WKE

APR 2014

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	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 704

PROJECT ID: 1228-25-70
WITH: N/A

COUNTY: MILWAUKEE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

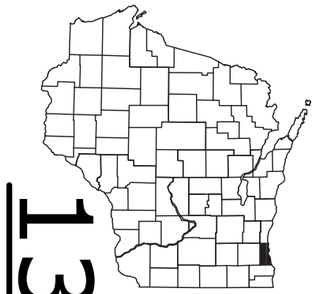
PLAN OF PROPOSED IMPROVEMENT

NORTH SOUTH FREEWAY

HOWARD AVE TO THE VALLEY BRIDGE
I 43
MILWAUKEE COUNTY

STATE PROJECT NUMBER
1228-25-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1228-25-70	WISC 2014103	1



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N

DESIGN DESIGNATION

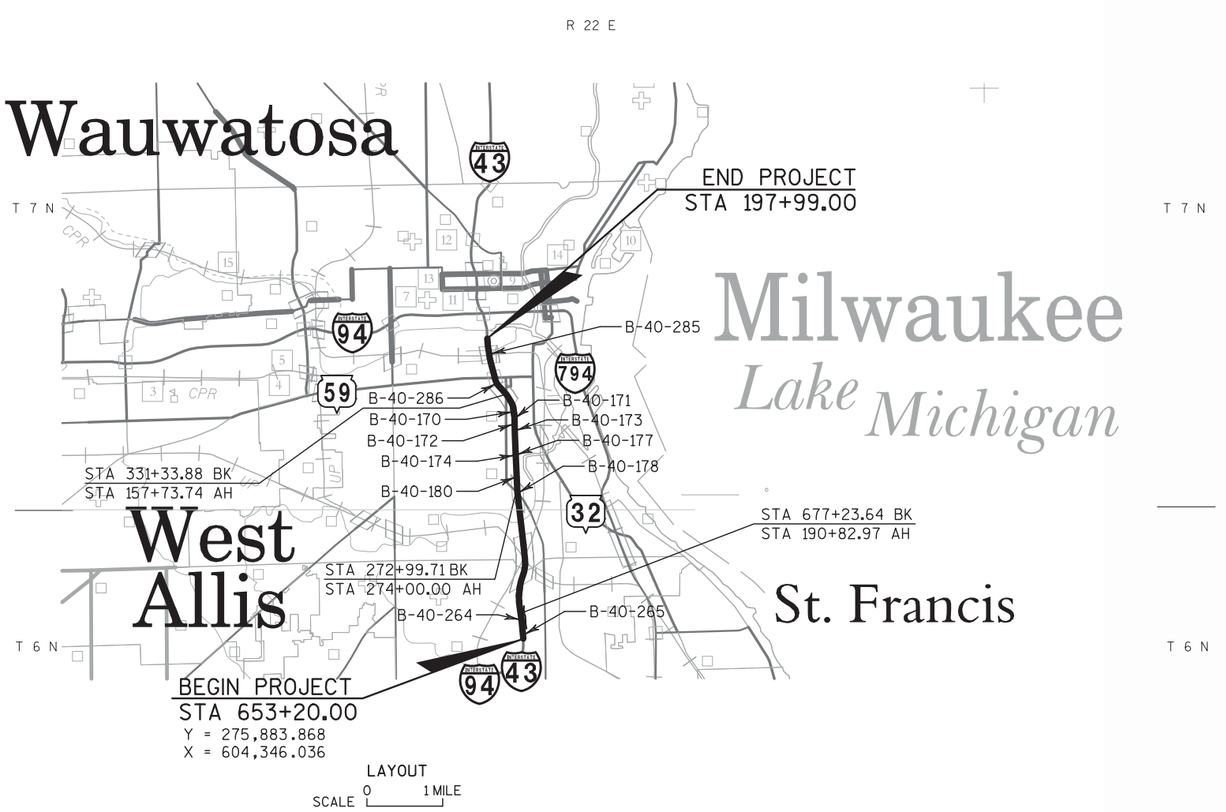
		MITCHELL-HOWARD	HOWARD-BECHER	BECHER-LAPHAM	LAPHAM-MARQUETTE
A.A.D.T.	2009	= 111,000	113,000	100,000	116,000
A.A.D.T.	2030	= 120,000	123,000	108,000	130,000
D.H.V.		= 12,250	12,446	10,976	13,426
D.D.		= 58/42	58/42	58/42	58/42
T.		= 9.1%	9.1%	9.1%	9.1%
DESIGN SPEED		= 60 MPH	60 MPH	60 MPH	55 MPH
ESALS		= 9,274,650	9,475,400	8,351,200	9,876,900

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



TOTAL NET LENGTH OF CENTERLINE = 3.860 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY - NAD 1983 (2007). ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007)

ORIGINAL PLANS PREPARED BY

URS
342 North Water Street
7th Floor
Milwaukee, WI 53202
(414) 831-4100

WISCONSIN
WILLIAM R. SCHILLING
E-35841
WAUKESHA
WISCONSIN
PROFESSIONAL ENGINEER

1/30/14 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	KAPUR & ASSOCIATES
Designer	URS CORPORATION
Project Manager	JOE GALLAMORE
Regional Examiner	
Regional Supervisor	JOE GALLAMORE
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 1/30/14 (Signature)

E

2

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. NOTIFY DIGGERS HOTLINE AND ALL UTILITIES IN THE VICINITY OF THE PROJECT TO LOCATE THEIR FACILITIES AT LEAST THREE WORKING DAYS PRIOR TO BEGINNING WORK.

ALL RADII DIMENSIONS TO CURB AND GUTTER SHOWN ON THE PLAN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

SOD LAWN AND FERTILIZE (TYPE B) ALL DISTURBED AREAS WITHIN THE RIGHT OF WAY AND T.L.E., OR AS DIRECTED BY THE ENGINEER.

PIPE ELEVATIONS SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

THE EROSION CONTROL FEATURES ARE SHOWN ON THE PLAN AND PROFILE SHEETS AT SUGGESTED LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED BY THE FIELD ENGINEER.

EROSION CONTROL DEVICES ARE TO BE PLACED IN PROPER SEQUENCE WITH CONSTRUCTION OPERATIONS AND MAINTAINED THROUGHOUT THE PROJECT TO COMPLETION OR AS DETERMINED BY THE ENGINEER.

ALL DISTRUBED AREAS WITHIN THE PROJECT VACINITY ARE TO BE LANDSCAPED APPROPRIATELY AT THE END OF THE PROJECT. EROSION MAT, FERTILIZER, AND SEEDING TO BE INCLUDED.

ALL PAVEMENT MARKING STATIONS ARE APPROXIMATE AND ARE TO BE VERIFIED BY THE ENGINEER IN THE FIELD.

INSTALL NEW PAVEMENT MARKINGS IN THE UNITED COMMUNITY CENTER PARKING LOT IN THE EXISTING LOCATIONS AND AS DIRECTED BY THE ENGINEER IN THE FIELD. THE LOT IS LOCATED IN THE NORTHWEST QUADRANT OF S. 6TH STREET AND W. WASHINGTON STREET.

INSTALL ALL RAMP METERING STOP BARS DIRECTLY BETWEEN THE EXSITING RAMP CONTROL SIGNAL ASSEMBLY BASES. EXACT PLACEMENT TO BE VERIFIED BY THE ENGINEER IN THE FIELD.

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

PROVIDE TEMPORARY POSITIVE DRAINAGE IN THE NEWLY INSTALLED STORM SEWER SYSTEM UNTIL IT IS ABLE TO EFFECTIVELY DRAIN TO ITS INTENDED OR PLANNED OUTFALL. ANY WORK REQUIRED TO COMPLETE THIS DRAINAGE IS INCIDENTAL TO THE BID ITEMS FOR STORM SEWER.

WHEN DEFINING THE PAVEMENT STRUCTURE, THE BOTTOM OF THE BASE AGGREGATE DENSE IS CONSIDERED THE SUBGRADE LINE. THE BREAKER RUN LAYER IS A SUBGRADE IMPROVEMENT.

PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
RAMPS E-10	1.75-2.5" UPPER 1.75-3" MIDDLE* 1.75-3" LOWER	12.5 mm UPPER 12.5 mm MIDDLE* 19 mm LOWER	PG64-22 UPPER PG64-22 UPPER* PG64-22 LOWER

* AT RAMP LOCATIONS REQUIRING WEDGING

PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
E-10	1.75 UPPER 1.75-3.25" LOWER	12.5 mm UPPER 12.5 mm LOWER	PG64-28P UPPER PG64-28P LOWER
E-10	1.5-3.25" WEDGE	9.5 mm UPPER	PG64-28P UPPER

AT CD ROADS

STANDARD ABBREVIATIONS

ACRES	AC
AHEAD	AH
ALUMINUM	ALUM
AND OTHERS	ET AL
ANTENNA	ANT
BACK	BK
BARN	B
BLOCK	BLK
BUILDING	BLDG
CENTERLINE	CL
CERTIFIED SURVEY MAP	CSM
CONCRETE	CONC
CORNER	COR
CORRUGATED STEEL CULVERT PIPE	CSCP
CORRUGATED STEEL PIPE ARCH	CSPA
ELECTRIC PEDESTAL	EP
ELEVATION	EL
FOUNDATION	FDN
GALVANIZED	GALV
GARAGE	G
GAS PUMP	GP
GAS VALVE	GV
HECTARES	HA
HOUSE	H
HIGHWAY EASEMENT	HE
LENGTH	L
LEFT HAND FORWARD	LHF
LONG CHORD	LC
LONG CHORD BEARING	LCB
LOW-WATER DATA	LWD
MONUMENT	MON
ORDINARY HIGH WATER MARK	OHWM
PAGE	P
PARKER-KALON FASTENER	PK
POWER POLE	PP
PROPERTY LINE	PL
RADIUS	R
REFERENCE LINE	RL
REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE	RCHECP
RIGHT HAND FORWARD	RHF
RIGHT OF WAY	R/W
SECTION	SEC
SHED	S
SLOPE INTERCEPT	SI
STATE TRAFFIC OPERATIONS CENTER	STOC
STATION	STA
TANGENT	TAN
TANK	T
TELEPHONE PEDESTAL	TP
TEMPORARY LIMITED EASEMENT	TLE
VOLUME	VOL
WALL	W

ORDER OF SECTION 2 SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PAVEMENT MARKING
TRAFFIC CONTROL
DETOUR PLANS

UTILITIES

ATC MANAGEMENT INC
MR. MIKE OLSEN
801 O'KEEFE ROAD
PO BOX 6113
DEPERE, WI 54115
920-338-6582
MOLSEN@ATCLLC.COM

AT&T CORPORATION
JMC ENGINEERS & ASSOCIATES
MR. WILLIAM KOENIG
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LAKE MILLS, WI 53551
608-628-0575
JMC140@FRONTIER.COM

AT&T CORPORATION
MR. TOM BOHTE
W277 S4747 SAYLESVILLE ROAD
WAUKESHA, WI 53189
262-547-6738

AT&T WISCONSIN
MR. MARK SZYMANSKI
7721 W FOND DU LAC AVENUE
MILWAUKEE, WI 53218
414-535-7417
MS7398@ATT.COM

AT&T MOBILITY
NETWORK OPERATIONS MANAGER
MR. MIKE JANSEN
15345 W COFFEE ROAD
NEW BERLIN, WI 53151
262-785-7102
262-785-7108 FAX
MJ2179@ATT.COM

CITY OF MILWAUKEE
CITY ENGINEER
MR. JEFFREY POLENSKE
841 N BROADWAY, ROOM 701
MILWAUKEE, WI 53202
414-286-3701
JEFFREY.POLENSKE@MILWAUKEE.GOV

CITY OF MILWAUKEE - CABLE
MR. BRIAN PAWLAK
841 N BROADWAY ST
MILWAUKEE, WI 53202
414-286-5970
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CITY OF MILWAUKEE - CONDUIT
MRS. KAREN ROGNEY
841 N BROADWAY ST, ROOM 920
MILWAUKEE, WI 53202
414-286-3243
KAREN.ROGNEY@MILWAUKEE.GOV

CITY OF MILWAUKEE - LIGHTING/SIGNALS
MR. DENNIS MILLER
1540 W. CANAL STREET
MILWAUKEE, WI 53233
414-286-5942
DENNIS.MILLER@MILWAUKEE.GOV

CITY OF MILWAUKEE - SEWERS
MR. TONY KOTECKI
841 N BROADWAY ST, ROOM 710
MILWAUKEE, WI 53202
414-286-2433
ANTHONY.KOTECKI@MILWAUKEE.GOV

CITY OF MILWAUKEE - WATER
MR. DAVE GOLDAPP
841 N BROADWAY ST, ROOM 409
MILWAUKEE, WI 53202
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LEVEL 3 COMMUNICATIONS LLC
MR. MARK DECHANT
507 SOUTH 2ND STREET
MILWAUKEE, WI 53204
414-426-1857
MARK.DECHANT@LEVEL3.COM

MIDWEST FIBER NETWORKS
OSP ENGINEER
MR. RICHARD TRGOVEC
3701 W BURNHAM STREET, SUITE C
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414-672-5612
414-226-2269 FAX
RTRGOVEC@MIDWESTFIBERNETWORKS.COM

MILWAUKEE METRO SEWERAGE DISTRICT
MR. ROBERT REBITSKI
260 W. SEEBOTH ST.
MILWAUKEE, WI 53204
414-225-2214
RREBITSKI@MMSD.COM

PAETEC BUSINESS SERVICES
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MR. JIM KOSTUCH
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005
262-792-7938
JAMES.KOSTUCH@WINDSTREAM.COM

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MR. KEVIN HUFF
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PALOS HEIGHTS, IL 60463
708-837-7927
708-371-8674 FAX
KEVIN.HUFF@QWEST.COM

SPRINT COMMUNICATIONS LP
FACILITIES ENGINEER II/OSP-EAST
MR. JIM BURTON
5600 N. RIVER ROAD, SUITE 200
ROSEMONT, IL 60018
708-955-6659
JAMES.M.BURTON@SPRINT.COM

TCG OF MILWAUKEE
PROJECT MANAGER
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UTILITY COORDINATOR
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GRUJO.MILINKOVIC@VERIZON.COM

WE ENERGIES - ELECTRIC/GAS/STEAM
SEND ALL CORRESPONDENCE TO:
MR. LATROY BRUMFIELD
333 W EVERETT STREET - A299
MILWAUKEE, WI 53203
414-221-5617
LATROY.BRUMFIELD@WE-ENERGIES.COM

FIELD CONTACT - ELECTRIC
MR. KEN FRANECKI
500 S. 116TH STREET
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414-944-5531
KENNETH.FRANECKI@WE-ENERGIES.COM

FIELD CONTACT - GAS
MR. PAUL OSMANSKI
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FIELD CONTACT - STEAM
MR. TERRENCE OLSON JR.
231 W. MICHIGAN ST.
MILWAUKEE, WI 53203
414-221-4509
TERRENCE.OLSON@WE-ENERGIES.COM

WINDSTREAM KDL INC/
WINDSTREAM NTI INC
f/k/a NORLIGHT
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ELECTRICAL FIELD UNIT:
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WEST ALLIS, WI 53214
414-266-1170

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WISDOT STOC
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WISDOT ATR PULL BOXES
MR. CLIFF SEROWSKI
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WEST ALLIS, WI 53214
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CONTACTS

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SE REGION
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URS CORPORATION
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WISCONSIN DEPT. OF NATURAL RESOURCES
SE REGION
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MILWAUKEE, WI 53212
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414-263-8483 FAX
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UNION PACIFIC RAILROAD COMPANY
MANAGER OF SPECIAL PROJECTS
MR. JOHN VENICE
101 NORTH WACKER DRIVE SUITE 1920
CHICAGO, IL 60606
312-777-2043
402-233-2769 FAX
JNVENICE@UP.COM

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

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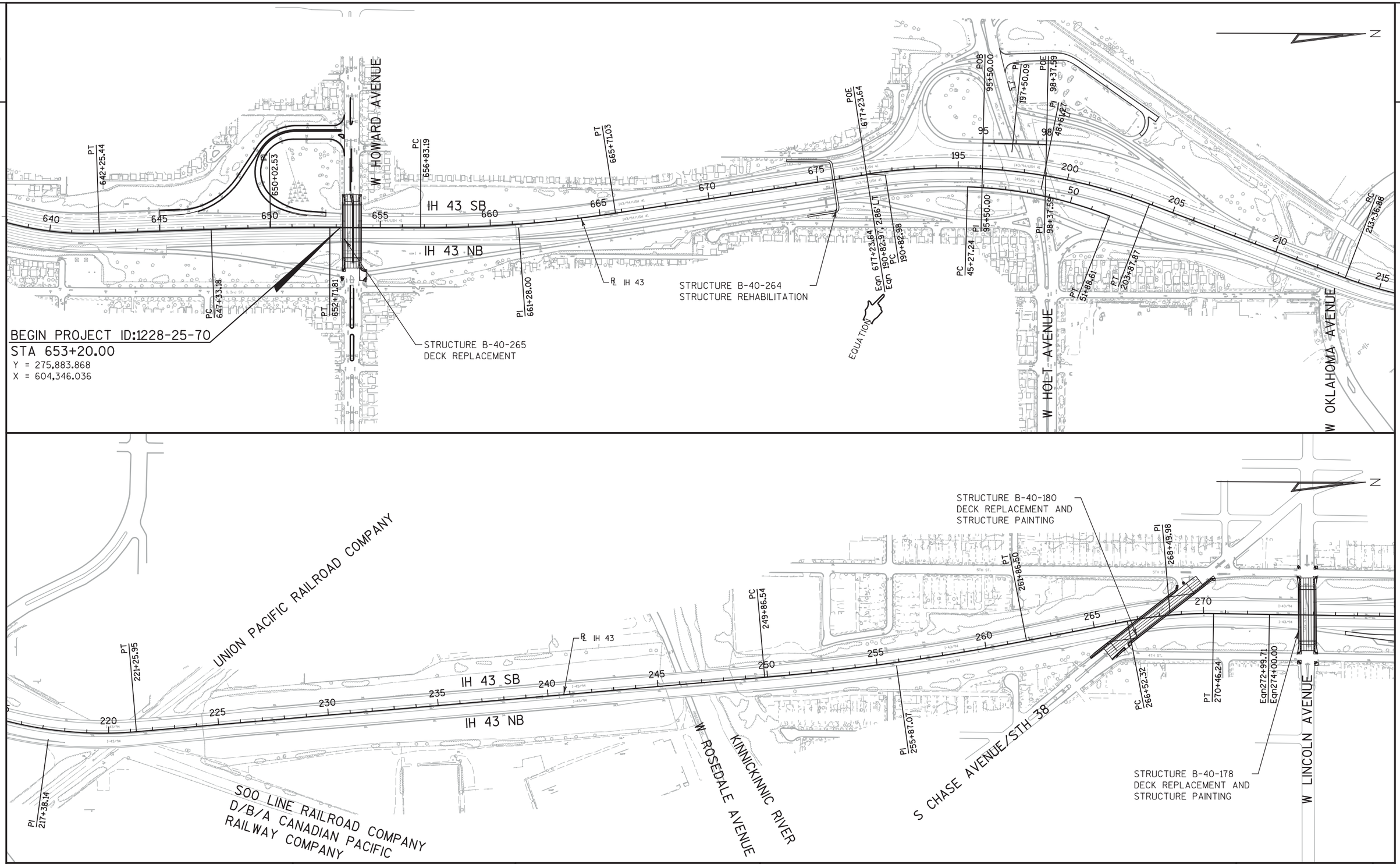
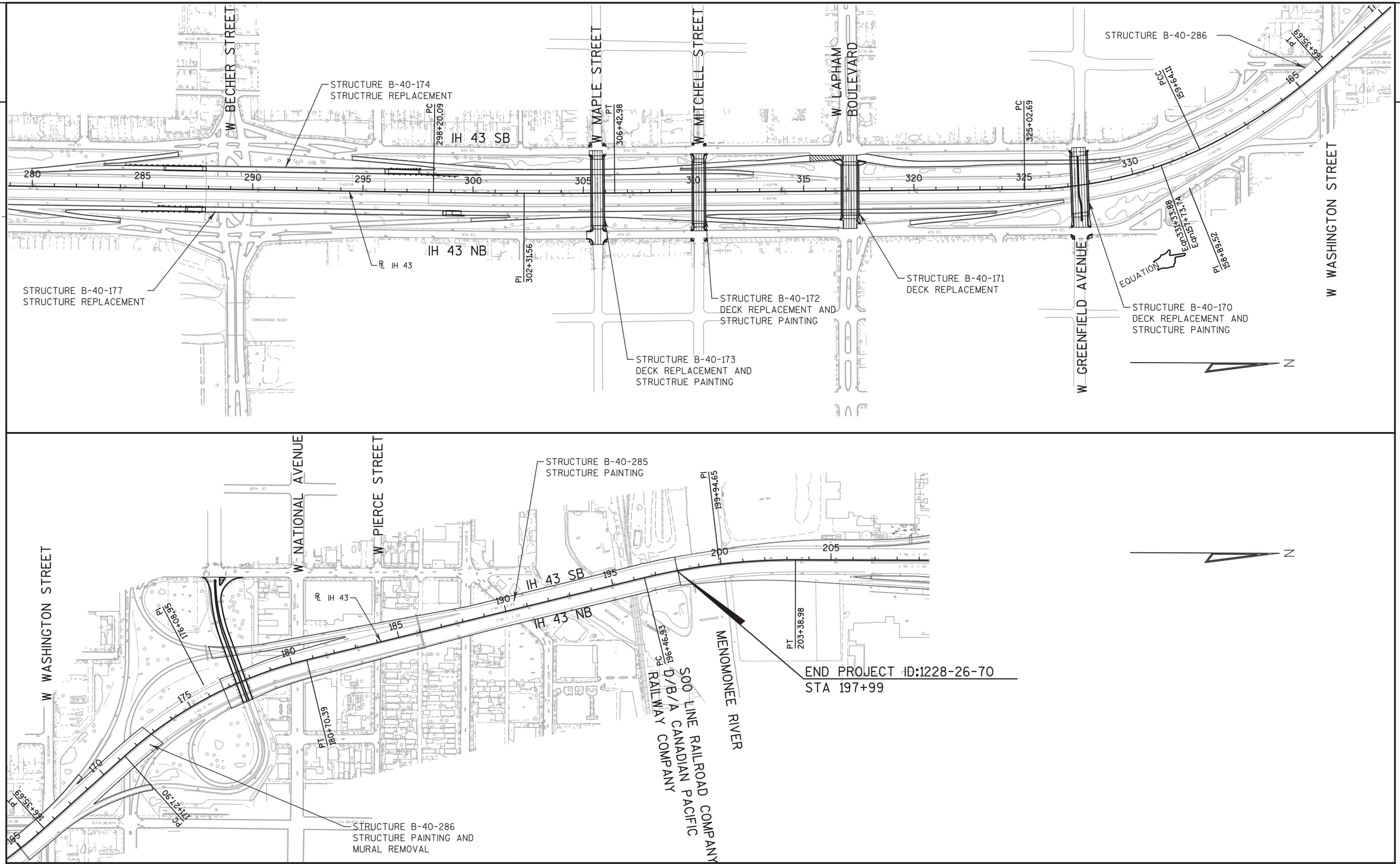
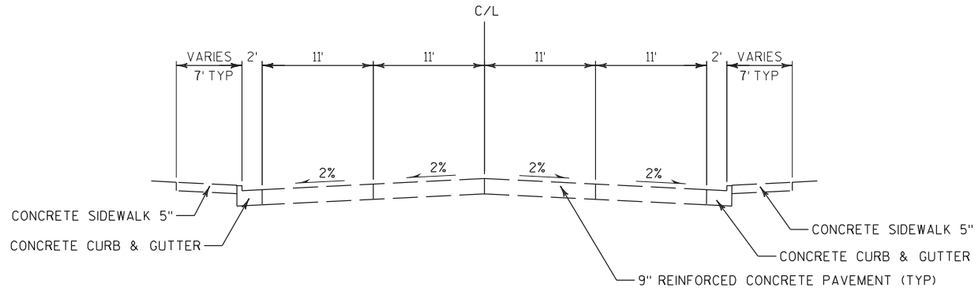


PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\020201_po.dgn PLOT DATE : 2/4/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 400.0000 sf / in.
WISDOT/CADDS SHEET 42

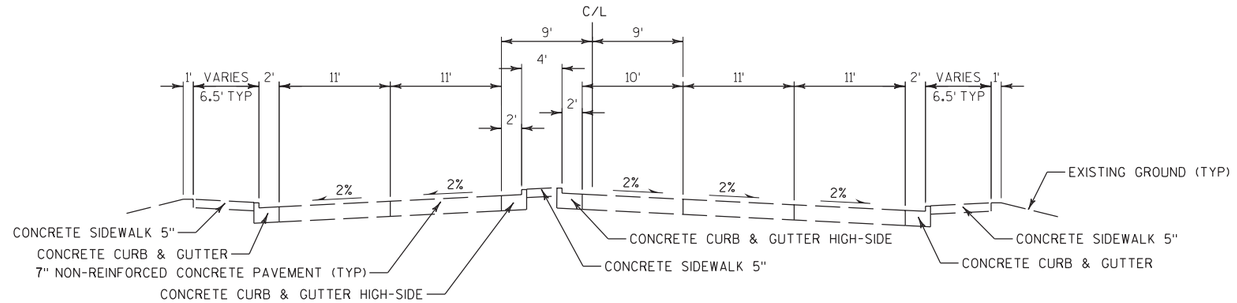


PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 4	E



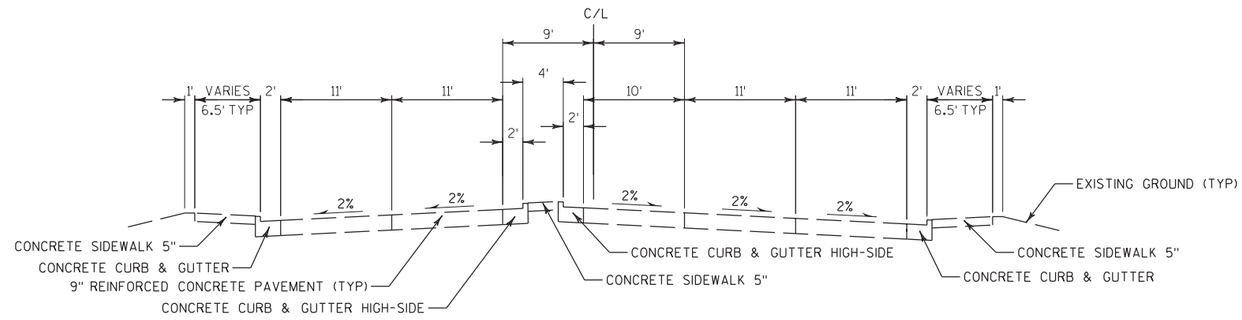
EXISTING TYPICAL SECTION

MAPLE STREET
STA 399+59.75 TO STA 399+98.97
STA 402+99.97 TO STA 403+85.00
MITCHELL STREET
STA 299+59.53 TO STA 299+98.68
STA 302+75.18 TO STA 303+08.74



EXISTING TYPICAL SECTION

LAPHAM STREET
STA 199+53.52 TO STA 199+98.94
STA 202+25.78 TO STA 202+86.31

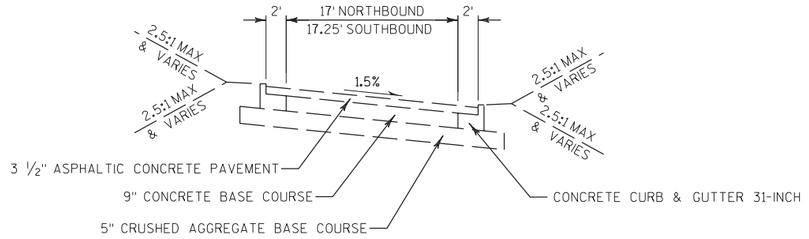


EXISTING TYPICAL SECTION

GREENFIELD AVENUE
STA 99+60.41 TO STA 99+98.79
STA 102+56.56 TO STA 103+22.12
LINCOLN AVENUE
STA 499+46.46 TO STA 499+99.28
STA 502+32.70 TO STA 502+76.32

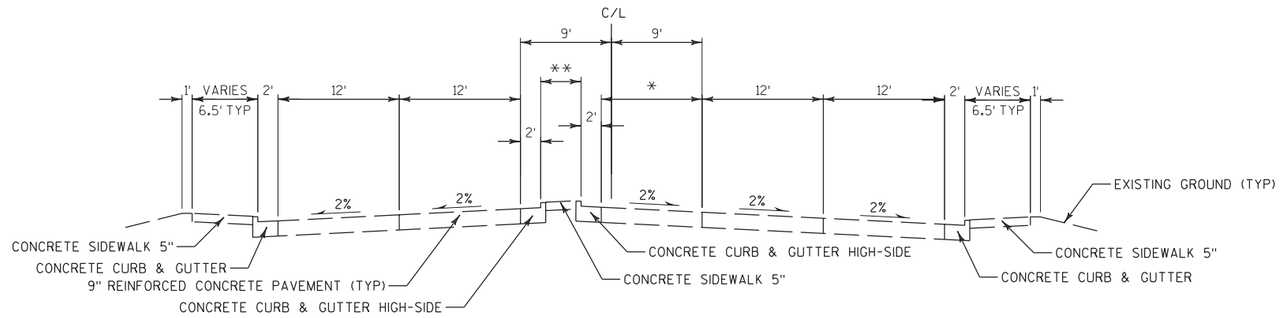
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 5	E

2



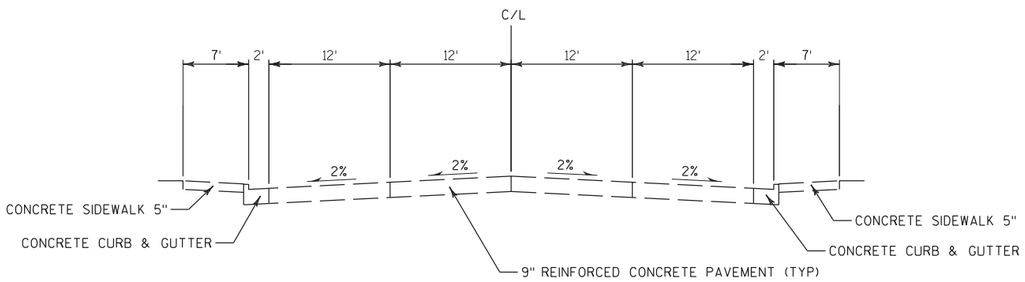
EXISTING TYPICAL SECTION - CD ROADS

BECHER STREET NB CD ROAD
STA 1186+97.00 TO STA 1187+87.69
STA 1198+64.19 TO STA 1199+47.28
BECHER STREET SB CD ROAD
STA 1185+96.00 TO STA 1187+87.50
STA 1195+99.00 TO STA 1197+53.53



EXISTING TYPICAL SECTION

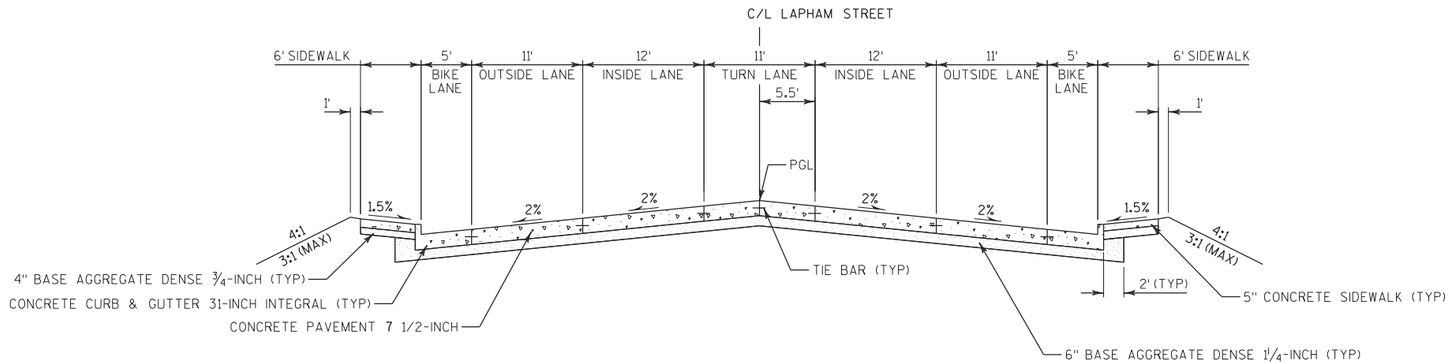
HOWARD AVENUE
STA 699+52.82 TO STA 699+99.08
STA 702+39.24 TO STA 702+85.75
* VARIES 0' - 10'
** VARIES 4' -14'



EXISTING TYPICAL SECTION

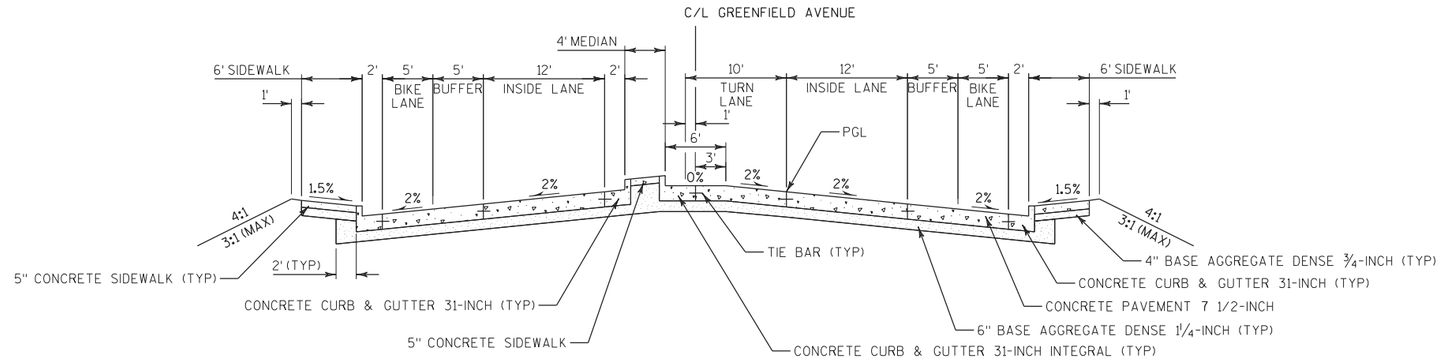
CHASE AVENUE
STA 599+04.75 TO STA 599+98.02
STA 603+27.26 TO STA 603+93.67

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 6	E



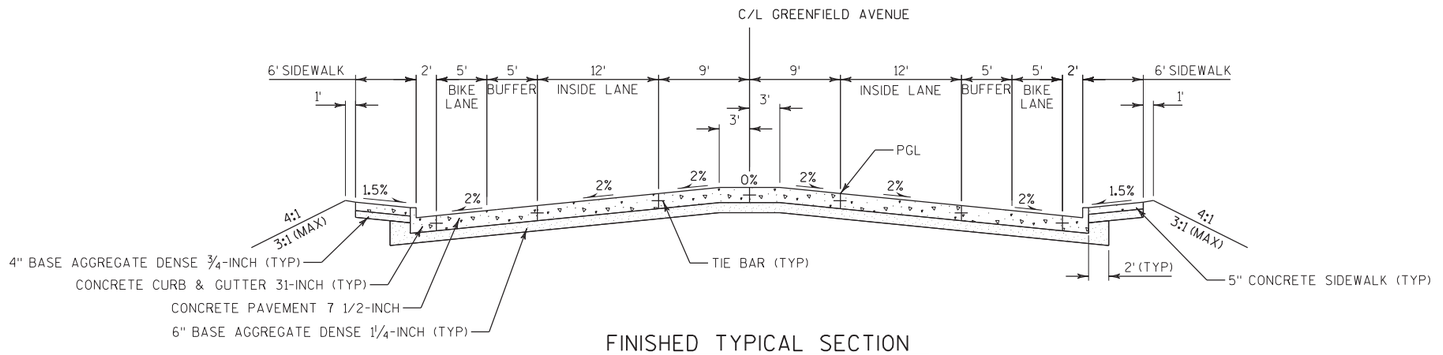
FINISHED TYPICAL SECTION

LAPHAM STREET
STA 199+53.52 TO STA 199+98.94
STA 202+25.78 TO STA 202+86.31



FINISHED TYPICAL SECTION

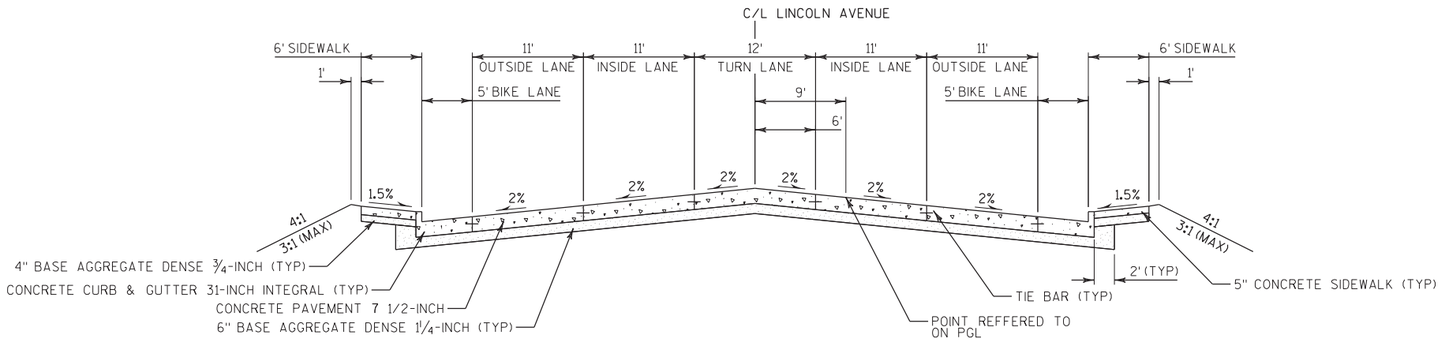
GREENFIELD AVENUE
STA 102+56.56 TO STA 103+22.12



FINISHED TYPICAL SECTION

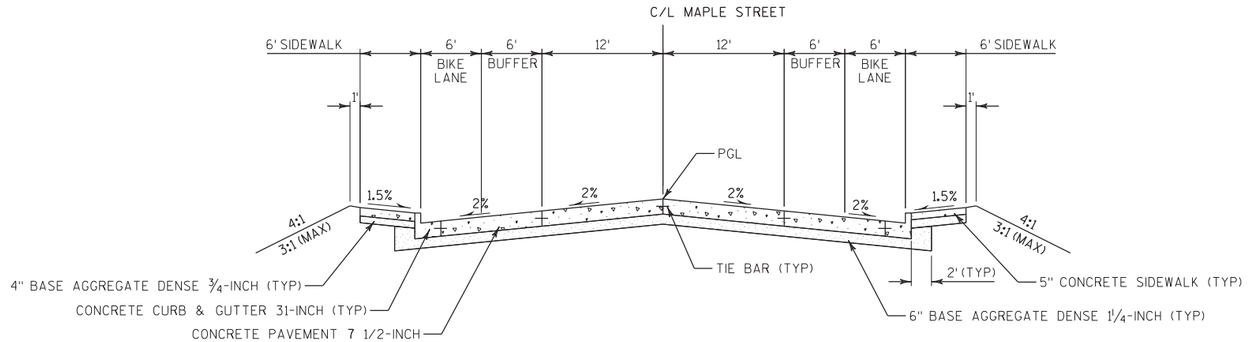
GREENFIELD AVENUE
STA 99+60.41 TO STA 99+98.79

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 7	E



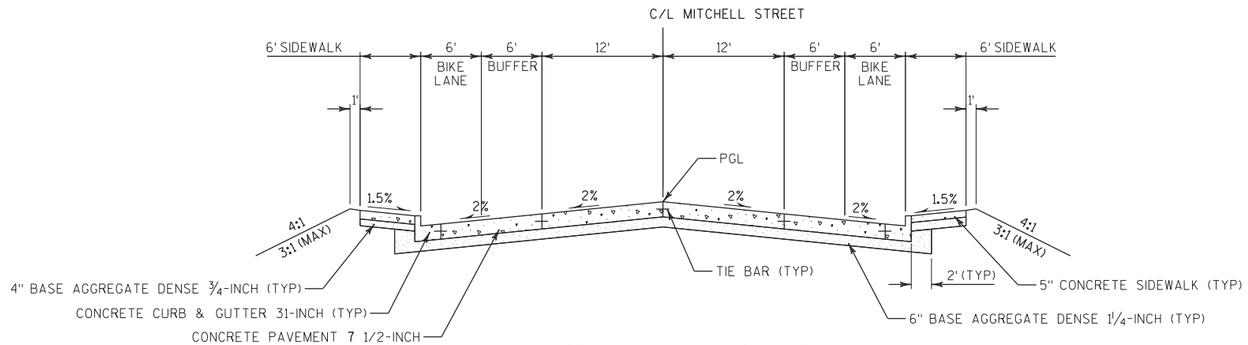
FINISHED TYPICAL SECTION

LINCOLN AVENUE
STA 499+46.46 TO STA 499+99.28
STA 502+32.70 TO STA 502+76.32



FINISHED TYPICAL SECTION

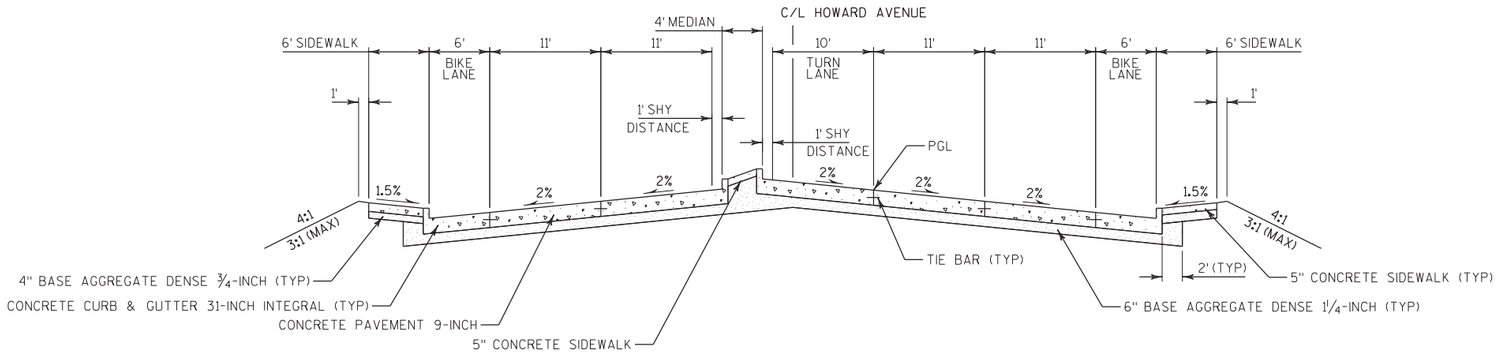
MAPLE STREET
STA 399+59.75 TO STA 399+98.97
STA 402+99.97 TO STA 403+85.00



FINISHED TYPICAL SECTION

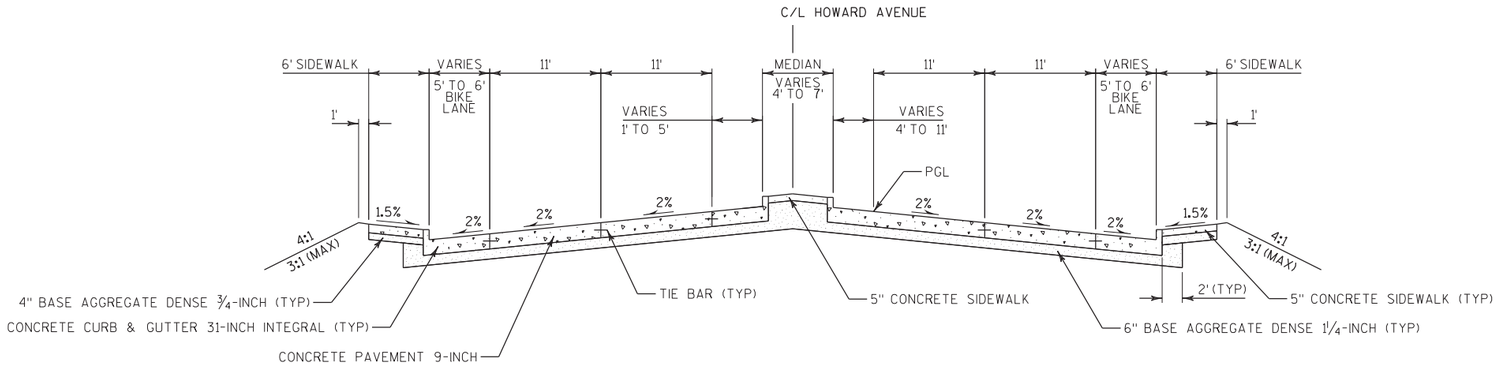
MITCHELL STREET
STA 299+59.53 TO STA 299+98.68
STA 302+75.18 TO STA 303+08.74

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 8	E



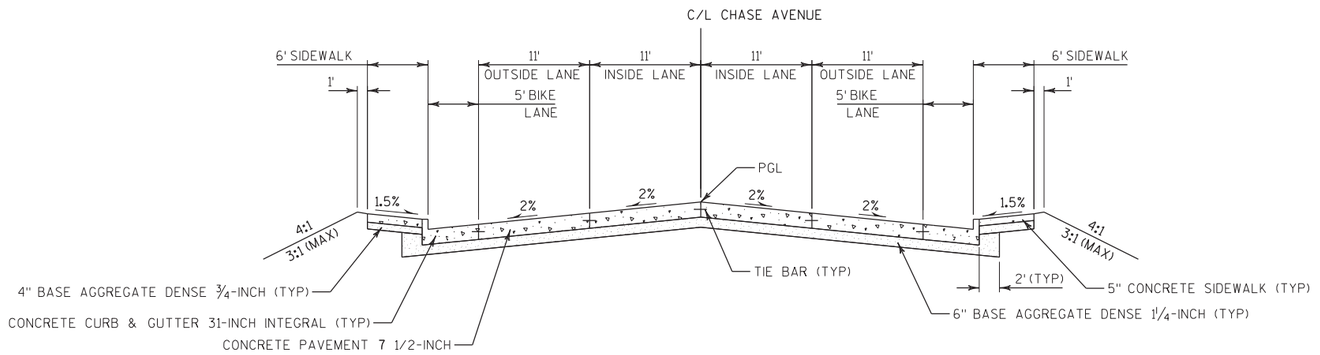
FINISHED TYPICAL SECTION

HOWARD AVENUE
STA 702+39.24 TO STA 702+85.75



FINISHED TYPICAL SECTION

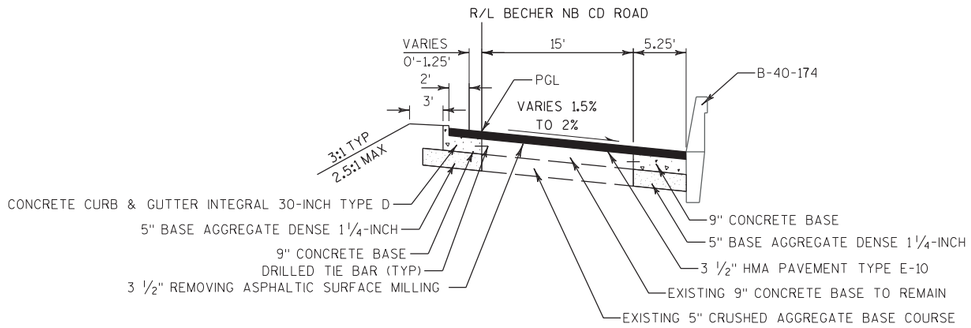
HOWARD AVENUE
STA 699+52.82 TO STA 699+99.08



FINISHED TYPICAL SECTION

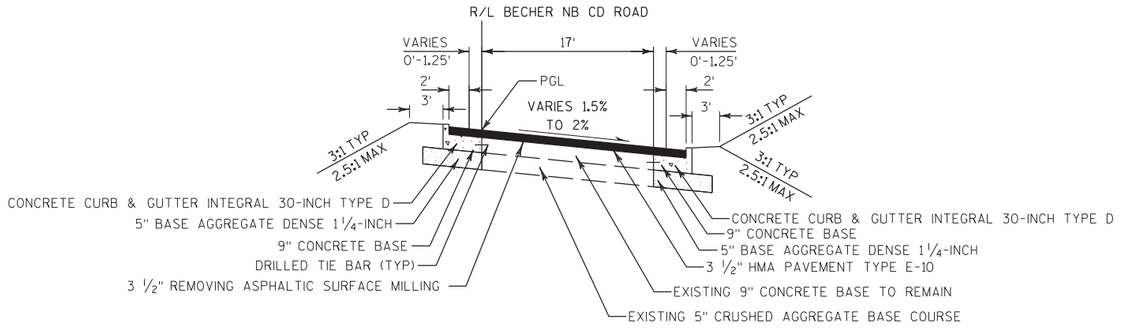
CHASE AVENUE
STA 599+04.75 TO STA 599+98.02
STA 603+27.26 TO STA 604+21.09

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 9	E



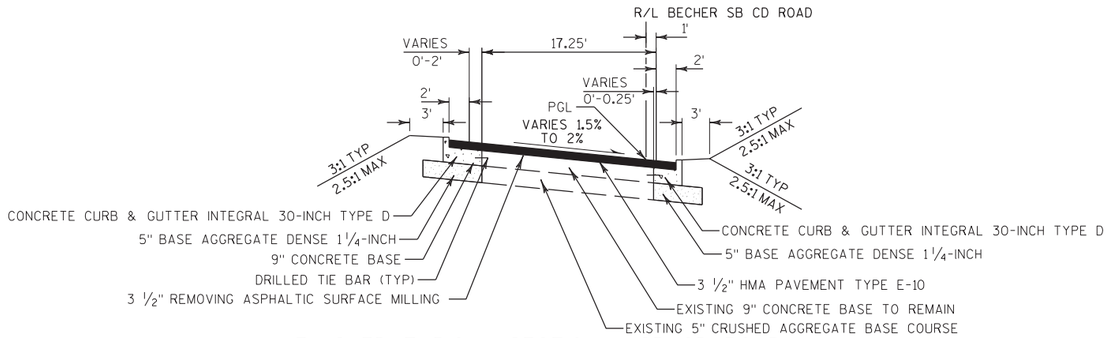
FINISHED TYPICAL SECTION - NB CD ROAD

BECHER STREET NB CD ROAD
STA 1198+64.19 TO STA 1199+47.28



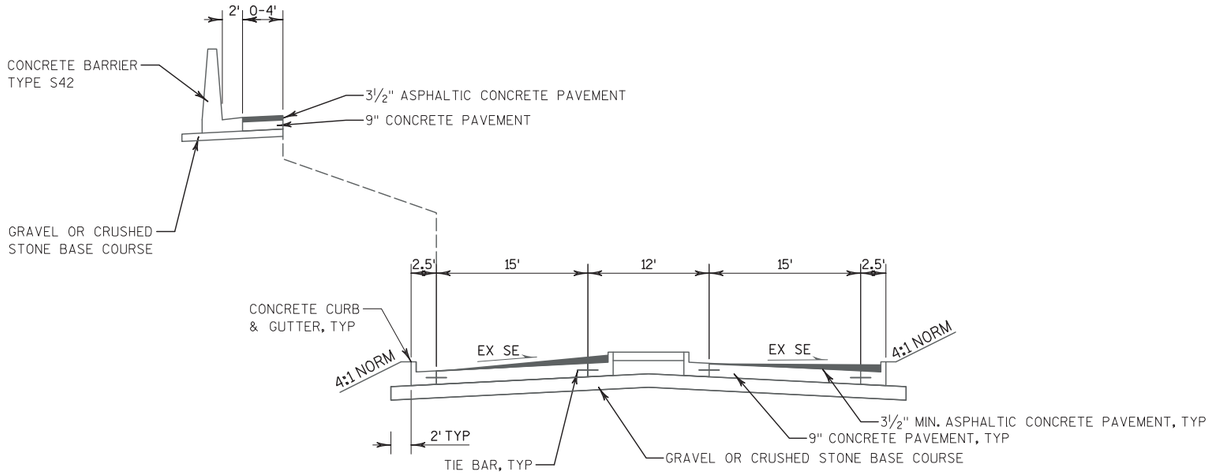
FINISHED TYPICAL SECTION - NB CD ROAD

BECHER STREET NB CD ROAD
STA 1186+97.00 TO STA 1187+87.61



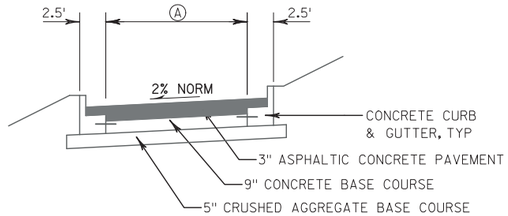
FINISHED TYPICAL SECTION - SB CD ROAD

BECHER STREET SB CD ROAD
STA 1185+96.00 TO STA 1187+87.50
STA 1195+99.00 TO STA 1197+53.53



EXISTING TYPICAL SECTION - RAMPS

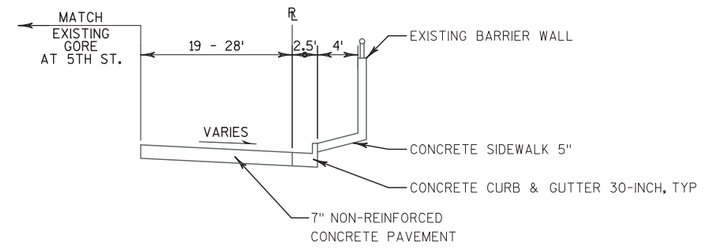
STA 645+57.08 TO STA 654+46.31 HOWARD AVENUE SB EXIT RAMP
STA 644+46.64 TO STA 654+46.39 HOWARD AVENUE SB ENTRANCE RAMP



RAMP	A
SB BECHER EXIT	17'
LAPHAM ENT	12-27'
CD	13-24'
BECHER ENT	12=19'
LAPHAM EXIT	13-36'
NB LAPHAM EXIT	16-36'
BECHER EXIT	15-17'
BECHER ENT	14-15'
CD	16-24'
LAPHAM ENT	12-19'

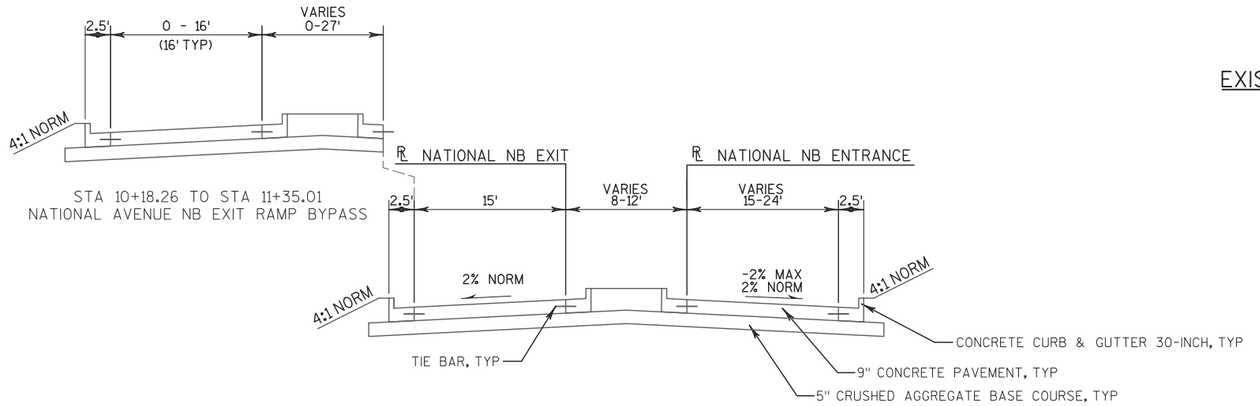
EXISTING TYPICAL SECTION - RAMPS

STA 94+48.76 TO STA 102+98.79 BECHER ST SB EXIT RAMP
STA 106+79.47 TO STA 115+31.14 LAPHAM BLVD SB ENTRANCE RAMP
STA 79+97.68 TO STA 1212+69.84 BECHER/LAPHAM SB C-D RAMP
STA 79+97.68 TO STA 86+65.86 BECHER ST SB ENTRANCE RAMP
STA 105+63.83 TO STA 116+79.77 LAPHAM BLVD NB EXIT RAMP
STA 77+47.79 TO STA 84+06.99 BECHER ST NB EXIT RAMP
STA 99+63.11 TO STA 105+63.83 BECHER ST NB ENTRANCE RAMP
STA 1179+14.57 TO STA 1226+82.27 BECHER/LAPHAM NB C-D RAMP
STA 116+09.71 TO STA 127+62.99 LAPHAM BLVD SB EXIT RAMP
STA 119+63.22 TO STA 126+68.94 LAPHAM BLVD NB ENTRANCE



EXISTING TYPICAL SECTION - RAMPS

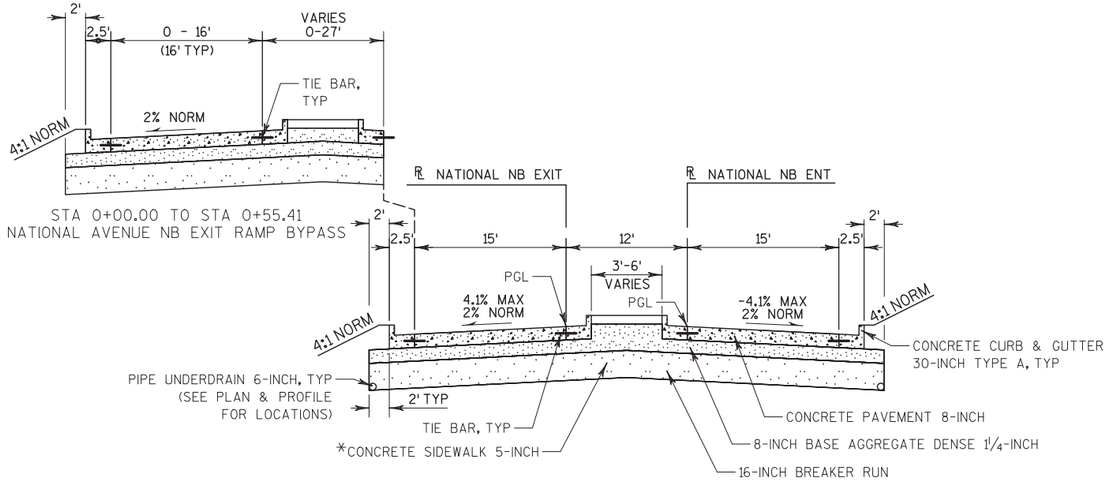
LAPHAM SB ENT. RAMP
115+31.14 - 116+81.72



EXISTING TYPICAL SECTION - RAMPS

STA 10+18.26 TO STA 16+04.14 NATIONAL AVENUE NB ENTRANCE RAMP
STA 10+18.26 TO STA 16+04.13 NATIONAL AVENUE NB EXIT RAMP

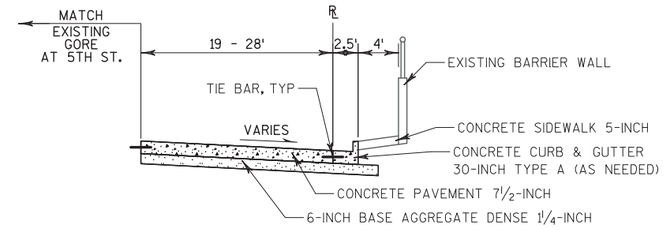
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 11	E



FINISHED TYPICAL SECTION - RAMPS

STA 10+18.26 TO STA 16+04.14 NATIONAL AVENUE NB ENTRANCE RAMP
STA 10+18.26 TO STA 16+04.13 NATIONAL AVENUE NB EXIT RAMP

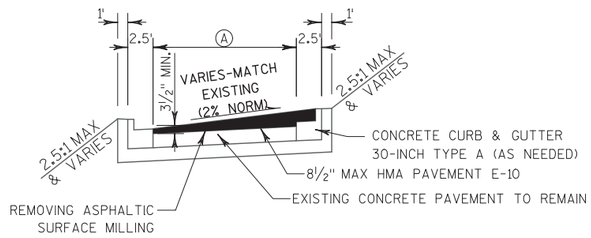
*STA 10+32.89 TO STA 12+50.00



FINISHED TYPICAL SECTION - RAMPS

LAPHAM SB ENTRANCE RAMP
115+31.14 - 116+81.72

RAMP	A
SB BECHER EXIT	17'
LAPHAM ENT	12-27'
CD	13-24'
BECHER ENT	12-19'
LAPHAM EXIT	13-36'
NB LAPHAM EXIT	16-36'
BECHER EXIT	15-17'
BECHER ENT	14-15'
CD	16-24'
LAPHAM ENT	12-19'



FINISHED TYPICAL SECTION - RAMPS

STA 94+48.76 TO STA 102+98.79 BECHER ST SB EXIT RAMP
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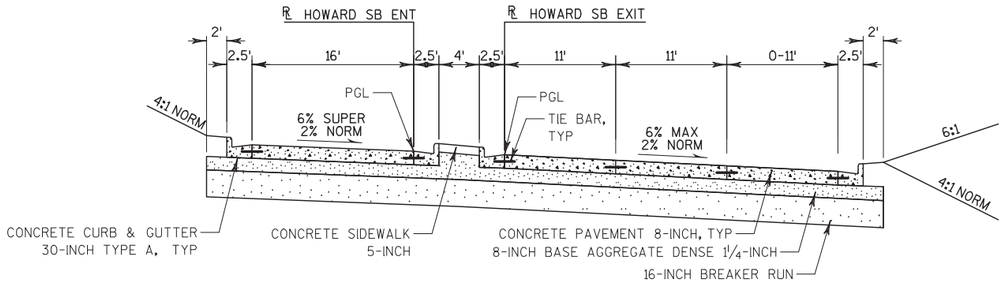
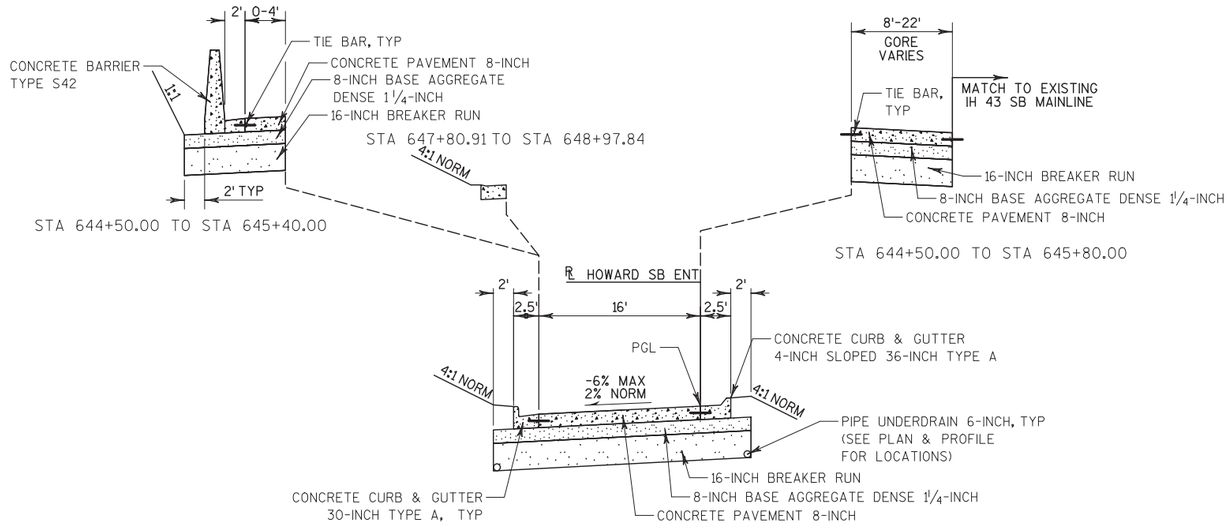


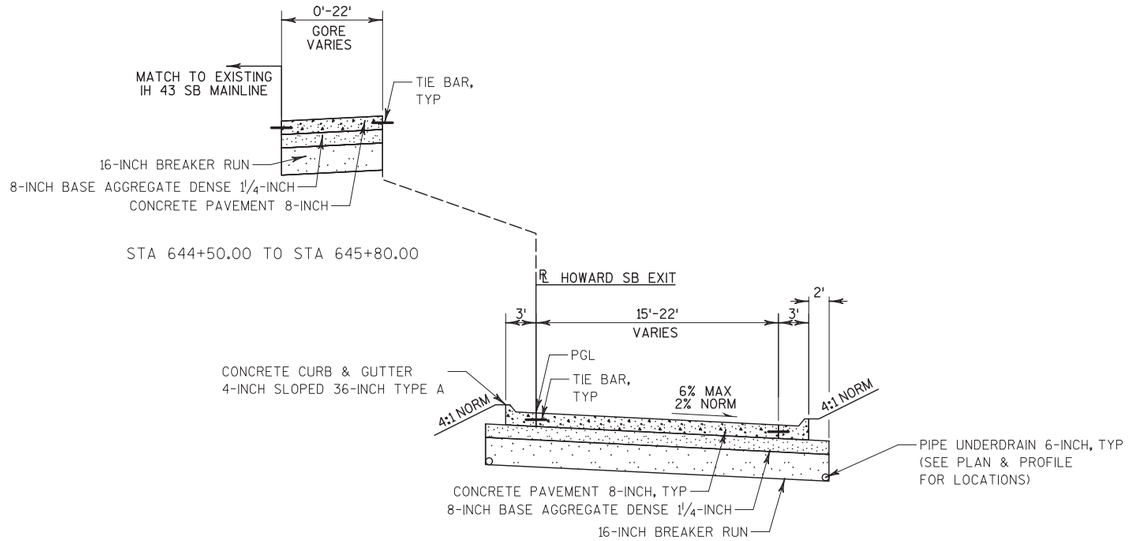
FINISHED TYPICAL SECTION - RAMPS

STA 650+00.00 TO STA 654+46.31 HOWARD AVENUE SB EXIT RAMP
STA 648+97.84 TO STA 654+46.39 HOWARD AVENUE SB ENTRANCE RAMP



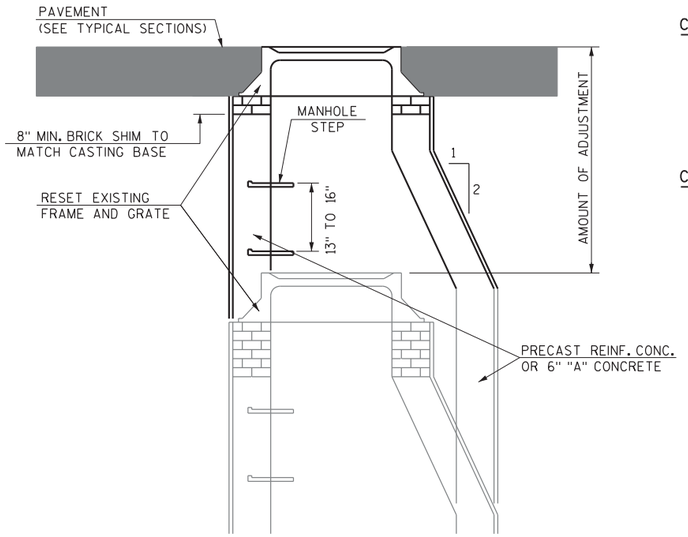
FINISHED TYPICAL SECTION - RAMPS

STA 644+46.64 TO STA 648+97.84 HOWARD AVENUE SB ENTRANCE RAMP



FINISHED TYPICAL SECTION - RAMPS

STA 645+57.08 TO STA 650+00.00 HOWARD AVENUE SB EXIT RAMP



CORBEL MAY BE REVERSED STRAIGHT SIDE LEANED SLIGHTLY TO CLEAR CURB HEAD.

REPAIR BY REMOVING AND REPLACING DAMAGED OR LOOSE BRICK OR BLOCK TO THE DEPTH AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. DEPTHS AS INDICATED ON PLAN ARE ESTIMATES ONLY AND MAY VARY AT TIME OF CONSTRUCTION.

CASE 1 **NEW FRAMES & COVERS FOR EXISTING STRUCTURES:**

0" TO 12" OF ADJUSTMENT WILL BE CONSIDERED INCLUDED IN THE BID ITEM OF THE NEW COVER.

MORE THAN 12" OF ADJUSTMENT WILL BE PAID AS ITEM OF "RECONSTRUCTING MANHOLES OR INLETS".

CASE 2 **EXISTING FRAMES & COVERS TO BE SET TO NEW GRADE**

0" TO 12" OF ADJUSTMENT WILL BE PAID AS ITEM OF "ADJUSTING MANHOLE OR INLET COVERS."

MORE THAN 12" OF ADJUSTMENT WILL BE PAID AS ITEM OF "RECONSTRUCTING MANHOLES OR INLETS".

NOTES

1) IN EITHER CASE (1 OR 2), IF ANY REQUIRED ADJUSTMENT (0" TO >12") EXTENDS INTO THE CORBEL, THE ADJUSTMENT SHALL BE PAID AS ITEM OF "RECONSTRUCTING MANHOLES OR INLETS".

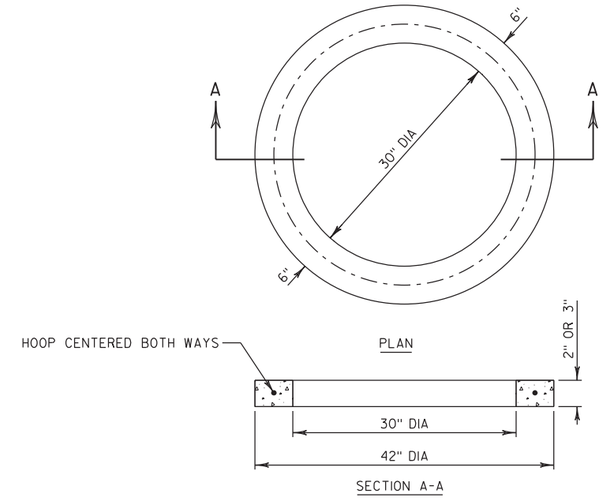
2) IN EITHER CASE (1 OR 2), IF THE ENGINEER IN THE FIELD, UPON INSPECTING THE EXISITNG STRUCTURE, DEEMS THE EXISITNG STRUCTURE TO BE IN A CONDITION THAT IS NOT SUITABLE FOR ITS INTENDED PURPOSE (TRAFFIC LOADING) THEN, THE STRUCTURE SHALL BE RECONSTRUCTED AND PAID UNDER THE ITEM OF "RECONSTRUCTING MANHOLES OR INLETS".

3) MANHOLE ADJUSTMENTS IN ASPHALTIC PAVEMENT WILL BE MADE AFTER THE LOWER LAYER IS PLACED.

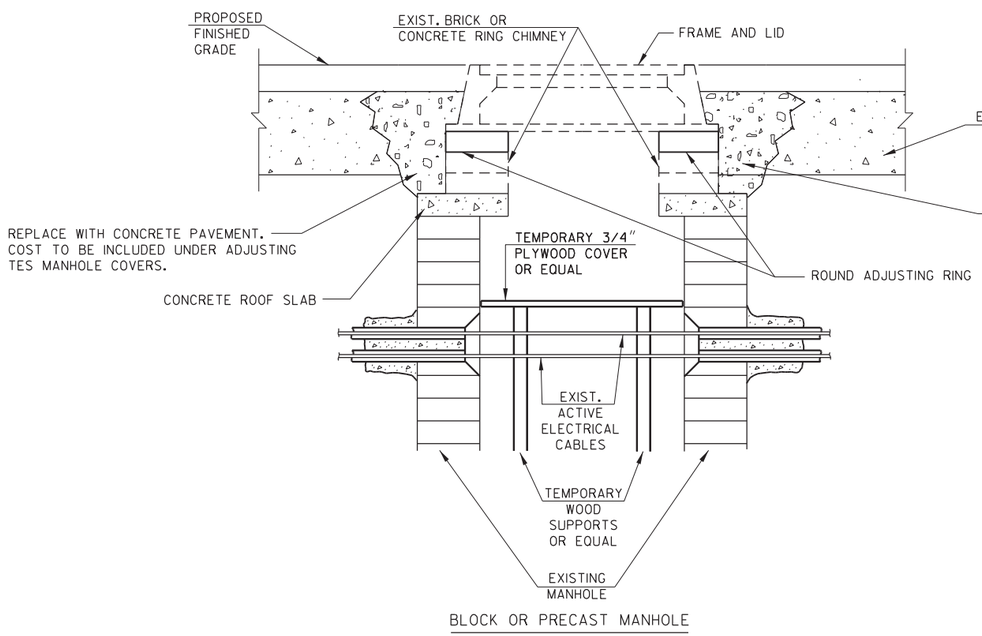
ADJUSTING & RECONSTRUCTING MANHOLES AND INLETS

NOTES:

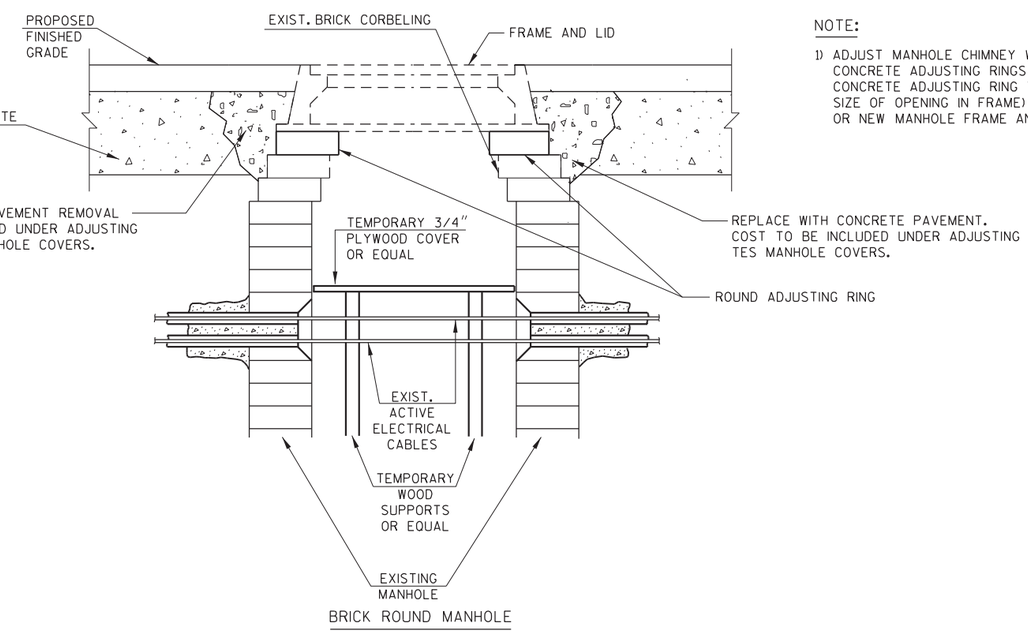
1. THE ADJUSTING RING SHALL BE 2" OR 3" IN HEIGHT.
2. THE CIRCUMFERENTIAL STEEL SHALL BE CENTERED WITHIN THE RING.
3. ARE OF CIRCUMFERENTIAL STEEL = 0.07 SQ. INCH PER VERTICAL FOOT WITH A MINIMUM OF .024 SQ INCH IN ANY ONE RING.
4. THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE CORE SHALL BE 4000 PSI.



ROUND ADJUSTING RING DETAIL



BLOCK OR PRECAST MANHOLE

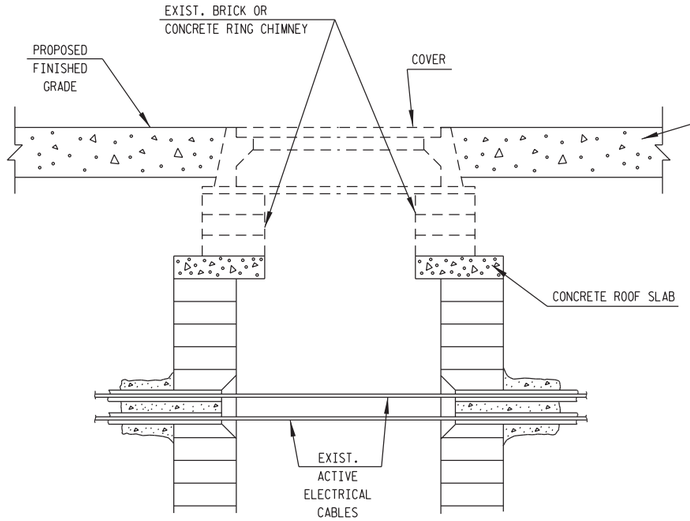


BRICK ROUND MANHOLE

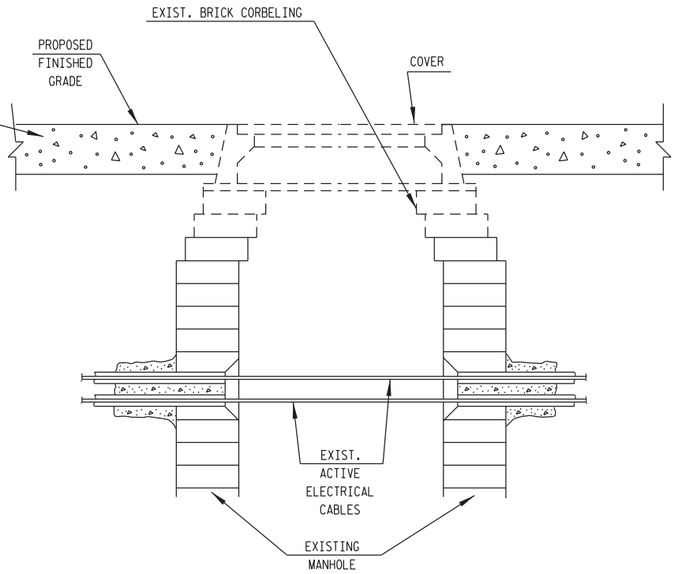
NOTE:

1) ADJUST MANHOLE CHIMNEY WITH PROPER SIZE CONCRETE ADJUSTING RINGS (SIZE OF OPENING OF CONCRETE ADJUSTING RING TO BE DETERMINED BY SIZE OF OPENING IN FRAME) AND REINSTALL EXISTING OR NEW MANHOLE FRAME AND LID TO FINISH GRADE.

ADJUSTING TES MANHOLE COVERS

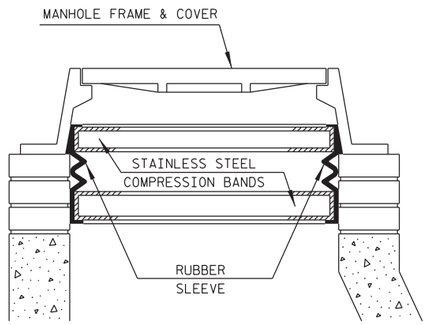


BLOCK OR PRECAST MANHOLE



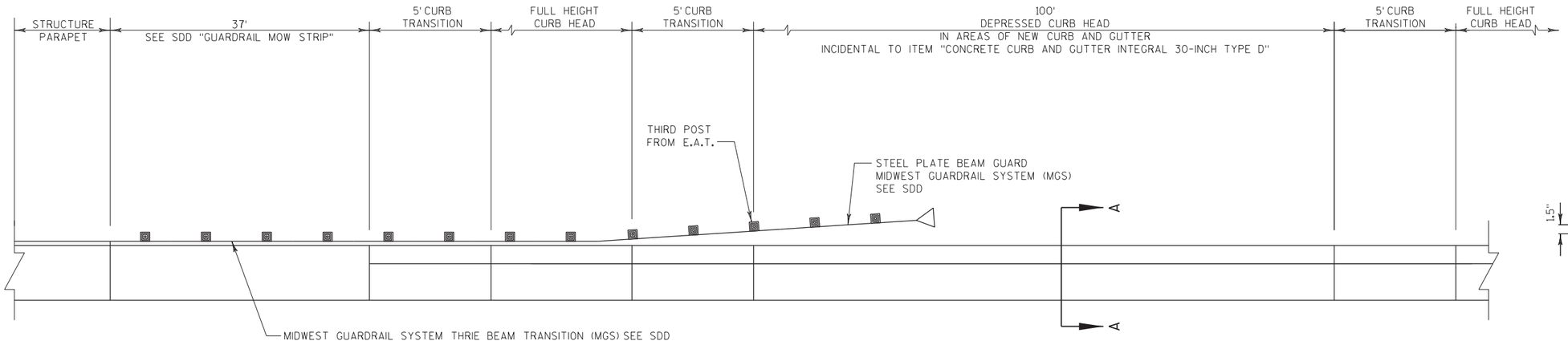
BRICK ROUND MANHOLE

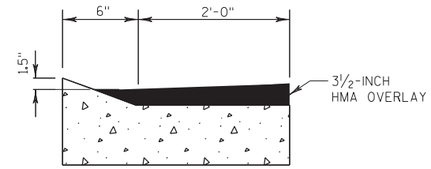
ADJUSTING TES MANHOLE COVERS IN CONCRETE WALK



INTERNAL SANITARY MANHOLE SEAL

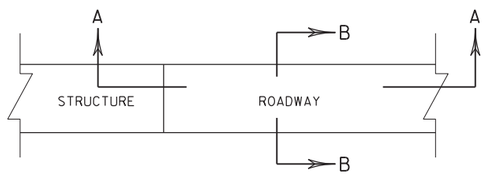
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 15	E

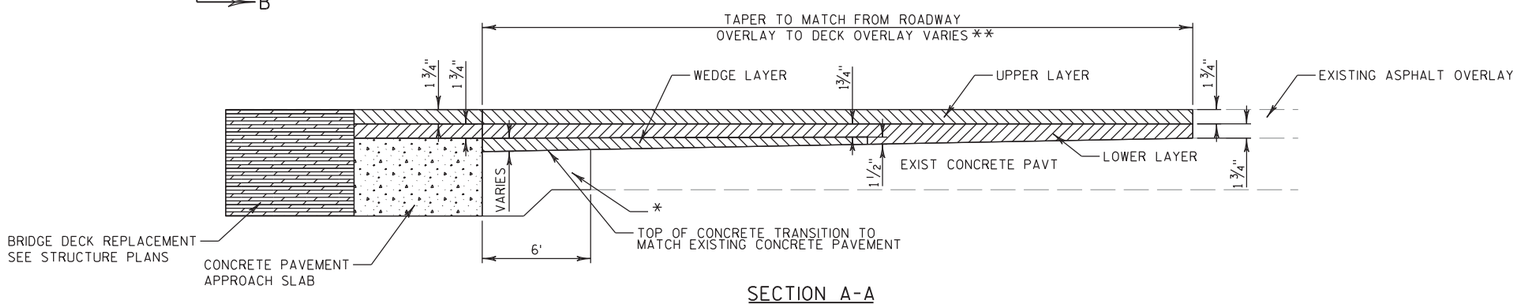




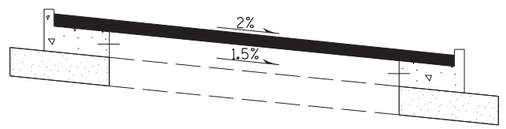
SECTION A-A
DEPRESSED CURB HEAD

DEPRESSED CURB HEAD AT BEAM GUARD TERMINAL & STRUCTURE APPROACH





SECTION A-A



SECTION B-B

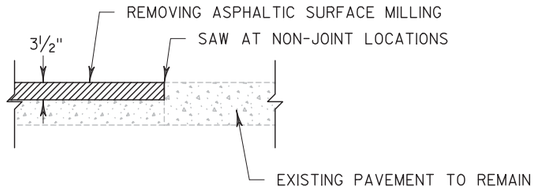
HMA AND CONCRETE PAVEMENT AT CD ROAD BRIDGE ENDS

B-40-174 & B-40-177

* TRANSITION FROM 12-INCH CONCRETE PAVEMENT APPROACH SLAB TO EXISTING 9-INCH CONCRETE PAVEMENT. SEE S.D.D. "CONCRETE PAVEMENT APPROACH SLAB"

** B-40-174 SOUTH APPROACH TAPER = 175.8'
B-40-174 NORTH APPROACH TAPER = 138.9'
B-40-177 SOUTH APPROACH TAPER = 74.9'
B-40-177 NORTH APPROACH TAPER = 67.5'

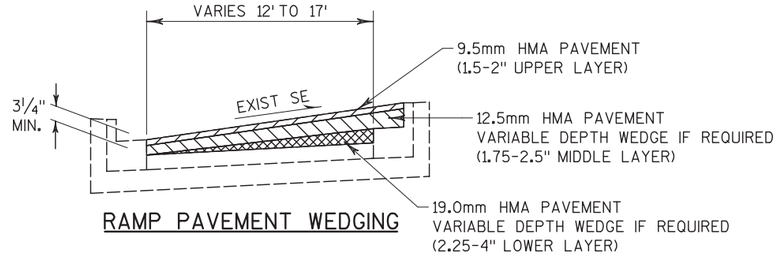
PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
E-10	1.75" UPPER 1.75 - 3.25" LOWER	12.5 MM UPPER 12.5 MM LOWER	PG64-28P PG64-28P
E-10	1.5" - 3.50" WEDGE	9.5 MM WEDGE	PG64-28P



RAMP PAVEMENT JOINT

NOTES:

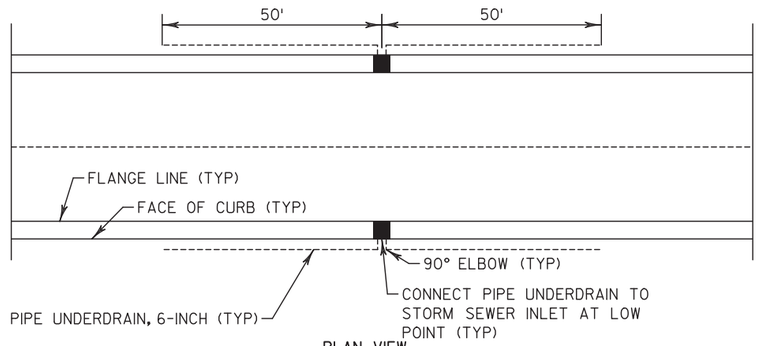
THE ABOVE WORK WILL BE PERFORMED AT THE ENDS OF ALL RAMPS WHERE MATCHING EXISTING PAVEMENT. THE REMOVAL OF EXISTING HOT-MIX ASPHALT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE PER TON FOR "REMOVING ASPHALTIC SURFACE MILLING".



RAMP PAVEMENT WEDGING

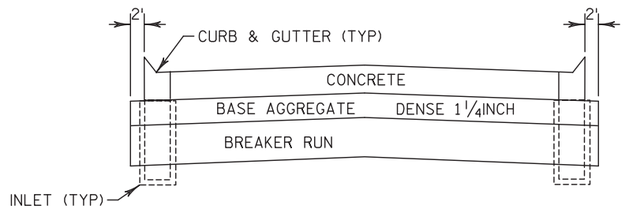
NOTES:

WEDGING ONLY REQUIRED AT LOCATIONS THAT EXCEED 4.5" OF ASPHALT.



PLAN VIEW

SAME FOR BOTH NB AND SB



SECTION VIEW

UNDERDRAIN IN BREAKER RUN AT PROFILE LOW POINTS

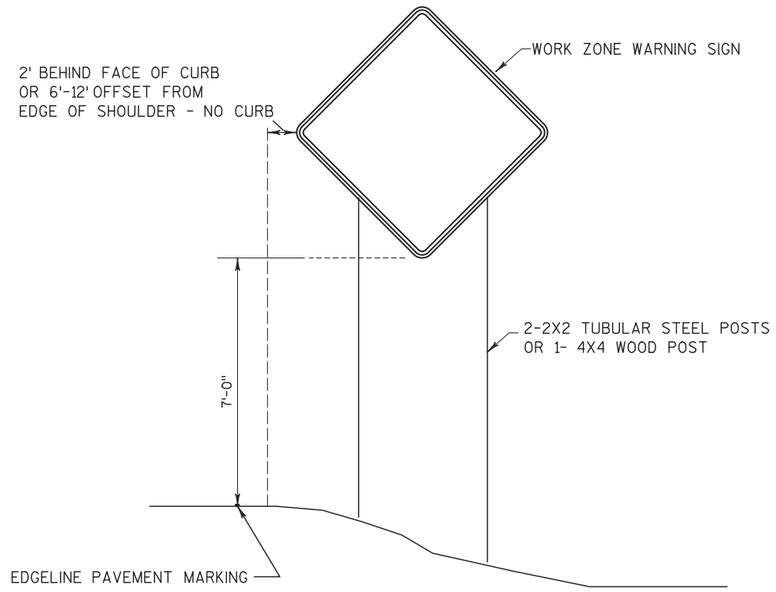
PIPE UNDERDRAIN , 6-INCH, INSTALL AND CONNECT TO INLET PRIOR TO PLACING THE BREAKER RUN. CONNECTION SHALL BE INCIDENTAL TO THE INLET ADJUSTMENTS

NOTE:

COORDINATE INSTALLATION WITH MGS BEAMGUARD CONSTRUCTION TO NOT CONFLICT.

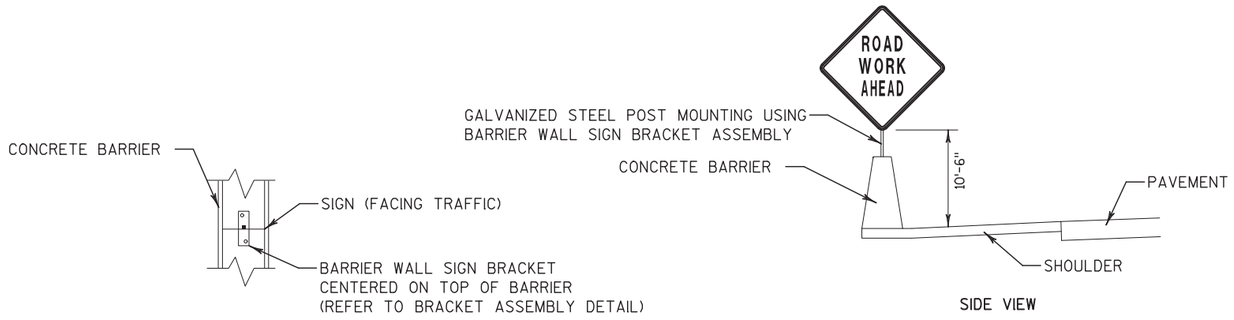
RAMP UNDERDRAIN DETAIL

2



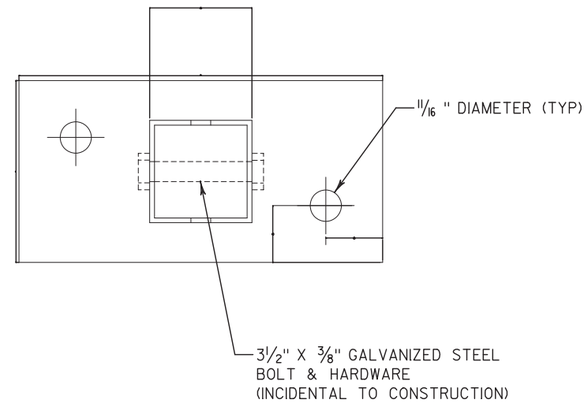
TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL
MOUNTING ON FIXED SUPPORT

LONG TERM
7 DAYS OR MORE



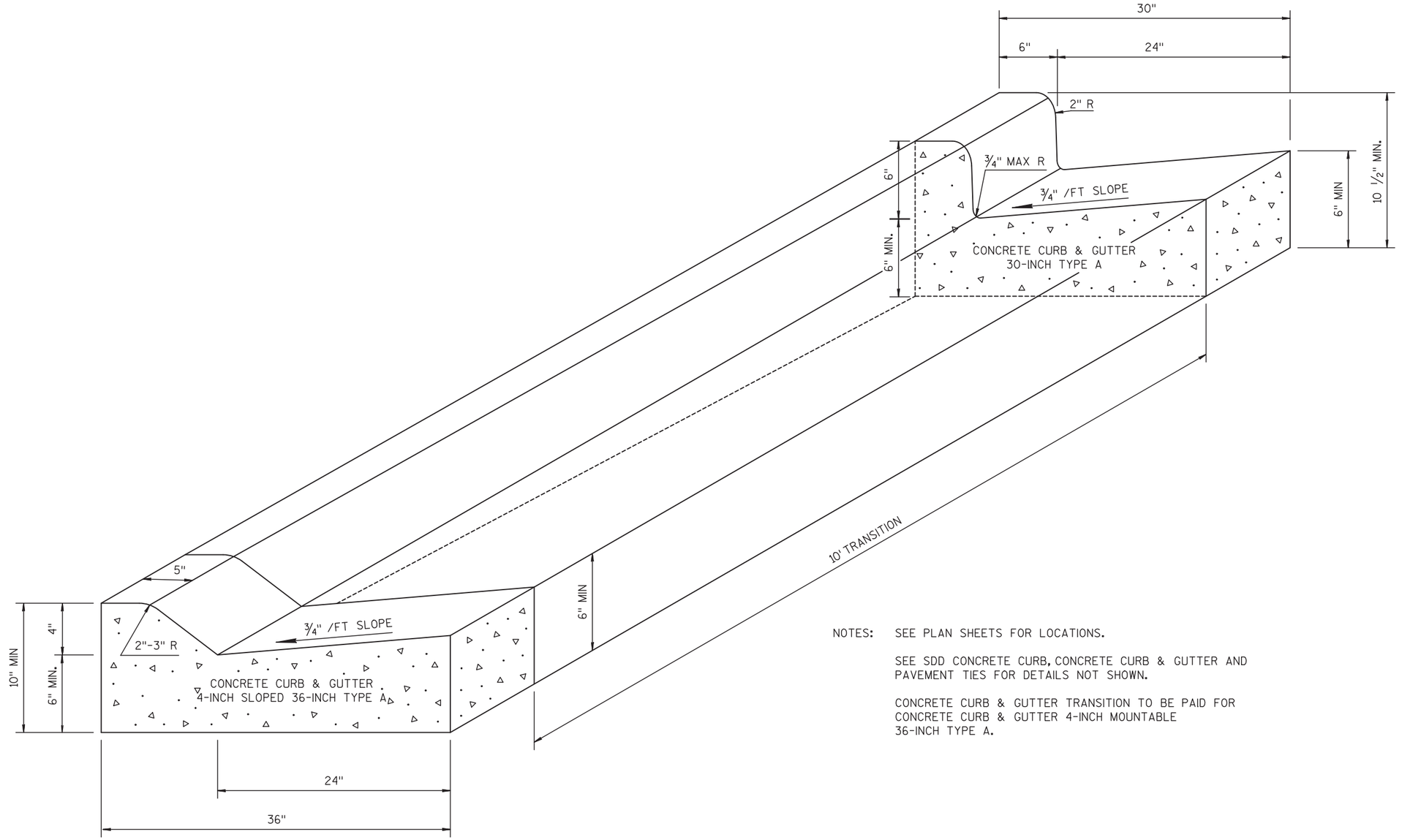
NOTE:
MINIMUM 3-FOOT CLEARANCE ALONG SHOULDER
REQUIRED FOR BARRIER MOUNTED SIGNS.

MEDIAN BARRIER MOUNTING DETAIL FOR SIGNS



BRACKET ASSEMBLY DETAIL

2



NOTES: SEE PLAN SHEETS FOR LOCATIONS.

SEE SDD CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES FOR DETAILS NOT SHOWN.

CONCRETE CURB & GUTTER TRANSITION TO BE PAID FOR CONCRETE CURB & GUTTER 4-INCH MOUNTABLE 36-INCH TYPE A.

CONCRETE CURB & GUTTER TRANSITION DETAIL

2

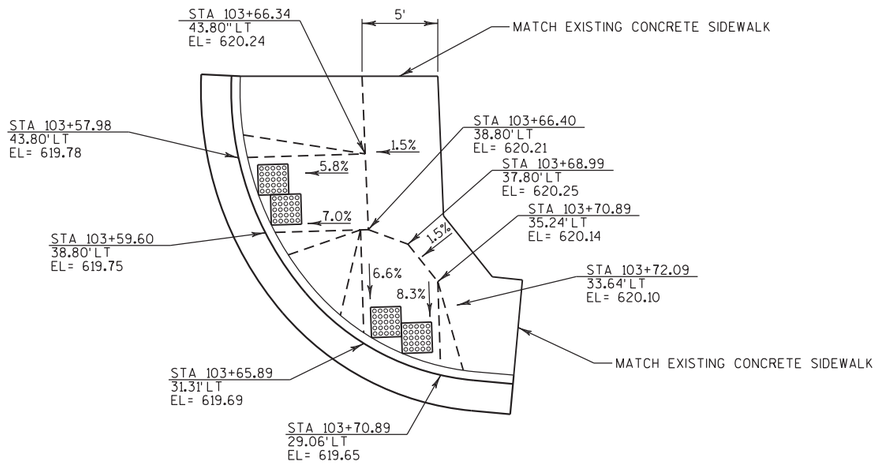
NOTES;

1) SEE PLAN DETAILS AND PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.

2) SEE SDD "CURB RAMPS TYPE 2 AND 3" FOR ADDITIONAL INFORMATION.

N

S 4TH ST



GREENFIELD AVE

R/L GREENFIELD AVE

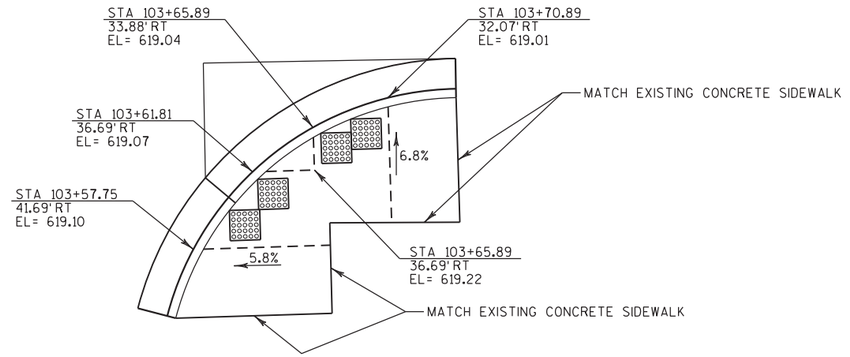
104

N

104

R/L GREENFIELD AVE

GREENFIELD AVE



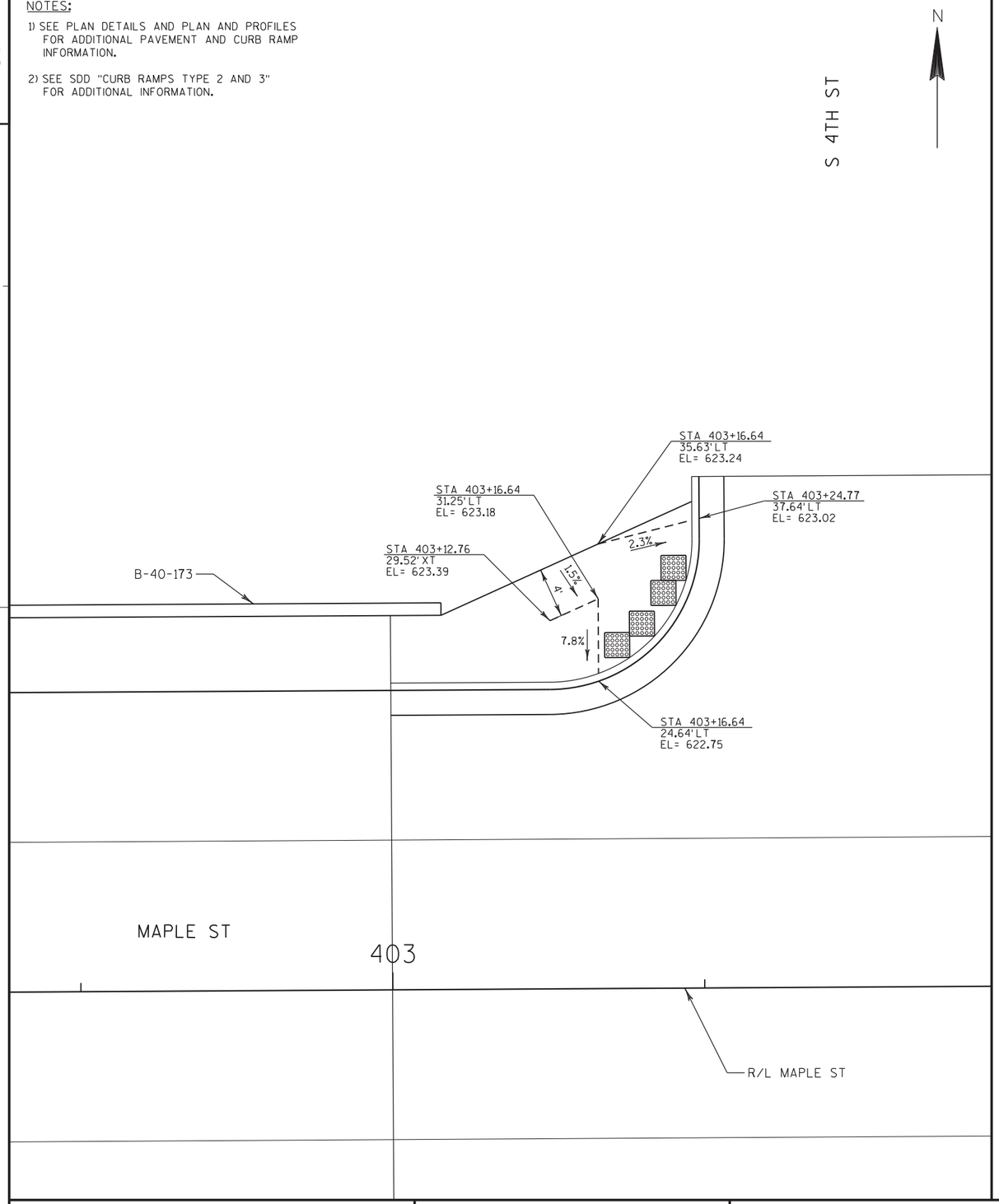
S 4TH ST

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - CURB RAMP LAYOUT	SHEET 20	E

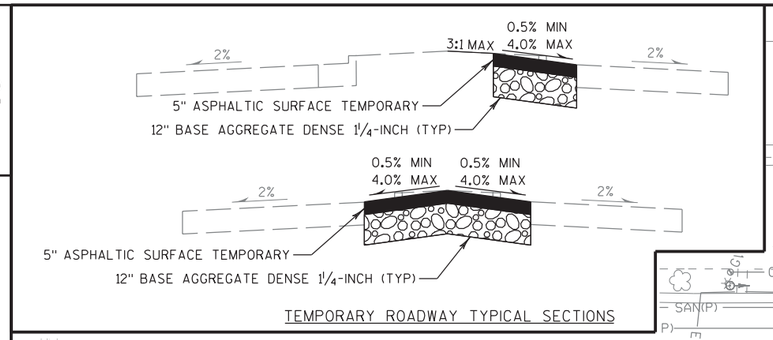
NOTES:

1) SEE PLAN DETAILS AND PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.

2) SEE SDD "CURB RAMPS TYPE 2 AND 3" FOR ADDITIONAL INFORMATION.



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - CURB RAMP LAYOUT	SHEET 21	E



TEMPORARY ROADWAY TYPICAL SECTIONS

LEGEND

PLACE TEMPORARY ROADWAY

XXXXX SAWING CONCRETE

CLEARING AND GRUBBING

S 5TH ST

IH 43 SB

REMOVING CONCRETE SIDEWALK

CAUTION

REMOVING CURB & GUTTER

695 696 697 698 699 700

REMOVING CURB & GUTTER

REMOVING CURB & GUTTER

HOWARD AVE

REMOVING CONCRETE SIDEWALK

R/L HOWARD AVE

R/L HOWARD AVE

REMOVING CURB & GUTTER

REMOVING CURB & GUTTER

REMOVING CURB & GUTTER

CAUTION

703 704 705 706 707 708

REMOVING CURB & GUTTER

HOWARD AVE

S 3RD ST

S 2ND ST

CLEARING AND GRUBBING (TREE REMOVAL)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - W HOWARD AVE REMOVALS	SHEET 22	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\021004_CD.dgn PLOT DATE : 2/4/2014 PLOT BY : shannon_c PLOT NAME : PLOT SCALE : 1:39.9999

WISDOT/CADDS SHEET 42

NOTE:
SEE PLAN AND PROFILE - W HOWARD AVE FOR ADDITIONAL PAVEMENT PLACEMENT ON W HOWARD AVE.

S 5TH PL

S 5TH ST

IH 43 SB

S 2ND ST

S 3RD ST

HOWARD AVE

R/L HOWARD AVE

CONCRETE CURB & GUTTER 31-INCH

CONCRETE SIDEWALK 5-INCH

STA 695+13.19
5.42' RT

R=178'

STA 695+35.77
6.86' RT

STA 696+20.14
2.74' LT

R=96.7'

STA 696+32.18
6.85' RT

STA 696+32.18
4.65' RT
R=2.2'

STA 697+45.82
2.90' RT

STA 697+45.81
6.27' RT

STA 697+89.07
6.87' RT

STA 698+94.35
3.02' RT

STA 699+34.44
3.64' RT

STA 699+34.43
6.92' RT

2.77'

STA 703+78.17'
7.01'LT

STA 703+63.99
7.04' RT

STA 704+60.00
TREES GLEDITSIA TRICANTHOS
"SUNBURST", B&B, 4-INCH

STA 705+18.00
TREES CERCIS CANADENSIS,
B&B, 4-INCH

STA 705+50.34
6.93'LT

STA 705+50.34
0.19' RT
R=7.12'

STA 705+50.33
7.31' RT

STA 705+94.61
7.26'LT

STA 705+94.59
0.05' RT
R=7.21'

STA 705+94.62
7.14' RT

STA 706+97.92
6.99'LT

STA 706+97.90
0.10' RT
R=7.09'

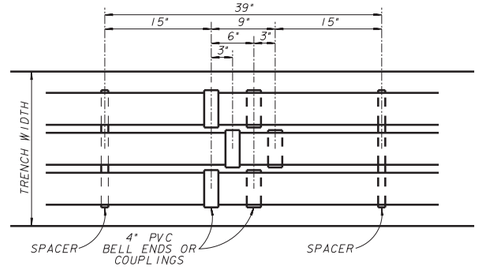
STA 706+97.90
7.18' RT

13'

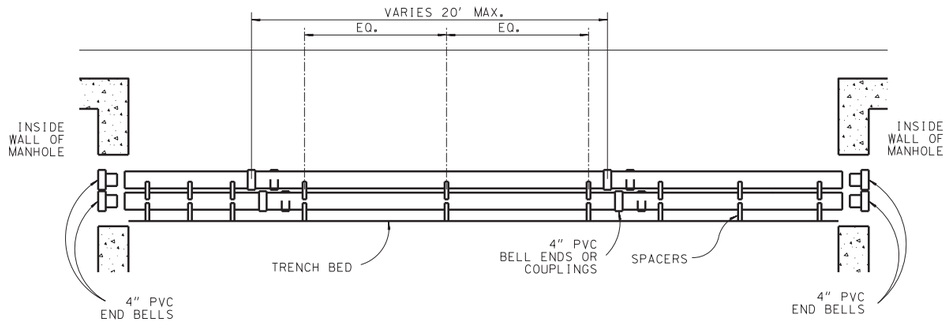
695 696 697 698 699 700 703 704 705 706 707 708

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL - W HOWARD AVE PAVEMENT REPLACEMENT	SHEET 23	E

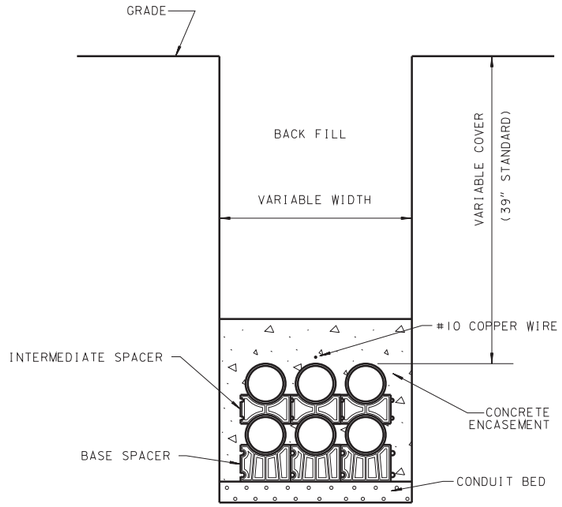
FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\021005_CD.dgn
PLOT DATE : 2/4/2014
PLOT BY : shannon_c
PLOT NAME :
PLOT SCALE : 1:39.9999
WISDOT/CADDS SHEET 42



PLAN VIEW
N.T.S.

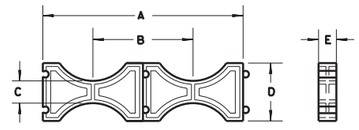


SECTION VIEW
N.T.S.



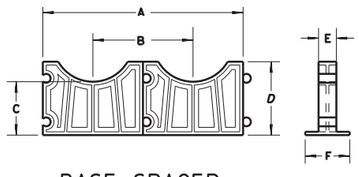
CROSS SECTION VIEW, TYP.
N.T.S.

COND.	3"	4"
A	10"	11 ½"
B	5"	5 ⅝"
C	1 ½"	1 ½"
D	3 ½"	3 ½"
E	1"	1"



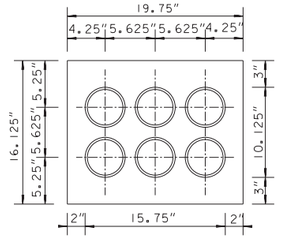
INTERMEDIATE SPACER

COND.	3"	4"
A	10"	11 ½"
B	5"	5 ⅝"
C	3"	3"
D	3 ⅛"	4 ⅛"
E	1"	1"
F	2 ½"	2 ½"



BASE SPACER

INTERMEDIATE AND BASE SPACER DETAIL

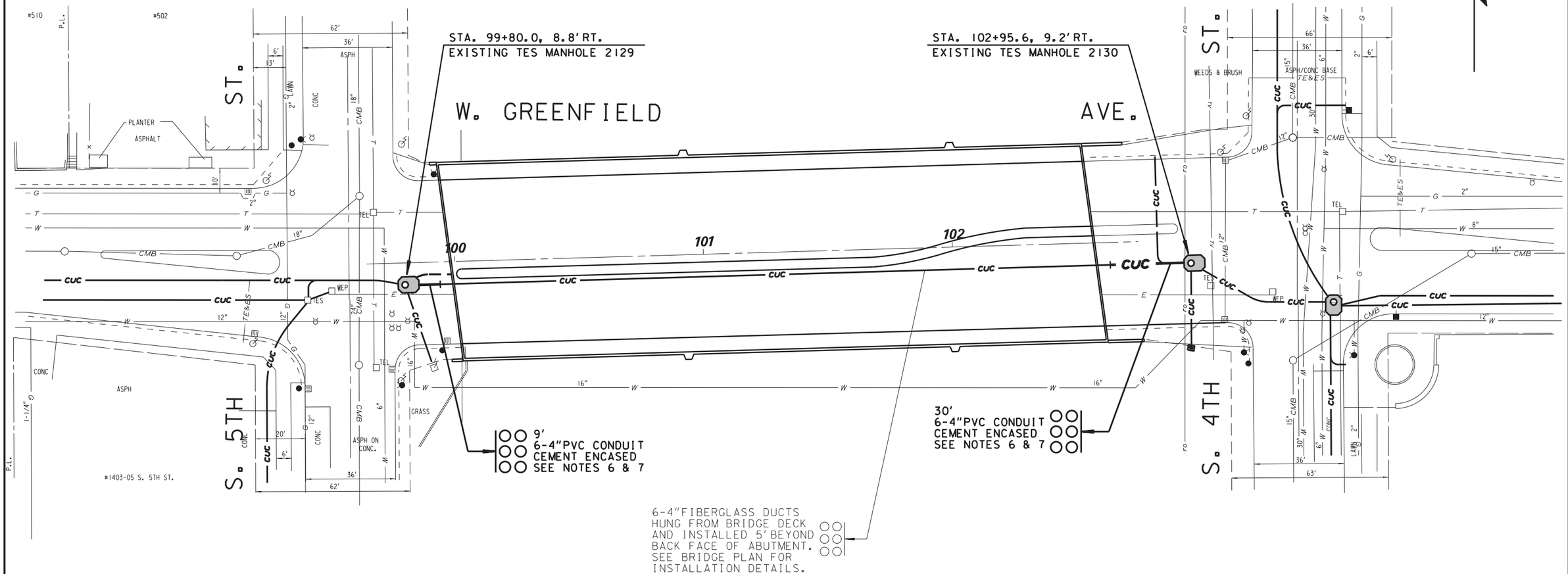


CROSS SECTION VIEW
N.T.S.

SHEET 2 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W. GREENFIELD AVE.	COUNTY: MILWAUKEE	CITY UG CONDUIT DETAILS (TES)	SCALE FEET	SHEET NO: 24	E

2



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 MINIMUM DEPTH OF 28-INCHES BETWEEN FINISHED GROUND AND TOP OF CONDUIT.
5) MAINTAIN 6" MINIMUM CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.
6) REMOVE ABANDONED CONDUIT FROM THE MANHOLE WALL AND INSTALL PROPOSED CONDUIT INTO THE MANHOLE AT THAT SAME LOCATION.
7) REMOVE ABANDONED CONDUIT AS NEEDED FOR THE PROPOSED INSTALLATION.

LEGEND

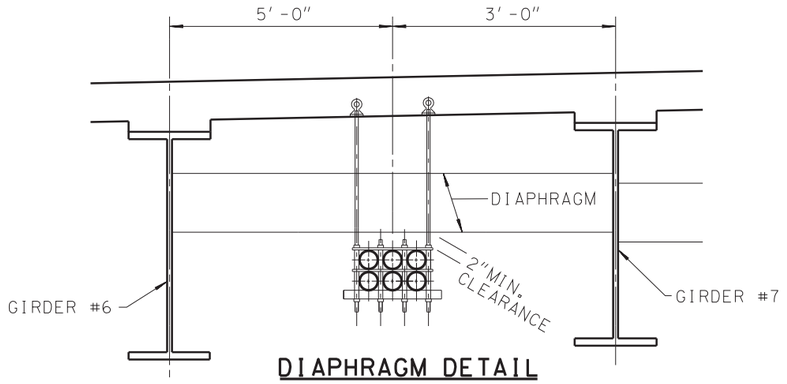
— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.

—— cuc —— EXISTING CONDUIT

SHEET 1 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W. GREENFIELD AVE	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0' 40'	SHEET NO: 25	E

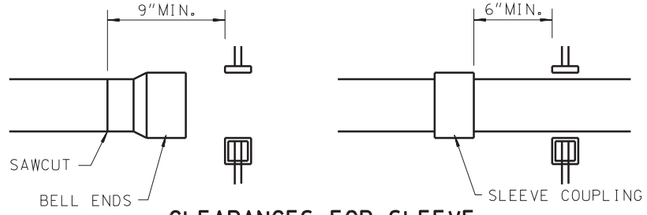
2



DIAPHRAGM DETAIL

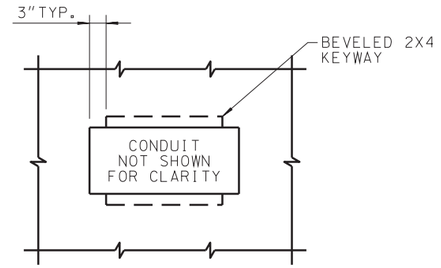
(LOOKING EAST)

2" MINIMUM CLEARANCE
BOTTOM OF DIAPHRAM TO
TOP OF PIPE



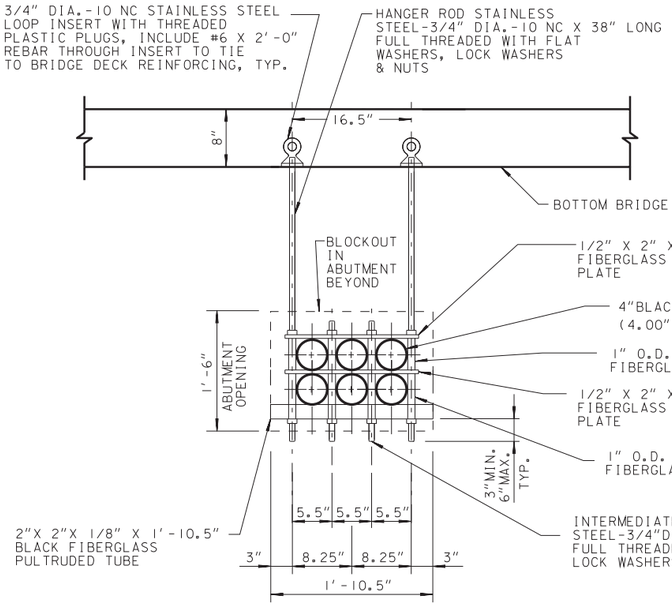
CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS

NOTES:
A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. A TAPE MEASURE CAN BE USED TO PREDETERMINE THESE LOCATIONS AND THE CONDUIT CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS AS SHOWN ABOVE.

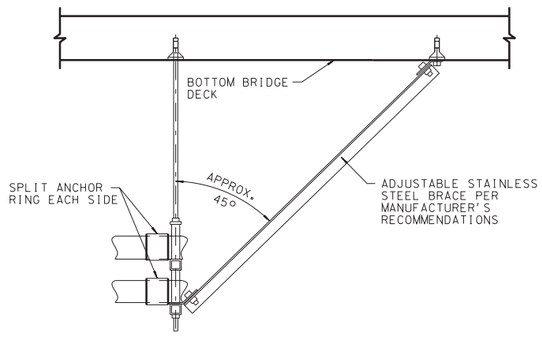


BLOCKOUT PATCH DETAIL

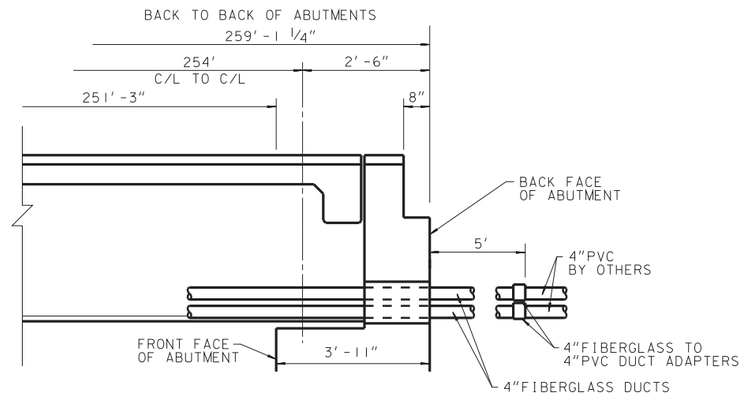
(1'-10.5" X 1'-6" BLOCKOUT)



TYPICAL 6 DUCT CITY COMMUNICATION HANGER PACKAGE DETAIL



TYPICAL 6 DUCT BRACED HANGER DETAIL

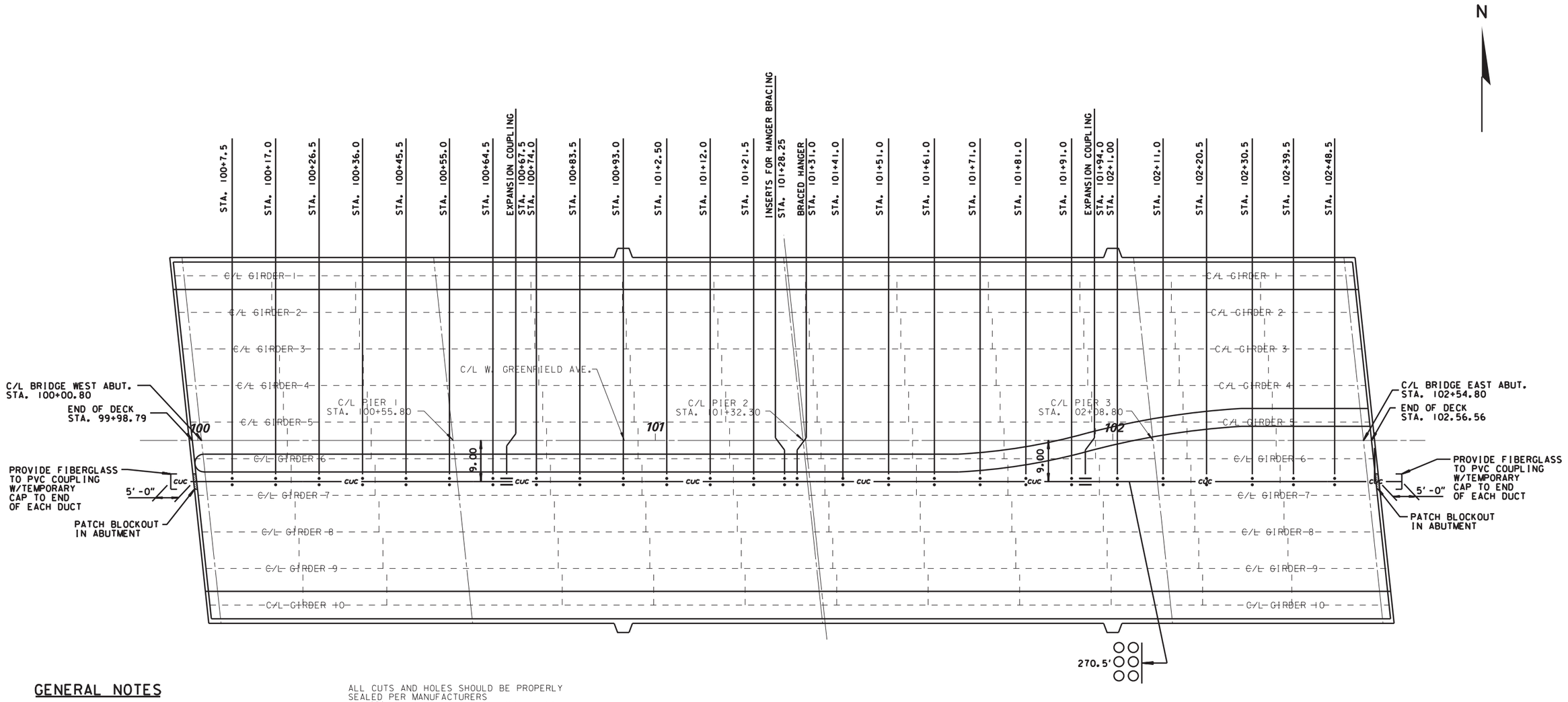


TYPICAL SECTION AT ABUTMENTS

SHEET 2 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W. GREENFIELD AVE.	COUNTY: MILWAUKEE	CITY UG CONDUIT DETAILS (TES)	SCALE FEET	SHEET NO: 26	E

2



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS ARE IN FEET AND ARE ALONG THE R/L FOR W. GOOD HOPE RD.

ALL COMPONENTS SHALL HAVE A MINIMUM 75 YEAR DESIGN LIFE.

EACH 4" DIA. CONDUIT WEIGHES 9 PLF.

ALL HORIZONTAL SUPPORT MEMBERS TO BE MADE OF BLACK FIBERGLASS PULTRUDED MATERIAL.

FIBERGLASS MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E-84, CLASS I FLAME RATING AND SELF-EXTINGUISHING REQUIREMENTS OF ASTM D-635, A SURFACE VEIL SHALL BE APPLIED DURING PULTRUSION TO INSURE A RESIN RICH SURFACE AND ULTRAVIOLET RESISTANCE.

ALL CUTS AND HOLES SHOULD BE PROPERLY SEALED PER MANUFACTURERS RECOMMENDATIONS TO PREVENT CORROSION.

ALL STEEL MEMBERS AND HARDWARE SHALL HAVE STAINLESS STEEL COATING.

FURNISH CONCRETE FOR BRIDGES CONFORMING TO SECTION 501, GRADE E. CONTRACTOR MAY USE PREMIXED BAG CEMENT PER ENGINEER'S APPROVAL.

SPACE HANGERS A MAXIMUM 10'-0". LOCATE CONDUIT HANGERS BETWEEN GIRDERS. SEE BRIDGE PLANS.

ALL FIBERGLASS JOINTS SHALL BE EPOXIED PER MANUFACTURER'S SPECIFICATIONS.

EXTEND CONDUIT 5'-0" FROM BACK FACE OF ABUTMENT. PROVIDE COUPLING AND TEMPORARY CAP ON THE END OF EACH DUCT.

INSTALL EXPANSION JOINT PER LOCATION ON THE PLAN. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.

STATE PROJECT NUMBER 1228-25-70	HWY: W. GREENFIELD AVE.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET	SHEET NO: 27	E

FILE NAME: W:\UGD\CONDUIT WORK FILES\UCONDUIT\2013\US 43 HOWARD TO VALLEY\GREENFIELD\GREENFIELD BRIDGE.DGN
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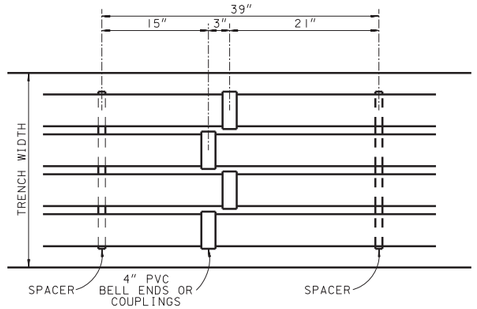
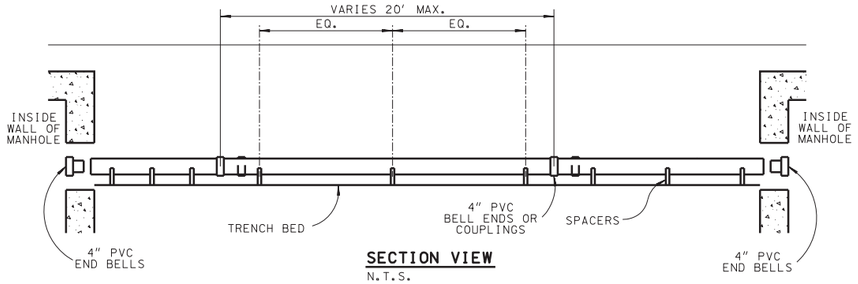
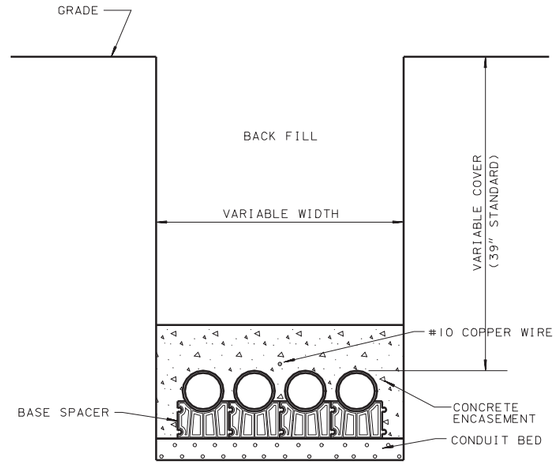


PLAN VIEW
N.T.S.



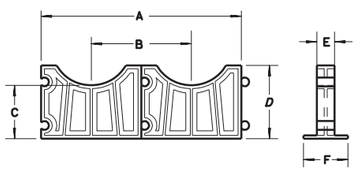
SECTION VIEW
N.T.S.



CROSS SECTION VIEW, TYP.
N.T.S.

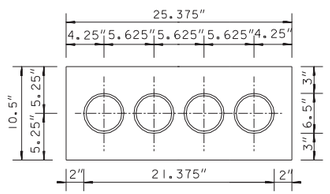
2

COND.	3"	4"
A	10"	11 1/4"
B	5"	5 7/8"
C	3"	3"
D	3 7/8"	4 1/2"
E	1"	1"
F	2 1/2"	2 1/2"



BASE SPACER

INTERMEDIATE AND BASE SPACER DETAIL

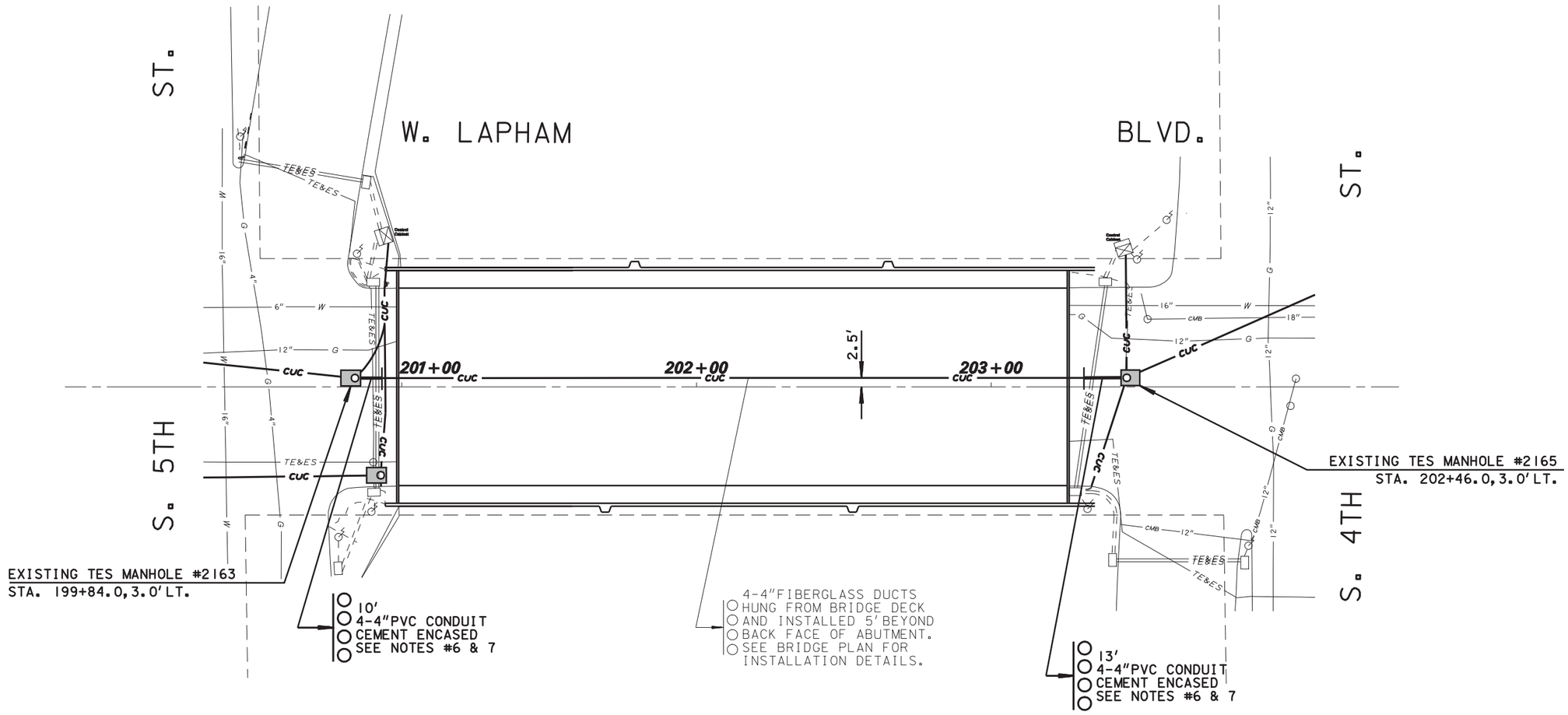


CROSS SECTION VIEW
N.T.S.

SHEET 2 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W.LAPHAM BLVD	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES) DETAILS	SHEET NO: 28	E

2



NOTES:

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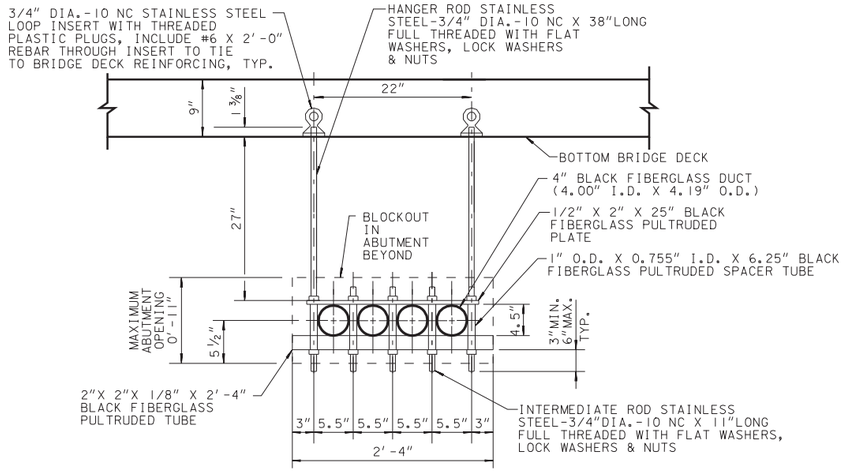
3) DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
4) MAINTAIN A MINIMUM DEPTH OF 28-INCHES BETWEEN FINISHED GROUND AND TOP OF CONDUIT.
5) MAINTAIN 6" MINIMUM CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.
6) REMOVE ABANDONED CONDUIT FROM THE MANHOLE WALL AND INSTALL PROPOSED CONDUIT INTO THE MANHOLE AT THAT SAME LOCATION.
7) REMOVE ABANDONED CONDUIT AS NEEDED FOR THE PROPOSED INSTALLATION

LEGEND

— CUC —	PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.
— CUC —	EXISTING CONDUIT

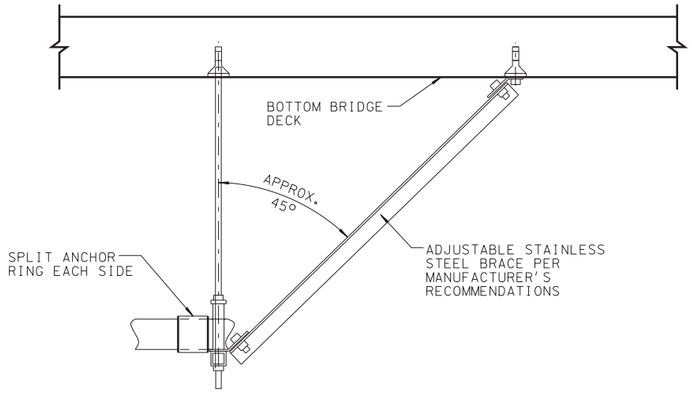
SHEET 1 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W.LAPHAM BLVD	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0 40	SHEET NO: 29	E

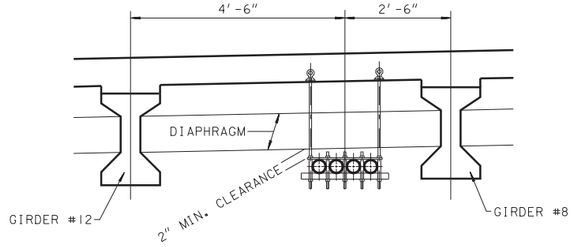


4 DUCT CITY COMMUNICATION HANGER PACKAGE DETAIL

* THE CONTRACTOR SHALL FIELD VERIFY HANGER LENGTHS IN ORDER TO AVOID CONFLICTS WITH DIAPHRAM CROSSING.



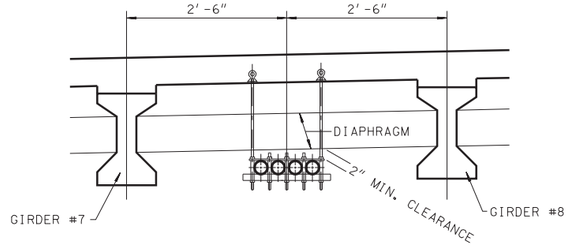
TYPICAL 4 DUCT BRACED HANGER DETAIL



DIAPHRAGM DETAIL

SPAN 1 (LOOKING EAST)

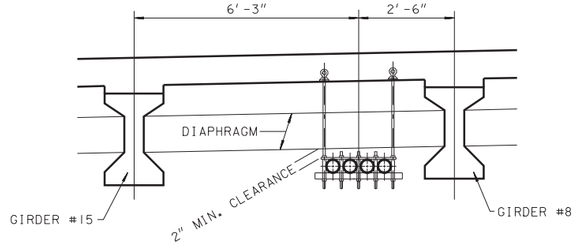
2" MIN. CLEARANCE BOTTOM OF DIAPHRAGM TO TOP OF PIPE



DIAPHRAGM DETAIL

SPANS 2 & 3 (LOOKING EAST)

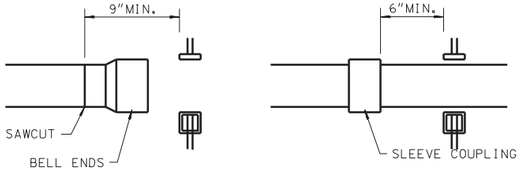
2" MIN. CLEARANCE BOTTOM OF DIAPHRAGM TO TOP OF PIPE



DIAPHRAGM DETAIL

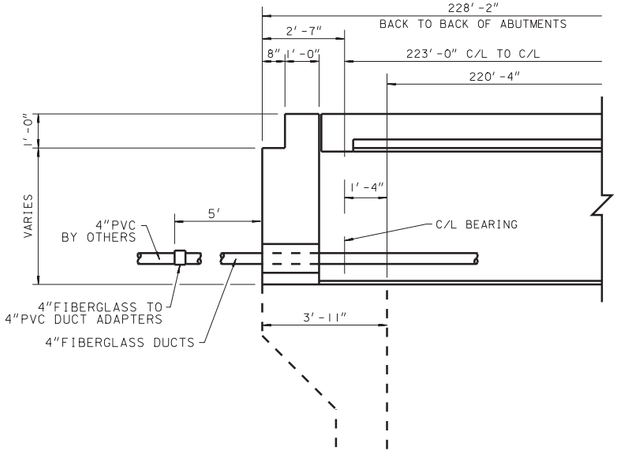
SPAN 4 (LOOKING EAST)

2" MIN. CLEARANCE BOTTOM OF DIAPHRAGM TO TOP OF PIPE

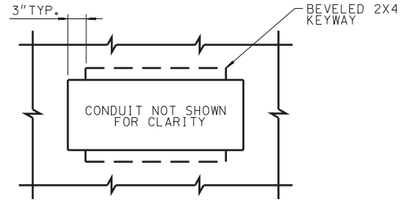


CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS

NOTES:
A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. A TAPE MEASURE CAN BE USED TO PREDETERMINE THESE LOCATIONS AND THE CONDUIT CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS AS SHOWN ABOVE.



TYP SECTION AT ABUTMENTS

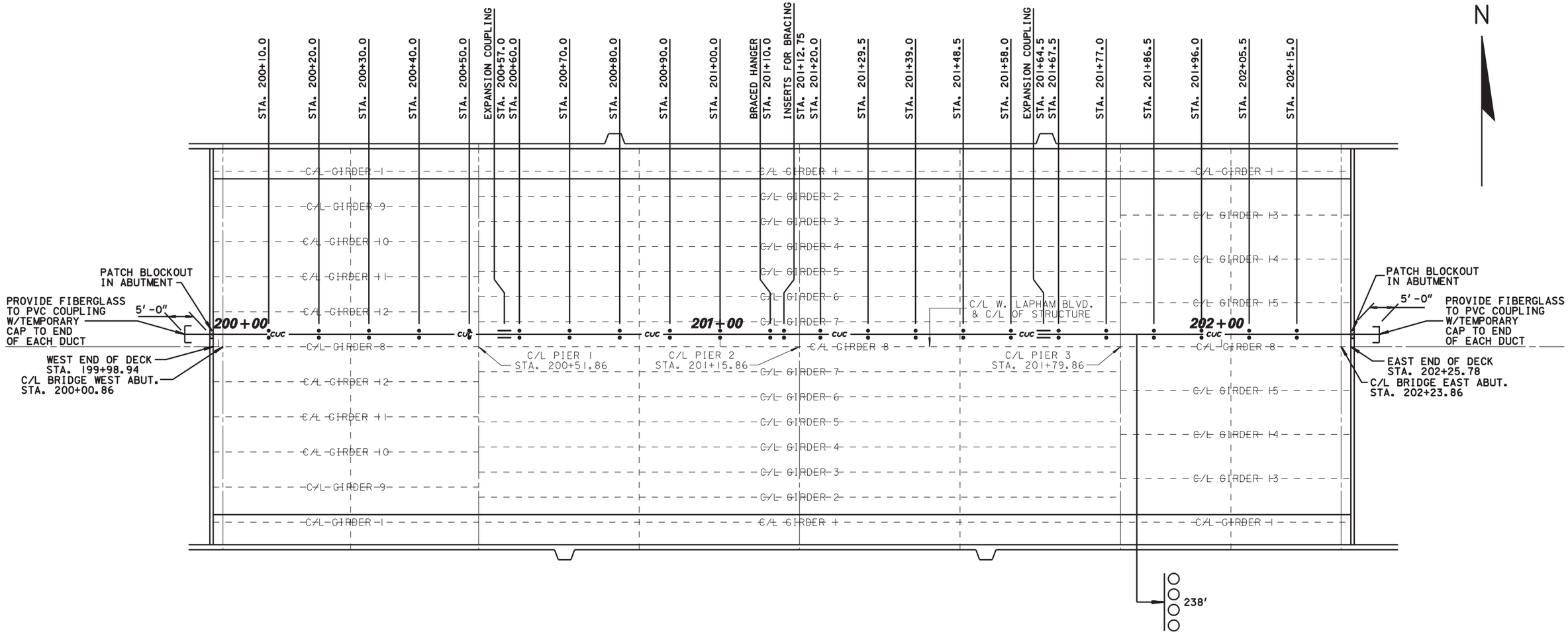


BLOCKOUT PATCH DETAIL

(2'-3" X 0'-11" BLOCKOUT)

SHEET 2 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W.LAPHAM BLVD	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES) DETAILS	SHEET NO: 30	E



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS ARE IN FEET AND ARE ALONG THE R/L FOR W. LAPHAM BLVD.

ALL COMPONENTS SHALL HAVE A MINIMUM 75 YEAR DESIGN LIFE.

EACH 4" DIA. CONDUIT WEIGHES 9 PLF.

ALL HORIZONTAL SUPPORT MEMBERS TO BE MADE OF BLACK FIBERGLASS PULTRUDED MATERIAL.

FIBERGLASS MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E-84, CLASS I FLAME RATING AND SELF-EXTINGUISHING REQUIREMENTS OF ASTM D-635, A SURFACE VEIL SHALL BE APPLIED DURING PULTRUSION TO INSURE A RESIN RICH SURFACE AND ULTRAVIOLET RESISTANCE.

ALL CUTS AND HOLES SHOULD BE PROPERLY SEALED PER MANUFACTURERS RECOMMENDATIONS TO PREVENT CORROSION.

ALL STEEL MEMBERS AND HARDWARE SHALL HAVE STAINLESS STEEL COATING.

FURNISH CONCRETE FOR BRIDGES CONFORMING TO SECTION 501. GRADE E. CONTRACTOR MAY USE PREMIXED BAG CEMENT PER ENGINEER'S APPROVAL.

SPACE HANGERS A MAXIMUM 10'-0". LOCATE CONDUIT HANGERS BETWEEN GIRDERS. SEE BRIDGE PLANS.

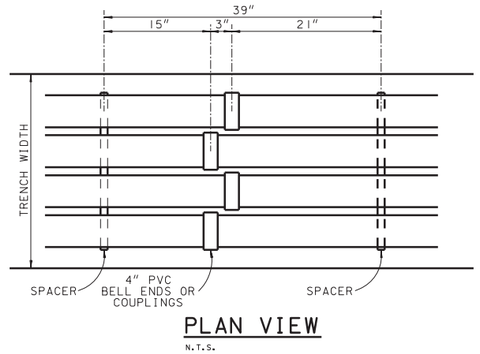
ALL FIBERGLASS JOINTS SHALL BE EPOXIED PER MANUFACTURER'S SPECIFICATIONS.

EXTEND CONDUIT 5'-0" FROM BACK FACE OF ABUTMENT. PROVIDE COUPLING AND TEMPORARY CAP ON THE END OF EACH DUCT.

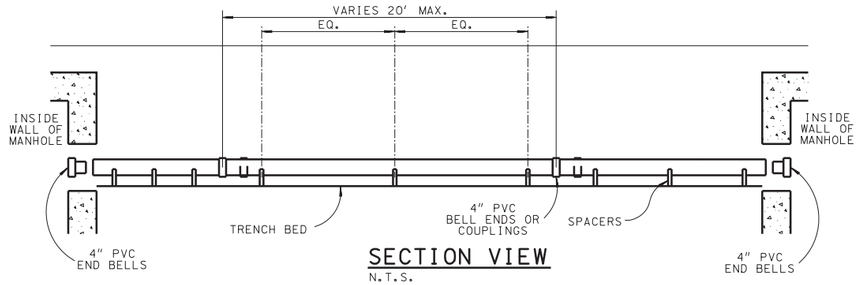
INSTALL EXPANSION JOINT PER LOCATION ON THE PLAN. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.

SHEET 1 OF 2

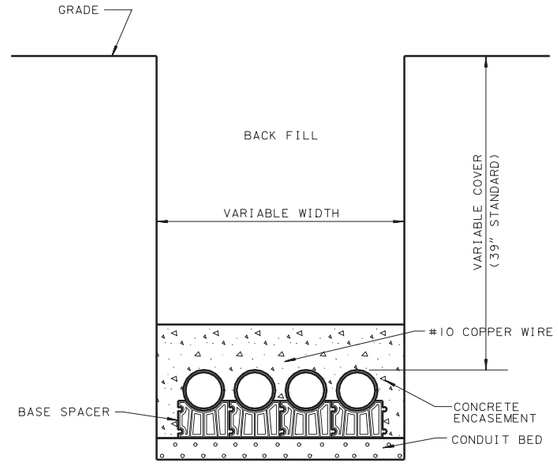
STATE PROJECT NUMBER 1228-25-70	HWY: W. LAPHAM BLVD	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0' 20'	SHEET NO: 31	E



PLAN VIEW
N.T.S.



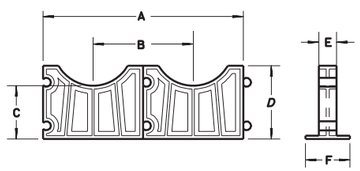
SECTION VIEW
N.T.S.



CROSS SECTION VIEW, TYP.
N.T.S.

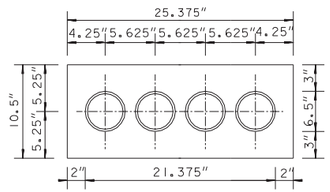
2

COND.	3"	4"
A	10"	11 ½"
B	5"	5 ⅞"
C	3"	3"
D	3 ⅞"	4 ⅛"
E	1"	1"
F	2 ½"	2 ½"



BASE SPACER

INTERMEDIATE AND BASE SPACER DETAIL



CROSS SECTION VIEW
N.T.S.

SHEET 2 OF 2

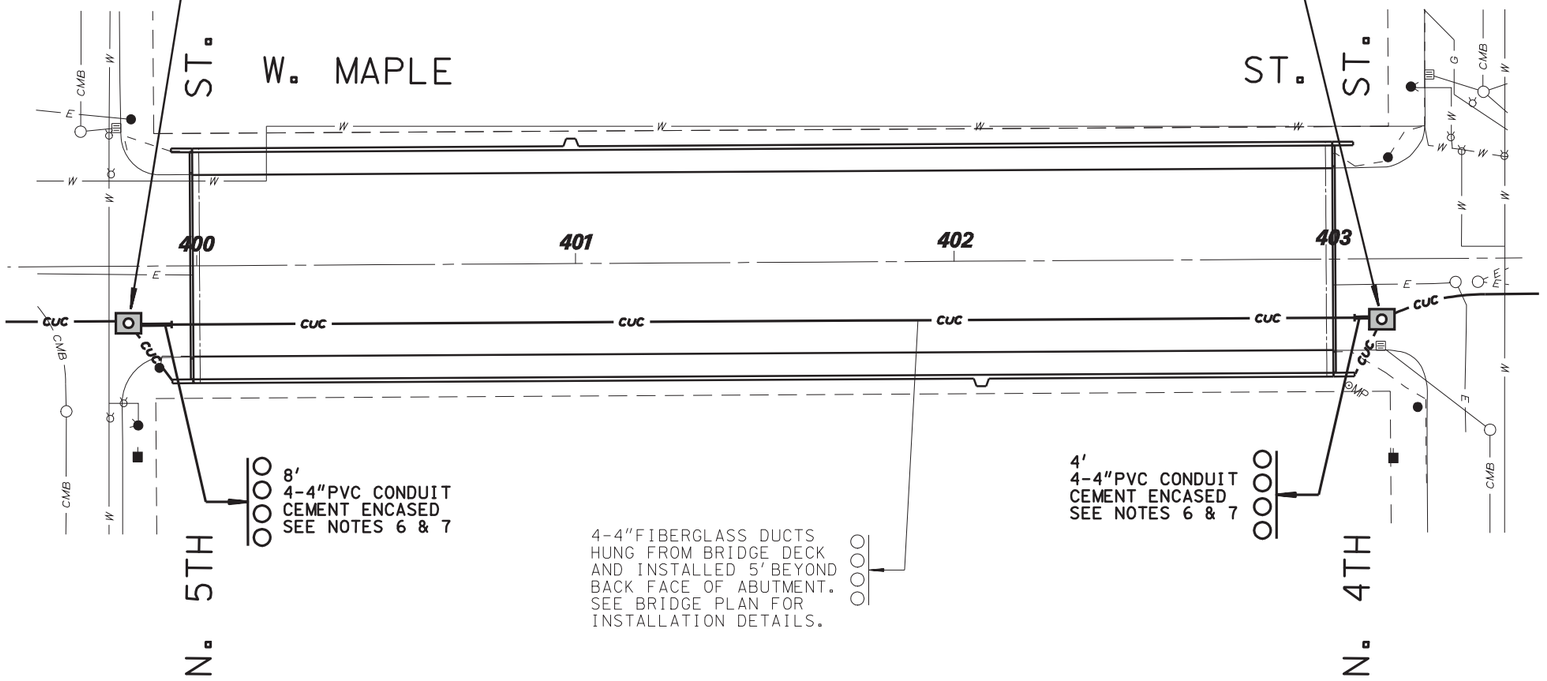
STATE PROJECT NUMBER 1228-25-70	HWY: W. MAPLE ST.	COUNTY: MILWAUKEE	CITY UG CONDUIT DETAILS (TES)	SCALE FEET	SHEET NO: 32	E

2

N

STA. 399+82.0, 15.0' RT.
EXISTING TES MANHOLE 2196

STA. 403+12.8, 16.0' RT.
EXISTING TES MANHOLE 2197



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 MINIMUM DEPTH OF 28-INCHES BETWEEN FINISHED GROUND AND TOP OF CONDUIT.
5) MAINTAIN 6" MINIMUM CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.
6) REMOVE ABANDONED CONDUIT FROM THE MANHOLE WALL AND INSTALL PROPOSED CONDUIT INTO THE MANHOLE AT THAT SAME LOCATION.
7) REMOVE ABANDONED CONDUIT AS NEEDED FOR THE PROPOSED INSTALLATION.

LEGEND

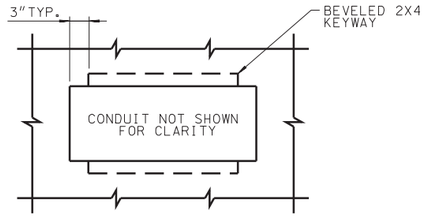
— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.

— CUC — EXISTING CONDUIT

SHEET 1 OF 2

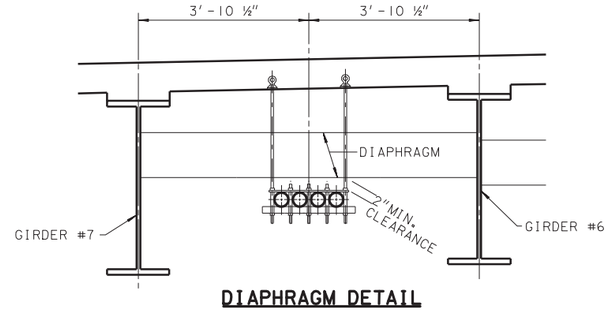
STATE PROJECT NUMBER 1228-25-70	HWY: W. MAPLE ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0' 40'	SHEET NO: 33	E

2



BLOCKOUT PATCH DETAIL

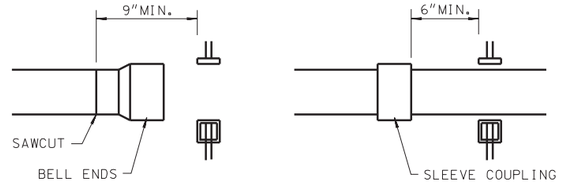
(2'-3" X 0'-11" BLOCKOUT)



DIAPHRAGM DETAIL

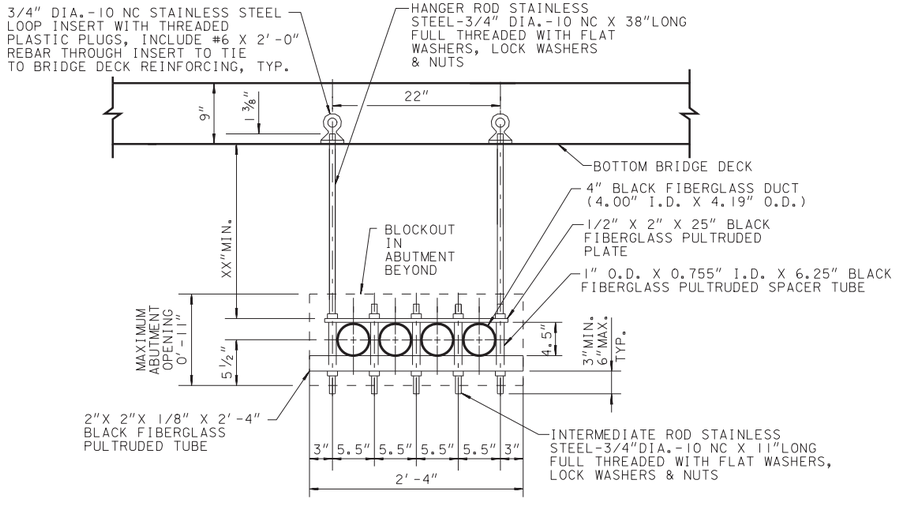
(LOOKING WEST)

2" MINIMUM CLEARANCE
BOTTOM OF DIAPHRAM
TO TOP OF PIPE



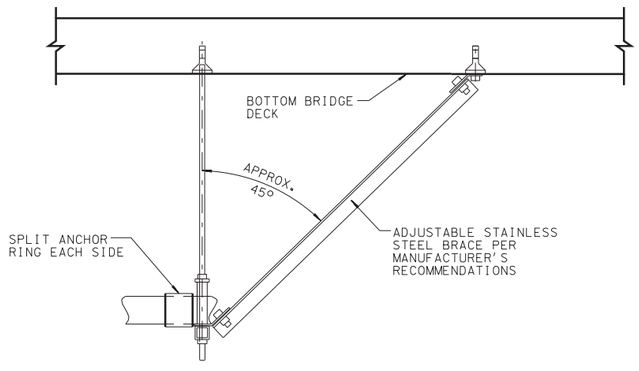
CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS

NOTES:
A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. A TAPE MEASURE CAN BE USED TO PREDETERMINE THESE LOCATIONS AND THE CONDUIT CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS AS SHOWN ABOVE.

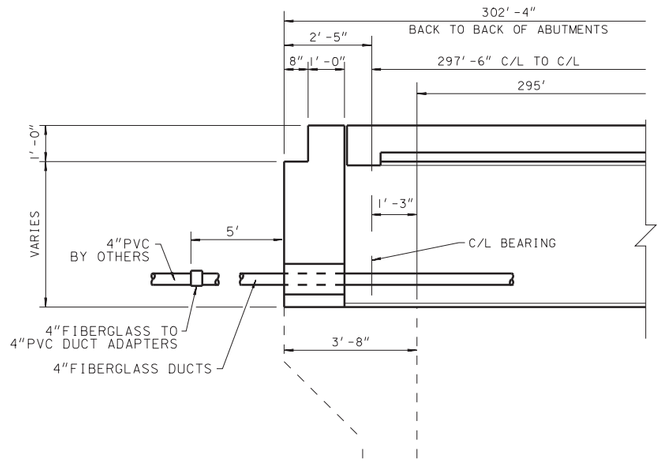


4 DUCT CITY COMMUNICATION HANGER PACKAGE DETAIL

THE CONTRACTOR SHALL FIELD VERIFY HANGER LENGTHS IN ORDER TO AVOID CONFLICTS WITH DIAPHRAM CROSSING.



TYPICAL 4 DUCT BRACED HANGER DETAIL



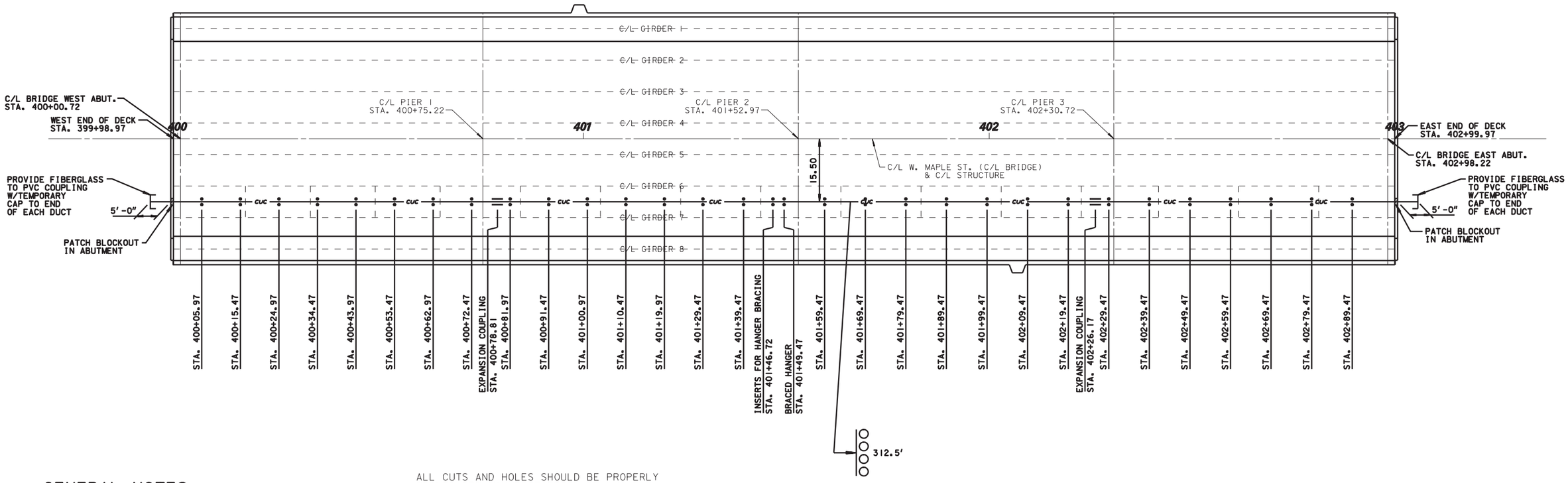
TYP SECTION AT ABUTMENTS

SHEET 2 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W. MAPLE ST.	COUNTY: MILWAUKEE	CITY UG CONDUIT DETAILS (TES)	SCALE FEET	SHEET NO: 34	E

2

N



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS ARE IN FEET AND ARE ALONG THE R/L FOR W. GOOD HOPE RD.

ALL COMPONENTS SHALL HAVE A MINIMUM 75 YEAR DESIGN LIFE.

EACH 4" DIA. CONDUIT WEIGHES 9 PLF.

ALL HORIZONTAL SUPPORT MEMBERS TO BE MADE OF BLACK FIBERGLASS PULTRUDED MATERIAL.

FIBERGLASS MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E-84, CLASS I FLAME RATING AND SELF-EXTINGUISHING REQUIREMENTS OF ASTM D-635, A SURFACE VEIL SHALL BE APPLIED DURING PULTRUSION TO INSURE A RESIN RICH SURFACE AND ULTRAVIOLET RESISTANCE.

ALL CUTS AND HOLES SHOULD BE PROPERLY SEALED PER MANUFACTURERS RECOMMENDATIONS TO PREVENT CORROSION.

ALL STEEL MEMBERS AND HARDWARE SHALL HAVE STAINLESS STEEL COATING.

FURNISH CONCRETE FOR BRIDGES CONFORMING TO SECTION 501. GRADE E. CONTRACTOR MAY USE PREMIXED BAG CEMENT PER ENGINEER'S APPROVAL.

SPACE HANGERS A MAXIMUM 10'-0". LOCATE CONDUIT HANGERS BETWEEN GIRDERS. SEE BRIDGE PLANS.

ALL FIBERGLASS JOINTS SHALL BE EPOXIED PER MANUFACTURER'S SPECIFICATIONS.

EXTEND CONDUIT 5'-0" FROM BACK FACE OF ABUTMENT. PROVIDE COUPLING AND TEMPORARY CAP ON THE END OF EACH DUCT.

INSTALL EXPANSION JOINT PER LOCATION ON THE PLAN. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.

STATE PROJECT NUMBER 1228-25-70	HWY: W. MAPLE ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET	SHEET NO: 35	E

FILE NAME: W:\UGD\CONDUIT WORK FILES\UCONDUIT\2013\US 43 HOWARD TO VALLEY\MAPLE\MAPLE BRIDGE.DGN
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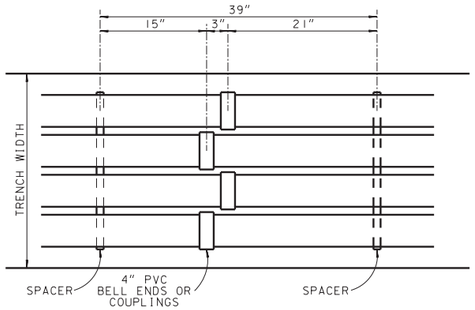
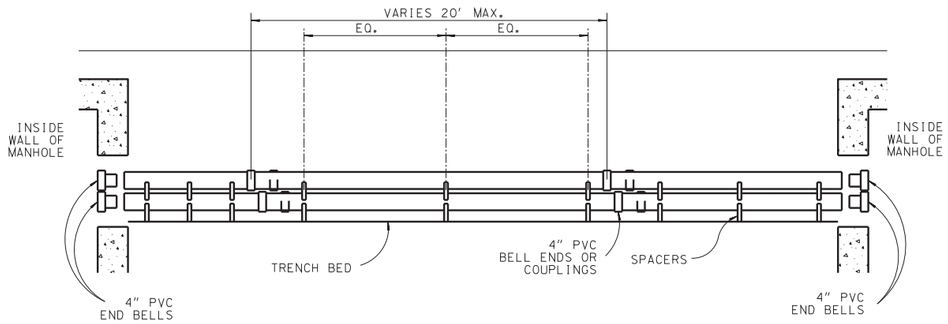
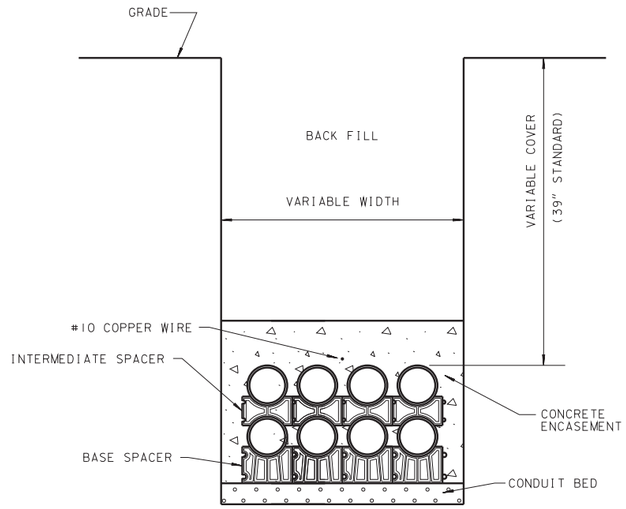


PLAN VIEW
N.T.S.

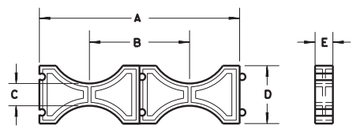


SECTION VIEW
N.T.S.



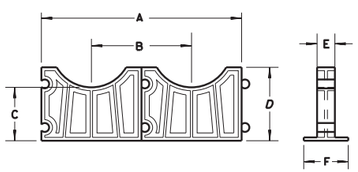
CROSS SECTION VIEW, TYP.
N.T.S.

COND.	3"	4"
A	10"	11 ½"
B	5"	5 ⅝"
C	1 ½"	1 ½"
D	3 ½"	3 ½"
E	1"	1"



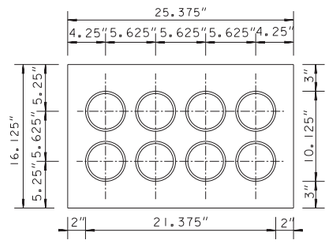
INTERMEDIATE SPACER

COND.	3"	4"
A	10"	11 ½"
B	5"	5 ⅝"
C	3"	3"
D	3 ½"	4 ½"
E	1"	1"
F	2 ½"	2 ½"



BASE SPACER

INTERMEDIATE AND BASE SPACER DETAIL

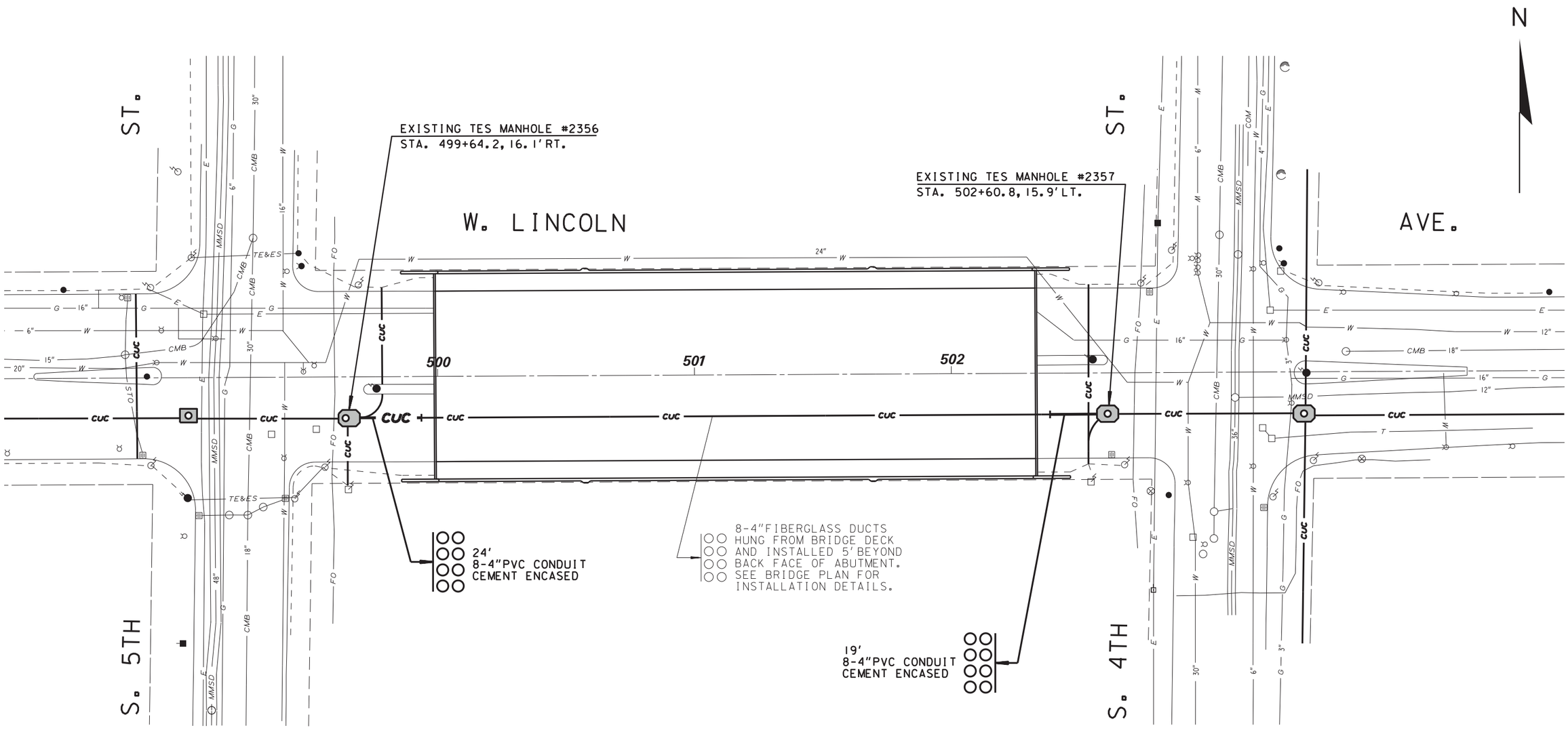


CROSS SECTION VIEW
N.T.S.

SHEET 2 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W. LINCOLN AVE.	COUNTY: MILWAUKEE	CITY UG CONDUIT DETAILS (TES)	SCALE FEET	SHEET NO: 36	E

2



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 MINIMUM DEPTH OF 28-INCHES BETWEEN FINISHED GROUND AND TOP OF CONDUIT.
5) MAINTAIN 6" MINIMUM CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.
6) REMOVE ABANDONED CONDUIT FROM THE MANHOLE WALL AND INSTALL PROPOSED CONDUIT INTO THE MANHOLE AT THAT SAME LOCATION.
7) REMOVE ABANDONED CONDUIT AS NEEDED FOR THE PROPOSED INSTALLATION

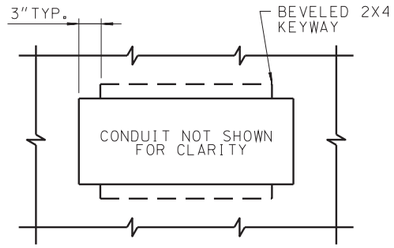
LEGEND

— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.

— cuc — EXISTING CONDUIT

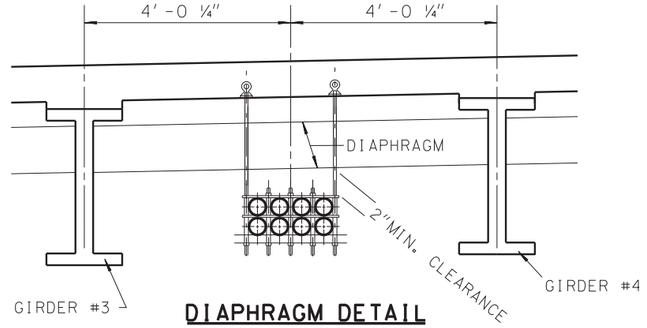
SHEET 1 OF 2

STATE PROJECT NUMBER 1228-25-70 - -	HWY: W. LINCOLN AVE	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0 40'	SHEET NO: 37	E



BLOCKOUT PATCH DETAIL

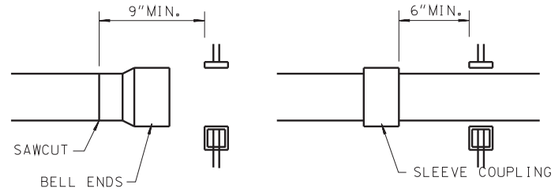
(2'-4" X 1'-6" BLOCKOUT)



DIAPHRAGM DETAIL

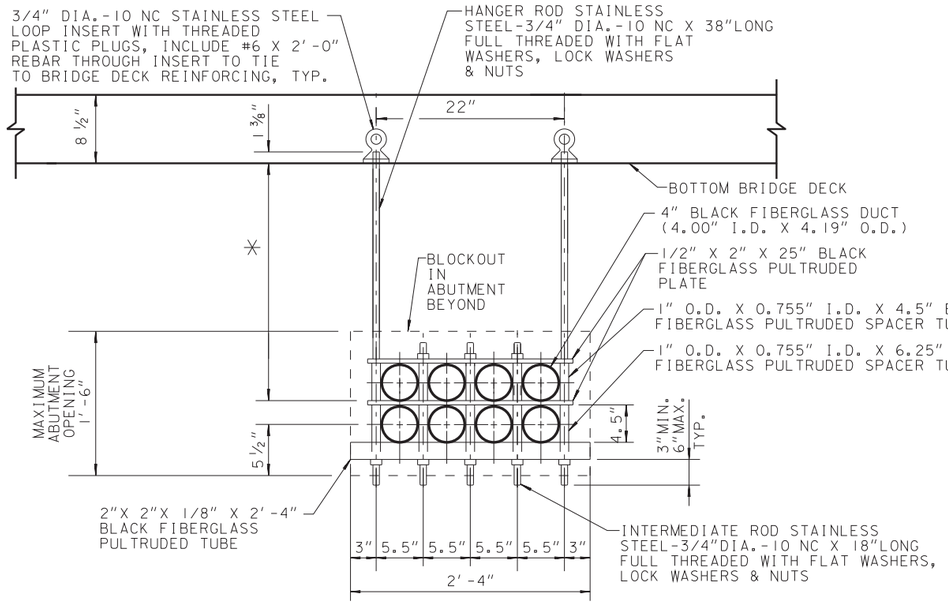
(LOOKING WEST)

2" MINIMUM CLEARANCE
BOTTOM OF DIAPHRAGM
TO TOP OF PIPE



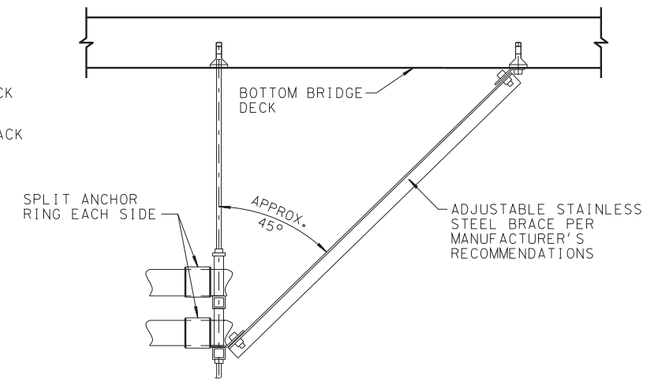
CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS

NOTES:
A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. A TAPE MEASURE CAN BE USED TO PREDETERMINE THESE LOCATIONS AND THE CONDUIT CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS AS SHOWN ABOVE.

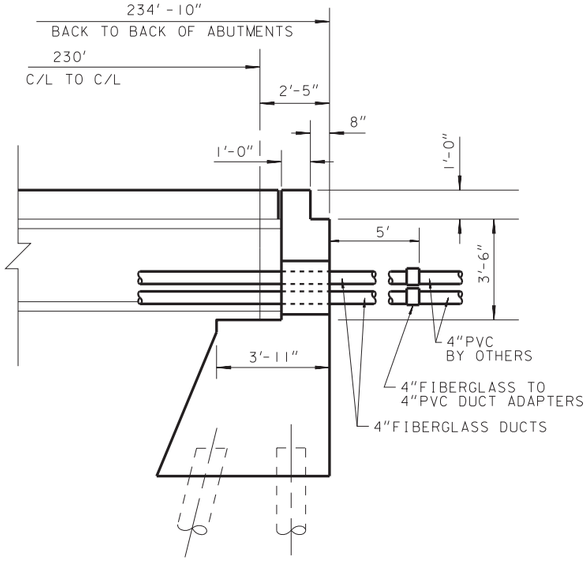


8 DUCT CITY COMMUNICATION HANGER PACKAGE DETAIL

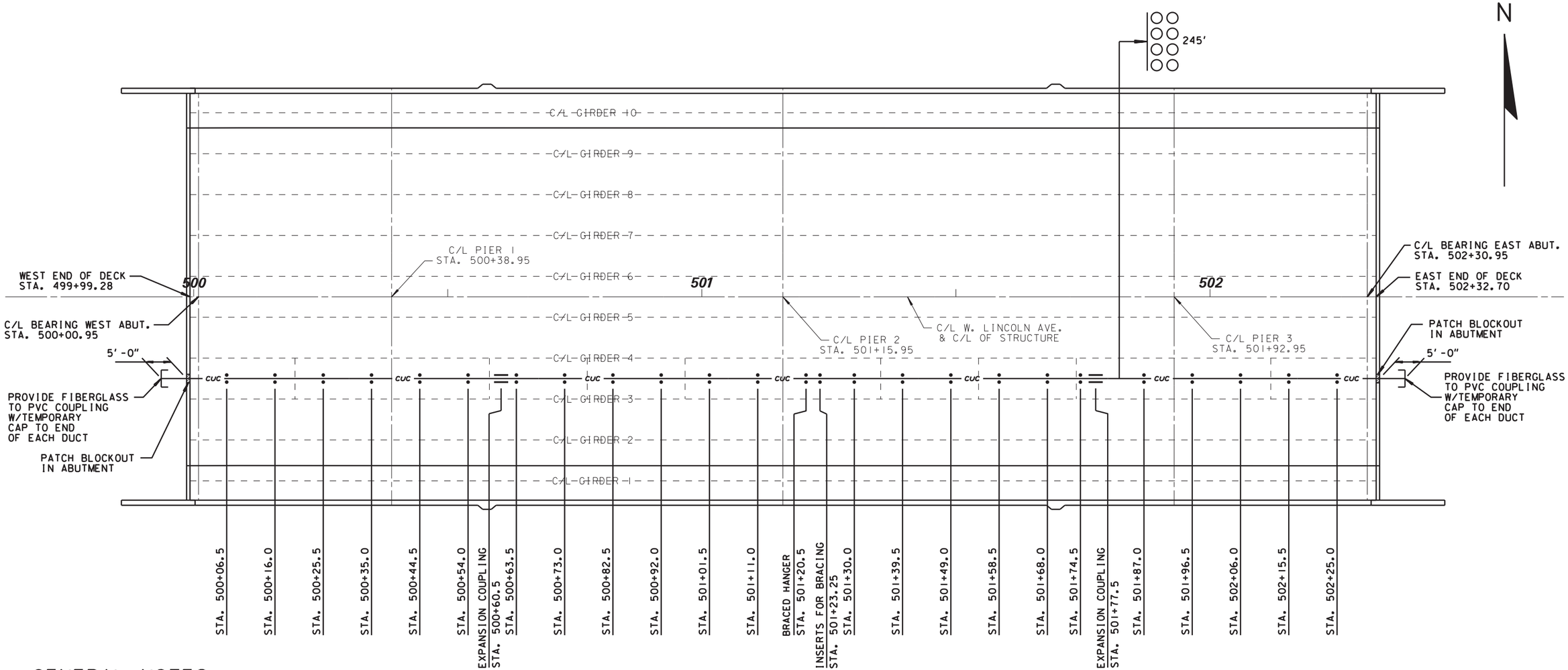
* THE CONTRACTOR SHALL FIELD VERIFY HANGER LENGTHS IN ORDER TO AVOID CONFLICTS WITH DIAPHRAM CROSSING.



TYPICAL 8 DUCT BRACED HANGER DETAIL



SECTION THRU ABUTMENTS



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS ARE IN FEET AND ARE ALONG THE R/L FOR W. LAPHAM BLVD.

ALL COMPONENTS SHALL HAVE A MINIMUM 75 YEAR DESIGN LIFE.

EACH 4" DIA. CONDUIT WEIGHES 9 PLF.

ALL HORIZONTAL SUPPORT MEMBERS TO BE MADE OF BLACK FIBERGLASS PULTRUDED MATERIAL.

FIBERGLASS MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E-84, CLASS I FLAME RATING AND SELF-EXTINGUISHING REQUIREMENTS OF ASTM D-635, A SURFACE VEIL SHALL BE APPLIED DURING PULTRUSION TO INSURE A RESIN RICH SURFACE AND ULTRAVIOLET RESISTANCE.

ALL CUTS AND HOLES SHOULD BE PROPERLY SEALED PER MANUFACTURERS RECOMMENDATIONS TO PREVENT CORROSION.

ALL STEEL MEMBERS AND HARDWARE SHALL HAVE STAINLESS STEEL COATING.

FURNISH CONCRETE FOR BRIDGES CONFORMING TO SECTION 501. GRADE E. CONTRACTOR MAY USE PREMIXED BAG CEMENT PER ENGINEER'S APPROVAL.

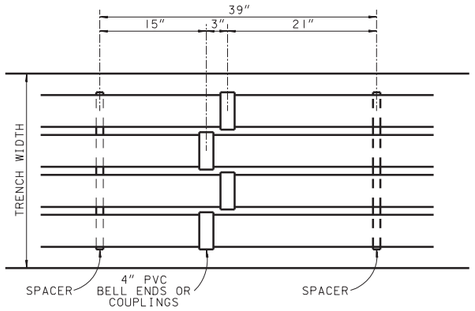
SPACE HANGERS A MAXIMUM 10'-0". LOCATE CONDUIT HANGERS BETWEEN GIRDERS. SEE BRIDGE PLANS.

ALL FIBERGLASS JOINTS SHALL BE EPOXIED PER MANUFACTURER'S SPECIFICATIONS.

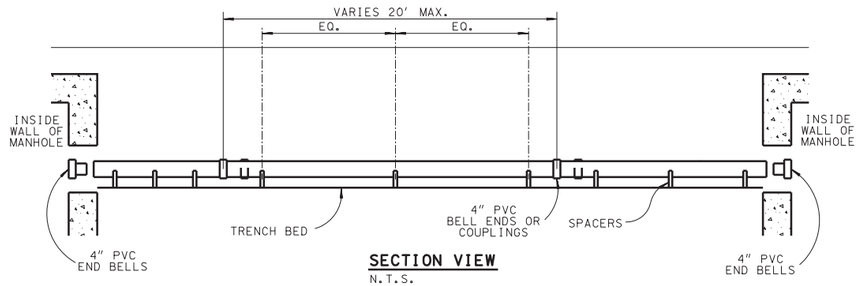
EXTEND CONDUIT 5'-0" FROM BACK FACE OF ABUTMENT. PROVIDE COUPLING AND TEMPORARY CAP ON THE END OF EACH DUCT.

INSTALL EXPANSION JOINT PER LOCATION ON THE PLAN. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.

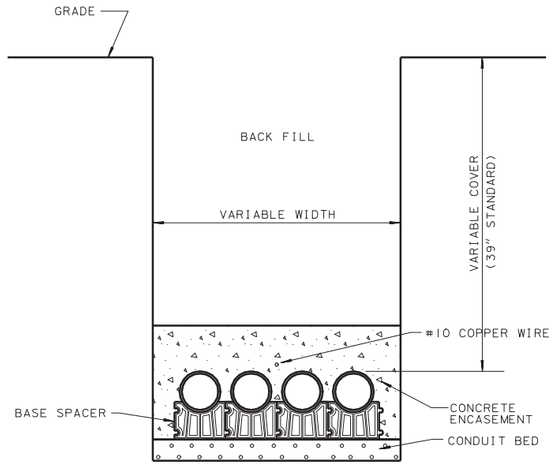
STATE PROJECT NUMBER 1228-25-70 - -	HWY: W. LINCOLN AVE	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET	SHEET NO: 39 E



PLAN VIEW
N.T.S.



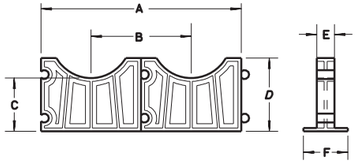
SECTION VIEW
N.T.S.



CROSS SECTION VIEW, TYP.
N.T.S.

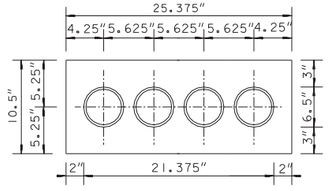
2

COND.	3"	4"
A	10"	11 ½"
B	5"	5 ⅝"
C	3"	3"
D	3 ⅞"	4 ½"
E	1"	1"
F	2 ½"	2 ½"



BASE SPACER

INTERMEDIATE AND BASE SPACER DETAIL



CROSS SECTION VIEW
N.T.S.

STATE PROJECT NUMBER 1228-25-70 - -	HWY: W.HOWARD AVE	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET	SHEET NO: 40	E

2

N

W. HOWARD

AVE.

ST.

RAMP

EXISTING TES MANHOLE #2638
STA. 703+42.4, 36.4' LT.

700+00 701+00 702+00

CUC CUC CUC CUC CUC CUC

27'
4-4"PVC CONDUIT
CEMENT ENCASED
SEE NOTES 6 & 7

EXISTING TES MANHOLE #2653
STA. 699+64.0, 23.5' RT.

4-4"FIBERGLASS DUCTS
HUNG FROM BRIDGE DECK
AND INSTALLED 5' BEYOND
BACK FACE OF ABUTMENT.
SEE BRIDGE PLAN FOR
INSTALLATION DETAILS.

92'
4-4"PVC CONDUIT
CEMENT ENCASED
SEE NOTES 6 & 7

EXISTING TES MANHOLE #2654
STA. 703+39.6, 24.2' RT.

RAMP

S. 3RD

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 MINIMUM DEPTH OF 28-INCHES BETWEEN FINISHED GROUND AND TOP OF CONDUIT.
5) MAINTAIN 6" MINIMUM CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.
6) REMOVE ABANDONED CONDUIT FROM THE MANHOLE WALL AND INSTALL PROPOSED CONDUIT INTO THE MANHOLE AT THAT SAME LOCATION.
7) REMOVE ABANDONED CONDUIT AS NEEDED FOR THE PROPOSED INSTALLATION.

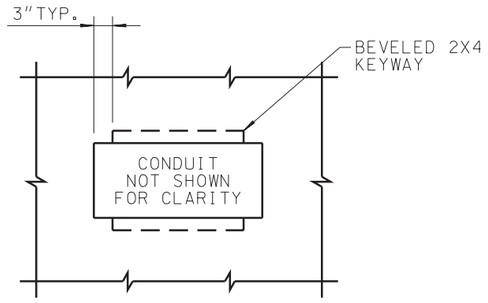
LEGEND

— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.

—— CUC —— EXISTING CONDUIT

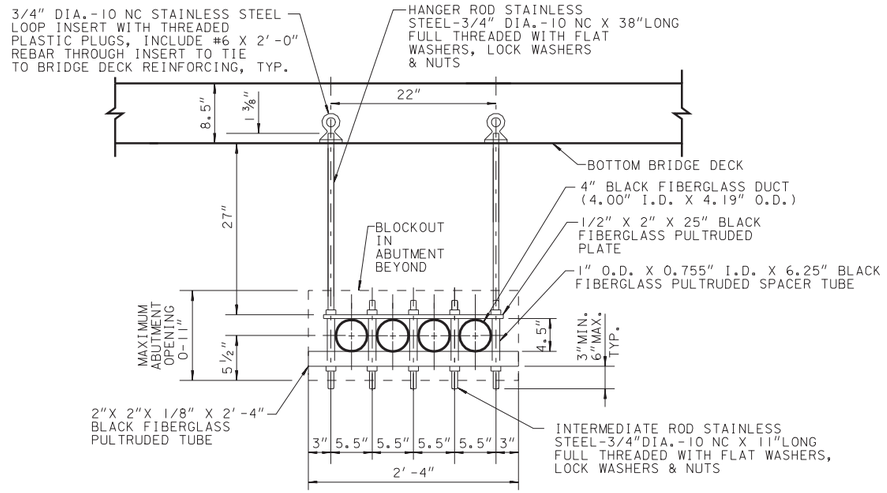
SHEET 1 OF 2

STATE PROJECT NUMBER 1228-25-70 - -	HWY: W. HOWARD AVE	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0' 40'	SHEET NO: 41	E



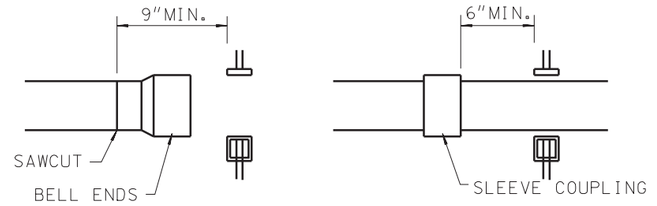
BLOCKOUT PATCH DETAIL

(2'-3" X 0'-11" BLOCKOUT)



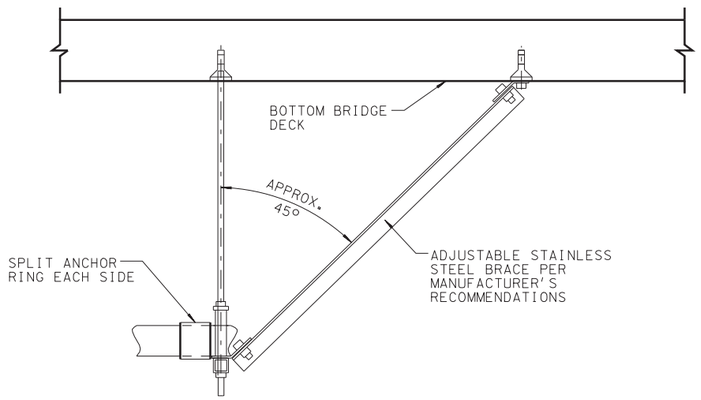
4 DUCT CITY COMMUNICATION HANGER PACKAGE DETAIL

THE CONTRACTOR SHALL FIELD VERIFY HANGER LENGTHS IN ORDER TO AVOID CONFLICTS WITH DIAPHRAM CROSSING.

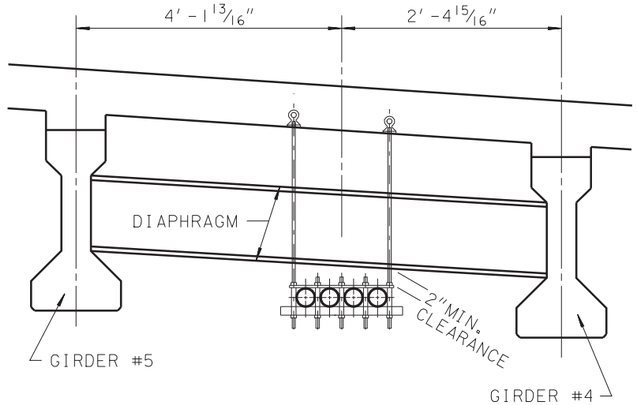


CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS

NOTES:
A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. A TAPE MEASURE CAN BE USED TO PREDETERMINE THESE LOCATIONS AND THE CONDUIT CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS AS SHOWN ABOVE.

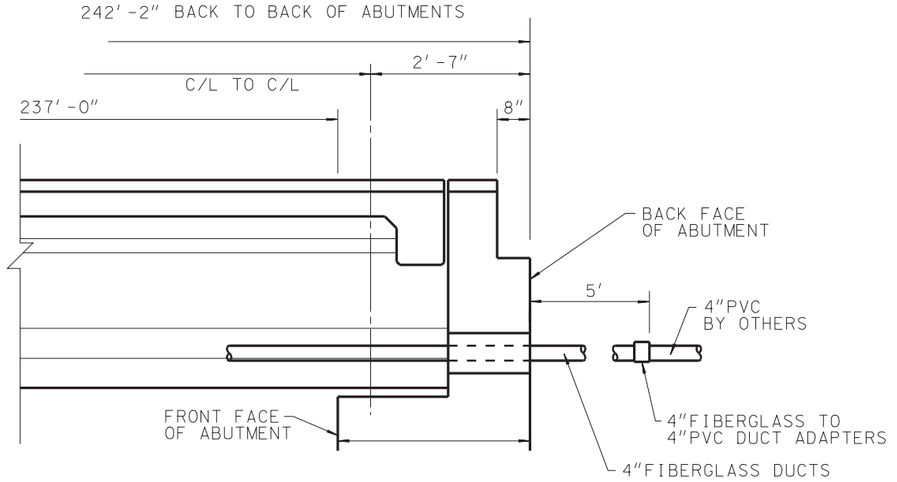


TYPICAL 4 DUCT BRACED HANGER DETAIL

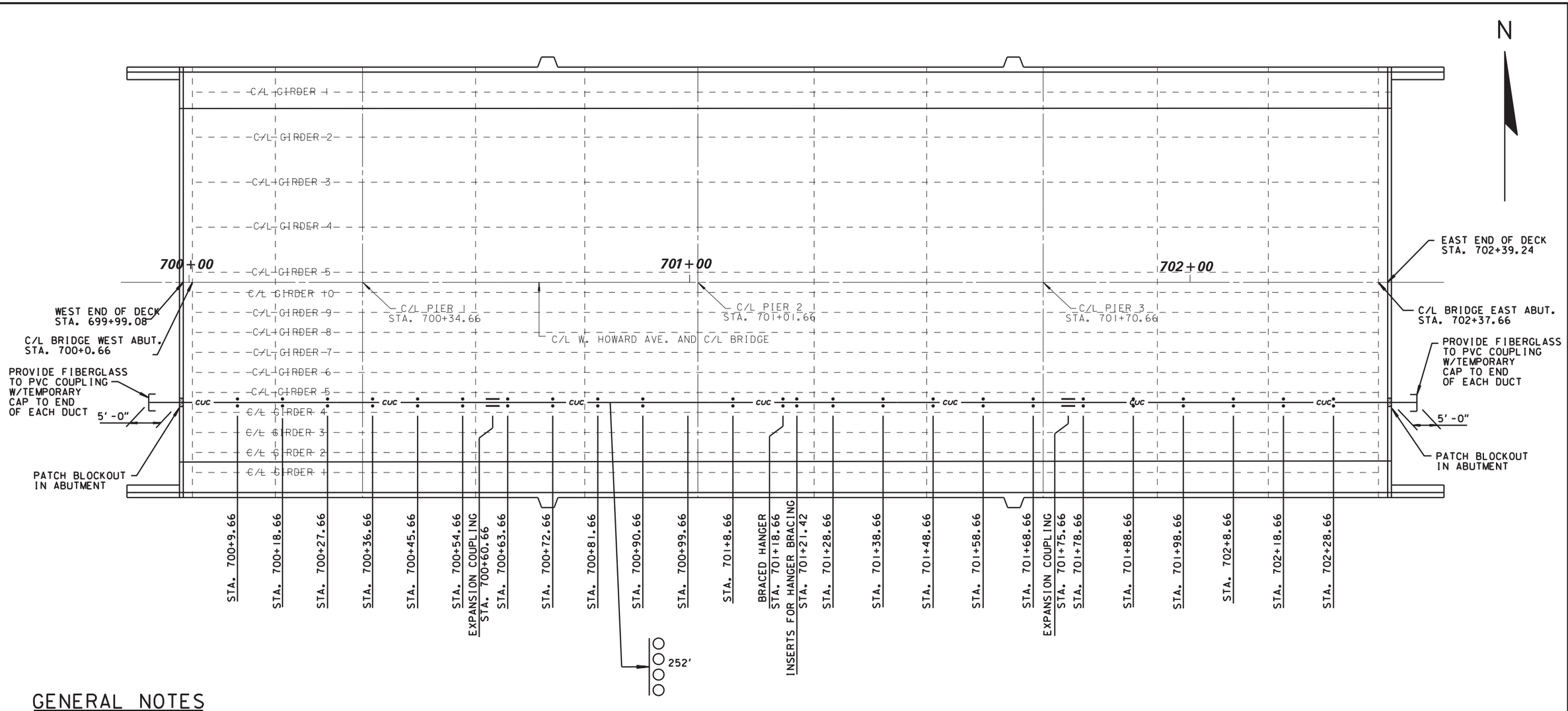


DIAPHRAGM DETAIL

2" MINIMUM CLEARANCE BOTTOM OF OF DIAPHRAM TO TOP OF PIPE



TYPICAL SECTION AT ABUTMENTS



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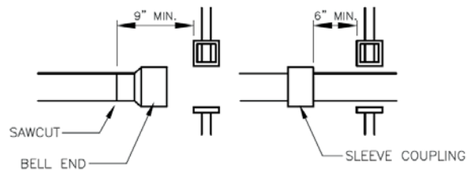
STATE PROJECT NUMBER 1228-25-70	HWY: W. HOWARD AVE	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET	SHEET NO: 43 E

FILE NAME: W:\UGD\CONDUIT WORK FILES\UCONDUIT\2013\US 43 HOWARD TO VALLEY\HOWARD\HOWARD BRIDGE.DGN
PEN TABLE: PENLIB:E_CUCSTATE.PEN
SCALE: 20.000000:1.000000
PRINT DATE: 01-OCT-2013

CONDUIT RECORD

CAUTION: HIGH VOLTAGE

CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS



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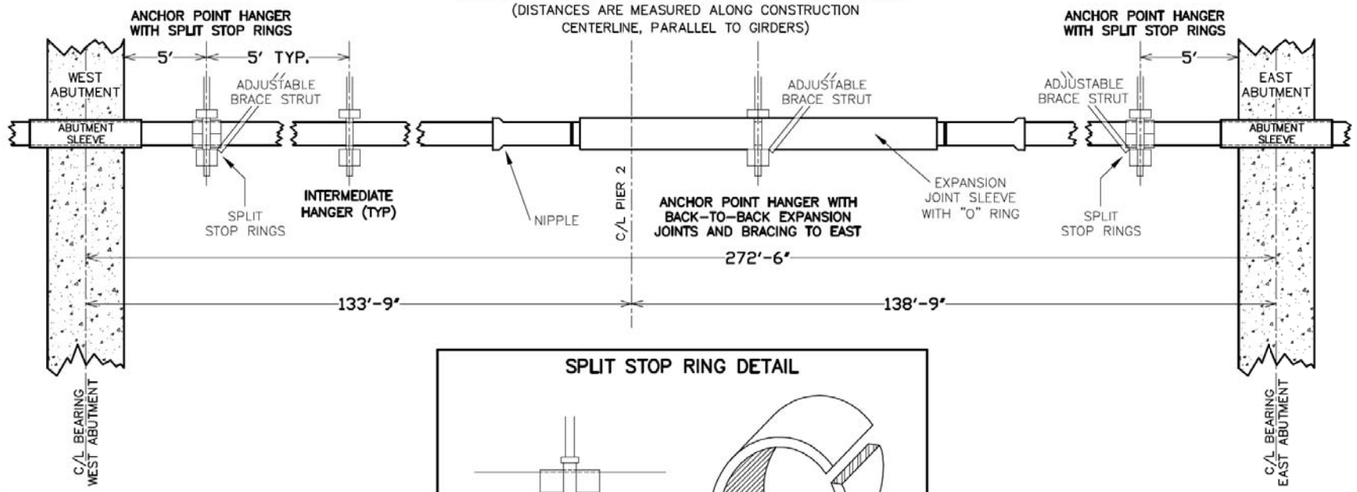
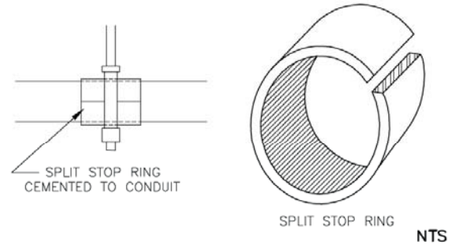
NTS

BACK TO BACK EXPANSION JOINT INSTALLATION

(DISTANCES ARE MEASURED ALONG CONSTRUCTION CENTERLINE, PARALLEL TO GIRDERS)

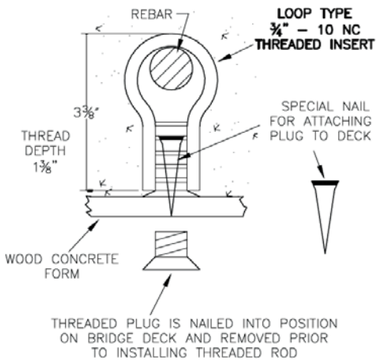


SPLIT STOP RING DETAIL



NTS

INSERTS FOR ALL HANGERS AND ANGLE BRACE STRUTS



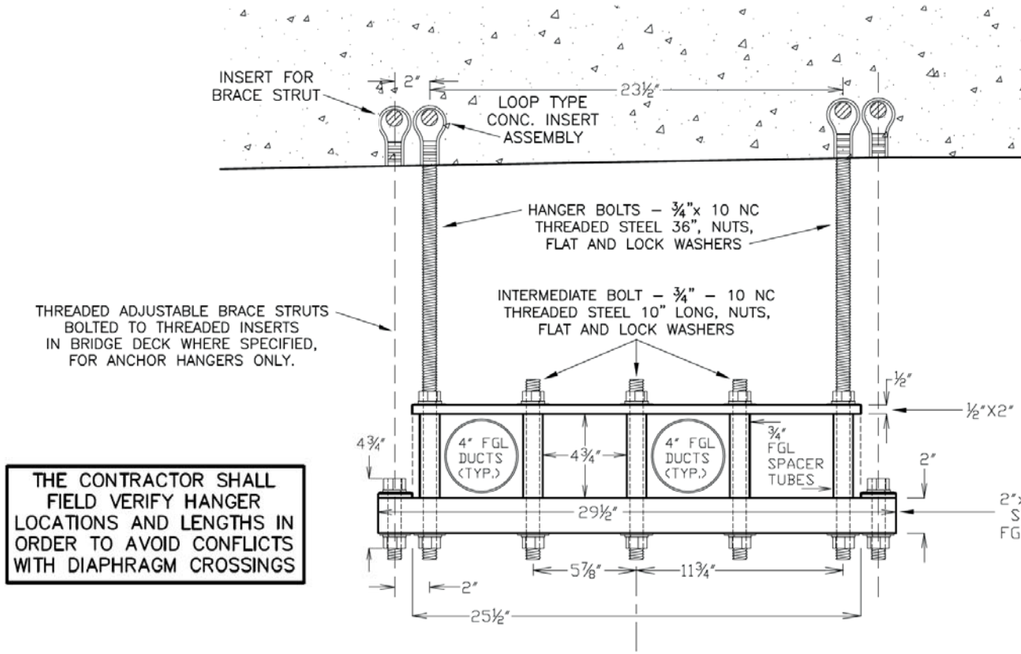
NTS

NTS

ANCHOR POINT HANGER ASSEMBLY DETAIL

(INTERMEDIATE HANGER ASSEMBLIES ARE SIMILAR IN DESIGN AND DIMENSION BUT WITHOUT THE 2 THREADED ADJUSTABLE BRACE STRUTS, STRUT DECK INSERTS AND SPLIT STOP RINGS)

TO BE PLACED CENTERED BETWEEN GIRDERS 3 AND 4



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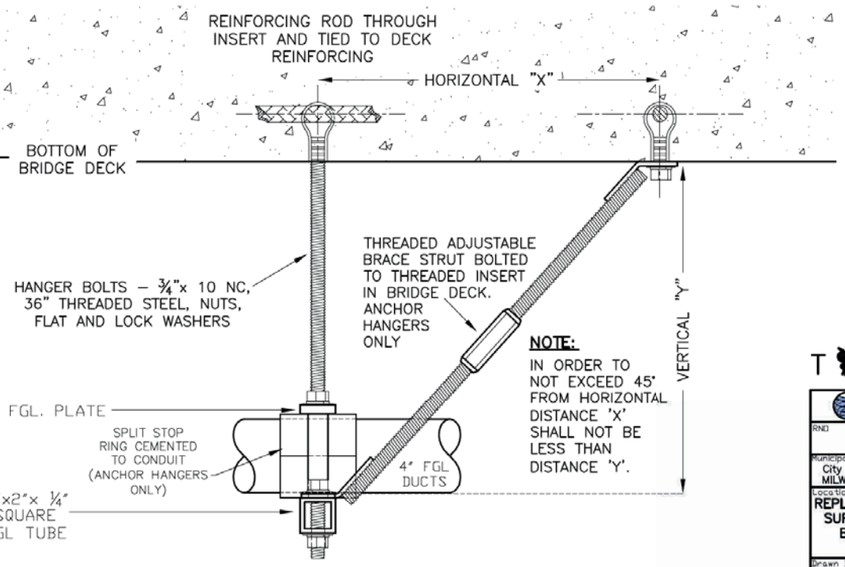
ANCHOR ASSEMBLY SIDE VIEW WITH BRACE STRUTS, STRUT INSERTS AND STOP RINGS



NOTE:

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(ALL PARTS REFERENCED FROM)
OSBURN ASSOCIATES, INC.
P.O. BOX 912 LOGAN, OHIO 43138
TOLL FREE 1-800-523-8917
www.osburnassociates.com

CONTRACT DESIGNER:
LORI WITTHUHN•MI-TECH SERVICES
(920)288-8934

T bug testing is required for Hi-Cap circuits. If you encounter any discrepancy, call local assignment or the Hi-Cap Center (800-572-9846).

at&t		Ref		Date Service Req.	
RND	Geo Loc	WC		Date Issued	
Municipality: City of MILWAUKEE		County: MILWAUKEE	Township: T6N R22E	1/4 Sec: SEC 5	Tax Dist

Location & Description:
REPLACEMENT OF CONDUIT AND RELATED HANGER SUPPORT MATERIAL UNDER BRIDGE STRUCTURE B-40-170, GREENFIELD AVE. OVER IH 43
CITY OF MILWAUKEE, WISCONSIN.

Drawn By	Orig.	Tel #	PLR:
MI TECH	MARK EDER	(262) 896-7434	Maj Codes: 4C

Revisions:

EWO #: 9011401

Print 2 of

CONDUIT RECORD

TYPICAL EXISTING INTERMEDIATE HANGER ASSEMBLIES SHOWN WITH TEMPORARY CABLE/DUCT SUPPORTS FOR STRUCTURE B-40-170

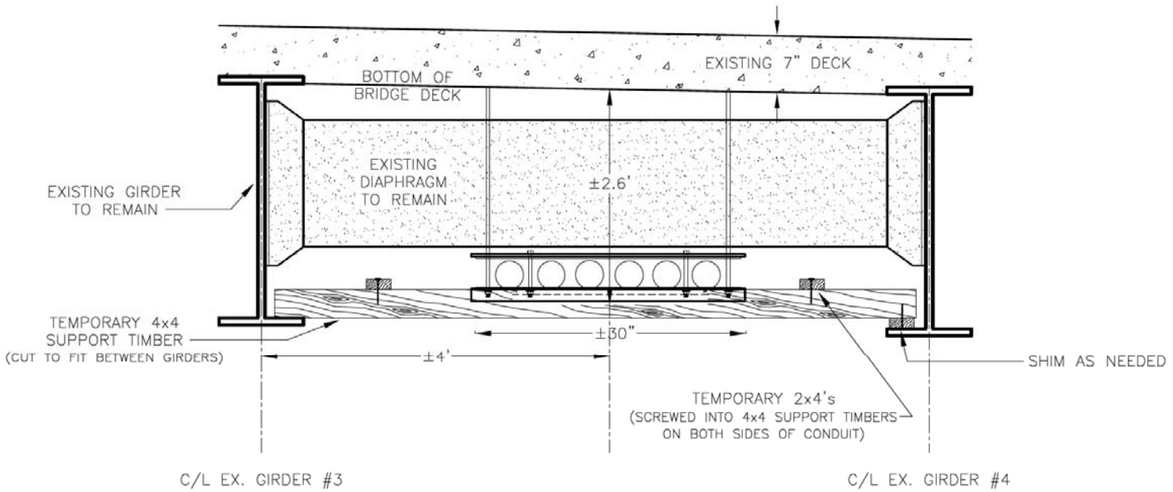
(TO BE REMOVED AT TIME OF NEW DECK PLACEMENT)

CONSTRUCTION NOTE:
ALL EXISTING GIRDERS & DIAPHRAGMS TO REMAIN. ALL EXISTING BRIDGE DECK TO BE REPLACED.

CONSTRUCTION NOTE:
51 EXISTING HANGERS ARE TO BE REPLACED WITH LIKE-KIND HANGER SYSTEM

CROSS SECTION

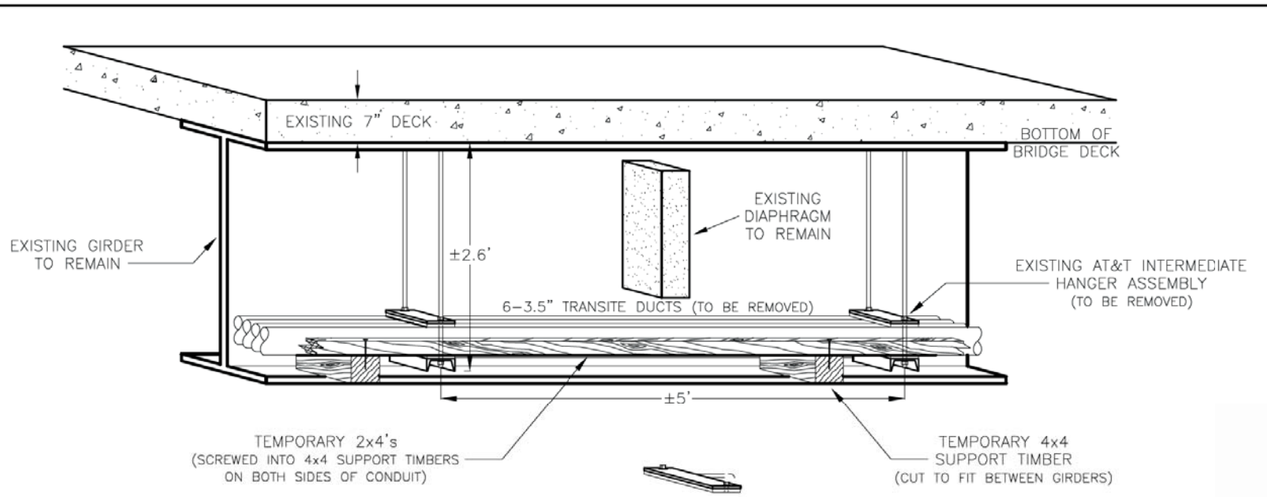
(LOOKING WEST FROM EAST ABUTMENT)



NTS

SIDE VIEW

(LOOKING NORTH BETWEEN GIRDERS 3 & 4)



NTS

ATTENTION:

TRANSITE DUCT SHOWN ON THIS PRINT HAS BEEN IDENTIFIED AS A HAZARDOUS MATERIAL (ASBESTOS) AND SPECIAL PRECAUTIONS ARE REQUIRED WHEN HANDLING, REMOVING, OR DISPOSING OF THE MATERIAL.
CONTACT DEBI SIROVINA, EH&S MANAGER, AT&T, (262)970-8496

THE CONTRACTOR SHALL VERIFY DIMENSIONS SHOWN AND FIELD ADJUST AS NEEDED

THE UTILITIES SHOWN ON THIS PLAN ARE INDICATED IN ACCORDANCE WITH AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT LOCATIONS AND ELEVATIONS OF ALL UTILITIES FROM THE OWNERS OF THE RESPECTIVE UTILITIES AND FROM FIELD VERIFICATION WHERE NECESSARY.

CONTRACT DESIGNER:
LORI WITTHUHN*MI-TECH SERVICES
(920)288-8934

T bug testing is required for Hi-Cap circuits. If you encounter any discrepancy, call local assignment or the Hi-Cap Center (800-572-9846).

at&t	Ref		Date Service Req.	
RND	Geo Loc	WC	Date Issued	
Municipality: City of MILWAUKEE	County: MILWAUKEE	Township: T6N R22E	1/4 Sec: SEC 5	Tax Dist

Location & Description:
REPLACEMENT OF CONDUIT AND RELATED HANGER SUPPORT MATERIAL UNDER BRIDGE STRUCTURE B-40-170, GREENFIELD AVE. OVER IH 43
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Drawn By: MI TECH	Orig. MARK EDER	Tel # (262) 896-7434	PLR:
Revisions:			Maj Coden: 4C
			CWD #: 9011401
			Print 1 of

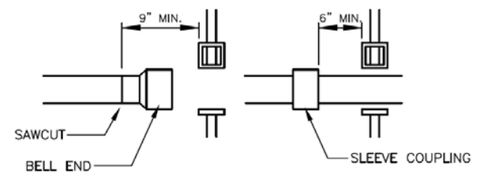
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 45 E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\021021_cd.dgn PLOT DATE : 1/31/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 200.0000 sf / in.

CONDUIT RECORD

CAUTION: HIGH VOLTAGE

CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS



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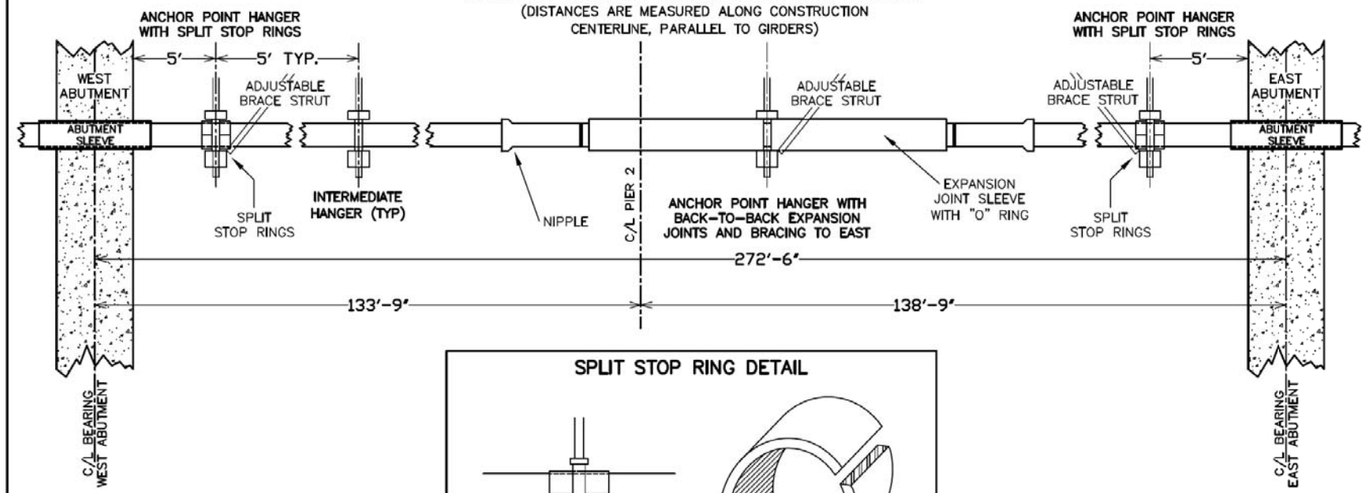
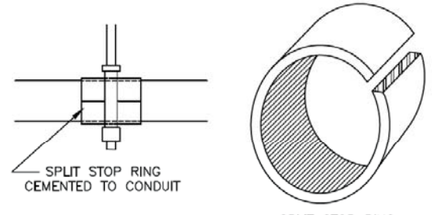
NTS

BACK TO BACK EXPANSION JOINT INSTALLATION

(DISTANCES ARE MEASURED ALONG CONSTRUCTION CENTERLINE, PARALLEL TO GIRDERS)



SPLIT STOP RING DETAIL



NTS

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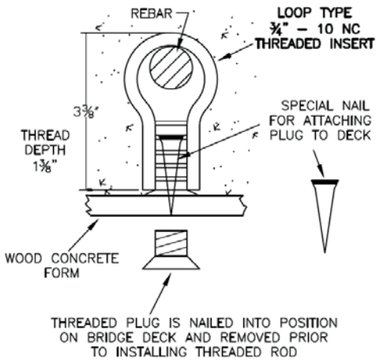

NTS

NTS

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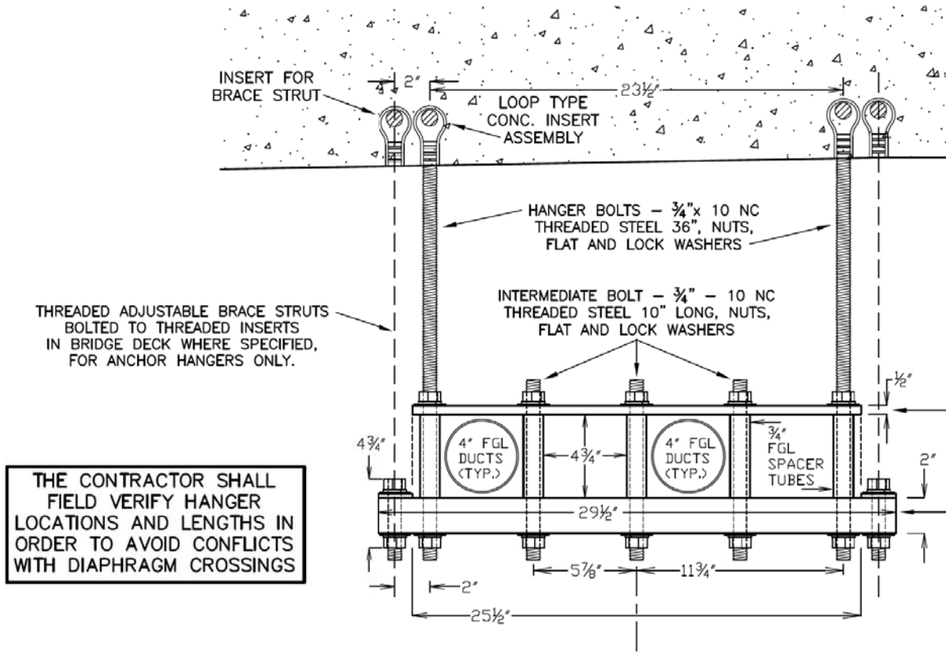

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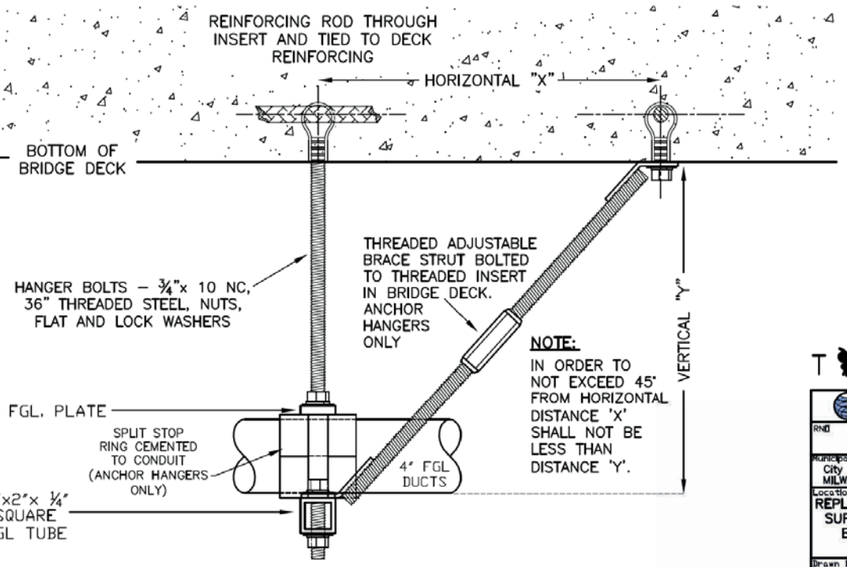
ANCHOR ASSEMBLY SIDE VIEW WITH BRACE STRUTS, STRUT INSERTS AND STOP RINGS



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CONTRACT DESIGNER:
LORI WITTHUHN*MI–TECH SERVICES
(920)288–8934

T bug testing is required for HI-Cap circuits. If you encounter any discrepancy, call local assignment or the HI-Cap Center (800-572-9846).

at&t	Ref		Date Service Req.
RNB	Geo Loc	WC	Date Issued
Municipality: City of MILWAUKEE	County: MILWAUKEE	Township: T6N R22E	1/4 Sec: SEC 5	Tax Dist

Location & Description:
REPLACEMENT OF CONDUIT AND RELATED HANGER SUPPORT MATERIAL UNDER BRIDGE STRUCTURE B–40–172, W. MITCHELL ST. OVER IH 43
CITY OF MILWAUKEE, WISCONSIN.

Drawn By: MI TECH	Dsg: MARK EDER	Tel #: (262) 896-7434	PLS#
Revisions:			Maj Code: 4C
			EWO #: 9011415
			Print 2 of

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 46	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\021022_cd.dgn PLOT DATE : 1/31/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 200.0000 sf / in.

WISDOT/CADDS SHEET 42

CONDUIT RECORD

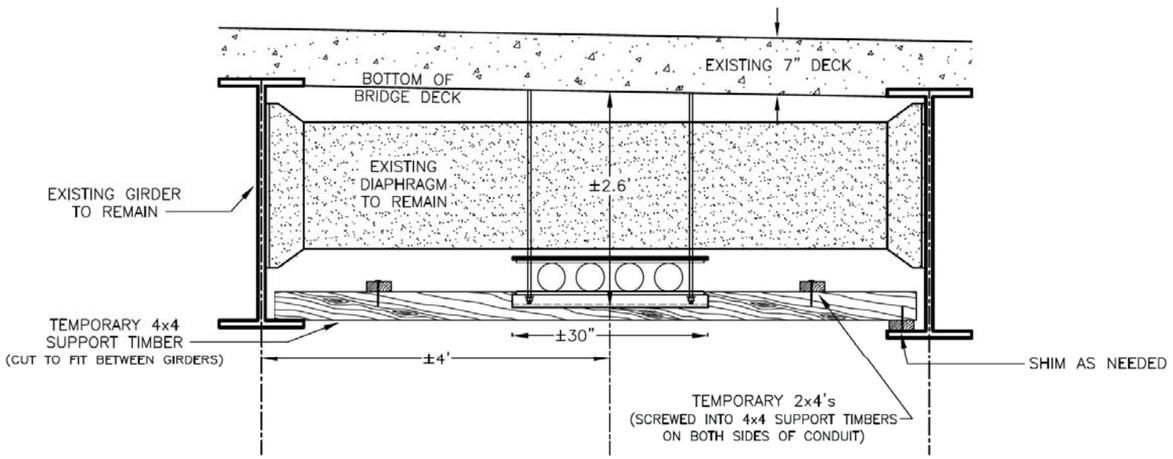
TYPICAL EXISTING INTERMEDIATE HANGER ASSEMBLIES SHOWN WITH TEMPORARY CABLE/DUCT SUPPORTS FOR STRUCTURE B-40-172

(TO BE REMOVED AT TIME OF NEW DECK PLACEMENT)

CONSTRUCTION NOTE:
ALL EXISTING GIRDERS & DIAPHRAGMS TO REMAIN. ALL EXISTING BRIDGE DECK TO BE REPLACED.

CROSS SECTION

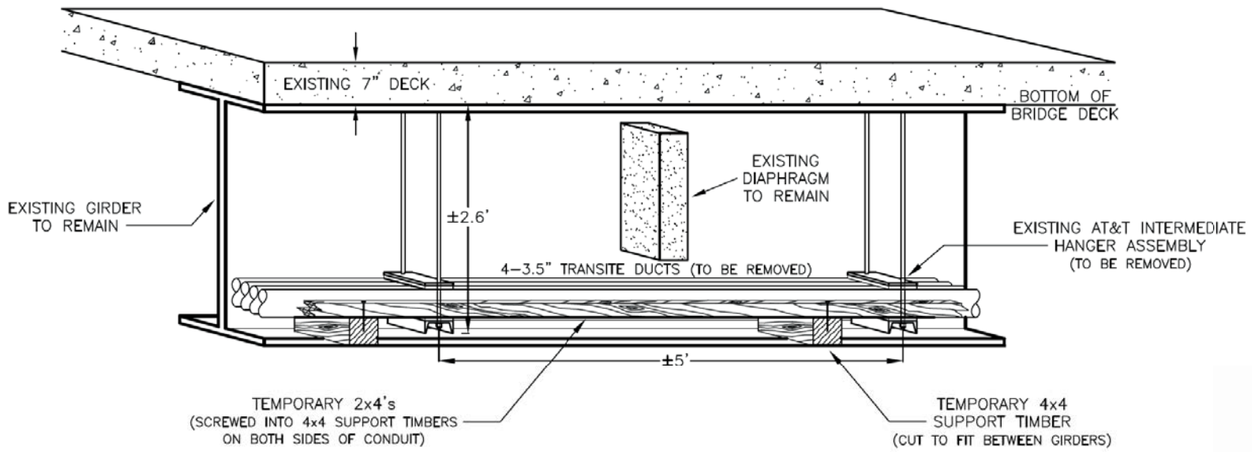
(LOOKING WEST FROM EAST ABUTMENT)



NTS

SIDE VIEW

(LOOKING NORTH BETWEEN GIRDERS 2 & 3)



NTS

CAUTION

ATTENTION:

TRANSITE DUCT SHOWN ON THIS PRINT HAS BEEN IDENTIFIED AS A HAZARDOUS MATERIAL (ASBESTOS) AND SPECIAL PRECAUTIONS ARE REQUIRED WHEN HANDLING, REMOVING, OR DISPOSING OF THE MATERIAL.
CONTACT DEBI SIROVINA, EH&S MANAGER, AT&T, (262)970-8496

THE CONTRACTOR SHALL VERIFY DIMENSIONS SHOWN AND FIELD ADJUST AS NEEDED

THE UTILITIES SHOWN ON THIS PLAN ARE INDICATED IN ACCORDANCE WITH AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT LOCATIONS AND ELEVATIONS OF ALL UTILITIES FROM THE OWNERS OF THE RESPECTIVE UTILITIES AND FROM FIELD VERIFICATION WHERE NECESSARY.

CONTRACT DESIGNER:
LORI WITTHUHN*MI-TECH SERVICES
(920)288-8934

T bug testing is required for HI-Cap circuits. If you encounter any discrepancy, call local assignment or the HI-Cap Center (800-572-9846).

at&t	Ref			Date Service Req.
RND	Geo Loc	WC		Date Issued
Municipality: City of MILWAUKEE	County: MILWAUKEE	Township: T8N R22E	1/4 Sec: SEC 5	Tax Dist

Location & Description:
REPLACEMENT OF CONDUIT AND RELATED HANGER SUPPORT MATERIAL UNDER BRIDGE STRUCTURE B-40-172, W. MITCHELL ST. OVER IH 43 CITY OF MILWAUKEE, WISCONSIN.

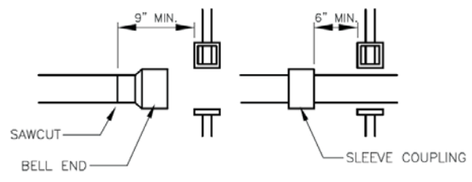
Drawn By: MI TECH	Dsg. MARK EDER	Tel # (262) 896-7434	PLS:
Revisions:			Maj Code: 4C
			Ewo #: 9011415
			Print 1 of

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 47	E

CONDUIT RECORD

CAUTION: HIGH VOLTAGE

CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS



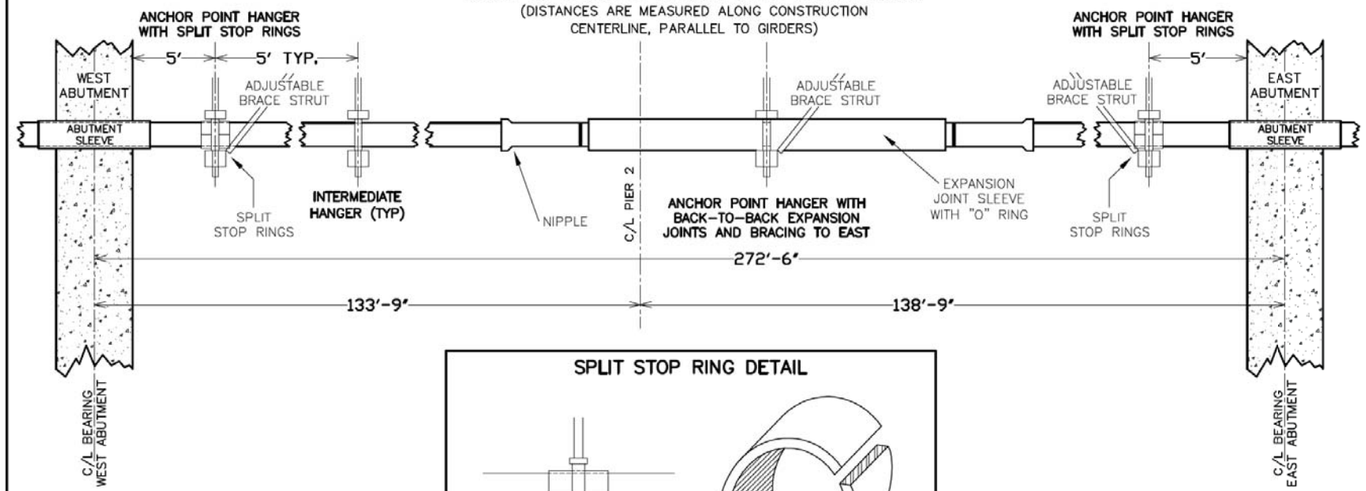
NOTES:

A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. MEASURE IN FIELD TO PREDETERMINE THESE LOCATIONS AND THE CONDUIT CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS AS SHOWN ABOVE.

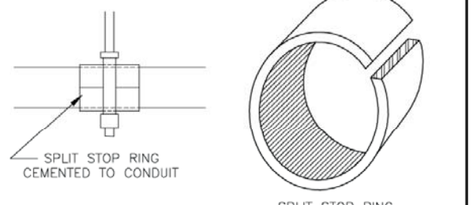
NTS

BACK TO BACK EXPANSION JOINT INSTALLATION

(DISTANCES ARE MEASURED ALONG CONSTRUCTION CENTERLINE, PARALLEL TO GIRDERS)



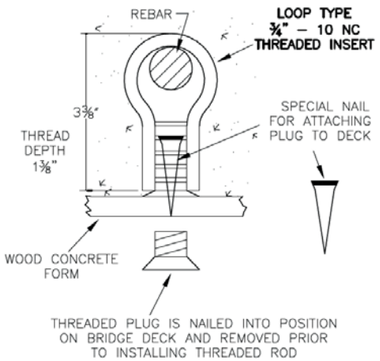
SPLIT STOP RING DETAIL



NTS

NTS

INSERTS FOR ALL HANGERS AND ANGLE BRACE STRUTS



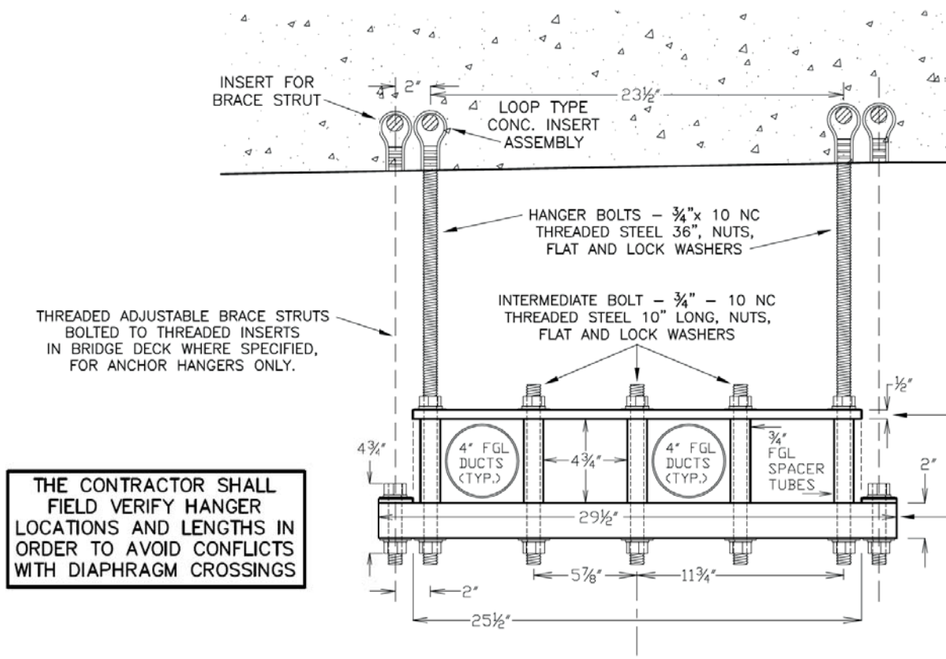
NTS

NTS

ANCHOR POINT HANGER ASSEMBLY DETAIL

(INTERMEDIATE HANGER ASSEMBLIES ARE SIMILAR IN DESIGN AND DIMENSION BUT WITHOUT THE 2 THREADED ADJUSTABLE BRACE STRUTS, STRUT DECK INSERTS AND SPLIT STOP RINGS)

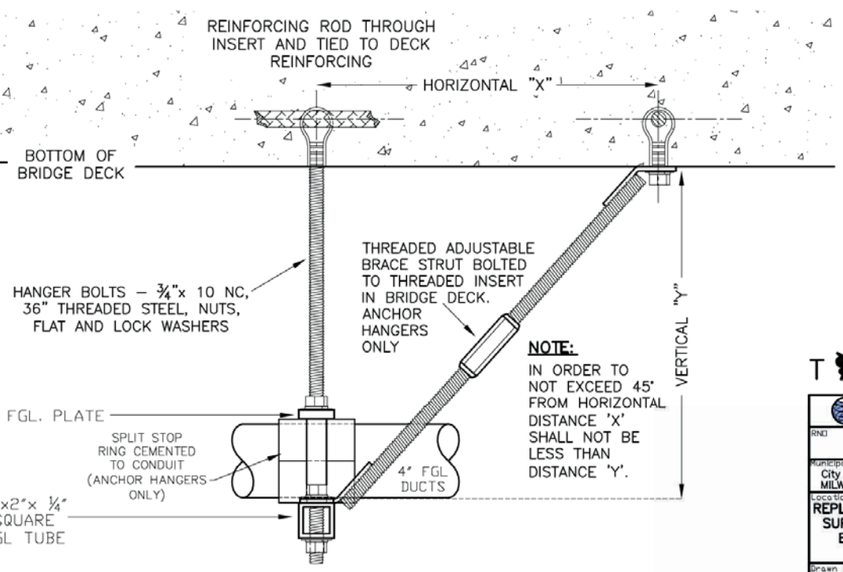
TO BE PLACED CENTERED BETWEEN GIRDERS 8 AND 9



THE CONTRACTOR SHALL FIELD VERIFY HANGER LOCATIONS AND LENGTHS IN ORDER TO AVOID CONFLICTS WITH DIAPHRAGM CROSSINGS

ANCHOR ASSEMBLY SIDE VIEW

WITH BRACE STRUTS, STRUT INSERTS AND STOP RINGS



NOTE:

IN ORDER TO NOT EXCEED 45° FROM HORIZONTAL DISTANCE 'X' SHALL NOT BE LESS THAN DISTANCE 'Y'.

NTS

(ALL PARTS REFERENCED FROM)
OSBURN ASSOCIATES, INC.
P.O. BOX 912 LOGAN, OHIO 43138
TOLL FREE 1–800–523–8917
www.osburnassociates.com

CONTRACT DESIGNER:
LORI WITTHUHN*MI–TECH SERVICES
(920)288–8934

T bug testing is required for Hi-Cap circuits. If you encounter any discrepancy, call local assignment or the Hi-Cap Center (800-572-9846).

at&t	Ref		Date Service Req.
RNI	Geo Loc	WC	Date Issued
Municipality: City of MILWAUKEE	County: MILWAUKEE	Township: T6N R22E	1/4 Sec: SEC 5	Tax Dist

Location & Description:
REPLACEMENT OF CONDUIT AND RELATED HANGER SUPPORT MATERIAL UNDER BRIDGE STRUCTURE B–40–178, W. LINCOLN AVE. OVER IH 43 CITY OF MILWAUKEE, WISCONSIN.

Drawn By	Orig.	Tel #	PLR:
MI TECH	MARK EDER	(262) 896–7434	Maj Code: 4C

Revisions:

EWO #: **9011422**

Print 2 of

CONDUIT RECORD

TYPICAL EXISTING INTERMEDIATE HANGER ASSEMBLIES SHOWN WITH TEMPORARY CABLE/DUCT SUPPORTS FOR STRUCTURE B-40-178

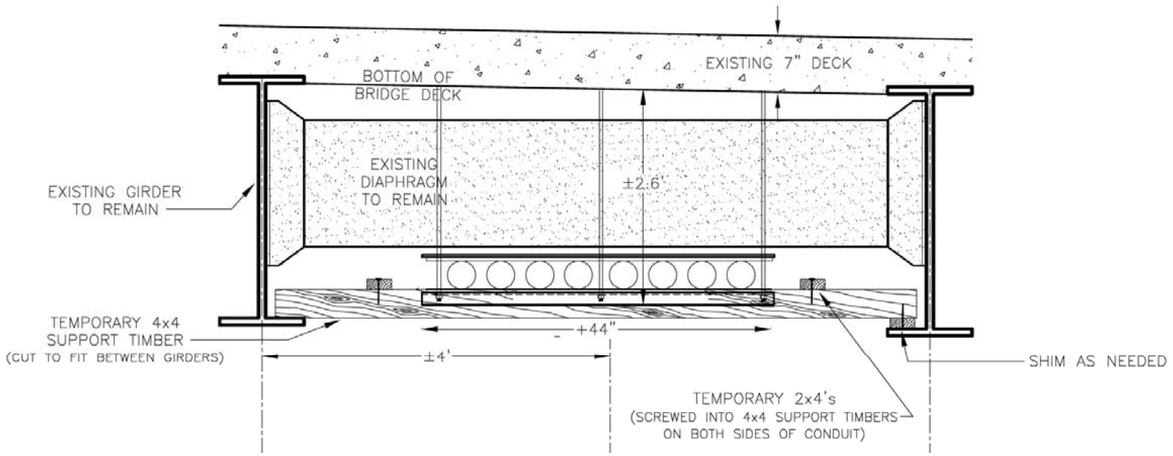
(TO BE REMOVED AT TIME OF NEW DECK PLACEMENT)

CONSTRUCTION NOTE:
ALL EXISTING GIRDERS & DIAPHRAGMS TO REMAIN. ALL EXISTING BRIDGE DECK TO BE REPLACED.

CONSTRUCTION NOTE:
45 EXISTING HANGERS ARE TO BE REPLACED WITH LIKE-KIND HANGER SYSTEM

CROSS SECTION

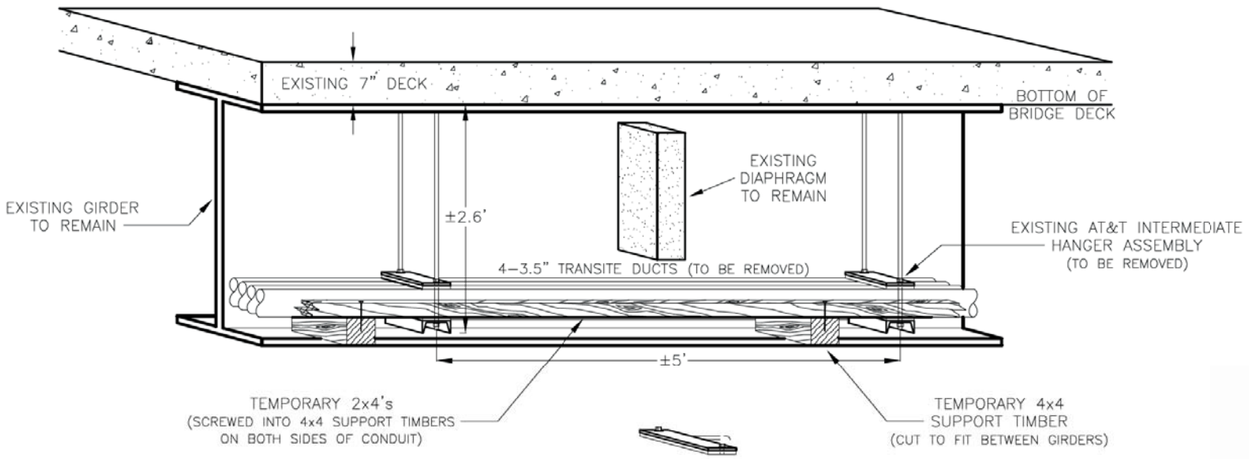
(LOOKING WEST FROM EAST ABUTMENT)



NTS

SIDE VIEW

(LOOKING NORTH BETWEEN GIRDERS 8 & 9)



NTS

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CONTRACT DESIGNER:
LORI WITTHUHN*MI-TECH SERVICES
(920)288-8934

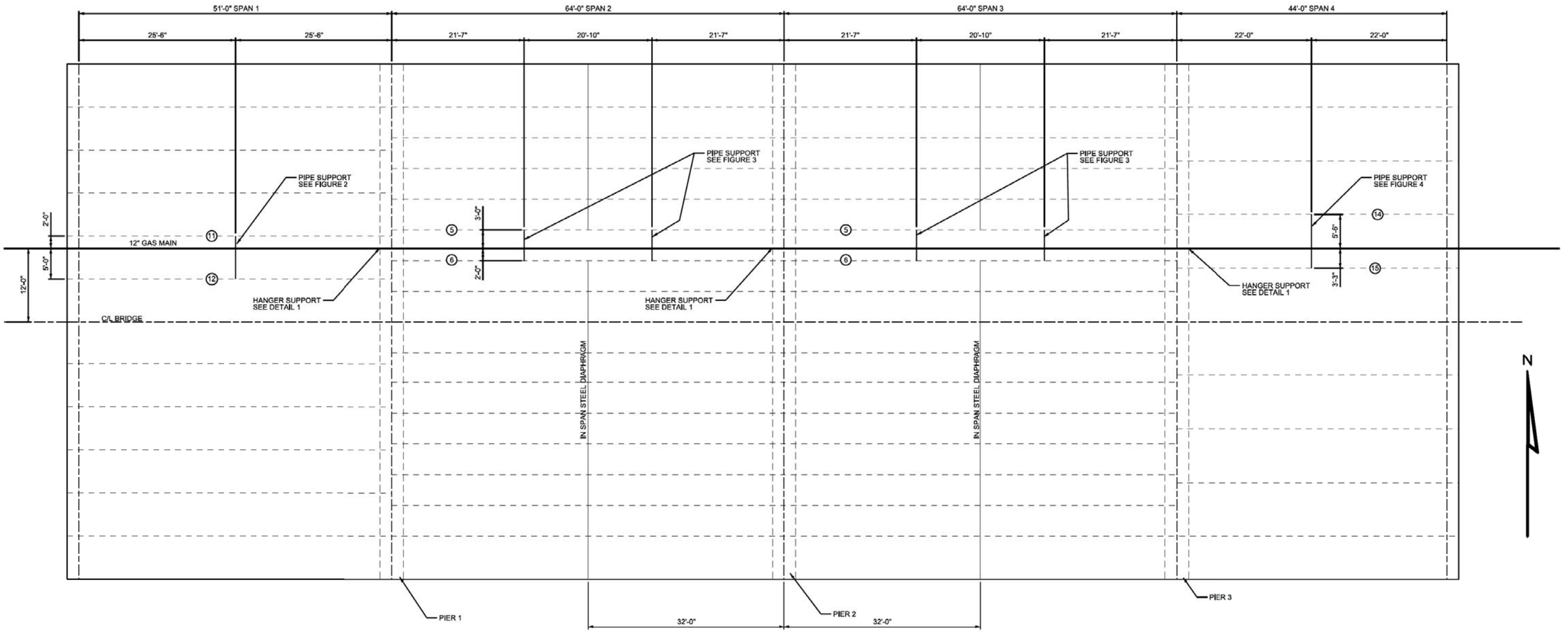
T bug testing is required for Hi-Cap circuits. If you encounter any discrepancy, call local assignment or the Hi-Cap Center (800-572-9846).

at&t	Ref		Date Service Req.
RNO	Geo Loc	WC	Date Issued
Municipality: City of MILWAUKEE	County: MILWAUKEE	Township: T6N R22E	1/4 Sec: SEC 5	Tax Dist

Location & Description:
REPLACEMENT OF CONDUIT AND RELATED HANGER SUPPORT MATERIAL UNDER BRIDGE STRUCTURE B-40-178, W. LINCOLN AVE. OVER IH 43
CITY OF MILWAUKEE, WISCONSIN.

Drawn By: MI TECH	Dsg. MARK EDER	Tel # (262) 896-7434	PLR: Maj Code: 4C
Revisions:			CWO #: 9011422
			Print 1 of

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 49 E



STUCTURE B-40-171 FRAMING PLAN
1/4" = 1'-0"

WISCONSIN
LEE L. PAULUS
E-13031
MILWAUKEE
PROFESSIONAL ENGINEER
1/6/2014

FIGURE 1
STRUCTURE B-40-171
FRAMING PLAN

STRUCTURE B-40-171
MILWAUKEE, WI
MILWAUKEE COUNTY, WI

we energies

PROJECT NUMBER:	2012009.02
DATE:	03-19-12
PROJECT MGR:	LLP
DRAWN BY:	MP
FILE NAME:	DETAIL2.dgn
SCALE:	1/4" = 1'-0"
REVISED:	____

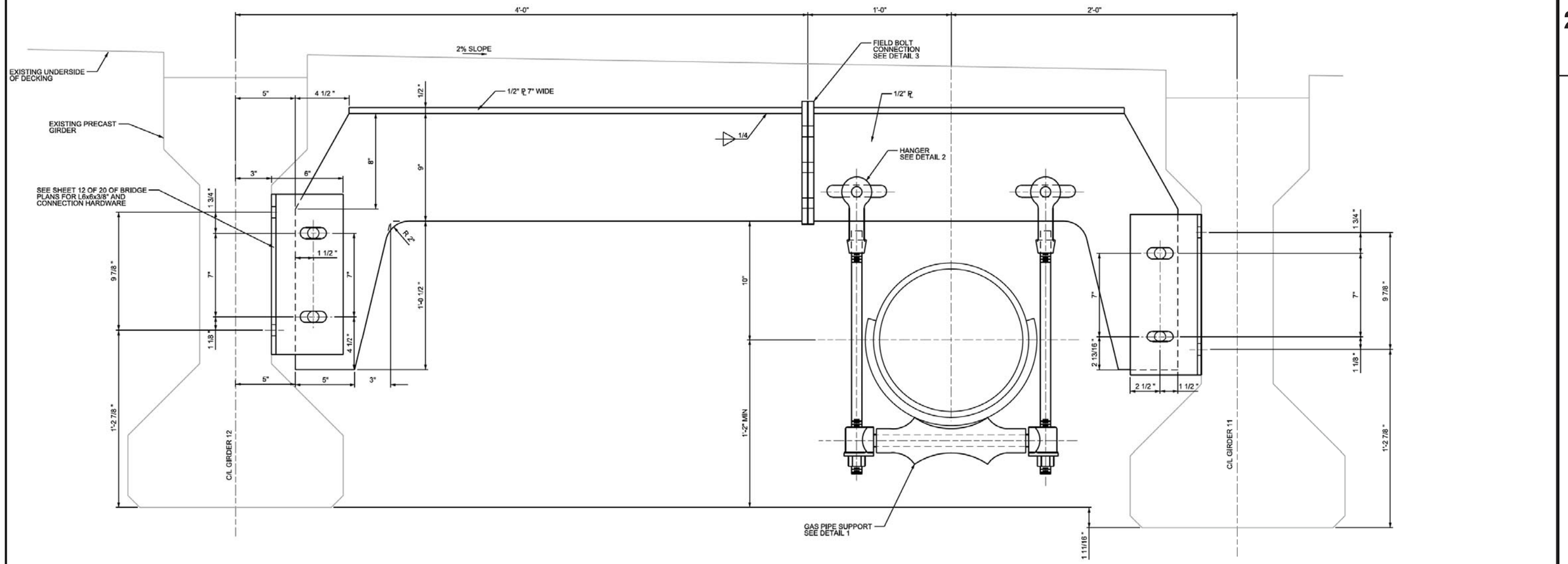
OTIE
Oneida Total Integrated Enterprises

ELEV-2012 PROJECTS\021030\Layouts\Sheets\Detail2.dgn
DATE: 2/5/2014

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 50 E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\021030_cd.dgn PLOT DATE : 1/31/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 200.0000 sf / in.

WISDOT/CADDS SHEET 42



SPAN 1
LOOKING WEST

DESIGN CRITERIA:

THE PIPE CENTERLINE IS DESIGNED TO BE PARALLEL TO THE ROADWAY SURFACE AND PARALLEL TO THE LONGITUDINAL AXIS OF THE PRECAST CONCRETE GIRDERS.

THE PIPE SUPPORT FRAMES "T"STEMS AND HANGERS ARE DESIGNED TO BE VERTICALLY PLUMB.

THE TWO CONNECTION BOLTS THROUGH THE PRECAST CONCRETE GIRDER WEBS SHALL HAVE THEIR COMMON VERTICAL CENTERLINE PERPENDICULAR TO THE LONGITUDINAL AXES OF THE GIRDERS.

MATERIAL AND CONNECTION HARDWARE NOTES:

1. ALL STEEL PLATES, RODS, ETC. SHALL BE ASTM A36 STEEL.
2. ALL BOLTS, NUTS, AND WASHERS SHALL BE ASTM A325 WITH THREADS EXCLUDED FROM SHEAR PLANE.
3. NUTS SHALL BE SELF-LOCKING OR A HEX NUT WITH JAM NUT.
4. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153 CLASS C.
5. ALL CHEVIS, BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.
6. GALVANIZED CLEVIS AND NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENT ANY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

WISCONSIN
LEE L. PAULUS
E-33251
MILWAUKEE
PROFESSIONAL ENGINEER
11/6/2014

FIGURE 2
SUPPORT HANGER FOR
12" GAS MAIN - SPAN 1

STRUCTURE B-40-171
MILWAUKEE, WI
MILWAUKEE COUNTY, WI

we energies

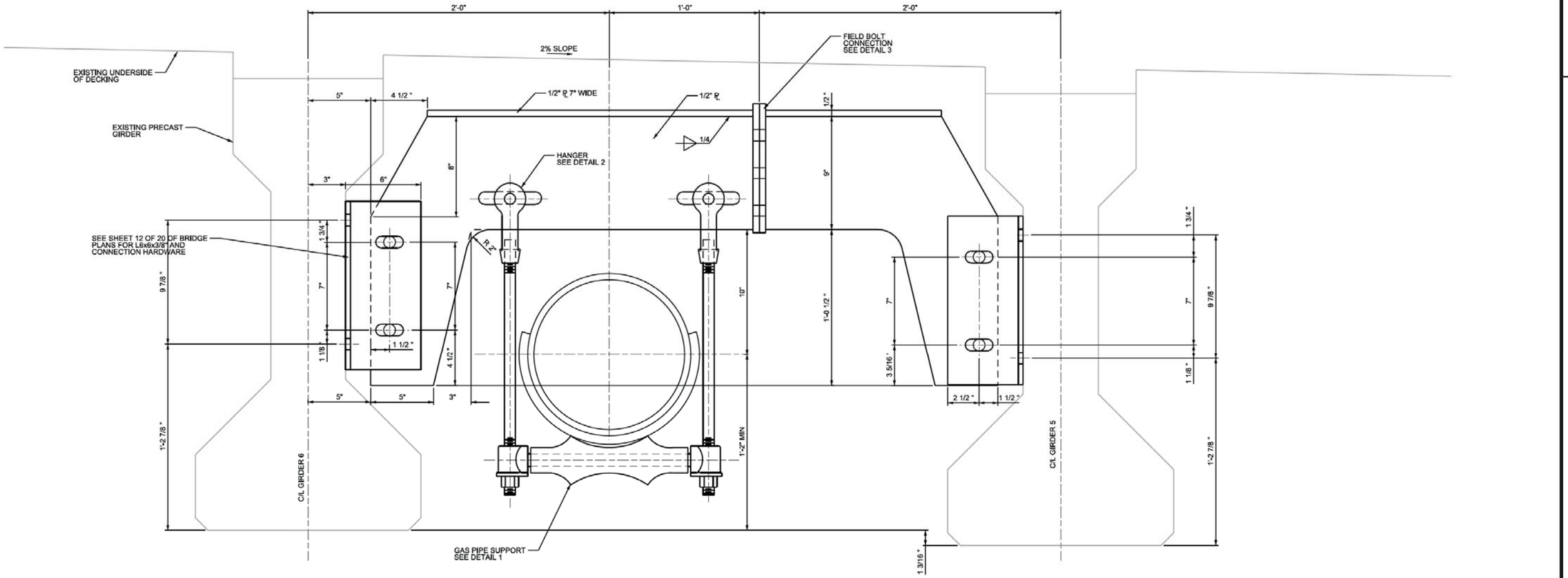
PROJECT NUMBER:	2012009.02
DATE:	01-06-14
PROJECT MGR:	LLP
DRAWN BY:	MP
FILE NAME:	Span01.dgn
SCALE:	1-1/2" = 1'-0"
REVISED:	____

OTIE
Oneida Total Integrated Enterprises

FILE P:2012 PROJECTS\2012109.sp\work\Span01.dgn
DATE: 01/06/14

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 51 E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\021031_cd.dgn PLOT DATE : 1/31/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 200.0000 sf / in.



SPANS 2 & 3
LOOKING WEST

DESIGN CRITERIA:

THE PIPE CENTERLINE IS DESIGNED TO BE PARALLEL TO THE ROADWAY SURFACE AND PARALLEL TO THE LONGITUDINAL AXIS OF THE PRECAST CONCRETE GIRDERS.

THE PIPE SUPPORT FRAMES "T"STEMS AND HANGERS ARE DESIGNED TO BE VERTICALLY PLUMB.

THE TWO CONNECTION BOLTS THROUGH THE PRECAST CONCRETE GIRDER WEBS SHALL HAVE THEIR COMMON VERTICAL CENTERLINE PERPENDICULAR TO THE LONGITUDINAL AXES OF THE GIRDERS.

MATERIAL AND CONNECTION HARDWARE NOTES:

1. ALL STEEL PLATES, RODS, ETC. SHALL BE ASTM A36 STEEL.
2. ALL BOLTS, NUTS, AND WASHERS SHALL BE ASTM A325 WITH THREADS EXCLUDED FROM SHEAR PLANE.
3. NUTS SHALL BE SELF-LOCKING OR A HEX NUT WITH JAM NUT.
4. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153 CLASS C.
5. ALL CHEVIS, BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.
6. GALVANIZED CLEVIS AND NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENT ANY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

WISCONSIN
LEE L. PAULUS
E-13351
MILWAUKEE
PROFESSIONAL ENGINEER
11/6/2014

FIGURE 3
SUPPORT HANGER FOR
12" GAS MAIN - SPANS 2 & 3

we energies

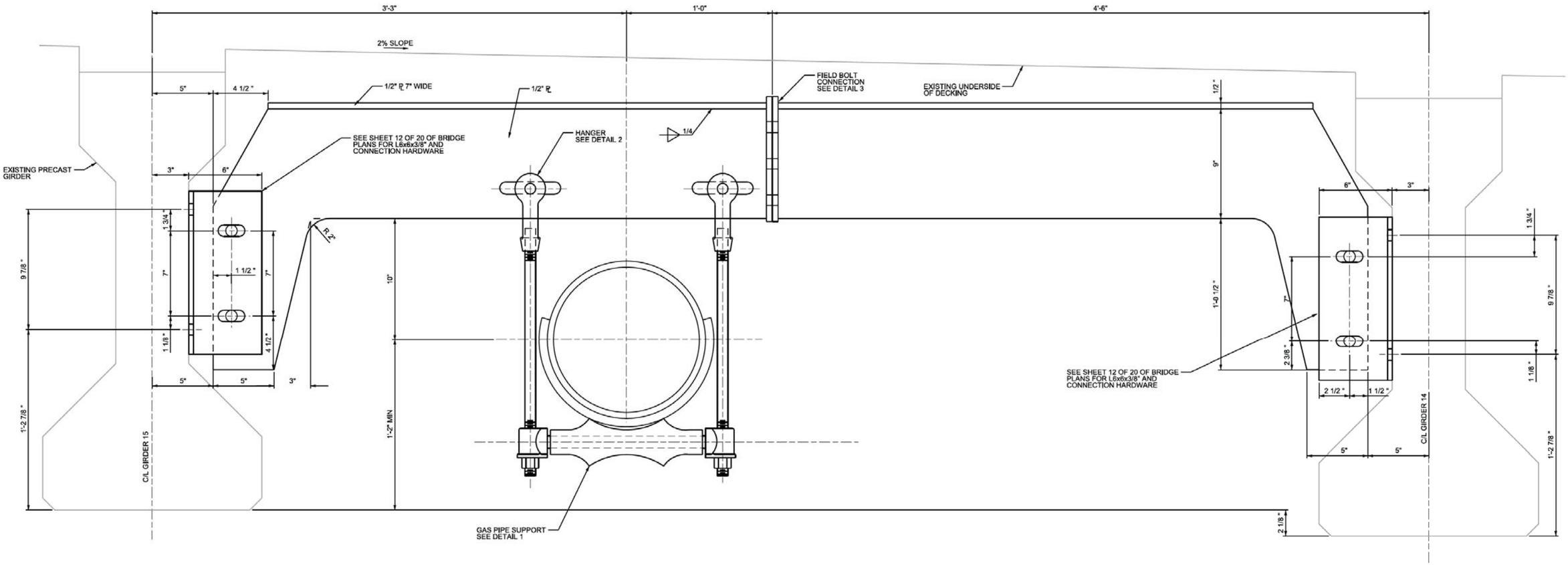
STRUCTURE B-40-171
MILWAUKEE, WI
MILWAUKEE COUNTY, WI

PROJECT NUMBER:	2012009.02
DATE:	01-06-14
PROJECT MGR:	LLP
DRAWN BY:	MP
FILE NAME:	Span02.dgn
SCALE:	1-1/2" = 1'-0"
REVISED:	____

OTIE
Oneida Total Integrated Enterprises

FILE P:\2012 PROJECTS\2012009.02\work\Span02.dgn
DATE: 01/06/14

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 52	E



SPAN 4
LOOKING WEST

DESIGN CRITERIA:

THE PIPE CENTERLINE IS DESIGNED TO BE PARALLEL TO THE ROADWAY SURFACE AND PARALLEL TO THE LONGITUDINAL AXIS OF THE PRECAST CONCRETE GIRDERS.

THE PIPE SUPPORT FRAMES "T"STEMS AND HANGERS ARE DESIGNED TO BE VERTICALLY PLUMB.

THE TWO CONNECTION BOLTS THROUGH THE PRECAST CONCRETE GIRDER WEBS SHALL HAVE THEIR COMMON VERTICAL CENTERLINE PERPENDICULAR TO THE LONGITUDINAL AXES OF THE GIRDERS.

MATERIAL AND CONNECTION HARDWARE NOTES:

1. ALL STEEL PLATES, RODS, ETC. SHALL BE ASTM A36 STEEL.
2. ALL BOLTS, NUTS, AND WASHERS SHALL BE ASTM A325 WITH THREADS EXCLUDED FROM SHEAR PLANE.
3. NUTS SHALL BE SELF-LOCKING OR A HEX NUT WITH JAM NUT.
4. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153 CLASS C.
5. ALL CHEVIS, BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.
6. GALVANIZED CLEVIS AND NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENT ANY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

WISCONSIN LEE L. PAULUS E-13351 MILWAUKEE PROFESSIONAL ENGINEER
1/6/2014

FIGURE 4
SUPPORT HANGER FOR
12" GAS MAIN - SPAN 4

STRUCTURE B-40-171
MILWAUKEE, WI
MILWAUKEE COUNTY, WI

we energies

PROJECT NUMBER:	2012009.02
DATE:	01-06-14
PROJECT MGR:	LLP
DRAWN BY:	MP
FILE NAME:	Span04.dgn
SCALE:	1-1/2" = 1'-0"
REVISED:	____

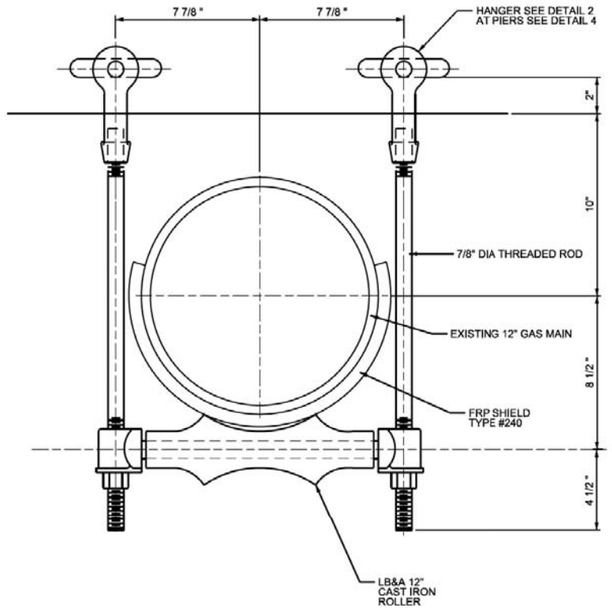
OTIE
Oneida Total Integrated Enterprises

FILE P:\2012 PROJECTS\2012009.02\work\Span04.dgn
DATE: 01/06/14

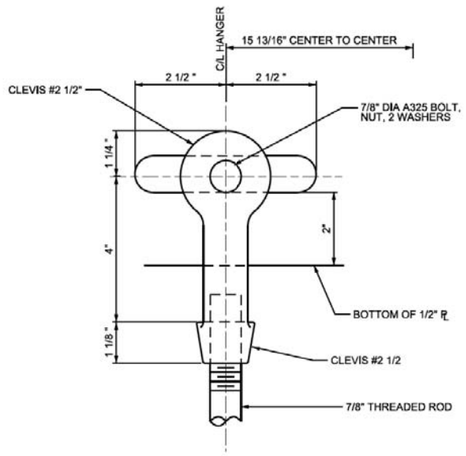
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 53	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\021033_cd.dgn PLOT DATE : 1/31/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 200.0000 sf / in.

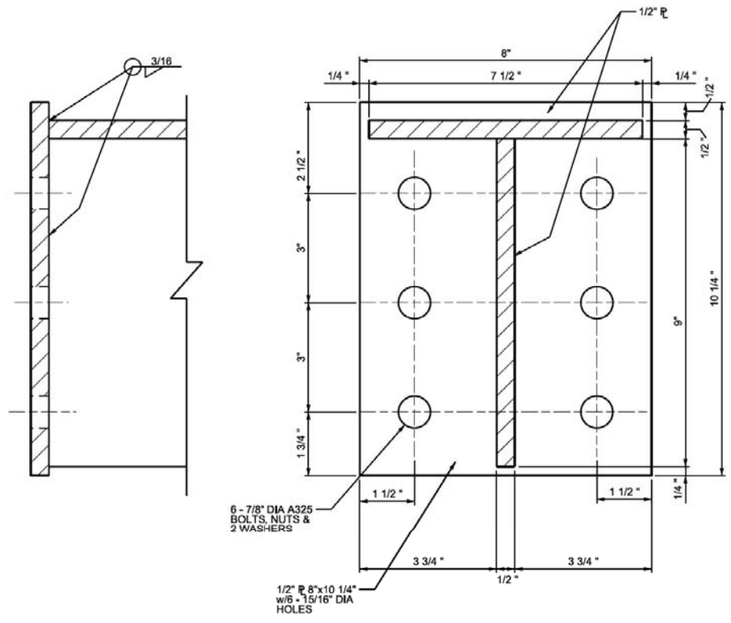
WISDOT/CADDS SHEET 42



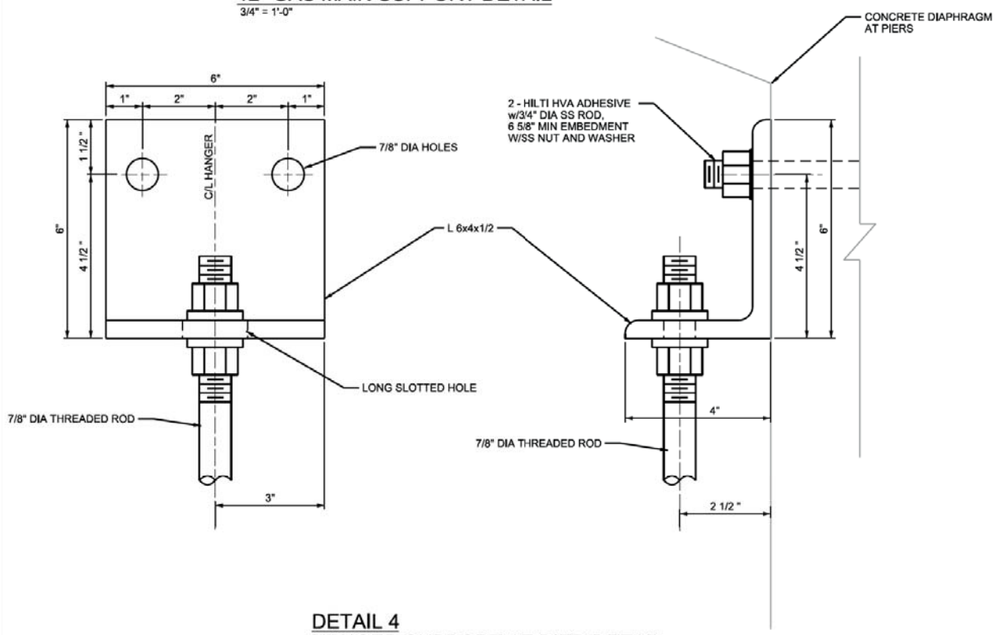
DETAIL 1
12" GAS MAIN SUPPORT DETAIL
3/4" = 1'-0"



DETAIL 2
HANGER DETAIL
1 1/2" = 1'-0"



DETAIL 3
FIELD BOLT CONNECTION DETAIL
1 1/2" = 1'-0"



DETAIL 4
HANGER SUPPORT AT PIER DETAIL
1 1/2" = 1'-0"

DESIGN CRITERIA:

THE PIPE CENTERLINE IS DESIGNED TO BE PARALLEL TO THE ROADWAY SURFACE AND PARALLEL TO THE LONGITUDINAL AXIS OF THE PRECAST CONCRETE GIRDERS.

THE PIPE SUPPORT FRAMES "T"STEMS AND HANGERS ARE DESIGNED TO BE VERTICALLY PLUMB.

THE TWO CONNECTION BOLTS THROUGH THE PRECAST CONCRETE GIRDER WEBS SHALL HAVE THEIR COMMON VERTICAL CENTERLINE PERPENDICULAR TO THE LONGITUDINAL AXES OF THE GIRDERS.

MATERIAL AND CONNECTION HARDWARE NOTES:

1. ALL STEEL PLATES, RODS, ETC. SHALL BE ASTM A36 STEEL.
2. ALL BOLTS, NUTS, AND WASHERS SHALL BE ASTM A325 WITH THREADS EXCLUDED FROM SHEAR PLANE.
3. NUTS SHALL BE SELF-LOCKING OR A HEX NUT WITH JAM NUT.
4. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153 CLASS C.
5. ALL CHEVIS, BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.
6. GALVANIZED CLEVIS AND NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENT ANY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

FIGURE 5
SUPPORT HANGER FOR
12" GAS MAIN - DETAILS

STRUCTURE B-40-171
MILWAUKEE, WI
MILWAUKEE COUNTY, WI

we energies

PROJECT NUMBER:	2012009.02
DATE:	01-06-14
PROJECT MGR:	LLP
DRAWN BY:	MP
FILE NAME:	DETAIL1.dgn
SCALE:	1-1/2" = 1'-0"
REVISED:	_____

OTIE
Oneida Total Integrated Enterprises

ELE-P-2012 PROJECTS\2012009.02\Layout\Engr\Detail1.dgn
DATE: 01/06/14

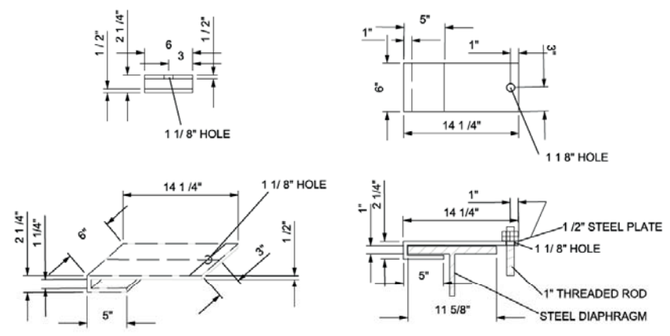
we energies

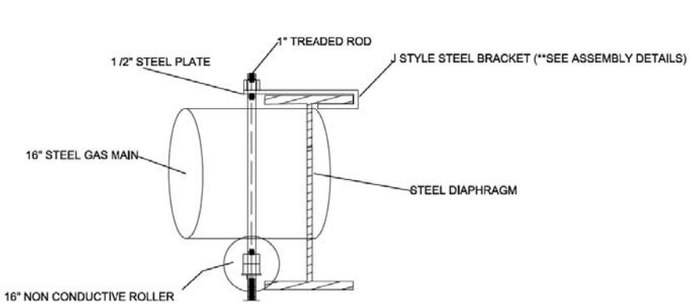
ELEC WR

GAS WR 3568344

ASSEMBLY OF STEEL BRACKET DETAILS

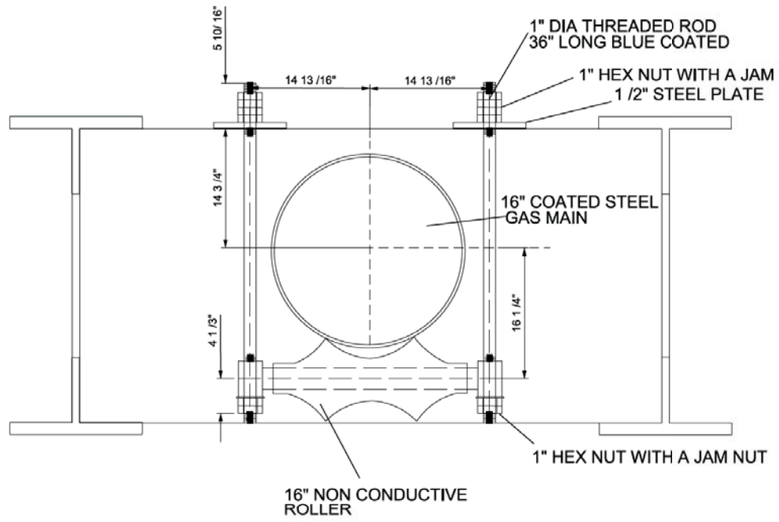
SCALE 1 1 /2" = 1'-0"





DETAIL 2
16" GAS MAIN SUPPORT DETAIL
END VIEW

SCALE 1 1 /2" = 1'-0"



DETAIL 1
16" GAS MAIN SUPPORT DETAIL
FRONT VIEW

SCALE 3/ 4" = 1'-0"

DESIGN CRITERIA:

THE PIPE CENTERLINE IS DESIGNED TO BE PARRALLEL TO THE ROADWAY SURFACE AND PARRALLELTO THE LONGITUDINAL AXIS OF THE STEEL GIRDERS.

MATERIAL AND CONNECTION HARDWARE NOTES:

1. ALL STEEL BRACKETS SHALL BE ASTM A36 STEEL
2. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 WITH THREADS EXCLUDED FROM SHEAR PLANE.
3. NUTS SHALL BE SELF LOCKING OR A HEX NUT WITH A JAM NUT.
4. ALL STEEL SHALL BE BLUE COATED AFTER FABRICATION.

NORTH

1/14/2014 8:04:05 AM C:\Users\W47726\Desktop\Lincoln bridge steel bracket.dgn

SHEET NO. 1 OF 1

PROJECT NO:1228-25-70	HWY:IH 43	COUNTY:MILWAUKEE	CONSTRUCTION DETAIL	SHEET 55	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\021035_cd.dgn PLOT DATE : 1/31/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 200.0000 sf / in.

WISDOT/CADDS SHEET 42

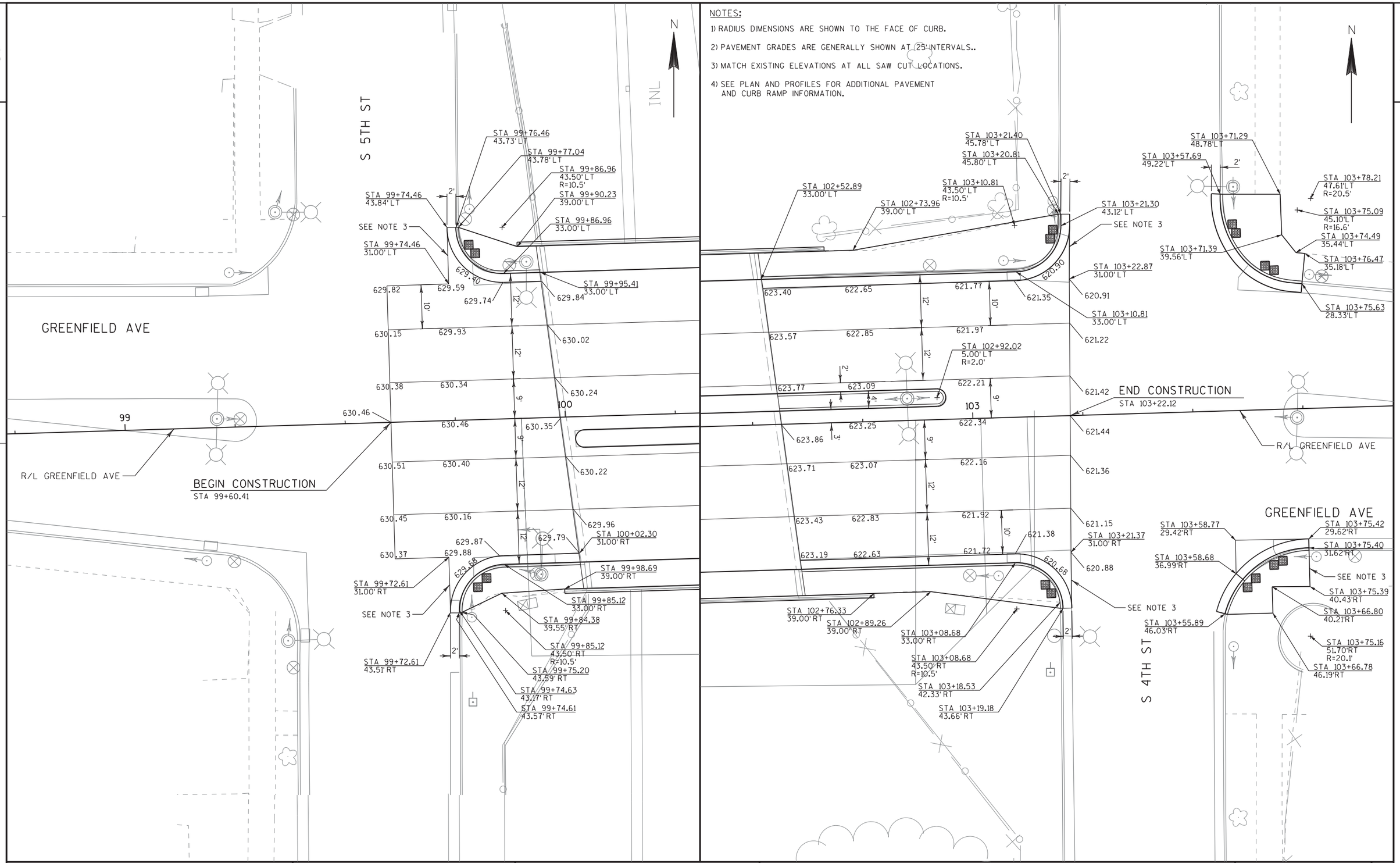
NOTES:

1) RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.

2) PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS..

3) MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

4) SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.


N
S 5TH ST
INL
GREENFIELD AVE
99
100
103
R/L GREENFIELD AVE
BEGIN CONSTRUCTION
STA 99+60.41
END CONSTRUCTION
STA 103+22.12
R/L GREENFIELD AVE
S 4TH ST
GREENFIELD AVE
STA 99+76.46 43.73'LT
STA 99+77.04 43.78'LT
STA 99+86.96 43.50'LT R=10.5'
STA 99+90.23 39.00'LT
STA 99+86.96 33.00'LT
STA 99+74.46 43.84'LT
SEE NOTE 3
STA 99+74.46 31.00'LT
STA 99+95.41 33.00'LT
STA 100+02.30 31.00'RT
STA 99+98.69 39.00'RT
STA 99+72.61 31.00'RT
STA 99+85.12 33.00'RT
STA 99+84.38 39.55'RT
STA 99+85.12 43.50'RT R=10.5'
STA 99+75.20 43.59'RT
STA 99+74.63 43.17'RT
STA 99+74.61 43.57'RT
STA 99+72.61 43.51'RT
STA 103+21.40 45.78'LT
STA 103+20.81 45.80'LT
STA 103+10.81 43.50'LT R=10.5'
STA 102+52.89 33.00'LT
STA 102+73.96 39.00'LT
STA 103+21.30 43.12'LT
SEE NOTE 3
STA 103+22.87 31.00'LT
STA 103+10.81 33.00'LT
STA 102+92.02 5.00'LT R=2.0'
STA 103+71.29 48.78'LT
STA 103+57.69 49.22'LT
STA 103+78.21 47.61'LT R=20.5'
STA 103+75.09 45.10'LT R=16.6'
STA 103+74.49 35.44'LT
STA 103+71.39 39.56'LT
STA 103+76.47 35.18'LT
STA 103+75.63 28.33'LT
STA 103+21.37 31.00'RT
STA 103+58.77 29.42'RT
STA 103+75.42 29.62'RT
STA 103+75.40 31.62'RT
STA 103+58.68 36.99'RT
SEE NOTE 3
STA 103+75.39 40.43'RT
STA 103+66.80 40.21'RT
STA 103+55.89 46.03'RT
STA 103+75.16 51.70'RT R=20.1'
STA 103+66.78 46.19'RT
STA 102+76.33 39.00'RT
STA 102+89.26 39.00'RT
STA 103+08.68 33.00'RT
STA 103+08.68 43.50'RT R=10.5'
STA 103+18.53 42.33'RT
STA 103+19.18 43.66'RT
629.82
629.59
629.74
629.84
629.40
630.15
629.93
630.02
630.38
630.34
630.24
630.46
630.46
630.35
630.51
630.40
630.22
630.45
630.16
629.96
629.87
629.88
629.79
630.37
629.68
623.40
622.65
621.77
621.35
620.90
620.91
623.57
622.85
621.97
621.22
623.77
623.09
622.21
621.42
623.86
623.25
622.34
621.44
623.71
623.07
622.16
621.36
623.43
622.83
621.92
621.38
621.15
623.19
622.63
621.72
620.68
620.88
621.30
621.39
621.29
621.21
621.20
621.19
621.18
621.17
621.16
621.15
621.14
621.13
621.12
621.11
621.10
621.09
621.08
621.07
621.06
621.05
621.04
621.03
621.02
621.01
621.00
620.99
620.98
620.97
620.96
620.95
620.94
620.93
620.92
620.91
620.90
620.89
620.88
620.87
620.86
620.85
620.84
620.83
620.82

2

N

STA 199+86.52
71.98' LT

STA 199+90.46
71.32' LT

STA 199+81.67
43.29' LT

SEE NOTE 3

STA 199+89.56
41.96' LT
R=8'

STA 199+79.70
43.63' LT

STA 199+88.39
38.50' LT
R=5'

STA 199+77.65
31.50' LT

STA 199+99.11
44.33' LT

STA 199+98.86
40.41' LT

3' 5' 11' 12' 11'

639.03 638.08 637.40

STA 199+83.14
37.18' LT

637.78

STA 199+84.38
35.51' LT

STA 199+98.94
33.50' LT

STA 199+88.39
33.50' LT

639.11 638.38 637.68

LAPHAM ST

R/L LAPHAM ST

199

639.21 638.58 637.92 200

638.65 638.03

639.19 638.57 637.92

BEGIN CONSTRUCTION
STA 199+53.52

12' 11' 12'

639.12 638.38 637.68

3' 5' 11'

STA 199+98.94
33.50' RT

639.00 638.18 637.40

638.12

STA 199+72.15
31.50' RT

STA 199+99.10
40.50' RT

STA 199+99.16
43.93' RT

STA 199+72.92
44.78' RT

STA 199+84.49
34.10' RT

SEE NOTE 3

STA 199+84.90
44.09' RT
R=10'

STA 199+74.92
44.67' RT

S 5TH ST

2'

STA 199+80.35
75.00' RT

STA 199+76.69
75.21' RT

N

STA 202+61.60
45.77' LT

STA 202+62.18
45.73' LT

STA 202+61.86
41.18' LT

STA 202+53.88
41.76' LT
R=8'

STA 202+47.06
45.09' LT

STA 202+53.95
33.76' LT

STA 202+66.17
45.44' LT

STA 202+42.00
40.91' LT

STA 202+30.13
39.50' LT

SEE NOTE 3

STA 202+65.17
31.50' LT

625.63 624.82 624.13 623.95 623.74

STA 202+25.78
33.50' LT

5' 11' 3'

625.91 625.10 624.25 624.04

12' 11'

626.15 625.34 624.50 624.17 624.23

202 203

626.26 625.45

626.15 625.39 624.63 624.30

12' 11' 3'

625.91 625.27 624.68 624.40

STA 202+25.78
33.50' RT

625.63 625.12 624.73 624.51

5'

625.02

STA 202+48.55
31.50' RT

STA 202+29.96
39.50' RT

2'

SEE NOTE 3

STA 202+34.11
33.65' RT

STA 202+33.94
43.64' RT
R=10'

STA 202+43.93
44.13' RT

STA 202+43.31
44.83' RT

STA 202+43.89
44.86' RT

S 4TH ST

R/L LAPHAM ST

END CONSTRUCTION
STA 202+86.31

LAPHAM ST

NOTES:

1) RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.
2) PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS..
3) MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.
4) SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - LAPHAM STREET	SHEET 57	E

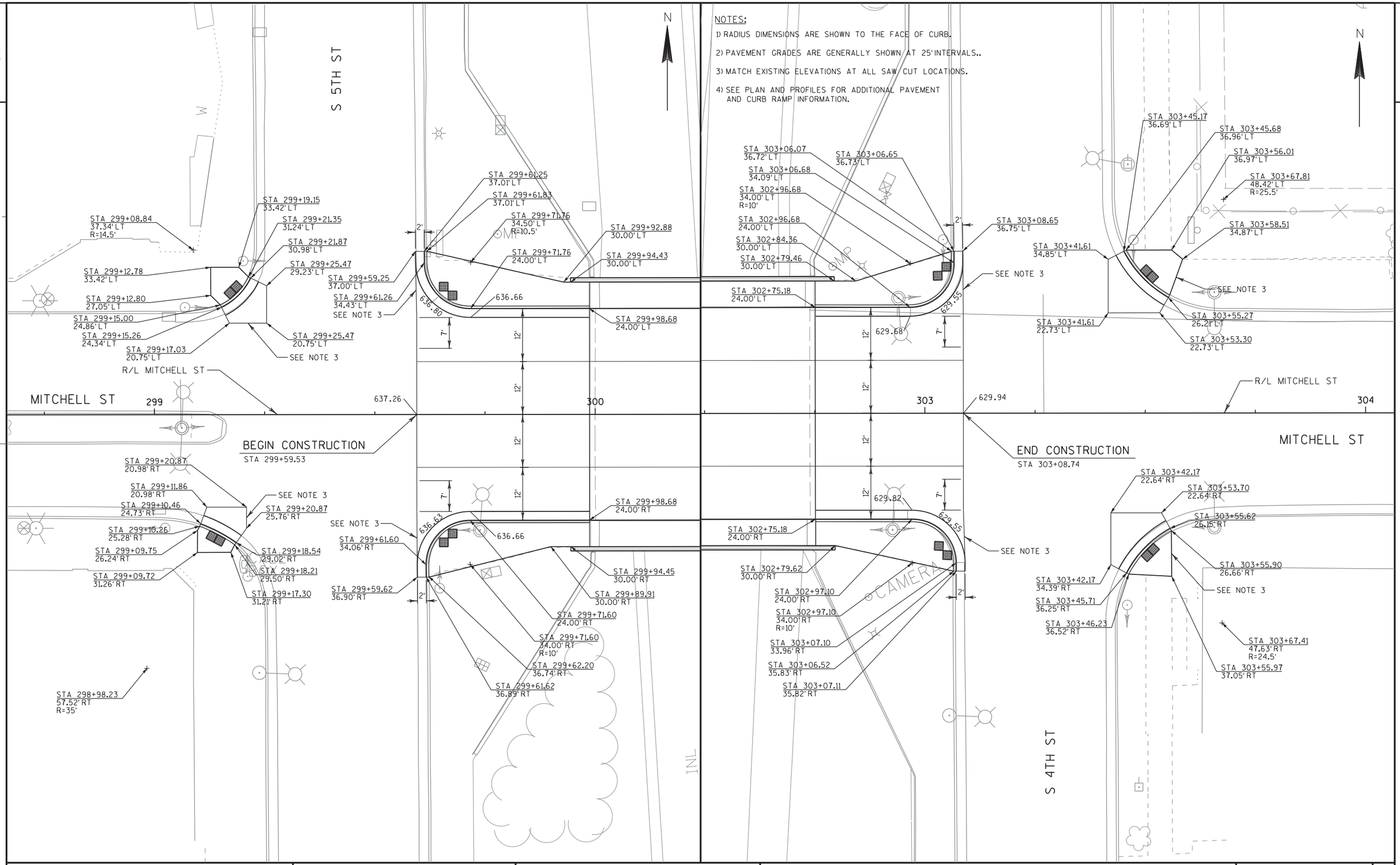
NOTES:

1) RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.

2) PAVEMENT GRADES ARE GENERALLY SHOWN AT 25'INTERVALS..

3) MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

4) SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - MITCHELL STREET	SHEET 58	E

NOTES:

1) RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.

2) PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS..

3) MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

4) SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.

S 5TH ST

S 4TH ST

MAPLE ST

R/L MAPLE ST

BEGIN CONSTRUCTION
STA 399+59.75

END CONSTRUCTION
STA 403+85.00

399

400

403

404

STA 399+41.03
38.89'LT

STA 399+32.00
38.89'LT

STA 399+18.44
49.41'LT
R=25.5'

STA 399+36.41
32.15'LT

STA 399+31.99
34.26'LT

STA 399+28.60
31.31'LT

STA 399+25.93
31.31'LT

STA 399+36.82
31.73'LT

STA 399+39.63
28.89'LT

SEE NOTE 3

STA 399+29.38
26.38'LT

STA 399+31.18
22.81'LT

STA 399+39.63
22.81'LT

STA 399+77.94
36.41'LT

SEE NOTE 3

STA 399+78.05
22.00'LT

631.02

630.71

12'

STA 399+79.94
36.43'LT

STA 399+80.52
36.43'LT

STA 399+79.95
34.42'LT

STA 399+84.88
32.32'LT

STA 399+90.45
34.50'LT
R=10.5'

STA 399+87.90
30.80'LT

STA 399+94.48
30.00'LT

STA 399+90.45
24.00'LT

STA 399+98.97
24.00'LT

STA 399+33.94
24.50'RT

STA 399+44.46
24.50'RT

STA 399+31.89
27.94'RT

STA 399+31.59
28.44'RT

STA 399+25.82
25.92'RT

STA 399+25.04
29.77'RT

STA 399+23.08
29.37'RT

STA 399+22.43
32.59'RT

STA 399+27.77
35.09'RT

STA 399+33.32
37.70'RT

SEE NOTE 3

STA 399+19.04
49.38'RT
R=25'

STA 399+40.44
37.63'RT

STA 399+40.95
37.35'RT

STA 399+44.46
35.42'RT

630.76

630.69

15'

STA 399+98.97
24.00'RT

STA 399+91.81
24.09'RT

STA 399+94.56
30.00'RT

STA 399+91.96
36.09'RT
R=12'

STA 399+79.96
36.09'RT

STA 399+80.54
37.00'RT

STA 399+79.96
37.00'RT

STA 403+24.77
41.00'LT

STA 403+24.77
36.00'LT

STA 403+24.16
35.90'LT

STA 403+12.77
36.00'LT
R=12'

STA 403+12.77
24.00'LT

STA 403+04.04
30.00'LT

STA 403+59.87
41.00'LT

STA 403+26.77
41.00'LT

623.12

622.16

622.63

STA 402+99.97
24.00'LT

STA 403+61.80
41.59'LT

STA 403+64.72
36.27'LT

STA 403+68.87
40.08'LT

STA 403+68.88
38.90'LT

STA 403+84.57
48.09'LT
R=23.7'

STA 403+74.25
40.13'LT

STA 403+74.44
35.13'LT

STA 403+75.01
34.81'LT

STA 403+74.98
29.50'LT

STA 403+73.94
27.58'LT

622.72

622.31

622.16

STA 403+85.29
24.03'LT

STA 403+81.09
24.67'LT

621.46

STA 402+99.97
24.00'RT

STA 402+99.97
30.00'RT

STA 403+04.31
30.00'RT

STA 403+14.75
24.00'RT

STA 403+14.75
34.00'RT
R=10'

STA 403+24.75
33.98'RT

STA 403+24.17
35.85'RT

STA 403+24.78
51.00'RT

621.07

620.11

STA 403+26.78
51.00

619.19

STA 403+85.11
24.02'RT

STA 403+84.01
24.67'RT

620.35

620.08

STA 403+77.53
24.45'RT

619.58

SEE NOTE 3

619.68

618.61

618.88

STA 403+58.55
51.00'RT

STA 403+84.13
26.66'RT

STA 403+86.12
26.55'RT

STA 403+86.37
30.97'RT

STA 403+74.80
33.65'RT

STA 403+74.69
39.22'RT

STA 403+78.55
42.46'RT
R=18'

STA 403+69.09
37.42'RT

STA 403+69.10
39.26'RT

STA 403+61.88
37.42'RT

STA 403+60.55
42.46'RT

STA 403+60.55
51.00'RT

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - MAPLE STREET	SHEET 59	E

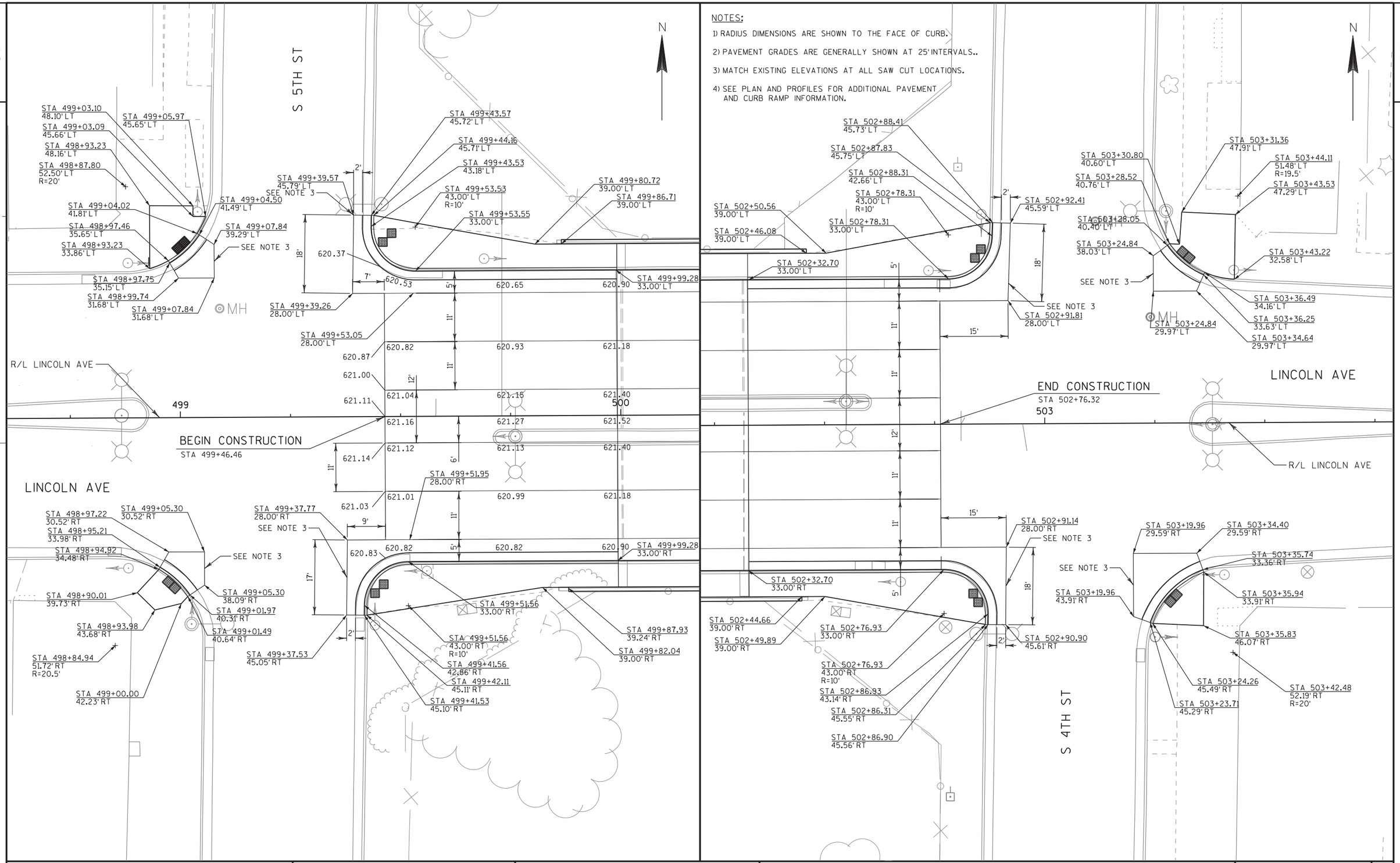
NOTES:

1) RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.

2) PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS..

3) MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

4) SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - LINCOLN AVENUE	SHEET 60	E

NOTES:

1) RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.

2) PAVEMENT GRADES ARE GENERALLY SHOWN AT 25'INTERVALS..

3) MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

4) SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.

N

IH 43 SB

STA 598+33.32
42.86'LT

STA 598+39.17
28.67'LT

STA 598+44.70
37.00'LT
R=10'

STA 598+46.13
33.93'LT

STA 598+44.70
27.00'LT

STA 598+52.76
33.00'LT

STA 598+82.49
33.00'LT

STA 598+28.89
36.18'LT

STA 598+28.57
35.70'LT

STA 599+41.51
33.00'LT

STA 599+51.85
27.00'LT

630.60

12'

629.73 630.22 630.56

629.67 629.79 630.28 630.62

5'

11'

SEE NOTE 3

63'

STA 598+27.47
22.00'LT

630.10 630.50 630.84 631.04 631.07

630.02

11'

BEGIN CONSTRUCTION
STA 598+90.63

598 599 600

630.17 630.32 630.72 631.06 631.26 631.44

11'

R/L CHASE AVE

630.19 630.51 630.78 630.93

630.15

15'

631.37

11'

STA 600+09.90
27.58'RT

STA 600+09.87
25.00'RT

STA 600+44.19
27.00'RT

CHASE AVE

630.04

STA 599+56.00
26.00'RT

631.30

630.23 630.40 630.49

629.99

5'

STA 599+49.29
32.34'RT

STA 599+57.22
32.55'RT

STA 600+16.49
33.00'RT

STA 600+54.45
33.00'RT

STA 599+49.29
40.81'RT

STA 599+54.16
41.01'RT

STA 599+81.94
43.59'RT

STA 600+09.87
27.00'RT

STA 599+86.87
47.01'RT

STA 600+09.87
33.00'RT

STA 600+14.07
65.88'RT
R=39.1'

S 5TH ST

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - CHASE AVENUE WEST END	SHEET 61	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\021206_PD.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 42

NOTES:

1) RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.

2) PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS..

3) MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

4) SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.

S 4TH ST

CHASE AVE

IH 43 NB

STA 602+70.83 33.00' LT

STA 602+81.09 27.00' LT

STA 603+11.85 35.27' LT

STA 603+12.88 40.45' LT R=23.4'

STA 603+17.81 39.51' LT

STA 603+18.39 27.00' LT

STA 603+22.15 29.63' LT

STA 603+22.43 30.41' LT

STA 603+02.49 33.00' LT

STA 603+23.90 40.37' LT

STA 603+18.39 31.00' LT R=4'

STA 603+24.48 40.38' LT

STA 603+46.71 30.60' LT

STA 603+46.48 40.50' LT

STA 603+47.06 40.52' LT

STA 603+57.31 41.02' LT

STA 603+57.27 36.42' LT

STA 603+73.43 27.00' RT

STA 603+83.47 33.00' RT

STA 604+00.77 43.34' LT

STA 604+01.44 37.37' LT

STA 604+20.87 38.98' LT

STA 604+21.09 22.00' RT

STA 604+65.97 27.00' RT

STA 604+69.79 33.00' RT

STA 604+93.76 22.00' RT

STA 604+93.83 23.74' RT

STA 604+93.92 25.74' RT

STA 604+94.18 31.31' RT

END CONSTRUCTION STA 604+21.09

R/L CHASE AVE

SEE NOTE 3

18'

2'

15'

11'

5'

603

604

605

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - CHASE AVENUE EAST END	SHEET 62	E

NOTES:

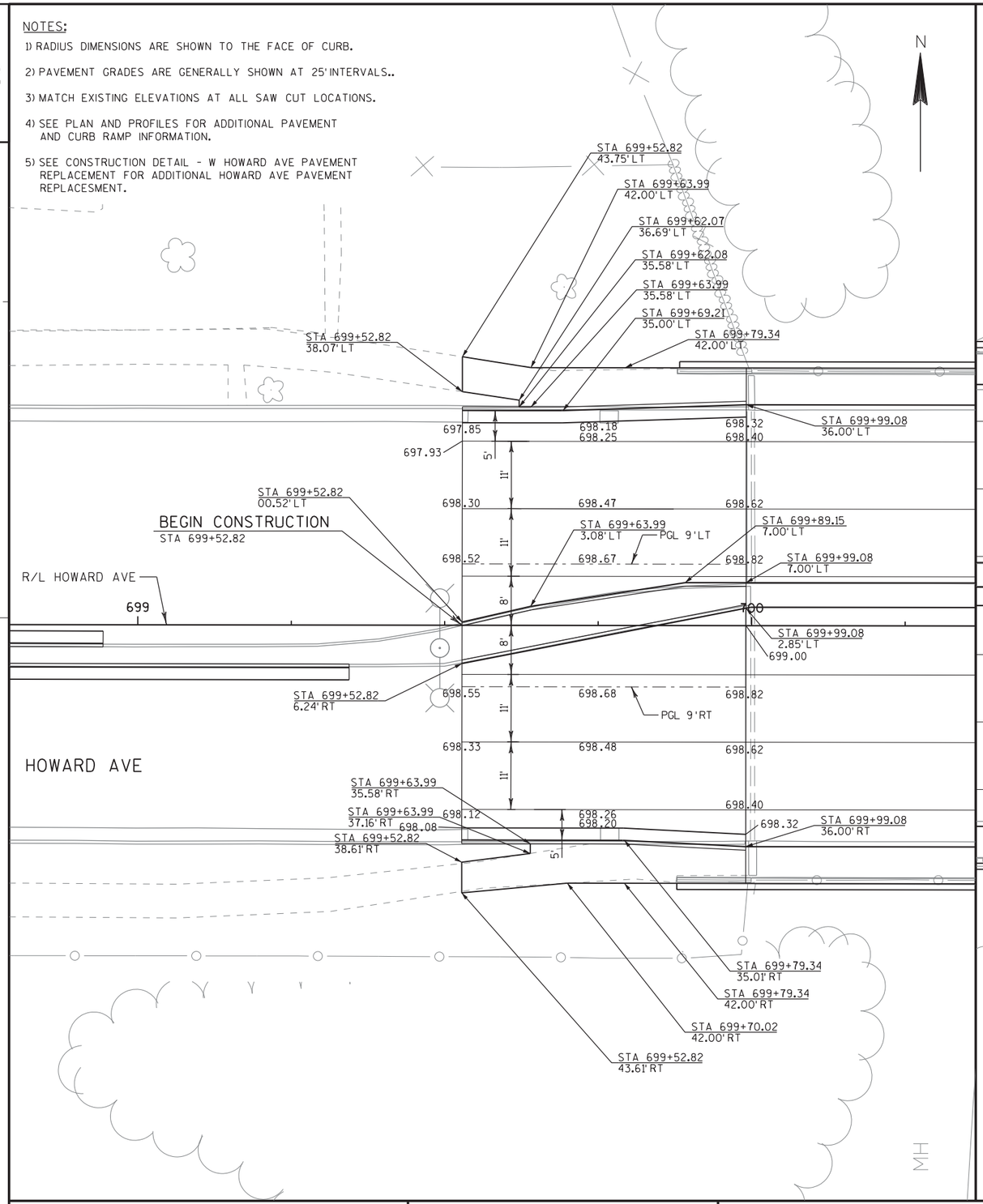
1) RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.

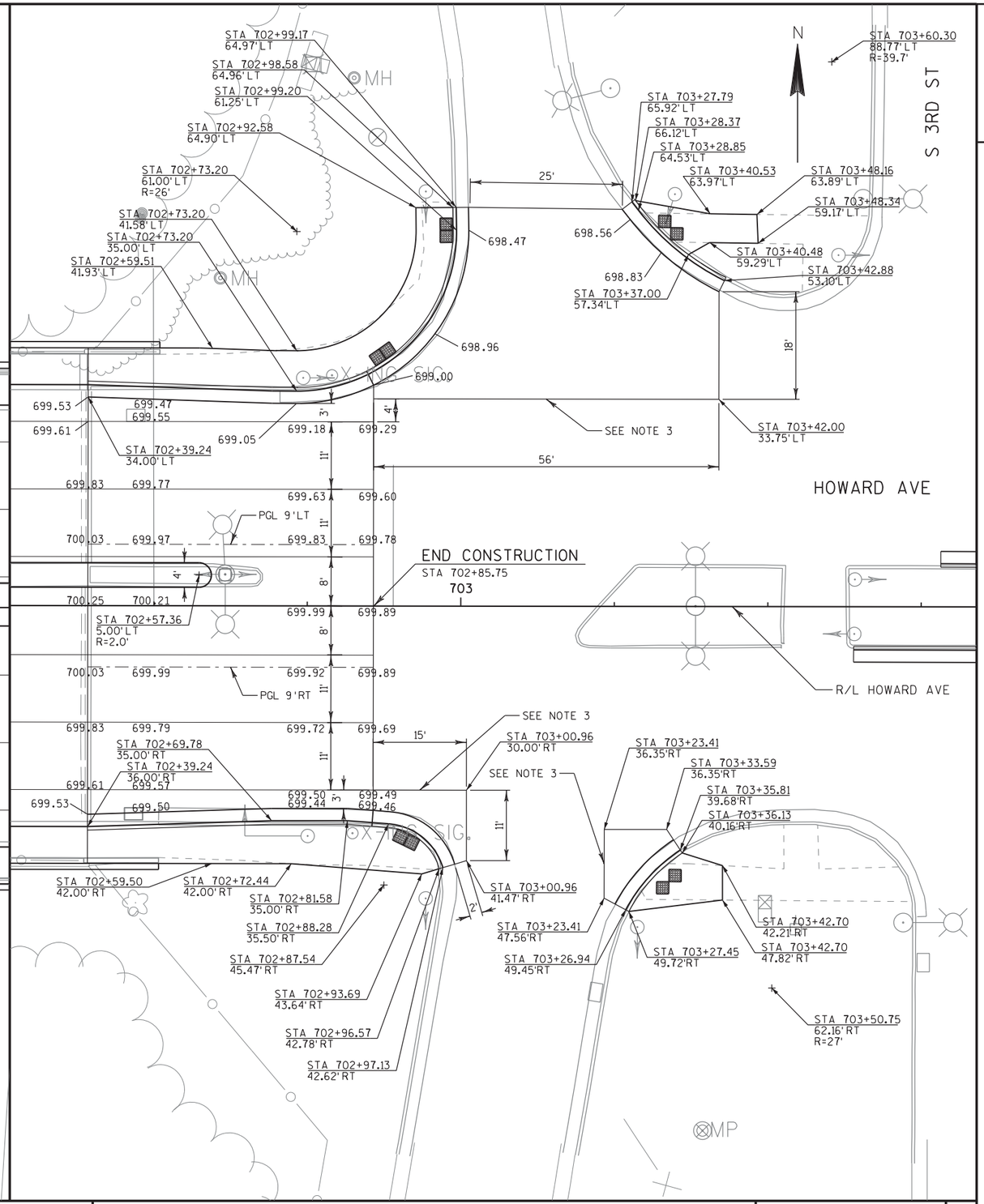
2) PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS..

3) MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

4) SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.

5) SEE CONSTRUCTION DETAIL - W HOWARD AVE PAVEMENT REPLACEMENT FOR ADDITIONAL HOWARD AVE PAVEMENT REPLACESMENT.





PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - HOWARD AVENUE	SHEET 63	E

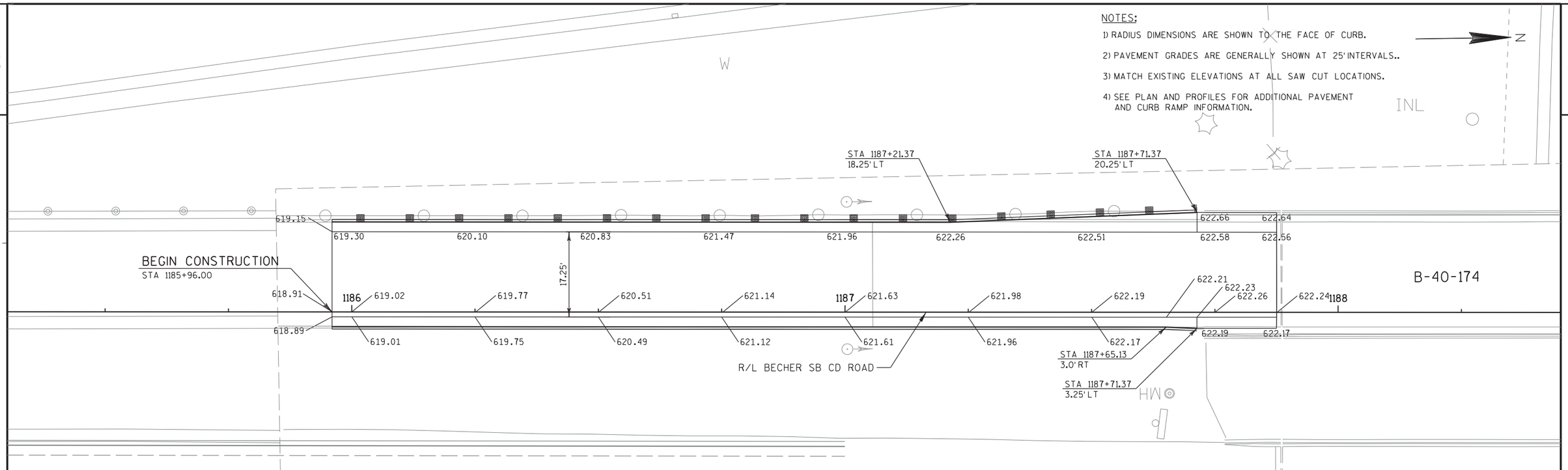
NOTES:

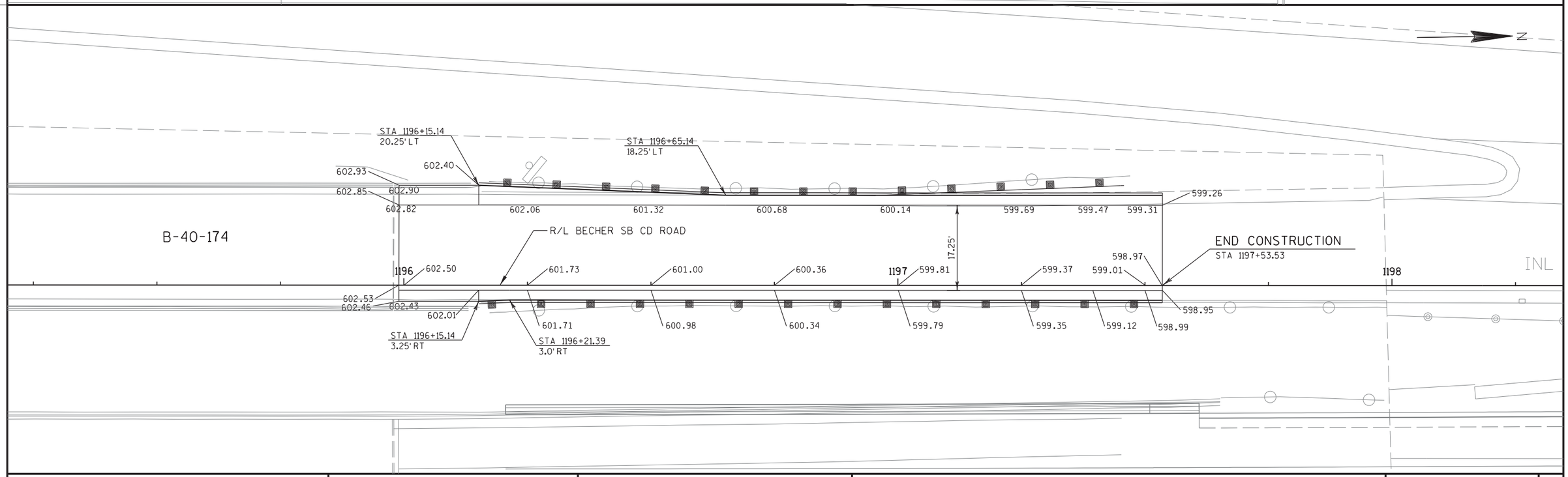
1) RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.

2) PAVEMENT GRADES ARE GENERALLY SHOWN AT 25'INTERVALS..

3) MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

4) SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.





PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - SB CD ROAD AT BECHER STREET	SHEET 64	E

NOTES:

1) RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.

2) PAVEMENT GRADES ARE GENERALLY SHOWN AT 25'INTERVALS..

3) MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

4) SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT AND CURB RAMP INFORMATION.

N

BEGIN CONSTRUCTION
STA 1186+97.00

STA 1187+40.18
2.0' LT

STA 1187+71.43
3.25' LT

R/L BECHER NB CD ROAD

1186 1187 1188 1189

614.81 614.85 615.08 615.16 615.19 615.18 615.13 615.19 615.24

17'

614.45 614.49 614.74 614.82 614.85 614.84 614.79 614.77 614.72

STA 1187+40.18
19.0' RT

STA 1187+71.43
20.25' RT

B-40-177

B-40-176

STA 1198+80.36
3.25' LT

STA 1199+47.28
2.25' LT

END CONSTRUCTION
STA 1199+47.28

1198 1199 1200

602.94 602.77 602.64 602.31 601.89 601.52

602.88 602.70 602.29 601.88 601.51

R/L BECHER NB CD ROAD

17'

15.25'

602.54 602.36 602.32 601.99 601.58 601.28

602.48 602.30 602.28 601.89 601.48 601.20

STA 1199+62.27
19.25' RT

STA 1199+47.28
20.25' RT

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - NB CD ROAD AT BECHER STREET	SHEET 65	E

2

N

NOTES:

1. RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.
2. PAVEMENT GRADES ARE GENERALLY SHOWN AT 25'INTERVALS.
3. MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.
4. SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT INFORMATION.

POOL

℄ HOWARD SB ENT

STA 652+26.38
18.00'LT

CONCRETE CURB & GUTTER
30-INCH TYPE A

STA 652+26.38
2.00'RT

STA 652+26.38
2.00'LT

STA 652+10.73
34.46'LT

℄ HOWARD SB EXIT

STA 653+76.07
35.00'RT

STA 653+96.28
65.94'LT

STA 653+96.28
66.00'LT
R 48.0'

STA 653+96.28
18.00'LT

STA 654+21.18
16.00'RT
R 2.0'

STA 654+20.26
17.78'RT

STA 654+21.18
14.00'RT

STA 654+26.70
0.00'RT

STA 654+26.70
4.50'LT
R 2.5'

STA 654+26.70
0.00'RT

STA 654+37.17
14.00'RT

STA 654+42.17
19.01'RT

STA 654+37.17
19.00'RT
R 5.0'

STA 654+42.16
28.86'RT

STA 654+40.16
28.86'RT
R 2.0

STA 654+38.85
30.37'RT

STA 653+76.07
103.00'RT

STA 654+44.67
103.08'RT

STA 654+44.06
111.08'RT

STA 650+35.92
18.00'LT

CONCRETE CURB & GUTTER
TRANSITION (SEE DETAIL)

CONCRETE CURB & GUTTER
4-INCH SLOPED 36-INCH TYPE A

STA 652+26.38
185.0'RT

STA 649+64.63
172.12'RT
R 148.0'

R 178'

R 96.0'

R 68.0'

16'

33'

W HOWARD AVENUE

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - W HOWARD AVENUE RAMPS	SHEET 66	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\021201_pd.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 40.0000 sf / in.

N

NOTES:

1. RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.
2. PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS.
3. MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.
4. SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT INFORMATION.

CONCRETE CURB & GUTTER
30-INCH TYPE A

CONCRETE CURB & GUTTER TRANSITION
(SEE DETAIL)

STA 648+71.28
18.00' LT

CONCRETE CURB & GUTTER
30-INCH TYPE A
(DRIVEWAY CURB CUT FOR BEAMGUARD EAT, SEE DETAIL)

R 349'
X=603,920.885
Y=275,125.487

R 187'
X=604,095.799
Y=275,683.369

STA 648+71.28
2.00' RT

℄ HOWARD SB ENT

R 349'
X=603,920.885
Y=275,125.487

CONCRETE CURB & GUTTER
4-INCH SLOPED 36-INCH TYPE A

STA 646+57.72
18.00' LT

BEGIN C&G
STA 645+80.07

STA 645+41.10
22.60' LT

STA 646+25.33
2.00' RT

SIGN

IH 43/IH 94/USH 41 SB

IH 43 ℄

IH 43/IH 94/USH 41 NB

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - W HOWARD AVENUE RAMPS	SHEET 67	E

2

N

NOTES:

1. RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.
2. PAVEMENT GRADES ARE GENERALLY SHOWN AT 25'INTERVALS.
3. MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.
4. SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT INFORMATION.

649 650 690.12 689.16 689.63 689.45 689.20 688.56 687.97 687.22 686.45 687.78 686.99 685.67 686.24 685.53 684.90 684.17 683.50 684.87 682.81 684.19 682.14 683.55 681.53 682.96 680.94 682.40 680.49 681.93 680.28 681.59 680.21 681.38 680.21 681.27 680.23 681.19 680.31 681.12 680.40 681.05 680.42 680.92 680.44 680.79 680.29 680.59 648 647 646

16' 22' R 148' R 148' R 298'

STA 649+48.24
2.00' LT

STA 649+64.63
172.12' RT

STA 647+80.02
26.35' RT

Y=275,762.27
Y=603,975.03

℄ HOWARD SB EXIT

STA 647+33.81
2.00' LT

STA 646+81.82
2.00' LT

STA 645+93.38
17.00' RT

STA 645+15.00
17.00' RT

BEGIN PROJECT
STA 653+20.00
X = 604,346.036
Y = 275,883.868

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

℄ IH 43

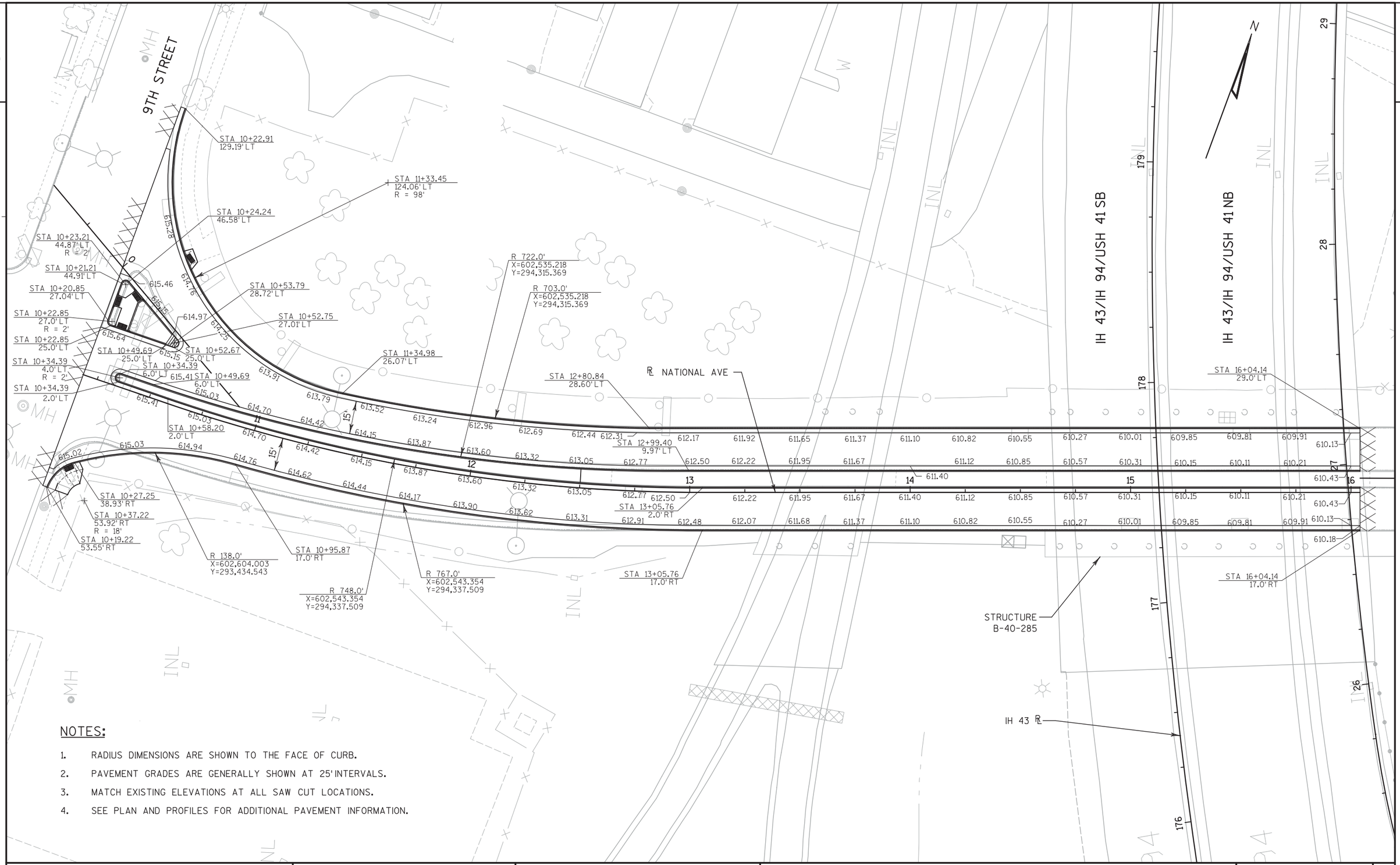
650 651 652 653 654 655

W HOWARD AVENUE

MH MH MH MH SIGN SIGN I43/94

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - W HOWARD AVENUE RAMPS	SHEET 68	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\021203_pd.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 40.0000 sf / in.



NOTES:

1. RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB.
2. PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS.
3. MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.
4. SEE PLAN AND PROFILES FOR ADDITIONAL PAVEMENT INFORMATION.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - NATIONAL AVENUE NB RAMP	SHEET 69	E

2

LEGEND

	EXISTING	PROPOSED
FTMS CONVENTIONAL SYMBOLS		
JUNCTION BOX	▬	
CCTV CAMERA AND POLE	◀▬●	
FTMS FIELD CABINET AND BASE	▷◁	
POLE MOUNTED CABINET	⊠	
METER BREAKER PEDESTAL	⊠	
24"X36" STEEL PULL BOX	⊗	◑
MANHOLE	Ⓜ	
ADVANCE FLASHER ASSEMBLY	FY	
FTMS (ITS) CONDUIT	– –	– –
BREAKER DISCONNECT BOX	⊞	
COMMUNICATIONS VAULT, TYPE 1	V	
WIRELESS TRAFFIC SENSOR	▪	▪
WIRELESS TRAFFIC SENSOR ACCESS POINT	▬	▬
RAMP METER SIDEMOUNT SIGNAL	●→	●→
RAMP METER OVERHEAD SIGNAL	●↓	
LOOP DETECTOR	⌐ ⌐	□
DETECTION ZONE	⬭	⬭

FTMS REMOVALS NOTES

1. COORDINATE THE REMOVAL OR DISCONNECTION OF ANY EXISTING FTMS DEVICE, WHETHER PERMANENT OR TEMPORARY, WITH THE ENGINEER AND THE ITS FIELD SYSTEM INTEGRATOR 1-WEEK PRIOR TO REQUESTED DISCONNECTION.
2. THE ENGINEER AND THE ITS FIELD SYSTEM WILL COORDINATE THE REQUESTED DISCONNECT SCHEDULE WITH THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER. THE STATEWIDE TRAFFIC OPERATIONS CENTER MAY REQUIRE THAT EXISTING DEVICES REMAIN IN SERVICE UNTIL SUCH TIME THAT THEIR REMOVAL CAN BE DEMONSTRATED TO BE REQUIRED TO ADHERE TO THE PROJECT SCHEDULE.

FTMS GENERAL NOTES

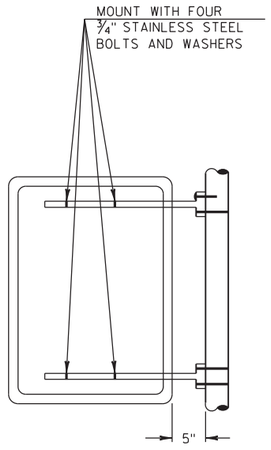
1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF 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.

FTMS STANDARD ABBREVIATIONS

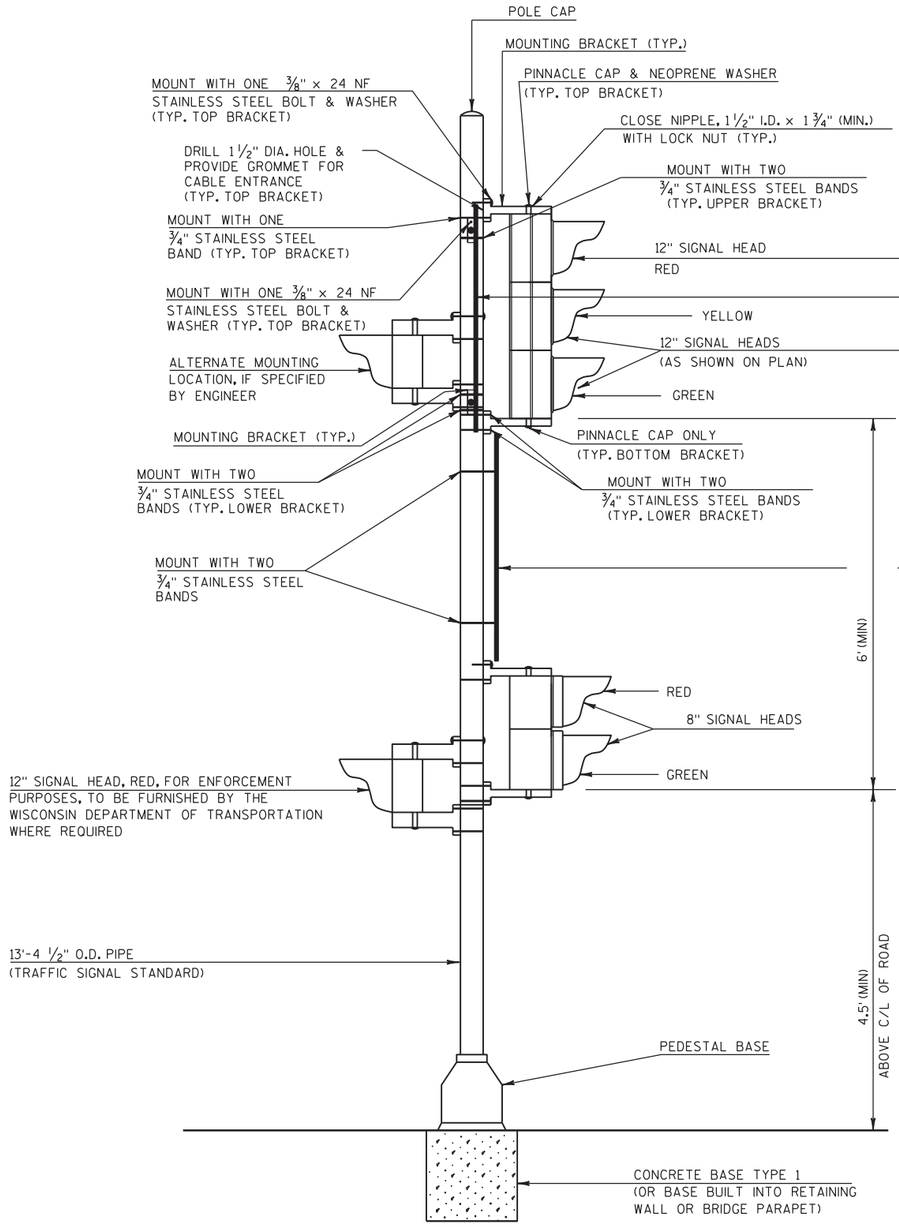
CB	CONTROLLER CABINET
CCTV	CLOSED CIRCUIT TELEVISION SITE
CV	COMMUNICATIONS VAULT
FY	ADVANCE FLASHER (ASSEMBLY)
PB	PULL BOX
MH	MANHOLE
RM	RAMP METER
WTS	WIRELESS TRAFFIC SENSOR
SB	SIGN BASE

NOTE

1) R1Ø-6 SIGN; AN ARROW POINTING LEFT SHALL BE USED ON A RIGHT SIDE SIGNAL & AN ARROW POINTING RIGHT SHALL BE USED ON A LEFT SIDE SIGNAL.

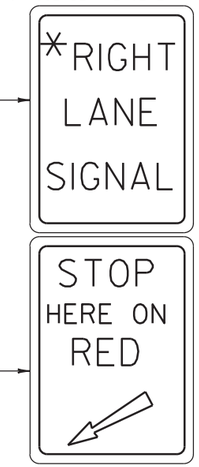


REAR VIEW



SIDE VIEW

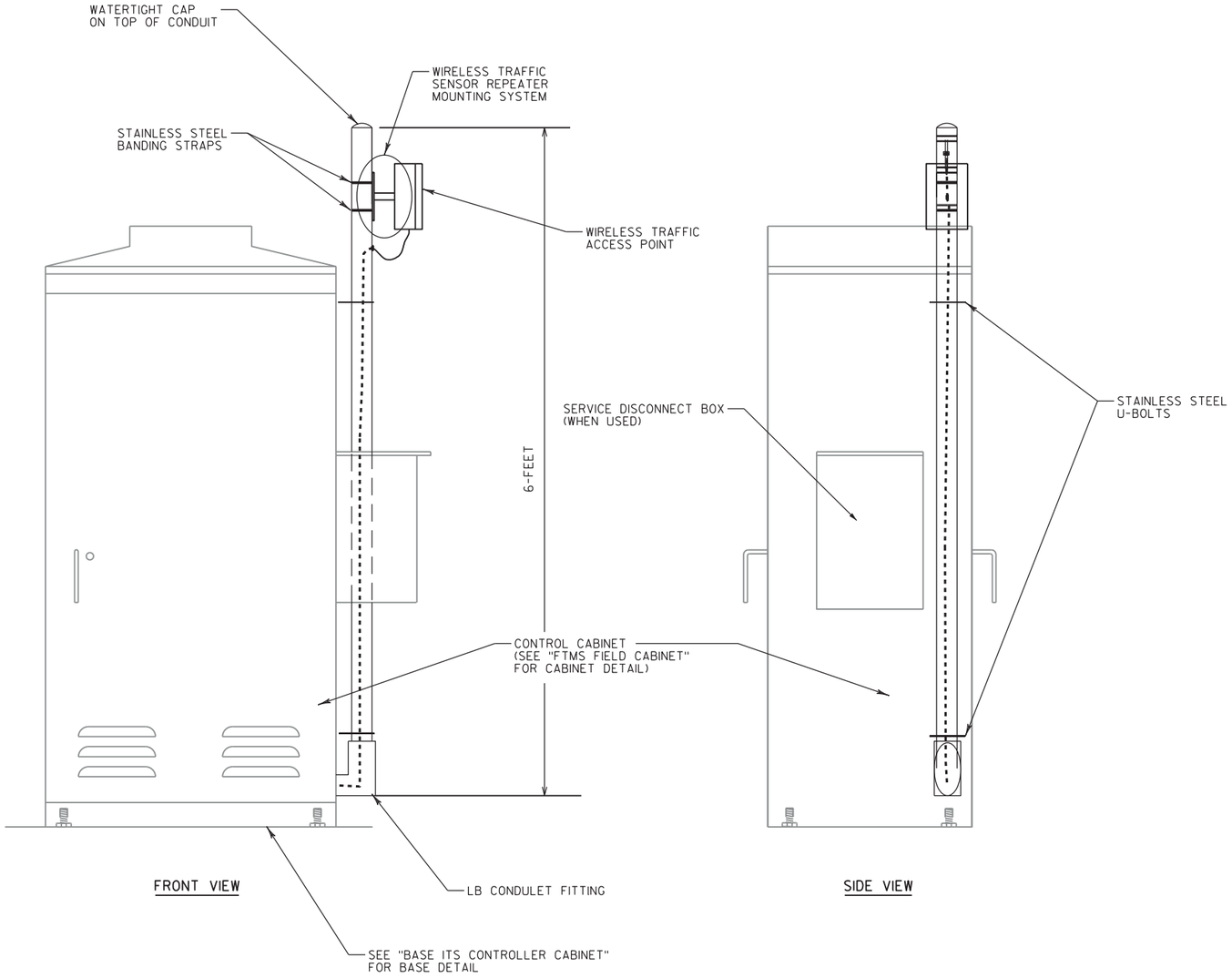
* RIGHT OR LEFT ACCORDING TO ASSEMBLY PLACEMENT



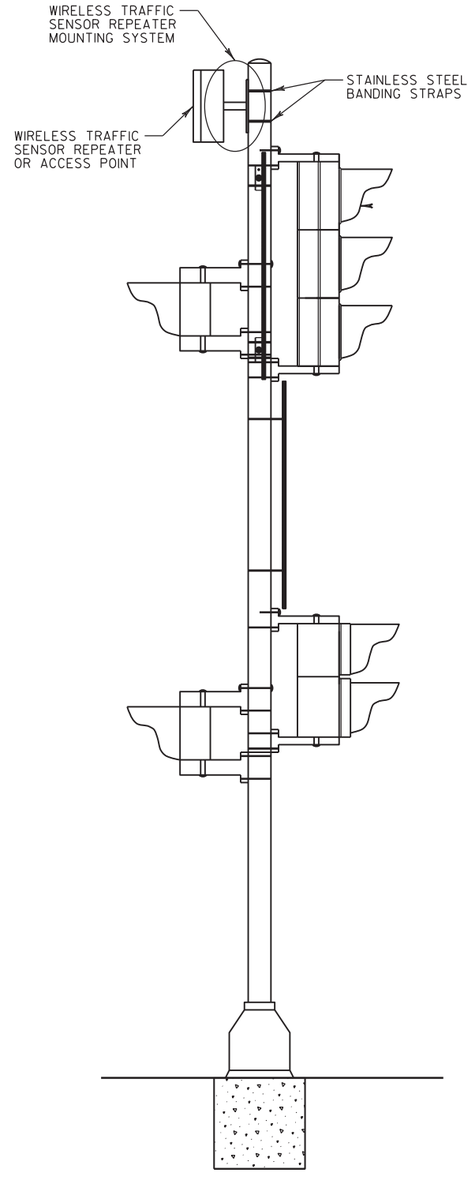
FRONT VIEW

SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT

2



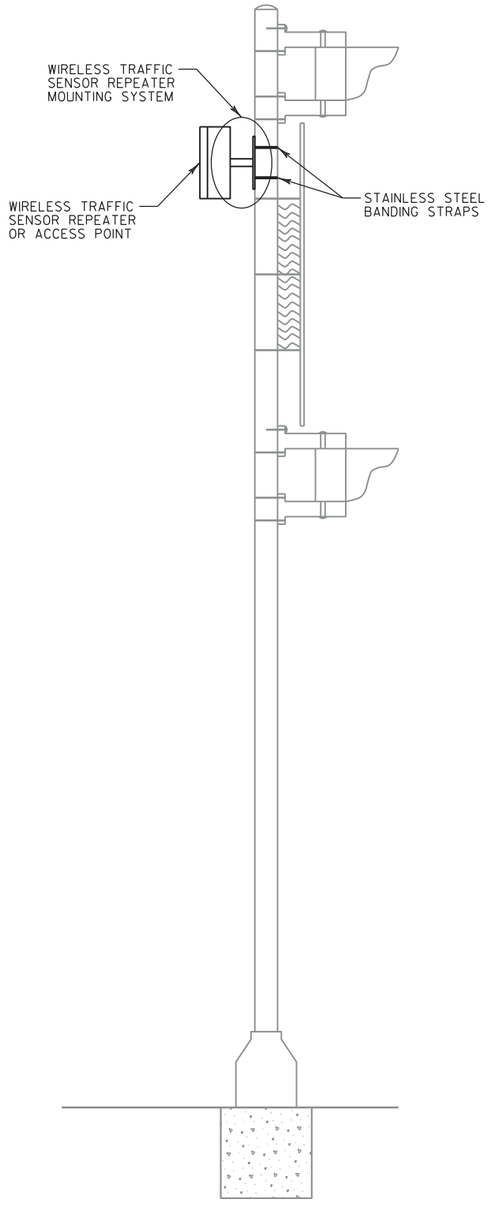
EXISTING CABINET WITH WIRELESS
TRAFFIC SENSOR ACCESS POINT
(NOT TO SCALE)



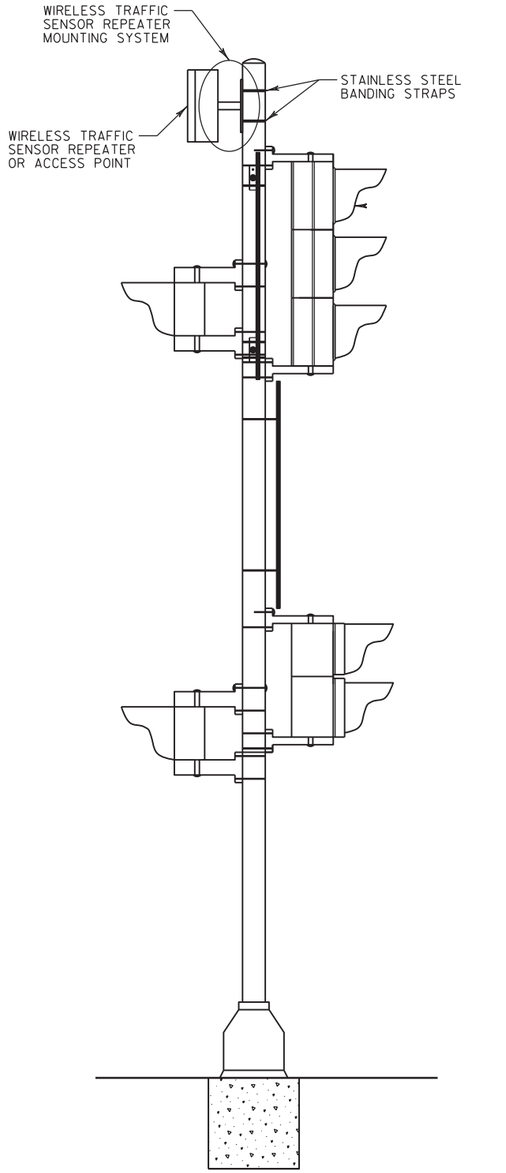
SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT
(NEW OR EXISTING) WITH
WIRELESS TRAFFIC SENSOR REPEATER
OR ACCESS POINT
(NOT TO SCALE)

PROJECT NO:1228-25-70	HWY: IH 43 / 94	COUNTY: MILWAUKEE	FTMS CONSTRUCTION DETAILS	SHEET 72	E

2



EXISTING ADVANCE FLASHER ASSEMBLY WITH
WIRELESS TRAFFIC SENSOR ACCESS POINT
(NOT TO SCALE)



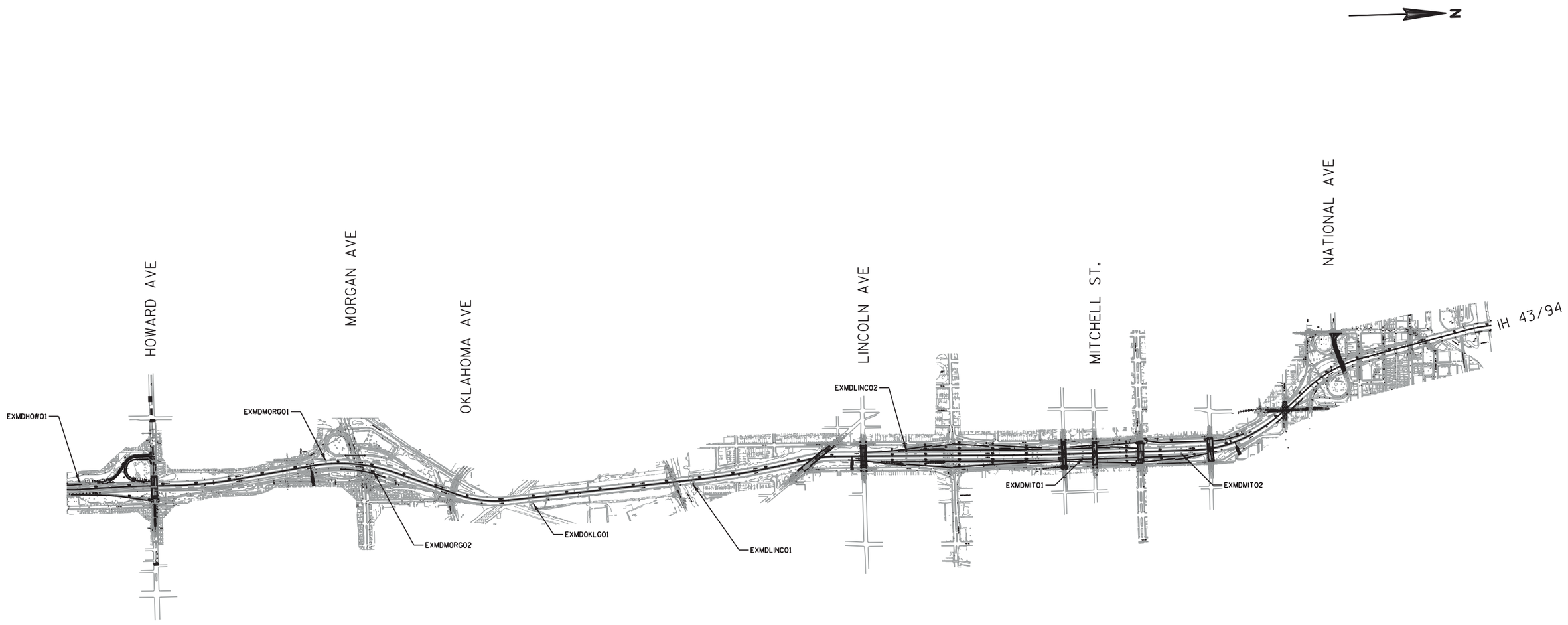
SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT
(NEW OR EXISTING) WITH
WIRELESS TRAFFIC SENSOR ACCESS POINT
(NOT TO SCALE)

NOTES

1) REFOCUS EXISTING MICROWAVE VEHICLE DETECTOR ASSEMBLY SITES AS SHOWN ON THIS DETAIL WHENEVER TRAFFIC PATTERN ADJACENT TO DETECTOR SITE IS CHANGED.

2) REFOCUS MICROWAVE VEHICLE DETECTOR ASSEMBLY SITES WITHIN ONE DAY OF IMPLEMEMENTATION OF TRAFFIC PATTERN CHANGES.

3) AT THE TIME THAT THE TRAFFIC PATTERN IS CHANGED BACK TO ORIGINAL PATTERN FOR THE FINAL TIME, REFOCUS THE MICROWAVE VEHICLE DETECTORS SO THAT THEY ARE PROPERLY FOCUSED FOR PERMANENT TRAFFIC PATTERN AT PROJECT COMPLETION.



EXISTING MICROWAVE DETECTOR SITES

W. HOWARD AVE. TO W. NATIONAL AVE.

(FOR PAY ITEM REFOCUS MICROWAVE VEHICLE DETECTOR ASSEMBLY)

PROJECT NO: 1228-25-70	HWY: IH 43 / 94	COUNTY: MILWAUKEE	FTMS EXISTING MICROWAVE DETECTORS LAYOUT	SHEET 74	E

FILE NAME : \\mlww400\ingrproj\59271\12282570_43-94\cds\4394_fm_mds.dgn PLOT DATE : 1/20/2014 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 1500:1

WISDOT/CADDS SHEET 42

2

2

REMOVE EXISTING CABLES (LDLIC AND TRAFFIC SIGNAL CABLE - DO NOT REMOVE MICROWAVE DETECTOR CABLE)

REMOVE EXISTING CABLES (LDLIC AND TRAFFIC SIGNAL CABLE - DO NOT REMOVE MICROWAVE DETECTOR CABLE)

EXPBHOW05

EXPBHOW06

EXPBHOW04

EXSBHOW01
REMOVE SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY AND CONCRETE BASE

EXSBHOW02
REMOVE SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY AND CONCRETE BASE

EXPBHOW01
PULL BOX
TO REMAIN IN PLACE

EXPBHOW02
PULL BOX
TO REMAIN IN PLACE

REMOVE EXISTING CABLES (LDLIC) AND ABANDON CONDUIT

EXPBHOW03
REMOVE PULL BOX

650

645

S. 5TH ST.

HOWARD AVE.

S. 3rd ST.

43/94/USH 41

PROJECT NO: 1228-25-70	HWY: IH 43 / 94	COUNTY: MILWAUKEE	FTMS REMOVAL PLANS	SHEET 75	E

FILE NAME : \\mlww400\ingrproj\59271\12282570_43-94\cds\4394_fm_rem05.dgn PLOT DATE : 1/20/2014 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

N

EXPBBEC07

REMOVE EXISTING CABLE (ONLY REMOVE CABLES ASSOCIATED WITH RM-40-0028 CONNECTION)

EXSBBEC01 REMOVE SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY (DO NOT REMOVE CONCRETE BASE)

REMOVE EXISTING CABLE (ONLY REMOVE CABLES ASSOCIATED WITH RM-40-0028 CONNECTION)

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

EXSBBEC04 REMOVE SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY (DO NOT REMOVE CONCRETE BASE)

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

W. BECHER ST.

5TH ST.

REMOVE EXISTING CABLE (ONLY REMOVE CABLES ASSOCIATED WITH RM-40-0028 CONNECTION)

EXPBBEC05

EXPBBEC06

EXPBBEC04

EXPBBEC08

EXPBBEC09

EXPBBEC10

EXPBBEC11

EXPBBEC12

EXPBBEC01

REMOVE EXISTING CABLES AND ABANDON CONDUIT

EXPBBEC03

EXFYBEC01

EXPBBEC13

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

EXPBBEC02

EXCB-RM-40-0028 REMOVE EXISTING ITS FIELD CABINET AND CONCRETE BASE

EXSBBEC02 REMOVE SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY (DO NOT REMOVE CONCRETE BASE)

EXSBBEC03 REMOVE SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY (DO NOT REMOVE CONCRETE BASE)

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

I-43/94

I-43/94

4TH ST.

85 90 95 285 290 295 1185 1190 1195

PROJECT NO: 1228-25-70	HWY: IH 43 / 94	COUNTY: MILWAUKEE	FTMS REMOVAL PLANS	SHEET 76	E

FILE NAME : \\mlww400\ingrproj\59271\12282570_43-94\cds\4394_fm_rem15.dgn PLOT DATE : 1/20/2014 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

N

W. LAPHAM AVE.

5TH ST.

4TH ST.

I-43/94

115

120

125

215

315

320

325

1215

1220

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

EXFYLAP01

EXPBLAP01

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

EXFYLAP02

EXPBLAP02

EXPBLAP03

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

EXPBLAP04

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

REMOVE EXISTING CABLES AND ABANDON CONDUIT

EXCB-RM-40-0056

REMOVE EXISTING ITS FIELD CABINET AND CONCRETE BASE (SALVAGE LOOP DETECTOR EMULATION CARDS FOR REINSTALLATION IN EXCB-RM-40-0057)

ATHLETIC FIELD

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

EXSBLAP01

REMOVE SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY (DO NOT REMOVE CONCRETE BASE)

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

EXPBLAP07

EXPBLAP06

EXFYLAP03

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

EXPBLAP05

EXFYLAP04

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

EXSBLAP02

REMOVE SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY (DO NOT REMOVE CONCRETE BASE)

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

REMOVE EXISTING CABLES ASSOCIATED WITH RM-40-0056 // DO NOT REMOVE CABLES ASSOCIATED WITH RM-40-0057 // (CONDUIT TO BE REUSED)

EXSBLAP04

REMOVE SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY (DO NOT REMOVE CONCRETE BASE)

EXPBLAP08

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

EXPBLAP07

REMOVE EXISTING CABLES (CONDUIT TO BE REUSED)

EXPBLAP09

EXPBLAP10

EXPBLAP11

EXPBLAP12

EXCB-RM-40-0057

EXSBLAP03

REMOVE SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY (DO NOT REMOVE CONCRETE BASE)

PROJECT NO: 1228-25-70	HWY: IH 43 / 94	COUNTY: MILWAUKEE	FTMS REMOVAL PLANS	SHEET 77	E

2

EXCB-RM-40-0054
(1) WTS ACCESS POINT AND
(1) WTS CONTACT CLOSURE MODULE

IN EXISTING CONDUIT
(1) 7/C NO. 14 AWG
TRAFFIC SIGNAL CABLE AND
(1) WTS ACCESS POINT CABLE

IN EXISTING CONDUIT
(1) 7/C NO. 14 AWG
TRAFFIC SIGNAL CABLE AND
(1) WTS ACCESS POINT CABLE

EXPBHOW05

EXPBHOW06

EXPBHOW04

QUEUE
DETECTION WTS

SBHOW01
(1) TYPE 1 CONCRETE BASE
(1) SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY
(1) WTS ACCESS POINT

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (2) 7/C NO. 14 AWG
TRAFFIC SIGNAL CABLES
(1) WITH (1) WTS ACCESS POINT CABLE

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 7/C NO. 14 AWG
TRAFFIC SIGNAL CABLE

SBHOW02
(1) SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY
(1) TYPE 1 CONCRETE BASE

EXPBHOW01
PULL BOX
TO REMAIN IN PLACE

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 7/C NO. 14 AWG
TRAFFIC SIGNAL CABLE

RAMP METER STOP
BAR WTS ARRAY

EXPBHOW02
PULL BOX
TO REMAIN IN PLACE

N

S. 5TH ST.

S. HOWARD AVE

I 43/94/USH 41

650

645

BACK OF CURB

EDGE OF TRAVELED WAY

BACK OF CURB

EXCB-CCTV-40-0079

IN EXISTING CONDUIT
(1) 2/C NO. 12 UF GROUNDED CABLE

EXPBHOW99
(1) INSTALL PROPOSED CONDUIT
INTO EXISTING PULL BOX

RAMP GATE G40-76

(1) 2-INCH NONMETALLIC CONDUIT WITH
(1) 2/C NO. 12 UF GROUNDED CABLE

S. 3rd ST.

PROJECT NO: 1228-25-70	HWY: IH 43 / 94	COUNTY: MILWAUKEE	FTMS DESIGN SHEETS	SHEET	E

FILE NAME : \\mlww400\ingrproj\59271\12282570_43-94\cds\4394_fm_05.dgn PLOT DATE : 1/20/2014 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

2

EXCB-RM-40-0055

RAMP GATE G40-79
EXPBHOL02
(2) INSTALL PROPOSED CONDUIT
INTO EXISTING PULL BOX
(1) 2-INCH NONMETALLIC CONDUIT WITH
(1) 2/C NO. 12 UF GROUNDED CABLE

RAMP GATE G40-80

IN EXISTING CONDUIT
(2) 2/C NO. 12 UF GROUNDED CABLES

CANADIAN PACIFIC

HOLT AVE.

