+59.57 LN
S.E. = RC (2.0%)
DESIGN SPEED = 35 MPH

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MIKE CARPENTER (608) 821-8700

WISCONSIN
MICHAEL S. CARPENTER
E-36648
LONE ROCK, WI
PROFESSIONAL ENGINEER
7/24/2015

NO.	DATE	REVISION	BY

Baker
MICHAEL BAKER JR., INC
7633 GANSER WAY, SUITE 206
MADISON, WI 53719

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/04/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-628

IH 794 AT WB EXIT RAMP

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	MSC	DESIGN CK'D.	LMK	DRAWN BY	DRH	PLANS CK'D.	LMK

GENERAL PLAN & ELEVATION

SHEET 1 OF 14
851

8

8

STATE PROJECT NUMBER
1300-13-74

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS BORING RW-1, RW-1A, RW-3A	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)	
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	130	30	-	
* RETAINED SOIL EL. VARIES EL. VARIES	120	30	-	
SAND SILT, CLAY WITH SAND EXISTING FILL EL. VARIES EL. VARIES	125	30	-	
FOUNDRY MATERIAL WITH WOOD EXISTING FILL EL. VARIES EL. VARIES	105	25	-	
VERY STIFF CLAY EL. VARIES EL. 551	130	-	2,000	UNDRAINED
		28	50	DRAINED
MEDIUM DENSE SAND/SILTY SAND EL. 551 EL. VARIES	120	30	-	

STRATUM LOCATIONS AND SOIL DESCRIPTIONS BORING RW-2	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)	
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	130	30	-	
* RETAINED SOIL EL. VARIES EL. VARIES	120	30	-	
SAND SILT, CLAY WITH SAND EXISTING FILL EL. VARIES EL. VARIES	125	30	-	
FOUNDRY MATERIAL WITH WOOD EXISTING FILL EL. VARIES EL. VARIES	105	25	-	
SOFT TO M. STIFF CLAY EL. VARIES EL. 538	120	-	500	UNDRAINED
		25	-	DRAINED
STIFF CLAY EL. 538 EL. VARIES	125	-	1,000	UNDRAINED
		28	-	DRAINED

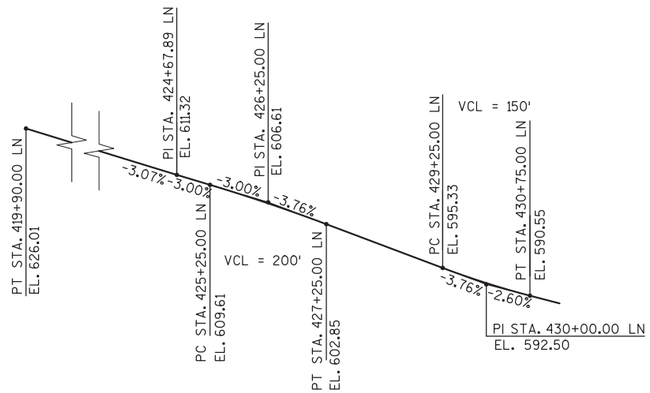
* DESIGN WALL FOR THESE VALUES

WALL EXTERNAL & OVERALL STABILITY EVALUATION **

DIMENSIONS	EVALUATED LOCATIONS			
	WEST SIDE WALL	SOUTH SIDE WALL	EAST SIDE WALL	EAST SIDE WALL
WALL HEIGHT (FEET)[1]	24.7	18.0	27.2	21.4
EXPOSED WALL HEIGHT (FEET)	23.2	16.5	25.7	19.9
REINFORCEMENT LENGTH/WALL HEIGHT[4]	1.1	1.3 (35 FEET)[3]	1.1	1.1
WALL STATION	12+29	12+39 TO 13+16	13+26	15+00
CAPACITY TO DEMAND RATIO (CDR)[2]				
SLIDING (CDR>1.0)	1.63	2.08	1.74	1.50
ECCENTRICITY (CDR>1.0)	2.18	3.43	2.41	1.92
GLOBAL STABILITY (CDR>1.0)	1.01	1.04	1.01	1.01
BEARING RESISTANCE (CDR>1.0)	1.00	1.00	1.01	1.02
FACTORED BEARING RESISTANCE (PSF)	3,500	3,500	3,500	3,500

** BASED ON GEOTECHNICAL ENGINEERING REPORT

1. THE WALL HEIGHT INCLUDES AN EMBEDMENT OF 1.5 FT.
2. CDR REQUIREMENTS AND LOAD AND RESISTANCE FACTORS ARE PRESENTED IN CHAPTER 14 OF THE BRIDGE MANUAL.
3. THE MINIMUM REINFORCEMENT LENGTH FOR THE SOUTH SIDE WALL IS 35 FEET
4. THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.



PROFILE GRADE LINE - IH 794 WB EXIT RAMP

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153, TYPES I, II, OR III, OR M213.

THE FINISHED GRADE LINE, AS SHOWN IN THE GEOMETRY TABLE, SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION FOR THE WALL.

THE PLAN QUANTITY FOR THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO THE MINIMUM EMBEDMENT DEPTH.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (1991).

ALL WALL STATIONING, OFFSETS, AND DIMENSIONS ARE GIVEN ALONG THE ℄ OF WALL R-40-628, UNLESS OTHERWISE SHOWN.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR, UNLESS OTHERWISE SHOWN OR NOTED.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALL IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

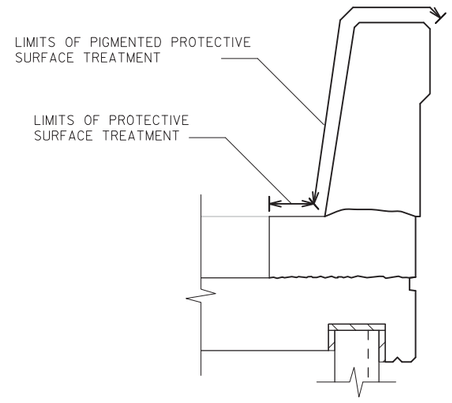
THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON SHEET 1 AND THE GEOMETRY TABLE GIVEN ON SHEET 3.

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP".

CONTRACTOR SHALL SUPPLY AND INSTALL A NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.

SEE SHEETS 12 & 13 AND THE SPECIAL PROVISIONS REGARDING AESTHETIC TREATMENT TO WALL.

QUANTITY FOR "BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS" AND "CONCRETE MASONRY RETAINING WALLS" INCLUDES PARAPET, PARAPET FOOTING, LIGHT STANDARD, AND ANCHOR SLAB.



PROTECTIVE SURFACE TREATMENT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

DRAWN BY DNB | PLANS CK'D. LMK

GENERAL NOTES

SHEET 2 OF 14
852

8

8

STATE PROJECT NUMBER
1300-13-74

R-40-628 GEOMETRY TABLE

WALL STATION	ROADWAY STATION 'LN'	OFFSET TO ℄ R-40-628	EL. A	EL. C ◓	MIN. ☆ EMBEDMENT	WALL HEIGHT
09+04.12	427+85.08 LN	8.75 LT	600.75	599.40	1.50	2.85
09+14.23	427+75.00 LN	-	-	599.16	1.50	-
09+14.23	427+75.00 LN	-	-	599.16	5.66	-
09+21.16	427+68.04 LN	8.75 LT	601.39	599.00	5.50	7.89
09+29.63	427+59.57 LN	8.75 LT	601.71	599.00	4.60	7.31
09+50.00	427+39.26 LN	8.75 LT	602.47	599.00	3.50	6.97
09+75.00	427+14.33 LN	8.75 LT	603.41	599.00	3.50	7.91
10+00.00	426+89.40 LN	8.75 LT	604.32	599.00	3.50	8.82
10+25.00	426+64.47 LN	8.75 LT	605.21	599.00	3.50	9.71
10+28.61	426+60.87 LN	8.75 LT	605.34	599.00	3.50	9.84
10+50.00	426+39.57 LN	9.59 LT	606.10	597.33	3.33	12.10
10+75.00	426+14.86 LN	12.67 LT	607.00	595.00	3.00	15.00
10+83.31	426+06.73 LN	14.20 LT	607.30	595.00	3.00	15.30
11+00.00	425+90.46 LN	17.56 LT	607.90	595.00	3.00	15.90
11+15.90	425+75.00 LN	-	-	595.00	3.00	-
11+15.90	425+75.00 LN	-	-	595.00	1.50	-
11+25.00	425+66.17 LN	22.75 LT	608.78	595.00	1.50	15.28
11+50.00	425+41.96 LN	28.14 LT	609.64	595.00	1.50	16.14
11+75.00	425+17.84 LN	33.72 LT	610.48	594.72	1.50	17.26
12+00.00	424+93.81 LN	39.50 LT	611.28	592.86	1.50	19.93
12+21.19	424+73.51 LN	44.55 LT	611.85	589.22	1.50	24.13
12+25.00	424+69.77 LN	44.22 LT	611.93	589.03	1.50	24.40
12+29.31	424+65.49 LN	43.85 LT	612.04	588.82	1.50	24.72
12+29.31	424+65.49 LN	43.85 LT	602.50	588.82	1.50	15.18
12+39.16	424+55.68 LN	43.00 LT	602.50	587.53	1.50	16.47
12+50.00	424+56.44 LN	32.19 LT	602.50	587.31	1.50	16.69
12+75.00	424+58.21 LN	7.25 LT	602.50	586.80	1.50	17.20
13+00.00	424+59.99 LN	17.69 RT	602.50	586.30	1.50	17.70
13+15.91	424+61.11 LN	33.56 RT	602.50	585.98	1.50	18.02
13+25.00	424+70.22 LN	33.54 RT	602.50	586.01	1.50	17.99
13+25.72	424+70.95 LN	33.53 RT	602.50	586.01	1.50	17.99
13+25.72	424+70.95 LN	33.53 RT	611.74	586.01	1.50	27.23
13+50.00	424+95.50 LN	33.36 RT	610.06	585.97	1.50	25.58
13+75.00	425+20.77 LN	32.97 RT	609.09	585.86	1.50	24.73
13+85.32	425+31.20 LN	32.75 RT	608.78	585.81	1.50	24.48
14+00.00	425+46.04 LN	32.75 RT	608.33	585.72	1.50	24.11
14+25.00	425+71.32 LN	32.75 RT	607.54	585.57	1.50	23.46
14+50.00	425+96.59 LN	32.75 RT	606.72	585.41	1.50	22.81
14+75.00	426+21.87 LN	32.75 RT	605.88	585.26	1.50	22.13
15+00.00	426+47.14 LN	32.75 RT	605.02	585.10	1.50	21.42
15+25.00	426+72.41 LN	32.75 RT	604.13	584.97	1.50	20.66
15+50.00	426+97.69 LN	32.75 RT	603.22	584.88	1.50	19.84
15+75.00	427+22.96 LN	32.75 RT	602.29	584.83	1.50	18.95
16+00.00	427+48.23 LN	32.75 RT	601.34	584.82	1.50	18.02
16+11.22	427+59.58 LN	32.75 RT	600.91	584.84	1.50	17.57
16+25.00	427+73.36 LN	32.75 RT	600.39	584.86	1.50	17.03
16+50.00	427+98.36 LN	32.75 RT	599.45	584.93	1.50	16.02
16+75.00	428+23.36 LN	32.75 RT	598.51	585.06	1.50	14.95
17+00.00	428+48.36 LN	32.75 RT	597.57	585.21	1.50	13.86
17+25.00	428+73.36 LN	32.75 RT	596.63	585.36	1.50	12.77
17+50.00	428+98.36 LN	32.75 RT	595.69	585.52	1.50	11.67
17+75.00	429+23.36 LN	32.75 RT	594.75	585.68	1.50	10.57
18+00.00	429+48.36 LN	32.75 RT	593.83	585.79	1.50	9.54
18+25.00	429+73.36 LN	32.75 RT	592.96	585.84	1.50	8.62
18+50.00	429+98.36 LN	32.75 RT	592.13	585.80	1.50	7.83
18+63.93	430+12.29 LN	32.75 RT	591.70	585.75	1.50	7.46
18+75.00	430+22.93 LN	32.75 RT	591.37	585.70	1.50	7.17
19+00.00	430+46.98 LN	32.75 RT	590.68	585.52	1.50	6.65
19+03.19	430+50.05 LN	32.75 RT	590.59	585.50	1.50	6.59
19+25.00	430+70.87 LN	29.78 RT	590.08	585.42	1.50	6.17
19+50.00	430+94.89 LN	27.05 RT	589.51	589.06	1.50	1.95
19+53.29	430+98.07 LN	26.75 RT	589.43	589.64	1.50	1.29

MSE CUTOFF WALL GEOMETRY TABLE

CUTOFF WALL STATION	ROADWAY STATION	OFFSET TO FF OF CUTOFF WALL	TOP OF WALL ELEV.	TOP OF LEVELING PAD
01+00.00	424+65.49 LN	43.85 LT	607.74	600.50
01+25.00	424+67.24 LN	18.91 LT	607.74	600.50
01+50.00	424+69.00 LN	6.03 RT	607.74	600.50
01+75.00	424+70.77 LN	30.97 RT	607.74	600.50
01+77.57	424+70.95 LN	33.53 RT	607.74	600.50

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL
502.3200	PROTECTIVE SURFACE TREATMENT	SY	53
502.3210.S	PIGMENTED PROTECTIVE SURFACE TREATMENT	SY	395
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	434
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	51,070
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	200
517.1010.S.2002	CONCRETE STAINING R-40-628	SF	17,478
604.0400	SLOPE PAVING CONCRETE	SY	84
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	1,050
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	16
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	1,883
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	6
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	4
SPV.0165.2002	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP	SF	16,440
	NON-BID ITEMS		
	CORK FILLER	SIZE	1"
	PREFORMED JOINT FILLER	SIZE	½" & ¾"
	NON-BITUMINOUS JOINT SEALER	SIZE	1"
	EXPANDED POLYSTYRENE	SIZE	1" & 4"

LEGEND

◥ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

◓ SEE ROADWAY PLANS FOR FINISHED GRADE EL. UPON COMPLETION OF N. HARBOR DRIVE IMPROVEMENTS.

☆ MINIMUM DEPTH BELOW FINISHED GRADE VARIES ALONG WALL. 1'-6" DEPTH REQUIRED EXCEPT ALONG SEGMENT OF WEST FACE OF WALL (STA 09+14.23 TO 11+15.90), WHICH REQUIRES GREATER DEPTHS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

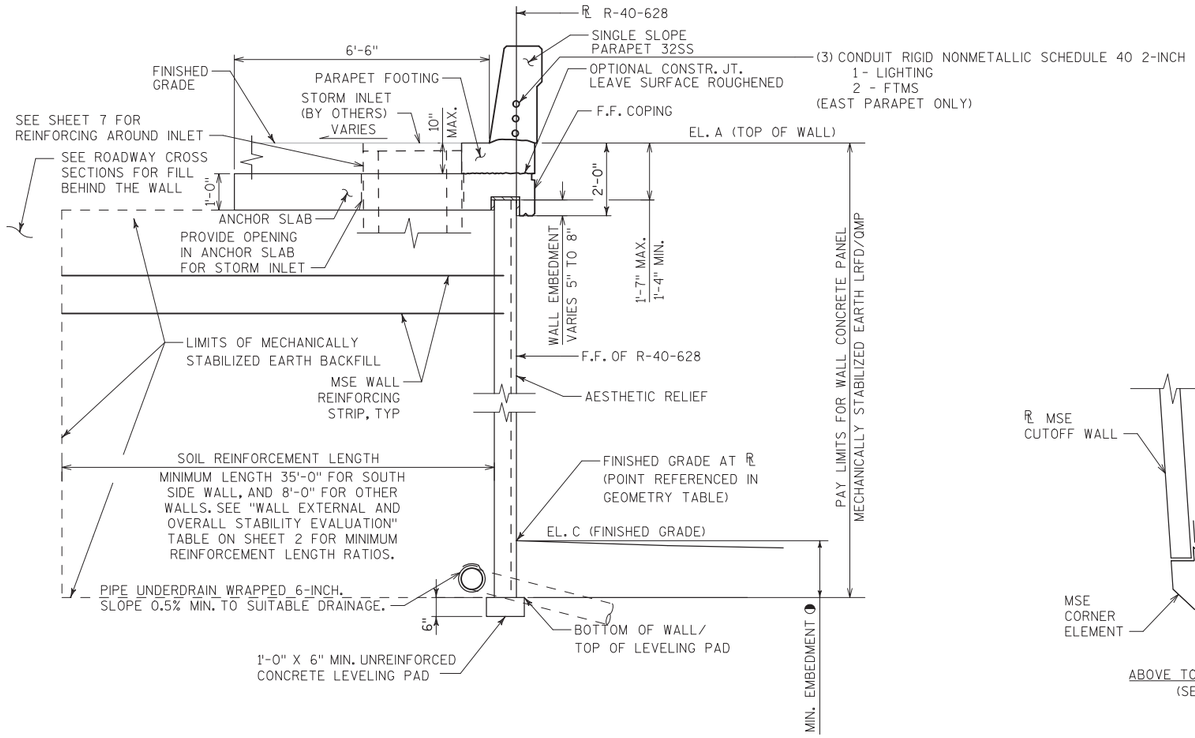
STRUCTURE R-40-628

DRAWN BY DRH | PLANS CK'D. LMK

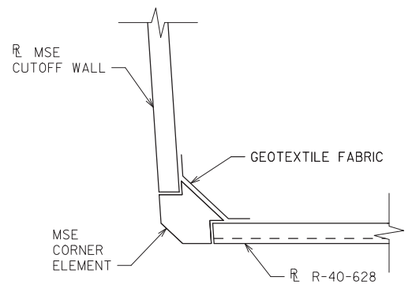
QUANTITIES & GEOMETRY

SHEET 3 OF 14
853

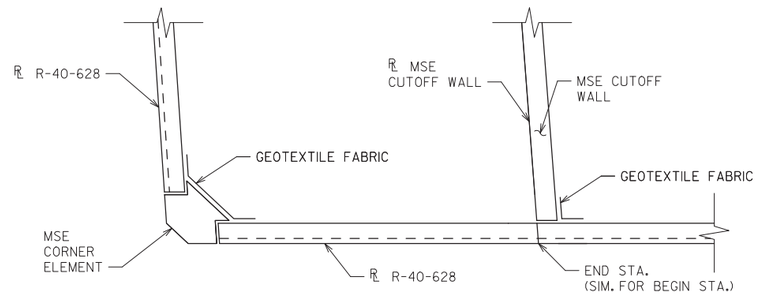
STATE PROJECT NUMBER
1300-13-74



SECTION A-A



ABOVE TOP OF SLOPE PAVING - PLAN VIEW
(SECTION E-E FROM SHEET 5)



BELOW TOP OF SLOPE PAVING - PLAN VIEW
(SECTION F-F FROM SHEET 5)

DETAIL A

8

8

LEGEND

◓ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR WALLS ON LEVEL GROUND, EXCEPT BETWEEN STA 9+14.23 TO 11+15.90). FIELD EMBEDMENT SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

DRAWN BY DRH | PLANS CK'D. LMK

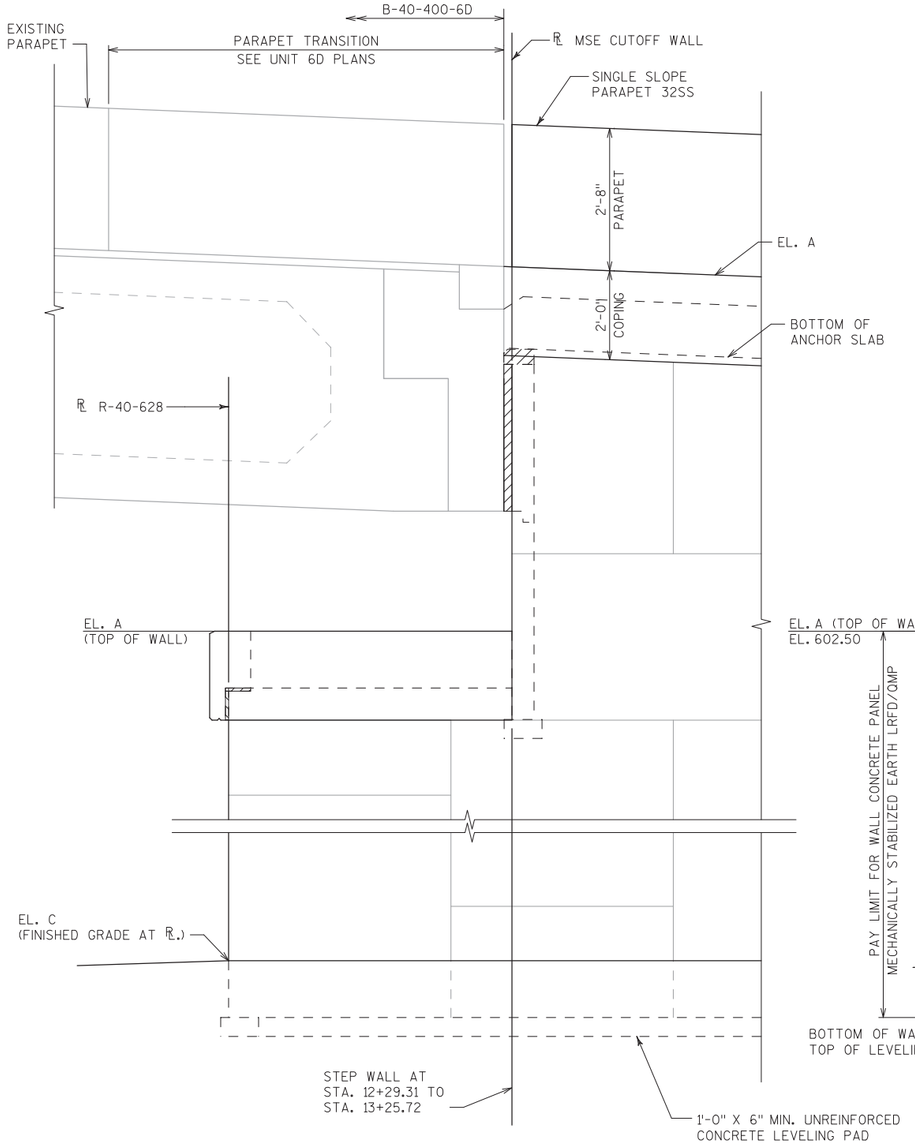
WALL SECTIONS 1

SHEET 4 OF 14
854

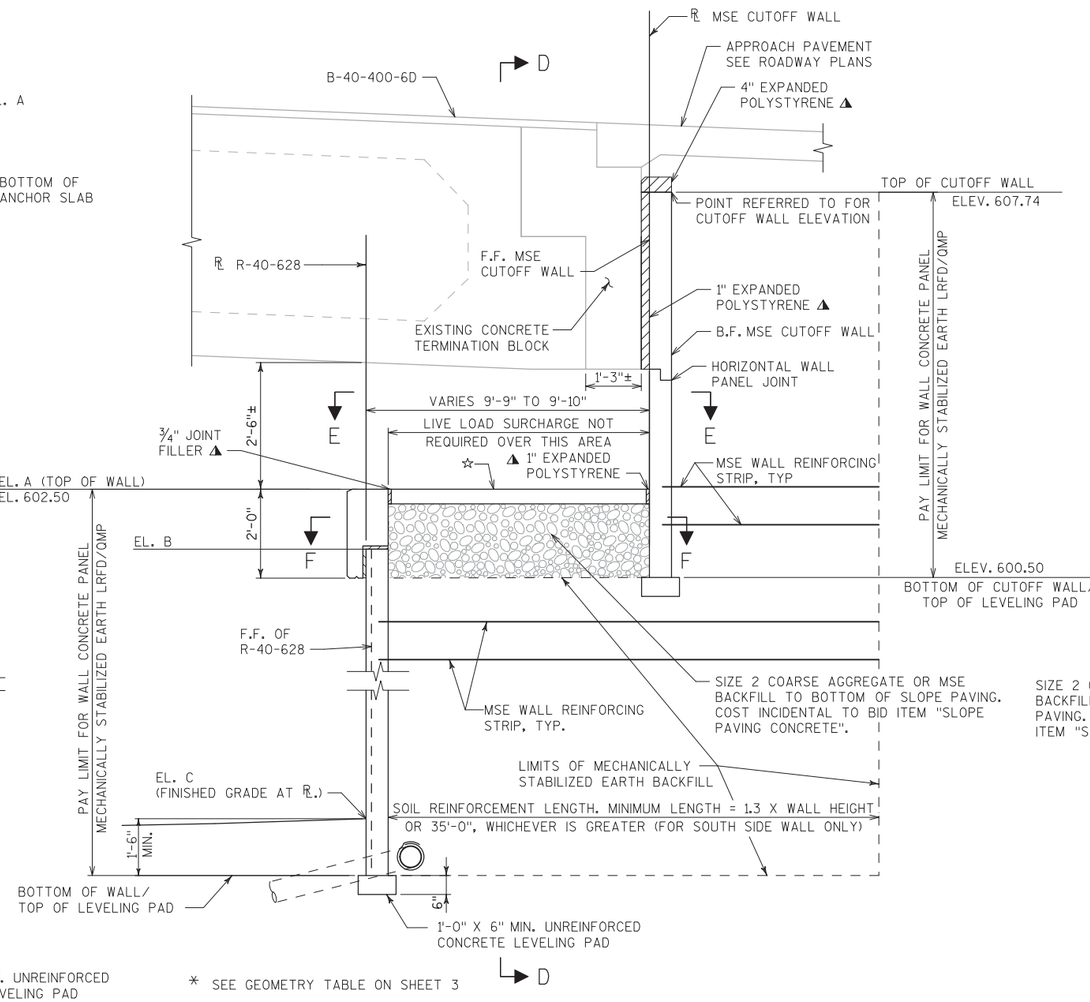
IP_PWP:d0330720\080804_dt.dan.DGN 23-JUL-2015 11:10

STATE PROJECT NUMBER

1300-13-74

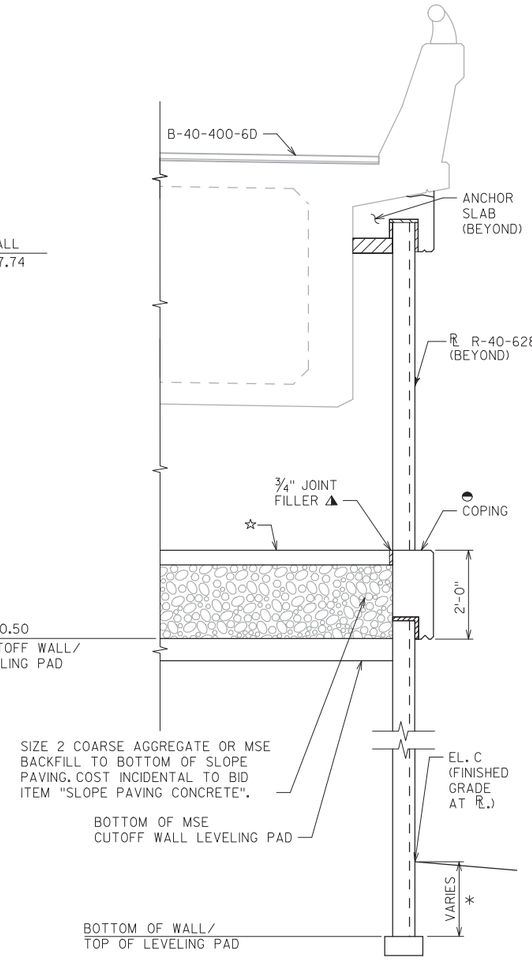


ELEVATION B-B



* SEE GEOMETRY TABLE ON SHEET 3

SECTION C-C



* SEE GEOMETRY TABLE ON SHEET 3

SECTION D-D

NOTES

SEE SHEET 4 FOR SECTION E-E
SEE SHEET 4 FOR SECTION F-F

LEGEND

◓ COPING CONCRETE AND REBAR TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP".

☆ 4" CONCRETE (SLOPE ¾") TO BE PAID FOR AS "SLOPE PAVING CONCRETE"

◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

DRAWN BY DNB | PLANS CK'D. LMK

WALL SECTIONS 2

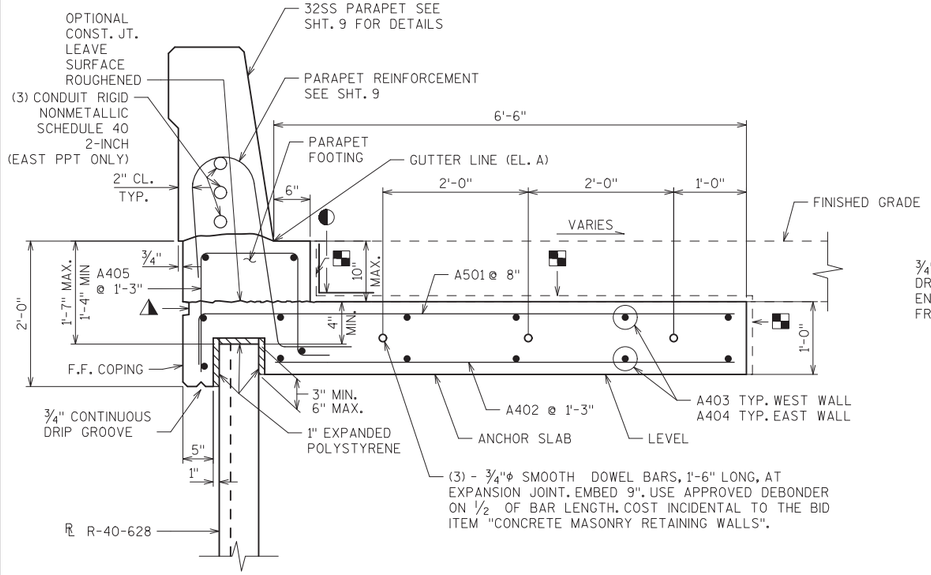
SHEET 5 OF 14

855

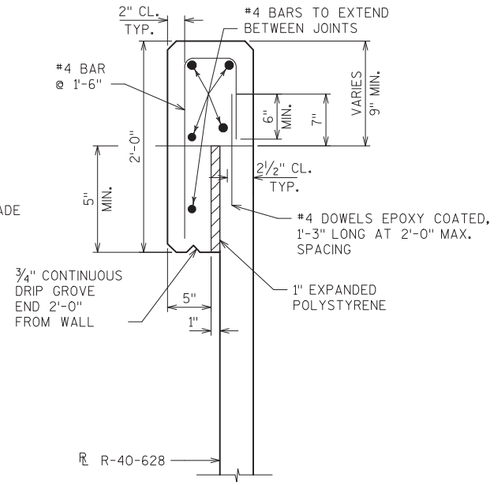
8

8

STATE PROJECT NUMBER
1300-13-74

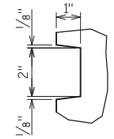


CAST-IN-PLACE CONCRETE TRAFFIC BARRIER DETAIL



CAST-IN-PLACE CONCRETE COPING DETAIL

COST OF ALL BAR STEEL REINFORCEMENT AND CONCRETE DETAILED IN CONCRETE COPING SHALL BE INCLUDED IN BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP"



NOTE:
RUSTICATION IS REQUIRED REGARDLESS OF WHETHER OPTIONAL CONST. JT. IS USED.

◭ RUSTICATION DETAIL

LEGEND

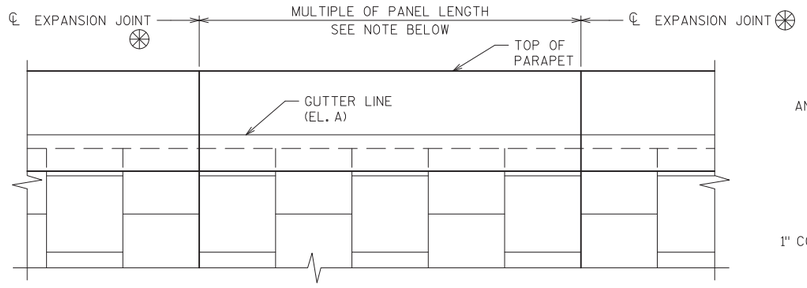
† SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

⊛ EXPANSION JOINTS TO BE SPACED AT A MINIMUM OF 20' AND A MAXIMUM OF 30'. LOCATE EXPANSION JOINTS OVER WALL JOINTS. DO NOT RUN BAR STEEL THRU JOINT. JOINT TO EXTEND FULL DEPTH OF PARAPET AND ANCHOR SLAB.

◆ OVERALL LENGTH OF BAR IS PROVIDED FOR QUANTITY PURPOSES ONLY. CONTRACTOR TO DETERMINE AND ADJUST ACTUAL BAR LENGTHS TO FIT BETWEEN EXPANSION JOINTS. PAY QUANTITY IS BASED ON VALUE SHOWN IN BILL OF BARS. BEND BARS AS REQUIRED FOR WALL GEOMETRY.

■ 18" RUBBERIZED MEMBRANE WATERPROOFING TO BE PLACED ON THESE SURFACES AT EACH JOINT.

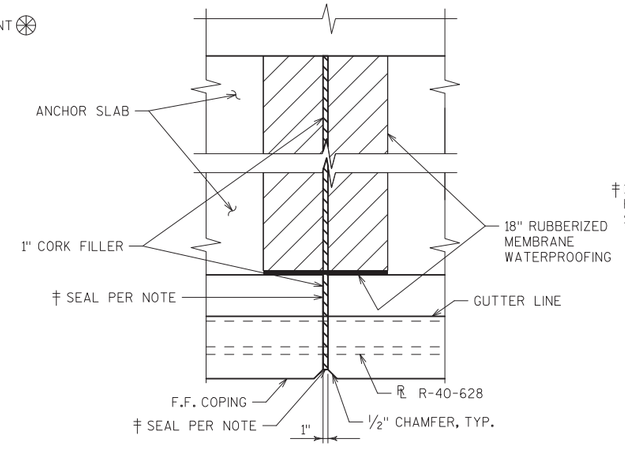
◐ IF THE OPTIONAL CONST. JOINT IS USED, PLACE 18" MEMBRANE WATERPROOFING ALONG THE ENTIRE LONGITUDINAL JOINT. THE MEMBRANE WATERPROOFING SEALING THE OPTIONAL CONST. JOINT IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".



C.I.P. TRAFFIC BARRIER PARTIAL ELEVATION

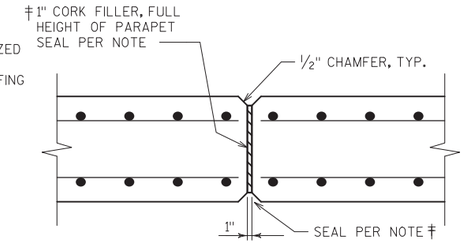
(AESTHETICS NOT SHOWN FOR CLARITY)

NOTE:
ALL JOINTS MUST COINCIDE WITH PANEL JOINT ON FRONT FACE WHERE BOTTOM OF LIP INTERSECTS WITH PANEL JOINT.



⊛ ANCHOR SLAB EXPANSION JOINT DETAIL

PLAN VIEW



⊛ TRAFFIC BARRIER EXPANSION JOINT DETAIL

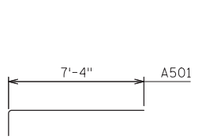
PLAN VIEW

BILL OF BARS

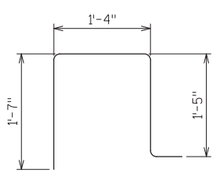
TOTAL COATED = 28,100 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
A501	1431	8'-0"	X	X		ANCHOR SLAB - TOP - TRANS.
A402	764	6'-3"	X			ANCHOR SLAB - BOT. TRANS.
◆ A403	15	324'-10"	X			ANCHOR SLAB - TOP & BOT. - LONGIT. - WEST WALL
◆ A404	15	627'-2"	X			ANCHOR SLAB - TOP & BOT. - LONGIT. - EAST WALL
A405	764	4'-9"	X	X		ANCHOR SLAB - VERT.
A606	36	5'-6"	X			ANCHOR SLAB - INLET
A608	36	8'-0"	X			ANCHOR SLAB - INLET
A609	36	5'-1"	X	X		ANCHOR SLAB - INLET

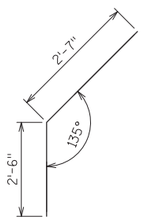
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



A501



A405



A609

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

DRAWN BY DNB | PLANS CK'D. LMK

WALL DETAILS 1

SHEET 6 OF 14

856

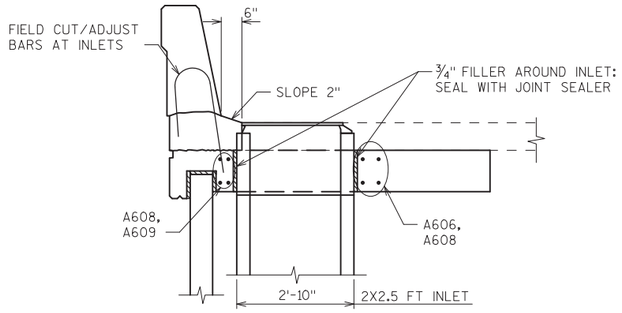
8

8

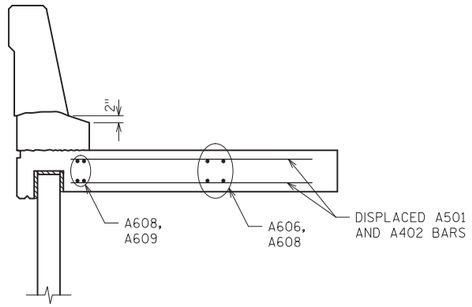
IP_PWP:d0330720\080806_dt.dgn 23-JUL-2015 11:11

STATE PROJECT NUMBER

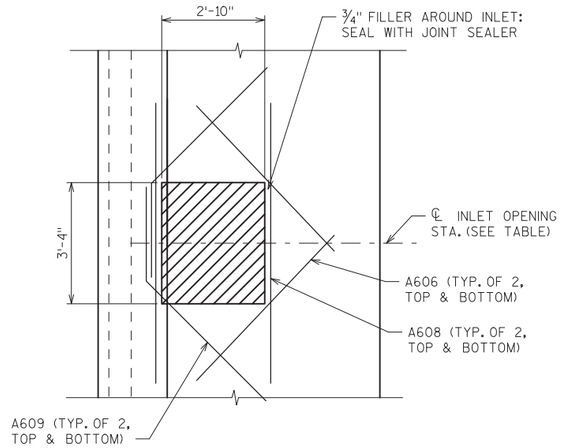
1300-13-74



SECTION THRU WALL AT INLET



SECTION THRU WALL
ADJACENT TO INLET



PLAN AT RECTANGULAR INLET

(SHOWING ADDITIONAL INLET REINFORCEMENT)

INLETS

NO.	RAMP STA.	WALL STA.	TYPE
302AA	425+06.74 LN	13+61.14	2X2.5 FT
302BB	425+50.00 LN	14+03.91	2X2.5 FT
303	426+50.00 LN	15+02.83	2X2.5 FT
304	427+00.00 LN	15+52.29	2X2.5 FT
305	427+50.00 LN	16+01.75	2X2.5 FT
306	427+75.06 LN	16+27.70	2X2.5 FT
300A	428+75.97 LN	17+27.61	2X2.5 FT
300B	429+55.97 LN	18+07.61	2X2.5 FT
300C	430+77.59 LN	19+32.15	2X2.5 FT

NOTE: SEE ROADWAY PLANS FOR COMPLETE INLET DETAILS AND INFORMATION

NOTES

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPET AND ANCHOR SLAB BETWEEN EXPANSION JOINTS MAY BE USED. RUN BAR REINFORCEMENT THRU THE JOINT.

LAP LONGITUDINAL #4 BARS A MINIMUM OF 1'-0".

CONCRETE QUANTITY BASED ON 3" PANEL EMBEDMENT AND 5½" PANEL THICKNESS.

THE WALL MANUFACTURER SHALL OBTAIN INLET HEIGHT FROM THE CONTRACTOR TO DESIGN THE SOIL REINFORCEMENT AROUND THE INLET.

INLET AND GRATE BY OTHERS.

CUT OR DISPLACE (2" MAX.) REINFORCEMENT SHOWN IN "CAST-IN-PLACE" CONCRETE TRAFFIC BARRIER FOOTING DETAIL FOR PRECAST WALL PANELS 2" CLEAR OF INLET OPENING (REINFORCEMENT SHOWN IS ADDITIONAL REINFORCEMENT).

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

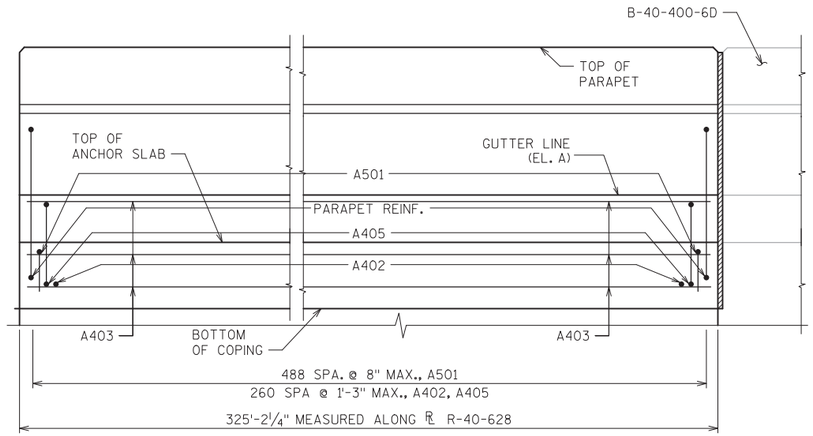
DRAWN BY DNB | PLANS CK'D. LMK

WALL DETAILS 2

SHEET 7 OF 14

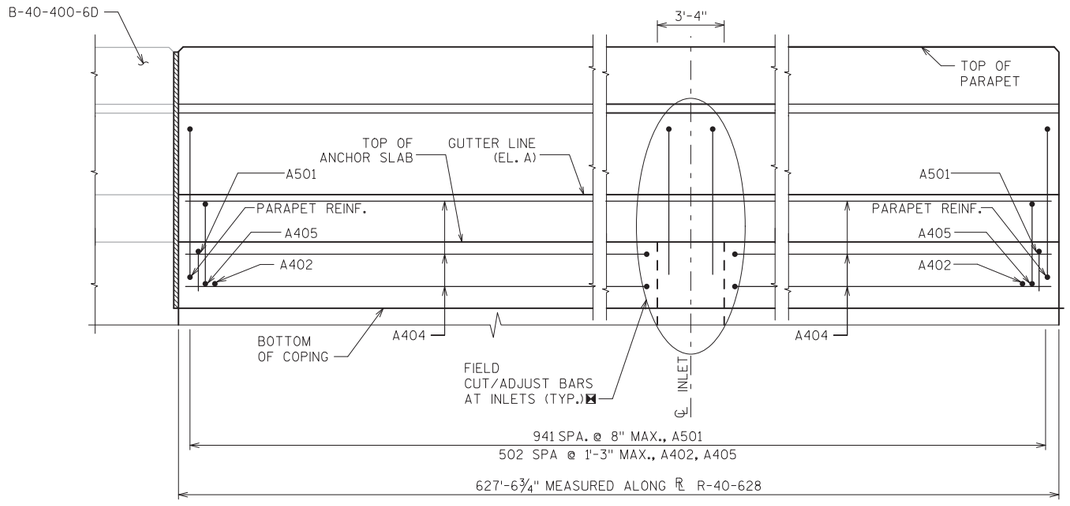
857

STATE PROJECT NUMBER
1300-13-74



OUTSIDE ELEVATION - WEST ANCHOR SLAB

(FOR CLARITY, NOT ALL VERTICAL ANCHOR SLAB BARS ARE SHOWN)



OUTSIDE ELEVATION - EAST ANCHOR SLAB

(FOR CLARITY, NOT ALL VERTICAL ANCHOR SLAB BARS ARE SHOWN)

LEGEND

SEE SHEET 7 FOR ADDITIONAL REINFORCEMENT DETAILS AT INLETS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

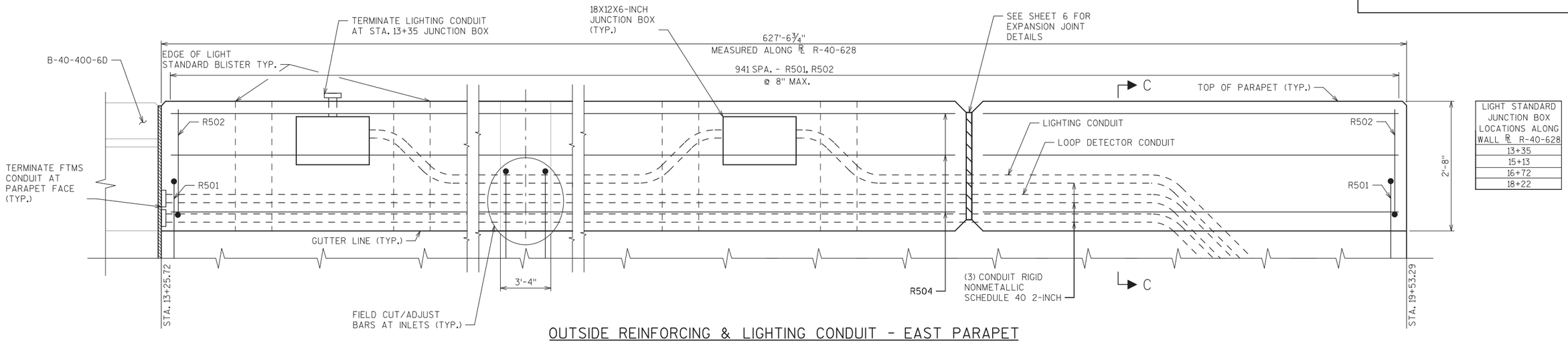
DRAWN BY DRH | PLANS CK'D. LMK

ANCHOR SLAB DETAILS

SHEET 8 OF 14

858

STATE PROJECT NUMBER
1300-13-74



LIGHT STANDARD JUNCTION BOX LOCATIONS ALONG WALL ℄ R-40-628
13+35
15+13
16+72
18+22

OUTSIDE REINFORCING & LIGHTING CONDUIT - EAST PARAPET

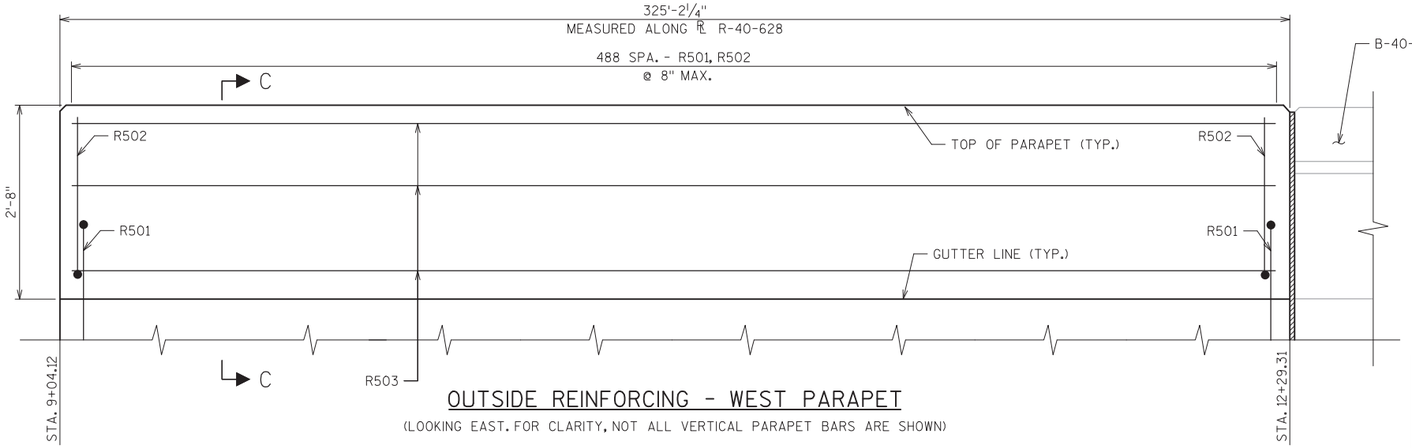
(LOOKING WEST. FOR CLARITY, NOT ALL VERTICAL PARAPET BARS ARE SHOWN)

TOTAL COATED = 21,510 LBS

BILL OF BARS

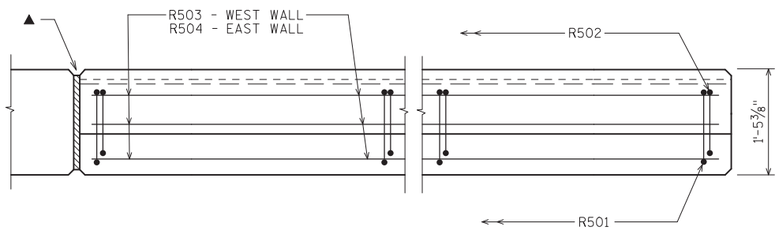
BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
R501	1431	5'-5"	X	X		PARAPET - VERT.
R502	1431	5'-0"	X	X		PARAPET - VERT.
◆ R503	6	324'-10"	X			PARAPET - LONGIT. - WEST WALL
◆ R504	6	627'-2"	X			PARAPET - LONGIT. - EAST WALL

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.

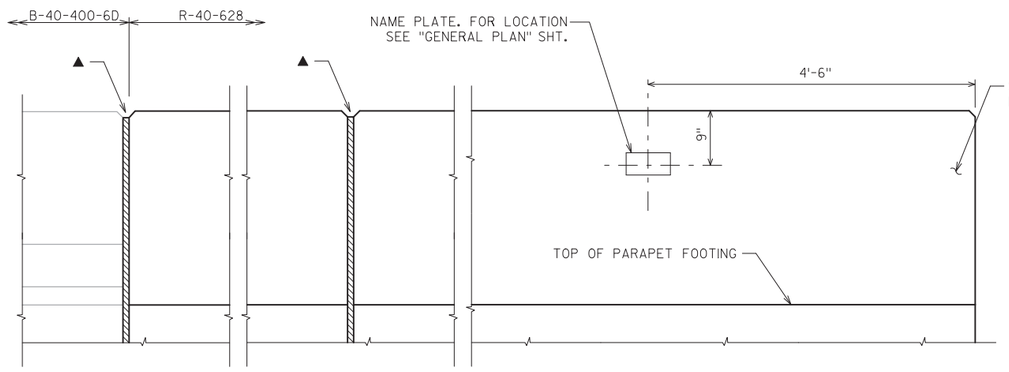


OUTSIDE REINFORCING - WEST PARAPET

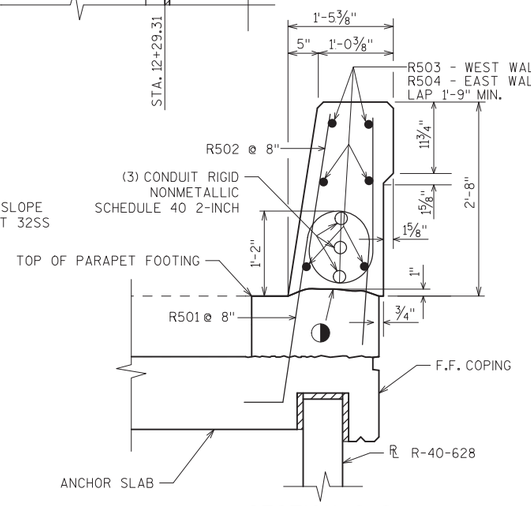
(LOOKING EAST. FOR CLARITY, NOT ALL VERTICAL PARAPET BARS ARE SHOWN)



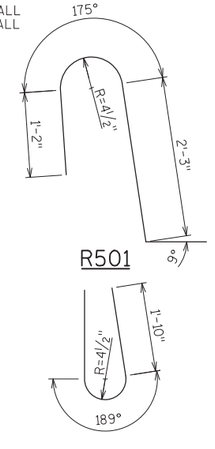
PLAN



INSIDE ELEVATION



SECTION C-C



LEGEND

▲ SEE SHT. 6 FOR JOINT DETAILS AND NOTES.

◐ CONST. JT. - STRIKE OFF AS SHOWN

◆ OVERALL LENGTH OF BAR IS PROVIDED FOR QUANTITY PURPOSES ONLY. CONTRACTOR TO DETERMINE AND ADJUST ACTUAL BAR LENGTHS TO FIT BETWEEN EXPANSION JOINTS. PAY QUANTITY IS BASED ON VALUE SHOWN IN BILL OF BARS. BEND BARS AS REQUIRED FOR WALL GEOMETRY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

DRAWN BY	DNB	PLANS CK'D.	LMK

PARAPET DETAILS (1 OF 3)

SHEET 9 OF 14

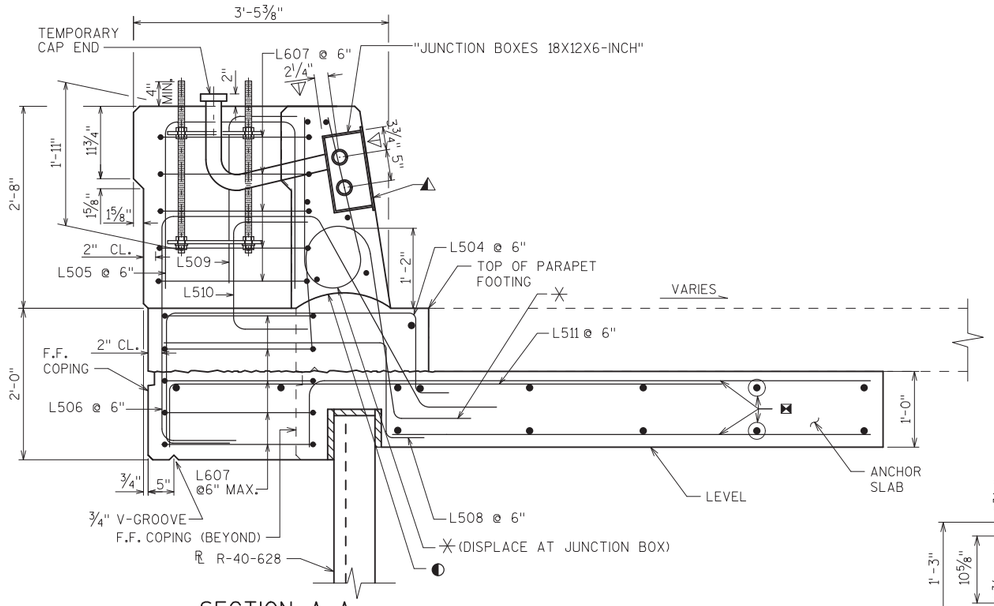
859

8

8

STATE PROJECT NUMBER

1300-13-74



SECTION A-A

LIGHT STANDARD JUNCTION BOX LOCATIONS ALONG WALL ℄ R-40-628
13+35
15+13
16+72
18+22

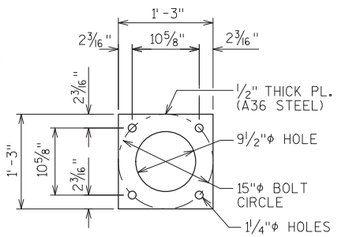
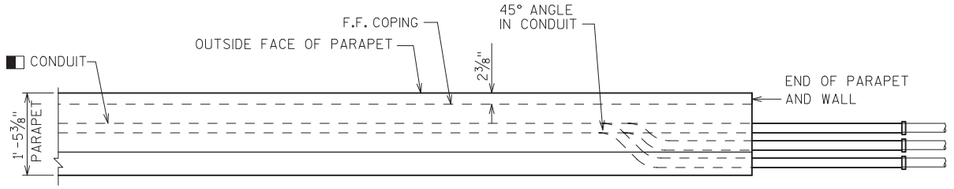
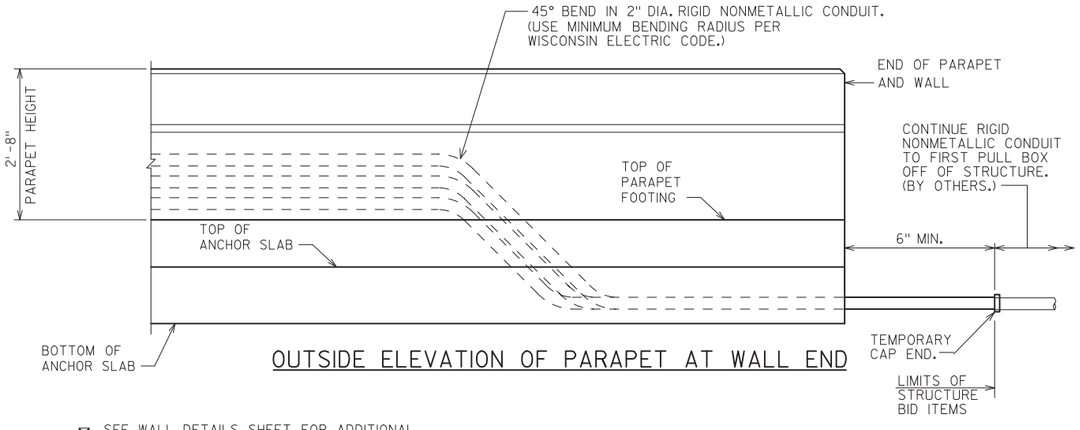


PLATE DETAIL

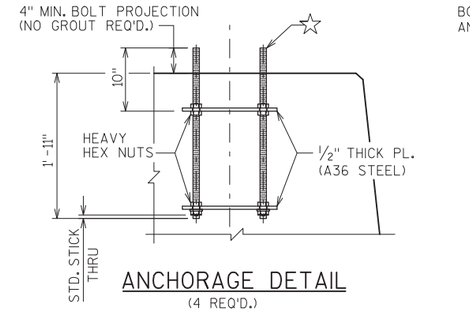
(4 REQ'D.)



PLAN OF PARAPET AT WALL END

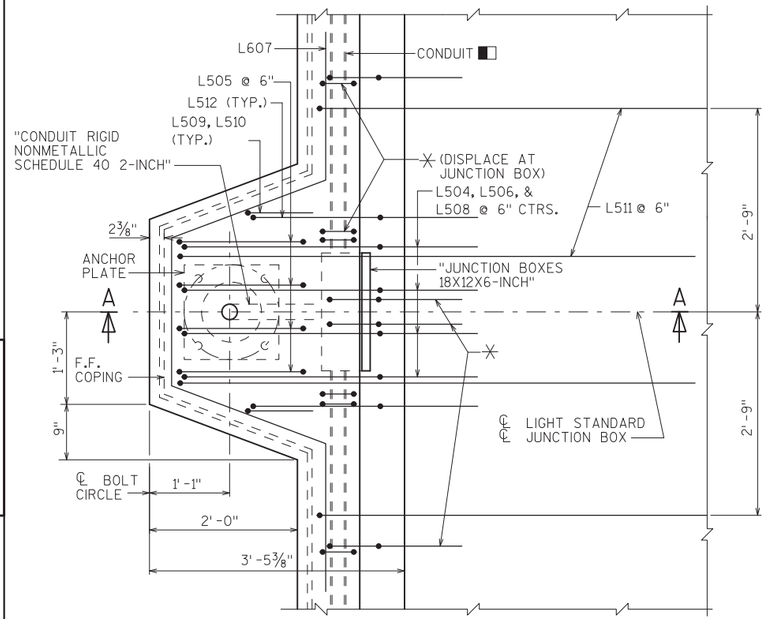


OUTSIDE ELEVATION OF PARAPET AT WALL END

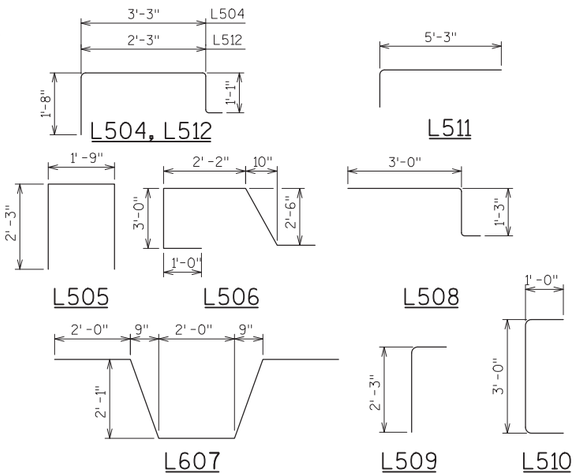


ANCHORAGE DETAIL

(4 REQ'D.)



PLAN AT LIGHT STANDARD



- SEE WALL DETAILS SHEET FOR ADDITIONAL BAR STEEL DETAILS
- USE 2" DIA. RIGID NONMETALLIC CONDUIT.
- CONST. JT. STRIKE OFF AS SHOWN
- CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.
- LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.
- SEE SINGLE SLOPE PARAPET SHEET FOR ADDITIONAL BAR STEEL DETAILS
- 1"ϕ THREADED ANCHOR BOLTS ASTM A449 OR AASHTO M 314-90 GR 55. HOT DIP ASTM A153, CLASS C, UPPER 8" OF BOLT INCLUDING NUTS & WASHERS. PROVIDE ENLARGED THREAD ON NUTS FOR PROPER FIT AFTER GALVANIZING. PROVIDE DOUBLE FLAT WASHERS & NUTS.

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURE", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

BILL OF BARS

TOTAL COATED = 1,460 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
L504	16	6'-6"	X	X		TRANSV. @ LIGHT STD.
L505	16	6'-0"	X	X		PARAPET VERT. @ LIGHT STD.
L506	16	9'-2"	X	X		PARAPET VERT. @ LIGHT STD.
L607	40	10'-0"	X	X		PARAPET HORIZ. @ LIGHT STD.
L508	16	4'-10"	X	X		TRANSV. @ LIGHT STD.
L509	8	3'-2"	X	X		PARAPET VERT. @ LIGHT STD.
L510	8	4'-9"	X	X		PARAPET VERT. @ LIGHT STD.
L511	48	5'-11"	X	X		TRANSV. @ LIGHT STD.
L512	8	5'-6"	X	X		TRANSV. @ LIGHT STD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

DRAWN BY DRH | PLANS CK'D. LMK

PARAPET DETAILS (2 OF 3)

SHEET 10 OF 14

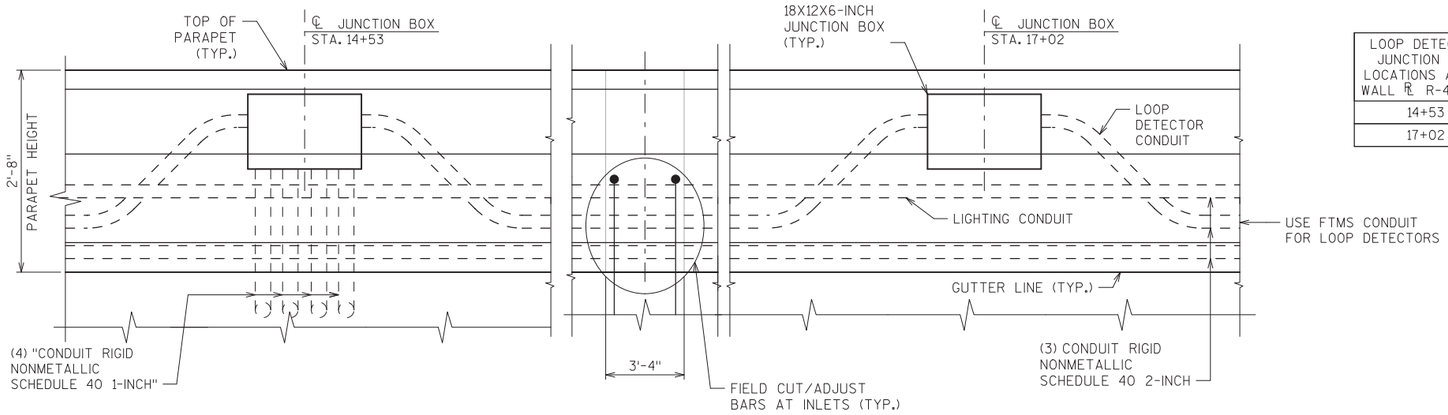
860

8

8

IP_PWP:d0330720\080810_dt.dan.DGN 23-JUL-2015 11:13

STATE PROJECT NUMBER
1300-13-74



LOOP DETECTOR JUNCTION BOX LOCATIONS ALONG WALL ℟ R-40-628
14+53
17+02

OUTSIDE ELEVATION OF PARAPET FOR LOOP DETECTORS

(LOOKING WEST. REINF. NOT SHOWN FOR CLARITY)

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH"
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"

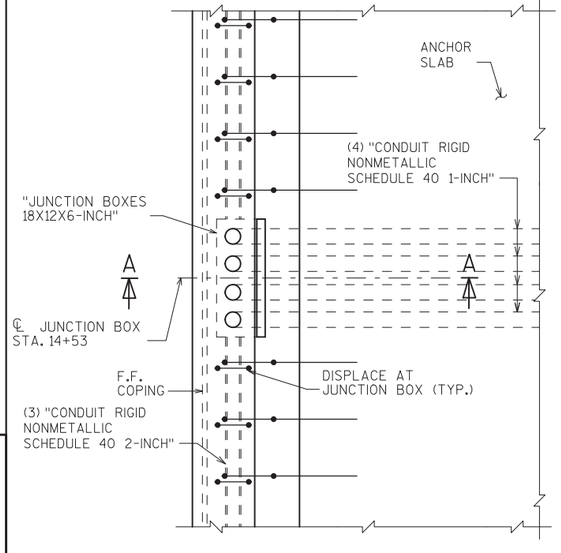
APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

LEGEND

◐ CONST. JT. STRIKE OFF AS SHOWN

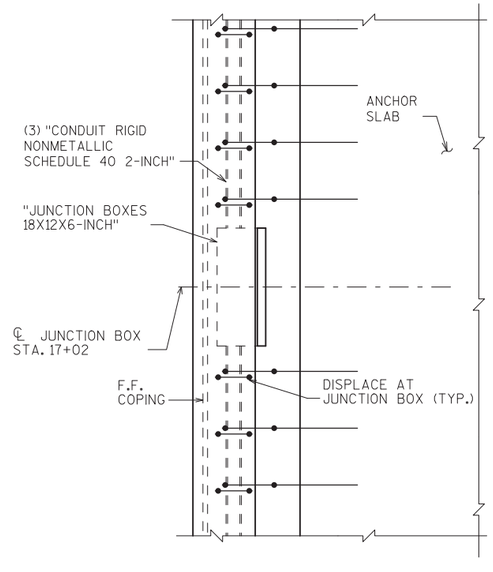
◭ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.