S. 5th ST.

I43/94/USH 41

195

200

205

50NC

Ean 677+23.64
Ean 190+82.97
2.86' LT

RAMP GATE G40-77

(1) 2-INCH NONMETALLIC CONDUIT WITH
(1) 2/C NO. 12 UF GROUNDED CABLE

PBHOL01

IN EXISTING CONDUIT
(2) 2/C NO. 12 UF GROUNDED CABLES

EXPBHOL01

(2) INSTALL PROPOSED CONDUITS
INTO EXISTING PULL BOX

RAMP GATE G40-78

EXCB-RM-40-0018

PROJECT NO: 1228-25-70	HWY: IH 43 / 94	COUNTY: MILWAUKEE	FTMS DESIGN SHEETS	SHEET 79	E

2

N

W. BECHER ST.

IN EXISTING CONDUIT
(1) LDLIC AND (2) WTS ACCESS POINT CABLES,
(1) 7/C NO. AWG TRAFFIC SIGNAL CABLE,
(1) 5/C NO. 14 AWG TRAFFIC SIGNAL CABLE,
AND (1) 2/C NO. 12 UF GROUNDED CABLE

EXPBBEC07

SBBEC02
(1) SIDEMOUNT RAMP CONTROL
SIGNAL ASSEMBLY AND
(1) WTS ACCESS POINT
ON EXISTING CONCRETE BASE

EXCB-RM-40-0029
(1) WTS CONTACT CLOSURE MODULE AND
(4) WTS CONTACT CLOSURE EXTENSION MODULES

IN EXISTING CONDUIT
(1) LDLIC AND (2) WTS ACCESS POINT CABLES,
(1) 7/C NO. AWG TRAFFIC SIGNAL CABLE,
(1) 5/C NO. 14 AWG TRAFFIC SIGNAL CABLE,
(1) 2/C NO. 12 UF GROUNDED CABLE

EXPBBEC04

EXFYBEC01
(1) WTS ACCESS POINT

IN EXISTING CONDUIT
(1) LDLIC AND (1) WTS ACCESS POINT CABLE
(1) 7/C NO. AWG TRAFFIC SIGNAL
CABLE AND (1) 5/C NO. 14 AWG
TRAFFIC SIGNAL CABLE

IN EXISTING CONDUIT
(2) 7/C NO. AWG TRAFFIC SIGNAL
CABLES

IN EXISTING CONDUIT
(1) LDLIC AND (1) 5/C NO. 14 AWG
TRAFFIC SIGNAL CABLE

IN EXISTING CONDUIT
(1) 5/C NO. 14 AWG
TRAFFIC SIGNAL CABLE

IN EXISTING CONDUIT
(1) LDLIC AND (1) 5/C NO. 14 AWG
TRAFFIC SIGNAL CABLE

IN EXISTING CONDUIT
(1) LDLIC AND (1) WTS ACCESS POINT CABLE,
(1) 7/C NO. AWG TRAFFIC SIGNAL CABLE,
(1) 5/C NO. 14 AWG TRAFFIC SIGNAL CABLE,
AND (1) 2/C NO. 12 UF GROUNDED CABLE

EXPBBEC08

EXPBBEC09

EXPBBEC10

EXPBBEC11

EXPBBEC12

EXFYBEC01

EXPBBEC13

LDBC01 (6X10 6-TURNS)

EXPBBEC06

RAMP METER STOP
BAR WTS ARRAY

QUEUE
DETECTION WTS

EXPBBEC03

EXPBBEC01

IN EXISTING CONDUIT
(1) WTS ACCESS POINT CABLE

SBBEC01
(1) SIDEMOUNT RAMP CONTROL
SIGNAL ASSEMBLY ON EXISTING
CONCRETE BASE

IN EXISTING CONDUIT
(1) WTS ACCESS
POINT CABLE

IN EXISTING CONDUIT
(1) WTS ACCESS
POINT CABLE AND
(2) 7/C NO. AWG
TRAFFIC SIGNAL CABLES

SBBEC04
(1) SIDEMOUNT RAMP CONTROL
SIGNAL ASSEMBLY AND
(2) WTS ACCESS POINTS
ON EXISTING CONCRETE BASE

SBBEC03
(1) SIDEMOUNT RAMP CONTROL
SIGNAL ASSEMBLY ON EXISTING
CONCRETE BASE

IN EXISTING CONDUIT
(1) 7/C NO. AWG TRAFFIC SIGNAL
CABLE

EXPBBEC02

IN EXISTING CONDUIT
(1) 7/C NO. AWG TRAFFIC SIGNAL
CABLE

IN EXISTING CONDUIT
(1) LDLIC AND (1) WTS ACCESS POINT CABLE
(1) 7/C NO. AWG TRAFFIC SIGNAL
CABLE AND (1) 5/C NO. 14 AWG
TRAFFIC SIGNAL CABLE

(1) 2-INCH NONMETALLIC CONDUIT WITH
SOLAR POWER RAMP GATE POWER WIRES

RAMP GATE G40-82

(1) TYPE 10 CONCRETE CONTROL CABINET BASE
(1) PEDESTAL BASE
(1) 3.5-FT TRAFFIC SIGNAL STANDARD
(1) RAMP GATE SOLAR POWER ASSEMBLY

EXPBBEC05
(1) INSTALL PROPOSED CONDUIT
INTO EXISTING PULL BOX

(1) 2-INCH NONMETALLIC CONDUIT WITH
(1) 2/C NO. 12 UF GROUNDED CABLE

RAMP GATE G40-81

LANE LINE

EDGE OF TRAVELED WAY

I-43/94

PROJECT NO: 1228-25-70	HWY: IH 43 / 94	COUNTY: MILWAUKEE	FTMS DESIGN SHEETS	SHEET 80	E

2

N

W. LAPHAM AVE.

5TH ST.

4TH ST.

I-43/94

ATHLETIC FIELD

(1) TYPE 10 CONCRETE CONTROL CABINET BASE
(1) PEDESTAL BASE
(1) 3.5-FT TRAFFIC SIGNAL STANDARD
(1) RAMP GATE SOLAR POWER ASSEMBLY

(1) 2-INCH NONMETALLIC CONDUIT WITH SOLAR POWER RAMP GATE POWER WIRES

RAMP GATE G40-84

IN EXISTING CONDUIT
(1) 5/C NO. 14 AWG TRAFFIC SIGNAL CABLE

EXFYLAP01

EXPBLAP01

WTS

EXFYLAP02

EXPBLAP02

WTS

IN EXISTING CONDUIT
(2) 5/C NO. 14 AWG TRAFFIC SIGNAL CABLES AND
(2) WTS ACCESS POINT CABLES

IN EXISTING CONDUIT
(1) 5/C NO. 14 AWG TRAFFIC SIGNAL CABLE AND
(2) WTS ACCESS POINT CABLES

EXPBLAP03

EXPBLAP04

EXPBLAP07

EXPBLAP06

SPLICE NEW LDLIC TO EXISTING LOOP DETECTOR

EXPBLAP05

EXFYLAP04

IN EXISTING CONDUIT
(1) 5/C NO. 14 AWG TRAFFIC SIGNAL CABLE, (1) NEW LDLIC, AND
(2) WTS ACCESS POINT CABLES

IN EXISTING CONDUIT
(1) 5/C NO. 14 AWG TRAFFIC SIGNAL CABLE, (4) SALVAGED LDLIC, (1) NEW LDLIC, AND
(2) WTS ACCESS POINT CABLES
(1) 2/C NO. 12 UF GROUNDED CABLE

(1) 2-INCH NONMETALLIC CONDUIT WITH
(1) 2/C NO. 12 UF GROUNDED CABLE

SBLAP01
(1) SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY

SBLAP02
(1) SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY

EXFYLAP03

EXPBLAP13

EXPBLAP08

IN EXISTING CONDUIT
(1) 5/C NO. 14 AWG TRAFFIC SIGNAL CABLE, (4) SALVAGED LDLIC, (1) NEW LDLIC, AND
(2) WTS ACCESS POINT CABLES

IN EXISTING CONDUIT
(2) 5/C NO. 14 AWG TRAFFIC SIGNAL CABLES

EXFYLAP05

RAMP GATE G40-83

EXPBLAP09

IN EXISTING CONDUIT
(1) 5/C NO. 14 AWG TRAFFIC SIGNAL CABLE, (4) SALVAGED LDLIC, (1) NEW LDLIC, AND
(2) WTS ACCESS POINT CABLES

EXPBLAP10
(1) INSTALL PROPOSED CONDUIT INTO EXISTING PULL BOX

EXPBLAP11

EXPBLAP12

SBLAP04
(1) SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY

SBLAP03
(1) SIDEMOUNT RAMP CONTROL SIGNAL ASSEMBLY

EXCB-RM-40-0057

115 215 315 120 320 325 125 1220 1215 120

PROJECT NO: 1228-25-70	HWY: IH 43 / 94	COUNTY: MILWAUKEE	FTMS DESIGN SHEETS	SHEET 81	E

2

2

N

EXPBWAL01
(1) INSTALL PROPOSED CONDUIT
INTO EXISTING PULL BOX

EXCB-CCTV-40-0017

WALKER

PBWAL01

PBWAL02

(1) 2-INCH NONMETALLIC CONDUIT WITH
(1) 2/C NO. 12 UF GROUNDED CABLE

IN EXISTING CONDUIT
(1) 2/C NO. 12 UF GROUNDED CABLE

RAMP GATE G40-87

(1) 2-INCH NONMETALLIC CONDUIT WITH
(1) 2/C NO. 12 UF GROUNDED CABLE

I 43 / I 94

175

170

9TH

EXCB-RM-40-0058/0059

IN EXISTING CONDUIT
(2) 2/C NO. 12 UF GROUNDED CABLES

(1) 2-INCH NONMETALLIC CONDUIT WITH
(1) 2/C NO. 12 UF GROUNDED CABLE

RAMP GATE G40-86

PBMIN02

EXPBMIN02
(1) INSTALL PROPOSED CONDUIT
INTO EXISTING PULL BOX

MINERAL

W. MINERAL ST

EXPBMIN01

EXCB-RM-40-0027

RAMP GATE G40-85

EXPBHOL01
(2) INSTALL PROPOSED CONDUIT
INTO EXISTING PULL BOX

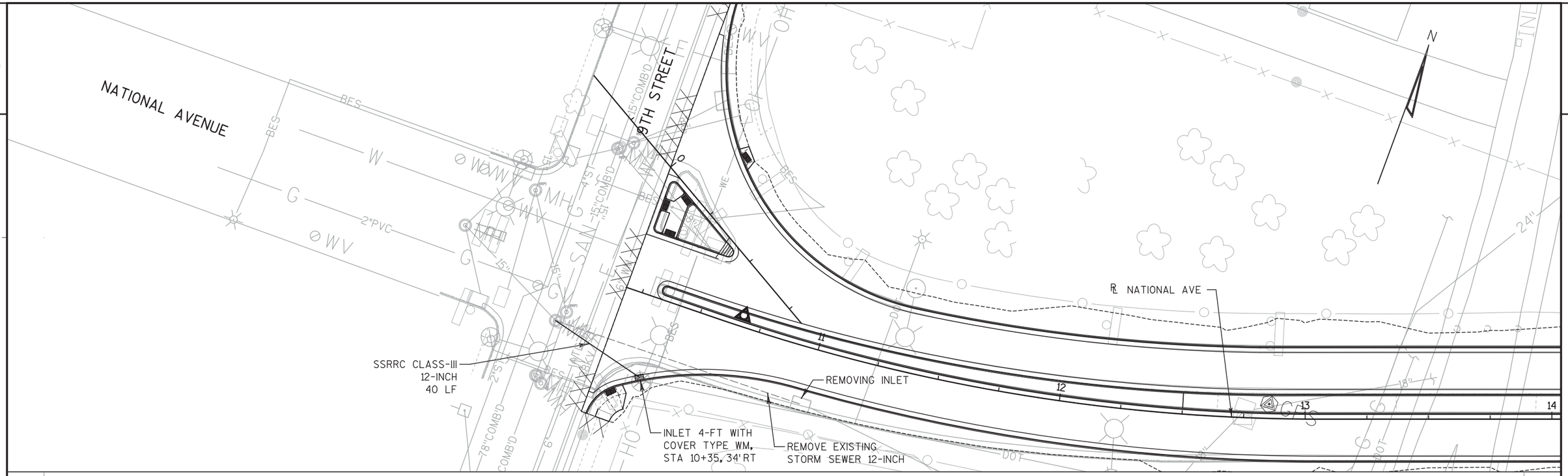
IN EXISTING CONDUIT
(1) 2/C NO. 12 UF GROUNDED CABLES

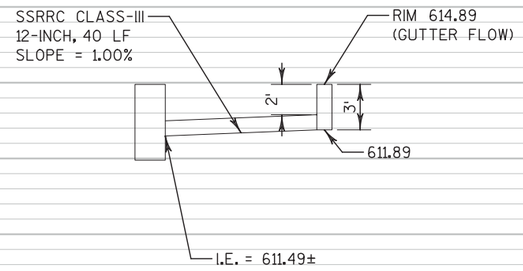
(1) 2-INCH NONMETALLIC CONDUIT WITH
(1) 2/C NO. 12 UF GROUNDED CABLE

S. 6TH ST

PROJECT NO: 1228-25-70	HWY: IH 43 / 94	COUNTY: MILWAUKEE	FTMS DESIGN SHEETS	SHEET 82	E

2





630 625 620 615 610 605 600 595 590

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	STORM SEWER	SHEET 83	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
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- [ ] INDICATES YEAR OF SIGN

N

NORTH 43 41 ESTR

WEST 94 ESTR

SOUTH 43 41 MOVE

EAST 94 MOVE 68

[13] RAMP METERED WHEN FLASHING
66 R3-8 MOVE ON FLASHER POLE

RAMP GATE

RAMP CLOSED USE ALT ROUTE
R11-54F MOVE 63 64

ESTR

FREEWAY ENTRANCE [13]
67 D13-3 MOVE

ONE WAY [13] ESTR

NO TURN ON RED [13] ESTR

FROM LEFT LANE [13] ESTR

[13] ONLY ONLY ESTR

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED [13]
R5-57 MOVE ON LIGHT POLE 65

RIGHT TURN SIGNAL REMOVE

(CITY) RIGHT TURN SIGNAL R10-10R 57

WRONG WAY R5-1A MOVE 59

REMOVE W12-1D(2S) ON SIGNAL POLE 58

[13] Howard Ave. ← WEST EAST →
60 M1-94 MOD MOVE

STOP HERE ON RED
61 R10-6 ON SIGNAL POLE MOVE

STOP HERE ON RED
62 R10-6L ON SIGNAL POLE MOVE

SB ENTRANCE RAMP

SB EXIT RAMP

[11] ESTR

NORTH 94 41 WEST 94 ESTR

Howard Ave. 3900 SOUTH ESTR

56 REMOVE AND REINSTALL ON BRIDGE

I43/94/USH 41 SB

I43/94/USH 41 NB

HOWARD AVE.

Howard Ave. 3900 SOUTH ESTR

NB EXIT RAMP

RAMP CLOSED USE ALT ROUTE
R11-54F 54 55

NB ENTRANCE RAMP

RAMP GATE

S. 3RD ST.

NORTH 94 ESTR

NORTH 94 41 WEST 94 ESTR

SHEET 1 OF 9

PROJECT NO: 1228-25-70	HWY: IH-43/94	COUNTY: MILWAUKEE	SIGNING PLAN	SHEET E

FILE NAME : J:\projects\D2_12282543\SIGN\023201_ps.dgn PLOT DATE : 02-DEC-2013 11:48 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 100:1

2

N

LEFT LANE
BUSES MOTORCYCLES AND 2 OR MORE OCCUPANT CAR POOLS ONLY
ESTR

RAMP METERED WHEN FLASHING
ESTR

RAMP METERED WHEN FLASHING
ESTR

ONE WAY
ESTR

RAMP GATE

JUST BEHIND SIDEWALK RAMP

RAMP GATE

JUST BEHIND SIDEWALK IN FRONT OF SIGNAL POLE

NB ON RAMP

SB EXIT RAMP

SB EXIT RAMP

I43/94/USH 41 SB

I43/94/USH 41 NB

NB EXIT RAMP

4TH ST

HOLT AVE.

HOLT AVE.

HOLT AVE.

RAMP CLOSED
USE
ALT ROUTE
R11-54F
50

RAMP CLOSED
USE
ALT ROUTE
R11-54F
53

52

RAMP CLOSED
USE
ALT ROUTE
R11-54F
51

BETWEEN BRIDGES BEFORE 1ST PIER OF NB BRIDGE

DO NOT ENTER
ESTR

RAMP CLOSED
USE
ALT ROUTE
R11-54F
48
49

RAMP GATE

FREEWAY ENTRANCE
[13]
ESTR

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
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

TO MB4-5(2)

M1-1(2)

M1-1(2)

MB6-1

TO MB4-5(2)

M1-1(2)

M1-1(2)

MB6-1

J3-1(2S) (47)

ON LIGHT POLE ON BRIDGE ABOVE FENCE

TO MB4-5(2)

M1-1(2)

M1-1(2)

MB5-1L(2)

TO MB4-5(2)

M1-1(2)

M1-1(2)

MB5-1L(2)

J2-1(2S) (46)

ON LIGHT POLE ON BRIDGE ABOVE FENCE

Chase Ave (44)

REMOVE AND REINSTALL ON BRIDGE

Lincoln Ave 2300 SOUTH (43)

REMOVE AND REINSTALL ON BRIDGE

Chase Ave (45)

REMOVE AND REINSTALL ON BRIDGE

Lincoln Ave 2300 SOUTH (42)

REMOVE AND REINSTALL ON BRIDGE

5TH ST

5TH ST

5TH ST

4TH ST

4TH ST

I43\I94\USH 41 SB

I43\I94\USH 41 NB

S. CHASE AVE.

LINCOLN AVE.

N

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
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

SHEET 3 OF 9

PROJECT NO: 1228-25-70	HWY: IH-43/94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 86	E

FILE NAME : J:\projects\D2_12282543\SIGN\023203_ps.dgn PLOT DATE : 02-DEC-2013 11:49 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 100:1

2

N

ROGERS ST.

BECHER ST.

5TH ST

SB ON RAMP

SB EXIT

I43\I94\USH 41 SB

I43\I94\USH 41 NB

4TH ST

NB ON RAMP

RAMP GATE

RAMP METERED WHEN FLASHING
ESTR

SOUTH EAST 43 94 41
ESTR

ESTR

5TH ST
ESTR

RAMP CLOSED ~~USE~~ ALT ROUTE
R11-54F
40

RAMP CLOSED ~~USE~~ ALT ROUTE
R11-54F
41

SOUTH EAST 43 94 41
ESTR

NORTH WEST 43 94 41
ESTR

RAMP CLOSED ~~USE~~ ALT ROUTE
R11-54F
39

DOWNTOWN
ESTR

NORTH WEST 43 94 41
ESTR

4TH STREET
SPEED LIMIT 30
ESTR

RAMP CLOSED ~~USE~~ ALT ROUTE
R11-54F
37

ESTR

NORTH WEST 43 94 41
ESTR

ESTR

RAMP CLOSED ~~USE~~ ALT ROUTE
R11-54F
38

SOUTH EAST 43 94 41
ESTR

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

SHEET 4 OF 9

PROJECT NO: 1228-25-70	HWY: IH-43/94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 87	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
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

N

SOUTH
INTERSTATE 43
EAST
INTERSTATE 94
Mitchell St
ESTR

5TH ST

W. MAPLE ST.

I43\I94\USH 41 SB

I43\I94\USH 41 NB

W. MITCHELL AVE.

RAMP GATE

4TH ST

Maple St
1800 SOUTH
35
36
REMOVE AND REINSTALL ON BRIDGE

Mitchell Ave
1700 SOUTH
33
34
REMOVE AND REINSTALL ON BRIDGE

SHEET 5 OF 9

PROJECT NO: 1228-25-70	HWY: IH-43/94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 88 E

FILE NAME : J:\projects\D2_12282543\SIGN\023205_ps.dgn PLOT DATE : 02-DEC-2013 11:50 PLOT BY : mscppl 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
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

RAMP CLOSED
USE
ALT ROUTE
R11-54F
32

Lapham Ave
1600 SOUTH
REMOVE AND REINSTALL ON BRIDGE
30
31

REMOVE
28
R4-7(2S)
REMOVE
29
W5-52L(2S)

5TH ST.

W. LAPHAM AVE.

I43\I94\USH 41 SB

I43\I94\USH 41 NB

GREENFIELD AVE.

RAMP GATE

4TH ST.

PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
ESTR

RAMP CLOSED
USE
ALT ROUTE
R11-54F
27

RAMP METERED WHEN FLASHING
ESTR

ESTR

NORTH
INTERSTATE
43
WEST
INTERSTATE
94

GREENFIELD AVE.
ESTR

Greenfield Ave
1400 SOUTH
REMOVE AND REINSTALL ON BRIDGE
25
26

2

SHEET 6 OF 9

PROJECT NO: 1228-25-70	HWY: IH-43/94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 89	E

FILE NAME : J:\projects\D2_12282543\SIGN\023206_ps.dgn PLOT DATE : 02-DEC-2013 11:50 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 100:1

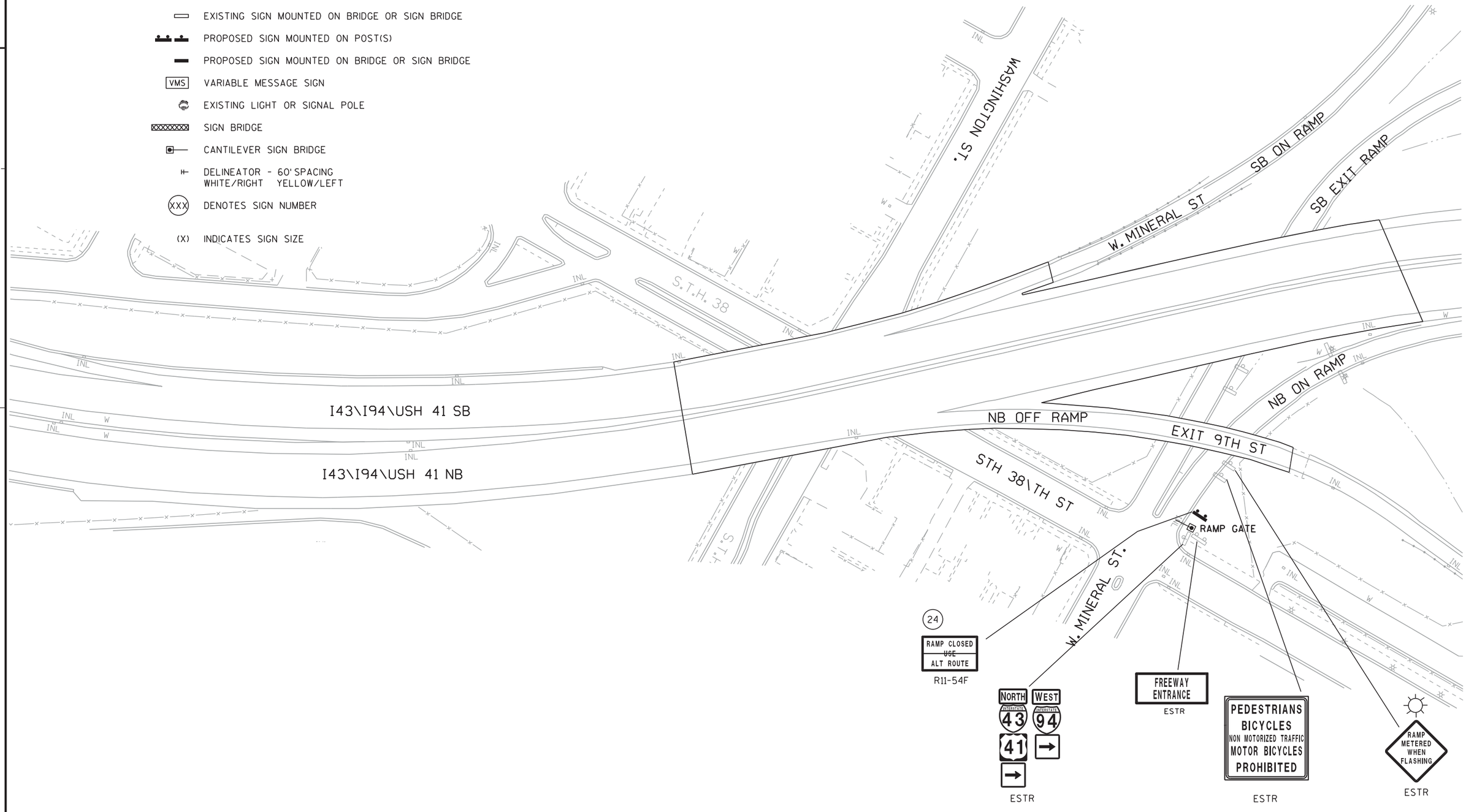
WISDOT/CADDS SHEET 42

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
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N



SHEET 7 OF 9

PROJECT NO: 1228-25-70	HWY: IH-43/94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 90 E

FILE NAME : J:\projects\D2_12282543\SIGN\023207_ps.dgn PLOT DATE : 02-DEC-2013 11:51 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 100:1

2

RAMP CLOSED
USE
ALT ROUTE
R11-54F

23

PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
ESTR

RAMP GATE

FREEWAY
ENTRANCE
ESTR

ESTR

STOP
ALL WAY
ESTR

RAMP
METERED
WHEN
FLASHING
ESTR

SB ON RAMP

SB EXIT RAMP

NATIONAL AVE. ON RAMP

W. WALKER ST

S. 9TH ST

NATIONAL AVE.

W. PIERCE ST.

I43\I94\USH 41 SB

I43\I94\USH 41 NB

N

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
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 8 OF 9

PROJECT NO: 1228-25-70	HWY: IH-43/94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 91	E

2

NORTH / WEST
INTERSTATE 43 / INTERSTATE 94
41
REMOVE FROM LIGHT POLE

NORTH / WEST
M3-1 / MB3-4
INTERSTATE 43 / INTERSTATE 94
M1-1 / M1-1
M6-1 / M6-1
69

21 FREEWAY ENTRANCE
MOVE

RAMP GATE

4 6 5 7 STOP
R1-1(3)
ALL WAY
R1-3P(3)

STOP
ALL WAY
REMOVE

PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
REMOVE

PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
20
R5-1A(5)
MOUNT ON LIGHT POLE

18 WRONG WAY
RS-1A(2S)
19 WRONG WAY
MOVE

9 HARLEY DAVIDSON MUSEUM
MOVE

MINERAL ST.

WALKER ST

RAMP CLOSED
USE
ALT ROUTE
22
R11-54F

15
R4-7(2S)
REMOVE
16
W5-52L(2S)
REMOVE
17 WRONG WAY
MOVE

ONE WAY
R6-2L(2S)
ONE WAY
REMOVE
12

13 DO NOT ENTER
R5-1(3)
DO NOT ENTER
REMOVE
14 WRONG WAY
RS-1A(2S)
MOVE

STOP
R1-1(3)
2
3
STOP
REMOVE

11
Walker Street
National Ave
9th Street
Walker Street
National Ave
9th Street
REMOVE

NATIONAL AVE.

9TH ST

JCT
M2-1
59
M1-6
J1-1(2S)
1
JCT
59
REMOVE

W. PIERCE ST.

NATIONAL AVE ON RAMP

I43\I94\USH 41 SB

I43\I94\USH 41 NB

8
TO
M4-5(2)
59
M1-6
M5-1R(2)
J2-1(2S)
MOUNT ON LIGHT POLE
TO
M4-5(2)
59
M1-6
M5-1R(2)
REMOVE

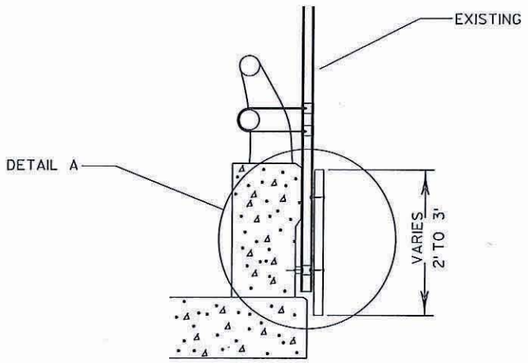
PARK & RIDE
D4-2R(2)
10
PARK & RIDE
REMOVE

N

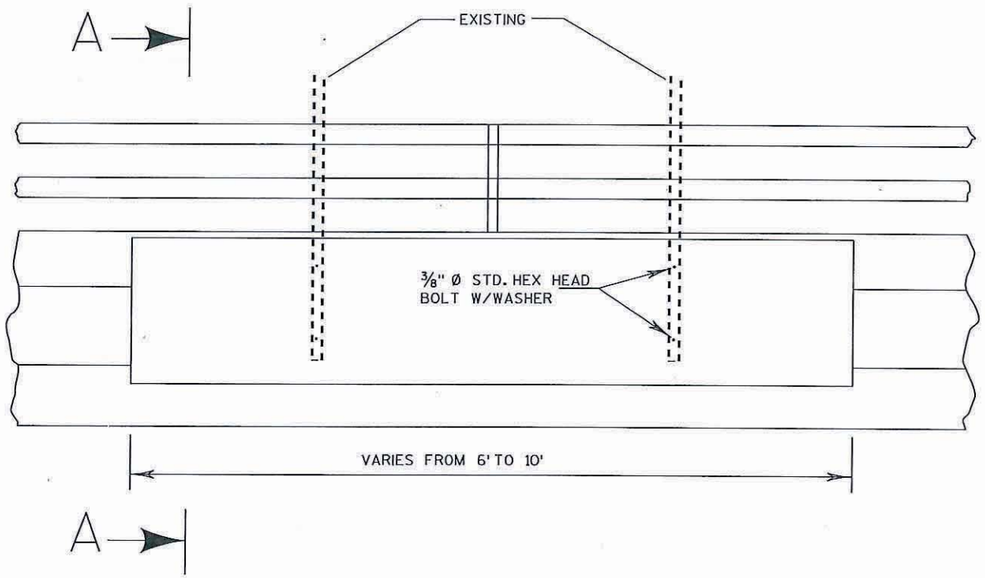
SHEET 9 OF 9

PROJECT NO: 1228-25-70	HWY: IH-43/94	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 92 E

FILE NAME : J:\projects\D2_12282543\SIGN\023209_ps.dgn PLOT DATE : 02-DEC-2013 11:52 PLOT BY : mscppl PLOT NAME : PLOT SCALE : 100:1



SECTION A-A
SIDE VIEW

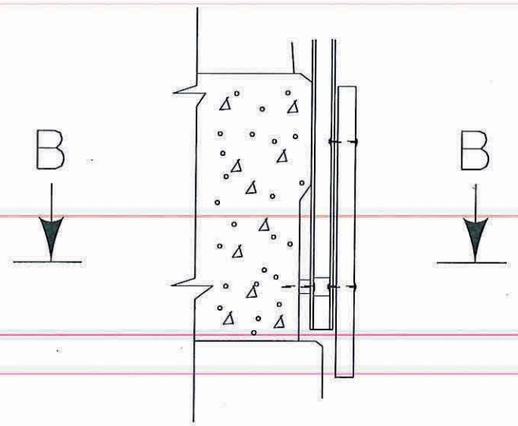


FRONT VIEW

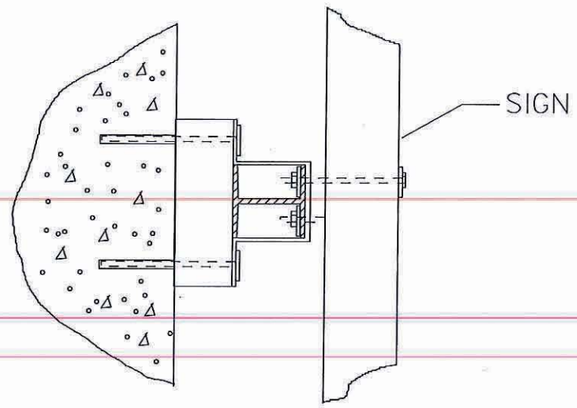
NOTES:

PROVIDE NEW BOLTS.

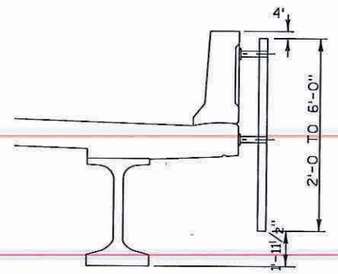
MOUNTING DETAIL COSTS ARE INCIDENTAL TO PAY ITEM "TYPE II SIGNS, REFLECTIVE".



DETAIL A



SECTION B-B
TOP VIEW



PARAPET OPTION
WITHOUT RAIL

PROJECT NO: 1228-25-70	HWY: IH-43	COUNTY: MILWAUKEE	SIGN MOUNTING DETAIL ON BRIDGE	SHEET 93

2

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 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 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.

TRAFFIC & STREET LIGHTING GENERAL NOTES:

2

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 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) 414-286-3687 (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.

UTILITY LINE CODE

SAN	SANITARY SEWER
STO	STORM SEWER
W	WATER
G	GAS
E	ELECTRIC
TE&ES	CITY TRAFFIC, LIGHTING, COMM. & UNDERGROUND CONDUIT
. . .	OVERHEAD LINE
T	TELEPHONE
TV	CABLE

OTHER UTILITIES AS NOTED

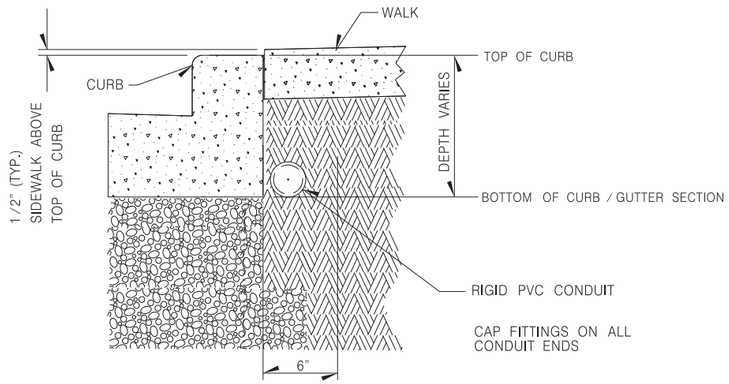
SHEET 1 OF 11

PROJECT NO: 1228–25–70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRFFFIC SIGNAL CONDUIT DETAILS	SHEET 94	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\I–94 Bridges 1228–25–00\Copy of allML_Sara'sEdits.dgn PLOT DATE : 27–SEP–2013 09:53 PLOT BY : jbondo PLOT NAME : PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

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"

TYPICAL CONDUIT INSTALLATION
BEHIND CURB

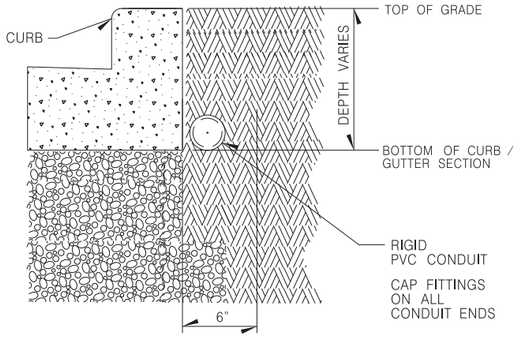
NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

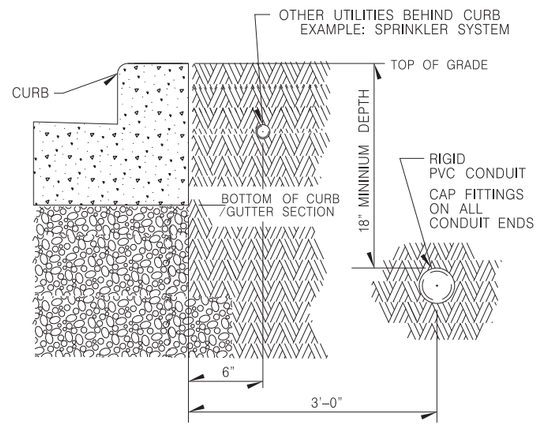
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.

DETAIL "B"

CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB,
UNLESS NOTED OR APPROVED BY ENGINEER.



DETAIL "C"

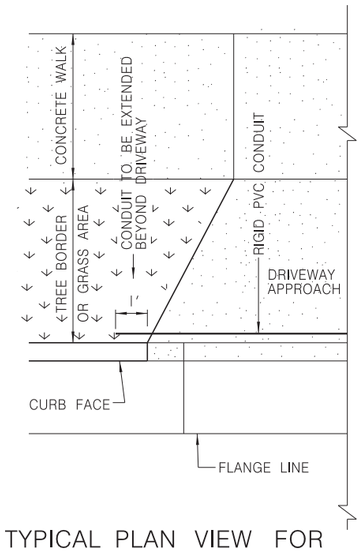


100 DETAIL "B" & "C"

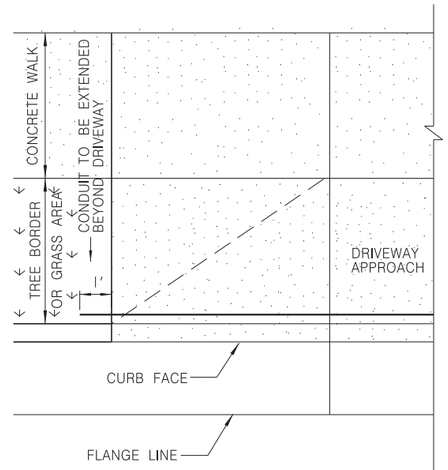
TYPICAL CONDUIT INSTALLATION
BEHIND CURB

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.



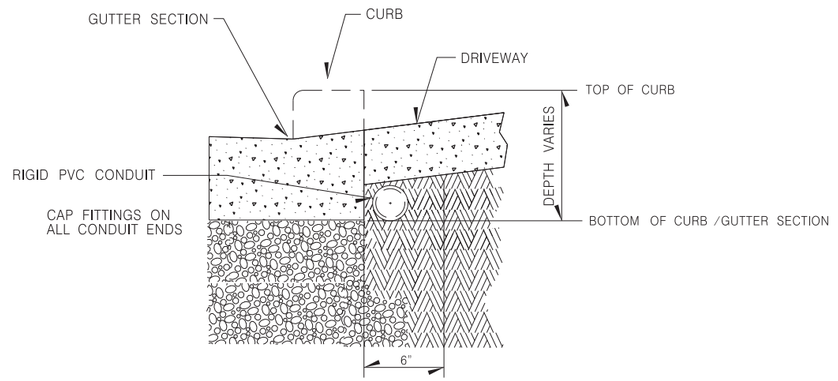
TYPICAL PLAN VIEW FOR
FLARED DRIVEWAY



TYPICAL PLAN VIEW FOR
DEPRESSED DRIVEWAY

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.



101 DETAIL

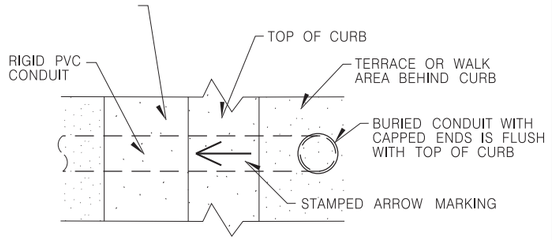
TYPICAL CONDUIT INSTALLATION
UNDER DRIVEWAYS OR PEDESTRIAN RAMPS

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.

SHEET 2 OF 11

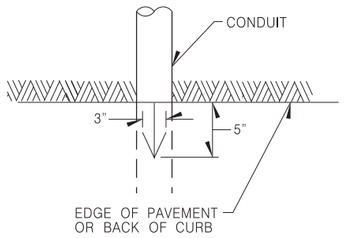
PROJECT NO: 1228–25–70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS	SHEET 95	E



TOP VIEW OF CURB STAMPING

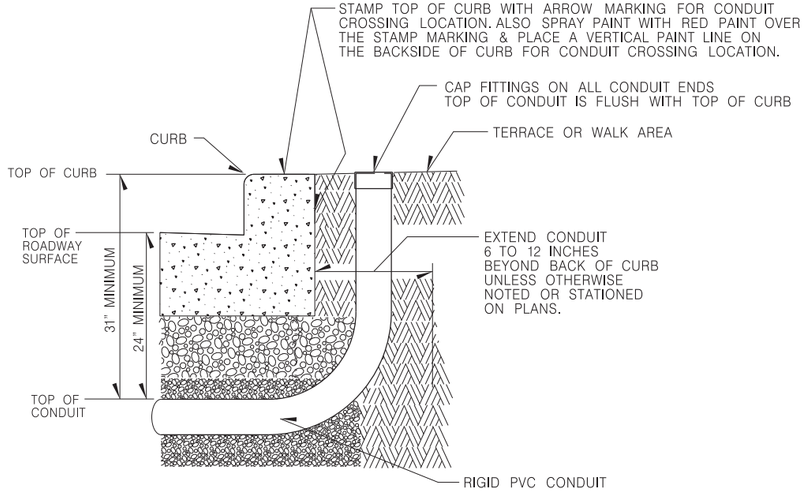
NOT TO SCALE

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

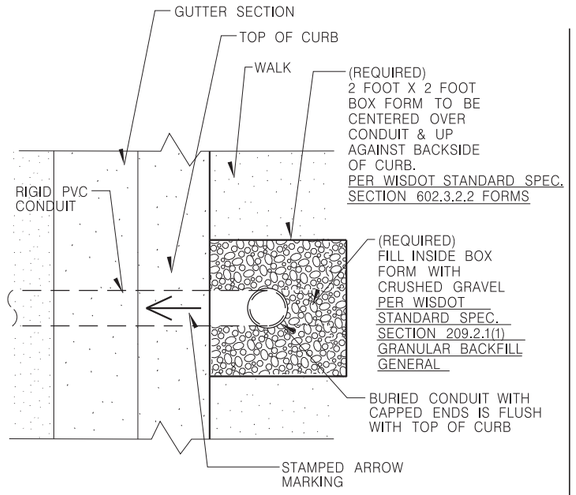


102 DETAIL VERSION #2

TYPICAL CONDUIT INSTALLATION FOR CROSSING ROADWAYS

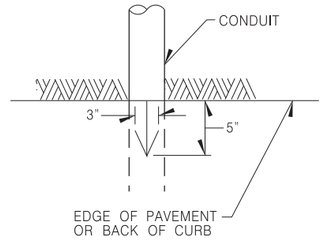
NOT TO SCALE

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

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.

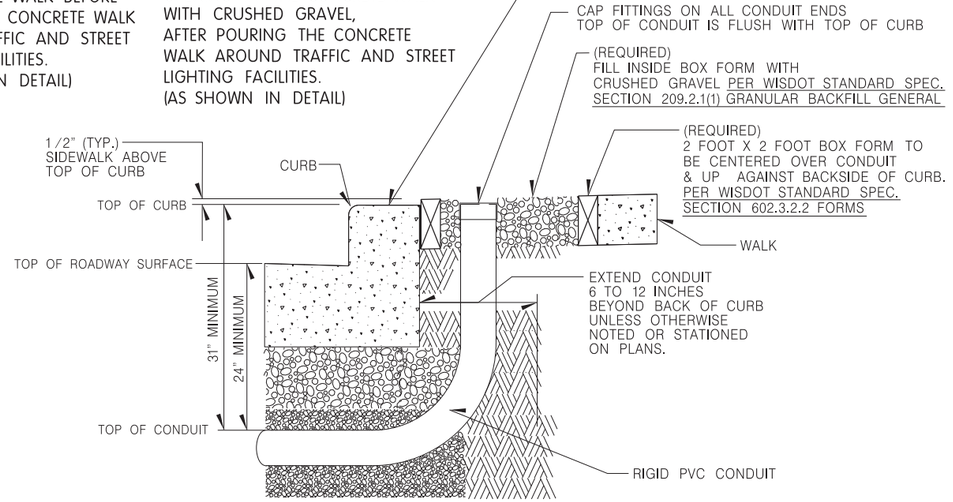


ARROW MARK

NOT TO SCALE

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

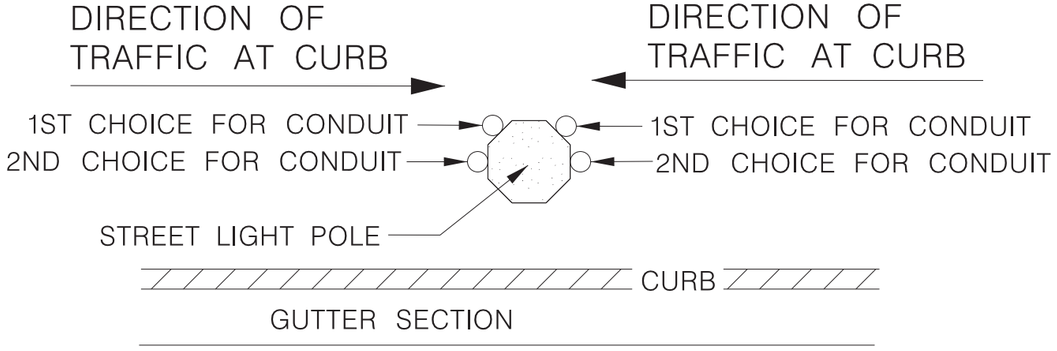
TYPICAL CONDUIT INSTALLATION FOR CROSSING ROADWAYS FROM FULL WALK AREAS

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.

SHEET 3 OF 11

NOTE: CAP FITTINGS ON CONDUIT ENDS



104 DETAIL

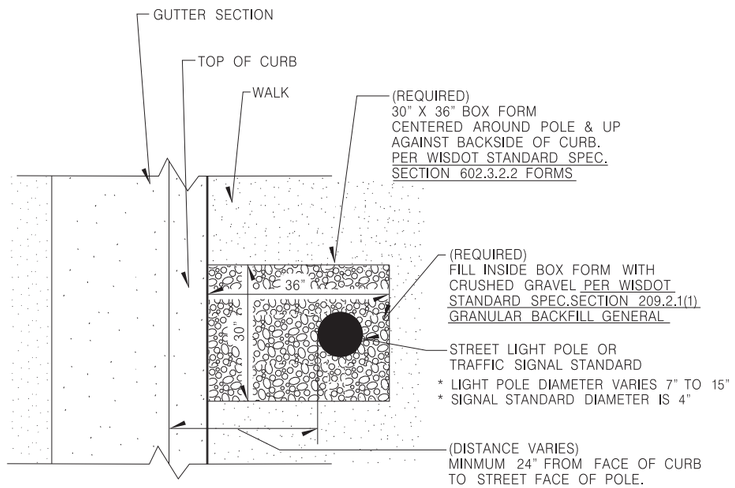
TYPICAL TRAFFIC SIGNAL RISER CONDUIT LOCATIONS ON STREET LIGHT POLE DEPENDING ON DIRECTION OF TRAFFIC AT CURB

NOT TO SCALE

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)

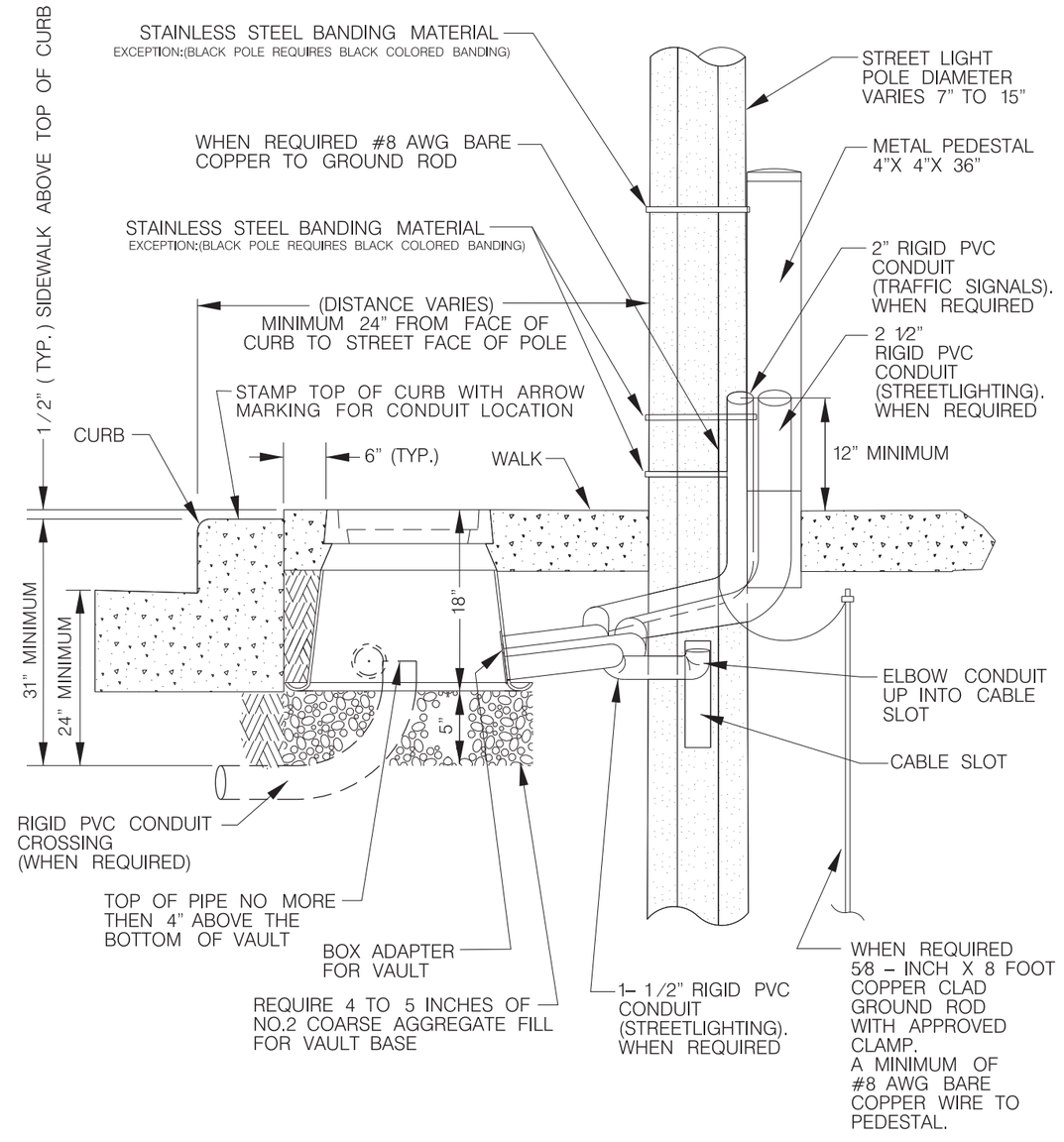


105 DETAIL

TYPICAL 30" X 36" BOX FORM AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL STANDARD

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.



108 DETAIL

TYPICAL CONDUIT INSTALLATION FROM VAULT TO POLE

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

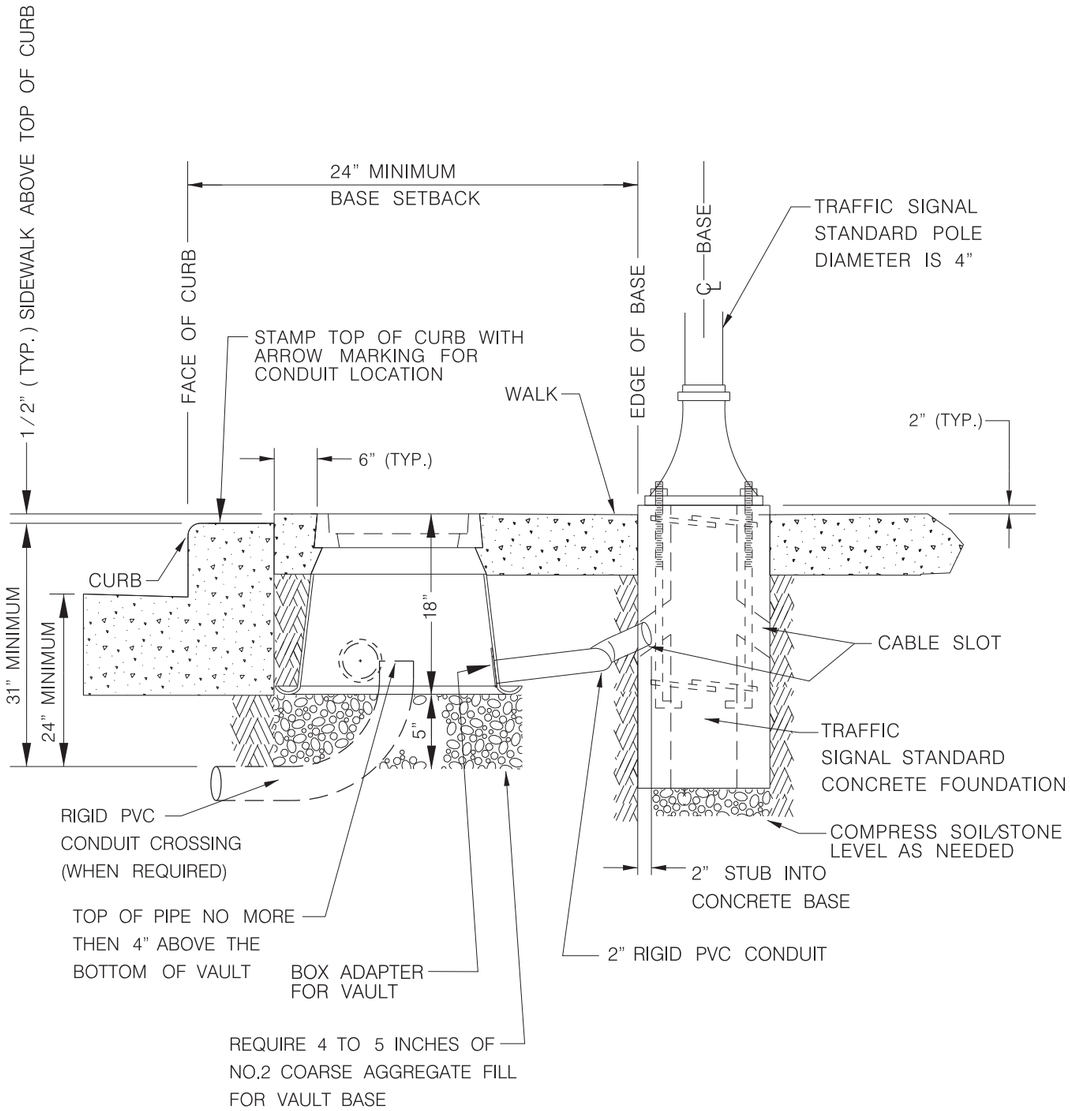
SHEET 4 OF 11

PROJECT NO: 1228–25–70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS	SHEET 97	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\I–94 Bridges 1228–25–00\Copy of aliML_Sara'sEdits.dgn PLOT DATE : 27–SEP–2013 09:57 PLOT BY : jbondo PLOT NAME : PLOT SCALE : 19.999960:1.000000

WISDOT/CADDS SHEET 42

2

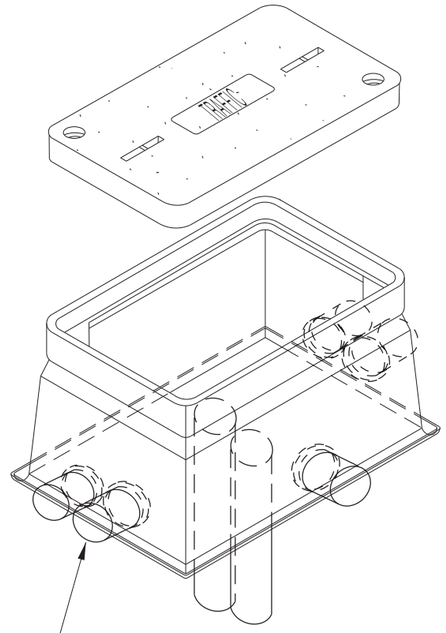


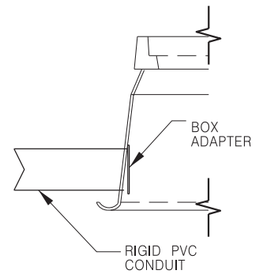
109 DETAIL

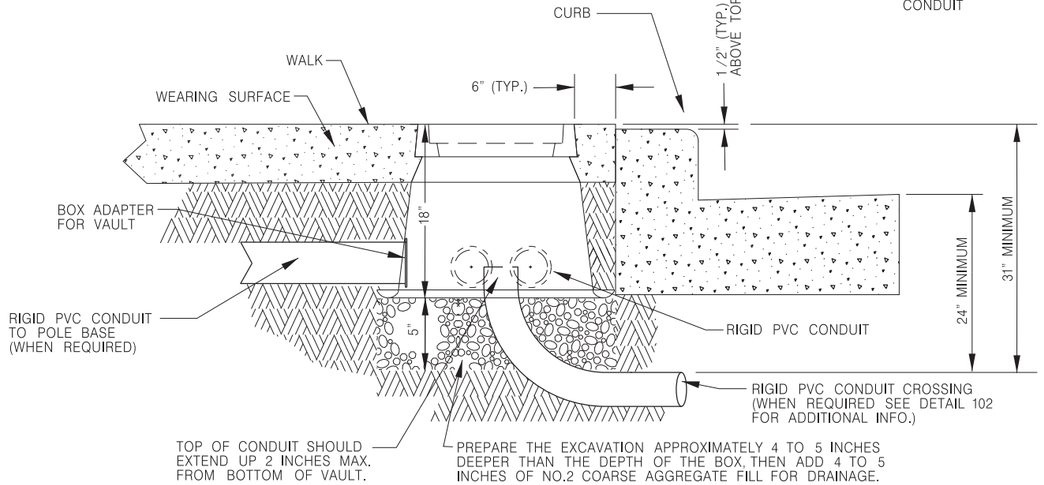
TYPICAL CONDUIT INSTALLATION FROM VAULT TO SIGNAL STANDARD AND TYPICAL BASE INSTALLATION

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM TRAFFIC & LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.







112 DETAIL

TYPICAL VAULT INSTALLATION IN WALK

NOT TO SCALE

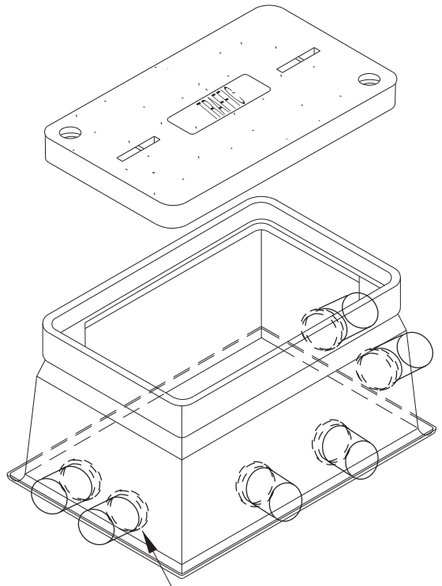
ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

SHEET 5 OF 11

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS	SHEET 98	E

FILE NAME : W:\bes\pavings\2014work\I43-94 Bridges\2014-01-15 Revisions 1228-25-70.dgn
PLOT DATE : 22-JAN-2014 08:22
PLOT BY : jbondo
PLOT NAME :
PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

2

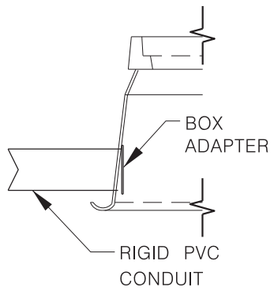


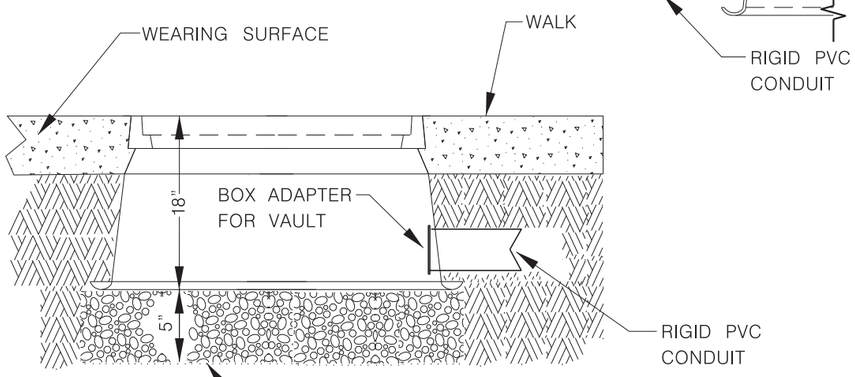
HEAVY DUTY COVER
W/ ELECTRIC LOGO
& W /2 BOLTS
COLOR: GRAY

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





PREPARE THE EXCAVATION APPROXIMATELY 4 TO 5 INCHES
DEEPER THAN THE DEPTH OF THE BOX, THEN ADD 4 TO 5
INCHES OF NO.2 COARSE AGGREGATE FILL FOR DRAINAGE.

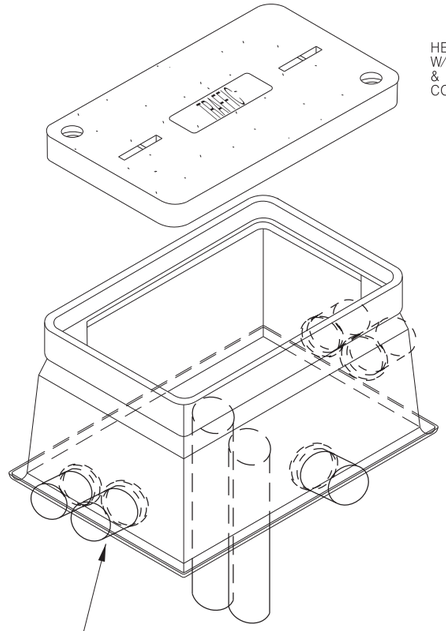
113 DETAIL

TYPICAL VAULT INSTALLATION
IN SIDEWALK

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.

2



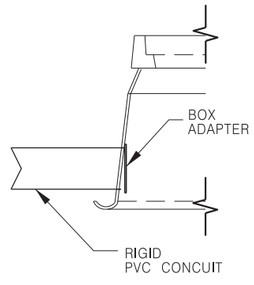
HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W /2 BOLTS
COLOR: GRAY

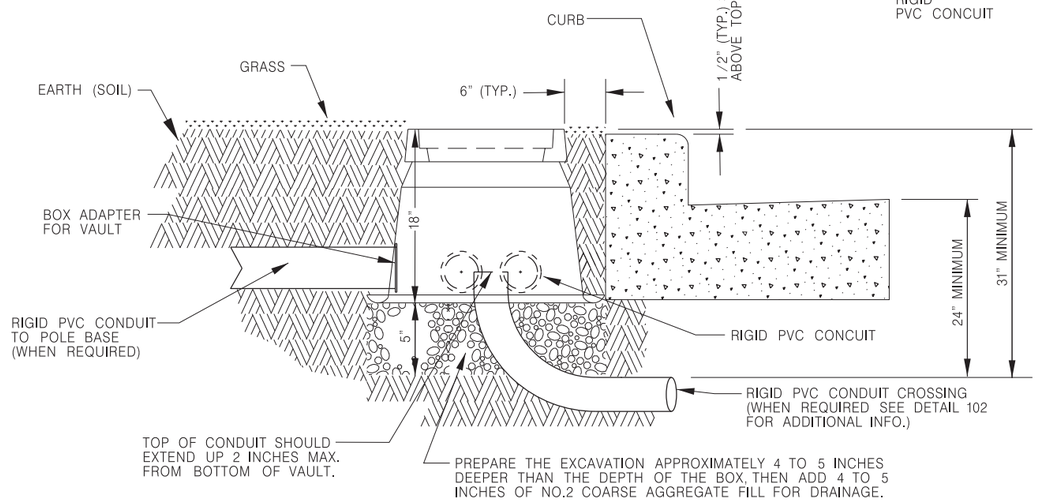
ELECTRICAL VAULT
FLARED WALL
BOX W /NO BASE
COLOR: GRAY

(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL P.V.C. CONDUITS





PREPARE THE EXCAVATION APPROXIMATELY 4 TO 5 INCHES
DEEPER THAN THE DEPTH OF THE BOX, THEN ADD 4 TO 5
INCHES OF NO.2 COARSE AGGREGATE FILL FOR DRAINAGE.

121 DETAIL

TYPICAL VAULT INSTALLATION IN GRASS AREA

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.

SHEET 6 OF 11

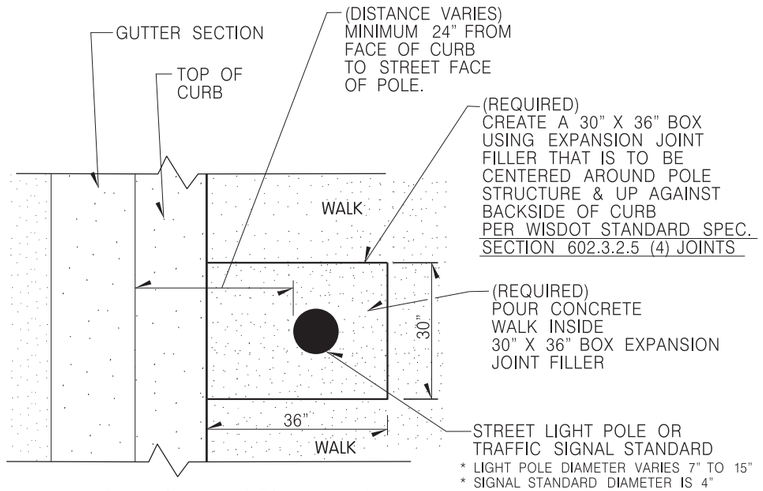
PROJECT NO: 1228–25–70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS	SHEET 99	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\I–94 Bridges 1228–25–00\Copy of aliML_Sara'sEdits.dgn PLOT DATE : 27–SEP–2013 10:00 PLOT BY : jbondo PLOT NAME : PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

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.



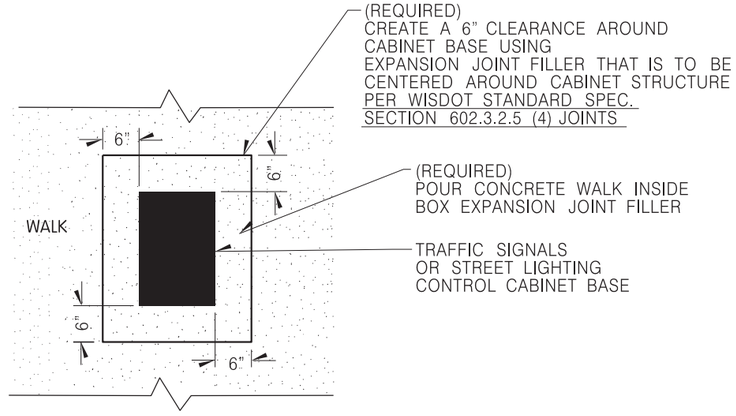
122 DETAIL VERSION #1 NOT TO SCALE

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.

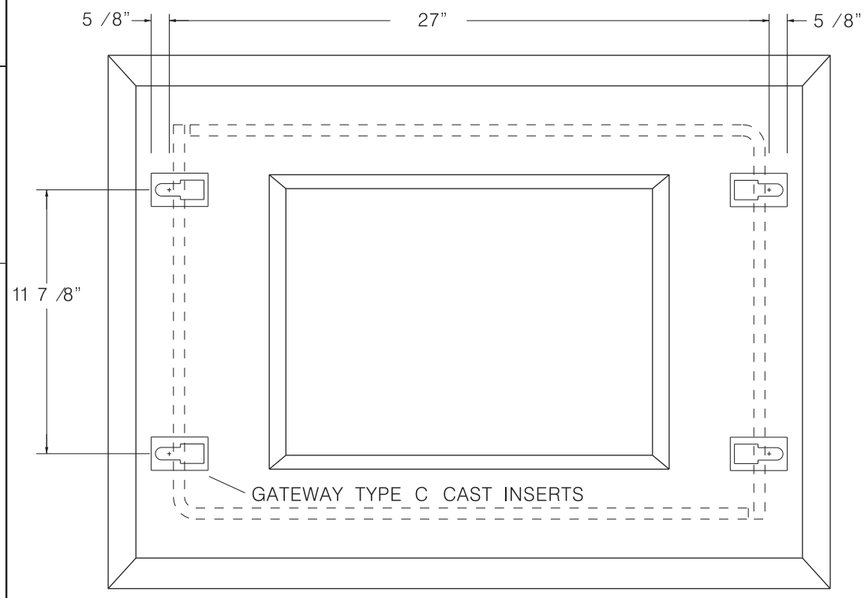
THE BOX SIZE OF THE AREA CREATED USING THE EXPANSION JOINT FILLER IS STANDARD AROUND LIGHT POLES AND TRAFFIC SIGNALS, BUT WILL VARY WHEN PLACED AROUND TRAFFIC & LIGHTING CONTROL CABINETS.

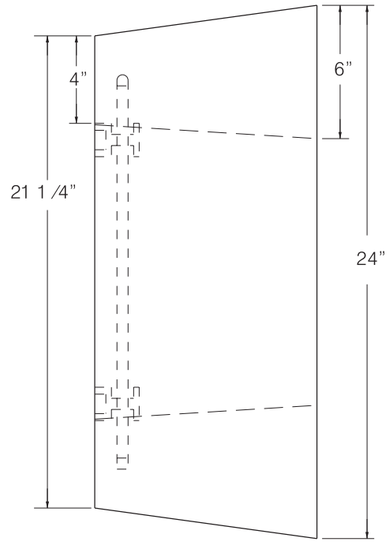


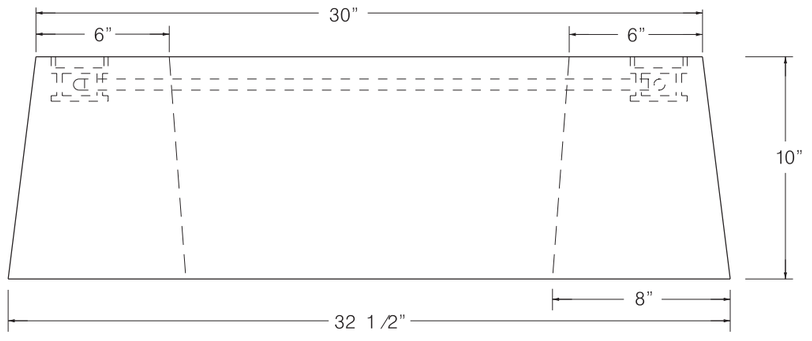
122 DETAIL VERSION #2 NOT TO SCALE

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.



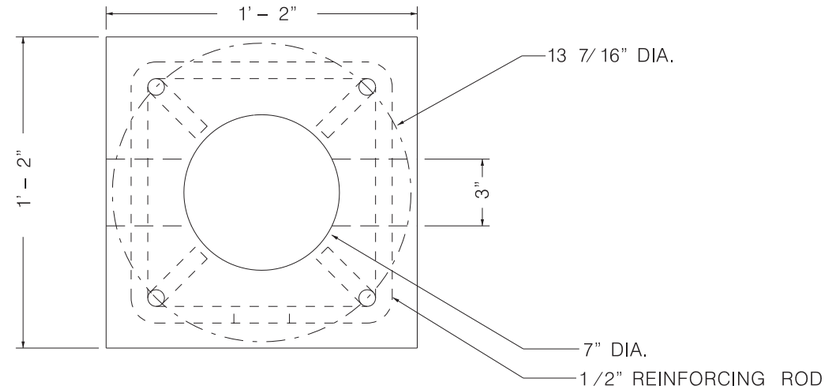


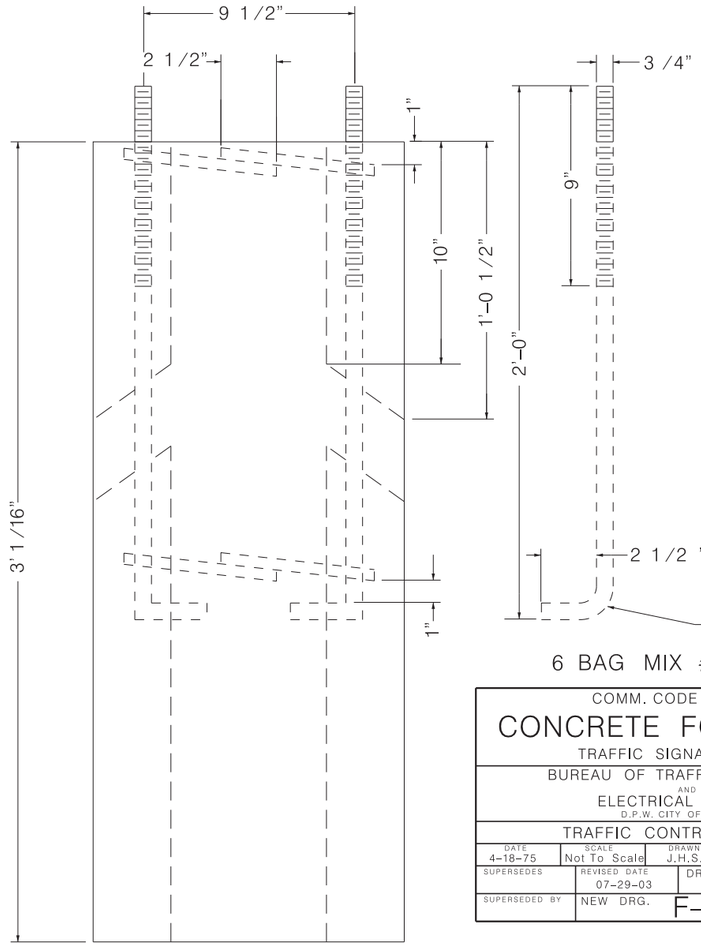


NOT TO SCALE

6 BAG MIX #1 STONE

COMM. CODE 1238-927				
CONCRETE FOUNDATION				
TRAFFIC SIGNAL CONTROL CABINET				
BUREAU OF TRAFFIC ENGINEERING AND ELECTRICAL SERVICES D.P.W. CITY OF MILWAUKEE				
TRAFFIC CONTROL MATERIAL				
DATE 4-22-75	SCALE 1/4" = 1"	DRAWN J.H.S.	CHECKED B.J.T.	APPROVED R.J.B.
SUPERSEDES C-65-546-T	REVISED DATE 01-30-02	DRG. C-75-564-T		
SUPERSEDED BY	NEW DRG. F-82-536-T			





NOT TO SCALE

6 BAG MIX #1 STONE

COMM. CODE 1238-936				
CONCRETE FOUNDATION				
TRAFFIC SIGNAL STANDARD				
BUREAU OF TRAFFIC ENGINEERING AND ELECTRICAL SERVICES D.P.W. CITY OF MILWAUKEE				
TRAFFIC CONTROL MATERIAL				
DATE 4-18-75	SCALE Not To Scale	DRAWN J.H.S.	CHECKED B.J.T.	APPROVED R.J.B.
SUPERSEDES	REVISED DATE 07-29-03	DRG. C-75-563-T		
SUPERSEDED BY	NEW DRG. F-82-535-T			

SHEET 8 OF 11

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS	SHEET 101 E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects-LFA\Preliminary Engineering\I-94 Bridges 1228-25-00\Copy of aliML.dgn
PLOT DATE : 27-SEP-2013 10:06
PLOT BY : jbondo
PLOT NAME :
PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

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).

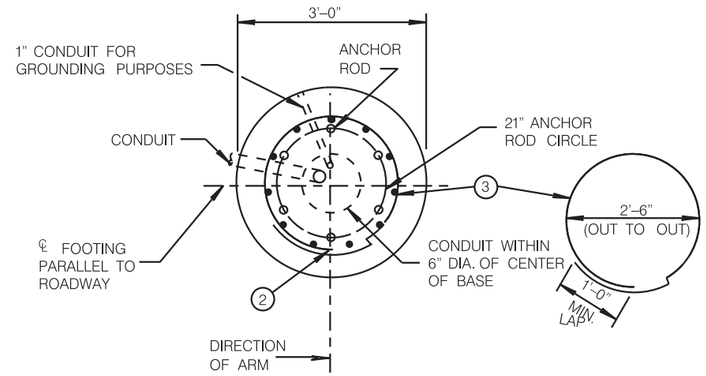
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

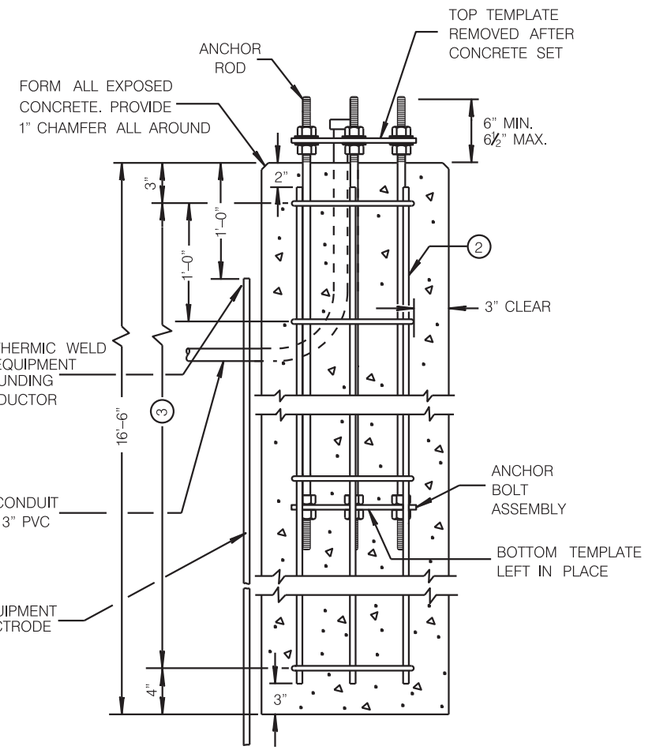
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER–RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (11) NO. 8 X 16'–1" BAR STEEL REINFORCEMENT.

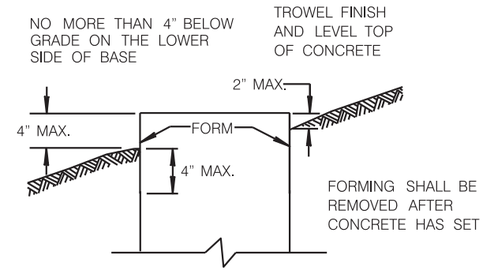
(3) (17) NO. 4 X 9'–0" BAR STEEL REINFORCEMENT @ 1'–0" C–C.

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.

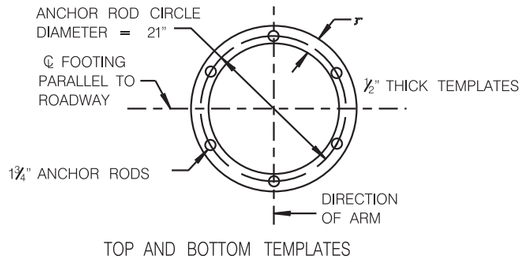




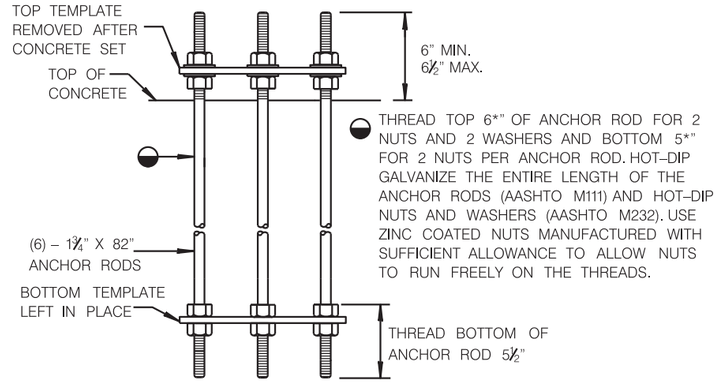
CONCRETE BASE TYPE 10 SPECIAL



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

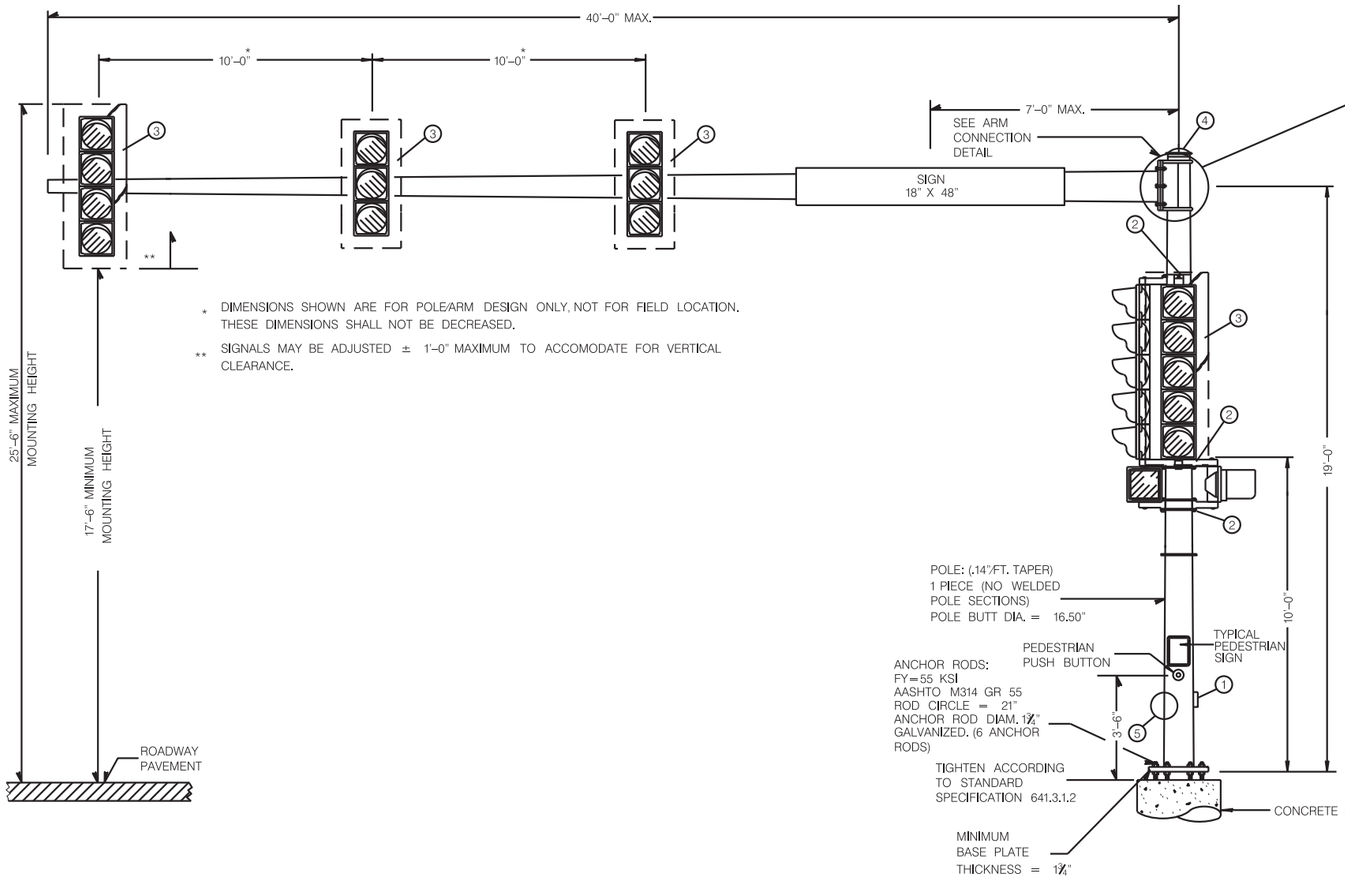
CONCRETE BASE TYPE 10 SPECIAL

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

SHEET 9 OF 11

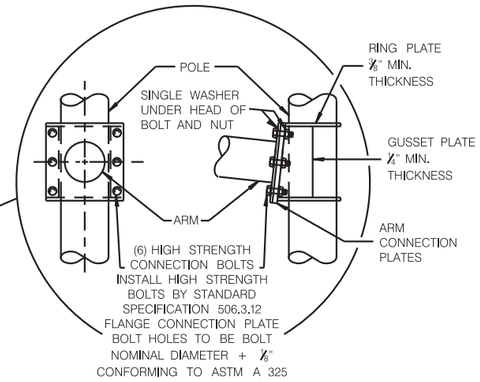
PROJECT NO: 1228–25–70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS	SHEET 102	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\I–94 Bridges 1228–25–00\Copy of allML.dgn
PLOT DATE : 27–SEP–2013 10:08
PLOT BY : jbondo
PLOT NAME :
PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

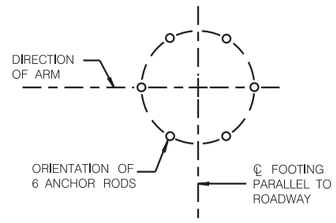


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** 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

TYPE 12 POLE SPECIAL
35'– 40' MONOTUBE ARM

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

SHEET 10 OF 11

PROJECT NO: 1228–25–70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS	SHEET 103	E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects–LFA\Preliminary Engineering\I–94 Bridges 1228–25–00\Copy of allML.dgn
PLOT DATE : 27–SEP–2013 10:09
PLOT BY : jbondo
PLOT NAME :
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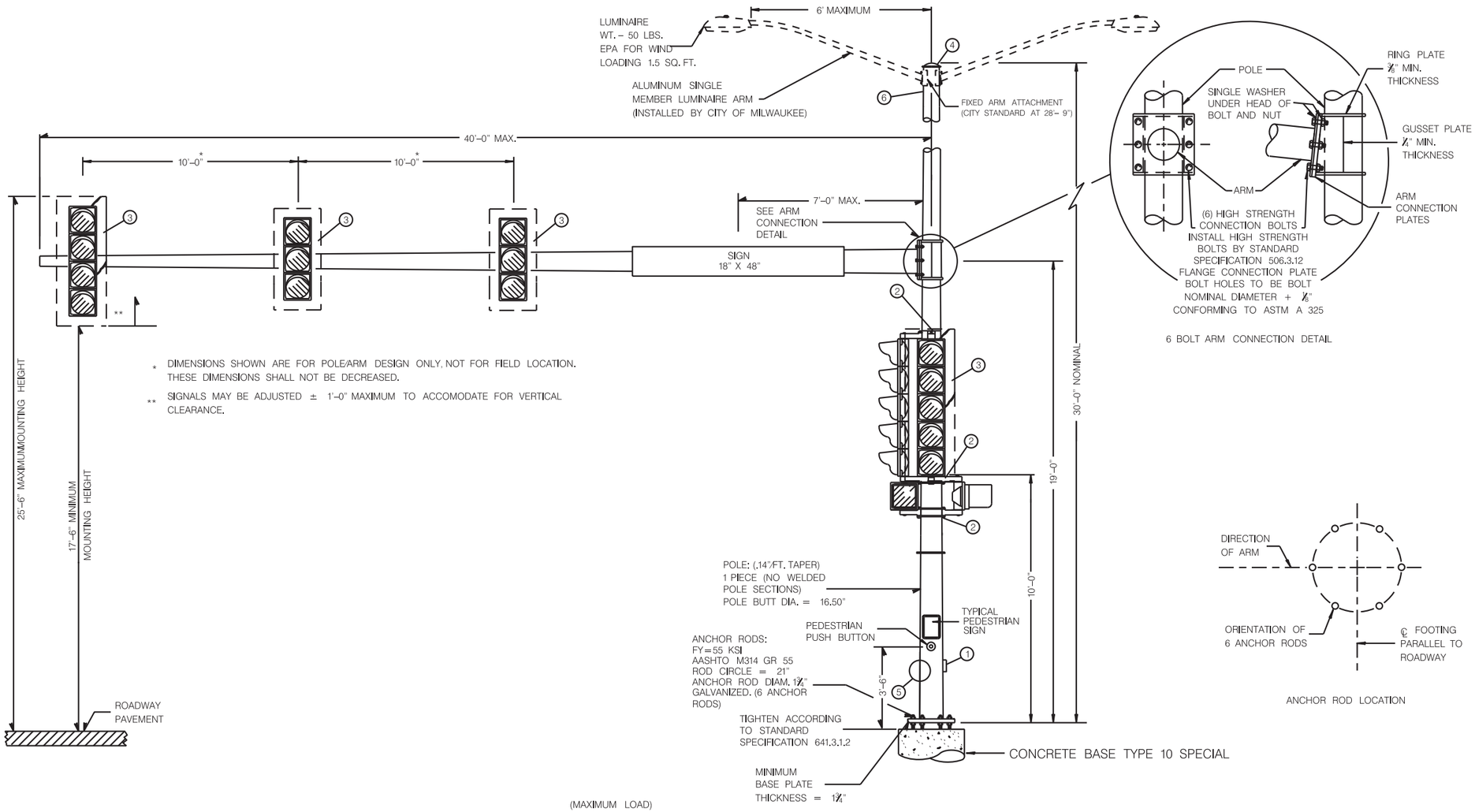
WISDOT/CADDS SHEET 42



* 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 13 POLE SPECIAL
35'– 40' MONOTUBE ARM

6 BOLT ARM CONNECTION DETAIL

ANCHOR ROD LOCATION

TYPE 13 POLE SPECIAL
35'– 40' MONOTUBE ARM

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

SHEET 11 OF 11

PROJECT NO: 1228–25–70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS	SHEET 104	E

2

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, 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.

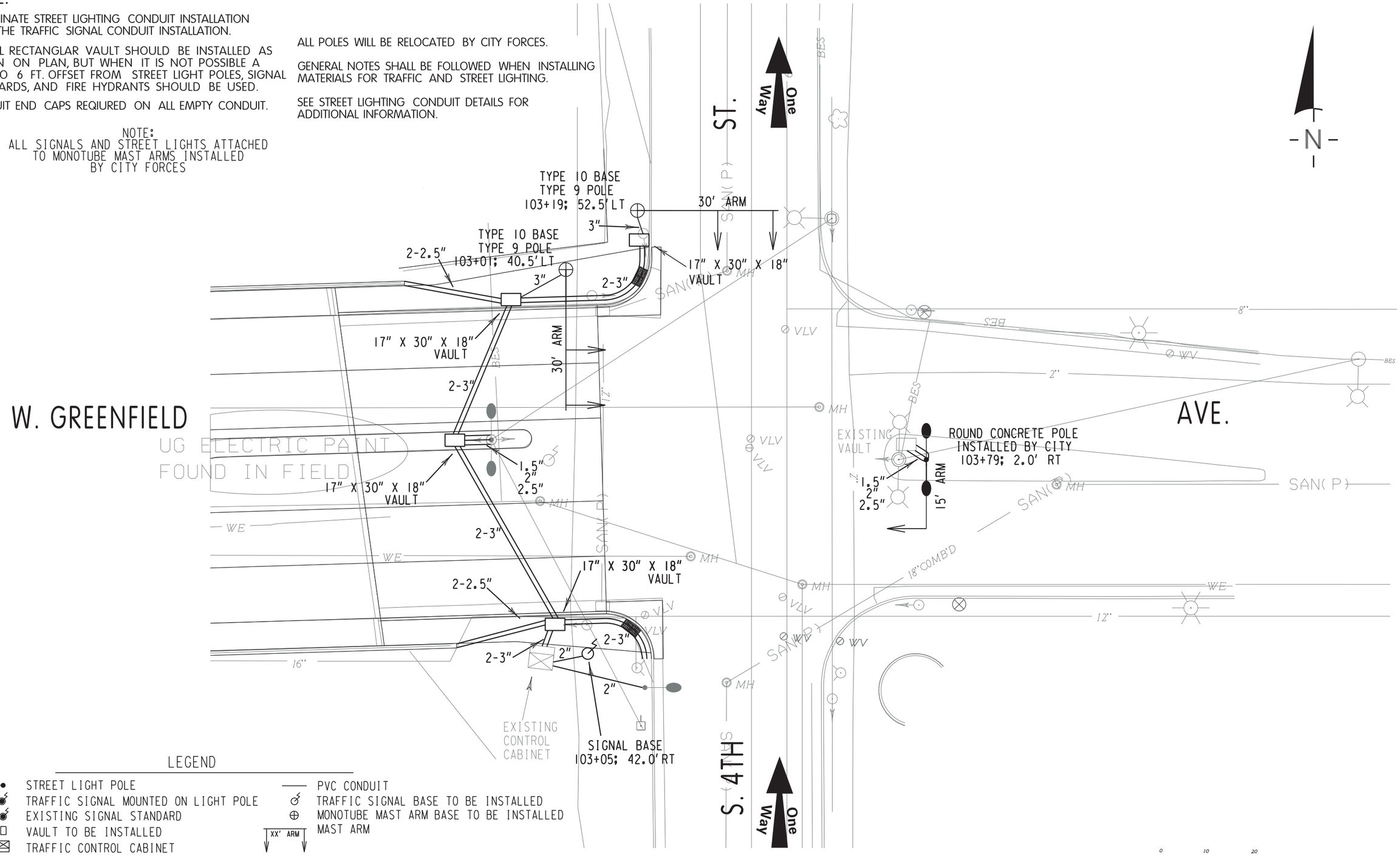
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

NOTE:
ALL SIGNALS AND STREET LIGHTS ATTACHED TO MONOTUBE MAST ARMS INSTALLED BY CITY FORCES

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

0 10 20

SHEET 1 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 105	E

2

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, 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.

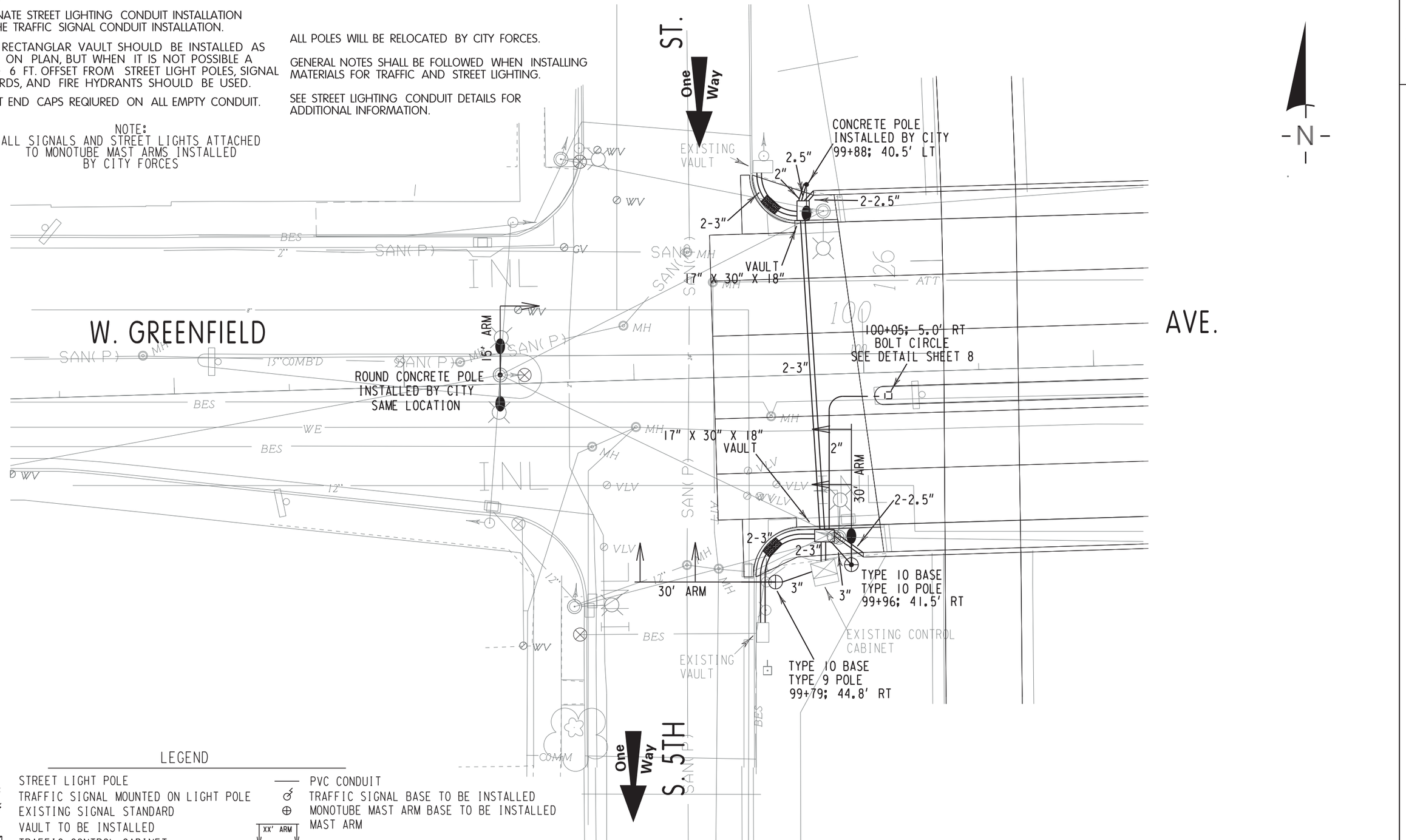
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

NOTE:
ALL SIGNALS AND STREET LIGHTS ATTACHED TO MONOTUBE MAST ARMS INSTALLED BY CITY FORCES



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

0 10 20

SHEET 2 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 106	E

FILE NAME : W:\bes\pavings\2014work\I43-94 Bridges\2014-01-15 Revisions 1228-25-70.dgn
PLOT DATE : 22-JAN-2014 08:30
PLOT BY : jbondo
PLOT NAME :
PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

2

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, 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.

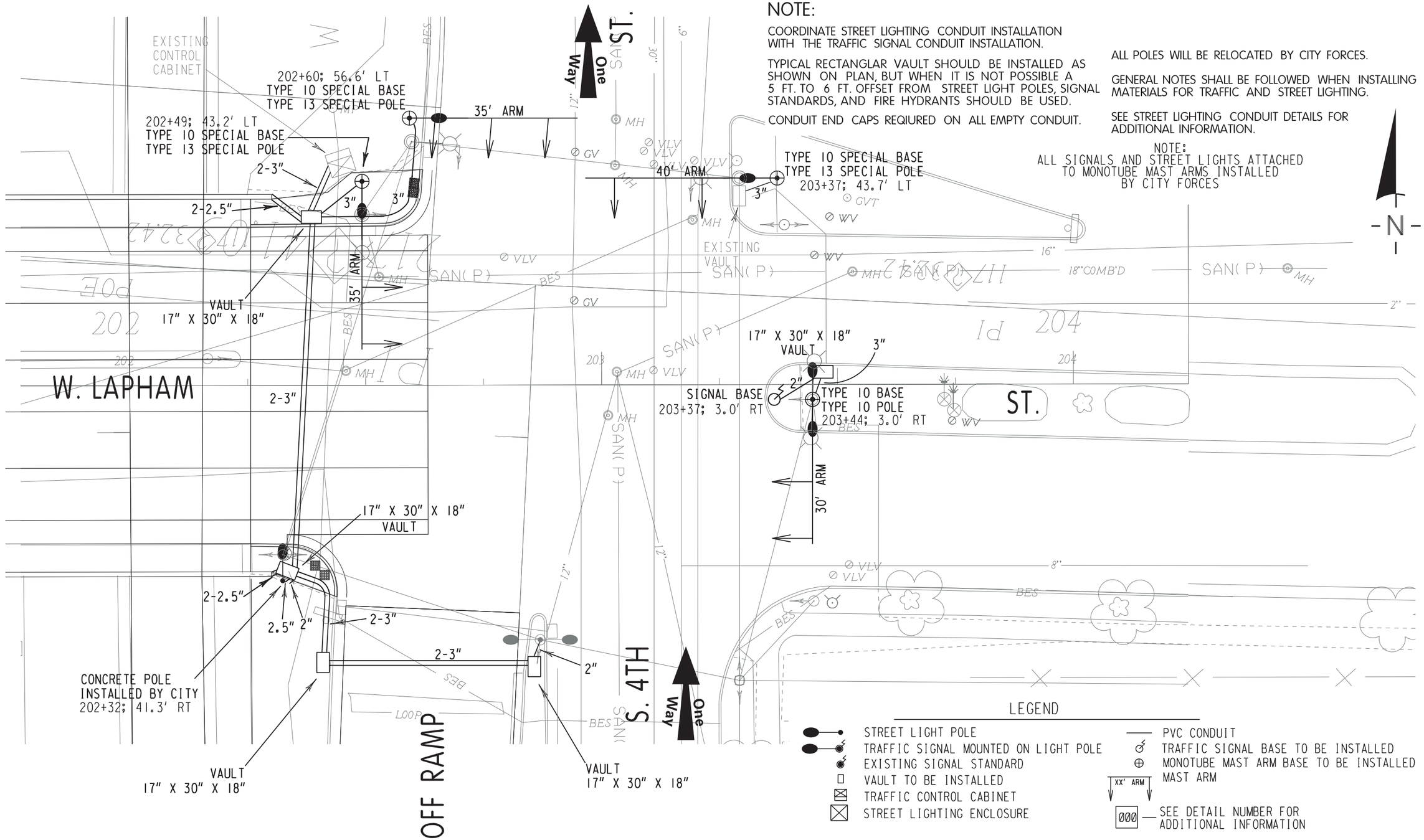
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

NOTE:
ALL SIGNALS AND STREET LIGHTS ATTACHED TO MONOTUBE MAST ARMS INSTALLED BY CITY FORCES



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

0 10 20

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 107	E

FILE NAME : W:\bes\pavings\2014work\I43-94 Bridges\2014-01-15 Revisions 1228-25-70.dgn
PLOT DATE : 22-JAN-2014 08:31
PLOT BY : jbondo
PLOT NAME :
PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

2

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, 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.

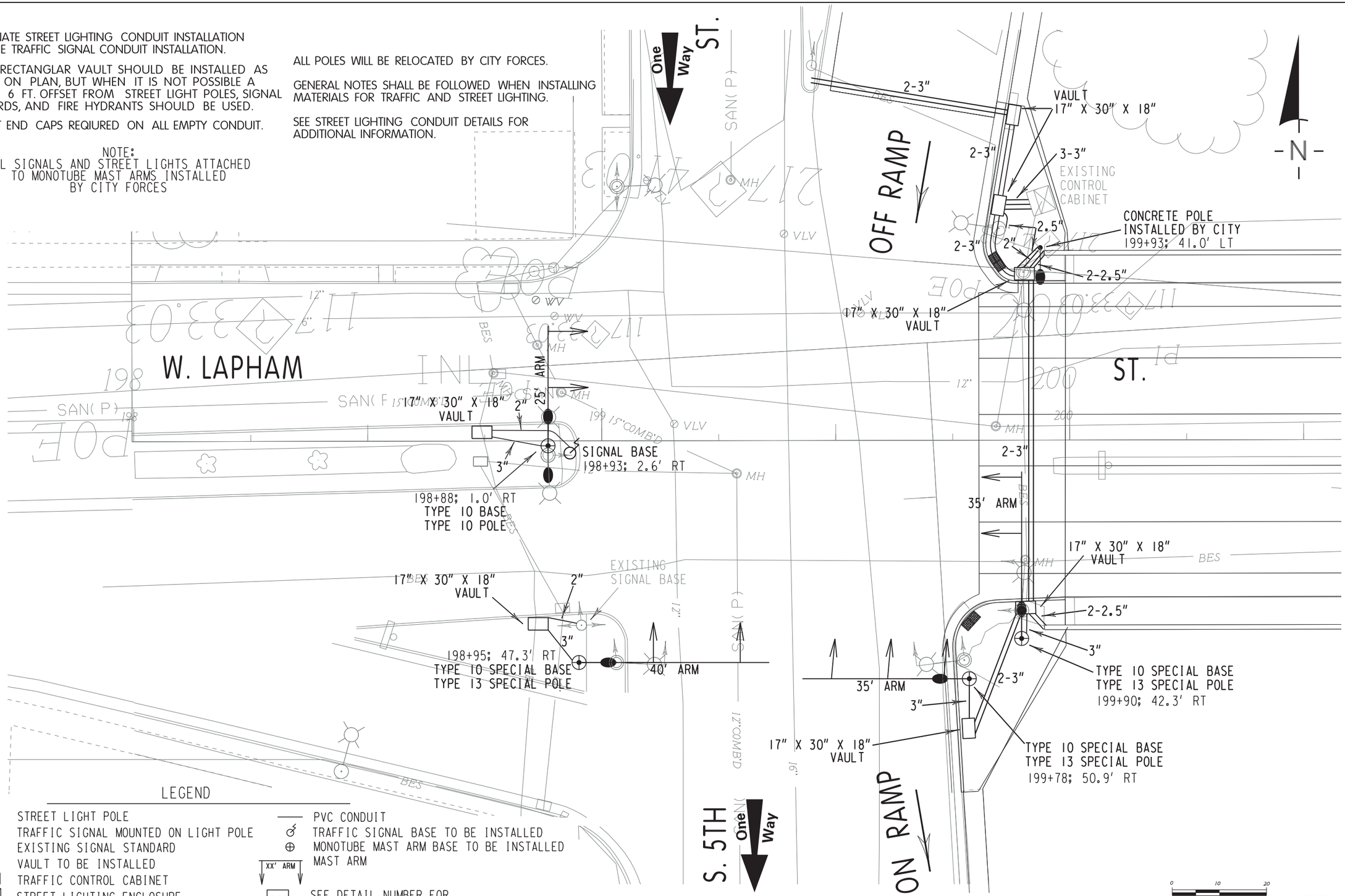
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

NOTE:
ALL SIGNALS AND STREET LIGHTS ATTACHED TO MONOTUBE MAST ARMS INSTALLED BY CITY FORCES

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SHEET 4 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 108	E

FILE NAME : W:\bes\pavings\2014work\I43-94 Bridges\2014-01-15 Revisions 1228-25-70.dgn
PLOT DATE : 22-JAN-2014 08:35
PLOT BY : jbondo
PLOT NAME :
PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

2

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, 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.

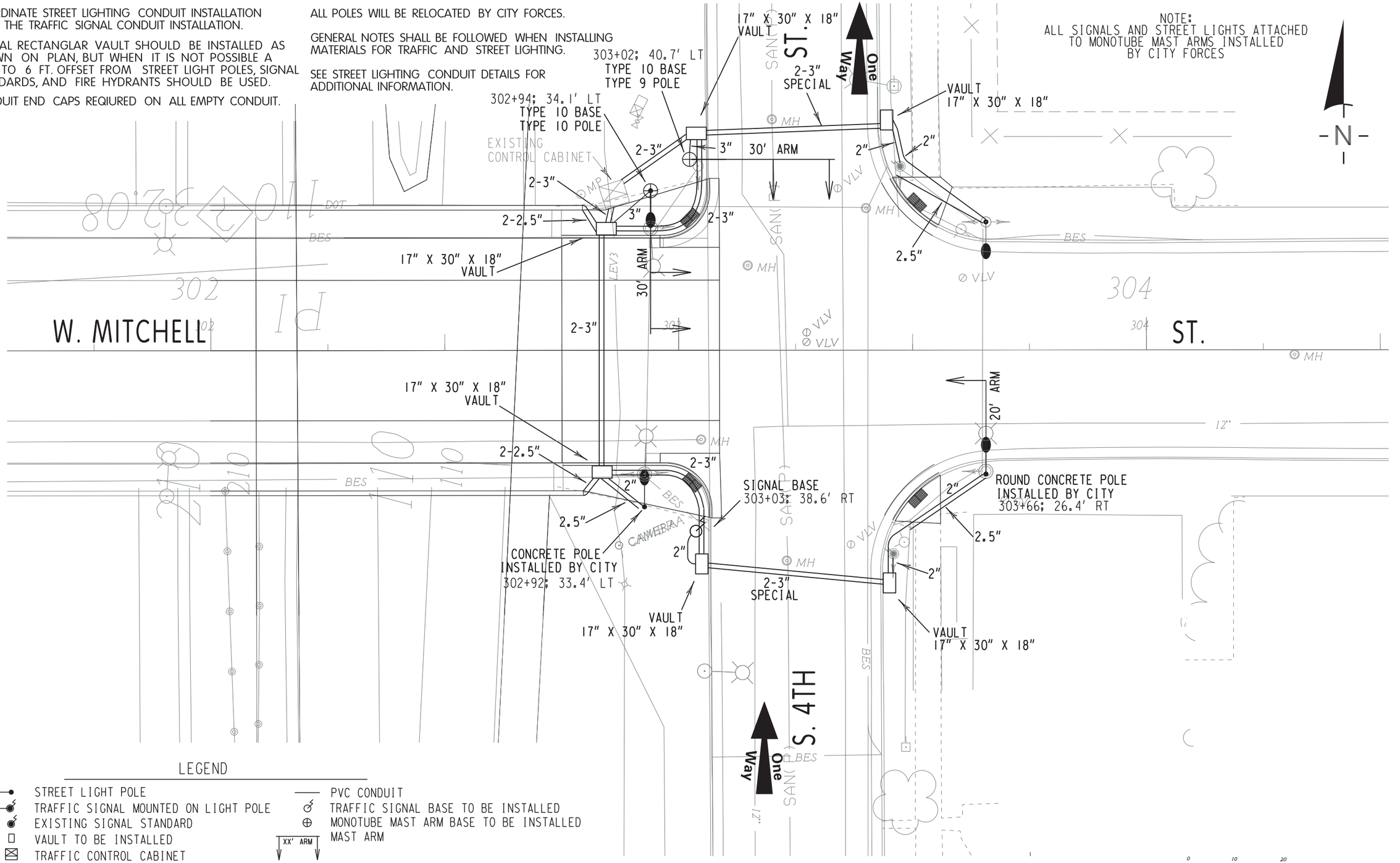
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

NOTE:
ALL SIGNALS AND STREET LIGHTS ATTACHED TO MONOTUBE MAST ARMS INSTALLED BY CITY FORCES



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SHEET 5 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 109	E

FILE NAME : W:\bes\pavings\2014work\I43-94 Bridges\2014-01-15 Revisions 1228-25-70.dgn
PLOT DATE : 22-JAN-2014 08:36
PLOT BY : jbondo
PLOT NAME :
PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

2

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, 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.

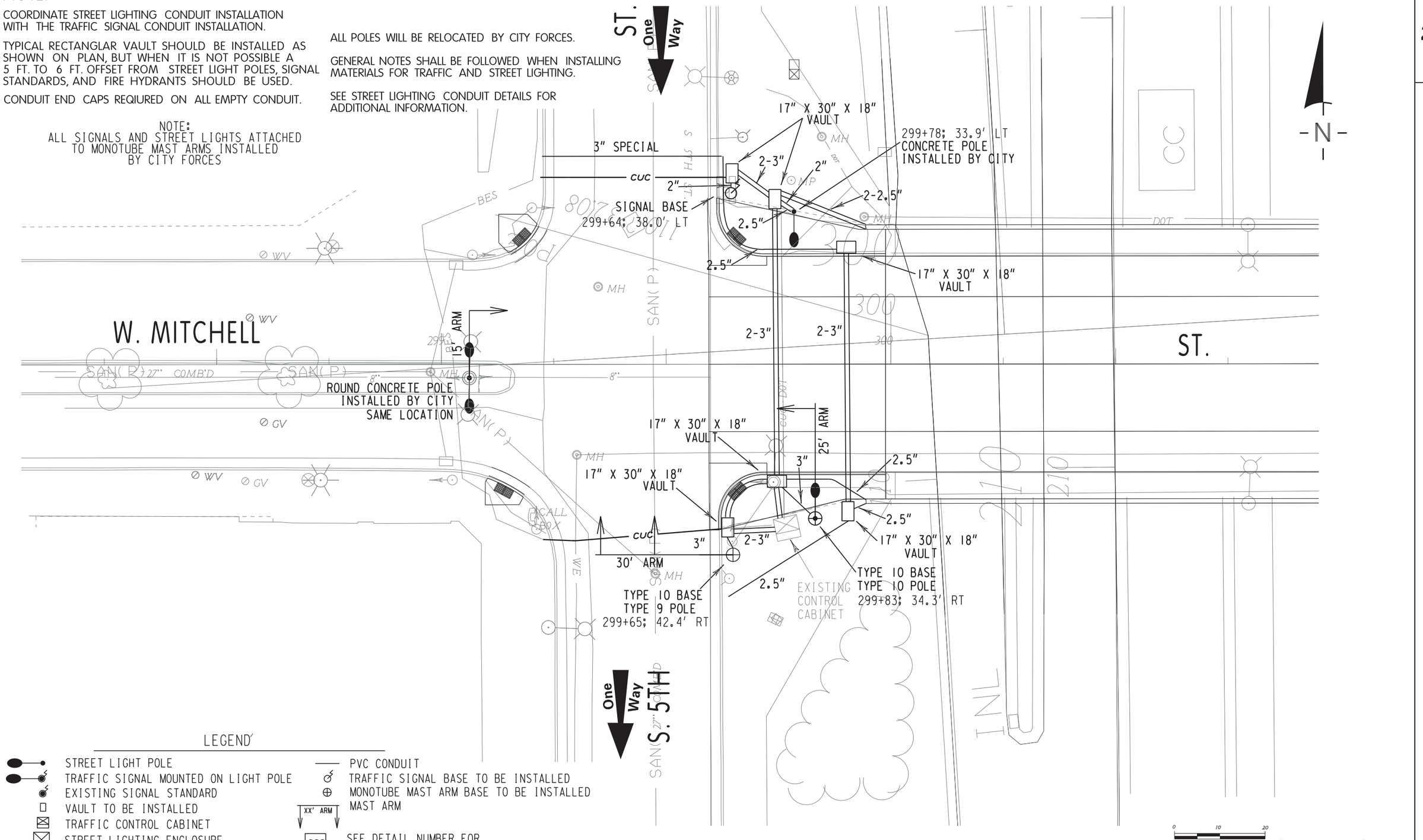
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

NOTE:
ALL SIGNALS AND STREET LIGHTS ATTACHED TO MONOTUBE MAST ARMS INSTALLED BY CITY FORCES

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SHEET 6 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 110	E

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, 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.

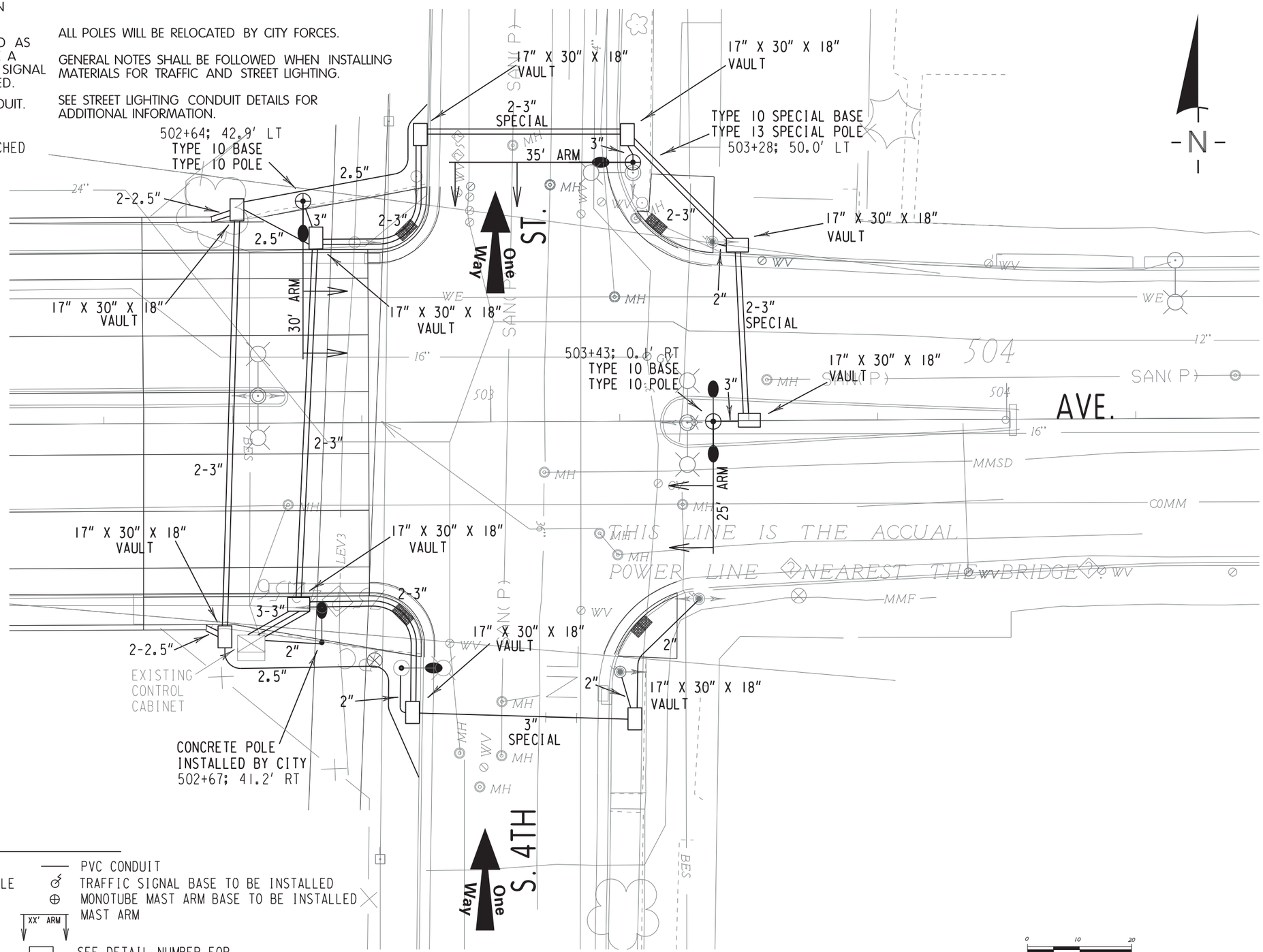
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

NOTE:
ALL SIGNALS AND STREET LIGHTS ATTACHED TO MONOTUBE MAST ARMS INSTALLED BY CITY FORCES

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

0 10 20

SHEET 7 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 111	E

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, 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.

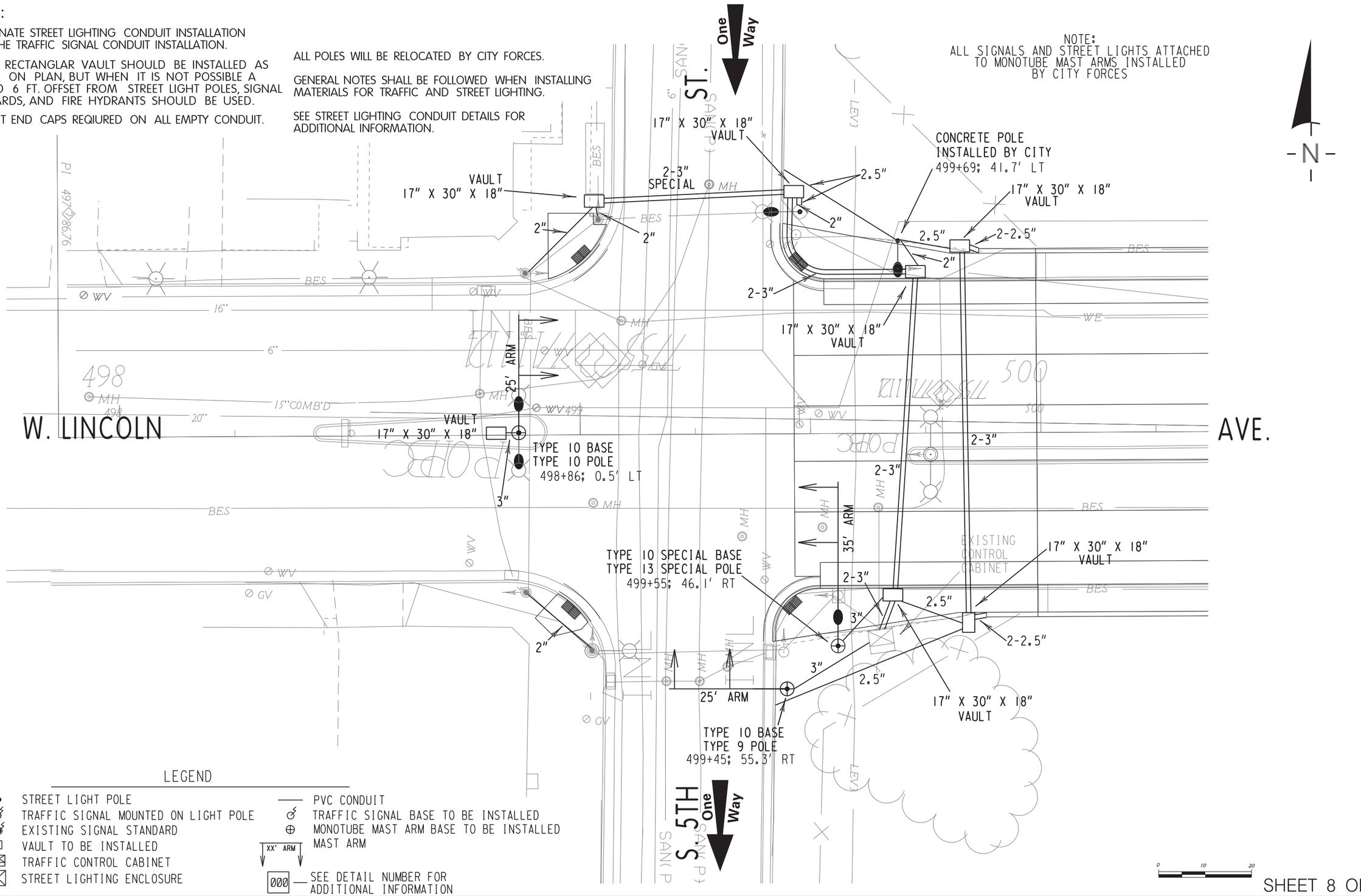
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

NOTE:
ALL SIGNALS AND STREET LIGHTS ATTACHED TO MONOTUBE MAST ARMS INSTALLED BY CITY FORCES



LEGEND

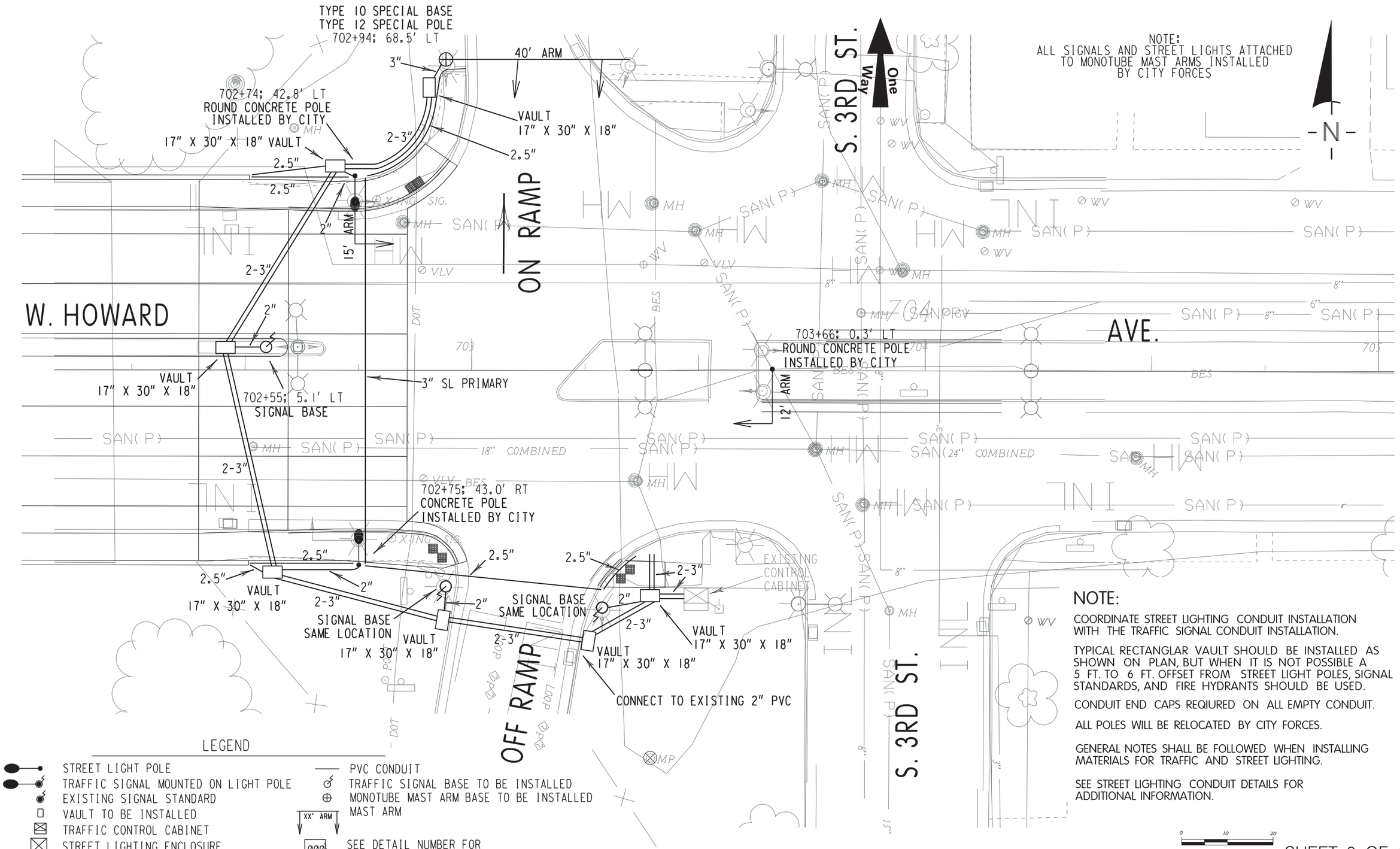
- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

0 10 20

SHEET 8 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 112 E

2



NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, 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.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

0 10 20

SHEET 9 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 113	E

FILE NAME : W:\bes\pavings\2014work\I43-94 Bridges\2014-01-15 Revisions 1228-25-70.dgn
PLOT DATE : 22-JAN-2014 08:41
PLOT BY : jbondo
PLOT NAME :
PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

2

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

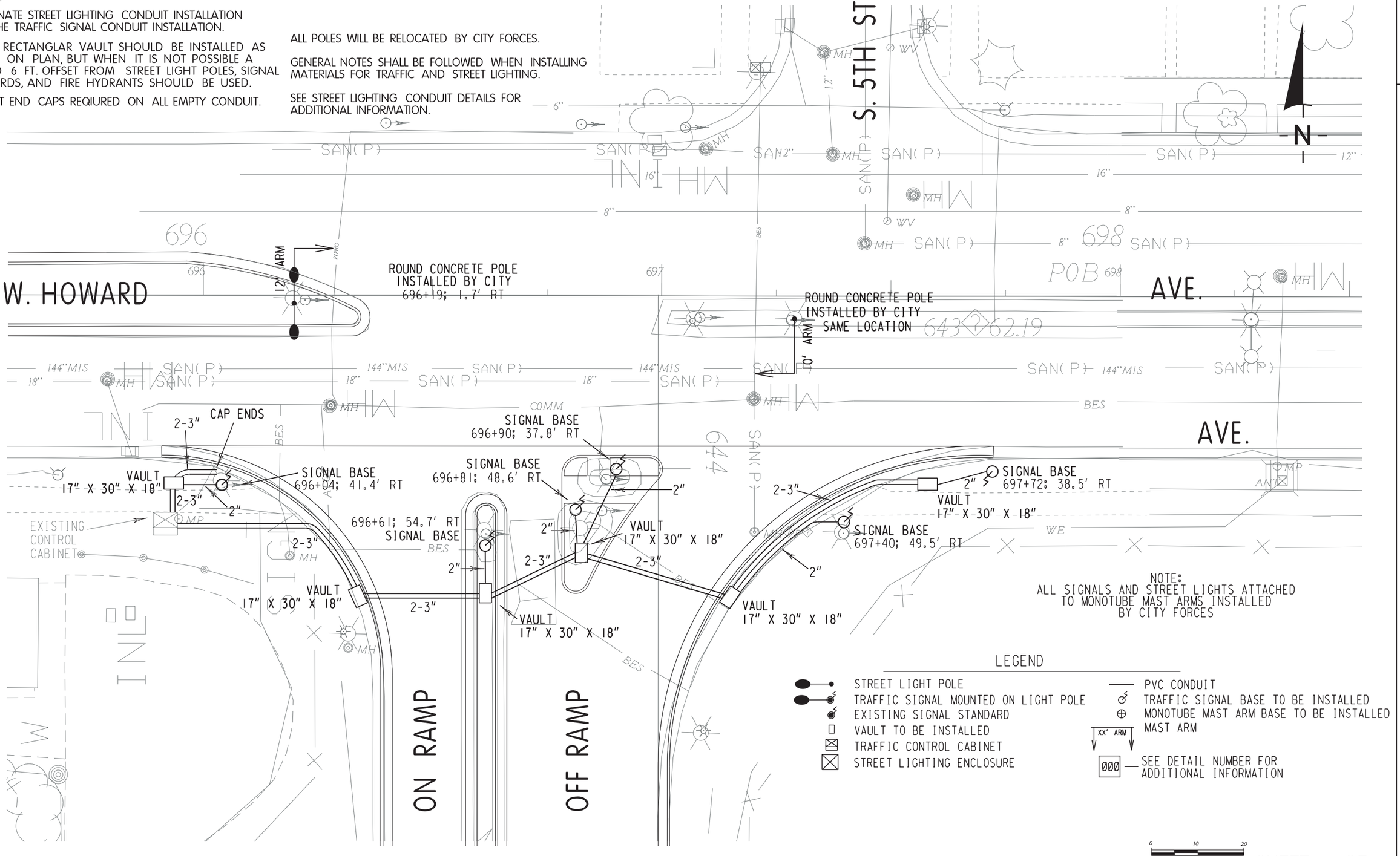
TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



SHEET 10 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 114	E

FILE NAME : W:\bes\pavings\2014work\I43-94 Bridges\2014-01-15 Revisions 1228-25-70.dgn
PLOT DATE : 22-JAN-2014 08:42
PLOT BY : jbondo
PLOT NAME :
PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

2

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

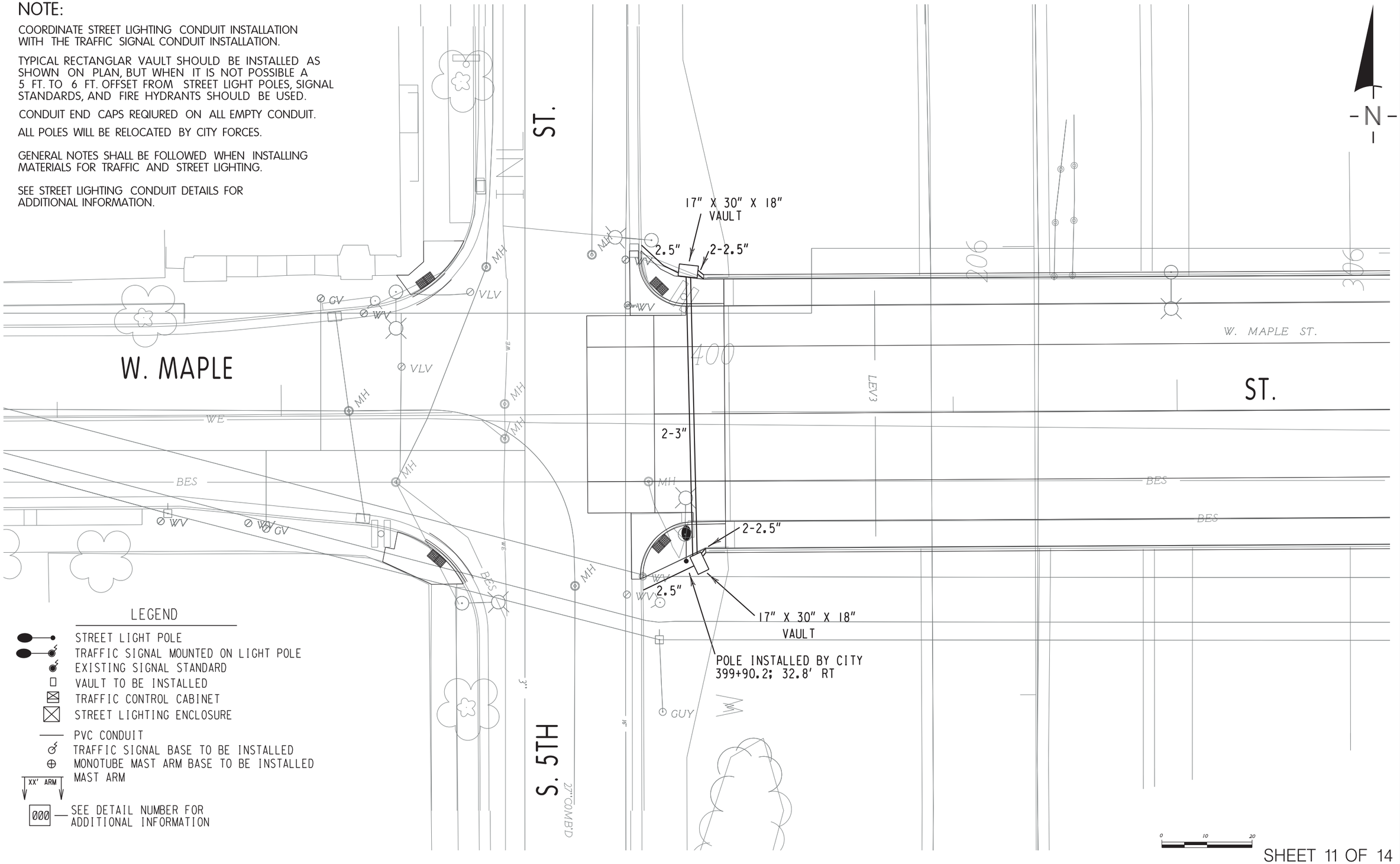
TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- MAST ARM (XX' ARM)
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SHEET 11 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 115	E

2

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

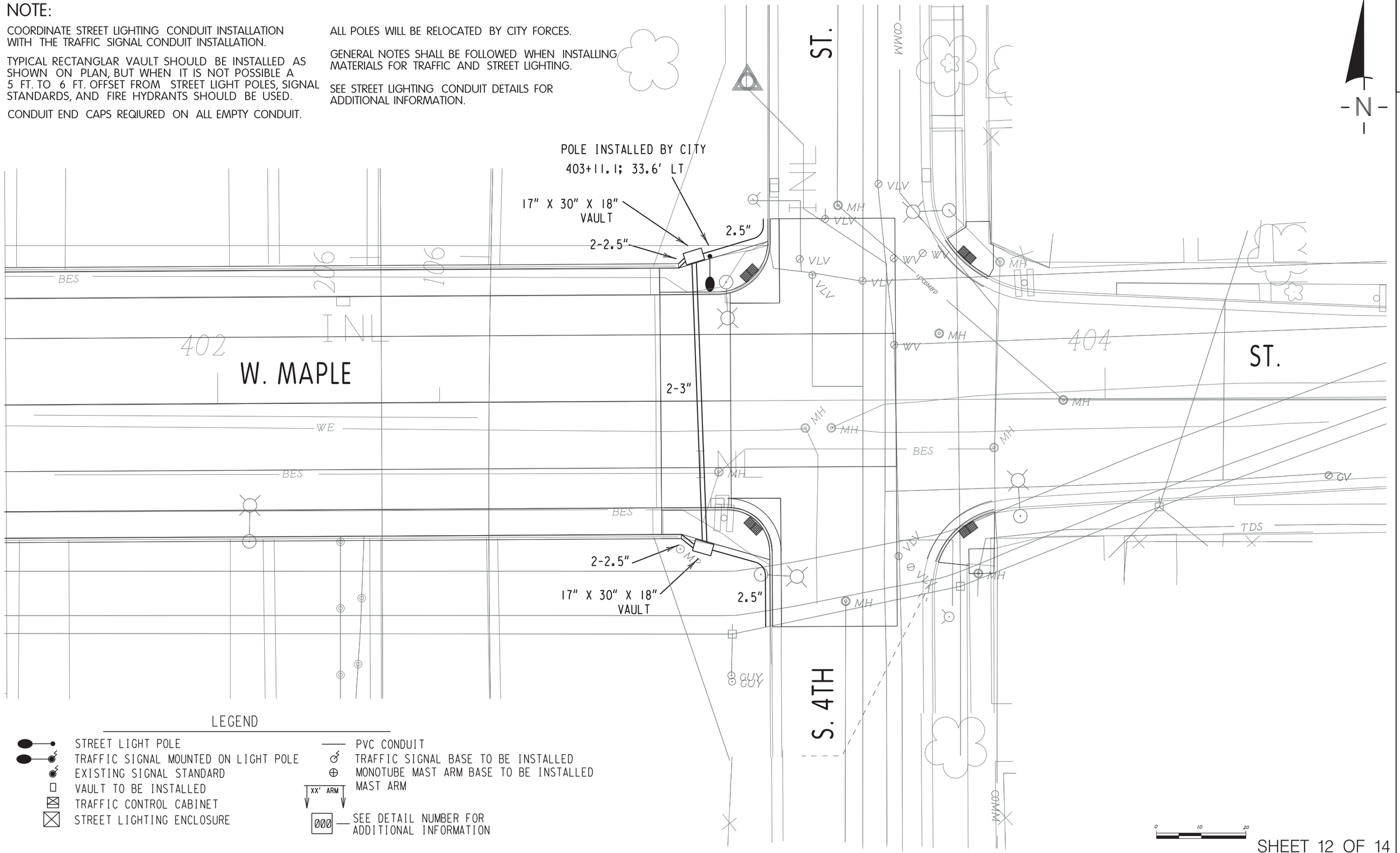
TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

SHEET 12 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 116	E

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, 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.

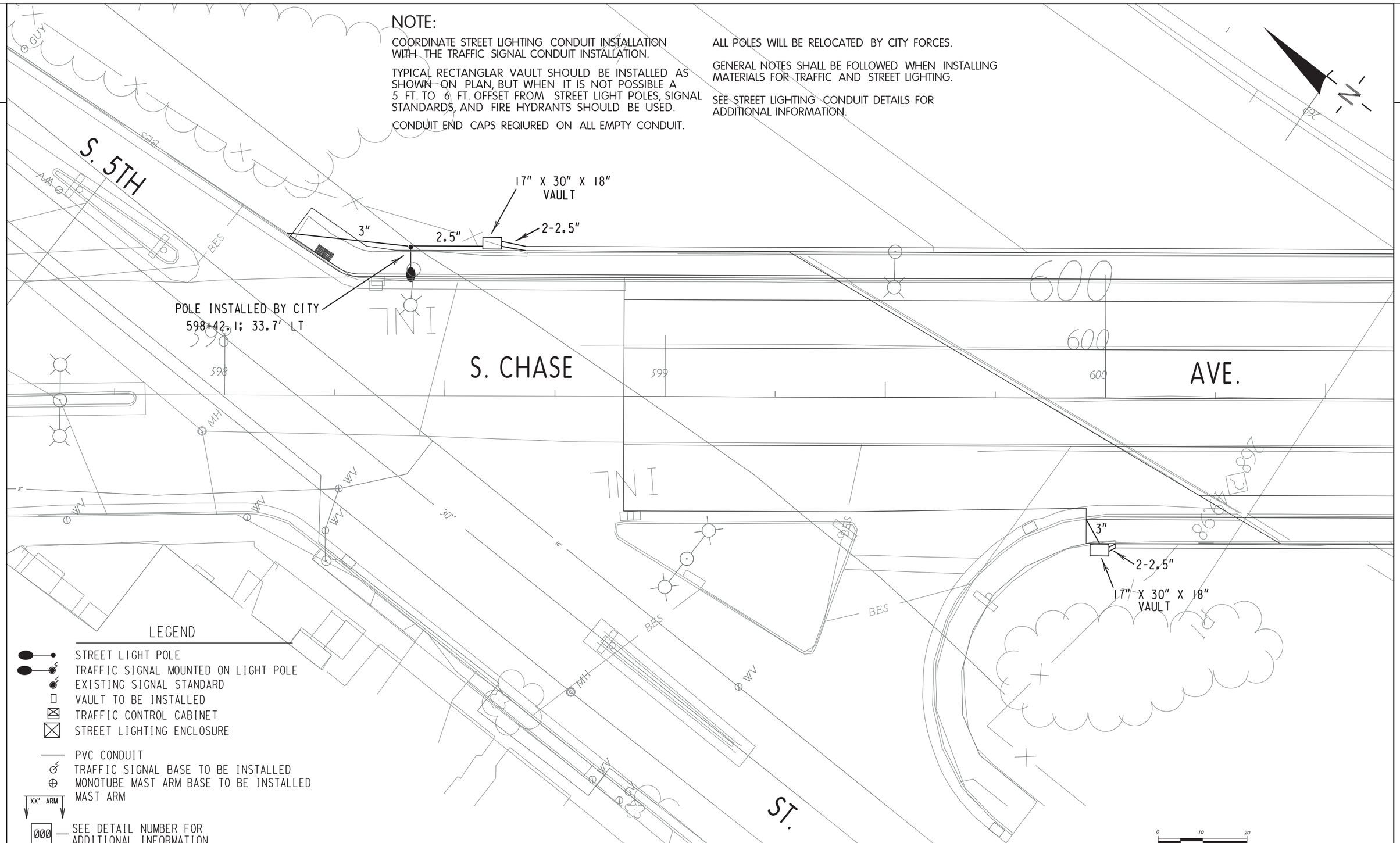
CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

2



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

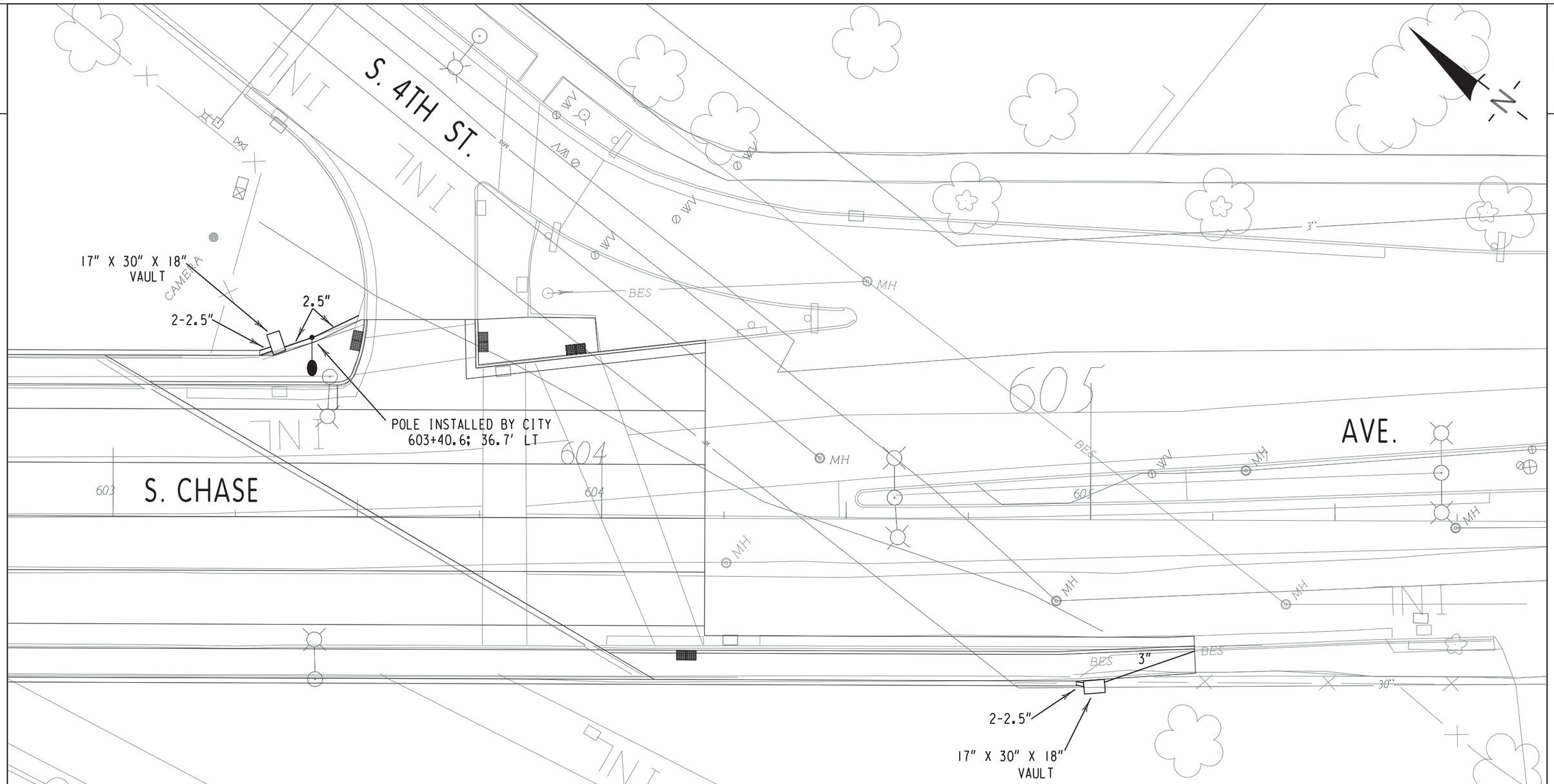
0 10 20

SHEET 13 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 117	E

FILE NAME : W:\bes\pavings\2014work\I43-94 Bridges\2014-01-15 Revisions 1228-25-70.dgn
PLOT DATE : 22-JAN-2014 09:35
PLOT BY : jbondo
PLOT NAME :
PLOT SCALE : 19.999960:1.000000
WISDOT/CADDS SHEET 42

2



LEGEND

- STREET LIGHT POLE
- TRAFFIC SIGNAL MOUNTED ON LIGHT POLE
- EXISTING SIGNAL STANDARD
- VAULT TO BE INSTALLED
- TRAFFIC CONTROL CABINET
- STREET LIGHTING ENCLOSURE
- PVC CONDUIT
- TRAFFIC SIGNAL BASE TO BE INSTALLED
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM — MAST ARM
- 000 — SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, 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.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

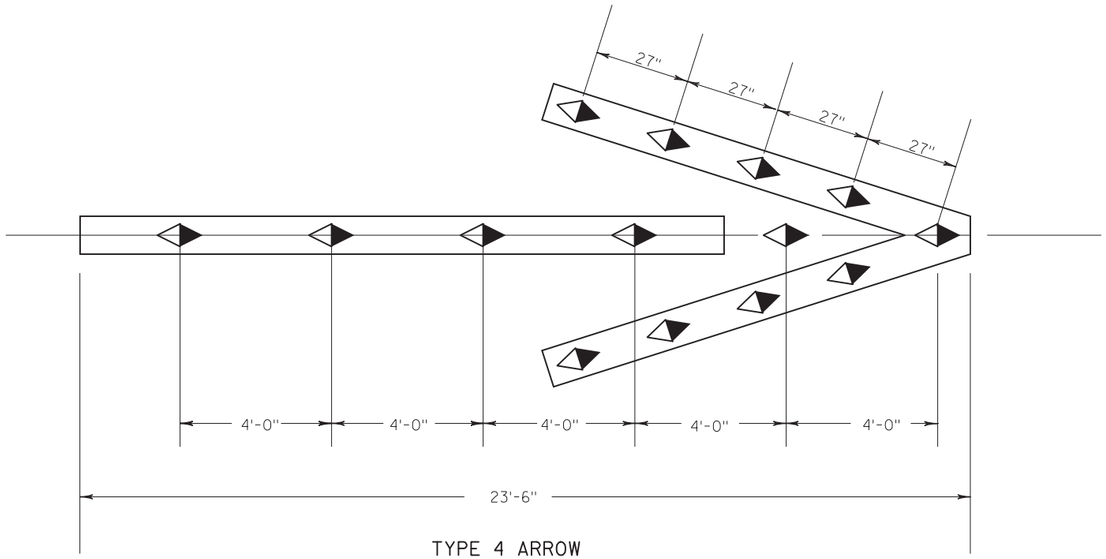
SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

0 10 20

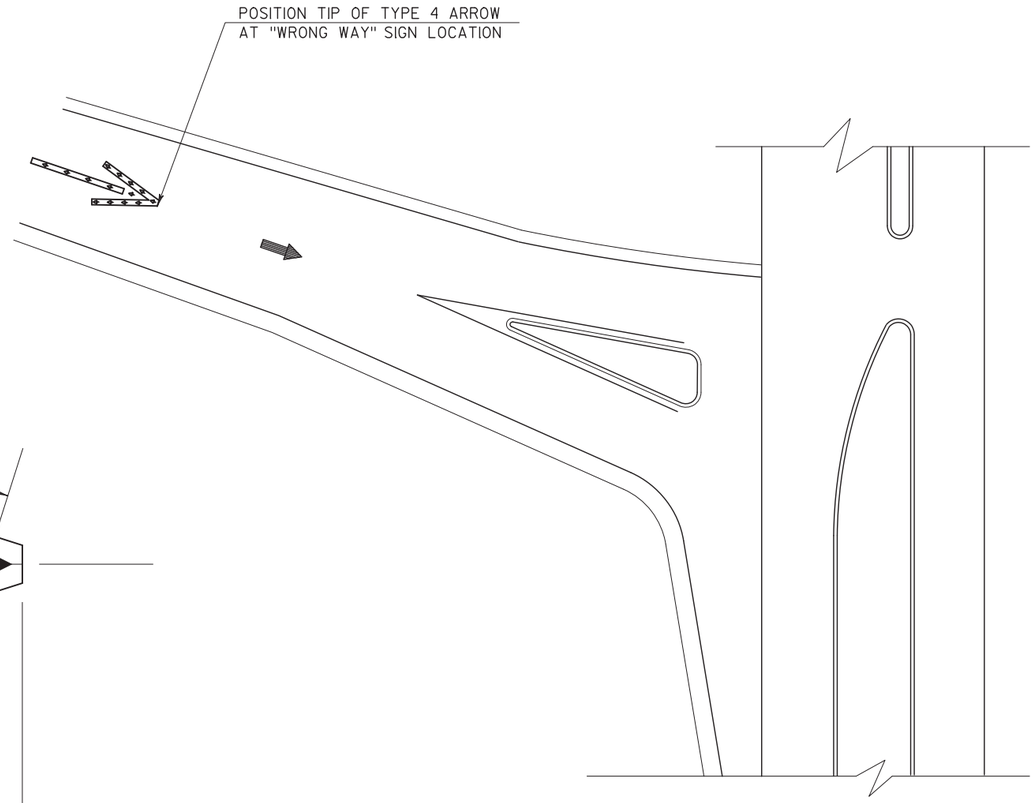
SHEET 14 OF 14

PROJECT NO: 1228-25-70	HWY: IH 43 /94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT PLAN	SHEET 118	E

2



TYPE 4 ARROW
NEW INSTALLATION



EXIT RAMP
PLAN VIEW

GENERAL NOTES

MARKER REFLECTORS INSTALLED IN TYPE 4 ARROWS BEFORE APPLICATION OF THE ARROW MARKING MATERIAL SHALL BE MASKED TO PREVENT COATING.

MARKERS SHALL NOT BE LOCATED DIRECTLY OVER LONGITUDNAL JOINTS. PLACE MARKERS ADJACENT TO THE JOINT LINE TO AVOID TEMPERATURE AND SHRINKAGE AND / OR BREAKAGE OF CONCRETE.

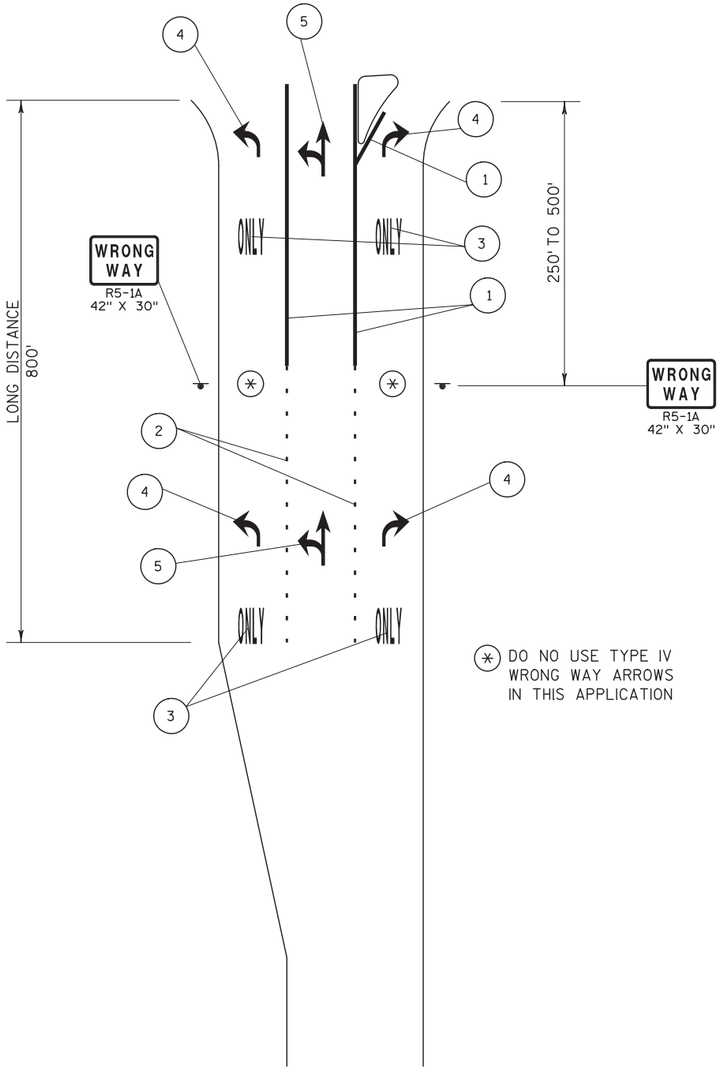
PAYMENT FOR THE MARKERS ARE INCIDENTAL TO THE BID ITEM FOR "GROOVED PREFORMED THERMOPLASTIC RAISED ARROWS TYPE 4".

LEGEND

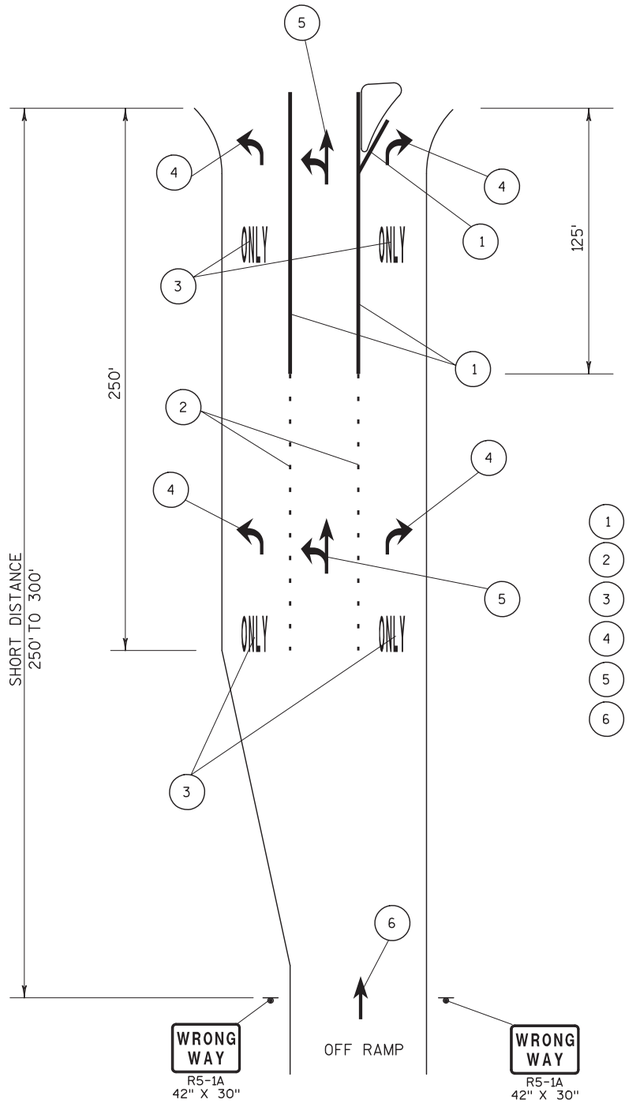
TWO WAY REFLECTOR (OPAQUE WHITE / REFLECTIVE RED REFLECTOR)

DIRECTION OF TRAVEL

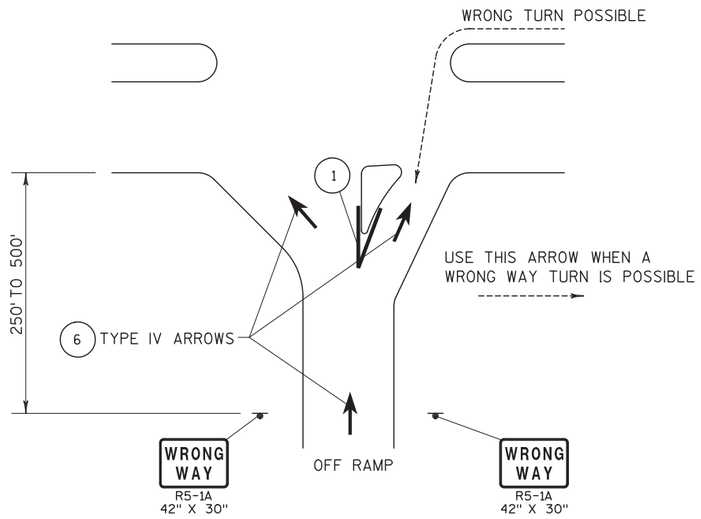
(RAMPS & ARROWS)



EXIT RAMP
(COMPLEX)



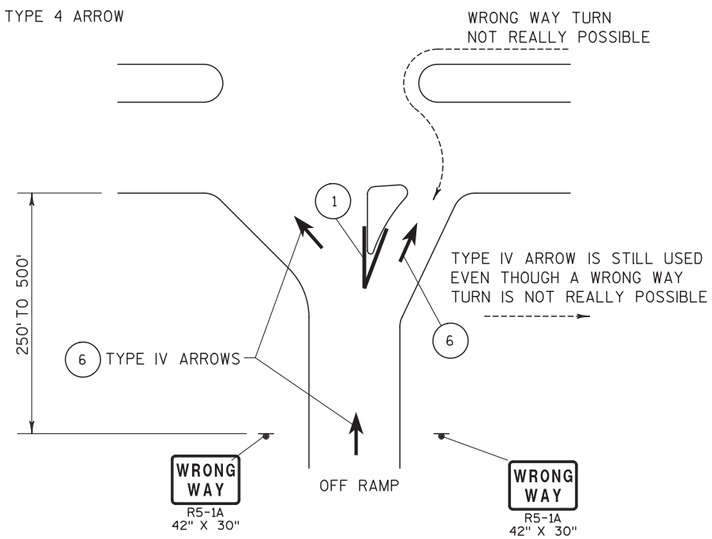
EXIT RAMP
(SIMPLE)



EXIT RAMP
(SIMPLE)

LEGEND

1. PAVEMENT MARKING 8" CHANNELIZING WHITE
2. PAVEMENT MARKING 8" WHITE (3' LINE, 12' SPACE)
3. PAVEMENT MARKING WORDS
4. PAVEMENT MARKING TYPE 2 ARROW
5. PAVEMENT MARKING TYPE 3 ARROW
6. PAVEMENT MARKING TYPE 4 ARROW



EXIT RAMP
(SIMPLE)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKING INTERSECTION DETAIL	SHEET 120	E

PAVEMENT MARKING LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
2	PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
3	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED) (12.5' LINE 37.5' SKIP)
4	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
5	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
6	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (SOLID WHITE)
7	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
8	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSS WALK 6-INCH (WHITE)
9	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC RPMS ARROWS TYPE 4
10	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
12	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
20	PAVEMENT MARKING CONTRAST EPOXY 7-INCH (12.5' LINE 37.5' SKIP)
24	PAVEMENT MARKING EPOXY 12-INCH DIAGONAL (SOLID YELLOW)
26	PAVEMENT MARKING EPOXY 24-INCH DIAGONAL (WHITE)

N

W HOWARD AVENUE

STA 644+50

STA 653+17

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I43/94/USH 41

IH 43 ℄

BEGIN PROJECT
STA 653+20.00
X = 604,346.036
Y = 275,883.868

STRUCTURE B-40-265

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 121	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\024501_pm.dgn PLOT DATE : 2/4/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
6. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
13. PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
14. PAVEMENT MARKING ARROWS BIKE LANE EPOXY
15. PAVEMENT MARKING EPOXY 4-INCH (LANE LINE WHITE) (10' LINE 30' SKIP)
16. PAVEMENT MARKING EPOXY 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
17. PAVEMENT MARKING EPOXY CROSS WALK 6-INCH (WHITE)
18. PAVEMENT MARKING EPOXY STOP LINE 18-INCH (SOLID WHITE)
19. PAVEMENT MARKING EPOXY ARROWS TYPE 2
20. PAVEMENT MARKING CONTRAST EPOXY 7-INCH (12.5' LINE 37.5' SKIP)
21. PAVEMENT MARKING EPOXY WORDS
22. PAVEMENT MARKING EPOXY 6-INCH (SOLID WHITE)
23. PAVEMENT MARKING EPOXY 8-INCH (SOLID WHITE)
24. PAVEMENT MARKING EPOXY 12-INCH DIAGONAL (SOLID YELLOW)
25. PAVEMENT MARKING CURB EPOXY (SOLID YELLOW)

N

CANADIAN PACIFIC

HOLT AVENUE

HOLT AVE.

5th ST.

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I43/94/USH 41

USH 41

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 122	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\024501a_pm.dgn PLOT DATE : 2/4/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 46

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED) (12.5' LINE 37.5' SKIP)
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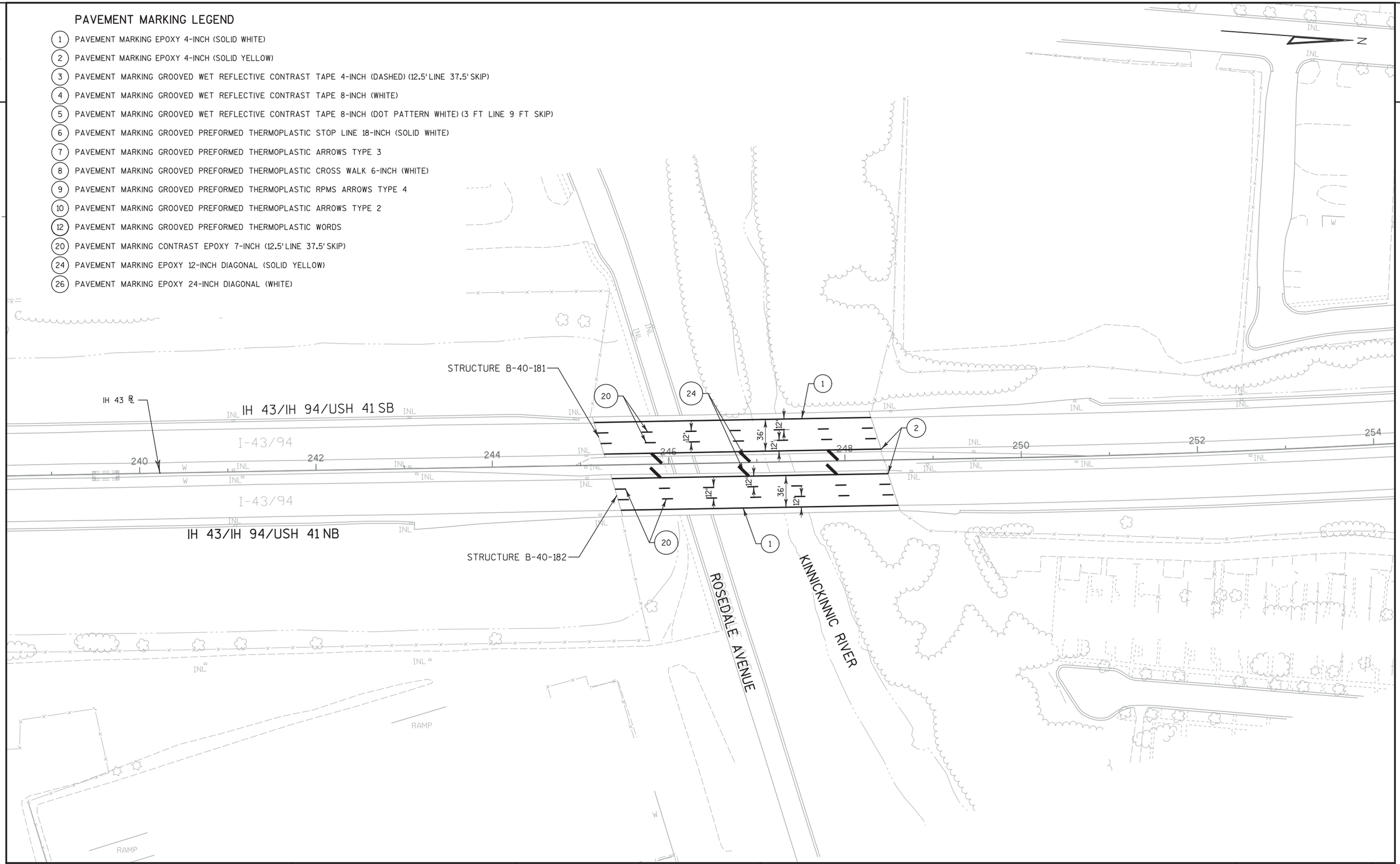
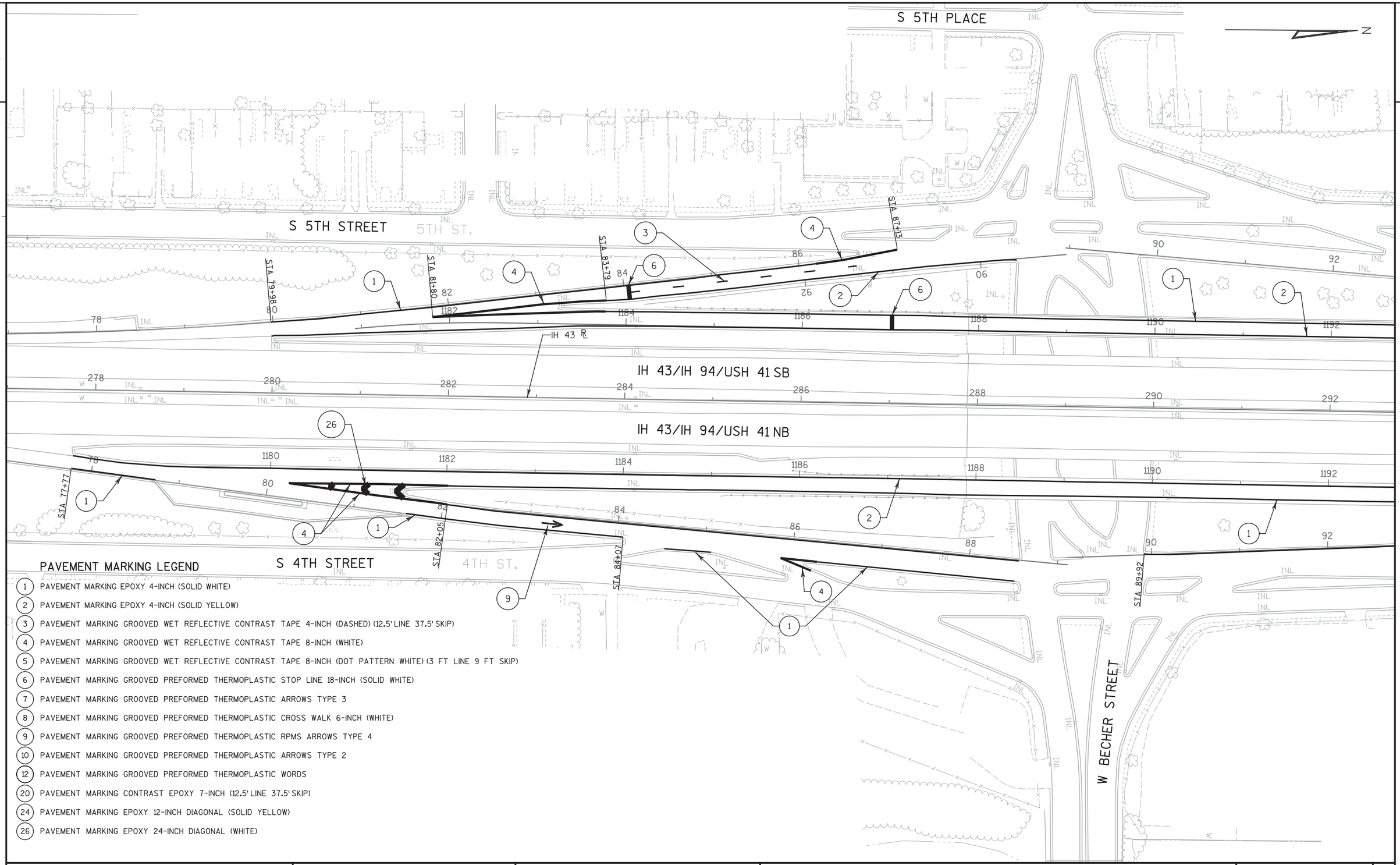
24. PAVEMENT MARKING EPOXY 12-INCH DIAGONAL (SOLID YELLOW)
26. PAVEMENT MARKING EPOXY 24-INCH DIAGONAL (WHITE)



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 123	E

2



PAVEMENT MARKING LEGEND

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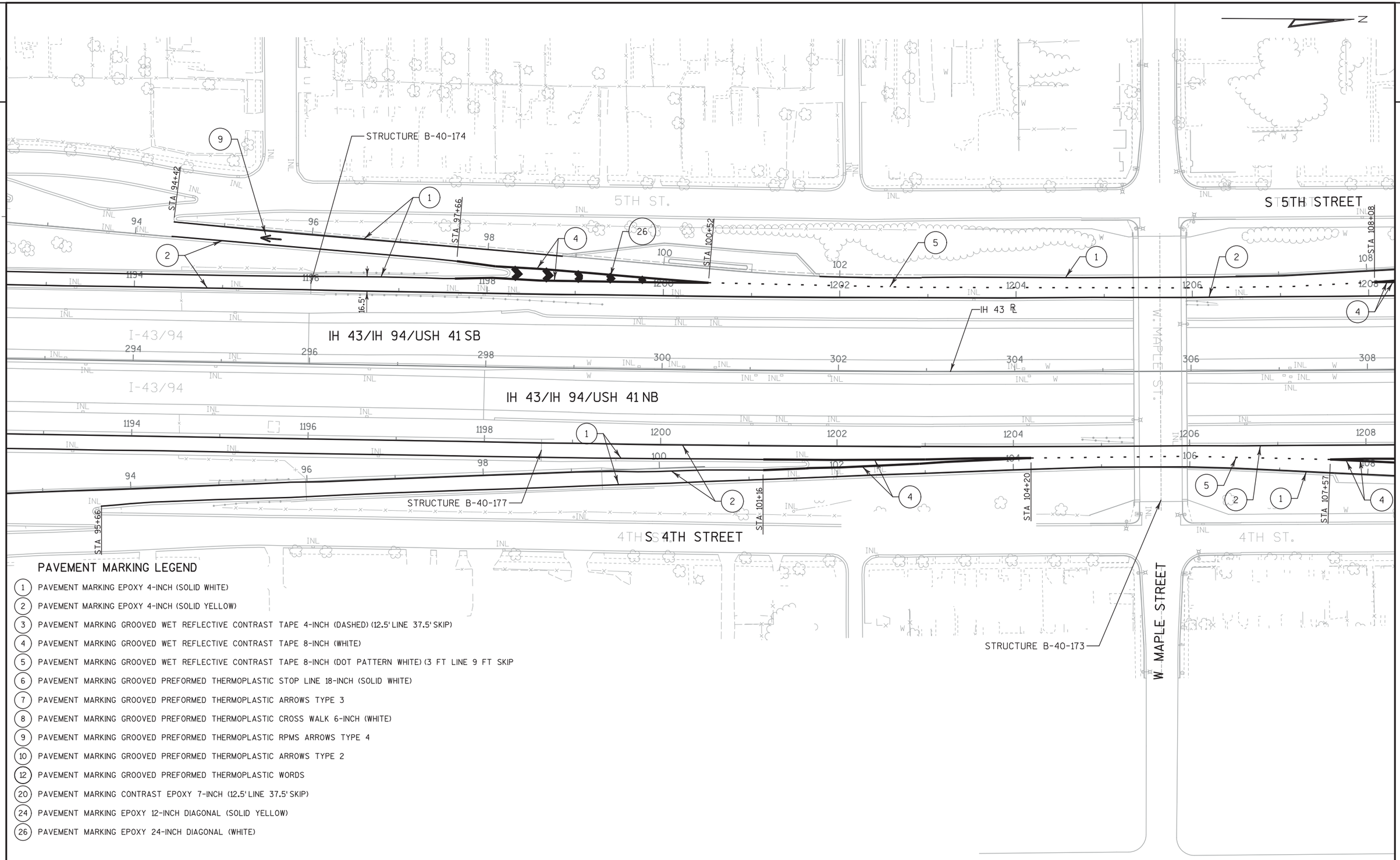
26. PAVEMENT MARKING EPOXY 24-INCH DIAGONAL (WHITE)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 124	E



PAVEMENT MARKING LEGEND

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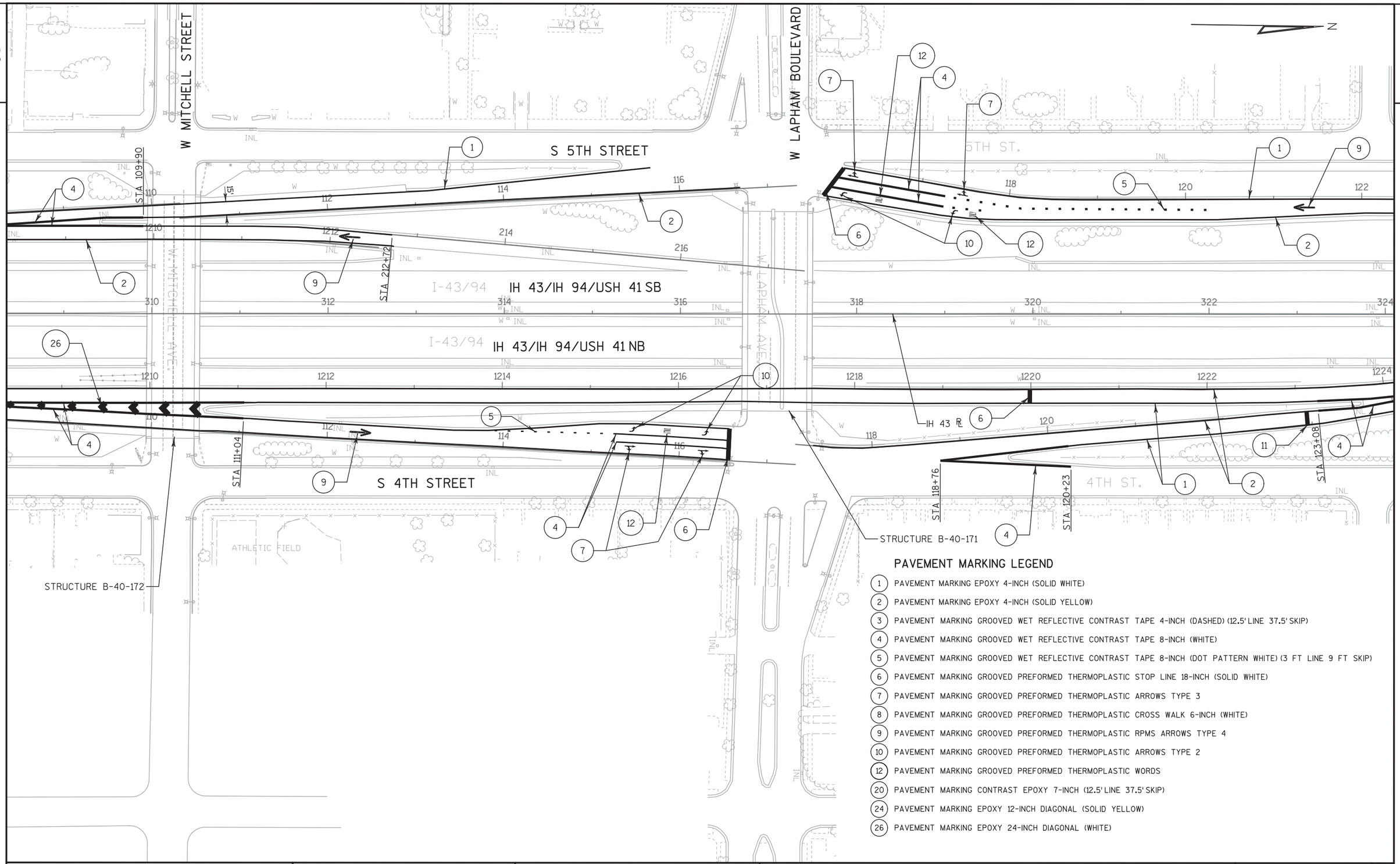
26. PAVEMENT MARKING EPOXY 24-INCH DIAGONAL (WHITE)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVMENT MARKING	SHEET 125	E

2



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24. PAVEMENT MARKING EPOXY 12-INCH DIAGONAL (SOLID YELLOW)
26. PAVEMENT MARKING EPOXY 24-INCH DIAGONAL (WHITE)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 126	E

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED) (12.5' LINE 37.5' SKIP)
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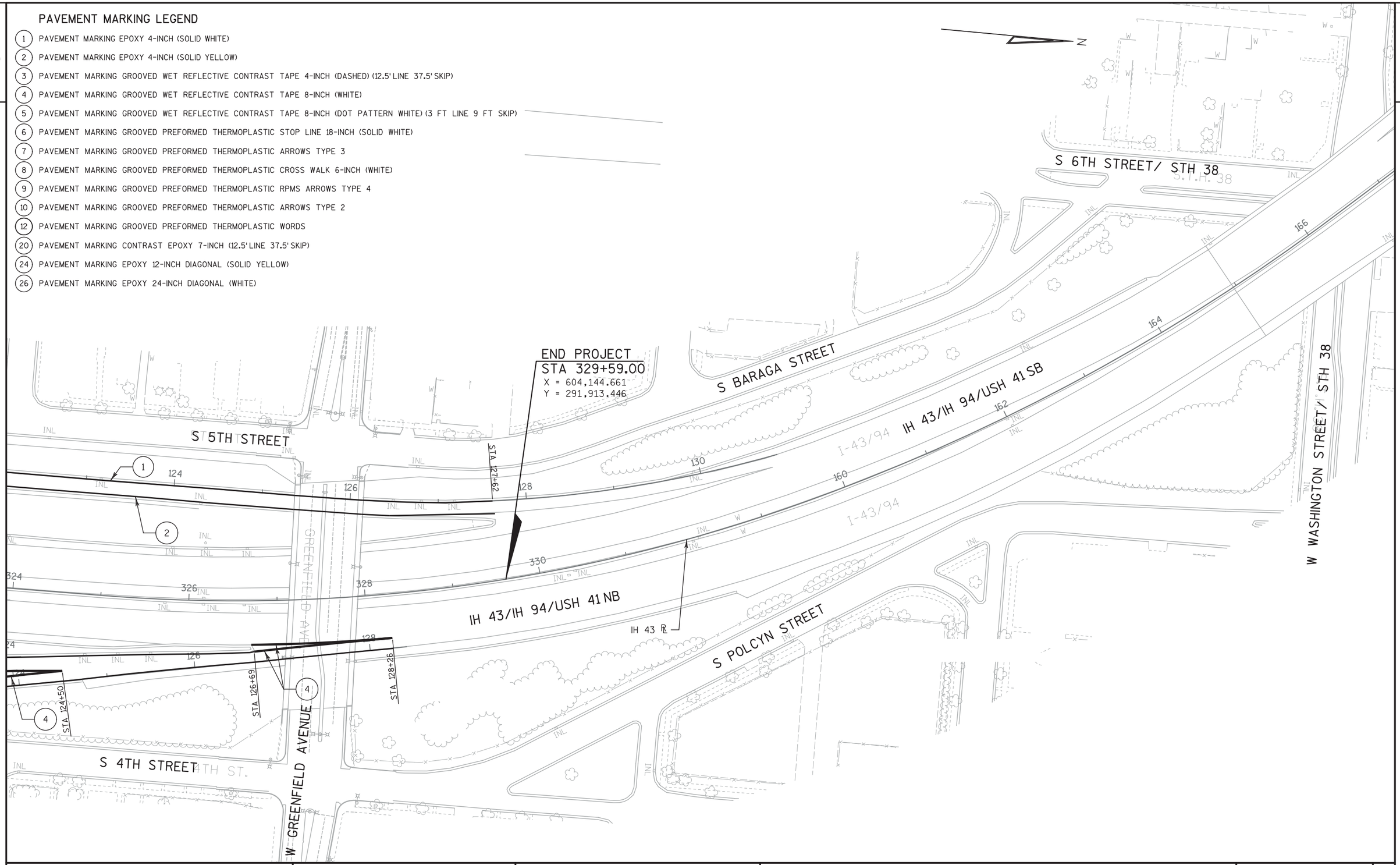

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 127	E

PAVEMENT MARKING LEGEND

(1) PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
(2) PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
(3) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED) (12.5' LINE 37.5' SKIP)
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(24) PAVEMENT MARKING EPOXY 12-INCH DIAGONAL (SOLID YELLOW)
(26) PAVEMENT MARKING EPOXY 24-INCH DIAGONAL (WHITE)

W. MINERAL ST.
WASHINGTON ST.
NATIONAL AVE.
NATIONAL AVENUE
9TH STREET
7TH STREET
7th ST.
STRUCTURE B-40-285
IH 43 ℄
IH 43/IH 94/USH 41 SB
IH 43/IH 94/USH 41 NB
I 43 / I 94
I 43 /I 94
CP25
SIGN
INL
MH
HW
W
A.G.
T
12
24
18
22
26
28
30
32
168
170
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176
178
180
182

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS	SHEET 128 E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\024506_pm.dgn PLOT DATE : 2/4/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
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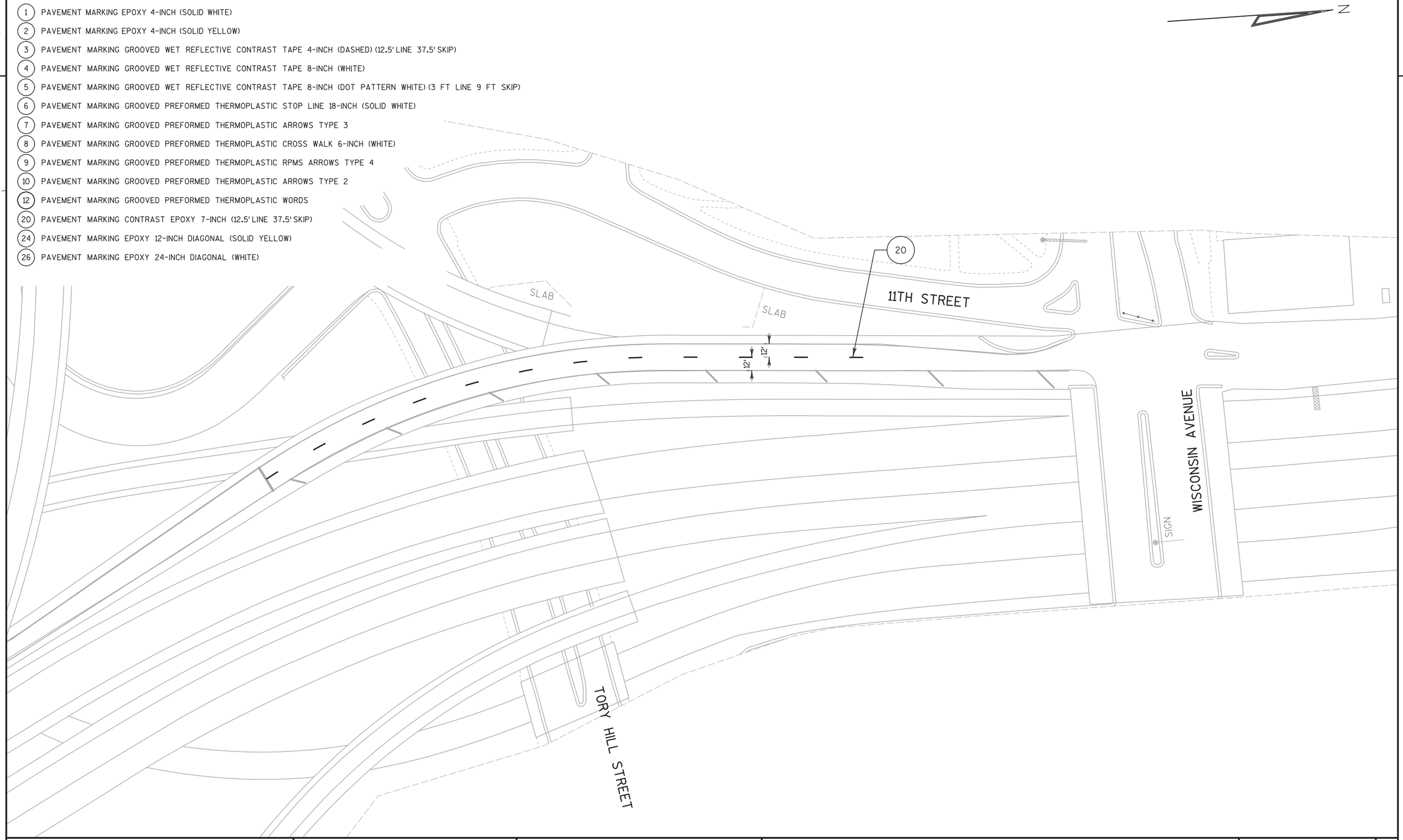

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKING DETAIL	SHEET 129	E

2

S 5TH ST

IH 43 SB

IH 43 NB

S 4TH ST

GREENFIELD AVE

99 100 101 102 103 104

N

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
6. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
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14. PAVEMENT MARKING ARROWS BIKE LANE EPOXY
15. PAVEMENT MARKING EPOXY 4-INCH (LANE LINE WHITE) (10' LINE 30' SKIP)
16. PAVEMENT MARKING EPOXY 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
17. PAVEMENT MARKING EPOXY CROSS WALK 6-INCH (WHITE)
18. PAVEMENT MARKING EPOXY STOP LINE 18-INCH (SOLID WHITE)
19. PAVEMENT MARKING EPOXY ARROWS TYPE 2
20. PAVEMENT MARKING CONTRAST EPOXY 7-INCH (12.5' LINE 37.5' SKIP)
21. PAVEMENT MARKING EPOXY WORDS
22. PAVEMENT MARKING EPOXY 6-INCH (SOLID WHITE)
23. PAVEMENT MARKING EPOXY 8-INCH (SOLID WHITE)
24. PAVEMENT MARKING EPOXY 12-INCH DIAGONAL (SOLID YELLOW)
25. PAVEMENT MARKING CURB EPOXY (SOLID YELLOW)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS - GREENFIELD AVENUE	SHEET 130	E

2

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
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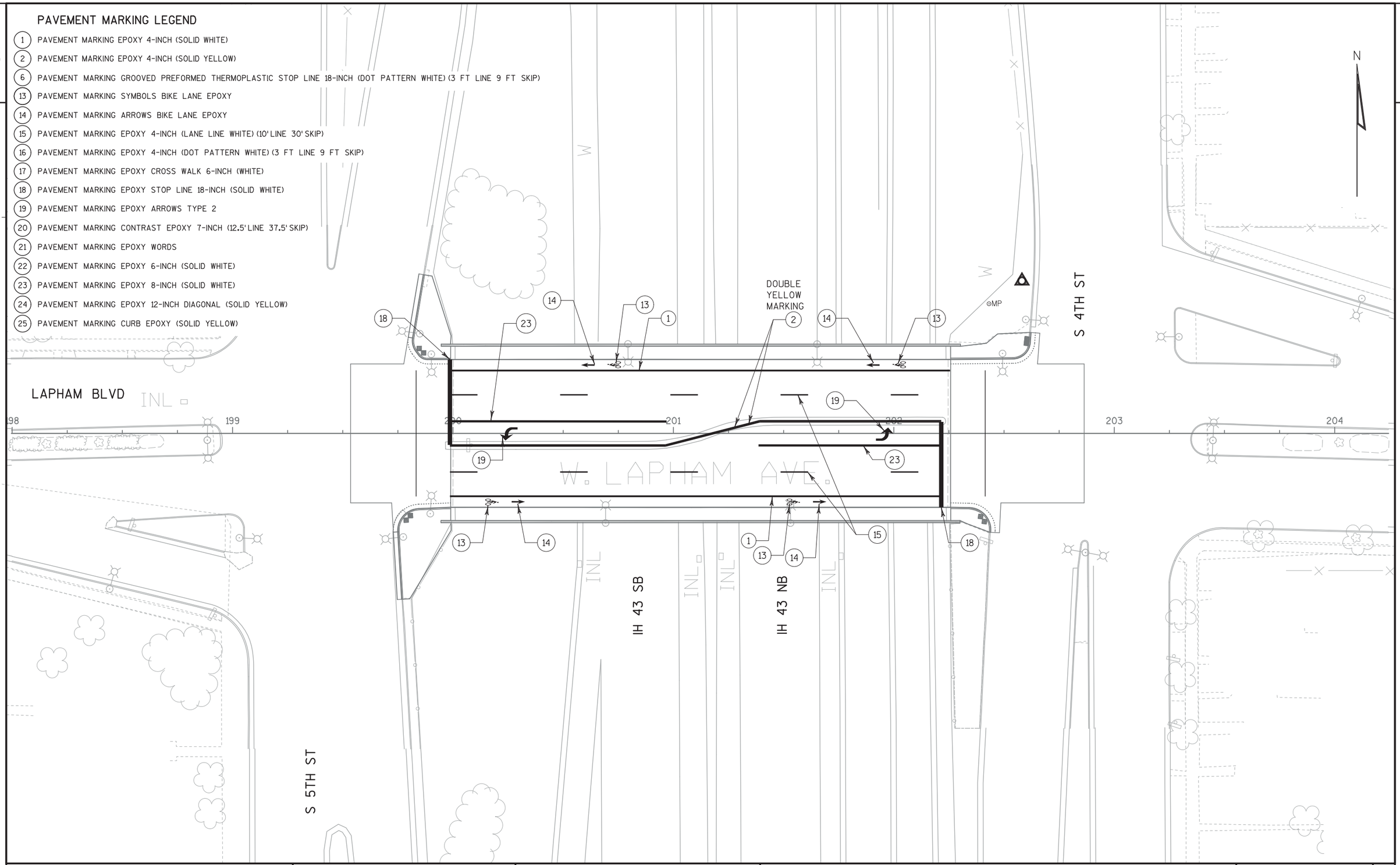
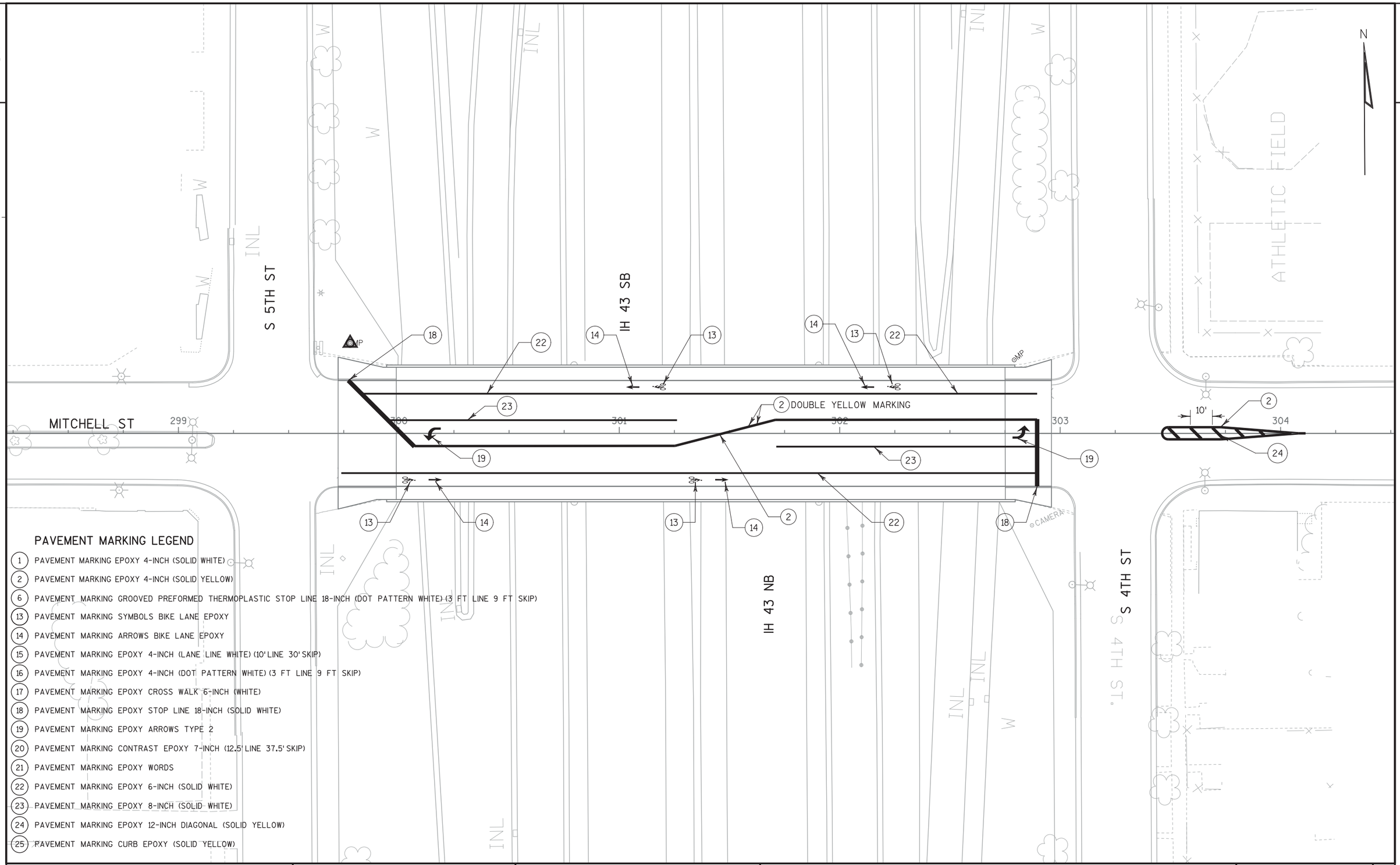
25. PAVEMENT MARKING CURB EPOXY (SOLID YELLOW)



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS - LAPHAM BOULEVARD	SHEET 131	E

2



PAVEMENT MARKING LEGEND

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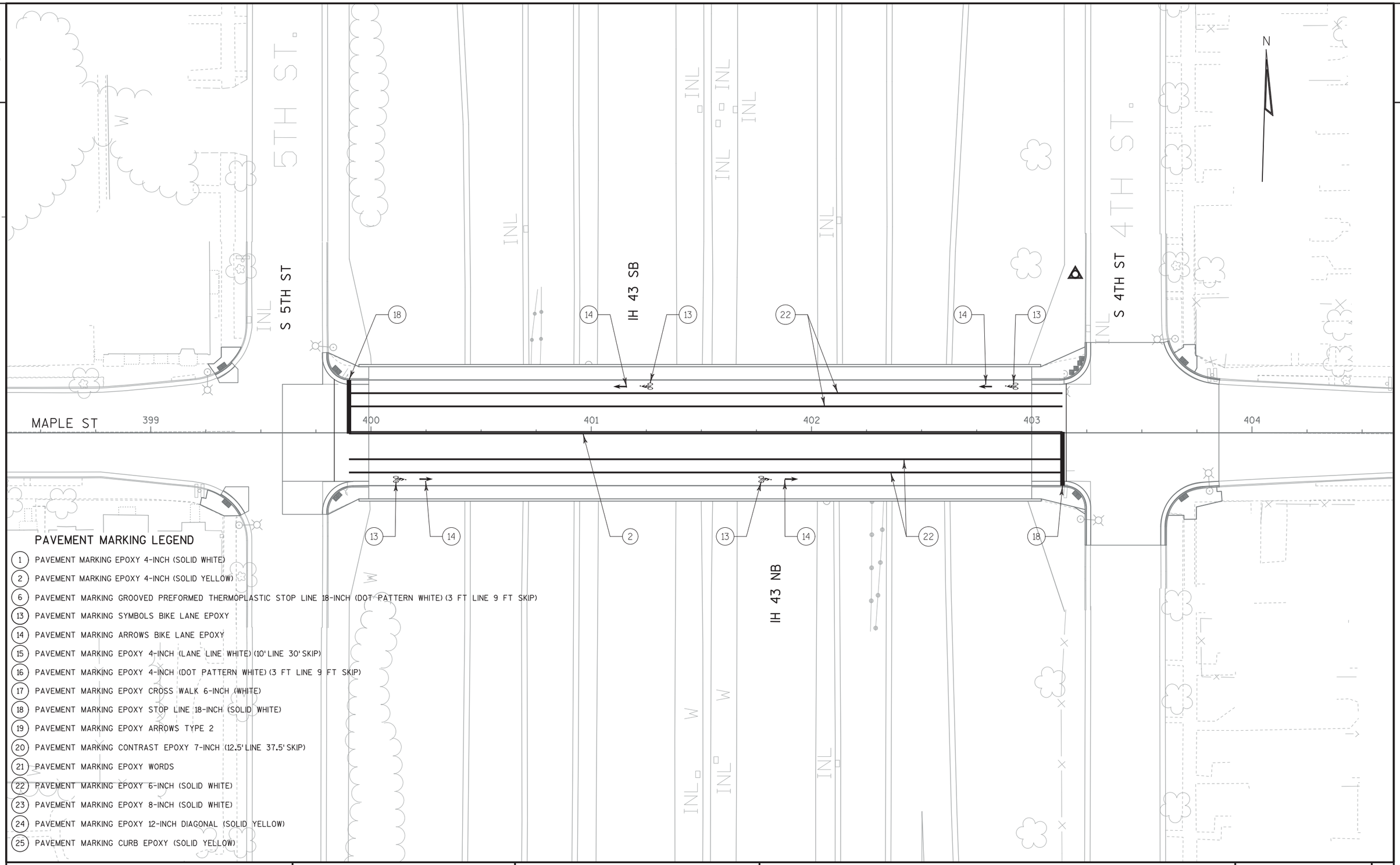
17. PAVEMENT MARKING EPOXY CROSS WALK 6-INCH (WHITE)
18. PAVEMENT MARKING EPOXY STOP LINE 18-INCH (SOLID WHITE)
19. PAVEMENT MARKING EPOXY ARROWS TYPE 2
20. PAVEMENT MARKING CONTRAST EPOXY 7-INCH (12.5' LINE 37.5' SKIP)
21. PAVEMENT MARKING EPOXY WORDS
22. PAVEMENT MARKING EPOXY 6-INCH (SOLID WHITE)
23. PAVEMENT MARKING EPOXY 8-INCH (SOLID WHITE)
24. PAVEMENT MARKING EPOXY 12-INCH DIAGONAL (SOLID YELLOW)
25. PAVEMENT MARKING CURB EPOXY (SOLID YELLOW)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS - MITCHELL STREET	SHEET 132	E



PAVEMENT MARKING LEGEND

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PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS - MAPLE STREET	SHEET 133	E

2

N

S 5TH ST

IH 43 SB

IH 43 NB

S 4TH ST

LINCOLN AVE

499 500 501 502 503 504

INL

I-43/94

PAVEMENT MARKING LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
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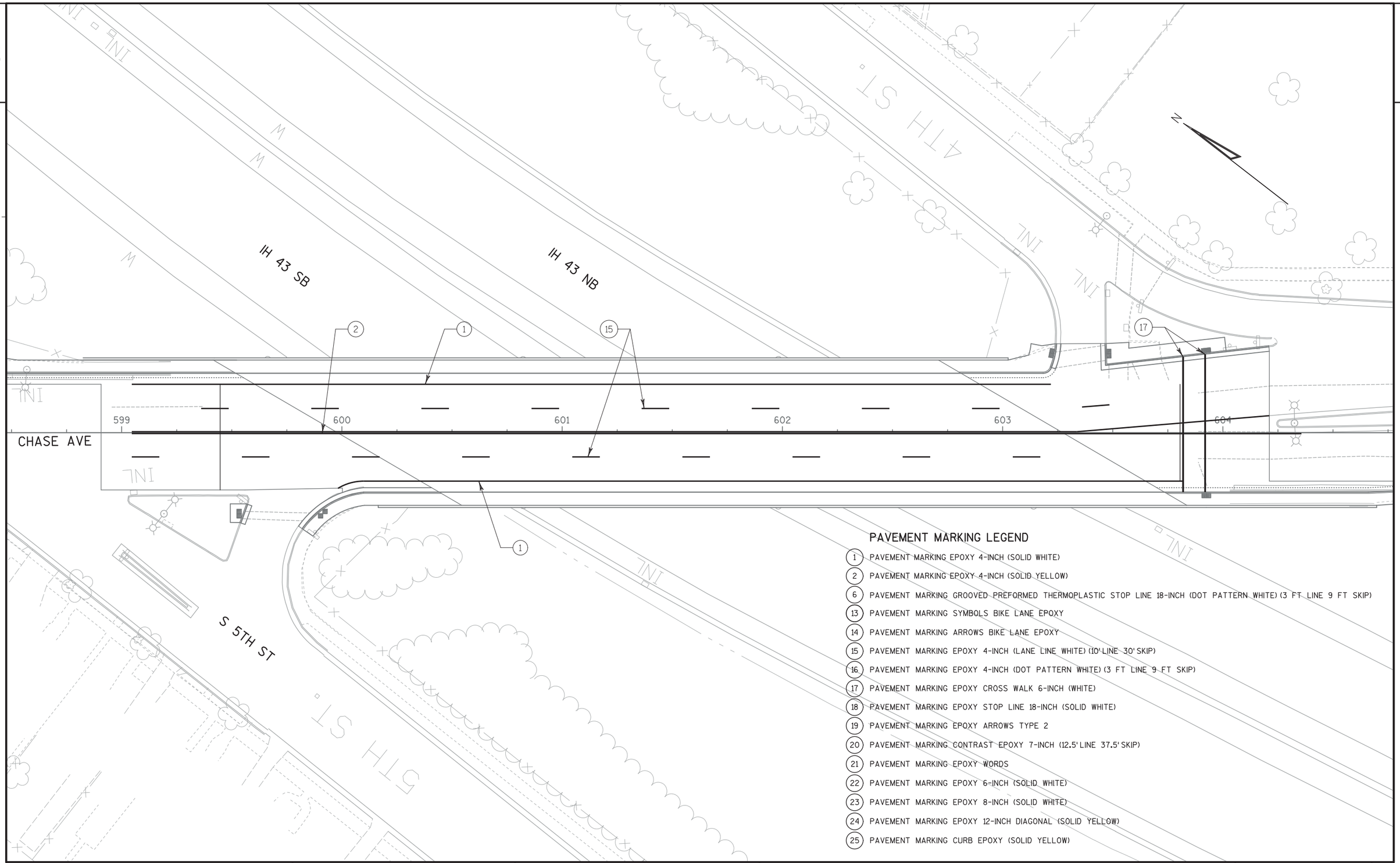
25	PAVEMENT MARKING CURB EPOXY (SOLID YELLOW)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS - LINCOLN AVENUE	SHEET 134	E

2



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25. PAVEMENT MARKING CURB EPOXY (SOLID YELLOW)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS - CHASE AVENUE	SHEET 135	E

2

2

N

HOWARD AVE

23

692

15

S 6TH STREET

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
6. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
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25. PAVEMENT MARKING CURB EPOXY (SOLID YELLOW)

NOTE: BEGIN PAVEMENT MARKINGS AT END OF CONSTRUCTION CROSSOVER LOCATION.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS - HOWARD AVENUE	SHEET 136	E

2

N

S. 5TH PLACE

S. 5TH STREET

HOWARD AVE

HOWARD AVE.

692 693 694 695 696 697 698

15 17 23

6'

ONLY ONLY

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
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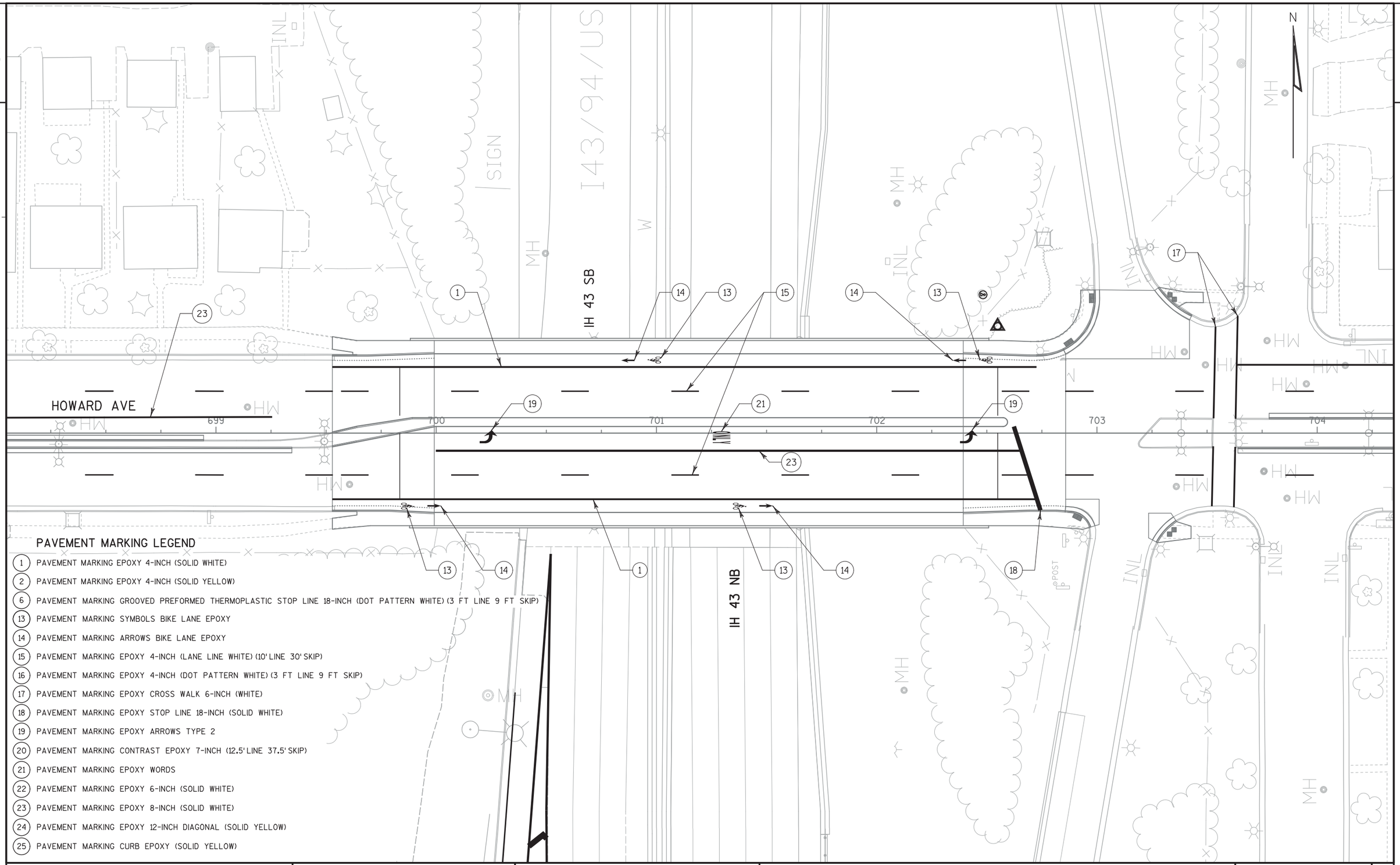
25. PAVEMENT MARKING CURB EPOXY (SOLID YELLOW)

NOTE: REFER TO MAINLINE PAVEMENT MARKING PLANS FOR RAMP INFORMATION.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS - HOWARD AVENUE	SHEET 137	E

2



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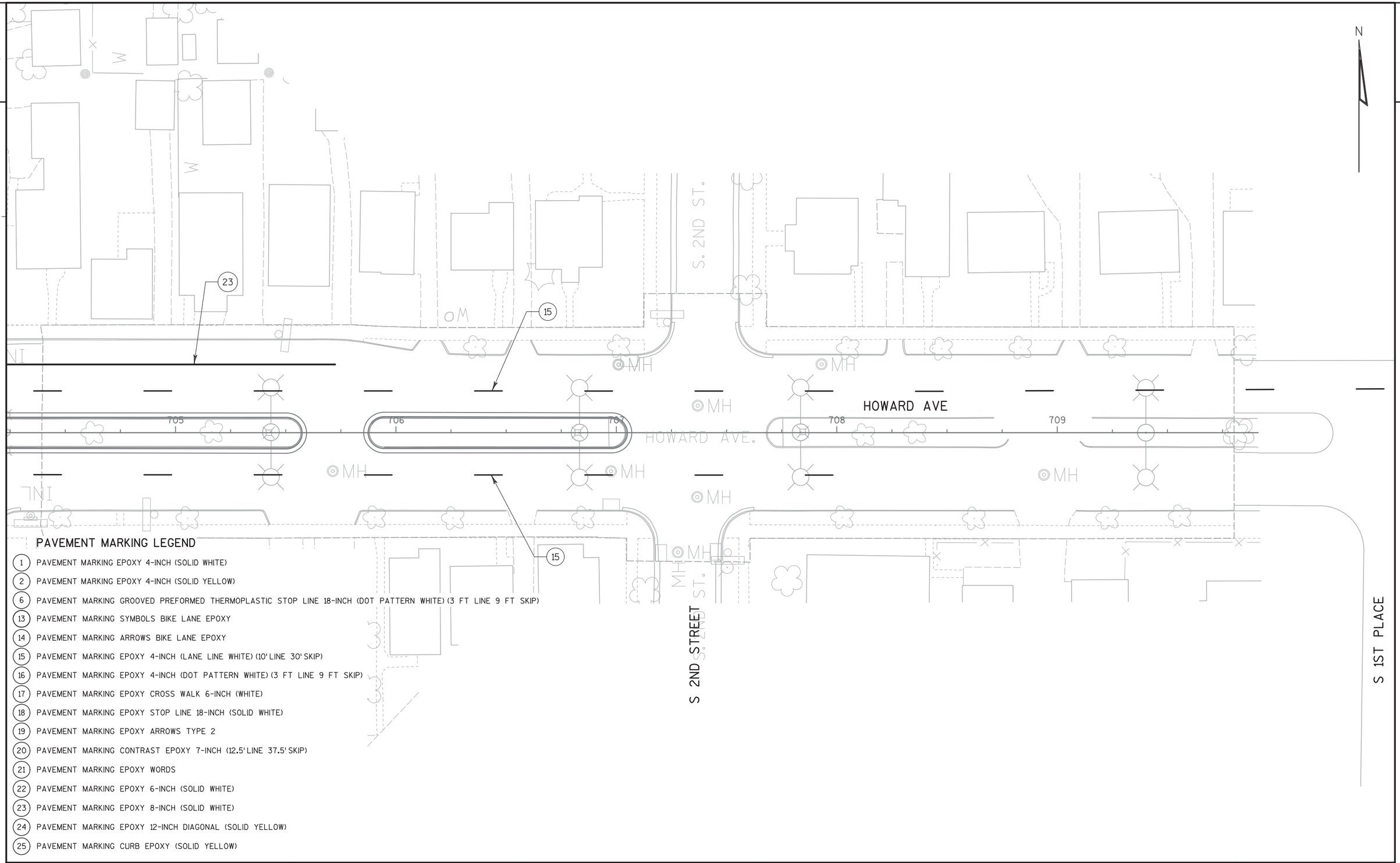
25. PAVEMENT MARKING CURB EPOXY (SOLID YELLOW)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS - HOWARD AVENUE	SHEET 138	E



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PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS - HOWARD AVENUE	SHEET 139	E

2

2

N

S 1ST STREET

15

HOWARD AVE

S 1ST STREET

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
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NOTE: BEGIN PAVEMENT MARKINGS AT END OF CONSTRUCTION CROSSOVER LOCATION.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKINGS - HOWARD AVENUE	SHEET 140	E

2

GENERAL TRAFFIC CONTROL NOTES

THE EXACT 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.

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.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1,500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE FEWER THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS. SIGNS MUST BE PLACED AT THE HEIGHT SHOWN IN THE MUTCD.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

NO EQUIPMENT OR MATERIAL SHALL BE STORED WITHIN THE WORK ZONE OTHER THAN BEHIND THE PRECAST CONCRETE BARRIER.

WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO LOCATE THE ARROWBOARD SHOWN, PLACE THE ARROWBOARD IN THE LANE CLOSURE TAPER AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE TAPER.

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 THE WORK DAY.

TRAFFIC CONTROL DRUMS IN TAPERS SHALL BE EQUIPPED WITH WARNING LIGHTS TYPE "C" ONE-WAY LIGHTS IN TAPERS ONLY UNLESS OTHERWISE SHOWN.

CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING

DO NOT CLOSE CONSECUTIVE RAMPS DURING CONSTRUCTION.

REMOVAL OF PAVEMENT MARKINGS AND PLACEMENT OF TEMPORARY PAVEMENT MARKINGS IS NOT REQUIRED FOR OVERNIGHT LANE CLOSURES.

USE TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (BLACK) TO COVER EXISTING MARKINGS.

ADJUSTMENTS IN THE BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF 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.

ALL MEDIAN SIGN REMOVAL LOCATIONS CALLED OUT IN THE PLANS ARE APPROXIMATE.

ALL RAMP CURB AND GUTTER REPLACEMENT LOCATIONS NEED TO BE VERIFIED IN THE FIELD AND APPROVED BY THE ENGINEER PRIOR TO REMOVING.

SINGLE LANE OFF-PEAK CLOSURES ARE NOT ALLOWED UNLESS APPROVED BY THE ENGINEER.

STAGING NOTES

TRAFFIC STAGING IS SHOWN FOR NORMAL CROWN SECTION, SUPERELEVATED SECTIONS SIMILAR.

TRAFFIC CONTROL ITEMS SHOWN IN EACH STAGE SHALL BE IN PLACE AT THE START OF THAT STAGE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

ALL TRAFFIC CONTROL DEVICES SHALL REMAIN IN PLACE, AS SHOWN, THROUGH THE DURATION OF EACH STAGE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TRAFFIC CONTROL NOTES FOR EACH SPECIFIC STAGE WILL BE PROVIDED AT THE BEGINNING OF THEIR STAGE.

SEE SPECIAL PROVISIONS FOR TRAFFIC STAGING REQUIREMENTS.

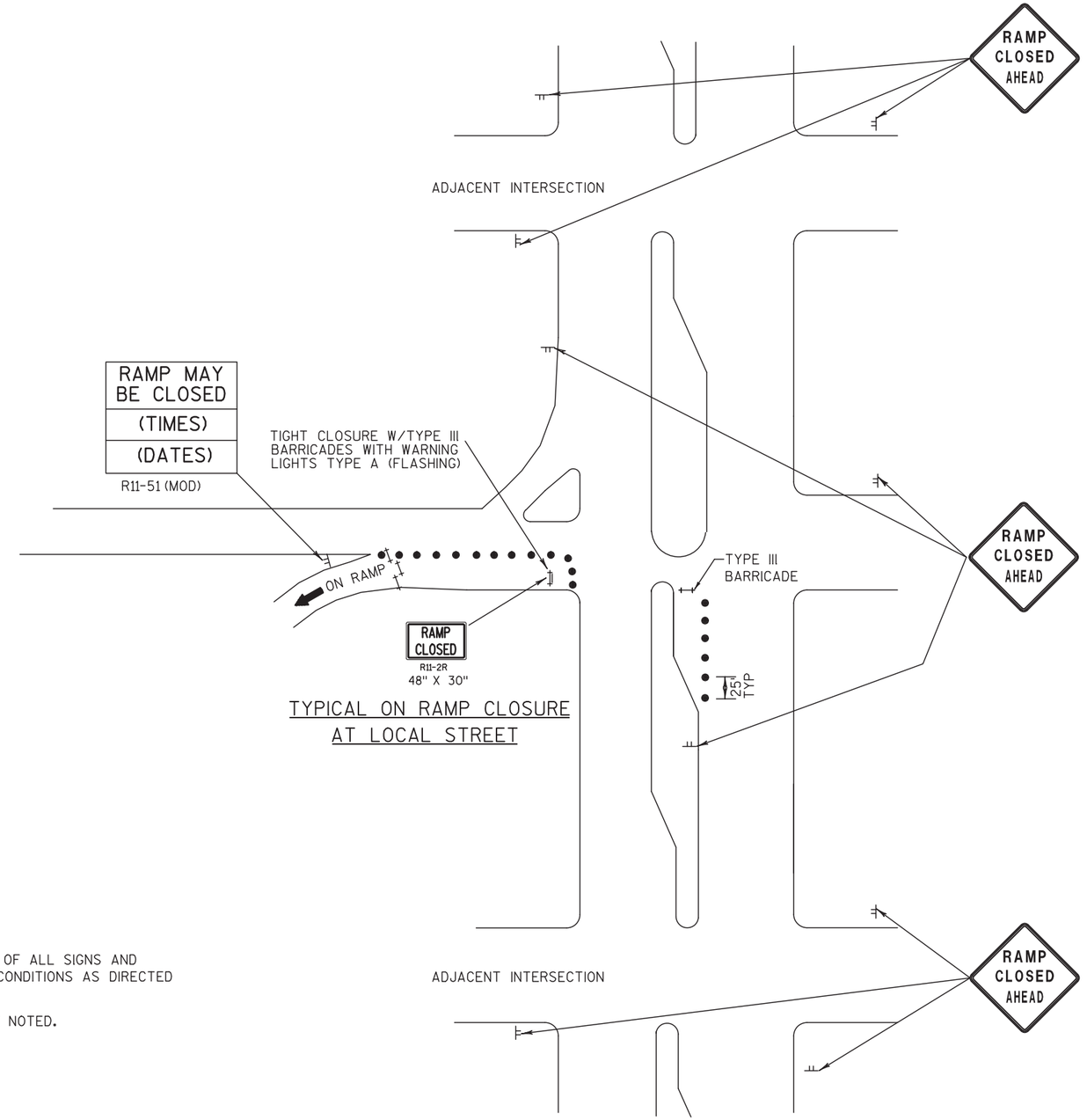
LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- TD CONGESTION WARNING SYSTEM DETECTOR

2

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL GENERAL NOTES	SHEET 141	E

2



TYPICAL ON RAMP CLOSURE AT LOCAL STREET

TRAFFIC CONTROL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

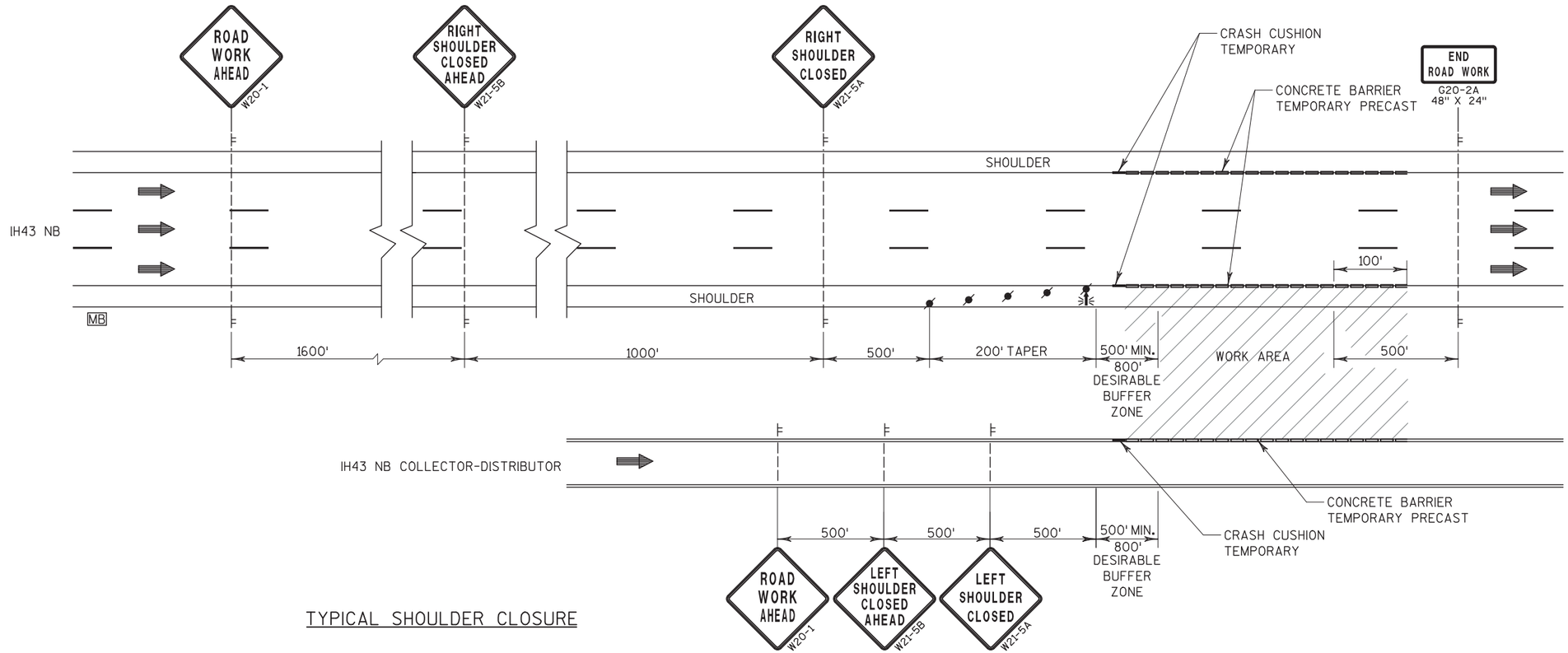
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

TRAFFIC CONTROL FOR ON-RAMP CLOSURE (SHORT TERM ONLY)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS	SHEET 142	E



TYPICAL SHOULDER CLOSURE

TRAFFIC CONTROL NOTES

SHOULDER CLOSURE SHOWN FOR NORTHBOUND, REVERSE FOR CLOSING THE SHOULDER ON SOUTHBOUND IH43.

ADJUST THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

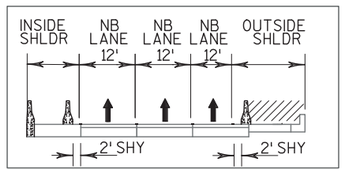
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

REMOVE OR COVER ALL SHORT TERM LANE CLOSURE SIGNS AND REMOVE ALL ARROW BOARDS AND DEVICES BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

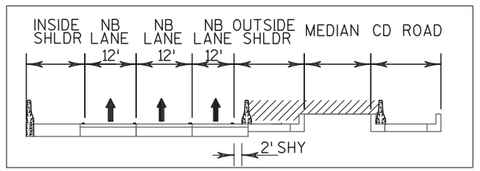
LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY CRASH CUSHION

MAINLINE SHOULDER TYPICAL

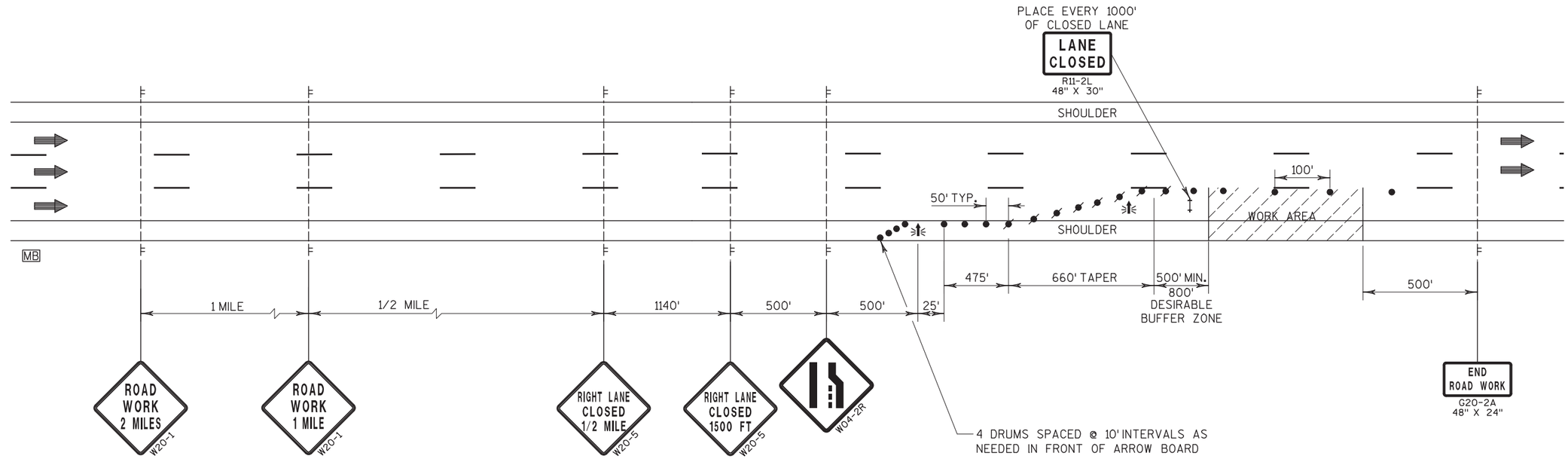


USE TRAFFIC CONTROL ON COLLECTOR-DISTRIBUTOR ROADS UNDER GREENFIELD AVENUE, MITCHELL AVENUE, AND MAPLE STREET AS SHOWN BELOW.



SHOULDER CLOSURE-SPEEDS 40 MPH OR GREATER

PROJECT NO: 1228-26-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS	SHEET 143	E



TYPICAL ONE-LANE CLOSURE

SHORT TERM - 7 DAYS OR LESS

RIGHT LANE CLOSURE SHOWN - REVERSE FOR CLOSING LEFT LANE.

ADJUST THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

REMOVE AND COVER ALL SHORT TERM LANE CLOSURE SIGNS AND ALL ARROW BOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.

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.

THIS DETAIL IS TYPICAL FOR OFF PEAK AND NIGHT TIME HOURS ONLY

SPEEDS 45 MPH OR GREATER

GENERAL NOTES

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.

REMOVE OR COVER ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" AS NEEDED AND AS APPROVED BY THE ENGINEER.
NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

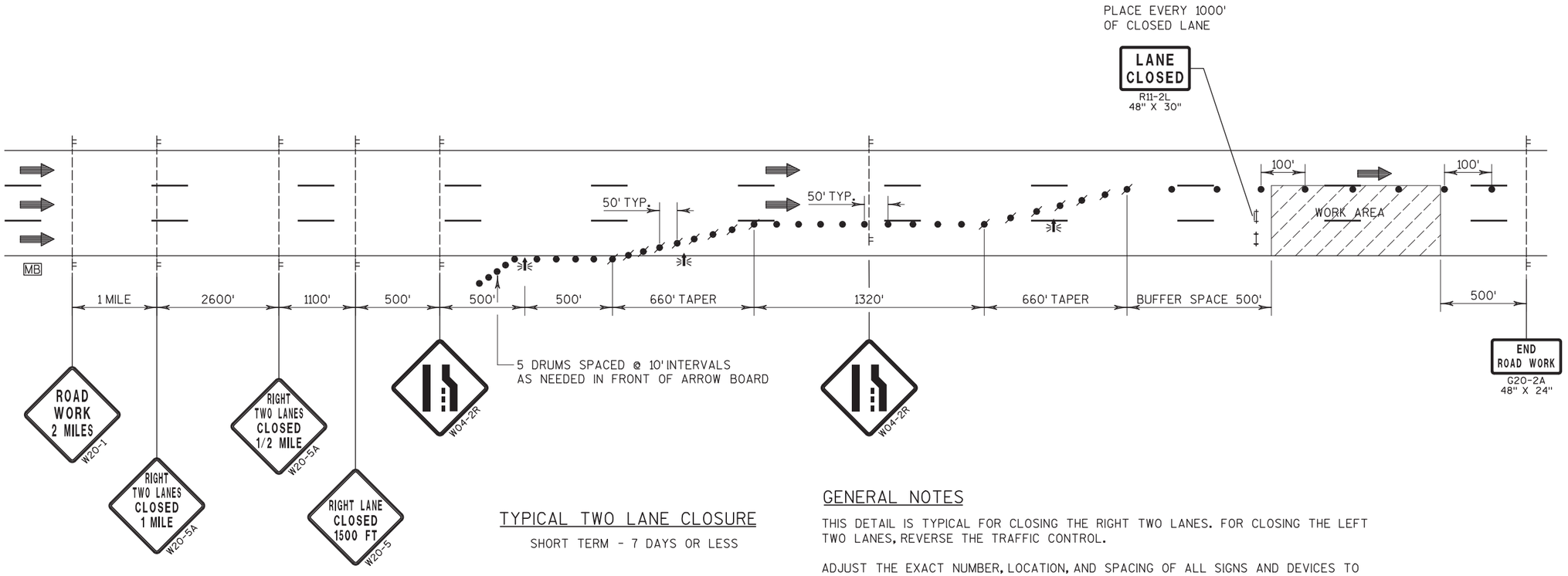
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRED ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST 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 HALF 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.

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- POST WITH ATTACHED SIGN IN DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS	SHEET 144	E



TYPICAL TWO LANE CLOSURE

SHORT TERM - 7 DAYS OR LESS

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

ADJUST THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES 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.

REMOVE OR COVER ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" 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 ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS 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, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

IMMEDIATELY RE-ESTABLISH BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION, UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

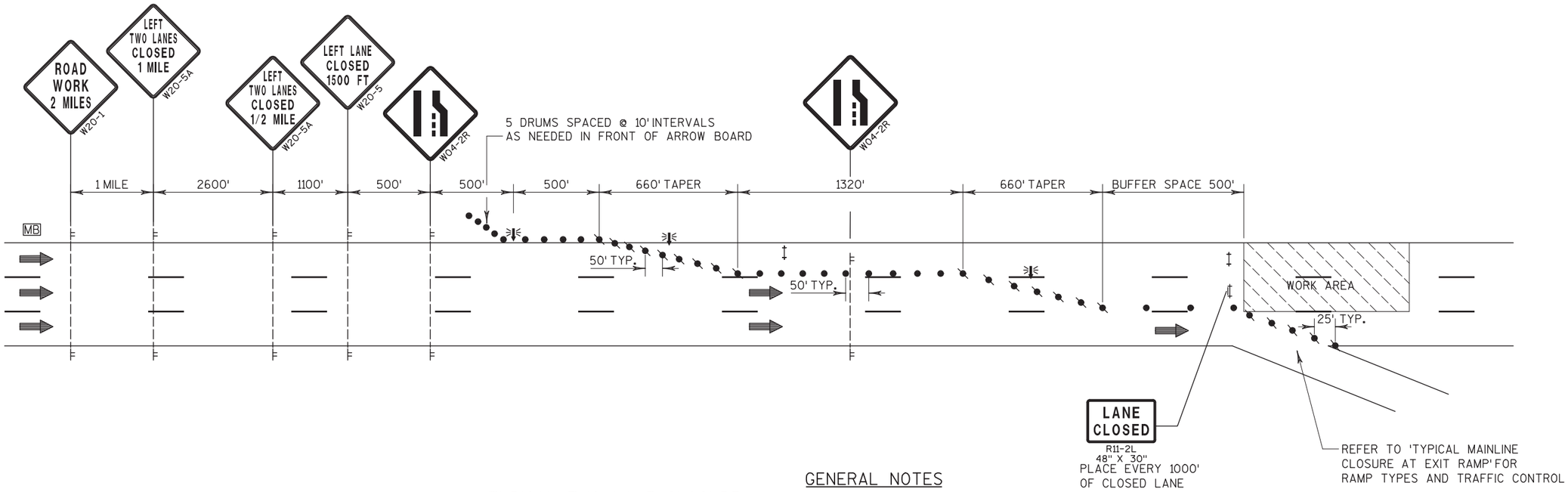
PULL BACK CHANNELIZING DEVICES, PLACED ADJACENT TO WORK AREA, FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

THIS DETAIL IS TYPICAL FOR OFF PEAK AND NIGHT TIME HOURS ONLY

SPEEDS 45 MPH OR GREATER

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS	SHEET 145	E



TYPICAL TWO LANE CLOSURE

FULL FREEWAY CLOSURE

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

ADJUST THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES 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.

REMOVE OR COVER ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" 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 ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS 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, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

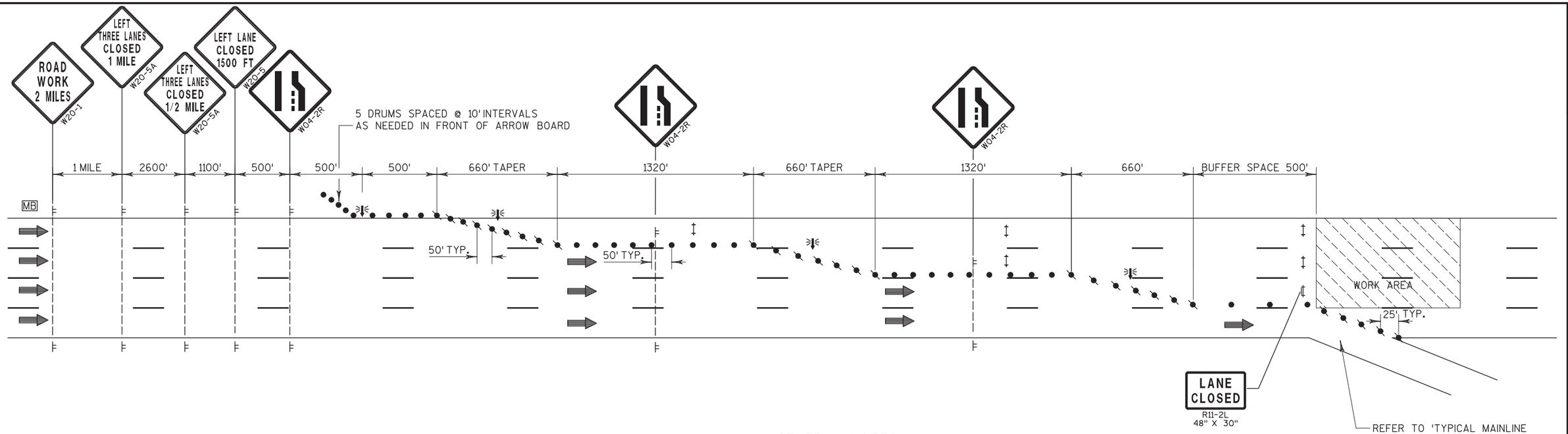
IMMEDIATELY RE-ESTABLISH BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION, UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

PULL BACK CHANNELIZING DEVICES, PLACED ADJACENT TO WORK AREA, FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

THIS DETAIL IS TYPICAL FOR OFF PEAK AND NIGHT TIME HOURS ONLY

SPEEDS 45 MPH OR GREATER



TYPICAL THREE LANE CLOSURE

FULL FREEWAY CLOSURE

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT THREE LANES. FOR CLOSING THE LEFT THREE LANES, REVERSE THE TRAFFIC CONTROL.

ADJUST THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES 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.

REMOVE OR COVER ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" 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 ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS 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, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

IMMEDIATELY RE-ESTABLISH BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION, UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

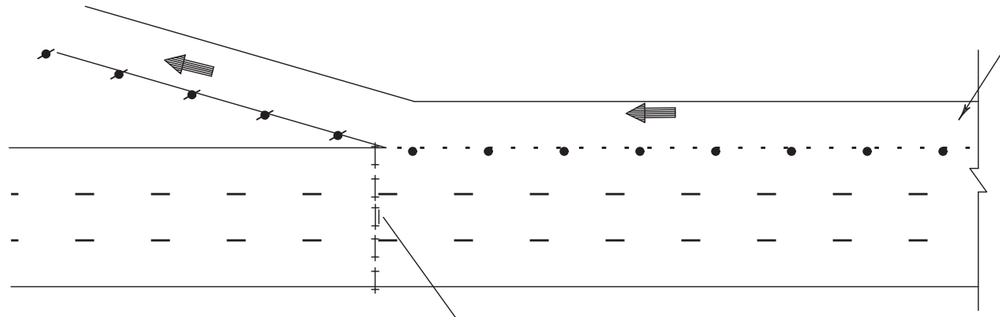
PULL BACK CHANNELIZING DEVICES, PLACED ADJACENT TO WORK AREA, FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

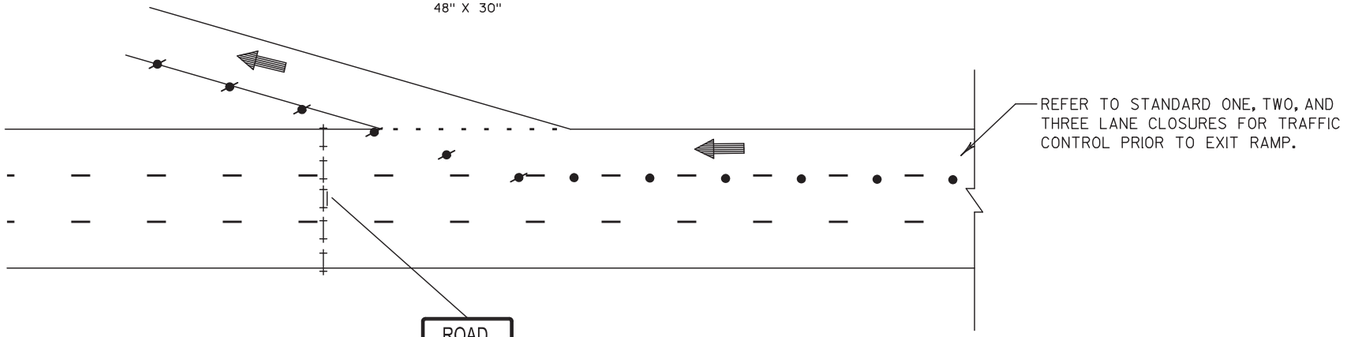
THIS DETAIL IS TYPICAL FOR OFF PEAK AND NIGHT TIME HOURS ONLY

SPEEDS 45 MPH OR GREATER

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS	SHEET 147	E



TYPICAL FOR THE NB HOWARD AVENUE, SB LAPHAM BOULEVARD, AND SB NATIONAL AVENUE EXIT RAMPS



TYPICAL FOR THE NB BECHER STREET, SB BECHER STREET, AND SB HOLT AVENUE EXIT RAMPS

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD

TYPICAL MAINLINE CLOSURE AT EXIT RAMP

FULL FREEWAY CLOSURE

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR MAINLINE TRAFFIC EXITING IH 43 DURING FULL FREEWAY CLOSURES. THIS CONFIGURATION IS TYPICAL FOR SOUTHBOUND TRAFFIC, FOR NORTHBOUND REVERSE THE TRAFFIC CONTROL.

ADJUST THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES 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.

REMOVE OR COVER ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" 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 ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS 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, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

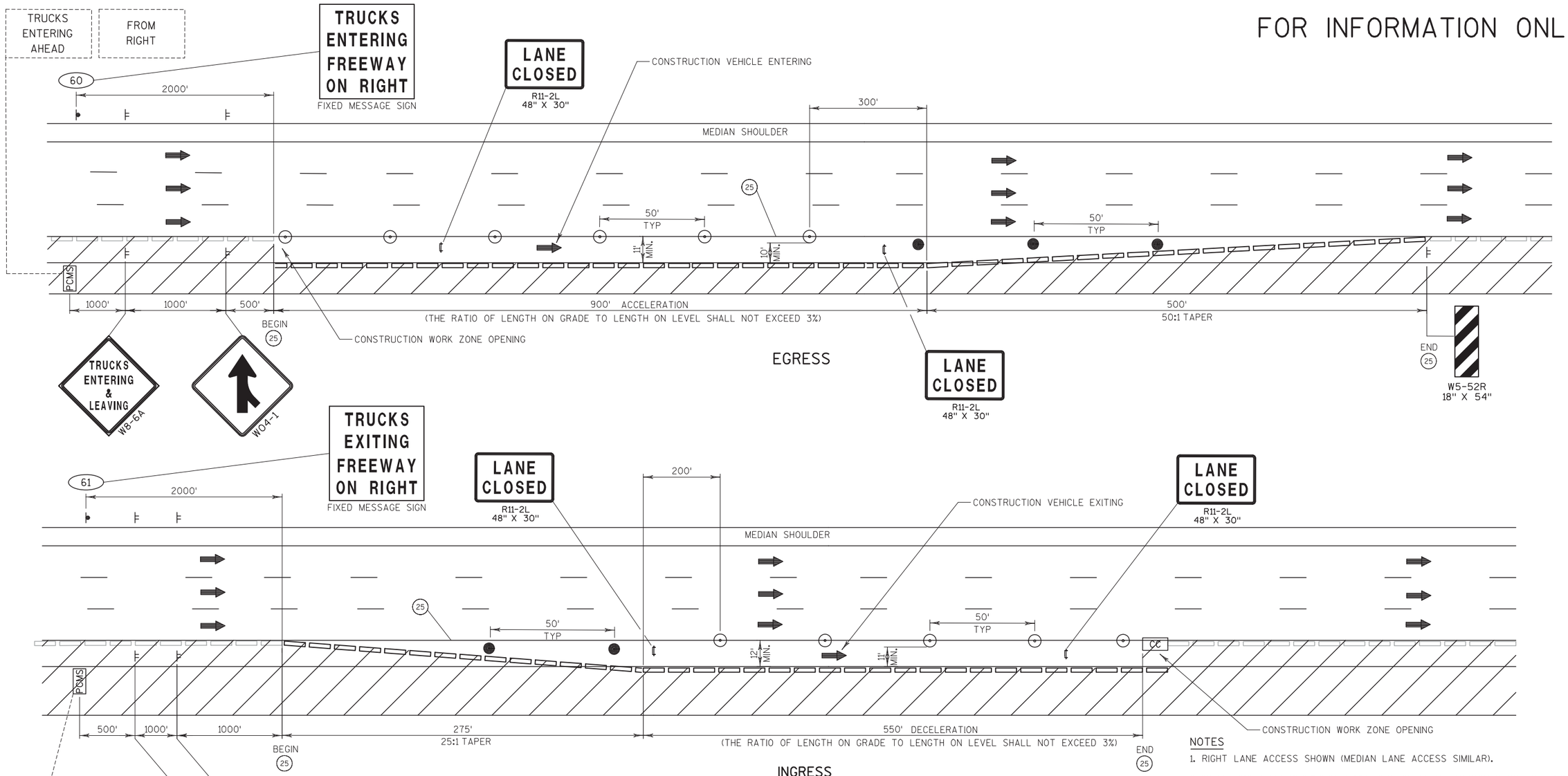
IMMEDIATELY RE-ESTABLISH BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION, UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

PULL BACK CHANNELIZING DEVICES, PLACED ADJACENT TO WORK AREA, FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

THIS DETAIL IS TYPICAL FOR OFF PEAK AND NIGHT TIME HOURS ONLY.

FOR INFORMATION ONLY



LEGEND

- DIRECTION OF TRAFFIC
- WORK ZONE
- CC — CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- EXISTING CONCRETE BARRIER TEMPORARY PRECAST
- TRAFFIC CONTROL TUBULAR MARKERS, WHITE
- TRAFFIC CONTROL DRUMS (USED WHEN EGRESS/INGRESS NOT IN USE)
- 25 — TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE, SOLID) (USE YELLOW, SOLID FOR MEDIAN INGRESS/EGRESS)
- SIGN ON TEMPORARY SUPPORT
- SIGN MOUNTED ON PERMANENT POST(S)
- TRAFFIC CONTROL BARRICADE TYPE III W/ SIGN (USED WHEN INGRESS/EGRESS NOT IN USE)
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE
- XXX — FIXED MESSAGE SIGN

NOTES

1. RIGHT LANE ACCESS SHOWN (MEDIAN LANE ACCESS SIMILAR).
2. WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.
3. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
4. FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS MAY HAVE A WARNING LIGHT, TYPE C (STEADY BURN).
5. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
6. ALL WARNING SIGNS FOR LONG TERM OPERATIONS SHALL BE NON-FLUORESCENT DIAMOND GRADE SHEETING. TYPE A LIGHTS AND FLAGS ARE NOT REQUIRED.
7. TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING LIVE TRAFFIC.
8. FREE FLOW TRAFFIC LANES SHALL BE A MINIMUM WIDTH OF ELEVEN FEET AND ACCOMMODATE A ONE FOOT SHY DISTANCE FROM TRAFFIC CONTROL DEVICES.
9. ITEMS ON THIS SHEET TO BE PAID USING STANDARD BID ITEMS.

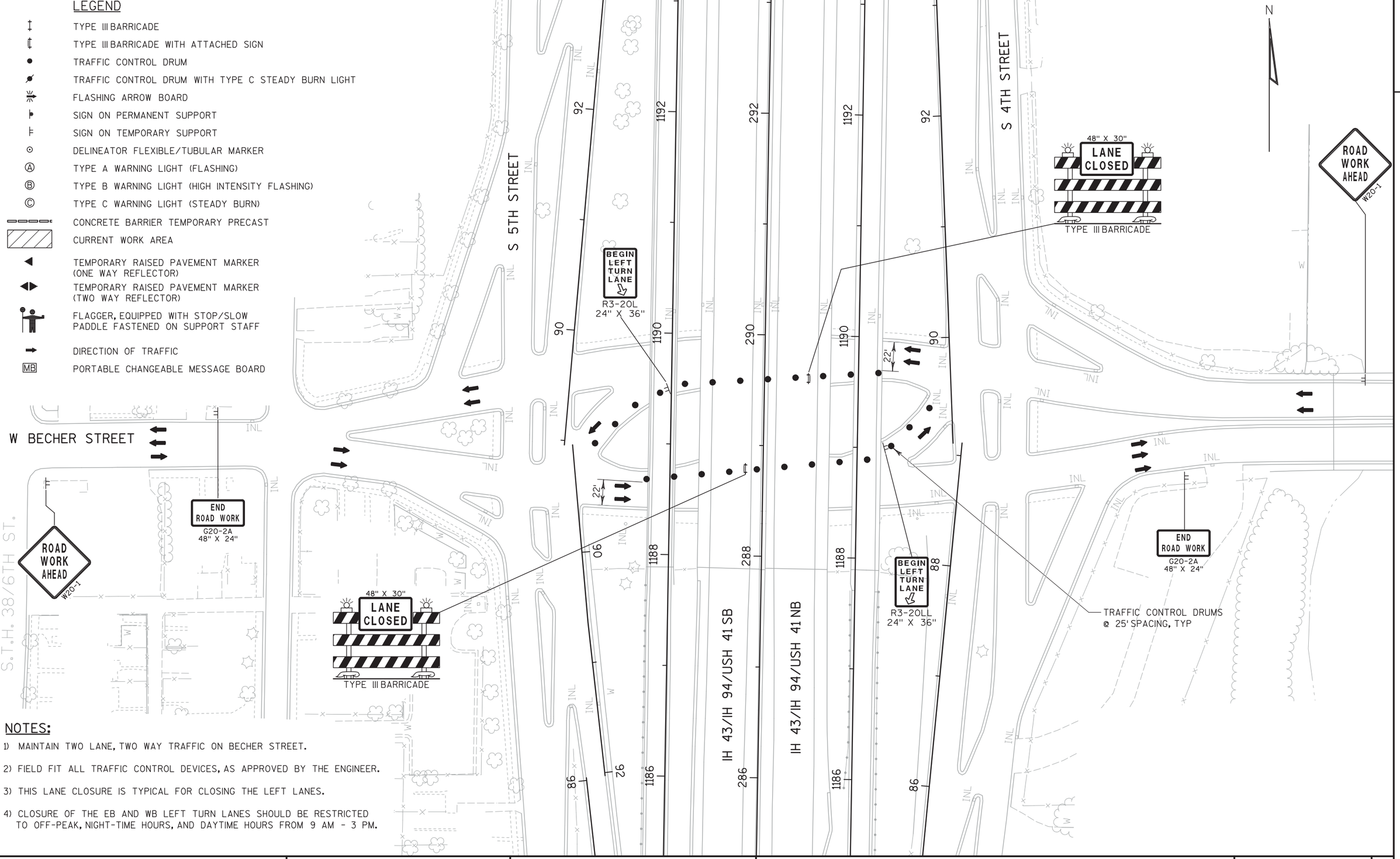
WORK ZONE INGRESS/EGRESS

POSTED SPEEDS 55 MPH OR LESS

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	WORK ZONE INGRESS/EGRESS	SHEET 149	E

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



NOTES:

1) MAINTAIN TWO LANE, TWO WAY TRAFFIC ON BECHER STREET.

2) FIELD FIT ALL TRAFFIC CONTROL DEVICES, AS APPROVED BY THE ENGINEER.

3) THIS LANE CLOSURE IS TYPICAL FOR CLOSING THE LEFT LANES.

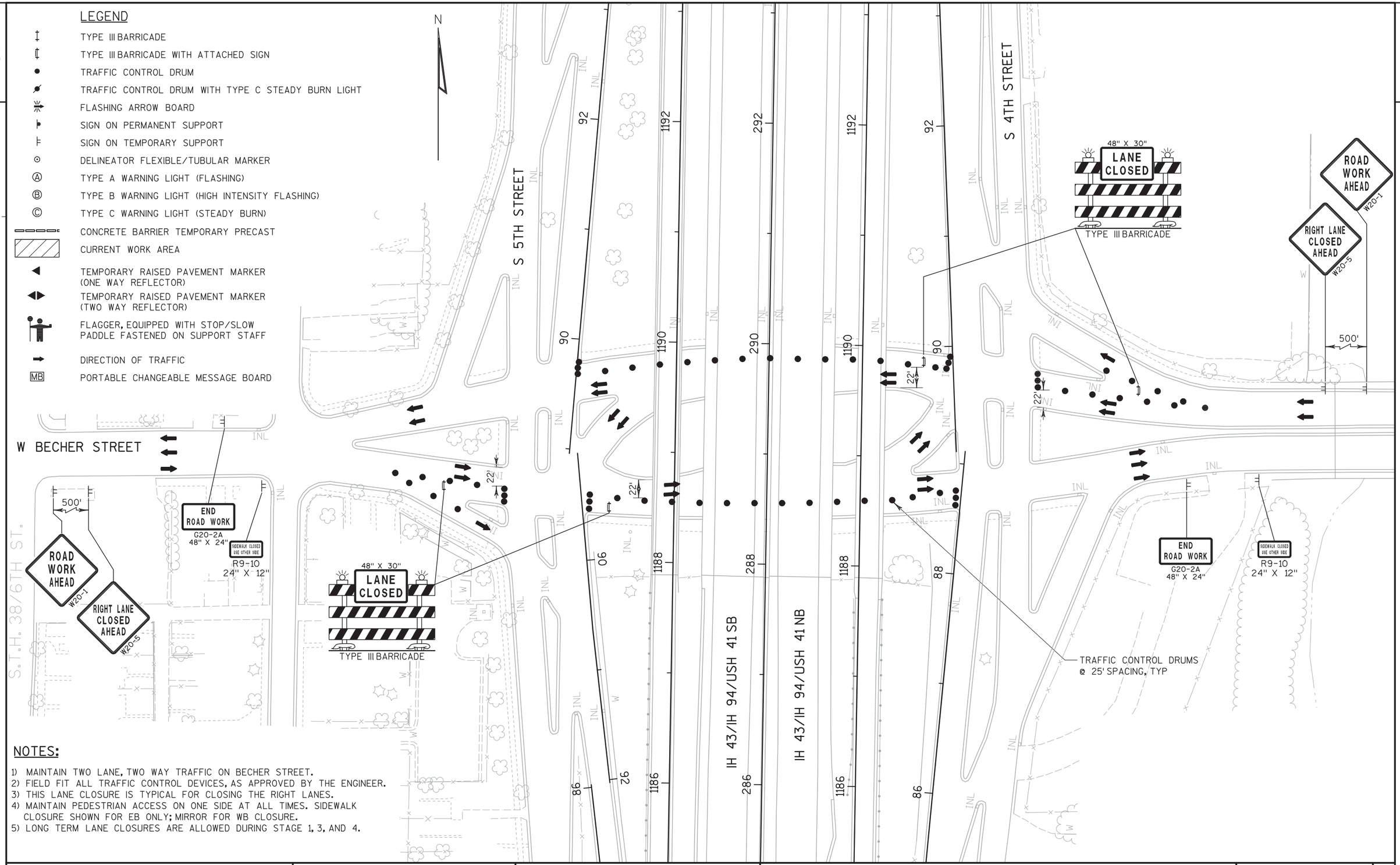
4) CLOSURE OF THE EB AND WB LEFT TURN LANES SHOULD BE RESTRICTED TO OFF-PEAK, NIGHT-TIME HOURS, AND DAYTIME HOURS FROM 9 AM - 3 PM.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAIL - BECHER STREET	SHEET 150	E

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



NOTES:

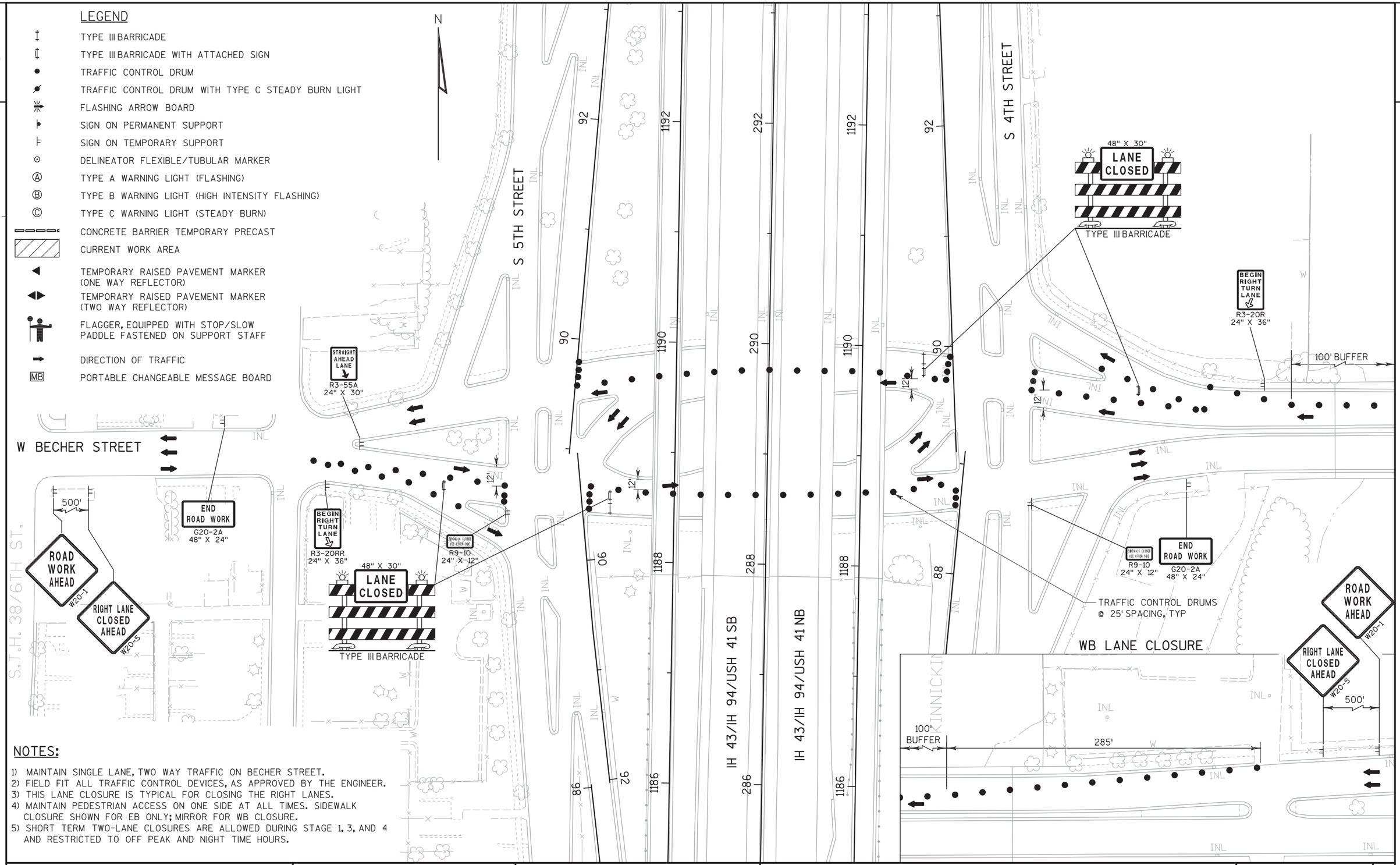
1) MAINTAIN TWO LANE, TWO WAY TRAFFIC ON BECHER STREET.
2) FIELD FIT ALL TRAFFIC CONTROL DEVICES, AS APPROVED BY THE ENGINEER.
3) THIS LANE CLOSURE IS TYPICAL FOR CLOSING THE RIGHT LANES.
4) MAINTAIN PEDESTRIAN ACCESS ON ONE SIDE AT ALL TIMES. SIDEWALK CLOSURE SHOWN FOR EB ONLY; MIRROR FOR WB CLOSURE.
5) LONG TERM LANE CLOSURES ARE ALLOWED DURING STAGE 1, 3, AND 4.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAIL - BECHER STREET, ONE LANE CLOSURE	SHEET 151	E

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



NOTES:

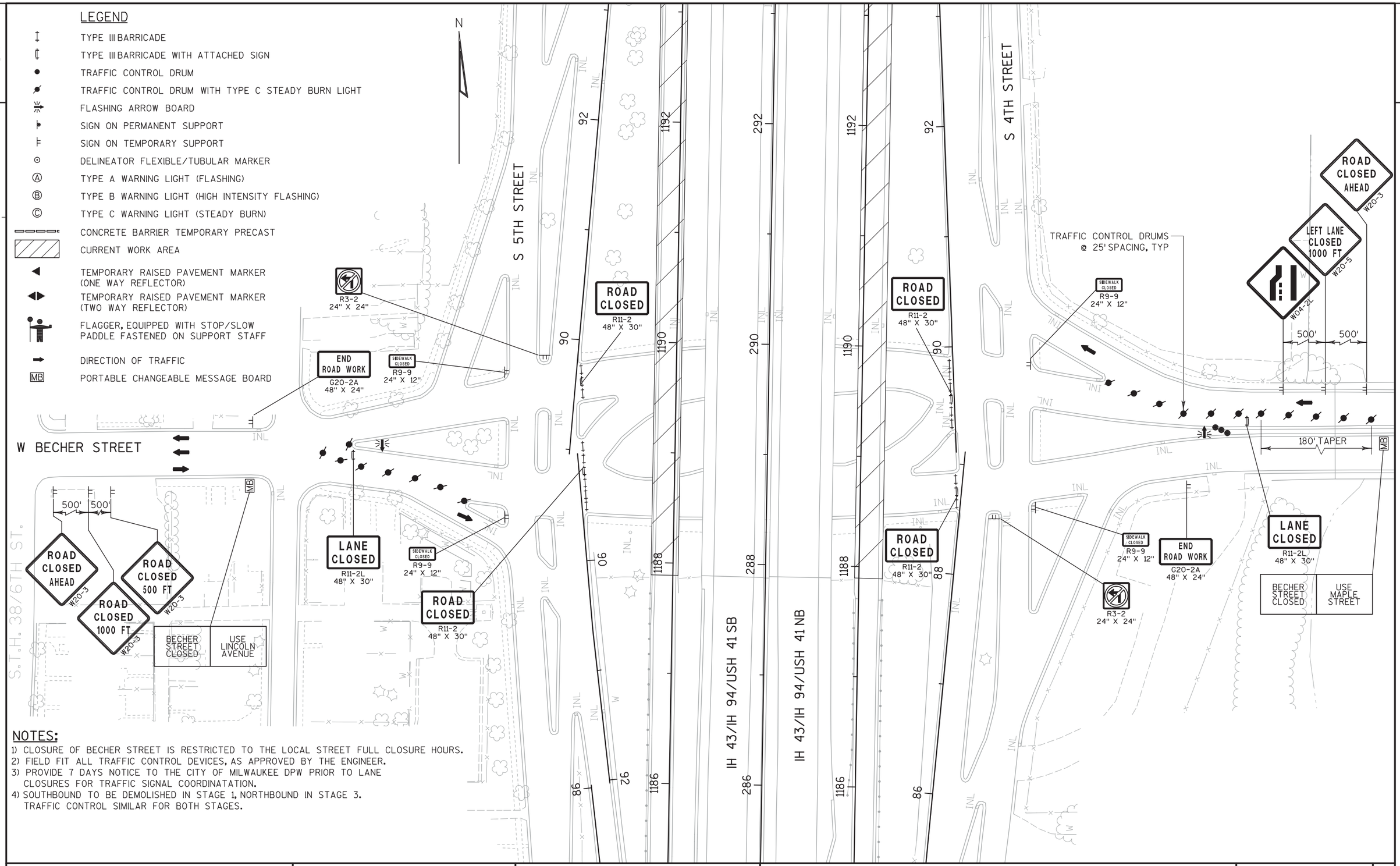
1) MAINTAIN SINGLE LANE, TWO WAY TRAFFIC ON BECHER STREET.
2) FIELD FIT ALL TRAFFIC CONTROL DEVICES, AS APPROVED BY THE ENGINEER.
3) THIS LANE CLOSURE IS TYPICAL FOR CLOSING THE RIGHT LANES.
4) MAINTAIN PEDESTRIAN ACCESS ON ONE SIDE AT ALL TIMES. SIDEWALK CLOSURE SHOWN FOR EB ONLY; MIRROR FOR WB CLOSURE.
5) SHORT TERM TWO-LANE CLOSURES ARE ALLOWED DURING STAGE 1, 3, AND 4 AND RESTRICTED TO OFF PEAK AND NIGHT TIME HOURS.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAIL - BECHER STREET, TWO LANE CLOSURE	SHEET 152	E

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



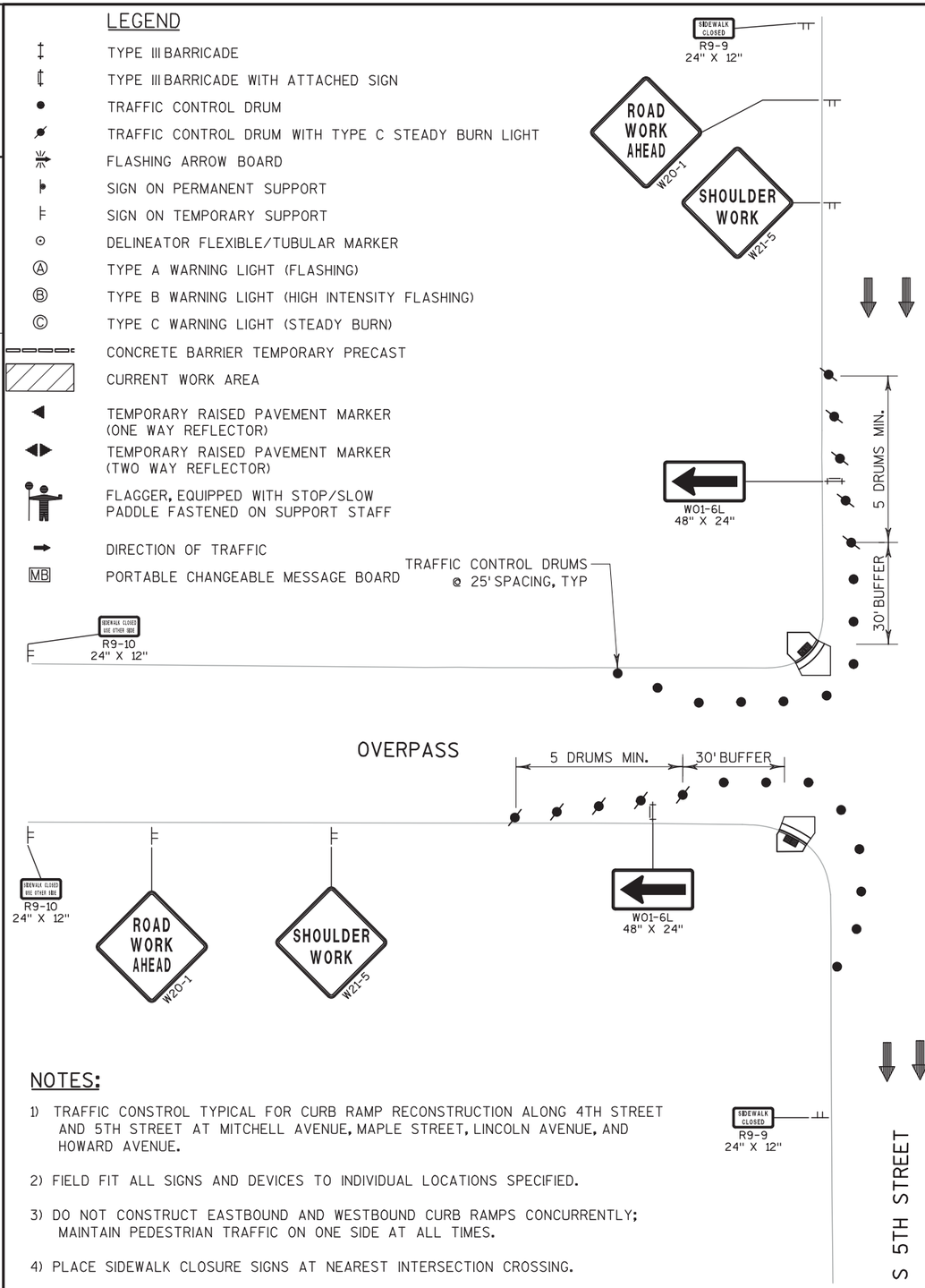
NOTES:

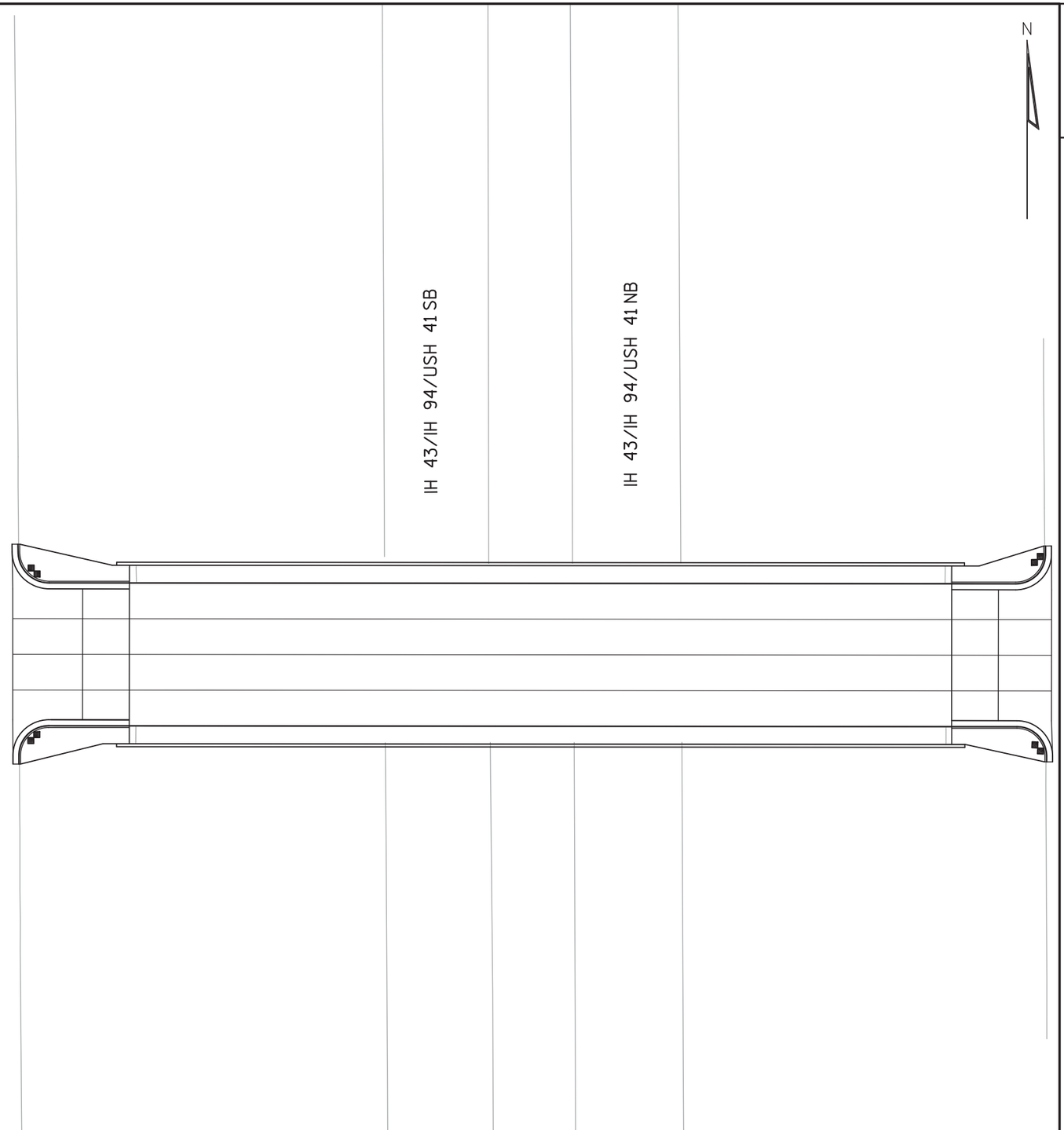
1) CLOSURE OF BECHER STREET IS RESTRICTED TO THE LOCAL STREET FULL CLOSURE HOURS.
2) FIELD FIT ALL TRAFFIC CONTROL DEVICES, AS APPROVED BY THE ENGINEER.
3) PROVIDE 7 DAYS NOTICE TO THE CITY OF MILWAUKEE DPW PRIOR TO LANE CLOSURES FOR TRAFFIC SIGNAL COORDINATATION.
4) SOUTHBOUND TO BE DEMOLISHED IN STAGE 1, NORTHBOUND IN STAGE 3. TRAFFIC CONTROL SIMILAR FOR BOTH STAGES.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAIL - BECHER STREET CD DEMO	SHEET 153	E

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD





NOTES:

1) TRAFFIC CONSTROL TYPICAL FOR CURB RAMP RECONSTRUCTION ALONG 4TH STREET AND 5TH STREET AT MITCHELL AVENUE, MAPLE STREET, LINCOLN AVENUE, AND HOWARD AVENUE.

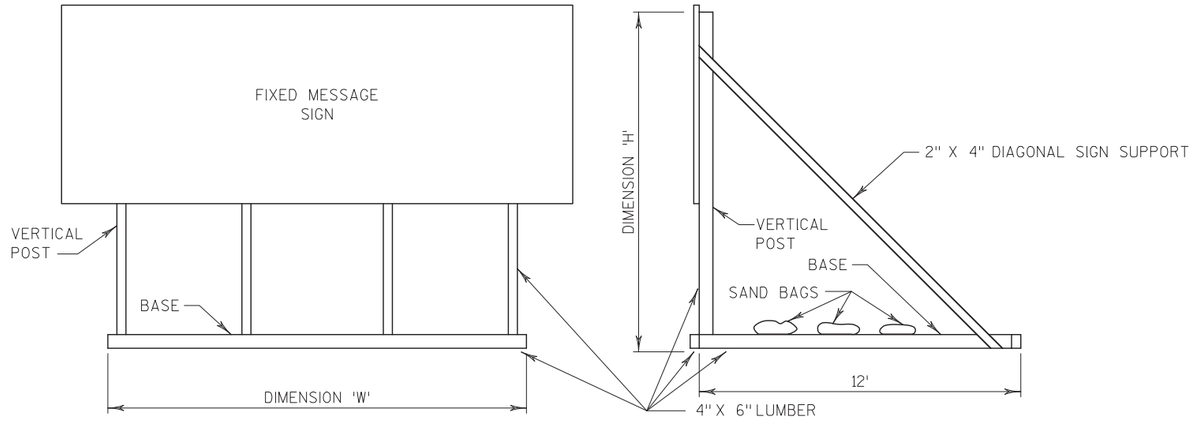
2) FIELD FIT ALL SIGNS AND DEVICES TO INDIVIDUAL LOCATIONS SPECIFIED.

3) DO NOT CONSTRUCT EASTBOUND AND WESTBOUND CURB RAMPS CONCURRENTLY; MAINTAIN PEDESTRIAN TRAFFIC ON ONE SIDE AT ALL TIMES.

4) PLACE SIDEWALK CLOSURE SIGNS AT NEAREST INTERSECTION CROSSING.

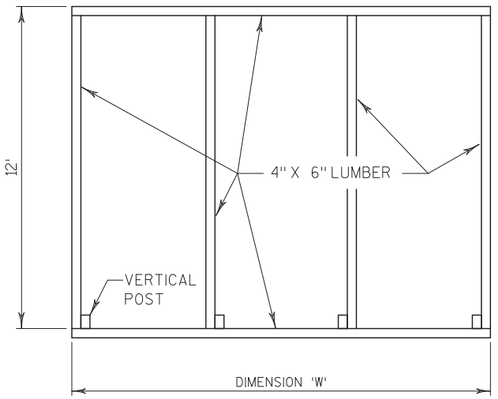
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAIL - CURB RAMP REPLACEMENT	SHEET 154	E

2



FRONT VIEW

SIDE VIEW

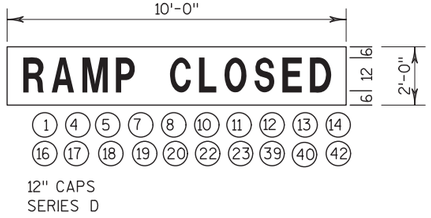


BASE PLAN VIEW

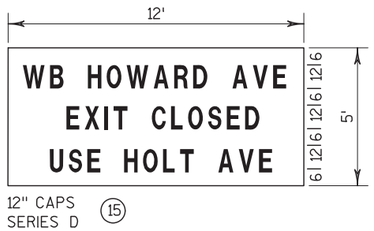
NOTES

1. SEE TRAFFIC CONTROL SHEETS FOR SIGN LOCATIONS.
2. TWO DIAGONAL SUPPORTS SHALL BE INCLUDED AND AFFIXED TO THE OUTSIDE SUPPORTS.
3. DIAGONAL SUPPORTS, VERTICAL POSTS AND BASE LUMBER ARE ALL INCLUDED IN THE "FIXED MESSAGE SIGN PORTABLE SUPPORT" ITEM.
4. PROVIDE AN ADEQUATE NUMBER OF SAND BAGS TO HOLD THE SIGN IN PLACE. SAND BAGS ARE INCLUDED IN THE "FIXED MESSAGE SIGN PORTABLE SUPPORT" ITEM.
5. SEE "TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS" SIGN PLATE FOR ADDITIONAL REQUIREMENTS.
6. REFER TO THE FOLLOWING PAGES FOR SIGN NUMBERS AND DIMENSIONS.

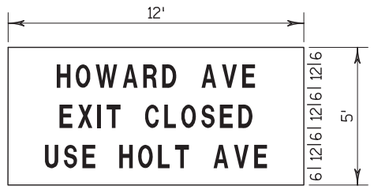
FIXED MESSAGE SIGN PORTABLE SUPPORT



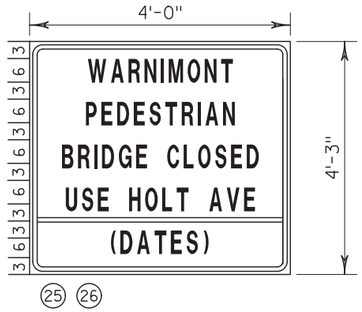
12" CAPS
SERIES D

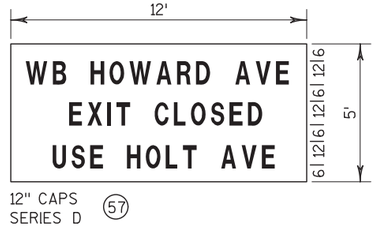


12" CAPS
SERIES D



12" CAPS
SERIES D





12" CAPS
SERIES D (57)

12" CAPS
SERIES D

GENERAL NOTES

1) ALL SIGNS TO HAVE STANDARD REFLECTIVE SHEETING - REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION.

2) AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.

3) ALL FIXED MESSAGE SIGNS TO BE MOUNTED ON WOODEN POST SUPPORTS (4" X 6"). THE NUMBER OF POSTS REQUIRED FOR EACH SIGN IS SHOWN. STEEL POSTS (2" X 2") MAY BE USED FOR SIGNS ON SURFACE STREETS.

4) SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "FIXED MESSAGE SIGNS".

5) SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.

6) ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:
   6-IN CAPS SHALL BE SERIES C
   12-IN CAPS SHALL BE SERIES D

7) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

8) SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2.

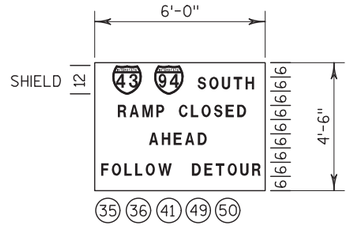
9) SIGN NUMBERS SHOWN BY ... (XX)

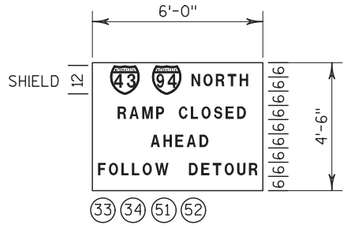
10) BEGIN XXX XX SIGNS TO BE IN PLACE 10 DAYS PRIOR TO CONSTRUCTION.

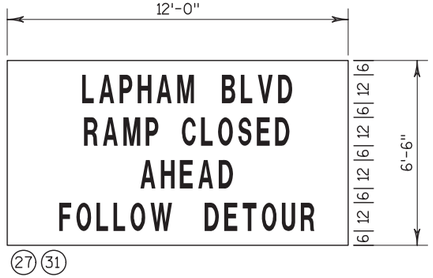
11) BEGIN XXX XX SIGNS SHALL BE SEPARATE PANELS, BUT SHALL BE CONSIDERED AS PART OF THE SIGN AND SHOULD BE REMOVED OR COVERED AFTER THEIR EFFECTIVE DATE. THE MONTH AND DAY SHALL BE DIRECTED BY THE ENGINEER IN THE FIELD.

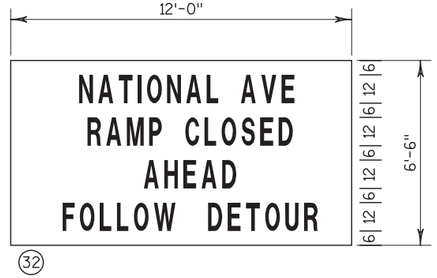
12) CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400 FT FROM ANY EXISTING TYPE 1 SIGN.

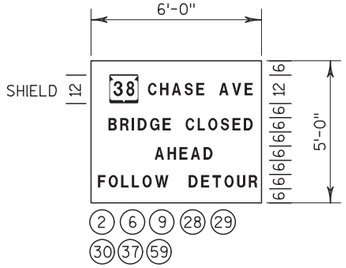
13) SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

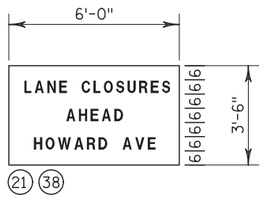


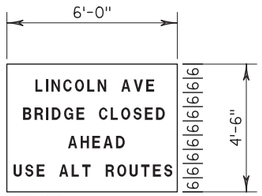


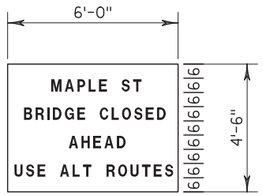


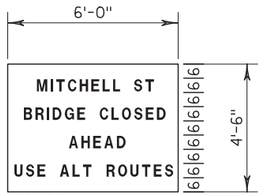


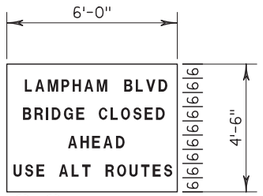


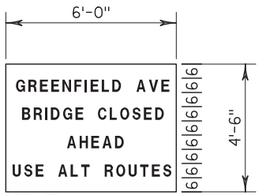












GENERAL NOTES

1) ALL SIGNS TO HAVE STANDARD REFLECTIVE SHEETING - REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION.

2) AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.

3) ALL FIXED MESSAGE SIGNS TO BE MOUNTED ON WOODEN POST SUPPORTS (4" X 6"). THE NUMBER OF POSTS REQUIRED FOR EACH SIGN IS SHOWN. STEEL POSTS (2" X 2") MAY BE USED FOR SIGNS ON SURFACE STREETS.

4) SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "FIXED MESSAGE SIGNS".

5) SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.

6) ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:
   6-IN CAPS SHALL BE SERIES C
   12-IN CAPS SHALL BE SERIES D

7) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

8) SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2.

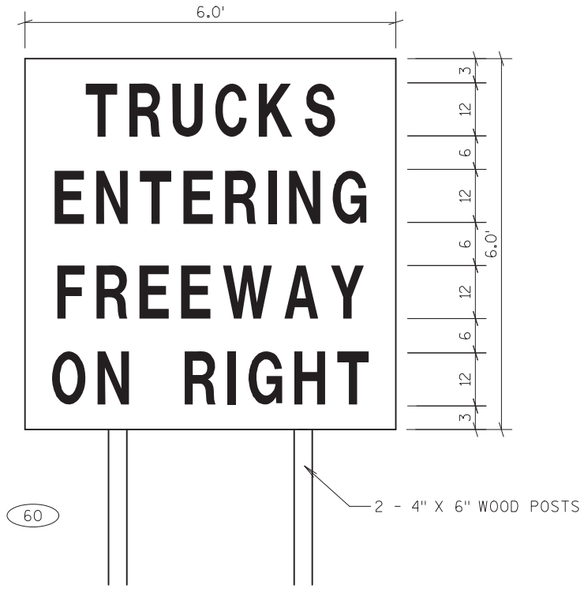
9) SIGN NUMBERS SHOWN BY ...(XX)

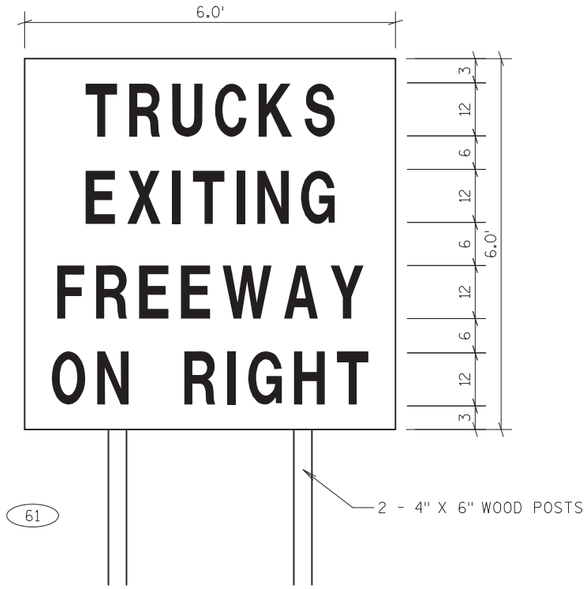
10) BEGIN XXX XX SIGNS TO BE IN PLACE 10 DAYS PRIOR TO CONSTRUCTION.

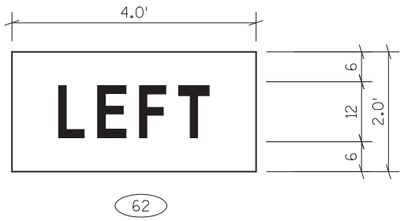
11) BEGIN XXX XX SIGNS SHALL BE SEPARATE PANELS, BUT SHALL BE CONSIDERED AS PART OF THE SIGN AND SHOULD BE REMOVED OR COVERED AFTER THEIR EFFECTIVE DATE. THE MONTH AND DAY SHALL BE DIRECTED BY THE ENGINEER IN THE FIELD.

12) CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400 FT FROM ANY EXISTING TYPE 1 SIGN.

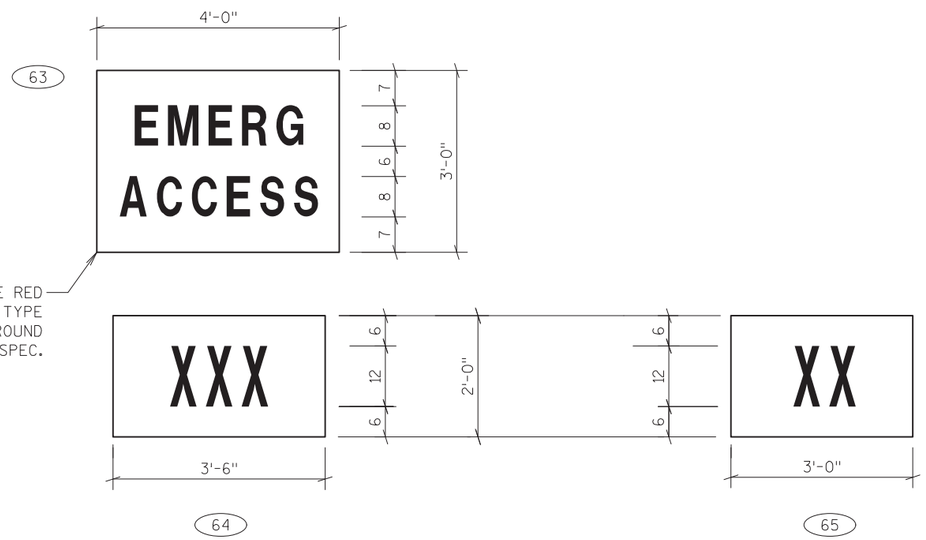
13) SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.







FIXED MESSAGE SIGNS



XXX REPRESENTS ACCESS POINT NUMBERS, AND WILL CHANGE FROM LOCATION TO LOCATION.

EMERGENCY ACCESS SIGNS

WORK ZONE INGRESS/EGRESS

NOTES

1. AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.
2. ALL SIGNS TO BE MOUNTED ON WOODEN POST SUPPORTS (4"x6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN. STEEL POSTS (2"X2") MAY BE USED FOR SIGNS ON SURFACE STREETS. SIGNS WHERE NO POSTS ARE SHOWN TO BE MOUNTED ON EXISTING SIGNS. FOR SIGNS MOUNTED ON POSTS, USE POSTS FROM FHWA LIST OF ACCEPTED BREAKAWAY SIGN SUPPORTS.
3. SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "TRAFFIC CONTROL SIGNS FIXED MESSAGE".
4. SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE TYPE F REFLECTIVE BACKGROUND UNLESS OTHERWISE NOTED.
5. ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS: 12" AND 8" CAPS SHALL BE SERIES "D", 6" CAPS SHALL BE SERIES "C".
6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.
7. SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2..
8. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

(XXX) = FIXED MESSAGE SIGN NUMBER

2

LEGEND

N

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

SIGN BRIDGE

DETOUR ROUTE

(SIZE X) INDICATES SIGN SIZE

(X) DENOTES FIXED MESSAGE SIGN NUMBER

XXX CLOSE ROADWAY

LANE CLOSURES AHEAD HOWARD AVE
STAGE 3 & 4 (38)

38 CHASE AVE BRIDGE CLOSED AHEAD FOLLOW DETOUR
(2) (6) (9) (59)

MITCHELL ST BRIDGE CLOSED AHEAD USE ALT ROUTES
(47) (48) STAGE 1

LAMPHAM BLVD BRIDGE CLOSED AHEAD USE ALT ROUTES
(53) (54) STAGE 4

5TH STREET

BARAGA STREET

IH 43/94 NB

HOWARD AVENUE

W WARNIMONT AVENUE

HOLT AVENUE

E CHASE AVENUE

LINCOLN AVENUE

BECHER STREET

MAPLE STREET

MITCHELL STREET

LAPHAM BOULEVARD

GREENFIELD AVENUE

LANE CLOSURES AHEAD HOWARD AVE
STAGE 3 & 4 (21) (38)

LINCOLN AVE BRIDGE CLOSED AHEAD USE ALT ROUTES
(43) (44) STAGE 2

MAPLE ST BRIDGE CLOSED AHEAD USE ALT ROUTES
(45) (46) STAGE 2

GREENFIELD AVE BRIDGE CLOSED AHEAD USE ALT ROUTES
(55) (56) STAGE 3

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL FMS SIGNS FOR OVERPASS CLOSURE	SHEET 159	E

2

IH 43 ℄

EQUATION
Eqn731+33.88
Eqn157+73.74

ROAD WORK AHEAD W20-1

LEFT LANE CLOSED 500 FT W20-5

W04-2L

W01-6R
48" X 24"

180' TAPER

TRAFFIC CONTROL DRUMS
@ 25' SPACING, TYP

LANE CLOSED
R11-2L
48" X 30"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

W GREENFIELD AVENUE

GREENFIELD AVE

500'

500'

180' TAPER

RIGHT LANE CLOSED AHEAD W20-5

ROAD WORK AHEAD W20-1

W04-2R

S 5TH STREET

S 4TH ST.

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

130

330

128

328

126

124

122

326

324

1224

180' TAPER

NOTES:
1. EASTBOUND AND WESTBOUND CLOSURES SHOWN. DO NOT USE SIMULTANEOUSLY.

2. LANE CLOSURES FOR PAINTING ARE NOT PERMITTED DURING ADJACENT RAMP OR OVERPASS CLOSURES.

N

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	GREENFIELD AVENUE PAINTING OPERATIONS	SHEET 160	E

2

N

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

W MITCHELL AVENUE

W. MITCHELL AVE.

W. MAPLE ST.

5TH ST S. 5TH STREET

4TH ST. S 4TH STREET

ATHLETIC FIELD

TEMPORARY PAVEMENT MARKING
TAPE 4-INCH DASHED YELLOW, TYP

LANE CLOSED
R11-2L
48" X 30"

LANE CLOSED
R11-2L
48" X 30"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

500'

ROAD WORK AHEAD
W20-1

W01-4L

ROAD WORK AHEAD
W20-1

NOTE:
1. LANE CLOSURES FOR PAINTING ARE NOT PERMITTED DURING ADJACENT RAMP OR OVERPASS CLOSURES.

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	MITCHELL AVENUE PAINTING OPERATIONS	SHEET 161	E

2

N

IH 43

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

5TH S S. 5TH STREET

4TH ST. S 4TH STREET

W MAPLE STREET

W MAPLE ST

TEMPORARY PAVEMENT MARKING TAPE, DASHED YELLOW, TYP

108 1208 308 1208 108

1206 306 206 106

12' 15'

1204 304 1204 104

102 1202 302 1202 102

100 100 100 0

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

LANE CLOSED
R11-2L
48" X 30"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

W04-2L

1,000'

ROAD WORK AHEAD
W20-1

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

500'

ROAD WORK AHEAD
W20-1

W01-4L

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

NOTE:
1. LANE CLOSURES FOR PAINTING ARE NOT PERMITTED DURING ADJACENT RAMP OR OVERPASS CLOSURES.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	MAPLE STREET PAINTING OPERATIONS	SHEET 162	E

NOTE:
1. EASTBOUND AND WESTBOUND CLOSURES SHOWN. DO NOT USE SIMULTANEOUSLY.

2. LANE CLOSURES FOR PAINTING ARE NOT PERMITTED DURING ADJACENT RAMP OR OVERPASS CLOSURES.

N

IH 43 R

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

ROAD WORK AHEAD W20-1

500'

500'

LEFT LANE CLOSED 500 FT W20-5

W04-2L

LANE CLOSED
R11-2L
48" X 30"

180' TAPER

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

W LINCOLN AVENUE

LINCOLN AVE.

LANE CLOSED
R11-2L
48" X 30"

W04-2R

ROAD WORK AHEAD W20-1

RIGHT LANE CLOSED AHEAD W20-5

500'

500'

180' TAPER

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

S 5TH STREET

S 4TH STREET

I-43/94

TRAFFIC CONTROL DRUMS @ 25' SPACING, TYP

LANE CLOSED
R11-2L
48" X 30"

W04-2L

LEFT LANE CLOSED 500 FT W20-5

500'

500'

ROAD WORK AHEAD W20-1

W04-2R

ROAD WORK AHEAD W20-1

RIGHT LANE CLOSED AHEAD W20-5

500'

500'

180' TAPER

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

180' TAPER

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	LINCOLN AVENUE PAINTING OPERATIONS	SHEET 163	E

NOTES:
1. MAINTAIN PEDESTRIAN ACCESS ON ONE SIDE OF OKLAHOMA AVENUE AT ALL TIMES. BOTH EB AND WB CLOSURES SHOWN.

2. MAINTAIN ACCESS TO DRIVEWAYS AND SIDEROADS AT ALL TIMES.

3. WORK TO BE COMPLETED IN STAGE 1 OR 2.

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

ROAD WORK AHEAD
W20-1

RIGHT LANE CLOSED 500 FT
W20-5

W04-2R

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

END ROAD WORK
G20-2A
48" X 24"

TRAFFIC CONTROL DRUMS WITH LIGHTS @ 25' SPACING, TYP

TRAFFIC CONTROL DRUMS @ 25' SPACING, TYP

180' TAPER

200' BUFFER

100' BUFFER

200' BUFFER

100' BUFFER

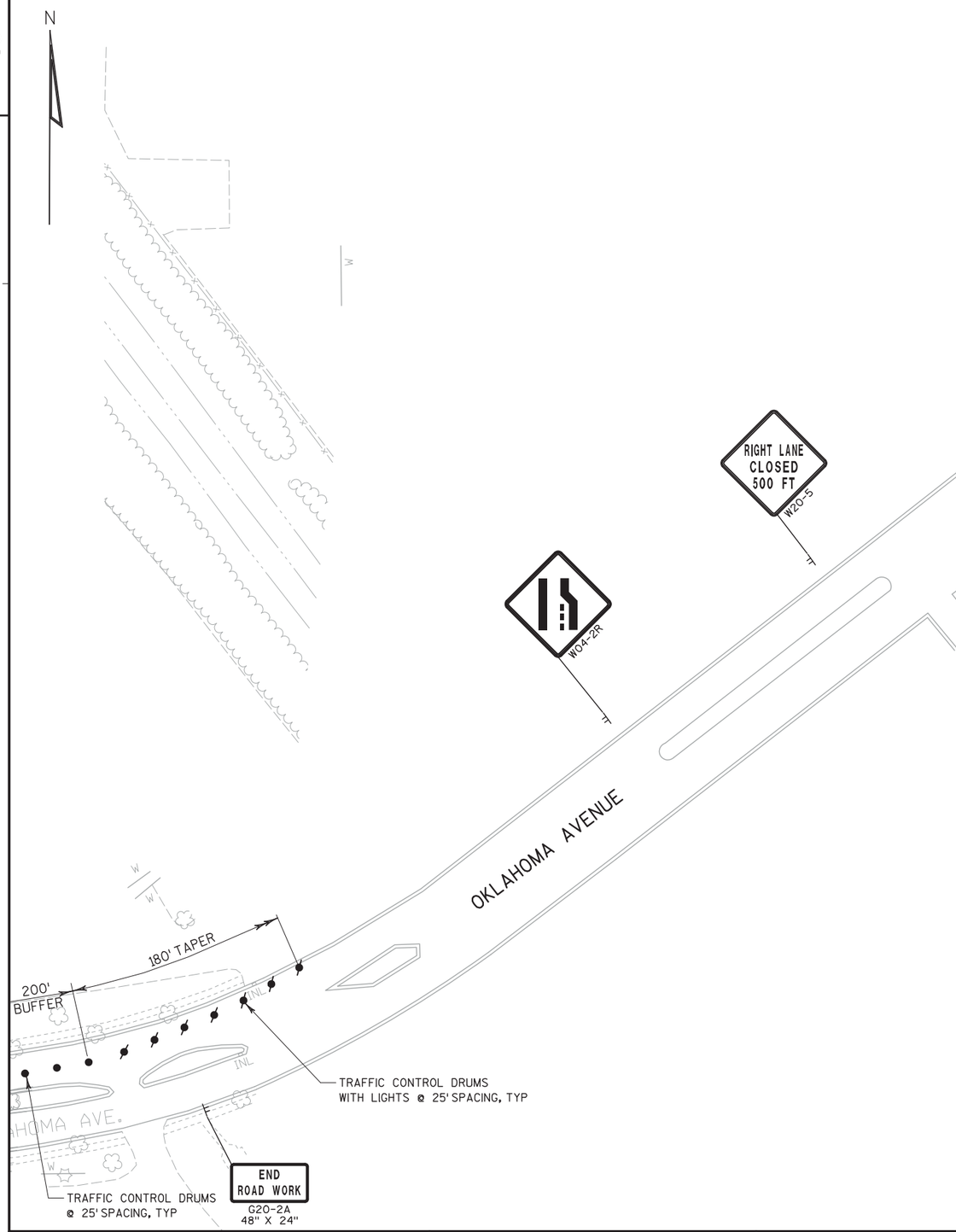
OKLAHOMA AVENUE

143/94/USH 41

143/94/USH 41

OKLAHOMA AV

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	OKLAHOMA AVENUE - OUTSIDE LANE CLOSURES	SHEET 164	E



LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

NOTES:
1. MAINTAIN PEDESTRIAN ACCESS ON ONE SIDE OF OKLAHOMA AVENUE AT ALL TIMES. BOTH EB AND WB CLOSURES SHOWN.
2. MAINTAIN ACCESS TO DRIVEWAYS AND SIDEROADS AT ALL TIMES.
3. WORK TO BE COMPLETED IN STAGE 1 OR 2.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	OKLAHOMA AVENUE - OUTSIDE LANE CLOSURES	SHEET 165	E

2

MB PLACE ON NORTH SIDE OF OKLAHOMA AVENUE AT INTERSECTION

MB

ROAD CLOSED AHEAD W20-3

OKLAHOMA AVE CLOSED AT I-43 | USE HOLT AVE

ROAD CLOSED 500 FT W20-3

PLACE AT INTERSECTION OF OKLAHOMA AVENUE AND 7TH STREET

S 6TH STREET

OKLAHOMA AVENUE

NOTES:
1. MAINTAIN PEDESTRIAN ACCESS ON ONE SIDE OF OKLAHOMA AVENUE AT ALL TIMES.
2. MAINTAIN ACCESS TO DRIVEWAYS AND SIDEROADS AT ALL TIMES.
3. WORK TO BE COMPLETED IN STAGE 1 OR 2.
4. OFF PEAK NIGHT-TIME WORK ONLY. SEE SPECIFICATIONS.

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

2

ROAD CLOSED R11-2 48" X 30"

ROAD CLOSED R11-2 48" X 30"

I43/94/USH 41

I43/94/USH 41

200' BUFFER

OKLAHOMA AV

RIGHT TURN ONLY R3-53R 24" X 30"

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	OKLAHOMA AVENUE - FULL NIGHT-TIME CLOSURE	SHEET 166 E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\025222_tc.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2

N

ROAD CLOSED AHEAD
W20-3

MB

OKLAHOMA AVE CLOSED AT I-43 | USE HOLT AVE

PLACE ON WB OKLAHOMA AVE AT S CHASE AVE

STH 38/S CHASE AVENUE

ROAD CLOSED 500 FT
W20-3

OKLAHOMA AVENUE

ROAD CLOSED
R11-2
48" X 30"

INL

INL

AHOMA AVE.

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

NOTES:
1. MAINTAIN PEDESTRIAN ACCESS ON ONE SIDE OF OKLAHOMA AVENUE AT ALL TIMES. BOTH EB AND WB CLOSURES SHOWN.
2. MAINTAIN ACCESS TO DRIVEWAYS AND SIDEROADS AT ALL TIMES.
3. WORK TO BE COMPLETED IN STAGE 1 OR 2.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	OKLAHOMA AVENUE - FULL NIGHT-TIME CLOSURES	SHEET 167	E

2

LEGEND

BRIDGE DEMOLITION

XXXXX CLOSE ROADWAY

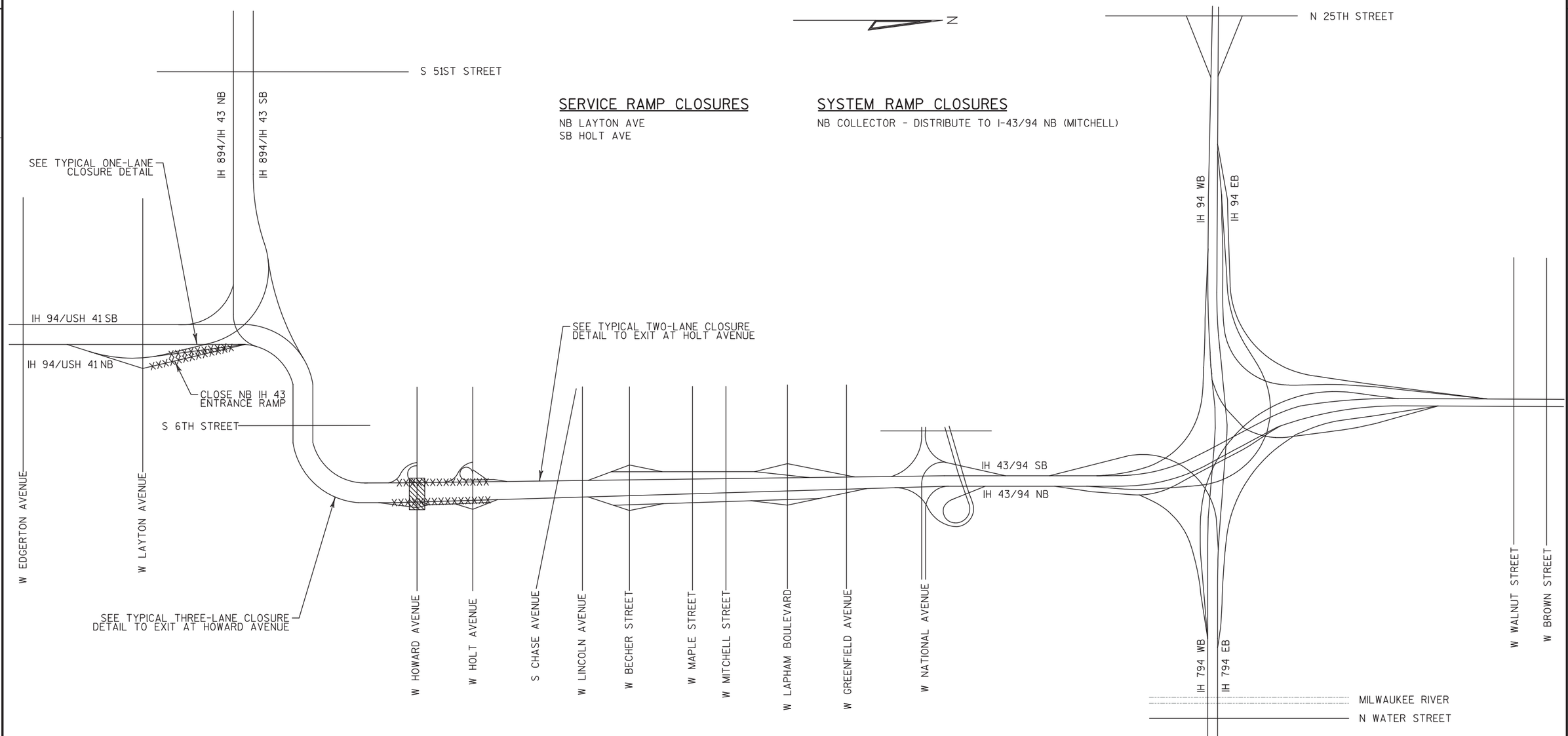
N

SERVICE RAMP CLOSURES

NB LAYTON AVE
SB HOLT AVE

SYSTEM RAMP CLOSURES

NB COLLECTOR - DISTRIBUTE TO I-43/94 NB (MITCHELL)



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS - HOWARD DEMOLITION STAGE 3 &4	SHEET 168	E

2

2

LEGEND

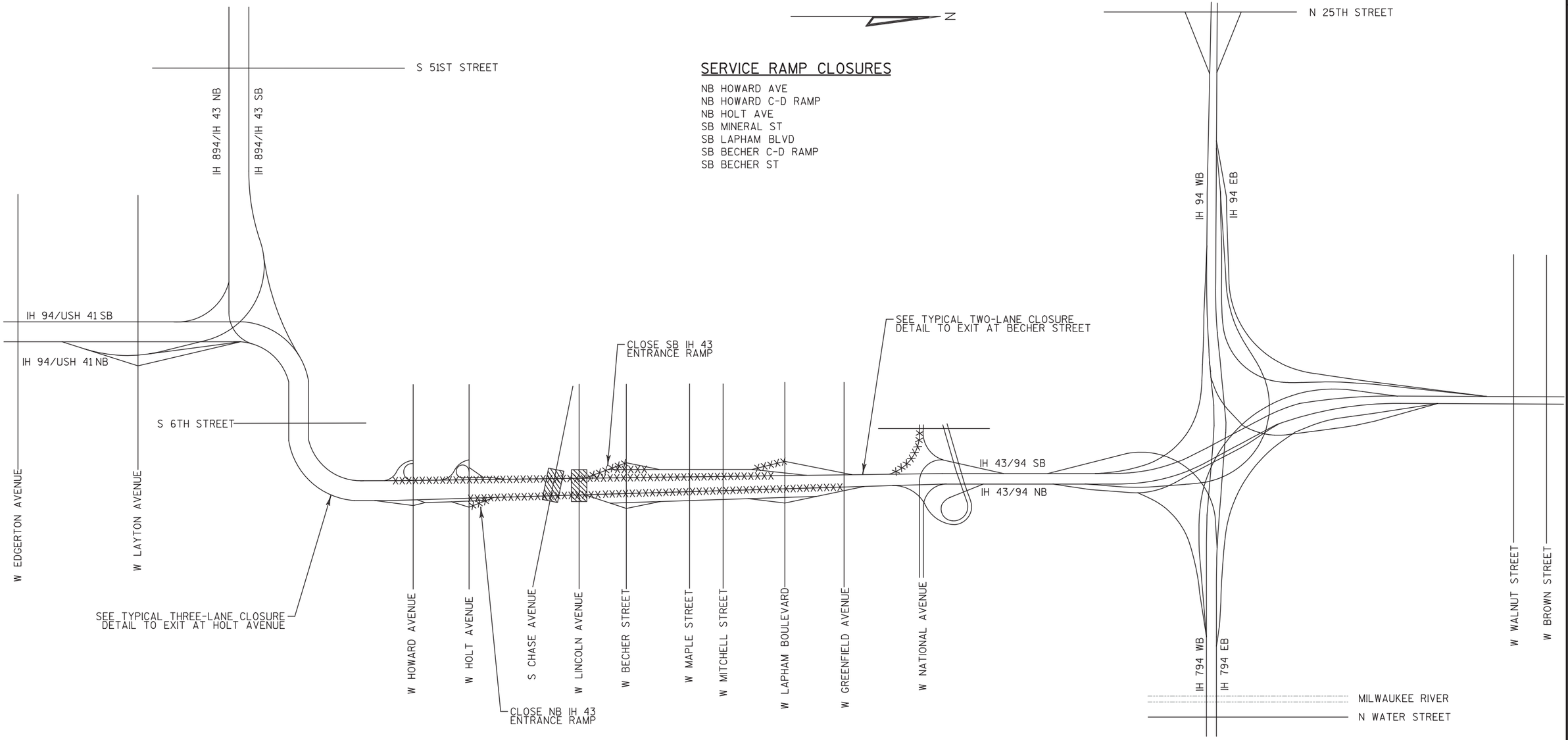
BRIDGE DEMOLITION

XXXXX CLOSE ROADWAY

N

SERVICE RAMP CLOSURES

NB HOWARD AVE
NB HOWARD C-D RAMP
NB HOLT AVE
SB MINERAL ST
SB LAPHAM BLVD
SB BECHER C-D RAMP
SB BECHER ST



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS - LINCOLN/CHASE DEMOLITION	SHEET 169	E

2

2

LEGEND

BRIDGE DEMOLITION

XXXXX CLOSE ROADWAY

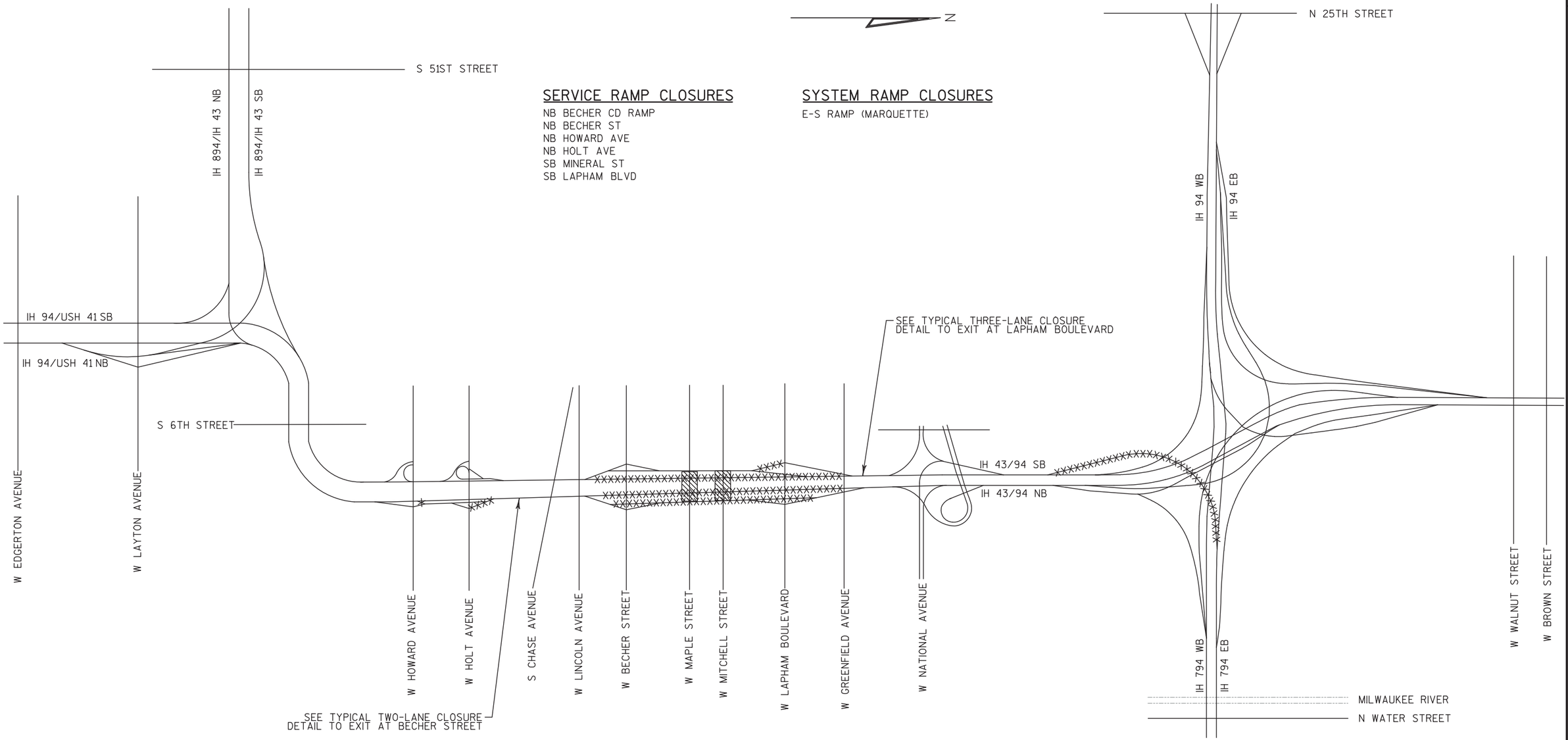
N

SERVICE RAMP CLOSURES

NB BECHER CD RAMP
NB BECHER ST
NB HOWARD AVE
NB HOLT AVE
SB MINERAL ST
SB LAPHAM BLVD

SYSTEM RAMP CLOSURES

E-S RAMP (MARQUETTE)



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS - MITCHELL/MAPLE DEMOLITION	SHEET 170	E

2

LEGEND

BRIDGE DEMOLITION

XXXXX CLOSE ROADWAY

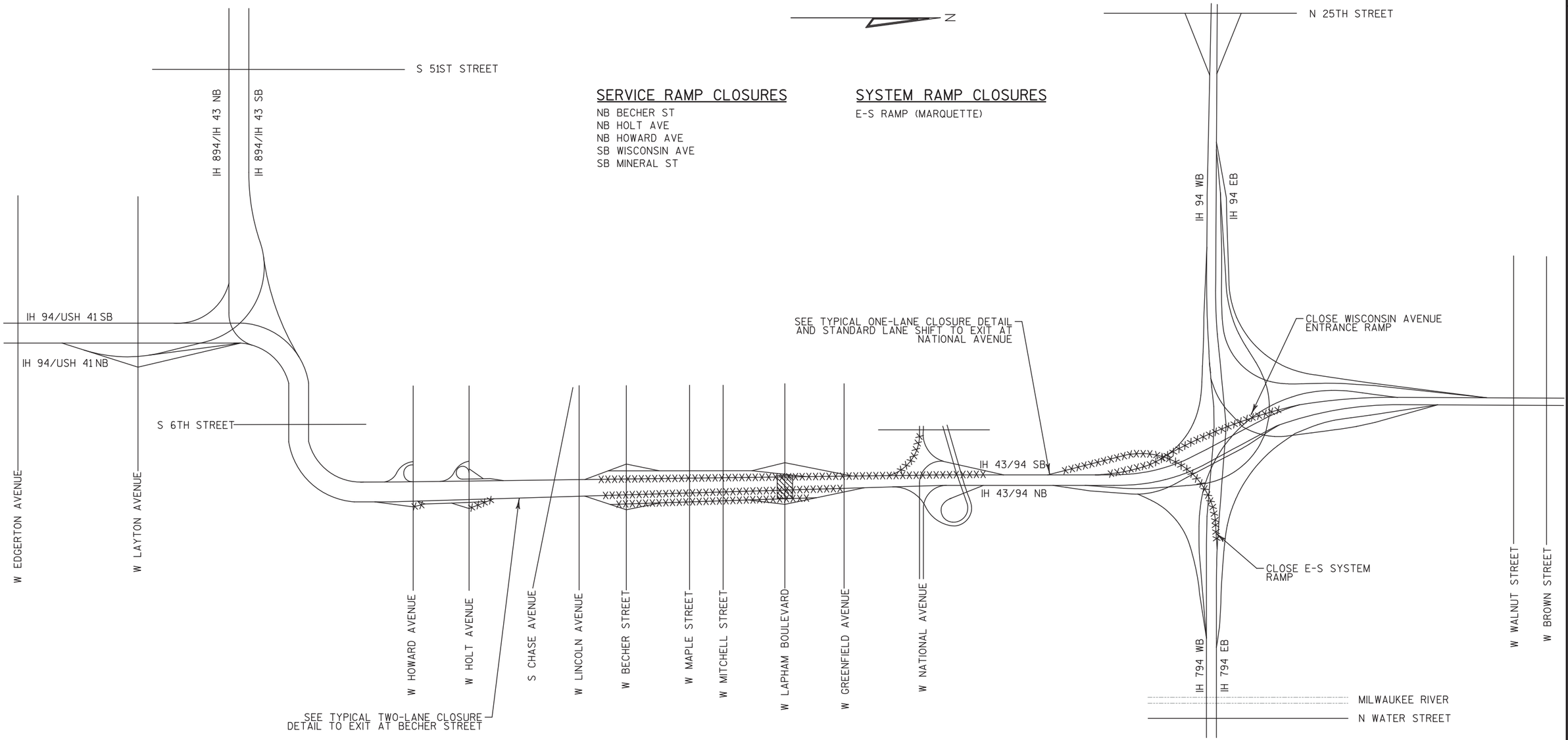
N

SERVICE RAMP CLOSURES

NB BECHER ST
NB HOLT AVE
NB HOWARD AVE
SB WISCONSIN AVE
SB MINERAL ST

SYSTEM RAMP CLOSURES

E-S RAMP (MARQUETTE)



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS - LAPHAM DEMOLITION STAGE 4	SHEET 171	E

2

LEGEND

BRIDGE DEMOLITION

XXXXX CLOSE ROADWAY

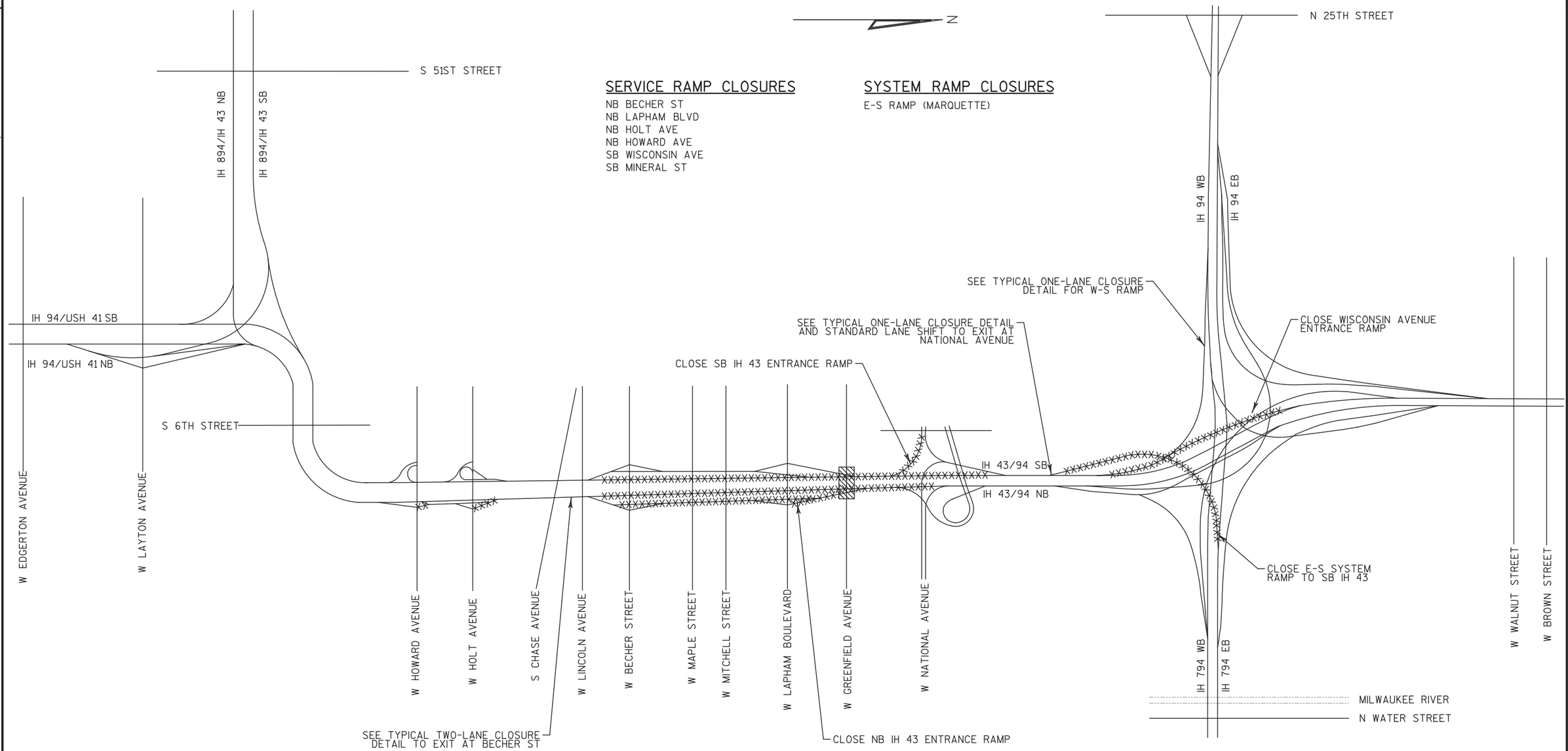
N

SERVICE RAMP CLOSURES

NB BECHER ST
NB LAPHAM BLVD
NB HOLT AVE
NB HOWARD AVE
SB WISCONSIN AVE
SB MINERAL ST

SYSTEM RAMP CLOSURES

E-S RAMP (MARQUETTE)



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL DETAILS - GREENFIELD DEMOLITION STAGE 3	SHEET 172	E

2

CONSTRUCTION STAGING NOTES

STAGE 1 TRAFFIC CONTROL NOTES

1) ALL CROSSROADS WITHIN THE PROJECT VICINITY AND NOT UNDER CONSTRUCTION ARE TO REMAIN OPEN AT ALL TIMES.

2) MAINTAIN ALL LANES OF IH 43 NORTHBOUND AND SOUTHBOUND TRAFFIC DURING PEAK HOURS.

3) SHORT TERM RAMP CLOSURES ARE ALLOWED FOR OVERHEAD STRUCTURE WORK.

4) SEE SDD TRAFFIC CONTROL LANE CLOSURE SPEEDS GREATER THAN 40 MPH, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY (SHORT TERM), EXIT RAMP CLOSURE, AND SHOULDER CLOSURE ON DIVIDED ROADWAY SPEEDS GREATER THAN 40 MPH FOR SHOULDER AND LANE CLOSURE INFORMATION.

STAGE 1 CONSTRUCTION STAGING NOTES

1) PERFORM DECK REPLACEMENT AND CONCRETE REPAIR WORK ON STRUCTURES B-40-172 (MITCHELL STREET) AND B-40-174 (SB BECHER CD ROAD).

2) PERFORM CONCRETE REPAIR WORK ON PEDESTRIAN STRUCTURE B-40-264 (WARNIMONT).

3) PAINT STRUCTURE GIRDERS DURING LANE CLOSURES FOR STRUCTURE B-40-286 (WASHINGTON STREET).

4) PLACE FINAL PAVEMENT MARKINGS ONCE FINAL PAVEMENT IS PLACED AND CURED.

5) CLOSE THE BECHER/LAPHAM SB CD ROAD FOR PAVING OPERATIONS.

6) LONG TERM CLOSURES FOR THE LAPHAM BOULEVARD SB ENTRANCE RAMP.

STAGE 2 TRAFFIC CONTROL NOTES

1) ALL CROSSROADS WITHIN THE PROJECT VICINITY AND NOT UNDER CONSTRUCTION ARE TO REMAIN OPEN AT ALL TIMES.

2) MAINTAIN ALL LANES OF IH 43 NORTHBOUND AND SOUTHBOUND TRAFFIC DURING PEAK HOURS.

3) SHORT AND LONG TERM RAMP CLOSURES ARE ALLOWED FOR OVERHEAD STRUCTURE WORK AND PAVING.

4) SEE SDD TRAFFIC CONTROL LANE CLOSURE SPEEDS GREATER THAN 40 MPH, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY (SHORT TERM), EXIT RAMP CLOSURE, AND SHOULDER CLOSURE ON DIVIDED ROADWAY SPEEDS GREATER THAN 40 MPH FOR SHOULDER AND LANE CLOSURE INFORMATION.

STAGE 2 CONSTRUCTION STAGING NOTES

1) PERFORM DECK REPLACEMENT AND CONCRETE REPAIR WORK ON STRUCTURES B-40-173 (MAPLE STREET) AND B-40-178 (LINCOLN AVENUE).

2) PAINT STRUCTURE GIRDERS DURING LANE CLOSURES FOR STRUCTURE B-40-172 (MITCHELL STREET) AFTER NEW DECK CONSTRUCTION IS FINISHED.

3) PLACE FINAL PAVEMENT MARKINGS ONCE FINAL PAVEMENT IS PLACED AND CURED.

4) CLOSE NATIONAL AVENUE NB EXIT RAMP AND 9TH STREET/WALKER STREET NB ENTRANCE RAMP FOR PAVING OPERATIONS.

5) LONG TERM CLOSURES FOR THE NATIONAL AVENUE NB EXIT AND 9TH STREET/WALKER STREET NB ENTRANCE RAMP.

STAGE 3 TRAFFIC CONTROL NOTES

1) ALL CROSSROADS WITHIN THE PROJECT VICINITY AND NOT UNDER CONSTRUCTION ARE TO REMAIN OPEN AT ALL TIMES.

2) MAINTAIN ALL LANES OF IH 43 NORTHBOUND AND SOUTHBOUND TRAFFIC DURING PEAK HOURS.

3) SHORT AND LONG TERM RAMP CLOSURES ARE ALLOWED FOR OVERHEAD STRUCTURE WORK AND PAVING.

4) SEE SDD TRAFFIC CONTROL LANE CLOSURE SPEEDS GREATER THAN 40 MPH, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY (SHORT TERM), EXIT RAMP CLOSURE, AND SHOULDER CLOSURE ON DIVIDED ROADWAY SPEEDS GREATER THAN 40 MPH FOR SHOULDER AND LANE CLOSURE INFORMATION.

STAGE 3 CONSTRUCTION STAGING NOTES

1) PERFORM DECK REPLACEMENT AND CONCRETE REPAIR WORK ON STRUCTURES B-40-177 (NB BECHER CD ROAD), B-40-170 (GREENFIELD AVENUE), AND B-40-265 (EB HOWARD AVENUE).

2) PAINT STRUCTURE GIRDERS DURING LANE CLOSURES FOR STRUCTURE B-40-178 (LINCOLN AVENUE), B-40-173 (MAPLE STREET), AND B-40-285 (VALLEY BRIDGE) AFTER NEW DECK CONSTRUCTION IS FINISHED.

3) PLACE FINAL PAVEMENT MARKINGS ONCE FINAL PAVEMENT IS PLACED AND CURED.

4) LONG TERM RAMP CLOSURES FOR THE LAPHAM BOULEVARD NB EXIT, HOWARD AVENUE NB EXIT, AND HOWARD AVENUE LEFT TURN RESTRICTIONS.

STAGE 4 TRAFFIC CONTROL NOTES

1) ALL CROSSROADS WITHIN THE PROJECT VICINITY AND NOT UNDER CONSTRUCTION ARE TO REMAIN OPEN AT ALL TIMES.

2) MAINTAIN ALL LANES OF IH 43 NORTHBOUND AND SOUTHBOUND TRAFFIC DURING PEAK HOURS.

3) SHORT AND LONG TERM RAMP CLOSURES ARE ALLOWED FOR OVERHEAD STRUCTURE WORK AND PAVING.

4) SEE SDD TRAFFIC CONTROL LANE CLOSURE SPEEDS GREATER THAN 40 MPH, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY (SHORT TERM), EXIT RAMP CLOSURE, AND SHOULDER CLOSURE ON DIVIDED ROADWAY SPEEDS GREATER THAN 40 MPH FOR SHOULDER AND LANE CLOSURE INFORMATION.

STAGE 4 CONSTRUCTION STAGING NOTES

1) PERFORM DECK REPLACEMENT AND CONCRETE REPAIR WORK ON STRUCTURES B-40-180 (CHASE AVENUE), B-40-171 (LAPHAM BOULEVARD), B-40-177 (NB BECHER CD ROAD), AND B-40-265 (WB HOWARD AVENUE) SOUTH.

2) PAINT STRUCTURE GIRDERS DURING LANE CLOSURES FOR STRUCTURE B-40-285 (VALLEY BRIDGE) AND B-40-170 (GREENFIELD AVENUE) AFTER NEW DECK CONSTRUCTION IS FINISHED.

3) PLACE FINAL PAVEMENT MARKINGS ONCE FINAL PAVEMENT IS PLACED AND CURED.

4) CLOSE LAPHAM BOULEVARD SB EXIT RAMP, BECHER/LAPHAM NB CD RAMPS, HOWARD AVENUE SB EXIT RAMP, AND HOWARD AVENUE SB ENTRANCE RAMP FOR PAVING OPERATIONS.

5) LONG TERM LANE CLOSURES FOR THE LAPHAM BOULEVARD NB EXIT, LAPHAM BOULEVARD SB EXIT RAMP, HOWARD AVENUE SB EXIT RAMP, AND HOWARD AVENUE LEFT TURN RESTRICTIONS.

STAGE 5 TRAFFIC CONTROL NOTES

1) ALL CROSSROADS WITHIN THE PROJECT VICINITY AND NOT UNDER CONSTRUCTION ARE TO REMAIN OPEN AT ALL TIMES.

2) MAINTAIN ALL LANES OF IH 43 NORTHBOUND AND SOUTHBOUND TRAFFIC DURING PEAK HOURS.

3) SHORT AND LONG TERM RAMP CLOSURES ARE ALLOWED FOR OVERHEAD STRUCTURE WORK AND PAVING.

4) SEE SDD TRAFFIC CONTROL LANE CLOSURE SPEEDS GREATER THAN 40 MPH, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY (SHORT TERM), EXIT RAMP CLOSURE, AND SHOULDER CLOSURE ON DIVIDED ROADWAY SPEEDS GREATER THAN 40 MPH OR SHOULDER AND LANE CLOSURE INFORMATION.

STAGE 5 CONSTRUCTION STAGING NOTES

1) PAINT STRUCTURE GIRDERS DURING LANE CLOSURES FOR STRUCUTRE B-40-285 (VALLEY BRIDGE).

2

2

N

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41NB

W MITCHELL STREET

W. MITCHELL AVE.

W. MAPLE ST.

5TH S. 5TH STREET

S 4TH ST. S 4TH STREET

ATHLETIC FIELD

FENCE TEMPORARY, TYP

CONCRETE BARRIER, TYP

DETOUR

BRIDGE OUT
R11-2B
48" X 30"

STOP
R1-1
36" X 36"

RIGHT TURN ONLY
R3-53R
24" X 30"

R4-7
24" X 30"

ROAD CLOSED 500 FT
W20-3

ROAD CLOSED 1000 FT
W20-3

ROAD CLOSED AHEAD
W20-3

500'

NOTE:
COVER TRAFFIC SIGNALS DURING CONSTRUCTION OPERATIONS

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TYPE A WARNING LIGHT (FLASHING)
- TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1	SHEET 174	E

2

N

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

ROAD WORK AHEAD W20-1

AT S 5TH STREET AND E SAVELAND AVENUE

RIGHT SHOULDER CLOSED W21-5A

R11-2B 48" X 30"
BRIDGE OUT
TYPE III BARRICADE

ROAD WORK AHEAD W20-1

AT WARNIMONT AVENUE AND S 5TH PLACE

ROAD WORK AHEAD W20-1

S 5TH STREET

SAFETY FENCE

TRAFFIC CONTROL DRUMS @25' SPACING, TYP

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

PED OVERHEAD

I43/94/USH 41

PC 190+82.98

95+50.00

46NC

DO NOT ENTER
R5-1
36" X 36"

PC 45+27.24

S 4TH STREET

SAFETY FENCE

25'

ROAD CLOSED
LOCAL TRAFFIC ONLY
R11-4 (MOD)
60" X 30"

R11-2B 48" X 30"
BRIDGE OUT
TYPE III BARRICADE

W WARNIMONT AVENUE

ONE WAY
R6-2R
24" X 30"

ONLY

END ROAD WORK
G20-2A
48" X 24"

W MORGAN AVENUE

ROAD WORK AHEAD W20-1

ROAD WORK AHEAD W20-1

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1	SHEET 175 E

NOTES:

1. MAINTAIN TWO LANE, TWO WAY TRAFFIC ON STH 38/6TH STREET.
2. CLOSE WASHINGTON STREET TO THRU TRAFFIC.
3. FIELD FIT ALL TRAFFIC CONTROL DEVICES, AS APPROVED BY THE ENGINEER.
4. RESTRICT ON-STREET PARKING ALONG STH 38/6TH STREET DURING PAINTING.
5. MAINTAIN PEDESTRIAN ACCESS ALONG WASHINGTON STREET AND 6TH STREET ON ONE SIDE AT ALL TIMES. NORTH AND WEST SIDEWALKS SHOWN OPEN; SIMILAR SIGNAGE FOR OTHER SIDE.
6. MAINTAIN LOCAL STREET ACCESS ON WASHINGTON STREET BETWEEN 5TH STREET TO 6TH STREET.
7. COVER TRAFFIC SIGNALS DURING BRIDGE PAINTING.

N

R11-4 60" X 30" ROAD CLOSED TO THRU TRAFFIC — TYPE III BARRICADE

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12"

ROAD CLOSED AHEAD W20-3 — PLACE AT THE INTERSECTION WITH 8TH STREET

R11-2 48" X 30" ROAD CLOSED — TYPE III BARRICADE

48" X 30" LANE CLOSED — TYPE III BARRICADE

48" X 30" LANE CLOSED — TYPE III BARRICADE

ONLY R3-5OR 30" X 36"

DELINEATOR FLEXIBLE/ TUBULAR MARKER AND BASE @ 25' SPACING, TYP

R3-2 24" X 24"

NO TURNS R3-3 24" X 24"

PAVEMENT MARKING CROSSWALK EPOXY 6-INCH WHITE

TEMPORARY PAVEMENT MARKING ARROWS TYPE 2, TYP

PLACE AT SB 6TH ST PRIOR TO NATIONAL AVE

TO INTERSTATE 43 INTERSTATE 94

W6-3 36" X 36"

W01-4R

ROAD WORK AHEAD W20-1

S.T.H. 38

STH 38/6TH STREET

TRAFFIC CONTROL DRUMS @ 25' SPACING, TYP

TEMPORARY PAVEMENT MARKING TAPE 4-INCH DASHED YELLOW, TYP

W01-4L

W6-3 36" X 36"

W01-6 48" X 24"

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12"

R3-2 24" X 24"

STOP R1-1 30" X 30"

TEMPORARY PAVEMENT MARKING CENTERLINE DOUBLE YELLOW 4-INCH

COVER

ROAD WORK AHEAD W20-1

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I-43/94

I-43/94

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12"

TEMPORARY PAVEMENT MARKING TAPE 8-INCH WHITE, TYP

TEMPORARY PAVEMENT MARKING TAPE 8-INCH DASHED WHITE, TYP

TEMPORARY PRECAST CONCRETE BARRIER, TYP

R11-2 48" X 30" ROAD CLOSED — TYPE III BARRICADE

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12"

R11-4 60" X 30" ROAD CLOSED TO THRU TRAFFIC — TYPE III BARRICADE

ROAD CLOSED AHEAD W20-3

WASHINGTON STREET

W MINERAL STREET

S.T.H. 38

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1	SHEET 176	E

NOTES:

1. MAINTAIN TWO LANE, TWO WAY TRAFFIC ON STH 38/6TH STREET.
2. CLOSE WASHINGTON STREET TO THRU TRAFFIC.
3. FIELD FIT ALL TRAFFIC CONTROL DEVICES, AS APPROVED BY THE ENGINEER.
4. RESTRICT ON-STREET PARKING ALONG STH 38/6TH STREET DURING PAINTING.
5. MAINTAIN PEDESTRIAN ACCESS ALONG WASHINGTON STREET AND 6TH STREET ON ONE SIDE AT ALL TIMES. SOUTH AND WEST SIDEWALKS SHOWN OPEN; SIMILAR SIGNAGE FOR OTHER SIDE.
6. MAINTAIN LOCAL STREET ACCESS ON WASHINGTON STREET BETWEEN 5TH STREET TO 6TH STREET.
7. COVER TRAFFIC SIGNALS DURING BRIDGE PAINTING.

N

STH 38/6TH STREET

W MADISON ST

S BARAGA ST

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

4TH ST

WASHINGTON ST.

W MINERAL STREET

WASHINGTON STREET

48" X 30" LANE CLOSED — TYPE III BARRICADE

TEMPORARY PAVEMENT MARKING CENTERLINE DOUBLE YELLOW 4-INCH

ONLY R3-5OR 30" X 36"

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12"

SIDEWALK CLOSED R9-9 24" X 12"

REMOVE EXISTING STOP LINE, REPLACE WITH PAVEMENT MARKING STOP LINE EPOXY 18-INCH AFTER CONSTRUCTION

R3-2 24" X 24"

STOP R1-1 30" X 30"

COVER

DELINEATOR FLEXIBLE/ TUBULAR MARKER AND BASE @ 25' SPACING, TYP

NO TURNS R3-3 24" X 24"

ROAD WORK AHEAD W20-1

W6-3 36" X 36"

R11-2 48" X 30" ROAD CLOSED — TYPE III BARRICADE

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12"

ROAD CLOSED AHEAD W20-3

R11-4 60" X 30" ROAD CLOSED TO THRU TRAFFIC — TYPE III BARRICADE

NO TURNS R3-3 24" X 24"

SIDEWALK CLOSED R9-9 24" X 12"

TEMPORARY PAVEMENT MARKING TAPE 4-INCH DASHED YELLOW

TEMPORARY PRECAST CONCRETE BARRIER, TYP

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12"

PAVEMENT MARKING CROSSWALK EPOXY 6-INCH WHITE

DELINEATOR FLEXIBLE/ TUBULAR MARKER AND BASE

PLACE AT SB 6TH ST PRIOR TO NATIONAL AVE

TEMPORARY PAVEMENT MARKING TAPE 8-INCH WHITE, TYP

TEMPORARY PAVEMENT MARKING ARROWS TYPE 2, TYP

W6-3 36" X 36"

ROAD WORK AHEAD W20-1

TO INTERSTATE 43 INTERSTATE 94

TEMPORARY PAVEMENT MARKING TAPE 8-INCH DASHED WHITE, TYP

TRAFFIC CONSTROL DRUMS @ 25' SPACING, TYP

R11-2 48" X 30" ROAD CLOSED — TYPE III BARRICADE

SIDEWALK CLOSED USE OTHER SIDE R9-10 24" X 12"

R11-4 60" X 30" ROAD CLOSED TO THRU TRAFFIC — TYPE III BARRICADE

ROAD CLOSED AHEAD W20-3

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1	SHEET 177	E

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
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- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

W LINCOLN AVENUE

W BECHER STREET

S 5TH STREET

5TH ST.

END ROAD WORK
G20-2A
48" X 24"

IH 43/IH 94/USH 41 SB

N 0°58'36" E

IH 43/IH 94/USH 41 NB

S 4TH STREET

4TH ST.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1	SHEET 178	E

2

2

RAMP CLOSED
R11-2L
48" X 30"

TRAFFIC CONTROL DRUMS
WITH LIGHTS @ 25' SPACING (TYP)

5TH ST.

S 5TH STREET

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I-43/94

4TH ST.

S 4TH STREET

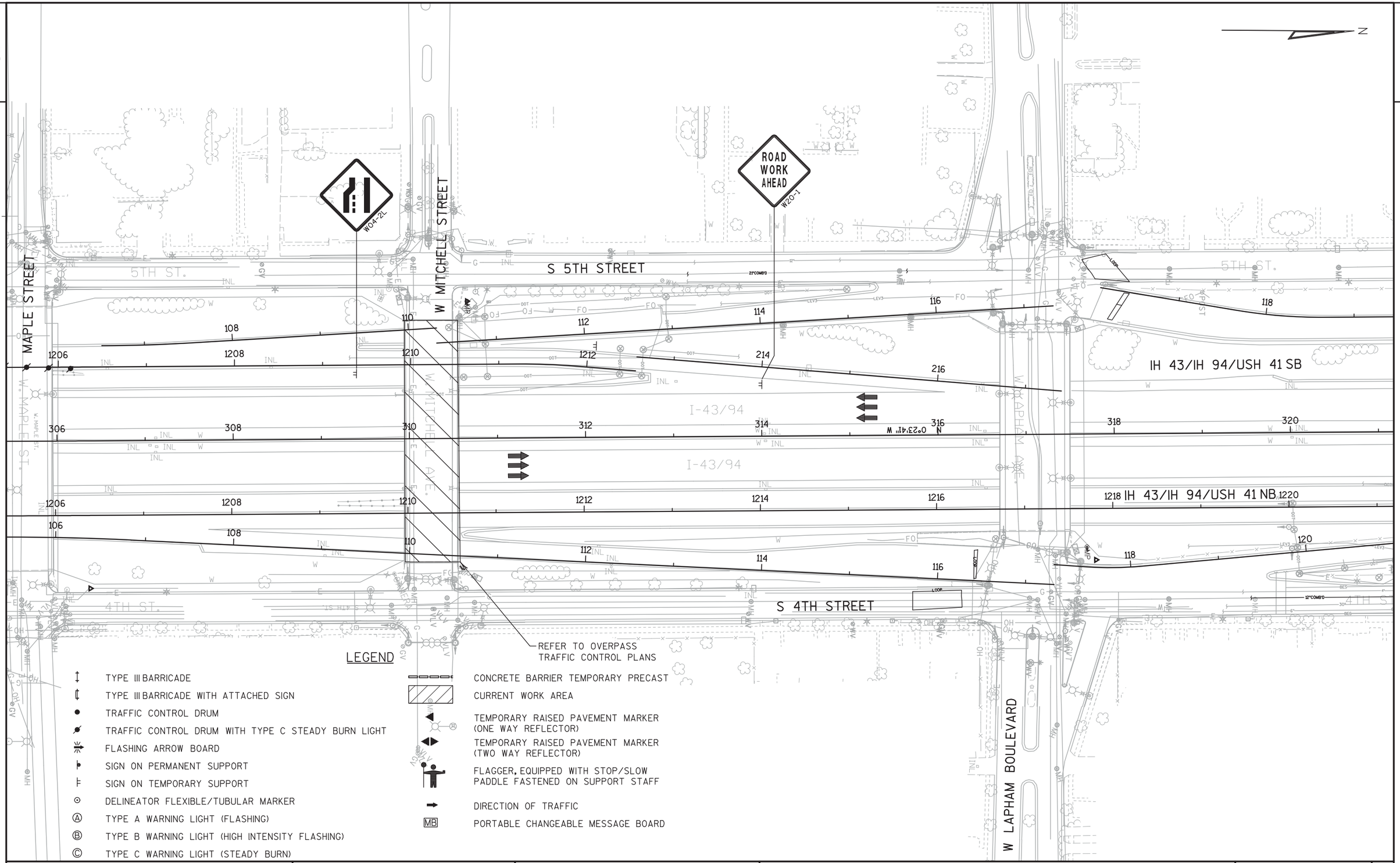
MAPLE STREET

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1	SHEET 179	E

2



LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
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- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1	SHEET 180	E

2

N

ROAD WORK AHEAD W20-1

S 5TH STREET

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

S 4TH STREET

W GREENFIELD AVENUE

I-43/94

I-43/94

EqpSta 33+33.88
EqpSta 173+14

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
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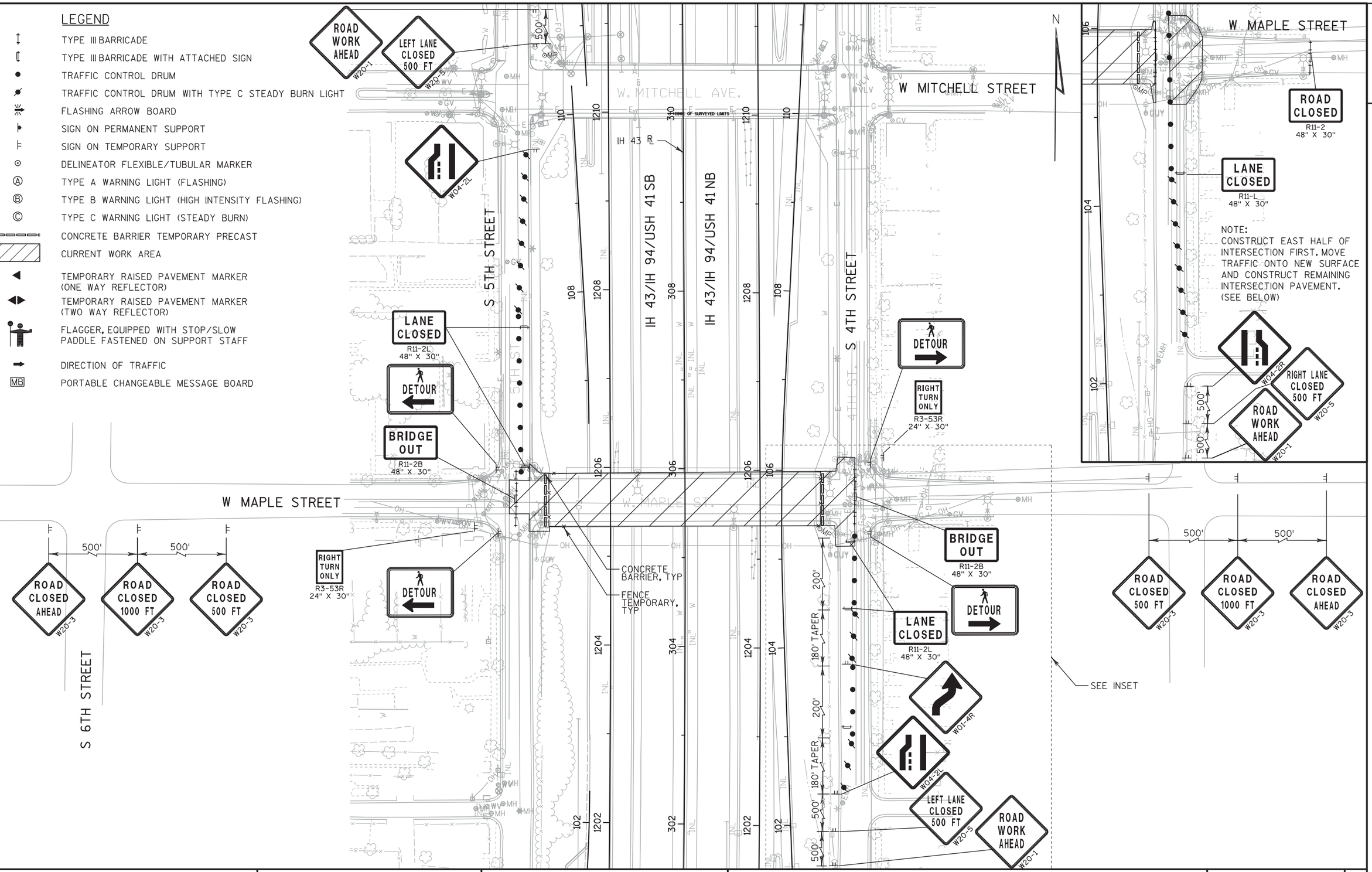
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1	SHEET 181	E

2

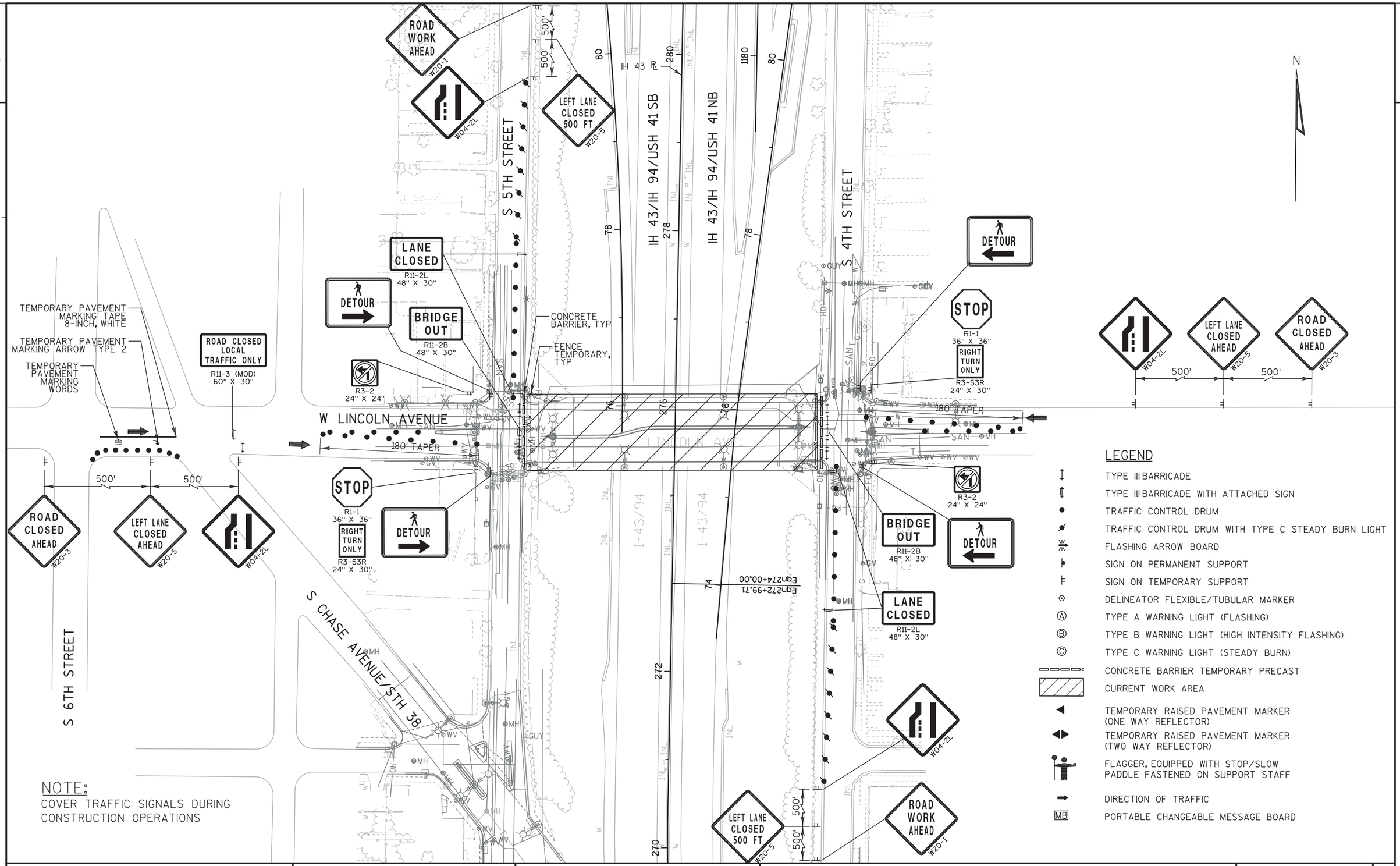
LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2	SHEET 182	E

2



NOTE:
COVER TRAFFIC SIGNALS DURING CONSTRUCTION OPERATIONS

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
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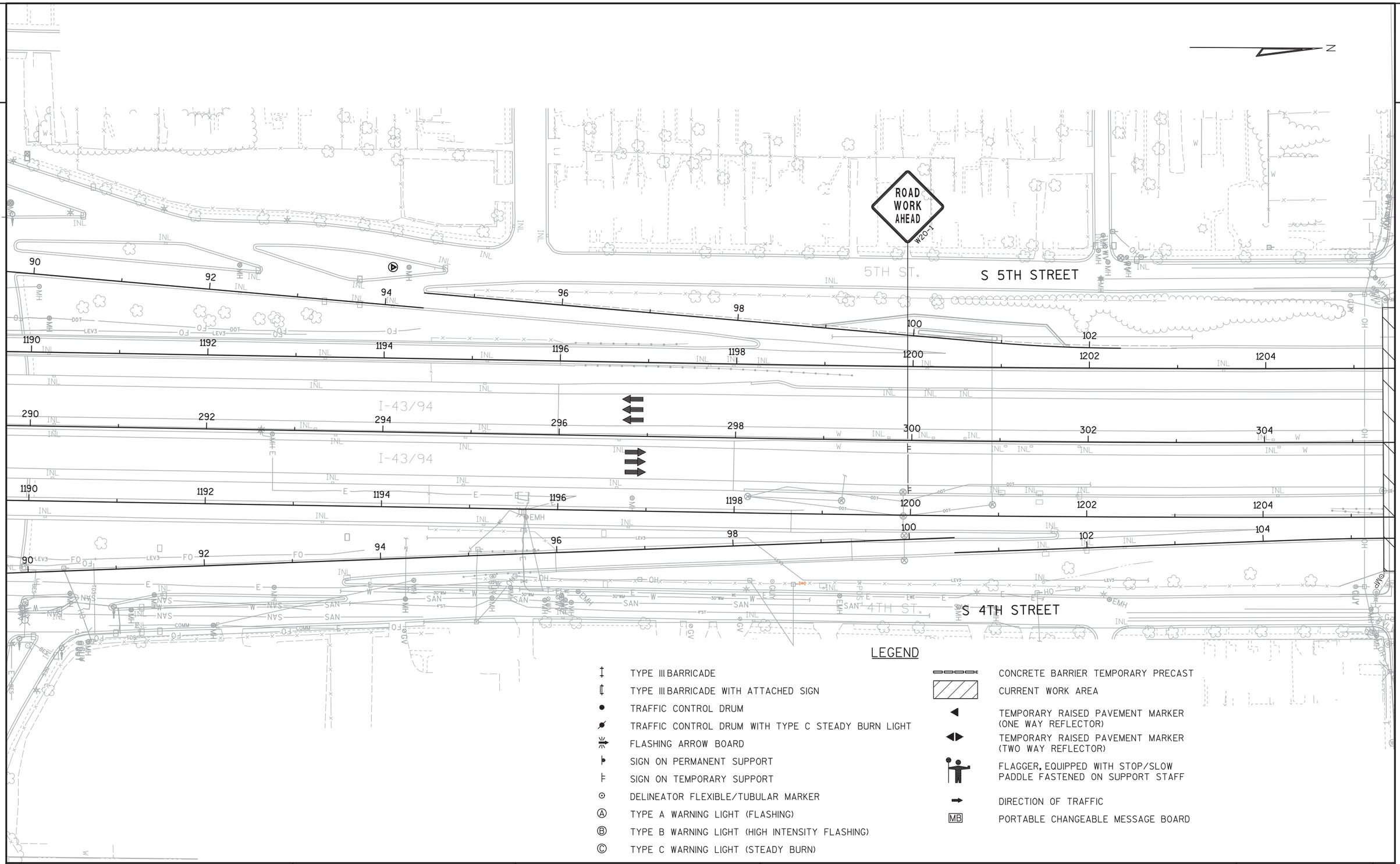
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2	SHEET 183	E

2

2



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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- SIGN ON TEMPORARY SUPPORT
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- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2	SHEET 184	E

2

2

MAPLE STREET

REFER TO OVERPASS
TRAFFIC CONTROL PLANS

5TH ST.