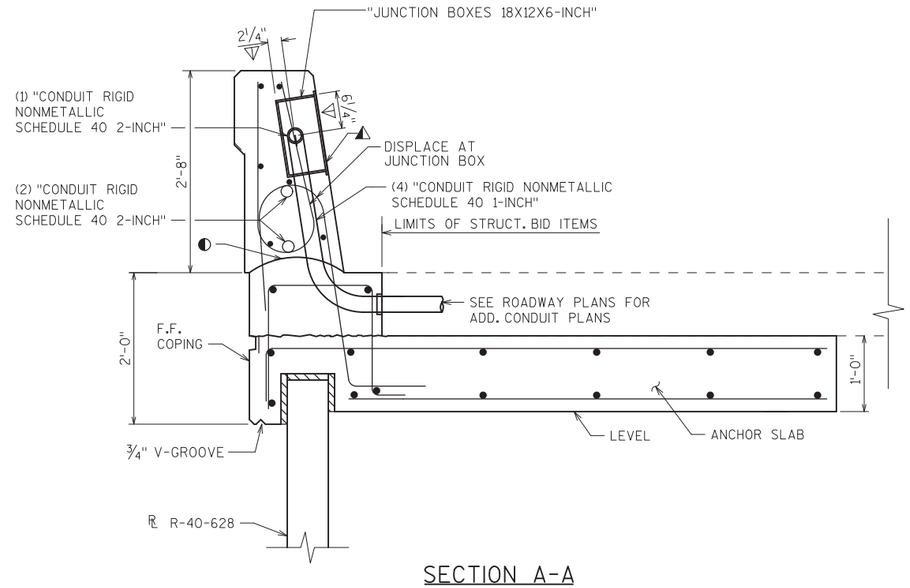
PLAN AT JUNCTION BOX

(STA. 14+53)



PLAN AT JUNCTION BOX

(STA. 17+02)



SECTION A-A

(STA. 14+53)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

DRAWN BY TJN | PLANS CK'D. MSC

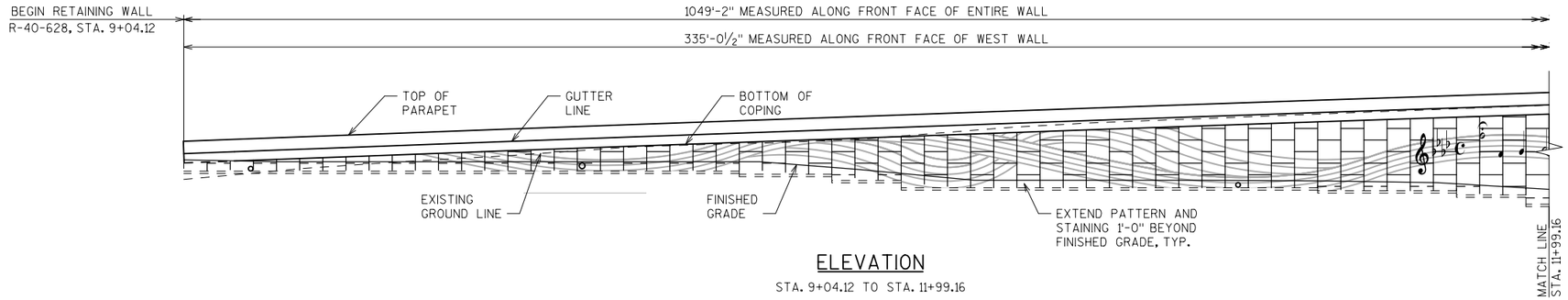
PARAPET DETAILS (3 OF 3)

SHEET 11 OF 14

861

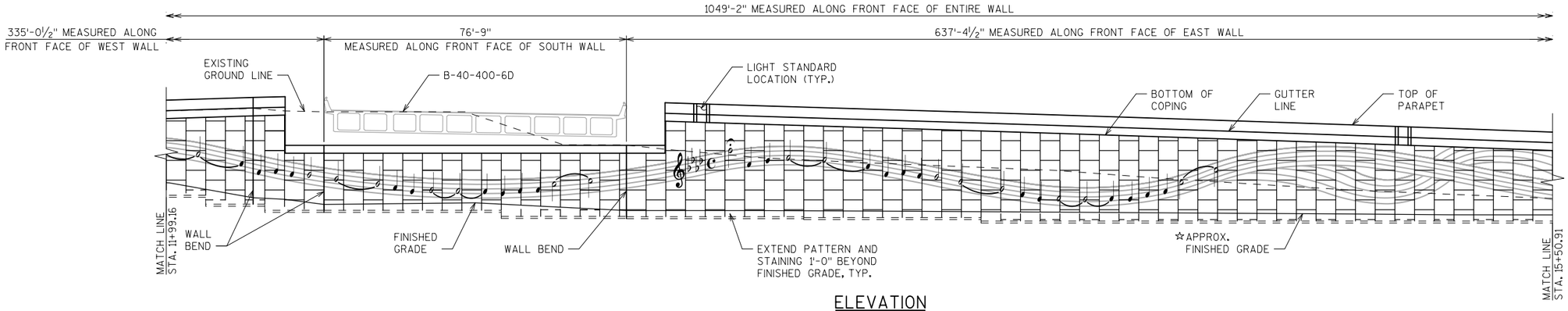
IP_PWP:d0330720\080811_cd.dgn.DGN 23-JUL-2015 11:13

STATE PROJECT NUMBER
1300-13-74



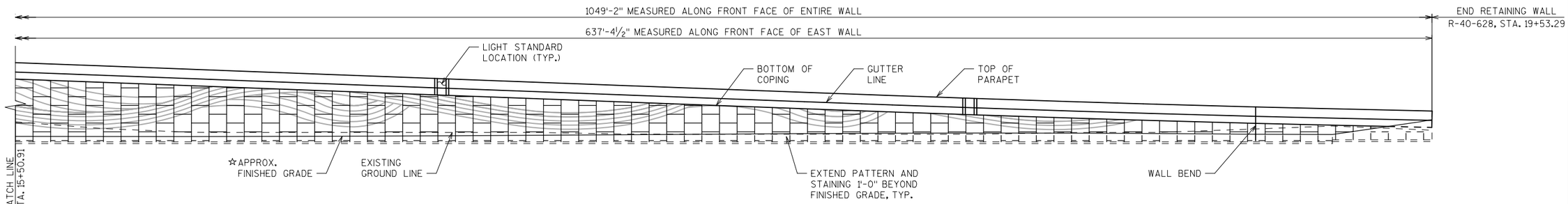
ELEVATION

STA. 9+04.12 TO STA. 11+99.16



ELEVATION

STA. 11+99.16 TO STA. 15+50.91



ELEVATION

STA. 15+50.91 TO STA. 19+53.29

LEGEND

☆THE ESTIMATED FINISHED GRADE UPON COMPLETION OF THE N. HARBOR DRIVE IMPROVEMENTS (TO BE COMPLETED UNDER SEPARATE CITY OF MILWAUKEE CONTRACT). SEE ROADWAY CROSS SECTIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

DRAWN BY DRH | PLANS CK'D. CDH

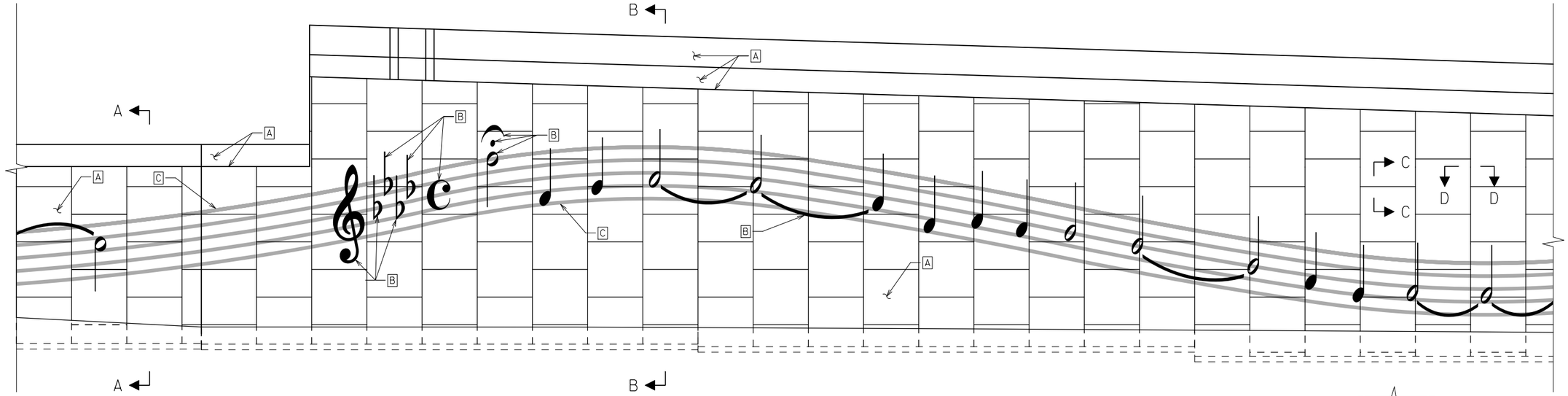
AESTHETIC DETAILS (1 OF 2)

SHEET 12 OF 14
862

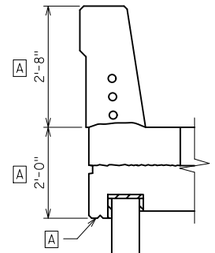
8

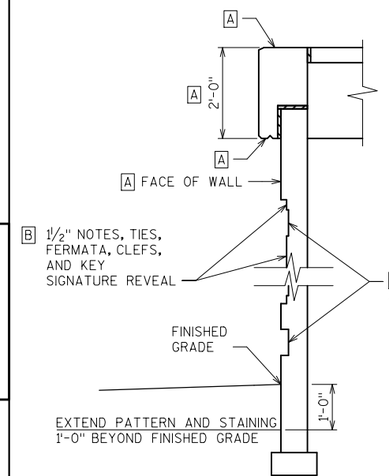
8

STATE PROJECT NUMBER
1300-13-74



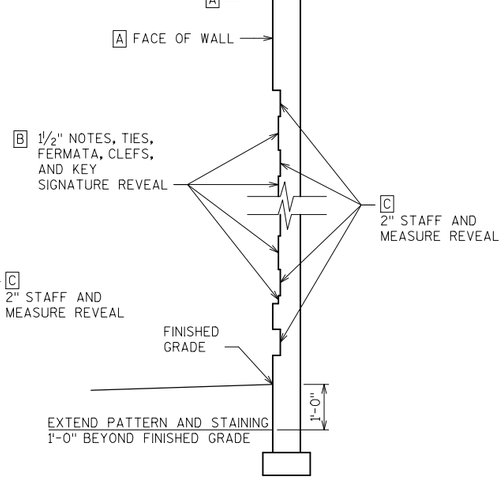
ELEVATION





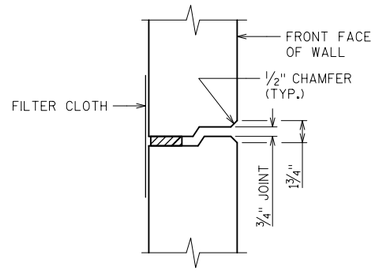
SECTION A-A

(SOUTH WALL STAINING DETAIL)

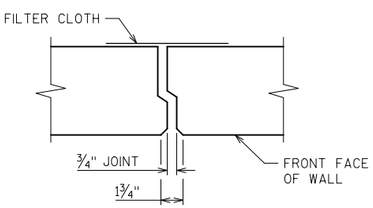


SECTION B-B

(EAST AND WEST WALL STAINING DETAIL)



SECTION C-C



SECTION D-D

CONCRETE STAINING SCHEDULE

MARK	COLOR	RECESS	NOTES
A	BASE COLOR	0	EXPOSED FACES TO 1'-0" BELOW FINISHED GRADE
B	ACCENT COLOR #1	-1½"	NOTES, TIES, FERMATA, CLEFS, AND KEY SIGNATURES
C	ACCENT COLOR #2	-2"	STAFFS AND MEASURES

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE SHERWIN-WILLIAMS STANDARD COLOR SYSTEM LISTED.

BASE COLOR: GRAY (LIGHT GRAY) - FEDERAL COLOR #26293
ACCENT COLOR #1: BLUE - FEDERAL COLOR #25177
ACCENT COLOR #2: GRAY (DARK GRAY) - FEDERAL COLOR #26132

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

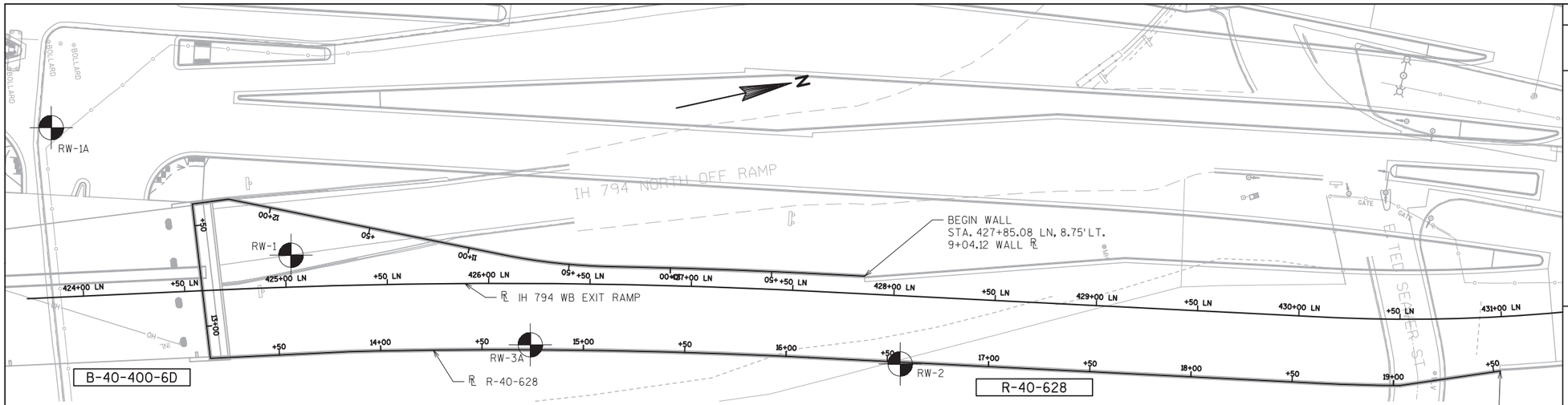
DRAWN BY DRH | PLANS CK'D. CDH

AESTHETIC DETAILS (2 OF 2)

SHEET 13 OF 14
863

8

8

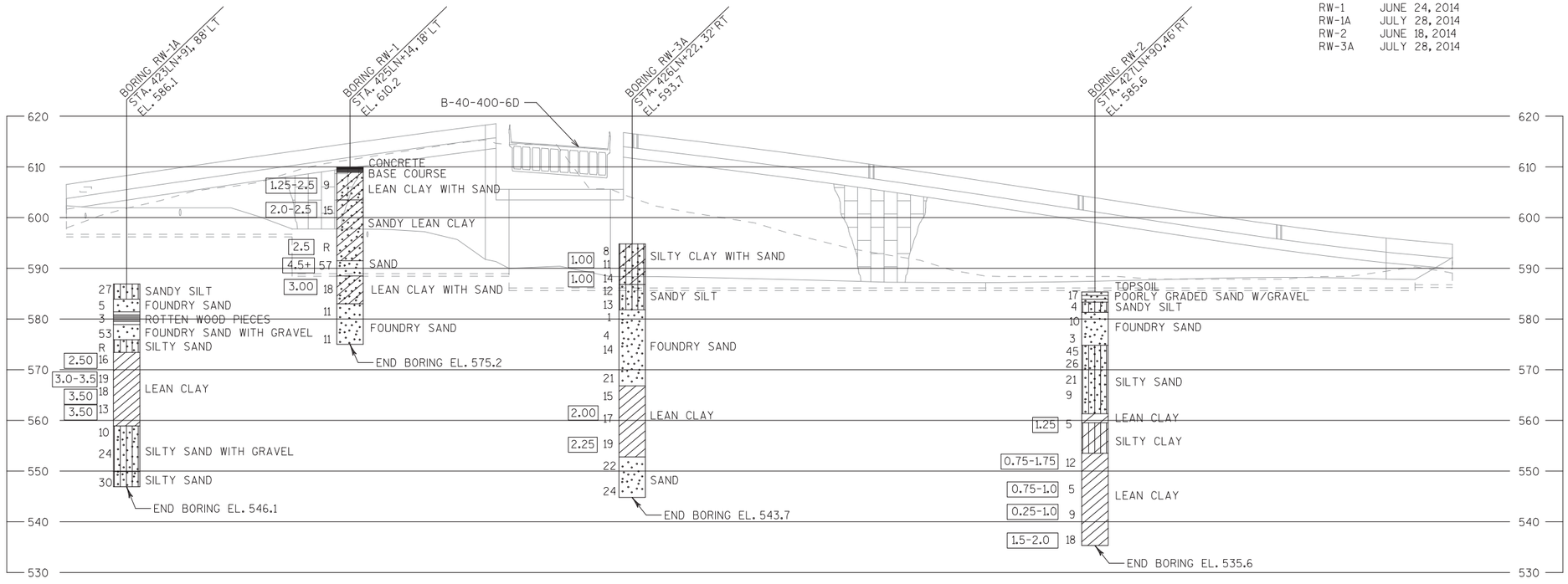


PLAN
MSE RETAINING WALL

END WALL
STA. 430+98.07 LN, 26.75'RT.
19+53.29 WALL ℄

SOIL EXPLORATION PERFORMED BY:
GESTRA
1626 W. FOND DU LAC AVE.
MILWAUKEE, WI 53202
414-933-7444 (OFFICE)
414-933-7844 (FAX)

RW-1	JUNE 24, 2014
RW-1A	JULY 28, 2014
RW-2	JUNE 18, 2014
RW-3A	JULY 28, 2014



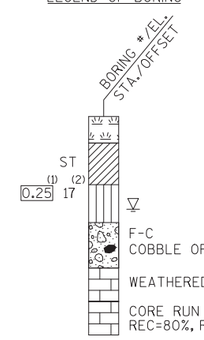
STATE PROJECT NUMBER

1300-13-74

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-628

DRAWN BY DNB | PLANS CK'D. LMK

SUBSURFACE EXPLORATION

SHEET 14 OF 14

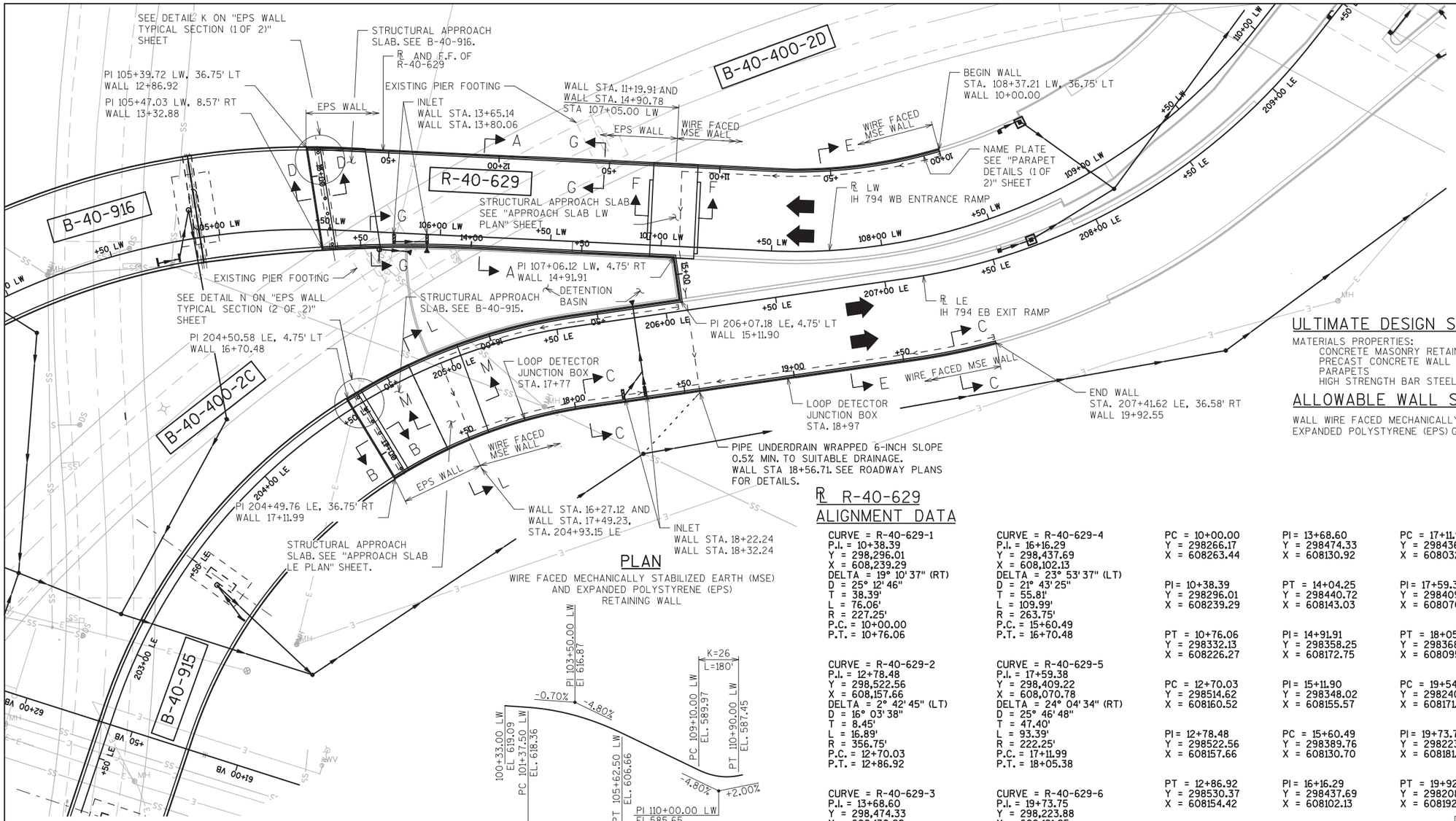
864

8

8

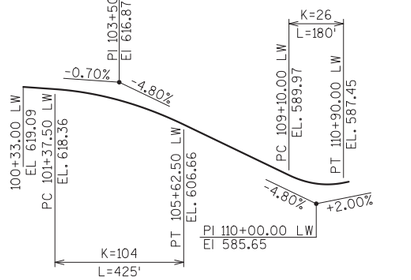
IP_PWP:d0330720\080814_sx.dan.DGN 23-JUL-2015 11:14

STATE PROJECT NUMBER
1300-13-74

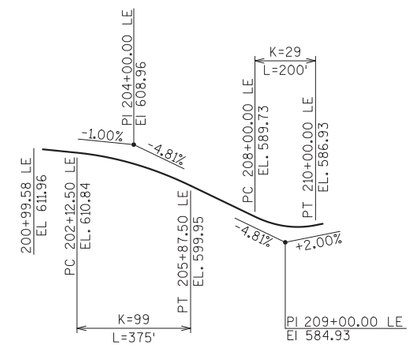


PLAN

WIRE FACED MECHANICALLY STABILIZED EARTH (MSE) AND EXPANDED POLYSTYRENE (EPS) RETAINING WALL



RAMP LW PROFILE



RAMP LE PROFILE

℄ R-40-629 ALIGNMENT DATA

CURVE = R-40-629-1
P.I. = 10+38.39
Y = 298,296.01
X = 608,239.29
DELTA = 19° 10' 37" (RT)
D = 25° 12' 46"
T = 38.39'
L = 76.06'
R = 227.25'
P.C. = 10+00.00
P.T. = 10+76.06

CURVE = R-40-629-2
P.I. = 12+78.48
Y = 298,522.56
X = 608,157.66
DELTA = 2° 42' 45" (LT)
D = 16° 03' 38"
T = 8.45'
L = 16.89'
R = 356.75'
P.C. = 12+70.03
P.T. = 12+86.92

CURVE = R-40-629-3
P.I. = 13+68.60
Y = 298,474.33
X = 608,130.92
DELTA = 6° 17' 53" (RT)
D = 8° 49' 30"
T = 35.72'
L = 71.37'
R = 649.25'
P.C. = 13+32.88
P.T. = 14+04.25

CURVE = R-40-629-4
P.I. = 16+16.29
Y = 298,437.69
X = 608,102.13
DELTA = 23° 53' 37" (LT)
D = 21° 43' 25"
T = 55.81'
L = 109.99'
R = 263.75'
P.C. = 15+60.49
P.T. = 16+70.48

CURVE = R-40-629-5
P.I. = 17+59.38
Y = 298,409.22
X = 608,070.78
DELTA = 24° 04' 34" (RT)
D = 25° 46' 48"
T = 47.40'
L = 93.39'
R = 222.25'
P.C. = 17+11.99
P.T. = 18+05.38

CURVE = R-40-629-6
P.I. = 19+73.75
Y = 298,223.88
X = 608,181.25
DELTA = 6° 47' 17" (LT)
D = 18° 01' 54"
T = 18.84'
L = 37.64'
R = 317.75'
P.C. = 19+54.91
P.T. = 19+92.55

PC = 10+00.00 Y = 298266.17 X = 608263.44	PI = 13+68.60 Y = 298474.33 X = 608130.92	PC = 17+11.99 Y = 298436.49 X = 608032.02
PI = 10+38.39 Y = 298296.01 X = 608239.29	PT = 14+04.25 Y = 298440.72 X = 608143.03	PI = 17+59.38 Y = 298409.22 X = 608070.78
PT = 10+76.06 Y = 298332.13 X = 608226.27	PI = 14+91.91 Y = 298358.25 X = 608172.75	PT = 18+05.38 Y = 298368.51 X = 608095.05
PC = 12+70.03 Y = 298514.62 X = 608160.52	PI = 15+11.90 Y = 298348.02 X = 608155.57	PC = 19+54.91 Y = 298240.06 X = 608171.60
PI = 12+78.48 Y = 298522.56 X = 608157.66	PC = 15+60.49 Y = 298389.76 X = 608130.70	PI = 19+73.75 Y = 298223.88 X = 608181.25
PT = 12+86.92 Y = 298530.37 X = 608154.42	PI = 16+16.29 Y = 298437.69 X = 608102.13	PT = 19+92.55 Y = 298208.94 X = 608192.74
PC = 13+32.88 Y = 298506.40 X = 608115.20	PT = 16+70.48 Y = 298469.95 X = 608056.59	

NOTES

SEE SHEET 5 FOR SECTION A-A
SEE SHEET 7 FOR SECTION B-B
SEE SHEET 9 FOR SECTION C-C
SEE SHEET 4 FOR SECTION D-D
SEE SHEET 10 FOR SECTION E-E
SEE SHEET 11 FOR SECTION F-F
SEE SHEET 7 FOR SECTION G-G
SEE SHEET 6 FOR SECTION L-L
SEE SHEET 11 FOR SECTION M-M

BENCH MARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
223	24+00.65 LM	32.65' RT.	ALUM. CAP MONUMENT	585.93
225	206+73.73 LE	168.96' RT	ALUM. CAP MONUMENT	586.97

ULTIMATE DESIGN STRESSES

MATERIALS PROPERTIES:

CONCRETE MASONRY RETAINING WALLS	f'c = 3,500 PSI
PRECAST CONCRETE WALL PANEL	f'c = 4,000 PSI
PARAPETS	f'c = 4,000 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 PSI

ALLOWABLE WALL SYSTEMS

WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/QMP
EXPANDED POLYSTYRENE (EPS) GEOFOAM

LIST OF DRAWINGS

1. GENERAL PLAN
2. WALL ELEVATION
3. NOTES & QUANTITIES
4. EPS WALL NOTES
5. EPS WALL TYPICAL SECTION (1 OF 2)
6. EPS WALL TYPICAL SECTION (2 OF 2)
7. EPS WALL DETAILS
8. FOAM CONCRETE DETAILS
9. MSE WALL NOTES & DETAILS
10. MSE WALL TYPICAL SECTION
11. WALL DETAILS (1 OF 2)
12. WALL DETAILS (2 OF 2)
13. APPROACH SLAB LW PLAN
14. APPROACH SLAB LW DETAILS
15. APPROACH SLAB LE PLAN
16. APPROACH SLAB LE DETAILS
17. ANCHOR SLAB DETAILS (1 OF 2)
18. ANCHOR SLAB DETAILS (2 OF 2)
19. PARAPET DETAILS (1 OF 3)
20. PARAPET DETAILS (2 OF 3)
21. PARAPET DETAILS (3 OF 3)
22. PARAPET TRANSITION DETAILS
23. AESTHETIC DETAILS
24. SUBSURFACE EXPLORATION (1 OF 2)
25. SUBSURFACE EXPLORATION (2 OF 2)

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MIKE CARPENTER (608) 821-8700

WISCONSIN
MICHAEL S. CARPENTER
E-36648
LONE ROCK, WI
PROFESSIONAL ENGINEER
8/6/2015

NO.	DATE	REVISION	BY

Baker
MICHAEL BAKER JR., INC
7633 GANSER WAY, SUITE 206
MADISON, WI 53719

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 08/12/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-629

IH 794 EB EXIT RAMP / WB ENTRANCE RAMP

COUNTY: MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~: MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
DNB	MSC	MDM	MSC

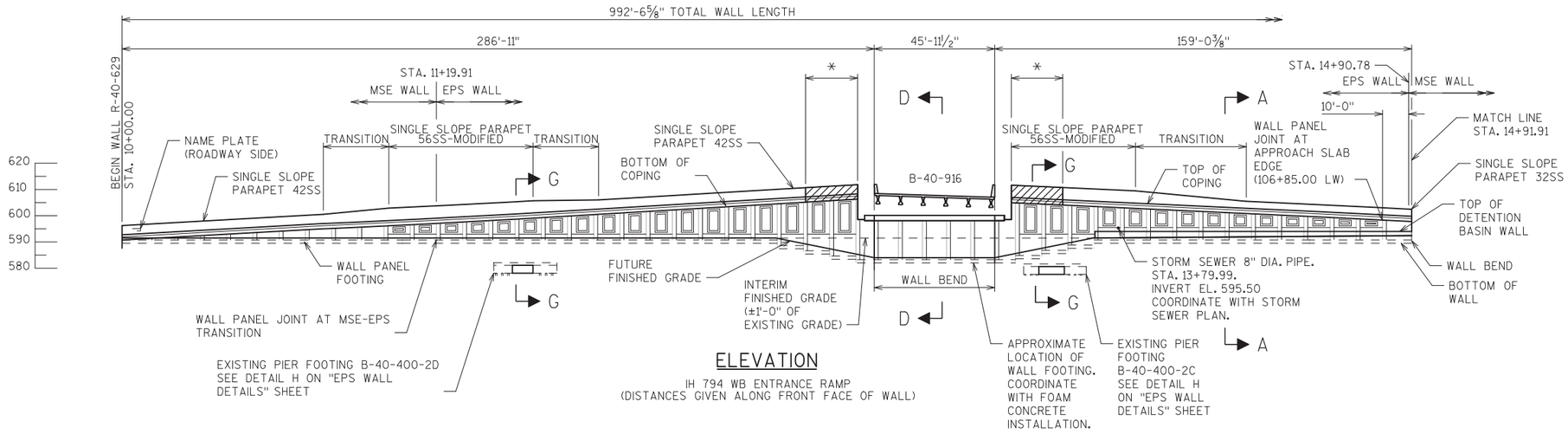
GENERAL PLAN

SHEET 1 OF 25
865

8

8

STATE PROJECT NUMBER
1300-13-74



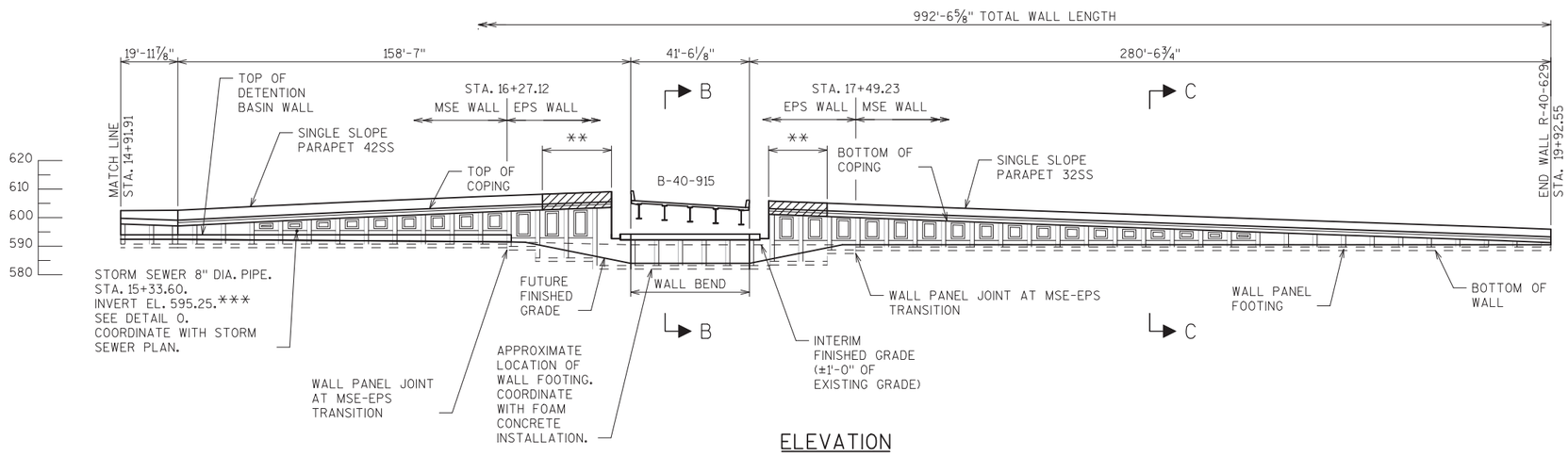
ELEVATION

IH 794 WB ENTRANCE RAMP
(DISTANCES GIVEN ALONG FRONT FACE OF WALL)

PARAPET TYPE TABLE

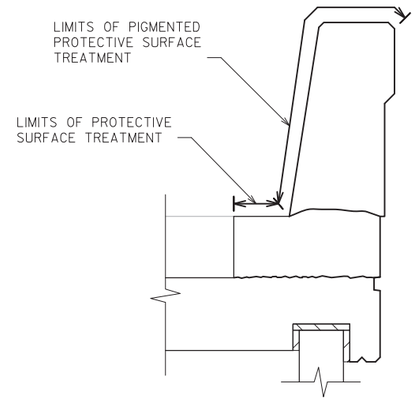
FROM	TO	OFFSET	TYPE
105+64.20 LW	106+43.15 LW	LT	42SS
106+43.15 LW	106+68.15 LW	LT	TRANSITION
106+68.15 LW	107+23.15 LW	LT	56SS-MODIFIED
107+23.15 LW	107+48.15 LW	LT	TRANSITION
107+48.15 LW	108+37.21 LW	LT	42SS
105+73.05 LW	106+17.91 LW	RT	56SS-MODIFIED
106+17.91 LW	106+59.91 LW	RT	TRANSITION
106+59.91 LW	107+15.00 LW	RT	32SS
204+81.47 LE	206+14.43 LE	LT	42SS
204+81.47 LE	207+41.62 LE	RT	32SS

NOTE:
THE STATIONS GIVEN ARE FOR LOCATION OF PARAPETS THAT ARE INCLUDED IN THE R-40-629 PAY LIMITS. SEE B-40-915 AND B-40-916 FOR DETAILS OF PARAPETS ON STRUCTURAL APPROACH SLABS AT THE ABUTMENTS.



ELEVATION

IH 794 EB EXIT RAMP
(DISTANCES GIVEN ALONG FRONT FACE OF WALL)



PROTECTIVE SURFACE TREATMENT DETAIL

LEGEND

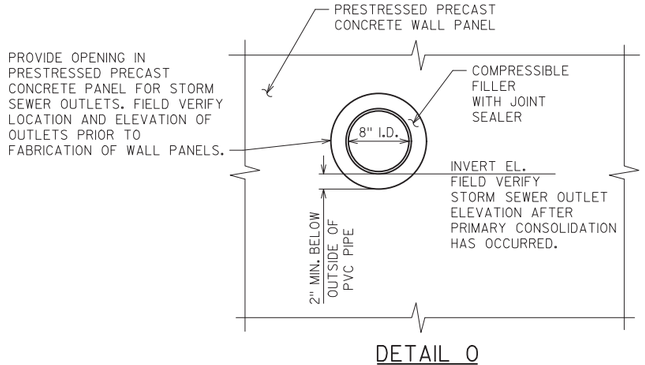
* APPROACH SLAB AND PARAPET INCLUDED WITH BRIDGE B-40-916

** APPROACH SLAB AND PARAPET INCLUDED WITH BRIDGE B-40-915

*** AS CONSTRUCTED ELEVATION. FIELD VERIFY STORM SEWER OUTLET ELEVATIONS AFTER PRIMARY CONSOLIDATION HAS OCCURRED.

NOTES

SEE SHEET 5 FOR SECTION A-A
SEE SHEET 7 FOR SECTION B-B
SEE SHEET 9 FOR SECTION C-C
SEE SHEET 4 FOR SECTION D-D
SEE SHEET 7 FOR SECTION G-G



DETAIL O

STORM SEWER OPENING

INTERIM FINISHED GRADE TABLE

WALL STA.	FINISHED GRADE
10+00.00	591.50
13+71.12	591.50
14+91.91	591.50
15+11.90	591.50
16+28.62	591.50
16+70.46	590.50
19+92.55	590.50

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY: DRH | PLANS CK'D.: MSC

WALL ELEVATION

SHEET 2 OF 25
866

8

8

GEOMETRY TABLE ◣

WALL STATION	ROADWAY STATION	OFFSET TO ℄ R-40-629	EL. A ☆	EL. B ☆	EL. D ☆	EL. E ☆	WALL HEIGHT ■
10+00.00	108+37.21 LW	36.75 LT	592.74	-	-	591.50	3.24
10+25.00	108+08.16 LW	36.75 LT	594.14	-	-	591.50	4.64
10+50.00	107+79.12 LW	36.75 LT	595.53	-	-	591.50	6.03
10+75.00	107+50.08 LW	36.75 LT	596.93	-	-	591.50	7.43
11+00.00	107+24.91 LW	36.75 LT	598.14	-	-	591.50	8.64
11+19.91	107+05.00 LW	36.75 LT	599.09	598.26	595.09	591.50	9.59
11+25.00	106+99.91 LW	36.75 LT	599.34	598.50	595.34	591.50	9.84
11+50.00	106+74.91 LW	36.75 LT	600.63	599.80	596.63	591.50	11.13
11+75.00	106+49.91 LW	36.75 LT	602.11	601.28	598.11	591.50	12.61
12+00.00	106+24.91 LW	36.75 LT	603.59	602.76	599.59	591.50	14.09
12+25.00	105+99.91 LW	36.75 LT	605.08	604.21	601.08	591.50	15.58
12+50.00	105+74.91 LW	36.75 LT	606.56	605.64	602.56	591.38	18.56
12+75.00	105+50.42 LW	36.75 LT	608.00	-	604.00	586.38	24.00
12+80.50	105+45.48 LW	36.75 LT	608.32	-	604.32	585.28	26.32
12+80.50	105+45.48 LW	36.75 LT	598.53	-	-	585.28	16.53
12+83.21	105+43.17 LW	36.75 LT	598.53	-	-	584.74	16.53
12+83.21	105+43.17 LW	36.75 LT	600.11	-	-	584.74	18.11
12+86.92	105+39.72 LW	36.75 LT	600.11	-	-	584.00	18.11
13+00.00	105+41.61 LW	23.84 LT	600.11	-	-	584.00	18.11
13+25.00	105+45.63 LW	0.81 RT	600.11	-	-	584.00	18.11
13+32.88	105+47.03 LW	8.57 RT	600.11	-	-	584.00	18.11
13+36.57	105+50.65 LW	8.25 RT	600.11	-	-	584.74	18.11
13+36.57	105+50.65 LW	8.25 RT	598.53	-	-	584.74	16.53
13+39.25	105+53.39 LW	8.00 RT	598.53	-	-	585.27	16.53
13+39.25	105+53.39 LW	8.00 RT	606.96	-	602.96	585.27	24.96
13+50.00	105+64.28 LW	7.02 RT	606.47	-	602.47	587.42	22.47
13+75.00	105+89.23 LW	5.41 RT	605.33	604.50	601.33	591.53	16.58
14+00.00	106+14.22 LW	4.76 RT	604.18	603.34	600.18	591.72	15.43
14+25.00	106+39.22 LW	4.75 RT	603.00	602.13	599.00	591.91	14.25
14+50.00	106+64.22 LW	4.75 RT	601.83	600.91	597.83	592.10	13.08
14+75.00	106+89.22 LW	4.75 RT	600.65	599.70	596.65	592.29	11.90
14+90.78	107+05.00 LW	4.75 RT	599.89	598.94	595.89	592.41	11.14
14+91.91	107+06.12 LW	4.75 RT	599.84	-	-	592.42	11.09
15+00.00	107+07.66 LW	12.69 RT	599.94	-	-	592.40	11.19
15+11.90	206+07.18 LE	4.75 LT	599.09	-	-	592.38	10.34
15+25.00	205+94.08 LE	4.75 LT	599.74	-	-	592.28	10.99
15+50.00	205+69.08 LE	4.75 LT	600.96	-	-	592.09	12.21
15+75.00	205+44.34 LE	4.75 LT	602.10	-	-	591.91	13.35
16+00.00	205+19.79 LE	4.75 LT	603.16	-	-	591.72	14.41
16+27.12	204+93.15 LE	4.75 LT	604.10	602.95	600.10	591.53	15.35
16+50.00	204+70.69 LE	4.75 LT	605.10	-	601.10	588.10	21.10
16+63.73	204+57.21 LE	4.75 LT	605.58	-	601.58	585.35	23.58
16+63.73	204+57.21 LE	4.75 LT	592.64	-	-	585.35	10.64
16+66.81	204+54.18 LE	4.75 LT	592.64	-	-	584.73	10.64
16+66.81	204+54.18 LE	4.75 LT	594.22	-	-	584.73	12.22
16+70.48	204+50.58 LE	4.75 LT	594.22	-	-	584.00	12.22
16+75.00	204+50.50 LE	0.23 LT	594.22	-	-	584.00	12.22
17+00.00	204+50.02 LE	24.77 RT	594.22	-	-	584.00	12.22
17+11.99	204+49.76 LE	36.75 RT	594.22	-	-	584.00	12.22
17+15.65	204+54.03 LE	36.75 RT	594.22	-	-	584.73	12.22
17+15.65	204+54.03 LE	36.75 RT	592.64	-	-	584.73	10.64
17+18.74	204+57.61 LE	36.75 RT	592.64	-	-	585.35	10.64
17+18.74	204+57.61 LE	36.75 RT	603.18	-	599.18	585.35	21.18
17+25.00	204+64.92 LE	36.75 RT	602.93	-	598.93	586.60	18.93
17+49.23	204+93.15 LE	36.75 RT	602.09	601.26	598.09	590.50	13.59
17+75.00	205+23.19 LE	36.75 RT	601.12	-	-	590.50	12.62
18+00.00	205+52.32 LE	36.75 RT	600.09	-	-	590.50	11.59
18+25.00	205+78.21 LE	36.75 RT	599.21	-	-	590.50	10.71
18+50.00	206+03.21 LE	36.75 RT	598.35	-	-	590.50	9.85
18+75.00	206+28.21 LE	36.75 RT	597.48	-	-	590.50	8.98
19+00.00	206+53.21 LE	36.75 RT	596.61	-	-	590.50	8.11
19+25.00	206+78.21 LE	36.75 RT	595.72	-	-	590.50	7.22
19+50.00	207+03.21 LE	36.75 RT	594.80	-	-	590.50	6.30
19+75.00	207+26.07 LE	36.66 RT	593.96	-	-	590.50	5.46
19+92.55	207+41.62 LE	36.58 RT	593.26	-	-	590.50	4.76

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS BORING NR-3, NR-4, NR-5	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)	
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	130	30	-	
* EXISTING FILL RETAINED SOIL EL. VARIES TO EL. 582	120	30	-	
ORGANIC (PEAT AND ORGANIC SILT) EL. 582 TO EL. 580-574	70	-	250	UNDRAINED
		15-20	-	DRAINED
SOFT TO M. STIFF CLAY EL. 580-574 TO EL. 568-562	105	-	650	UNDRAINED
		24	-	DRAINED
STIFF CLAY EL. 568-562 TO EL. 564-555	125	-	1,500	UNDRAINED
		28	-	DRAINED
SOFT TO M. STIFF CLAY EL. 564-555 TO EL. 558-546	105	-	650	UNDRAINED
		24	-	DRAINED
STIFF CLAY EL. 558-546 TO EL. 540-525	120	-	1,000	UNDRAINED
		26	-	DRAINED
M. DENSE SAND / SILTY SAND EL. 540-525 TO EL. VARIES	115	30	-	

STRATUM LOCATIONS AND SOIL DESCRIPTIONS BORING SR-2, SR-3, SR-4	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)	
GRANULAR BACKFILL (REINFORCING ZONE OR BACKFILL)	130	30	-	
* EXISTING FILL RETAINED SOIL EL. VARIES TO EL. 580	120	30	-	
ORGANIC (PEAT AND ORGANIC SILT) EL. 580 TO EL. 576-575	70	-	250	UNDRAINED
		15-20	-	DRAINED
SOFT TO M. STIFF CLAY EL. 576-575 TO EL. 572-560	105	-	650	UNDRAINED
		24	-	DRAINED
V. LOOSE TO LOOSE SAND EL. 572-560 TO EL. 567-556	110	24	-	
SOFT TO M. STIFF CLAY EL. 567-556 TO EL. 562-550	105	-	650	UNDRAINED
		24	-	DRAINED
STIFF TO V. STIFF CLAY EL. 562-550 TO EL. 550-545	130	-	2,000	UNDRAINED
		30	-	DRAINED
M. DENSE SAND / SILTY SAND EL. 550-545 TO EL. VARIES	115	30	-	

* DESIGN WALL FOR THESE VALUES

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL
502.3200	PROTECTIVE SURFACE TREATMENT	SY	45
502.3210.S	PIGMENTED PROTECTIVE SURFACE TREATMENT	SY	392
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	618
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	72,100
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	37
517.1010.S.2003	CONCRETE STAINING R-40-629	SF	13,726
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	630
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	16
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	244
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	2
SPV.0035.2002	EXPANDED POLYSTYRENE (EPS) GEOFOAM	CY	3,450
SPV.0165.2001	PRESTRESSED PRECAST CONCRETE WALL PANEL	SF	12,386
SPV.0165.2003	WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/QMP	SF	5,722
	NON-BID ITEMS		
	CORK FILLER	SIZE	1"
	PREFORMED JOINT FILLER	SIZE	¾"
	NON-BITUMINOUS JOINT SEALER	SIZE	1"
	EXPANDED POLYSTYRENE	SIZE	1"
	NEOPRENE FILLER	SIZE	1"
	FILLER	SIZE	½"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF THIS WALL (STRUCTURE R-40-629) WITH THE CONSTRUCTION OF THE EAST ABUTMENT OF BRIDGE B-40-915 AND THE EAST ABUTMENT OF BRIDGE B-40-916.

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153, TYPES I, II, OR III, OR M213.

THE PLAN QUANTITY FOR THE BID ITEMS "WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/QMP" AND "PRESTRESSED PRECAST CONCRETE WALL PANEL" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO A CONSTANT DEPTH BELOW FINISHED GRADE AS FOLLOWS: 2'-9" AT DETENTION BASIN (APPROX. STA. 13+70 TO 16+30), VARIABLE AT ABUTMENTS (SEE "FOAMED CONCRETE DETAILS" SHEET), AND 2'-0" AT ALL OTHER LOCATIONS.

BEVEL EXPOSED EDGES OF CONCRETE ¾", UNLESS NOTED OTHERWISE.

ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (1991).

ALL WALL STATIONING, OFFSETS, AND DIMENSIONS ARE GIVEN ALONG THE ℄ OF WALL R-40-629, UNLESS OTHERWISE SHOWN.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR, UNLESS OTHERWISE SHOWN OR NOTED.

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE GEOMETRY TABLE GIVEN ON THIS SHEET. INCLUDE A 2 FOOT MATERIAL SURCHARGE ABOVE THE FINISHED GRADE.

THE COST OF FURNISHING AND PLACING THE FOOTING UNDER THE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL".

THE QUANTITY OF CONCRETE MASONRY FOR THE CAST-IN-PLACE PARAPET AND ANCHOR SLAB, EPS SLAB, AND APPROACH SLAB IS PAID FOR UNDER THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

CONTRACTOR SHALL SUPPLY AND INSTALL A NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

PIGMENTED PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND ROADWAY FACE OF THE PARAPET.

OPTIONAL TRANSVERSE CONSTRUCTION JOINTS ARE PERMITTED IN THE FOOTING WITH A MINIMUM SPACING OF TWO PANEL LENGHTS. FOOTING JOINTS SHOULD BE OFFSET A MINIMUM OF 1'-0" FROM WALL JOINTS. RUN BAR STEEL THROUGH FOOTING JOINTS.

MSE WALL REQUIRES TWO STAGES OF FILL FOR THE TALLEST PORTIONS OF THE WALL. LIFT 1 SHOULD BE TO ELEVATION 602 FEET. AFTER 90% CONSOLIDATION HAS BEEN ACHIEVED, LIFT 2 SHOULD BE PLACED.

PROVIDE OPENINGS IN PRESTRESSED PRECAST CONCRETE PANEL FOR STORM SEWER OUTLETS. FIELD VERIFY STORM SEWER OUTLET ELEVATIONS AFTER PRIMARY CONSOLIDATION HAS OCCURRED.

LIGHTWEIGHT FOAMED CONCRETE IS TO BE PAID FOR SEPARATELY FROM THE WALL. SEE ROADWAY PLANS FOR QUANTITIES.

LEGEND

◣ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

☆ EL. A = BOT. OF PARAPET OR TOP OF COPING
EL. B = TOP OF ANCHOR SLAB (EL. SHOWN ONLY WHERE TOP OF ANCHOR SLAB IS SLOPED)
EL. D = TOP OF EPS SLAB AT WALL ALIGNMENT
EL. E = FUTURE FINISHED GRADE, SEE SHEET 2 FOR INTERIM FINISHED GRADE

■ EXPOSED HEIGHT (TOP OF WALL TO INTERIM FINISHED GRADE) PLUS WALL EMBEDMENT DEPTH

STATE PROJECT NUMBER

1300-13-74

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY DRH | PLANS CK'D. MSC

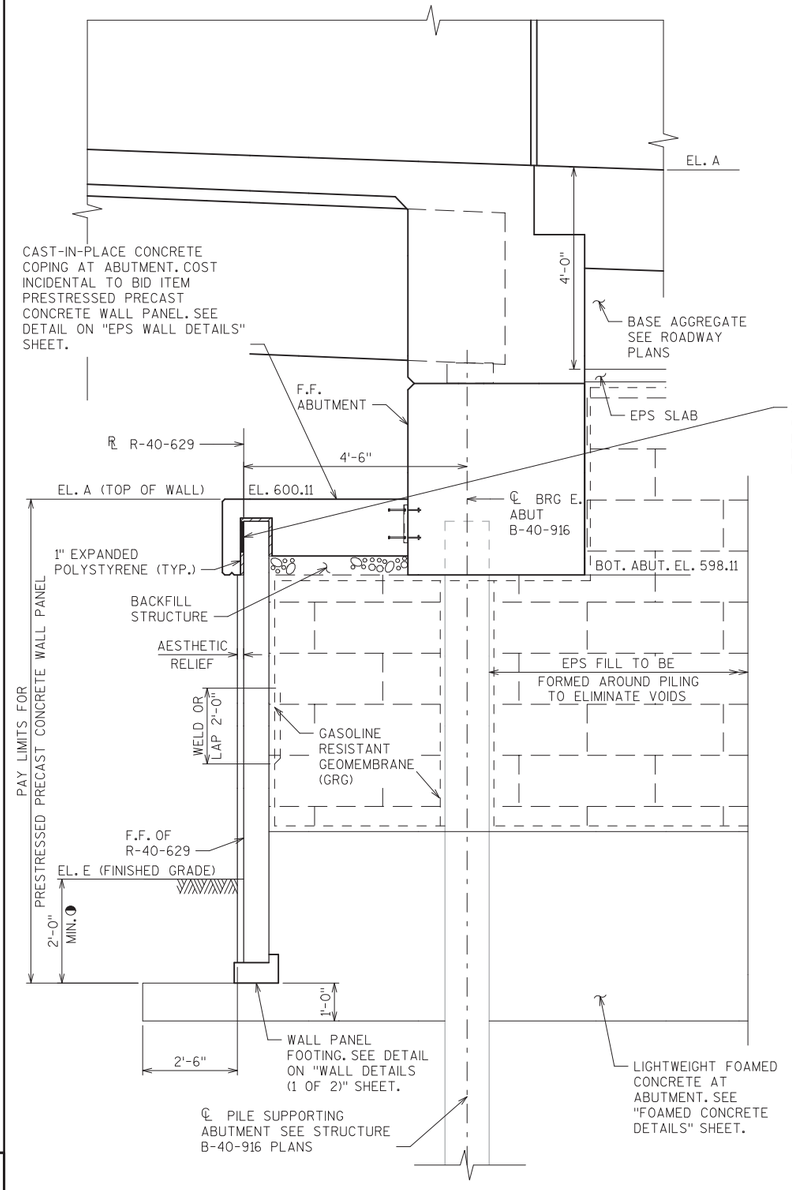
NOTES & QUANTITIES

SHEET 3 OF 25

867

8

8



SECTION D-D

EPS WALL SECTION AT ABUTMENT

DESIGN CRITERIA

CONTRACTOR SHALL DESIGN RETAINING WALL, EPS EMBANKMENT AND PRESTRESSED PRECAST PANELS FOR THE FOLLOWING DESIGN CRITERIA AND MINIMUM LOADING.

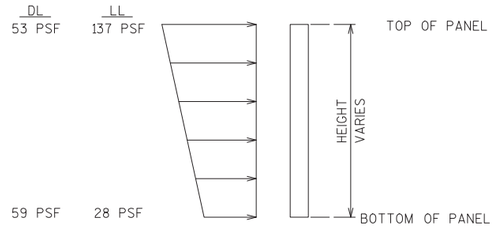
DESIGN:	AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION STATE OF WISCONSIN, DEPARTMENT OF TRANSPORTATION (WISDOT), BRIDGE MANUAL NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM, NCHRP REPORT 529, "GUIDELINE AND RECOMMENDED STANDARD FOR GEOFOAM APPLICATIONS IN HIGHWAY EMBANKMENTS", TRANSPORTATION RESEARCH BOARD, 2004 ASTM D6817/D6817M-15, STANDARD SPECIFICATION FOR RIGID CELLULAR POLYSTYRENE GEOFOAM, ASTM INTERNATIONAL, WEST CONSHOHOCKEN, PA, 2015, WWW.ASTM.ORG DESIGN LOADS SHALL BE LESS THAN MINIMUM ELASTIC LIMIT OF EPS BLOCK, BASED ON THE COMPRESSIVE RESISTANCE AT 1% STRAIN PER ASTM D6817, AND A FACTOR OF SAFETY FOR VERTICAL STRESS OF 1.2 PER NCHRP REPORT 529.
LIVE LOAD:	DESIGN TRUCK AND TANDEM VEHICLES PER AASHTO LRFD REQUIREMENTS WITH APPLICABLE IMPACT AND MULTIPLE PRESENCE FACTORS, AND DISTRIBUTION THROUGH EMBANKMENT AND OVERLAP PER NCHRP REPORT 529 MINIMUM 240 PSF SURCHARGE
COLLISION FORCE:	F_T = 54 KIPS ON BARRIERS
EARTHQUAKE EFFECTS:	SITE CLASS D k_h = 0.1, C_{sm} = 0.15
WIND LOAD:	V_{DZ} = 100 MPH P_D = 40 PSF (WIND PRESSURE ON STRUCTURE) WL = 0.1 KLF AT 6 FT ABOVE DRIVING SURFACE (WIND PRESSURE ON VEHICLE)
MAXIMUM UNBALANCED HYDROSTATIC HEAD:	2.75 FT
FUTURE WEARING SURFACE:	20 PSF
SOIL PARAMETERS (SUPPORTING SOIL):	
ALLOWABLE SOIL BEARING:	AT 1-FT EMBANKMENT OVEREXCAVATION (5-FT TOTAL OVEREXCAVATION): 3000 PSF ALLOWABLE SOIL BEARING 0.5-IN SETTLEMENT
UNDRAINED SHEAR STRENGTH:	500 PSF

EPS WALL EXTERNAL STABILITY EVALUATION ◭

WALL HEIGHT (FEET)	4	6	8	10	12	14	16	18	20	22	24	26	28
EXPOSED WALL HEIGHT (FEET)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
BORING USED	○	○	○	○	○	○	○	○	○	○	○	○	○
GLOBAL STABILITY, CAPACITY TO DEMAND RATIO (CDR), MIN	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
BEARING (CDR > 1.0)	6.57	6.49	6.41	6.33	6.24	6.15	6.05	5.96	5.86	5.75	5.65	5.55	5.44
UPLIFT, HYDRAULIC (CDR > 1.2)	1.27	1.29	1.31	1.32	1.34	1.36	1.37	1.39	1.41	1.42	1.44	1.46	1.47
SLIDING, HYDRAULIC (CDR > 1.2)	27.27	27.68	28.10	28.51	28.93	29.34	29.76	30.17	30.59	31.00	31.42	31.83	32.25
OVERTURNING STABILITY, HYDRAULIC (CDR > 1.2)	576.40	584.10	591.80	599.40	607.10	614.70	622.40	630.00	637.70	645.30	653.00	660.60	668.30
ECCENTRICITY, HYDRAULIC (CDR > 1.0)	204.10	206.80	209.50	212.20	214.90	217.60	220.30	223.10	225.80	228.50	231.20	233.90	236.60
SLIDING, WIND (CDR > 1.2)	14.23	11.03	9.04	7.69	6.72	5.98	5.40	4.93	4.55	4.23	3.95	3.72	3.52
OVERTURNING STABILITY, WIND (CDR > 1.2)	259.90	183.50	130.60	95.63	72.36	56.41	45.13	36.91	30.76	26.04	22.35	19.41	17.03
ECCENTRICITY, WIND (CDR > 1.0)	130.00	91.77	65.28	47.81	36.18	28.21	22.57	18.46	15.38	13.02	11.17	9.70	8.51

PANEL LOADING DIAGRAM: ◩

UNFACTORED LOADS



EPS WALL GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE COMPLETE DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS AND EPS EMBANKMENT IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
2. THE RETAINING WALL AND EPS MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "EXPANDED POLYSTYRENE (EPS) GEOFOAM".
3. PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENT AND DETAILS.
4. THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS AND THE GEOMETRY TABLE GIVEN ON SHEET 3.

LEGEND

◓ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (2'-0" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

◭ ALL CAPACITY TO DEMAND RATIOS (CDR) ARE CALCULATED FOR THE WALL HEIGHTS SHOWN IN THE TABLE. SEE GEOTECHNICAL REPORT FOR FURTHER INFORMATION.

○ ALL BORINGS NR-3, NR-4, NR-4A, NR-5, SR-2, SR-3 AND SR-4, AS PRESENTED IN PROJECT GEOTECHNICAL TECHNICAL MEMORANDUM, APPLY TO THE RETAINING WALL ANALYSIS.

◩ DESIGN PANELS FOR THE HORIZONTAL PRESSURE SHOWN. THESE PRESSURES SATISFY THE GIVEN DESIGN CRITERIA.

STATE PROJECT NUMBER

1300-13-74

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY MDM | PLANS CK'D. MSC

EPS WALL NOTES

SHEET 4 OF 25

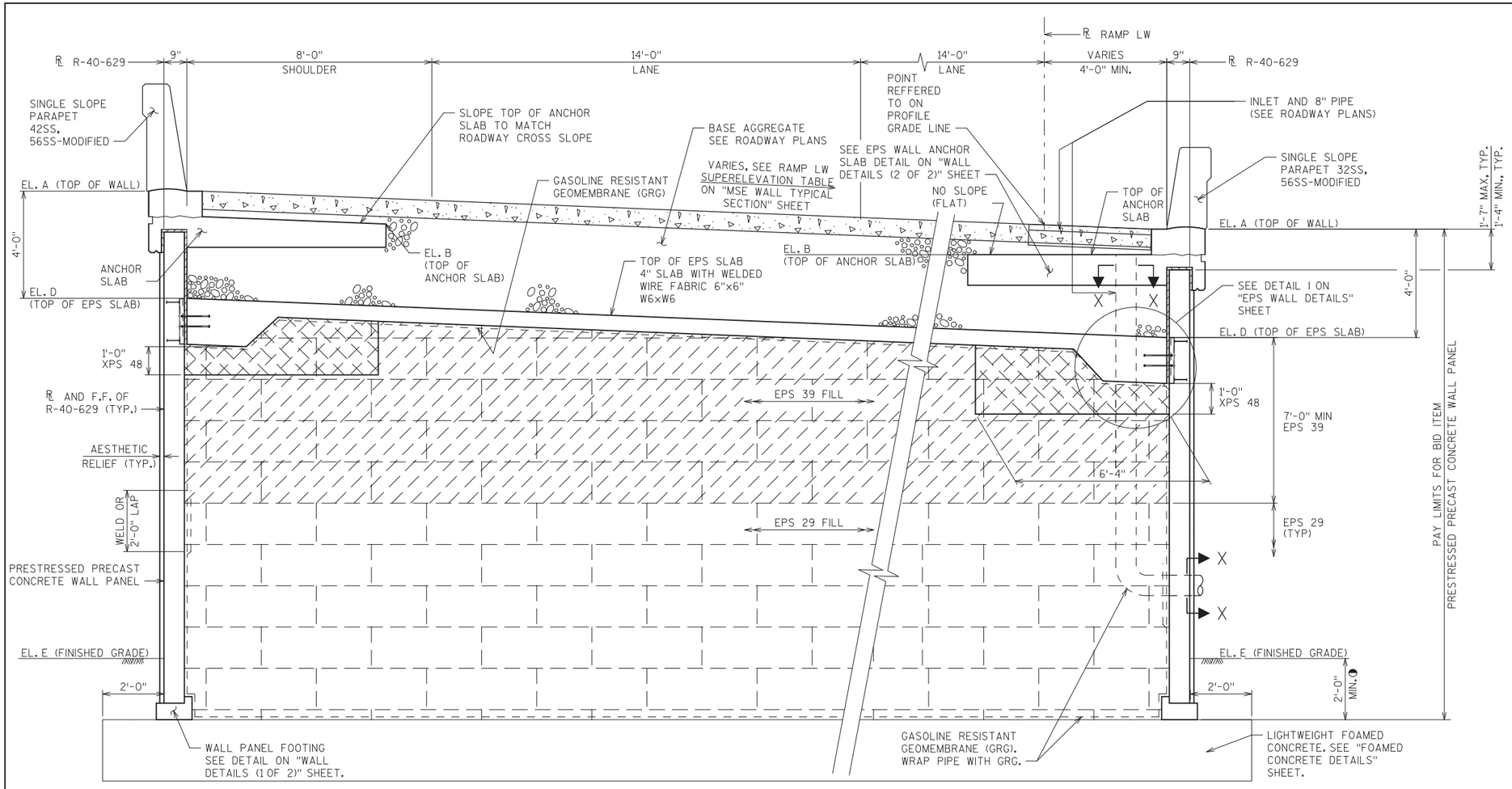
868

8

8

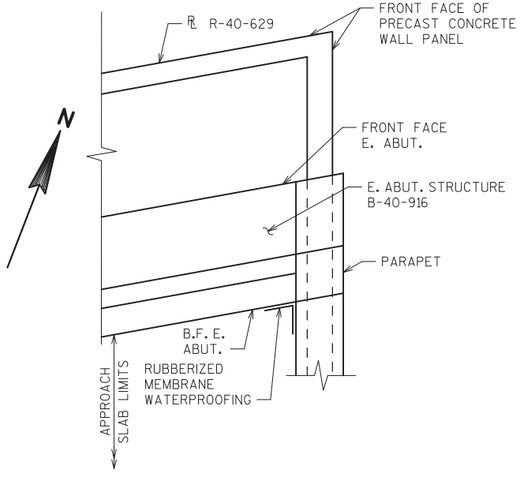
STATE PROJECT NUMBER

1300-13-74



SECTION A-A

EPS WALL - WB ENTRANCE RAMP



DETAIL K - PLAN VIEW

LEGEND

EPS ## REFERS TO EPS TYPE PER ASTM D6817/D6817M-15

EPS XPS 48 FILL

EPS 39 FILL

EPS 29 FILL

NOTE:

- MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (2'-0" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

APPROXIMATE WEIGHT OF WELDED WIRE FABRIC IS 3,280 LBS. THIS QUANTITY IS INCLUDED IN BID ITEM "BAR STEEL REINFORCEMENT HS RETAINING WALLS".

SEE SHEET 10 FOR SECTION X-X

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY MDM | PLANS CK'D. MSC

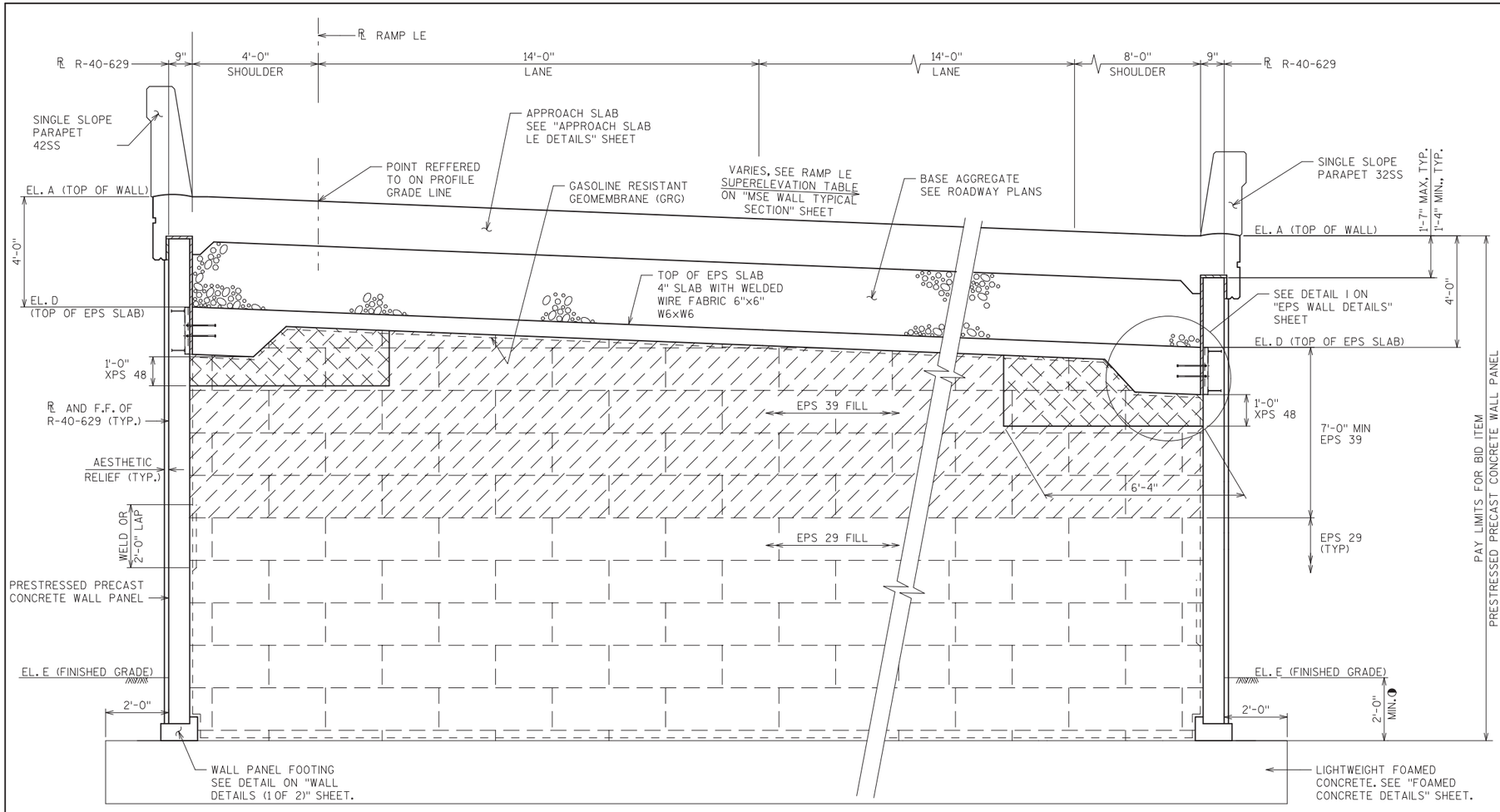
EPS WALL TYPICAL SECTION (1 OF 2)

SHEET 5 OF 25

869

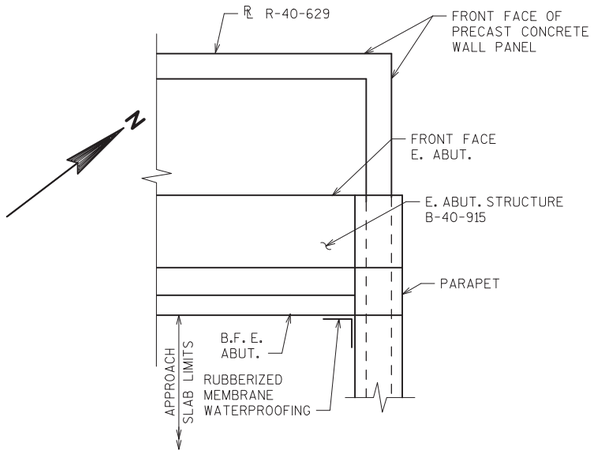
STATE PROJECT NUMBER

1300-13-74



SECTION L-L

EPS WALL - EB EXIT RAMP



DETAIL N - PLAN VIEW

LEGEND

EPS ** REFERS TO EPS TYPE PER ASTM D6817/D6817M-15

EPS XPS 48 FILL

EPS 39 FILL

EPS 29 FILL

NOTE:

● MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (2'-0" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY	DRH	PLANS CK'D.	MSC

EPS WALL TYPICAL SECTION (2 OF 2)

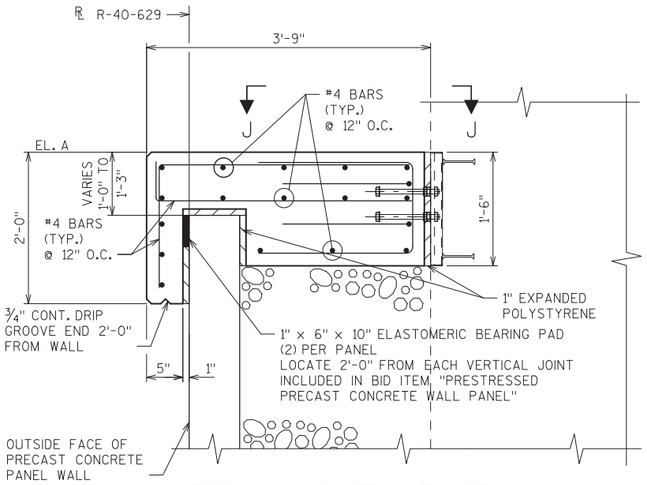
SHEET 6 OF 25

870

IP_PWP:d0347432\080906_xs.dgn.DGN 24-JUL-2015 08:13

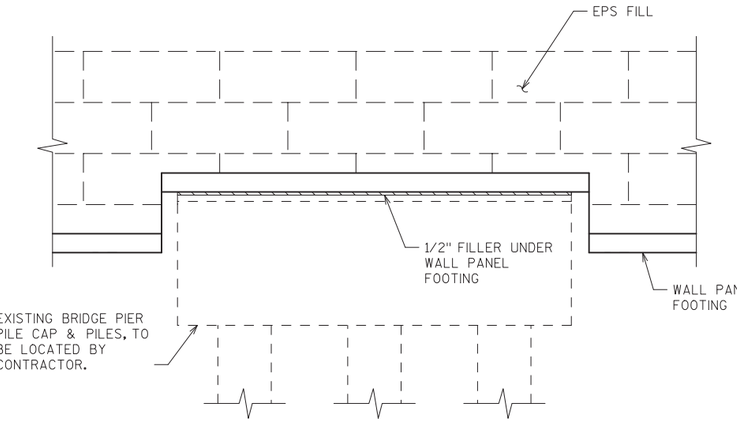
STATE PROJECT NUMBER

1300-13-74

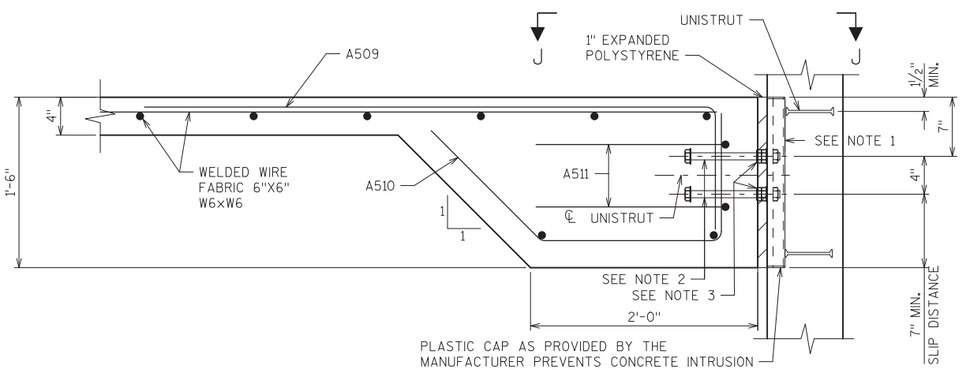


EPS WALL CAST-IN-PLACE CONCRETE COPING AT ABUTMENT

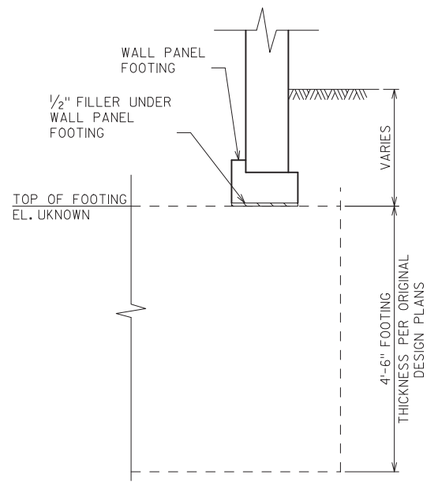
COST OF ALL BAR STEEL REINFORCEMENT AND CONCRETE DETAILED IN CONCRETE COPING SHALL BE INCLUDED IN BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL"



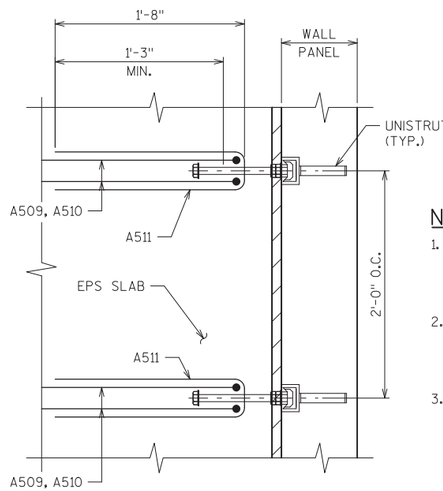
DETAIL H



DETAIL I



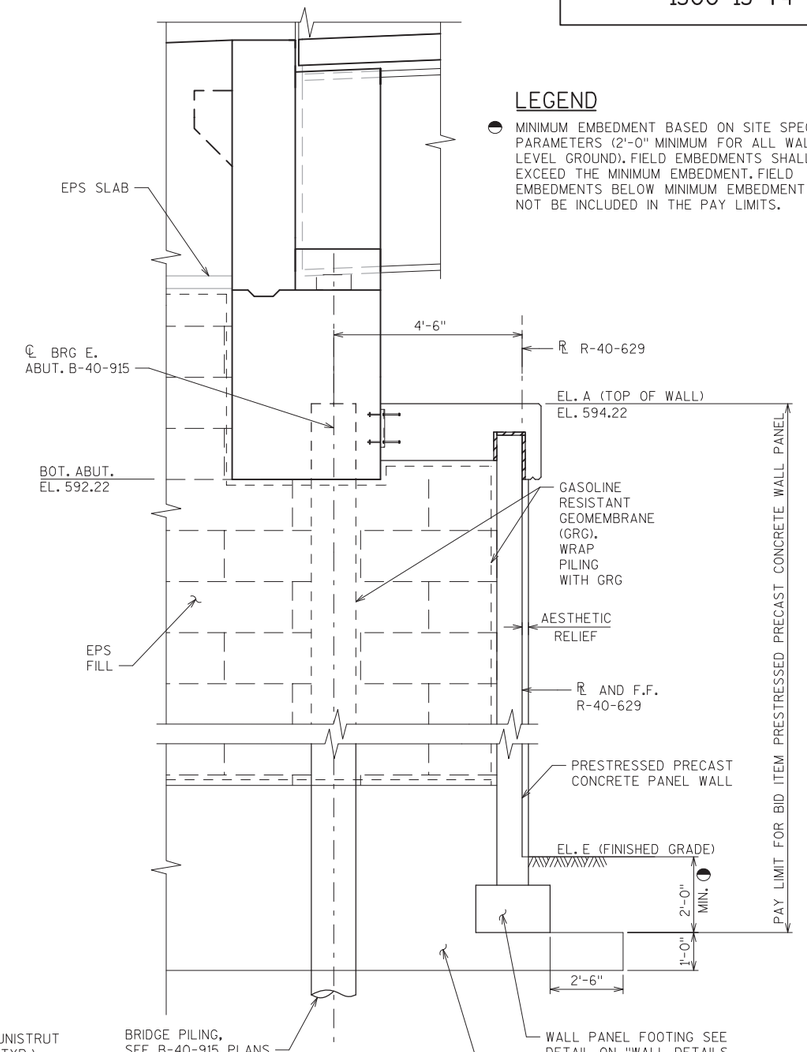
SECTION G-G



SECTION J-J

LEGEND

◓ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (2'-0" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.



SECTION B-B

EPS WALL SECTION AT ABUTMENT

NOTES

1. STAINLESS STEEL UNISTRUT P3773-18 (OR APPROVED EQUIVALENT) CHANNEL WITH (2) P1023 STAINLESS STEEL NUTS W/ SPRINGS, SPACED AT 2'-0".
2. (2) ¾" DIA. x 10" LONG 18-8 ASTM A304 STAINLESS STEEL BOLTS WITH 2" x 2" x ¼" PLATE STAINLESS STEEL WASHERS. PLACE PLATE WASHER BETWEEN UNISTRUT AND TEFLON COATED WASHER.
3. DOUBLE ¾" 18-8 ASTM A304 STAINLESS STEEL NUTS WITH TEFLON COATED WASHER. FINGER TIGHTEN FIRST NUT AND HOLD IN POSITION UNTIL SECOND IS TIGHTENED TO 75 FT-LBS TORQUE. BOLT ASSEMBLY SHOULD SLIDE IN UNISTRUT AFTER TIGHTENING SECOND NUT (LOCK-IN). PLACE TEFLON COATED WASHER BETWEEN PLATE WASHER AND NUT.
4. UNISTRUT ASSEMBLY INCLUDED UNDER BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL".
5. SEE "ANCHOR SLAB DETAILS" SHEET FOR BILL OF BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY	MDM	PLANS CK'D.	MSC

EPS WALL DETAILS

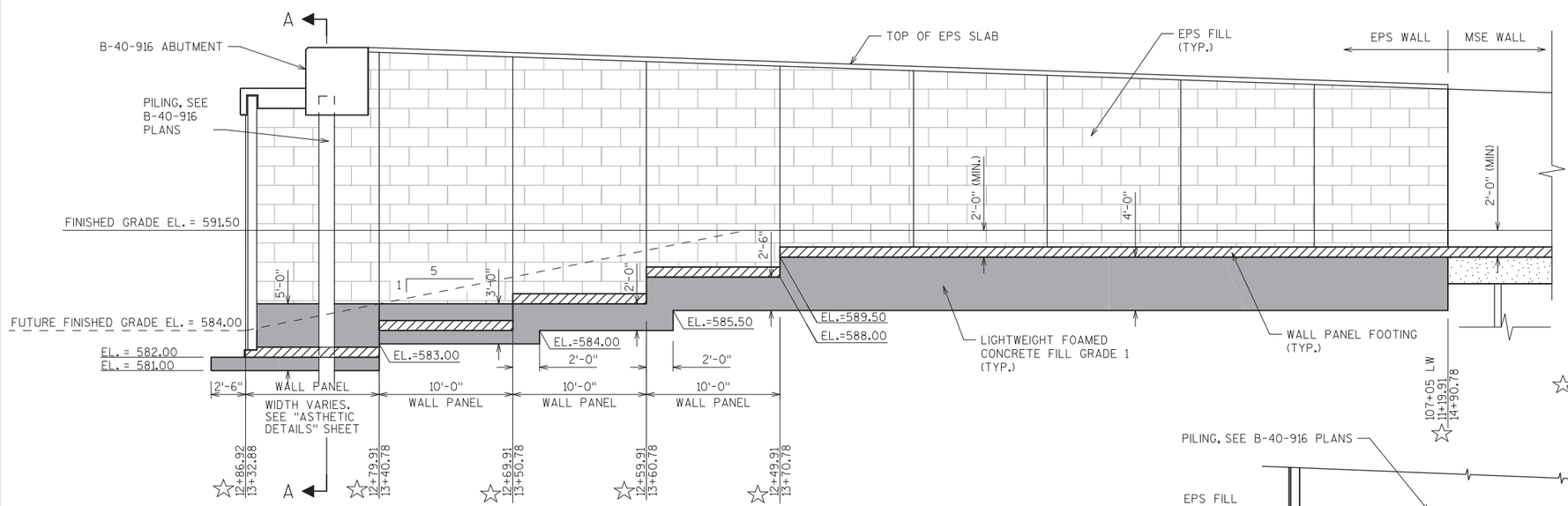
SHEET 7 OF 25

871

8

8

STATE PROJECT NUMBER
1300-13-74



NOTES

PILING MUST BE DRIVEN PRIOR TO PLACEMENT OF FOAMED CONCRETE.

WALL STEPS SHOWN ARE APPROXIMATE AND MUST BE COORDINATED WITH THE WALL MANUFACTURER.

AREAS OF FOAMED CONCRETE PLACED WITHIN THE LIMITS OF THE ABUTMENT MUST BE PLACED UNDERNEATH AND WITHIN THE WALL PANELS AND FOOTINGS TO A DEPTH SHOWN ON THE PLANS. PLACEMENT OF FOAMED CONCRETE MUST BE COORDINATED WITH THE WALL MANUFACTURER.

SEE ROADWAY PLANS FOR FOAMED CONCRETE QUANTITY.

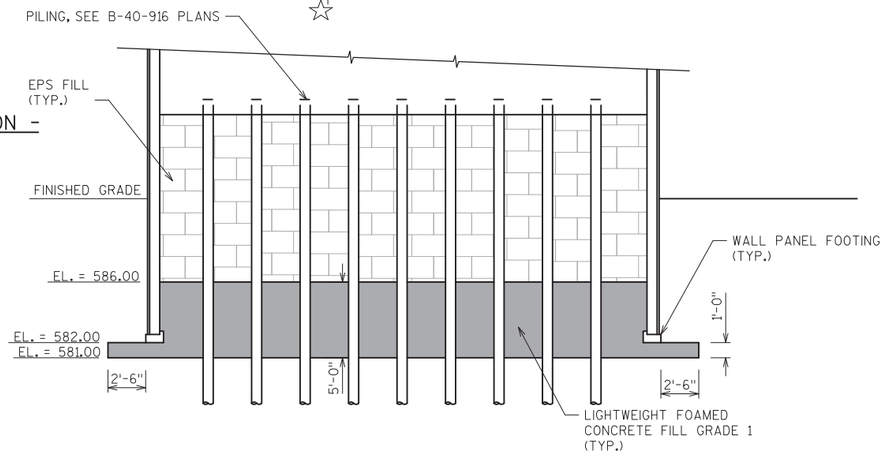
SEE B-40-915 AND B-40-916 PLANS FOR PILING DETAILS.

LEGEND

☆ STATIONING ALONG EAST SIDE OF FOAMED CONCRETE/EPS

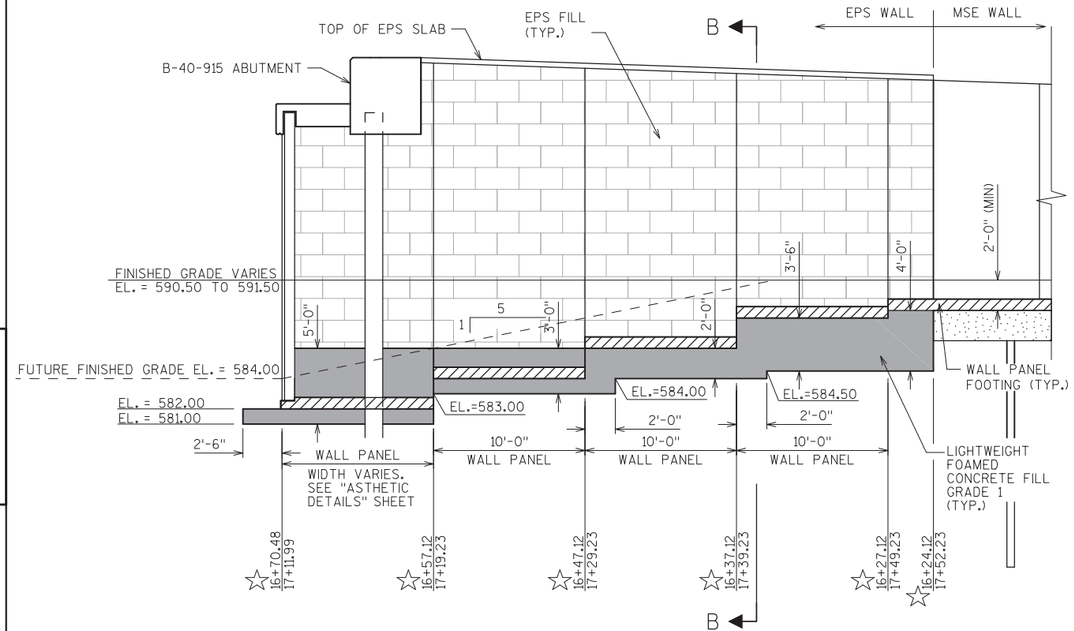
R-40-629 LIGHTWEIGHT FOAMED CONCRETE FILL INSTALLATION - IH 794 WB ENTRANCE RAMP ELEVATION LOOKING EAST

N.T.S.



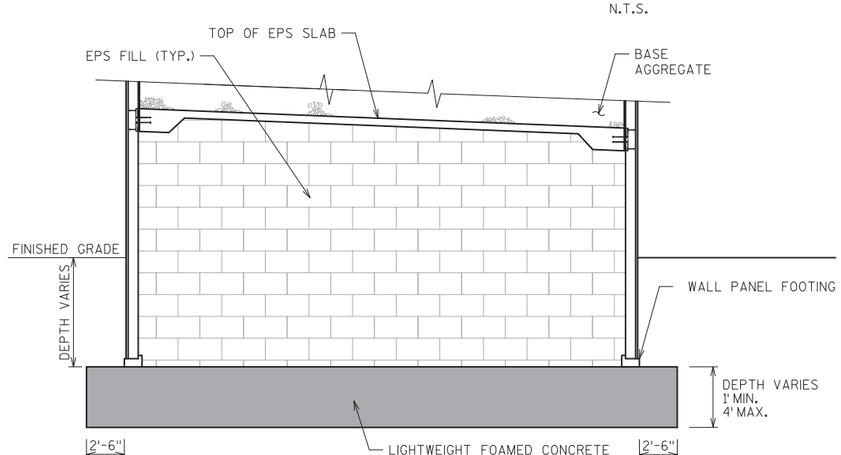
R-40-629 LIGHTWEIGHT FOAMED CONCRETE FILL INSTALLATION - SECTION A-A (AT ABUTMENT)

N.T.S.



R-40-629 LIGHTWEIGHT FOAMED CONCRETE FILL INSTALLATION - IH 794 EB EXIT RAMP ELEVATION LOOKING EAST

N.T.S.



R-40-629 LIGHTWEIGHT FOAMED CONCRETE FILL INSTALLATION - SECTION B-B (AT MID-WALL)

N.T.S.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY KMF | PLANS CK'D. MSC

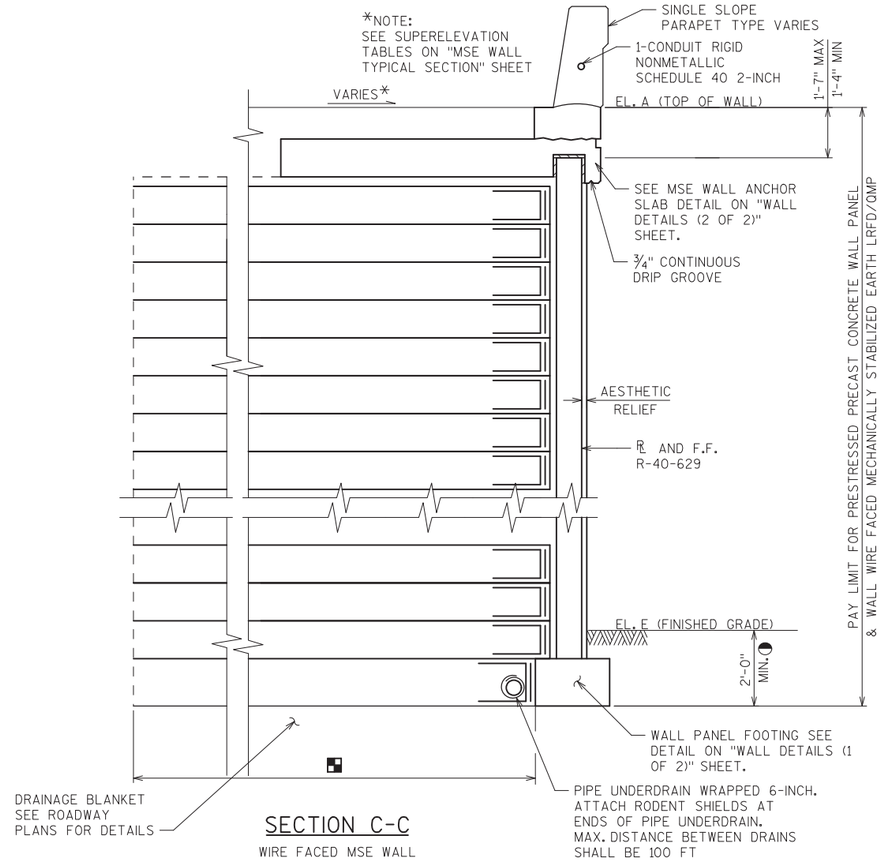
FOAMED CONCRETE DETAILS

SHEET 8 OF 25
872

8

8

STATE PROJECT NUMBER
1300-13-74



SECTION C-C

WIRE FACED MSE WALL

MSE WALL GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALL IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/GMP".
2. THE MANUFACTURER OF THE MSE WALL SHALL COORDINATE WITH THE GENERAL CONTRACTOR ON THE ANCHORING OF THE PANELS INTO THE BACKFILL. THE ATTACHMENT METHOD SHALL BE APPROVED BY THE ENGINEER.
3. PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.
4. DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 240 PSF.
5. THE RETAINING IS TO BE DESIGNED USING THE ELEVATIONS AND THE GEOMETRY TABLE GIVEN ON SHT. 3

LEGEND

◓ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (2'-0" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

◪ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

⬙ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. INTERNAL STABILITY IS THE CONTRACTORS RESPONSIBILITY.

MSE WALL EXTERNAL & OVERALL STABILITY EVALUATION ✳✳

DIMENSIONS	EVALUATED LOCATIONS		
	N. SIDE WALL OF WB RAMP	S. SIDE WALL OF EB RAMP	N. SIDE WALL EB RAMP
MAX. WALL HEIGHT (FEET)	11	15	16
MINIMUM LENGTH OF REINFORCEMENT (FEET) ◪	1.2 TIMES WALL HEIGHT		
WALL STATION	11+19.91	17+49.23	16+27.12
	CAPACITY TO DEMAND RATIO (CDR)		
SLIDING (CDR>1.0)	1.79	1.75	1.78
ECCENTRICITY (CDR>1.0)	2.58	2.55	2.57
OVERALL STABILITY (CDR>1.0) - LONG TERM ⬙	1.10	1.10	1.10
BEARING RESISTANCE (CDR>1.0)	1.03	1.03	1.06
FACTORED BEARING RESISTANCE (PSF) - LIFT 1	1,800	1,800	1,800
FACTORED BEARING RESISTANCE (PSF) - LONG TERM	3,000	3,000	3,000

✳✳ BASED ON GEOTECHNICAL ENGINEERING REPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY MDM | PLANS CK'D. MSC

MSE WALL NOTES & DETAILS

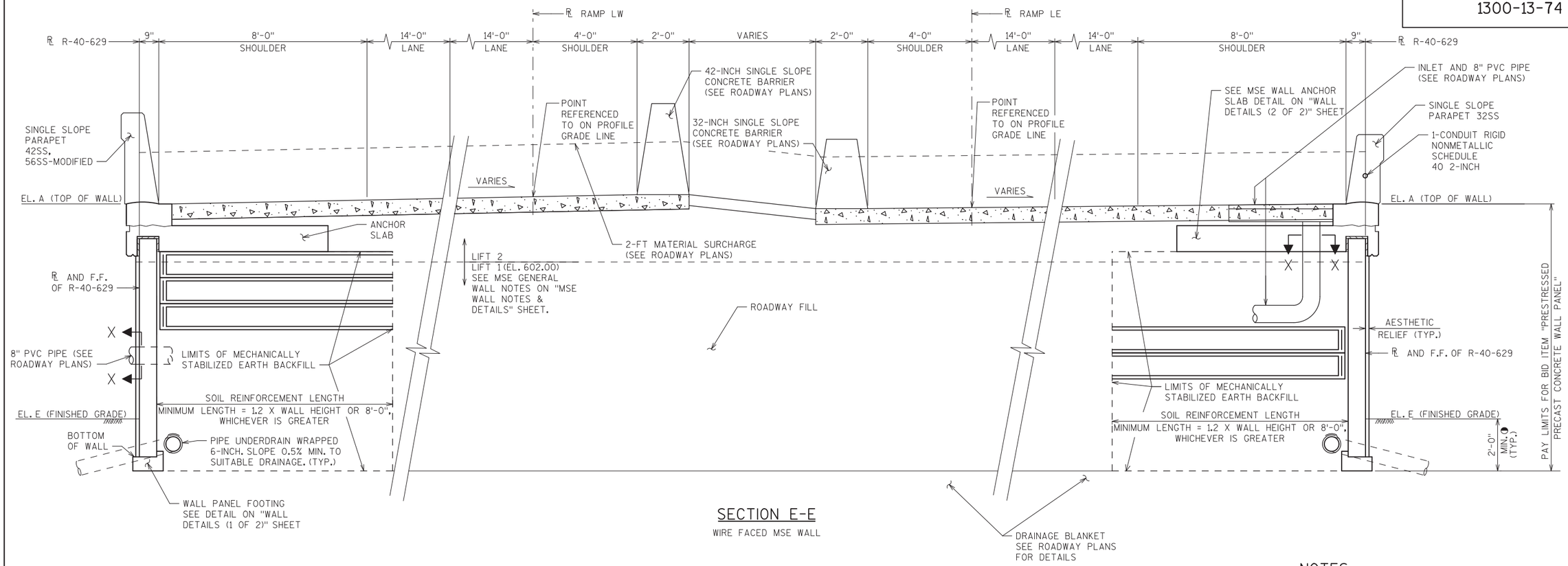
SHEET 9 OF 25

873

8

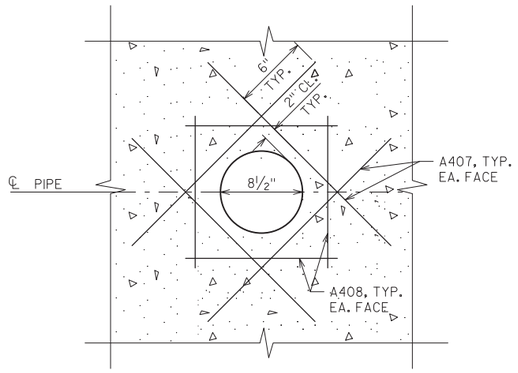
STATE PROJECT NUMBER

1300-13-74



SECTION E-E

WIRE FACED MSE WALL



SECTION X-X

BAR STEEL CALLOUTS ARE FOR ANCHOR SLAB ONLY. ADDITIONAL STEEL IN WALL PANEL TO BE PAID FOR UNDER "PRESTRESSED PRECAST CONCRETE WALL PANEL"

SUPERELEVATION TABLE - RAMP LE

LOCATION	CROSS SLOPE (%)
203+61.90 LE	6.00
204+63.73 LE	6.00
205+58.59 LE	4.00
206+66.73 LE	0.00
207+09.40 LE	-1.33
207+30.73 LE	-2.00
208+75.00 LE	-2.00

A NEGATIVE SIGN INDICATES CROSS-SLOPE DIRECTION OPPOSITE TO THAT SHOWN IN TYPICAL SECTION

SUPERELEVATION TABLE - RAMP LW

LOCATION	CROSS SLOPE (%)
104+90.87 LW	4.00
105+54.87 LW	2.00
106+18.87 LW	0.00
106+82.87 LW	-2.00
109+75.00 LW	-2.00

A NEGATIVE SIGN INDICATES CROSS-SLOPE DIRECTION OPPOSITE TO THAT SHOWN IN TYPICAL SECTION

NOTES

◓ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (2'-0" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

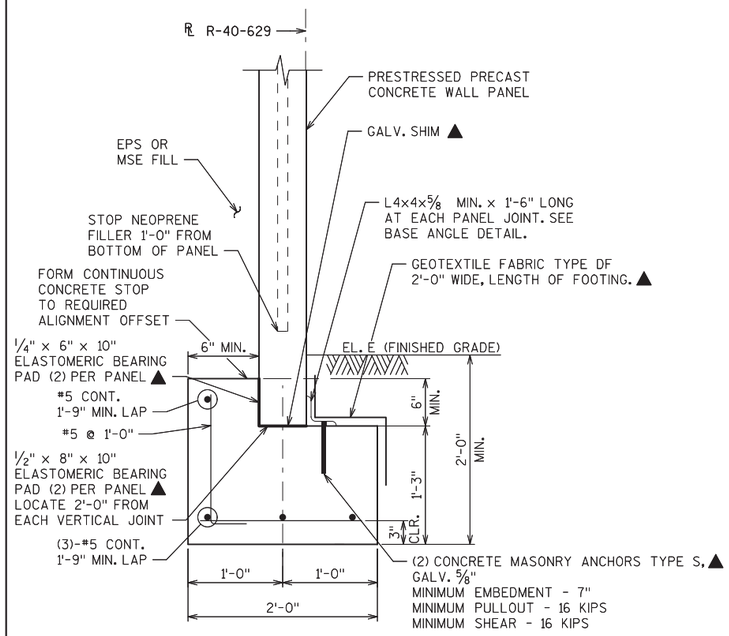
DRAWN BY DRH | PLANS CK'D. MSC

MSE WALL TYPICAL SECTION

SHEET 10 OF 25

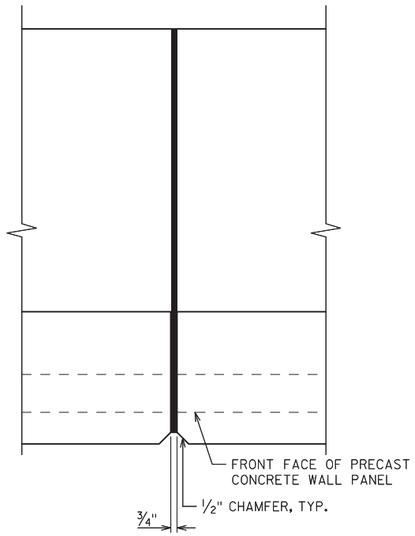
874

IP_PWP:d0347432\080910_xs.dan.DGN 24-JUL-2015 09:25



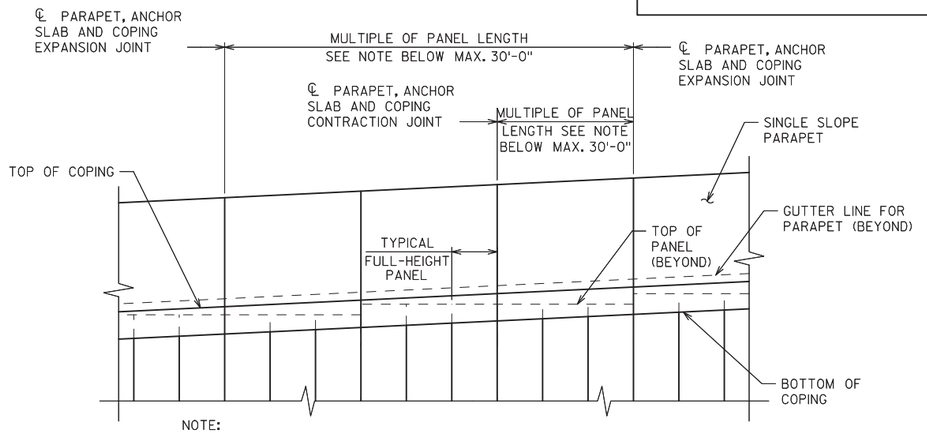
WALL PANEL FOOTING DETAIL

COST OF ALL BAR STEEL REINFORCEMENT AND CONCRETE LEVELING PAD SHALL BE INCLUDED IN BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL"



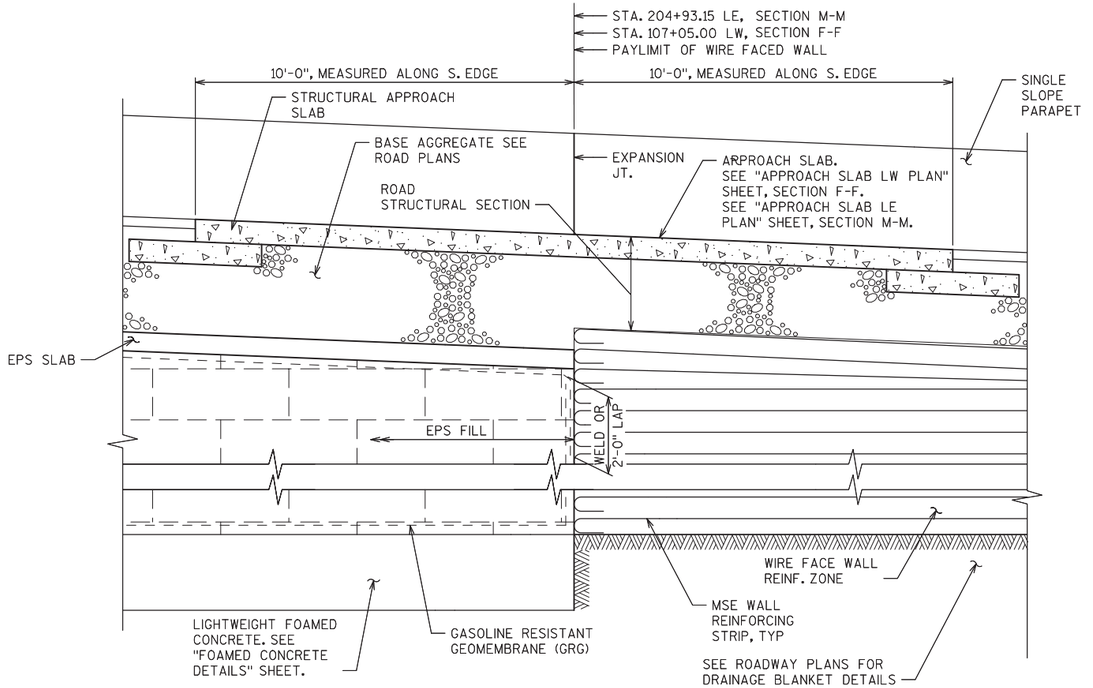
ANCHOR SLAB CONTRACTION JOINT

PLAN VIEW

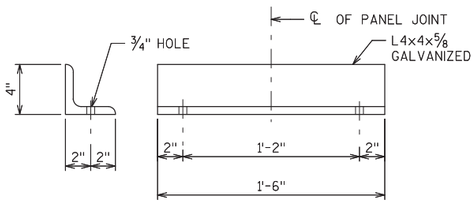


NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINT ON FRONT FACE

CAST-IN-PLACE ANCHOR SLAB AND COPING PARTIAL ELEVATION

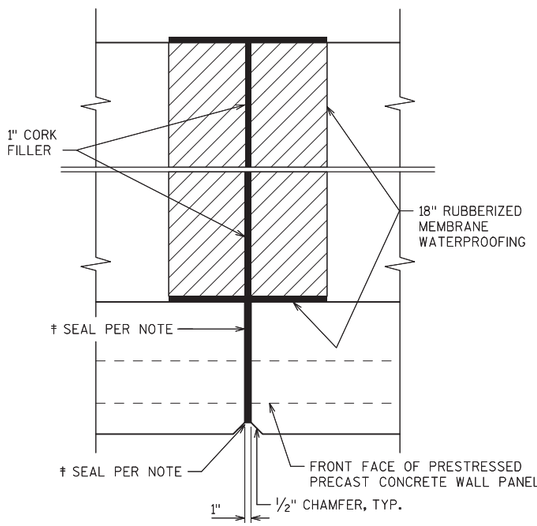


SECTION F-F, SECTION M-M



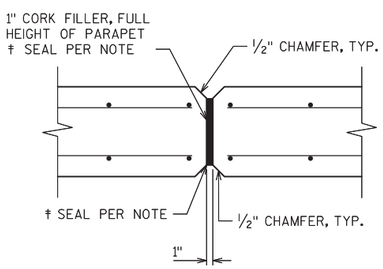
BASE ANGLE DETAIL

(1) AT EACH PANEL JOINT INCLUDED IN BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL"



⊛ ANCHOR SLAB EXPANSION JOINT

PLAN VIEW



⊛ PARAPET EXPANSION JOINT DETAIL

LEGEND

† SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE)

⊛ EXPANSION JOINTS TO BE SPACED A MINIMUM OF 20' AND A MAXIMUM OF 30'. LOCATE EXPANSION JOINTS OVER WALL JOINTS. DO NOT RUN BAR STEEL THRU JOINT. JOINT TO EXTEND FULL DEPTH OF PARAPET AND ANCHOR SLAB.

◨ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANEL.

▲ INCLUDED IN BID ITEM PRESTRESSED PRECAST CONCRETE WALL PANEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY MDM | PLANS CK'D. MSC

WALL DETAILS (1 OF 2)

SHEET 11 OF 25
875

8

8

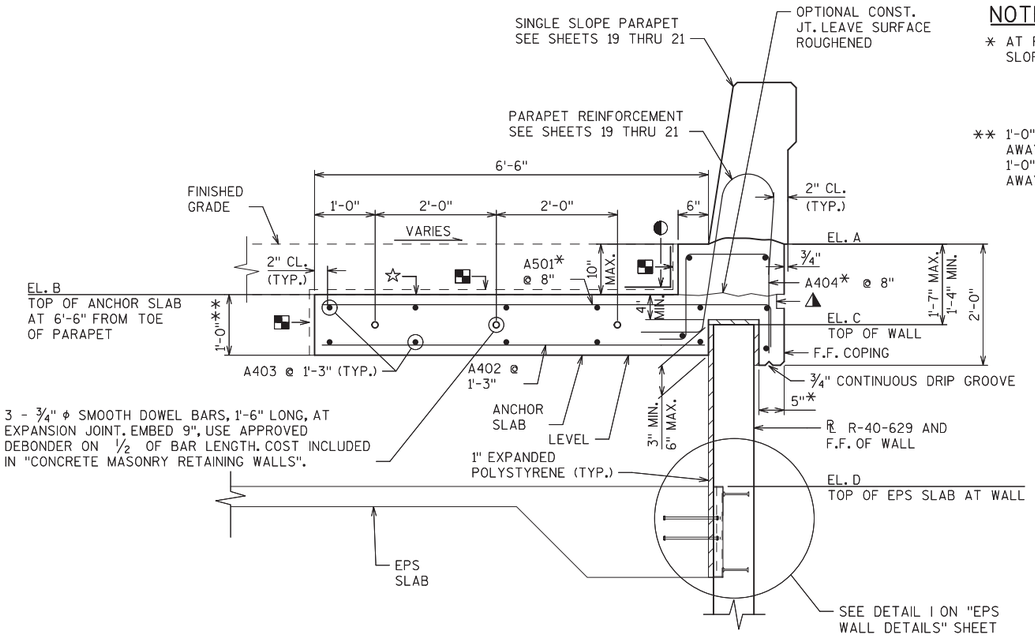
STATE PROJECT NUMBER

1300-13-74

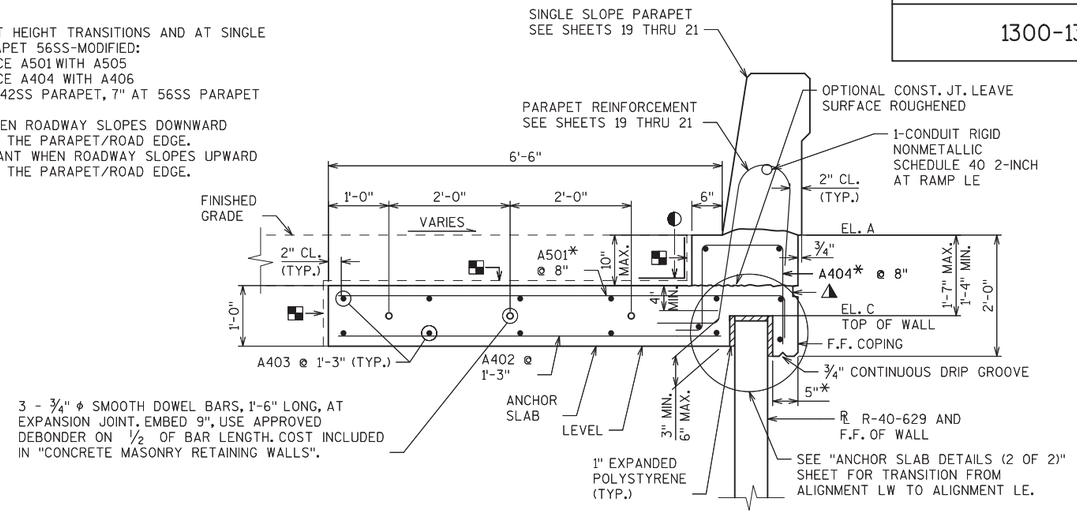
NOTES

* AT PARAPET HEIGHT TRANSITIONS AND AT SINGLE SLOPE PARAPET 56SS-MODIFIED:
  REPLACE A501 WITH A505
  REPLACE A404 WITH A406
  5" AT 42SS PARAPET, 7" AT 56SS PARAPET

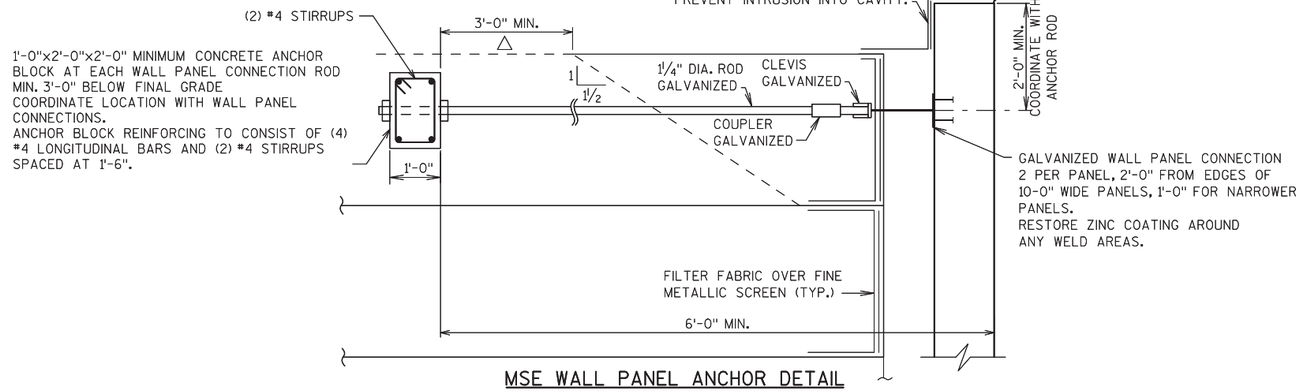
** 1'-0" MIN WHEN ROADWAY SLOPES DOWNWARD AWAY FROM THE PARAPET/ROAD EDGE.
1'-0" CONSTANT WHEN ROADWAY SLOPES UPWARD AWAY FROM THE PARAPET/ROAD EDGE.



EPS WALL ANCHOR SLAB DETAIL

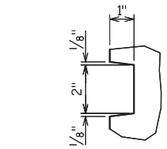


MSE WALL ANCHOR SLAB DETAIL



MSE WALL PANEL ANCHOR DETAIL

ANCHOR ASSEMBLY INCLUDING 1 1/4" DIA. ROD, ANCHOR BLOCK, COUPLER, AND CLEVIS INCLUDED UNDER BID ITEM "WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/QMP"



NOTE:
RUSTICATION IS REQUIRED REGARDLESS OF WHETHER OPTIONAL CONST. JT. IS USED.

▲ RUSTICATION DETAIL

LEGEND

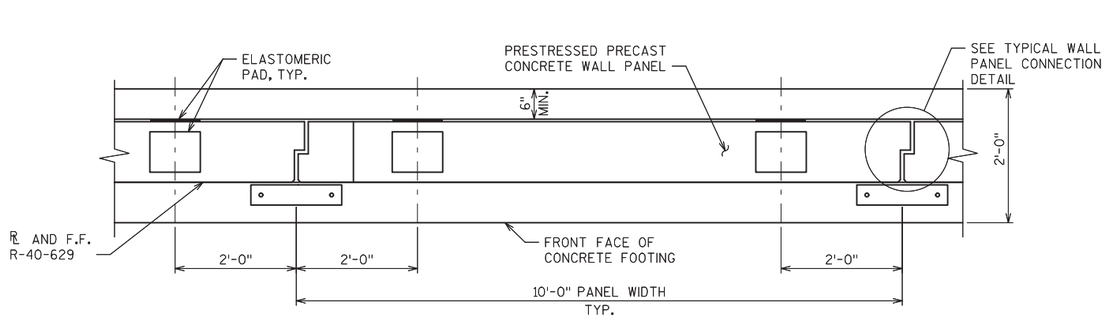
◪ COST INCLUDED IN BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL".

▪ 18" "RUBBERIZED MEMBRANE WATERPROOFING" TO BE PLACED ON THESE SURFACES AT EACH JOINT.

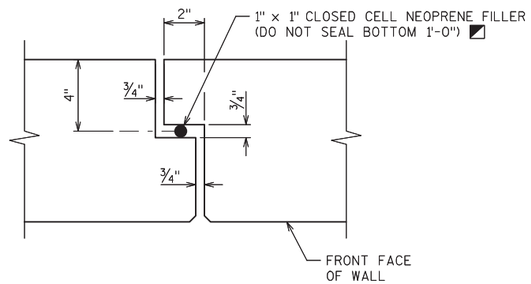
◐ IF THE OPTIONAL CONST. JOINT IS USED, PLACE 18" MEMBRANE WATERPROOFING ALONG THE ENTIRE LONGITUDINAL JOINT. THE MEMBRANE WATERPROOFING SEALING THE OPTIONAL CONST. JOINT IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

☆ SLOPE TOP OF ANCHOR SLAB WHEN ROADWAY SLOPES DOWNWARD AWAY FROM THE PARAPET/ROAD EDGE. TOP OF ANCHOR SLAB TO BE FLAT (NO SLOPE) WHEN ROADWAY SLOPES UPWARD AWAY FROM PARAPET/ROAD EDGE.

△ DESIGN LENGTH TO PROVIDE REQUIRED HORIZONTAL CAPACITY OF ANCHOR ASSEMBLY. MIN. 3'-0" COMPACTED FILL IN FRONT OF ANCHOR BLOCK PRIOR TO WALL PANEL ERECTION.



TYPICAL WALL PANEL CONNECTION PLAN



TYPICAL WALL PANEL CONNECTION DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY	DRH	PLANS CK'D.	MSC

WALL DETAILS (2 OF 2)

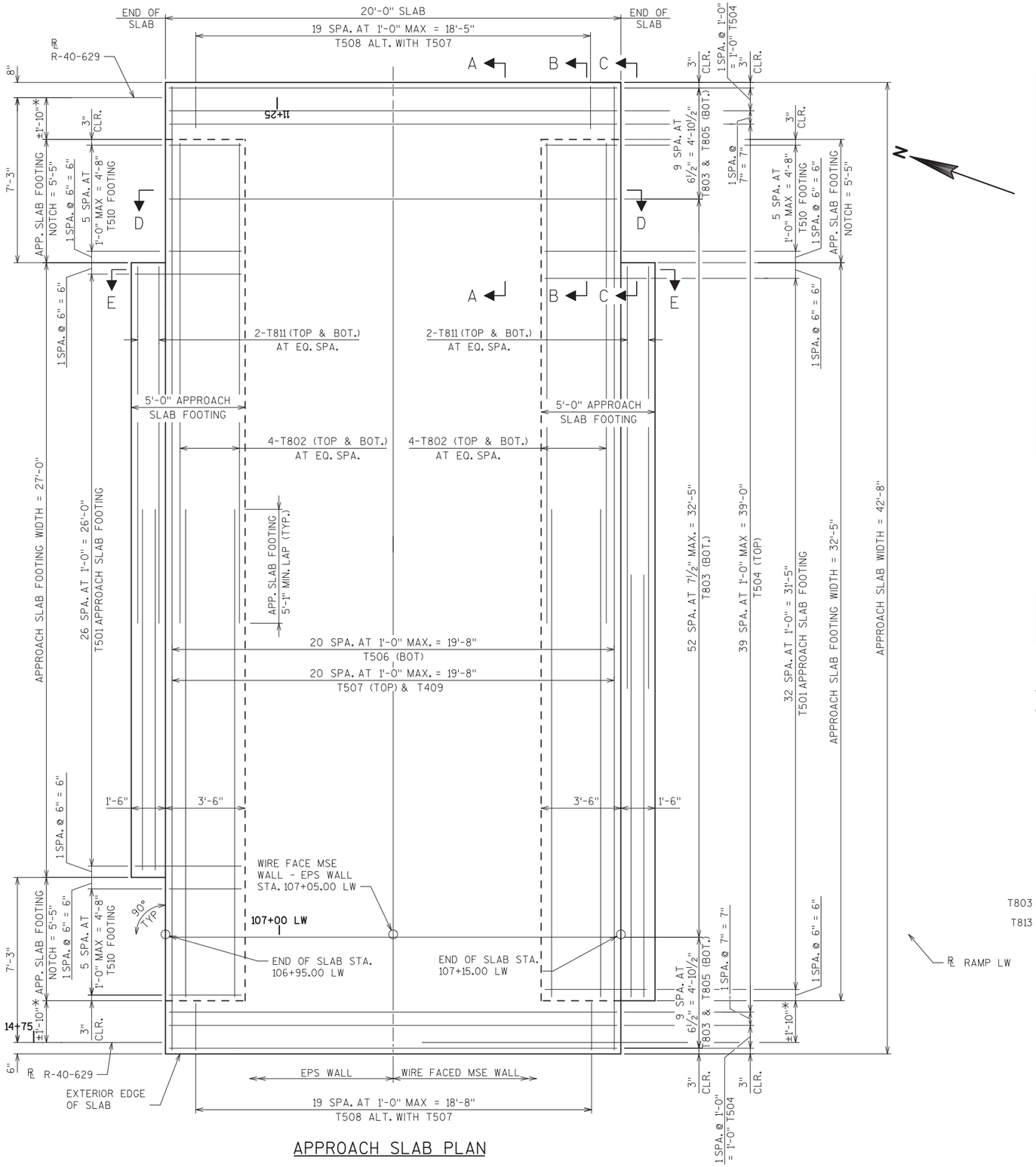
SHEET 12 OF 25
876

8

8

STATE PROJECT NUMBER

1300-13-74



APPROACH SLAB PLAN

BILL OF BARS

TOTAL COATED = 20,870 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
T501	87	12'-2"	X		X		APPROACH SLAB LW AND LE FTG. - STIRRUP
T802	32	24'-0"	X				APPROACH SLAB LW FTG. - TRANS.
T803	65	21'-6"	X		X		APPROACH SLAB LW - LONG. - BOT.
T504	48	19'-8"	X				APPROACH SLAB LW - LONG. - TOP
T805	6	19'-8"	X				APPROACH SLAB LW - LONG. - BOT. - EDGE
T506	21	43'-9"	X		X		APPROACH SLAB LW - TRANS. - BOT.
T507	21	42'-4"	X				APPROACH SLAB LW - TRANS. - TOP
T508	88	4'-3"	X		X		APPROACH SLAB LW & LE - TRANS. - TOP - WALL
T409	92	3'-0"	X		X		APPROACH SLAB LW AND LE - TRANS. - WALL
T510	30	9'-2"	X		X		APPROACH SLAB LW AND LE FTG. - STIRRUP
T811	16	18'-7"	X				APPROACH SLAB LW FTG. - TRANS.
T812	8	37'-6"	X				APPROACH SLAB LE FTG. - TRANS.
T813	71	23'-5"	X		X		APPROACH SLAB LE - LONG. - BOT.
T514	48	21'-7"	X				APPROACH SLAB LE - LONG. - TOP
T815	3	23'-6"	X				APPROACH SLAB LE - LONG. - BOT. - N. EDGE
T816	3	19'-8"	X				APPROACH SLAB LE - LONG. - BOT. - S. EDGE
T517	25	43'-7"	X		X		APPROACH SLAB LE - TRANS. - BOT.
T518	24	42'-2"	X				APPROACH SLAB LE - TRANS. - TOP
T819	4	26'-6"	X				APPROACH SLAB LE FTG. - TRANS.

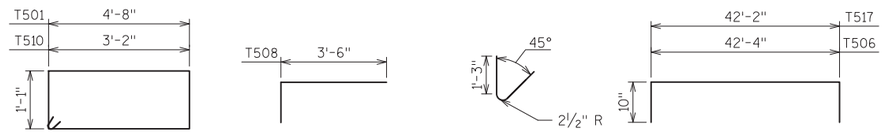
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.

LENGTH SHOWN FOR ANY BAR IN A BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

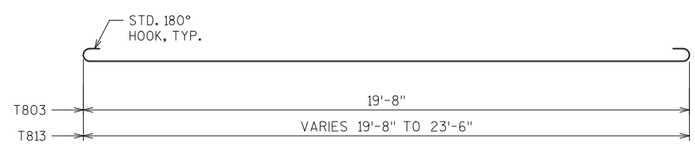
BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
T813	1 SERIES OF 71	21'-6" TO 25'-4"
T514	1 SERIES OF 48	19'-8" TO 23'-6"

BUNDLE AND TAG EACH SERIES SEPARATELY.



T501, T510 T508 T409 T506, T517



T803, T813

LEGEND

* DIMENSION ASSUMES WALL PANEL THICKNESS OF 8".

NOTES

1. SEE SHEET 13 FOR SECTIONS A-A, B-B, C-C, D-D, AND E-E.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY TJN | PLANS CK'D. MSC

APPROACH SLAB LW PLAN

SHEET 13 OF 25
877

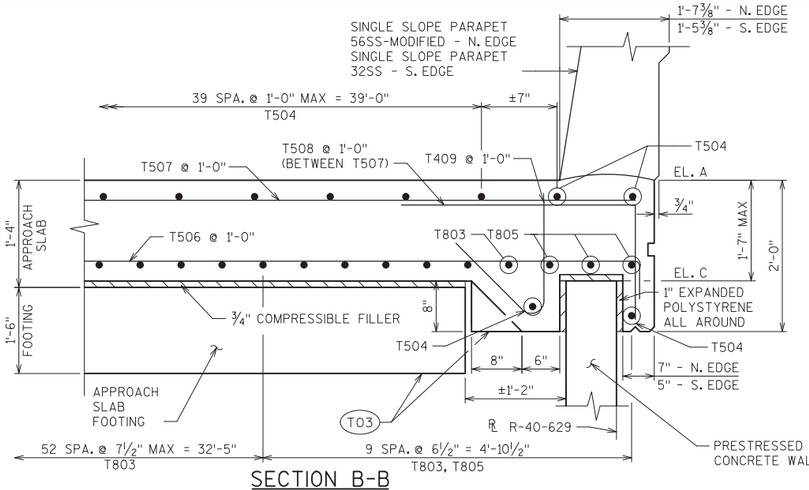
8

8

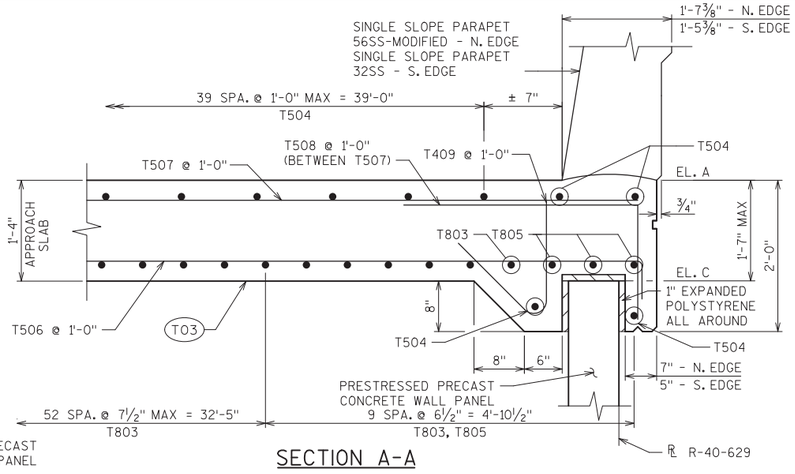
IP_PWP:d0347432\080913_as.dgn.DGN 24-JUL-2015 08:16

STATE PROJECT NUMBER

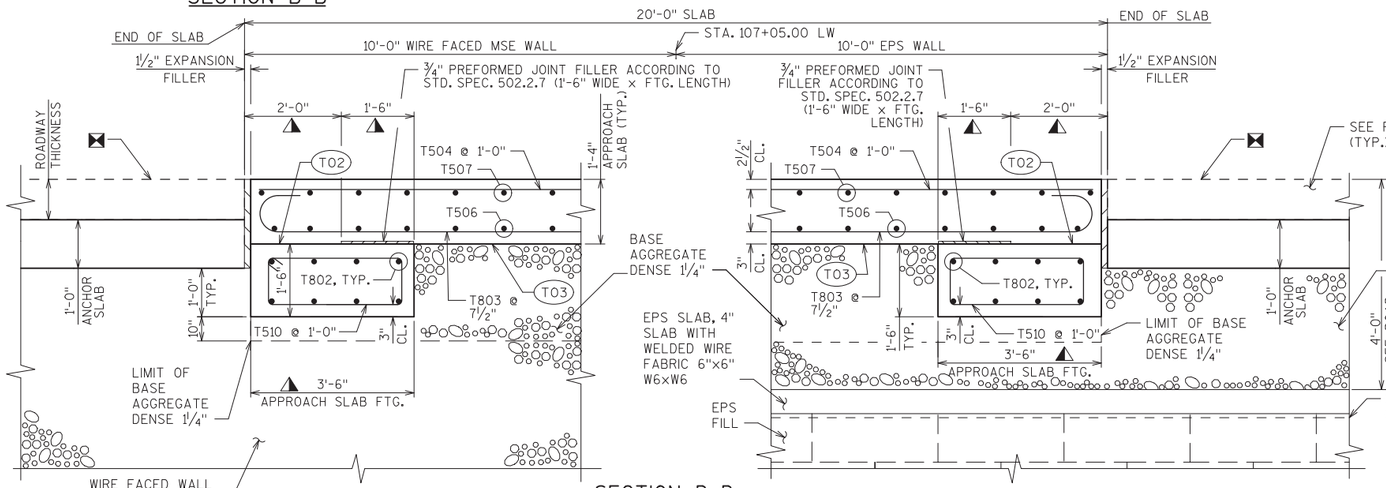
1300-13-74



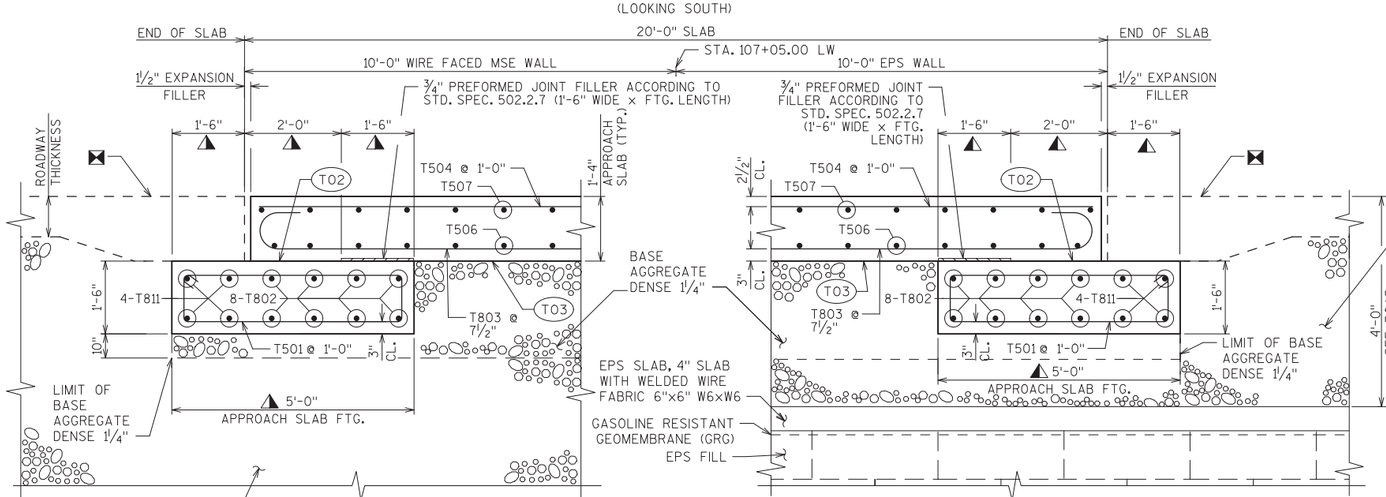
SECTION B-B



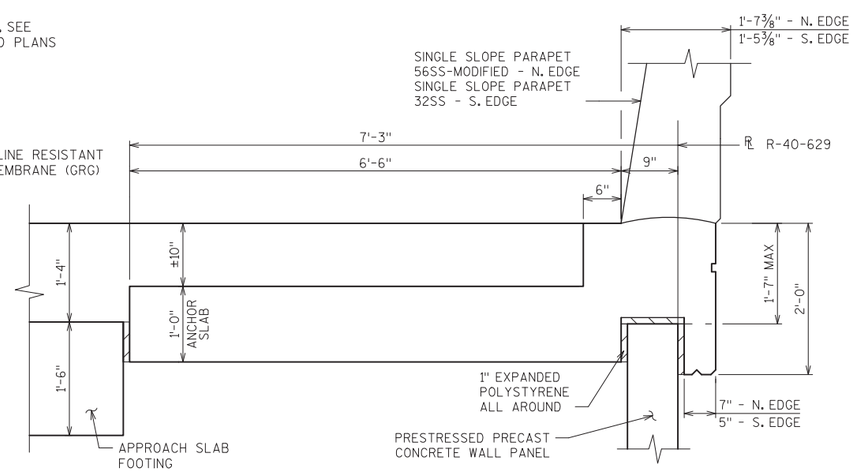
SECTION A-A



SECTION D-D
SECTION THRU APPROACH SLAB
(LOOKING SOUTH)



SECTION E-E
SECTION THRU APPROACH SLAB
(LOOKING SOUTH)



SECTION C-C

LEGEND

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03 INCH MIN. TOTAL THICKNESS) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03 INCH MIN. TOTAL THICKNESS) OF POLYETHYLENE SHEETS OVER THE ENTIRE SUBGRADE BENEATH.

▣ ROADWAY APPROACH PAVEMENT.

△ MEASURED NORMAL TO END OF SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY TJN | PLANS CK'D. MSC

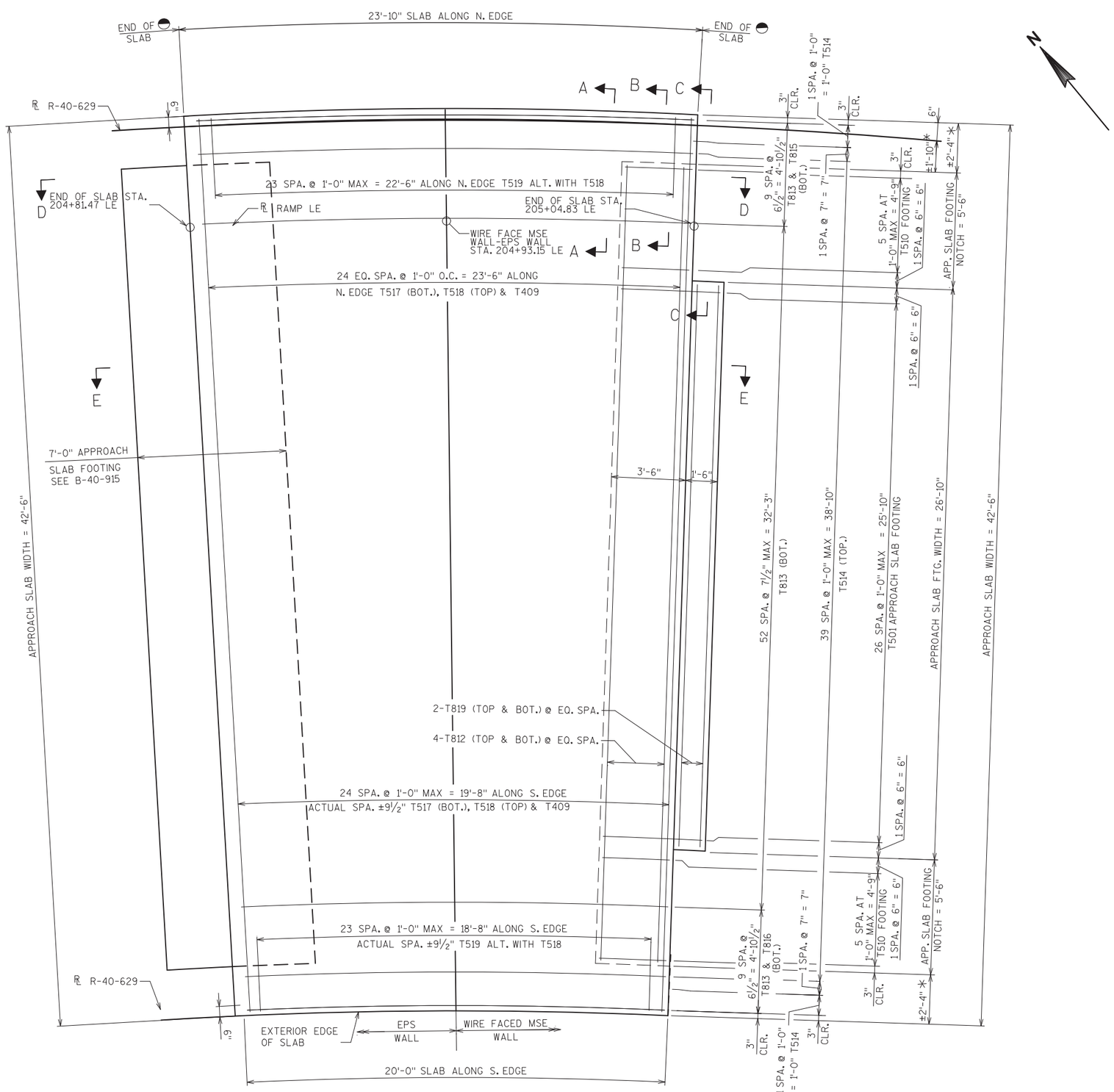
APPROACH SLAB LW DETAILS

SHEET 14 OF 25
878

8

8

IP_PWP:d0347432\080914_as.dan.DGN 24-JUL-2015 08:16



STATE PROJECT NUMBER

1300-13-74

LEGEND

◓ END OF SLAB LINE IS NORMAL TO ℄ RAMP LE AT STA. 204+81.03 LE AT THE NORTH END OF THE SLAB AND STA. 205+04.83 LE AT THE SOUTH END OF THE SLAB.

* DIMENSION ASSUMES WALL PANEL THICKNESS OF 8".