W MITCHELL STREET

S 5TH STREET

W. MITCHELL AVE.

I-43/94

I-43/94

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

S 4TH STREET

4TH ST.

W LAPHAM BOULEVARD

RAMP
CLOSED
AHEAD

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
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- SIGN ON TEMPORARY SUPPORT
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- Ⓐ TYPE A WARNING LIGHT (FLASHING)
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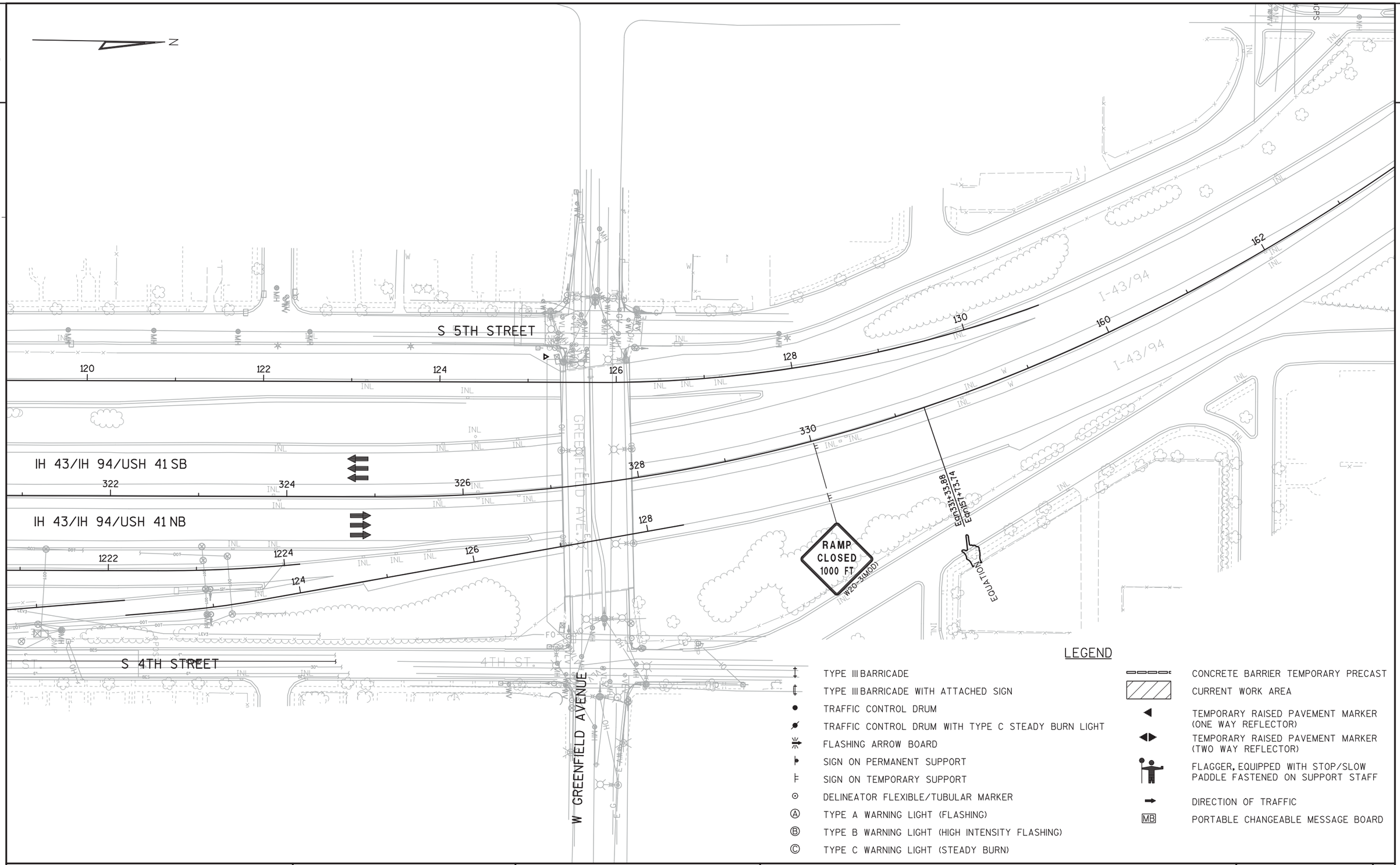
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2	SHEET 185	E

2



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2	SHEET 186	E

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

STH 38/6TH STREET

W WASHINGTON STREET

W MINERAL STREET

RAMP CLOSED
R11-2R
48" X 30"

EXIT 311

COVER

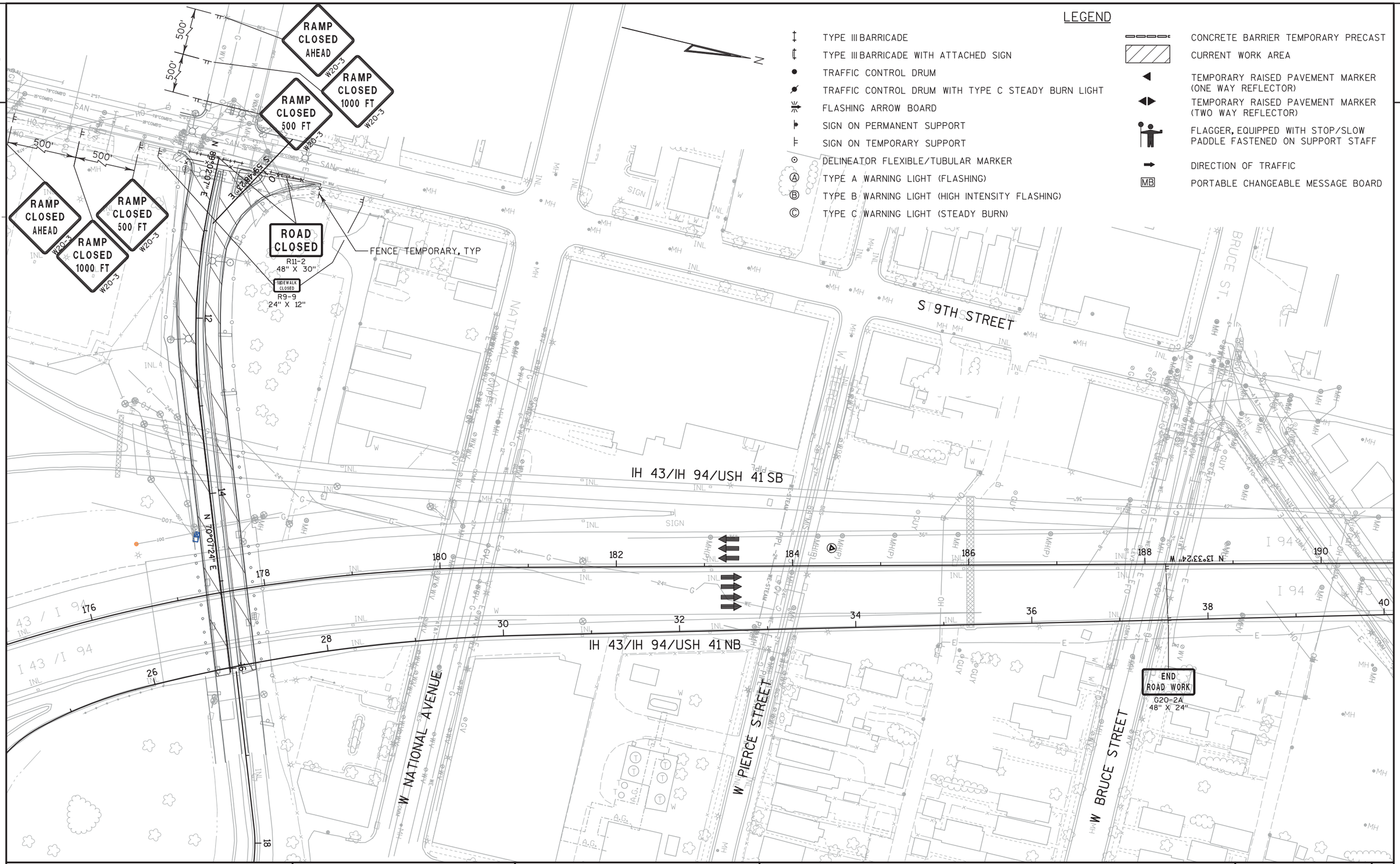
TRAFFIC CONTROL DRUMS @ 25' SPACING (TYP)

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2	SHEET 187 E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026206_s2.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2



LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

2

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2	SHEET 188	E

2

ROAD WORK AHEAD W20-1

LEFT LANE CLOSED 500 FT W20-5

W04-2L

500'

500'

IH 43 ℞

Eqn3314+33.88

Eqn1571+73.74

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

S BARAGA STREET

S POLCYN STREET

S 6TH STREET

S 3RD STREET

W GREENFIELD AVENUE

GREENFIELD AVE.

LANE CLOSED
R11-2L
48" X 30"

DETOUR

BRIDGE OUT
R11-2B
48" X 30"

STOP
R1-1
36" X 36"

RIGHT TURN ONLY
R3-53R
24" X 30"

ROAD CLOSED 500 FT W20-3

ROAD CLOSED 1000 FT W20-3

ROAD CLOSED AHEAD W20-3

CONCRETE BARRIER, TYP

FENCE TEMPORARY, TYP

S 5TH STREET ST.

S 4TH STREET 4TH ST.

130
128
126
124
122
328
326
324
1224

N

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
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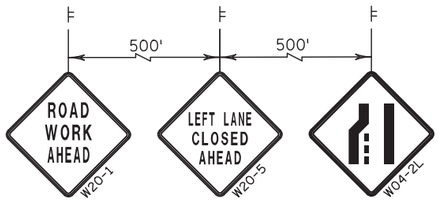
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

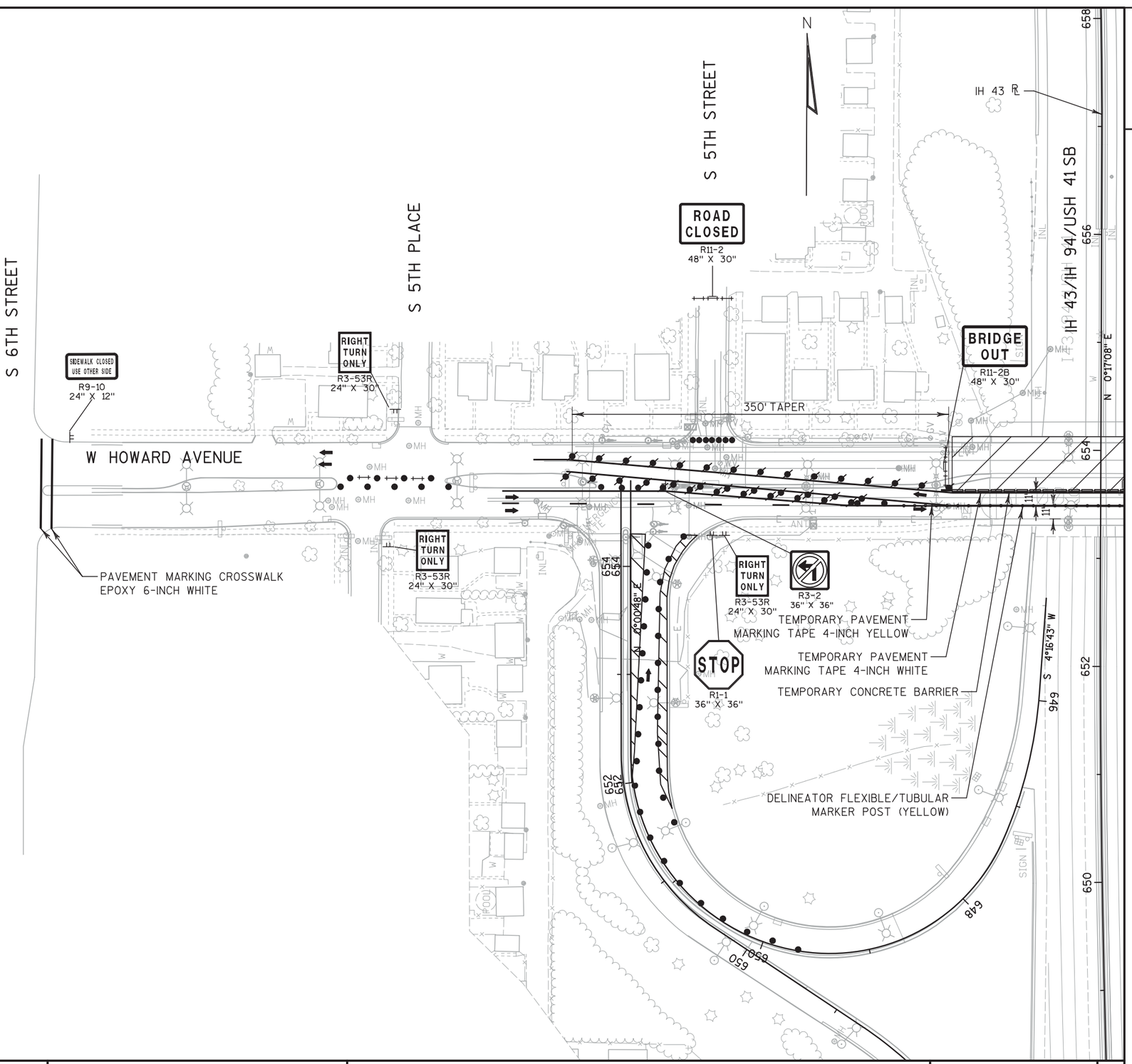
NOTE:
COVER TRAFFIC SIGNALS DURING CONSTRUCTION OPERATIONS

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 189	E

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TYPE A WARNING LIGHT (FLASHING)
- TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD





NOTE:

1. REFER TO STRUCTURE PLANS "STAGED CONSTRUCTION" FOR TRAFFIC CONTROL WIDTHS.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 190 E

NOTE:

1. THROUGH ACCESS MUST BE MAINTAINED ON THE IH 43 NORTHBOUND RAMPS DURING FULL FREEWAY CLOSURE DETOURS.
2. REFER TO STRUCTURE PLANS "STAGED CONSTRUCTION" FOR TRAFFIC CONTROL WIDTHS.

N

IH 43/IH 94/USH 41 NB

IH 43

N 0°17'08" E

S 3RD STREET

S 2ND STREET

S 1ST STREET

S 1ST PLACE

W HOWARD AVENUE

LANE CLOSED
R11-2L
48" X 30"

BRIDGE OUT
R11-2B
48" X 30"

ROAD CLOSED LOCAL TRAFFIC ONLY
R11-3 (MOD)
60" X 30"

NORTH INTERSTATE 43 WEST INTERSTATE 94

RIGHT TURN ONLY
R3-53R
24" X 30"

LANE CLOSED
R11-2L
48" X 30"

W01-4L

LANE CLOSED
R11-2L
48" X 30"

180' TAPER

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

W04-2L

500'

LEFT LANE CLOSED AHEAD
W20-5

500'

ROAD WORK AHEAD
W20-1

TEMPORARY PAVEMENT MARKING ARROWS TYPE 2

TEMPORARY PAVEMENT MARKING TAPE 4-INCH YELLOW

TEMPORARY PAVEMENT MARKING TAPE 4-INCH WHITE

PAVEMENT MARKING CROSSWALK EPOXY 6-INCH WHITE

R3-2
24" X 24"

TEMPORARY CONCRETE BARRIER

DELINEATOR FLEXIBLE/TUBULAR MARKER POST (YELLOW)

RIGHT TURN ONLY
R3-53R
24" X 30"

W11-2
30" X 30"

W16-7L
24" X 12"

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 191	E

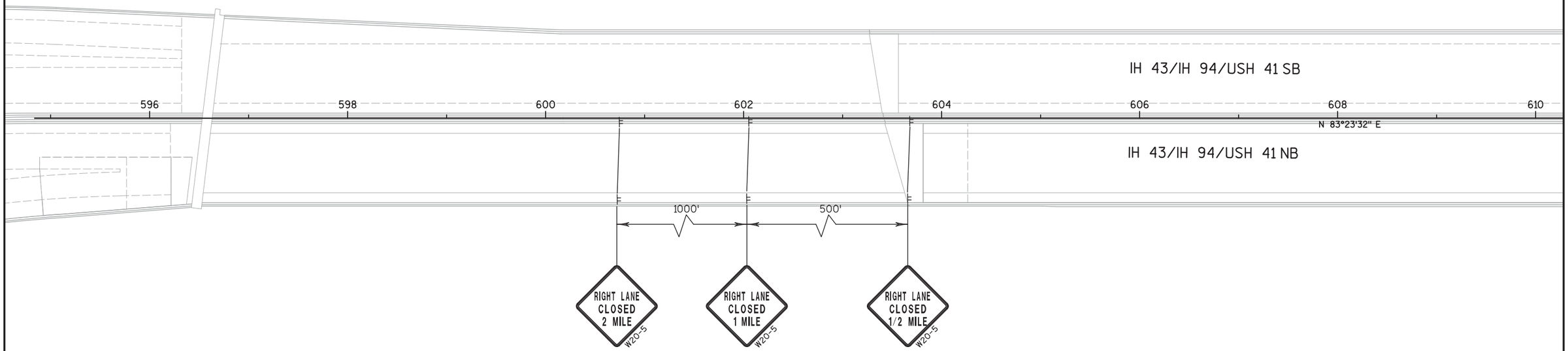
2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

2



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 192	E

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

2

IH 43/IH 94/USH 41 SB

610 612 614 616 618 620 622 624

IH 43/IH 94/USH 41 NB

RAMP CLOSED AHEAD

W04-2R

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 193	E

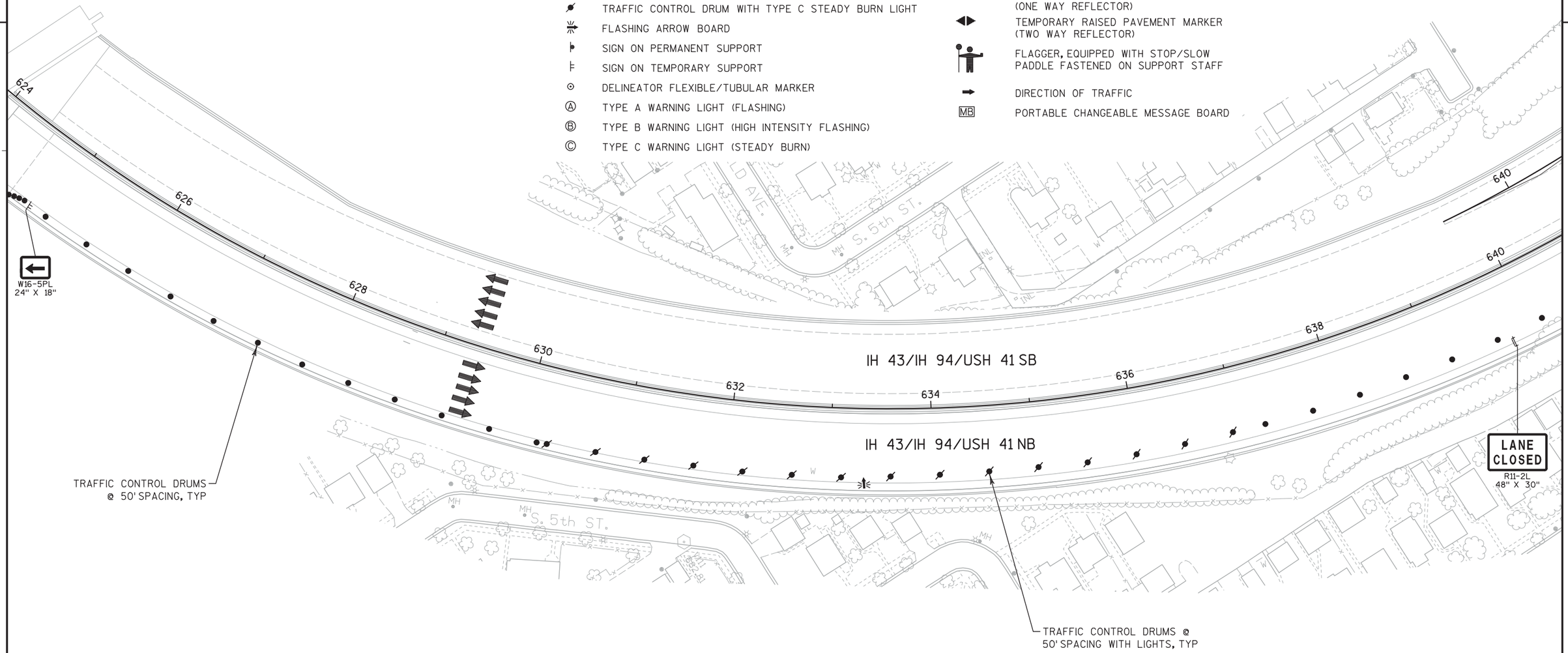
FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026305_s3.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 194	E

2

N

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

TRAFFIC CONTROL DRUMS
@ 25' SPACING (TYP)

TRAFFIC CONTROL DRUMS
@ 50' SPACING, TYP

RAMP
CLOSED
R11-2L
48" X 30"

W HOWARD AVENUE

S 3RD STREET

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

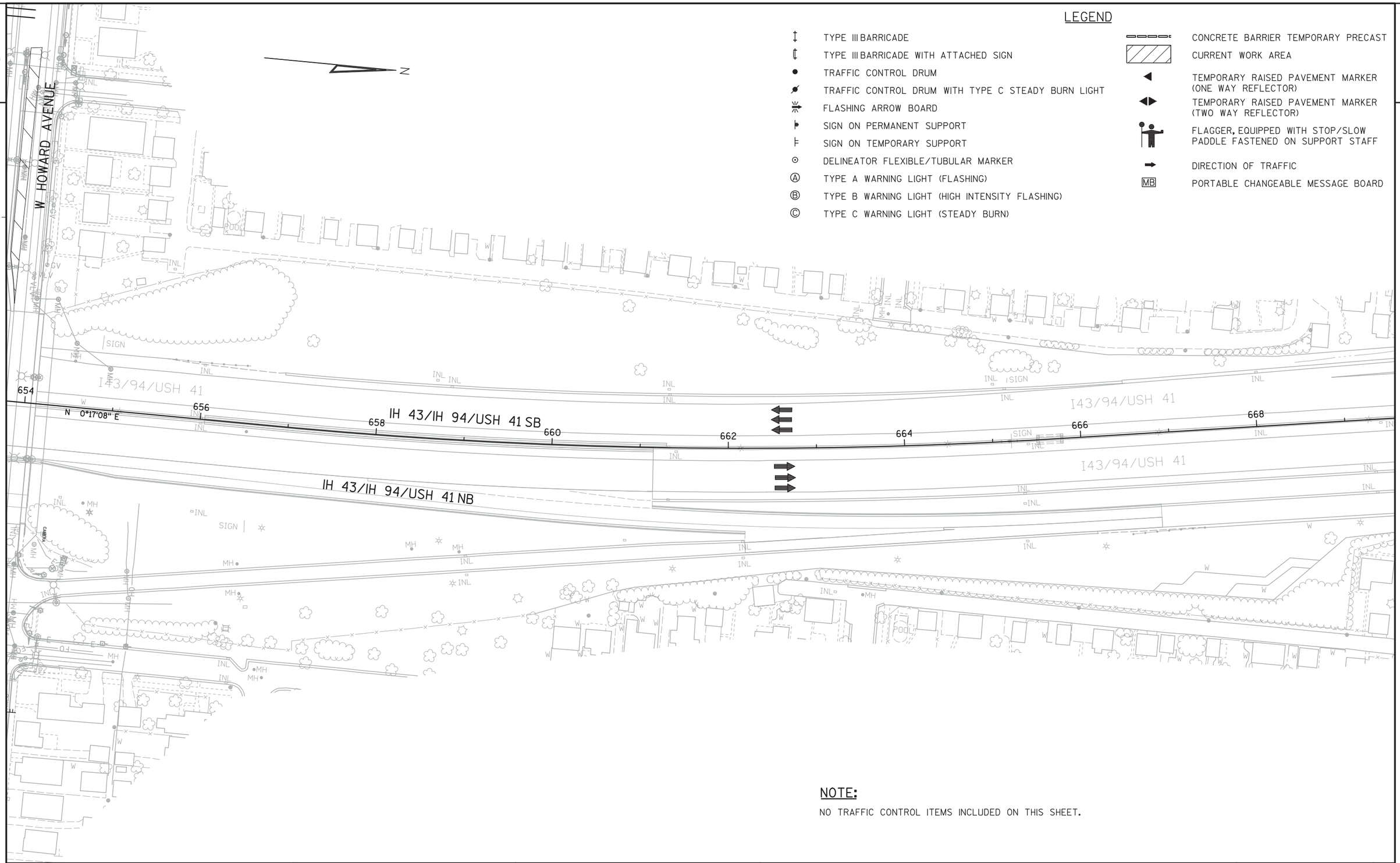
NOTE:
SEE HOWARD AVENUE TRAFFIC CONTROL SHEETS

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 195	E

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



NOTE:

NO TRAFFIC CONTROL ITEMS INCLUDED ON THIS SHEET.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 196	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026308_s3.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

N

S. 5TH STREET

W. HOLT AVENUE

I43/94/USH 41 IH 43/IH 94/USH 41 SB

I43/94/USH 41

IH 43/IH 94/USH 41 NB

S. 4TH STREET

HOLT AVE.

670 672 674 676 192 194 196 198 96 46NC 48NC

N 8°35'32" W

N 8°33'22" W

N 1°25'34" E

PED OVERHEAD

POOL

SIGN

GPS

Eqn 677+23.64 = Eqn 190+82.97, 2.86' LT

EQUATION

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST
TYPE III BARRICADE WITH ATTACHED SIGN	CURRENT WORK AREA
TRAFFIC CONTROL DRUM	TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
FLASHING ARROW BOARD	FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
SIGN ON PERMANENT SUPPORT	DIRECTION OF TRAFFIC
SIGN ON TEMPORARY SUPPORT	PORTABLE CHANGEABLE MESSAGE BOARD
DELINEATOR FLEXIBLE/TUBULAR MARKER	
Ⓐ TYPE A WARNING LIGHT (FLASHING)	
Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)	
Ⓒ TYPE C WARNING LIGHT (STEADY BURN)	

NOTE:

NO TRAFFIC CONTROL ITEMS INCLUDED ON THIS SHEET.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 197	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026309_s3.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I43/94/USH 41

W HOLT AVENUE

S 3RD STREET

W OKLAHOMA AVENUE

HOLT AVE.

OKLAHOMA AVE.

98 200 202 204 206 208 210 212 214

48NC 50NC

N 20°48'15" E

CENTER LANE
BUSES MOTORCYCLES AND 2 OR MORE OCCUPANT CAR POOLS ONLY
R3-51C
48" X 78"

COVER WITH TEMPORARY PAVEMENT MARKING REMOVABLE TAPE (BLACK), TYP

COVER

FILLER CAPS

CANOPY

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 198	E

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

W. OKLAHOMA AVENUE

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I-43/94

214 216 218 220 222 224 226 228

UNION PACIFIC RAILROAD COMPANY

SOO LINE RAILROAD COMPANY
D/B/A CANADIAN PACIFIC RAILWAY COMPANY

NOTE:

NO TRAFFIC CONTROL ITEMS INCLUDED ON THIS SHEET.

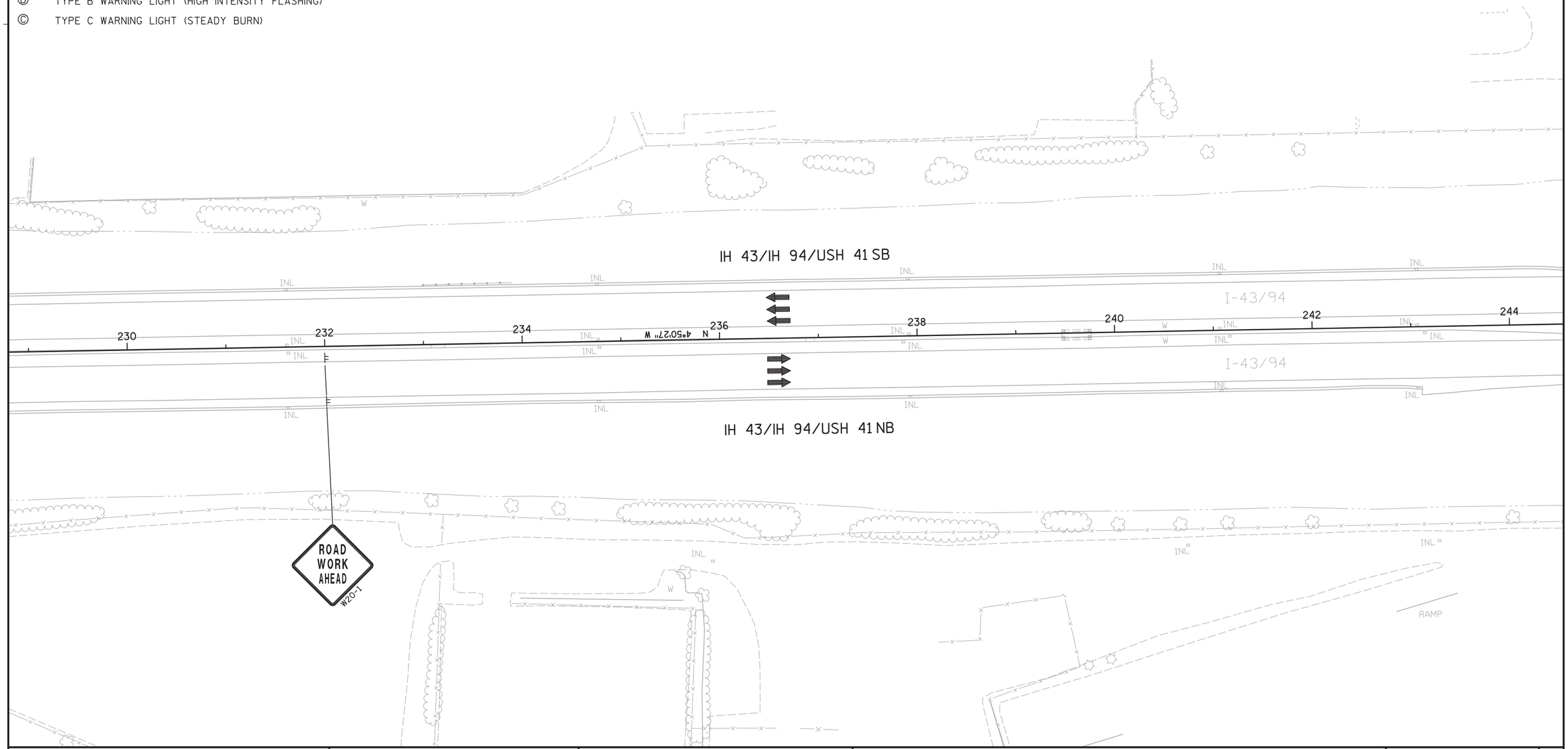
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 199	E

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 200	E

2

2

N

W ROSEDALE AVENUE

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I-43/94

246 248 250 252 254 256 258 260

RAMP CLOSED AHEAD

KINNICKINNIC RIVER

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 201	E

2

N

5TH ST.

S 5TH STREET

5TH ST.

S CHASE AVENUE/STH 38

I-43/94

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I-43/94

S 4TH STREET

264 N 10°50'27" W

Eqn272+99.71 = Eqn274+00.00

EQUATION

RAMP CLOSED 1000 FT

W20-3(MOD)

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 202	E

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

W LINCOLN AVENUE

S 5TH STREET

5TH ST.

W BECHER STREET

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

N 0°58'36" E

S 4TH STREET

4TH ST.

TRAFFIC CONTROL DRUMS @ 25' SPACING

RAMP CLOSED
R11-2L
48" X 30"

RAMP WILL BE CLOSED
12PM TO 10PM
BEGINNING
JAN 15
R11-51
48" X 48"

EXIT 314A-B

COVER

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 203	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026315_s3.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2

2

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I-43/94

I-43/94

5TH ST.

S 5TH STREET

4TH ST.

S 4TH STREET

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 204	E

2

N

MAPLE STREET

W MITCHELL STREET

S 5TH STREET

5TH ST.

W. MAPLE ST.

W. MITCHELL AVE.

W LAPHAM BOULEVARD

I-43/94

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

S 4TH STREET

4TH ST.

TRAFFIC CONTROL DRUMS
@ 25' SPACING (TYP)

RAMP
CLOSED
R11-2L
48" X 30"

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
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- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 205	E

2

N

S 5TH STREET

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

S 4TH STREET

W GREENFIELD AVENUE

I-43/94

I-43/94

END ROAD WORK
G20-2A
48" X 24"

EQUATION
Eqbk1+33.88
Eqahd1+73.14

LEGEND

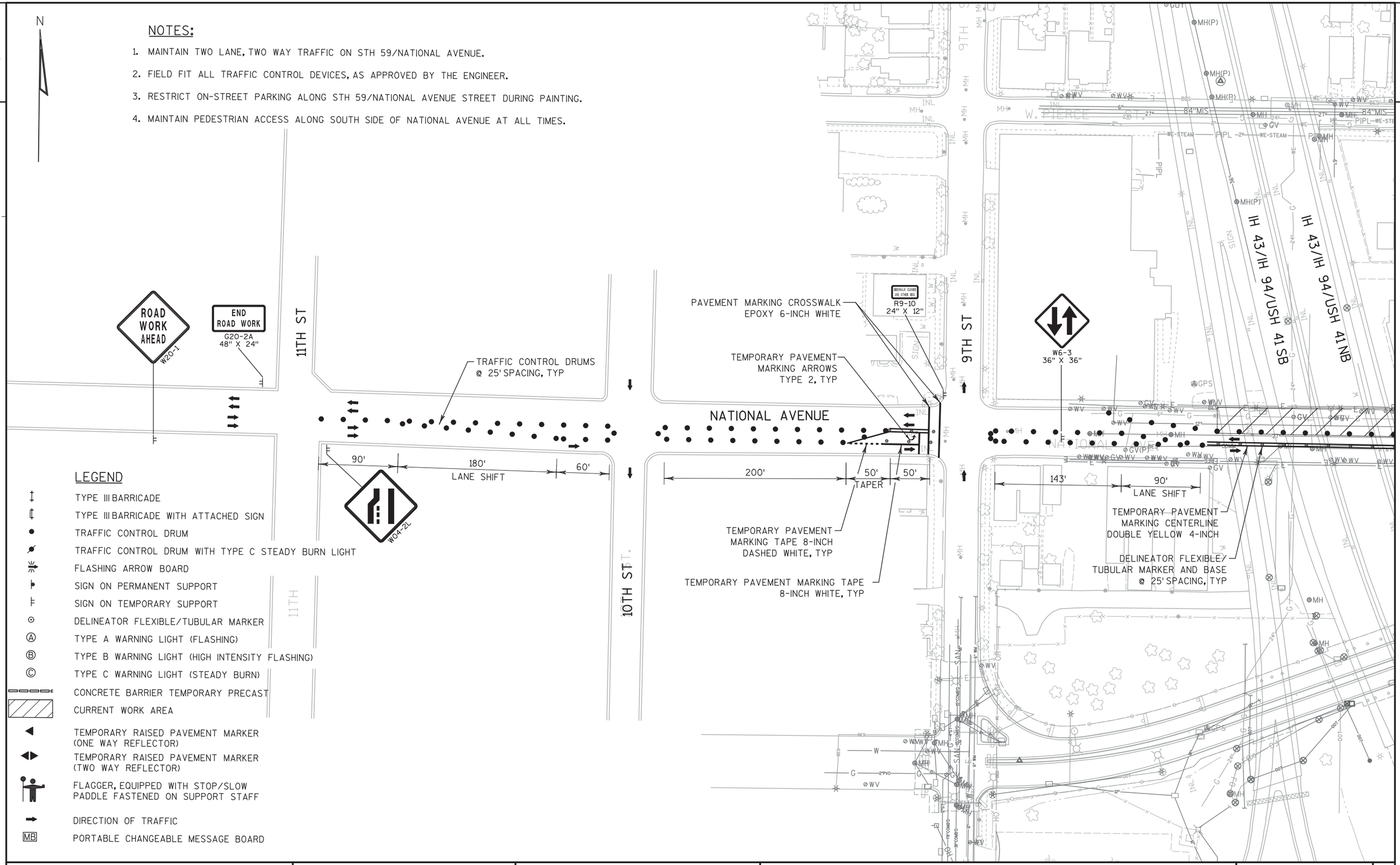
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3	SHEET 206	E

N

NOTES:

1. MAINTAIN TWO LANE, TWO WAY TRAFFIC ON STH 59/NATIONAL AVENUE.
2. FIELD FIT ALL TRAFFIC CONTROL DEVICES, AS APPROVED BY THE ENGINEER.
3. RESTRICT ON-STREET PARKING ALONG STH 59/NATIONAL AVENUE STREET DURING PAINTING.
4. MAINTAIN PEDESTRIAN ACCESS ALONG SOUTH SIDE OF NATIONAL AVENUE AT ALL TIMES.



LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 207	E

NOTES:

1. MAINTAIN TWO LANE, TWO WAY TRAFFIC ON STH 59/NATIONAL AVENUE.
2. FIELD FIT ALL TRAFFIC CONTROL DEVICES, AS APPROVED BY THE ENGINEER.
3. RESTRICT ON-STREET PARKING ALONG STH 59/NATIONAL AVENUE STREET DURING PAINTING.
4. MAINTAIN PEDESTRIAN ACCESS ALONG SOUTH SIDE OF NATIONAL AVENUE AT ALL TIMES.

N

2

TEMPORARY PAVEMENT MARKING CENTERLINE DOUBLE YELLOW 4-INCH

LANE CLOSED
R11-2(MOD)
48" X 30"

R3-2
24" X 24"

ONLY
R3-50R
30" X 36"

7th 7TH ST.

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

W6-3
36" X 36"

W04-2R

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

S.T.H. 38/6TH ST.

6TH ST

ROAD WORK AHEAD
W20-1

NATIONAL AVENUE

90'
LANE SHIFT

110'
BUFFER

180'
TAPER

DELINEATOR FLEXIBLE/ TUBULAR MARKER AND BASE @ 25' SPACING, TYP

TRAFFIC CONTROL DRUMS @ 25' SPACING, TYP

END ROAD WORK
G20-2A
48" X 24"

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

LEGEND

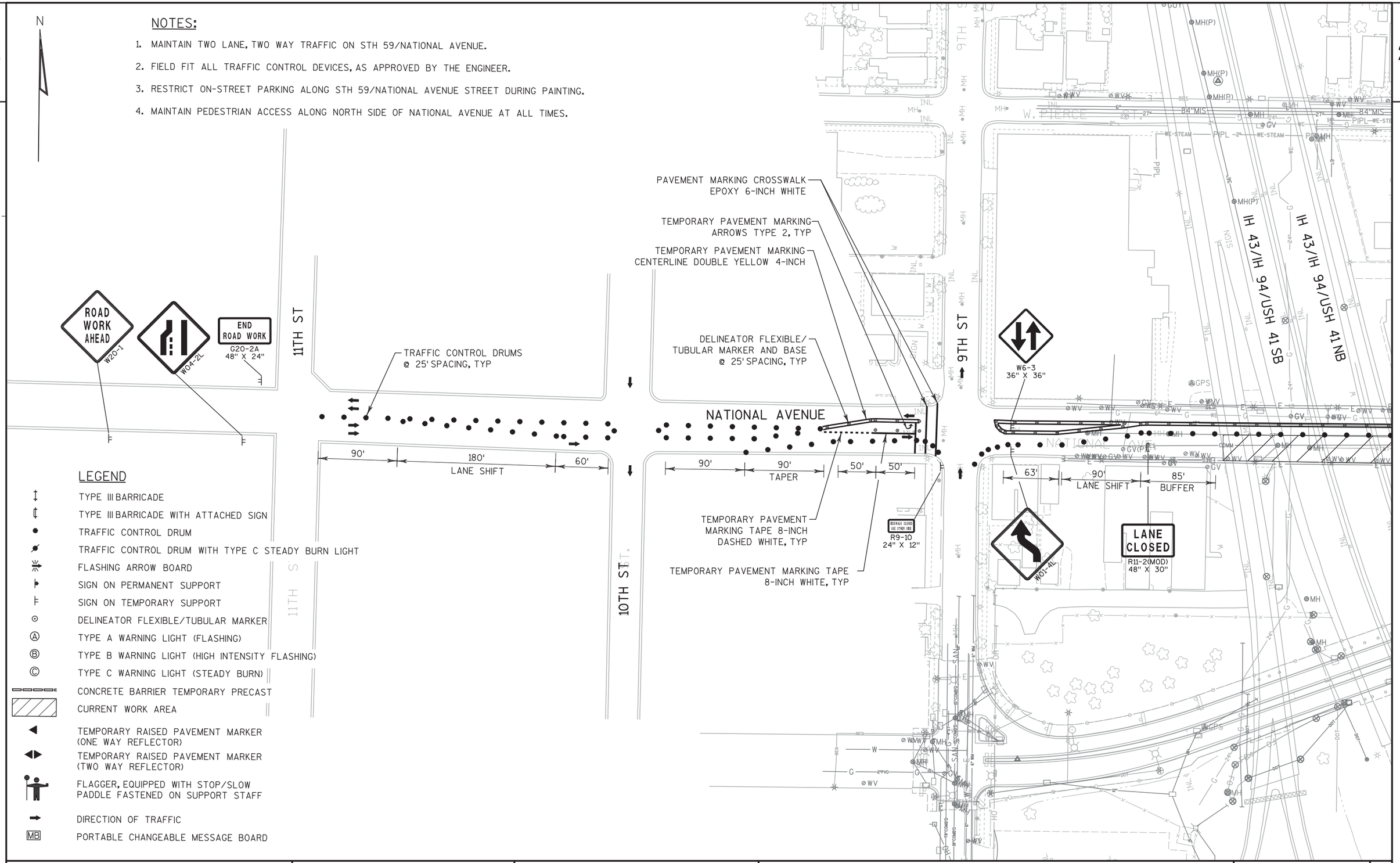
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TYPE A WARNING LIGHT (FLASHING)
- TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 208	E

N

NOTES:

1. MAINTAIN TWO LANE, TWO WAY TRAFFIC ON STH 59/NATIONAL AVENUE.
2. FIELD FIT ALL TRAFFIC CONTROL DEVICES, AS APPROVED BY THE ENGINEER.
3. RESTRICT ON-STREET PARKING ALONG STH 59/NATIONAL AVENUE STREET DURING PAINTING.
4. MAINTAIN PEDESTRIAN ACCESS ALONG NORTH SIDE OF NATIONAL AVENUE AT ALL TIMES.



LEGEND

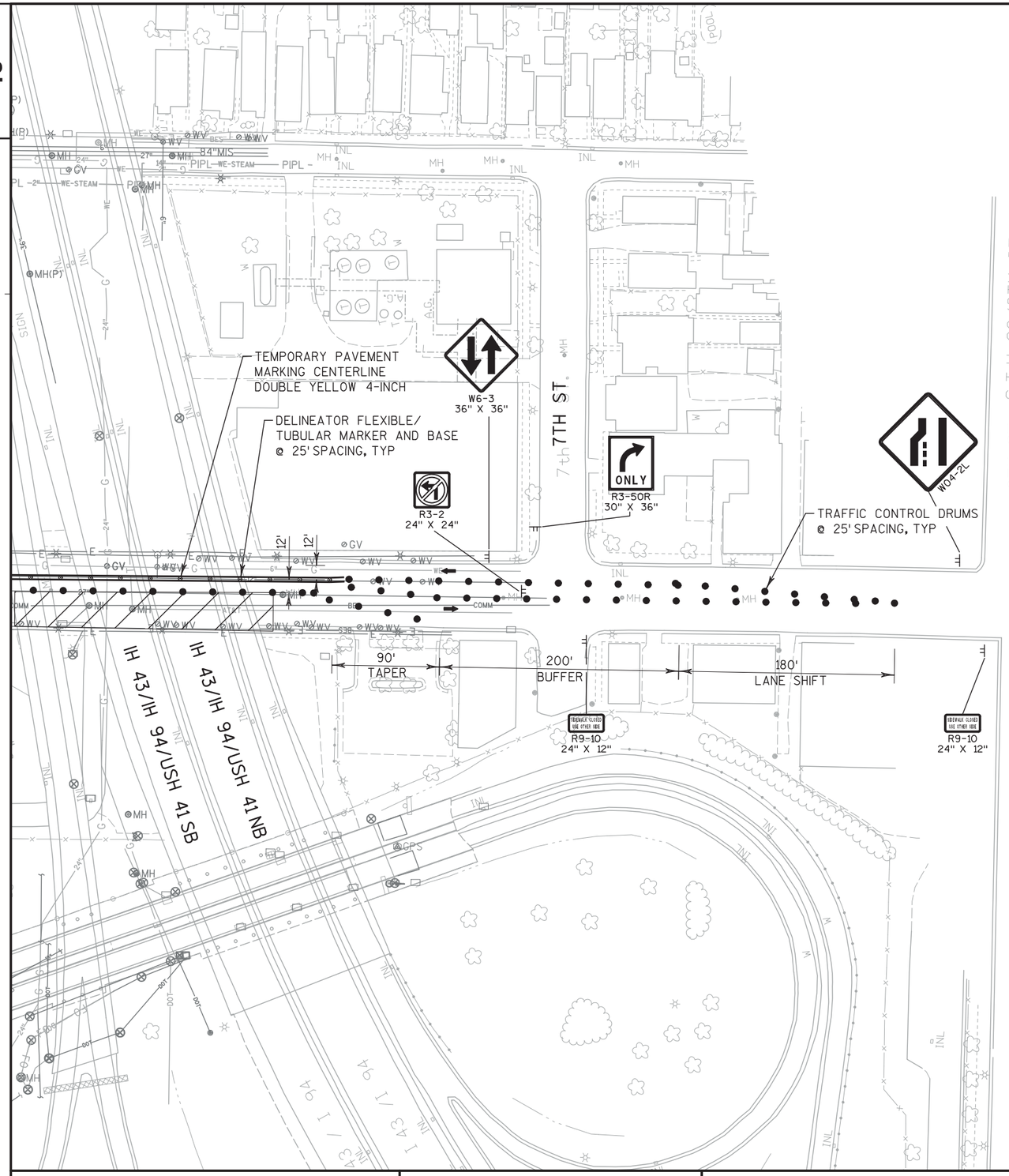
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 209 E

NOTES:

1. MAINTAIN TWO LANE, TWO WAY TRAFFIC ON STH 59/NATIONAL AVENUE.
2. FIELD FIT ALL TRAFFIC CONTROL DEVICES, AS APPROVED BY THE ENGINEER.
3. RESTRICT ON-STREET PARKING ALONG STH 59/NATIONAL AVENUE STREET DURING PAINTING.
4. MAINTAIN PEDESTRIAN ACCESS ALONG NORTH SIDE OF NATIONAL AVENUE AT ALL TIMES.

N



LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 210	E

2

S 6TH STREET/STH 38

S.T.H. 38

W LAPHAM BOULEVARD

IH 43 PL

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

S 5TH ST.

S 4TH STREET

I-43/94

ROAD WORK AHEAD W20-1

CONCRETE BARRIER, TYP

BRIDGE OUT R11-2B 48" X 30"

SIDEWALK CLOSED R9-9 24" X 12"

180' TAPER

500' 500'

LEFT LANE CLOSED AHEAD W20-5

ROAD CLOSED AHEAD W20-3

W04-2L

W16-5PR 24" X 18"

LANE CLOSED R11-2L 48" X 30"

STOP R1-1 36" X 36"

RIGHT TURN ONLY R3-53R 24" X 30"

DETOUR

FENCE TEMPORARY, TYP

NOTE:
COVER TRAFFIC SIGNALS DURING CONSTRUCTION OPERATIONS

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
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- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 211	E

2

ROAD WORK AHEAD W20-1

LEFT LANE CLOSED AHEAD W20-5

W04-2L

S 4TH STREET

IH 43/IH 94/USH 41 NB

IH 43/IH 94/USH 41 SB

IH 43

212

210

892

266

264

262

260

S 5TH STREET

ROAD CLOSED LOCAL TRAFFIC ONLY
R11-3 (MOD)
60" X 30"

DETOUR

PLACE STAGGERED BARRICADES AT CHASE AVENUE & LINCOLN AVENUE

W16-5PR
24" X 18"

BRIDGE OUT
R11-2B
48" X 30"

CONCRETE BARRIER, TYP

W CHASE AVENUE/STH 38

500'

STOP
R1-1
36" X 36"

RIGHT TURN ONLY
R3-53R
24" X 30"

R3-2
24" X 24"

DETOUR

FENCE TEMPORARY, TYP

R9-10
24" X 12"

ROAD CLOSED
R11-2
48" X 30"

LANE CLOSED
R11-2L
48" X 30"

ROAD CLOSED AHEAD W20-3

W01-4R

S 5TH PLACE

S 6TH STREET

N 10°50'27" W

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

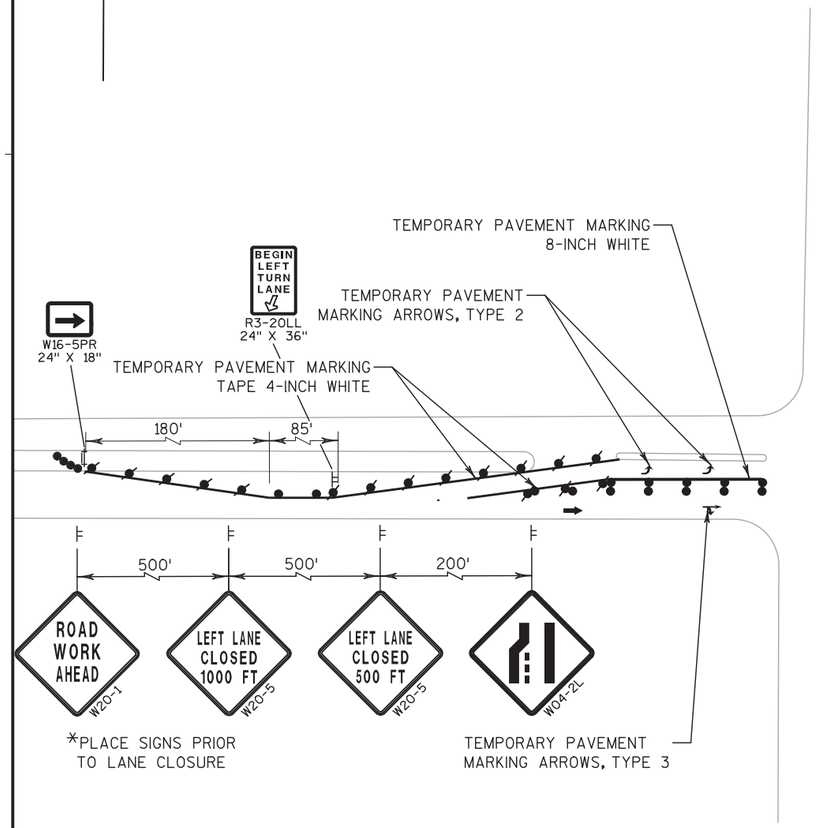
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 212	E

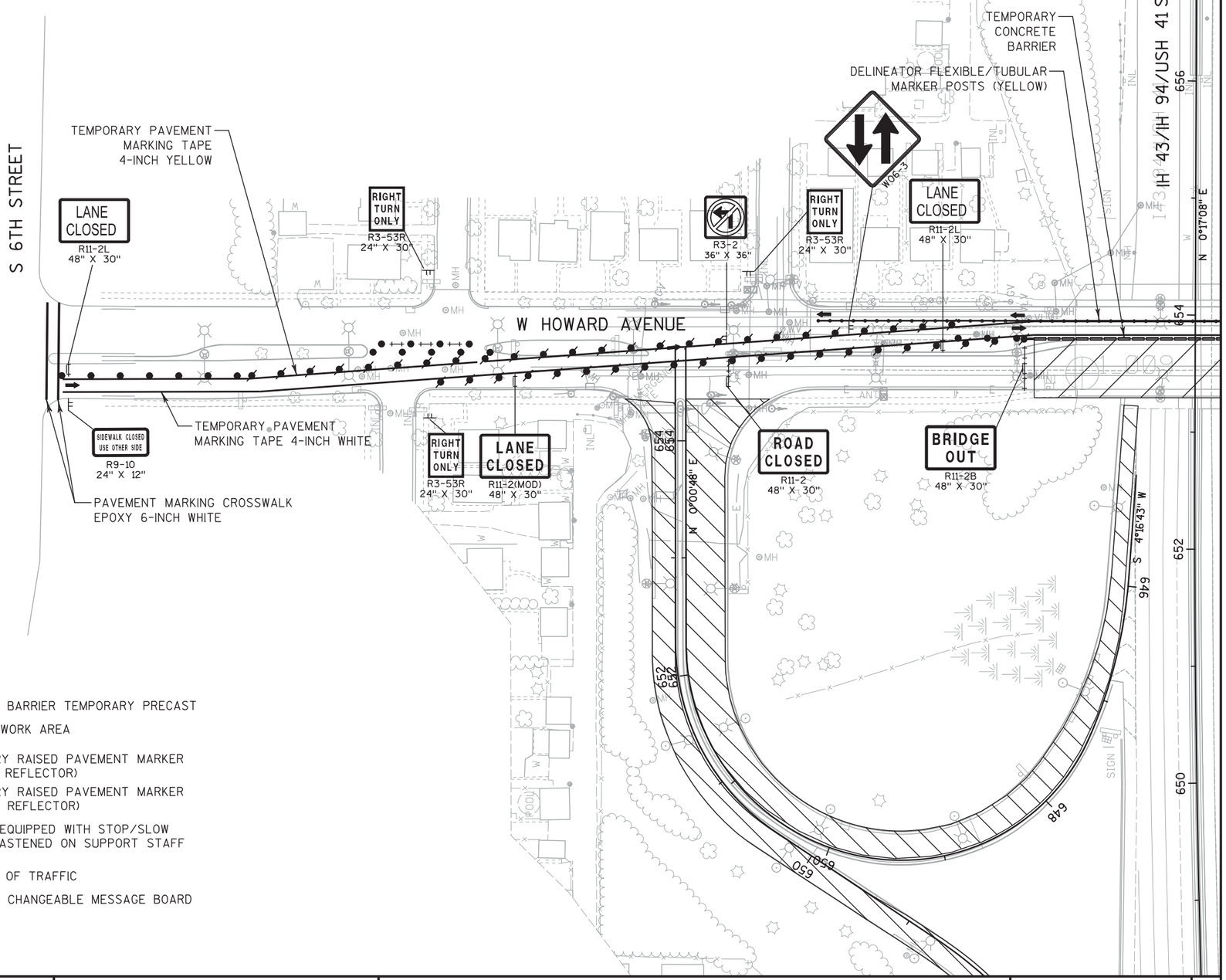
FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026402_s4.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

N

NOTE:

1. SB HOWARD AVENUE ENTRANCE RAMP MUST REMAIN OPEN DURING STRUCTURE DEMOLITION. RAMP CLOSURES ARE PERMITTED AFTER DEMOLITION IS COMPLETE.
2. REFER TO STRUCTURE PLANS "STAGED CONSTRUCTION" FOR TRAFFIC CONTROL WIDTHS.





LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 213 E

NOTE:

1. THROUGH ACCESS MUST BE MAINTAINED ON THE IH 43 NORTHBOUND RAMPS DURING FULL FREEWAY CLOSURE DETOURS.
2. REFER TO STRUCTURE PLANS "STAGED CONSTRUCTION" FOR TRAFFIC CONTROL WIDTHS.

N

IH 43 ℄

IH 43/IH 94/USH 41 NB

N 0°17'08" E

DELINEATOR FLEXIBLE/TUBULAR MARKER POSTS (YELLOW)

TEMPORARY CONCRETE BARRIER

S 3RD STREET

S 2ND STREET

S 1ST STREET

S 1ST PLACE

W HOWARD AVENUE

W06-3

R3-2
24" X 24"

RIGHT TURN ONLY
R3-53R
24" X 30"

LANE CLOSED
R11-2L
48" X 30"

W11-2
30" X 30"

W16-7L
24" X 12"

W04-2L

LEFT LANE CLOSED AHEAD
W20-5

500'

500'

ROAD WORK AHEAD
W20-1

BRIDGE OUT
R11-2B
48" X 30"

STOP
R1-1
30" X 30"

TEMPORARY PAVEMENT MARKING TAPE 4-INCH YELLOW

TEMPORARY PAVEMENT MARKING TAPE 4-INCH WHITE

W16-5PR
24" X 18"

PAVEMENT MARKING CROSSWALK EPOXY 6-INCH WHITE

SIDEWALK CLOSED USE OTHER SIDE
R9-10
24" X 12"

X-ING SIG.

658
656
654
652
650

LEGEND

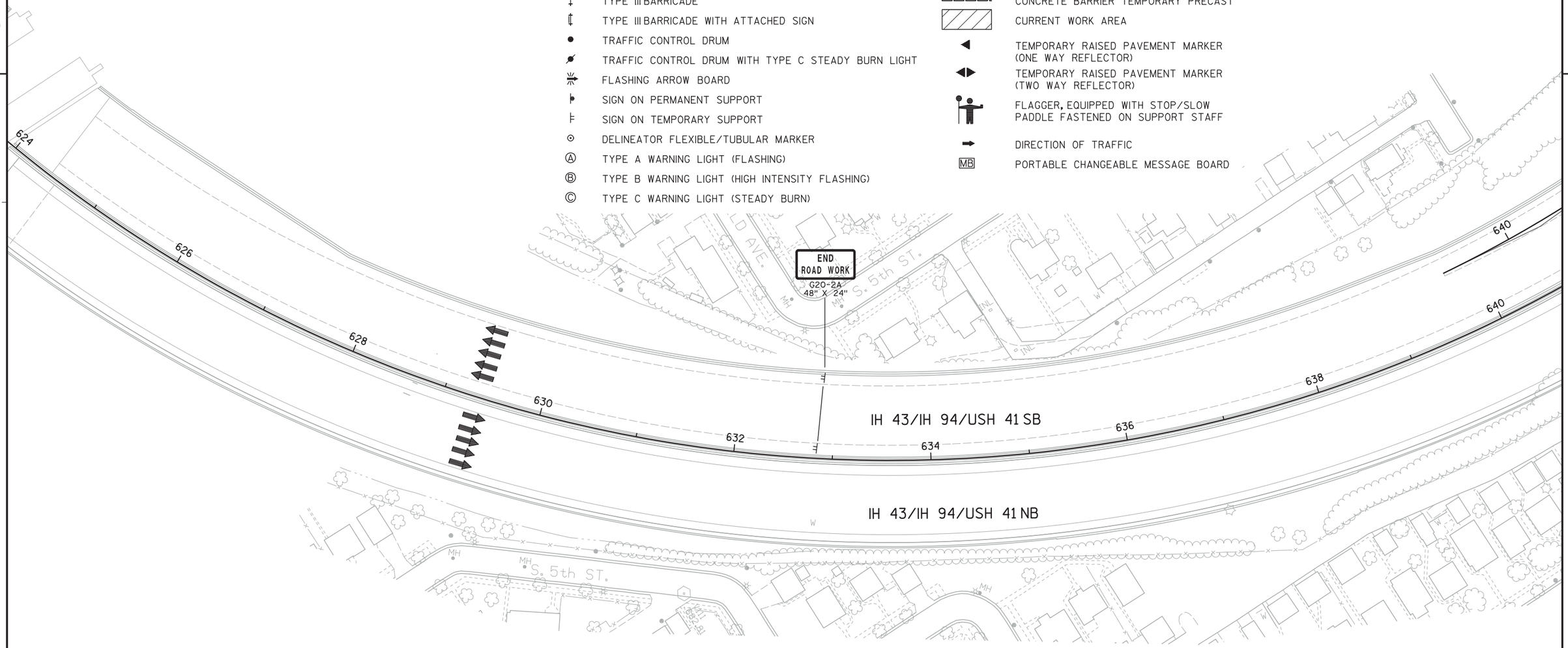
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 214	E

2

LEGEND

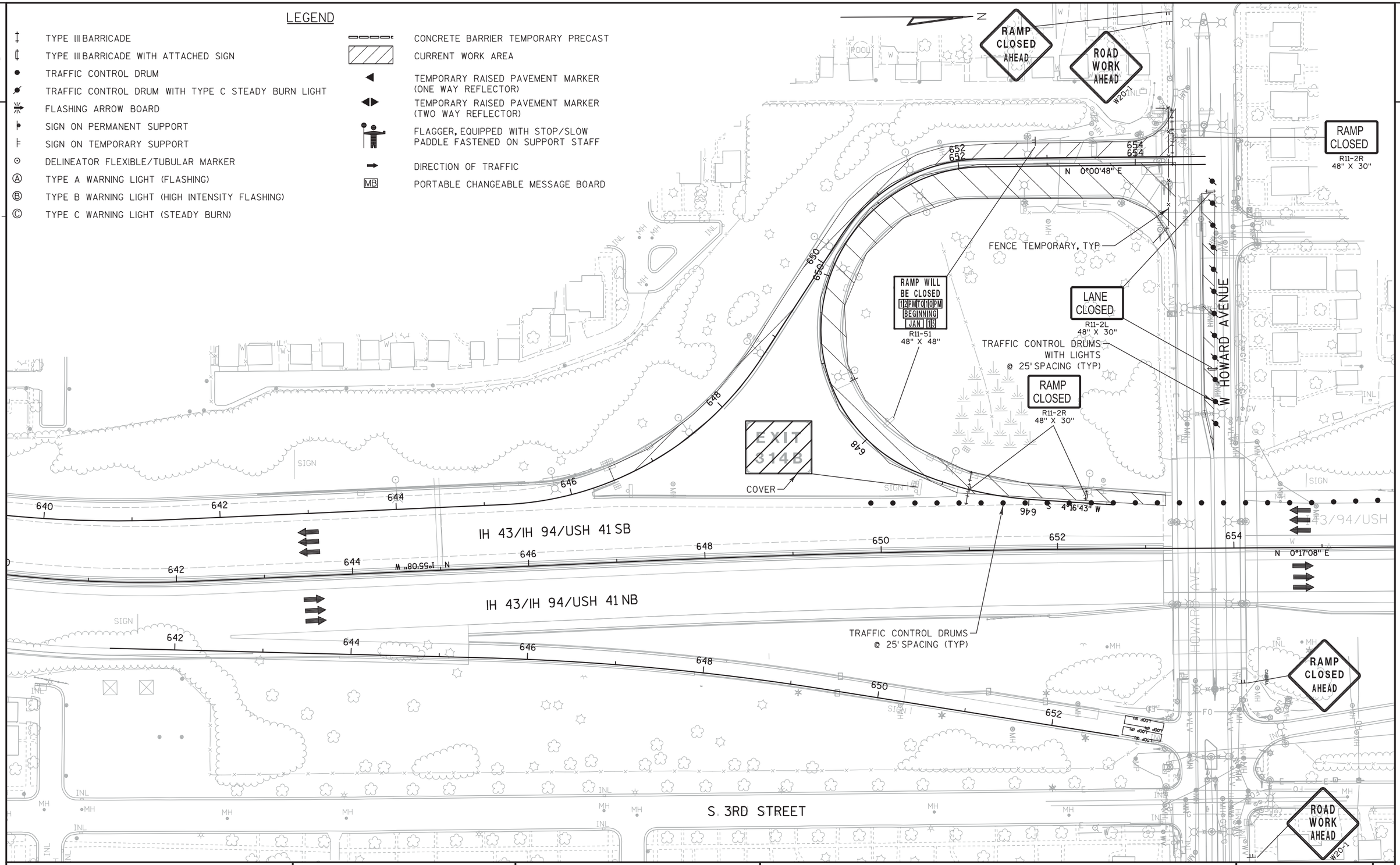
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 215	E

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 216	E

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

W HOWARD AVENUE

LANE CLOSED
R11-2(MOD)
48" X 30"

TRAFFIC CONTROL DRUMS WITH LIGHTS @ 25' SPACING (TYP)

TRAFFIC CONTROL DRUMS @ 25' SPACING (TYP)

RAMP CLOSED 1000 FT
W20-3(MOD)

I43/94/USH 41

654 656 658 660 662 664 666 668

N 0°17'08" E

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 217	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026407_s4.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

2

N

S. 5TH STREET

W. HOLT AVENUE

RAMP CLOSED AHEAD

IH 43/IH 94/USH 41 SB

I43/94/USH 41

IH 43/IH 94/USH 41 NB

S. 4TH STREET

HOLT AVE.

PED OVERHEAD

EQUATION Eqn 677+23.64 = Eqn 190+82.97, 2.86' LT

670 N 8°35'32" W 672 674 676 N 8°33'22" W 192 194 196 198

96 N 1°25'34" E

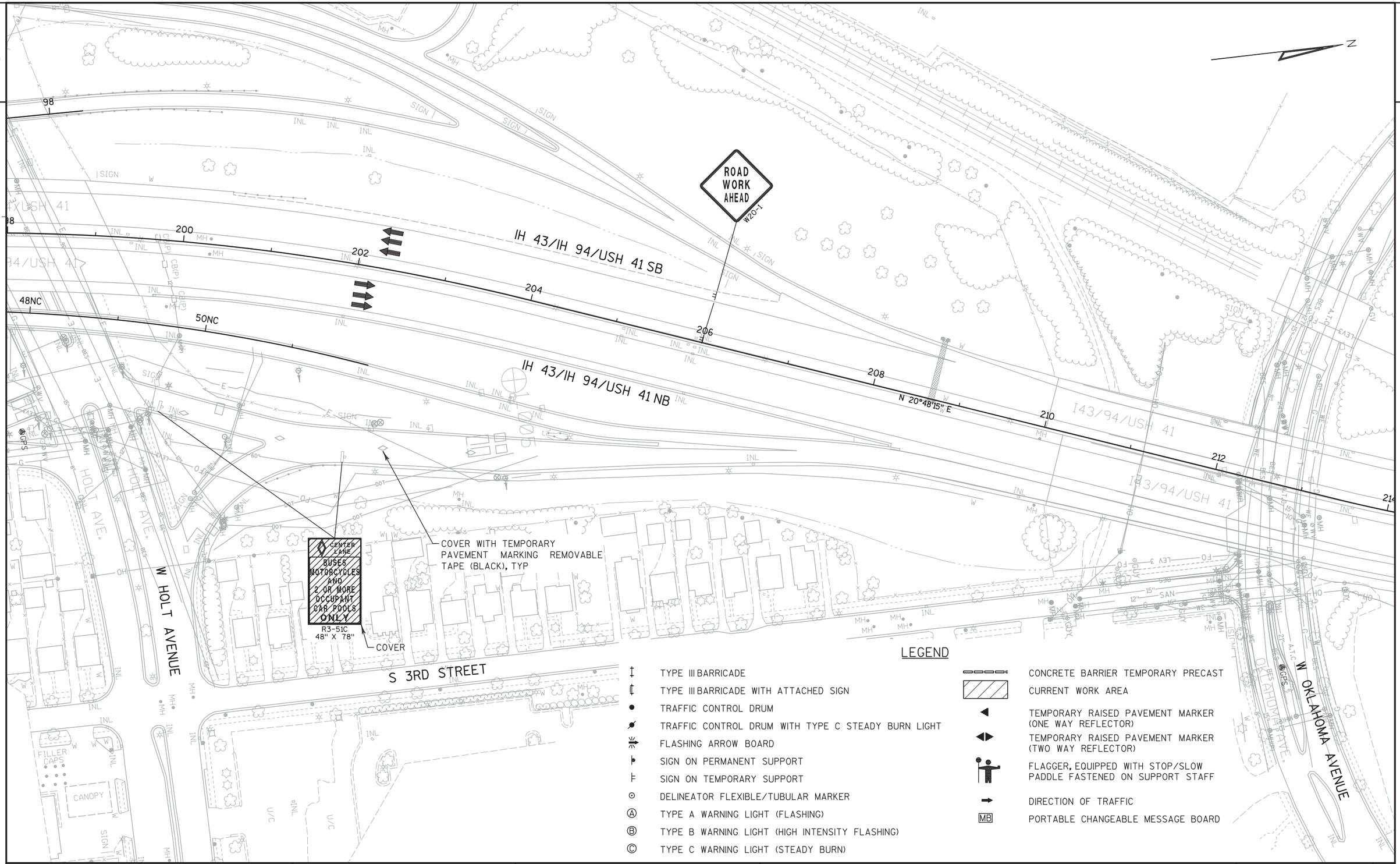
46NC 48NC

LEGEND

TYPE III BARRICADE	CONCRETE BARRIER TEMPORARY PRECAST
TYPE III BARRICADE WITH ATTACHED SIGN	CURRENT WORK AREA
TRAFFIC CONTROL DRUM	TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
FLASHING ARROW BOARD	FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
SIGN ON PERMANENT SUPPORT	DIRECTION OF TRAFFIC
SIGN ON TEMPORARY SUPPORT	PORTABLE CHANGEABLE MESSAGE BOARD (MB)
DELINEATOR FLEXIBLE/TUBULAR MARKER	
(A) TYPE A WARNING LIGHT (FLASHING)	
(B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)	
(C) TYPE C WARNING LIGHT (STEADY BURN)	

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 218	E

2



LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
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- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 219	E

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

W. OKLAHOMA AVENUE

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I-43/94

214 216 218 220 222 224 226 228

UNION PACIFIC RAILROAD COMPANY

SOO LINE RAILROAD COMPANY
D/B/A CANADIAN PACIFIC RAILWAY COMPANY

NOTE:

NO TRAFFIC CONTROL ITEMS INCLUDED ON THIS SHEET.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 220	E

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

IH 43/IH 94/USH 41 SB

I-43/94

230 232 234 236 238 240 242 244

N 49°50'27" W

IH 43/IH 94/USH 41 NB

RAMP CLOSED AHEAD

RAMP

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 221	E

2

N

W ROSEDALE AVENUE

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I-43/94

246 248 250 252 254 256 258 260

RAMP CLOSED AHEAD

KINNICKINNIC RIVER

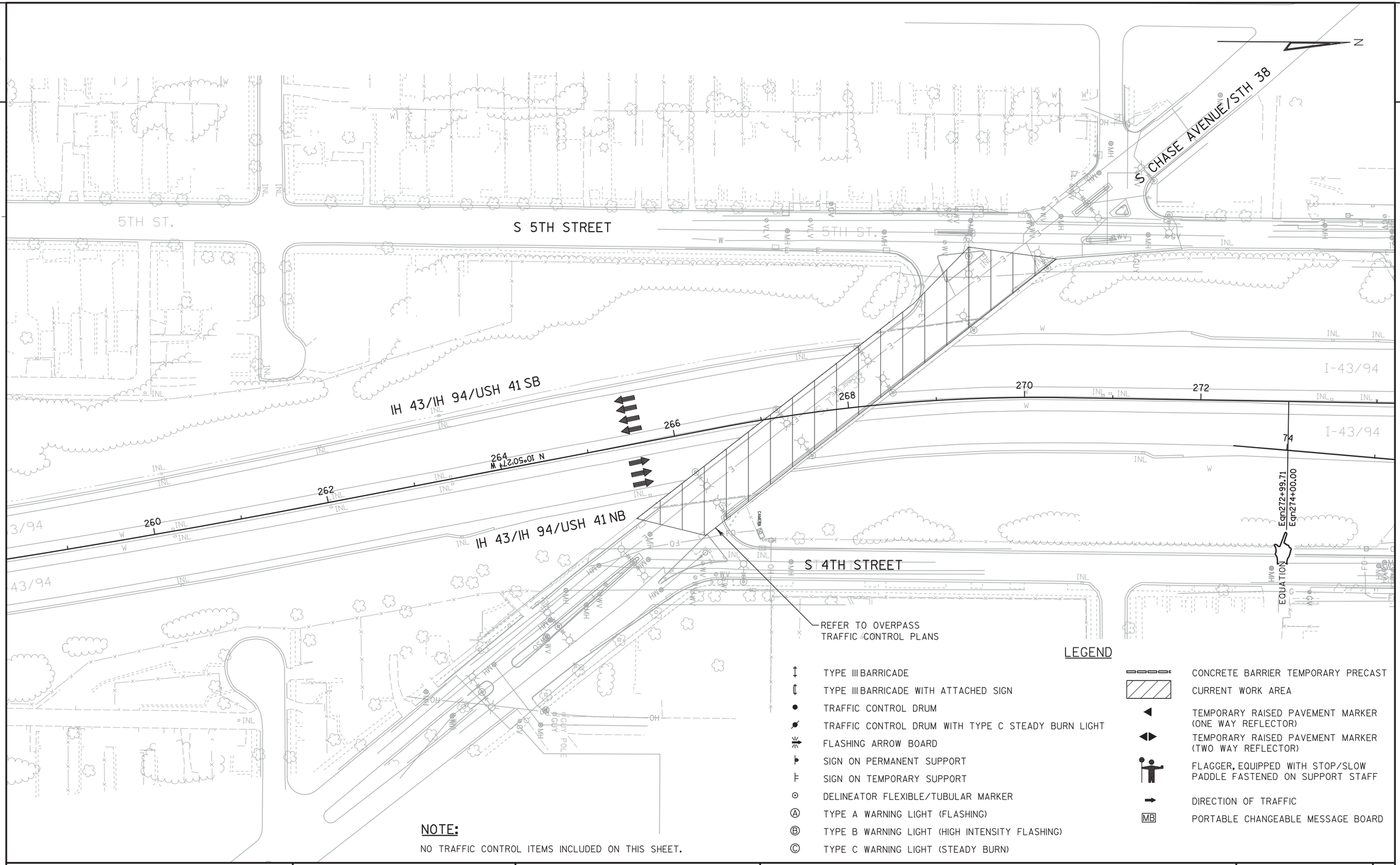
LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 222	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026412_s4.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2



LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

NOTE:

NO TRAFFIC CONTROL ITEMS INCLUDED ON THIS SHEET.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 223	E

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

W LINCOLN AVENUE

W BECHER STREET

S 5TH STREET

5TH ST.

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

N 0°58'36" E

S 4TH STREET

4TH ST.

RAMP CLOSED AHEAD

TRAFFIC CONTROL DRUMS @ 25' SPACING

RAMP CLOSED
R11-2R
48" X 30"

ROAD WORK AHEAD
W20-1

RAMP CLOSED AHEAD

LANE CLOSED
R11-2L
48" X 30"

RAMP CLOSED
R11-2R
48" X 30"

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 224 E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026414_s4.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2

RAMP CLOSED AHEAD

ROAD WORK AHEAD
W20-1

5TH ST.

S 5TH STREET

IH 43/IH 94/USH 41 SB

I-43/94

IH 43/IH 94/USH 41 NB

I-43/94

4TH ST.

S 4TH STREET

RAMP CLOSED
R11-2R
48" X 30"

RAMP CLOSED
R11-2R
48" X 30"

RAMP WILL BE CLOSED
12 PM TO 10 PM
BEGINNING
JAN 13
R11-51
48" X 48"

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 225	E

2

N

RAMP CLOSED AHEAD

MAPLE STREET

W MITCHELL STREET

S 5TH STREET

5TH ST.

IH 43/IH 94/USH 41 SB

I-43/94

RAMP CLOSED
R11-2R
48" X 30"

TRAFFIC CONTROL DRUMS
@ 25' SPACING (TYP)

IH 43/IH 94/USH 41 NB

S 4TH STREET

W LAPHAM BOULEVARD

REFER TO OVERPASS
TRAFFIC CONTROL PLANS

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 226	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026416_s4.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

N

S 5TH STREET

RAMP CLOSED
R11-2R
48" X 30"

I-43/94

I-43/94

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

S 4TH STREET

4TH ST.

W GREENFIELD AVENUE

EQUATION
Eqn 23+33.88 = Eqn 57+73.14

LEGEND

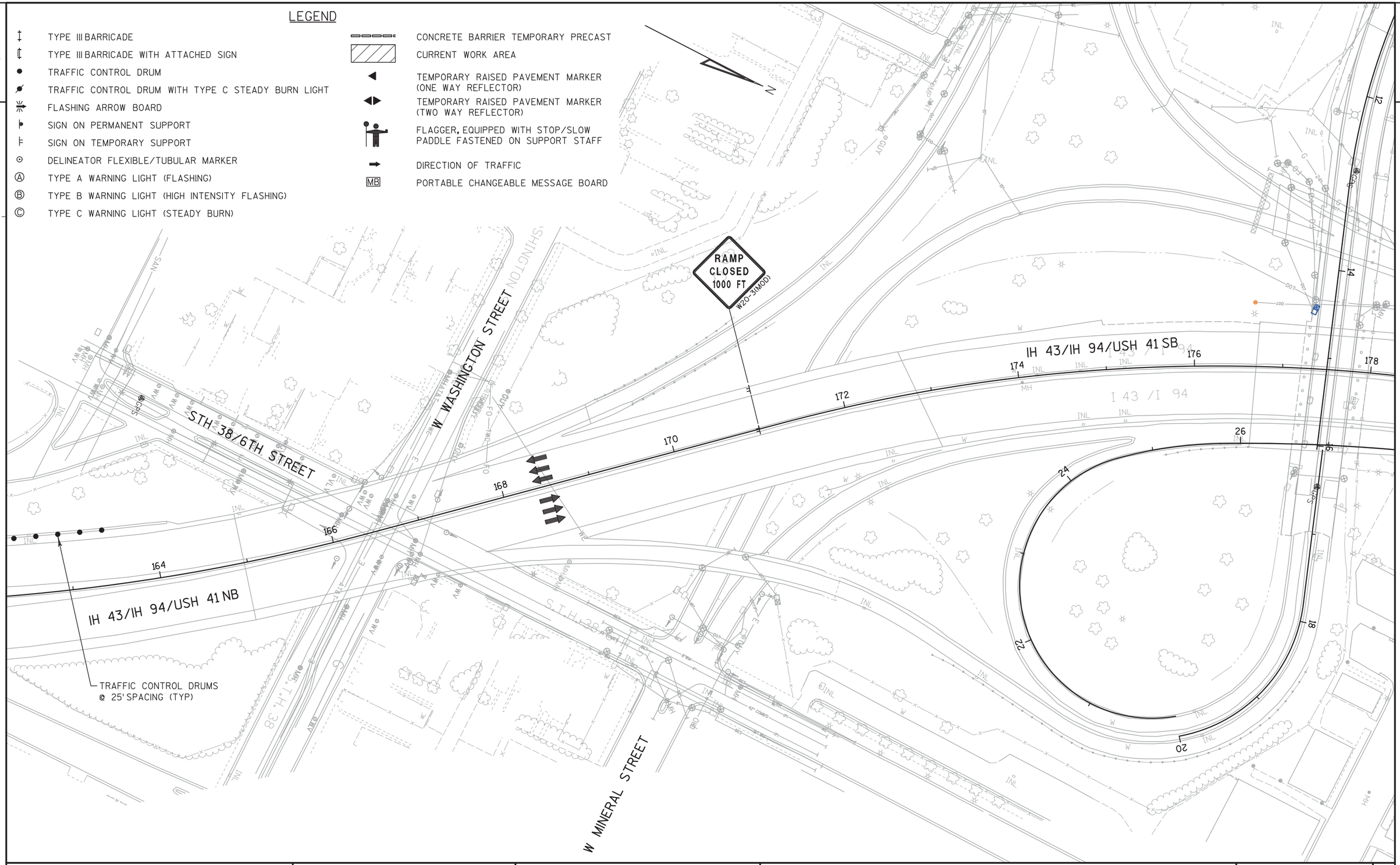
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 227	E

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)

- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 228	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026418_s4.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

S 59°48'23" E

N 89°20'47" E

N 70°07'24" E

N 13°33'24" W

ROAD WORK AHEAD W20-1

S 9TH STREET

BRUCE ST.

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I 94

W NATIONAL AVENUE

W PIERCE STREET

W BRUCE STREET

WEST VIRGINIA STREET

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 229	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\026419_s4.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

2

MENOMONEE RIVER

SOO LINE RAILROAD COMPANY
D/B/A CANADIAN PACIFIC RAILWAY
COMPANY

IH 43/IH 94/USH 41 SB

ROAD
WORK
1 MILE
W20-1

COAL PILE

194 196 198 200 202 204 206 208

MENOMONEE PIER

MENOMONEE R.

MENOMONEE RIVER

LEGEND

- 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
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- CURRENT WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4	SHEET 230	E

2

HOLT AVENUE

MORGAN AVENUE

3RD STREET

MORGAN AVENUE

6TH STREET

5TH PLACE

5TH STREET

4TH STREET

3RD STREET

WARNIMONT AVENUE

WARNIMONT AVENUE

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY

① 4'-0" × 4'-3"

WARNIMONT
PEDESTRIAN
BRIDGE CLOSED
USE HOLT AVE
(DATES)

FMS (25) (26)

② DETOUR ←

③ DETOUR →

④ BRIDGE WILL BE CLOSED
X X PM T O X X PM
BEGINNING
JAN 15

R11-51 MOD
48" X 48"

⑤ END DETOUR

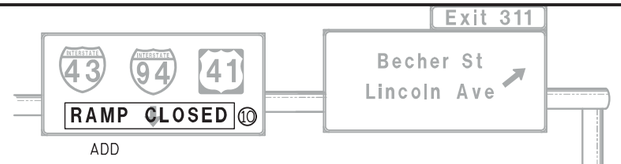
M4-8A
24" X 18"

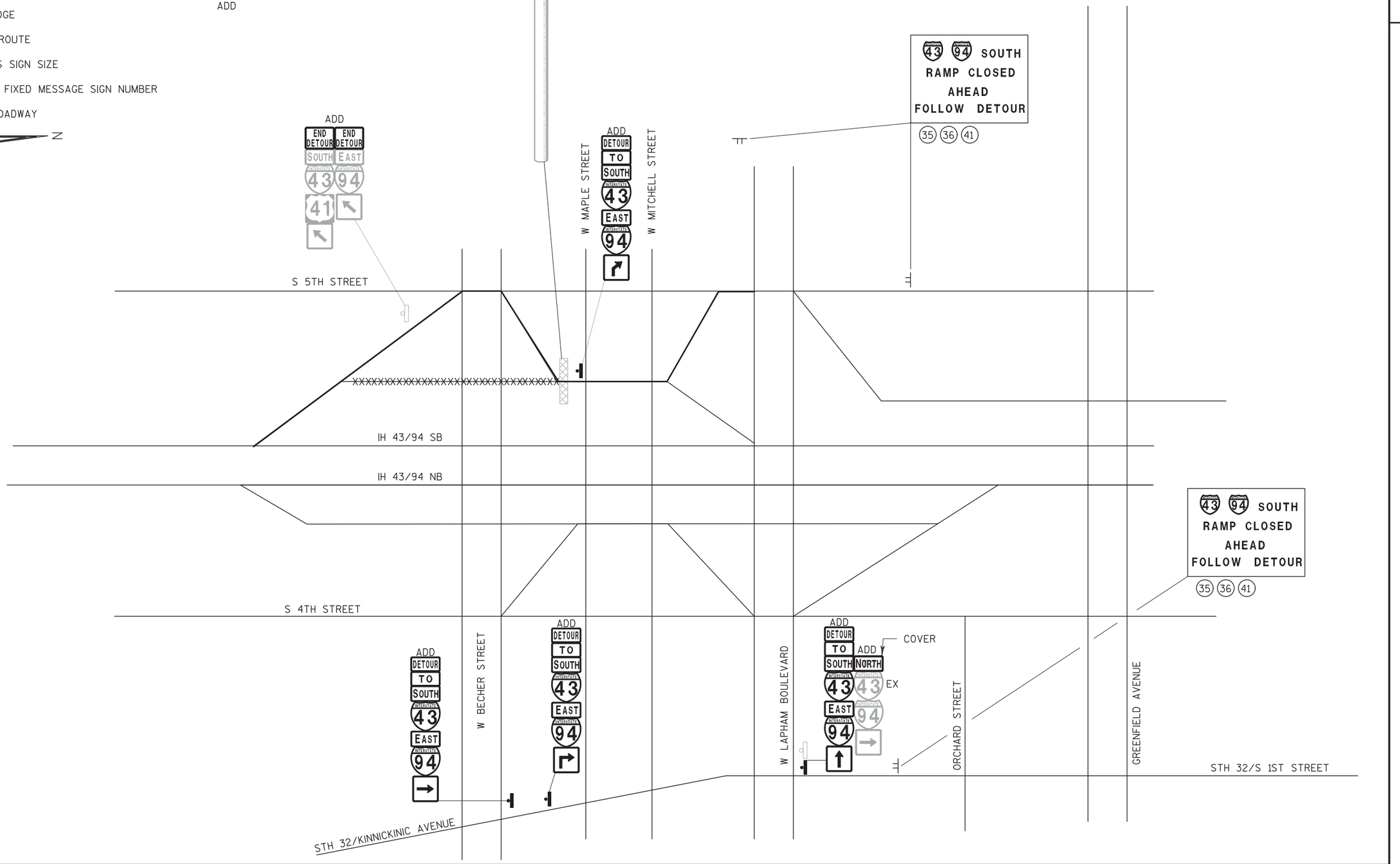
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - WARNIMONT AVE PEDESTRIAN BRIDGE (STAGE 1)	SHEET 231	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY
- N



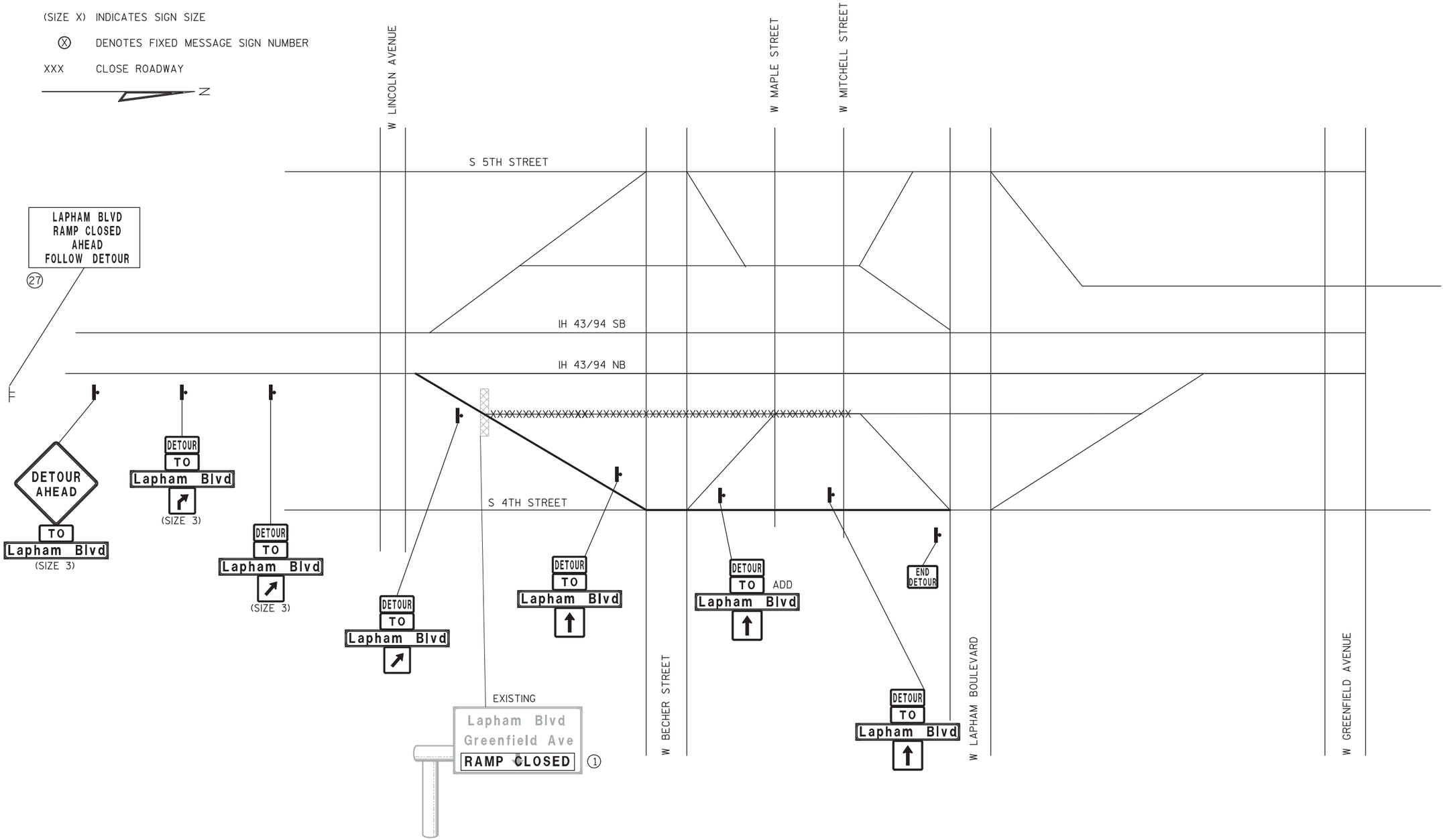


PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - LAPHAM BLVD SB ENTRANCE RAMP (STAGE 1)	SHEET 232	E

2

LEGEND

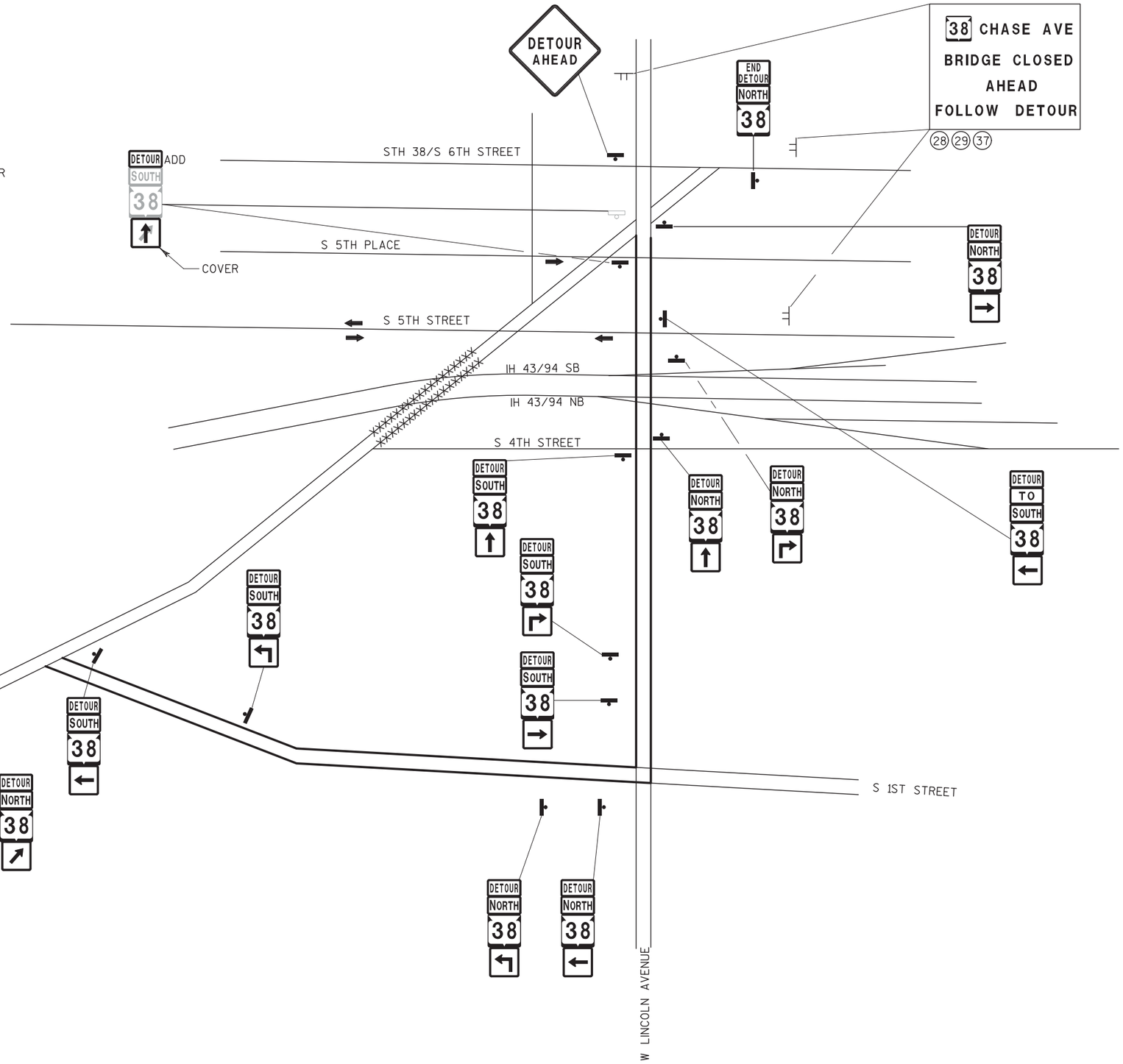
- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY
- N



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - LAPHAM BLVD NB EXIT RAMP (STAGES 3-4)	SHEET 233	E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY
- N



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - CHASE AVENUE (STAGE 4)	SHEET 234	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY

N

Becher St
EAST

DETOUR TO Lapham Blvd ADD

DETOUR TO Lapham Blvd

DETOUR TO Lapham Blvd ADD

DETOUR TO Lapham Blvd

END DETOUR TO Lapham Blvd ADD

(SIZE 3)
DETOUR TO Lapham Blvd

(SIZE 3)
DETOUR TO Lapham Blvd

DETOUR TO Lapham Blvd

DETOUR TO Lapham Blvd

Exit 312A
Lapham Blvd
Mitchell Street
RAMP CLOSED (16)

DETOUR AHEAD TO Lapham Blvd (SIZE 3)

LINCOLN AVENUE

5TH STREET

6TH STREET

IH 43/94 SB

IH 43/94 NB

POLCYN STREET

4TH STREET

LAPHAM BLVD
RAMP CLOSED
AHEAD
FOLLOW DETOUR
(31)

EXISTING
Exit 312A
Lapham Blvd
Mitchell St
1/2 Mile
RAMP CLOSED
ADD (39)

EXISTING
Exit 312A
Lapham Blvd
Mitchell St
EXIT ONLY
RAMP CLOSED
ADD (40)

DETOUR TO Lapham Blvd

DETOUR TO Lapham Blvd

DETOUR TO Lapham Blvd

DETOUR TO Lapham Blvd

DETOUR TO Lapham Blvd

DETOUR TO Lapham Blvd

BECHER STREET

LAPHAM BOULEVARD

GREENFIELD AVENUE

SEE NB CD ROAD DETOUR PLAN

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - LAPHAM BLVD SB EXIT RAMP (STAGE 4)	SHEET 235	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\027005_dt.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 3000.0007 sf / in.

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY

N

ADD
DETOUR AHEAD
TO
National Ave
H-D Museum
(SIZE 3)

ADD
DETOUR
TO
National Ave
H-D Museum
(SIZE 3)

EXISTING
Becher-Mitchell 3/4
National Ave
794
3
ADD
RAMP CLOSED
(17)

EXISTING
EXIT 311
59
National Ave
3/4 Mile
RAMP CLOSED
ADD
(18)

EXISTING
Harley-Davidson Museum
COVER

EXISTING
National Ave
794
East 1
ADD
RAMP CLOSED
(19)

EXISTING
EXIT 311
59
National Ave
(20) RAMP CLOSED
ADD

EXISTING
EXIT 311
COVER

9TH STREET
6TH STREET
5TH STREET
4TH STREET
LINCOLN AVENUE
IH 43/94 SB
IH 43/94 NB
BARAGA STREET
POLCYN STREET
BECHER STREET
LAPHAM BOULEVARD
GREENFIELD AVENUE
MINERAL STREET
NATIONAL AVENUE

ADD
DETOUR
TO
National Ave
H-D Museum

ADD
DETOUR
TO
National Ave
H-D Museum

ADD
DETOUR
TO
National Ave
H-D Museum

ADD
DETOUR
TO
National Ave
H-D Museum

ADD
DETOUR
TO
National Ave
H-D Museum

EXISTING
JCT
59
DETOUR
TO
National Ave
H-D Museum
ADD

EXISTING
TO
43
94
H-D Museum
ADD

EXISTING
WEST
59
END DETOUR
National Ave
DETOUR
TO
H-D Museum
ADD

(32) NATIONAL AVE
RAMP CLOSED
AHEAD
FOLLOW DETOUR

(3) DETOUR
NATIONAL AVE
H-D MUSEUM

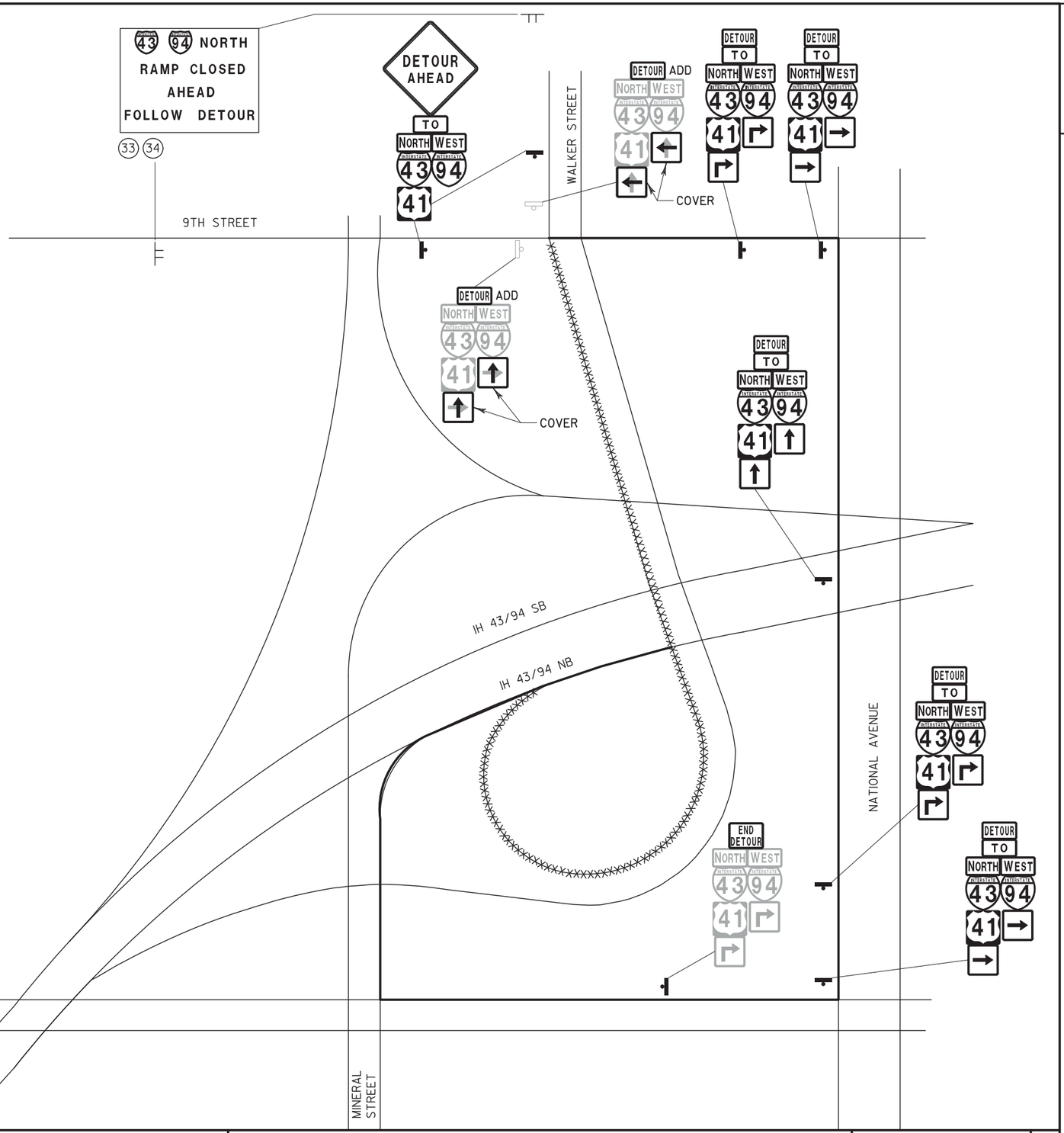
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - NATIONAL AVE NB EXIT RAMP (STAGE 5)	SHEET 236	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY

N



2

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - 9TH ST/WALKER ST NB ENTRANCE RAMP (STAGE 5)	SHEET 237	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY
- N

27TH STREET

IH 94 EB

IH 94 WB

IH 43/94 SB

IH 43/94 NB

HOWELL AVENUE

LAYTON AVENUE

VAN NORMAN AVENUE

MARTIN LANE

BOLIVAR AVENUE

PLAINFIELD AVENUE

WATERFORD AVENUE

HOWARD AVENUE

HOLT AVENUE

COVER

DETOUR AHEAD TO EAST 94 SOUTH 43

43 94 SOUTH (50)
RAMP CLOSED
AHEAD
FOLLOW DETOUR

STAGE 3

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - HOWARD AVE SB ENT RAMP LT TURN RESTRICTION	SHEET 238	E

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY

N

6TH STREET

HOWARD AVENUE

MORGAN AVENUE

HOLT AVENUE

IH 43/94 SB

IH 43/94 NB

W SAVELAND AVENUE

W WARNIMONT AVENUE

HOWELL AVE

S CHASE AVE

3RD ST

2ND ST

1ST PL

1ST ST

DETOUR TO WEST Howard Ave

DETOUR TO WEST Howard Ave

DETOUR TO WEST Howard Ave (SIZE 3)

DETOUR TO WEST Howard Ave (SIZE 3)

WB HOWARD AVE EXIT CLOSED USE HOLT AVE (57)

DETOUR AHEAD (SIZE 3)

DETOUR WEST Howard Ave

DETOUR WEST Howard Ave

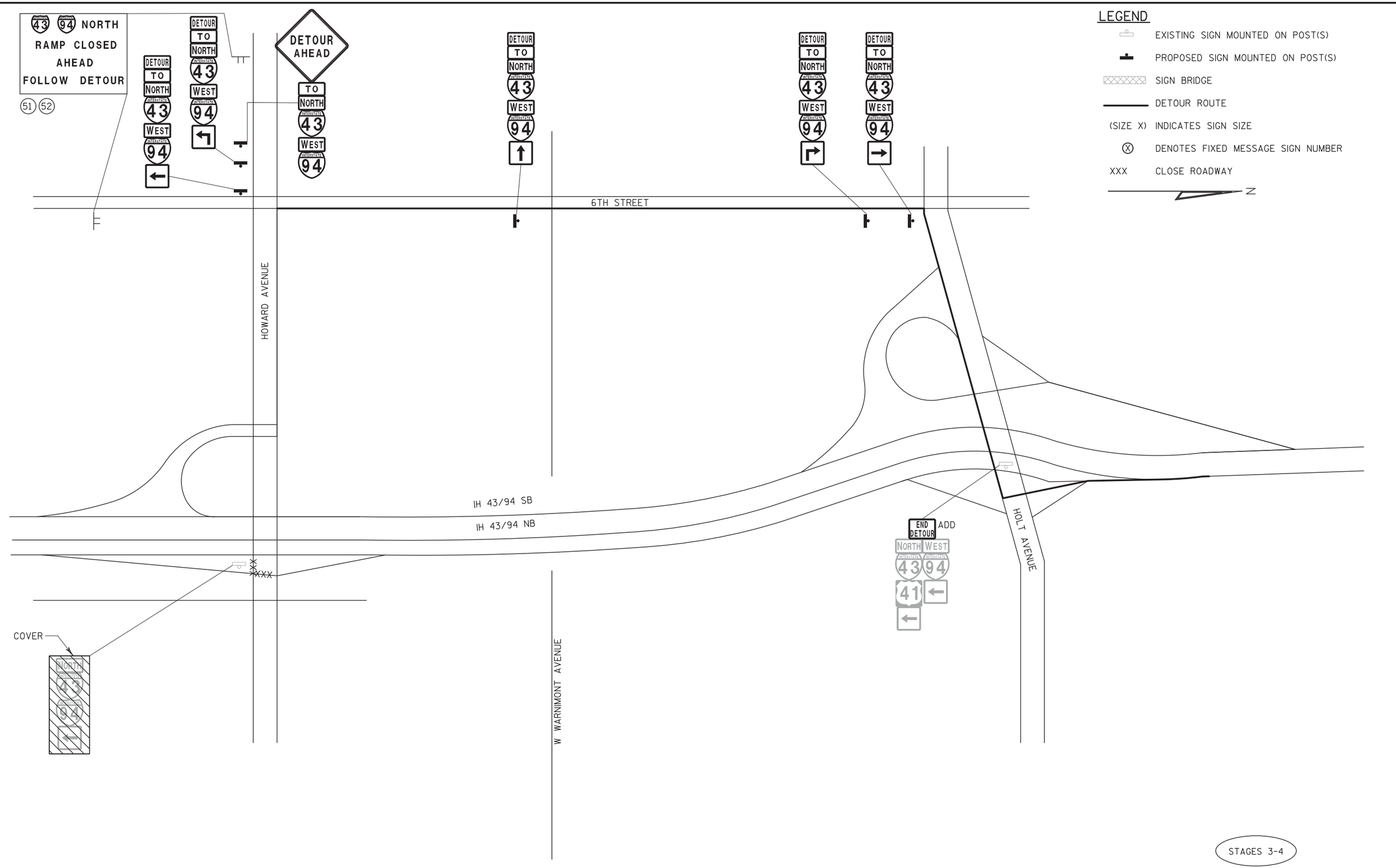
DETOUR TO WEST Howard Ave

END DETOUR

STAGE 3

PROJECT NO:1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - HOWARD AVE SB EXIT RAMP LT TURN RESTRICTION	SHEET 239	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\027009_dt.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 3000.0007 sf / in.



STAGES 3-4

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - HOWARD AVE NB ENT RAMP LT TURN RESTRICTION	SHEET 240	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY

N

6TH STREET

HOWARD AVENUE

MORGAN AVENUE

HOLT AVENUE

W SAVELAND AVENUE

W WARNIMONT AVENUE

IH 43/94 SB

IH 43/94 NB

3RD ST

2ND ST

1ST PL

1ST ST

HOWELL AVE

S CHASE AVE

Exit 314B
Howard Avenue
RAMP CLOSED (14)

(13)
RAMP CLOSED
894
1 1/2

DETOUR TO Howard Ave

DETOUR TO Howard Ave (SIZE 3)

DETOUR TO Howard Ave (SIZE 3)

DETOUR TO Howard Ave (SIZE 3)

DETOUR TO Howard Ave (SIZE 3)

(24)
HOWARD AVE
EXIT CLOSED
USE HOLT AVE

DETOUR AHEAD (SIZE 3)

Exit 314B
Howard Ave
3/4 mile
RAMP CLOSED (11)

Holt Ave 1/2
Howard Ave
894
RAMP CLOSED
2 3/4 (12)

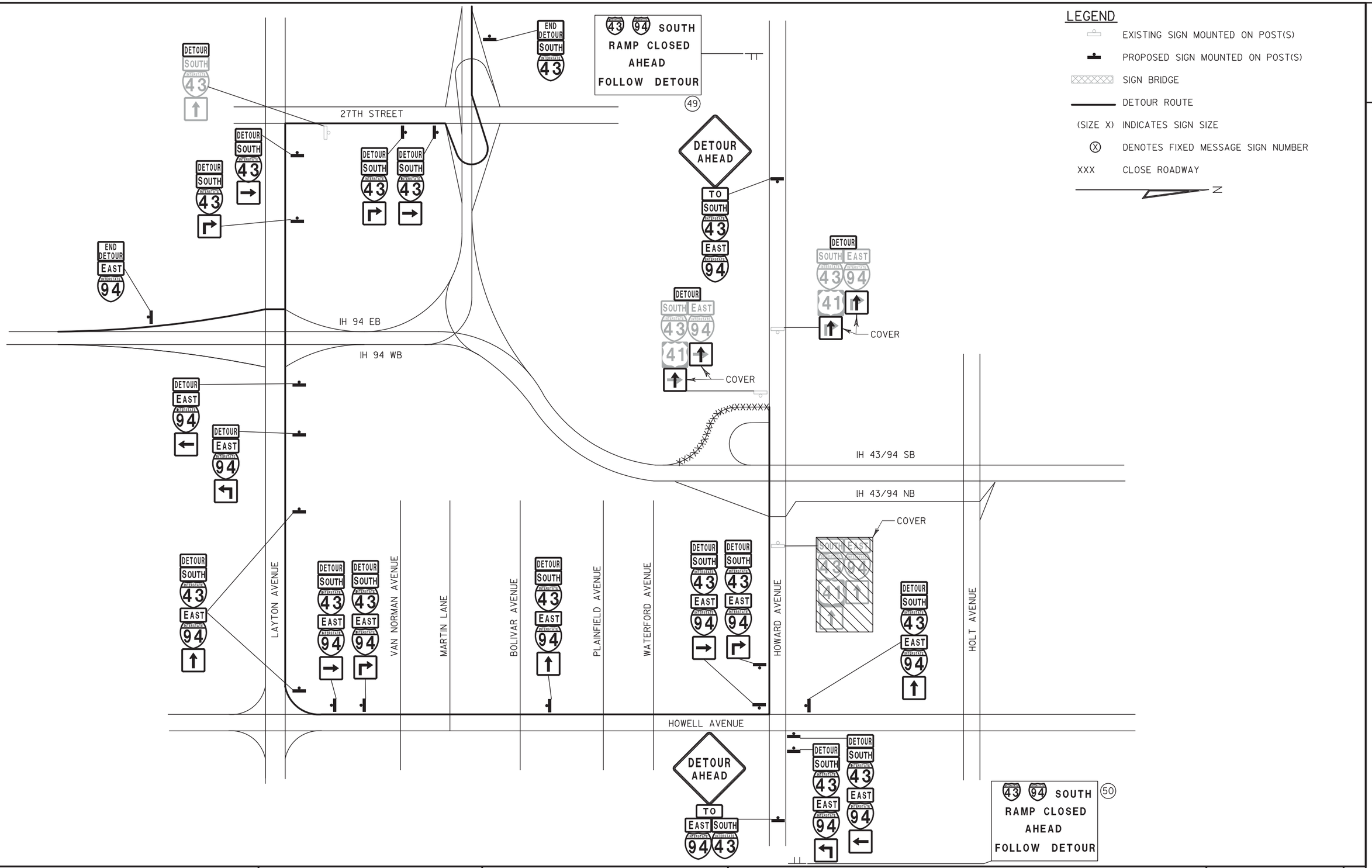
DETOUR Howard Ave

DETOUR Howard Ave

DETOUR TO Howard Ave

END DETOUR

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - HOWARD AVE SB EXIT RAMP - STAGE 4	SHEET 241	E



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - HOWARD AVE SB ENT RAMP CLOSURE - STAGE 4	SHEET 242	E

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY
- N

6TH STREET

HOWARD AVENUE

W WARNIMONT AVENUE

IH 43/94 SB

IH 43/94 NB

HOLT AVENUE

HOWELL AVENUE

CHASE AVENUE

DETOUR AHEAD (SIZE 3)

WB HOWARD AVE
EXIT CLOSED
USE HOLT AVE
(15)

Howard Ave
West
East

COVER

END DETOUR

DETOUR TO Howard Ave (SIZE 3)

DETOUR TO Howard Ave (SIZE 3)

DETOUR TO Howard Ave

DETOUR TO Howard Ave

DETOUR TO Howard Ave

DETOUR TO Howard Ave

DETOUR TO Howard Ave

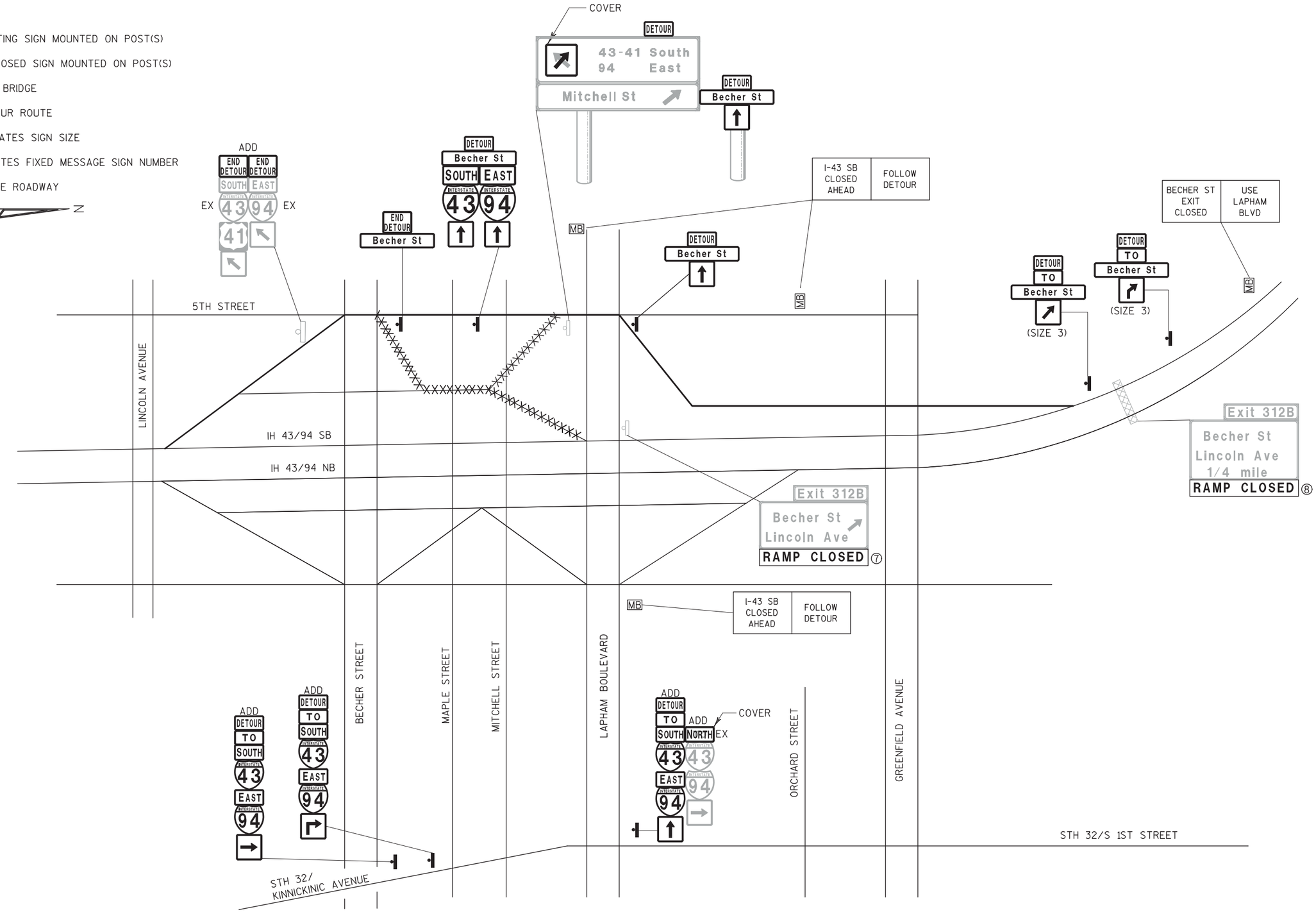
STAGE 4

PROJECT NO:1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - HOWARD AVE NB EXIT RAMP LT TURN RESTRICTION	SHEET 243	E

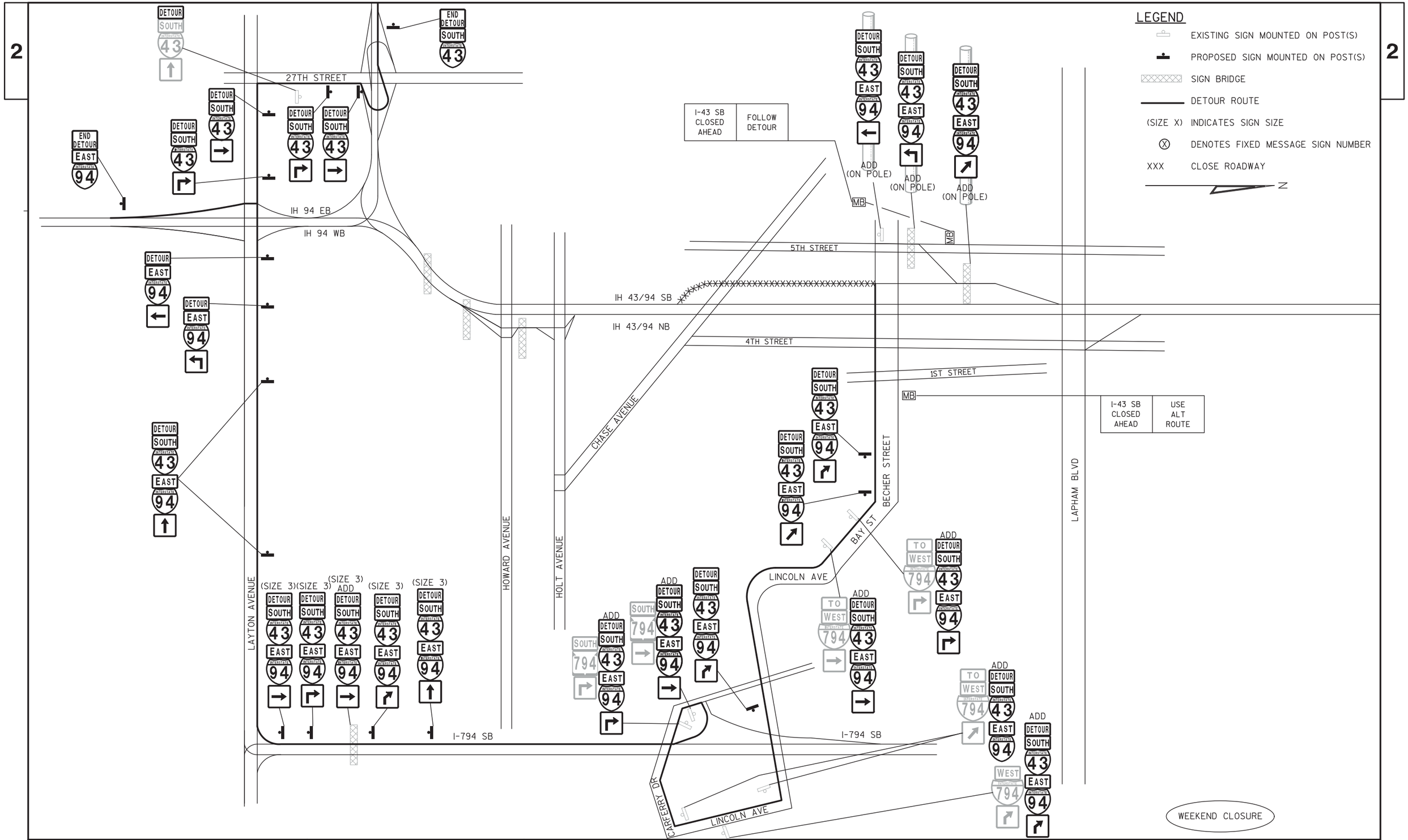
2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- Ⓧ DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY
- N



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLANS - SB CD RAMP (WEEKEND CLOSURE)	SHEET 244	E

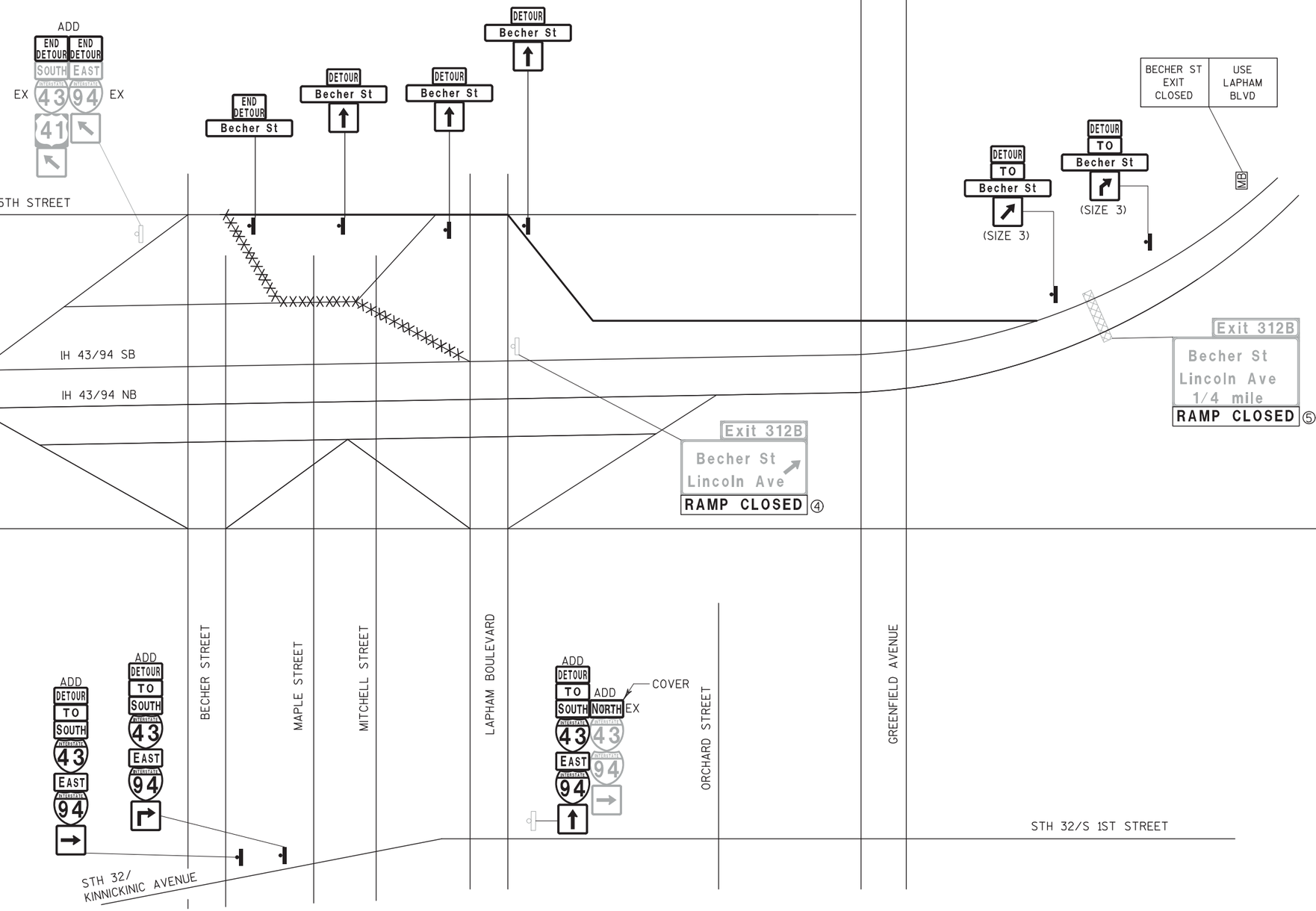


PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - SB BECHER ST/LAPHAM BLVD ENTRANCE RAMP	SHEET 245	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY
- N



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - BECHER ST SB EXIT RAMP (WEEKEND CLOSURE)	SHEET 246	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY
- N

W LINCOLN AVENUE

W MAPLE STREET

W MITCHELL STREET

S 5TH STREET

IH 43/94 SB

IH 43/94 NB

S 4TH STREET

W BECHER STREET

W LAPHAM BOULEVARD

W GREENFIELD AVENUE

I-43 NB CLOSED AHEAD	USE LAPHAM BLVD

NORTH WEST — 43 94 — 41 — COVER

MB

LAPHAM CLOSED AHEAD	FOLLOW DETOUR

DETOUR AHEAD
TO
Lapham Blvd
(SIZE 3)

DETOUR
TO
Lapham Blvd
(SIZE 3)

DETOUR
TO
Lapham Blvd
(SIZE 3)

DETOUR
TO
Lapham Blvd

DETOUR
TO
Lapham Blvd

I-43 NB RAMP CLOSED	USE LAPHAM BLVD

EXISTING
Lapham Blvd
Greenfield Ave
RAMP CLOSED
42

I-43 NB RAMP CLOSED	USE LAPHAM BLVD

DETOUR TO NORTH 43 WEST 94
DETOUR TO ADD
Lapham Blvd

DETOUR
TO
NORTH 43 WEST 94
Lapham Blvd

END DETOUR
Lapham Blvd

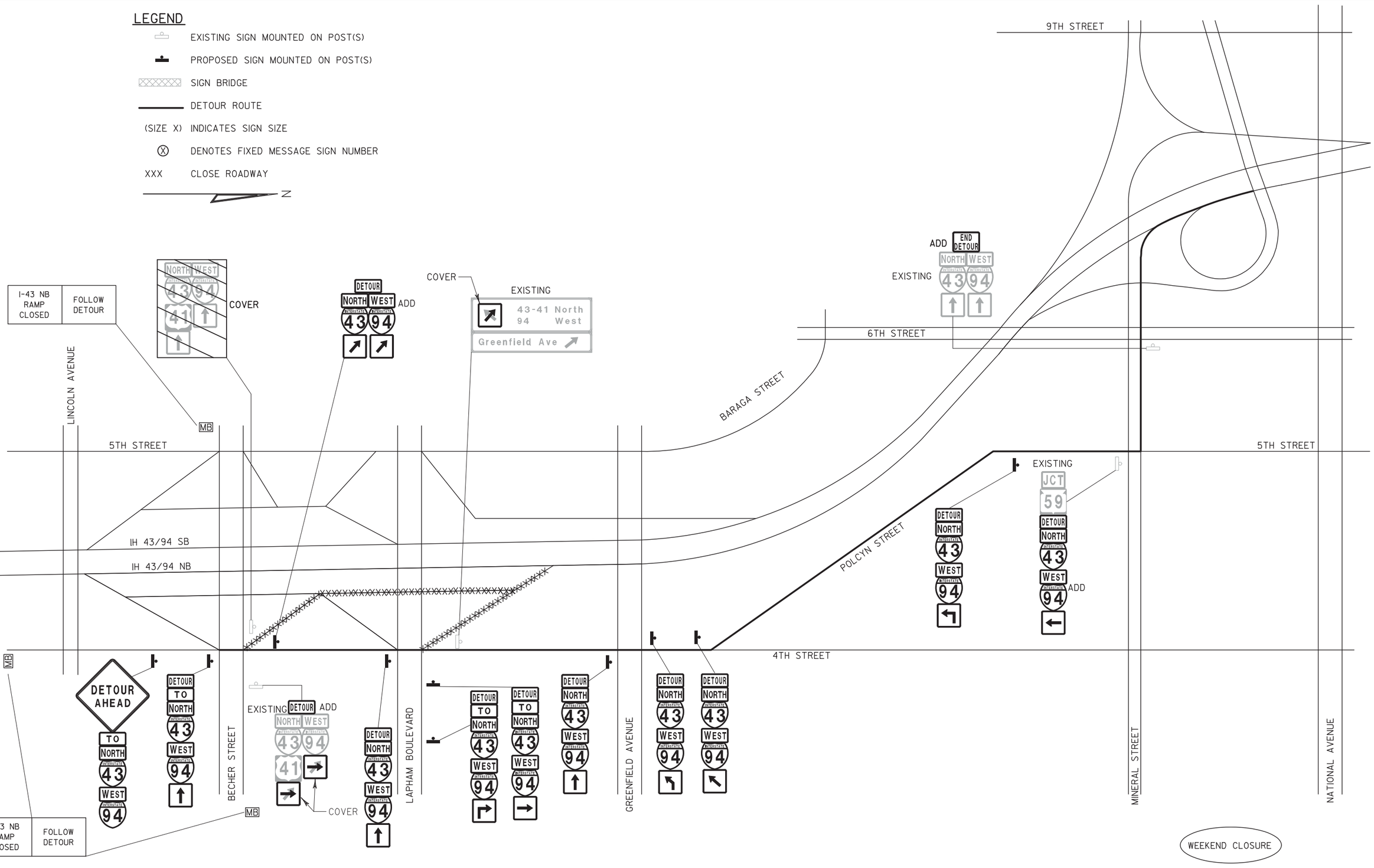
END DETOUR EXISTING
43-41 North
94 West
Greenfield Ave

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - NB CD RAMP (WEEKEND CLOSURE)	SHEET 247	E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY

N



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - BECHER ST/LAPHAM BLVD NB ENTRANCE RAMP	SHEET 248	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\027018_dt.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 3000.0007 sf / in.

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY

N

Lapham Blvd
Greenfield Ave
Exit 312 A-B
RAMP CLOSED (22)

Exit 312A-B
Becher St
Mitchell St
RAMP CLOSED (21)

END DETOUR TO Becher St

END DETOUR TO Lapham Blvd

DETOUR TO Becher St Lapham Blvd

DETOUR TO Becher St Lapham Blvd

DETOUR TO Becher St Lapham Blvd

DETOUR TO Becher St Lapham Blvd (SIZE 3)

DETOUR TO Becher St Lapham Blvd

DETOUR TO Becher St Lapham Blvd (SIZE 3)

DETOUR TO Becher St Lapham Blvd

DETOUR AHEAD TO Becher St Lapham Blvd (SIZE 3)

EXIT 312 A-B CLOSED AHEAD | FOLLOW DETOUR

MB

9TH STREET
6TH STREET
5TH STREET
4TH STREET
BARAGA STREET
IH 43/94 SB
IH 43/94 NB
POLCYN STREET
NATIONAL AVENUE
MINERAL STREET
LINCOLN AVENUE
BECHER STREET
LAPHAM BOULEVARD
GREENFIELD AVENUE

WEEKEND CLOSURE

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - BECHER ST/LAPHAM BLVD NB EXIT RAMP	SHEET 249	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY

N

INTERSTATE 43 NORTH
INTERSTATE 94 WEST 41
Milwaukee

Exit 314A
Holt Avenue 1 Mile

Exit 314B
Howard Avenue 3/4 Mile

I-43 CLOSED AHEAD | AT HOWARD AVE — MB

IH 43 NB
IH 43 SB

27TH STREET

I-94 CLOSED AHEAD | AT HOWARD AVE

MB

DETOUR TO NORTH INTERSTATE 43 WEST INTERSTATE 94 (SIZE 3)

DETOUR TO NORTH INTERSTATE 43 WEST INTERSTATE 94 (SIZE 3)

IH 94 EB

IH 94 WB

REFER TO NEXT SHEET FOR ADDITIONAL SIGNING

I-43 CLOSED AHEAD | AT HOLT AVE

6TH STREET

IH 43/94 SB

IH 43/94 NB

MB

END DETOUR

DETOUR AHEAD
NORTH INTERSTATE 43 WEST INTERSTATE 94
(SIZE 3)

STH 119

GRANGE AVENUE

INTERSTATE 43 NORTH
INTERSTATE 94 WEST 41
Milwaukee
EXIT ONLY

EDGERTON AVENUE

Exit 316
Layton Ave
EXIT ONLY

DETOUR TO NORTH INTERSTATE 43 WEST INTERSTATE 94

DETOUR TO NORTH INTERSTATE 43 WEST INTERSTATE 94

STH 30/HOWELL AVENUE

LAYTON AVENUE

DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94

DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94

I-794 SB

DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94

NORWICH AVENUE

COVER

DETOUR NORTH INTERSTATE 43 INTERSTATE 94 ADD

DETOUR SOUTH INTERSTATE 43 INTERSTATE 94 EX

SOUTH INTERSTATE 43 INTERSTATE 94 EX

DETOUR NORTH INTERSTATE 43 INTERSTATE 94 ADD

HOWARD AVENUE

W WARNIMONT AVENUE

DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94

ADD DETOUR TO INTERSTATE 43 INTERSTATE 94 EX

HOLT AVENUE

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - I-43/94 FULL FREEWAY CLOSURE (HOWARD AVE BR)	SHEET 250	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY

N

6TH STREET

MORGAN AVENUE

HOWARD AVENUE

HOLT AVENUE

W SAVELAND AVENUE

W WARNIMONT AVENUE

IH 43/94 SB

IH 43/94 NB

MB

I-43 CLOSED AHEAD | FOLLOW DETOUR

DETOUR TO 43 94 ADD

DETOUR SOUTH 43 EAST 94 ADD

DETOUR SOUTH EAST 43 94 41 ADD

END DETOUR SOUTH EAST 43 94 41 ADD

REFER TO PREVIOUS SHEET FOR ADDITIONAL SIGNING

NO TRUCKS ALLOWED | ON MORGAN AVE

SOUTH EAST 43 94 41 COVER

DETOUR SOUTH 43 EAST 94 (SIZE 3)

DETOUR NORTH 43 WEST 94 ADD (ON POLE) (SIZE 3)

DETOUR NORTH 43 WEST 94 ADD (ON POLE)

DETOUR NORTH 43 WEST 94 ADD (ON POLE)

DETOUR NORTH 43 WEST 94

DETOUR NORTH 43 WEST 94

DETOUR NORTH 43 WEST 94 ADD (ON POLE)

DETOUR NORTH 43 WEST 94

END DETOUR NORTH 43 WEST 94

Exit 314A Holt Ave

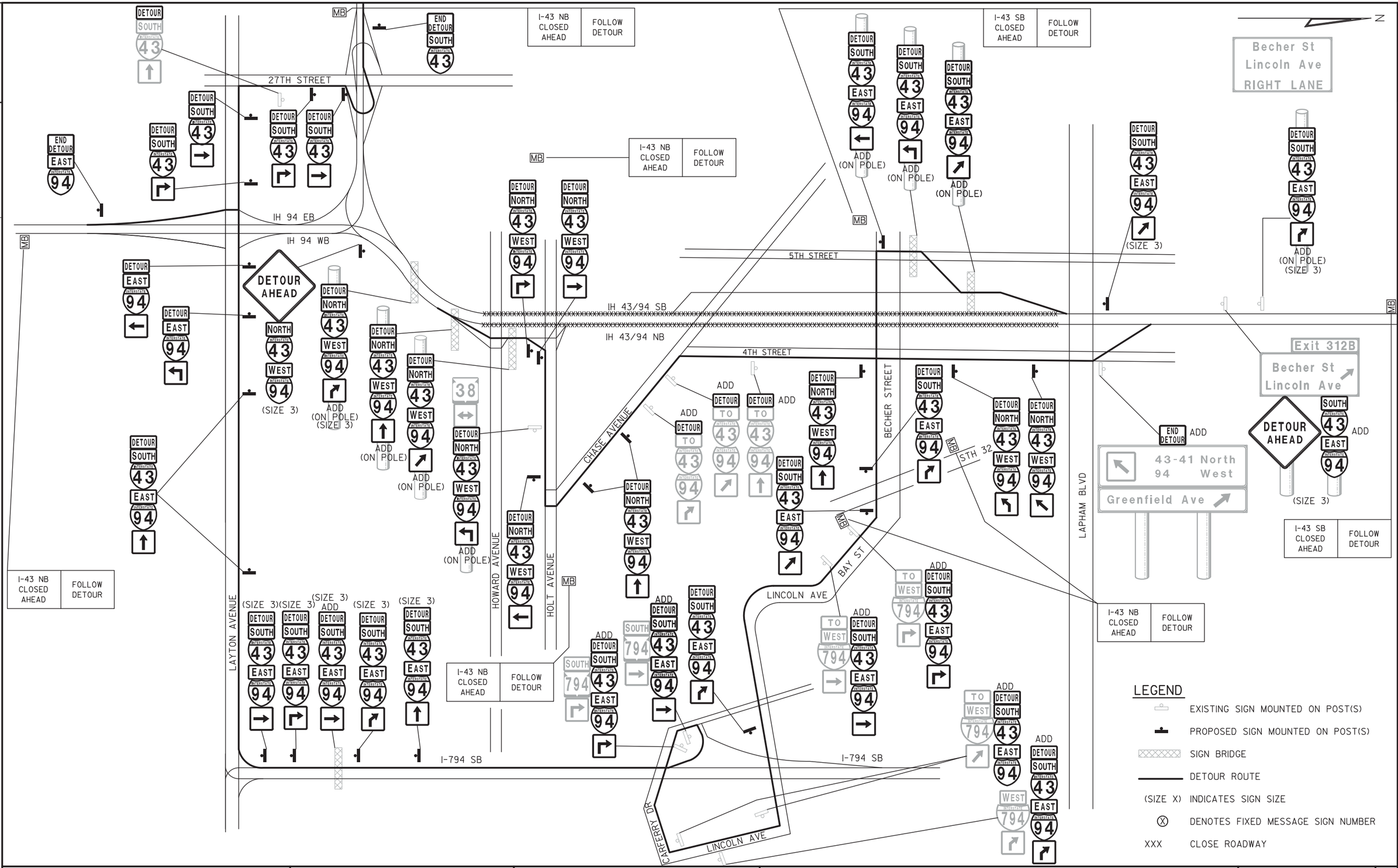
DETOUR SOUTH 43 EAST 94 ADD (SIZE 3)

I-43 CLOSED AHEAD | FOLLOW DETOUR

I-43 CLOSED AHEAD | FOLLOW DETOUR

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - I-43/94 FULL FREEWAY CLOSURE (HOWARD AVE BR)	SHEET 251	E

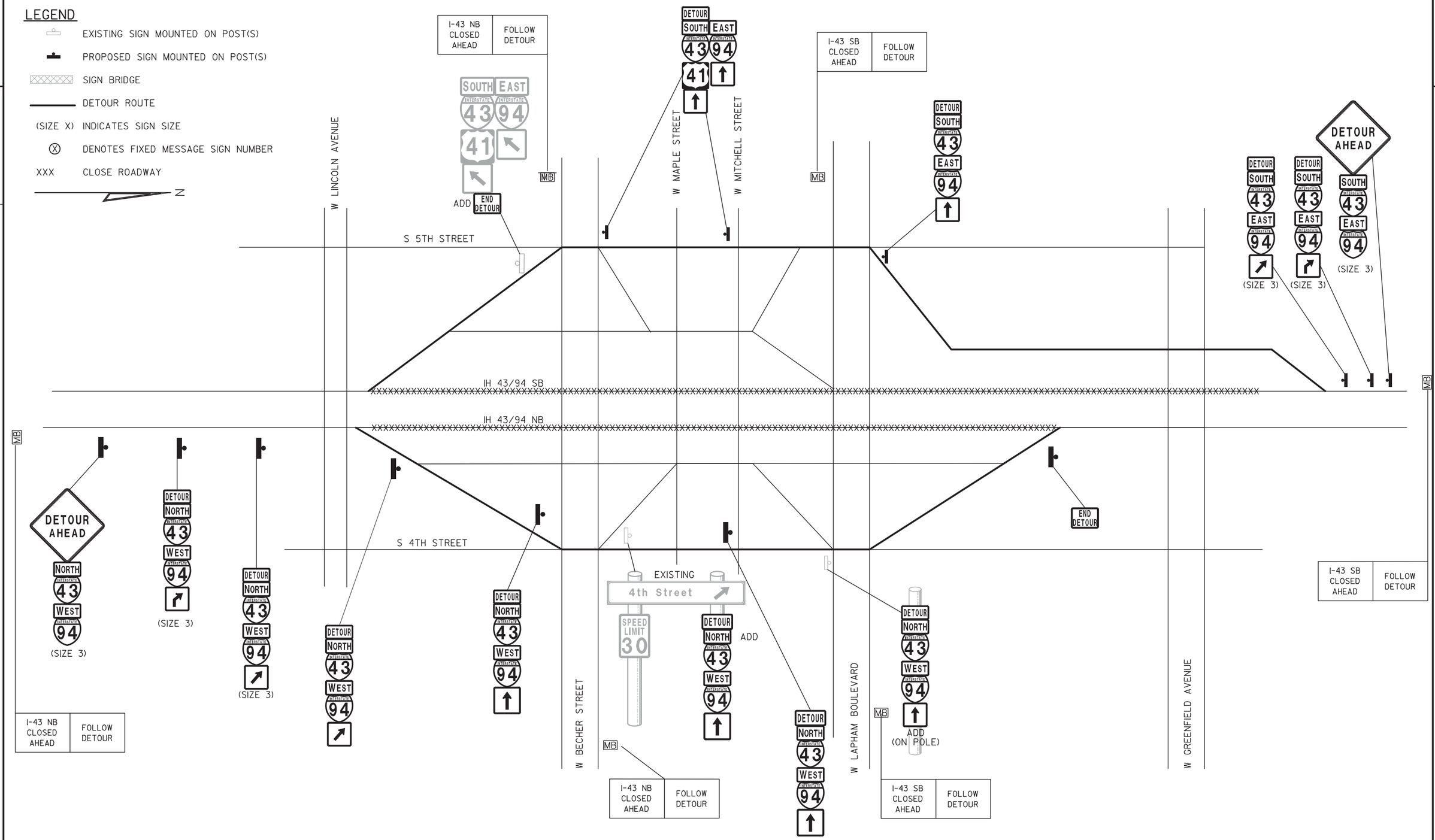
FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\027021_dt.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 3000.0007 sf / in.


2
2
N
MB
DETOUR SOUTH INTERSTATE 43
END DETOUR SOUTH INTERSTATE 43
DETOUR SOUTH INTERSTATE 43 EAST INTERSTATE 94
END DETOUR EAST INTERSTATE 94
DETOUR EAST INTERSTATE 94
DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94
DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94 (SIZE 3)
ADD (ON POLE) (SIZE 3)
ADD (ON POLE)
DETOUR AHEAD
NORTH INTERSTATE 43 WEST INTERSTATE 94
(SIZE 3)
38
DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94
ADD (ON POLE)
DETOUR SOUTH INTERSTATE 43 EAST INTERSTATE 94
(SIZE 3)
ADD
DETOUR TO INTERSTATE 43 SOUTH INTERSTATE 94
DETOUR TO INTERSTATE 43 SOUTH INTERSTATE 94
ADD
DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94
DETOUR SOUTH INTERSTATE 43 EAST INTERSTATE 94
DETOUR SOUTH INTERSTATE 43 EAST INTERSTATE 94
ADD (ON POLE)
DETOUR SOUTH INTERSTATE 43 EAST INTERSTATE 94
(SIZE 3)
ADD (ON POLE) (SIZE 3)
DETOUR SOUTH INTERSTATE 43 EAST INTERSTATE 94
DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94
DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94
DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94
DETOUR NORTH INTERSTATE 43 WEST INTERSTATE 94
DETOUR SOUTH INTERSTATE 43 EA

2

LEGEND

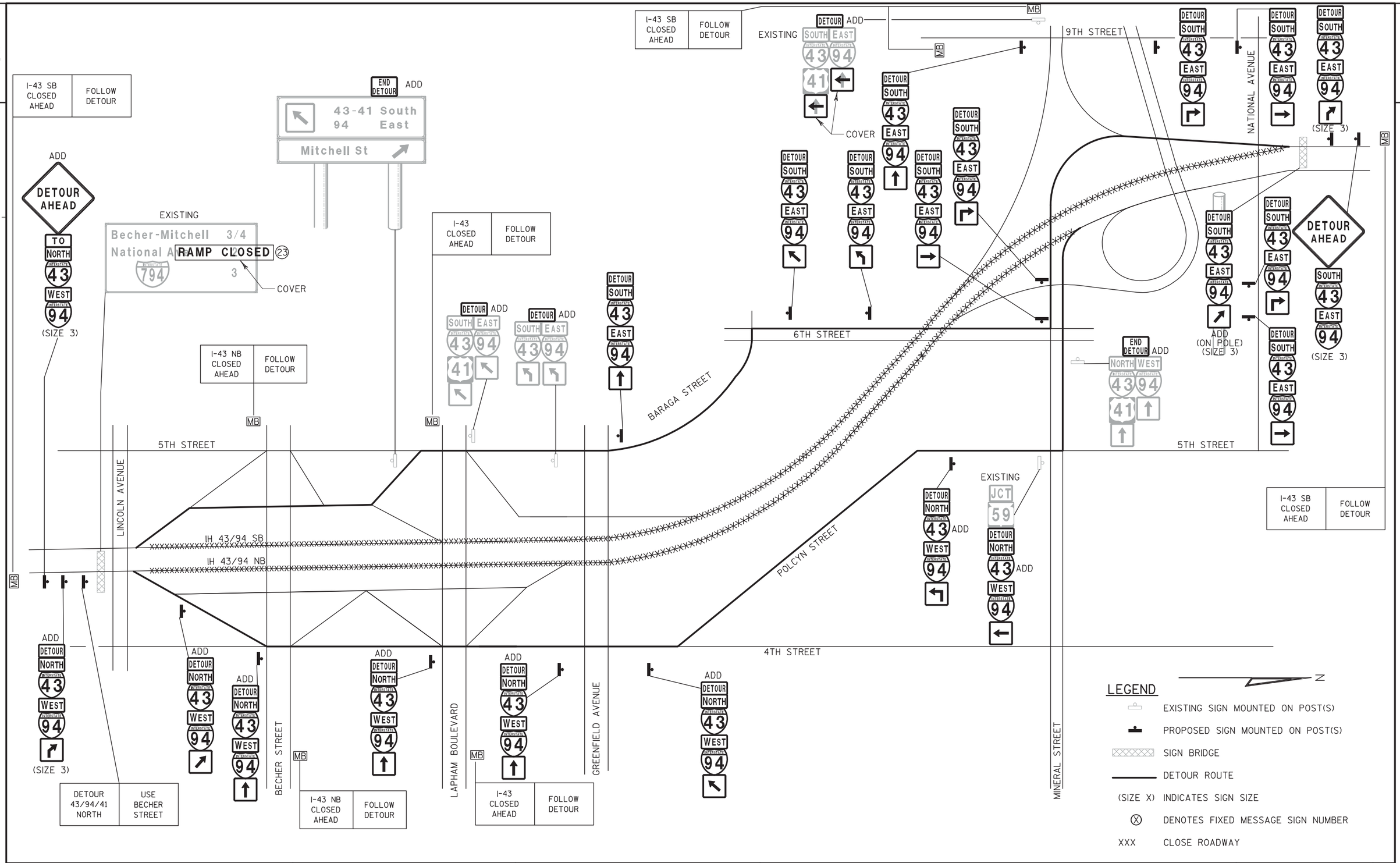
- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY
- N



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	I-43/94 FULL FREEWAY CLOSURE (MAPLE, MITCHELL, LAPHAM BRIDGE)	SHEET 253	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\027023_dt.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 3000.0007 sf / in.

WISDOT/CADDS SHEET 42

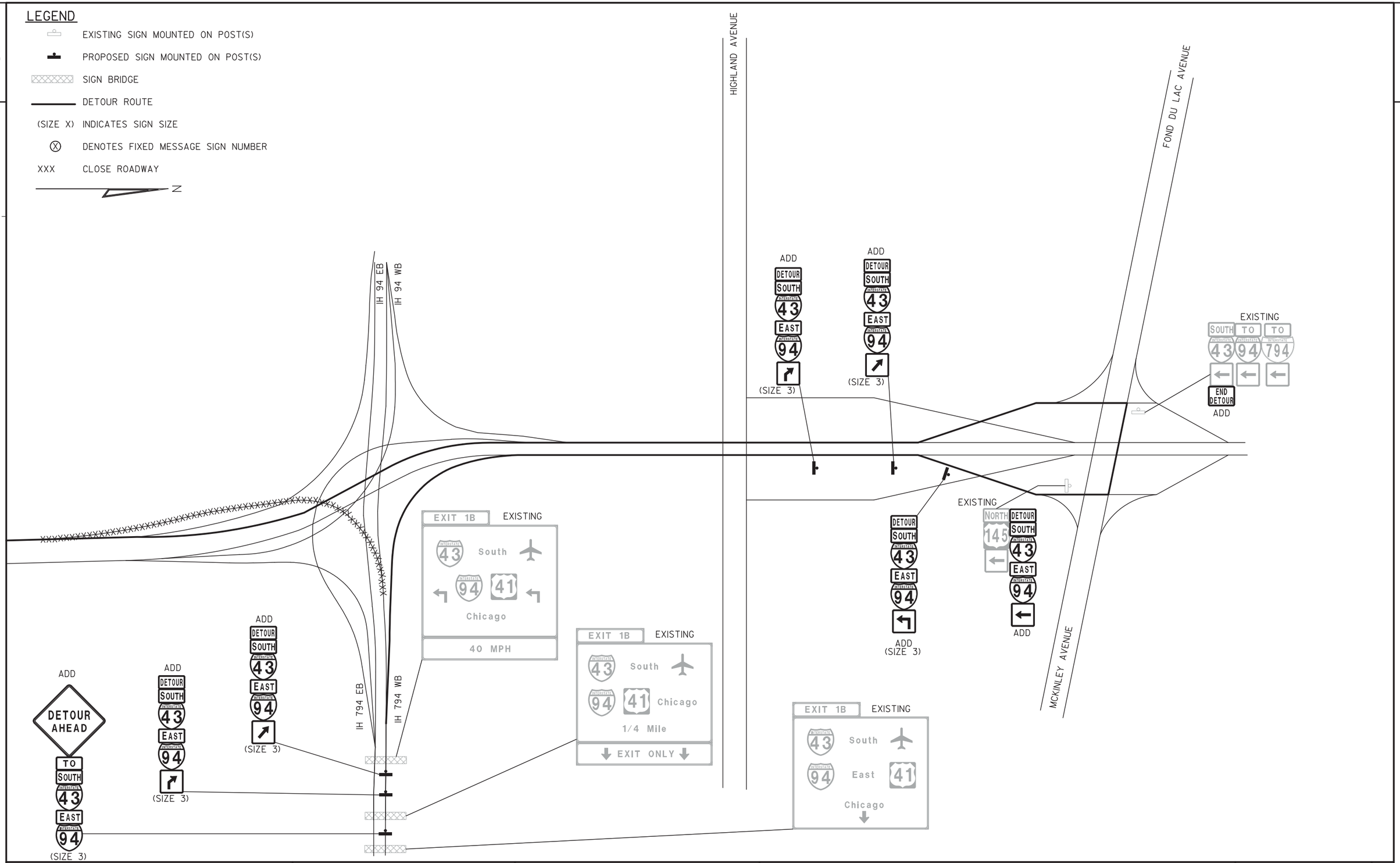


PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	I-43/94 FULL FREEWAY CLOSURE (GREENFIELD AVE, LAPHAM BRIDGE)	SHEET 254	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- Ⓧ DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY
- N



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - EAST-SOUTH SYSTEM RAMP FULL FWY CLOSURE	SHEET 255	E

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- SIGN BRIDGE
- DETOUR ROUTE
- (SIZE X) INDICATES SIGN SIZE
- (X) DENOTES FIXED MESSAGE SIGN NUMBER
- XXX CLOSE ROADWAY

N

6TH STREET

HOWARD AVENUE

W WARNIMONT AVENUE

IH 43/94 SB

IH 43/94 NB

HOLT AVENUE

HOWELL AVENUE

CHASE AVENUE

DETOUR AHEAD (SIZE 3)

HOWARD AVE
EXIT CLOSED
USE HOLT AVE
(58)

Howard Ave
West East
COVER

END DETOUR

DETOUR TO Howard Ave (SIZE 3)

DETOUR TO Howard Ave (SIZE 3)

DETOUR TO Howard Ave

DETOUR TO Howard Ave

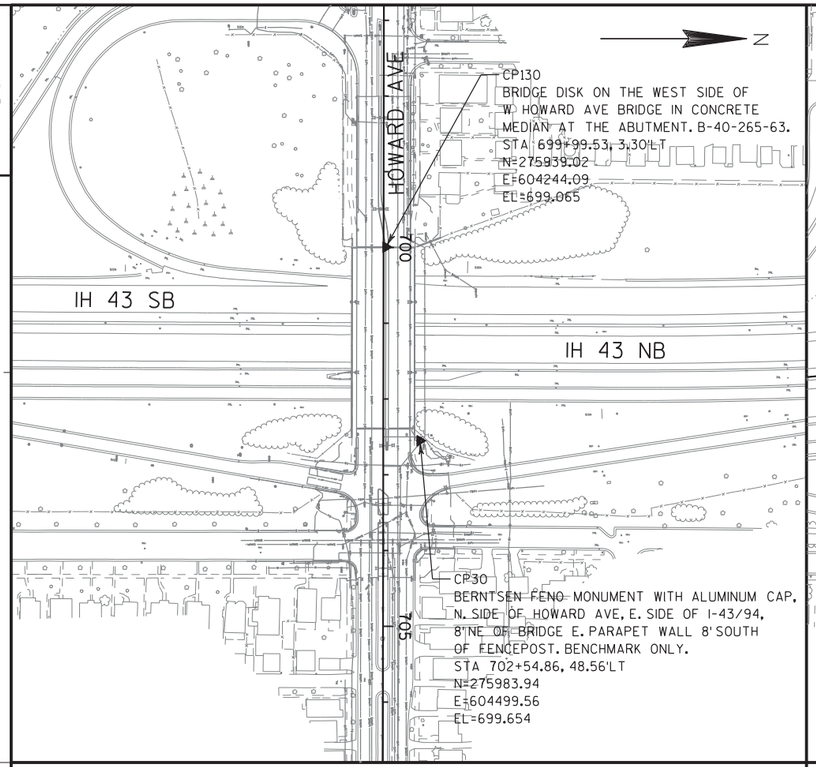
DETOUR TO Howard Ave

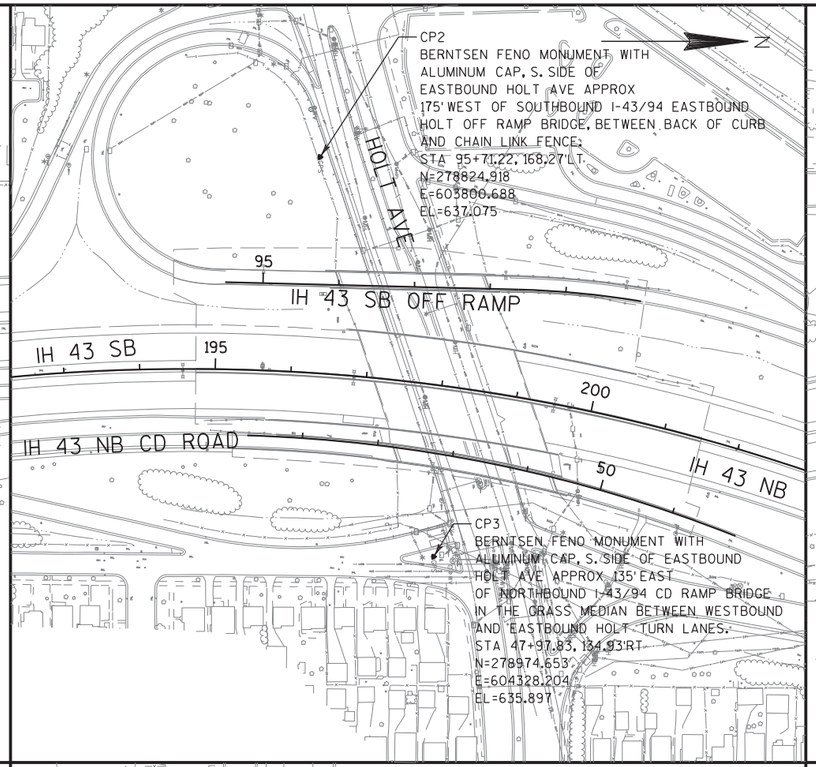
DETOUR TO Howard Ave

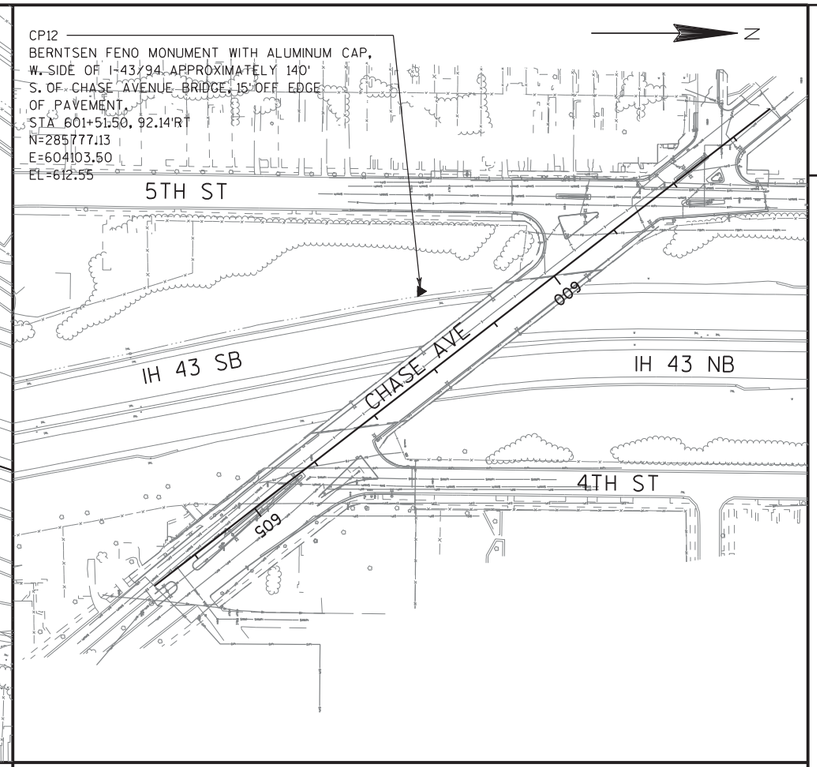
DETOUR TO Howard Ave

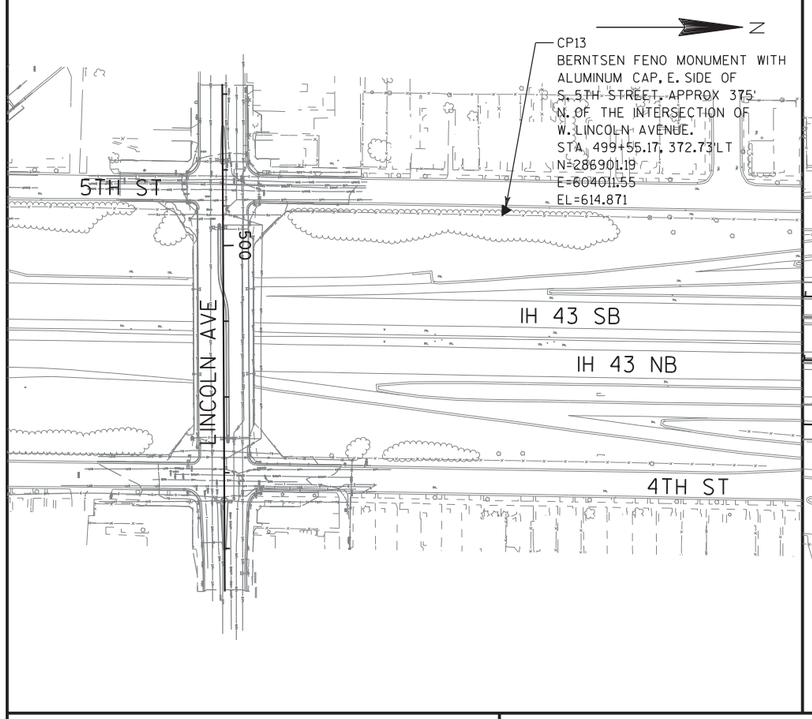
STAGE 3

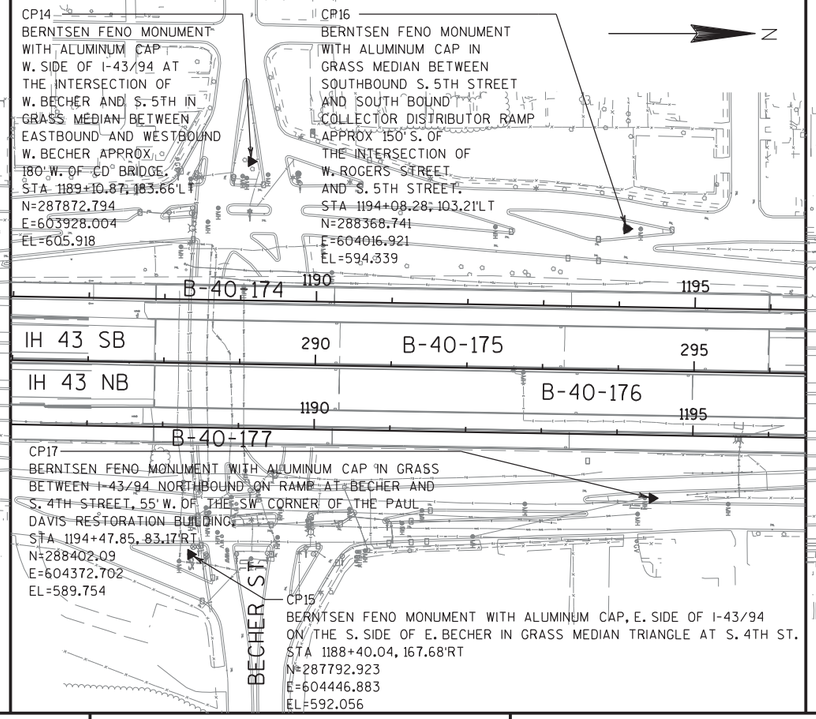
PROJECT NO:1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - HOWARD AVE NB EXIT RAMP CLOSURE	SHEET 256	E

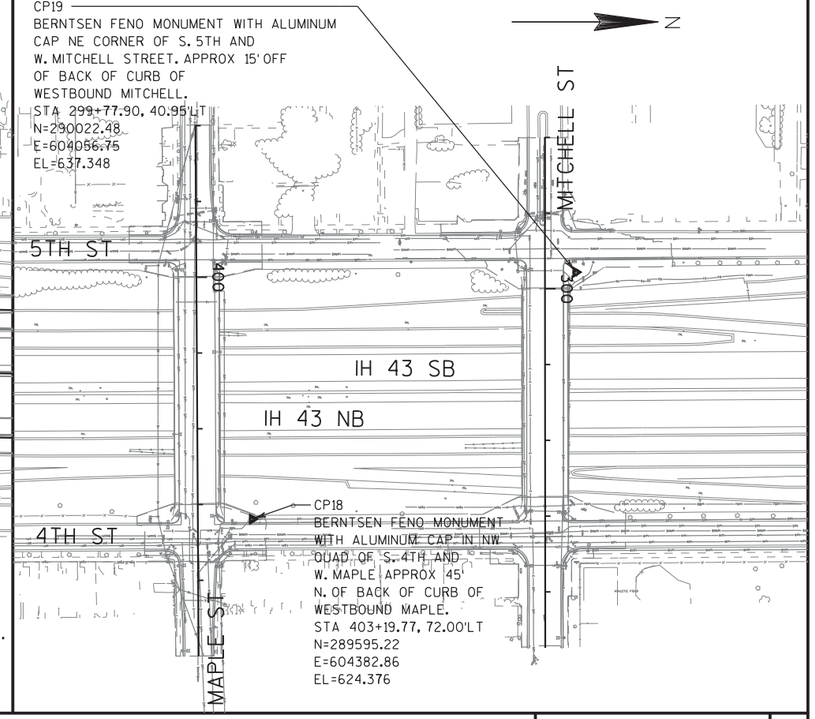












PROJECT NO: 1128-25-70	HWY: IH 43	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - SURVEY CONTROL	SHEET 257	E

2

CP14
BERNTSEN FENO MONUMENT
WITH ALUMINUM CAP
W. SIDE OF I-43/94 AT
THE INTERSECTION OF
W. BECHER AND S. 5TH IN
GRASS MEDIAN BETWEEN
EASTBOUND AND WESTBOUND
W. BECHER APPROX.
180' W. OF CD° BRIDGE.
STA 1189+10.87, 183.66'LT
N=287872.794
E=603928.004
EL=605.918

CP16
BERNTSEN FENO MONUMENT
WITH ALUMINUM CAP IN
GRASS MEDIAN BETWEEN
SOUTHBOUND S. 5TH STREET
AND SOUTH BOUND
COLLECTOR DISTRIBUTOR RAMP
APPROX 150' S. OF
THE INTERSECTION OF
W. ROGERS STREET
AND S. 5TH STREET.
STA 1194+08.28, 103.21'LT
N=288368.741
E=604016.921
EL=594.339

N

B-40-174

1190

1195

IH 43 SB

290

B-40-175

295

IH 43 NB

B-40-176

1190

1195

B-40-177

CP17
BERNTSEN FENO MONUMENT WITH ALUMINUM CAP IN GRASS
BETWEEN I-43/94 NORTHBOUND ON RAMP AT BECHER AND
S. 4TH STREET, 55' W. OF THE SW CORNER OF THE PAUL
DAVIS RESTORATION BUILDING.
STA 1194+47.85, 83.17'RT
N=288402.09
E=604372.702
EL=589.754

BECHER ST

CP15
BERNTSEN FENO MONUMENT WITH ALUMINUM CAP, E. SIDE OF I-43/94
ON THE S. SIDE OF E. BECHER IN GRASS MEDIAN TRIANGLE AT S. 4TH ST.
STA 1188+40.04, 167.68'RT
N=287792.923
E=604446.883
EL=592.056

CP21
BERNTSEN FENO MONUMENT WITH ALUMINUM CAP
SE CORNER OF S. 5TH AND W. GREENFIELD AVENUE.
APPROX 21' S. OF THE BACK OF CURB
FOR EASTBOUND GREENFIELD AVENUE.
STA 99+87.05, 55.74'RT
N=291648.84
E=604041.67
EL=630.139

N

5TH ST

100

IH 43 SB

IH 43 NB

4TH ST

GREENFIELD AVE

CP23
BERNTSEN FENO
MONUMENT WITH
ALUMINUM CAP
IN GRASS MEDIAN ON
THE W. SIDE OF I-43/94
BETWEEN N. BOUND ON
RAMP AND S. BOUND
OFF RAMP FOR NATIONAL
AVE APPROX 50' W. OF
NATIONAL AVE OFF
RAMP BRIDGE.
STA 5+98.33, 61.20'LT
N=293831.117
E=602777.151
EL=613.109

CP25
BERNTSEN FENO MONUMENT
WITH ALUMINUM CAP,
N. SIDE OF NATIONAL AVE
AT THE DRIVEWAY
TO THE MILWAUKEE ENTERPRISE
CENTER ON THE E. SIDE OF
THE DRIVEWAY ENTRANCE IN
THE PLANTER AREA APPROX
23' N. OF THE BACK OF SIDEWALK.
STA STA 9+97.96, 27.67'LT
N=294021.588
E=602758.594
EL=615.851

N

NATIONAL AVE

SB OFF RAMP

5

10

180

B-40-285

30

NB ON RAMP

IH 43 SB

175

IH 43 NB

CP24
BERNTSEN FENO MONUMENT WITH ALUMINUM CAP IN
GRASS MEDIAN ON THE E. SIDE OF I-43/94 BETWEEN
NORTH BOUND ON RAMP AND SOTH BOUND OFF RAMP
FOR NATIONAL AVE APPROX 50' E. OF
NATIONAL AVE ON RAMP BRIDGE.
STA 26+88.86, 47.66'RT
N=293753.050
E=603116.754
EL=611.333

2

PROJECT NO: 1128-25-70	HWY: IH 43	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - SURVEY CONTROL	SHEET 258	E

CURVE ENT-1
PI STA 640+33.91
y = 274,648.10
x = 640,304.08
Δ = 9° 35' 44.04" (LT)
D = 4° 26' 29.52"
T = 108.27
L = 216.04
R = 1290.00
PC STA 639+25.64
y = 274,540.80
x = 604,289.62
PT STA 641+41.68
y = 274,756.31
x = 604,300.46
BK = N 07°40'36" E
AH = N 01°55'08" W

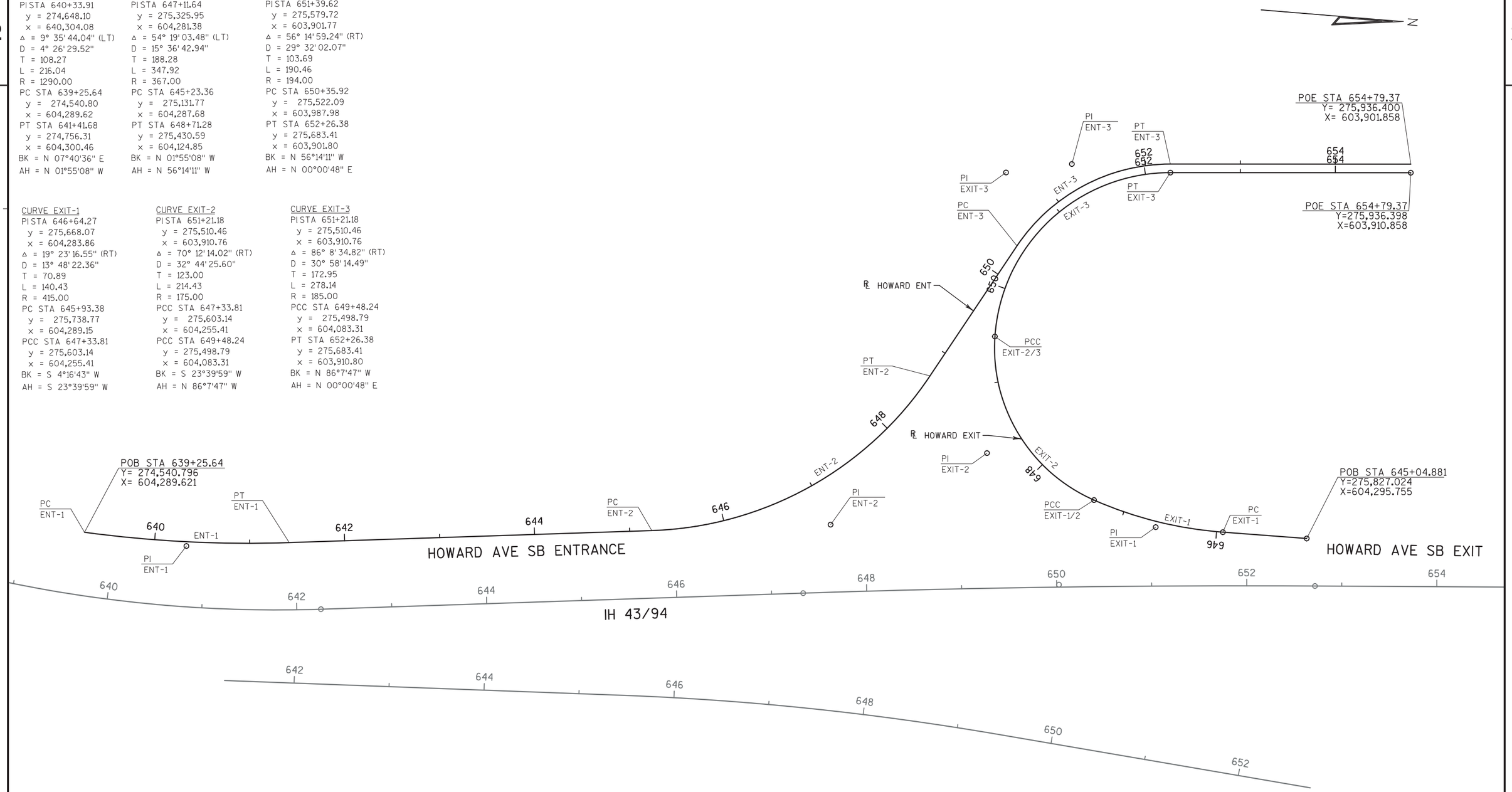
CURVE ENT-2
PI STA 647+11.64
y = 275,325.95
x = 604,281.38
Δ = 54° 19' 03.48" (LT)
D = 15° 36' 42.94"
T = 188.28
L = 347.92
R = 367.00
PC STA 645+23.36
y = 275,131.77
x = 604,287.68
PT STA 648+71.28
y = 275,430.59
x = 604,124.85
BK = N 01°55'08" W
AH = N 56°14'11" W

CURVE ENT-3
PI STA 651+39.62
y = 275,579.72
x = 603,901.77
Δ = 56° 14' 59.24" (RT)
D = 29° 32' 02.07"
T = 103.69
L = 190.46
R = 194.00
PC STA 650+35.92
y = 275,522.09
x = 603,987.98
PT STA 652+26.38
y = 275,683.41
x = 603,901.80
BK = N 56°14'11" W
AH = N 00°00'48" E

CURVE EXIT-1
PI STA 646+64.27
y = 275,668.07
x = 604,283.86
Δ = 19° 23' 16.55" (RT)
D = 13° 48' 22.36"
T = 70.89
L = 140.43
R = 415.00
PC STA 645+93.38
y = 275,738.77
x = 604,289.15
PCC STA 647+33.81
y = 275,603.14
x = 604,255.41
BK = S 4°16'43" W
AH = S 23°39'59" W

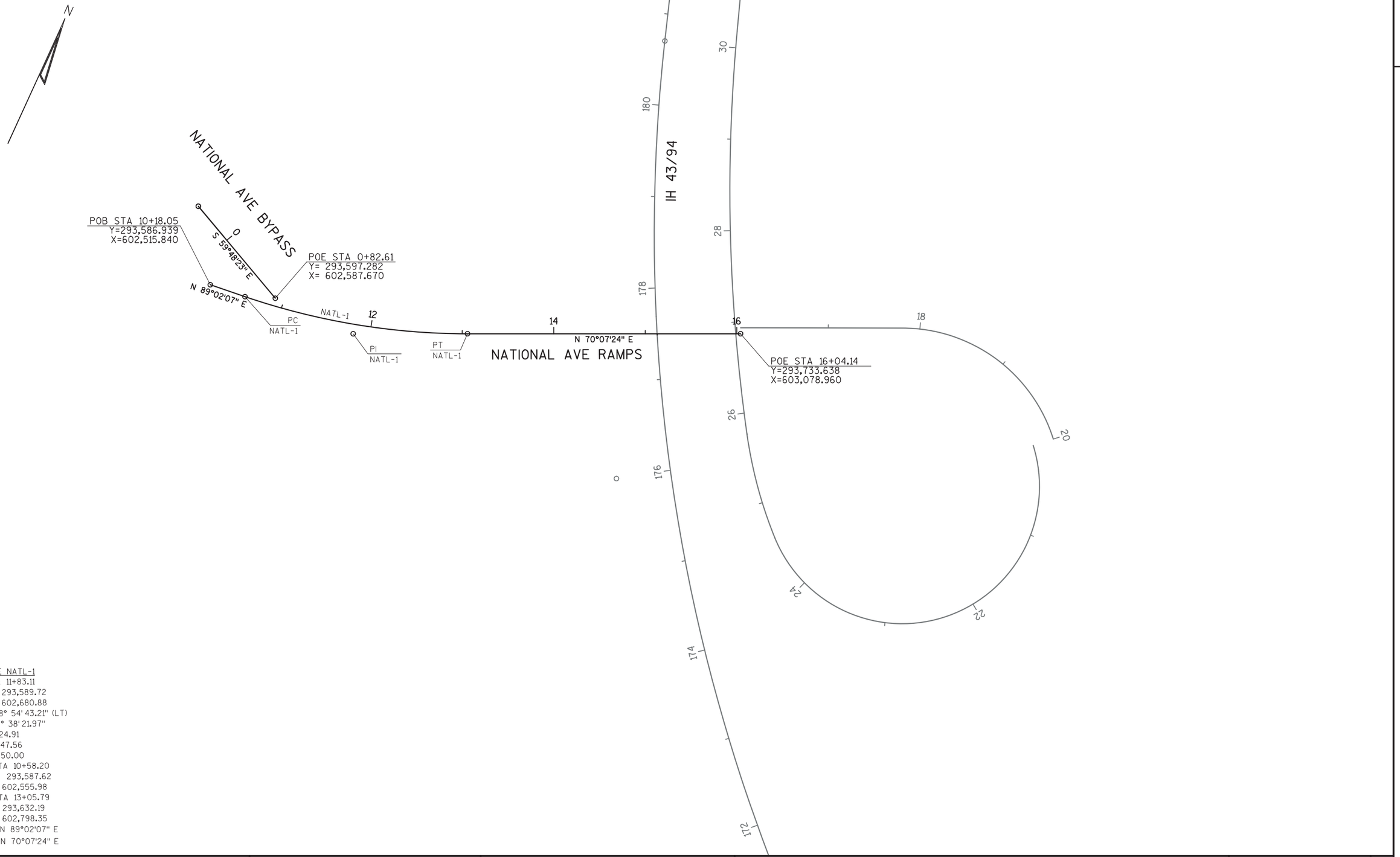
CURVE EXIT-2
PI STA 651+21.18
y = 275,510.46
x = 603,910.76
Δ = 70° 12' 14.02" (RT)
D = 32° 44' 25.60"
T = 123.00
L = 214.43
R = 175.00
PCC STA 647+33.81
y = 275,603.14
x = 604,255.41
PCC STA 649+48.24
y = 275,498.79
x = 604,083.31
BK = S 23°39'59" W
AH = N 86°7'47" W

CURVE EXIT-3
PI STA 651+21.18
y = 275,510.46
x = 603,910.76
Δ = 86° 8' 34.82" (RT)
D = 30° 58' 14.49"
T = 172.95
L = 278.14
R = 185.00
PCC STA 649+48.24
y = 275,498.79
x = 604,083.31
PT STA 652+26.38
y = 275,683.41
x = 603,910.80
BK = N 86°7'47" W
AH = N 00°00'48" E



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SHEET 259	E

2



CURVE NATL-1
PI STA 11+83.11
y = 293,589.72
x = 602,680.88
Δ = 18° 54' 43.21" (LT)
D = 7° 38' 21.97"
T = 124.91
L = 247.56
R = 750.00
PC STA 10+58.20
y = 293,587.62
x = 602,555.98
PT STA 13+05.79
y = 293,632.19
x = 602,798.35
BK = N 89°02'07" E
AH = N 70°07'24" E

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SHEET 260	E

DATE 10FEB14 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	1228-25-70 QUANTITY
0010	108.4400	CPM PROGRESS SCHEDULE	EACH	1.000	1.000
0020	201.0105	CLEARING	STA	1.000	1.000
0030	201.0120	CLEARING	ID	13.000	13.000
0040	201.0205	GRUBBING	STA	1.000	1.000
0050	201.0220	GRUBBING	ID	13.000	13.000
0060	203.0200	REMOVING OLD STRUCTURE (STATION) 0001. 101+32	LS	1.000	1.000
0070	203.0200	REMOVING OLD STRUCTURE (STATION) 0002. 200+00	LS	1.000	1.000
0080	203.0200	REMOVING OLD STRUCTURE (STATION) 0003. 300+00	LS	1.000	1.000
0090	203.0200	REMOVING OLD STRUCTURE (STATION) 0004. 400+00	LS	1.000	1.000
0100	203.0200	REMOVING OLD STRUCTURE (STATION) 0005. 1187+87	LS	1.000	1.000
0110	203.0200	REMOVING OLD STRUCTURE (STATION) 0006. 1187+88	LS	1.000	1.000
0120	203.0200	REMOVING OLD STRUCTURE (STATION) 0007. 501+14.50	LS	1.000	1.000
0130	203.0200	REMOVING OLD STRUCTURE (STATION) 0008. 601+58.95	LS	1.000	1.000
0140	203.0200	REMOVING OLD STRUCTURE (STATION) 0009. 701+01.66	LS	1.000	1.000
0150	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0001. B-40-170	LS	1.000	1.000
0160	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0002. B-40-171	LS	1.000	1.000
0170	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0003. B-40-172	LS	1.000	1.000
0180	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0004. B-40-173	LS	1.000	1.000
0190	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0005. B-40-174	LS	1.000	1.000
0200	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0006. B-40-177	LS	1.000	1.000
0210	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0007. B-40-178	LS	1.000	1.000
0220	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0008. B-40-180	LS	1.000	1.000
0230	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0009. B-40-265	LS	1.000	1.000
0240	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 0001. B-40-170	LS	1.000	1.000
0250	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 0002. B-40-171	LS	1.000	1.000
0260	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 0003. B-40-172	LS	1.000	1.000
0270	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 0004. B-40-173	LS	1.000	1.000
0280	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 0005. B-40-174	LS	1.000	1.000
0290	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 0006. B-40-177	LS	1.000	1.000
0300	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 0007. B-40-178	LS	1.000	1.000
0310	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 0008. B-40-180	LS	1.000	1.000

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DATE 10FEB14 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	1228-25-70 QUANTITY
0320	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 0009. B-40-265	LS	1.000	1.000
0330	204.0100	REMOVING PAVEMENT	SY	16,093.000	16,093.000
0340	204.0125	REMOVING ASPHALTIC SURFACE MILLING	TON	5,921.000	5,921.000
0350	204.0150	REMOVING CURB & GUTTER	LF	8,830.000	8,830.000
0360	204.0155	REMOVING CONCRETE SIDEWALK	SY	1,742.000	1,742.000
0370	204.0155	REMOVING CONCRETE SIDEWALK **P**	SY	41.000	41.000
0380	204.0157	REMOVING CONCRETE BARRIER **P**	LF	97.000	97.000
0390	204.0165	REMOVING GUARDRAIL **P**	LF	1,299.000	1,299.000
0400	204.0170	REMOVING FENCE **P**	LF	630.000	630.000
0410	204.0175	REMOVING CONCRETE SLOPE PAVING	SY	825.000	825.000
0420	204.0195	REMOVING CONCRETE BASES	EACH	2.000	2.000
0430	204.0220	REMOVING INLETS	EACH	1.000	1.000
0440	204.0245	REMOVING STORM SEWER (SIZE) 0001. 12-INCH	LF	105.000	105.000
0450	205.0100	EXCAVATION COMMON	CY	16,626.000	16,626.000
0460	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0001. B-40-170	LS	1.000	1.000
0470	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0002. B-40-171	LS	1.000	1.000
0480	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0003. B-40-172	LS	1.000	1.000
0490	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0004. B-40-173	LS	1.000	1.000
0500	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0005. B-40-174	LS	1.000	1.000
0510	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0006. B-40-177	LS	1.000	1.000
0520	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0007. B-40-178	LS	1.000	1.000
0530	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0008. B-40-180	LS	1.000	1.000
0540	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0009. B-40-265	LS	1.000	1.000
0550	209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	1,517.000	1,517.000
0560	213.0100	FINISHING ROADWAY (PROJECT) 0001. 1228-25-70	EACH	1.000	1.000
0570	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	440.000	440.000
0580	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	11,687.000	11,687.000
0590	311.0115	BREAKER RUN	CY	5,940.000	5,940.000
0600	320.0155	CONCRETE BASE 9-INCH **P**	SY	105.000	105.000
0610	390.0303	BASE PATCHING CONCRETE	SY	100.000	100.000
0620	390.0403	BASE PATCHING CONCRETE SHES	SY	5,335.000	5,335.000
0630	415.0075	CONCRETE PAVEMENT 7 1/2-INCH **P**	SY	3,733.000	3,733.000
0640	415.0080	CONCRETE PAVEMENT 8-INCH **P**	SY	6,645.000	6,645.000
0650	415.0090	CONCRETE PAVEMENT 9-INCH **P**	SY	3,409.000	3,409.000
0660	415.0410	CONCRETE PAVEMENT APPROACH SLAB **P**	SY	1,752.000	1,752.000
0670	416.0610	DRILLED TIE BARS	EACH	8,794.000	8,794.000
0680	416.0620	DRILLED DOWEL BARS	EACH	18,079.000	18,079.000
0690	440.4410.S	INCENTIVE IRI RIDE	DOL	8,874.000	8,874.000
0700	455.0115	ASPHALTIC MATERIAL PG64-22	TON	255.000	255.000
0710	455.0140	ASPHALTIC MATERIAL PG64-28P	TON	16.000	16.000
0720	455.0605	TACK COAT	GAL	1,277.000	1,277.000
0730	460.1110	HMA PAVEMENT TYPE E-10	TON	7,134.000	7,134.000
0740	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	4,420.000	4,420.000
0750	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	266.000	266.000

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DATE 10FEB14 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	1228-25-70 QUANTITY
0760	502.0100	CONCRETE MASONRY BRIDGES	CY	6,758.000	6,758.000
0770	502.3100	EXPANSION DEVICE (STRUCTURE) 0001. B-40-170 **P**	LS	1.000	1.000
0780	502.3100	EXPANSION DEVICE (STRUCTURE) 0002. B-40-171 **P**	LS	1.000	1.000
0790	502.3100	EXPANSION DEVICE (STRUCTURE) 0003. B-40-172 **P**	LS	1.000	1.000
0800	502.3100	EXPANSION DEVICE (STRUCTURE) 0004. B-40-173 **P**	LS	1.000	1.000
0810	502.3100	EXPANSION DEVICE (STRUCTURE) 0005. B-40-174 **P**	LS	1.000	1.000
0820	502.3100	EXPANSION DEVICE (STRUCTURE) 0006. B-40-177 **P**	LS	1.000	1.000
0830	502.3100	EXPANSION DEVICE (STRUCTURE) 0007. B-40-178 **P**	LS	1.000	1.000
0840	502.3100	EXPANSION DEVICE (STRUCTURE) 0008. B-40-180 **P**	LS	1.000	1.000
0850	502.3100	EXPANSION DEVICE (STRUCTURE) 0009. B-40-264 **P**	LS	1.000	1.000
0860	502.3200	PROTECTIVE SURFACE TREATMENT **P**	SY	23,383.000	23,383.000
0870	502.5002	MASONRY ANCHORS TYPE L NO. 4 BARS **P**	EACH	1,713.000	1,713.000
0880	502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS **P**	EACH	1,749.000	1,749.000
0890	502.6110	MASONRY ANCHORS TYPE S 3/4-INCH **P**	EACH	44.000	44.000
0900	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES **P**	LB	1,507,210.000	1,507,210.000
0910	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED **P**	EACH	140.000	140.000
0920	506.2610	BEARING PADS ELASTOMERIC LAMINATED **P**	EACH	288.000	288.000
0930	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 0001. B-40-171	EACH	42.000	42.000
0940	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 0002. B-40-265	EACH	123.000	123.000
0950	506.5000	BEARING ASSEMBLIES FIXED (STRUCTURE) 0001. B-40-170 **P**	EACH	10.000	10.000
0960	506.5000	BEARING ASSEMBLIES FIXED (STRUCTURE) 0002. B-40-171 **P**	EACH	30.000	30.000
0970	506.5000	BEARING ASSEMBLIES FIXED (STRUCTURE) 0003. B-40-172 **P**	EACH	8.000	8.000
0980	506.5000	BEARING ASSEMBLIES FIXED (STRUCTURE) 0004. B-40-173 **P**	EACH	8.000	8.000
0990	506.5000	BEARING ASSEMBLIES FIXED (STRUCTURE) 0004. B-40-174 **P**	EACH	12.000	12.000
1000	506.5000	BEARING ASSEMBLIES FIXED (STRUCTURE) 0006. B-40-177 **P**	EACH	16.000	16.000
1010	506.5000	BEARING ASSEMBLIES FIXED (STRUCTURE) 0007. B-40-178 **P**	EACH	10.000	10.000
1020	506.5000	BEARING ASSEMBLIES FIXED (STRUCTURE) 0008. B-40-180 **P**	EACH	9.000	9.000
1030	506.6000	BEARING ASSEMBLIES EXPANSION (STRUCTURE) 0001. B-40-174	EACH	8.000	8.000
1040	506.6000	BEARING ASSEMBLIES EXPANSION (STRUCTURE) 0002. B-40-177	EACH	12.000	12.000
1050	506.7050.S	REMOVING BEARINGS (STRUCTURE) 0001. B-40-170	EACH	50.000	50.000
1060	506.7050.S	REMOVING BEARINGS (STRUCTURE) 0002. B-40-171	EACH	100.000	100.000

DATE 10FEB14 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	1228-25-70 QUANTITY
1070	506.7050.S	REMOVING BEARINGS (STRUCTURE) 0003. B-40-172	EACH	40.000	40.000
1080	506.7050.S	REMOVING BEARINGS (STRUCTURE) 0004. B-40-173	EACH	40.000	40.000
1090	506.7050.S	REMOVING BEARINGS (STRUCTURE) 0005. B-40-174	EACH	44.000	44.000
1100	506.7050.S	REMOVING BEARINGS (STRUCTURE) 0006. B-40-177	EACH	60.000	60.000
1110	506.7050.S	REMOVING BEARINGS (STRUCTURE) 0007. B-40-178	EACH	50.000	50.000
1120	506.7050.S	REMOVING BEARINGS (STRUCTURE) 0008. B-40-180	EACH	27.000	27.000
1130	506.7050.S	REMOVING BEARINGS (STRUCTURE) 0009. B-40-265	EACH	140.000	140.000
1140	506.7060.S	BRIDGE JACKING (STRUCTURE) 0001. B-40-170	LS	1.000	1.000
1150	506.7060.S	BRIDGE JACKING (STRUCTURE) 0002. B-40-171	LS	1.000	1.000
1160	506.7060.S	BRIDGE JACKING (STRUCTURE) 0003. B-40-172	LS	1.000	1.000
1170	506.7060.S	BRIDGE JACKING (STRUCTURE) 0004. B-40-173	LS	1.000	1.000
1180	506.7060.S	BRIDGE JACKING (STRUCTURE) 0005. B-40-174	LS	1.000	1.000
1190	506.7060.S	BRIDGE JACKING (STRUCTURE) 0006. B-40-177	LS	1.000	1.000
1200	506.7060.S	BRIDGE JACKING (STRUCTURE) 0007. B-40-178	LS	1.000	1.000
1210	506.7060.S	BRIDGE JACKING (STRUCTURE) 0008. B-40-180	LS	1.000	1.000
1220	506.7060.S	BRIDGE JACKING (STRUCTURE) 0009. B-40-265	LS	1.000	1.000
1230	509.1000	JOINT REPAIR	SY	3.000	3.000
1240	509.1200	CURB REPAIR	LF	27.000	27.000
1250	509.1500	CONCRETE SURFACE REPAIR	SF	201.000	201.000
1260	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	0.200	0.200
1270	509.5100.S	POLYMER OVERLAY	SY	541.000	541.000
1280	509.9020.S	EPOXY CRACK SEALING	LF	36.000	36.000
1290	514.0450	FLOOR DRAINS TYPE WF	EACH	7.000	7.000
1300	514.2608	DOWNSPOUT 8-INCH **P**	LF	33.000	33.000
1310	516.0500	RUBBERIZED MEMBRANE WATERPROOFING **P**	SY	249.000	249.000
1320	517.0900.S	PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 0001. B-40-170	LS	1.000	1.000
1330	517.0900.S	PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 0002. B-40-172	LS	1.000	1.000
1340	517.0900.S	PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 0003. B-40-173	LS	1.000	1.000
1350	517.0900.S	PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 0004. B-40-174	LS	1.000	1.000
1360	517.0900.S	PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 0005. B-40-177	LS	1.000	1.000
1370	517.0900.S	PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 0006. B-40-178	LS	1.000	1.000
1380	517.0900.S	PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 0007. B-40-180	LS	1.000	1.000
1390	517.1010.S	CONCRETE STAINING (STRUCTURE) 0001. B-40-286-21	SF	1,090.000	1,090.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1228-25-70 QUANTITY
1400	517.1010.S	CONCRETE STAINING (STRUCTURE) 0002. B-40-286-24A	SF	3,085.000	3,085.000
1410	517.1010.S	CONCRETE STAINING (STRUCTURE) 0003. B-40-286-24B	SF	2,435.000	2,435.000
1420	517.1010.S	CONCRETE STAINING (STRUCTURE) 0004. B-40-286-24D	SF	1,280.000	1,280.000
1430	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0001. B-40-170	LS	1.000	1.000
1440	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0002. B-40-172	LS	1.000	1.000
1450	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0003. B-40-173	LS	1.000	1.000
1460	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0004. B-40-178	LS	1.000	1.000
1470	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0005. B-40-285-22A	LS	1.000	1.000
1480	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0006. B-40-285-22B	LS	1.000	1.000
1490	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0007. B-40-285-23A	LS	1.000	1.000
1500	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0008. B-40-285-23B	LS	1.000	1.000
1510	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0009. B-40-285-25A	LS	1.000	1.000
1520	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0010. B-40-285-25B	LS	1.000	1.000
1530	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0011. B-40-285-25C	LS	1.000	1.000
1540	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0012. B-40-285-25D	LS	1.000	1.000
1550	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0013. B-40-285-27A	LS	1.000	1.000
1560	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0014. B-40-285-27B	LS	1.000	1.000
1570	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0015. B-40-285-27C	LS	1.000	1.000
1580	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0016. B-40-285-27D	LS	1.000	1.000
1590	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0017. B-40-285-27E1	LS	1.000	1.000
1600	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0018. B-40-285-27E2	LS	1.000	1.000
1610	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0019. B-40-285-27F1	LS	1.000	1.000
1620	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0020. B-40-285-27F2	LS	1.000	1.000
1630	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0021. B-40-285-27G	LS	1.000	1.000
1640	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0022. B-40-285-27H	LS	1.000	1.000
1650	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0023. B-40-285-27I	LS	1.000	1.000
1660	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0024. B-40-285-27J	LS	1.000	1.000
1670	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0025. B-40-286-24A	LS	1.000	1.000
1680	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 0026. B-40-286-24B	LS	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1228-25-70 QUANTITY
1690	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0001. B-40-170	LS	1.000	1.000
1700	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0002. B-40-172	LS	1.000	1.000
1710	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0003. B-40-173	LS	1.000	1.000
1720	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0004. B-40-178	LS	1.000	1.000
1730	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0005. B-40-285-22A	LS	1.000	1.000
1740	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0006. B-40-285-22B	LS	1.000	1.000
1750	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0007. B-40-285-23A	LS	1.000	1.000
1760	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0008. B-40-285-23B	LS	1.000	1.000
1770	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0009. B-40-285-25A	LS	1.000	1.000
1780	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0010. B-40-285-25B	LS	1.000	1.000
1790	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0011. B-40-285-25C	LS	1.000	1.000
1800	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0012. B-40-285-25D	LS	1.000	1.000
1810	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0013. B-40-285-27A	LS	1.000	1.000
1820	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0014. B-40-285-27B	LS	1.000	1.000
1830	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0015. B-40-285-27C	LS	1.000	1.000
1840	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0016. B-40-285-27D	LS	1.000	1.000
1850	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0017. B-40-285-27E1	LS	1.000	1.000
1860	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0018. B-40-285-27E2	LS	1.000	1.000
1870	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0019. B-40-285-27F1	LS	1.000	1.000
1880	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0020. B-40-285-27F2	LS	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1228-25-70 QUANTITY
1890	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0021. B-40-285-27G	LS	1.000	1.000
1900	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0022. B-40-285-27H	LS	1.000	1.000
1910	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0023. B-40-285-27I	LS	1.000	1.000
1920	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0024. B-40-285-27J	LS	1.000	1.000
1930	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0025. B-40-286-24A	LS	1.000	1.000
1940	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 0026. B-40-286-24B	LS	1.000	1.000
1950	517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	26.000	26.000
1960	601.0331	CONCRETE CURB & GUTTER 31-INCH **P**	LF	2,117.000	2,117.000
1970	601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A	LF	12,600.000	12,600.000
1980	601.0452	CONCRETE CURB & GUTTER INTEGRAL 30-INCH TYPE D **P**	LF	864.000	864.000
1990	601.0551	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE A **P**	LF	1,036.000	1,036.000
2000	602.0410	CONCRETE SIDEWALK 5-INCH **P**	SF	28,526.000	28,526.000
2010	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW **P**	SF	464.000	464.000
2020	603.1142	CONCRETE BARRIER TYPE S42 **P**	LF	90.000	90.000
2030	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	7,751.000	7,751.000
2040	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	8,119.000	8,119.000
2050	604.0400	SLOPE PAVING CONCRETE	SY	825.000	825.000
2060	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	86.000	86.000
2070	611.0420	RECONSTRUCTING MANHOLES	EACH	1.000	1.000
2080	611.0430	RECONSTRUCTING INLETS	EACH	2.000	2.000
2090	611.0651	INLET COVERS TYPE S	EACH	2.000	2.000
2100	611.0660	INLET COVERS TYPE WM	EACH	1.000	1.000
2110	611.3004	INLETS 4-FT DIAMETER	EACH	1.000	1.000
2120	611.3220	INLETS 2X2-FT	EACH	2.000	2.000
2130	611.8110	ADJUSTING MANHOLE COVERS	EACH	7.000	7.000
2140	611.8115	ADJUSTING INLET COVERS	EACH	37.000	37.000
2150	612.0106	PIPE UNDERDRAIN 6-INCH	LF	400.000	400.000
2160	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	1,054.000	1,054.000
2170	614.0010	BARRIER SYSTEM GRADING SHAPING FINISHING	EACH	5.000	5.000
2180	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	5.000	5.000
2190	614.0905	CRASH CUSHIONS TEMPORARY	EACH	10.000	10.000
2200	614.2300	MGS GUARDRAIL 3	LF	980.000	980.000
2210	614.2340	MGS GUARDRAIL 3 L	LF	112.500	112.500
2220	614.2500	MGS THRIE BEAM TRANSITION	LF	236.400	236.400
2230	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	4.000	4.000
2240	614.2620	MGS GUARDRAIL TERMINAL TYPE 2	EACH	1.000	1.000
2250	616.0205	FENCE CHAIN LINK 5-FT	LF	250.000	250.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1228-25-70 QUANTITY
2260	616.0206	FENCE CHAIN LINK 6-FT	LF	380.000	380.000
2270	616.0600.S	FENCE TEMPORARY	LF	1,790.000	1,790.000
2280	616.0700.S	FENCE SAFETY	LF	480.000	480.000
2290	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 0001. 1228-25-70	EACH	1.000	1.000
2300	619.1000	MOBILIZATION	EACH	1.000	1.000
2310	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	110.000	110.000
2320	625.0100	TOPSOIL	SY	9,792.000	9,792.000
2330	627.0200	MULCHING	SY	6,730.000	6,730.000
2340	628.1504	SILT FENCE	LF	1,930.000	1,930.000
2350	628.1520	SILT FENCE MAINTENANCE	LF	1,930.000	1,930.000
2360	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	20.000	20.000
2370	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	10.000	10.000
2380	628.2023	EROSION MAT CLASS II TYPE B	SY	5,475.000	5,475.000
2390	628.7005	INLET PROTECTION TYPE A	EACH	8.000	8.000
2400	628.7010	INLET PROTECTION TYPE B	EACH	68.000	68.000
2410	628.7015	INLET PROTECTION TYPE C	EACH	42.000	42.000
2420	628.7020	INLET PROTECTION TYPE D	EACH	38.000	38.000
2430	628.7570	ROCK BAGS	EACH	30.000	30.000
2440	629.0210	FERTILIZER TYPE B	CWT	5.300	5.300
2450	630.0130	SEEDING MIXTURE NO. 30	LB	121.000	121.000
2460	631.0300	SOD WATER	MGAL	59.000	59.000
2470	631.1000	SOD LAWN	SY	2,535.000	2,535.000
2480	632.0101	TREES (SPECIES, ROOT, SIZE) 0001. CERCIS CANADENSIS B&B 4-INCH	EACH	1.000	1.000
2490	632.0101	TREES (SPECIES, ROOT, SIZE) 0002. GLEDITSIA TRICANTHOS "SUNBURST" B&B 4-INCH	EACH	1.000	1.000
2500	632.9101	LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	EACH	2.000	2.000
2510	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	63.000	63.000
2520	637.2210	SIGNS TYPE II REFLECTIVE H	SF	189.000	189.000
2530	637.2215	SIGNS TYPE II REFLECTIVE H FOLDING	SF	180.000	180.000
2540	637.2230	SIGNS TYPE II REFLECTIVE F	SF	10.000	10.000
2550	638.2102	MOVING SIGNS TYPE II	EACH	27.000	27.000
2560	638.2602	REMOVING SIGNS TYPE II	EACH	24.000	24.000
2570	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	25.000	25.000
2580	643.0100	TRAFFIC CONTROL (PROJECT) 0001. 1228-25-70	EACH	1.000	1.000
2590	643.0300	TRAFFIC CONTROL DRUMS	DAY	170,214.000	170,214.000
2600	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	27,929.000	27,929.000
2610	643.0500	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	EACH	291.000	291.000
2620	643.0600	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	EACH	291.000	291.000
2630	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	35,979.000	35,979.000
2640	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	53,935.000	53,935.000
2650	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	1,584.000	1,584.000
2660	643.0900	TRAFFIC CONTROL SIGNS	DAY	56,505.000	56,505.000
2670	643.0910	TRAFFIC CONTROL COVERING SIGNS TYPE I	EACH	11.000	11.000
2680	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	45.000	45.000
2690	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	1,868.000	1,868.000
2700	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	4,037.000	4,037.000
2710	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 0001. 1228-25-70	EACH	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1228-25-70 QUANTITY
2720	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	72,042.000	72,042.000
2730	646.0103	PAVEMENT MARKING PAINT 4-INCH **P**	LF	4,600.000	4,600.000
2740	646.0106	PAVEMENT MARKING EPOXY 4-INCH **P**	LF	41,340.000	41,340.000
2750	646.0116	PAVEMENT MARKING EPOXY 6-INCH **P**	LF	3,184.000	3,184.000
2760	646.0126	PAVEMENT MARKING EPOXY 8-INCH **P**	LF	1,710.000	1,710.000
2770	646.0841.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH **P**	LF	340.000	340.000
2780	646.0843.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH **P**	LF	6,190.000	6,190.000
2790	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2 **P**	EACH	10.000	10.000
2800	647.0206	PAVEMENT MARKING ARROWS BIKE LANE EPOXY **P**	EACH	20.000	20.000
2810	647.0306	PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY **P**	EACH	20.000	20.000
2820	647.0356	PAVEMENT MARKING WORDS EPOXY **P**	EACH	3.000	3.000
2830	647.0456	PAVEMENT MARKING CURB EPOXY **P**	LF	560.000	560.000
2840	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH **P**	LF	413.000	413.000
2850	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH **P**	LF	130.000	130.000
2860	647.0746	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH **P**	LF	240.000	240.000
2870	647.0766	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH **P**	LF	1,220.000	1,220.000
2880	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	16,686.000	16,686.000
2890	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	120.000	120.000
2900	649.0701	TEMPORARY PAVEMENT MARKING 8-INCH	LF	1,079.000	1,079.000
2910	649.1100	TEMPORARY PAVEMENT MARKING STOP LINE 18-INCH	LF	60.000	60.000
2920	649.1700	TEMPORARY PAVEMENT MARKING ARROWS	EACH	15.000	15.000
2930	649.1900	TEMPORARY PAVEMENT MARKING WORDS	EACH	1.000	1.000
2940	652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	88.000	88.000
2950	652.0220	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/2-INCH	LF	15.000	15.000
2960	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	1,400.000	1,400.000
2970	652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	9,752.000	9,752.000
2980	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	4,415.000	4,415.000
2990	652.0615	CONDUIT SPECIAL 3-INCH	LF	490.000	490.000
3000	652.0700.S	INSTALL CONDUIT INTO EXISTING ITEM	EACH	9.000	9.000
3010	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	3.000	3.000
3020	653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	2.000	2.000
3030	653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	28.000	28.000
3040	654.0101	CONCRETE BASES TYPE 1	EACH	2.000	2.000
3050	654.0105	CONCRETE BASES TYPE 5	EACH	12.000	12.000
3060	654.0110	CONCRETE BASES TYPE 10	EACH	14.000	14.000
3070	654.0220	CONCRETE CONTROL CABINET BASES TYPE 10	EACH	2.000	2.000
3080	655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	LF	2,565.000	2,565.000
3090	655.0240	CABLE TRAFFIC SIGNAL 7-14 AWG	LF	1,050.000	1,050.000
3100	655.0305	CABLE TYPE UF 2-12 AWG GROUNDED	LF	2,210.000	2,210.000
3110	655.0700	LOOP DETECTOR LEAD IN CABLE	LF	225.000	225.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1228-25-70 QUANTITY
3120	657.0100	PEDESTAL BASES	EACH	2.000	2.000
3130	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	12.000	12.000
3140	657.0405	TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT	EACH	2.000	2.000
3150	657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	28.000	28.000
3160	662.1026.S	RAMP CLOSURE GATES HARDWIRED 26-FT	EACH	5.000	5.000
3170	662.1032.S	RAMP CLOSURE GATES HARDWIRED 32-FT	EACH	3.000	3.000
3180	662.1037.S	RAMP CLOSURE GATES HARDWIRED 37-FT	EACH	1.000	1.000
3190	662.1040.S	RAMP CLOSURE GATES HARDWIRED 40-FT	EACH	1.000	1.000
3200	662.2037.S	RAMP CLOSURE GATES SOLAR 37-FT	EACH	2.000	2.000
3210	670.0100	FIELD SYSTEM INTEGRATOR	LS	1.000	1.000
3220	670.0200	ITS DOCUMENTATION	LS	1.000	1.000
3230	674.0300	REMOVE CABLE	LF	3,265.000	3,265.000
3240	674.0400	REINSTALL CABLE	LF	770.000	770.000
3250	676.0100	SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT	EACH	8.000	8.000
3260	690.0150	SAWING ASPHALT	LF	335.000	335.000
3270	690.0250	SAWING CONCRETE	LF	27,637.000	27,637.000
3280	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	1,466.000	1,466.000
3290	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	43,880.000	43,880.000
3300	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	HRS	10,000.000	10,000.000
3310	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	20,000.000	20,000.000
3320	SPV.0045	SPECIAL 0001. TRUCK MOUNTED ATTENUATOR	DAY	50.000	50.000
3330	SPV.0060	SPECIAL 0001. MOBILIZATIONS EMERGENCY PAVEMENT REPAIR	EACH	10.000	10.000
3340	SPV.0060	SPECIAL 0002. TRAFFIC CONTROL CLOSE-OPEN FREEWAY ENTRANCE RAMP	EACH	35.000	35.000
3350	SPV.0060	SPECIAL 0003. TRAFFIC CONTROL INTERIM FREEWAY LANE CLOSURE	EACH	24.000	24.000
3360	SPV.0060	SPECIAL 0004. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 **P**	EACH	11.000	11.000
3370	SPV.0060	SPECIAL 0005. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3 **P**	EACH	4.000	4.000
3380	SPV.0060	SPECIAL 0006. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC RAISED ARROWS TYPE 4 **P**	EACH	9.000	9.000
3390	SPV.0060	SPECIAL 0007. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS **P**	EACH	8.000	8.000
3400	SPV.0060	SPECIAL 2000. WIRELESS TRAFFIC SENSOR	EACH	12.000	12.000
3410	SPV.0060	SPECIAL 2001. WIRELESS TRAFFIC SENSOR ACCESS POINT	EACH	4.000	4.000
3420	SPV.0060	SPECIAL 2002. WIRELESS TRAFFIC SENSOR CONTACT CLOSURE MODULE	EACH	3.000	3.000
3430	SPV.0060	SPECIAL 2003. WIRELESS TRAFFIC SENSOR CONTACT CLOSURE EXTENSION MODULE	EACH	4.000	4.000
3440	SPV.0060	SPECIAL 2004. REMOVING RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT	EACH	8.000	8.000
3450	SPV.0060	SPECIAL 2005. REMOVING CONTROLLER CABINET	EACH	1.000	1.000
3460	SPV.0060	SPECIAL 2006. REMOVING CONTROLLER CABINET BASE	EACH	1.000	1.000
3470	SPV.0060	SPECIAL 2007. REFOCUS MICROWAVE VEHICLE DETECTOR ASSEMBLY	EACH	20.000	20.000

3

DATE 10FEB14 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	1228-25-70 QUANTITY
3480	SPV.0060	SPECIAL 3000. PRE-CAST TRAFFIC SIGNAL BASES	EACH	14.000	14.000
3490	SPV.0060	SPECIAL 3001. POLES TYPE 9	EACH	6.000	6.000
3500	SPV.0060	SPECIAL 3002. POLES TYPE 10	EACH	8.000	8.000
3510	SPV.0060	SPECIAL 3003. POLES TYPE 13 SPECIAL	EACH	9.000	9.000
3520	SPV.0060	SPECIAL 3004. POLES TYPE 12 SPECIAL	EACH	1.000	1.000
3530	SPV.0060	SPECIAL 3005. MONOTUBE ARMS 25-FT	EACH	5.000	5.000
3540	SPV.0060	SPECIAL 3006. MONOTUBE ARMS 30-FT	EACH	9.000	9.000
3550	SPV.0060	SPECIAL 3007. MONOTUBE ARMS 35-FT	EACH	7.000	7.000
3560	SPV.0060	SPECIAL 3008. MONOTUBE ARMS 40-FT	EACH	3.000	3.000
3570	SPV.0060	SPECIAL 3009. CONCRETE BASES TYPE 10 SPECIAL	EACH	10.000	10.000
3580	SPV.0060	SPECIAL 3010. RECTANGULAR POLYMER CONCRETE VAULT 17X30X18-INCH	EACH	68.000	68.000
3590	SPV.0060	SPECIAL 4000. CLEANING AND PAINTING BEARINGS	EACH	413.000	413.000
3600	SPV.0060	SPECIAL 4001. ULTRASONIC IMPACT TREATMENT PROCEDURE	EACH	132.000	132.000
3610	SPV.0060	SPECIAL 4002. MAGNETIC PARTICLE TESTING PROCEDURE	EACH	132.000	132.000
3620	SPV.0060	SPECIAL 4003. REMOVE AND REPLACE FENCE POST	EACH	14.000	14.000
3630	SPV.0060	SPECIAL 4004. FENCE POST REPAIR	EACH	102.000	102.000
3640	SPV.0060	SPECIAL 4005. BOLTED ANGLE RETROFIT SPECIAL	EACH	24.000	24.000
3650	SPV.0060	SPECIAL 4006. WELD RETROFIT SPECIAL	EACH	1,034.000	1,034.000
3660	SPV.0060	SPECIAL 4007. STEEL CRACK REPAIR SPECIAL	EACH	100.000	100.000
3670	SPV.0060	SPECIAL 4008. STEEL GIRDER SPLICE REPAIR	EACH	17.000	17.000
3680	SPV.0060	SPECIAL 5000. INSTALL CONDUIT INTO EXISTING MANHOLE	EACH	10.000	10.000
3690	SPV.0060	SPECIAL 5001. ADJUSTING WATER VALVE BOXES	EACH	22.000	22.000
3700	SPV.0060	SPECIAL 5002. INTERNAL SANITARY MANHOLE SEAL	EACH	3.000	3.000
3710	SPV.0060	SPECIAL 5003. ADJUSTING TES MANHOLE COVERS	EACH	12.000	12.000
3720	SPV.0060	SPECIAL 5004. EXPOSING EXISTING UTILITY PAVED AREAS	EACH	36.000	36.000
3730	SPV.0060	SPECIAL 5005. EXPOSING EXISTING UTILITY UNPAVED AREAS	EACH	4.000	4.000
3740	SPV.0070	SPECIAL 4000. CORROSION INHIBITING PROTECTIVE COATING	GAL	12.000	12.000
3750	SPV.0090	SPECIAL 0001. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH **P**	LF	231.000	231.000
3760	SPV.0090	SPECIAL 0002. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH **P**	LF	308.000	308.000
3770	SPV.0090	SPECIAL 0003. PAVEMENT MARKING CONTRAST EPOXY 7-INCH **P**	LF	460.000	460.000
3780	SPV.0090	SPECIAL 0004. CONCRETE CURB AND GUTTER INTEGRAL 31-INCH	LF	949.000	949.000
3790	SPV.0090	SPECIAL 4000. FENCE CHAIN LINK POLYMER-COATED 8-FT	LF	4,135.000	4,135.000
3800	SPV.0090	SPECIAL 5000. 8-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	43.000	43.000

DATE 10FEB14 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	1228-25-70 QUANTITY
3810	SPV.0090	SPECIAL 5001. 6-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	39.000	39.000
3820	SPV.0090	SPECIAL 5002. 4-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60	LF	154.000	154.000
3830	SPV.0105	SPECIAL 0001. PAVEMENT CLEANUP 1228-25-70	LS	1.000	1.000
3840	SPV.0105	SPECIAL 0002. SURVEY PROJECT 1228-25-70	LS	1.000	1.000
3850	SPV.0105	SPECIAL 4000. COVER PLATE MODIFICATION B-40-170	LS	1.000	1.000
3860	SPV.0105	SPECIAL 4001. COVER PLATE MODIFICATION B-40-172	LS	1.000	1.000
3870	SPV.0105	SPECIAL 4002. PAINT FENCE CHAIN LINK B-40-264	LS	1.000	1.000
3880	SPV.0105	SPECIAL 4003. TEMPORARY SUPPORT, B-40-183	LS	1.000	1.000
3890	SPV.0105	SPECIAL 4004. TEMPORARY SUPPORT, B-40-184	LS	1.000	1.000
3900	SPV.0105	SPECIAL 5000. UNDERDECK UTILITY STRUCTURE B-40-170 CITY OF MILWAUKEE	LS	1.000	1.000
3910	SPV.0105	SPECIAL 5001. UNDERDECK UTILITY STRUCTURE B-40-171 CITY OF MILWAUKEE	LS	1.000	1.000
3920	SPV.0105	SPECIAL 5002. UNDERDECK UTILITY STRUCTURE B-40-173 CITY OF MILWAUKEE	LS	1.000	1.000
3930	SPV.0105	SPECIAL 5003. UNDERDECK UTILITY STRUCTURE B-40-178 CITY OF MILWAUKEE	LS	1.000	1.000
3940	SPV.0105	SPECIAL 5004. UNDERDECK UTILITY STRUCTURE B-40-265 CITY OF MILWAUKEE	LS	1.000	1.000
3950	SPV.0165	SPECIAL 4000. CATHODIC PROTECTION	SF	48.000	48.000
3960	SPV.0165	SPECIAL 4001. REMOVE EXISTING MURAL	SF	7,890.000	7,890.000
3970	SPV.0195	SPECIAL 0001. COLD PATCH	TON	10.000	10.000

EARTHWORK

Division	From/To Station	Location	Common Excavation (1) (item # 205.0100) Cut (2)	EBS Excavation (3)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (4) Factor 1.25	Mass Ordinate +/-	Waste	Borrow (5) (item #208.0100)	Comment:
1	645+15 to 654+45	HOWARD EXIT RAMP	3685	0	757	2928	143	178	2749			
	644+50 to 654+45	HOWARD ENTRANCE RAMP	2787	0	603	2184	187	234	1951			
Division 1 Subtotal			6472	0	1360	5112	330	412	4700	4700	0	
2	50+00 to 100+00	NATIONAL RAMPS	2640	0	352	2289	28	35	2254			
Division 2 Subtotal			2640	0	352	2289	28	35	2254	2254	0	See Note 15
3	-	GREENFIELD AVENUE	238	0	238	0	2	3	-3			
	-	LAPHAM BOULEVARD	262	0	262	0	2	3	-3			
	-	MITCHELL STREET	169	0	169	0	0	1	-1			
	-	MAPLE STREET	293	0	293	0	0	0	0			
	-	LINCOLN AVENUE	275	0	275	0	0	1	-1			
	-	CHASE AVENUE	386	0	386	0	10	13	-13			
	-	HOWARD AVENUE	616	0	616	0	5	6	-6			
	-	BECHER CDN	131	0	131	0	3	3	-3			
	-	BECHER CDS	242	0	242	0	12	14	-14			
Division 3 Subtotal			2611	0	2611	0	34	43	-43	0	0	See Note 15
4	-	BASE PATCHING NB	693	471								
	-	BASE PATCHING SB	1433	2306								
Division 4 Subtotal			2126	2777	0	0	0	0	0	0	0	See Note 15
Grand Total			13849	2777	4322	7400	392	490	6911	6953	0	
		Total Common Ex	16626									

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) Expanded Rock - Factor = 1.1.
4) Expanded Fill. Factor = 1.25
5) SeeAggregate table. To be filled with Base Aggregate Dense 1 1/4-inch

CHAIN LINK FENCE

	204.0170 REMOVING FENCE LF	616.0206 FENCE CHAIN LINK 6-FT LF	616.0600.S FENCE TEMPORARY LF	616.0700.S FENCE SAFETY LF
HOLT AVENUE PARK & RIDE	45	45	-	45
WARNIMONT STREET CLOSURE	-	-	-	100
NATIONAL NB ENTRANCE RAMP	20	20	190	20
GREENFIELD AVENUE	80	80	230	80
MITCHELL AVNEUE	-	-	155	-
MAPLE STREET	-	-	175	-
LINCOLN AVENUE	95	95	225	95
LAPHAM BOULEVARD	-	-	240	-
CHASE AVENUE	80	80	400	80
HOWARD AVNUE	60	60	175	60
1228-25-70 TOTAL	380	380	1,790	480

MOBILIZATIONS EROSION CONTROL

	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
IH 43 NORTHBOUND	10	5
IH 43 SOUTHBOUND	10	5
1228-25-70 TOTAL	20	10

PIPE UNDERDRAIN

	STA	612.0106 PIPE UNDERDRAIN 6-INCH LF
NORTHBOUND		
NATIONAL EXIT RAMP	15+50	100
NATIONAL ENTRANCE RAMP	15+50	100
SOUTHBOUND		
HOWARD EXIT RAMP	646+75	100
HOWARD ENTRANCE RAMP	647+25	100
TOTAL		400

INCENTIVE IRI RIDE

	440.4410.S DOL
PROJECT 1228-25-70	8874
TOTAL	8874

HAUL ROADS

	618.0100 MAINTANCENCE AND REPAIR OF HAUL ROADS EACH
PROJECT 1228-25-70	1
TOTAL	1

* = ADDITIONAL QUANTITIES LISTED ELSEWHERE | ALL QUANTITIES ARE CATEGORY 1000 UNLESS NOTED

PROJECT NO: 1228-25-70 | HWY: IH 43 | COUNTY: MILWAUKEE | MISCELLANEOUS QUANTITIES | SHEET 273 | E

TRAFFIC CONTROL

	643.0100	643.2000	643.0300		643.0420		643.0500	643.0600	643.0705		643.0715		643.0800		643.0900		643.1050		603.8000	603.8125	614.0905	SPV.0045.0001		SPV.0060.0003	SPV.0060.0002			
	TRAFFIC CONTROL 1228-25-70	TRAFFIC CONTROL DETOUR 1228-25-70	TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER		TRAFFIC CONTROL WARNING LIGHTS				TRAFFIC CONTROL ARROW BOARDS		TRAFFIC CONTROL CONTROL SIGNS		TRAFFIC CONTROL SIGNS PCMS		CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	CRASH CUSHIONS TEMPORARY	TRUCK MOUNTED ATTENUATOR		TRAFFIC CONTROL INTERIM FREEWAY LANE CLOSURE	TRAFFIC CONTROL CLOSE-OPEN FREEWAY ENTRANCE RAMP	NO. OF CLOSURES	REMARKS	
							POSTS	BASES	TYPE A		TYPE C																		
	EACH	EACH	EACH	DAYS	EACH	DAYS	EACH	EACH	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAY	LF	LF	EACH	EACH	DAY	EACH	EACH			
PROJECT 1228-25-70	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	
STAGE 1																												
MAINLINE	-	-	30	1,830	4	244	0	0	6	366	30	1,830	0	0	7	427	2	122	0	0	0	-	-	3	4	1	61	DAYS
MITCHELL STREET	-	-	15	915	10	610	0	0	12	732	5	305	0	0	14	854	-	0	-	-	-	-	-	-	-	1	61	DAYS
MITCHELL CURB RAMPS AT 4TH AND 5TH	-	-	60	3,660	4	244	0	0	0	0	20	1,220	0	0	20	1,220	-	0	-	-	-	-	-	-	-	1	61	DAYS
LINCOLN AVENUE	-	-	75	4,575	16	976	0	0	22	1,342	20	1,220	0	0	27	1,647	-	0	160	160	-	-	-	-	-	1	61	DAYS
LINCOLN CURB RAMPS AT 4TH AND 5TH	-	-	60	3,660	4	244	0	0	0	0	20	1,220	0	0	20	1,220	-	0	-	-	-	-	-	-	-	1	61	DAYS
WARNIMONT PEDESTRIAN BRIDGE	-	-	55	3,355	4	244	0	0	7	427	10	610	0	0	14	854	-	0	-	-	-	-	-	-	-	1	61	DAYS
WASHINGTON STREET PAINTING	-	-	70	4,270	40	2,440	80	80	60	3,660	20	1,220	2	122	50	3,050	-	0	270	540	-	-	-	-	-	1	61	DAYS
SB BECHER STREET DEMOLITION	-	-	20	1,220	20	1,220	0	0	26	1,586	20	1,220	2	122	20	1,220	-	0	-	-	-	-	-	-	-	1	61	DAYS
BECHER INSIDE LANE CLOSURE	-	-	25	1,525	2	122	0	0	4	244	0	0	0	0	8	488	-	0	-	-	-	-	-	-	-	1	61	DAYS
BECHER OUTSIDE LANE CLOSURE	-	-	70	4,270	4	244	0	0	8	488	0	0	0	0	12	732	-	0	-	-	-	-	-	-	-	1	61	DAYS
BECHER TWO LANE CLOSURE	-	-	75	4,575	4	244	0	0	8	488	0	0	0	0	16	976	-	0	-	-	-	-	-	-	-	1	61	DAYS
SHOULDER CLOSURE	-	-	5	305	0	0	0	0	0	0	5	305	1	61	8	488	1	61	1,000	1,000	1	-	-	-	-	1	61	DAYS
DETOURS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	427	-	-	-	-	-	-	-	1	61	DAYS
STAGE 2																												
MAINLINE	-	-	55	3,410	16	992	0	0	22	1,364	30	1,860	0	0	25	1,550	3	186	0	0	0	-	-	9	10	1	62	DAYS
MAPLE STREET	-	-	65	4,030	20	1,240	0	0	28	1,736	30	1,860	0	0	28	1,736	-	0	120	120	-	-	-	-	-	1	62	DAYS
MAPLE CURB RAMPS AT 5TH	-	-	30	1,860	2	124	0	0	0	0	10	620	0	0	10	620	-	0	-	-	-	-	-	-	-	1	62	DAYS
SHOULDER CLOSURE	-	-	5	310	0	0	0	0	0	0	5	310	1	62	8	496	1	62	1,000	1,000	1	-	-	-	-	1	62	DAYS
DETOURS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	0	-	-	-	-	-	-	-	-	62	DAYS
STAGE 3				0		0				0		0		0		0												
MAINLINE	-	-	100	7,400	12	888	0	0	20	1,480	60	4,440	1	74	28	2,072	2	148	0	0	0	-	-	6	12	1	74	DAYS
HOWARD AVENUE NORTH	-	-	130	9,620	25	1,850	43	43	22	1,628	74	5,476	0	0	30	2,220	-	0	340	340	2	-	-	-	-	1	74	DAYS
GREENFIELD AVENUE	-	-	60	4,440	14	1,036	0	0	20	1,480	24	1,776	0	0	21	1,554	-	0	160	160	-	-	-	-	-	1	74	DAYS
VALLEY BRIDGE PAINTING (SINGLE LANE CLOSURE)	-	-	55	4,070	1	74	0	0	0	0	15	1,110	2	148	15	1,110	1	74	-	-	-	-	-	-	-	1	74	DAYS
NB BECHER STREET DEMOLITION	-	-	20	1,480	20	1,480	0	0	26	1,924	20	1,480	2	148	20	1,480	-	-	-	-	-	-	-	-	-	1	74	DAYS
BECHER INSIDE LANE CLOSURE	-	-	25	1,850	2	148	0	0	4	296	0	0	0	0	8	592	-	-	-	-	-	-	-	-	-	1	74	DAYS
BECHER OUTSIDE LANE CLOSURE	-	-	90	6,660	4	296	0	0	8	592	0	0	0	0	12	888	-	-	-	-	-	-	-	-	-	1	74	DAYS
BECHER TWO LANE CLOSURE	-	-	75	5,550	4	296	0	0	8	592	0	0	0	0	16	1,184	-	-	-	-	-	-	-	-	-	1	74	DAYS
SHOULDER CLOSURE	-	-	5	370	0	0	0	0	0	0	5	370	1	74	8	592	1	74	1,000	1,000	1	-	-	-	-	1	74	DAYS
DETOURS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	1,184	-	-	-	-	-	-	-	1	74	DAYS
STAGE 4																												
MAINLINE	-	-	110	6,160	34	1,904	0	0	50	2,800	40	2,240	0	0	53	2,968	2	112	0	0	0	-	-	3	4	1	56	DAYS
CHASE AVENUE	-	-	51	2,856	20	1,120	0	0	30	1,680	24	1,344	0	0	20	1,120	-	0	200	250	-	-	-	-	-	1	56	DAYS
LAPHAM BOULEVARD	-	-	36	2,016	32	1,792	0	0	30	1,680	20	1,120	0	0	27	1,512	-	0	160	160	-	-	-	-	-	1	56	DAYS
HOWARD AVENUE SOUTH	-	-	185	10,360	13	728	70	70	20	1,120	105	5,880	0	0	37	2,072	-	0	330	330	2	-	-	-	-	1	56	DAYS
HOWARD CURB RAMPS AT NB RAMPS	-	-	30	1,680	2	112	0	0	0	0	10	560	0	0	10	560	-	0	-	-	-	-	-	-	-	1	56	DAYS
VALLEY BRIDGE PAINTING (SINGLE LANE CLOSURE)	-	-	55	3,080	1	56	0	0	0	0	15	840	2	112	15	840	1	56	-	-	-	-	-	-	-	1	56	DAYS
BECHER OUTSIDE LANE CLOSURE	-	-	90	5,040	4	224	0	0	8	448	0	0	0	0	12	672	-	-	-	-	-	-	-	-	-	1	56	DAYS
BECHER TWO LANE CLOSURE	-	-	75	4,200	4	224	0	0	8	448	0	0	0	0	16	896	-	-	-	-	-	-	-	-	-	1	56	DAYS
SHOULDER CLOSURE	-	-	5	280	0	0	0	0	0	0	5	280	1	56	8	448	1	56	1,000	1,000	1	-	-	-	-	1	56	DAYS
DETOURS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	728	-	-	-	-	-	-	-	1	56	DAYS
STAGE 5																												
VALLEY BRIDGE PAINTING (SINGLE LANE CLOSURE)	-	-	55	1,650	1	30	0	0	0	0	15	450	2	60	15	450	1	30	-	-	-	-	-	-	-	1	30	DAYS
NATIONAL AVENUE TRAFFIC CONTROL (NORTH CLOSURE)	-	-	105	3,150	1	30	20	20	-	-	-	-	-	-	15	450	-	-	-	-	-	-	-	-	-	1	30	DAYS
NATIONAL AVENUE TRAFFIC CONTROL (SOUTH CLOSURE)	-	-	115	3,450	1	30	40	40	-	-	-	-	-	-	15	450	-	-	-	-	-	-	-	-	-	1	30	DAYS
SHOULDER CLOSURE	-	-	5	150	0	0	0	0	0	0	5	150	1	30	11	330	1	30	1,000	1,000	1	-	-	-	-	1	30	DAYS
FULL FREEWAY CLOSURES																												
HOWARD AVE BRIDGE (@NB HOWARD, SB HOLT)	-	-	305	2,440	8	64	0	0	16	128	120	960	11	88	59	472	5	40	-	-	-	-	-	-	-	2	4	DAYS
CHASE/LINCOLN BRIDGE (@NB HOWARD, SB BECHER)	-	-	305	2,440	8	64	0	0	16	128	120	960	11	88	59	472	6	48	-	-	-	-	-	-	-	2	4	DAYS
MAPLE/MITCHELL/LAPHAM BRIDGE (@NB BECHER, SB LAPHAM)	-	-	205	2,460	5	60	0	0	10	120	75	900	7	84	35	420	2	24	-	-	-	-	-	-	-	3	4	DAYS
GREENFIELD(@NB BECHER, SB NATIONAL)	-	-	320	1,280	10	40	0	0	20	80	115	460	12	48	72	288	12	48	-	-	-	-	-	-	-	1	4	DAYS
UNDISTRIBUTED																												
RAMP CLOSURES FROM MAINLINE - UNDISTRIBUTED	-	-	15	450	45	1,350	-	-	0	0	0	0	0	0	11	330	-	-	-	-	-	-	-	-	-	3	10	DAYS
RAMP CLOSURES FROM SIDE ROAD - UNDISTRIBUTED		-	25	750	2	60	-	-	4	120	0	0	0	0	11	330	-	-	-	-	-	-	-	-	-	3	10	DAYS
MITCHELL STREET PAINTING	-	-	15	930	2	124	-	-	4	248	0	0	0	0	10	620	-	0	-	-	-	-	-	-	-	1	62	DAYS
MAPLE STREET PAINTING	-	-	15	1,110	2	148	-	-	4	296	0	0	0	0	10	740	-	0	-	-	-	-	-	-	-	1	74	DAYS
LINCOLN AVENUE PAINTING	-	-	20	1,480	4	296	-	-	8	592	16	1,184	0	0	25	1,850	-	0	-	-	-	-	-	-	-	1	74	DAYS
GREENFIELD AVENUE PAINTING	-	-	65	3,640	4	224	-	-	8	448	20	1,120	0	0	25	1,400	-	0	-	-	-	-	-	-	-	1	56	DAYS
HOLT AVENUE PARK & RIDE	-	-	50	1,750	10	350	-	-	15	525	0	0	0	0	5	175	-	0	-	-	-	-	-	-	-	1	35	DAYS
SUBTOTALS	1	1	3,532	148,012	445	24,286	253	253	562	31,286	1,128	46,900	59	1,377	1,021	49,135	92	3,510	6,740	7,060	9	0	0	21	30			
UNDISTRIBUTED	-	-	530	22,202	67	3,643	38	38	84	4,693	169	7,035	9	207	153	7,370	14	527	1,011	1,059	1	2	50	3	5			
TOTALS	1	1		170,214		27,929	291	291		35,979		53,935		1,584		56,505		4,037	7,751	8,119	10		50	24	35			

* = ADDITIONAL QUANTITIES LISTED ELSEWHERE | ALL QUANTITIES ARE CATEGORY 1000 UNLESS NOTED

PROJECT NO: 1228-25-70 | HWY: IH 43 | COUNTY: MILWAUKEE | MISCELLANEOUS QUANTITIES | SHEET 274 | E

TRAFFIC CONTROL SIGNS FIXED MESSAGE

SIGN NO.	SIGN MESSAGE	W (FT)	SIGN SIZE X	H (FT)	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF
1	RAMP CLOSED	10	X	2	20
2	STH 38 CHASE AVE BRIDGE CLOSED AHEAD FOLLOW DETOUR	6	X	5	30
3	DETOUR NATIONAL AVE H-D MUSEUM	12	X	5	60
4	RAMP CLOSED	10	X	2	20
5	RAMP CLOSED	10	X	2	20
6	STH 38 CHASE AVE BRIDGE CLOSED AHEAD FOLLOW DETOUR	6	X	5	30
7	RAMP CLOSED	10	X	2	20
8	RAMP CLOSED	10	X	2	20
9	STH 38 CHASE AVE BRIDGE CLOSED AHEAD FOLLOW DETOUR	6	X	5	30
10	RAMP CLOSED	10	X	2	20
11	RAMP CLOSED	10	X	2	20
12	RAMP CLOSED	10	X	2	20
13	RAMP CLOSED	10	X	2	20
14	RAMP CLOSED	10	X	2	20
15	WB HOWARD AVE EXIT CLOSED USE HOLT AVE	12	X	5	60
16	RAMP CLOSED	10	X	2	20
17	RAMP CLOSED	10	X	2	20
18	RAMP CLOSED	10	X	2	20
19	RAMP CLOSED	10	X	2	20
20	RAMP CLOSED	10	X	2	20
21	LANE CLOSURES AHEAD HOWARD AVE	3.5	X	6	21
22	RAMP CLOSED	10	X	2	20
23	RAMP CLOSED	10	X	2	20
24	HOWARD AVE EXIT CLOSED USE HOLT AVE	12	X	5	60
25	WARNIMONT PEDESTRIAN BRDIGE CLOSED USE HOLT AVE (DATES)	4	X	4.25	17
26	WARNIMONT PEDESTRIAN BRDIGE CLOSED USE HOLT AVE (DATES)	4	X	4.25	17
27	LAPHAM BLVD RAMP CLOSED AHEAD FOLLOW DETOUR	12	X	6.5	78
28	STH 38 CHASE AVE BRIDGE CLOSED AHEAD FOLLOW DETOUR	6	X	5	30
29	STH 38 CHASE AVE BRIDGE CLOSED AHEAD FOLLOW DETOUR	6	X	5	30
30	STH 38 CHASE AVE BRIDGE CLOSED AHEAD FOLLOW DETOUR	6	X	5	30
31	LAPHAM BLVD RAMP CLOSED AHEAD FOLLOW DETOUR	12	X	6.5	78
32	NATIONAL AVE RAMP CLOSED AHEAD FOLLOW DETOUR	12	X	6.5	78
33	IH 43/94 NORTH RAMP CLOSED AHEAD FOLLOW DETOUR	6	X	4.5	27
34	IH 43/94 NORTH RAMP CLOSED AHEAD FOLLOW DETOUR	6	X	4.5	27
35	IH 43/94 SOUTH RAMP CLOSED AHEAD FOLLOW DETOUR	6	X	4.5	27
36	IH 43/94 SOUTH RAMP CLOSED AHEAD FOLLOW DETOUR	6	X	4.5	27
37	STH 38 CHASE AVE BRIDGE CLOSED AHEAD FOLLOW DETOUR	6	X	5	30
38	LANE CLOSURES AHEAD HOWARD AVE	6	X	3.5	21
39	RAMP CLOSED	10	X	2	20
40	RAMP CLOSED	10	X	2	20
41	IH 43/94 SOUTH RAMP CLOSED AHEAD FOLLOW DETOUR	6	X	4.5	27
42	RAMP CLOSED	10	X	2	20
43	LINCOLN AVE BRIDGE CLOSED AHEAD USE ALT ROUTES	6	X	4.5	27
44	LINCOLN AVE BRIDGE CLOSED AHEAD USE ALT ROUTES	6	X	4.5	27
45	MAPLE ST BRIDGE CLOSED AHEAD USE ALT ROUTES	6	X	4.5	27
46	MAPLE ST BRIDGE CLOSED AHEAD USE ALT ROUTES	6	X	4.5	27
47	MITCHELL ST BRIDGE CLOSED AHEAD USE ALT ROUTES	6	X	4.5	27
48	MITCHELL ST BRIDGE CLOSED AHEAD USE ALT ROUTES	6	X	4.5	27
49	IH 43/94 SOUTH RAMP CLOSED AHEAD FOLLOW DETOUR	6	X	4.5	27
50	IH 43/94 SOUTH RAMP CLOSED AHEAD FOLLOW DETOUR	6	X	4.5	27
51	IH 43/94 NORTH RAMP CLOSED AHEAD FOLLOW DETOUR	6	X	4.5	27
52	IH 43/94 NORTH RAMP CLOSED AHEAD FOLLOW DETOUR	6	X	4.5	27
53	LAPHAM BLVD BRIDGE CLOSED AHEAD USE ALT ROUTES	6	X	4.5	27
54	LAPHAM BLVD BRIDGE CLOSED AHEAD USE ALT ROUTES	6	X	4.5	27
55	GREENFIELD AVE BRIDGE CLOSED AHEAD USE ALT ROUTES	6	X	4.5	27
56	GREENFIELD AVE BRIDGE CLOSED AHEAD USE ALT ROUTES	6	X	4.5	27
57	WB HOWARD AVE EXIT CLOSED USE HOLT AVE	12	X	5	60
58	HOWARD AVE EXIT CLOSED USE HOLT AVE	12	X	5	60
59	STH 38 CHASE AVE BRIDGE CLOSED AHEAD FOLLOW DETOUR	6	X	5	30
60	TRUCKS ENTERING FREEWAY ON RIGHT	6	X	6	36
61	TRUCKS EXITING FREEWAY ON RIGHT	6	X	6	36
62	LEFT	4	X	2	8
63	EMERG ACCESS	4	X	3	12
64	XXX	3.5	X	2	7
65	XXX	3	X	2	6
TOTAL					1,868

COLD PATCH

	SPV.0195.0001 TON
PROJECT 1228-25-70	10
TOTAL	10

SURVEY PROJECT

LOCATION	SPV.0105.0002 SURVEY PROJECT 1228-25-70 LS
PROJECT	1
TOTAL	1

STORM SEWER

	STATION	204.0220 REMOVING INLETS EACH	204.0245 REMOVING STORM SEWER 12-INCH LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	611.0420 RECONSTRUCTING MANHOLES EACH	611.0651 INLET COVERS TYPE S EACH	611.0660 INLET COVERS TYPE WM EACH	611.0430 RECONSTRUCTING INLETS EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3220 INLETS 2X2-FT EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH	SPV.0060.5002 INTERNAL SANITARY MANHOLE SEALS EACH
IH 43 NORTHBOUND													
NATIONAL ENTRANCE	10+35.00	-	105	40	-	-	1	-	1	-	-	-	-
	10+99.00	1	-	-	-	-	-	-	-	-	-	-	-
	12+51.00	-	-	-	-	-	-	1	-	-	-	-	-
	12+75.00	-	-	-	-	-	-	-	-	-	-	1	-
	15+00.00	-	-	-	-	-	-	-	-	-	-	1	-
	15+50.00	-	-	-	-	-	-	-	-	-	-	1	-
	16+00.00	-	-	-	-	-	-	-	-	-	-	1	-
NATIONAL EXIT	10+28.00	-	-	-	-	-	-	-	-	-	-	1	-
	10+47.00	-	-	-	-	-	-	-	-	-	-	1	-
	14+50.00	-	-	-	-	-	-	-	-	-	-	1	-
	15+44.00	-	-	-	-	-	-	-	-	-	-	1	-
	15+50.00	-	-	-	-	-	-	-	-	-	-	1	-
	16+00.00	-	-	-	-	-	-	-	-	-	-	1	-
IH 43 SOUTHBOUND													
HOWARD ENTRANCE RAMP	645+15.00	-	-	-	-	-	-	-	-	-	-	1	-
	646+48.00	-	-	-	-	-	-	-	-	-	-	1	-
	646+55.00	-	-	-	-	-	-	-	-	-	-	1	-
	647+05.00	-	-	-	-	-	-	-	-	-	-	1	-
	650+00.00	-	-	-	-	-	-	-	-	-	-	2	-
HOWARD EXIT RAMP	646+66.00	-	-	-	-	-	-	-	-	-	-	1	-
	646+86.00	-	-	-	-	-	-	-	-	-	-	1	-
	647+23.00	-	-	-	-	-	-	-	-	-	-	1	-
	649+93.00	-	-	-	-	-	-	-	-	-	-	1	-
HOLT AVENUE PARK & RIDE		-	-	-	-	-	-	-	-	-	1	3	-
GREENFIELD AVENUE	99+74.70	-	-	-	-	-	-	-	-	-	-	1	-
	99+95.20	-	-	-	-	-	-	-	-	-	1	-	-
	99+95.20	-	-	-	-	-	-	-	-	-	-	1	-
	103+08.20	-	-	-	-	-	-	-	-	-	-	1	-
	103+10.30	-	-	-	-	-	-	-	-	-	-	1	-
LAPHAM BOULEVARD	202+50.70	-	-	-	-	-	-	-	-	-	-	-	-
	202+52.90	-	-	-	-	-	-	-	-	-	1	-	-
MAPLE STREET	403+41.30	-	-	-	-	-	-	-	-	-	1	1	-
LINCOLN AVENUE	502+62.10	-	-	-	-	-	-	-	-	-	-	1	-
	502+77.20	-	-	-	-	-	-	-	-	-	-	1	-
CHASE AVENUE	598+48.30	-	-	-	-	-	-	-	-	-	-	1	-
	603+52.20	-	-	-	-	-	-	-	-	-	-	1	-
	603+99.00	-	-	-	-	-	-	-	-	-	-	1	-
HOWARD AVENUE	699+54.50	-	-	21	-	1	-	-	-	1	-	-	-
	699+54.50	-	-	25	-	1		-	-	1	-	-	-
	699+79.20	-	-	-	-	-	-	-	-	-	-	1	-
	699+75.60	-	-	-	-	-	-	-	-	-	-	1	-
	699+82.70	-	-	-	-	-	-	-	-	-	1	-	-
	702+46.70	-	-	-	-	-	-	-	-	-	-	1	1
	702+47.00	-	-	-	-	-	-	-	-	-	-	1	-
	702+51.80	-	-	-	-	-	-	-	-	-	1	-	1
	702+85.00	-	-	-	-	-	-	-	-	-	1	-	1
Undistributed		-	-	-	1	-	-	1	-	-	-	-	-
SUBTOTAL		1	105	86	1	2	1	2	1	2	7	37	3

* = ADDITIONAL QUANTITIES LISTED ELSEWHERE | ALL QUANTITIES ARE CATEGORY 1000 UNLESS NOTED

TRAFFIC CONTROL COVERING SIGNS

	643.0910 TYPE I EACH	643.0920 TYPE II EACH	EXISTING SIGN	SIGN CODE	CYCLES
CHASE AVENUE	-	1	ARROW AHEAD	M06-1	1
NATIONAL AVE NB EXIT RAMP	1	-	EXIT 311	-	1
	1	-	H-D MUSEUM EXIT 311	-	1
9TH ST/WALKER ST NM ENTRANCE RAMP	-	2	ARROW AHEAD	M06-1	1
	-	2	ARROW RIGHT	M06-1	1
SB CD RAMP	1	-	ARROW TILT LEFT	M6-2	1
	-	1	TO	M4-5	1
BECHER ST/LAPHAM BLVD NB ENT RAMP	-	1	NORTH	M3-1	1
	-	1	WEST	M3-4	1
	-	1	SHIELD 43	M1-1	1
	-	1	SHIELD 94	M1-1	1
	-	1	SHIELD 41	M1-1	1
	-	2	ARROW AHEAD	M06-1	1
	-	2	ARROW TILT RIGHT	M6-2	1
	1	-	ARROW TILT LEFT	M6-2	1
NB CD RAMP	-	1	NORTH	M3-1	1
WEEKEND CLOSURES STAGE 2-4	-	1	WEST	M3-4	1
	-	1	SHIELD 43	M1-1	1
	-	1	SHIELD 94	M1-1	1
	-	1	SHIELD 41	M1-1	1
	-	2	ARROW AHEAD	M06-1	1
I-43/94 FULL FREEWAY CLOSURE (GREENFIELD AVE/LAPHAM BLVD BRIDGE)	-	2	ARROW AHEAD	M06-1	1
HOWARD AVE SB ENTRANCE RAMP	-	1	SOUTH	M3-3	1
LEFT TURN RESTRICTION	-	1	EAST	M3-2	1
	-	1	SHIELD 43	M1-1	1
	-	1	SHIELD 94	M1-1	1
	-	1	SHIELD 41	M1-1	1
	-	2	ARROW RIGHT	M06-1	1
	-	2	AHEAD RIIGHT TURN	M05-1R	1
	-	2	ARROW AHEAD	M06-1	1
HOWARD AVE NB ENTRANCE RAMP	-	1	NORTH	M3-1	1
LEFT TURN RESTRICTION	-	1	SHIELD 43	M1-1	1
	-	1	SHIELD 94	M1-1	1
	-	1	ARROW LEFT	M06-1	1
HOWARD AVE NB EXIT RAMP LEFT TURN RESTICTION	1	-	ARROW LEFT"WEST"	-	1
LAPHAM BLVD SB EXIT RAMP	-	1	TO	M4-5	1
BECHER ST SB EXIT RAMP	-	1	TO	M4-5	1
I-43/94 FULL FREEWAY CLOSURE	-	2	TO	M4-5	1
HOWARD AVE BRIDGE	-	2	ARROW LEFT	M06-1	1
WASHINGTON STREET	4	-	STOP	R1-1	1
HOLT AVENUE	2	-	HOV LANE	R3-11MOD	1
TOTAL	11	45			

INCENTIVE STRENGTH CONCRETE

	715.0415 PAVEMENT DOL	715.0502 STRUCTURES DOL
PROJECT 1228-25-70	1,466	43,880
TOTAL	1,466	43,880

FINISHING ROADWAY

	213.0100 EACH
PROJECT 1228-25-70	1
TOTAL	1

EROSION CONTROL

LOCATION	STATION	STATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2023 EROSION MAT CLASS II TYPE B 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
IH 43 NORTHBOUND										
HOWARD OVERPASS AREA	652+00.00	656+00.00			-	-	1	-	-	-
LINCOLN OVERPASS AREA	274+00.00	275+00.00	-	-	-	-	1	-	-	-
MAPLE OVERPASS AREA	304+00.00	308+00.00	-	-	-	-	6	-	-	-
LAPHAM OVERPASS AREA	316+00.00	319+00.00	-	-	-	-	2	-	-	-
GREENFIELD OVERPASS AREA	325+00.00	329+00.00	-	-	-	-	3	-	-	-
BECHER/LAPHAM RAMPS	278+00.00	327+00.00	-	-	-	1	15	2	12	-
NATIONAL ENTRANCE	10+00.00	16+00.00	-	-	505	2	1	1	3	-
NATIONAL EXIT	10+00.00	16+00.00	-	-	855	-	2	1	4	-
IH 43 SOUTHBOUND										
HOWARD ENTRANCE RAMP	649+00.00	654+00.00	-	-	2,230	3	2	1	2	-
HOWARD EXIT RAMP	646+00.00	654+00.00	-	-	1,830	1	1	-	3	-
CHASE OVERPASS AREA	267+00.00	268+00.00	-	-	-	-	2	-	-	-
LINCOLN OVERPASS AREA	274+00.00	275+00.00	-	-	-	-	1	-	-	-
MAPLE OVERPASS AREA	304+00.00	308+00.00	-	-	-	-	2	-	-	-
LAPHAM OVERPASS AREA	316+00.00	319+00.00	-	-	-	-	2	-	-	-
GREENFIELD OVERPASS AREA	325+00.00	329+00.00	-	-	-	-	4	-	-	-
BECHER/LAPHAM RAMPS	280+00.00	287+00.00	-	-	-	1	16	2	9	-
LAPHAM EXIT RAMP	318+00.00	330+00.00	-	-	-	-	3	-	3	-
HOLT AVENUE PARK & RIDE			-	-	55	-	3	3	2	-
OVERPASSES										
GREENFIELD AVENUE	99+60.00	103+22.00	150	150	-	-	0	4	-	-
LAPHAM BOULEVARD	199+54.00	202+86.00	60	60	-	-	0	3	-	-
MITCHELL STREET	299+59.00	303+09.00	135	135	-	-	1	2	-	-
MAPLE STREET	399+60.00	403+75.00	90	90	-	-	0	4	-	-
LINCOLN AVENUE	499+46.00	502+76.00	190	190	-	-	0	4	-	-
CHASE AVENUE	599+05.00	603+94.00	120	120	-	-	0	6	-	-
HOWARD AVENUE	695+13.00	707+07.00	205	205	-	-	0	7	-	-
BECHER CDS	1185+96.00	1197+54.00	770	770	-	-	0	2	-	-
BECHER CDN	1186+97.00	1199+47.00	210	210	-	-	0	0	-	-
UNDISTRIBUTED										30
TOTAL			1,930	1,930	5,475	8	68	42	38	30

CONCRETE SIDEWALK

	204.0155 REMOVING CONCRETE SIDEWALK SY	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF
NORTHBOUND					
NATIONAL EXIT RAMP	165	-	1,340	24	55
NATIONAL ENTRANCE RAMP	15	-	130	8	-
SOUTHBOUND					
HOWARD EXIT RAMP	215	-	1,930	32	55
HOWARD ENTRANCE RAMP	15	-	130	8	-
HOLT AVENUE PARK & RIDE	35	-	390	-	-
OVERPASSES					
GREENFIELD AVENUE	157	59	1,507	64	-
LAPHAM BOULEVARD	160	57	14,440	32	-
MITCHELL STREET	138	48	1,235	64	-
MAPLE STREET	113	42	1,064	72	-
LINCOLN AVENUE	234	80	2,051	64	-
CHASE AVENUE	259	95	2,427	56	-
HOWARD AVENUE	236	59	1,518	40	-
BECHER CDS	-	-	-	-	-
BECHER CDN	-	-	-	-	-
TOTAL	1,742	440	28,162	464	110

LANDSCAPING

	STATION	TO STATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
NORTHBOUND								
NATIONAL ENTRANCE	10+00.00	16+00.00	960	960	0.6	17	-	-
NATIONAL EXIT	10+00.00	16+00.00	770	770	0.5	14	-	-
SOUTHBOUND								
HOWARD ENTRANCE RAMP	649+00.00	654+00.00	2,270	2,270	1.4	41	-	-
HOWARD EXIT RAMP	646+00.00	654+00.00	1,850	1,850	1.2	33	-	-
OVERPASSES								
GREENFIELD AVENUE	99+67	103+21	125	-	0.1	-	3	119
LAPHAM BOULEVARD	199+73	202+63	106	-	0.1	-	2	101
MITCHELL STREET	299+59	303+09	217	-	0.1	-	5	207
MAPLE STREET	399+68	403+53	98	-	0.1	-	2	93
LINCOLN AVENUE	499+40	502+90	243	-	0.1	-	5	231
CHASE AVENUE	598+27	604+94	126	-	0.1	-	3	120
HOWARD AVENUE	695+13	696+34	69	-	0	-	2	66
HOWARD AVENUE	699+53	702+97	160	-	0.1	-	4	152
HOWARD AVENUE	703+64	705+57	279	-	0.2	-	6	266
HOWARD AVENUE	705+88	707+04	142	-	0.1	-	3	135
BECHER CDS	186+04	197+54	865	-	0.5	-	19	824
BECHER CDN	187+05	199+07	232	-	0.1	-	5	221
SUBTOTAL			8,512	5,850	5	105	59	2,535
UNDISTRIBUTED (15%)			1,280	880	1	16		
TOTAL			9,792	6,730	5.3	121	59	2,535

* = ADDITIONAL QUANTITIES LISTED ELSEWHERE | ALL QUANTITIES ARE CATEGORY 1000 UNLESS NOTED

DETOUR SIGNS

643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS

SIGN MESSAGE	SIGN CODE	SIZE	SIZE 2 EACH	SIZE 2 DAY	SIZE 3 EACH	SIZE 3 DAY
DETOUR						
SB BECHER STREET/LAPHAM BLVD						
DETOUR	M4-8	24" X 12"	22	3,102	-	-
DETOUR	M4-8	36" X 18"	-	-	5	705
SHIELD 43	M1-1	24" X 24"	20	2,820	-	-
SHIELD 43	M1-1	36" X 36"	-	-	5	705
SHIELD 94	M1-1	24" X 24"	18	2,538	-	-
SHIELD 94	M1-1	36" X 36"	-	-	5	705
SOUTH	M3-2	24" X 12"	20	2,820	-	-
SOUTH	M3-2	36" X 18"	-	-	5	705
EAST	M3-3	24" X 12"	18	2,538	-	-
EAST	M3-3	36" X 18"	-	-	5	705
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	8	1,128	-	-
ARROW RT OR LT OR AHEAD	M06-1	30" X 30"	-	-	3	423
ARROW TILT RT OR LT	M06-2	21" X 21"	2	282	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	21" X 21"	3	423	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	1	141
AHEAD RIGHT TURN	M05-1R	21" X 21"	4	564	-	-
AHEAD RIGHT TURN	M05-1R	30" X 30"	-	-	1	141
AHEAD LEFT TURN	M05-1L	21" X 21"	2	282	-	-
END DETOUR	M4-8A	24" X 18"	2	282	-	-
POSTS	18		-	-	-	-
WARNIMONT AVE PEDESTRIAN BRIDGE						
PEDESTRIAN DETOUR ARROW RIGHT	W11-2		5	305	-	-
PEDESTRIAN DETOUR ARROW LEFT			4	244	-	-
BRIDGE WILL BE CLOSED	R11-51 MOD		2	122	-	-
END DETOUR	M4-8A	24" X 18"	2	122	-	-
POSTS	17					
LAPHAM BLVD NB EXIT RAMP (STAGE 3-4)						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	130
TO	M4-5	24" X 12"	4	520	-	-
TO	M4-5	36" X 18"	-	-	3	390
DETOUR	M4-8	24" X 12"	4	520	-	-
DETOUR	M4-8	36" X 18"	-	-	2	260
LAPHAM BLVD	M1-94	40" X 12"	4	520	-	-
LAPHAM BLVD	M1-94	60" X 18"	-	-	3	390
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	3	390	-	-
ARROW TILT RT OR LT	M06-2	21" X 21"	1	130	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	1	130
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	1	130
END DETOUR	M4-8A	24" X 18"	1	130	-	-
POSTS	7		-	-	-	-
CHASE AVENUE						
DETOUR AHEAD	W20-2A		2	112	-	-
DETOUR	M4-8	24" X 12"	14	784	-	-
TO	M4-5	24" X 12"	1	56	-	-
NORTH	M3-1	24" X 12"	8	448	-	-
SOUTH	M3-2	24" X 12"	6	336	-	-
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	8	448	-	-
ARROW TILT RT OR LT	M06-2	21" X 21"	1	56	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	21" X 21"	1	56	-	-
AHEAD LEFT TURN	M05-1L	21" X 21"	2	112	-	-
AHEAD RIGHT TURN	M05-1R	21" X 21"	2	112	-	-
SHIELD 38	M1-1	24" X 24"	12	672	-	-
END DETOUR	M4-8A	24" X 18"	2	112	-	-
POSTS	17		-	-	-	-
LAHPAM BLVD SB EXIT RAMP STAGE 4						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	56
TO	M4-5	24" X 12"	10	560	-	-
TO	M4-5	36" X 18"	-	-	3	168
DETOUR	M4-8	24" X 12"	10	560	-	-
DETOUR	M4-8	36" X 18"	-	-	2	112
LAPHAM BLVD	M1-94	40" X 12"	11	616	-	-
LAPHAM BLVD	M1-94	60" X 18"	-	-	3	168
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	4	224	-	-
AHEAD LEFT TURN	M05-1L	21" X 21"	5	280	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	1	56
ARROW TILT RT OR LT	M06-2	21" X 21"	1	56	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	1	56
END DETOUR	M4-8A	24" X 18"	1	56	-	-
POSTS	12		-	-	-	-
SUBTOTAL				25,438		6,276

DETOUR SIGNS

643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS

SIGN MESSAGE	SIGN CODE	SIZE	SIZE 2 EACH	SIZE 2 DAY	SIZE 3 EACH	SIZE 3 DAY
NATIONAL AVE NB EXIT RAMP STAGE 5						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	30
TO	M4-5	24" X 12"	7	210	-	-
TO	M4-5	36" X 18"	-	-	2	60
NATIONAL AVE	M1-94	44" X 12"	7	210	-	-
NATIONAL AVE	M1-94	66" X 18"	-	-	2	60
H-D MUSEUM	M1-94	36" X 12"	8	240	-	-
H-D MUSEUM	M1-94	54" X 18"	-	-	2	60
DETOUR	M4-8	24" X 12"	7	210	-	-
DETOUR	M4-8	36" X 18"	-	-	1	30
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	5	150	-	-
ARROW TILT RT OR LT	M06-2	21" X 21"	3	90	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	1	30
END DETOUR	M4-8A	24" X 18"	1	30	-	-
POSTS	8		-	-	-	-
9TH ST/WALKER ST NB ENTRANCE RAMP						
DETOUR AHEAD	W20-2A		2	60	-	-
DETOUR	M4-8	24" X 12"	7	210	-	-
TO	M4-5	24" X 12"	7	210	-	-
NORTH	M3-1	24" X 12"	7	210	-	-
WEST	M3-4	24" X 12"	7	210	-	-
SHIELD 43	M1-1	24" X 24"	7	210	-	-
SHIELD 94	M1-1	24" X 24"	7	210	-	-
SHIELD 41	M1-1	24" X 24"	7	210	-	-
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	10	300	-	-
AHEAD RIGHT TURN	M05-1R	21" X 21"	4	120	-	-
END DETOUR	M4-8A	24" X 18"	1	30	-	-
POSTS	8		-	-	-	-
LAPHAM BLVD SB ENTRNCE RAMP						
DETOUR	M4-8	24" X 12"	4	244	-	-
TO	M4-5	24" X 12"	4	244	-	-
SHIELD 43	M1-1	24" X 24"	4	244	-	-
SHIELD 94	M1-1	24" X 24"	4	244	-	-
SOUTH	M3-2	24" X 12"	4	244	-	-
EAST	M3-3	24" X 12"	4	244	-	-
NORTH	M3-1	24" X 12"	1	61	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	21" X 21"	1	61	-	-
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	2	122	-	-
AHEAD RIGHT TURN	M05-1R	21" X 21"	1	61	-	-
END DETOUR	M4-8A	24" X 18"	2	122	-	-
POSTS	3		-	-	-	-
BECHER ST SB EXIT RAMP (WEEKEND CLOSURES STAGE 2-3						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	14
DETOUR	M4-8	24" X 12"	6	84	-	-
DETOUR	M4-8	36" X 18"	-	-	2	28
TO	M4-5	24" X 12"	3	42	-	-
TO	M4-5	36" X 18"	-	-	2	28
SOUTH	M3-2	24" X 12"	3	42	-	-
EAST	M3-3	24" X 12"	3	42	-	-
NORTH	M3-1	24" X 12"	1	14	-	-
BECHER ST	M1-94	40" X 12"	4	56	-	-
BECHER ST	M1-94	60" X 18"	-	-	2	28
SHIELD 43	M1-1	24" X 24"	3	42	-	-
SHIELD 94	M1-1	24" X 24"	3	42	-	-
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	5	70	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	1	14
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	1	14
AHEAD RIGHT TURN	M05-1R	21" X 21"	1	14	-	-
END DETOUR	M4-8A	24" X 18"	3	42	-	-
POSTS	8		-	-	-	-
SB CD RAMP (WEEKEND CLOSURES STAGE 2-4)						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	21
DETOUR	M4-8	24" X 12"	6	126	-	-
DETOUR	M4-8	36" X 18"	-	-	2	42
TO	M4-5	24" X 12"	3	63	-	-
TO	M4-5	36" X 18"	-	-	2	42
SOUTH	M3-2	24" X 12"	4	84	-	-
EAST	M3-3	24" X 12"	4	84	-	-
NORTH	M3-1	24" X 12"	1	21	-	-
BECHER ST	M1-94	40" X 12"	4	84	-	-
BECHER ST	M1-94	60" X 18"	-	-	2	42
SHIELD 43	M1-1	24" X 24"	4	84	-	-
SHIELD 94	M1-1	24" X 24"	4	84	-	-
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	6	126	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	1	21
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	1	21
AHEAD RIGHT TURN	M05-1R	21" X 21"	1	21	-	-
END DETOUR	M4-8A	24" X 18"	3	63	-	-
POSTS	8		-	-	-	-
SUBTOTAL				6,341		585

DETOUR SIGNS

643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS

SIGN MESSAGE	SIGN CODE	SIZE	SIZE 2 EACH	SIZE 2 DAY	SIZE 3 EACH	SIZE 3 DAY
NB CD RAMP (WEEKEND CLOSURES STAGE 2-4)						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	14
DETOUR	M4-8	24" X 12"	5	70	-	-
DETOUR	M4-8	36" X 18"	-	-	2	28
TO	M4-5	24" X 12"	5	70	-	-
TO	M4-5	36" X 18"	-	-	3	42
SHIELD 43	M1-1	24" X 24"	2	28	-	-
SHIELD 94	M1-1	24" X 24"	2	28	-	-
NORTH	M3-1	24" X 12"	2	28	-	-
WEST	M3-4	24" X 12"	2	28	-	-
LAPHAM BLVD	M1-94	40" X 12"	5	70	-	-
LAPHAM BLVD	M1-94	60" X 18"	-	-	3	42
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	4	56	-	-
ARROW TILT RT OR LT	M06-2	21" X 21"	1	14	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	1	14
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	1	14
END DETOUR	M4-8A	24" X 18"	2	28	-	-
POSTS	7		-	-	-	-
BECHER/LAPHAM NB ENTRANCE RAMP (WEEKEND CLOSURES STAGE 2-4)						
DETOUR AHEAD	W20-2A		1	14	-	-
DETOUR	M4-8	24" X 12"	11	154	-	-
TO	M4-5	24" X 12"	4	56	-	-
NORTH	M3-1	24" X 12"	11	154	-	-
WEST	M3-4	24" X 12"	11	154	-	-
SHIELD 43	M1-1	24" X 24"	11	154	-	-
SHIELD 94	M1-1	24" X 24"	11	154	-	-
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	7	98	-	-
AHEAD RIGHT TURN	M05-1R	21" X 21"	1	14	-	-
AHEAD LEFT TURN	M05-1L	21" X 21"	1	14	-	-
ARROW AHEAD & LEFT TILT	M05-2L	21" X 21"	1	14	-	-
ARROW TILT RT OR LT	M06-2	21" X 21"	4	56	-	-
END DETOUR	M4-8A	24" X 18"	1	14	-	-
POSTS	9		-	-	-	-
BECHER ST/LAPHAM BLVD NB EXIT RAMP (WEEKEND CLOSURES STAGE 2-4)						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	14
DETOUR	M4-8	24" X 12"	8	112	-	-
DETOUR	M4-8	36" X 18"	-	-	2	28
TO	M4-5	24" X 12"	10	140	-	-
TO	M4-5	36" X 18"	-	-	3	42
LAPHAM BLVD	M1-94	40" X 12"	9	126	-	-
LAPHAM BLVD	M1-94	60" X 18"	-	-	3	42
BECHER ST	M1-94	40" X 12"	9	126	-	-
BECHER ST	M1-94	60" X 18"	-	-	3	42
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	4	56	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	1	14
AHEAD RIGHT TURN	M05-1R	21" X 21"	3	42	-	-
AHEAD LEFT TURN	M05-1L	21" X 21"	1	14	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	1	14
END DETOUR	M4-8A	24" X 18"	2	28	-	-
POSTS	13		-	-	-	-
FULL FREEWAY CLOSURE (HOWARD AVE BRIDGE)						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	4
DETOUR	M4-8	24" X 12"	24	96	-	-
DETOUR	M4-8	36" X 18"	-	-	6	24
TO	M4-5	24" X 12"	2	8	-	-
TO	M4-5	36" X 18"	-	-	2	8
SHIELD 43	M1-1	24" X 24"	21	84	-	-
SHIELD 43	M1-1	36" X 36"	-	-	7	28
SHIELD 94	M1-1	24" X 24"	21	84	-	-
SHIELD 94	M1-1	36" X 36"	-	-	7	28
SOUTH	M3-2	24" X 12"	5	20	-	-
SOUTH	M3-2	36" X 18"	-	-	3	12
EAST	M3-3	24" X 12"	3	12	-	-
EAST	M3-3	36" X 18"	-	-	3	12
NORTH	M3-1	24" X 12"	18	72	-	-
NORTH	M3-2	36" X 18"	-	-	4	16
WEST	M3-4	24" X 12"	16	64	-	-
WEST	M3-5	36" X 18"	-	-	4	16
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	12	48	-	-
AHEAD LEFT TURN	M05-1L	21" X 21"	3	12	-	-
AHEAD RIGHT TURN	M05-1R	21" X 21"	1	4	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	21" X 21"	1	4	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	2	8
ARROW TILT RT OR LT	M06-2	21" X 21"	5	20	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	4	16
END DETOUR	M4-8A	24" X 18"	3	12	-	-
POSTS	22		-	-	-	-
SUBTOTAL				2,654		522

* = ADDITIONAL QUANTITIES LISTED ELSEWHERE

ALL QUANTITIES ARE CATEGORY 1000 UNLESS NOTED

DETOUR SIGNS

SIGN MESSAGE	SIGN CODE	SIZE	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS SIZE 2 EACH	SIZE 2 DAY	SIZE 3 EACH	SIZE 3 DAY
HOWARD AVE SB EXIT RAMP (STAGE 4)						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	56
TO	M4-5	24" X 12"	4	224	-	-
TO	M4-5	36" X 18"	-	-	2	112
DETOUR	M4-8	24" X 12"	7	392	-	-
DETOUR	M4-8	36" X 18"	-	-	2	112
HOWARD AVE	M1-94	40" X 12"	7	392	-	-
HOWARD AVE	M1-94	60" X 18"	-	-	2	112
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	4	224	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	1	56
ARROW AHEAD & LEFT TILT	M05-2L	21" X 21"	1	56	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	1	56
AHEAD RIGHT TURN	M05-1R	21" X 21"	1	56	-	-
ARROW TILT RT OR LT	M06-2	21" X 21"	1	56	-	-
END DETOUR	M4-8A	24" X 18"	1	56	-	-
POSTS	10		-	-	-	-
HOWARD AVE SB ENTRANCE RAMP CLOSURE						
DETOUR AHEAD	W20-2A	48" X 48"	1	60	-	-
DETOUR	M4-8	24" X 12"	17	1,020	-	-
TO	M4-5	36" X 18"	1	60	-	-
SHIELD 43	M1-1	24" X 24"	16	960	-	-
SHIELD 94	M1-1	24" X 24"	14	840	-	-
SOUTH	M3-2	24" X 12"	16	960	-	-
EAST	M3-3	24" X 12"	14	840	-	-
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	10	600	-	-
AHEAD RIGHT TURN	M05-1R	21" X 21"	4	240	-	-
AHEAD LEFT TURN	M05-1l	21" X 21"	2	120	-	-
END DETOUR	M4-8A	24" X 18"	2	120		
POSTS	19		-	-	-	-
HOWARD AVE NB ENTRANCE RAMP LEFT TURN RESTRICTION						
DETOUR AHEAD	W20-2A	48" X 48"	1	130	-	-
DETOUR	M4-8	24" X 12"	5	650	-	-
TO	M4-5	36" X 18"	6	780	-	-
SHIELD 43	M1-1	24" X 24"	6	780	-	-
SHIELD 94	M1-1	24" X 24"	6	780	-	-
NORTH	M3-1	24" X 12"	6	780	-	-
WEST	M3-4	24" X 12"	6	780	-	-
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	3	390	-	-
AHEAD RIGHT TURN	M05-1R	21" X 21"	1	130	-	-
AHEAD LEFT TURN	M05-1l	21" X 21"	1	130	-	-
END DETOUR	M4-8A	24" X 18"	1	130	-	-
POSTS	6		-	-	-	-
HOWARD AVE NB EXIT RAMP LEFT TURN RESTRICTION						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	90
TO	M4-5	24" X 12"	5	450	-	-
TO	M4-5	36" X 18"	-	-	2	180
DETOUR	M4-8	24" X 12"	5	450	-	-
DETOUR	M4-8	36" X 18"	-	-	2	180
HOWARD AVE	M1-94	40" X 12"	5	450	-	-
HOWARD AVE	M1-94	60" X 18"	-	-	2	180
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	3	270	-	-
ARROW RT OR LT OR AHEAD	M06-1	30" X 30"	-	-	1	90
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	1	90
AHEAD RIGHT TURN	M05-1R	21" X 21"	2	180	-	-
END DETOUR	M4-8A	24" X 18"	1	90	-	-
POSTS	9		-	-	-	-
SUBTOTAL				14,626		1,314

DETOUR SIGNS

SIGN MESSAGE	SIGN CODE	SIZE	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS SIZE 2 EACH	SIZE 2 DAY	SIZE 3 EACH	SIZE 3 DAY
I-43/94 FULL FWY CLOSURE (CHASE/LINCOLN BRIDGE)						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	2	16
DETOUR	M4-8	24" X 12"	36	288	-	-
DETOUR	M4-8	36" X 18"	-	-	8	64
SHIELD 43	M1-1	24" X 24"	30	240	-	-
SHIELD 43	M1-1	36" X 36"	-	-	10	80
SHIELD 94	M1-1	24" X 24"	28	224	-	-
SHIELD 94	M1-1	36" X 36"	-	-	10	80
SOUTH	M3-2	24" X 12"	20	160	-	-
SOUTH	M3-2	36" X 18"	-	-	8	64
EAST	M3-3	24" X 12"	18	144	-	-
EAST	M3-3	36" X 18"	-	-	8	64
NORTH	M3-1	24" X 12"	10	80	-	-
NORTH	M3-2	36" X 18"	-	-	2	16
WEST	M3-4	24" X 12"	10	80	-	-
WEST	M3-5	36" X 18"	-	-	2	16
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	13	104	-	-
ARROW RT OR LT OR AHEAD	M06-1	30" X 30"	-	-	3	24
ARROW TILT RT OR LT	M06-2	21" X 21"	4	32	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	1	8
ARROW AHEAD & RIGHT TILT	M05-2R	21" X 21"	3	24	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	3	24
ARROW AHEAD & LEFT TILT	M05-2L	21" X 21"	1	8	-	-
AHEAD RIGHT TURN	M05-1R	21" X 21"	5	40	-	-
AHEAD RIGHT TURN	M05-1R	30" X 30"	-	-	1	8
AHEAD LEFT TURN	M05-1L	21" X 21"	3	24	-	-
END DETOUR	M4-8A	24" X 18"	3	24	-	-
POSTS	27		-	-	-	-
I-43/94 FULL FREEWAY CLOSURE (MAPLE, MITCHELL, LAPHAM BRIDGE)						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	2	24
DETOUR	M4-8	24" X 12"	8	96	-	-
DETOUR	M4-8	36" X 18"	-	-	4	48
SHIELD 43	M1-1	24" X 24"	8	96	-	-
SHIELD 43	M1-1	36" X 36"	-	-	6	72
SHIELD 94	M1-1	24" X 24"	8	96	-	-
SHIELD 94	M1-1	36" X 36"	-	-	6	72
SHIELD 41	M1-1	24" X 24"	2	24	-	-
SOUTH	M3-2	24" X 12"	3	36	-	-
SOUTH	M3-2	36" X 18"	-	-	3	36
EAST	M3-3	24" X 12"	3	36	-	-
EAST	M3-3	36" X 18"	-	-	3	36
NORTH	M3-1	24" X 12"	5	60	-	-
NORTH	M3-2	36" X 18"	-	-	3	36
WEST	M3-4	24" X 12"	5	60	-	-
WEST	M3-5	36" X 18"	-	-	3	36
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	9	108	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	2	24
ARROW TILT RT OR LT	M06-2	21" X 21"	1	12	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	2	24
END DETOUR	M4-8A	24" X 18"	2	24	-	-
POSTS	13		-	-	-	-
I-43/94 FULL FREEWAY CLOSURE (GREENFIELD AVE)						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	2	8
DETOUR	M4-8	24" X 12"	-	-	3	12
DETOUR	M4-8	36" X 18"	20	80	-	-
TO	M4-5	36" X 18"	-	-	1	4
SHIELD 43	M1-1	24" X 24"	17	68	-	-
SHIELD 43	M1-1	36" X 36"	-	-	5	20
SHIELD 94	M1-1	24" X 24"	17	68	-	-
SHIELD 94	M1-1	36" X 36"	-	-	5	20
SOUTH	M3-2	24" X 12"	10	40	-	-
SOUTH	M3-2	36" X 18"	-	-	3	12
EAST	M3-3	24" X 12"	10	40	-	-
EAST	M3-3	36" X 18"	-	-	3	12
NORTH	M3-1	24" X 12"	7	28	-	-
NORTH	M3-2	36" X 18"	-	-	2	8
WEST	M3-4	24" X 12"	7	28	-	-
WEST	M3-5	36" X 18"	-	-	2	8
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	9	36	-	-
ARROW TILT RT OR LT	M06-2	21" X 21"	3	12	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	1	4
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	2	8
ARROW AHEAD & LEFT TILT	M05-2L	21" X 21"	1	4	-	-
AHEAD RIGHT TURN	M05-1R	21" X 21"	3	12	-	-
AHEAD LEFT TURN	M05-1L	21" X 21"	1	4	-	-
END DETOUR	M4-8A	24" X 18"	2	8	-	-
POSTS	21					
SUBTOTAL				2,548		988

DETOUR SIGNS

SIGN MESSAGE	SIGN CODE	SIZE	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS SIZE 2 EACH	SIZE 2 DAY	SIZE 3 EACH	SIZE 3 DAY
EAST-SOUTH SYSTEM RAMP FULL FREEWAY CLOSURE (ALSO FOR GREENFIELD AVE BRIDGE)						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	4
TO	M4-5	36" X 18"	-	-	1	4
DETOUR	M4-8	24" X 12"	1	4	-	-
DETOUR	M4-8	36" X 18"	-	-	5	20
SOUTH	M3-2	24" X 12"	1	4	-	-
SOUTH	M3-2	36" X 18"	-	-	6	24
SHIELD 43	M1-1	24" X 24"	1	4	-	-
SHIELD 43	M1-1	36" X 36"	-	-	6	24
EAST	M3-3	24" X 12"	1	4	-	-
EAST	M3-3	36" X 18"	-	-	6	24
SHIELD 94	M1-1	24" X 24"	1	4	-	-
SHIELD 94	M1-1	36" X 36"	-	-	6	24
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	1	4	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	2	8
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	2	8
AHEAD LEFT TURN	M05-1L	30" X 30"	-	-	1	4
END DETOUR	M4-8A	24" X 18"	1	4	-	-
POSTS	6		-	-	-	-
HOWARD AVE SB ENTRANCE RAMP LEFT TURN RESTRICTION						
DETOUR AHEAD	W20-2A	48" X 48"	2	120	-	-
DETOUR	M4-8	24" X 12"	19	1,140	-	-
TO	M4-5	36" X 18"	2	120	-	-
SHIELD 43	M1-1	24" X 24"	17	1,020	-	-
SHIELD 94	M1-1	24" X 24"	15	900	-	-
SOUTH	M3-2	24" X 12"	17	1,020	-	-
EAST	M3-3	24" X 12"	15	900	-	-
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	14	840	-	-
AHEAD RIGHT TURN	M05-1R	21" X 21"	4	240	-	-
AHEAD LEFT TURN	M05-1l	21" X 21"	2	120	-	-
END DETOUR	M4-8A	24" X 18"	2	120		
POSTS	20		-	-	-	-
HOWARD AVE SB EXIT RAMP LEFT TURN RESTRICTION						
DETOUR AHEAD	W20-2A	48" X 48"	-	-	1	90
TO	M4-5	24" X 12"	3	270	-	-
TO	M4-5	36" X 18"	-	-	2	180
DETOUR	M4-8	24" X 12"	7	630	-	-
DETOUR	M4-8	36" X 18"	-	-	2	180
WEST	M3-4	24" X 12"	7	630	-	-
WEST	M3-5	36" X 18"	-	-	2	180
HOWARD AVE	M1-94	40" X 12"	7	630	-	-
HOWARD AVE	M1-94	60" X 18"	-	-	2	180
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	4	360	-	-
ARROW TILT RT OR LT	M06-2	30" X 30"	-	-	1	90
ARROW AHEAD & LEFT TILT	M05-2L	21" X 21"	1	90	-	-
ARROW AHEAD & RIGHT TILT	M05-2R	30" X 30"	-	-	1	90
AHEAD RIGHT TURN	M05-1R	21" X 21"	1	90	-	-
ARROW TILT RT OR LT	M06-2	21" X 21"	1	90	-	-
END DETOUR	M4-8A	24" X 18"	1	90	-	-
POSTS	11		-	-	-	-
WASHINGTON STREET PAINTING						
TO	M4-5	24" X 12"	2	42	-	-
SHIELD 43	M1-1	24" X 24"	2	42	-	-
SHIELD 94	M1-1	24" X 24"	2	42	-	-
ARROW RT OR LT OR AHEAD	M06-1	21" X 21"	2	42	-	-
POSTS	2					
SUBTOTAL				9,616		1,134
TOTAL				72,042		

* = ADDITIONAL QUANTITIES LISTED ELSEWHERE

ALL QUANTITIES ARE CATEGORY 1000 UNLESS NOTED

PROJECT NO: 1228-25-70 | HWY: IH 43 | COUNTY: MILWAUKEE | MISCELLANEOUS QUANTITIES | SHEET 278 E

PAVEMENT CLEANUP

	1228-25-70 SPV.0105.0001 LS
PROJECT	1
TOTAL	1

MOBILIZATIONS EMERGENCY PAVEMENT REPAIR

	SPV.0060.0001 EACH
PROJECT	10
TOTAL	10

CONCRETE CURB & GUTTER

LOCATION	204.0150 REMOVING CURB & GUTTER LF	601.0331 CONCRETE CURB & GUTTER 31-INCH LF	SPV.0090.0004 CONCRETE CURB & GUTTER INTEGRAL 31-INCH LF	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0452 CONCRETE CURB & GUTTER INTEGRAL 30-INCH TYPE D LF	601.0551 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A LF
NORTHBOUND						
BECHER/LAPHAM EXIT	1190	-	-	1190	-	-
BECHER/LAPHAM CD	3975	-	-	3975	-	-
NATIONAL ENTRANCE	-	-	-	1180	-	-
NATIONAL EXIT	-	-	-	1300	-	-
SOUTHBOUND						
HOWARD ENTRANCE RAMP	-	-	-	1419	-	274
HOWARD EXIT RAMP	-	-	-	936	-	762
BECHER/LAPHAM ENTRANCE	382	-	-	382	-	-
BECHER/LAPHAM CD	1000	-	-	1000	-	-
BECHER/LAPHAM CD	106	-	-	106	-	-
LAPHAM EXIT RAMP	232	-	-	232	-	-
HOLT AVENUE PARK & RIDE	880	-	-	880	-	-
OVERPASSES						
GREENFIELD AVENUE	-	241	95	-	-	-
LAPHAM BOULEVARD	-	60	124	-	-	-
MITCHELL STREET	-	219	-	-	-	-
MAPLE STREET	-	234	-	-	-	-
LINCOLN AVENUE	-	47	256	-	-	-
CHASE AVENUE	-	172	289	-	-	-
HOWARD AVENUE	1065	1144	185	-	-	-
BECHER CDS	-	-	-	-	630	-
BECHER CDN	-	-	-	-	234	-
TOTAL	8830	2117	949	12600	864	1036

TEMPORARY PAVEMENT MARKING

LOCATION	STAGE	649.0100 TEMPORARY PAVEMENT MARKINGS 4-INCH SOLID WHITE LF	DASH/DOT WHITE LF	SOLID YELLOW LF	DASH/DOT YELLOW LF	649.0400 TEMPORARY PAVEMENT MARKINGS REMOVABLE TAPE 4-INCH BLACK LF	649.0701 TEMPORARY PAVEMENT MARKINGS 8-INCH SOLID WHITE LF	DOT/DASH WHITE LF	649.1100 TEMPORARY PAVEMENT MARKING STOP LINE 18-INCH LF	649.1700 TEMPORARY PAVEMENT MARKING ARROWS TYPE 2 EACH	TYPE 3 EACH	649.1900 TEMPORARY PAVEMENT MARKING WORDS EACH
WASHINGTON STREET (EAST CONSTRUCTION)	1	-	-	2000	22	-	230	60	-	4	-	-
WASHINGTON STREET (WEST CONSTRUCTION)	1	-	-	2000	20	-	230	45	-	4	-	-
LINCOLN AVENUE REDECKING	1-2	90	-	-	0	-	-	-	-	1	-	1
MITCHELL STREET PAINTING		-	-	-	167	-	-	-	-	-	-	-
HOWARD AVENUE WB CONSTRUCTION	3	1685	-	2920	-	-	-	155	-	1	-	-
MAPLE STREET PAINTING		-	-	-	167	-	-	-	-	-	-	-
HOWARD AVENUE EB CONSTRUCTION	4	2125	-	3090	-	-	105	138	-	2	1	-
HOLT AVENUE NB ENTRANCE RAMP	3	-	-	-	-	120	-	-	-	-	-	-
NATIONAL AVENUE (DURING VALLEY PAINTING)	5	-	-	2400	-	-	90	26	60	2	-	-
TOTAL		3,900	0	12,410	376	120	655	424	60	14	1	1
		16,686					1,079			15		

PAVEMENT

LOCATION	STA	STA	204.0100 REMOVING PAVEMENT SY	204.0125 REMOVING ASPHALTIC SURFACE MILLING TON	204.0157 REMOVING CONCRETE BARRIER LF	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	311.0115 BREAKER RUN CY	320.0155 CONCRETE BASE 9-INCH SY	390.0303 BASE PATCHING CONCRETE SY	390.0403 BASE PATCHING CONCRETE SHES SY	415.0075 CONCRETE PAVEMENT 7 1/2-INCH SY	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	455.0115 ASPHALTIC MATERIAL PG64-22 TON	455.0140 PG64-28P TON	455.0605 TACK COAT GAL	460.1110 HMA PAVEMENT TYPE E-10 TON	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL	465.0125 ASPHALTIC SURFACE TEMPORARY TON	603.1142 CONCRETE BARRIER TYPE S42 LF	690.0250 SAWING CONCRETE LF	690.0150 SAWING ASPHALT LF
NORTHBOUND																									
BECHER/LAPHAM EXIT	278+00.00	287+00.00	-	564	-	312	106	-	-	560	-	-	-	-	745	1680	30	-	140	808	520	-	-	2352	55
BECHER/LAPHAM CD	299+00.00	327+00.00	-	1942	-	1074	365	-	-	1930	-	-	-	-	2517	5790	103	-	490	2786	1790	-	-	8106	100
NATIONAL ENTRANCE	10+00.00	16+00.00	1070	-	-	765	475	-	-	0	-	1070	-	-	472	75	-	-	-	-	-	-	-	75	-
NATIONAL EXIT	10+00.00	16+00.00	1175	-	-	855	521	-	-	0	-	1175	-	-	520	140	-	-	-	-	-	-	-	140	-
SOUTHBOUND																									
HOWARD ENTRANCE RAMP	644+50.00	654+46.00	1915	386	97	1324	851	-	-	0	-	1915	-	-	568	200	-	-	-	-	-	-	90	200	-
HOWARD EXIT RAMP	645+57.00	654+46.00	2485	500	-	1562	1103	-	-	0	-	2485	-	-	375	150	-	-	-	-	-	-	-	150	-
BECHER/LAPHAM ENTRANCE	280+00.00	287+00.00	-	435	-	242	83	-	-	435	-	-	-	-	364	1320	23	-	110	624	400	-	-	1848	55
BECHER/LAPHAM CD	294+00.00	315+00.00	-	1282	-	710	241	-	-	1275	-	-	-	-	1015	3840	68	-	320	1839	1180	-	-	5376	75
BECHER/LAPHAM CD	315+00.00	317+00.00	370	-	-	164	164	-	-	0	370	-	-	-	43	111	-	-	-	-	-	-	-	155	-
LAPHAM EXIT RAMP	318+00.00	330+00.00	-	573	-	318	108	-	-	570	-	-	-	-	367	1710	31	-	150	822	530	-	-	2394	50
HOLT AVENUE PARK & RIDE			2810	-	-	971	1923	-	-	565	-	-	2810	-	672	1996	-	-	-	-	-	22	-	2794	-
OVERPASSES																									
GREENFIELD AVENUE	33+60	103+22	791	-	-	327	-	-	-	-	499	-	-	233	10	126	-	-	-	-	-	-	-	360	-
LAPHAM BOULEVARD	133+54	202+86	820	-	-	304	-	-	-	-	565	-	-	198	33	174	-	-	-	-	-	-	-	302	-
MITCHELL STREET	299+59	303+09	466	-	-	193	-	-	-	-	246	-	-	153	10	138	-	-	-	-	-	-	-	345	-
MAPLE STREET	399+60	403+75	937	-	-	377	-	-	-	-	711	-	-	153	17	160	-	-	-	-	-	-	-	389	-
LINCOLN AVENUE	499+46	502+76	829	-	-	292	-	-	-	-	541	-	-	195	24	163	-	-	-	-	-	-	-	527	-
CHASE AVENUE	599+05	603+94	1132	-	-	538	-	-	-	-	801	-	-	521	92	154	-	-	-	-	-	-	-	491	-
HOWARD AVENUE	695+13	707+07	914	-	-	1187	-	-	-	-	-	-	599	180	546	143	-	-	-	-	-	244	-	634	-
BECHER CDS	1185+96	1197+54	247	159	-	35	-	33	-	-	-	-	-	60	276	4	-	11	44	168	-	-	-	670	-
BECHER CDN	1186+97	1199+47	132	80	-	51	-	72	-	-	-	-	-	59	128	5	-	5	23	87	-	-	-	329	-
STRUCTURE FILL (SEE EARTHWORK)			-	-	-	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UNDISTRIBUTED			-	-	-	-	-		100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL			16,093	5,921	97	11,687	5,940	105	100	5,335	3,733	6,645	3,409	1,752	8,794	18,079	255	16	1,277	7,134	4,420	266	90	27,637	335

* = ADDITIONAL QUANTITIES LISTED ELSEWHERE | ALL QUANTITIES ARE CATEGORY 1000 UNLESS NOTED

PAVEMENT MARKING

	646.0103	646.0106			646.0841.S	646.0843.S		SPV.0090.0001	SPV.0090.0002	SPV.0060.0004	SPV.0060.0005	SPV.0060.0006	647.0306	SPV.0060.0007	647.0206	647.0766	647.0566	647.0166	647.0356	646.0116	646.0126	647.0726	647.0746	SPV.0090.0003	647.0456
	PAINT 4-INCH SOLID YELLOW LF	EPOXY 4-INCH SOLID WHITE LF	EPOXY 4-INCH DASH WHITE	EPOXY 4-INCH SOLID YELLOW LF	GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH WHITE DASH/DOT LF	GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH WHITE SOLID LF	GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH WHITE DASH/DOT LF	GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH WHITE LF	GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH WHITE LF	GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 EACH	GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3 EACH	GROOVED PREFORMED THERMOPLASTIC RAISED ARROWS TYPE 4 EACH	SYMBOLS BIKE LANE EPOXY EACH	GROOVED PREFORMED THERMOPLASTIC WORDS EACH	ARROWS BIKE LANE EPOXY EACH	CROSS WALKS EPOXY 6-INCH WHITE LF	STOP LINE EPOXY 18-INCH LF	ARROWS EPOXY TYPE 2 EACH	WORDS EPOXY EACH	EPOXY 6-INCH WHITE LF	EPOXY 8-INCH WHITE LF	DIAGONAL EPOXY 12-INCH SOLID YELLOW LF	DIAGONAL EPOXY 24-INCH SOLID WHITE LF	CONTRAST EPOXY 7-INCH WHITE LF	CURB EPOXY YELLOW LF
IH 43 NORTHBOUND																									
BECHER & CD	-	3965	0	4505	0	1050	25	-	-	-	-	1	-		-	-	-	-	-	-	-	-	55	-	-
LAPHAM & CD	-	3180	0	3310	85	1850	105	70	-	2	2	1	-	2	-	-	-	-	-	-	-	-	-	-	-
NATIONAL ENTRANCE	-	590	0	580	0	-	-	-	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NATIONAL EXIT	-	630	0	595	0	55	-	30	60	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
KINNICKINNIC RIVER BRIDGE	-	315		315	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50		157	-
			0		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IH 43 SOUTHBOUND																									
HOWARD ENTRANCE RAMP	-	755	0	985	0	225	-	20	63	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
HOWARD EXIT RAMP	-		0	695	0	875	35	12	121	7	-	1	-	4	-	-	-	-	-	-	-	-	115	-	-
BECHER & CD	-	3065	0	3295	65	1065	115	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	-	-
LAPHAM & CD	-	1355	0	1455	190	365	80	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
LAPHAM EXIT RAMP	-	1160	0	1180	-	260	85	40	-	2	2	1	-	2	-	-	-	-	-	-	-	-	-	-	-
WISCONSIN AVE ENT RAMP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	145	-
KINNICKINNIC RIVER BRIDGE	-	315	-	315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	158	-
IH 43 OVERPASSES																									
GREENFIELD AVENUE	-	-	0	-	0	-	-	-	-	-	-	-	4	-	4	145	70	3	1	1265	252	-	-	-	-
LAPHAM BOULEVARD	-	450	120	450	0	-	-	-	-	-	-	-	4	-	4	-	83	2	-	-	182	-	-	-	-
MITCHELL AVENUE	-	-	20	825	0	-	-	-	-	-	-	-	4	-	4	-	73	-	-	623	250	30	-	-	-
MAPLE STREET	-	-	0	650	0	-	-	-	-	-	-	-	4	-	4	-	49	-	-	1296	-	-	-	-	-
LINCOLN AVENUE	-	620	0	565	0	-	-	-	-	-	-	-	-	-	-	-	80	3	1	-	225	-	-	-	-
CHASE AVENUE/STH 38	-	805	225	1050	0	-	-	-	-	-	-	-	-	-	-	125	-	-	-	-	-	-	-	-	-
HOWARD AVENUE	-	640	950	-	0	-	-	-	-	-	-	-	4	-	4	145	40	2	1	-	266	-	-	-	-
OTHER																									
HOLT AVENUE PARK & RIDE	-	-	60	1350	-	-	-	24	-	-	-	-	-	-	-	140	-	-	-	-	-	-	-	-	560
6TH STREET	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	18	-	-	-	-	-	-	-	-
HOWARD AVENUE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	455	-	-	-	-	535	-	-	-	-
NATIONAL AVENUE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	-	-	-	-	-	-	-	-	-
UUC PARKING LOT	4600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4600	17845	1375	22120	340	5745	445	231	308	11	4	9	20	8	20	1220	413	10	3	3184	1710	130	240	460	560
			41,340				6,190																		

GUARDRAIL

LOCATION	STA	STA		204.0165 REMOVING GUARDRAIL LF	614.0010 BARRIER SYSTEM GRADING, SHAPING, FINISHING EACH	614.2300 GUARDRAIL 3 LF	614.2340 GUARDRAIL 3 L LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 GUARDRAIL TERMINAL EAT EACH	614.2620 GUARDRAIL TERMINAL TYPE 2 EACH	*FOR INFORMATION ONLY* EXCAVATION COMMON CY	BORROW CY	SALVAGED TOPSOIL SY	FERTILIZER TYPE B CWT	SEEDING LB	MULCHING SY
NORTHBOUND																
LAPHAM/BECHER CD	1185+07	1187+74	RT	260	1	175.0	-	39.4	1	-	8	-	101	6.4	1.8	101
LAPHAM/BECHER CD	1185+82	1187+74	LT	180	1	100.0	-	39.4	1	-	6	-	76	4.8	1.4	76
SOUTHBOUND																
HOWARD ENTRANCE RAMP	645+38	647+94	LT	84	-	37.5	112.5	39.4	1	-	-	-	-	-	-	-
LAPHAM/BECHER CD	1184+23	1187+74	LT	330	1	337.5	-	39.4	-	1	-	10	116	7.3	2.1	116
LAPHAM/BECHER CD	1196+13	1197+52	LT	129	1	50.0	-	39.4	1	-	9	-	106	6.7	1.9	106
LAPHAM/BECHER CD	1196+13	1199+31	RT	316	1	280.0		39.4	-	-	-	5	58	3.6	1.0	58
TOTAL				1299	5	980.0	112.5	236.4	4	1						

UNDERDECK UTILITIES

LOCATION	SPV.0060.5000 INSTALL CONDUIT INTO EXISTING MANHOLE EACH	SPV.0090.5000 8-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60 LF	SPV.0090.5001 6-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60 LF	SPV.0090.5002 4-DUCT CONDUIT CEMENT ENCASED 4-INCH RIGID NONMETALLIC CONDUIT DB-60 LF	**SPV.0105.5000 UNDERDECK UTILITY STRUCTURE B-40-170 CITY OF MILWAUKEE CONDUIT LS	**SPV.0105.5001 UNDERDECK UTILITY STRUCTURE B-40-171 CITY OF MILWAUKEE CONDUIT LS	**SPV.0105.5002 UNDERDECK UTILITY STRUCTURE B-40-173 CITY OF MILWAUKEE CONDUIT LS	**SPV.0105.5003 UNDERDECK UTILITY STRUCTURE B-40-178 CITY OF MILWAUKEE CONDUIT LS	**SPV.0105.5004 UNDERDECK UTILITY STRUCTURE B-40-265 CITY OF MILWAUKEE CONDUIT LS
W GREENFIELD AVENUE	2	-	39	-	1	-	-	-	-
W HOWARD AVENUE	2	-	-	119	-	-	-	-	1
W LAPHAM BOULEVARD	2	-	-	23	-	1	-	-	-
W LINCOLN AVENUE	2	43	-	-	-	-	-	1	-
W MAPLE STREET	2	-	-	12	-	-	1	-	-
TOTAL	10	43	39	154	1	1	1	1	1

*CATEGORY 1500

* = ADDITIONAL QUANTITIES LISTED ELSEWHERE | ALL QUANTITIES ARE CATEGORY 1000 UNLESS NOTED

PROJECT NO: 1228-25-70 | HWY: IH 43 | COUNTY: MILWAUKEE | MISCELLANEOUS QUANTITIES | SHEET 280 | E

CLEARING AND GRUBBING

STATION	OFFSET	LOCATION	201.0105 CLEARING STA	201.0120 CLEARING ID	201.0205 GRUBBING STA	201.0220 GRUBBING ID	NOTES
102+00-103+00	LT	GREENFIELD	1	--	1	--	
704+62	RL	HOWARD	--	4	--	4	
705+16	RL	HOWARD	--	9	--	9	
SUBTOTAL			1	13	1	13	
PROJECT TOTAL			1	13	1	13	

TREES

STATION	OFFSET	LOCATION	632.0101.0001 TREES CERCIS CANADENSIS B&B 4-INCH	632.0101.0002 TREES GLEDITSIA TRICANTHOS "SUNBURST" B&B 4-INCH	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLE EACH	COMMON NAME
704+60	0' RT	HOWARD AVE	--	1	1	SUNBURST LOCUST
705+18	0' RT	HOWARD AVE	1	--	1	REDBUD
PROJECT TOTAL			1	1	2	

ADJUSTING TES MANHOLE COVERS

STATION	OFFSET	ROADWAY	SPV.0060.5003 ADJUSTING TES MANHOLE COVERS EACH	REMARKS
99+79.6	8.8' RT	GREENFIELD AVE	1	NEW COVER
102+95.4	8.6' RT	GREENFIELD AVE	1	NEW COVER
199+84.2	3.0' LT	LAPHAM AVE	1	NEW COVER
199+90.5	25.6' RT	LAPHAM AVE	1	NEW COVER
202+45.8	3.1' LT	LAPHAM AVE	1	NEW COVER
399+81.9	15.0' RT	MAPLE AVE	1	NEW COVER
403+12.8	16.0' RT	MAPLE AVE	1	NEW COVER
403+74.9	10.9' RT	MAPLE AVE	1	NEW COVER
499+64.6	16.1' RT	LINCOLN AVE	1	NEW COVER
502+60.6	15.9' RT	LINCOLN AVE	1	NEW COVER
699+60.6	23.3' RT	HOWARD AVE	1	NEW COVER
703+40.2	37.0' LT	HOWARD AVE	1	NEW COVER
SUBTOTAL			12	
PROJECT TOTAL			12	

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

WATER ADJUSTMENTS

STATION	OFFSET	LOCATION	SPV.0060.5001 ADJUSTING WATER VALVE BOXES EACH
98+76.53	26.1' RT	GREENFIELD AVE	1
99+73.83	25.9' RT	GREENFIELD AVE	1
99+74.16	20.5' RT	GREENFIELD AVE	1
99+80.27	23.6' RT	GREENFIELD AVE	1
103+15.29	37.0' RT	GREENFIELD AVE	1
103+17.46	34.1' RT	GREENFIELD AVE	1
199+55.38	27.2' LT	LAPHAM AVE	1
202+79.42	27.2' LT	LAPHAM AVE	1
399+80.49	36.2' RT	MAPLE AVE	1
403+31.34	31.9' LT	MAPLE AVE	1
403+34.17	28.3' LT	MAPLE AVE	1
403+45.46	26.9' LT	MAPLE AVE	1
403+52.51	12.4' LT	MAPLE AVE	1
403+52.56	32.0' LT	MAPLE AVE	1
403+53.23	35.2' RT	MAPLE AVE	1
403+55.98	37.7' RT	MAPLE AVE	1
403+59.07	33.1' LT	MAPLE AVE	1
499+41.40	41.2' LT	LINCOLN AVE	1
499+47.60	2.1' LT	LINCOLN AVE	1
499+51.78	4.4' LT	LINCOLN AVE	1
699+55.27	26.1' LT	HOWARD AVE	1
699+59.70	26.0' LT	HOWARD AVE	1
SUBTOTAL			22
PROJECT TOTAL			22

UTILITY LINE OPENING

LOCATION	SPV.0060.5004 EXPOSING EXISTING UTILITY PAVED AREA EACH	SPV.0060.5005 EXPOSING EXISTING UTILITY UNPAVED AREA EACH
GREENFIELD	4	--
LAPHAM	4	--
MITCHELL	4	--
MAPLE	4	--
LINCOLN	4	--
CHASE	4	--
HOWARD	4	--
BECHER CDS	4	--
BECHER CDN	4	--
UNDISTRIBUTED	--	4
PROJECT TOTAL	36	4

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP (EA)	634.0618 WOOD POSTS 4"X 6"x18' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	J1-1 (2S)	--	24	x	39	6.500	--	--	1	1	1	--	--	--
	M2-1	--	21	x	15	--	--	--	--	--	--	--	--	--
	M1-6	59	24	x	24	--	--	--	--	--	--	--	--	--
2	R1-1 (3)	--	36	x	36	9.000	--	--	1	1	1	--	--	--
3	R1-1 (3)	--	36	x	36	9.000	--	--	1	1	1	--	--	--
4	R1-1 (3)	--	36	x	36	9.000	--	--	1	1	1	--	--	--
5	R1-3 (3)	--	30	x	12	2.500	--	--	1	--	--	--	4	--
6	R1-1 (3)	--	36	x	36	9.000	--	--	1	1	1	--	--	--
7	R1-3 (3)	--	30	x	12	2.500	--	--	1	--	--	--	6	--
8	J2-1 (2S)	--	24	x	57	9.500	--	--	1	--	--	--	--	ON LIGHT POLE
	M4-5	--	24	x	12	--	--	--	--	--	--	--	--	--
	M1-6	59	24	x	24	--	--	--	--	--	--	--	--	--
	M5-1R	--	21	x	21	--	--	--	--	--	--	--	--	--
9	NONE	HARLEY DAVIDSON MUSEUM	--	x	--	--	--	--	--	2	2	1	--	--
10	D4-2 (2)	--	30	x	36	7.500	--	--	1	1	1	--	--	--
11	D1-3	WALKER ST - NATIONAL AVE 9TH STREET	90	x	36	22.500	--	--	1	2	2	--	--	--
12	R6-2L (2S)	--	24	x	30	5.000	--	--	1	--	--	--	4	--
13	R5-1 (3)	--	36	x	36	9.000	--	--	1	--	--	--	11	--
14	R5-1A	--	--	x	--	--	--	--	--	--	--	1	11	MOUNT AT 3' FROM GROUND
15	R4-7 (2S)	--	24	x	30	5.000	--	--	1	--	--	--	6	--
16	W5-52L (2S)	--	12	x	36	--	3.000	--	1	--	--	--	6	--
17	R5-1A	--	--	x	--	--	--	--	--	--	--	1	6	MOUNT AT 3' FROM GROUND
18	R5-1A (3)	--	42	x	30	8.750	--	--	1	1	1	--	--	--
19	R5-1A (3)	--	42	x	30	8.750	--	--	1	1	1	--	--	--
20	R5-57 (5)	--	36	x	36	9.000	--	--	1	--	--	--	--	ON LIGHT POLE
21	D13-3	--	--	x	--	--	--	--	--	2	2	1	--	--
22	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
23	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--

PROJECT NO: 1228-25-70	HWY: IH-43/94	COUNTY: MILWAUKEE	PERMANENT SIGNING QUANTITIES	SHEET:	E

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP (EA)	634.0618 WOOD POSTS 4"X 6"x18' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
24	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
25	M1-94 MOD	GREENFIELD AVE ...	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
26	M1-94 MOD	GREENFIELD AVE ...	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
27	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
28	R4-7 (2S)	--	24	x	30	5.000	--	--	1	1	1	--	--	--
29	W5-52L (2S)	--	12	x	36	--	3.000	--	1	--	--	--	28	--
30	M1-94 MOD	LAPHAM AVE ...	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
31	M1-94 MOD	LAPHAM AVE ...	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
32	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
33	M1-94 MOD	MITCHELL AVE ...	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
34	M1-94 MOD	MITCHELL AVE ...	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
35	M1-94 MOD	MAPLE ST ...	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
36	M1-94 MOD	MAPLE ST ...	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
37	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
38	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
39	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
40	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
41	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
42	M1-94 MOD	LINCOLN AVE ..	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
43	M1-94 MOD	LINCOLN AVE ..	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
44	M1-94	CHASE AVE	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
45	M1-94	CHASE AVE	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
46	J2-1 (2S)	--	24	x	81	13.500	--	--	1	--	--	--	--	ON LIGHT POLE ON BRIDGE ABOVE FENCE
	MB4-5	--	24	x	12	--	--	--	--	--	--	--	--	--
	M1-1	43	24	x	24	--	--	--	--	--	--	--	--	--
	M1-1	94	24	x	24	--	--	--	--	--	--	--	--	--
	MB5-1L	--	21	x	21	--	--	--	--	--	--	--	--	--
47	J3-1 (2S)	--	24	x	81	13.500	--	--	1	--	--	--	--	ON LIGHT POLE ON BRIDGE ABOVE FENCE
	MB4-5	--	24	x	12	--	--	--	--	--	--	--	--	--
	M1-1	43	24	x	24	--	--	--	--	--	--	--	--	--
	M1-1	94	24	x	24	--	--	--	--	--	--	--	--	--
	MB6-1	LEFT ARROW	21	x	21	--	--	--	--	--	--	--	--	--

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP (EA)	634.0618 WOOD POSTS 4"X 6"x18' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
48	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
49	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
50	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
51	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
52	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
53	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
54	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
55	R11-54F	--	48	x	30	--	--	10.000	--	--	2	--	--	--
56	M1-94 MOD	HOWARD AVE ...	--	x	--	--	--	--	--	--	--	1	--	REMOVE AND REINSTALL ON BRIDGE - BRACKETS INCIDENTL
57	R10-10R	--	24	x	30	5.000	--	--	1	--	--	--	--	ON SIGNAL POLE
58	W12-1D (2S)	--	24	x	24	--	4.000	--	1	--	--	--	57	ON SIGNAL POLE
59	R5-1A	--	--	x	--	--	--	--	--	--	--	1	60	--
60	M1-94	--	--	x	--	--	--	--	--	2	2	1	--	--
61	R10-6	--	--	x	--	--	--	--	--	--	--	1	--	ON SIGNAL POLE
62	R10-6L	--	--	x	--	--	--	--	--	--	--	1	--	ON SIGNAL POLE
63	R11-54F	--	--	x	--	--	--	--	--	2	2	1	--	--
64	R11-54F	--	--	x	--	--	--	--	--	2	2	1	--	--
65	R5-57 (5)	--	--	x	--	--	--	--	--	--	--	1	--	ON LIGHT POLE
66	R3-8	--	--	x	--	--	--	--	--	--	--	1	--	ON FLASHER POLE
67	D13-3	--	--	x	--	--	--	--	--	2	2	1	--	--
68	J3-1	SOUTH IH43-US41/EAST IH94	--	x	--	--	--	--	--	2	2	1	--	--
69	J3-1 (2S)	--	48	x	57	19.000	--	--	1	--	2	--	--	EXISTING ON LIGHT POLE
	MB3-1	--	24	x	12	--	--	--	--	--	--	--	--	--
	M1-1	43	24	x	24	--	--	--	--	--	--	--	--	--
	MB6-1	RIGHT ARROW	21	x	21	--	--	--	--	--	--	--	--	--
	MB3-3	--	24	x	12	--	--	--	--	--	--	--	--	--
	M1-1	94	24	x	24	--	--	--	--	--	--	--	--	--
	MB6-1	RIGHT ARROW	21	x	21	--	--	--	--	--	--	--	--	--
		--	--	x	--	--	--	--	--	--	--	--	--	--
		--	--	x	--	--	--	--	--	--	--	--	--	--
		--	--	x	--	--	--	--	--	--	--	--	--	--
	TOTALS					189	10	180	24	25	63	27	--	--

ESTIMATE OF QUANTITIES-TRAFFIC SIGNALS

PROJECT ID. 1228-25-70

CATEGORY CODE 1500

MILWAUKEE COUNTY

Std.Bid Item No.	Description	Unit	Quantity
652.0220	Conduit Rigid Nonmetallic Schedule 40 1 1/2-Inch	LF	15
652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	550
652.0230	Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	LF	1,140
652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	4,415
652.0615	Conduit Special 3-Inch	LF	490
654.0110	Concrete Bases Type 10	Each	14
SPV.0060.3000	Pre-Cast Traffic Signal Bases	Each	14
SPV.0060.3001	Poles Type 9	Each	6
SPV.0060.3002	Poles Type 10	Each	8
SPV.0060.3003	Poles Type 13 Special	Each	9
SPV.0060.3004	Poles Type 12 Special	Each	1
SPV.0060.3005	Monotube Arms 25-FT	Each	5
SPV.0060.3006	Monotube Arms 30-FT	Each	9
SPV.0060.3007	Monotube Arms 35-FT	Each	7
SPV.0060.3008	Monotube Arms 40-FT	Each	3
SPV.0060.3009	Concrete Bases Type 10 Special	Each	10
SPV.0060.3010	Rectangular Polymer Concrete Vault 17x30x18-Inch	Each	68

FTMS REMOVALS

CATEGORY 1300

ROADWAY	ITEM ID	LOCATION	204.0195 REMOVING CONCRETE BASES EACH	674.0300 REMOVE CABLE L.F.	SPV.0060.2004 REMOVING RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT EACH	SPV.0060.2005 REMOVING CONTROLLER CABINET EACH	SPV.0060.2006 REMOVING CONTROLLER CABINET BASE EACH
IH 43 / 94							
	EXSBHOW01	HOWARD AVE.	1	--	1	--	--
	EXSBHOW02		1	--	1	--	--
	EXPBHOW03 - EXCBRM-40-0054		--	600	--	--	--
	EXSBBEC01		--	--	1	--	--
	EXSBBEC02		--	--	1	--	--
	EXCB-RM-40-0028		--	--	--	1	1
	EXPBBEC01 - EXCB-RM-40-0029		--	10	--	--	--
	EXFYBEC01 - EXPBBEC01		--	950	--	--	--
	EXCB-RM-40-0029 - EXPBBEC01		--	380	--	--	--
	EXSBBEC03 - EXPBBEC03		--	40	--	--	--
	EXPBBEC03 - EXPBBEC01		--	30	--	--	--
	EXSBBEC04 - EXPBBEC03		--	10	--	--	--
	EXSBBEC02 - EXPBBEC06		--	40	--	--	--
	EXSBBEC01 - EXPBBEC06		--	10	--	--	--
	EXPBBEC07 - EXCB-RM-40-0029		--	10	--	--	--
	EXPBBEC06 - EXPBBEC07		--	20	--	--	--
	EXSBLAP01	LAPHAM BLVD.	--	--	1	--	--
	EXSBLAP02	NB ON-RAMP	--	--	1	--	--
	EXSBLAP03		--	--	1	--	--
	EXSBLAP04		--	--	1	--	--
	EXFYLAP02 - EXPBLAP02		--	10	--	--	--
	EXFYLAP01 - EXPBLAP02		--	35	--	--	--
	EXPBLAP02 - EXPBLAP06		--	625	--	--	--
	EXPBLAP06 - EXCB-RM-40-0056		--	10	--	--	--
	EXFYLAP04 - EXPBLAP06		--	10	--	--	--
	EXFYLAP03 - EXPBLAP06		--	45	--	--	--
	EXSBLAP02 - EXPBLAP07		--	10	--	--	--
	EXSBLAP01 - EXPBLAP07		--	35	--	--	--
	EXPBLAP07 - EXPBLAP06		--	210	--	--	--
	EXCB-RM-40-0057 - EXPBLAP07		--	175	--	--	--
TOTALS			2	3265	8	1	1

FTMS LUMP SUM ITEMS

CATEGORY 1300

CATEGORY	ROADWAY	LOCATION	670.0100 FIELD SYSTEM INTEGRATOR LS	670.0200 ITS DOCUMENTATION LS
1300	IH 43 / 94			
		PROJECT	1	1
	TOTAL		1	1

FTMS MISCELLANEOUS QUANTITIES

CATEGORY 1300

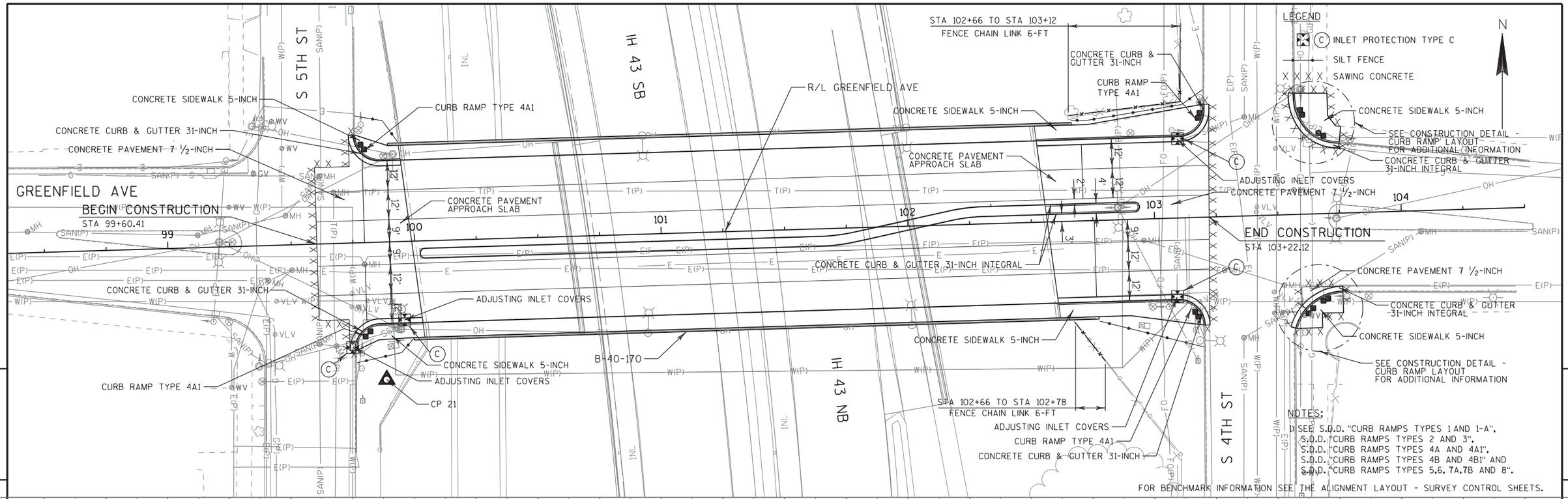
ROADWAY	ITEM ID	LOCATION	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	654.0101 CONCRETE BASES TYPE 1 EACH	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	674.0400 REINSTALL CABLE L.F.	676.0100 SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT EACH	SPV.0060.2000 WIRELESS TRAFFIC SENSOR EACH	SPV.0060.2001 WIRELESS TRAFFIC SENSOR ACCESS POINT EACH	SPV.0060.2002 WIRELESS TRAFFIC SENSOR CONTACT CLOSURE MODULE EACH	SPV.0060.2003 WIRELESS TRAFFIC SENSOR CONTACT CLOSURE EXTENSION MODULE EACH	SPV.0060.2007 REFOCUS MICROWAVE VEHICLE DETECTOR ASSEMBLY EACH
IH 43 / 94														
	SBHOW01	HOWARD AVE.	--	1	--	--	--	--	1	3	1	--	--	--
	SBHOW01 - EXPBHOW01	SB ON-RAMP	10	--	--	15	--	--	--	--	--	--	--	--
	SBHOW02		--	1	--	--	--	--	1	--	--	--	--	--
	SBHOW02 - EXPBHOW02		10	--	--	10	--	--	--	--	--	--	--	--
	EXPBHOW01 - EXPBHOW02		70	--	--	35	--	--	--	--	--	--	--	--
	EXPBHOW01 - EXPBHOW04		--	--	--	210	--	--	--	--	--	--	--	--
	EXPBHOW04 - EXPBHOW05		--	--	--	120	--	--	--	--	--	--	--	--
	EXPBHOW05 - EXPBHOW06		--	--	--	175	--	--	--	--	--	--	--	--
	EXPBHOW06 - EXCB-RM-40-0054		--	--	--	25	--	--	--	--	--	--	--	--
	EXCB-RM-40-0054		--	--	--	--	--	--	--	1	--	1	--	--
	G40-76 - EXPBHOW99	NB ON-RAMP	10	--	--	--	--	--	--	--	--	--	--	--
	G40-79 - EXPBHOL02	HOLT AVE.	10	--	--	--	--	--	--	--	--	--	--	--
	G40-80 - EXPBHOL02	SB ON-RAMP	10	--	--	--	--	--	--	--	--	--	--	--
	G40-77 - PBHOL01	NB ON-RAMP	10	--	--	--	--	--	--	--	--	--	--	--
	PBHOL01 - EXPBHOL01		100	--	--	--	--	--	--	--	--	--	--	--
	G40-78 - EXPBHOL01		10	--	--	--	--	--	--	--	--	--	--	--
	SBBEC01	BECHER ST.	--	--	--	--	--	--	1	--	--	1	--	--
	SBBEC02	SB ON-RAMP	--	--	--	--	--	--	1	6	1	--	--	--
	EXCB-RM-40-0029		--	--	--	--	--	--	--	--	--	1	4	--
	EXCB-RM-40-0029 - SBBEC04		--	--	--	390	--	--	--	--	--	--	--	--
	SBBEC04 - SBBEC03		--	--	--	70	--	--	--	--	--	--	--	--
	EXCB-RM-40-0029 - EXFYBEC01		--	--	1400	--	--	--	--	--	--	--	--	--
	G40-81 - EXPBBEC05		10	--	--	--	--	--	--	--	--	--	--	--
	G40-82	NB ON-RAMP	10	--	--	--	--	--	--	--	--	--	--	--
	EXFYLAP02	LAPHAM BLVD.	--	--	--	--	--	--	--	2	2	--	--	--
	G40-84	SB ON-RAMP	10	--	--	--	--	--	--	--	--	--	--	--
	EXCB-RM-40-0057 - EXFYLAP05	NB ON-RAMP	--	--	160	--	--	--	--	--	--	--	--	--
	EXFYLAP05 - EXFYLAP04		--	--	250	--	--	--	--	--	--	--	--	--
	EXFYLAP04 - EXFYLAP03		--	--	50	--	--	--	--	--	--	--	--	--
	EXFYLAP03 - EXFYLAP02		--	--	680	--	--	--	--	--	--	--	--	--
	EXFYLAP02 - EXFYLAP01		--	--	25	--	--	--	--	--	--	--	--	--
	SBLAP01		--	--	--	--	--	--	1	--	--	--	--	--
	SBLAP02		--	--	--	--	--	--	1	--	--	--	--	--
	SBLAP03		--	--	--	--	--	--	1	--	--	--	--	--
	SBLAP04		--	--	--	--	--	--	1	--	--	--	--	--
	EXPBLAP07 - EXCBRM-40-0057		--	--	--	--	--	360	--	--	--	--	--	--
	EXPBLAP13 - EXCB-RM-40-0057		--	--	--	--	--	410	--	--	--	--	--	--
	EXPBLAP06 - EXCB-RM-40-0057		--	--	--	--	225	--	--	--	--	--	--	--
	G40-83 - EXPBLAP10		10	--	--	--	--	--	--	--	--	--	--	--
	G40-87 - PBWAL01	WALKER ST.	10	--	--	--	--	--	--	--	--	--	--	--
	PBWAL02 - PBWAL01	NB ON-RAMP	260	--	--	--	--	--	--	--	--	--	--	--
		MINERAL ST.		--	--	--	--	--	--	--	--	--	--	--
	G40-85 - EXPBMIN01	SB ON-RAMP	230	--	--	--	--	--	--	--	--	--	--	--
	G40-86 - PBMIN02	NB ON-RAMP	10	--	--	--	--	--	--	--	--	--	--	--
	PBMIN02 - EXPBMIN02		60	--	--	--	--	--	--	--	--	--	--	--
	UNDISTRIBUTED		--	--	--	--	--	--	--	--	--	--	--	20
TOTALS			850	2	2565	1050	225	770	8	12	4	3	4	20

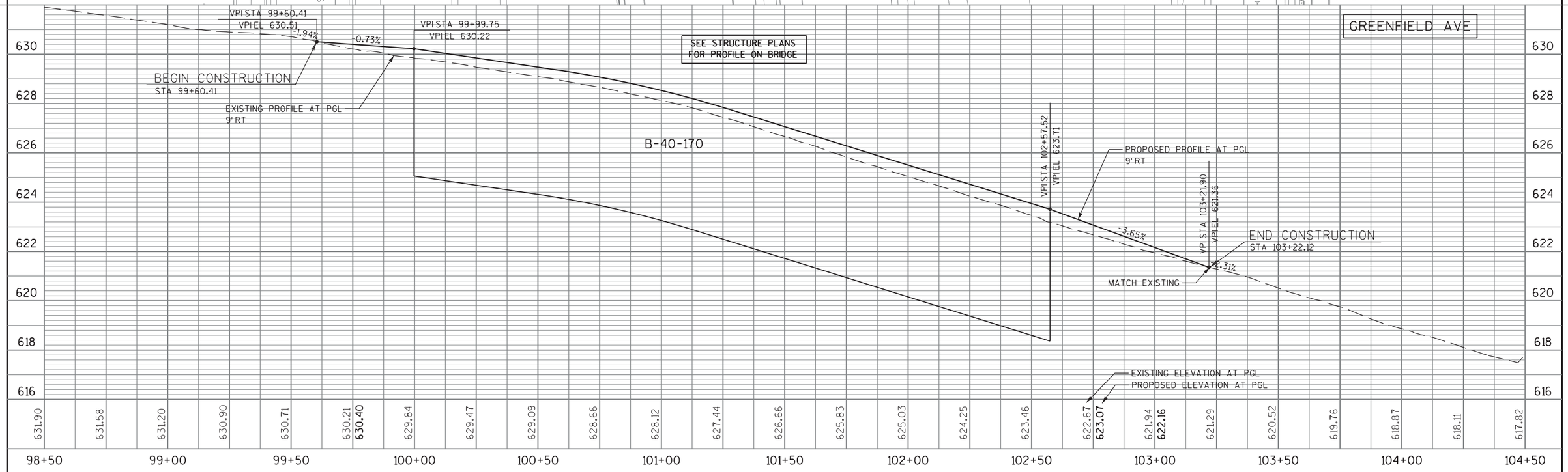
3

RAMP GATE QUANTITIES

CATEGORY 1300

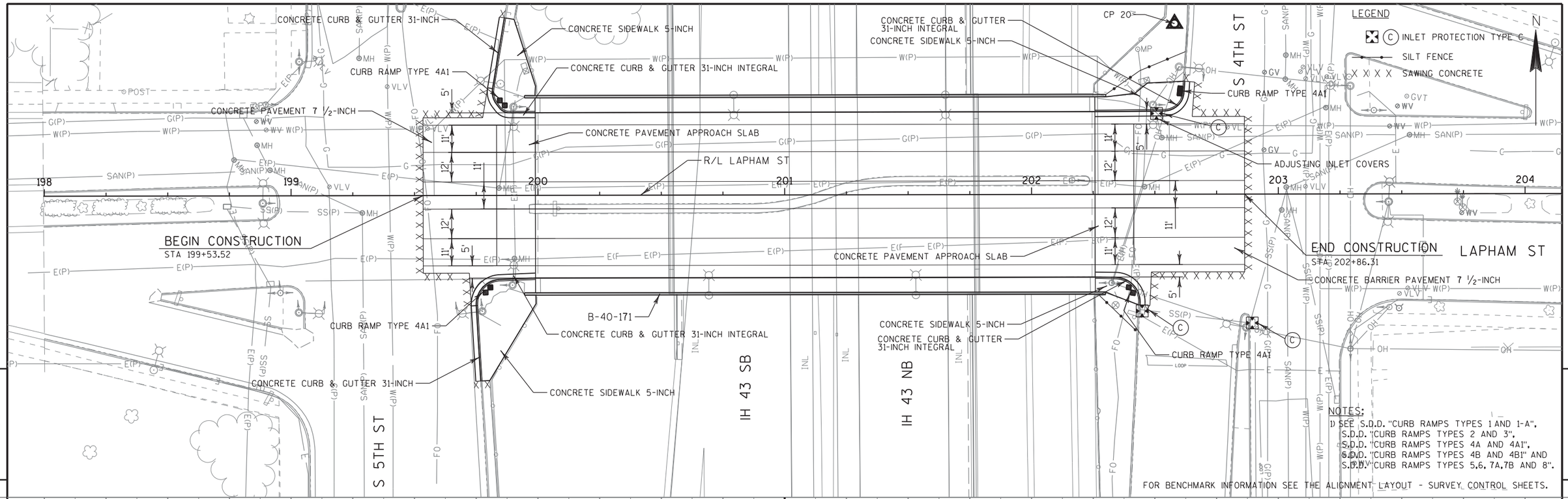
ROADWAY	ITEM ID	LOCATION	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	653.0135 PULL BOXES STEEL 24X36-INCH EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0220 CONCRETE CONTROL CABINET BASES TYPE 10 EACH	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED LF	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT EACH	662.1026.S RAMP CLOSURE GATES HARDWIRED 26-FT EACH	662.1032.S RAMP CLOSURE GATES HARDWIRED 32-EAFT EACH	662.1037.S RAMP CLOSURE GATES HARDWIRED 37-FT EACH	662.1040.S RAMP CLOSURE GATES HARDWIRED 40-FT EACH	662.2037.S RAMP CLOSURE GATES SOLAR 37-FT EACH
IH 43 / 94															
	G40-76	HOWARD AVE.	--	--	1	--	--	--	1	--	1	--	--	--	--
	EXPBHOW99	NB	1	--	--	--	--	--	--	--	--	--	--	--	--
	G40-76 - EXCB-CCTV-40-0079		--	--	--	--	50	--	--	--	--	--	--	--	--
	G40-79	HOLT AVE.	--	--	1	--	--	--	1	--	1	--	--	--	--
	G40-80	SB	--	--	1	--	--	--	1	--	1	--	--	--	--
	EXPBHOL02		2	--	--	--	--	--	--	--	--	--	--	--	--
	G40-79 - EXPBHOL02		--	--	--	--	20	--	--	--	--	--	--	--	--
	G40-80 - EXPBHOL02		--	--	--	--	20	--	--	--	--	--	--	--	--
	EXPBHOL02 - EXCB-RM-40-0055		--	--	--	--	300	--	--	--	--	--	--	--	--
	G40-77	NB	--	--	1	--	--	--	1	--	--	--	1	--	--
	G40-78		--	--	1	--	--	--	1	--	--	--	--	1	--
	G40-78 - EXPBHOL01		--	--	--	--	10	--	--	--	--	--	--	--	--
	G40-77 - EXPBHOL01		--	--	--	--	110	--	--	--	--	--	--	--	--
	EXPBHOL01 - EXCB-RM-40-0018		--	--	--	--	350	--	--	--	--	--	--	--	--
	EXPBHOL01		2	--	--	--	--	--	--	--	--	--	--	--	--
	PBHOL01		--	1	--	--	--	--	--	--	--	--	--	--	--
	G40-81	BECHER ST.	--	--	1	--	--	--	1	--	1	--	--	--	--
	EXPBBEC05	SB	1	--	--	--	--	--	--	--	--	--	--	--	--
	G40-81 - EXCB-RM-40-0029		--	--	--	--	300	--	--	--	--	--	--	--	--
	G40-82	NB	--	--	1	1	--	1	1	1	--	--	--	--	1
	G40-84	LAPHAM BLVD. SB	--	--	1	1	--	1	1	1	--	--	--	--	1
	G40-83	LAPHAM BLVD. NB	--	--	1	--	--	--	1	--	1	--	--	--	--
	G40-83 - EXCB-RM-40-0057		--	--	--	--	150	--	--	--	--	--	--	--	--
	EXPBLAP10		1	--	--	--	--	--	--	--	--	--	--	--	--
	G40-85	MINERAL ST. SB	--	--	1	--	--	--	1	--	--	1	--	--	--
	EXPBMIN01		1	--	--	--	--	--	--	--	--	--	--	--	--
	G40-85 - EXCB-RM-40-0027		--	--	--	--	375	--	--	--	--	--	--	--	--
	G40-87	WALKER ST. NB	--	--	1	--	--	--	1	--	--	1	--	--	--
	PBWAL01		--	1	--	--	--	--	--	--	--	--	--	--	--
	PBWAL02		--	1	--	--	--	--	--	--	--	--	--	--	--
	G40-87 - EXCB-CCTV-40-0017		--	--	--	--	425	--	--	--	--	--	--	--	--
	G40-86	MINERAL ST. NB	--	--	1	--	--	--	1	--	--	1	--	--	--
	EXPBMIN02		1	--	--	--	--	--	--	--	--	--	--	--	--
	G40-86 - EXCB-RM-40-0058		--	--	--	--	100	--	--	--	--	--	--	--	--
TOTALS			9	3	12	2	2210	2	12	2	5	3	1	1	2

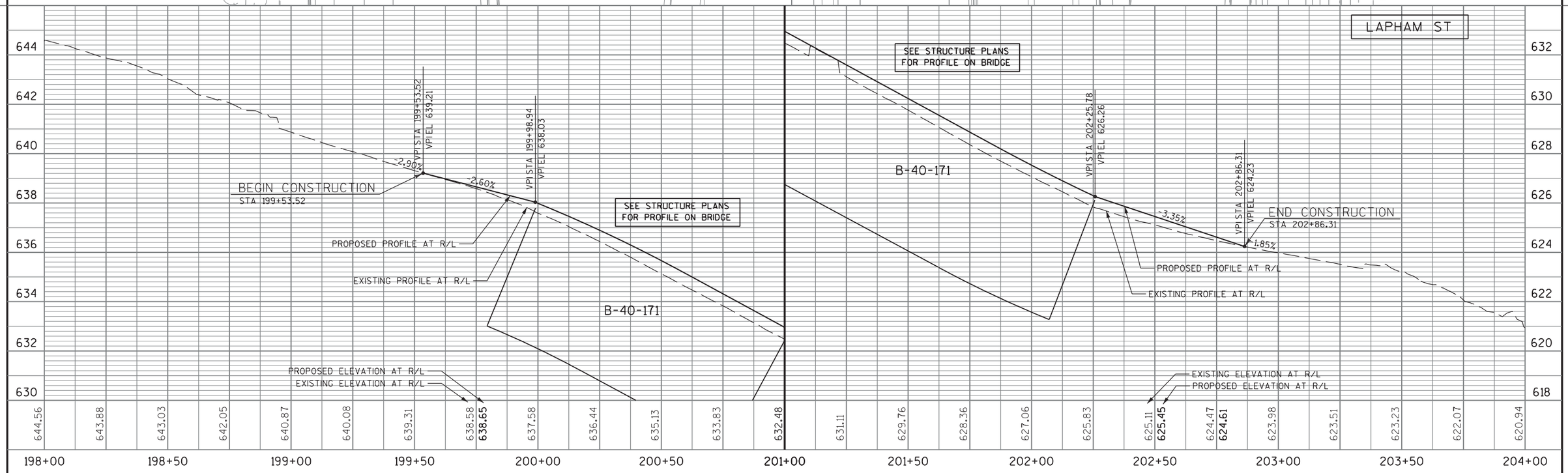




PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: GREENFIELD AVE	SHEET 290	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\050101_pp.dgn
PLOT DATE : 1/28/2014
PLOT BY : wally_w
PLOT NAME :
PLOT SCALE : 1:39.9999
WISDOT/CADDS SHEET 30





PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: LAPHAM ST	SHEET 291 E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\050102_pp.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:40

NOTES:

1) SEE S.D.D. "CURB RAMPS TYPES 1 AND 1-A",
S.D.D. "CURB RAMPS TYPES 2 AND 3",
S.D.D. "CURB RAMPS TYPES 4A AND 4A1",
S.D.D. "CURB RAMPS TYPES 4B AND 4B1" AND
S.D.D. "CURB RAMPS TYPES 5,6, 7A,7B AND 8".

N

S 5TH ST

IH 43 SB

IH 43 NB

S 4TH ST

MITCHELL ST

R/L MITCHELL ST

CURB RAMP TYPE 1
CONCRETE SIDEWALK 5-INCH
CONCRETE CURB & GUTTER 31-INCH
CONCRETE PAVEMENT 7 1/2-INCH
CONCRETE PAVEMENT APPROACH SLAB
CURB RAMP TYPE 4A1
ADJUSTING INLET COVERS

BEGIN CONSTRUCTION
STA 299+59.53

END CONSTRUCTION
STA 303+08.74

B-40-172

LEGEND

- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- SILT FENCE
- X X X X SAWING CONCRETE

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT - SURVEY CONTROL SHEETS.

VPISTA 299+59.53
VPIEL 637.26
-2.05%

VPISTA 299+98.68
VPIEL 636.75

SEE STRUCTURE PLANS FOR PROFILE ON BRIDGE

VPISTA 302+75.18
VPIEL 630.89

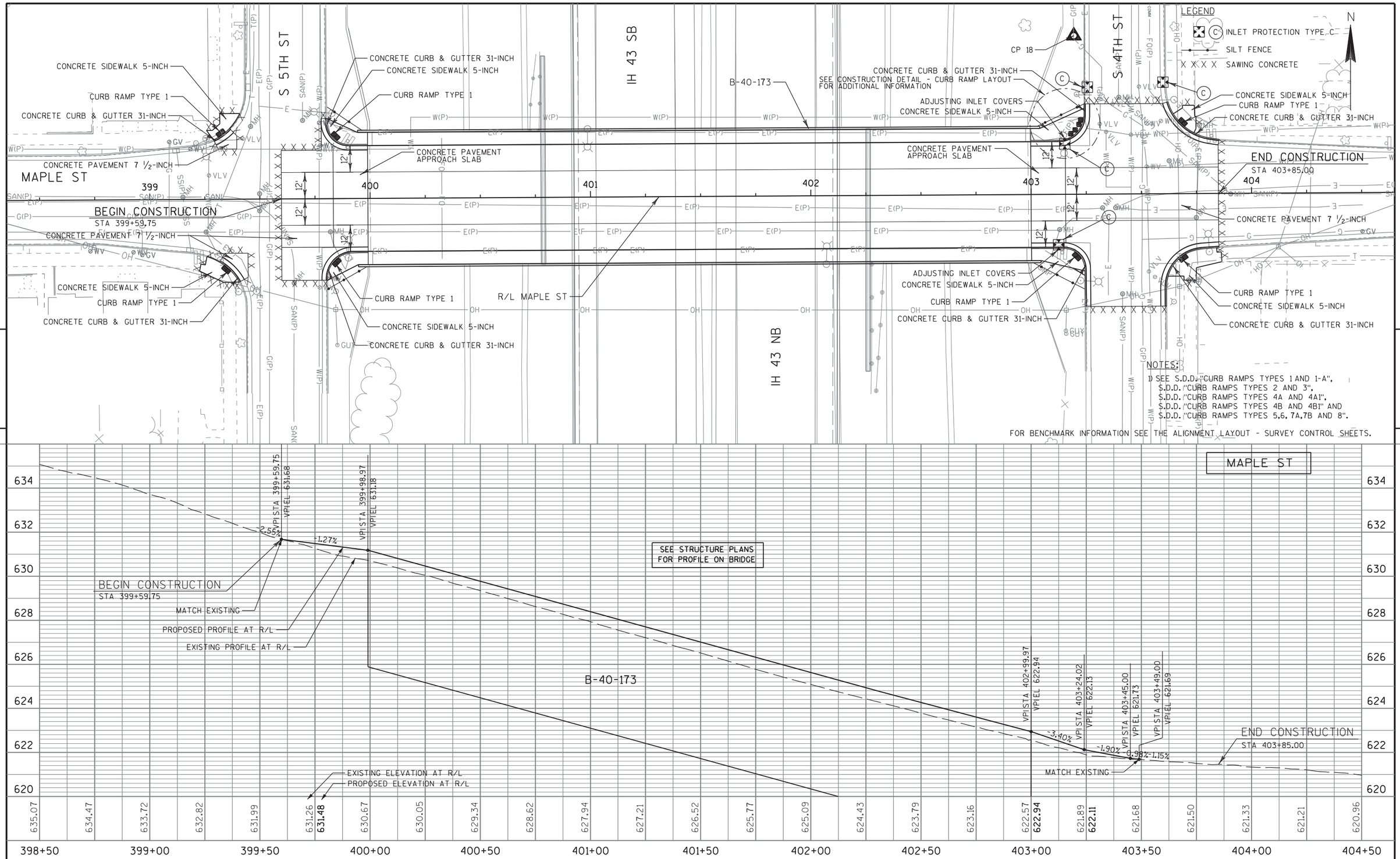
VPISTA 303+08.74
VPIEL 629.94

-2.83%
-2.49%

PROPOSED PROFILE AT R/L
EXISTING PROFILE AT R/L
EXISTING ELEVATION AT R/L
PROPOSED ELEVATION AT R/L

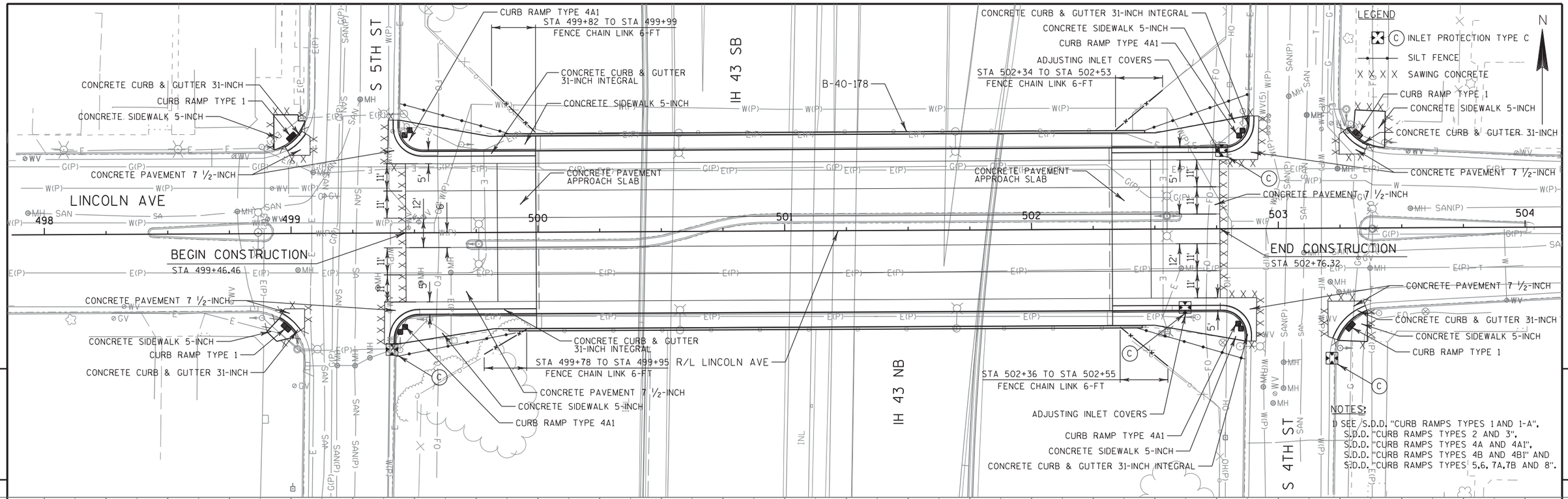
640.04	639.57	638.98	637.93	637.46	636.96	636.43	635.88	635.31	634.74	634.21	633.69	633.19	632.67	632.15	631.64	631.15	630.69	630.17	**630.19**	629.53	628.98	628.30	627.68	626.93	625.98
298+50	299+00	299+50	300+00	300+50	301+00	301+50	302+00	302+50	303+00	303+50	304+00	304+50													

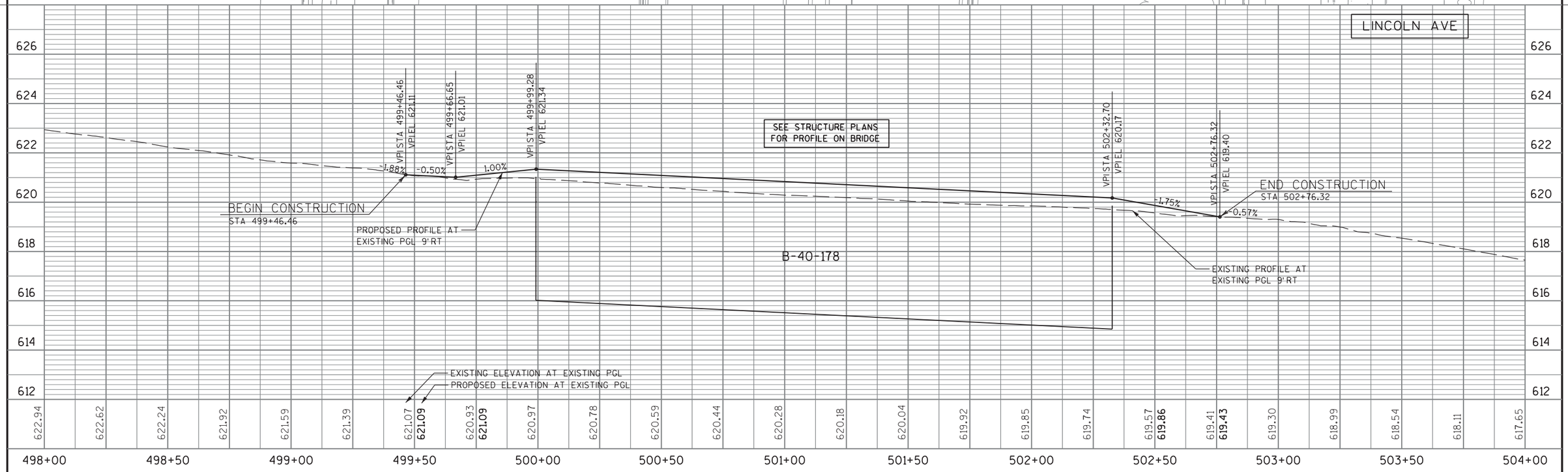
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: MITCHELL STREET	SHEET 292	E



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: MAPLE STREET	SHEET 293 E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\050104_pp.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:39.9999
WISDOT/CADDS SHEET 30





PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: LINCOLN AVE	SHEET 294 E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\050105_pp.dgn
PLOT DATE : 1/28/2014
PLOT BY : wally_w
PLOT NAME :
PLOT SCALE : 1:39.9999
WISDOT/CADDS SHEET 30

NOTES:

1) SEE S.D.D. "CURB RAMPS TYPES 1 AND 1-A", S.D.D. "CURB RAMPS TYPES 2 AND 3", S.D.D. "CURB RAMPS TYPES 4A AND 4A1", S.D.D. "CURB RAMPS TYPES 4B AND 4B1" AND S.D.D. "CURB RAMPS TYPES 5,6, 7A,7B AND 8".

LEGEND

- (C) INLET PROTECTION TYPE C
- SILT FENCE
- X X X X SAWING CONCRETE

CURB RAMP TYPE 4A1
CONCRETE CURB & GUTTER 31-INCH INTEGRAL
ADJUSTING INLET COVERS
STA 598+69 TO STA 598+89
FENCE CHAIN LINK 6-FT
CONCRETE SIDEWALK 5-INCH
CONCRETE PAVEMENT 7 1/2-INCH
BEGIN CONSTRUCTION
STA 598+90.63
ADJUSTING INLET COVERS
IH 43 SB
IH 43 NB
CHASE AVE
599
600
601
602
603
604
CONCRETE PAVEMENT APPROACH SLAB
CONCRETE CURB & GUTTER 31-INCH
CONCRETE SIDEWALK 5-INCH
STA 600+15 TO STA 600+29
FENCE CHAIN LINK 6-FT
CURB RAMP TYPE 4A1
CURB RAMP TYPE 2
R/L CHASE AVE
B-40-180
CP 12
FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT - SURVEY CONTROL SHEETS.
S 5TH ST
END CONSTRUCTION
STA 604+21.09
S 4TH ST
CONCRETE PAVEMENT 7 1/2-INCH
CURB RAMP TYPE 7B
CONCRETE SIDEWALK 5-INCH
CURB RAMP TYPE 2
20'
CONCRETE SIDEWALK 5-INCH
CONCRETE CURB & GUTTER 31-INCH INTEGRAL
STA 602+92 TO STA 602+98
FENCE CHAIN LINK 6-FT
CONCRETE PAVEMENT 7 1/2-INCH
ADJUSTING INLET COVERS
CONCRETE PAVEMENT APPROACH SLAB
CURB RAMP TYPE 7B
ADJUSTING INLET COVERS

CHASE AVE
CONCRETE PAVEMENT 7 1/2-INCH
R/L CHASE AVE
604
605
CONCRETE PAVEMENT 7 1/2-INCH
STA 604+63 TO STA 604+82
FENCE CHAIN LINK 6-FT
ADJUSTING INLET COVERS
CONCRETE CURB & GUTTER 31-INCH INTEGRAL
CURB RAMP TYPE 7B
CONCRETE SIDEWALK 5-INCH

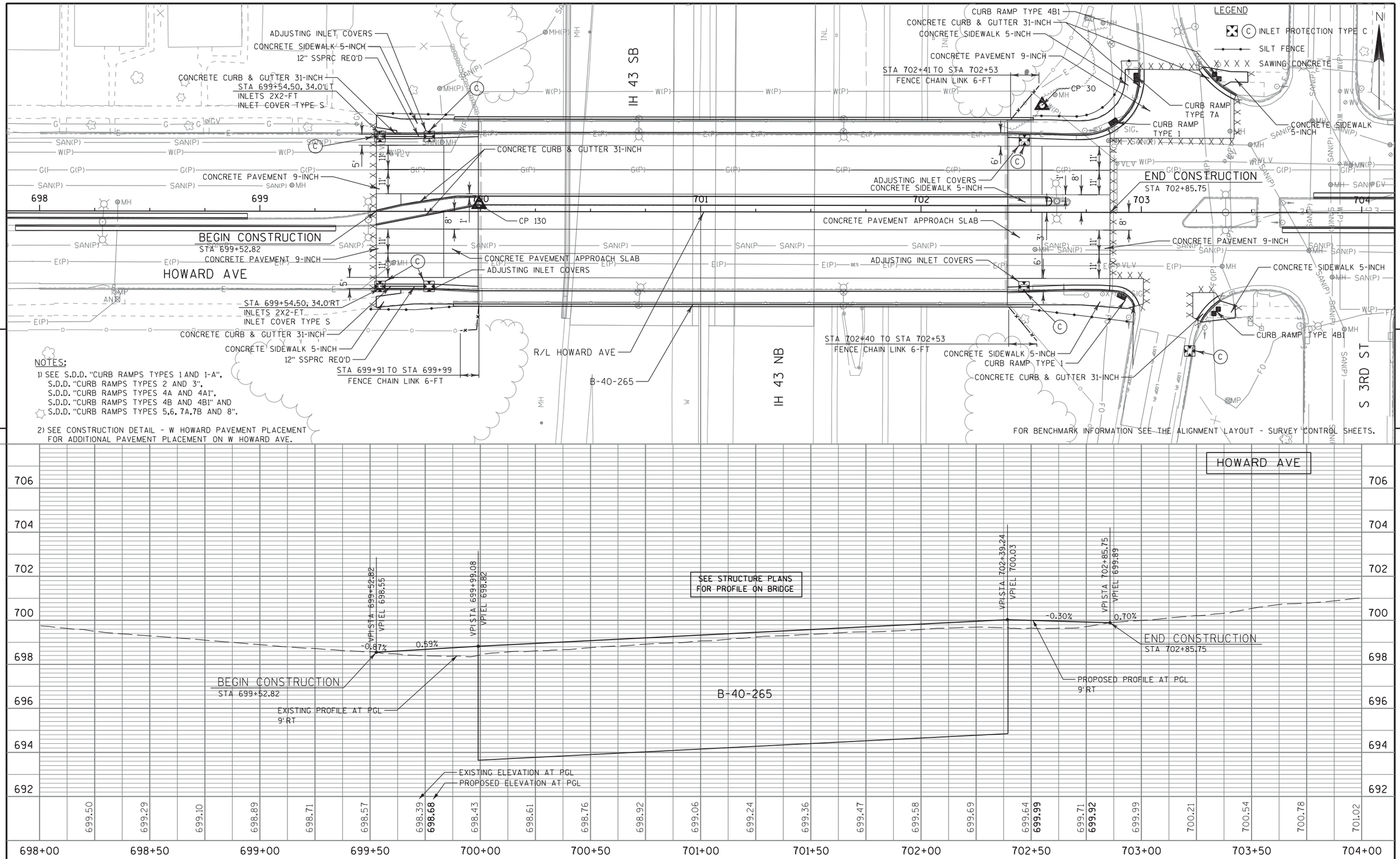
CHASE AVE

SEE STRUCTURE PLANS FOR PROFILE ON BRIDGE

VPI STA 598+90.63
VPI EL 630.17
VP STA 599+42.15
VPI EL 630.99
PROPOSED PROFILE AT R/L
0.46%
1.60%
0.80%
EXISTING PROFILE AT R/L
BEGIN CONSTRUCTION
STA 598+90.63
B-40-180
VPI STA 603+83.13
VPI EL 634.52
VPI STA 604+21.09
VPI EL 634.46
-0.17%
+0.06%
END CONSTRUCTION
STA 604+21.09

EXISTING ELEVATION AT R/L
PROPOSED ELEVATION AT R/L

| | | |

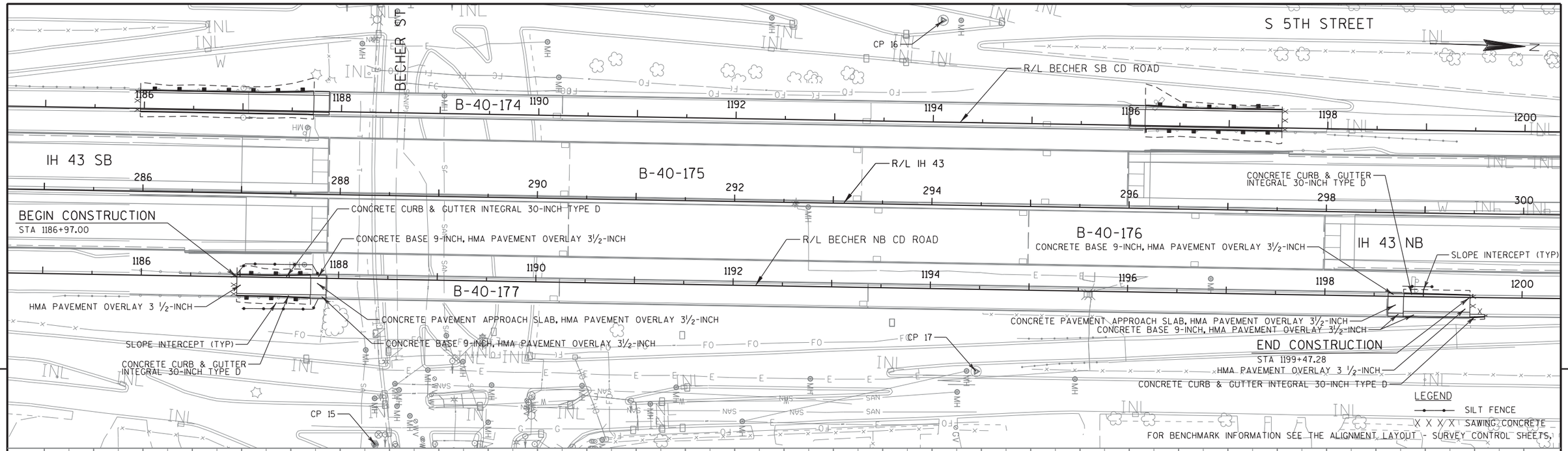


NOTES:

1) SEE S.D.D. "CURB RAMPS TYPES 1 AND 1-A", S.D.D. "CURB RAMPS TYPES 2 AND 3", S.D.D. "CURB RAMPS TYPES 4A AND 4A1", S.D.D. "CURB RAMPS TYPES 4B AND 4B1" AND S.D.D. "CURB RAMPS TYPES 5,6, 7A,7B AND 8".