NOTES

SEE SHEET 16 FOR SECTIONS A-A, B-B, C-C, D-D, AND E-E.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY DRH | PLANS CK'D. MSC

APPROACH SLAB LE PLAN

SHEET 15 OF 25
879

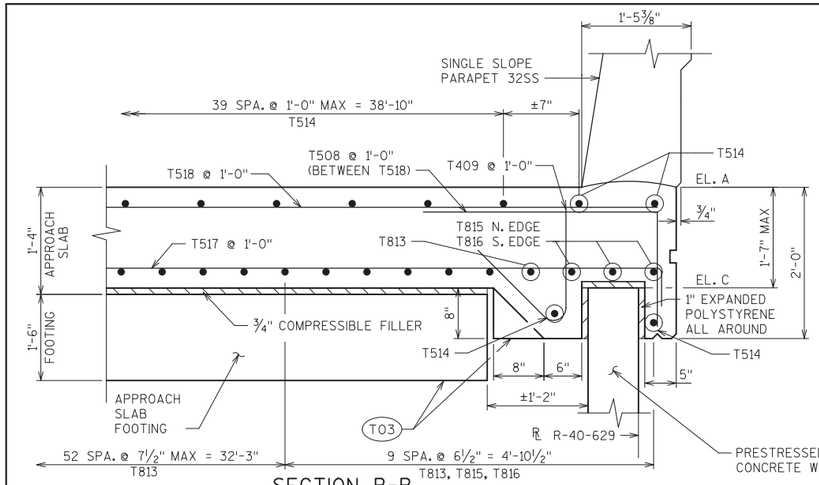
8

8

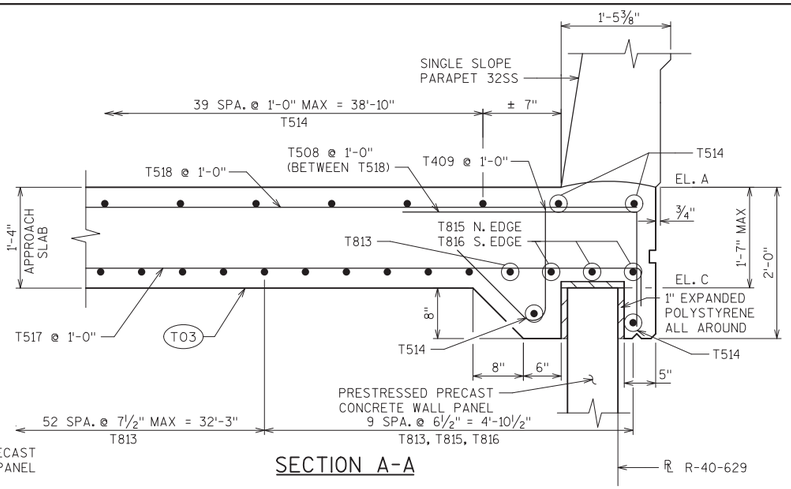
STATE PROJECT NUMBER
1300-13-74

LEGEND

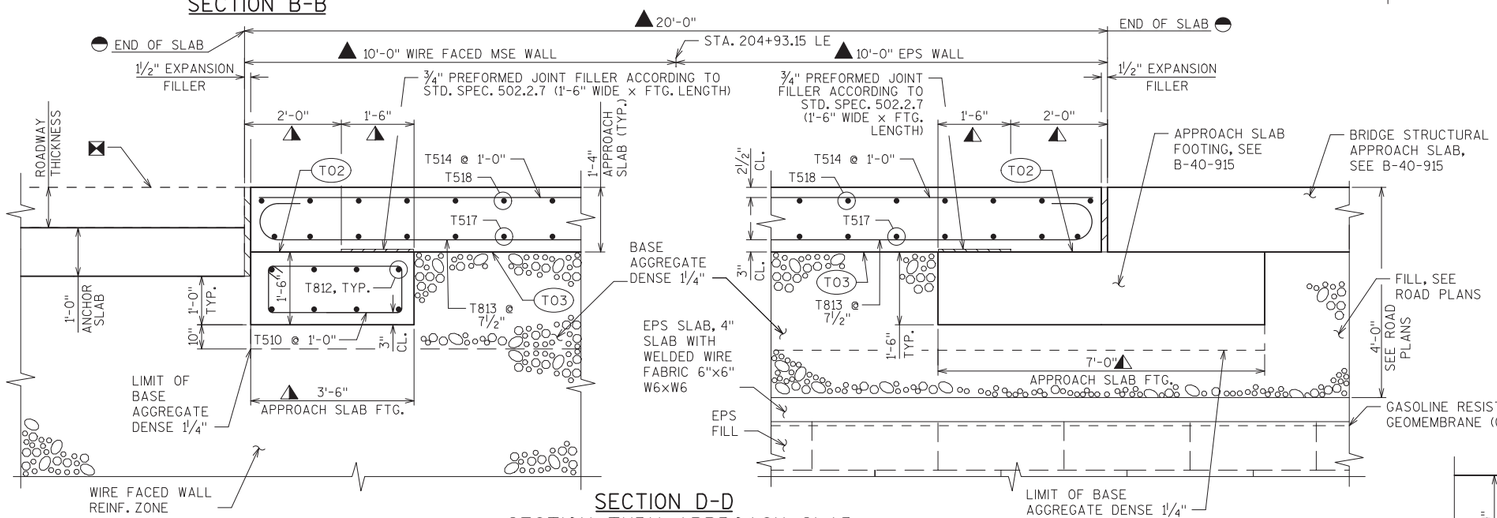
- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03 INCH MIN. TOTAL THICKNESS) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.
- (T03) PLACE MULTIPLE LAYERS (0.03 INCH MIN. TOTAL THICKNESS) OF POLYETHYLENE SHEETS OVER THE ENTIRE SUBGRADE BENEATH.
- ROADWAY APPROACH PAVEMENT.
- MEASURED NORMAL TO END OF SLAB.
- END OF SLAB LINE IS NORMAL TO ℄ RAMP LE AT STA. 204+81.03 LE AT THE NORTH END OF THE SLAB AND STA. 205+04.83 LE AT THE SOUTH END OF THE SLAB.
- MEASURED ALONG S. EDGE OF APPROACH SLAB



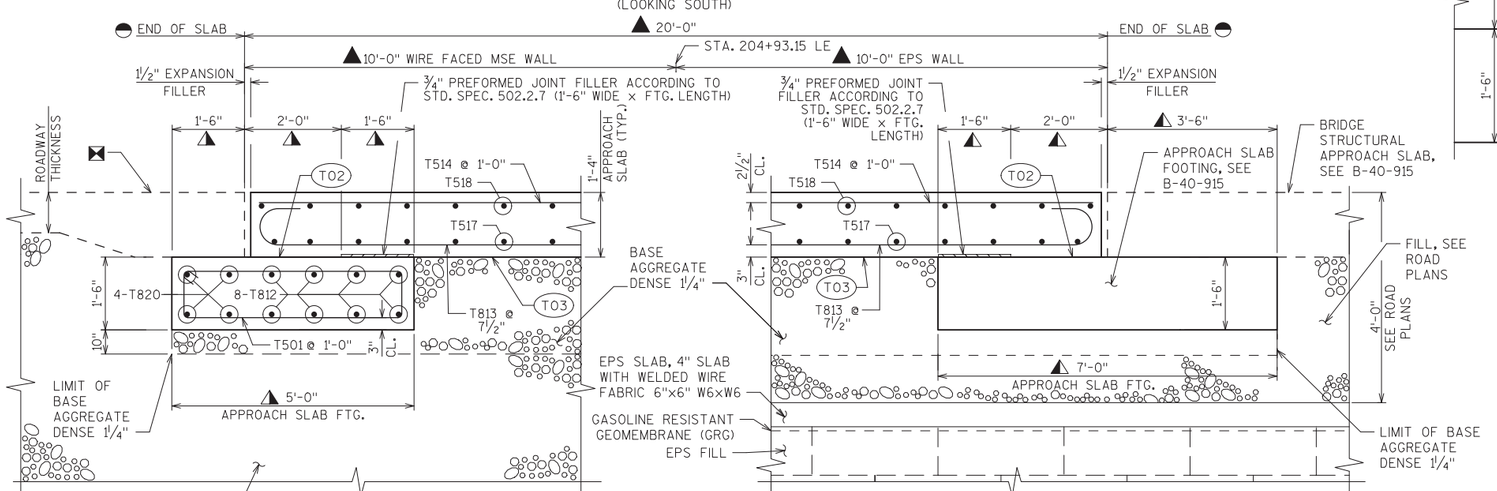
SECTION B-B



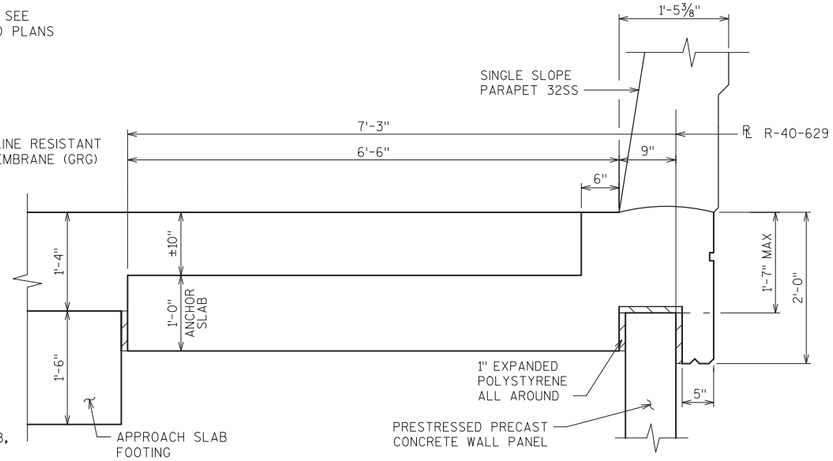
SECTION A-A



SECTION D-D
SECTION THRU APPROACH SLAB
(LOOKING SOUTH)



SECTION E-E
SECTION THRU APPROACH SLAB
(LOOKING SOUTH)



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY TJN | PLANS CK'D. MSC

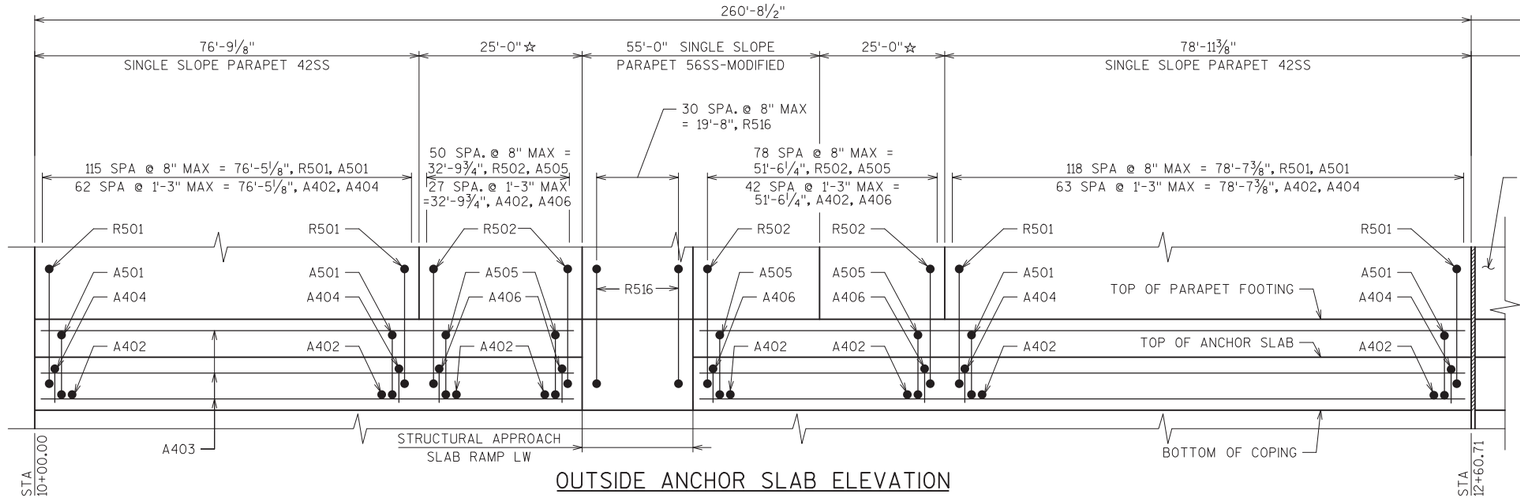
APPROACH SLAB LE DETAILS

SHEET 16 OF 25
880

8

8

STATE PROJECT NUMBER
1300-13-74



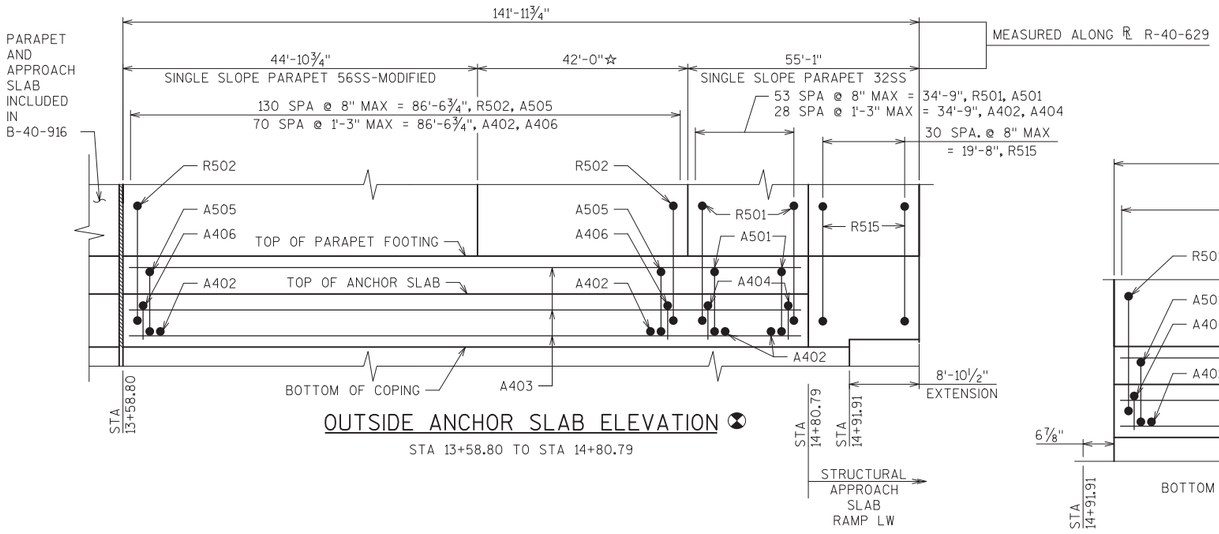
OUTSIDE ANCHOR SLAB ELEVATION

STA 10+00.00 TO STA 12+60.71

BILL OF BARS — TOTAL COATED = 26,360 LBS

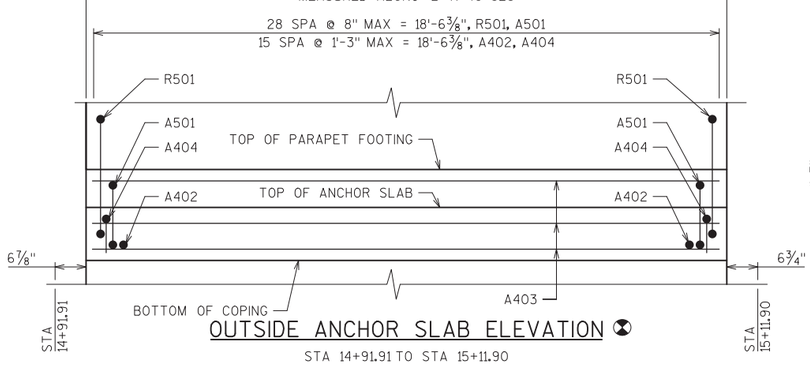
BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
A501	836	8'-0"	X	X		TOP - TRANS.
A402	592	6'-3"	X			BOT. - TRANS.
A403	14	727'-10"	X			TOP & BOT. - LONGIT.
A404	450	4'-9"	X	X		VERT.
A505	261	8'-2"	X	X		TOP - TRANS. - MODIFIED WIDTH
A406	142	4'-11"	X	X		VERT. - MODIFIED WIDTH
A407	32	2'-0"	X			SEWER PIPE REINF. - DIAGONAL
A408	32	1'-6"	X			SEWER PIPE REINF. - LAT. AND TRANS.
A509	400	6'-0"	X	X		EPS SLAB - VERT.
A510	400	4'-8"	X	X		EPS SLAB - VERT.
A511	400	3'-6"	X	X		EPS SLAB - HORIZ.

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



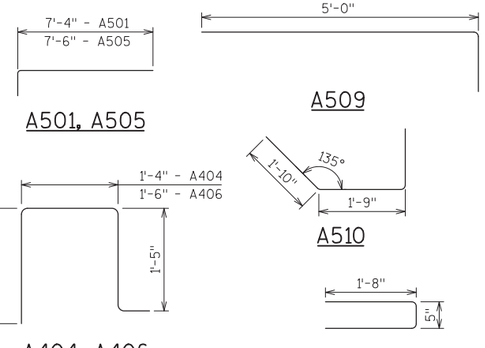
OUTSIDE ANCHOR SLAB ELEVATION ⊗

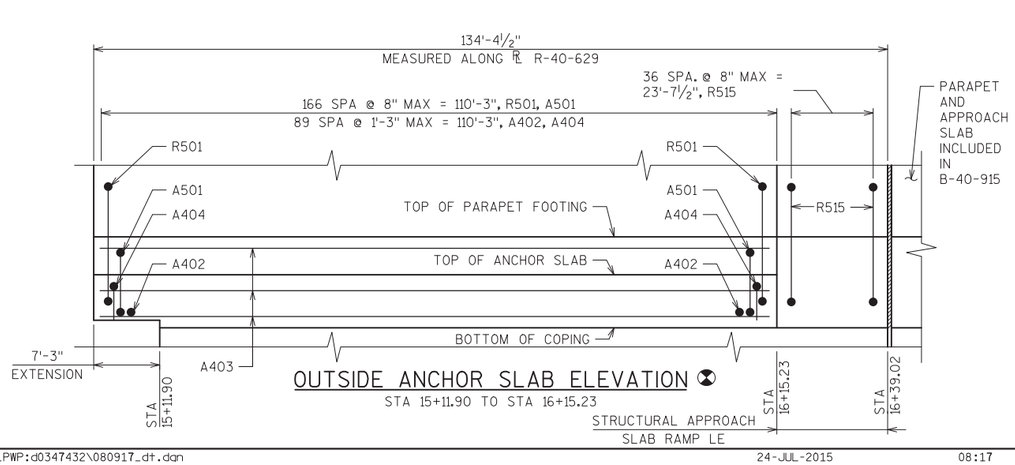
STA 13+58.80 TO STA 14+80.79



OUTSIDE ANCHOR SLAB ELEVATION ⊗

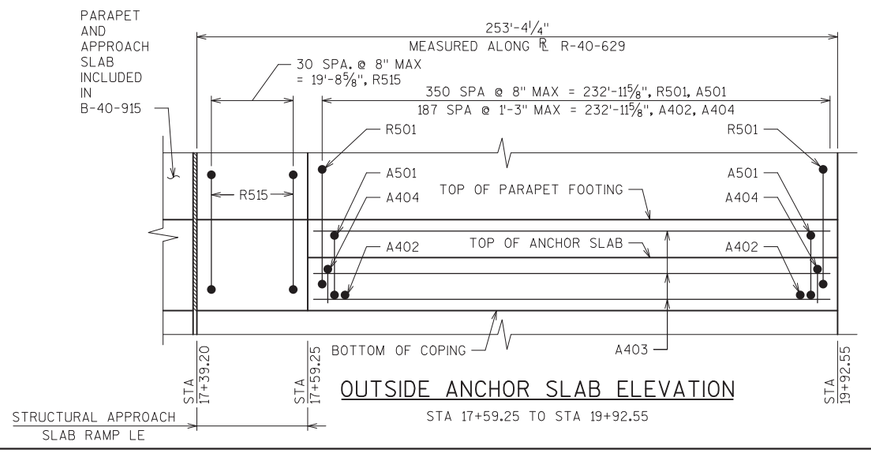
STA 14+91.91 TO STA 15+11.90





OUTSIDE ANCHOR SLAB ELEVATION ⊗

STA 15+11.90 TO STA 16+15.23



OUTSIDE ANCHOR SLAB ELEVATION

STA 17+59.25 TO STA 19+92.55

LEGEND

◆ OVERALL LENGTH OF BAR IS PROVIDED FOR QUANTITY PURPOSES. CONTRACTOR TO ADJUST BAR LENGTHS TO FIT BETWEEN EXPANSION JOINTS. PAY QUANTITY IS BASED ON VALUE SHOWN IN BILL OF BARS.

☆ VERTICAL TRANSITION BETWEEN PARAPET TYPES.

⊗ SEE ANCHOR SLAB TRANSITION FROM ALIGNMENT LW TO LE DETAIL ON "ANCHOR SLAB DETAILS (2 OF 2)" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY: DRH | PLANS CK'D.: MSC

ANCHOR SLAB DETAILS (1 OF 2)

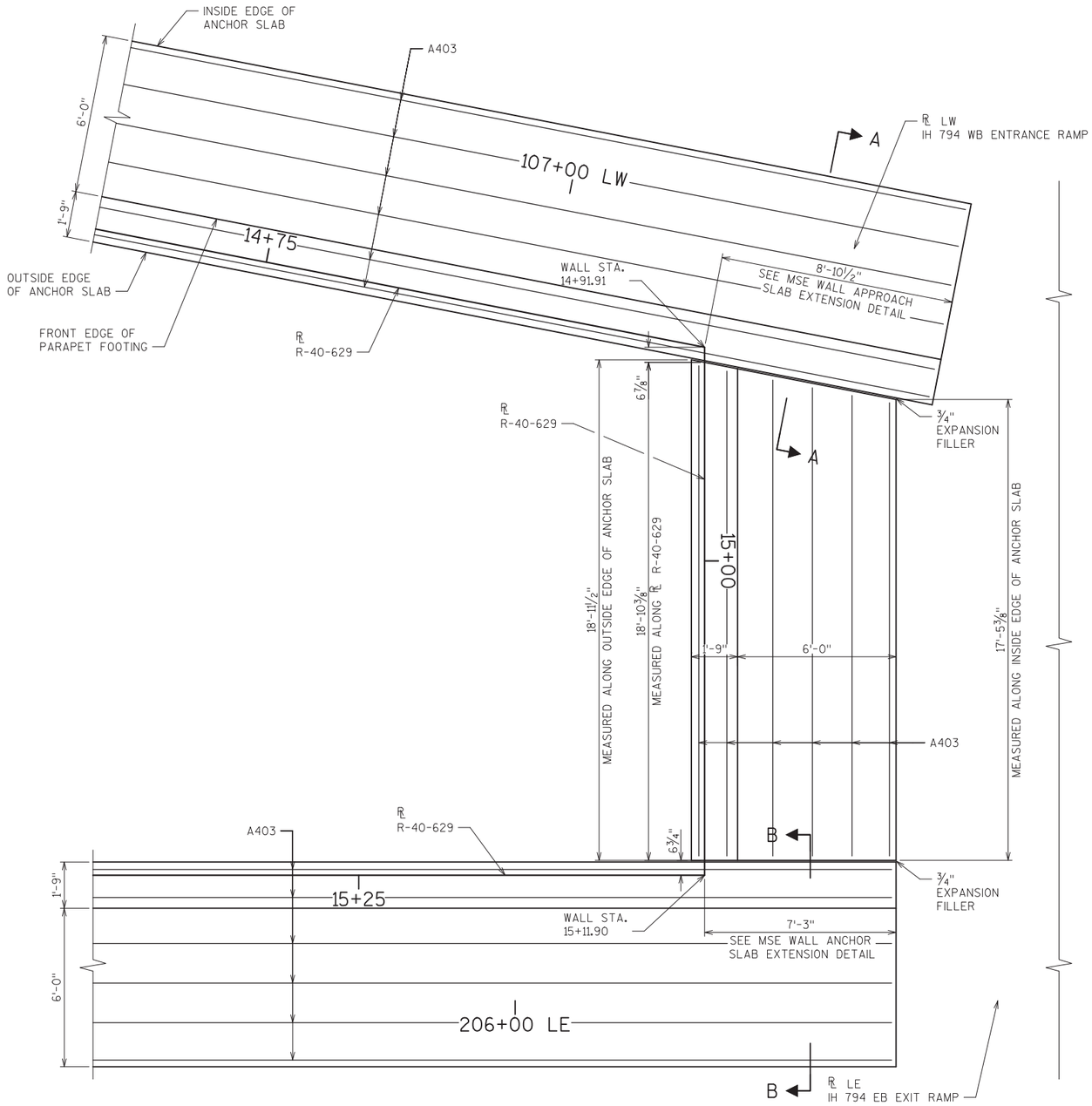
SHEET 17 OF 25

881

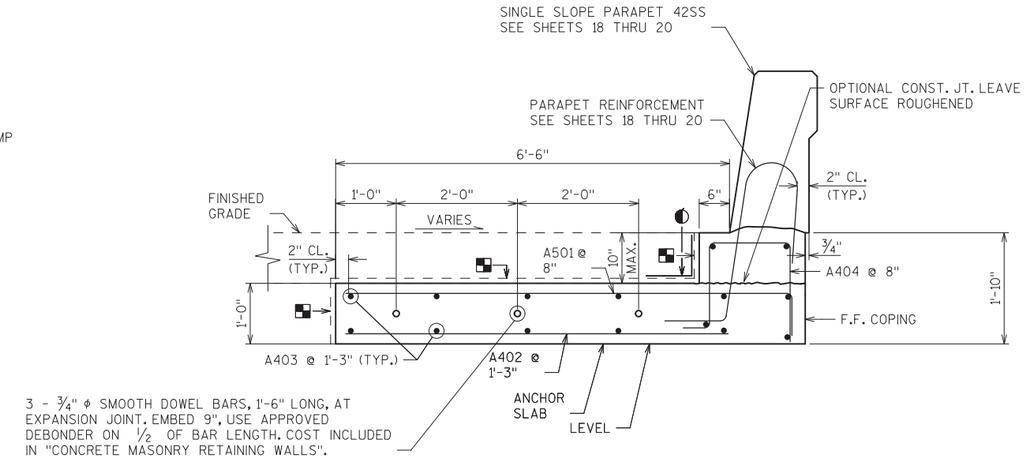
8

8

STATE PROJECT NUMBER
1300-13-74

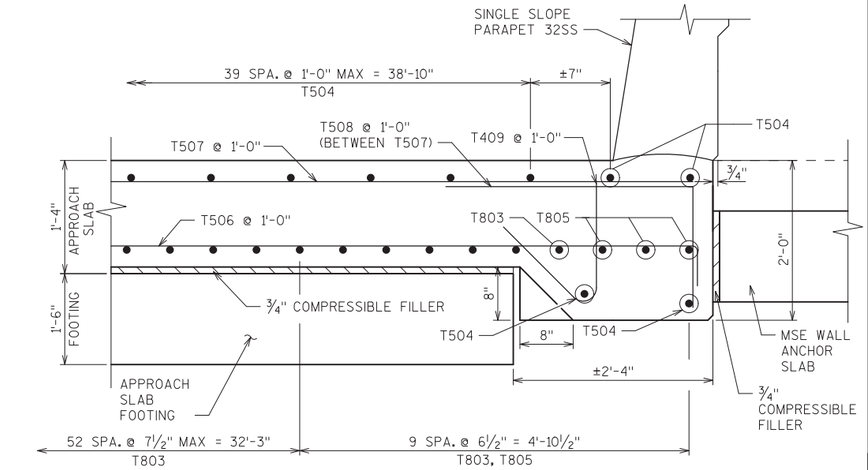


ANCHOR SLAB TRANSITION FROM ALIGNMENT LW TO LE



SECTION B-B

MSE WALL ANCHOR SLAB EXTENSION DETAIL



SECTION A-A

MSE WALL APPROACH SLAB EXTENSION DETAIL

LEGEND

■ 18" "RUBBERIZED MEMBRANE WATERPROOFING" TO BE PLACED ON THESE SURFACES AT EACH JOINT.

◐ IF THE OPTIONAL CONST. JOINT IS USED, PLACE 18" MEMBRANE WATERPROOFING ALONG THE ENTIRE LONGITUDINAL JOINT. THE MEMBRANE WATERPROOFING SEALING THE OPTIONAL CONST. JOINT IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY DRH | PLANS CK'D. MSC

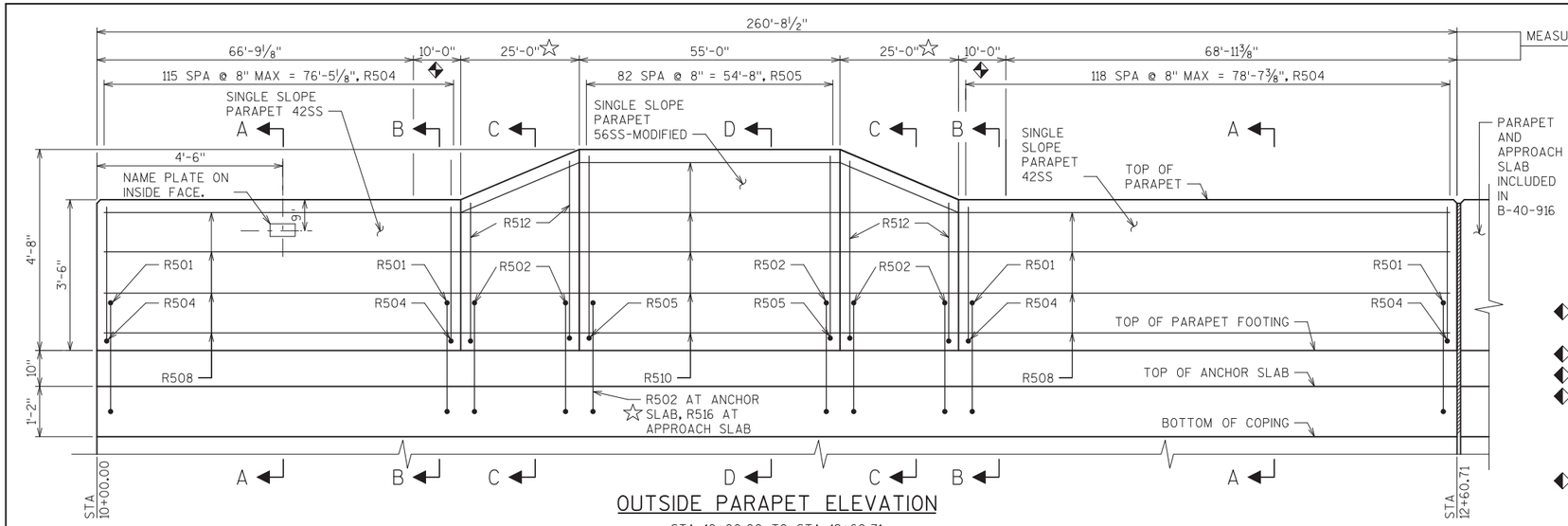
ANCHOR SLAB DETAILS (2 OF 2)

SHEET 18 OF 25
882

8

8

STATE PROJECT NUMBER
1300-13-74



OUTSIDE PARAPET ELEVATION

STA 10+00.00 TO STA 12+60.71

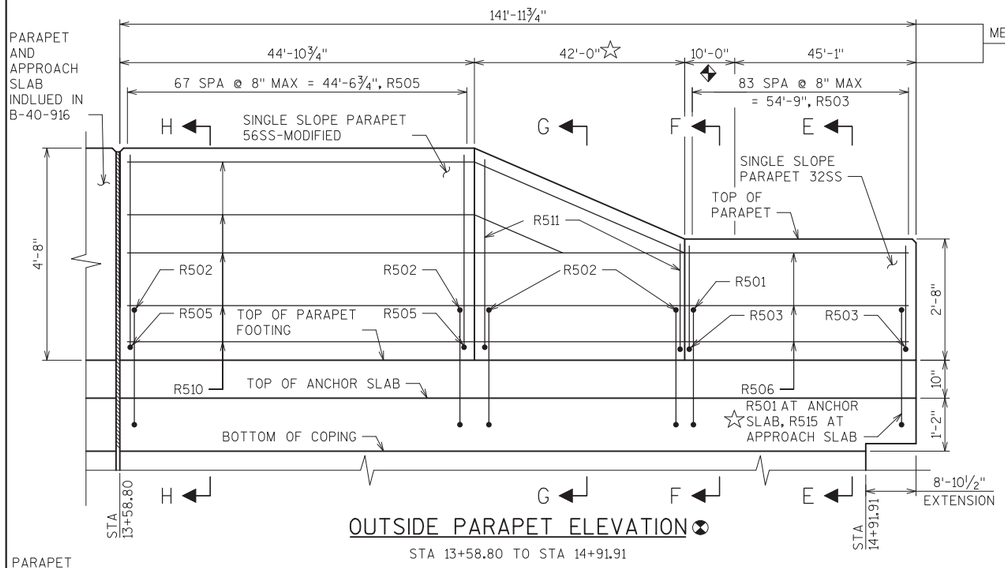
BILL OF BARS

TOTAL COATED = 21,590 LBS

BAR MARK	NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
R501	836	5'-5"	X	X		PARAPET - VERT. - 32SS, 42SS
R502	261	5'-6"	X	X		PARAPET - VERT. - HEIGHT TRANSITION, 56SS
R503	465	5'-0"	X	X		PARAPET - VERT. - 32SS
R504	438	6'-8"	X	X		PARAPET - VERT. - 42SS
R505	151	9'-1"	X	X		PARAPET - VERT. - 56SS-MODIFIED
◆ R506	6	307'-10"	X			PARAPET - LONGIT. - SECTION E-E, F-F
R507	10	42'-0"	X			PARAPET - LONGIT. - SECTION G-G
◆ R508	8	290'-6"	X			PARAPET - LONGIT. - SECTION A-A, B-B
◆ R509	10	50'-0"	X			PARAPET - LONGIT. - SECTION C-C
◆ R510	10	99'-11"	X			PARAPET - LONGIT. - SECTION D-D, H-H
R511	64	7'-1"	X	X	X	PARAPET - VERT. - TRANSITION
R512	76	7'-11"	X	X	X	PARAPET - VERT. - TRANSITION
R513	31	5'-10"	X	X	X	PARAPET - VERT. - TRANSITION
◆ R514	8	17'-11"	X			PARAPET - LONGIT. - TRANSITION
R515	99	4'-11"	X	X		PARAPET - VERT. - 32SS, 42SS - APPROACH SLAB
R516	31	5'-0"	X	X		PARAPET - VERT. - 56SS - APPROACH SLAB

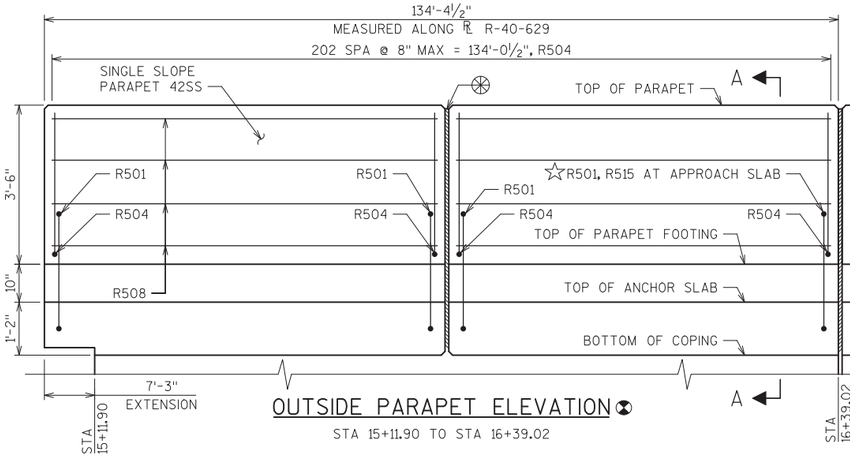
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.

LENGTH SHOWN FOR ANY BAR IN A BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



OUTSIDE PARAPET ELEVATION ⊛

STA 13+58.80 TO STA 14+91.91



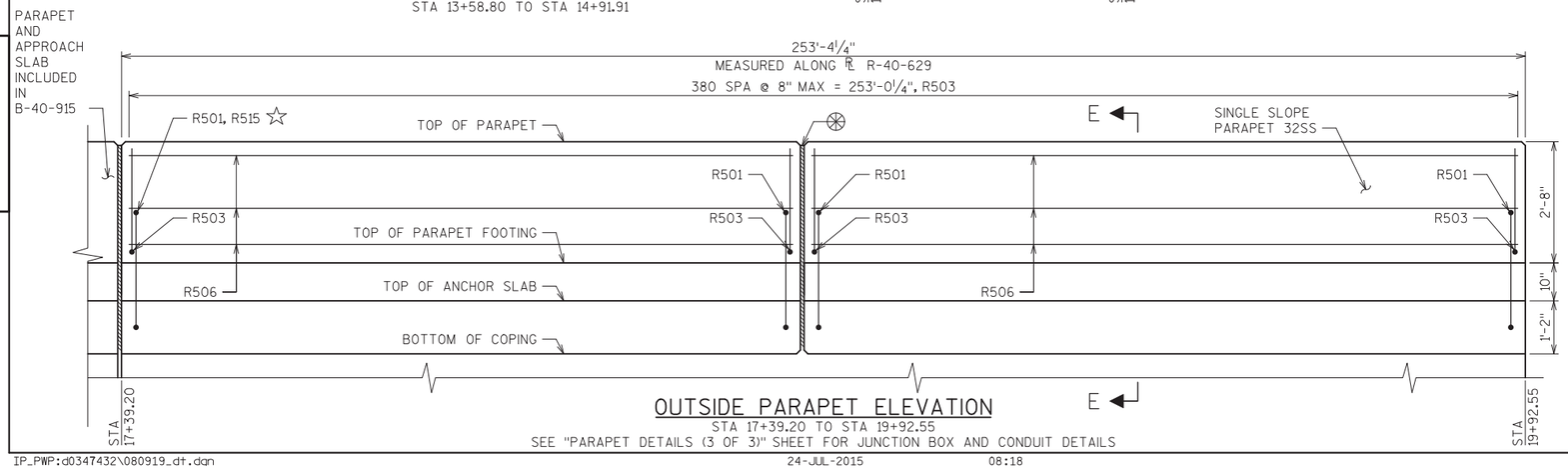
OUTSIDE PARAPET ELEVATION ⊛

STA 15+11.90 TO STA 16+39.02

BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
R511	1 SERIES OF 64	5'-0" TO 9'-1"
R512	2 SERIES OF 38	6'-8" TO 9'-1"
R513	1 SERIES OF 31	5'-0" TO 6'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY.



OUTSIDE PARAPET ELEVATION

STA 17+39.20 TO STA 19+92.55

SEE "PARAPET DETAILS (3 OF 3)" SHEET FOR JUNCTION BOX AND CONDUIT DETAILS

NOTE

SEE SHEET 19 FOR SECTIONS A-A, B-B, C-C, D-D, E-E, F-F, G-G, AND H-H

LEGEND

⊛ SEE "WALL DETAILS (1 OF 2)" SHEET FOR JOINT DETAILS AND NOTES. TYPICAL OF ALL PARAPETS.

◆ PARAPET WIDTH TRANSITION

☆ SEE "PARAPET TRANSITION DETAILS" SHEET.

⊛ SEE PLAN - RAMP LW TO RAMP LE DETAIL ON "PARAPET TRANSITION DETAILS" SHEET

◆ OVERALL LENGTH OF BAR IS PROVIDED FOR QUANTITY PURPOSES. CONTRACTOR TO ADJUST BAR LENGTHS TO FIT BETWEEN EXPANSION JOINTS. BEND HORIZONTAL BARS AS NECESSARY AT PARAPET TRANSITIONS. PAY QUANTITY IS BASED ON VALUE SHOWN IN BILL OF BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY: DRH | PLANS CK'D.: MSC

PARAPET DETAILS (1 OF 3)

SHEET 19 OF 25

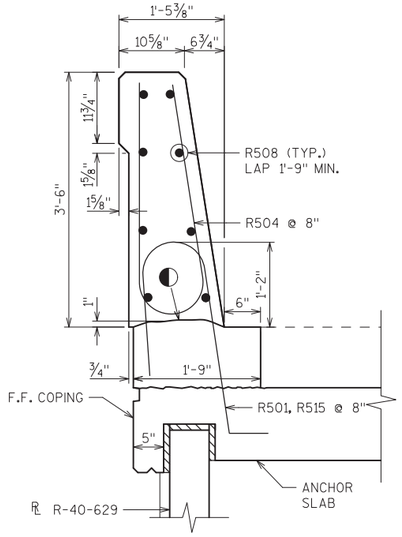
883

8

8

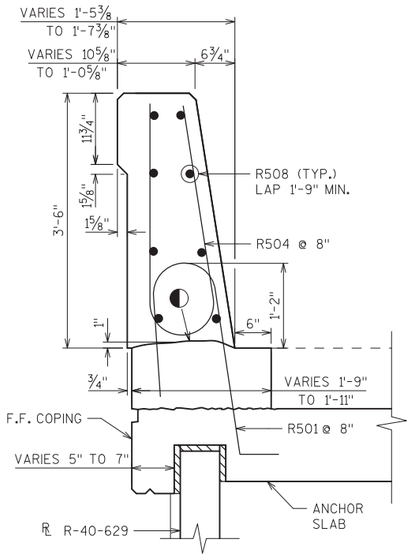
STATE PROJECT NUMBER

1300-13-74



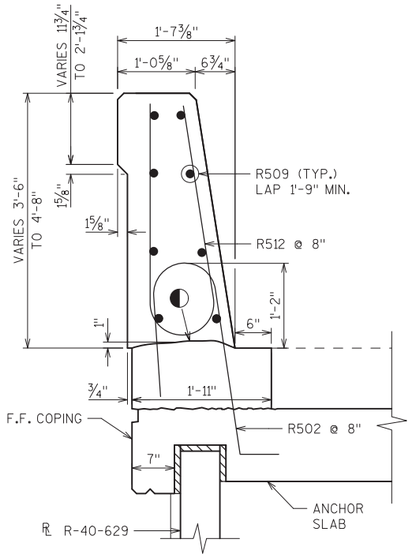
SECTION A-A

42SS PARAPET



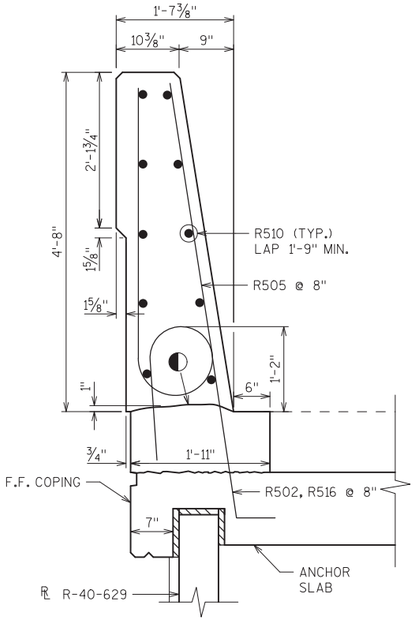
SECTION B-B

42SS PARAPET - WIDTH TRANSITION



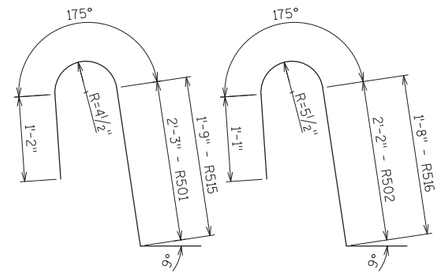
SECTION C-C

42SS PARAPET - HEIGHT TRANSITION

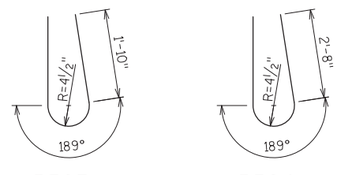


SECTION D-D

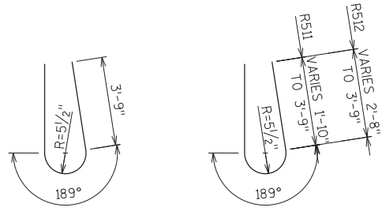
56SS PARAPET - MODIFIED



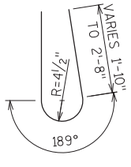
R501, R515 R502, R516



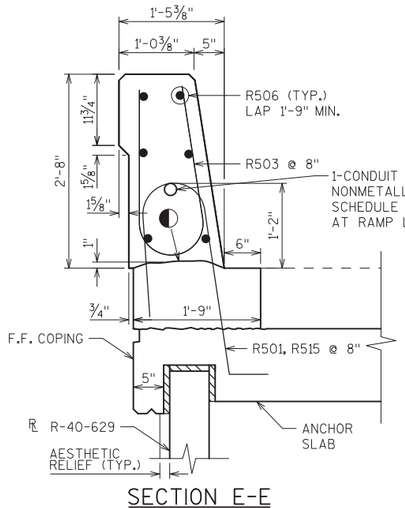
R503 R504



R505 R511, R512

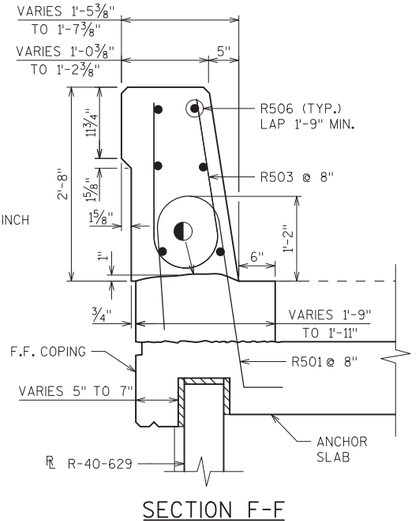


R513



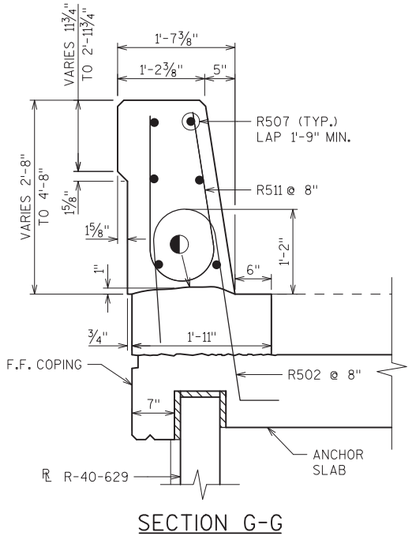
SECTION E-E

32SS PARAPET



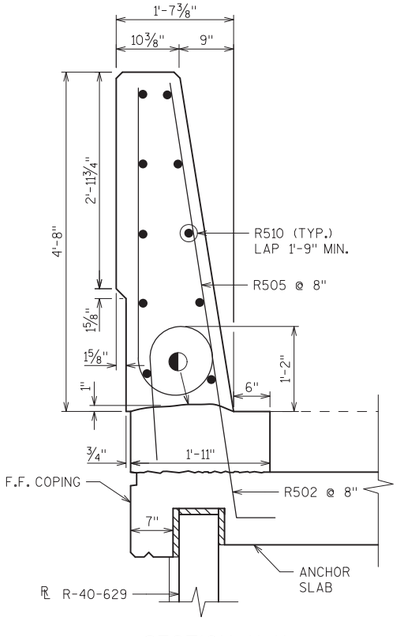
SECTION F-F

32SS PARAPET - WIDTH TRANSITION



SECTION G-G

32SS PARAPET - HEIGHT TRANSITION



SECTION H-H

56SS PARAPET - MODIFIED

LEGEND

CONST. JT. - STRIKE OFF AS SHOWN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY: DRH | PLANS CK'D.: MSC

PARAPET DETAILS (2 OF 3)

SHEET 20 OF 25

884

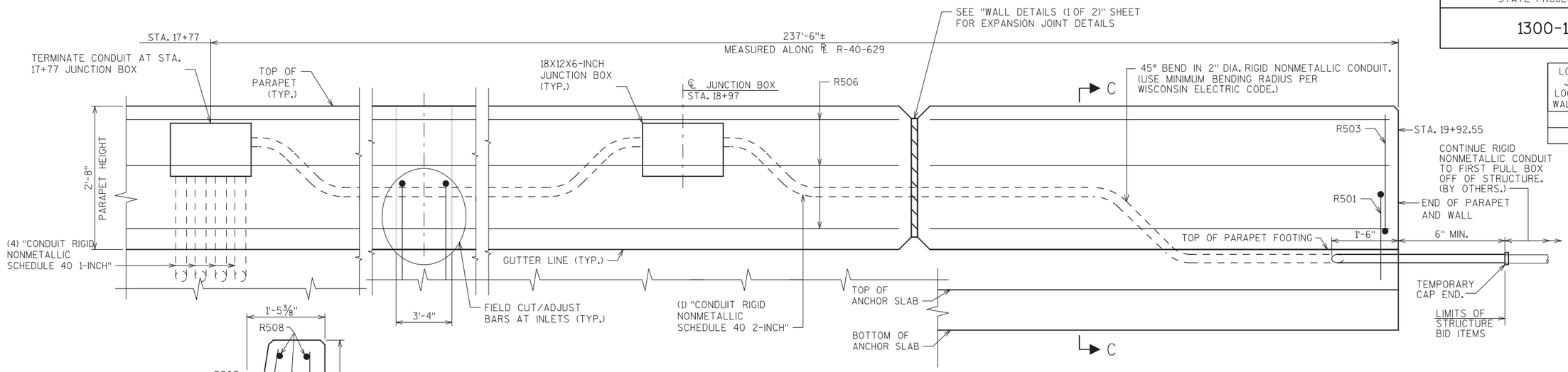
8

8

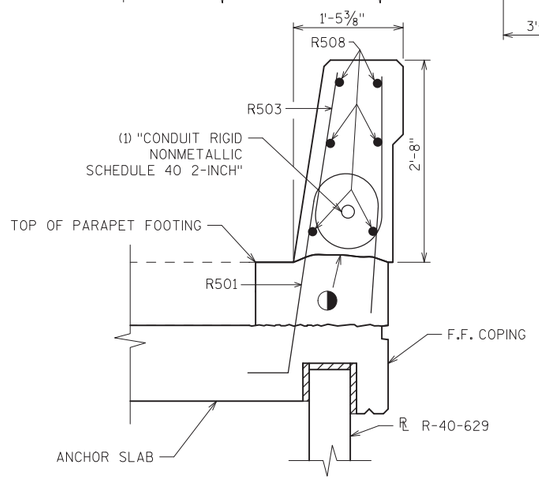
IP_PWP:d0347432\080920_dt.dgn 24-JUL-2015 08:18

STATE PROJECT NUMBER
1300-13-74

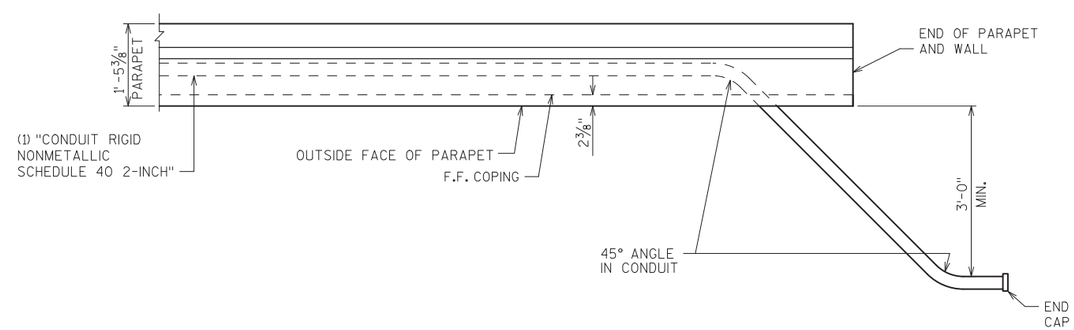
LOOP DETECTOR JUNCTION BOX LOCATIONS ALONG WALL ℄ R-40-629
17+77
18+97



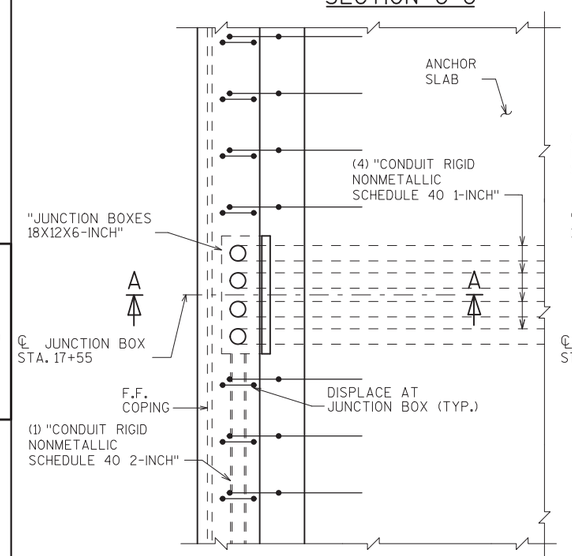
OUTSIDE ELEVATION OF PARAPET



SECTION C-C

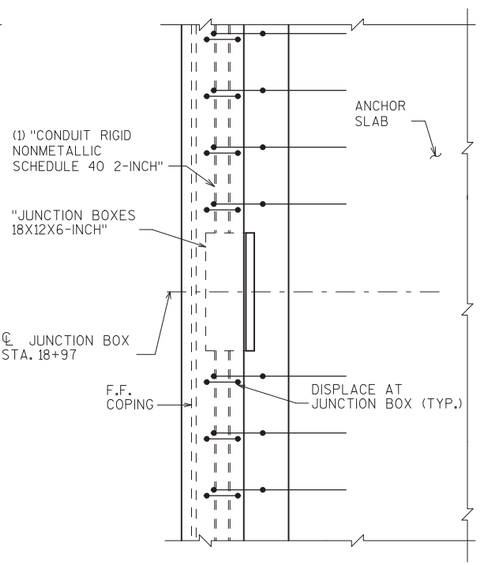


PLAN OF PARAPET AT WALL END



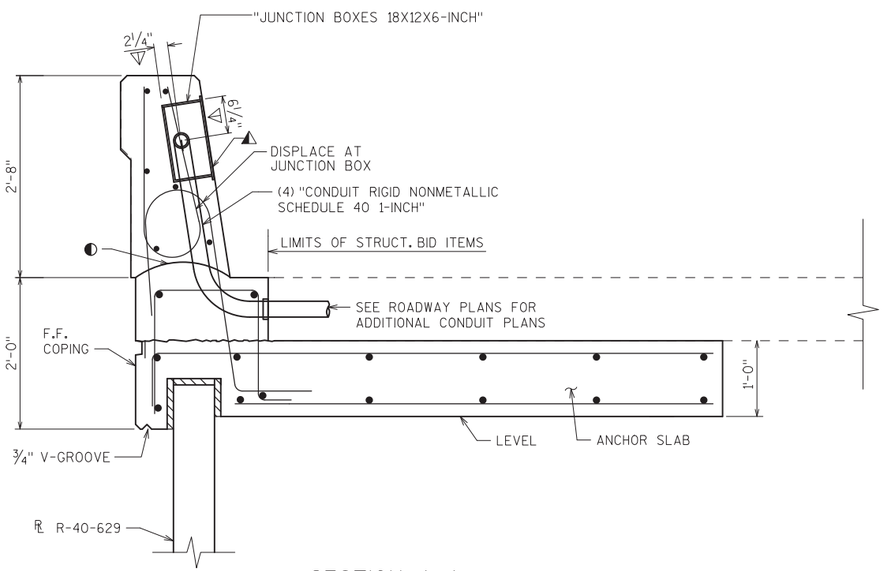
PLAN AT JUNCTION BOX

(STA. 17+77)



PLAN AT JUNCTION BOX

(STA. 18+97)



SECTION A-A

(STA. 17+77)

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH"
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

LEGEND

◑ CONST. JT. STRIKE OFF AS SHOWN

◭ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY	TJN	PLANS CK'D.	MSC

PARAPET DETAILS (3 OF 3)

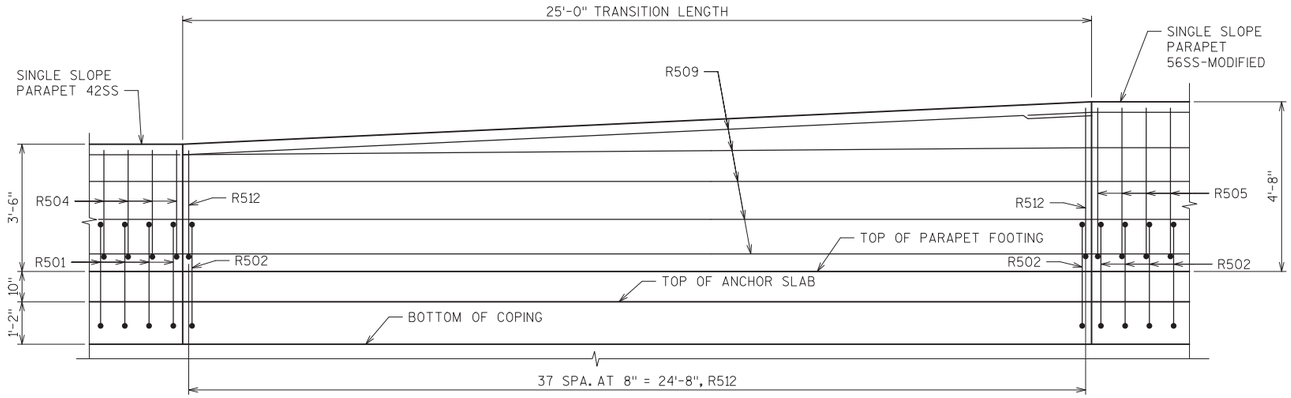
SHEET 21 OF 25
885

8

8

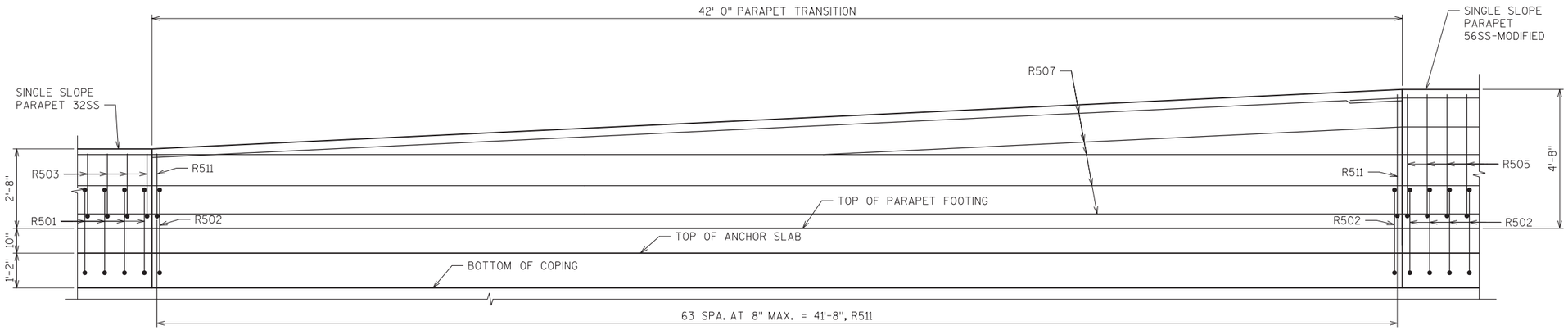
STATE PROJECT NUMBER

1300-13-74



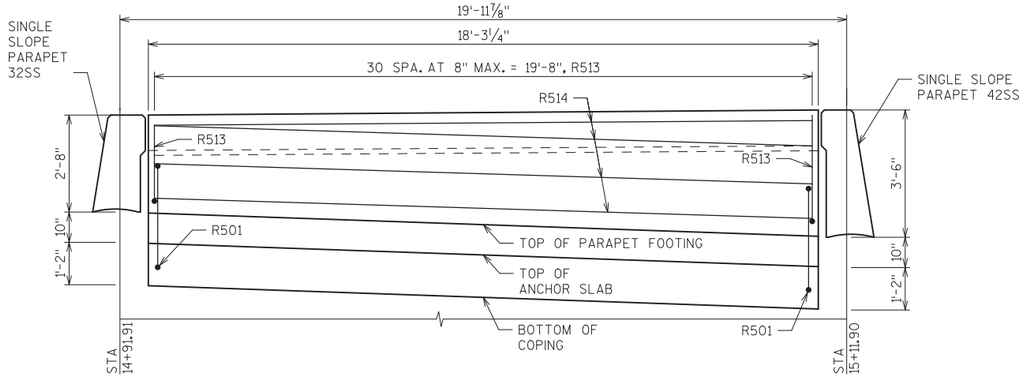
OUTSIDE PARAPET ELEVATION

SINGLE SLOPE PARAPET 42SS TO SINGLE SLOPE PARAPET 56SS-MODIFIED



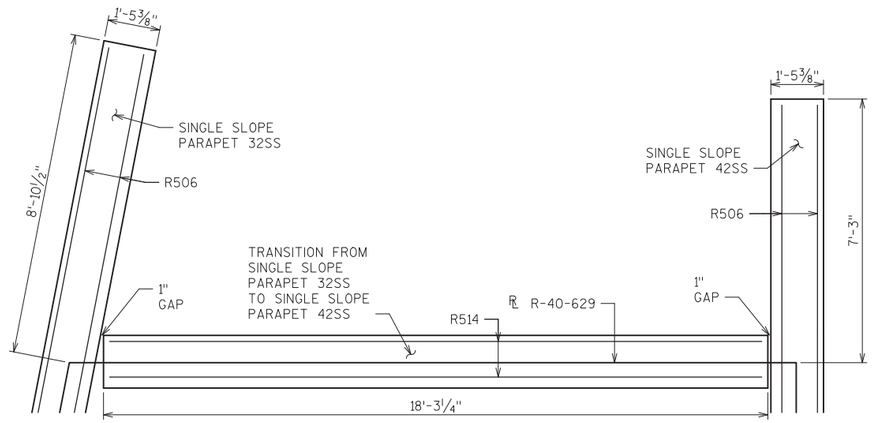
OUTSIDE PARAPET ELEVATION

SINGLE SLOPE PARAPET 32SS TO SINGLE SLOPE PARAPET 56SS-MODIFIED



OUTSIDE PARAPET ELEVATION - RAMP LW TO RAMP LE

SINGLE SLOPE PARAPET 32SS TO SINGLE SLOPE PARAPET 42SS



PLAN - RAMP LW TO RAMP LE

SINGLE SLOPE PARAPET 32SS TO SINGLE SLOPE PARAPET 42SS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY DRH | PLANS CK'D. MSC

PARAPET TRANSITION DETAILS

SHEET 22 OF 25

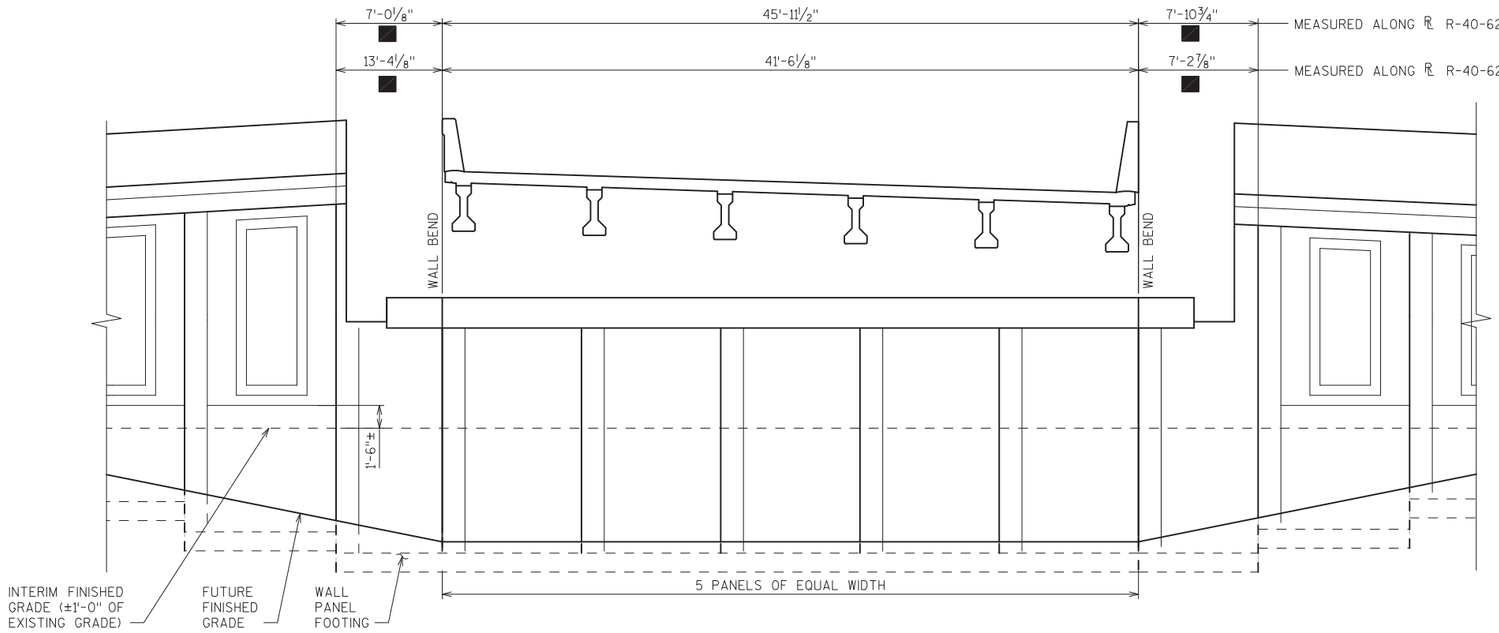
886

8

8

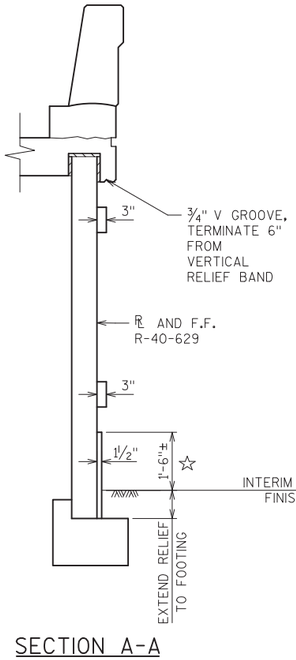
STATE PROJECT NUMBER

1300-13-74

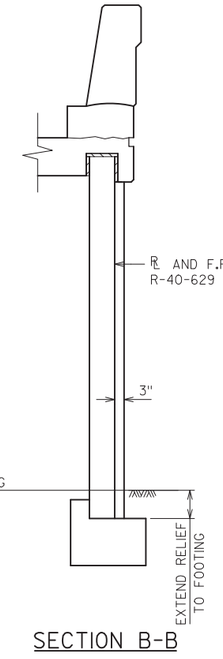


PRESTRESSED PRECAST CONCRETE WALL PANEL

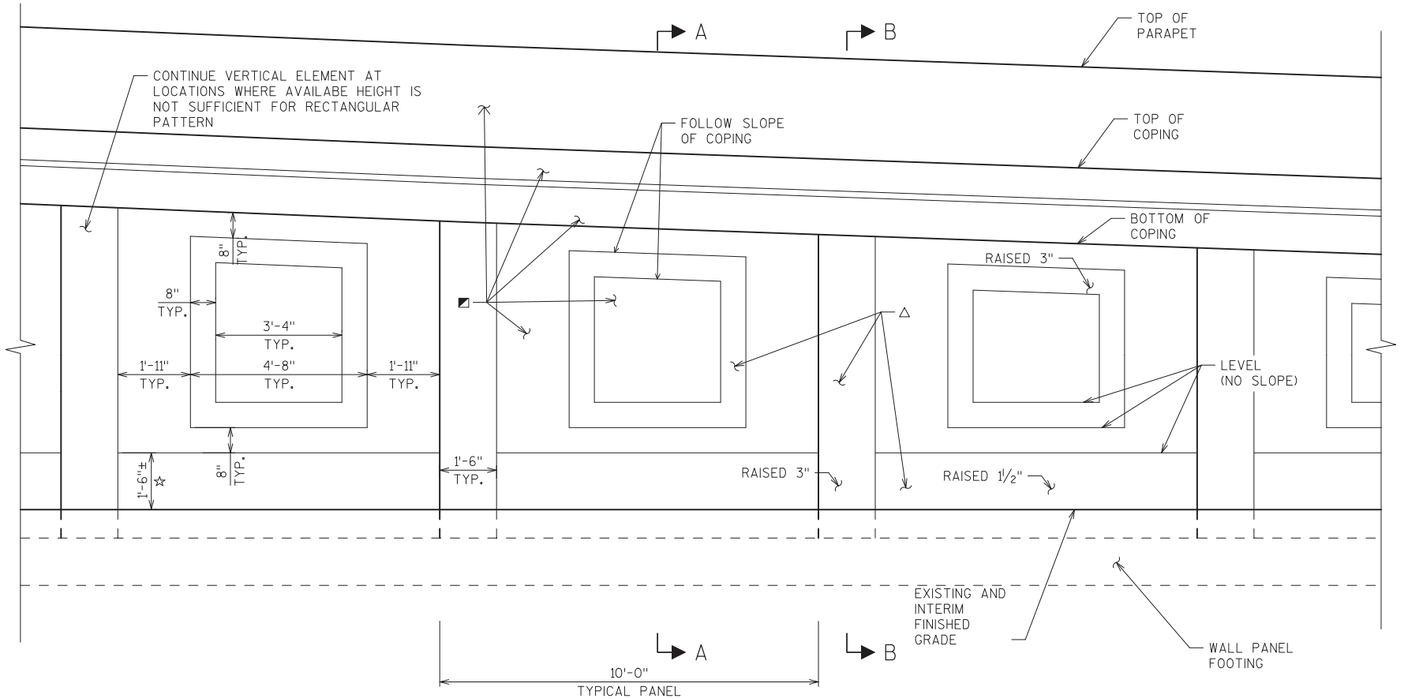
ABUTMENT DETAIL



SECTION A-A



SECTION B-B



PRESTRESSED PRECAST CONCRETE WALL PANEL

PROJECTION AND STAINING DETAIL

LEGEND

- FEDERAL COLOR #26293 (LIGHT GRAY)
- △ FEDERAL COLOR #26132 (DARK GRAY)
- ☆ AT LOCATIONS IN FRONT OF DETENTION BASIN (STA 13+71.12 TO STA 16+28.63), MAINTAIN 1'-6"± MEASURED FROM TOP OF DETENTION BASIN WALL.
- WALL PANEL DIMENSIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY DRH | PLANS CK'D. MSC

AESTHETIC DETAILS

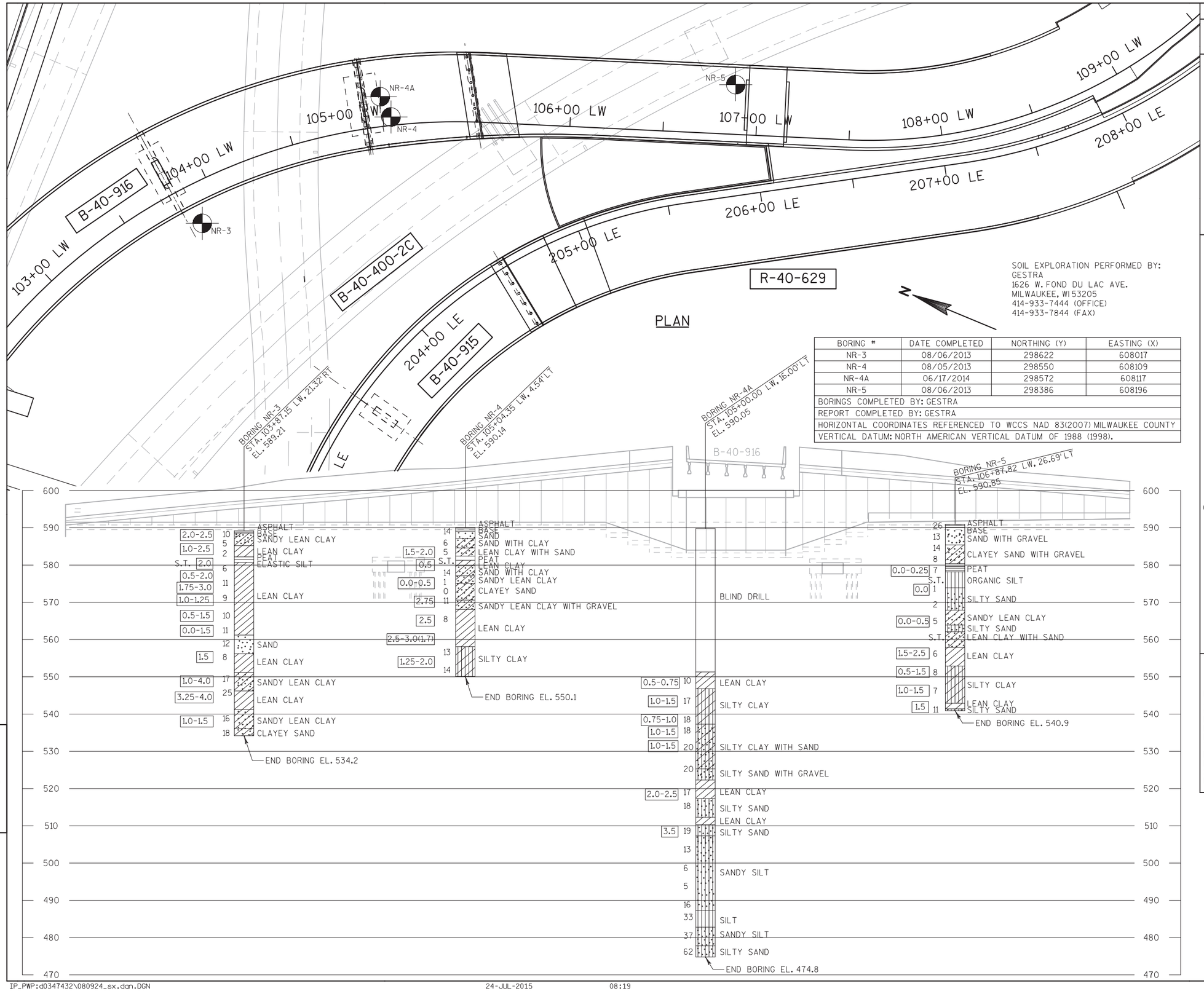
SHEET 23 OF 25

887

8

8

IP_PWP:d0347432\080923_ad.dan.DGN 24-JUL-2015 08:19



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
NR-3	08/06/2013	298622	608017
NR-4	08/05/2013	298550	608109
NR-4A	06/17/2014	298572	608117
NR-5	08/06/2013	298386	608196
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: GESTRA			
HORIZONTAL COORDINATES REFERENCED TO WCCS NAD 83(2007) MILWAUKEE COUNTY			
VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (1998).			