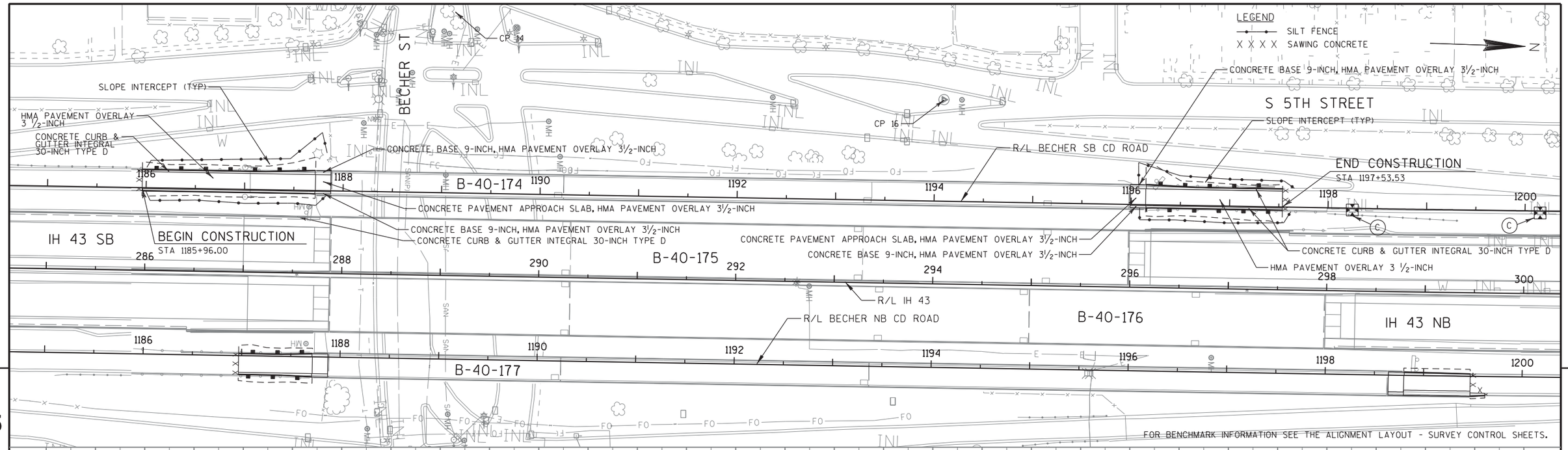
2) SEE CONSTRUCTION DETAIL - W HOWARD PAVEMENT PLACEMENT FOR ADDITIONAL PAVEMENT PLACEMENT ON W HOWARD AVE.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: HOWARD AVE	SHEET 296	E



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: NB CD ROAD AT BECHER STREET	SHEET 297 E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\050110_pp.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100



BECHER SB CD ROAD B-40-174

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: SB CD ROAD AT BECHER STREET	SHEET 298 E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\050111_pp.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

MATCH EXISTING PAVEMENT JOINT, TO BE VERIFIED BY FIELD ENGINEER

CURB RAMP TYPE 1

BEGIN CONSTRUCTION
STA 10+18.26

W WALKER ST

SLOPE INTERCEPT, TYP

CONCRETE CURB AND GUTTER 30-INCH TYPE A, TYP

CONCRETE SIDEWALK 5-INCH

ADJUST INLET, TYP

R NATIONAL AVE RAMPS

SAWING CONCRETE, TYP

CURB RAMP TYPE 6

CONCRETE MEDIAN SLOPED NOSE TYPE 1

S 9TH STREET

REMOVE EXISTING CONCRETE PAVEMENT
CONCRETE PAVEMENT 8-INCH

IH 43 SB

IH 43 NB

PIPE UNDERDRAIN 6-INCH, TYP

END CONSTRUCTION
STA 16+04.13

END CONSTRUCTION
STA 16+04.14

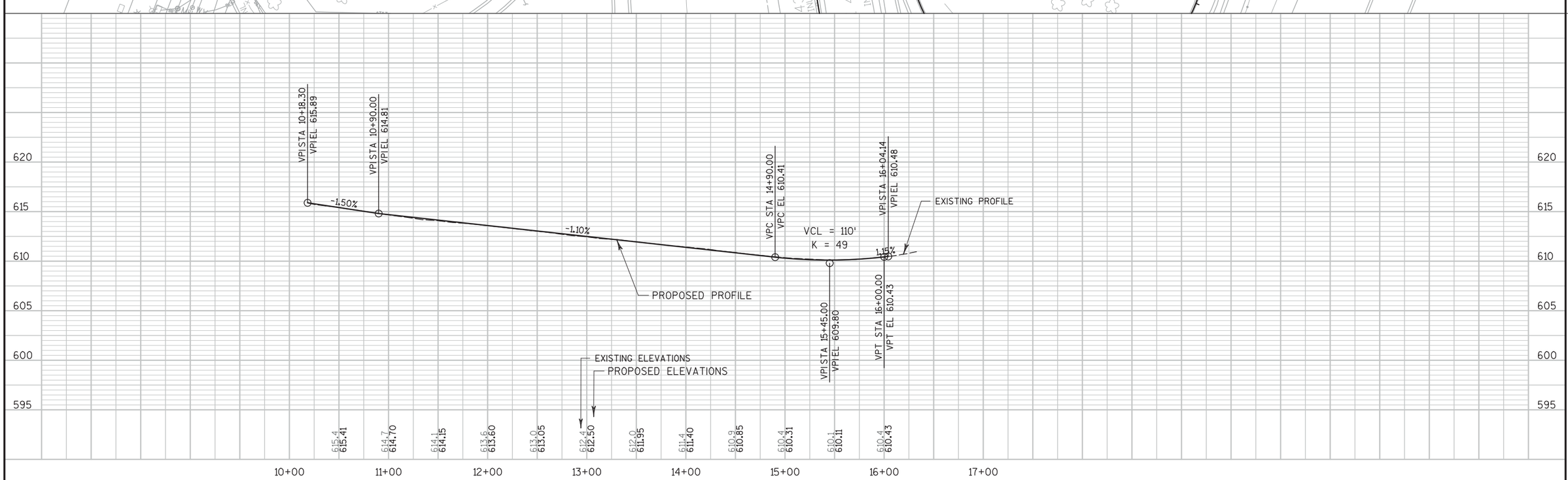
STRUCTURE B-40-285

LEGEND

- INLET PROTECTION TYPE (X)
- SILT FENCE
- ###### EROSION MAT CLASS I, TYPE B

NOTE:

1. SEE MISCELLANEOUS QUANTITIES FOR INLET AND MANHOLE RECONSTRUCTION, BARRIER AND GUARDRAIL REPLACEMENT, AND CONCRETE BARRIER JOINT AND CRACK REPAIR.
2. FOR BENCHMARK INFORMATION, SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: NATIONAL AVENUE RAMPS	SHEET 299	E

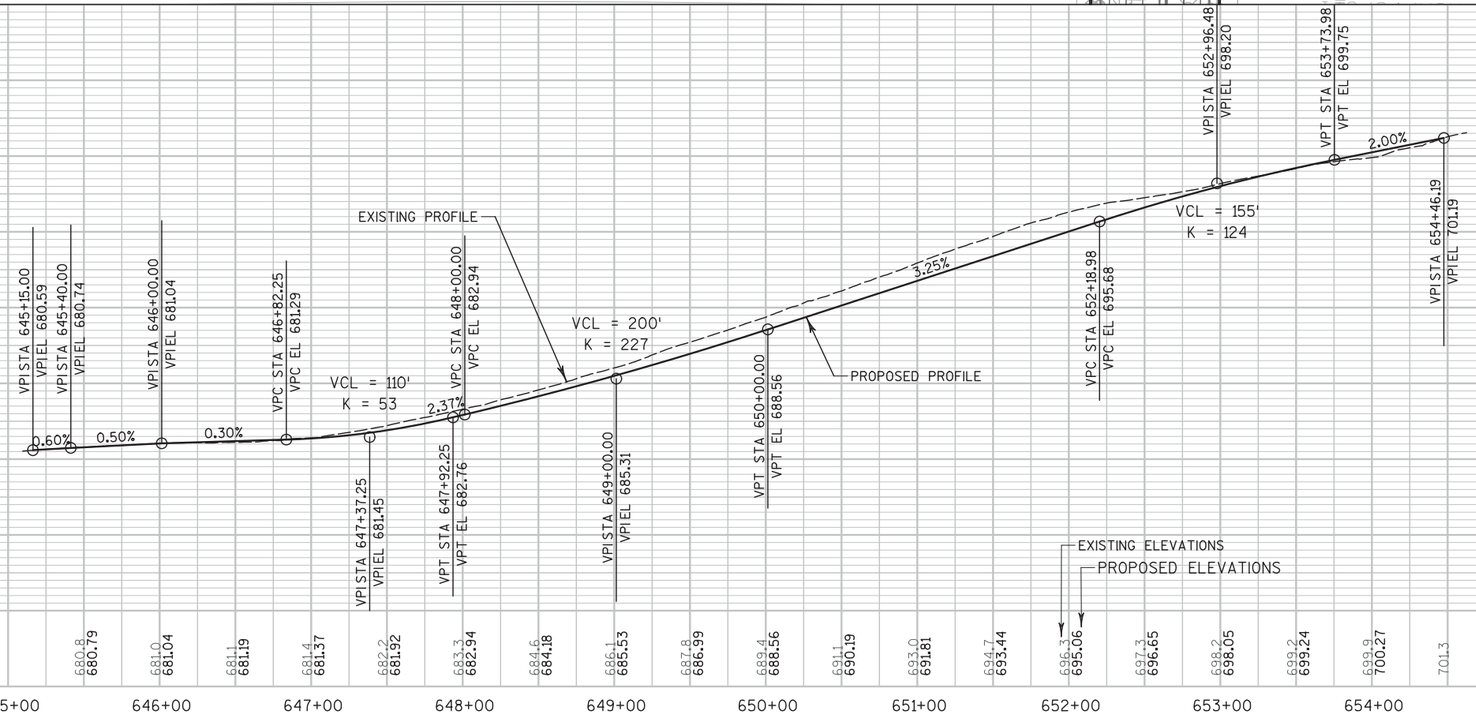
REMOVING EXISTING ASPHALTIC PAVEMENT
CONCRETE PAVEMENT 8-INCH
CURB RAMP TYPE 4B1
CONCRETE SIDEWALK 5-INCH
SAWING CONCRETE, TYP
CONCRETE MEDIAN SLOPED NOSE TYPE 1
CURB RAMP TYPE 6
30-INCH CONCRETE CURB AND GUTTER TYPE A, TYP
CURB RAMP TYPE 4B1
ADJUST INLET, TYP
SLOPE INTERCEPT, TYP
EXISTING WETLAND
PIPE UNDERDRAIN 6-INCH, TYP
℄ SB HOWARD ENTRANCE
℄ SB HOWARD EXIT
IH 43/IH 94/USH 41 SB
W HOWARD AVENUE
S 5TH ST

BEGIN CONSTRUCTION
STA 645+15.00

END CONSTRUCTION
STA 654+46.19

LEGEND
- INLET PROTECTION TYPE (X)
- SILT FENCE
- ###### EROSION MAT CLASS I, TYPE B

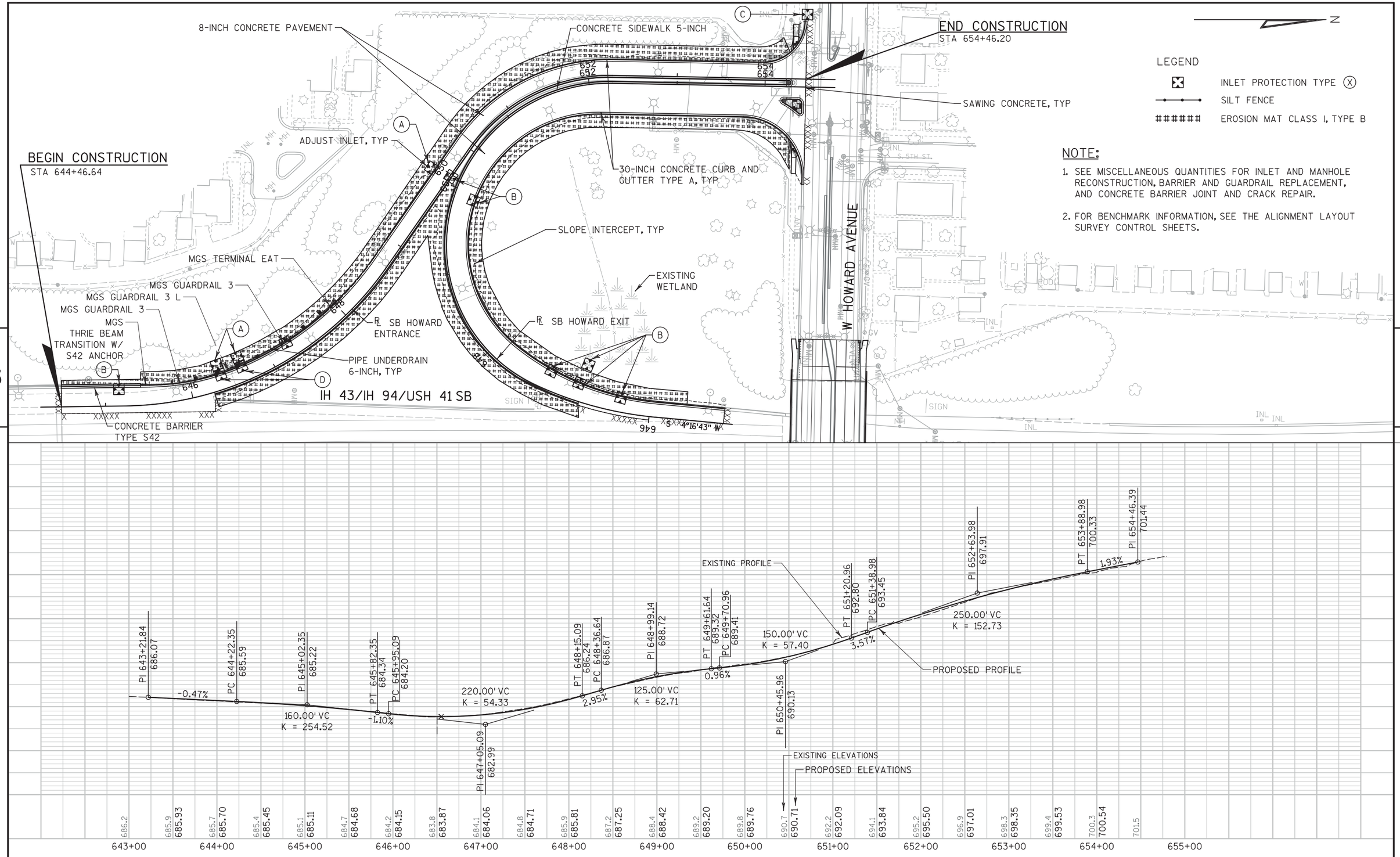
NOTE:
1. SEE MISCELLANEOUS QUANTITIES FOR INLET AND MANHOLE RECONSTRUCTION, BARRIER AND GUARDRAIL REPLACEMENT, AND CONCRETE BARRIER JOINT AND CRACK REPAIR.
2. FOR BENCHMARK INFORMATION, SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: HOWARD AVENUE SB EXIT RAMP	SHEET 300	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\050100b_pp.dgn PLOT DATE : 2/4/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 40



PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: HOWARD AVENUE SB ENTRANCE RAMP	SHEET 301	E

SEE "PLAN AND PROFILE: HOWARD AVENUE RAMPS"

N

SEE "PLAN AND PROFILE: HOWARD AVE"

HOWARD AVE SB ENTRANCE RAMP

HOWARD AVE SB EXIT RAMP

W HOWARD AVENUE

MGS GUARDRAIL 3L
STA 546+93 - 647+12

℄ HOWARD AVE SB ENT RAMP

SLOPE INTERCEPT, TYP

HOWARD AVE SB EXIT RAMP

MGS TERMINAL EAT

MGS THRIE BEAM TRANSITION W/ S42 ANCHOR

MGS GUARDRAIL 3

BEGIN PROJECT
STA 653+20.00
X = 604,346.036
Y = 275,883.868

N 0°00'48" E

33.5'

S 4°16'43" W

IH 43/IH 94/USH 41 SB

IH 43/94/USH 41

IH 43 ℄

N 0°17'08" E

IH 43/IH 94/USH 41 NB

STRUCTURE B-40-265
DECK REPLACEMENT

CP30

LEGEND

- INLET PROTECTION TYPE (X)
- SILT FENCE
- ###### EROSION MAT CLASS I, TYPE B

NOTE:

1. SEE MISCELLANEOUS QUANTITIES FOR INLET AND MANHOLE RECONSTRUCTION, BARRIER AND GUARDRAIL REPLACEMENT, AND CONCRETE BARRIER JOINT AND CRACK REPAIR.
2. FOR BENCHMARK INFORMATION, SEE THE ALIGNMNENT LAYOUT SURVEY CONTROL SHEETS.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN: BEGIN PROJECT - STA 645+28	SHEET 302	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\050101_pp.dgn PLOT DATE : 2/4/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 46

NOTE:

1. SEE MISCELLANEOUS QUANTITIES FOR INLET AND MANHOLE RECONSTRUCTION, BARRIER AND GUARDRAIL REPLACEMENT, AND CONCRETE BARRIER JOINT AND CRACK REPAIR.
2. FOR BENCHMARK INFORMATION, SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.
3. CONTRACTOR TO PROVIDE SURVEY INFORMATION TO FIELD ENGINEER FOR EXISTING GRADES. FIELD ENGINEER TO PROVIDE CONTRACTOR WITH STAKING GRADES.
4. CONSTRUCT TEMPORARY ACCESS PRIOR TO PAVEMENT REPLACEMENT. REMOVE TEMPORARY ACCESS AFTER PAVING IS COMPLETE AND RESTORE SIDEWALK, CURB, AND GRASS AS NOTED.

LEGEND

- INLET PROTECTION TYPE (X)
- SILT FENCE
- EROSION MAT CLASS I, TYPE B

SAWING CONCRETE, TYP

ADJUST INLET AND MANHOLE COVERS, TYP

CONCRETE PAVEMENT 9-INCH

CONCRETE CURB AND GUTTER 30-INCH TYPE A, TYP, REPLACEMENT AS NEEDED

TEMPORARY ACCESS DURING CONSTRUCTION

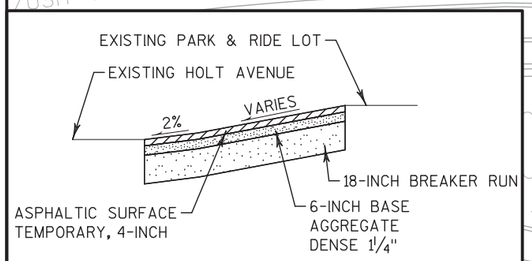
REMOVE AND REPLACE CONCRETE SIDEWALK 5-INCH
REMOVE AND REPLACE CONCRETE CURB & GUTTER - 30-INCH TYPE A
REMOVE AND REPLACE CHAIN LINK FENCE - 6 FT
PAVE WITH TEMPORARY ASPHALT

CANADIAN PACIFIC

HOLT AVENUE

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB



TEMPORARY ACCESS DETAIL

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN: HOLT AVENUE PARK & RIDE	SHEET 303 E

SEE "PLAN & PROFILE: CHASE AVE"

SEE "PLAN & PROFILE: LINCOLN AVE"

N

S 5TH STREET

STRUCTURE B-40-180
DECK REPLACEMENT AND
STRUCTURE PAINTING

STRUCTURE B-40-178
DECK REPLACEMENT AND
STRUCTURE PAINTING

IH 43 ℄

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I-43/94

S 4TH STREET

STH 38/CHASE AVENUE

LINCOLN AVENUE

LEGEND

- INLET PROTECTION TYPE (X)
- SILT FENCE
- ###### EROSION MAT CLASS I, TYPE B

NOTE:

1. SEE MISCELLANEOUS QUANTITIES FOR INLET AND MANHOLE RECONSTRUCTION, BARRIER AND GUARDRAIL REPLACEMENT, AND CONCRETE BARRIER JOINT AND CRACK REPAIR.

2. FOR BENCHMARK INFORMATION, SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN: STA 263+00 - STA 277+00	SHEET 304	E

S 5TH PLACE

S 5TH STREET

5TH ST.

CONCRETE CURB AND GUTTER REPLACEMENT AS NEEDED

MGS TERMINAL TYPE 2

MGS GUARDRAIL 3

SAWING CONCRETE, TYP

MGS THRIE BEAM TRANSITION W/ 32SS ANCHOR

CP14

STRUCTURE B-40-174
STRUCTURE REPLACEMENT

CONCRETE PAVEMENT APPROACH SLAB

IH 43/IH 94/USH 41 SB

IH 43 RL

IH 43/IH 94/USH 41 NB

MGS TERMINAL EAT

MGS GUARDRAIL 3

CONCRETE PAVEMENT APPROACH SLAB

MGS GUARDRAIL 3

STRUCTURE B-40-177
STRUCTURE REPLACEMENT

S 4TH STREET

MATCH RAMP PAVEMENT TO ELEVATION OF EXISTING CRASH INVESTIGATION SITE

REMOVING ASPHALTIC SURFACE MILLING
BASE PATCH CONCRETE AS NEEDED
HMA PAVEMENT TYPE E-10

CONCRETE CURB AND GUTTER REPLACEMENT AS NEEDED

MGS THRIE BEAM TRANSITION W/ 32SS ANCHOR

CP15

W BECHER STREET

SEE "PLAN & PROFILE: NB OR SB CD ROAD AT BECHER STREET"

LEGEND

- INLET PROTECTION TYPE (X)
- SILT FENCE
- ####### EROSION MAT CLASS I, TYPE B

NOTE:

1. SEE MISCELLANEOUS QUANTITIES FOR INLET AND MANHOLE RECONSTRUCTION, BARRIER AND GUARDRAIL REPLACEMENT, AND CONCRETE BARRIER JOINT AND CRACK REPAIR.
2. FOR BENCHMARK INFORMATION, SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN: STA 277+00 - STA 292+50	SHEET 305 E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\050102_pp.dgn PLOT DATE : 2/4/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 46

SEE "PLAN & PROFILE: MAPLE STREET"

STRUCTURE B-40-174
STRUCTURE REPLACEMENT

STRUCTURE B-40-175

CONCRETE PAVEMENT APPROACH SLAB

CONCRETE CURB AND GUTTER REPLACEMENT AS NEEDED

MGS THRIE BEAM TRANSITION W/ 32SS ANCHOR

MATCH RAMP PAVEMENT TO ELEVATION OF EXISTING CRASH INVESTIGATION SITE

5TH ST.

S 5TH STREET

W MAPLE STREET

I-43/94

IH 43/IH 94/USH 41 SB

MGS GUARDRAIL 3

MGS TERMINAL EAT

CONNECT TO SIGN STRUCTURE BASE

IH 43

I-43/94

STRUCTURE B-40-176

IH 43/IH 94/USH 41 NB

S 4TH STREET

CP18

STRUCTURE B-40-177
STRUCTURE REPLACEMENT

CONCRETE PAVEMENT APPROACH SLAB

CONCRETE CURB AND GUTTER REPLACEMENT AS NEEDED

REMOVING ASPHALTIC SURFACE MILLING
BASE PATCH CONCRETE AS NEEDED
HMA PAVEMENT TYPE E-10

STRUCTURE B-40-173
DECK REPLACEMENT AND STRUCTURE PAINTING

SEE "PLAN & PROFILE: NB OR SB CD ROAD AT BECHER STREET"

LEGEND

INLET PROTECTION TYPE (X)

SILT FENCE

EROSION MAT CLASS I, TYPE B

NOTE:

1. SEE MISCELLANEOUS QUANTITIES FOR INLET AND MANHOLE RECONSTRUCTION, BARRIER AND GUARDRAIL REPLACEMENT, AND CONCRETE BARRIER JOINT AND CRACK REPAIR.

2. FOR BENCHMARK INFORMATION, SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN: STA 292+50 - STA 308+25	SHEET 306	E

W MITCHELL STREET

W LAPHAM BOULEVARD

S 5TH STREET

5TH ST.

S 4TH STREET

4TH ST.

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

I-43/94

ATHLETIC FIELD

REMOVING ASPHALTIC SURFACE MILLING
BASE PATCH CONCRETE AS NEEDED
HMA PAVEMENT TYPE E-10

CONCRETE CURB AND GUTTER REPLACEMENT AS NEEDED

CONCRETE PAVEMENT 7 1/2-INCH

SAWING CONCRETE, TYP

B-70-172
DECK REPLACEMENT AND STRUCTURE PAINTING

13.8'

36.5'

16.8'

16.1'

17'

IH 43 ℄

CP20

STRUCTURE B-40-171
DECK REPLACEMENT

SEE "PLAN & PROFILE: MITCHELL STREET"

SEE "PLAN & PROFILE: LAPHAM BLVD"

LEGEND

- INLET PROTECTION TYPE (X)
- SILT FENCE
- ###### EROSION MAT CLASS I, TYPE B

NOTE:

1. SEE MISCELLANEOUS QUANTITIES FOR INLET AND MANHOLE RECONSTRUCTION, BARRIER AND GUARDRAIL REPLACEMENT, AND CONCRETE BARRIER JOINT AND CRACK REPAIR.
2. FOR BENCHMARK INFORMATION, SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN: STA 308+25 - STA 324+00	SHEET 307	E

N

S 6TH STREET/ STH 38

W GREENFIELD AVENUE

S BARAGA STREET

S 5TH STREET

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

S POLCYN STREET

S 4TH STREET

W WASHINGTON STREET/ STH 38

REMOVING ASPHALTIC SURFACE MILLING
BASE PATCH CONCRETE AS NEEDED
HMA PAVEMENT TYPE E-10

CONCRETE CURB AND GUTTER REPLACEMENT AS NEEDED

SEE "PLAN & PROFILE: GREENFIELD AVE"

SAWING CONCRETE, TYP

STRUCTURE B-40-170
DECK REPLACEMENT AND
STRUCTURE PAINTING

IH 43 ℄

Eqn 33+33.88
Eqn 51+73.74

EQUATION

CONCRETE CURB AND GUTTER REPLACEMENT AS NEEDED

CP21

CP22

16.2'

13.4'

LEGEND

- INLET PROTECTION TYPE (X)
- SILT FENCE
- ###### EROSION MAT CLASS I, TYPE B

NOTE:

1. SEE MISCELLANEOUS QUANTITIES FOR INLET AND MANHOLE RECONSTRUCTION, BARRIER AND GUARDRAIL REPLACEMENT, AND CONCRETE BARRIER JOINT AND CRACK REPAIR.
2. FOR BENCHMARK INFORMATION, SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN: STA 324+00 - STA 167+00	SHEET 308	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\050105_pp.dgn PLOT DATE : 2/4/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 46

LEGEND

- INLET PROTECTION TYPE (X)
- SILT FENCE
- ###### EROSION MAT CLASS I, TYPE B

NOTE:

1. SEE MISCELLANEOUS QUANTITIES FOR INLET AND MANHOLE RECONSTRUCTION, BARRIER AND GUARDRAIL REPLACEMENT, AND CONCRETE BARRIER JOINT AND CRACK REPAIR.
2. FOR BENCHMARK INFORMATION, SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

RELOCATE LIGHT POLE

SLOPE INTERCEPT, TYP

SEE "PLAN AND PROFILE: NATIONAL AVENUE RAMPS"

STRUCTURE B-40-285

IH 43/IH 94/USH 41 SB

IH 43/IH 94/USH 41 NB

IH 43 ℄

℄ NATIONAL AVE

NATIONAL AVE NB ENTRANCE RAMP

NATIONAL AVE NB EXIT RAMP

NATIONAL AVENUE

9TH STREET

7TH STREET

7th ST.

WASHINGTON ST.

CP24

CP25

CAUTION

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	PLAN: STA 168+00 - STA 183+00	SHEET 309 E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\050106_pp.dgn PLOT DATE : 2/4/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 46

Standard Detail Drawing List

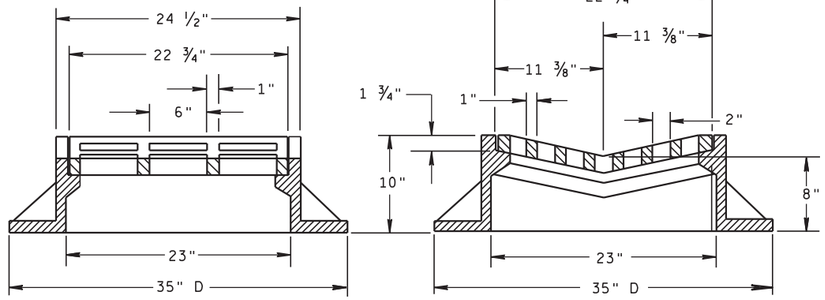
08A05-18B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-18C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-15A	CURB RAMPS TYPES 1 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
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C05-07	CONCRETE CONTROL CABINET BASES
09C11-04	CONCRETE BASE TYPE 10
09E08-04A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-04B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-04E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
11B02-02	CONCRETE MEDIAN NOSE
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C14-04A	BASE PATCHING CONCRETE
13C14-04B	BASE PATCHING CONCRETE
13C14-04C	BASE PATCHING CONCRETE
13C15-05A	CONCRETE BASE
13C15-05B	CONCRETE BASE
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
14A02-01	TREE PLANTING DETAIL
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13H	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
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B32-02A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-02C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-02E	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B33-01G	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B33-01H	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-03A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

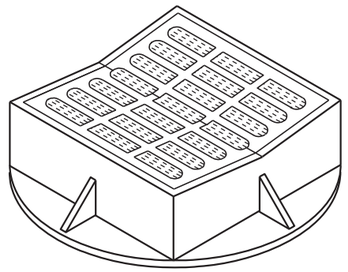
6

Standard Detail Drawing List

14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15B03-13A	FENCE CHAIN LINK
15B03-13B	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
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
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)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C27-01	DOUBLE ARROW WARNING SIGN PLACEMENT
15C29-03C	URBAN BICYCLE LANE MARKING
15C29-03D	URBAN BICYCLE LANE MARKING
15C29-03E	PAVEMENT MARKING FOR BIKE LANES
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-03	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D14-02	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-02	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE

6

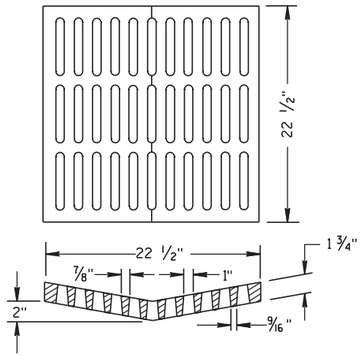




TYPE "B"

(APPROXIMATE WEIGHT 405 LBS.)

FRAME..... 294 LBS.
GRATE..... 111 LBS.

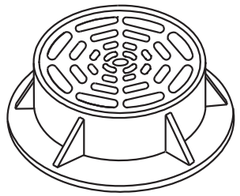


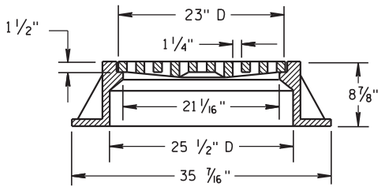
ALTERNATIVE GRATE FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 134 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTED AS TYPE B-A ON THE DRAINAGE TABLE





TYPE "C"

(APPROXIMATE WEIGHT 259 LBS.)

FRAME..... 152 LBS.
GRATE..... 107 LBS.

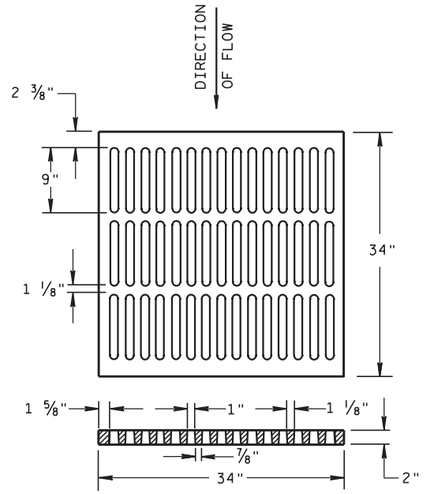
GENERAL NOTES

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.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

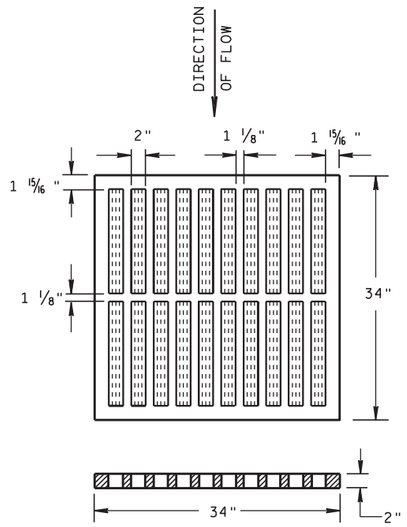


ALTERNATIVE TYPE "MS"

(APPROXIMATE GRATE WEIGHT 329 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

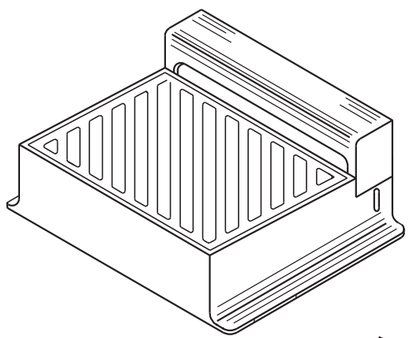


TYPE "MS"

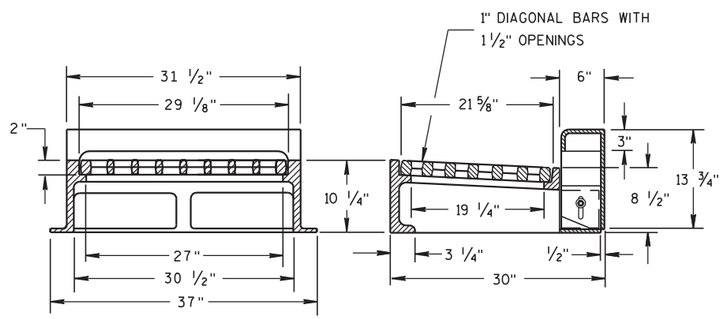
(APPROXIMATE GRATE WEIGHT 268 LBS.)

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"

(APPROXIMATE WEIGHT 648 LBS.)

FRAME..... 355 LBS.
GRATE..... 156 LBS.
CURB BOX..... 137 LBS.

INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

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/S/ Jerry H. Zaass
ROADWAY STANDARDS ENGINEER

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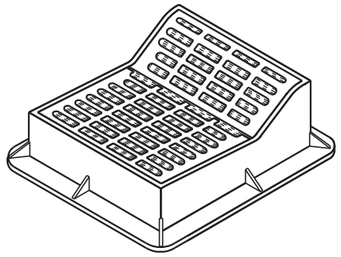
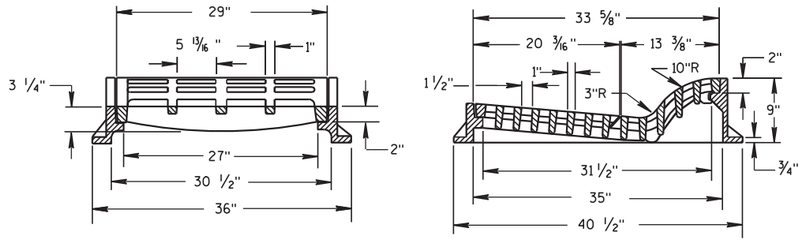


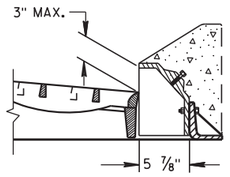


TYPE "F"

(APPROXIMATE WEIGHT 644 LBS.)

FRAME.....302 LBS.
GRATE.....160 LBS.
GRATE.....182 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

(APPROXIMATE WEIGHT CURB BOX 68 LBS.)

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

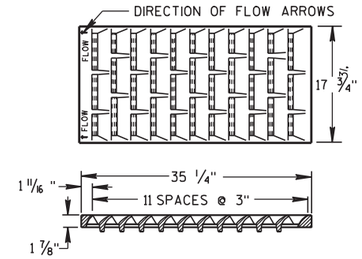
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

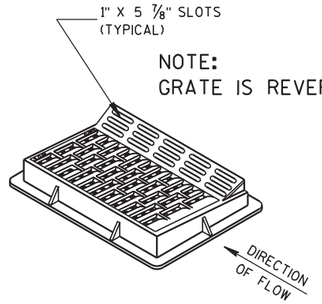
GENERAL NOTES

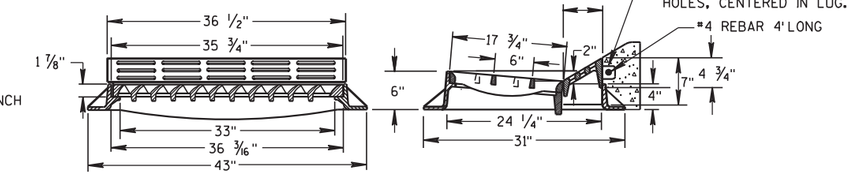
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.





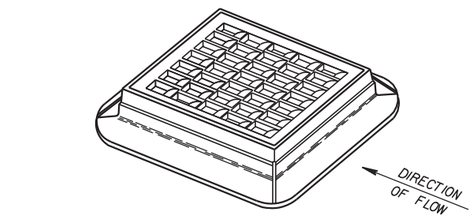


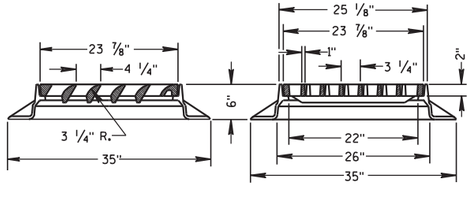
TYPE "HM"

(APPROXIMATE WEIGHT 414 LBS.)
FRAME..... 181 LBS.
GRATE..... 159 LBS.
CURB BOX..... 74 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE

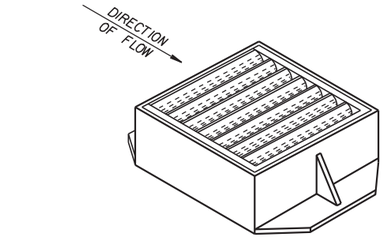


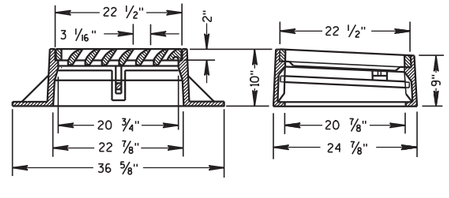


TYPE "S"

(APPROXIMATE WEIGHT 333 LBS.)

FRAME.....164 LBS.
GRATE..... 169 LBS.

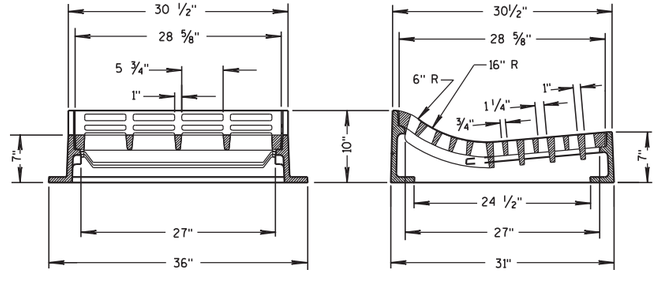




TYPE "V"

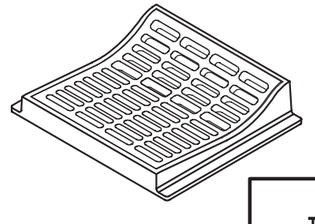
(APPROXIMATE WEIGHT 410 LBS.)

FRAME..... 269 LBS.
GRATE..... 136 LBS.
SAFETY BAR..... 5 LBS.



TYPE "T"

(APPROXIMATE WEIGHT 530 LBS.)
FRAME.....270 LBS.
GRATE.....260 LBS.
USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
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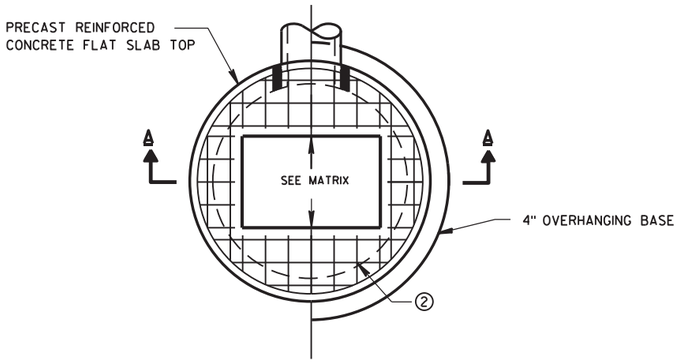
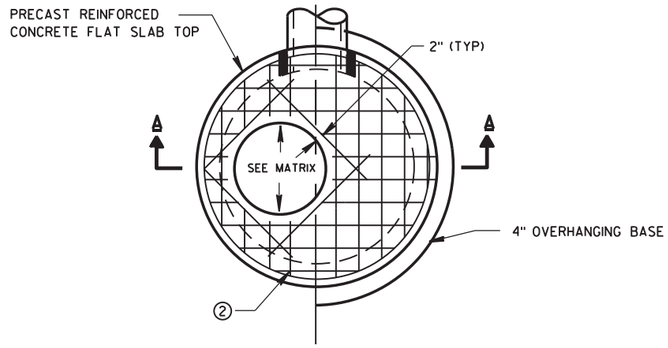
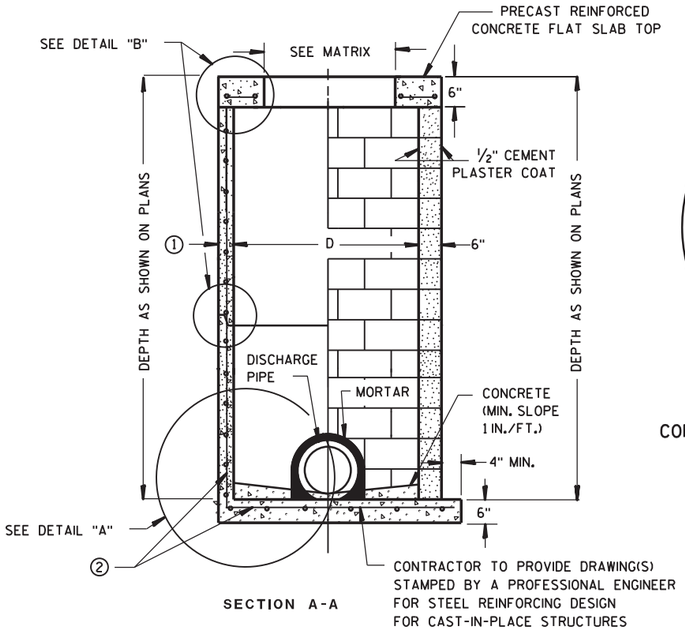


PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

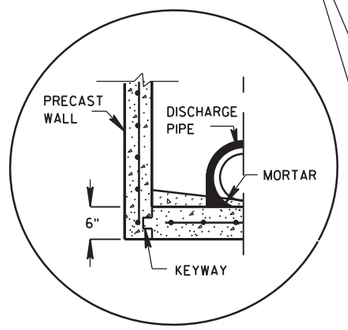


SECTION A-A

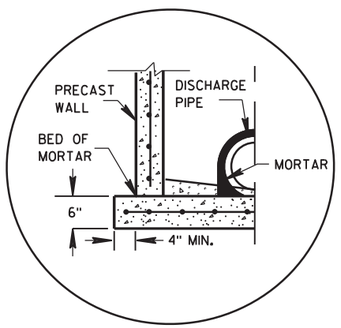
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

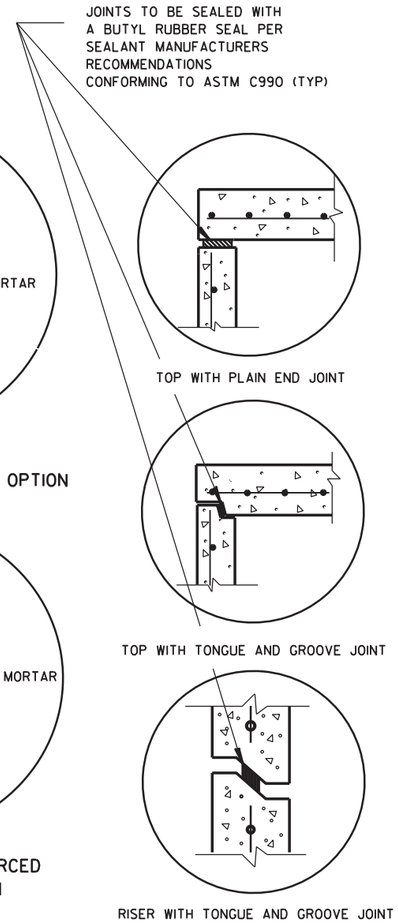


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



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.

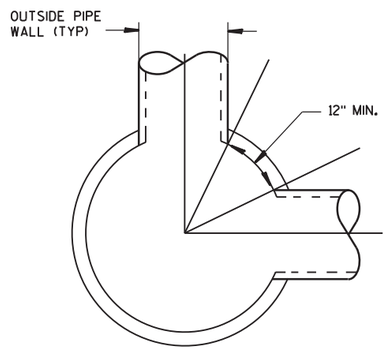
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

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

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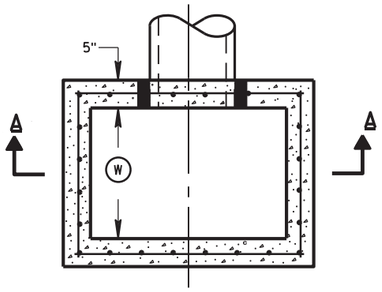
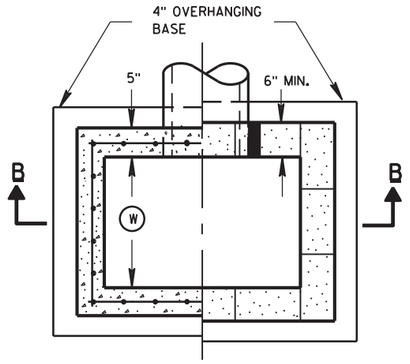
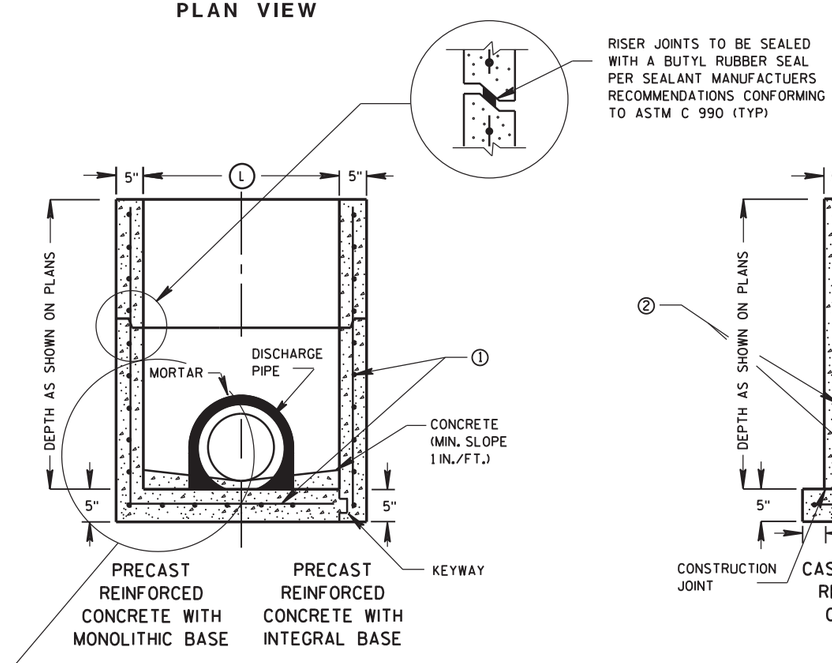


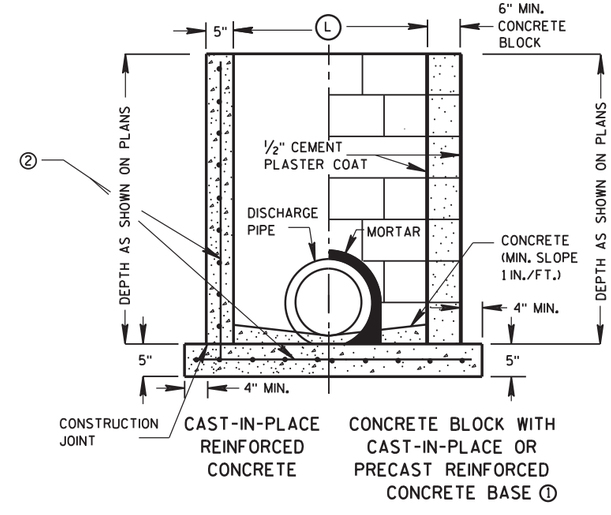
PLAN VIEW



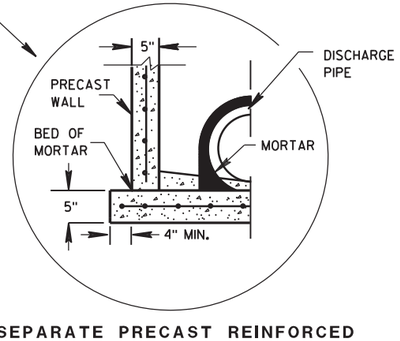
PLAN VIEW



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.

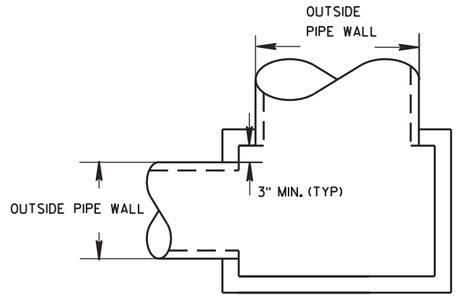
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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
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ENGINEER
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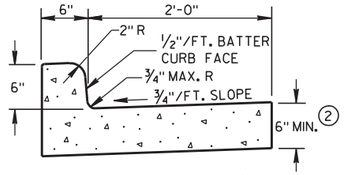
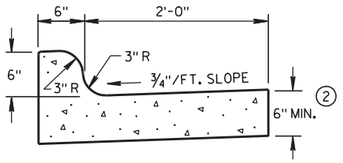
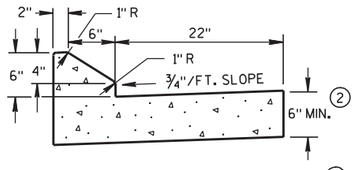


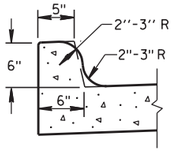
TYPES A & D (1)



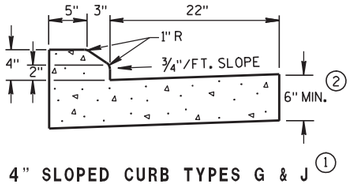
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

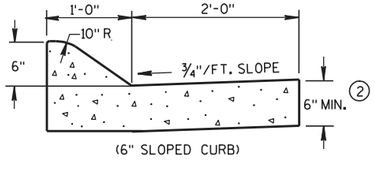


OPTIONAL CURB SHAPE
FOR TYPES K & L (1)

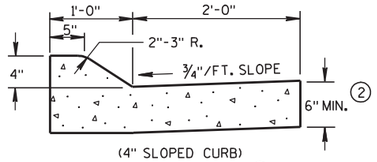


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

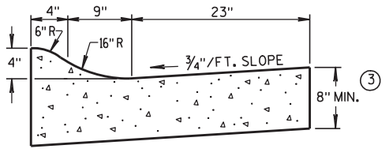


(6" SLOPED CURB)



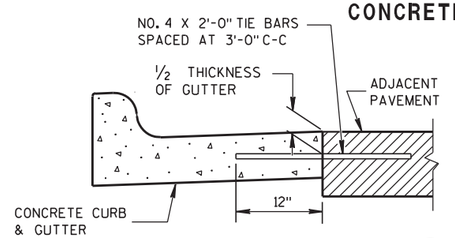
(4" SLOPED CURB)

TYPES A & D (1)

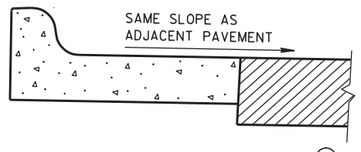


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION (1)



REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

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.

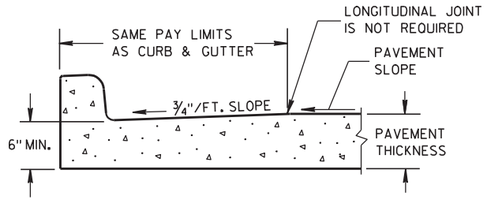
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(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.

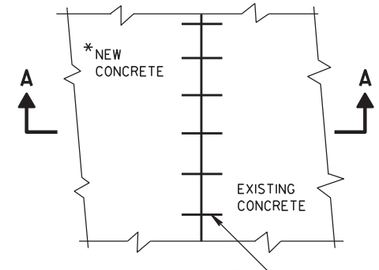
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(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.

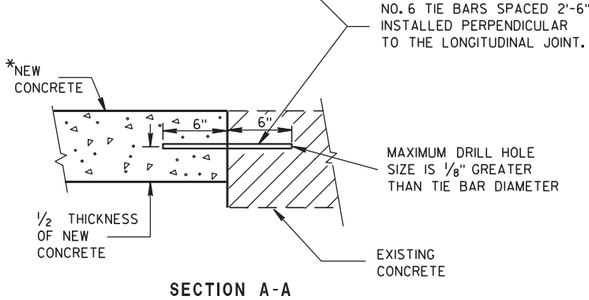


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



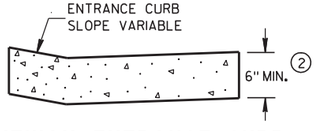
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

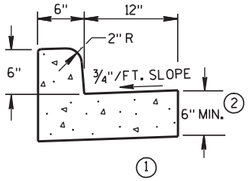


SECTION A-A

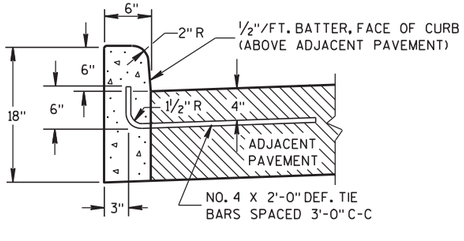
TIE BARS DRILLED
INTO EXISTING PAVEMENT



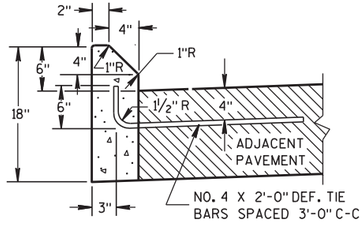
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"

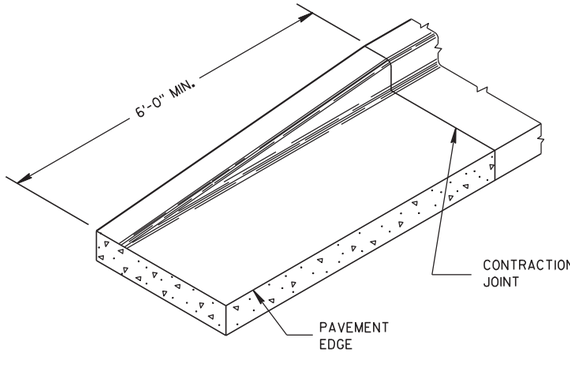


(1)
TYPES A & D



(1)
TYPES G & J

CONCRETE CURB



END SECTION CURB & GUTTER

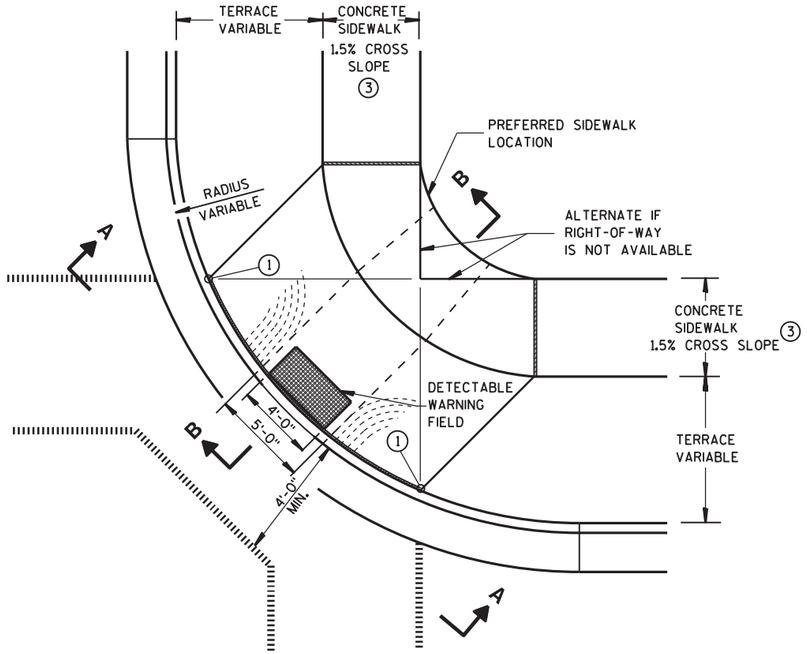
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
316
FHWA
ENT

6

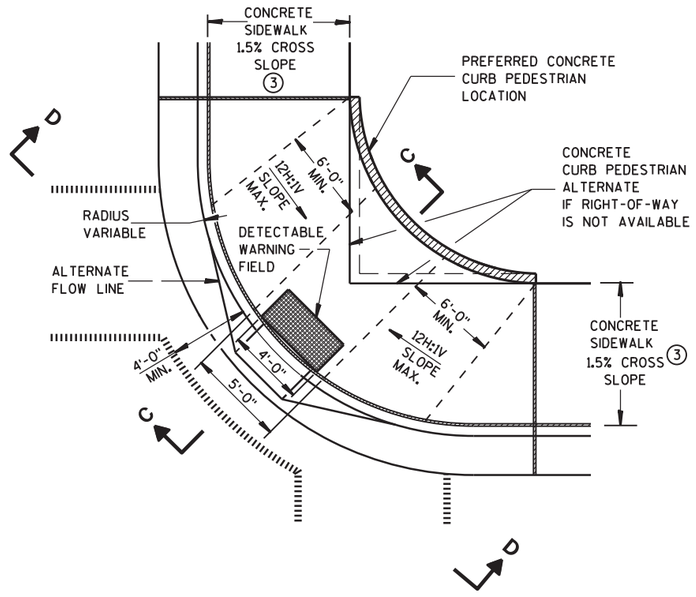
S.D.D. 8 D 1-17



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.

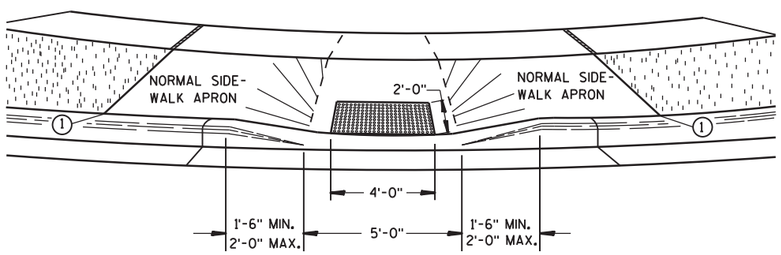
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

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.

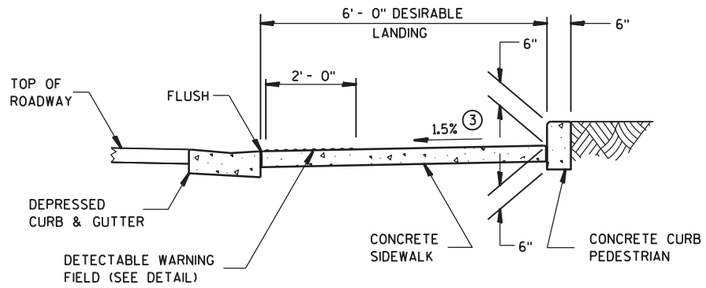
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

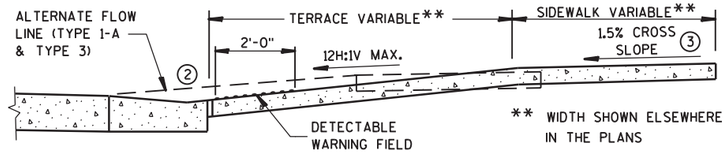
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



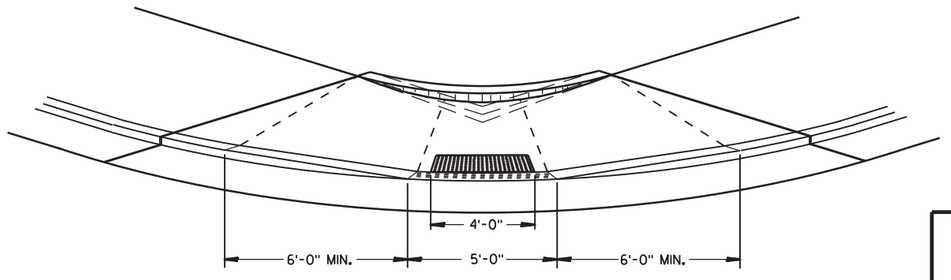
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

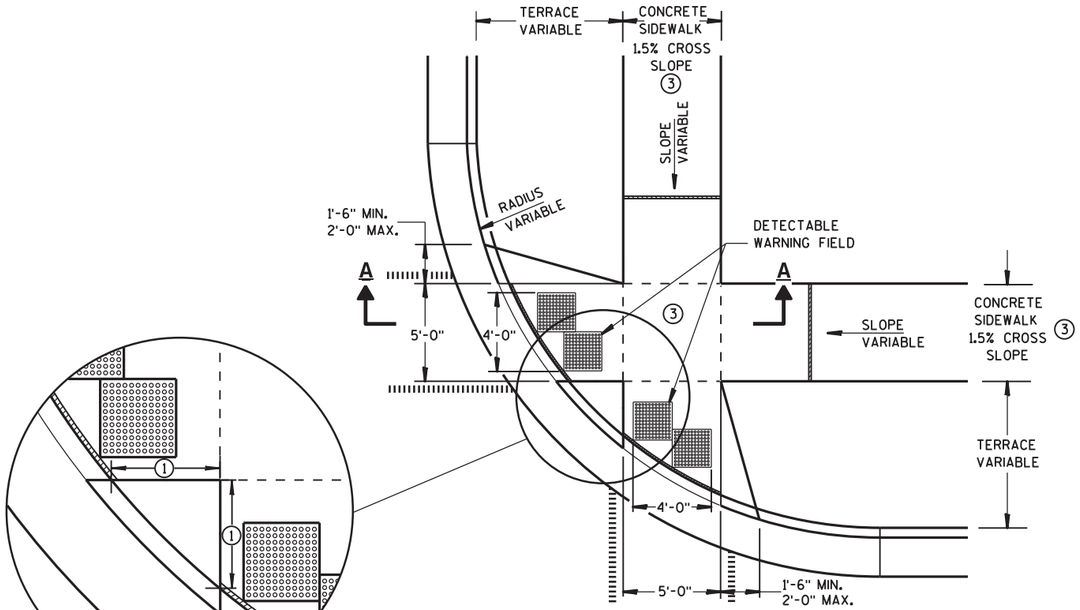
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-15a

6

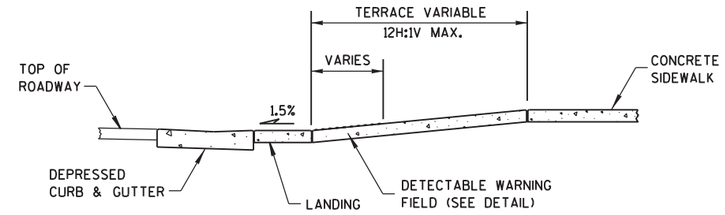
S.D.D. 8 D 5-15a



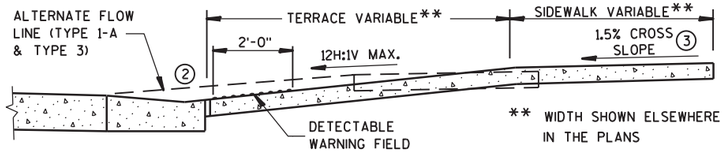
PLAN VIEW

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.

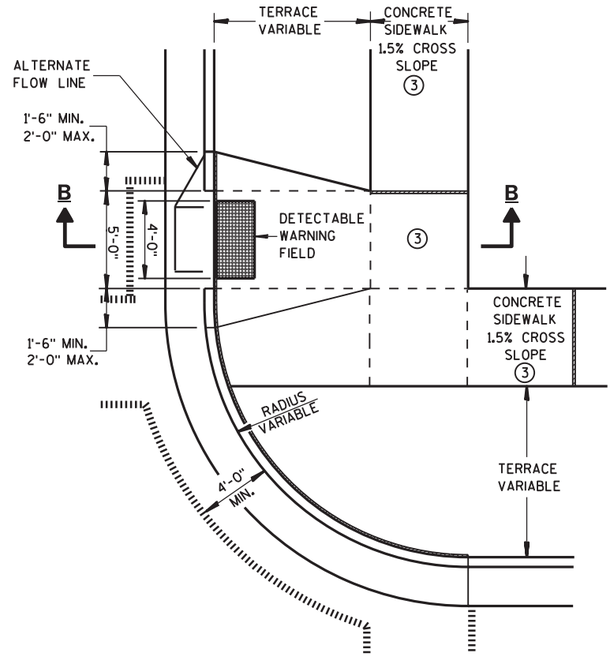
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

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

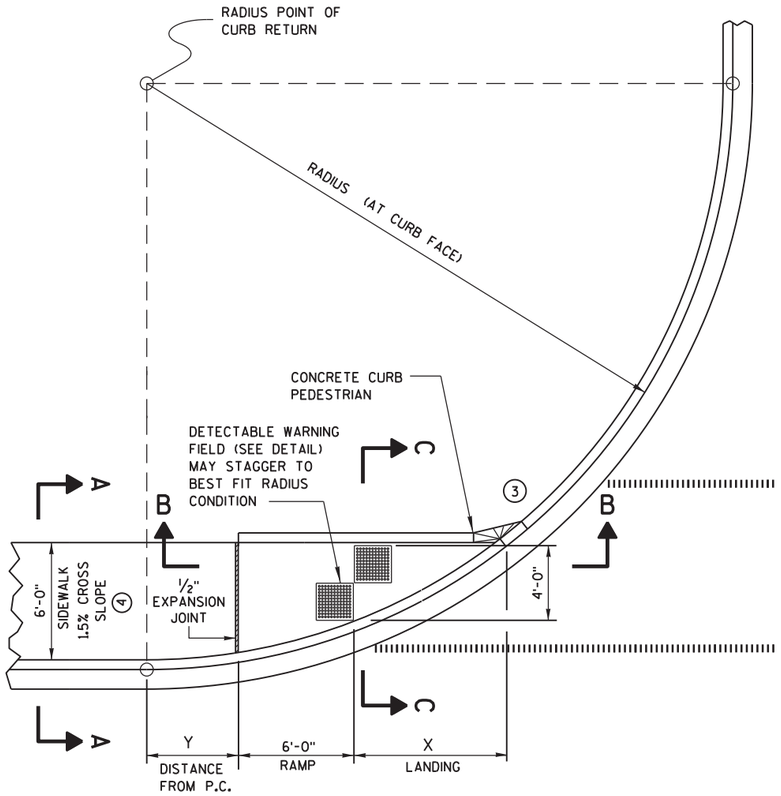
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS
TYPES 2 AND 3

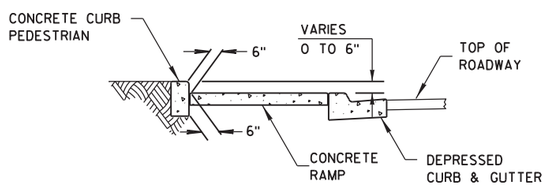
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

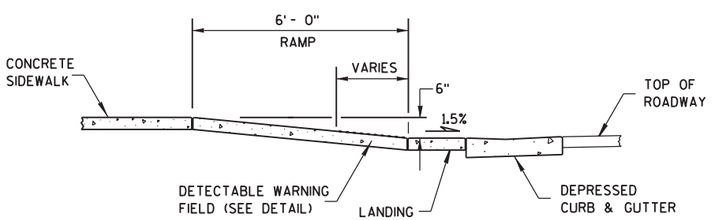
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



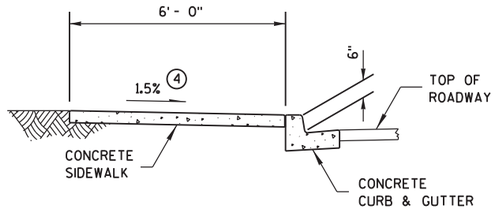
SECTION C-C FOR TYPE 4A



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

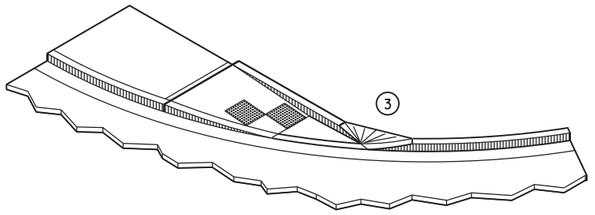
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

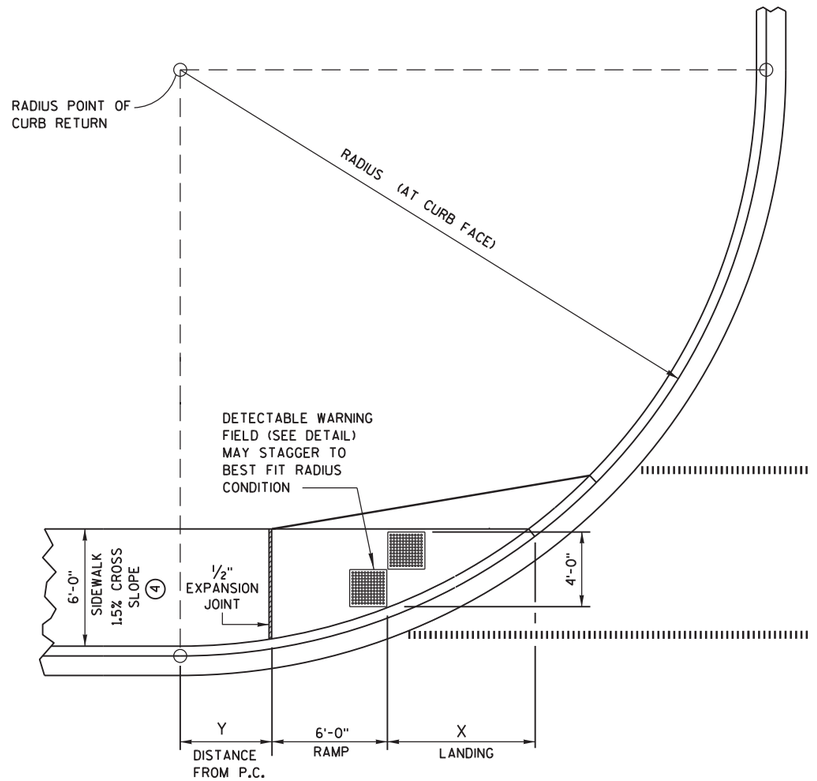
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

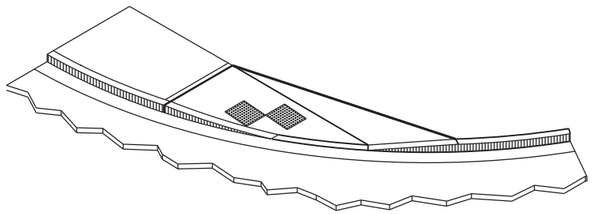
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

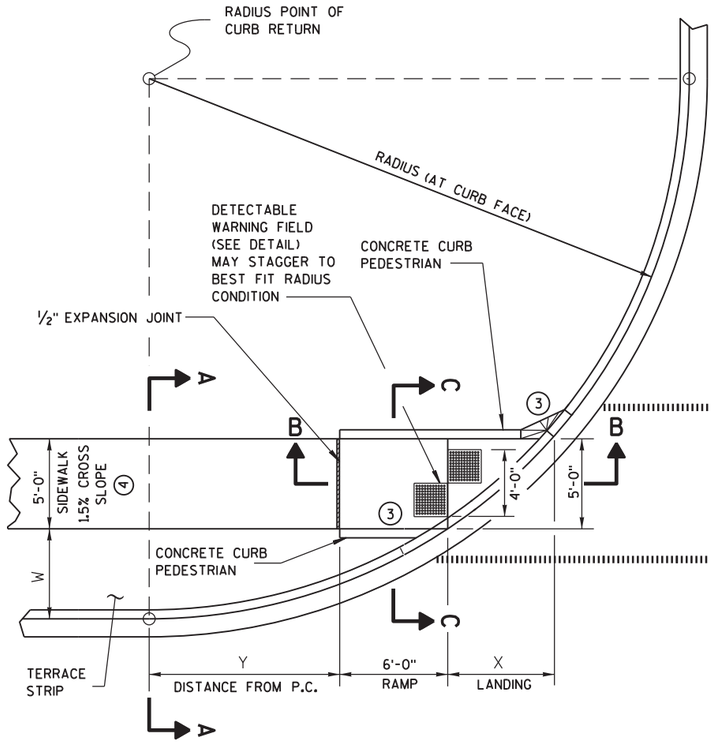
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

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

LEGEND

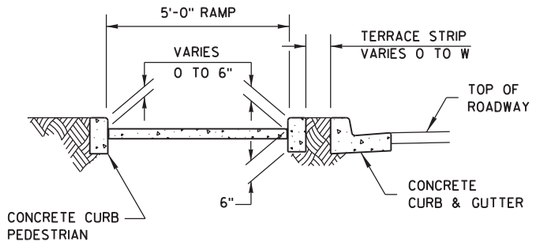
½" EXPANSION JOINT-SIDEWALK

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



SECTION C-C FOR TYPE 4B

GENERAL NOTES

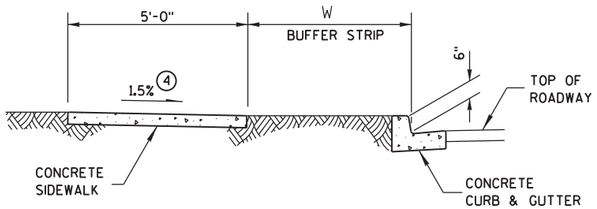
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

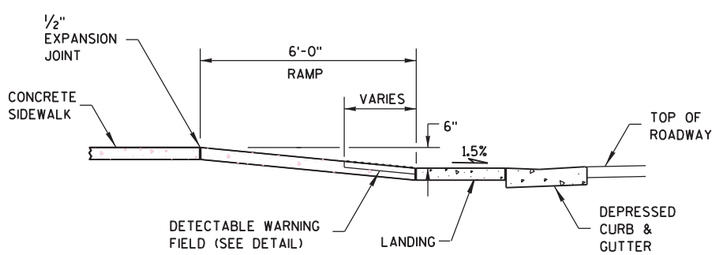
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

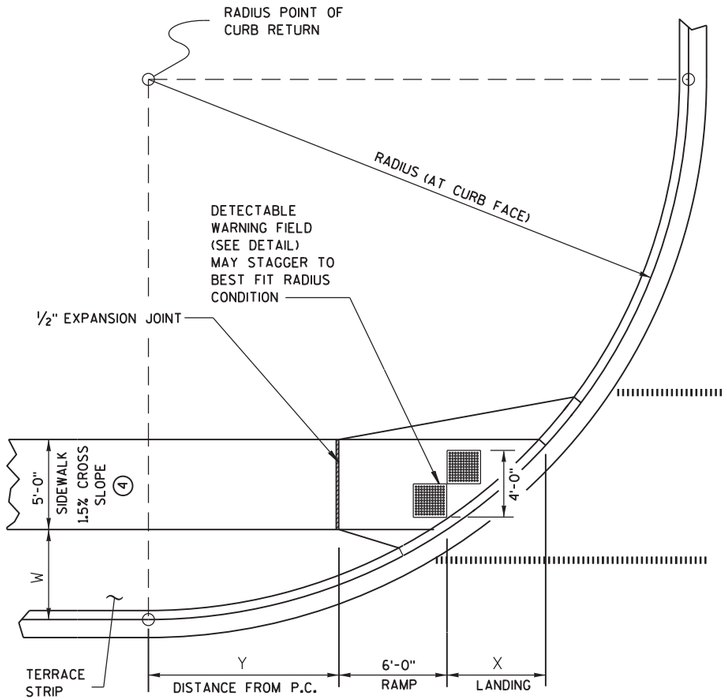
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



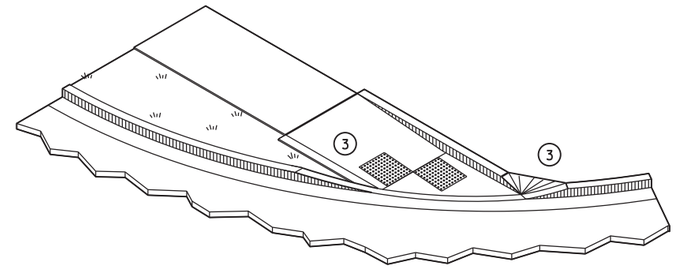
SECTION A-A FOR TYPE 4B



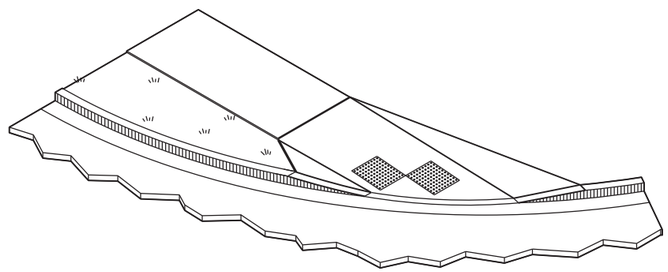
SECTION B-B FOR TYPE 4B



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



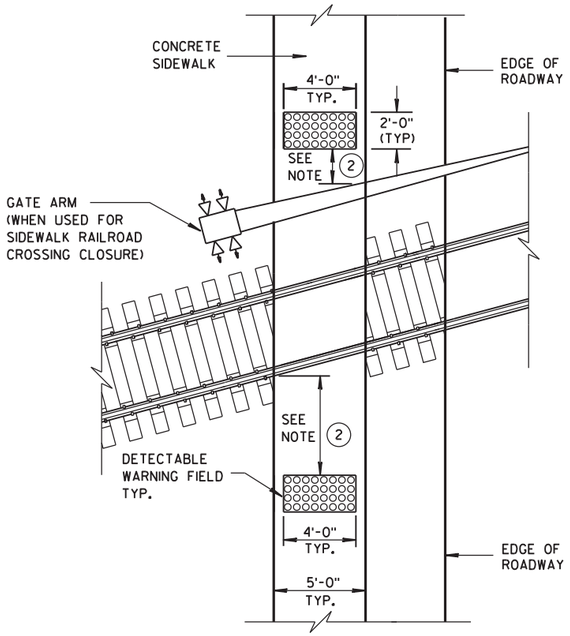
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

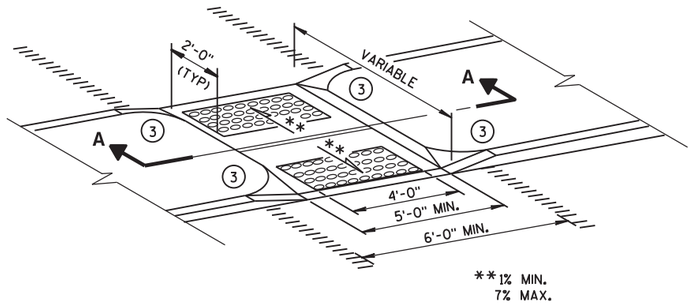
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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%.

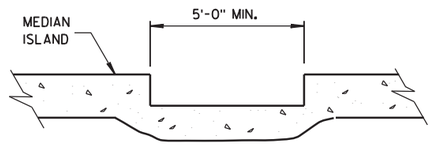
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

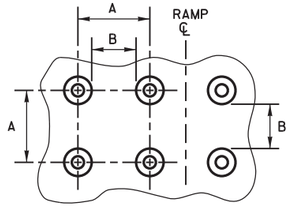
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET 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.



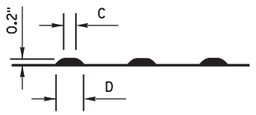
SECTION A-A



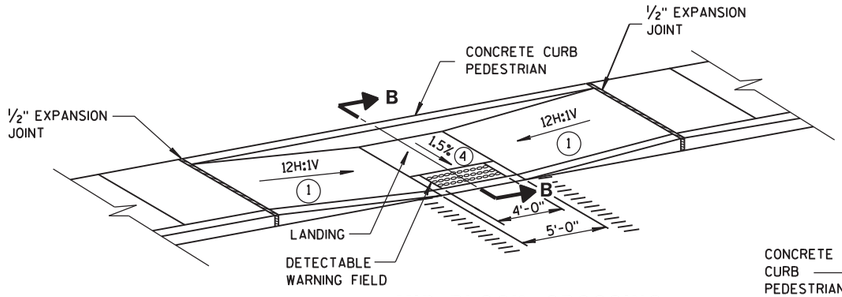
PLAN VIEW

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

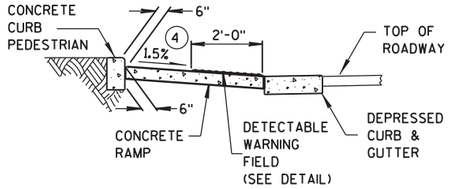
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

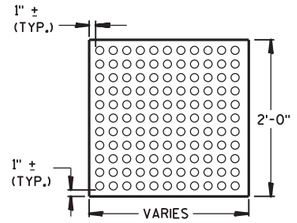


MID-BLOCK CROSSING
TYPE 7A



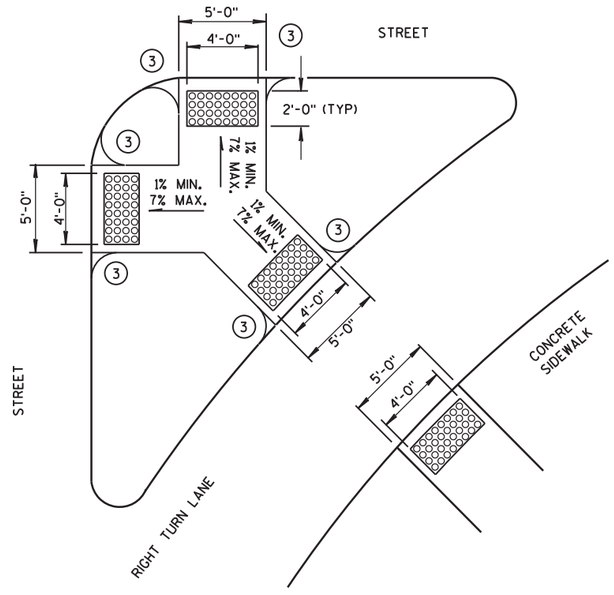
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

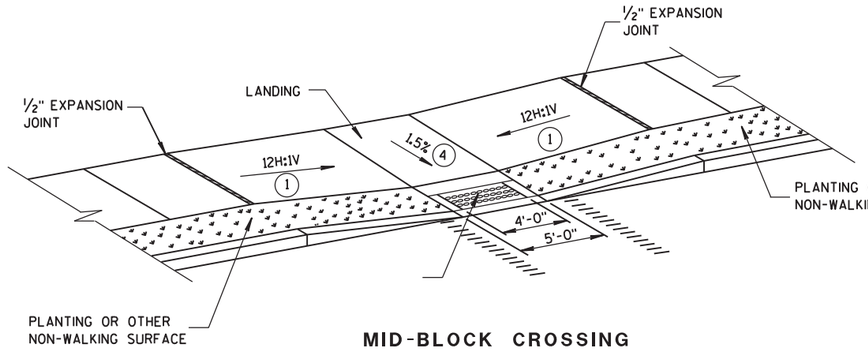


PLAN VIEW

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

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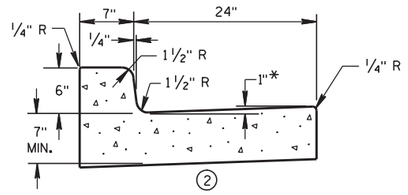
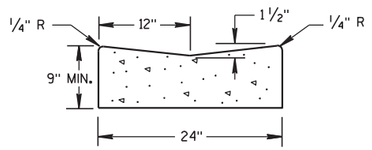
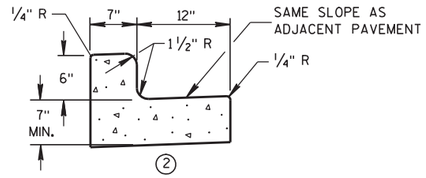
S.D.D. 8 D 5-15e



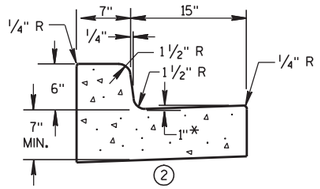
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

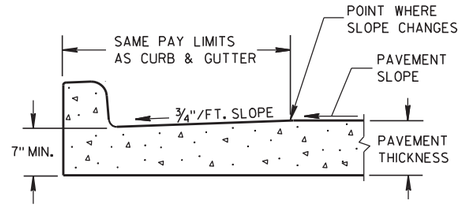


① CONCRETE CURB & GUTTER 19"



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.

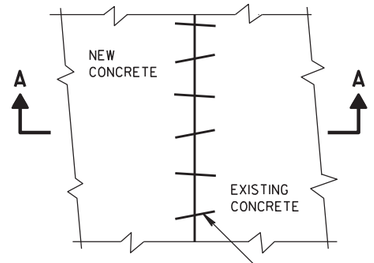
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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.

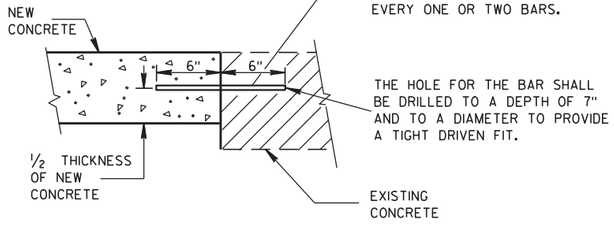
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

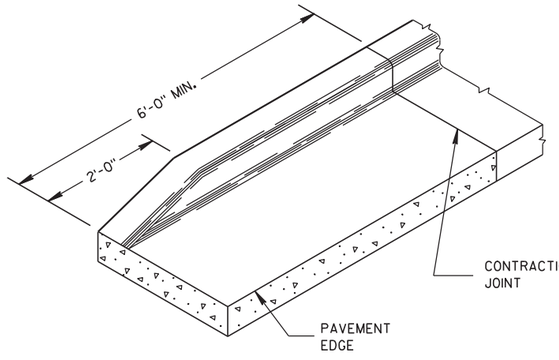
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



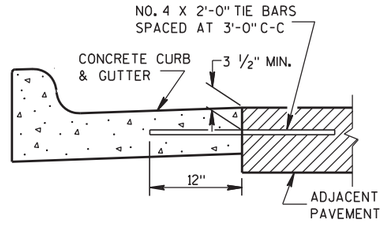
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

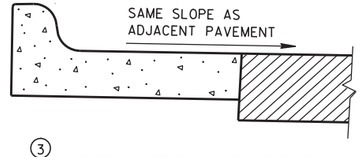
PAVEMENT TIES



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 Zoon — ROADWAY STANDARDS ENGINEER

322

ENT

FHWA

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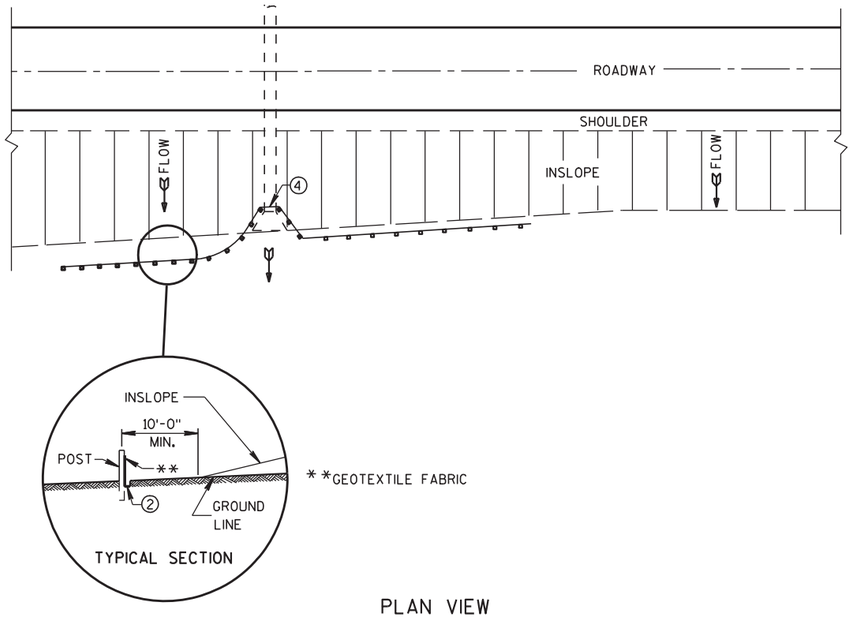
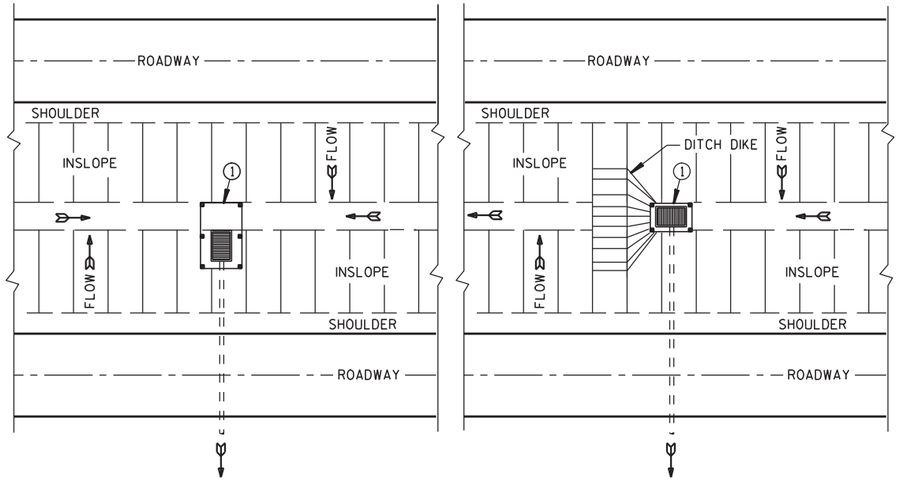
S.D.D. 8 D 16-10



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



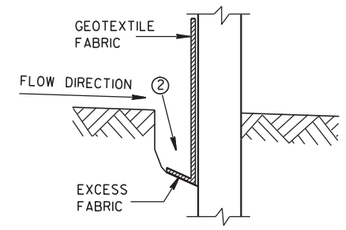
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

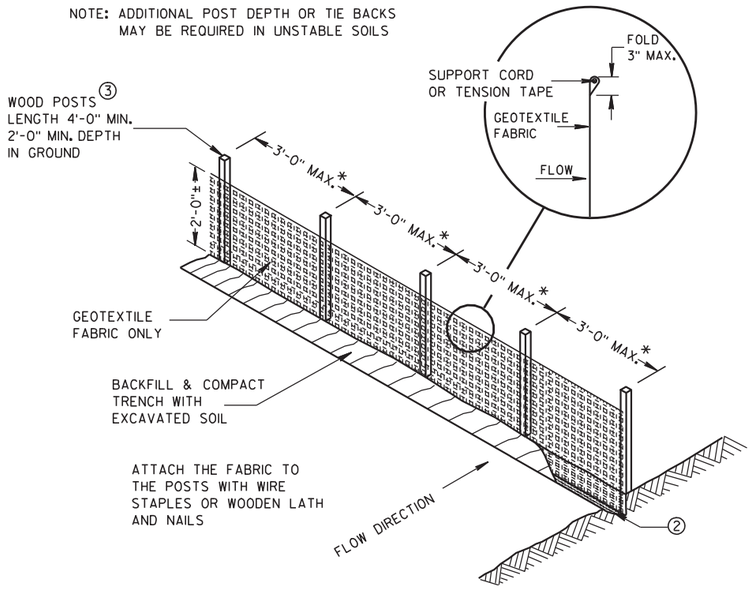
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

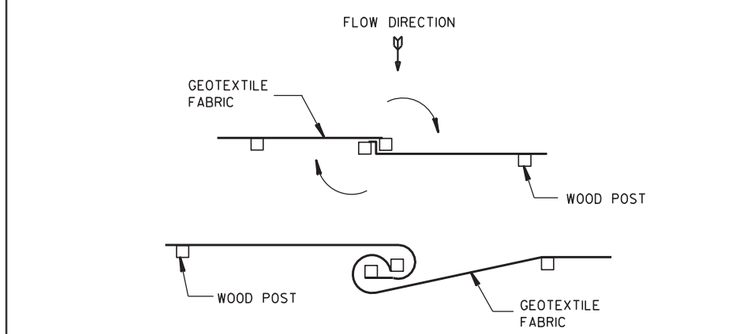
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



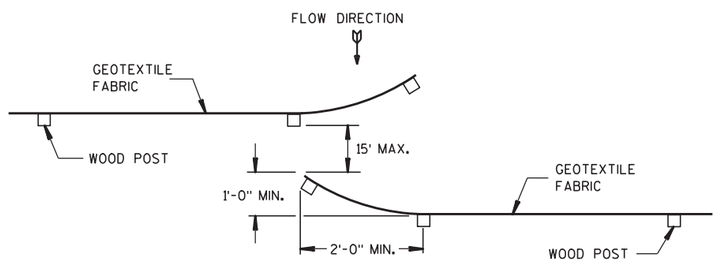
TRENCH DETAIL



SILT FENCE

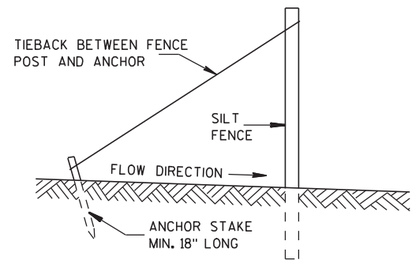


TWIST METHOD



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

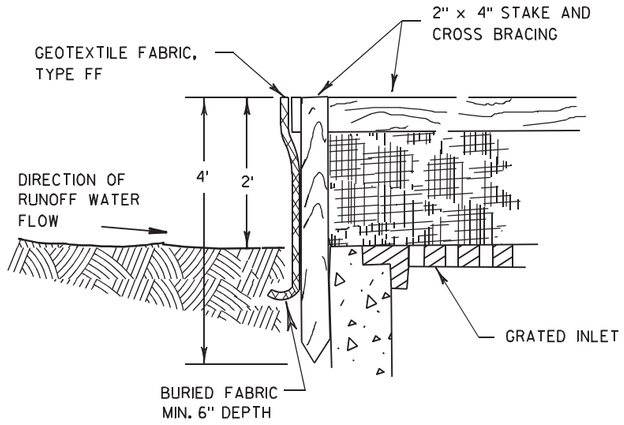
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

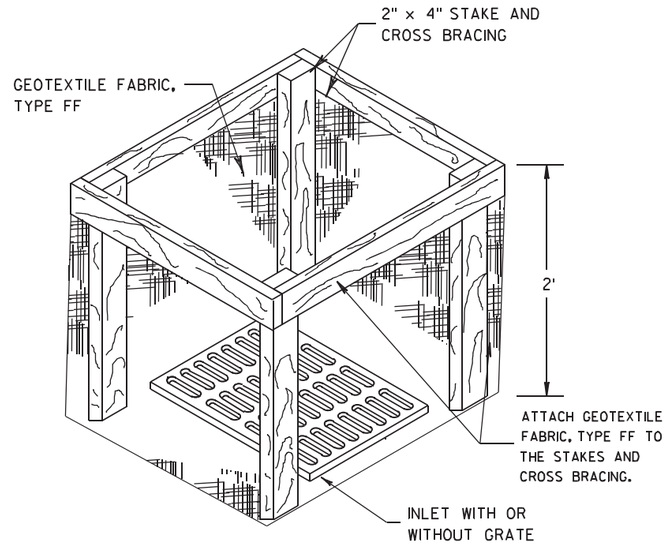
6

S.D.D. 8 E 9-6

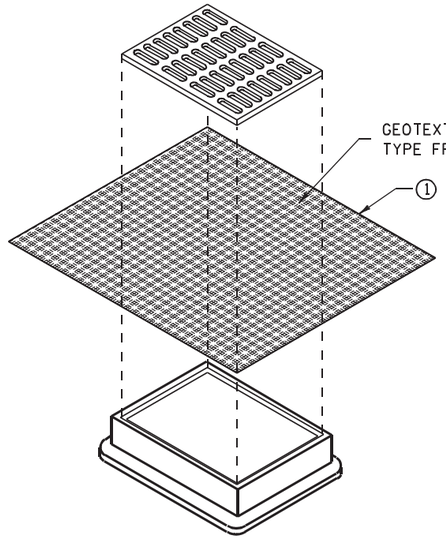
6

S.D.D. 8 E 9-6



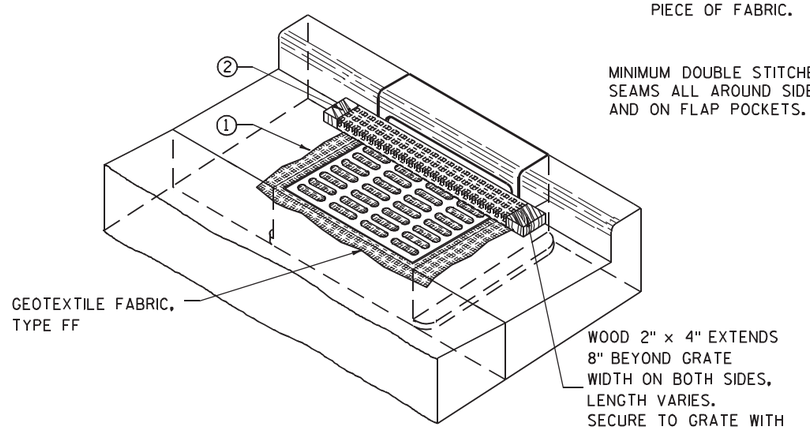


INLET PROTECTION, TYPE A

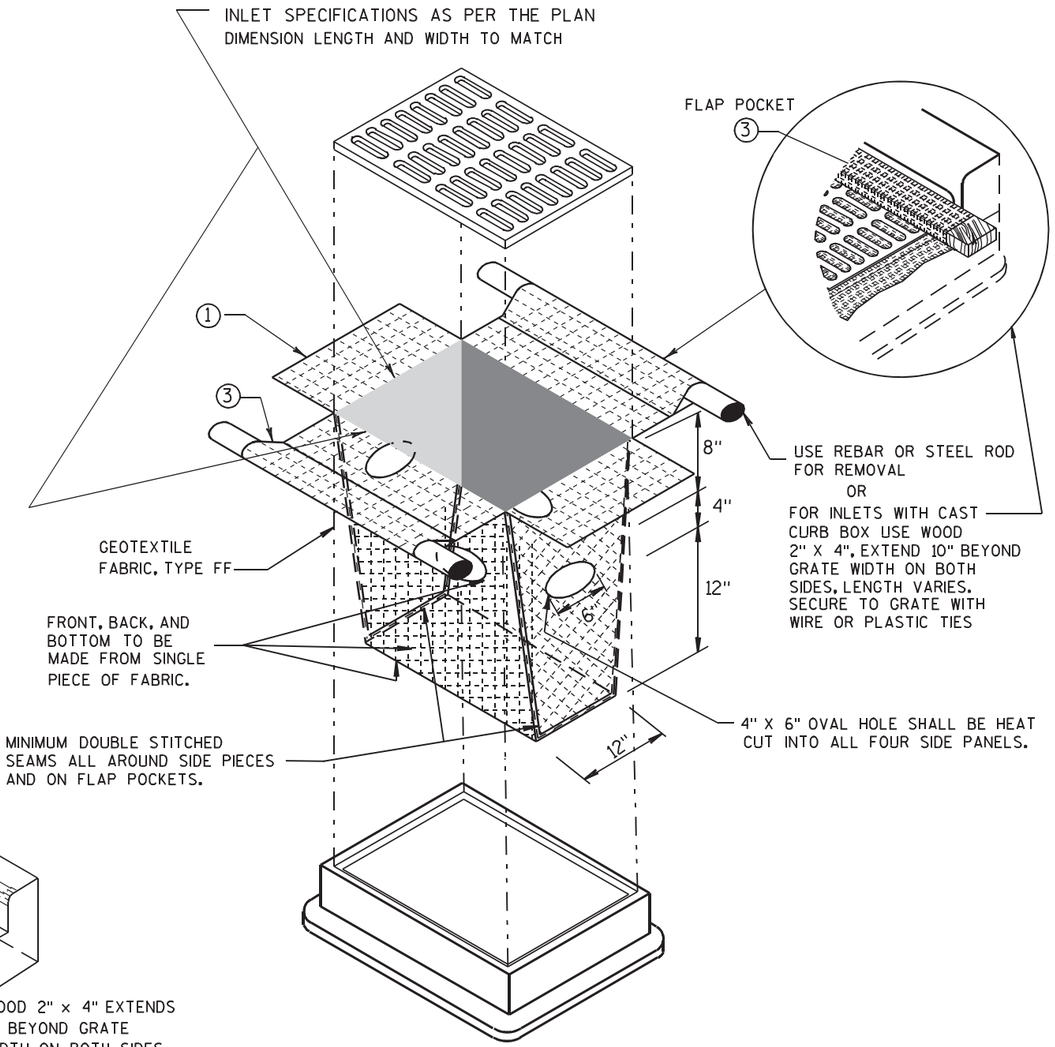


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

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.

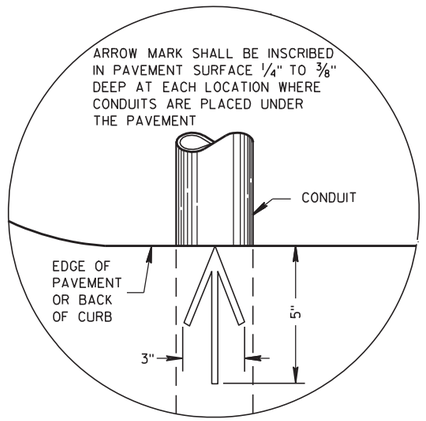
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

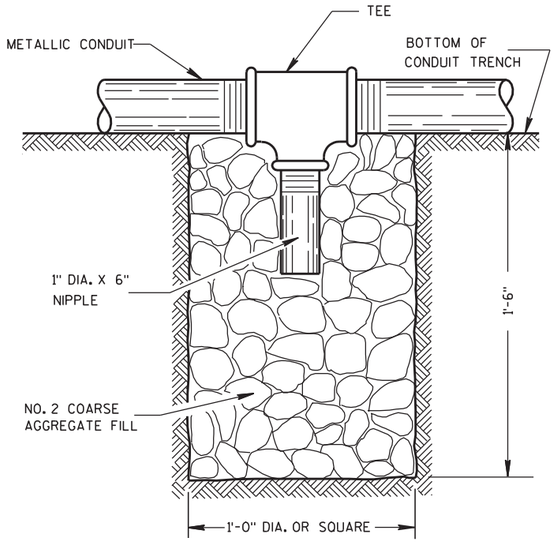
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2



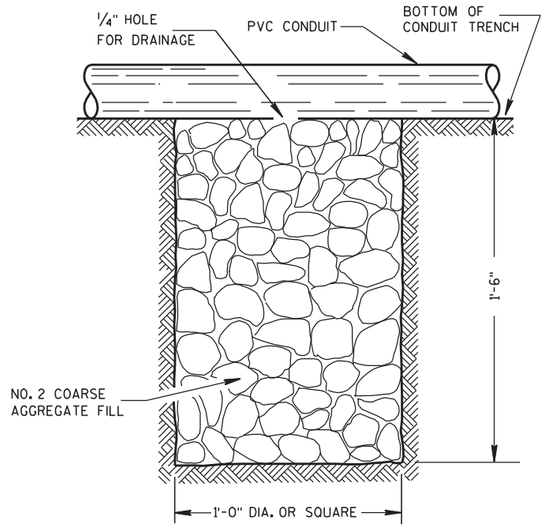
PLAN VIEW

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.

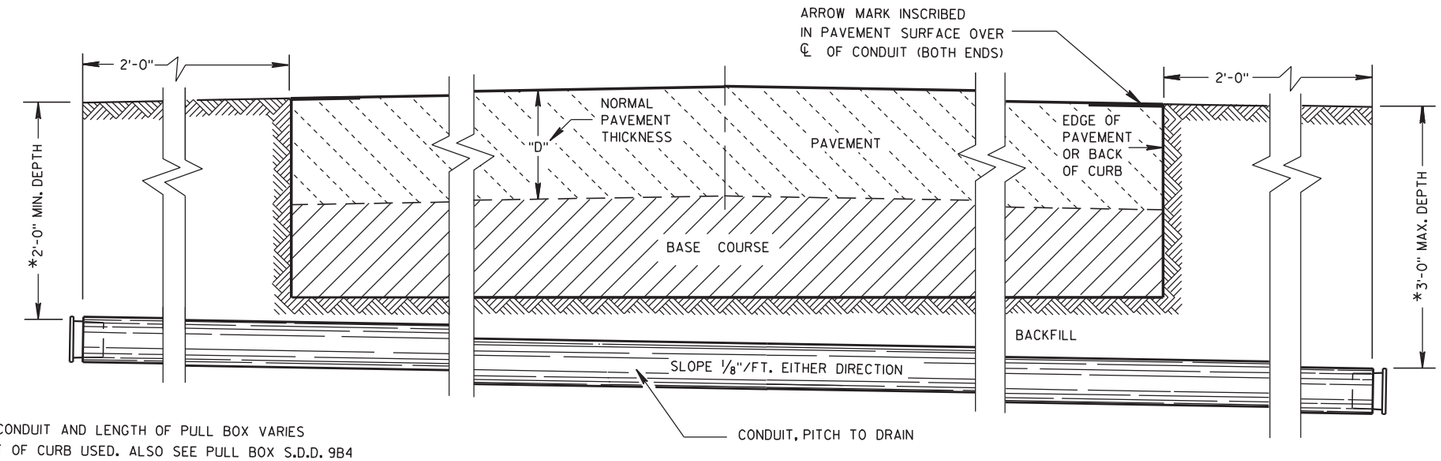
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

10/23/03 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 325 HWYS

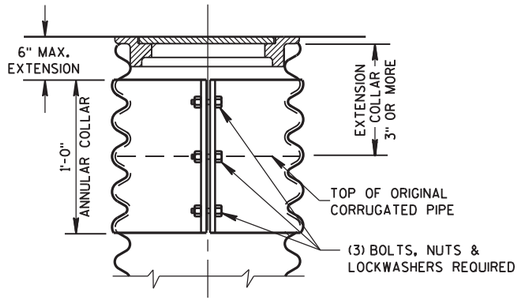
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

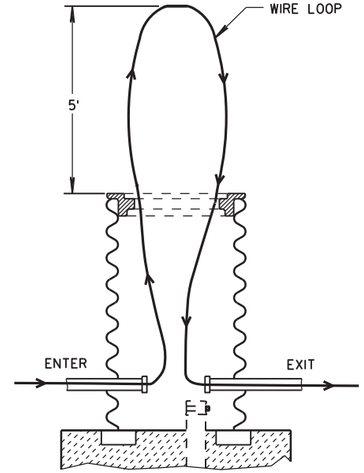
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	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.

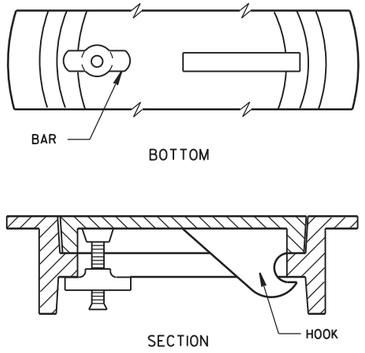
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

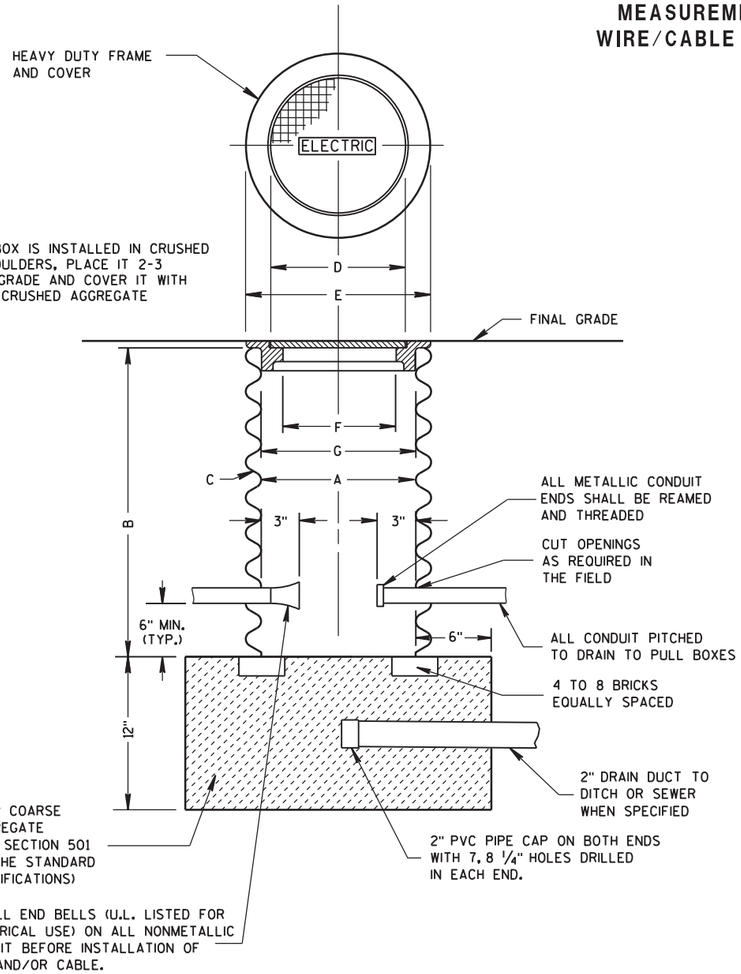


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

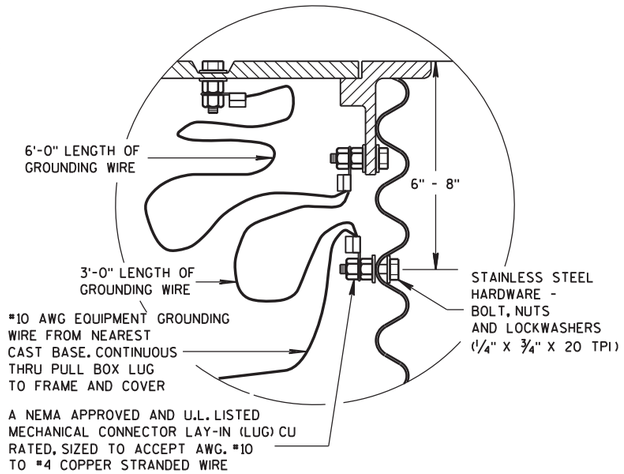


ALTERNATE COVER (LOCKING)

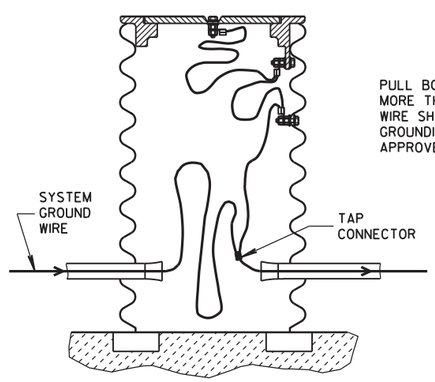
TIGHTENING BAR TYPE



PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

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.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

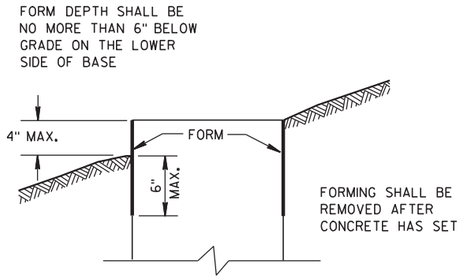
2-7-2013 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

6

S.D.D. 9 B 4-10



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
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 2 AND TYPE 5 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 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

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.

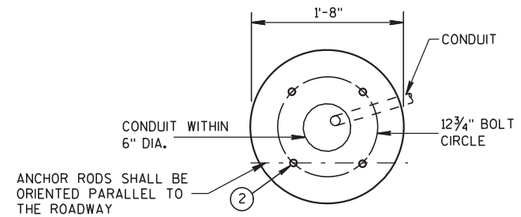
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

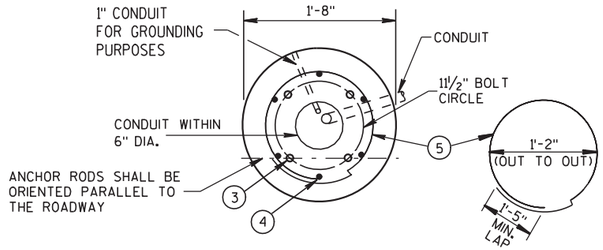
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

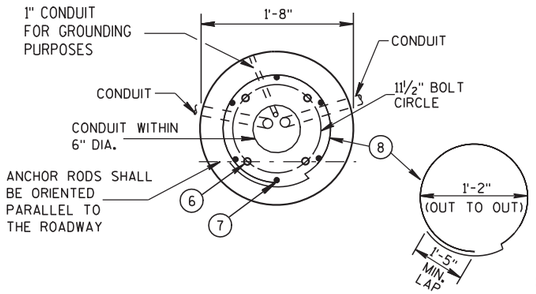
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

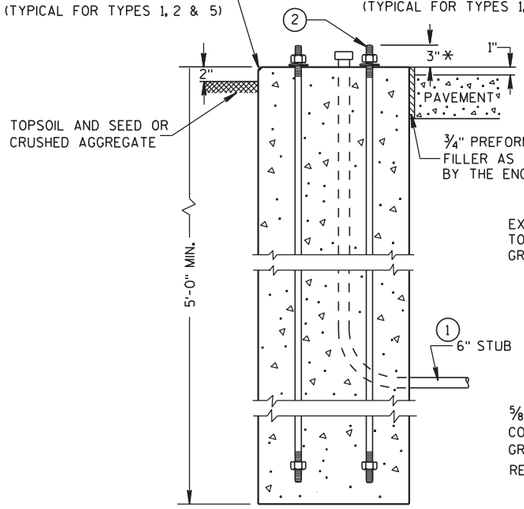






FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

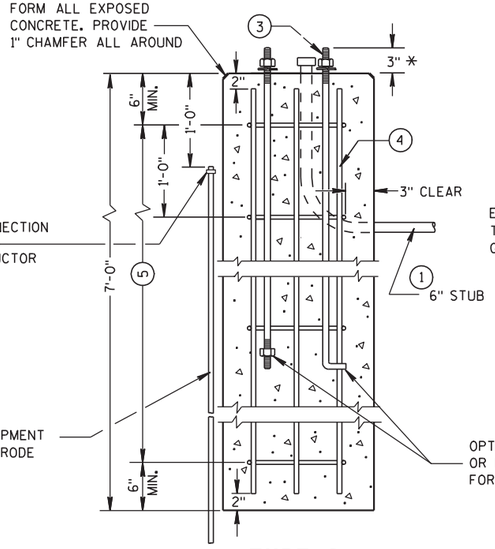
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)



HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)

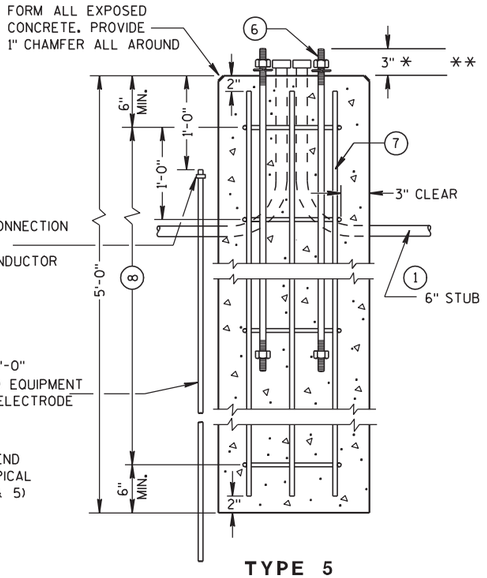
TYPE 1

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 (DATE)
/S/ Joanna L. Rush
STATE ELECTRICAL ENGI 327 HWYS
FHWA

6
S.D.D. 9 C 2-6

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, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

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 AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

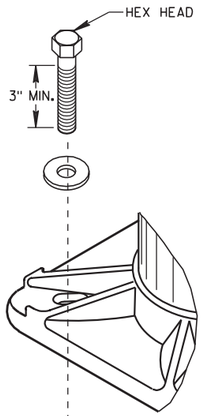
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

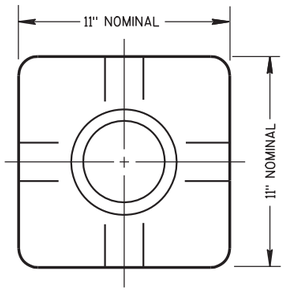
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

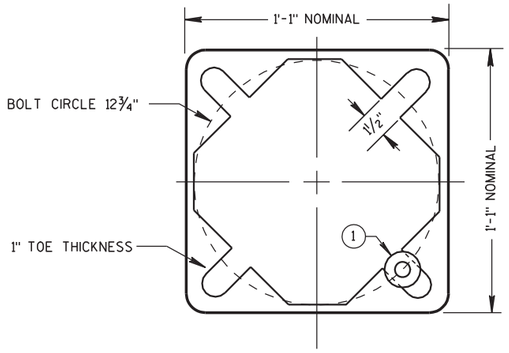
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

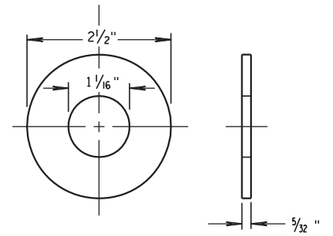




TOP VIEW
(PEDESTAL BASE)

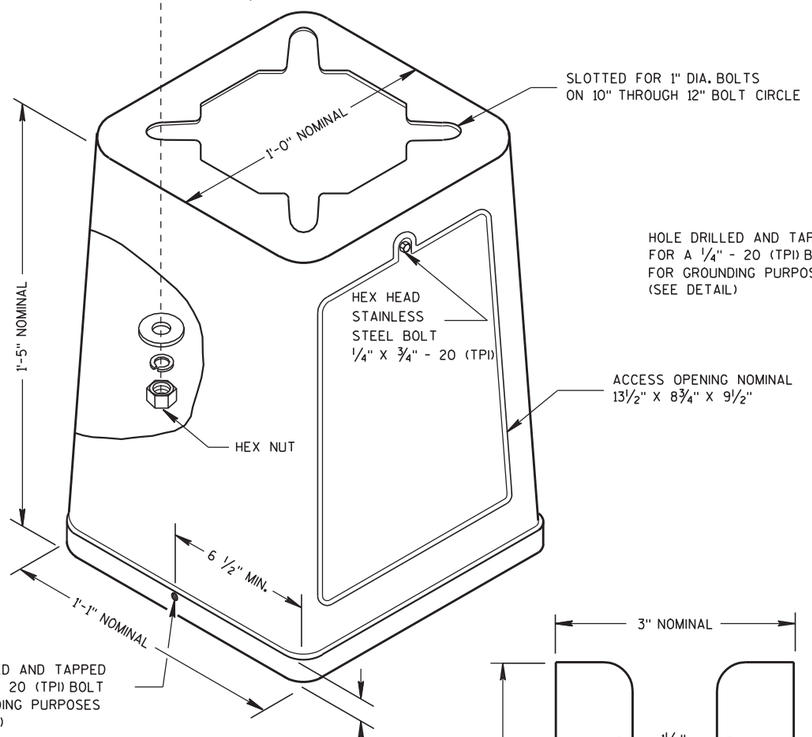


BOTTOM VIEW
(PEDESTAL BASE)

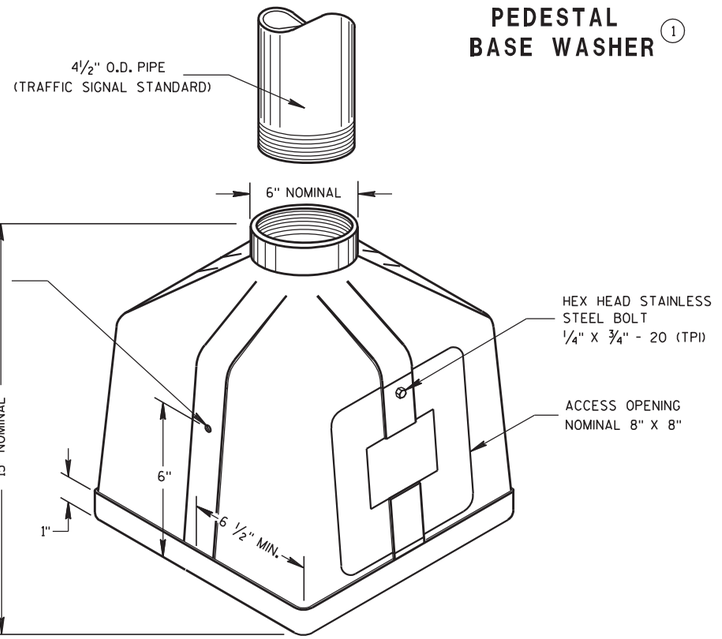


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

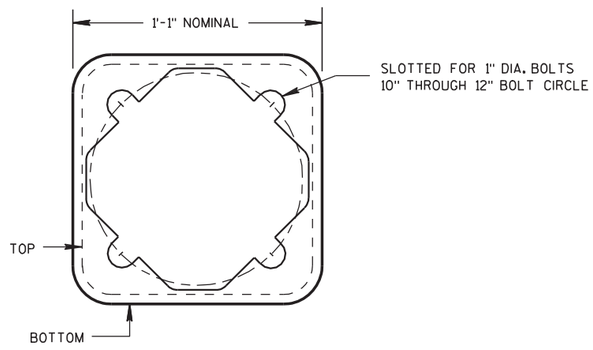


ISOMETRIC VIEW

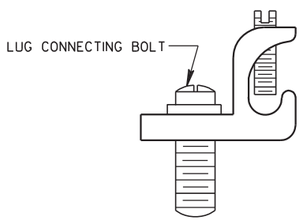


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

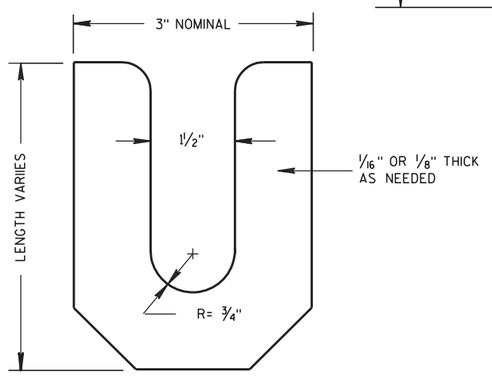


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/27/09 — DATE
/S/ Joanna L. Rich — STATE ELECTRICAL ENGI
328 — HWYS
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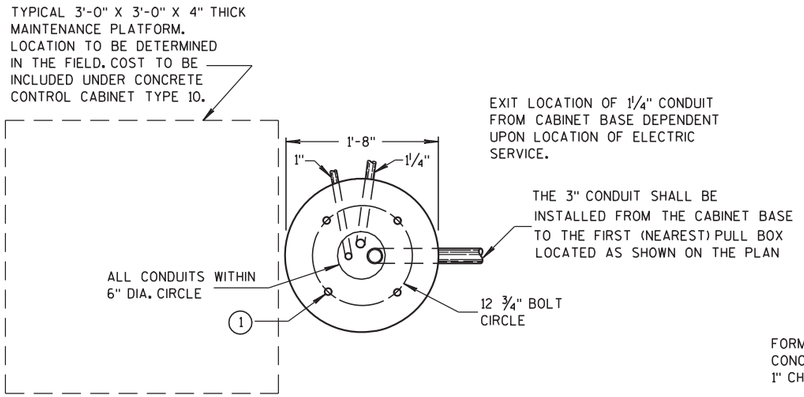
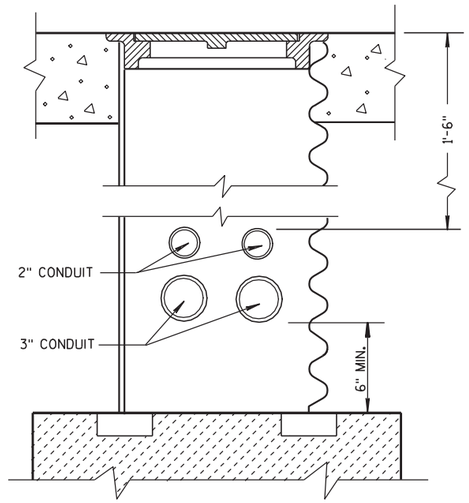
CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65 *

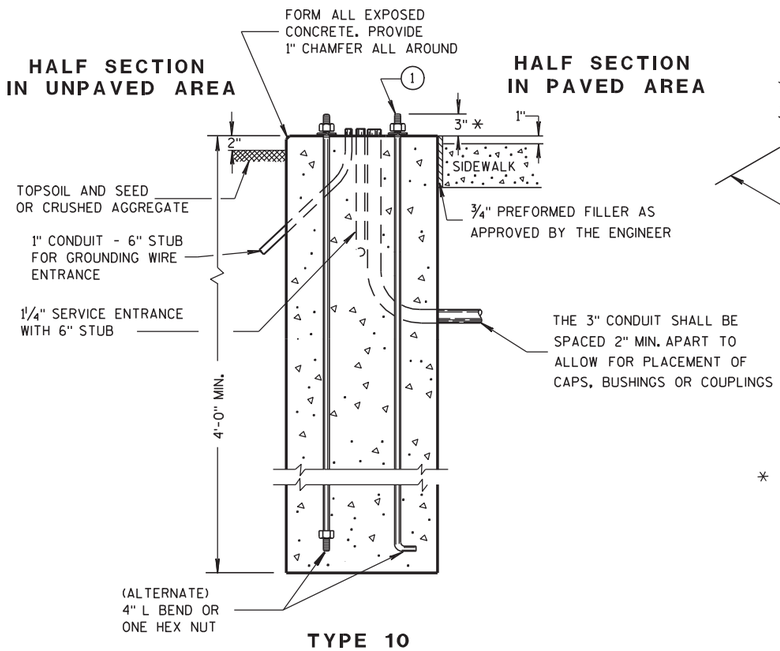
* INCLUDES MAINTENANCE PLATFORM.



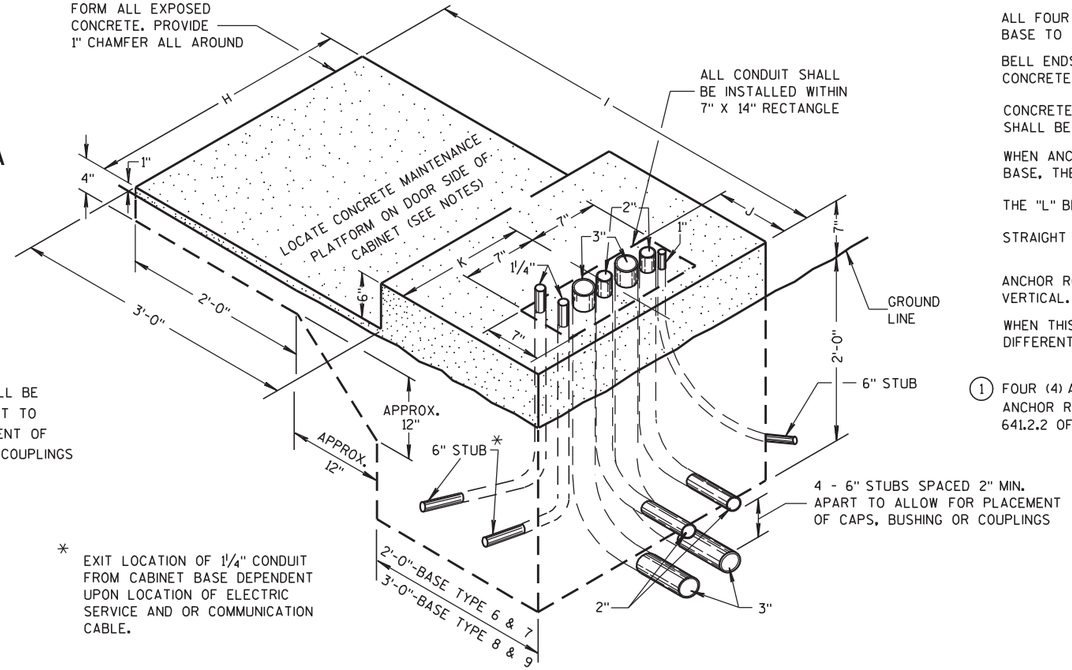


CONDUIT LOCATIONS IN 24" X 36" PULL BOX

(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)



TYPE 10



TYPE 6,7,8 AND 9
(ISOMETRIC VIEW)

* EXIT LOCATION OF 1¼" CONDUIT FROM CABINET BASE DEPENDENT UPON LOCATION OF ELECTRIC SERVICE AND OR COMMUNICATION CABLE.

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

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 APPROVED CONCRETE MASONRY ANCHORS 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 SURFACES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND 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.

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.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST PULL BOX LOCATED AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WHEN THIS DRAWING IS USED FOR STREET LIGHTING CABINET BASES, CONDUIT MAY BE DIFFERENT AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

(1) FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6"
ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS.

CONCRETE CONTROL CABINET BASES

CONCRETE CONTROL CABINET BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/3/10
DATE

/S/ Joanna L. [illegible]
STATE ELECTRICAL ENGI

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S.D.D. 9 C 5-7

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).

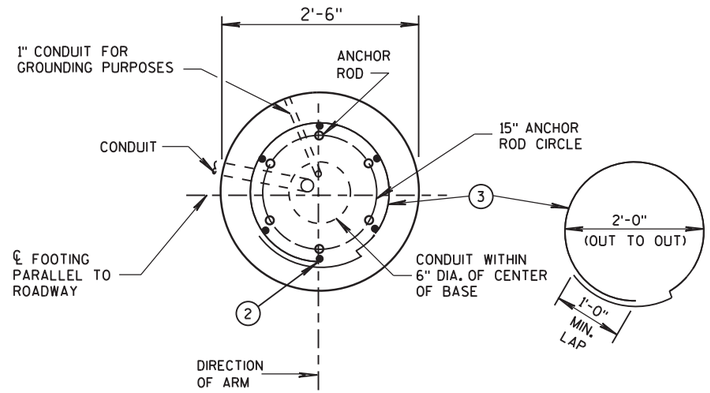
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

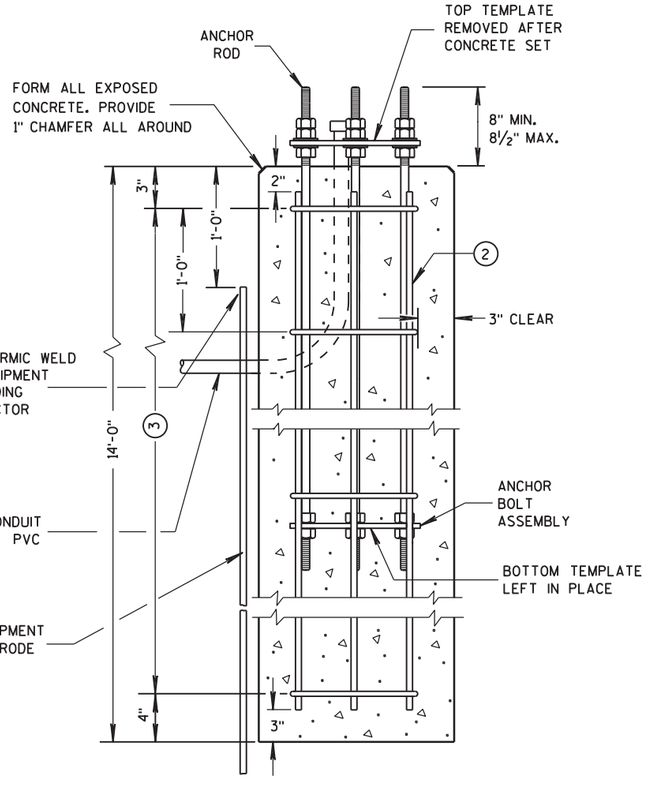
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 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.

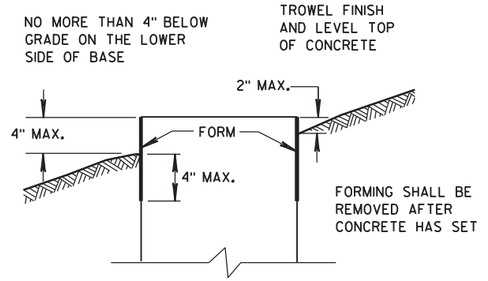
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



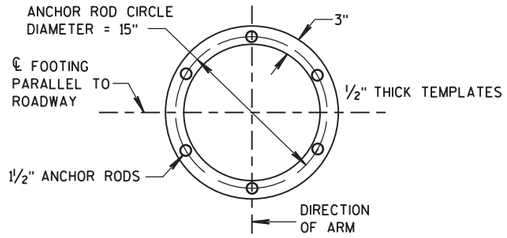


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

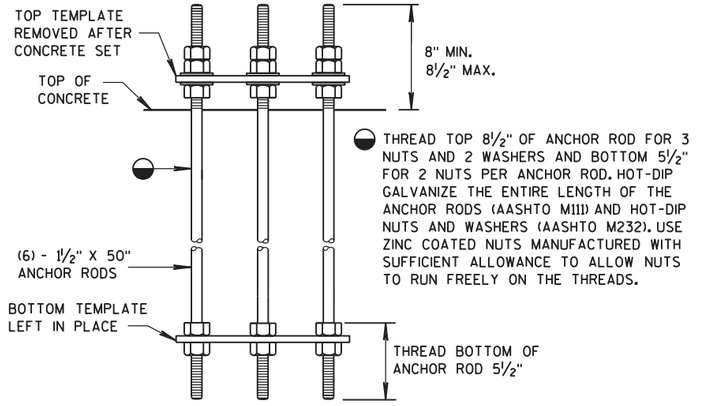
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



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

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11-26-2013
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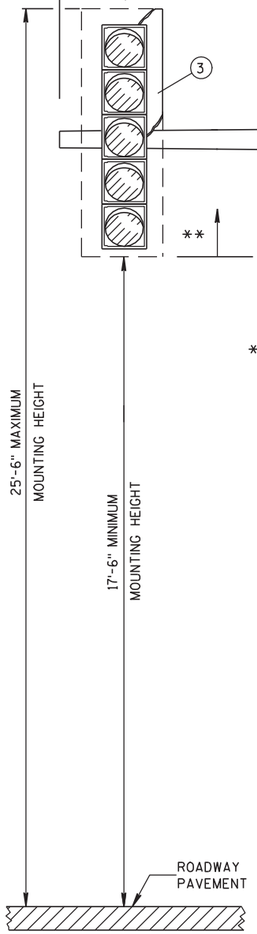
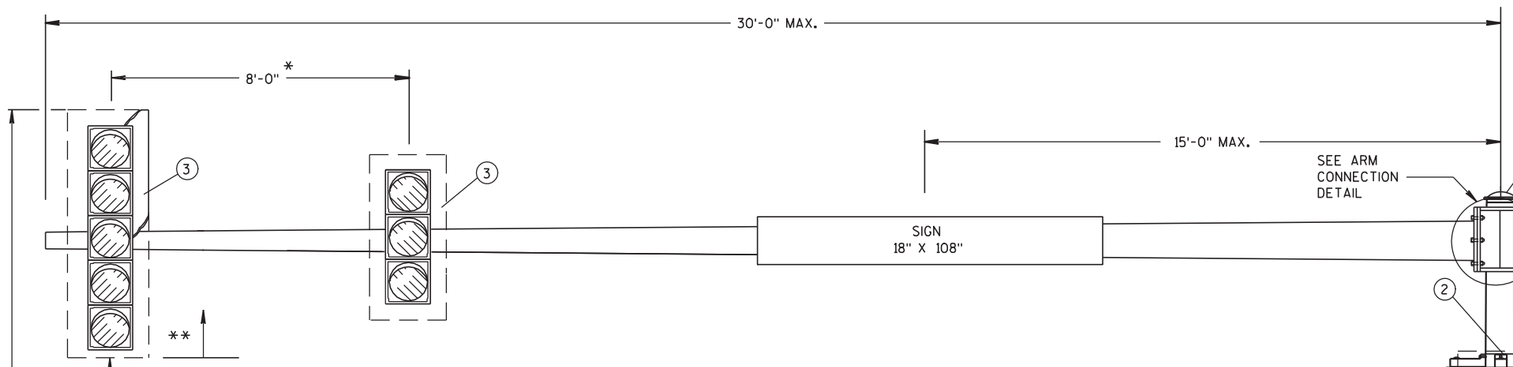
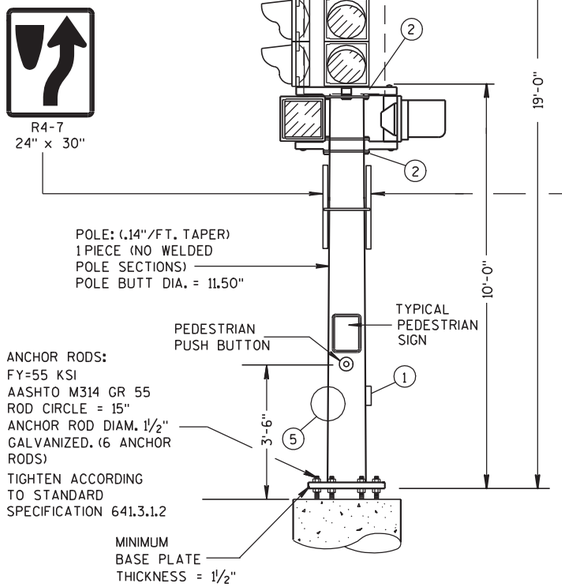
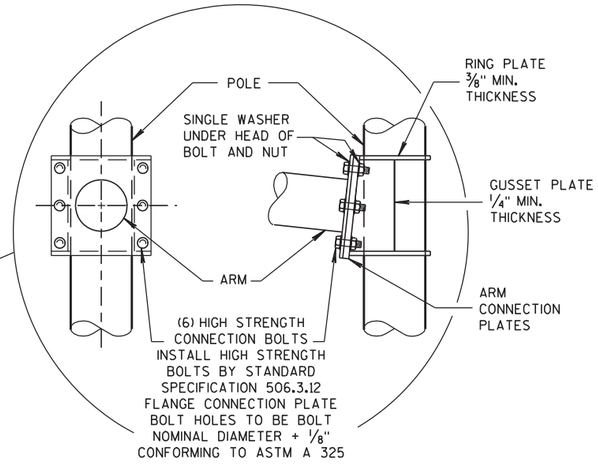




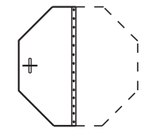
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY. NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

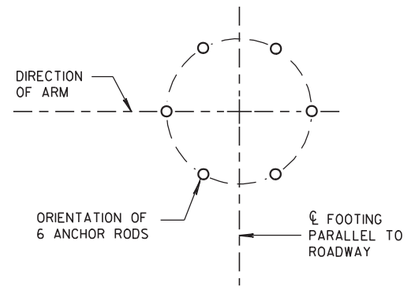
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.





6 BOLT ARM CONNECTION DETAIL





ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 9 POLE 15'- 30' MONOTUBE ARM

TYPE 9 POLE 15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011
DATE

/S/ Thomas J. Corrigan
STATE ELECTRICAL ENGI

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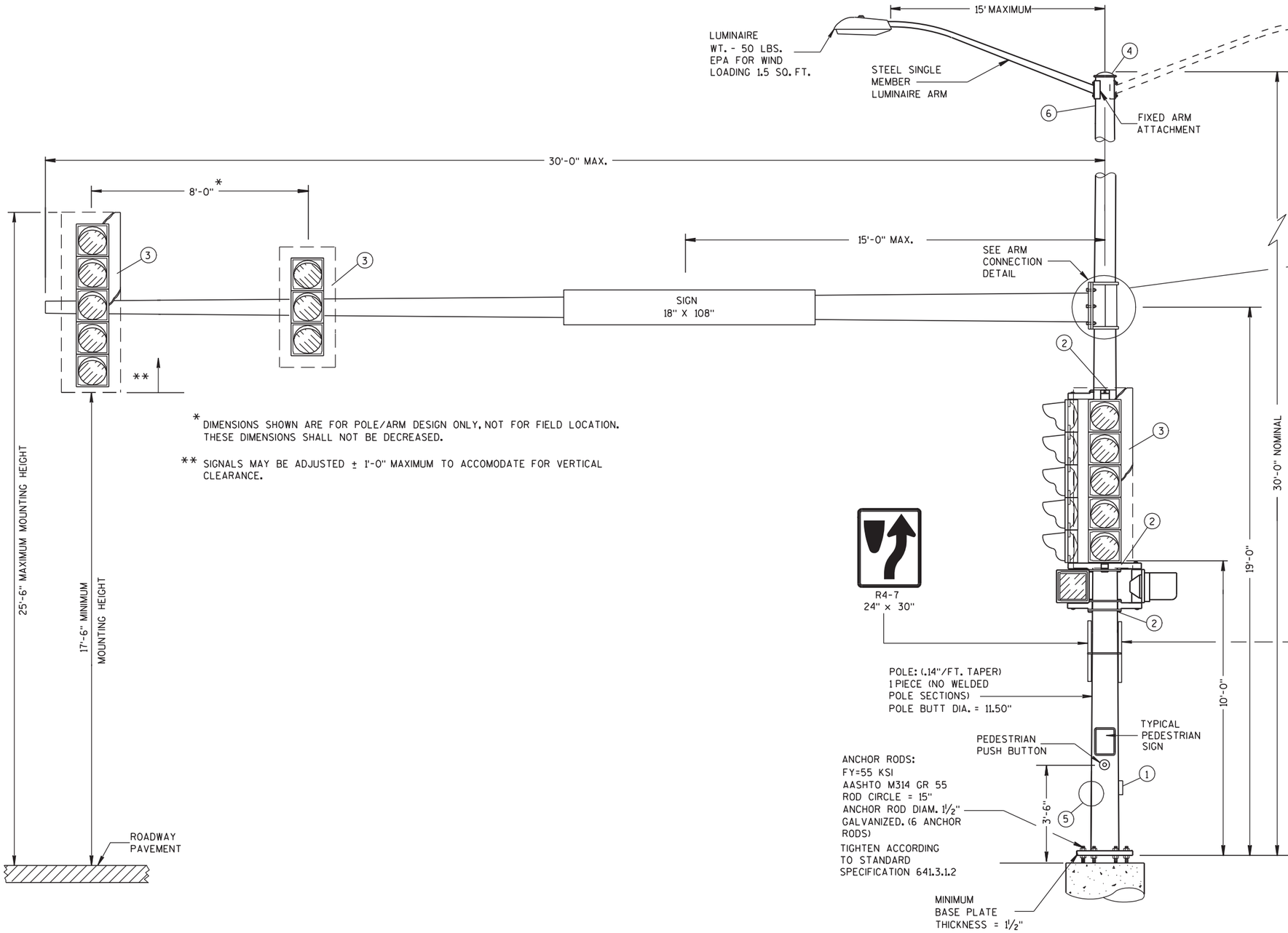

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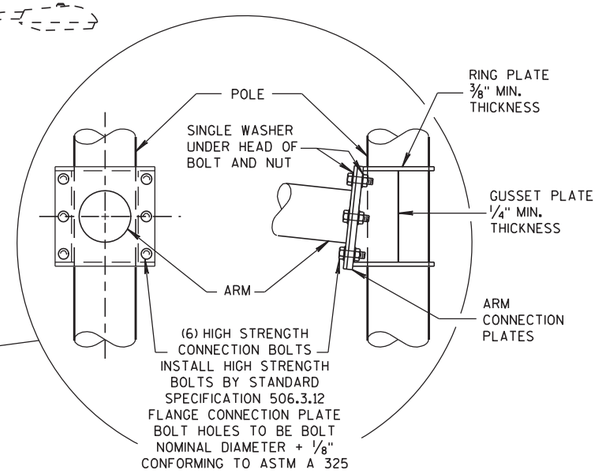
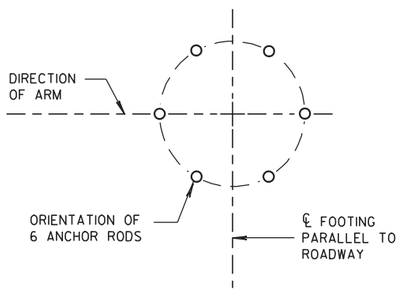
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION 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

3/2/2011 — DATE

/S/ Thomas J. Corrigo — STATE ELECTRICAL ENGI

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S.D.D. 9 E 8-4b

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S.D.D. 9 E 8-4b

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 LATEST AASHTO 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.

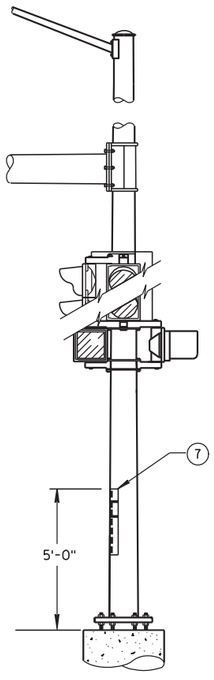
(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

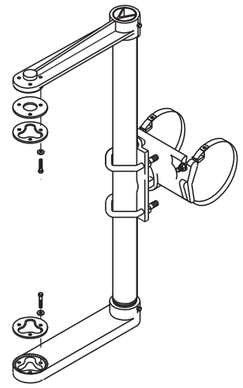
(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

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.

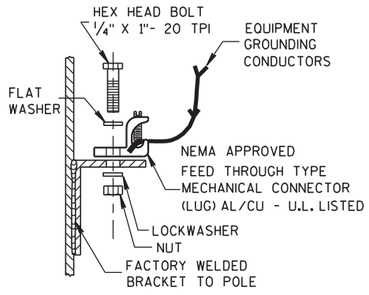


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



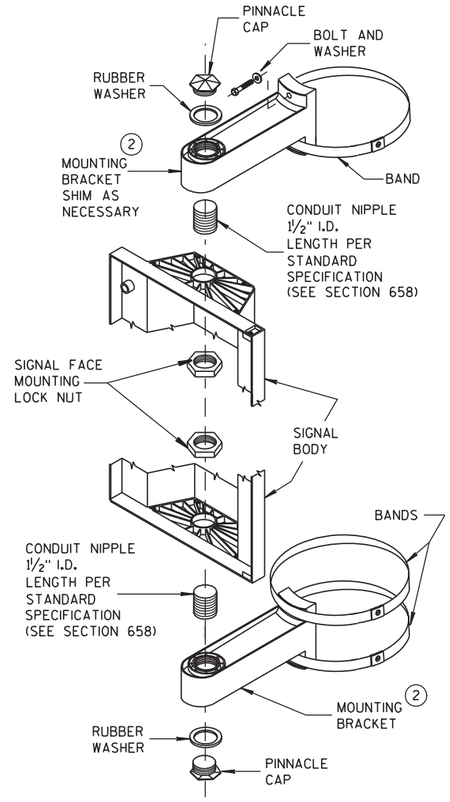
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

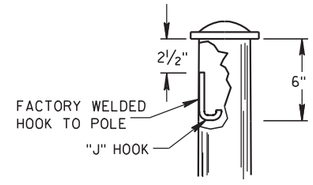


TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



"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

3/2/2011 DATE

/S/ Thomas J. Corrigan
STATE ELECTRICAL ENGI 333 HWYS

FHWA

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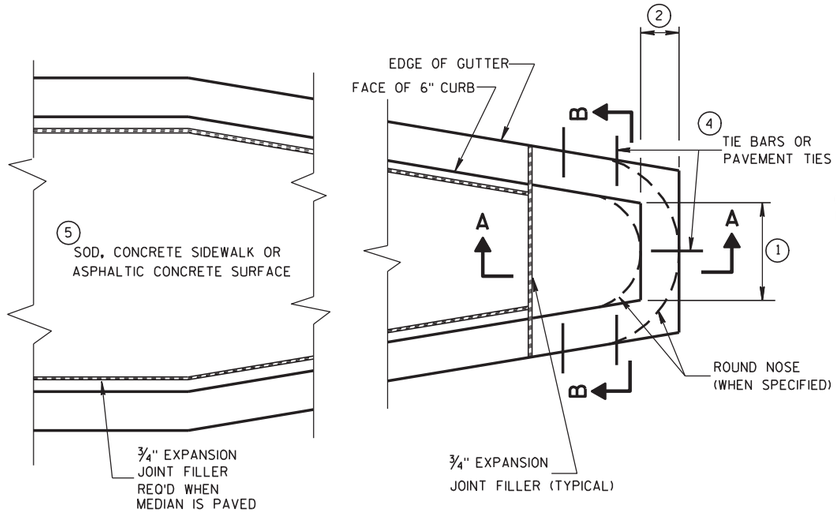
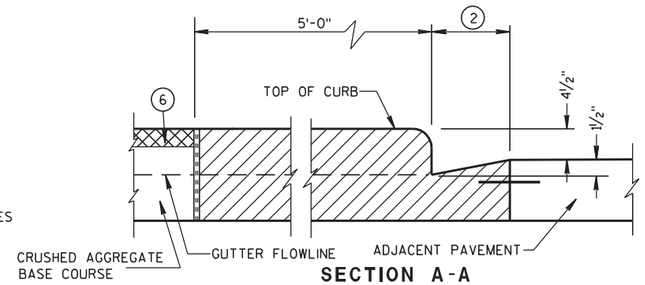
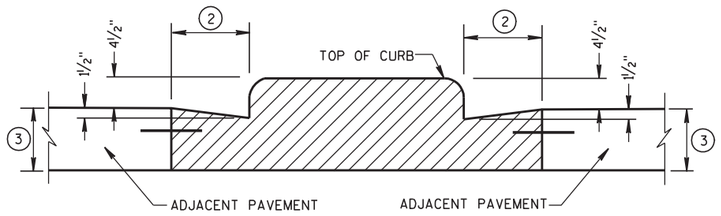




SECTION A-A



SECTION B-B

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.

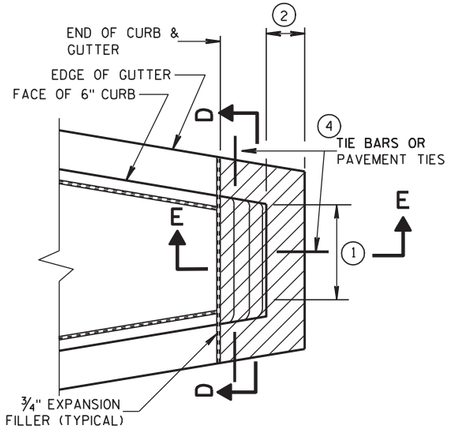
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

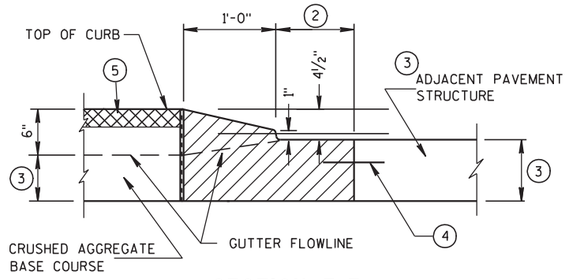
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(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.

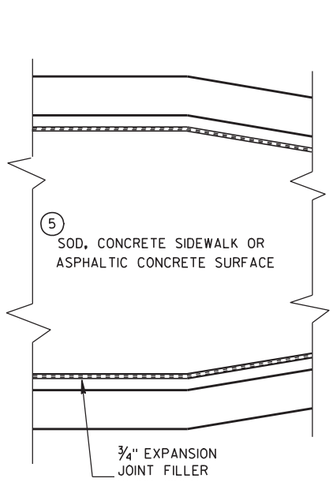
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

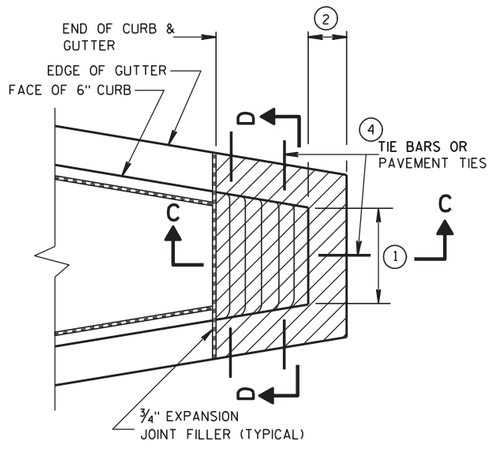




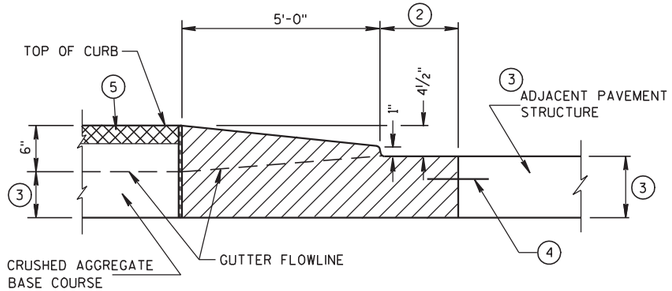
SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2

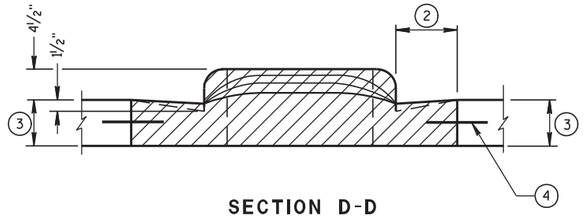




CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION C-C



SECTION D-D

CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE FHWA	/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER 334 NT

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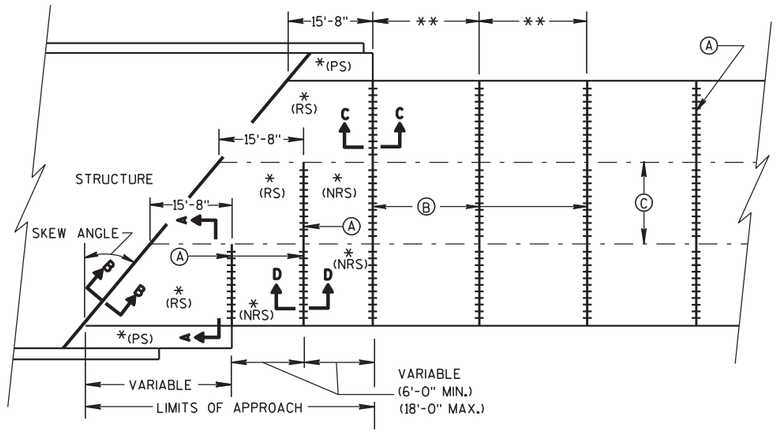
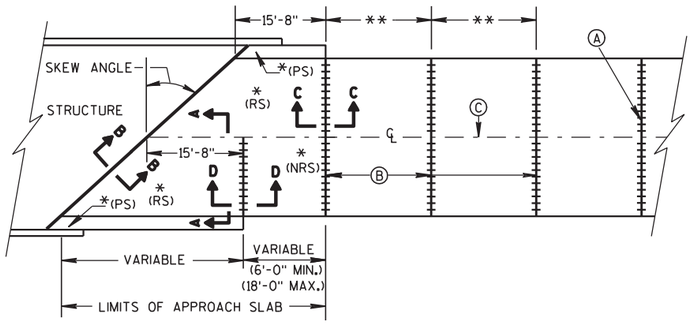
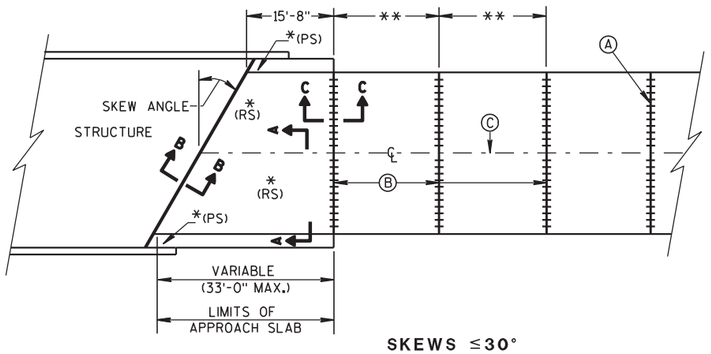


SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



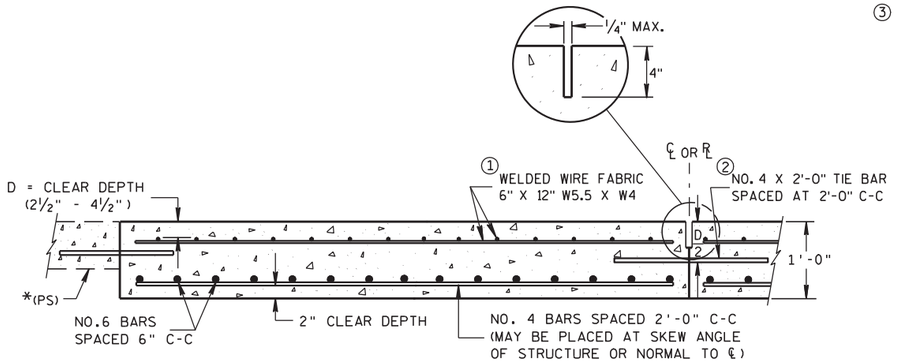
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

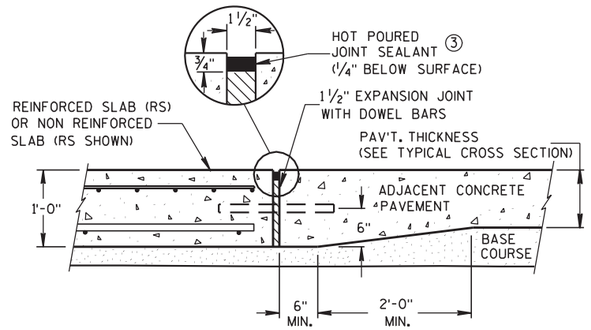
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

**STANDARD TRANSVERSE JOINT SPACING
(SEE SDD 13C4, SDD 13C11, & SDD 13C13)

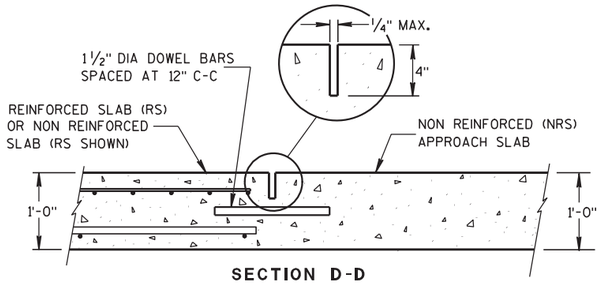
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
Ⓑ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
Ⓒ STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

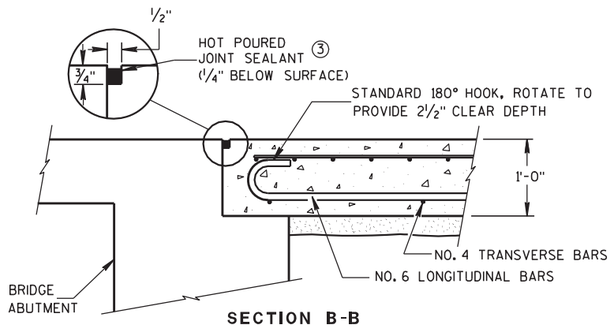
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

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.

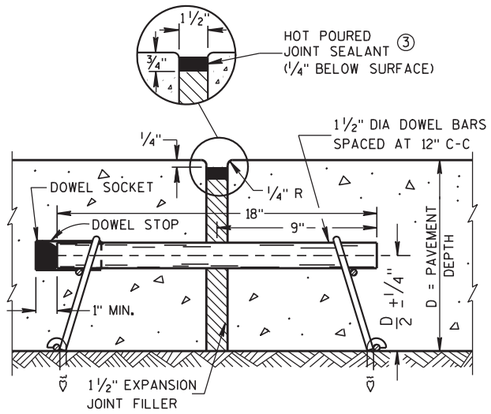
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

③ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/11/2009 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DESIGNER
FHWA

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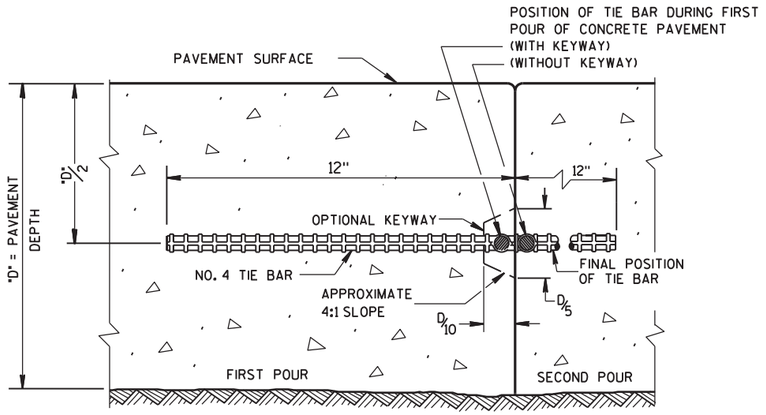
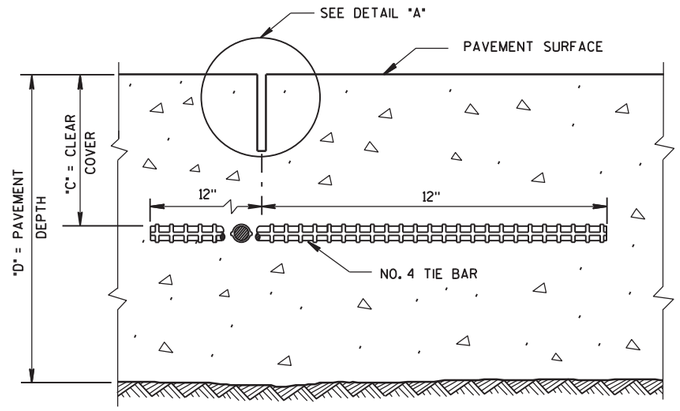


CONSTRUCTION JOINT



SAWED JOINT

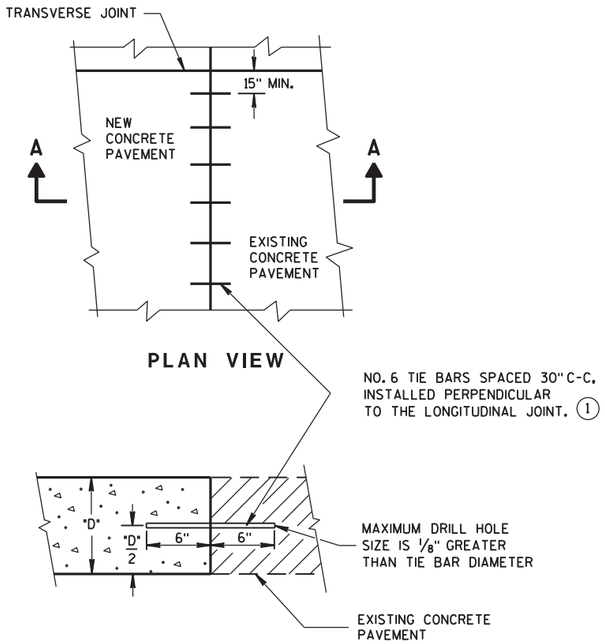
GENERAL NOTES

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.

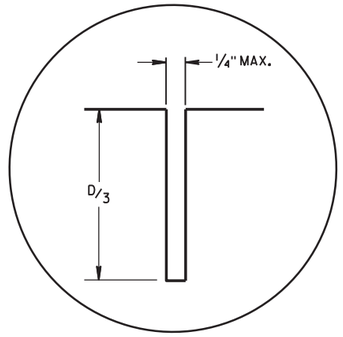
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SECTION A-A

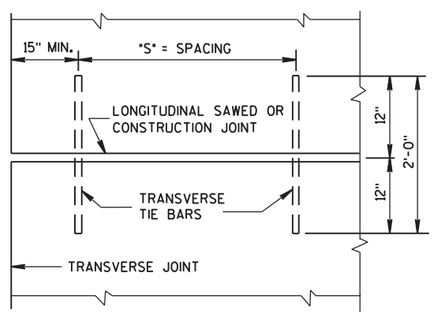
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"

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

5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER

FHWA

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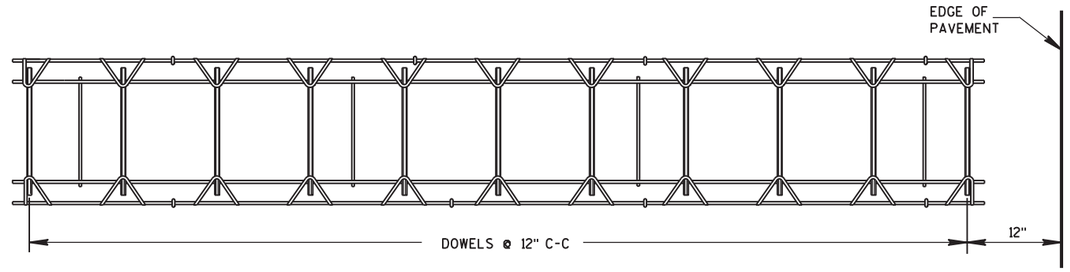
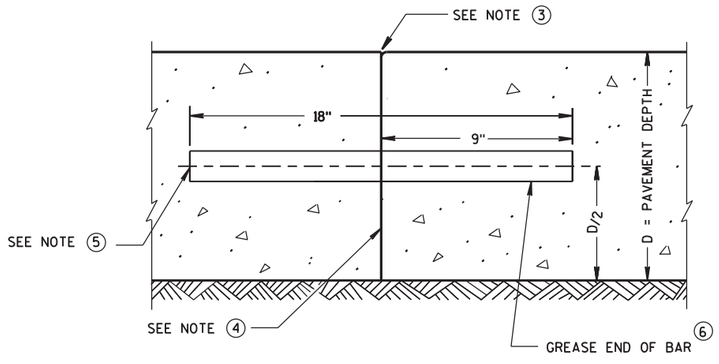


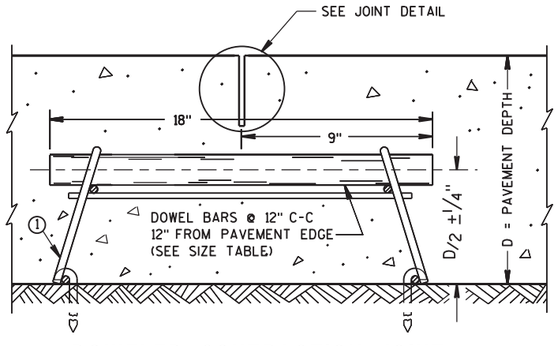
PLAN VIEW

SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



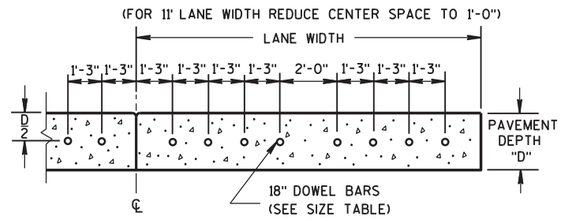
TRANSVERSE CONSTRUCTION JOINT



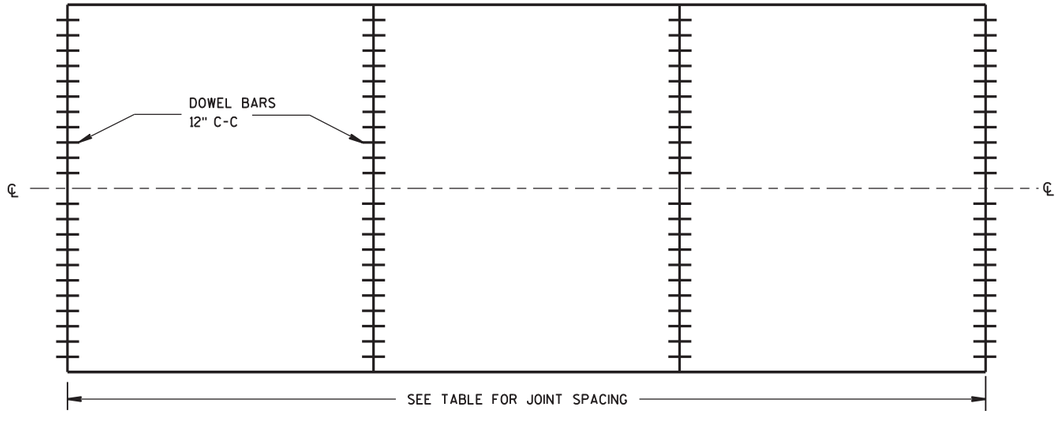
DOWELED CONTRACTION JOINT

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.

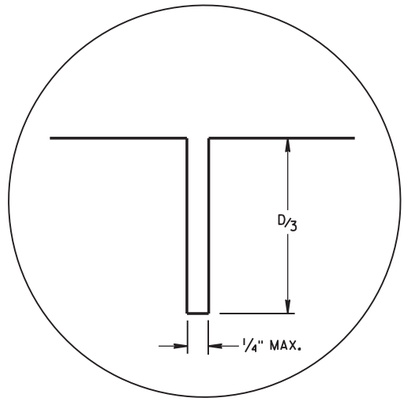
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

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
FHWA

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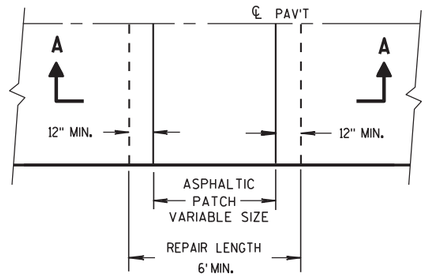
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

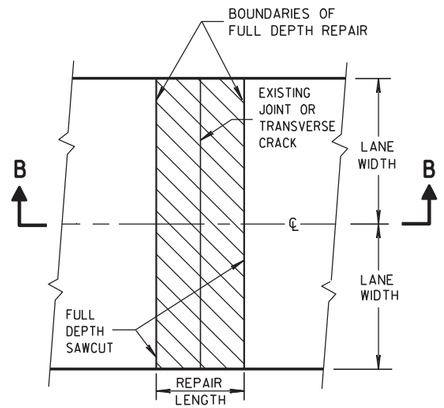
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

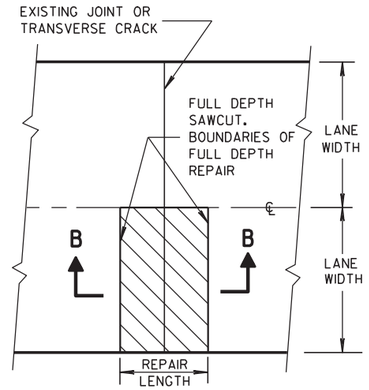
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



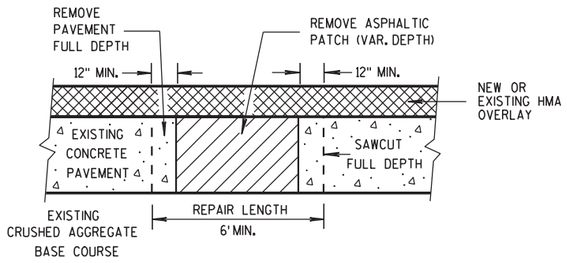
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

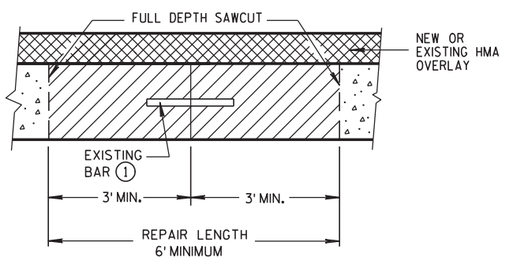
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

6

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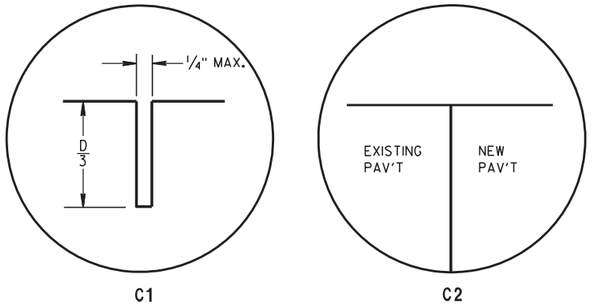
S.D.D. 13 C 14-4a

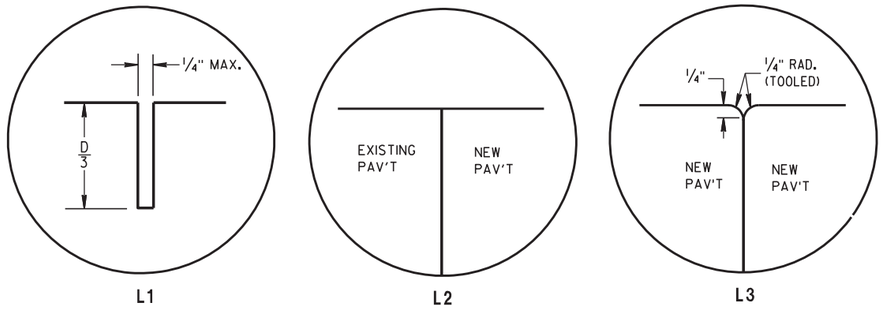
S.D.D. 13 C 14-4a

BASE PATCHING CONCRETE

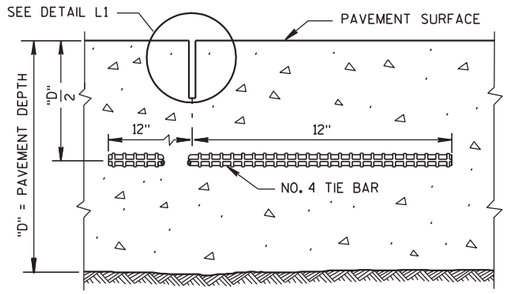
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...



TRANSVERSE JOINTS

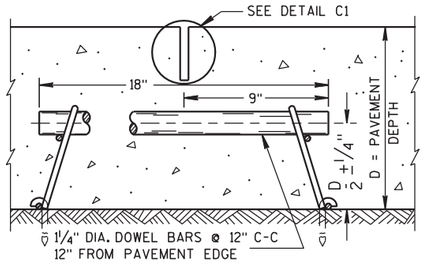


LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT



SECTION F-F

CONTRACTION JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

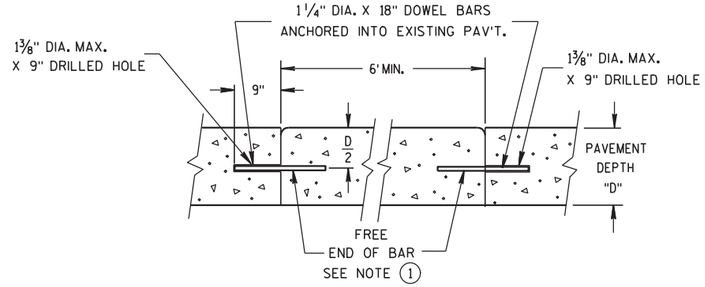
CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

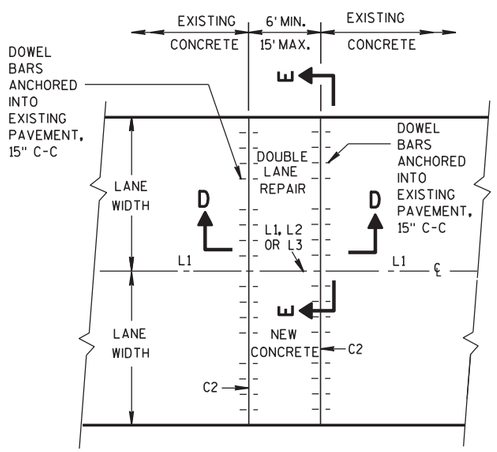
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

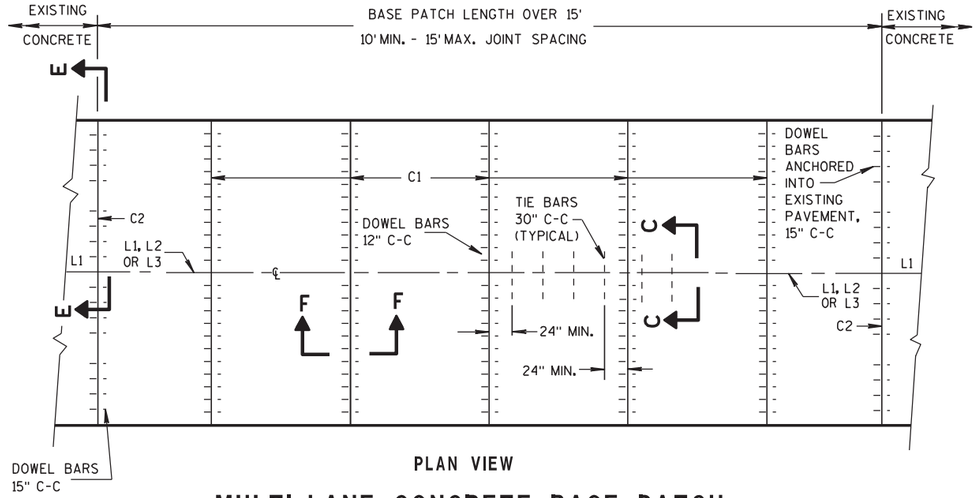


SECTION D-D



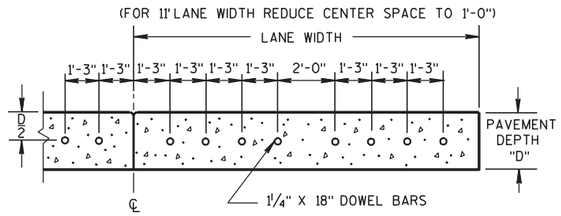
PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH



SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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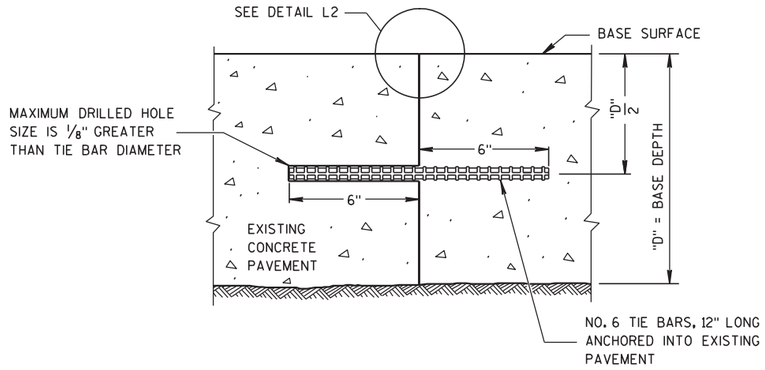
S.D.D. 13 C 14-4b



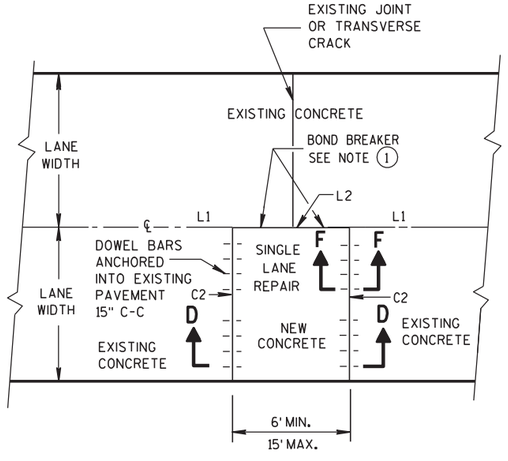
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

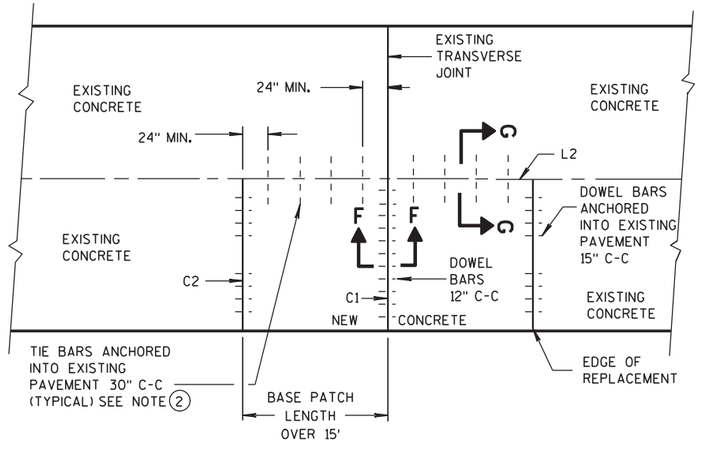
1. USE AN ENGINEER-APPROVED BOND BREAKER FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.

2. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12-11-2009 DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE 340 NEER

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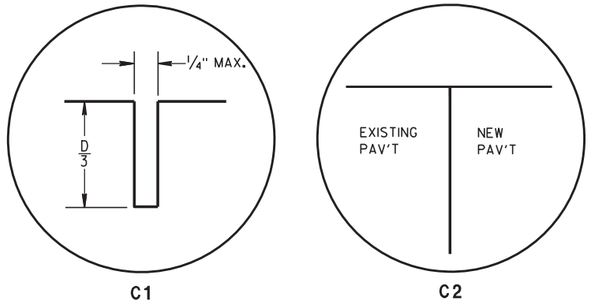
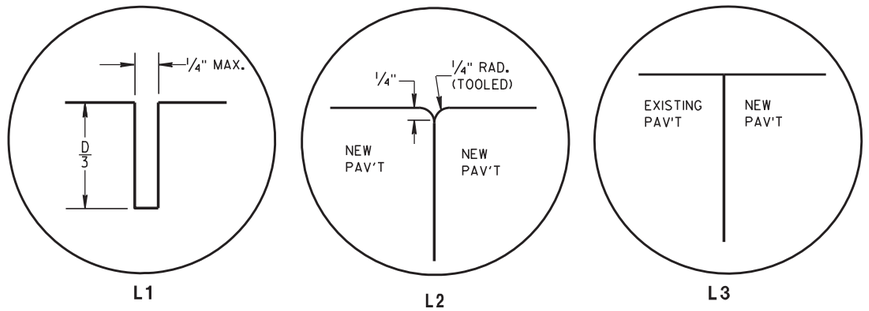
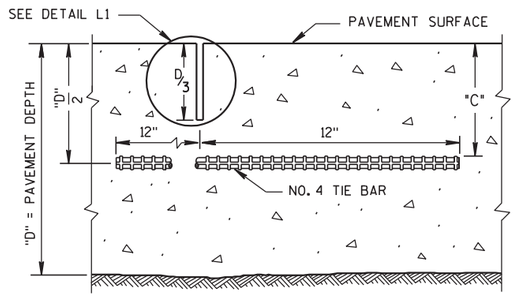
S.D.D. 13 C 14-4c



TRANSVERSE JOINTS

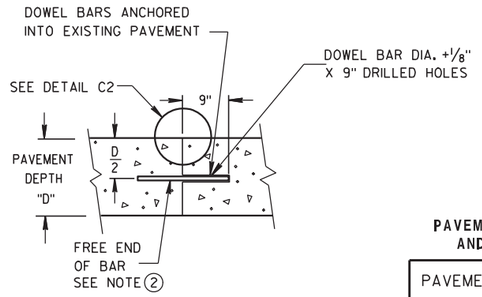


LONGITUDINAL JOINTS



SECTION C-C

SAWED JOINT



SECTION D-D

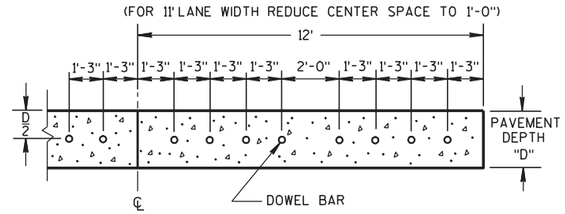
GENERAL NOTES

ANCHOR TIE BARS AND DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

(2) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION E-E

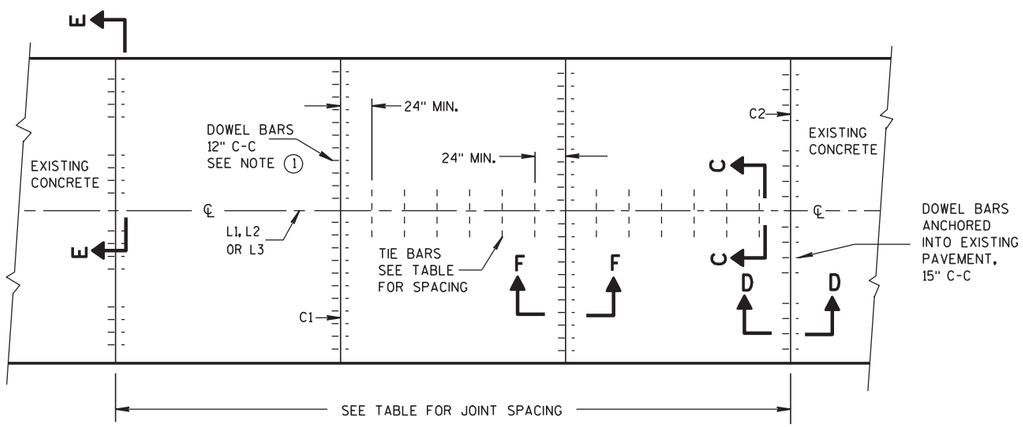
SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH "D"	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5½", 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'

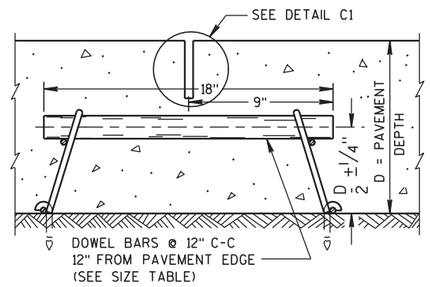
TIE BAR LOCATION TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING C-C	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 ½"	3"±½"	48"	42"
7, 7 ½"	3 ¼"±1"	45"	36"
8, 8 ½"	3 ¾"±1"	39"	30"
9, 9 ½"	4 ¼"±1"	33"	27"
10, 10 ½"	4 ¾"±1"	30"	24"
11, 11 ½"	5 ¼"±1"	27"	21"
12"	5 ¾"±1"	24"	21"



PLAN VIEW

CONCRETE BASE CONTRACTION JOINT LOCATIONS



SECTION F-F

CONTRACTION JOINT

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 13 C 15-5a

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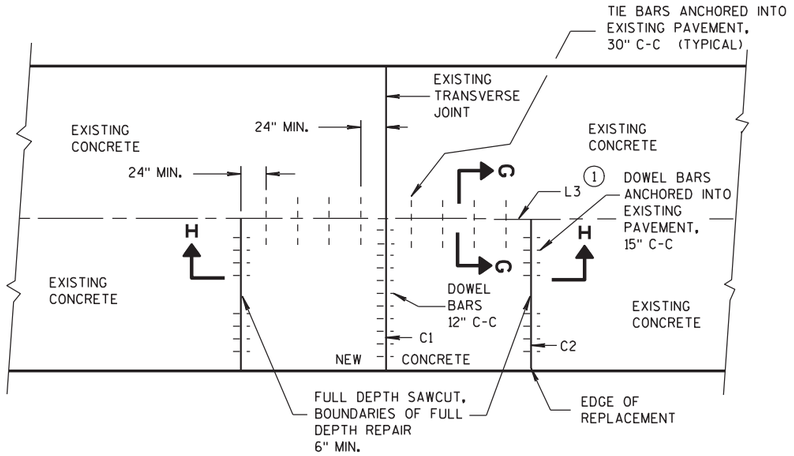
S.D.D. 13 C 15-5a

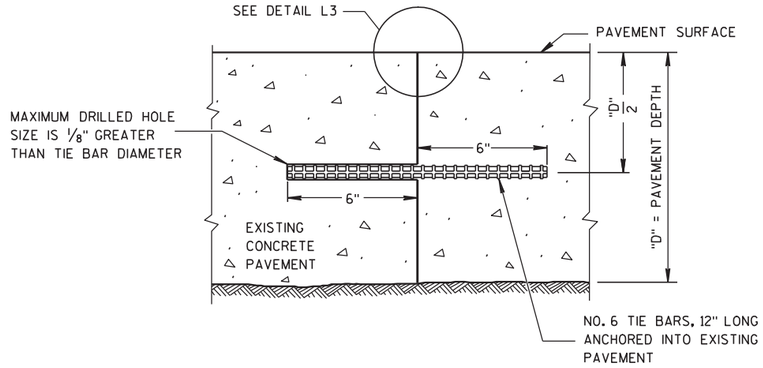


PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR

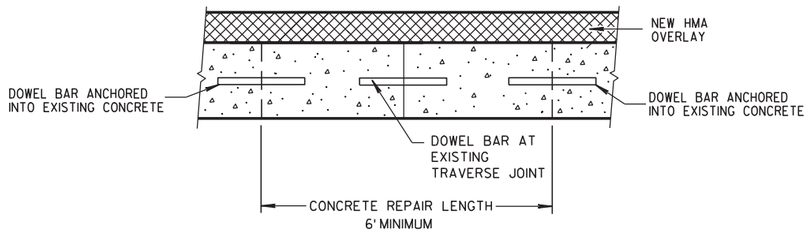
GENERAL NOTES

(1) USE AN ENGINEER-APPROVED BOND BREAKER AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.



SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H-H

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12-11-2009
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & D342 INEER

FHWA

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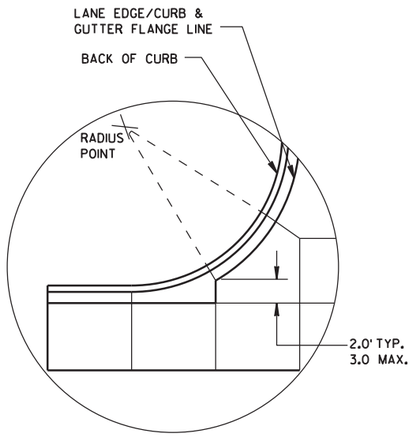
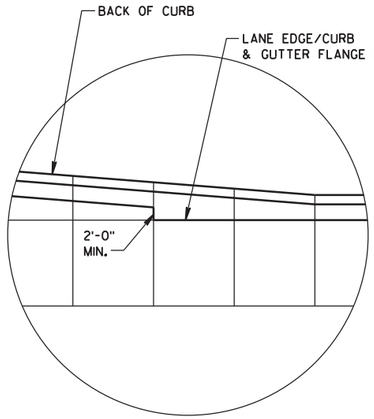
S.D.D. 13 C 15-5b



DETAIL "A"



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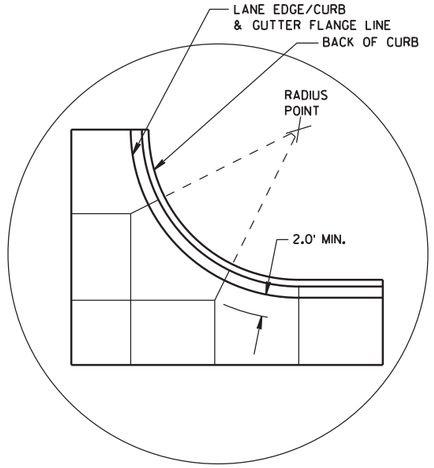
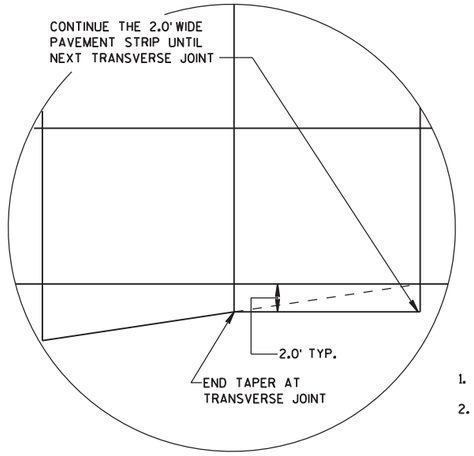


DETAIL "C"



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.

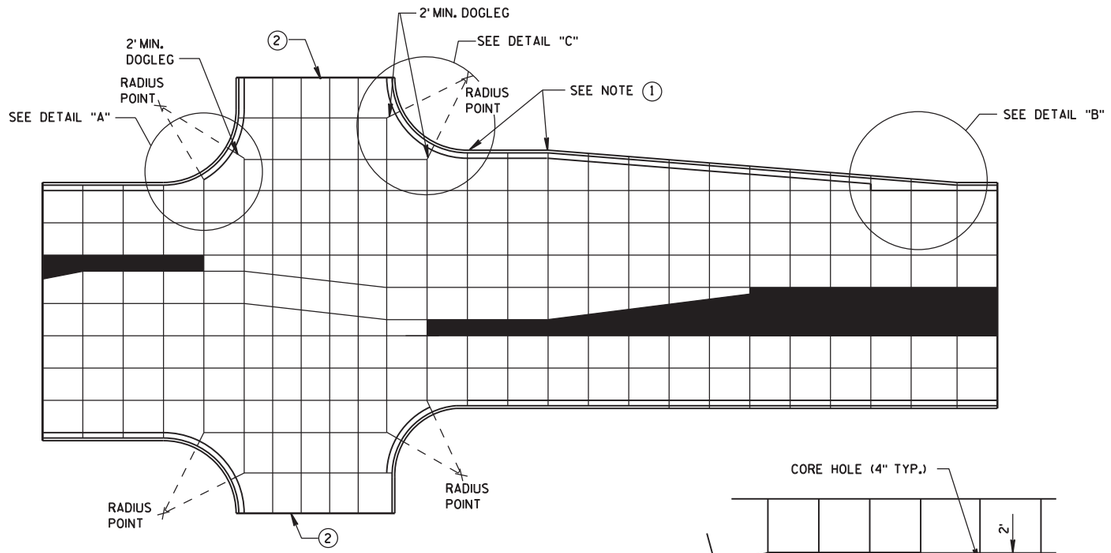
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

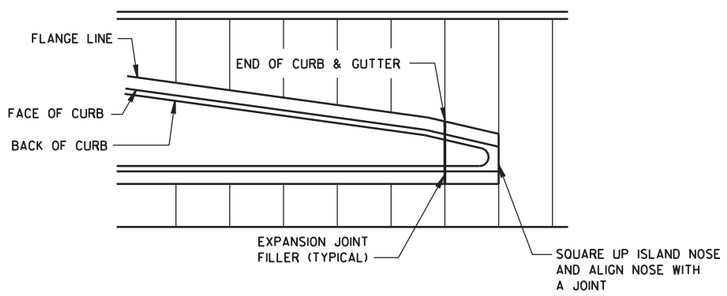
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



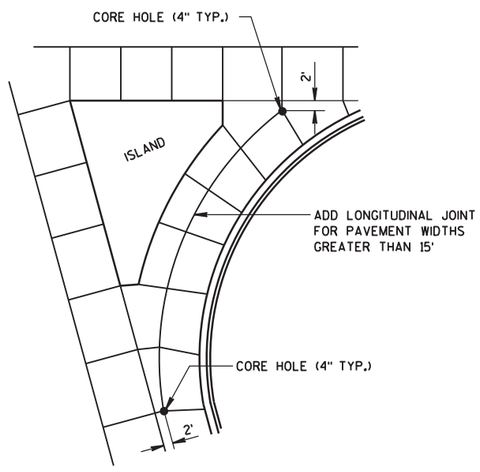
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

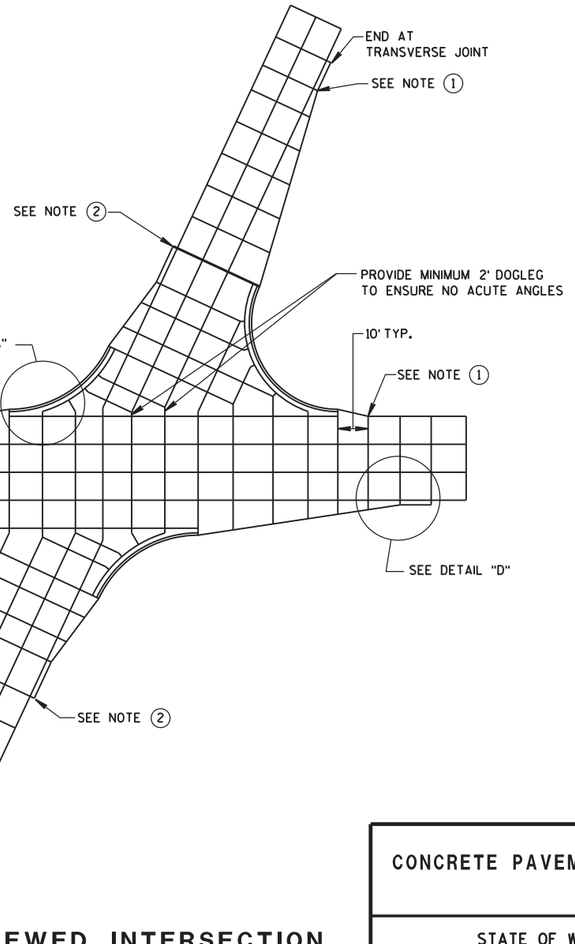
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



APPROACH TO MEDIAN



LARGE RIGHT TURN



SKEWED INTERSECTION

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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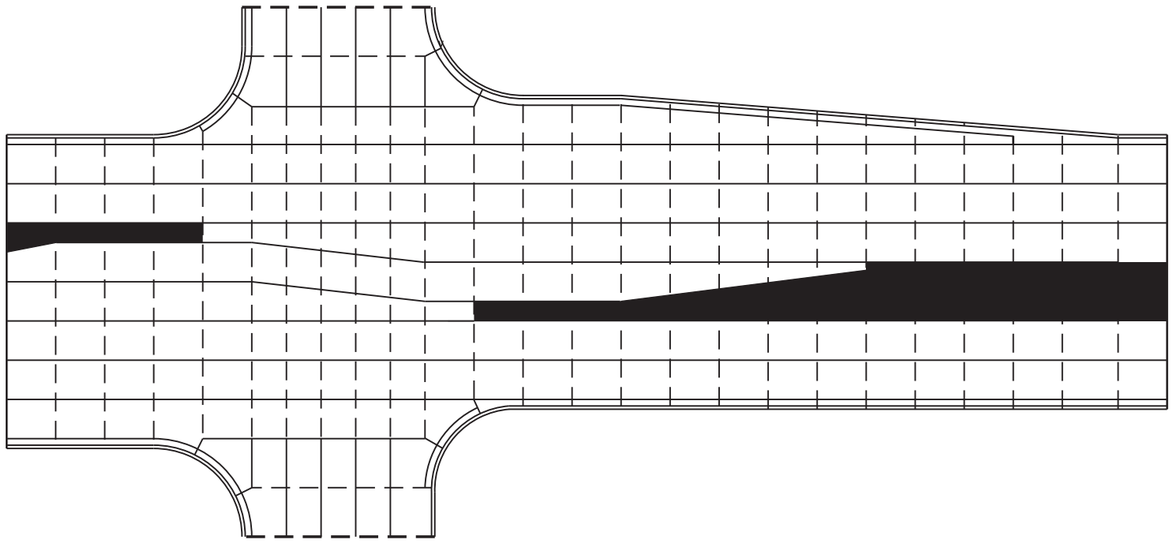
S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

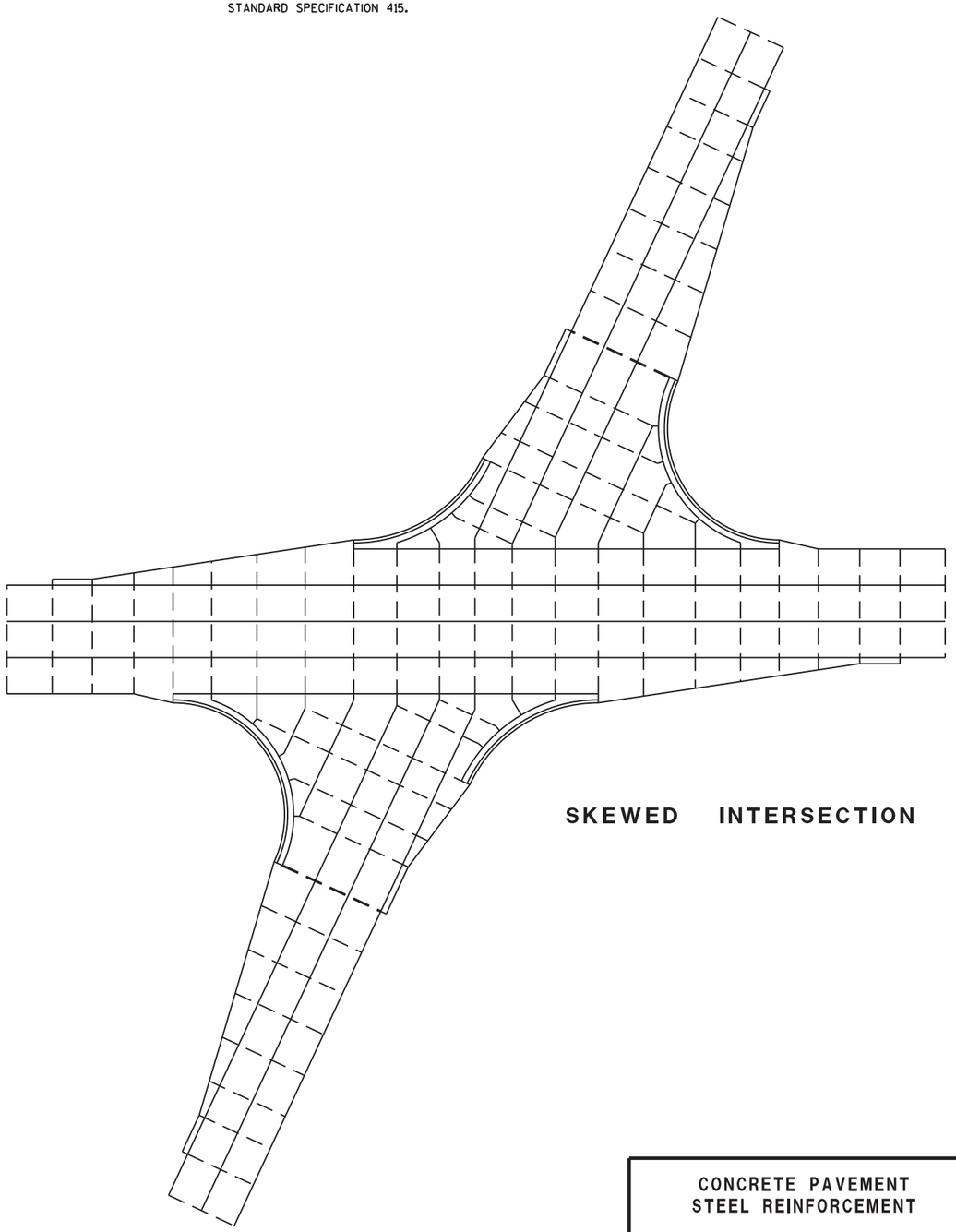
TIED JOINT



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

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S.D.D. 13 C 18-2b

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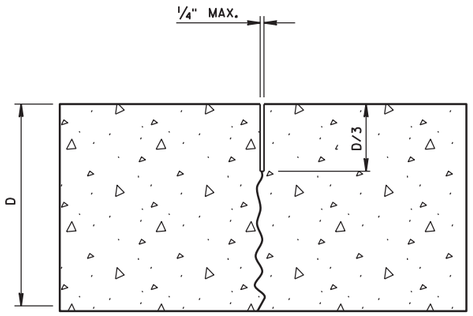
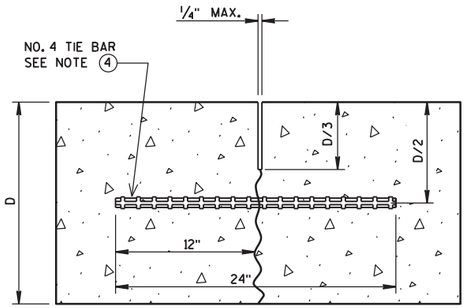
S.D.D. 13 C 18-2b



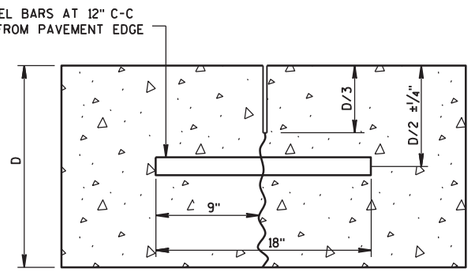
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

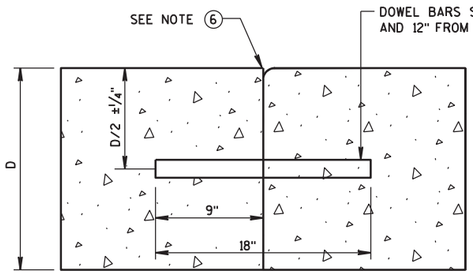
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 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.



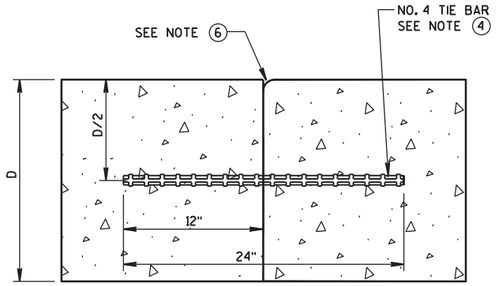
DOWELED-TRANSVERSE

CONTRACTION JOINTS

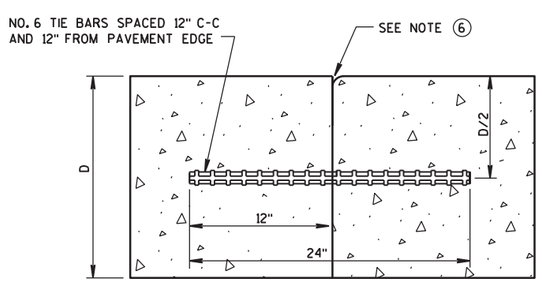
SEE NOTE (2)



DOWELED TRANSVERSE

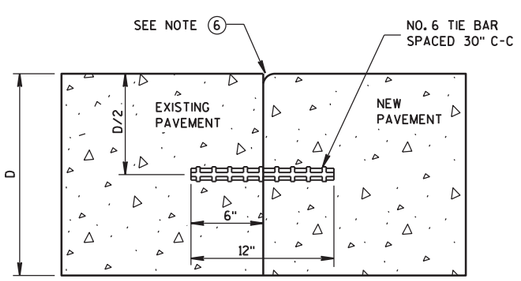


TIED LONGITUDINAL



TIED TRANSVERSE

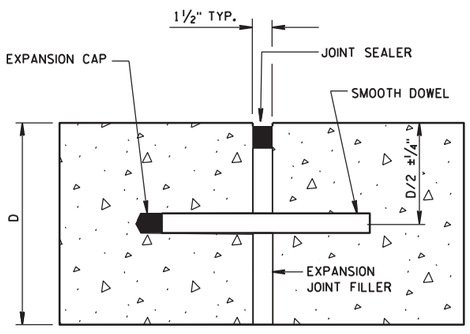
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

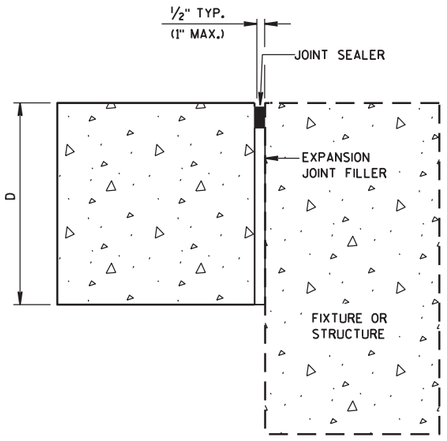
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 13 C 18-2c

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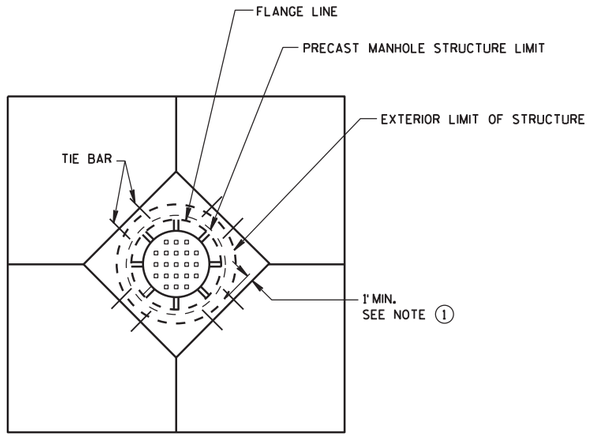
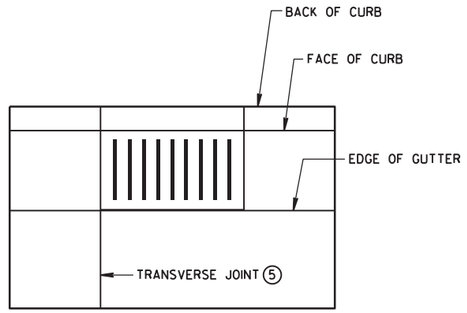
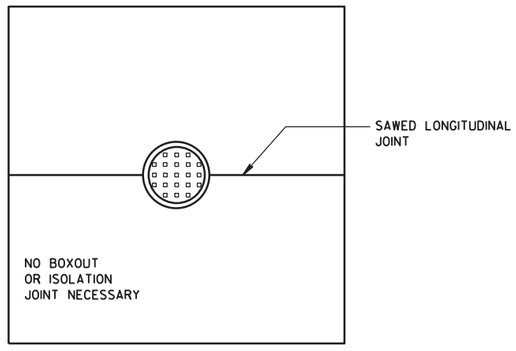
S.D.D. 13 C 18-2c



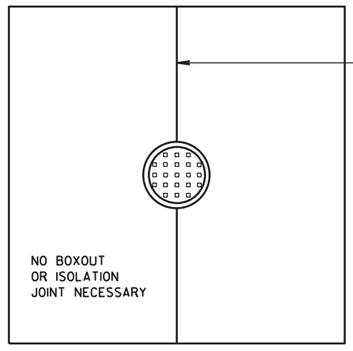
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



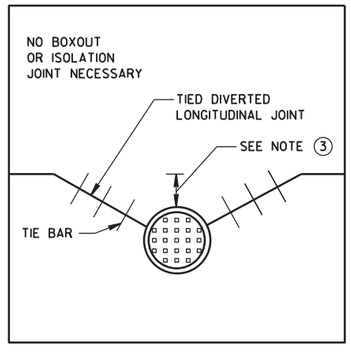
INLET WITH TRANSVERSE JOINT



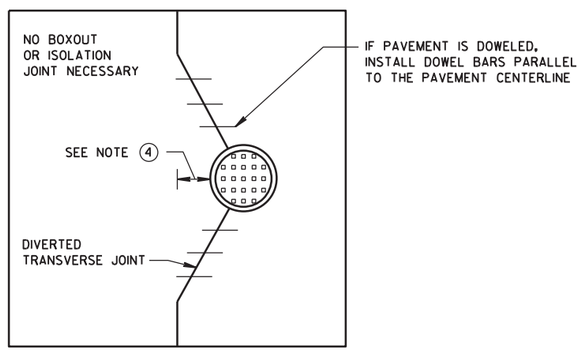
MANHOLE WITH LONGITUDINAL JOINT



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

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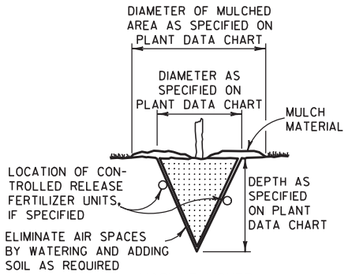
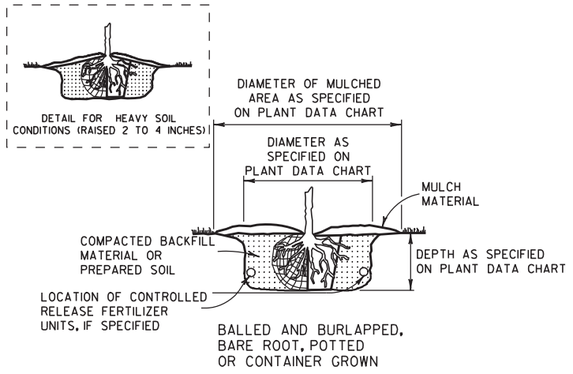
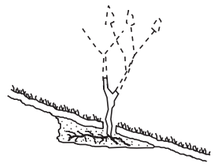


MACHINE MOVED

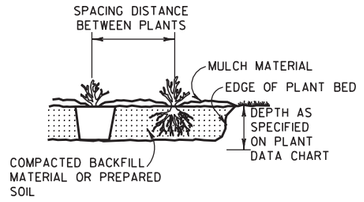


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



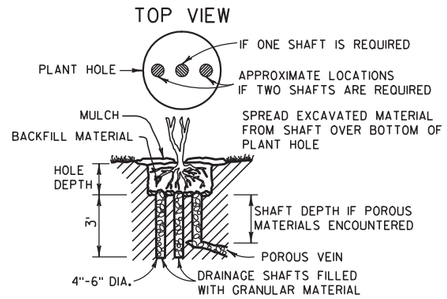
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

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



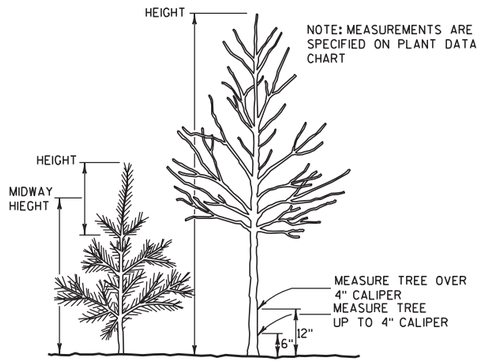
PREPARED BED (BARE ROOT AND POTTED)

PLANTING

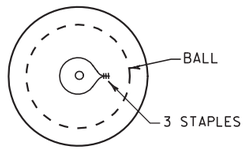


NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

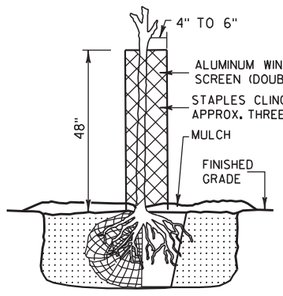
DRAINING



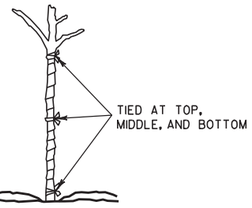
MEASURING



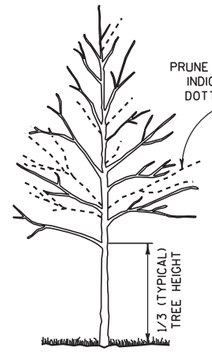
TOP VIEW



RODENT PROTECTION



WRAPPING

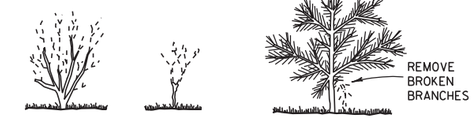


TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)

SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

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

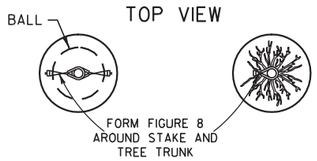


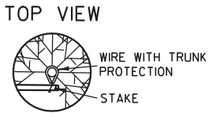
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

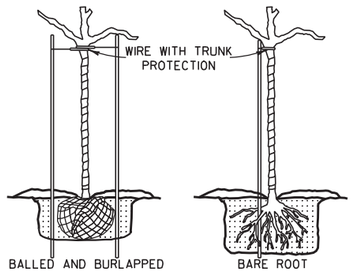
SUMAC

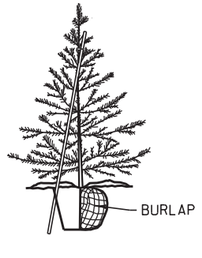
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



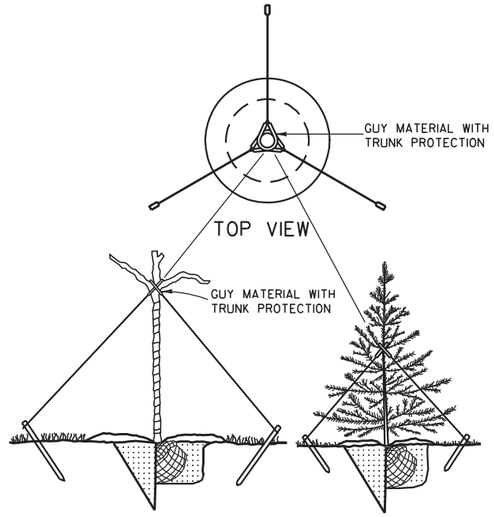






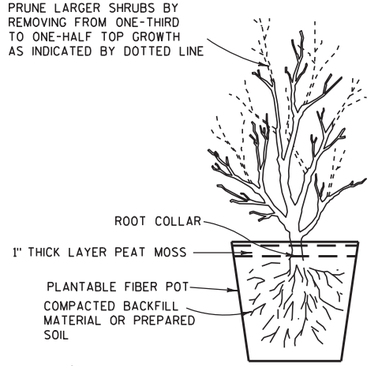
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE 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

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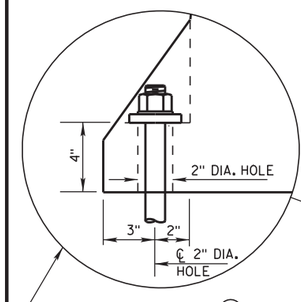
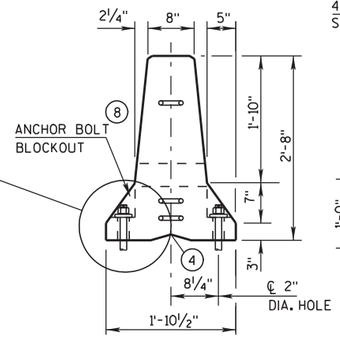
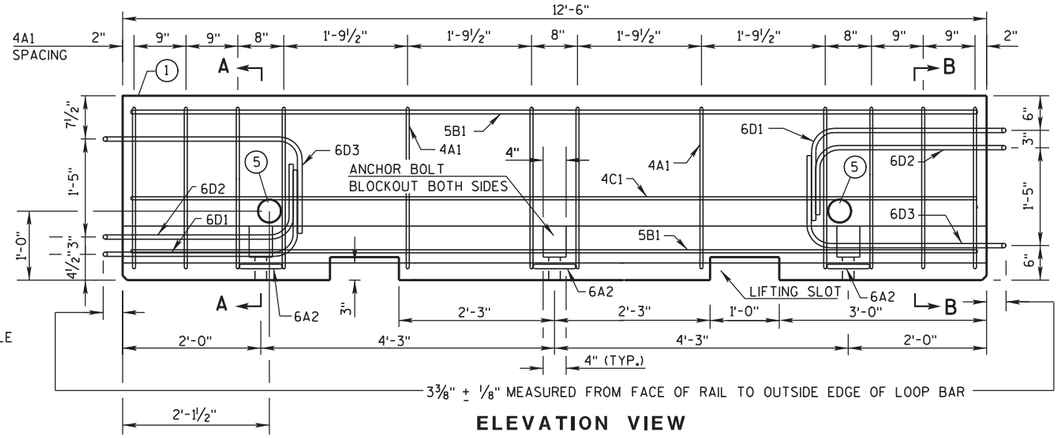
S.D.D. 14 A 2-1



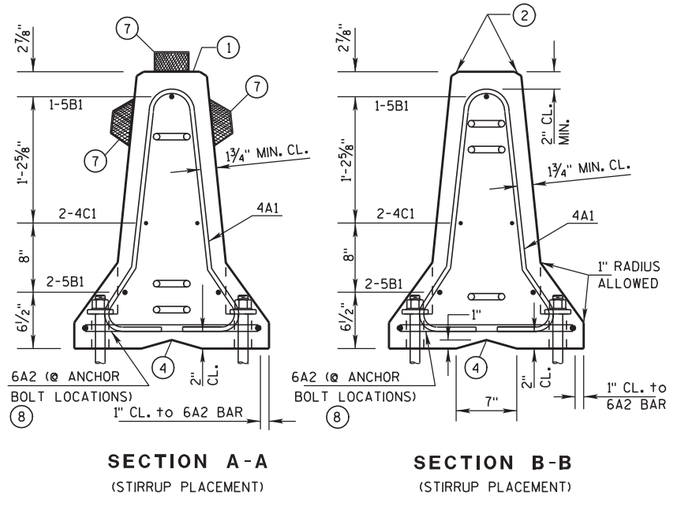
ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



END VIEW

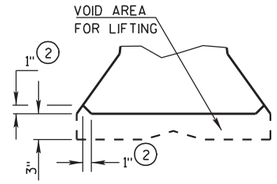


ELEVATION VIEW

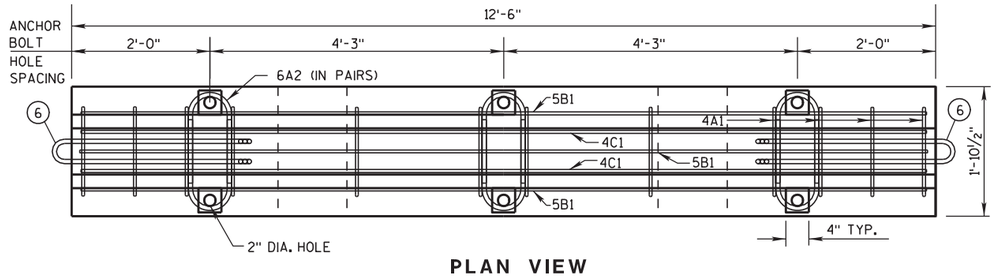


SECTION A-A
(STIRRUP PLACEMENT)

SECTION B-B
(STIRRUP PLACEMENT)

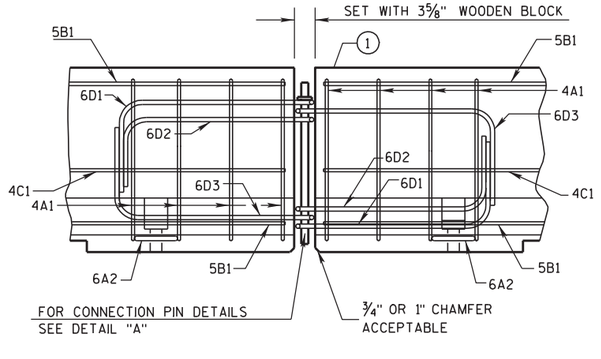


DETAIL "B"
LIFTING SLOT DETAIL

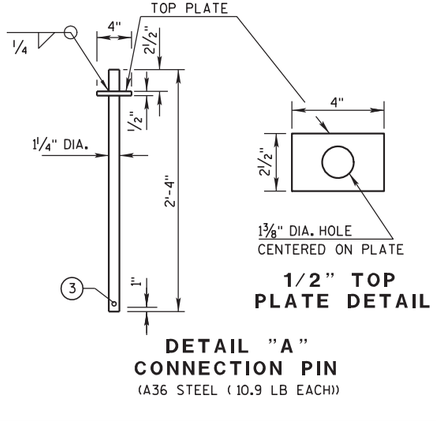


PLAN VIEW

DETAILS OF BARRIER SECTION

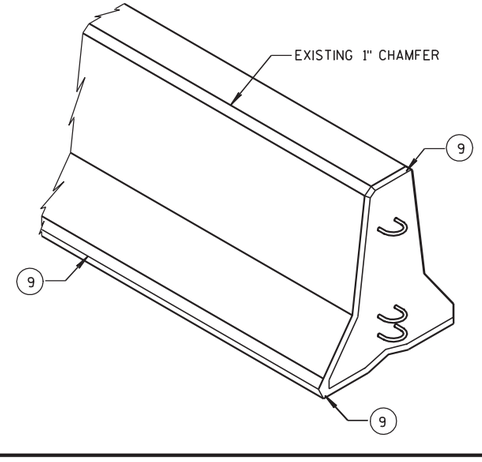


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(a) THRU 14B7-13(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 EPOXY 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: WICBTP
- 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 TRANSPO.....

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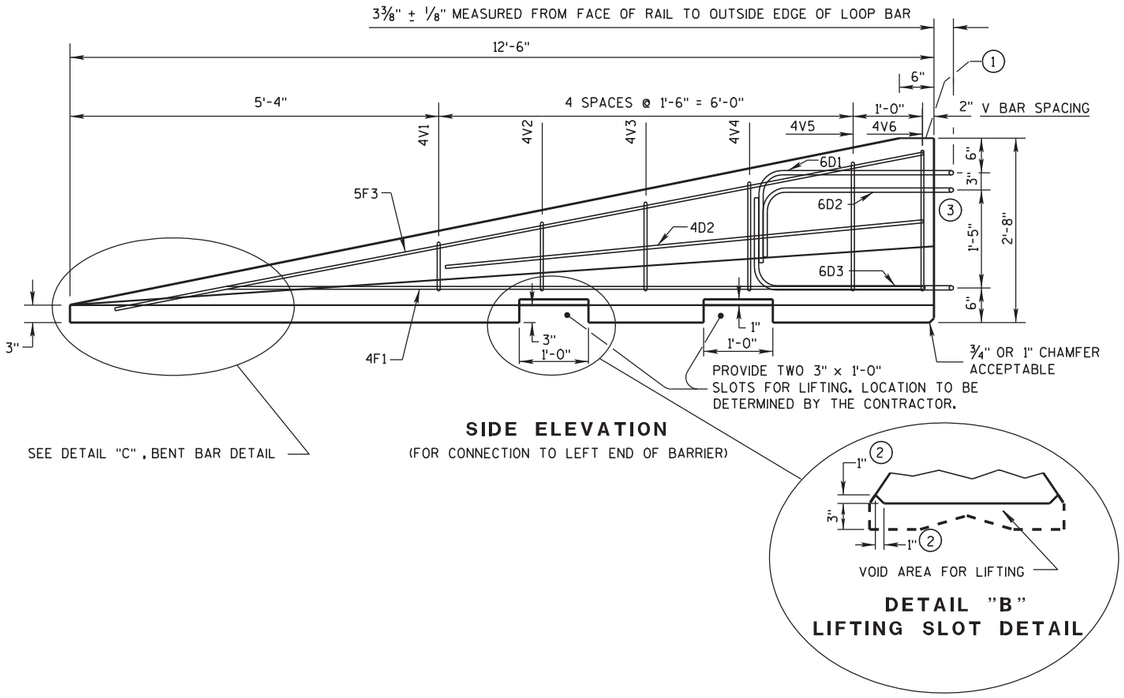
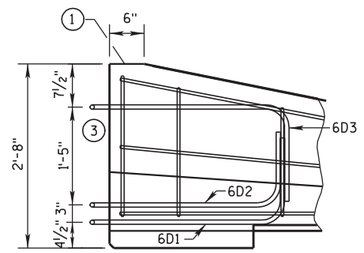
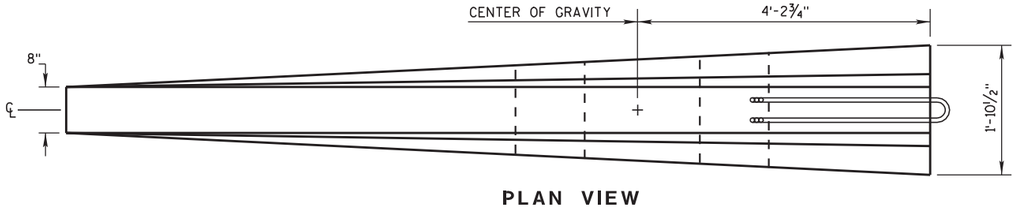
S.D.D. 14 B 7-13a

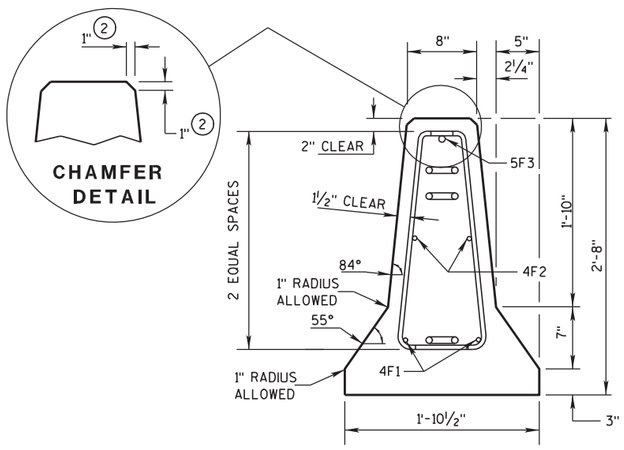


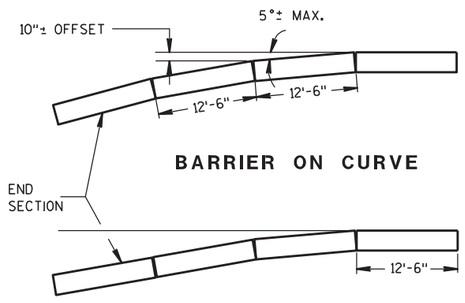


GENERAL NOTES

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 TRANSPORTATION

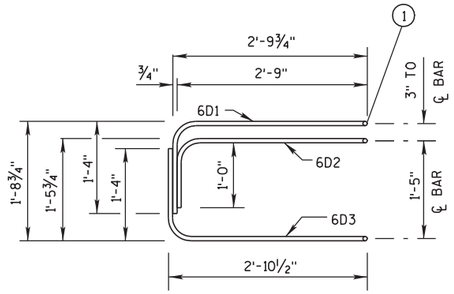
6

S.D.D. 14 B 7-13b

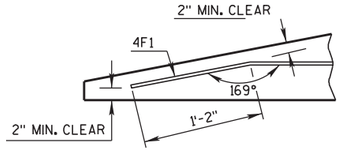
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

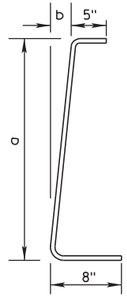
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

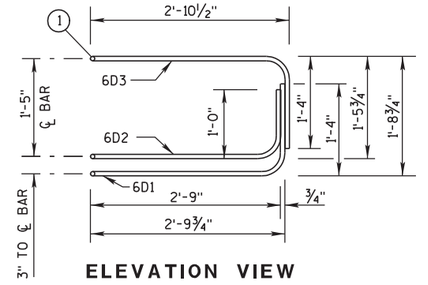
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

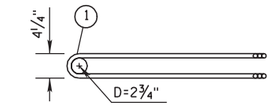
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

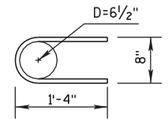
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



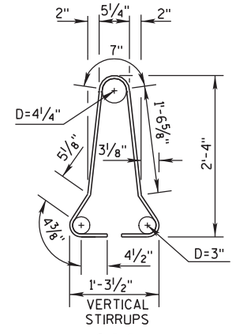
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



4A1

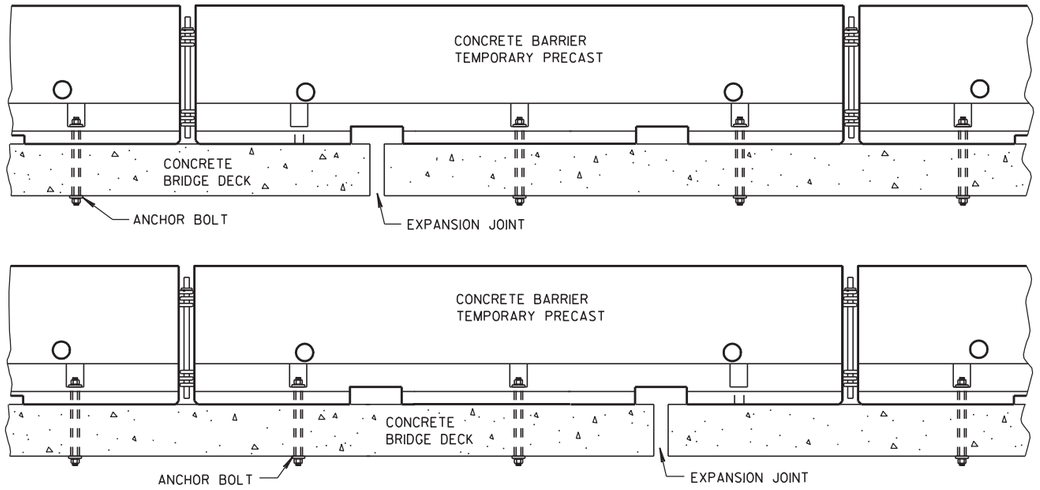
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

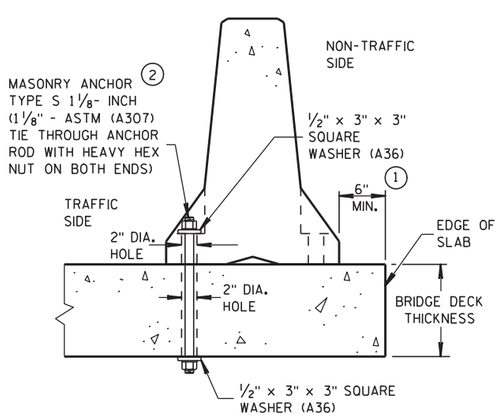
6

S.D.D. 14 B 7-13c



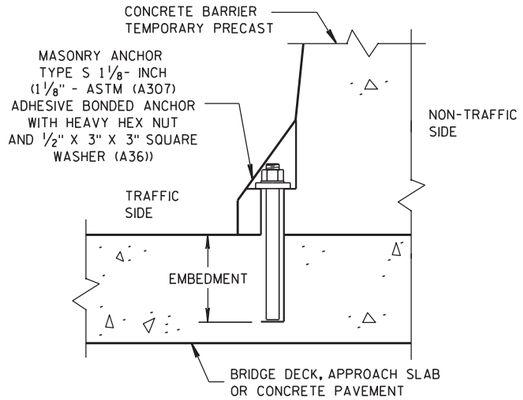
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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

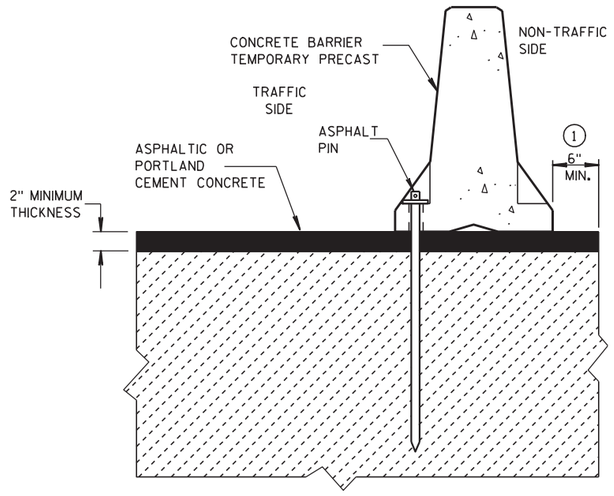
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

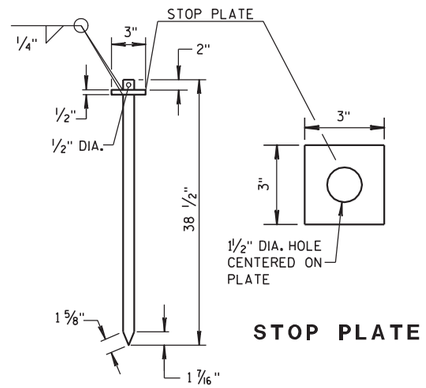
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

2. ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) 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 ALLANCHOR 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 EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.



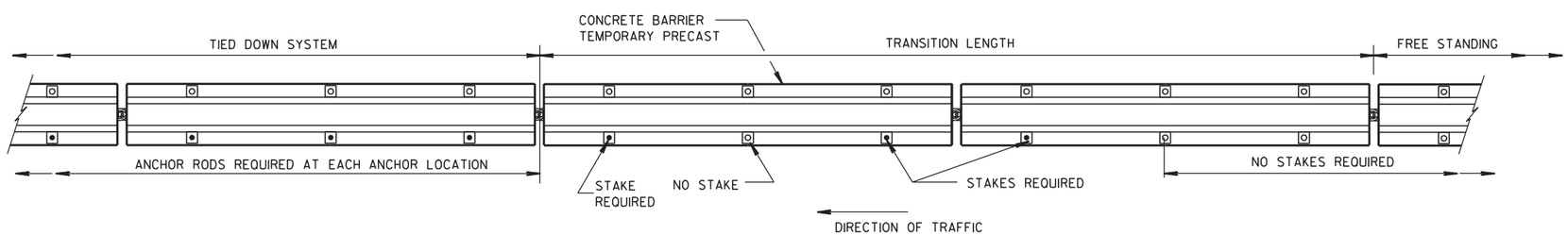


STOP PLATE

ASPHALT PIN
(ASTM A36 STEEL)

STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



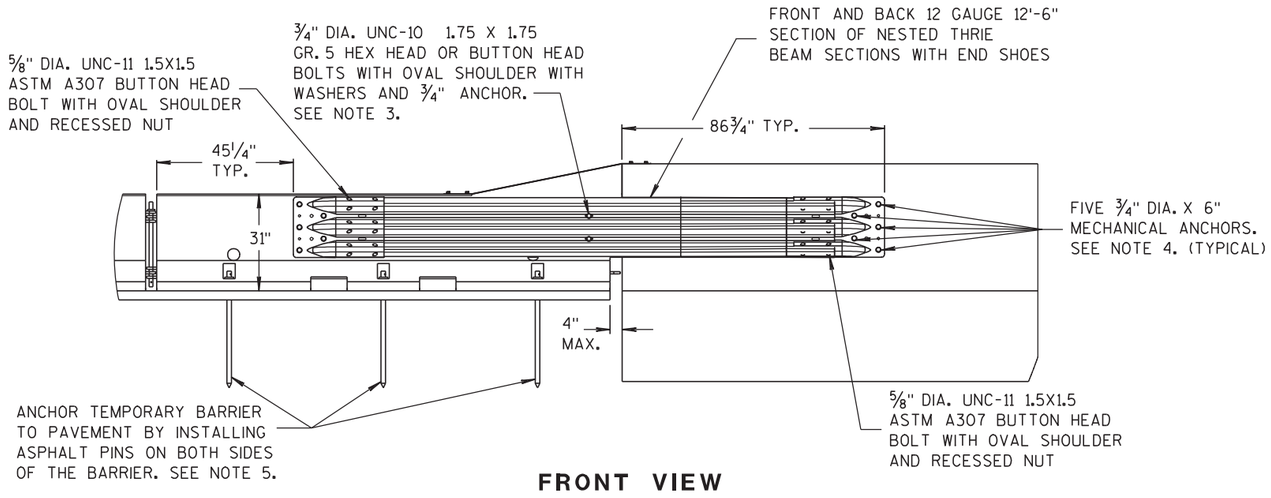
PLAN VIEW

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"

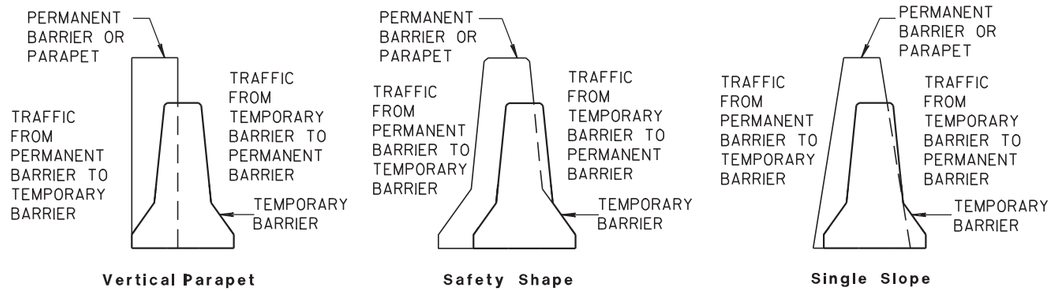
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....

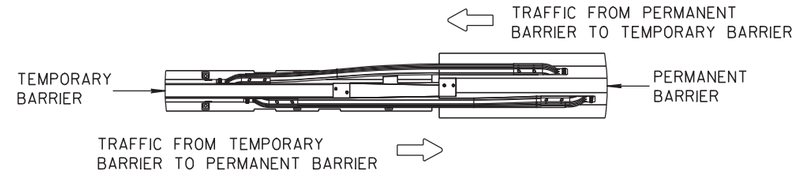


FRONT VIEW

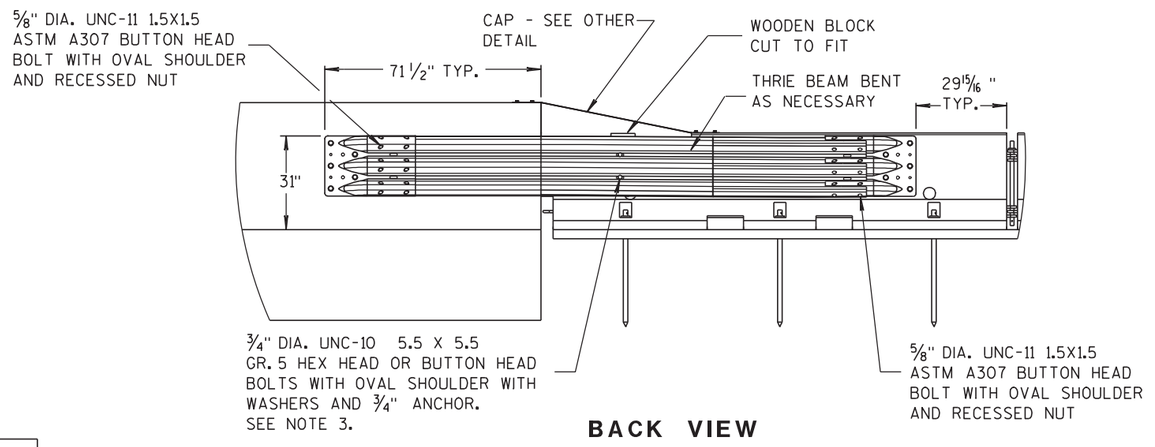
NOTES

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 EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY 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 EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

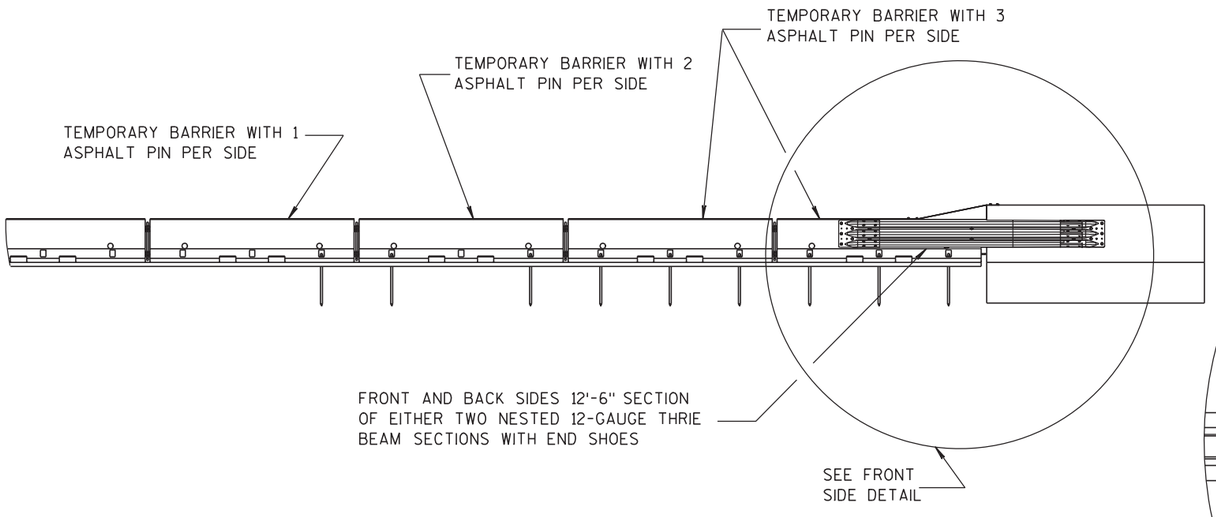




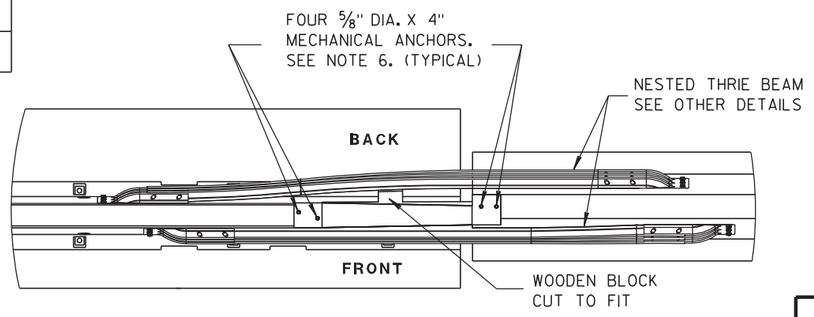
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



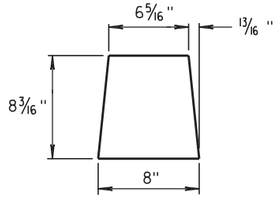
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

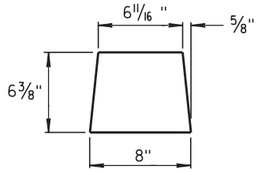
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

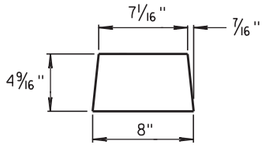
6
S.D.D. 14 B 7-13e



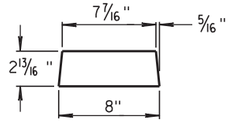
GUSSET 1



GUSSET 2

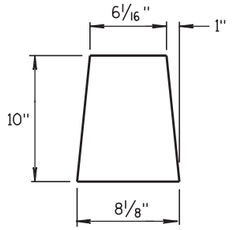


GUSSET 3

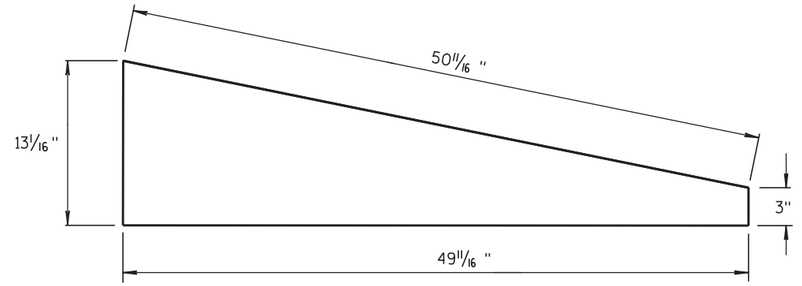


GUSSET 4

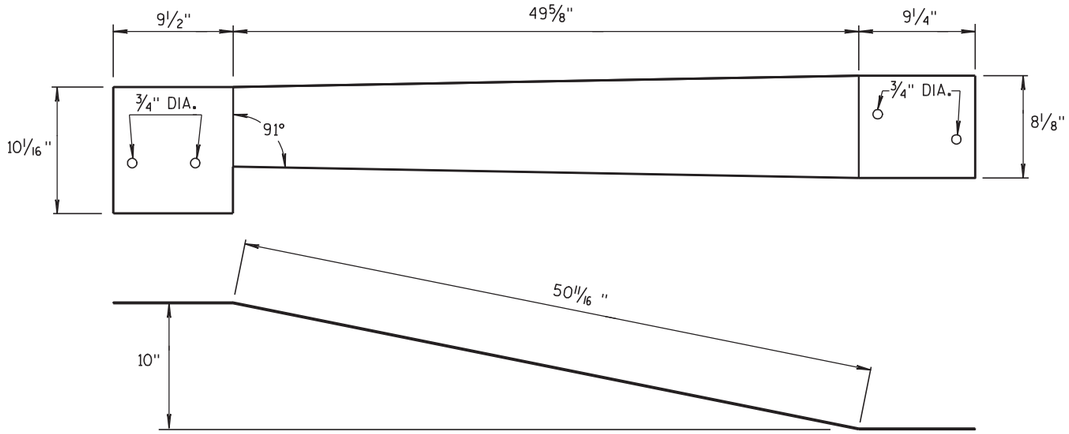
GUSSETS



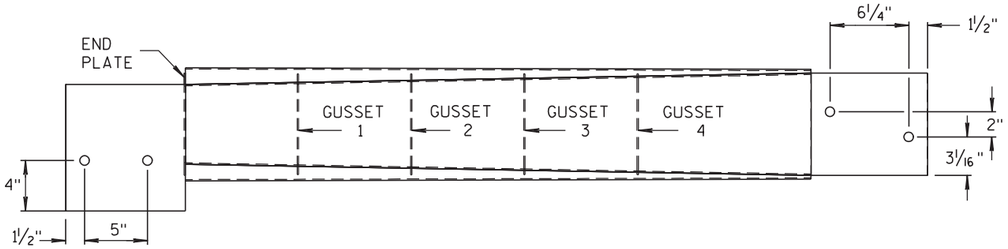
END PLATE

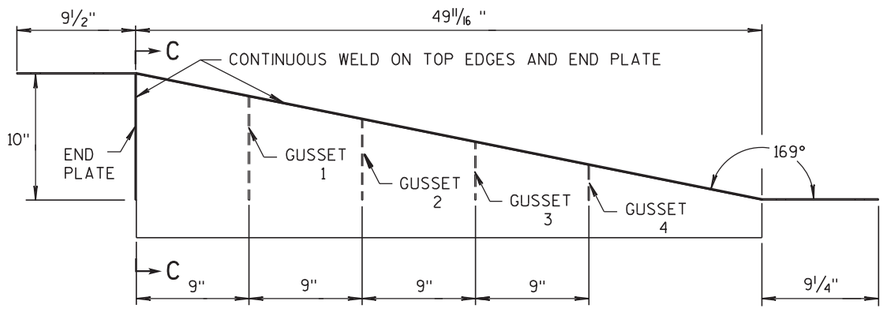


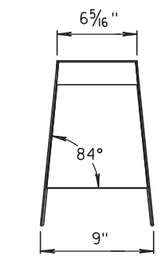
SIDE PLATE



TOP PLATE







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

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

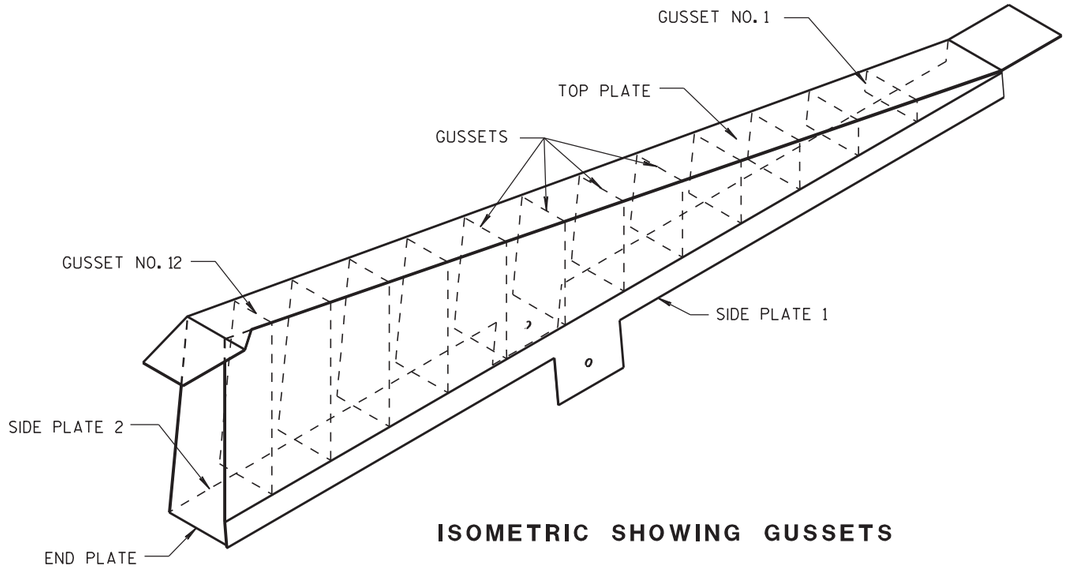
SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

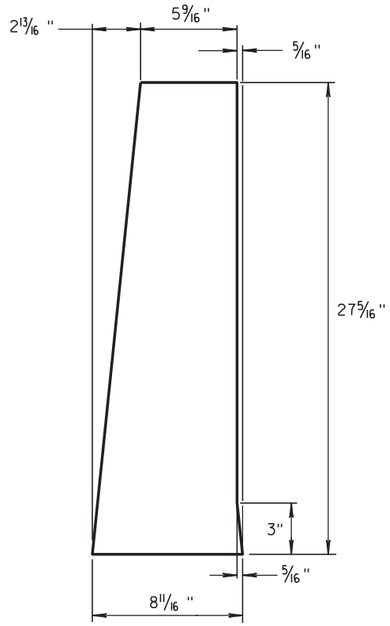
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 7-13f

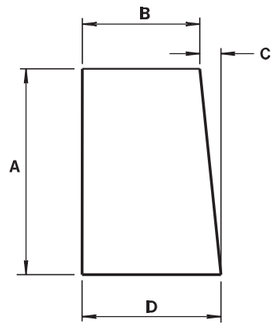


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



GUSSETS 1 - 12

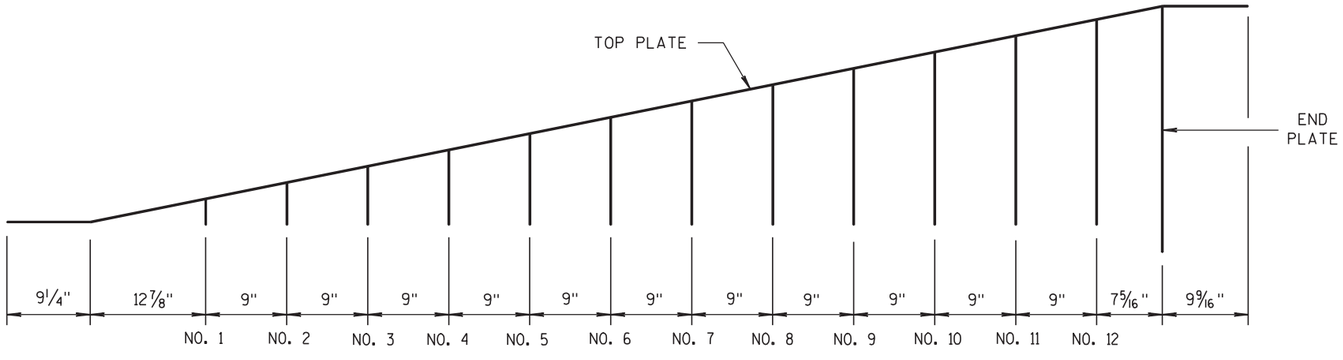
ALL GUSSETS 1/8" STEEL PLATE

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 TRANSPORTATION

6

S.D.D. 14 B 7-13g

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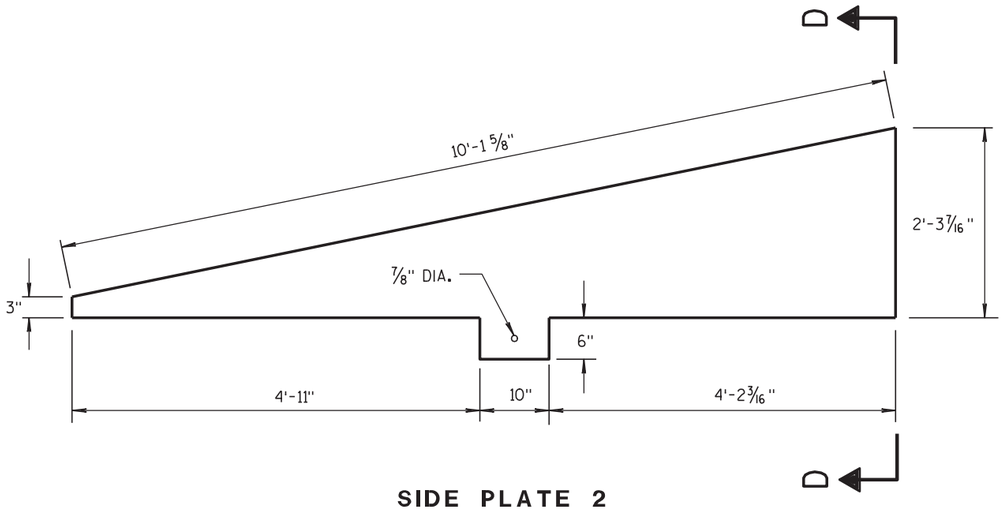
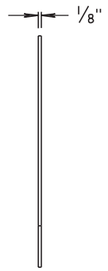
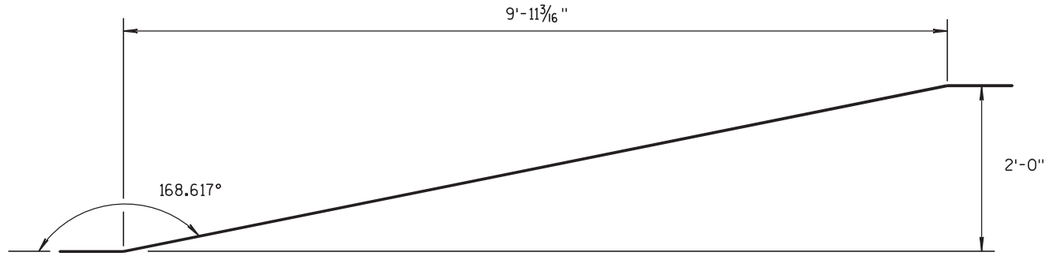
S.D.D. 14 B 7-13g



SIDE PLATE 2

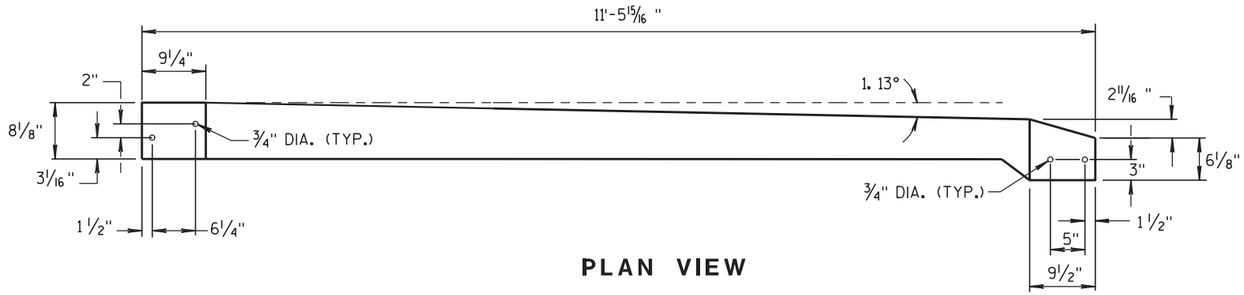


END VIEW



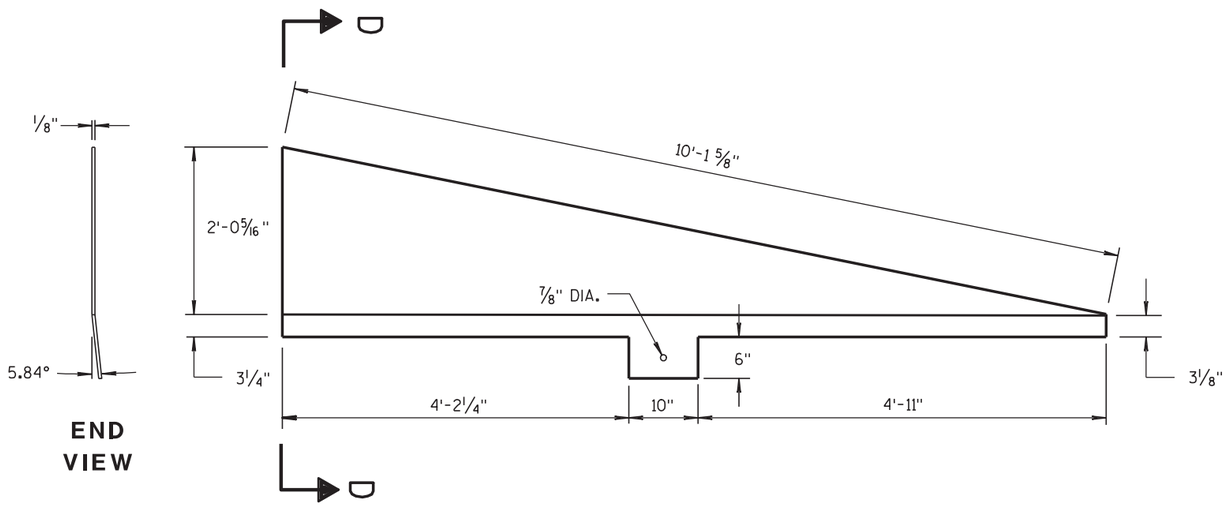
SIDE VIEW

TOP PLATE



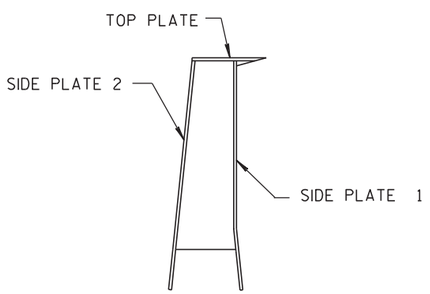
PLAN VIEW

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
8/31/2012
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
355
ENT
FHWA

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S.D.D. 14 B 7-13h

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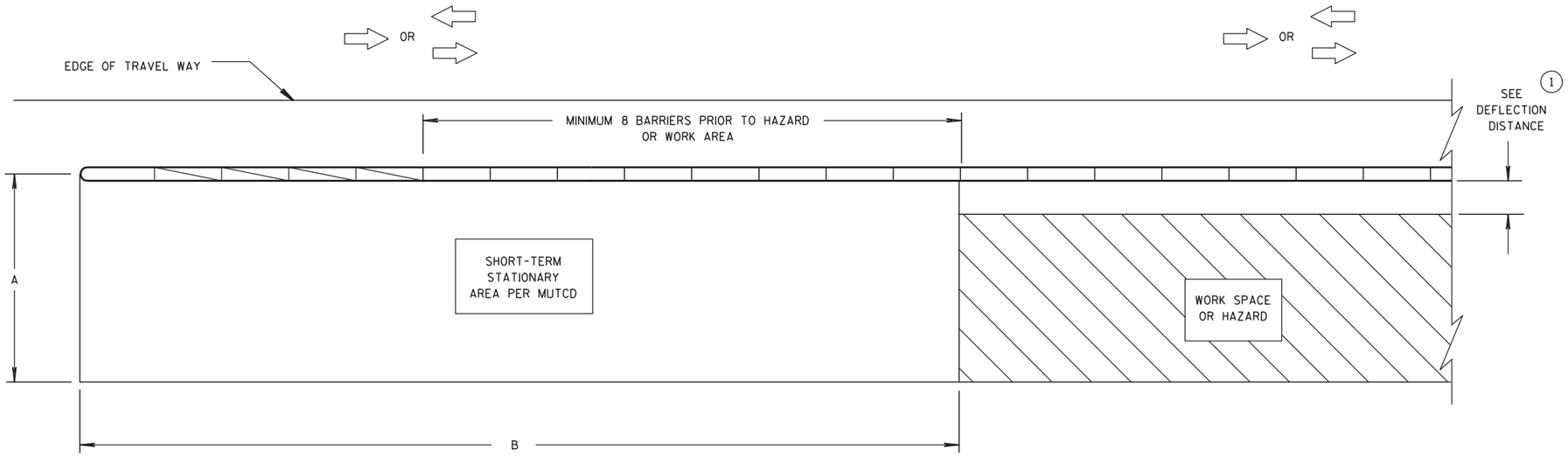
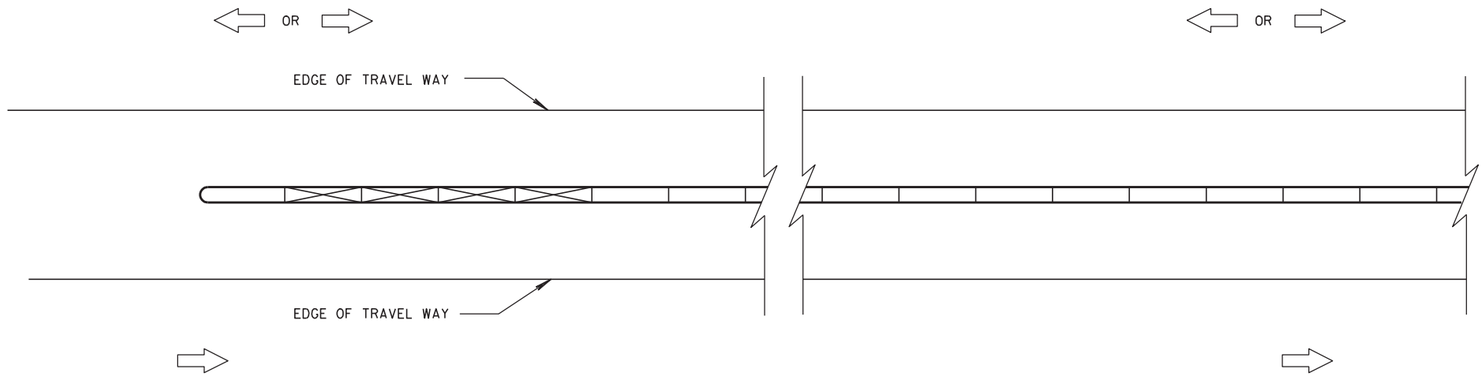
S.D.D. 14 B 7-13h



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES 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

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.

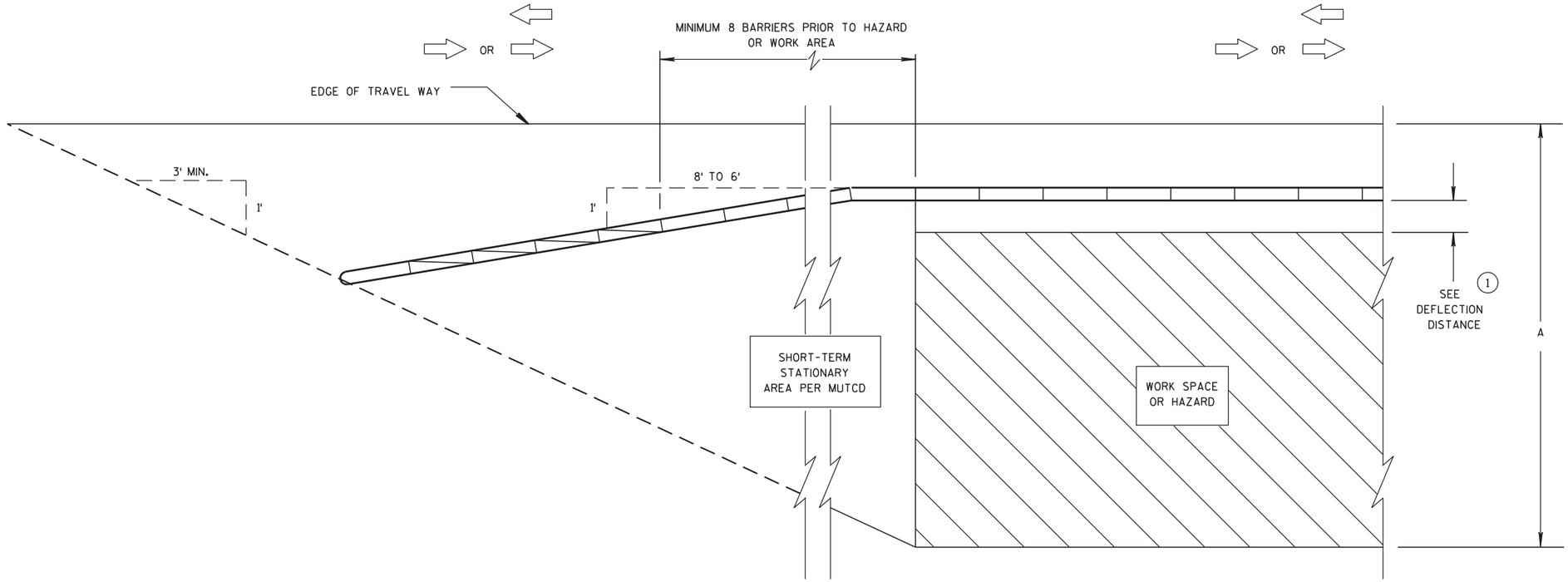
(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

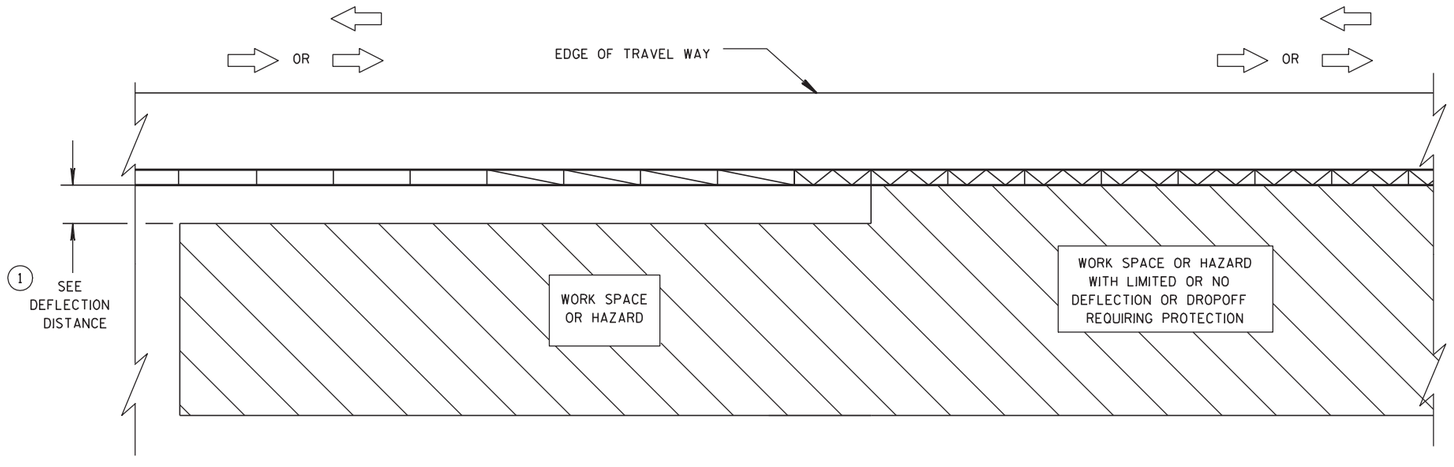
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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 TRANSPO...

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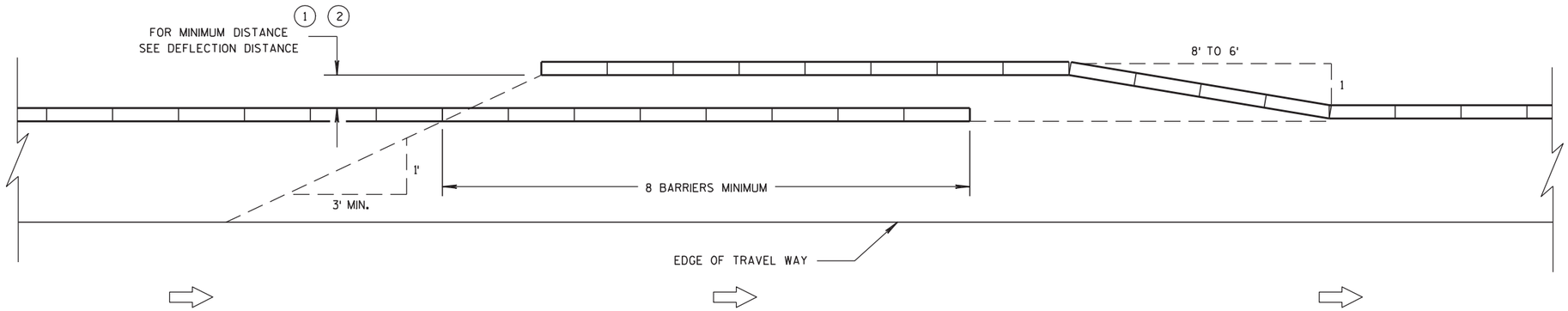
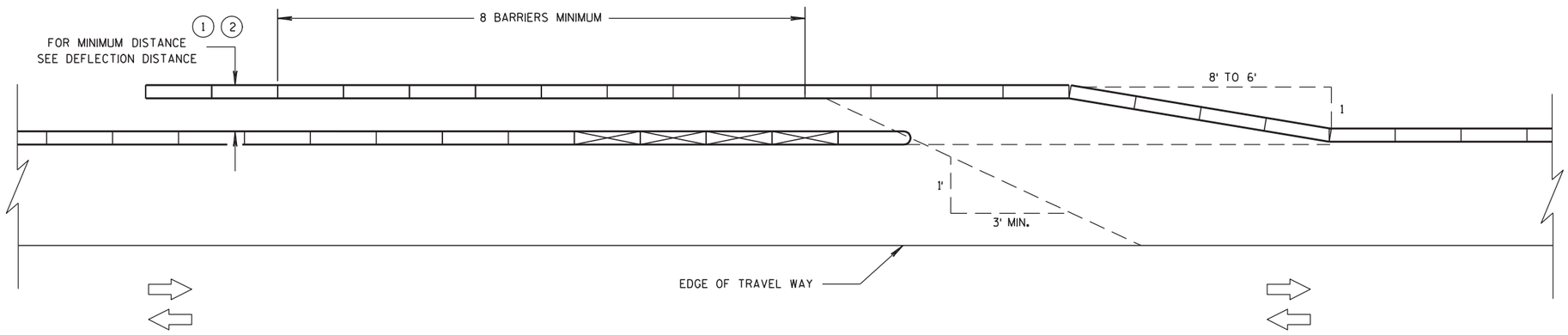
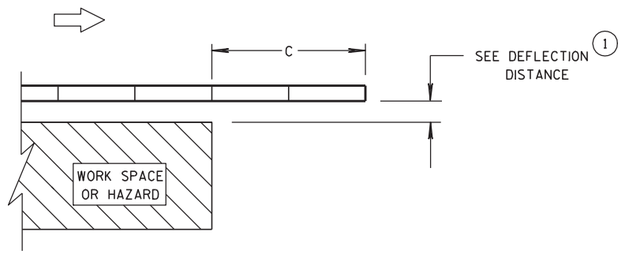
S.D.D. 14 B 8-1b



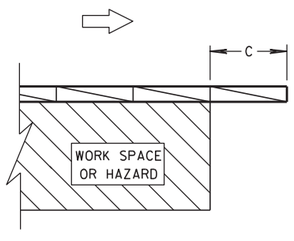
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

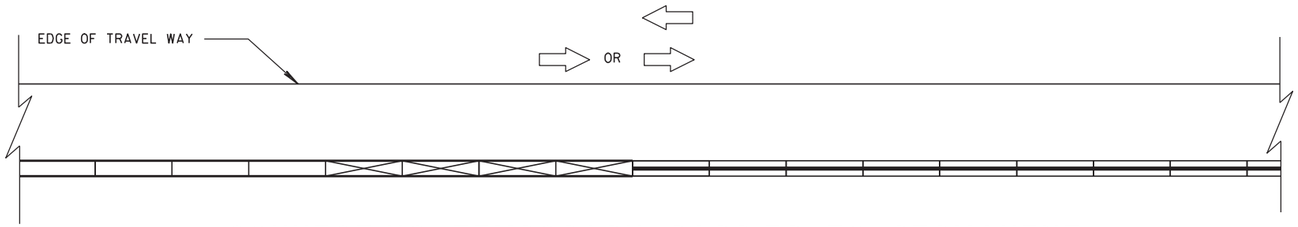
LEGEND

- 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

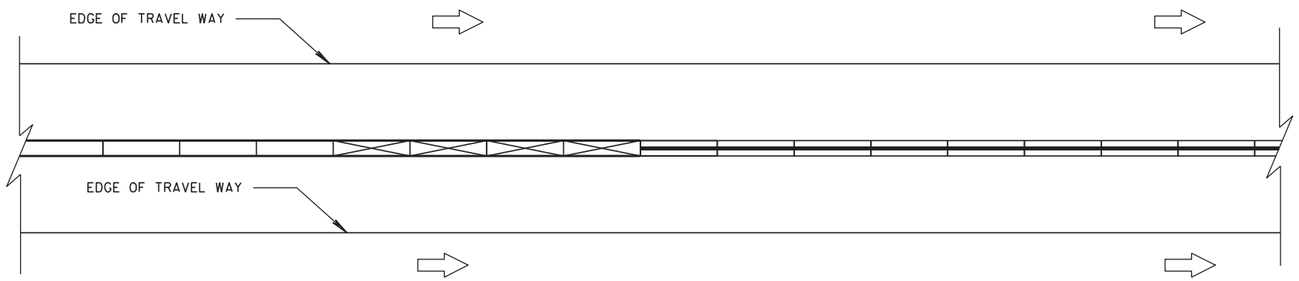
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 8-1c



CONNECTING TEMPORARY BARRIER TO PERMANENT CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

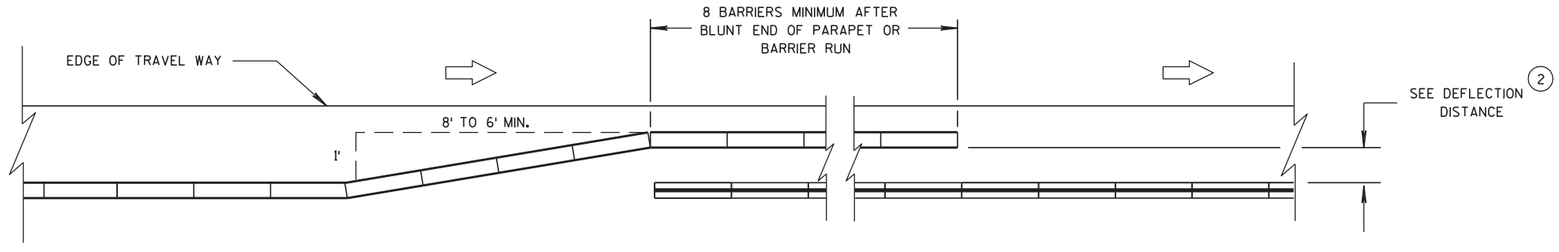
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

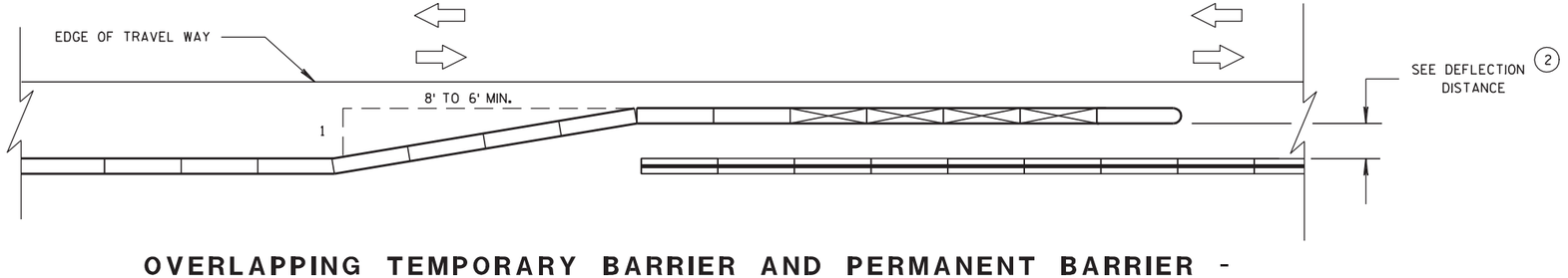
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 8-1d

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

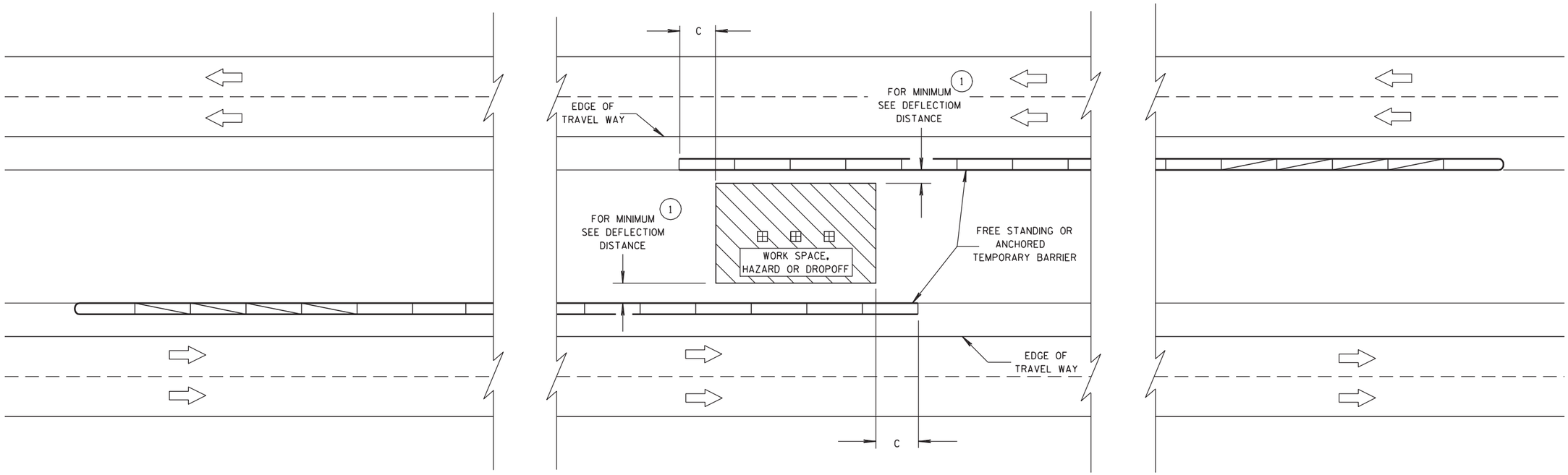
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER

360

FHWA

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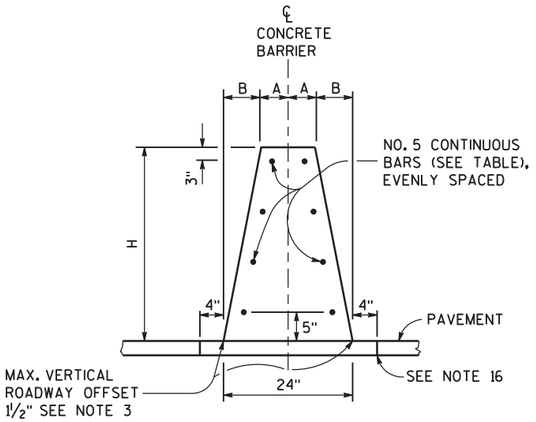
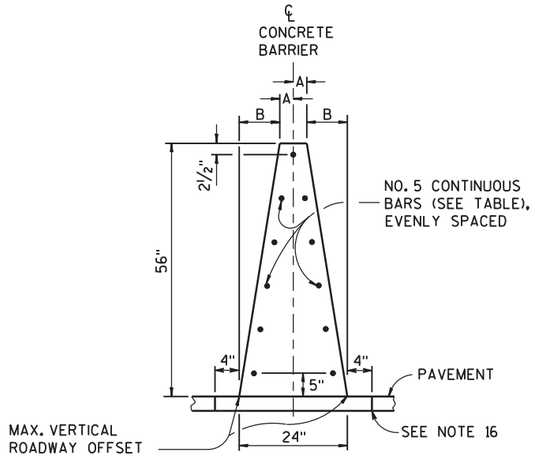
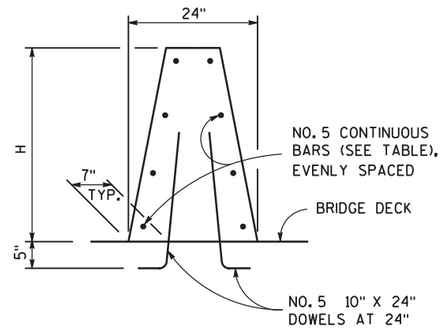
S.D.D. 14 B 8-1e



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)



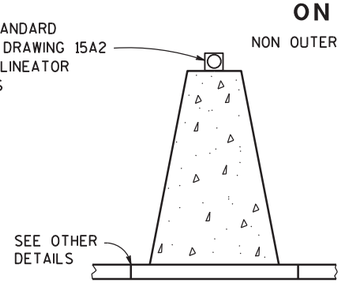
SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

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, PAVEMENT 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. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCERET BARRIER BID ITEM. 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



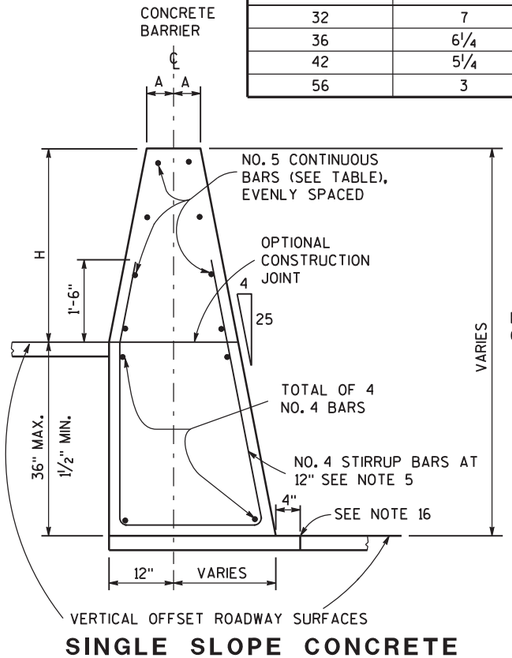
DELINEATION

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

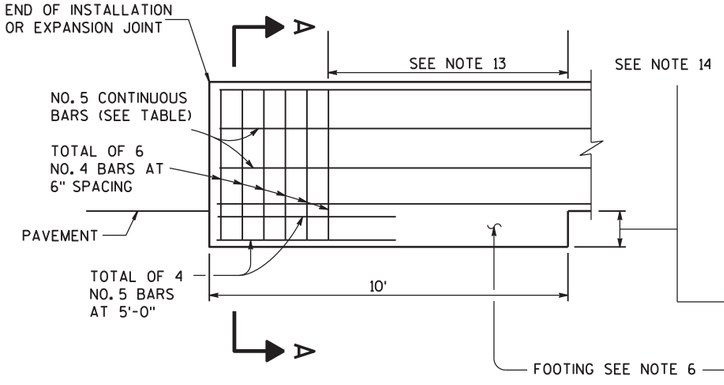
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	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	



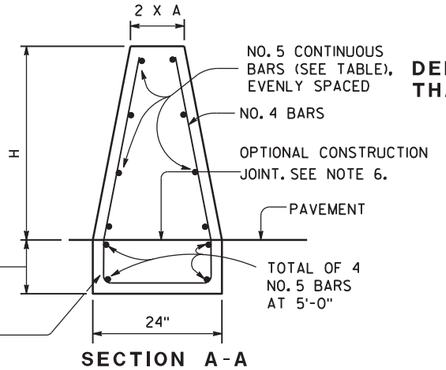
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(BETWEEN ADJACENT ROADWAYS)



END ANCHOR SINGLE SLOPE CONCRETE BARRIER

AT CONSTRUCTION JOINT

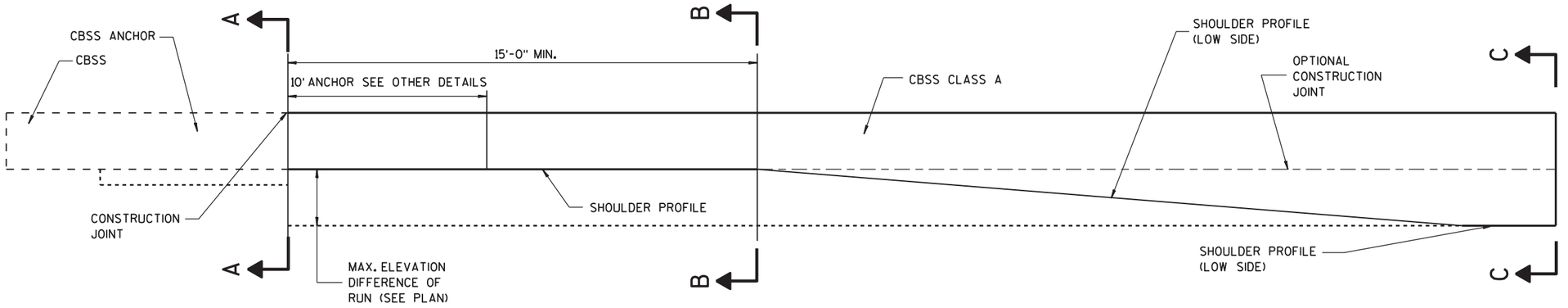


SECTION A-A

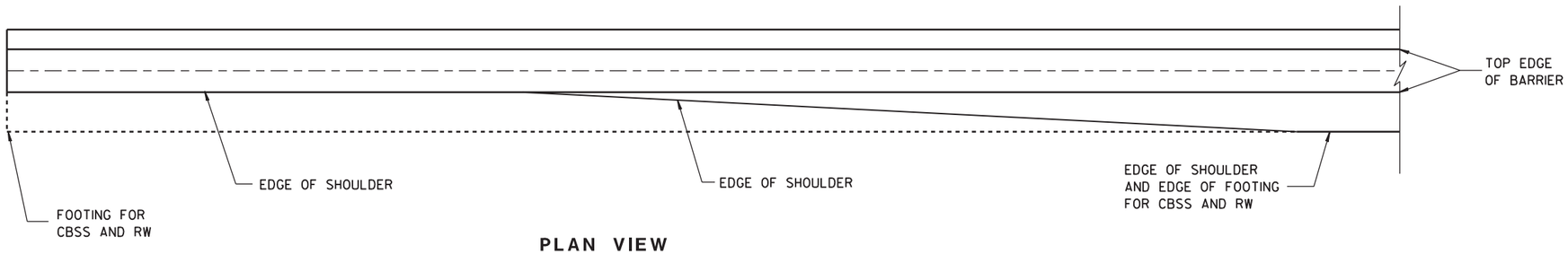
CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

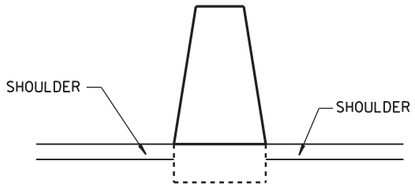
6
S.D.D. 14 B 32-2a



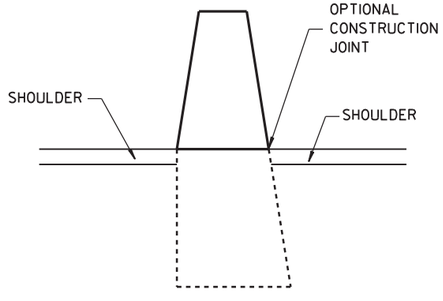
ELEVATION VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



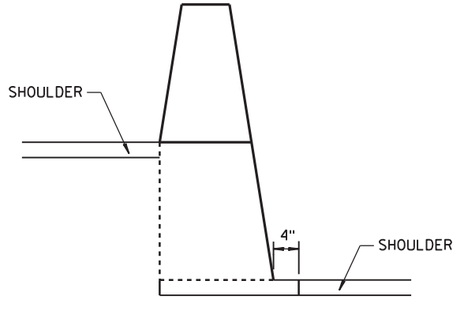
PLAN VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



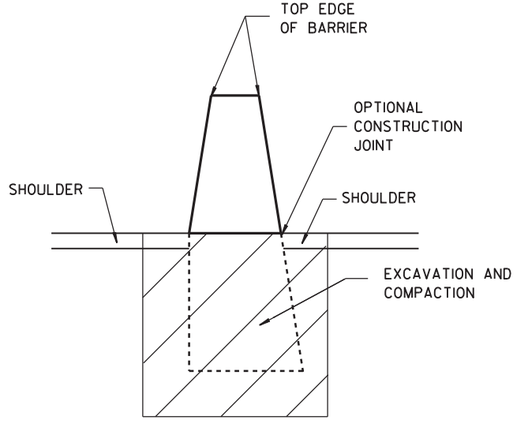
SECTION A-A



SECTION B-B



SECTION C-C

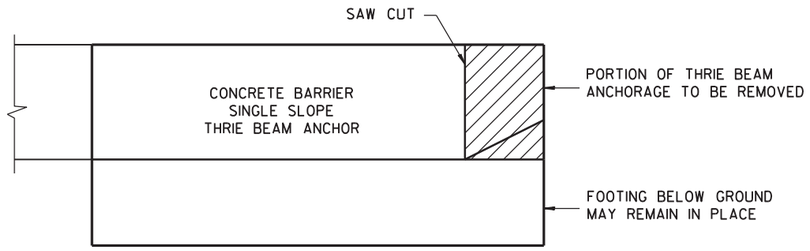


CONCRETE BARRIER SINGLE SLOPE (CBSS)

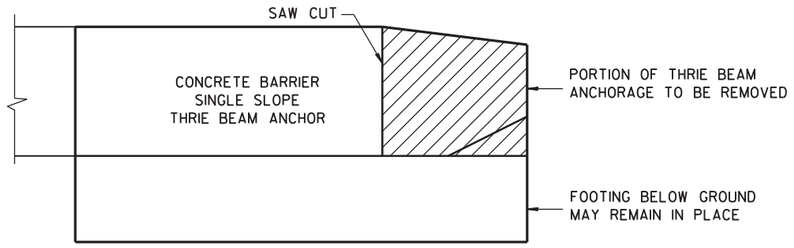
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

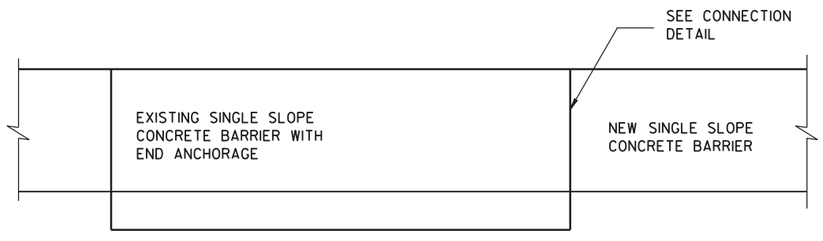
S.D.D. 14 B 32-2c



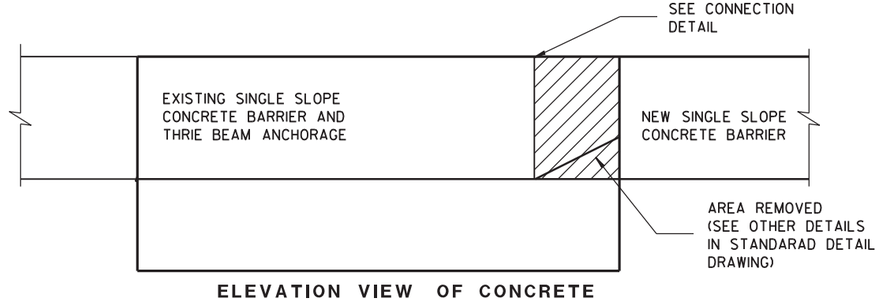
REMOVAL AREA OF
32" CONCRETE THRIE BEAM ANCHORAGE



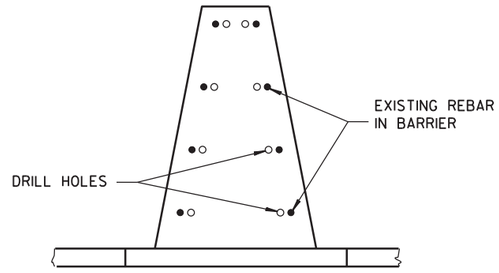
REMOVAL AREA OF CONCRETE THRIE BEAM
ANCHORAGE WITH HEIGHT GREATER THAN 32"



ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR END ANCHORAGE



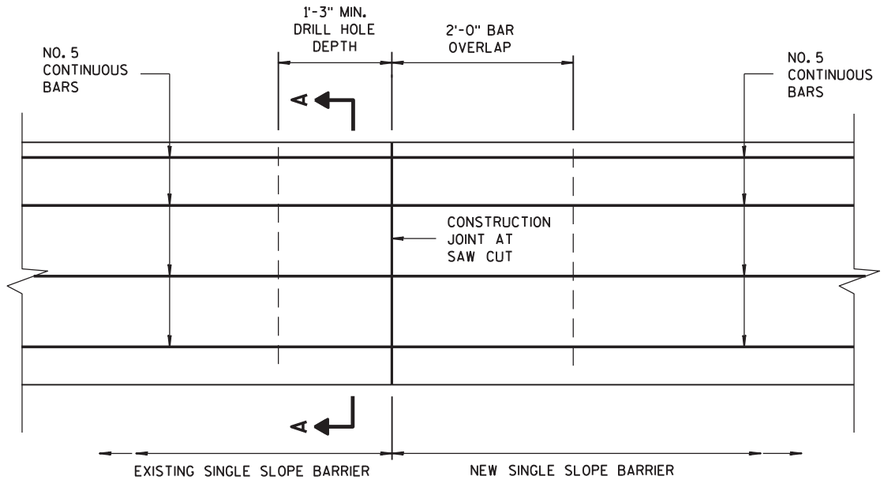
ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR THRIE BEAM TERMINAL



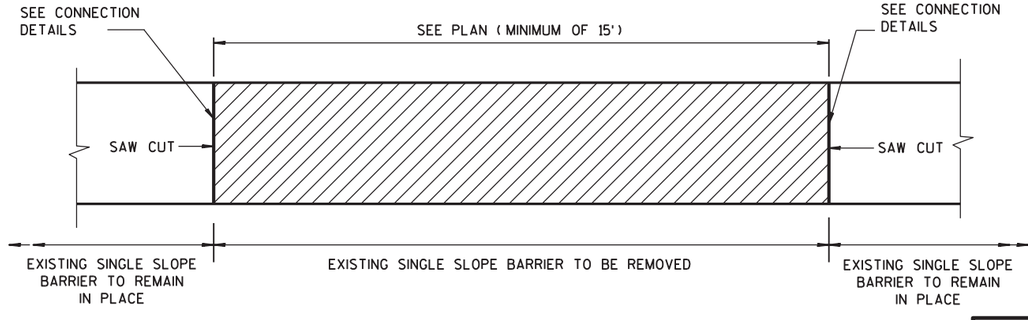
SECTION A-A

GENERAL NOTES

1. THE NUMBER OF DRILL HOLES IS EQUAL TO THE NUMBER OF REBAR IN BARRIER (SEE OTHER DETAILS).
2. MINIMUM DEPTH OF DRILL HOLES IS 1'-3".
3. DRILL HOLES TO BE A MINIMUM OF 4 INCHES FROM THE EDGE OF CONCRETE.
4. INSTALL EPOXY COATED NO. 5 BARS IN DRILL HOLES.
5. END ANCHORAGE MAY OR MAY NOT BE PRESENT ON EXISTING BARRIER.
6. REMOVE THRIE BEAM ANCHORAGE AS SHOWN.
7. ALL ITEMS INCLUDED WITH CONCRETE BARRIER ITEMS EXCEPT FOR REMOVAL.



CONNECTION OF EXISTING SINGLE SLOPE CONCRETE BARRIER TO
NEW SINGLE SLOPE CONCRETE BARRIER



ELEVATION FILE
BARRIER REMOVAL AND REPLACEMENT

CONCRETE BARRIER
SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-10-2013
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

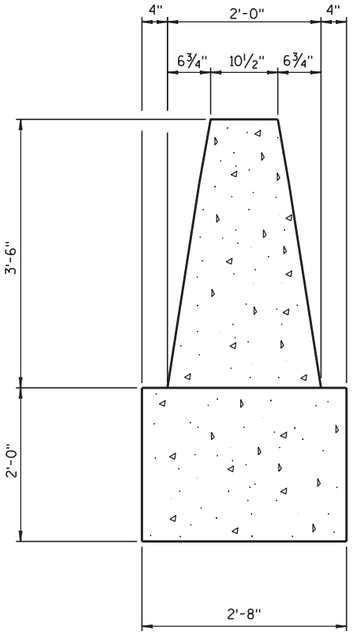
RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER

6

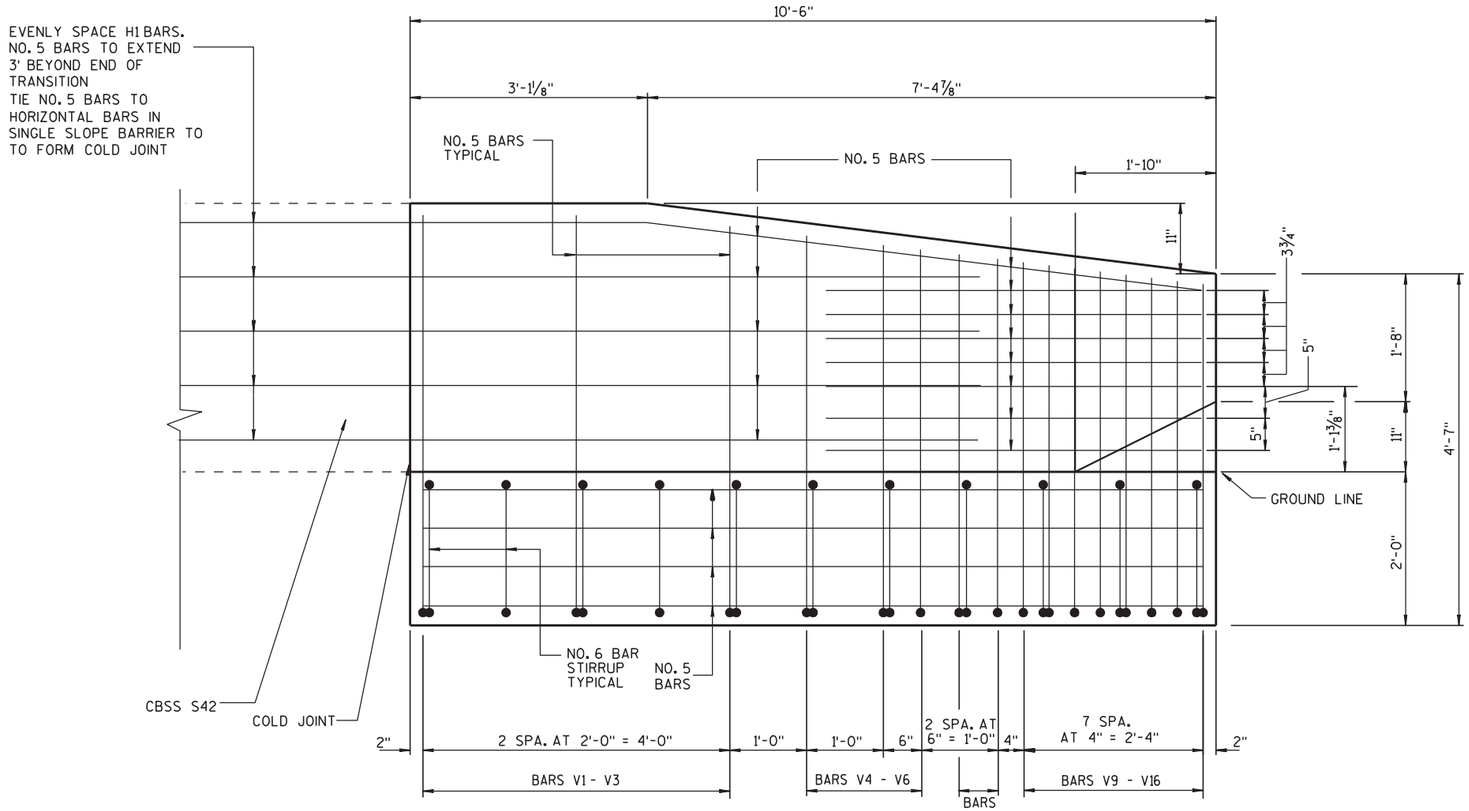
S.D.D. 14 B 32-2e

6

S.D.D. 14 B 32-2e

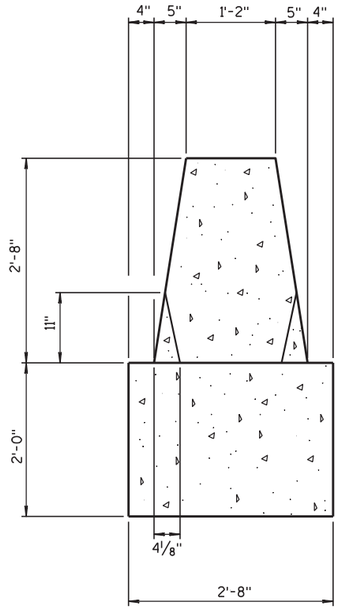


SECTION A-A

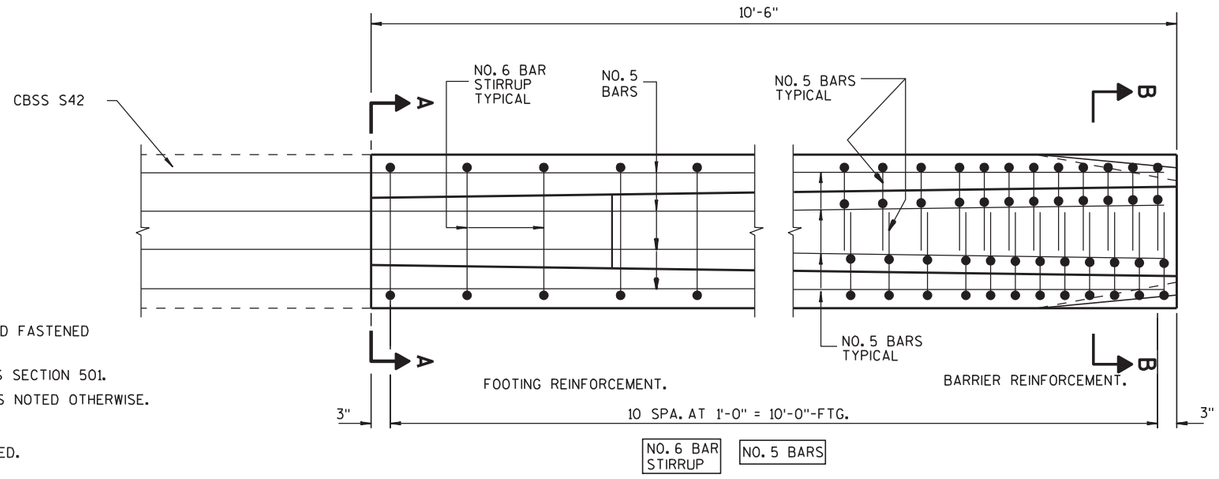


SEE SECTIONS ① THRU ⑯

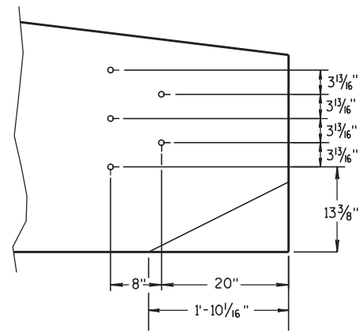
ELEVATION VIEW



SECTION B-B



PLAN VIEW



PVC PIPE LOCATIONS

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 SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE of BARRIER.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

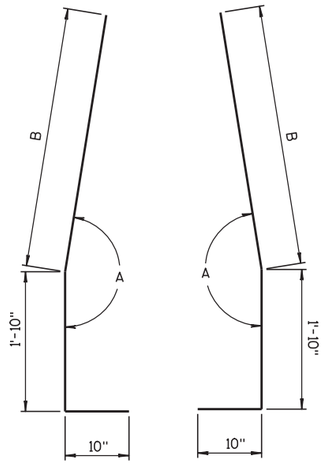
CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 33-1g

BAR CHART
SECTIONS V1 - V11

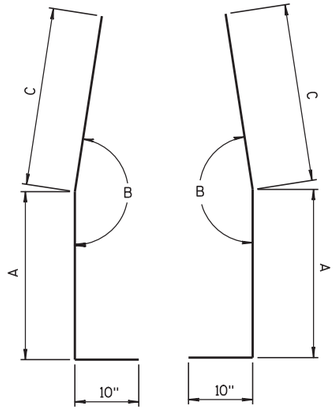
BAR	A	B
V1	170°-50'	3'-4½"
V2	171°-20'	3'-4½"
V3	171°-30'	3'-2½"
V4	171°-25'	3'-1½"
V5	171°-15'	3'-0"
V6	171°-15'	2'-11"
V7	171°-20'	2'-10½"
V8	171°-10'	2'-9½"
V9	171°-10'	2'-9"
V10	171°-05'	2'-8½"
V11	171°-10'	2'-8"



BAR BENDING DETAIL
FOR BARS V1 - V11

BAR CHART
SECTIONS V12 - V13

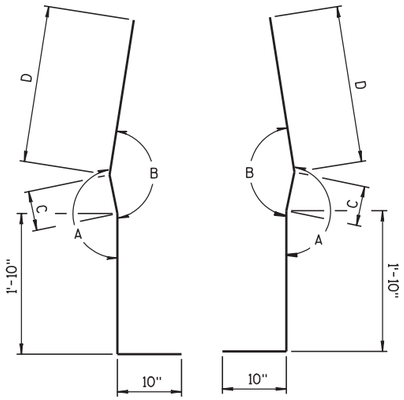
BAR	A	B	C
V12	2'-2"	171°-15'	2'-3½"
V13	2'-7"	171°-05'	1'-10"



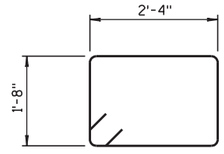
BAR BENDING DETAIL
FOR BARS V12 - V13

BAR CHART
SECTIONS V14 - V16

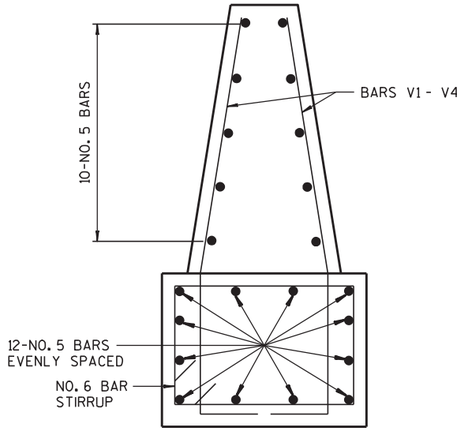
BAR	A	B	C	D
V14	168°-15'	159°-15'	6"	2'-0"
V15	169°-20'	161°-00'	8"	1'-10"
V16	168°-40'	160°-10'	10"	1'-8"



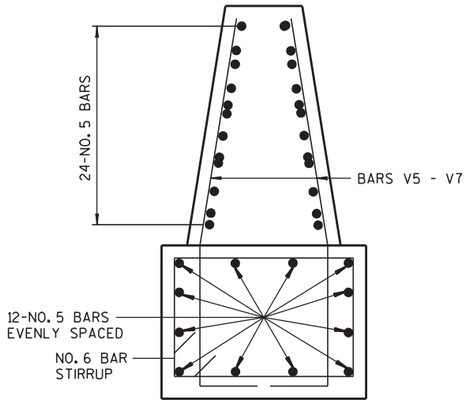
BAR BENDING DETAIL
FOR BARS V14 - V16



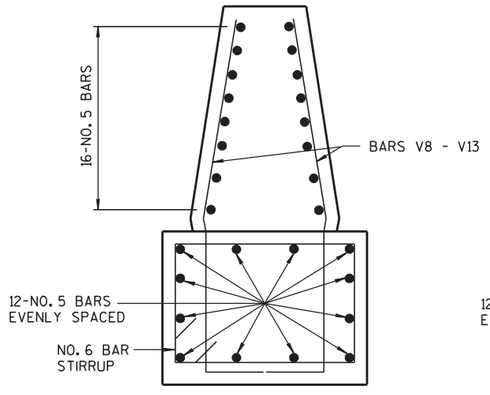
STIRRUP BAR
BENDING DETAIL



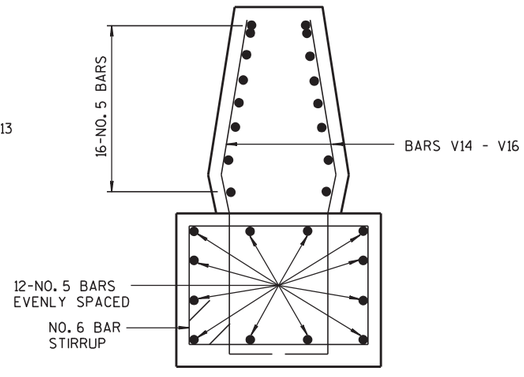
BAR DETAIL
SECTIONS V1 - V4



BAR DETAIL
SECTIONS V5 - V7



BAR DETAIL
SECTIONS V8 - V13



BAR DETAIL
SECTIONS V14 - V16

CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-3-2010 DATE
/S/ Jerry H. Z--- ROADWAY STANDARDS ENGINEER
365
FHWA

6
S.D.D. 14 B 33-1h

GENERAL NOTES

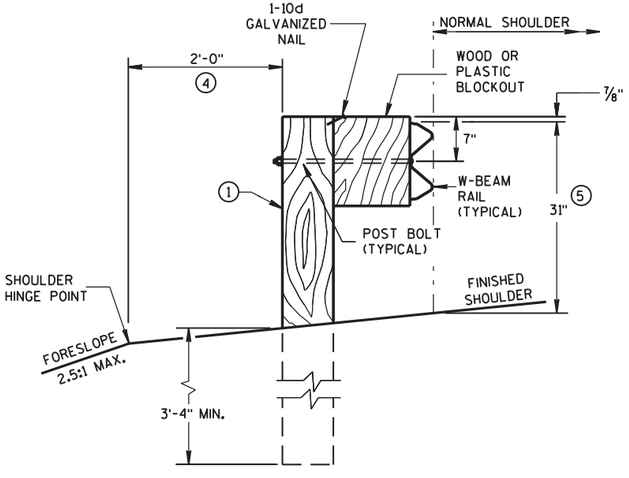
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

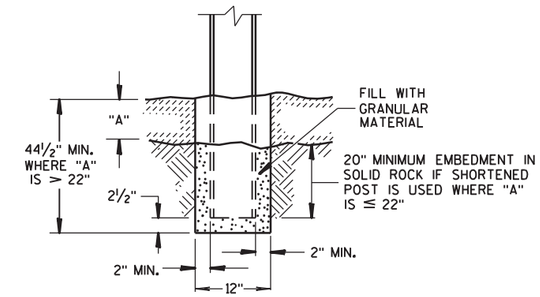
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".



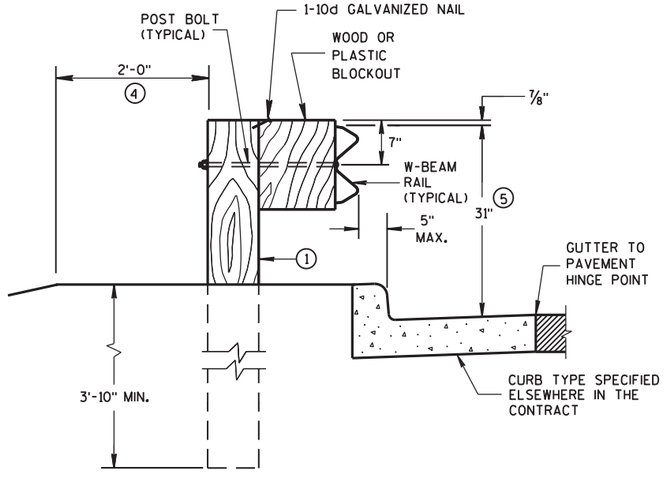
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



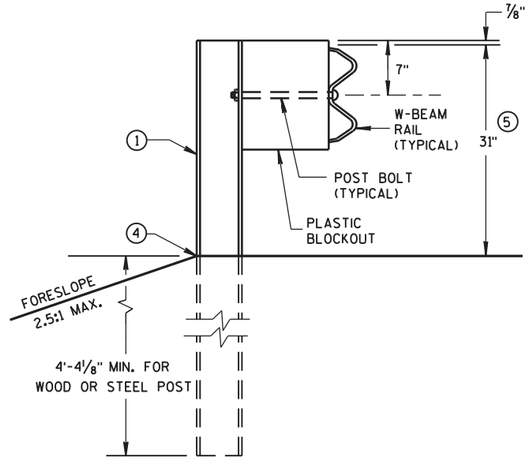
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



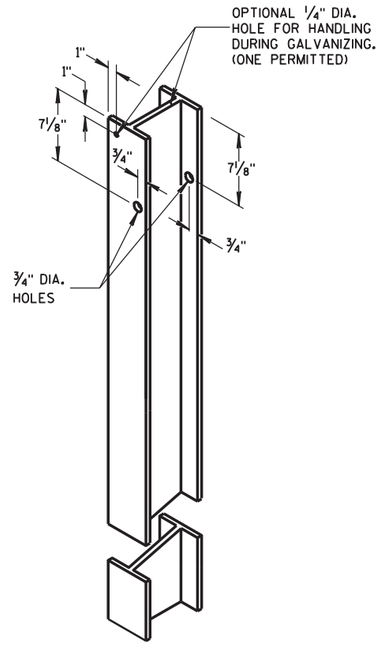
END VIEW

LOCATED ALONG A CURBED ROADWAY

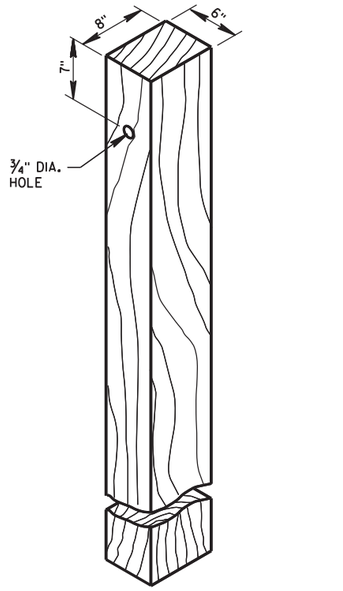


END VIEW

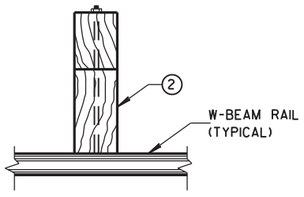
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



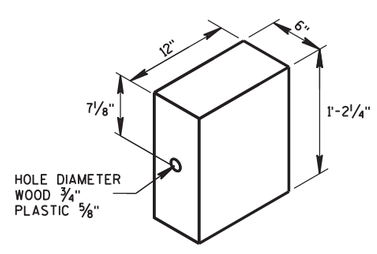
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



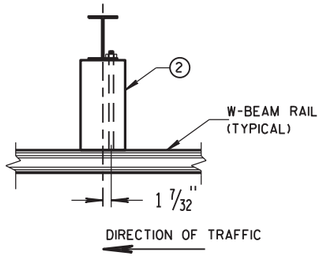
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

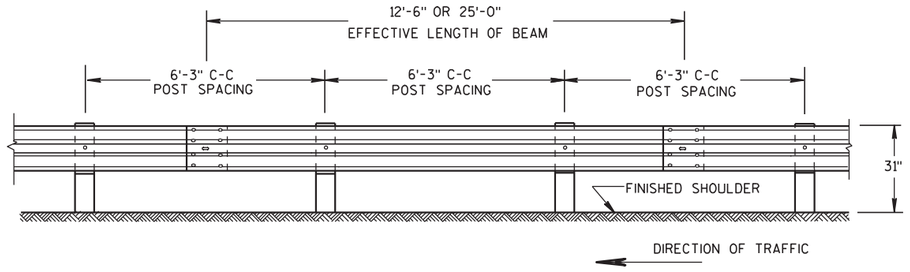


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

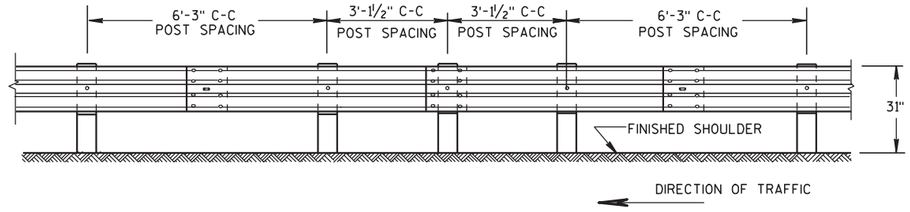
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-2a



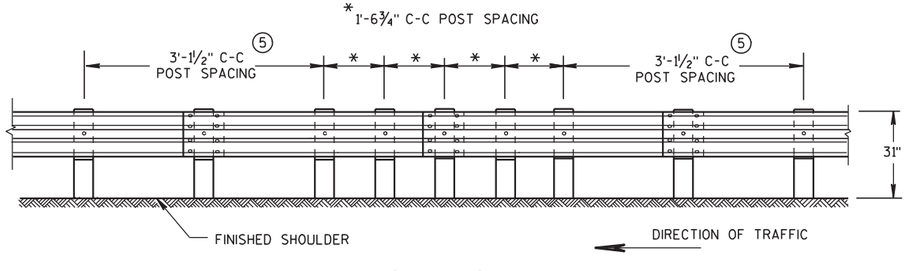
FRONT VIEW

POST SPACING STANDARD INSTALLATION



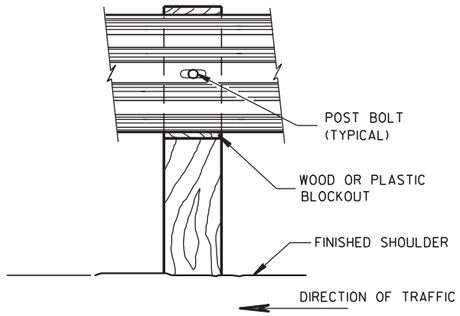
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

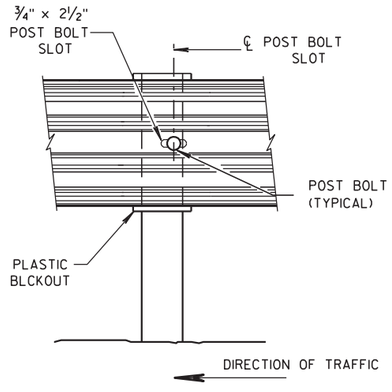


FRONT VIEW

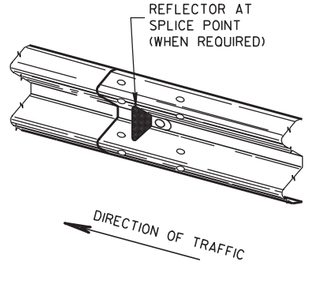
QUARTER POST SPACING (QS)

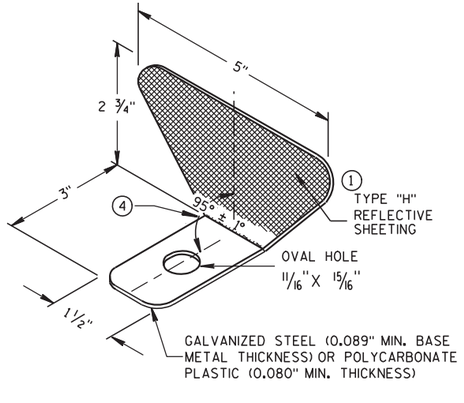


FRONT VIEW AT WOOD POST

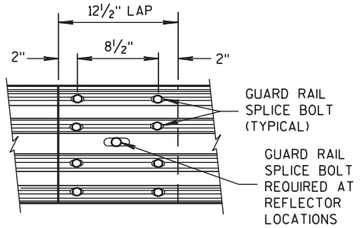


FRONT VIEW AT STEEL POST



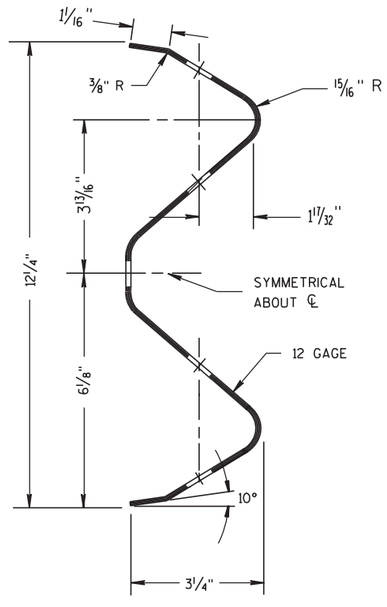


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①



FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL

REFLECTOR SPACING ②

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 1 ③	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ④	3

GENERAL NOTES

① PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.

② DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

③ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

④ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

⑤ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

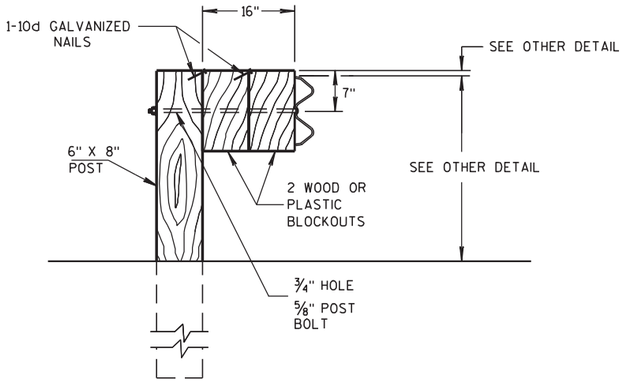
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

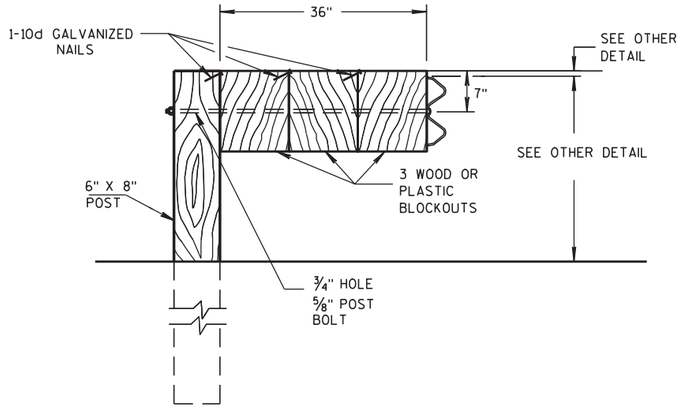
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 42-2b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

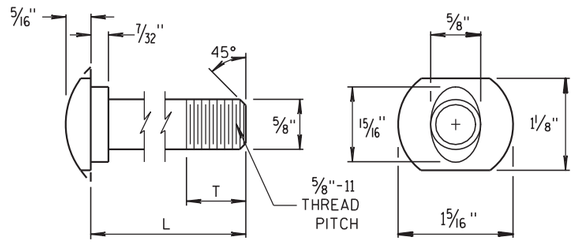


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

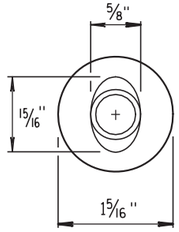
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

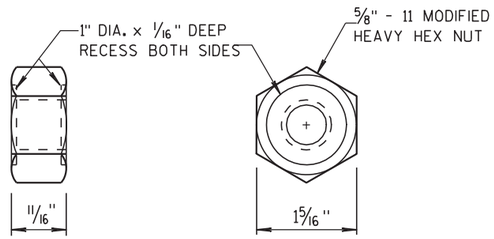


POST BOLT TABLE

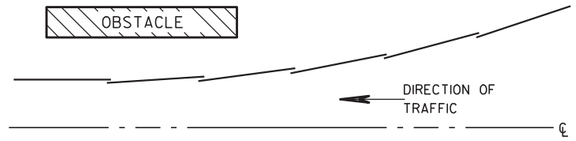
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

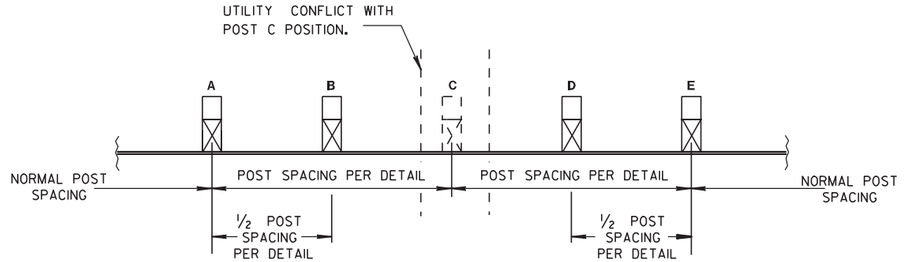


POST BOLT AND RECESS NUT

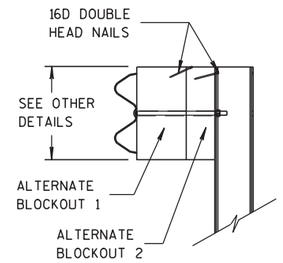


PLAN VIEW

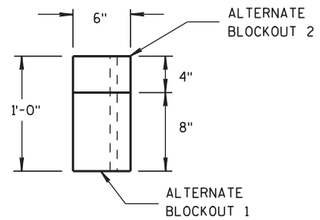
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

ENT

6

S.D.D. 14 B 42-2c

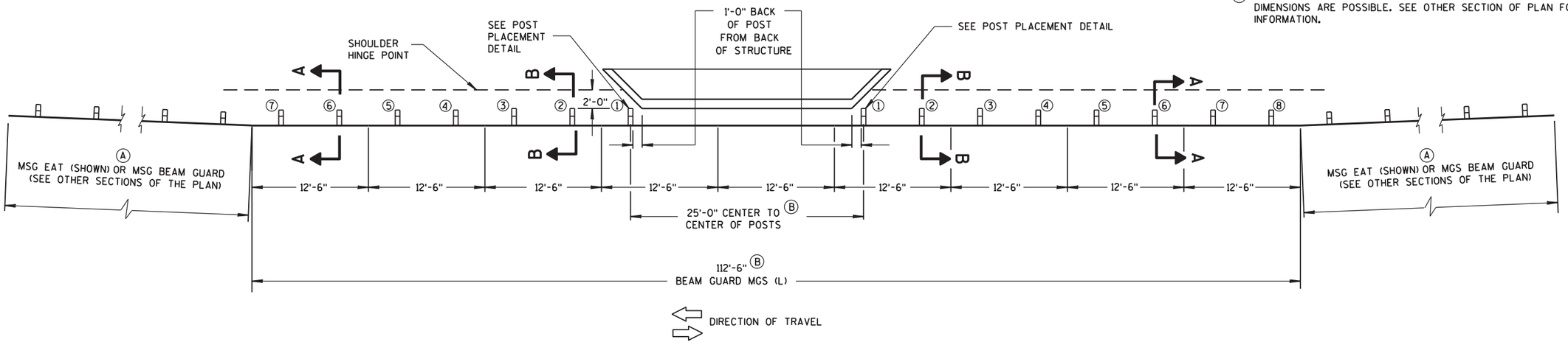
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

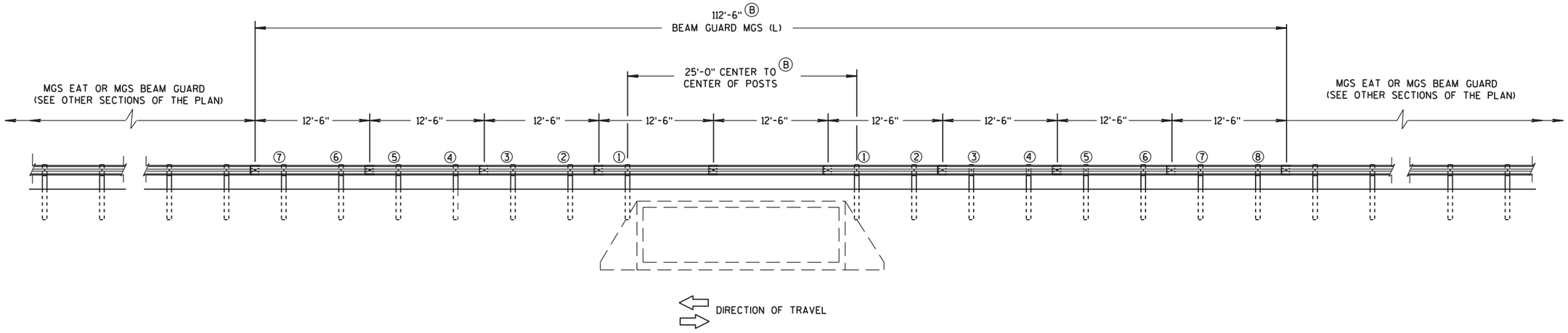
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 43-3a

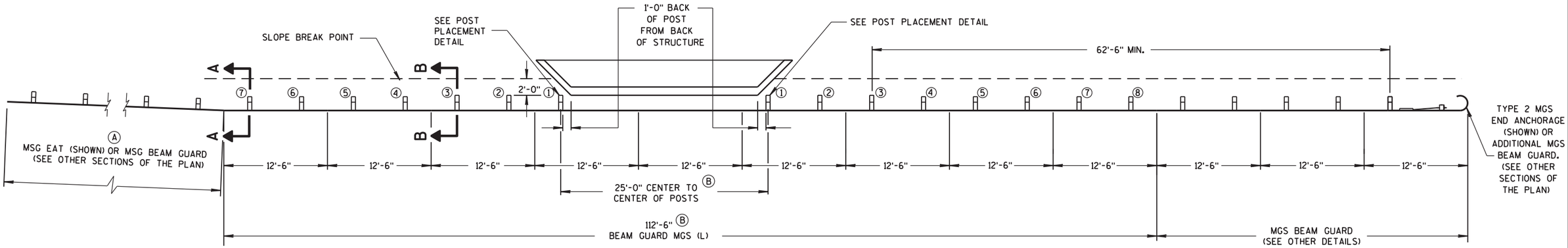
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

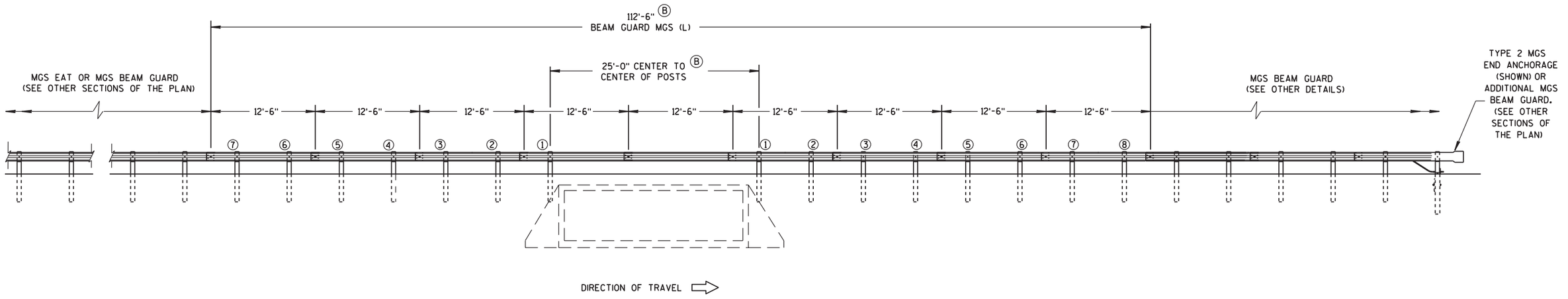
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



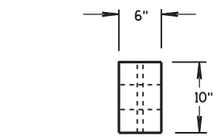
ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

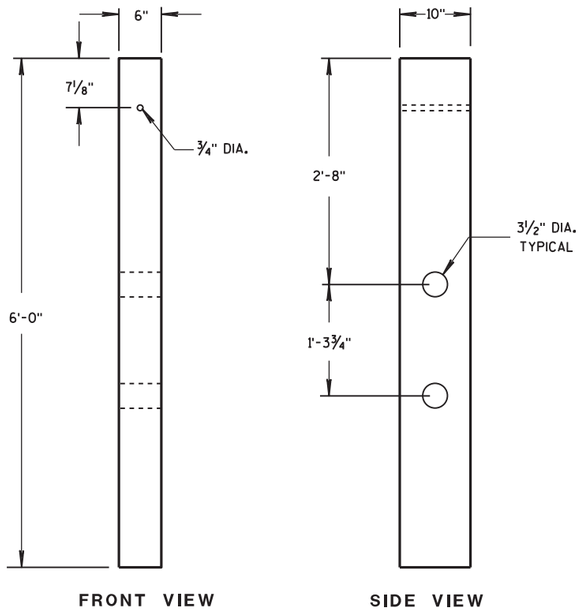
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPOI	370

6

S.D.D. 14 B 43-3b

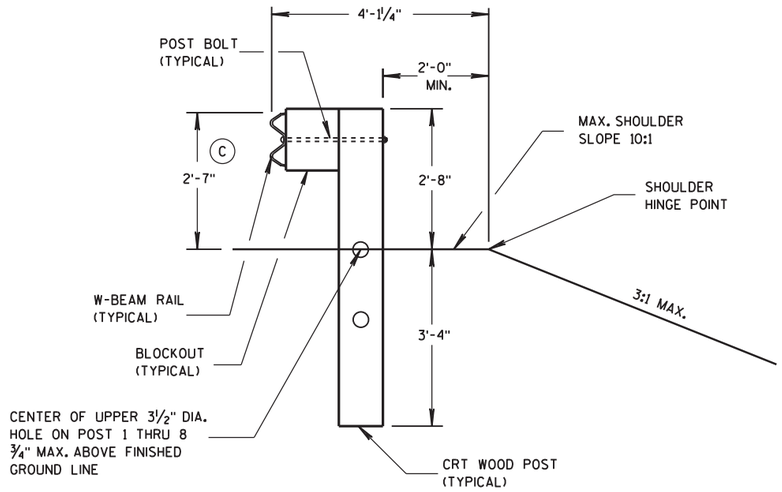


PLAN VIEW



FRONT VIEW SIDE VIEW

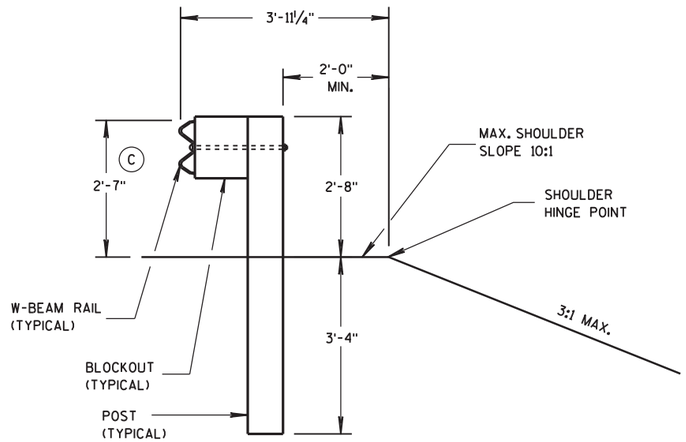
CRT WOOD POST



SECTION B-B

POSTS NO. 1-3

SEE OTHER DETAILS



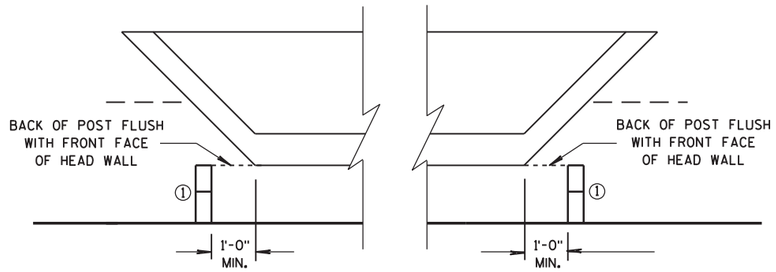
SECTION A-A

POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

(C) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/10/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 14 B 43-3c

6

S.D.D. 14 B 43-3c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL),AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

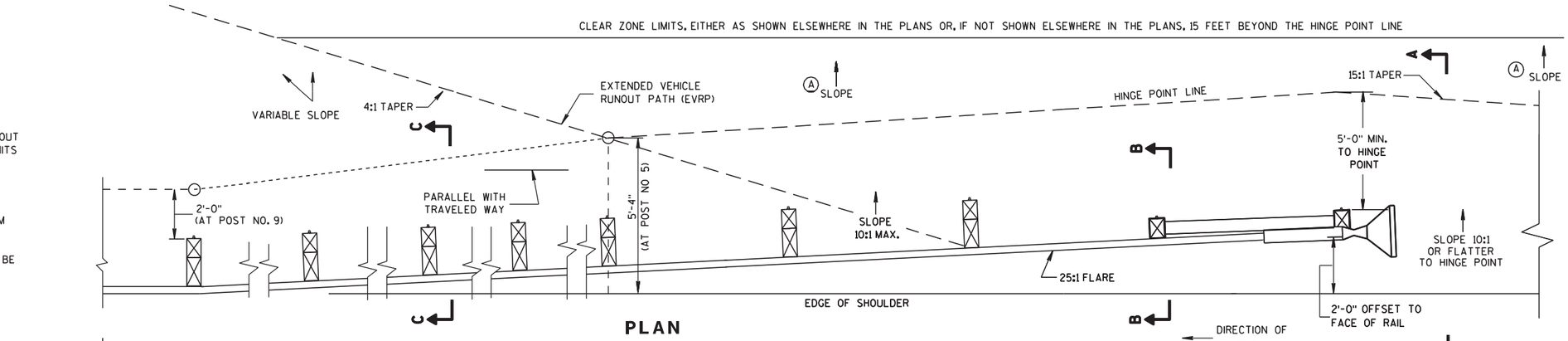
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

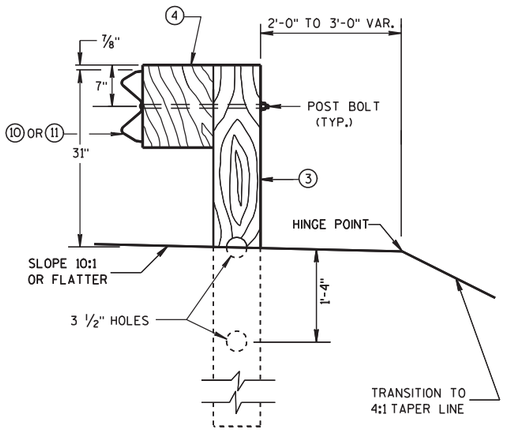
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

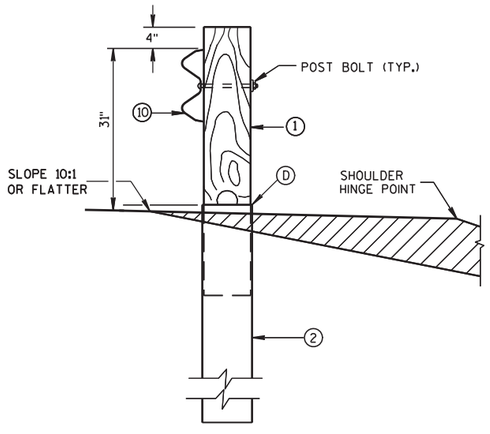
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

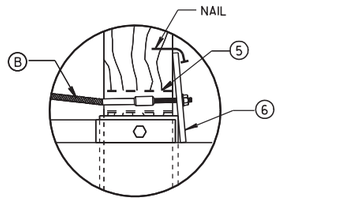


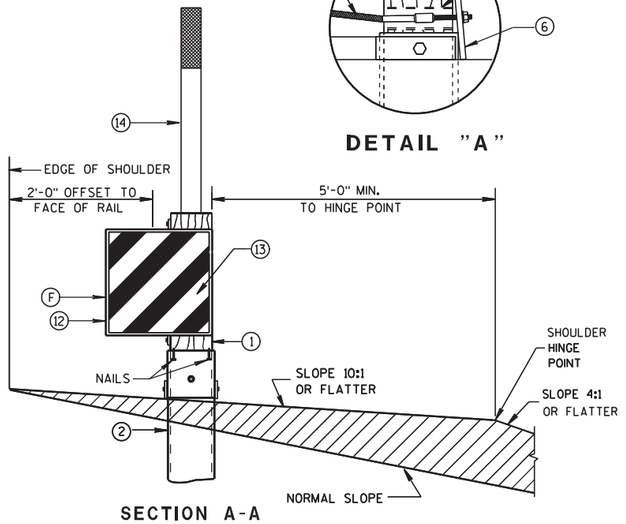


SECTION C-C
TYPICAL AT POST NOS. 3-9

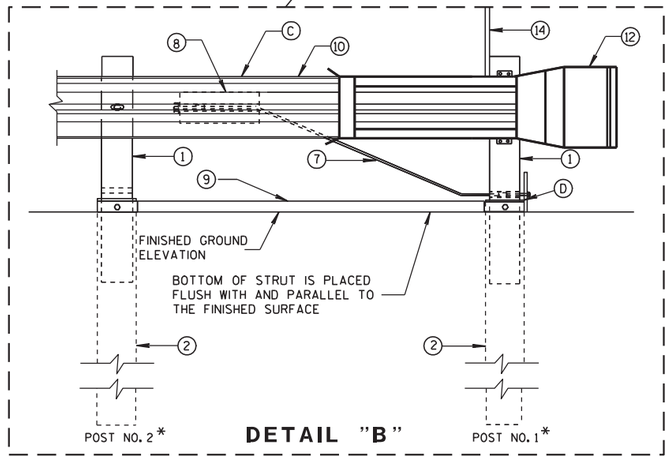


SECTION B-B
TYPICAL AT POST NO. 2*





SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

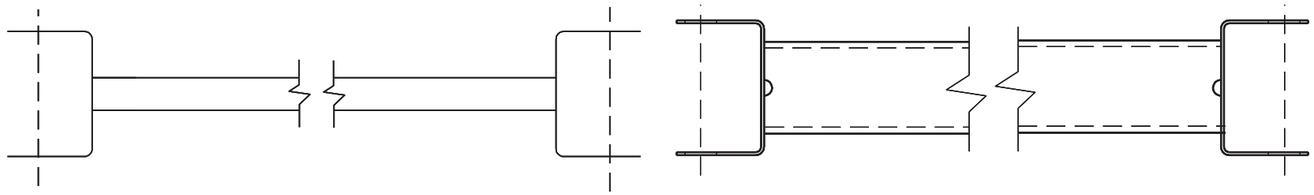
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1a

6

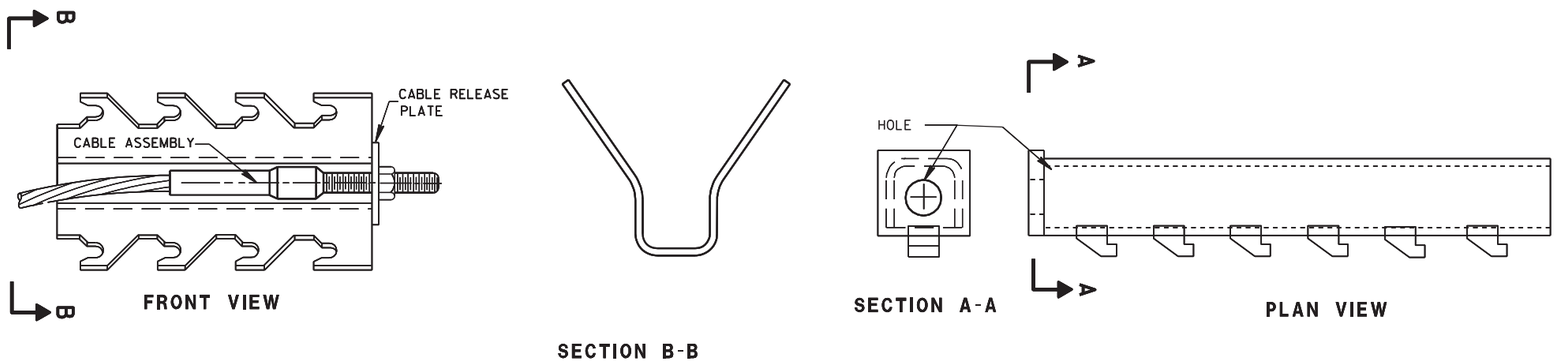
S.D.D. 14 B 44-1a



GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



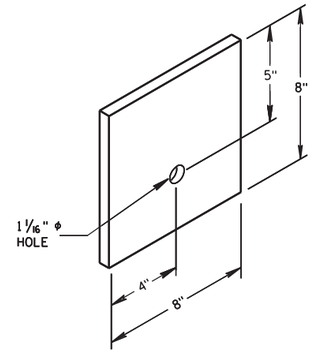
FRONT VIEW

SECTION B-B

SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



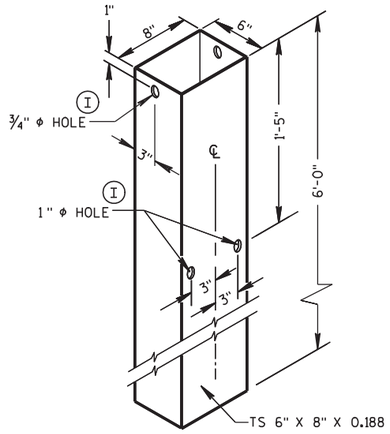
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

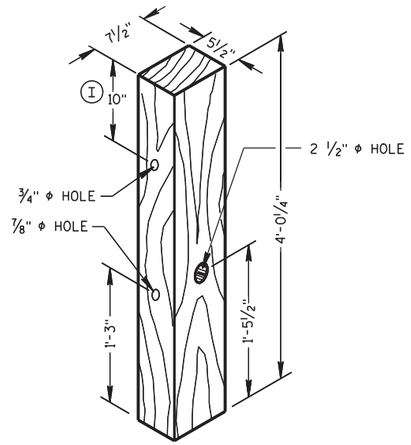
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1b

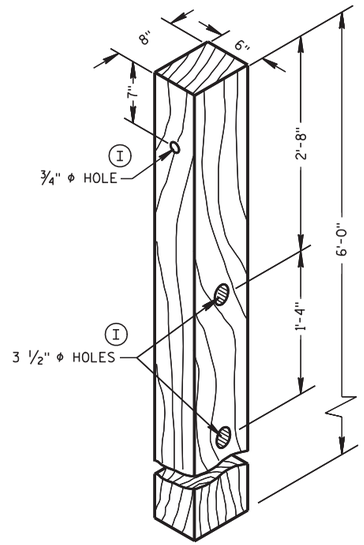


FOUNDATION TUBE (2)



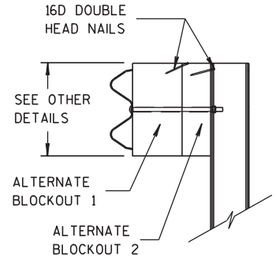
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

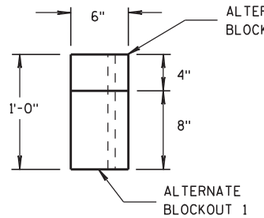


POSTS NUMBER 3-9

WOOD CRT POST (3)

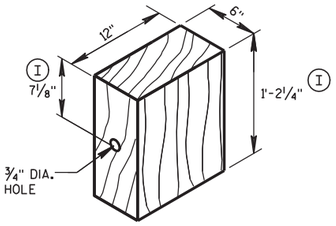


SIDE VIEW



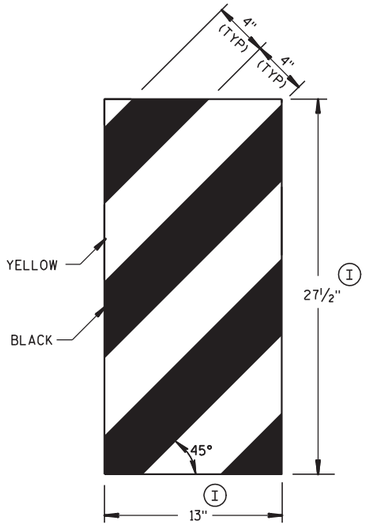
TOP VIEW

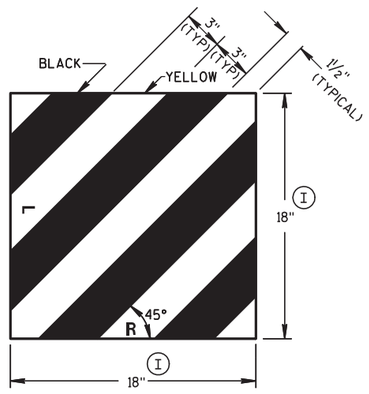
ALTERNATE WOOD BLOCKOUT DETAIL



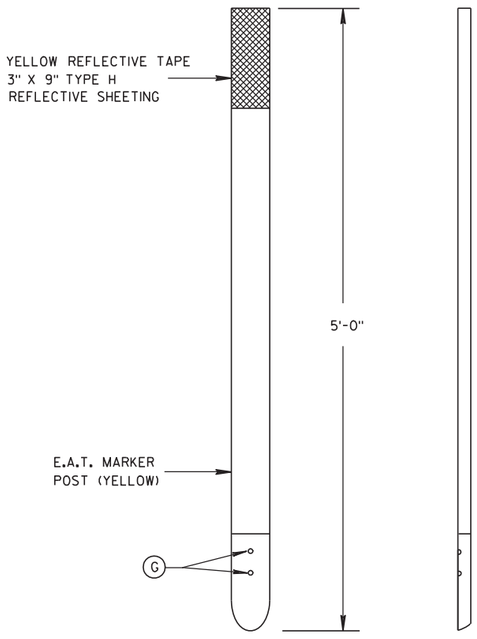
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





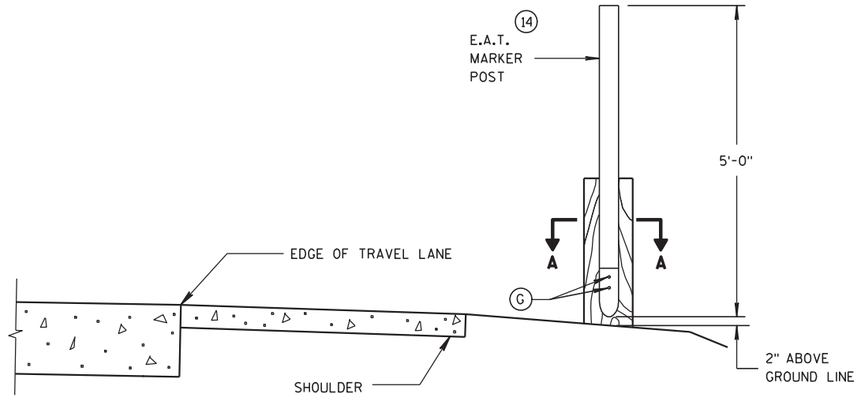
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

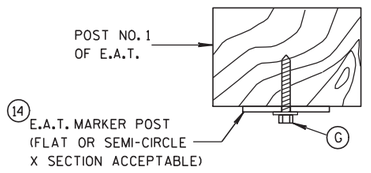
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

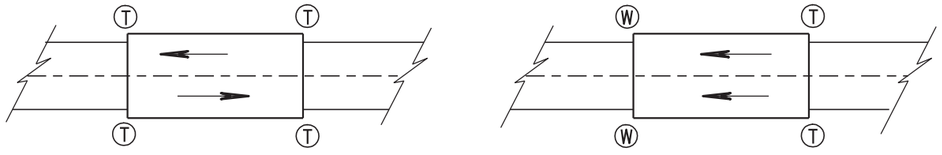
APPROVED
5/23/2011
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS 374
ENGINEER
[illegible]ENT
FHWA

6

S.D.D. 14 B 44-1c

6

S.D.D. 14 B 44-1c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

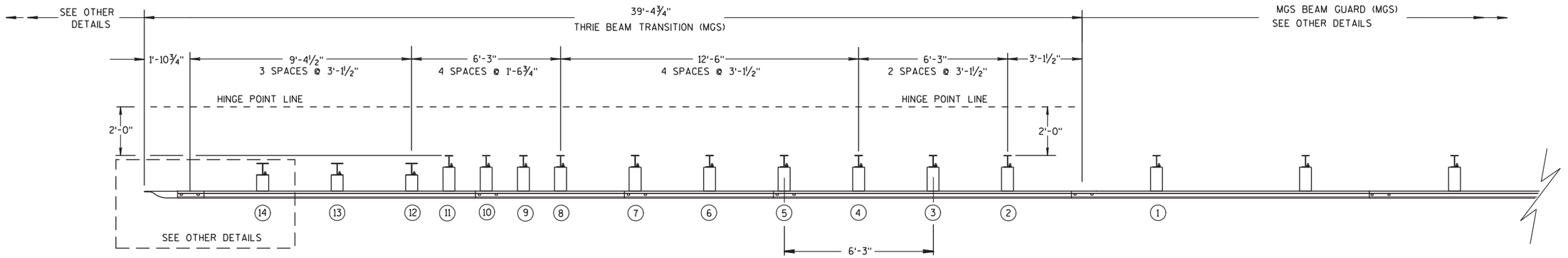
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

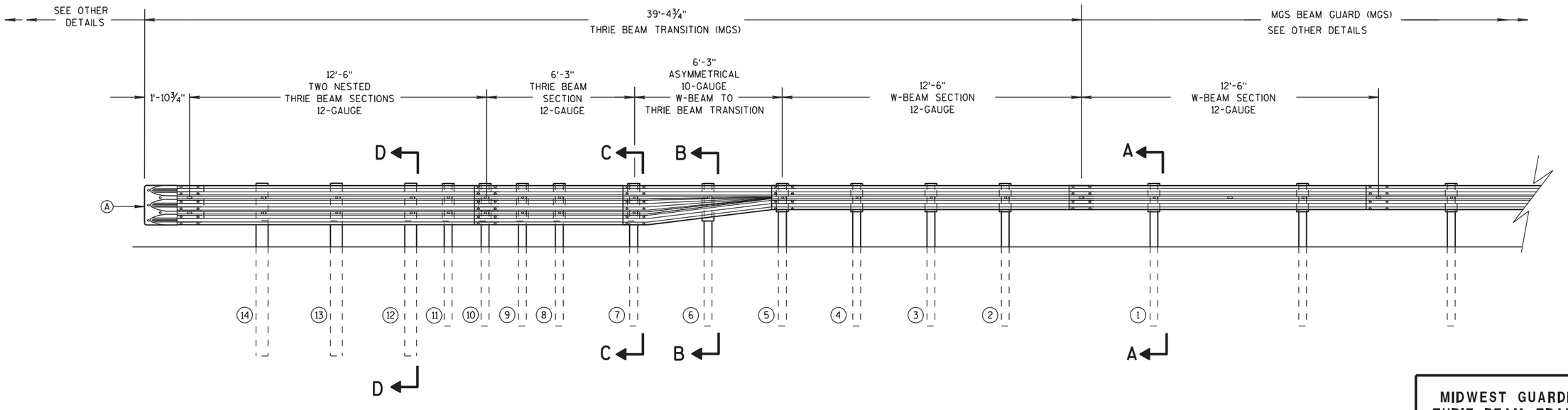
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

(A) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

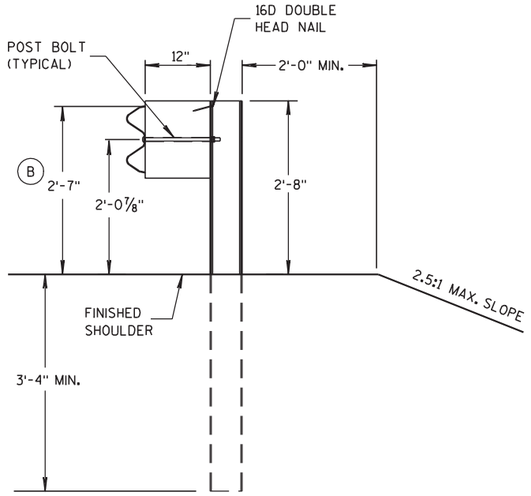
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3a

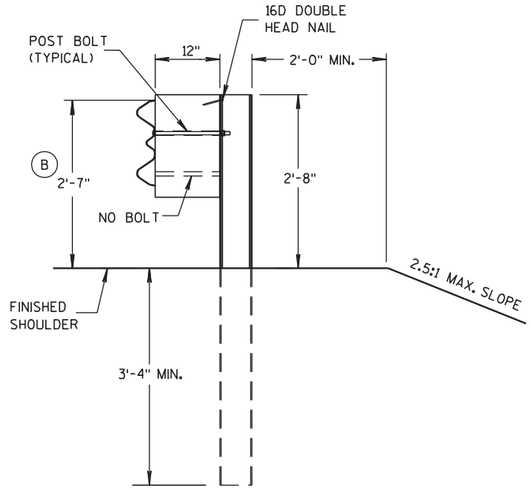
GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



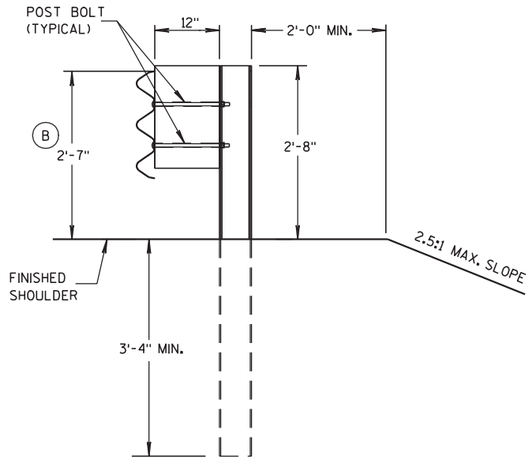
SECTION A-A

POSTS 1-5



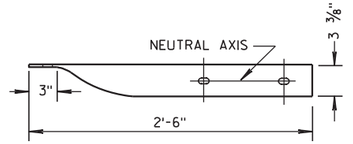
SECTION B-B

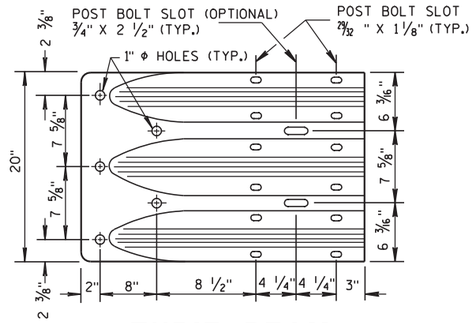
POST 6



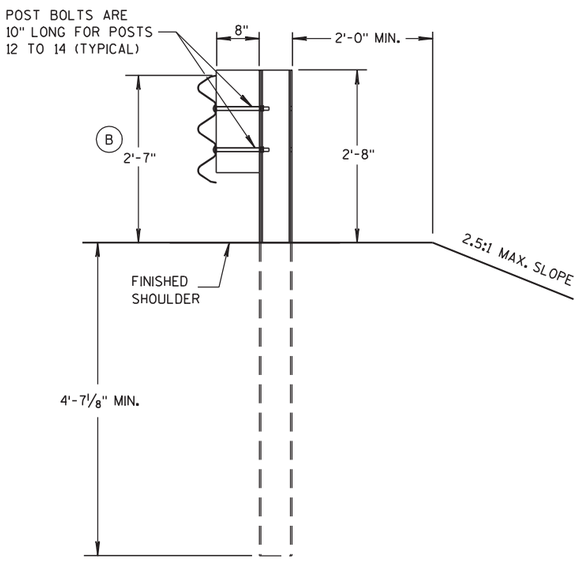
SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14

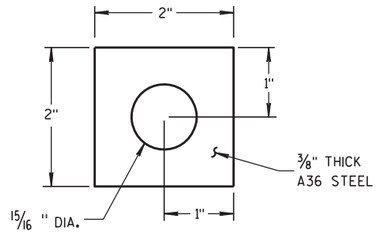
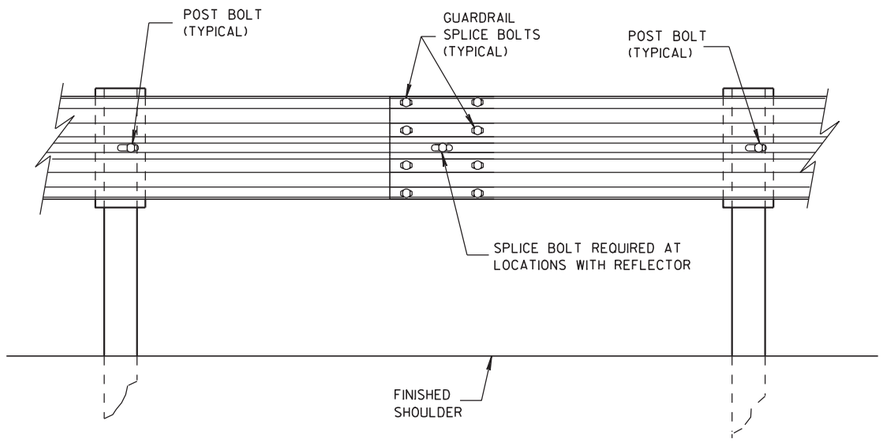
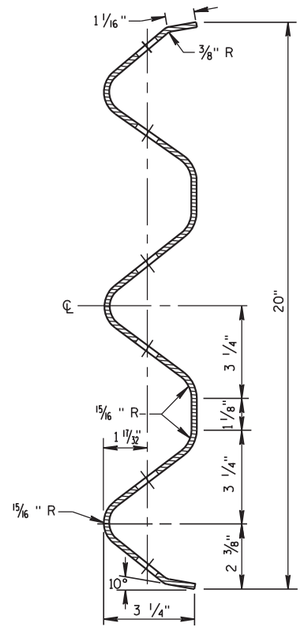


PLATE WASHER DETAIL



SPLICE DETAIL



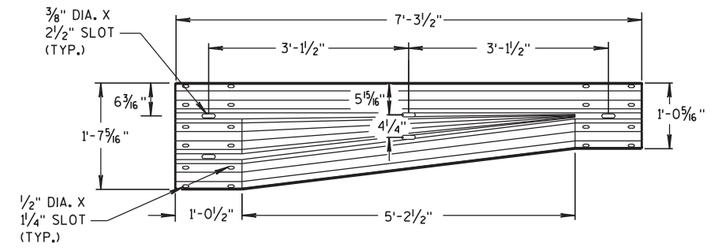
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

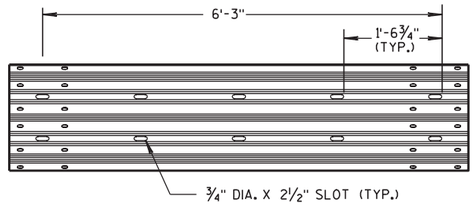
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

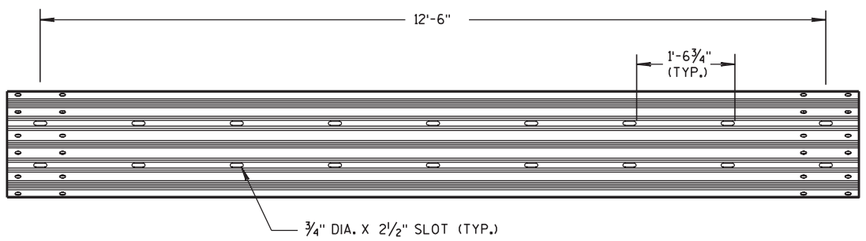
S.D.D. 14 B 45-3b



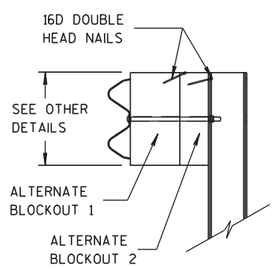
W-BEAM TO THRIE BEAM TRANSITION SECTION



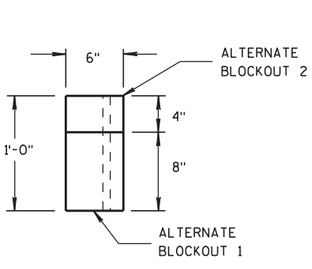
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

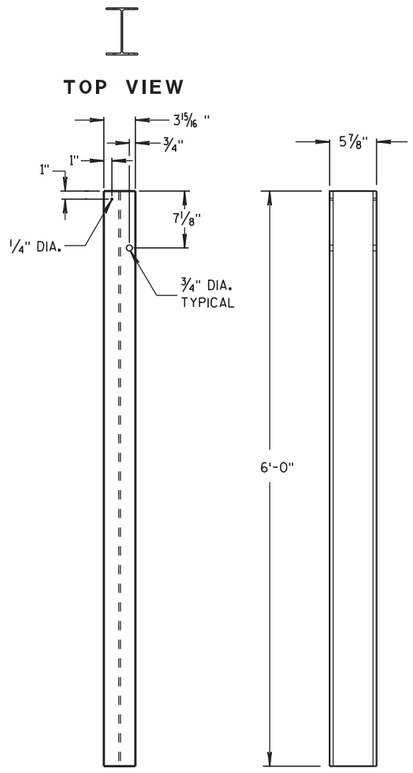


SIDE VIEW



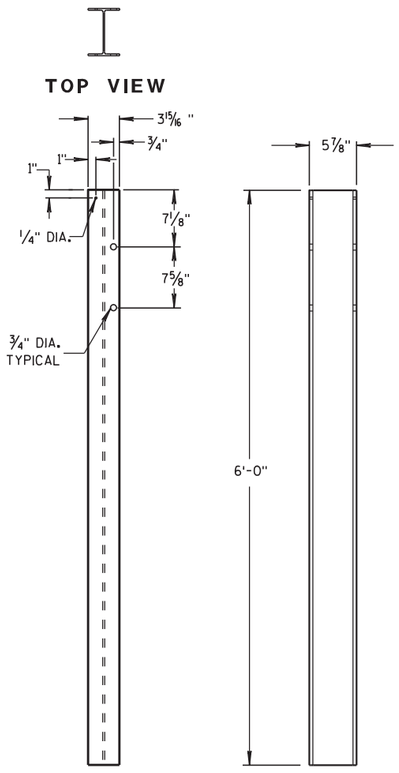
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



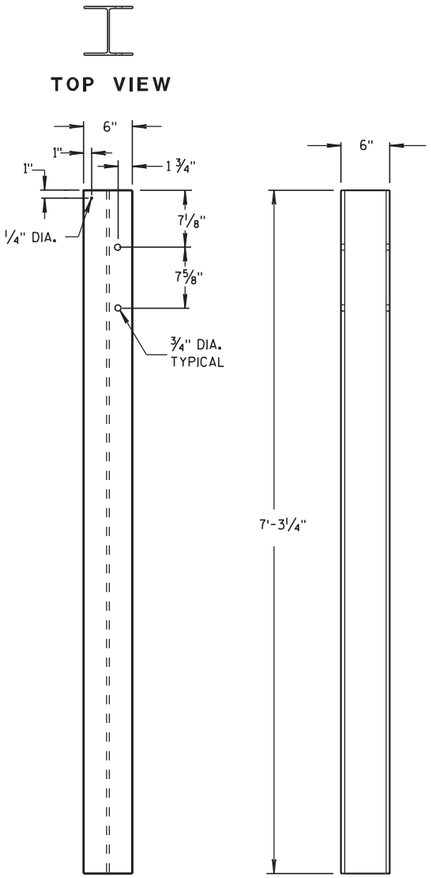
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5



FRONT VIEW SIDE VIEW

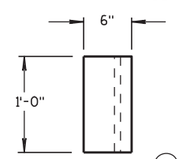
STEEL POSTS 6-11



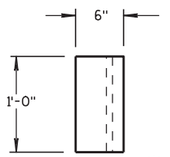
FRONT VIEW SIDE VIEW

STEEL POSTS 12-14

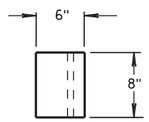
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



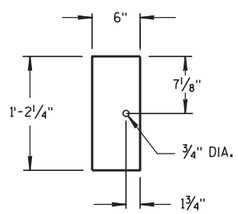
TOP VIEW (1)



TOP VIEW (1)

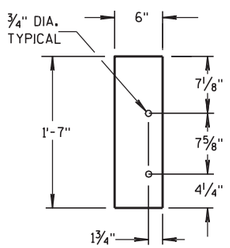


TOP VIEW



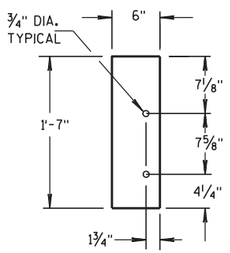
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

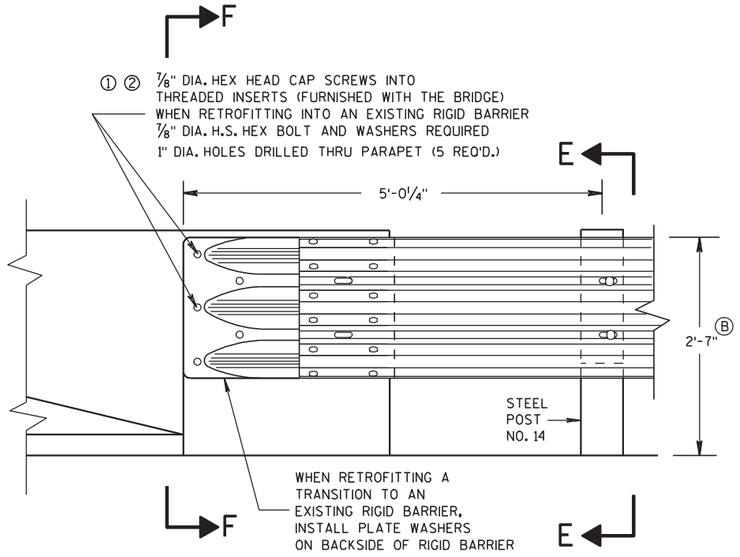
BLOCKOUT POSTS 12-14

STEEL POST SIZES

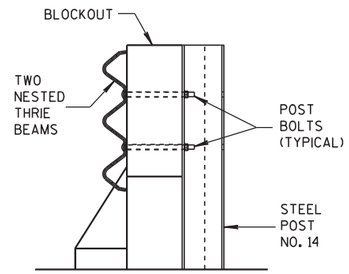
POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FRONT VIEW



SECTION E-E

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

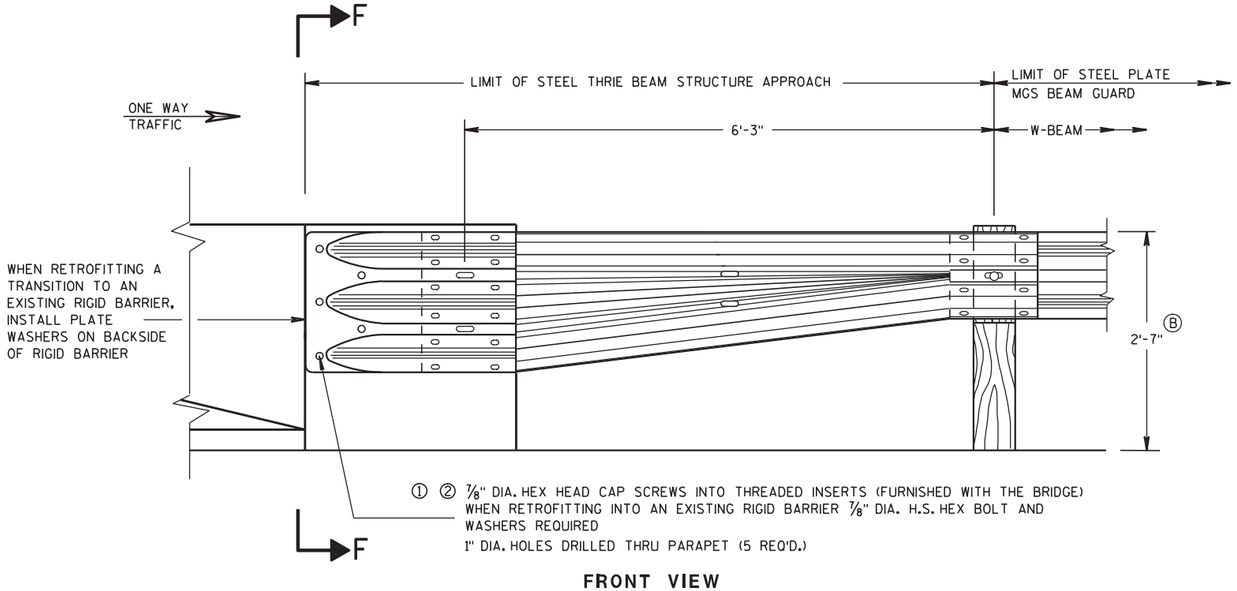
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

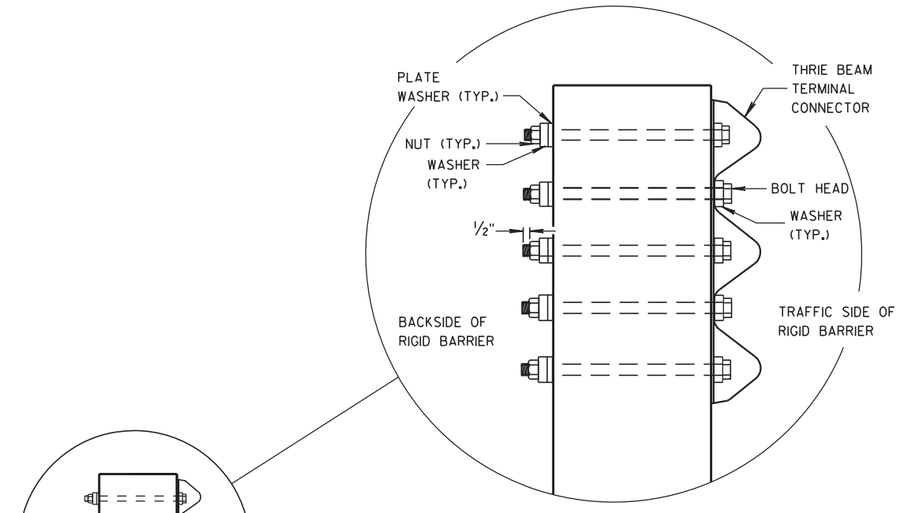
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

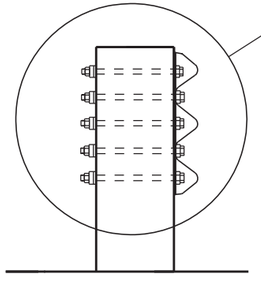
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW





SECTION F-F

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS [illegible]
ENGINEER

FHWA

6

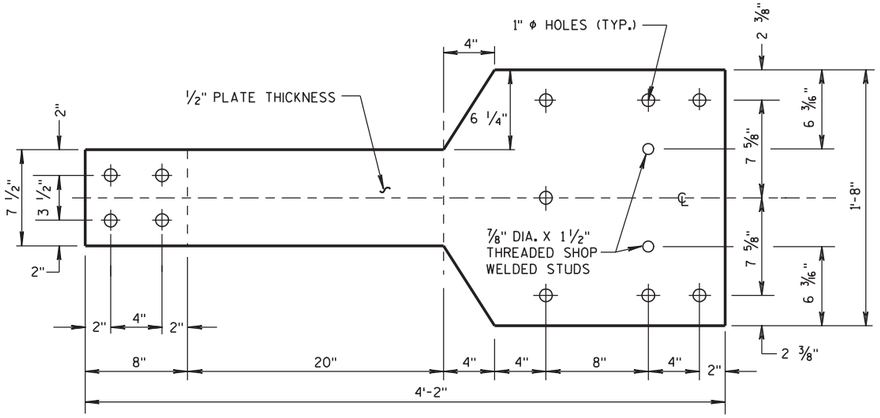
S.D.D. 14 B 45-3d

6

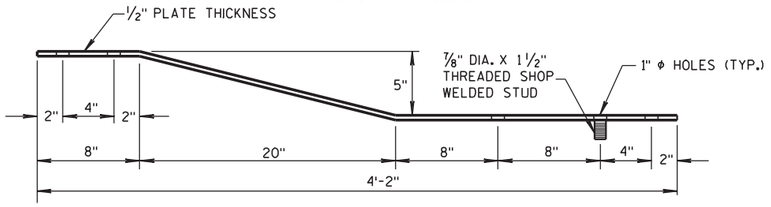
S.D.D. 14 B 45-3d

GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

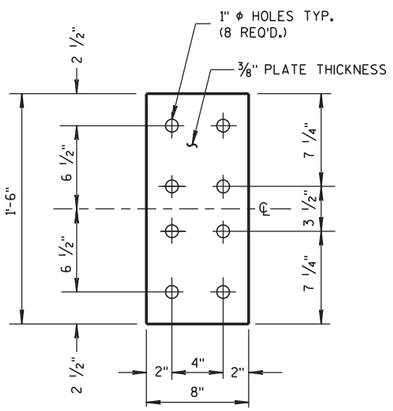


FRONT VIEW



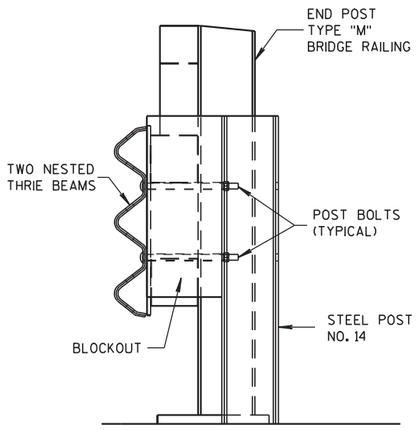
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

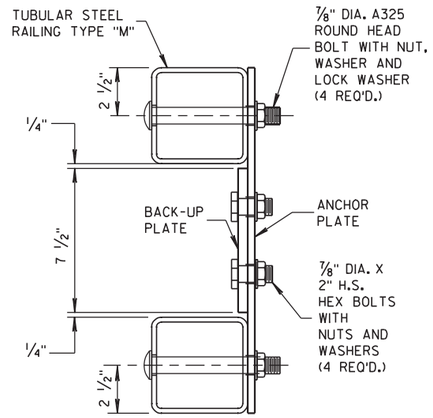


FRONT VIEW

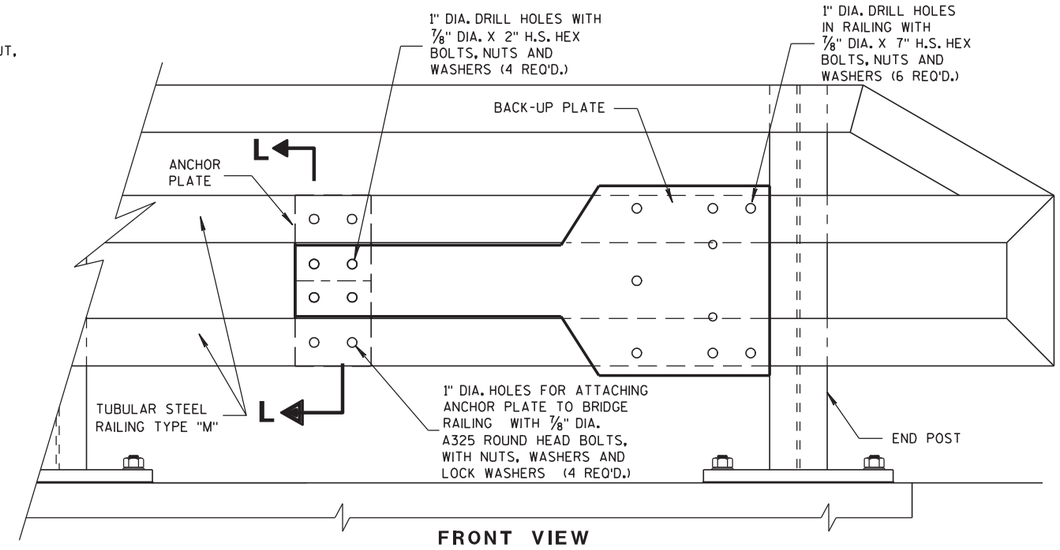
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

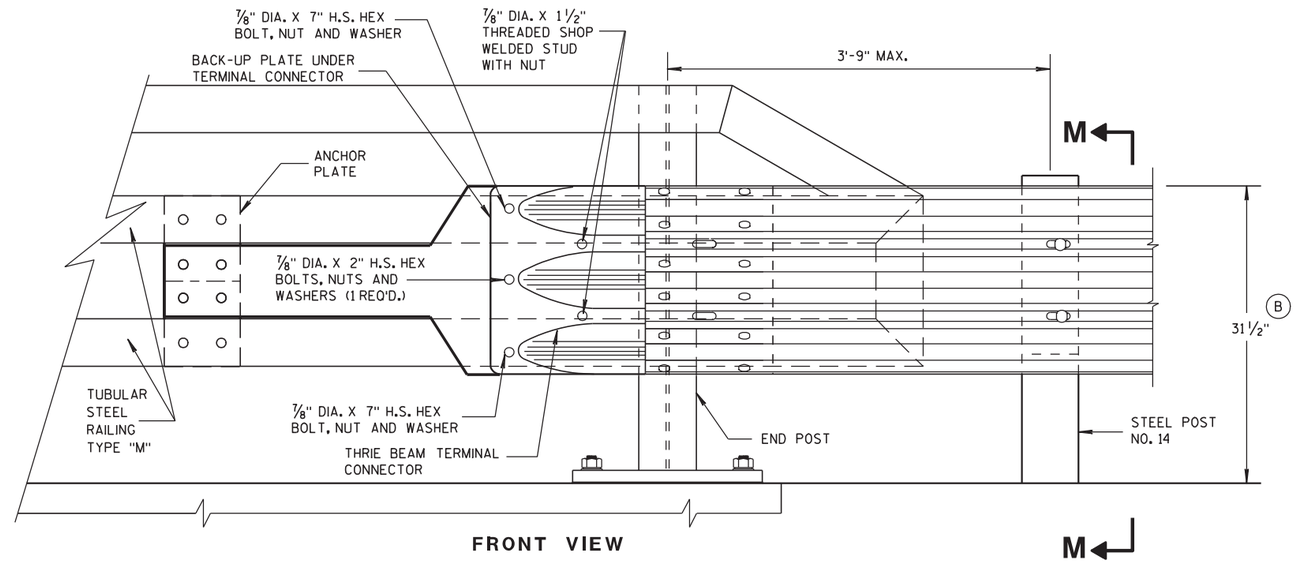


SECTION L-L

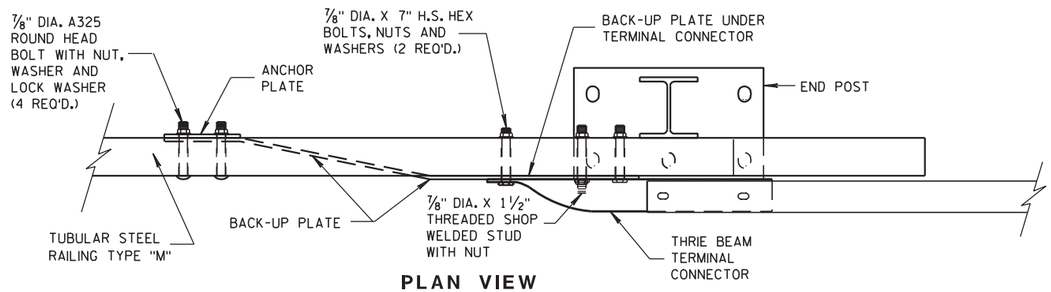


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

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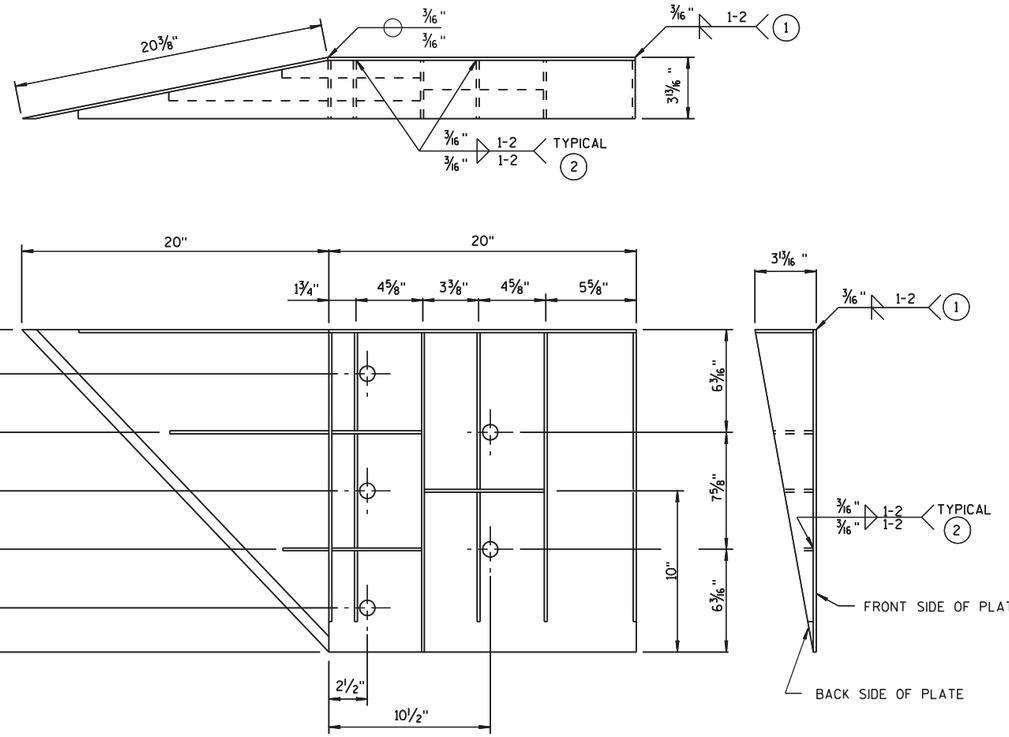
FHWA



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

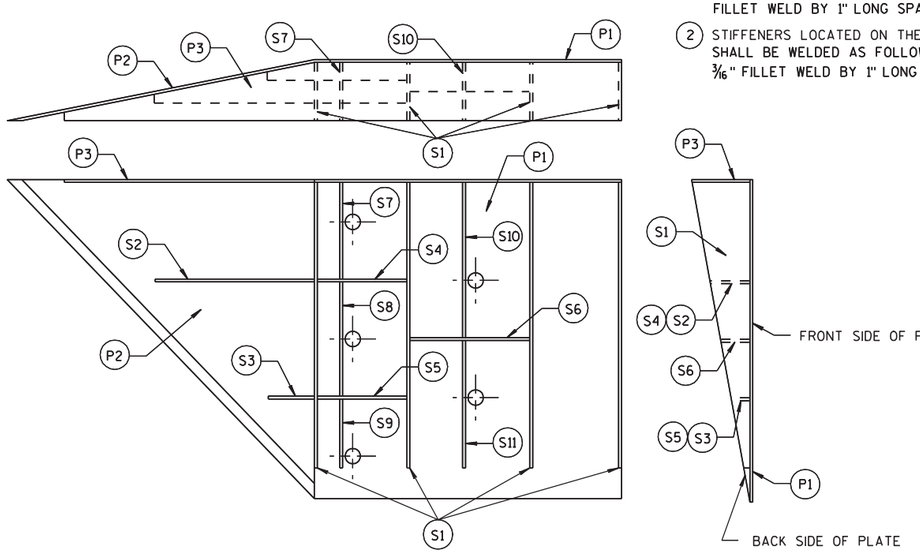


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 31/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 31/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012
DATE
/S/ Jerry H ...
ROADWAY STANDARDS 380
ENGINEER
...MENT
FHWA

6

S.D.D. 14 B 45-3i

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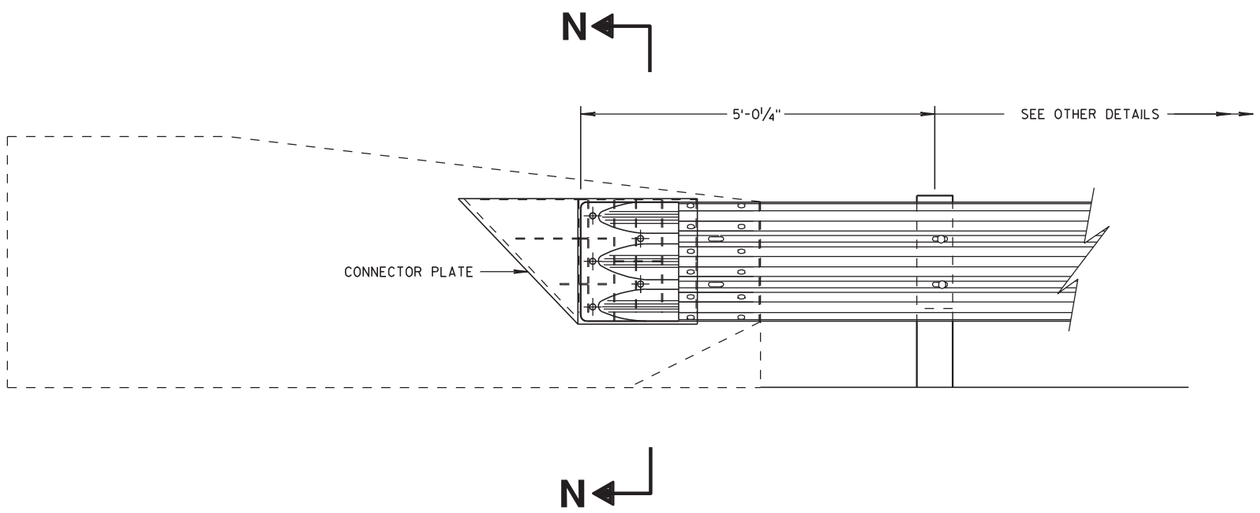
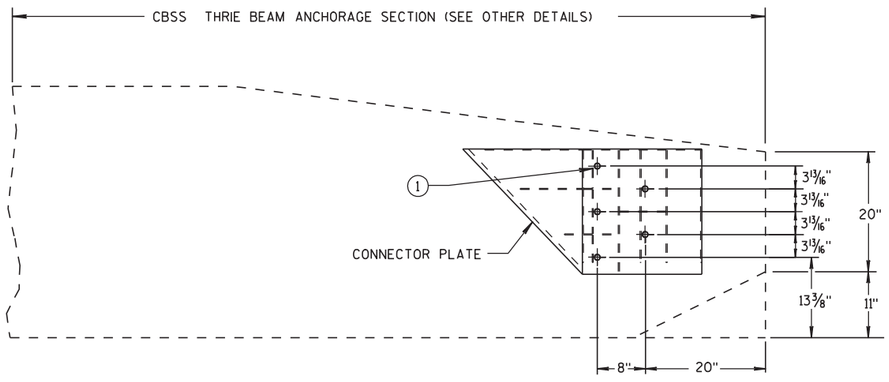
S.D.D. 14 B 45-3i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

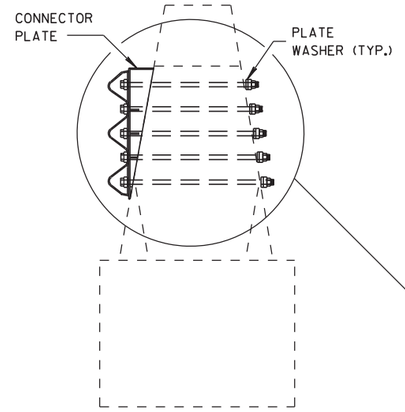


SINGLE SLOPE CONNECTION PLATE PLACEMENT

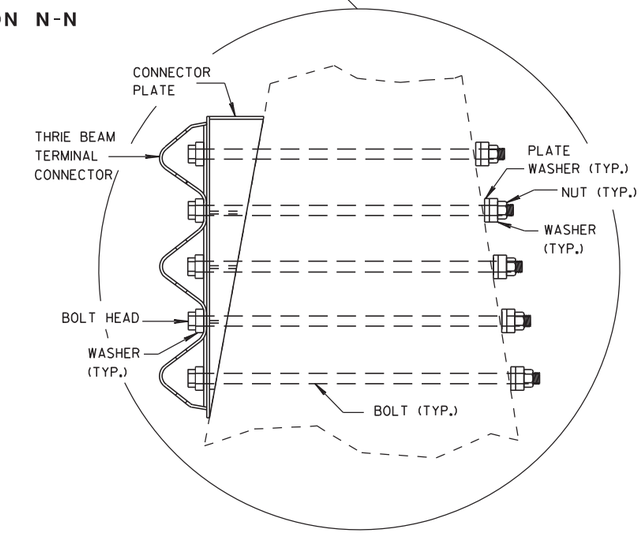
GENERAL NOTES

CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 45-3j

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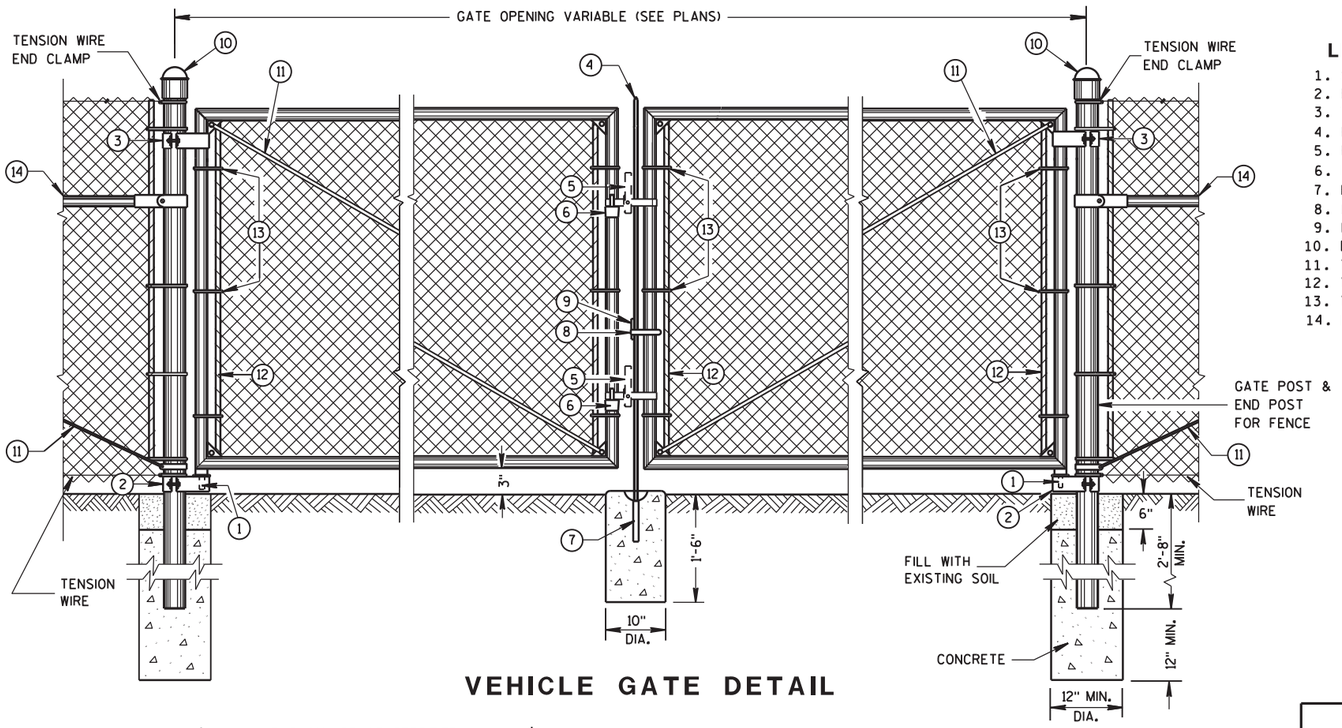
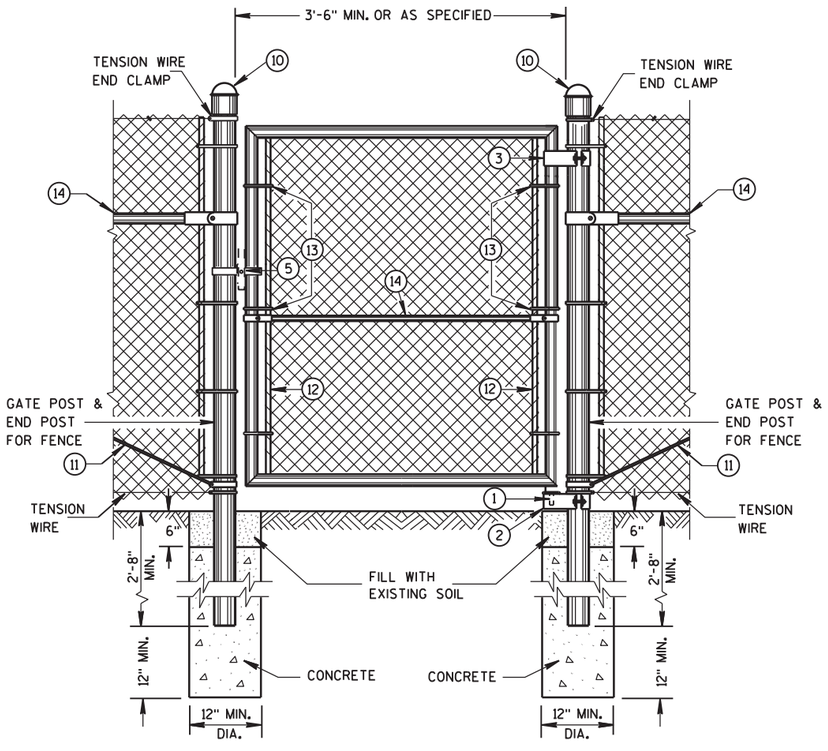
S.D.D. 14 B 45-3j



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

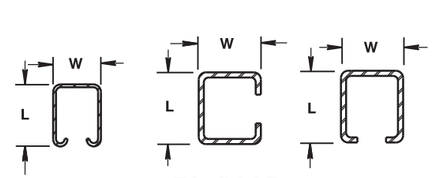
FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

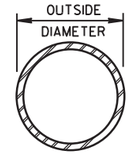
FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

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.



FS POST



SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FORMED STEEL FENCE POST

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

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR ROUND STEEL FENCE POST

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

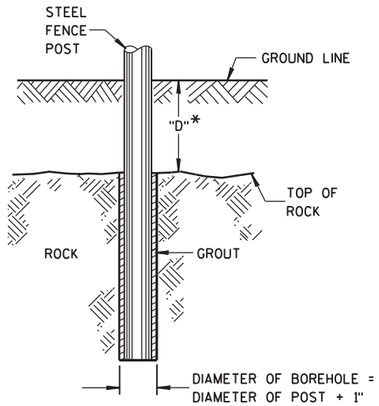
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

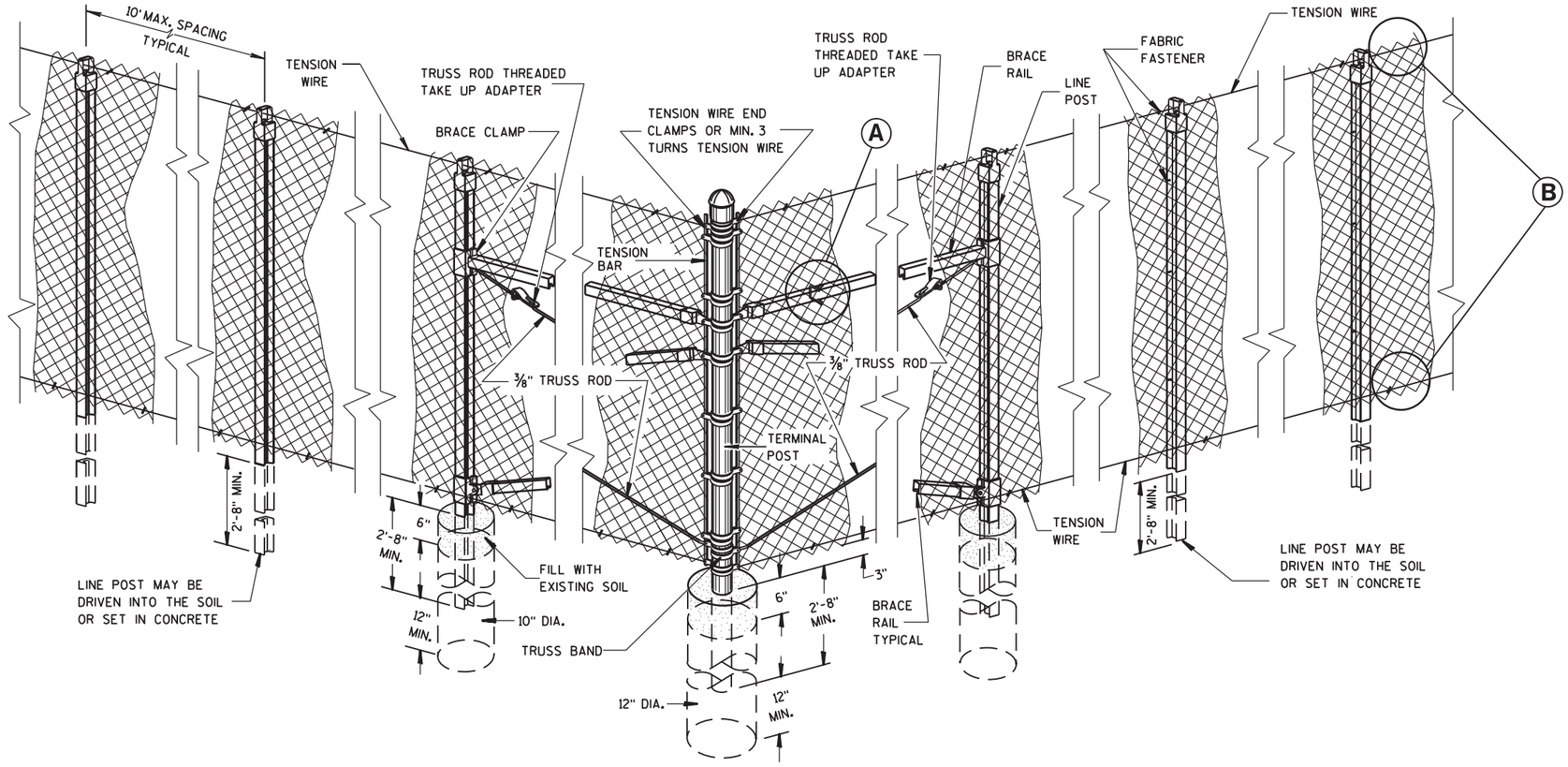
6

S.D.D. 15 B 3-13a

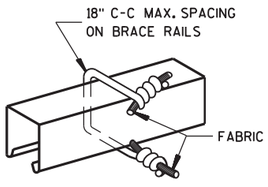


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



BRACE RAIL

FABRIC FASTENER

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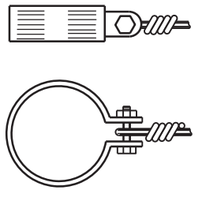
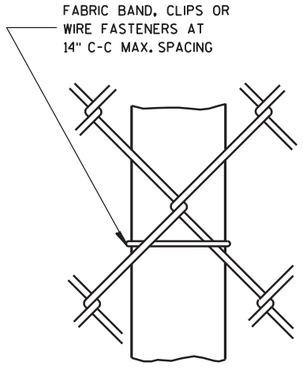


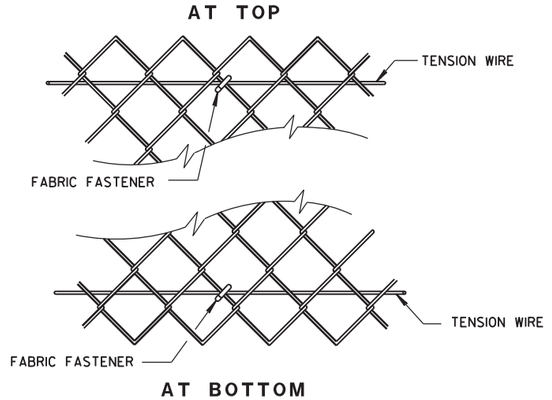
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/16/2013
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

383

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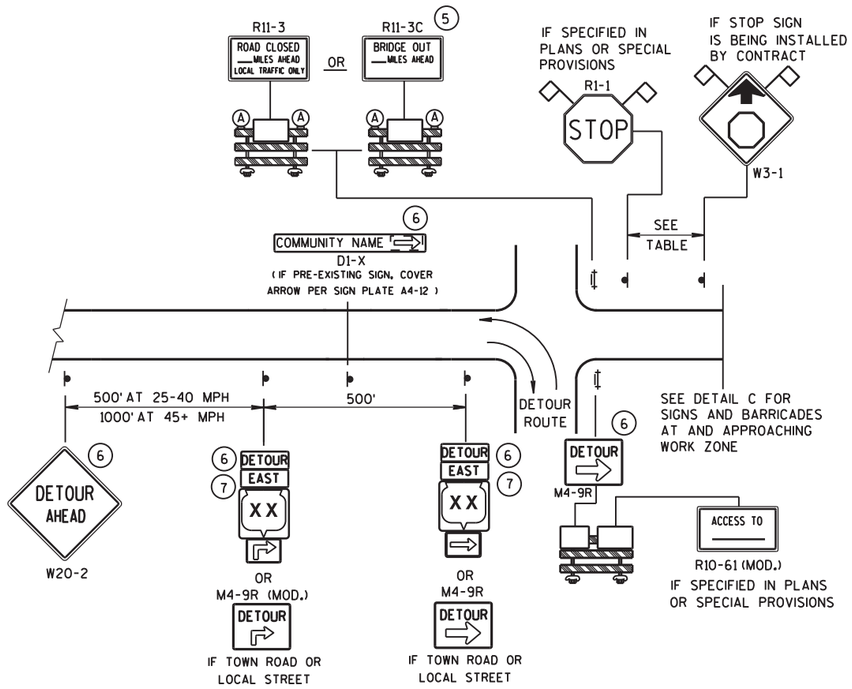
S.D.D. 15 B 3-13b

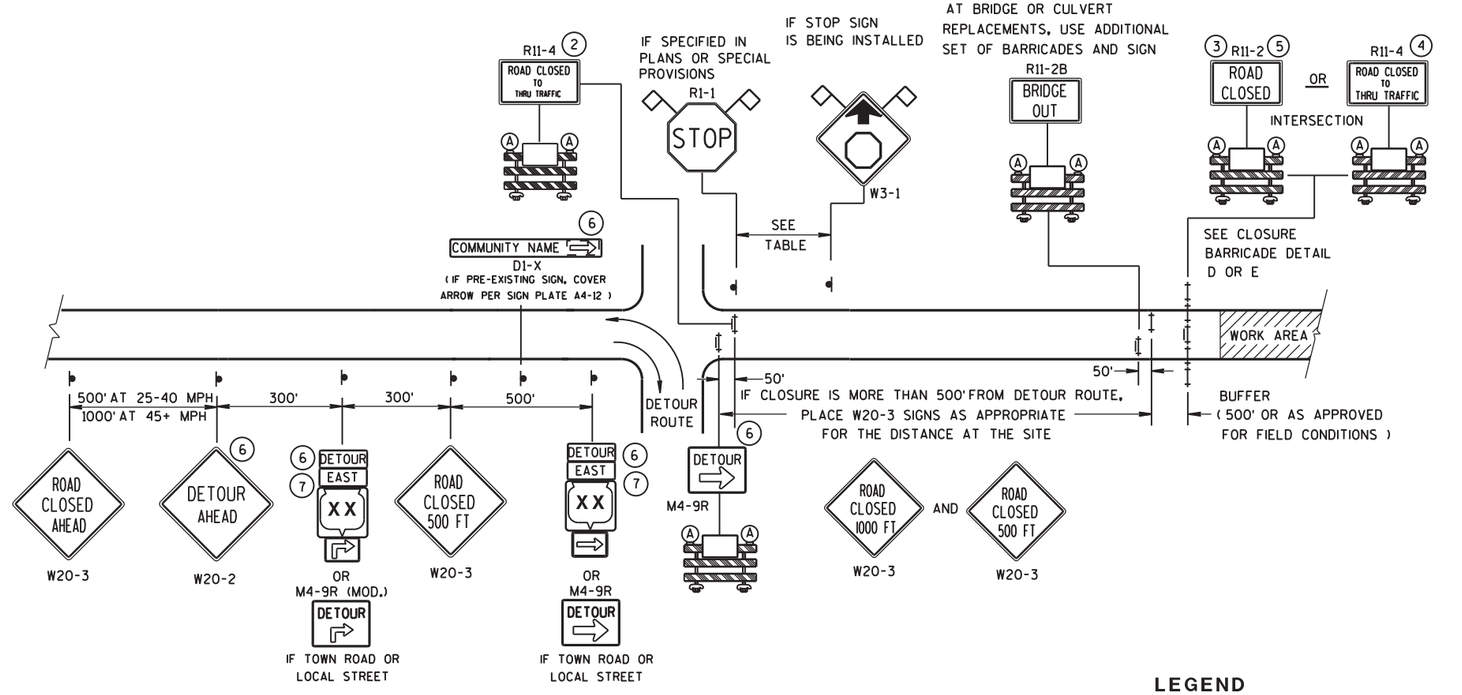
6

S.D.D. 15 B 3-13b



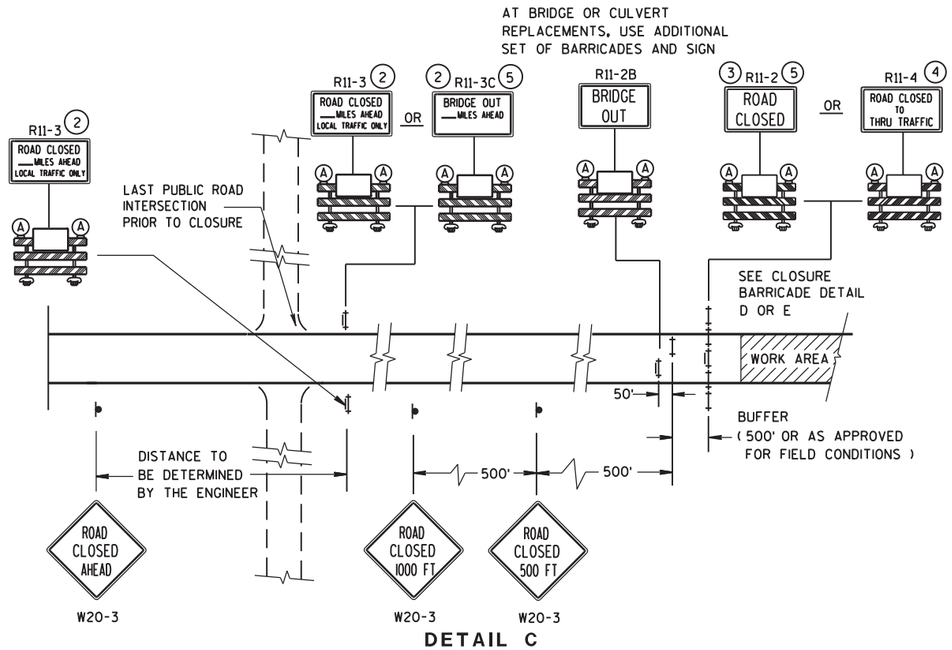
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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; M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

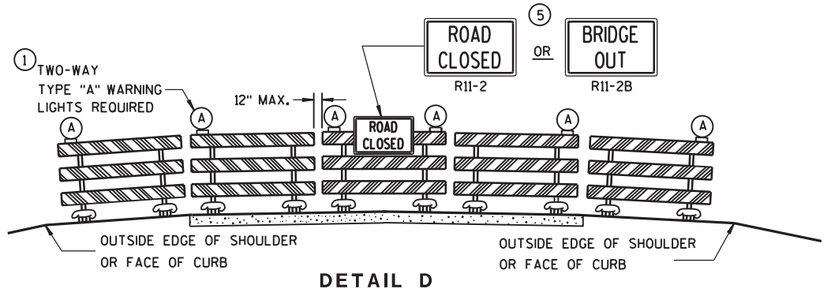
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

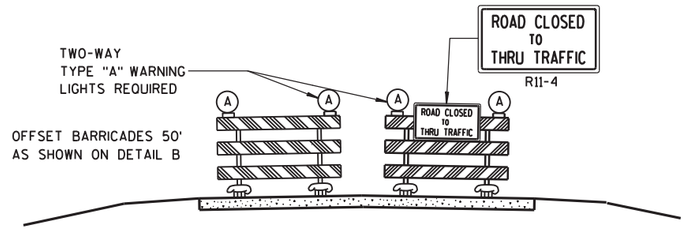
S.D.D. 15 C 2-5a



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.

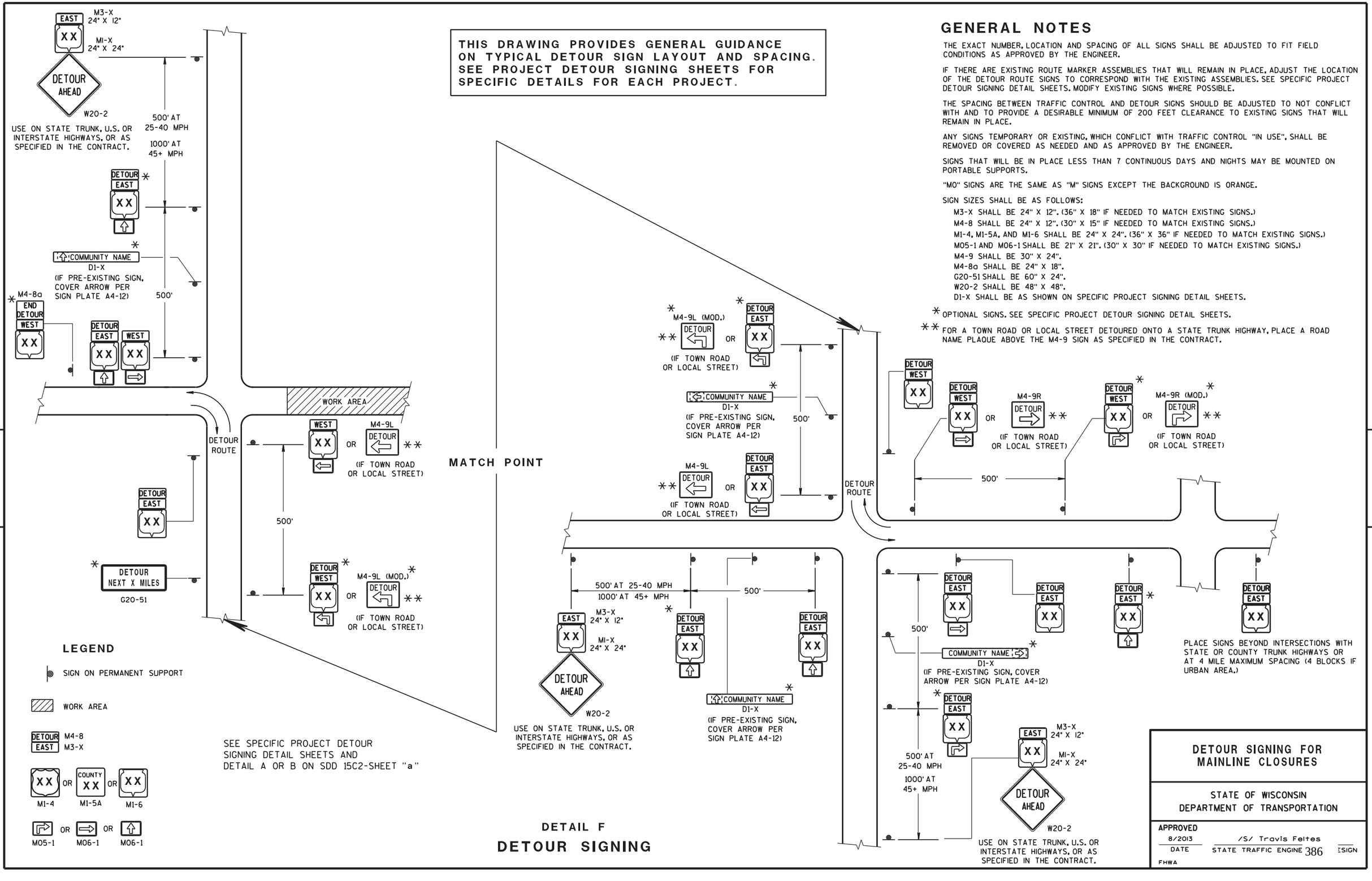
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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.)
- MO5-1 AND MO6-1 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.



DETAIL F

DETOUR SIGNING

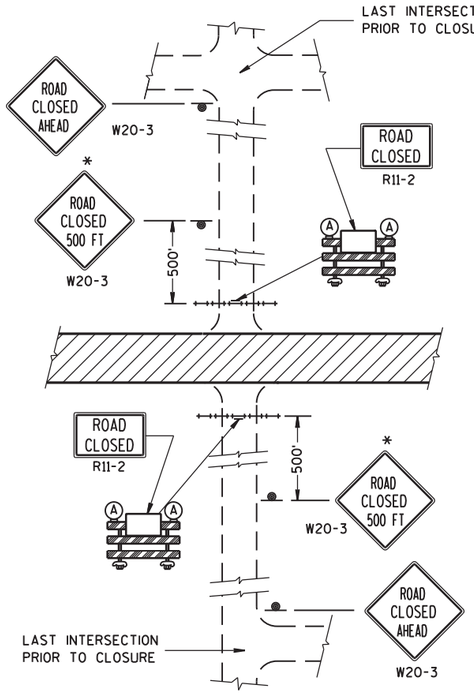
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 DATE
/S/ Travis Feltes STATE TRAFFIC ENGINEER
FHWA

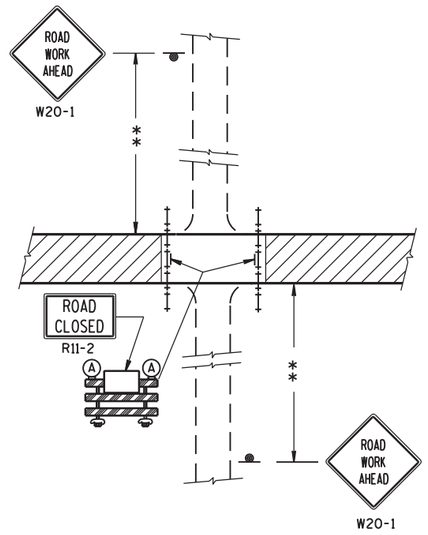
6

S.D.D. 15 C 2-5c



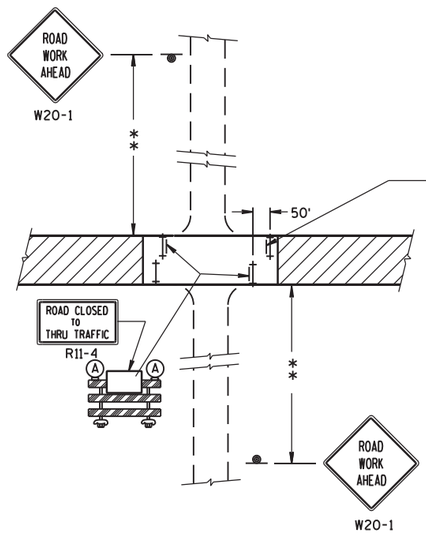
DETAIL 1

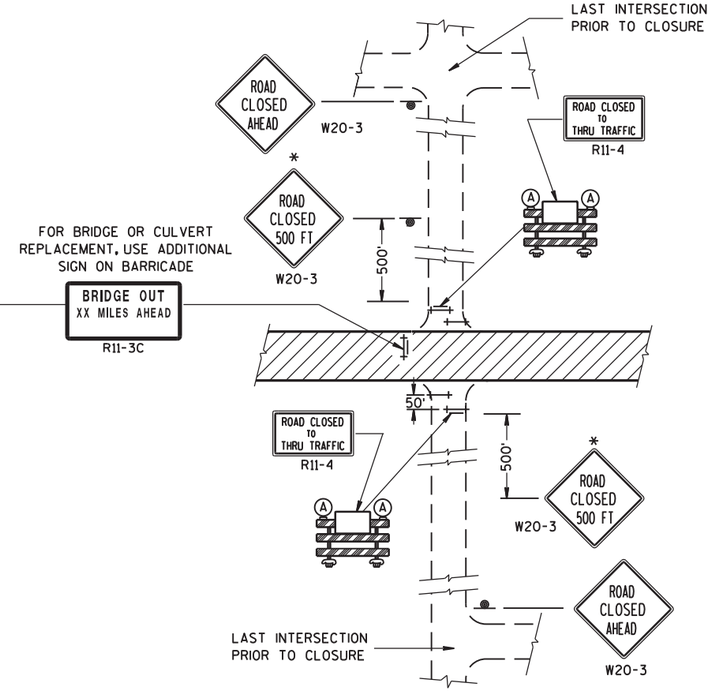
(NO ACCESS TO PROJECT)



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
FHWA

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S.D.D. 15 C 3-2

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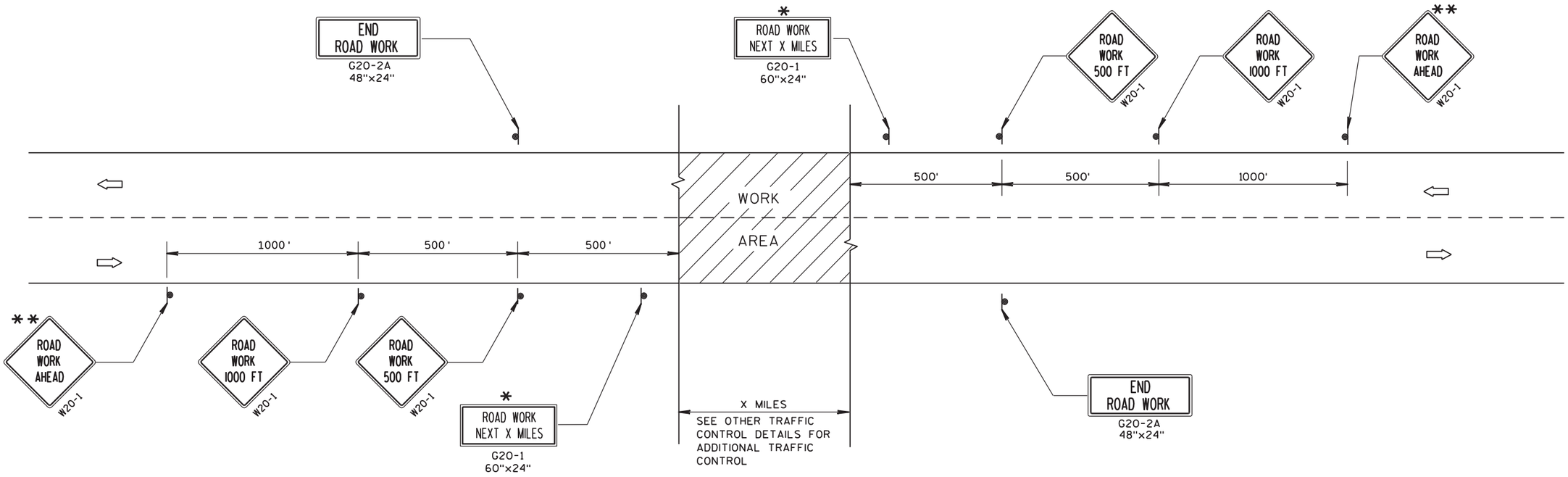
S.D.D. 15 C 3-2

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 MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

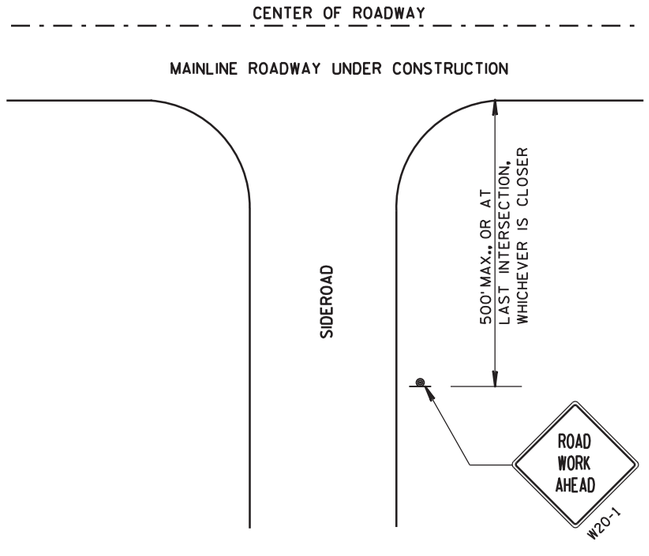
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
388 — SIGN
FHWA

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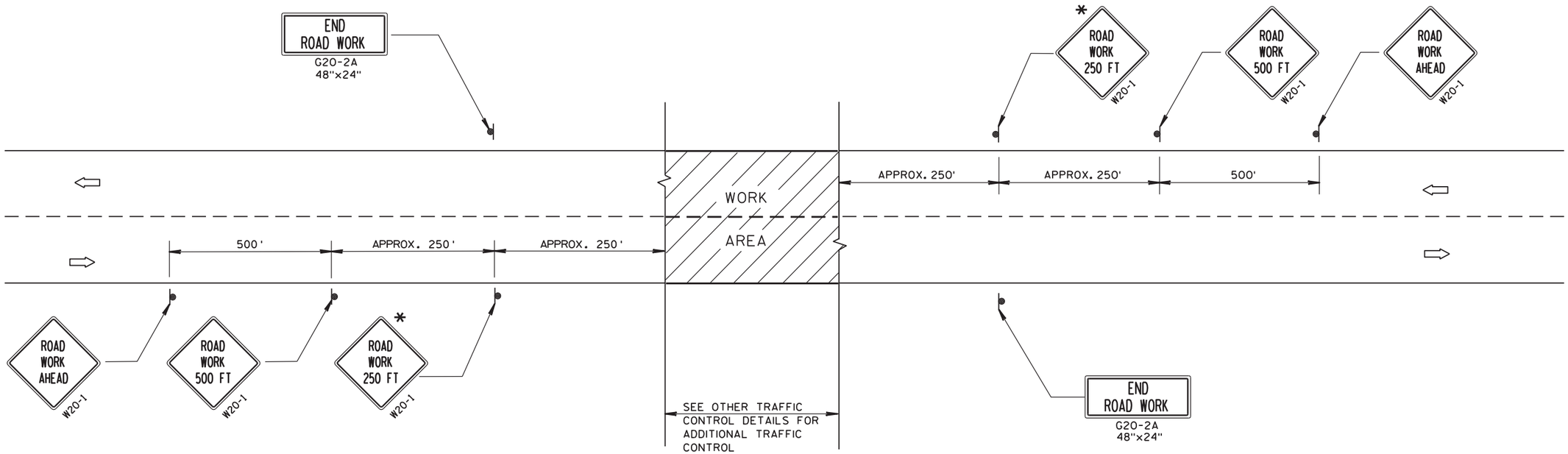
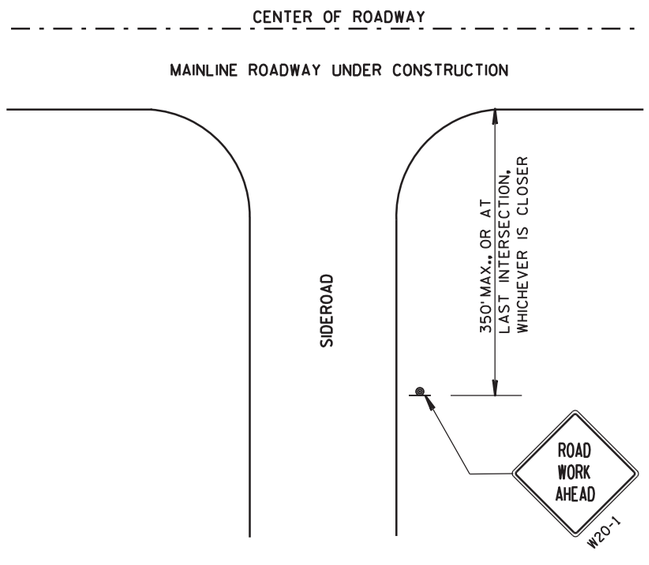
S.D.D. 15 C 4-2



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

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SIGN

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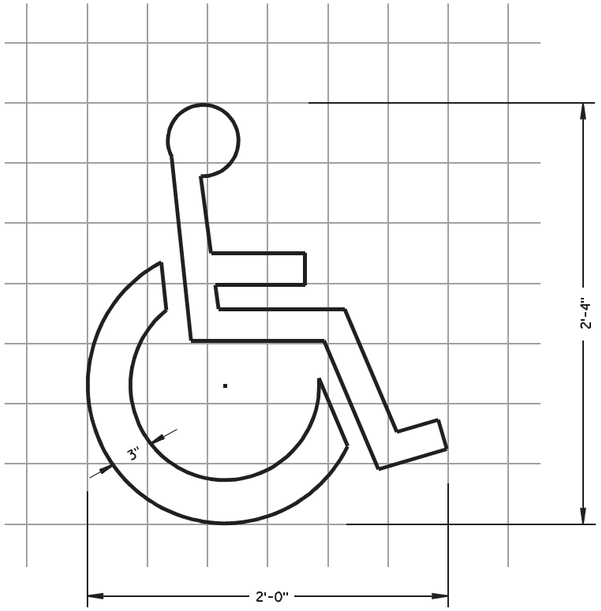
S.D.D. 15 C 5-2

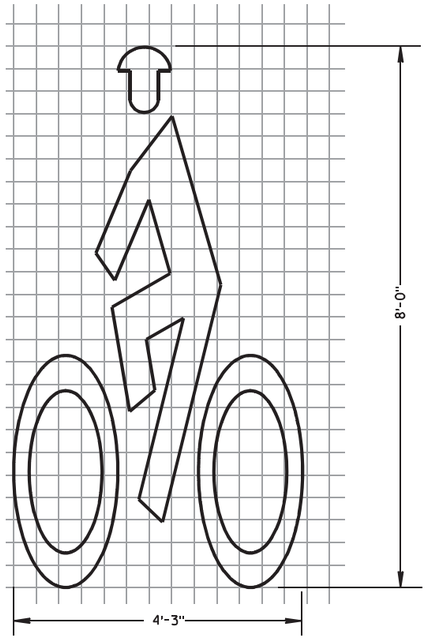
GENERAL NOTES

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.

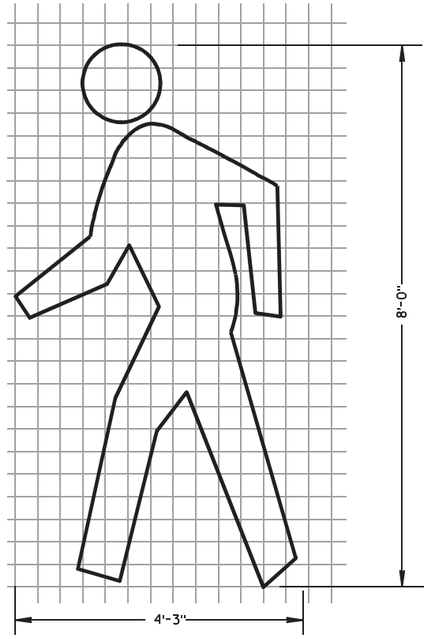
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES 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.

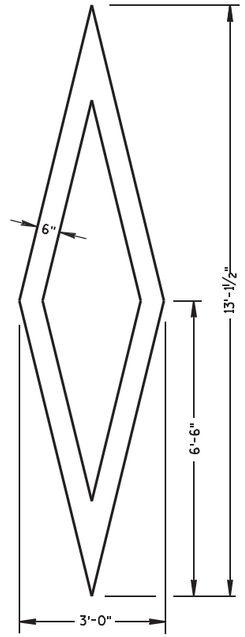




BIKE CROSSING SYMBOL



PEDESTRIAN SYMBOL



PREFERENTIAL LANE SYMBOL

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S.D.D. 15 C 7-12a

S.D.D. 15 C 7-12a

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 DATE

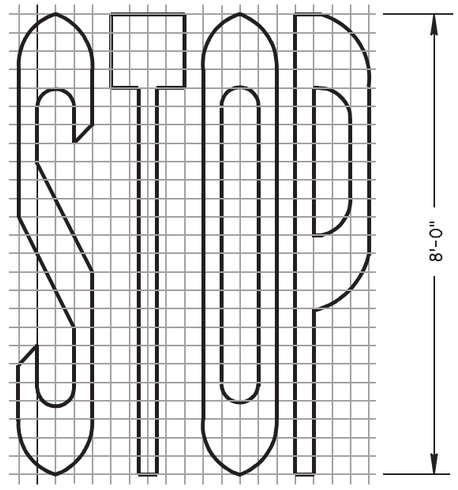
/S/ Thomas N Nothdurft
STATE TRAFFIC ENGINEER

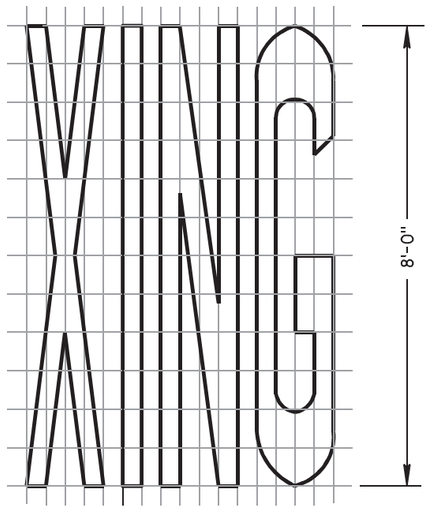
FHWA

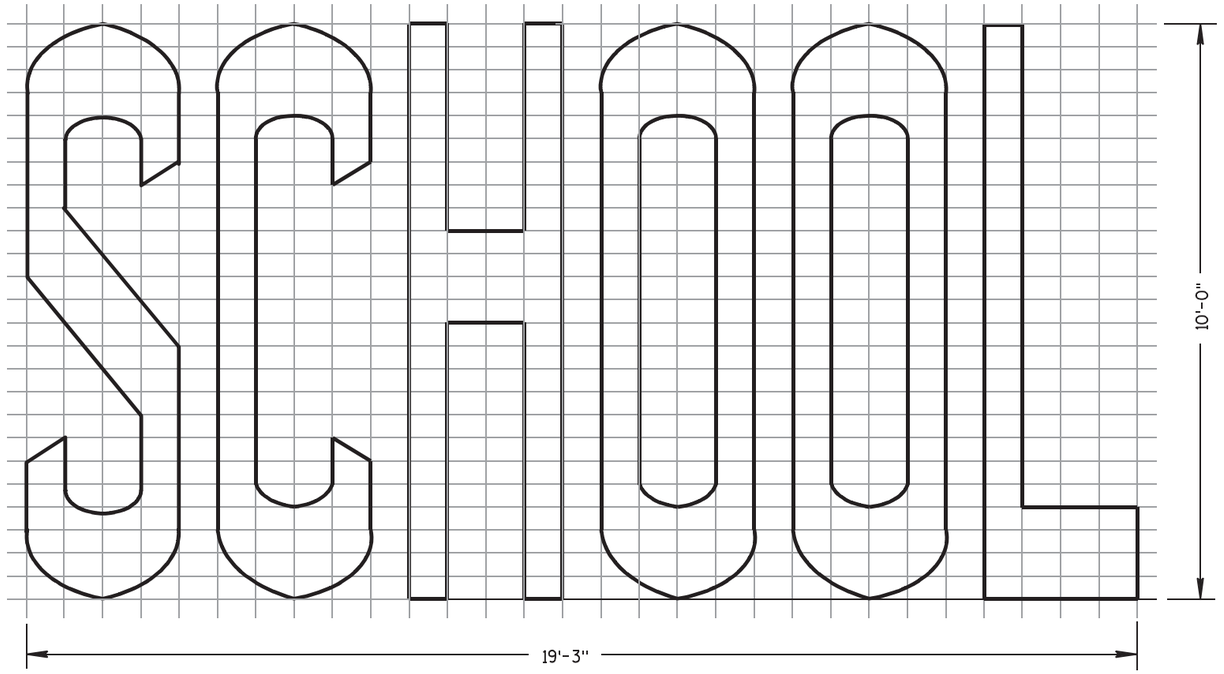
GENERAL NOTES

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.

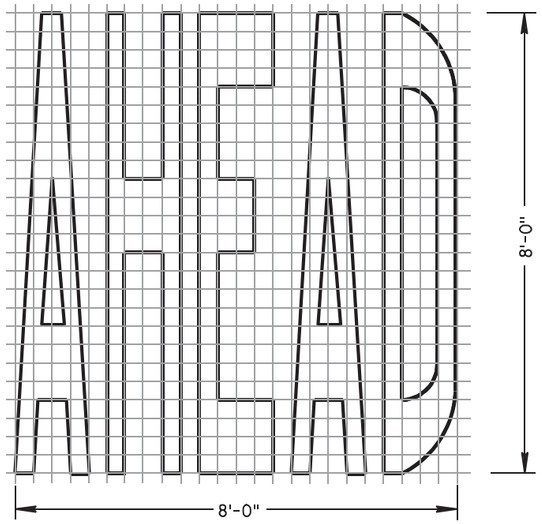
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

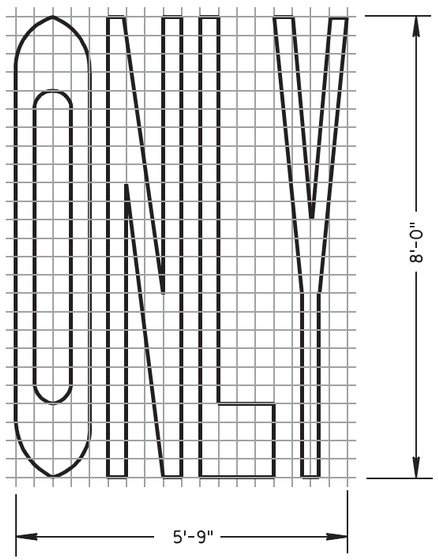


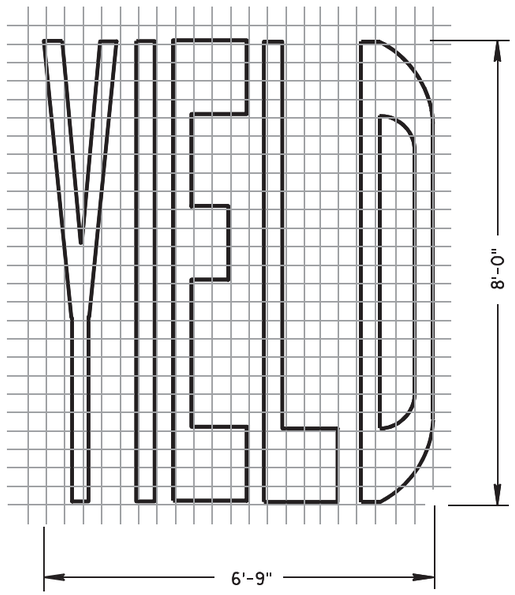


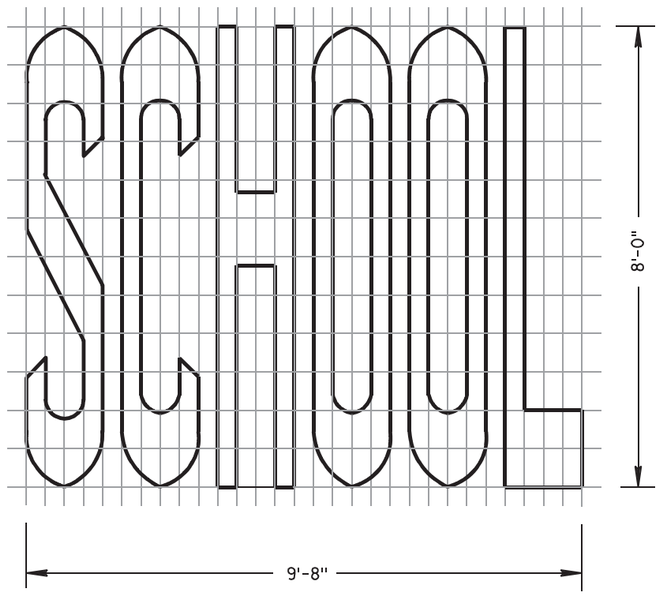


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE — /S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER — IGN

FHWA

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S.D.D. 15 C 7-12b

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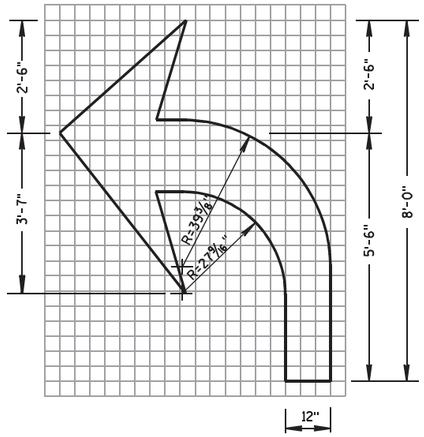
S.D.D. 15 C 7-12b

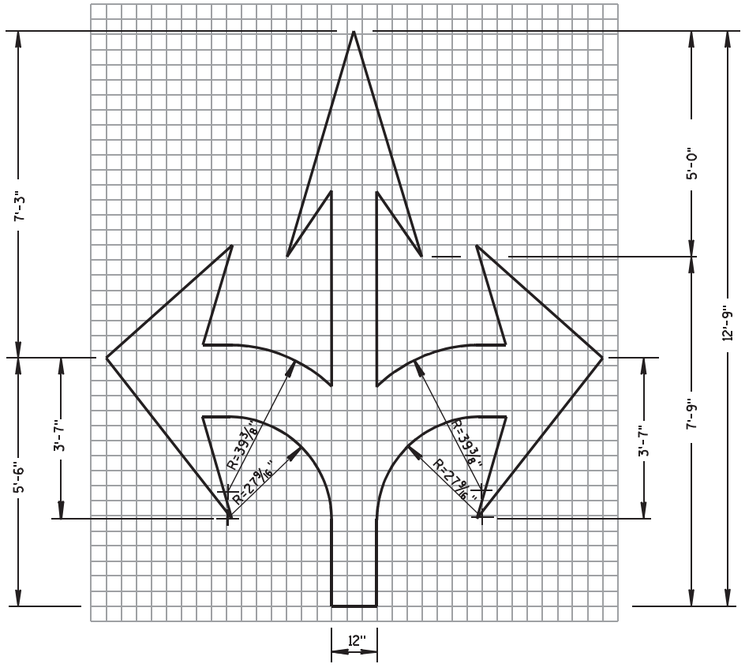
GENERAL NOTES

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.

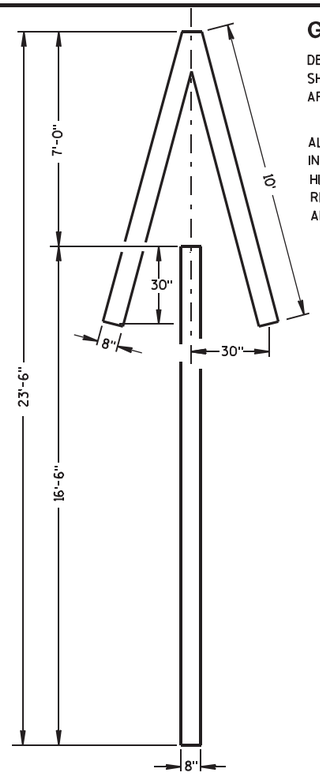
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



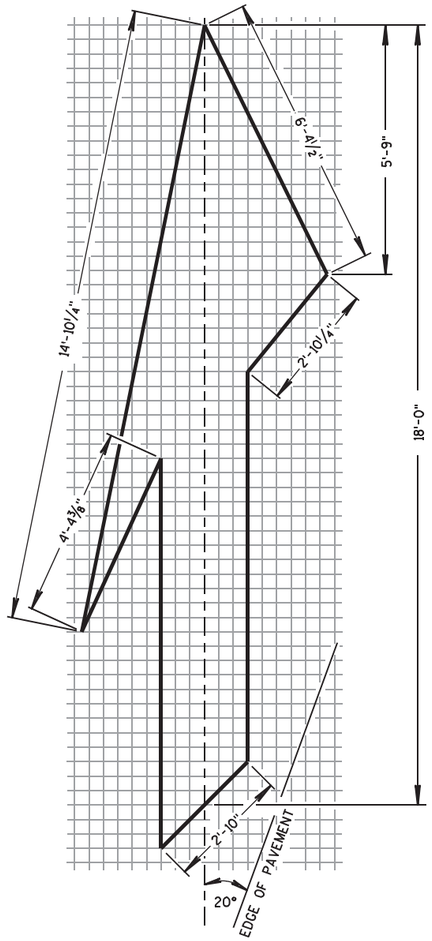
TYPE 2



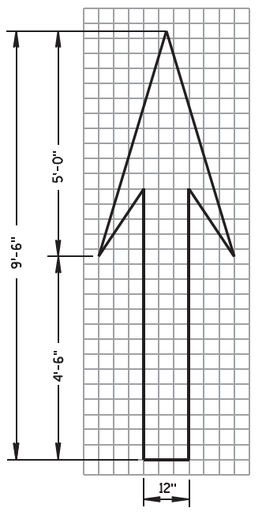
TYPE 6



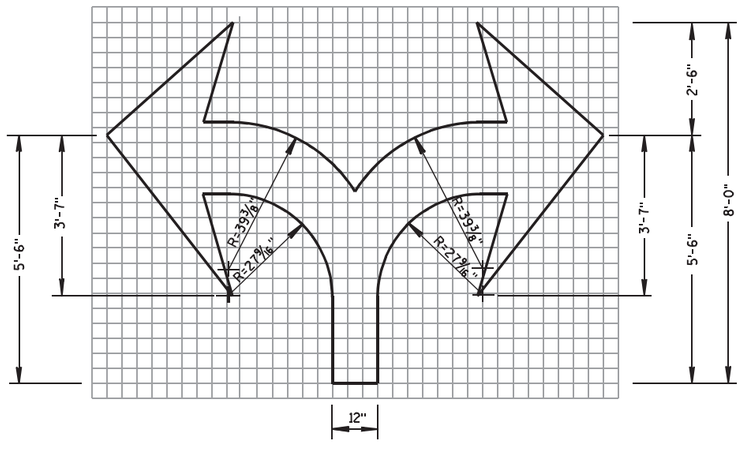
TYPE 4



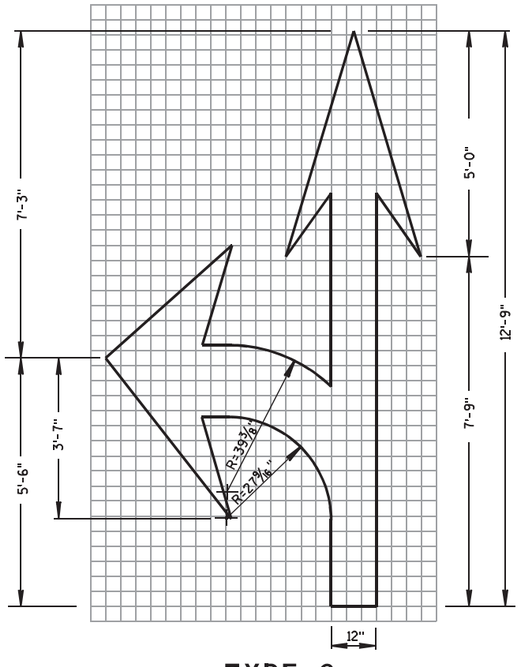
TYPE 5 LANE DROP ARROW



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

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S.D.D. 15 C 7-12c

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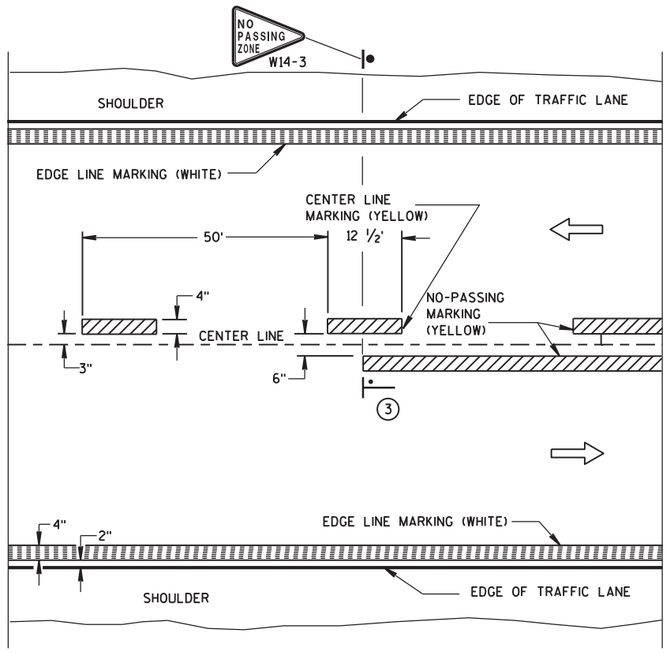
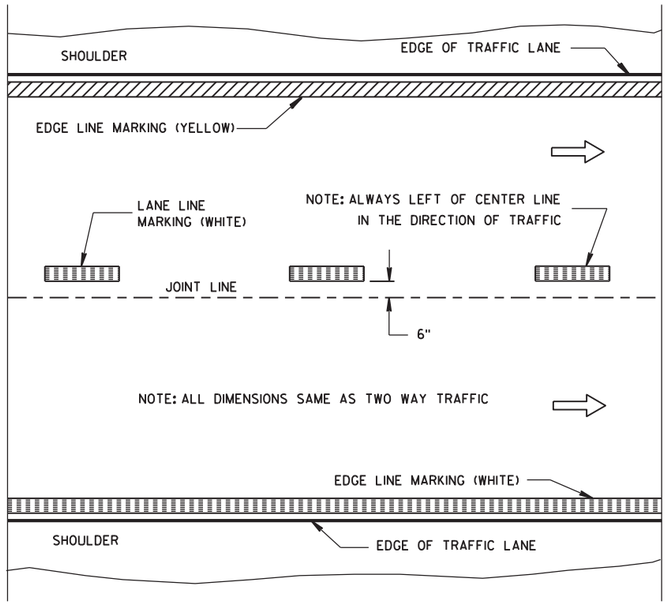
S.D.D. 15 C 7-12c

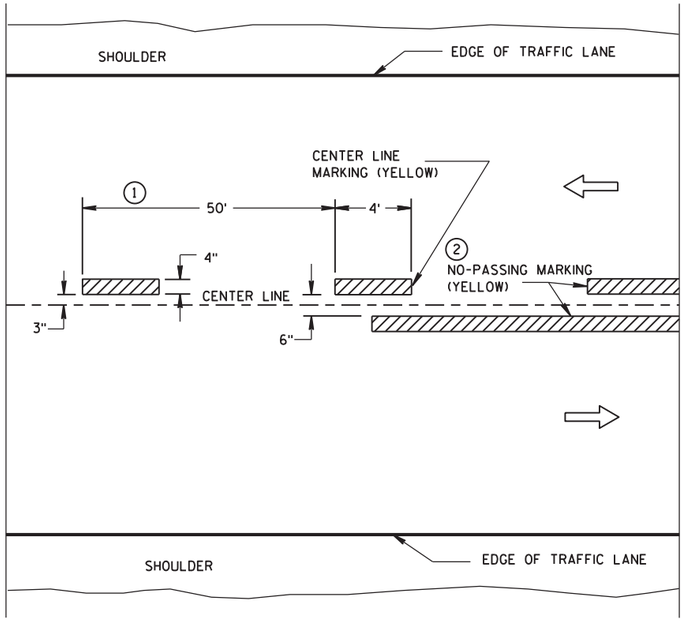


TWO WAY TRAFFIC

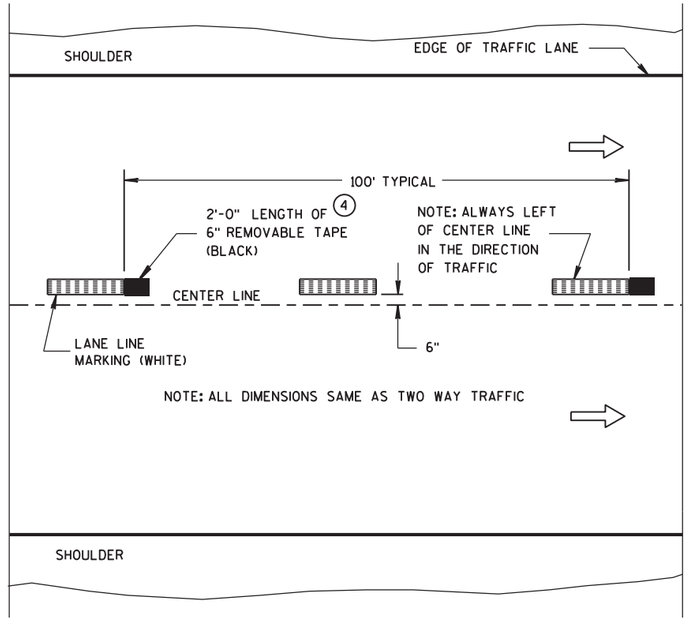


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

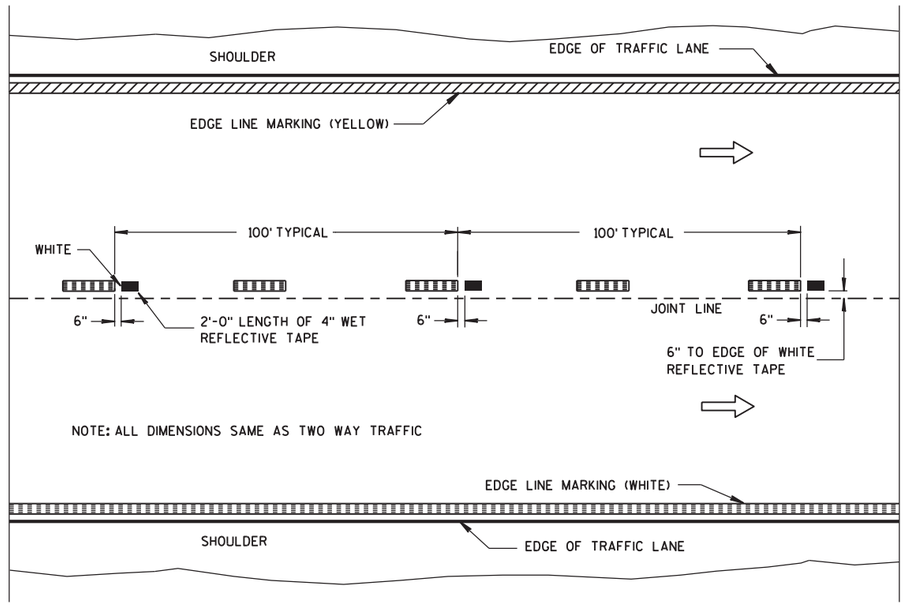
GENERAL NOTES

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

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S.D.D. 15 C 8-16a

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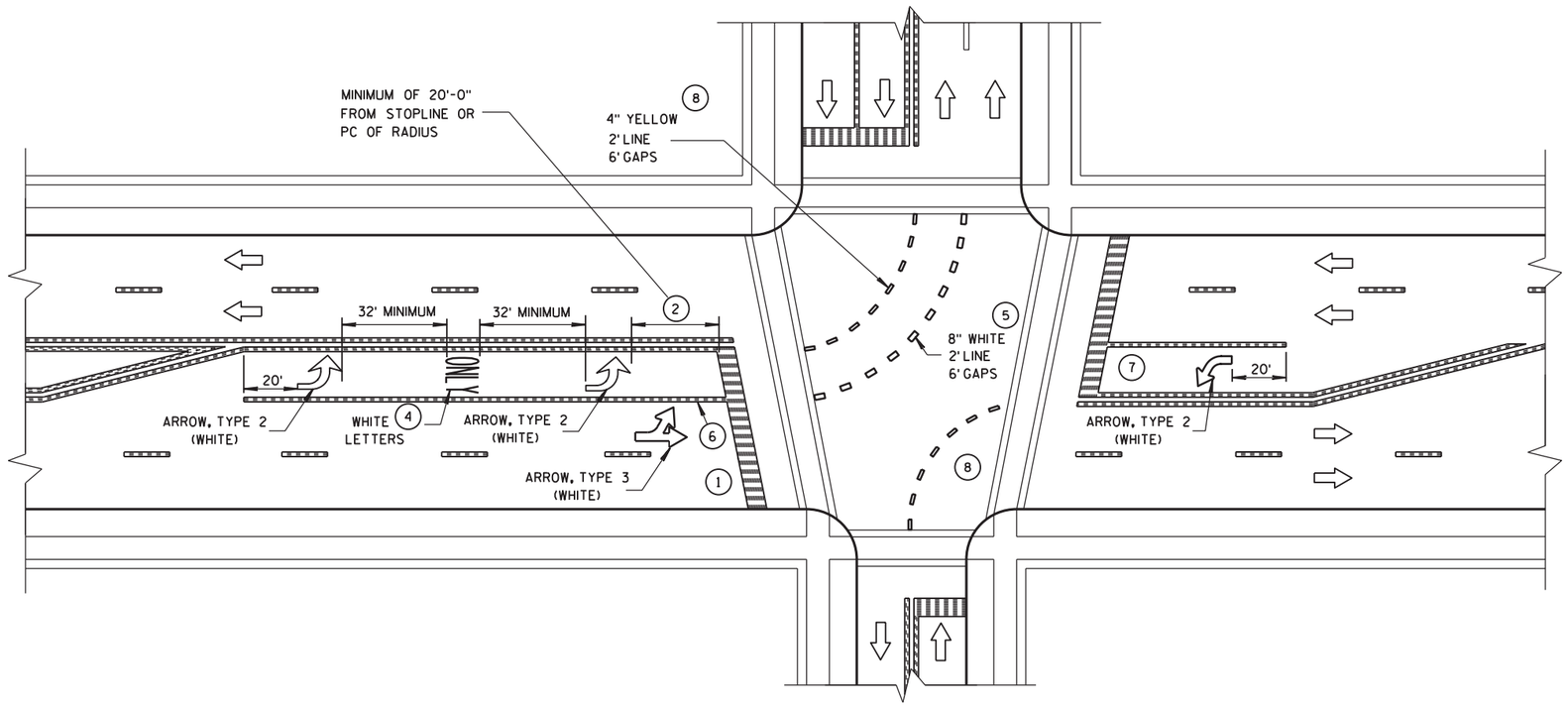
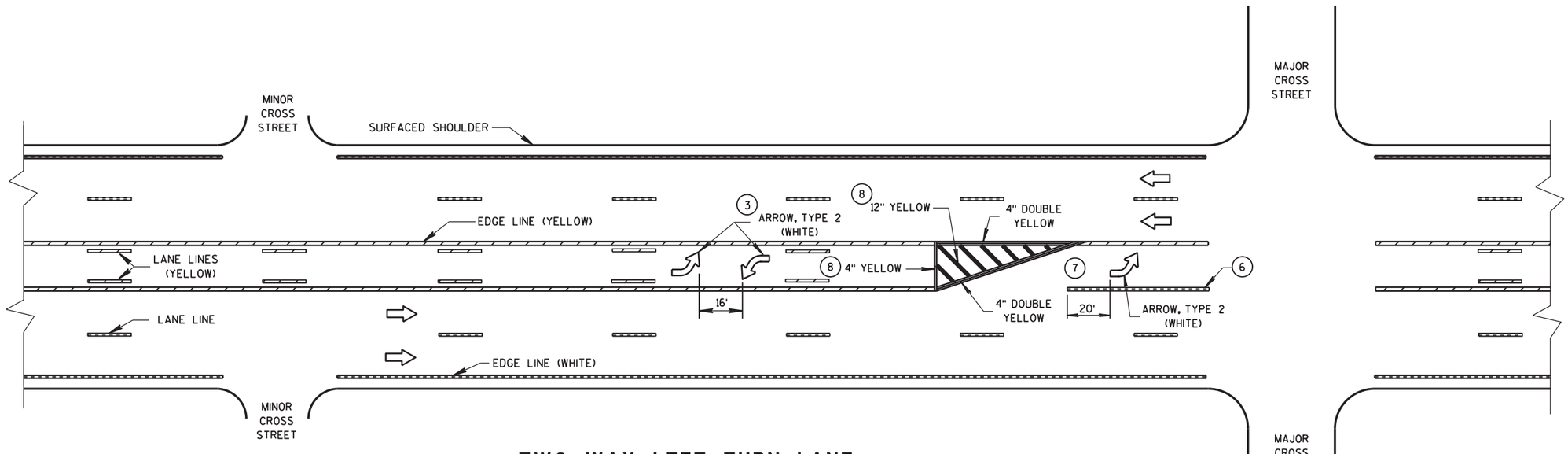
S.D.D. 15 C 8-16a



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 TRANSPO...

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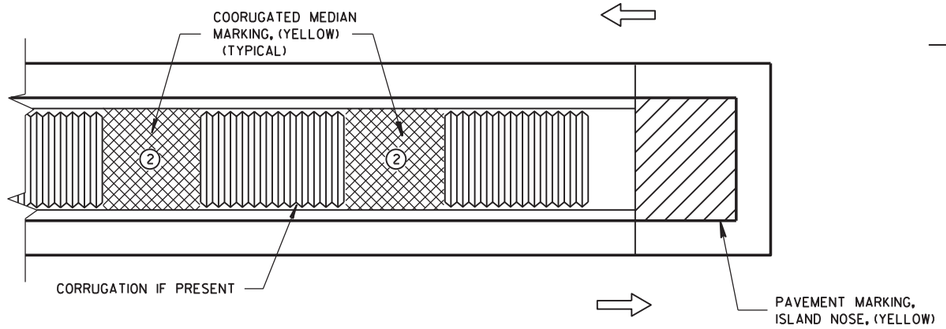
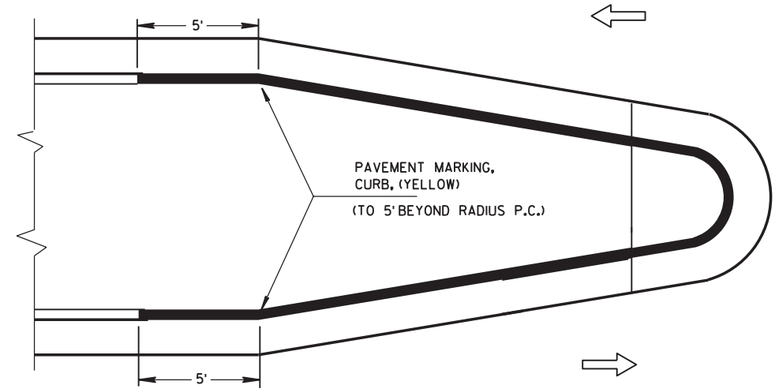
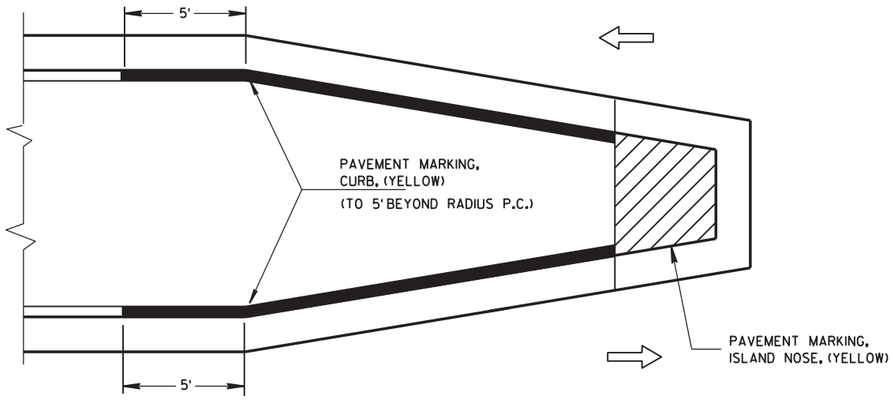
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

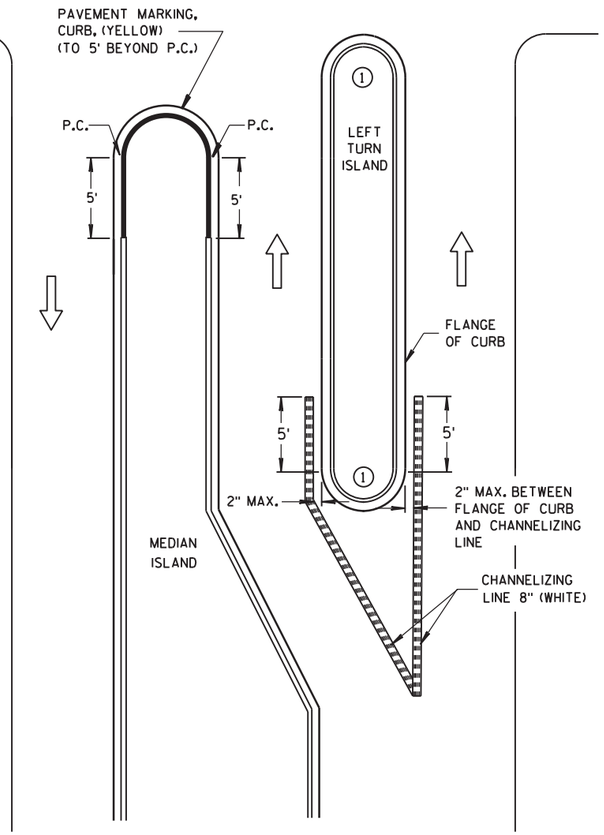


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

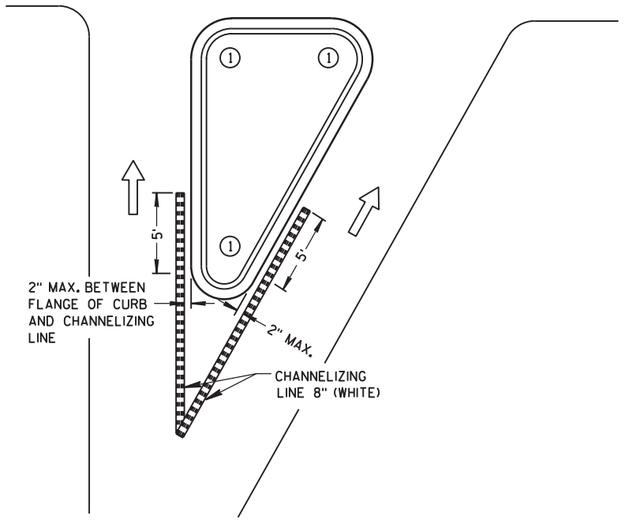


LEFT TURN & MEDIAN ISLAND

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

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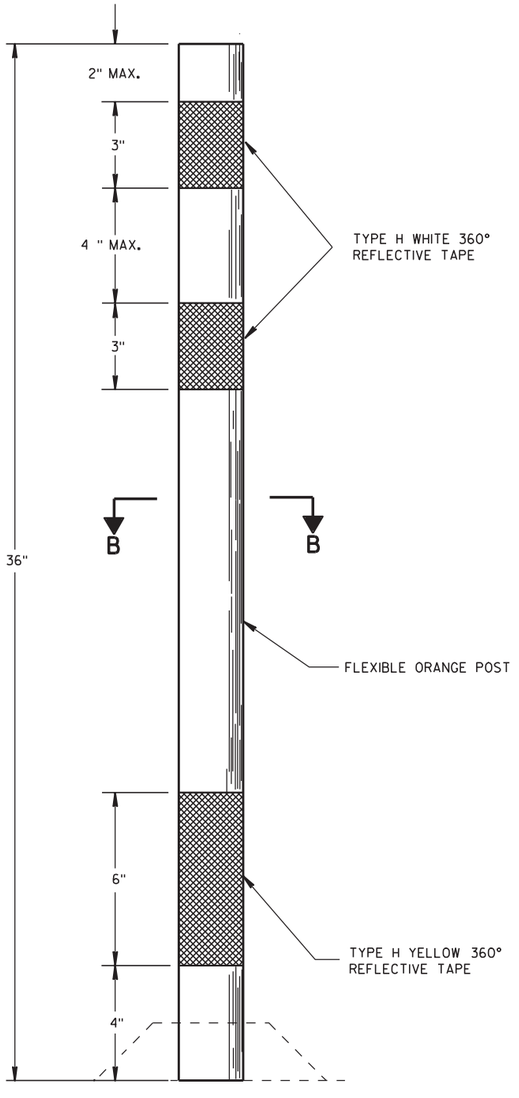
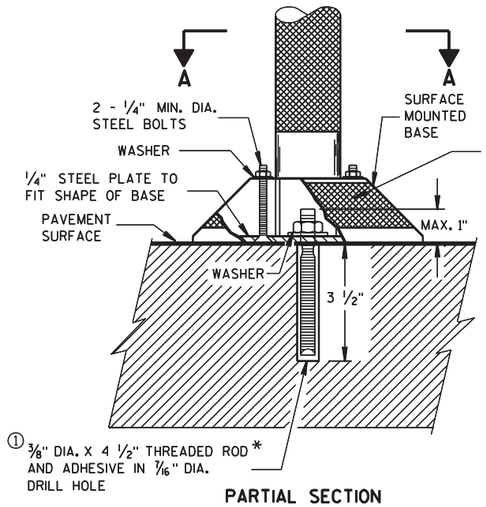
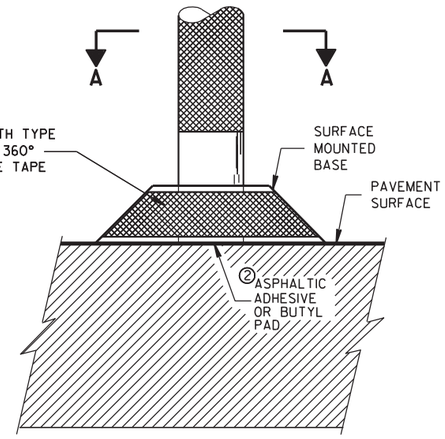


FLEXIBLE TUBULAR MARKER POST



PARTIAL SECTION TO SHOW BOLTS



POST BASES ON NEW OR EXISTING PAVEMENT

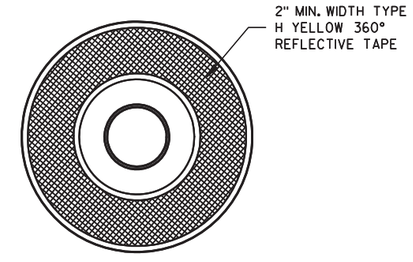
GENERAL NOTES

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.

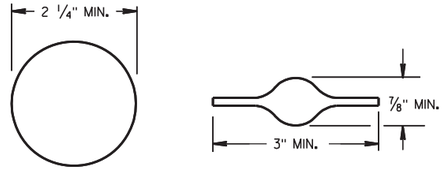
① THREADED ROD SHALL BE MACHINED DOWN TO 0.280 INCH DIA. 1 1/4 INCHES FROM THE TOP.

② THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



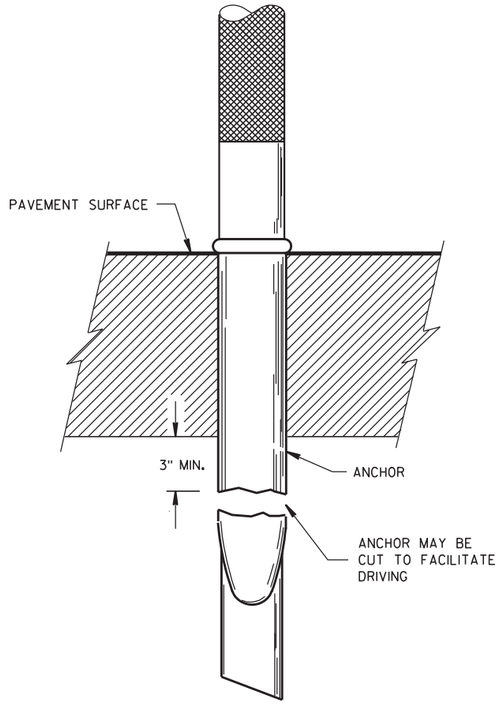
SECTION A-A

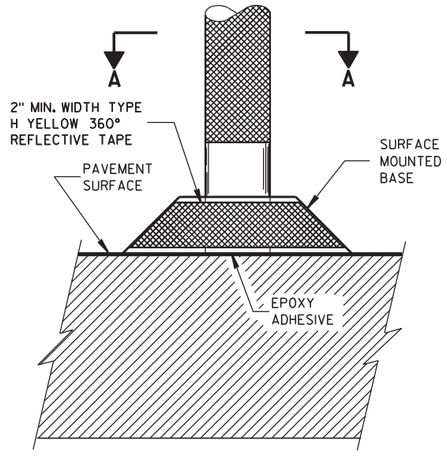
SURFACE MOUNTED BASE



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

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S.D.D. 15 C 11-5

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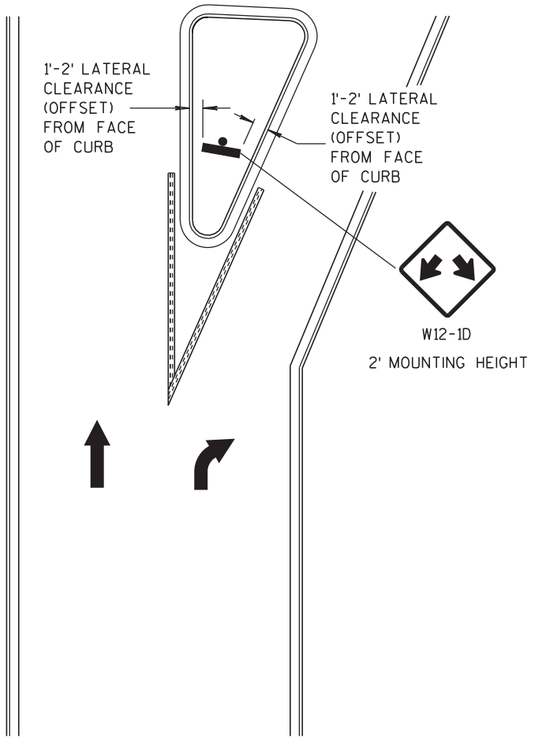
S.D.D. 15 C 11-5

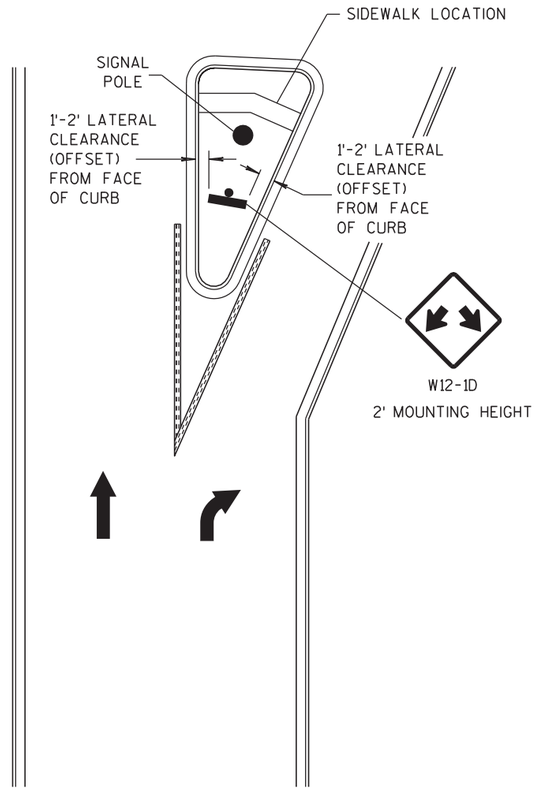
GENERAL NOTE

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

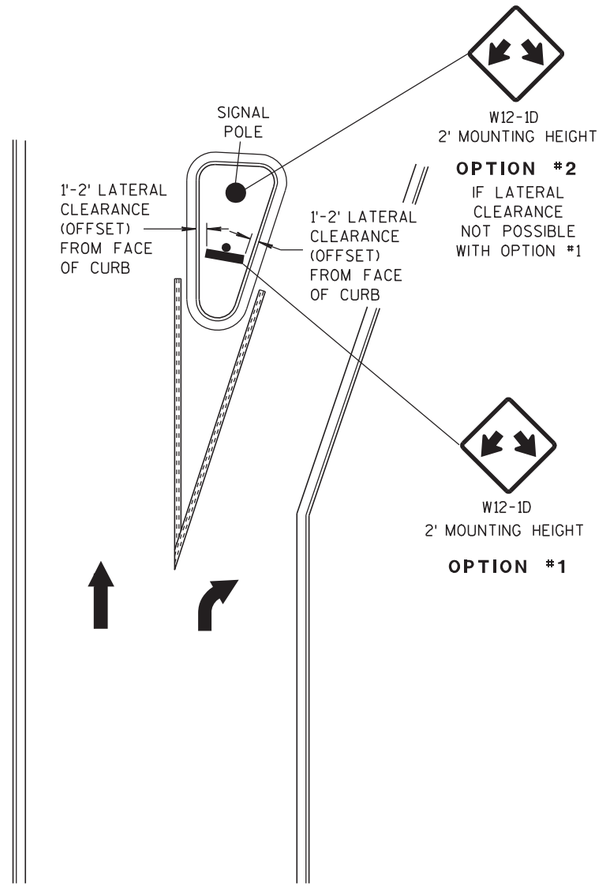
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.



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 397 IGN
FHWA	

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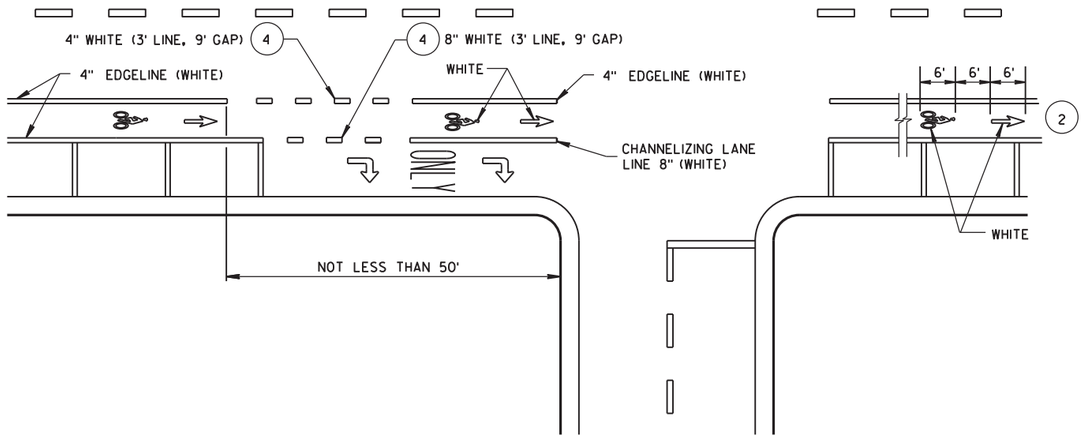
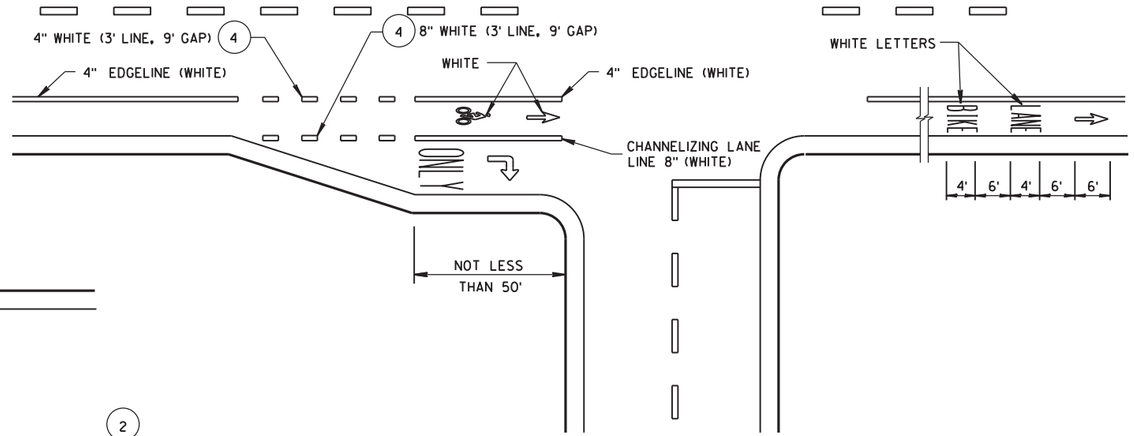


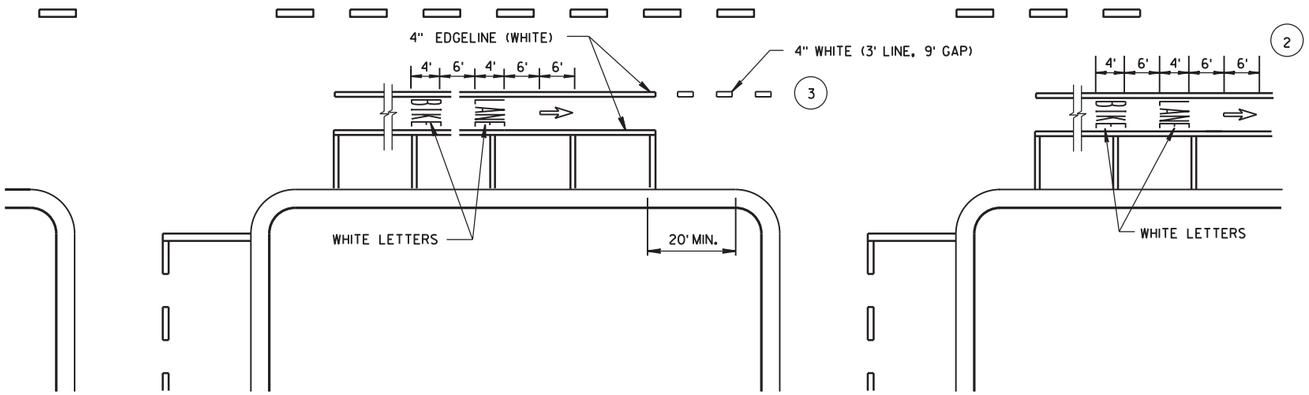
DESIGNATED BICYCLE LANE

GENERAL NOTES

1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. THE SERIES OF PAVEMENT MARKING SYMBOLS SHALL BE REPEATED AFTER INTERSECTIONS AND SPACED A MAXIMUM OF 250'. NO PAVEMENT MARKING WILL TAKE PLACE IN THE CROSSWALK.
3. DOTTED LINES SHOULD BE USED 50' TO 200' IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
4. WHEN SPECIFIED IN THE CONTRACT.



DESIGNATED BICYCLE LANE
NO PARKING, RIGHT TURN LANE



DESIGNATED BICYCLE LANE
WITH PARKING, NO RIGHT TURN LANE

URBAN BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 C 29-3c

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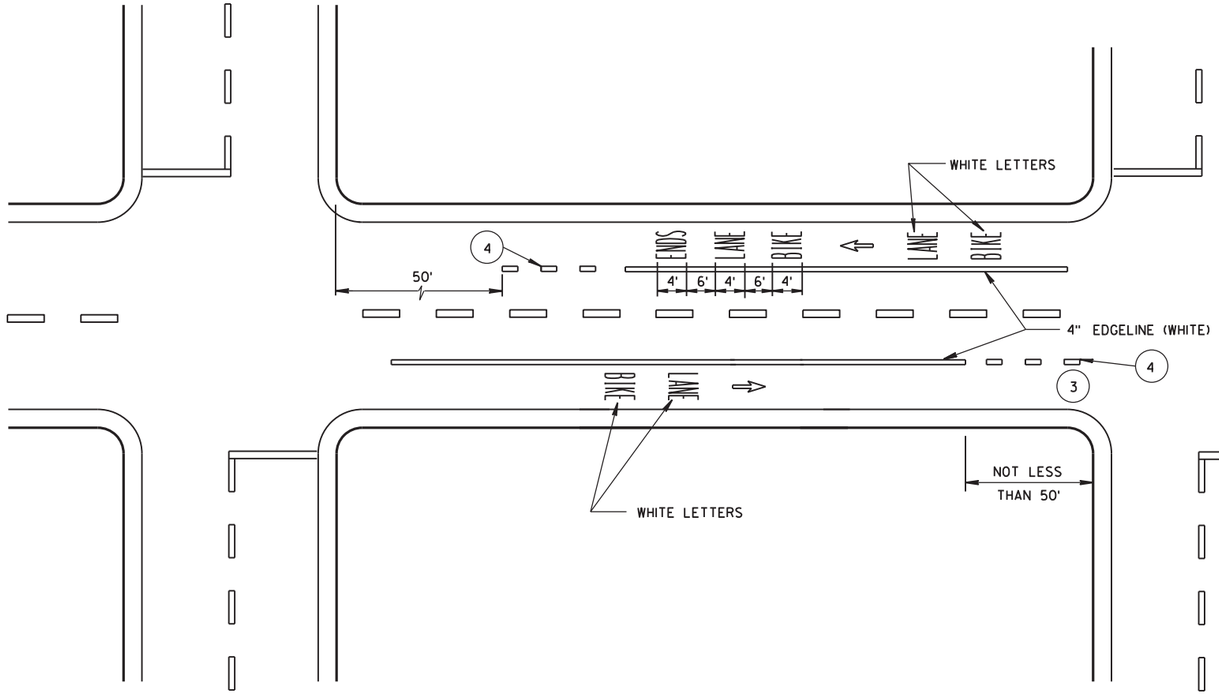
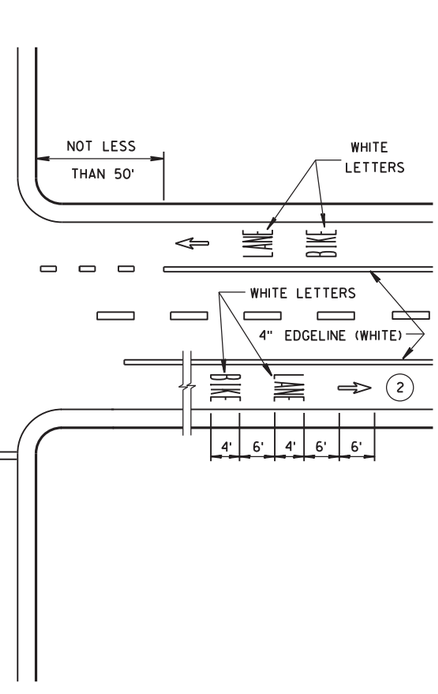
S.D.D. 15 C 29-3c

GENERAL NOTES

1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. THE SERIES OF PAVEMENT MARKING SYMBOLS SHALL BE REPEATED AFTER INTERSECTIONS AND SPACED A MAXIMUM OF 250'. NO PAVEMENT MARKING WILL TAKE PLACE IN THE CROSSWALK.
3. DOTTED LINES SHOULD BE USED 50' TO 200' IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
4. 3' LINE, 9' GAP - 4" WIDE, WHITE.





DESIGNATED BICYCLE LANE
NO PARKING

URBAN BICYCLE LANE MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4/30/2013 DATE FHWA	/S/ Travis Feltes STATE TRAFFIC EN 399

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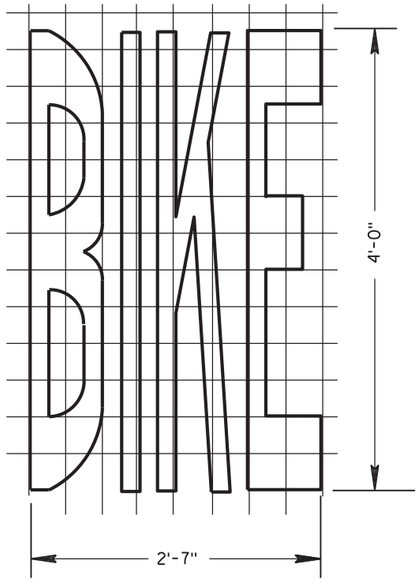
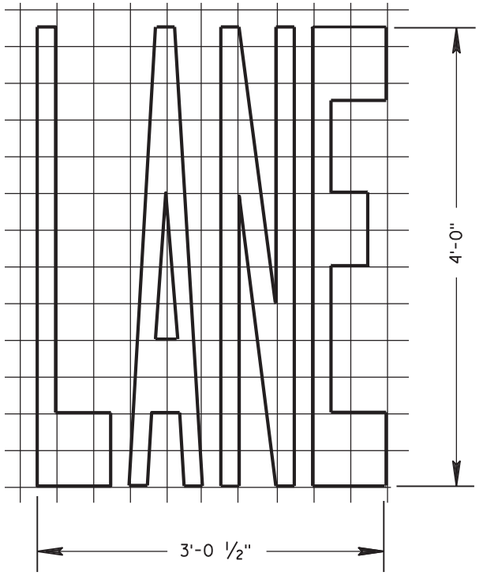
S.D.D. 15 C 29-3d

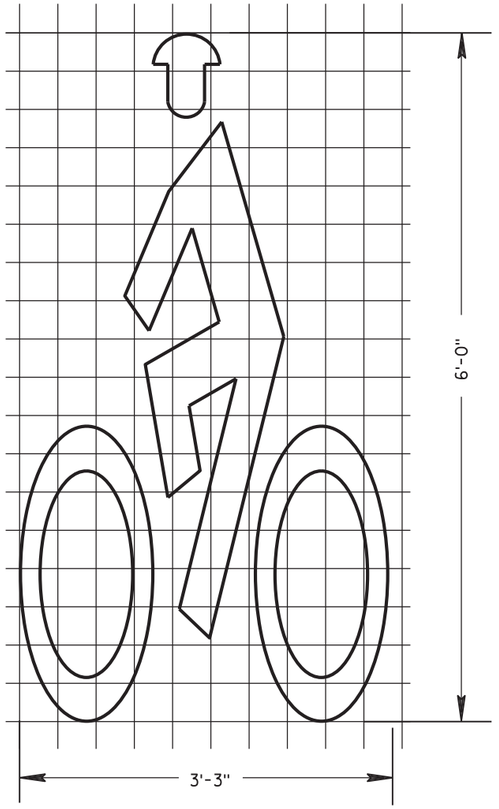
GENERAL NOTES

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.

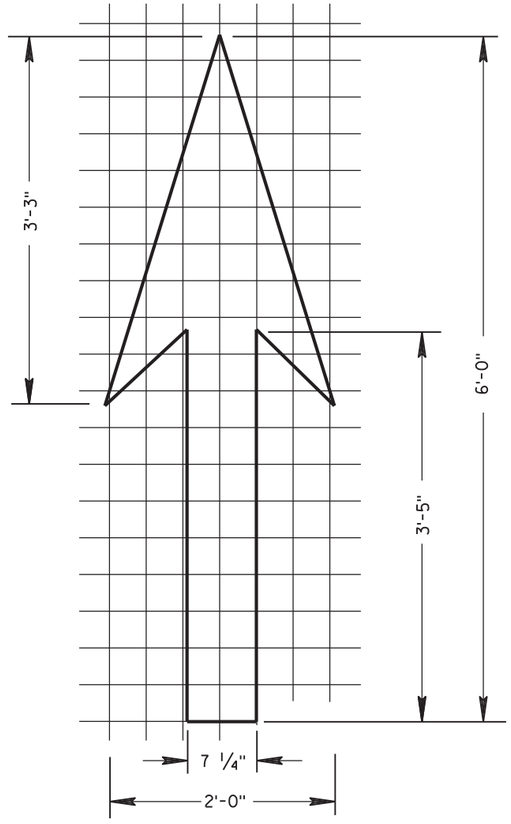
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



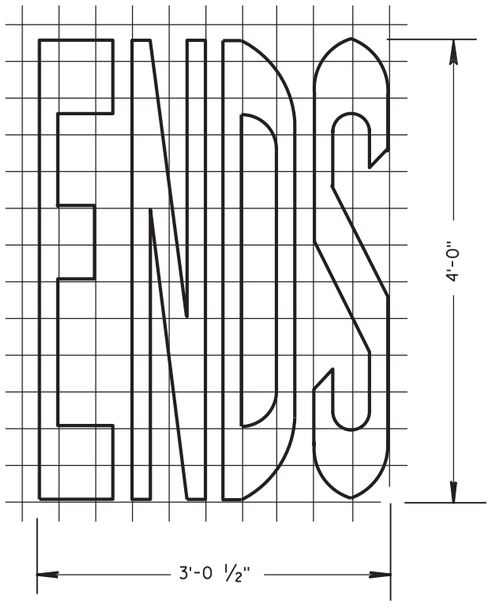




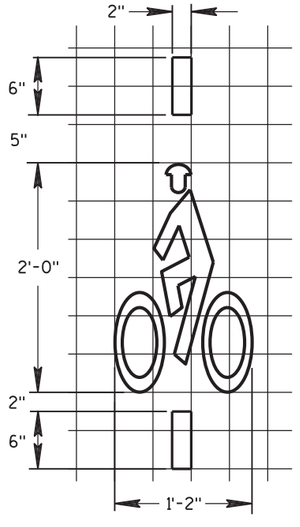
BIKE LANE SYMBOL



BIKE LANE ARROW



BIKE LANE WORDS



BICYCLE DETECTOR PAVEMENT MARKING

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-30-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC EN

FHWA

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S.D.D. 15 C 29-3e

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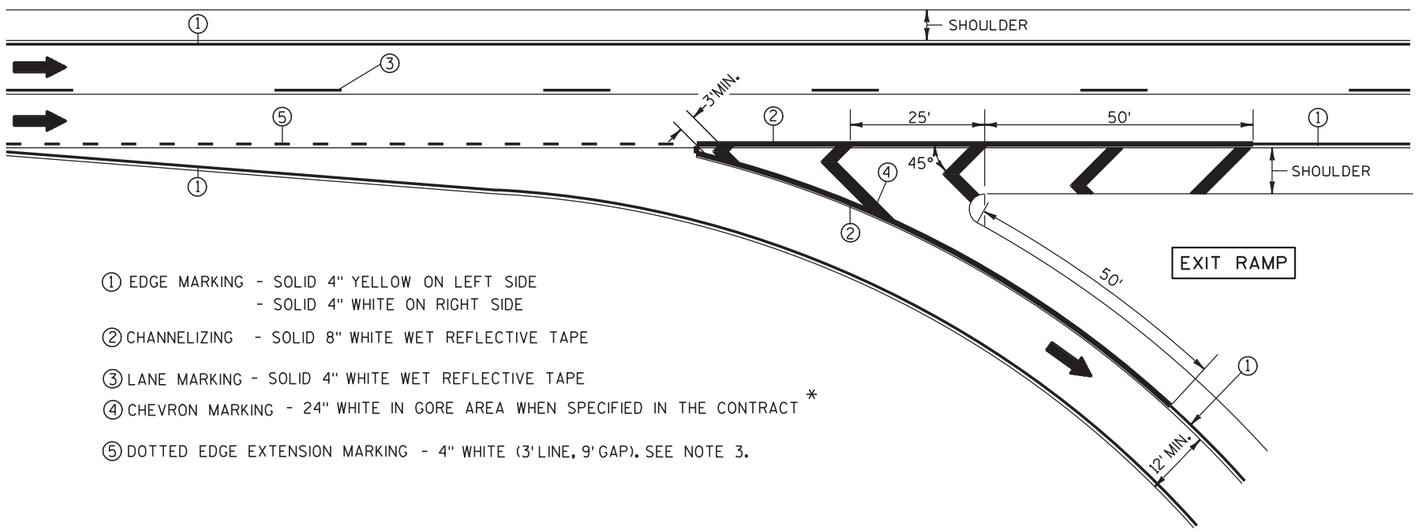
S.D.D. 15 C 29-3e



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:

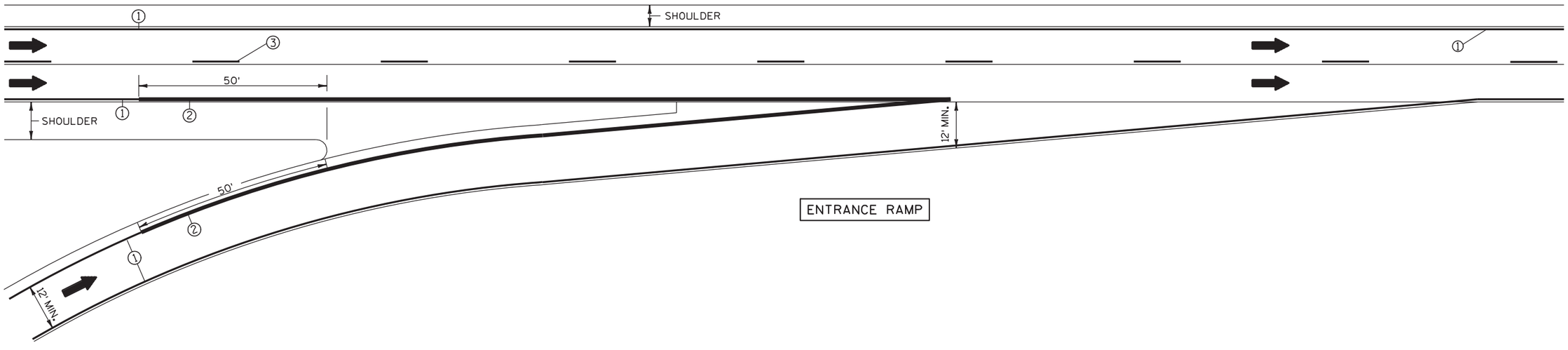
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

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.



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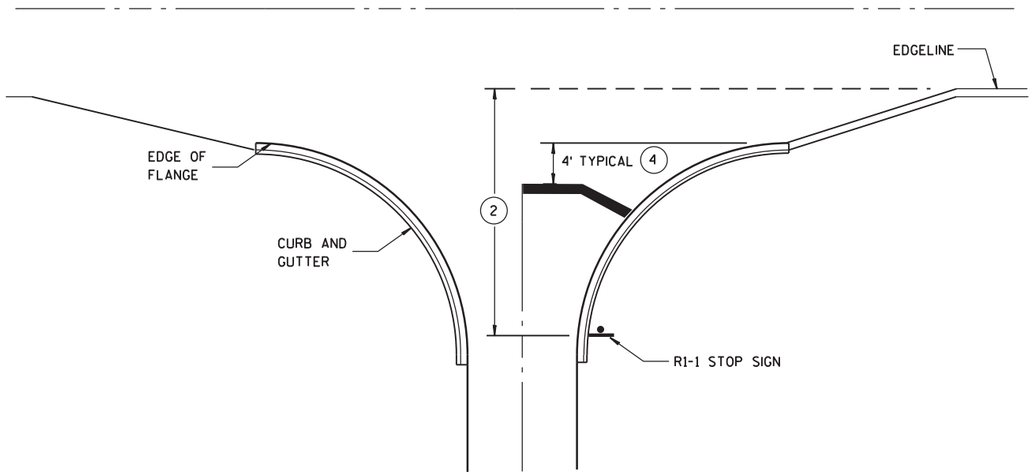
S.D.D. 15 C 31-1a

PAVEMENT MARKING
(RAMPS AND GORES)

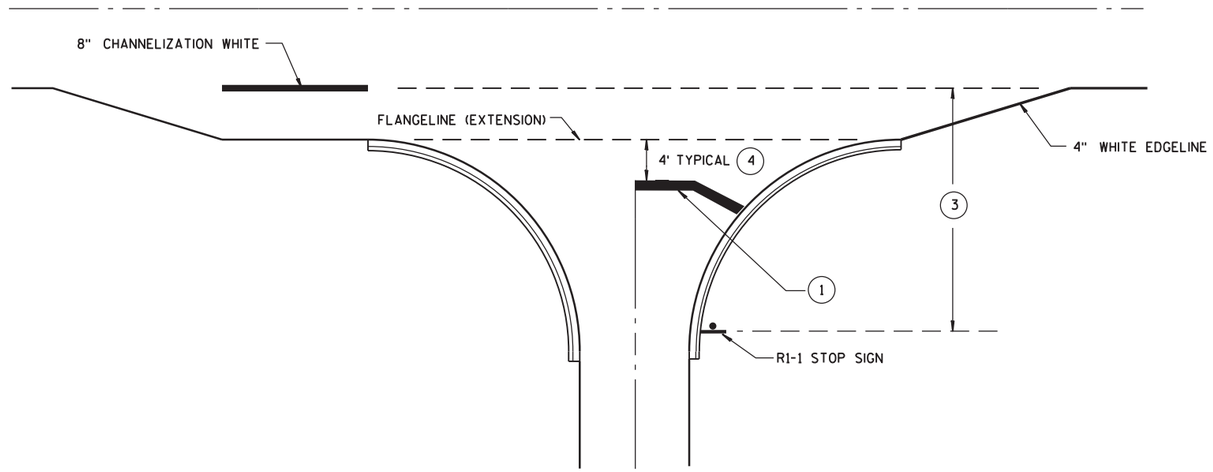
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

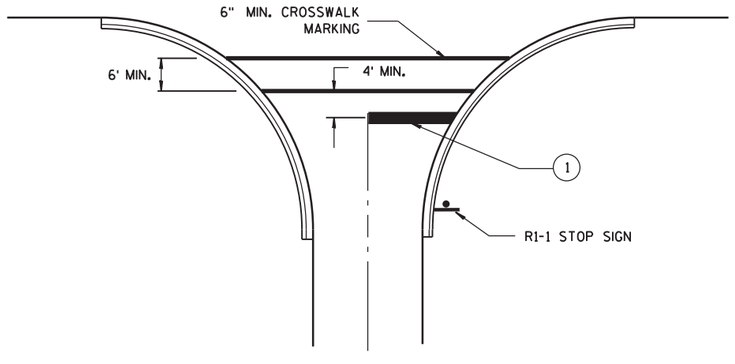
S.D.D. 15 C 31-1a



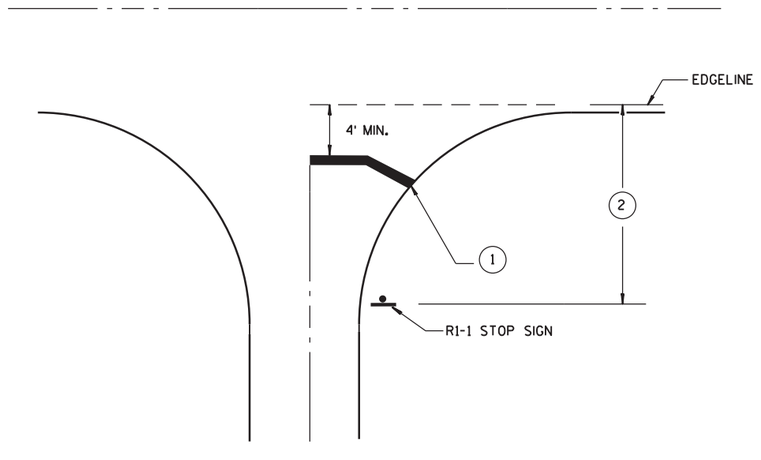
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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 E

FHWA

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S.D.D. 15 C 33-1

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- POST WITH ATTACHED SIGN IN DRUM
- 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"×48" 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.

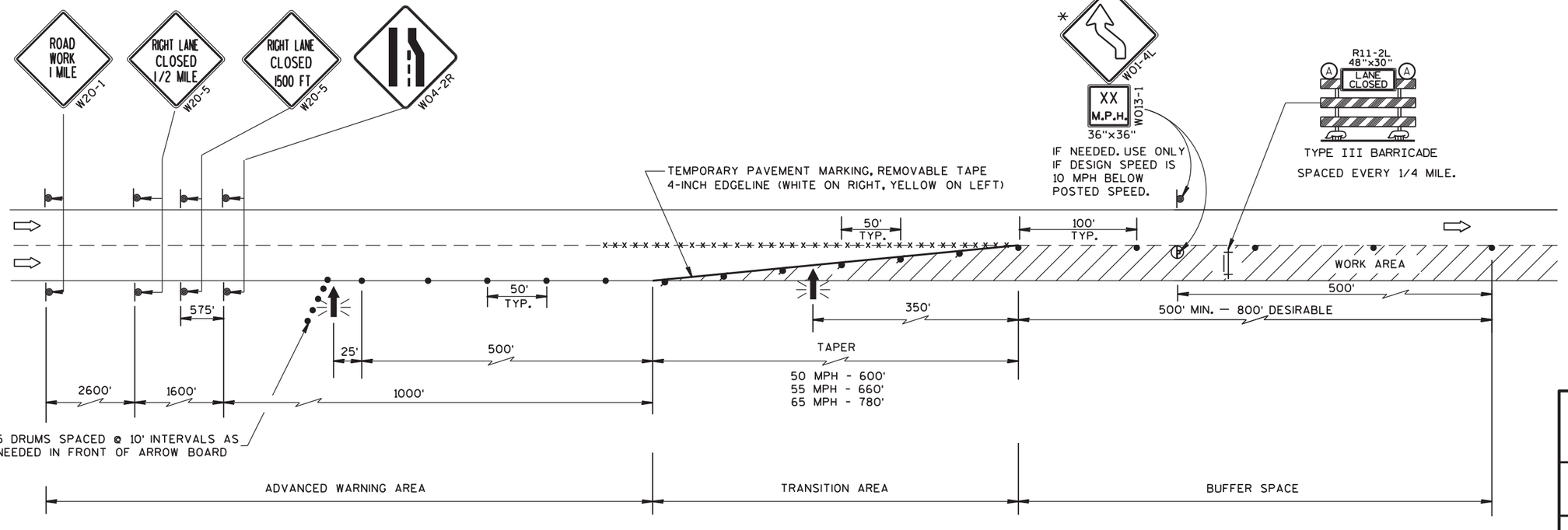
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN 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.

LOCATED 500 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.

R2-1
48"×60"
(BLACK AND WHITE)

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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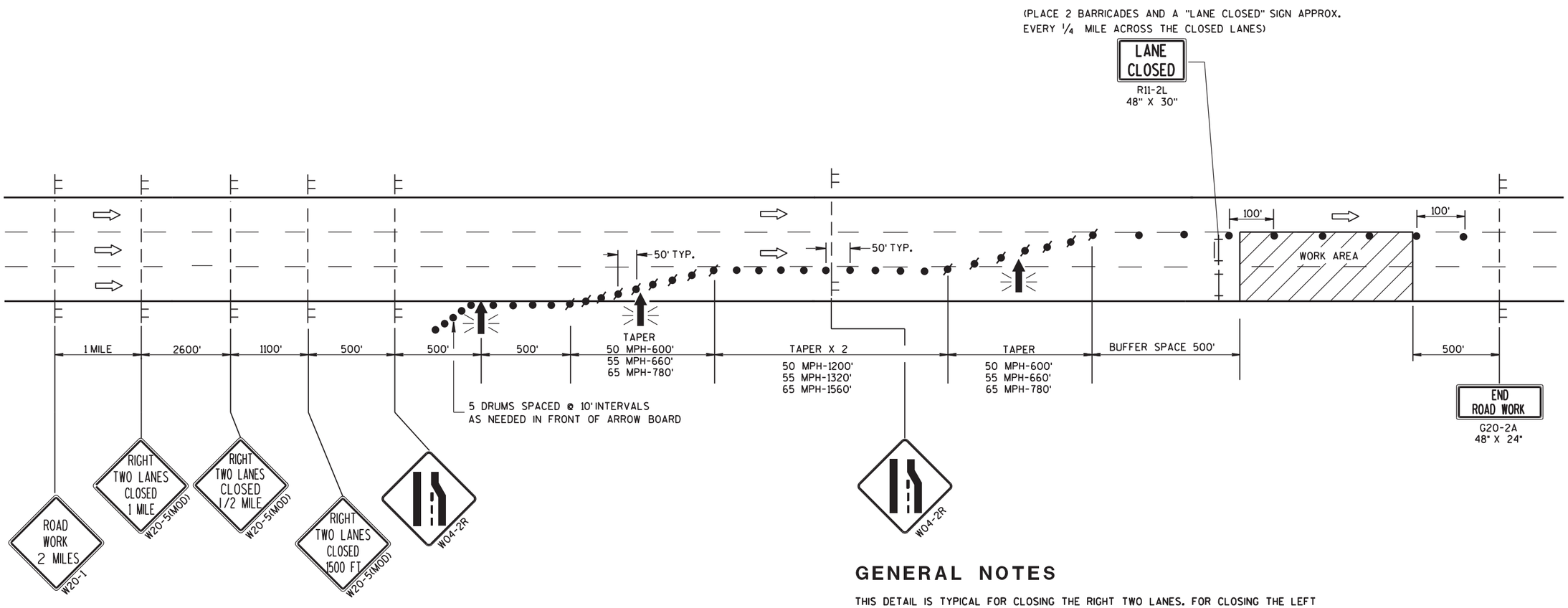
S.D.D. 15 D 12-3



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.

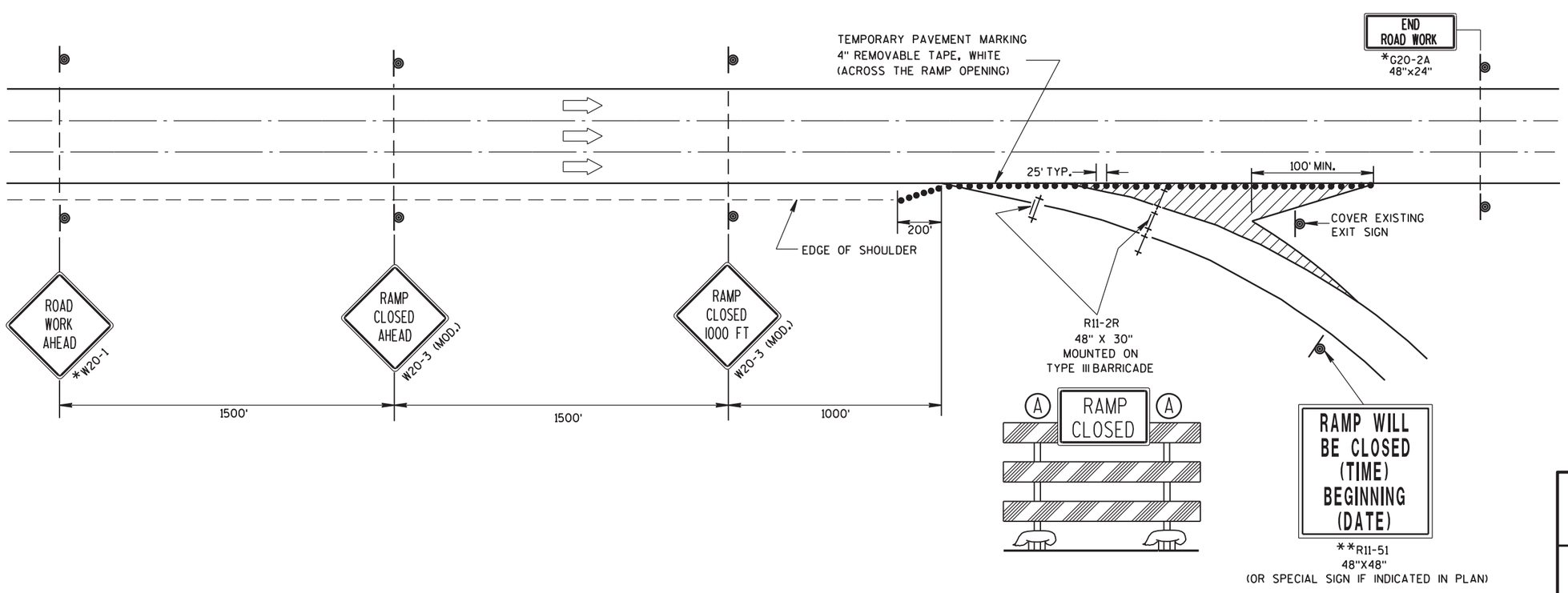
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

405

DESIGN

FHWA

6

S.D.D. 15 D 16-2

6

S.D.D. 15 D 16-2

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

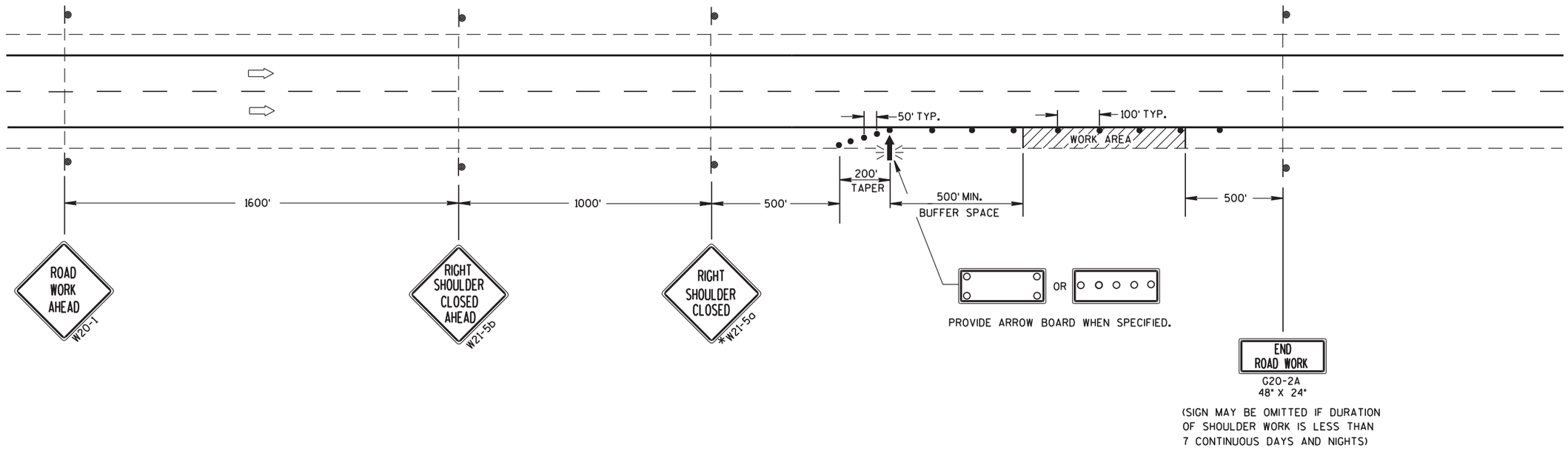
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 D 27-2

6

S.D.D. 15 D 27-2

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.

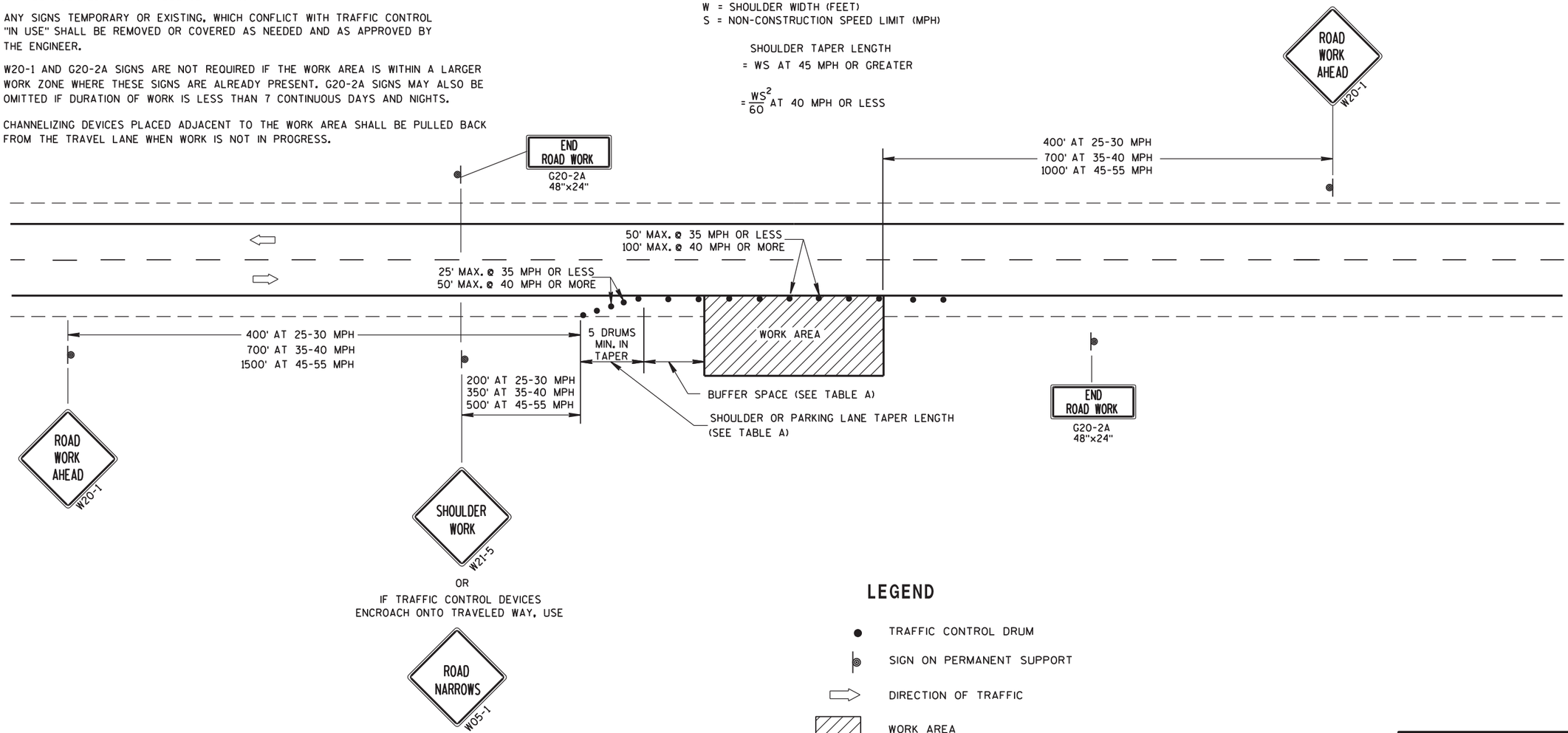
TABLE A

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

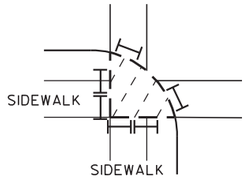
/S/ Travis Feltes
STATE TRAFFIC ENGINEER

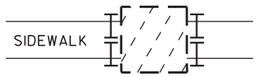
FHWA

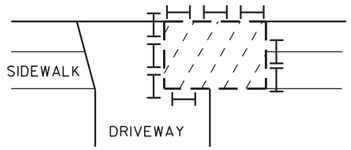
6

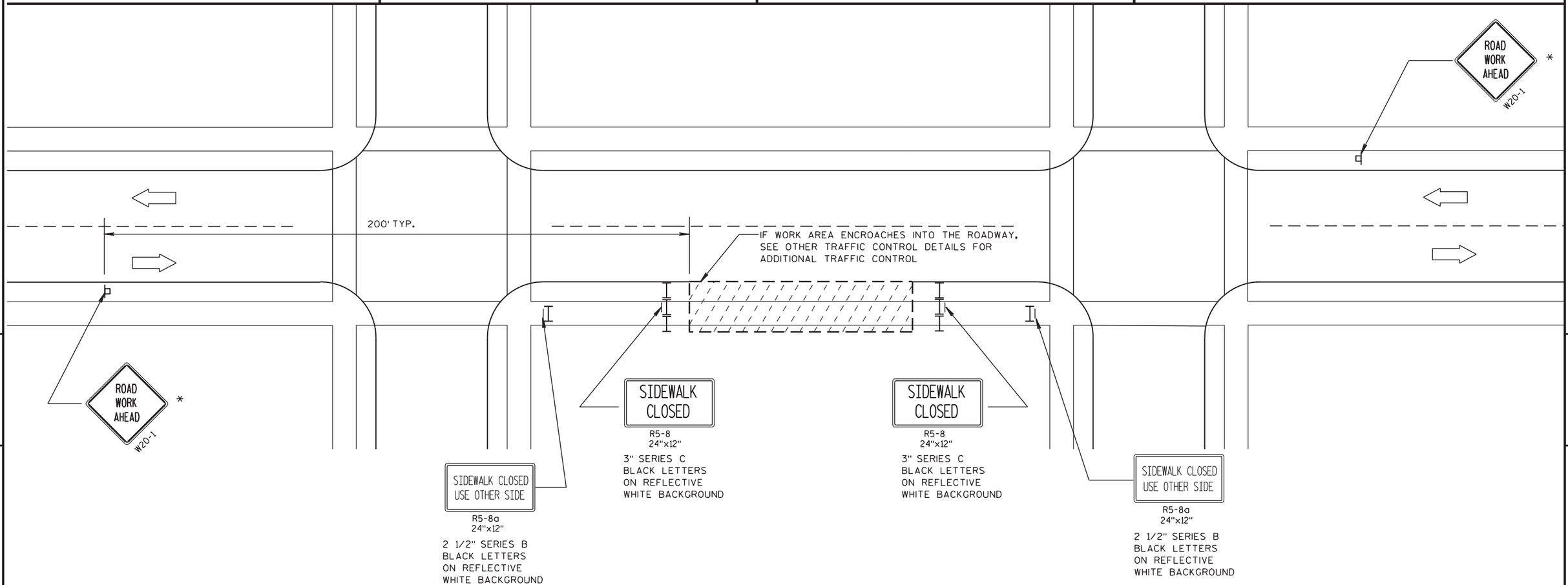
S.D.D. 15 D 28-2

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

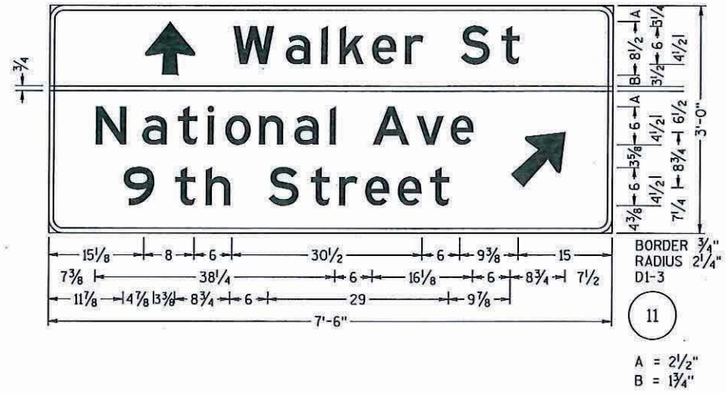
APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK 408 NEER
FHWA

6

S.D.D. 15 D 30-1

6

S.D.D. 15 D 30-1



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 II".

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 UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE 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

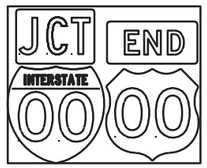
11. DO NOT SCALE.

7

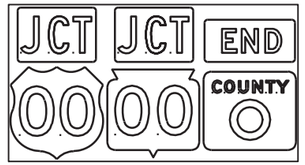
7

TYPICAL ASSEMBLIES

J1-1

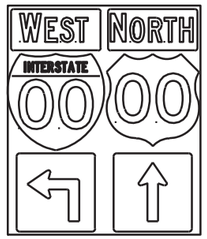


J1-2

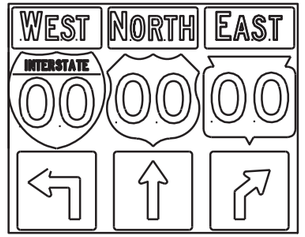


J1-3

J2-1



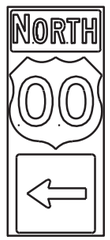
J2-2



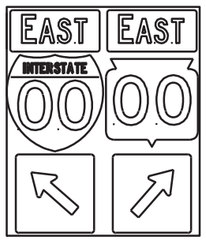
J2-3

JV

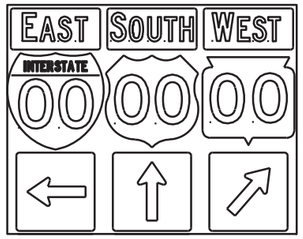
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1

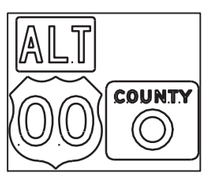


J3-2

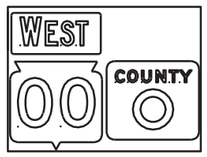


J3-3

J4-1



J4-2



J4-2

J13-1

J12-1

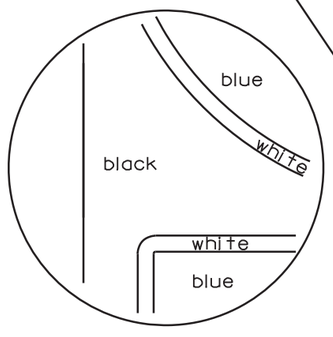
J32-1

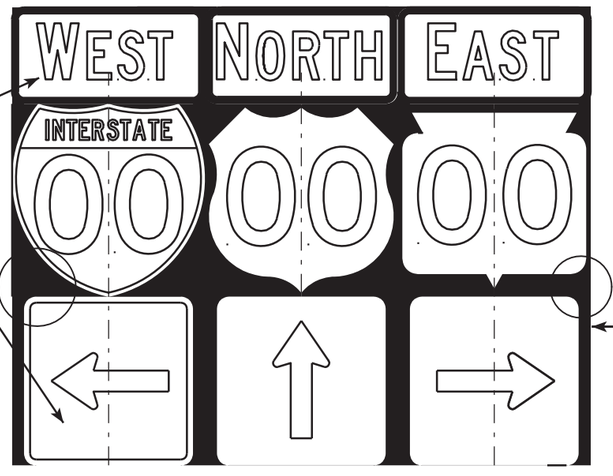
J33-1

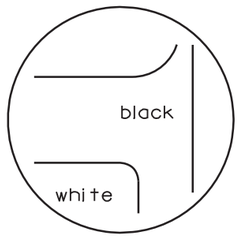
J23-1

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

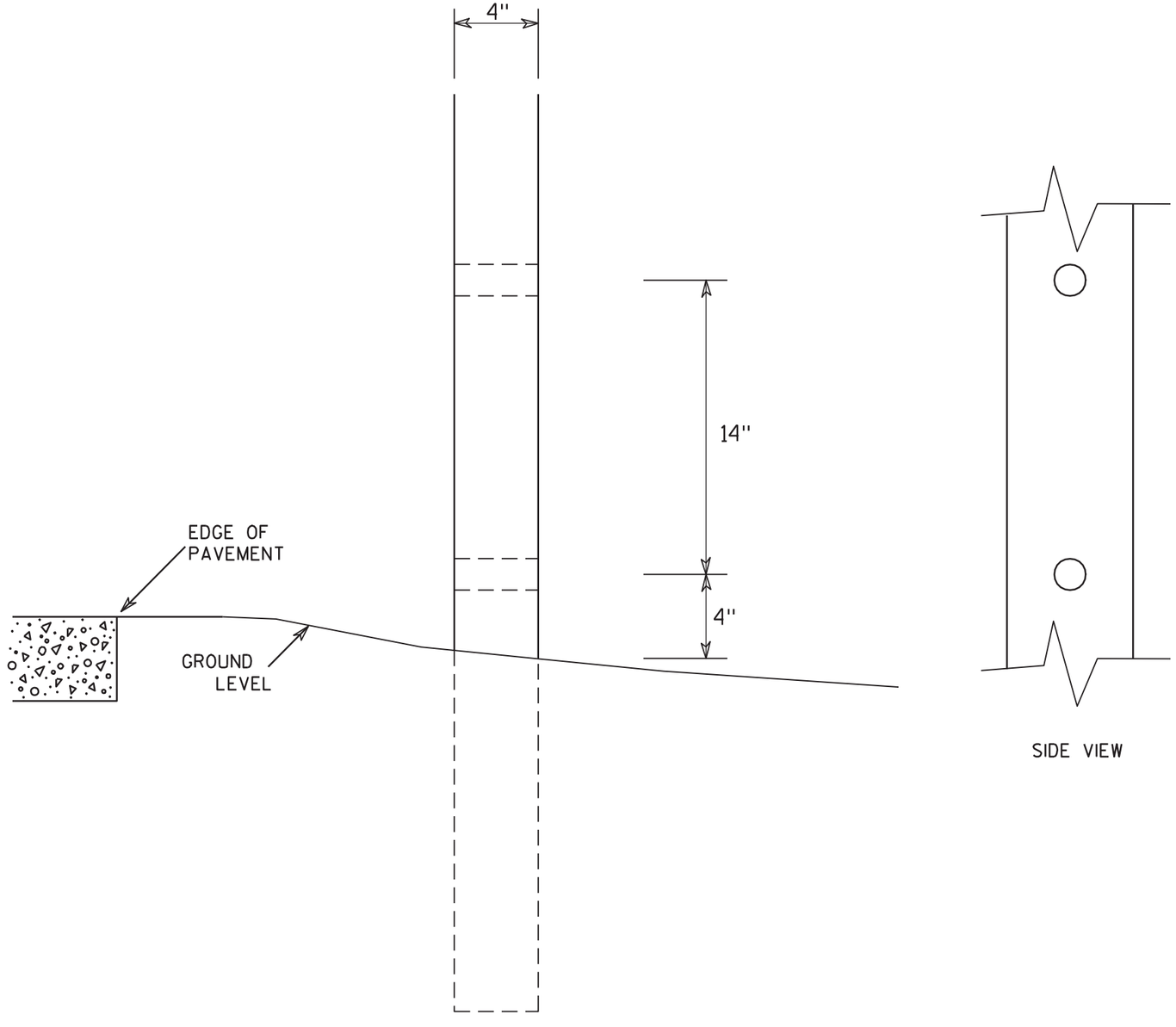
DATE 3/25/13 PLATE NO. A2-1S.7

7

7

PROJECT NO:

SHEET NO: 410 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

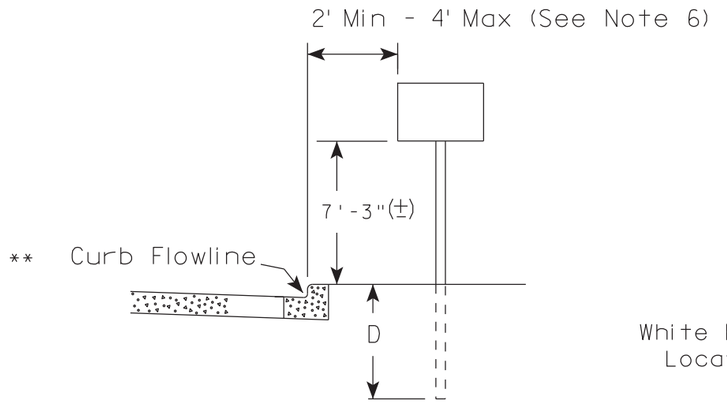
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

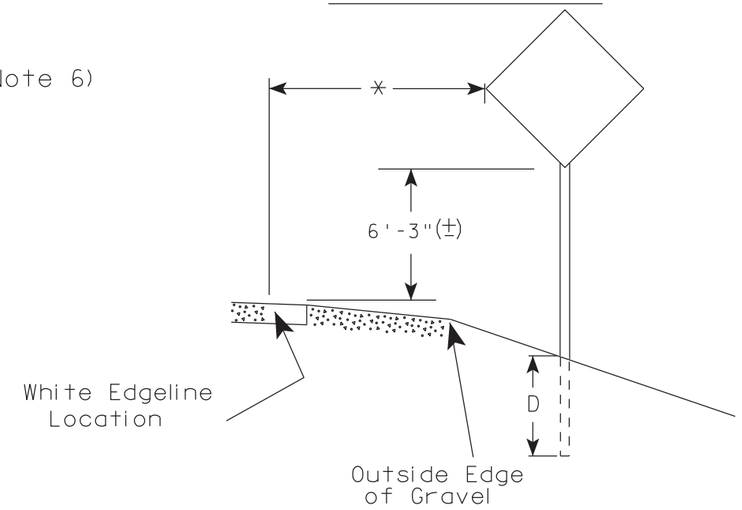
DATE 3/27/97 PLATE NO. A4-11.2

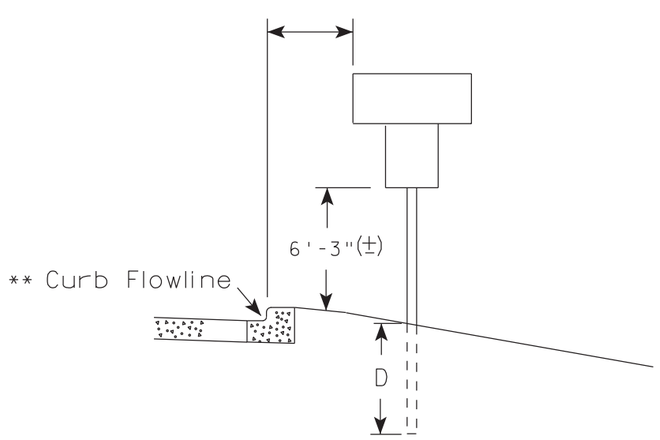
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 411	E

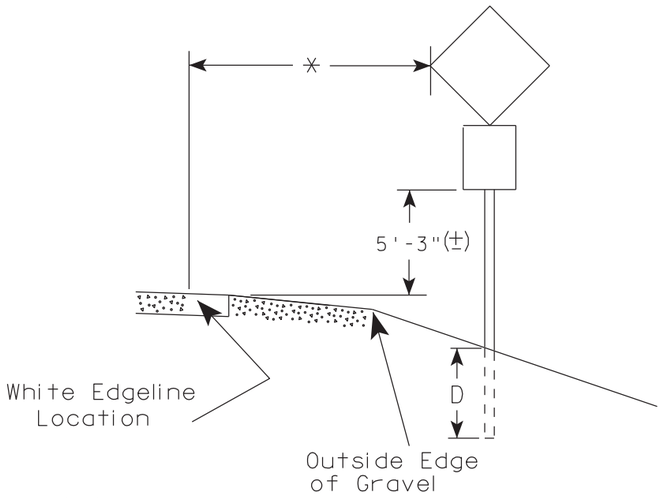
URBAN AREA



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.

GENERAL NOTES

1. Signs wider than 4 feet, 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 (A4-5) 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 stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed 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) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

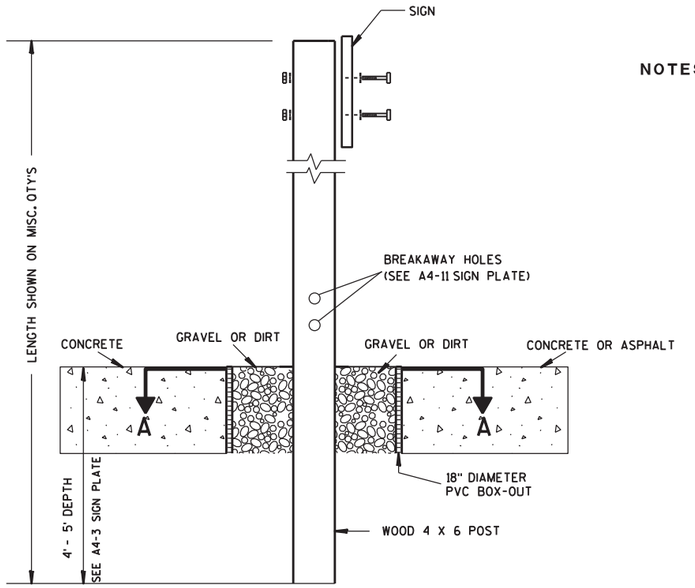
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

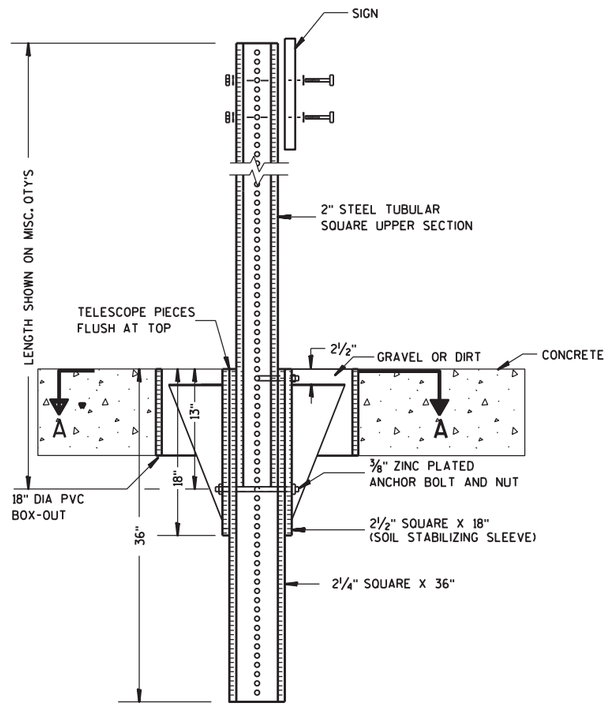
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 30-SEP-2013 13:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000



ELEVATION VIEW

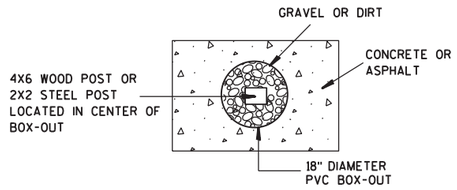
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

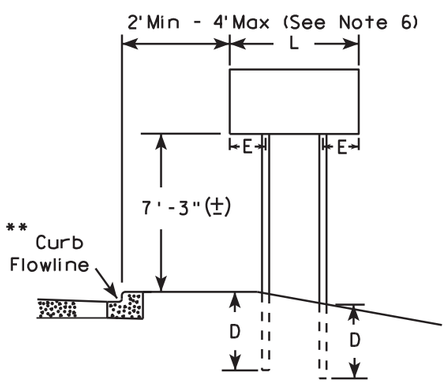
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

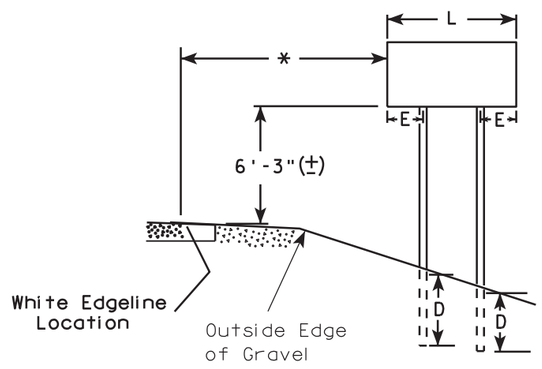
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

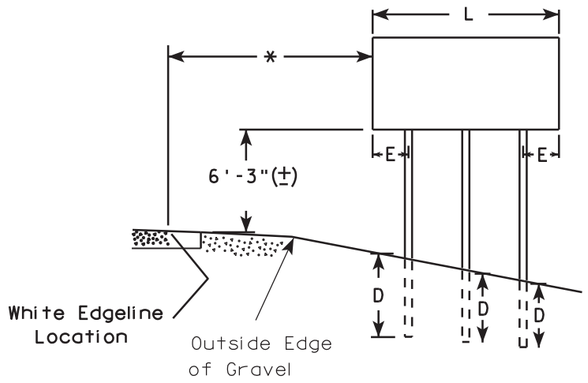
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

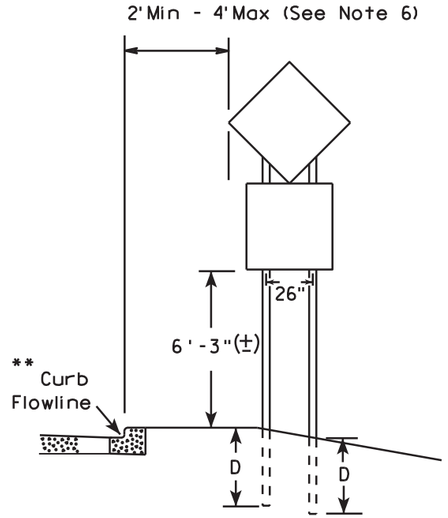
URBAN AREA



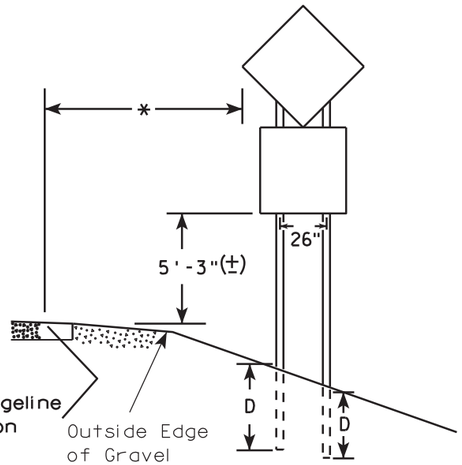
RURAL AREA (See Note 3)







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 (A4-5) 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 stop signs (R1-1F) 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) & End of Road Markers (W5-56 & W5-56A) 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 or 20 S.F. or less 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'

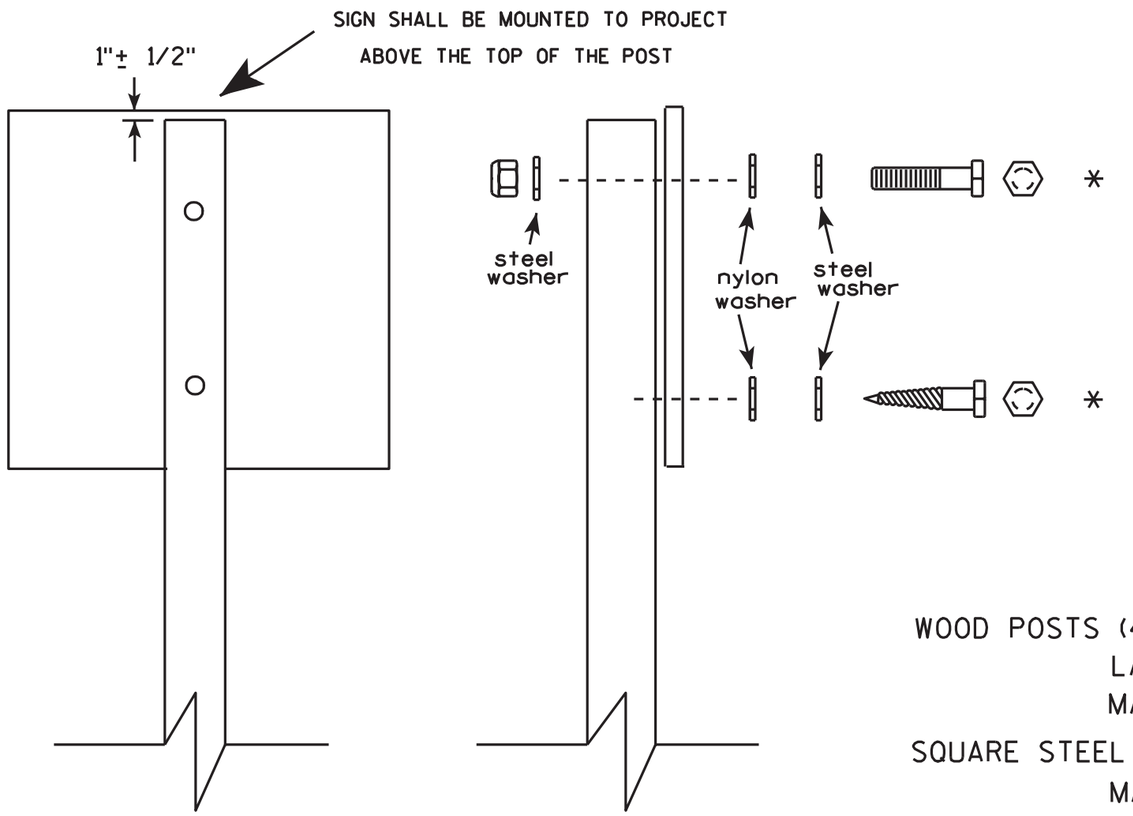
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-4 12 414

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	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

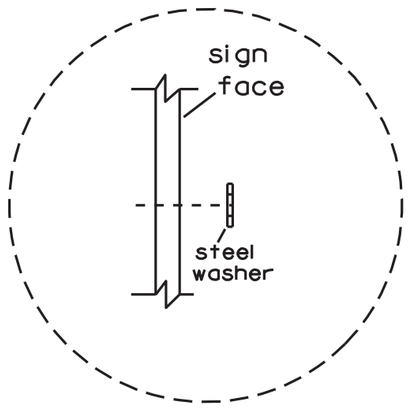
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

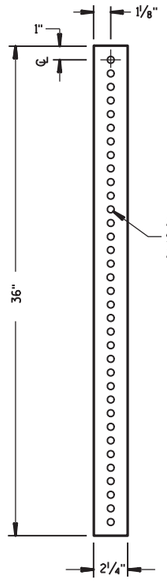
7

PROJECT NO:

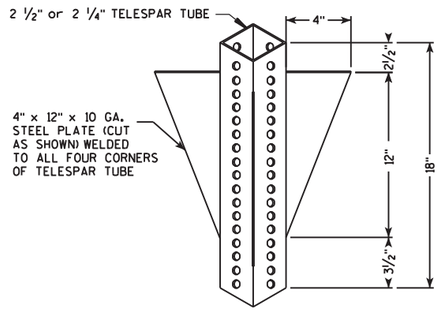
SHEET NO: 415 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

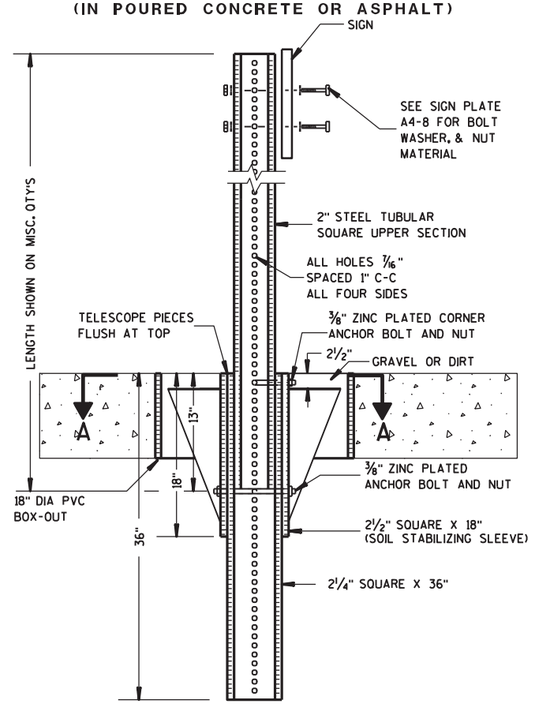
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



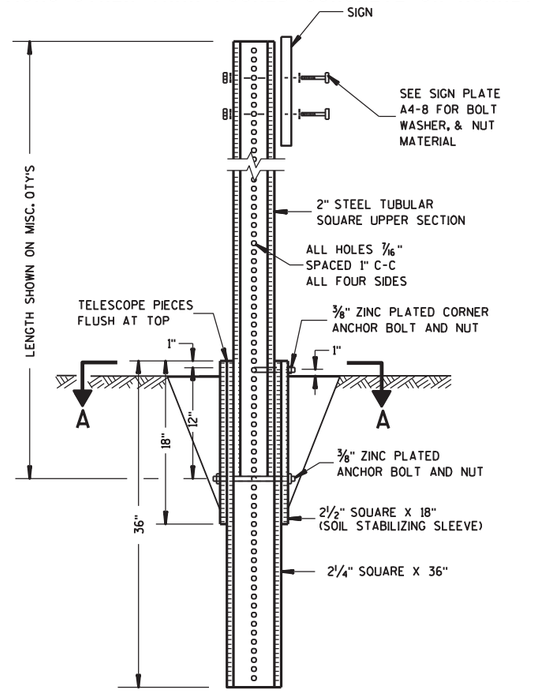
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

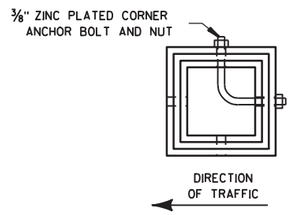


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASHALT)





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).

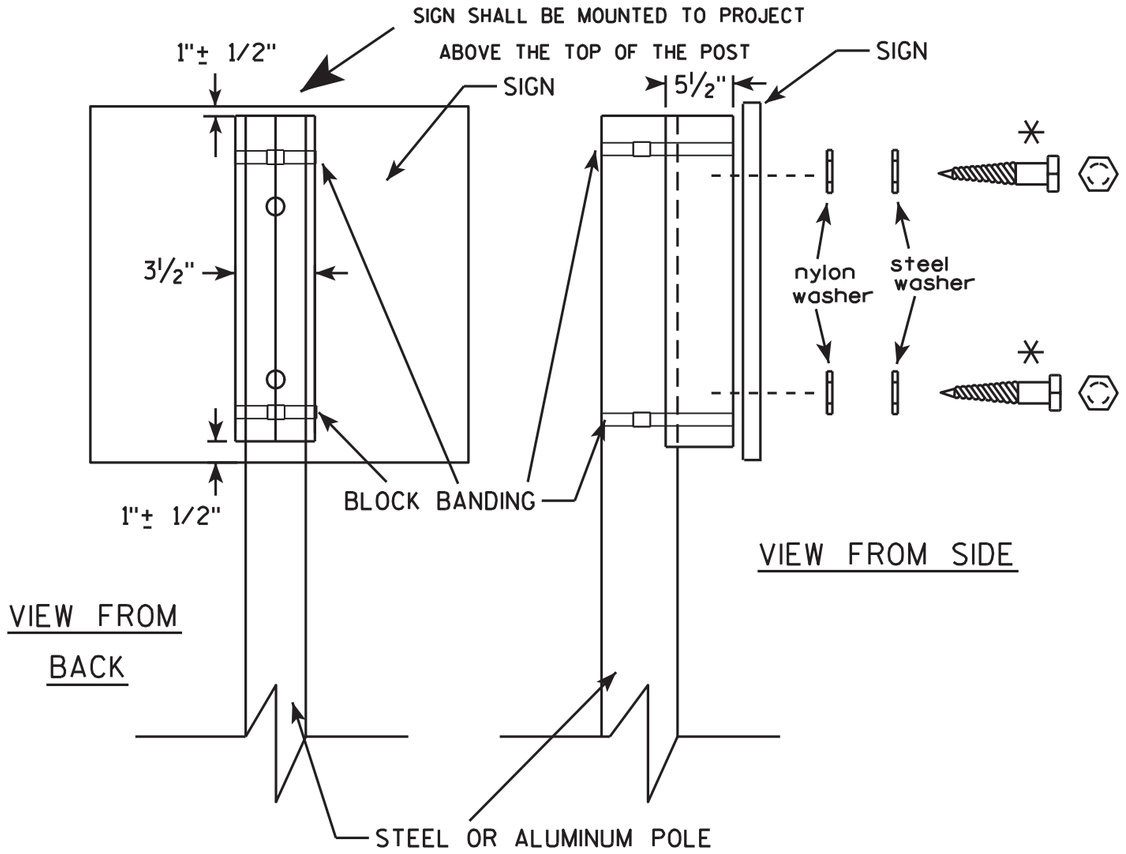
TUBULAR STEEL SIGN POST A4-9

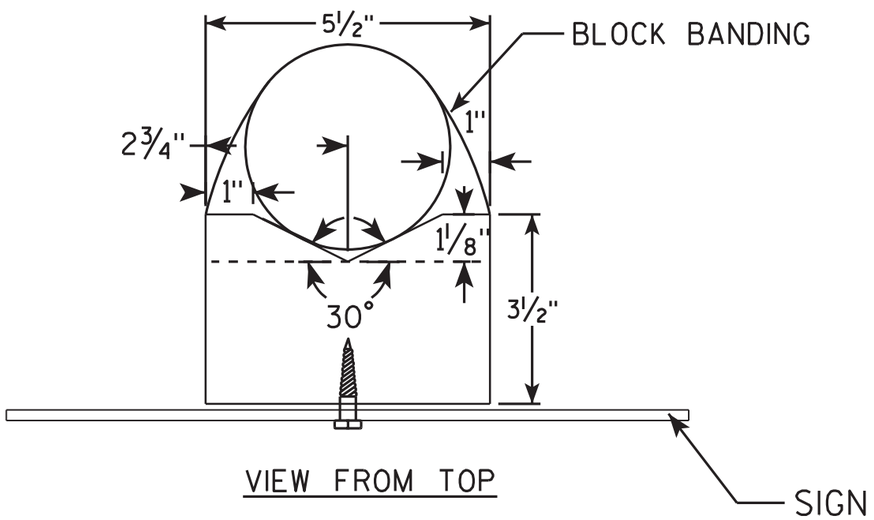
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/30/12 PLATE NO. A4-9.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 416	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

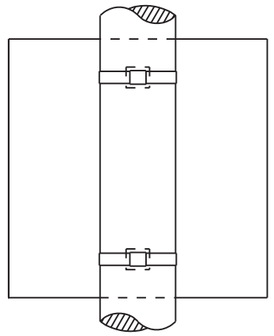
DATE 7/12/07 PLATE NO. A5-10.1

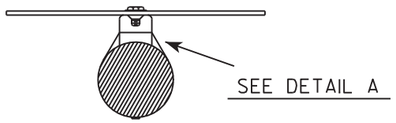
PROJECT NO:

SHEET NO: 417 E

BANDING

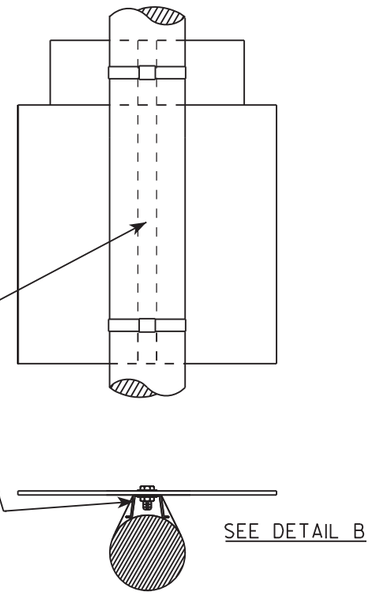
SINGLE SIGN

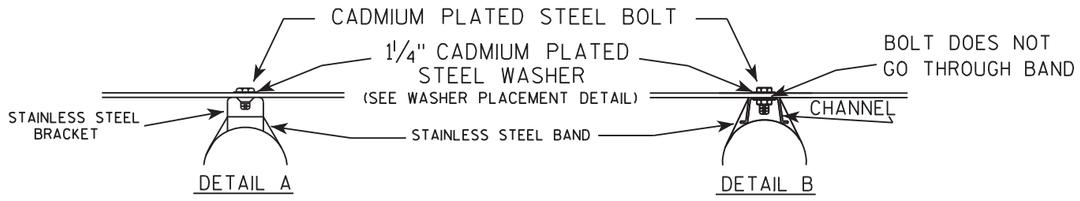




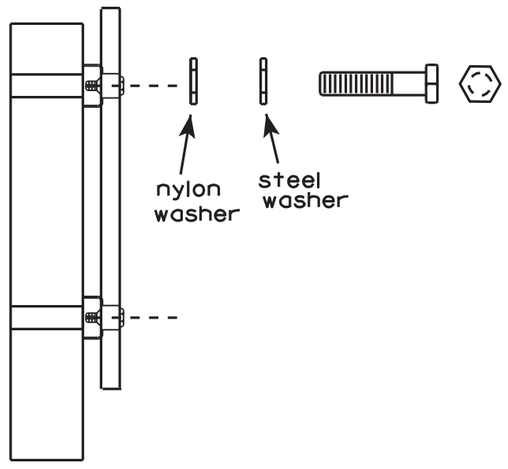
"J" ASSEMBLY

CHANNEL
SEE TYPICAL PANEL INSTALLATION SHEET





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.

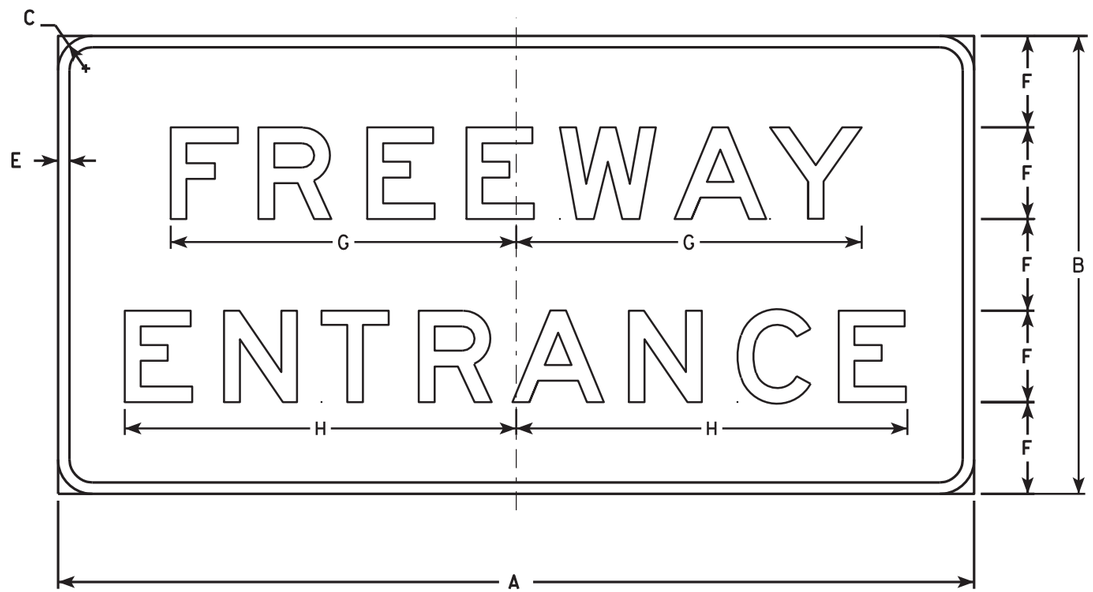
STANDARD SIGN
SIGN BANDING DETAILS

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: 418	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

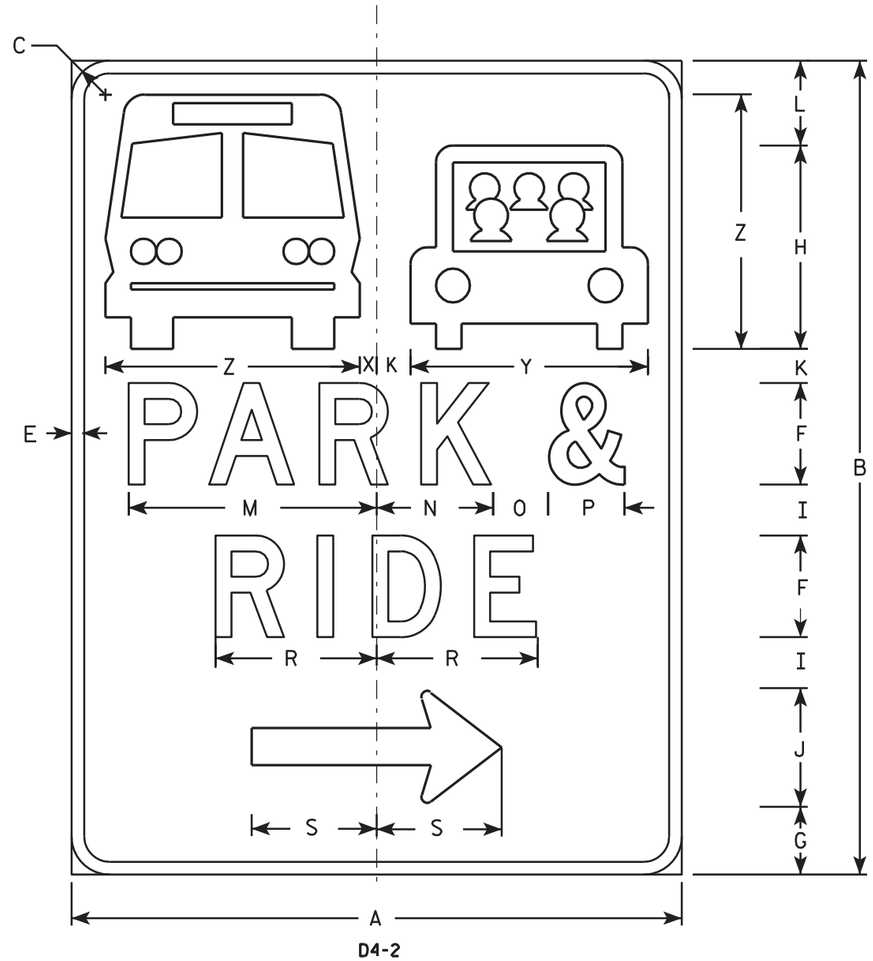
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/12/13 PLATE NO. D13-3.1

PROJECT NO:

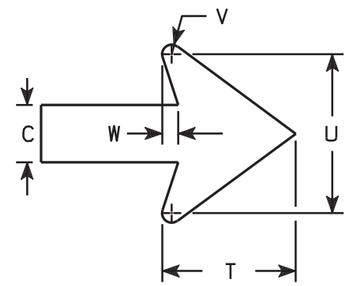
SHEET NO: 419 E



D4-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   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. The D4-2L is the same as a D4-2R except the arrow is reversed.
6. The D4-2 sign may have either symbol or both symbols at the same time.



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	30	1 1/8		1/2	4	1 5/8	7 1/2	1 1/2	4 5/8	1 3/8	3 7/8	9 3/4	4	2 3/4	3		6 3/8	4 7/8	3 1/2	4 1/8	1/4	3/8	5/8	9 3/8	10	5.0
2	30	36	1 3/8		5/8	5	2	9	1 5/8	5 1/2	1 5/8	4 5/8	12 1/4	5 1/8	3 3/8	3 3/4		8	6 1/8	4 3/8	5 1/4	3/8	1/2	7/8	11 3/4	12 1/2	7.50
3	36	48	2 1/4		3/4	6	4	12	3	7	2	5	14 5/8	6 7/8	3 1/4	4 1/2		9 1/2	7 1/2	5 1/4	6 1/4	3/8	5/8	1	14	15	12.0
4																											
5																											

STANDARD SIGN
D4-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/20/10 PLATE NO. D4-2.5

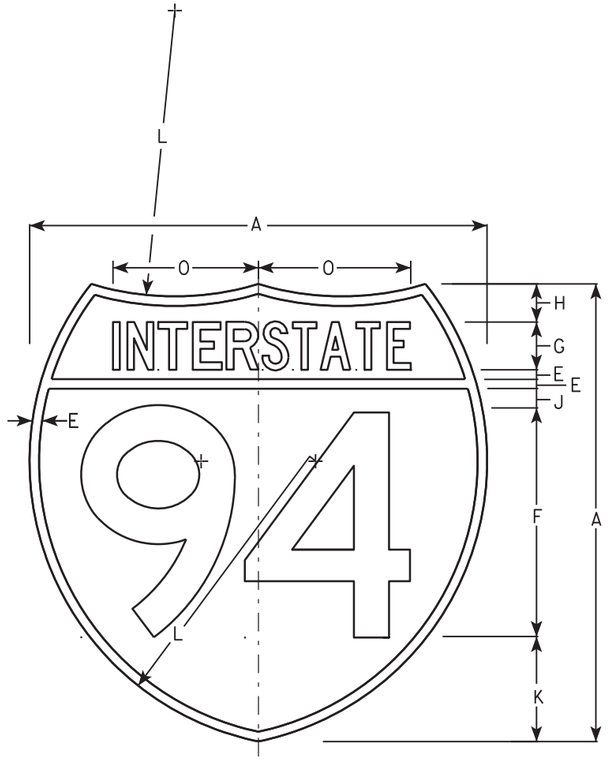
PROJECT NO: | SHEET NO: 420 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\D42.dgn PLOT DATE : 10-FEB-2011 14:21 PLOT BY : mscsja

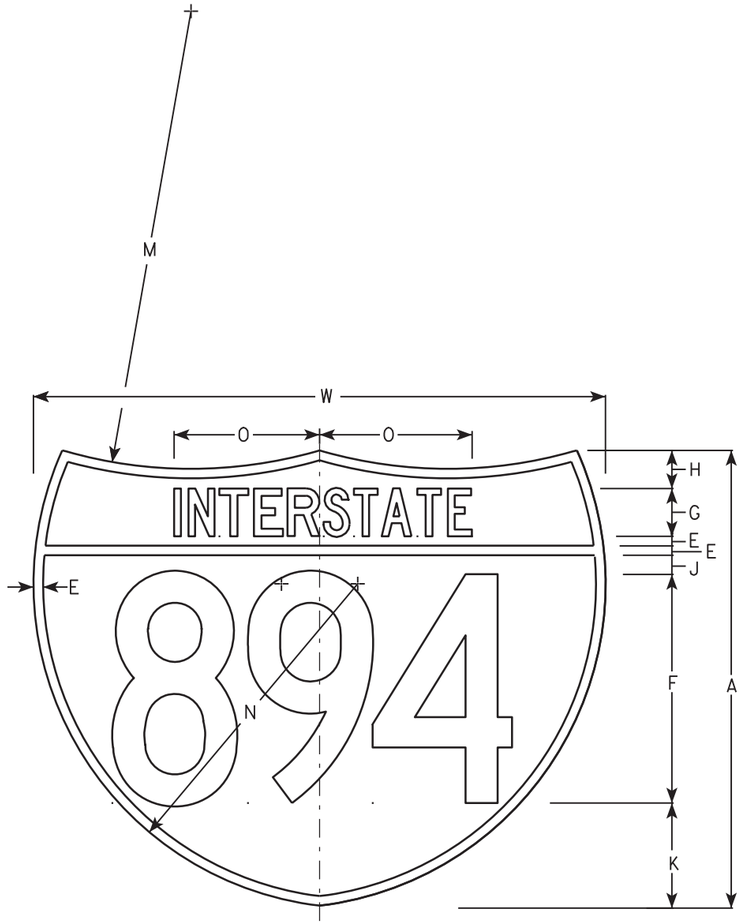
WISDOT/CADDS SHEET 42

7

7



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

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

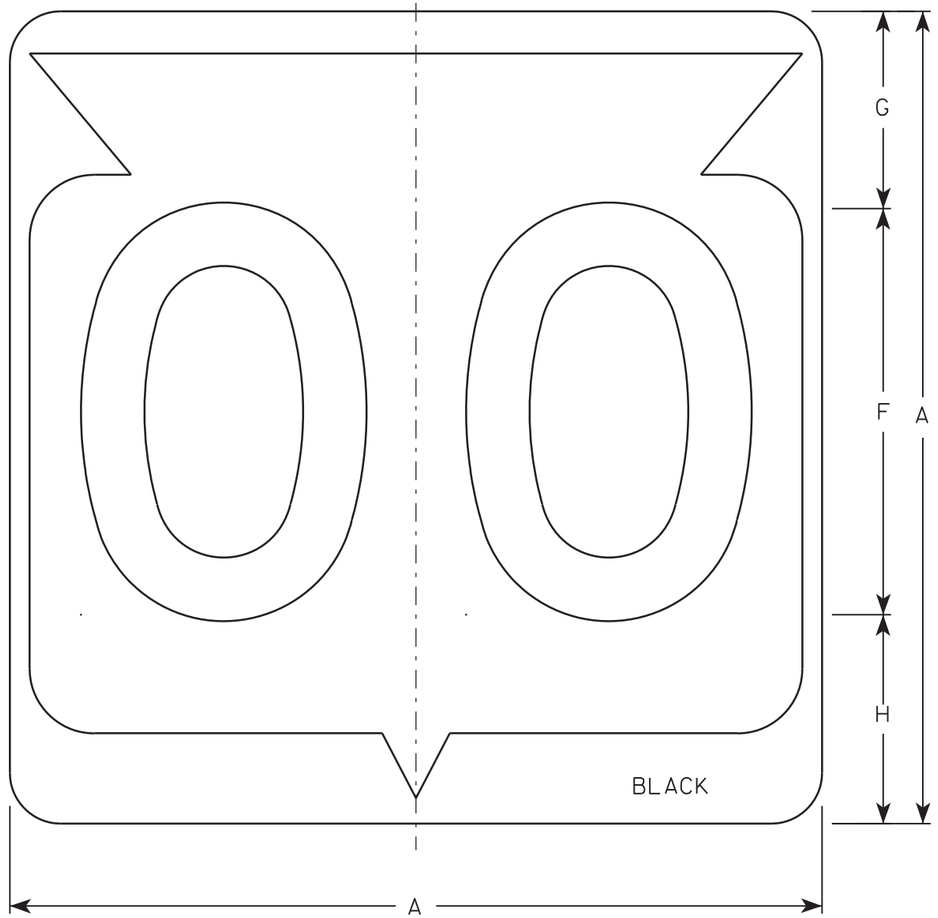
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

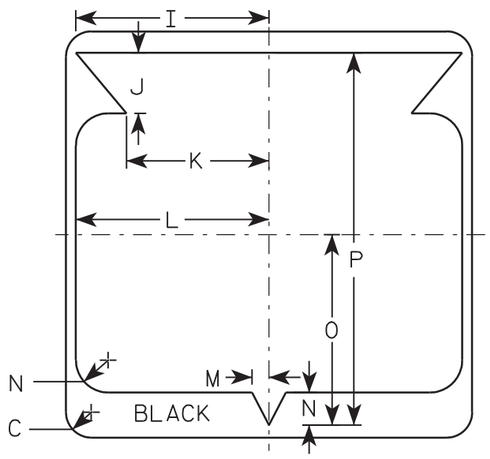
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 421	E



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

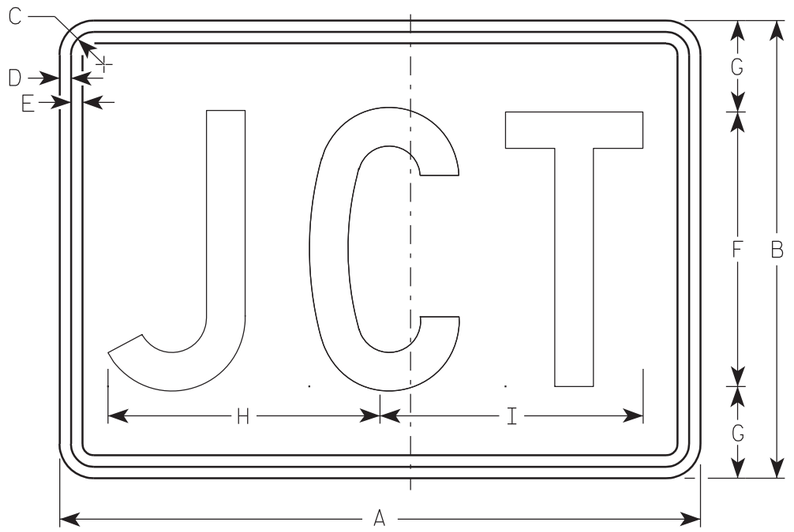
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

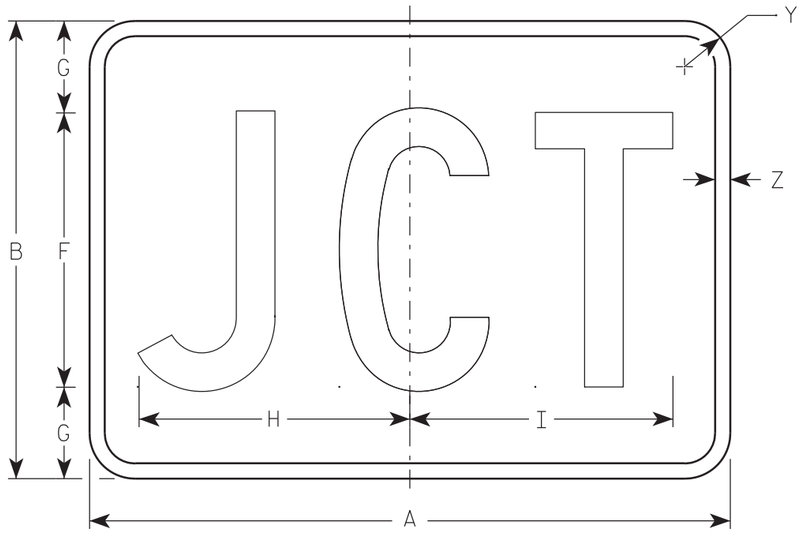
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 422	E



M2-1
MK2-1
MM2-1
MR2-1



MB2-1
MG2-1
MN2-1

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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. M2-1 Background - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   Message - Black
   MB2-1 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   MG2-1 Background - Green
   Message - White - Type H Reflective
   MK2-1 Background - Green
   Message - White - Type H Reflective
   MM2-1 Background - White - Type H Reflective
   Message - Green
   MN2-1 Background - Brown
   Message - White - Type H Reflective
   MR2-1 Background - Brown
   Message - Yellow - Type H Reflective

Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 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	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20

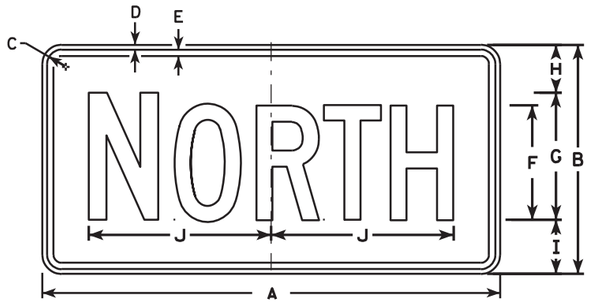
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

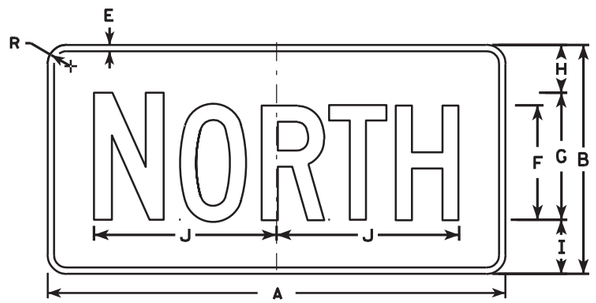
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M2-1.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 423	E



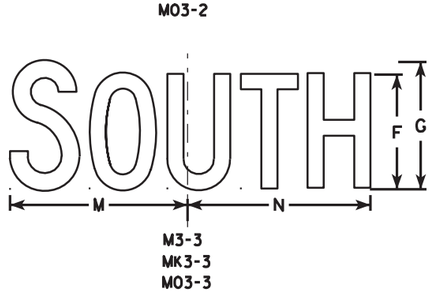
M3-1
MK3-1
MO3-1



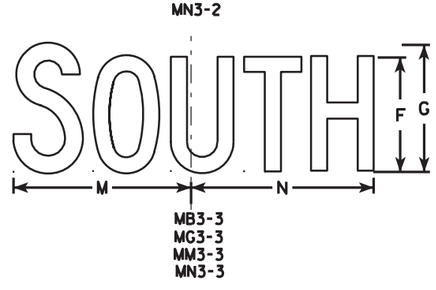
MB3-1
MG3-1
MM3-1
MN3-1

M3-2
MK3-2
MO3-2

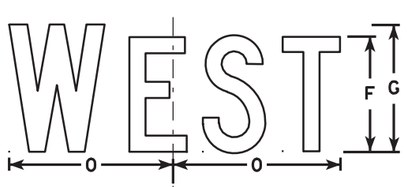
MB3-2
MG3-2
MM3-2
MN3-2



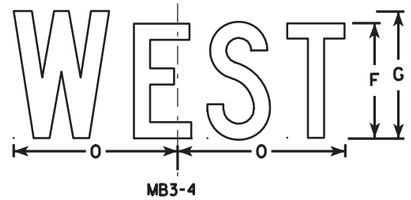
M3-3
MK3-3
MO3-3



MB3-3
MG3-3
MM3-3
MN3-3



M3-4
MK3-4
MO3-4



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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 - Type H Reflective (Detour or temporary signs - Reflective) Message - Black
   MB3-1 thru MB3-4 Background - Blue Message - White - Type H Reflective (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective Message - Green
   MN3-1 thru MN3-4 Background - Brown Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective Message - Black
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

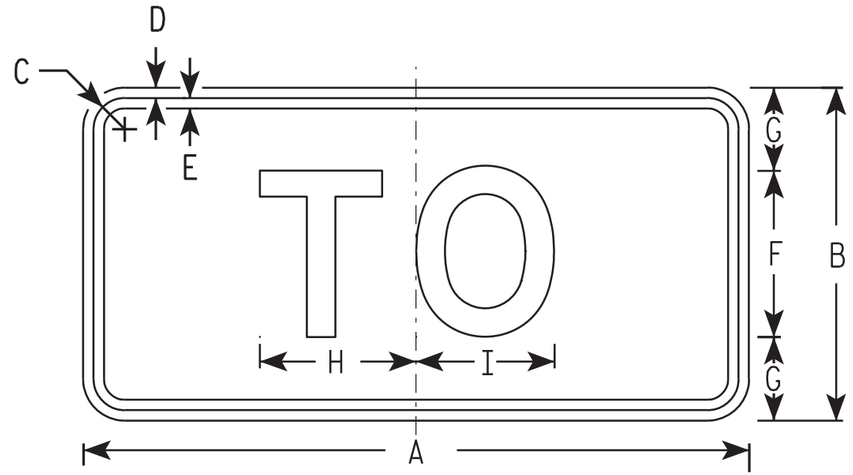
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

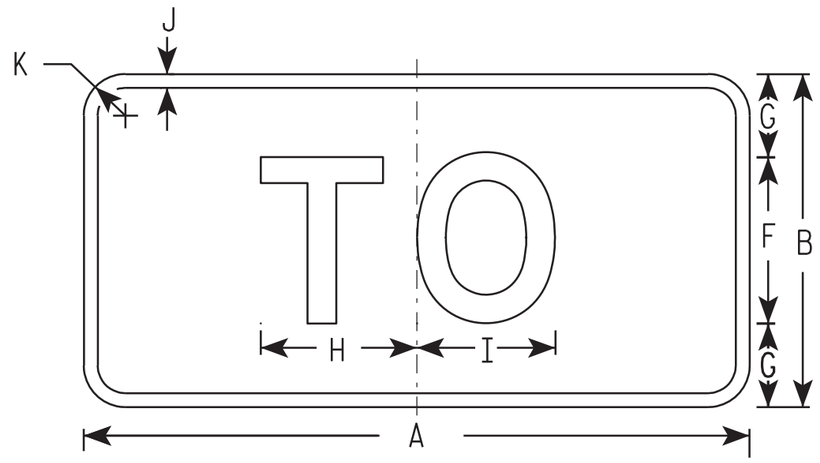
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 424	E



M4-5
MK4-5
MM4-5



MB4-5
MG4-5
MN4-5

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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 - Type H Reflective (Detour or temporary Signs - Reflective)
   Message - Black
   MB4-5 Background - Blue
   Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
   MG4-5 Background - Green
   Message - White - Type H Reflective
   MK4-5 Background - Green
   Message - White - Type H Reflective
   MM4-5 Background - White - Type H Reflective
   Message - Green
   MN4-5 Background - Brown
   Message - White - Type H Reflective

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

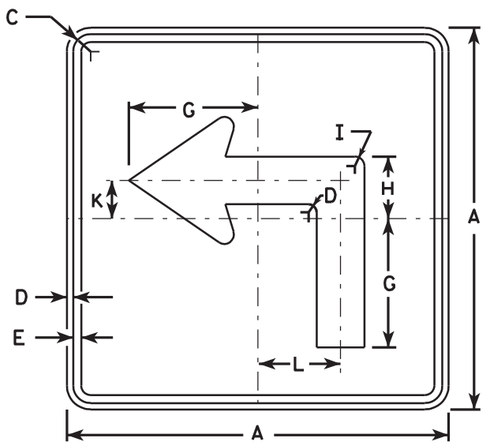
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

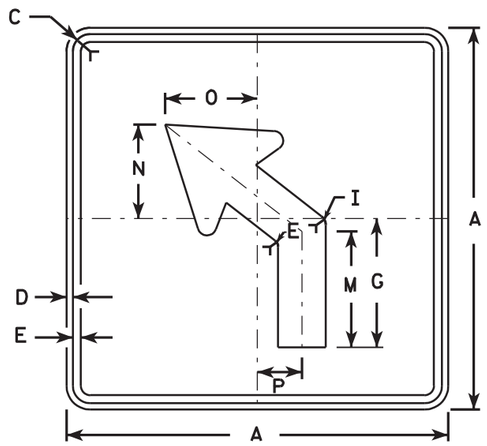
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-5.6

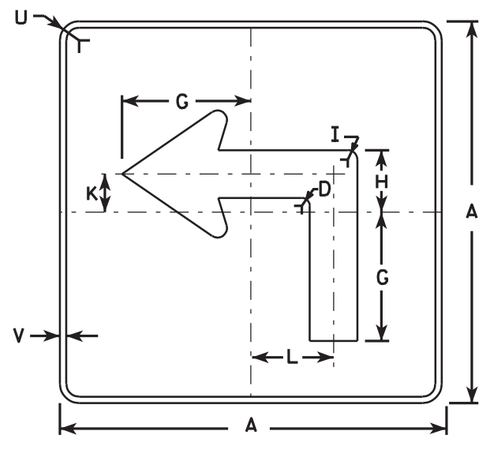
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 425	E



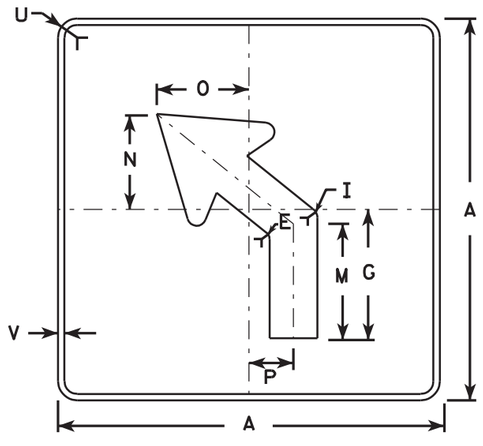
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



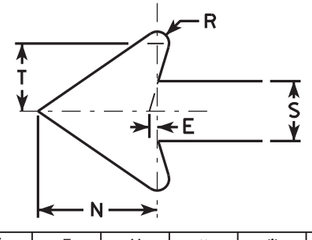
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



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

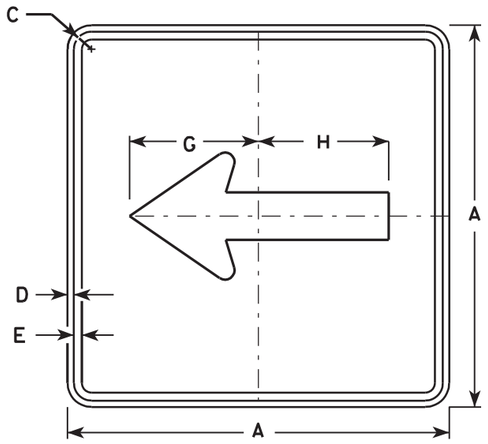
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

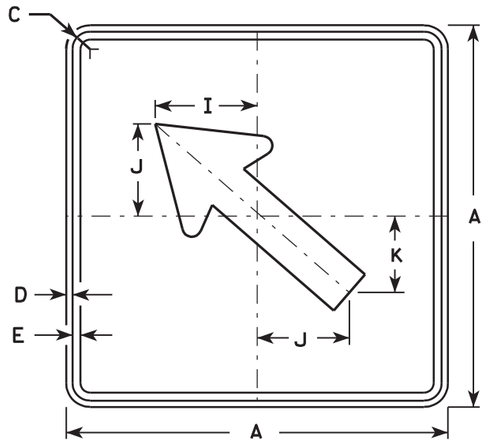
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

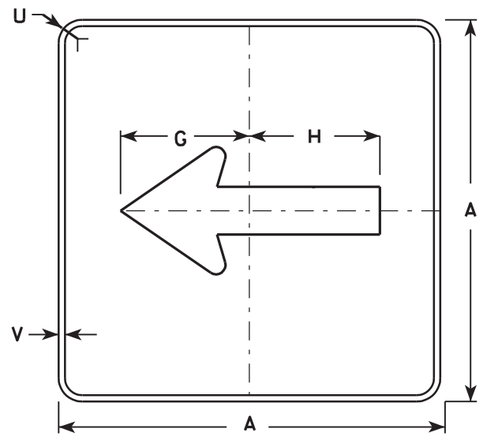
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 426	E



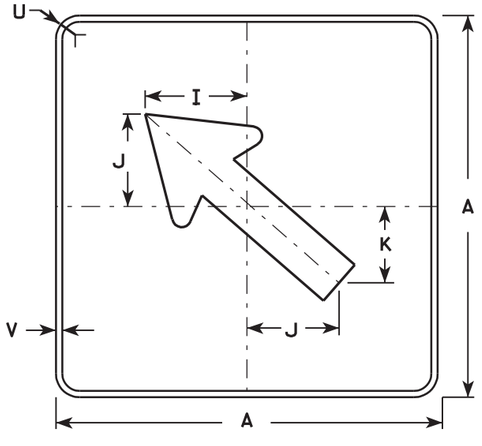
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MP6-2
MR6-2



MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

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. M6-1 and M6-2 Background - White - Type H Reflective
   Message - Black

   MB6-1 and MB6-2 Background - Blue
   Message - White - Type H Reflective

   MG6-1 and MG6-2 Background - Green
   Message - White - Type H Reflective

   MK6-1 and MK6-2 Background - Green
   Message - White - Type H Reflective

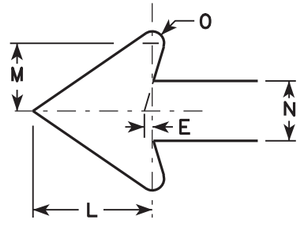
   MM6-1 and MM6-2 Background - White - Type H Reflective
   Message - Green

   MN6-1 and MN6-2 Background - Brown
   Message - White - Type H Reflective

   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black

   MP6-1 and MP6-2 Background - White - Type H Reflective
   Message - Blue

   MR6-1 and MR6-2 Background - Brown
   Message - Yellow - Type H Reflective



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

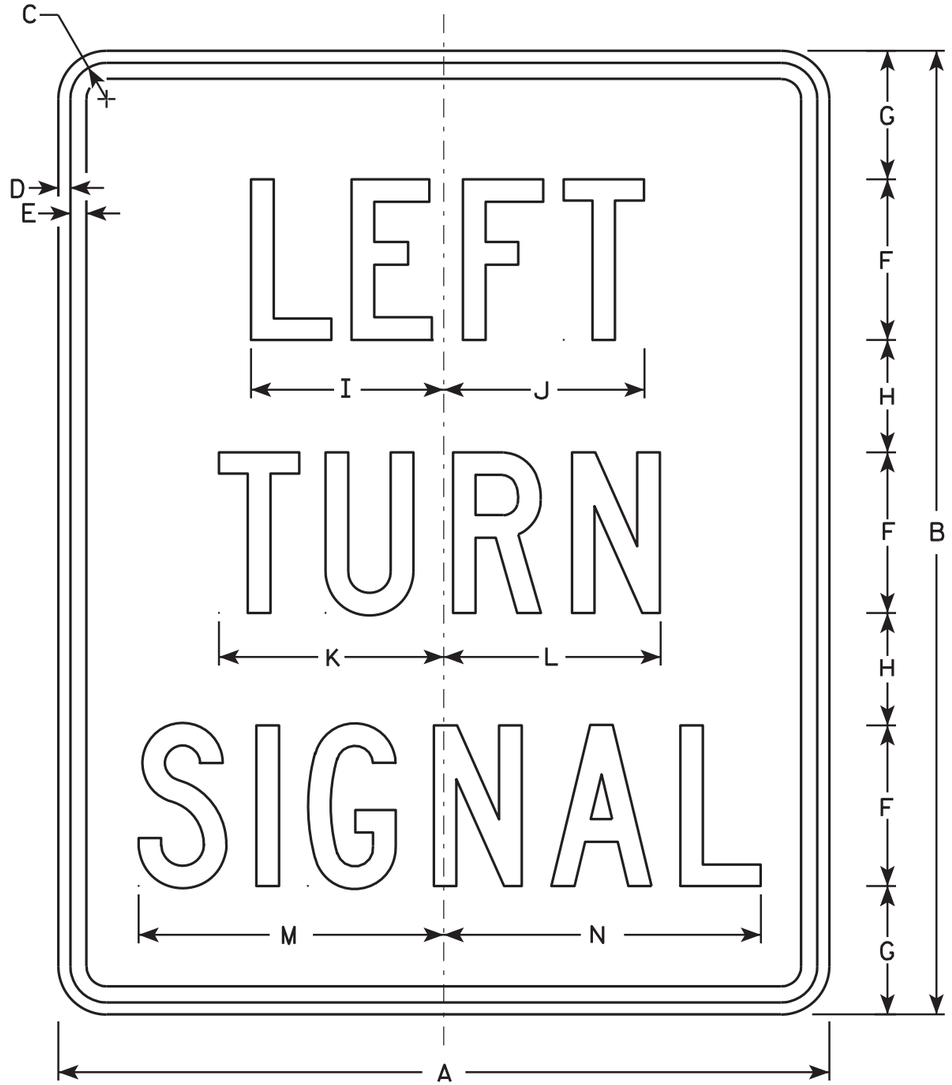
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-1.13

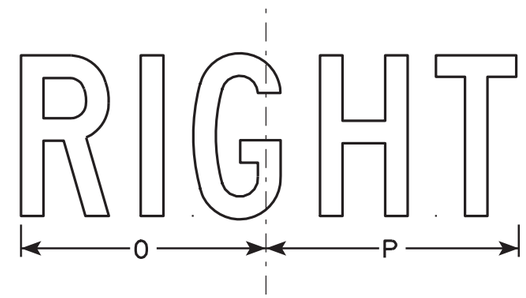
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 427	E



R10-10L

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.
5. R10-10R is identical to R10-10L except RIGHT replaces LEFT.



R10-10R

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	30	1 1/8	3/8	1/2	5	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8											5.0
2M	24	30	1 1/8	3/8	1/2	5	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8											5.0
3																											
4																											
5																											

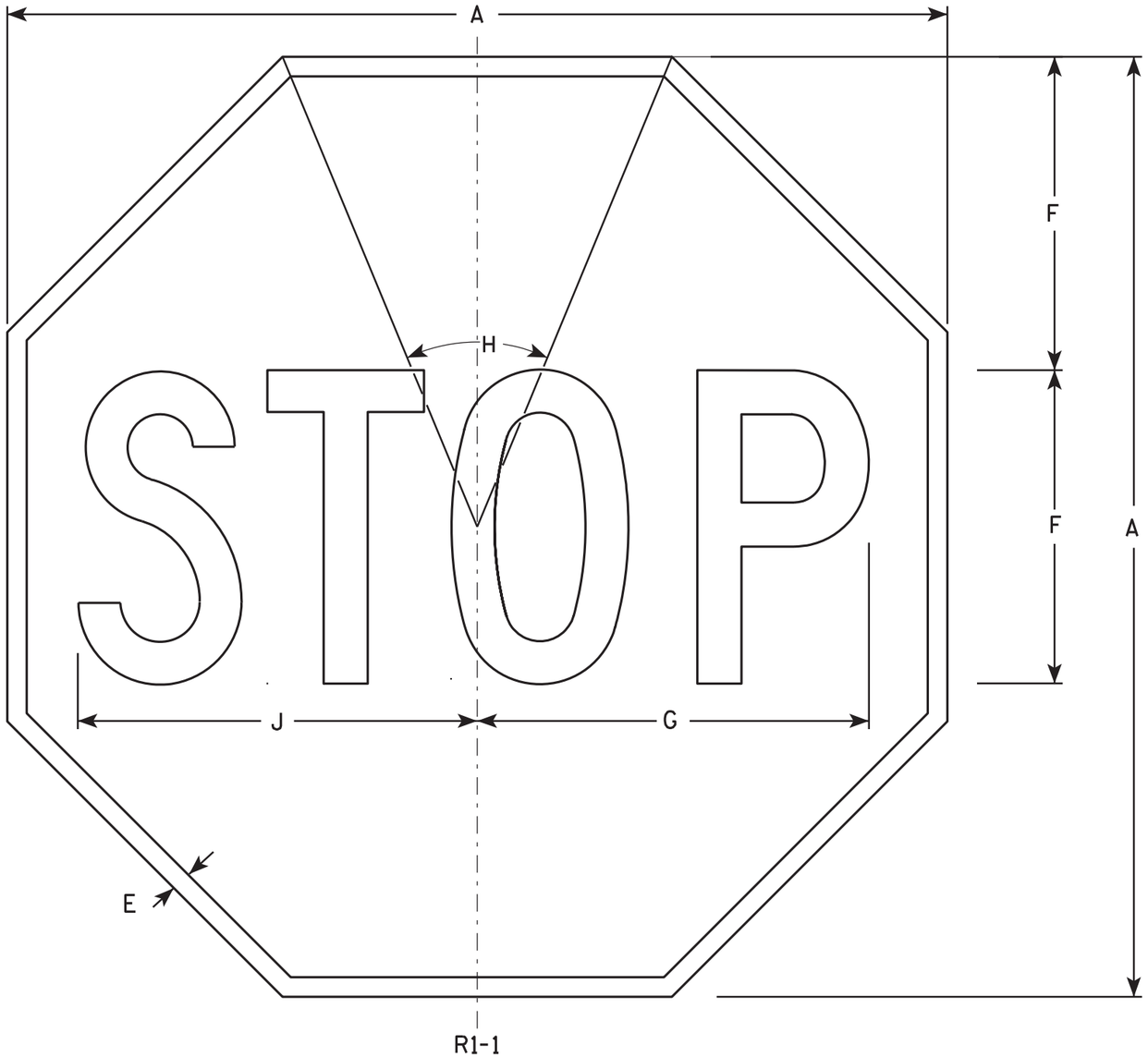
STANDARD SIGN
R10-10

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-10.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 428	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

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

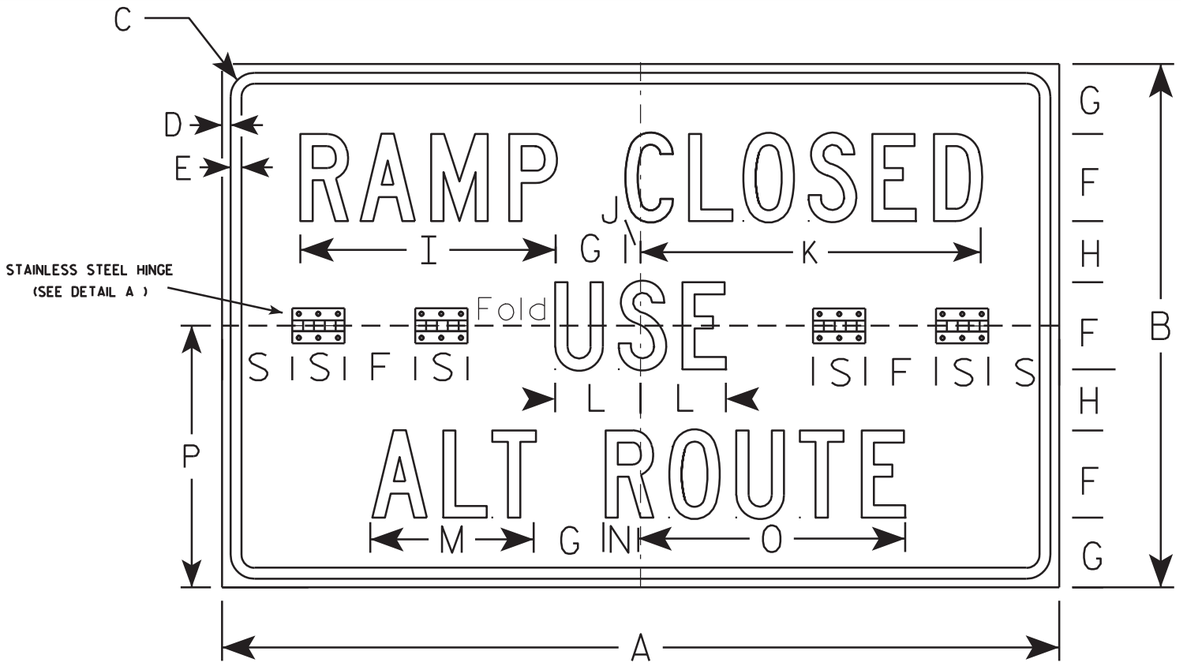
STANDARD SIGN
R1-1

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: 429	E

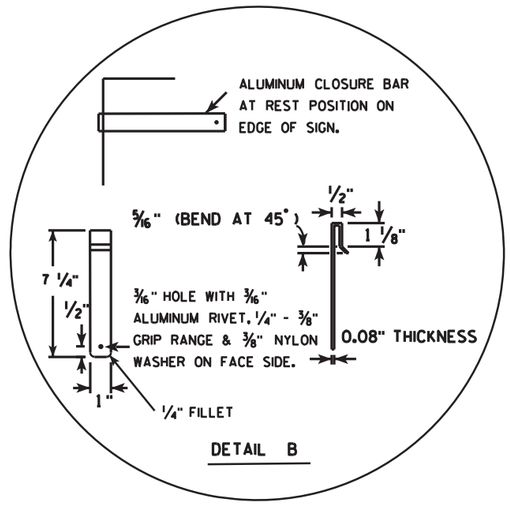


R11-54F

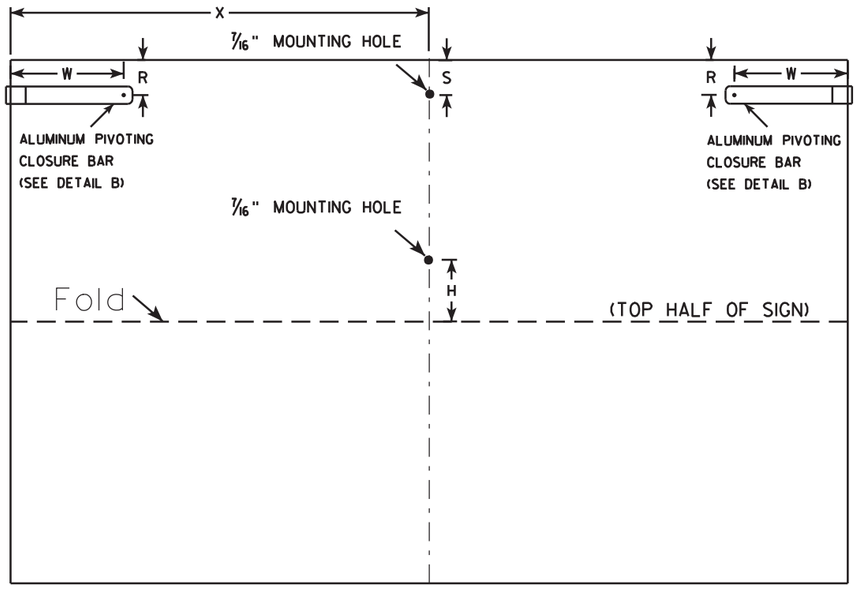
NOTES

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. Sign Base Material shall be aluminum corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.

DETAIL A



DETAIL B



(BACK VIEW)

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	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

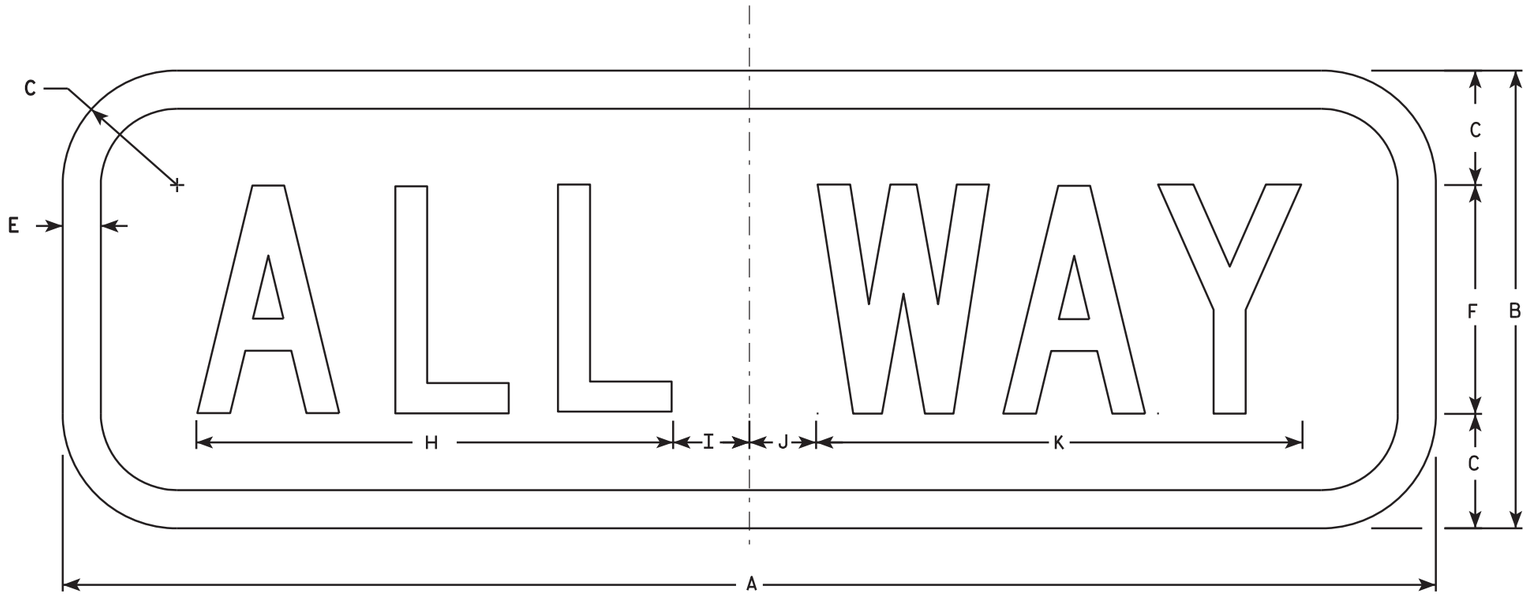
STANDARD SIGN
R11-54F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-54F.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 430	E



R1-3P

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. 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	18	6	1 1/2		1/2	3		6 1/4	1 1/4	7/8	6 3/8																0.75
2S	18	6	1 1/2		1/2	3		6 1/4	1 1/4	7/8	6 3/8																1.5
2M	24	9	1 1/2		1/2	5		9 1/4	1 1/4	3/4	9 3/4																1.5
3	30	12	2 1/4		5/8	6		11	2 1/4	1 1/2	11 3/4																2.5
4																											
5																											

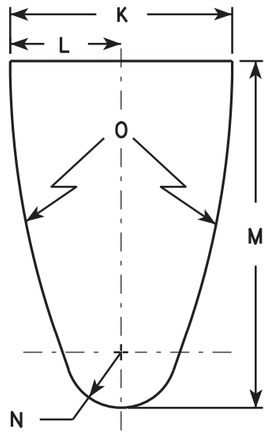
STANDARD SIGN
R1-3P

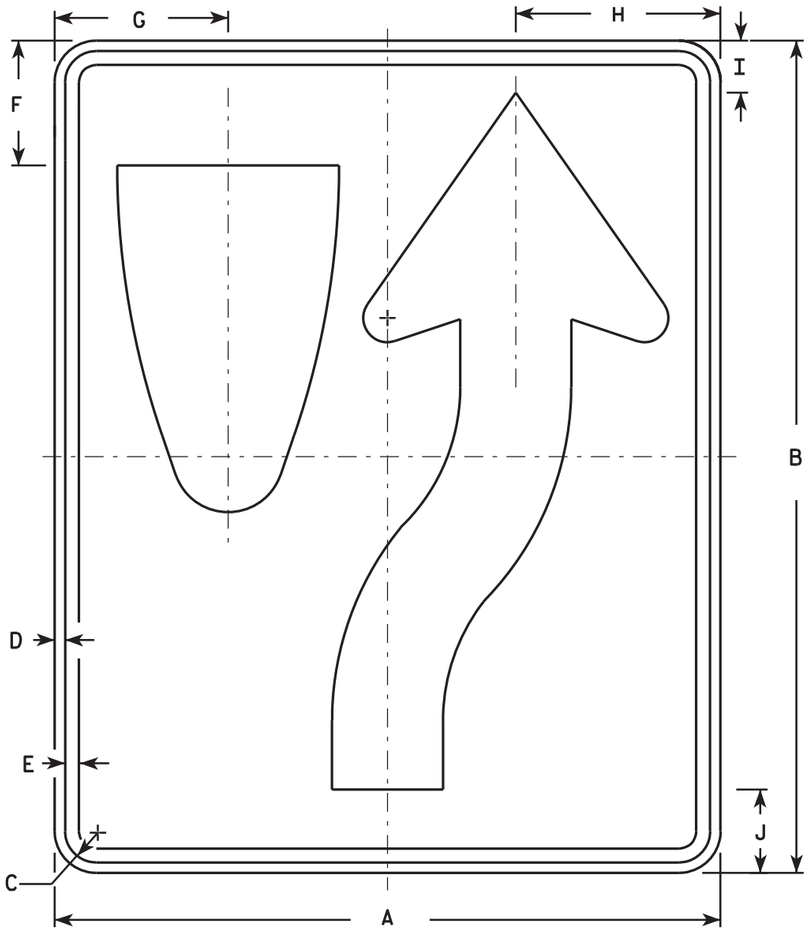
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. R1-3P.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 431	E

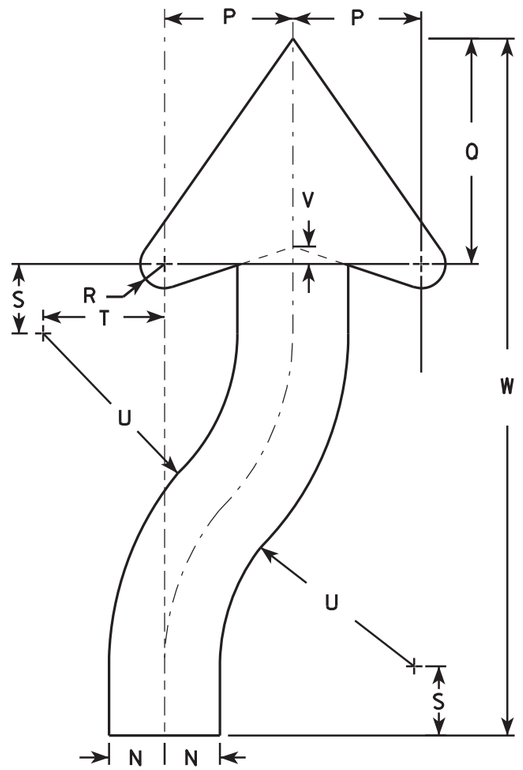




R4-7

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

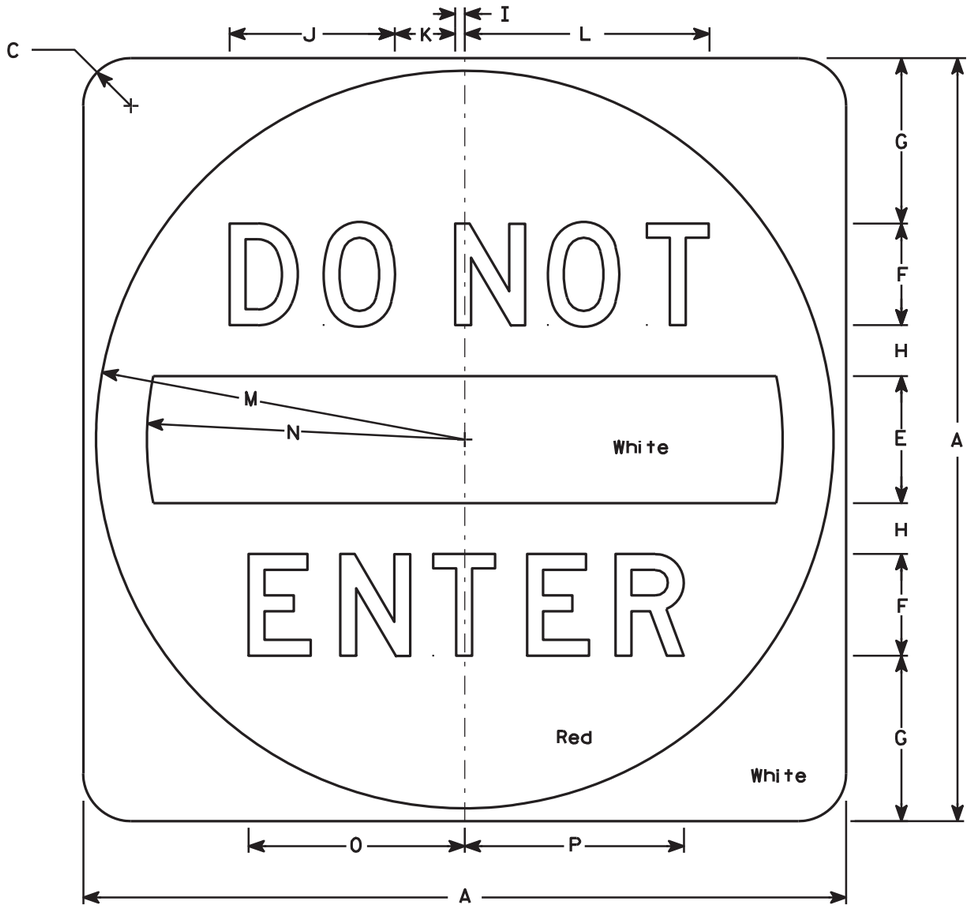
STANDARD SIGN
R4-7 & R4-8

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: 432	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

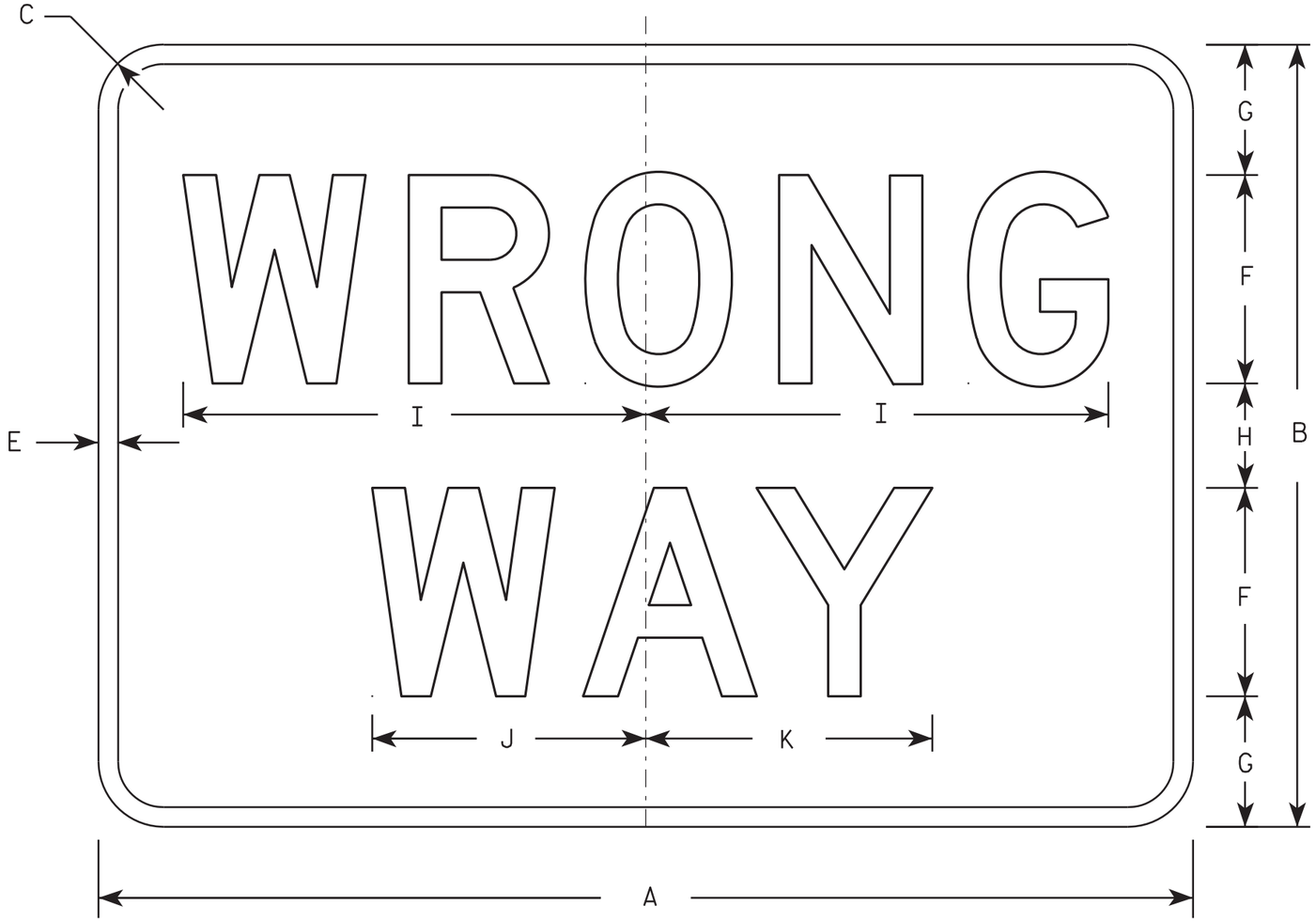
STANDARD SIGN
R5-1

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: 433 | 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: 434	E

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

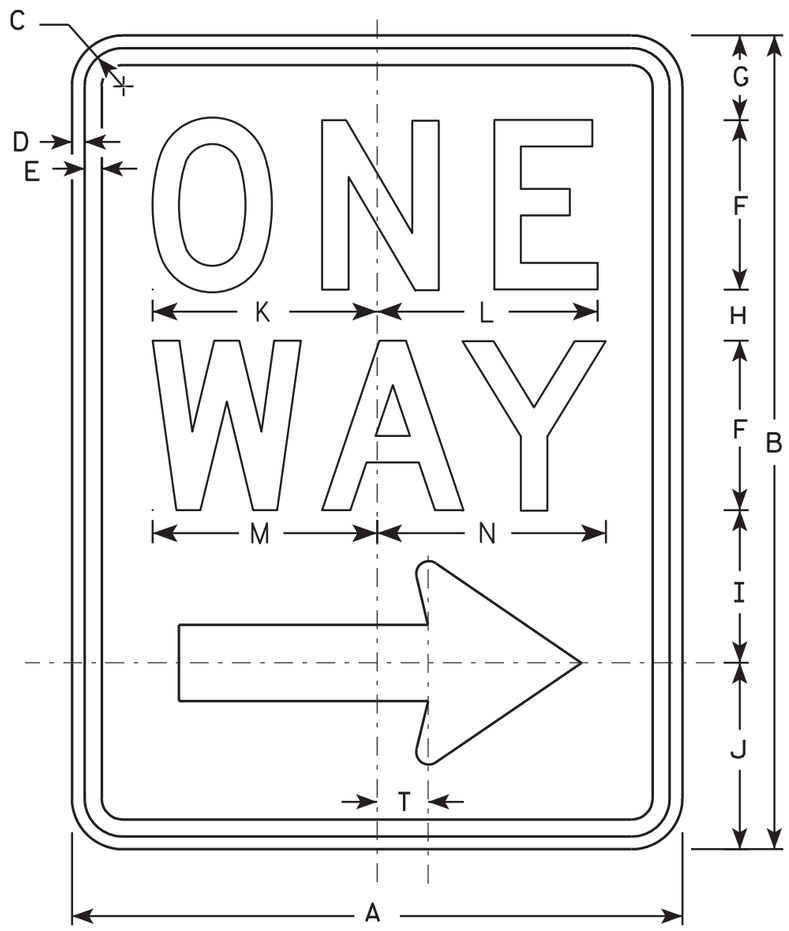
STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

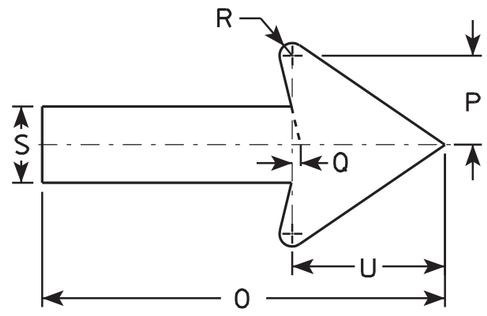
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 435 | E



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																										

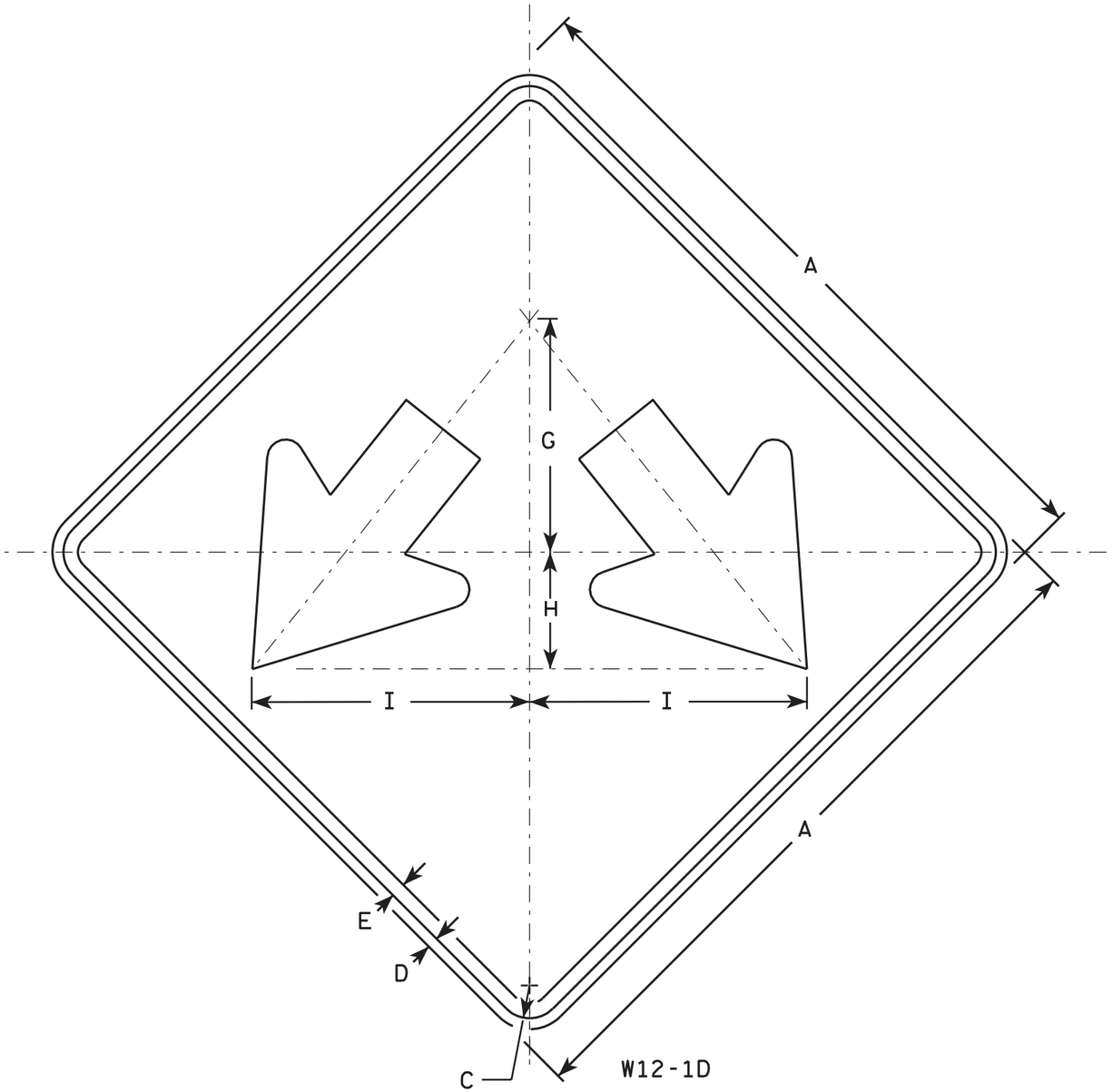
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

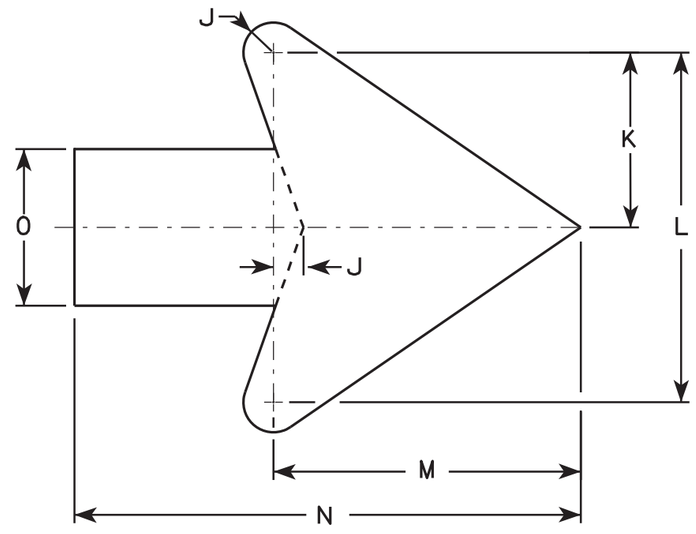
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 436 | E



W12-1D

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		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

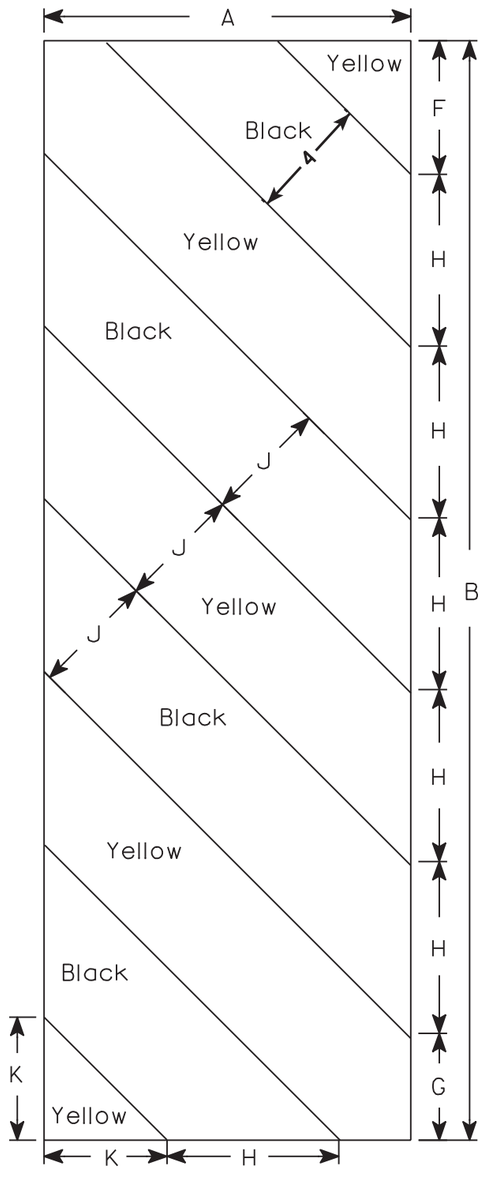
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 437	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W121D.DGN PLOT DATE : 13-MAR-2013 13:26 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.713802:1.000000

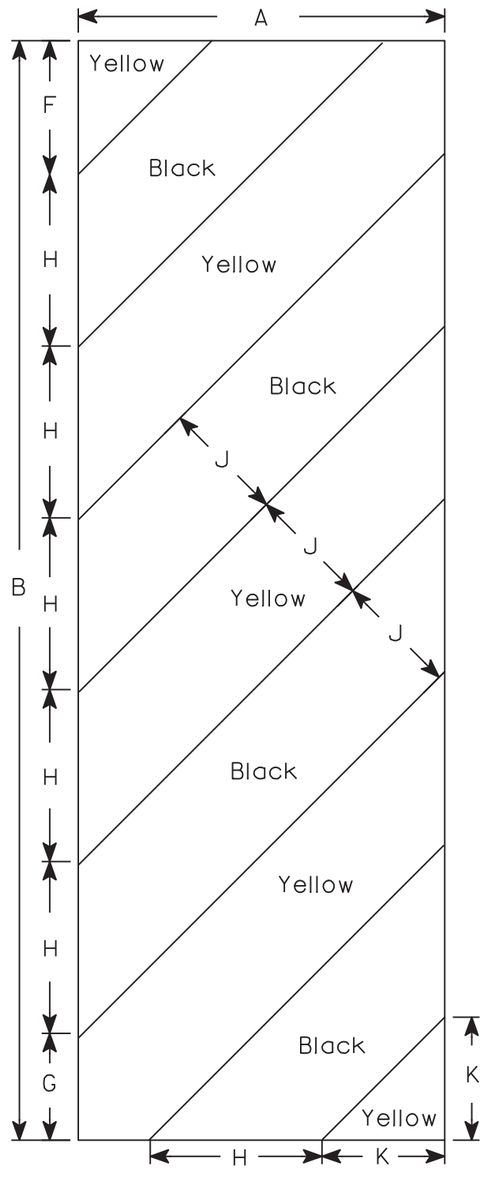
WISDOT/CADDS SHEET 42

7

7



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

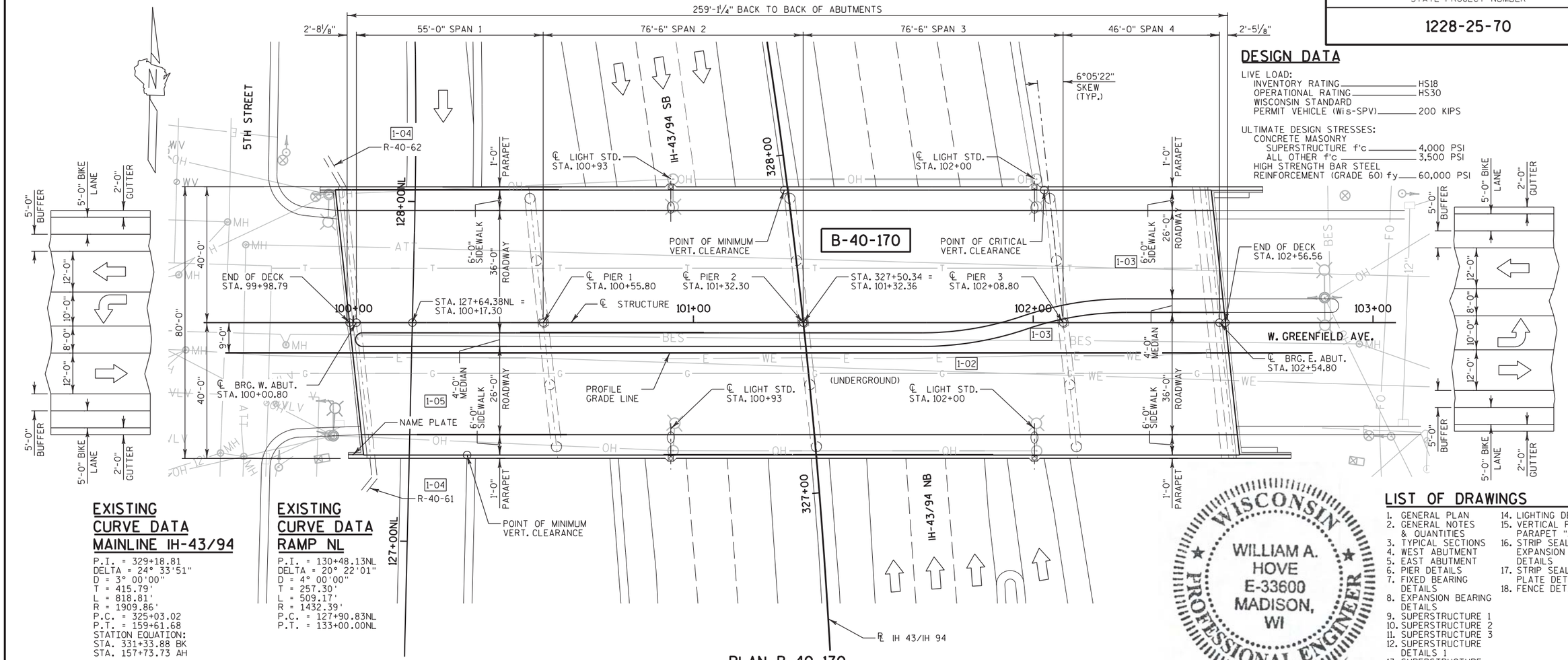
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 438	E

STATE PROJECT NUMBER

1228-25-70



EXISTING CURVE DATA MAINLINE IH-43/94

P.I. = 329+18.81
DELTA = 24° 33'51"
D = 3° 00'00"
T = 415.79'
L = 818.81'
R = 1909.86'
P.C. = 325+03.02
P.T. = 159+61.68
STATION EQUATION:
STA. 331+33.88 BK
STA. 157+73.73 AH

EXISTING CURVE DATA RAMP NL

P.I. = 130+48.13NL
DELTA = 20° 22'01"
D = 4° 00'00"
T = 257.30'
L = 509.17'
R = 1432.39'
P.C. = 127+90.83NL
P.T. = 133+00.00NL

TRAFFIC DATA

IH-43/94
A.D.T. (2040) = 137,000
D.H.V. (2040) = 13,426
R.D.S. - = 55 MPH

W. GREENFIELD AVE.
A.D.T. (2035) = 5,879
D.H.V. (2035) = 637
R.D.S. - = 35 MPH

LEGEND

1-01 CRITICAL CLEARANCE AT FLOW LINE. CLEARANCE IS 14'-9½" AT EDGE OF RAMP LANE.

1-02 UTILITY ON BRIDGE, TO BE REMOVED BY OWNER PRIOR TO CONSTRUCTION.

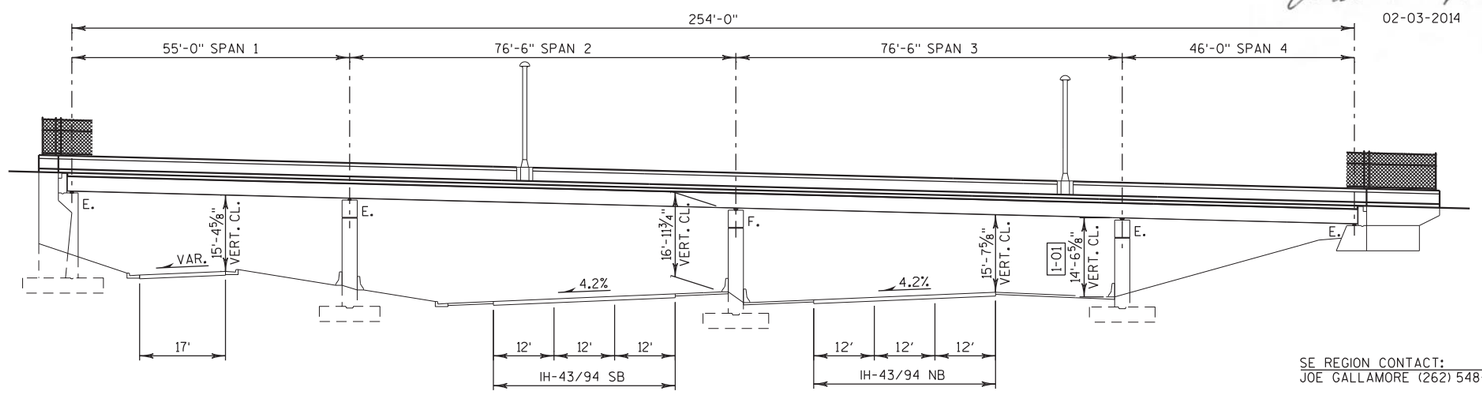
1-03 UTILITY ON BRIDGE TO REMAIN. SEE SPECIAL PROVISIONS AND ROADWAY PLANS FOR DETAILS.

1-04 EXISTING RETAINING WALLS TO REMAIN.

1-05 NAME PLATE AND BENCH MARK CAP (WHEN SUPPLIED) FOR LOCATION, SEE SHEET 15.

PLAN B-40-170

(DECK REPLACEMENT - 4 SPAN STEEL GIRDER BRIDGE)



ELEVATION

(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:
INVENTORY RATING — HS18
OPERATIONAL RATING — HS30
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV) — 200 KIPS

ULTIMATE DESIGN STRESSES:
CONCRETE MASONRY
SUPERSTRUCTURE f'c — 4,000 PSI
ALL OTHER f'c — 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) fy — 60,000 PSI

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL NOTES & QUANTITIES
3. TYPICAL SECTIONS
4. WEST ABUTMENT
5. EAST ABUTMENT
6. PIER DETAILS
7. FIXED BEARING DETAILS
8. EXPANSION BEARING DETAILS
9. SUPERSTRUCTURE 1
10. SUPERSTRUCTURE 2
11. SUPERSTRUCTURE 3
12. SUPERSTRUCTURE DETAILS 1
13. SUPERSTRUCTURE DETAILS 2
14. LIGHTING DETAILS
15. VERTICAL FACE PARAPET "A"
16. STRIP SEAL EXPANSION JOINT DETAILS
17. STRIP SEAL COVER PLATE DETAILS
18. FENCE DETAILS

WISCONSIN PROFESSIONAL ENGINEER
WILLIAM A. HOVE
E-33600
MADISON, WI

02-03-2014

SE REGION CONTACT:
JOE GALLAMORE (262) 548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
BILL HOVE (262) 354-3014

NO.	DATE	REVISION	BY

CORRE
Structural Environmental Municipal Transportation
6510 GRAND TETON PLAZA, SUITE 334
MADISON, WI 53719
608.661.4119
www.correngineering.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher FOR: 02/03/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-170

W. GREENFIELD AVE. OVER IH 43/IH 94

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	PJM	DESIGN CK'D.	BH	DRAWN BY	BSS	PLANS CK'D.	BH

GENERAL PLAN

SHEET 1 OF 18

439

STATE PROJECT NUMBER

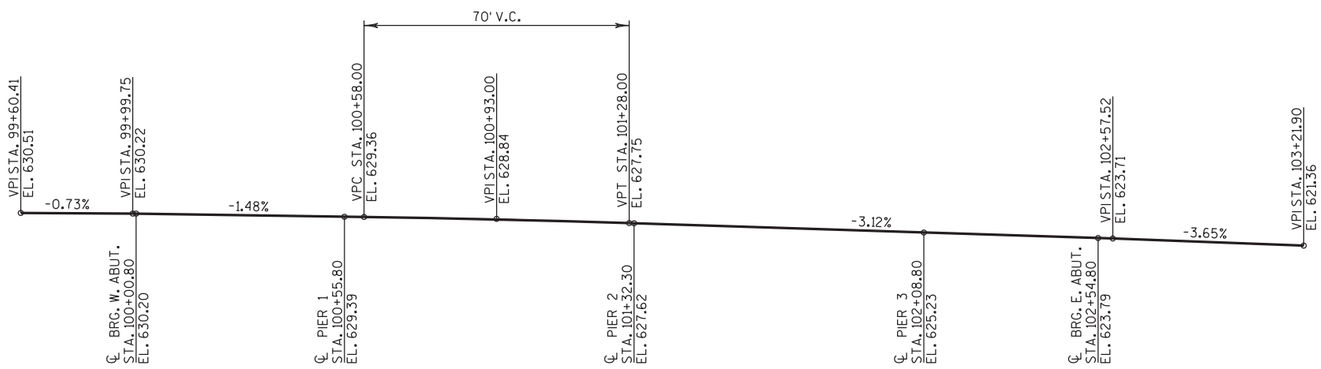
1228-25-70

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	ITEM DESCRIPTION	ITEM UNIT	WEST ABUTMENT	PIER #1	PIER #2	PIER #3	EAST ABUTMENT	SUPERSTRUCTURE	QUANTITY
	203.0200.0001	REMOVING OLD STRUCTURE STA. 101+32	LS	----	----	----	----	----	----	1
	203.0210.S.0001	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-170	LS	----	----	----	----	----	----	1
	203.0225.S.0001	DEBRIS CONTAINMENT B-40-170	LS	----	----	----	----	----	----	1
	206.1000.0001	EXCAVATION FOR STRUCTURES BRIDGES B-40-170	LS	----	----	----	----	----	----	1
	209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	70	----	----	----	70	----	140
*	502.0100	CONCRETE MASONRY BRIDGES	CY	27	1	1	1	30	696	756
	502.3100.0001	EXPANSION DEVICE B-40-170	LS	----	----	----	----	----	----	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	----	----	----	----	----	2,460	2,460
	502.5005	MASONRY ANCHORS TYPE L No. 5 BARS	EACH	130	42	42	42	174	----	430
	502.6110	MASONRY ANCHORS TYPE S 3/4-INCH	EACH	10	----	----	----	10	----	20
*	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	2390	220	220	220	2850	157,780	163,680
	506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	10	10	----	10	10	----	40
	506.5000.0001	BEARING ASSEMBLIES FIXED B-40-170	EACH	----	----	10	----	----	----	10
	506.7050.S.0001	REMOVING BEARINGS B-40-170	EACH	10	10	10	10	10	----	50
	506.7060.S.0001	BRIDGE JACKING B-40-170	LS	----	----	----	----	----	----	1
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	20	----	----	----	20	----	40
	517.0900.S.0001	PREPARATION AND COATING OF TOP FLANGES B-40-170	LS	----	----	----	----	----	----	1
	517.1800.S.0001	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-170	LS	----	----	----	----	----	----	1
	517.4500.S.0001	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-170	LS	----	----	----	----	----	----	1
	517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	----	----	----	----	----	----	1
	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	120	----	----	----	150	----	270
	652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	----	----	----	----	----	10	10
	652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	----	----	----	----	----	1,120	1,120
	653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	----	----	----	----	----	4	4
	657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	----	----	----	----	----	4	4
	SPV.0090.4000	FENCE CHAIN LINK POLYMER COATED 8-FT	LF	11	----	----	----	32	512	555
	SPV.0105.4000	COVER PLATE MODIFICATION B-40-170	LS	----	----	----	----	----	----	1
	NON-BID ITEMS									
	----	FILLER	SIZE	----	----	----	----	----	----	1/2" & 3/4"
	----	NAME PLATE	EACH	----	----	----	----	----	----	1

ALL ITEMS ARE CATEGORY 2000.

*THE CONCRETE AND REINFORCEMENT OF THE PARAPET ON THE WINGWALLS ARE INCLUDED IN THE ABUTMENT QUANTITIES. SUPERSTRUCTURE QUANTITIES INCLUDE THE CONCRETE AND REINFORCEMENT OF THE PARAPET ON THE DECK.



*PROFILE GRADE LINE WEST GREENFIELD AVENUE

*OFFSET 9'-0" FROM ℄, AS SHOWN ON TYPICAL SECTION ON SHEET 3.
STATION AT ℄ WITH CORRESPONDING ELEVATION AT PGL
IS SHOWN FOR SUBSTRUCTURES

GENERAL NOTES

THE EXISTING STRUCTURE (B-40-170) IS A FOUR-SPAN, STEEL GIRDER BRIDGE WITH AN OVERALL LENGTH OF 259.10 FEET AND AN OVERALL WIDTH OF 80.0 FEET. THE GIRDERS ARE TO BE PAINTED. THE BEARINGS, THE DECK, AND PARAPETS REPLACED, AND THE SUPERSTRUCTURE RAISED.

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M153, TYPES I, II, OR III OR M213.

THE FIRST DIGIT OF A THREE DIGIT AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

AT ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL CONTROLLED LOW STRENGTH.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 2½" WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL PLANS.

EXISTING ABUTMENTS AND PIERS TO REMAIN IN PLACE AS SHOWN AND INCORPORATED INTO NEW CONSTRUCTION.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

CLEAN, STRAIGHTEN, AND INCORPORATE EXISTING BAR STEEL REINFORCEMENT INTO NEW WORK, WHERE APPLICABLE.

VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWING. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR, 1968.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF SLAB, FACE OF CURB, TOP OF SIDEWALK AND MEDIAN, AND TO THE TOP AND ROADWAY FACE OF THE PARAPET.

ORIGINAL STRUCTURE PLANS OF EXISTING BRIDGE B-40-170 ARE AVAILABLE AT THE WISDOT SE REGION OFFICE. REFERENCE THOSE PLANS FOR THE DESIGN OF FALSEWORK.

FENCE AND FABRIC SHALL BE BLACK, FEDERAL COLOR NO. 27038.

STEEL SHALL BE PAINTED DENIM (BLUE)-SW6523, B-G/B/138, IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

THE CITY OF MILWAUKEE WILL REMOVE AND REINSTALL EXISTING LIGHT POLES. SEE SPECIAL PROVISIONS FOR COORDINATION REQUIREMENTS.

EXISTING UTILITIES OWNED BY WE ENERGIES ELECTRIC WILL BE REMOVED PRIOR TO CONSTRUCTION.

EXISTING UTILITIES OWNED BY THE CITY OF MILWAUKEE & AT&T WILL REMAIN ATTACHED TO THE STRUCTURE. CARE IS TO BE TAKEN TO PROTECT THE UTILITY DURING DECK DEMOLITION AND OTHER CONSTRUCTION ACTIVITIES.

EXISTING UTILITIES OWNED BY THE CITY OF MILWAUKEE WILL BE TEMPORARILY REMOVED PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AND INSTALLING ATTACHMENT HARDWARE INTO THE DECK. COST ASSOCIATED WITH THE WORK IS INCIDENTAL TO THE CONCRETE MASONRY BRIDGES BID ITEM.

FOR UTILITIES OWNED BY AT&T: AT&T WILL SUPPLY THE ATTACHMENT HARDWARE TO THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE ATTACHMENT HARDWARE INTO THE DECK. COST ASSOCIATED WITH THE WORK IS INCIDENTAL TO THE CONCRETE MASONRY BRIDGES BID ITEM.

SEE ROADWAY PLANS FOR DETAILS REGARDING UTILITY ATTACHMENTS TO THE BRIDGE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY BSS | PLANS CK'D. BH

GENERAL NOTES & QUANTITIES

SHEET 2 OF 18

440

8

8

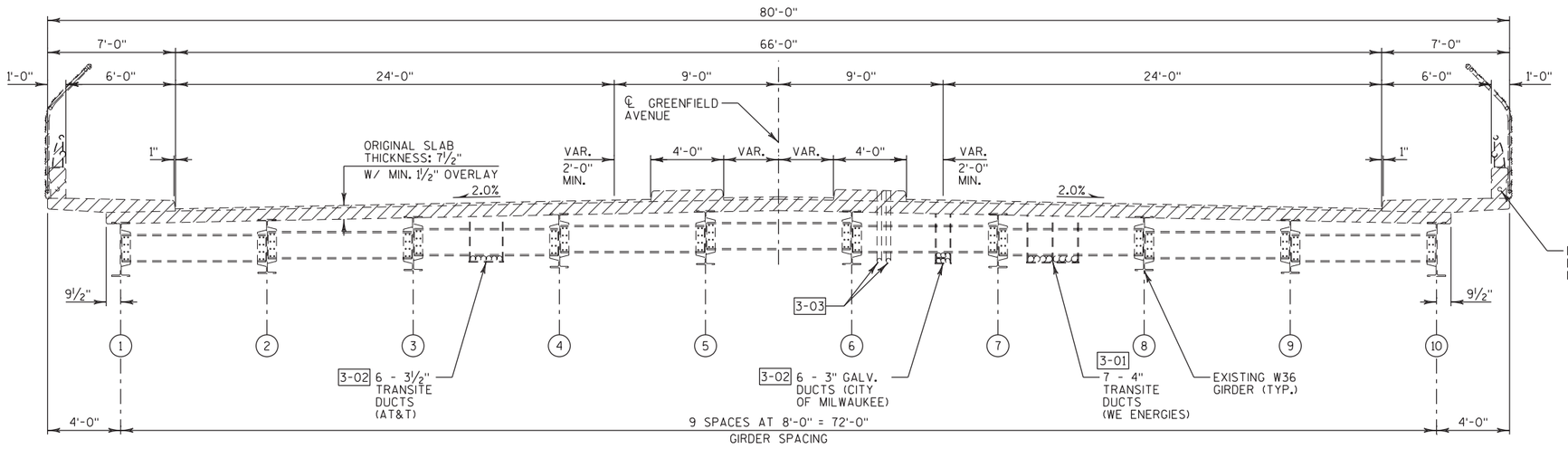
FILE NAME : S:\Projects\SE\Milwaukee County\1228-26-00 I-43 Structures Over Holt Avenue\CAD\Plans\1228-25-70\B-40-170\080102-notesquants.dgn

PLOT DATE : 2/2/2014

PLOT SCALE : 360.00000 ' / ft.

STATE PROJECT NUMBER

1228-25-70

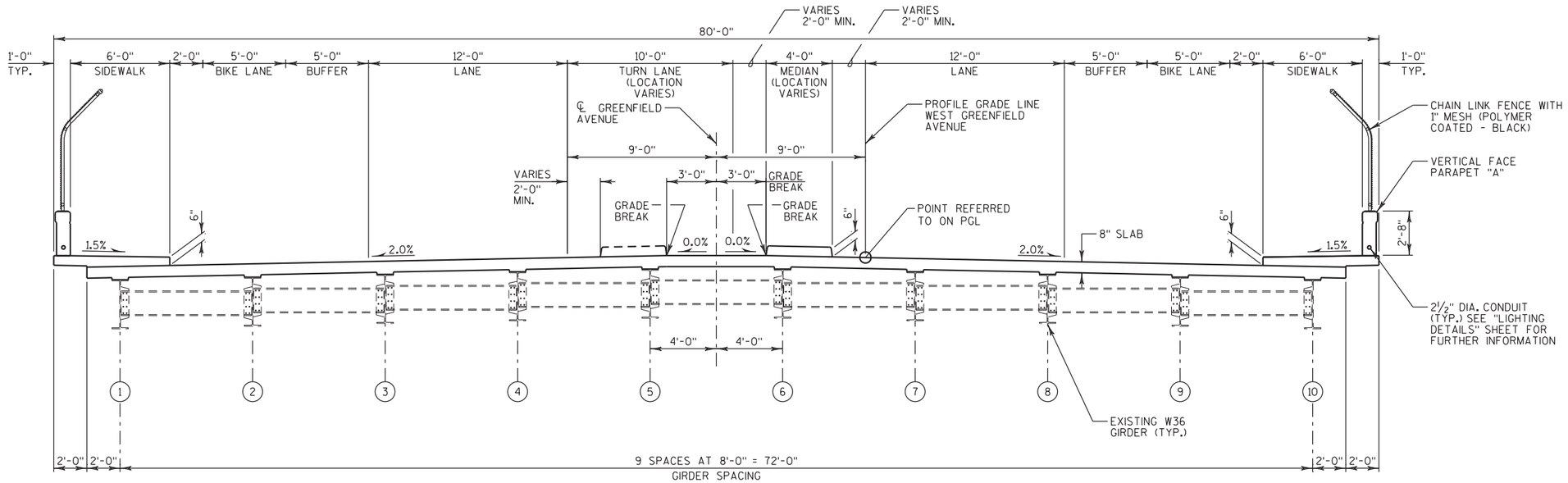


EXISTING TYPICAL SECTION

(LOOKING EAST)

LEGEND

- 3-01 ITEMS TO BE REMOVED BY UTILITY OWNER PRIOR TO CONSTRUCTION.
- 3-02 UTILITY TO REMAIN ON BRIDGE. SEE SPECIAL PROVISIONS AND DETAILS INCLUDED WITH THE ROADWAY PLANS.
- 3-03 ABANDONED ELECTRIC CONDUIT AT WEST ABUTMENT. CONDUITS BEND UP INTO MEDIAN. REMOVE AS DIRECTED BY ENGINEER.
- DENOTES REMOVAL LIMITS



PROPOSED TYPICAL SECTION

(LOOKING EAST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY BSS | PLANS CK'D. BH

TYPICAL SECTIONS

SHEET 3 OF 18

441

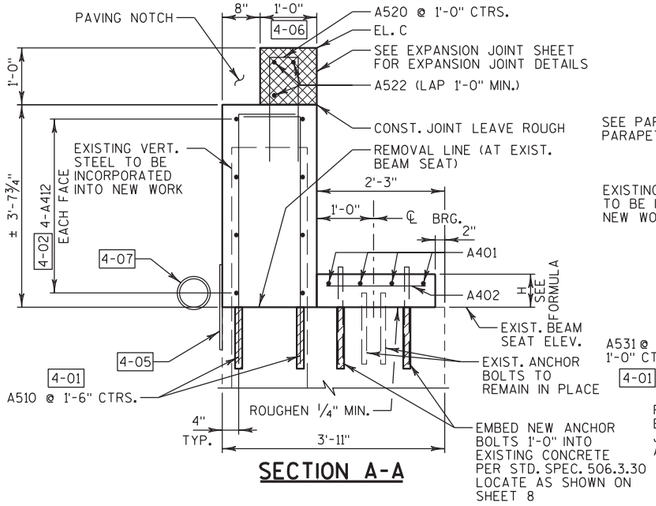
8

8

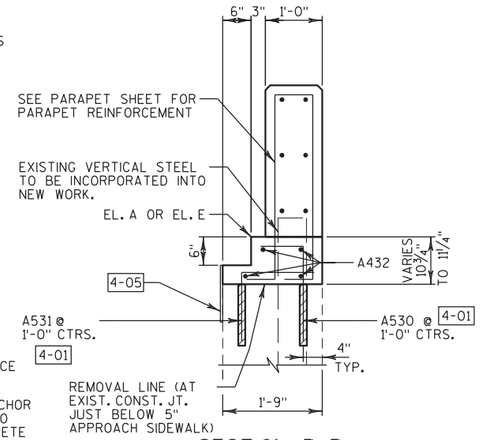
FILE NAME : S:\Projects\SE\Milwaukee County\1228-26-00 I-43 Structures Over Holt Avenue\CAD\Plans\1228-25-70\B-40-170\080103-typsec.dgn

PLOT DATE : 2/2/2014

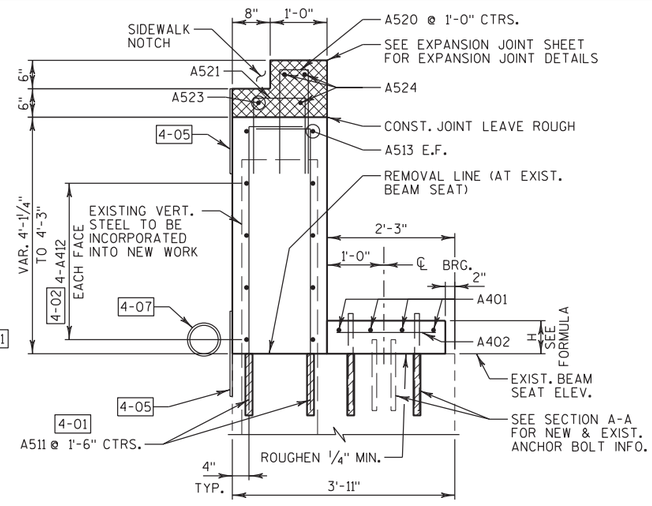
PLOT SCALE : 90.00000 ' / ft.



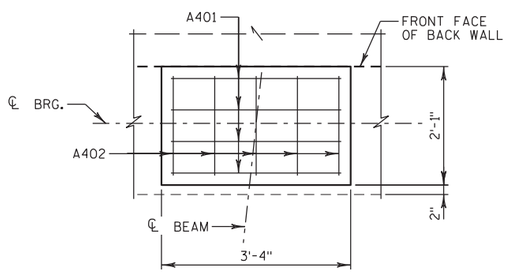
SECTION A-A



SECTION B-B

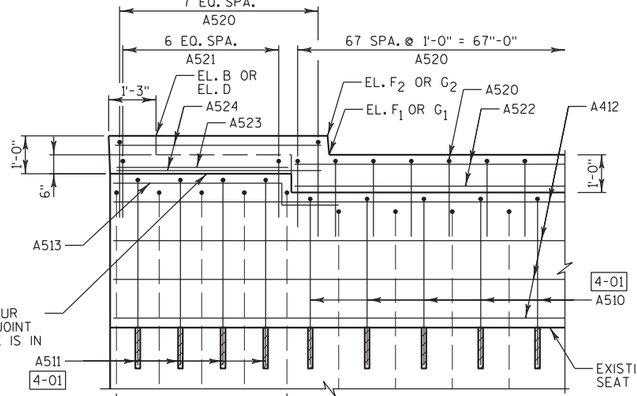


SECTION C-C

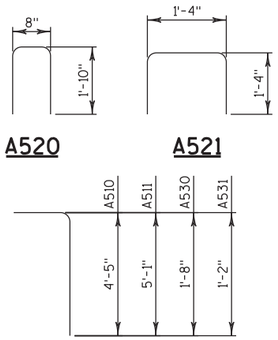


PLAN AT BEARING BLOCK

(TYP. ALL 10 LOCATIONS)



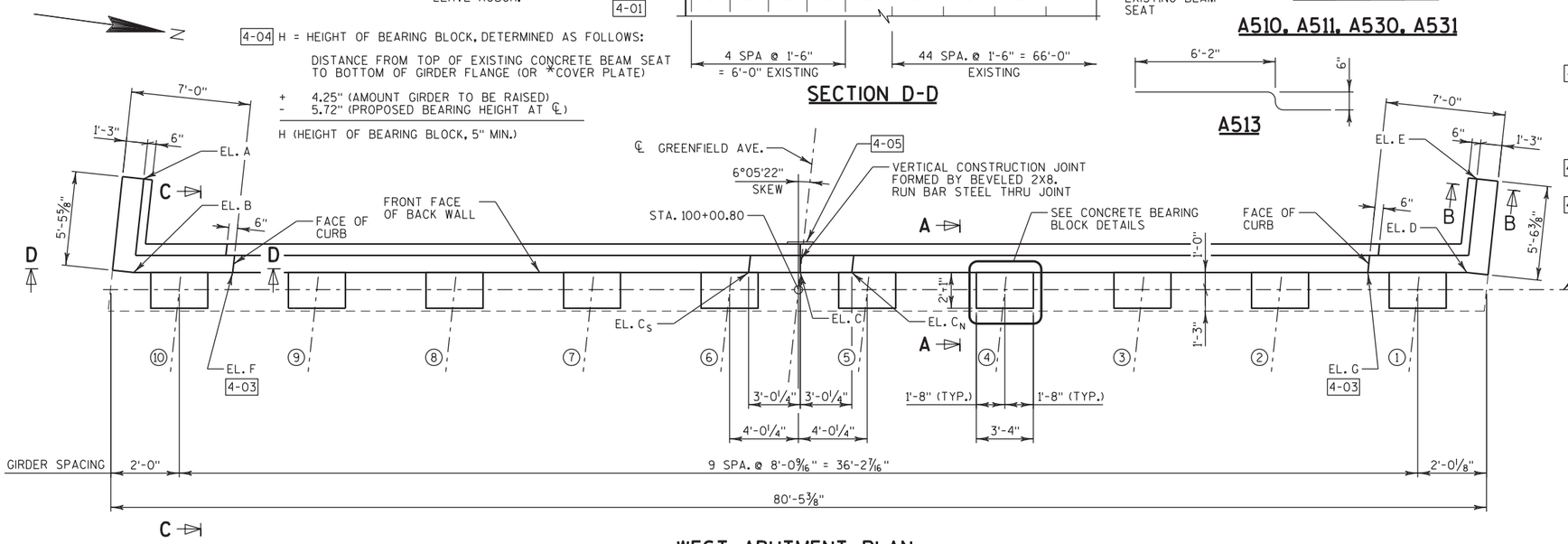
SECTION D-D



A520 A521

A510, A511, A530, A531

A513



WEST ABUTMENT PLAN

LOCATION	ELEVATION
A	630.34
B	630.27
C	630.34
C_S	630.33
C_N	630.34
D	630.36
E	630.40
F_1	629.68
F_2	630.18
G_1	629.77
G_2	630.27

STATE PROJECT NUMBER

1228-25-70

BILL OF BARS - WEST ABUTMENT

MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
EPOXY COATED BARS					TOTAL WEIGHT = 2,180 LBS.
A401	40	3'-0"			BEARING BLOCKS - HORIZONTAL
A402	50	1'-9"			BEARING BLOCKS - HORIZONTAL
A510	90	5'-6"	X		BACKWALL, F.F. & B.F. - VERTICAL
A511	16	6'-2"	X		BACKWALL, F.F. & B.F. - VERTICAL
A412	88	10'-0"			BACKWALL, F.F. & B.F. - HORIZONTAL
A513	4	8'-0"	X		BACKWALL @ S.W., F.F. & B.F. - HORIZONTAL
A520	84	4'-1"	X		PAVING BLOCK - VERTICAL
A521	14	3'-9"	X		PAVING BLOCK @ S.W. - VERTICAL
A522	30	8'-0"			PAVING BLOCK - HORIZONTAL
A523	2	6'-2"			PAVING BLOCK @ S.W. - HORIZONTAL
A524	6	6'-8"			PAVING BLOCK @ S.W. - HORIZONTAL
A530	12	2'-3"	X		TOP OF WINGS - VERTICAL
A531	12	2'-3"	X		TOP OF WINGS - VERTICAL
A432	8	5'-1"			TOP OF WINGS - HORIZONTAL
UNCOATED BARS					TOTAL WEIGHT = 0 LBS.

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR

NOTES & LEGEND

BOX OUTS WILL BE REQUIRED FOR UTILITIES RUNNING THROUGH THE ABUTMENT BACKWALL. DETAILS TO BE COORDINATED AND APPROVED BY THE ENGINEER.

Ⓧ DENOTES GIRDER NUMBER.

INDICATES CONCRETE AREA TO BE POURED AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE.

4-01 REINFORCEMENT INSTALLED WITH CONCRETE MASONRY ANCHOR TYPE L NO. 5 BAR. EMBED 1'-0" MIN. INTO EXISTING CONCRETE. VARY EMBEDMENT DEPTH TO MAINTAIN 2" CLEAR COVER AS NEEDED.

4-02 LAP BARS 2'-4" MIN. 11 BARS, 10 LAPS REQUIRED PER ROW.

4-03 ELEVATIONS GIVEN AT FLOW LINE AND TOP OF SIDEWALK.

4-04 H SHALL BE A MINIMUM OF 5". REMOVAL OF THE EXISTING CONCRETE WILL BE REQUIRED AT LOCATIONS WHERE THE EQUATION YIELDS A VALUE LESS THAN 5". THE ANTICIPATED VALUE OF "H", AT THE WEST ABUTMENT, IS 2¾". IF MORE THAN ½ OF THE PERIPHERAL AREA OF AN EXISTING REBAR IS EXPOSED THEN THE ADJACENT CONCRETE IS TO BE REMOVED TO PROVIDE A MINIMUM OF 1-INCH CLEARANCE AROUND THE BAR.

* DO NOT INCLUDE EXISTING TOP BEARING PLATE, WHICH IS TO BE REMOVED.

PRECAST BEARING BLOCKS MAY BE SUBSTITUTED BY THE CONTRACTOR WITH THE PRIOR APPROVAL OF THE ENGINEER. PAYMENT FOR THE PRECAST BEARING BLOCKS SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE CAST-IN-PLACE BEARING BLOCKS.

4-05 18" RUBBERIZED MEMBRANE WATERPROOFING. SEALL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

4-06 SLOPE TOP OF PAVING BLOCK TO FOLLOW GRADE.

4-07 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD "REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

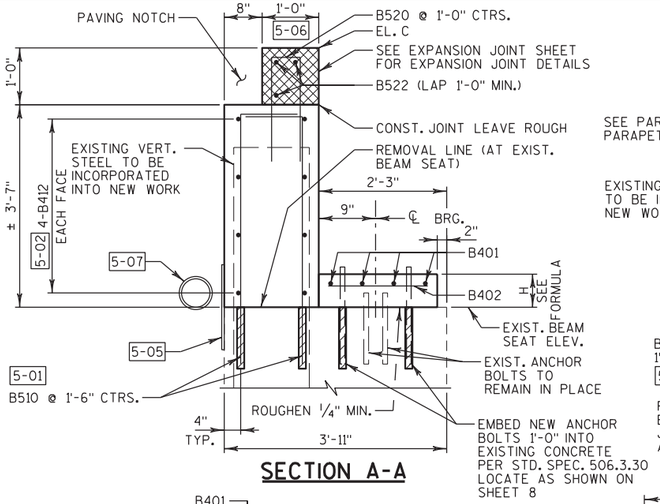
STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

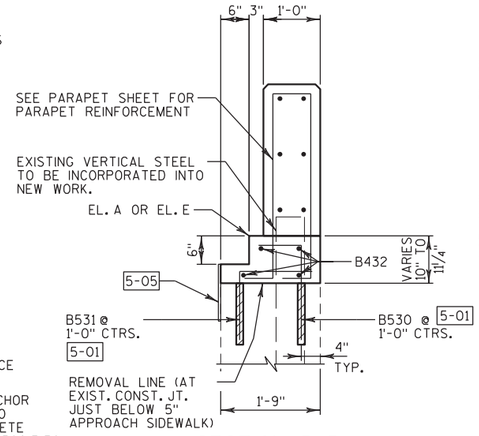
WEST ABUTMENT

SHEET 4 OF 18

FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080104-west-abut.dgn
PLOT DATE : 2/2/2014
PLOT SCALE : 2.00000 '/ ft.



SECTION A-A



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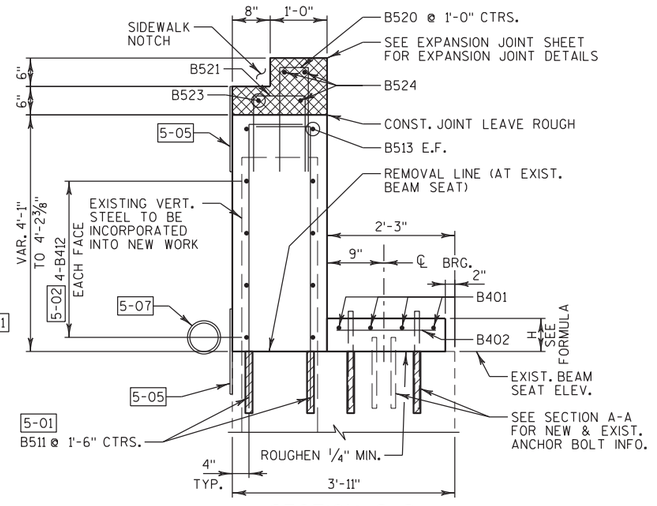

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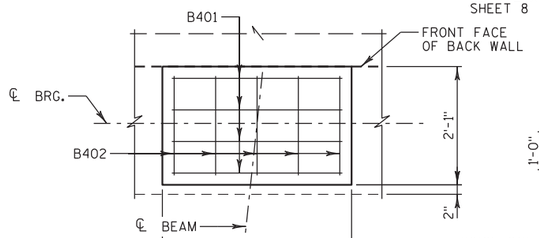
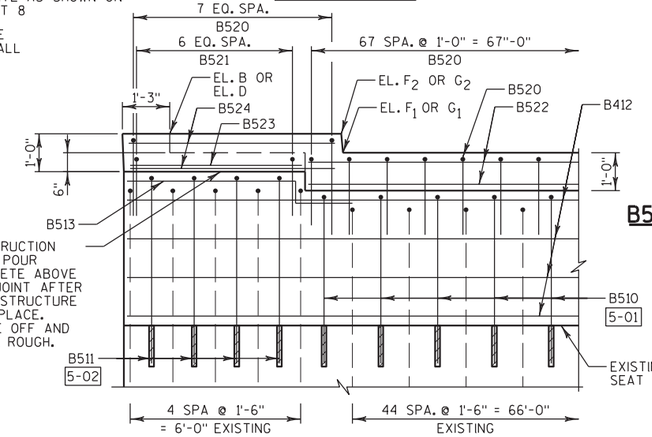
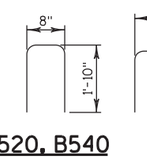


PLAN AT BEARING BLOCK

(TYP. ALL 10 LOCATIONS)

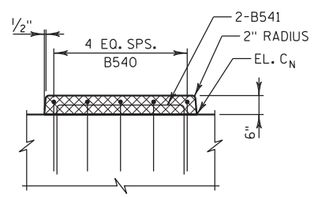


SECTION D-D



B520, B540

B521

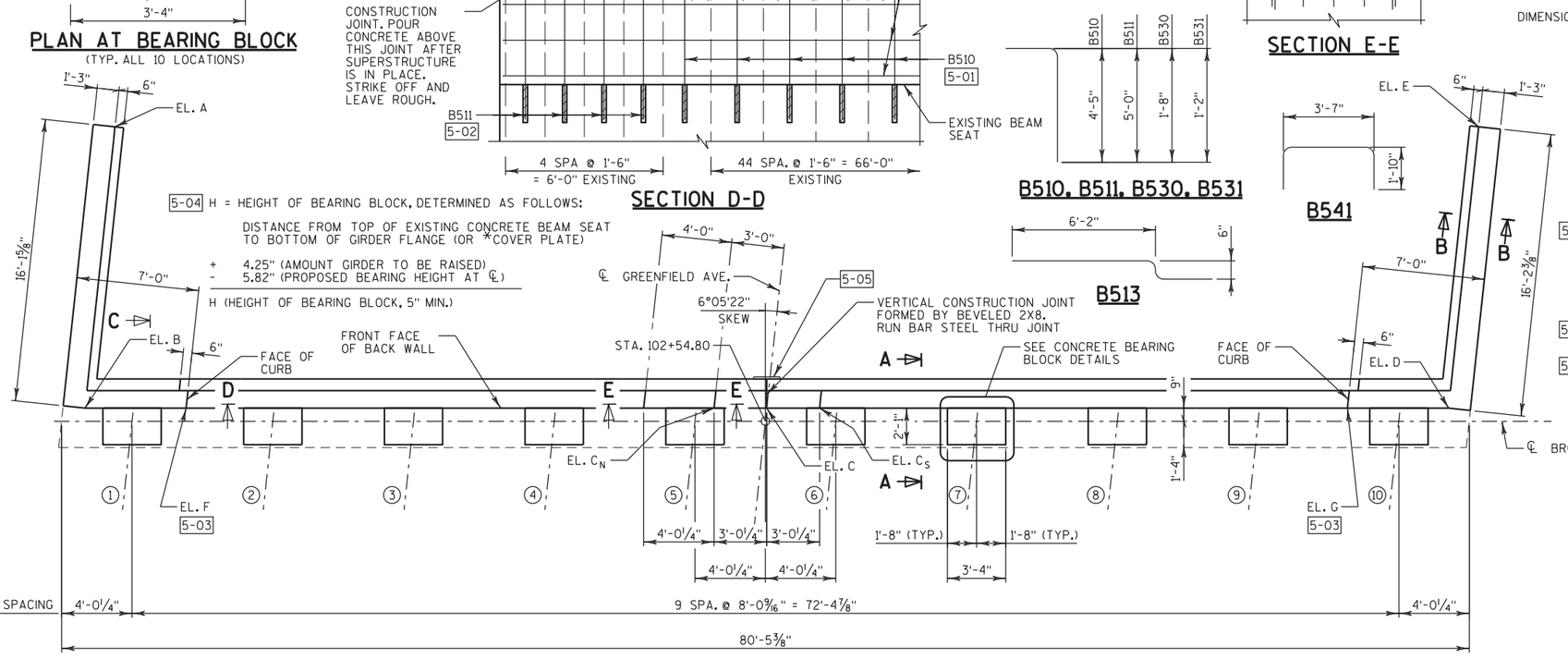


SECTION E-E

B510, B511, B530, B531

B513

B541



EAST ABUTMENT PLAN

5-04 H = HEIGHT OF BEARING BLOCK, DETERMINED AS FOLLOWS:

DISTANCE FROM TOP OF EXISTING CONCRETE BEAM SEAT TO BOTTOM OF GIRDER FLANGE (OR *COVER PLATE)

\+ 4.25" (AMOUNT GIRDER TO BE RAISED)
\- 5.82" (PROPOSED BEARING HEIGHT AT ℄)

H (HEIGHT OF BEARING BLOCK, 5" MIN.)

STATE PROJECT NUMBER

1228-25-70

BILL OF BARS - EAST ABUTMENT

MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
EPOXY COATED BARS					TOTAL WEIGHT = 2,370 LBS.
B401	40	3'-0"			BEARING BLOCKS - HORIZONTAL
B402	50	1'-9"			BEARING BLOCKS - HORIZONTAL
B510	90	5'-6"	X		BACKWALL, F.F. & B.F. - VERTICAL
B511	16	6'-1"	X		BACKWALL, F.F. & B.F. - VERTICAL
B412	88	10'-0"			BACKWALL, F.F. & B.F. - HORIZONTAL
B513	4	8'-0"	X		BACKWALL @ S.W., F.F. & B.F. - HORIZONTAL
B520	84	4'-1"	X		PAVING BLOCK - VERTICAL
B521	14	3'-9"	X		PAVING BLOCK @ S.W. - VERTICAL
B522	30	8'-0"			PAVING BLOCK - HORIZONTAL
B523	2	6'-2"			PAVING BLOCK @ S.W. - HORIZONTAL
B524	6	6'-8"			PAVING BLOCK @ S.W. - HORIZONTAL
B530	34	2'-3"	X		TOP OF WINGS - VERTICAL
B531	34	2'-3"	X		TOP OF WINGS - VERTICAL
B432	8	15'-9"			TOP OF WINGS - HORIZONTAL
B540	5	4'-1"	X		BACKWALL @ MEDIAN - VERTICAL
B541	2	7'-0"	X		BACKWALL @ MEDIAN - VERTICAL
UNCOATED BARS					TOTAL WEIGHT = 0 LBS.

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR

NOTES & LEGEND

BOX OUTS WILL BE REQUIRED FOR UTILITIES RUNNING THROUGH THE ABUTMENT BACKWALL. DETAILS TO BE COORDINATED AND APPROVED BY THE ENGINEER.

(X) DENOTES GIRDER NUMBER.

INDICATES CONCRETE AREA TO BE POURED AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE.

5-01 REINFORCEMENT INSTALLED WITH CONCRETE MASONRY ANCHOR TYPE L NO. 5 BAR. EMBED 1'-0" MIN. INTO EXISTING CONCRETE. VARY EMBEDMENT DEPTH TO MAINTAIN 2" CLEAR COVER AS NEEDED.

5-02 LAP BARS 2'-4" MIN. 11 BARS, 10 LAPS REQUIRED PER ROW.

5-03 ELEVATIONS GIVEN AT FLOW LINE AND TOP OF SIDEWALK.

5-04 H SHALL BE A MINIMUM OF 5". REMOVAL OF THE EXISTING CONCRETE WILL BE REQUIRED AT LOCATIONS WHERE THE EQUATION YIELDS A VALUE LESS THAN 5". THE ANTICIPATED VALUE OF "H", AT THE EAST ABUTMENT, IS 2 5/8". IF MORE THAN 1/2 OF THE PERIPHERAL AREA OF AN EXISTING REBAR IS EXPOSED THEN THE ADJACENT CONCRETE IS TO BE REMOVED TO PROVIDE A MINIMUM OF 1-INCH CLEARANCE AROUND THE BAR.

* DO NOT INCLUDE EXISTING TOP BEARING PLATE, WHICH IS TO BE REMOVED.

PRECAST BEARING BLOCKS MAY BE SUBSTITUTED BY THE CONTRACTOR WITH THE PRIOR APPROVAL OF THE ENGINEER. PAYMENT FOR THE PRECAST BEARING BLOCKS SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE CAST-IN-PLACE BEARING BLOCKS.

5-05 18" RUBBERIZED MEMBRANE WATERPROOFING. SEALL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

5-06 SLOPE TOP OF PAVING BLOCK TO FOLLOW GRADE.

5-07 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD "REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN".

LOCATION	ELEV.
A	623.45
B	624.01
C	623.89
C_S	623.88
C_N	623.90
D	623.74
E	623.14
F_1	623.40
F_2	623.90
G_1	623.18
G_2	623.68

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

EAST ABUTMENT

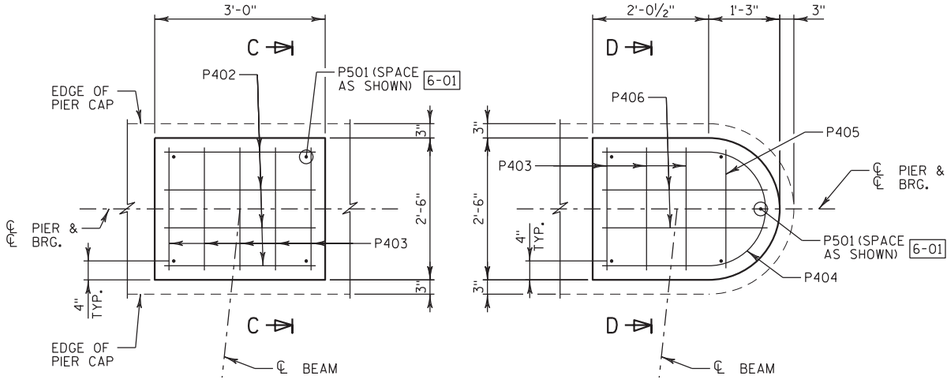
SHEET 5 OF 18

443

FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080105-east-abut.dgn

PLOT DATE : 2/2/2014

PLOT SCALE : 2.00000 '/ ft.



PLAN AT INTERIOR
BEARING BLOCK
(TYP. 8 INTERIOR LOCATIONS)

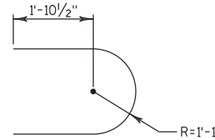
PLAN AT EXTERIOR
BEARING BLOCK
(TYP. 2 EXTERIOR LOCATIONS)

BILL OF BARS - PIERS (QUANTITY & WEIGHT SHOWN IS FOR ONE PIER)

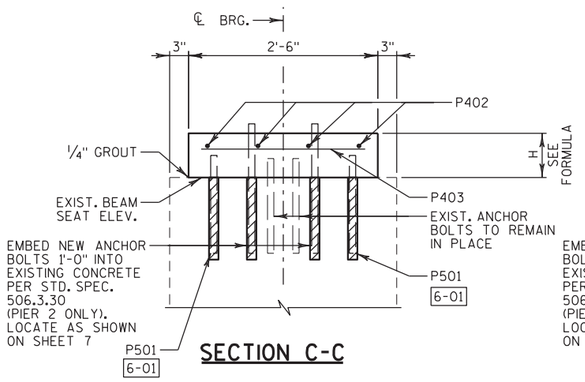
MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
EPOXY COATED BARS					TOTAL WEIGHT = 220 LBS.
P501	42	1'-9"			BEARING BLOCKS, INT & EXT. - VERTICAL
P402	32	2'-8"			BEARING BLOCKS, INT. - HORIZONTAL
P403	46	2'-2"			BEARING BLOCKS, INT & EXT. - HORIZONTAL
P404	2	7'-2"	X		BEARING BLOCKS, EXT. - HORIZONTAL
P405	2	2'-0"			BEARING BLOCKS, EXT. - HORIZONTAL
P406	4	2'-10"			BEARING BLOCKS, EXT. - HORIZONTAL
UNCOATED BARS					TOTAL WEIGHT = 0 LBS.

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

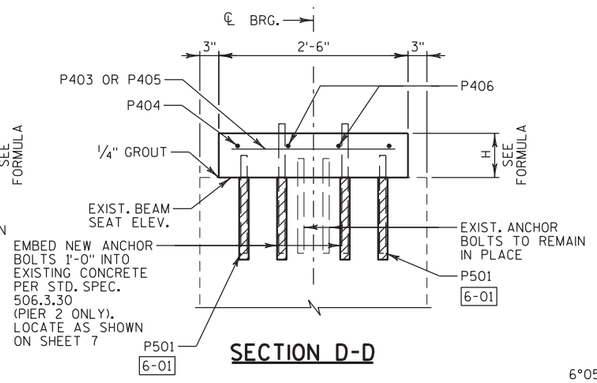
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR



P404



SECTION C-C



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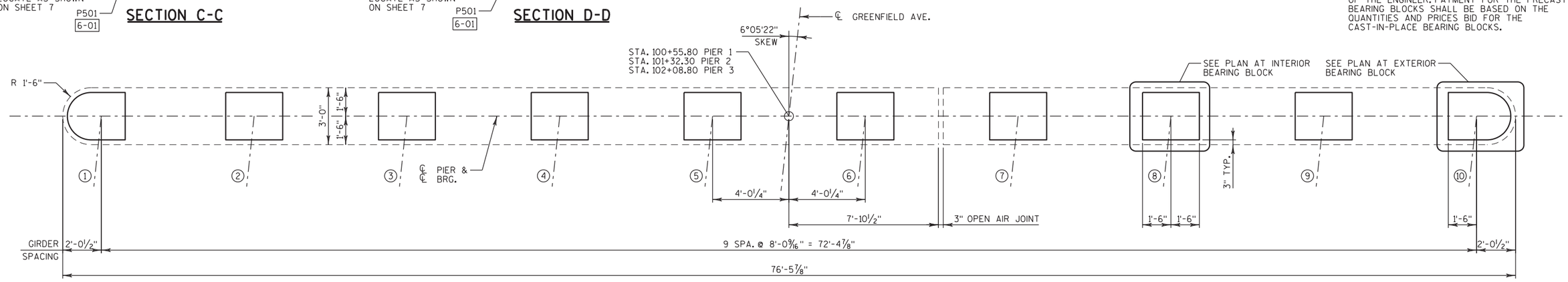


PIER PLAN

N

STATE PROJECT NUMBER

1228-25-70

NOTES & LEGEND

(X) DENOTES GIRDER NUMBER.

6-01 REINFORCEMENT INSTALLED WITH MASONRY ANCHORS TYPE L NO. 5 BAR. EMBED 1'-6" MIN. VARY DEPTH TO MAINTAIN 2" CLEAR COVER AS NEEDED.

ADJUST BAR STEEL TO MISS ANCHOR BOLTS AS REQUIRED.

H=HEIGHT OF BEARING BLOCK. H SHALL BE A MINIMUM OF 5". REMOVAL OF THE EXISTING CONCRETE WILL BE REQUIRED AT LOCATIONS WHERE THE EQUATION YIELDS A VALUE LESS THAN 5". IF MORE THAN ½ OF THE PERIPHERAL AREA OF AN EXISTING REBAR IS EXPOSED THEN THE ADJACENT CONCRETE IS TO BE REMOVED TO PROVIDE A MINIMUM OF 1-INCH CLEARANCE AROUND THE BAR. DETERMINE H AS FOLLOWS:

DISTANCE FROM TOP OF EXISTING CONCRETE BEAM SEAT TO BOTTOM OF GIRDER FLANGE (OR *COVER PLATE)
+4.25" (AMOUNT GIRDER TO BE RAISED)
-Z (PROPOSED BRG. HEIGHT @ ℄)
H (HEIGHT OF BEARING BLOCK)

Z = 4.16" PIER 1
Z = 4.87" PIER 2
Z = 4.31" PIER 3

*DO NOT INCLUDE EXISTING TOP BEARING PLATE, WHICH IS TO BE REMOVED.

THE ANTICIPATED VALUE OF H IS:
PIER 1:
GIRDERS 1 & 10 = 5.84"
GIRDERS 2-9 = 5.09"
PIER 2:
GIRDERS 1 & 10 = 3.44"
GIRDERS 2-9 = 3.19"
PIER 3:
GIRDERS 1 & 10 = 5.69"
GIRDERS 2-9 = 4.94"

PRECAST BEARING BLOCKS MAY BE SUBSTITUTED BY THE CONTRACTOR WITH THE PRIOR APPROVAL OF THE ENGINEER. PAYMENT FOR THE PRECAST BEARING BLOCKS SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE CAST-IN-PLACE BEARING BLOCKS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

PIER DETAILS

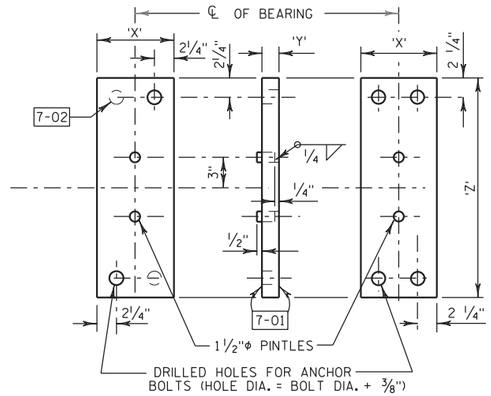
SHEET 6 OF 18

444

STATE PROJECT NUMBER

1228-25-70

	PLATE "A"		PLATE "B"		PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
	'X'	'Z'	'X'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'				
EXPANSION BEARING														
FIXED BEARING					2 3/8"	1'-0"		10"	2 3/8"	1'-9"	I	1 1/2"	10	PIER 2



TYPE I TYPE II

MASONRY PLATE "D"

BEARING NOTES & LEGEND

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

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.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES FIXED B-40-170" , EACH. REMOVAL OF THE EXISTING BEARINGS SHALL BE PAID AT THE UNIT PRICE BID FOR "REMOVING BEARINS B-40-170".

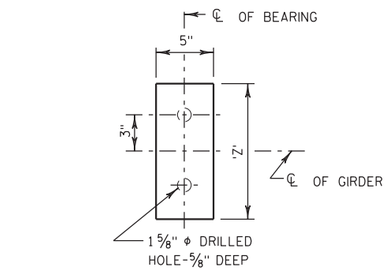
ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

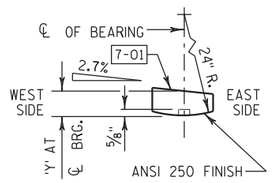
ROCKER PLATE "C" SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.
MASONRY PLATE "D" SHALL BE GALVANIZED.

7-01 FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

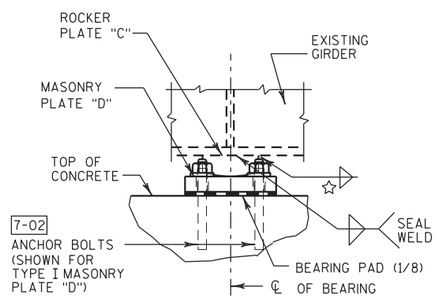
7-02 EXISTING ANCHOR BOLTS TO REMAIN EXTEND INTO CONCRETE BEARING BLOCK. ONLY CUT WHEN REQUIRED TO MAINTAIN 2" CLEAR DISTANCE TO CONCRETE SURFACE.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-10". PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

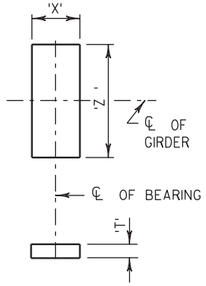




BEVELED ROCKER PLATE "C"
FIXED BEARING



FIXED BEARING ASSEMBLY



PLACE SHIM PLATE BETWEEN BEARING PAD AND MASONRY PLATE "D".

'T'	NO. REQ'D.	LOCATION

FOR DIMS. 'X', 'Z' AND ANCHOR BOLT LOCATIONS SEE MASONRY PLATE "D".

SHIM PLATE DETAILS

☆ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	ǂ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	△ 5/16"
OVER 1 1/2" TO 2 1/4"	△ 3/8"
OVER 2 1/4" TO 6"	△ 1/2"

ǂ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

FIXED BEARING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

FIXED BEARING DETAILS

SHEET 7 OF 18

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8

8

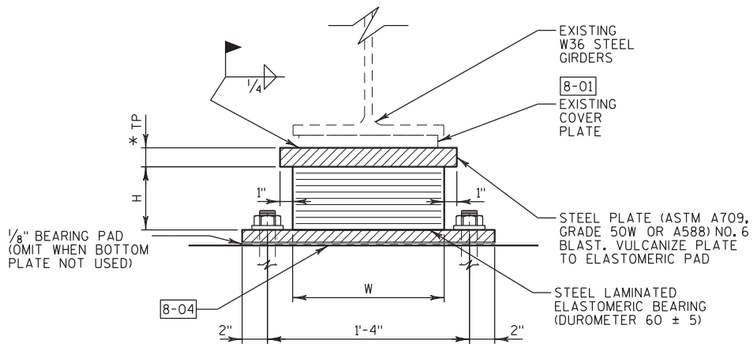
FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080107-bearing details.dgn

PLOT DATE : 2/2/2014

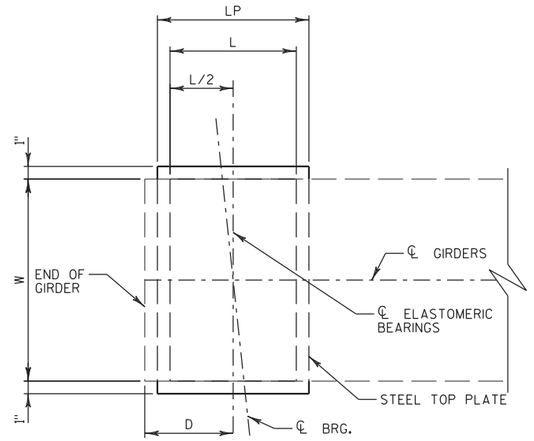
PLOT SCALE : 2.00000 '/ ft.

STATE PROJECT NUMBER

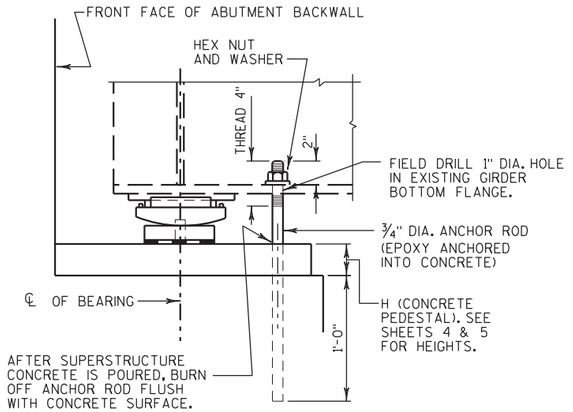
1228-25-70



FRONT ELEVATION

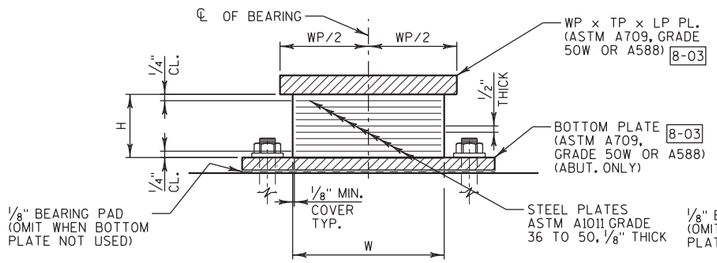


PLAN VIEW
(ABUTMENT SHOWN)

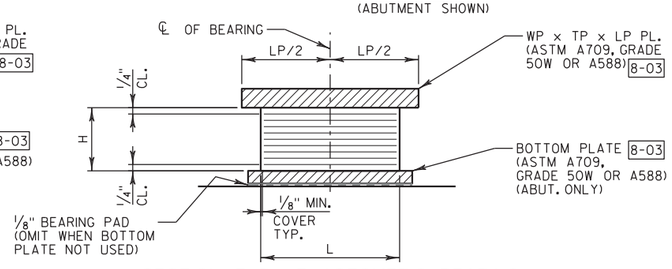


TEMPORARY HOLD DOWN DEVICE

PLACE ONE ANCHOR ROD PER GIRDER AT ABUTMENTS. LOCATE 4" (NORMAL) OFF ℄ OF GIRDER. ANCHOR ROD, NUT, WASHER AND DRILLED HOLE IN GIRDER FLANGE SHALL BE PAID FOR AS "MASONRY ANCHORS TYPE S 3/4"-INCH". EMBED 1'-0" IN CONCRETE.



SECTION THRU ELASTOMERIC BEARING
(FRONT ELEVATION)



SECTION THRU ELASTOMERIC BEARING
(SIDE ELEVATION)

BEARING NOTES:

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID AT THE UNIT BID PRICE FOR "BEARING PADS ELASTOMERIC LAMINATED". REMOVAL OF THE EXISTING BEARINGS SHALL BE PAID AT THE UNIT BID PRICE FOR "REMOVING BEARINGS B-40-170".

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATED PROCESS.

USE (2) 1 1/4"Φ X 1'-5" LONG ANCHOR BOLTS PER BEARING ASSEMBLY.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS PLATE "THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

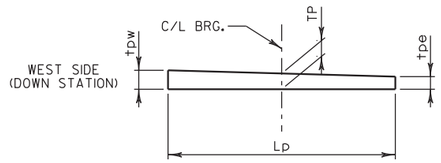
PROVIDE 1/8" BEARING PAD SAME SIZE AS BOTTOM PLATE. OMIT BEARING PAD WHERE BOTTOM PLATE IS NOT DETAILED.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

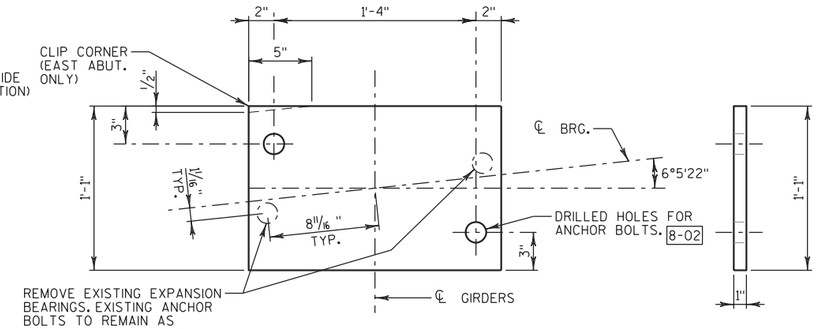
ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS "C".

BOTTOM PLATE SHALL BE GALVANIZED.



TAPERED PLATE DIAGRAM

EXPANSION BEARING REPLACEMENT
(REQUIRED AT WEST & EAST ABUTMENTS. PIERS 1 & 3)



BOTTOM PLATE DETAILS
(REQUIRED AT ABUTMENTS ONLY)

LEGEND

8-01 WELD STEEL PLATE DIRECTLY TO EXISTING BOTTOM FLANGE OR BOTTOM FLANGE COVER PLATE. PLATES WELDED TO EXISTING BEAMS THAT ARE PART OF THE EXISTING BEARINGS TO BE REMOVED. GRIND SMOOTH WELD THAT ATTACHED EXISTING BEARING TOP PLATE TO BOTTOM FLANGE OR COVER PLATE.

8-02 DRILLED HOLES FOR ANCHOR BOLTS IN BOTTOM PLATE HAVE A DIAMETER OF 3/8" LARGER THAN ANCHOR BOLT.

8-03 VULCANIZE TOP AND BOTTOM PLATE TO ELASTOMERIC PAD.

tpw = PLATE THICKNESS AT WEST SIDE OF SUBSTRUCTURE.

tpe = PLATE THICKNESS AT EAST SIDE OF SUBSTRUCTURE.

*SEE TAPERED PLATE DIAGRAM

8-04 REMOVE EXISTING EXPANSION BEARINGS. ANCHOR BOLTS TO REMAIN AND EXTEND INTO CONCRETE BEARING BLOCKS. ONLY CUT WHEN REQUIRED TO MAINTAIN 2" CLEAR DISTANCE TO CONCRETE SURFACE.

LOCATION	GIRDERS	TOTAL BEARING HEIGHT H (INCHES)	TOTAL ELASTOMER THICKNESS (INCHES)	NUMBER OF PLATES REQUIRED	LONGITUDINAL LENGTH OF BEARING L (MIN.) (INCHES)	HORIZONTAL WIDTH OF BEARING W (INCHES)	LONGITUDINAL LENGTH OF PLATE LP (MIN.) (INCHES)	HORIZONTAL WIDTH OF PLATE WP (INCHES)	THICKNESS OF PLATE			END OF GIRDER TO C/L BRG. D (INCHES)
									TPW (INCHES)	TP (INCHES)	TPE (INCHES)	
WEST ABUTMENT	1 THRU 10	3.125	2.5	5	11	12	13	14	1.6875	1.5938	1.5000	6
PIER 1	1 THRU 10	2.5	2	4	20	12	22	14	1.8125	1.6563	1.5000	N/A
PIER 3	1 THRU 10	2.5	2	4	20	12	22	14	2.1250	1.8125	1.5000	N/A
EAST ABUTMENT	1 THRU 10	3.125	2.5	5	11	12	13	14	1.8750	1.6875	1.5000	6

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

EXPANSION BEARING DETAILS

SHEET 8 OF 18

446

8

8

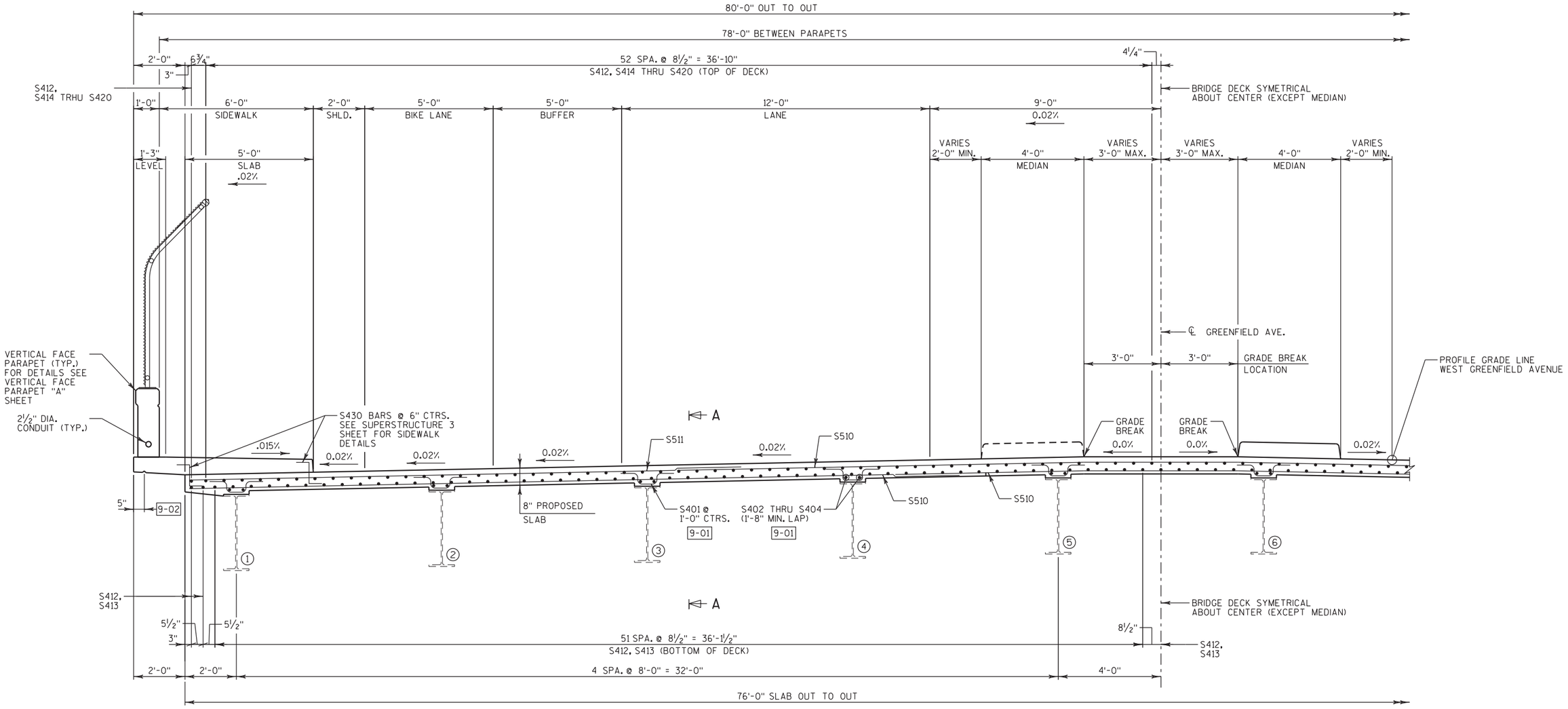
FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080108-bearing details 2.dgn

PLOT DATE : 2/2/2014

PLOT SCALE : 2.00000 '/ ft.

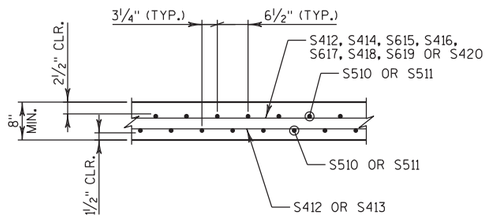
STATE PROJECT NUMBER

1228-25-70



PARTIAL CROSS-SECTION THRU ROADWAY

(LOOKING EAST)



SECTION A-A

NOTES & LEGEND

9-01 REINFORCEMENT LOCATED ONLY WHERE SHEAR LUGS EXIST. SEE SUPERSTRUCTURE DETAILS 1 SHEET FOR LIMITS.

9-02 ¾" V-GROOVE. TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENT.

(X) DENOTES GIRDER NUMBER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

SUPERSTRUCTURE 1

SHEET 9 OF 18

447

8

8

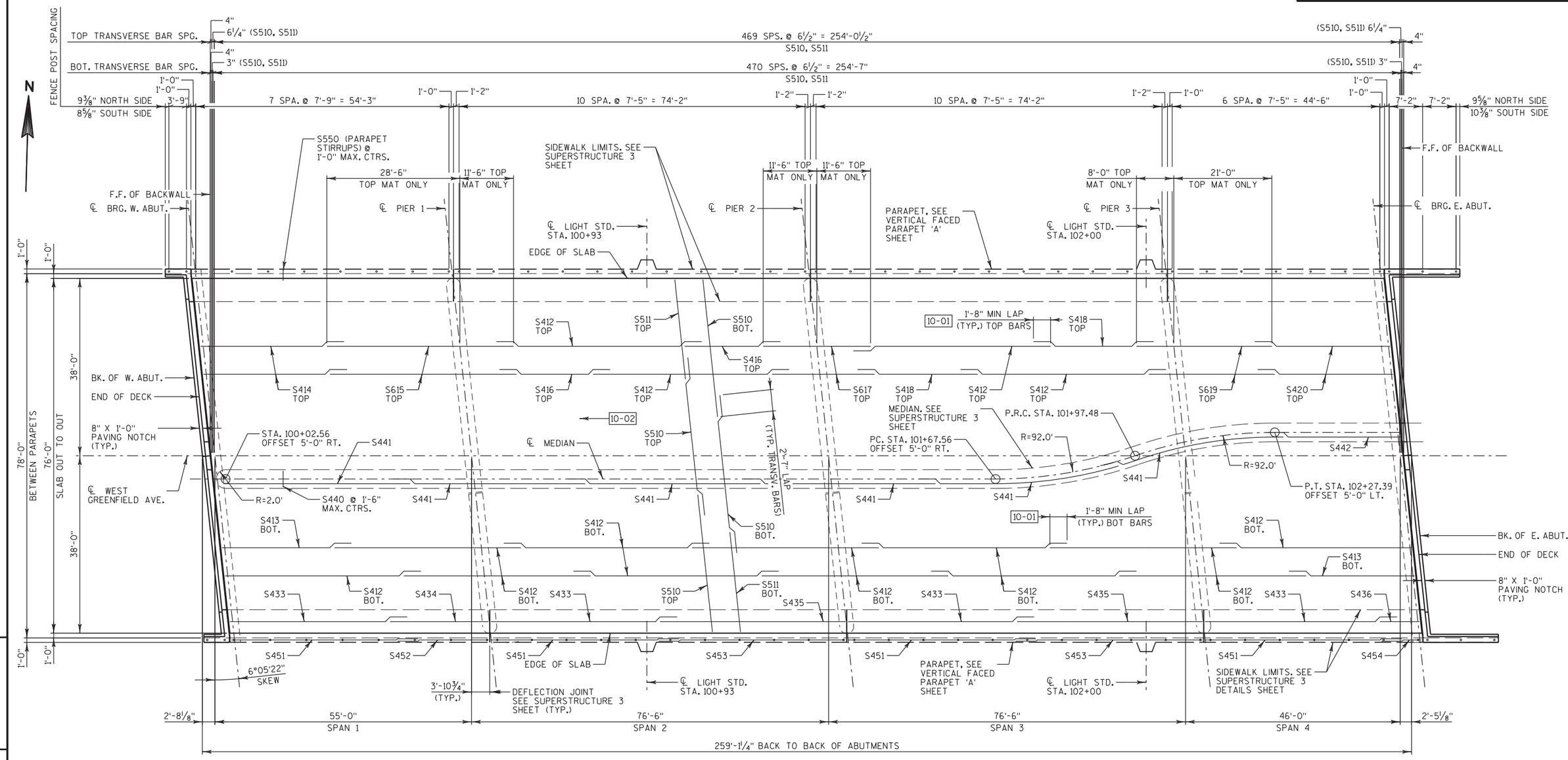
FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080109-superstructure-01.dgn

PLOT DATE : 2/2/2014

PLOT SCALE : 2.00000 '/ ft.

STATE PROJECT NUMBER

1228-25-70



PLAN

NOTES

1. ALL TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE PLACED ALONG THE SKEW.
2. THE BOTTOM TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS WITH A CENTER TO CENTER SPACING NOT TO EXCEED 4'-0". ONE LINE OF CONTINUOUS BAR CHAIRS SHALL BE PLACED NEAR EACH EDGE OF SLAB TO SUPPORT THE ENDS OF THE BOTTOM TRANSVERSE BAR STEEL.
3. THE TOP LONGITUDINAL BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS IN TRANSVERSE DIRECTION ON 4'-0" CENTERS.

LEGEND

10-01 STAGGER LAPS AS SHOWN FOR EACH ADJACENT BAR.

FOR LONGITUDIANAL BAR SPACING SEE "CROSS-SECTION THRU ROADWAY" ON SUPERSTRUCTURE 1 SHEET.

10-02 DIRECTION OF POUR SHALL BE UPHILL. THE RATE OF PLACING CONCRETE SHALL EQUAL OR EXCEED ½ SPAN LENGTH PER HOUR BUT NEED NOT EXCEED 100 C.Y. PER HOUR. THE CONTRACTOR MAY SUBMIT AN ALTERNATE POURING SEQUENCE SUBJECT TO THE APPROVAL OF THE STRUCTURES DESIGN SECTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

SUPERSTRUCTURE 2

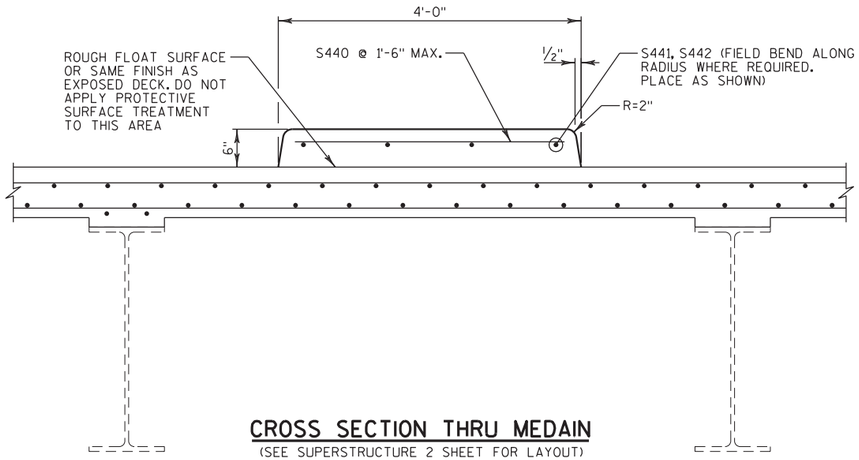
SHEET 10 OF 18

448

FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080110-superstructure-02.dgn

PLOT DATE : 2/2/2014

PLOT SCALE : 2.00000 '/ ft.



CROSS SECTION THRU MEDAIN

(SEE SUPERSTRUCTURE 2 SHEET FOR LAYOUT)

NOTES

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN THE DEFLECTION JOINT DETAIL. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

11-01 CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.

11-02 8" MIN. SIDEWALK THICKNESS REQ'D AT EDGE OF DECK/SLAB.

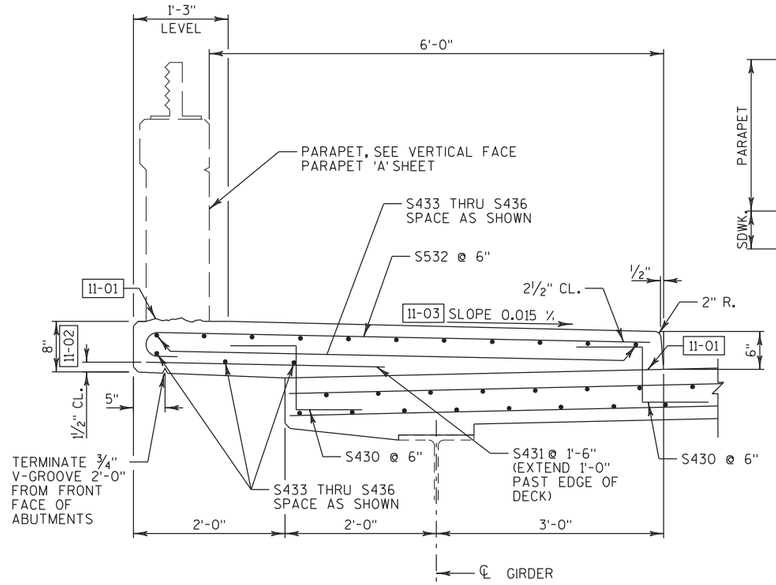
11-03 ± 0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

CLEAN ALL LOOSE MATERIAL ON THE DECK AT THE MEDIAN LOCATION PRIOR TO MEDIAN PLACEMENT USING HIGH PRESSURE WATER OR AIR. ENSURE ALL FREE-STANDING WATER IS REMOVED PRIOR TO MEDIAN PLACEMENT. NEAT CEMENT IS REQUIRED AS PER 509.3.8.2 OF THE STANDARD SPECIFICATIONS UNLESS THE MEDIAN IS POURED WITHIN 45 DAYS OF COMPLETING THE DECK POUR.

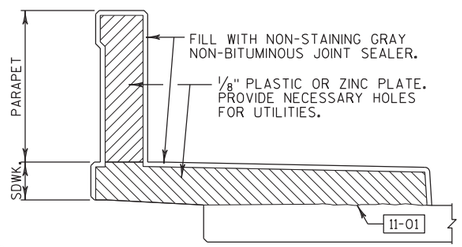
BILL OF BARS - SUPERSTRUCTURE

MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
EPOXY COATED BARS					TOTAL WEIGHT = 156,340 LBS.
S401	1310	2'-6"	X		DECK @ HAUNCHES - VERTICAL
S402	40	40'-0"			DECK @ HAUNCHES, SPANS 2 & 3 - LONGITUDINAL
S403	20	23'-8"			DECK @ HAUNCHES, SPAN 2 - LONGITUDINAL
S404	20	28'-8"			DECK @ HAUNCHES, SPAN 3 - LONGITUDINAL
S510	1890	30'-0"			DECK - TRANSVERSE
S511	945	21'-6"			DECK - TRANSVERSE
S412	870	40'-0"			DECK - LONGITUDINAL
S413	109	25'-9"			DECK, LONGITUDINAL
S414	108	29'-3"			DECK, SPAN 1 - LONGITUDINAL
S615	108	40'-0'			DECK, OVER PIER 1 - LONGITUDINAL
S416	108	18'-9"			DECK, SPAN 2 - LONGITUDINAL
S617	108	23'-0"			DECK, OVER PIER 2 - LONGITUDINAL
S418	108	22'-3"			DECK, SPAN 3 - LONGITUDINAL
S619	108	29'-0"			DECK, OVER PIER 3 - LONGITUDINAL
S420	108	27'-6"			DECK, SPAN 4 - LONGITUDINAL
S430	2048	2'-5"	X		DECK/SIDEWALK - VERTICAL
S431	344	3'-0"			SIDEWALK - TRANSVERSE
S532	1024	7'-2"	X		SIDEWALK - TRANSVERSE
S433	112	40'-0"			SIDEWALK - LONGITUDINAL
S434	28	18'-0"			SIDEWALK, SPAN 1 - LONGITUDINAL
S435	56	38'-0"			SIDEWALK, SPANS 2 & 3 - LONGITUDINAL
S436	28	8'-6"			SIDEWALK, SPAN 4 - LONGITUDINAL
S440	172	3'-6"			MEDIAN - TRANSVERSE
S441	24	40'-0"			MEDIAN - LONGITUDINAL
S442	4	26'-6"			MEDIAN - LONGITUDINAL
S550	514	6'-8"	X		PARAPET - VERTICAL
S451	48	40'-0"			PARAPET - LONGITUDINAL
S452	12	18'-0"			PARAPET, SPAN 1 - LONGITUDINAL
S453	24	38'-0"			PARAPET, SPANS 2 & 3 - LONGITUDINAL
S454	12	8'-6"			PARAPET, SPAN 4 - LONGITUDINAL
S460	180	4'-6"	X		DIAPHRAGM @ EXPANSION JOINTS - VERTICAL
S661	90	6'-8"			DIAPHRAGM @ EXPANSION JOINTS - TRANSVERSE
S462	36	6'-8"			DIAPHRAGM @ EXPANSION JOINTS - TRANSVERSE
UNCOATED BARS					TOTAL WEIGHT = 0 LBS.

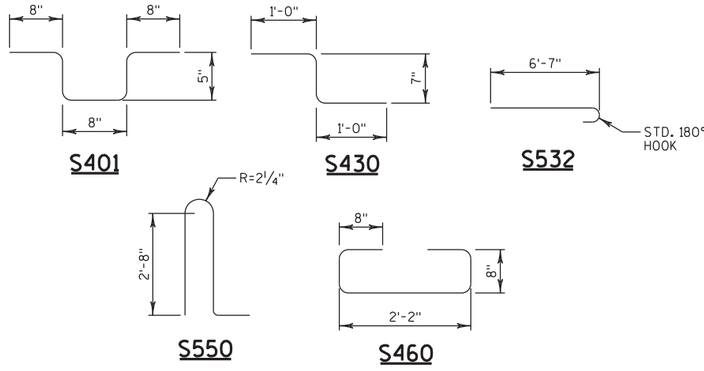
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR
SEE VERTICAL FACE PARAPET 'A' SHEET FOR PARAPET REINFORCEMENT DETAILS



SECTION THRU SIDEWALK



DEFLECTION JOINT DETAIL



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

SUPERSTRUCTURE 3

SHEET 11 OF 18

449

STATE PROJECT NUMBER

1228-25-70

8

8

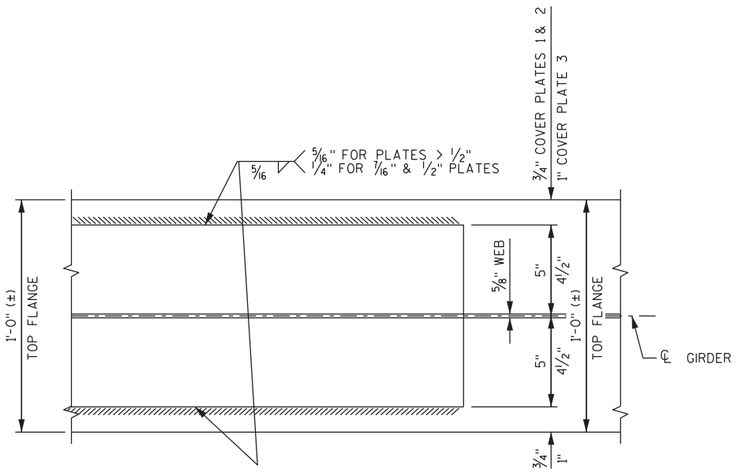
FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080111-superstructure-03.dgn

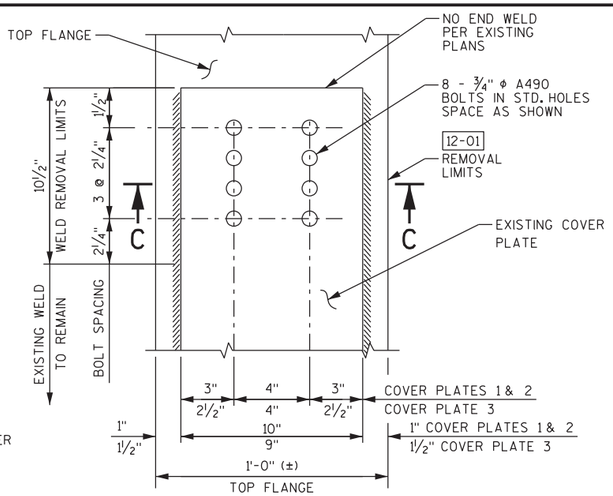
PLOT DATE : 2/2/2014

PLOT SCALE : 2.00000 '/ ft.

STATE PROJECT NUMBER

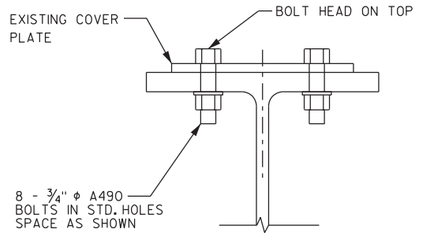
1228-25-70



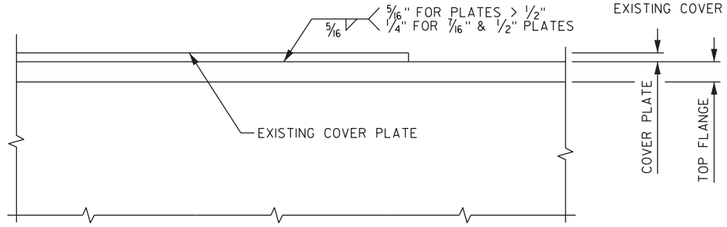


PLAN

(LOOKING DOWN AT TOP OF BEAM)

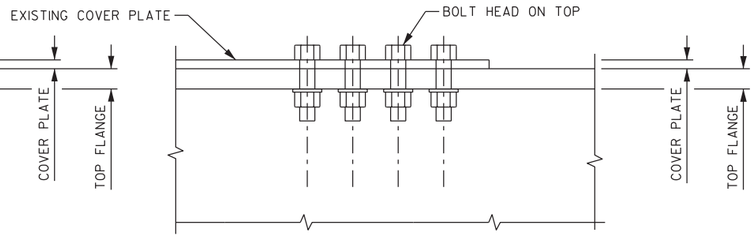


SECTION C-C

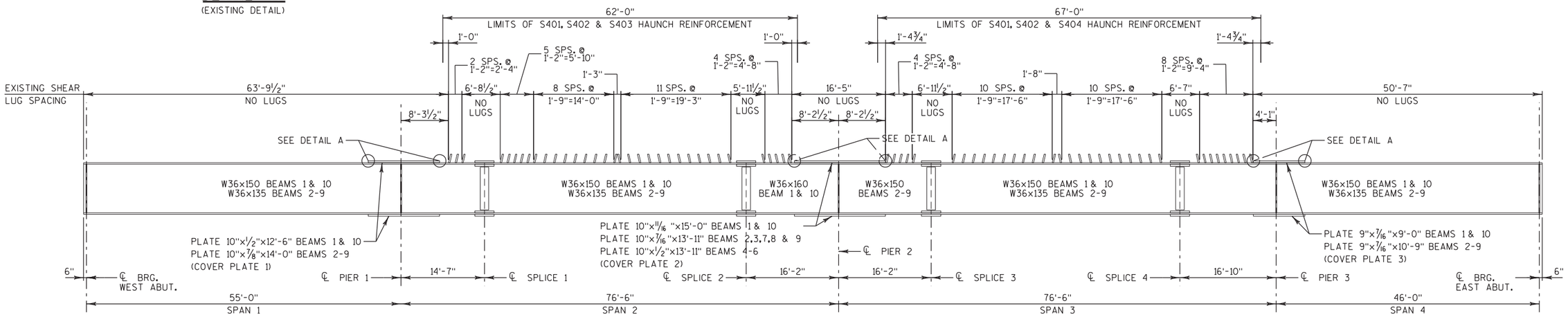


DETAIL "A"

(EXISTING DETAIL)



ELEVATION



EXISTING GIRDER DETAIL

NOTES

EXISTING DETAIL AT THE END OF THE TOP FLANGE COVER PLATES IS TO BE MODIFIED AS NOTED BELOW AND AS DETAILED IN THE SPECIAL PROVISIONS TO IMPROVE THE FATIGUE CAPACITY OF THE STRUCTURE.

1. INSTALL EIGHT (8) - 3/4" DIA. A490 GALVANIZED HIGH TENSILE STRENGTH BOLTS AS SHOWN IN THESE PLANS. ALL CONNECTIONS SHALL BE FRICTION TYPE. HOLES FOR BOLTED CONNECTIONS SHALL NOT BE MORE THAN 1/16" GREATER THAN THE NOMINAL BOLT DIAMETER. EACH FASTENER SHALL BE TIGHTENED EQUAL TO THE PROOF LOAD FOR THE GIVEN BOLT DIAMETER.
2. REMOVE 10 1/2" OF THE WELDS PARALLEL TO THE BEAM AT THE ENDS OF THE TOP FLANGE COVER PLATE. PAINT REPAIRED AREA. SEE SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.
3. ALL WORK SHOWN ON THIS SHEET IS INCLUDED IN THE BID ITEM "COVER PLATE MODIFICATION B-40-170". MODIFICATION WILL BE REQUIRED AT A TOTAL OF 60 LOCATIONS.
4. DIMENSIONS ARE BASED ON EXISTING STRUCTURE PLANS.

LEGEND

12-01 AFTER COMPLETION OF WELD REMOVAL AND PAINTING, SEAL WELD REMOVAL AREA WITH CAULK APPROVED BY THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

SUPERSTRUCTURE DETAILS 1

SHEET 12 OF 18

450

FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080112-superstructure-details.dgn

PLOT DATE : 2/2/2014

PLOT SCALE : 2.00000 '/ ft.

STATE PROJECT NUMBER

1228-25-70

TABLE OF DECK ELEVATIONS

	SPAN 1											SPAN 2										
	C/L of Brg. W. Abut.	0.1 Pt.	0.2 Pt.	0.3 Pt.	0.4 Pt.	0.5 Pt.	0.6 Pt.	0.7 Pt.	0.8 Pt.	0.9 Pt.	C/L of Pier #1	0.1 Pt.	C/L of F.S. #1	0.2 Pt.	0.3 Pt.	0.4 Pt.	0.5 Pt.	0.6 Pt.	0.7 Pt.	C/L of F.S. #2	0.8 Pt.	0.9 Pt.	C/L of Pier #2
EDGE OF DECK	629.66	629.60	629.52	629.44	629.36	629.28	629.20	629.11	629.03	628.95	628.87	628.76	628.65	628.64	628.50	628.35	628.19	628.01	627.82	627.63	627.61	627.39	627.16
C/L GIRDER 1	629.70	629.64	629.56	629.48	629.40	629.31	629.23	629.15	629.07	628.99	628.91	628.80	628.69	628.67	628.54	628.39	628.22	628.04	627.85	627.67	627.65	627.43	627.20
C/L GIRDER 2	629.86	629.79	629.71	629.62	629.54	629.46	629.38	629.30	629.22	629.14	629.05	628.94	628.83	628.82	628.68	628.53	628.36	628.18	627.99	627.80	627.78	627.56	627.33
C/L GIRDER 3	630.01	629.93	629.85	629.77	629.69	629.61	629.53	629.45	629.36	629.28	629.20	629.09	628.98	628.96	628.82	628.67	628.50	628.32	628.13	627.94	627.92	627.70	627.46
C/L GIRDER 4	630.16	630.08	630.00	629.92	629.84	629.76	629.67	629.59	629.51	629.43	629.35	629.24	629.12	629.11	628.97	628.81	628.64	628.46	628.27	628.08	628.06	627.83	627.60
C/L GIRDER 5	630.31	630.23	630.15	630.07	629.99	629.90	629.82	629.74	629.66	629.58	629.50	629.38	629.27	629.25	629.11	628.95	628.78	628.60	628.40	628.21	628.19	627.97	627.73
NORTH GRADE BREAK	630.33	630.25	630.17	630.08	630.00	629.92	629.84	629.76	629.68	629.60	629.52	629.40	629.29	629.27	629.13	628.97	628.80	628.62	628.42	628.23	628.21	627.98	627.75
SOUTH GRADE BREAK	630.32	630.24	630.16	630.08	629.99	629.91	629.83	629.75	629.67	629.59	629.51	629.39	629.27	629.26	629.12	628.96	628.79	628.60	628.40	628.21	628.19	627.96	627.73
C/L GIRDER 6	630.30	630.22	630.14	630.05	629.97	629.89	629.81	629.73	629.65	629.57	629.48	629.37	629.25	629.24	629.09	628.94	628.76	628.58	628.38	628.19	628.17	627.94	627.70
PROFILE GRADE LINE	630.19	630.11	630.03	629.95	629.86	629.78	629.70	629.62	629.54	629.46	629.38	629.26	629.14	629.13	628.98	628.82	628.65	628.47	628.27	628.07	628.05	627.82	627.59
C/L GIRDER 7	630.13	630.04	629.96	629.88	629.80	629.72	629.64	629.56	629.47	629.39	629.31	629.20	629.08	629.06	628.92	628.76	628.58	628.40	628.20	628.00	627.98	627.75	627.52
C/L GIRDER 8	629.95	629.87	629.79	629.71	629.63	629.55	629.46	629.38	629.30	629.22	629.14	629.02	628.90	628.89	628.74	628.58	628.40	628.22	628.01	627.82	627.80	627.57	627.33
C/L GIRDER 9	629.78	629.70	629.62	629.54	629.45	629.37	629.29	629.21	629.13	629.05	628.97	628.85	628.73	628.71	628.56	628.40	628.22	628.03	627.83	627.63	627.61	627.38	627.14
C/L GIRDER 10	629.61	629.53	629.44	629.36	629.28	629.20	629.12	629.04	628.96	628.88	628.80	628.67	628.55	628.54	628.39	628.22	628.04	627.85	627.65	627.45	627.43	627.19	626.96
EDGE OF DECK	629.56	629.48	629.40	629.32	629.24	629.16	629.08	628.99	628.91	628.83	628.75	628.63	628.51	628.49	628.34	628.18	628.00	627.81	627.60	627.40	627.38	627.15	626.91

TABLE OF DECK ELEVATIONS - CONTINUED

	SPAN 3													SPAN 4								
	C/L of Pier #2	0.1 Pt.	0.2 Pt.	C/L of F.S. #3	0.3 Pt.	0.4 Pt.	0.5 Pt.	0.6 Pt.	0.7 Pt.	C/L of F.S. #4	0.8 Pt.	0.9 Pt.	C/L of Pier #3	0.1 Pt.	0.2 Pt.	0.3 Pt.	0.4 Pt.	0.5 Pt.	0.6 Pt.	0.7 Pt.	0.8 Pt.	0.9 Pt.	C/L of Brg. E. Abut.
EDGE OF DECK	627.16	626.92	626.68	626.66	626.45	626.21	625.97	625.73	625.49	625.30	625.25	625.01	624.78	624.63	624.49	624.34	624.20	624.06	623.91	623.77	623.63	623.48	623.34
C/L GIRDER 1	627.20	626.96	626.72	626.69	626.48	626.24	626.00	625.76	625.52	625.33	625.29	625.05	624.81	624.67	624.52	624.38	624.23	624.09	623.95	623.80	623.66	623.52	623.37
C/L GIRDER 2	627.33	627.09	626.85	626.83	626.61	626.37	626.14	625.90	625.66	625.47	625.42	625.18	624.94	624.80	624.66	624.51	624.37	624.22	624.08	623.94	623.79	623.65	623.51
C/L GIRDER 3	627.46	627.22	626.99	626.96	626.75	626.51	626.27	626.03	625.79	625.60	625.55	625.31	625.08	624.93	624.79	624.65	624.50	624.36	624.21	624.07	623.93	623.78	623.64
C/L GIRDER 4	627.60	627.36	627.12	627.09	626.88	626.64	626.40	626.16	625.93	625.73	625.69	625.45	625.21	625.07	624.92	624.78	624.63	624.49	624.35	624.20	624.06	623.92	623.77
C/L GIRDER 5	627.73	627.49	627.25	627.23	627.01	626.77	626.54	626.30	626.06	625.87	625.82	625.58	625.34	625.20	625.06	624.91	624.77	624.62	624.48	624.34	624.19	624.05	623.91
NORTH GRADE BREAK	627.75	627.51	627.27	627.24	627.03	626.79	626.55	626.31	626.08	625.88	625.84	625.60	625.36	625.22	625.07	624.93	624.78	624.64	624.50	624.35	624.21	624.07	623.92
SOUTH GRADE BREAK	627.73	627.49	627.25	627.22	627.01	626.77	626.53	626.29	626.06	625.86	625.82	625.58	625.34	625.20	625.05	624.91	624.76	624.62	624.48	624.33	624.19	624.05	623.90
C/L GIRDER 6	627.70	627.46	627.23	627.20	626.99	626.75	626.51	626.27	626.03	625.84	625.79	625.55	625.32	625.17	625.03	624.89	624.74	624.60	624.45	624.31	624.17	624.02	623.88
PROFILE GRADE LINE	627.59	627.35	627.11	627.08	626.87	626.63	626.39	626.15	625.92	625.72	625.68	625.44	625.20	625.06	624.91	624.77	624.63	624.48	624.34	624.19	624.05	623.91	623.76
C/L GIRDER 7	627.52	627.28	627.04	627.01	626.80	626.56	626.32	626.08	625.85	625.65	625.61	625.37	625.13	624.99	624.84	624.70	624.56	624.41	624.27	624.12	623.98	623.84	623.69
C/L GIRDER 8	627.33	627.09	626.85	626.83	626.61	626.37	626.14	625.90	625.66	625.47	625.42	625.18	624.94	624.80	624.66	624.51	624.37	624.22	624.08	623.94	623.79	623.65	623.51
C/L GIRDER 9	627.14	626.90	626.67	626.64	626.43	626.19	625.95	625.71	625.47	625.28	625.23	624.99	624.76	624.61	624.47	624.33	624.18	624.04	623.89	623.75	623.61	623.46	623.32
C/L GIRDER 10	626.96	626.72	626.48	626.45	626.24	626.00	625.76	625.52	625.29	625.09	625.05	624.81	624.57	624.43	624.28	624.14	624.00	623.85	623.71	623.56	623.42	623.28	623.13
EDGE OF DECK	626.91	626.67	626.43	626.41	626.19	625.95	625.72	625.48	625.24	625.05	625.00	624.76	624.52	624.38	624.24	624.09	623.95	623.80	623.66	623.52	623.37	623.23	623.09

CONCRETE DEFLECTIONS

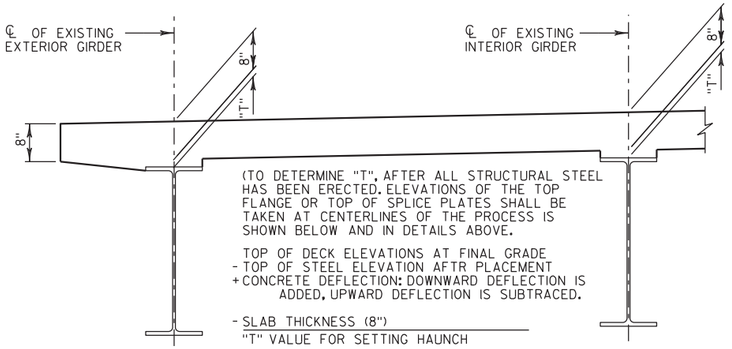
	SPAN 1											SPAN 2										
	C/L of Brg. W. Abut.	0.1 Pt.	0.2 Pt.	0.3 Pt.	0.4 Pt.	0.5 Pt.	0.6 Pt.	0.7 Pt.	0.8 Pt.	0.9 Pt.	C/L of Pier #1	0.1 Pt.	C/L of F.S. #1	0.2 Pt.	0.3 Pt.	0.4 Pt.	0.5 Pt.	0.6 Pt.	0.7 Pt.	C/L of F.S. #2	0.8 Pt.	0.9 Pt.	C/L of Pier #2
INTERIOR GIRDER	0	0.1	0.18	0.23	0.25	0.23	0.18	0.11	0.05	0	0	0.09	0.22	0.24	0.39	0.49	0.52	0.46	0.33	0.19	0.17	0.04	0
EXTERIOR GIRDER	0	0.07	0.12	0.16	0.17	0.16	0.13	0.08	0.03	0	0	0.06	0.15	0.16	0.26	0.33	0.35	0.31	0.23	0.13	0.12	0.03	0

NOTE: ALL VALUES IN INCHES. NEGATIVE DEFLECTION IS UPWARD. DEFLECTIONS ACCOUNT FOR WEIGHT OF DECK & HAUNCHES ONLY.

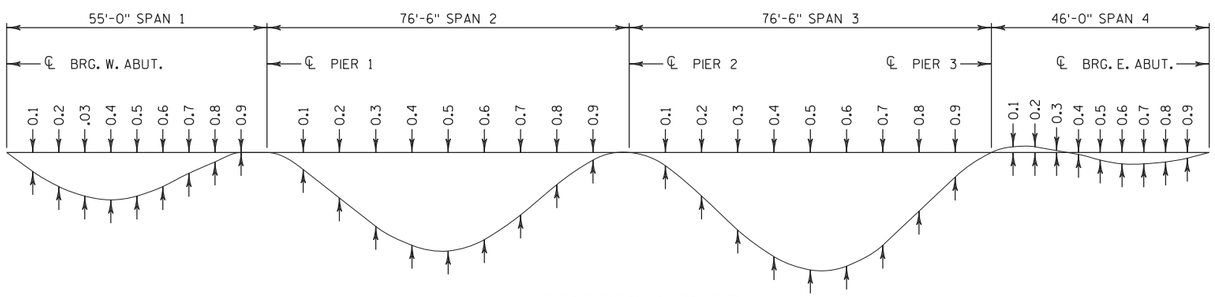
CONCRETE DEFLECTIONS - CONTINUED

	SPAN 3													SPAN 4								
	C/L of Pier #2	0.1 Pt.	0.2 Pt.	C/L of F.S. #3	0.3 Pt.	0.4 Pt.	0.5 Pt.	0.6 Pt.	0.7 Pt.	C/L of F.S. #4	0.8 Pt.	0.9 Pt.	C/L of Pier #3	0.1 Pt.	0.2 Pt.	0.3 Pt.	0.4 Pt.	0.5 Pt.	0.6 Pt.	0.7 Pt.	0.8 Pt.	0.9 Pt.	C/L of Brg. E. Abut.
INTERIOR GIRDER	0	0.07	0.23	0.25	0.41	0.55	0.62	0.6	0.49	0.35	0.31	0.13	0	-0.03	-0.03	-0.01	0.01	0.04	0.06	0.06	0.05	0.03	0
EXTERIOR GIRDER	0	0.05	0.15	0.16	0.26	0.36	0.4	0.39	0.32	0.23	0.21	0.09	0	-0.02	-0.02	0	0.02	0.03	0.04	0.05	0.04	0.02	0

NOTE: ALL VALUES IN INCHES. NEGATIVE DEFLECTION IS UPWARD. DEFLECTIONS ACCOUNT FOR WEIGHT OF DECK & HAUNCHES ONLY.



SLAB HAUNCH DETAILS
(SIDEWALK NOT SHOWN FOR CLARITY)



DEFLECTION DIAGRAM
SEE TABLE FOR DEAD LOAD DEFLECTIONS AT TENTH POINTS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

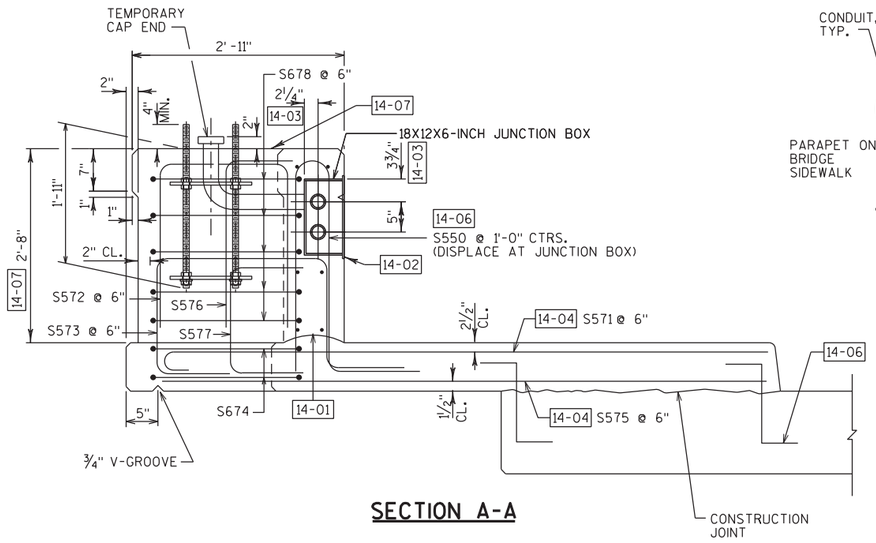
SUPERSTRUCTURE DETAILS 2

SHEET 13 OF 18

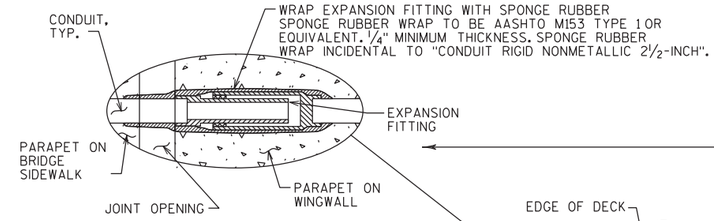
451

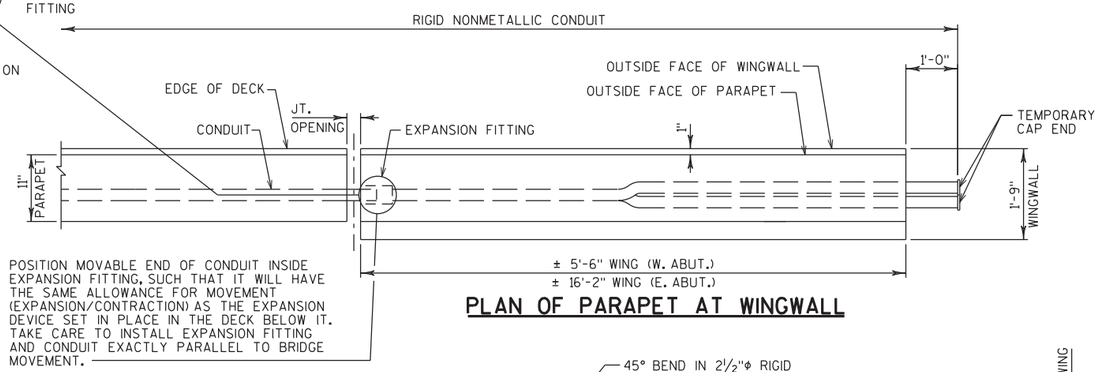
STATE PROJECT NUMBER

1228-25-70



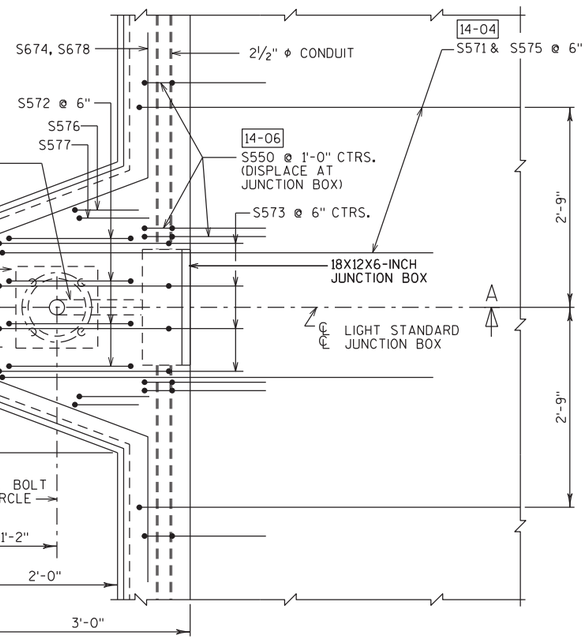
SECTION A-A





POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

PLAN OF PARAPET AT WINGWALL



PLAN AT LIGHT STANDARD

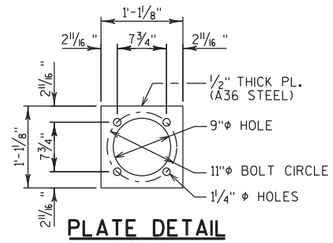
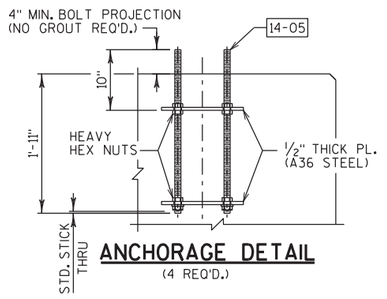


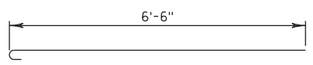
PLATE DETAIL

(8 REQ'D.)

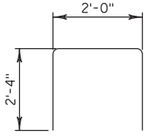


ANCHORAGE DETAIL

(4 REQ'D.)



S571



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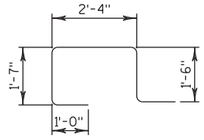

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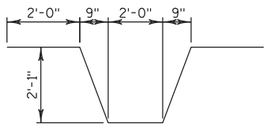

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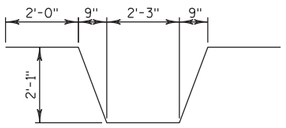

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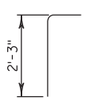

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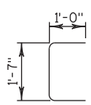
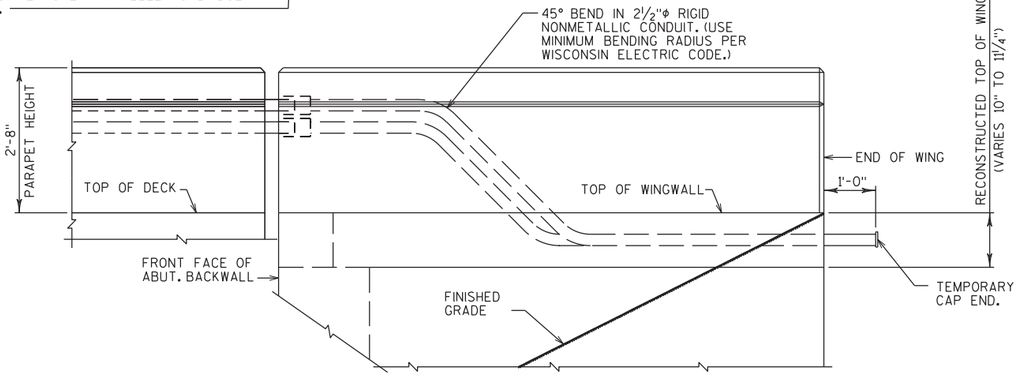


S577



OUTSIDE ELEVATION OF PARAPET AT WINGWALL

LEGEND

14-01	CONSTR. JT. STRIKE OFF AS SHOWN
14-02	CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.
14-03	LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.
14-04	THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.
14-05	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.
14-06	SEE SUPERSTRUCTURE SHEETS FOR ADDITIONAL BAR STEEL DETAILS.
14-07	TOP SURFACE OF LIGHT STANDARD TO BE LEVEL IN DIRECTION PARALLEL TO PARAPET AND SLOPE ⅛" PER FOOT AWAY FROM PARAPET. 2'-8" DIMENSION IS MAXIMUM AND WILL VARY BASED ON SLOPE OF GRADE.

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2½-INCH"
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH".

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
CARLON TYPE E945K (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID NONMETALLIC 2½-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED.

BILL OF BARS

(TOTAL WEIGHT = 1,450 LBS.)

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S571	X	48	7'-1"	X	SIDEWALK HORIZ. @ LIGHT STD.
S572	X	20	6'-5"	X	PARAPET VERT. @ JUNCTION BOX
S573	X	20	6'-11"	X	PARAPET VERT. @ LIGHT STD.
S674	X	8	10'-6"	X	SIDEWALK HORIZ. @ LIGHT STD.
S575	X	48	6'-6"		SIDEWALK HORIZ. @ LIGHT STD.
S576	X	8	3'-2"	X	PARAPET VERT. @ LIGHT STD.
S577	X	8	3'-4"	X	PARAPET VERT. @ LIGHT STD.
S678	X	20	10'-3"	X	PARAPET HORIZ. @ LIGHT STD.

BAR QUANTITIES AND WEIGHT SHOWN INCLUDES ALL FOUR LIGHT STANDARD LOCATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

LIGHTING DETAILS

SHEET 14 OF 18

452

8

8

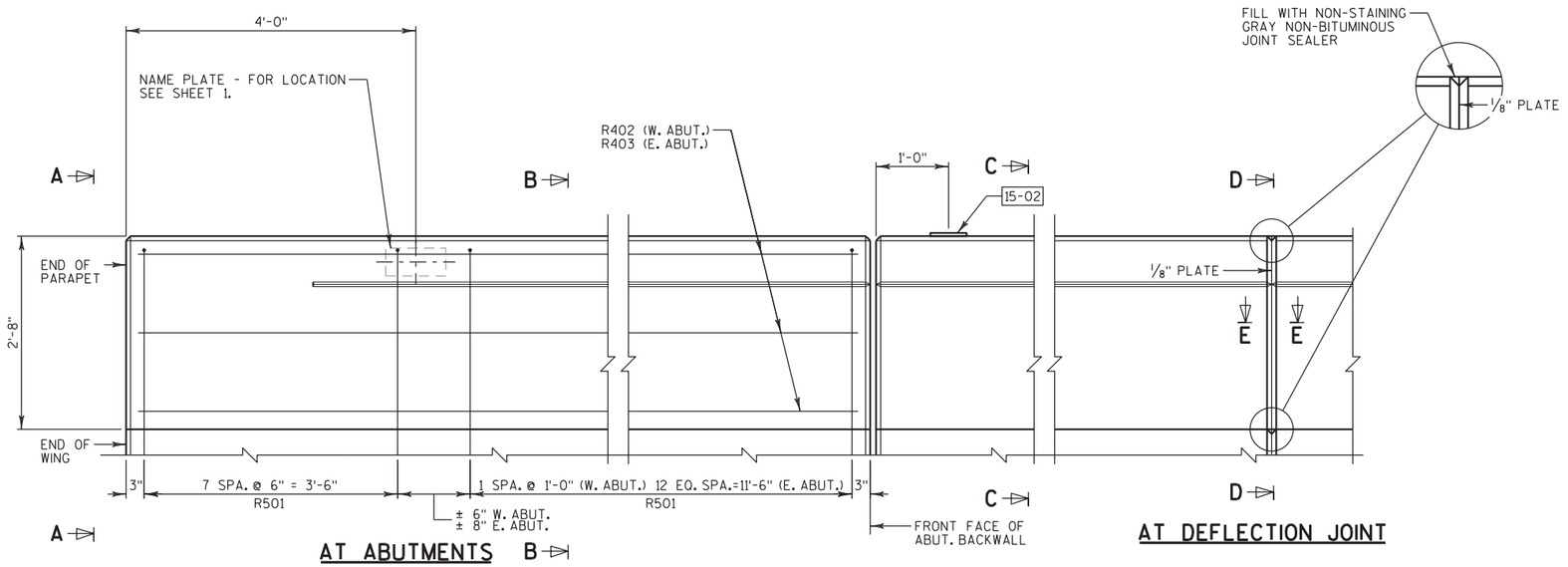
FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080114-light standard.dgn

PLOT DATE : 2/2/2014

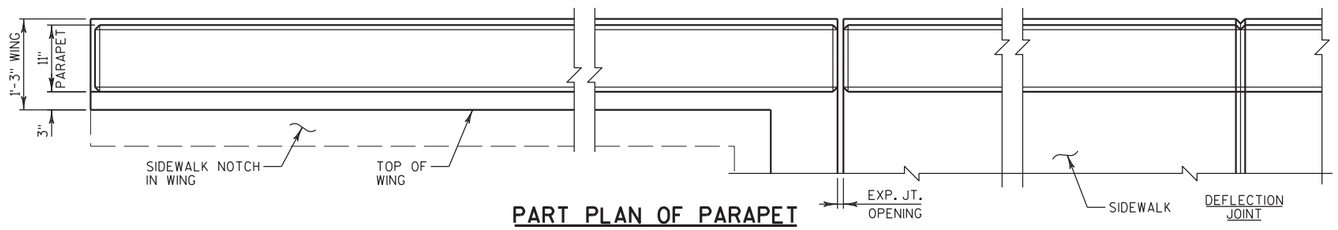
PLOT SCALE : 25.00000 '/ ft.

STATE PROJECT NUMBER

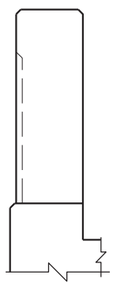
1228-25-70



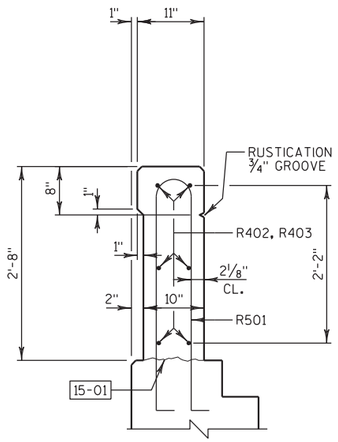
PART ELEVATION OF PARAPET



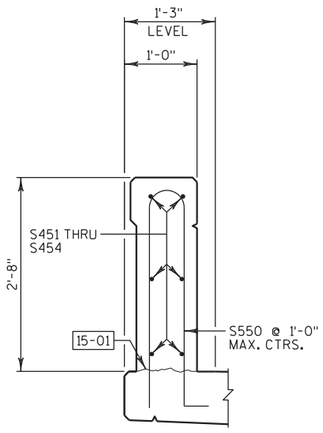
PART PLAN OF PARAPET



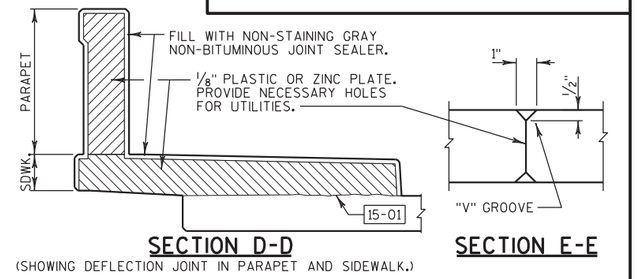
VIEW A-A



SECTION B-B

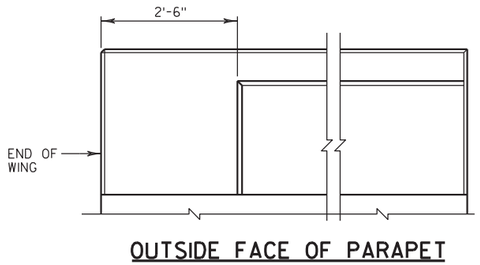


AT SIDEWALK ON BRIDGE SECTION C-C

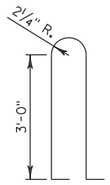


SECTION D-D
(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

SECTION E-E



OUTSIDE FACE OF PARAPET



R501

BILL OF BARS

TOTAL WEIGHT = (210 LBS. W. ABUT)
(480 LBS. E. ABUT)

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	bar series	LOCATION
R501	X	62	8'-0"	X		PARAPET VERT.
R402	X	12	5'-1"			PARAPET HORIZ.
R403	X	12	15'-9"			PARAPET HORIZ.

NOTES & LEGEND

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION D-D BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

REINFORCEMENT OF PARAPET ON BRIDGE INCLUDED IN BILL OF BARS ON SUPERSTRUCTURE 3 SHEET.

15-01 CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.

15-02 BENCH MARK CAP (WHEN SUPPLIED) OFFSET FROM FENCE/POSTS AS DIRECTED BY ENGINEER. SEE SHEET 1 FOR LOCATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

VERTICAL FACE PARAPET "A"

SHEET 15 OF 18

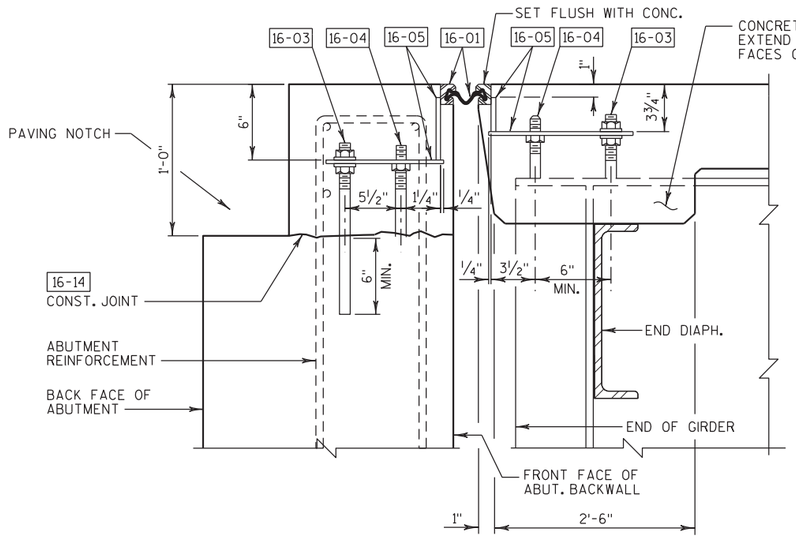
FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080115-parapet.dgn

PLOT DATE : 2/2/2014

PLOT SCALE : 25.00000 '/ ft.

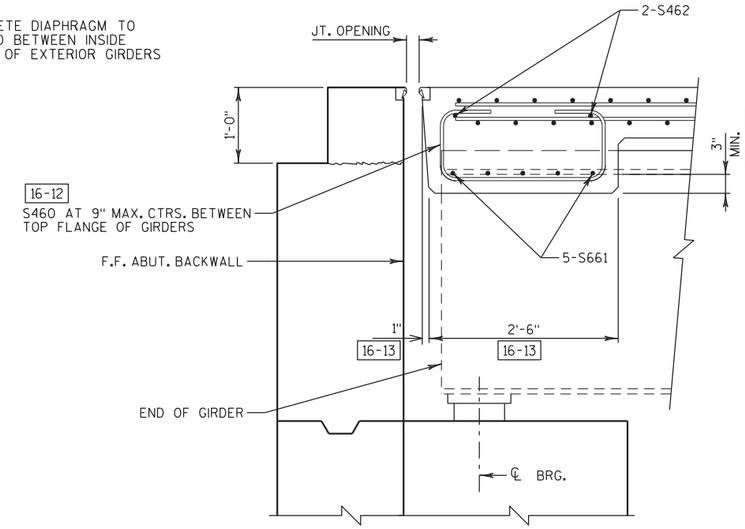
STATE PROJECT NUMBER

1228-25-70



SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU EXPANSION END

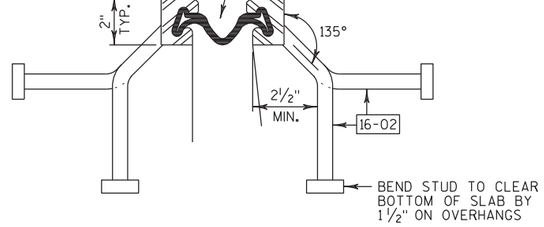
DIAPHRAGM TO EXTEND TO GIRDER WEB
(SEE PART TRANSVERSE SECTION AT DIAPHRAGM END FOR TYPICAL EXTENTS)

LEGEND

- 16-01 NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS. SET JOINT OPENING AT 1¾".
- 16-02 STUDS ⅝"ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- 16-2A ½" THICK ANCHOR PLATE WITH ⅝"ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- 16-03 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.
- 16-04 ¾"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
- 16-05 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.
- 16-06 GALVANIZED PLATE ⅜" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.
- 16-07 ¾"ϕ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
- 16-08 ¾"ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- 16-09 ¾"ϕ X 2¼" GALVANIZED THREADED COUPLING.
- 16-10 SIDEWALK OR MEDIAN COVER PLATE ⅜" X 2'-0" WIDE X LIMITS SHOWN. BEND DOWN FACE OF CURB WITH HOLES FOR NO. 7. GALVANIZE SIDEWALK PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED
- 16-11 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

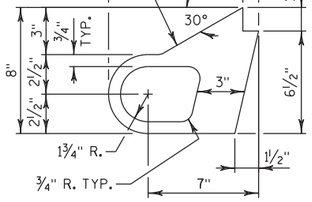
— REFER TO STRIP SEAL COVER PLATE DETAILS SHEET

- 16-12 BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ℄ GIRDERS.
- 16-13 DIMENSION IS TAKEN NORMAL TO ℄ ABUTMENTS.
- 16-14 POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

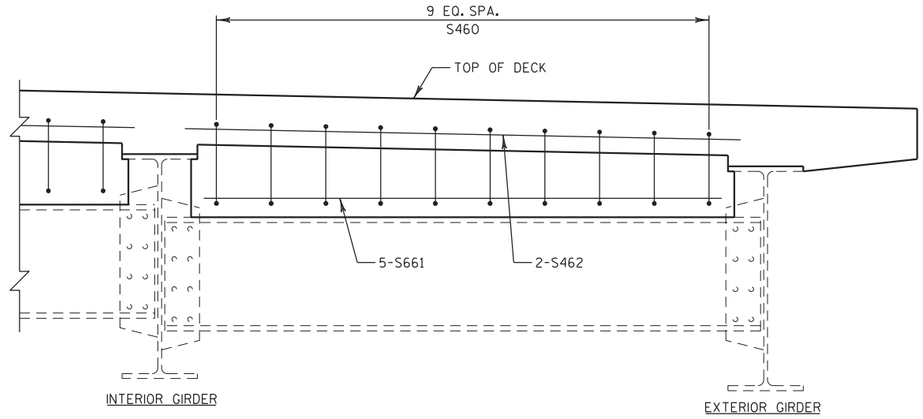


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS

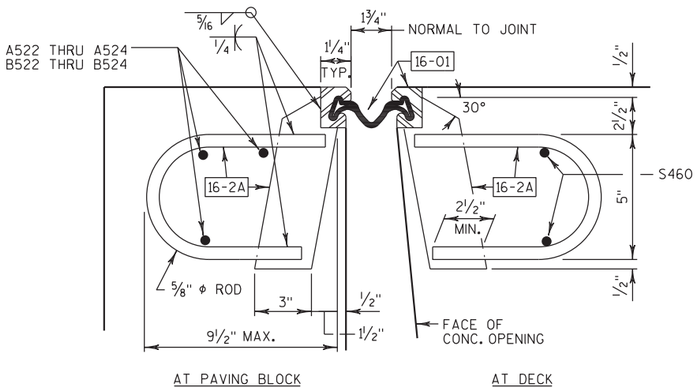


ALTERNATE STRIP SEAL ANCHOR



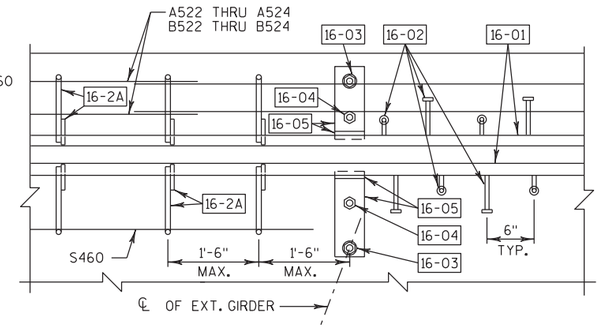
PART TRANSVERSE SECTION AT DIAPHRAGM

(SIDEWALK AND PARAPET NOT SHOWN)



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. 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 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 FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-170".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

STRIP SEAL EXPANSION JOINT DETAILS

SHEET 16 OF 18

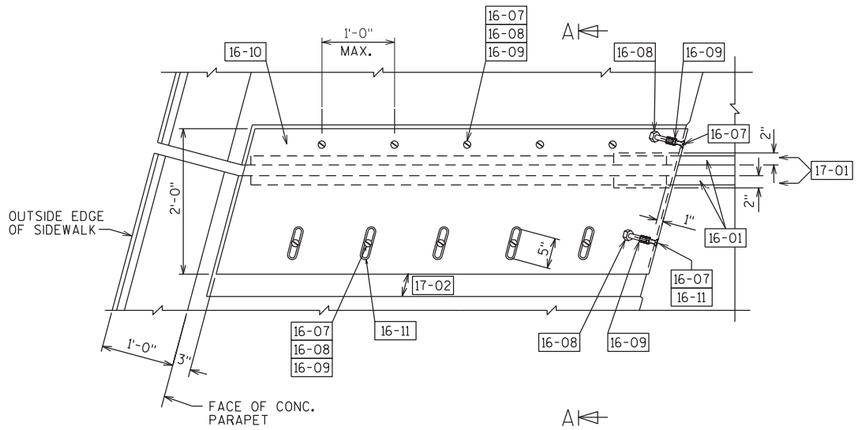
454

8

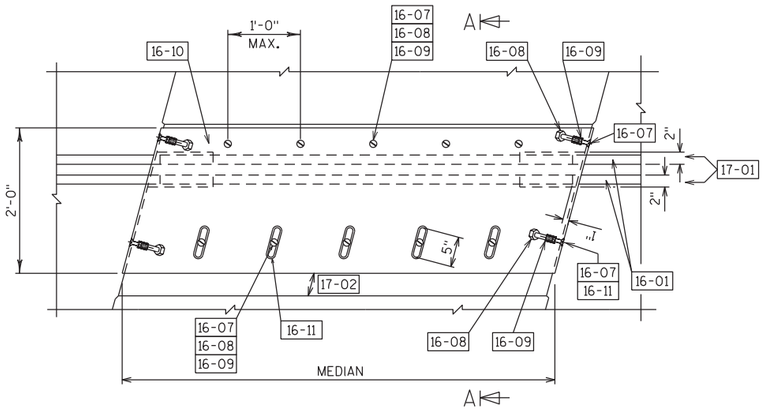
8

STATE PROJECT NUMBER

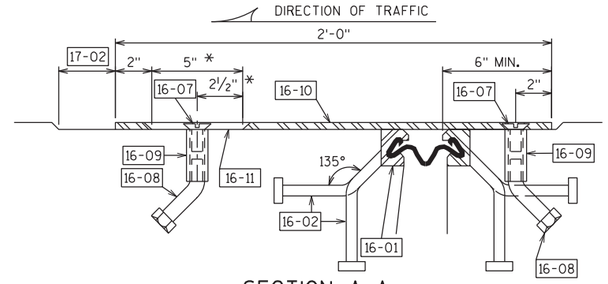
1228-25-70



PLAN AT SIDEWALK

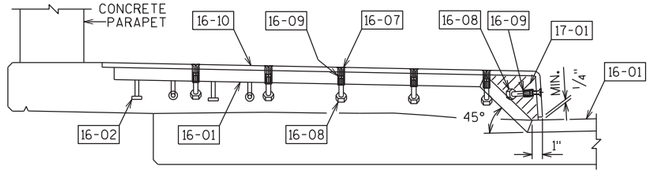


PLAN AT MEDIAN

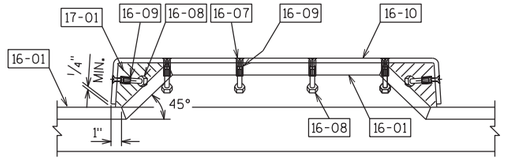


SECTION A-A

* DIMENSION ALONG DIRECTION OF MOVEMENT



SECTION AT SIDEWALK



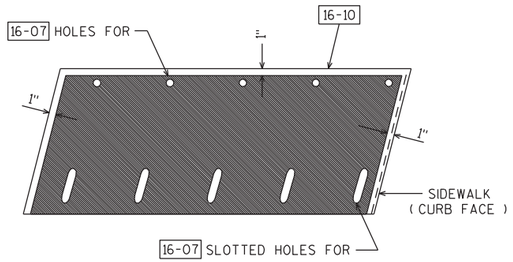
SECTION AT MEDIAN

LEGEND

16-01 THRU 16-11 SEE SHEET 16.

17-01 BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

17-02 JOINT OPENING DIMENSION ALONG SKEW PLUS ½".



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

STRIP SEAL COVER PLATE DETAILS

SHEET 17 OF 18

455

8

8

FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080117-strip seal cover pl details.dgn

PLOT DATE : 2/2/2014

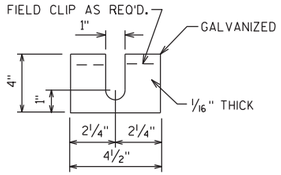
PLOT SCALE : 25.00000 '/ ft.

STATE PROJECT NUMBER

1228-25-70

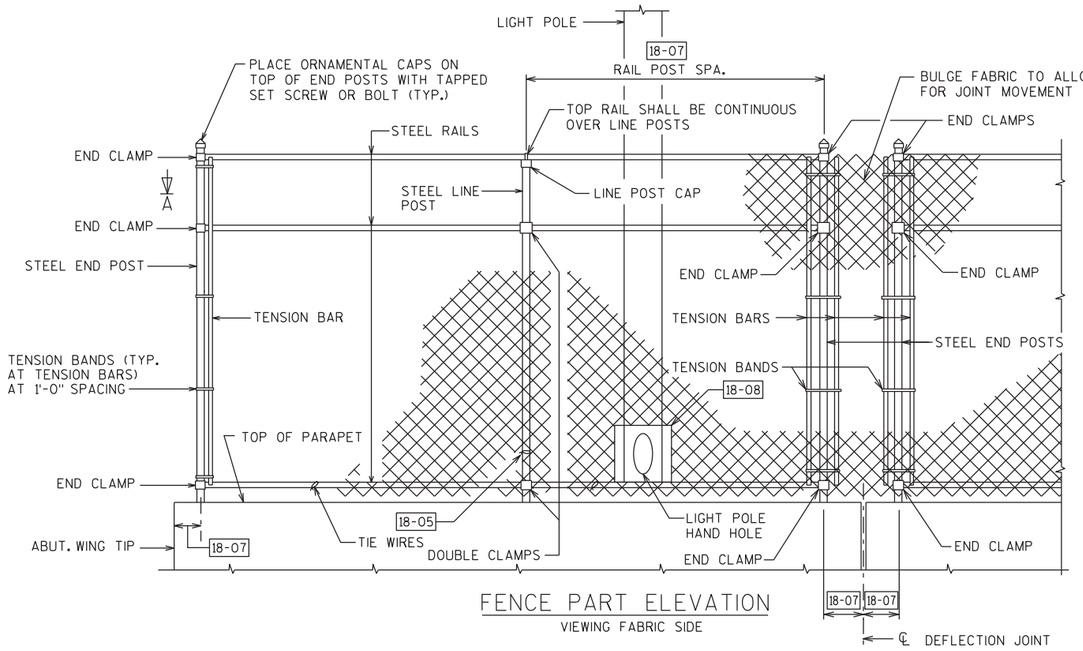
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



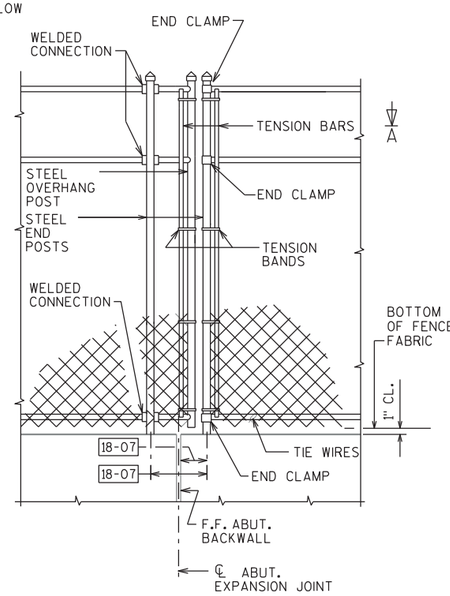
POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.



FENCE PART ELEVATION

VIEWING FABRIC SIDE



GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER-COATING ON THE OUTSIDE.

THE COLOR OF POLYMER-COATING FOR THIS STRUCTURE SHALL BE BLACK, FEDERAL COLOR NO. 27038, IN ACCORDANCE WITH ASTM F934.

FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER-COATED 8 FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR ¼ POINT OF POST SPACING.

18-01 CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

18-02 ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

18-03 ½" DIA. X 6⅞" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S", ½" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR ½" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE 18-04

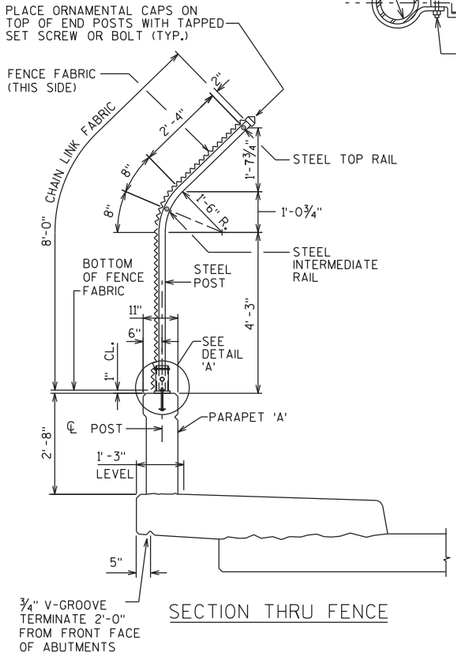
18-04 MASONRY ANCHOR TYPE S ½-INCH. EMBED 6" IN CONCRETE. ANCHOR, WASHER, AND NUT SHALL BE GALVANIZED.

18-05 ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

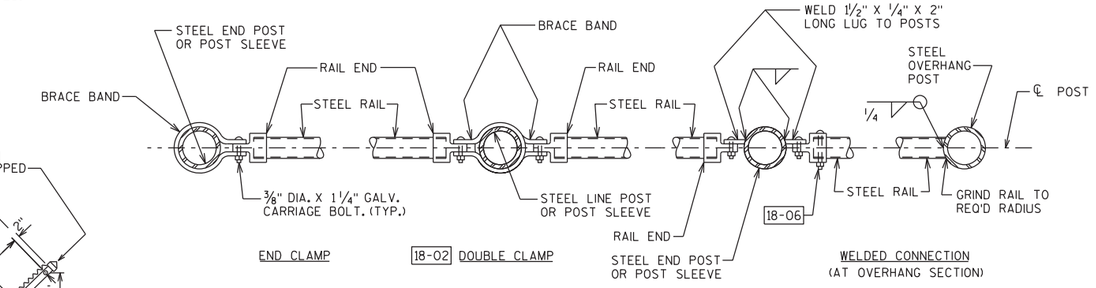
18-06 BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

18-07 SEE 'SUPERSTRUCTURE 2' SHEET FOR POST SPACING.

18-08 18" X 18" ACCESS GATE TO BE PROVIDED AT EACH LIGHT POLE FOR ACCESS TO THE HAND HOLE. DETAILS TO BE APPROVED BY THE ENGINEER.



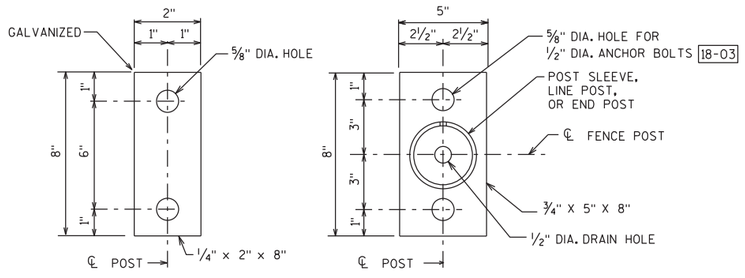
SECTION THRU FENCE



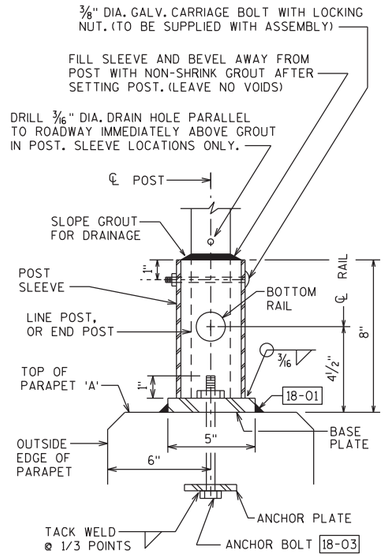
END CLAMP | 18-02 DOUBLE CLAMP | WELDED CONNECTION (AT OVERHANG SECTION)

SECTION A-A

NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS



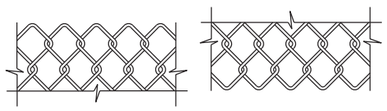
ANCHOR PLATE | BASE PLATE



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.



FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 1" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-170

DRAWN BY TKB | PLANS CK'D. BH

FENCE DETAILS

SHEET 18 OF 18

456

8

8

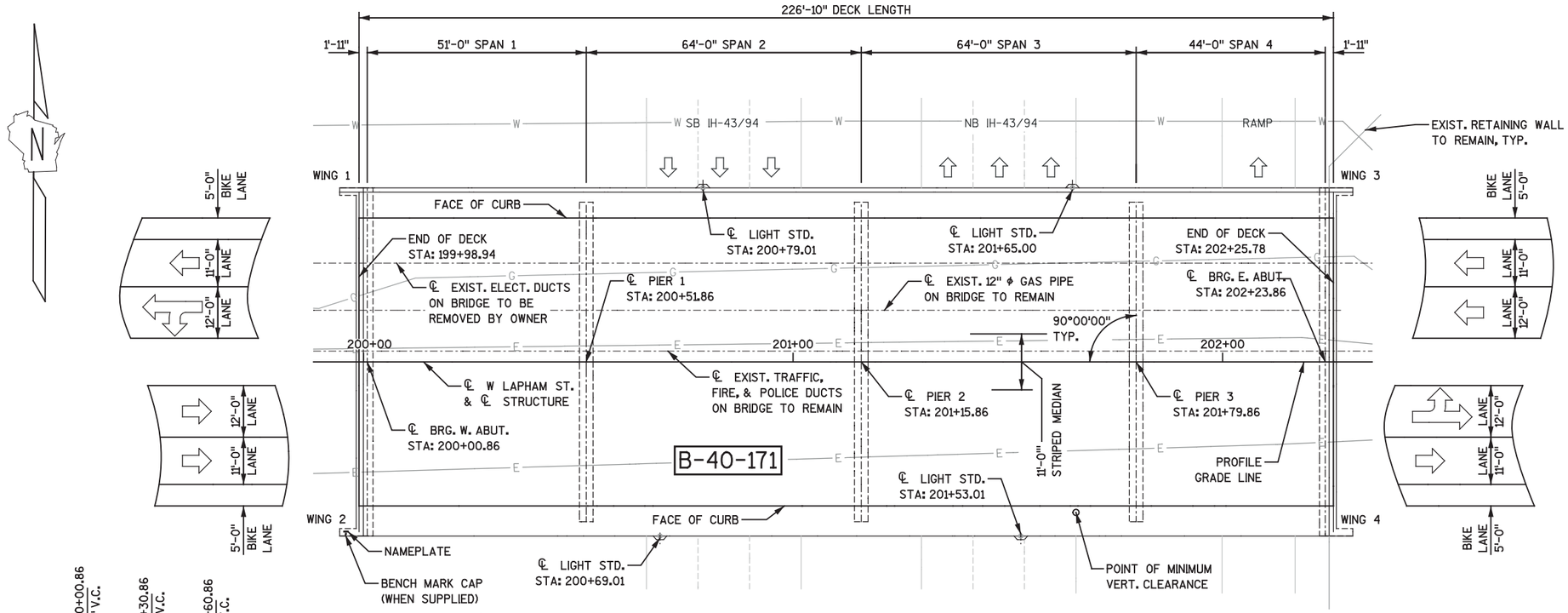
FILE NAME : S:±Projects±SE±Milwaukee County±1228-26-00 I-43 Structures Over Holt Avenue±CAD±Plans±1228-25-70±B-40-170±080118-fence details.dgn

PLOT DATE : 2/2/2014

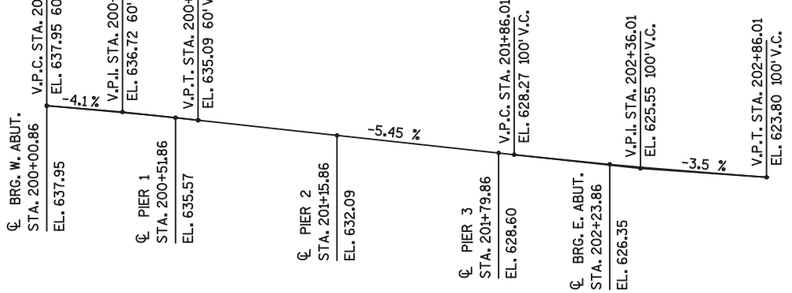
PLOT SCALE : 48.00000 '/ ft.

STATE PROJECT NUMBER

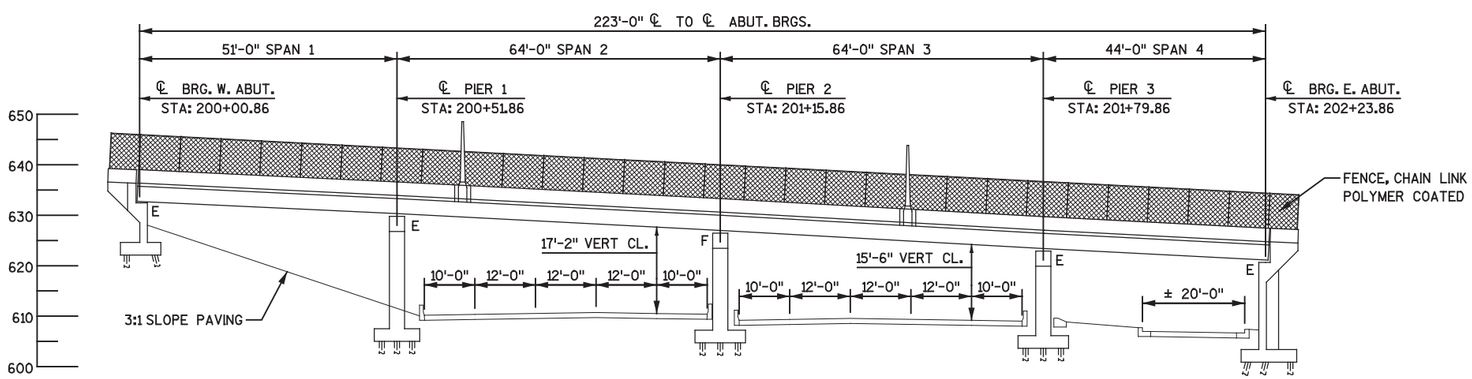
1228-25-70



PLAN B-40-171



PROFILE GRADE LINE W. LAPHAM BLVD.



ELEVATION
(LOOKING NORTH)

GENERAL NOTES

SEE SHEET 2 FOR GENERAL NOTES.

TRAFFIC DATA

W. LAPHAM ST.
A.D.T. (2035) = 8,516
IH-43/94
A.D.T. (2030) = 108,000

LIST OF DRAWINGS

1. PLAN & ELEVATION
2. CROSS SECTION & QUANTITIES
3. WEST ABUTMENT
4. WEST ABUTMENT DETAILS
5. EAST ABUTMENT
6. EAST ABUTMENT DETAILS
7. PIER BEARING LAYOUT
8. ELASTOMERIC EXPANSION BEARINGS
9. CONCRETE DIAPHRAGM DETAILS
10. PIER DIAPHRAGM DETAILS
11. CONCRETE DETAILS & FRAMING PLAN
12. STEEL DIAPHRAGM DETAILS
13. DECK ELEVATIONS
14. SUPERSTRUCTURE
15. SUPERSTRUCTURE DETAILS
16. PARAPET AND SIDEWALK DETAILS
17. STRIP SEAL EXPANSION JOINT
18. STRIP SEAL COVER PLATES FOR SIDEWALK
19. FENCE DETAILS
20. LIGHT STANDARD

DESIGN DATA

LIVE LOAD:

INVENTORY RATING	HS-11
OPERATIONAL RATING	HS-19
WISCONSIN STANDARD PERMIT VEHICLE (WIs-SPV)	170 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE SUPERSTRUCTURE	f'c = 4,000 P.S.I.
CONCRETE SUBSTRUCTURE	f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.
DIAPHRAGM STEEL	fY = 36,000 P.S.I.

WISCONSIN STEVEN J. MILLER 36937 MILWAUKEE, WI PROFESSIONAL ENGINEER
1/31/2014

SE REGION CONTACT:
JOE GALLAMORE (262) 548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
NICHOLAS HORNYAK (414) 282-6905

NO.	DATE	REVISION	BY

COLLINS ENGINEERS INC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 02/03/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-171

W. LAPHAM BLVD. OVER IH-43/94

COUNTY	MILWAUKEE
~~TOWN~~/CITY/~~VILLAGE~~	MILWAUKEE
DESIGN SPEC.	REHABILITATION N/A

DESIGNED BY	NJH	DESIGN CK'D.	RJW	DRAWN BY	MJH	PLANS CK'D.	RJW

PLAN & ELEVATION

SHEET 1 OF 20

457

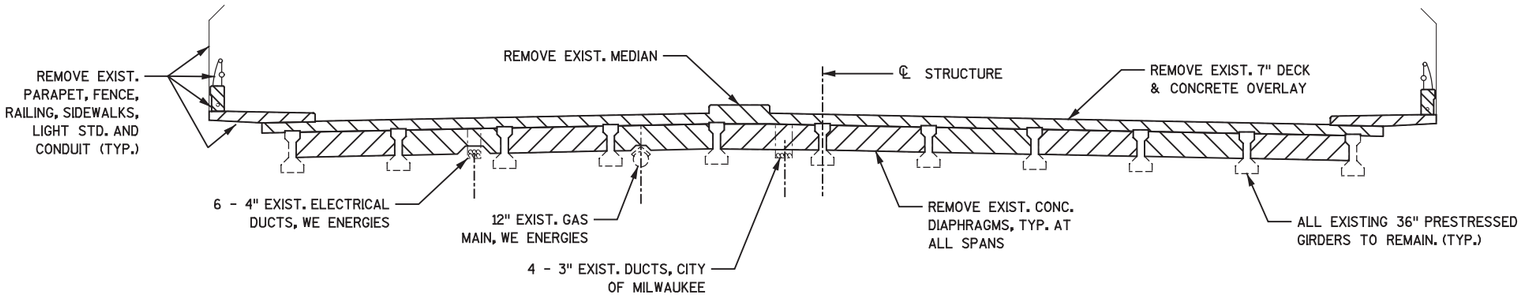
8

8

FILE NAME :01_B_40_171_Plan & Elevation.dgn
PLOT DATE :1/31/2014 3:32:25 PM PLOT BY : NicholasHornyakv8i DRV :Pdf_bw_HS.pltr PEN :CEL.TEXTSUB.TBL

STATE PROJECT NUMBER

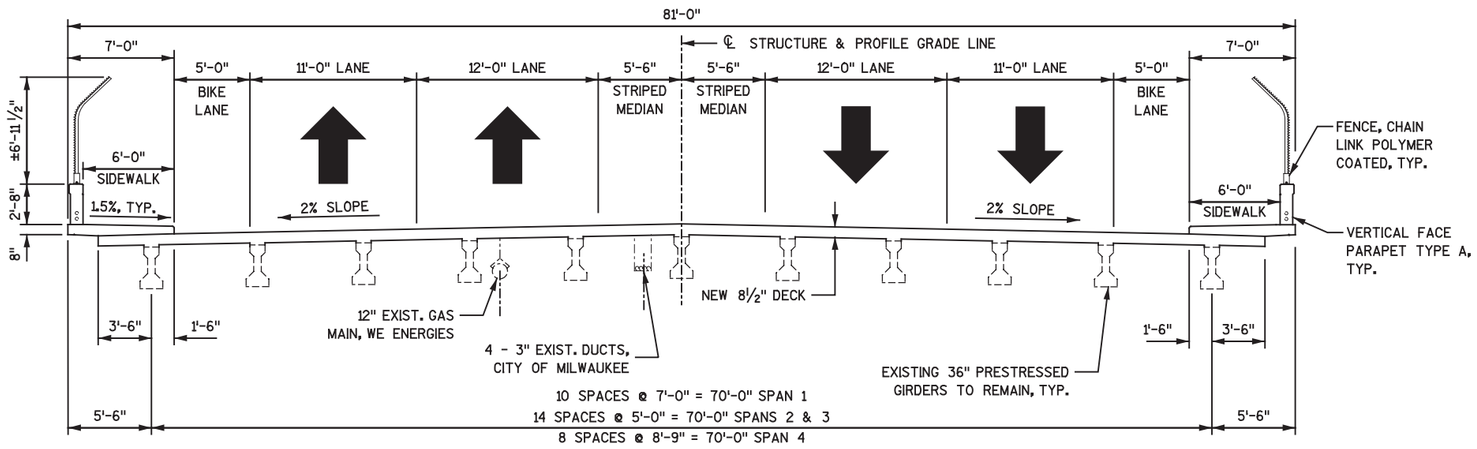
1228-25-70



EXISTING CROSS SECTION THRU ROADWAY

(LOOKING EAST, SHOWING GIRDERS AT SPAN 1)

DENOTES REMOVAL LIMITS.



PROPOSED TYPICAL SECTION

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER	W. ABUT	PIER 1	PIER 2	PIER 3	E. ABUT	TOTAL
203.0200.0002	REMOVING OLD STRUCTURE STA 200+00	LS	-	-	-	-	-	-	1
203.0210.S.0002	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-171	LS	-	-	-	-	-	-	1
203.0225.S.0002	DEBRIS CONTAINMENT B-40-171	LS	-	-	-	-	-	-	1
206.1000.0002	EXCAVATION FOR STRUCTURES BRIDGES B-40-171	LS	-	-	-	-	-	-	1
209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	-	49	-	-	-	49	98
502.0100	CONCRETE MASONRY BRIDGES	CY	659	22	-	4	-	22	707
502.3100.0002	EXPANSION DEVICE B-40-171	LS	-	-	-	-	-	-	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,205	-	-	-	-	-	2,205
502.5002	MASONRY ANCHORS TYPE L NO. 4 BARS	EACH	-	-	-	150	-	-	150
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	-	116	-	56	-	116	288
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	155,910	2,300	-	-	-	2,310	160,520
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	-	11	26	-	24	9	70
506.4000.0001	STEEL DIAPHRAGMS B-40-171	EACH	42	-	-	-	-	-	42
506.5000.0002	BEARING ASSEMBLIES FIXED B-40-171	EACH	-	-	-	30	-	-	30
506.7050.S.0002	REMOVING BEARINGS STRUCTURE B-40-171	EACH	-	11	26	30	24	9	100
506.7060.S.0002	BRIDGE JACKING B-40-171	LS	1	-	-	-	-	-	1
509.1500	CONCRETE SURFACE REPAIR	SF	60	-	-	-	-	-	60
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	15	-	-	-	15	30
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	12	-	-	-	-	-	12
652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	960	-	-	-	-	-	960
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	4	-	-	-	-	-	4
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	4	-	-	-	-	-	4
SPV.0090.4000	FENCE CHAIN LINK POLYMER-COATED 8-FT.	LF	474	-	-	-	-	-	474
	NON-BID ITEMS								
	FILLER	SIZE	-	-	-	-	-	-	1/2" & 3/4"
	NAME PLATE	EACH	-	-	-	-	-	-	1

ALL ITEMS ARE CATEGORY 2010

GENERAL NOTES

THE PROPOSED WORK INCLUDES REMOVAL AND REPLACEMENT OF THE DECK, DIAPHRAGMS, ABUTMENT BACKWALL AND ALL BEARINGS, AND CONCRETE SURFACE REPAIR.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST DIGIT OF A THREE DIGIT BAR AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

UTILIZE EXISTING BAR STEEL WHERE SHOWN AND EXTEND EXISTING BAR STEEL REINFORCEMENT 24 BAR DIAMETERS INTO NEW CONSTRUCTION, UNLESS SPECIFIED OTHERWISE.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M153, TYPES I, II, OR III OR M213.

AT ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL CONTROLLED LOW STRENGTH.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWING. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR.

ORIGINAL PLANS AND OVERLAY PLANS OF EXISTING BRIDGE B-40-171 ARE AVAILABLE AT THE WISDOT SOUTHEAST REGION OFFICE. REFERENCE THESE PLANS FOR THE DESIGN OF SLAB OVERHANG SHORING AND TEMPORARY BRACING DURING CONSTRUCTION.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF SLAB, FACE OF CURB, TOP OF SIDEWALK, AND TO THE TOP AND ROADWAY FACE OF THE PARAPET.

THE MINIMUM CONCRETE HAUNCH SHALL BE 2" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 3¾" WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

THE CITY OF MILWAUKEE WILL REMOVE AND REINSTALL EXISTING LIGHT POLES. SEE SPECIAL PROVISIONS FOR COORDINATION REQUIREMENTS.

SEE ROADWAY PLANS FOR DETAILS REGARDING UTILITY ATTACHMENTS TO THE BRIDGE.

FENCE SHALL BE POLYMER COATED BLACK, FEDERAL COLOR NO. 27038.

FOR UTILITIES OWNED BY THE CITY OF MILWAUKEE: EXISTING UTILITIES WILL BE REMOVED BY THE OWNER PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AND INSTALLING ATTACHMENT HARDWARE INTO THE DECK. COSTS ASSOCIATED WITH THE WORK IS INCIDENTAL TO THE CONCRETE MASONRY BRIDGES BID ITEM.

FOR UTILITIES OWNED BY WE ENERGIES GAS: WE ENERGIES WILL SUPPLY THE ATTACHMENT HARDWARE TO THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE SUPPLIED DIAPHRAGMS, THREADED ROD, HANGERS, AND OTHER HARDWARE SHOWN IN THE DETAILS AND RE-ATTACHING THE UTILITY TO THE BRIDGE PRIOR TO REMOVAL OF THE EXISTING DECK. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE UTILITY DURING CONSTRUCTION. COSTS ASSOCIATED WITH THE WORK IS INCIDENTAL TO THE CONCRETE MASONRY BRIDGES BID ITEM.

EXISTING UTILITIES OWNED BY WE ENERGIES ELECTRIC WILL BE REMOVED PRIOR TO CONSTRUCTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY	MJH	PLANS CK'D.	RJW

CROSS SECTION & QUANTITIES

SHEET 2 OF 20

458

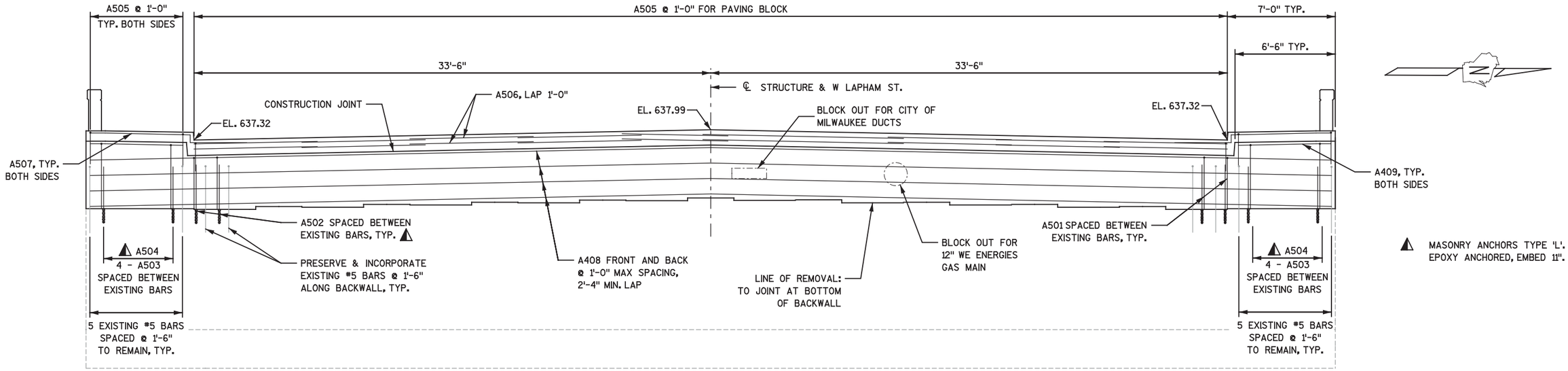
8

8

FILE NAME :02_B_40_171_Cross Section & Quantities.dgn
PLOT DATE :1/31/2014 3:32:16 PM PLOT BY : NicholasHornyakv8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

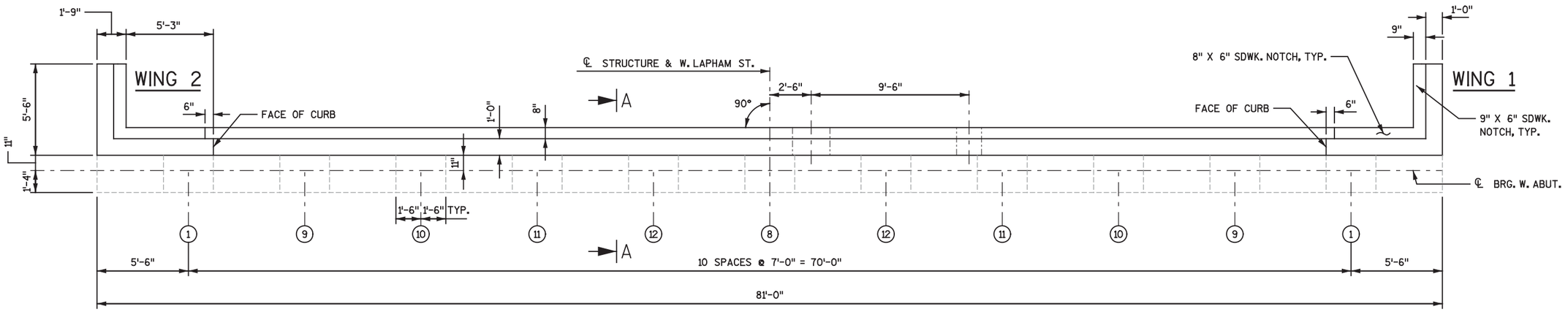
1228-25-70



⚠ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".

ELEVATION

(LOOKING WEST)



PLAN

NOTE: GIRDER DESIGNATIONS ARE BASED ON ORIGINAL PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

WEST ABUTMENT

SHEET 3 OF 20

459

8

8

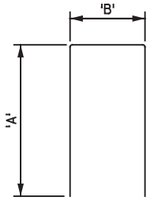
FILE NAME :03_B-40-171_West Abutment.dgn
PLOT DATE :1/31/2014 3:32:17 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

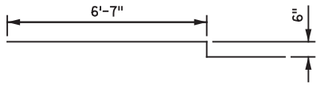
BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	46	7'-5"	X		BACKWALL VERT.
A502	X	92	3'-9"			BACKWALL VERT. ANCHORS ◭
A503	X	8	9'-3"	X		BACKWALL VERT.
A504	X	16	3'-7"			BACKWALL VERT. ANCHORS ◭
A505	X	82	4'-5"	X		PAVING NOTCH VERT.
A506	X	27	8'-4"			PAVING NOTCH HORIZ.
A507	X	4	10'-6"	X		SDWK. PAVING NOTCH HORIZ.
A408	X	16	41'-6"			BACKWALL HORIZ.
A409	X	4	6'-2"			SDWK. BACKWALL HORIZ.
A510	X	8	9'-4"	X		WINGWALL VERT.
A511	X	4	9'-6"	X		WINGWALL VERT.
A512	X	8	3'-6"			WINGWALL VERT. ANCHORS ◭
A413	X	24	5'-2"			WINGWALL HORIZ.
A414	X	12	3'-9"	X		WINGWALL SDWK. NOTCH VERT.
A615	X	4	5'-2"			WINGWALL SDWK. NOTCH HORIZ.
A516	X	16	2'-0"			BLOCKOUT REENTRANT CORNERS

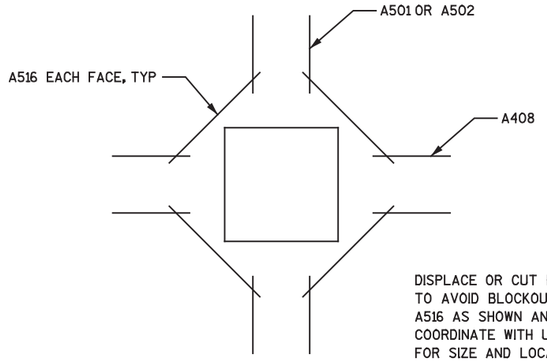


A501, A503, A505, A510, A511, A414

BAR MARK	DIM. 'A'	DIM. 'B'
A501	3'-2"	1'-4"
A503	4'-1"	1'-4"
A505	2'-0"	8"
A510	4'-1"	1'-5"
A511	4'-2"	1'-5"
A414	1'-8"	8"



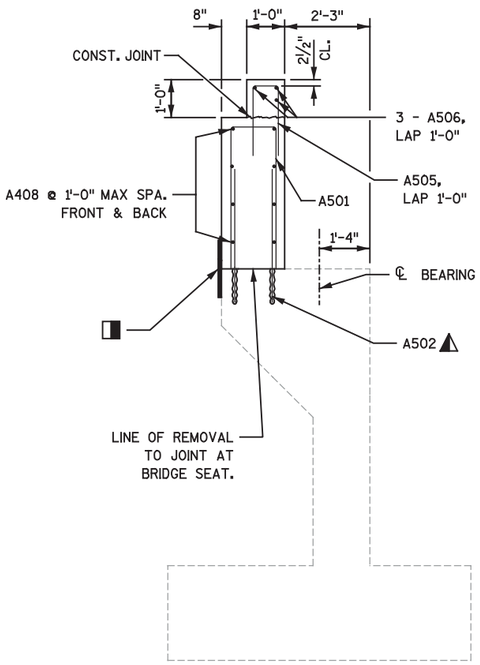
A507



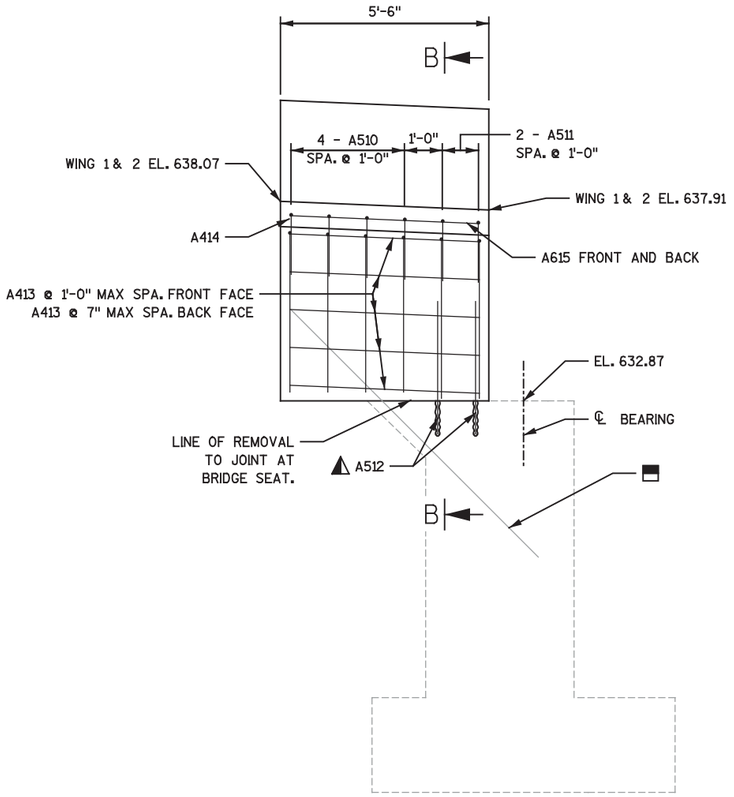
DISPLACE OR CUT REBAR TO AVOID BLOCKOUT. ADD A516 AS SHOWN AND COORDINATE WITH UTILITY FOR SIZE AND LOCATION OF BLOCKOUT.

BLOCKOUT DETAIL

- ■ PRESERVE & INCORPORATE EXISTING BARS
- ◭ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".
- ◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.

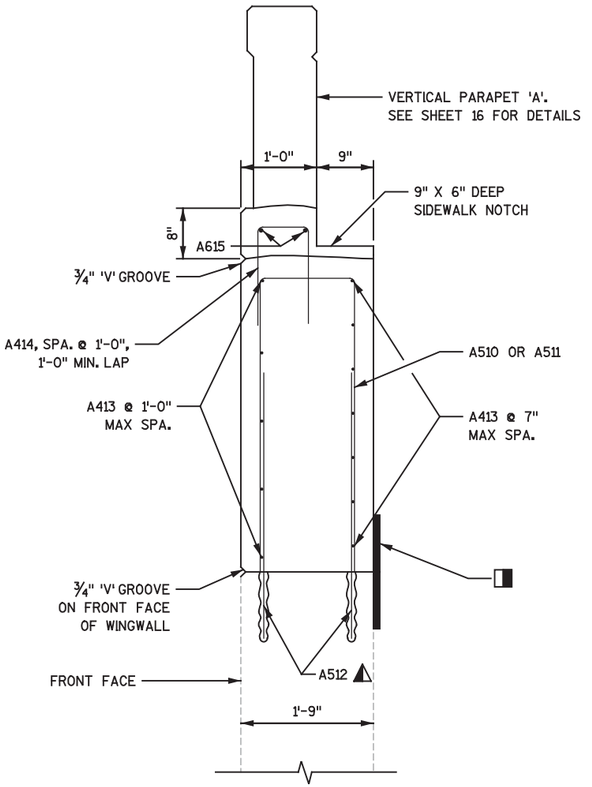


SECTION A-A



WEST ABUTMENT WING 2

(WING 1 OPPOSITE HAND)



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

WEST ABUTMENT DETAILS

SHEET 4 OF 20

460

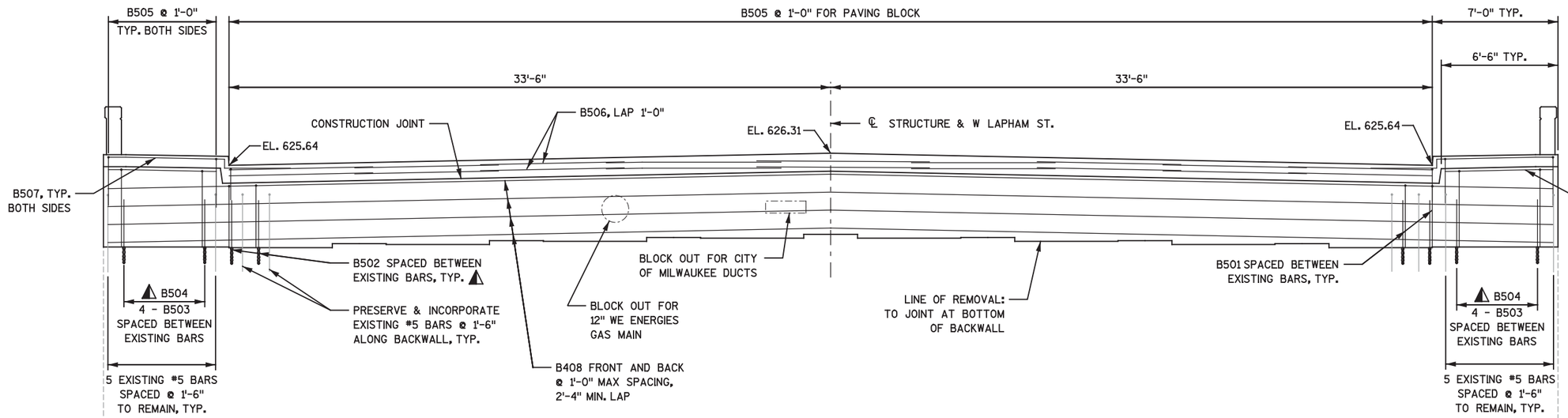
8

8

FILE NAME :04_B-40-171_West Abutment Details.dgn
PLOT DATE :1/31/2014 3:32:18 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

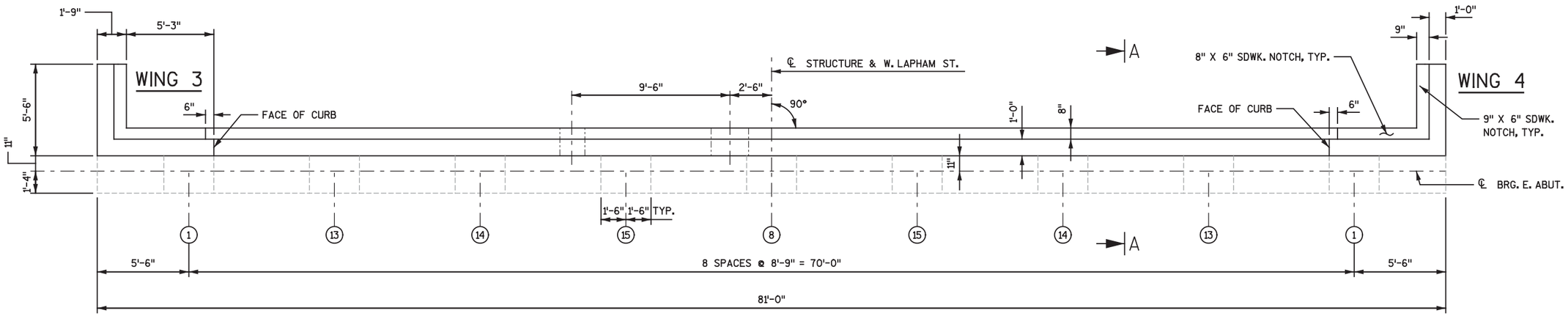
STATE PROJECT NUMBER

1228-25-70



ELEVATION

(LOOKING EAST)



PLAN

NOTE: GIRDER DESIGNATIONS ARE BASED ON ORIGINAL PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

EAST ABUTMENT

SHEET 5 OF 20

461

8

8

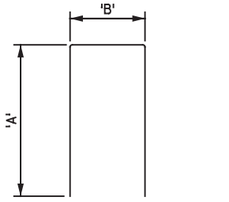
FILE NAME :05_B-40-171_East Abutment.dgn
PLOT DATE :1/31/2014 3:32:19 PM PLOT BY : NicholasHornyak@t DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

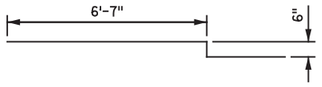
BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501	X	46	7'-9"	X		BACKWALL VERT.
B502	X	92	3'-9"			BACKWALL VERT. ANCHORS ◭
B503	X	8	9'-7"	X		BACKWALL VERT.
B504	X	16	3'-8"			BACKWALL VERT. ANCHORS ◭
B505	X	82	4'-5"	X		PAVING NOTCH VERT.
B506	X	27	8'-4"			PAVING NOTCH HORIZ.
B507	X	4	10'-6"	X		SDWK. PAVING NOTCH HORIZ.
B408	X	16	41'-6"			BACKWALL HORIZ.
B409	X	4	6'-2"			SDWK. BACKWALL HORIZ.
B510	X	8	9'-0"	X		WINGWALL VERT.
B511	X	4	9'-8"	X		WINGWALL VERT.
B512	X	8	3'-6"			WINGWALL VERT. ANCHORS ◭
B413	X	24	5'-2"			WINGWALL HORIZ.
B414	X	12	3'-9"	X		WINGWALL SDWK. NOTCH VERT.
B615	X	4	5'-2"			WINGWALL SDWK. NOTCH HORIZ.
B516	X	16	2'-0"			BLOCKOUT REENTRANT CORNERS

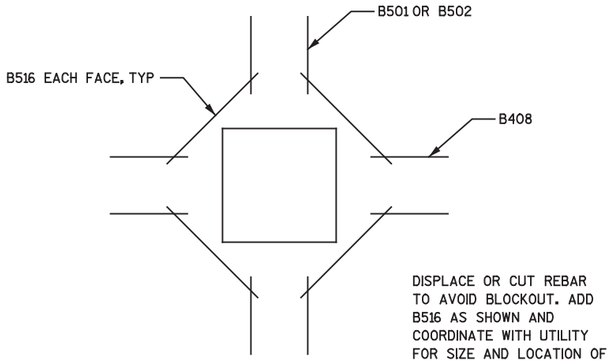


B501, B503, B505, B510, B511, B414

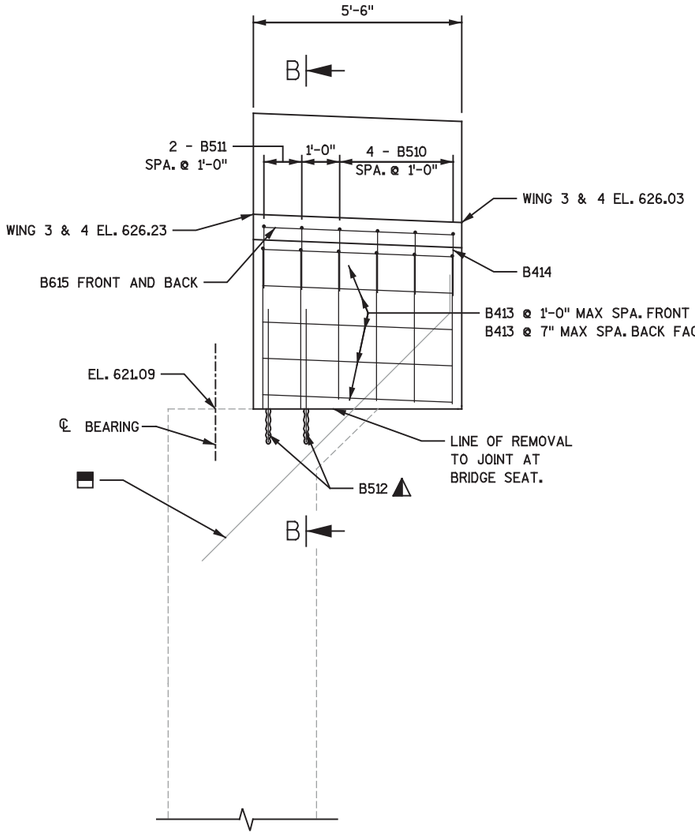
BAR MARK	DIM. 'A'	DIM. 'B'
B501	3'-4"	1'-4"
B503	4'-3"	1'-4"
B505	2'-0"	8"
B510	3'-11"	1'-5"
B511	4'-3"	1'-5"
B414	1'-8"	8"



B507

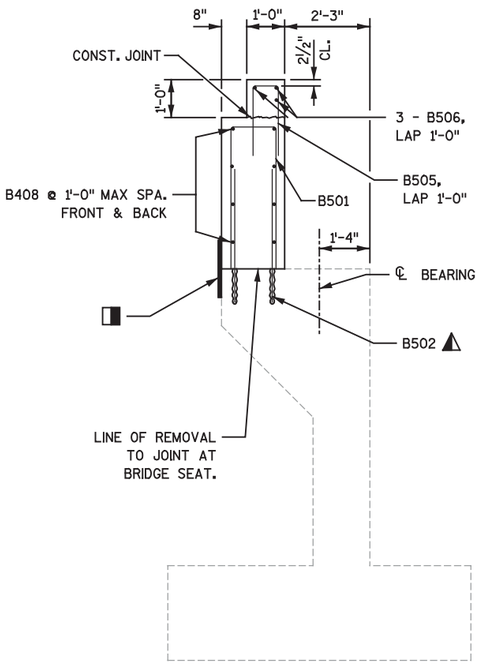


BLOCKOUT DETAIL

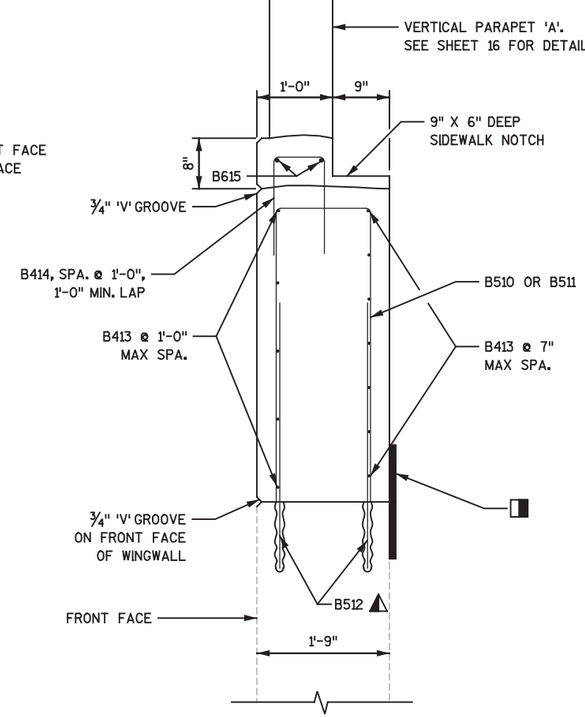


EAST ABUTMENT WING 4

(WING 3 OPPOSITE HAND)



SECTION A-A



SECTION B-B

- PRESERVE & INCORPORATE EXISTING BARS
- ◭ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".
- ◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

EAST ABUTMENT DETAILS

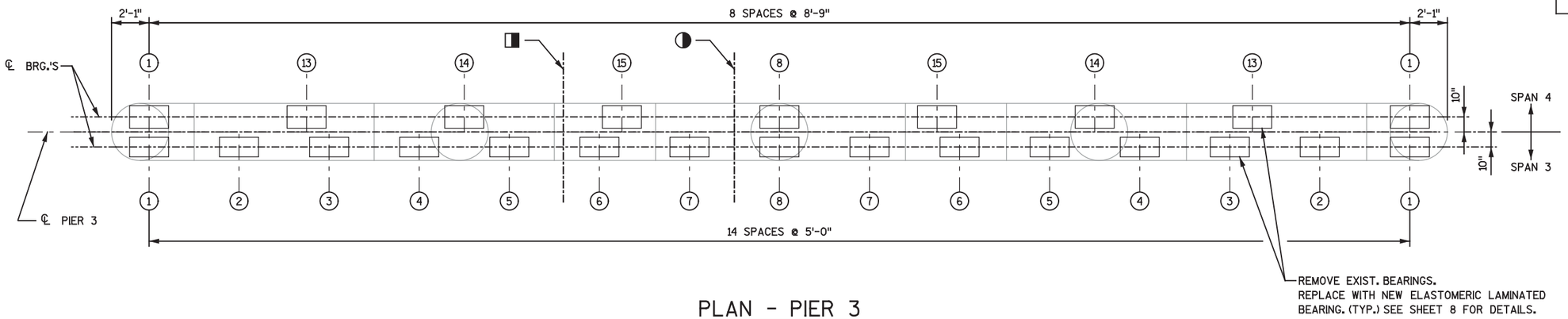
SHEET 6 OF 20

462

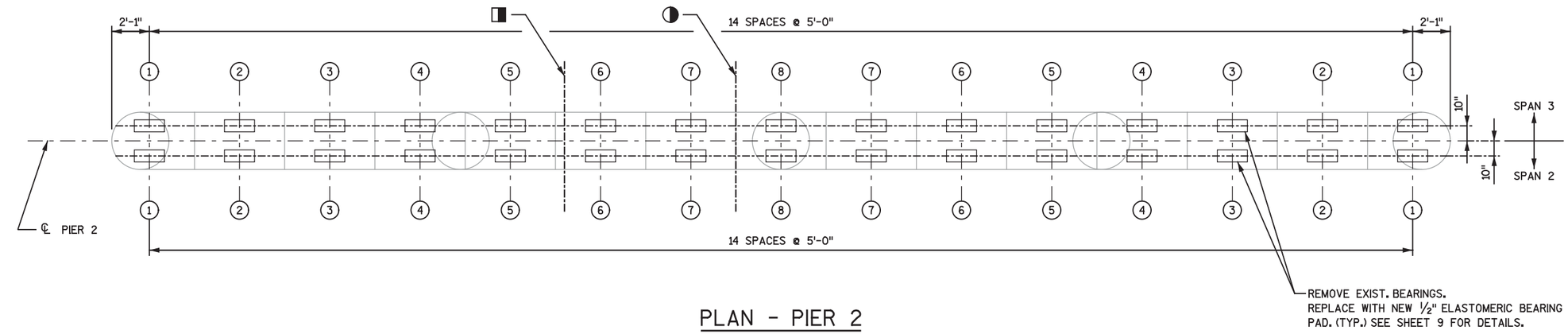
FILE NAME :\06_B-40-171_East Abutment Details.dgn
PLOT DATE :1/31/2014 3:32:20 PM PLOT BY : NicholasHornyak\v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

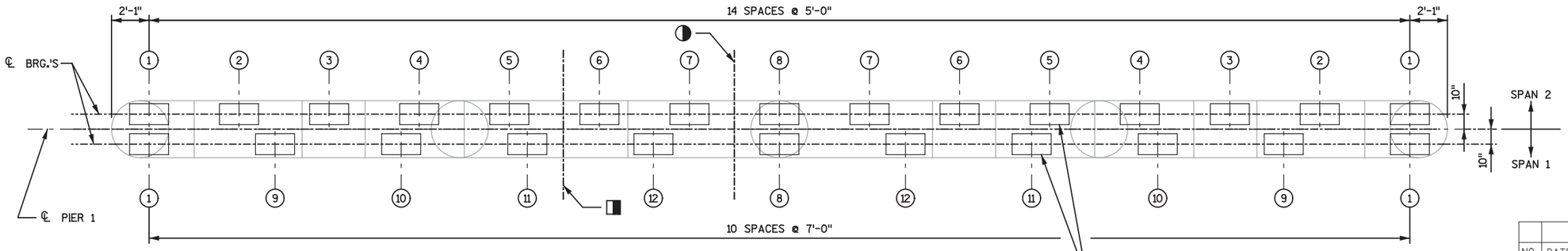
1228-25-70



PLAN - PIER 3



PLAN - PIER 2



PLAN - PIER 1

◑ ℄ EXISTING DUCT PACKAGE TO REMAIN. PROVIDE BLOCK OUT. SEE SHEET 15 FOR BLOCKOUT DETAIL. SEE SHEETS 26 TO 29 FOR LOCATIONS AND SUPPORT DETAILS.

◨ ℄ EXISTING 12" GAS MAIN TO REMAIN. PROVIDE BLOCK OUT. SEE SHEET 15 FOR BLOCKOUT DETAIL. SEE SHEETS 21 TO 25 FOR LOCATION AND SUPPORT DETAILS.

NOTE: GIRDER DESIGNATIONS ARE BASED ON EXISTING PLANS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

PIER BEARING LAYOUT

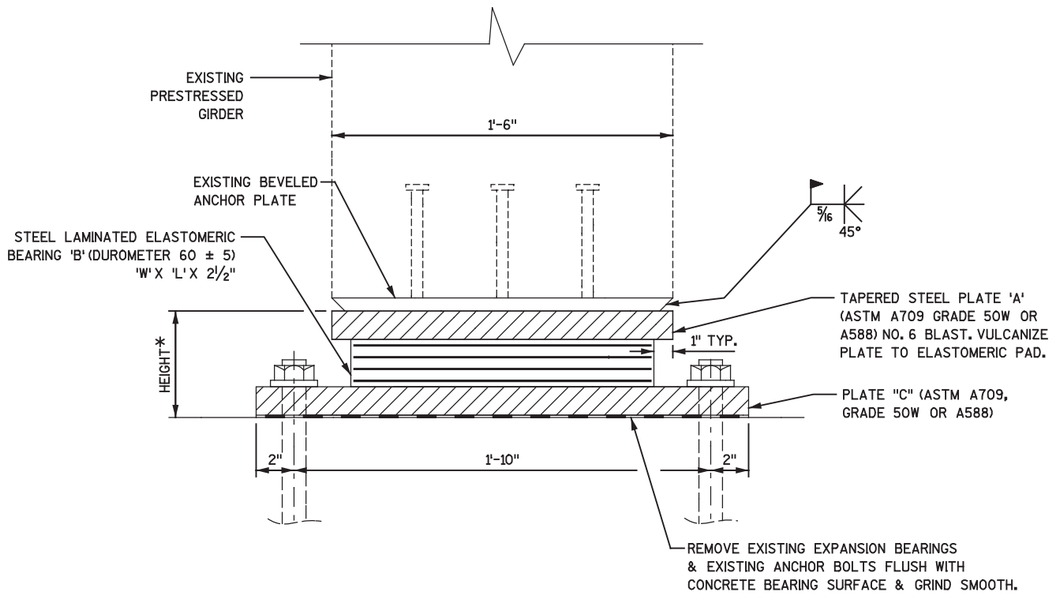
SHEET 7 OF 20

463

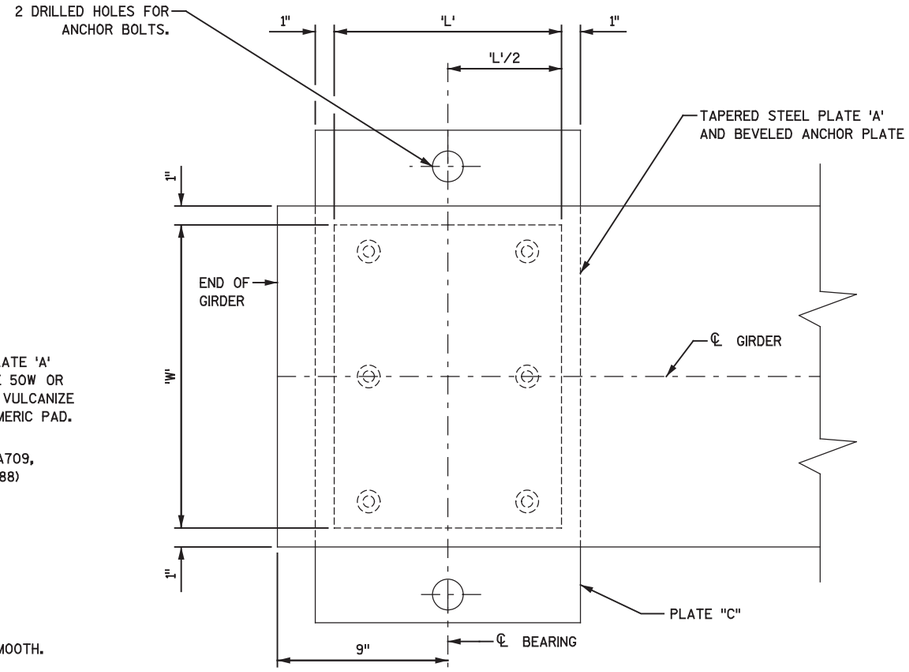
FILE NAME :07_B-40-171_Pier Bearing Layout.dgn
PLOT DATE :1/31/2014 3:32:21 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CEL_TEXTSUB.TBL

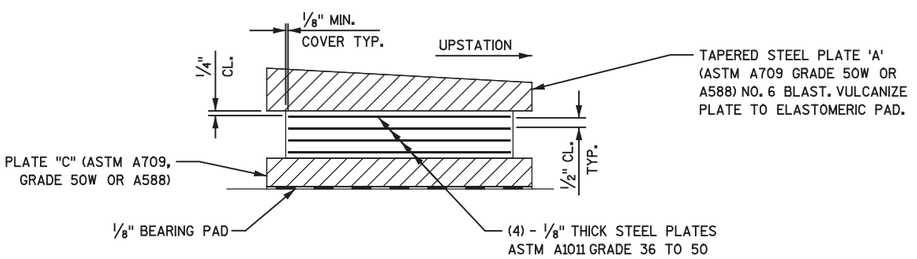
STATE PROJECT NUMBER

1228-25-70



FRONT ELEVATION

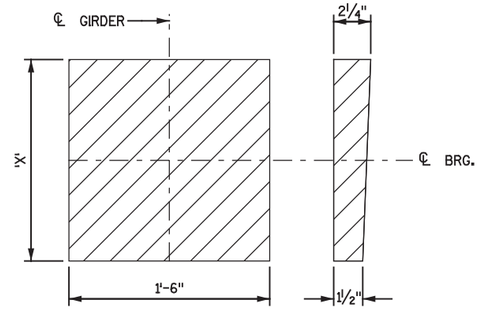




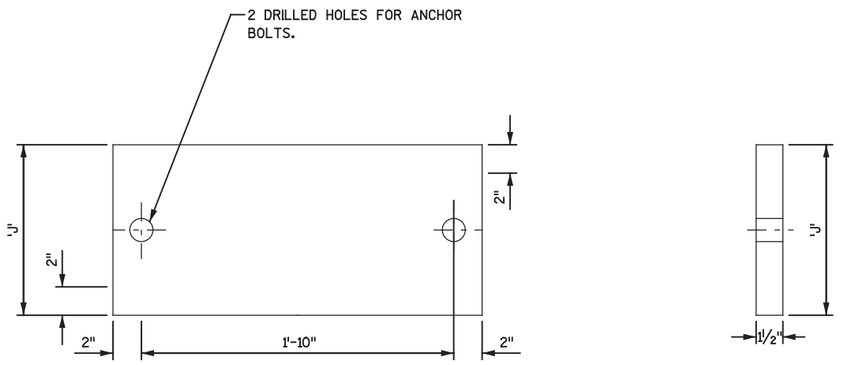
SECTION THRU ELASTOMERIC BEARING

EXPANSION BEARINGS								
LOCATION	PLATE 'A'		BEARING 'B'		PLATE 'C'		HEIGHT	NO. OF
	'X'		'W'	'L'	'J'		(IN.)*	BRG.
W. ABUT.	1'-1"		1'-4"	11"	1'-1"		6"	11
PIER 1 WEST	1'-2"		1'-4"	1'-0"	1'-2"		6"	11
PIER 1 EAST	1'-2"		1'-4"	1'-0"	1'-2"		6"	15
PIER 3 WEST	1'-1"		1'-4"	11"	1'-1"		6"	15
PIER 3 EAST	1'-3"		1'-4"	1'-1"	1'-3"		6"	9
E. ABUT.	1'-1"		1'-4"	11"	1'-1"		6"	9

* HEIGHT MEASURED AT ℄ OF BEARING



TOP PLATE 'A' DETAILS



MASONRY PLATE 'C' DETAILS

BEARING NOTES

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

COMPRESSION LOAD AND ADHESION TESTS WILL BE WAIVED WHERE BEARINGS ARE DETAILED TO MEET HEIGHT REQUIREMENTS.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

USE (2) 1¼" ϕ, 1'-5" LONG ANCHOR BOLTS PER BEARING PAD ASSEMBLY.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS PLATE "C" THICKNESS + 2¼".

PROVIDE ⅛" THICK BEARING PAD SAME SIZE AS MASONRY PLATE "C" FOR EACH BEARING.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "C" SHALL HAVE A DIAMETER ⅜" LARGER THAN ANCHOR BOLT.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS "C".

PLATE "C" SHALL BE GALVANIZED.

GRIND EXISTING WELD THAT ATTACHES TO EXISTING TOP PLATE TO EXISTING BOTTOM FLANGE. GRIND AFFECTED AREAS SMOOTH.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY	MJH	PLANS CK'D.	RJW

ELASTOMERIC EXPANSION BEARINGS

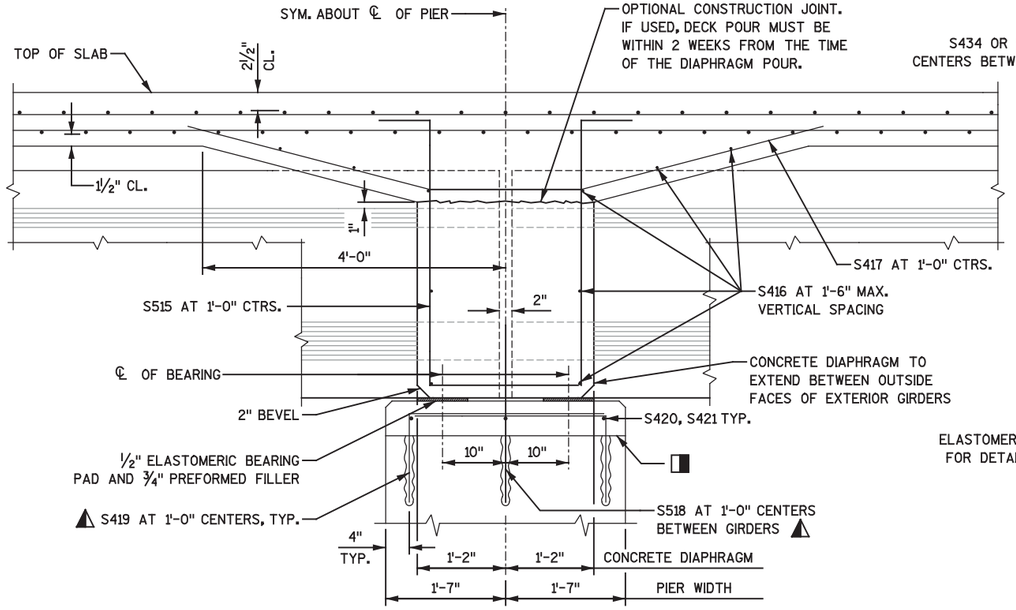
SHEET 8 OF 20

464

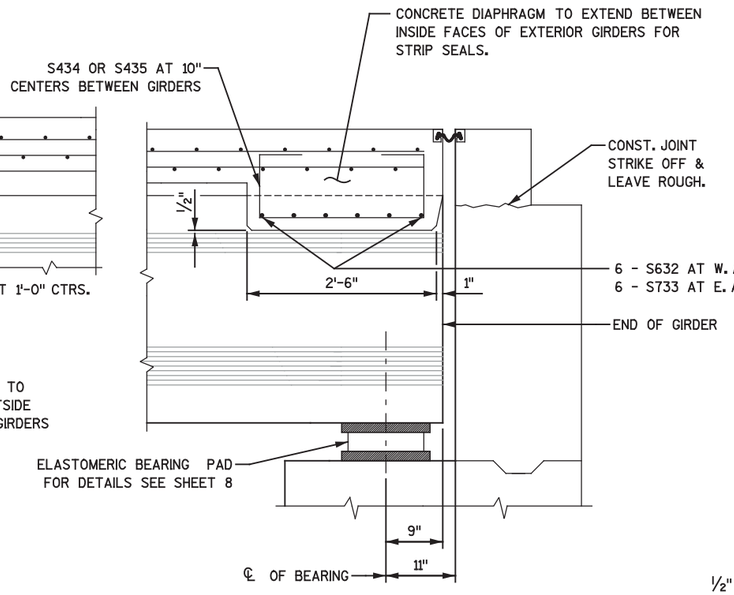
FILE NAME :08.B-40-171.Elastomeric Expansion Bearings.dgn
PLOT DATE :1/31/2014 3:32:22 PM PLOT BY : NicholasHornyakv8i DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



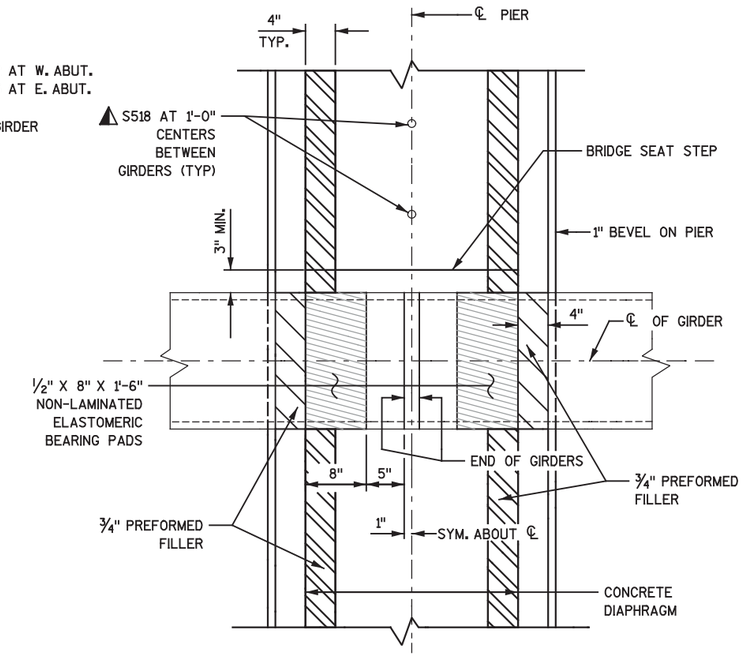
DIAPHRAGM AT PIER 2



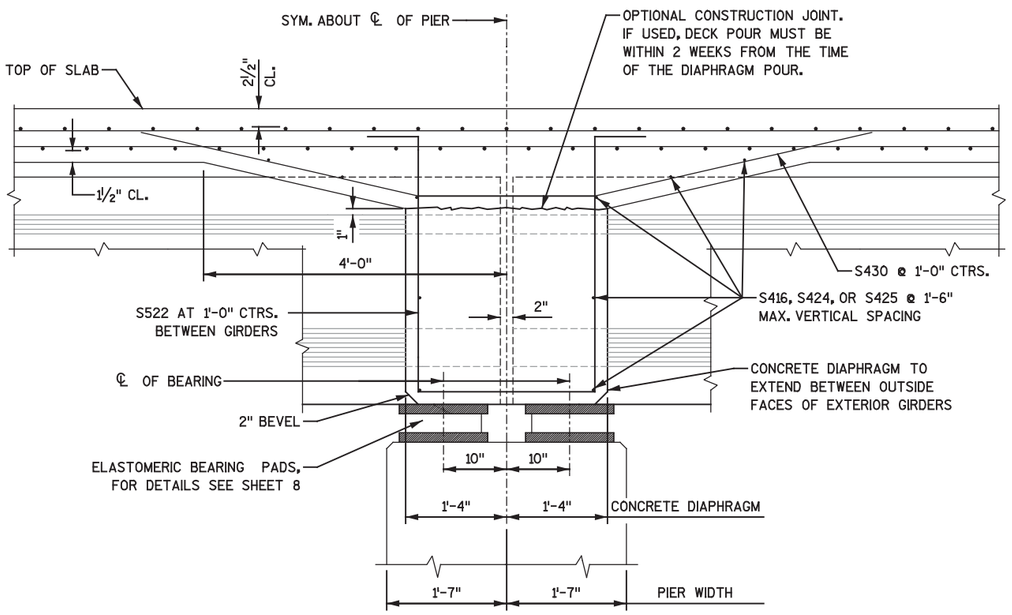
DIAPHRAGM AT ABUTMENTS

▲ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".

▌ ROUGHEN EXISTING SURFACE TO ¼" AMPLITUDE BEFORE POURING NEW CONCRETE

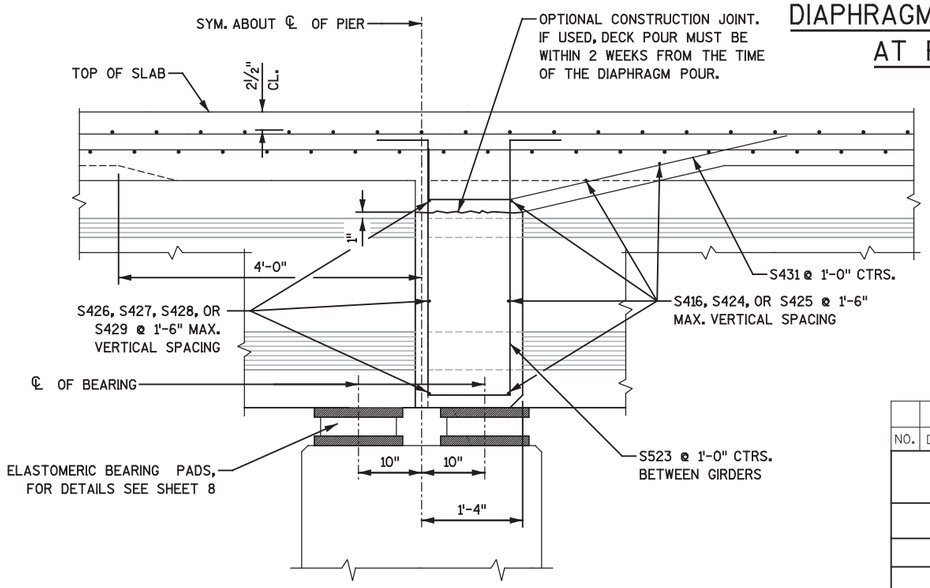


DIAPHRAGM PLAN VIEW AT PIER 2



FULL DIAPHRAGM AT PIERS 1 & 3

(BETWEEN GIRDERS)



HALF DIAPHRAGM AT PIERS 1 & 3

(AT GIRDERS)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

CONCRETE DIAPHRAGM DETAILS

SHEET 9 OF 20

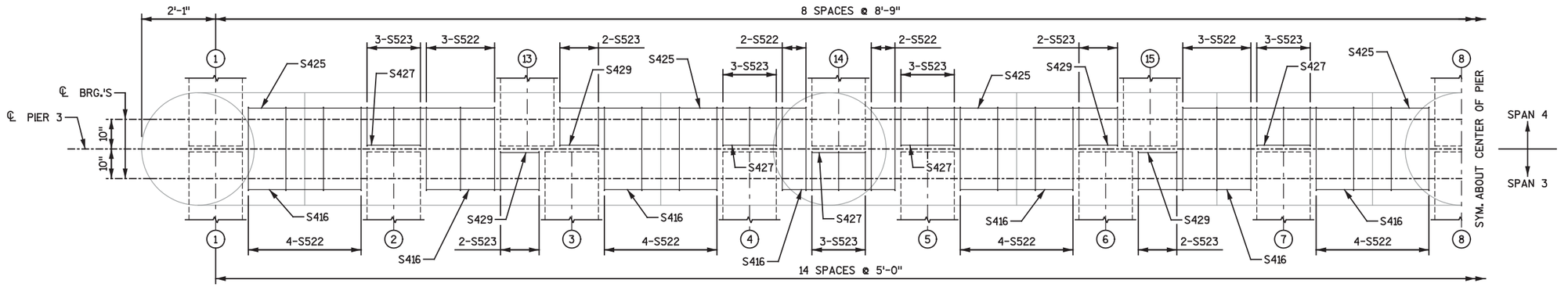
465

8

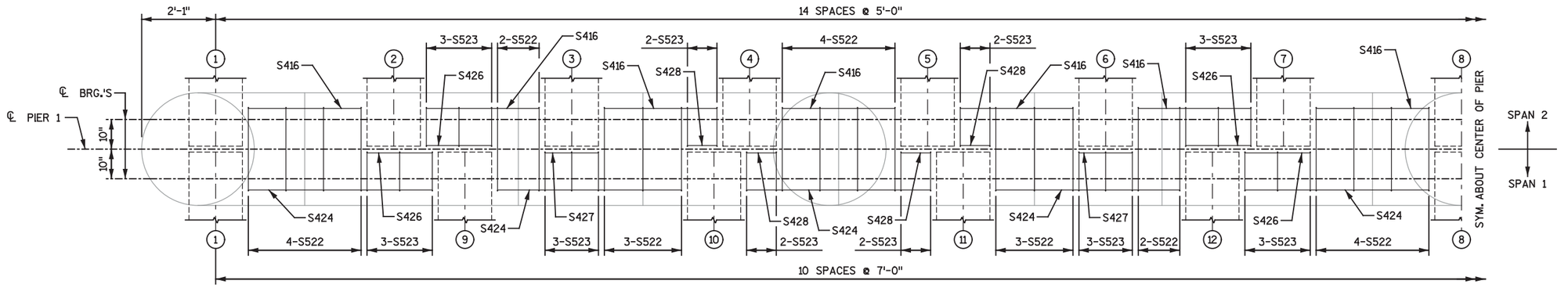
8

FILE NAME :\09_B-40-171_Concrete Diaphragm Details.dgn
PLOT DATE :1/31/2014 3:33:24 PM PLOT BY : NicholasHornyak@t DRV :Pdf_bw_HS.ptt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



PLAN - PIER 3



PLAN - PIER 1

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

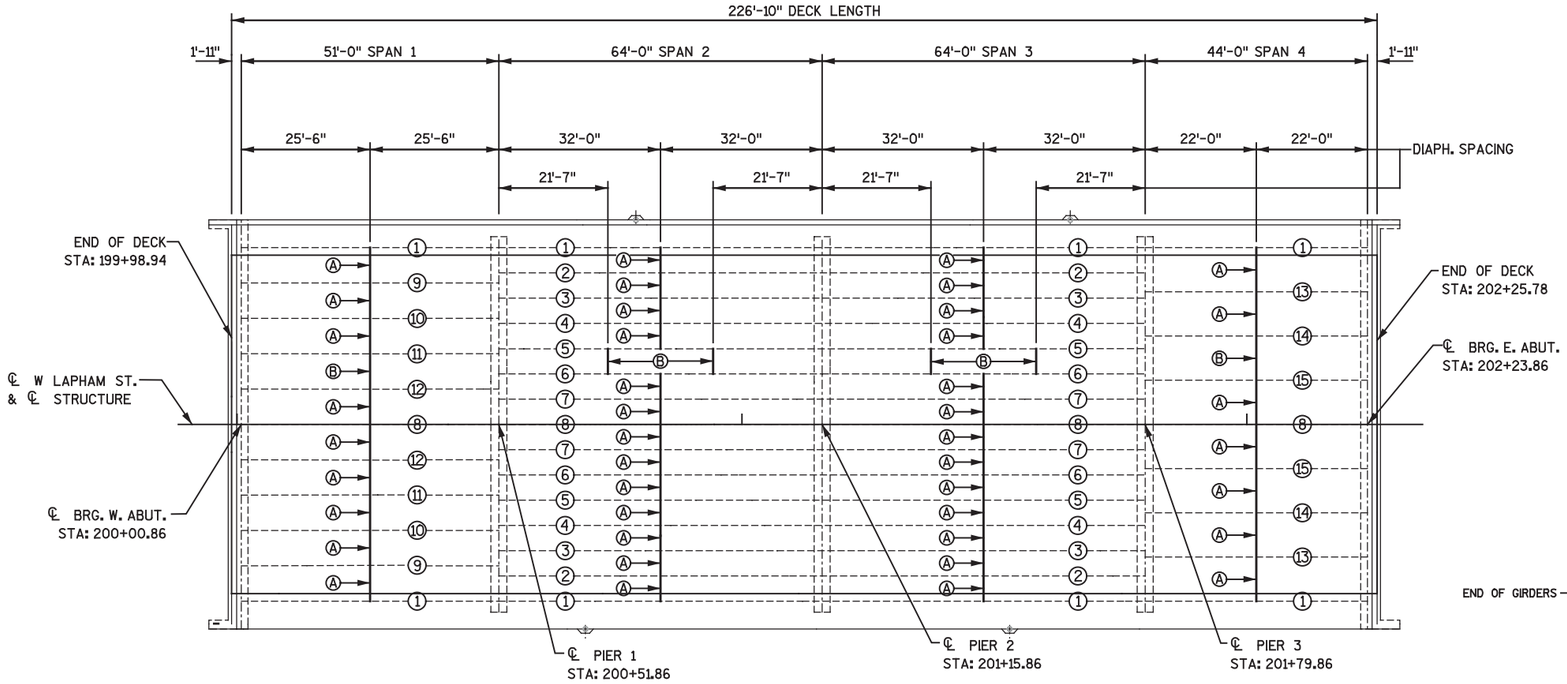
DRAWN BY	MJH	PLANS CK'D.	RJW

PIER DIAPHRAGM DETAILS

SHEET 10 OF 20

FILE NAME :10_B-40-171_Pier Diaphragm Details.dgn
PLOT DATE :1/31/2014 3:32:25 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



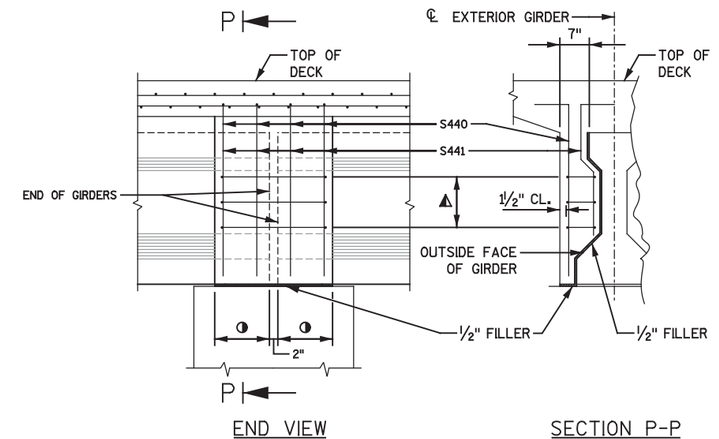
FRAMING PLAN

Ⓐ TYPICAL IN SPAN STEEL DIAPHRAGM. SEE SHT. 12

Ⓑ IN SPAN STEEL DIAPHRAGM WITH GAS MAIN SUPPORTS. SEE WE ENERGIES GAS PLAN, SHTS. 21 TO 25

◑ DIMENSION IS 1'-1" AT PIER 2 AND 1'-3" AT PIERS 1 AND 3

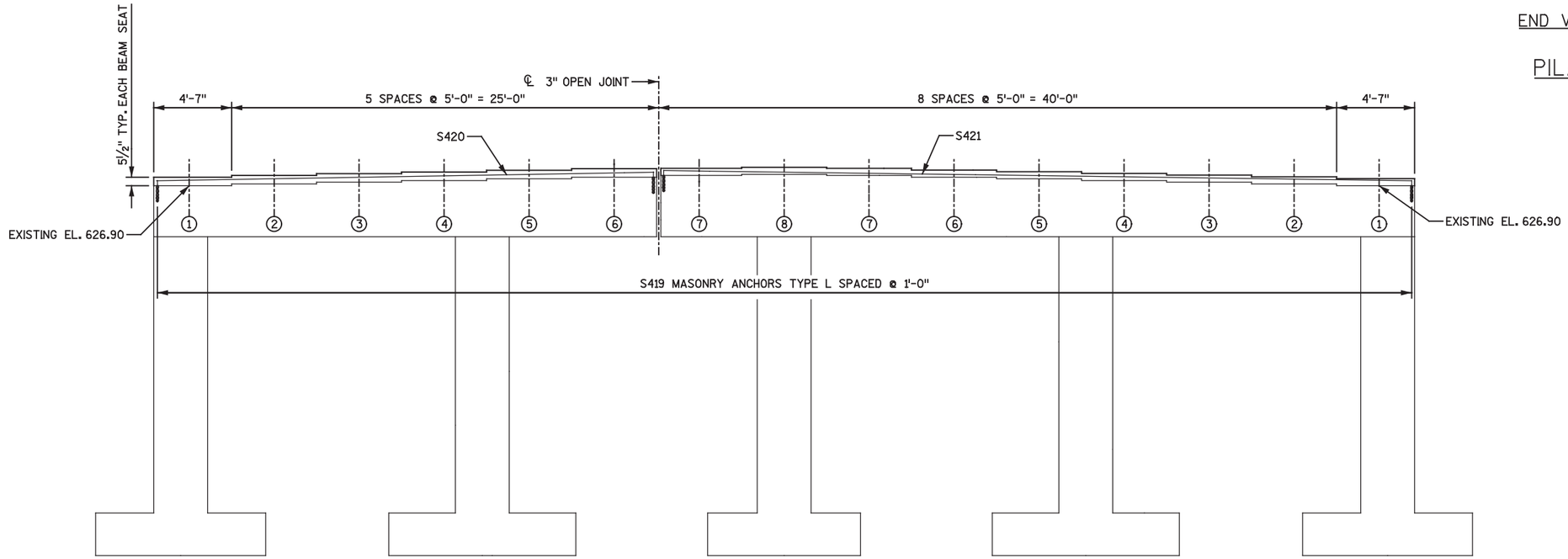
◭ S342 AT 6" SPA. PIERS 1 AND 3
S343 AT 6" SPA. PIER 2



END VIEW

SECTION P-P

PILASTER DETAILS AT PIER



PIER 2 CAP REVISION *
(LOOKING EAST)

*SEE SHEET 9 "DIAPHRAGM AT PIER 2" FOR DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY	MJH	PLANS CK'D.	RJW

CONCRETE DETAILS & FRAMING PLAN

SHEET 11 OF 20

467

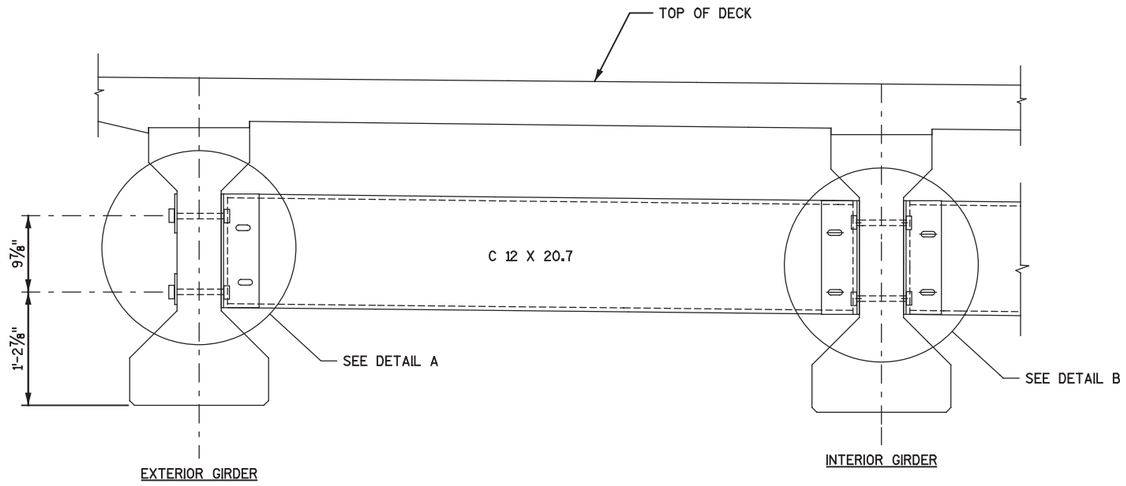
8

8

FILE NAME :IL8.40.171.Concrete Details & Framing Plan.dgn
PLOT DATE :1/31/2014 3:32:25 PM PLOT BY : NicholasHornyakv8L DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

ALL DIAPHRAGM MATERIAL SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-171", EACH.

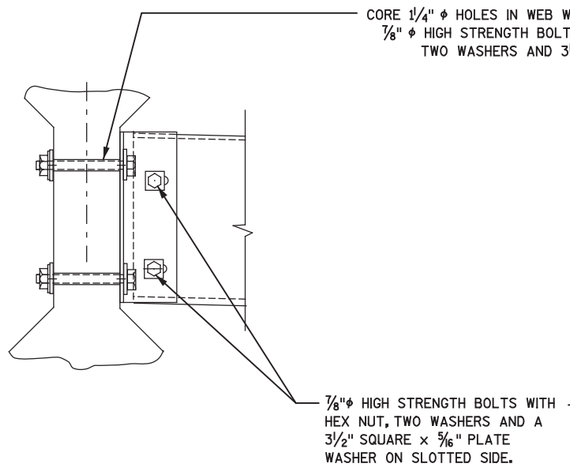
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

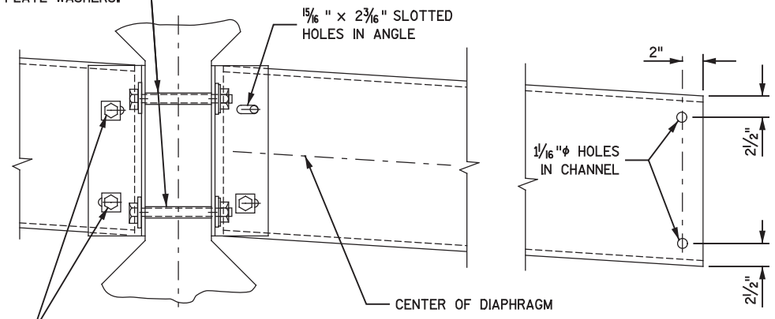
ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

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.

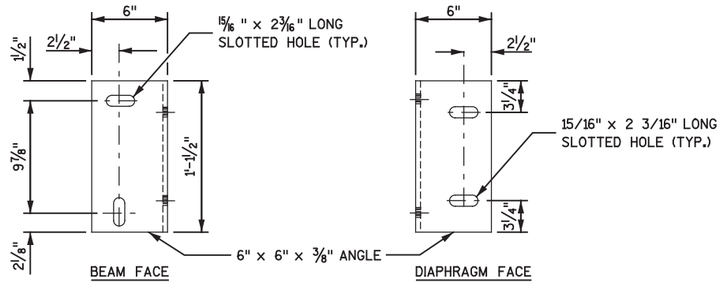
CORED HOLES FOR EXISTING GIRDERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-171", EACH.



DETAIL A
(FOR EXISTING EXTERIOR GIRDERS)



DETAIL B
(FOR CONTINUOUS LINE OF DIAPHRAGMS)



DIAPHRAGM SUPPORT

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

STEEL DIAPHRAGM DETAILS

SHEET 12 OF 20

468

FILE NAME :I2_B-40-171_SteelDiaphragm Details.dgn
PLOT DATE :1/31/2014 3:32:26 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

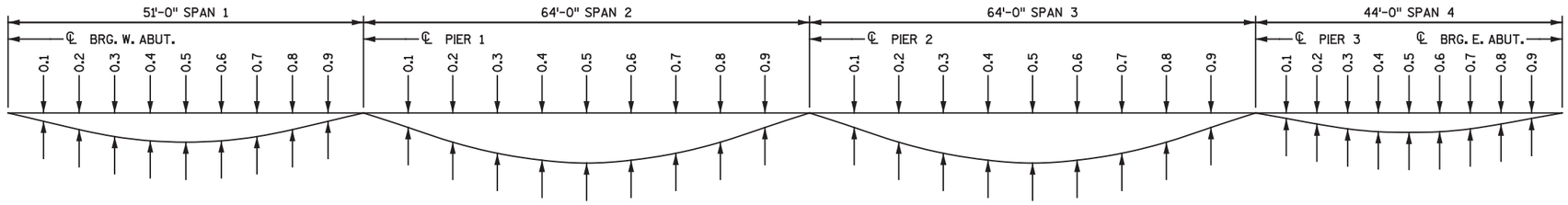
TOP OF DECK ELEVATIONS

GIRDER \ POINT	℄ BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 1 WEST	GIRDER	PIER 1 EAST	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 2 WEST
N. EDGE	637.18	636.97	636.75	636.53	636.30	636.06	635.82	635.57	635.32	635.06	634.80	N. EDGE	634.80	634.46	634.11	633.76	633.42	633.07	632.72	632.37	632.02	631.67	631.32
1	637.25	637.04	636.82	636.60	636.37	636.13	635.89	635.64	635.39	635.13	634.87	1	634.87	634.53	634.18	633.83	633.49	633.14	632.79	632.44	632.09	631.74	631.39
9	637.39	637.18	636.96	636.74	636.51	636.27	636.03	635.78	635.53	635.27	635.01	2	634.97	634.63	634.28	633.93	633.59	633.24	632.89	632.54	632.19	631.84	631.49
10	637.53	637.32	637.10	636.88	636.65	636.41	636.17	635.92	635.67	635.41	635.15	3	635.07	634.73	634.38	634.03	633.69	633.34	632.99	632.64	632.29	631.94	631.59
11	637.67	637.46	637.24	637.02	636.79	636.55	636.31	636.06	635.81	635.55	635.29	4	635.17	634.83	634.48	634.13	633.79	633.44	633.09	632.74	632.39	632.04	631.69
12	637.81	637.60	637.38	637.16	636.93	636.69	636.45	636.20	635.95	635.69	635.43	5	635.27	634.93	634.58	634.23	633.89	633.54	633.19	632.84	632.49	632.14	631.79
–	–	–	–	–	–	–	–	–	–	–	–	6	635.37	635.03	634.68	634.33	633.99	633.64	633.29	632.94	632.59	632.24	631.89
–	–	–	–	–	–	–	–	–	–	–	–	7	635.47	635.13	634.78	634.43	634.09	633.74	633.39	633.04	632.69	632.34	631.99
8	637.95	637.74	637.52	637.30	637.07	636.83	636.59	636.34	636.09	635.83	635.57	8	635.57	635.23	634.88	634.53	634.19	633.84	633.49	633.14	632.79	632.44	632.09
–	–	–	–	–	–	–	–	–	–	–	–	7	635.47	635.13	634.78	634.43	634.09	633.74	633.39	633.04	632.69	632.34	631.99
–	–	–	–	–	–	–	–	–	–	–	–	6	635.37	635.03	634.68	634.33	633.99	633.64	633.29	632.94	632.59	632.24	631.89
12	637.81	637.60	637.38	637.16	636.93	636.69	636.45	636.20	635.95	635.69	635.43	5	635.27	634.93	634.58	634.23	633.89	633.54	633.19	632.84	632.49	632.14	631.79
11	637.67	637.46	637.24	637.02	636.79	636.55	636.31	636.06	635.81	635.55	635.29	4	635.17	634.83	634.48	634.13	633.79	633.44	633.09	632.74	632.39	632.04	631.69
10	637.53	637.32	637.10	636.88	636.65	636.41	636.17	635.92	635.67	635.41	635.15	3	635.07	634.73	634.38	634.03	633.69	633.34	632.99	632.64	632.29	631.94	631.59
9	637.39	637.18	636.96	636.74	636.51	636.27	636.03	635.78	635.53	635.27	635.01	2	634.97	634.63	634.28	633.93	633.59	633.24	632.89	632.54	632.19	631.84	631.49
1	637.25	637.04	636.82	636.60	636.37	636.13	635.89	635.64	635.39	635.13	634.87	1	634.87	634.53	634.18	633.83	633.49	633.14	632.79	632.44	632.09	631.74	631.39
S. EDGE	637.18	636.97	636.75	636.53	636.30	636.06	635.82	635.57	635.32	635.06	634.80	S. EDGE	634.80	634.46	634.11	633.76	633.42	633.07	632.72	632.37	632.02	631.67	631.32

GIRDER \ POINT	PIER 2 EAST	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 3 WEST	GIRDER	PIER 3 EAST	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. E. ABUT.
N. EDGE	631.32	630.97	630.62	630.28	629.93	629.58	629.23	628.88	628.53	628.18	627.83	N. EDGE	627.83	627.59	627.36	627.12	626.89	626.66	626.44	626.22	626.00	625.79	625.58
1	631.39	631.04	630.69	630.35	630.00	629.65	629.30	628.95	628.60	628.25	627.90	1	627.90	627.66	627.43	627.19	626.96	626.73	626.51	626.29	626.07	625.86	625.65
2	631.49	631.14	630.79	630.45	630.10	629.75	629.40	629.05	628.70	628.35	628.00	13	628.08	627.84	627.60	627.36	627.13	626.90	626.68	626.46	626.24	626.03	625.82
3	631.59	631.24	630.89	630.55	630.20	629.85	629.50	629.15	628.80	628.45	628.10	14	628.25	628.01	627.78	627.54	627.31	627.08	626.86	626.64	626.42	626.21	626.00
4	631.69	631.34	630.99	630.65	630.30	629.95	629.60	629.25	628.90	628.55	628.20	15	628.43	628.19	627.95	627.71	627.48	627.25	627.03	626.81	626.59	626.38	626.17
5	631.79	631.44	631.09	630.75	630.40	630.05	629.70	629.35	629.00	628.65	628.30	–	–	–	–	–	–	–	–	–	–	–	–
6	631.89	631.54	631.19	630.85	630.50	630.15	629.80	629.45	629.10	628.75	628.40	–	–	–	–	–	–	–	–	–	–	–	–
7	631.99	631.64	631.29	630.95	630.60	630.25	629.90	629.55	629.20	628.85	628.50	–	–	–	–	–	–	–	–	–	–	–	–
8	632.09	631.74	631.39	631.05	630.70	630.35	630.00	629.65	629.30	628.95	628.60	8	628.60	628.36	628.13	627.89	627.66	627.43	627.21	626.99	626.77	626.56	626.35
7	631.99	631.64	631.29	630.95	630.60	630.25	629.90	629.55	629.20	628.85	628.50	–	–	–	–	–	–	–	–	–	–	–	–
6	631.89	631.54	631.19	630.85	630.50	630.15	629.80	629.45	629.10	628.75	628.40	–	–	–	–	–	–	–	–	–	–	–	–
5	631.79	631.44	631.09	630.75	630.40	630.05	629.70	629.35	629.00	628.65	628.30	–	–	–	–	–	–	–	–	–	–	–	–
4	631.69	631.34	630.99	630.65	630.30	629.95	629.60	629.25	628.90	628.55	628.20	15	628.43	628.19	627.95	627.71	627.48	627.25	627.03	626.81	626.59	626.38	626.17
3	631.59	631.24	630.89	630.55	630.20	629.85	629.50	629.15	628.80	628.45	628.10	14	628.25	628.01	627.78	627.54	627.31	627.08	626.86	626.64	626.42	626.21	626.00
2	631.49	631.14	630.79	630.45	630.10	629.75	629.40	629.05	628.70	628.35	628.00	13	628.08	627.84	627.60	627.36	627.13	626.90	626.68	626.46	626.24	626.03	625.82
1	631.39	631.04	630.69	630.35	630.00	629.65	629.30	628.95	628.60	628.25	627.90	1	627.90	627.66	627.43	627.19	626.96	626.73	626.51	626.29	626.07	625.86	625.65
S. EDGE	631.32	630.97	630.62	630.28	629.93	629.58	629.23	628.88	628.53	628.18	627.83	S. EDGE	627.83	627.59	627.36	627.12	626.89	626.66	626.44	626.22	626.00	625.79	625.58

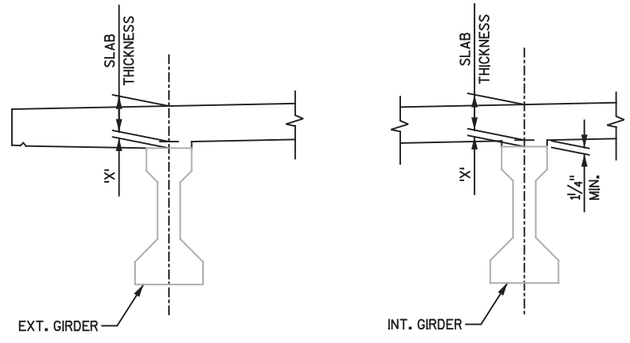
DEAD LOAD DEFLECTIONS

CONCRETE DEAD LOAD DEFLECTIONS (FEET)										
℄ BRG. W. ABUT.	SPAN 1									℄ PIER 1
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
0.000	0.012	0.024	0.034	0.040	0.042	0.040	0.034	0.024	0.012	0.000
	SPAN 2									
℄ PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 2
0.000	0.021	0.042	0.058	0.068	0.072	0.068	0.058	0.042	0.021	0.000
	SPAN 3									
℄ PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 3
0.000	0.021	0.042	0.058	0.068	0.072	0.068	0.058	0.042	0.021	0.000
	SPAN 4									℄ BRG. E. ABUT.
℄ PIER 3	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
0.000	0.008	0.016	0.023	0.027	0.028	0.027	0.023	0.016	0.008	0.000



DEFLECTION DIAGRAM

SEE TABLE FOR DEAD LOAD DEFLECTIONS AT TENTH POINTS



HAUNCH DETAIL

NOTES

TO DETERMINE 'X':
ELEVATIONS OF THE TOP FLANGES, TOP OF SPLICE PLATE, OR TOP OF COVER PLATES, WHICHEVER APPLIES, SHALL BE TAKEN AT ℄ OF BRGS. AND AT TENTH POINTS OF EACH SPAN, THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF STEEL ELEVATION
\+ DEFLECTION (CONCRETE ONLY)
\- SLAB THICKNESS

= CONCRETE HAUNCH HEIGHT 'X'

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

DECK ELEVATIONS

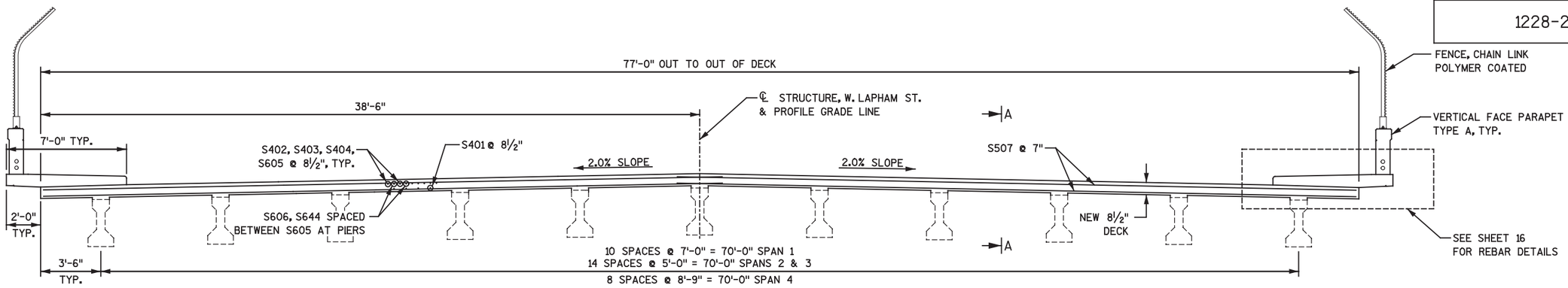
SHEET 13 OF 20

469

FILE NAME :I3_B-40-171_Deck Elevations.dgn
PLOT DATE :1/31/2014 3:32:26 PM PLOT BY : NicholasHornyakv6L DRV :PDF_BW_HS.pltr PEN :CELTEXTSUB.TBL

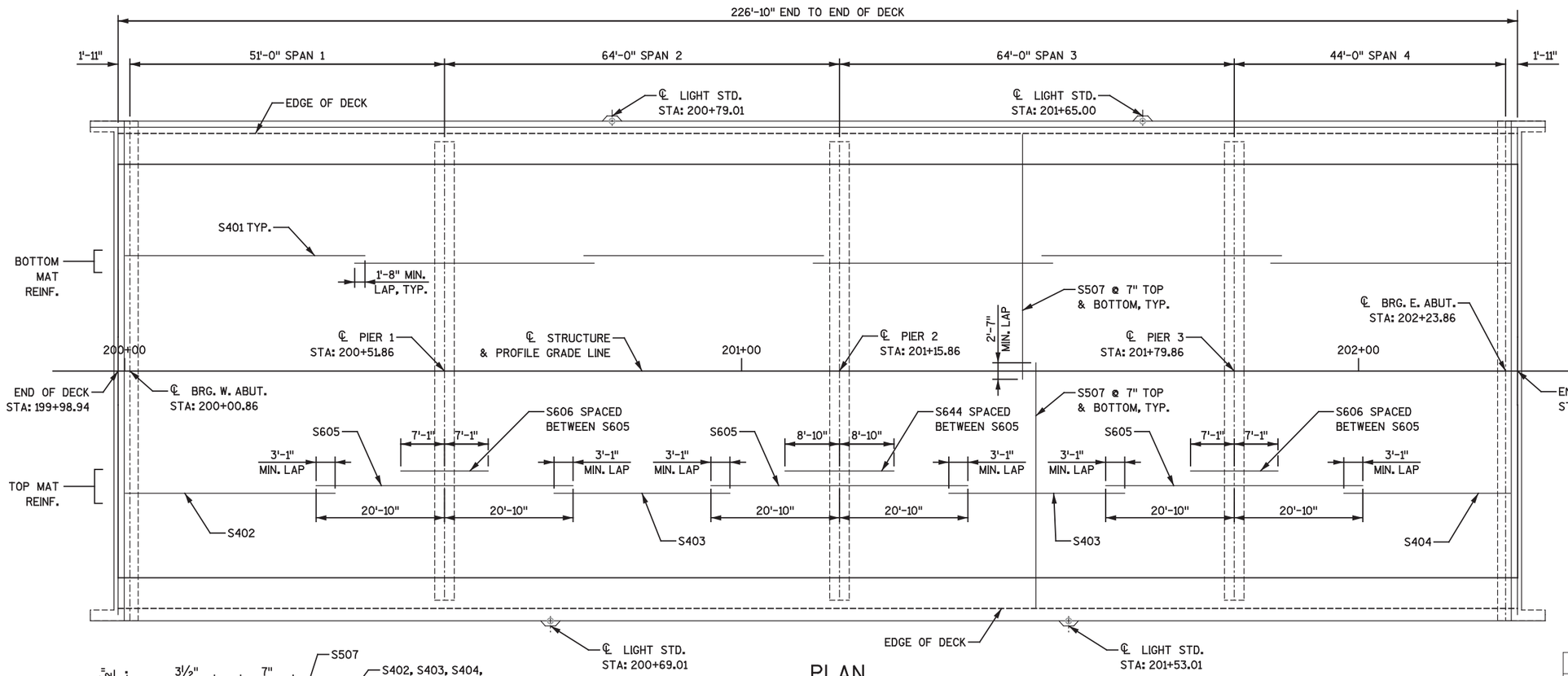
STATE PROJECT NUMBER

1228-25-70

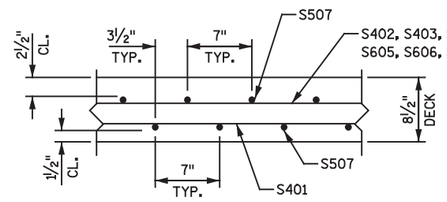


CROSS SECTION

(LOOKING EAST)



PLAN



SECTION A-A THRU DECK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

SHEET 14 OF 20

SUPERSTRUCTURE 470

8

8

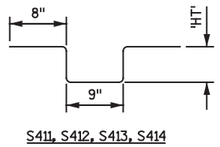
FILE NAME :14.8.40.171.Superstructure.dgn
PLOT DATE :1/31/2014 3:32:27 PM PLOT BY : NicholasHornyakv8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

BILL OF BARS

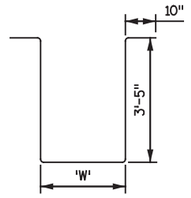
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	654	38'-10"			LONGIT. BOTTOM
S402	X	110	34'-0"			LONGIT. TOP SPAN 1
S403	X	220	28'-6"			LONGIT. TOP SPAN 2 & 3
S404	X	110	27'-0"			LONGIT. TOP SPAN 4
S605	X	330	41'-8"			LONGIT. CONTINUITY PIERS 1-3
S606	X	218	14'-2"			LONGIT. CONTINUITY PIERS 1 & 3
S507	X	1542	39'-8"			TRANS. TOP AND BOTTOM
S408	X	44	26'-8"			HAUNCH LONGIT. SPAN 1
S409	X	120	32'-8"			HAUNCH LONGIT. SPANS 2 & 3
S410	X	36	23'-2"			HAUNCH LONGIT. SPAN 4
S411	X	160	2'-5"	X		HAUNCH HAT
S412	X	1462	2'-7"	X		HAUNCH HAT
S413	X	1231	2'-9"	X		HAUNCH HAT
S414	X	100	2'-11"	X		HAUNCH HAT
S515	X	56	10'-0"	X		PIER 2 DIAPH. VERT.
S416	X	280	3'-2"			PIER 1, 2, & 3 DIAPH. HORIZ.
S417	X	56	8'-8"	X		PIER 2 DIAPH. VERT.
S518	X	56	2'-5"			PIER 2 DIAPH. VERT. ANCHORS ⚠
S419	X	150	3'-7"	X		PIER 2 CAP REVISION ANCHORS ⚠
S420	X	3	29'-1"			PIER 2 CAP REVISION HORIZ.
S421	X	3	44'-1"			PIER 2 CAP REVISION HORIZ.
S522	X	96	10'-4"	X		PIER 1 & 3 DIAPH. VERT.
S523	X	98	9'-1"	X		PIER 1 & 3 DIAPH. VERT.
S424	X	50	5'-2"			PIER 1 DIAPH. OUTSIDE HORIZ.
S425	X	40	6'-11"			PIER 3 DIAPH. OUTSIDE HORIZ.
S426	X	24	1'-10"			PIER 1 DIAPH. INSIDE HORIZ.
S427	X	42	1'-6"			PIER 1 & 3 DIAPH. INSIDE HORIZ.
S428	X	24	0'-10"			PIER 1 DIAPH. INSIDE HORIZ.
S429	X	24	1'-1"			PIER 3 DIAPH. INSIDE HORIZ.
S430	X	96	9'-10"	X		PIER 1 & 3 DIAPH. VERT.
S431	X	98	5'-4"	X		PIER 1 & 3 DIAPH. VERT.
S632	X	60	5'-8"			W. ABUT. DIAPH. BOTTOM HORIZ.
S733	X	48	7'-5"			E. ABUT. DIAPH. BOTTOM HORIZ.
S434	X	80	4'-10"	X		W. ABUT. DIAPH. STIRRUPS
S435	X	80	5'-2"	X		E. ABUT. DIAPH. STIRRUPS
S436	X	20	5'-8"			W. ABUT. DIAPH. TOP HORIZ.
S437	X	16	7'-5"			E. ABUT. DIAPH. TOP HORIZ.
S438	X	20	5'-8"			W. ABUT. JOINT HOLD DOWN
S439	X	16	7'-5"			E. ABUT. JOINT HOLD DOWN
S440	X	24	4'-0"	X		PILASTER VERT.
S441	X	24	3'-2"	X		PILASTER VERT.
S342	X	12	6'-4"	X		PILASTER HORIZ. PIERS 1 & 3
S343	X	6	5'-8"	X		PILASTER HORIZ. PIER 2
S644	X	109	17'-8"			LONGIT. CONTINUITY PIER 2
S545	X	48	2'-0"			BLOCKOUT REENTRANT CORNERS

⚠ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".



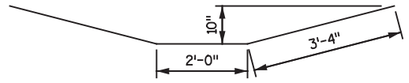
S411, S412, S413, S414

BAR MARK	'HT'
S411	4"
S412	5"
S413	6"
S414	7"

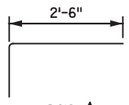


S515, S522, S523

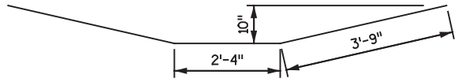
BAR MARK	'W'
S515	2'-0"
S522	2'-4"
S523	1'-1"



S417

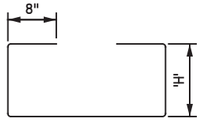


S419 ⚠



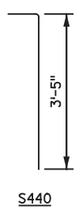
S430

S431



S434, S435

BAR MARK	'H'
S434	10"
S435	1'-0"



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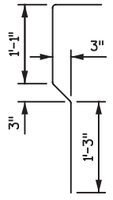
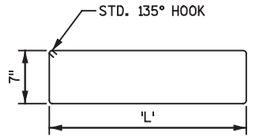
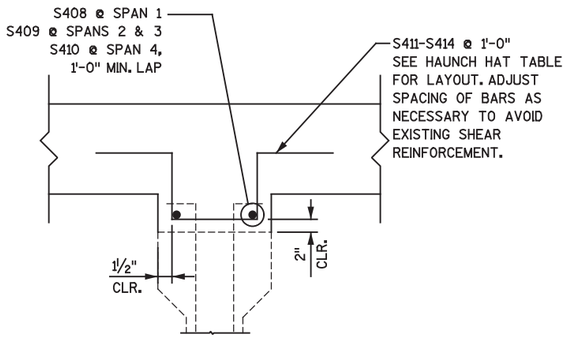


S441



S342, S343

BAR MARK	'L'
S342	2'-4"
S343	2'-0"



HAUNCH DETAILS

HAUNCH HAT TABLE SPAN 1

GIRDER MARK	BAR MARK			
	0.0'-10.2'	10.2'-20.4'	20.4'-40.8'	40.8'-51.0'
7TH GIRDER FROM NORTH	S411	S412	S413	S413
ALL OTHER GIRDERS	S411	S412	S413	S414

HAUNCH HAT TABLE SPAN 2

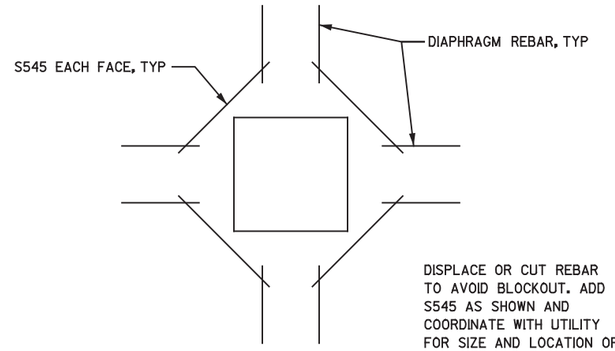
GIRDER MARK	BAR MARK	
	0.0'-25.6'	25.6'-64.0'
ALL GIRDERS	S413	S412

HAUNCH HAT TABLE SPAN 3

GIRDER MARK	BAR MARK		
	0.0'-12.8'	12.8'-51.2'	51.2'-64.0'
7TH GIRDER FROM NORTH	S412	S411	S411
ALL OTHER GIRDERS	S412	S412	S413

HAUNCH HAT TABLE SPAN 4

GIRDER MARK	BAR MARK
	0.0'-44.0"
ALL GIRDERS	S413



BLOCKOUT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

SUPERSTRUCTURE DETAILS

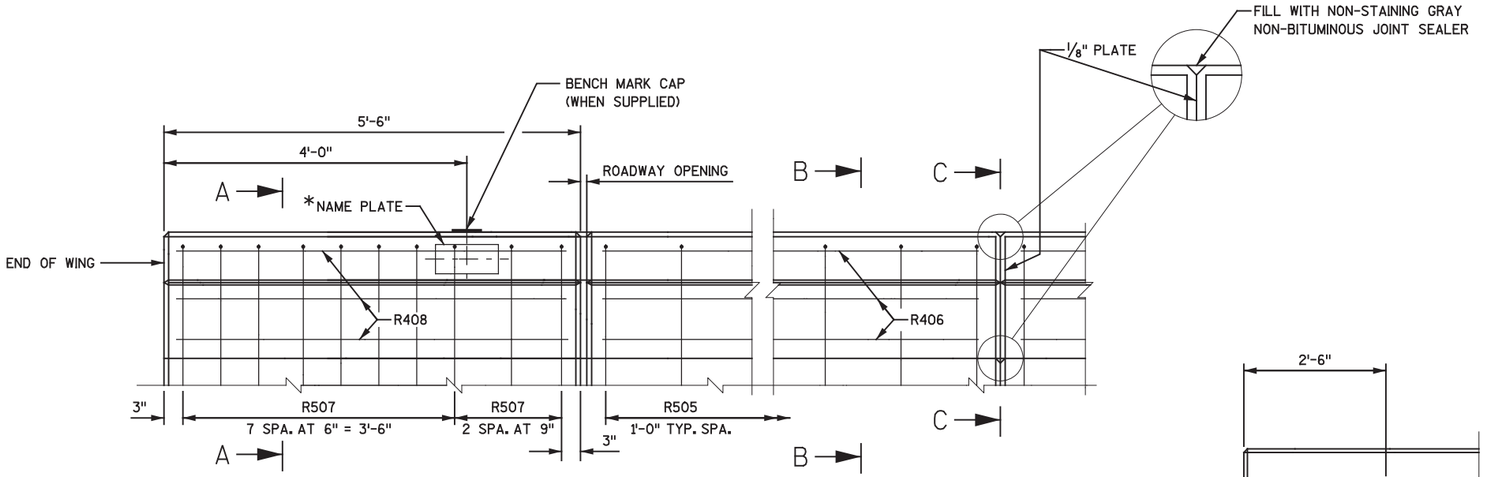
SHEET 15 OF 20

471

FILE NAME :15.B-40-171.Superstructure Details.dgn
PLOT DATE :1/31/2014 3:32:27 PM PLOT BY :NicholasHornyak@L DRV :Pdf_bw_HS.pltt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

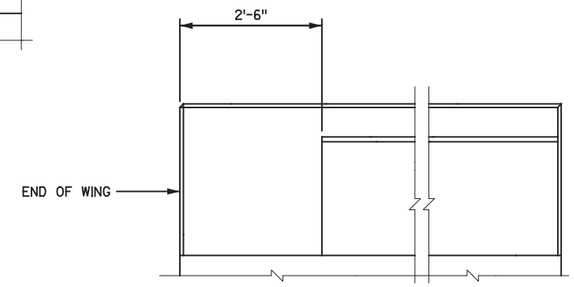
1228-25-70



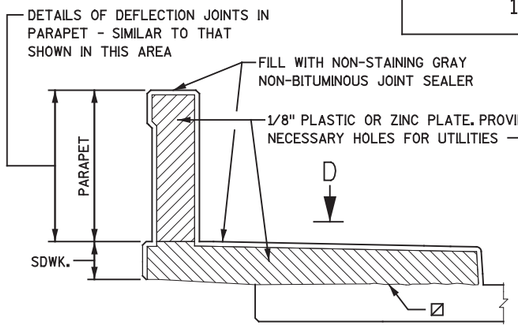
AT ABUTMENTS IN SPAN

ELEVATION OF PARAPET

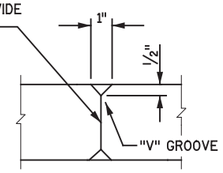
(INSIDE FACE)



OUTSIDE PARAPET FACE



SECTION C-C

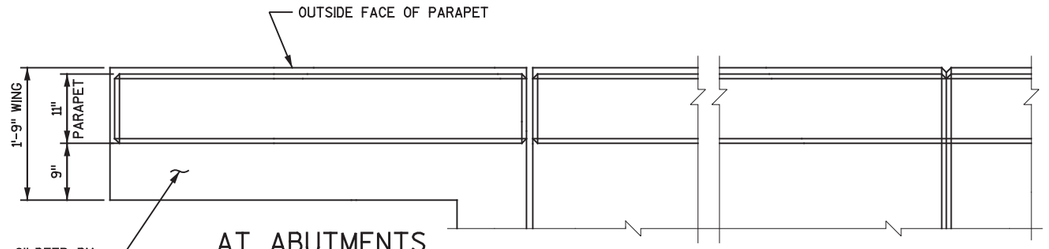


SECTION D-D

FOR LOCATIONS OF DEFLECTION JOINTS IN PARAPET OR SIDEWALK USE THE FOLLOWING CRITERIA:

1. GIRDER STRUCTURES AND SLAB STRUCTURES WITH A SIDEWALK SHOULD HAVE A DEFLECTION JOINT IN THE SIDEWALK AND PARAPET OVER THE PIER.

IF THERE IS A LIGHT STANDARD AT THE PIER, PLACE A DEFLECTION JOINT APPROX. 4'-0" EACH SIDE OF PIER, WITH NONE DIRECTLY OVER THE PIER.



AT ABUTMENTS AT PIERS

PLAN OF PARAPET

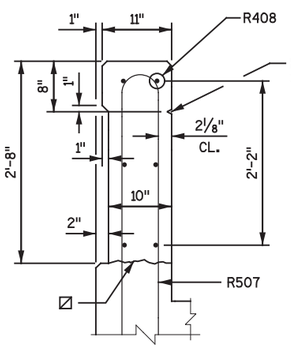
NOTES

WHEN PARAPETS ARE POURED CONTINUOSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION "C-C" BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

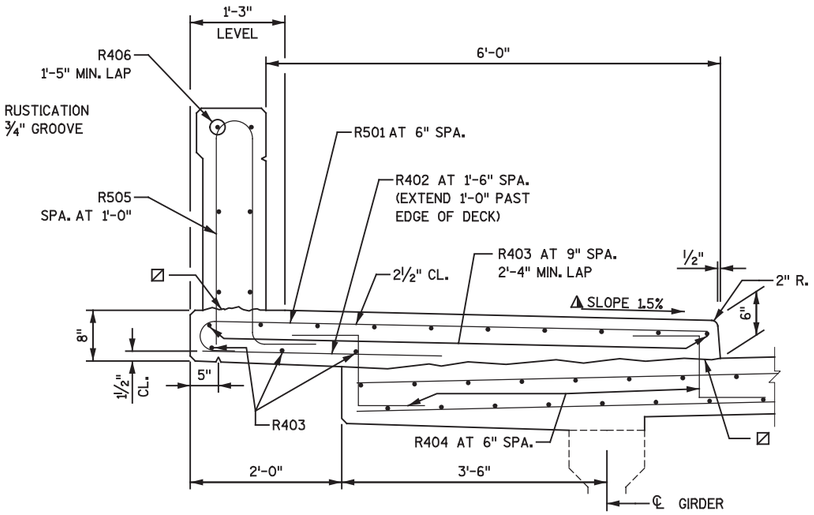
⊠ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE

* FOR LOCATION OF NAME PLATE & BENCH MARK, SEE PLAN & ELEVATION SHEET.

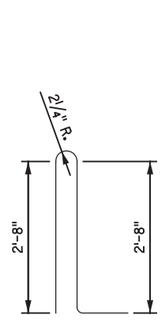
⚠ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



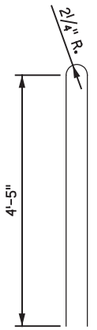
SECTION A-A



SECTION B-B



R505



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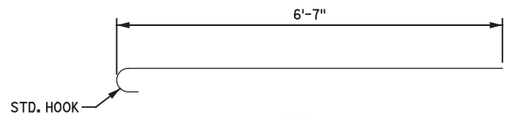

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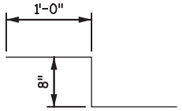


R404

BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	900	7'-2"	X		SDWK. TRANS. TOP
R402	X	302	2'-10"			SDWK. TRANS. BOTTOM
R403	X	156	39'-5"			SDWK. LONG. TOP & BOTTOM
R404	X	1800	2'-6"	X		SDWK. DECK TIES
R505	X	452	6'-8"	X		PARAPET VERTICAL
R406	X	72	38'-8"			PARAPET HORIZONTAL
R507	X	40	9'-5"	X		WINGWALL PARAPET VERT.
R408	X	24	5'-0"			WINGWALL PARAPET HORIZ.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

PARAPET AND SIDEWALK DETAILS

SHEET 16 OF 20

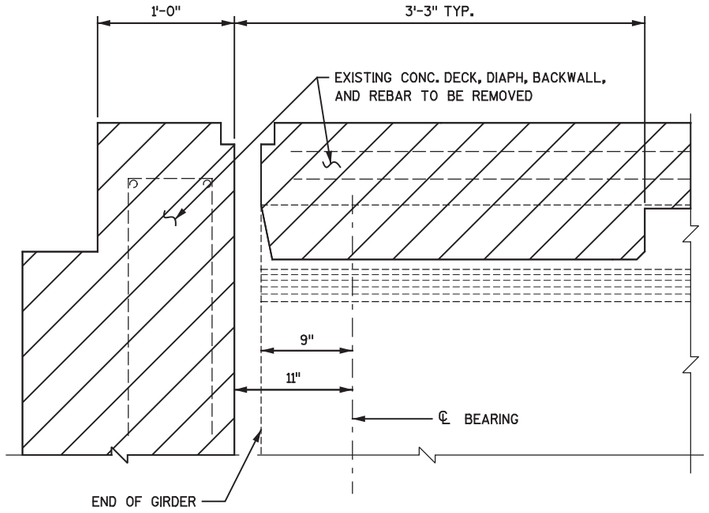
472

8

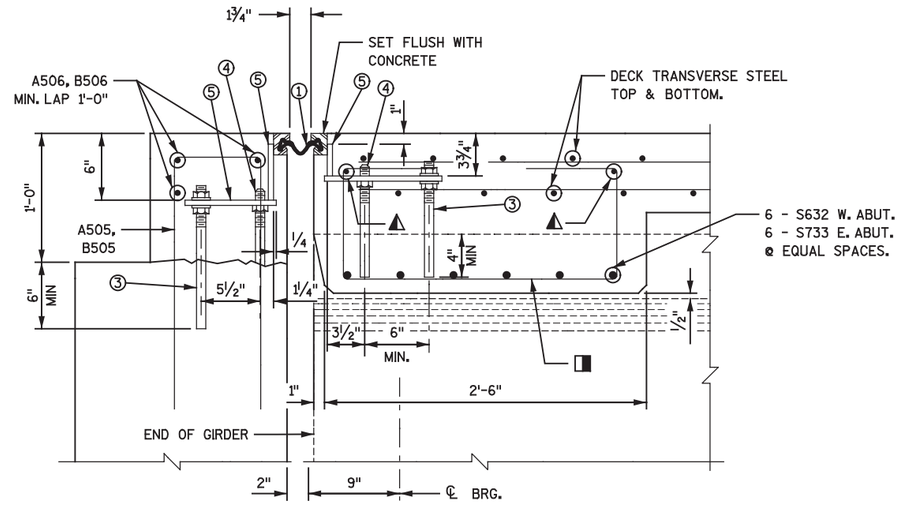
8

FILE NAME :16_B-40-171_Parapet and Sidewalk Details.dgn
PLOT DATE :1/31/2014 3:32:28 PM PLOT BY : NicholasHornyakv8i DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



JOINT REMOVAL
AT ABUTMENTS



SECTION THRU JOINT
AT ABUTMENTS

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.

② STUDS ⅝" ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & 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 TO ① AT 1'-6" CENTERS BETWEEN GIRDERS

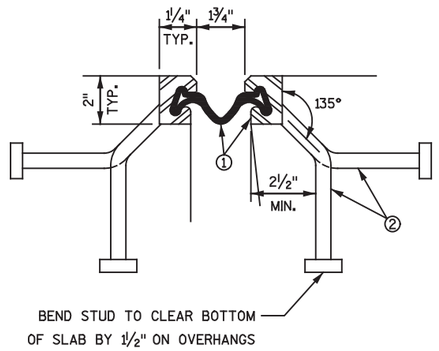
③ ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

④ ¾" ϕ THREADED ROD WITH NUT. TACK WELD NUT TO ⑤.

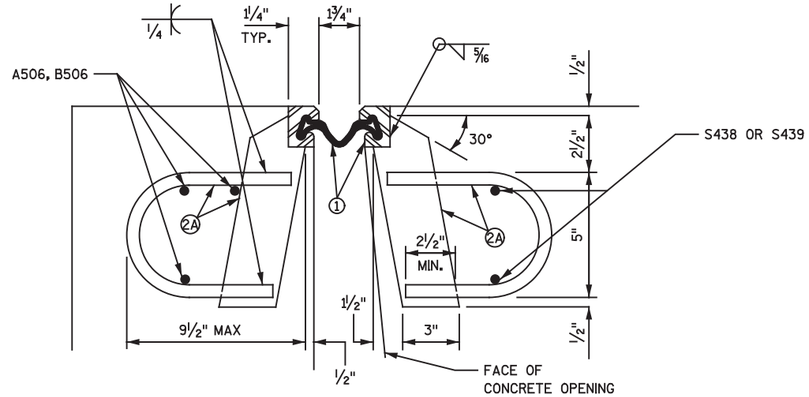
⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO ①. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR ③ & 1" ϕ HOLE FOR ④.

▲ S436 OR S437, SAME LENGTH AS HORIZ. DIAPH. BARS AT BOTTOM OF DIAPHRAGM.

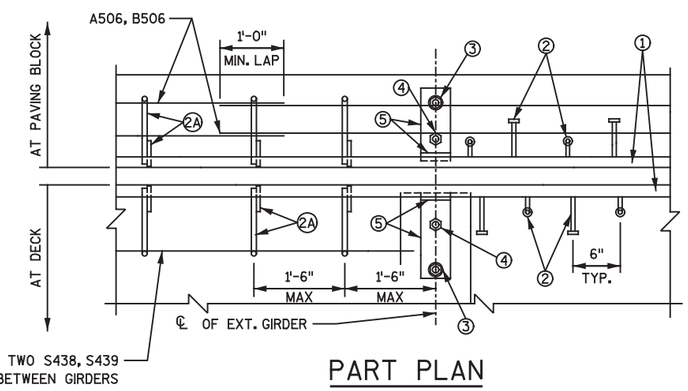
◨ S434 OR S435 @ 10" O.C. BETWEEN TOP FLANGE OF GIRDERS.



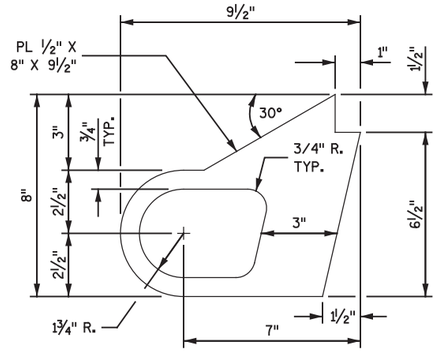
SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF DECK & AT PARAPETS AND SIDEWALKS



SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN



ALTERNATE STRIP SEAL ANCHOR

EXPANSION JOINT NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORMTO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-171".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY	MJH	PLANS CK'D.	RJW

STRIP SEAL EXPANSION JOINT

SHEET 17 OF 20

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FILE NAME :17_B-40-171_Strip Seal Expansion Joint.dgn
PLOT DATE :1/31/2014 3:32:28 PM PLOT BY : NicholasHornyak@t DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

LEGEND

REFER TO SHEET 17

① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.

② STUDS 5/8" ϕ X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & 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 ① AT 1'-6" CENTERS BETWEEN GIRDERS

③ 3/4" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER. 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 ⑤.

⑤ FABRICATE SUPPORT FROM 3" X 1/2" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO ①. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1 1/2" ϕ HOLE FOR ③ & 1" ϕ HOLE FOR ④.

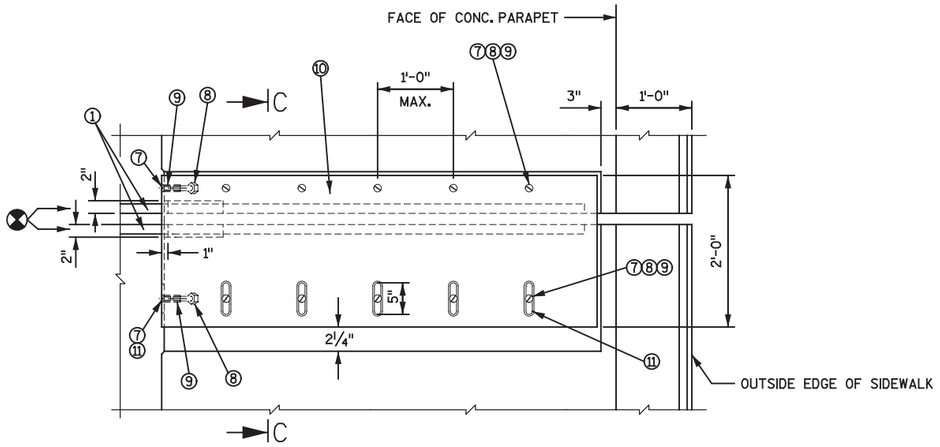
⑦ 3/4" ϕ X 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

⑧ 3/4" ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

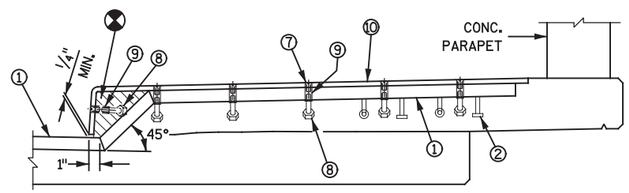
⑨ 3/4" ϕ X 2 1/4" GALVANIZED THREADED COUPLING.

⑩ SIDEWALK COVER PLATE 3/8" X 2'-0" X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR ⑦. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

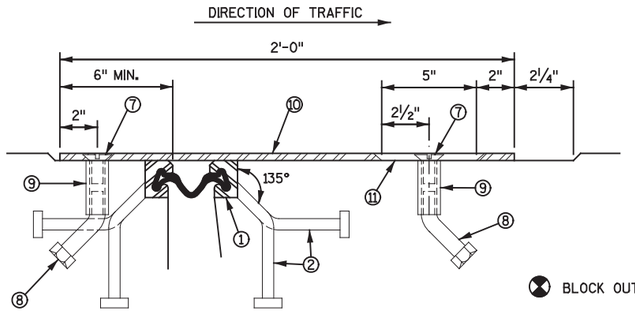
⑪ 1" X 5" SLOTTED COUNTERSUNK HOLE FOR ⑦. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.



PLAN AT SIDEWALK

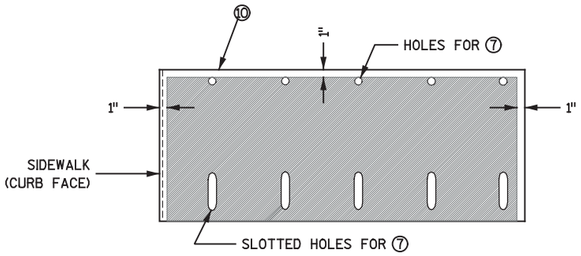


SECTION AT SIDEWALK



SECTION C-C

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W.S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

STRIP SEAL COVER PLATES FOR SIDEWALK

SHEET 18 OF 20

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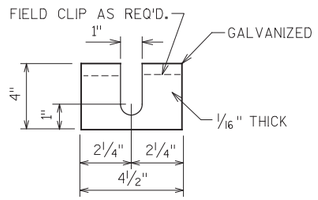
FILE NAME :18.B-40-171.Strip Seal Cover Plates for Sidewalk.dgn
PLOT DATE :1/31/2014 3:32:29 PM PLOT BY : NicholasHornyakv8L DRV :Pdf_bw_HS.pltt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

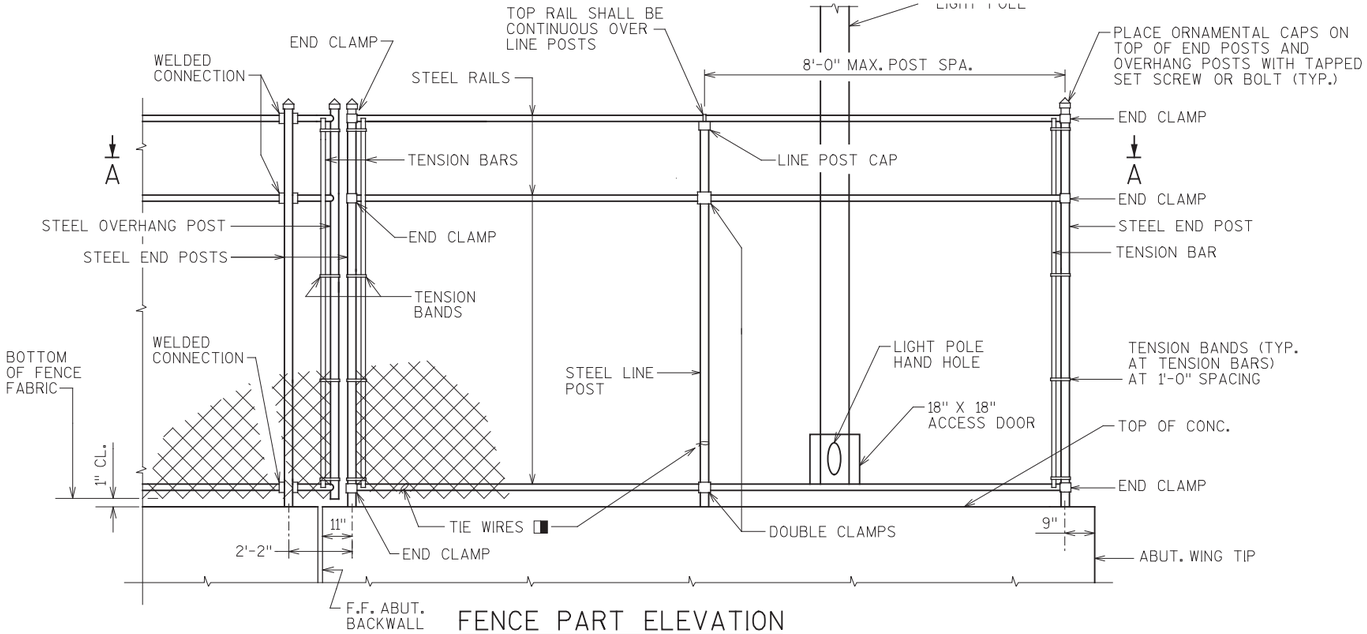
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



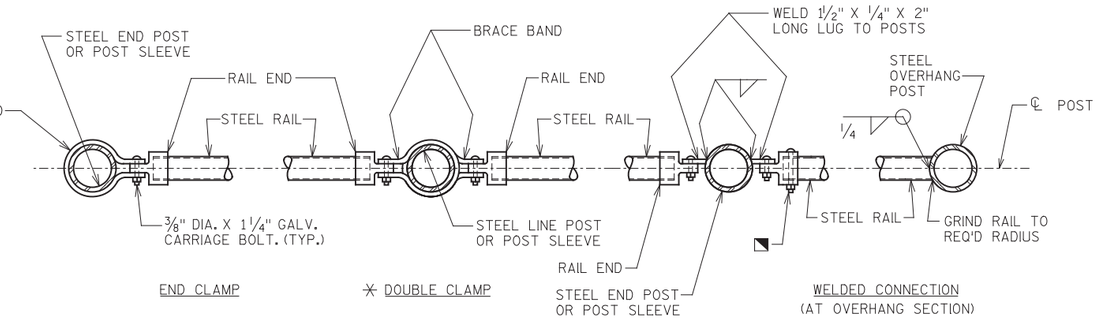
POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.

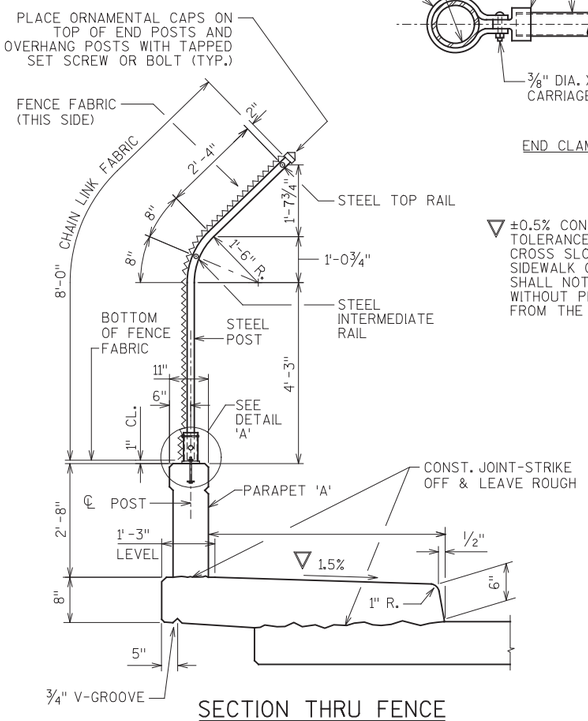


FENCE PART ELEVATION

VIEWING FABRIC SIDE



END CLAMP ✳ DOUBLE CLAMP WELDED CONNECTION (AT OVERHANG SECTION)

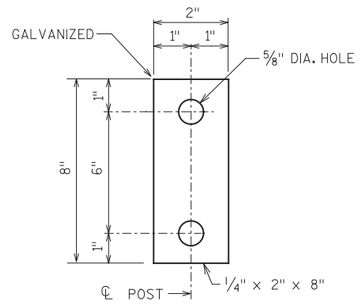


SECTION THRU FENCE

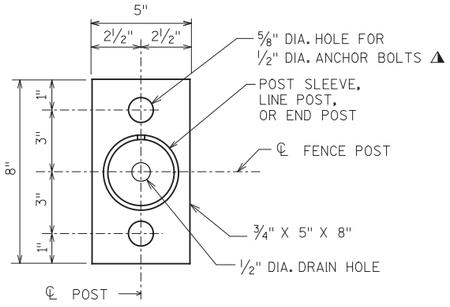
SECTION A-A

▽ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

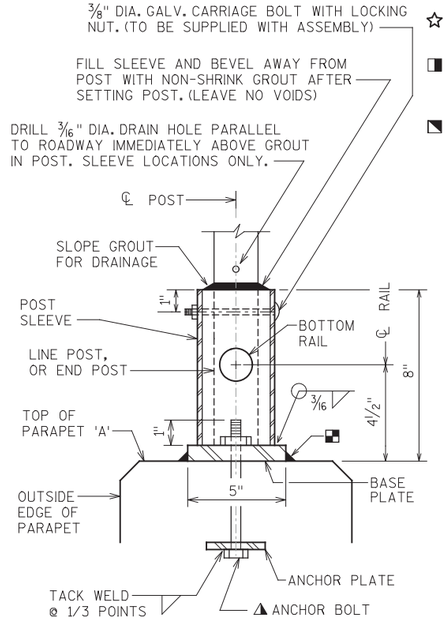
NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS



ANCHOR PLATE



BASE PLATE



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER-COATING ON THE OUTSIDE.

FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE COLOR OF POLYMER-COATING FOR THIS STRUCTURE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER-COATED 8- FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

◪ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

✳ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

◭ 1/2" DIA. X 6 7/8" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S", 1/2" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR 1/2" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

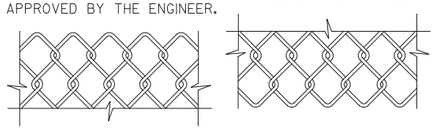
☆ MASONRY ANCHOR TYPE S 1/2-INCH. EMBED 6" IN CONCRETE. ANCHOR WASHER, AND NUT SHALL BE GALVANIZED.

◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

◥ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR 1/4 POINT OF POST SPACING.

18" X 18" ACCESS GATE TO BE PROVIDED AT EACH LIGHT POLE FOR ACCESS TO THE HAND HOLE. DETAILS TO BE APPROVED BY THE ENGINEER.



TOP DETAIL BOTTOM DETAIL

FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 1" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

FENCE DETAILS

SHEET 19 OF 20

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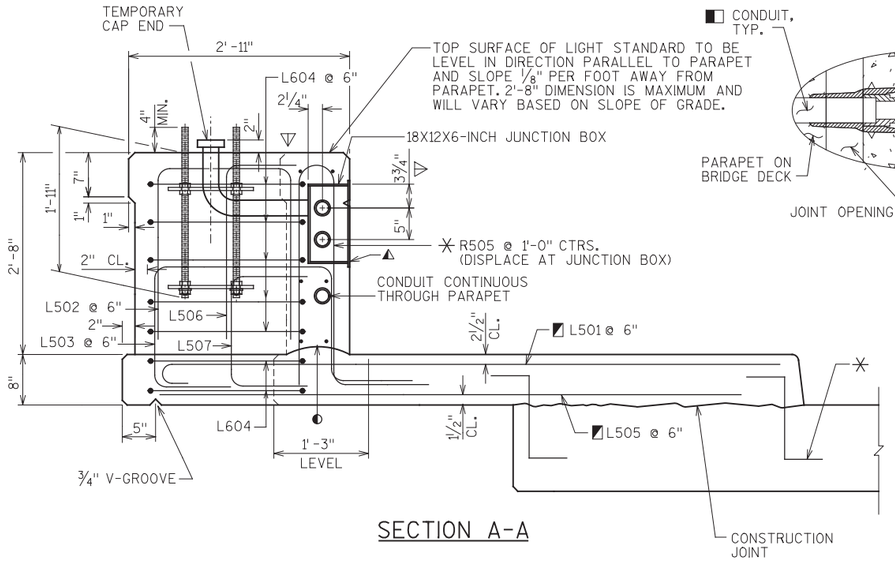
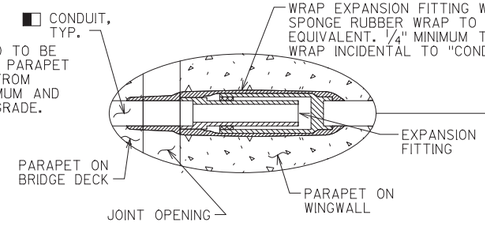
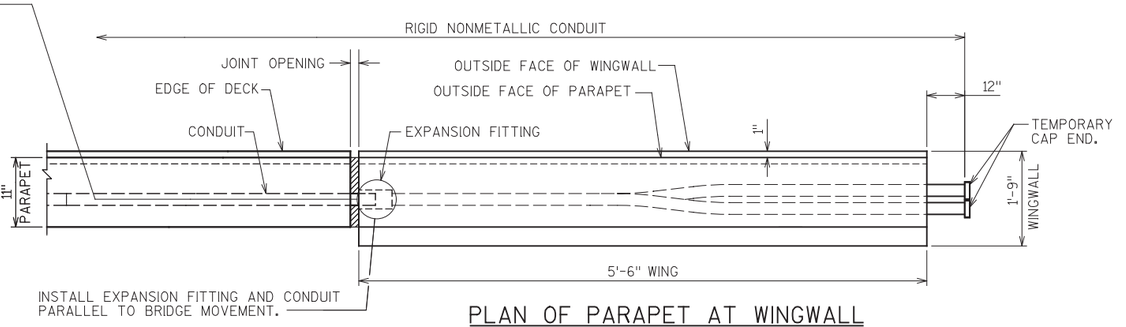
FILE NAME :I:\B-40-171\Chain Fence Details.dgn
PLOT DATE :1/31/2014 3:33:29 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



SECTION A-A





PLAN OF PARAPET AT WINGWALL

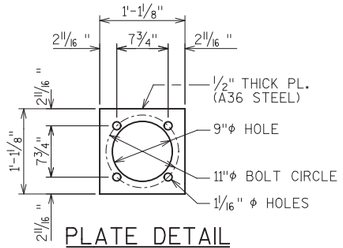
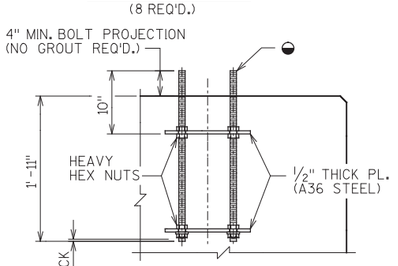
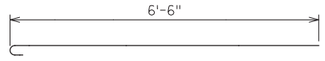


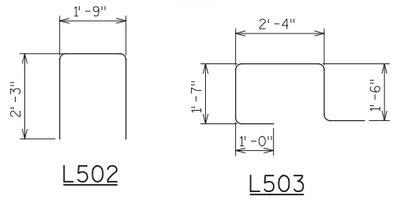
PLATE DETAIL
(8 REQ'D.)



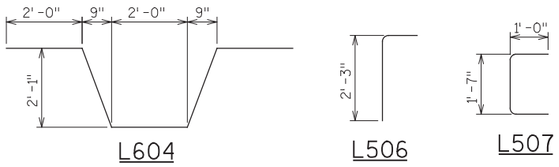
ANCHORAGE DETAIL
(4 REQ'D.)



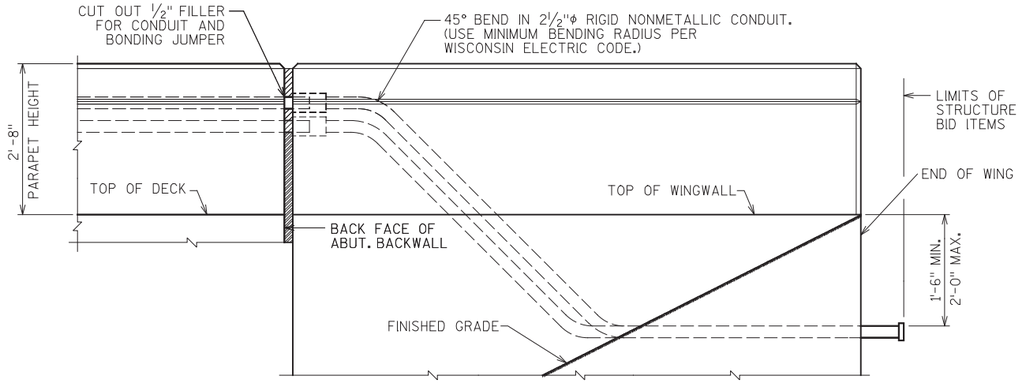
L501



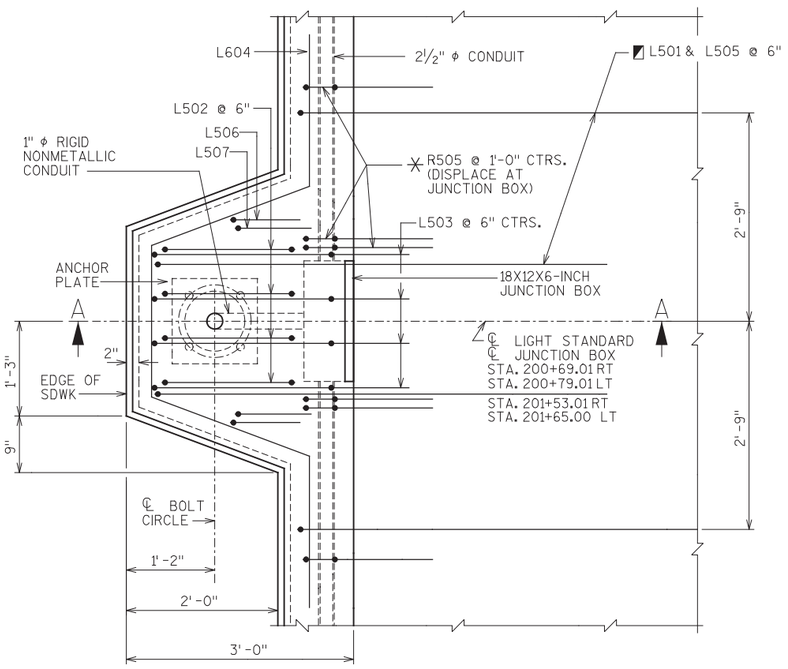
L502 L503



L604 L506 L507



OUTSIDE ELEVATION OF PARAPET AT WINGWALL



PLAN AT LIGHT STANDARD

- ◐ CONSTR. 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.
- ◩ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.
- ◒ 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.
- ✳ SEE PARAPET AND SIDEWALK DETAILS, SHT. 16 FOR ADDITIONAL BAR STEEL DETAILS.

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2½-INCH"
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH".

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
CARLON TYPE E945K (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID NONMETALLIC 2½-INCH".

ADAPTER FITTINGS SHALL BE U.L. OR NRTL LISTED FOR ELECTRICAL USE.

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
L501	X	48	7'-1"	X	SIDEWALK HORIZ. @ JUNCTION BOX
L502	X	16	6'-0"	X	PARAPET VERT. @ JUNCTION BOX
L503	X	16	6'-11"	X	PARAPET VERT. @ LIGHT STD.
L604	X	28	10'-0"	X	PARAPET HORIZ. @ LIGHT STD.
L505	X	48	6'-6"		SIDEWALK HORIZ. @ JUNCTION BOX
L506	X	8	3'-2"	X	PARAPET VERT. @ LIGHT STD.
L507	X	8	3'-5"	X	PARAPET VERT. @ LIGHT STD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-171

DRAWN BY MJH | PLANS CK'D. RJW

LIGHT STANDARD

SHEET 20 OF 20
476

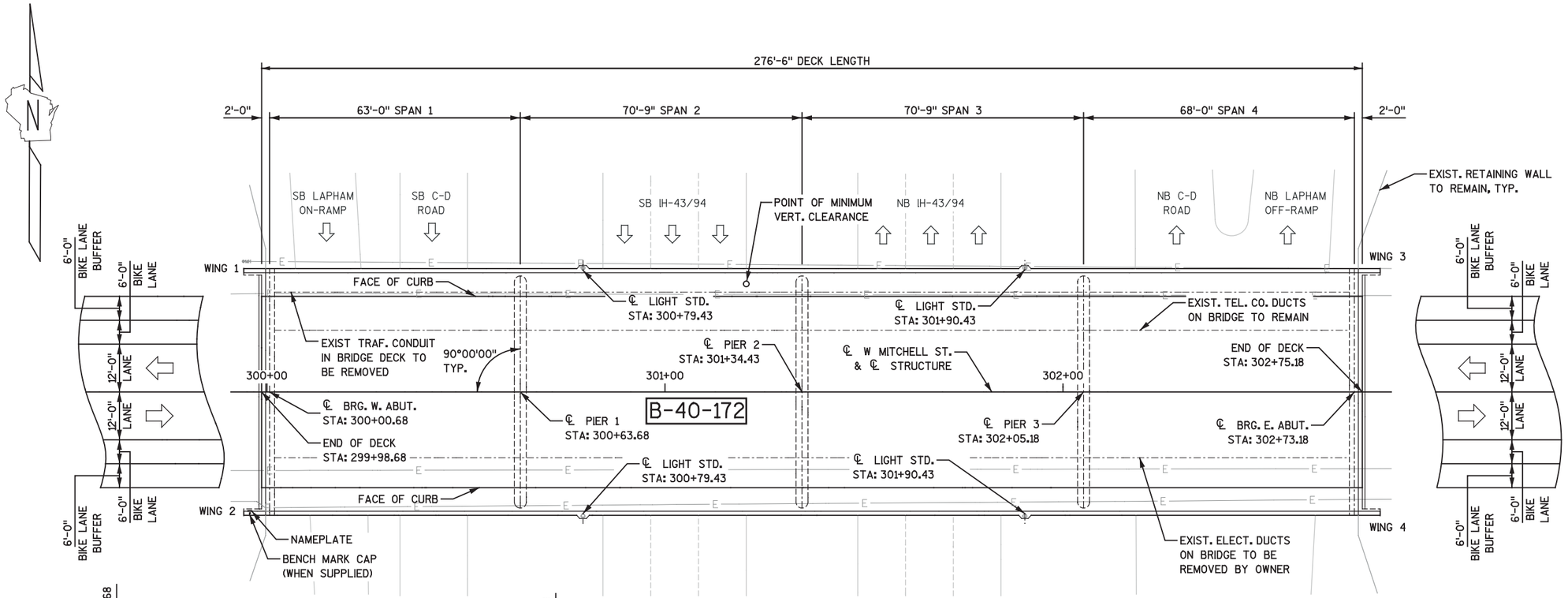
8

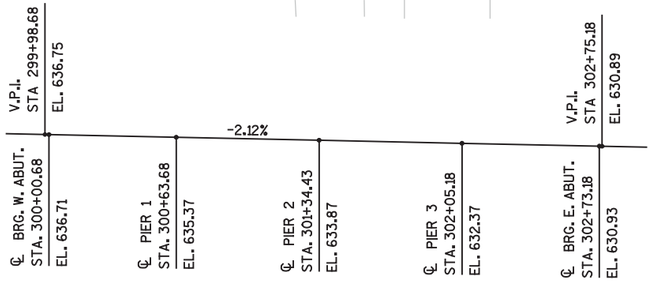
8

FILE NAME :20_B-40-171_Electrical Details.dgn
PLOT DATE :11/31/2014 3:32:30 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pltPEN :CELTEXTSUB.TBL

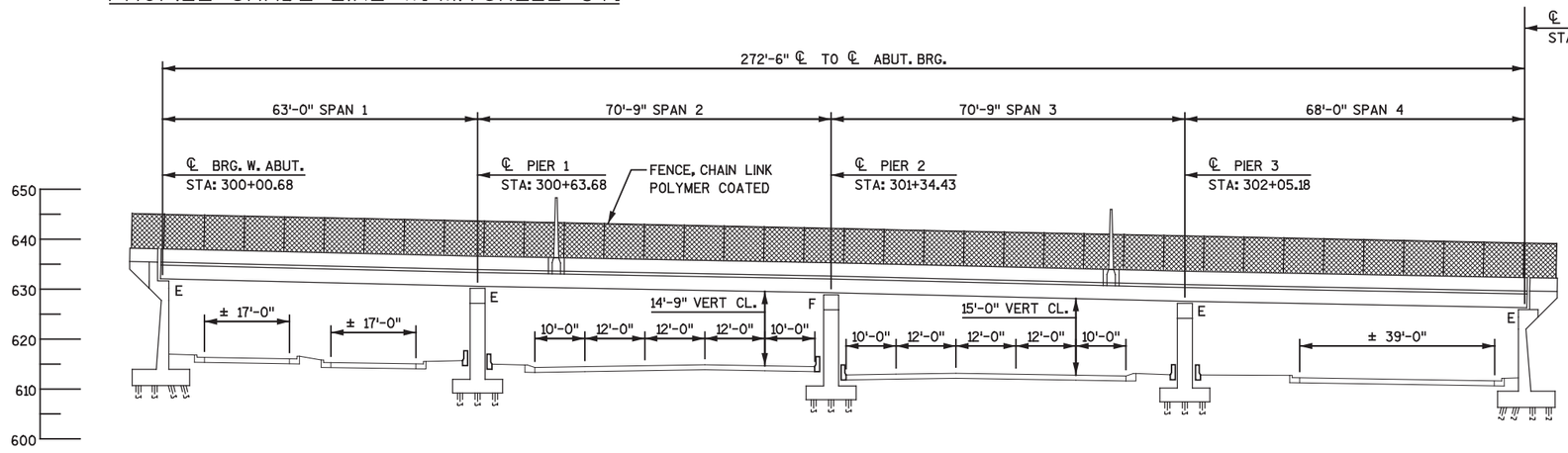
STATE PROJECT NUMBER

1228-25-70





PROFILE GRADE LINE W. MITCHELL ST.



ELEVATION
(LOOKING NORTH)

PLAN B-40-172

GENERAL NOTES

SEE SHEET 2 FOR GENERAL NOTES.

TRAFFIC DATA

W. MITCHELL ST.
A.D.T. (2035) = 4,413
IH-43/94
A.D.T. (2030) = 108,000

LIST OF DRAWINGS

1. PLAN & ELEVATION
2. CROSS SECTION & QUANTITIES
3. WEST ABUTMENT
4. WEST ABUTMENT DETAILS
5. EAST ABUTMENT
6. EAST ABUTMENT DETAILS
7. ELASTOMERIC EXPANSION BEARINGS
8. FIXED BEARING DETAILS
9. DECK ELEVATIONS
10. SUPERSTRUCTURE
11. SUPERSTRUCTURE DETAILS
12. PARAPET AND SIDEWALK DETAILS
13. STRIP SEAL EXPANSION JOINT
14. STRIP SEAL COVER PLATES FOR SIDEWALK
15. FENCE DETAILS
16. LIGHT STANDARD
17. COVER PLATE MODIFICATIONS

DESIGN DATA

LIVE LOAD:

INVENTORY RATING	HS-23
OPERATIONAL RATING	HS-39
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV)	250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE SUPERSTRUCTURE	f'c = 4,000 P.S.I.
CONCRETE SUBSTRUCTURE	f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.

WISCONSIN
STEVEN J. MILLER
36937
MILWAUKEE, WI
PROFESSIONAL ENGINEER
Steven J. Miller
1/31/2014

SE REGION CONTACT:
JOE GALLAMORE (262) 548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
NICHOLAS HORNYAK (414) 282-6905

NO.	DATE	REVISION	BY

COLLINS ENGINEERS INC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 02/03/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-172

W. MITCHELL ST. OVER IH-43/94

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
NJH	RJW	MJH	RJW

PLAN & ELEVATION

SHEET 1 OF 17
477

8

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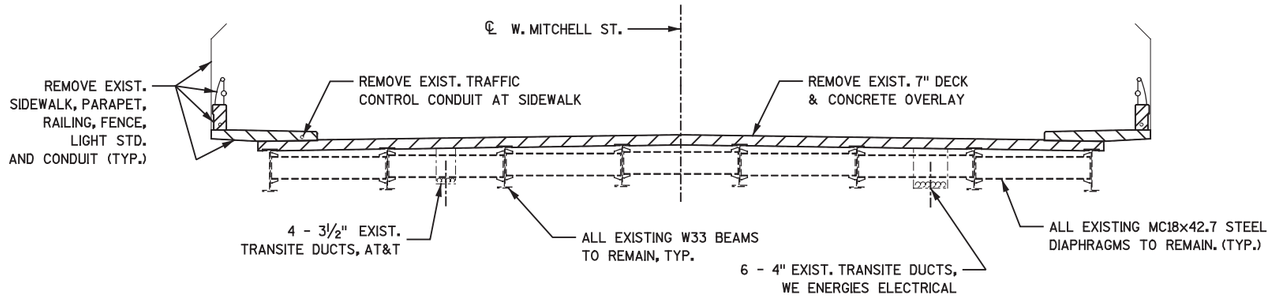
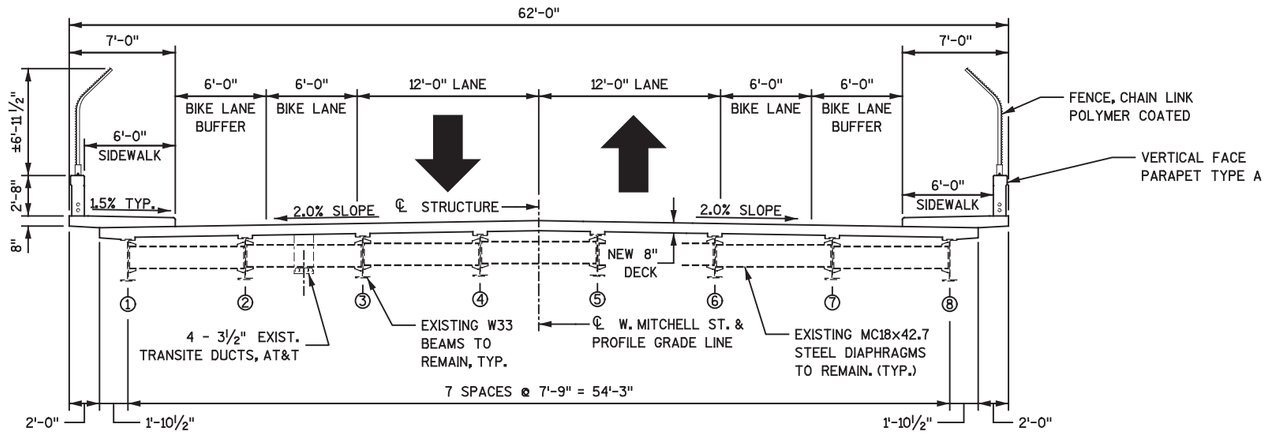
FILE NAME :01_B_40_172_Plan & Elevation.dgn
PLOT DATE :1/31/2014 3:37:29 PM PLOT BY : NicholasHornyakv8i DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL



EXISTING CROSS SECTION THRU ROADWAY

(LOOKING EAST)

▨ DENOTES REMOVAL LIMITS.



PROPOSED CROSS SECTION THRU ROADWAY

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER	W. ABUT	PIER 1	PIER 2	PIER 3	E. ABUT	TOTAL
203.0200.0003	REMOVING OLD STRUCTURE STA 300+00	LS	-	-	-	-	-	-	1
203.0210.S.0003	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-172	LS	-	-	-	-	-	-	1
203.0225.S.0003	DEBRIS CONTAINMENT B-40-172	LS	-	-	-	-	-	-	1
206.1000.0003	EXCAVATION FOR STRUCTURES BRIDGES B-40-172	LS	-	-	-	-	-	-	1
209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	-	37	-	-	-	37	74
502.0100	CONCRETE MASONRY BRIDGES	CY	549	18	-	-	-	18	585
502.3100.0003	EXPANSION DEVICE B-40-172	LS	-	-	-	-	-	-	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,101	-	-	-	-	-	2,101
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	-	88	-	-	-	88	176
502.6110	MASONRY ANCHORS TYPE S 3/4-INCH	EACH	8	-	-	-	-	-	8
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	132,980	1,780	-	-	-	1,770	136,530
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	-	8	8	-	8	8	32
506.5000.0003	BEARING ASSEMBLIES FIXED B-40-172	EACH	-	-	-	8	-	-	8
506.7050.S.0003	REMOVING BEARINGS B-40-172	EACH	-	8	8	8	8	8	40
506.7060.S.0003	BRIDGE JACKING B-40-172	LS	1	-	-	-	-	-	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	11	-	-	-	11	22
517.0900.S.0002	PREPARATION AND COATING OF TOP FLANGES B-40-172	LS	-	-	-	-	-	-	1
517.1800.S.0002	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-172	LS	-	-	-	-	-	-	1
517.4500.S.0002	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-172	LS	-	-	-	-	-	-	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	-	-	-	-	-	-	1
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	12	-	-	-	-	-	12
652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	1,120	-	-	-	-	-	1,120
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	4	-	-	-	-	-	4
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	4	-	-	-	-	-	4
SPV.0105.4001	COVER PLATE MODIFICATION B-40-172	LS	-	-	-	-	-	-	1
SPV.0090.4000	FENCE CHAIN LINK POLYMER-COATED 8-FT.	LF	570	-	-	-	-	-	570
	NON-BID ITEMS								
	FILLER	SIZE	-	-	-	-	-	-	1/2" & 3/4"
	NAME PLATE	EACH	-	-	-	-	-	-	1

* ALL ITEMS ARE CATEGORY 2020

STATE PROJECT NUMBER

1228-25-70

GENERAL NOTES

THE PROPOSED WORK INCLUDES CLEANING AND PAINTING OF ALL STRUCTURAL STEEL, REMOVAL AND REPLACEMENT OF THE DECK, ABUTMENT BACKWALLS, AND EXPANSION BEARINGS.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST DIGIT OF A THREE DIGIT BAR AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

UTILIZE EXISTING BAR STEEL WHERE SHOWN AND EXTEND EXISTING BAR STEEL REINFORCEMENT 24 BAR DIAMETERS INTO NEW CONSTRUCTION, UNLESS SPECIFIED OTHERWISE.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M153, TYPES I, II, OR III OR M213.

AT ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL CONTROLLED LOW STRENGTH.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWING. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR.

ORIGINAL PLANS AND OVERLAY PLANS OF EXISTING BRIDGE B-40-172 ARE AVAILABLE AT THE WISDOT SOUTHEAST REGION OFFICE. REFERENCE THESE PLANS FOR THE DESIGN OF SLAB OVERHANG SHORING AND TEMPORARY BRACING DURING CONSTRUCTION.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF SLAB, FACE OF CURB, TOP OF SIDEWALK, AND TO THE TOP AND ROADWAY FACE OF THE PARAPET.

THE MINIMUM CONCRETE HAUNCH SHALL BE 2" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 2¾" WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE.

VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

THE CITY OF MILWAUKEE WILL REMOVE AND REINSTALL EXISTING LIGHT POLES. SEE SPECIAL PROVISIONS FOR COORDINATION REQUIREMENTS.

SEE ROADWAY PLANS FOR DETAILS REGARDING UTILITY ATTACHMENTS TO THE BRIDGE.

ALL STRUCTURAL STEEL SHALL BE PAINTED. FINISH COLOR DENIM (BLUE) - SW6523, B-G/B/138.

FENCE SHALL BE POLYMER COATED BLACK, FEDERAL COLOR NO. 27038.

FOR UTILITIES OWNED BY AT&T: AT&T WILL RE-ATTACH THE UTILITY TO THE BRIDGE PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ATTACHMENT HARDWARE PROVIDED BY AT&T, PROTECTING THE UTILITY DURING CONSTRUCTION AND COORDINATING WITH AT&T AS NECESSARY. COSTS ASSOCIATED WITH THE WORK IS INCIDENTAL TO THE CONCRETE MASONRY BRIDGES BID ITEM.

EXISTING UTILITIES OWNED BY WE ENERGIES ELECTRIC WILL BE REMOVED PRIOR TO CONSTRUCTION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. RJW

CROSS SECTION & QUANTITIES

SHEET 2 OF 17

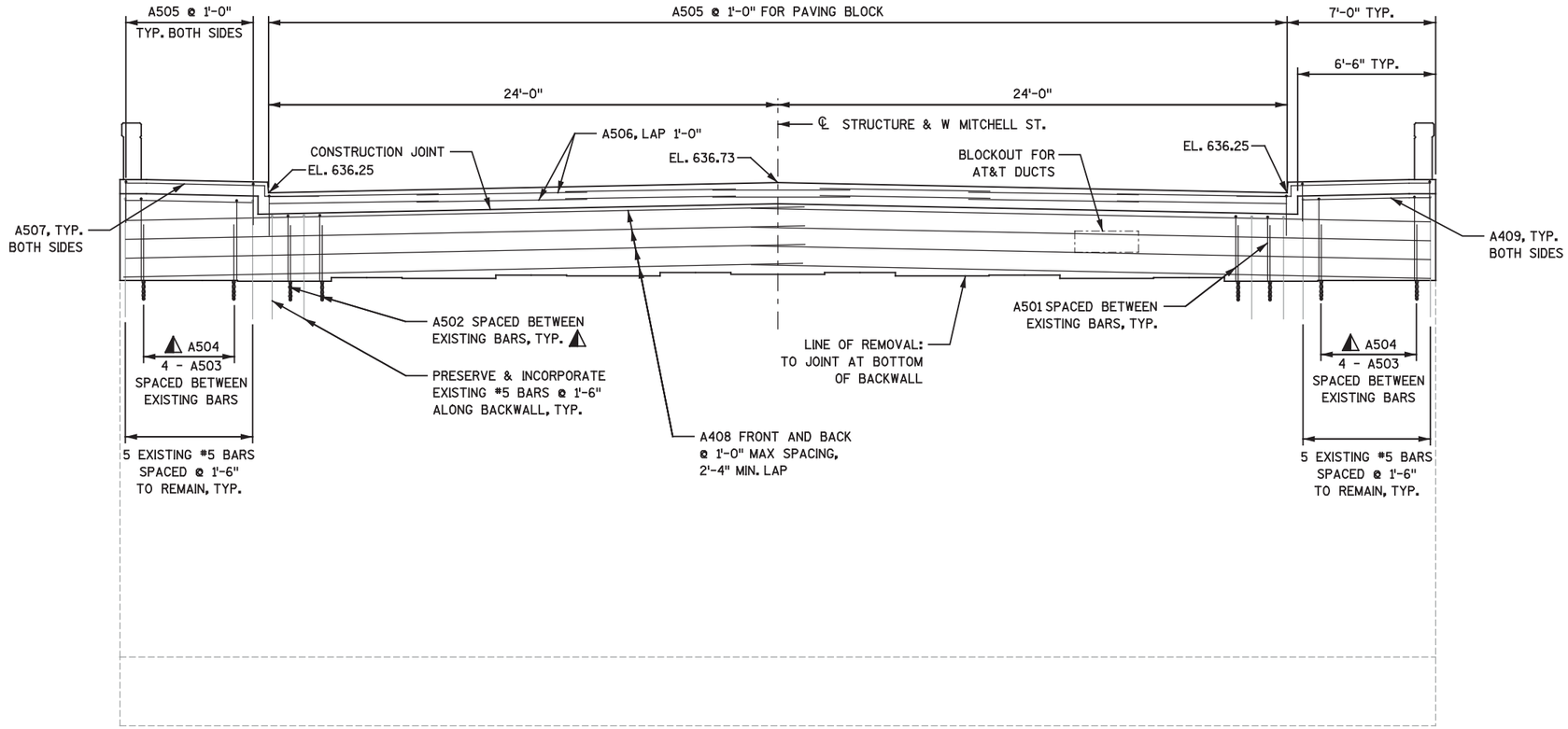
478

8

8

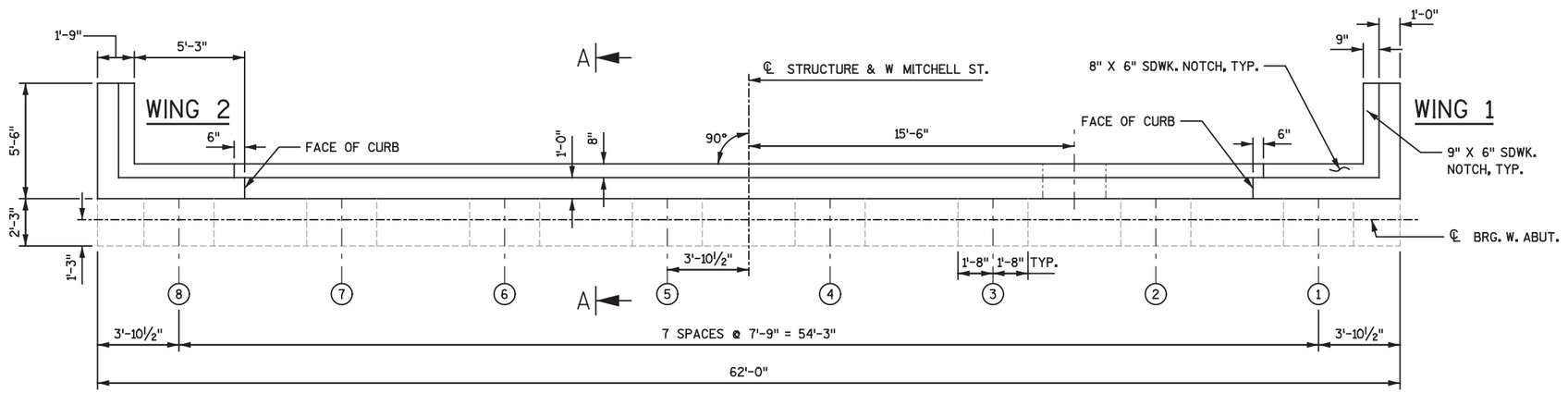
FILE NAME :\02.B_40_172_Cross Section & Quantities.dgn
PLOT DATE :1/31/2014 3:37:30 PM PLOT BY : NicholasHornyakv8i DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



⚠ MASONRY ANCHORS TYPE 'L'.
EPOXY ANCHORED, EMBED 11".

ELEVATION
(LOOKING WEST)



PLAN

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. RJW

WEST ABUTMENT

SHEET 3 OF 17
479

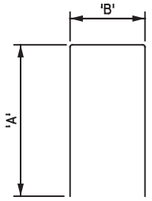
FILE NAME :\03_B-40-172_West Abutment.dgn
PLOT DATE :1/31/2014 3:37:31 PM PLOT BY : NicholasHornyakvBL DRV :Pdf_bw_NS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

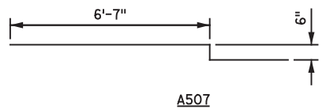
BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	32	7'-1"	X		BACKWALL VERT.
A502	X	64	3'-8"			BACKWALL VERT. ANCHORS ⚠
A503	X	8	8'-11"	X		BACKWALL VERT.
A504	X	16	3'-6"			BACKWALL VERT. ANCHORS ⚠
A505	X	63	4'-5"	X		PAVING NOTCH VERT.
A506	X	21	7'-9"			PAVING NOTCH HORIZ.
A507	X	4	10'-6"	X		SDWK. PAVING NOTCH HORIZ.
A408	X	16	32'-0"			BACKWALL HORIZ.
A409	X	4	6'-2"			SDWK. BACKWALL HORIZ.
A510	X	8	8'-8"	X		WINGWALL VERT.
A511	X	4	9'-0"	X		WINGWALL VERT.
A512	X	8	3'-6"			WINGWALL VERT. ANCHORS ⚠
A413	X	24	5'-2"			WINGWALL HORIZ.
A414	X	12	3'-9"	X		WINGWALL SDWK. NOTCH VERT.
A615	X	4	5'-2"			WINGWALL SDWK. NOTCH HORIZ.
A516	X	8	2'-0"			BLOCKOUT REENTRANT CORNERS

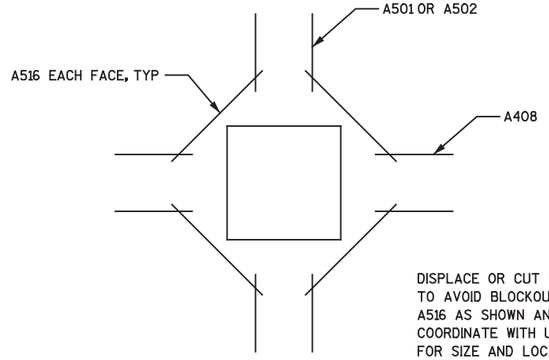


A501, A503, A505, A510, A511, A414

BAR MARK	DIM. 'A'	DIM. 'B'
A501	3'-0"	1'-4"
A503	3'-11"	1'-4"
A505	2'-0"	8"
A510	3'-9"	1'-5"
A511	3'-11"	1'-5"
A414	1'-8"	8"



A507

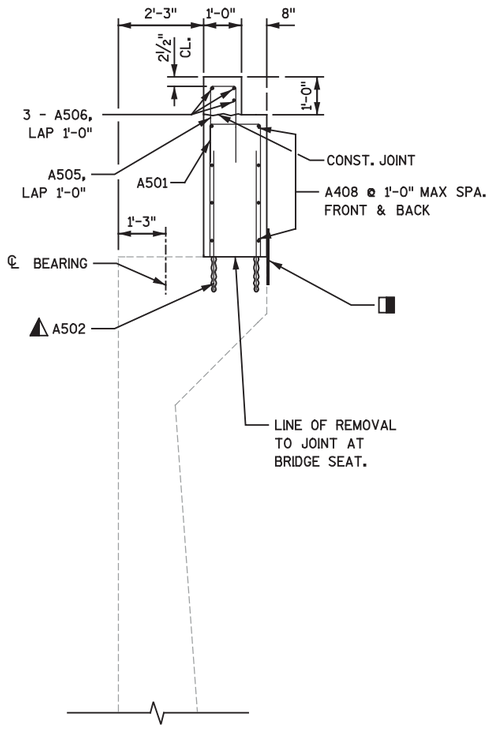


BLOCKOUT DETAIL

PRESERVE & INCORPORATE EXISTING BARS

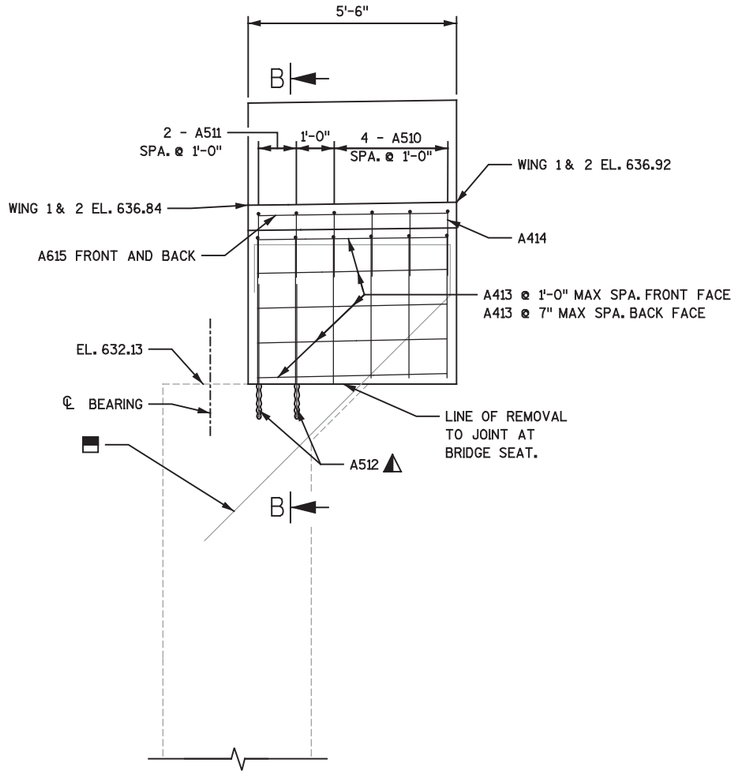
⚠ MASONRY ANCHORS TYPE 'L', EPOXY ANCHORED, EMBED 11".

18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.



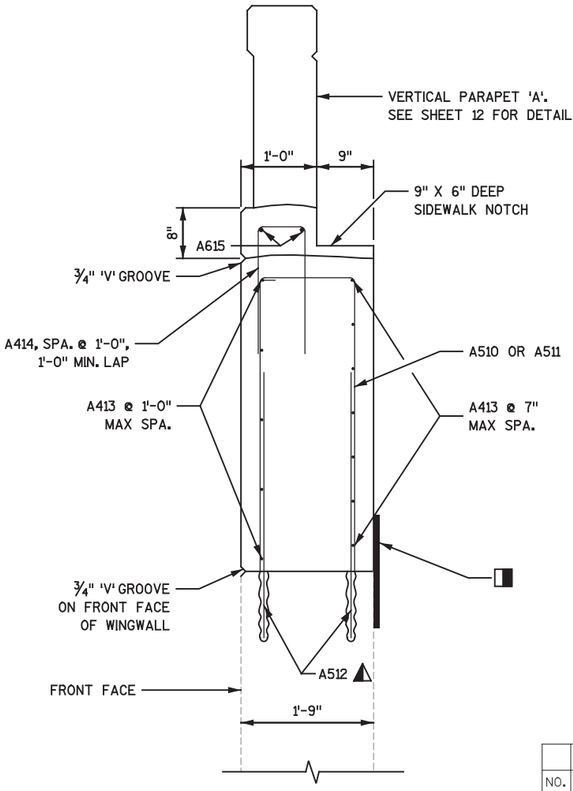
SECTION A-A

(FROM SHEET 3 OF 17)



WEST ABUTMENT WING 1

(WING 2 OPPOSITE HAND)



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. RJW

WEST ABUTMENT DETAILS

SHEET 4 OF 17

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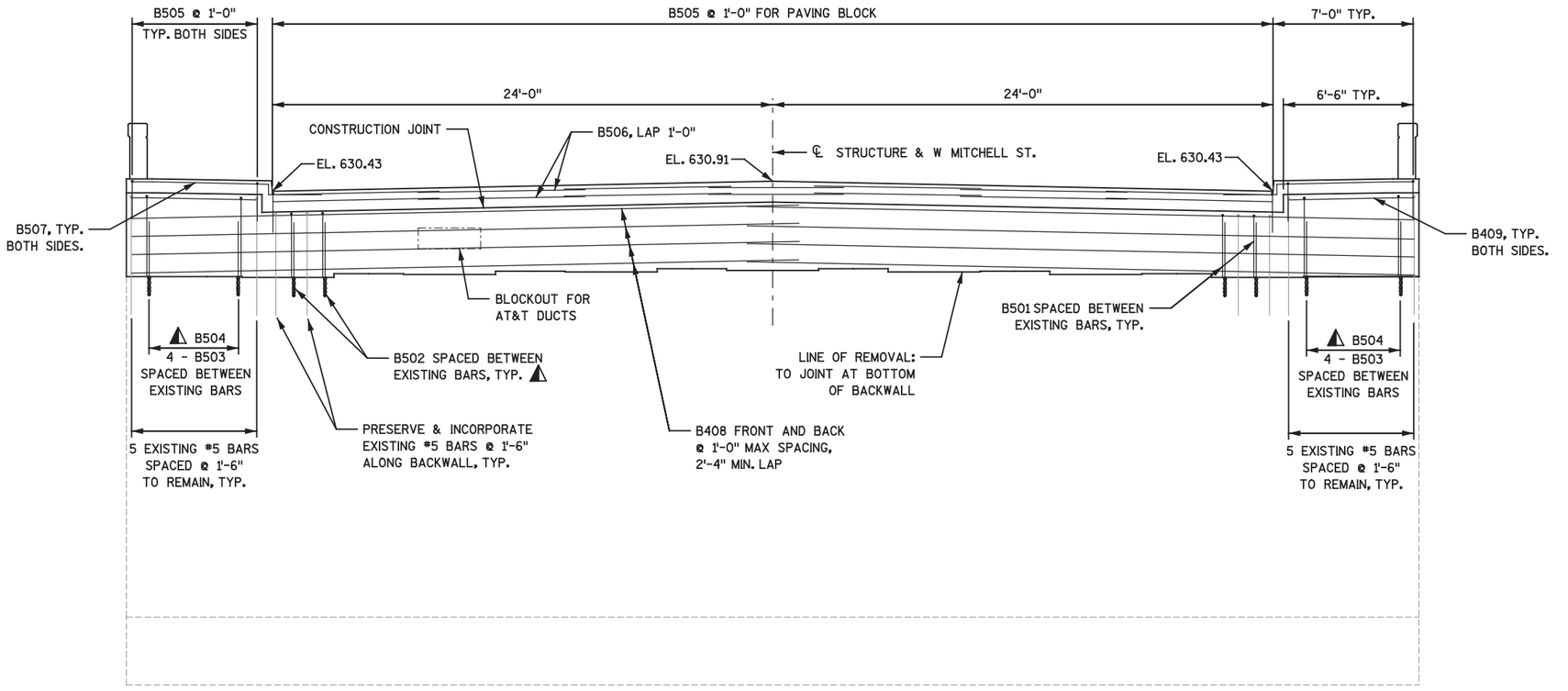
8

8

FILE NAME :04_B-40-172_West Abutment Details.dgn
PLOT DATE :1/31/2014 3:37:31 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

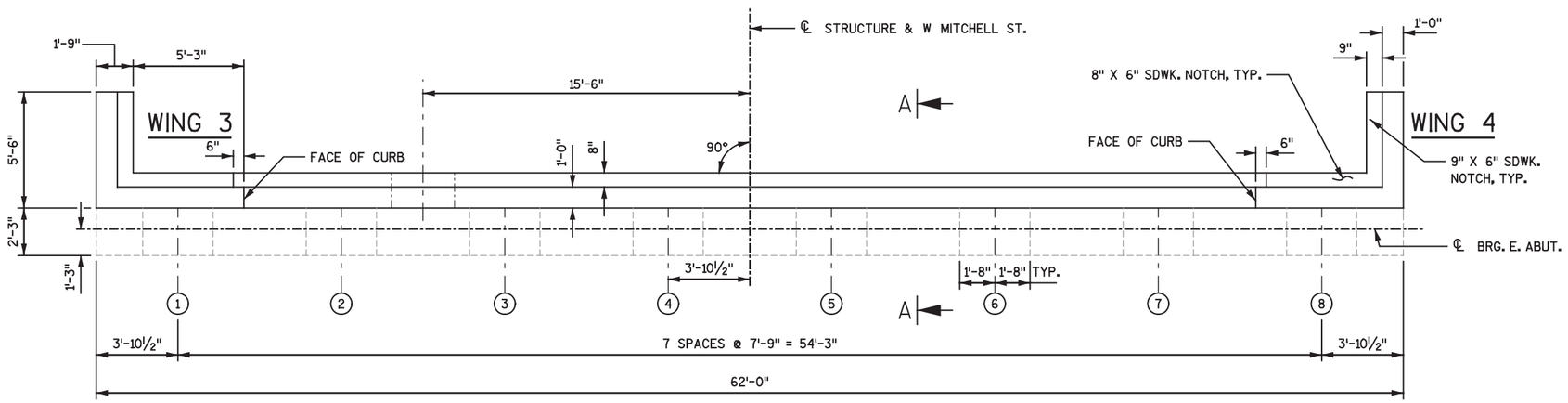
1228-25-70



⚠ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".

ELEVATION

(LOOKING EAST)



PLAN

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. RJW

EAST ABUTMENT

SHEET 5 OF 17

481

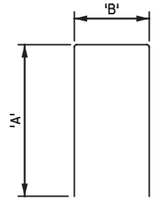
FILE NAME :05_B-40-172_East Abutment.dgn
PLOT DATE :1/31/2014 3:37:33 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

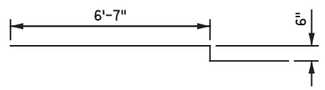
BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501	X	32	6'-11"	X		BACKWALL VERT.
B502	X	64	3'-8"			BACKWALL VERT. ANCHORS ◭
B503	X	8	8'-9"	X		BACKWALL VERT.
B504	X	16	3'-6"			BACKWALL VERT. ANCHORS ◭
B505	X	63	4'-5"	X		PAVING NOTCH VERT.
B506	X	21	7'-9"			PAVING NOTCH HORIZ.
B507	X	4	10'-6"	X		SDWK. PAVING NOTCH HORIZ.
B408	X	16	32'-0"			BACKWALL HORIZ.
B409	X	4	6'-2"			SDWK. BACKWALL HORIZ.
B510	X	8	8'-2"	X		WINGWALL VERT.
B511	X	4	8'-10"	X		WINGWALL VERT.
B512	X	8	3'-6"			WINGWALL VERT. ANCHORS ◭
B413	X	24	5'-2"			WINGWALL HORIZ.
B414	X	12	3'-9"	X		WINGWALL SDWK. NOTCH VERT.
B615	X	4	5'-2"			WINGWALL SDWK. NOTCH HORIZ.
B516	X	8	2'-0"			BLOCKOUT REENTRANT CORNERS



B501, B503, B505, B510, B511, B414

BAR MARK	DIM. 'A'	DIM. 'B'
B501	2'-11"	1'-4"
B503	3'-10"	1'-4"
B505	2'-0"	8"
B510	3'-6"	1'-5"
B511	3'-10"	1'-5"
B414	1'-8"	8"



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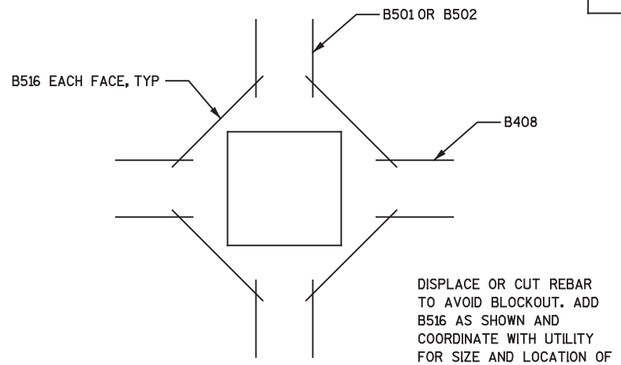
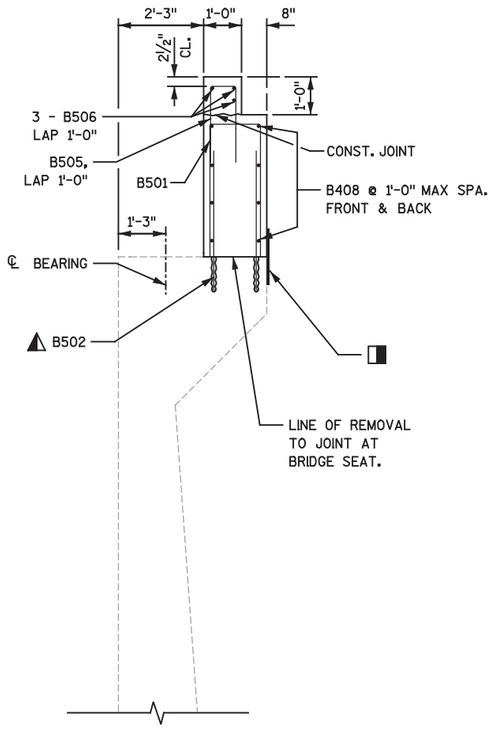


BLOCKOUT DETAIL

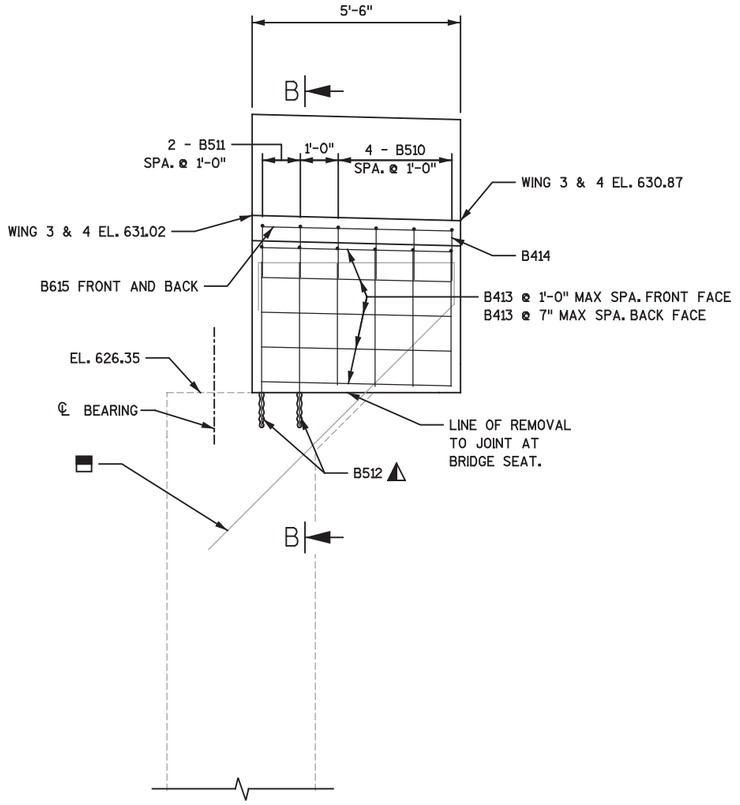
PRESERVE & INCORPORATE EXISTING BARS

◭ MASONRY ANCHORS TYPE 'L', EPOXY ANCHORED, EMBED 11".

18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.

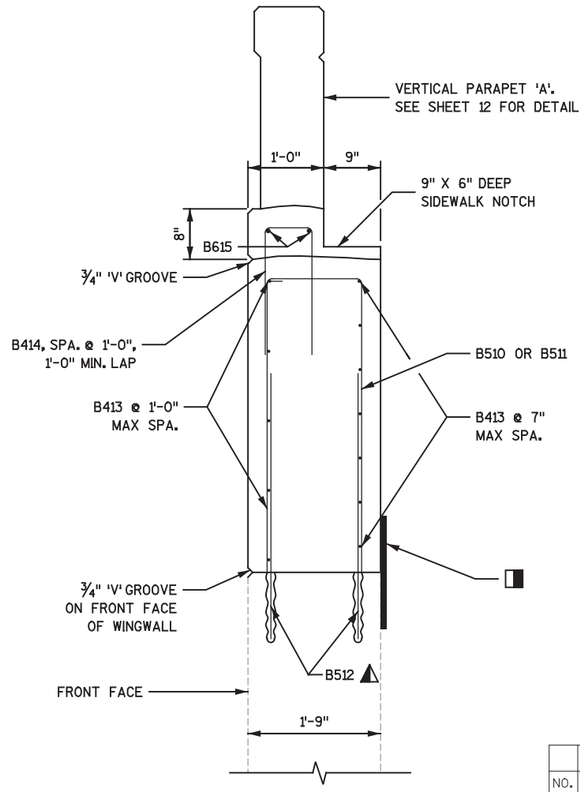


SECTION A-A



EAST ABUTMENT WING 4

(WING 3 OPPOSITE HAND)



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. RJW

EAST ABUTMENT DETAILS

SHEET 6 OF 17

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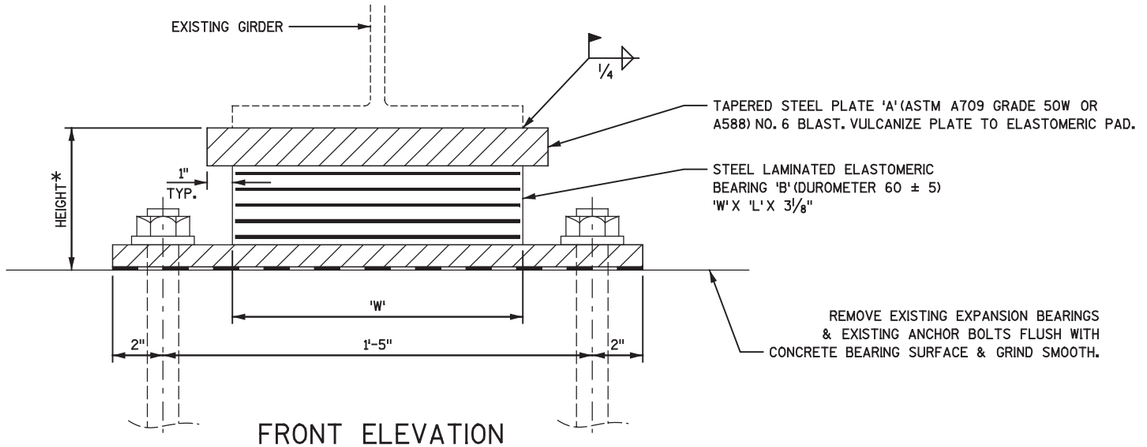
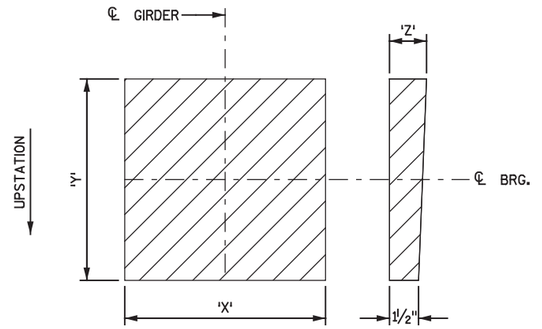
FILE NAME :06_B-40-172_East Abutment Details.dgn
PLOT DATE :1/31/2014 3:37:33 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

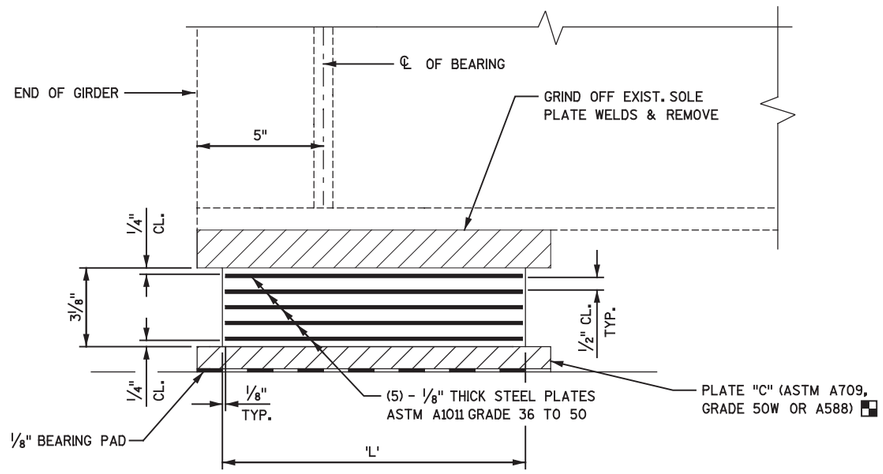
1228-25-70



FRONT ELEVATION

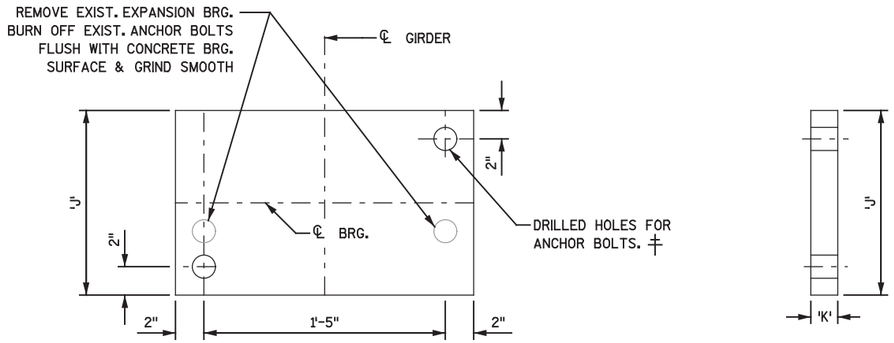


TOP PLATE 'A' DETAILS

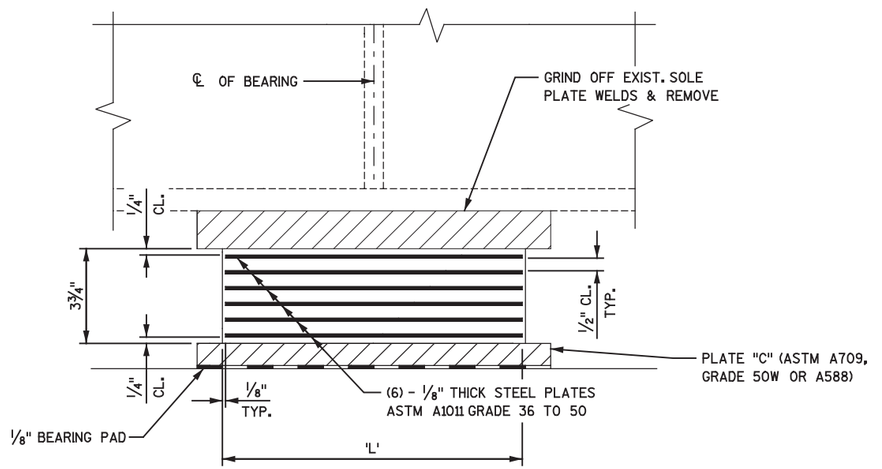


SECTION THRU ELASTOMERIC BEARING

(AT ABUTMENT)



BOTTOM PLATE 'C' DETAILS



SECTION THRU ELASTOMERIC BEARING

(AT PIERS)

EXPANSION BEARINGS											
LOCATION	PLATE A			BEARING B			PLATE C			HEIGHT (IN.)*	NO. OF BRG.
	'X'	'Y'	'Z'	'W'	'L'		'J'	'K'			
W. ABUT. BEAMS 1-8	1'-1 1/2"	1'-3"	1 3/4"	11 1/2"	1'-1"		1'-3"	1/2"	■	5 3/8"	8
E. ABUT. BEAMS 2-7	1'-1 1/2"	1'-3"	1 3/4"	11 1/2"	1'-1"		1'-3"	1/2"	■	5 3/8"	6
E. ABUT. BEAMS 1, 8	1'-1 5/8"	1'-3"	1 3/4"	11 5/8"	1'-1"		1'-3"	1/2"	■	5 3/8"	2
PIER 1 BEAMS 2-7	1'-1 1/2"	1'-10"	1 7/8"	11 1/2"	1'-8"		1'-10"	9/16"		6 1/8"	6
PIER 1 BEAMS 1, 8	1'-1 1/2"	1'-10"	2"	11 1/2"	1'-8"		1'-10"	1 1/4"		6 7/8"	2
PIER 3 BEAMS 2-7	1'-1 1/2"	1'-10"	1 7/8"	11 1/2"	1'-8"		1'-10"	9/16"		6 1/8"	6
PIER 3 BEAMS 1, 8	1'-1 5/8"	1'-10"	1 7/8"	11 5/8"	1'-8"		1'-10"	1 5/16"		6 7/8"	2

* HEIGHT MEASURED AT ℄ OF BEARING.

BEARING NOTES

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

COMPRESSION LOAD AND ADHESION TESTS WILL BE WAIVED WHERE BEARINGS ARE DETAILED TO MEET HEIGHT REQUIREMENTS.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

USE (2) 1 1/4" ϕ, 1'-5" LONG ANCHOR BOLTS PER BEARING PAD ASSEMBLY.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS PLATE "C" THICKNESS + 2 1/4".

PROVIDE 1/8" THICK BEARING PAD SAME SIZE AS MASONRY PLATE "C" FOR EACH BEARING.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS "C".

PLATE "C" SHALL BE GALVANIZED.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "C" HAVE A DIAMETER OF 3/8" LARGER THAN ANCHOR BOLT.

■ VULCANIZE BOTTOM PLATE "C" TO ELASTOMERIC PAD AT THE WEST AND EAST ABUTMENT LOCATIONS.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. NJH

ELASTOMERIC EXPANSION BEARINGS

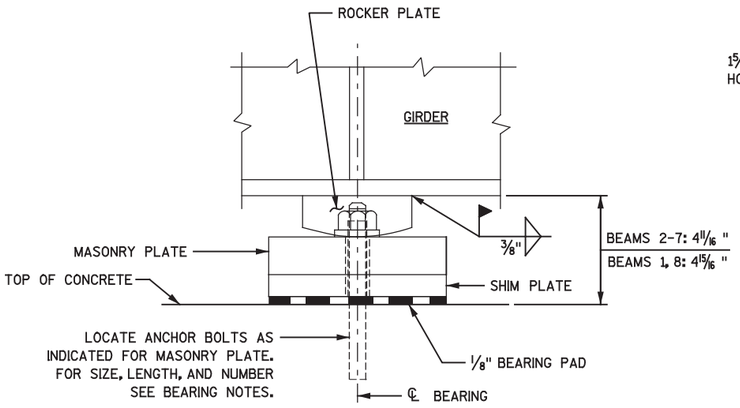
SHEET 7 OF 17

483

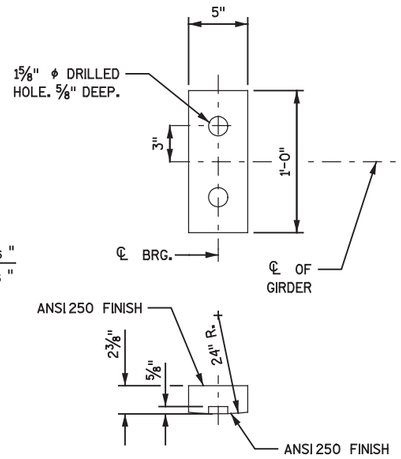
FILE NAME :\07_B-40-172_Elastomeric Expansion Bearings.dgn
PLOT DATE :1/31/2014 3:37:35 PM PLOT BY : NicholasHornyak:BL DRV :Pdf_bw_HS.pltr PEN :CEL_TEXTSUB.TBL

STATE PROJECT NUMBER

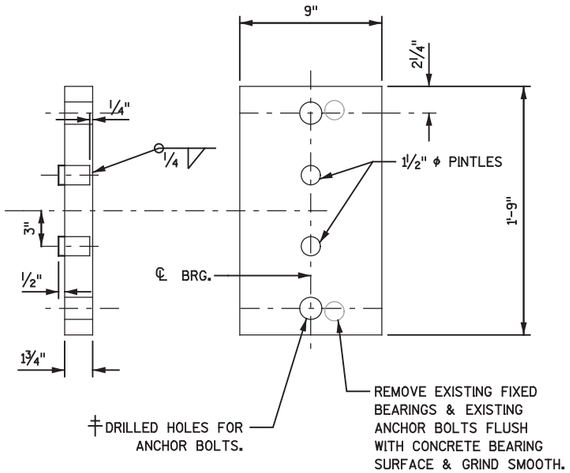
1228-25-70



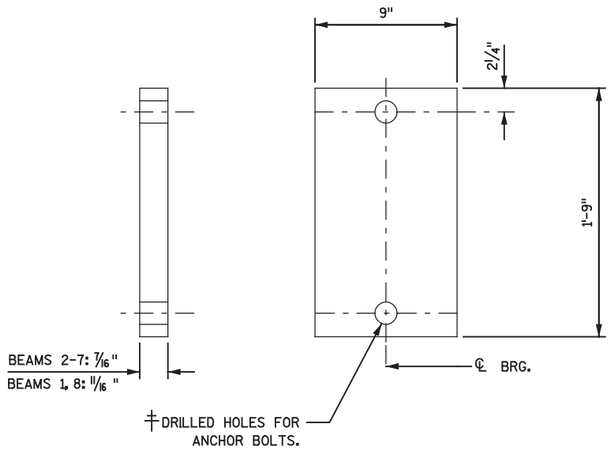
FIXED BEARING ASSEMBLY



ROCKER PLATE



MASONRY PLATE



SHIM PLATE

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

IN LIEU OF USING SHIM PLATES, FABRICATOR MAY INCREASE THICKNESS OF MASONRY PLATE BY THE SHIM PLATE THICKNESS.

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.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

USE (2) 1 1/4" ϕ, 1'-5" LONG ANCHOR BOLTS PER BEARING PAD ASSEMBLY.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS, MASONRY PLATE THICKNESS + SHIM PLATE THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING PINTLES, ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL MATERIALS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES FIXED B-40-172", EACH.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE FOR A DRIVING FIT.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE FOR EACH BEARING.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

ROCKER PLATE SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.

MASONRY PLATE SHALL BE GALVANIZED.

PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE AND SHIM PLATE HAVE A DIAMETER OF 3/8" LARGER THAN ANCHOR BOLT.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY	MJH	PLANS CK'D.	NJH

FIXED BEARING DETAILS

SHEET 8 OF 17

484

FILE NAME :108_B-40-172_Fixed Bearing Details.dgn
PLOT DATE :1/31/2014 3:37:37 PM PLOT BY : NicholasHornyak18L DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

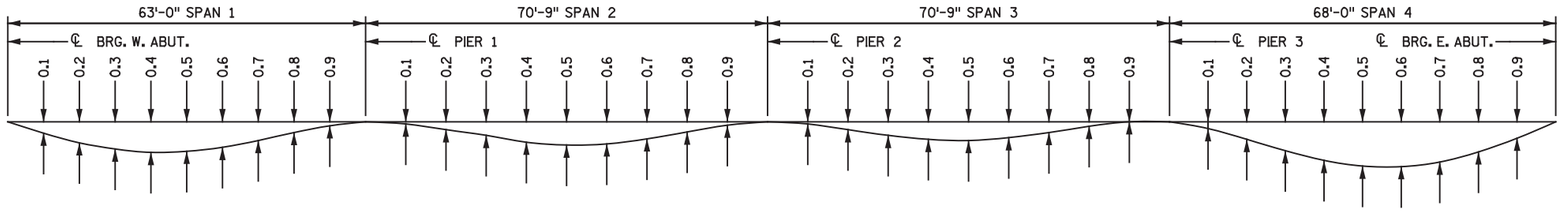
TOP OF DECK ELEVATIONS

POINT / GIRDER	℄ BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 2
N. EDGE	636.13	635.99	635.86	635.73	635.59	635.46	635.33	635.19	635.06	634.93	634.79	634.64	634.49	634.34	634.19	634.04	633.89	633.74	633.59	633.44	633.29
1	636.17	636.03	635.90	635.76	635.63	635.50	635.36	635.23	635.10	634.96	634.83	634.68	634.53	634.38	634.23	634.08	633.93	633.78	633.63	633.48	633.33
2	636.32	636.19	636.05	635.92	635.79	635.65	635.52	635.39	635.25	635.12	634.98	634.83	634.68	634.53	634.38	634.23	634.08	633.93	633.78	633.63	633.48
3	636.48	636.34	636.21	636.07	635.94	635.81	635.67	635.54	635.41	635.27	635.14	634.99	634.84	634.69	634.54	634.39	634.24	634.09	633.94	633.79	633.64
4	636.63	636.50	636.36	636.23	636.10	635.96	635.83	635.70	635.56	635.43	635.29	635.14	634.99	634.84	634.69	634.54	634.39	634.24	634.09	633.94	633.79
5	636.63	636.50	636.36	636.23	636.10	635.96	635.83	635.70	635.56	635.43	635.29	635.14	634.99	634.84	634.69	634.54	634.39	634.24	634.09	633.94	633.79
6	636.48	636.34	636.21	636.07	635.94	635.81	635.67	635.54	635.41	635.27	635.14	634.99	634.84	634.69	634.54	634.39	634.24	634.09	633.94	633.79	633.64
7	636.32	636.19	636.05	635.92	635.79	635.65	635.52	635.39	635.25	635.12	634.98	634.83	634.68	634.53	634.38	634.23	634.08	633.93	633.78	633.63	633.48
8	636.17	636.03	635.90	635.76	635.63	635.50	635.36	635.23	635.10	634.96	634.83	634.68	634.53	634.38	634.23	634.08	633.93	633.78	633.63	633.48	633.33
S. EDGE	636.13	635.99	635.86	635.73	635.59	635.46	635.33	635.19	635.06	634.93	634.79	634.64	634.49	634.34	634.19	634.04	633.89	633.74	633.59	633.44	633.29

POINT / GIRDER	PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 3	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. E. ABUT.
N. EDGE	633.29	633.14	632.99	632.84	632.69	632.54	632.39	632.24	632.09	631.94	631.79	631.65	631.50	631.36	631.22	631.07	630.93	630.78	630.64	630.49	630.35
1	633.33	633.18	633.03	632.88	632.73	632.58	632.43	632.28	632.13	631.98	631.83	631.69	631.54	631.40	631.25	631.11	630.96	630.82	630.68	630.53	630.39
2	633.48	633.33	633.18	633.03	632.88	632.73	632.58	632.43	632.28	632.13	631.98	631.84	631.70	631.55	631.41	631.26	631.12	630.98	630.83	630.69	630.54
3	633.64	633.49	633.34	633.19	633.04	632.89	632.74	632.59	632.44	632.29	632.14	632.00	631.85	631.71	631.56	631.42	631.27	631.13	630.99	630.84	630.70
4	633.79	633.64	633.49	633.34	633.19	633.04	632.89	632.74	632.59	632.44	632.29	632.15	632.01	631.86	631.72	631.57	631.43	631.29	631.14	631.00	630.85
5	633.79	633.64	633.49	633.34	633.19	633.04	632.89	632.74	632.59	632.44	632.29	632.15	632.01	631.86	631.72	631.57	631.43	631.29	631.14	631.00	630.85
6	633.64	633.49	633.34	633.19	633.04	632.89	632.74	632.59	632.44	632.29	632.14	632.00	631.85	631.71	631.56	631.42	631.27	631.13	630.99	630.84	630.70
7	633.48	633.33	633.18	633.03	632.88	632.73	632.58	632.43	632.28	632.13	631.98	631.84	631.70	631.55	631.41	631.26	631.12	630.98	630.83	630.69	630.54
8	633.33	633.18	633.03	632.88	632.73	632.58	632.43	632.28	632.13	631.98	631.83	631.69	631.54	631.40	631.25	631.11	630.96	630.82	630.68	630.53	630.39
S. EDGE	633.29	633.14	632.99	632.84	632.69	632.54	632.39	632.24	632.09	631.94	631.79	631.65	631.50	631.36	631.22	631.07	630.93	630.78	630.64	630.49	630.35

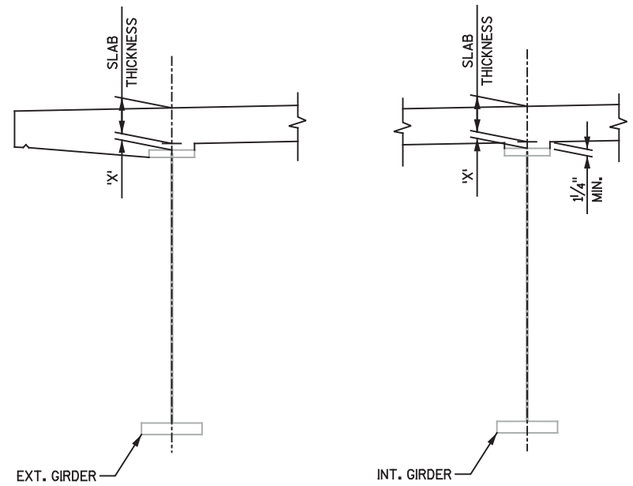
DEAD LOAD DEFLECTIONS

	CONCRETE DEAD LOAD DEFLECTIONS (FEET)										
		SPAN 1									
	℄ BRG. W. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 1
Girders 1, 8	0.000	0.006	0.011	0.014	0.013	0.011	0.006	0.002	0.000	0.000	0.000
Girders 2-7	0.000	0.020	0.037	0.048	0.054	0.052	0.045	0.033	0.019	0.007	0.000
	SPAN 2										
	℄ PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 2
Girders 1, 8	0.000	0.000	0.002	0.007	0.013	0.017	0.017	0.014	0.009	0.003	0.000
Girders 2-7	0.000	0.004	0.014	0.027	0.036	0.041	0.039	0.030	0.018	0.006	0.000
	SPAN 3										
	℄ PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 3
Girders 1, 8	0.000	0.002	0.007	0.012	0.015	0.014	0.011	0.006	0.001	0.000	0.000
Girders 2-7	0.000	0.004	0.014	0.024	0.031	0.033	0.028	0.019	0.008	0.000	0.000
	SPAN 4										℄ BRG. E. ABUT.
	℄ PIER 3	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
Girders 1, 8	0.000	0.000	0.001	0.006	0.012	0.018	0.021	0.021	0.017	0.009	0.000
Girders 2-7	0.000	0.012	0.031	0.051	0.068	0.078	0.079	0.071	0.053	0.029	0.000



DEFLECTION DIAGRAM

SEE TABLE FOR DEAD LOAD DEFLECTIONS AT TENTH POINTS



HAUNCH DETAIL

NOTES

TO DETERMINE 'X':
ELEVATIONS OF THE TOP FLANGES, TOP OF SPLICE PLATE, OR TOP OF COVER PLATES, WHICHEVER APPLIES, SHALL BE TAKEN AT ℄ OF BRGS. AND AT TENTH POINTS OF EACH SPAN, THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF STEEL ELEVATION
\+ DEFLECTION (CONCRETE ONLY)
\- SLAB THICKNESS

= CONCRETE HAUNCH HEIGHT 'X'

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

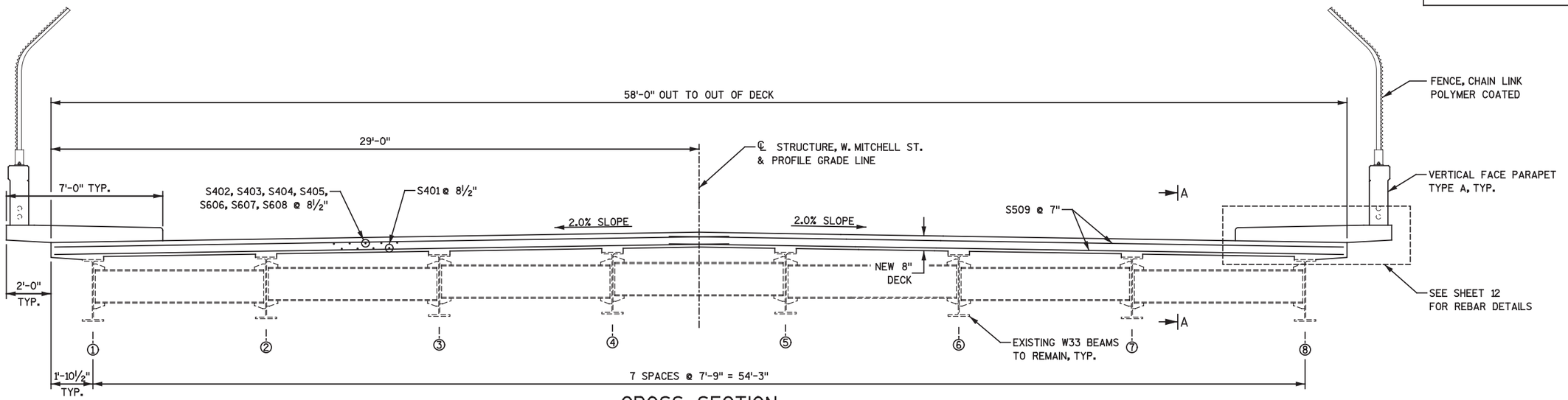
DRAWN BY MJH | PLANS CK'D. RJW

DECK ELEVATIONS

SHEET 9 OF 17
485

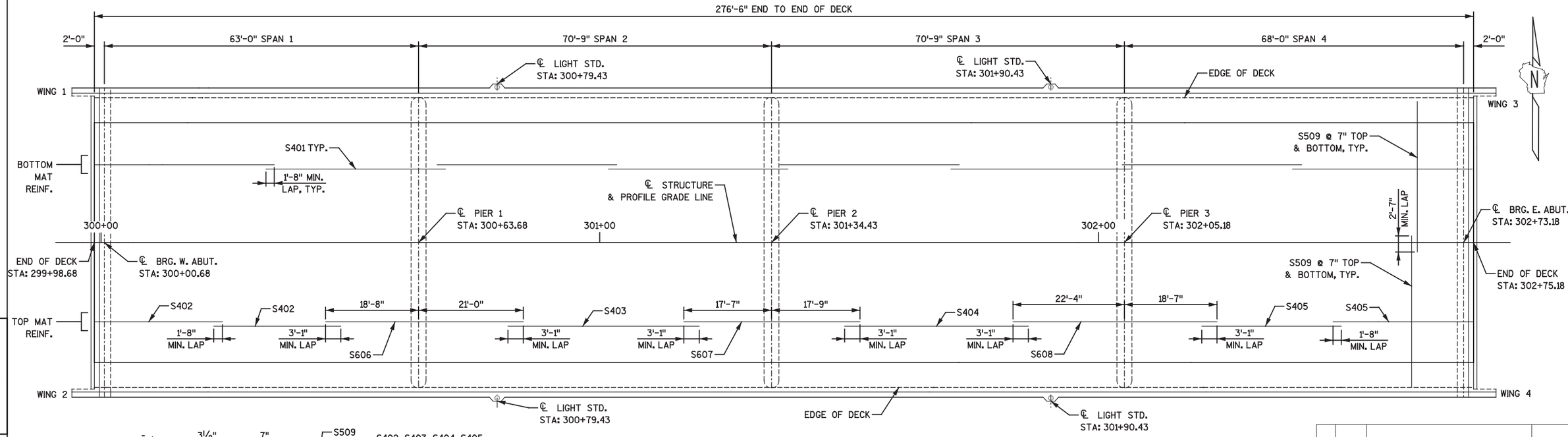
FILE NAME :09_B-40-172_Deck Elevations.dgn
PLOT DATE :1/31/2014 3:37:37 PM PLOT BY : NicholasHornyakvBL DRV :Pdf_bw_NS.pltt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

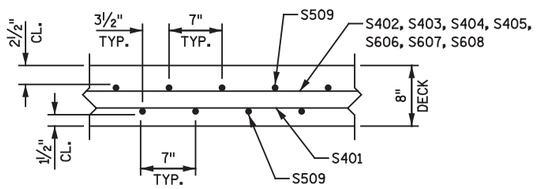


CROSS SECTION

(LOOKING EAST)



PLAN



SECTION A-A THRU DECK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY	MJH	PLANS CK'D.	RJW

SHEET 10 OF 17

SUPERSTRUCTURE 486

8

8

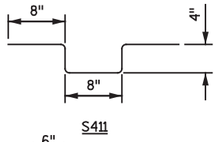
FILE NAME :10_B_40_172_Superstructure.dgn
PLOT DATE :1/31/2014 3:37:38 PM PLOT BY : NicholasHornyak@8 DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

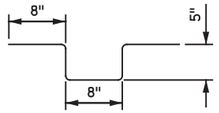
1228-25-70

BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	656	36'-0"			LONGIT. BOTTOM
S402	X	166	25'-6"			LONGIT. TOP SPAN 1
S403	X	83	38'-4"			LONGIT. TOP SPAN 2
S404	X	83	36'-10"			LONGIT. TOP SPAN 3
S405	X	166	28'-0"			LONGIT. TOP SPAN 4
S606	X	83	39'-8"			LONGIT. CONTINUITY PIER 1
S607	X	83	35'-4"			LONGIT. CONTINUITY PIER 2
S608	X	83	40'-11"			LONGIT. CONTINUITY PIER 3
S509	X	1882	30'-2"			TRANS. TOP AND BOTTOM
S410	X	128	36'-0"			HAUNCH LONGIT.
S411	X	1496	2'-4"	X		HAUNCH HAT
S412	X	680	2'-6"	X		HAUNCH HAT
S413	X	126	4'-2"	X		S & N ABUT. DIAPH. STIRRUPS
S614	X	70	6'-6"			S & N ABUT. DIAPH. BOTTOM HORIZ.
S415	X	28	6'-6"			S & N ABUT. DIAPH. TOP HORIZ.
S416	X	28	6'-6"			S & N ABUT. JOINT HOLD DOWN



S411



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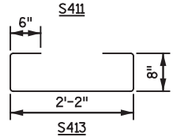

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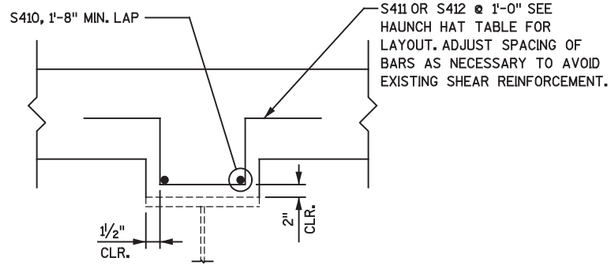
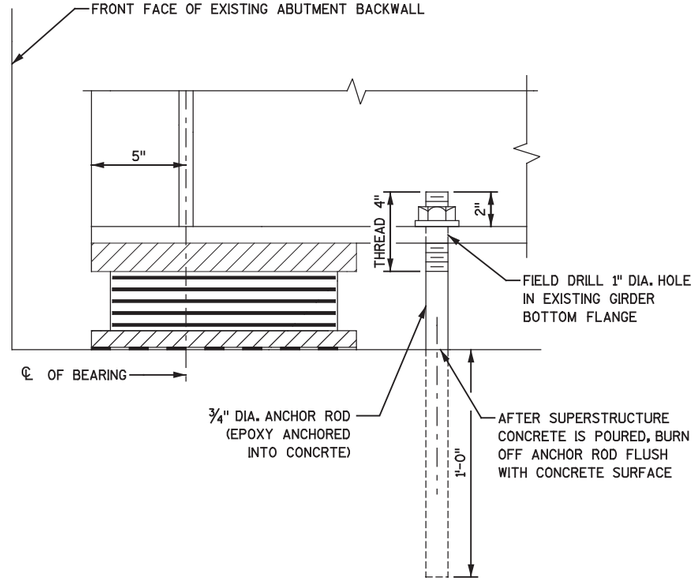


HAUNCH DETAILS

HAUNCH HAT TABLE

GIRDER NO.	BAR MARK			
	SPAN 1	SPAN 2	SPAN 3	SPAN 4
1	S411	S411	S411	S411
2	S411	S411	S411	S411
3	S411	S411	S411	S412
4	S412	S412	S412	S412
5	S412	S412	S412	S412
6	S411	S411	S411	S412
7	S411	S411	S411	S411
8	S411	S411	S411	S411



TEMPORARY HOLD DOWN DEVICE

PLACE ONE ANCHOR ROD PER GIRDER AT ABUTMENT WHERE SLAB POUR TERMINATES. LOCATE 4" (NORMAL) OFF ℄ OF GIRDER. ANCHOR ROD, NUT, WASHER AND DRILLED HOLE IN GIRDER FLANGE SHALL BE PAID FOR AS "MASONRY ANCHORS TYPE S ¾-INCH". MINIMUM PULLOUT CAPACITY OF 27 KIPS.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. RJW

SUPERSTRUCTURE DETAILS

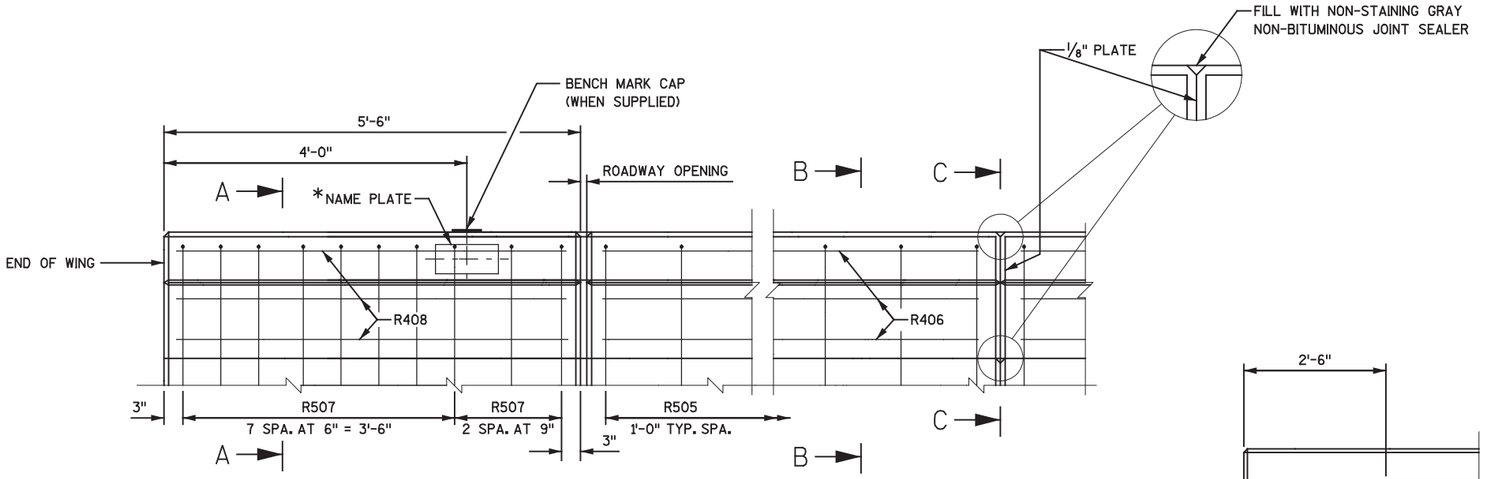
SHEET 11 OF 17

487

FILE NAME :ILB-40-172_Superstructure Details.dgn
PLOT DATE :1/31/2014 3:37:41 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

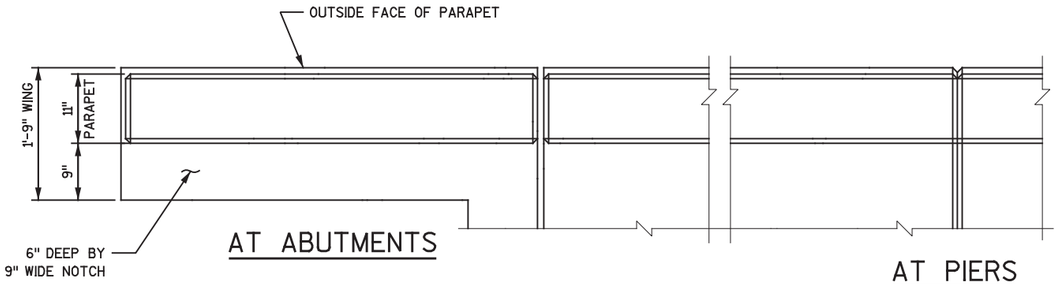
1228-25-70



AT ABUTMENTS IN SPAN

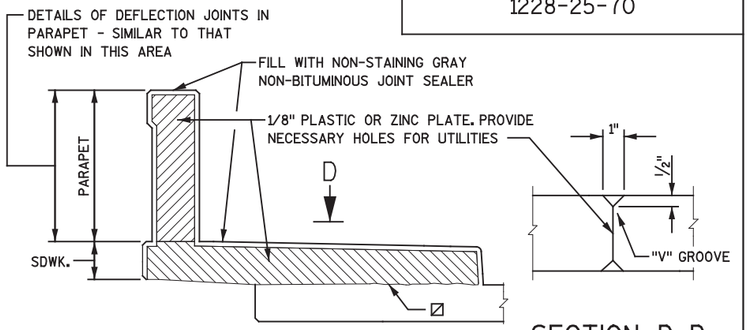
ELEVATION OF PARAPET

(INSIDE FACE)



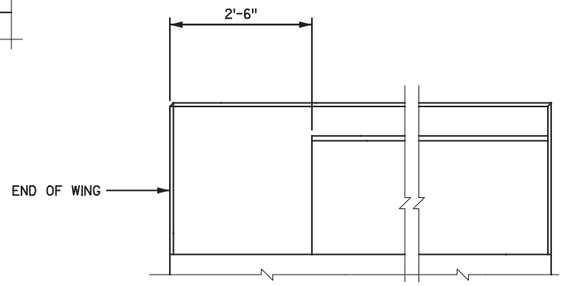
AT ABUTMENTS AT PIERS

PLAN OF PARAPET



SECTION C-C

SECTION D-D



OUTSIDE PARAPET FACE

FOR LOCATIONS OF DEFLECTION JOINTS IN PARAPET OR SIDEWALK USE THE FOLLOWING CRITERIA:

1. GIRDER STRUCTURES AND SLAB STRUCTURES WITH A SIDEWALK SHOULD HAVE A DEFLECTION JOINT IN THE SIDEWALK AND PARAPET OVER THE PIER.

IF THERE IS A LIGHT STANDARD AT THE PIER, PLACE A DEFLECTION JOINT APPROX. 4'-0" EACH SIDE OF PIER, WITH NONE DIRECTLY OVER THE PIER.

NOTES

WHEN PARAPETS ARE POURED CONTINUOSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION "C-C" BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

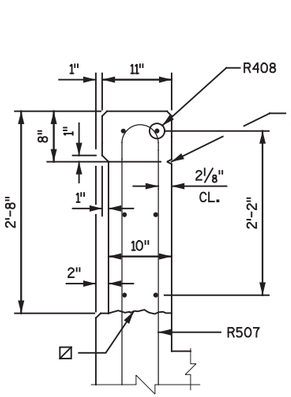
⊠ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE

* FOR LOCATION OF NAME PLATE & BENCH MARK, SEE PLAN & ELEVATION SHEET.

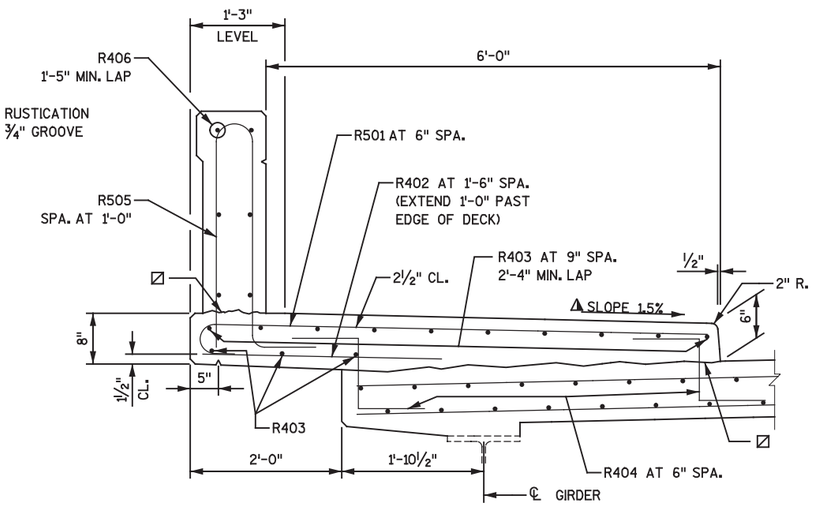
▲ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

BILL OF BARS

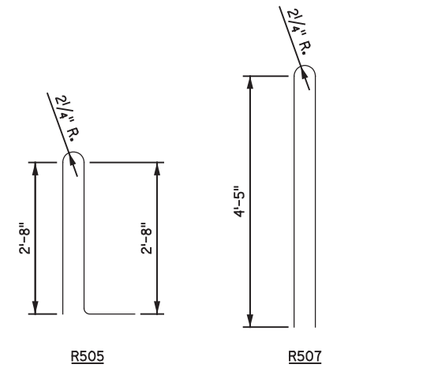
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	1106	7'-2"	X		SDWK. TRANS. TOP
R402	X	370	2'-10"			SDWK. TRANS. BOTTOM
R403	X	208	36'-7"			SDWK. LONG. TOP & BOTTOM
R404	X	2212	2'-5"	X		SDWK. DECK TIES
R505	X	554	6'-8"	X		PARAPET VERTICAL
R406	X	96	35'-10"			PARAPET HORIZONTAL
R507	X	40	9'-5"	X		WINGWALL PARAPET VERT.
R408	X	24	5'-0"			WINGWALL PARAPET HORIZ.

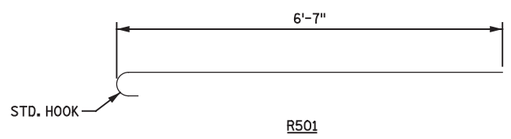


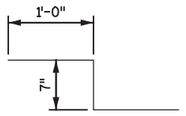
SECTION A-A



SECTION B-B







NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. RJW

PARAPET AND SIDEWALK DETAILS

SHEET 12 OF 17

488

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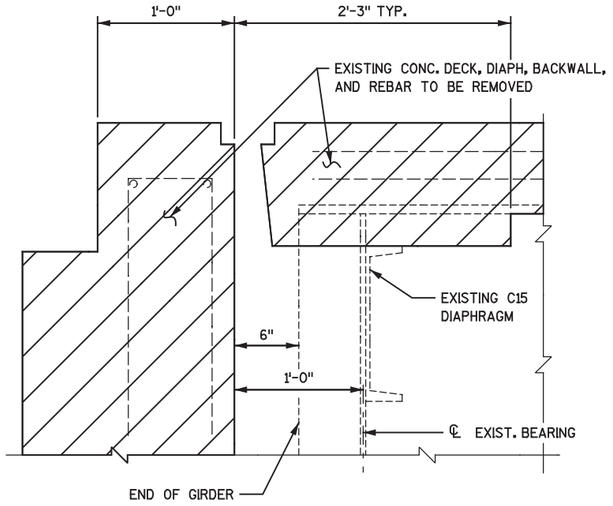
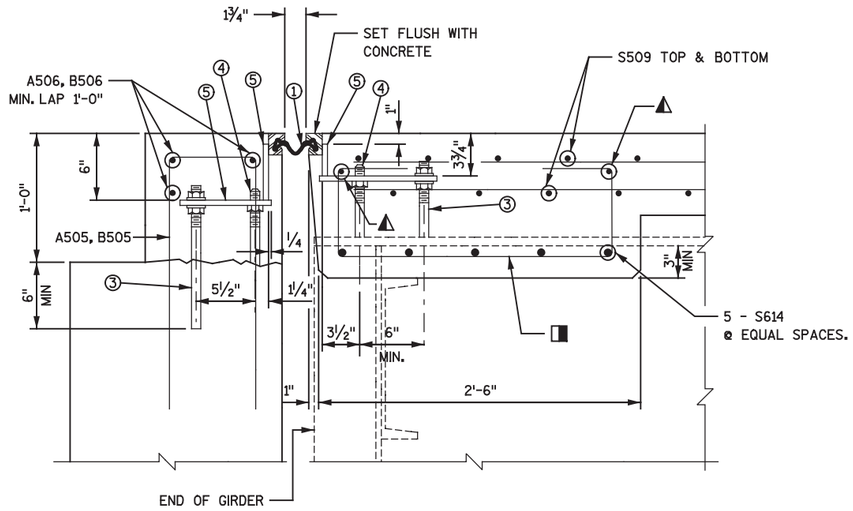
FILE NAME :12_B-40-172_Parapet and Sidewalk Details.dgn
PLOT DATE :1/31/2014 3:37:45 PM PLOT BY : NicholasHornyak:BL DRV :Pdf_bw_HS.pltt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

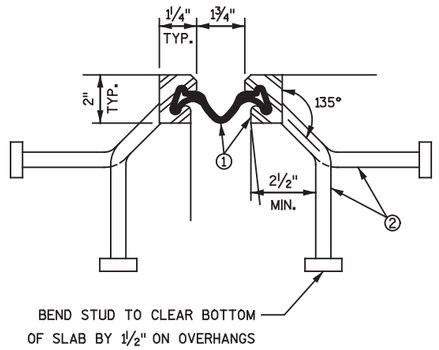
1228-25-70



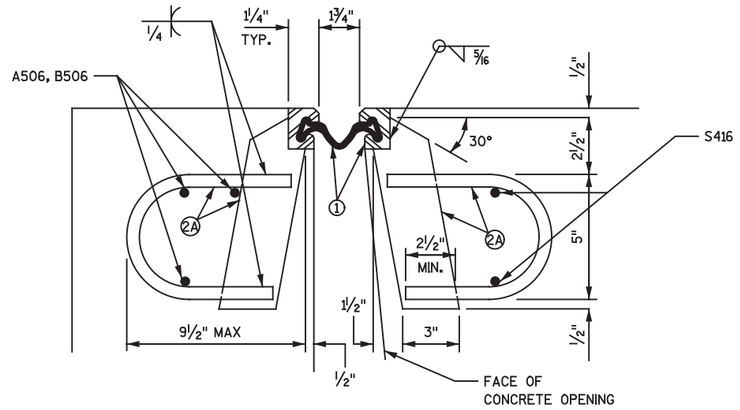
JOINT REMOVAL
AT ABUTMENTS



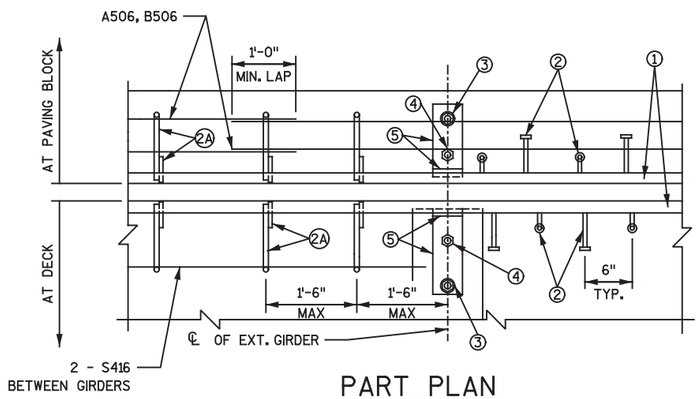
SECTION THRU JOINT
AT ABUTMENTS



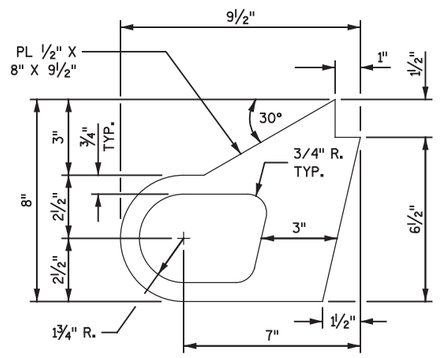
SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF DECK &
AT PARAPETS AND SIDEWALKS



SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN



ALTERNATE STRIP SEAL ANCHOR

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.

② STUDS ⅝" ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & 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 TO 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 WELD NUT TO ⑤.

⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO ①. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR ③ & 1" ϕ HOLE FOR ④.

▲ S415, SAME LENGTH AS HORIZ. DIAPH. BARS AT BOTTOM OF DIAPHRAGM.

◨ S413 @ 9" O.C. BETWEEN TOP FLANGE OF GIRDERS.

EXPANSION JOINT NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-172".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY	MJH	PLANS CK'D.	RJW

STRIP SEAL EXPANSION JOINT

SHEET 13 OF 17

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FILE NAME :13_B-40-172_Strip Seal Expansion Joint.dgn
PLOT DATE :1/31/2014 3:37:46 PM PLOT BY : NicholasHornyak@t DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.

② STUDS 5/8" ϕ X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & 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 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 ⑤.

⑤ FABRICATE SUPPORT FROM 3" X 1/2" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO ①. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1 1/2" ϕ HOLE FOR ③ & 1" ϕ HOLE FOR ④.

REFER TO SHEET 13

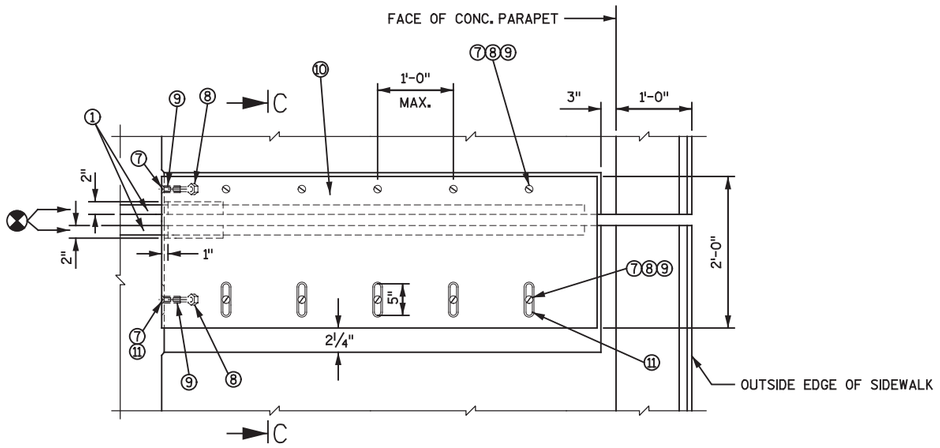
⑦ 3/4" ϕ X 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

⑧ 3/4" ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

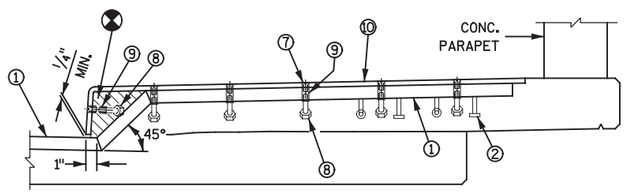
⑨ 3/4" ϕ X 2 1/4" GALVANIZED THREADED COUPLING.

⑩ SIDEWALK COVER PLATE 3/8" X 2'-0" X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR ⑦. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

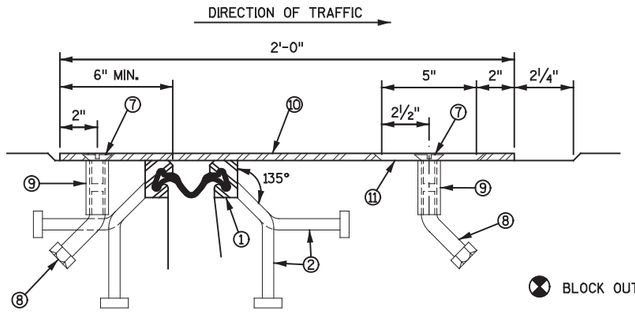
⑪ 1" X 5" SLOTTED COUNTERSUNK HOLE FOR ⑦. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.



PLAN AT SIDEWALK

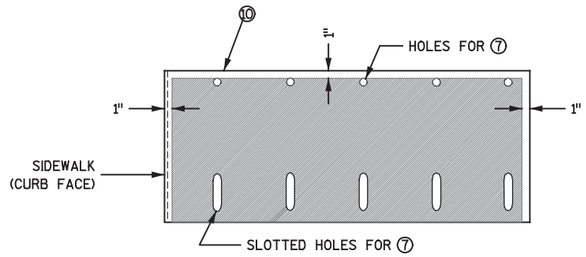


SECTION AT SIDEWALK



SECTION C-C

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W.S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. RJW

STRIP SEAL COVER PLATES FOR SIDEWALK

SHEET 14 OF 17

490

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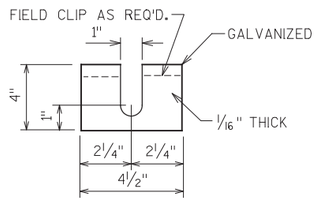
FILE NAME :14_B-40-172_Strip Seal Cover Plates for Sidewalk.dgn
PLOT DATE :1/31/2014 3:37:46 PM PLOT BY : NicholasHornyak@t DRV :Pdf_bw_HS.pltt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

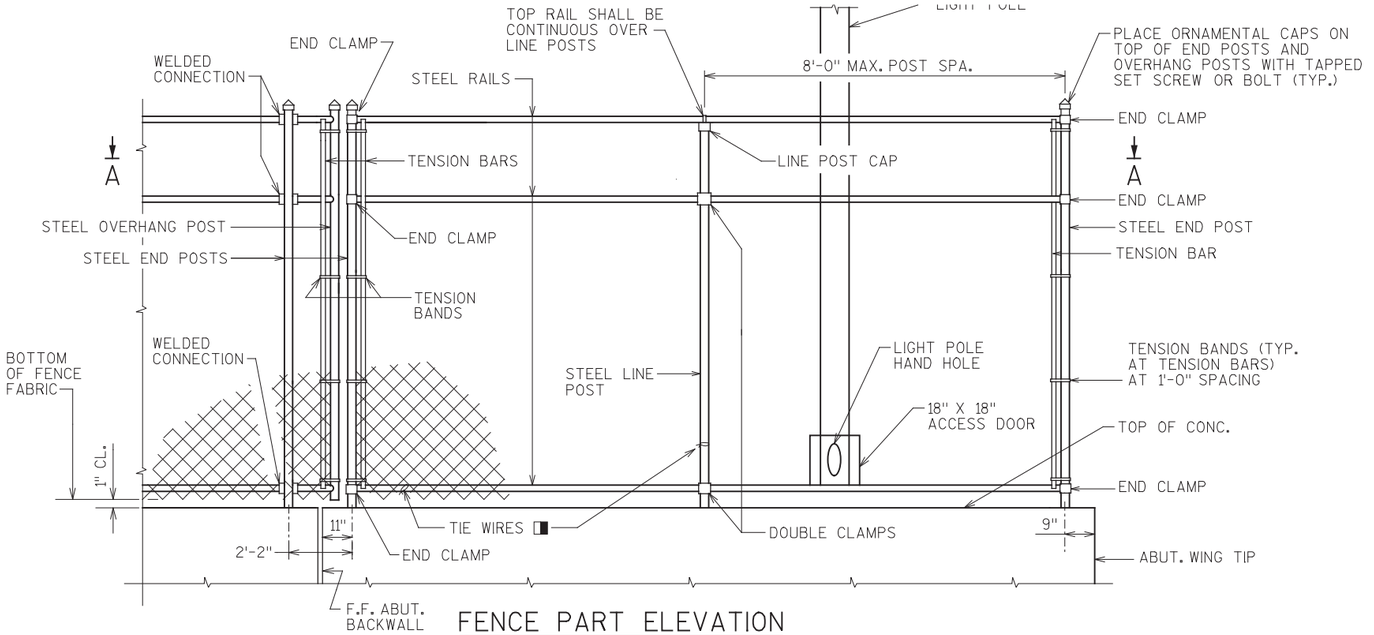
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



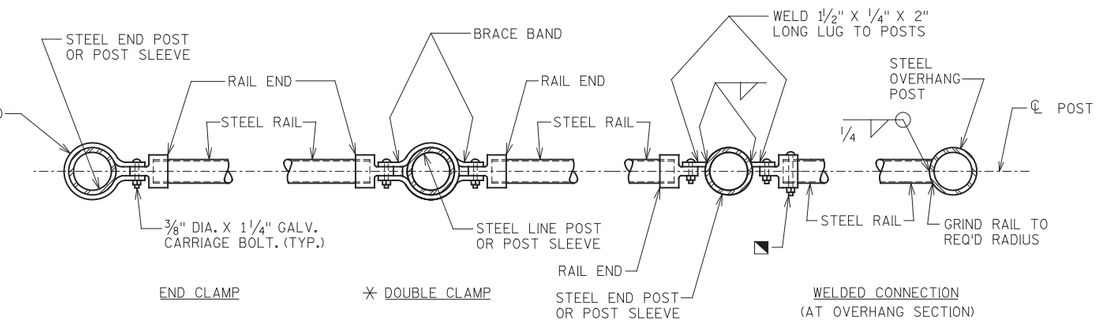
POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.

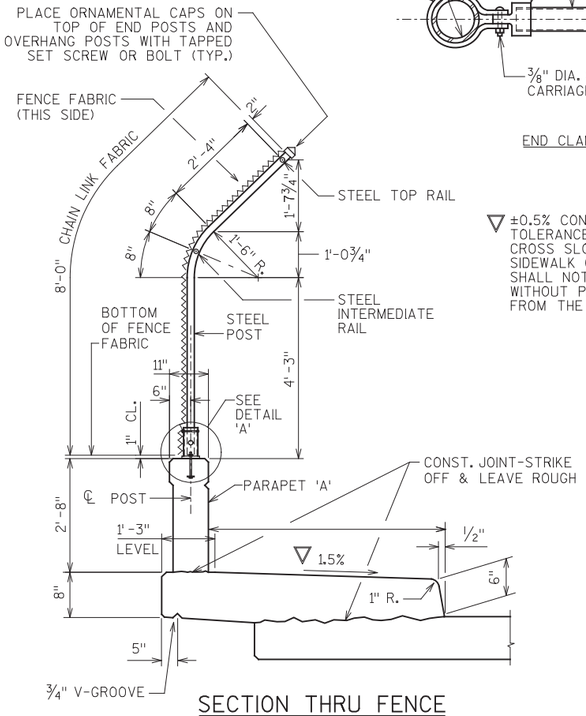


FENCE PART ELEVATION

VIEWING FABRIC SIDE



END CLAMP ✳ DOUBLE CLAMP WELDED CONNECTION (AT OVERHANG SECTION)

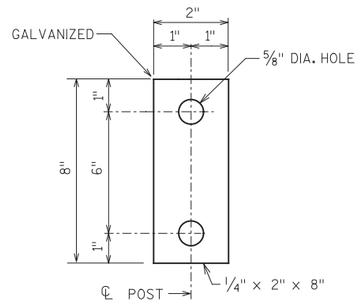


SECTION THRU FENCE

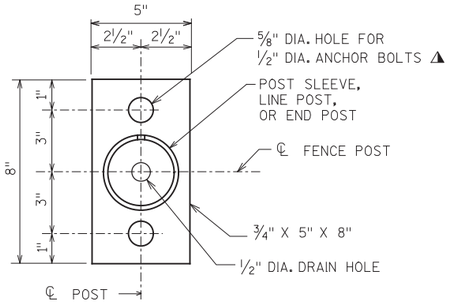
SECTION A-A

▽ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

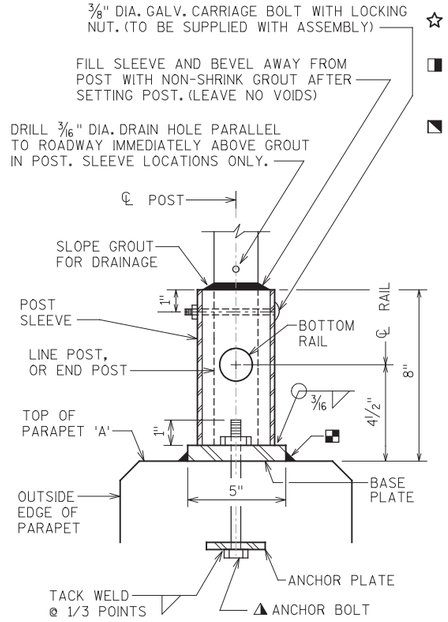
NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS



ANCHOR PLATE



BASE PLATE



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER-COATING ON THE OUTSIDE.

FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE COLOR OF POLYMER-COATING FOR THIS STRUCTURE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER-COATED 8- FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

◪ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

✳ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

◭ 1/2" DIA. X 6 7/8" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S", 1/2" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR 1/2" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

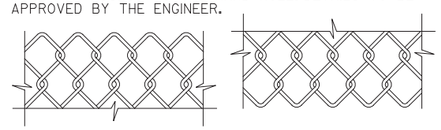
☆ MASONRY ANCHOR TYPE S 1/2-INCH. EMBED 6" IN CONCRETE. ANCHOR WASHER, AND NUT SHALL BE GALVANIZED.

◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

◥ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR 1/4 POINT OF POST SPACING.

18" X 18" ACCESS GATE TO BE PROVIDED AT EACH LIGHT POLE FOR ACCESS TO THE HAND HOLE. DETAILS TO BE APPROVED BY THE ENGINEER.



TOP DETAIL BOTTOM DETAIL

FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 1" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. RJW

FENCE DETAILS

SHEET 15 OF 17

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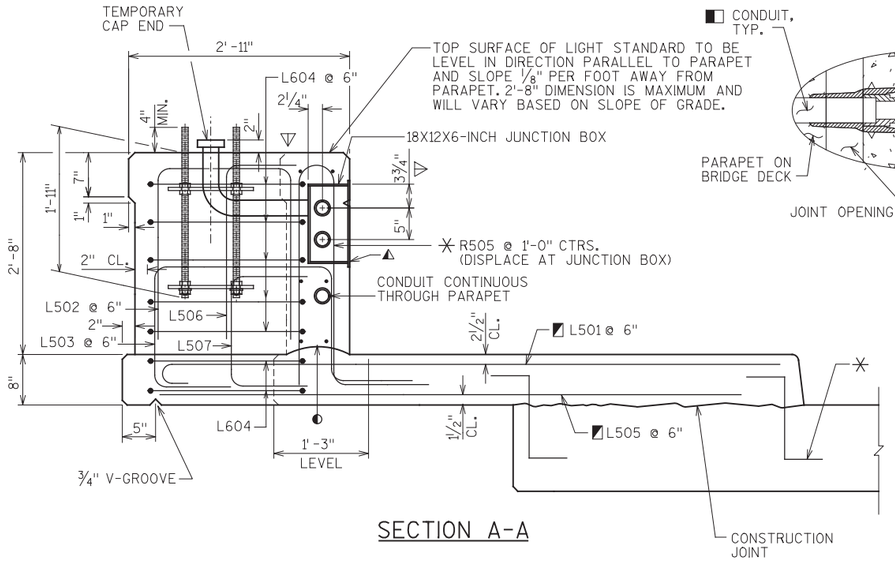
8

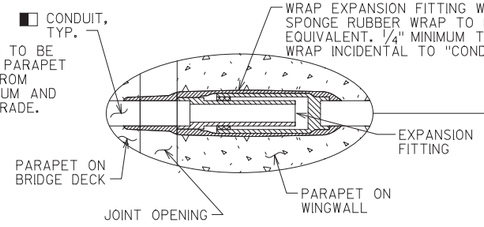
8

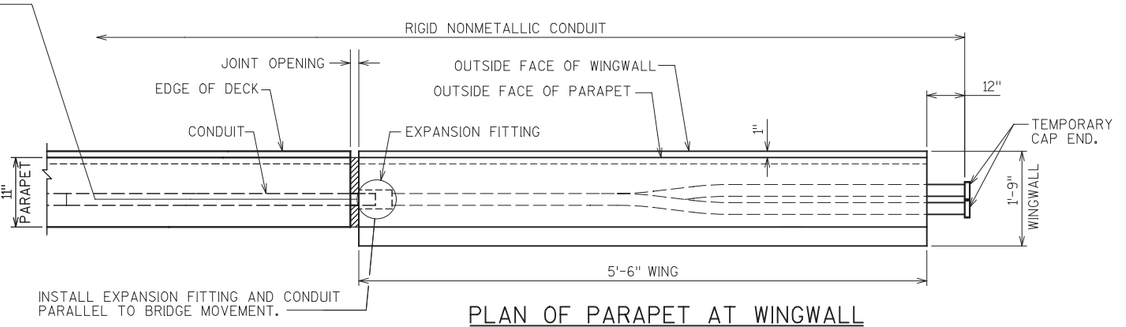
FILE NAME :15_B-40-172_Chain Fence Details.dgn
PLOT DATE :1/31/2014 3:37:47 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



SECTION A-A





PLAN OF PARAPET AT WINGWALL

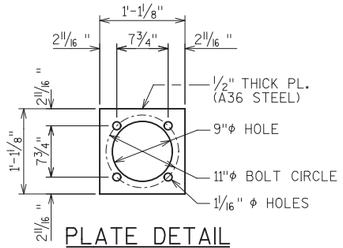
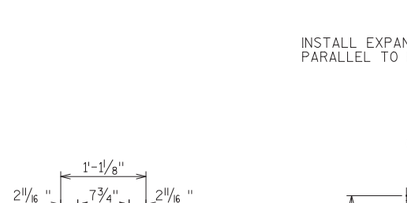


PLATE DETAIL
(8 REQ'D.)

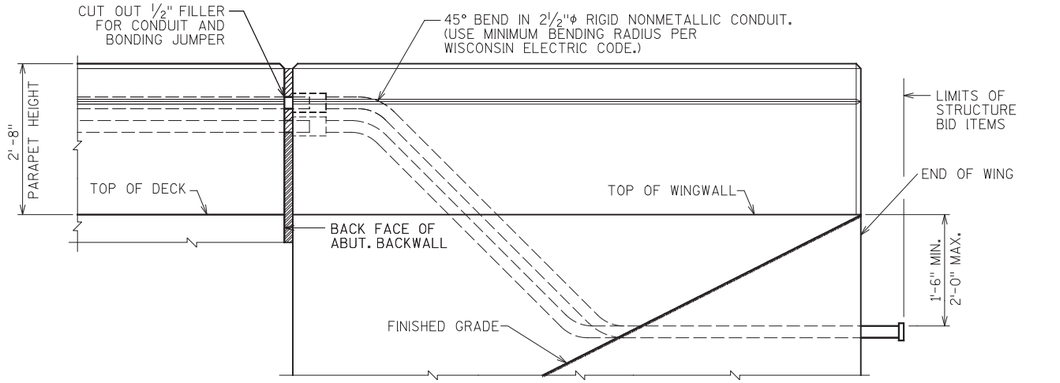
ANCHORAGE DETAIL
(4 REQ'D.)

L501

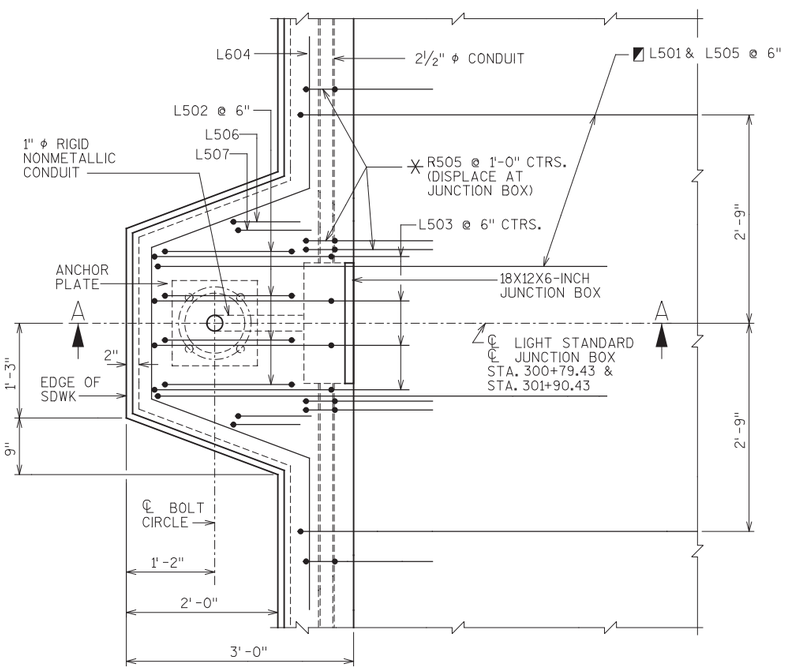


L502 L503

L604 L506 L507



OUTSIDE ELEVATION OF PARAPET AT WINGWALL



PLAN AT LIGHT STANDARD

◐ CONSTR. 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.

◩ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.

◒ 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.

✳ SEE PARAPET AND SIDEWALK DETAILS, SHT. 12 FOR ADDITIONAL BAR STEEL DETAILS.

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2½-INCH"
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH".

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
CARLON TYPE E945K (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID NONMETALLIC 2½-INCH".

ADAPTER FITTINGS SHALL BE U.L. OR NRTL LISTED FOR ELECTRICAL USE.

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
L501	X	48	7'-1"	X	SIDEWALK HORIZ. @ JUNCTION BOX
L502	X	16	6'-0"	X	PARAPET VERT. @ JUNCTION BOX
L503	X	16	6'-11"	X	PARAPET VERT. @ LIGHT STD.
L604	X	28	10'-0"	X	PARAPET HORIZ. @ LIGHT STD.
L505	X	48	6'-6"		SIDEWALK HORIZ. @ JUNCTION BOX
L506	X	8	3'-2"	X	PARAPET VERT. @ LIGHT STD.
L507	X	8	3'-5"	X	PARAPET VERT. @ LIGHT STD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. RJW

LIGHT STANDARD

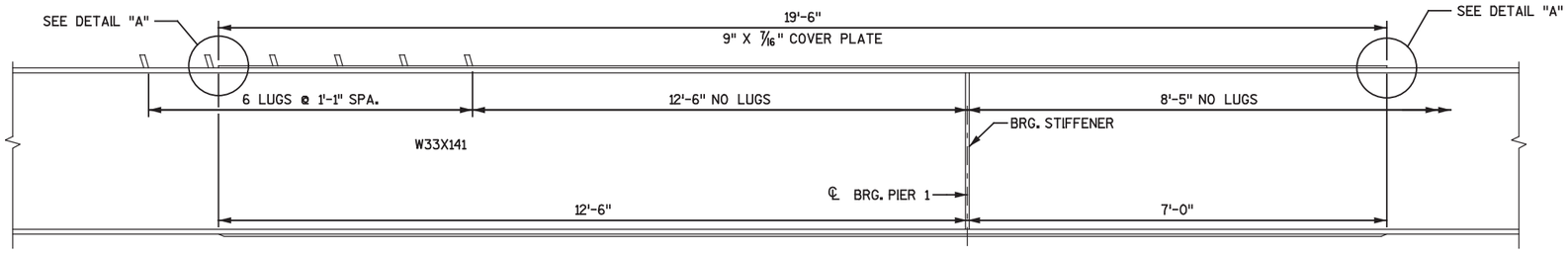
SHEET 16 OF 17
492

8

8

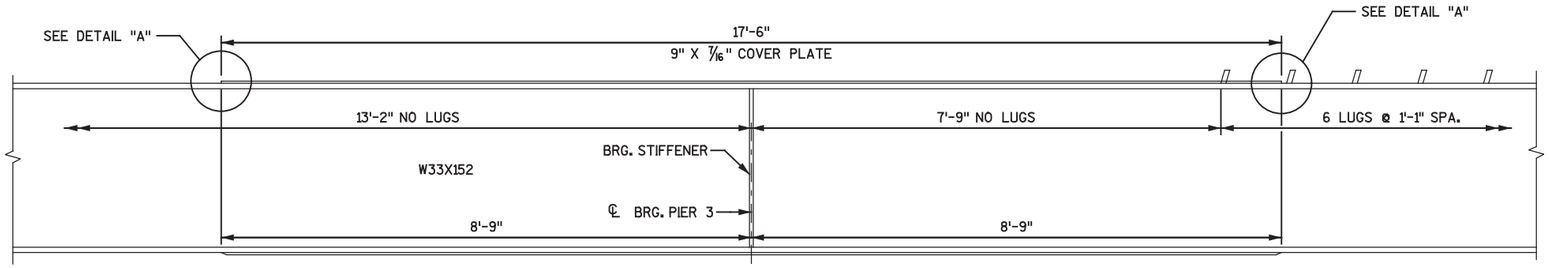
FILE NAME :16_B-40-172_Electrical Details.dgn
PLOT DATE :1/31/2014 3:37:47 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pltPEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



WEST COVER PLATE GIRDER ELEVATION

(LOCATED AT PIER 1 EXTERIOR BEAMS, 2 GIRDERS TOTAL)



EAST COVER PLATE GIRDER ELEVATION

(LOCATED AT PIER 3 EXTERIOR BEAMS, 2 GIRDERS TOTAL)

NOTES

EXISTING DETAIL AT THE END OF THE TOP FLANGE COVER PLATES IS TO BE MODIFIED AS NOTED BELOW AND AS DETAILED IN THE SPECIAL PROVISIONS TO IMPROVE THE FATIGUE CAPACITY OF THE STRUCTURE. MODIFICATION TO BE INSTALLED IN THE FOLLOWING ORDER.

1. INSTALL TWELVE (6) - 3/4" DIA. A325 GALVANIZED HIGH TENSILE STRENGTH BOLTS AS SHOWN IN THESE PLANS. ALL CONNECTIONS SHALL BE FRICTION TYPE. HOLES FOR BOLTED CONNECTIONS SHALL NOT BE MORE THAN 1/16" GREATER THAN THE NOMINAL BOLT DIAMETER. EACH FASTENER SHALL BE TIGHTENED EQUAL TO THE PROOF LOAD FOR THE GIVEN BOLT DIAMETER.

2. REMOVE 7 3/4" OF THE WELDS PARALLEL TO THE BEAM AT THE ENDS OF THE TOP FLANGE COVER PLATES. PAINT REPAIRED AREA. SEE SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.

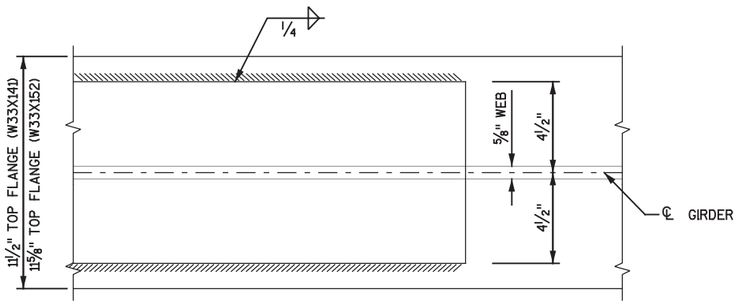
ALL WORK SHOWN ON THIS SHEET IS INCLUDED IN THE BID ITEM "COVER PLATE MODIFICATION B-40-172." MODIFICATION WILL BE REQUIRED AT A TOTAL OF 8 LOCATIONS.

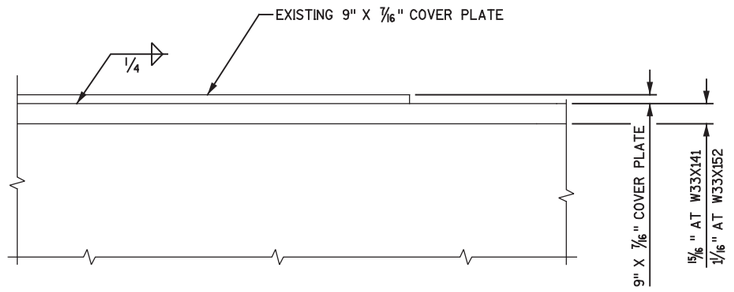
DIMENSIONS ARE BASED ON EXISTING STRUCTURE PLANS.

LEGEND

● AFTER COMPLETION OF WELD REMOVAL AND PAINTING, SEAL WELD REMOVAL AREA WITH CAULK APPROVED BY THE ENGINEER. COLOR OF CAULK SHALL MATCH PAINT OR SHALL BE CLEAR.

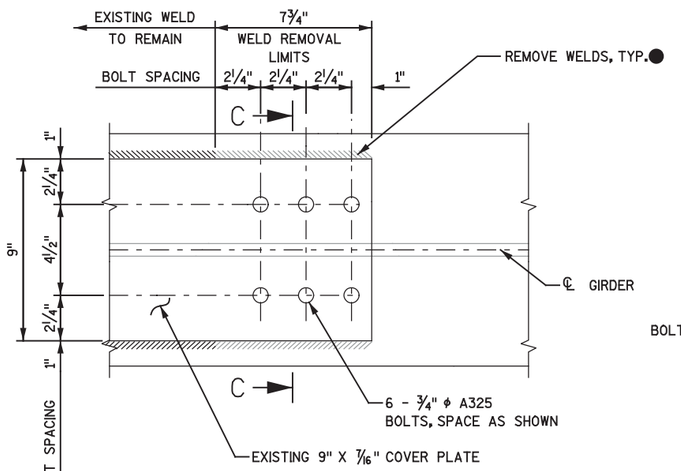
NOTE: LUG SPACING SHOWN PER EXISTING PLAN





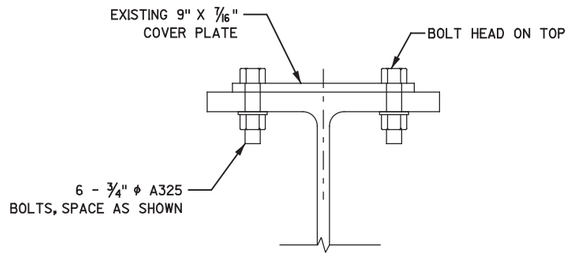
DETAIL "A"

(EXISTING DETAIL)

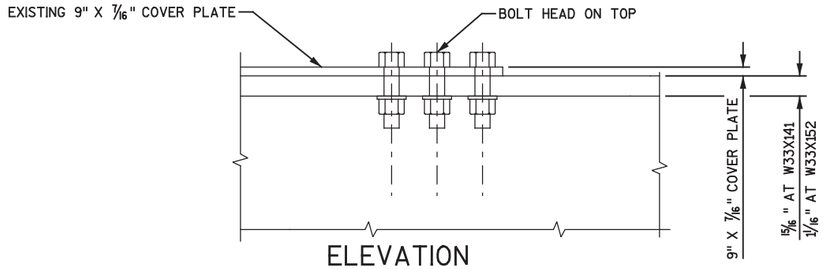


PLAN

(LOOKING DOWN AT TOP OF BEAM)



SECTION C-C



ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-172

DRAWN BY MJH | PLANS CK'D. RJW

COVER PLATE MODIFICATIONS

SHEET 17 OF 17

493

8

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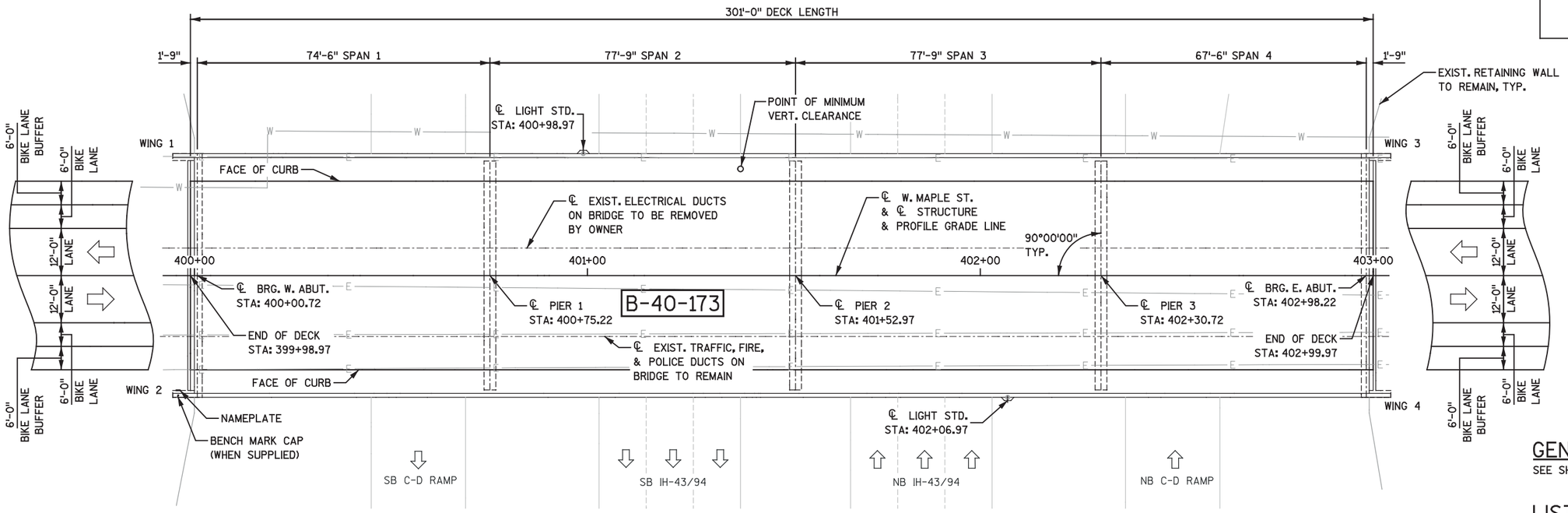
FILE NAME :17_B-40-172_Cover Plate Modifications.dgn
PLOT DATE :1/31/2014 3:37:48 PM PLOT BY : NicholasHornyak@WisDOT.gov DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



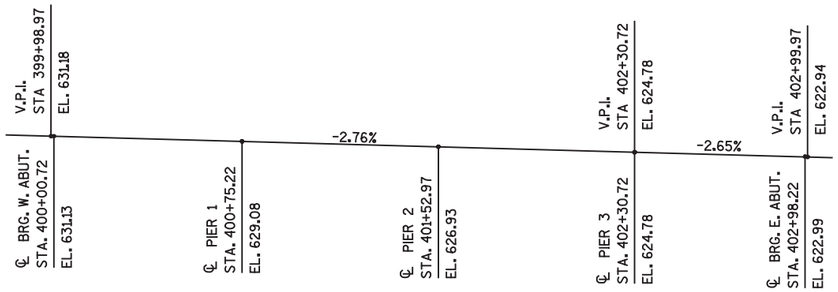
GENERAL NOTES

SEE SHEET 2 FOR GENERAL NOTES.

LIST OF DRAWINGS

1. PLAN & ELEVATION
2. GENERAL NOTES & QUANTITIES
3. CROSS SECTION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. ELASTOMERIC EXPANSION BEARINGS
9. FIXED BEARING DETAILS
10. DECK ELEVATIONS
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. PARAPET AND SIDEWALK DETAILS
14. STRIP SEAL EXPANSION JOINT
15. STRIP SEAL COVER PLATES FOR SIDEWALK
16. FENCE DETAILS
17. LIGHT STANDARD
18. CITY OF MKE UTILITY PLAN
19. CITY OF MKE ATTACHMENT DETAILS
20. CITY OF MKE UNDERGROUND CONDUIT PLAN
21. CITY OF MKE UNDERGROUND CONDUIT DETAILS

PLAN B-40-173



DESIGN DATA

LIVE LOAD:

INVENTORY RATING	HS-23
OPERATIONAL RATING	HS-39
WISCONSIN STANDARD PERMIT VEHICLE (WIs-SPV)	250 KIPS

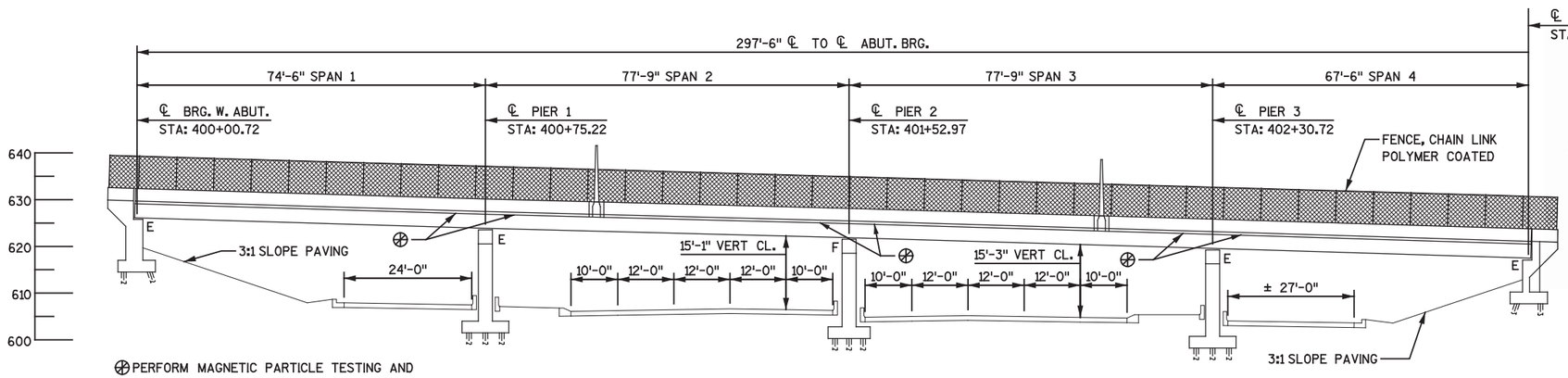
ULTIMATE DESIGN STRESSES:

CONCRETE SUPERSTRUCTURE	f'c = 4,000 P.S.I.
CONCRETE SUBSTRUCTURE	f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.

TRAFFIC DATA

W. MAPLE ST.
A.D.T. (2035) = 1,578
IH-43/94
A.D.T. (2030) = 108,000

PROFILE GRADE LINE W. MAPLE ST.



⊛ PERFORM MAGNETIC PARTICLE TESTING AND ULTRASONIC IMPACT TREATMENT AT TOP COVER PLATE END WELD LOCATIONS:
PIER 1: GIRDERS 1 THRU 8
PIER 2: GIRDERS 1 AND 8
PIER 3: GIRDERS 1 THRU 8

ELEVATION

(LOOKING NORTH)

WISCONSIN
STEVEN J. MILLER
36937
MILWAUKEE, WI
PROFESSIONAL ENGINEER

1/27/2014

(SHEETS 1 THRU 17 ONLY)

SE REGION CONTACT:
JOE GALLAMORE (262) 548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
NICHOLAS HORNYAK (414) 282-6905

NO.	DATE	REVISION	BY

COLLINS ENGINEERS INC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 01/31/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-173

W. MAPLE ST. OVER IH-43/94

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	NJH	DESIGN CK'D.	RJW	DRAWN BY	NJH	PLANS CK'D.	RJW

PLAN & ELEVATION

SHEET 1 OF 21

494

8

8

FILE NAME : 01_B_40_173_Plan & Elevation.dgn
PLOT DATE : 1/27/2014 12:27:48 AM PLOT BY : NicholasHornyakv8i DRV : Pdf_bw_HS.plt PEN : CEL.TEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

TOTAL ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER	W. ABUT	PIER 1	PIER 2	PIER 3	E. ABUT	TOTAL
203.0200.0004	REMOVING OLD STRUCTURE STA 400+00	LS	-	-	-	-	-	-	1
203.0210.S.0004	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-173	LS	-	-	-	-	-	-	1
203.0225.S.0004	DEBRIS CONTAINMENT B-40-173	LS	-	-	-	-	-	-	1
206.1000.0004	EXCAVATION FOR STRUCTURES BRIDGES B-40-173	LS	-	-	-	-	-	-	1
209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	-	37	-	-	-	37	74
502.0100	CONCRETE MASONRY BRIDGES	CY	597	16	-	-	-	16	629
502.3100.0004	EXPANSION DEVICE B-40-173	LS	-	-	-	-	-	-	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,287	-	-	-	-	-	2,287
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	-	86	-	-	-	88	174
502.6110	MASONRY ANCHORS TYPE S 3/4-INCH	EACH	8	-	-	-	-	-	8
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	144,320	1,790	-	-	-	1,800	147,910
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	-	8	8	-	8	8	32
506.5000.0004	BEARING ASSEMBLIES FIXED B-40-173	EACH	-	-	-	8	-	-	8
506.7050.S.0004	REMOVING BEARINGS B-40-173	EACH	-	8	8	8	8	8	40
506.7060.S.0004	BRIDGE JACKING B-40-173	LS	1	-	-	-	-	-	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	-	11	-	11	-	22
517.0900.S.0003	PREPARATION AND COATING OF TOP FLANGES B-40-173	LS	-	-	-	-	-	-	1
517.1800.S.0003	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-173	LS	-	-	-	-	-	-	1
517.4500.S.0003	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-173	LS	-	-	-	-	-	-	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	-	-	-	-	-	-	1
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	6	-	-	-	-	-	6
652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	1,215	-	-	-	-	-	1,215
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	2	-	-	-	-	-	2
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	2	-	-	-	-	-	2
SPV.0060.4001	ULTRASONIC IMPACT TREATMENT PROCEDURE	EACH	-	-	16	4	16	-	36
SPV.0060.4002	MAGNETIC PARTICLE TESTING	EACH	-	-	16	4	16	-	36
SPV.0090.4000	FENCE CHAIN LINK POLYMER-COATED 8-FT.	LF	619	-	-	-	-	-	619
	NON-BID ITEMS								
	FILLER	SIZE	-	-	-	-	-	-	1/2" & 3/4"
	NAME PLATE	EACH	-	-	-	-	-	-	1

ALL ITEMS ARE CATEGORY 2030

GENERAL NOTES

THE PROPOSED WORK INCLUDES CLEANING AND PAINTING OF ALL STRUCTURAL STEEL, REMOVAL AND REPLACEMENT OF THE DECK, ABUTMENT BACKWALLS, AND ALL BEARINGS.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST DIGIT OF A THREE DIGIT BAR AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

UTILIZE EXISTING BAR STEEL WHERE SHOWN AND EXTEND EXISTING BAR STEEL REINFORCEMENT 24 BAR DIAMETERS INTO NEW CONSTRUCTION, UNLESS SPECIFIED OTHERWISE.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M153, TYPES I, II, OR III OR M213.

AT ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL CONTROLLED LOW STRENGTH.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWING. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR.

ORIGINAL PLANS AND OVERLAY PLANS OF EXISTING BRIDGE B-40-173 ARE AVAILABLE AT THE WISDOT SOUTHEAST REGION OFFICE. REFERENCE THESE PLANS FOR THE DESIGN OF SLAB OVERHANG SHORING AND TEMPORARY BRACING DURING CONSTRUCTION.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF SLAB, FACE OF CURB, TOP OF SIDEWALK, AND TO THE TOP AND ROADWAY FACE OF THE PARAPET.

THE MINIMUM CONCRETE HAUNCH SHALL BE 2" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 2¾" WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE.

VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

THE CITY OF MILWAUKEE WILL REMOVE AND REINSTALL EXISTING LIGHT POLES. SEE SPECIAL PROVISIONS FOR COORDINATION REQUIREMENTS.

ALL STRUCTURAL STEEL SHALL BE PAINTED. FINISH COLOR DENIM (BLUE) - SW6523, B-G/B/138.

FENCE SHALL BE POLYMER COATED BLACK, FEDERAL COLOR NO. 27038.

EXISTING UTILITIES OWNED BY WE ENERGIES ELECTRIC WILL BE REMOVED PRIOR TO CONSTRUCTION.

FOR UTILITIES OWNED BY THE CITY OF MILWAUKEE: EXISTING UTILITIES WILL BE REMOVED BY THE OWNER PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AND INSTALLING ATTACHMENT HARDWARE INTO THE DECK. COSTS ASSOCIATED WITH THE WORK IS INCIDENTAL TO THE CONCRETE MASONRY BRIDGES BID ITEM.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

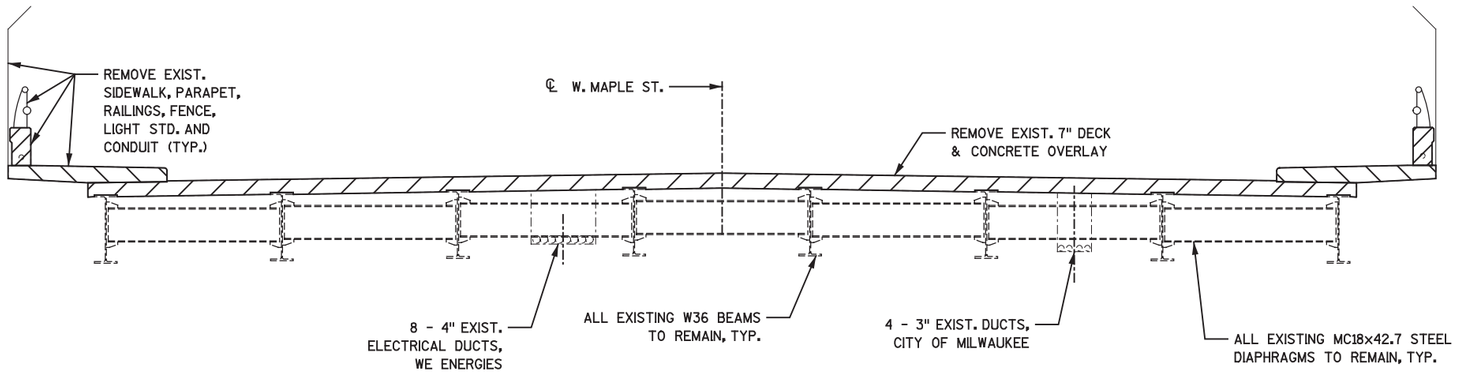
GENERAL NOTES & QUANTITIES

SHEET 2 OF 21

495

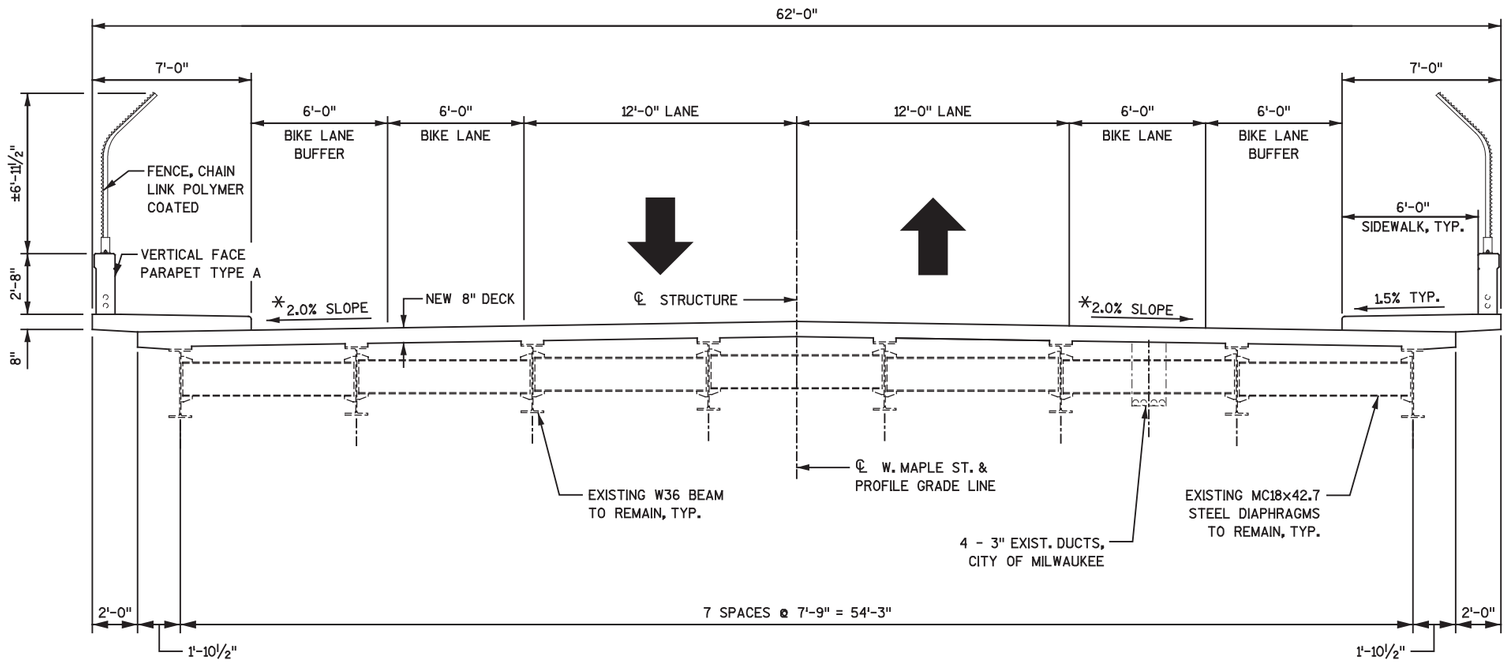
FILE NAME :02_8_40_173_General Notes & Quantities.dgn
PLOT DATE :1/27/2014 12:27:53 AM PLOT BY : NicholasHornyak@E DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



EXISTING CROSS SECTION THRU ROADWAY

(LOOKING EAST)



CROSS SECTION THRU ROADWAY

(LOOKING EAST)

▨ DENOTES REMOVAL LIMITS.