SOIL EXPLORATION PERFORMED BY:
GESTRA
1626 W. FOND DU LAC AVE.
MILWAUKEE, WI 53205
414-933-7444 (OFFICE)
414-933-7844 (FAX)

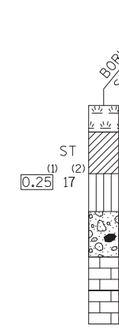
STATE PROJECT NUMBER

1300-13-74

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

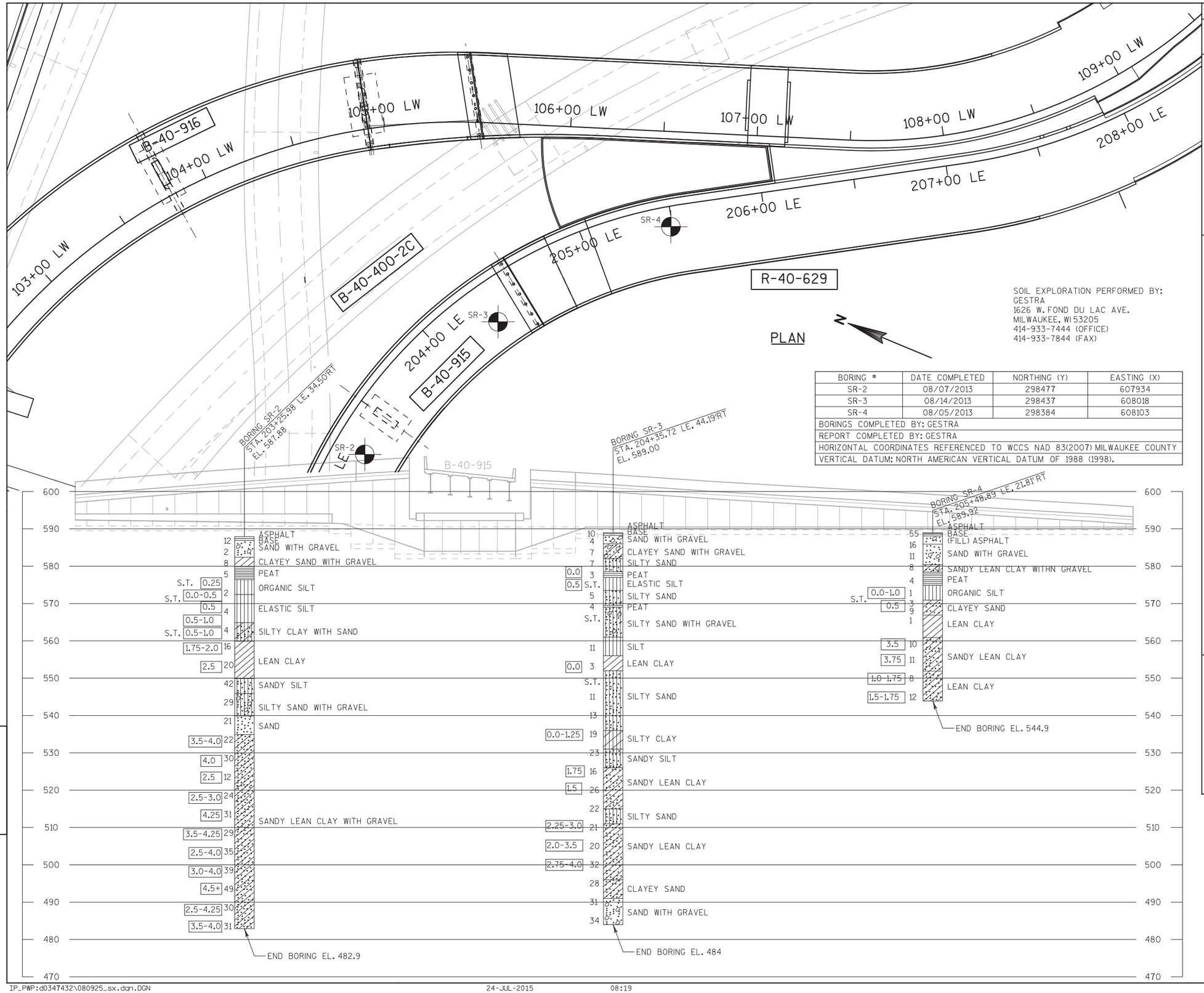
DRAWN BY MDM PLANS CK'D. MSC

SUBSURFACE EXPLORATION (1 OF 2)

SHEET 24 OF 25
888

8

8



SOIL EXPLORATION PERFORMED BY:
GESTRA
1626 W. FOND DU LAC AVE.
MILWAUKEE, WI 53205
414-933-7444 (OFFICE)
414-933-7844 (FAX)

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SR-2	08/07/2013	298477	607934
SR-3	08/14/2013	298437	608018
SR-4	08/05/2013	298384	608103
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: GESTRA			
HORIZONTAL COORDINATES REFERENCED TO WCCS NAD 83(2007) MILWAUKEE COUNTY			
VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (1998).			

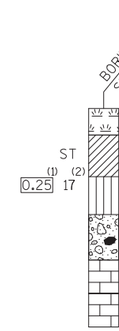
STATE PROJECT NUMBER

1300-13-74

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-629

DRAWN BY MDM | PLANS CK'D. MSC

SUBSURFACE EXPLORATION (2 OF 2)

SHEET 25 OF 25
889

8

8

IP_PWP:d0347432\080925_sx.dgn.DGN 24-JUL-2015 08:19

EB Ramp

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Mass Ordinate Note 8
204+50.00	20450		93	0	8	0	0	0	0	0	0
205+00.00	20500	50	251	525	142	318	486	139	318	166	-334
205+50.00	20550	50	231	448	125	446	901	247	765	463	-1085
206+00.00	20600	50	202	364	116	401	752	223	1166	730	-1703
206+50.00	20650	50	198	50	108	371	384	207	1537	979	-1965
207+00.00	20700	50	168	36	99	340	79	191	1877	1208	-1933
207+50.00	20750	50	25	0	88	179	33	173	2056	1416	-1995
208+00.00	20800	50	77	0	1	94	0	83	2150	1515	-2000
208+50.00	20850	50	158	0	0	217	0	1	2367	1516	-1784
209+00.00	20900	50	216	0	0	346	0	0	2713	1516	-1438
209+50.00	20950	50	233	0	0	416	0	0	3129	1516	-1022
209+74.00	20974	24	186	0	0	186	0	0	3315	1516	-835
				Column totals		3315	2635	1263			

WB Ramp

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 5	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 7	Mass Ordinate Note 8
105+50.00	10550		0	0	0	0	0	0	0	0	0	0	0	0	0
106+00.00	10600	50	257	0	22	452	238	0	20	419	238	-378	544	335	616
106+50.00	10650	50	264	0	24	342	482	0	42	735	720	-1033	1500	923	1754
107+00.00	10700	50	286	0	19	495	509	0	40	775	1230	-1729	2507	1543	2959
107+50.00	10750	50	163	44	308	0	416	41	303	459	1645	-1806	3104	1910	3410
108+00.00	10800	50	138	25	206	0	278	64	476	0	1923	-1235	3104	1910	3053
108+50.00	10850	50	0	0	100	0	127	23	283	0	2050	-895	3104	1910	2818
109+00.00	10900	50	30	0	6	0	28	0	98	0	2079	-777	3104	1910	2728
109+50.00	10950	50	130	0	0	0	148	0	6	0	2227	-770	3104	1910	2870
110+00.00	11000	50	176	0	0	0	283	0	0	0	2510	-770	3104	1910	3152
110+50.00	11050	50	65	0	0	0	223	0	0	0	2733	-770	3104	1910	3376
					Column totals		2733	128	1268	2388					

NB Ramp

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Excavation for Structures	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Excavation for Structures	EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.2	Excavation for Structures	Expanded EBS Backfill 1.30 Note 5	Reduced EBS In Fill 0.80 Note 7	Mass Ordinate Note 8
424+63.00	42463		2143	27	0	133	94	0	0	0	0	0	0	0	0	0	0	0
425+00.00	42500	37	1685	21	0	130	54	2443	33	0	180	102	2443	-98	180	133	82	2688
425+50.00	42550	50	1276	7	0	139	53	2493	26	0	249	99	4935	-193	429	262	161	5498
426+00.00	42600	50	1380	0	0	146	52	2195	7	0	264	97	7130	-286	693	388	239	8043
426+50.00	42650	50	1115	0	1	206	50	1983	0	1	326	94	9114	-375	1019	510	314	10441
427+00.00	42700	50	1067	0	0	189	48	1654	0	1	366	91	10768	-461	1385	628	386	12547
427+50.00	42750	50	834	0	0	159	0	1438	0	0	322	45	12206	-504	1707	686	422	14350
428+00.00	42800	50	523	0	10	246	0	882	0	9	374	0	13088	-492	2081	686	422	15595
428+50.00	42850	50	397	0	14	177	0	460	0	23	391	0	13548	-465	2473	686	422	16420
429+00.00	42900	50	298	0	20	121	0	367	0	32	276	0	13915	-427	2749	686	422	17025
429+50.00	42950	50	211	0	24	74	0	291	0	41	180	0	14206	-378	2929	686	422	17447
430+00.00	43000	50	155	0	20	47	0	227	0	40	112	0	14434	-330	3041	686	422	17738
430+50.00	43050	50	118	0	7	29	0	183	0	24	70	0	14616	-301	3111	686	422	17962
431+00.00	43100	50	14	0	137	0	0	96	0	133	27	0	14712	-141	3138	686	422	17925
							Column totals	14712	66	304	3138	528						

Clybourn Street

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.2	Mass Ordinate Note 8
22+50.00	2250		215	52	2	0	0	0	0	0	0
23+00.00	2300	50	189	52	2	375	96	3	375	4	275
23+50.00	2350	50	176	51	1	338	95	3	713	7	514
23+64.00	2364	14	185	51	1	94	27	1	806	8	581
24+00.00	2400	36	217	52	2	268	69	2	1074	11	777
24+50.00	2450	50	179	52	3	367	96	4	1441	16	1043
24+72.00	2472	22	204	51	0	156	42	1	1597	18	1155
25+00.00	2500	28	181	52	0	200	53	0	1796	18	1301
25+22.00	2522	22	176	51	0	146	42	0	1942	18	1405
25+50.00	2550	28	188	51	0	189	53	0	2131	18	1541
26+00.00	2600	50	462	54	0	602	97	0	2733	18	2046
26+50.00	2650	50	272	53	1	679	98	1	3413	20	2625
27+00.00	2700	50	165	43	8	404	89	9	3817	30	2931
27+18.00	2718	18	146	57	6	104	34	5	3921	36	2995
27+50.00	2750	32	312	17	0	272	44	4	4193	40	3218
27+62.00	2762	12	307	17	0	138	8	0	4330	40	3348
28+00.00	2800	38	187	17	0	348	24	0	4678	40	3671
28+50.00	2850	50	228	17	0	385	32	0	5062	40	4024
29+00.00	2900	50	170	17	0	369	32	0	5431	41	4362
29+12.00	2912	12	114	17	1	63	8	0	5495	41	4417
29+22.94	2923	11	112	17	1	46	7	0	5540	41	4455
					Column totals	5540	1044	34			

9

9

PROJECT NO:1300-13-74 | HWY:IH 794 | COUNTY:MILWAUKEE | EARTHWORK | SHEET 891 | E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090101_ew.dgn PLOT DATE : 8/3/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

Lincoln Memorial Drive & SB Ramp

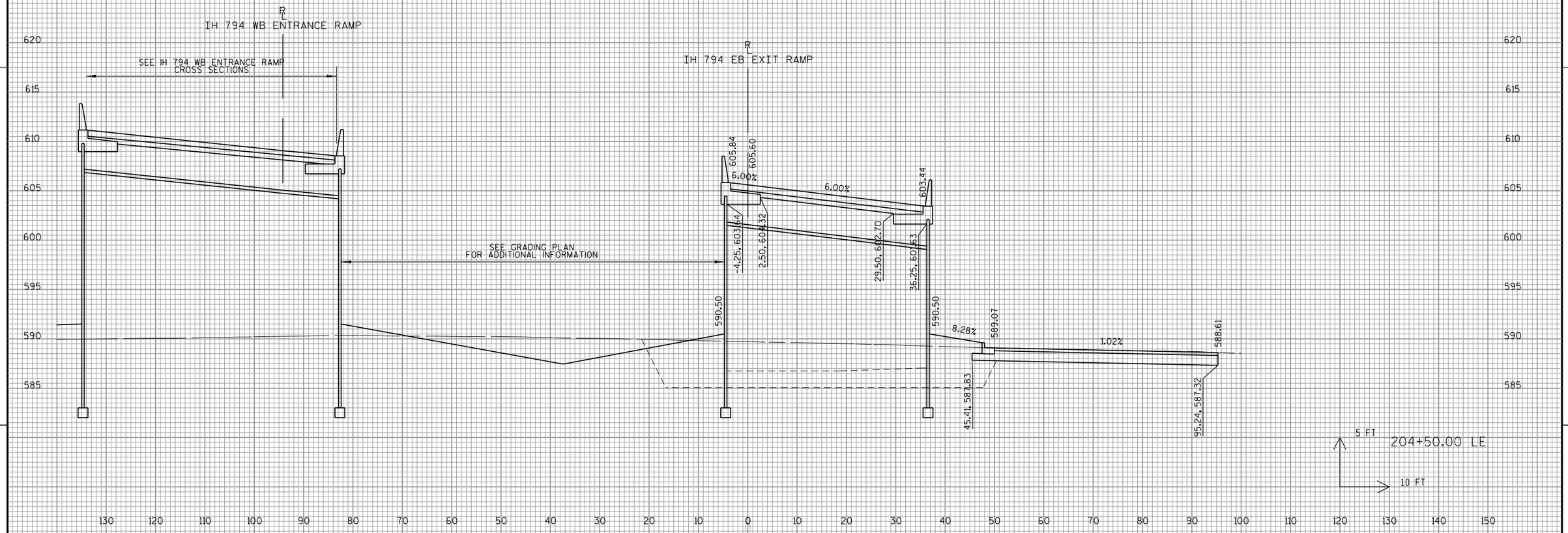
STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Mass Ordinate Note 8
12+00.00	1200		60	0	0	0	0	0	0	0	0
12+50.00	1250	50	54	0	0	106	0	0	106	0	106
13+00.00	1300	50	54	0	1	100	0	1	206	2	204
13+36.00	1336	36	79	0	0	88	0	1	294	2	292
13+50.00	1350	14	73	0	1	39	0	0	333	3	331
14+00.00	1400	50	90	0	6	152	0	6	485	10	475
14+50.00	1450	50	160	0	0	232	0	5	716	16	701
15+00.00	1500	50	150	0	0	287	0	0	1003	16	987
15+50.00	1550	50	130	0	4	259	0	3	1263	20	1243
16+00.00	1600	50	135	0	0	246	0	3	1509	24	1485
16+50.00	1650	50	129	0	0	245	0	0	1754	24	1729
17+00.00	1700	50	127	0	0	238	0	0	1991	24	1967
17+50.00	1750	50	187	0	0	291	0	0	2282	24	2258
18+00.00	1800	50	129	0	0	293	0	0	2575	24	2551
18+50.00	1850	50	60	0	14	175	0	13	2750	39	2710
19+00.00	1900	50	122	0	0	168	0	13	2918	55	2863
19+50.00	1950	50	128	0	0	231	0	0	3149	55	3094
20+00.00	2000	50	173	0	0	278	0	0	3427	55	3373
20+50.00	2050	50	201	0	0	346	0	0	3773	55	3718
21+00.00	2100	50	195	0	0	367	0	0	4140	55	4085
21+50.00	2150	50	200	0	0	366	0	0	4505	55	4450
22+00.00	2200	50	202	0	0	372	0	0	4877	55	4822
22+50.00	2250	50	186	0	0	359	0	0	5237	55	5182
23+00.00	2300	50	271	0	0	424	0	0	5660	55	5605
23+50.00	2350	50	33	0	57	281	0	53	5941	119	5823
24+00.00	2400	50	36	0	11	63	0	63	6005	194	5811
24+50.00	2450	50	744	0	41	722	0	48	6727	251	6476
25+00.00	2500	50	852	0	68	1479	0	101	8206	373	7833
25+50.00	2550	50	1051	0	140	1762	0	193	9968	604	9364
26+00.00	2600	50	1129	0	205	2018	0	320	11986	988	10998
26+50.00	2650	50	1023	0	242	1992	0	414	13978	1485	12494
27+00.00	2700	50	906	0	252	1786	0	457	15764	2033	13731
27+50.00	2750	50	694	0	468	1481	0	666	17245	2833	14413
28+00.00	2800	50	609	0	264	1206	0	677	18452	3645	14806
28+50.00	2850	50	873	0	0	1373	0	244	19824	3939	15885
29+00.00	2900	50	818	0	8	1566	0	8	21390	3948	17442
29+50.00	2950	50	575	0	26	1290	0	31	22681	3986	18695
30+00.00	3000	50	74	39	12	602	36	35	23282	4027	19219
30+50.00	3050	50	35	78	55	101	109	61	23383	4101	19138
31+00.00	3100	50	18	50	28	49	119	77	23432	4193	18975
31+50.00	3150	50	12	53	67	28	96	88	23461	4299	18803
32+00.00	3200	50	86	59	47	91	104	105	23552	4425	18664
32+50.00	3250	50	74	54	54	149	105	94	23701	4537	18596
33+00.00	3300	50	114	55	6	174	101	56	23874	4604	18602
33+50.00	3350	50	122	55	1	218	101	7	24092	4613	18710
34+00.00	3400	50	104	55	2	209	102	3	24302	4616	18814
34+45.08	3445	45	106	63	5	175	98	6	24477	4623	18884
					Column totals	24477	970	3852			

Chicago Street

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Mass Ordinate Note 8
51+00.00	5100		77	37	0	0	0	0	0	0	0
51+50.00	5150	50	96	38	0	161	70	0	161	0	91
51+88.00	5188	38	188	37	0	200	52	0	360	0	238
52+00.00	5200	12	190	37	0	84	16	0	444	0	306
52+50.00	5250	50	112	37	0	280	68	0	724	0	518
					Column totals	724	206	0			

Van Buren Street

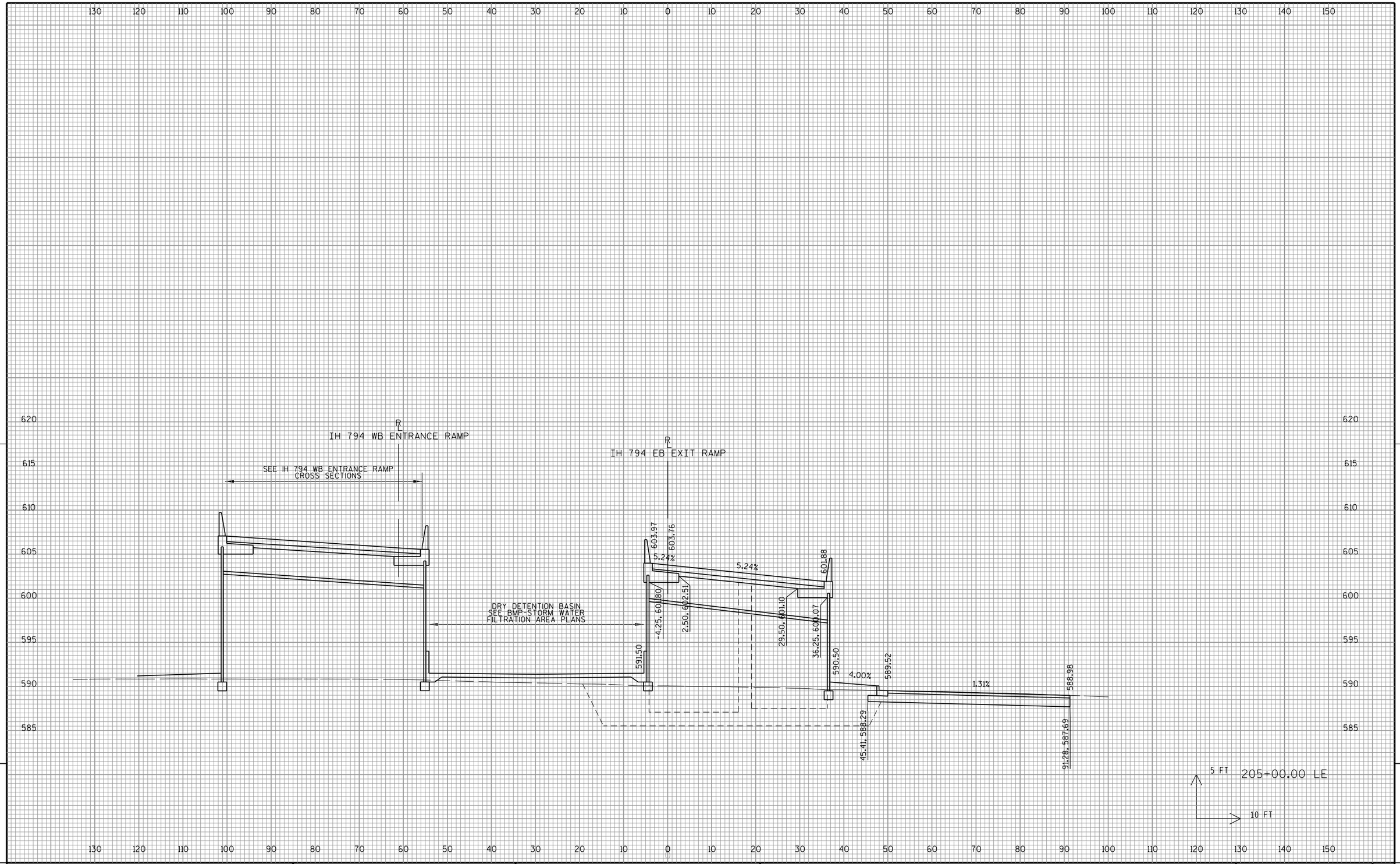
STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Mass Ordinate Note 8
62+51.00	6251		3	9	0	0	0	0	0	0	0
63+00.00	6300	49	14	9	0	16	17	0	16	0	-1
63+50.00	6350	50	17	9	6	29	17	6	44	7	4
63+54.00	6354	4	17	9	6	2	1	1	47	8	4
					Column totals	47	35	7			



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 EB EXIT RAMP	SHEET 894	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090201_xs_RampLE.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



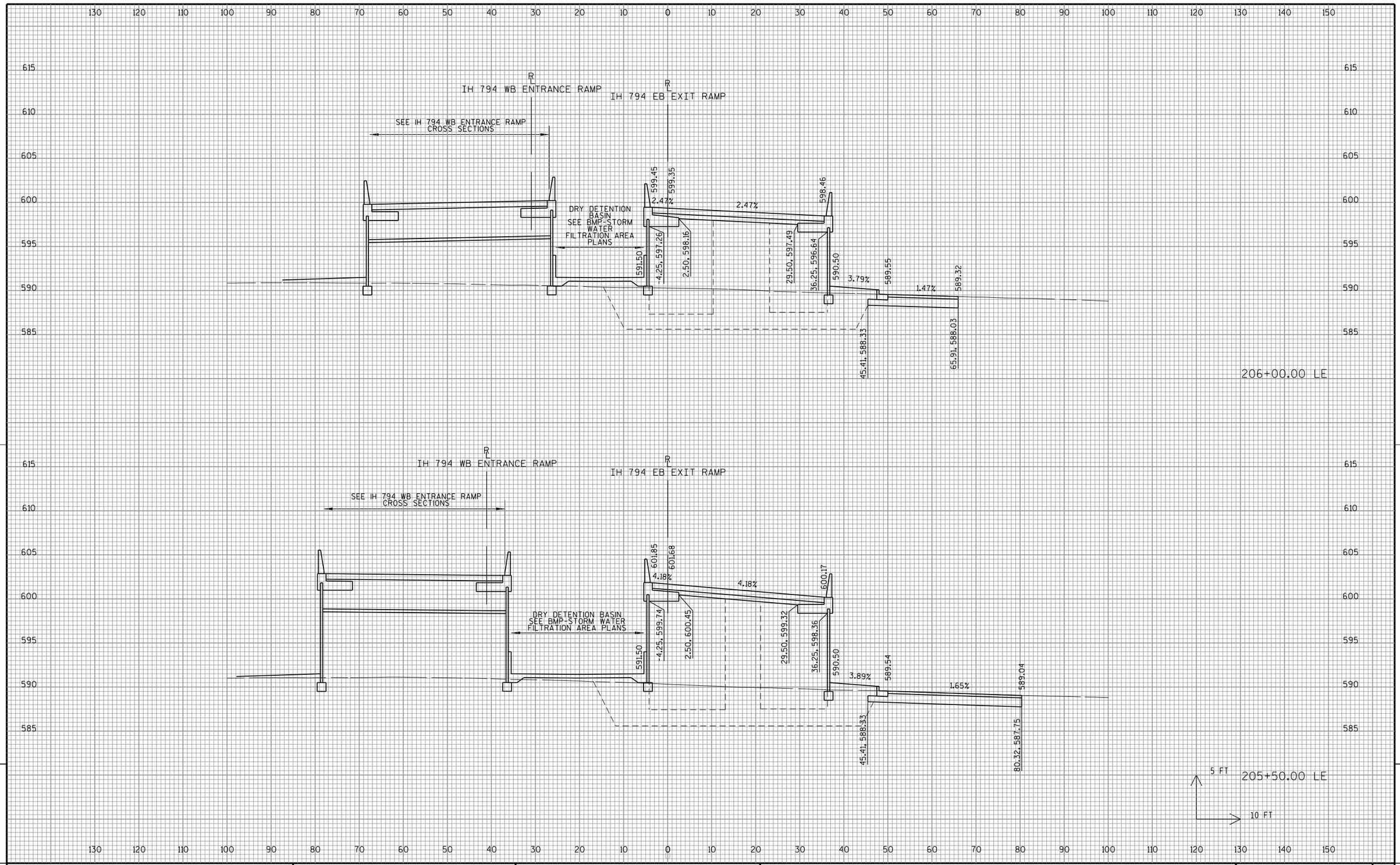
9

9

PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:IH 794 EB EXIT RAMP	SHEET 895	E

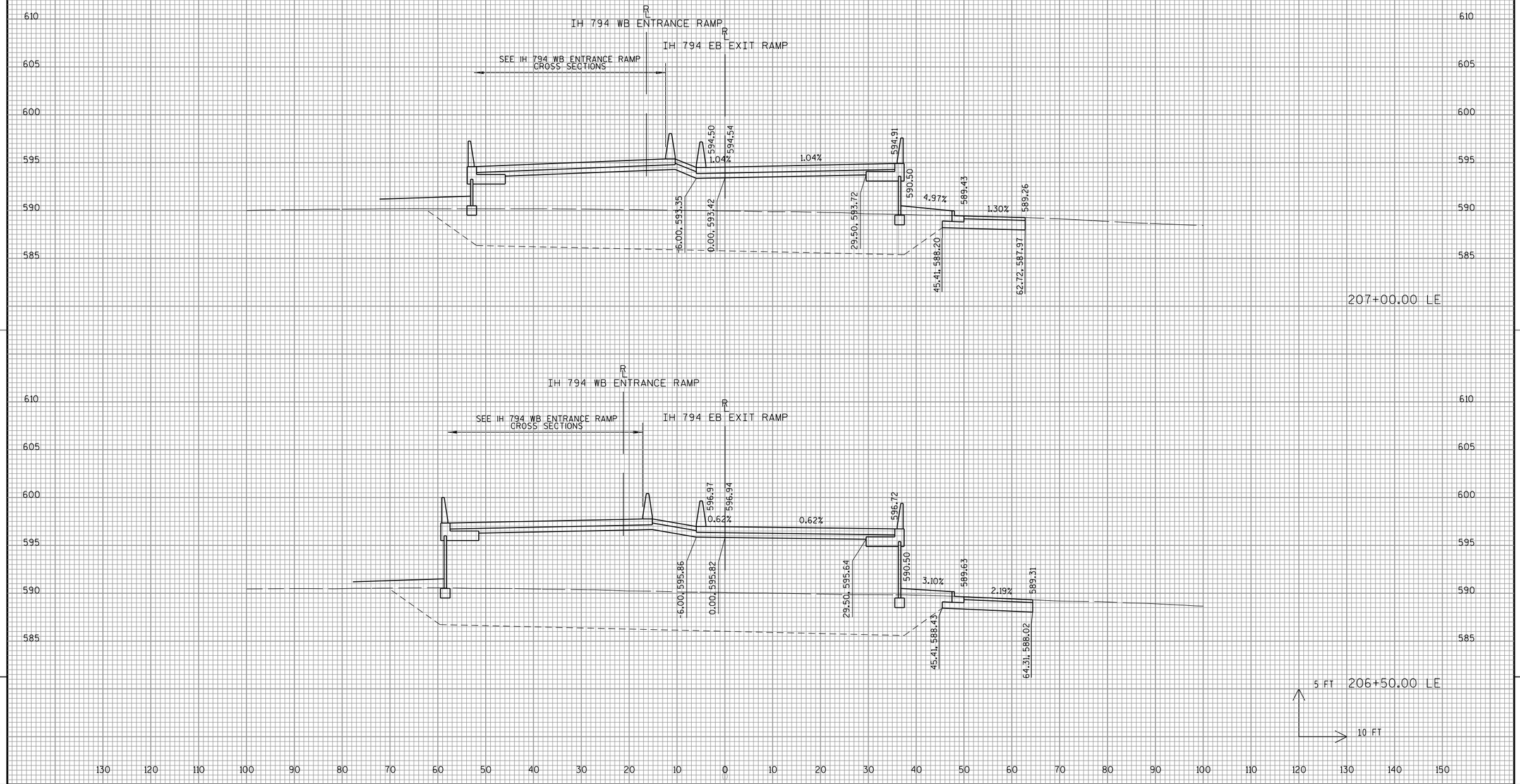
FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090201_xs_RampLE.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:IH 794 EB EXIT RAMP	SHEET 896	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090201_xs_RampLE.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



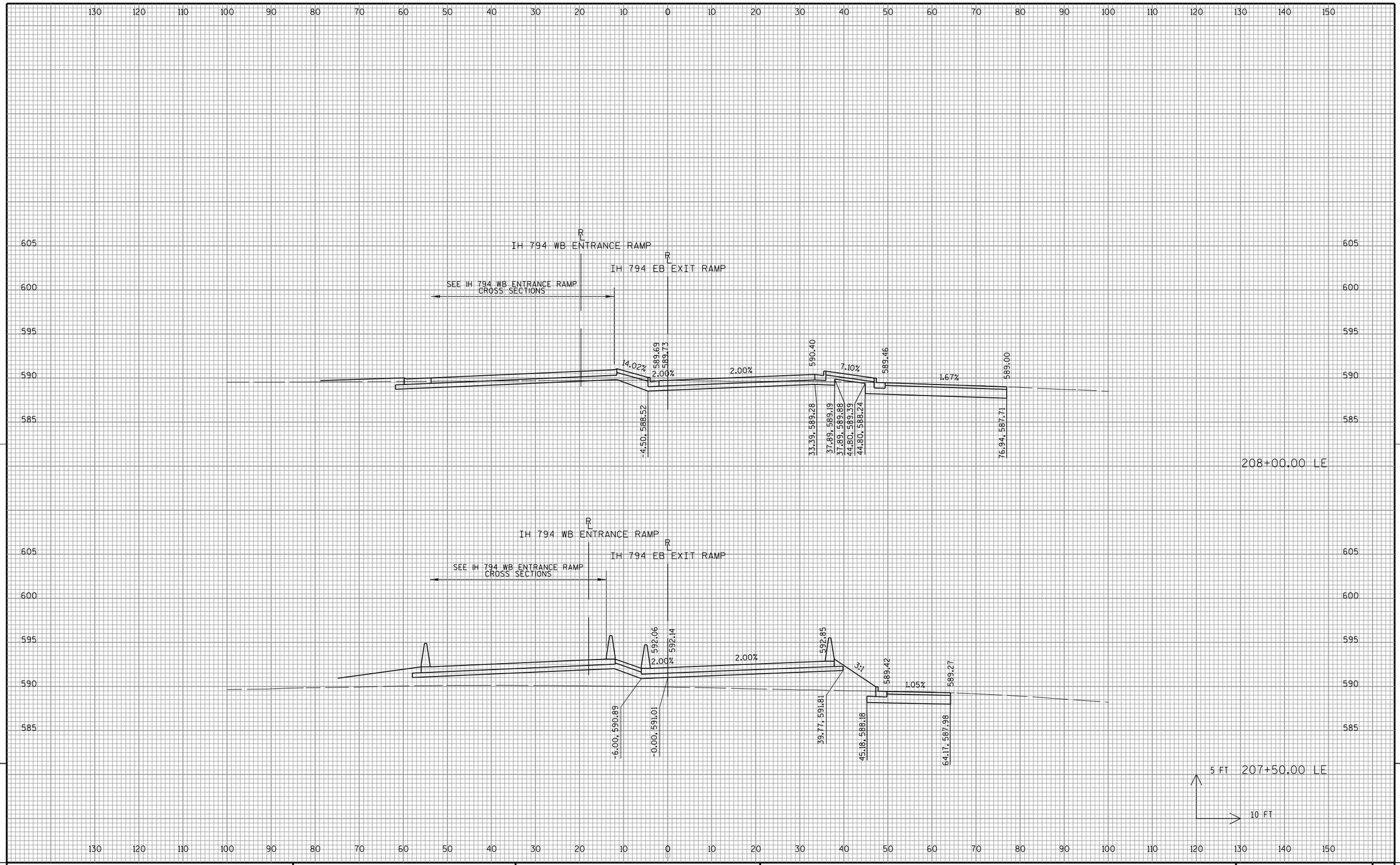
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 EB EXIT RAMP	SHEET 897	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090201_xs_RampLE.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



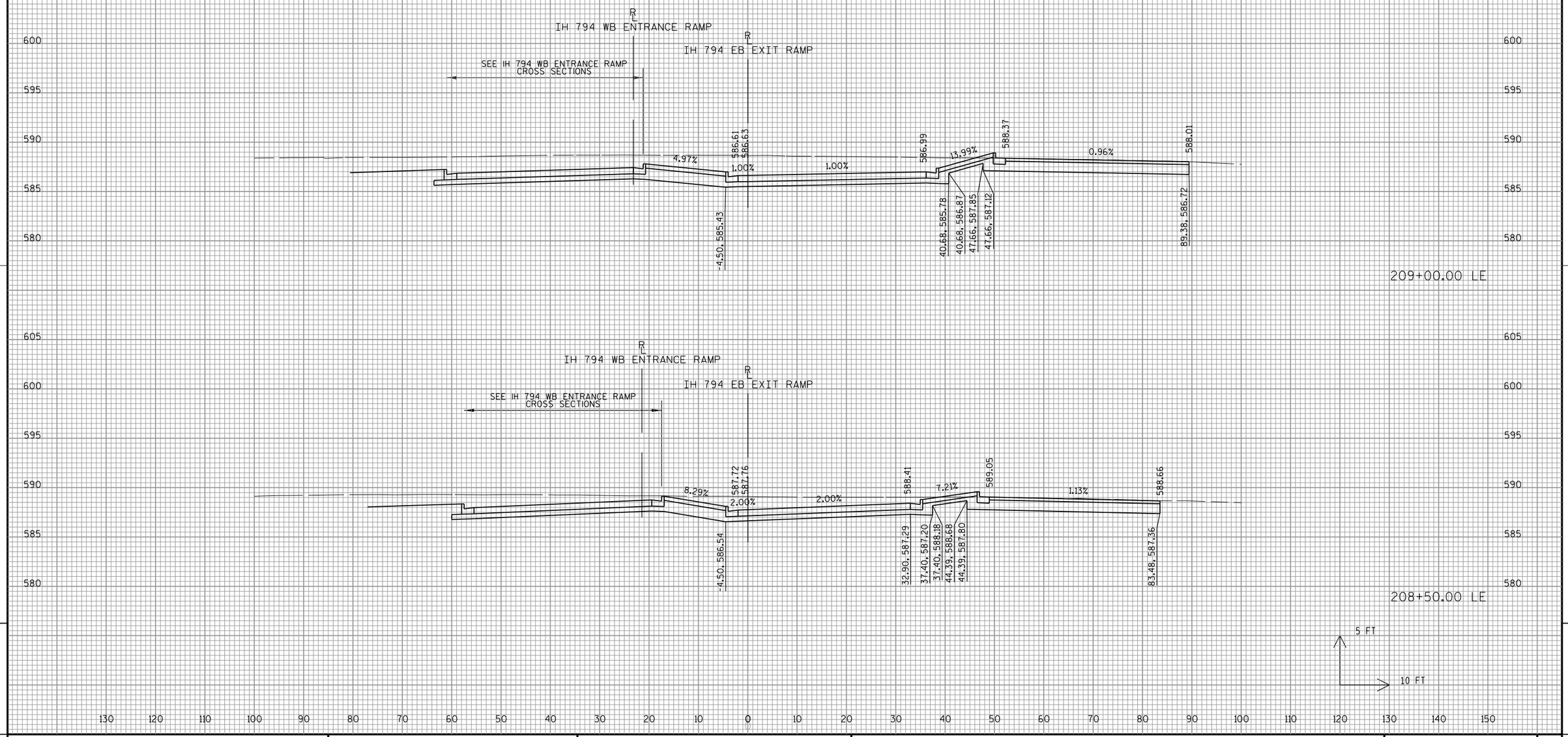
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 EB EXIT RAMP	SHEET 898	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090201_xs_RampLE.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

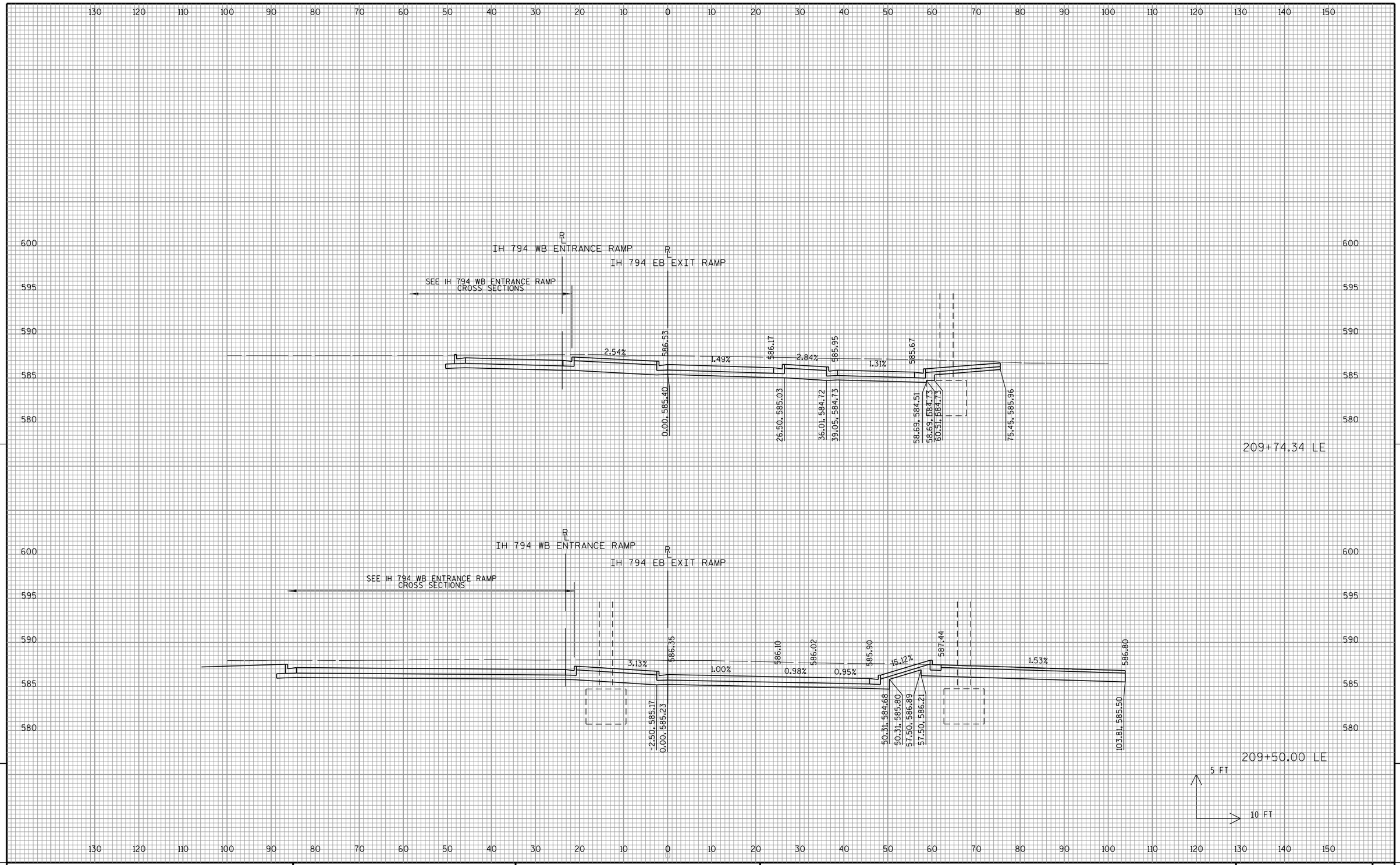
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 EB EXIT RAMP	SHEET 899	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090201_xs_RampLE.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



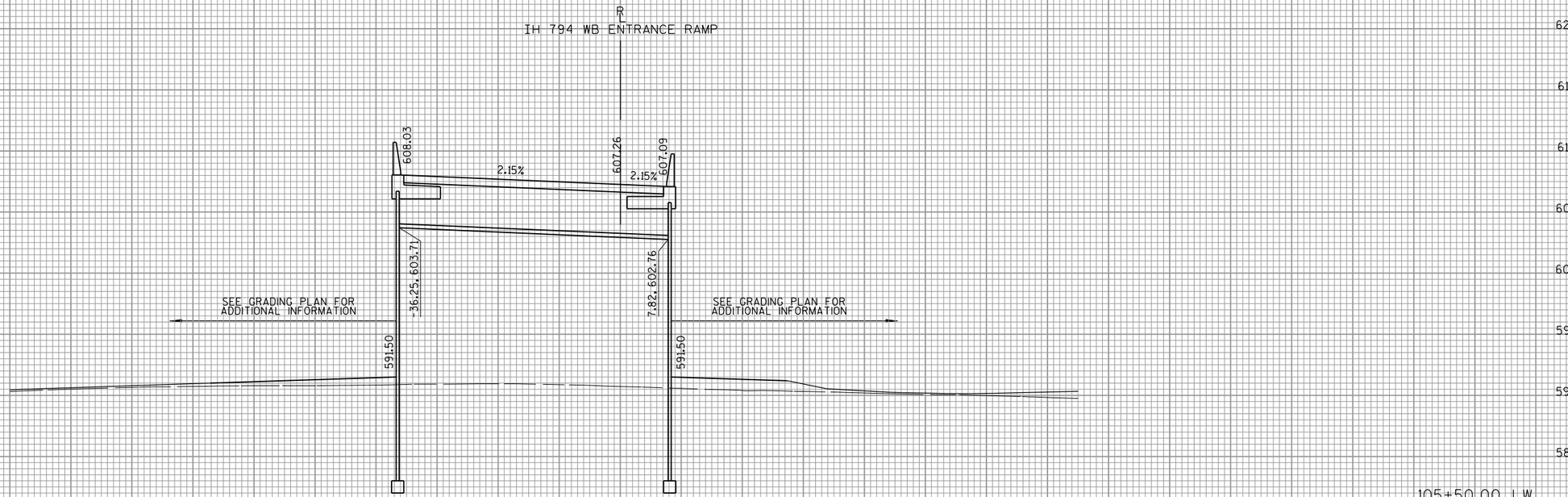
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 EB EXIT RAMP	SHEET 900	E

R
L

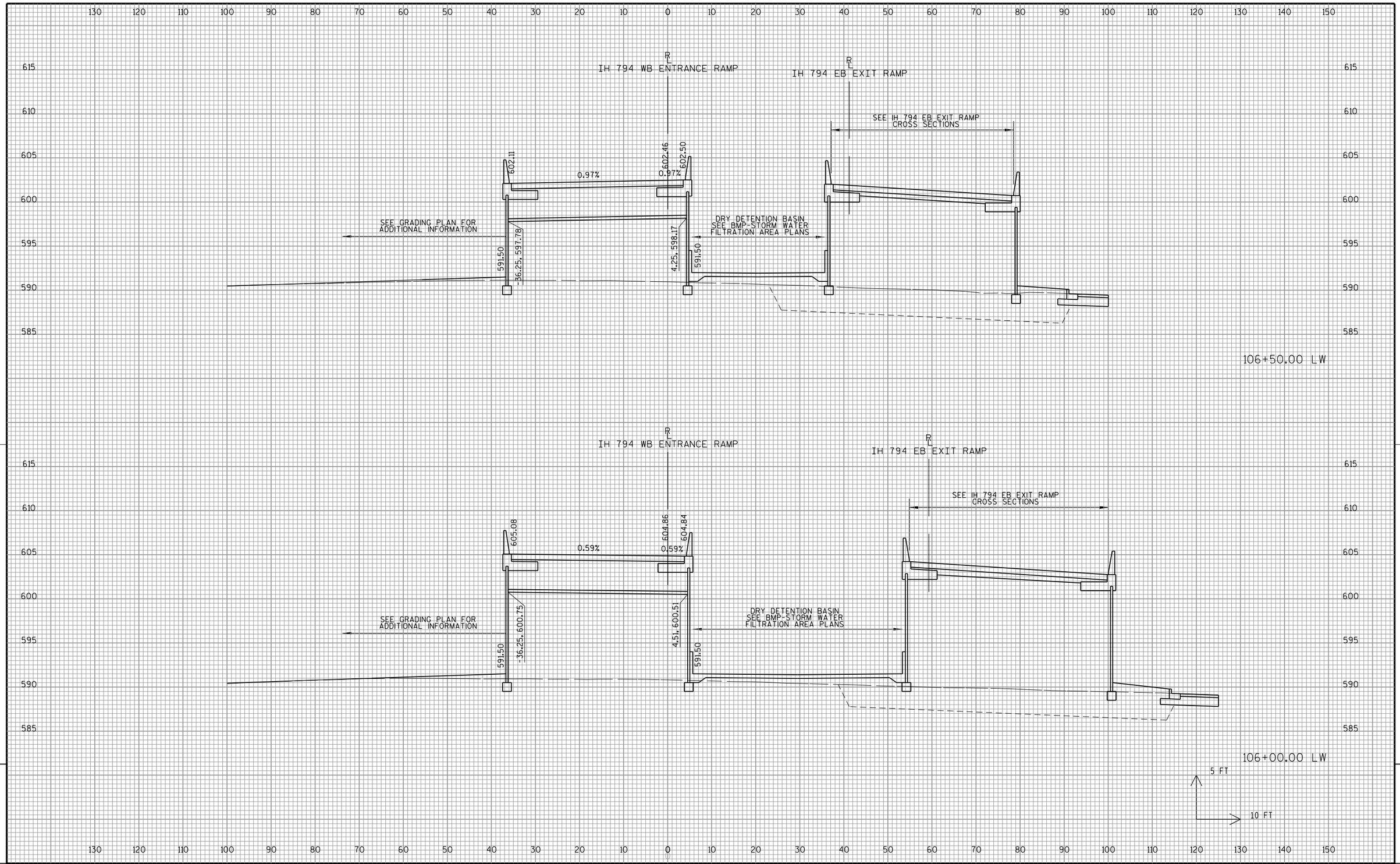
IH 794 WB ENTRANCE RAMP



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB ENTRANCE RAMP	SHEET 901	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090202_xs_RampLW.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



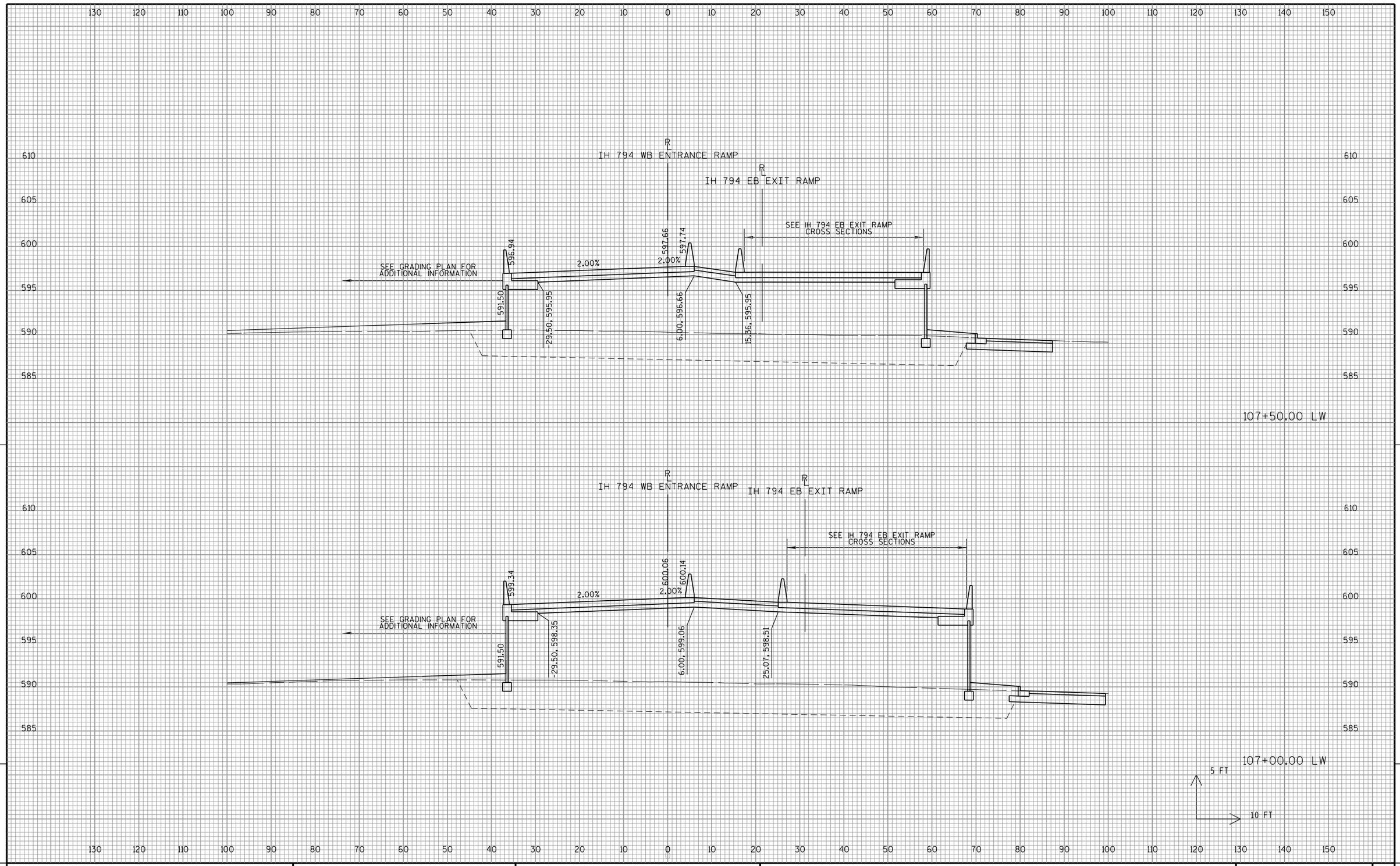
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB ENTRANCE RAMP	SHEET 902	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090202_xs_RampLW.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

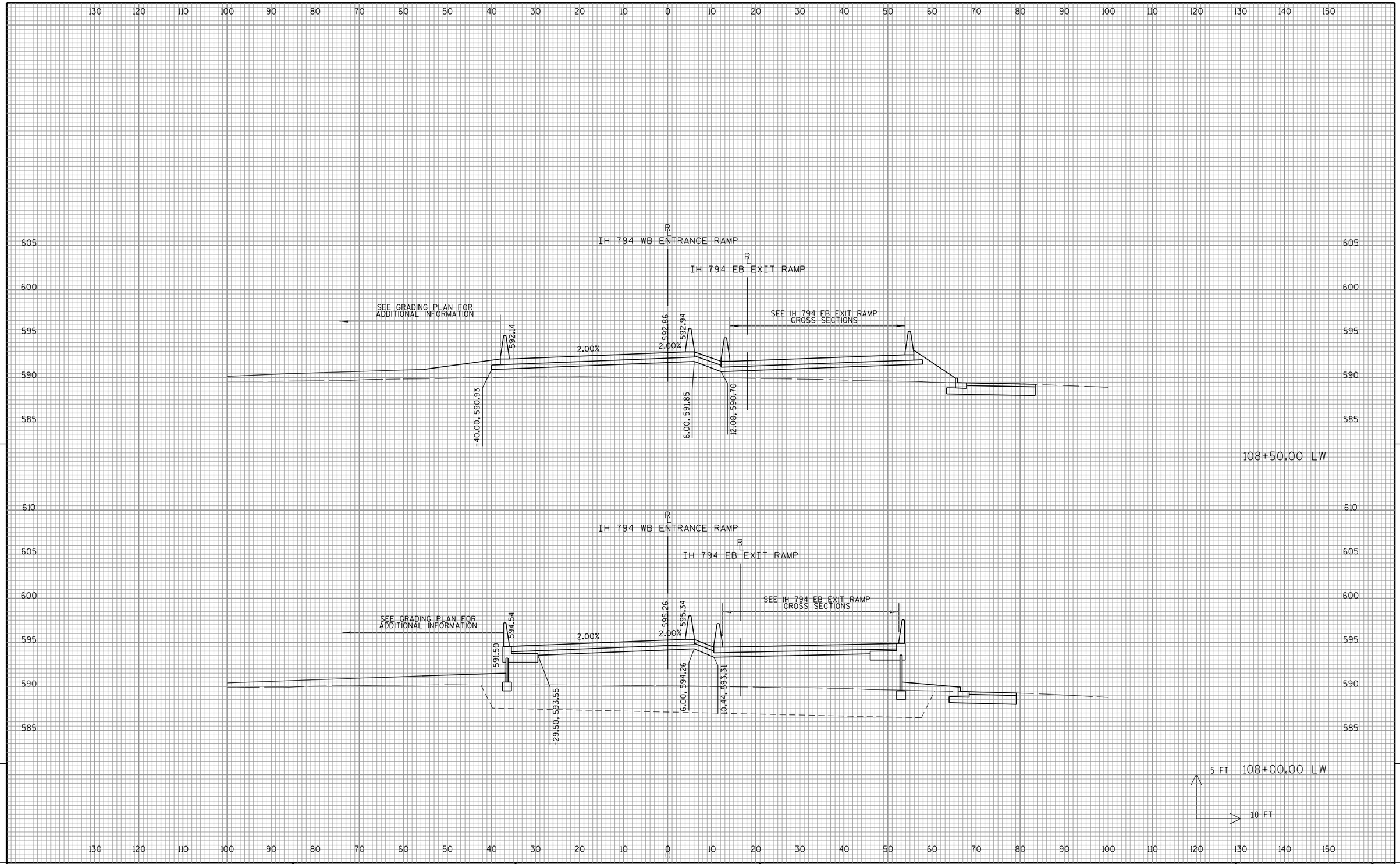
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB ENTRANCE RAMP	SHEET 903	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090202_xs_RampLW.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



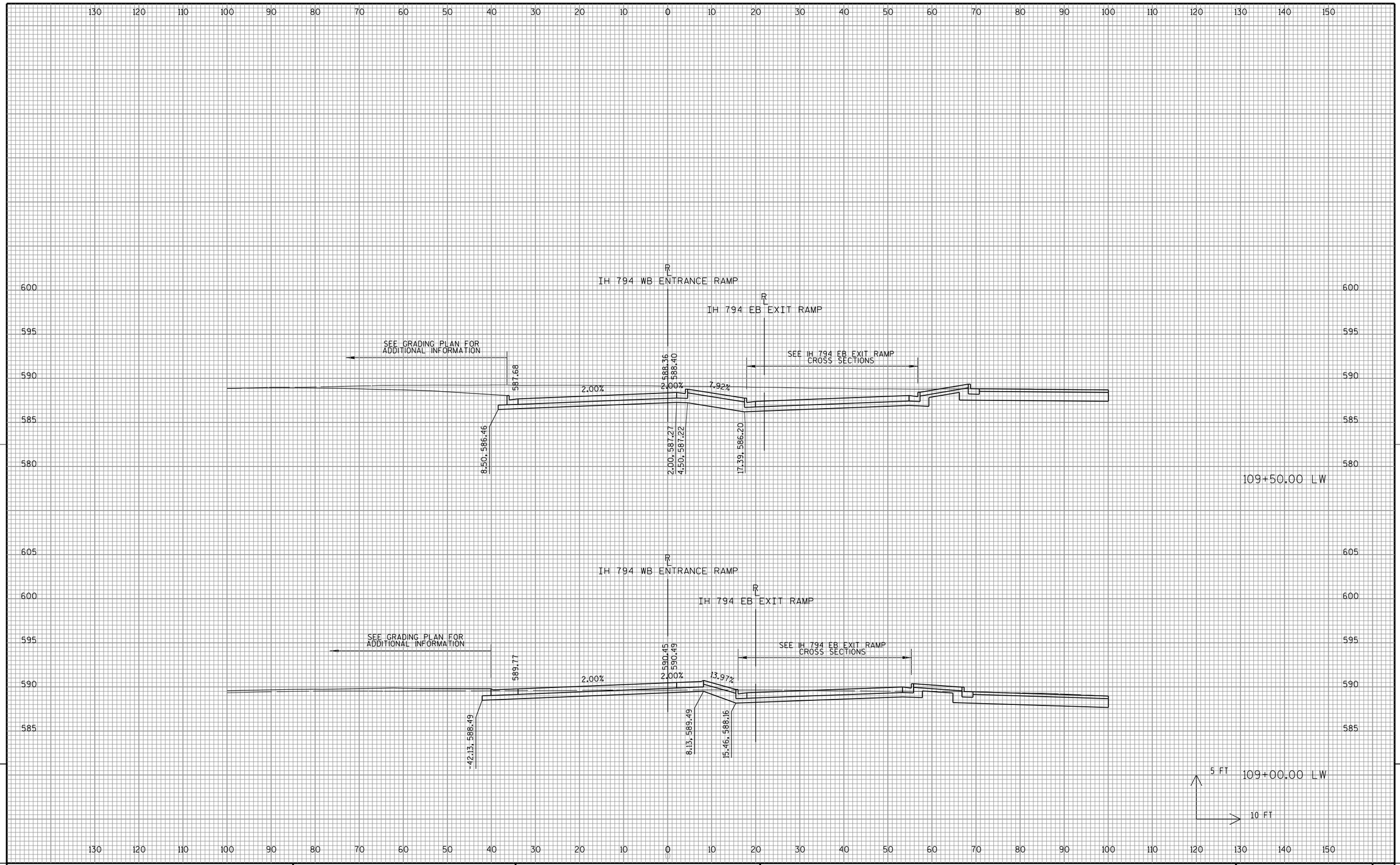
9

9

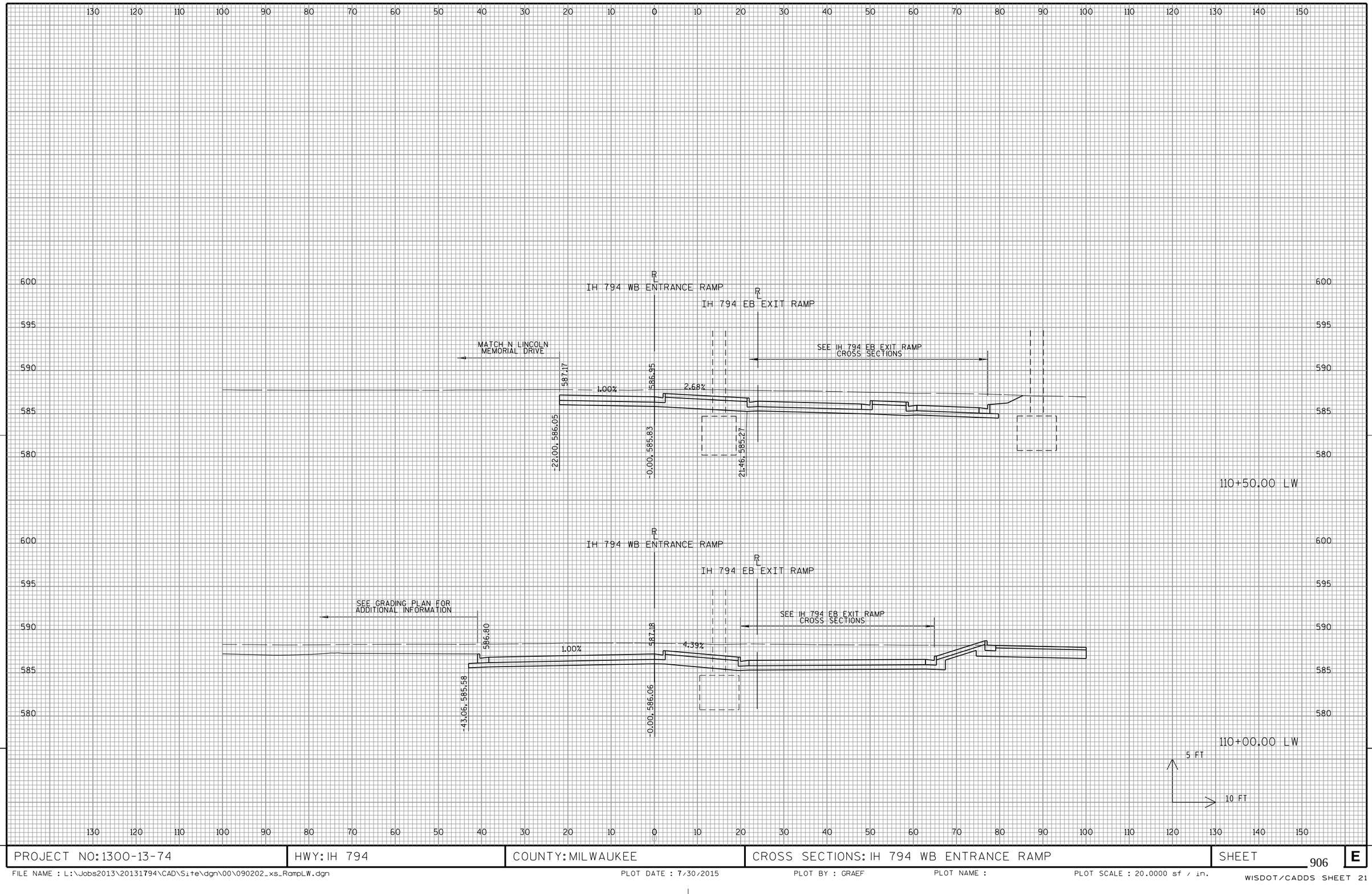
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB ENTRANCE RAMP	SHEET 904	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090202_xs_RampLW.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:IH 794 WB ENTRANCE RAMP	SHEET 905	E



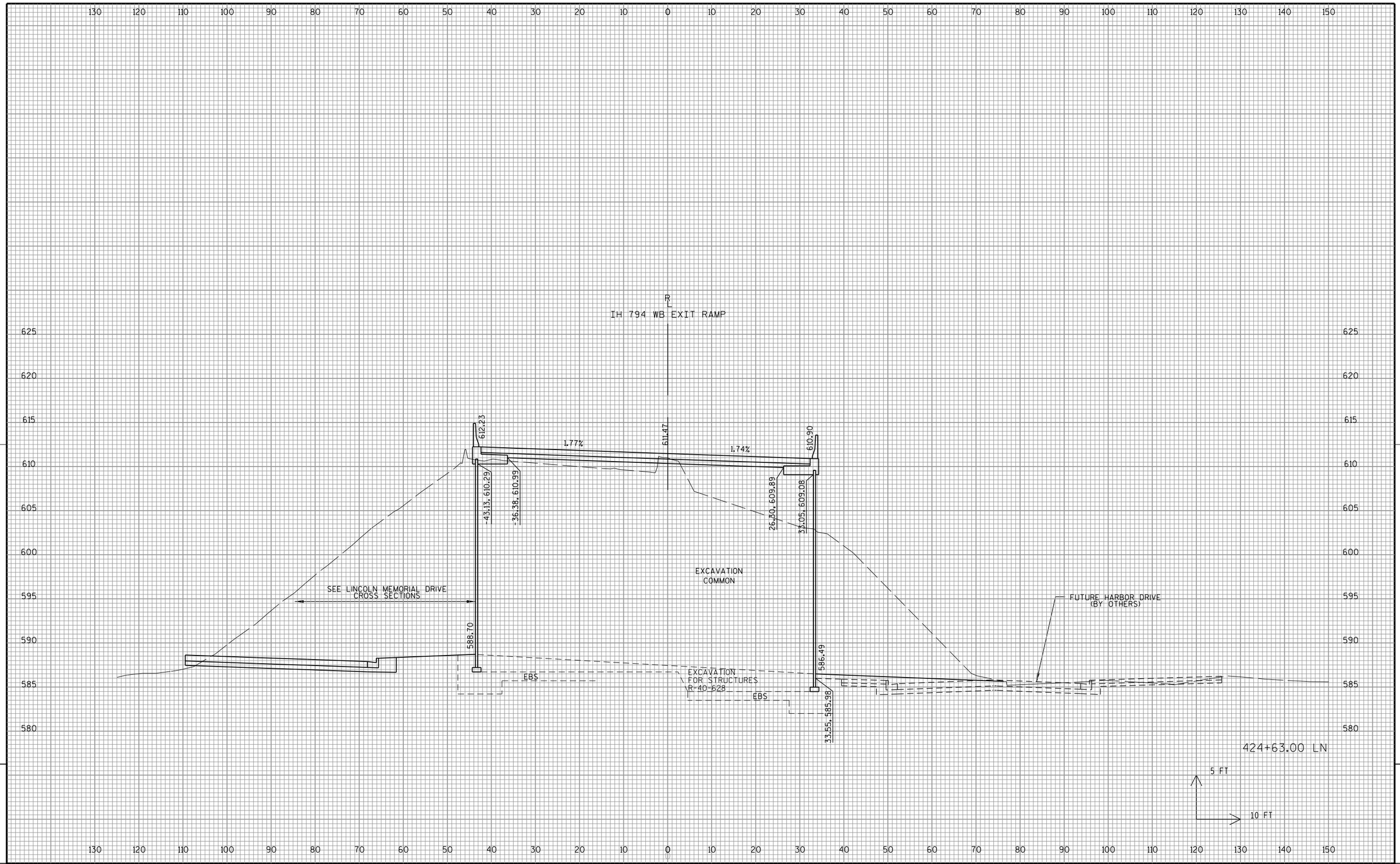
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB ENTRANCE RAMP	SHEET 906	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090202_xs_RampLW.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

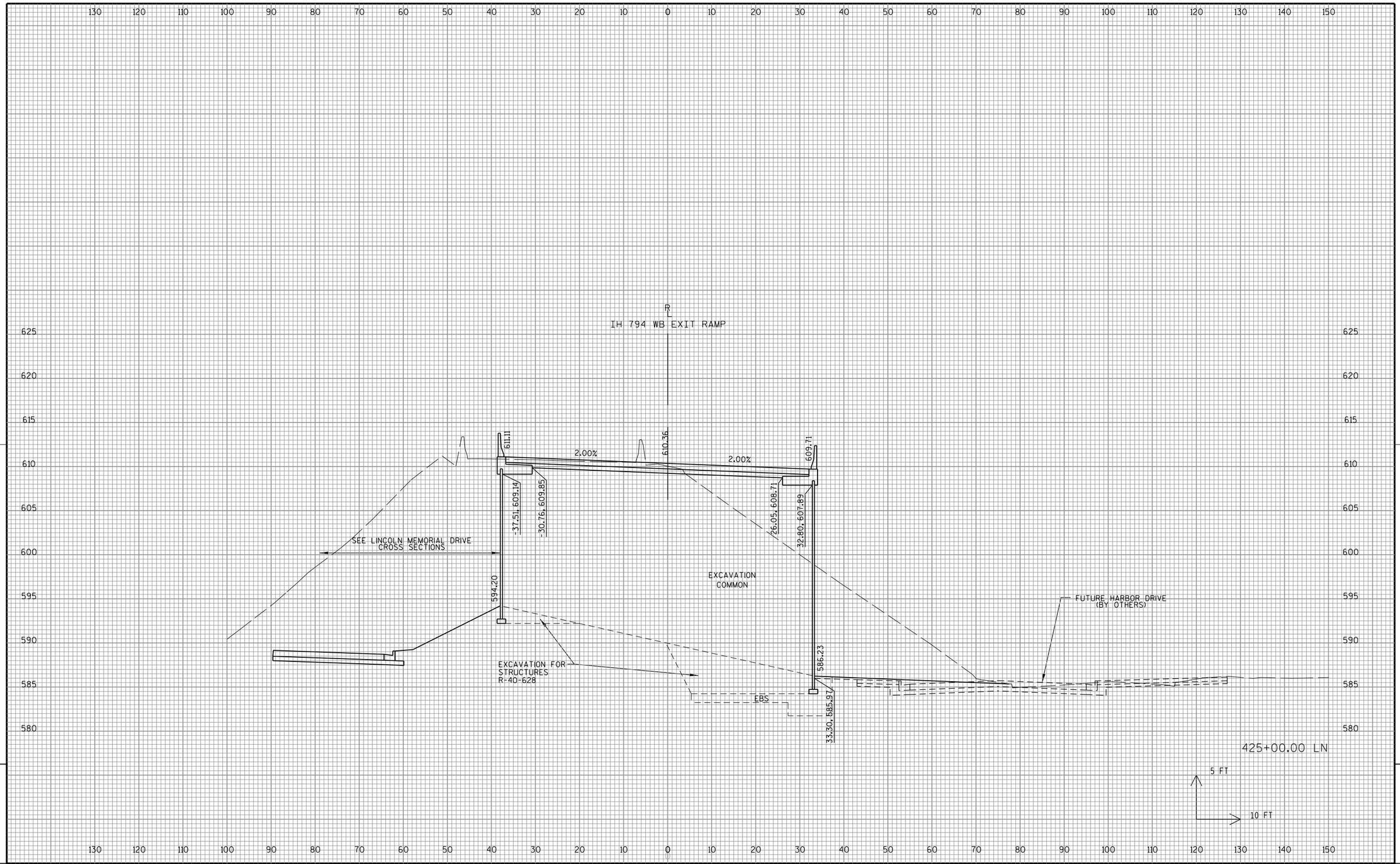
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB EXIT RAMP	SHEET 907	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

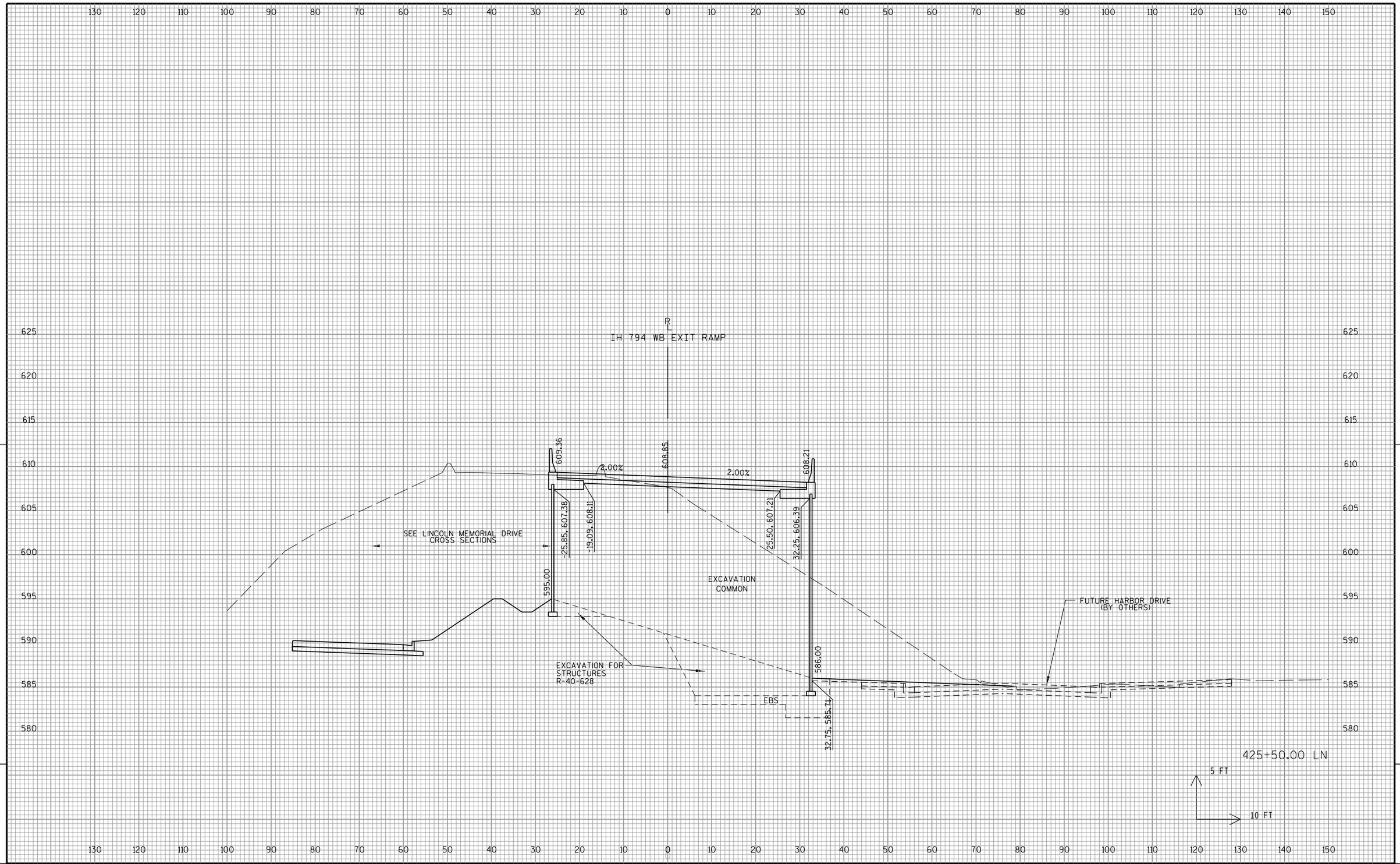
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB EXIT RAMP	SHEET 908	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

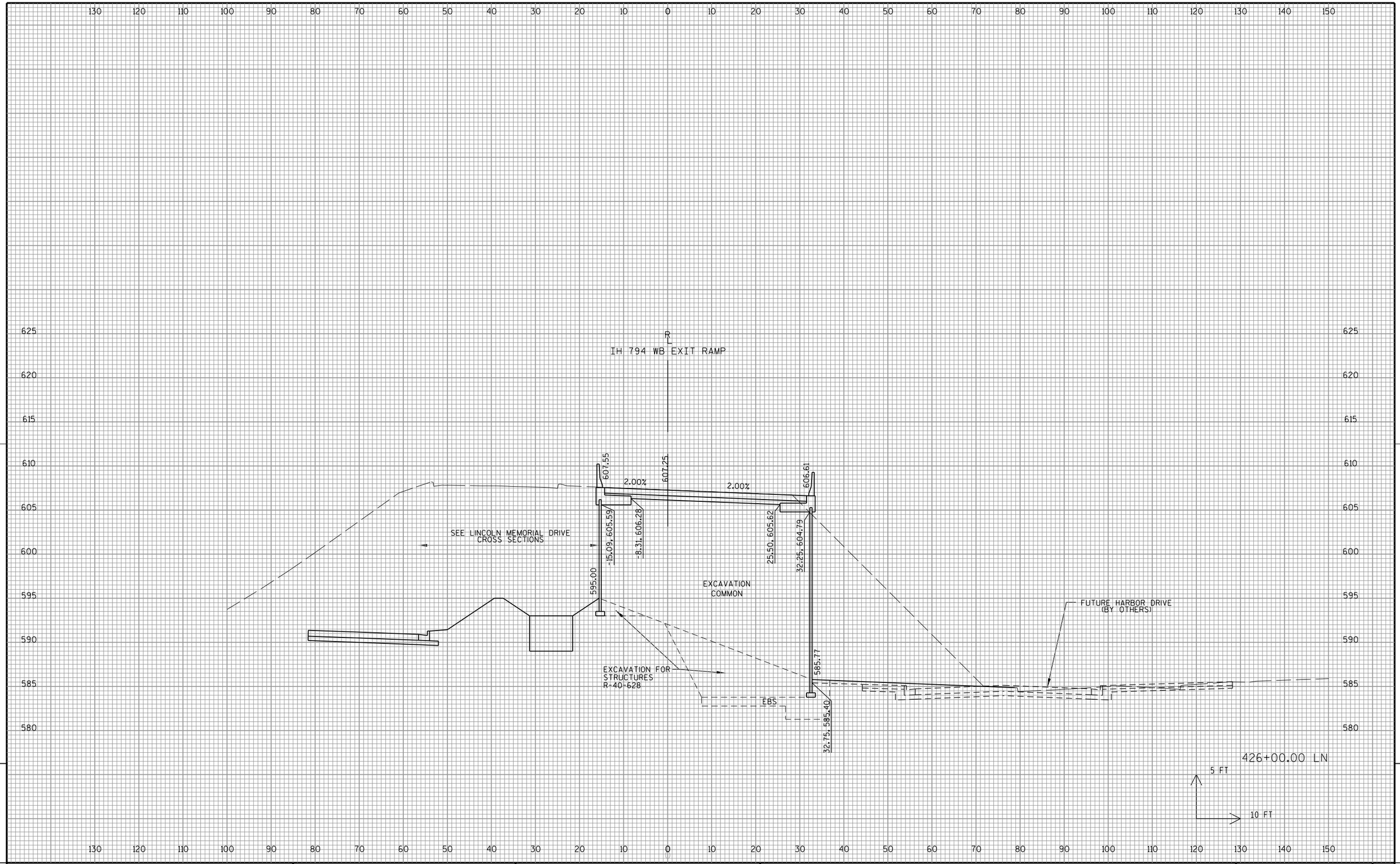
WISDOT/CADDS SHEET 21



PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:IH 794 WB EXIT RAMP	SHEET 909 E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

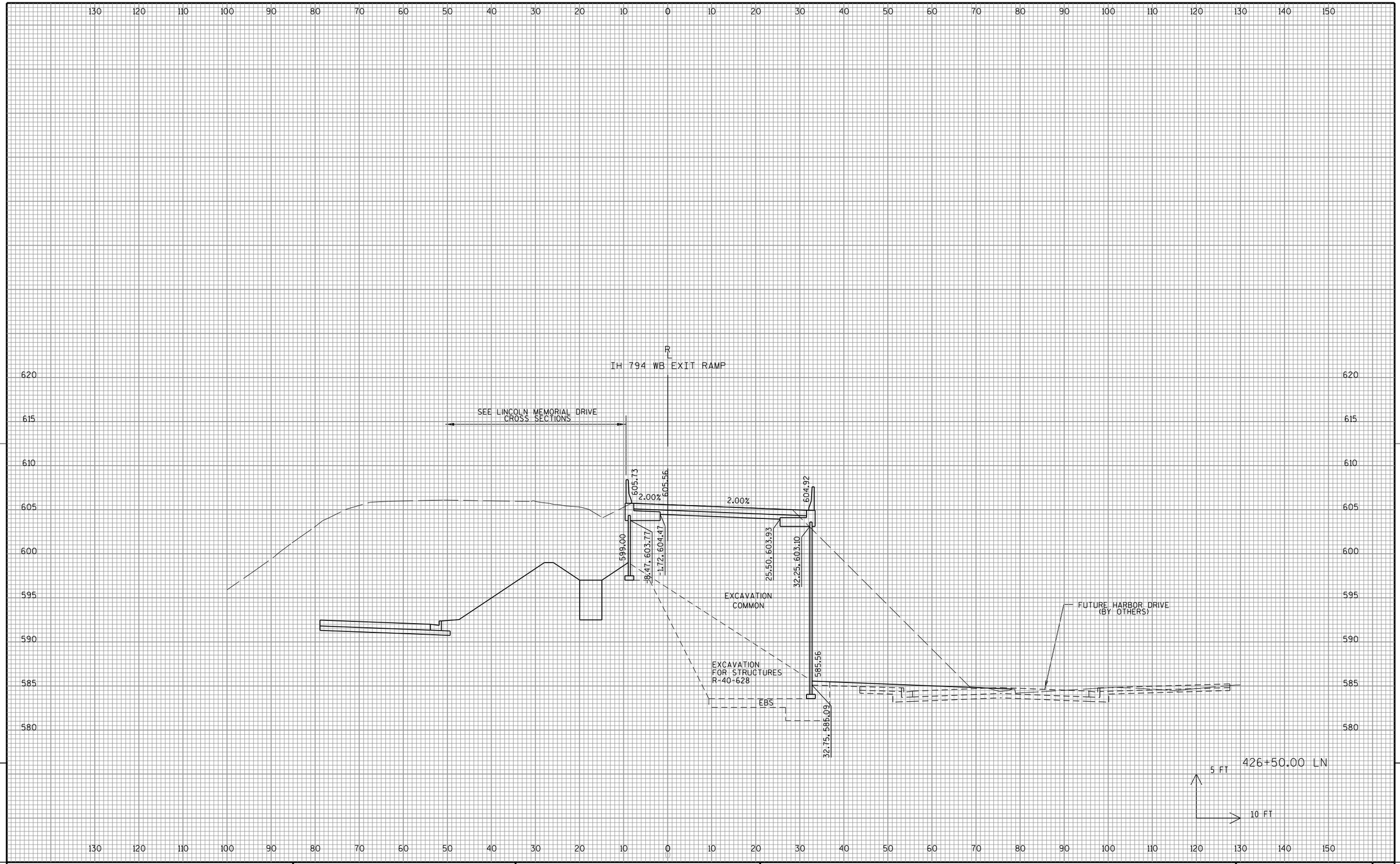
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB EXIT RAMP	SHEET 910	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

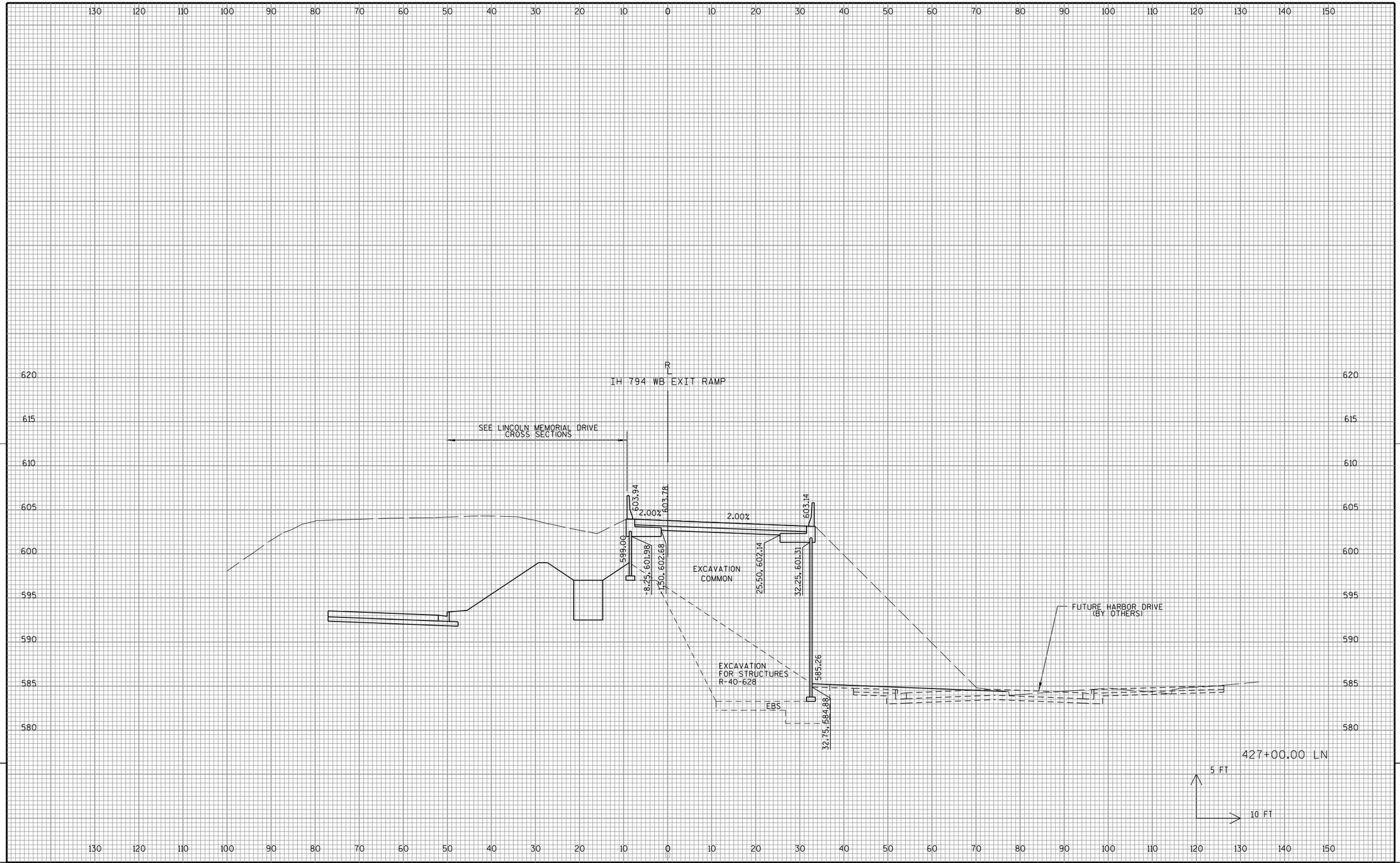
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB EXIT RAMP	SHEET 911	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

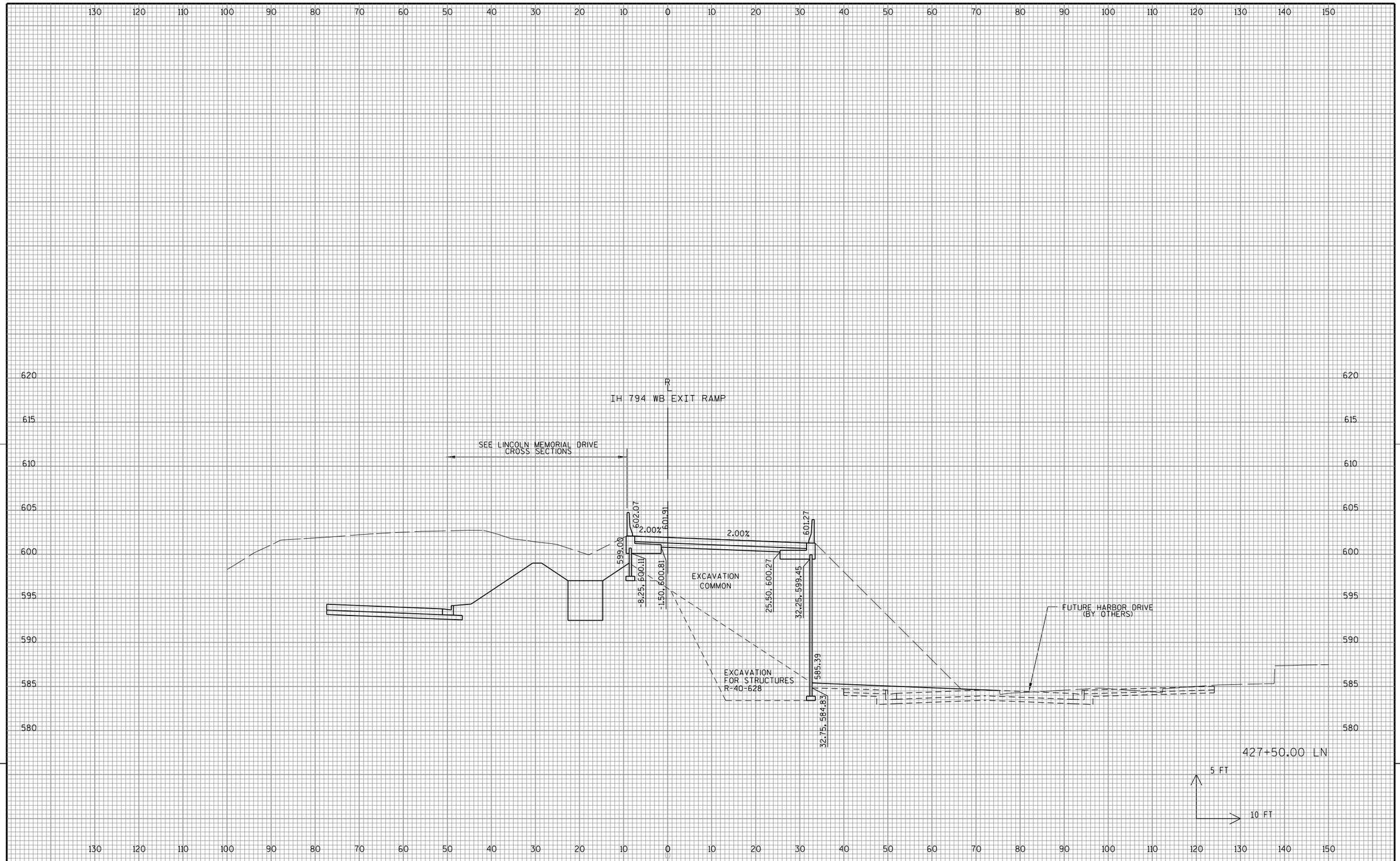
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB EXIT RAMP	SHEET 912	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB EXIT RAMP	SHEET 913	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

R
L

IH 794 WB EXIT RAMP

615
610
605
600
595
590
585
580

130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SEE LINCOLN MEMORIAL DRIVE CROSS SECTIONS

600.18

600.03

2.00%

2.00%

599.39

-7.85, 599.06

25.50, 598.39

32.25, 597.56

FUTURE HARBOR DRIVE (BY OTHERS)

EXCAVATION FOR STRUCTURES R-40-628

585.54

32.75, 584.95

428+00.00 LN

5 FT

10 FT

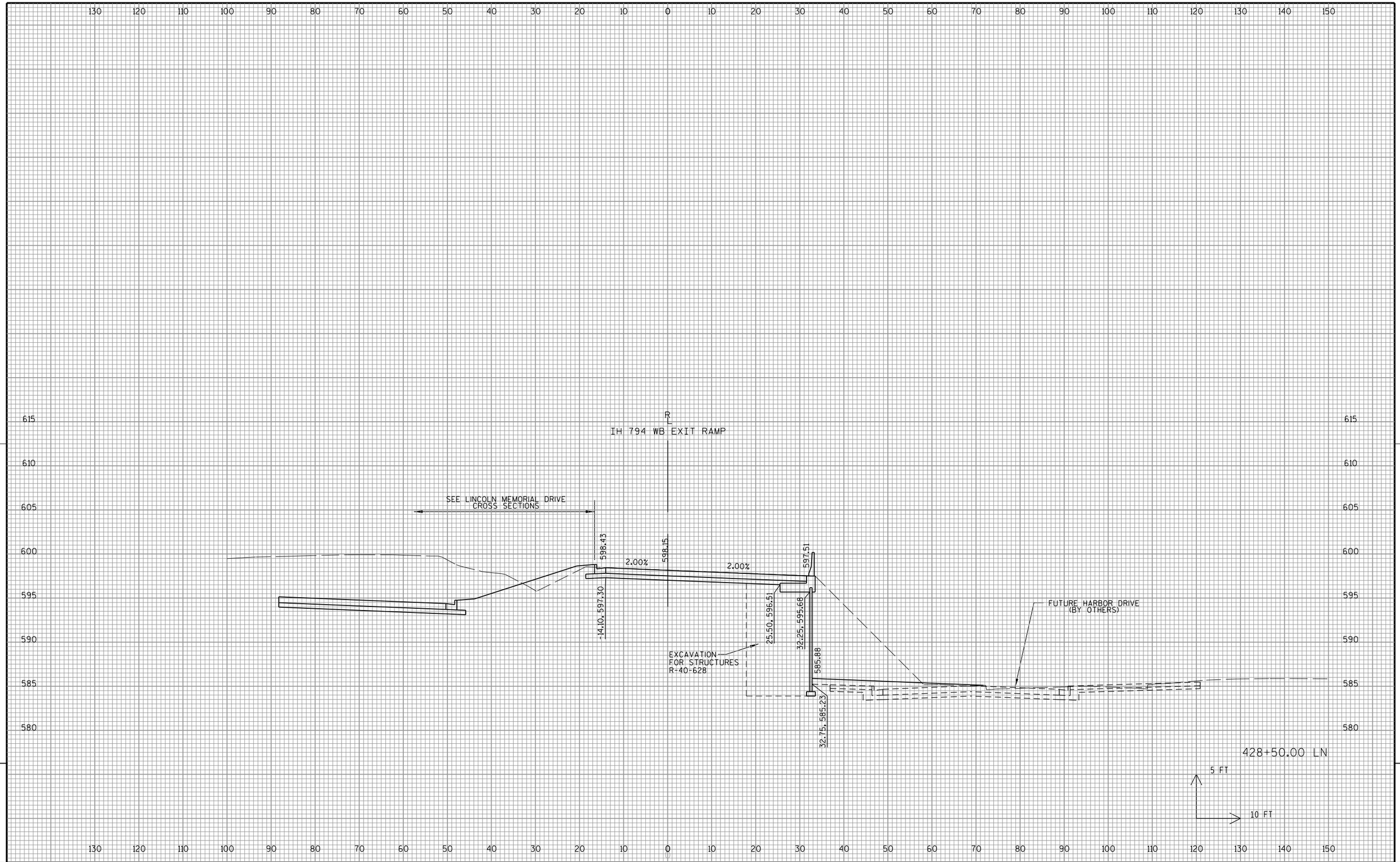
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB EXIT RAMP	SHEET 914	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

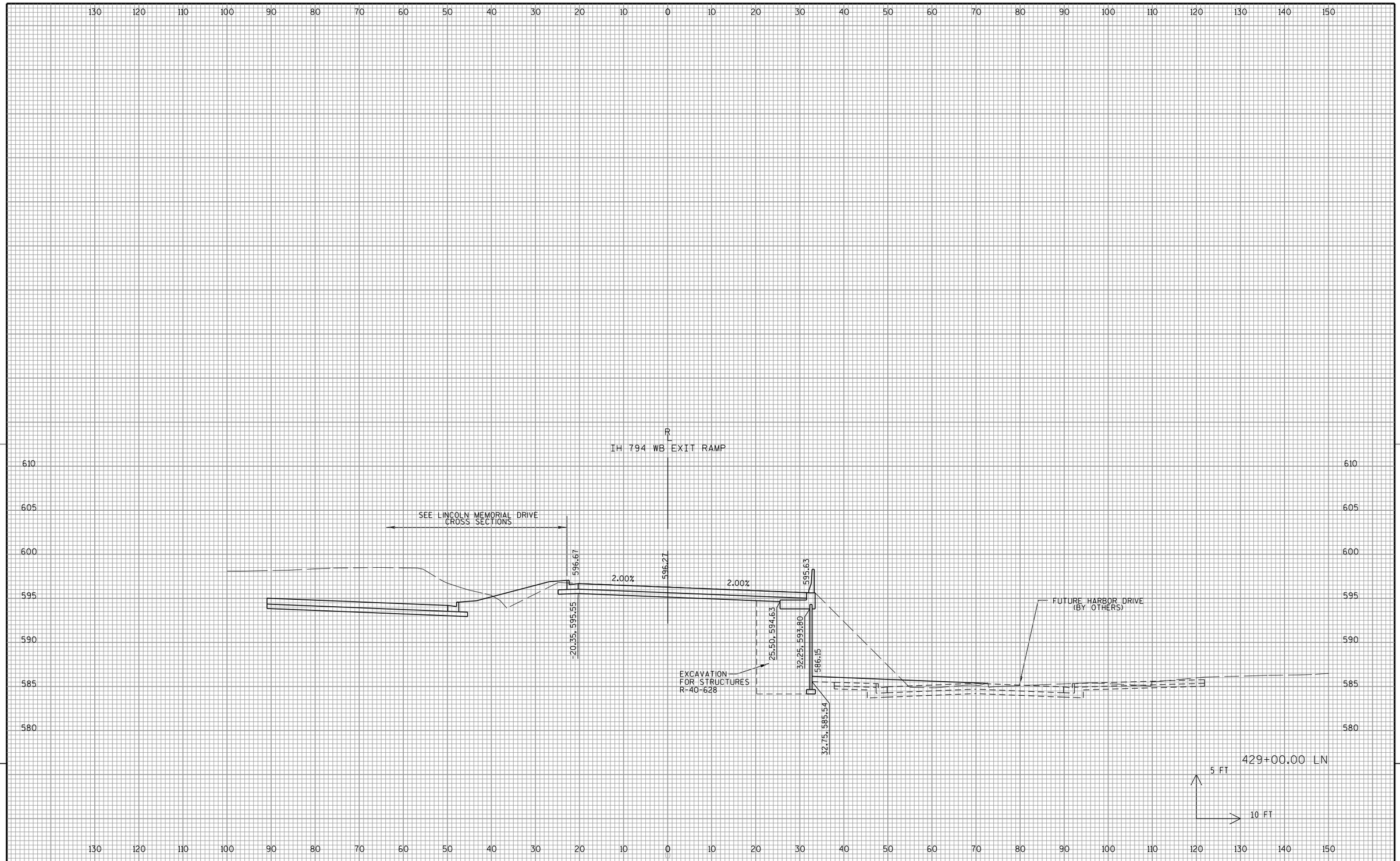
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB EXIT RAMP	SHEET 915	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

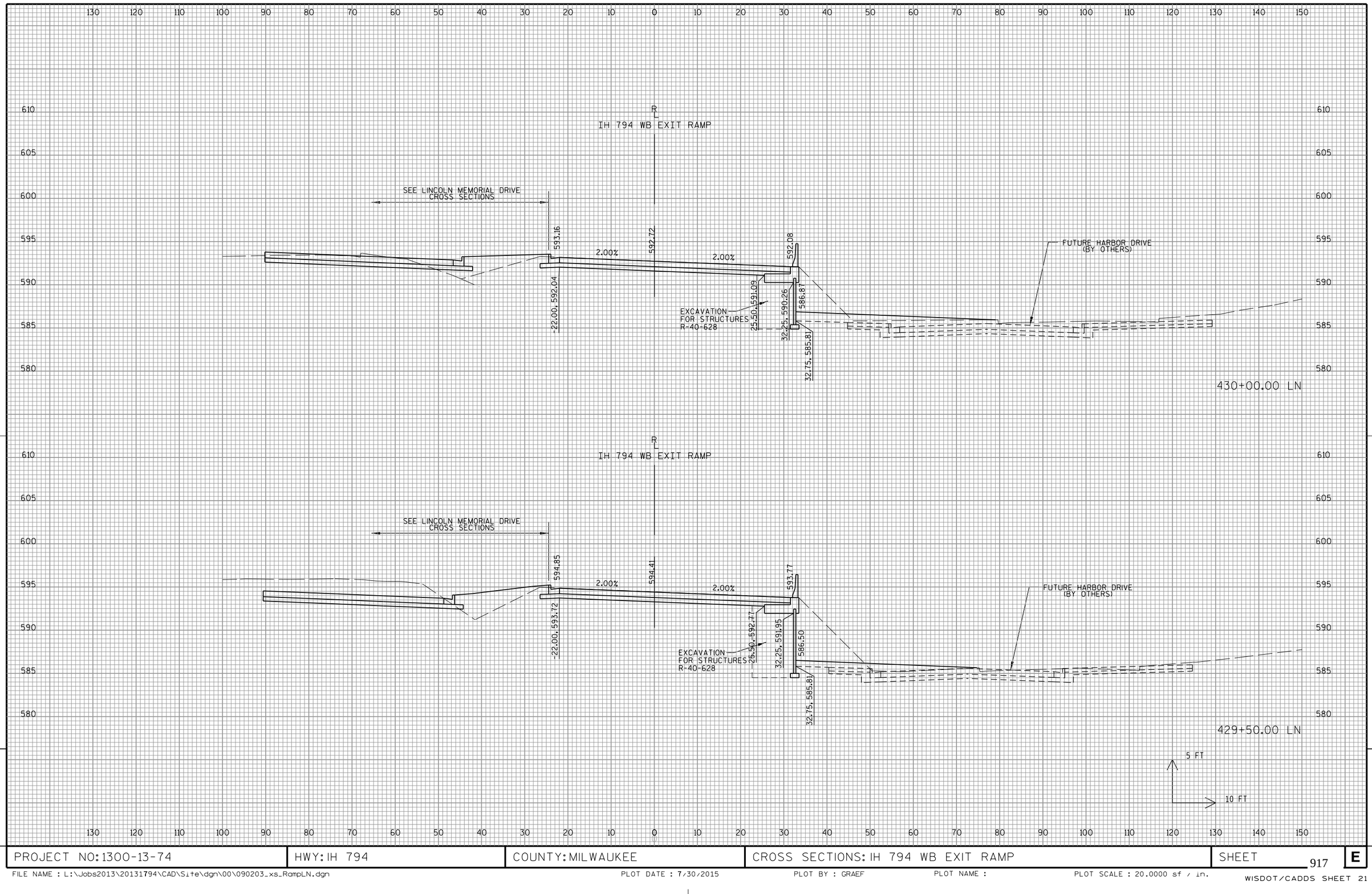
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB EXIT RAMP	SHEET 916	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

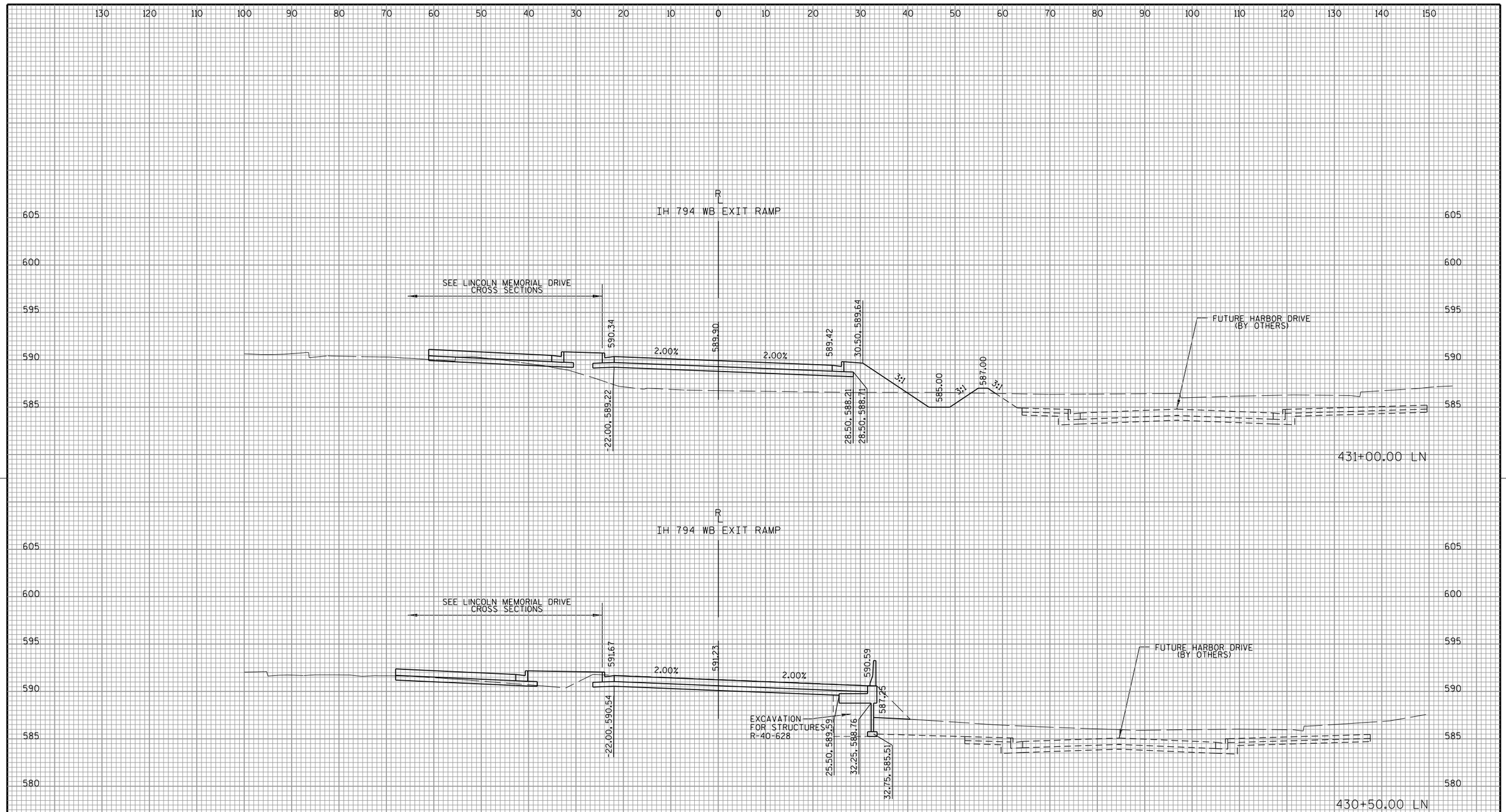
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 WB EXIT RAMP	SHEET 917	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



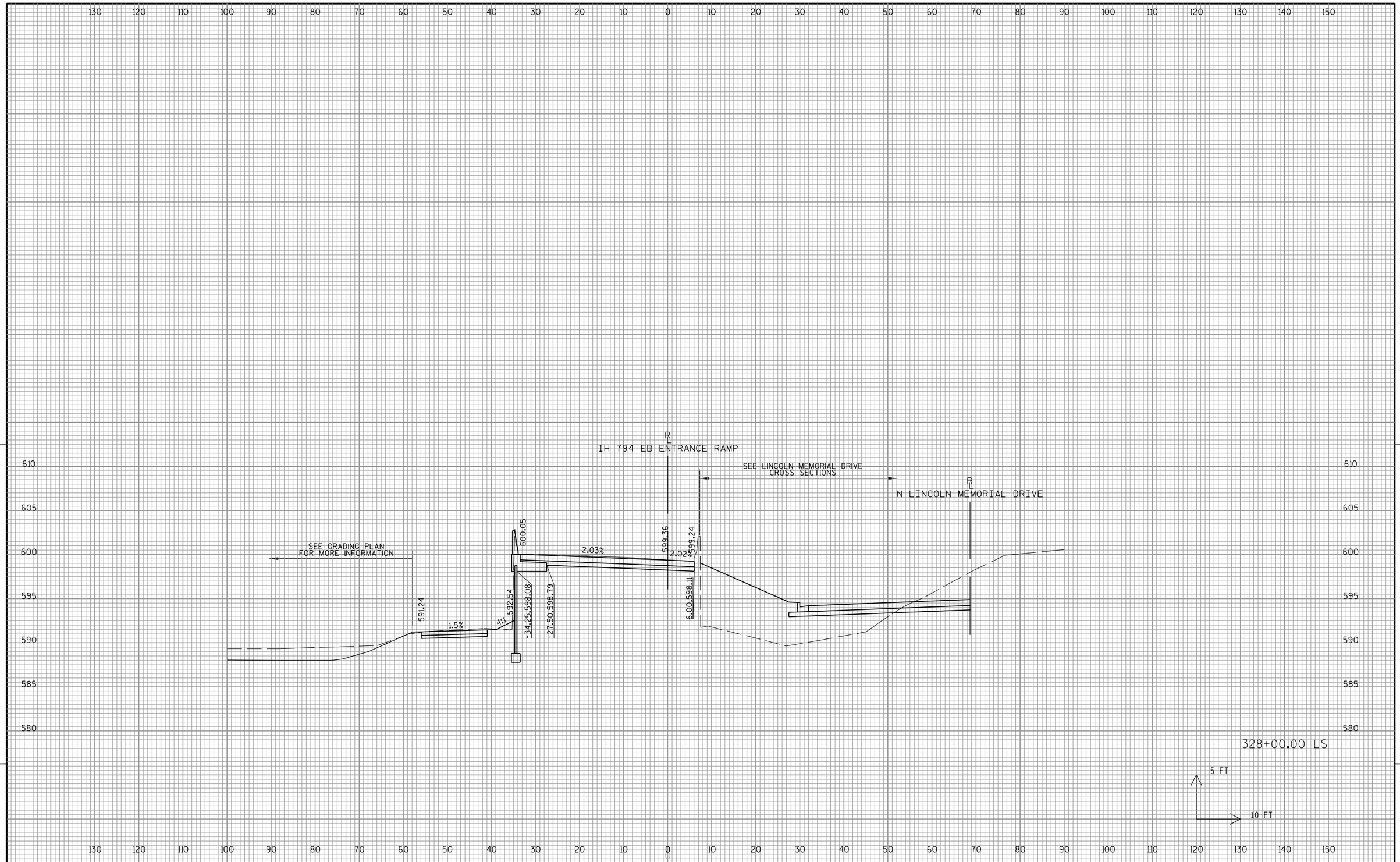
9

9

PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:IH 794 WB EXIT RAMP	SHEET 918	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090203_xs_RampLN.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

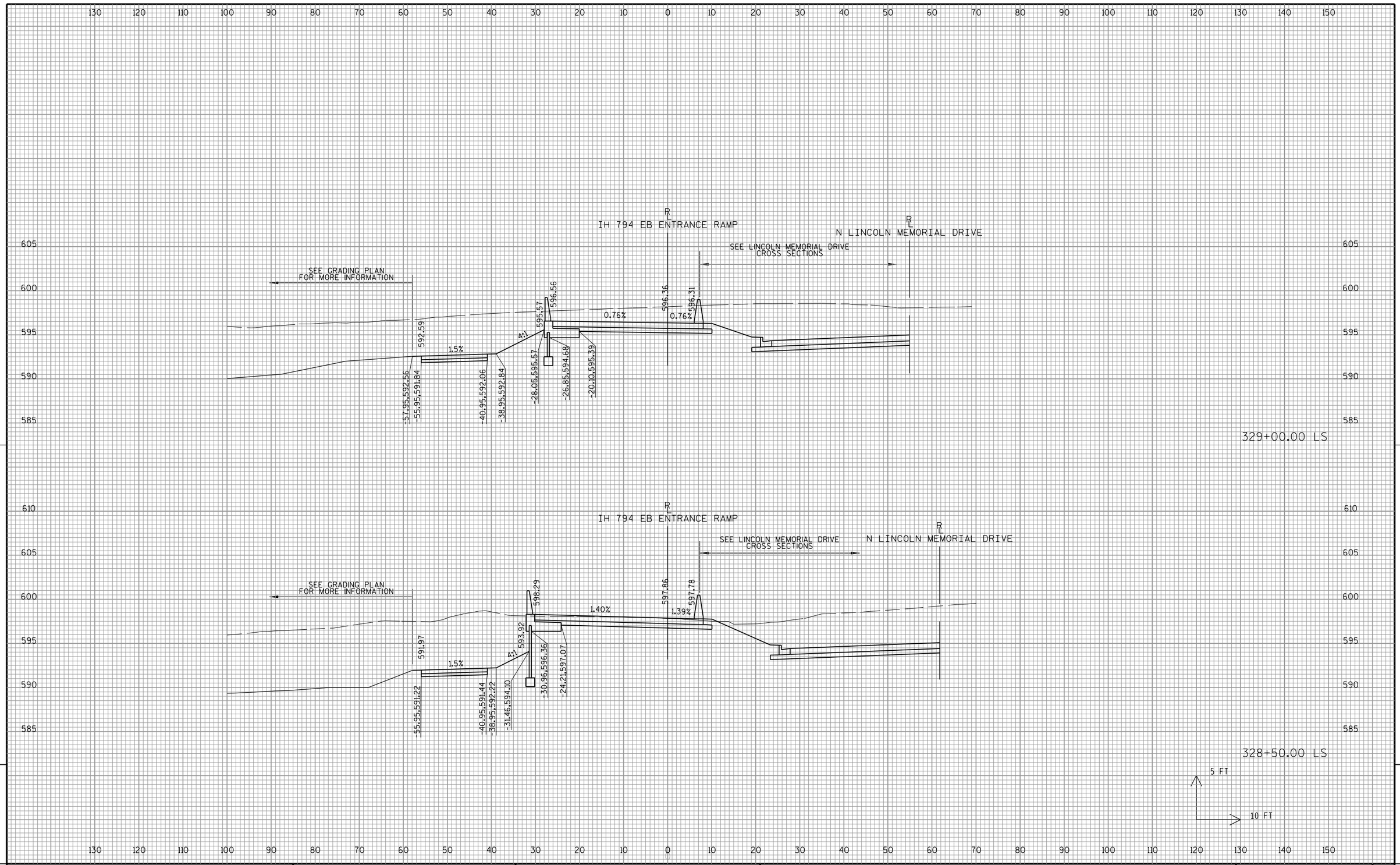
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 794 EB ENTRANCE RAMP	SHEET 919	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090204_xs_RampLS.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

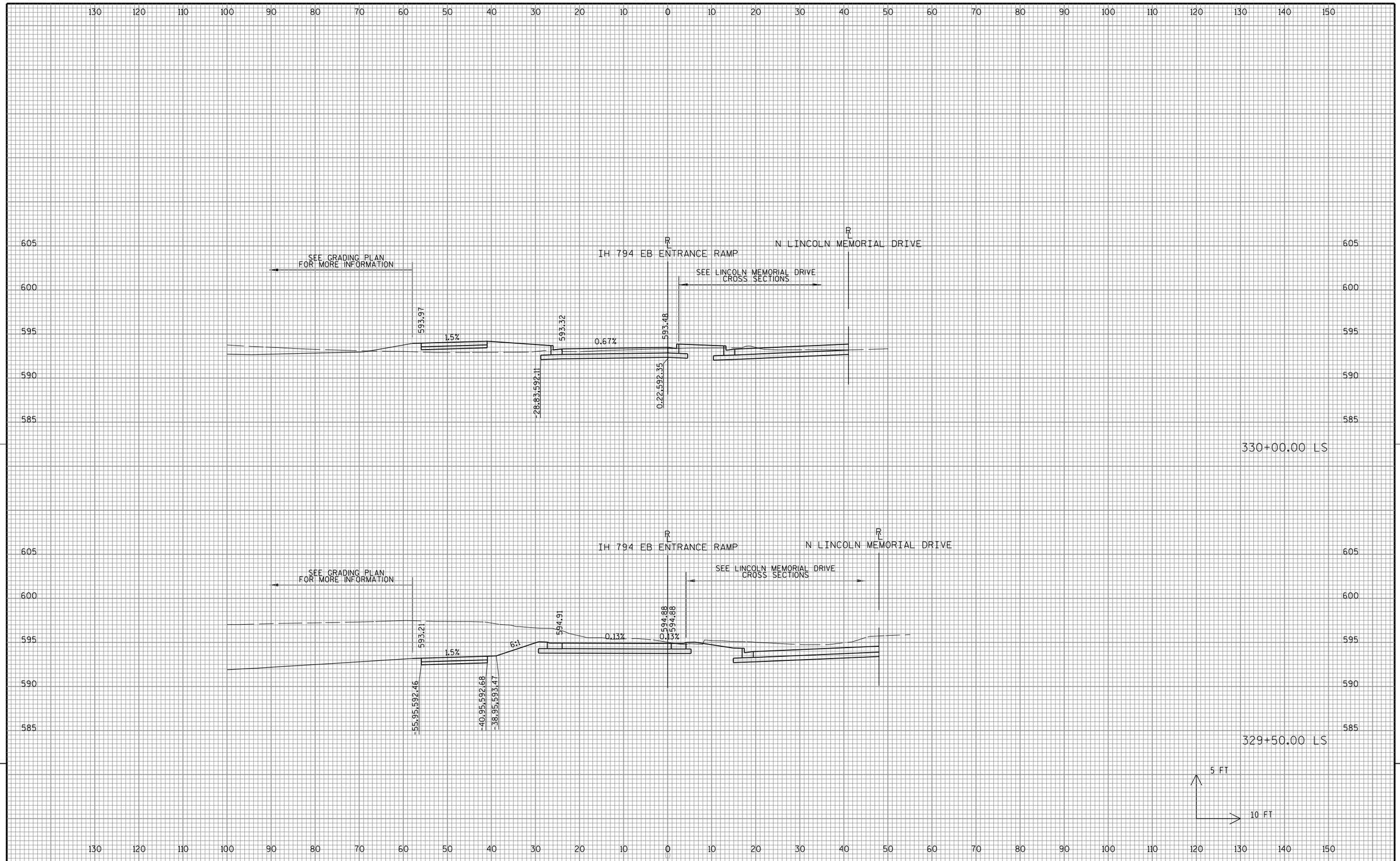
WISDOT/CADDS SHEET 21



PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:IH 794 EB ENTRANCE RAMP	SHEET 920	E

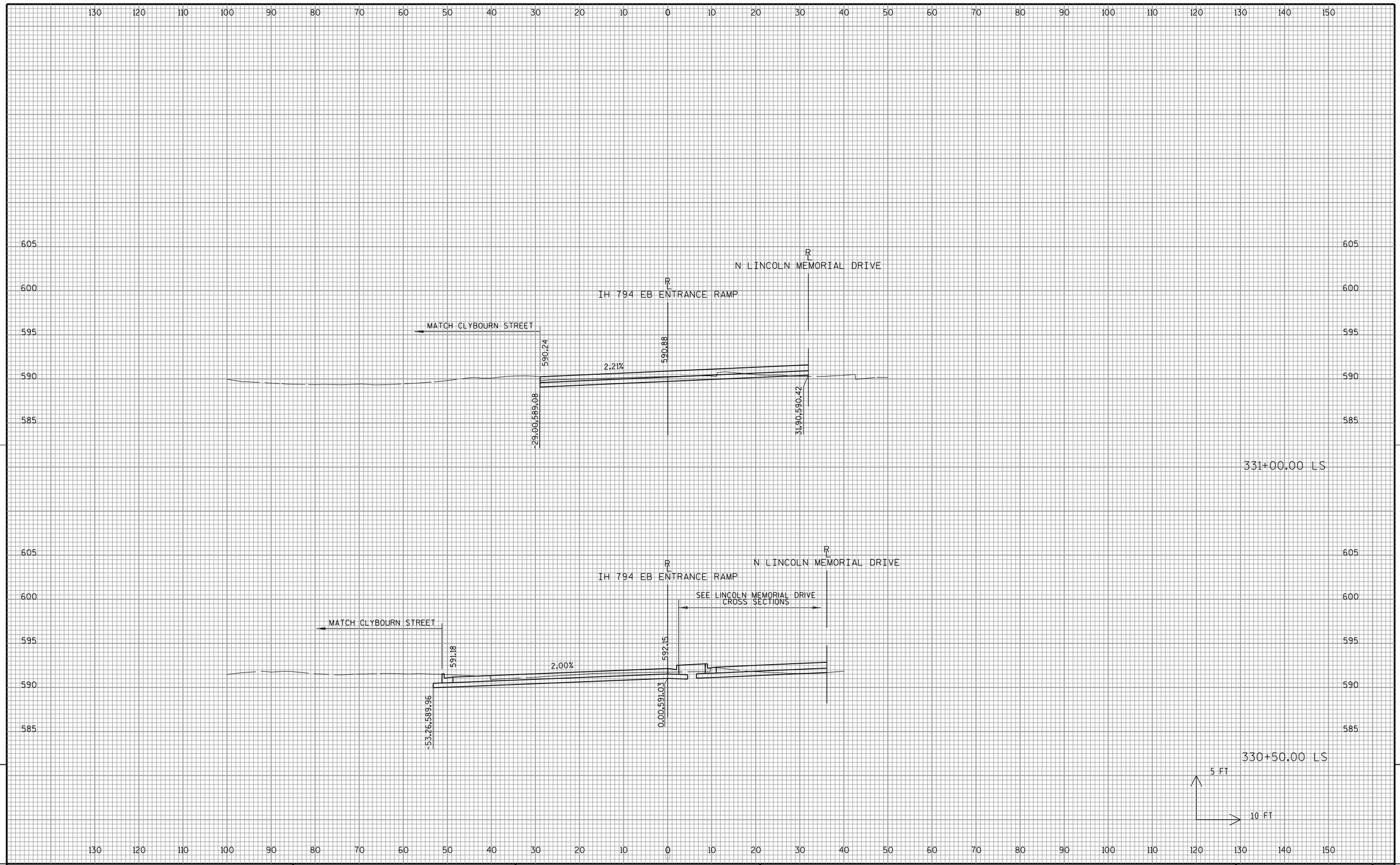
FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090204_xs_RampLS.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:IH 794 EB ENTRANCE RAMP	SHEET 921	E

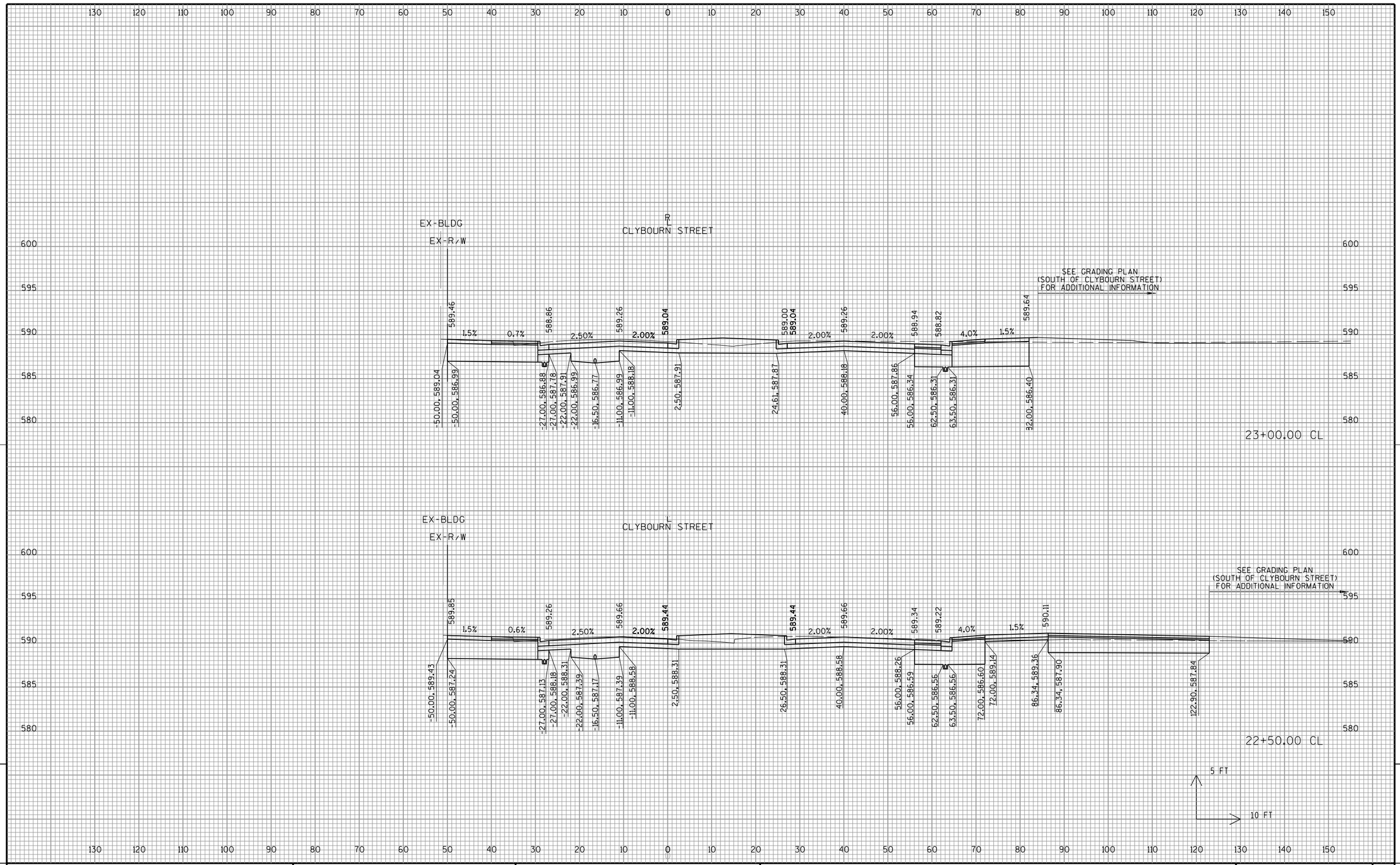
FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090204_xs_RampLS.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.



PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:IH 794 EB ENTRANCE RAMP	SHEET 922	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090204_xs_RampLS.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

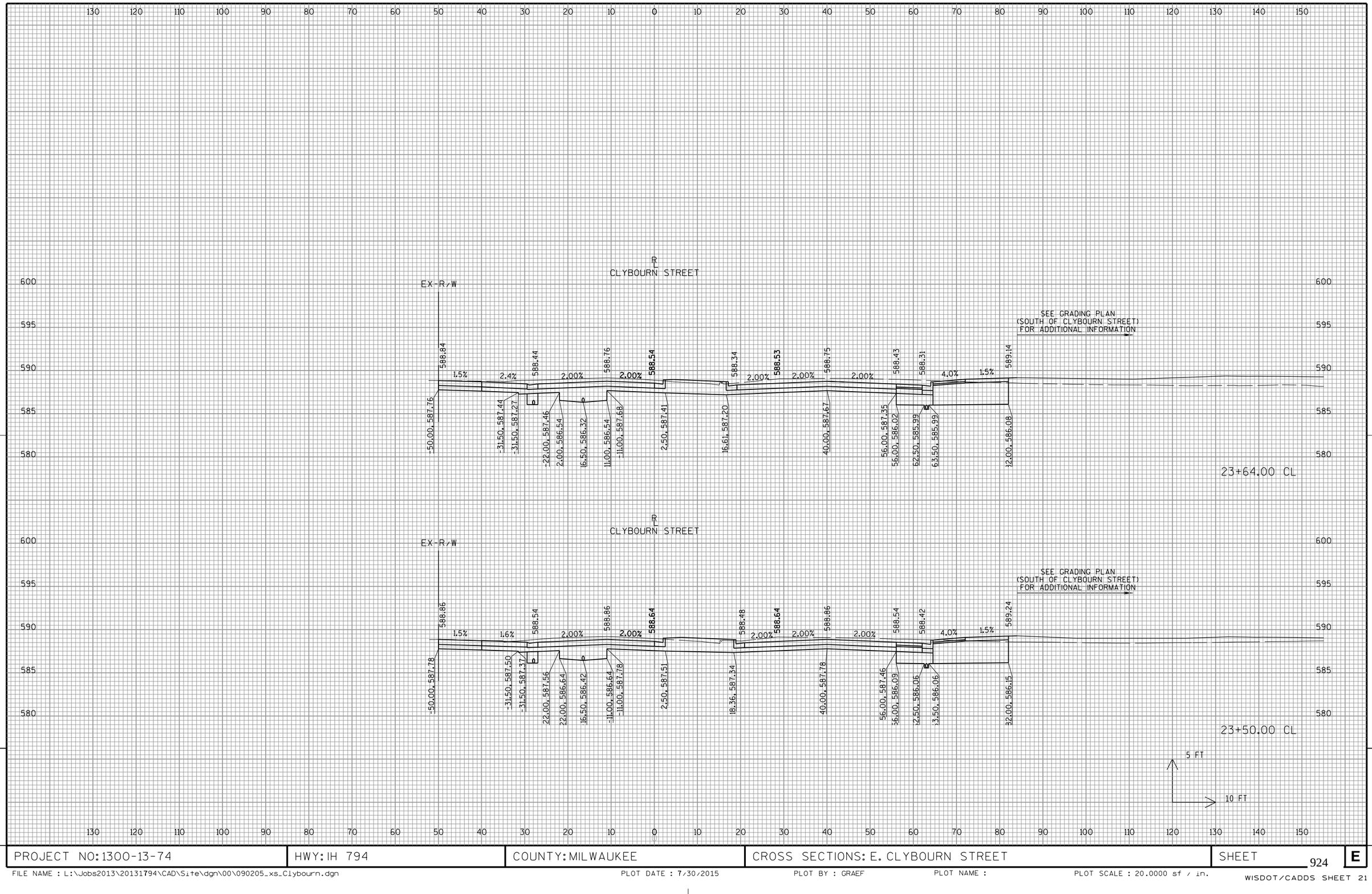
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CLYBOURN STREET	SHEET 923	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090205_xs_Clybourn.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

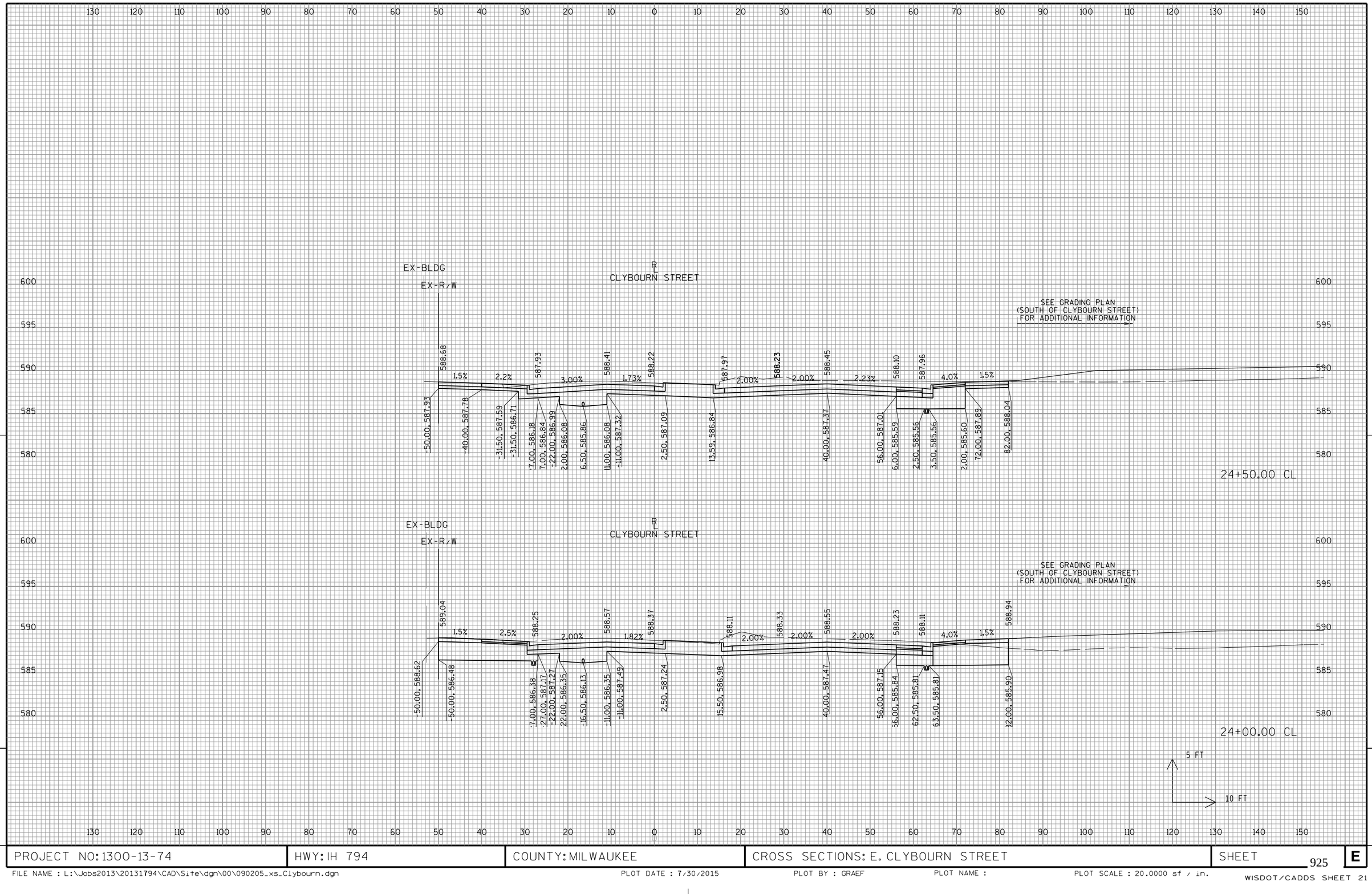
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CLYBOURN STREET	SHEET 924	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090205_xs_Clybourn.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

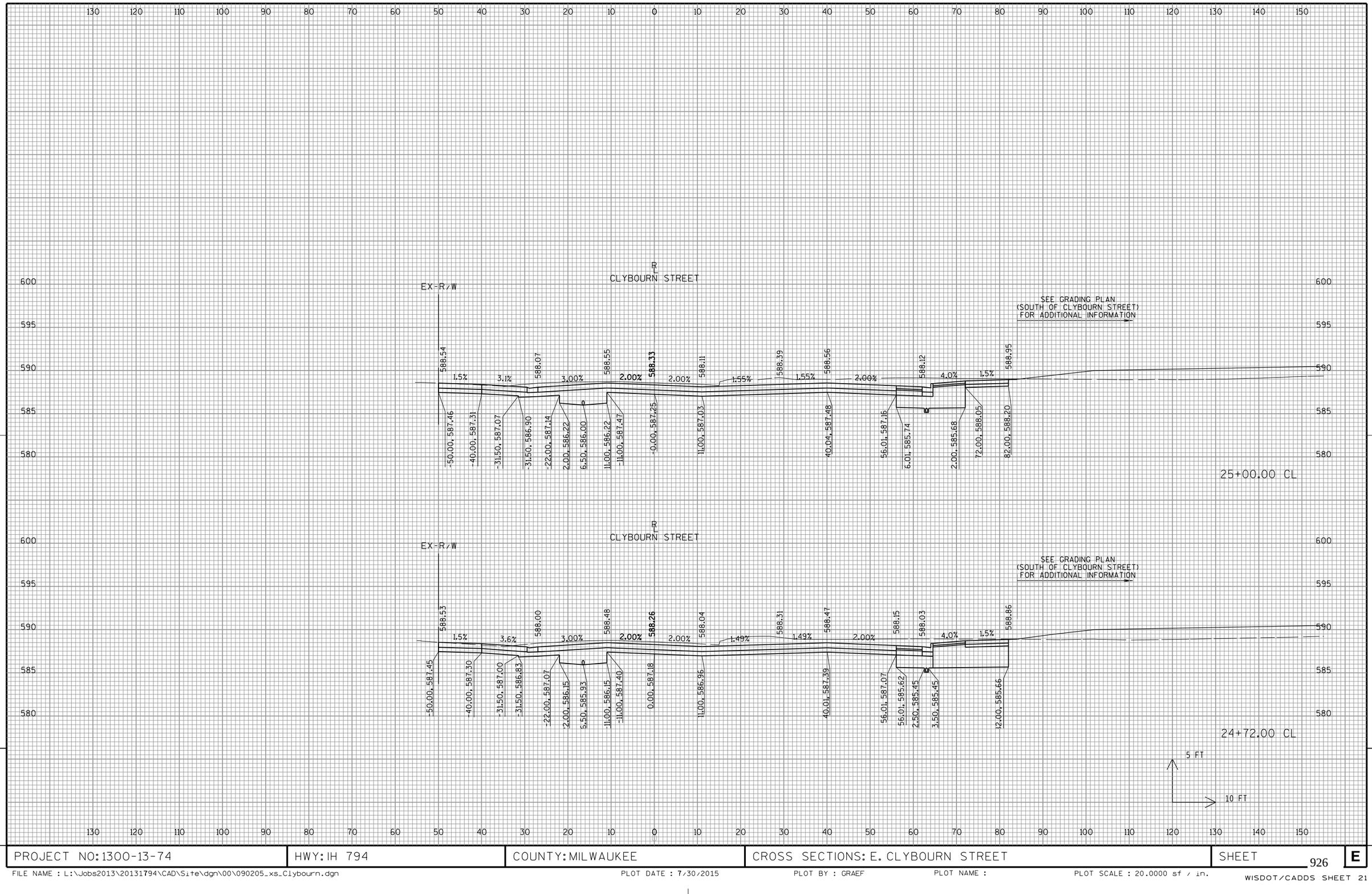
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CLYBOURN STREET	SHEET 925	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090205_xs_Clybourn.dgn | PLOT DATE : 7/30/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



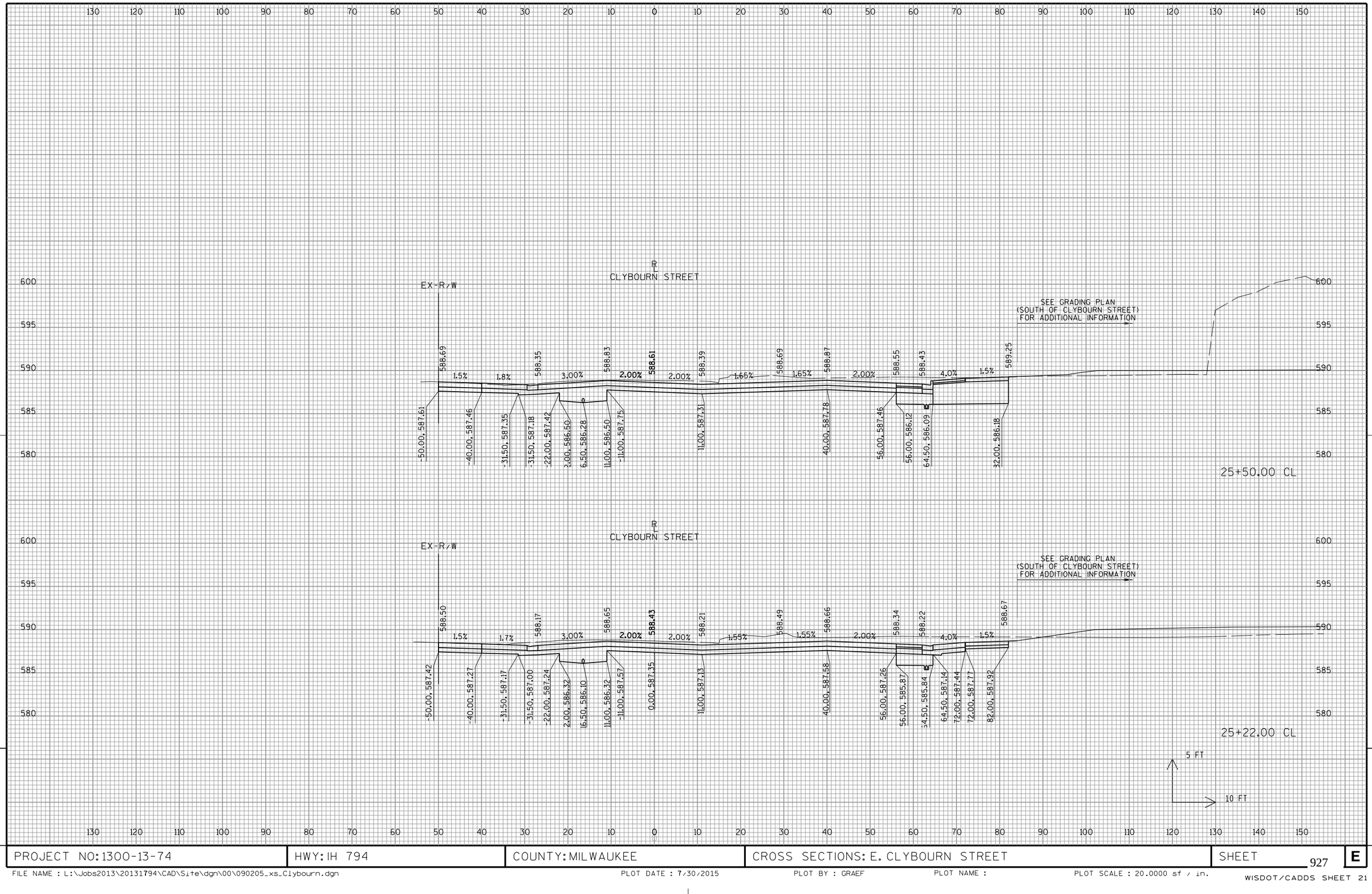
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CLYBOURN STREET	SHEET 926	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090205_xs_Clybourn.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

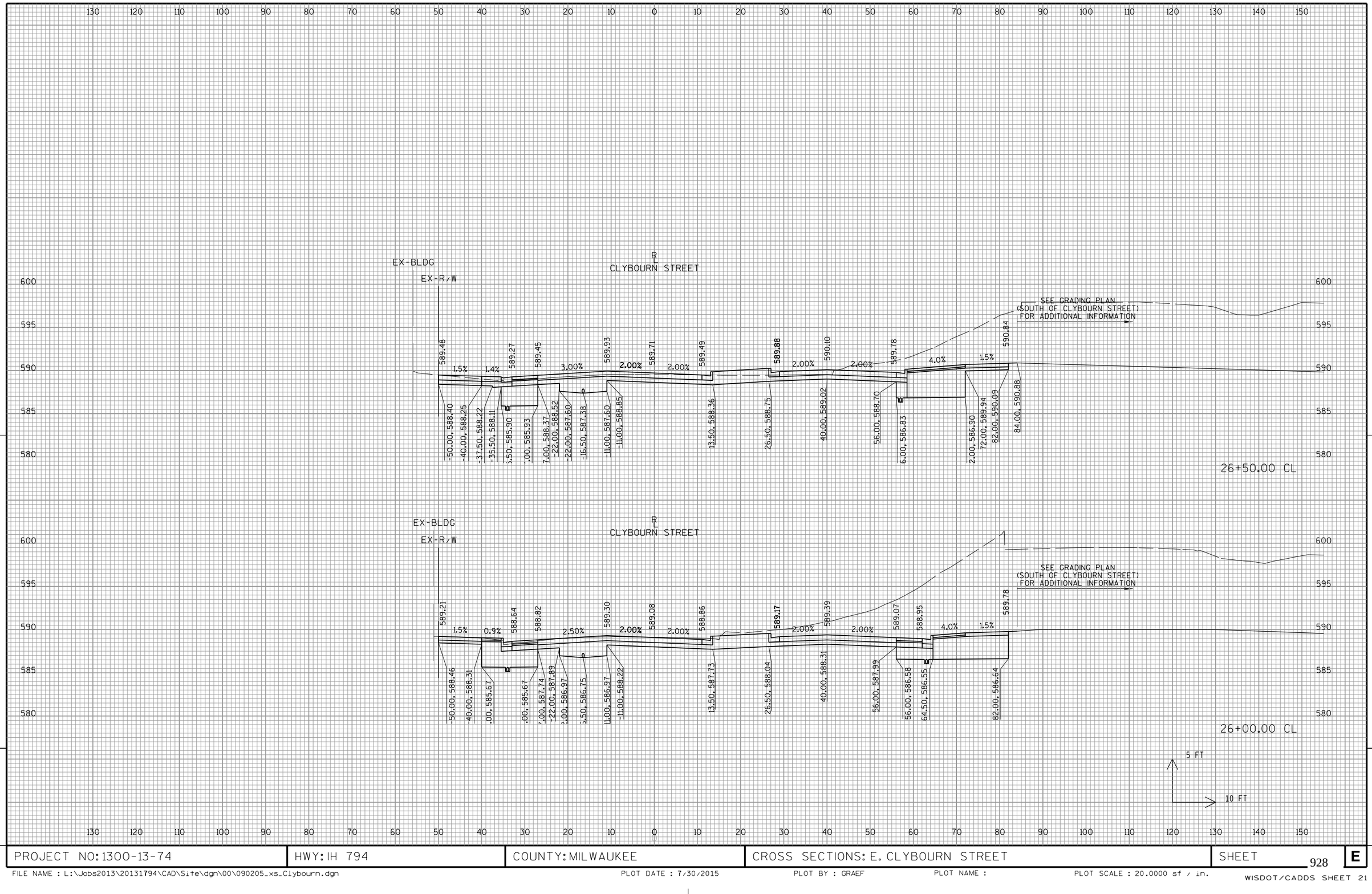
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CLYBOURN STREET	SHEET 927	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090205_xs_Clybourn.dgn | PLOT DATE : 7/30/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



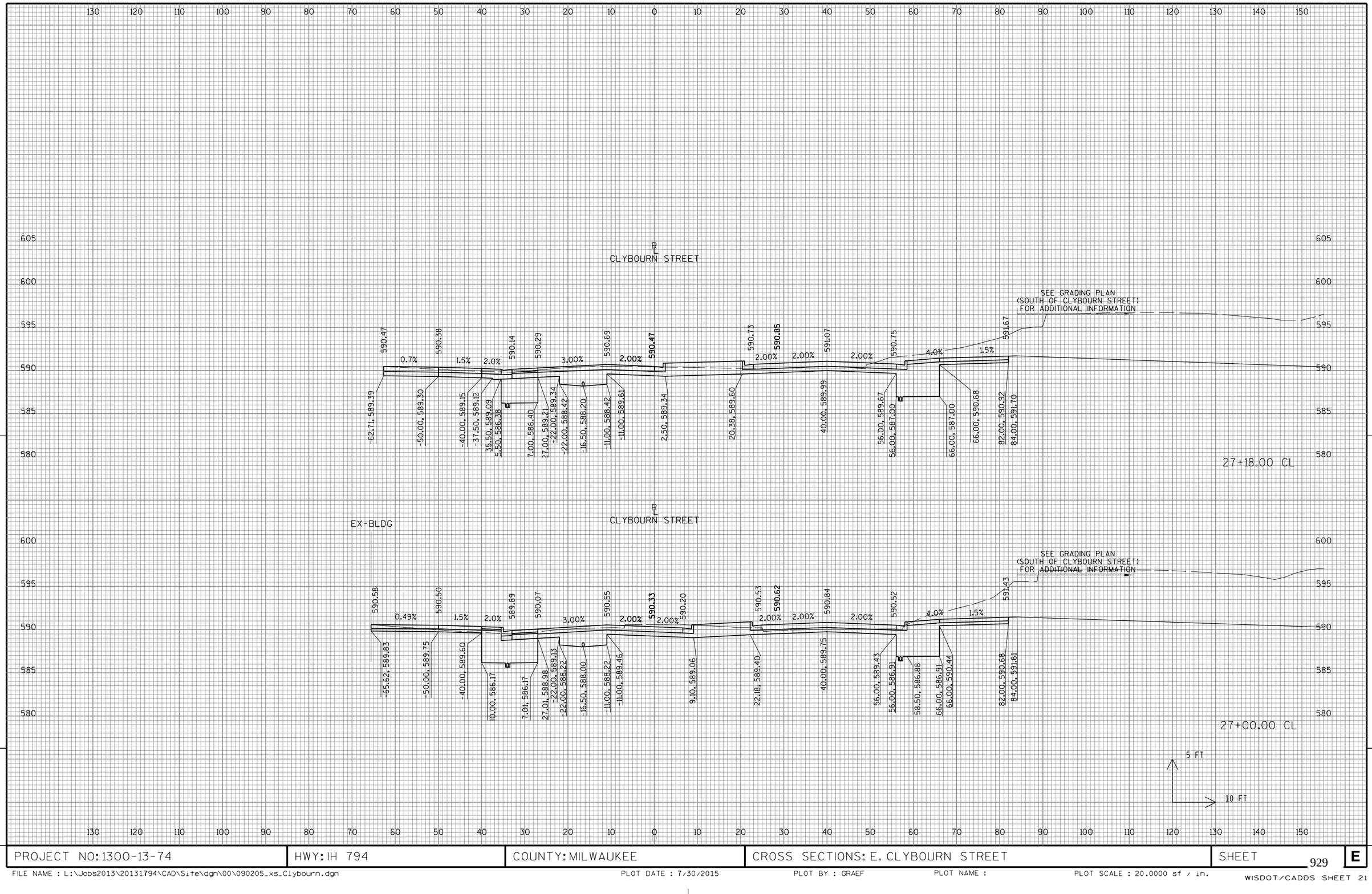
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CLYBOURN STREET	SHEET 928	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090205_xs_Clybourn.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



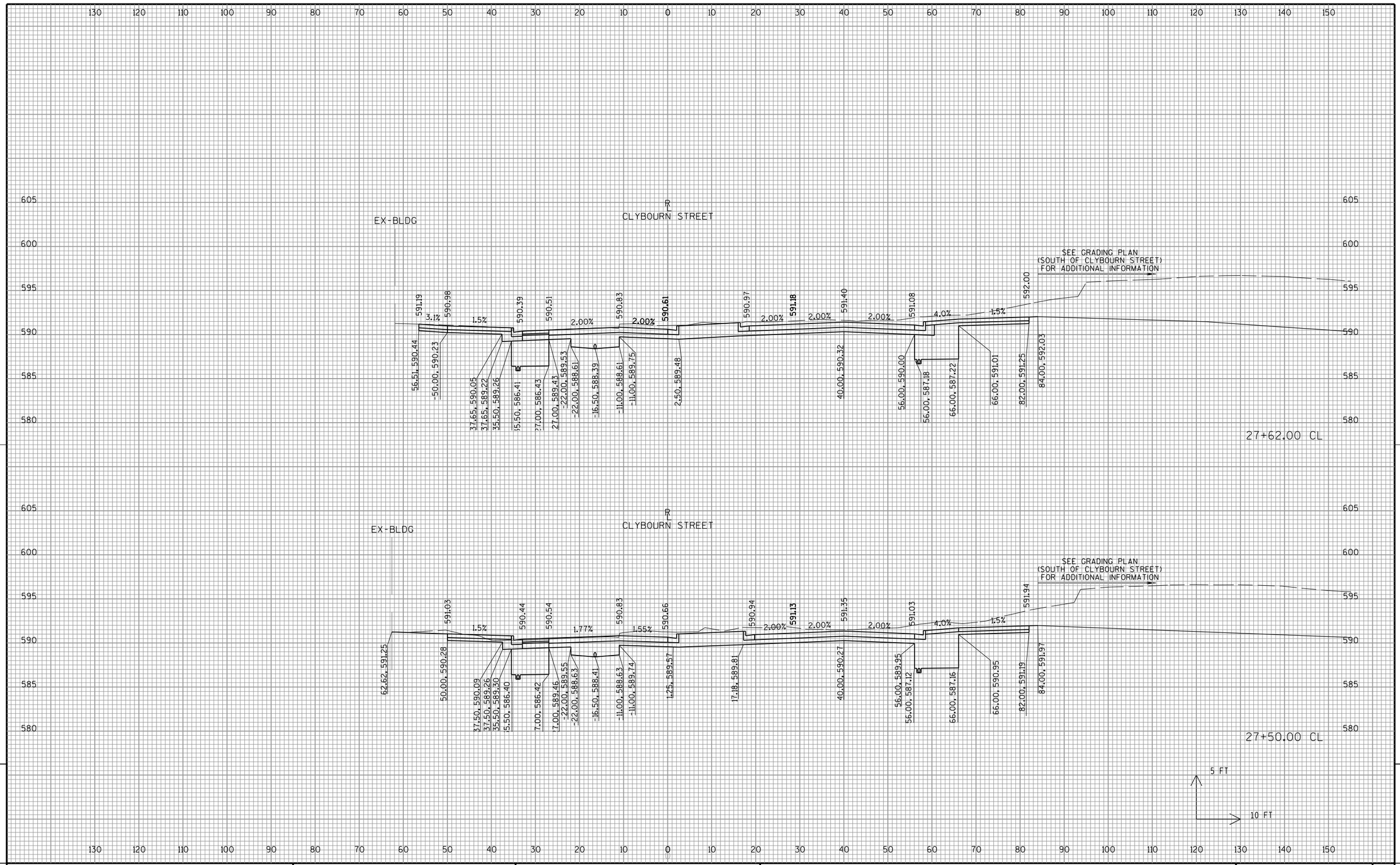
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CLYBOURN STREET	SHEET 929	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090205_xs_Clybourn.dgn | PLOT DATE : 7/30/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 20.0000 sf / in.