* CROSS SLOPE CHANGES IN SPAN 4. SEE SHEET 10: DECK ELEVATIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY	MJH	PLANS CK'D.	RJW

CROSS SECTION

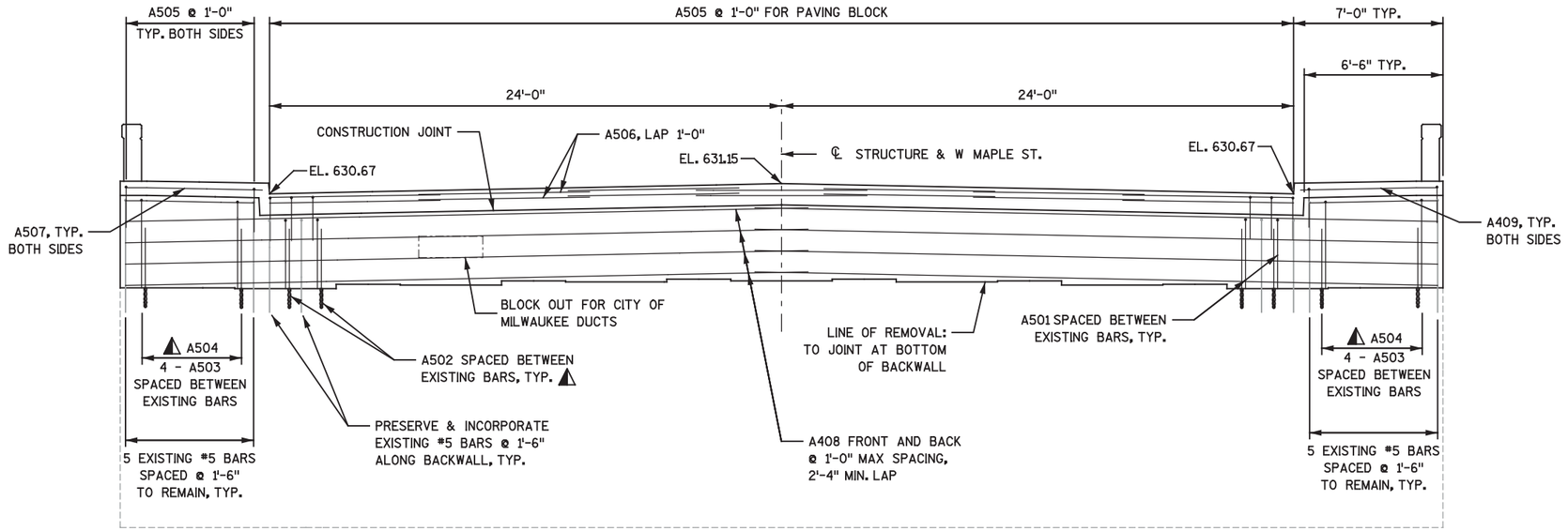
SHEET 3 OF 21

496

FILE NAME :\03_B_40_173_Cross Section.dgn
PLOT DATE :1/27/2014 1127:54 AM PLOT BY : NicholasHornyak:ML DRV :Pdf_bw_HS.pltPEN :CEL.TEXTSUB.TBL

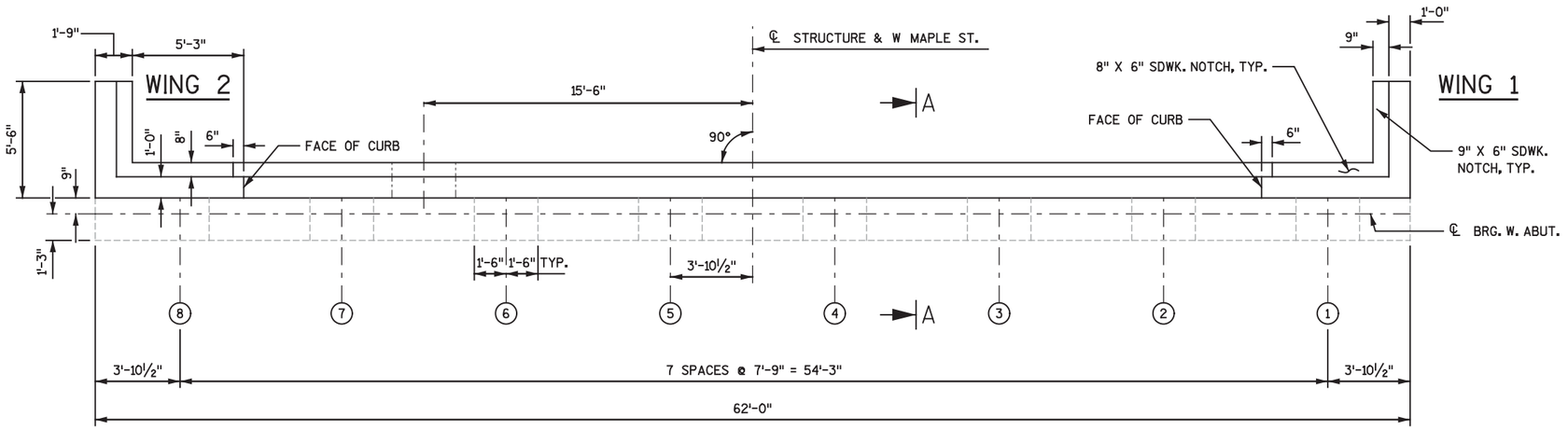
STATE PROJECT NUMBER

1228-25-70



ELEVATION

(LOOKING WEST)



PLAN

▲ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

WEST ABUTMENT

SHEET 4 OF 21

497

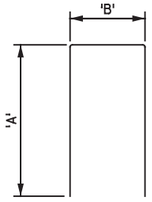
FILE NAME :04_B-40-173_West Abutment.dgn
PLOT DATE :1/27/2014 11:27:54 AM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

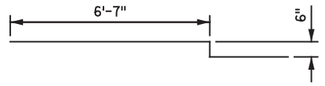
BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	31	7'-7"	X		BACKWALL VERT.
A502	X	62	3'-8"			BACKWALL VERT. ANCHORS ⚠
A503	X	8	9'-3"	X		BACKWALL VERT.
A504	X	16	3'-7"			BACKWALL VERT. ANCHORS ⚠
A505	X	63	4'-5"	X		PAVING NOTCH VERT.
A506	X	21	7'-9"			PAVING NOTCH HORIZ.
A507	X	4	10'-6"	X		SDWK. PAVING NOTCH HORIZ.
A408	X	16	32'-0"			BACKWALL HORIZ.
A409	X	4	6'-2"			SDWK. BACKWALL HORIZ.
A510	X	8	9'-2"	X		WINGWALL VERT.
A511	X	4	9'-8"	X		WINGWALL VERT.
A512	X	8	3'-6"			WINGWALL VERT. ANCHORS ⚠
A413	X	24	5'-2"			WINGWALL HORIZ.
A414	X	12	3'-9"	X		WINGWALL SDWK. NOTCH VERT.
A615	X	4	5'-2"			WINGWALL SDWK. NOTCH HORIZ.
A516	X	8	2'-0"			BLOCKOUT REENTRANT CORNERS

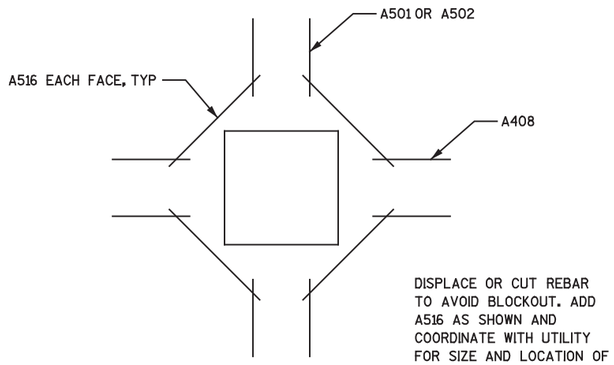


A501, A503, A505, A510, A511, A414

BAR MARK	DIM. 'A'	DIM. 'B'
A501	3'-3"	1'-4"
A503	4'-1"	1'-4"
A505	2'-0"	8"
A510	4'-0"	1'-5"
A511	4'-3"	1'-5"
A414	1'-8"	8"

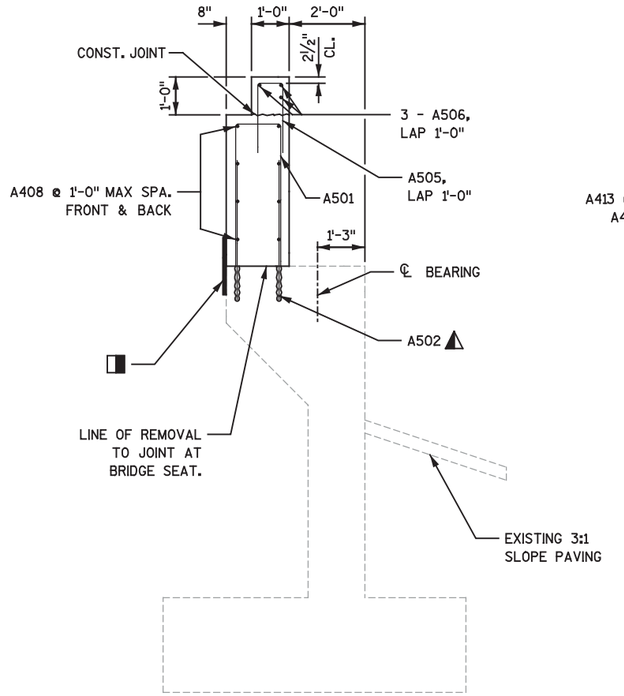


A507

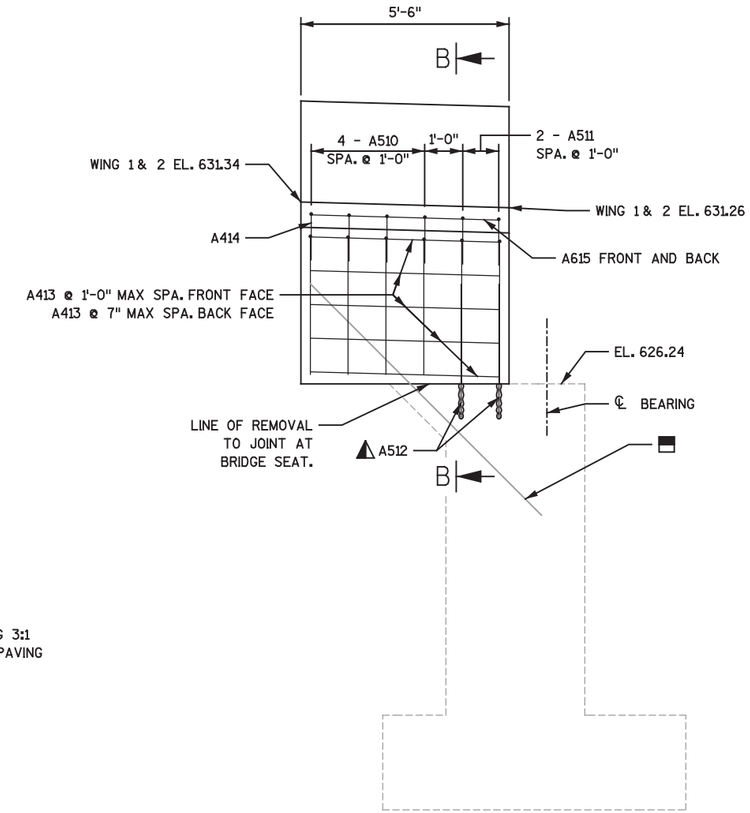


DISPLACE OR CUT REBAR TO AVOID BLOCKOUT. ADD A516 AS SHOWN AND COORDINATE WITH UTILITY FOR SIZE AND LOCATION OF BLOCKOUT.

BLOCKOUT DETAIL

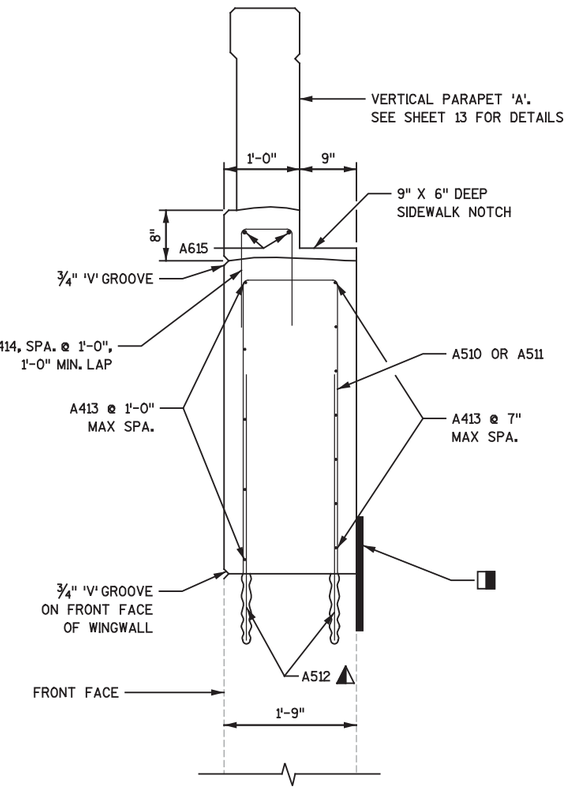


SECTION A-A



WEST ABUTMENT WING 2

(WING 1 OPPOSITE HAND)



SECTION B-B

PRESERVE & INCORPORATE EXISTING BARS

⚠ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".

18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

WEST ABUTMENT DETAILS

SHEET 5 OF 21
498

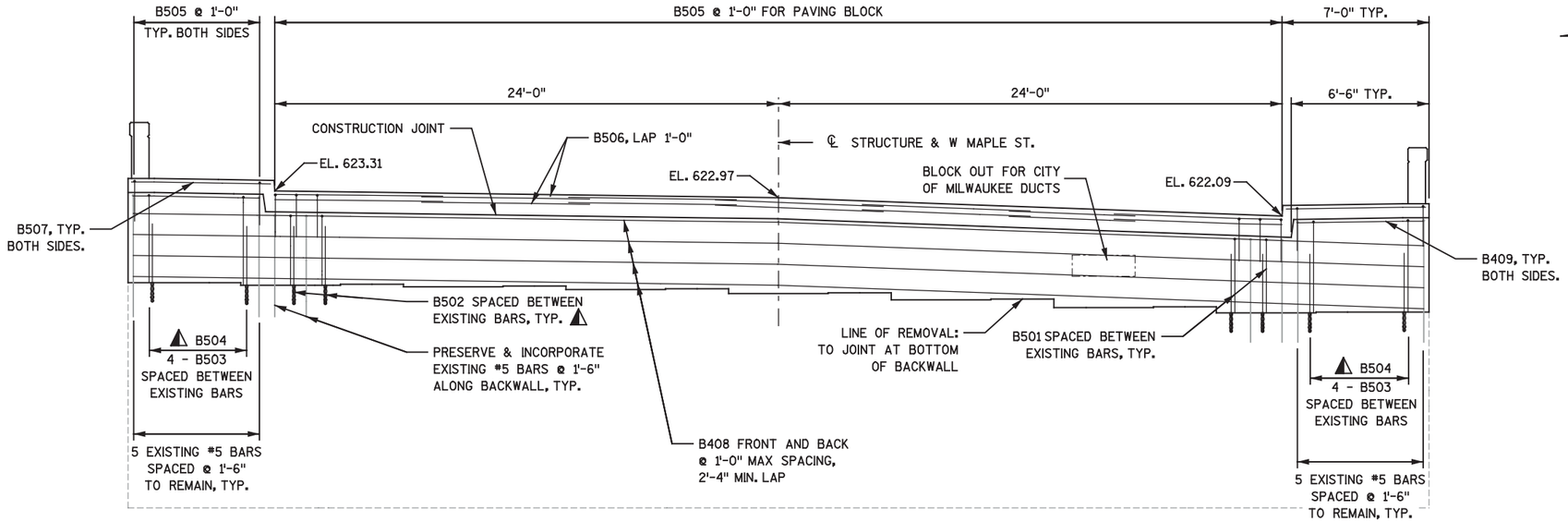
8

8

FILE NAME :05_B-40-173_West Abutment Details.dgn
PLOT DATE :1/27/2014 11:27:55 AM PLOT BY : NicholasHornyak@t DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

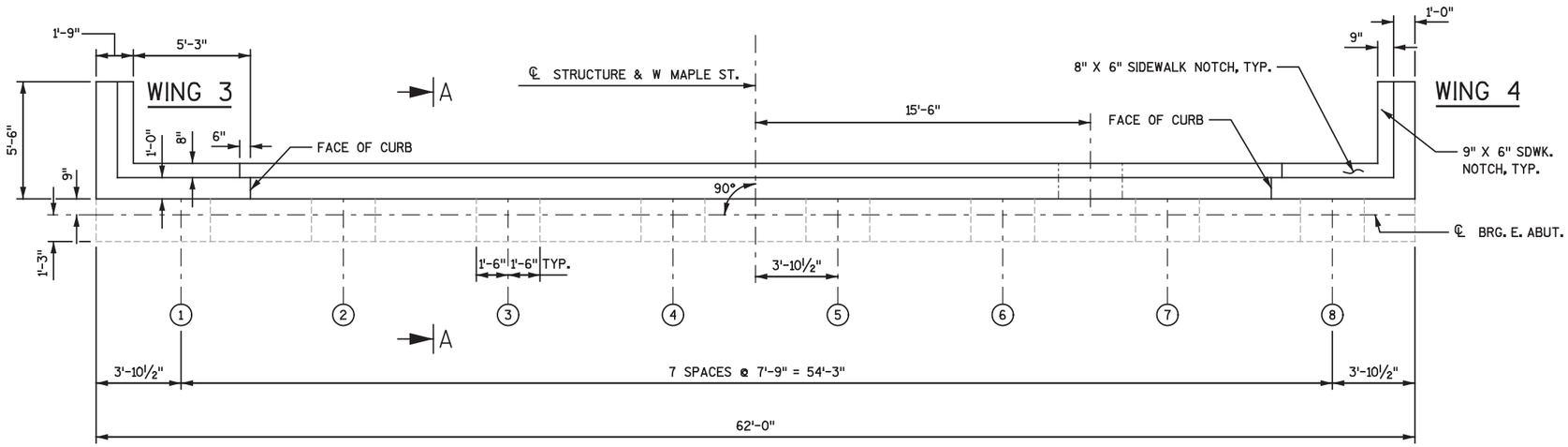
1228-25-70



MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".

ELEVATION

(LOOKING EAST)



PLAN

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

EAST ABUTMENT

SHEET 6 OF 21

499

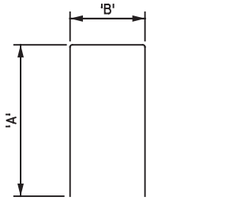
FILE NAME :06_B-40-173_East Abutment.dgn
PLOT DATE :1/27/2014 11:27:56 AM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

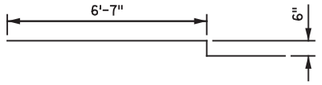
BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501	X	32	7'-9"	X		BACKWALL VERT.
B502	X	64	3'-7"			BACKWALL VERT. ANCHORS ◭
B503	X	8	9'-3"	X		BACKWALL VERT.
B504	X	16	3'-9"			BACKWALL VERT. ANCHORS ◭
B505	X	63	4'-5"	X		PAVING NOTCH VERT.
B506	X	21	7'-9"			PAVING NOTCH HORIZ.
B507	X	4	10'-6"	X		SDWK. PAVING NOTCH HORIZ.
B408	X	16	32'-0"			BACKWALL HORIZ.
B409	X	4	6'-2"			SDWK. BACKWALL HORIZ.
B510	X	4	8'-8"	X		WINGWALL 3 VERT.
B511	X	4	9'-0"	X		WINGWALL 4 VERT.
B512	X	2	9'-4"	X		WINGWALL 3 VERT.
B513	X	2	9'-8"	X		WINGWALL 4 VERT.
B514	X	8	3'-6"			WINGWALL VERT. ANCHORS ◭
B415	X	24	5'-2"			WINGWALL HORIZ.
B416	X	12	3'-9"	X		WINGWALL SDWK. NOTCH VERT.
B617	X	4	5'-2"			WINGWALL SDWK. NOTCH HORIZ.
B518	X	8	2'-0"			BLOCKOUT REENTRANT CORNERS

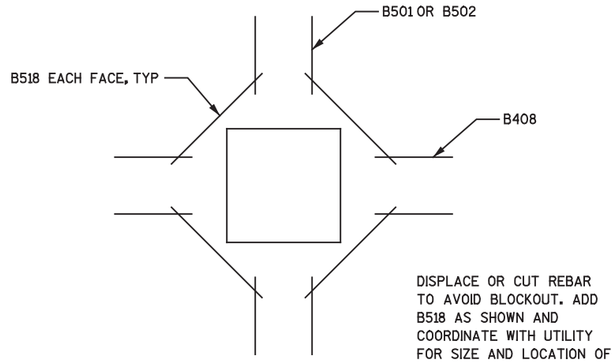


B501, B503, B505, B510, B511, B512, B513, B416

BAR MARK	DIM. 'A'	DIM. 'B'
B501	3'-3"	1'-4"
B503	4'-1"	1'-4"
B505	2'-0"	8"
B510	3'-9"	1'-5"
B511	3'-11"	1'-5"
B512	4'-1"	1'-5"
B513	4'-3"	1'-5"
B416	1'-8"	8"



B507

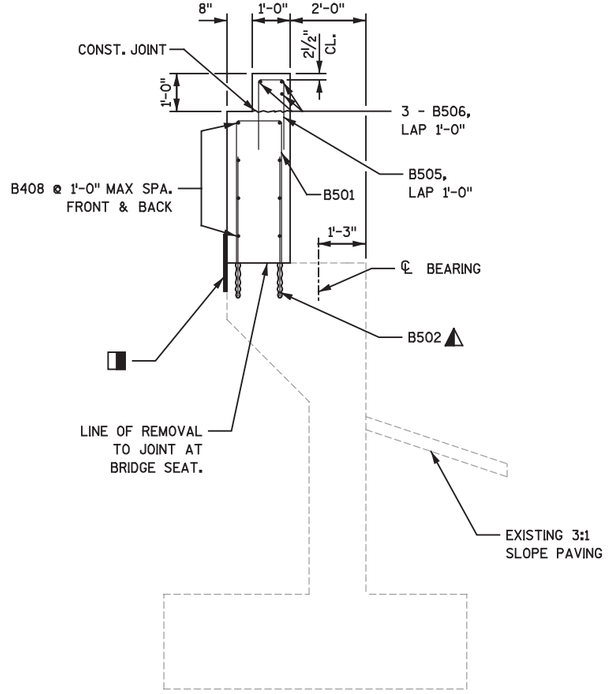


BLOCKOUT DETAIL

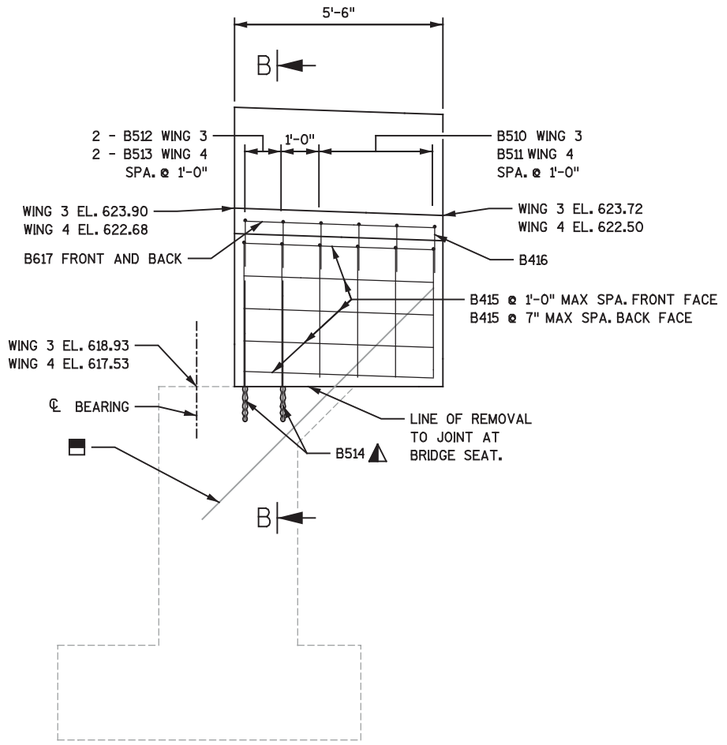
PRESERVE & INCORPORATE EXISTING BARS

◭ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".

18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.

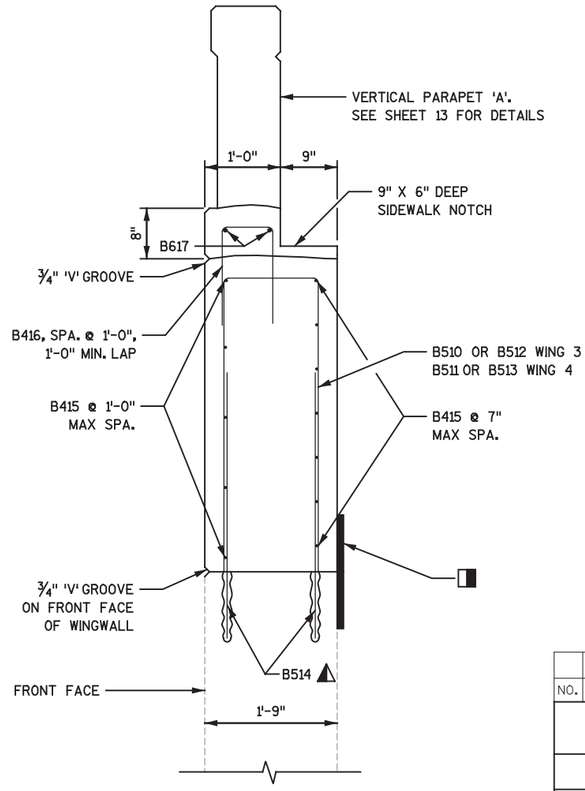


SECTION A-A



EAST ABUTMENT WING 4

(WING 3 OPPOSITE HAND)



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

EAST ABUTMENT DETAILS

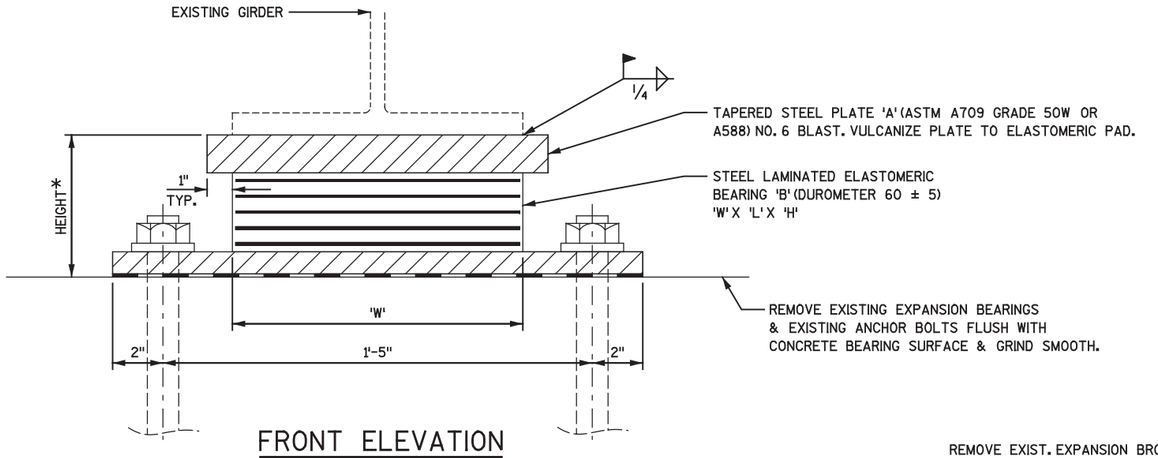
SHEET 7 OF 21

500

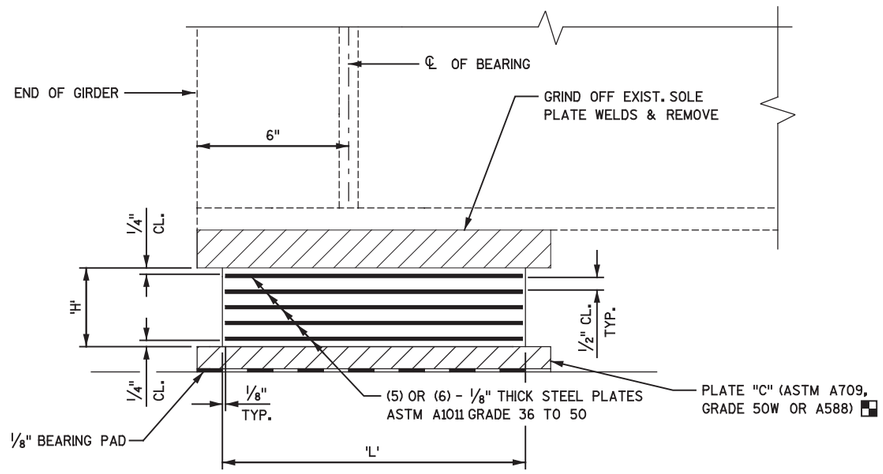
8

8

FILE NAME :\07_B-40-173_East Abutment Details.dgn
PLOT DATE :1/27/2014 11:27:57 AM PLOT BY : NicholasHornyak.v8i DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

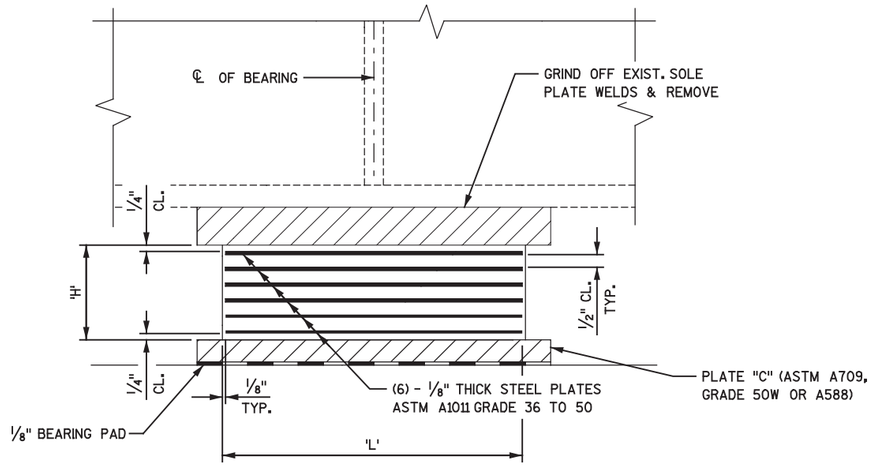


FRONT ELEVATION



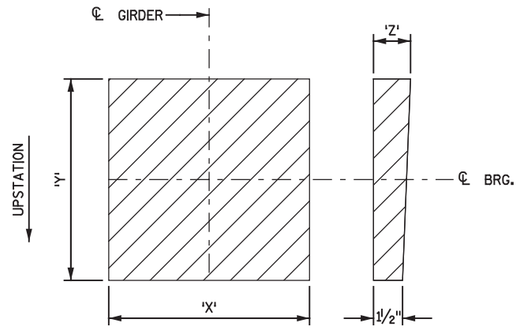
SECTION THRU ELASTOMERIC BEARING

(AT ABUTMENT)

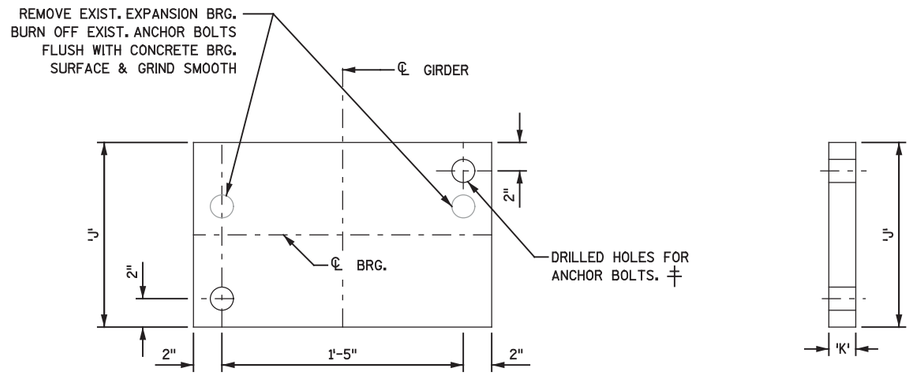


SECTION THRU ELASTOMERIC BEARING

(AT PIERS)



TOP PLATE 'A' DETAILS



BOTTOM PLATE 'C' DETAILS

EXPANSION BEARINGS												
LOCATION	PLATE A			BEARING B			PLATE C			HEIGHT (IN.)*	NO. OF BRG.
	'X'	'Y'	'Z'	'W'	'L'	'H'	'J'	'K'			
W. ABUT. BEAMS 2-7	1'-2"	1'-3"	1 7/8"	12"	1'-1"	3 3/4"	1'-3"	1/2"	■	6 1/16"	6
W. ABUT. BEAMS 1, 8	1'-2"	1'-3"	1 7/8"	12"	1'-1"	3 3/4"	1'-3"	1/2"	■	6 1/16"	2
PIER 1 BEAMS 2-7	1'-2"	1'-11"	2 1/8"	12"	1'-9"	3 3/4"	1'-11"	1 5/8"		7 5/16"	6
PIER 1 BEAMS 1, 8	1'-2"	1'-11"	2 1/8"	12"	1'-9"	3 3/4"	1'-11"	1 7/8"		7 5/16"	2
PIER 3 BEAMS 2-7	1'-2"	1'-10"	2"	12"	1'-8"	3 3/4"	1'-10"	1 11/16"		7 5/16"	6
PIER 3 BEAMS 1, 8	1'-2"	1'-10"	2 1/8"	12"	1'-8"	3 3/4"	1'-10"	1 7/8"		7 5/16"	2
E. ABUT. BEAMS 1-3	1'-2"	1'-3"	1 1/2"	12"	1'-1"	3 1/8"	1'-3"	1 5/16"	■	6 1/16"	1
E. ABUT. BEAMS 4-6	1'-2"	1'-3"	1 7/8"	12"	1'-1"	3 1/8"	1'-3"	1 1/8"	■	6 1/16"	3
E. ABUT. BEAMS 7, 8	1'-2"	1'-3"	2 1/8"	12"	1'-1"	3 1/8"	1'-3"	1"	■	6 1/16"	1

* HEIGHT MEASURED AT ℄ OF BEARING

BEARING NOTES

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

COMPRESSION LOAD AND ADHESION TESTS WILL BE WAIVED WHERE BEARINGS ARE DETAILED TO MEET HEIGHT REQUIREMENTS.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

USE (2) 1 1/4" ϕ, 1'-5" LONG ANCHOR BOLTS PER BEARING PAD ASSEMBLY.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS PLATE "C" THICKNESS + 2 1/4".

PROVIDE 1/8" THICK BEARING PAD SAME SIZE AS MASONRY PLATE "C" FOR EACH BEARING.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS "C".

PLATE "C" SHALL BE GALVANIZED.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "C" HAVE A DIAMETER OF 3/8" LARGER THAN ANCHOR BOLT.

■ VULCANIZE BOTTOM PLATE "C" TO ELASTOMERIC PAD AT THE WEST AND EAST ABUTMENT LOCATIONS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

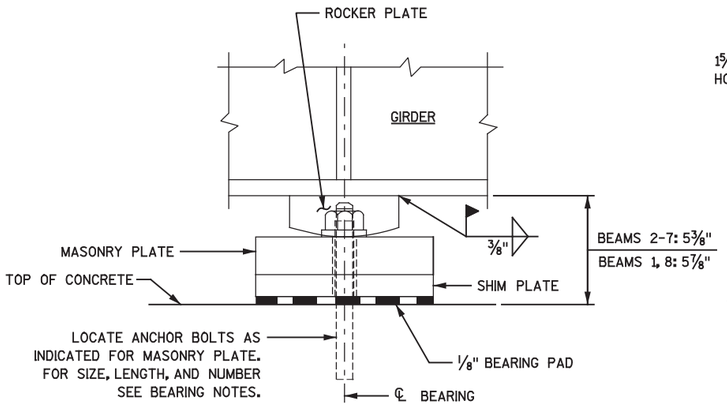
ELASTOMERIC EXPANSION BEARINGS

SHEET 8 OF 21
501

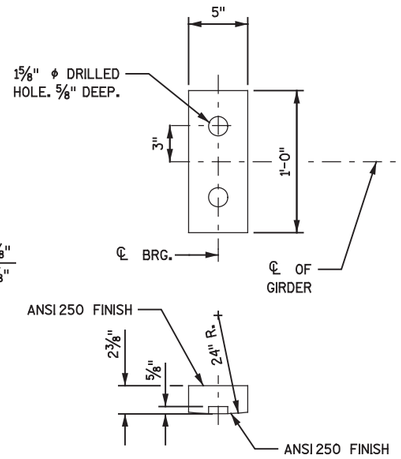
FILE NAME :\08_B-40-173_Elastomeric Expansion Bearings.dgn
PLOT DATE :1/27/2014 11:27:59 AM PLOT BY : NicholasHornyak@t DRV :Pdf_bw_HS.pit PEN :CEL_TEXTSUB.TBL

STATE PROJECT NUMBER

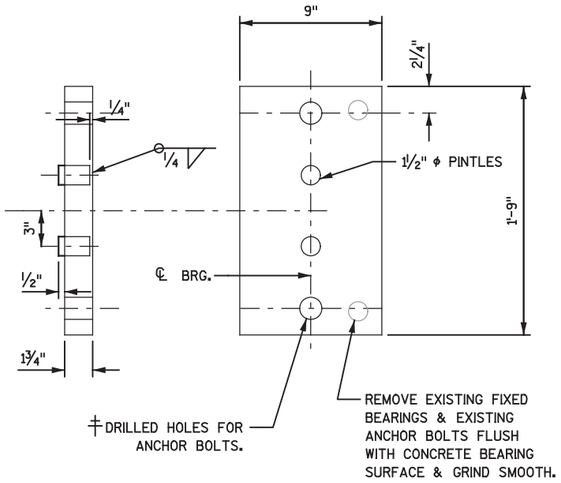
1228-25-70



FIXED BEARING ASSEMBLY



ROCKER PLATE



MASONRY PLATE

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

IN LIEU OF USING SHIM PLATES, FABRICATOR MAY INCREASE THICKNESS OF MASONRY PLATE BY THE SHIM PLATE THICKNESS.

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.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

USE (2) 1 1/4" ϕ, 1'-5" LONG ANCHOR BOLTS PER BEARING PAD ASSEMBLY.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS, MASONRY PLATE THICKNESS + SHIM PLATE THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING PINTLES, ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL MATERIALS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES FIXED B-40-173", EACH.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE FOR A DRIVING FIT.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE FOR EACH BEARING.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

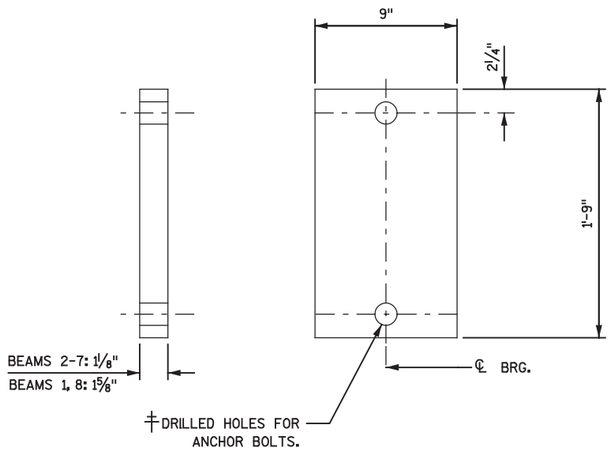
ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

ROCKER PLATE SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.

MASONRY PLATE SHALL BE GALVANIZED.

PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE. PLATES SHALL HAVE DIMENSIONS THAT MATCH PLATE.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE AND SHIM PLATE HAVE A DIAMETER OF 3/8" LARGER THAN ANCHOR BOLT.



SHIM PLATE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

FIXED BEARING DETAILS

SHEET 9 OF 21

502

FILE NAME :09_B-40-173_Fixed Bearing Details.dgn
PLOT DATE :1/27/2014 11:28:01 AM PLOT BY : NicholasHornyak:WI DRV :Pdf_bw_HS.pltPEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

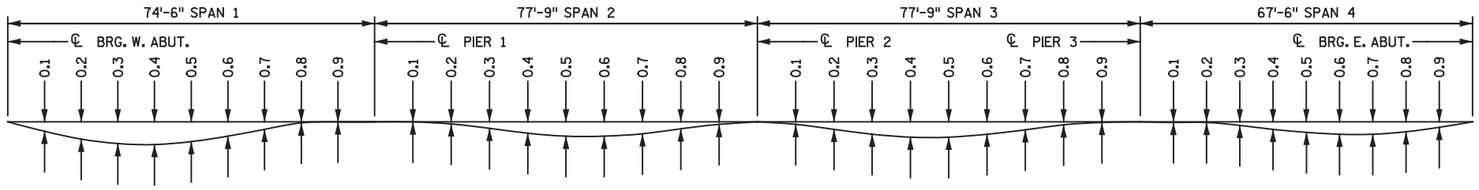
TOP OF DECK ELEVATIONS

GIRDER \ POINT	℄ BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 2
N. EDGE	630.55	630.35	630.14	629.93	629.73	629.52	629.32	629.11	628.91	628.70	628.50	628.28	628.07	627.85	627.64	627.42	627.21	626.99	626.78	626.56	626.35
1	630.59	630.38	630.18	629.97	629.77	629.56	629.36	629.15	628.94	628.74	628.53	628.32	628.10	627.89	627.67	627.46	627.25	627.03	626.82	626.60	626.39
2	630.74	630.54	630.33	630.13	629.92	629.72	629.51	629.30	629.10	628.89	628.69	628.47	628.26	628.04	627.83	627.62	627.40	627.19	626.97	626.76	626.54
3	630.90	630.69	630.49	630.28	630.08	629.87	629.67	629.46	629.25	629.05	628.84	628.63	628.41	628.20	627.98	627.77	627.56	627.34	627.13	626.91	626.70
4	631.05	630.85	630.64	630.44	630.23	630.03	629.82	629.61	629.41	629.20	629.00	628.78	628.57	628.35	628.14	627.93	627.71	627.50	627.28	627.07	626.85
5	631.05	630.85	630.64	630.44	630.23	630.03	629.82	629.61	629.41	629.20	629.00	628.78	628.57	628.35	628.14	627.93	627.71	627.50	627.28	627.07	626.85
6	630.90	630.69	630.49	630.28	630.08	629.87	629.67	629.46	629.25	629.05	628.84	628.63	628.41	628.20	627.98	627.77	627.56	627.34	627.13	626.91	626.70
7	630.74	630.54	630.33	630.13	629.92	629.72	629.51	629.30	629.10	628.89	628.69	628.47	628.26	628.04	627.83	627.62	627.40	627.19	626.97	626.76	626.54
8	630.59	630.38	630.18	629.97	629.77	629.56	629.36	629.15	628.94	628.74	628.53	628.32	628.10	627.89	627.67	627.46	627.25	627.03	626.82	626.60	626.39
S. EDGE	630.55	630.35	630.14	629.93	629.73	629.52	629.32	629.11	628.91	628.70	628.50	628.28	628.07	627.85	627.64	627.42	627.21	626.99	626.78	626.56	626.35

GIRDER \ POINT	PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 3	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. E. ABUT.
N. EDGE	626.35	626.14	625.92	625.71	625.49	625.28	625.06	624.85	624.63	624.42	624.20	624.12	624.04	623.96	623.88	623.80	623.72	623.64	623.56	623.48	623.48
1	626.39	626.17	625.96	625.74	625.53	625.31	625.10	624.88	624.67	624.46	624.24	624.15	624.07	623.98	623.89	623.81	623.72	623.63	623.55	623.46	623.37
2	626.54	626.33	626.11	625.90	625.68	625.47	625.25	625.04	624.83	624.61	624.40	624.28	624.17	624.06	623.94	623.83	623.72	623.61	623.49	623.38	623.27
3	626.70	626.48	626.27	626.05	625.84	625.62	625.41	625.19	624.98	624.77	624.55	624.41	624.27	624.13	623.99	623.85	623.72	623.58	623.44	623.30	623.16
4	626.85	626.64	626.42	626.21	625.99	625.78	625.56	625.35	625.14	624.92	624.71	624.54	624.37	624.21	624.04	623.88	623.71	623.55	623.38	623.21	623.05
5	626.85	626.64	626.42	626.21	625.99	625.78	625.56	625.35	625.14	624.92	624.71	624.53	624.35	624.16	623.97	623.79	623.60	623.41	623.23	623.04	622.85
6	626.70	626.48	626.27	626.05	625.84	625.62	625.41	625.19	624.98	624.77	624.55	624.37	624.19	623.99	623.79	623.58	623.38	623.18	622.97	622.77	622.56
7	626.54	626.33	626.11	625.90	625.68	625.47	625.25	625.04	624.83	624.61	624.40	624.22	624.04	623.82	623.60	623.38	623.16	622.94	622.72	622.50	622.28
8	626.39	626.17	625.96	625.74	625.53	625.31	625.10	624.88	624.67	624.46	624.24	624.06	623.88	623.65	623.41	623.17	622.94	622.70	622.46	622.23	621.99
S. EDGE	626.35	626.14	625.92	625.71	625.49	625.28	625.06	624.85	624.63	624.42	624.20	624.02	623.85	623.61	623.36	623.12	622.88	622.64	622.40	622.16	621.92

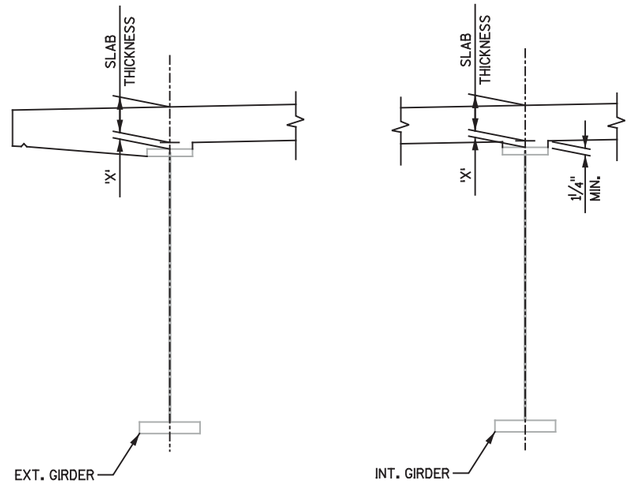
DEAD LOAD DEFLECTIONS

	CONCRETE DEAD LOAD DEFLECTIONS (FEET)										
		SPAN 1									
	℄ BRG. W. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 1
Girders 1, 8	0.000	0.013	0.023	0.029	0.030	0.026	0.019	0.011	0.003	0.000	0.000
Girders 2-7	0.000	0.019	0.035	0.044	0.046	0.040	0.029	0.015	0.002	0.000	0.000
		SPAN 2									
	℄ PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 2
Girders 1, 8	0.000	0.000	0.001	0.004	0.007	0.009	0.007	0.004	0.000	-0.001	0.000
Girders 2-7	0.000	0.000	0.004	0.013	0.023	0.029	0.029	0.024	0.014	0.005	0.000
		SPAN 3									
	℄ PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 3
Girders 1, 8	0.000	0.000	0.002	0.006	0.009	0.010	0.008	0.004	0.000	-0.002	0.000
Girders 2-7	0.000	0.005	0.015	0.025	0.031	0.031	0.025	0.016	0.006	0.001	0.000
		SPAN 4									℄ BRG. E. ABUT.
	℄ PIER 3	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
Girders 1, 8	0.000	0.001	0.001	0.004	0.010	0.014	0.017	0.016	0.013	0.007	0.000
Girders 2-7	0.000	0.001	0.001	0.007	0.015	0.021	0.025	0.025	0.020	0.011	0.000



DEFLECTION DIAGRAM

SEE TABLE FOR DEAD LOAD DEFLECTIONS AT TENTH POINTS



HAUNCH DETAIL

NOTES

TO DETERMINE 'X':
ELEVATIONS OF THE TOP FLANGES, TOP OF SPLICE PLATE, OR TOP OF COVER PLATES, WHICHEVER APPLIES, SHALL BE TAKEN AT ℄ OF BRGS. AND AT TENTH POINTS OF EACH SPAN, THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF STEEL ELEVATION
\+ DEFLECTION (CONCRETE ONLY)
\- SLAB THICKNESS

= CONCRETE HAUNCH HEIGHT 'X'

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

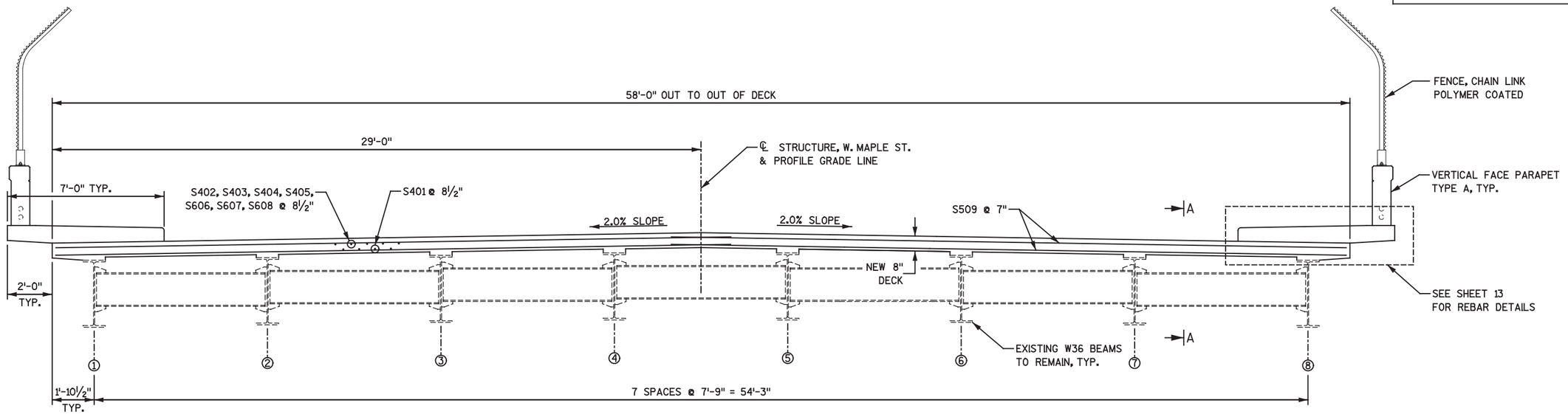
DECK ELEVATIONS

SHEET 10 OF 21

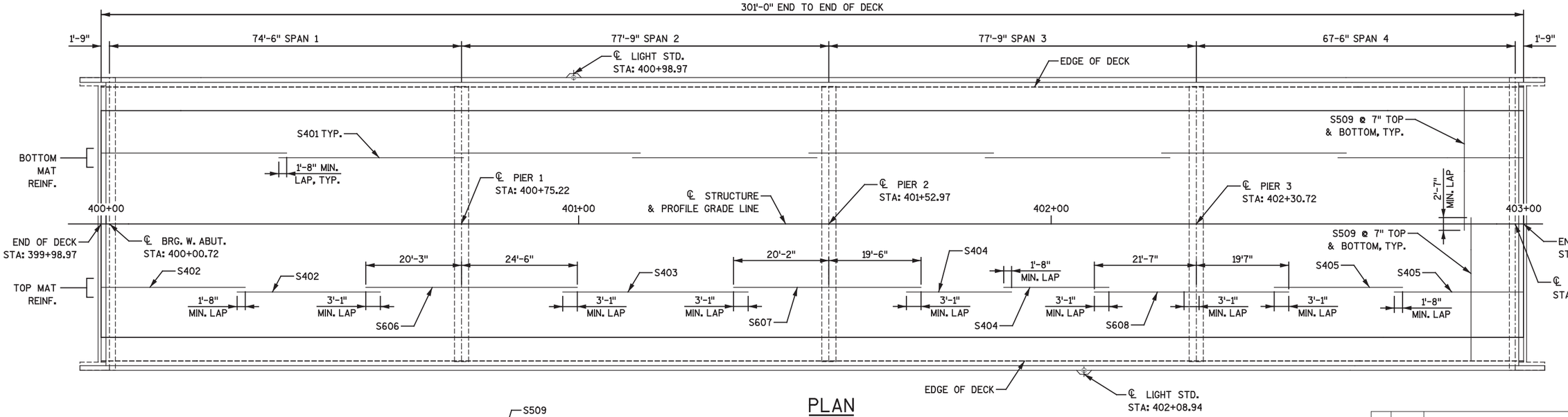
503

FILE NAME :10_B-40-173_Deck Elevations.dgn
PLOT DATE :11/27/2014 11:28:01 AM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

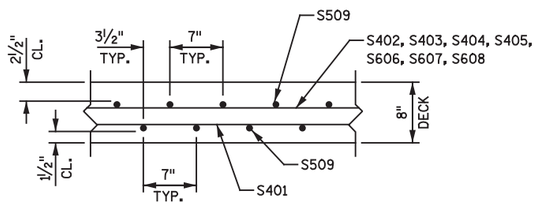
STATE PROJECT NUMBER
1228-25-70



CROSS SECTION
(LOOKING EAST)



PLAN



SECTION A-A THRU DECK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY	MJH	PLANS CK'D.	RJW

SHEET 11 OF 21

SUPERSTRUCTURE 504

8

8

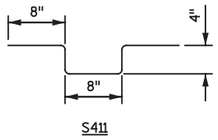
FILE NAME :I:\B_40_173_Superstructure.dgn
PLOT DATE :1/27/2014 12:26:02 AM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

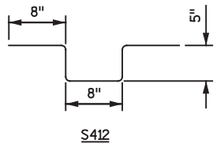
1228-25-70

BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	656	39'-1"			LONGIT. BOTTOM
S402	X	166	30'-4"			LONGIT. TOP SPAN 1
S403	X	83	39'-3"			LONGIT. TOP SPAN 2
S404	X	166	22'-3"			LONGIT. TOP SPAN 3
S405	X	166	27'-2"			LONGIT. TOP SPAN 4
S606	X	83	44'-9"			LONGIT. CONTINUITY PIER 1
S607	X	83	39'-8"			LONGIT. CONTINUITY PIER 2
S608	X	83	41'-2"			LONGIT. CONTINUITY PIER 3
S509	X	2066	30'-2"			TRANS. TOP AND BOTTOM
S410	X	128	39'-1"			HAUNCH LONGIT.
S411	X	2244	2'-5"	X		HAUNCH HAT
S412	X	70	2'-7"	X		HAUNCH HAT
S413	X	56	2'-9"	X		HAUNCH HAT
S414	X	28	2'-11"	X		HAUNCH HAT
S415	X	126	4'-2"	X		S & N ABUT. DIAPH. STIRRUPS
S616	X	70	6'-5"			S & N ABUT. DIAPH. BOTTOM HORIZ.
S417	X	28	6'-5"			S & N ABUT. DIAPH. TOP HORIZ.
S418	X	28	6'-5"			S & N ABUT. JOINT HOLD DOWN



S411



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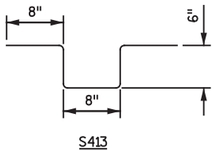

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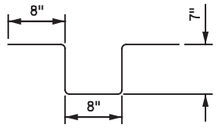

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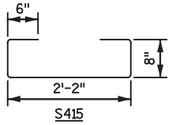
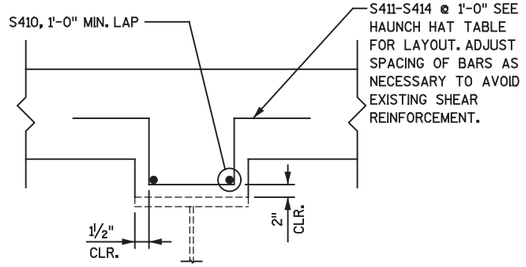


S415



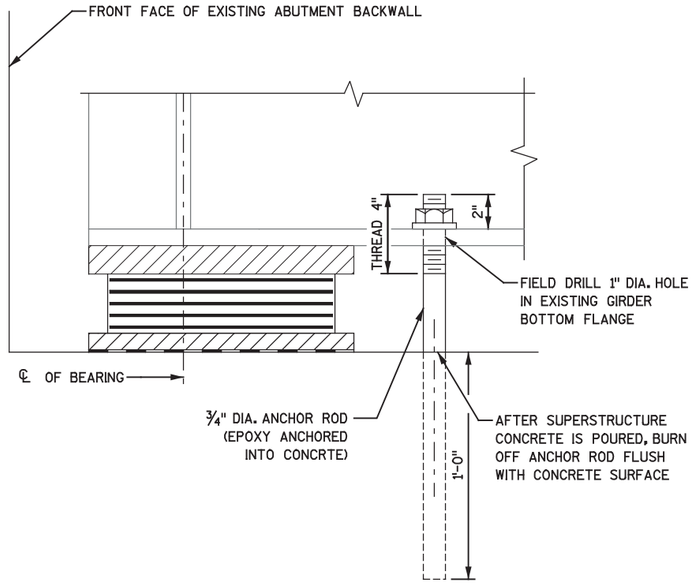
HAUNCH DETAILS

HAUNCH HAT TABLE

GIRDER NO.	BAR MARK			
	SPAN 1	SPAN 2	SPAN 3	SPAN 4
1-8	S411	S411	S411	SEE TABLE BELOW

HAUNCH HAT TABLE SPAN 4

GIRDER NO.	BAR MARK				
	1.0'-13.5'	13.5'-27.0'	27.0'-40.5'	40.5'-54.0'	54.0'-67.5'
1	S411	S413	S414	S414	S412
2	S411	S413	S413	S413	S412
3	S411	S412	S412	S412	S411
4	S411	S411	S411	S411	S411
5	S411	S411	S411	S411	S411
6	S411	S411	S411	S411	S411
7	S411	S411	S411	S411	S411
8	S411	S411	S411	S411	S411



TEMPORARY HOLD DOWN DEVICE

PLACE ONE ANCHOR ROD PER GIRDER AT ABUTMENT WHERE SLAB POUR TERMINATES. LOCATE 4" (NORMAL) OFF ℄ OF GIRDER. ANCHOR ROD, NUT, WASHER AND DRILLED HOLE IN GIRDER FLANGE SHALL BE PAID FOR AS "MASONRY ANCHORS TYPE S ¾-INCH". MINIMUM PULLOUT CAPACITY OF 27 KIPS.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

SUPERSTRUCTURE DETAILS

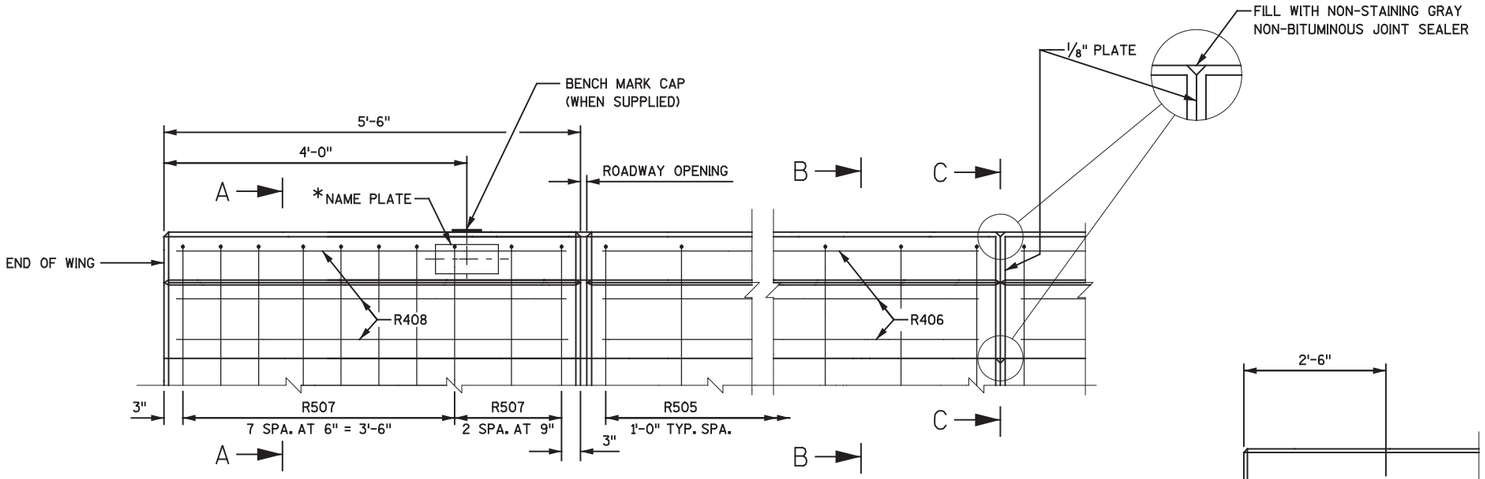
SHEET 12 OF 21

505

FILE NAME :12_B-40-173_Superstructure Details.dgn
PLOT DATE :1/27/2014 11:28:02 AM PLOT BY : NicholasHornyak:WI DRV :Pdf_bw_HS.pltPEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

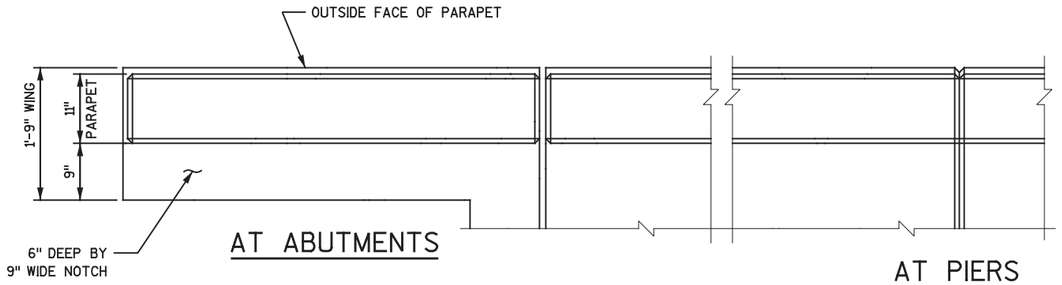
1228-25-70



AT ABUTMENTS IN SPAN

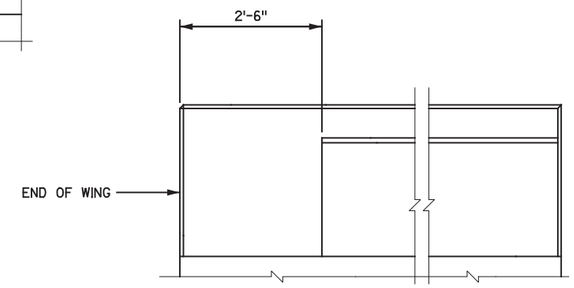
ELEVATION OF PARAPET

(INSIDE FACE)

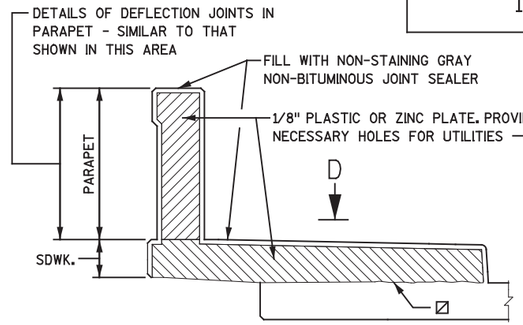


AT ABUTMENTS AT PIERS

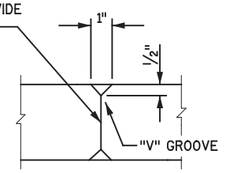
PLAN OF PARAPET



OUTSIDE PARAPET FACE



SECTION C-C



SECTION D-D

FOR LOCATIONS OF DEFLECTION JOINTS IN PARAPET OR SIDEWALK USE THE FOLLOWING CRITERIA:

1. GIRDER STRUCTURES AND SLAB STRUCTURES WITH A SIDEWALK SHOULD HAVE A DEFLECTION JOINT IN THE SIDEWALK AND PARAPET OVER THE PIER.

IF THERE IS A LIGHT STANDARD AT THE PIER, PLACE A DEFLECTION JOINT APPROX. 4'-0" EACH SIDE OF PIER, WITH NONE DIRECTLY OVER THE PIER.

NOTES

WHEN PARAPETS ARE POURED CONTINUOSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION "C-C" BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

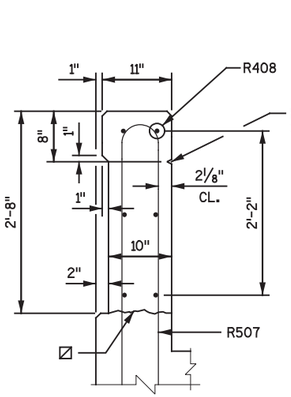
⊠ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE

* FOR LOCATION OF NAME PLATE & BENCH MARK, SEE PLAN & ELEVATION SHEET.

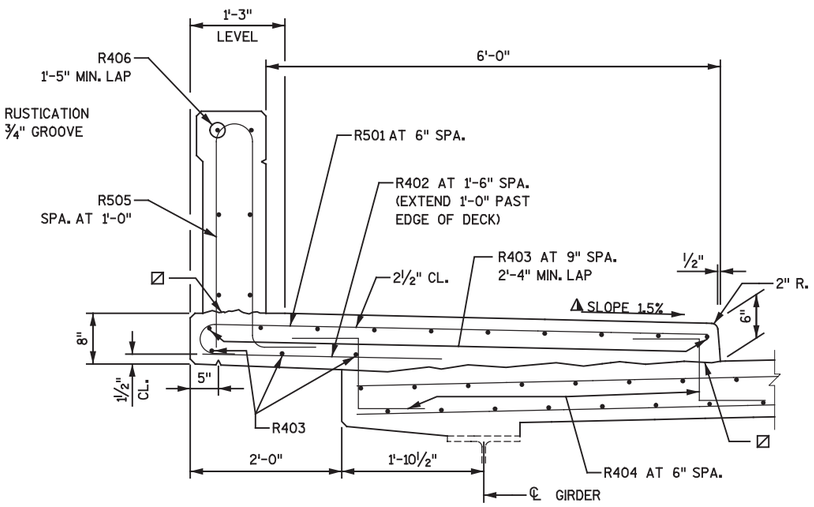
▲ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

BILL OF BARS

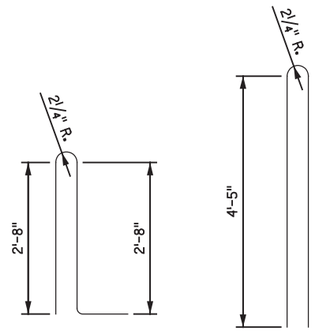
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	1204	7'-2"	X		SDWK. TRANS. TOP
R402	X	404	2'-10"			SDWK. TRANS. BOTTOM
R403	X	208	39'-8"			SDWK. LONG. TOP & BOTTOM
R404	X	2408	2'-5"	X		SDWK. DECK TIES
R505	X	602	6'-8"	X		PARAPET VERTICAL
R406	X	96	38'-10"			PARAPET HORIZONTAL
R507	X	40	9'-5"	X		WINGWALL PARAPET VERT.
R408	X	24	5'-0"			WINGWALL PARAPET HORIZ.

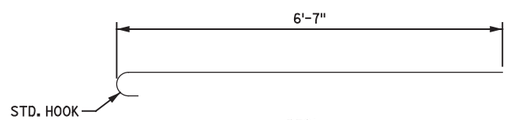


SECTION A-A

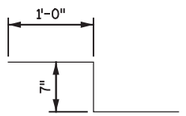


SECTION B-B





R501



R404

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

PARAPET AND SIDEWALK DETAILS

SHEET 13 OF 21

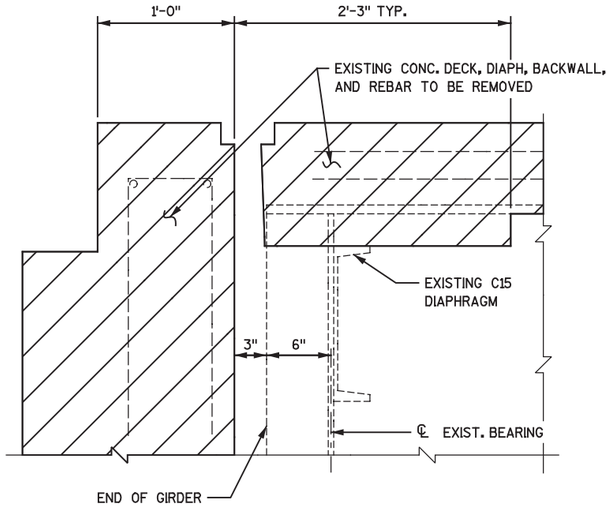
506

8

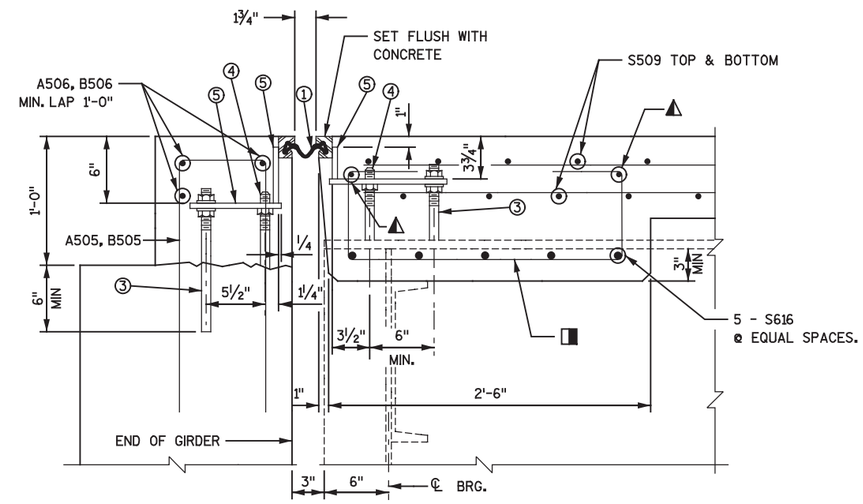
8

FILE NAME :13.B-40-173_VertFaceFace Parapet A.dgn
PLOT DATE :1/27/2014 122603 AM PLOT BY : NicholasHornyak\BL DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

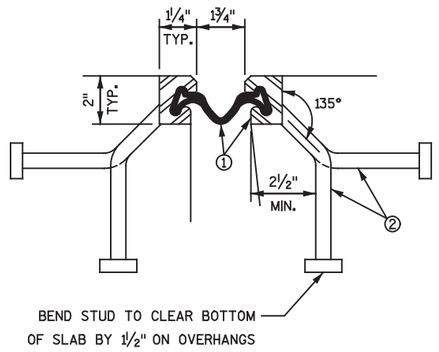
STATE PROJECT NUMBER
1228-25-70



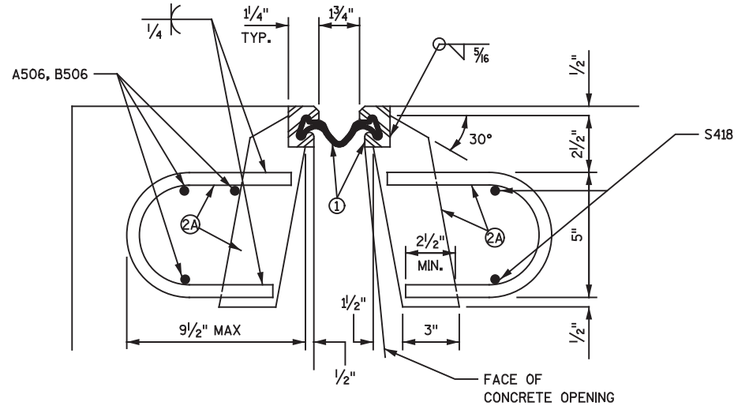
JOINT REMOVAL
AT ABUTMENTS



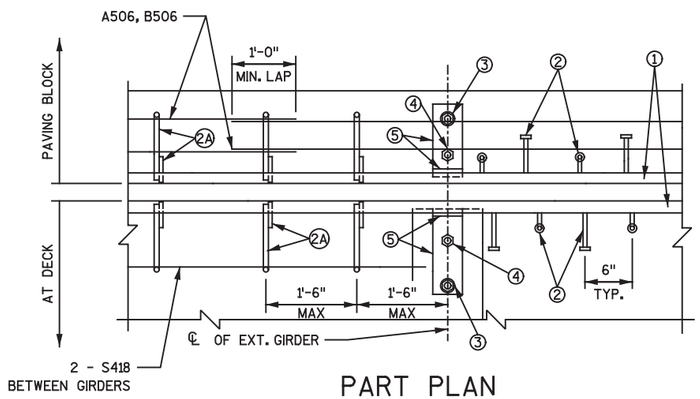
SECTION THRU JOINT
AT ABUTMENTS



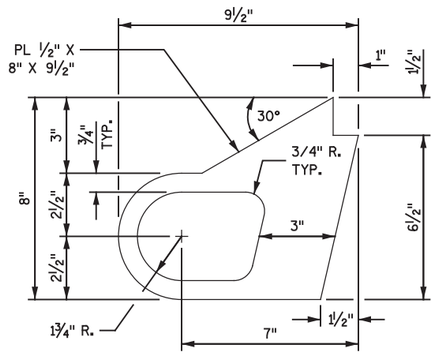
SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF DECK &
AT PARAPETS AND SIDEWALKS



SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN



ALTERNATE STRIP SEAL ANCHOR

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.

② STUDS ⅝" ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & 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 TO 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 WELD NUT TO ⑤.

⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO ①. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR ③ & 1" ϕ HOLE FOR ④.

▲ S417, SAME LENGTH AS HORIZ. DIAPH. BARS AT BOTTOM OF DIAPHRAGM.

◨ S415 @ 9" O.C. BETWEEN TOP FLANGE OF GIRDERS.

EXPANSION JOINT NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-173".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY	MJH	PLANS CK'D.	RJW

STRIP SEAL EXPANSION JOINT

SHEET 14 OF 21

507

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FILE NAME :14_B-40-173_Strip Seal Expansion Joint.dgn
PLOT DATE :1/27/2014 11:28:04 AM PLOT BY : NicholasHornyak@t DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.

② STUDS 5/8" ϕ X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & 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 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 ⑤.

⑤ FABRICATE SUPPORT FROM 3" X 1/2" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO ①. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1 1/2" ϕ HOLE FOR ③ & 1" ϕ HOLE FOR ④.

REFER TO SHEET 14

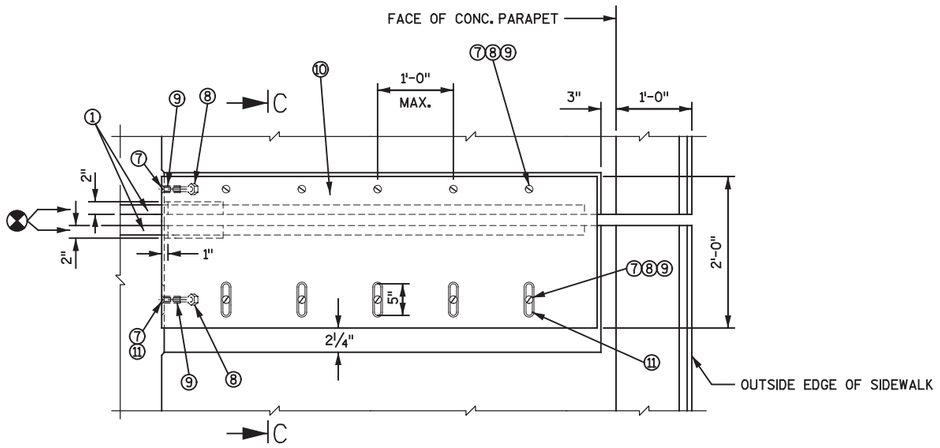
⑦ 3/4" ϕ X 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

⑧ 3/4" ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

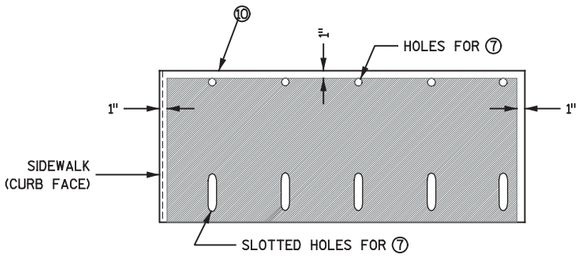
⑨ 3/4" ϕ X 2 1/4" GALVANIZED THREADED COUPLING.

⑩ SIDEWALK COVER PLATE 3/8" X 2'-0" X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR ⑦. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

⑪ 1" X 5" SLOTTED COUNTERSUNK HOLE FOR ⑦. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.



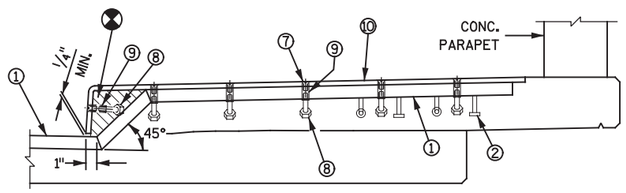
PLAN AT SIDEWALK



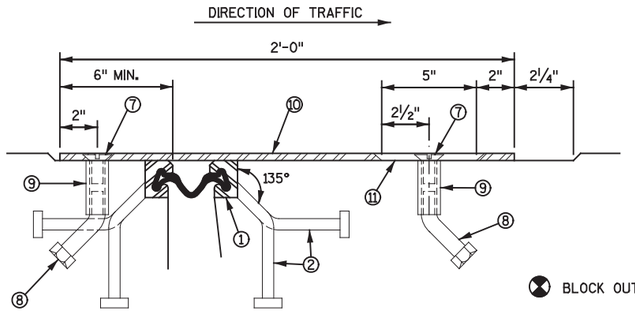
PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W.S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170



SECTION AT SIDEWALK



SECTION C-C

⊠ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

STRIP SEAL COVER PLATES FOR SIDEWALK

SHEET 15 OF 21

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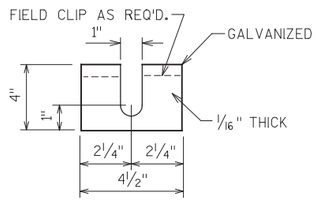
FILE NAME :15.B-40-173_Strip Seal Cover Plates for Sidewalk.dgn
PLOT DATE :1/27/2014 1128:05 AM PLOT BY : NicholasHornyak:BL DRV :Pdf_bw_HS.pltt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

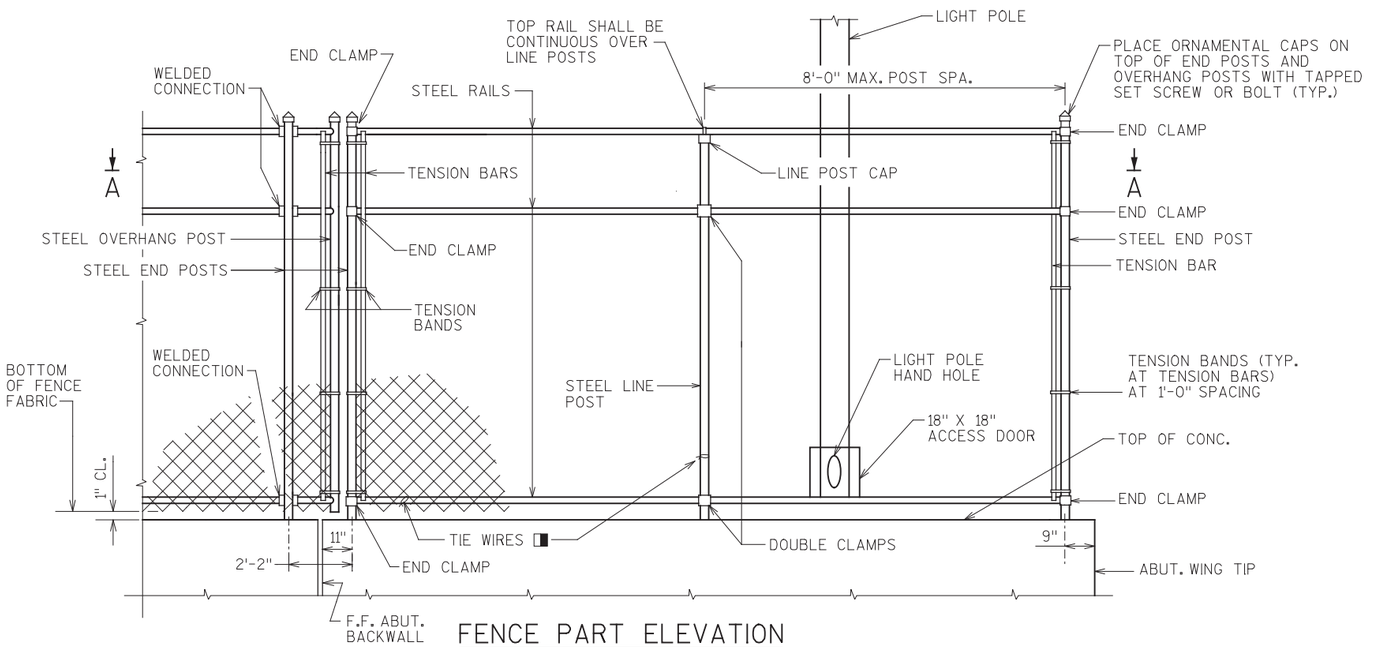
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



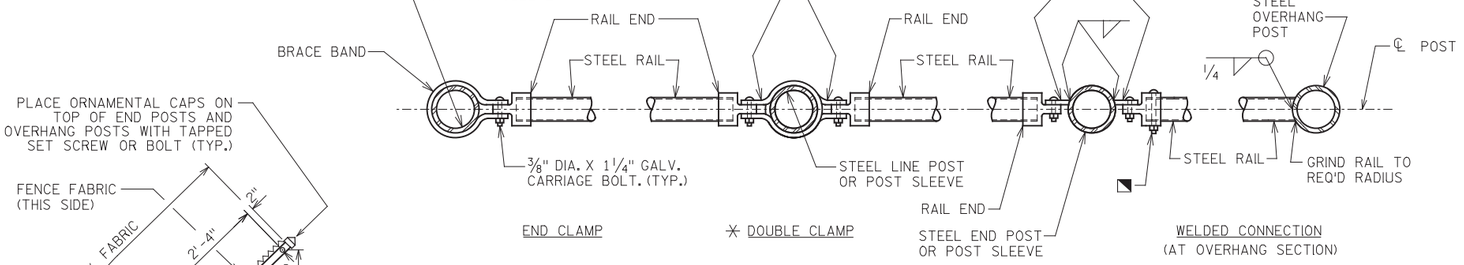
POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.

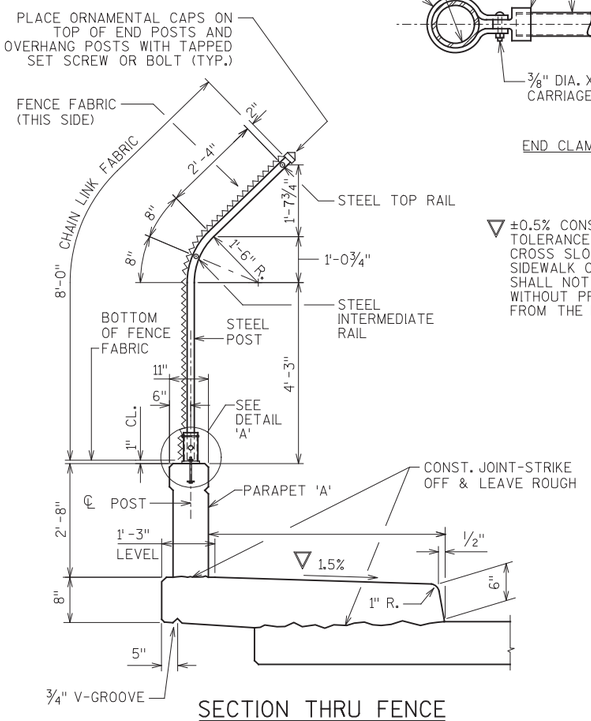


FENCE PART ELEVATION

VIEWING FABRIC SIDE



END CLAMP ✳ DOUBLE CLAMP WELDED CONNECTION (AT OVERHANG SECTION)

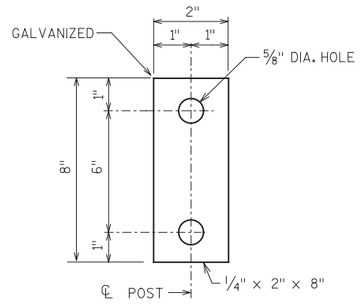


SECTION THRU FENCE

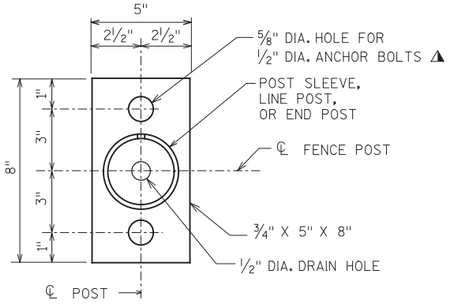
▽ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

SECTION A-A

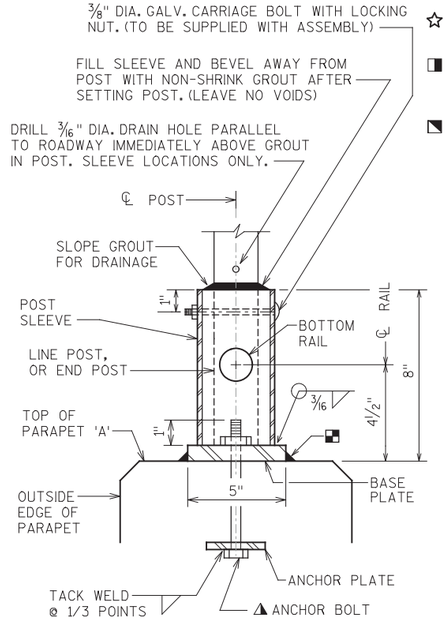
NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS



ANCHOR PLATE



BASE PLATE



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER-COATING ON THE OUTSIDE.

FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE COLOR OF POLYMER-COATING FOR THIS STRUCTURE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER-COATED 8- FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

◪ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

✳ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

◭ 1/2" DIA. X 6 7/8" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S", 1/2" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR 1/2" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

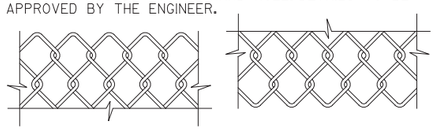
☆ MASONRY ANCHOR TYPE S 1/2-INCH. EMBED 6" IN CONCRETE. ANCHOR WASHER, AND NUT SHALL BE GALVANIZED.

◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

◥ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR 1/4 POINT OF POST SPACING.

18" X 18" ACCESS GATE TO BE PROVIDED AT EACH LIGHT POLE FOR ACCESS TO THE HAND HOLE. DETAILS TO BE APPROVED BY THE ENGINEER.



TOP DETAIL BOTTOM DETAIL

FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 1" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

FENCE DETAILS

SHEET 16 OF 21

509

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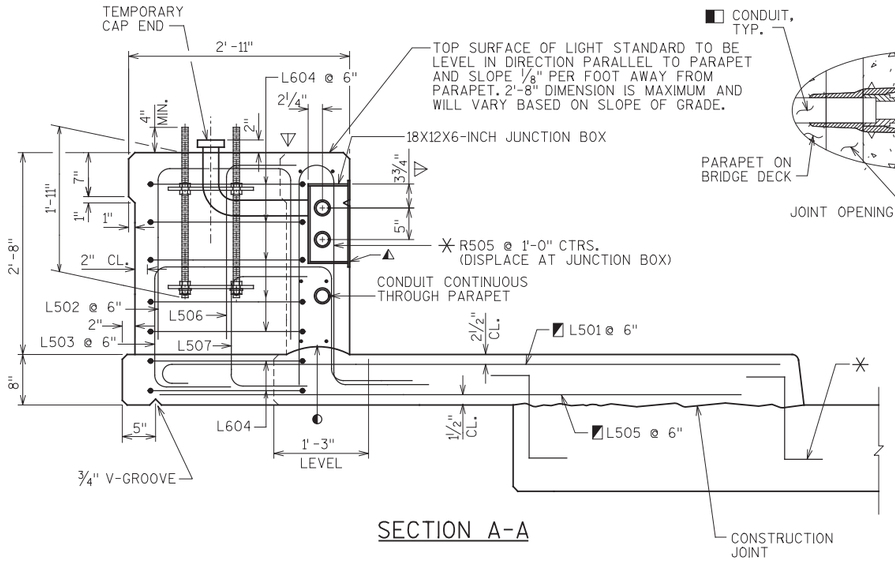
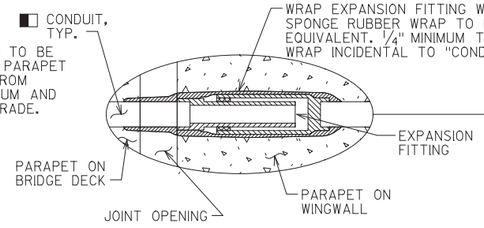
FILE NAME :16_B-40-173_Chain Fence Details.dgn
PLOT DATE :1/27/2014 11:28:05 AM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

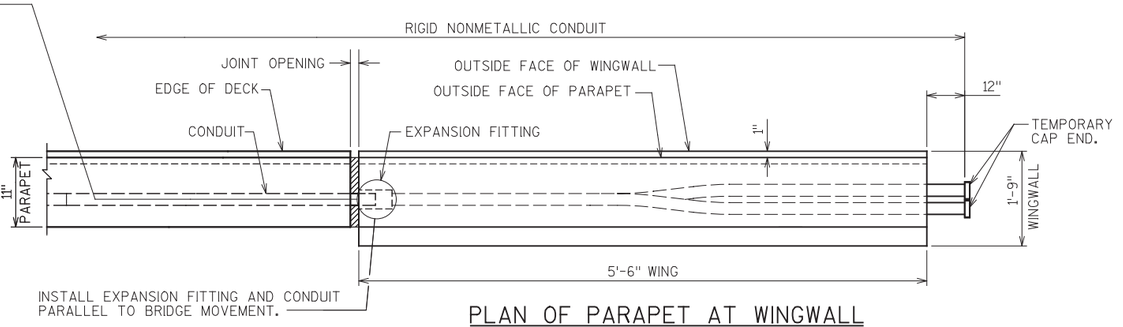
STATE PROJECT NUMBER

1228-25-70



SECTION A-A





PLAN OF PARAPET AT WINGWALL

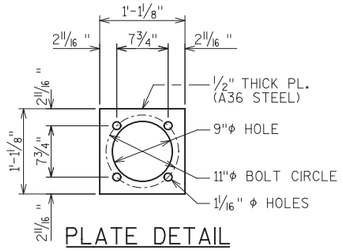
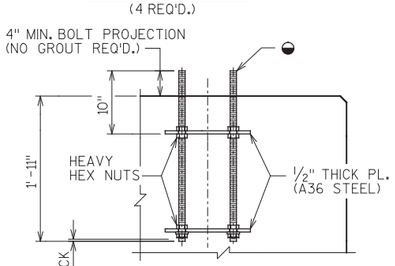
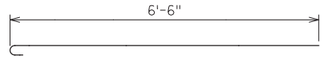


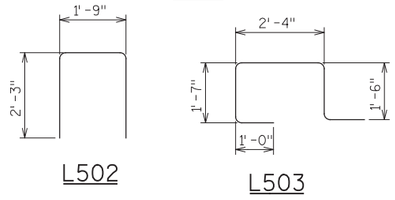
PLATE DETAIL
(4 REQ'D.)



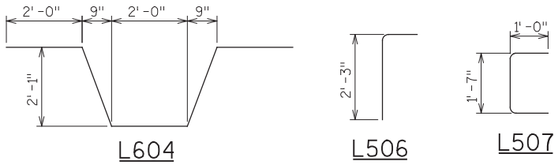
ANCHORAGE DETAIL
(2 REQ'D.)



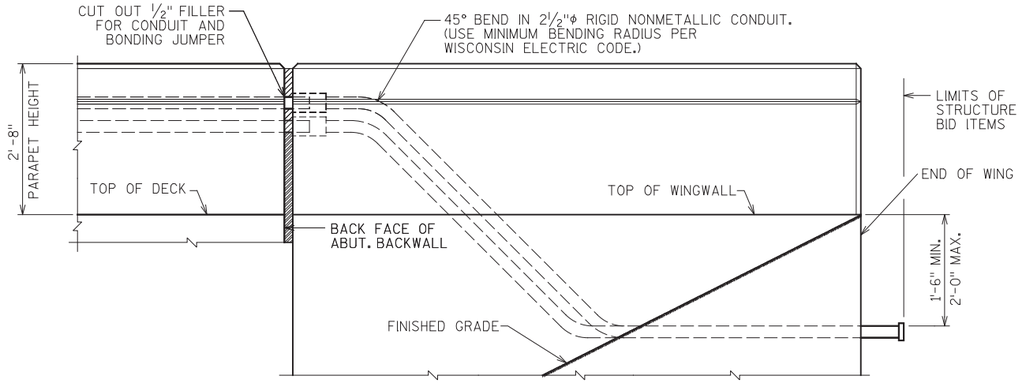
L501



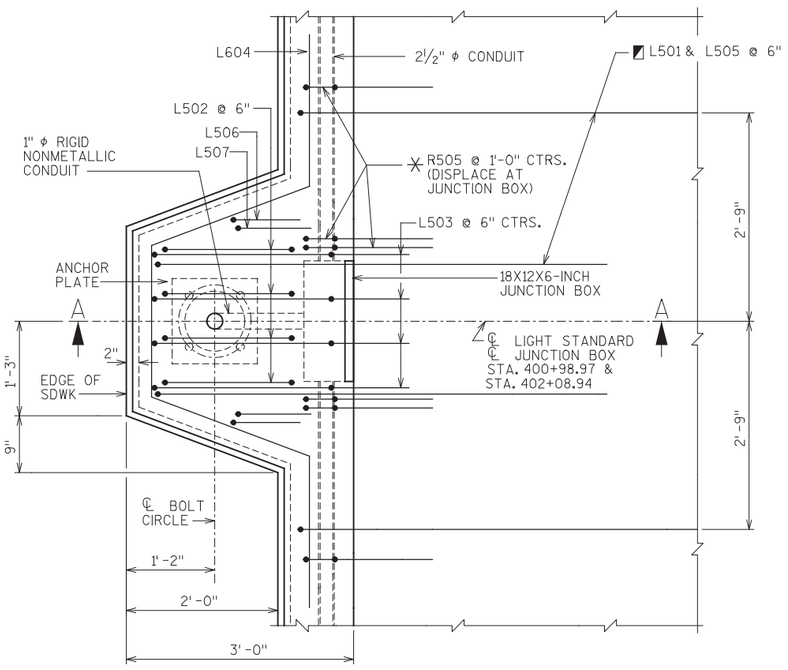
L502 L503



L604 L506 L507



OUTSIDE ELEVATION OF PARAPET AT WINGWALL



PLAN AT LIGHT STANDARD

◐ CONSTR. 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.

◩ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.

◒ 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.

✳ SEE PARAPET AND SIDEWALK DETAILS, SHT. 13 FOR ADDITIONAL BAR STEEL DETAILS.

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2½-INCH"
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH".

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
CARLON TYPE E945K (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID NONMETALLIC 2½-INCH".

ADAPTER FITTINGS SHALL BE U.L. OR NRTL LISTED FOR ELECTRICAL USE.

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
L501	X	24	7'-1"	X	SIDEWALK HORIZ. @ JUNCTION BOX
L502	X	8	6'-0"	X	PARAPET VERT. @ JUNCTION BOX
L503	X	8	6'-11"	X	PARAPET VERT. @ LIGHT STD.
L604	X	14	10'-0"	X	PARAPET HORIZ. @ LIGHT STD.
L505	X	24	6'-6"		SIDEWALK HORIZ. @ JUNCTION BOX
L506	X	4	3'-2"	X	PARAPET VERT. @ LIGHT STD.
L507	X	4	3'-5"	X	PARAPET VERT. @ LIGHT STD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY MJH | PLANS CK'D. RJW

LIGHT STANDARD

SHEET 17 OF 21

510

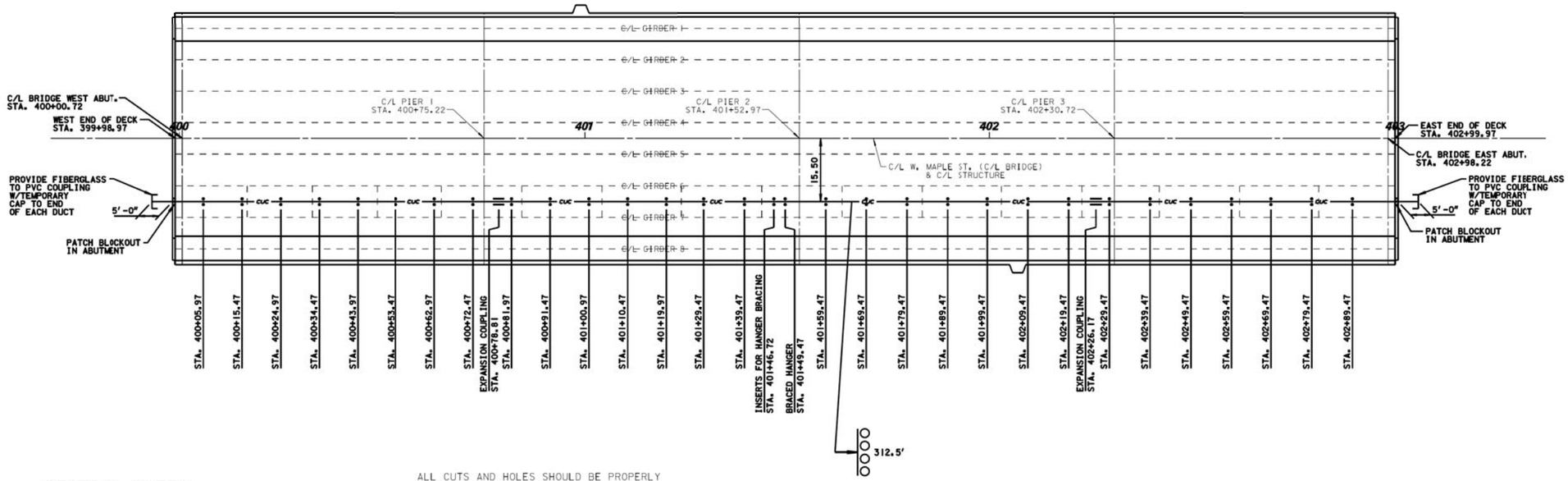
8

8

FILE NAME :I:\7.B-40-173_Electrical Details.dgn
PLOT DATE :11/27/2014 112606 AM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pltPEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS ARE IN FEET AND ARE ALONG THE R/L FOR W. GOOD HOPE RD.

ALL COMPONENTS SHALL HAVE A MINIMUM 75 YEAR DESIGN LIFE.

EACH 4" DIA. CONDUIT WEIGHES 9 PLF.

ALL HORIZONTAL SUPPORT MEMBERS TO BE MADE OF BLACK FIBERGLASS PULTRUDED MATERIAL.

FIBERGLASS MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E-84, CLASS I FLAME RATING AND SELF-EXTINGUISHING REQUIREMENTS OF ASTM D-635, A SURFACE VEIL SHALL BE APPLIED DURING PULTRUSION TO INSURE A RESIN RICH SURFACE AND ULTRAVIOLET RESISTANCE.

ALL CUTS AND HOLES SHOULD BE PROPERLY SEALED PER MANUFACTURERS RECOMMENDATIONS TO PREVENT CORROSION.

ALL STEEL MEMBERS AND HARDWARE SHALL HAVE STAINLESS STEEL COATING.

FURNISH CONCRETE FOR BRIDGES CONFORMING TO SECTION 501. GRADE E. CONTRACTOR MAY USE PREMIXED BAG CEMENT PER ENGINEER'S APPROVAL.

SPACE HANGERS A MAXIMUM 10'-0". LOCATE CONDUIT HANGERS BETWEEN GIRDERS. SEE BRIDGE PLANS.

ALL FIBERGLASS JOINTS SHALL BE EPOXIED PER MANUFACTURER'S SPECIFICATIONS.

EXTEND CONDUIT 5'-0" FROM BACK FACE OF ABUTMENT. PROVIDE COUPLING AND TEMPORARY CAP ON THE END OF EACH DUCT.

INSTALL EXPANSION JOINT PER LOCATION ON THE PLAN. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.

SHEET 1 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W. MAPLE ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET	SHEET NO:	E

FILE NAME: W:\UGD\CONDUIT WORK FILES\UCONDUIT\2013\US 43 HOWARD TO VALLEY\MAPLE\MAPLE BRIDGE.DGN PEN TABLE: PENLIB:E_CUCSTATE.PEN SCALE: 24.749901:1.000000 PRINT DATE: 01-OCT-2013

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY NJH | PLANS CK'D. RJW

CITY OF MKE UTILITY PLAN

SHEET 18 OF 21

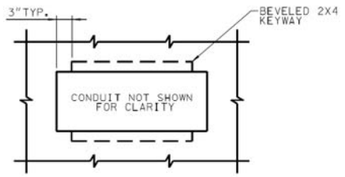
511

FILE NAME :18.B-40-173_MKE 01.dgn
PLOT DATE :1/27/2014 122836 AM PLOT BY : NicholasHornyak#8 DRV :Pdf_bw_HS.prt PEN :CELTEXTSUB.TBL

2

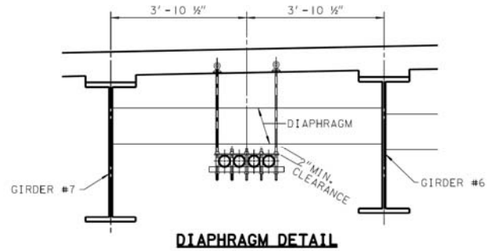
STATE PROJECT NUMBER

1228-25-70



BLOCKOUT PATCH DETAIL

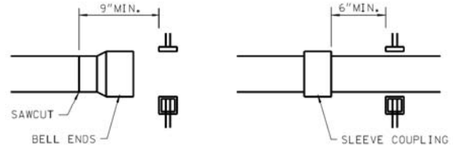
(2'-3" X 0'-11" BLOCKOUT)



DIAPHRAGM DETAIL

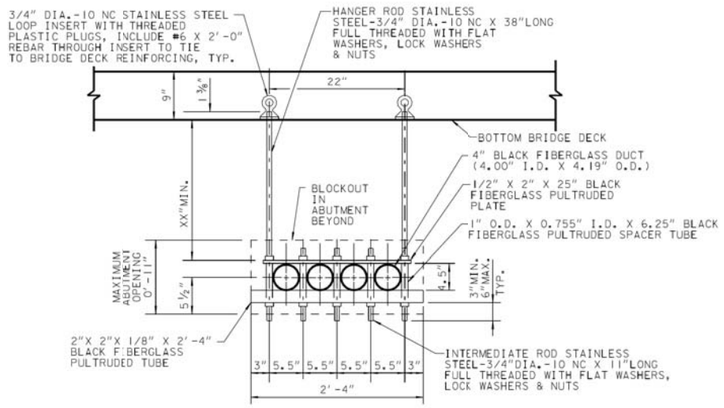
(LOOKING WEST)

2" MINIMUM CLEARANCE BOTTOM OF DIAPHRAM TO TOP OF PIPE



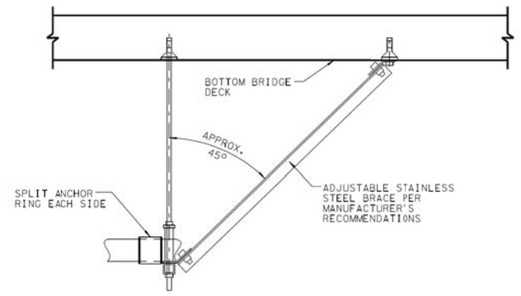
CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS

NOTES:
A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. A TAPE MEASURE CAN BE USED TO PREDETERMINE THESE LOCATIONS AND THE CONDUIT CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS AS SHOWN ABOVE.

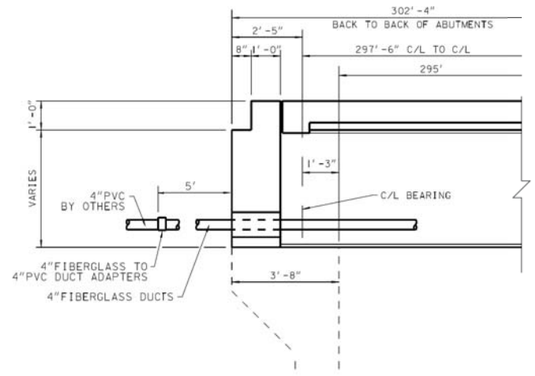


4 DUCT CITY COMMUNICATION HANGER PACKAGE DETAIL

THE CONTRACTOR SHALL FIELD VERIFY HANGER LENGTHS IN ORDER TO AVOID CONFLICTS WITH DIAPHRAM CROSSING.



TYPICAL 4 DUCT BRACED HANGER DETAIL



TYP SECTION AT ABUTMENTS

SHEET 2 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W. MAPLE ST.	COUNTY: MILWAUKEE	CITY UG CONDUIT DETAILS (TES)	SCALE FEET	SHEET NO: E

FILE NAME: W:\UGD\CONDUIT WORK FILES\UCONDUIT\2013\US 43 HOWARD TO VALLEY\MAPLE\MAPLE BRIDGE.DGN | PEN TABLE: PENLIB:E_CUCSTATE.PEN | SCALE: 24.749901:1.000000 | PRINT DATE: 01-OCT-2013

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY NJH | PLANS CK'D. RJW

CITY OF MKE ATTACHMENT DETAILS

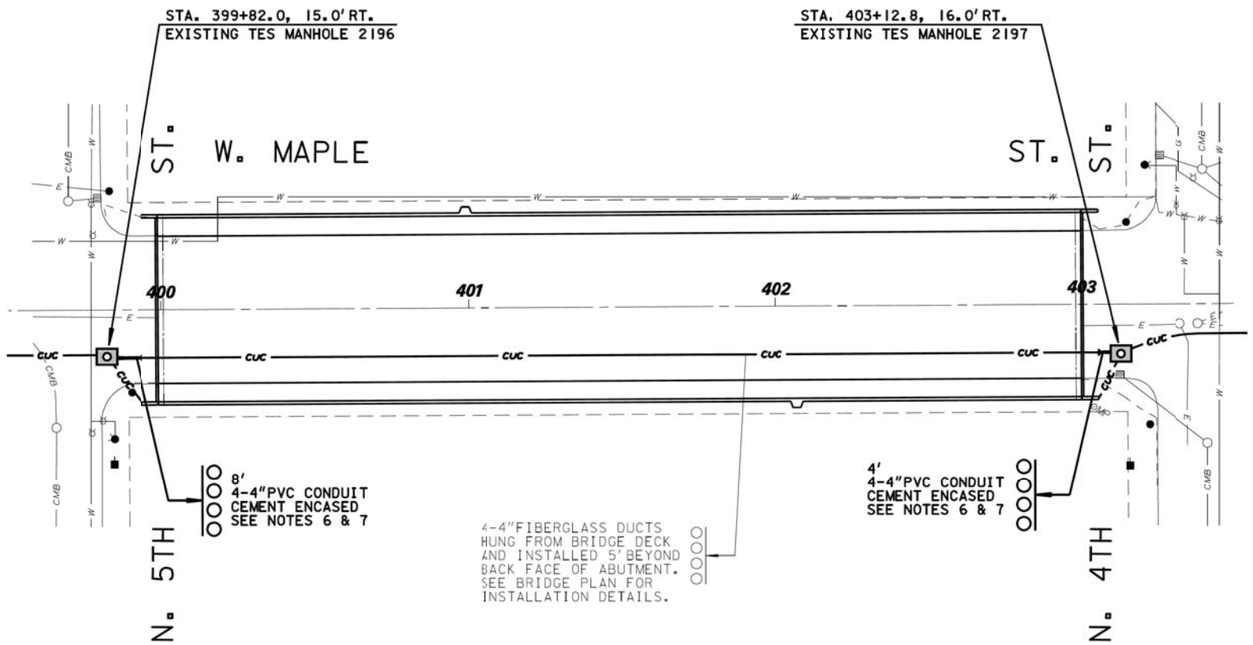
SHEET 19 OF 21

512

FILE NAME :I:\B-40-173_MKE 02.dgn
PLOT DATE :1/27/2014 1129:20 AM PLOT BY : NicholasHornyak\tl DRV :Pdf_bw_HS.prt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



N

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 MINIMUM DEPTH OF 28-INCHES BETWEEN FINISHED GROUND AND TOP OF CONDUIT.
5) MAINTAIN 6" MINIMUM CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.
6) REMOVE ABANDONED CONDUIT FROM THE MANHOLE WALL AND INSTALL PROPOSED CONDUIT INTO THE MANHOLE AT THAT SAME LOCATION.
7) REMOVE ABANDONED CONDUIT AS NEEDED FOR THE PROPOSED INSTALLATION.

LEGEND

— CUC — PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT, NUMBER OF RUNS AS NOTED.

— cuc — EXISTING CONDUIT

SHEET 1 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W. MAPLE ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT (TES)	SCALE FEET 0 40	SHEET NO:	E

FILE NAME: W:\UGD\CONDUIT WORK FILES\UCONDUIT\2013\US 43 HOWARD TO VALLEY\MAPLE\MAPLE BRIDGE.DGN PEN TABLE: PENLIB:E_CUCSTATE.PEN SCALE: 40.000000:1.000000 PRINT DATE: 01-OCT-2013

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

DRAWN BY NJH | PLANS CK'D. RJW

CITY OF MKE UNDERGROUND CONDUIT PLAN

SHEET 20 OF 21

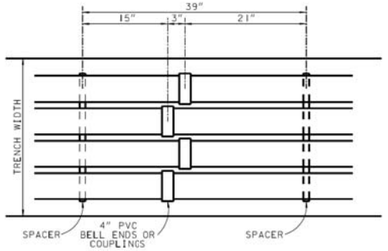
513

FILE NAME :20_B-40-173_MKE 03.dgn
PLOT DATE :1/27/2014 11:30:15 AM PLOT BY : NicholasHornyak98 DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

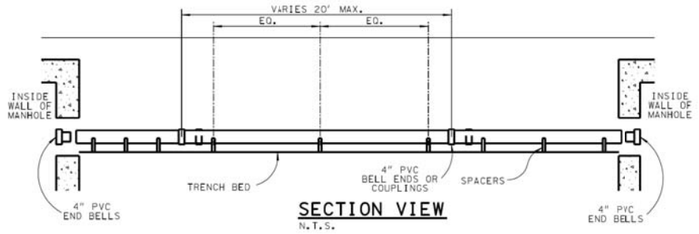
2

STATE PROJECT NUMBER

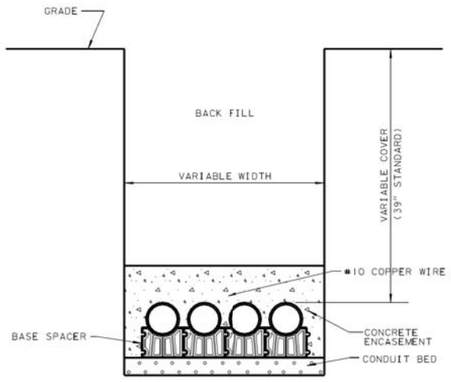
1228-25-70



PLAN VIEW
N.T.S.

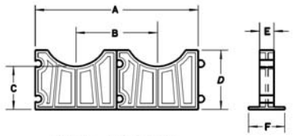


SECTION VIEW
N.T.S.



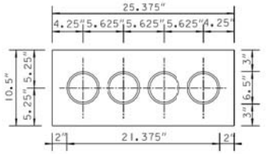
CROSS SECTION VIEW, TYP.
N.T.S.

COND.	3"	4"
A	10"	11 ½"
B	5"	5 ½"
C	3"	3"
D	3 ½"	4 ½"
E	1"	1"
F	2 ½"	2 ½"



BASE SPACER

INTERMEDIATE AND BASE SPACER DETAIL



CROSS SECTION VIEW
N.T.S.

SHEET 2 OF 2

STATE PROJECT NUMBER 1228-25-70	HWY: W. MAPLE ST.	COUNTY: MILWAUKEE	CITY UG CONDUIT DETAILS (TES)	SCALE FEET	SHEET NO:	E

FILE NAME: W:\UGD\CONDUIT WORK FILES\UCONDUIT\2013\US 43 HOWARD TO VALLEY\MAPLE\MAPLE BRIDGE.DGN PEN TABLE: PENLIB:E_CUCSTATE.PEN SCALE: 40.000000:1.000000 PRINT DATE: 31-OCT-2013

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8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-173

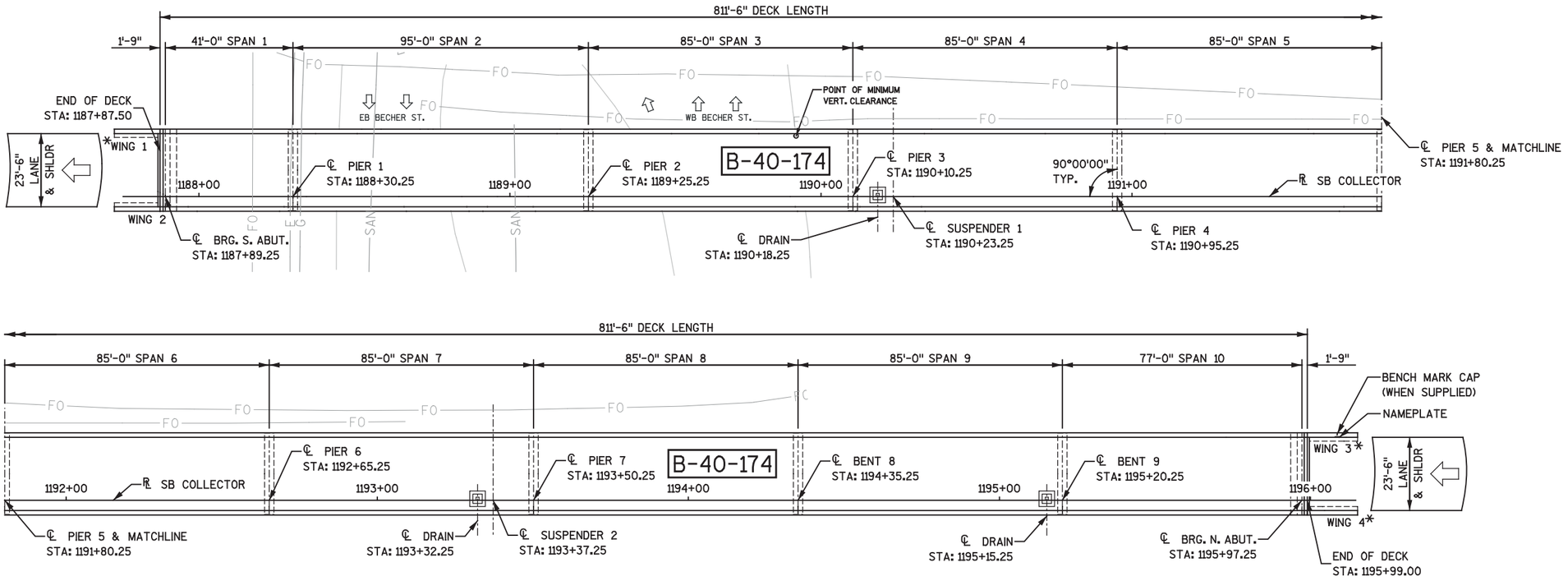
DRAWN BY NJH | PLANS CK'D. RJW

CITY OF MKE UNDERGROUND CONDUIT DETAILS

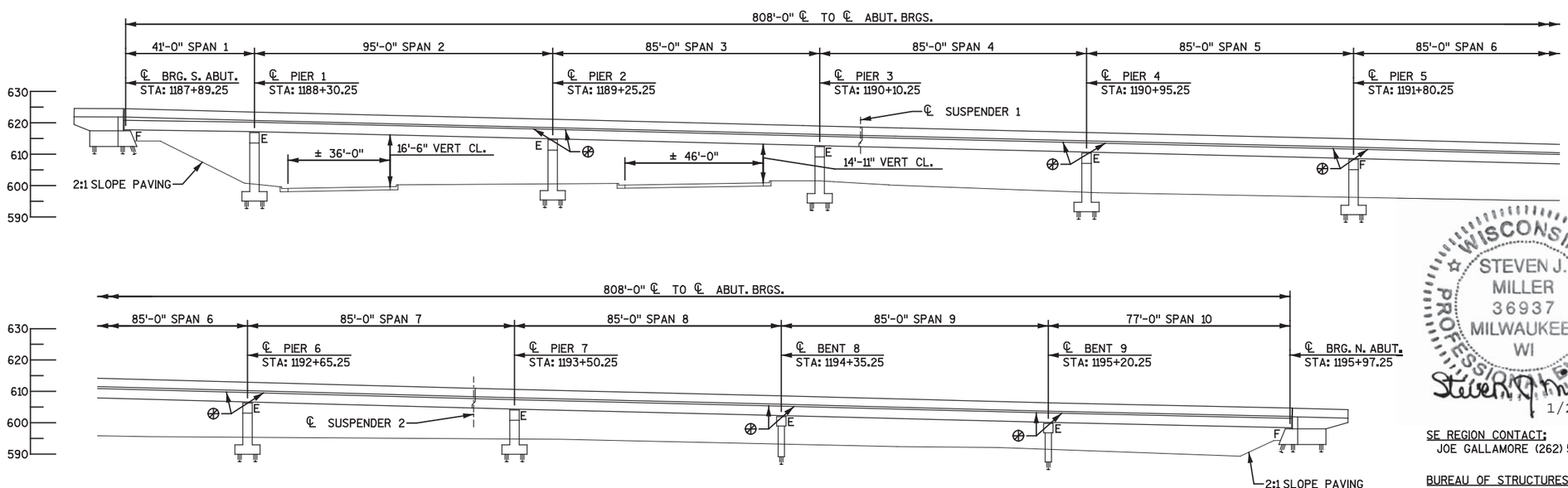
SHEET 21 OF 21

514

FILE NAME :21_B-40-173_MKE 04.dgn
PLOT DATE :1/27/2014 11:30:58 AM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CEL_TEXTSUB.TBL



PLAN B-40-174



ELEVATION
(LOOKING WEST)

STATE PROJECT NUMBER

1228-25-70

GENERAL NOTES
SEE SHEET 2 FOR GENERAL NOTES.

TRAFFIC DATA
SB COLLECTOR
A.D.T. (2035) = 13,500

DESIGN DATA
SEE SHEET 2 FOR DESIGN DATA.

LIST OF DRAWINGS

1. PLAN & ELEVATION
2. GENERAL NOTES & QUANTITIES
3. CROSS SECTION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. ELASTOMERIC EXPANSION BEARINGS
9. FIXED BEARING DETAILS
10. TYPE 'A-T' EXPANSION BEARINGS
11. DECK ELEVATIONS
12. SUPERSTRUCTURE SPANS 1-6
13. SUPERSTRUCTURE SPANS 7-10
14. SUPERSTRUCTURE DETAILS
15. SINGLE SLOPE PARAPET 32SS
16. STRIP SEAL EXPANSION JOINT AT ABUTMENTS
17. STRIP SEAL EXPANSION JOINT AT SUSPENDERS
18. STRIP SEAL DETAILS AT PARAPETS
19. FLOOR DRAIN TYPE 'WF'

⊛ PERFORM MAGNETIC PARTICLE TESTING AND ULTRASONIC IMPACT TREATMENT AT TOP COVER PLATE END WELD LOCATIONS:
PIER 2: GIRDERS 1 THRU 4
PIER 4: GIRDERS 1 AND 4
PIER 5: GIRDERS 1 AND 4
PIER 6: GIRDERS 1 AND 4
BENT 8: GIRDERS 1 AND 4
BENT 9: GIRDERS 1 THRU 4

* ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD

NO.	DATE	REVISION	BY

COLLINS ENGINEERS INC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 01/31/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN STEVEN J. MILLER 36937 MILWAUKEE, WI PROFESSIONAL ENGINEER
Steven J. Miller 1/27/2014

STRUCTURE B-40-174

SB COLLECTOR OVER W. BECHER ST.

COUNTY	MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~	MILWAUKEE
DESIGN SPEC.	REHABILITATION N/A		
DESIGNED BY	NJH	DESIGN CK'D.	RJW
DRAWN BY	MJH	PLANS CK'D.	RJW

PLAN & ELEVATION

SHEET 1 OF 19

515

SE REGION CONTACT:
JOE GALLAMORE (262) 548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
NICHOLAS HORNYAK (414) 282-6905

FILE NAME : 01_B_40_174_Plan & Elevation.dgn
PLOT DATE : 1/27/2014 10:02:34 PM PLOT BY : NicholasHornyak-WE DRV : Pdf_bw_HS.plt PEN : CEL.TEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

TOTAL ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER	S. ABUT	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	BENT 8	BENT 9	N. ABUT	TOTAL
203.0200.0005	REMOVING OLD STRUCTURE STA 1187+87	LS	-	-	-	-	-	-	-	-	-	-	-	-	1
203.0210.S.0005	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-174	LS	-	-	-	-	-	-	-	-	-	-	-	-	1
203.0225.S.0005	DEBRIS CONTAINMENT B-40-174	LS	-	-	-	-	-	-	-	-	-	-	-	-	1
206.1000.0005	EXCAVATION FOR STRUCTURES BRIDGES B-40-174	LS	-	-	-	-	-	-	-	-	-	-	-	-	1
209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	-	30	-	-	-	-	-	-	-	-	-	30	60
502.0100	CONCRETE MASONRY BRIDGES	CY	748	12	-	-	-	-	-	-	-	-	-	12	772
502.3100.0005	EXPANSION DEVICE B-40-174	LS	-	-	-	-	-	-	-	-	-	-	-	-	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,820	-	-	-	-	-	-	-	-	-	-	-	2,820
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	-	84	-	-	-	-	-	-	-	-	-	84	168
502.6110	MASONRY ANCHORS TYPE S 3/4-INCH	EACH	4	-	-	-	-	-	-	-	-	-	-	-	4
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	185,400	1,500	-	-	-	-	-	-	-	-	-	1,470	188,370
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	-	-	4	4	-	4	-	4	-	4	4	-	24
506.5000.0005	BEARING ASSEMBLIES FIXED B-40-174	EACH	-	4	-	-	-	-	4	-	-	-	-	4	12
506.6000.0001	BEARING ASSEMBLIES EXPANSION B-40-174	EACH	-	-	-	-	4	-	-	-	4	-	-	-	8
506.7050.S.0005	REMOVING BEARINGS B-40-174	EACH	-	4	4	4	4	4	4	4	4	4	4	4	44
506.7060.S.0005	BRIDGE JACKING B-40-174	LS	1	-	-	-	-	-	-	-	-	-	-	-	1
514.0450	FLOOR DRAINS TYPE WF	EACH	3	-	-	-	-	-	-	-	-	-	-	-	3
514.2608	DOWNSPOUT 8-INCH	LF	15	-	-	-	-	-	-	-	-	-	-	-	15
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	8	-	-	-	-	-	-	-	-	-	8	16
517.0900.S.0004	PREPARATION AND COATING OF TOP FLANGES B-40-174	LS	-	-	-	-	-	-	-	-	-	-	-	-	1
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	1	-	-	-	-	-	-	-	-	-	2	3
SPV.0060.4001	ULTRASONIC IMPACT TREATMENT PROCEDURE	EACH	-	-	-	8	-	4	4	4	-	4	8	-	32
SPV.0060.4002	MAGNETIC PARTICLE TESTING	EACH	-	-	-	8	-	4	4	4	-	4	8	-	32
	NON-BID ITEMS														
	FILLER	SIZE	-	-	-	-	-	-	-	-	-	-	-	-	1/2" & 3/4"
	NAME PLATE	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-

ALL ITEMS ARE CATEGORY 2040

DESIGN DATA

LIVE LOAD:

INVENTORY RATING	HS-17
OPERATIONAL RATING	HS-28
WISCONSIN STANDARD PERMIT VEHICLE (WIs-SPV)	210 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE SUPERSTRUCTURE	f'c = 4,000 P.S.I.
CONCRETE SUBSTRUCTURE	f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.

GENERAL NOTES

THE PROPOSED WORK INCLUDES REMOVAL AND REPLACEMENT OF THE DECK, ABUTMENT BACKWALLS, AND ALL BEARINGS.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST DIGIT OF A THREE DIGIT BAR AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

UTILIZE EXISTING BAR STEEL WHERE SHOWN AND EXTEND EXISTING BAR STEEL REINFORCEMENT 24 BAR DIAMETERS INTO NEW CONSTRUCTION, UNLESS SPECIFIED OTHERWISE.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M153, TYPES I, II, OR III OR M213.

AT ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL CONTROLLED LOW STRENGTH.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

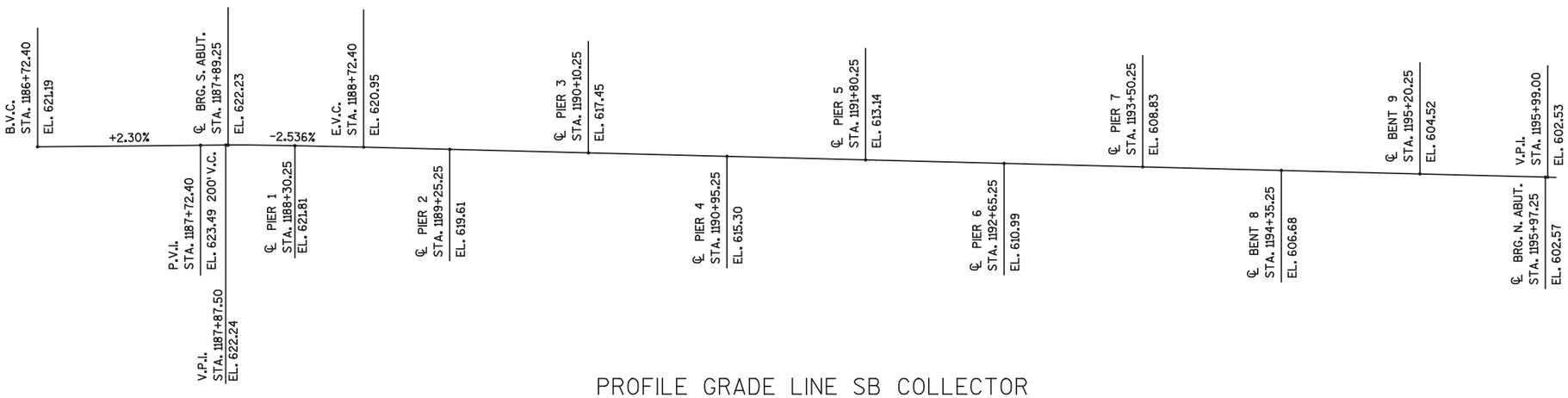
THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWING. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR.

ORIGINAL PLANS AND OVERLAY PLANS OF EXISTING BRIDGE B-40-174 ARE AVAILABLE AT THE WISDOT SOUTHEAST REGION OFFICE. REFERENCE THESE PLANS FOR THE DESIGN OF SLAB OVERHANG SHORING AND TEMPORARY BRACING DURING CONSTRUCTION.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF SLAB, FACE OF CURB, TOP OF SIDEWALK, AND TO THE TOP AND ROADWAY FACE OF THE PARAPET.

THE MINIMUM CONCRETE HAUNCH SHALL BE 2" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 3" WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.



PROFILE GRADE LINE SB COLLECTOR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

GENERAL NOTES & QUANTITIES

SHEET 2 OF 19

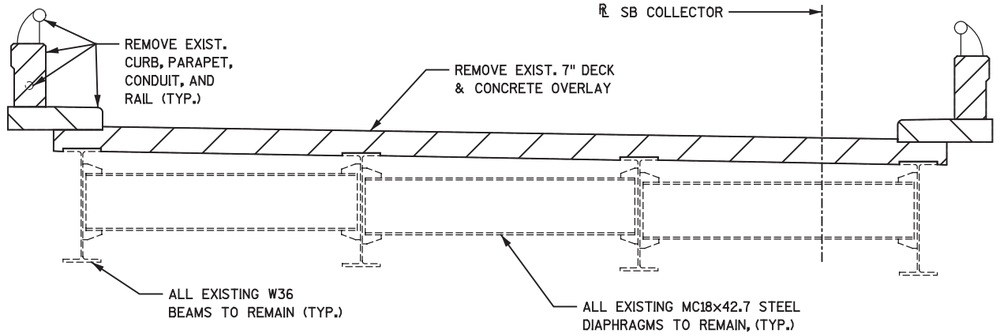
516

8

8

FILE NAME :\02_B_40_174_General Notes & Quantities.dgn
PLOT DATE :11/27/2014 12:02:35 PM PLOT BY : NicholasHornyak\x8t DRV :Pdf_bw_HS.pit PEN :CEL.TEXTSUB.TBL

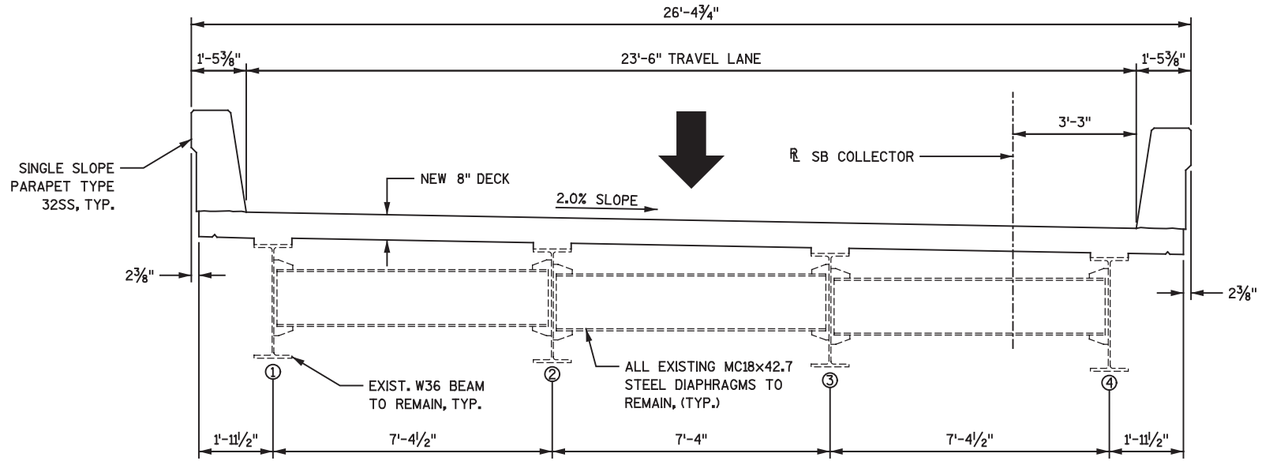
STATE PROJECT NUMBER
1228-25-70



DENOTES REMOVAL LIMITS.

EXISTING CROSS SECTION THRU ROADWAY

(LOOKING NORTH)



PROPOSED CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

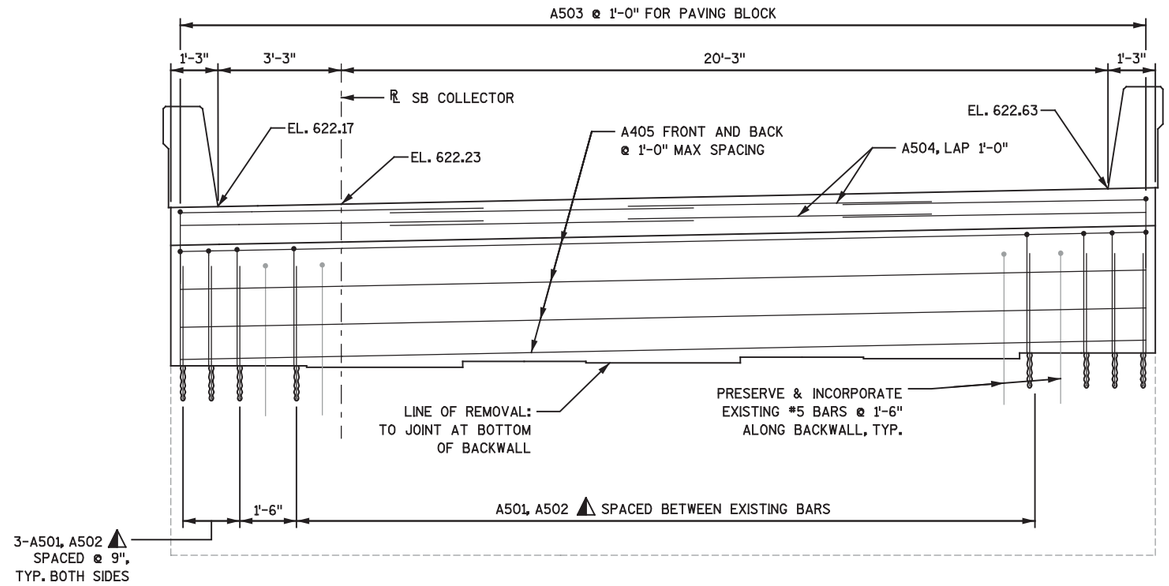
DRAWN BY MJH | PLANS CK'D. RJW

SHEET 3 OF 19

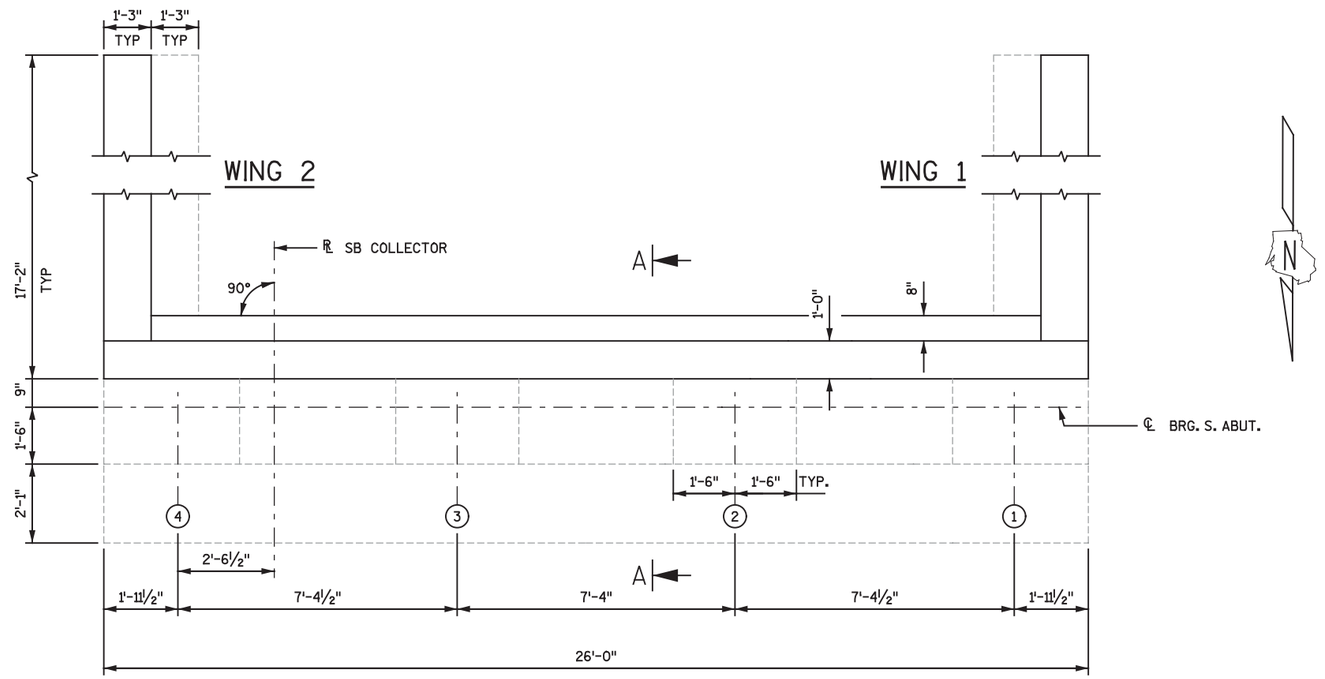
CROSS SECTION 517

FILE NAME :03_B_40_174_Cross Section.dgn
PLOT DATE :1/27/2014 12:02:36 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CEL.TEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



ELEVATION
(LOOKING SOUTH)



PLAN

⚠ MASONRY ANCHORS TYPE 'L'.
EPOXY ANCHORED, EMBED 11".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

SOUTH ABUTMENT

SHEET 4 OF 19
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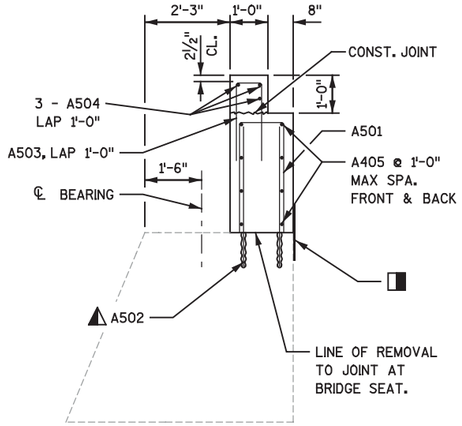
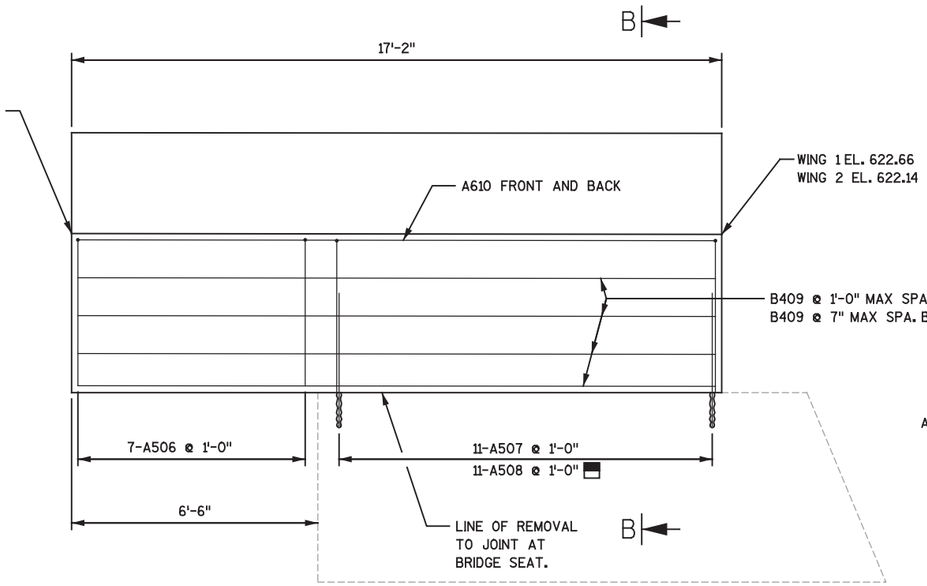
FILE NAME :04_B-40-174_South Abutment.dgn
PLOT DATE :1/27/2014 12:02:36 PM PLOT BY : NicholasHornyak:8L DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

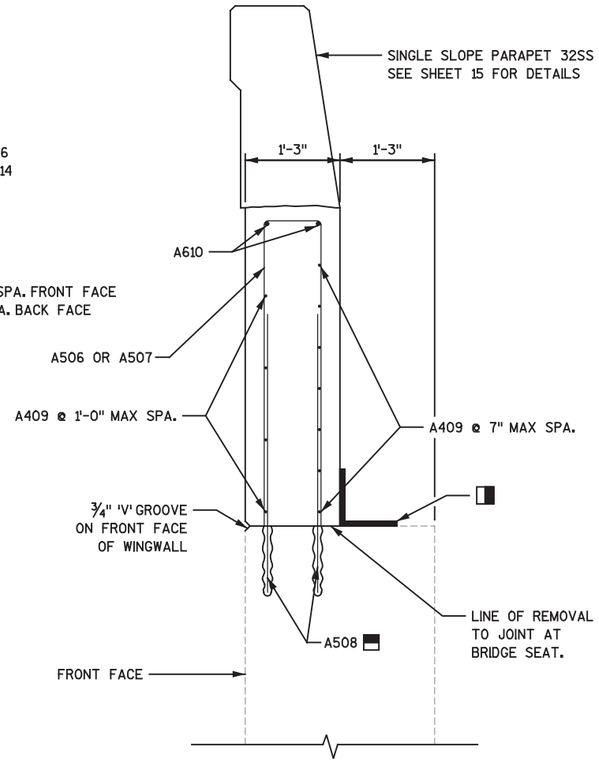


SECTION A-A



SOUTH ABUTMENT WING 2

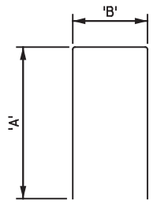
(WING 1 OPPOSITE HAND)



SECTION B-B

BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	20	7'-1"	X		BACKWALL VERT.
A502	X	40	3'-9"			BACKWALL VERT. ANCHORS ◭
A503	X	27	4'-5"	X		PAVING NOTCH VERT.
A504	X	12	7'-2"			PAVING NOTCH HORIZ.
A405	X	8	25'-8"			BACKWALL HORIZ.
A506	X	14	8'-4"	X		WINGWALL VERT.
A507	X	22	8'-8"	X		WINGWALL VERT.
A508	X	44	3'-8"			WINGWALL VERT. ANCHORS ⬒
A409	X	22	16'-10"			WINGWALL HORIZ.
A610	X	4	16'-10"			WINGWALL TOP HORIZ.



A501, A503, A506, A507

BAR MARK	DIM. 'A'	DIM. 'B'
A501	3'-0"	1'-4"
A503	2'-0"	8"
A506	3'-10"	11"
A507	4'-0"	11"

⬒ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11". REMOVE EXISTING U-BARS FROM WINGWALL.

◭ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

SOUTH ABUTMENT DETAILS

SHEET 5 OF 19

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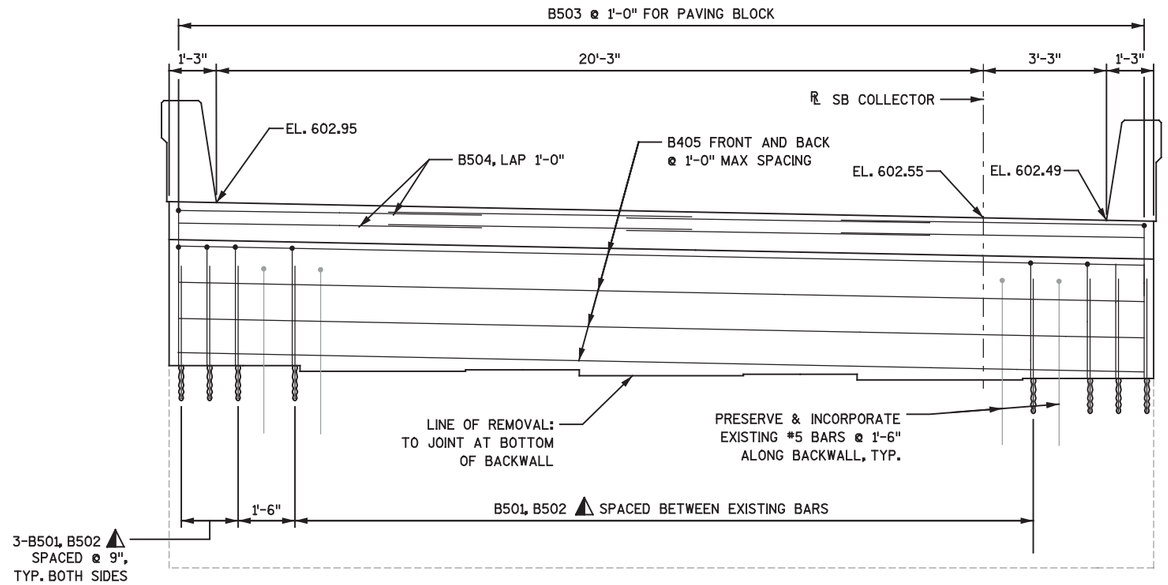
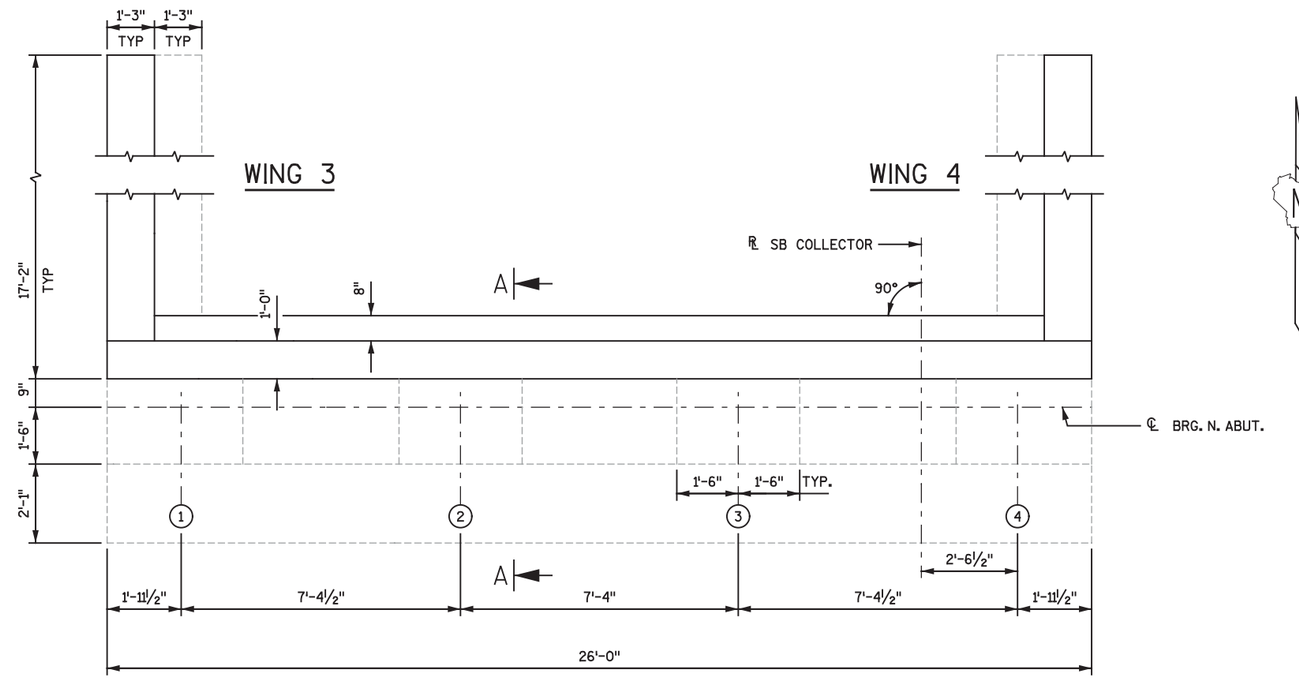
FILE NAME :\05_B-40-174_South Abutment Details.dgn
PLOT DATE :11/27/2014 12:02:37 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



ELEVATION
(LOOKING NORTH)



PLAN

⚠ MASONRY ANCHORS TYPE 'L'.
EPOXY ANCHORED, EMBED 11".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

NORTH ABUTMENT

SHEET 6 OF 19

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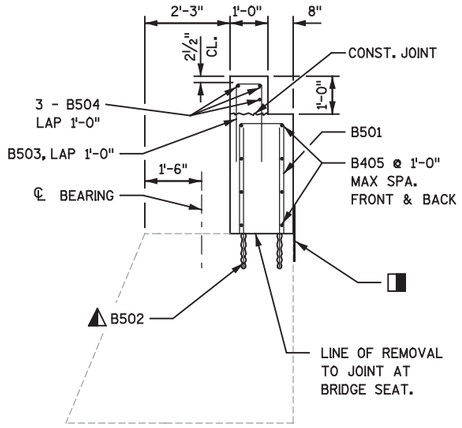
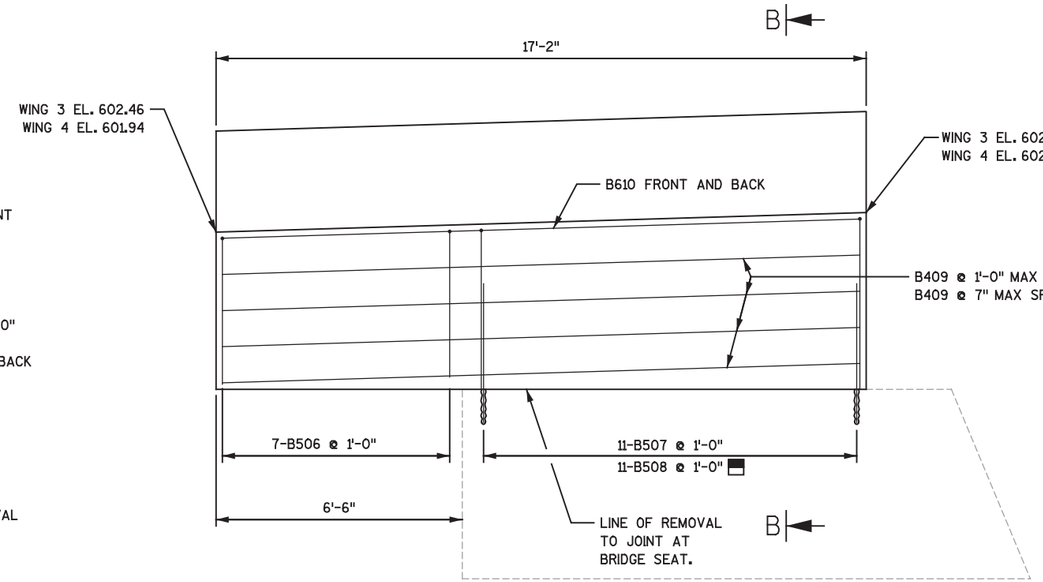
FILE NAME :06_B-40-174_North Abutment.dgn
PLOT DATE :1/27/2014 12:02:38 PM PLOT BY : NicholasHornyak:8L DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

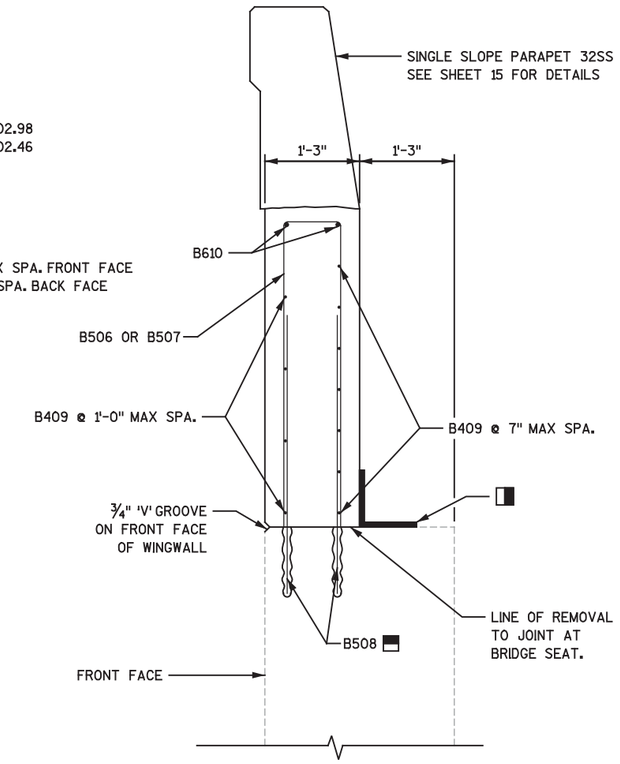


SECTION A-A



SOUTH ABUTMENT WING 3

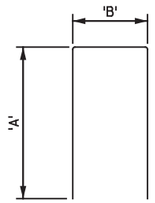
(WING 4 OPPOSITE HAND)



SECTION B-B

BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501	X	20	6'-11"	X		BACKWALL VERT.
B502	X	40	3'-10"			BACKWALL VERT. ANCHORS ◭
B503	X	27	4'-5"	X		PAVING NOTCH VERT.
B504	X	12	7'-2"			PAVING NOTCH HORIZ.
B405	X	8	25'-8"			BACKWALL HORIZ.
B506	X	14	7'-4"	X		WINGWALL VERT.
B507	X	22	8'-0"	X		WINGWALL VERT.
B508	X	44	3'-10"			WINGWALL VERT. ANCHORS ⬒
B409	X	22	16'-10"			WINGWALL HORIZ.
B610	X	4	16'-10"			WINGWALL TOP HORIZ.



B501, B503, B506, B507

BAR MARK	DIM. 'A'	DIM. 'B'
B501	2'-11"	1'-4"
B503	2'-0"	8"
B506	3'-4"	11"
B507	3'-8"	11"

⬒ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11". REMOVE EXISTING U-BARS FROM WINGWALL.

◭ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

NORTH ABUTMENT DETAILS

SHEET 7 OF 19

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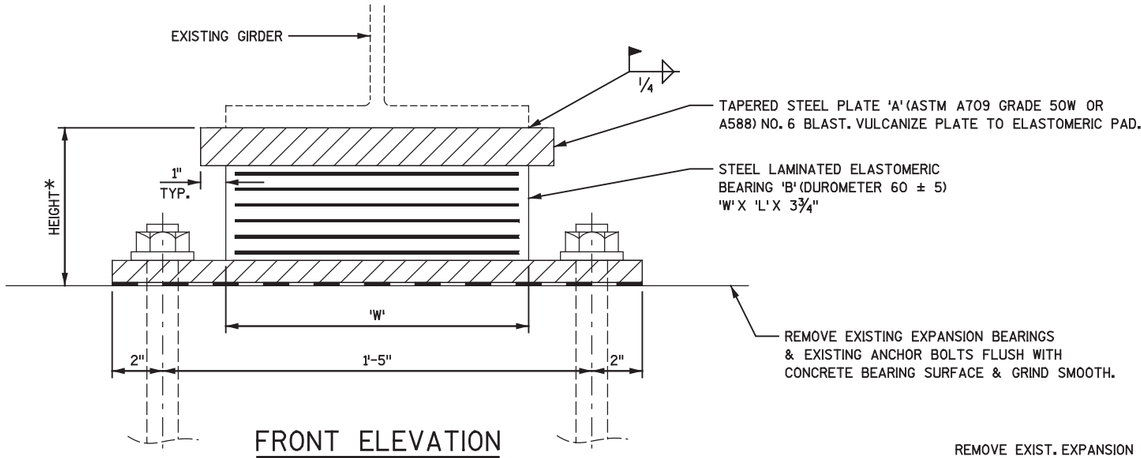
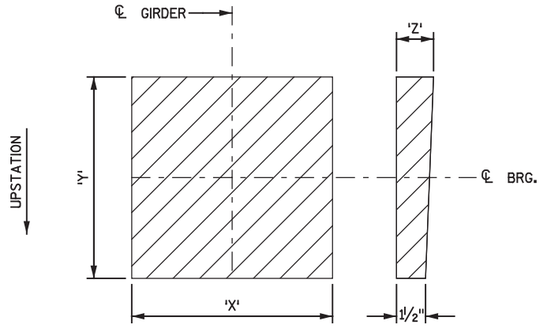
8

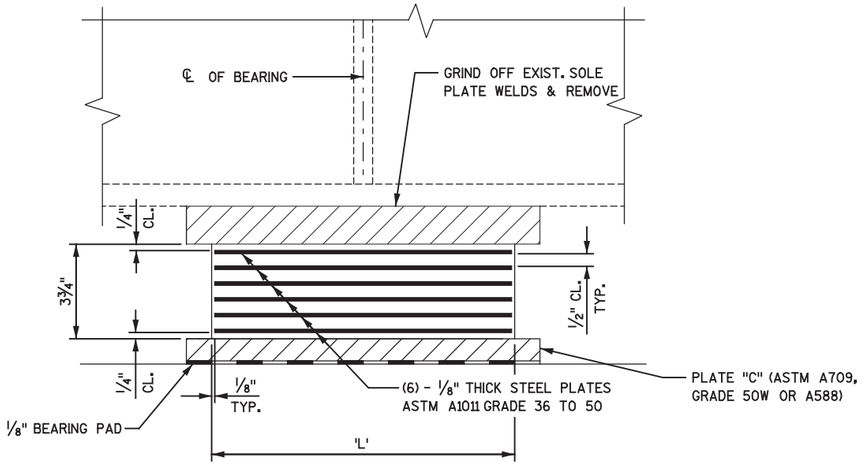
FILE NAME :07_B-40-174_North Abutment Details.dgn
PLOT DATE :11/27/2014 12:02:39 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL



FRONT ELEVATION

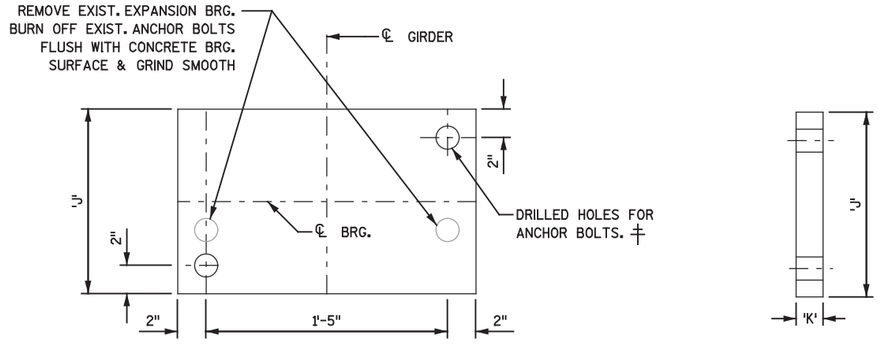


TOP PLATE 'A' DETAILS



SECTION THRU ELASTOMERIC BEARING

(AT PIERS)



BOTTOM PLATE 'C' DETAILS

EXPANSION BEARINGS												
LOCATION	PLATE A			BEARING B			PLATE C			HEIGHT (IN.)*	NO. OF BRG.
	'X'	'Y'	'Z'	'W'	'L'		'J'	'K'			
PIER 1 BEAMS 2, 3	1'-2"	1'-7"	1⅞"	12"	1'-5"		-	-		5⅜"	2
PIER 1 BEAMS 1, 4	1'-2"	1'-7"	1⅞"	12"	1'-5"		1'-7"	⅝"		6⅜"	2
PIER 2 BEAMS 2, 3	1'-2"	1'-9"	2"	12"	1'-7"		1'-9"	⅜"		6⅜"	2
PIER 2 BEAMS 1, 4	1'-2"	1'-9"	2"	12"	1'-7"		1'-9"	13/16"		6⅞"	2
PIER 4 BEAMS 2, 3	1'-2"	1'-8"	2"	12"	1'-6"		1'-8"	⅜"		6⅜"	2
PIER 4 BEAMS 1, 4	1'-2"	1'-8"	2"	12"	1'-6"		1'-8"	13/16"		6⅞"	2
PIER 6 BEAMS 2, 3	1'-2"	1'-7"	2"	12"	1'-5"		1'-7"	⅜"		6⅜"	2
PIER 6 BEAMS 1, 4	1'-2"	1'-7"	2"	12"	1'-5"		1'-7"	⅜"		6⅜"	2
PIER 8 BEAMS 2, 3	1'-2"	1'-8"	2"	12"	1'-6"		1'-8"	⅜"		6⅜"	2
PIER 8 BEAMS 1, 4	1'-2"	1'-8"	2"	12"	1'-6"		1'-8"	13/16"		6⅞"	2
PIER 9 BEAMS 2, 3	1'-2"	1'-8"	2"	12"	1'-6"		1'-8"	⅜"		6⅜"	2
PIER 9 BEAMS 1, 4	1'-2"	1'-8"	2"	12"	1'-6"		1'-8"	13/16"		6⅞"	2

* HEIGHT MEASURED AT ℄ OF BEARING

STATE PROJECT NUMBER

1228-25-70

BEARING NOTES

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

COMPRESSION LOAD AND ADHESION TESTS WILL BE WAIVED WHERE BEARINGS ARE DETAILED TO MEET HEIGHT REQUIREMENTS.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

USE (2) 1¼" ϕ, 1'-5" LONG ANCHOR BOLTS PER BEARING PAD ASSEMBLY.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS PLATE "C" THICKNESS + 2¼".

PROVIDE ⅛" THICK BEARING PAD SAME SIZE AS MASONRY PLATE "C" FOR EACH BEARING.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS "C".

PLATE "C" SHALL BE GALVANIZED.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "C" HAVE A DIAMETER OF ⅜" LARGER THAN ANCHOR BOLT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

ELASTOMERIC EXPANSION BEARINGS

SHEET 8 OF 19

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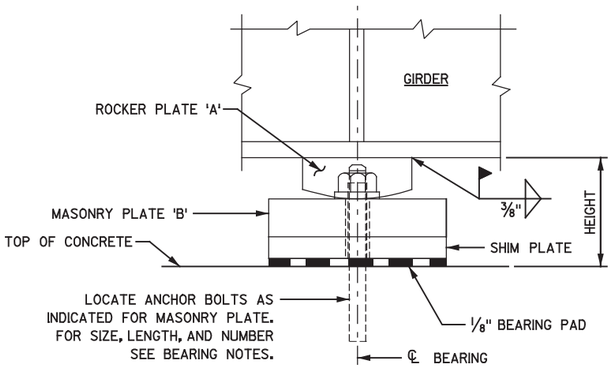
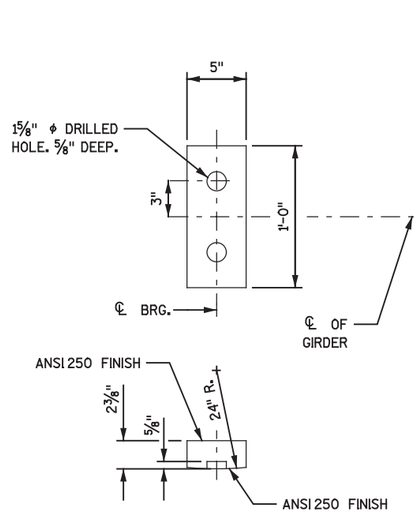
FILE NAME :\08_B-40-174_Elastomerto Expansion Bearings.dgn
PLOT DATE :1/27/2014 12:02:40 PM PLOT BY : NicholasMornyakv8i DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

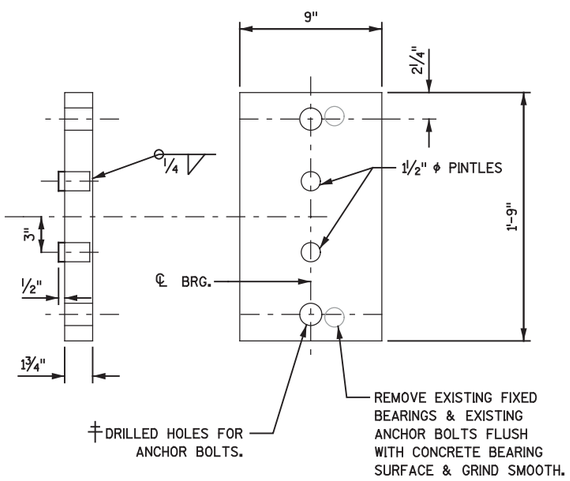
1228-25-70



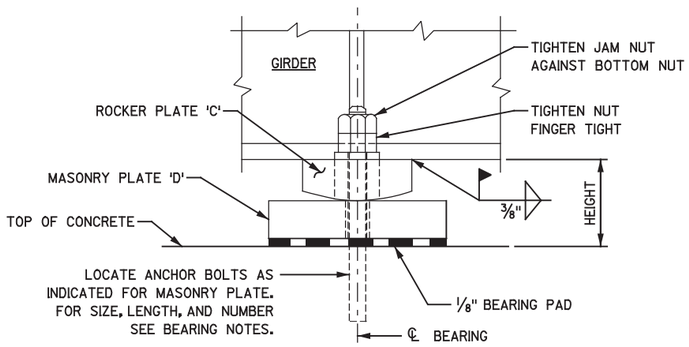
FIXED BEARING ASSEMBLY



ROCKER PLATE 'A'

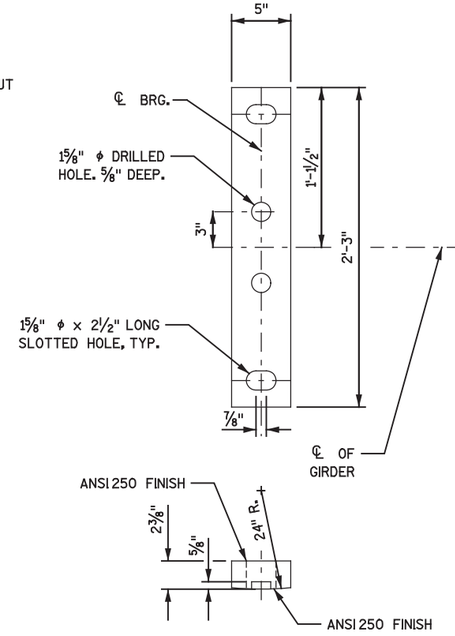


MASONRY PLATE 'B'

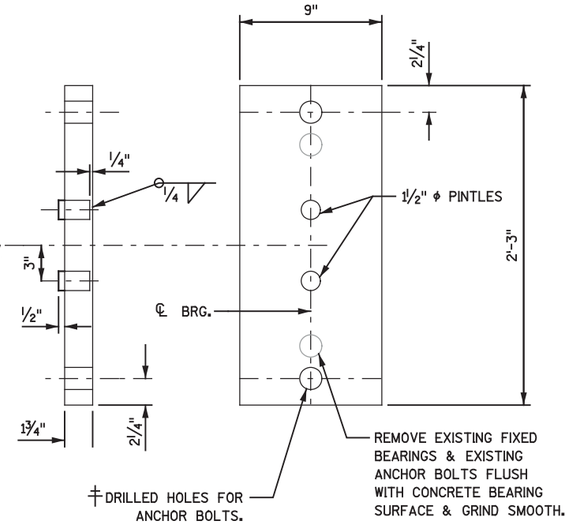


HOLD-DOWN DEVICE ASSEMBLY

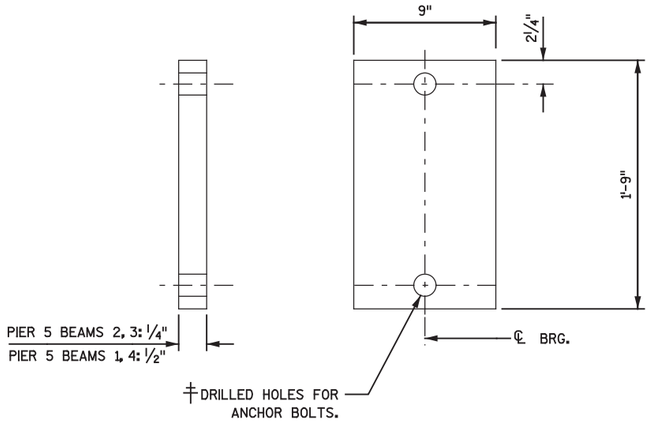
(AT SOUTH ABUTMENT ONLY)



ROCKER PLATE 'C'



MASONRY PLATE 'D'



SHIM PLATE

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

IN LIEU OF USING SHIM PLATES, FABRICATOR MAY INCREASE THICKNESS OF MASONRY PLATE BY THE SHIM PLATE THICKNESS.

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.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

USE (2) 1¼" ϕ, 1'-5" LONG ANCHOR BOLTS PER BEARING PAD ASSEMBLY AND (2) 1¼" ϕ, 1'-9¼" LONG ANCHOR BOLTS PER HOLD-DOWN DEVICE ASSEMBLY.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS, MASONRY PLATE THICKNESS + SHIM PLATE THICKNESS + 2¼", ABOVE TOP OF CONCRETE AT THE FIXED BEARING ASSEMBLY LOCATIONS.

ANCHOR BOLTS SHALL BE THREADED 4¼". PROVIDE ONE STANDARD WROUGHT WASHER AND TWO HEX NUTS PER BOLT. PROJECT ANCHOR BOLTS, MASONRY PLATE THICKNESS + ROCKER PLATE THICKNESS + 3½", ABOVE TOP OF CONCRETE AT THE HOLD-DOWN DEVICE ASSEMBLY LOCATIONS.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING PINTLES, ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL MATERIALS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES FIXED B-40-174", EACH.

CHAMFER TOP OF PINTLES ⅛". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE FOR A DRIVING FIT.

PROVIDE ⅛" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE FOR EACH BEARING.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

ROCKER PLATE SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.

MASONRY PLATE SHALL BE GALVANIZED.

PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE AND SHIM PLATE HAVE A DIAMETER OF ⅜" LARGER THAN ANCHOR BOLT.

FIXED BEARINGS			
LOCATION	HEIGHT (IN.)	NO. OF BRG.	ASSEMBLY DETAIL
S. ABUT. BEAMS 1-4	4¼"	4	HOLD-DOWN
PIER 5 BEAMS 1, 4	4¾"	2	FIXED
PIER 5 BEAMS 2, 3	4½"	2	FIXED
N. ABUT. BEAMS 1-4	4¼"	4	FIXED

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. NJH

FIXED BEARING DETAILS

SHEET 9 OF 19

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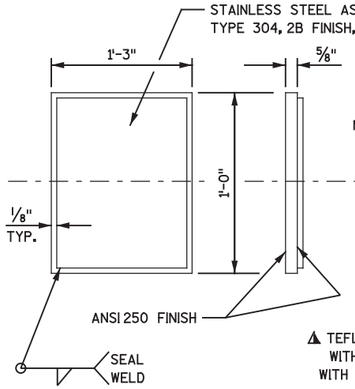
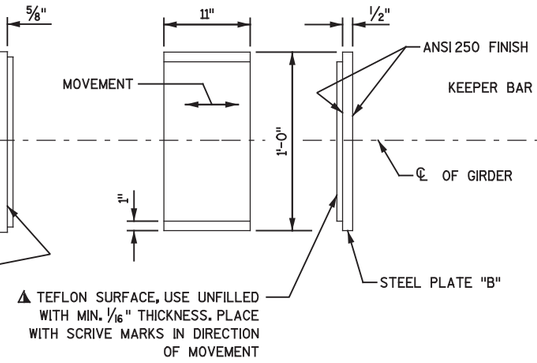
FILE NAME :09_B-40-174_Fixed Bearing Details.dgn
PLOT DATE :1/27/2014 12:02:42 PM PLOT BY : NicholasHornyak@E DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

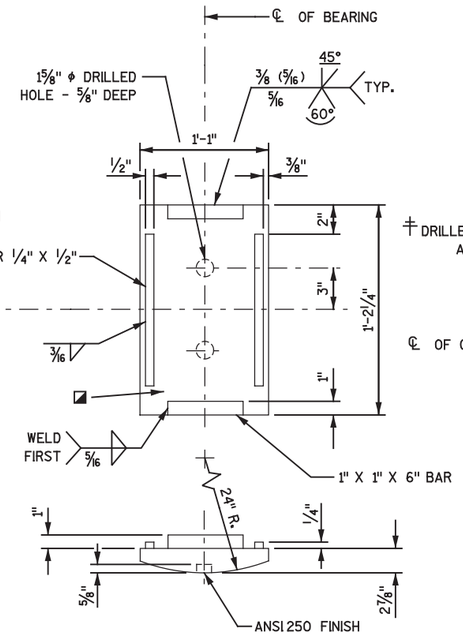
1228-25-70



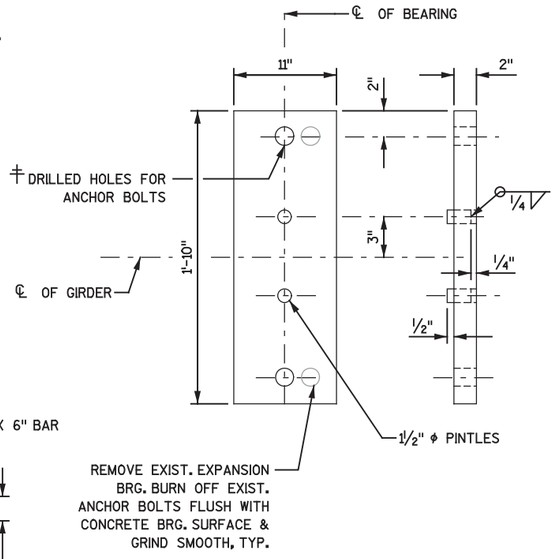
TOP PLATE "A"



TEFLON SURFACE ON PLATE "B"



ROCKER PLATE "C"



MASONRY PLATE "D"

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

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.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5" FOR 1 1/4" ϕ AND 1'-10" FOR 1 1/2" ϕ BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-40-174", EACH.

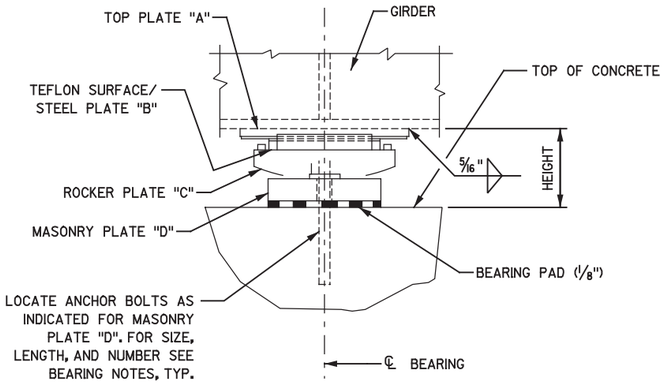
ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

PLACE SHIM PLATS BETWEEN BEARING PAD AND MASONRY PLATE "D".

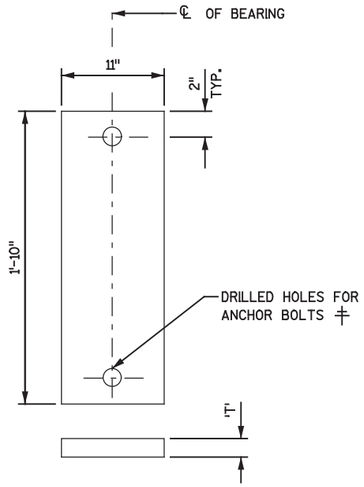
IN LIEU OF USING SHIM PLATES, FABRICATOR MAY INCREASE THICKNESS OF TOP PLATE "A" OR MASONRY PLATE "D" BY THE SHIM PLATE THICKNESS.

ROCKER PLATE "C" AND MASONRY PLATE "D" SHALL BE GALVANIZED. TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER.



EXPANSION BEARING ASSEMBLY



SHIM PLATE DETAILS

TYPE 'A-T' EXPANSION BEARINGS			
LOCATION	HEIGHT (IN.)	NO. OF BRG.	SHIM HEIGHT 'T'
PIER 3 BEAMS 1, 4	6 7/16"	2	3/16"
PIER 3 BEAMS 2, 3	6 1/4"	2	-
PIER 7 BEAMS 1, 4	6 7/16"	2	3/16"
PIER 7 BEAMS 2, 3	6 1/4"	2	-

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

⚠ BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING FEDERAL SPECIFICATION MMM-A-134, FEP FILM OR EQUAL.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "D" SHALL HAVE A DIAMETER OF 3/8" LARGER THAN ANCHOR BOLT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY	MJH	PLANS CK'D.	NJH

TYPE 'A-T' EXPANSION BEARINGS

SHEET 10 OF 19

524

8

8

FILE NAME :10_B-40-174_Type 'A-T' Expansion Bearings.dgn
PLOT DATE :11/27/2014 12:02:42 PM PLOT BY : NicholasHornyak@t DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

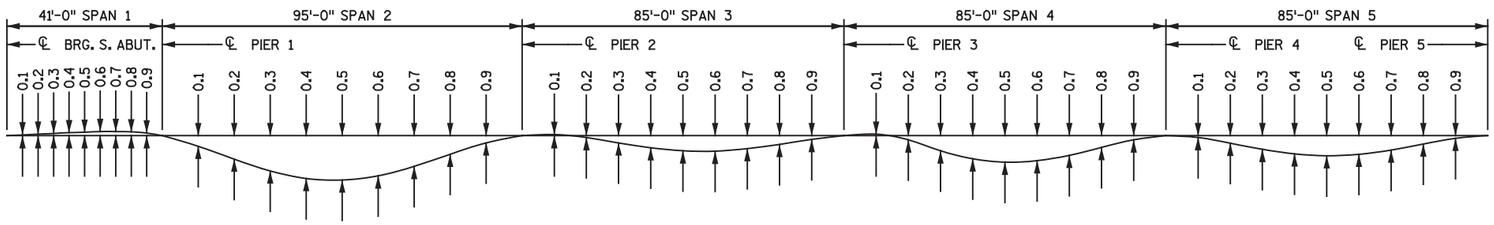
1228-25-70

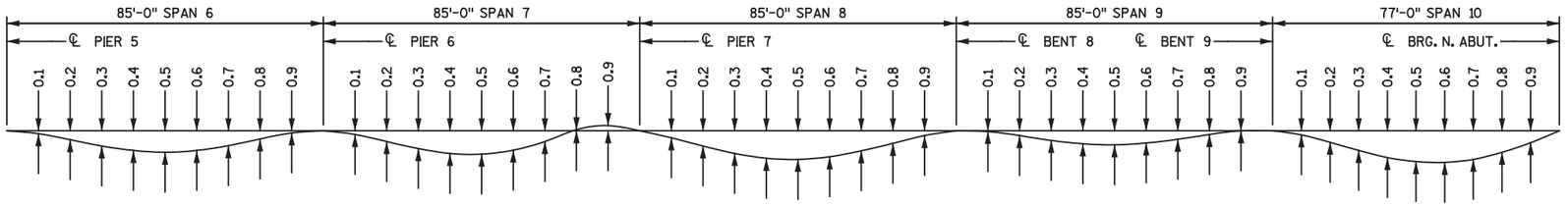
TOP OF DECK ELEVATIONS

POINT / GIRDER	℄ BRG. S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 2
W. EDGE	622.66	622.63	622.61	622.57	622.54	622.50	622.45	622.41	622.35	622.30	622.24	622.08	621.91	621.71	621.49	621.24	621.00	620.76	620.52	620.28	620.04
1	622.62	622.59	622.57	622.53	622.50	622.46	622.42	622.37	622.32	622.26	622.20	622.04	621.87	621.67	621.45	621.21	620.96	620.72	620.48	620.24	620.00
2	622.47	622.45	622.42	622.39	622.35	622.31	622.27	622.22	622.17	622.11	622.05	621.90	621.72	621.52	621.30	621.06	620.82	620.58	620.33	620.09	619.85
3	622.32	622.30	622.27	622.24	622.20	622.16	622.12	622.07	622.02	621.96	621.90	621.75	621.57	621.37	621.15	620.91	620.67	620.43	620.19	619.95	619.71
4	622.18	622.15	622.12	622.09	622.06	622.02	621.97	621.93	621.87	621.82	621.76	621.60	621.43	621.23	621.01	620.76	620.52	620.28	620.04	619.80	619.56
E. EDGE	622.14	622.11	622.09	622.05	622.02	621.98	621.93	621.89	621.83	621.78	621.72	621.56	621.39	621.19	620.97	620.72	620.48	620.24	620.00	619.76	619.52
POINT / GIRDER	PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 3	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 4
W. EDGE	620.04	619.82	619.61	619.39	619.18	618.96	618.75	618.53	618.32	618.10	617.88	617.67	617.45	617.24	617.02	616.81	616.59	616.38	616.16	615.94	615.73
1	620.00	619.78	619.57	619.35	619.14	618.92	618.71	618.49	618.28	618.06	617.84	617.63	617.41	617.20	616.98	616.77	616.55	616.34	616.12	615.90	615.69
2	619.85	619.64	619.42	619.21	618.99	618.78	618.56	618.34	618.13	617.91	617.70	617.48	617.27	617.05	616.84	616.62	616.40	616.19	615.97	615.76	615.54
3	619.71	619.49	619.28	619.06	618.84	618.63	618.41	618.20	617.98	617.77	617.55	617.34	617.12	616.90	616.69	616.47	616.26	616.04	615.83	615.61	615.40
4	619.56	619.34	619.13	618.91	618.70	618.48	618.27	618.05	617.83	617.62	617.40	617.19	616.97	616.76	616.54	616.33	616.11	615.89	615.68	615.46	615.25
E. EDGE	619.52	619.30	619.09	618.87	618.66	618.44	618.23	618.01	617.80	617.58	617.36	617.15	616.93	616.72	616.50	616.29	616.07	615.86	615.64	615.42	615.21
POINT / GIRDER	PIER 4	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 5	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 6
W. EDGE	615.73	615.51	615.30	615.08	614.87	614.65	614.44	614.22	614.00	613.79	613.57	613.36	613.14	612.93	612.71	612.50	612.28	612.06	611.85	611.63	611.42
1	615.69	615.47	615.26	615.04	614.83	614.61	614.40	614.18	613.96	613.75	613.53	613.32	613.10	612.89	612.67	612.46	612.24	612.02	611.81	611.59	611.38
2	615.54	615.33	615.11	614.90	614.68	614.46	614.25	614.03	613.82	613.60	613.39	613.17	612.96	612.74	612.52	612.31	612.09	611.88	611.66	611.45	611.23
3	615.40	615.18	614.96	614.75	614.53	614.32	614.10	613.89	613.67	613.46	613.24	613.02	612.81	612.59	612.38	612.16	611.95	611.73	611.52	611.30	611.08
4	615.25	615.03	614.82	614.60	614.39	614.17	613.95	613.74	613.52	613.31	613.09	612.88	612.66	612.45	612.23	612.01	611.80	611.58	611.37	611.15	610.94
E. EDGE	615.21	614.99	614.78	614.56	614.35	614.13	613.92	613.70	613.48	613.27	613.05	612.84	612.62	612.41	612.19	611.98	611.76	611.54	611.33	611.11	610.90
POINT / GIRDER	PIER 6	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 7	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	BENT 8
W. EDGE	611.42	611.20	610.99	610.77	610.56	610.34	610.12	609.91	609.69	609.48	609.26	609.05	608.83	608.62	608.40	608.18	607.97	607.75	607.54	607.32	607.11
1	611.38	611.16	610.95	610.73	610.52	610.30	610.08	609.87	609.65	609.44	609.22	609.01	608.79	608.58	608.36	608.14	607.93	607.71	607.50	607.28	607.07
2	611.23	611.02	610.80	610.58	610.37	610.15	609.94	609.72	609.51	609.29	609.08	608.86	608.64	608.43	608.21	608.00	607.78	607.57	607.35	607.14	606.92
3	611.08	610.87	610.65	610.44	610.22	610.01	609.79	609.58	609.36	609.14	608.93	608.71	608.50	608.28	608.07	607.85	607.64	607.42	607.20	606.99	606.77
4	610.94	610.72	610.51	610.29	610.07	609.86	609.64	609.43	609.21	609.00	608.78	608.57	608.35	608.13	607.92	607.70	607.49	607.27	607.06	606.84	606.63
E. EDGE	610.90	610.68	610.47	610.25	610.04	609.82	609.60	609.39	609.17	608.96	608.74	608.53	608.31	608.10	607.88	607.66	607.45	607.23	607.02	606.80	606.59
POINT / GIRDER	BENT 8	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	BENT 9	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. N. ABUT.
W. EDGE	607.11	606.89	606.68	606.46	606.24	606.03	605.81	605.60	605.38	605.17	604.95	604.76	604.56	604.36	604.17	603.97	603.78	603.58	603.39	603.19	603.00
1	607.07	606.85	606.64	606.42	606.20	605.99	605.77	605.56	605.34	605.13	604.91	604.72	604.52	604.33	604.13	603.93	603.74	603.54	603.35	603.15	602.96
2	606.92	606.70	606.49	606.27	606.06	605.84	605.63	605.41	605.19	604.98	604.76	604.57	604.37	604.18	603.98	603.79	603.59	603.40	603.20	603.01	602.81
3	606.77	606.56	606.34	606.13	605.91	605.69	605.48	605.26	605.05	604.83	604.62	604.42	604.23	604.03	603.84	603.64	603.45	603.25	603.06	602.86	602.66
4	606.63	606.41	606.19	605.98	605.76	605.55	605.33	605.12	604.90	604.69	604.47	604.27	604.08	603.88	603.69	603.49	603.30	603.10	602.91	602.71	602.52
E. EDGE	606.59	606.37	606.16	605.94	605.72	605.51	605.29	605.08	604.86	604.65	604.43	604.24	604.04	603.84	603.65	603.45	603.26	603.06	602.87	602.67	602.48

DEAD LOAD DEFLECTIONS

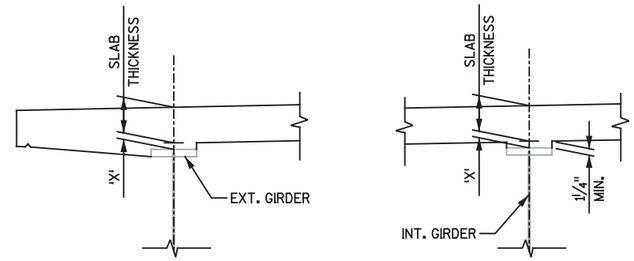
	CONCRETE DEAD LOAD DEFLECTIONS (FEET)										
		SPAN 1									
	℄ BRG. S. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 1
Girders 1, 4	0.000	-0.001	-0.003	-0.004	-0.006	-0.007	-0.008	-0.008	-0.007	-0.005	0.000
Girders 2, 3	0.000	-0.002	-0.004	-0.006	-0.008	-0.009	-0.011	-0.011	-0.010	-0.007	0.000
	SPAN 2										
	℄ PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 2
Girders 1, 4	0.000	0.021	0.047	0.070	0.085	0.088	0.079	0.060	0.036	0.014	0.000
Girders 2, 3	0.000	0.027	0.062	0.093	0.113	0.117	0.105	0.080	0.048	0.019	0.000
	SPAN 3										
	℄ PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 3
Girders 1, 4	0.000	-0.002	0.003	0.013	0.022	0.028	0.029	0.024	0.016	0.006	0.000
Girders 2, 3	0.000	-0.003	0.005	0.018	0.031	0.038	0.039	0.033	0.022	0.009	0.000
	SPAN 4										
	℄ PIER 3	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 4
Girders 1, 4	0.000	0.003	0.017	0.037	0.051	0.055	0.050	0.038	0.022	0.008	0.000
Girders 2, 3	0.000	-0.003	0.012	0.042	0.062	0.071	0.067	0.052	0.031	0.011	0.000
	SPAN 5										
	℄ PIER 4	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 5
Girders 1, 4	0.000	0.001	0.010	0.020	0.029	0.033	0.031	0.023	0.013	0.004	0.000
Girders 2, 3	0.000	0.005	0.020	0.036	0.048	0.053	0.050	0.038	0.022	0.007	0.000
	SPAN 6										
	℄ PIER 5	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 6
Girders 1, 4	0.000	0.004	0.014	0.024	0.032	0.034	0.030	0.022	0.011	0.002	0.000
Girders 2, 4	0.000	0.007	0.023	0.039	0.051	0.055	0.050	0.037	0.021	0.006	0.000
	SPAN 7										
	℄ PIER 6	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 7
Girders 1, 4	0.000	0.007	0.020	0.035	0.046	0.049	0.043	0.028	0.006	-0.005	0.000
Girders 2, 3	0.000	0.010	0.029	0.049	0.063	0.065	0.055	0.033	0.002	-0.011	0.000
	SPAN 8										
	℄ PIER 7	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ BENT 8
Girders 1, 4	0.000	0.013	0.030	0.045	0.054	0.055	0.050	0.038	0.023	0.009	0.000
Girders 2, 4	0.000	0.017	0.038	0.056	0.069	0.072	0.066	0.051	0.032	0.012	0.000
	SPAN 9										
	℄ BENT 8	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ BENT 9
Girders 1, 4	0.000	0.000	0.006	0.014	0.021	0.023	0.020	0.013	0.004	-0.001	0.000
Girders 2, 3	0.000	0.003	0.014	0.027	0.037	0.039	0.034	0.023	0.010	0.000	0.000
	SPAN 10										℄ BRG. N. ABUT.
	℄ BENT 9	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
Girders 1, 4	0.000	0.009	0.024	0.040	0.055	0.064	0.066	0.059	0.045	0.024	0.000
Girders 2, 3	0.000	0.011	0.030	0.052	0.071	0.083	0.085	0.077	0.058	0.031	0.000





DEFLECTION DIAGRAM

SEE TABLE FOR DEAD LOAD DEFLECTIONS AT TENTH POINTS



HAUNCH DETAIL

NOTES

TO DETERMINE 'X':
ELEVATIONS OF THE TOP FLANGES, TOP OF SPLICE PLATE, OR TOP OF COVER PLATES, WHICHEVER APPLIES, SHALL BE TAKEN AT ℄ OF BRGS. AND AT TENTH POINTS OF EACH SPAN, THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF STEEL ELEVATION
\+ DEFLECTION (CONCRETE ONLY)
\- SLAB THICKNESS

= CONCRETE HAUNCH HEIGHT 'X'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

DECK ELEVATIONS

SHEET 11 OF 19

525

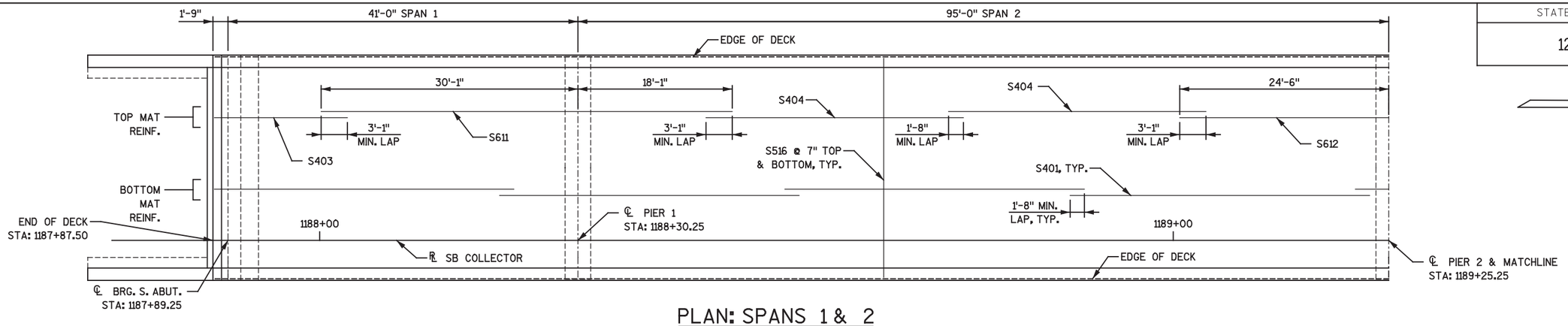
8

8

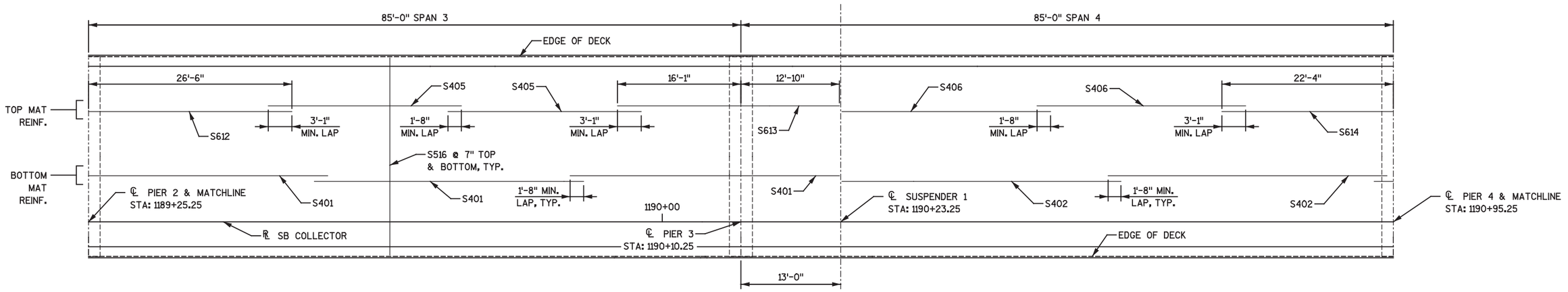
FILE NAME :I:\B-40-174_Deck Elevations.dgn
PLOT DATE :1/27/2014 12:02:43 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pltPEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

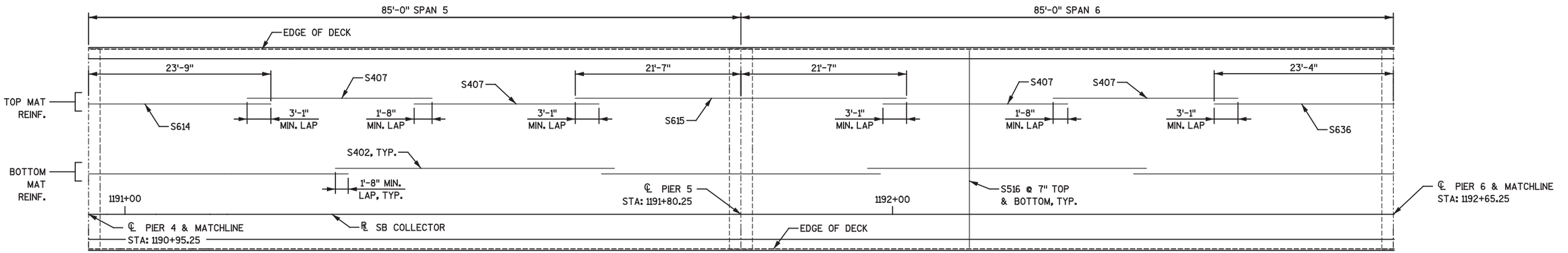
1228-25-70



PLAN: SPANS 1 & 2



PLAN: SPANS 3 & 4



PLAN: SPANS 5 & 6

NOTE: SEE SHEET 13 FOR SECTION THRU PARAPET ON BRIDGE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

SUPERSTRUCTURE SPANS 1-6

SHEET 12 OF 19

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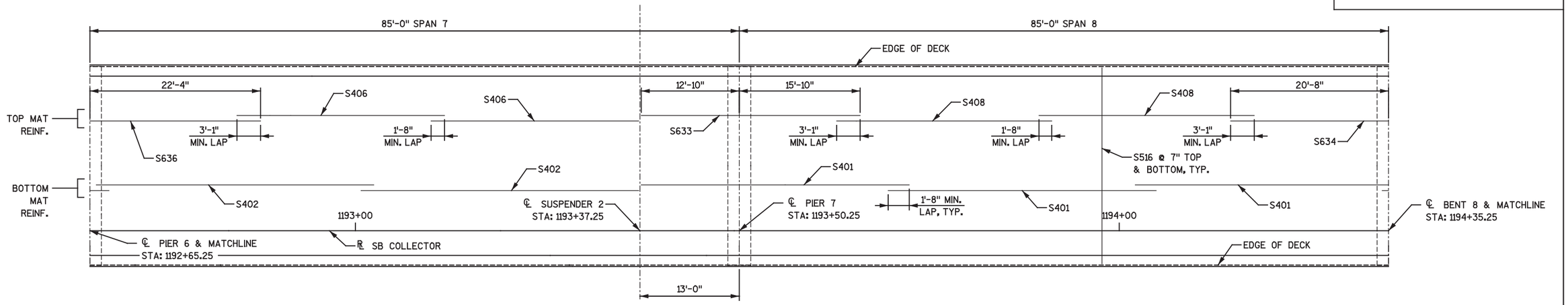
8

8

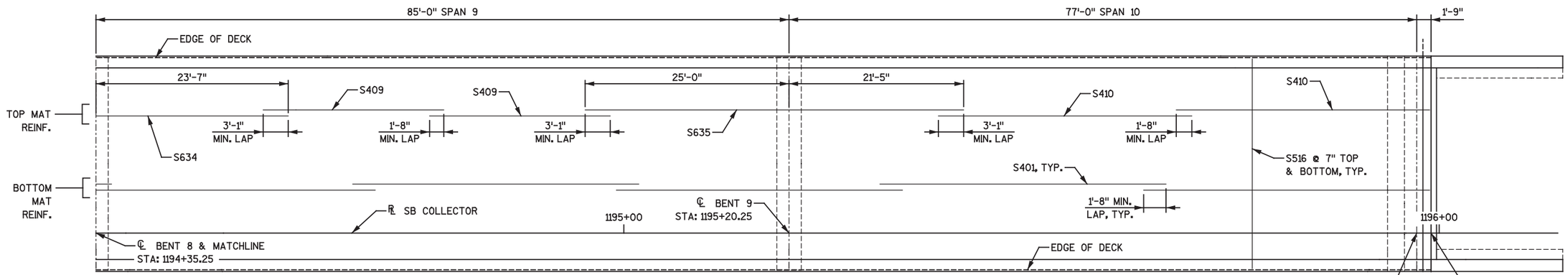
FILE NAME :12_B_40_174_Superstructure Spans 1-6.dgn
PLOT DATE :11/27/2014 12:02:43 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

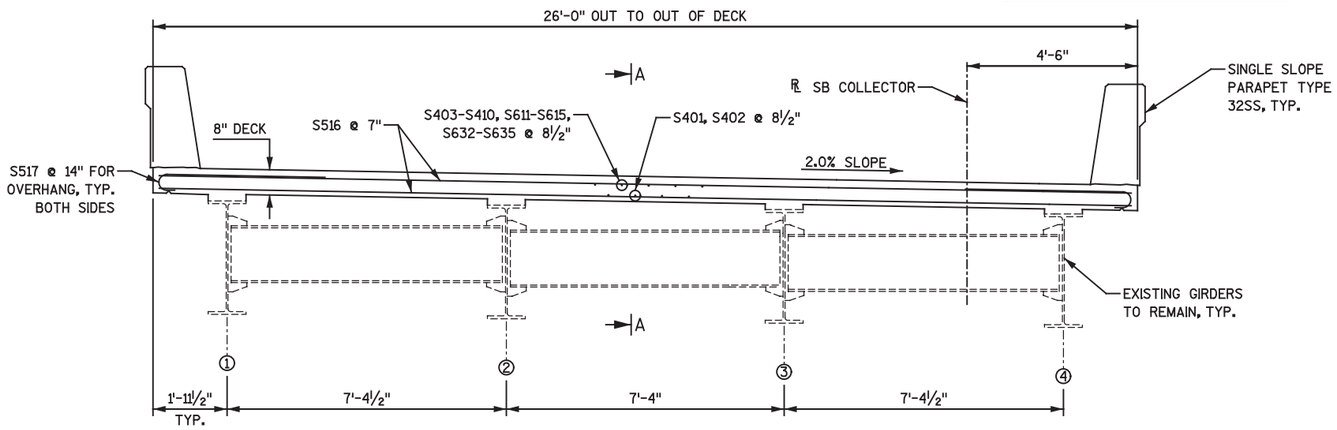
1228-25-70



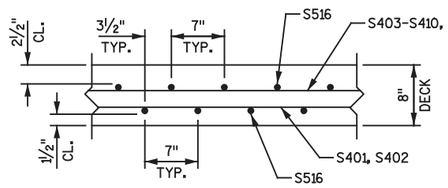
PLAN: SPANS 7 & 8



PLAN: SPANS 9 & 10



CROSS SECTION
(LOOKING NORTH)



SECTION A-A THRU DECK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

SUPERSTRUCTURE SPANS 7-10

SHEET 13 OF 19

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8

8

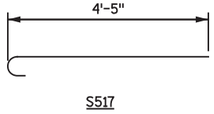
FILE NAME :13_B_40_174_Superstructure Spans 7-10.dgn
PLOT DATE :1/27/2014 12:02:44 PM PLOT BY : NicholasHornyak@L DRV :PDF_bw_HS.pltr PEN :CEL.TEXTSUB.TBL

STATE PROJECT NUMBER

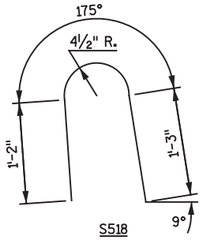
1228-25-70

BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	555	35'-1"			LONGIT. BOTTOM ABUT. TO HINGE 1, HINGE 2 TO ABUT.
S402	X	333	36'-4"			LONGIT. BOTTOM HINGE 1 TO HINGE 2
S403	X	38	15'-7"			LONGIT. TOP SPAN 1
S404	X	76	30'-2"			LONGIT. TOP SPAN 2
S405	X	76	25'-2"			LONGIT. TOP SPAN 3
S406	X	152	27'-2"			LONGIT. TOP SPAN 4, SPAN 7
S407	X	152	24'-1"			LONGIT. TOP SPAN 5, SPAN 6
S408	X	76	28'-2"			LONGIT. TOP SPAN 8
S409	X	76	22'-2"			LONGIT. TOP SPAN 9
S410	X	76	31'-0"			LONGIT. TOP SPAN 10
S611	X	38	48'-2"			LONGIT. CONTINUITY PIER 1
S612	X	38	51'-0"			LONGIT. CONTINUITY PIER 2
S613	X	38	28'-11"			LONGIT. CONTINUITY PIER 3
S614	X	38	46'-1"			LONGIT. CONTINUITY PIER 4
S615	X	38	43'-2"			LONGIT. CONTINUITY PIER 5
S516	X	2777	25'-8"			TRANS. TOP AND BOTTOM
S517	X	1388	5'-0"	X		TRANS. OVERHANG
S518	X	2430	4'-5"	X		PARAPET VERT. TIES
S519	X	2430	5'-0"	X		PARAPET VERT.
S520	X	288	37'-7"			PARAPET HORIZ.
S421	X	192	36'-4"			HAUNCH LONGIT.
S422	X	1745	2'-5"	X		HAUNCH HAT
S423	X	1183	2'-7"	X		HAUNCH HAT
S424	X	213	2'-9"	X		HAUNCH HAT
S425	X	95	2'-11"	X		HAUNCH HAT
S426	X	54	4'-2"	X		S & N ABUT. DIAPH. STIRRUPS
S627	X	30	6'-0"			S & N ABUT. DIAPH. BOTTOM HORIZ.
S428	X	12	6'-0"			S & N ABUT. DIAPH. TOP HORIZ.
S429	X	12	6'-0"			S & N ABUT. JOINT HOLD DOWN
S430	X	96	3'-8"	X		SUSPENDER DIAPH. STIRRUPS
S631	X	36	5'-0"			SUSPENDER DIAPH. BOTTOM HORIZ.
S432	X	24	5'-0"			SUSPENDER DIAPH. TOP HORIZ.
S633	X	38	28'-8"			LONGIT. CONTINUITY PIER 7
S634	X	38	44'-3"			LONGIT. CONTINUITY PIER 8
S635	X	38	46'-5"			LONGIT. CONTINUITY PIER 9
S636	X	38	45'-8"			LONGIT. CONTINUITY PIER 6
S437	X	24	5'-0"			SUSPENDER JOINT HOLD DOWN
S538	X	21	5'-0"			FLOOR DRAIN



S517



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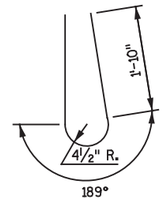

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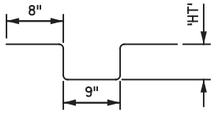
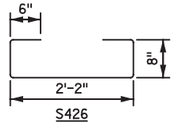
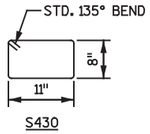


S422, S423, S424, S425

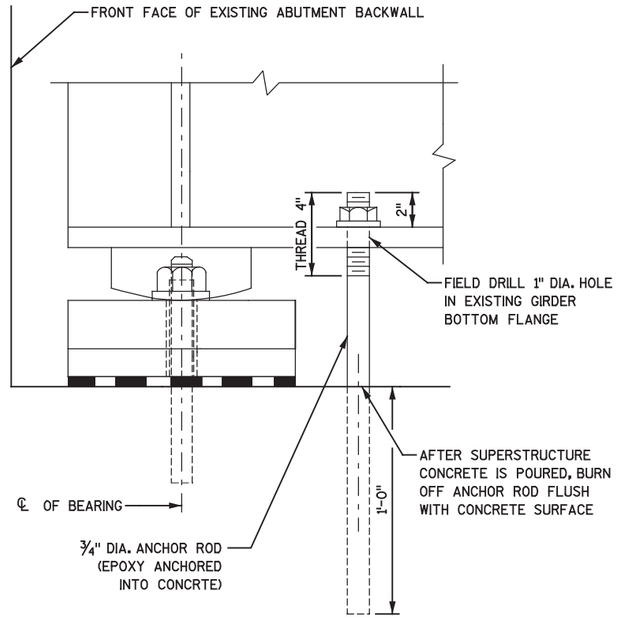
BAR MARK	'HT'
S422	4"
S423	5"
S424	6"
S425	7"



S426

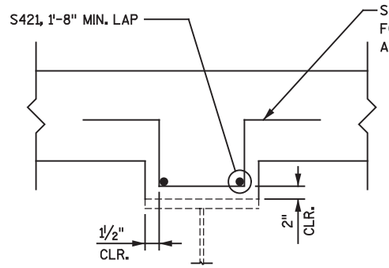


S430



TEMPORARY HOLD DOWN DEVICE

PLACE ONE ANCHOR ROD PER GIRDER AT ABUTMENT WHERE SLAB POUR TERMINATES. LOCATE 4" (NORMAL) OFF ℄ OF GIRDER. ANCHOR ROD, NUT, WASHER AND DRILLED HOLE IN GIRDER FLANGE SHALL BE PAID FOR AS "MASONRY ANCHORS TYPE S ¾-INCH". MINIMUM PULLOUT CAPACITY OF 27 KIPS.



HAUNCH DETAILS

HAUNCH HAT TABLE

GIRDER NO.	BAR MARK									
	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6	SPAN 7	SPAN 8	SPAN 9	SPAN 10
1	S424	SEE TABLE	S423	S423	S423	S423	S423	S423	S423	S423
2	S423	SEE TABLE	S422	S422	S423	S423	S422	S423	S422	S423
3	S423	SEE TABLE	S422	S422	S422	S422	S422	S422	S422	S422
4	S422	SEE TABLE	S422	S422	S422	S422	S422	S422	S422	S422

HAUNCH HAT TABLE SPAN 2

GIRDER NO.	BAR MARK				
	0'-19'	19'-38'	38'-57'	57'-76'	76'-95'
1	S424	S425	S425	S424	S424
2	S424	S425	S425	S424	S423
3	S424	S425	S424	S424	S423
4	S423	S424	S423	S423	S422

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

SUPERSTRUCTURE DETAILS

SHEET 14 OF 19

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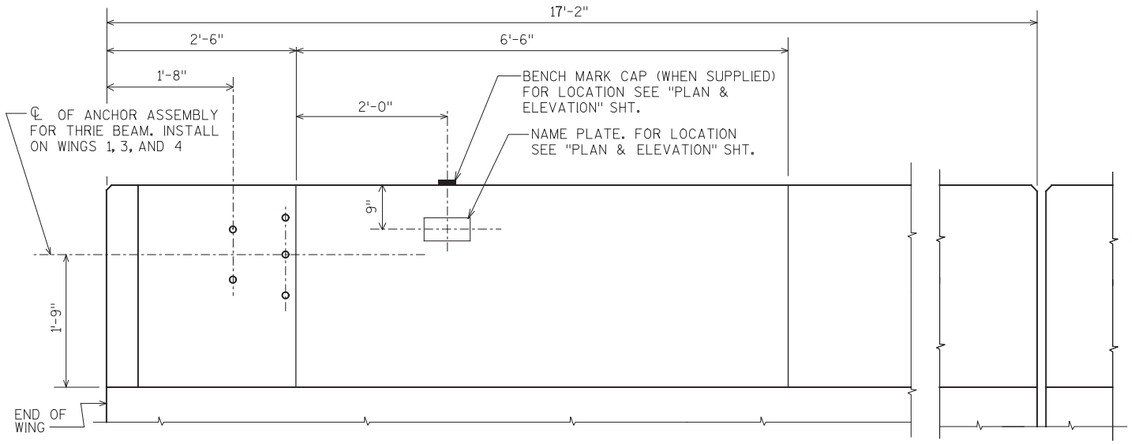
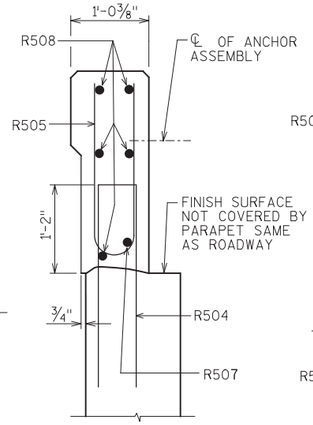
FILE NAME :14.B-40-174_Superstructure Details.dgn
PLOT DATE :1/27/2014 12:02:44 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pltt PEN :CELTEXTSUB.TBL

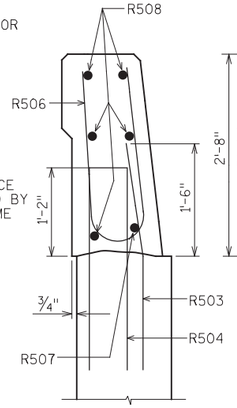
STATE PROJECT NUMBER
1228-25-70



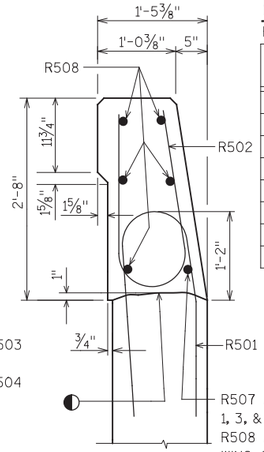
INSIDE ELEVATION



SECTION A



SECTION B



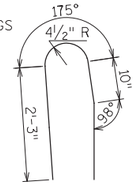
SECTION C

(FOLLOW SECTION C FOR LENGTH OF WINGWALL AT WING 2)

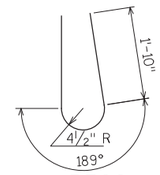
BILL OF BARS

FOR ABUTMENT PARAPETS

BAR MARK	WING 1	WING 2	WING 3	WING 4	LENGTH	BENT	COAT	LOCATION
R501	13	27	13	13	5'-10"	X	X	PARAPET VERT.
R502	13	27	13	13	5'-0"	X	X	PARAPET VERT.
R503	12	-	12	12	3'-0"	X	X	PARAPET VERT.
R504	17	-	17	17	5'-7"	X	X	PARAPET VERT.
R505	11	-	11	11	4'-9"	X	X	PARAPET VERT.
R506	6	-	6	6	4'-10"	X	X	PARAPET VERT.
R507	1	-	1	1	16'-9"	X	X	PARAPET HORIZ.
R508	5	6	5	5	16'-10"			PARAPET HORIZ.



R501



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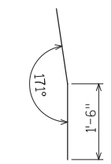
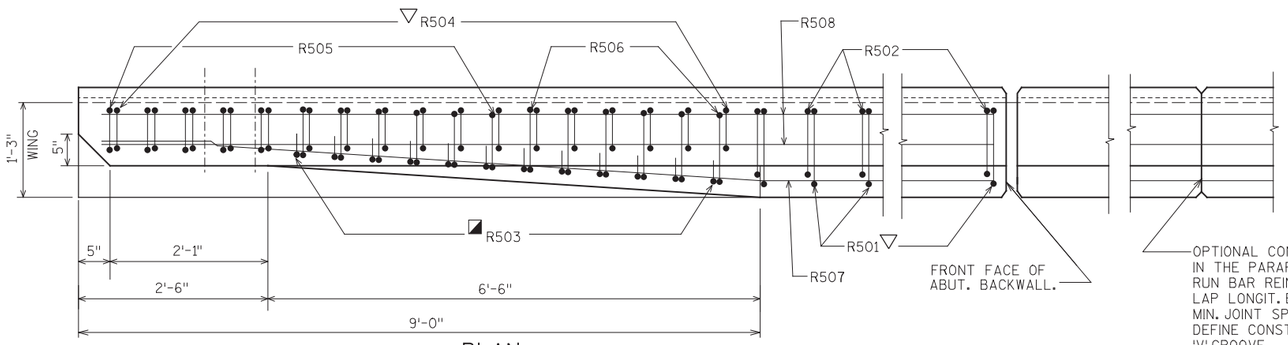


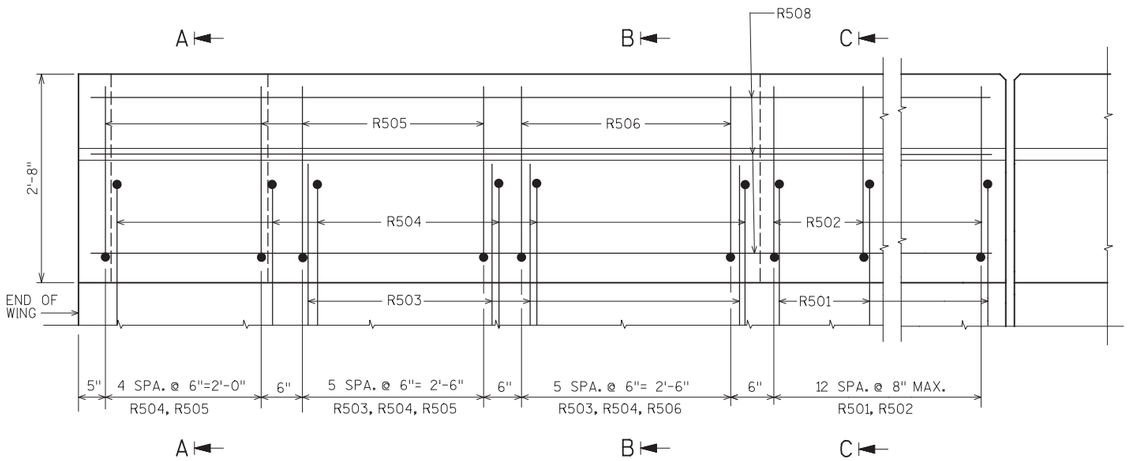
R503



PLAN

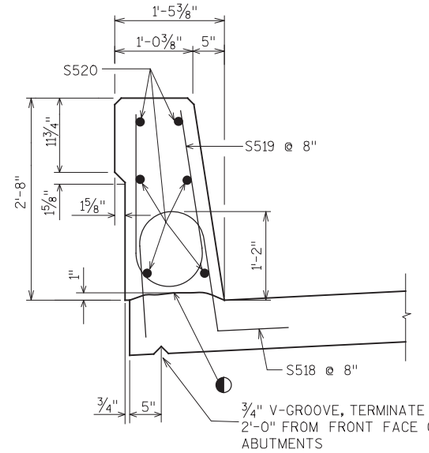
(TRANSITION SECTION AT WINGS 1, 3, AND 4 ONLY)

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.



OUTSIDE ELEVATION

(TRANSITION SECTION AT WINGS 1, 3, AND 4 ONLY)

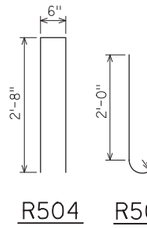


SECTION THRU PARAPET ON BRIDGE

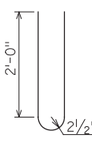
◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

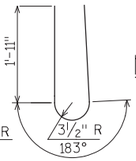
▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.



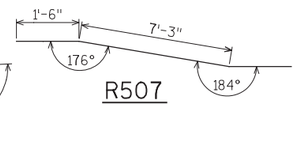
R504



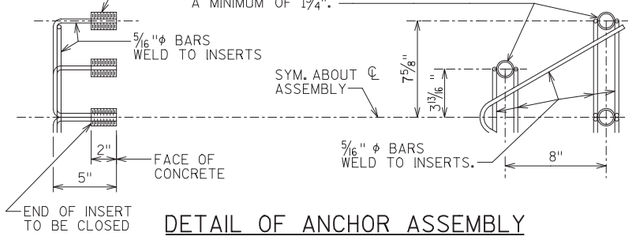
R505



R506



R507



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

SINGLE SLOPE PARAPET 32SS

SHEET 15 OF 19

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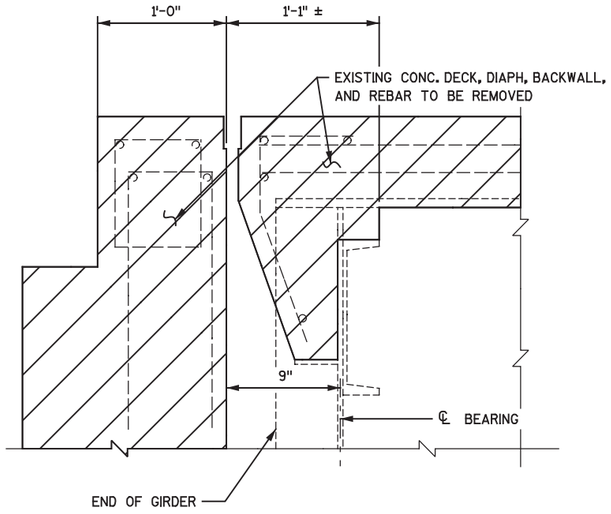
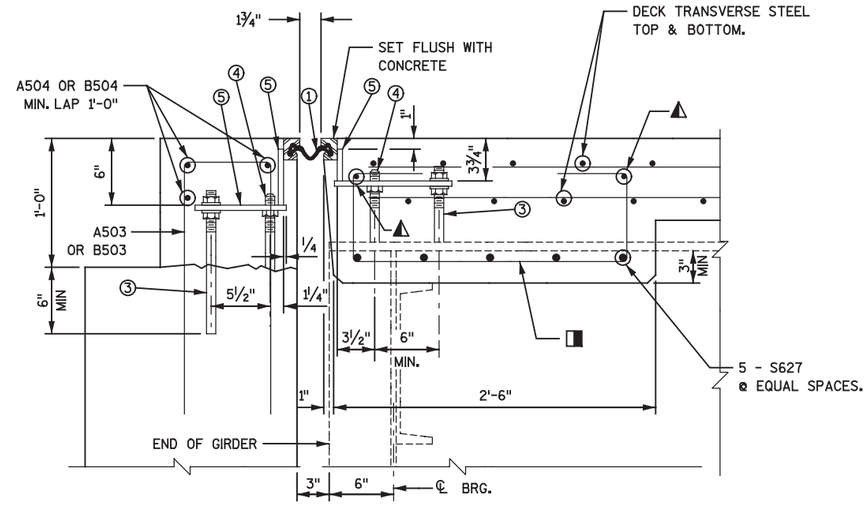
FILE NAME :15.B-40-174_Single Slope Parapet 32SS.dgn
PLOT DATE :1/27/2014 12:02:45 PM PLOT BY : NicholasHornyakv8i DRV :Pdf_bw_HS.pltPEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



JOINT REMOVAL
AT ABUTMENTS



SECTION THRU JOINT
AT ABUTMENTS

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.

② STUDS ⅝" ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & 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 TO ① AT 1'-6" CENTERS BETWEEN GIRDERS

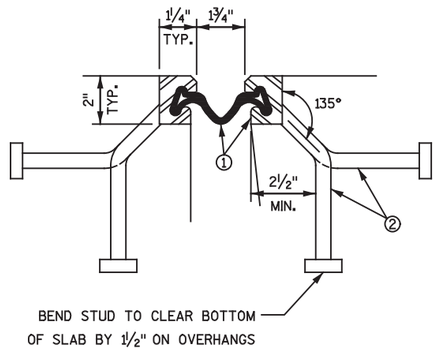
③ ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

④ ¾" ϕ THREADED ROD WITH NUT. TACK WELD NUT TO ⑤.

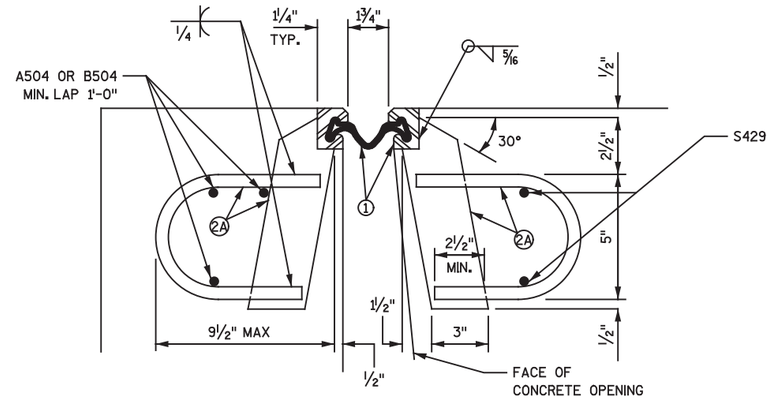
⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO ①. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR ③ & 1" ϕ HOLE FOR ④.

◭ S428, SAME LENGTH AS HORIZ. DIAPH. BARS AT BOTTOM OF DIAPHRAGM.

◨ S426 @ 9" O.C. BETWEEN TOP FLANGE OF GIRDERS.

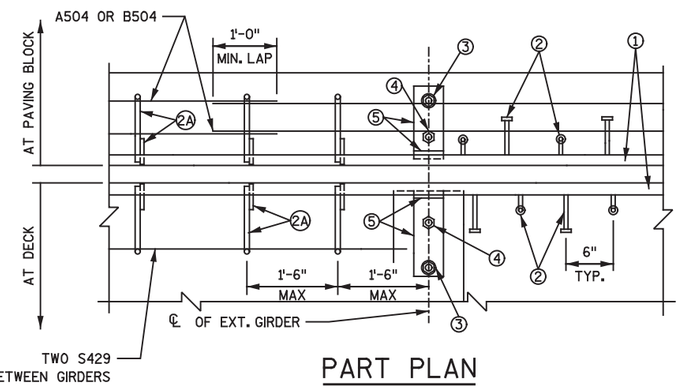


SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF DECK & AT PARAPETS

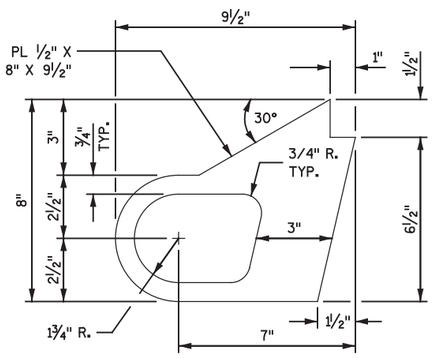


AT PAVING BLOCK AT DECK

SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN



ALTERNATE STRIP SEAL ANCHOR

EXPANSION JOINT NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION

SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION 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 WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-174".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY	PLANS CK'D.
MJH	RJW

STRIP SEAL EXPANSION JOINT AT ABUTMENTS

SHEET 16 OF 19

530

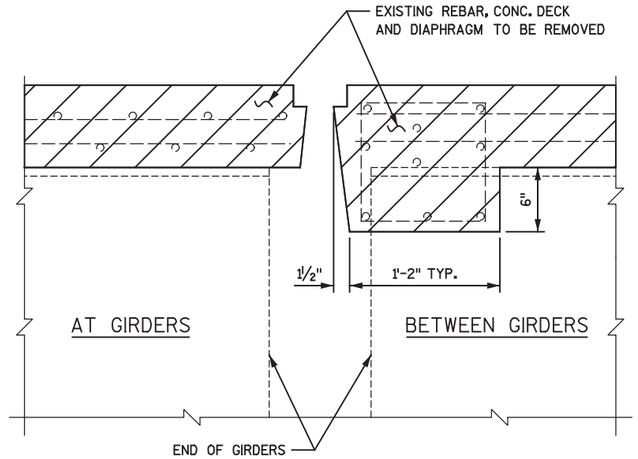
8

8

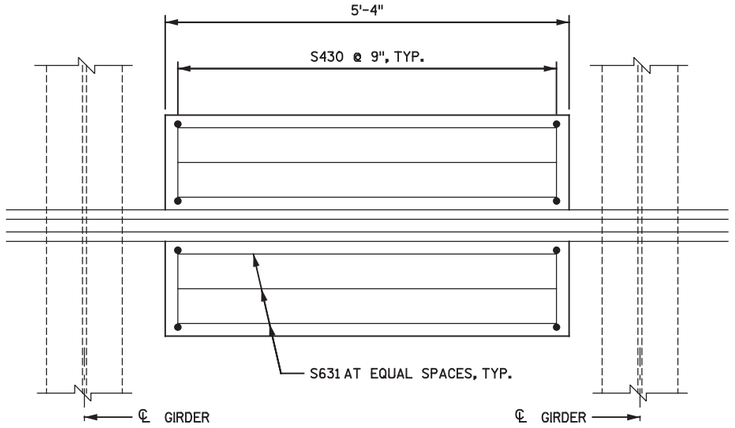
FILE NAME :16_B-40-174_Strip Seal Expansion Joint at Abutments.dgn
PLOT DATE :1/27/2014 12:02:46 PM PLOT BY : NicholasHornyak@t DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



JOINT REMOVAL
AT SUSPENDERS



SECTION A-A

LEGEND

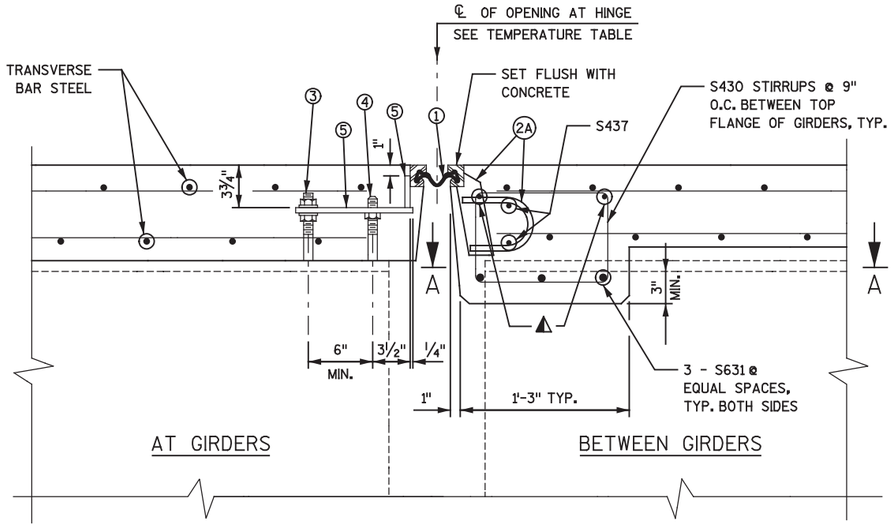
① NEOPRENE STRIP SEAL (5 - INCH) & STEEL EXTRUSIONS.

2A ½" THICK ANCHOR PLATE WITH ⅝" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO ① AT 1'-6" CENTERS BETWEEN GIRDERS. FOR DETAILS SEE SHEET 16.

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 WELD NUT TO ⑤.

⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO ①. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR ③ & 1" ϕ HOLE FOR ④.



SECTION THRU JOINT
AT SUSPENDERS

TEMPERATURE TABLE

Temp. °F	JOINT OPENING	
	SUSP. 1	SUSP. 2
85	1 1/4"	1 1/4"
75	1 5/8"	1 1/2"
65	1 7/8"	1 7/8"
55	2 1/4"	2 1/8"
45	2 1/2"	2 1/2"
35	2 3/4"	2 7/8"
25	3 1/8"	3 1/8"
15	3 3/8"	3 1/2"
5	3 3/4"	3 3/4"

EXPANSION JOINT NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION

SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION 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 WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-174".

SEE SHEET 16 FOR STRIP SEAL SECTION DETAILS SHOWING THE SECTION THRU JOINT AT THE EXTERIOR GIRDER TO EDGE OF DECK, THE SECTION THRU JOINT AT THE ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS, A PARTIAL PLAN VIEW, AND THE ALTERNATE STRIP SEAL ANCHOR.

⚠ S432, SAME LENGTH AS HORIZ. DIAPH. BARS AT BOTTOM OF DIAPHRAGM, TYP. BOTH SIDES.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

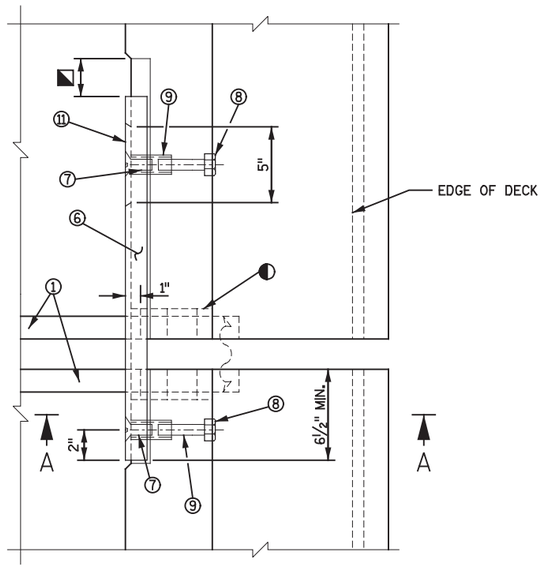
STRIP SEAL EXPANSION JOINT AT SUSPENDERS

SHEET 17 OF 19

531

FILE NAME :I:7_B-40-174_Strip Seal Expansion Joint at Suspenders.dgn
PLOT DATE :1/27/2014 12:02:46 PM PLOT BY : Nicholas Morrow DRV :PDF_BW_HS.pltPEN :CEL.TEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



PLAN AT PARAPET

SINGLE SLOPE PARAPET

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.

② STUDS ⅝" ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.

⑥ GALVANIZED PLATE ⅜" X 10½" X 2'-2" LONG WITH HOLES FOR ⑦. BEND AS SHOWN.

⑦ ¾" ϕ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

⑧ ¾" ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

⑨ ¾" ϕ X 2¼" GALVANIZED THREADED COUPLING.

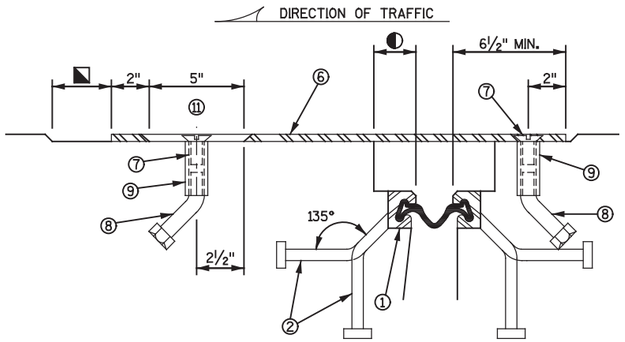
⑪ 1" X 5" SLOTTED COUNTERSUNK HOLE FOR ⑦ SLOT PARALLEL TO DIRECTION OF MOVEMENT.

EXPANSION JOINT NOTES

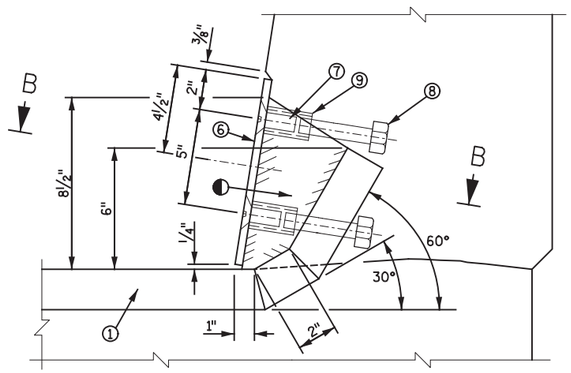
SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM ⑧ AND ⑨ SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

INSTALLATION OF ALL MATERIAL AND HARDWARE INCLUDED IN THE EXPANSION JOINT ASSEMBLIES AT THE PARAPET WILL BE INCLUDED IN THE BID ITEM "EXPANSION DEVICE B-40-174".

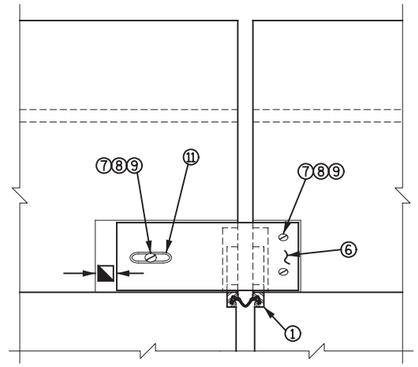


SECTION B-B



SECTION A-A

SINGLE SLOPE PARAPET



VIEW OF PARAPET PLATES FROM ROADWAY

SINGLE SLOPE PARAPET

◐ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING

◪ JOINT OPENING DIM. PLUS ½"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY	MJH	PLANS CK'D.	RJW

STRIP SEAL DETAILS AT PARAPETS

SHEET 18 OF 19

532

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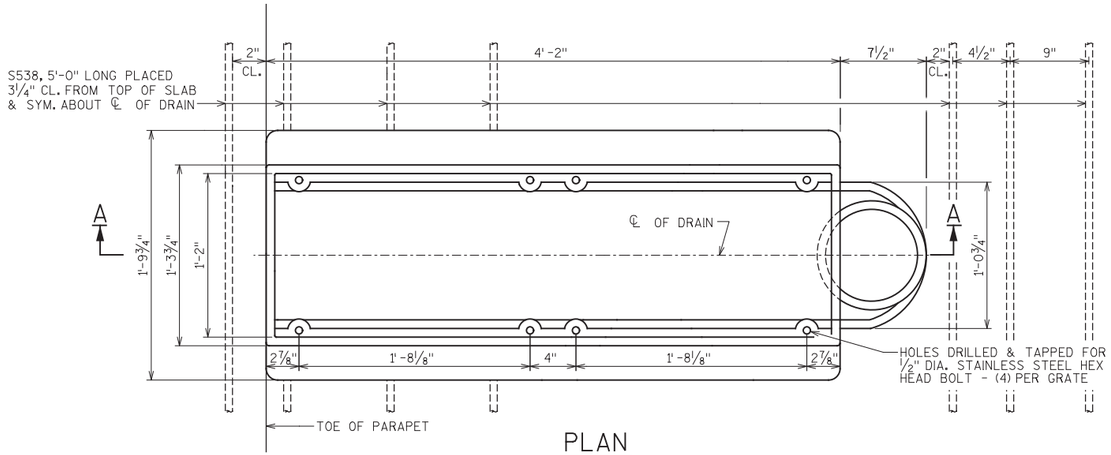
8

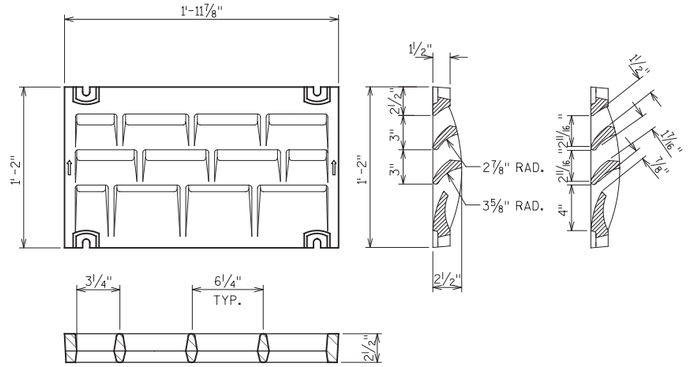
FILE NAME :18_B-40-174_Strip Seal Details at Parapets.dgn
PLOT DATE :1/27/2014 12:02:47 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



PLAN



GRATE CASTING DETAILS

ATTACH GRATES TO FRAME FOR SHIPMENT

GENERAL NOTES

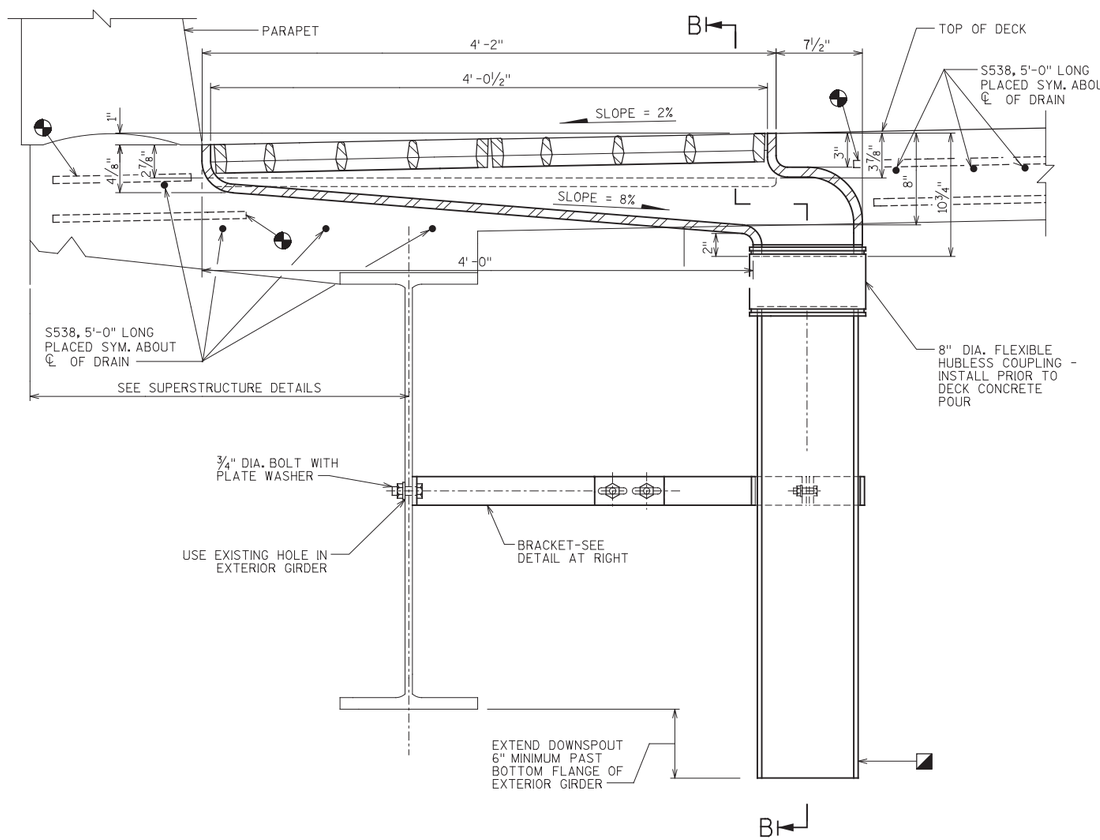
ALL MATERIAL FOR TYPE "WF" CASTING AND 8" DIA. CONNECTION PIPE, EXCLUDING GRATE HOLD DOWN SCREWS, SHALL BE GRAY IRON CONFORMING TO ASTM A48, CLASS 30.

MATERIAL FOR BRACKETS SHALL CONFORM TO ASTM A36.

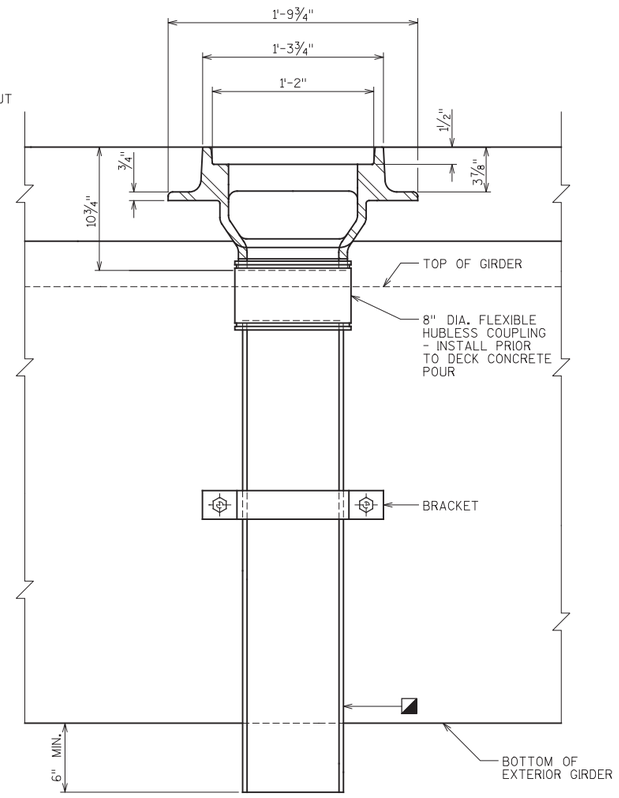
THE CONTRACTOR MAY PROPOSE AN ALTERNATE TYPE OF BRACKET. THE PROPOSED ALTERNATE DETAILS SHALL BE SUBMITTED AND SUBJECT TO THE APPROVAL OF THE ENGINEER.

◪ 8" DIA. DOWNSPOUTS SHALL BE REINFORCED THERMOSETTING RESIN PIPE CONFORMING TO SECTION 514 OF THE STANDARD SPECIFICATIONS.

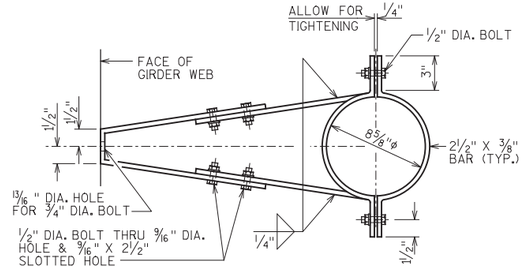
◔ TRANSVERSE & LONGITUDINAL SLAB BAR REINFORCEMENT TO BE CUT A MAXIMUM OF 1" CLEAR FROM DRAIN FRAME. DISPLACE BARS WHERE POSSIBLE.



SECTION A-A



SECTION B-B



BRACKET DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-174

DRAWN BY MJH | PLANS CK'D. RJW

FLOOR DRAIN TYPE 'WF'

SHEET 19 OF 19

533

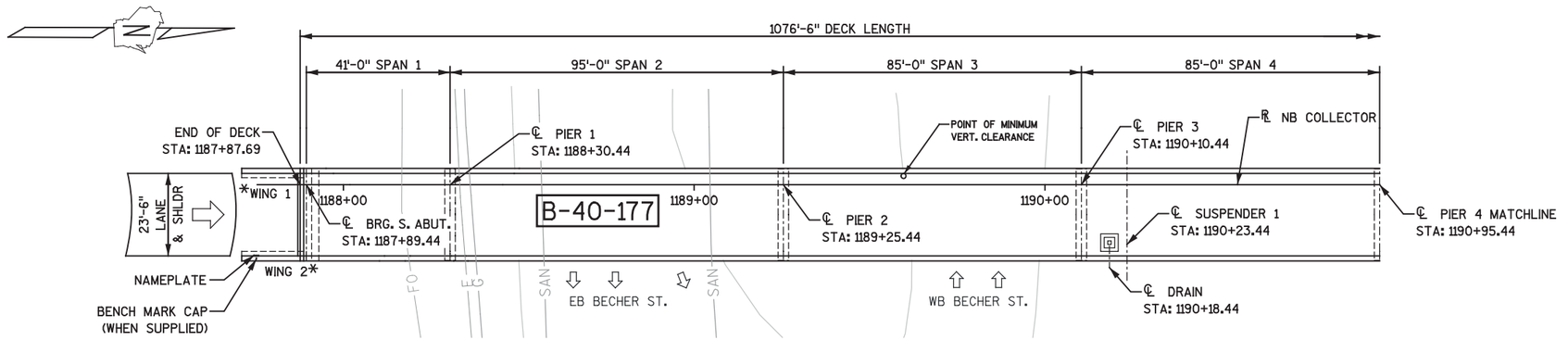
8

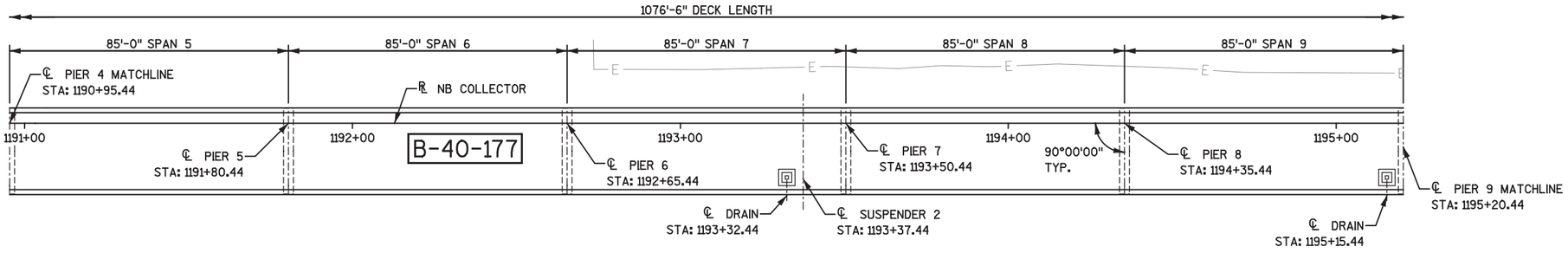
8

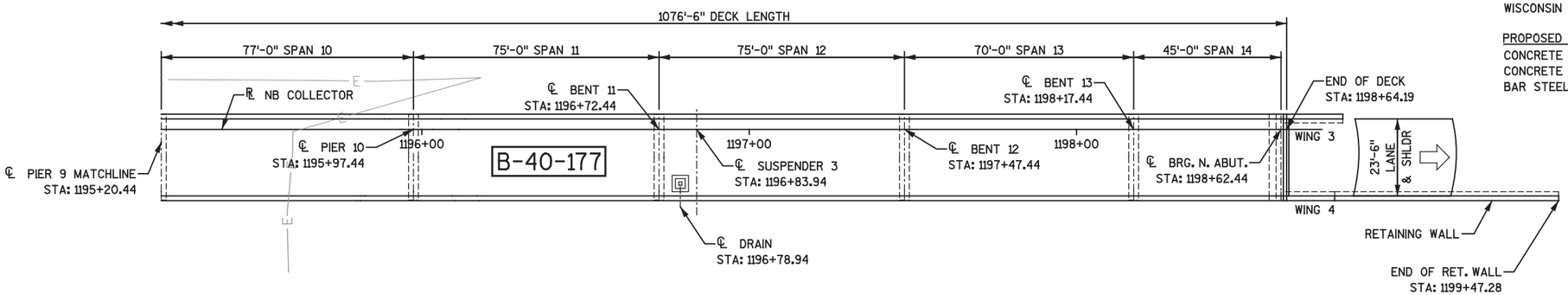
FILE NAME :I:\B-40-174_Floor Drain Type 'WF'.dgn
PLOT DATE :11/27/2014 12:02:47 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pltPEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70







PLAN B-40-177

GENERAL NOTES

SEE SHEET 2 FOR GENERAL NOTES.

TRAFFIC DATA

NB COLLECTOR
A.D.T. (2035) = 8,200

LIST OF DRAWINGS

1. GENERAL PLAN
2. ELEVATION
3. CROSS SECTION & QUANTITIES
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. NORTH ABUTMENT WING 4 DETAILS
9. ELASTOMERIC EXPANSION BEARINGS
10. FIXED BEARING DETAILS
11. TYPE 'A-T' EXPANSION BEARINGS
12. DECK ELEVATIONS
13. DEAD LOAD DEFLECTIONS
14. SUPERSTRUCTURE SPANS 1-6
15. SUPERSTRUCTURE SPANS 7-12
16. SUPERSTRUCTURE SPANS 13-14
17. SUPERSTRUCTURE DETAILS
18. SINGLE SLOPE PARAPET 32SS
19. STRIP SEAL EXPANSION JOINT AT ABUTMENTS
20. STRIP SEAL EXPANSION JOINT AT SUSPENDERS
21. STRIP SEAL DETAILS AT PARAPETS
22. FLOOR DRAIN TYPE 'WF'

* ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD

DESIGN DATA

LIVE LOAD:	
INVENTORY RATING	HS-19
OPERATIONAL RATING	HS-31
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV)	250 KIPS

PROPOSED ULTIMATE DESIGN STRESSES:	
CONCRETE SUPERSTRUCTURE	f'c = 4,000 P.S.I.
CONCRETE SUBSTRUCTURE	f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.

WISCONSIN
STEVEN J. MILLER
36937
MILWAUKEE, WI
PROFESSIONAL ENGINEER
Steven J. Miller
1/31/2014

SE REGION CONTACT:
JOE GALLAMORE (262) 548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
NICHOLAS HORNYAK (414) 282-6905

NO.	DATE	REVISION	BY

COLLINS ENGINEERS INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher 2/10/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-177

NB COLLECTOR OVER W. BECHER ST.

COUNTY	MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~	MILWAUKEE
DESIGN SPEC.	REHABILITATION N/A		
DESIGNED BY	NJH	DESIGN CK'D.	RJW
DRAWN BY	MJH	PLANS CK'D.	RJW

GENERAL PLAN

SHEET 1 OF 22

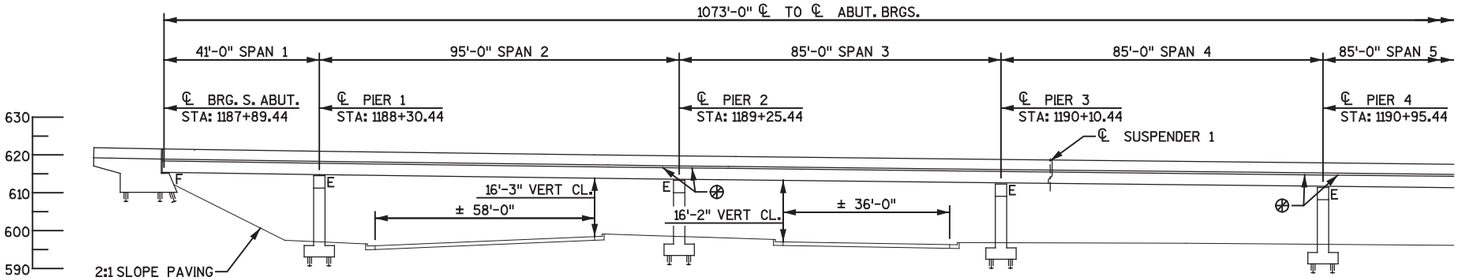
534

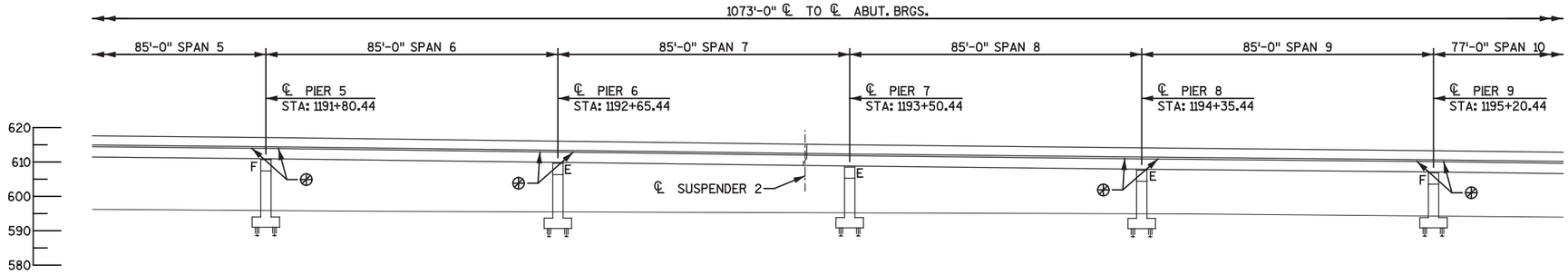
8

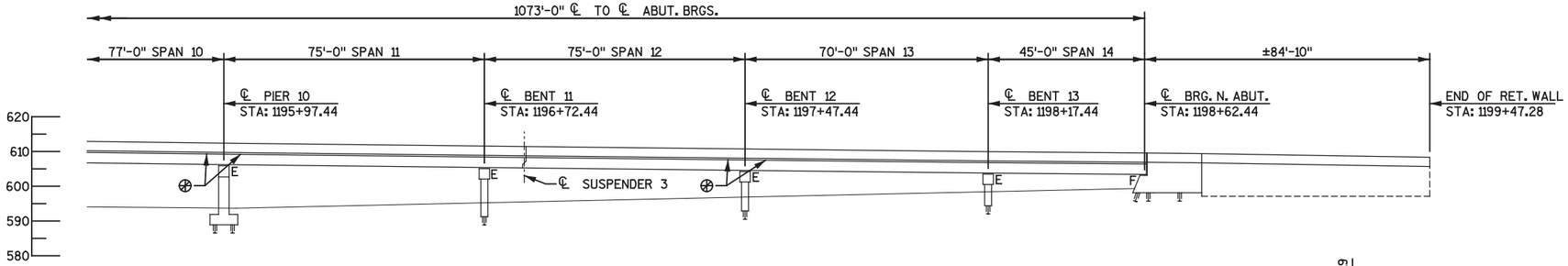
FILE NAME :01_B_40_177_General Plan.dgn
PLOT DATE :1/31/2014 3:54:58 PM PLOT BY : NicholasHornyakv8i DRV :Pdf_bw_HS.plt PEN :CEL.TEXTSUB.TBL

STATE PROJECT NUMBER

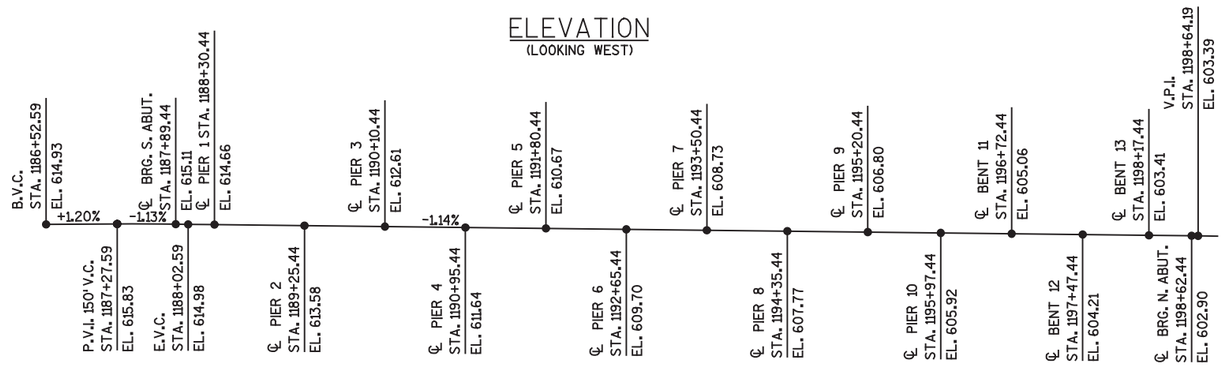
1228-25-70







ELEVATION
(LOOKING WEST)



PROFILE GRADE LINE NB COLLECTOR

GENERAL NOTES

THE PROPOSED WORK INCLUDES CLEANING AND PAINTING OF TOPS OF GIRDERS, REMOVAL AND REPLACEMENT OF THE DECK, ABUTMENT BACKWALLS, AND EXPANSION BEARINGS.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST DIGIT OF A THREE DIGIT BAR AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

UTILIZE EXISTING BAR STEEL WHERE SHOWN AND EXTEND EXISTING BAR STEEL REINFORCEMENT 24 BAR DIAMETERS INTO NEW CONSTRUCTION, UNLESS SPECIFIED OTHERWISE.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M153, TYPES I, II, OR III OR M213.

AT ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL CONTROLLED LOW STRENGTH.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWING. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR.

ORIGINAL PLANS AND OVERLAY PLANS OF EXISTING BRIDGE B-40-177 ARE AVAILABLE AT THE WISDOT SOUTHEAST REGION OFFICE. REFERENCE THOSE PLANS FOR THE DESIGN OF SLAB OVERHANG SHORING AND TEMPORARY BRACING DURING CONSTRUCTION.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF SLAB AND TO THE TOP AND ROADWAY FACE OF THE PARAPET.

THE MINIMUM CONCRETE HAUNCH SHALL BE 2" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 3¼" WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

⊛ PERFORM MAGNETIC PARTICLE TESTING AND ULTRASONIC IMPACT TREATMENT AT TOP COVER PLATE END WELD LOCATIONS:
PIER 2: GIRDERS 1 THRU 4
PIER 4: GIRDERS 1 AND 4
PIER 5: GIRDERS 1 AND 4
PIER 6: GIRDERS 1 AND 4
PIER 8: GIRDERS 1 AND 4
PIER 9: GIRDERS 1 THRU 4
PIER 10: GIRDERS 1 THRU 4
BENT 12: GIRDERS 1 THRU 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

ELEVATION

SHEET 2 OF 22

535

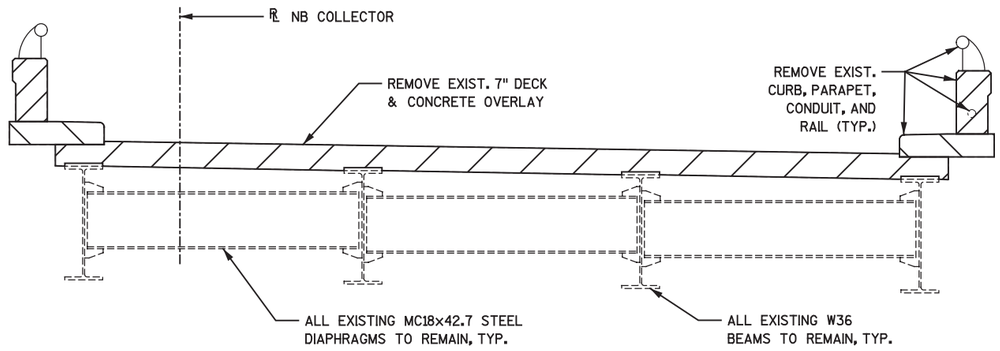
8

8

FILE NAME :02_B_40_177_Elevation.dgn
PLOT DATE :1/31/2014 3:54:58 PM PLOT BY : NicholasHornyak@8 DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

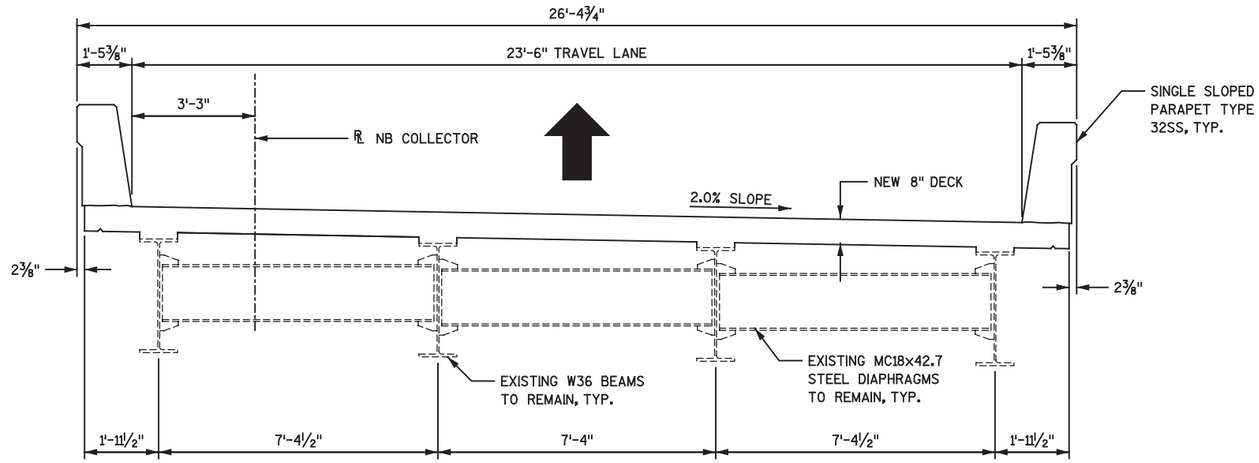
STATE PROJECT NUMBER

1228-25-70



EXISTING CROSS SECTION THRU ROADWAY

(LOOKING NORTH)



PROPOSED CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

▨ DENOTES REMOVAL LIMITS.

TOTAL ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER	S. ABUT	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	BENT 11	BENT 12	BENT 13	N. ABUT	TOTAL
203.0200.0006	REMOVING OLD STRUCTURE STA 1187+88	LS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
203.0210.S.0006	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-177	LS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
203.0225.S.0006	DEBRIS CONTAINMENT B-40-177	LS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
206.1000.0006	EXCAVATION FOR STRUCTURES BRIDGES B-40-177	LS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	29	59
502.0100	CONCRETE MASONRY BRIDGES	CY	944	12	-	-	-	-	-	-	-	-	-	-	-	-	-	12	968
502.3100.0006	EXPANSION DEVICE B-40-177	LS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	3,730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,730
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	-	84	-	-	-	-	-	-	-	-	-	-	-	-	-	94	178
502.6110	MASONRY ANCHORS TYPE S 3/4-INCH	EACH	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	246,300	1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	2,240	250,040
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	-	-	4	4	-	4	-	4	4	4	-	-	-	4	4	-	32
506.5000.0006	BEARING ASSEMBLIES FIXED B-40-177	EACH	-	4	-	-	-	-	4	-	-	-	4	-	-	-	-	4	16
506.6000.0002	BEARING ASSEMBLIES EXPANSION B-40-177	EACH	-	-	-	-	4	-	-	-	-	-	-	4	4	-	-	-	12
506.7050.S.0006	REMOVING BEARINGS B-40-177	EACH	-	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	60
506.7060.S.0006	BRIDGE JACKING B-40-177	LS	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
514.0450	FLOOR DRAINS TYPE WF	EACH	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
514.2608	DOWNSPOUT 8-INCH	LF	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	9	17
517.0900.S.0005	PREPARATION AND COATING OF TOP FLANGES B-40-177	LS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
SPV.0060.4001	ULTRASONIC IMPACT TREATMENT PROCEDURE	EACH	-	-	-	8	-	4	4	4	-	4	8	8	-	8	-	-	48
SPV.0060.4002	MAGNETIC PARTICLE TESTING PROCEDURE	EACH	-	-	-	8	-	4	4	4	-	4	8	8	-	8	-	-	48
	NON-BID ITEMS																		
	FILLER	SIZE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1/2" & 3/4"
	NAME PLATE	EACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

ALL ITEMS ARE CATEGORY 2050

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

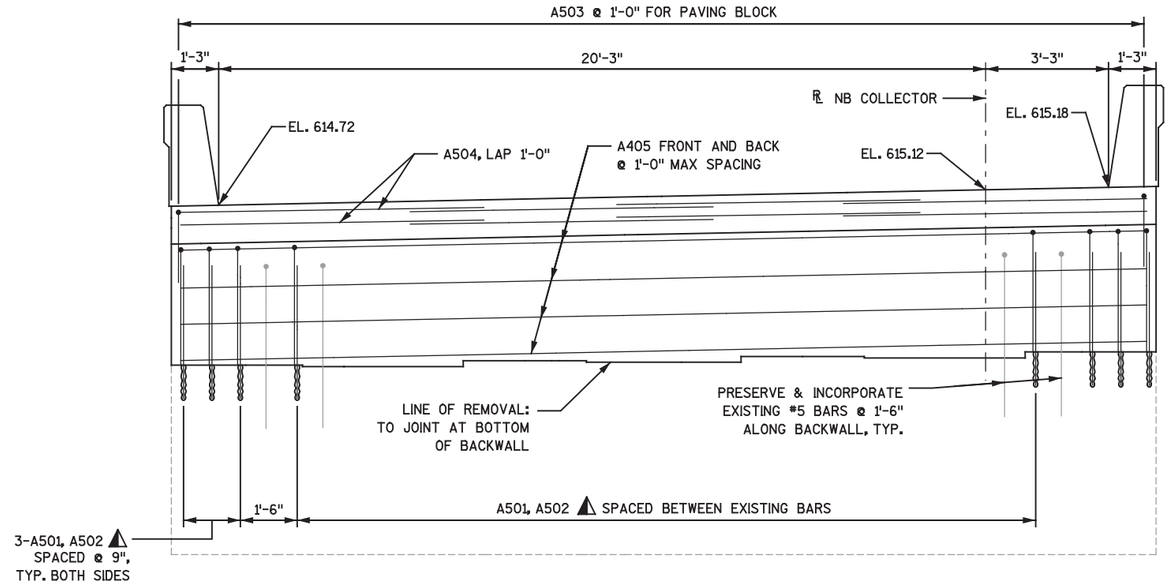
CROSS SECTION & QUANTITIES

SHEET 3 OF 22

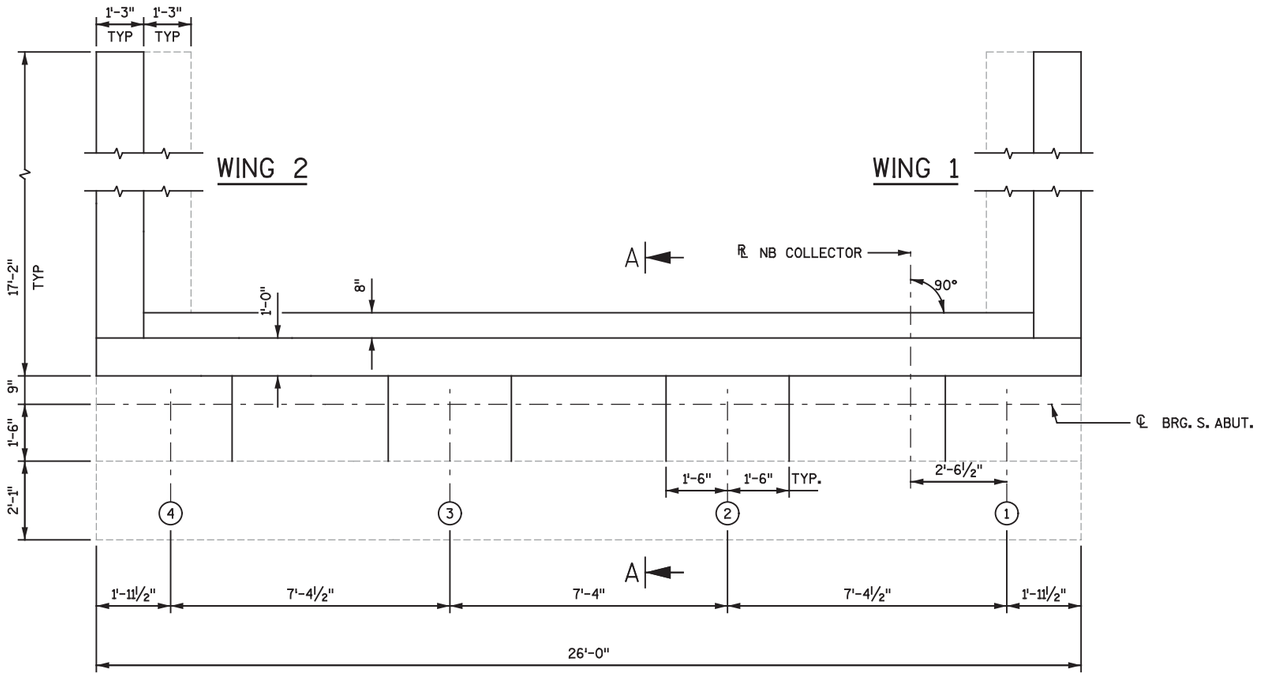
536

FILE NAME :03_B_40_177_Cross Section & Quantities.dgn
PLOT DATE :1/31/2014 3:54:59 PM PLOT BY : NicholasHornyak@L DRV :PDF_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



ELEVATION
(LOOKING SOUTH)



PLAN

⚠ MASONRY ANCHORS TYPE 'L'.
EPOXY ANCHORED, EMBED 11".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

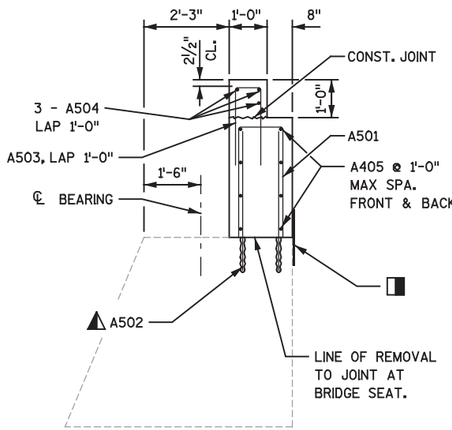
SOUTH ABUTMENT

SHEET 4 OF 22
537

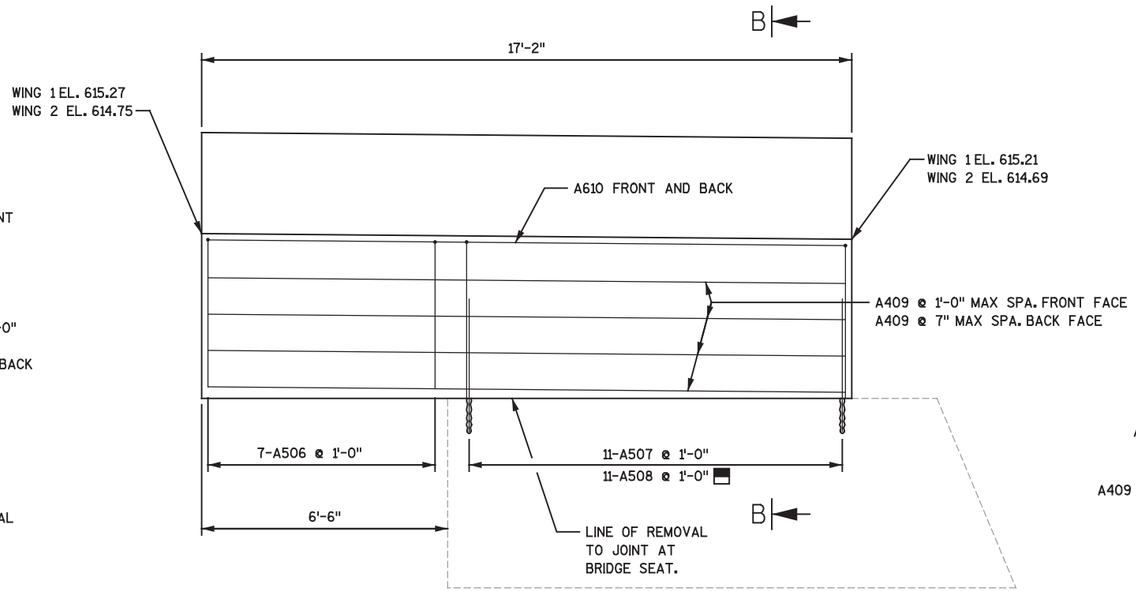
FILE NAME :04_B-40-177_South Abutment.dgn
PLOT DATE :1/31/2014 3:55:00 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

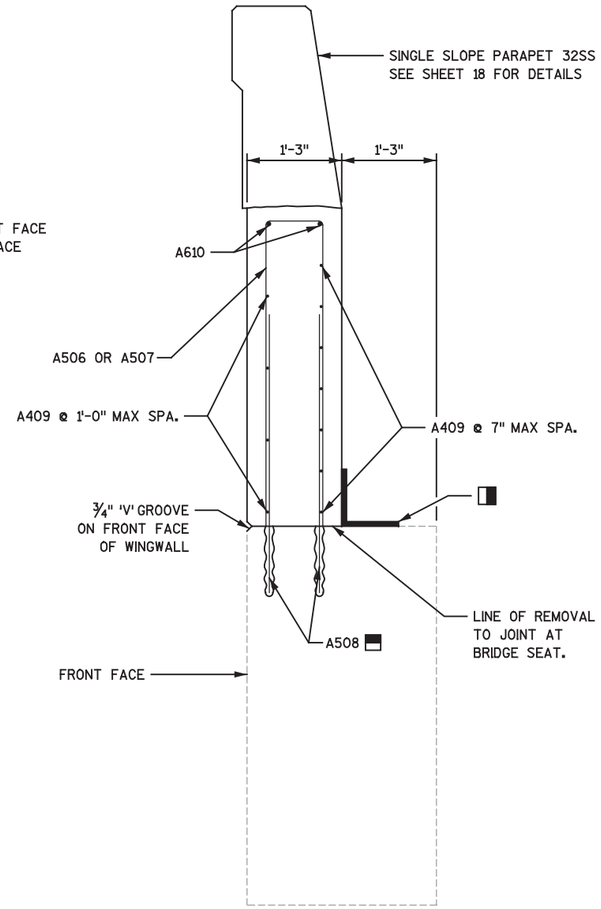


SECTION A-A



SOUTH ABUTMENT WING 2

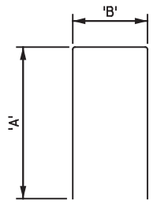
(WING 1 OPPOSITE HAND)



SECTION B-B

BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	20	7'-1"	X		BACKWALL VERT.
A502	X	40	3'-9"			BACKWALL VERT. ANCHORS ◭
A503	X	27	4'-5"	X		PAVING NOTCH VERT.
A504	X	12	7'-2"			PAVING NOTCH HORIZ.
A405	X	8	25'-8"			BACKWALL HORIZ.
A506	X	14	8'-6"	X		WINGWALL VERT.
A507	X	22	8'-8"	X		WINGWALL VERT.
A508	X	44	3'-8"			WINGWALL VERT. ANCHORS ⬒
A409	X	22	16'-10"			WINGWALL HORIZ.
A610	X	4	16'-10"			WINGWALL HORIZ. TOP



A501, A503, A506, A507

BAR MARK	DIM. 'A'	DIM. 'B'
A501	3'-0"	1'-4"
A503	2'-0"	8"
A506	3'-11"	11"
A507	4'-0"	11"

⬒ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11". REMOVE EXISTING U-BARS FROM WINGWALL.

◭ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

SOUTH ABUTMENT DETAILS

SHEET 5 OF 22

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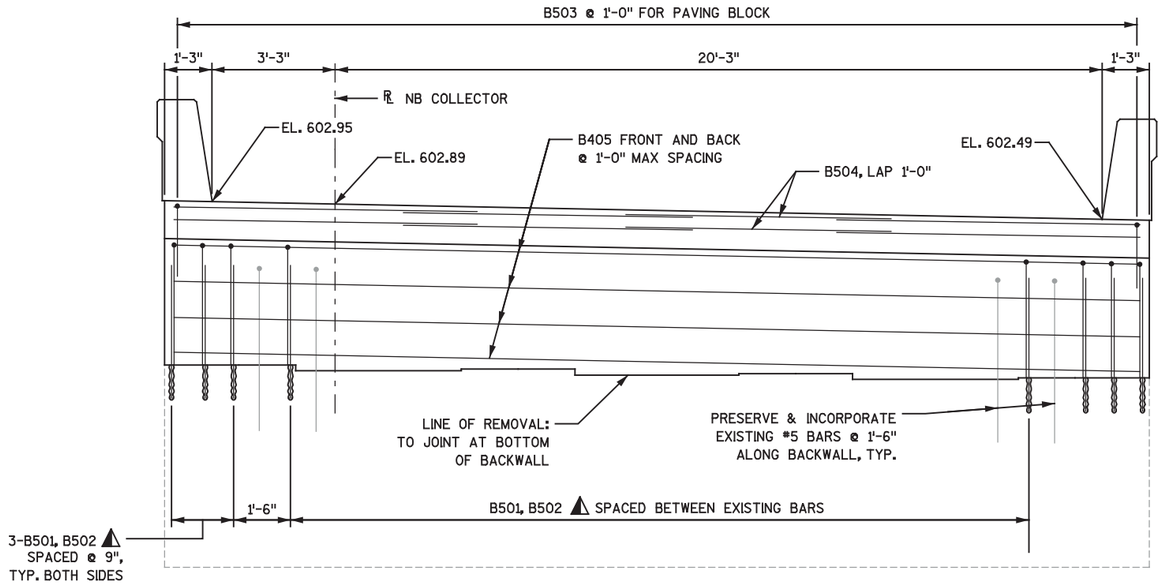
8

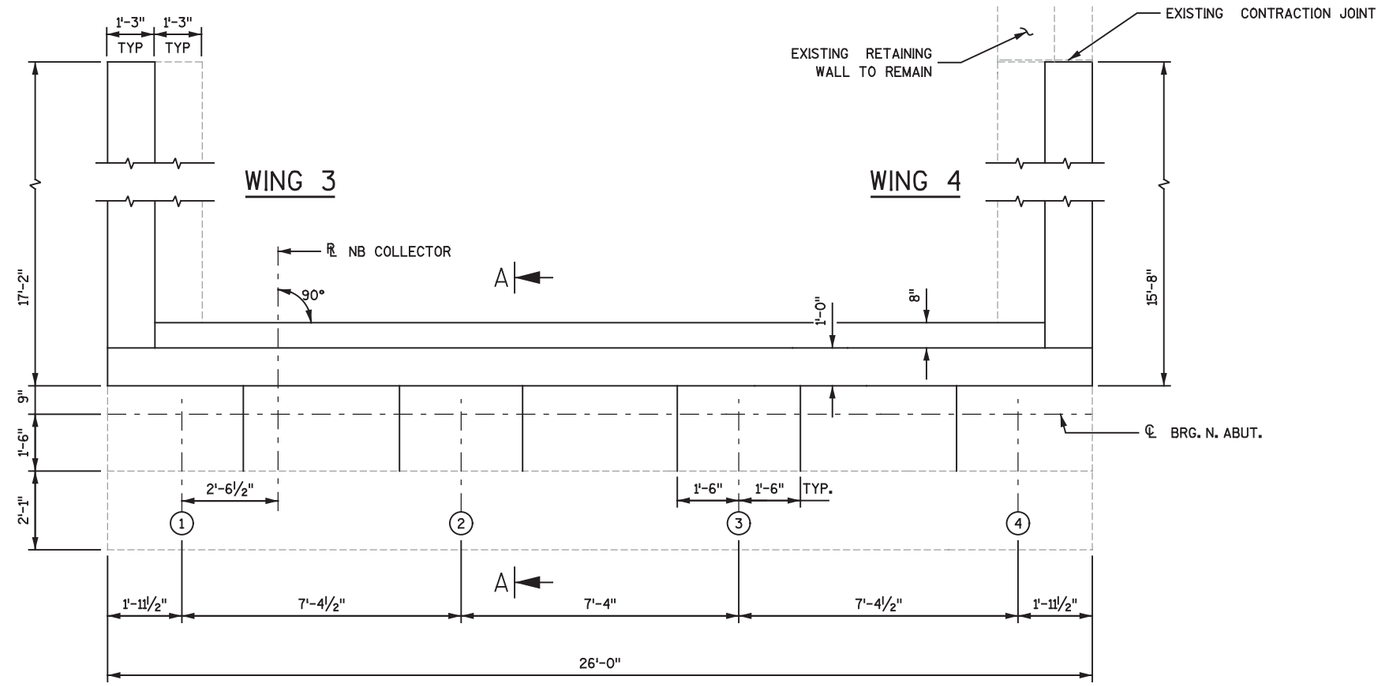
FILE NAME :05_B-40-177_South Abutment Details.dgn
PLOT DATE :1/31/2014 3:55:00 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



ELEVATION
(LOOKING NORTH)

⚠ MASONRY ANCHORS TYPE 'L'.
EPOXY ANCHORED, EMBED 11".



PLAN

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

NORTH ABUTMENT

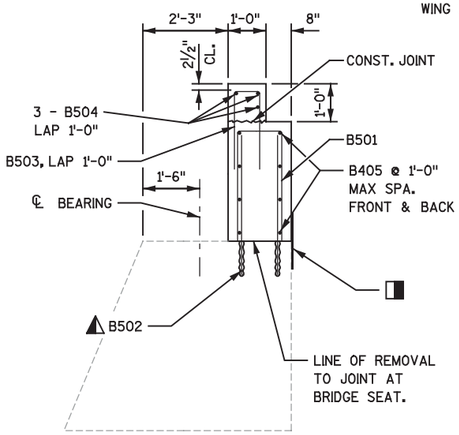
SHEET 6 OF 22

539

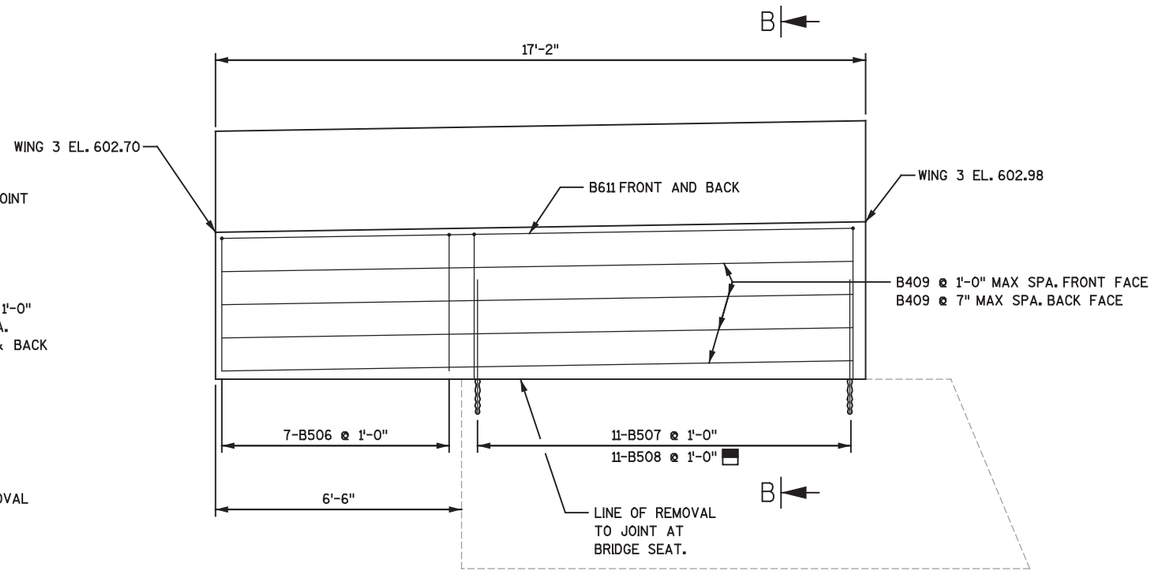
FILE NAME :06_B-40-177_North Abutment.dgn
PLOT DATE :1/31/2014 3:55:02 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

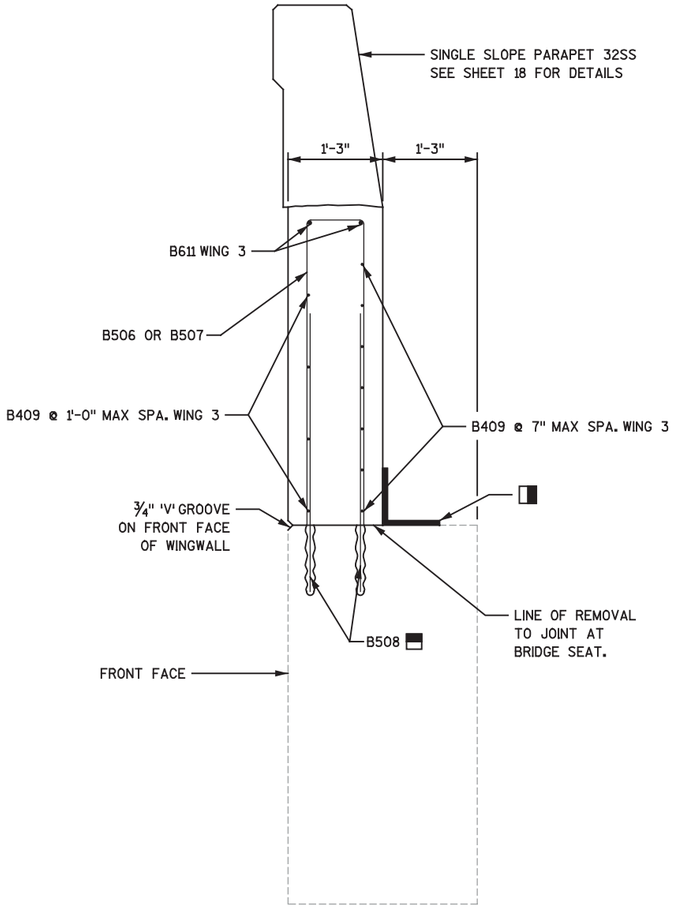


SECTION A-A



NORTH ABUTMENT WING 3

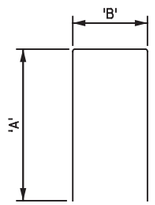
(SEE NEXT SHEET FOR WING 4 DETAILS)



SECTION B-B

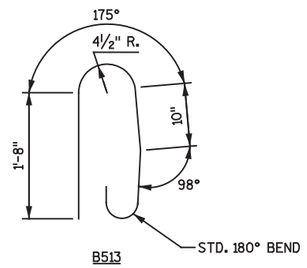
BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501	X	20	7'-1"	X		BACKWALL VERT.
B502	X	40	3'-8"			BACKWALL VERT. ANCHORS ⚠
B503	X	27	4'-5"	X		PAVING NOTCH VERT.
B504	X	12	7'-2"			PAVING NOTCH HORIZ.
B405	X	8	25'-8"			BACKWALL HORIZ.
B506	X	7	8'-0"	X		WINGWALL VERT. WING 3
B507	X	27	8'-0"	X		WINGWALL VERT. WING 3 & 4
B508	X	54	4'-0"			WINGWALL VERT. ANCHORS ⬒
B409	X	11	16'-10"			WINGWALL HORIZ.
B410	X	11	15'-4"			WINGWALL HORIZ.
B611	X	2	16'-10"			WINGWALL HORIZ. TOP
B612	X	2	15'-4"			WINGWALL HORIZ. TOP
B513	X	103	5'-2"	X		RET. WALL VERT.
B414	X	8	35'-1"			RET. WALL HORIZ.



B501, B503, B506, B507

BAR MARK	DIM. 'A'	DIM. 'B'
B501	3'-0"	1'-4"
B503	2'-0"	8"
B506	3'-8"	11"
B507	3'-8"	11"



B513

⬒ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11". REMOVE EXISTING U-BARS FROM WINGWALL.

⚠ MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11".

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

NORTH ABUTMENT DETAILS

SHEET 7 OF 22

540

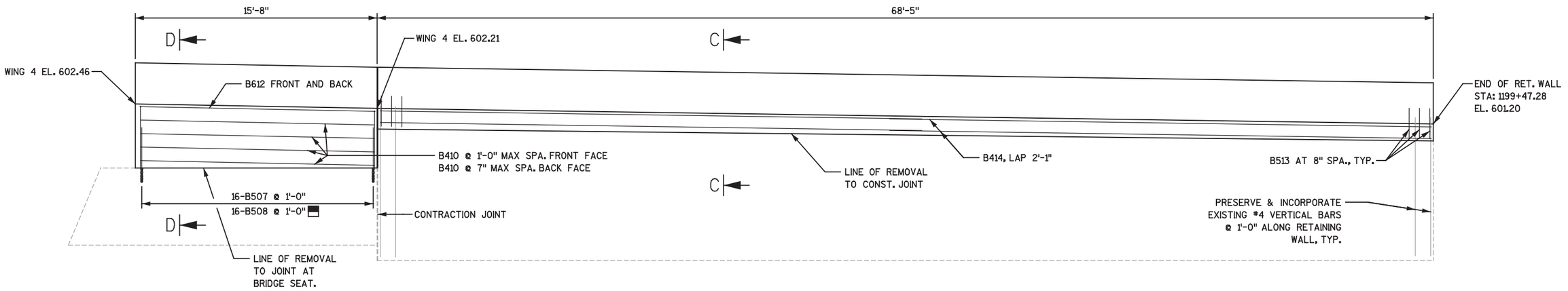
8

8

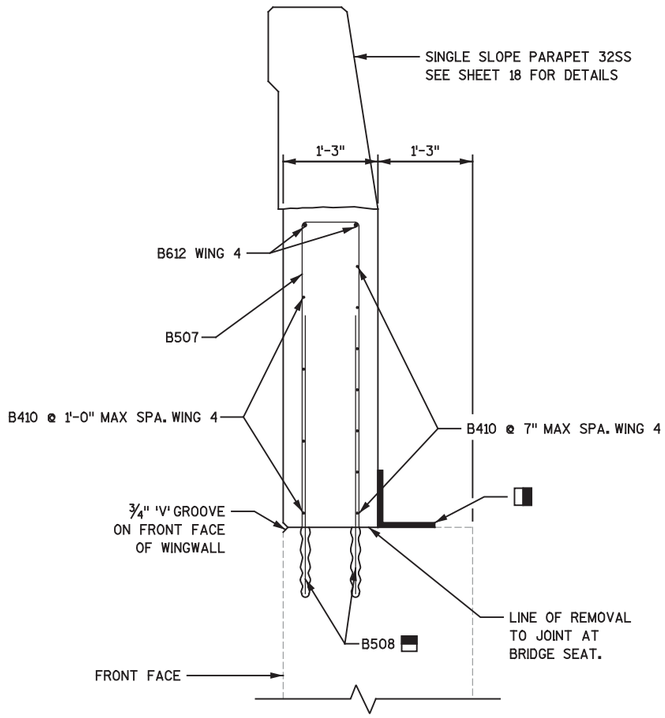
FILE NAME :\0T_B-40-177_North Abutment Details.dgn
PLOT DATE :1/31/2014 3:55:02 PM PLOT BY : NicholasHornyak.v8i DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

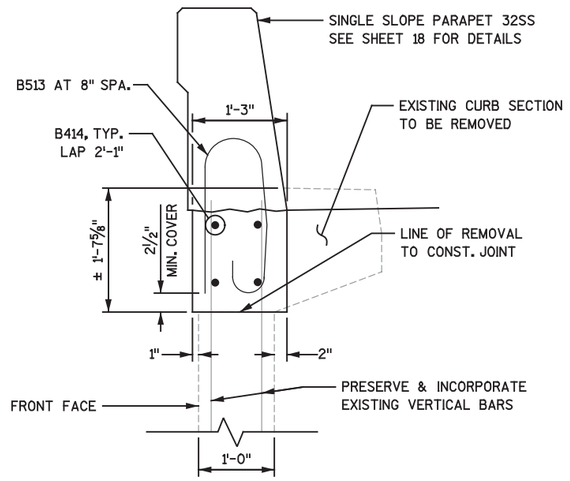
1228-25-70



NORTH ABUTMENT WING 4



SECTION D-D



SECTION C-C

8

8

MASONRY ANCHORS TYPE 'L'. EPOXY ANCHORED, EMBED 11". REMOVE EXISTING U-BARS FROM WINGWALL.

18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

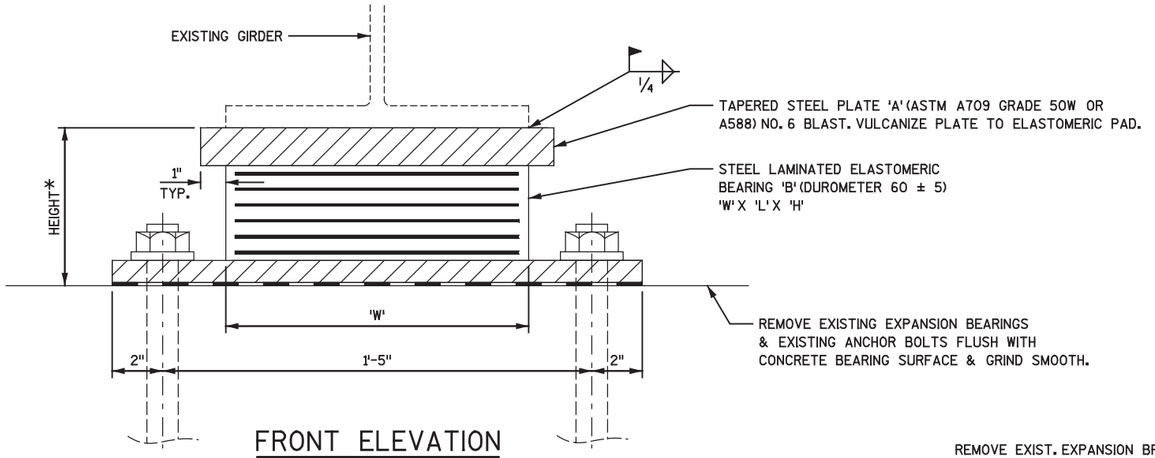
DRAWN BY MJH | PLANS CK'D. RJW

NORTH ABUTMENT WING 4 DETAILS

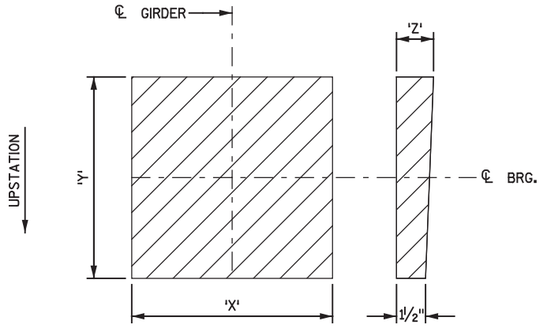
SHEET 8 OF 22

541

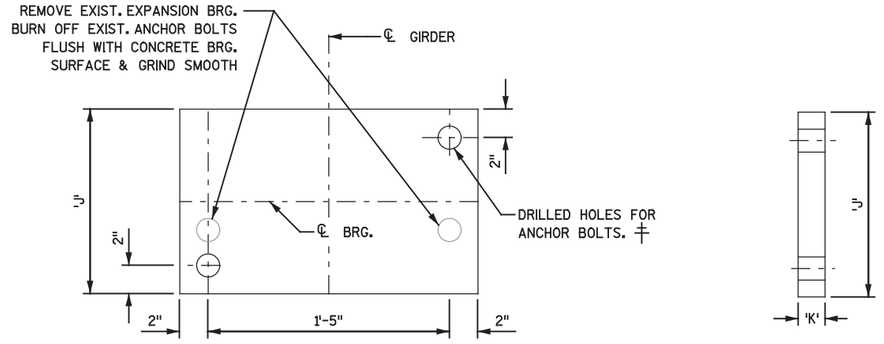
FILE NAME :108.B-40-177_North Abutment Wing 4 Details.dgn
PLOT DATE :1/31/2014 3:55:03 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL



FRONT ELEVATION



TOP PLATE 'A' DETAILS



BOTTOM PLATE 'C' DETAILS

SECTION THRU ELASTOMERIC BEARING

EXPANSION BEARINGS												
LOCATION	PLATE A			BEARING B			PLATE C			HEIGHT (IN.)*	NO. OF BRG.
	'X'	'Y'	'Z'	'W'	'L'	'H'	'J'	'K'			
PIER 1 BEAMS 2, 3	1'-2"	1'-7"	1¾"	12"	1'-5"	3⅛"	1'-7"	13/16 "		5 11/16 "	2
PIER 1 BEAMS 1, 4	1'-2"	1'-7"	1¾"	12"	1'-5"	3⅛"	1'-7"	15/16 "		6 3/16 "	2
PIER 2 BEAMS 2, 3	1'-2"	1'-9"	1¾"	12"	1'-7"	3¾"	1'-9"	1/16 "		6 3/16 "	2
PIER 2 BEAMS 1, 4	1'-2"	1'-9"	1¾"	12"	1'-7"	3¾"	1'-9"	15/16 "		6 7/16 "	2
PIER 4 BEAMS 2, 3	1'-2"	1'-8"	1¾"	12"	1'-6"	3¾"	1'-8"	1/16 "		6 3/16 "	2
PIER 4 BEAMS 1, 4	1'-2"	1'-8"	1¾"	12"	1'-6"	3¾"	1'-8"	15/16 "		6 7/16 "	2
PIER 6 BEAMS 2, 3	1'-2"	1'-7"	1¾"	12"	1'-5"	3¾"	1'-7"	1/16 "		6 3/16 "	2
PIER 6 BEAMS 1, 4	1'-2"	1'-7"	1¾"	12"	1'-5"	3¾"	1'-7"	1/16 "		6 3/16 "	2
PIER 7 BEAMS 2, 3	1'-2"	1'-7"	1¾"	12"	1'-5"	3¾"	1'-7"	1/16 "		6 3/16 "	2
PIER 7 BEAMS 1, 4	1'-2"	1'-7"	1¾"	12"	1'-5"	3¾"	1'-7"	15/16 "		6 7/16 "	2
PIER 8 BEAMS 2, 3	1'-2"	1'-8"	1¾"	12"	1'-6"	3¾"	1'-8"	1/16 "		6 3/16 "	2
PIER 8 BEAMS 1, 4	1'-2"	1'-8"	1¾"	12"	1'-6"	3¾"	1'-8"	15/16 "		6 7/16 "	2
PIER 12 BEAMS 2, 3	1'-2"	1'-6"	1⅝"	12"	1'-4"	3⅛"	1'-6"	7/8"		5 11/16 "	2
PIER 12 BEAMS 1, 4	1'-2"	1'-6"	1⅝"	12"	1'-4"	3⅛"	1'-6"	7/8"		5 11/16 "	2
PIER 13 BEAMS 2, 3	1'-2"	1'-5"	1⅝"	12"	1'-3"	3⅛"	1'-5"	5/8"		5 1/16 "	2
PIER 13 BEAMS 1, 4	1'-2"	1'-5"	1⅝"	12"	1'-3"	3⅛"	1'-5"	7/8"		5 11/16 "	2

* HEIGHT MEASURED AT ℄ OF BEARING

STATE PROJECT NUMBER

1228-25-70

BEARING NOTES

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

COMPRESSION LOAD AND ADHESION TESTS WILL BE WAIVED WHERE BEARINGS ARE DETAILED TO MEET HEIGHT REQUIREMENTS.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

USE (2) 1¼" ϕ, 1'-5" LONG ANCHOR BOLTS PER BEARING PAD ASSEMBLY.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS PLATE "C" THICKNESS + 2¼".

PROVIDE ⅛" THICK BEARING PAD SAME SIZE AS MASONRY PLATE "C" FOR EACH BEARING.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS "C".

PLATE "C" SHALL BE GALVANIZED.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "C" HAVE A DIAMETER OF ⅜" LARGER THAN ANCHOR BOLT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

ELASTOMERIC EXPANSION BEARINGS

SHEET 9 OF 22

542

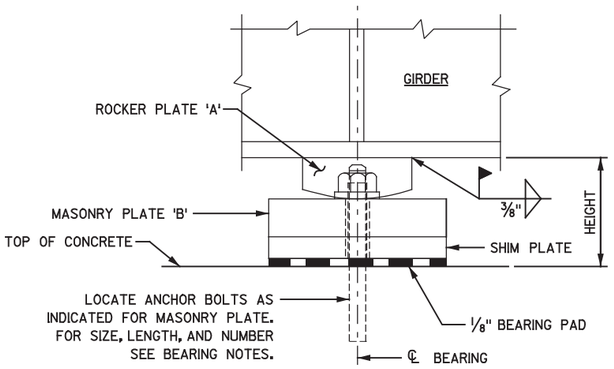
8

8

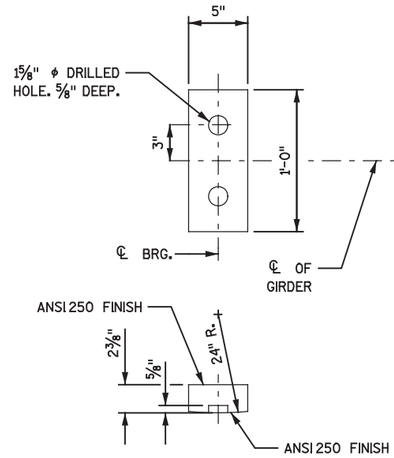
FILE NAME :\09_B-40-177_Elastomerto Expansion Bearings.dgn
PLOT DATE :1/31/2014 325504 PM PLOT BY : NicholasMornyakv8l DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

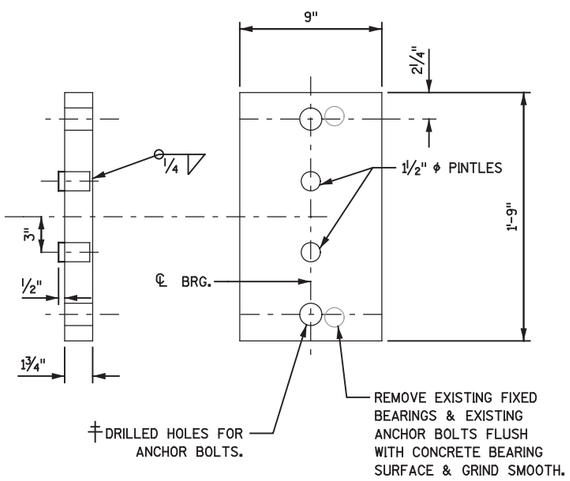
1228-25-70



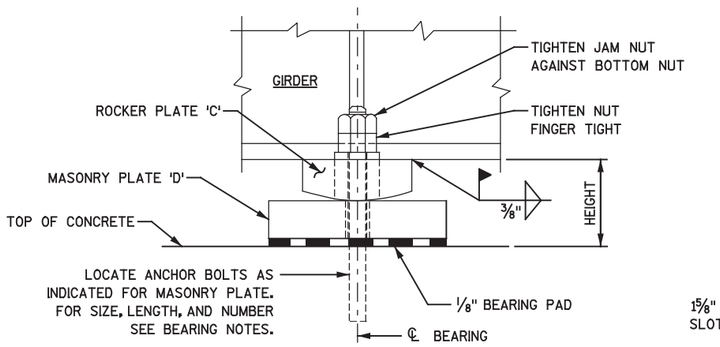
FIXED BEARING ASSEMBLY



ROCKER PLATE 'A'

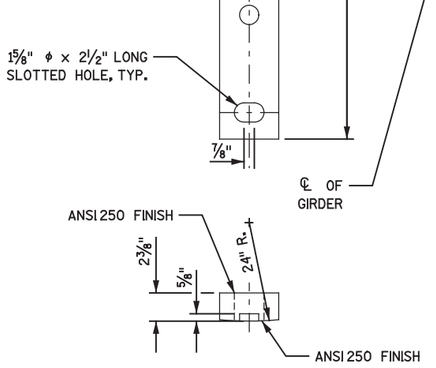


MASONRY PLATE 'B'

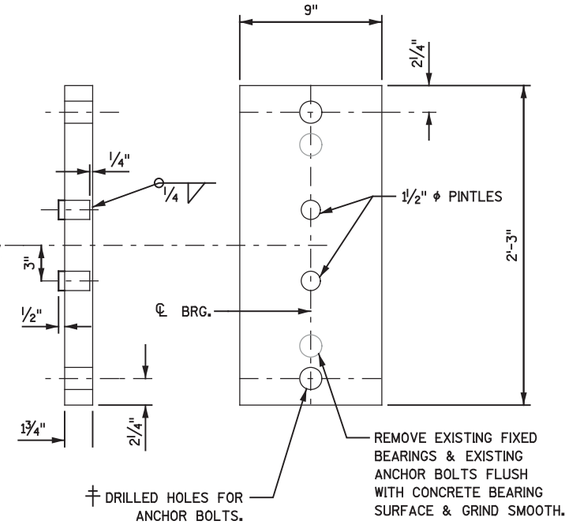


HOLD-DOWN DEVICE ASSEMBLY

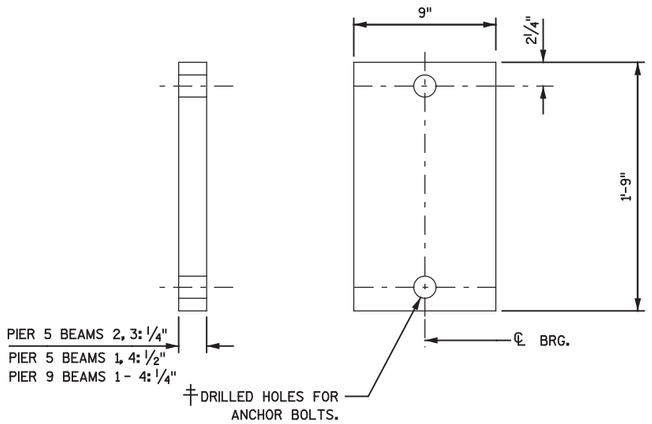
(AT SOUTH ABUTMENT ONLY)



ROCKER PLATE 'C'



MASONRY PLATE 'D'



SHIM PLATE

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

IN LIEU OF USING SHIM PLATES, FABRICATOR MAY INCREASE THICKNESS OF MASONRY PLATE BY THE SHIM PLATE THICKNESS.

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.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

USE (2) 1¼" ϕ, 1'-5" LONG ANCHOR BOLTS PER BEARING PAD ASSEMBLY AND (2) 1¼" ϕ, 1'-8" LONG ANCHOR BOLTS PER HOLD-DOWN DEVICE ASSEMBLY.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS, MASONRY PLATE THICKNESS + SHIM PLATE THICKNESS + 2¼", ABOVE TOP OF CONCRETE AT THE FIXED BEARING ASSEMBLY LOCATIONS.

ANCHOR BOLTS SHALL BE THREADED 4¼". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS, MASONRY PLATE THICKNESS + ROCKER PLATE THICKNESS + 3½", ABOVE TOP OF CONCRETE AT THE HOLD-DOWN DEVICE ASSEMBLY LOCATIONS.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING PINTLES, ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL MATERIALS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES FIXED B-40-177", EACH.

CHAMFER TOP OF PINTLES ⅛". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE FOR A DRIVING FIT.

PROVIDE ⅛" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE FOR EACH BEARING.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

ROCKER PLATE SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.

MASONRY PLATE SHALL BE GALVANIZED.

PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE AND SHIM PLATE HAVE A DIAMETER OF ⅜" LARGER THAN ANCHOR BOLT.

FIXED BEARINGS			
LOCATION	HEIGHT (IN.)	NO. OF BRG.	ASSEMBLY DETAIL
S. ABUT. BEAMS 1-4	4¼"	4	HOLD-DOWN
PIER 5 BEAMS 1, 4	4¾"	2	FIXED
PIER 5 BEAMS 2, 3	4½"	2	FIXED
PIER 9 BEAMS 1-4	4½"	4	FIXED
N. ABUT. BEAMS 1-4	4¼"	4	FIXED

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. NJH

FIXED BEARING DETAILS

SHEET 10 OF 22

543

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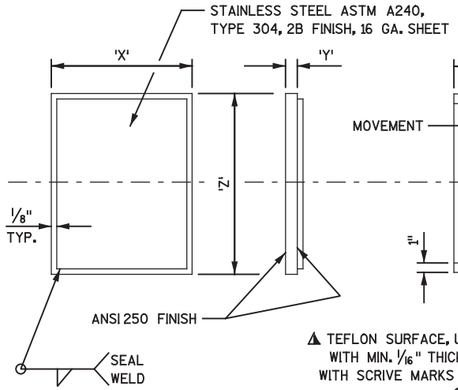
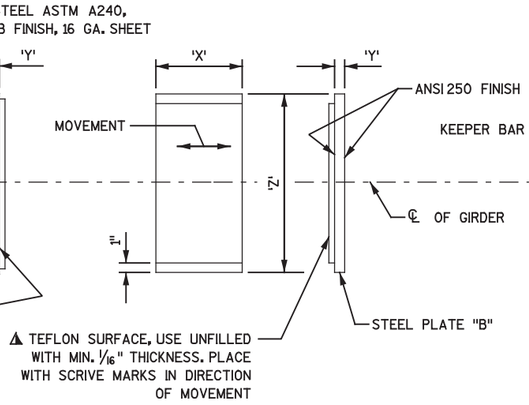
FILE NAME :\10_B-40-177_Fixed Bearing Details.dgn
PLOT DATE :1/31/2014 3:25:06 PM PLOT BY : NicholasHornyak@E DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

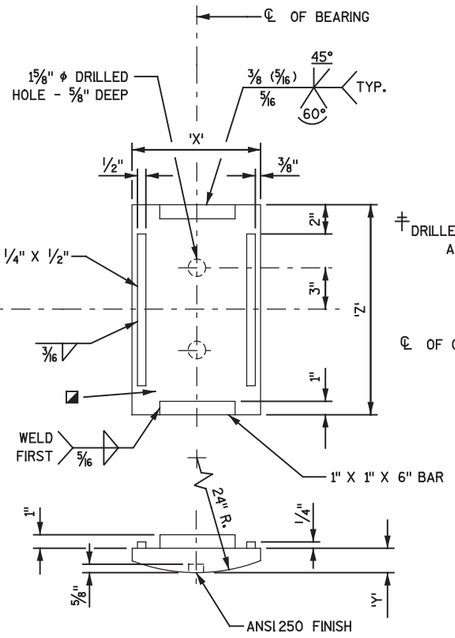
1228-25-70



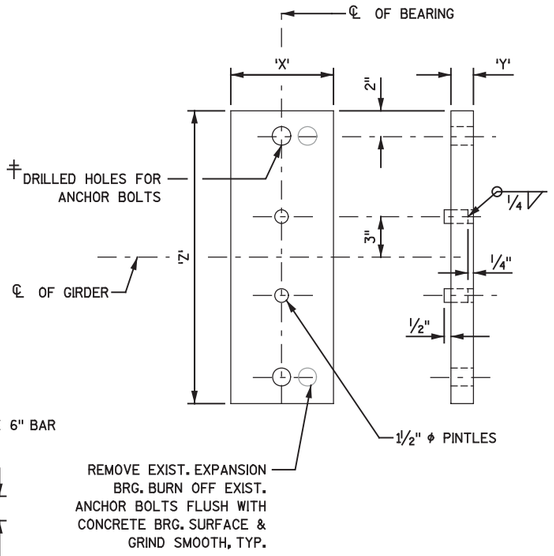
TOP PLATE "A"



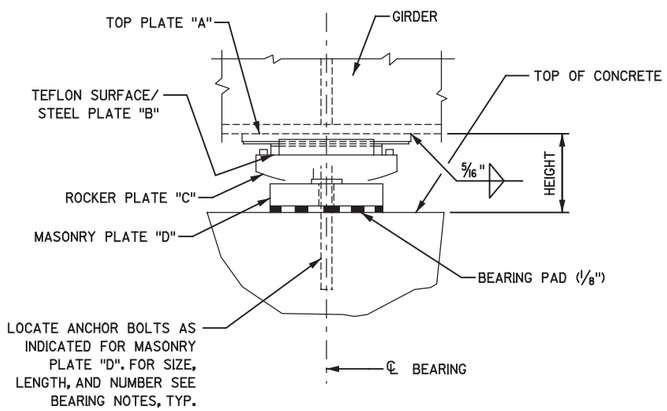
TEFLON SURFACE ON PLATE "B"



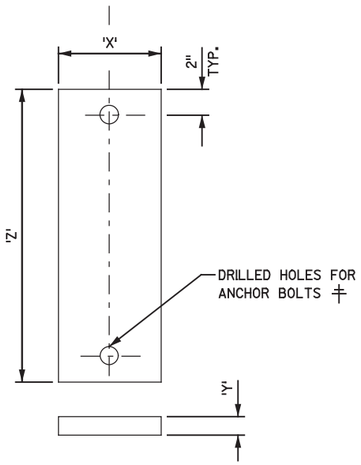
ROCKER PLATE "C"



MASONRY PLATE "D"



EXPANSION BEARING ASSEMBLY



SHIM PLATE DETAILS

TYPE 'A-T' EXPANSION BEARINGS																	
LOCATION	PLATE A			PLATE B			PLATE C			PLATE D			SHIM PLATE			HEIGHT (IN.)	NO. OF BRG.
	'X'	'Y'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'		
PIER 3 BEAMS 2, 3	11"	5/8"	1'-2"	7"	1/2"	1'-2"	9"	1 5/16"	1'-4 1/4"	8"	1 1/2"	2'-0"	8"	1 3/8"	2'-0"	6 3/16"	2
PIER 3 BEAMS 1, 4	11"	5/8"	1'-0"	7"	1/2"	1'-0"	9"	1 5/16"	1'-2 1/4"	8"	1 1/2"	1'-10"	8"	1 5/8"	1'-10"	6 7/16"	2
PIER 10 BEAMS 2, 3	11"	5/8"	1'-2"	7"	1/2"	1'-2"	9"	1 5/16"	1'-4 1/4"	8"	1 1/2"	2'-0"	8"	7/8"	2'-0"	5 11/16"	2
PIER 10 BEAMS 1, 4	11"	5/8"	1'-0"	7"	1/2"	1'-0"	9"	1 5/16"	1'-2 1/4"	8"	1 1/2"	1'-10"	8"	1 3/8"	1'-10"	6 3/16"	2
PIER 11 BEAMS 2, 3	11"	5/8"	1'-2"	7"	1/2"	1'-2"	9"	1 5/16"	1'-4 1/4"	8"	1 1/2"	2'-0"	8"	7/8"	2'-0"	5 11/16"	2
PIER 11 BEAMS 1, 4	11"	5/8"	1'-0"	7"	1/2"	1'-0"	9"	1 5/16"	1'-2 1/4"	8"	1 1/2"	1'-10"	8"	1 3/8"	1'-10"	6 3/16"	2

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

⚠ BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING FEDERAL SPECIFICATION MMM-A-134, FEP FILM OR EQUAL.

⧺ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "D" SHALL HAVE A DIAMETER OF 3/8" LARGER THAN ANCHOR BOLT.

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

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.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE 1 1/4" ϕ AND THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. ANCHOR BOLT LENGTH TO BE 1'-5". PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-40-177", EACH.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

PLACE SHIM PLATS BETWEEN BEARING PAD AND MASONRY PLATE "D".

IN LIEU OF USING SHIM PLATES, FABRICATOR MAY INCREASE THICKNESS OF TOP PLATE "A" OR MASONRY PLATE "D" BY THE SHIM PLATE THICKNESS.

ROCKER PLATE "C" AND MASONRY PLATE "D" SHALL BE GALVANIZED. TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. NJH

TYPE 'A-T' EXPANSION BEARINGS

SHEET 11 OF 22

544

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FILE NAME :ILB-40-177_Type 'A-T' Expansion Bearings.dgn
PLOT DATE :1/31/2014 3:25:06 PM PLOT BY : NicholasHornyakvBL DRV :Pdf_bw_NS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70

TOP OF DECK ELEVATIONS

POINT / GIRDER	℄ BRG. S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 2
W. EDGE	615.20	615.16	615.12	615.07	615.03	614.99	614.94	614.89	614.85	614.80	614.75	614.64	614.54	614.43	614.32	614.21	614.10	613.99	613.89	613.78	613.67
1	615.16	615.12	615.08	615.04	614.99	614.95	614.90	614.85	614.81	614.76	614.71	614.61	614.50	614.39	614.28	614.17	614.06	613.96	613.85	613.74	613.63
2	615.01	614.98	614.93	614.89	614.85	614.80	614.75	614.71	614.66	614.61	614.57	614.46	614.35	614.24	614.13	614.02	613.92	613.81	613.70	613.59	613.48
3	614.87	614.83	614.79	614.74	614.70	614.65	614.61	614.56	614.51	614.47	614.42	614.31	614.20	614.09	613.99	613.88	613.77	613.66	613.55	613.44	613.34
4	614.72	614.68	614.64	614.59	614.55	614.51	614.46	614.41	614.37	614.32	614.27	614.16	614.06	613.95	613.84	613.73	613.62	613.51	613.41	613.30	613.19
E. EDGE	614.68	614.64	614.60	614.55	614.51	614.47	614.42	614.37	614.33	614.28	614.23	614.12	614.02	613.91	613.80	613.69	613.58	613.47	613.37	613.26	613.15
POINT / GIRDER	PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 3	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 4
W. EDGE	613.67	613.57	613.48	613.38	613.28	613.19	613.09	612.99	612.89	612.80	612.70	612.60	612.51	612.41	612.31	612.22	612.12	612.02	611.93	611.83	611.73
1	613.63	613.53	613.44	613.34	613.24	613.15	613.05	612.95	612.86	612.76	612.66	612.56	612.47	612.37	612.27	612.18	612.08	611.98	611.89	611.79	611.69
2	613.48	613.39	613.29	613.19	613.10	613.00	612.90	612.80	612.71	612.61	612.51	612.42	612.32	612.22	612.13	612.03	611.93	611.84	611.74	611.64	611.54
3	613.34	613.24	613.14	613.05	612.95	612.85	612.75	612.66	612.56	612.46	612.37	612.27	612.17	612.08	611.98	611.88	611.79	611.69	611.59	611.50	611.40
4	613.19	613.09	612.99	612.90	612.80	612.70	612.61	612.51	612.41	612.32	612.22	612.12	612.03	611.93	611.83	611.74	611.64	611.54	611.44	611.35	611.25
E. EDGE	613.15	613.05	612.96	612.86	612.76	612.67	612.57	612.47	612.37	612.28	612.18	612.08	611.99	611.89	611.79	611.70	611.60	611.50	611.41	611.31	611.21
POINT / GIRDER	PIER 4	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 5	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 6
W. EDGE	611.73	611.63	611.54	611.44	611.34	611.25	611.15	611.05	610.96	610.86	610.76	610.67	610.57	610.47	610.37	610.28	610.18	610.08	609.99	609.89	609.79
1	611.69	611.60	611.50	611.40	611.30	611.21	611.11	611.01	610.92	610.82	610.72	610.63	610.53	610.43	610.34	610.24	610.14	610.05	609.95	609.85	609.75
2	611.54	611.45	611.35	611.25	611.16	611.06	610.96	610.87	610.77	610.67	610.58	610.48	610.38	610.29	610.19	610.09	609.99	609.90	609.80	609.70	609.61
3	611.40	611.30	611.20	611.11	611.01	610.91	610.82	610.72	610.62	610.53	610.43	610.33	610.24	610.14	610.04	609.94	609.85	609.75	609.65	609.56	609.46
4	611.25	611.15	611.06	610.96	610.86	610.77	610.67	610.57	610.48	610.38	610.28	610.18	610.09	609.99	609.89	609.80	609.70	609.60	609.51	609.41	609.31
E. EDGE	611.21	611.11	611.02	610.92	610.82	610.73	610.63	610.53	610.44	610.34	610.24	610.15	610.05	609.95	609.85	609.76	609.66	609.56	609.47	609.37	609.27
POINT / GIRDER	PIER 6	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 7	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 8
W. EDGE	609.79	609.70	609.60	609.50	609.41	609.31	609.21	609.12	609.02	608.92	608.82	608.73	608.63	608.53	608.44	608.34	608.24	608.15	608.05	607.95	607.86
1	609.75	609.66	609.56	609.46	609.37	609.27	609.17	609.08	608.98	608.88	608.79	608.69	608.59	608.49	608.40	608.30	608.20	608.11	608.01	607.91	607.82
2	609.61	609.51	609.41	609.32	609.22	609.12	609.03	608.93	608.83	608.73	608.64	608.54	608.44	608.35	608.25	608.15	608.06	607.96	607.86	607.77	607.67
3	609.46	609.36	609.27	609.17	609.07	608.98	608.88	608.78	608.68	608.59	608.49	608.39	608.30	608.20	608.10	608.01	607.91	607.81	607.72	607.62	607.52
4	609.31	609.22	609.12	609.02	608.93	608.83	608.73	608.63	608.54	608.44	608.34	608.25	608.15	608.05	607.96	607.86	607.76	607.67	607.57	607.47	607.37
E. EDGE	609.27	609.18	609.08	608.98	608.89	608.79	608.69	608.60	608.50	608.40	608.30	608.21	608.11	608.01	607.92	607.82	607.72	607.63	607.53	607.43	607.34
POINT / GIRDER	PIER 8	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 9	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER 10
W. EDGE	607.86	607.76	607.66	607.56	607.47	607.37	607.27	607.18	607.08	606.98	606.89	606.80	606.71	606.62	606.54	606.45	606.36	606.27	606.18	606.10	606.01
1	607.82	607.72	607.62	607.53	607.43	607.33	607.23	607.14	607.04	606.94	606.85	606.76	606.67	606.58	606.50	606.41	606.32	606.23	606.15	606.06	605.97
2	607.67	607.57	607.48	607.38	607.28	607.18	607.09	606.99	606.89	606.80	606.70	606.61	606.52	606.44	606.35	606.26	606.17	606.09	606.00	605.91	605.82
3	607.52	607.43	607.33	607.23	607.13	607.04	606.94	606.84	606.75	606.65	606.55	606.47	606.38	606.29	606.20	606.11	606.03	605.94	605.85	605.76	605.68
4	607.37	607.28	607.18	607.08	606.99	606.89	606.79	606.70	606.60	606.50	606.41	606.32	606.23	606.14	606.05	605.97	605.88	605.79	605.70	605.62	605.53
E. EDGE	607.34	607.24	607.14	607.04	606.95	606.85	606.75	606.66	606.56	606.46	606.37	606.28	606.19	606.10	606.02	605.93	605.84	605.75	605.66	605.58	605.49
POINT / GIRDER	PIER 10	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	BENT 11	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	BENT 12
W. EDGE	606.01	605.92	605.84	605.75	605.67	605.58	605.50	605.41	605.32	605.24	605.15	605.07	604.98	604.90	604.81	604.73	604.64	604.56	604.47	604.38	604.30
1	605.97	605.88	605.80	605.71	605.63	605.54	605.46	605.37	605.29	605.20	605.11	605.03	604.94	604.86	604.77	604.69	604.60	604.52	604.43	604.35	604.26
2	605.82	605.74	605.65	605.57	605.48	605.39	605.31	605.22	605.14	605.05	604.97	604.88	604.80	604.71	604.63	604.54	604.45	604.37	604.28	604.20	604.11
3	605.68	605.59	605.50	605.42	605.33	605.25	605.16	605.08	604.99	604.91	604.82	604.73	604.65	604.56	604.48	604.39	604.31	604.22	604.14	604.05	603.97
4	605.53	605.44	605.36	605.27	605.19	605.10	605.01	604.93	604.84	604.76	604.67	604.59	604.50	604.42	604.33	604.25	604.16	604.07	603.99	603.90	603.82
E. EDGE	605.49	605.40	605.32	605.23	605.15	605.06	604.98	604.89	604.80	604.72	604.63	604.55	604.46	604.38	604.29	604.21	604.12	604.04	603.95	603.86	603.78
POINT / GIRDER	BENT 12	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	BENT 13	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. N. ABUT.
W. EDGE	604.30	604.22	604.14	604.06	603.98	603.90	603.82	603.74	603.66	603.58	603.50	603.45	603.40	603.35	603.30	603.24	603.19	603.14	603.09	603.04	602.99
1	604.26	604.18	604.10	604.02	603.94	603.86	603.78	603.70	603.62	603.54	603.46	603.41	603.36	603.31	603.26	603.21	603.15	603.10	603.05	603.00	602.95
2	604.11	604.03	603.95	603.87	603.79	603.71	603.63	603.55	603.47	603.39	603.31	603.26	603.21	603.16	603.11	603.06	603.01	602.95	602.90	602.85	602.80
3	603.97	603.89	603.81	603.73	603.65	603.57	603.49	603.41	603.33	603.25	603.17	603.12	603.06	603.01	602.96	602.91	602.86	602.81	602.76	602.71	602.65
4	603.82	603.74	603.66	603.58	603.50	603.42	603.34	603.26	603.18	603.10	603.02	602.97	602.92	602.87	602.81	602.76	602.71	602.66	602.61	602.56	602.51
E. EDGE	603.78	603.70	603.62	603.54	603.46	603.38	603.30	603.22	603.14	603.06	602.98	602.93	602.88	602.83	602.78	602.72	602.67	602.62	602.57	602.52	602.47

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

DECK ELEVATIONS

SHEET 12 OF 22

545

FILE NAME :12_B-40-177_Deck Elevations.dgn
PLOT DATE :1/31/2014 3:55:07 PM PLOT BY : NicholasHornyak:WI DRV :Pdf_bw_HS.pltPEN :CELTEXTSUB.TBL

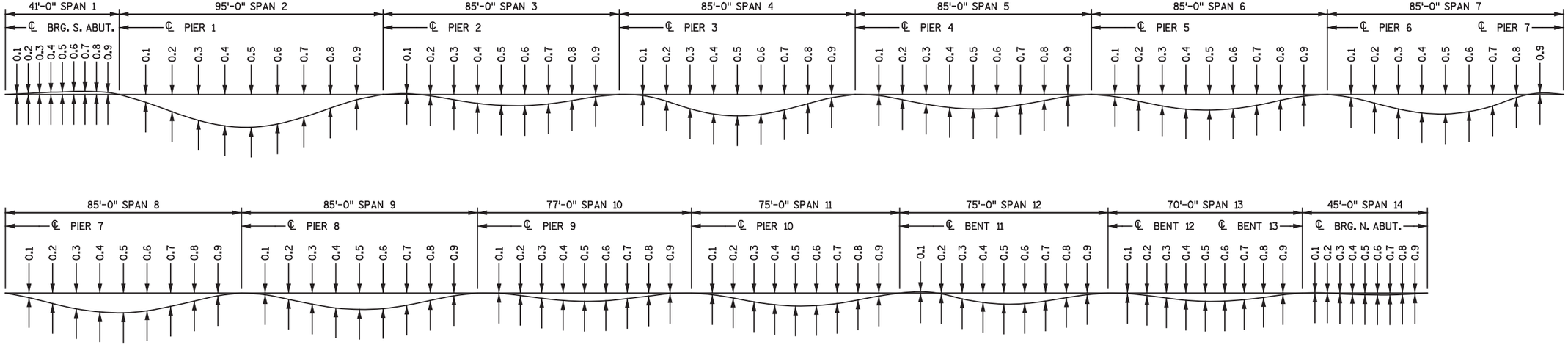
STATE PROJECT NUMBER

1228-25-70

DEAD LOAD DEFLECTIONS

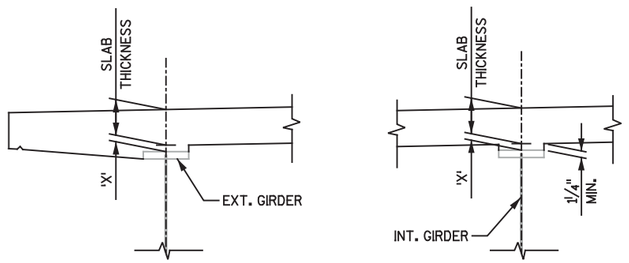
	CONCRETE DEAD LOAD DEFLECTIONS (FEET)										
		SPAN 1									
	℄ BRG. S. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 1
Girders 1, 4	0.000	-0.001	-0.003	-0.004	-0.006	-0.007	-0.008	-0.008	-0.007	-0.005	0.000
Girders 2, 3	0.000	-0.002	-0.004	-0.006	-0.008	-0.009	-0.011	-0.011	-0.010	-0.007	0.000
		SPAN 2									
	℄ PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 2
Girders 1, 4	0.000	0.021	0.047	0.070	0.085	0.088	0.079	0.060	0.036	0.014	0.000
Girders 2, 3	0.000	0.028	0.062	0.093	0.113	0.118	0.106	0.081	0.049	0.019	0.000
		SPAN 3									
	℄ PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 3
Girders 1, 4	0.000	-0.002	0.003	0.013	0.022	0.028	0.029	0.024	0.016	0.006	0.000
Girders 2, 3	0.000	-0.003	0.005	0.019	0.032	0.039	0.040	0.034	0.022	0.008	0.000
		SPAN 4									
	℄ PIER 3	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 4
Girders 1, 4	0.000	0.003	0.017	0.037	0.051	0.055	0.050	0.038	0.022	0.008	0.000
Girders 2, 3	0.000	0.004	0.024	0.051	0.070	0.077	0.071	0.055	0.033	0.012	0.000
		SPAN 5									
	℄ PIER 4	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 5
Girders 1, 4	0.000	0.001	0.010	0.020	0.029	0.033	0.031	0.023	0.013	0.004	0.000
Girders 2, 3	0.000	0.004	0.019	0.035	0.047	0.052	0.049	0.037	0.022	0.007	0.000
		SPAN 6									
	℄ PIER 5	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 6
Girders 1, 4	0.000	0.004	0.013	0.024	0.032	0.034	0.030	0.021	0.011	0.002	0.000
Girders 2, 4	0.000	0.008	0.024	0.041	0.053	0.056	0.051	0.039	0.021	0.006	0.000
		SPAN 7									
	℄ PIER 6	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 7
Girders 1, 4	0.000	0.007	0.021	0.036	0.047	0.051	0.045	0.030	0.009	-0.003	0.000
Girders 2, 3	0.000	0.011	0.031	0.052	0.066	0.070	0.061	0.041	0.011	-0.005	0.000

	CONCRETE DEAD LOAD DEFLECTIONS (FEET)										
		SPAN 8									
	℄ PIER 7	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 8
Girders 1, 4	0.000	0.012	0.027	0.040	0.048	0.049	0.044	0.032	0.018	0.006	0.000
Girders 2, 4	0.000	0.017	0.038	0.057	0.068	0.071	0.064	0.048	0.029	0.010	0.000
		SPAN 9									
	℄ PIER 8	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 9
Girders 1, 4	0.000	0.003	0.013	0.026	0.036	0.040	0.038	0.030	0.018	0.007	0.000
Girders 2, 3	0.000	0.006	0.023	0.040	0.054	0.059	0.056	0.044	0.027	0.010	0.000
		SPAN 10									
	℄ PIER 9	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ PIER 10
Girders 1, 4	0.000	0.001	0.008	0.016	0.022	0.025	0.023	0.017	0.009	0.002	0.000
Girders 2, 3	0.000	0.001	0.009	0.019	0.027	0.030	0.028	0.020	0.011	0.002	0.000
		SPAN 11									
	℄ PIER 10	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ BENT 11
Girders 1, 4	0.000	0.005	0.014	0.024	0.032	0.035	0.034	0.028	0.019	0.009	0.000
Girders 2, 4	0.000	0.006	0.018	0.032	0.042	0.047	0.045	0.038	0.025	0.011	0.000
		SPAN 12									
	℄ BENT 11	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ BENT 12
Girders 1, 4	0.000	-0.004	0.003	0.017	0.027	0.031	0.029	0.023	0.013	0.005	0.000
Girders 2, 4	0.000	-0.005	0.003	0.021	0.034	0.040	0.038	0.029	0.017	0.006	0.000
		SPAN 13									
	℄ BENT 12	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ BENT 13
Girders 1, 4	0.000	0.001	0.007	0.014	0.020	0.023	0.023	0.019	0.012	0.005	0.000
Girders 2, 3	0.000	0.002	0.009	0.018	0.026	0.030	0.029	0.024	0.016	0.006	0.000
		SPAN 14									
	℄ BENT 13	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ BRG. N. ABUT.
Girders 1, 4	0.000	-0.001	0.000	0.002	0.004	0.005	0.006	0.005	0.004	0.002	0.000
Girders 2, 3	0.000	-0.001	0.000	0.003	0.005	0.006	0.007	0.007	0.005	0.003	0.000



DEFLECTION DIAGRAM

SEE TABLE FOR DEAD LOAD DEFLECTIONS AT TENTH POINTS



HAUNCH DETAIL

NOTES

TO DETERMINE 'X':
ELEVATIONS OF THE TOP FLANGES, TOP OF SPLICE PLATE, OR TOP OF COVER PLATES, WHICHEVER APPLIES, SHALL BE TAKEN AT ℄ OF BRGS. AND AT TENTH POINTS OF EACH SPAN, THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF STEEL ELEVATION
\+ DEFLECTION (CONCRETE ONLY)
\- SLAB THICKNESS
= CONCRETE HAUNCH HEIGHT 'X'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

DEAD LOAD DEFLECTIONS

SHEET 13 OF 22

546

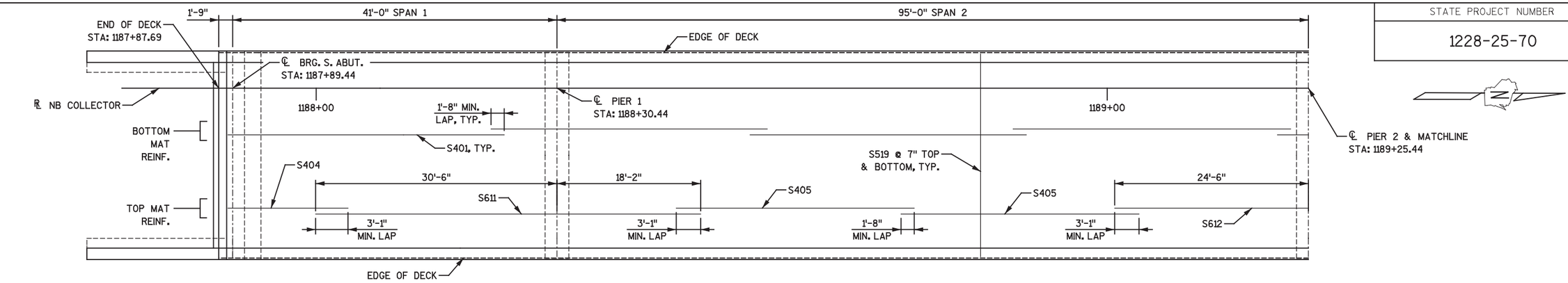
8

8

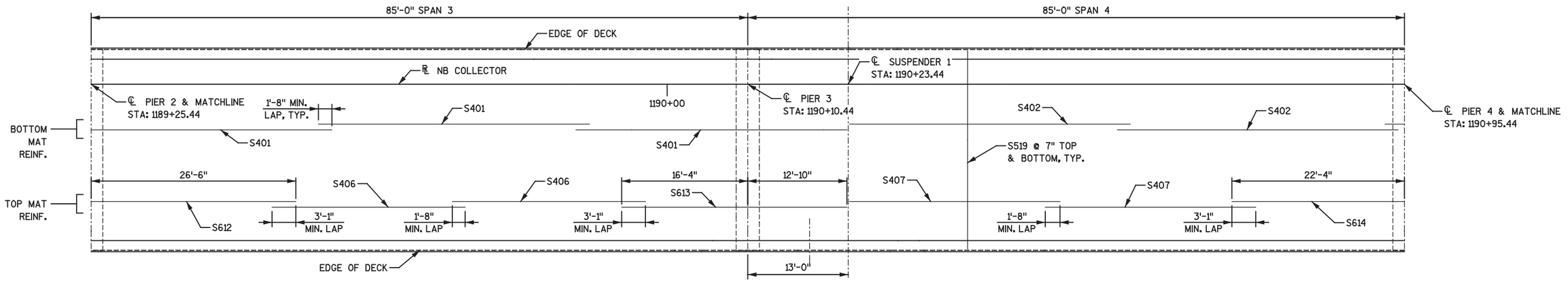
FILE NAME :I3_B-40-177_Dead Load Deflections.dgn
PLOT DATE :1/31/2014 3:55:07 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

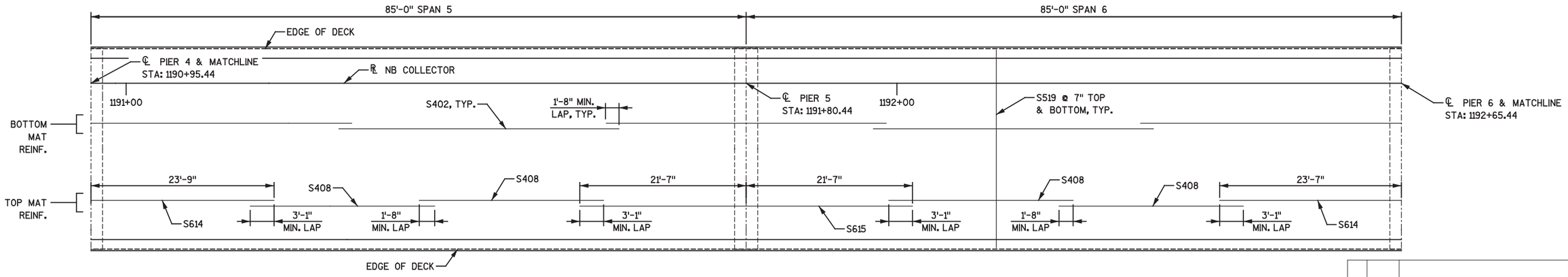
1228-25-70



PLAN: SPANS 1 & 2



PLAN: SPANS 3 & 4



PLAN: SPANS 5 & 6

NOTE: SEE SHEET 16 FOR SECTION THRU PARAPET ON BRIDGE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

SUPERSTRUCTURE SPANS 1-6

SHEET 14 OF 22

547

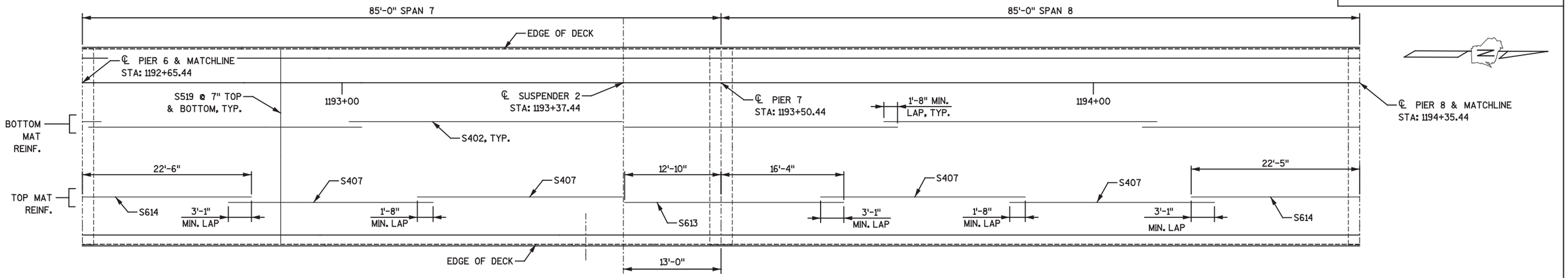
8

8

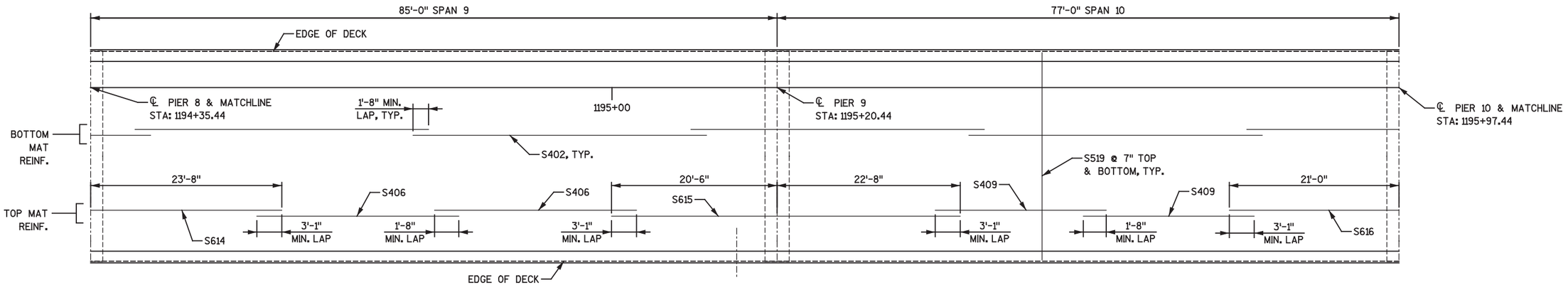
FILE NAME :14.B.40.177.Superstructure Spans 1-6.dgn
PLOT DATE :1/31/2014 3:55:08 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

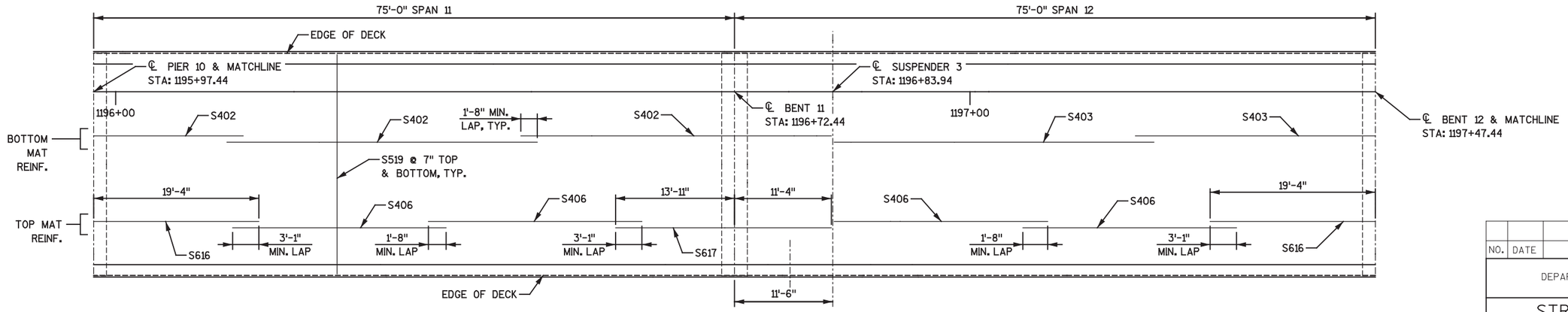
1228-25-70



PLAN: SPANS 7 & 8



PLAN: SPANS 9 & 10



PLAN: SPANS 11 & 12

NOTE: SEE SHEET 16 FOR
SECTION THRU PARAPET ON BRIDGE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

SUPERSTRUCTURE SPANS 7-12

SHEET 15 OF 22

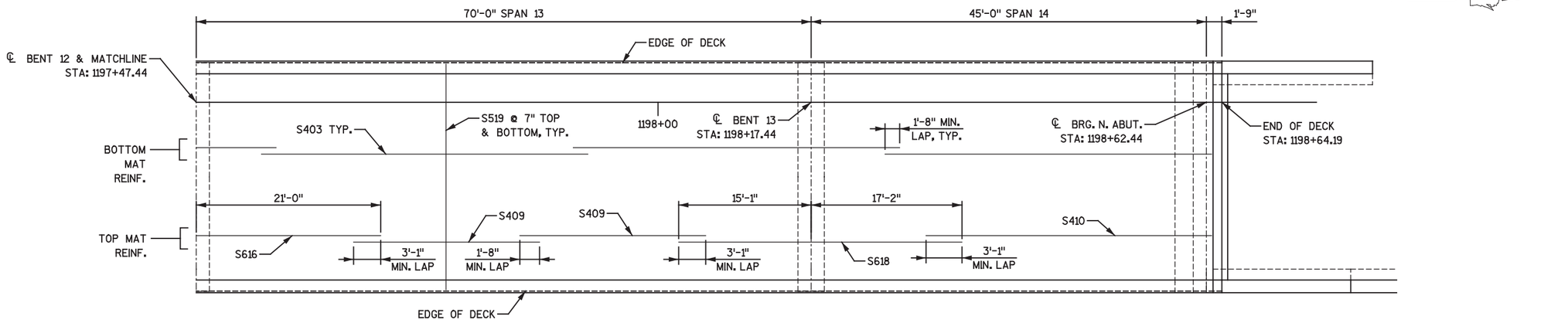
548

8

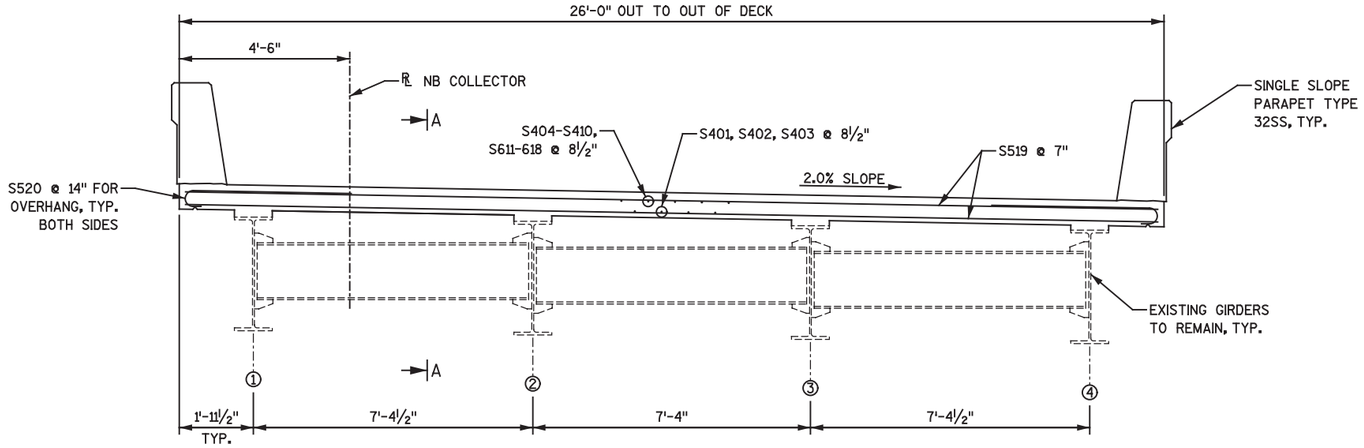
8

FILE NAME :15_B_40_177_Superstructure Spans 7-12.dgn
PLOT DATE :1/31/2014 325508 PM PLOT BY : NicholasHornyakvBL DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

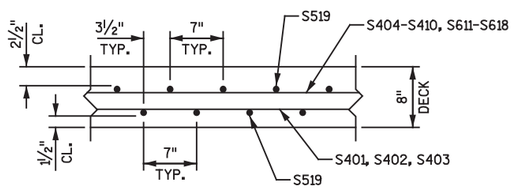
STATE PROJECT NUMBER
1228-25-70



PLAN: SPANS 13 & 14



CROSS SECTION
(LOOKING NORTH)



SECTION A-A THRU DECK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

SUPERSTRUCTURE
SPANS 13-14

SHEET 16 OF 22
549

8

8

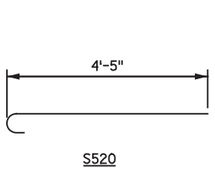
FILE NAME :\B_40_177_Superstructure Spans 13-14.dgn
PLOT DATE :1/31/2014 3:55:08 PM PLOT BY : NicholasHornyak:v8i DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

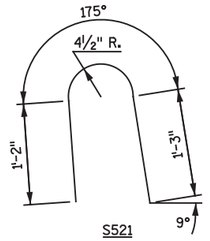
1228-25-70

BILL OF BARS

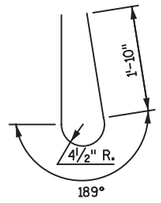
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	259	34'-11"			LONGIT. BOTTOM S. ABUT. TO HINGE 1
S402	X	703	36'-4"			LONGIT. BOTTOM HINGE 1 TO HINGE 2, HINGE 2 TO HINGE 3
S403	X	185	37'-2"			LONGIT. BOTTOM HINGE 3 TO N. ABUT.
S404	X	38	15'-2"			LONGIT. TOP SPAN 1
S405	X	76	30'-1"			LONGIT. TOP SPAN 2
S406	X	304	25'-0"			LONGIT. TOP SPAN 3, 9, 11, 12
S407	X	228	27'-3"			LONGIT. TOP SPAN 4, 7, 8
S408	X	152	23'-11"			LONGIT. TOP SPAN 5, 6
S409	X	152	21'-2"			LONGIT. TOP SPAN 10, 13
S410	X	38	32'-6"			LONGIT. TOP SPAN 14
S611	X	38	48'-8"			LONGIT. CONTINUITY PIER 1
S612	X	38	51'-0"			LONGIT. CONTINUITY PIER 2
S613	X	76	29'-2"			LONGIT. CONTINUITY PIER 3, PIER 7
S614	X	114	46'-1"			LONGIT. CONTINUITY PIER 4, PIER 6, PIER 8
S615	X	76	43'-2"			LONGIT. CONTINUITY PIER 5, PIER 9
S616	X	76	40'-4"			LONGIT. CONTINUITY PIER 10, PIER 12
S617	X	38	25'-3"			LONGIT. CONTINUITY PIER 11
S618	X	38	32'-3"			LONGIT. CONTINUITY PIER 13
S519	X	3685	25'-8"			TRANS. TOP AND BOTTOM
S520	X	1842	5'-0"	X		TRANS. OVERHANG
S521	X	3224	4'-5"	X		PARAPET TIES
S522	X	3224	5'-0"	X		PARAPET VERT.
S523	X	372	37'-11"			PARAPET HORIZ.
S424	X	248	37'-1"			HAUNCH LONGIT.
S425	X	1786	2'-5"	X		HAUNCH HAT
S426	X	2510	2'-7"	X		HAUNCH HAT
S427	X	54	4'-2"	X		S & N ABUT. DIAPH. STIRRUPS
S628	X	30	6'-0"			S & N ABUT. DIAPH. BOTTOM HORIZ.
S429	X	12	6'-0"			S & N ABUT. DIAPH. TOP HORIZ.
S430	X	12	6'-0"			S & N ABUT. JOINT HOLD DOWN
S431	X	144	3'-8"	X		SUSPENDER DIAPH. SIRRUPS
S632	X	54	5'-0"			SUSPENDER DIAPH. BOTTOM HORIZ.
S433	X	36	5'-0"			SUSPENDER DIAPH. TOP HORIZ.
S434	X	36	5'-0"			SUSPENDER HOLD DOWN
S535	X	28	5'-0"			FLOOR DRAIN



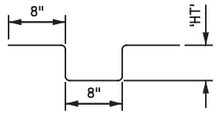
S520



S521

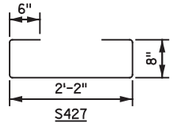


S522

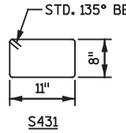


S425, S426

BAR MARK	'HT'
S425	4"
S426	5"



S427



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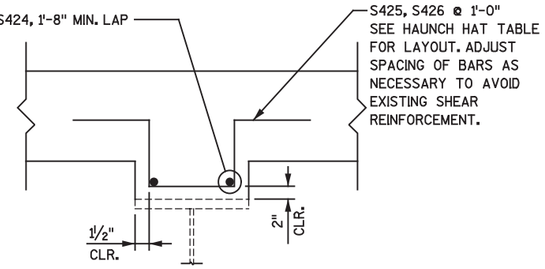
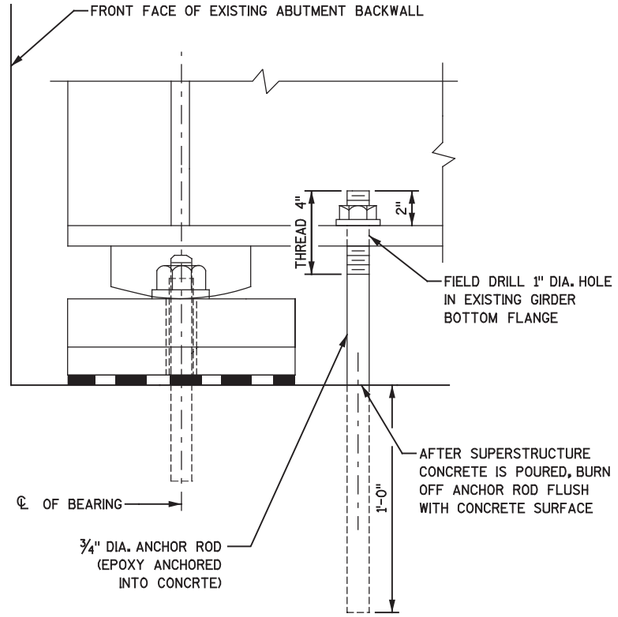


HAUNCH DETAILS

HAUNCH HAT TABLE

GIRDER NO.	BAR MARK													
	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6	SPAN 7	SPAN 8	SPAN 9	SPAN 10	SPAN 11	SPAN 12	SPAN 13	SPAN 14
1	S426	S426	S426	S426	S426	S426	S426	S426	S426	S426	S426	S426	S426	S426
2	S426	S426	S425	S426	S426	S426	S426	S426	S426	S426	S426	S426	S426	S426
3	S425	S426	S425	S425	S425	S425	S425	S425	S426	S426	S426	S425	S426	S426
4	S425	S425	S425	S425	S425	S425	S425	S425	S425	S425	S425	S425	S425	S425



TEMPORARY HOLD DOWN DEVICE

PLACE ONE ANCHOR ROD PER GIRDER AT ABUTMENT WHERE SLAB POUR TERMINATES. LOCATE 4" (NORMAL) OFF ℄ OF GIRDER. ANCHOR ROD, NUT, WASHER AND DRILLED HOLE IN GIRDER FLANGE SHALL BE PAID FOR AS "MASONRY ANCHORS TYPE S ¾-INCH". MINIMUM PULLOUT CAPACITY OF 27 KIPS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

SUPERSTRUCTURE DETAILS

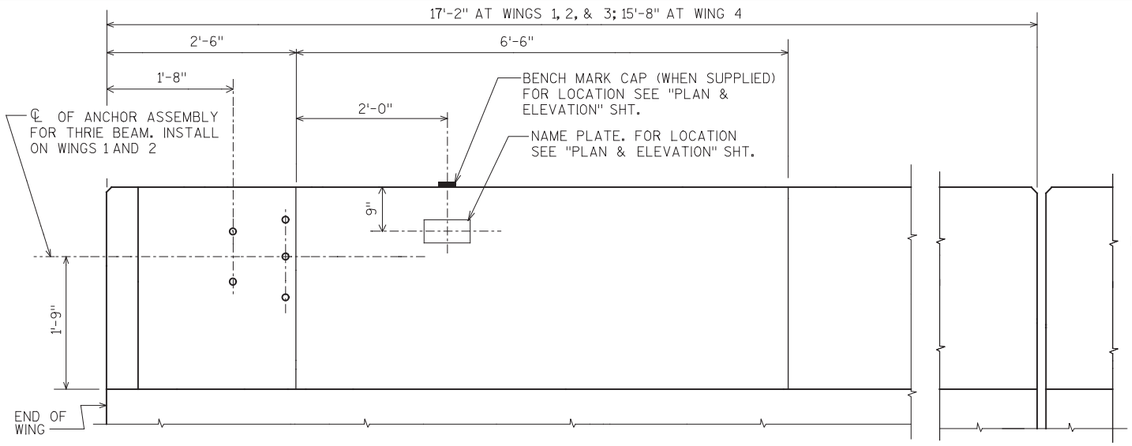
SHEET 17 OF 22

550

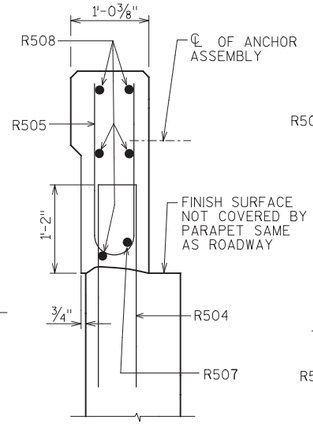
FILE NAME :I7.B-40-177..Superstructure Details.dgn
PLOT DATE :11/31/2014 3:55:09 PM PLOT BY : NicholasHornyak:BL DRV :Pdf_bw_HS.pit PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

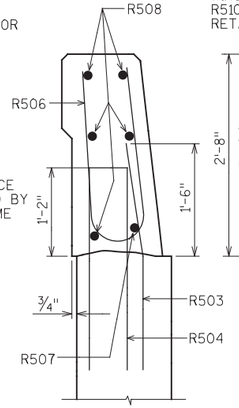
1228-25-70



INSIDE ELEVATION



SECTION A



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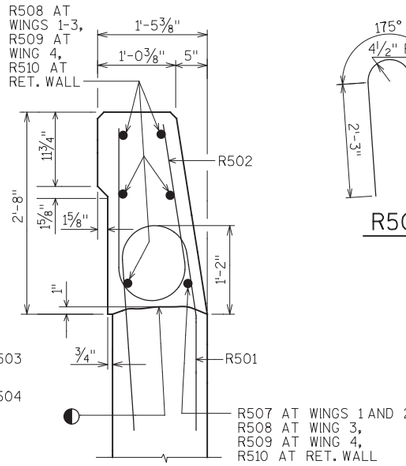
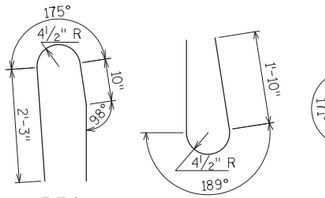
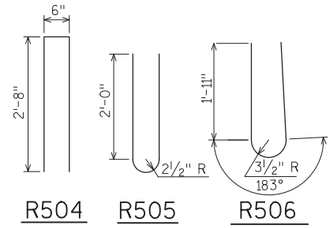
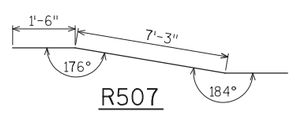


SECTION C

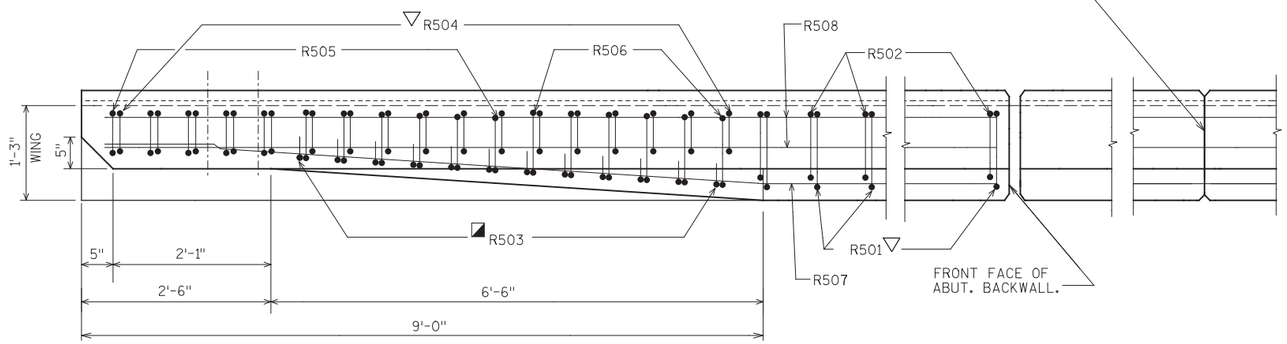
(FOLLOW SECTION C FOR ENTIRE LENGTH OF WINGWALL AT WINGS 3, 4, & RET. WALL)







OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.



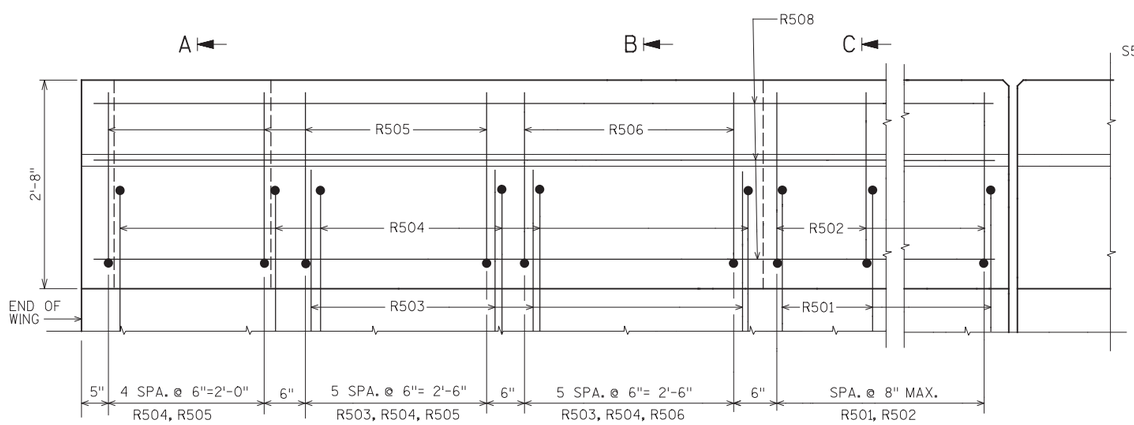
PLAN

(TRANSITION SECTION AT WINGS 1 AND 2 ONLY)

BILL OF BARS

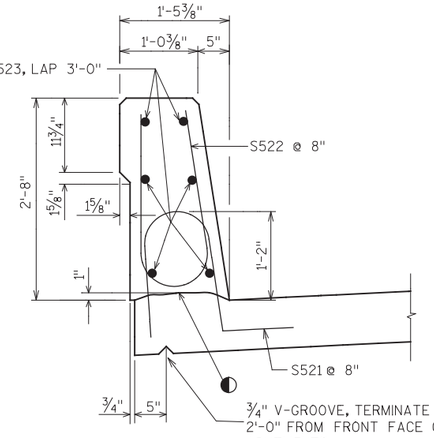
FOR ABUTMENT PARAPETS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
R501	X	76	5'-10"	X	PARAPET VERT.
R502	X	179	5'-0"	X	PARAPET VERT.
R503	X	24	3'-0"	X	PARAPET VERT. TRANS. W1 & W2
R504	X	34	5'-7"	X	PARAPET VERT. END W1 & W2
R505	X	22	4'-9"	X	PARAPET VERT. END W1 & W2
R506	X	12	4'-10"	X	PARAPET VERT. TRANS. W1 & W2
R507	X	2	16'-9"	X	PARAPET HORIZ. W1 & W2
R508	X	16	16'-10"		PARAPET HORIZ. W1, W2, &W3
R509	X	6	15'-4"		PARAPET HORIZ. W4
R510	X	12	35'-7"		PARAPET HORIZ. RET. WALL

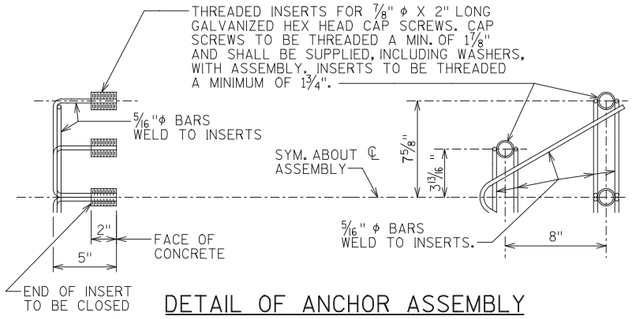


OUTSIDE ELEVATION

(TRANSITION SECTION AT WINGS 1 AND 2 ONLY)



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

SINGLE SLOPE PARAPET 32SS

SHEET 18 OF 22

551

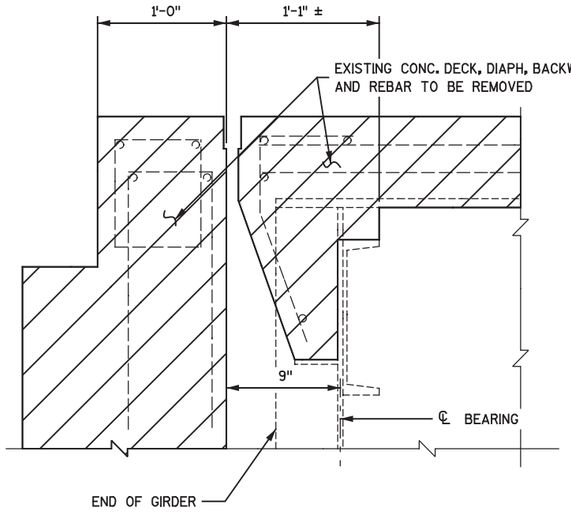
8

13

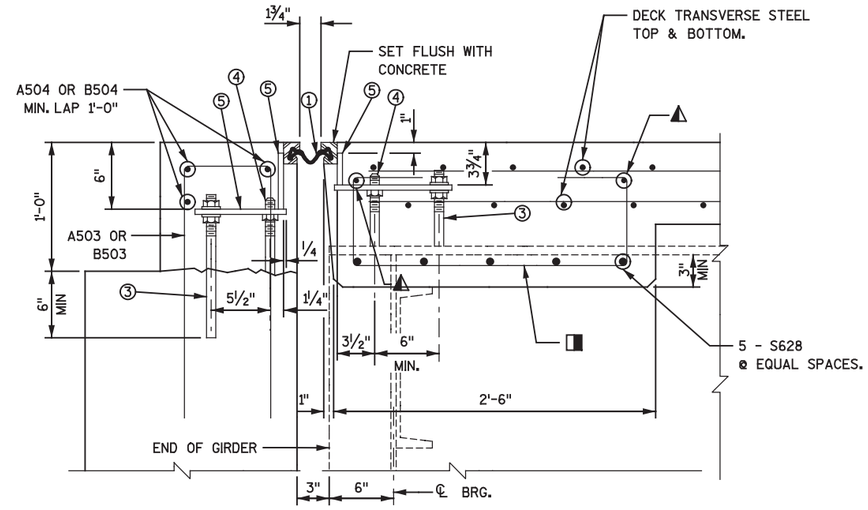
8

FILE NAME :18.B-40-177_Single Slope Parapet 32SS.dgn
PLOT DATE :1/31/2014 3:55:09 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pltt PEN :CEL.TEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



JOINT REMOVAL
AT ABUTMENTS



SECTION THRU JOINT
AT ABUTMENTS

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.

② STUDS ⅝" ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & 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 TO ① AT 1'-6" CENTERS BETWEEN GIRDERS

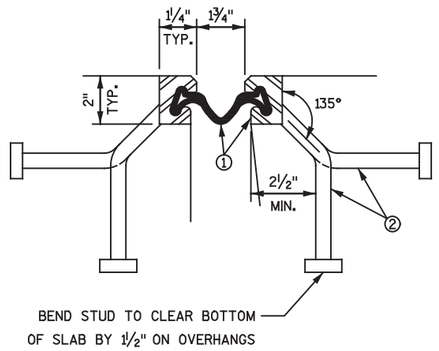
③ ¾" ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

④ ¾" ϕ THREADED ROD WITH NUT. TACK WELD NUT TO ⑤.

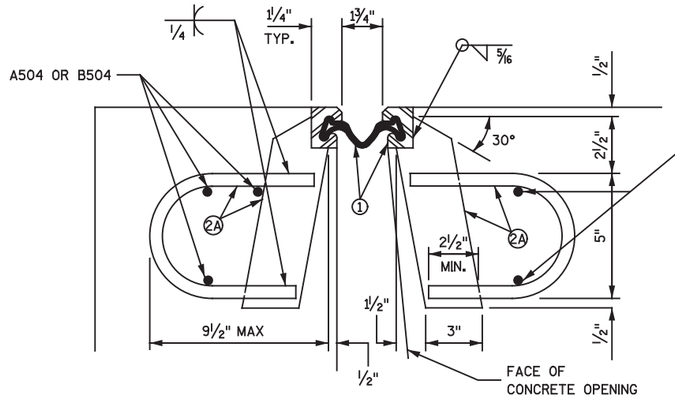
⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO ①. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR ③ & 1" ϕ HOLE FOR ④.

▲ S429, SAME LENGTH AS HORIZ. DIAPH. BARS AT BOTTOM OF DIAPHRAGM.

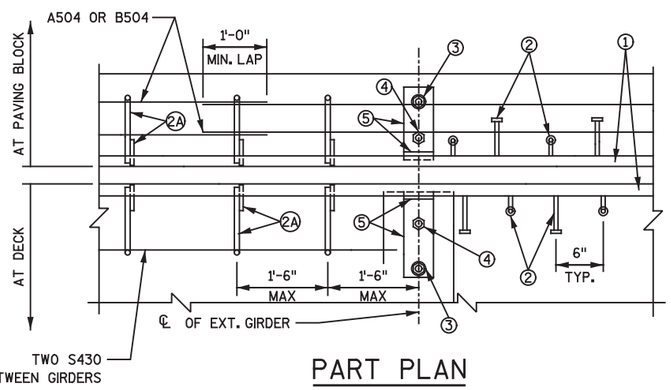
◨ S427 @ 9" O.C. BETWEEN TOP FLANGE OF GIRDERS.



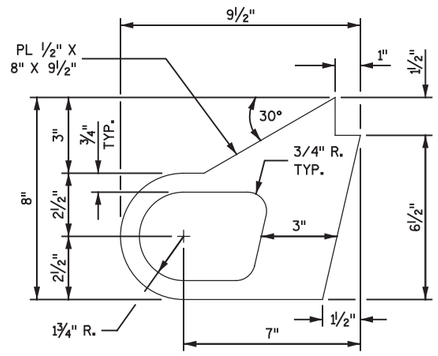
SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF DECK & AT PARAPETS



SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN



ALTERNATE STRIP SEAL ANCHOR

EXPANSION JOINT NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING, OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION

SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES, SUPPORTS & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-177".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY	MJH	PLANS CK'D.	RJW

STRIP SEAL EXPANSION JOINT AT ABUTMENTS

SHEET 19 OF 22

552

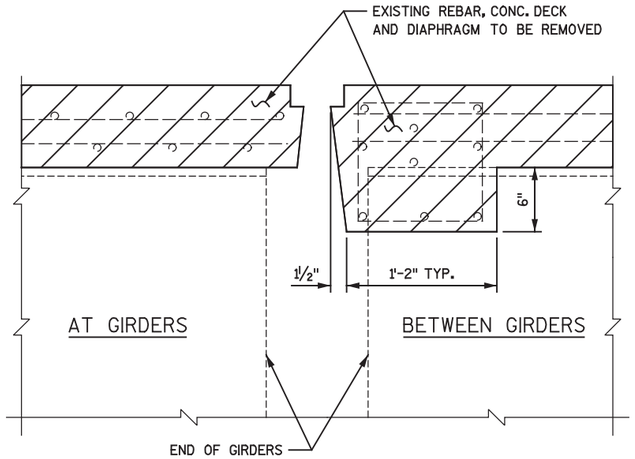
8

8

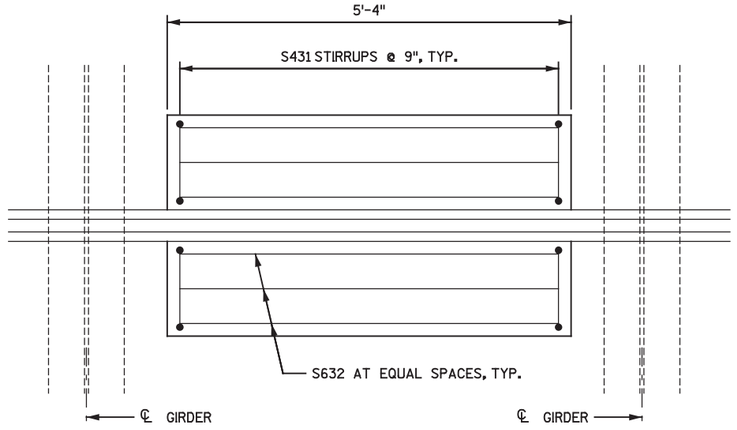
FILE NAME :I:\B-40-177_Strip Seal Expansion Joint At Abutments.dgn
PLOT DATE :1/31/2014 3:55:10 PM PLOT BY : NicholasHornyak@E DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



JOINT REMOVAL
AT SUSPENDERS



SECTION A-A

LEGEND

① NEOPRENE STRIP SEAL (5 - INCH) & STEEL EXTRUSIONS.

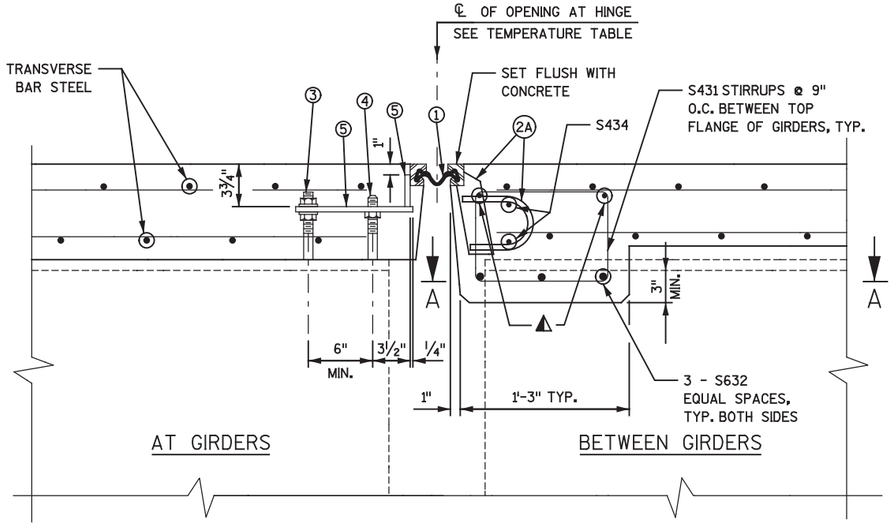
② STUDS ⅝" ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.

②A ½" THICK ANCHOR PLATE WITH ⅝" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO 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 WELD NUT TO ⑤.

⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO ①. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR ③ & 1" ϕ HOLE FOR ④.



SECTION THRU JOINT
AT SUSPENDERS

TEMPERATURE TABLE

Temp, °F	JOINT OPENING		
	HINGE 1	HINGE 2	HINGE 3
85	1 1/4"	1 1/2"	1 3/8"
75	1 5/8"	1 3/4"	1 3/4"
65	1 7/8"	2"	2"
55	2 1/4"	2 1/4"	2 1/4"
45	2 1/2"	2 1/2"	2 1/2"
35	2 3/4"	2 3/4"	2 3/4"
25	3 1/8"	3"	3"
15	3 3/8"	3 1/4"	3 1/4"
5	3 3/4"	3 1/2"	3 5/8"

EXPANSION JOINT NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING, OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION

SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES, SUPPORTS & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-177".

SEE SHEET 19 FOR STRIP SEAL SECTION DETAILS SHOWING THE SECTION THRU JOINT AT THE EXTERIOR GIRDER TO EDGE OF SLAB, THE SECTION THRU JOINT AT THE ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS, A PARTIAL PLAN VIEW, AND THE ALTERNATE STRIP SEAL ANCHOR.

⚠ S433, SAME LENGTH AS HORIZ. DIAPH. BARS AT BOTTOM OF DIAPHRAGM, TYP. BOTH SIDES.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

STRIP SEAL EXPANSION JOINT AT SUSPENDERS

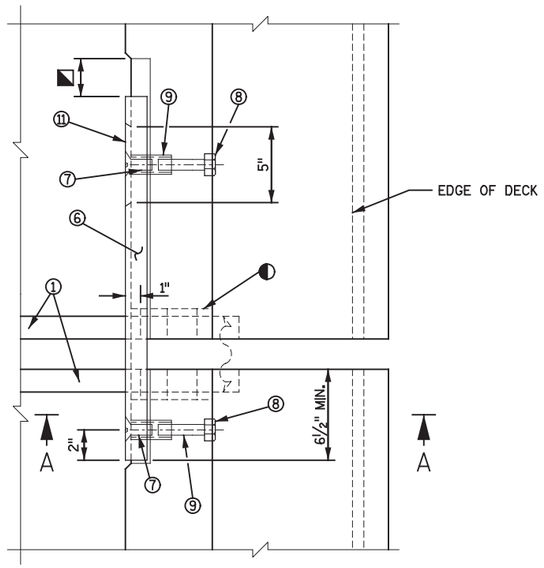
SHEET 20 OF 22

553

FILE NAME :20_B-40-177_Strip Seal Expansion Joint at Suspenders.dgn
PLOT DATE :1/31/2014 3:55:11 PM PLOT BY : Nicholas Harmyak VHB DRV :Pdf_bw_HS.pltr PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



PLAN AT PARAPET

SINGLE SLOPE PARAPET

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS.

② STUDS ⅝" ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.

⑥ GALVANIZED PLATE ⅜" X 10½" X 2'-2" LONG WITH HOLES FOR ⑦. BEND AS SHOWN.

⑦ ¾" ϕ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

⑧ ¾" ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

⑨ ¾" ϕ X 2¼" GALVANIZED THREADED COUPLING.

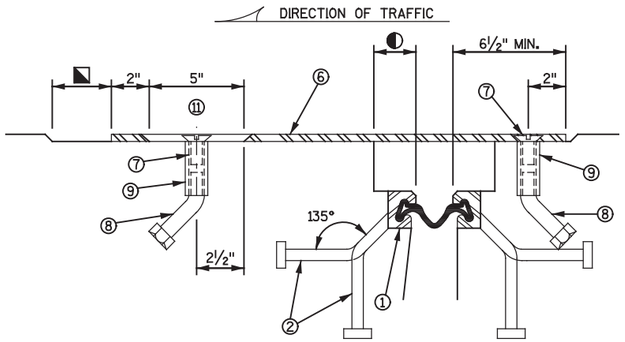
⑪ 1" X 5" SLOTTED COUNTERSUNK HOLE FOR ⑦ SLOT PARALLEL TO DIRECTION OF MOVEMENT.

EXPANSION JOINT NOTES

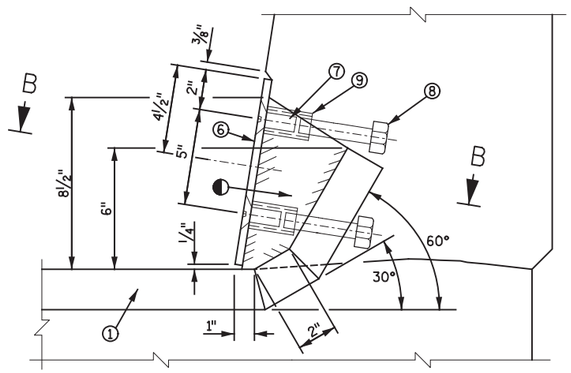
SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM ⑧ AND ⑨ SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

INSTALLATION OF ALL MATERIAL AND HARDWARE INCLUDED IN THE EXPANSION JOINT ASSEMBLIES AT THE PARAPET WILL BE INCLUDED IN THE BID ITEM "EXPANSION DEVICE B-40-177".

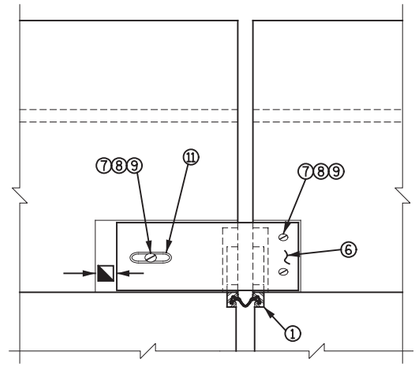


SECTION B-B



SECTION A-A

SINGLE SLOPE PARAPET



VIEW OF PARAPET PLATES FROM ROADWAY

SINGLE SLOPE PARAPET

◐ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING

◪ JOINT OPENING DIM. PLUS ½"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY MJH | PLANS CK'D. RJW

STRIP SEAL DETAILS AT PARAPETS

SHEET 21 OF 22

554

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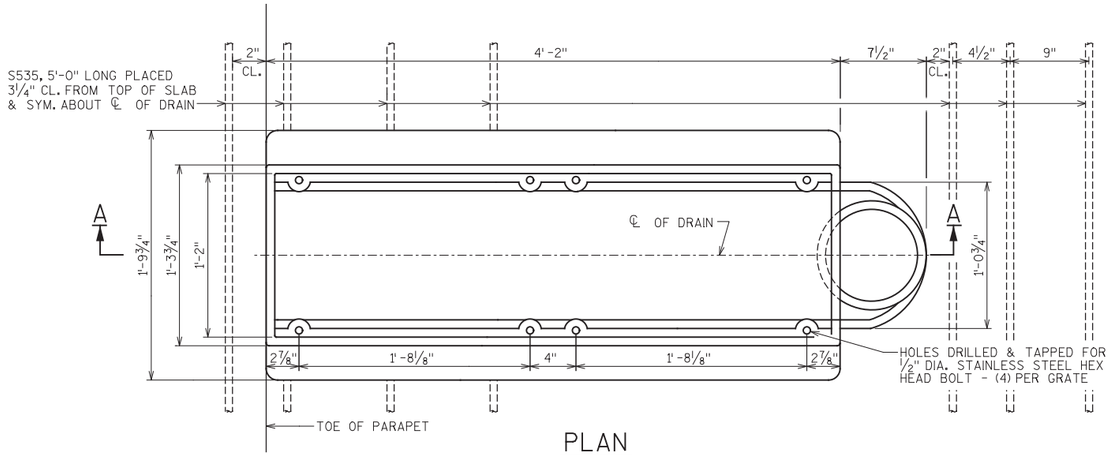
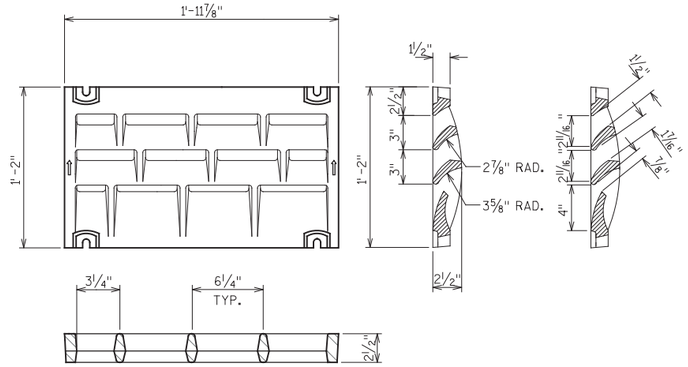
FILE NAME :21.B-40-177_Strip Seal Details At Parapets.dgn
PLOT DATE :1/31/2014 3:55:11 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



PLAN



GRATE CASTING DETAILS

ATTACH GRATES TO FRAME FOR SHIPMENT

GENERAL NOTES

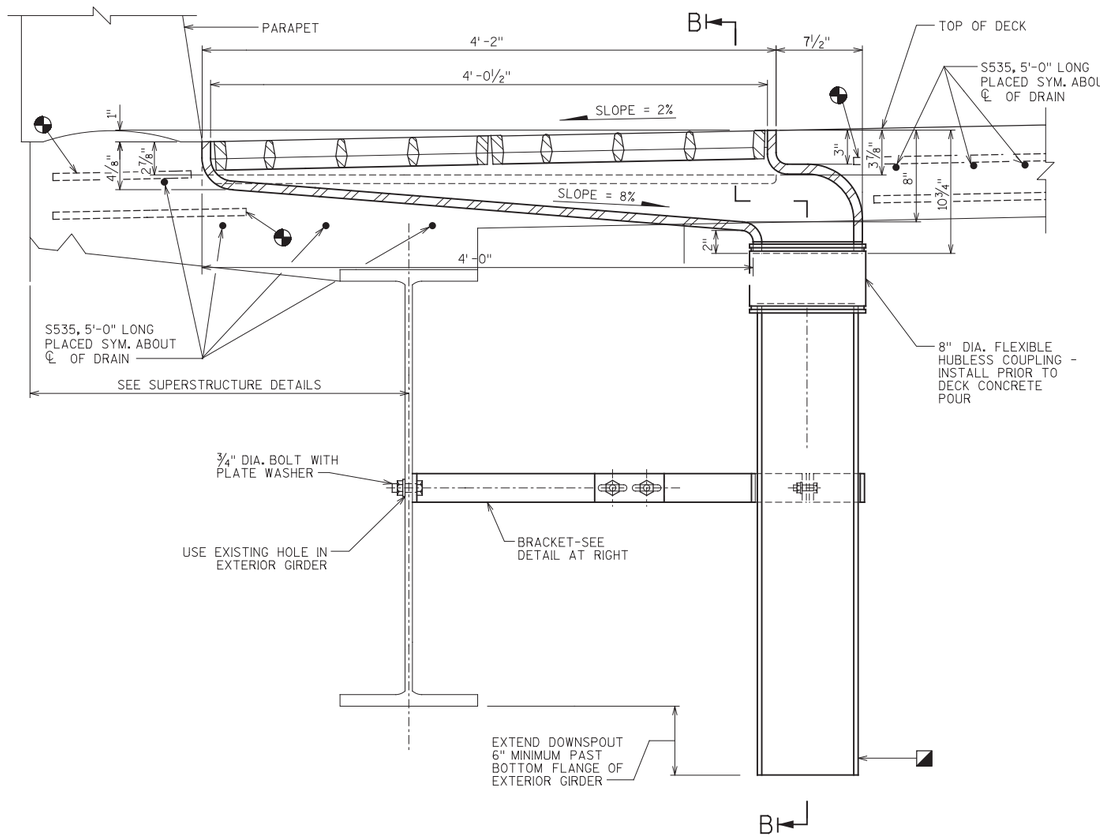
ALL MATERIAL FOR TYPE "WF" CASTING AND 8" DIA. CONNECTION PIPE, EXCLUDING GRATE HOLD DOWN SCREWS, SHALL BE GRAY IRON CONFORMING TO ASTM A48, CLASS 30.

MATERIAL FOR BRACKETS SHALL CONFORM TO ASTM A36.

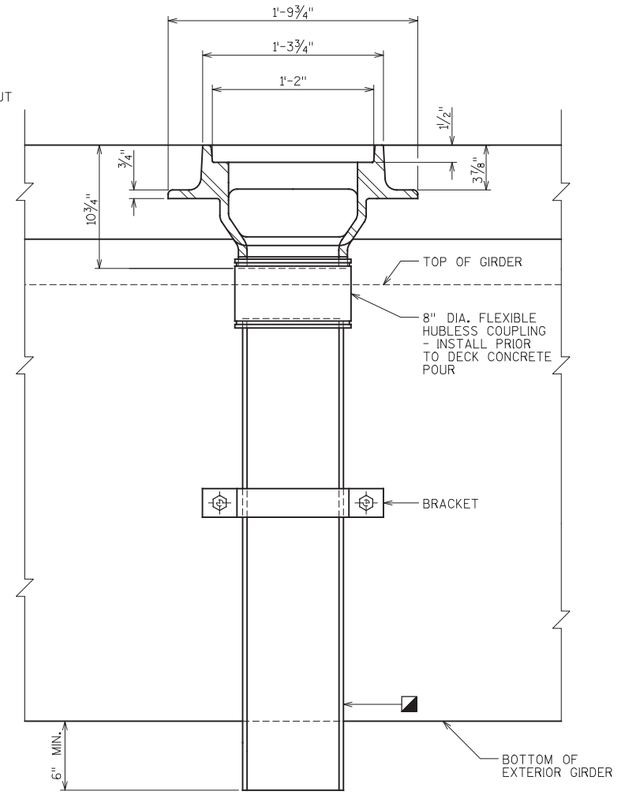
THE CONTRACTOR MAY PROPOSE AN ALTERNATE TYPE OF BRACKET. THE PROPOSED ALTERNATE DETAILS SHALL BE SUBMITTED AND SUBJECT TO THE APPROVAL OF THE ENGINEER.

◪ 8" DIA. DOWNSPOUTS SHALL BE REINFORCED THERMOSETTING RESIN PIPE CONFORMING TO SECTION 514 OF THE STANDARD SPECIFICATIONS.

◔ TRANSVERSE & LONGITUDINAL SLAB BAR REINFORCEMENT TO BE CUT A MAXIMUM OF 1" CLEAR FROM DRAIN FRAME. DISPLACE BARS WHERE POSSIBLE.



SECTION A-A



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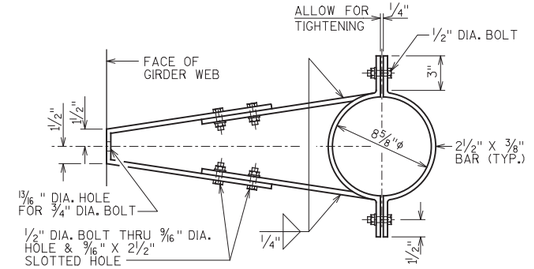

BRACKET DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-177

DRAWN BY | PLANS CK'D. RJW

FLOOR DRAIN TYPE 'WF'

SHEET 22 OF 22

555

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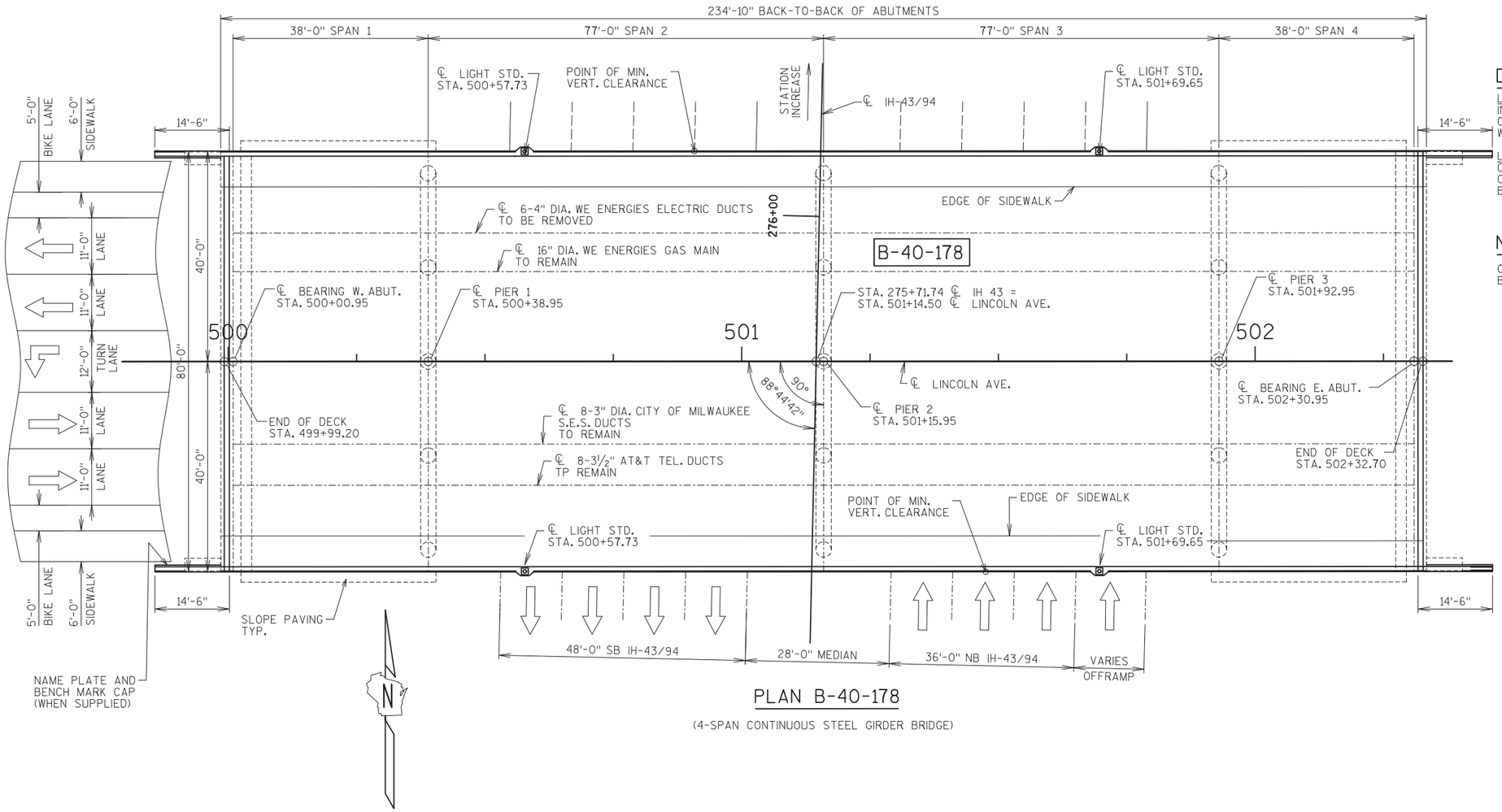
FILE NAME :22_B-40-177_Floor Drain Type 'WF'.dgn
PLOT DATE :1/31/2014 3:55:12 PM PLOT BY : NicholasHornyak:BL DRV :pdf_bw_HS.plt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



PLAN B-40-178

(4-SPAN CONTINUOUS STEEL GIRDER BRIDGE)

DESIGN DATA

LIVE LOAD:

INVENTORY RATING	HS-23
OPERATING RATING	HS-38
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SUPERSTRUCTURE	F'c = 4,000 P.S.I.
CONCRETE MASONRY SUBSTRUCTURE	F'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60	Fy = 60,000 P.S.I.

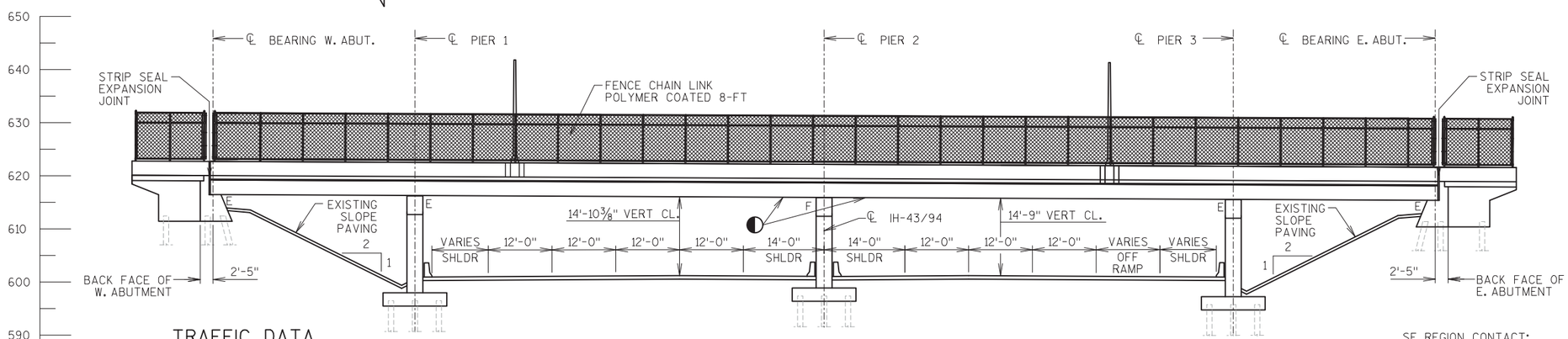
NOTE

OVERHEAD POWER LINES DIRECTLY EAST OF BRIDGE TO REMAIN ACTIVE DURING CONSTRUCTION.

WISCONSIN
MICHAEL A. DELEMONT
E-42185
CRYSTAL LAKE
PROFESSIONAL ENGINEER
1/31/2014

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTION AND QUANTITIES
3. ABUTMENT DETAILS
4. ABUTMENT DETAILS 2
5. SUPERSTRUCTURE
6. SUPERSTRUCTURE DETAILS
7. VERTICAL FACE PARAPET "A"
8. FENCE DETAILS
9. LIGHT STANDARD
10. EXPANSION DEVICE DETAIL
11. COVER PLATE DETAIL
12. EXPANSION BEARING DETAILS
13. FIXED BEARING DETAILS



ELEVATION

(LOOKING NORTH)

TRAFFIC DATA

IH-43/94
A.D.T. (2040) - 127,000
D.H.V. (2040) - 12,446
R.D.S. 60 MPH

LINCOLN AVE.
A.D.T. (2035) - 7,681
D.H.V. (2035) - 732
R.D.S. 35 MPH

◐ PERFORM MAGNETIC PARTICLE TESTING AND ULTRASONIC IMPACT TREATMENT AT TOP COVER PLATE END WELD LOCATIONS:
PIER 2: GIRDERS 1 THRU 4 AND 7 THRU 10

SE REGION CONTACT:
JOE GALLAMORE (262) 548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
MICHAEL DELEMONT (414) 831-4157

NO.	DATE	REVISION	BY

URS
342 North Water Street
7th Floor
Milwaukee, WI 53202
(414) 831-4100

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher 2/10/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-178

LINCOLN AVENUE OVER IH-43/94

COUNTY	TOWN/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	JDL	DESIGN CK'D.	JDB	DRAWN BY	JDL	PLANS CK'D.	JDB

GENERAL PLAN AND ELEVATION

SHEET 1 OF 13
556

FILE= P:\Transportation\I43 Valley Bridge Overpasses\CADD\Structures\B-40-178\Final\01-178_general plan and elevation.dgn
DATE: 1/31/2014
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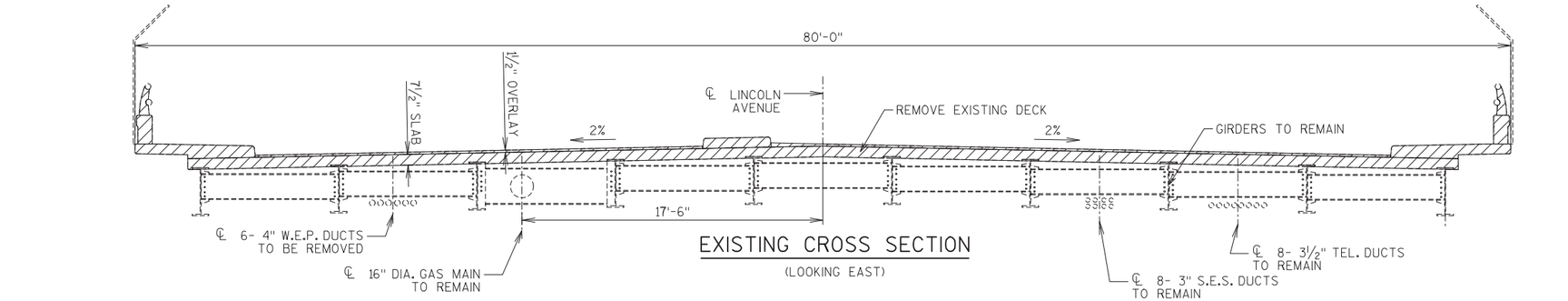
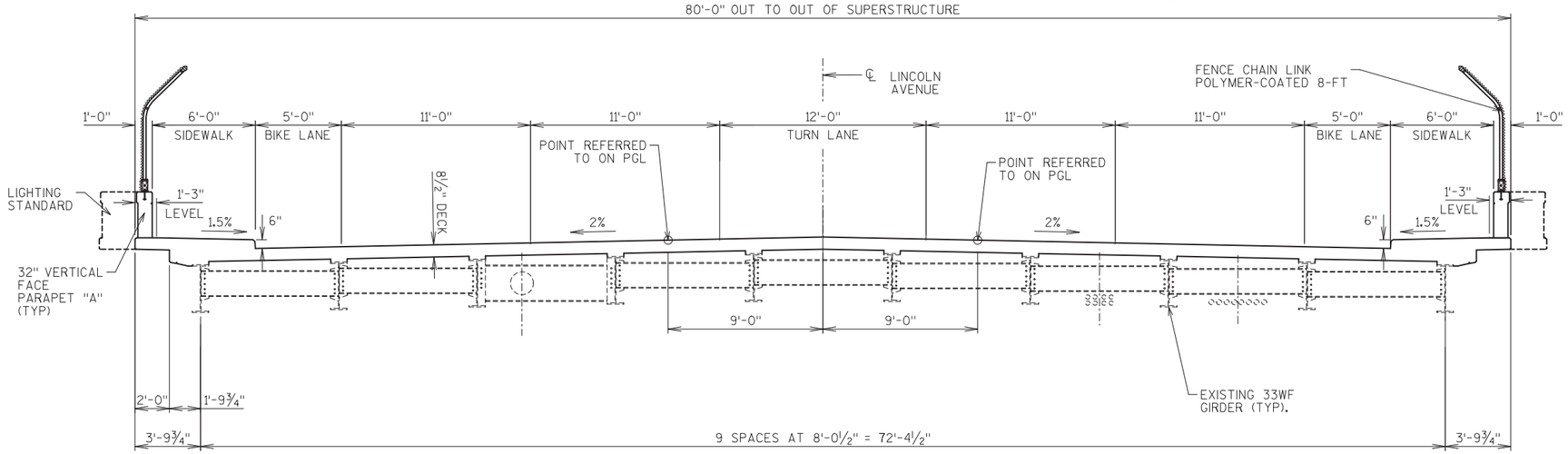


EXISTING CROSS SECTION

(LOOKING EAST)



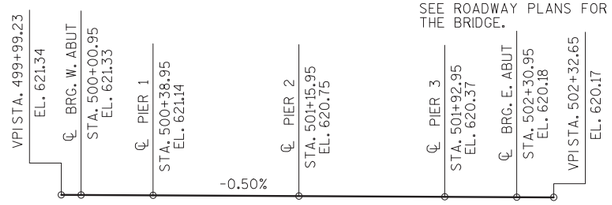
CROSS SECTION THRU ROADWAY

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

ALL ITEMS ARE CATEGORY 2060

BID ITEM #	BID ITEM	UNIT	SUPER - STRUCTURE	WEST ABUTMENT	PIER 1	PIER 2	PIER 3	EAST ABUTMENT	TOTAL
203.0200.0007	REMOVING OLD STRUCTURE STA. 501+14.50	LS	--	--	--	--	--	--	1
203.0210.S.0007	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-178	LS	--	--	--	--	--	--	1
203.0225.S.0007	DEBRIS CONTAINMENT STRUCTURE B-40-178	LS	--	--	--	--	--	--	1
206.1000.0007	EXCAVATION FOR STRUCTURES BRIDGES B-40-178	LS	--	--	--	--	--	--	1
209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	--	74	--	--	--	74	148
502.0100	CONCRETE MASONRY BRIDGES	CY	606	26	--	--	--	26	658
502.3100.0007	EXPANSION DEVICE B-40-178	LS	--	--	--	--	--	--	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,400	--	--	--	--	--	2,400
502.5002	MASONRY ANCHORS TYPE L NO. 4 BARS	EA	--	182	--	--	--	182	364
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EA	--	16	--	--	--	16	32
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	141,127	3,031	--	--	--	3,031	147,189
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EA	--	10	10	--	10	10	40
506.5000	BEARING ASSEMBLIES FIXED B-40-178	EA	--	--	--	10	--	--	10
506.7050.S.0007	REMOVING BEARINGS B-40-178	EA	--	10	10	10	10	10	50
506.7060.S.0007	BRIDGE JACKING B-40-178	LS	--	--	--	--	--	--	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	--	10	--	--	--	10	20
517.0900.S.0006	PREPARATION AND COATING OF TOP FLANGES B-40-178	LS	--	--	--	--	--	--	1
517.1800.S.0004	STRUCTURAL REPAINTING RECYCLED ABRASIVE B-40-178	LS	--	--	--	--	--	--	1
517.4500.S.0004	NEGATIVE PRESSURE CONTAINMENT COLLECTION OF WASTE MATERIALS B-40-178	LS	--	--	--	--	--	--	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EA	1	--	--	--	--	--	1
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	--	97	--	--	--	97	194
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	18	--	--	--	--	--	18
652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	1056	--	--	--	--	--	1,056
653.0222	JUNCTION BOXES 18X12X6-INCH	EA	4	--	--	--	--	--	4
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EA	4	--	--	--	--	--	4
SPV.0060.4001	ULTRASONIC IMPACT TREATMENT PROCEDURE	EA	16	--	--	--	--	--	16
SPV.0060.4002	MAGNETIC PARTICLE TESTING PROCEDURE	EA	16	--	--	--	--	--	16
SPV.0090.4000	FENCE CHAIN LINK POLYMER-COATED 8-FT	LF	518	--	--	--	--	--	518
	NON-BID ITEMS								
	FILLER	SIZE							1/2"
	NAME PLATE	EACH							1



PROFILE GRADE LINE LINCOLN AVENUE

9'LT. & 9'RT. OF ℄

GENERAL NOTES

THE PROPOSED WORK INCLUDES REPLACING THE DECK, RAISING OF THE GIRDERS BY 0.30 FT, WINGWALL MODIFICATIONS, BACKWALL REPLACEMENT, PAINTING, BEARING REPLACEMENT, AND NEW FENCE.

WINGWALL MODIFICATION CONSISTS OF REMOVING THE TOP PORTION OF THE WINGWALL AND RECONSTRUCTING IT TO ACCOMMODATE THE NEW PROFILE.

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS OF EXISTING ELEMENTS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE AND THE FRONT FACE AND THE TOP OF THE PARAPET, INCLUDING PARAPETS ON ABUTMENT WINGS AND SIDEWALK.

EXISTING GIRDERS MUST BE PROTECTED DURING CONSTRUCTION.

ELEVATIONS ARE REFERENCED TO THE NAVD 88 DATUM.

VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

AT ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL CONTROLLED LOW STRENGTH"

THE MINIMUM CONCRETE HAUNCH SHALL BE 2" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 2½" WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE FIELD ENGINEER.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWING. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR (1967).

ORIGINAL PLANS AND OVERLAY PLANS OF EXISTING BRIDGE ARE AVAILABLE AT WISDOT SOUTHEAST REGION OFFICE. REFERENCE THESE PLANS FOR THE DESIGN OF SLAB OVERHANG SHORING AND TEMPORARY BRACING DURING CONSTRUCTION.

FENCE AND FABRIC SHALL BE BLACK, FEDERAL COLOR NO. 27038.

ALL STEEL SHALL BE PAINTED DENIM (BLUE)-SW6523, B-G/B/138, IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

CITY OF MILWAUKEE WILL REMOVE AND REINSTALL EXISTING LIGHT POLES, SEE SPECIAL PROVISION FOR COORDINATION REQUIREMENTS.

ALL CONCRETE REMOVED SHALL BE DEFINED BY A 1" DEEP SAW CUT.

CLEAN, STRAIGHTEN, AND INCORPORATE EXISTING BAR STEEL REINFORCEMENT INTO NEW WORK, WHERE APPLICABLE.

EXISTING UTILITIES OWNED BY WE ENERGIES ELECTRIC WILL BE REMOVED PRIOR TO CONSTRUCTION.

EXISTING UTILITIES OWNED BY THE CITY OF MILWAUKEE WILL BE REMOVED PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AND INSTALLING ATTACHMENT HARDWARE INTO THE DECK. COST ASSOCIATED WITH THE WORK IS INCIDENTAL TO THE CONCRETE MASONRY BRIDGES BID ITEM.

FOR UTILITIES OWNED BY AT&T: AT&T WILL SUPPLY THE ATTACHMENT HARDWARE TO THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE ATTACHMENT HARDWARE INTO THE DECK. COST ASSOCIATED WITH THE WORK IS INCIDENTAL TO THE CONCRETE MASONRY BRIDGES BID ITEM.

FOR UTILITIES OWNED BY WE ENERGIES GAS: WE ENERGIES WILL SUPPLY THE ATTACHMENT HARDWARE TO THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR RE-ATTACHING THE UTILITY TO THE DIAPHRAGMS AND PROTECTING PRIOR TO REMOVAL OF THE EXISTING DECK. COST ASSOCIATED WITH THE WORK IS INCIDENTAL TO THE CONCRETE MASONRY BRIDGES BID ITEM.

SEE ROADWAY PLANS FOR DETAILS REGARDING UTILITY ATTACHMENTS TO THE BRIDGE.

STATE PROJECT NUMBER
1228-25-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-178

DRAWN BY JDL | PLANS CK'D. JDB

TYPICAL SECTION AND QUANTITIES

SHEET 2 OF 13

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FILE= P:\Transportation\143 Valley Bridge Overpasses\CADD\Structures\B-40-178\Final\02-178_typical section.dgn

DATE: 1/31/2014
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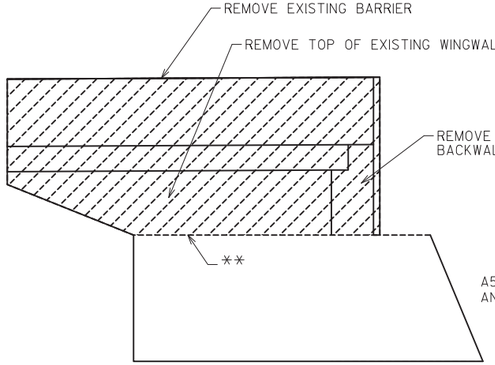
STATE PROJECT NUMBER

1228-25-70



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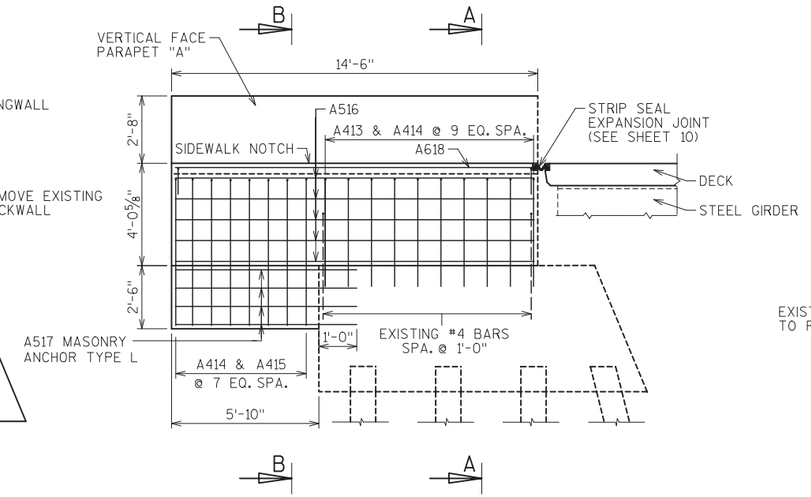
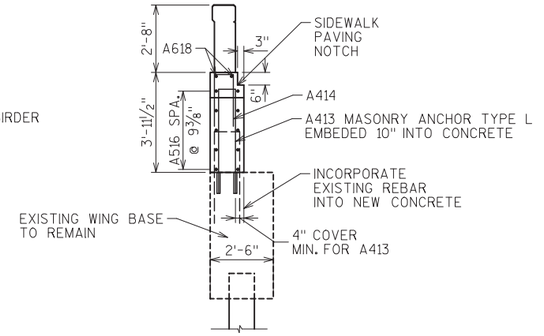
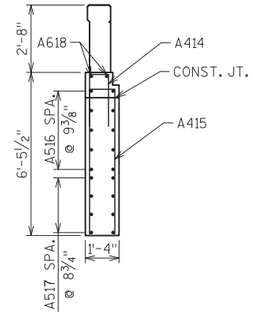


PROPOSED

ELEVATION - WING WALL

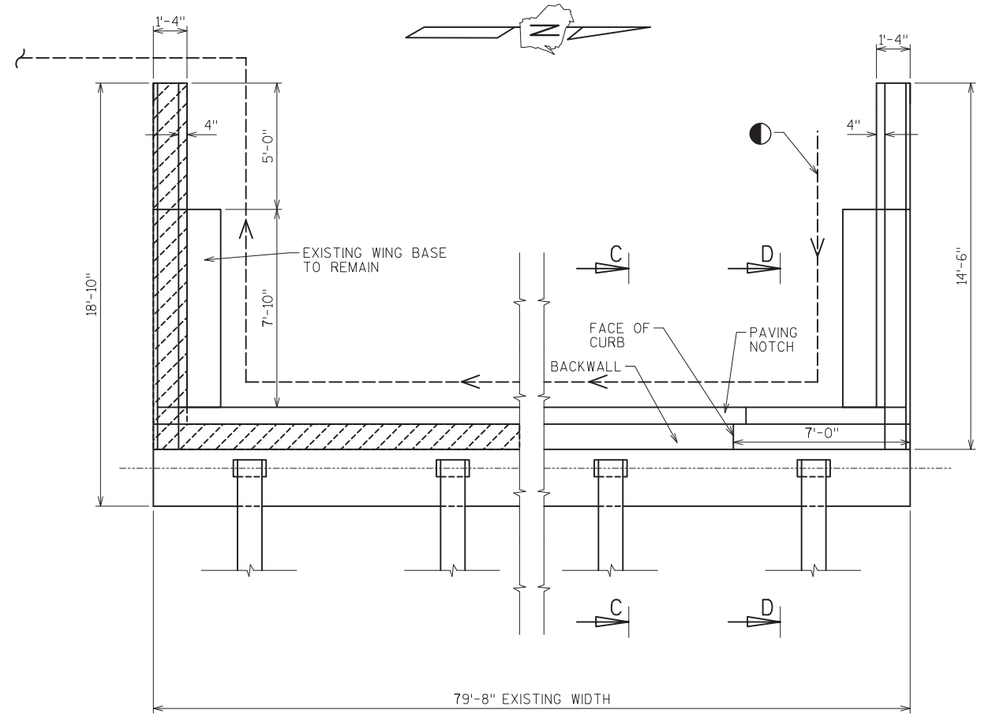


SECTION A-A



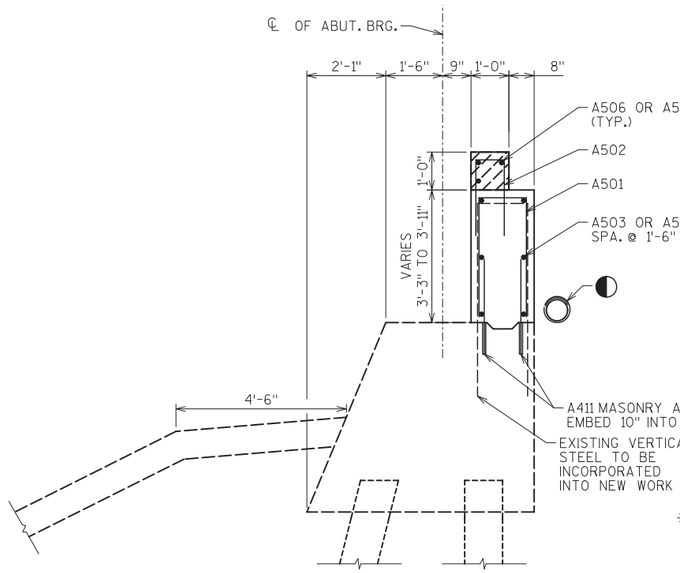
SECTION B-B

CROSS SECTION - WING WALL

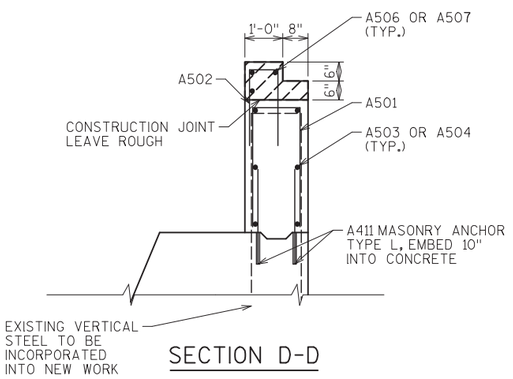


PLAN - ABUTMENT

(WEST ABUTMENT SHOWN. EAST ABUTMENT SIMILAR)



SECTION C-C



SECTION D-D

NOTES

** CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT. ROUGHEN SURFACE TO ¼" AMPLITUDE BEFORE POURING NEW WINGWALL CONCRETE.

◐ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD "REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN".

BILL OF BARS IS LOCATED ON SHEET 4.

▨ INDICATES CONCRETE AREA TO BE POURED AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-178

DRAWN BY	JDL	PLANS CK'D.	JDB

ABUTMENT DETAILS

SHEET 3 OF 13

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DATE: 1/31/2014
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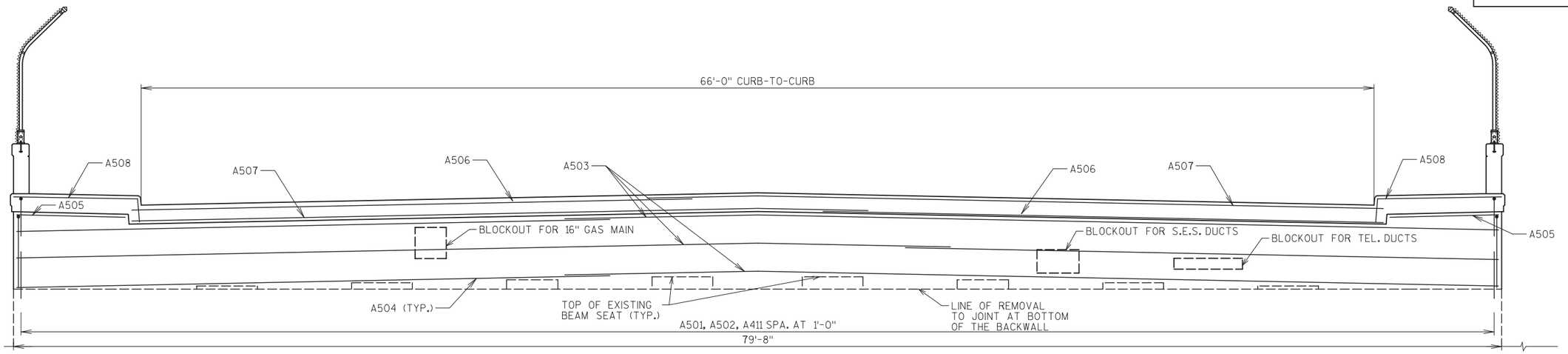
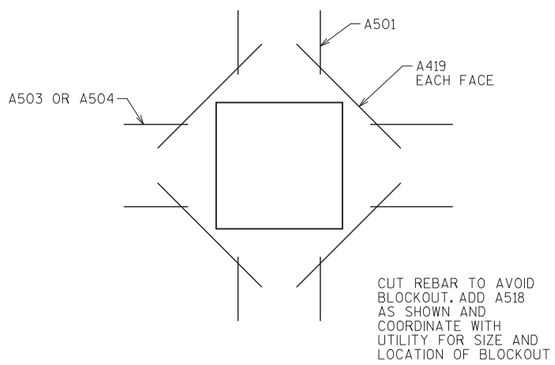
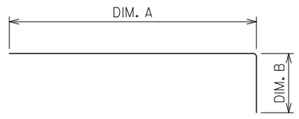


ABUTMENT ELEVATION

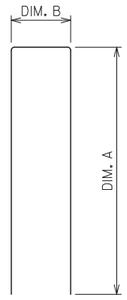
(EAST ABUTMENT SHOWN. WEST ABUTMENT SIMILAR
BLOCKOUTS OPPOSITE)



BLOCKOUT DETAIL



TYPE 1



TYPE 2

BILL OF BARS

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
A501	162	7'-3"	X	ABUTMENT DOWEL BARS
A502	162	4'-7"	X	BACKWALL DOWEL BARS
A503	12	50'-0"		LONGITUDINAL ABUTMENT
A504	12	31'-11"		LONGITUDINAL ABUTMENT
A505	8	5'-10"		LONGITUDINAL ABUTMENT SIDEWALK
A506	8	39'-5"		LONGITUDINAL BACKWALL
A507	8	30'-0"		LONGITUDINAL BACKWALL
A508	8	7'-11"	X	LONGITUDINAL BACKWALL SIDEWALK
--	--	--		BAR NOT USED
--	--	--		BAR NOT USED
A411	324	2'-6"		BACKWALL ANCHORS, TYPE L
--	--	--		BAR NOT USED
A413	40	8'-8"	X	VERT WINGWALL ANCHORS, TYPE L
A414	80	4'-9"	X	WINGWALL VERTICAL BARS
A415	32	12'-6"	X	WINGWALL VERTICAL BARS
A516	40	14'-2"		LONGITUDINAL WALL
A517	32	6'-8"		HORIZ WINGWALL ANCHORS, TYPE L
A618	8	14'-2"		LONGITUDINAL PAVING NOTCH
A419	48	2'-0"		BLOCKOUT REINFORCING

TOTAL WEIGHT =6,062 LBS

BAR BEND CHART

BAR BEND CHART			
BAR MARK	DIM. A	DIM. B	TYPE
A501	3'-1"	1'-4"	2
A502	2'-0"	0'-10"	2
A508	1'-3"	6'-10"	1
A413	4'-2"	0'-8"	2
A414	2'-0"	0'-10"	2
A415	5'-10"	1'-0"	2

NOTES

ALL EXISTING ABUTMENT
AND BEAM SEAT REBAR
AND ANCHOR BOLTS TO REMAIN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-178

DRAWN BY JDL | PLANS CK'D. JDB

ABUTMENT
DETAILS 2

SHEET 4 OF 13
559

DATE: 1/31/2014
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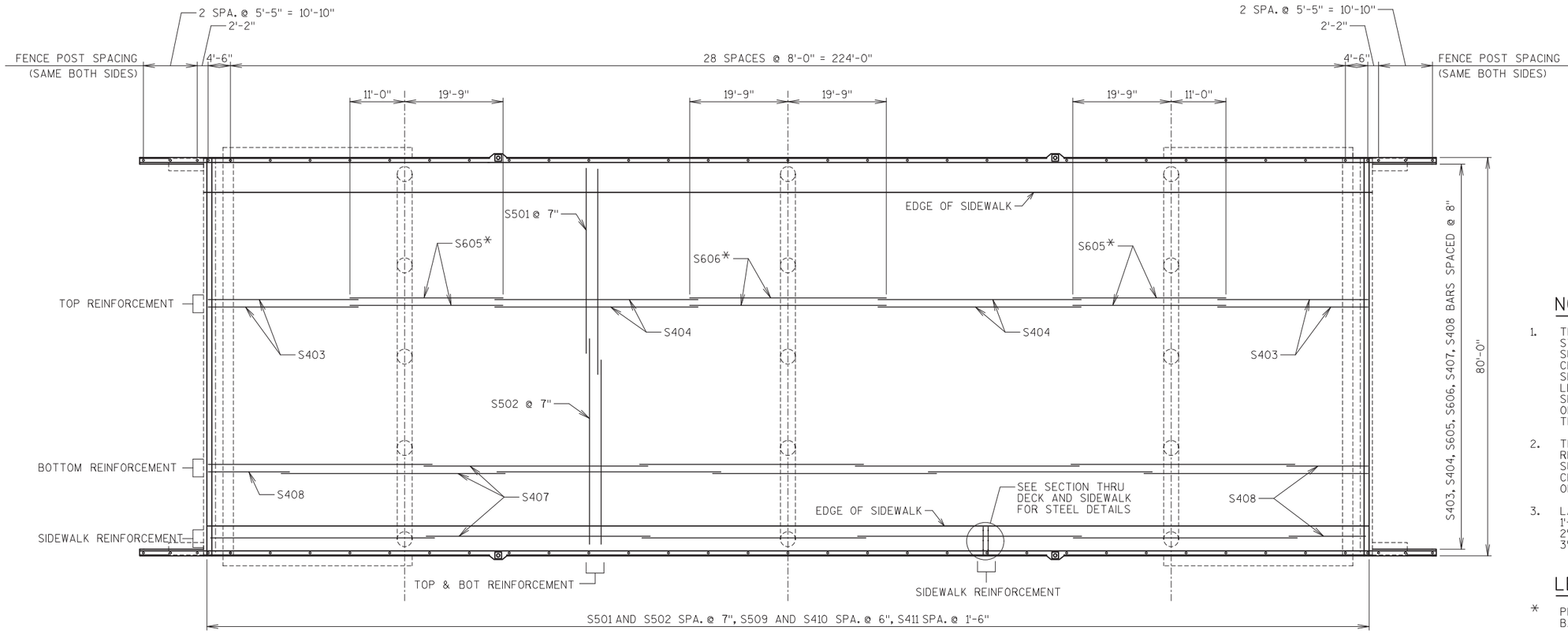
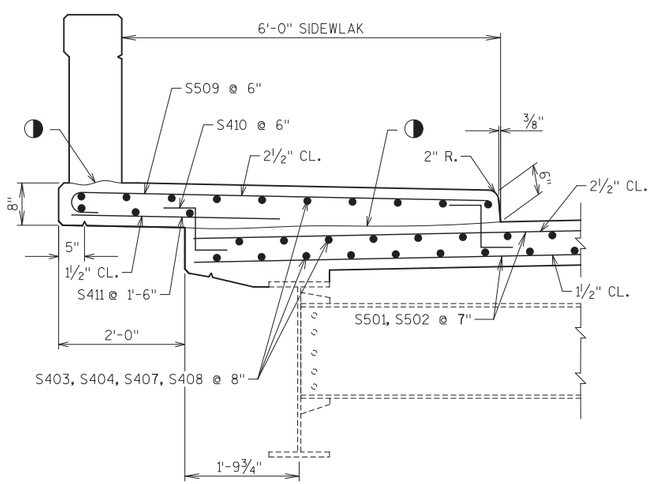


PLAN B-40-178



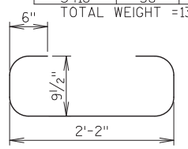
SECTION THRU DECK AND SIDEWALK

BILL OF BARS

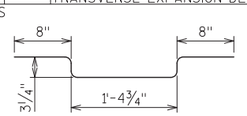
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
ALL REINFORCEMENT BARS IN THIS BILL SHALL BE EPOXY COATED.

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
S501	794	37'-0"		TRANSVERSE T & B
S502	794	41'-3"		TRANSVERSE T & B
S403	234	31'-8"		LONGITUDINAL T
S404	234	43'-8"		LONGITUDINAL T
S605	234	30'-9"		CONTINUITY - T PIER 1 & 3
S606	117	39'-6"		CONTINUITY - T PIER 2
S407	705	45'-0"		LONGITUDINAL B / SIDEWALK
S408	141	16'-4"		LONGITUDINAL B / SIDEWALK
S509	926	7'-2"	X	TRANSVERSE - SIDEWALK T
S410	1852	2'-8"	X	SIDEWALK/DECK DOWELS
S411	310	3'-3"		TRANSVERSE - SIDEWALK B
S412	820	2'-11"	X	HAT BARS
S413	36	7'-8"		TRANSVERSE EXPANSION DEVICE
S714	90	7'-8"		TRANSVERSE EXPANSION DEVICE
S415	216	4'-5"	X	EXPANSION STIRRUPS
S416	36	7'-8"		TRANSVERSE EXPANSION DEVICE

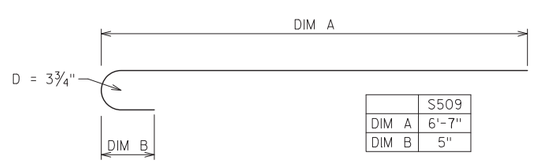
TOTAL WEIGHT =131,990 LBS



S415

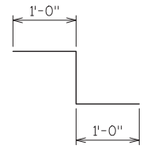


S412



	S509
DIM A	6'-7"
DIM B	5"

S509



S410

NOTES

1. THE BOTTOM TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS WITH A CENTER TO CENTER SPACING NOT TO EXCEED 4'-0". ONE LINE OF CONTINUOUS BAR CHAIRS SHALL BE PLACED NEAR EACH EDGE OF THE SLAB TO SUPPORT THE ENDS OF THE BOTTOM TRANSVERSE BAR STEEL.
2. THE TOP LONGITUDINAL BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS IN TRANSVERSE DIRECTION ON 4'-0" CENTERS.
3. LAP LONGITUDINAL SPLICES AT 1'-8" MIN. FOR #4 BARS, 2'-7" MIN. FOR #5 BARS AND 3'-1" MIN. FOR #6 BARS.

LEGEND

* PLACED IN BETWEEN PRIMARY LONGITUDINAL BARS IN TOP MAT OVER PIERS.

◑ CONST. JOINT-STRIKE OFF AS SHOWN AND LEAVE ROUGH.

STATE PROJECT NUMBER

1228-25-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-178

DRAWN BY JDL | PLANS CK'D. JDB

SUPERSTRUCTURE

SHEET 5 OF 13
560

DATE: 1/31/2014
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STATE PROJECT NUMBER

1228-25-70

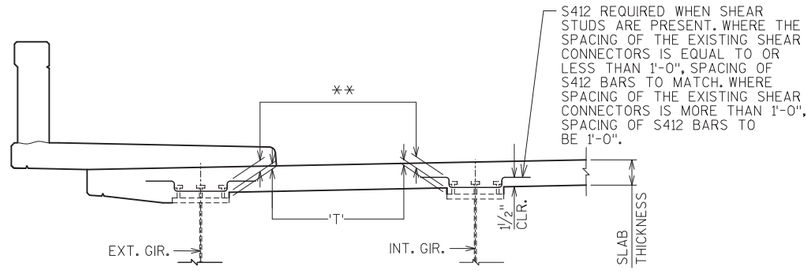
TOP OF DECK ELEVATIONS

SPAN 1											
	W. ABUT	.1 POINT	.2 POINT	.3 POINT	.4 POINT	.5 POINT	.6 POINT	.7 POINT	.8 POINT	.9 POINT	PIER 1
STATION	500+00.95	500+04.75	500+08.55	500+12.35	500+16.15	500+19.95	500+23.75	500+27.55	500+31.35	500+35.15	500+38.95
N. EDGE OF DECK	620.75	620.73	620.71	620.69	620.67	620.65	620.64	620.62	620.60	620.58	620.56
GIRDER 1	620.79	620.77	620.75	620.73	620.71	620.69	620.67	620.65	620.63	620.62	620.60
GIRDER 2	620.95	620.93	620.91	620.89	620.87	620.85	620.83	620.81	620.80	620.78	620.76
GIRDER 3	621.11	621.09	621.07	621.05	621.03	621.01	620.99	620.97	620.96	620.94	620.92
GIRDER 4	621.27	621.25	621.23	621.21	621.19	621.17	621.15	621.14	621.12	621.10	621.08
PGL	621.33	621.31	621.29	621.27	621.25	621.24	621.22	621.20	621.18	621.16	621.14
GIRDER 5	621.43	621.41	621.39	621.37	621.35	621.33	621.32	621.30	621.28	621.26	621.24
GIRDER 6	621.43	621.41	621.39	621.37	621.35	621.33	621.32	621.30	621.28	621.26	621.24
PGL	621.33	621.31	621.29	621.27	621.25	621.24	621.22	621.20	621.18	621.16	621.14
GIRDER 7	621.27	621.25	621.23	621.21	621.19	621.17	621.15	621.14	621.12	621.10	621.08
GIRDER 8	621.11	621.09	621.07	621.05	621.03	621.01	620.99	620.97	620.96	620.94	620.92
GIRDER 9	620.95	620.93	620.91	620.89	620.87	620.85	620.83	620.81	620.80	620.78	620.76
GIRDER 10	620.79	620.77	620.75	620.73	620.71	620.69	620.67	620.65	620.63	620.62	620.60
S. EDGE OF DECK	620.75	620.73	620.71	620.69	620.67	620.65	620.64	620.62	620.60	620.58	620.56

SPAN 2											
	PIER 1	.1 POINT	.2 POINT	.3 POINT	.4 POINT	.5 POINT	.6 POINT	.7 POINT	.8 POINT	.9 POINT	PIER 2
STATION	500+38.95	500+46.65	500+54.35	500+62.05	500+69.75	500+77.45	500+85.15	500+92.85	501+00.55	501+08.25	501+15.95
N. EDGE OF DECK	620.56	620.52	620.48	620.44	620.41	620.37	620.33	620.29	620.25	620.21	620.17
GIRDER 1	620.60	620.56	620.52	620.48	620.44	620.40	620.37	620.33	620.29	620.25	620.21
GIRDER 2	620.76	620.72	620.68	620.64	620.60	620.56	620.53	620.49	620.45	620.41	620.37
GIRDER 3	620.92	620.88	620.84	620.80	620.76	620.73	620.69	620.65	620.61	620.57	620.53
GIRDER 4	621.08	621.04	621.00	620.96	620.92	620.89	620.85	620.81	620.77	620.73	620.69
PGL	621.14	621.10	621.06	621.02	620.99	620.95	620.91	620.87	620.83	620.79	620.76
GIRDER 5	621.24	621.20	621.16	621.12	621.09	621.05	621.01	620.97	620.93	620.89	620.85
GIRDER 6	621.24	621.20	621.16	621.12	621.09	621.05	621.01	620.97	620.93	620.89	620.85
PGL	621.14	621.10	621.06	621.02	620.99	620.95	620.91	620.87	620.83	620.79	620.76
GIRDER 7	621.08	621.04	621.00	620.96	620.92	620.89	620.85	620.81	620.77	620.73	620.69
GIRDER 8	620.92	620.88	620.84	620.80	620.76	620.73	620.69	620.65	620.61	620.57	620.53
GIRDER 9	620.76	620.72	620.68	620.64	620.60	620.56	620.53	620.49	620.45	620.41	620.37
GIRDER 10	620.60	620.56	620.52	620.48	620.44	620.40	620.37	620.33	620.29	620.25	620.21
S. EDGE OF DECK	620.56	620.52	620.48	620.44	620.41	620.37	620.33	620.29	620.25	620.21	620.17

SPAN 3											
	PIER 2	.1 POINT	.2 POINT	.3 POINT	.4 POINT	.5 POINT	.6 POINT	.7 POINT	.8 POINT	.9 POINT	PIER 3
STATION	501+15.95	501+23.65	501+31.35	501+39.05	501+46.75	501+54.45	501+62.15	501+69.85	501+77.55	501+85.25	501+92.95
N. EDGE OF DECK	620.17	620.14	620.10	620.06	620.02	619.98	619.94	619.91	619.87	619.83	619.79
GIRDER 1	620.21	620.17	620.13	620.10	620.06	620.02	619.98	619.94	619.90	619.86	619.83
GIRDER 2	620.37	620.33	620.30	620.26	620.22	620.18	620.14	620.10	620.06	620.03	619.99
GIRDER 3	620.53	620.49	620.46	620.42	620.38	620.34	620.30	620.26	620.22	620.19	620.15
GIRDER 4	620.69	620.66	620.62	620.58	620.54	620.50	620.46	620.42	620.39	620.35	620.31
PGL	620.76	620.72	620.68	620.64	620.60	620.56	620.52	620.49	620.45	620.41	620.37
GIRDER 5	620.85	620.82	620.78	620.74	620.70	620.66	620.62	620.59	620.55	620.51	620.47
GIRDER 6	620.85	620.82	620.78	620.74	620.70	620.66	620.62	620.59	620.55	620.51	620.47
PGL	620.76	620.72	620.68	620.64	620.60	620.56	620.52	620.49	620.45	620.41	620.37
GIRDER 7	620.69	620.66	620.62	620.58	620.54	620.50	620.46	620.42	620.39	620.35	620.31
GIRDER 8	620.53	620.49	620.46	620.42	620.38	620.34	620.30	620.26	620.22	620.19	620.15
GIRDER 9	620.37	620.33	620.30	620.26	620.22	620.18	620.14	620.10	620.06	620.03	619.99
GIRDER 10	620.21	620.17	620.13	620.10	620.06	620.02	619.98	619.94	619.90	619.86	619.83
S. EDGE OF DECK	620.17	620.14	620.10	620.06	620.02	619.98	619.94	619.91	619.87	619.83	619.79

SPAN 4											
	PIER 3	.1 POINT	.2 POINT	.3 POINT	.4 POINT	.5 POINT	.6 POINT	.7 POINT	.8 POINT	.9 POINT	E. ABUT
STATION	501+92.95	501+96.75	502+00.55	502+04.35	502+08.15	502+11.95	502+15.75	502+19.55	502+23.35	502+27.15	502+30.95
N. EDGE OF DECK	619.79	619.77	619.75	619.73	619.71	619.69	619.68	619.66	619.64	619.62	619.60
GIRDER 1	619.83	619.81	619.79	619.77	619.75	619.73	619.71	619.69	619.67	619.66	619.64
GIRDER 2	619.99	619.97	619.95	619.93	619.91	619.89	619.87	619.85	619.84	619.82	619.80
GIRDER 3	620.15	620.13	620.11	620.09	620.07	620.05	620.03	620.01	620.00	619.98	619.96
GIRDER 4	620.31	620.29	620.27	620.25	620.23	620.21	620.19	620.18	620.16	620.14	620.12
PGL	620.37	620.35	620.33	620.31	620.29	620.28	620.26	620.24	620.22	620.20	620.18
GIRDER 5	620.47	620.45	620.43	620.41	620.39	620.37	620.36	620.34	620.32	620.30	620.28
GIRDER 6	620.47	620.45	620.43	620.41	620.39	620.37	620.36	620.34	620.32	620.30	620.28
PGL	620.37	620.35	620.33	620.31	620.29	620.28	620.26	620.24	620.22	620.20	620.18
GIRDER 7	620.31	620.29	620.27	620.25	620.23	620.21	620.19	620.18	620.16	620.14	620.12
GIRDER 8	620.15	620.13	620.11	620.09	620.07	620.05	620.03	620.01	620.00	619.98	619.96
GIRDER 9	619.99	619.97	619.95	619.93	619.91	619.89	619.87	619.85	619.84	619.82	619.80
GIRDER 10	619.83	619.81	619.79	619.77	619.75	619.73	619.71	619.69	619.67	619.66	619.64
S. EDGE OF DECK	619.79	619.77	619.75	619.73	619.71	619.69	619.68	619.66	619.64	619.62	619.60



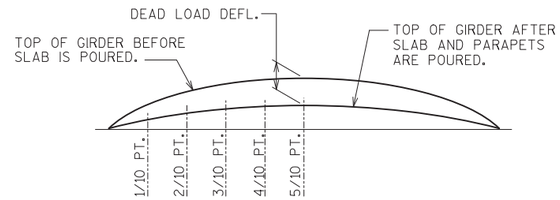
SLAB HAUNCH DETAIL

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 SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF THE 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
\- SLAB THICKNESS
= HAUNCH HEIGHT 'T'



DEAD LOAD DEFLECTION DIAGRAM

GIRDER DATA									
SPAN	DEAD LOAD DEFL. (IN.)								
	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.
1	<1/16"	<1/16"	<1/16"	<1/16"	<1/16"	<1/16"	<1/16"	<1/16"	<1/16"
2	3/16"	3/8"	9/16"	11/16"	11/16"	5/8"	7/16"	1/4"	1/16"
3	1/16"	1/4"	7/16"	5/8"	11/16"	11/16"	9/16"	3/8"	3/16"
4	<1/16"	<1/16"	<1/16"	<1/16"	<1/16"	<1/16"	<1/16"	<1/16"	<1/16"

DEAD LOAD DEFLECTIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-178

DRAWN BY JDL | PLANS CK'D. JDB

SUPERSTRUCTURE DETAILS

SHEET 6 OF 13
561

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DATE: 1/31/2014
I.D. justin_bohler

STATE PROJECT NUMBER

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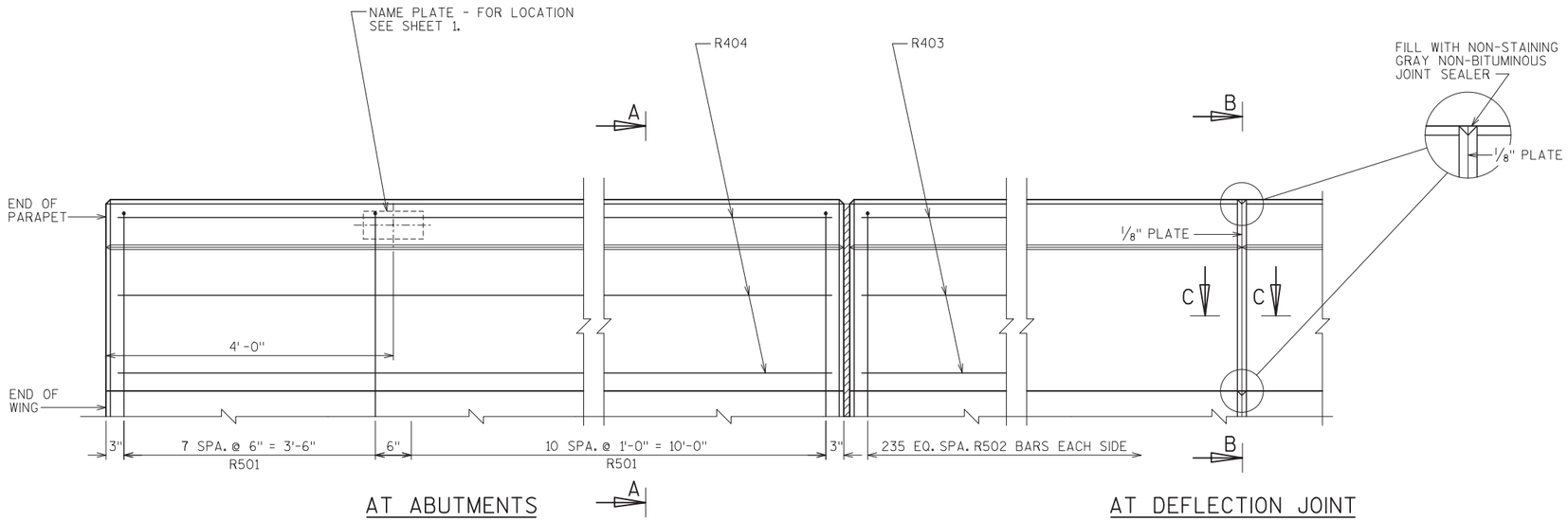
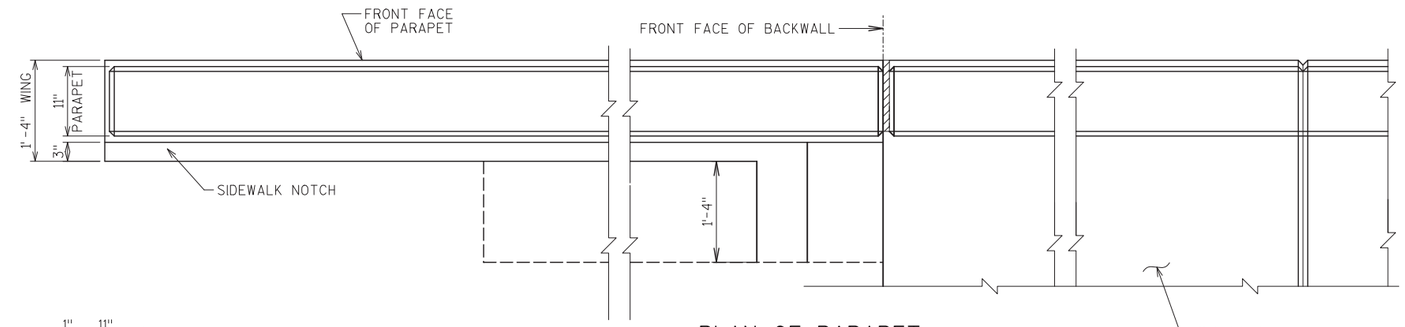


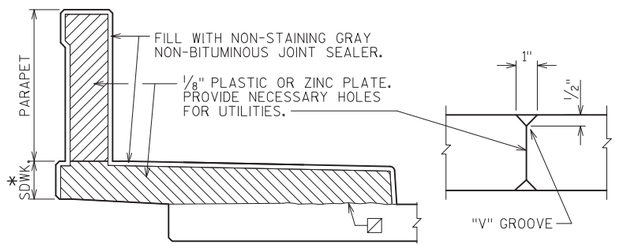
AT ABUTMENTS

AT DEFLECTION JOINT

ELEVATION OF PARAPET



PLAN OF PARAPET



SECTION B-B

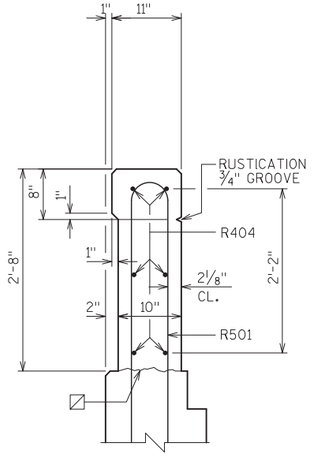
SECTION C-C

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

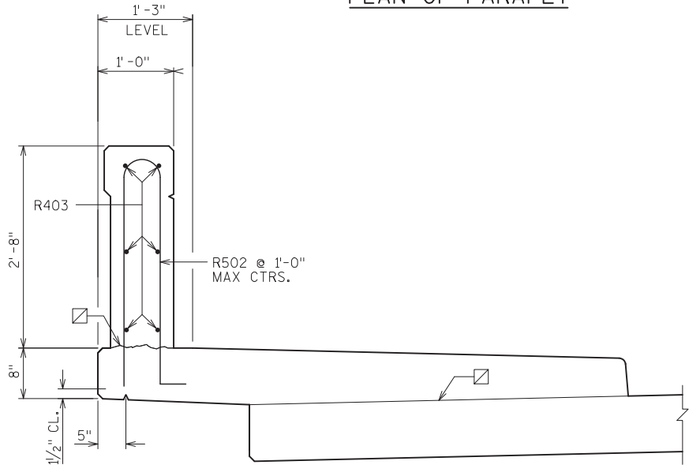
WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION B-B BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

DO NOT RUN BAR STEEL THROUGH DEFLECTION JOINT. CUT SIDEWALK AND PARAPET REINFORCING AS REQUIRED.

* 8" MIN. SIDEWALK THICKNESS ALSO REQUIRED AT EDGE OF DECK AND SLAB



SECTION A-A

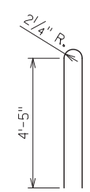


AT SIDEWALK

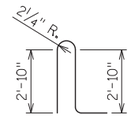
BILL OF BARS

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
R501	76	9'-5"	X	WINGWALL PARAPET VERT.
R502	472	6'-10"	X	BRIDGE PARAPET VERT.
R403	72	40'-6"		BRIDGE PARAPET HORZ.
R404	24	14'-0"		WINGWALL PARAPET HORZ.

TOTAL WEIGHT =7,655 LBS



R501



R502

☒ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-178

DRAWN BY JDL | PLANS CK'D. JDB

VERTICAL FACE PARAPET "A"

SHEET 7 OF 13

562

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DATE: 1/31/2014

I.D. justin.bohler

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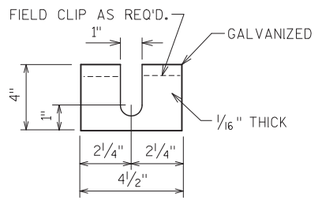
STATE PROJECT NUMBER

1228-25-70

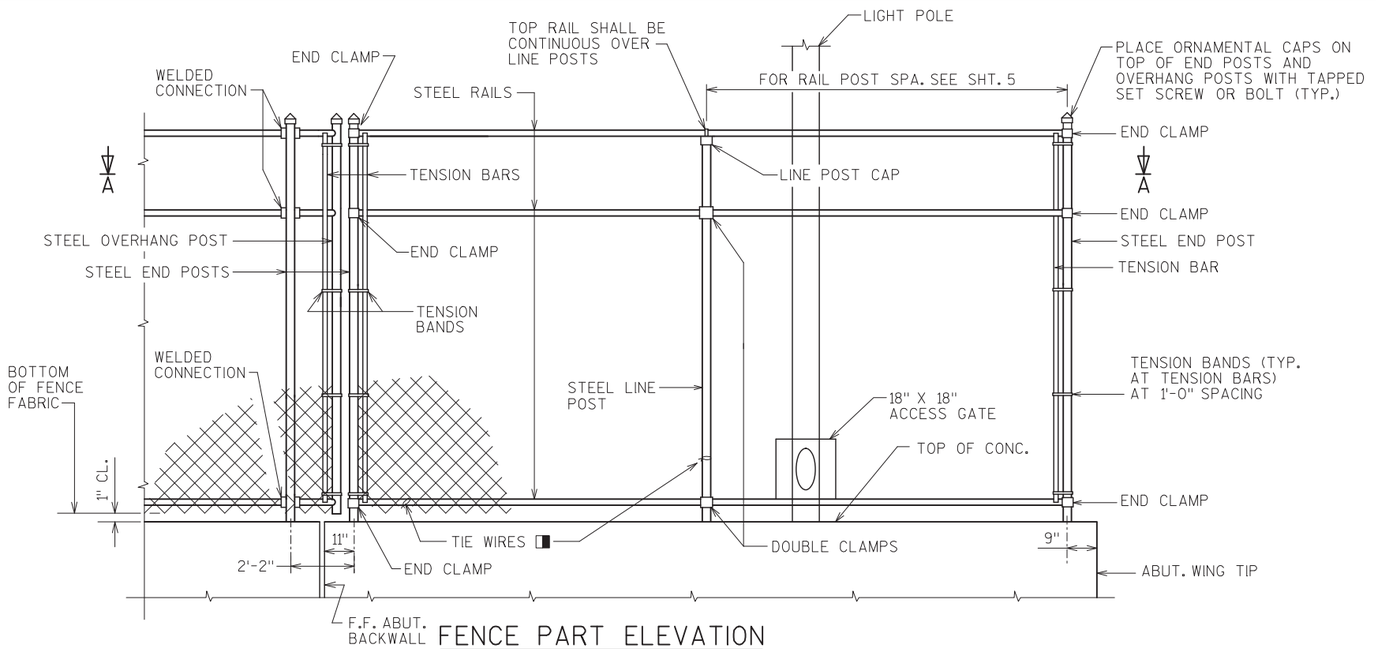
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.



FENCE PART ELEVATION

VIEWING FABRIC SIDE

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER-COATING ON THE OUTSIDE.

FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE COLOR OF POLYMER-COATING FOR THIS STRUCTURE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER-COATED 8- FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

◪ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

✳ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

◭ 1/2" DIA. X 6 7/8" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S", 1/2" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR 1/2" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

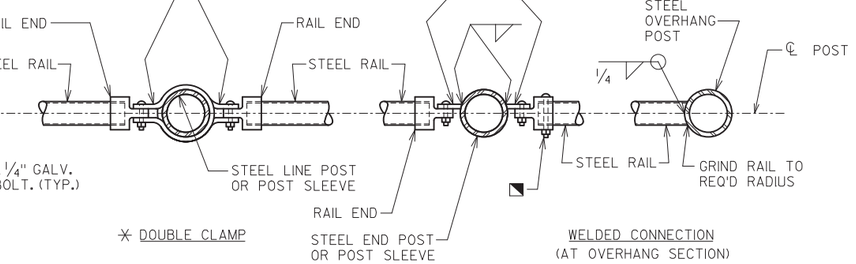
☆ 1/2" DIA. CONCRETE MASONRY ANCHOR, TYPE "S", 6" MIN. EMBEDMENT (EPOXY ANCHORED) INTO CONCRETE. ANCHOR, WASHER AND NUT SHALL BE GALVANIZED.

◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

◹ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR 1/4 POINT OF POST SPACING.

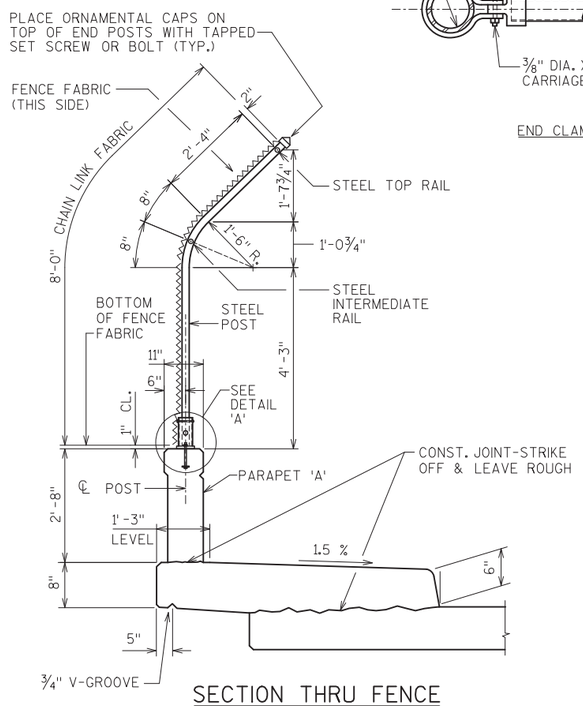
18" X 18" ACCESS GATE TO BE PROVIDED AT EACH LIGHT POLE FOR ACCESS TO THE HAND HOLE. DETAIL TO BE APPROVED BY THE ENGINEER.



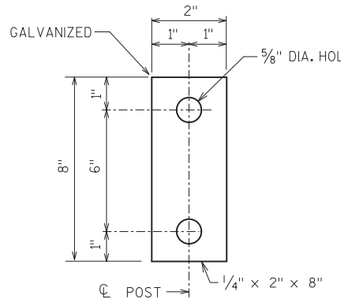
END CLAMP ✳ DOUBLE CLAMP WELDED CONNECTION (AT OVERHANG SECTION)

SECTION A-A

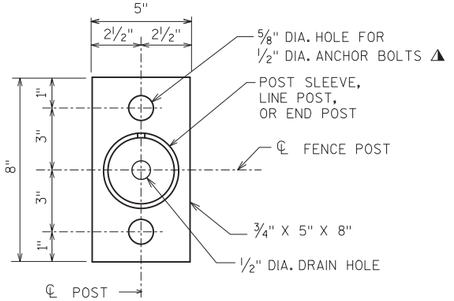
NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS



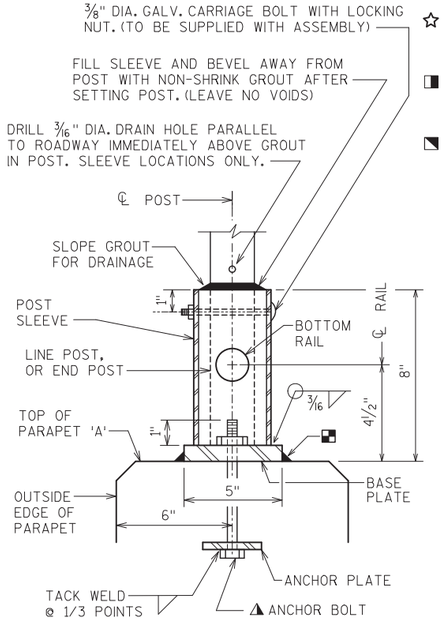
SECTION THRU FENCE



ANCHOR PLATE



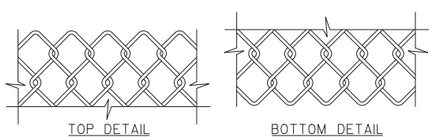
BASE PLATE



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.



FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 1" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

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STRUCTURE B-40-178

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JDL	JDB

FENCE DETAILS

SHEET 8 OF 13

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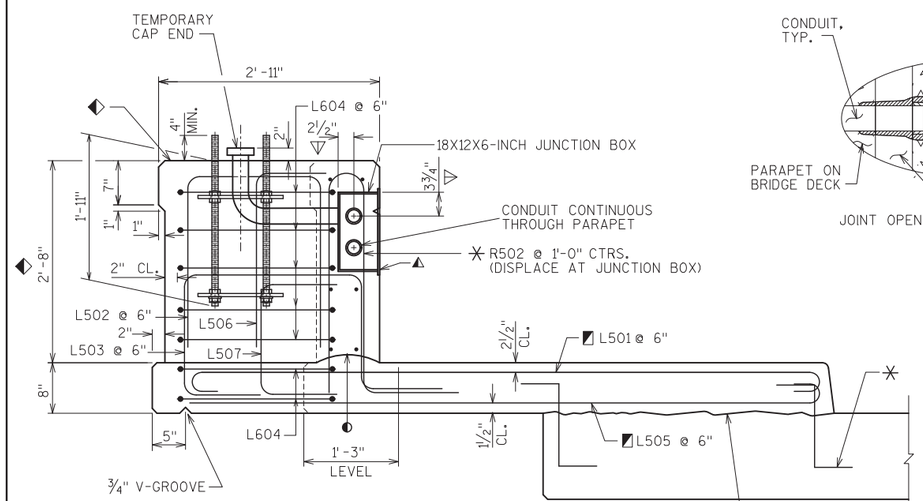
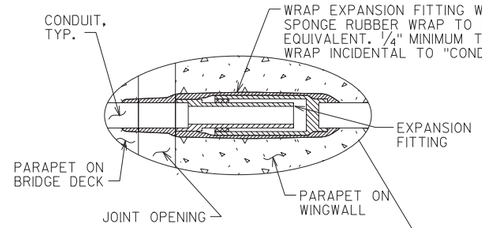
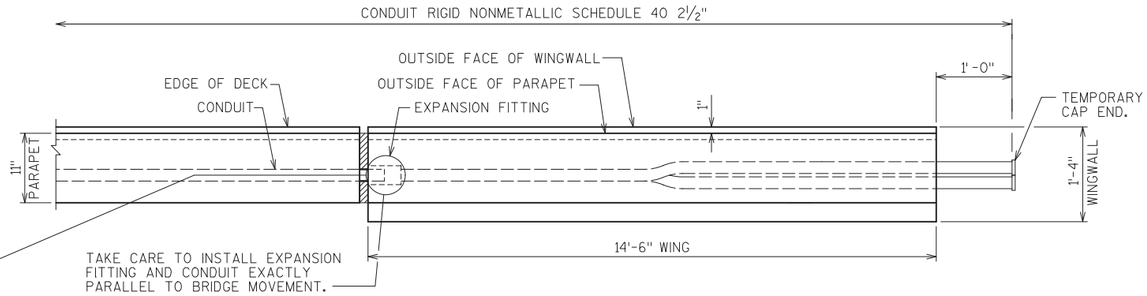


SECTION A-A





PLAN OF PARAPET AT WINGWALL

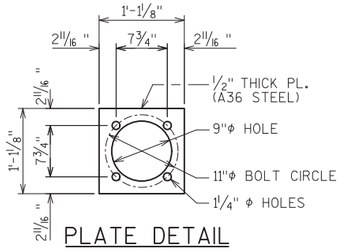
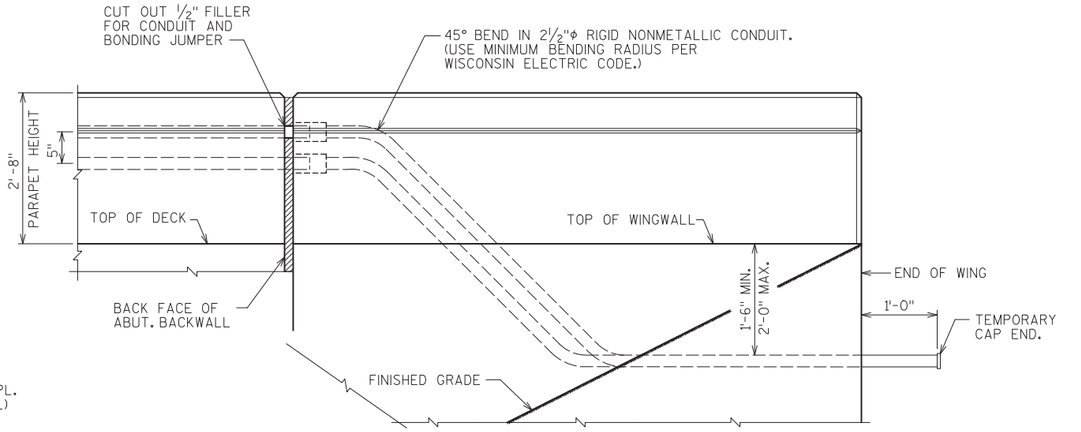
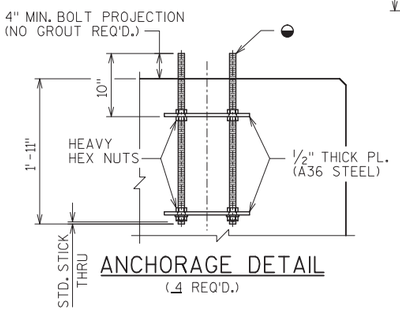


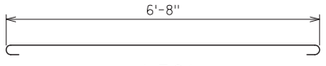
PLATE DETAIL
(8 REQ'D.)



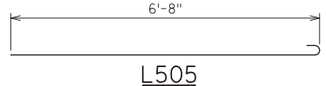
OUTSIDE ELEVATION OF PARAPET AT WINGWALL



ANCHORAGE DETAIL
(4 REQ'D.)



L501



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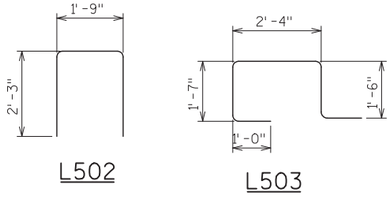

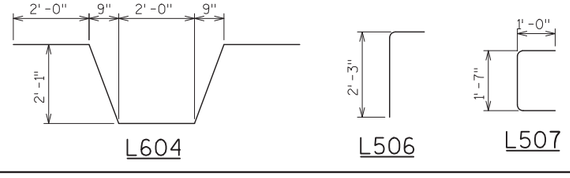

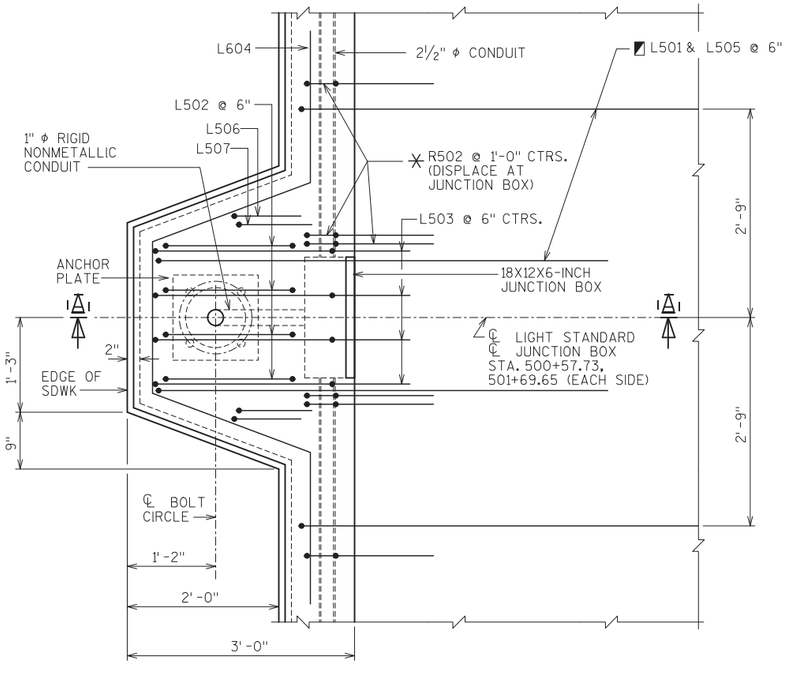

PLAN AT LIGHT STANDARD

◐ CONSTR. 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.

◩ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.

◒ 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.

✳ SEE "SUPERSTRUCTURE" AND "VERTICAL FACE PARAPET 'A'" SHEETS FOR ADDITIONAL BAR STEEL DETAILS.

◆ TOP SURFACE OF LIGHT STANDARD TO BE LEVEL IN DIRECTION PARALLEL TO PARAPET AND SLOPE ⅛" PER FOOT AWAY FROM PARAPET. 2'-8" DIMENSION IS MAXIMUM AND WILL VARY BASED ON SLOPE OF GRADE.

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH, EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURE", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2½-INCH"
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
CARLON TYPE E945K (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2½-INCH".

ADAPTER FITTINGS U.L. LISTED FOR ELECTRICAL USE SHALL BE USED.

BILL OF BARS

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
L501	48	8'-2"	X	SIDEWALK HORIZ. @ JUNCTION BOX
L502	16	6'-0"	X	PARAPET VERT. @ JUNCTION BOX
L503	16	7'-0"	X	PARAPET VERT. @ LIGHT STD.
L604	28	10'-0"	X	PARAPET HORIZ. @ LIGHT STD.
L505	48	7'-5"		SIDEWALK HORIZ. @ JUNCTION BOX
L506	8	3'-2"	X	PARAPET VERT. @ LIGHT STD.
L507	8	3'-5"	X	PARAPET VERT. @ LIGHT STD.

TOTAL WEIGHT =1,473 LBS

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STRUCTURE B-40-178

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LIGHT STANDARD

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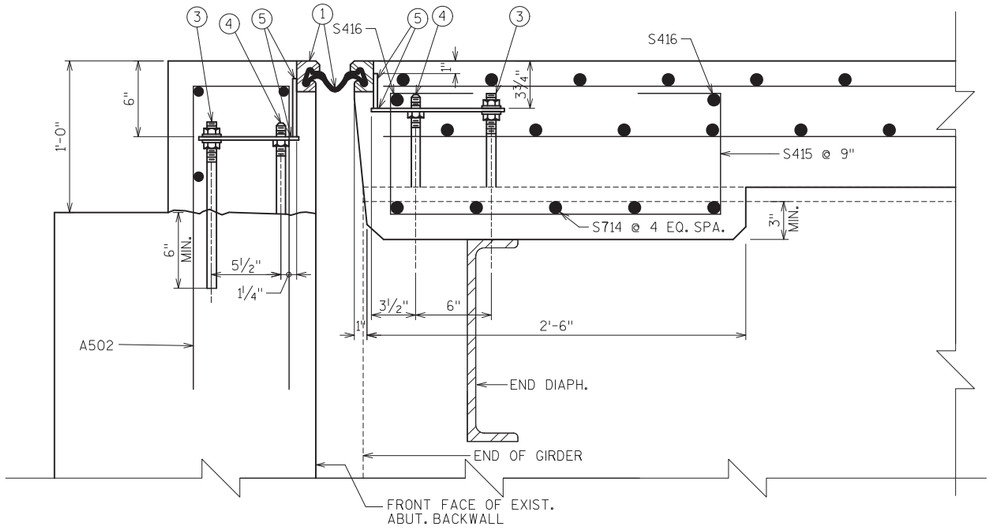
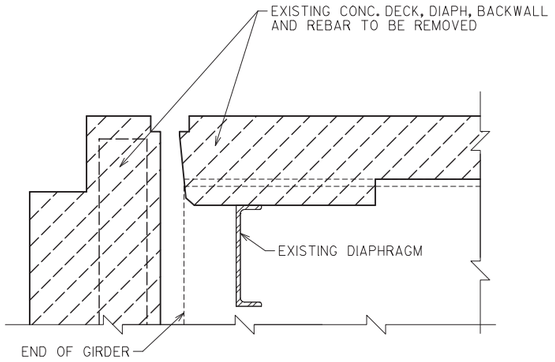


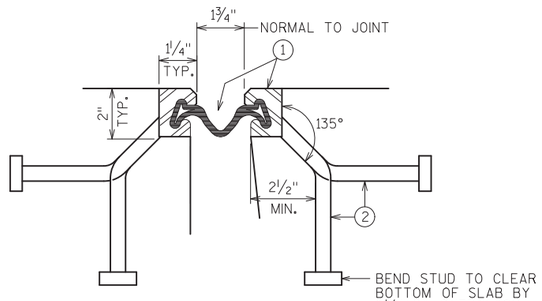
SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



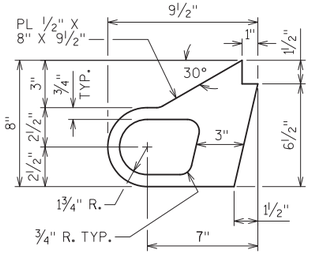
JOINT REMOVAL

AT ABUTMENTS

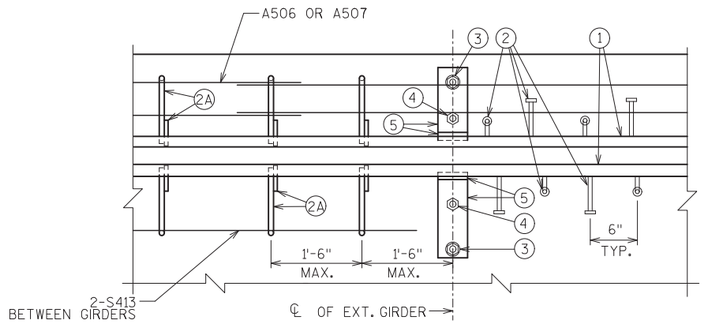


SECTION THRU JOINT

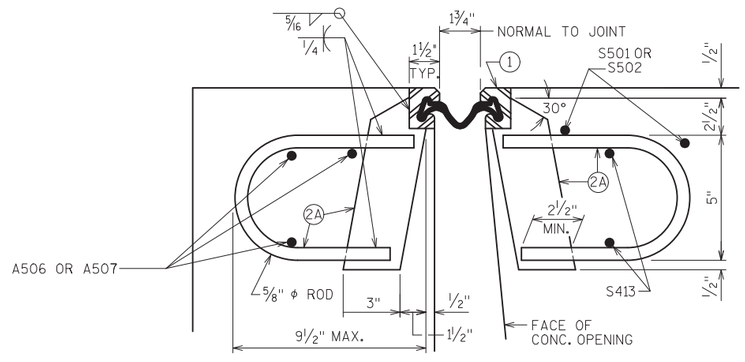
EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS



ALTERNATE STRIP SEAL ANCHOR



PART PLAN



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

LEGEND

(1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS ⅝"ϕ 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 TO 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 WELD NUT 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.

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTERGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

INSTALLATION OF STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-178".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-178

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EXPANSION DEVICE DETAIL

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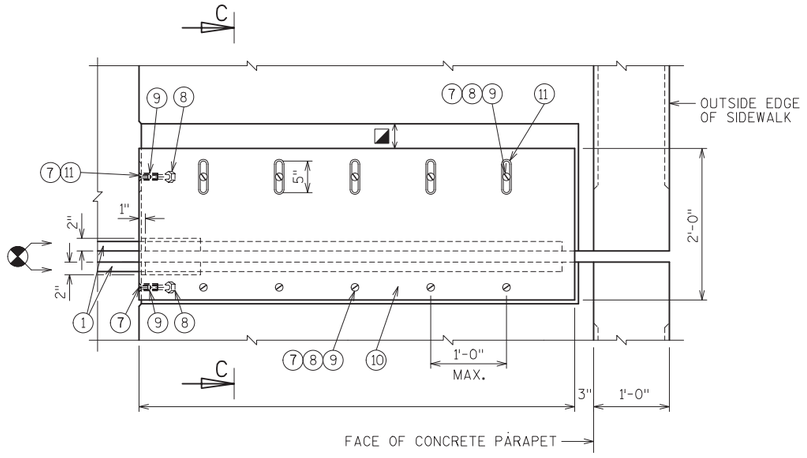
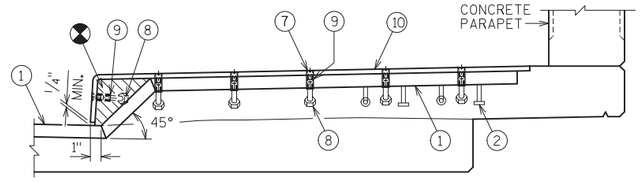
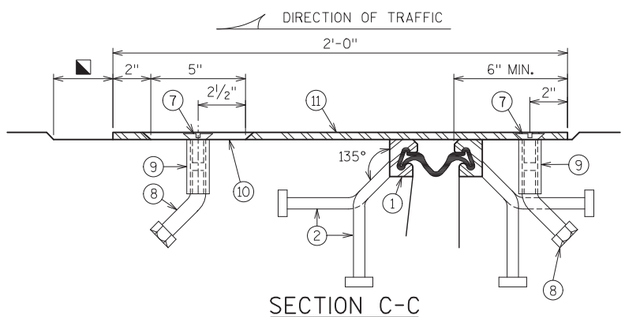


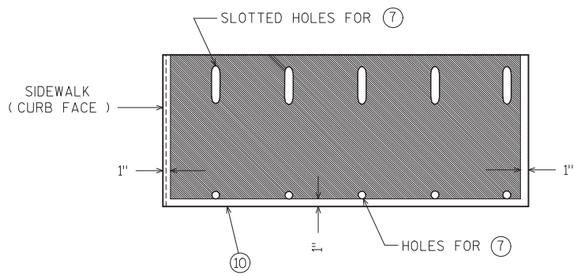
PLAN AT SIDEWALK



SECTION AT SIDEWALK



SECTION C-C



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

FOR NOTES 1-5, SEE SHEET 10

(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) SIDEWALK COVER PLATE 3/8" X 2'-2" LONG X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 7 GALVANIZED PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

(11) 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 ALONG SKEW PLUS 1/2".

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STRUCTURE B-40-178

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COVER PLATE DETAIL

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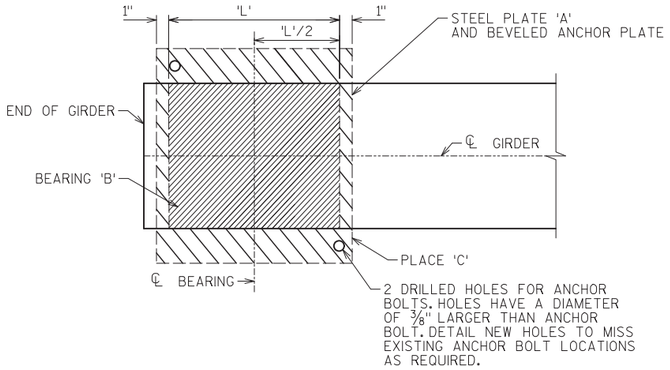
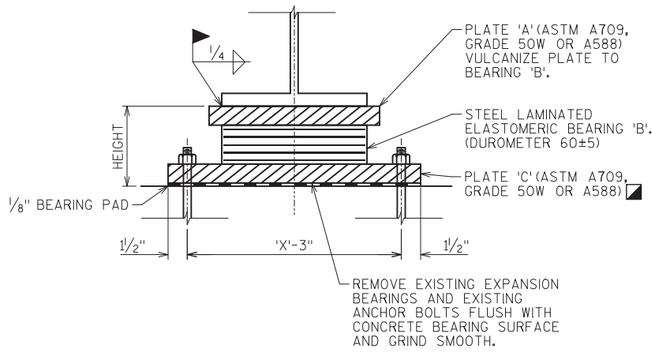
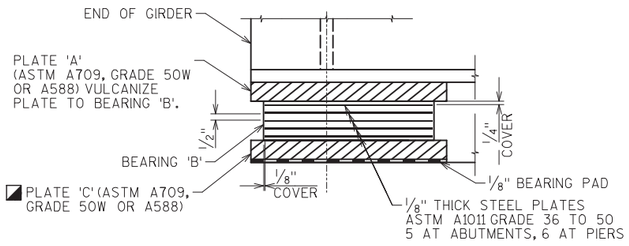


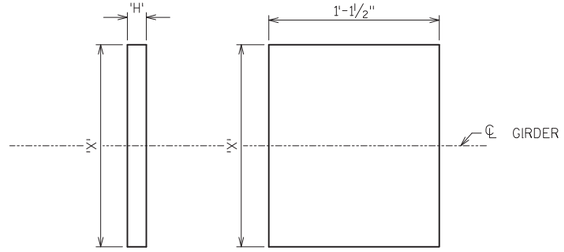
PLAN VIEW ELASTOMERIC BEARING



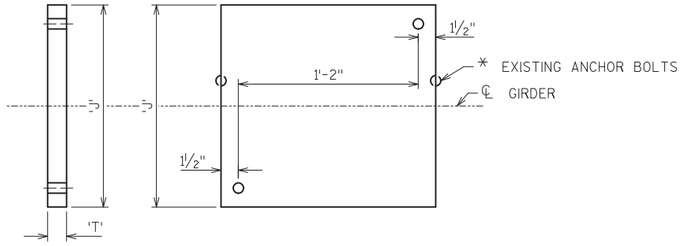
FRONT ELEVATION



SECTION THRU ELASTOMERIC BEARING



TOP PLATE 'A'



MASONRY PLATE 'C'

EXPANSION BEARINGS										
LOCATION	PLATE 'A'		BEARING 'B'			PLATE 'C'			HEIGHT (IN.)	NUMBER NEEDED
	'X'	H'	'W'	'L'	HEIGHT	'J'	'T'			
WEST ABUTMENT	1'-4"	2 1/4"	11 1/2"	1'-2"	3 1/8"	1'-8"	2 1/2"	◪	7 7/8"	10
PIER 1	1'-10"	2 3/8"	11 1/2"	1'-8"	3 3/4"	1'-10"	2 1/2"		8 5/8"	10
PIER 3	1'-10"	2 3/8"	11 1/2"	1'-8"	3 3/4"	1'-10"	2 1/2"		8 5/8"	10
EAST ABUTMENT	1'-4"	2 1/4"	11 1/2"	1'-2"	3 1/8"	1'-8"	2 1/2"	◪	7 7/8"	10

ELASTOMERIC EXPANSION BEARING

BEARING NOTES

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR 'BEARING PADS ELASTOMERIC LAMINATED", EACH.

COMPRESSION LOAD AND ADHESION TEST WILL BE WAIVED WHERE BEARINGS ARE DETAILED TO MEET HEIGHT REQUIREMENTS.

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5" FOR 1 1/4" ϕ BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "C" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS BOTTOM PLATE 'C' FOR EACH BEARING.

USE (2) 1 1/4" ϕ, 1'-5" LONG ANCHOR BOLTS PER BEARING PAD ASSEMBLY.

DRILLED HOLES FOR ANCHOR BOLTS IN BOTTOM PLATE 'C' HAVE A DIAMETER OF 3/8" LARGER THAN ANCHOR BOLT.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

◪ VULCANIZE TOP PLATE 'A' AND BOTTOM PLATE 'C' TO ELASTOMERIC PAD.

* REMOVE EXISTING FIXED BEARINGS AND EXISTING ANCHOR BOLTS FLUSH WITH CONCRETE BEARING SURFACE AND GRIND SMOOTH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-178

DRAWN BY	JDL	PLANS CK'D.	JDB

EXPANSION BEARING DETAIL

SHEET 12 OF 13

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DATE: 1/31/2014
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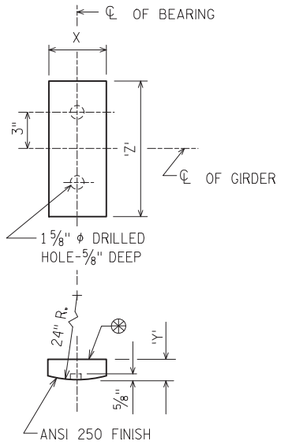
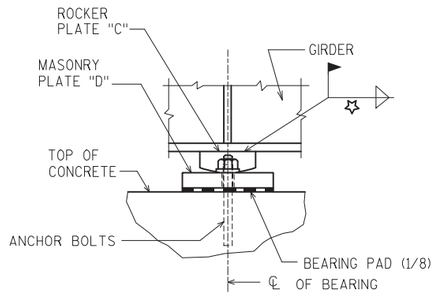
STATE PROJECT NUMBER

1228-25-70

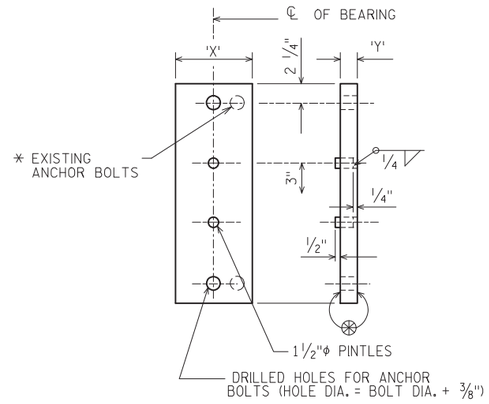


ROCKER PLATE "C"



FIXED BEARING ASSEMBLY

FIXED BEARING AT PIER 2



TYPE I

MASONRY PLATE "D"

	PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
	'X'	'Y'	'Z'	'X'	'Y'	'Z'				
FIXED BEARING	5"	3 1/2"	1'-2"	1'-1"	4"	1'-11"	TYPE I	1 1/4"	10	AT PIER 2

☆ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	∓ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	△ 5/16"
OVER 1 1/2" TO 2 1/4"	△ 3/8"
OVER 2 1/4" TO 6"	△ 1/2"

∓ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

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.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5" FOR 1 1/4" ϕ BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES FIXED B-40-178", EACH.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

ROCKER PLATE "C" SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.

MASONRY PLATE "D" SHALL BE GALVANIZED.

⊛ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

* REMOVE EXISTING FIXED BEARINGS AND EXISTING ANCHOR BOLTS FLUSH WITH CONCRETE BEARING SURFACE AND GRIND SMOOTH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-178

DRAWN BY JDL | PLANS CK'D. JDB

FIXED BEARING DETAILS

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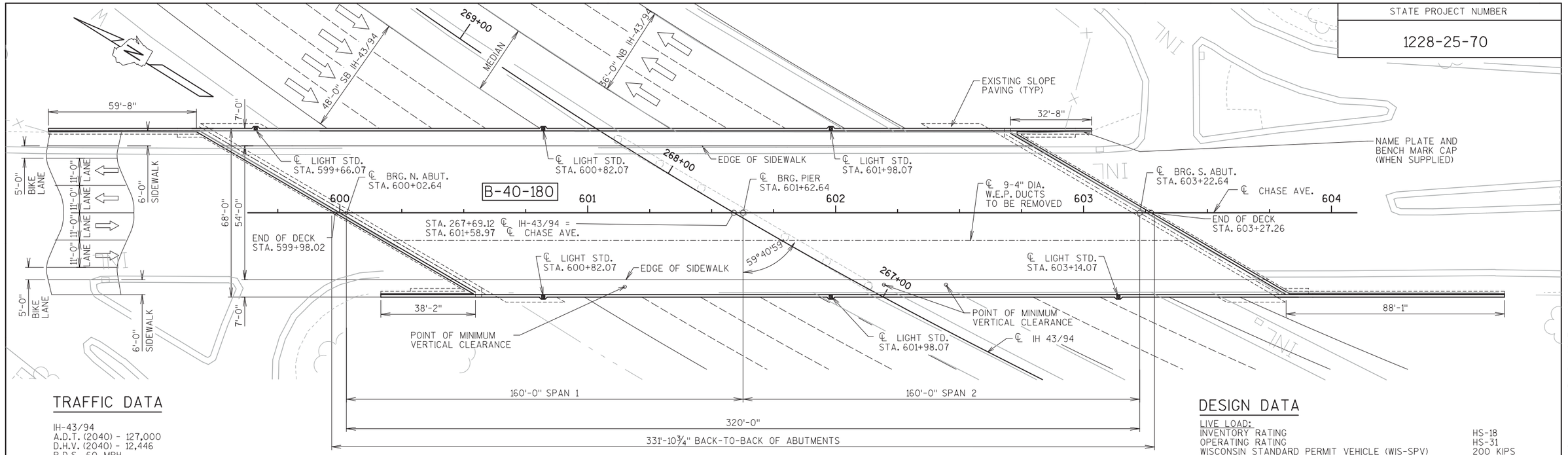


PLAN B-40-180

TRAFFIC DATA

IH-43/94
A.D.T. (2040) - 127,000
D.H.V. (2040) - 12,446
R.D.S. 60 MPH

STH 38 / CHASE AVE.
A.D.T. (2035) - 8,651
D.H.V. (2035) - 734
R.D.S. 35 MPH

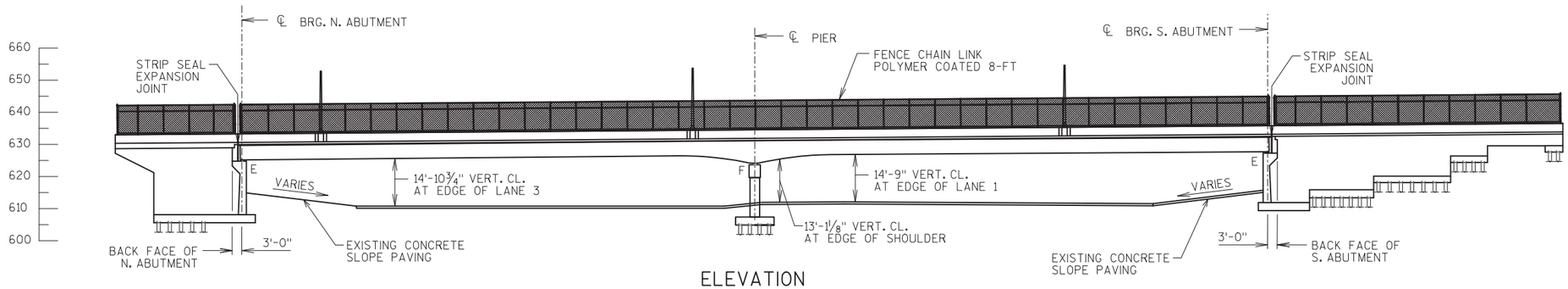
DESIGN DATA

LIVE LOAD:

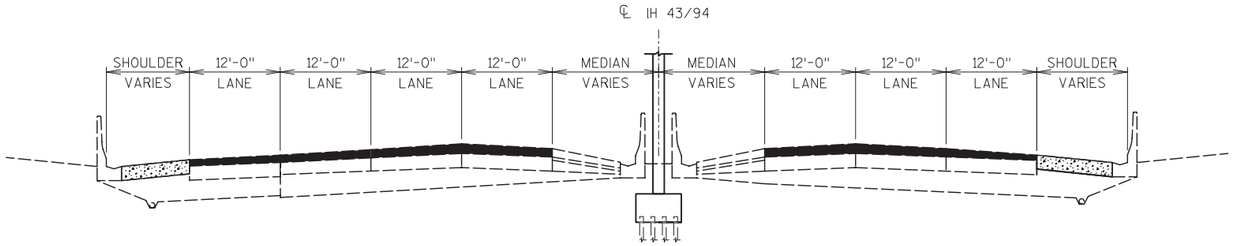
INVENTORY RATING	HS-18
OPERATING RATING	HS-31
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	200 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SUPERSTRUCTURE	F'c = 4,000 P.S.I.
CONCRETE MASONRY SUBSTRUCTURE	F'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60	Fy = 60,000 P.S.I.



ELEVATION
(LOOKING NORTH)



TYPICAL SECTION THRU IH 43/94
(LOOKING NORTH)

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTION AND QUANTITIES
3. ABUTMENT DEATILS
4. ABUTMENT DETAILS 2
5. ABUTMENT DETAILS 3
6. ABUTMENT DETAILS 4
7. SUPERSTRUCTURE
8. SUPERSTRUCTURE DETAILS
9. VERTICAL FACE PARAPET "A"
10. FENCE DETAILS
11. LIGHT STANDARD
12. EXPANSION BEARING DETAIL
13. FIXED BEARING DETAILS
14. EXPANSION DEVICE DETAIL
15. COVER PLATE DETAIL

SE REGION CONTACT:
JOE GALLAMORE (262) 548-2601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
MICHAEL DELEMONT (414) 831-4157

WISCONSIN
MICHAEL A. DELEMONT
E-42485
CRYSTAL LAKE, IL
PROFESSIONAL ENGINEER
1/31/2014

NO.	DATE	REVISION	BY

URS
342 North Water Street
7th Floor
Milwaukee, WI 53202
(414) 831-4100

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 02/03/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-180

CHASE AVENUE OVER IH-43/94

COUNTY: MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~: MILWAUKEE
DESIGN SPEC.: REHABILITATION N/A	

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JDL	MAD	JDL	JDB

GENERAL PLAN AND ELEVATION

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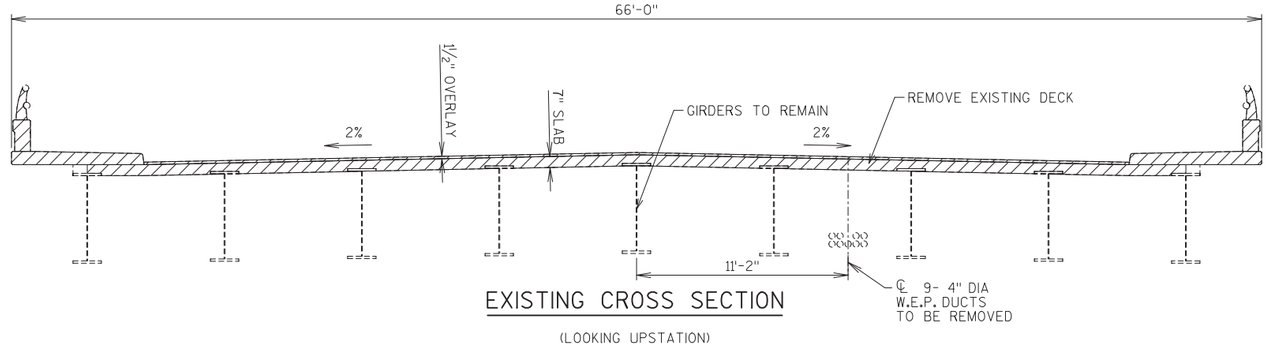
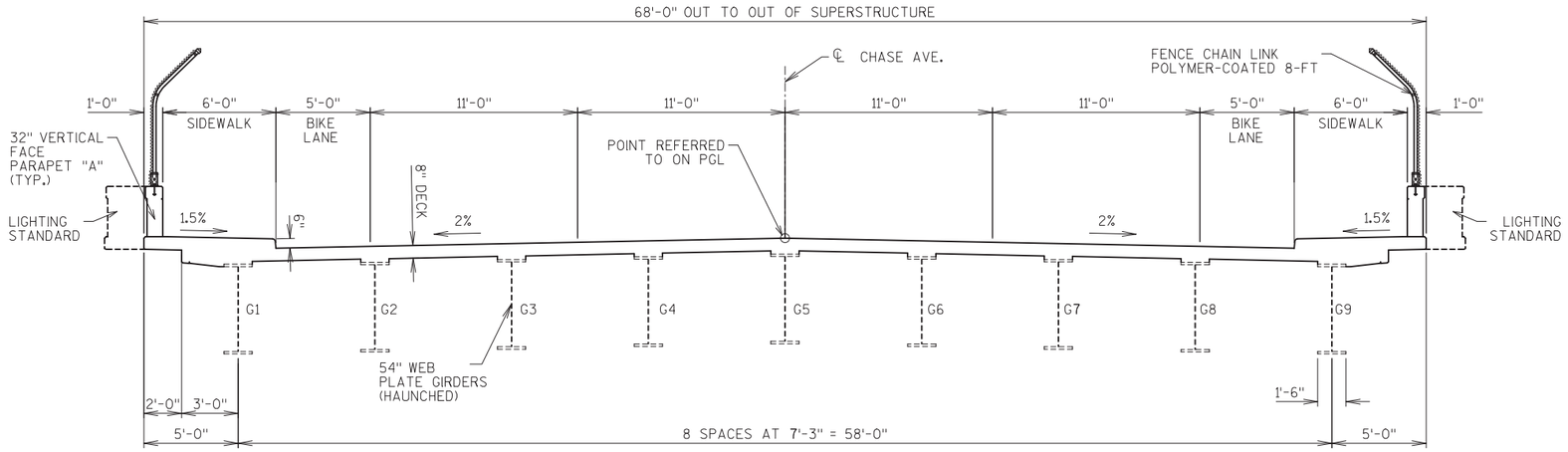


EXISTING CROSS SECTION

(LOOKING UPSTATION)



CROSS SECTION THRU ROADWAY

(LOOKING UPSTATION)

TOTAL ESTIMATED QUANTITIES

ALL ITEMS ARE CATEGORY 2070

BID ITEM #	BID ITEM	UNIT	SUPER - STRUCTURE	SOUTH ABUTMENT	PIER 1	NORTH ABUTMENT	TOTAL
203.0200.0008	REMOVING OLD STRUCTURE STA. 601+58.95	LS	--	--	--	--	1
203.0210.S.0008	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-180	LS	--	--	--	--	1
203.0225.S.0008	DEBRIS CONTAINMENT STRUCTURE B-40-180	LS	--	--	--	--	1
206.1000.0008	EXCAVATION FOR STRUCTURES BRIDGES B-40-180	LS	--	--	--	--	1
209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	--	360	--	360	720
502.0100	CONCRETE MASONRY BRIDGES	CY	734	34	--	34	802
502.3100.0008	EXPANSION DEVICE B-40-180	LS	--	--	--	--	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,850	--	--	--	2,850
502.5002	MASONRY ANCHORS TYPE L NO. 4 BARS	EA	--	368	--	363	731
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	159,510	8,873	--	8,873	177,256
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EA	--	9	--	9	18
506.5000.0008	BEARING ASSEMBLIES FIXED B-40-180	EA	--	--	9	--	9
506.7050.S.0008	REMOVING BEARINGS B-40-180	EA	--	9	9	9	27
506.7060.S.0008	BRIDGE JACKING B-40-180	LS	--	--	--	--	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	--	21	--	17	38
517.0900.S.0007	PREPARATION AND COATING OF TOP FLANGES B-40-180	LS	--	--	--	--	1
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	--	150	--	150	300
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	18	--	--	--	18
652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	1796	--	--	--	1,796
653.0222	JUNCTION BOXES 18X12X6-INCH	EA	6	--	--	--	6
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCUTRE	EA	6	--	--	--	6
SPV.0090.4000	FENCE CHAIN LINK POLYMER-COATED 8-FT	LF	871	--	--	--	871
	NON-BID ITEMS						
	FILLER	SIZE					1/2"
	NAME PLATE	EACH					1

GENERAL NOTES

THE PROPOSED WORK INCLUDES REPLACING AND WIDENING THE DECK BY 1'ON BOTH SIDES, RAISING ALL GIRDERS BY 2⅛", WINGWALL MODIFICATIONS, BACKWALL REPLACEMENT, BEARING REPLACEMENT, AND NEW FENCE.

WINGWALL MODIFICATION CONSISTS OF REMOVING THE TOP PORTION OF THE WINGWALL AND RECONSTRUCTING IT TO ACCOMMODATE THE INCREASED CROSS SECTION WIDTH.

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFOREMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS OF EXISTING ELEMENTS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE AND THE FRONT FACE AND THE TOP OF THE PARAPET, INCLUDING PARAPETS ON ABUTMENT WINGS AND SIDEWALKS.

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXISTING UTILITIES OWNED BY WE ENERGIES WILL BE REMOVED FROM THE STRUCTURE PRIOR TO CONSTRUCTION.

EXISTING GIRDERS MUST BE PROTECTED DURING CONSTRUCTION.

ELEVATIONS ARE REFERENCED TO THE NAVD 88 DATUM

VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

AT ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL CONTROLLED LOW STRENGTH"

THE MINIMUM CONCRETE HAUNCH SHALL BE 2" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 2½" WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE FIELD ENGINEER.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWING. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR, 1967.

ORIGINAL PLANS AND OVERLAY PLANS OF EXISTING BRIDGE ARE AVAILABLE AT WISDOT SOUTHEAST REGION OFFICE. REFERENCE THESE PLANS FOR THE DESIGN OF SLAB OVERHANG SHORING AND TEMPORARY BRACING DURING CONSTRUCTION.

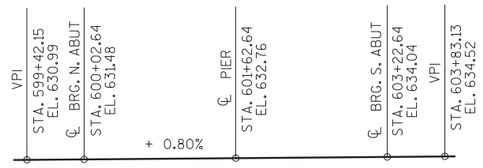
FENCE AND FABRIC SHALL BE PAINTED BLACK, FEDERAL COLOR NO. 27038.

TOP OF TOP FLANGE OF ALL GIRDERS SHALL BE PAINTED DENIM (BLUE)-SW6523, B-G/B/138, IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

CITY OF MILWAUKEE WILL REMOVE AND REINSTALL EXISTING LIGHT POLES, SEE SPECIAL PROVISION FOR COORDINATION REQUIREMENTS.

ALL CONCRETE REMOVED SHALL BE DEFINED BY A 1" DEEP SAW CUT.

CLEAN, STRAIGHTEN, AND INCORPORATE EXISTING BAR STEEL REINFORCEMENT INTO NEW WORK, WHERE APPLICABLE.



PROFILE GRADE LINE CHASE AVENUE

EXISTING CURVE DATA

IH-43/94
DELTA = 11° 49' 03"
D = 3° 00'
R = 1909.86'
L = 393.92'
T = 197.66'
P.C. = STA 266+52.33
P.I. = 268+49.99
P.T. = 270+46.25

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

DRAWN BY JDL | PLANS CK'D. JDB

TYPICAL SECTION AND QUANTITIES

SHEET 2 OF 15
570

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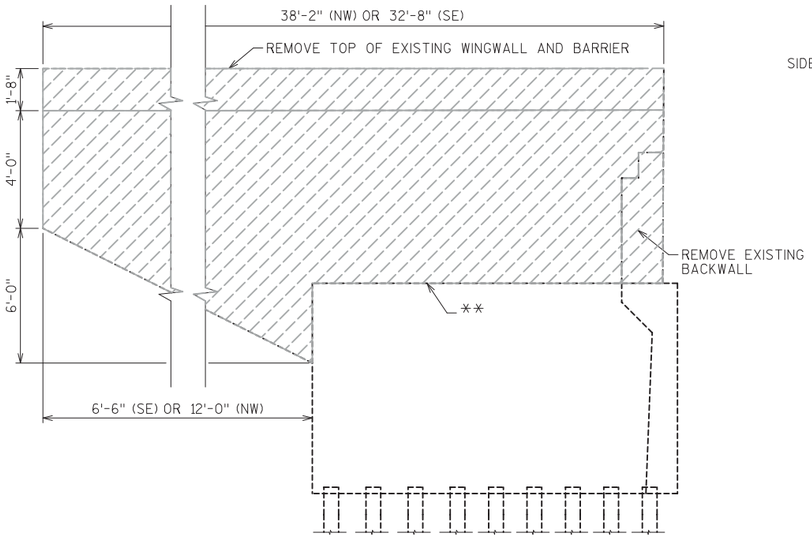

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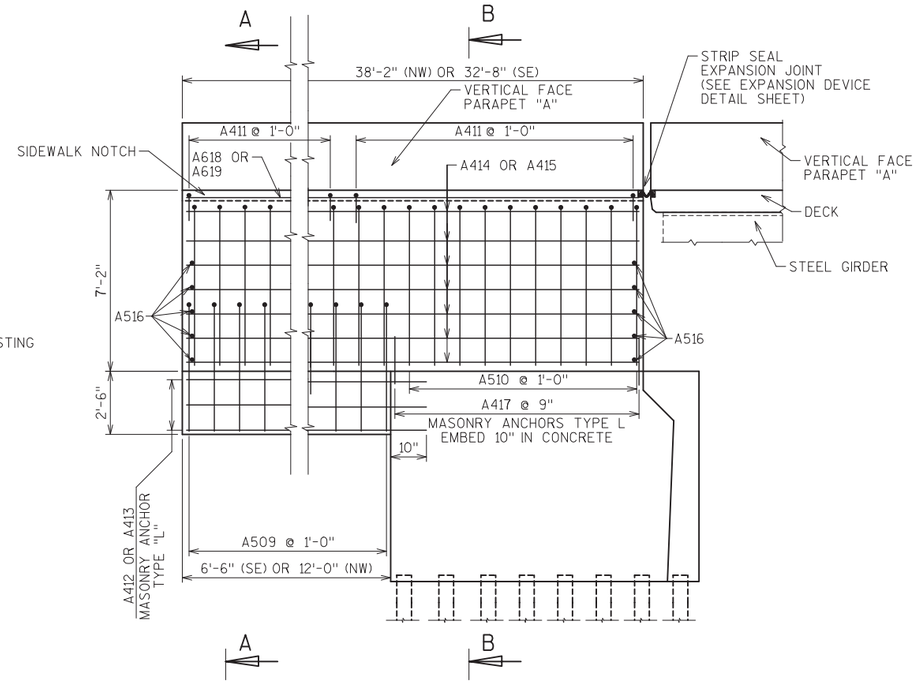
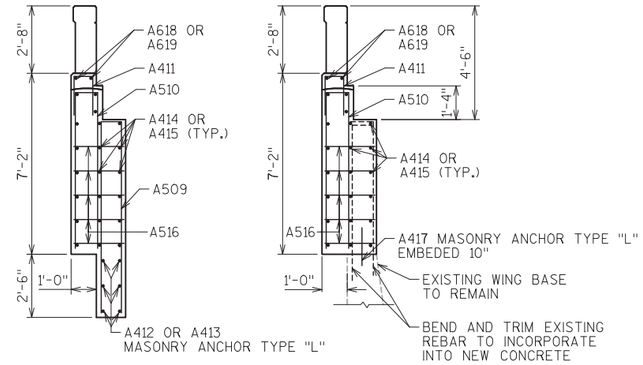


PROPOSED

ELEVATION - SE AND NW WING WALL



SECTION A-A

SECTION B-B

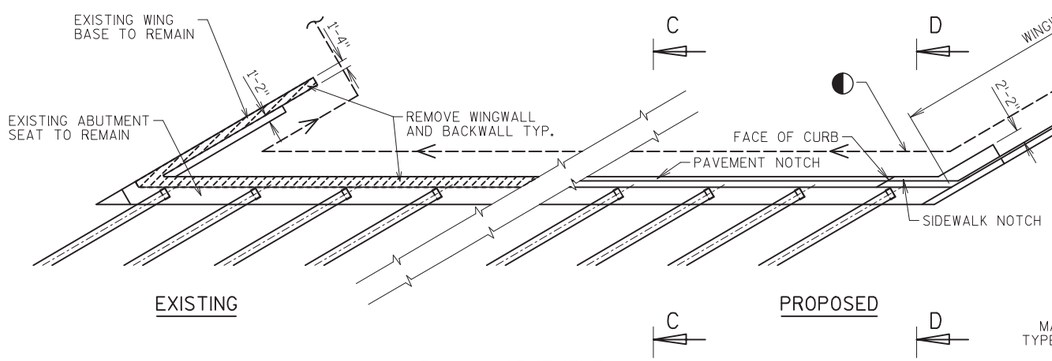
CROSS SECTION - WING WALL

NOTES

- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD "REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN".
- ** CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT AROUND THE PERIMETER OF THE EXISTING WINGWALL. ROUGHEN SURFACE TO 1/4" AMPLITUDE BEFORE POURING NEW WINGWALL CONCRETE.

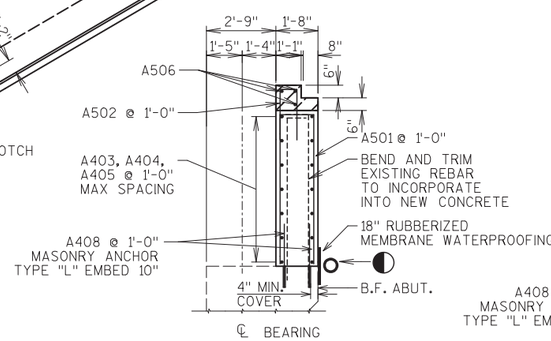
  FOR BILL OF BARS AND BEND DIAGRAMS SEE SHEET 4
- INDICATES CONCRETE AREA TO BE POURED AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE

EXISTING

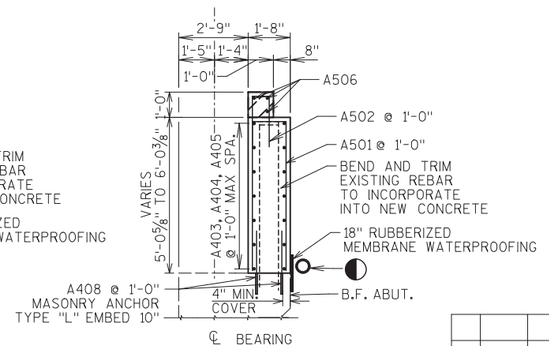


PLAN - ABUTMENT

(SOUTH ABUTMENT SHOWN. NORTH ABUTMENT SIMILAR)



SECTION D-D



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

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ABUTMENT DETAILS

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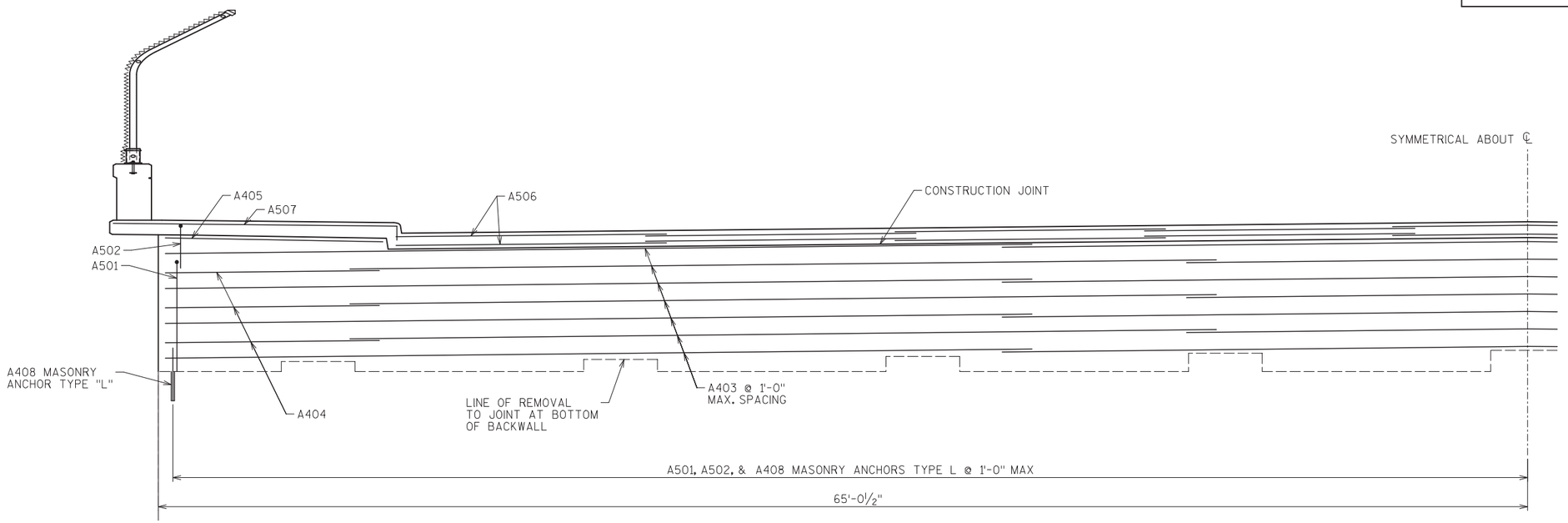
1228-25-70



ABUTMENT ELEVATION

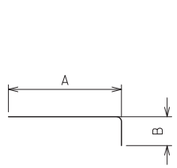
BILL OF BARS

(ALL BARS TO BE EPOXY COATED)

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
A501	270	13'-0"	X	ABUTMENT VERT. REINF.
A502	270	4'-5"	X	BACKWALL VERT. REINF.
A403	84	41'-2"		ABUTMENT HORIZ. REINF.
A404	28	10'-2"		ABUTMENT HORIZ. REINF.
A405	8	12'-10"		ABUTMENT HORIZ. REINF. UNDER SIDEWALK
A506	54	8'-0"		BACKWALL HORZ. REINF.
A507	8	14'-1"	X	BACKWALL HORZ. REINF. UNDER SIDEWALK
A408	524	2'-6"		ABUTMENT MASONRY ANCHORS TYPE L
A509	20	10'-6"	X	VERTICAL REINF. IN WALL (NW, SE)
A510	71	13'-4"	X	VERTICAL REINF. IN WALL (NW, SE)
A411	71	3'-7"	X	VERTICAL REINF. IN WALL (NW, SE)
A412	6	7'-2"		LATERAL REINF. BOTH FACES SE WALL
A413	6	12'-8"		LATERAL REINF. BOTH FACES NW WALL
A414	21	32'-4"		HORIZ. REINF. SE WALL
A415	21	37'-10"		HORIZ. REINF. NW WALL
A516	355	1'-10"		HORIZ. DOWELS, SE, NW WALLS
A417	70	1'-10"		MASONRY ANCHORS
A618	2	32'-4"		LATERAL REINF. TOP OF SE WALL
A619	2	37'-10"		LATERAL REINF. TOP OF NW WALL
A520	65	11'-5"	X	VERT. REINF. (SW)
A521	24	7'-3"	X	VERT. REINF. (SW)
A422	89	3'-7"	X	VERT. REINF. (SW)
A523	19	5'-11"	X	VERT. REINF. (SW)
A424	4	25'-3"		LATERAL REINF. (SW)
A425	4	39'-0"		LATERAL REINF. (SW)
A426	8	45'-0"		LATERAL REINF. (SW)
A427	8	44'-2"		LATERAL REINF. (SW)
A628	2	50'-0"		LATERAL REINF. TOP OF SW WALL
A629	2	32'-4"		LATERAL REINF. TOP OF SW WALL
A430	65	1'-10"		MASONRY ANCHORS, TYPE L BARS (SW)
A531	421	1'-10"		HORIZ. DOWEL BARS (SW)
A532	58	12'-7"	X	VERT. REINF. (NE)
A533	2	11'-11"	X	VERT. REINF. (NE)
A434	60	3'-7"	X	VERT. REINF. TOP OF NE WALL
A435	12	40'-0"		LATERAL REINF. (NE)
A436	12	20'-9"		LATERAL REINF. (NE)
A637	2	59'-4"		LATERAL REINF. TOP OF NE WALL
A538	21	10'-1"	X	VERT. REINF. (NE)
A439	60	1'-10"		MASONRY ANCHORS, TYPE L BARS (NE)
A540	240	1'-10"		HORIZ. DOWEL BARS (NE)

TOTAL WEIGHT =17,746 LBS

BEND CHART			
BAR NO.	DIM A	DIM B	BEND TYPE
A501	5'-11"	1'-5"	2
A502	2'-0"	0'-8"	2
A507	13'-6"	0'-8"	1
A509	5'-0"	0'-10"	2
A510	6'-5"	0'-10"	2
A411	1'-6"	0'-9"	2
A520	5'-5"	0'-11"	2
A521	3'-4"	0'-11"	2
A422	1'-6"	0'-9"	2
A523	2'-9"	0'-9"	2
A532	6'-0"	0'-11"	2
A533	5'-8"	0'-11"	2
A434	1'-6"	0'-9"	2
A538	4'-10"	0'-9"	2



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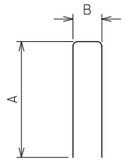

TYPE 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

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ABUTMENT DETAILS 2

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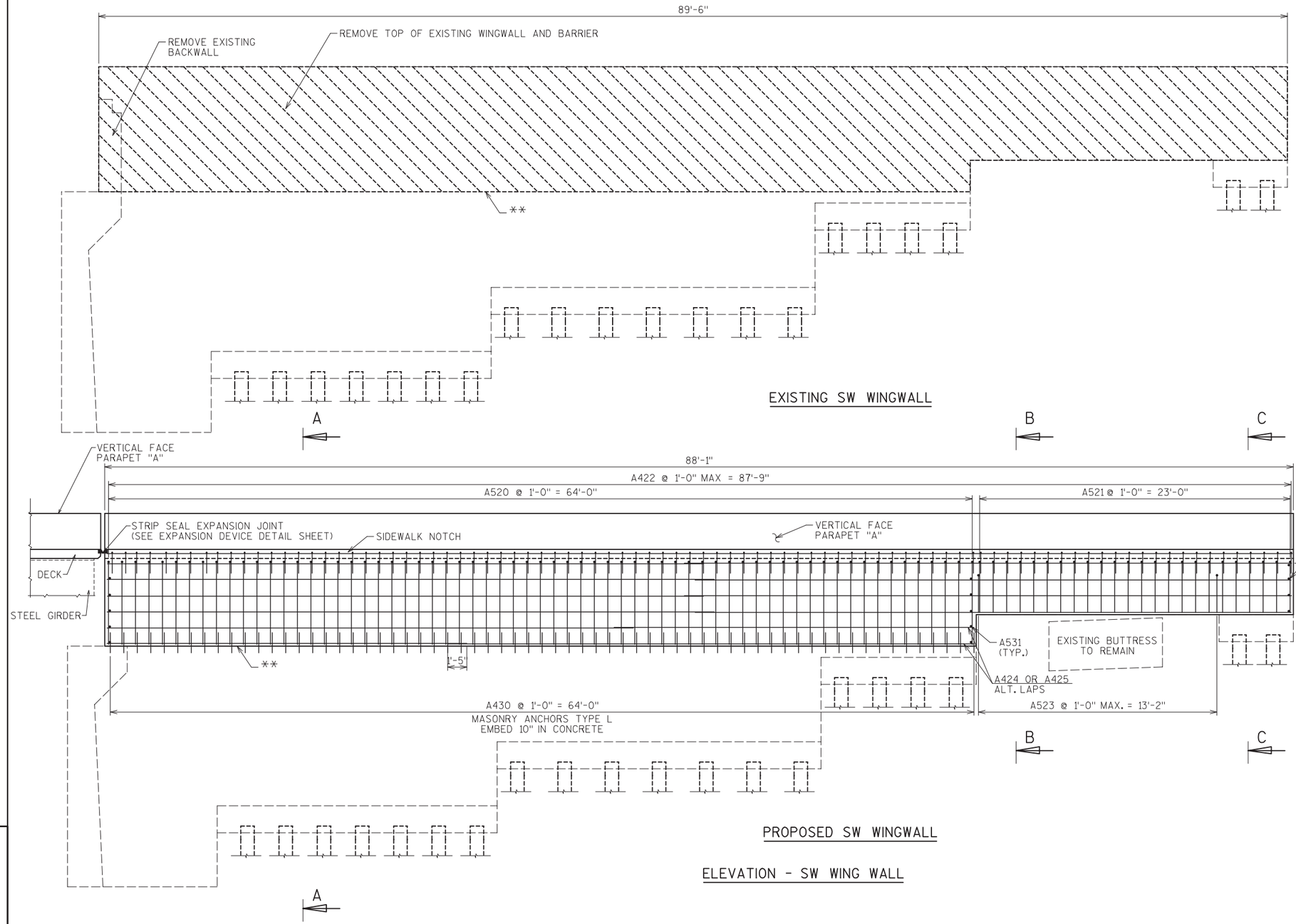
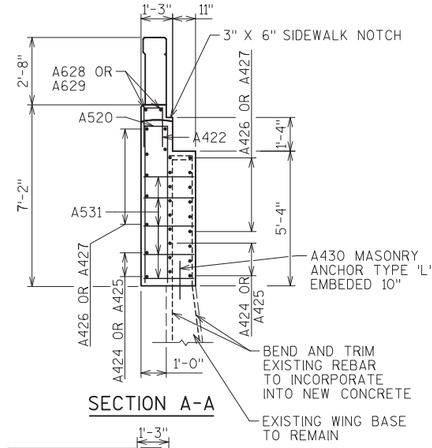


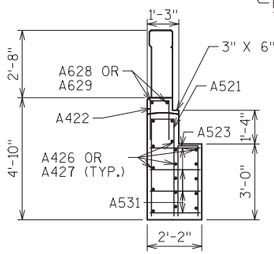
EXISTING SW WINGWALL

PROPOSED SW WINGWALL

ELEVATION - SW WING WALL



SECTION A-A



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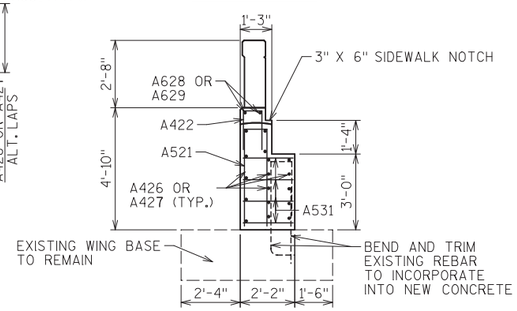

SECTION C-C

NOTES

** CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT. ROUGHEN SURFACE TO 1/4" AMPLITUDE BEFORE POURING NEW WINGWALL CONCRETE.

BILL OF BARS AND BEND DIAGRAMS ARE ON SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

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ABUTMENT DETAILS 3

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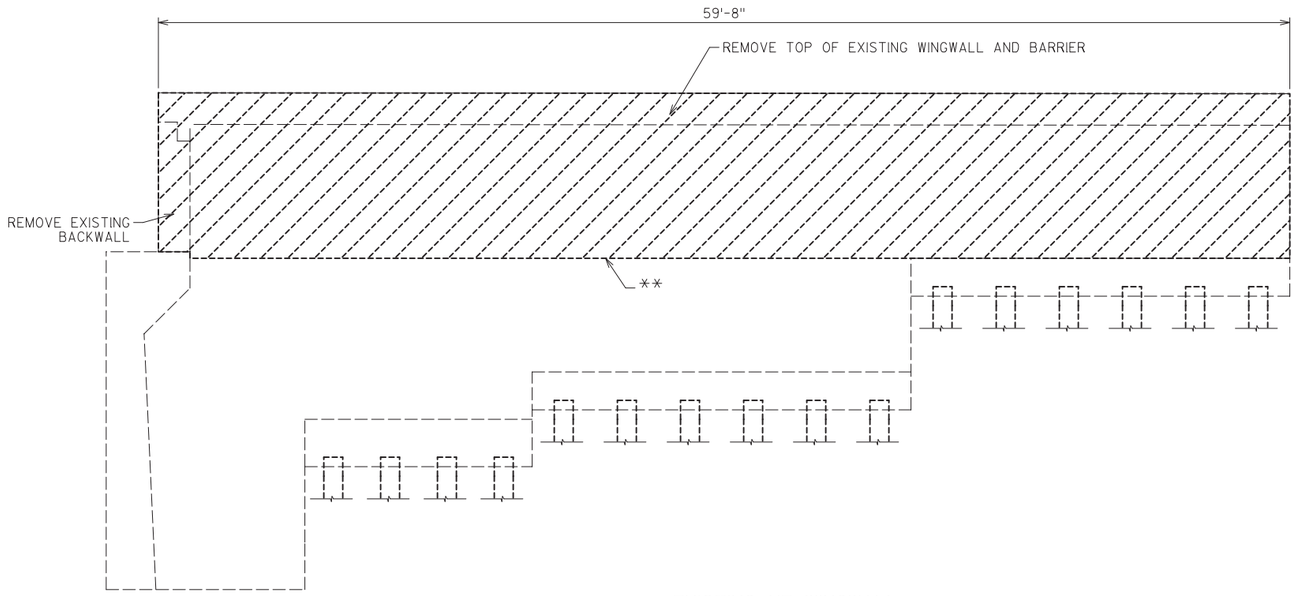
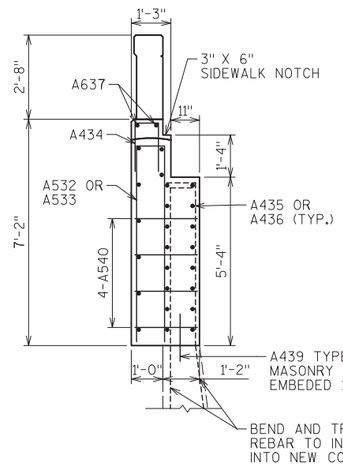


EXISTING NE WINGWALL



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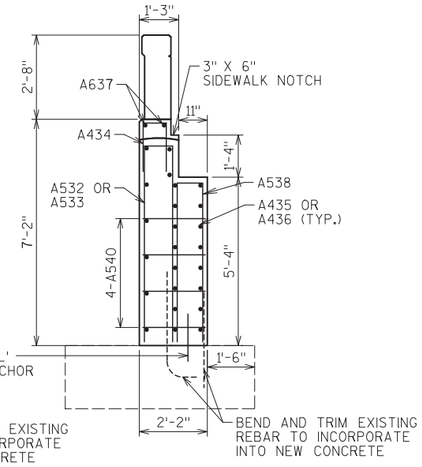
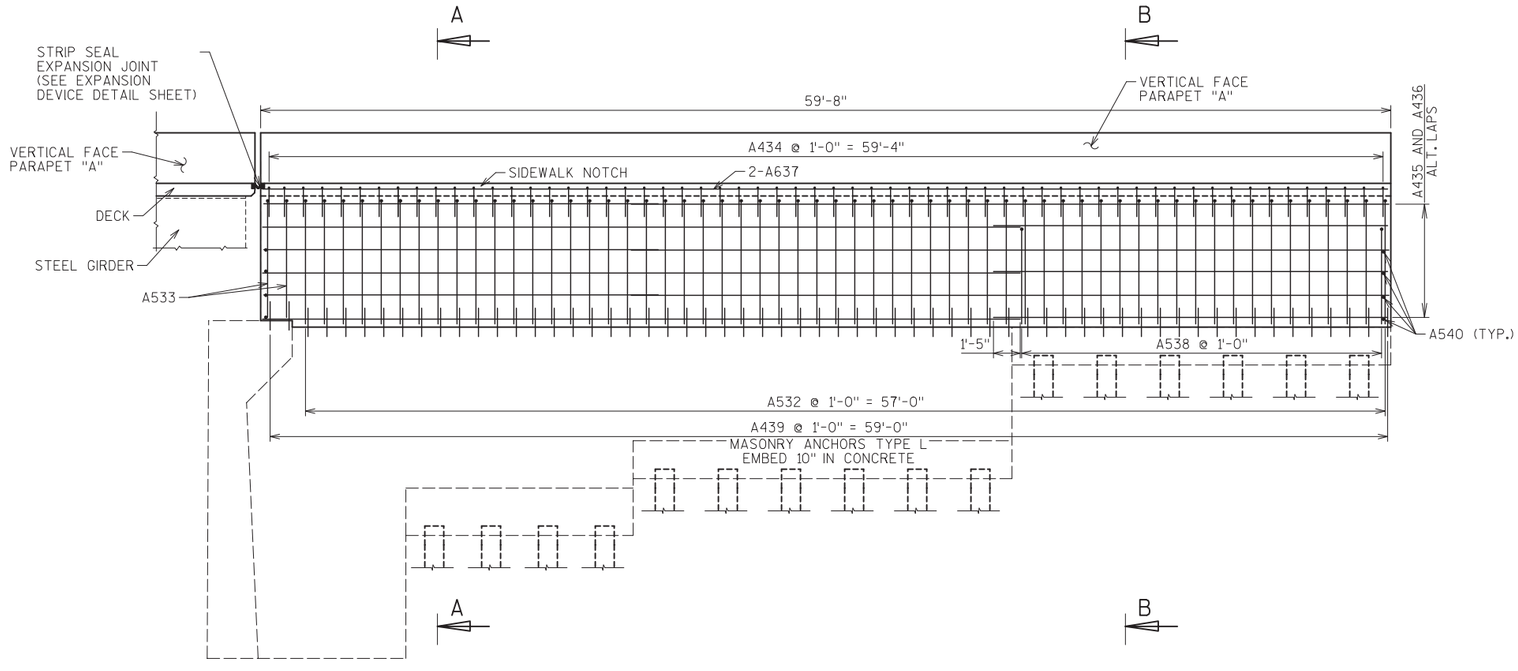


SECTION B-B



PROPOSED NE WINGWALL

ELEVATION - NE WING WALL

NOTES

** CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT. ROUGHEN SURFACE TO 1/4" AMPLITUDE BEFORE POURING NEW WINGWALL CONCRETE.

BILL OF BARS AND BEND DIAGRAMS ARE ON SHEET 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

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ABUTMENT DETAILS 4

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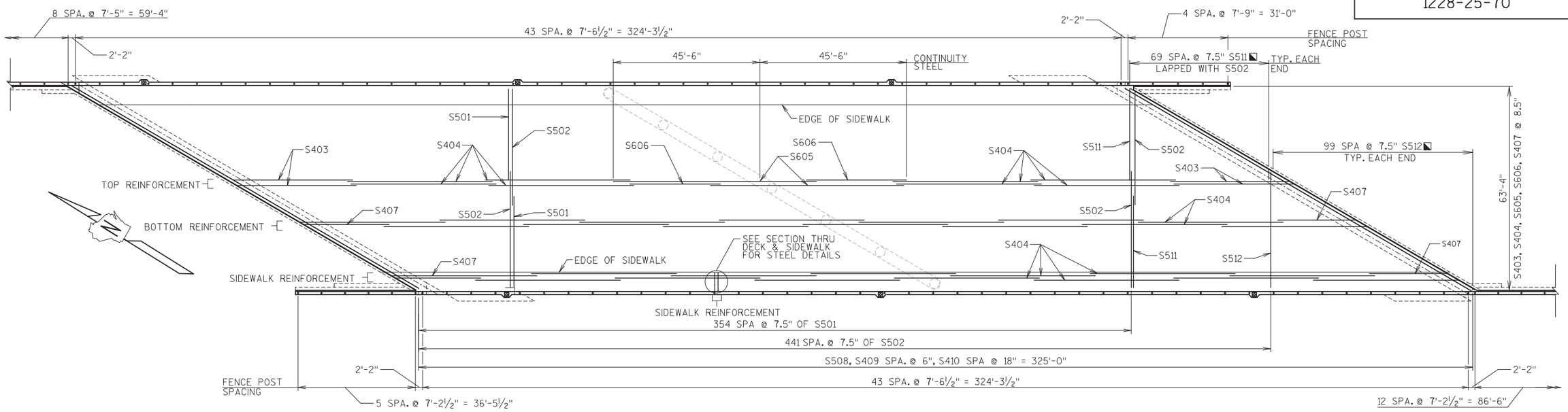


PLAN B-40-180

BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
ALL REINFORCEMENT BARS IN THIS BILL SHALL BE EPOXY COATED.

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
S501	710	28'-2"		TRANSVERSE T & B
S502	884	36'-1"		TRANSVERSE T & B
S403	192	37'-2"		LONGITUDINAL TOP
S404	1245	45'-0"		LONGITUDINAL T & B
S605	99	60'-0"		CONTINUITY - PIER 1
S606	102	34'-1"		CONTINUITY - PIER 1
S407	123	26'-5"		LONGITUDIAL BOTTOM
S508	1300	7'-2"	X	TRANSVERSE - SIDEWALK
S409	2600	1'-8"	X	SIDEWALK/DECK DOWELS
S410	434	3'-3"		TRANSVERSE - SIDEWALK
◪ S511	280	15'-8"		TRANSVERSE T & B
◪ S512	400	19'-2"		TRANSVERSE T & B
S413	2160	2'-11"	X	HAT BARS
S414	32	14'-0"		JOINT HOLD DOWN
S715	80	14'-0"		TRANSVERSE B DIAPH.
S416	320	4'-4"	X	DIAPH. STIRRUP
S417	32	14'-0"		TRANSVERSE T DIAPH.

◪ BAR SERIES

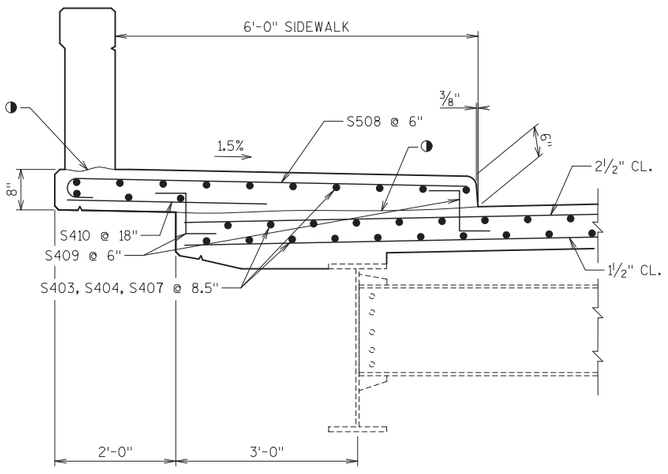
BAR MARK	NO. REQ'D.	LENGTH
S511	4 SERIES OF 75	3'-1" TO 28'-3"
S512	4 SERIES OF 110	0'-5" TO 37'-11"

NOTES

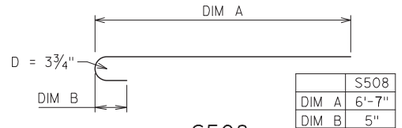
1. THE BOTTOM TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS WITH A CENTER TO CENTER SPACING NOT TO EXCEED 4'-0". ONE LINE OF CONTINUOUS BAR CHAIRS SHALL BE PLACED NEAR EACH EDGE OF THE SLAB TO SUPPORT THE ENDS OF THE BOTTOM TRANSVERSE BAR STEEL.
2. THE TOP LONGITUDINAL BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS IN TRANSVERSE DIRECTION ON 4'-0" CENTERS.
3. LAP LONGITUDINAL SPLICES AT 1'-8" MIN. FOR #4 BARS, 2'-7" MIN. FOR #5 BARS AND 3'-1" MIN. FOR #6 BARS.

LEGEND

◑ CONST. JOINT-STRIKE OFF AS SHOWN AND LEAVE ROUGH.

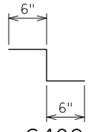


SECTION THRU DECK & SIDEWALK



	S508
DIM A	6'-7"
DIM B	5"

S508



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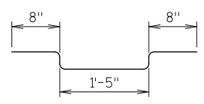

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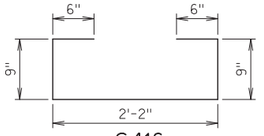

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

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SUPERSTRUCTURE

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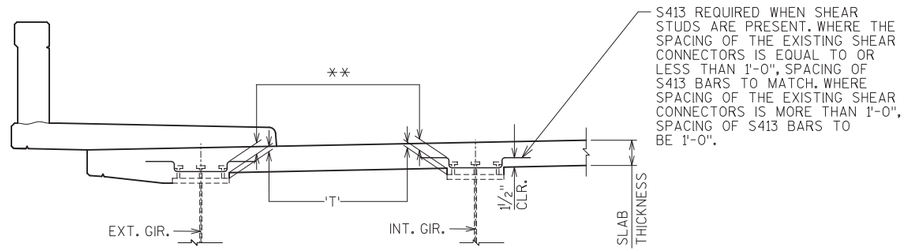


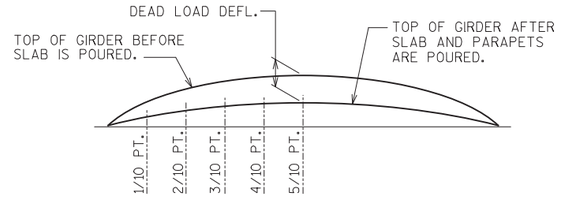
SLAB HAUNCH DETAIL

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 SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF THE 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
\- SLAB THICKNESS
= HAUNCH HEIGHT 'T'



CONCRETE DEAD LOAD DEFLECTION DIAGRAM

CONCRETE DEAD LOAD DEFLECTIONS

SPAN	GIRDER DATA								
	DEAD LOAD DEFL. (IN.)								
	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.
1	1/4"	1/2"	5/8"	11/16"	5/8"	7/16"	3/8"	3/16"	<1/16"
2	<1/16"	3/16"	3/8"	9/16"	5/8"	11/16"	5/8"	1/2"	1/4"

TOP OF DECK ELEVATIONS

	SPAN 1										
	NORTH ABUTMEN	0.1 SPAN	0.2 SPAN	0.3 SPAN	0.4 SPAN	0.5 SPAN	0.6 SPAN	0.7 SPAN	0.8 SPAN	0.9 SPAN	PIER 1
N. EDGE OF DECK	629.53	629.66	629.78	629.91	630.04	630.17	630.30	630.42	630.55	630.68	630.81
GIRDER 1	629.63	629.76	629.89	630.01	630.14	630.27	630.40	630.53	630.65	630.78	630.91
GIRDER 2	630.31	630.44	630.56	630.69	630.82	630.95	631.08	631.20	631.33	631.46	631.59
GIRDER 3	630.84	630.97	631.10	631.23	631.35	631.48	631.61	631.74	631.87	631.99	632.12
GIRDER 4	631.23	631.36	631.49	631.62	631.74	631.87	632.00	632.13	632.26	632.38	632.51
PGL / GIRDER 5	631.48	631.60	631.73	631.86	631.99	632.12	632.24	632.37	632.50	632.63	632.76
GIRDER 6	631.43	631.56	631.69	631.81	631.94	632.07	632.20	632.33	632.45	632.58	632.71
GIRDER 7	631.24	631.37	631.50	631.62	631.75	631.88	632.01	632.14	632.26	632.39	632.52
GIRDER 8	630.90	631.03	631.16	631.29	631.42	631.54	631.67	631.80	631.93	632.06	632.18
GIRDER 9	630.42	630.55	630.68	630.81	630.93	631.06	631.19	631.32	631.45	631.57	631.70
S. EDGE OF DECK	630.40	630.53	630.66	630.79	630.92	631.04	631.17	631.30	631.43	631.56	631.68
	SPAN 2										
	PIER 1	0.1 SPAN	0.2 SPAN	0.3 SPAN	0.4 SPAN	0.5 SPAN	0.6 SPAN	0.7 SPAN	0.8 SPAN	0.9 SPAN	SOUTH ABUTMENT
N. EDGE OF DECK	630.81	630.94	631.06	631.19	631.32	631.45	631.58	631.70	631.83	631.96	632.09
GIRDER 1	630.91	631.04	631.17	631.29	631.42	631.55	631.68	631.81	631.93	632.06	632.19
GIRDER 2	631.59	631.72	631.84	631.97	632.10	632.23	632.36	632.48	632.61	632.74	632.87
GIRDER 3	632.12	632.25	632.38	632.51	632.63	632.76	632.89	633.02	633.15	633.27	633.40
GIRDER 4	632.51	632.64	632.77	632.90	633.02	633.15	633.28	633.41	633.54	633.66	633.79
PGL / GIRDER 5	632.76	632.88	633.01	633.14	633.27	633.40	633.52	633.65	633.78	633.91	634.04
GIRDER 6	632.71	632.84	632.97	633.09	633.22	633.35	633.48	633.61	633.73	633.86	633.99
GIRDER 7	632.52	632.65	632.78	632.90	633.03	633.16	633.29	633.42	633.54	633.67	633.80
GIRDER 8	632.18	632.31	632.44	632.57	632.70	632.82	632.95	633.08	633.21	633.34	633.46
GIRDER 9	631.70	631.83	631.96	632.09	632.21	632.34	632.47	632.60	632.73	632.85	632.98
S. EDGE OF DECK	631.68	631.81	631.94	632.07	632.20	632.32	632.45	632.58	632.71	632.84	632.96

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

DRAWN BY JDL | PLANS CK'D. JDB

SUPERSTRUCTURE DETAILS

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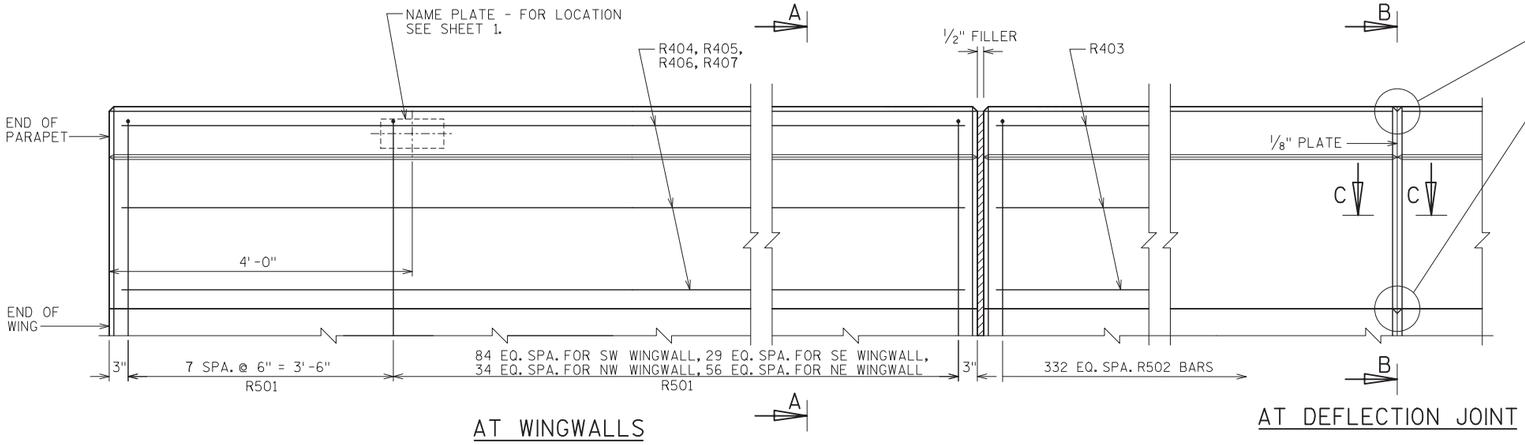
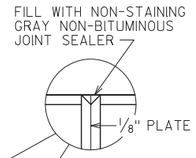
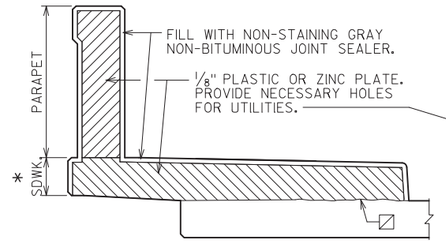


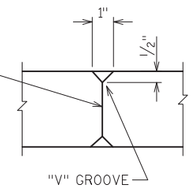
AT WINGWALLS

AT DEFLECTION JOINT





SECTION B-B



SECTION C-C

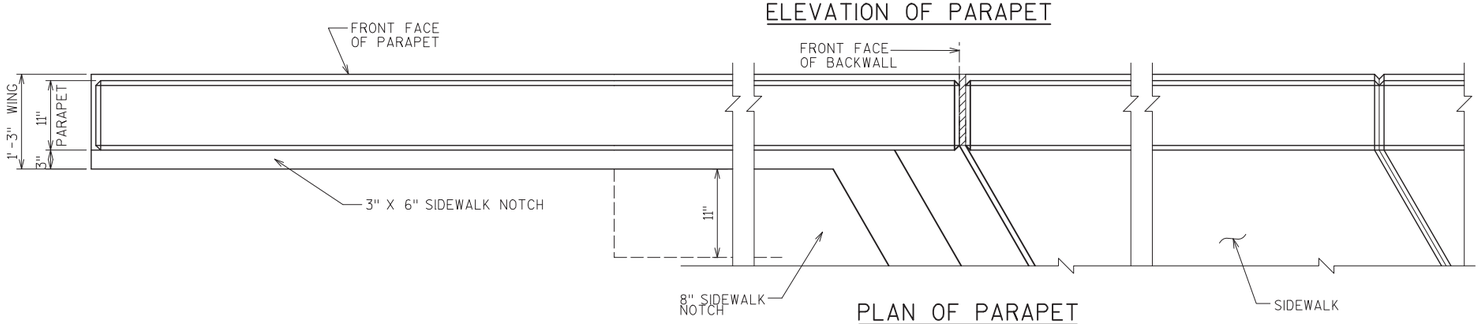
(DEFLECTION JOINT IN PARAPET AND SIDEWALK AT EACH PIER)

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION B-B BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

DO NOT RUN BAR STEEL THROUGH DEFLECTION JOINT. CUT SIDEWALK AND PARAPET REINFORCEMENT AS REQUIRED.

* 8" MIN. SIDEWALK THICKNESS REQUIRED AT EDGE OF DECK AND SLAB

ELEVATION OF PARAPET

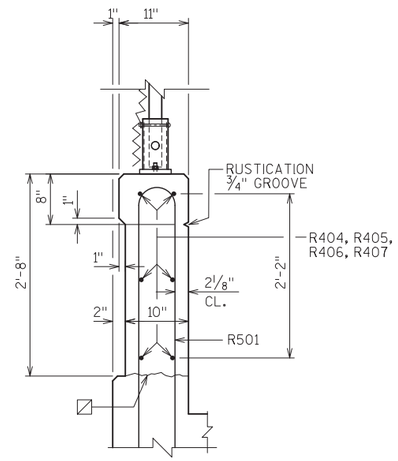


PLAN OF PARAPET

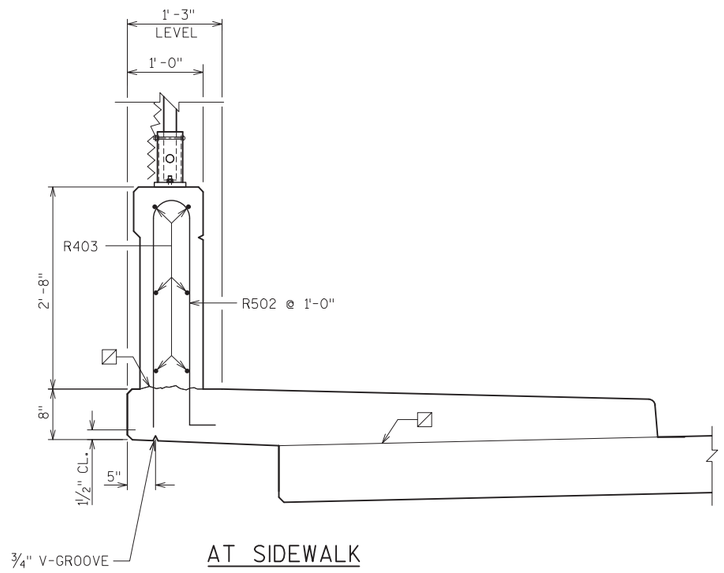
BILL OF BARS

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
R501	235	9'-5"	X	WINGWALL PARAPET VERT.
R502	666	6'-8"	X	BRIDGE PARAPET VERT.
R403	96	42'-6"		BRIDGE PARAPET HORZ.
R404	12	30'-6"		WINGWALL 1 PARAPET HORZ.
R405	6	37'-10"		WINGWALL 2 PARAPET HORZ.
R406	6	32'-4"		WINGWALL 3 PARAPET HORZ.
R407	12	44'-11"		WINGWALL 4 PARAPET HORZ.

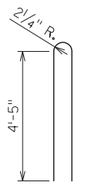
TOTAL WEIGHT = 10,560LBS



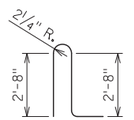
SECTION A-A



AT SIDEWALK



R501



R502

☒ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

DRAWN BY JDL | PLANS CK'D. JDB

VERTICAL FACE PARAPET "A"

SHEET 9 OF 15
577

DATE: 1/31/2014
I.D. justin_bohler

FILE= P:\Transportation\I43 Valley Bridge Overpasses\CADD\Structures\B-40-180\Final\09-180_Vertical Face Parapet A.dgn

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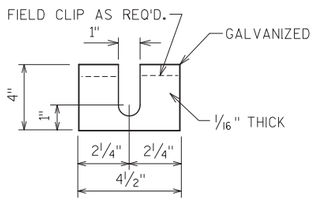
STATE PROJECT NUMBER

1228-25-70

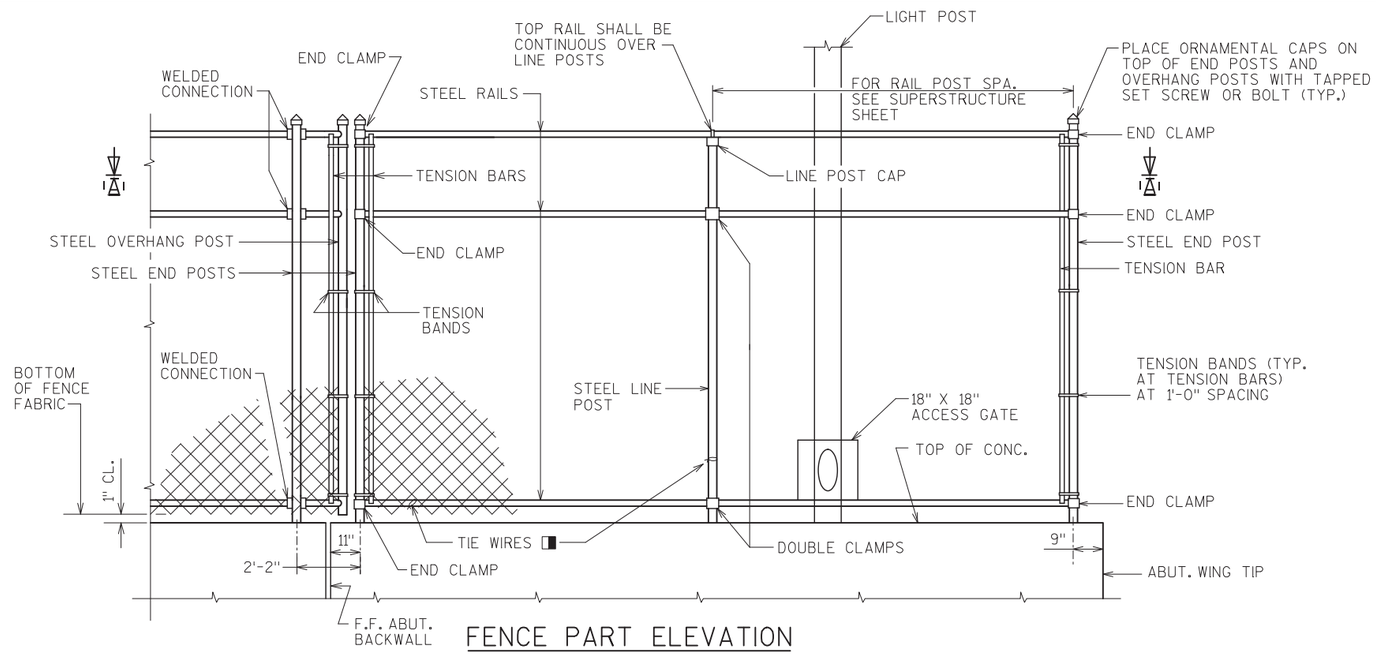
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



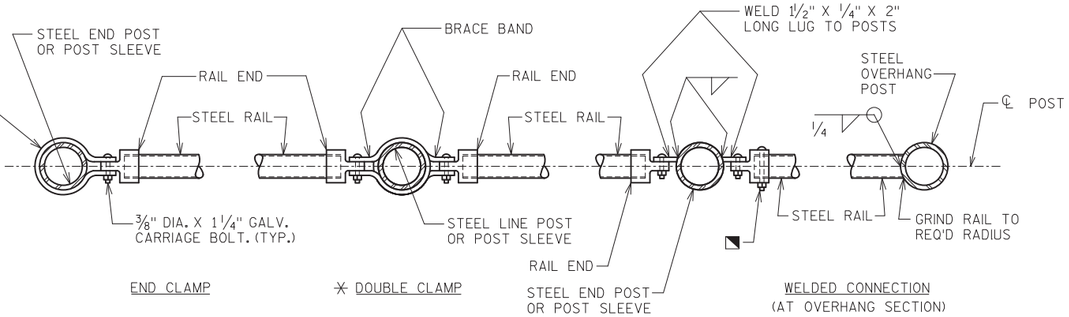
POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.



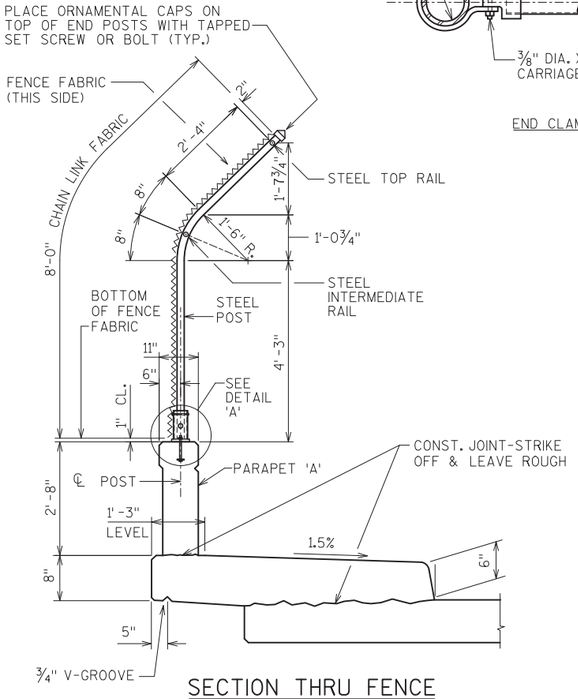
FENCE PART ELEVATION

VIEWING FABRIC SIDE

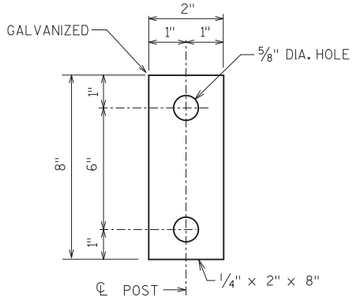


SECTION A-A

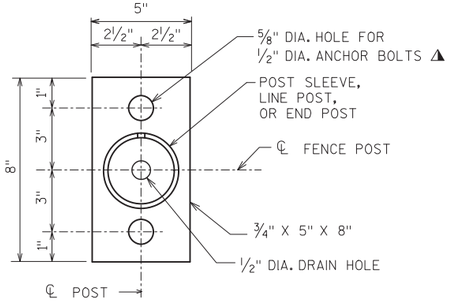
NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS



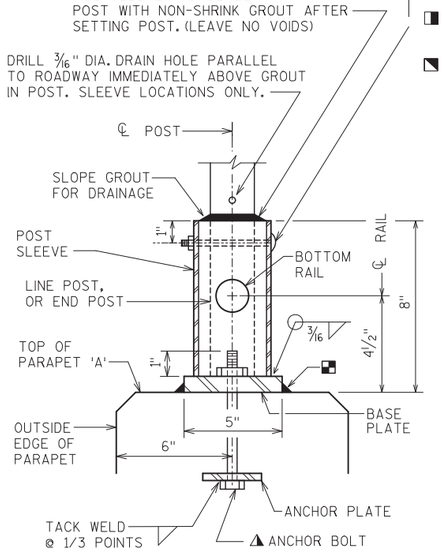
SECTION THRU FENCE



ANCHOR PLATE



BASE PLATE



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER-COATING ON THE OUTSIDE.

FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE COLOR OF POLYMER-COATING FOR THIS STRUCTURE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER-COATED 8- FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

◪ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

✳ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

▲ 1/2" DIA. X 6 7/8" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S", 1/2" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR 1/2" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

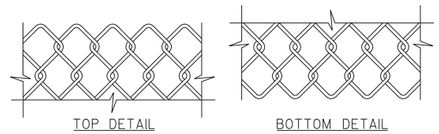
☆ 1/2" DIA. CONCRETE MASONRY ANCHOR, TYPE "S", 6" MIN. EMBEDMENT (EPOXY ANCHORED) INTO CONCRETE. ANCHOR, WASHER AND NUT SHALL BE GALVANIZED.

◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

◩ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR 1/4 POINT OF POST SPACING.

18" X 18" ACCESS GATE TO BE PROVIDED AT EACH LIGHT POLE FOR ACCESS TO THE HAND HOLE. DETAILS TO BE APPROVED BY THE ENGINEER.



FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 1" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

DRAWN BY JDL | PLANS CK'D. JDB

FENCE DETAILS

SHEET 10 OF 15
578

DATE: 1/31/2014
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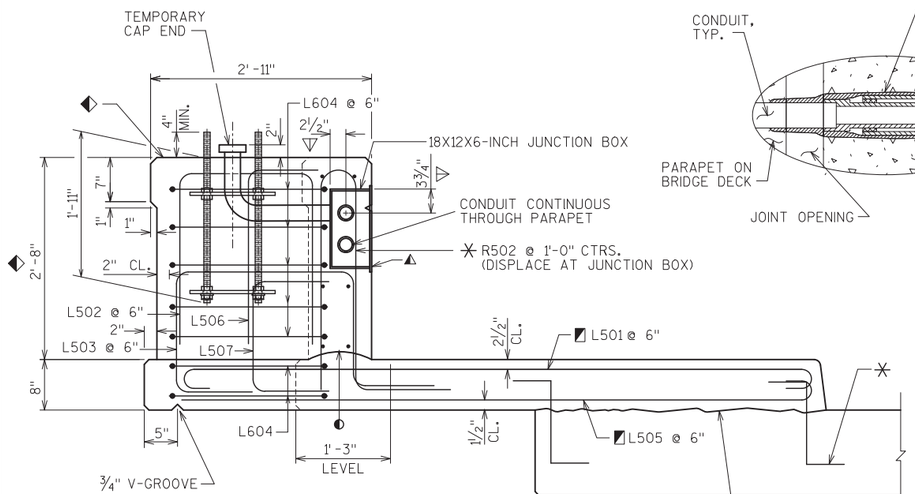
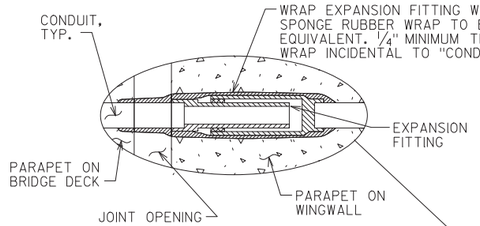
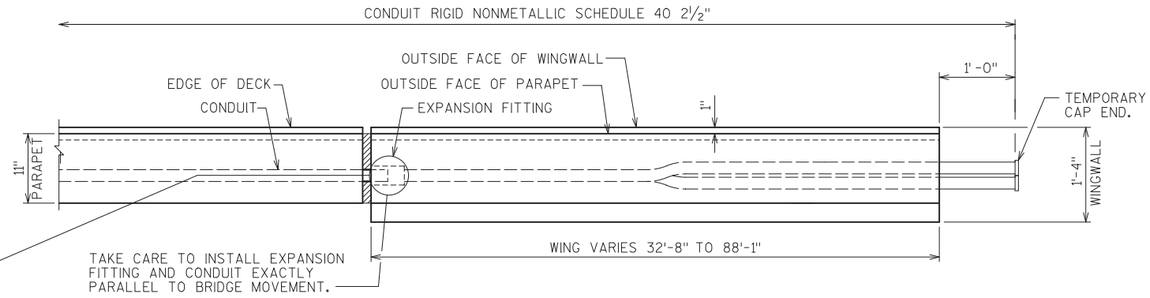
STATE PROJECT NUMBER

1228-25-70



SECTION A-A





PLAN OF PARAPET AT WINGWALL

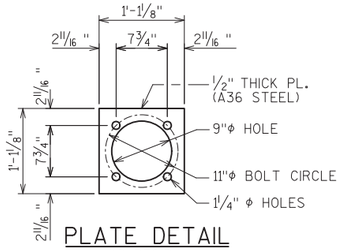
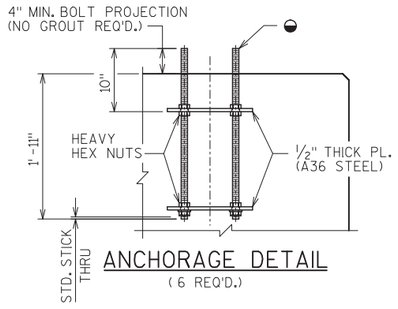
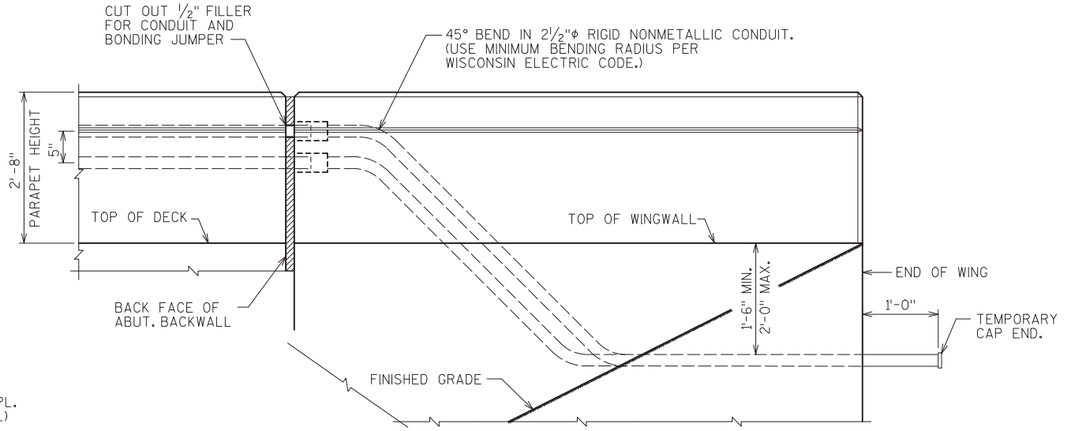


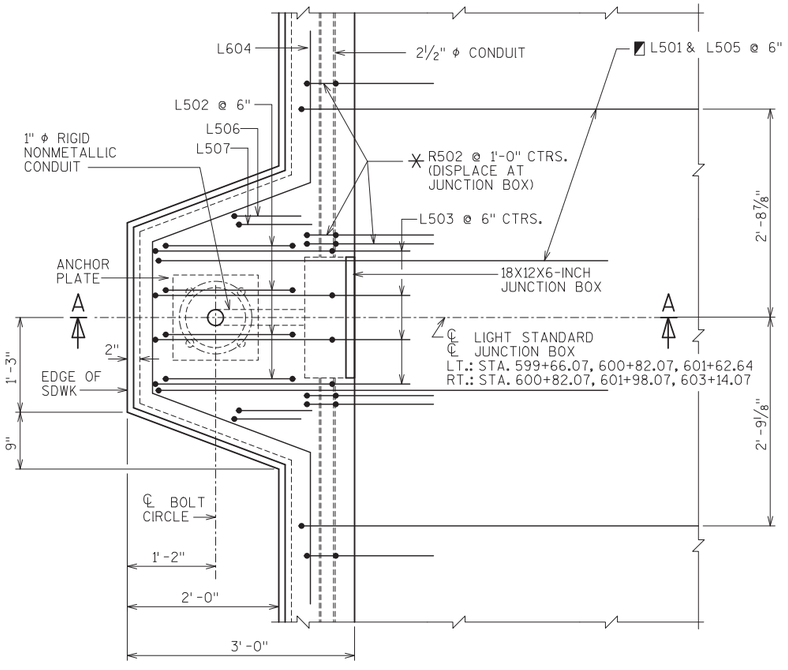
PLATE DETAIL
(12 REQ'D.)



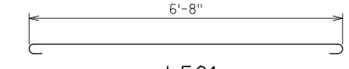
ANCHORAGE DETAIL
(6 REQ'D.)



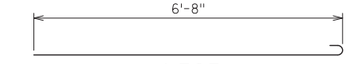
OUTSIDE ELEVATION OF PARAPET AT WINGWALL



PLAN AT LIGHT STANDARD



L501



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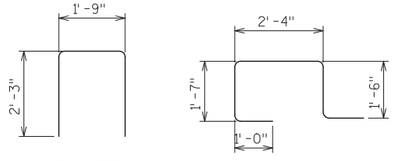
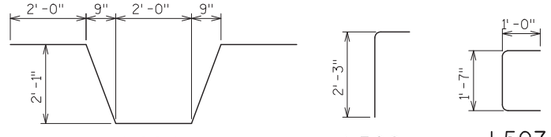


L502 L503



L604 L506 L507

- ◐ CONSTR. 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.
- ◩ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.
- ◒ 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.
- ✳ SEE "SUPERSTRUCTURE" AND "VERTICAL FACE PARAPET 'A'" SHEETS FOR ADDITIONAL BAR STEEL DETAILS.
- ◆ TOP SURFACE OF LIGHT STANDARD TO BE LEVEL IN DIRECTION PARALLEL TO PARAPET AND SLOPE ⅛" PER FOOT AWAY FROM PARAPET. 2'-8" DIMENSION IS MAXIMUM AND WILL VARY BASED ON SLOPE OF GRADE.

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH, EACH.
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2½-INCH"
"CONDUIT RIGID NONMETALIC SCHEDULE 40 1-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
CARLON TYPE E945K (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID NONMETALLIC 2½-INCH".

ADAPTER FITTINGS U.L. LISTED FOR ELECTRICAL USE SHALL BE USED.

BILL OF BARS

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
L501	72	7'-10"	X	SIDEWALK HORIZ. @ JUNCTION BOX
L502	24	6'-0"	X	PARAPET VERT. @ JUNCTION BOX
L503	24	7'-0"	X	PARAPET VERT. @ LIGHT STD.
L604	42	10'-0"	X	PARAPET HORIZ. @ LIGHT STD.
L505	72	7'-3"	X	SIDEWALK HORIZ. @ JUNCTION BOX
L506	12	3'-2"	X	PARAPET VERT. @ LIGHT STD.
L507	12	3'-4"	X	PARAPET VERT. @ LIGHT STD.

TOTAL WEIGHT =2,170 LBS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

DRAWN BY JDL | PLANS CK'D. JDB

LIGHT STANDARD

SHEET 11 OF 15
579

DATE: 1/31/2014
I.D. justin_bohler

FILE= P:\Transportation\I43 Valley Bridge Overpasses\CADD\Structures\B-40-180\Final\11-180_light standard.dgn

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STATE PROJECT NUMBER

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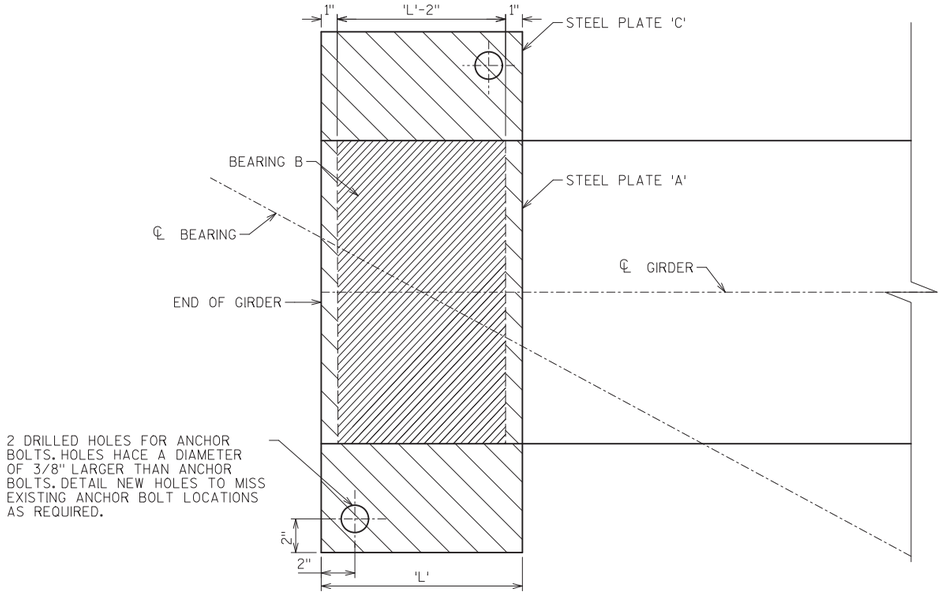
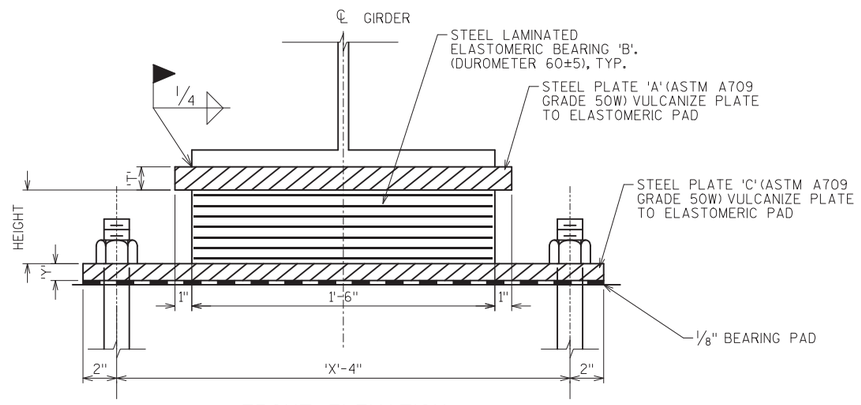
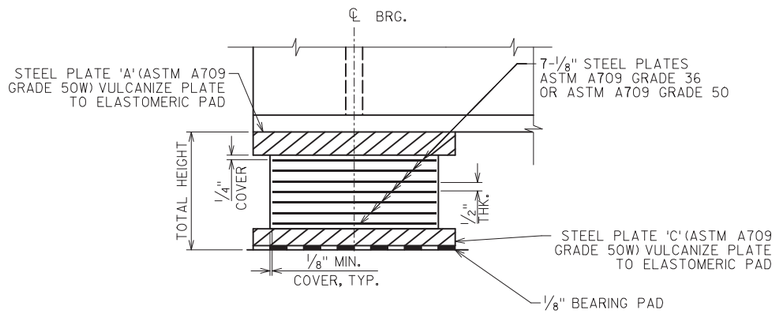


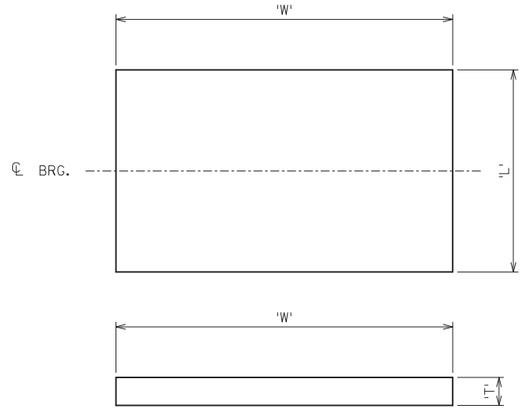
PLAN VIEW ELASTOMERIC BEARING



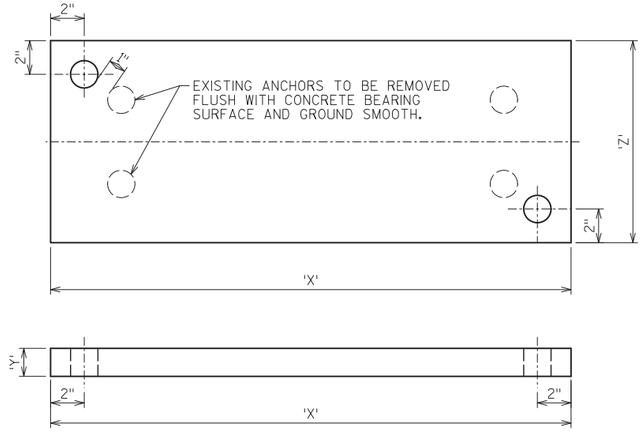
FRONT ELEVATION



SECTION THRU ELASTOMERIC BEARING



TOP PLATE 'A'



MASONRY PLATE 'C'

LOCATION	PLATE 'A'			PLATE 'C'			BEARING 'B'			TOTAL HEIGHT	NO. REQ'D
	'W'	'T'	'L'	'X'	'Y'	'Z'	HEIGHT	WIDTH	LENGTH		
NORTH ABUTMENT	1'-8"	1 1/4"	1'-4"	2'-7"	1 1/4"	1'-4"	4 1/4"	1'-6"	1'-2"	6 7/8"	9
SOUTH ABUTMENT	1'-8"	1 1/4"	1'-4"	2'-7"	1 1/4"	1'-4"	4 1/4"	1'-6"	1'-2"	6 7/8"	9

BEARING NOTES

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR 'BEARING PADS ELASTOMERIC LAMINATED", EACH.

COMPRESSION LOAD AND ADHESION TEST WILL BE WAIVED WHERE BEARINGS ARE DETAILED TO MEET HEIGHT REQUIREMENTS.

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5 FOR 1¼" ϕ BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "C" THICKNESS + 2¼", ABOVE TOP OF CONCRETE.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS BOTTOM PLATE 'C' FOR EACH BEARING.

USE (2) 1¼" ϕ, 1'-5" LONG ANCHOR BOLTS PER BEARING PAD ASSEMBLY.

DRILLED HOLES FOR ANCHOR BOLTS IN BOTTOM PLATE 'C' HAVE A DIAMETER OF ⅜" LARGER THAN ANCHOR BOLT.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

VULCANIZE TOP PLATE 'A' AND BOTTOM PLATE 'C' TO ELASTOMERIC PAD.

REMOVE EXISTING FIXED BEARINGS AND EXISTING ANCHOR BOLTS FLUSH WITH CONCRETE BEARING SURFACE AND GRIND SMOOTH.

WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY SURFACES IN CONTACT WITH THE ELASTOMER TO 200. F (93. C). TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

DRAWN BY JDL | PLANS CK'D. JDB

EXPANSION BEARING DETAIL

SHEET 12 OF 15
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FILE= P:\Transportation\143 Valley Bridge Overpasses\CADD\Structures\B-40-180\Final\12-180_Bearing Detail.dgn

DATE: 1/31/2014
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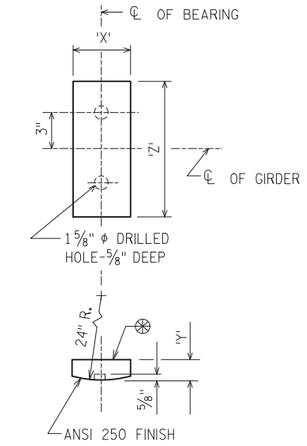
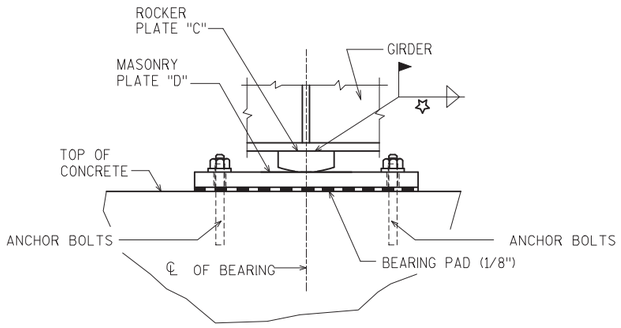
STATE PROJECT NUMBER

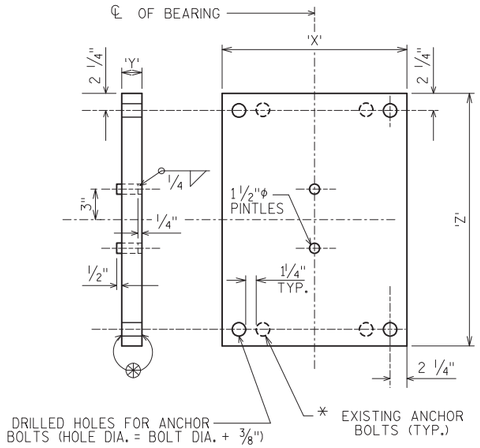
1228-25-70



ROCKER PLATE "C"



FIXED BEARING ASSEMBLY



TYPE II

MASONRY PLATE "D"

FIXED BEARING

	PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
	'X'	'Y'	'Z'	'X'	'Y'	'Z'				
FIXED BEARING	5"	3 3/8"	1'-8"	1'-10"	3 3/4"	2'-6"	TYPE II	1 1/4"	7	INTERIOR AT PIER
	5"	3 3/8"	1'-8"	1'-10"	5"	2'-6"	TYPE II	1 1/4"	2	EXTERIOR AT PIER

☆ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	∔ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	△ 5/16"
OVER 1 1/2" TO 2 1/4"	△ 3/8"
OVER 2 1/4" TO 6"	△ 1/2"

∔ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

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.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5" FOR 1 1/4" ϕ BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES FIXED B-40-180", EACH.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

ROCKER PLATE "C" SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.

MASONRY PLATE "D" SHALL BE GALVANIZED.

⊛ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

* REMOVE EXISTING FIXED BEARINGS AND EXISTING ANCHOR BOLTS FLUSH WITH CONCRETE BEARING SURFACE AND GRIND SMOOTH.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

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FIXED BEARING DETAILS

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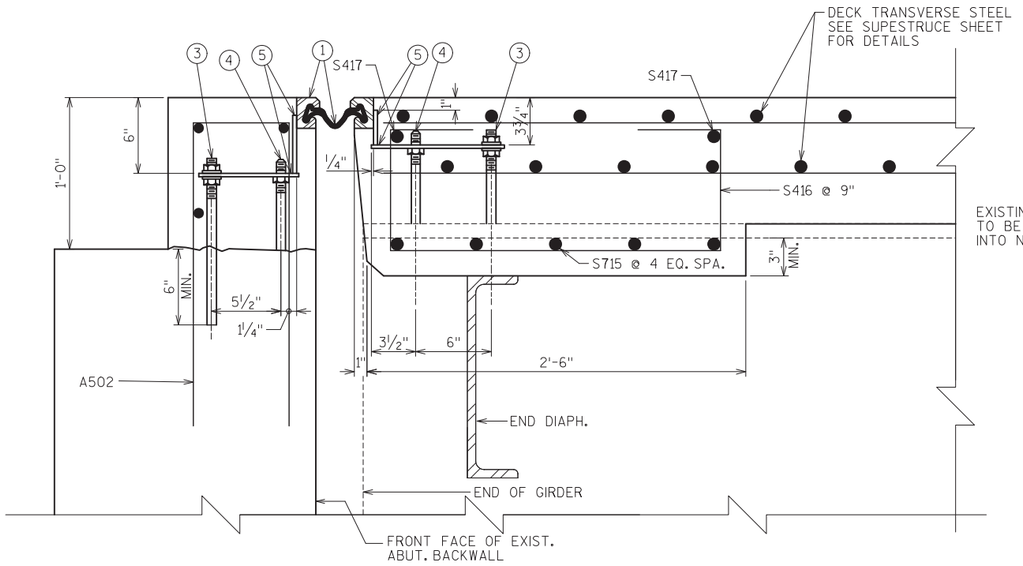
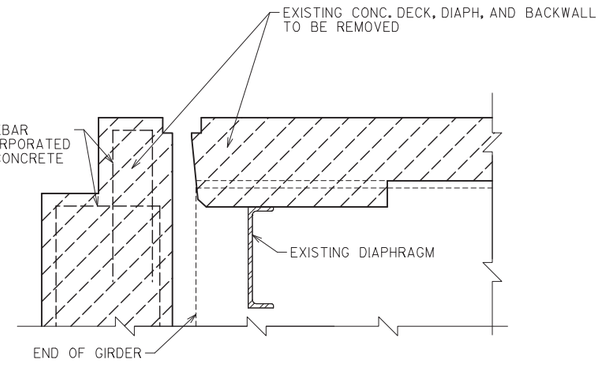


SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



JOINT REMOVAL

AT ABUTMENTS

LEGEND

(1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

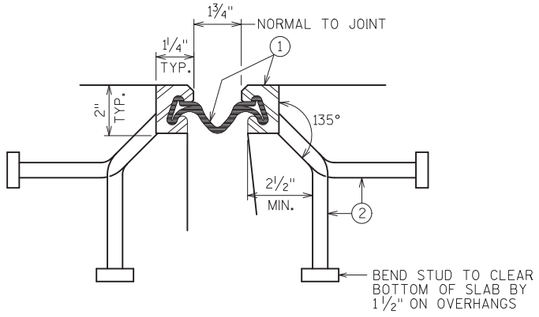
(2) STUDS $\frac{5}{8}$"ϕ X 6$\frac{3}{8}$" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(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.

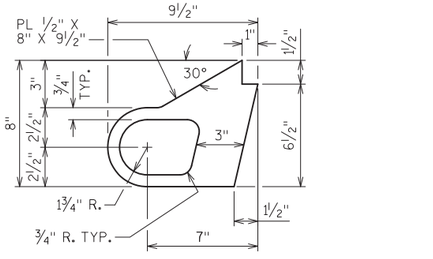
(4) $\frac{3}{4}$"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(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.

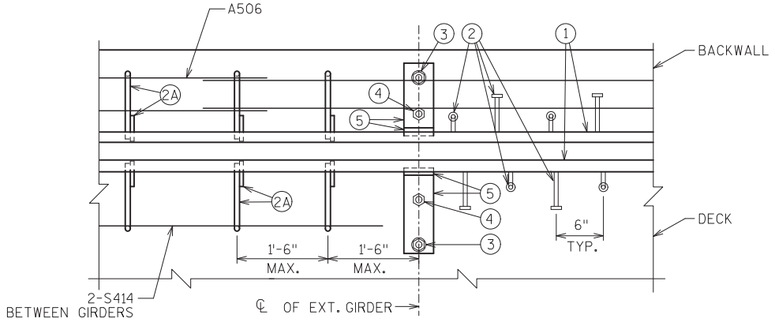


SECTION THRU JOINT

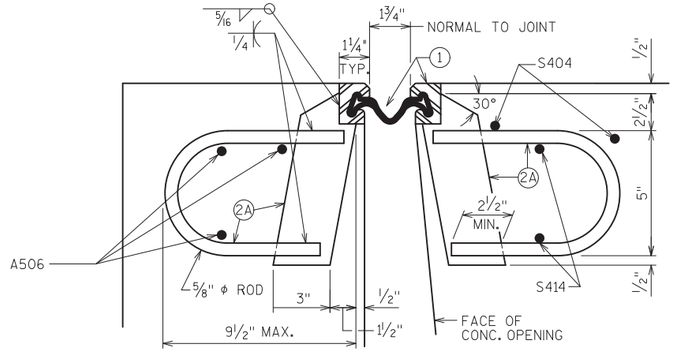
EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS



ALTERNATE STRIP SEAL ANCHOR



PART PLAN



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTERGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

INSTALLATION OF STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-40-180".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-180

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EXPANSION DEVICE DETAIL

SHEET 14 OF 15

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FILE= P:\Transportation\I43 Valley Bridge Overpasses\CADD\Structures\B-40-180\Final\14-180_Expansion Device - North & South Abutment Strip Seal.dgn

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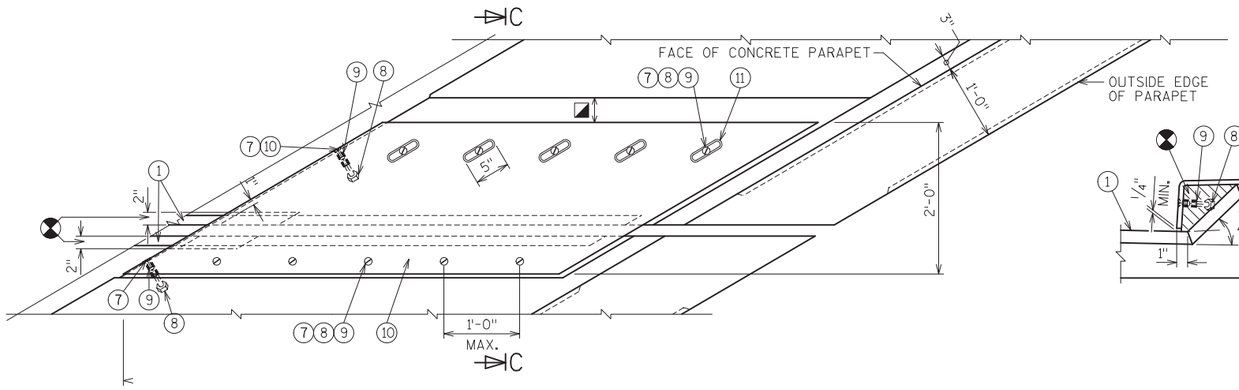
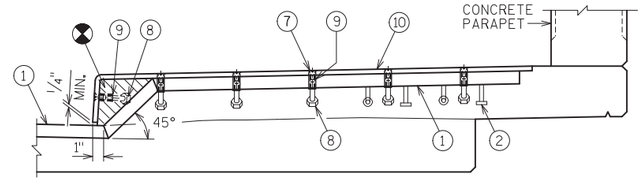
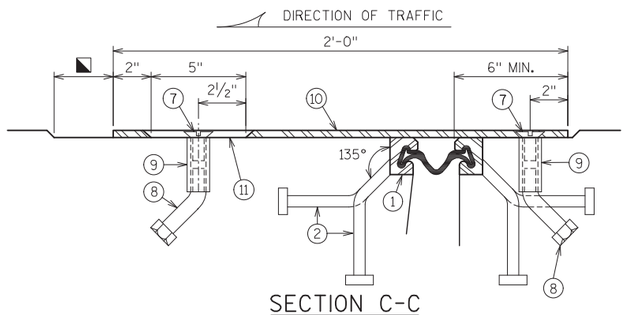


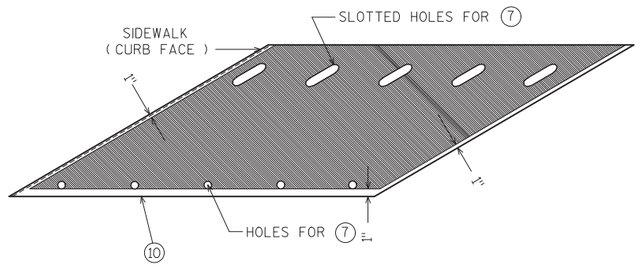
PLAN AT SIDEWALK



SECTION AT SIDEWALK



SECTION C-C



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

FOR NOTES 1-5, SEE SHEET 10

(7) ¾"ϕ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾"ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾"ϕ X 2¼" GALVANIZED THREADED COUPLING.

(10) SIDEWALK COVER PLATE ⅜" X 2'-2" LONG X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 7 GALVANIZED PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

(11) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◥ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

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STRUCTURE B-40-180

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COVER PLATE DETAIL

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DATE: 1/31/2014
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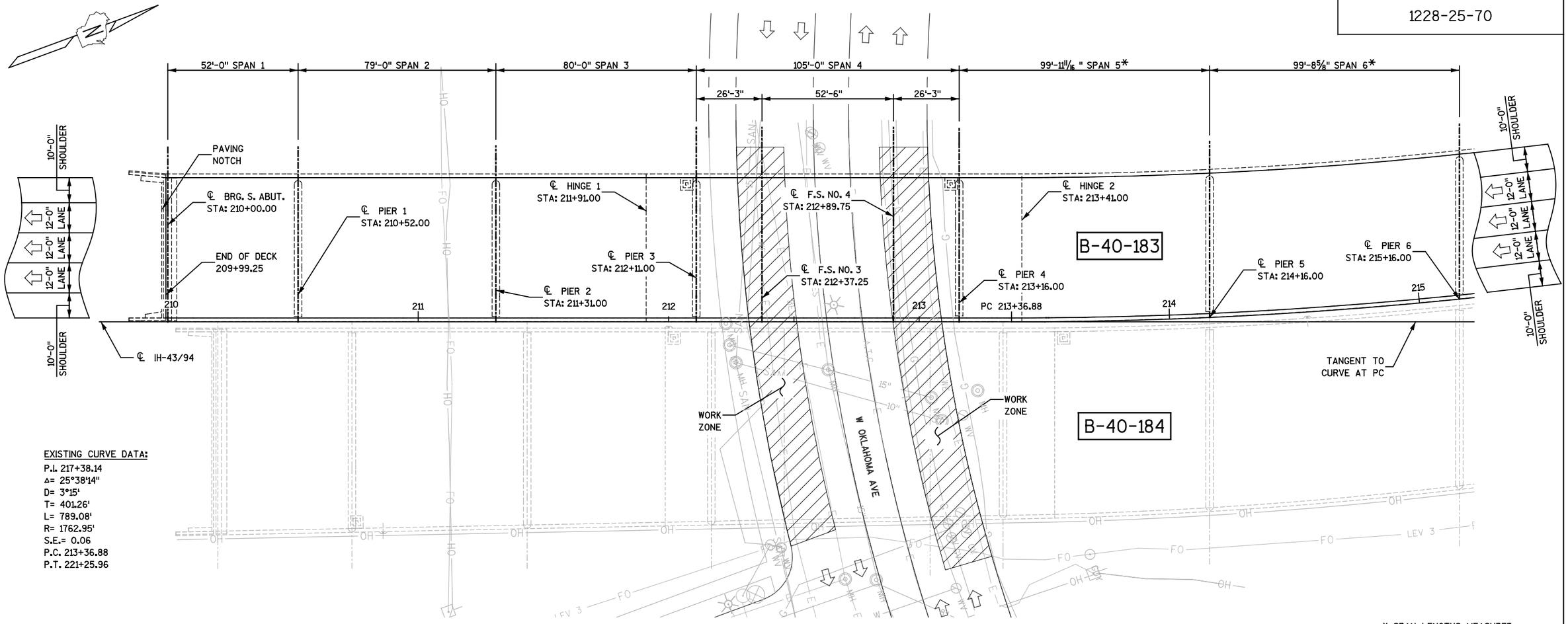
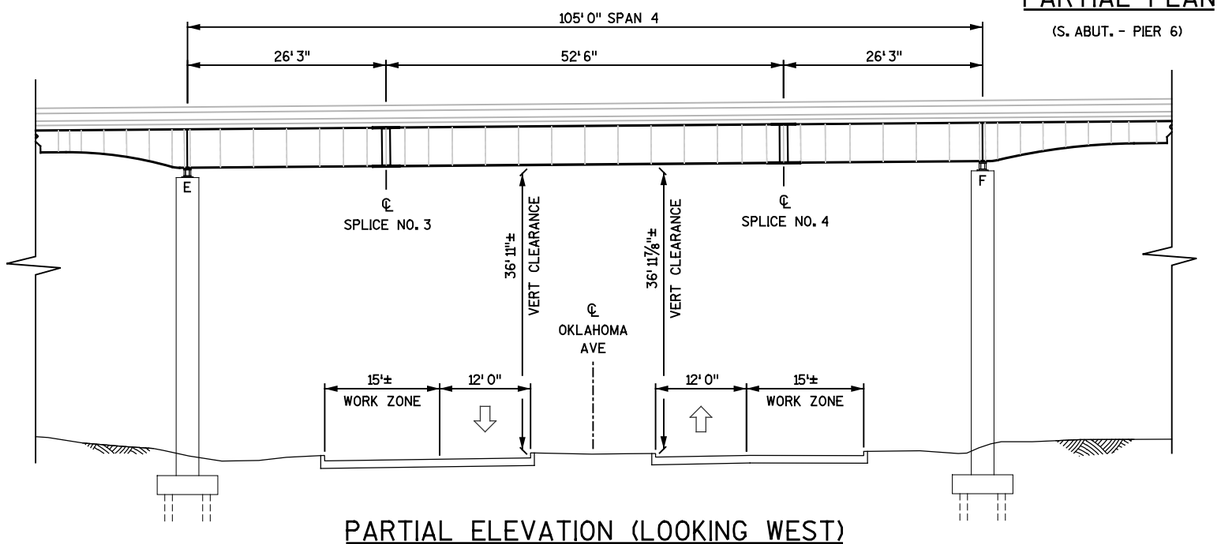


EXISTING CURVE DATA:
P.I. 217+38.14
Δ= 25°38'14"
D= 3°15'
T= 401.26'
L= 789.08'
R= 1762.95'
S.E.= 0.06
P.C. 213+36.88
P.T. 221+25.96

PARTIAL PLAN

(S. ABUT. - PIER 6)



PARTIAL ELEVATION (LOOKING WEST)

(SPAN 4)

DESIGN DATA

LIVE LOAD:

INVENTORY RATING	HS-11
OPERATIONAL RATING	HS-19
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV)	141 KIPS

* SPAN LENGTHS MEASURED ALONG TANGENT TO CURVE

GENERAL NOTES

SEE SHEET 2 FOR GENERAL NOTES.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTION, FRAMING PLAN & QUANTITIES
3. SPLICE PLATE DETAILS

TRAFFIC DATA

IH-43/94 SB
A.D.T. (2009) = 56,900

OKLAHOMA AVE
A.D.T. (2008) = 13,800

WISCONSIN
NICHOLAS J. HORNYAK
E-42804
MILWAUKEE
WI
PROFESSIONAL ENGINEER
4/27/14

SE REGION CONTACT:
JOE GALLAMORE (262) 548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
NICHOLAS HORNYAK (414) 282-6905

NO.	DATE	REVISION	BY

COLLINS ENGINEERS INC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 01/31/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-183

IH-43/94 SB/EB OVER OKLAHOMA AVE

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	NJH	DESIGN CK'D.	RJW	DRAWN BY	NJH	PLANS CK'D.	RJW

GENERAL PLAN
SPANS 1 - 6

SHEET 1 OF 3
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FILE NAME :OLB-40-183_Title & Plan.dgn
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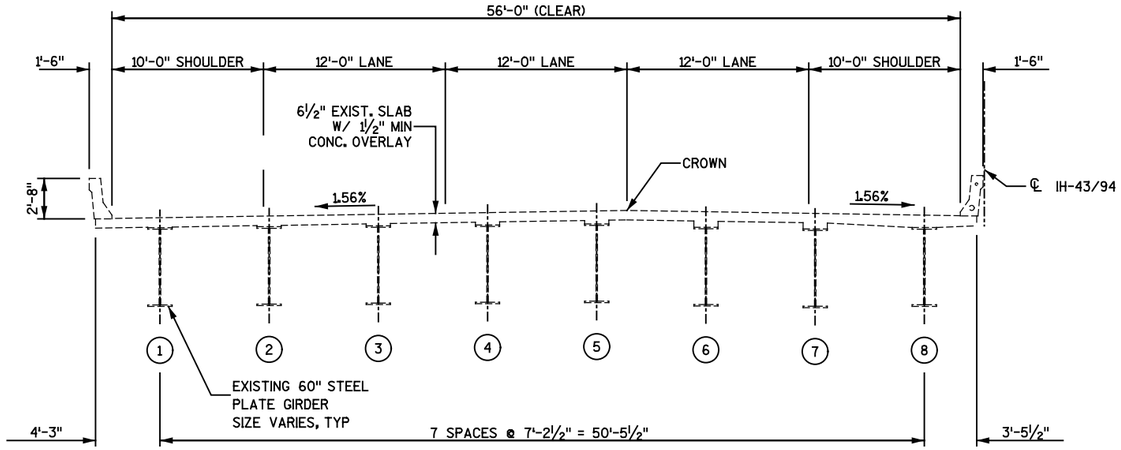
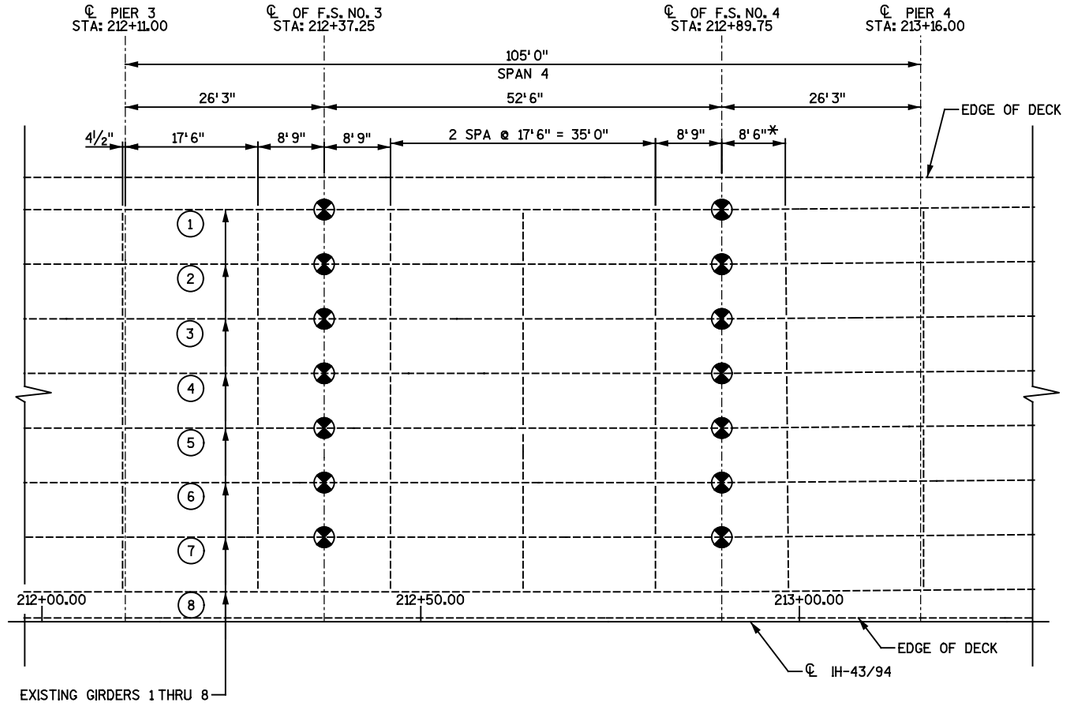


CROSS SECTION THRU ROADWAY

(LOOKING NORTH)



PARTIAL FRAMING PLAN

TOTAL ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER	TOTAL
SPV.0060.4008	STEEL GIRDER SPLICE REPAIR	EACH	14	14
SPV.0105.4003	TEMPORARY SUPPORT, B-40-183	LS	1	1

ALL ITEMS ARE CATEGORY 2340

GENERAL NOTES

THE PROPOSED WORK INCLUDES REMOVING AND REPLACING LOWER SPLICE PLATES ON GIRDERS 1 THRU 7 AT FIELD SPLICE LOCATIONS NO. 3 AND NO. 4.

EXCEPT FOR NIGHT-TIME CLOSURES, ONE LANE OF TRAFFIC SHALL BE MAINTAINED FOR EACH DIRECTION ON OKLAHOMA AVE. SEE SPECIAL PROVISIONS FOR TRAFFIC STAGING RESTRICTIONS ON OKLAHOMA AVE.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

ORIGINAL PLANS AND OVERLAY PLANS OF EXISTING BRIDGE B-40-183 ARE AVAILABLE AT THE WISDOT SOUTHEAST REGION OFFICE. REFERENCE THOSE PLANS FOR THE DESIGN OF SHORING AND TEMPORARY BRACING DURING CONSTRUCTION.

TEMPORARY SUPPORT SHALL BE INSTALLED/CONSTRUCTED PRIOR TO REMOVAL OF SPLICE PLATES.

REPAIRS MUST BE COMPLETED ONE SPLICE LOCATION AT A TIME.

NO MORE THAN ONE SPLICE MAY BE DISASSEMBLED AT ANY TIME.

PRIOR TO INSTALLATION OF THE NEW SPLICE PLATES, EXISTING GIRDER SURFACES ARE TO BE CLEANED AND PRIMED. SEE SPECIAL PROVISIONS.

TEMPORARY SUPPORT SHALL BE DESIGNED FOR DEAD AND LIVE LOADING. UNFACTORED VERTICAL REACTION FORCES AT EACH FIELD SPLICE ARE GIVEN BELOW.

DEAD LOAD = 36 KIPS
LIVE LOAD = 84 KIPS

⊗ STEEL GIRDER SPLICE REPAIR. SEE DETAILS PAGE 3.

* VARIES FROM 8'4 11/16 " TO 8'9"

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-183

DRAWN BY	CSH	PLANS CK'D.	RJW

TYPICAL SECTION & FRAMING PLAN

SHEET 2 OF 3

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PLOT DATE :11/27/2014 4:41:13 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pltr PEN :CEL.TEXTSUB.TBL

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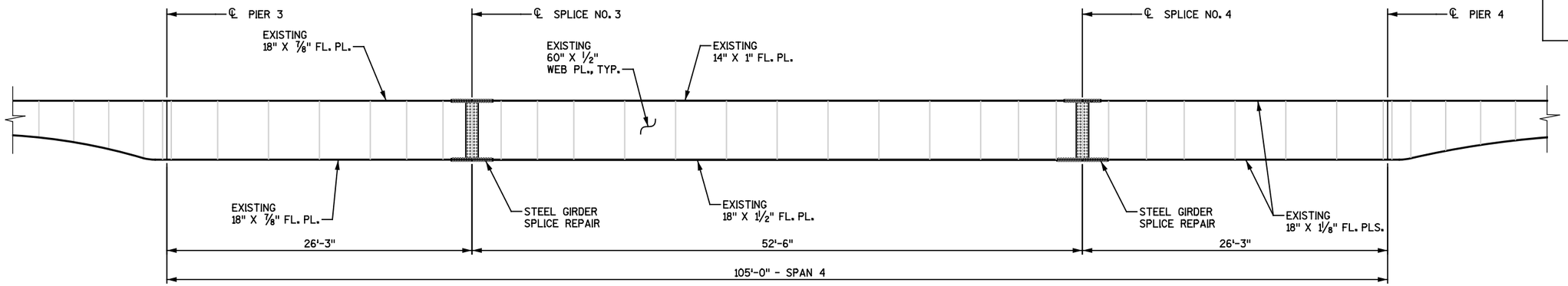
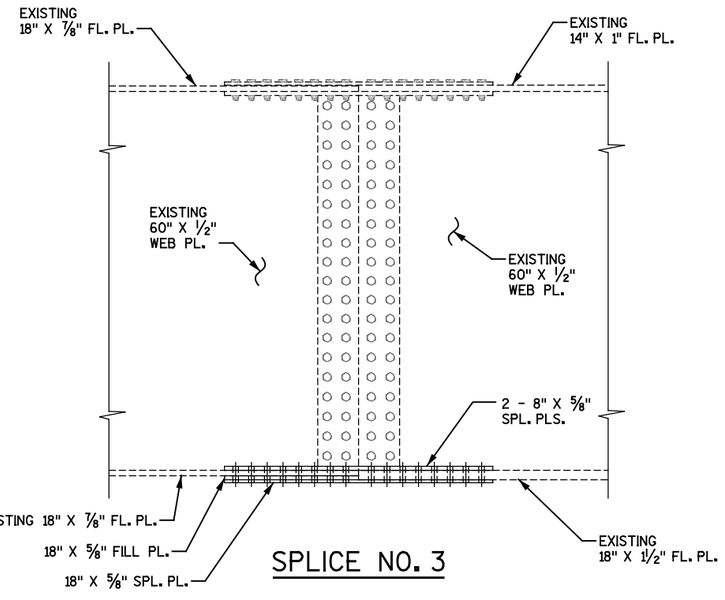
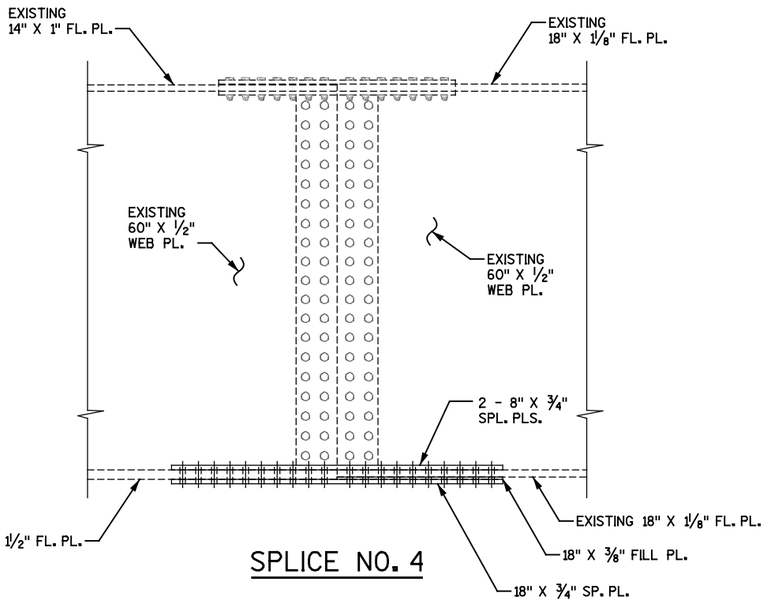


GIRDER ELEVATION

(GIRDERS 1 THRU 7)



SPLICE NO. 3

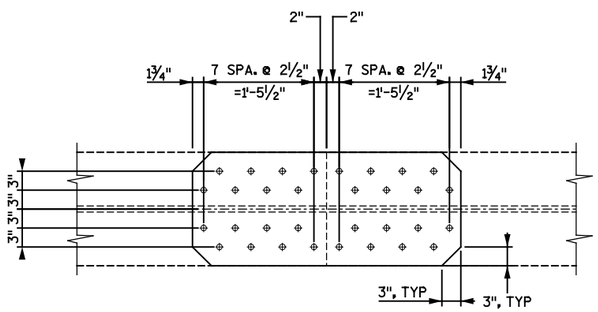


SPLICE NO. 4

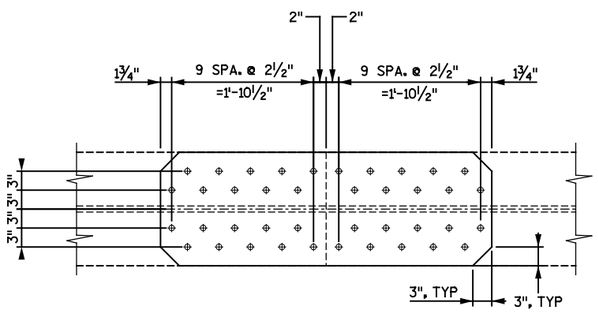
NOTES

ALL SPLICE PLATE STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

BOLTS IN BOTTOM SPLICE SHALL BE 7/8" ϕ HIGH STRENGTH ASTM A325 BOLTS.



SECTION BOTTOM PLATE



SECTION BOTTOM PLATE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-183

DRAWN BY NJH | PLANS CK'D. RJW

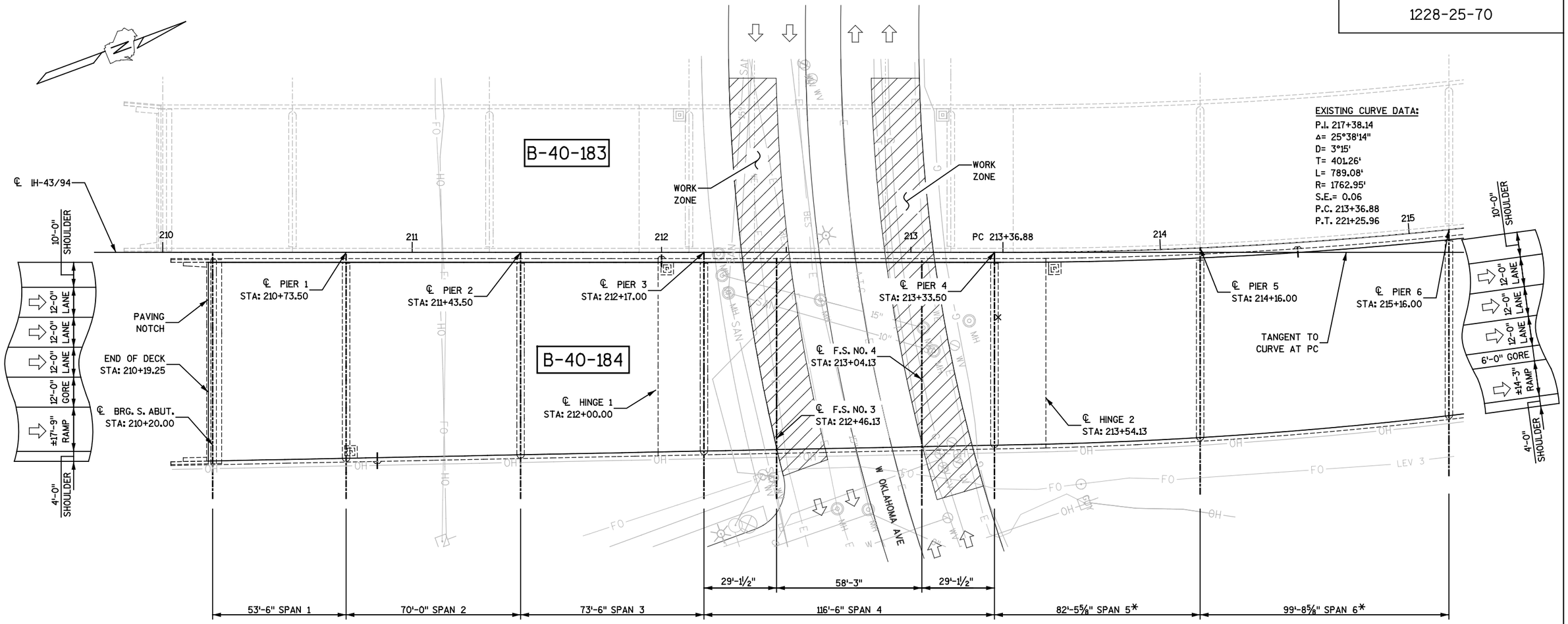
SPLICE PLATE DETAILS

SHEET 3 OF 3

586

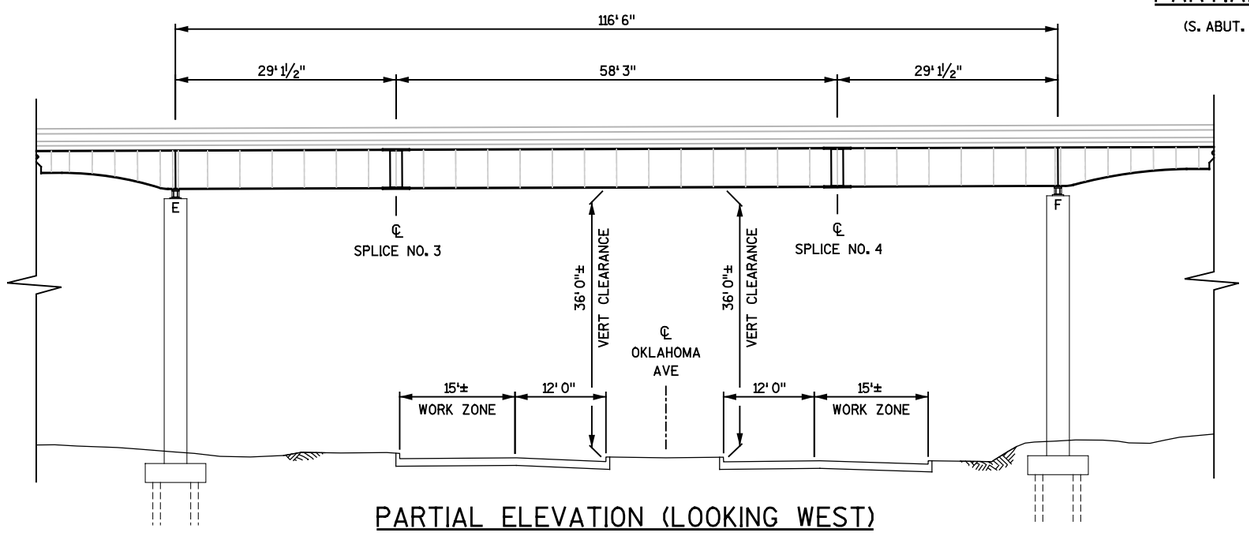
FILE NAME :03_B-40-183_Splice Plate Details.dgn
PLOT DATE :1/27/2014 4:43:13 PM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_NS.pltt PEN :CELTEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



PARTIAL PLAN

(S. ABUT. - PIER 6)



PARTIAL ELEVATION (LOOKING WEST)

(SPAN 4)

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTION, FRAMING PLAN & QUANTITIES
3. SPLICE PLATE DETAILS

GENERAL NOTES

SEE SHEET 2 FOR GENERAL NOTES.

DESIGN DATA

LIVE LOAD:

INVENTORY RATING	HS-16
OPERATIONAL RATING	HS-27
WISCONSIN STANDARD PERMIT VEHICLE (WIs-SPV)	178 KIPS

TRAFFIC DATA

IH-43/94 SB
A.D.T. (2009) = 56,400

OKLAHOMA AVE
A.D.T. (2008) = 13,800

WISCONSIN
NICHOLAS J. HORNYAK
E-42804
MILWAUKEE
WI
PROFESSIONAL ENGINEER
1/27/14

SE REGION CONTACT:
JOE GALLAMORE (262) 548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
NICHOLAS HORNYAK (414) 282-6905

* SPAN LENGTHS MEASURED ALONG TANGENT TO CURVE

NO.	DATE	REVISION	BY

COLLINS ENGINEERS INC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 01/31/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-184

IH-43/94 NB/WB OVER OKLAHOMA AVE

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	NJH	DESIGN CK'D.	RJW	DRAWN BY	NJH	PLANS CK'D.	RJW

GENERAL PLAN SPANS 1 - 6

SHEET 1 OF 3

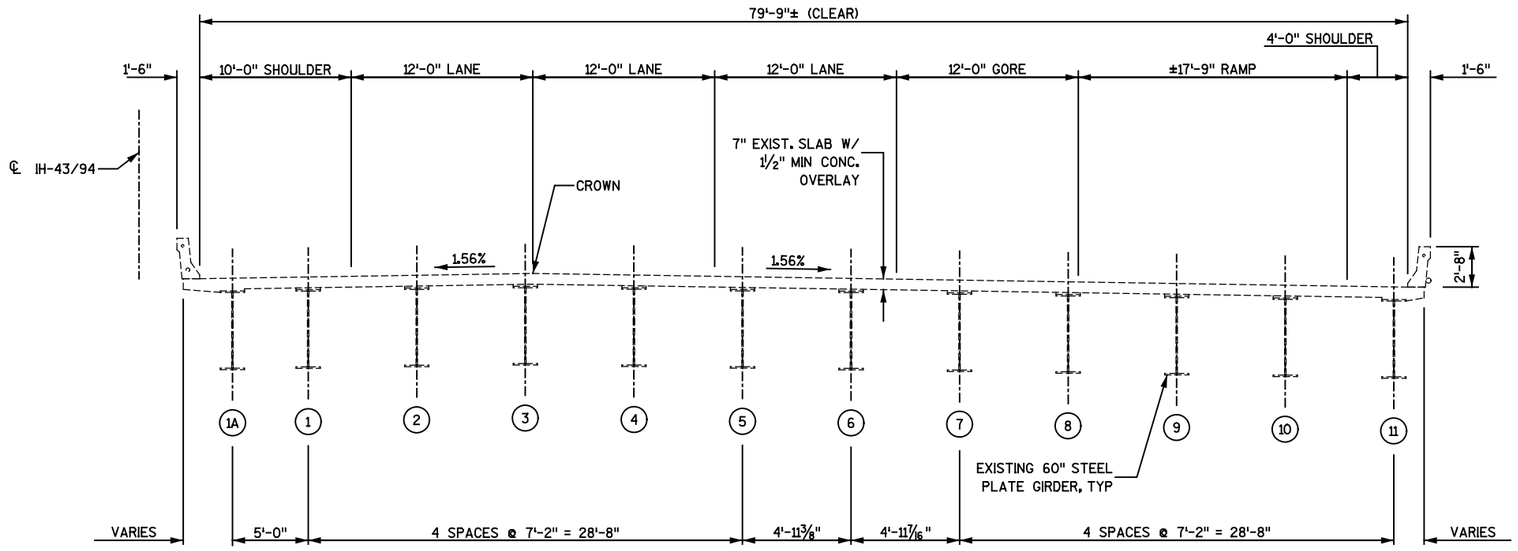
587

8

8

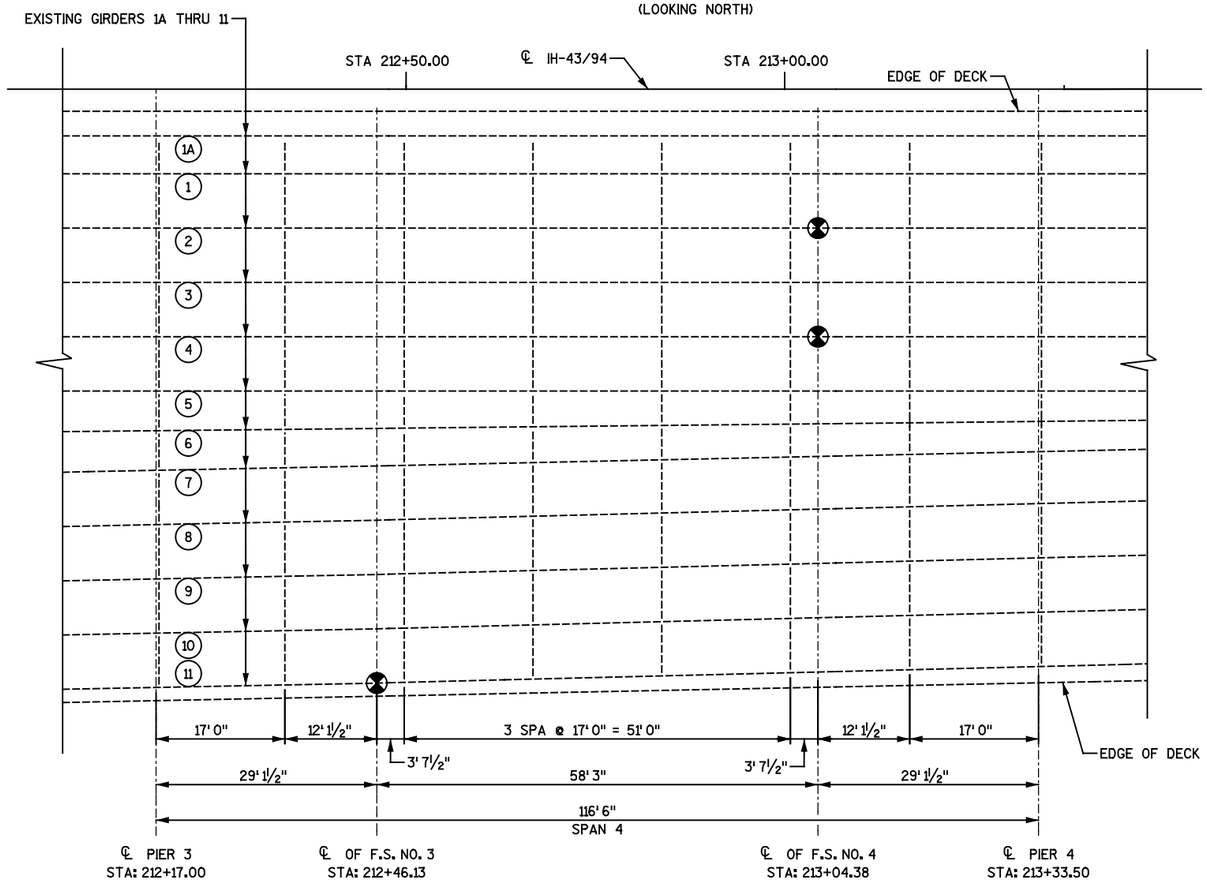
FILE NAME :01_B-40-184_Plan & Elevation.dgn
PLOT DATE :1/27/2014 12:42:34 AM PLOT BY : NicholasHornyakV8i DRV :Pdf_bw_HS.plt PEN :CEL.TEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)



PARTIAL FRAMING PLAN

GENERAL NOTES

THE PROPOSED WORK INCLUDES REMOVING AND REPLACING LOWER SPLICE PLATES ON GIRDER 11 AT FIELD SPLICE NO. 3 AND GIRDERS 2 AND 4 AT FIELD SPLICE NO. 4.

EXCEPT FOR NIGHT-TIME CLOSURES, ONE LANE OF TRAFFIC SHALL BE MAINTAINED FOR EACH DIRECTION ON OKLAHOMA AVE. SEE SPECIAL PROVISIONS FOR TRAFFIC STAGING RESTRICTIONS ON OKLAHOMA AVE.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

ORIGINAL PLANS AND OVERLAY PLANS OF EXISTING BRIDGE B-40-184 ARE AVAILABLE AT THE WISDOT SOUTHEAST REGION OFFICE. REFERENCE THOSE PLANS FOR THE DESIGN OF SHORING AND TEMPORARY BRACING DURING CONSTRUCTION.

TEMPORARY SUPPORT SHALL BE INSTALLED/CONSTRUCTED PRIOR TO REMOVAL OF SPLICE PLATES.

REPAIRS MUST BE COMPLETED ONE SPLICE LOCATION AT A TIME.

NO MORE THAN ONE SPLICE MAY BE DISASSEMBLED AT ANY TIME.

PRIOR TO INSTALLATION OF THE NEW SPLICE PLATES, EXISTING GIRDER SURFACES ARE TO BE CLEANED AND PRIMED. SEE SPECIAL PROVISIONS.

TEMPORARY SUPPORT SHALL BE DESIGNED FOR DEAD AND LIVE LOADING. UNFACTORED VERTICAL REACTION FORCES AT EACH FIELD SPLICE ARE GIVEN BELOW.

DEAD LOAD = 64 KIPS
LIVE LOAD = 76 KIPS

TOTAL ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	SUPER	TOTAL
SPV.0060.4008	STEEL GIRDER SPLICE REPAIR	EACH	3	3
SPV.0105.4004	TEMPORARY SUPPORT, B-40-184	LS	1	1

ALL ITEMS ARE CATEGORY 2350

⊗ STEEL GIRDER SPLICE REPAIR. SEE DETAILS PAGE 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-184

DRAWN BY CSH | PLANS CK'D. RJW

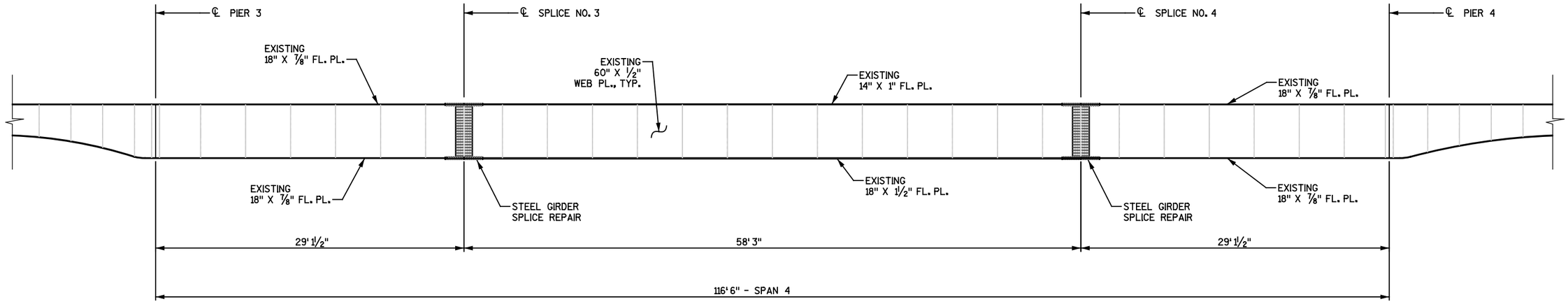
TYPICAL SECTION & FRAMING PLAN | SHEET 2 OF 3 | 588

8

8

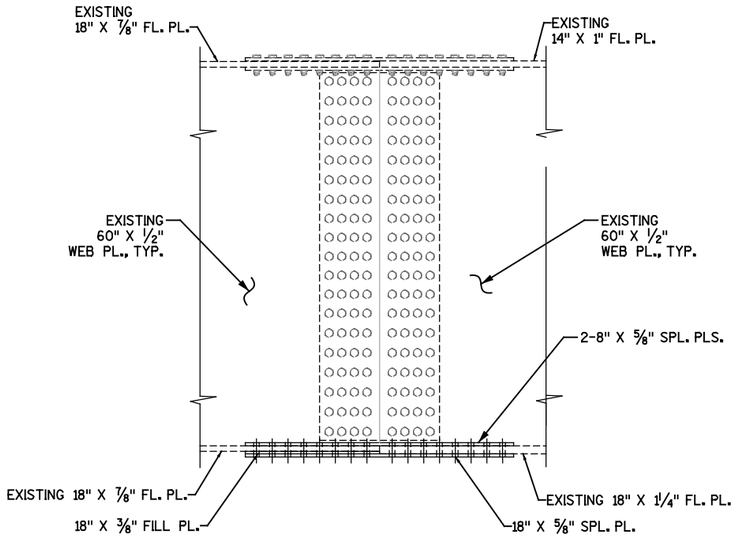
FILE NAME :02_B-40-184_Cross-Sections.dgn
PLOT DATE :11/27/2014 12:43:35 AM PLOT BY : NicholasHornyak@L DRV :Pdf_bw_HS.pltr PEN :CEL.TEXTSUB.TBL

STATE PROJECT NUMBER
1228-25-70

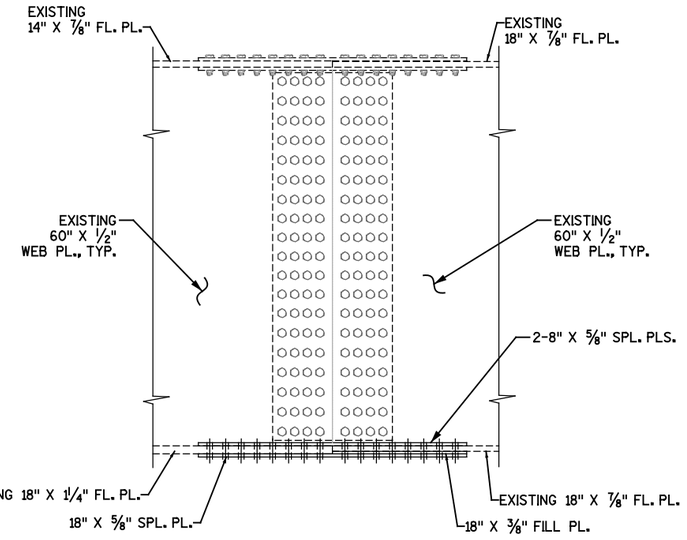


GIRDER ELEVATION

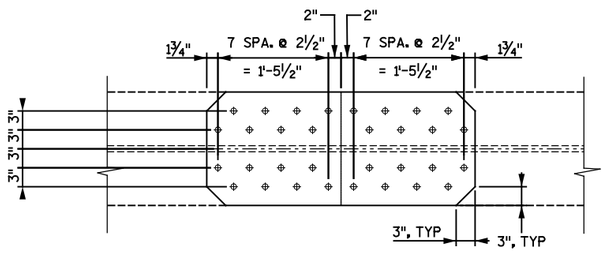
(GIRDERS 1 THRU 11)



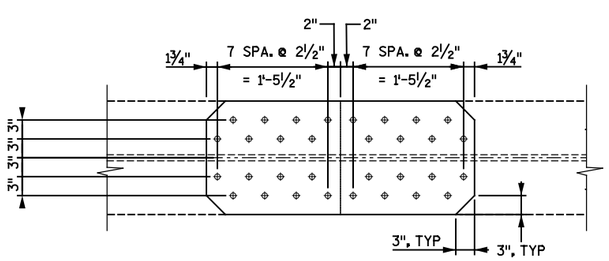
SPLICE NO. 3



SPLICE NO. 4



SECTION BOTTOM PLATE



SECTION BOTTOM PLATE

NOTES

ALL SPLICE PLATE STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

BOLTS IN BOTTOM SPLICE SHALL BE 7/8" ϕ HIGH STRENGTH ASTM A325 BOLTS.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-184

DRAWN BY	CSH	PLANS CK'D.	RJW

SPLICE PLATE DETAILS

SHEET 3 OF 3

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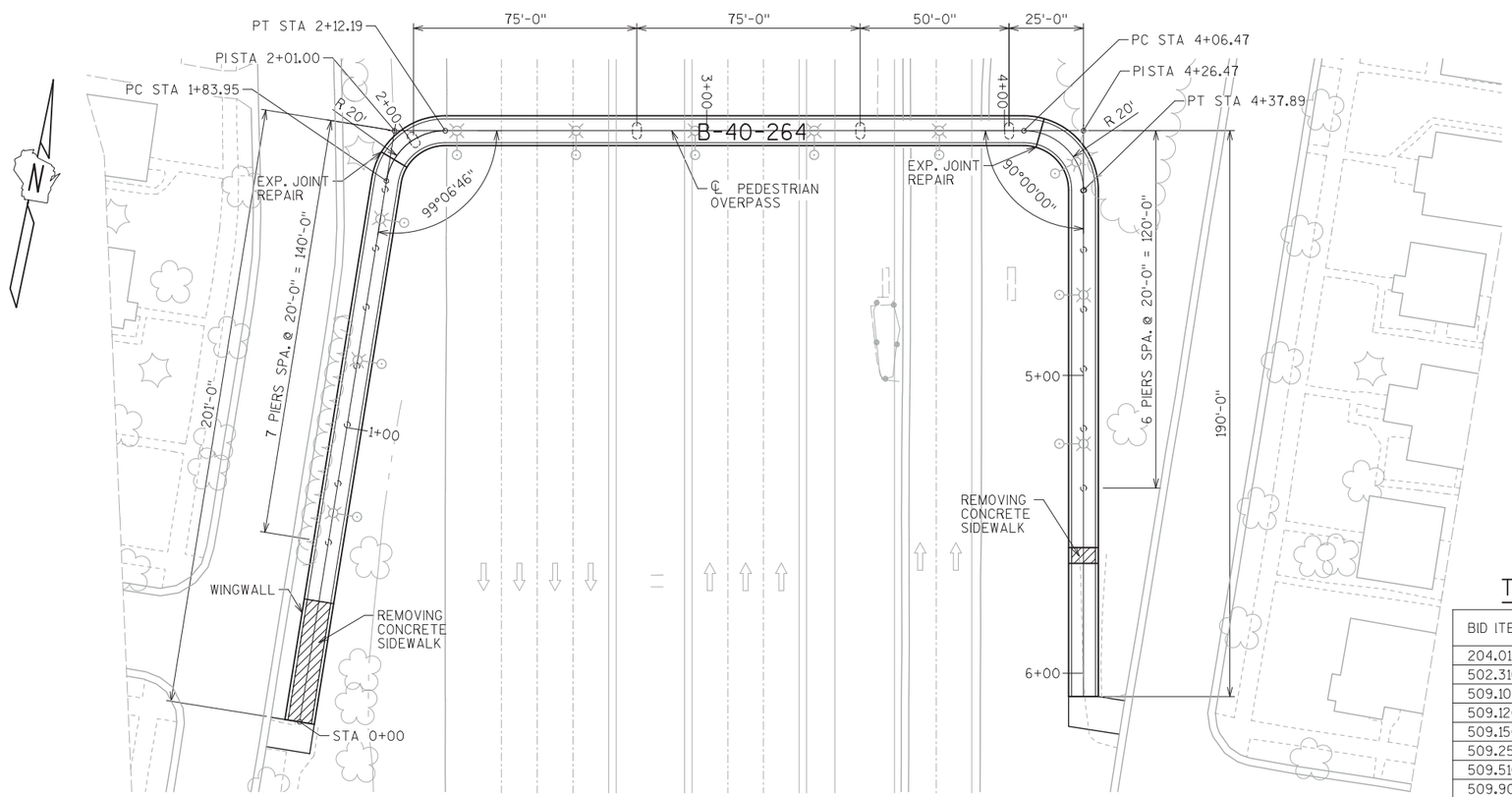
FILE NAME :\03_B-40-184_Splice Plate Details.dgn
PLOT DATE :1/27/2014 12:43:36 AM PLOT BY : NicholasHornyak:VE DRV :Pdf_bw_HS.pltPEN :CEL.TEXTSUB.TBL

STATE PROJECT NUMBER

1228-25-70



PLAN

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES. ALL STATIONS AND ELEVATIONS ARE IN FEET.

DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON ORIGINAL DESIGN PLANS.

COAT ENTIRE CONCRETE SURFACE OF PIERS 8, 9, 10 & 11 WITH CORROSION INHIBITING PROTECTIVE COATING. SEE SPECIAL PROVISIONS FOR DETAILS.

REMOVE AND REPLACE FENCE POSTS WITH COMPLETE SECTION LOSS AT THE BASE OR FAILED WELDS. FOR THE POSTS TO REMAIN, CLEAN AND GROUT THE SPACE IN BETWEEN THE POST AND SLEEVE WITH NON-SHRINK GROUT. SEE SPECIAL PROVISIONS FOR DETAILS.

FENCE (EXCLUDING MESH) SHALL BE PAINTED BLACK. FEDERAL COLOR NO. 27038.

CONCRETE SURFACE REPAIRS ON HORIZONTAL AND VERTICAL SURFACES WILL BOTH BE PAID FOR UNDER THE BID ITEM "CONCRETE SURFACE REPAIR"

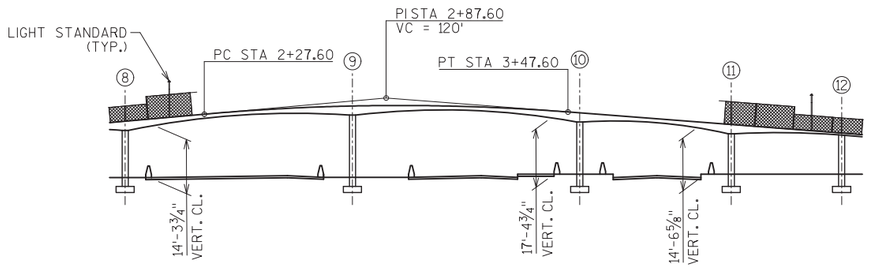
SCOPE OF WORK

PROPOSED WORK INCLUDES CONCRETE REPAIRS, JOINT REPAIRS, CORROSION PROTECTION, FENCE REPAIRS, AND AN OVERLAY OF THE CONCRETE DECK.

TOTAL ESTIMATED QUANTITIES

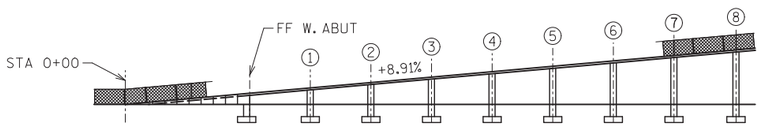
BID ITEM #	BID ITEM	UNIT	SUPER.	PIERS	W. ABUT.	E. ABUT.	TOTAL
204.0155	REMOVING CONCRETE SIDEWALK	SY	--	--	36	5	41
502.3100.0009	EXPANSION DEVICE B-40-264	LS	1	--	--	--	1
509.1000	JOINT REPAIR	SY	3	--	--	--	3
509.1200	CURB REPAIR	LF	27	--	--	--	27
509.1500	CONCRETE SURFACE REPAIR	SF	93	48	--	--	141
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	0.2	--	--	--	0.2
509.5100.S	POLYMER OVERLAY	SY	541	--	--	--	541
509.9020.S	EPOXY CRACK SEALING	LF	16	--	10	10	36
602.0410	CONCRETE SIDEWALK 5-INCH	SF	--	--	322	42	364
SPV.0060.4003	REMOVE AND REPLACE FENCE POST	EA	14	--	--	--	14
SPV.0060.4004	FENCE POST REPAIR	EA	102	--	--	--	102
SPV.0070.4000	CORROSION INHIBITING PROTECTIVE COATING	GAL	--	12	--	--	12
SPV.0105.4002	PAINT FENCE CHAIN LINK B-40-264	LS	1	--	--	--	1
SPV.0165.4000	CATHODIC PROTECTION	SF	--	48	--	--	48

ALL ITEMS ARE CATEGORY 2080



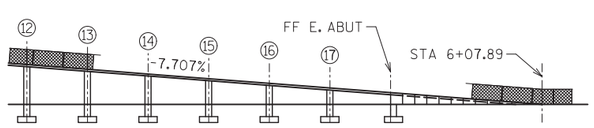
UNDERPASS ELEVATION

(LOOKING NORTH)



WEST APPROACH ELEVATION

(LOOKING WEST)



EAST APPROACH ELEVATION

(LOOKING EAST)

WISCONSIN
MICHAEL A. DELEMONT
E-42105
CRYSTAL LAKE
IL
PROFESSIONAL ENGINEER
1-28-2014

TRAFFIC DATA

IH-43/94:
A.D.T. (2040) - 127,000
D.H.V. (2040) - 12,446
R.D.S. 60 MPH

SE REGION CONTACT:
JOE GALLAMORE (262) 548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
MICHAEL DELEMONT (414) 831-4157

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTION
3. EXPANSION JOINT DETAILS
4. FENCE DETAILS
5. CATHODIC PROTECTION DETAILS

NO.	DATE	REVISION	BY

URS
342 North Water Street
7th Floor
Milwaukee, WI 53202
(414) 831-4100

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 01/31/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-264

W. WARNIMONT AVENUE PEDESTRIAN OVERPASS

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	MRL	DESIGN CK'D.	JDB	DRAWN BY	MRL	PLANS CK'D.	JDB

GENERAL PLAN AND ELEVATION

SHEET 1 OF 5
590

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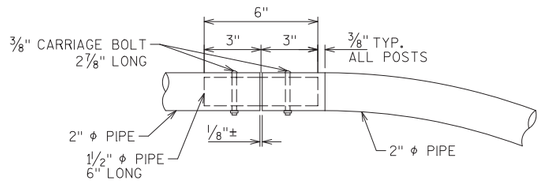
FILE= P:\Transportation\I43 Valley Bridge Overpasses\CADD\Structures\B-40-264\01-264_general plan and elevation.dgn

DATE: 1/28/2014
I.D. justin_bohler

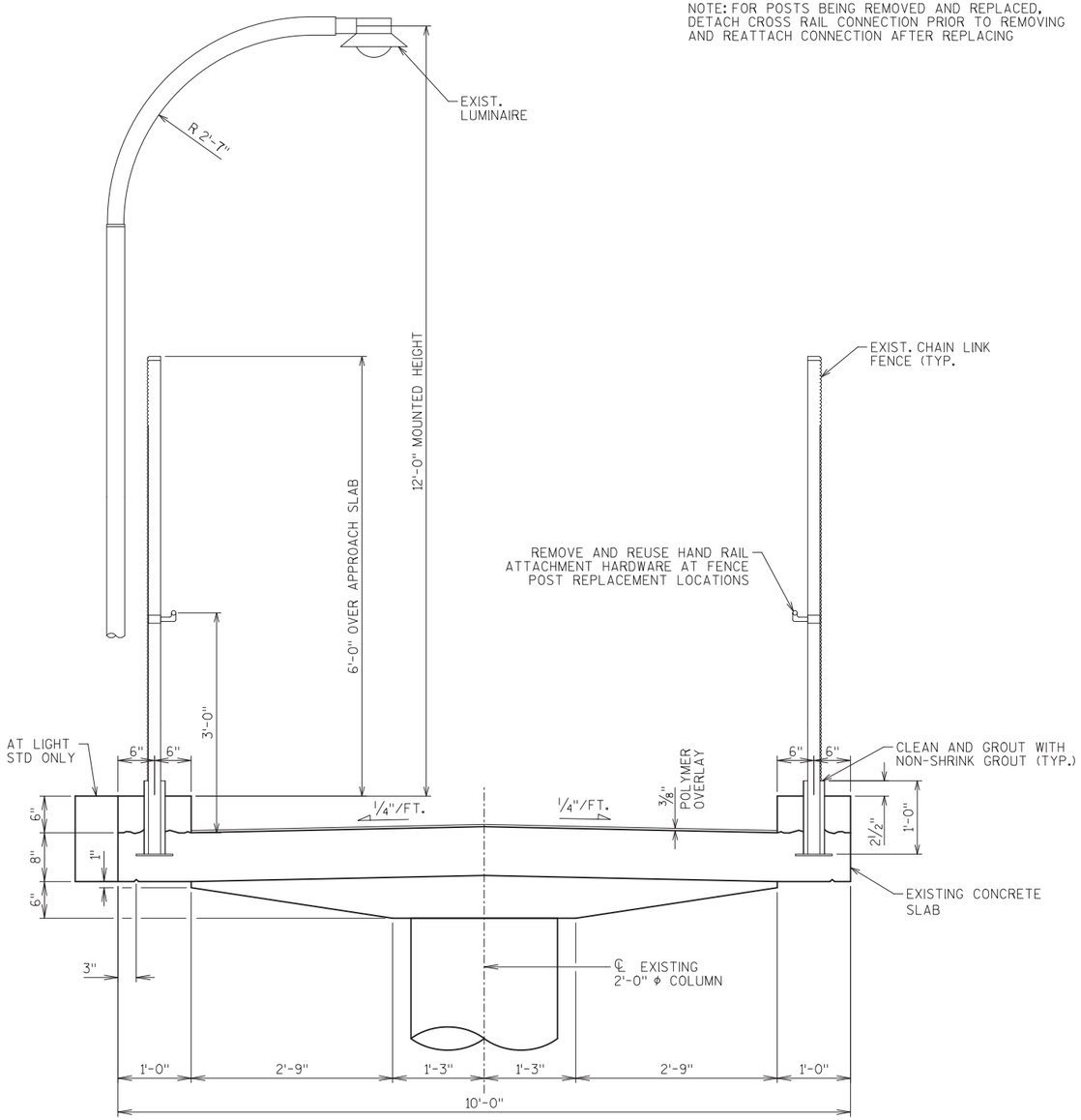
STATE PROJECT NUMBER

1228-25-70

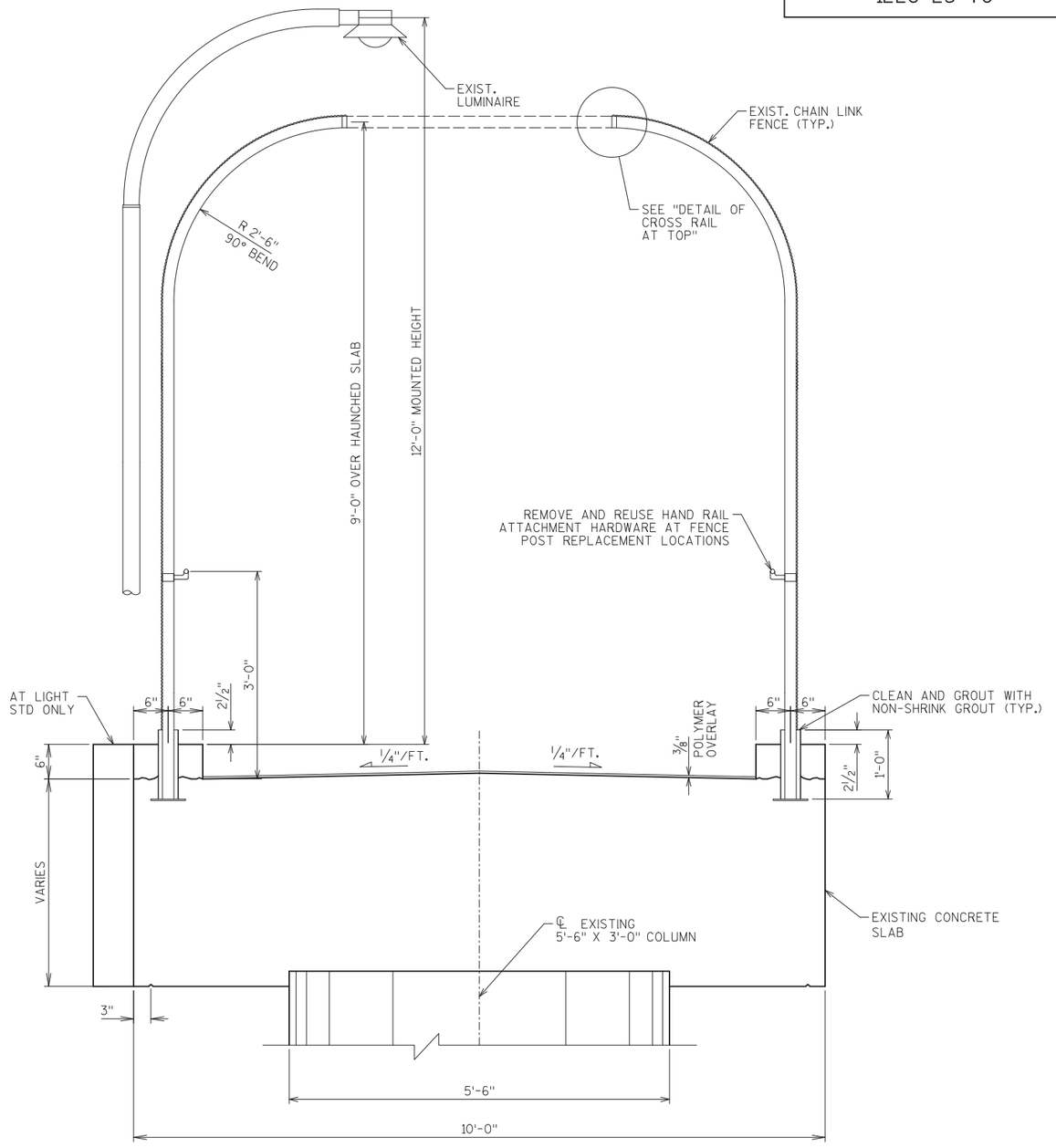


DETAIL OF CROSS RAIL AT TOP

NOTE: FOR POSTS BEING REMOVED AND REPLACED, DETACH CROSS RAIL CONNECTION PRIOR TO REMOVING AND REATTACH CONNECTION AFTER REPLACING



TYPICAL SECTION - APPROACH SLAB



TYPICAL SECTION - HAUNCHED SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-264

DRAWN BY MRL | PLANS CK'D. JDB

TYPICAL SECTION

SHEET 2 OF 5
591

DATE: 1/28/2014
I.D. justin_bohler

FILE= P:\Transportation\I43 Valley Bridge Overpasses\CADD\Structures\B-40-264\02-264_typical section.dgn

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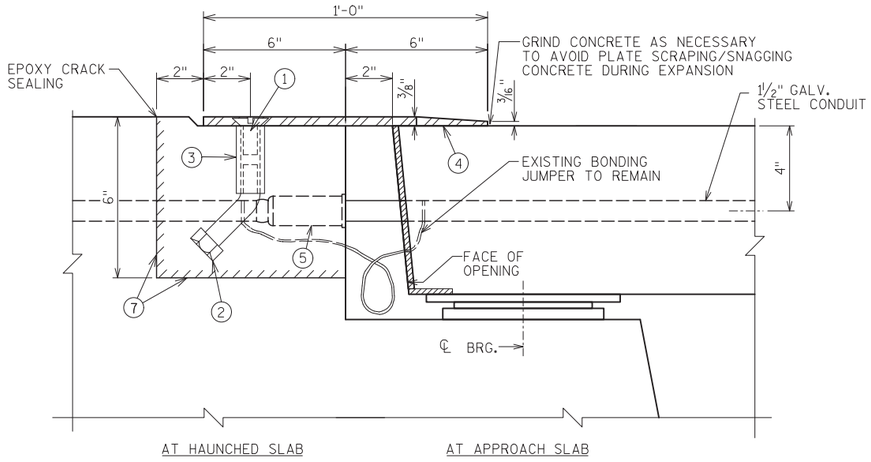
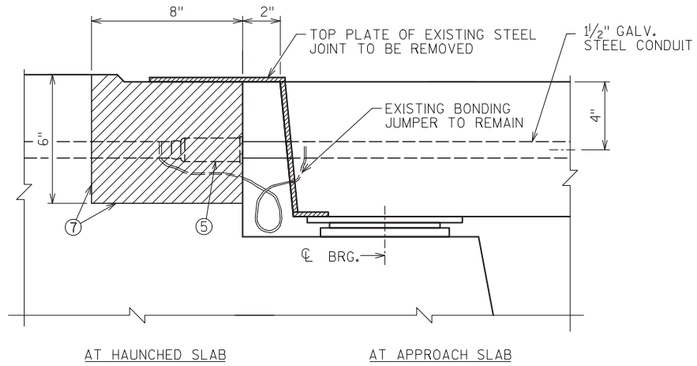
STATE PROJECT NUMBER

1228-25-70



SECTION THRU JOINT



LIMITS OF REMOVAL

LEGEND

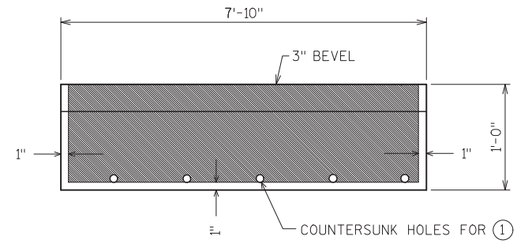
1. 3/4"Φ X 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
2. 3/4"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
3. 3/4"Φ X 2 1/4" GALVANIZED THREADED COUPLING.
4. SIDEWALK COVER PLATE 3/8" X 1'-0" WIDE X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 3. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.
5. EXISTING TYPE AX EXPANSION FITTING WITH LOOPED BONDING JUMPER WITH 1 1/2" GALV. STEEL CONDUIT. EXERCISE CARE NOT TO DAMAGE WHEN REMOVING CONCRETE.
6. APPLY JOINT FILLER TO AREAS OF EXPOSED JOINT NOT COVERED BY COVER PLATE. EXTEND VERTICALLY TO TOP OF CURB.
7. LIMITS OF CONCRETE REMOVAL AND JOINT REPAIR. EXISTING STEEL REINFORCMENT TO REMAIN. EXERCISE CARE NOT TO DAMAGE WHEN REMOVING CONCRETE.

GENERAL NOTES

ANCHOR SYSTEM NO. 2 AND NO. 3 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

COVER PLATE ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE INSTALLED AT BOTH JOINT LOCATIONS, AND IS INCIDENTAL TO BID ITEM "EXPANSION DEVICE B-40-264." SEE GENERAL PLAN AND ELEVATION SHEET FOR LOCATIONS.

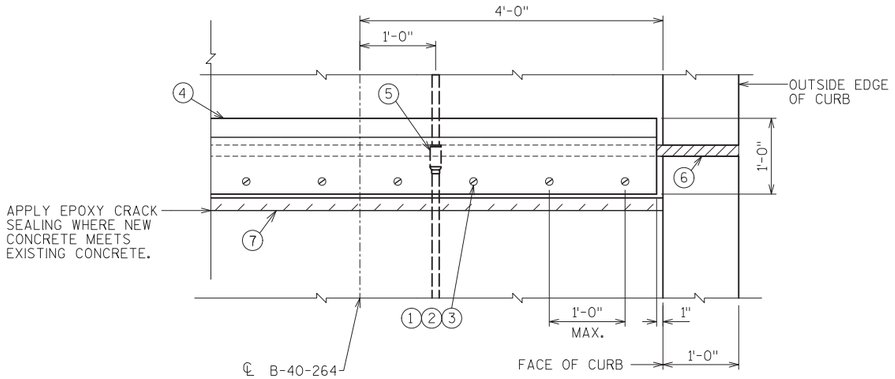
NEW CONCRETE FOR JOINT REPAIR WILL BE PAID AS "CONCRETE MASONRY OVERLAY DECKS."



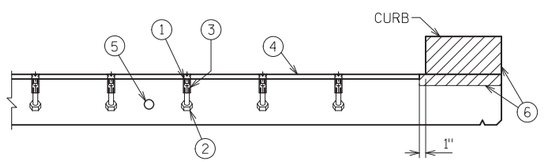
PLAN OF COVER PLATE
WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY.

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170



PLAN - COVER PLATE



SECTION - COVER PLATE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-264

DRAWN BY MRL | PLANS CK'D. JDB

EXPANSION DEVICE

SHEET 3 OF 5
592

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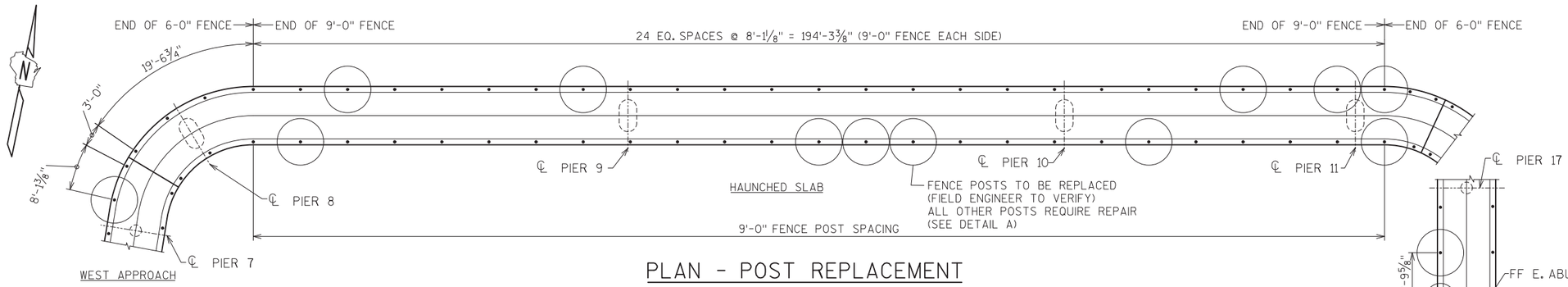
FILE= P:\Transportation\I43 Valley Bridge Overpasses\CADD\Structures\B-40-264\03-264_expansion device.dgn

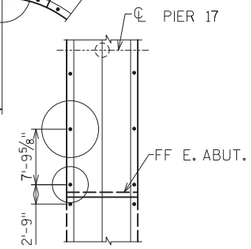
DATE: 1/28/2014
I.D. justin_bohler

STATE PROJECT NUMBER

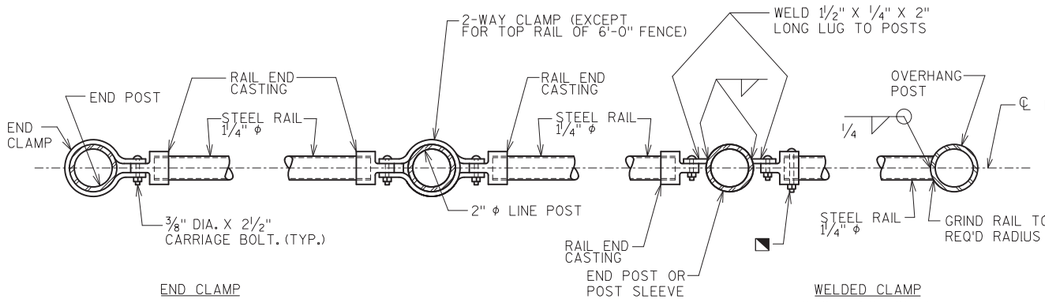
1228-25-70



PLAN - POST REPLACEMENT



EAST APPROACH



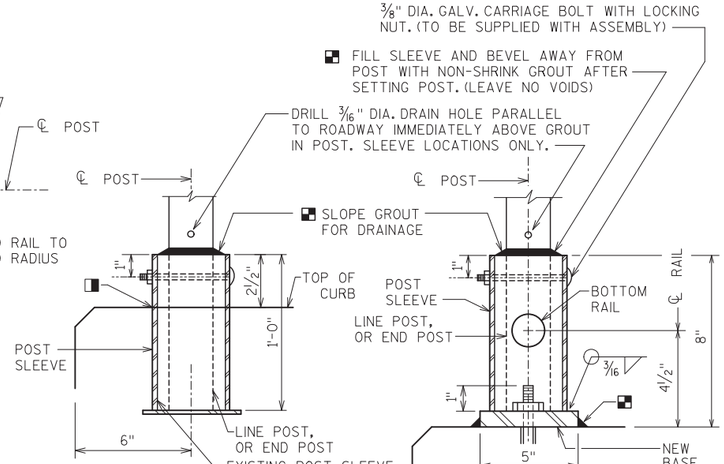
END CLAMP

WELDED CLAMP
6'-0" FENCE ONLY

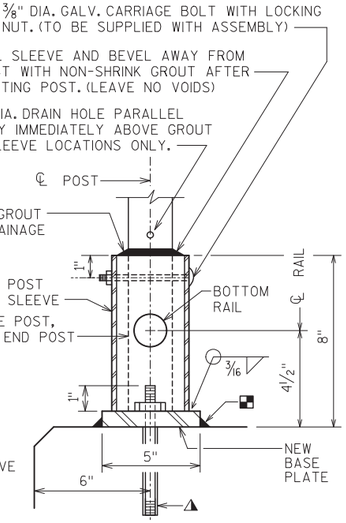
SECTION A-A

(EXISTING)

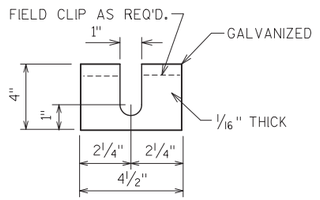
NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS. REUSE EXISTING CLAMPS WHEN POSSIBLE.



DETAIL 'A'

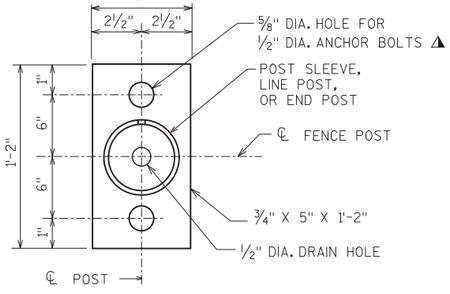


POST REPLACEMENT

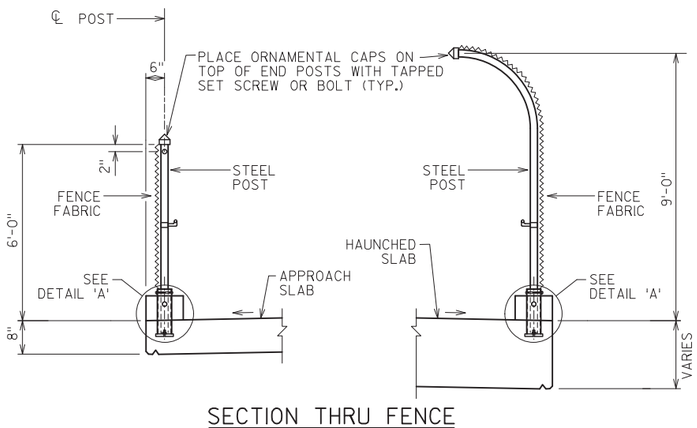


POST SHIM DETAILS

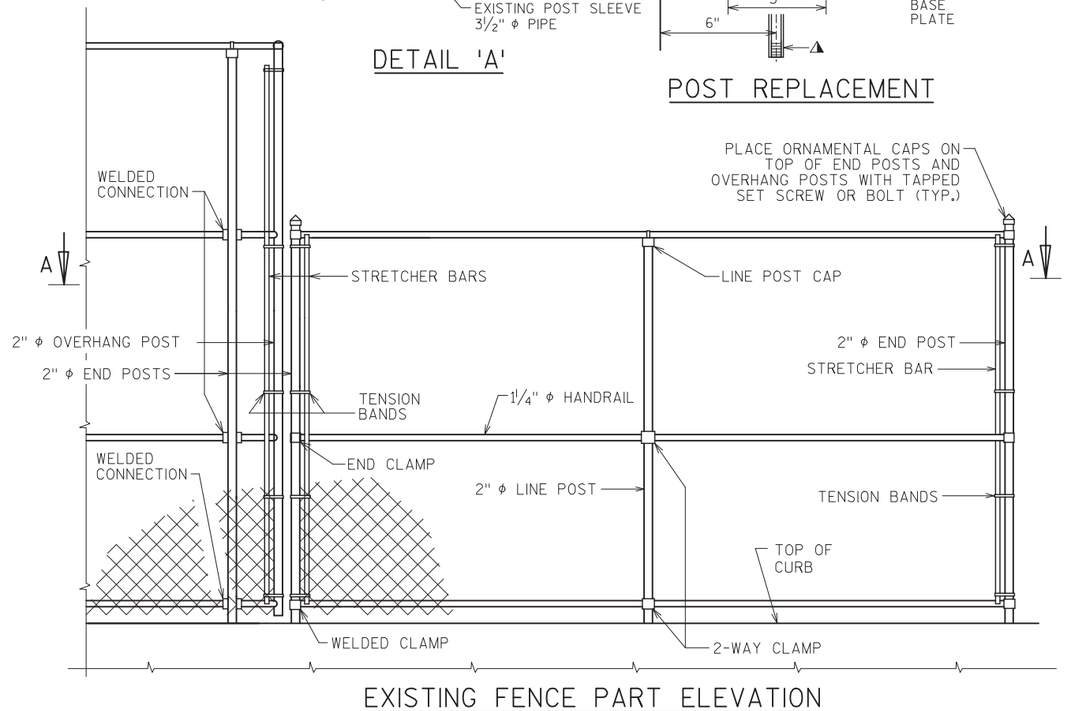
PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.



NEW BASE PLATE



SECTION THRU FENCE



EXISTING FENCE PART ELEVATION

VIEWING FABRIC SIDE

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL AND PAINTED BLACK.

STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

◪ CAULK AROUND PERIMETER OF FENCE POST AND FILL PORTION OF POST SLEEVE.

▲ ½" DIA. CONCRETE MASONRY ANCHOR, TYPE "S", 6" MIN. EMBEDMENT (EPOXY ANCHORED) INTO CONCRETE. ANCHOR, WASHER AND NUT SHALL BE GALVANIZED.

◨ CUT FLUSH WITH TOP OF CURB AND GRIND SMOOTH AT "REMOVE AND REPLACE FENCE POST" LOCATIONS.

◹ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-264

DRAWN BY: MRL | PLANS CK'D.: JDB

FENCE DETAILS

SHEET 4 OF 5
593

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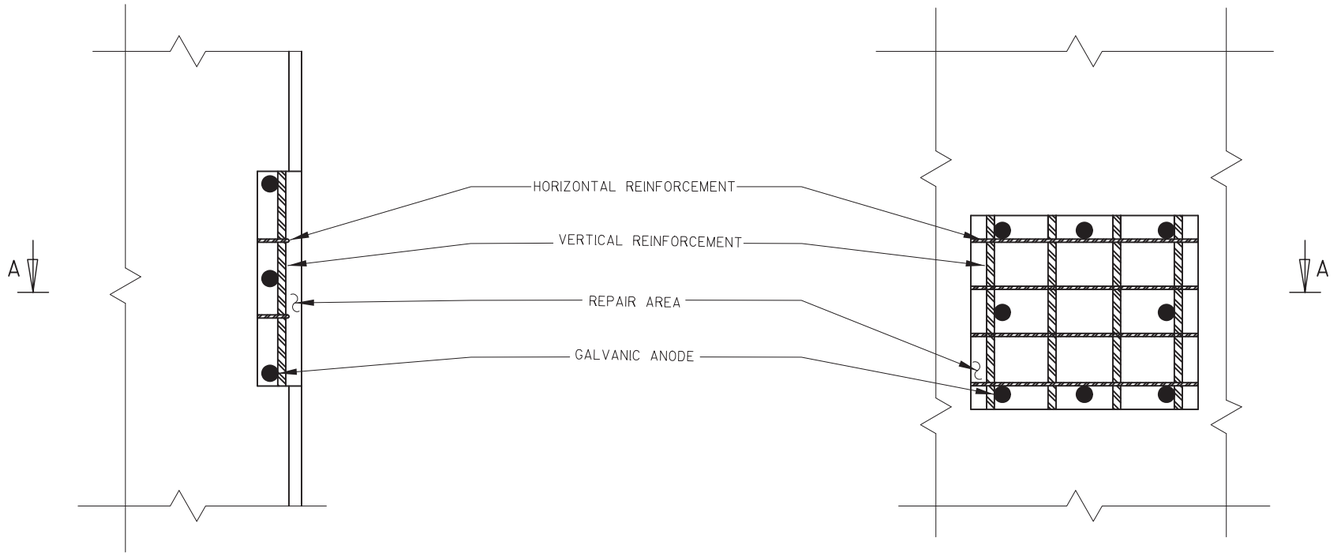
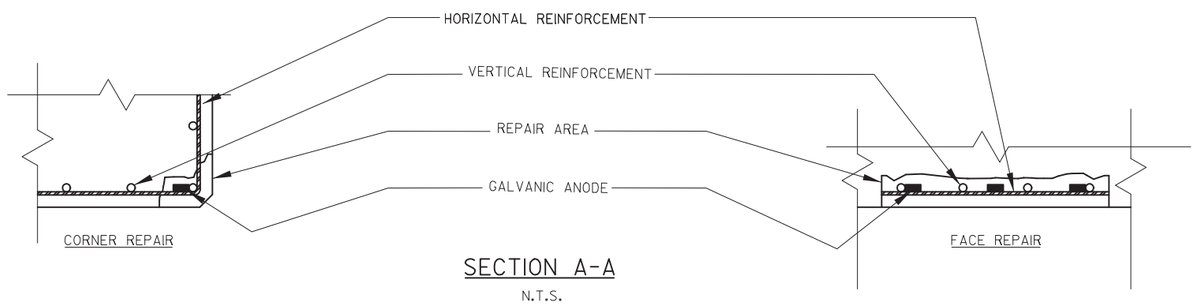


ELEVATION OF CORNER & FACE REPAIRS

N.T.S.

NOTES

1. REMOVE DAMAGED CONCRETE PER CONTRACT SPECIFICATION.
2. REPLACE / CLEAN CORRODED REINFORCING STEEL.
3. ENSURE ALL EXPOSED REINFORCING STEEL IS SECURELY FASTENED TOGETHER WITH TIE WIRE TO PROVIDE GOOD CONTINUITY.
4. ATTACH ANODES TO CLEAN REINFORCING STEEL. REFER TO SPECIAL PROVISION FOR MAXIMUM SPACING GUIDELINES.
5. POUR BACK REPAIR AREA WITH MATERIAL PER CONTRACT SPECIFICATION.
6. ENGINEER MUST CONFIRM ALL AREAS REQUIRING CONCRETE SURFACE REPAIR PRIOR TO PERFORMING ANY REMOVAL WORK.



SECTION A-A

N.T.S.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-264

DRAWN BY MRL | PLANS CK'D. JDB

CATHODIC PROTECTION DETAILS

SHEET 5 OF 5

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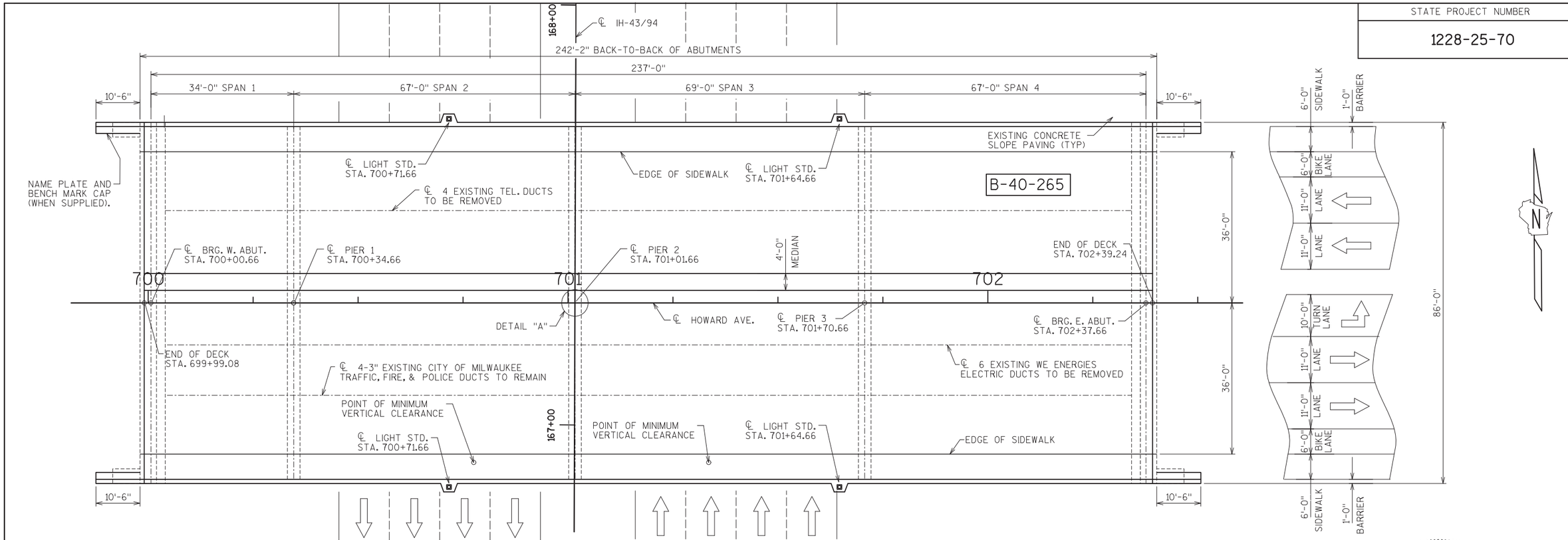
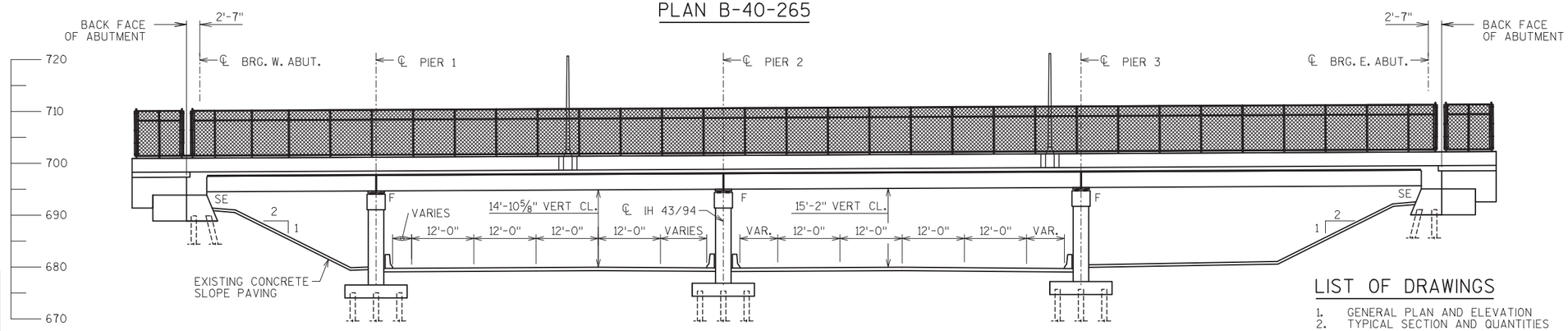


PLAN B-40-265



ELEVATION

(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:

INVENTORY RATING	HS-14
OPERATING RATING	HS-23
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	170 KIPS

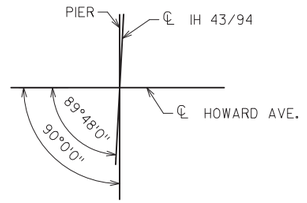
ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SUPERSTRUCTURE	F'c = 4,000 P.S.I.
CONCRETE MASONRY SUBSTRUCTURE	F'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60	FY = 60,000 P.S.I.

TRAFFIC DATA

IH-43/94
A.D.T. (2040) - 127,000
D.H.V. (2040) - 12,446
R.D.S. 60 MPH

HOWARD AVE.
A.D.T. (2035) - 23,862
D.H.V. (2035) - 2,062
R.D.S. 35 MPH



DETAIL "A"

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTION AND QUANTITIES
3. STAGED CONSTRUCTION
4. ABUTMENT DETAILS 1
5. ABUTMENT DETAILS 2
6. PIER DETAILS
7. GIRDER DETAILS
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. VERTICAL FACE PARAPET "A"
11. FENCE DETAILS
12. LIGHT STANDARD
13. STEEL DIAPHRAGM

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
MICHAEL DELEMONT (414) 831-4157

WISCONSIN
MICHAEL A. DELEMONT
E-42485
CRYSTAL LAKE, IL
PROFESSIONAL ENGINEER
1/31/2014

NO.	DATE	REVISION	BY

URS
342 North Water Street
7th Floor
Milwaukee, WI 53202
(414) 831-4100

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 02/03/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-265

HOWARD AVENUE OVER IH-43/94

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JDB	MAD	JDB	JDL

GENERAL PLAN AND ELEVATION

SHEET 1 OF 13
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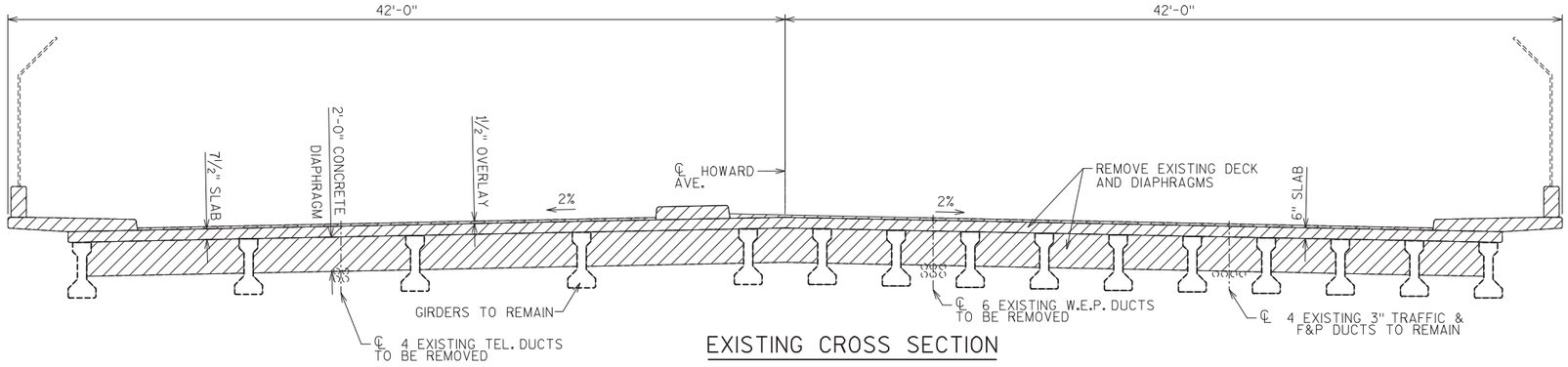
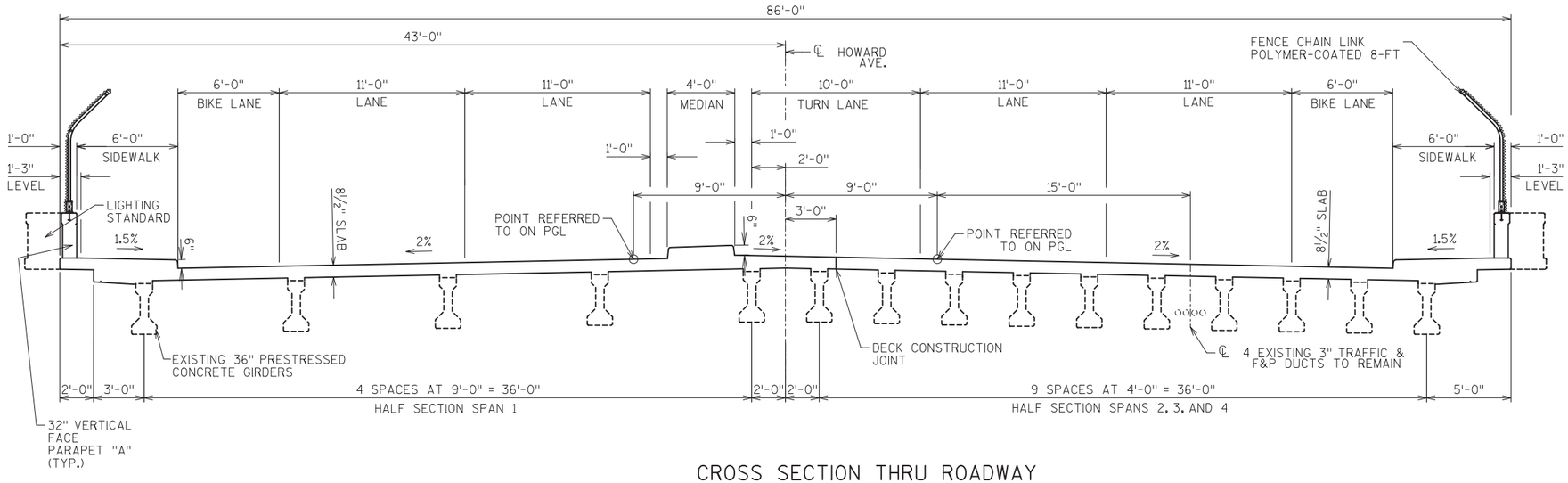


EXISTING CROSS SECTION

(LOOKING EAST)



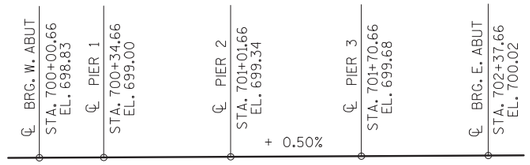
CROSS SECTION THRU ROADWAY

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

ALL ITEMS ARE CATEGORY 2090

BID ITEM #	BID ITEM	UNIT	SUPER-STRUCTURE	WEST ABUTMENT	PIER 1	PIER 2	PIER 3	EAST ABUTMENT	TOTAL
203.0200.0009	REMOVING OLD STRUCTURE STA. 701+01.66	LS	–	--	--	--	–	–	1
203.0210.S.0009	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-265	LS	–	--	--	--	–	–	1
203.0225.S.0009	DEBRIS CONTAINMENT B-40-265	LS	–	--	--	--	–	–	1
206.1000.0009	EXCAVATION FOR STRUCTURES BRIDGES B-40-265	LS	–	--	--	--	–	–	1
209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	–	72	--	--	–	72	144
502.0100	CONCRETE MASONRY BRIDGES	CY	709	51	25	23	23	50	881
502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,530	--	--	--	–	–	2,530
502.5002	MASONRY ANCHORS TYPE L NO. 4 BARS	EA	0	111	82	82	82	111	468
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EA	0	0	101	101	101	0	303
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	118,944	5,173	2,142	2,142	2,142	5,173	135,715
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EA	–	10	30	40	40	20	140
506.4000.0002	STEEL DIAPHRAGMS B-40-265	EA	123	--	--	--	–	–	123
506.7050.S.0009	REMOVING BEARINGS B-40-265	EA	140	--	--	--	–	–	140
506.7060.S.0009	BRIDGE JACKING B-40-265	LS	–	--	--	--	–	–	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	–	22	--	--	–	22	44
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	–	145	--	--	–	145	290
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	12	--	--	--	–	–	12
652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	1345	--	--	--	–	–	1,345
653.0220	JUNCTION BOXES 18X6X6-INCH	EA	2	--	--	--	–	–	2
653.0222	JUNCTION BOXES 18X12X6-INCH	EA	4	--	--	--	–	–	4
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EA	4	--	--	--	–	–	4
SPV.0090.4000	FENCE CHAIN LINK POLYMER-COATED 8-FT	LF	528	--	--	--	–	–	528
	NON-BID ITEMS								
	FILLER	SIZE							1/2"
	NAME PLATE	EACH							1



PROFILE GRADE LINE HOWARD AVENUE

9'LT. & 9'RT. OF ℄

GENERAL NOTES

THE PROPOSED WORK INCLUDES REPLACING AND WIDENING THE DECK BY 1' ON BOTH SIDES, RAISING ALL EXISTING GIRDERS BY 2", REPLACING THE SOUTH FACIA GIRDER IN SPAN 3, SEMI-EXPANSION ABUTMENT CONVERSION, BEARING REPLACEMENT, WINGWALL MODIFICATIONS, AND NEW FENCE.

WINGWALL MODIFICATION CONSISTS OF REMOVING THE TOP PORTION OF THE WINGWALL AND RECONSTRUCTING IT TO ACCOMMODATE THE INCREASED CROSS SECTION WIDTH.

SEMI-EXPANSION ABUTMENT CONVERSION INCLUDES REMOVING THE EXISTING ABUTMENT BACKWALL, REPLACING EXISTING BEARINGS WITH BEARING PADS, PLACING POLYSTYRENE SHEETS OVER THE ABUTMENT, AND POURING IN THE ENDS OF THE GIRDERS.

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS OF EXISTING ELEMENTS SHOWN ARE BASED ON EXISTING DESIGN PLANS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE AND THE FRONT FACE AND THE TOP OF THE PARAPET, INCLUDING PARAPETS ON ABUTMENT WINGS AND THE MEDIAN.

EXISTING UTILITIES OWNED BY WE ENERGIES AND AT&T WILL BE REMOVED. CONTRACTOR MUST COORDINATE WITH THE UTILITY OWNER AND PROVIDE ALL TRAFFIC CONTROL REQUIRED TO COMPLETE REMOVAL. REMOVAL WILL BE PERFORMED BY UTILITY OWNER.

EXISTING UTILITIES OWNED BY THE CITY OF MILWAUKEE WILL BE REMOVED PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AND INSTALLING ATTACHMENT HARDWARE INTO THE DECK. COST ASSOCIATED WITH THE WORK IS INCIDENTAL TO THE CONCRETE MASONRY BRIDGES BID ITEM.

SEE ROADWAY PLANS FOR DETAILS REGARDING UTILITY ATTACHMENTS TO THE BRIDGE.

CITY OF MILWAUKEE WILL REMOVE AND REINSTALL EXISTING LIGHT POLES, SEE SPECIAL PROVISION FOR COORDINATION REQUIREMENTS.

EXISTING GIRDERS MUST BE PROTECTED DURING CONSTRUCTION.

ELEVATIONS ARE REFERENCE TO THE NAVD 88 DATUM.

VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

AT ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL CONTROLLED LOW STRENGTH"

THE MINIMUM CONCRETE HAUNCH SHALL BE 2" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE DEPTH OF 2½" WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE FIELD ENGINEER.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWING. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR (1963).

ORIGINAL PLANS AND OVERLAY PLANS OF EXISTING BRIDGE ARE AVAILABLE AT WISDOT SOUTHEAST REGION OFFICE. REFERENCE THESE PLANS FOR THE DESIGN OF SLAB OVERHANG SHORING AND TEMPORARY BRACING DURING CONSTRUCTION.

FENCE AND FABRIC SHALL BE BLACK, FEDERAL COLOR NO 27038.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-265

DRAWN BY JDB | PLANS CK'D. JDL

TYPICAL SECTION AND QUANTITIES

SHEET 2 OF 13
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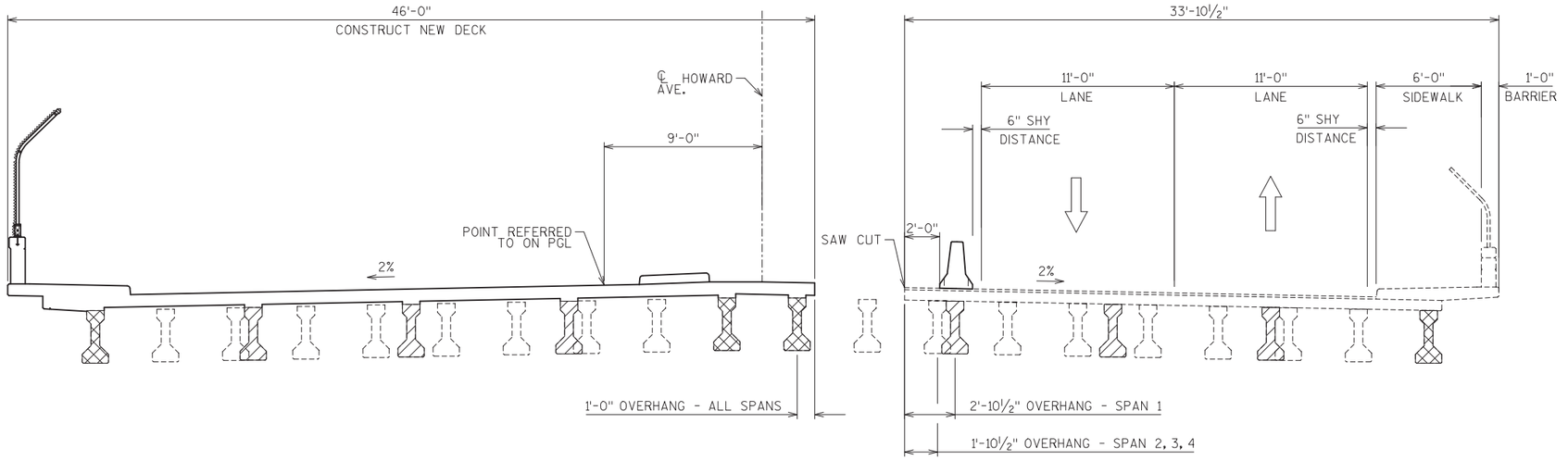
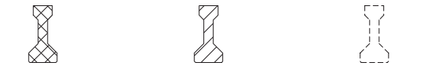
1228-25-70

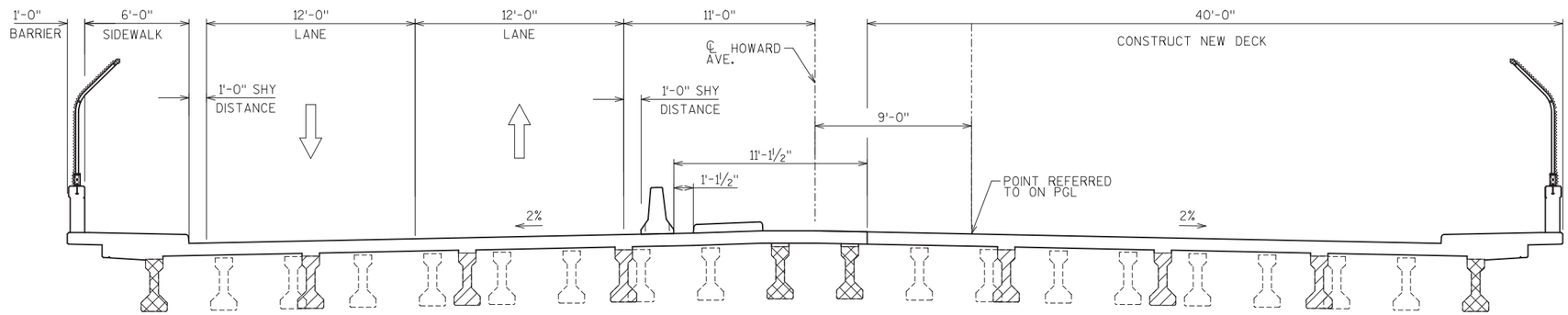


TYPICAL SECTION - STAGE 1

(LOOKING EAST)



LEGEND



TYPICAL SECTION - STAGE 2

(LOOKING EAST)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-265

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STAGED CONSTRUCTION

SHEET 2 OF 13
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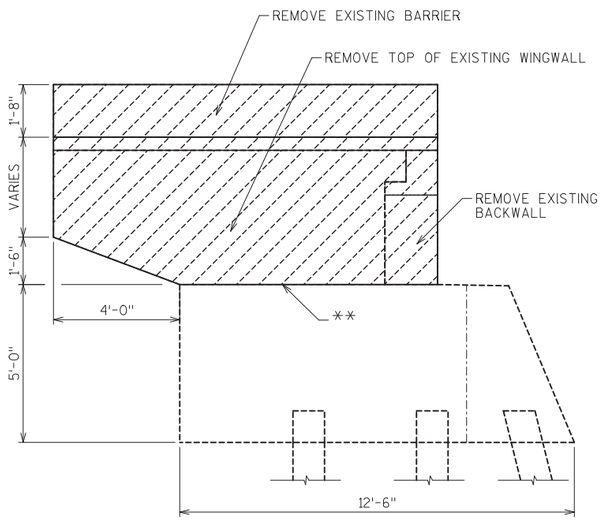

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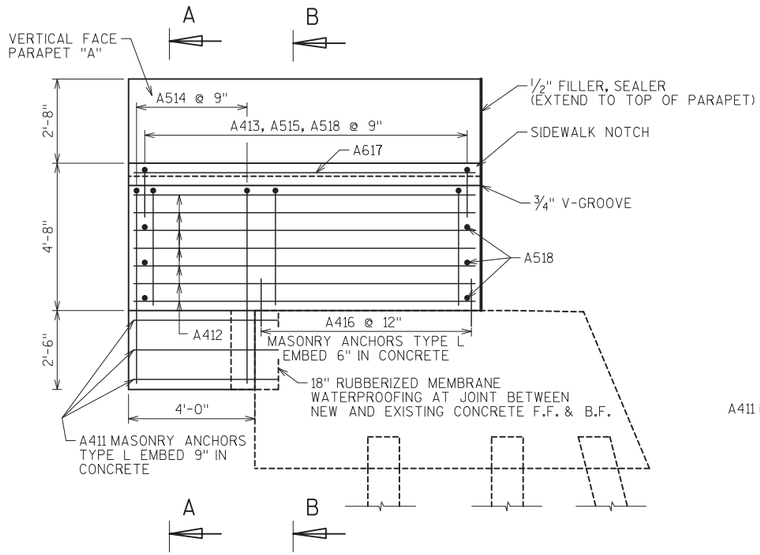
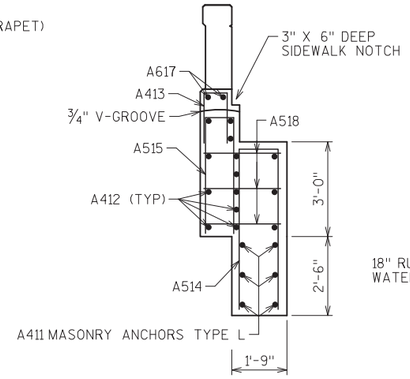
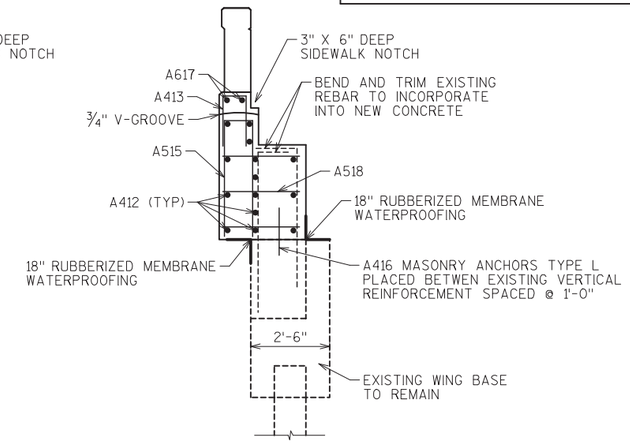


PROPOSED

ELEVATION - WING WALL



SECTION A-A



SECTION B-B

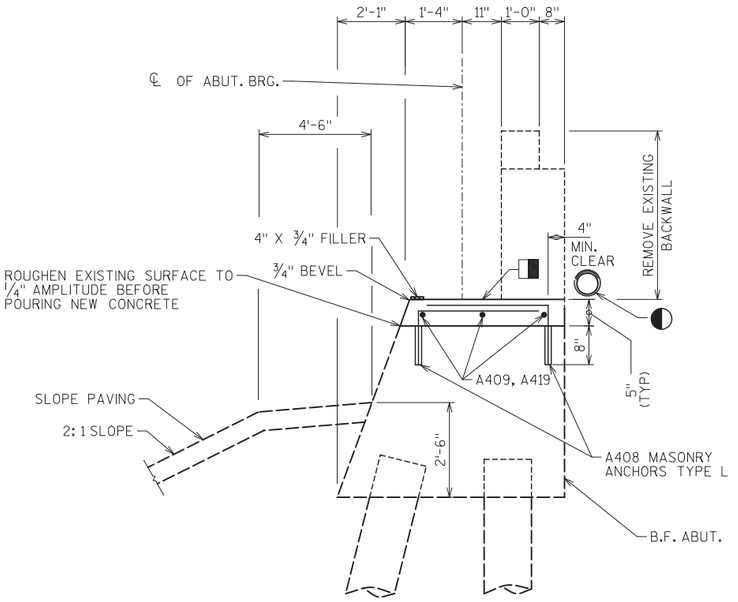
CROSS SECTION - WING WALL

EXISTING

PROPOSED

PLAN - ABUTMENT

(WEST ABUTMENT SHOWN. EAST ABUTMENT SIMILAR)



SECTION C-C

NOTES

- STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHELENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING FILLER AND SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".
- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD "REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN".
- ** CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT AROUND THE PERIMETER OF THE EXISTING WINGWALL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-265

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ABUTMENT DETAILS 1

SHEET 4 OF 13

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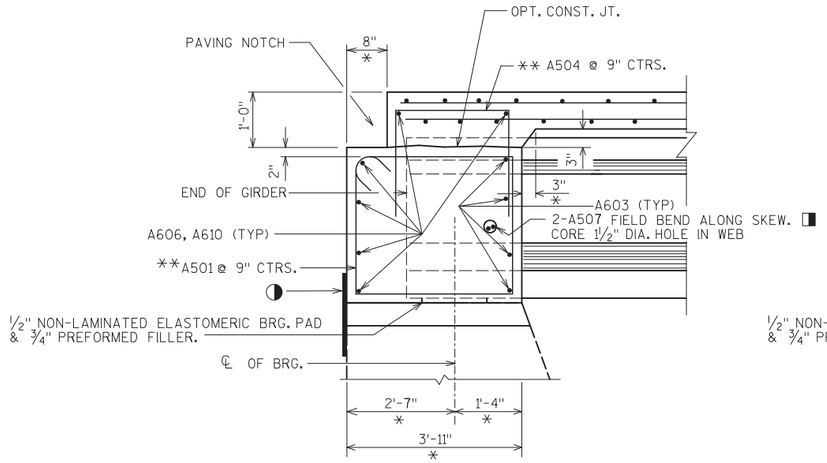
DATE: 1/31/2014
I.D. justin_bohler

STATE PROJECT NUMBER

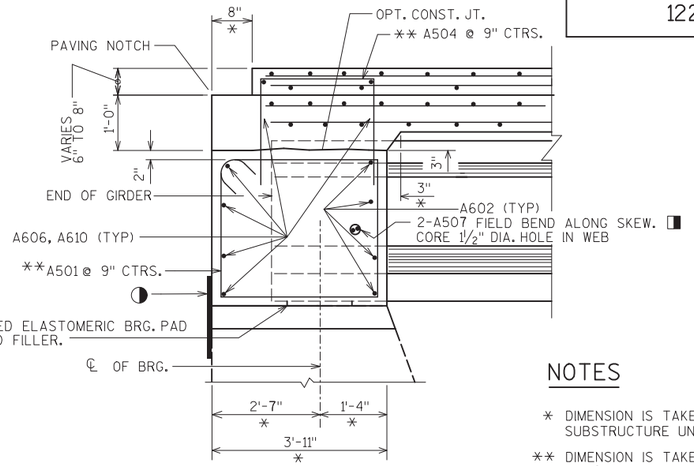
1228-25-70

BEAM SEAT ELEVATIONS

GIRDER NO.	W. ABUT	PIER 1		PIER 2	PIER 3	E. ABUT
		SPAN 1	SPAN 2			
1	694.33	694.50	694.50	694.84	695.18	695.52
2	694.51	694.66	694.58	694.92	695.26	695.60
3	694.69	694.82	694.66	695.00	695.34	695.68
4	694.87	694.98	694.66	695.08	695.42	695.76
5	695.05	695.22	694.82	695.16	695.50	695.84
6	695.05	695.22	694.82	695.24	695.58	695.92
7	694.87	694.98	694.98	695.32	695.66	696.00
8	694.69	694.82	694.98	695.40	695.74	696.08
9	694.51	694.66	695.14	695.48	695.82	696.16
10	694.33	694.50	695.22	695.56	695.90	696.24
11	--	--	695.22	695.56	695.90	696.24
12	--	--	695.14	695.48	695.82	696.16
13	--	--	694.98	695.40	695.74	696.08
14	--	--	694.98	695.32	695.66	696.00
15	--	--	694.82	695.24	695.58	695.92
16	--	--	694.82	695.16	695.50	695.84
17	--	--	694.66	695.08	695.42	695.76
18	--	--	694.66	695.00	695.34	695.68
19	--	--	694.58	694.92	695.26	695.60
20	--	--	694.50	694.84	695.18	695.52



SECTION B-B



SECTION A-A

NOTES

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** DIMENSION IS TAKEN PARALLEL TO ℄ GIRDER.

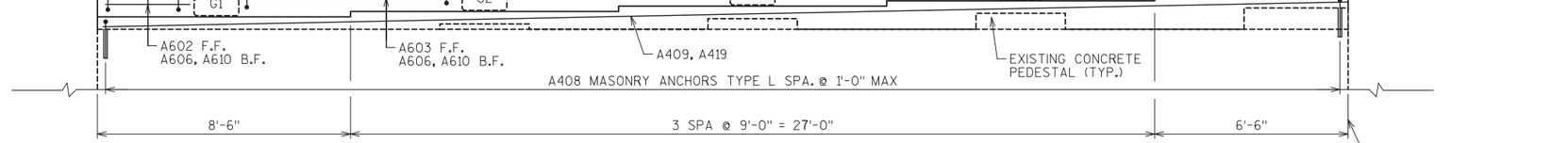
◨ CORING HOLE THROUGH EXISTING GIRDERS IS INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES"

◑ 18" RUBBERIZED MEMBRANE WATERPROOFING. PLACE ALONG HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS AT THE BACK OF THE ABUTMENT.

BILL OF BARS

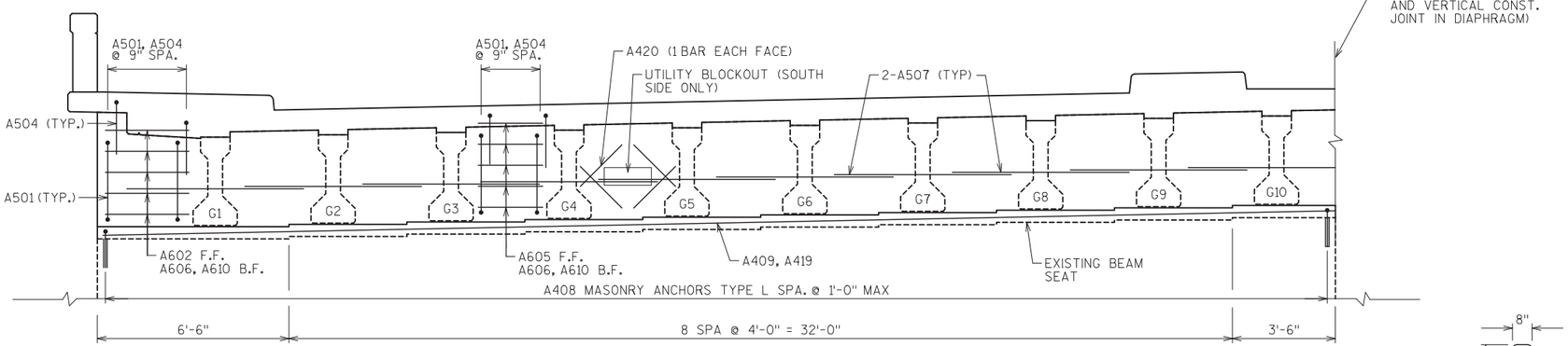
BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
A501	220	12'-11"	X	ABUTMENT DIAPHRAGM - STIRRUPS
A602	20	2'-11"		ABUTMENT DIAPHRAGM - HORIZ F.F. @ ENDS
A603	40	7'-2"		W. ABUT DIAPHRAGM - HORIZ F.F.
A504	220	7'-2"	X	ABUTMENT DIAPHRAGM - VERT
A605	95	2'-2"		E. ABUT DIAPHRAGM - HORIZ F.F.
A606	12	47'-11"		ABUT DIAPHRAGM - HORIZ B.F. - STAGE 1
A507	60	6'-0"		ABUTMENT DIAPHRAGM - THROUGH GIRDERS
A408	170	4'-7"	X	ABUTMENT BODY - VERT MASONRY ANCHOR
A409	12	23'-3"		ABUTMENT BODY - HORIZ - STAGE 1
A610	12	41'-11"		ABUT DIAPHRAGM - HORIZ B.F. - STAGE 2
A411	24	4'-7"		WINGWALL - HORIZ MASONRY ANCHORS
A412	56	10'-2"		WINGWALL - HORIZ, LONGITUDINAL
A413	60	3'-10"	X	WINGWALL - VERT
A514	24	11'-6"	X	WINGWALL - VERT
A515	60	8'-0"	X	WINGWALL - VERT
A416	28	1'-6"		WINGWALL - VERT MASONRY ANCHORS
A617	8	10'-2"		WINGWALL - HORIZ IN SIDEWALK NOTCH
A518	180	2'-5"		WINGWALL - HORIZ, TRANSVERSE
A419	6	38'-10"		ABUTMENT BODY - HORIZ - STAGE 2
A420	40	2'-0"		ABUTMENT DIAPHRAGM - UTILITY BLOCKOUT

TOTAL WEIGHT = 10,346 LBS



WEST ABUTMENT

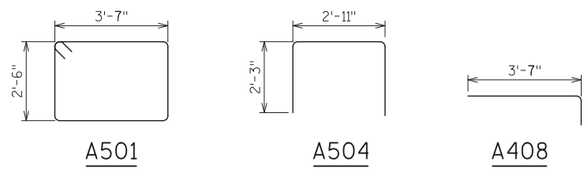
(HALF SECTION, LOOKING EAST)



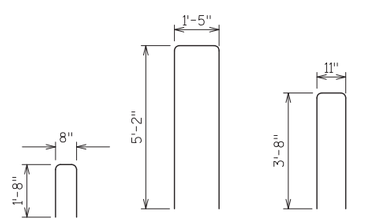
EAST ABUTMENT

(HALF SECTION, LOOKING EAST)

SYMMETRICAL ABOUT ℄ (EXCEPT FOR MEDIAN AND VERTICAL CONST. JOINT IN DIAPHRAGM)



A501 A504 A408



A413 A514 A515

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STRUCTURE B-40-265

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ABUTMENT DETAILS 2

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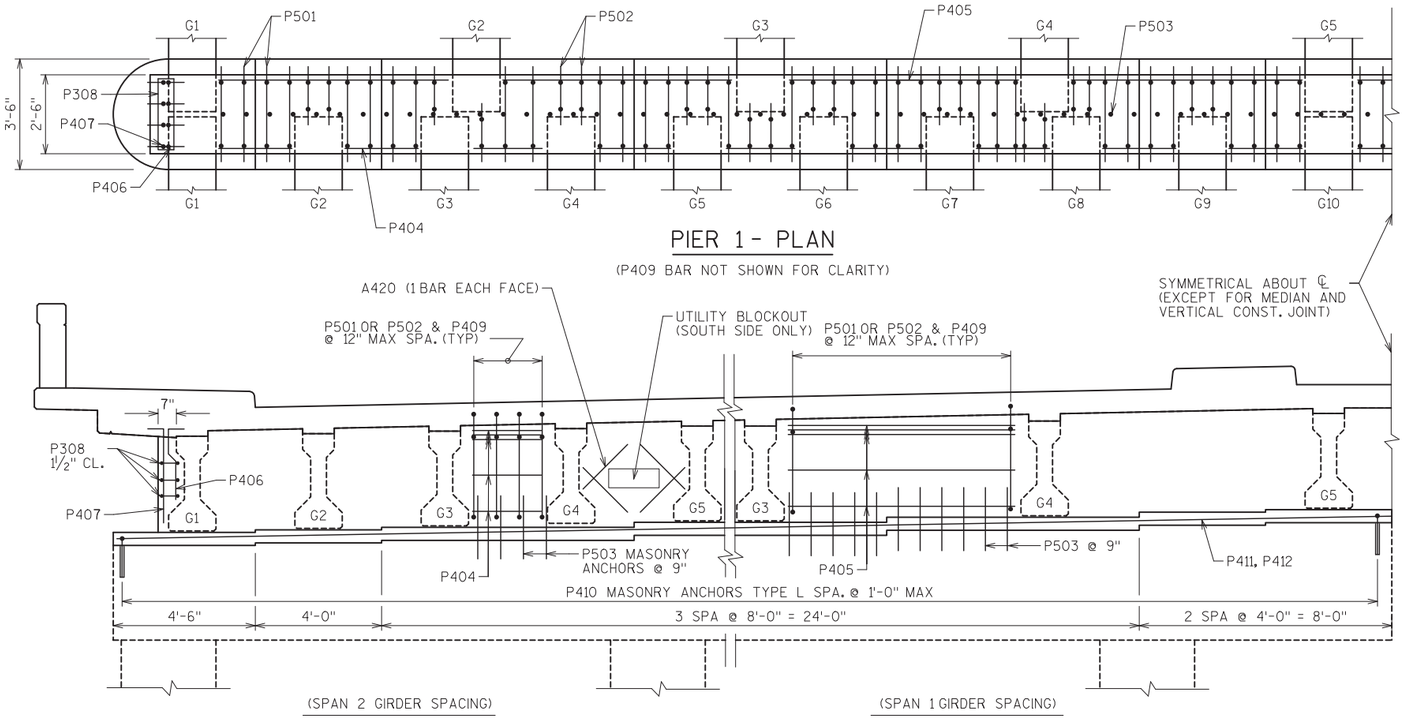
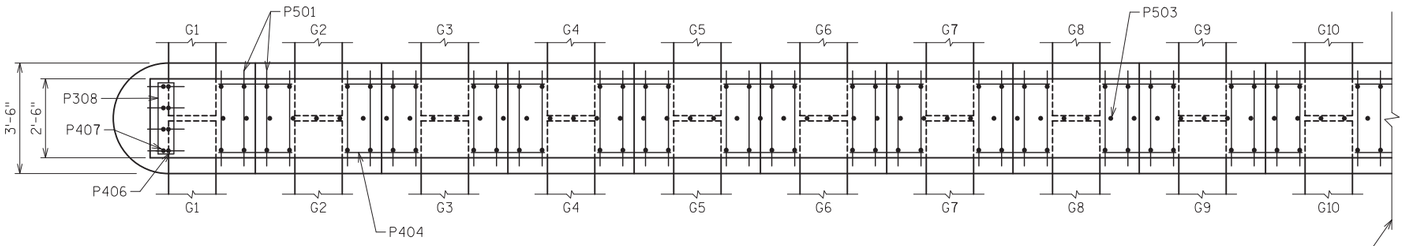


PIER 1 - PLAN

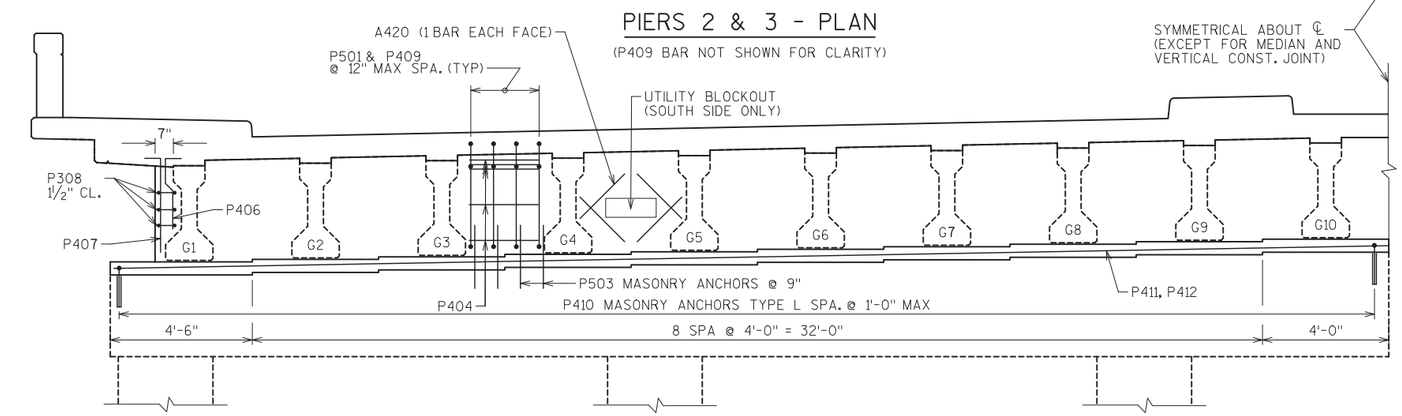
(P409 BAR NOT SHOWN FOR CLARITY)

PIER 1 - ELEVATION