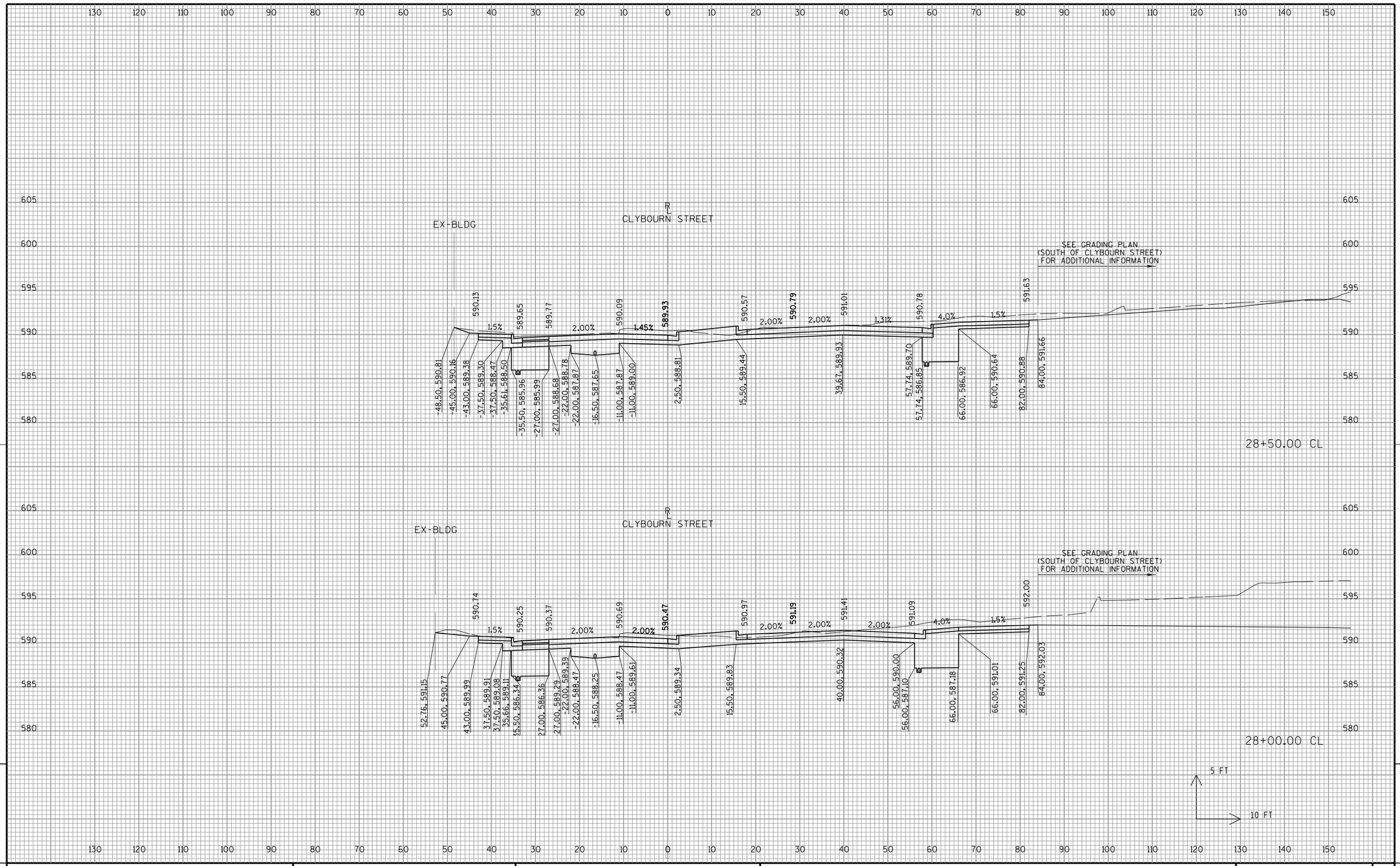
WISDOT/CADDS SHEET 21



PROJECT NO:1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CLYBOURN STREET	SHEET 930	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090205_xs_Clybourn.dgn | PLOT DATE : 7/30/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 20.0000 sf / in.

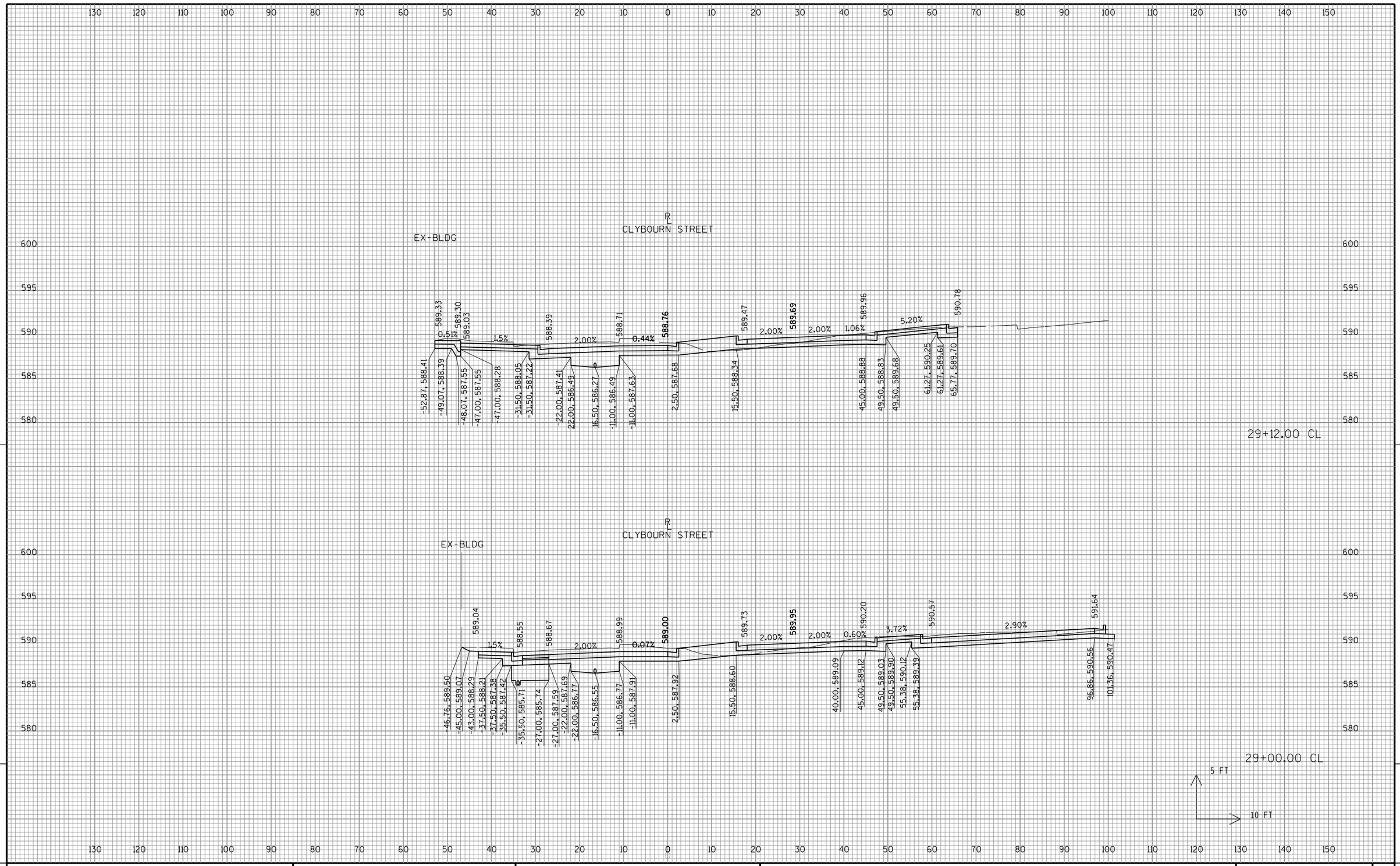
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CLYBOURN STREET	SHEET 931	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090205_xs_Clybourn.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

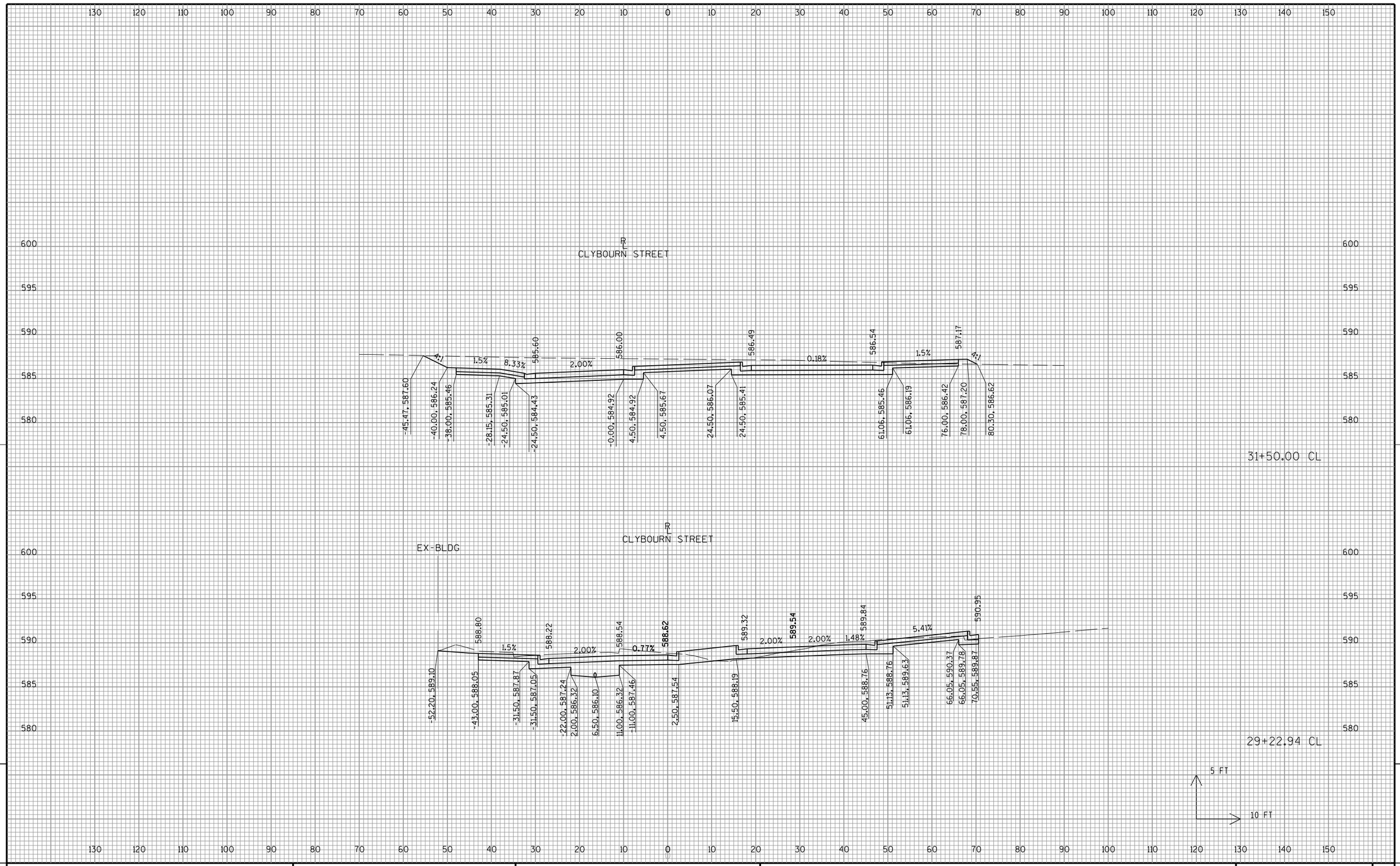
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CLYBOURN STREET	SHEET 932	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090205_xs_Clybourn.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



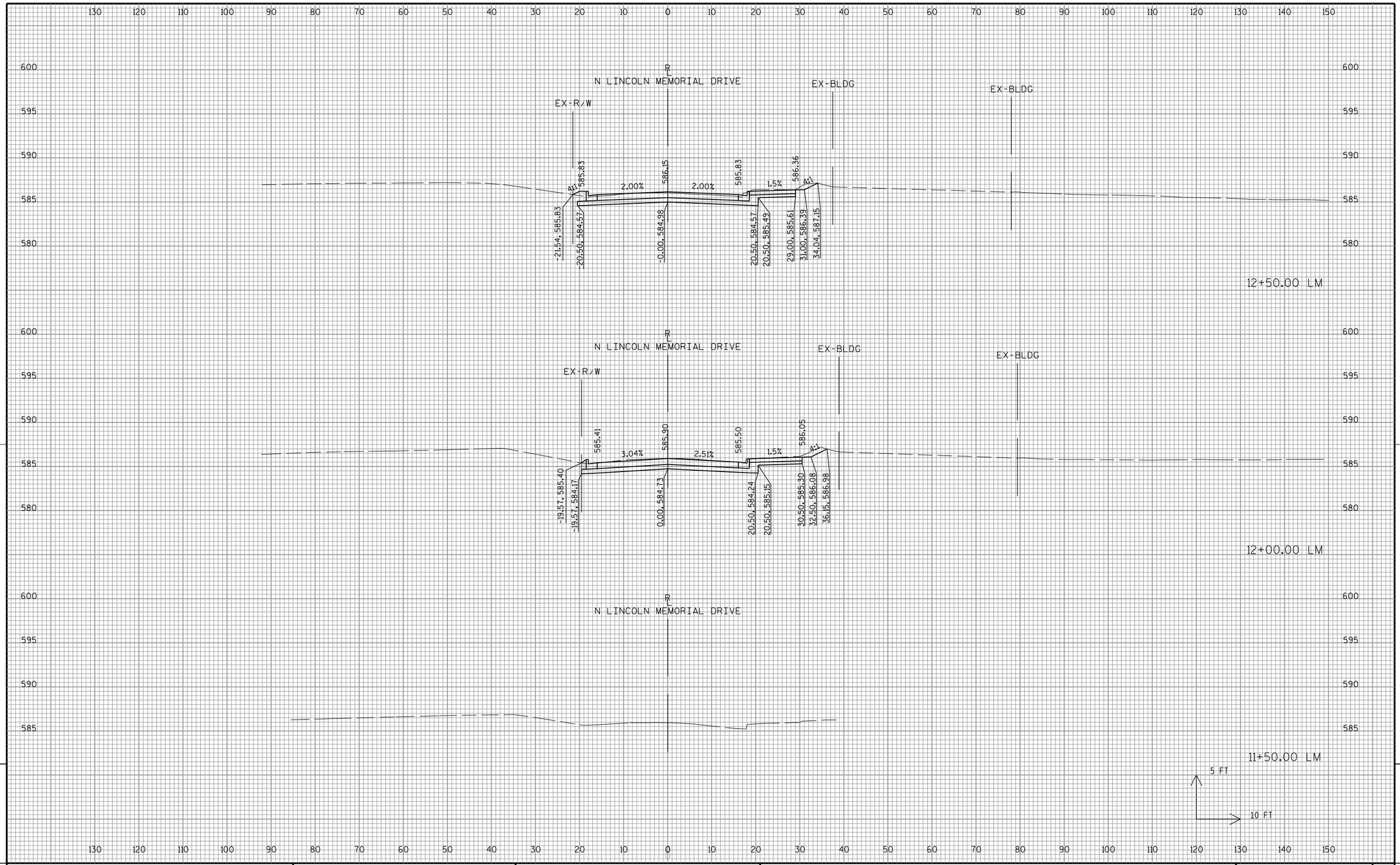
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CLYBOURN STREET	SHEET 933	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090205_xs_Clybourn.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

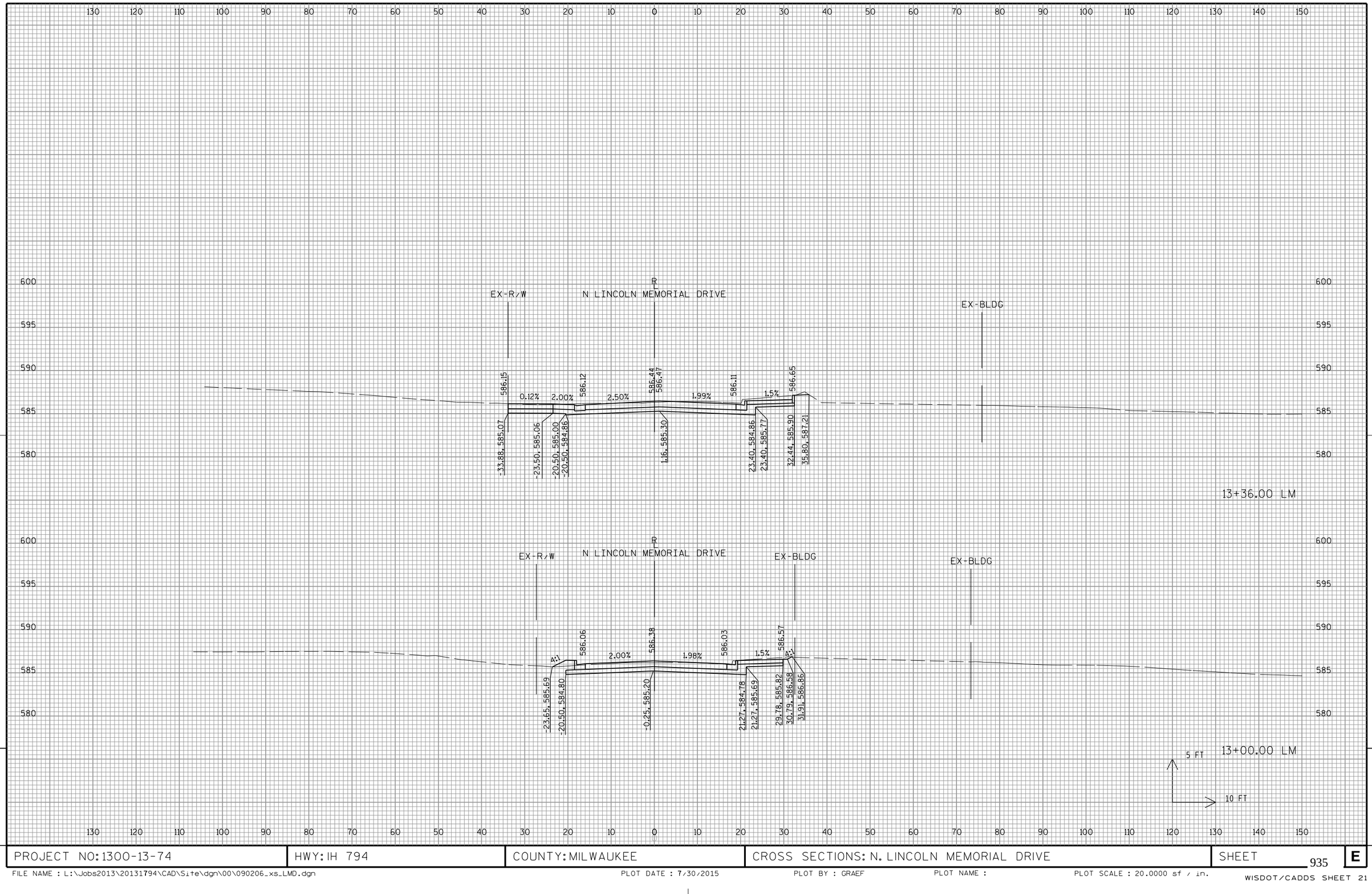
WISDOT/CADDS SHEET 21



PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:N. LINCOLN MEMORIAL DRIVE	SHEET 934 E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



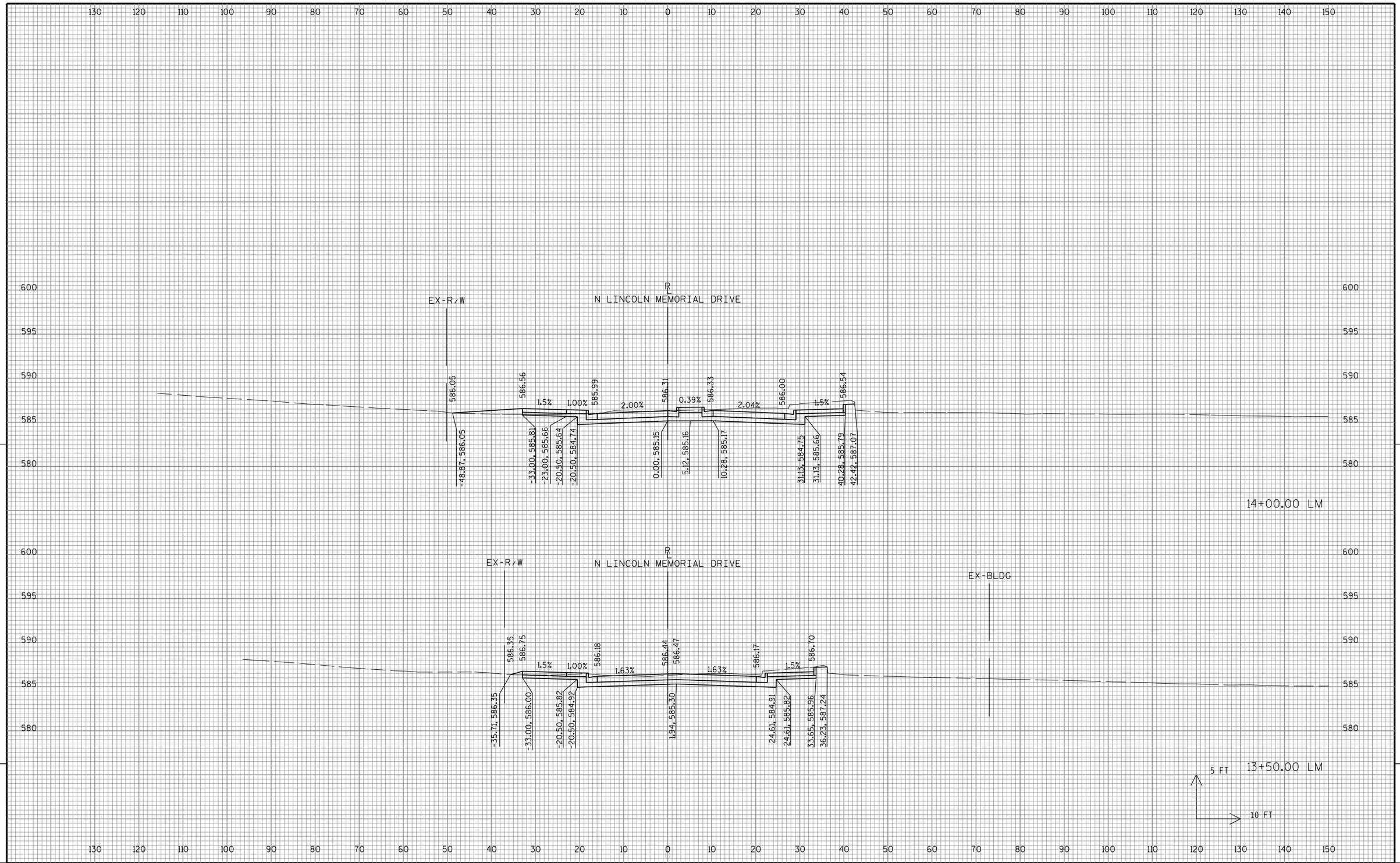
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 935	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



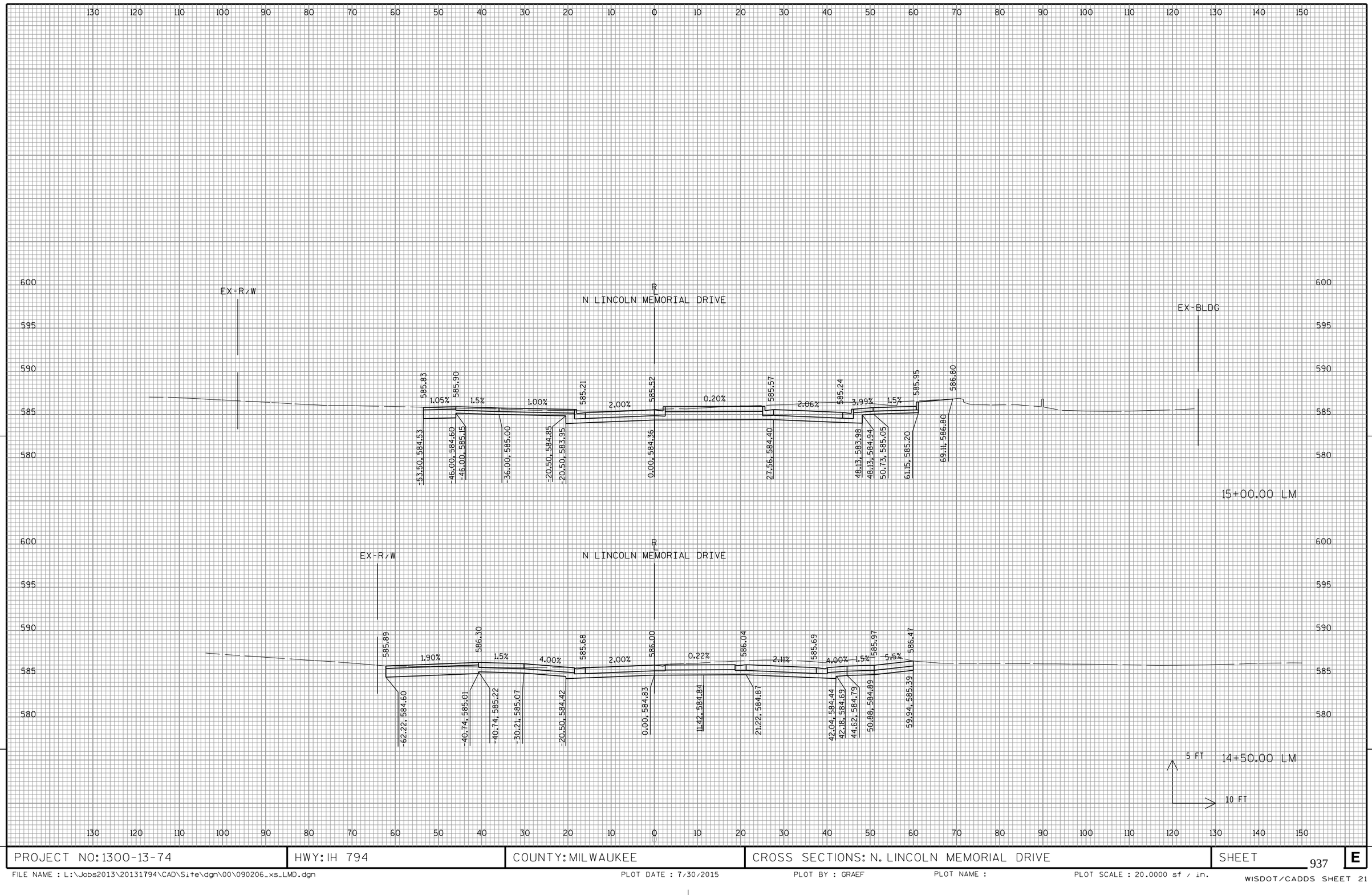
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 936	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn | PLOT DATE : 7/30/2015 | PLOT BY : GRAEF | PLOT NAME : | PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

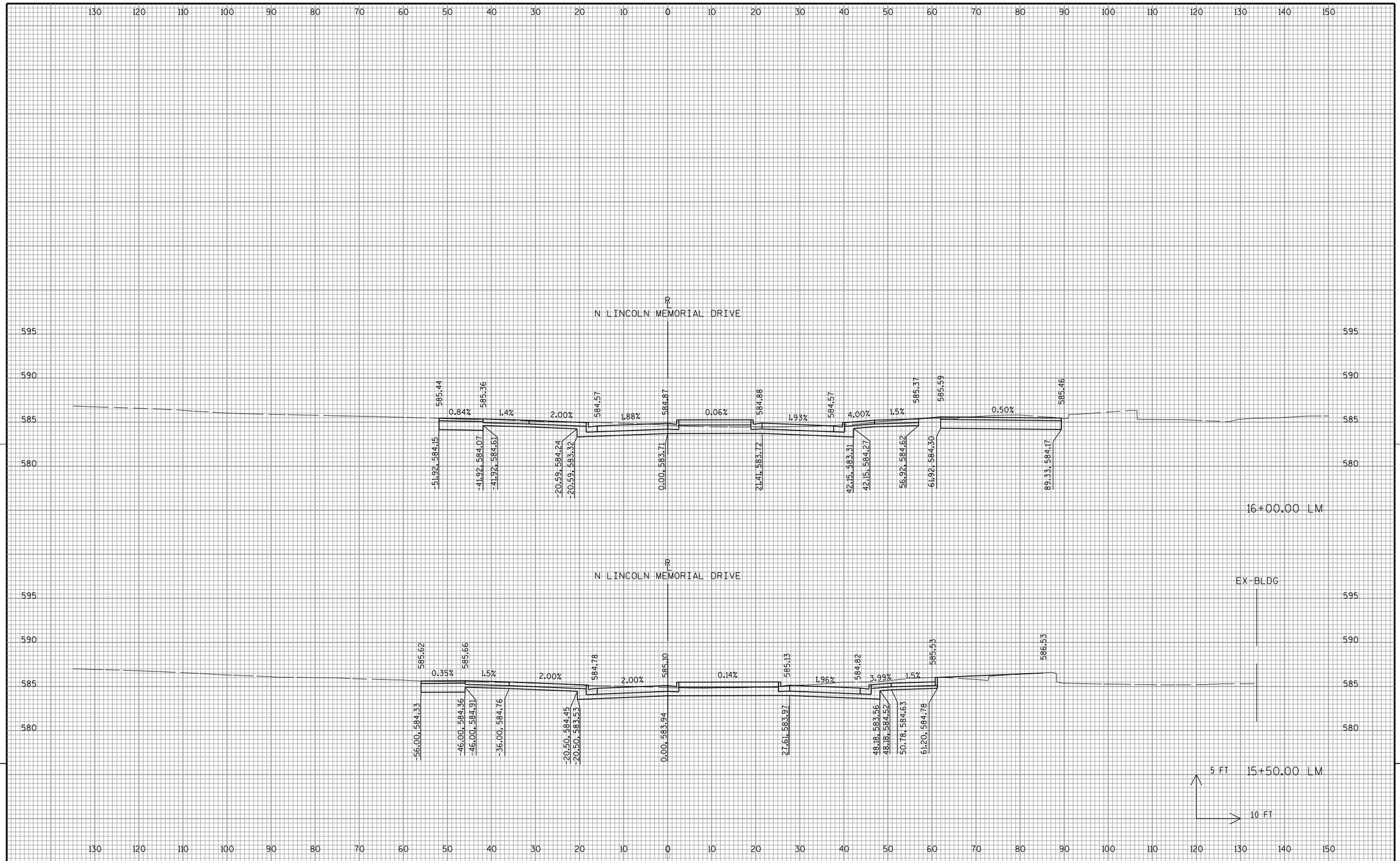


9

9

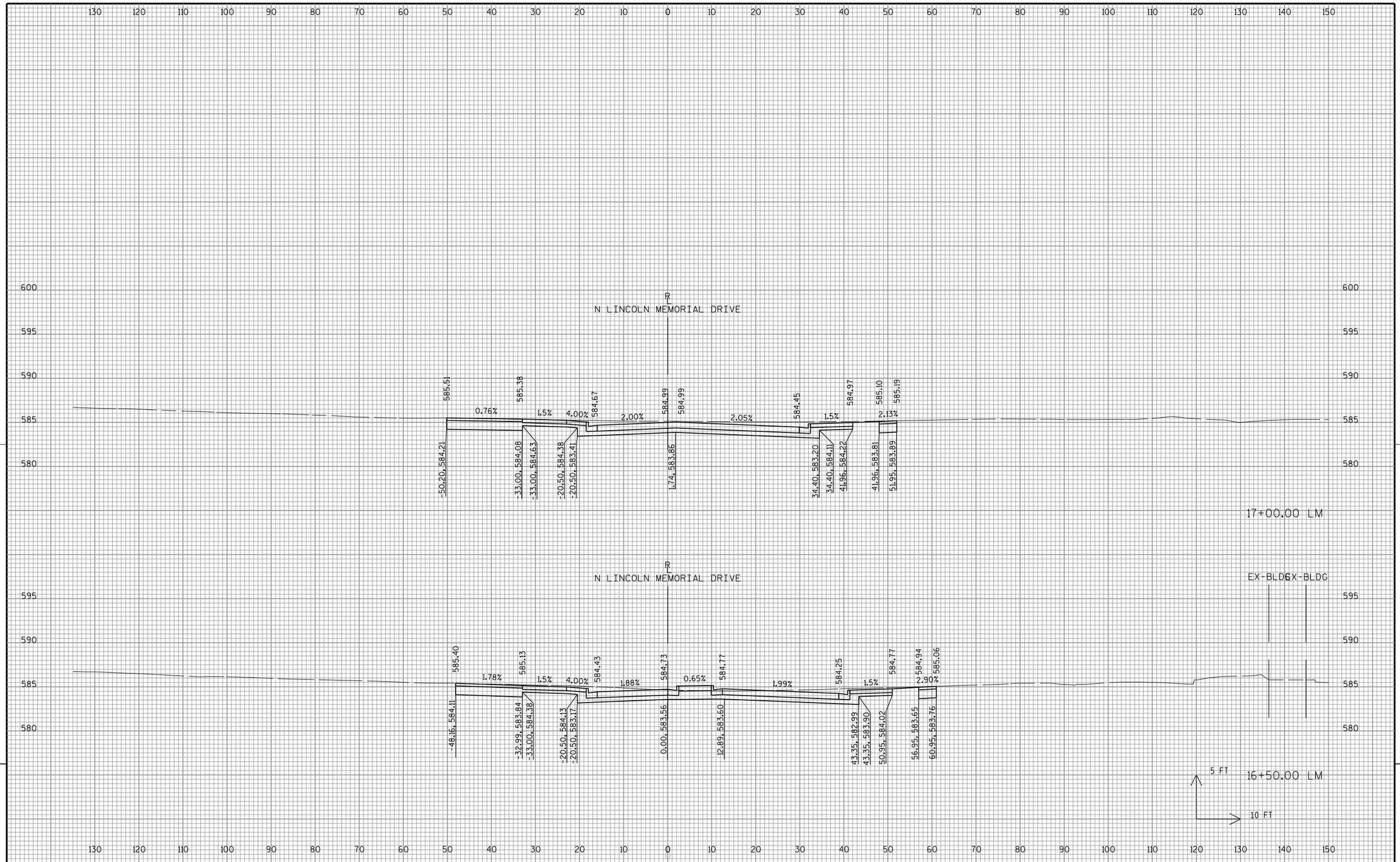
PROJECT NO:1300-13-74	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:N. LINCOLN MEMORIAL DRIVE	SHEET 937	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 938	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.



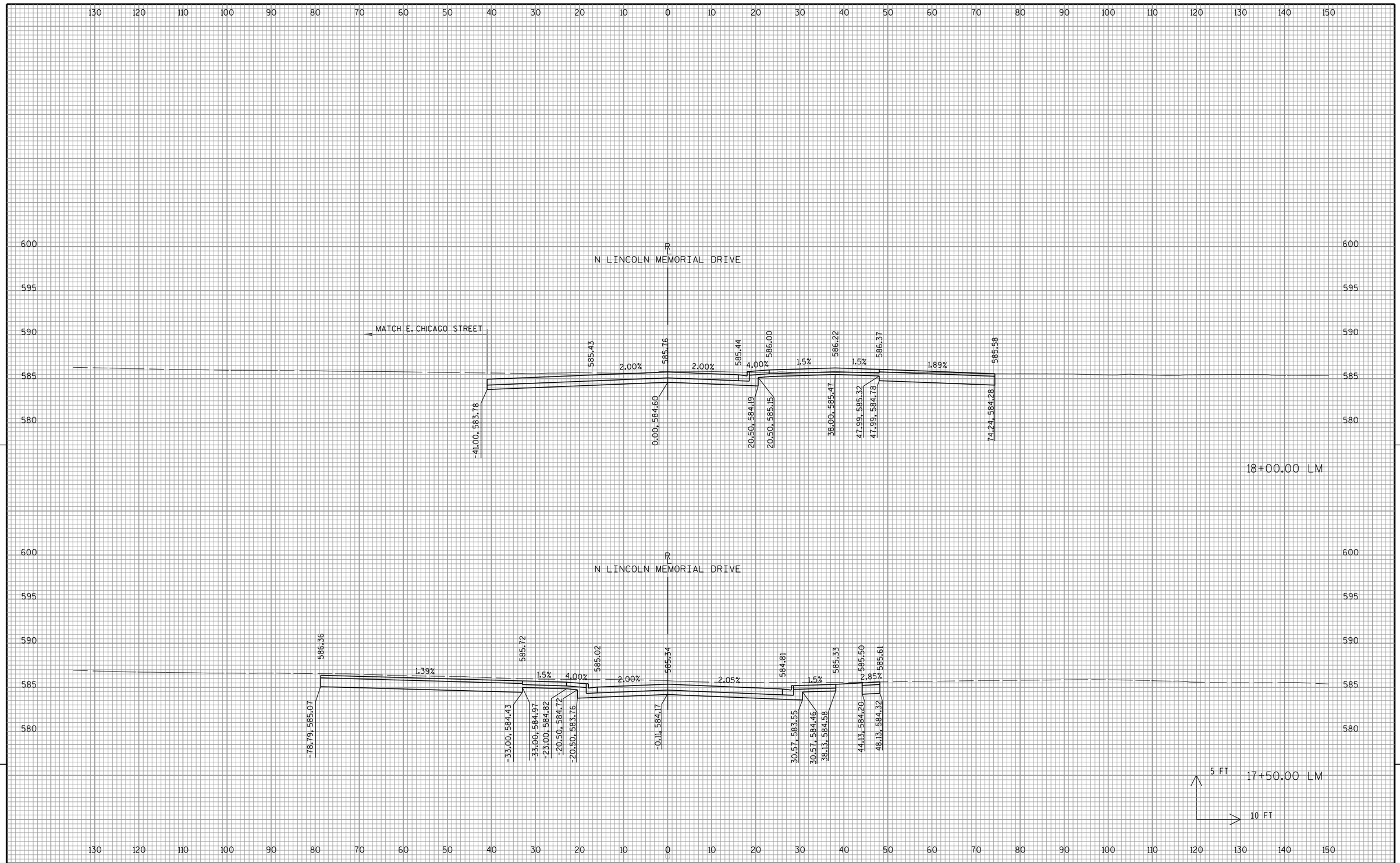
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 939	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

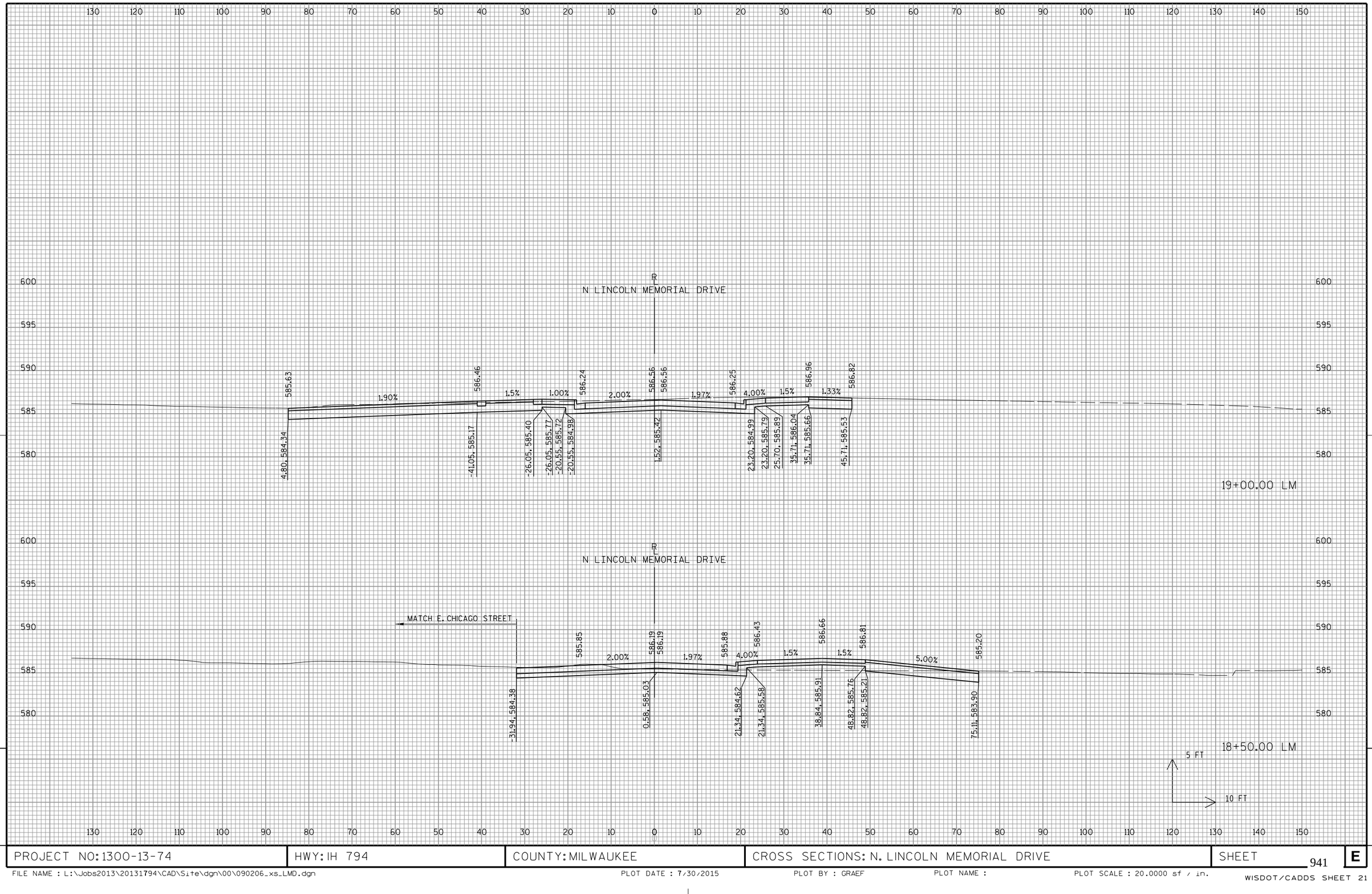
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 940	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

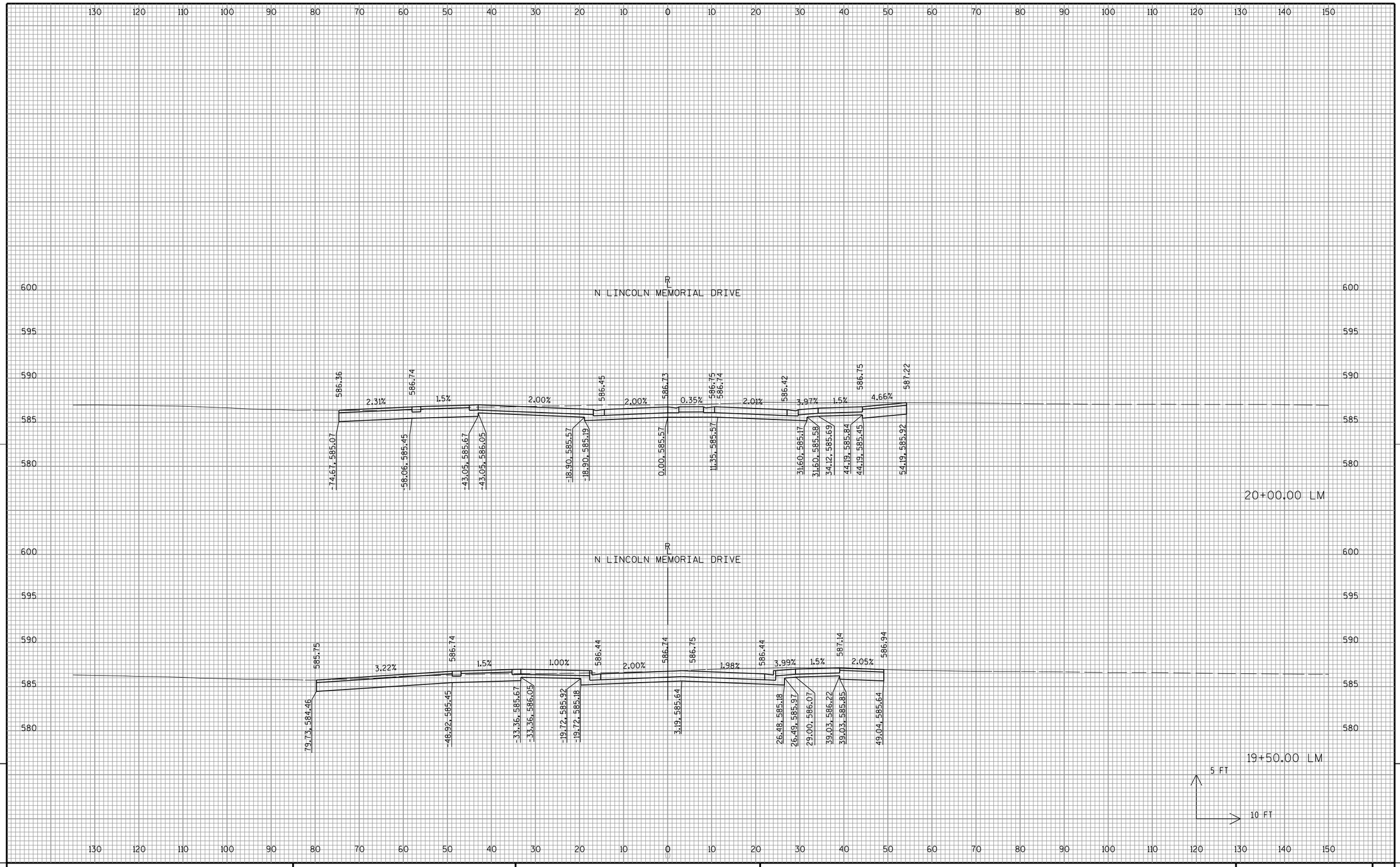
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 941	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



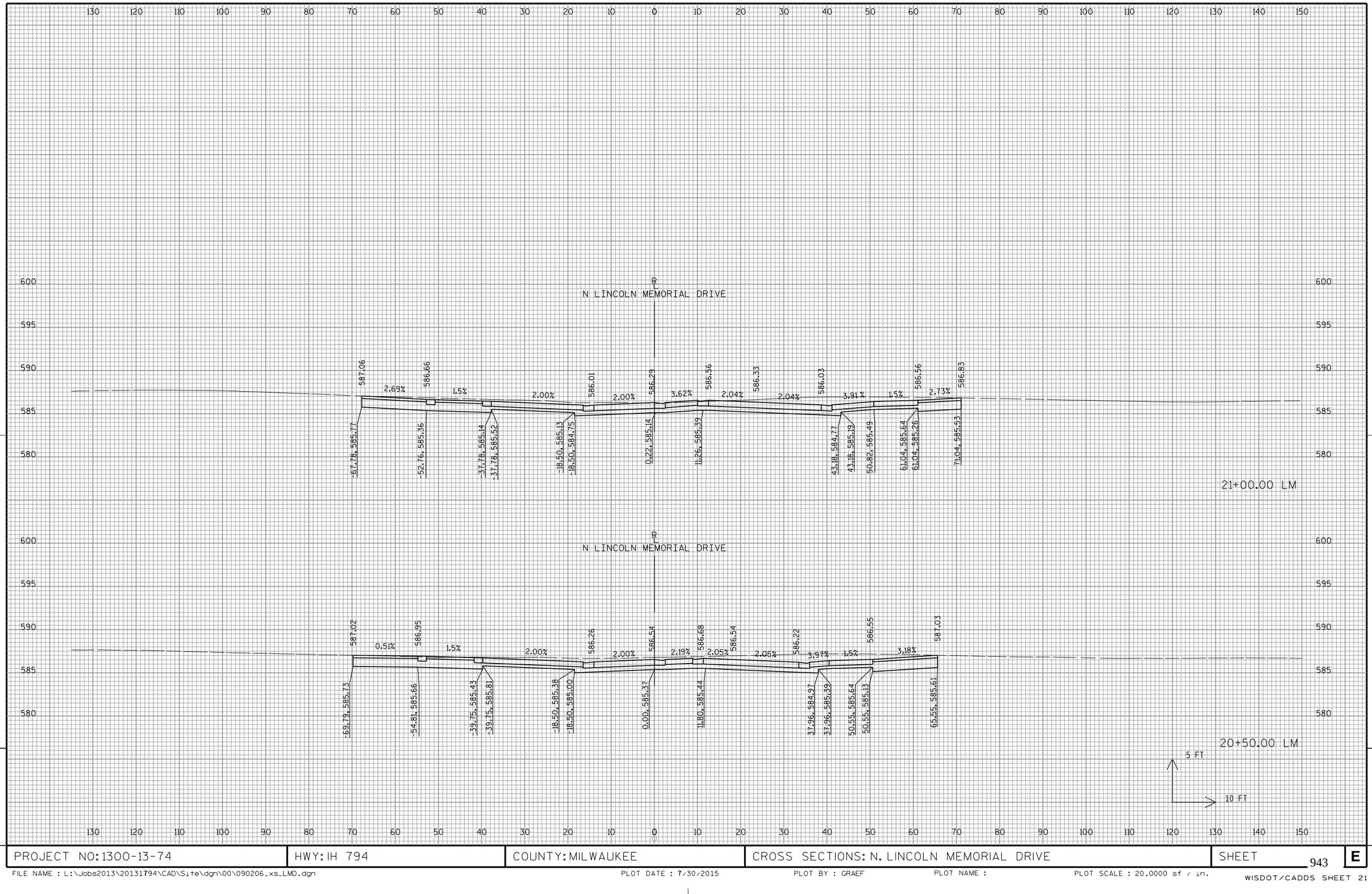
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 942	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



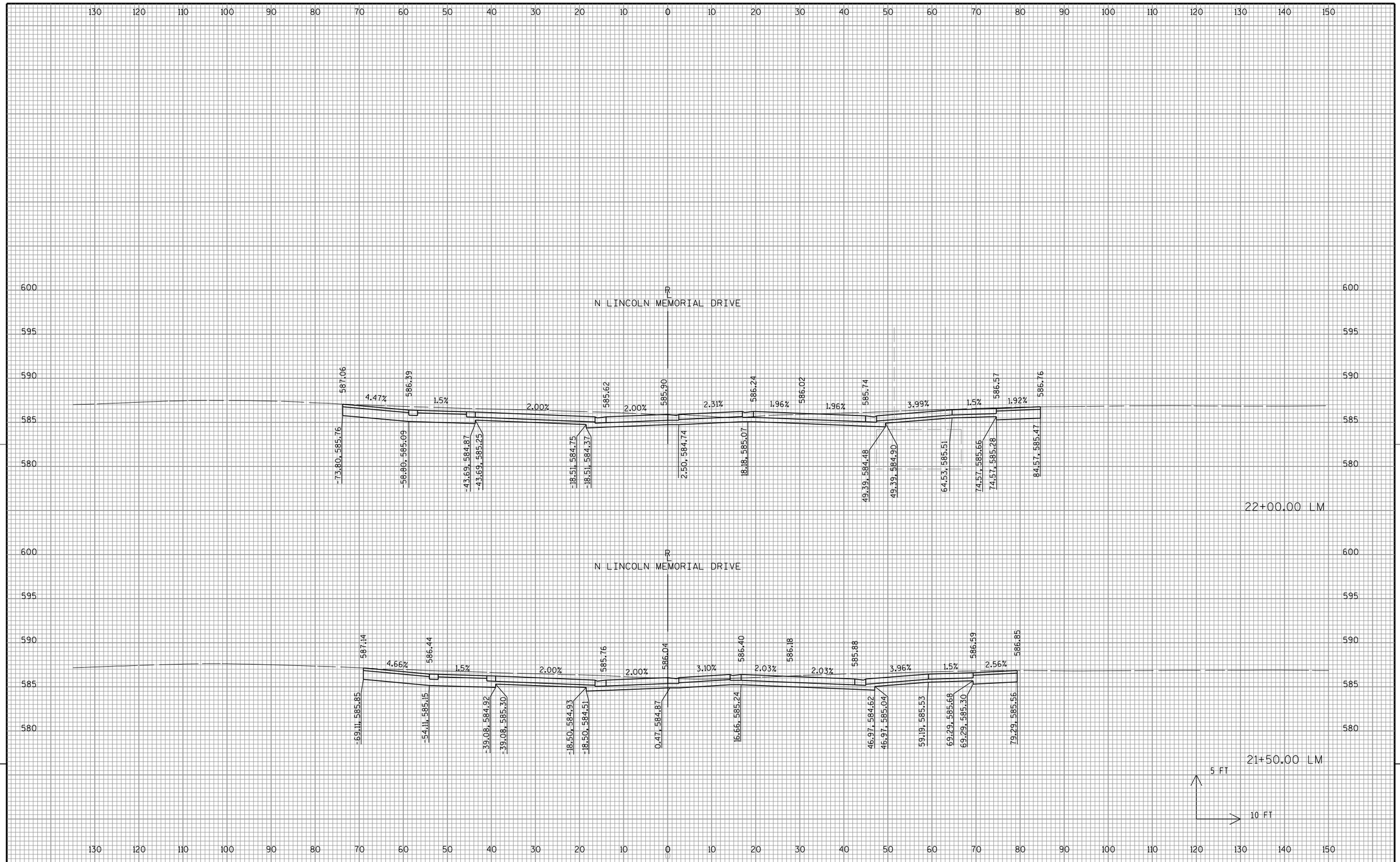
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 943	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

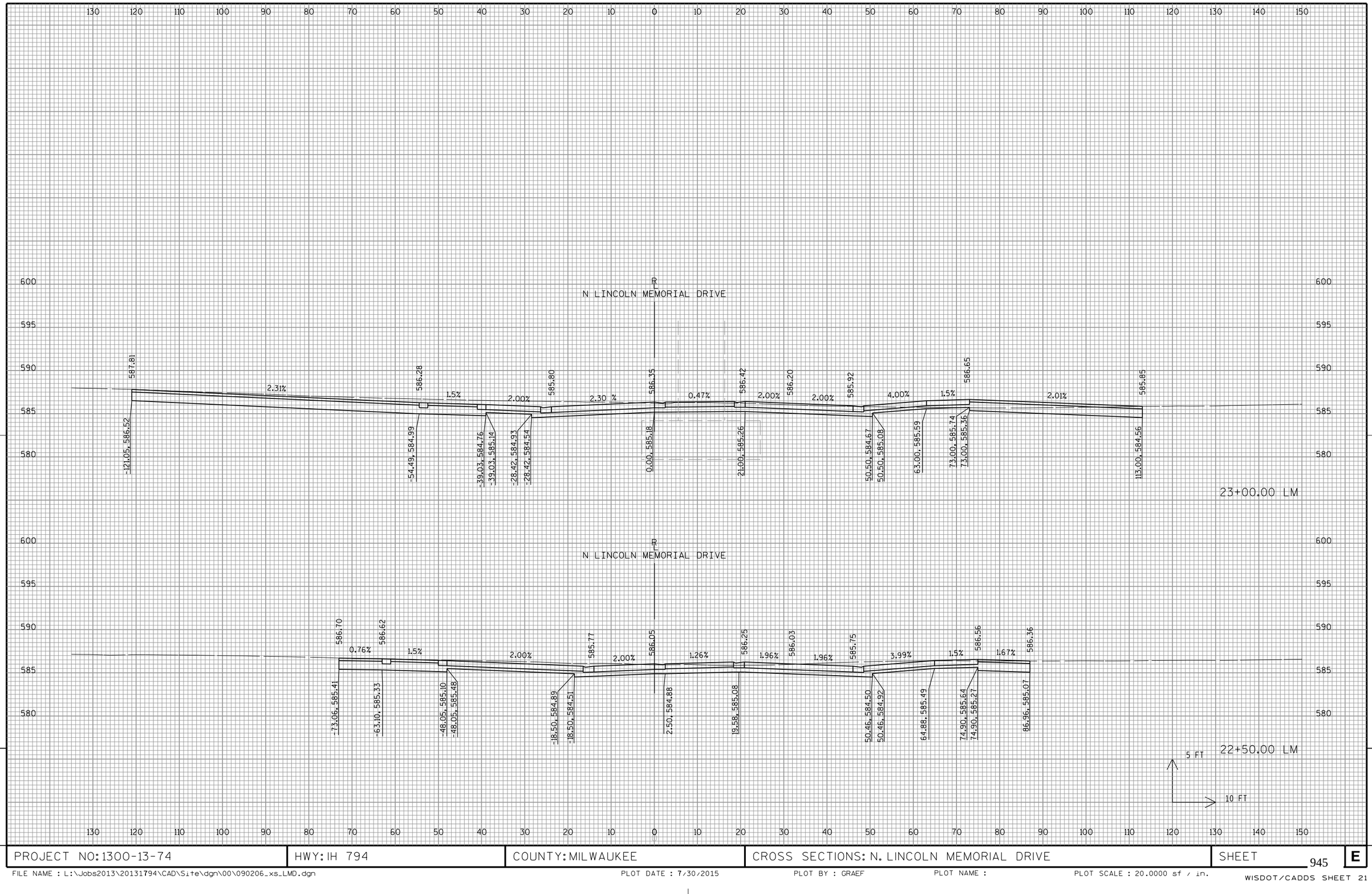
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 944	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

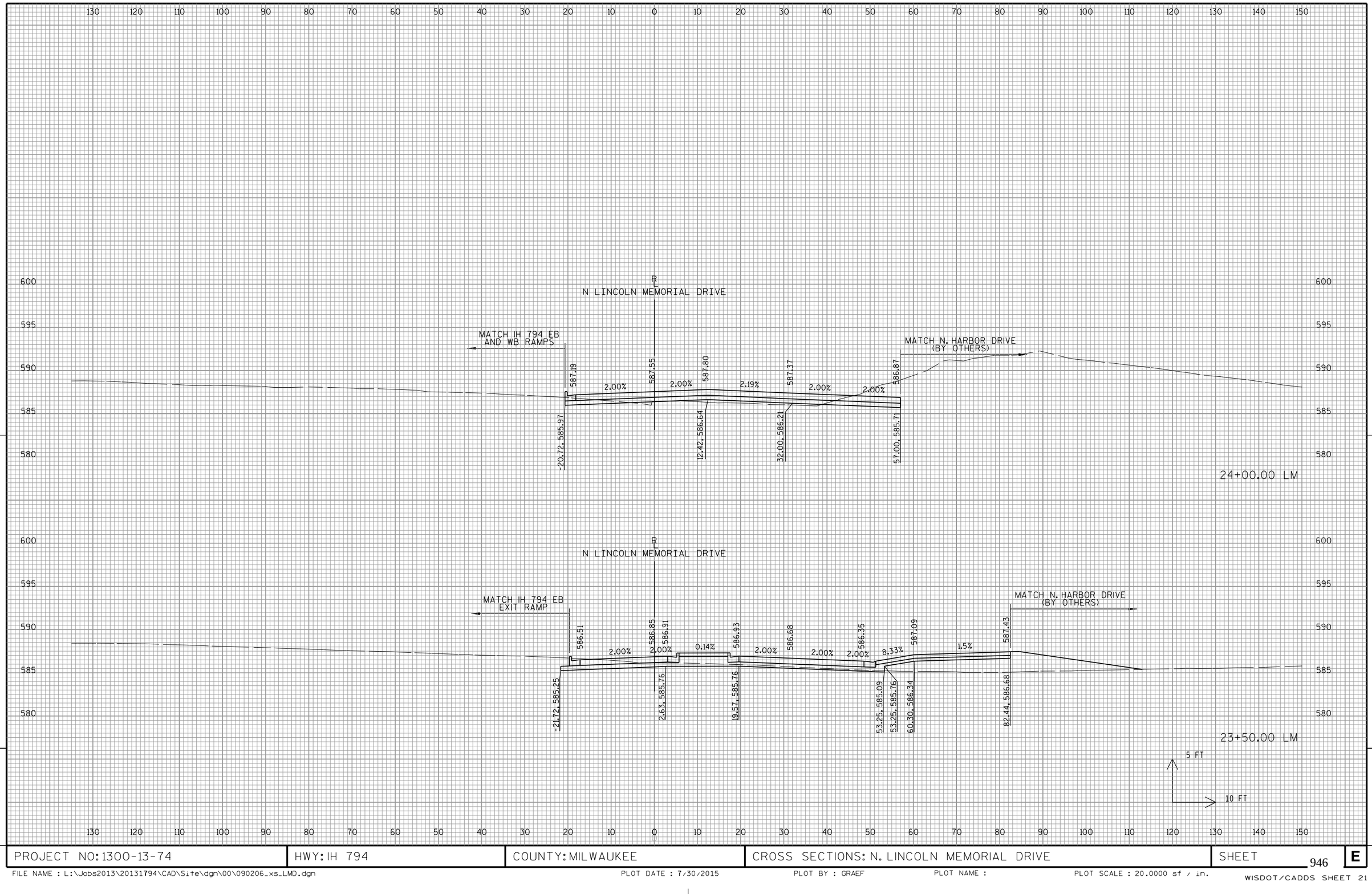
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 945	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

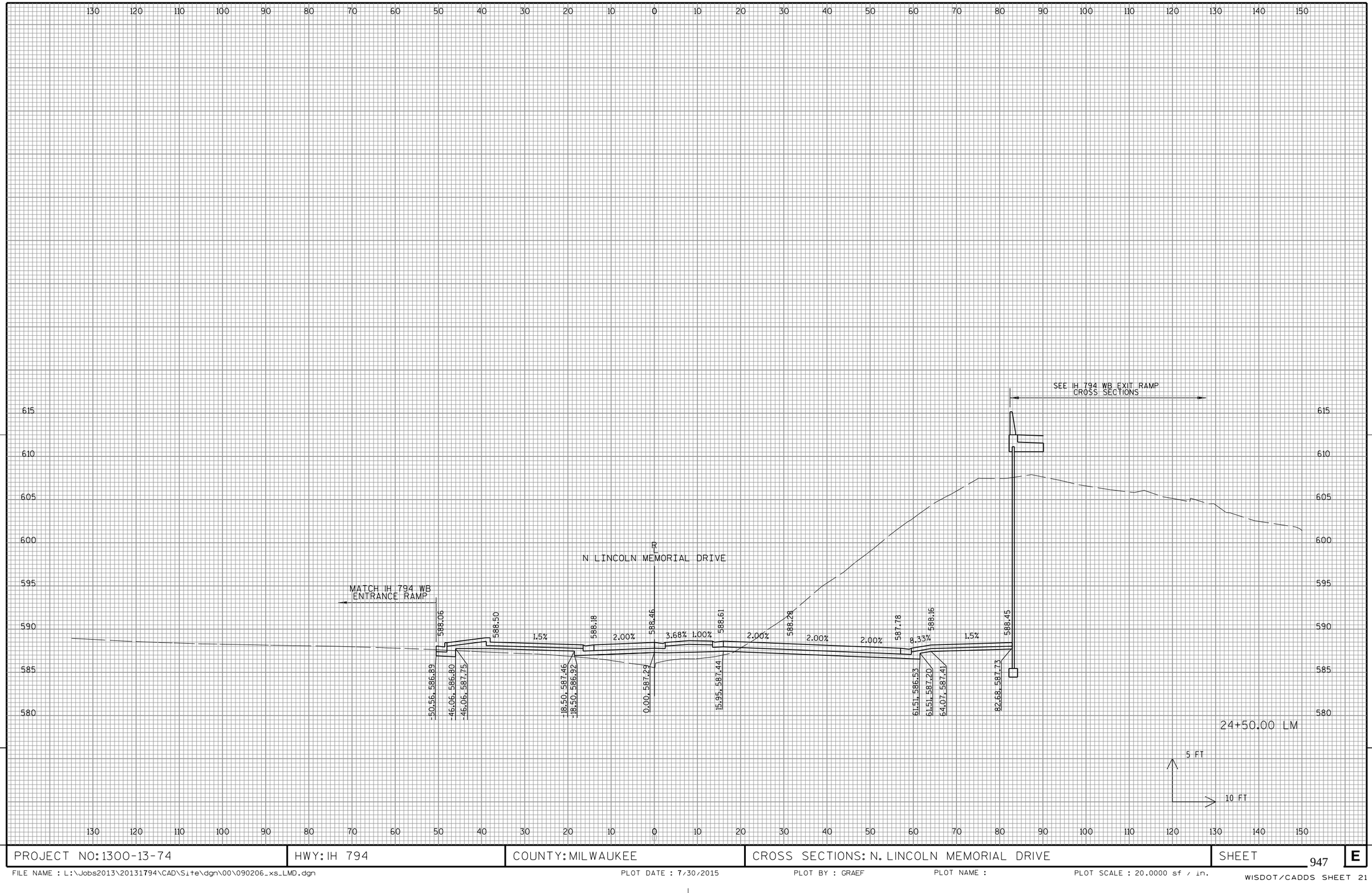
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 946	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

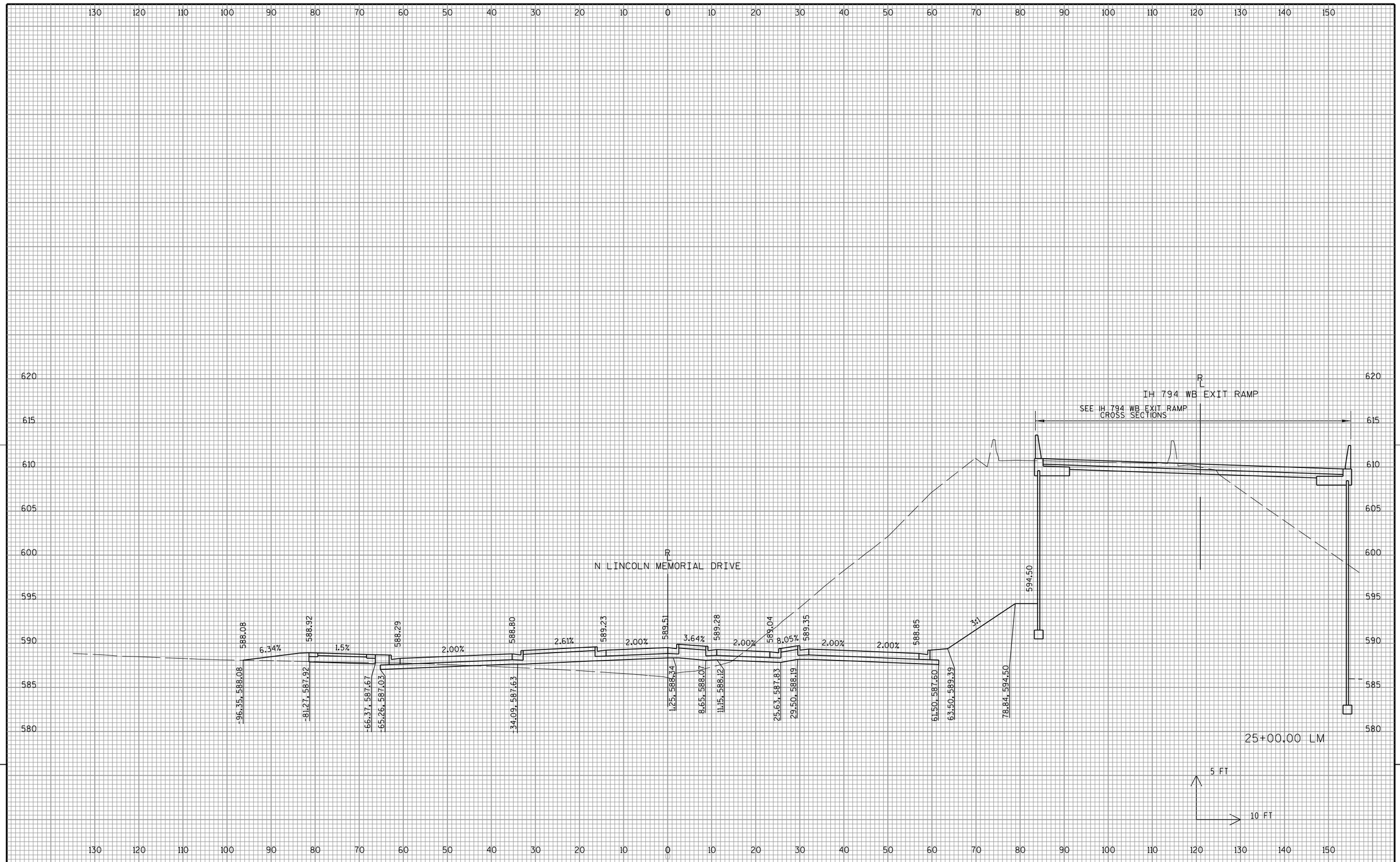
WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 947	E



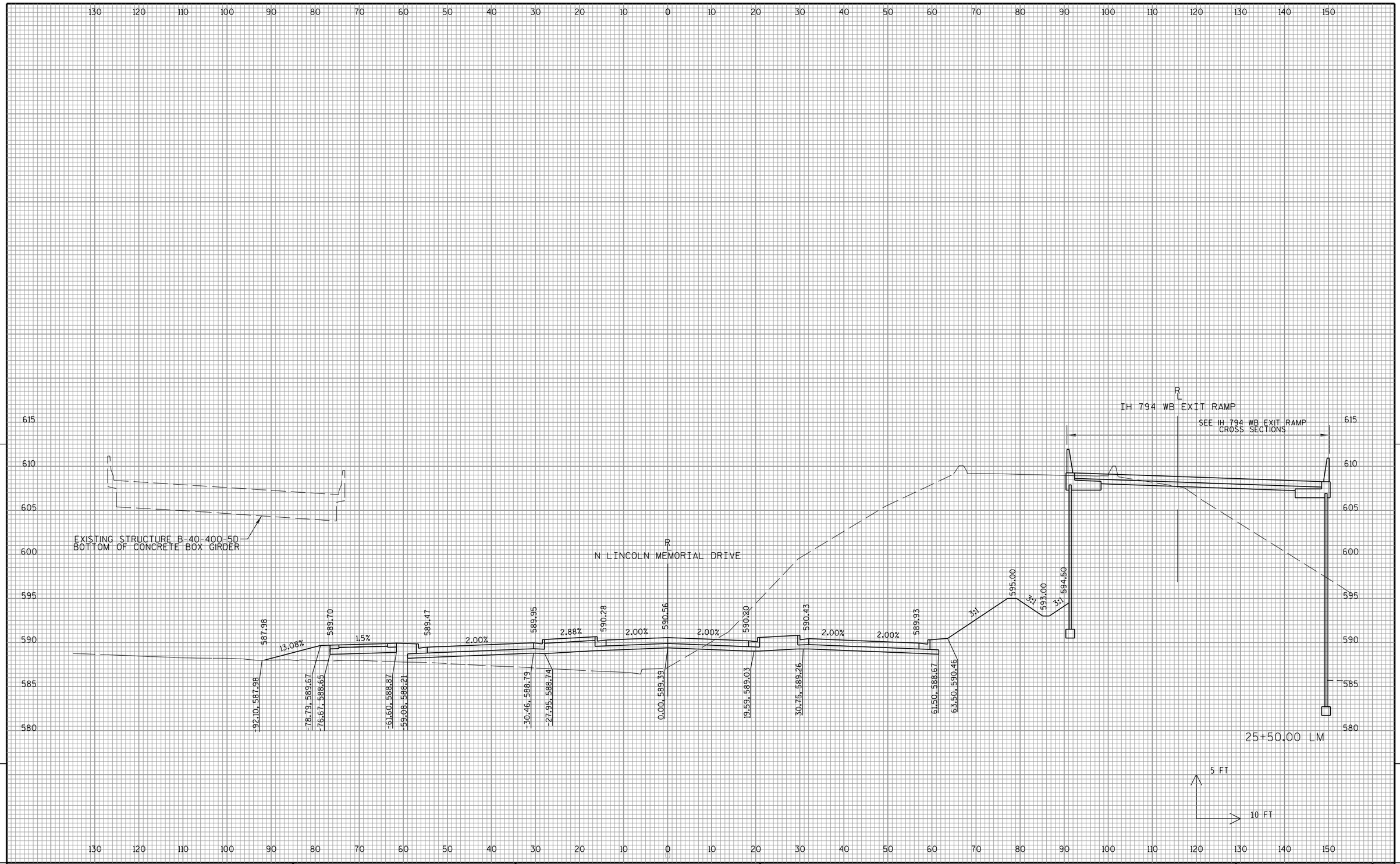
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 948	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

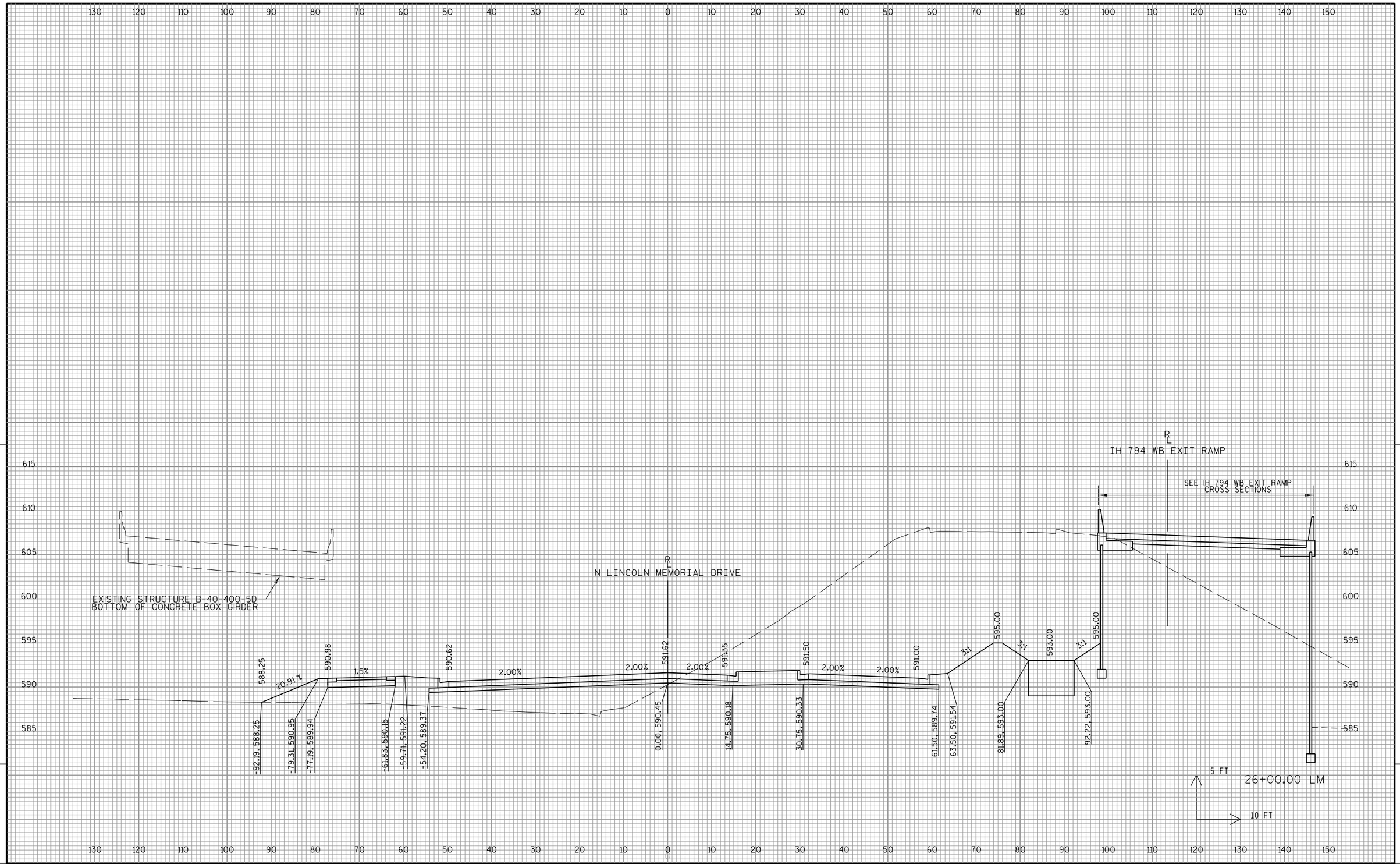


9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 949	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn
PLOT DATE : 7/30/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21

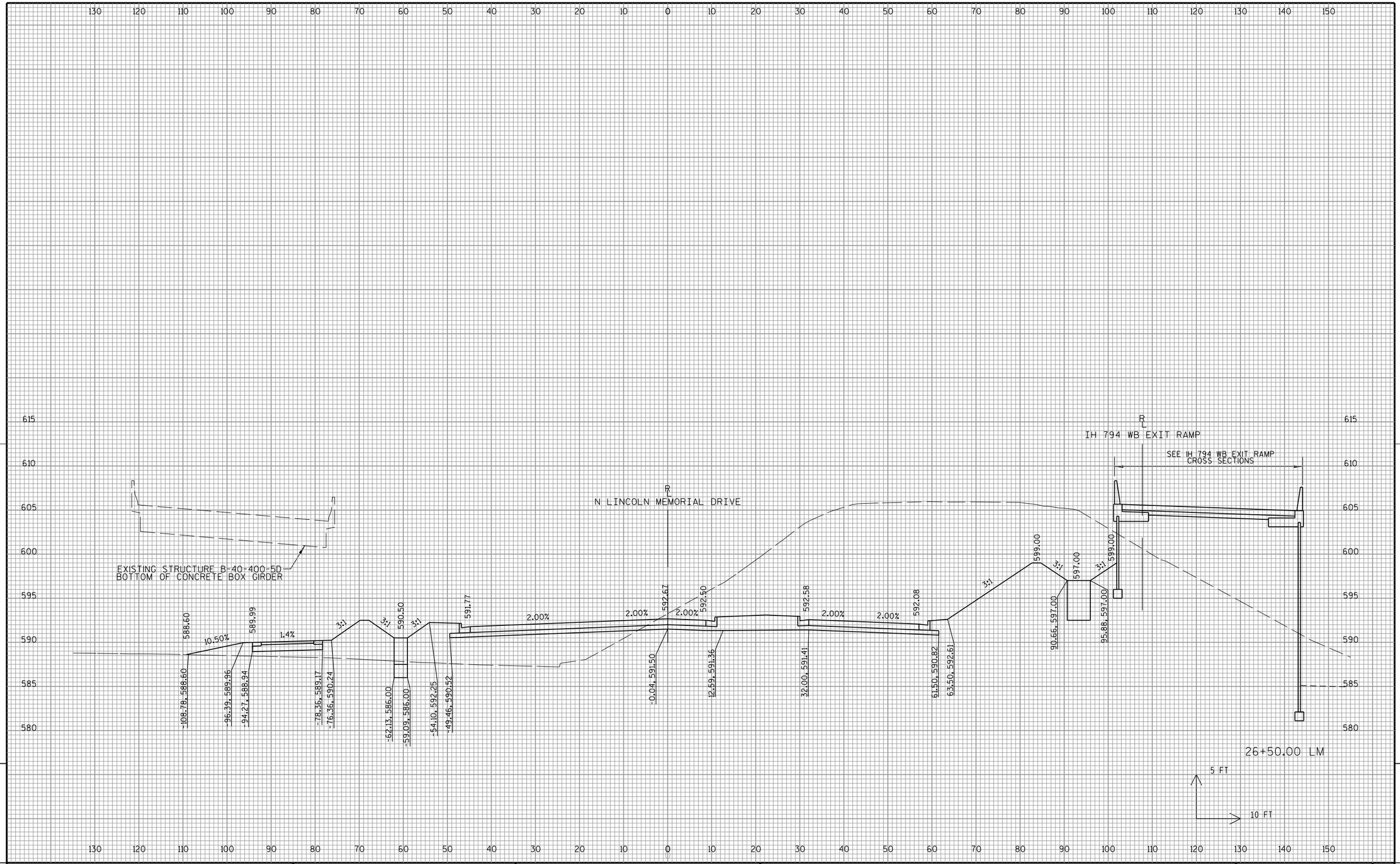


9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 950	E

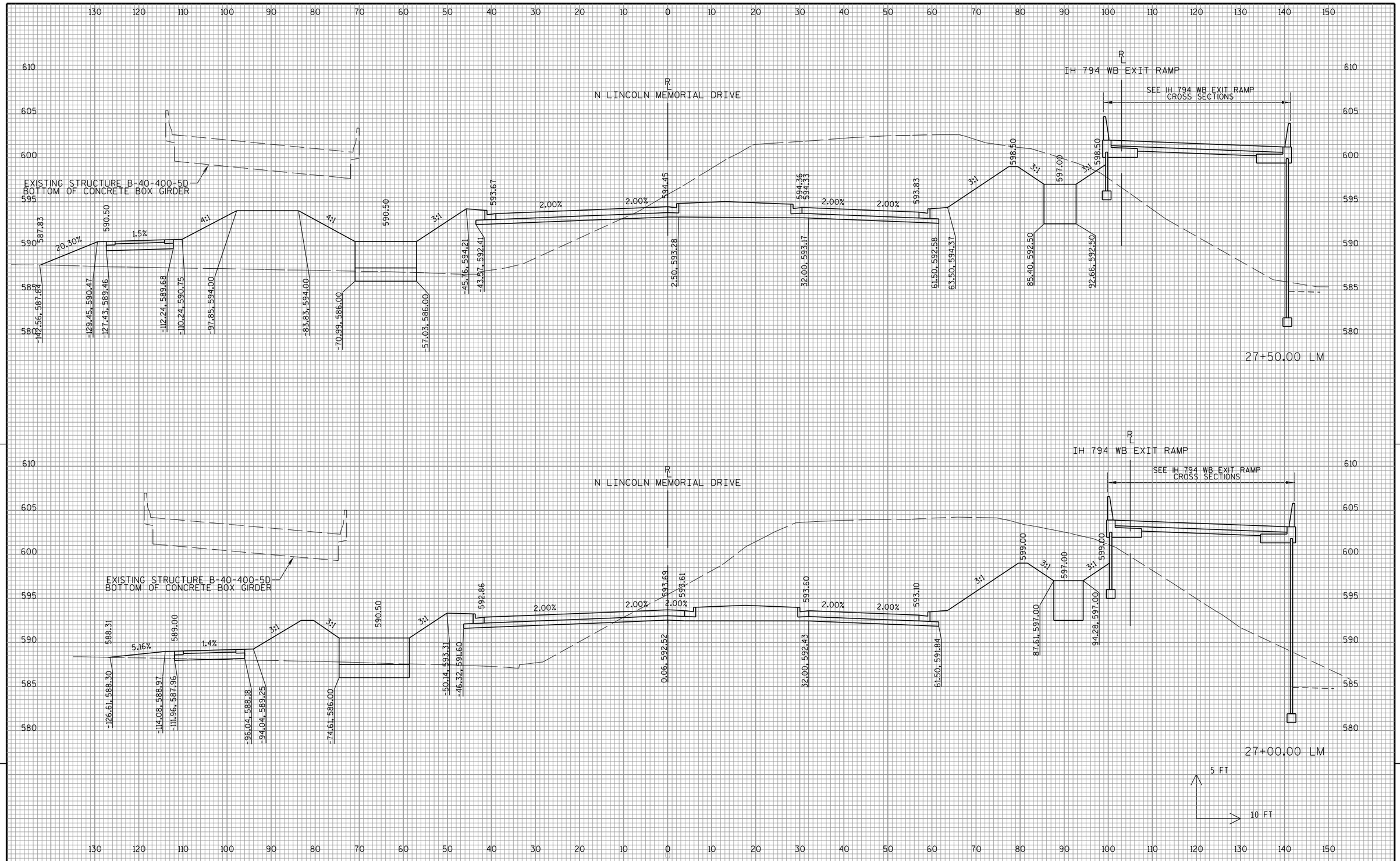
FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.



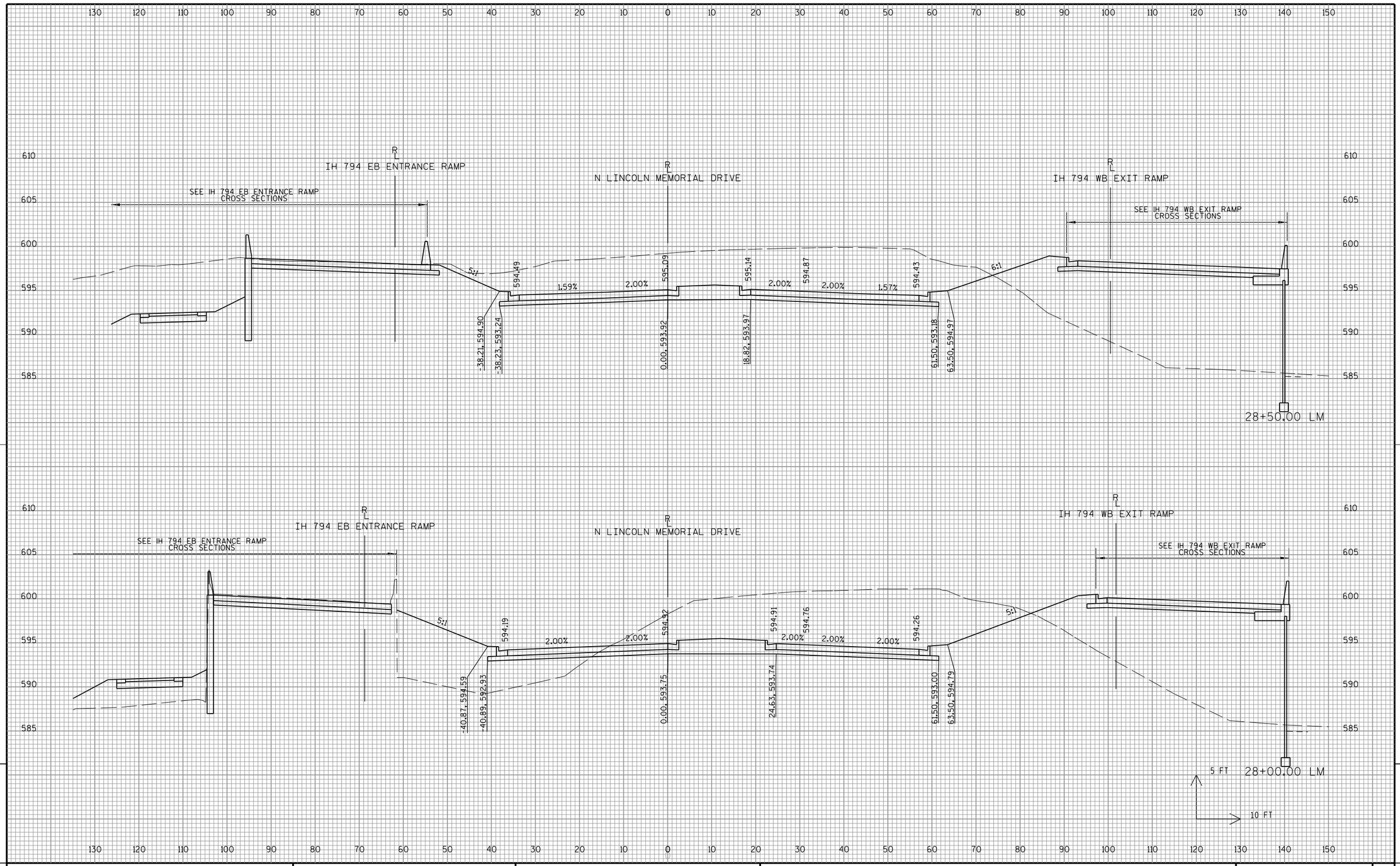
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 951	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 952	E



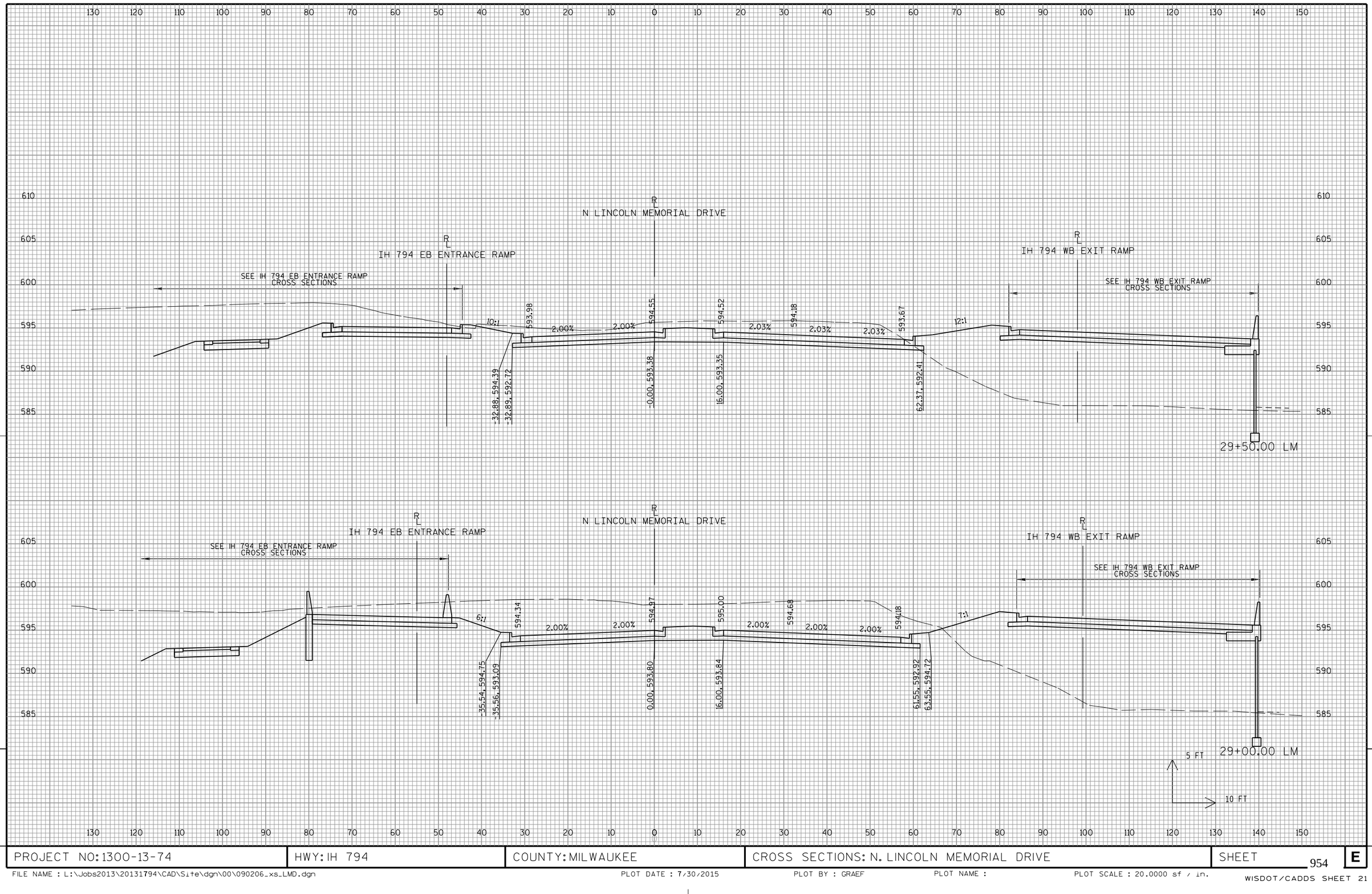
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 953	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

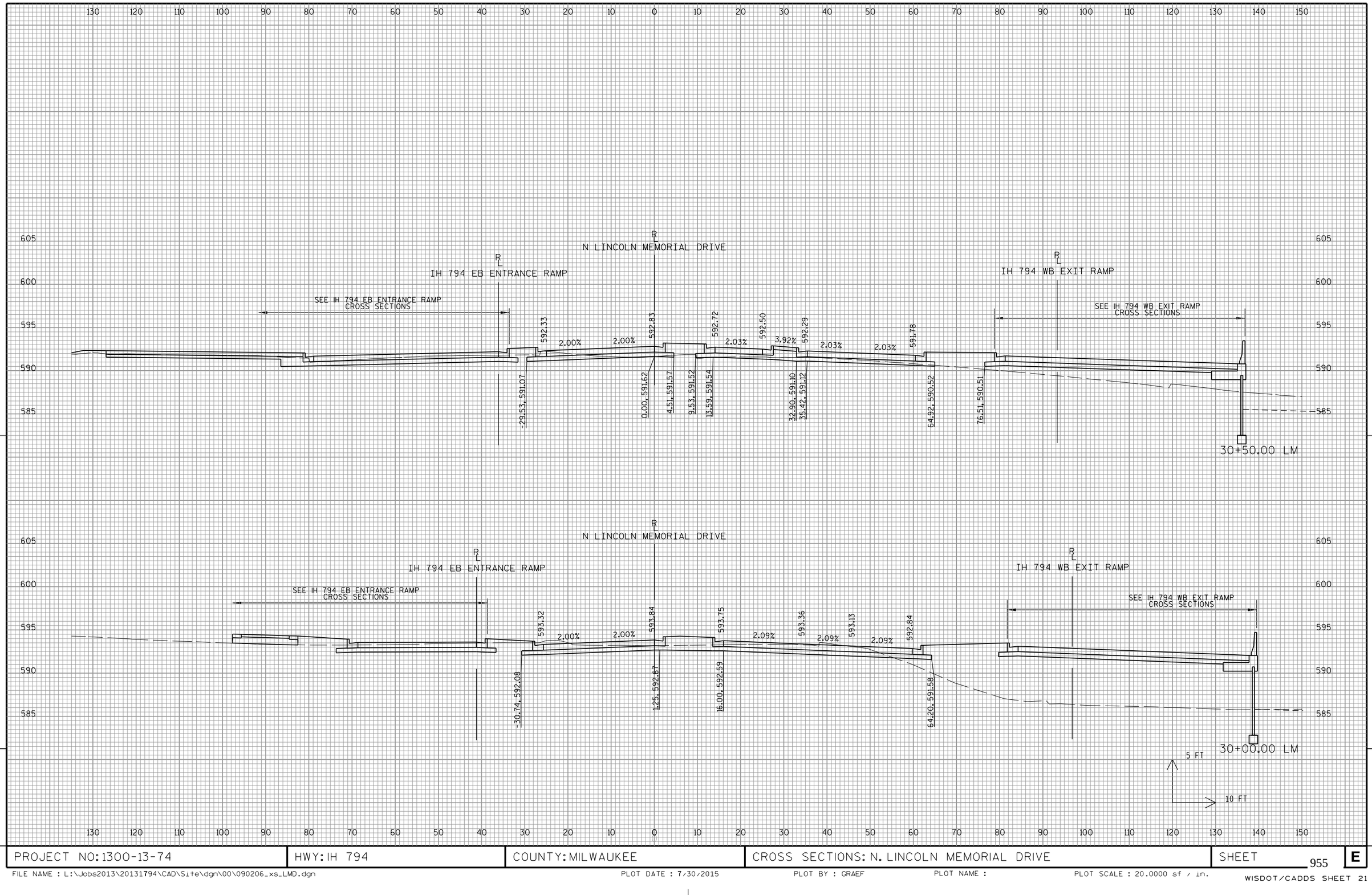
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 954	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

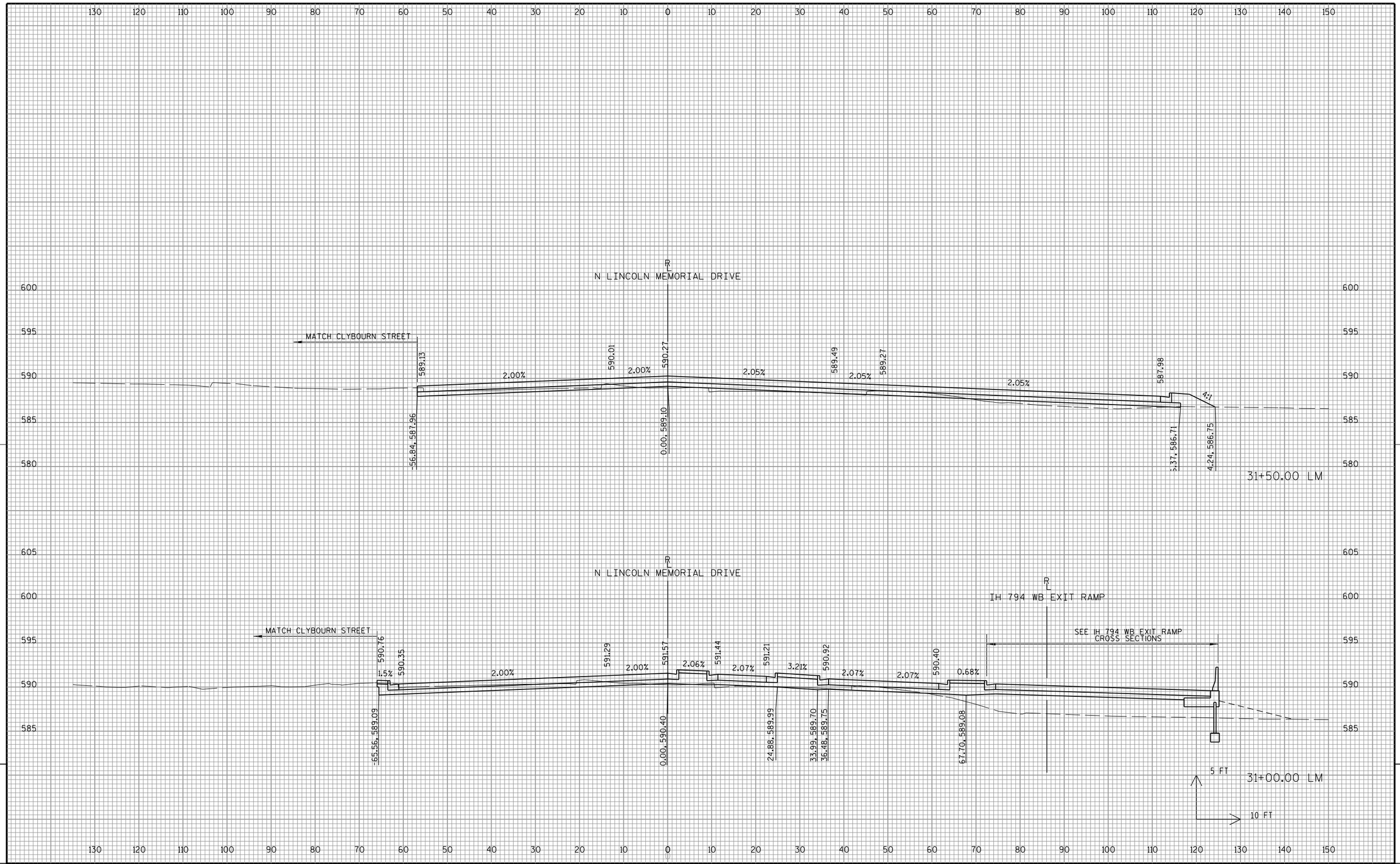
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 955	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

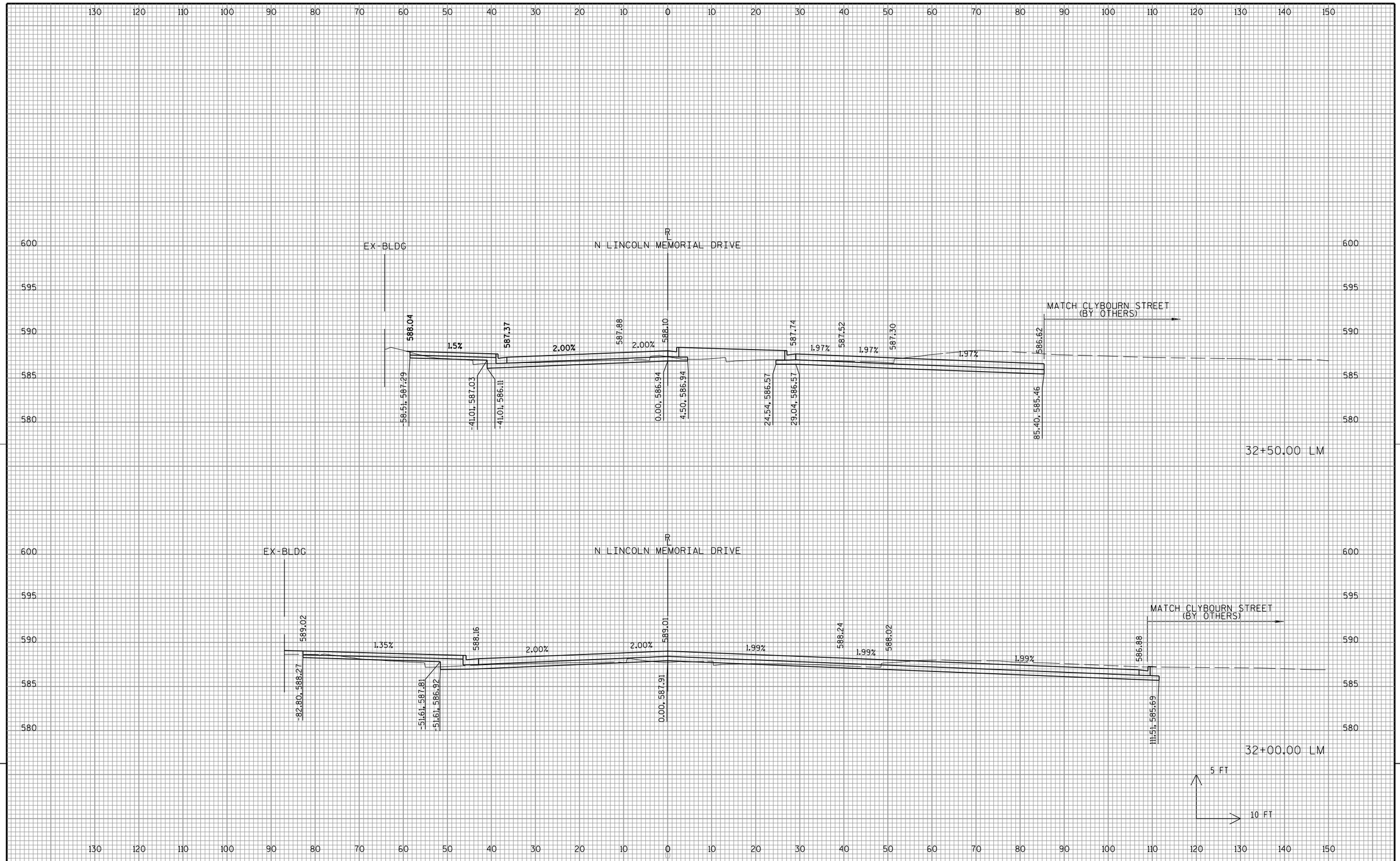
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 956	E

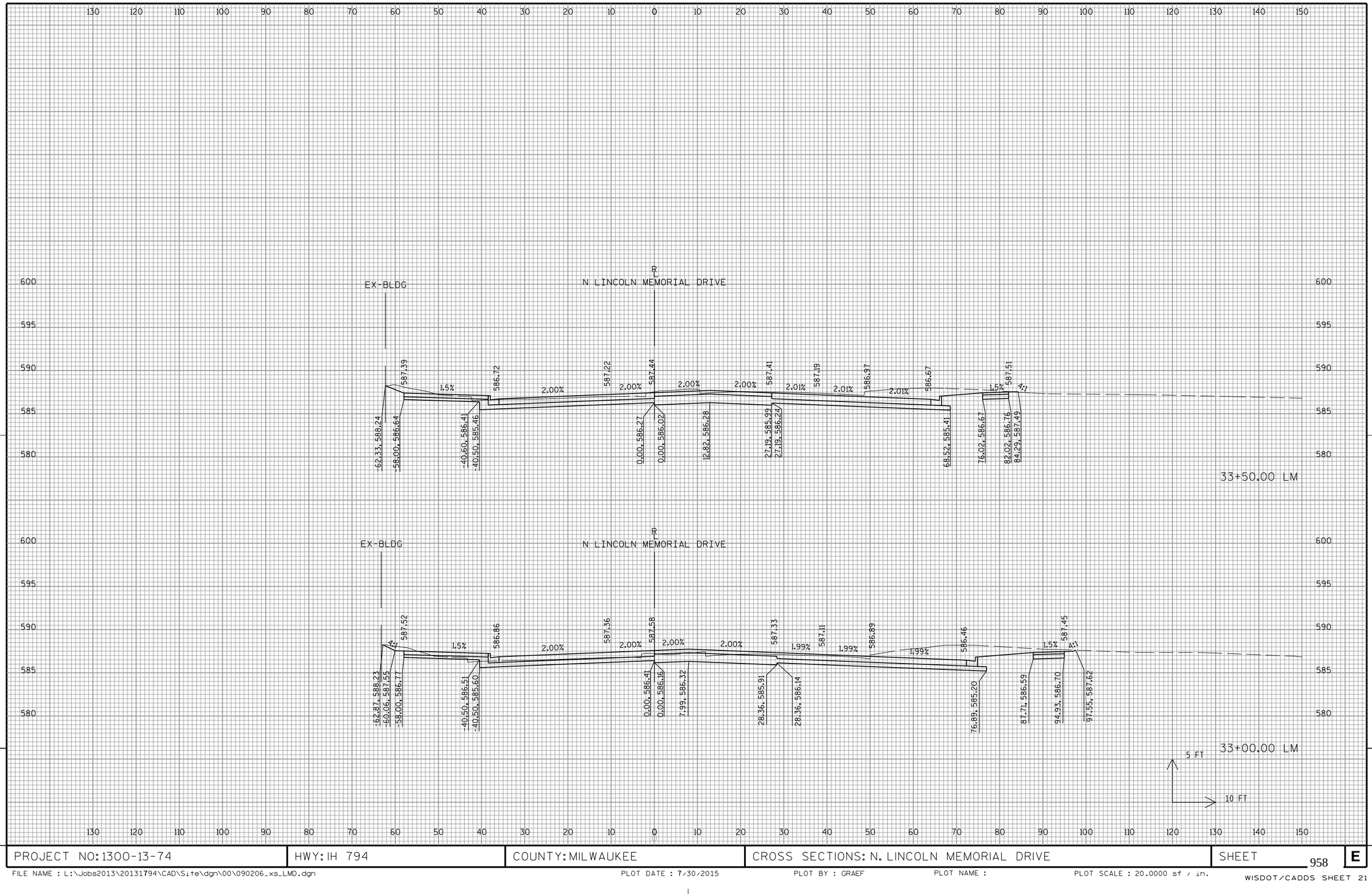
FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



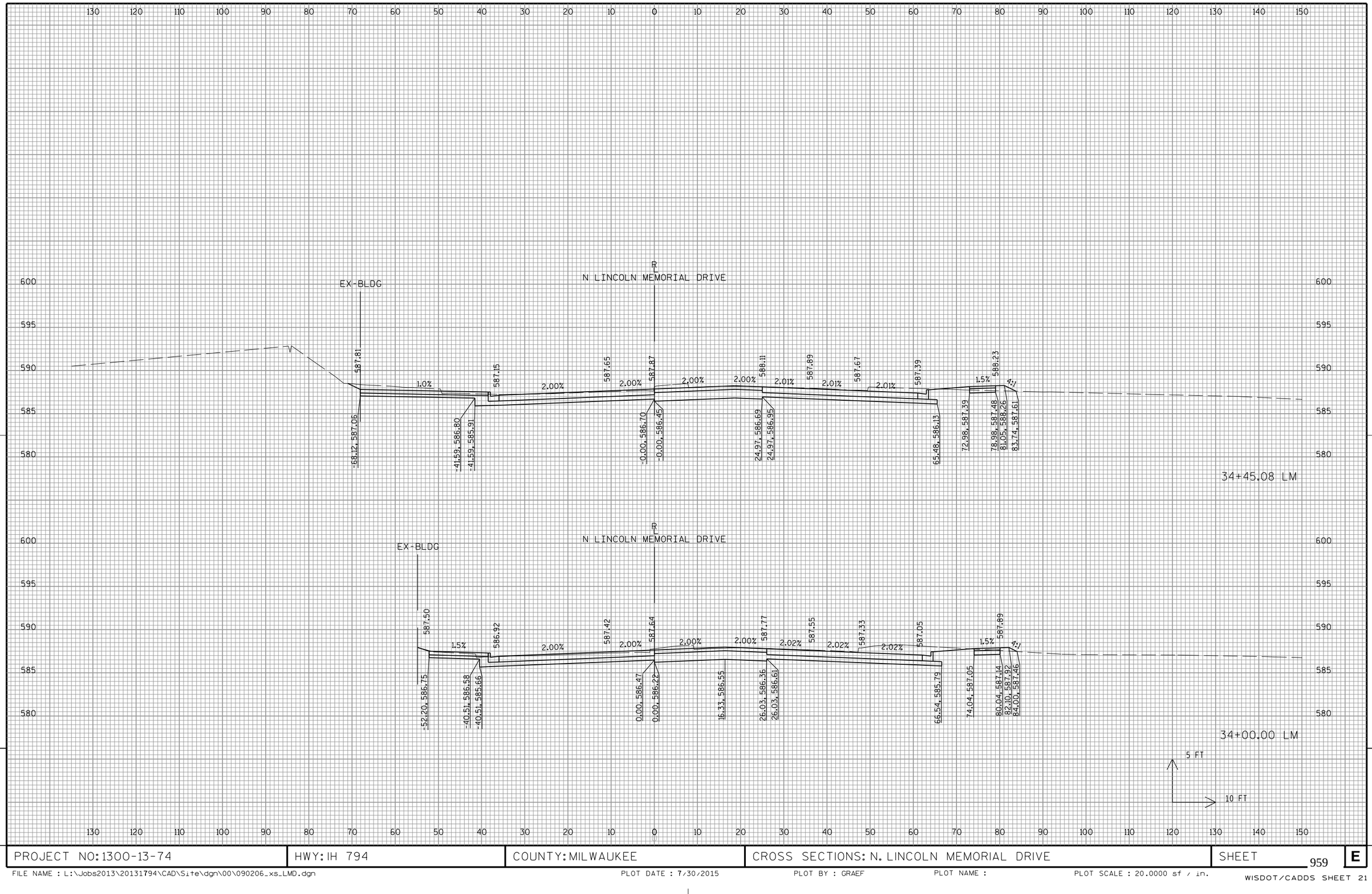
PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 957	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn
PLOT DATE : 7/30/2015
PLOT BY : GRAEF
PLOT NAME :
PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 958	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



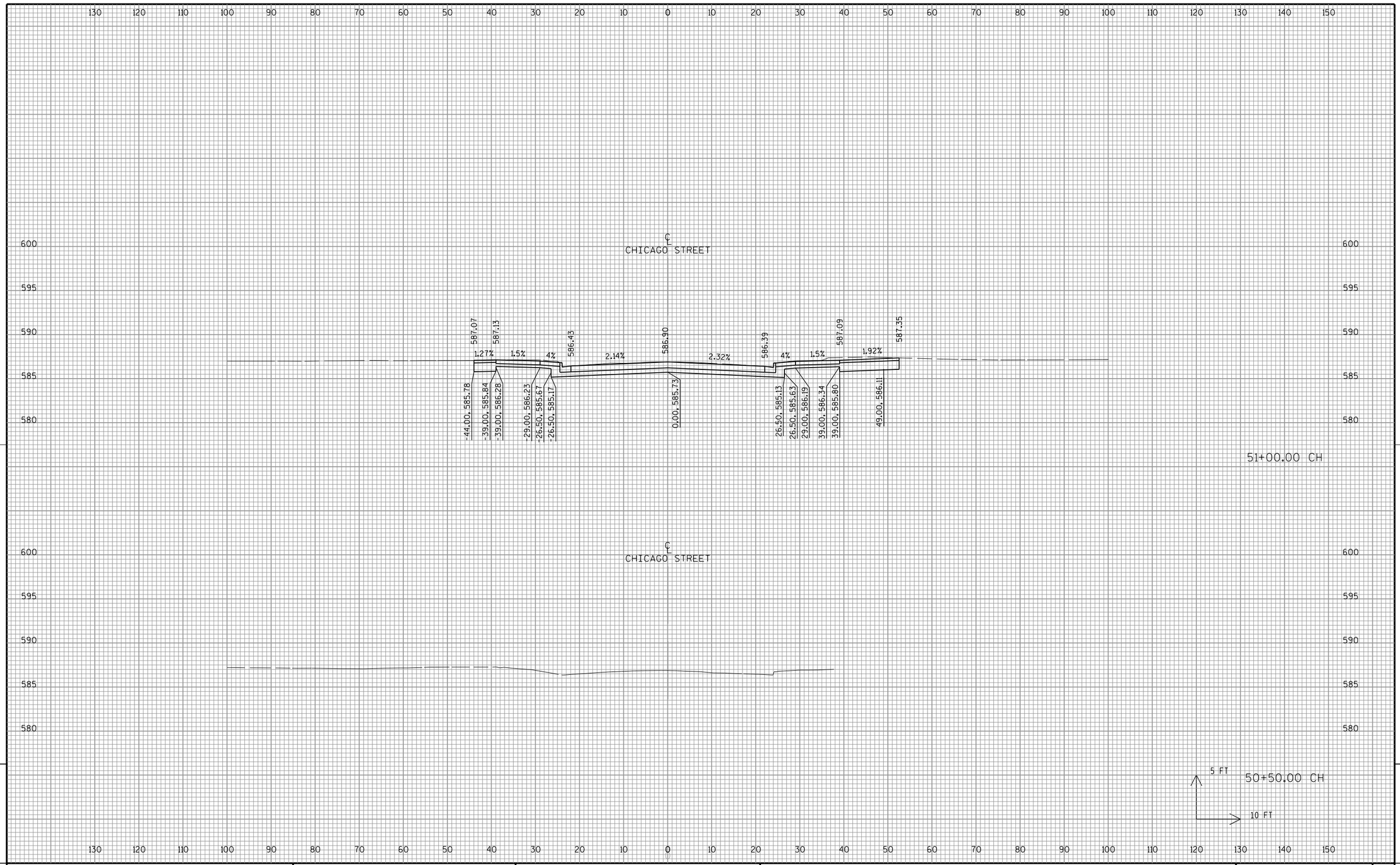
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: N. LINCOLN MEMORIAL DRIVE	SHEET 959	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090206_xs_LMD.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

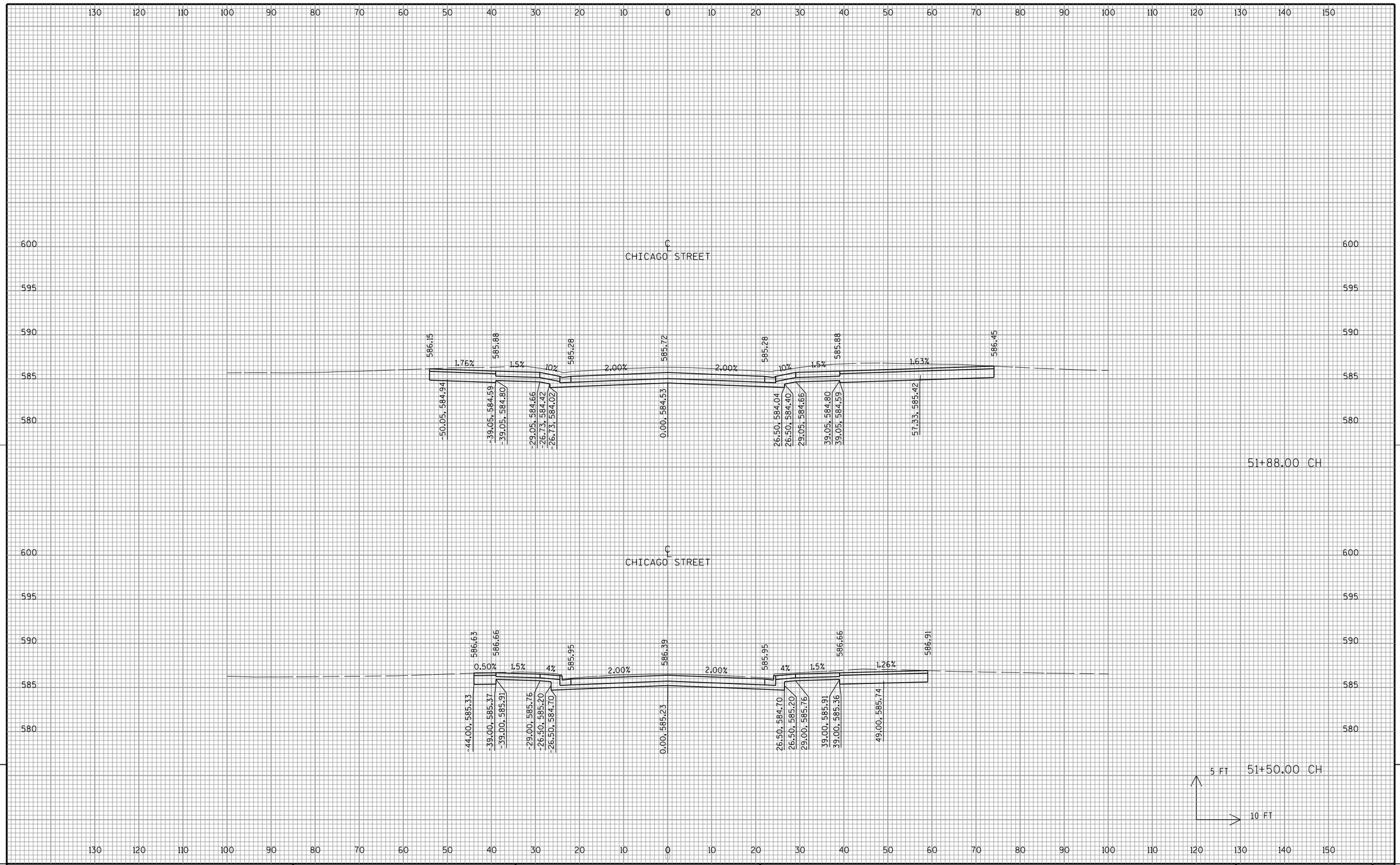
WISDOT/CADDS SHEET 21



PROJECT NO:1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CHICAGO STREET	SHEET 960	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090207_xs_Chicago.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



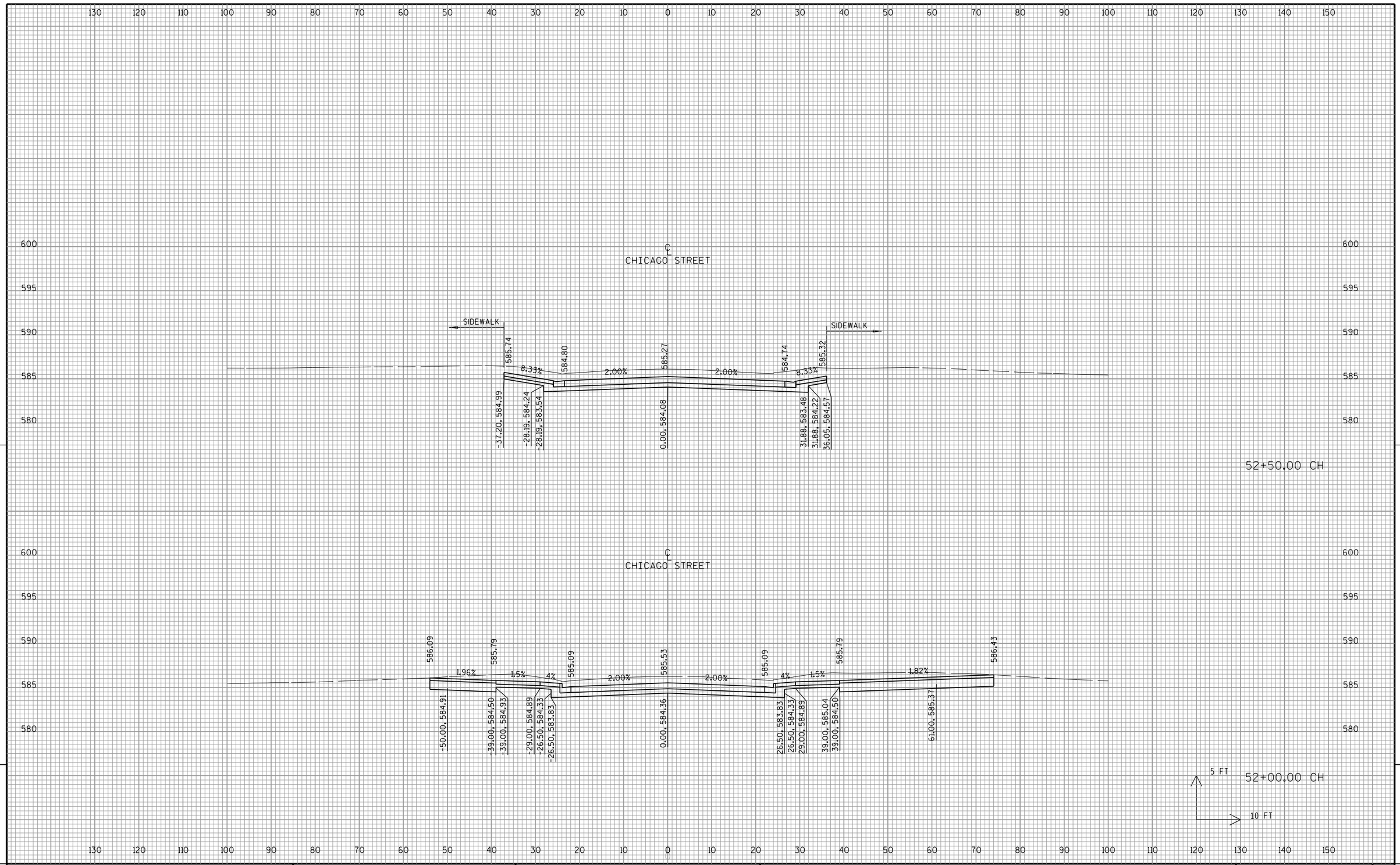
9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CHICAGO STREET	SHEET 961	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090207_xs_Chicago.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

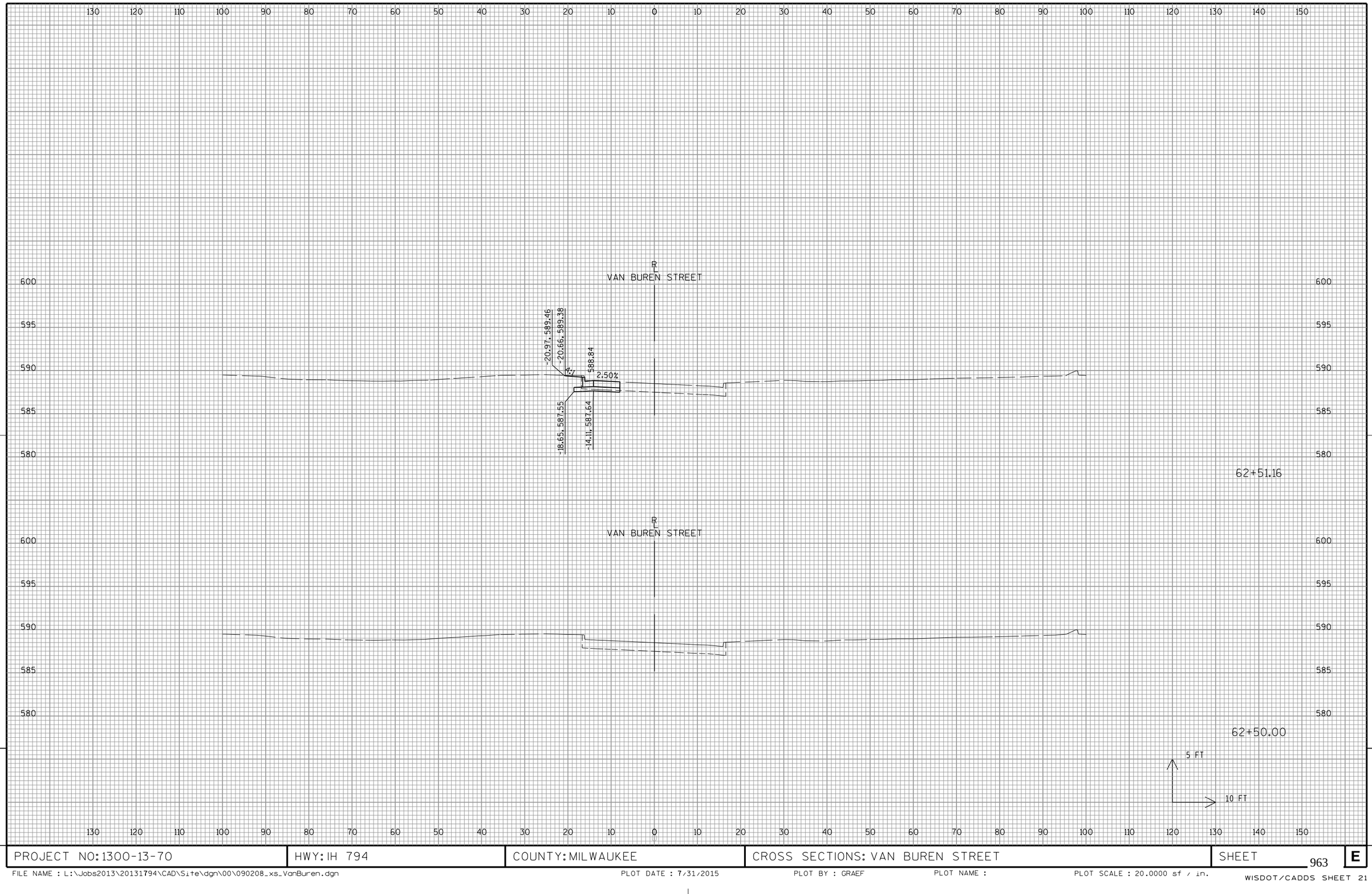


9

9

PROJECT NO: 1300-13-74	HWY: IH 794	COUNTY: MILWAUKEE	CROSS SECTIONS: E. CHICAGO STREET	SHEET 962	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090207_xs_Chicago.dgn PLOT DATE : 7/30/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



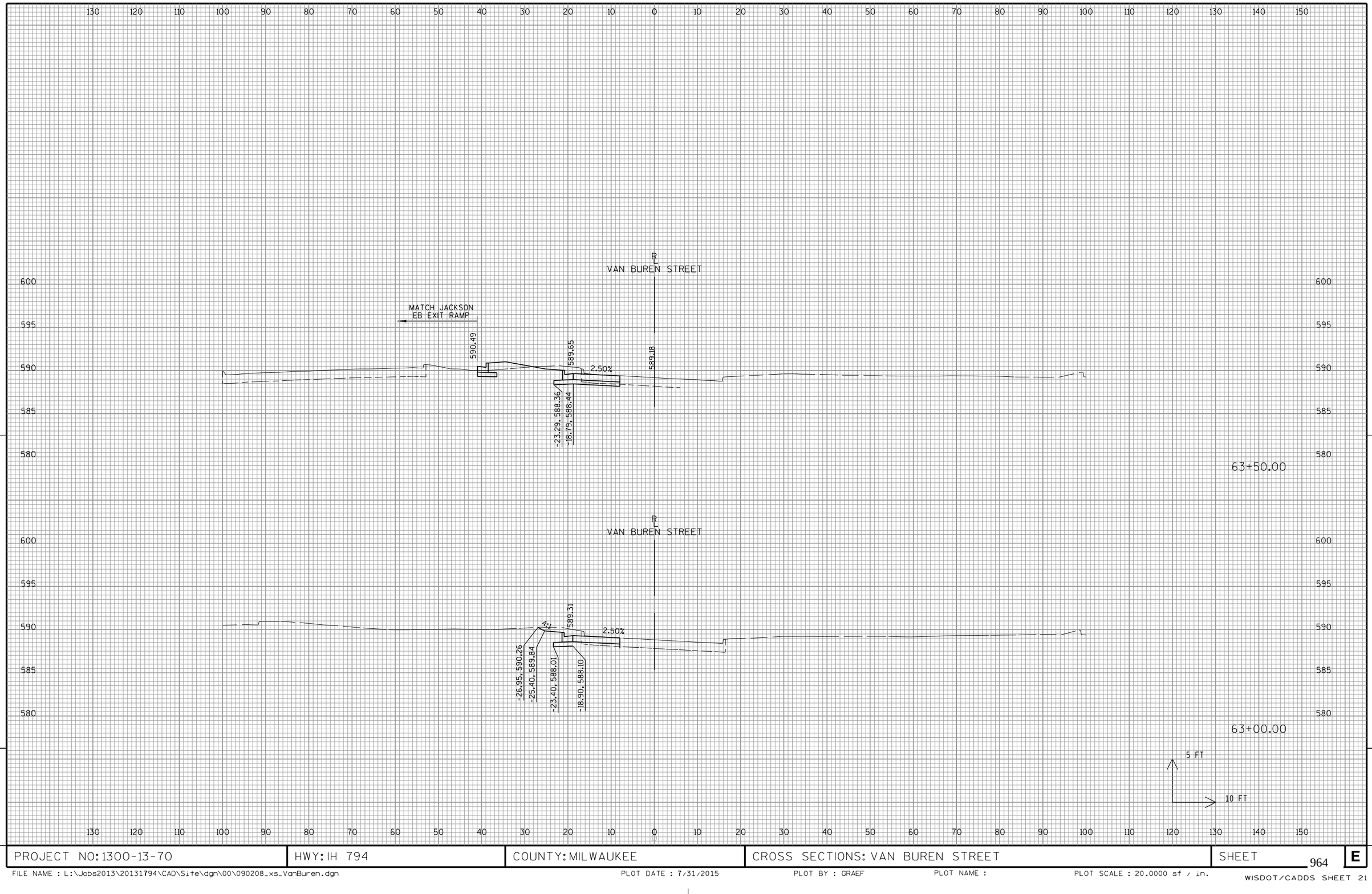
9

9

PROJECT NO:1300-13-70	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:VAN BUREN STREET	SHEET 963	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090208_xs_VanBuren.dgn PLOT DATE : 7/31/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



9

9

PROJECT NO:1300-13-70	HWY:IH 794	COUNTY:MILWAUKEE	CROSS SECTIONS:VAN BUREN STREET	SHEET 964	E

FILE NAME : L:\Jobs2013\20131794\CAD\Site\dgn\00\090208_xs_VanBuren.dgn PLOT DATE : 7/31/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov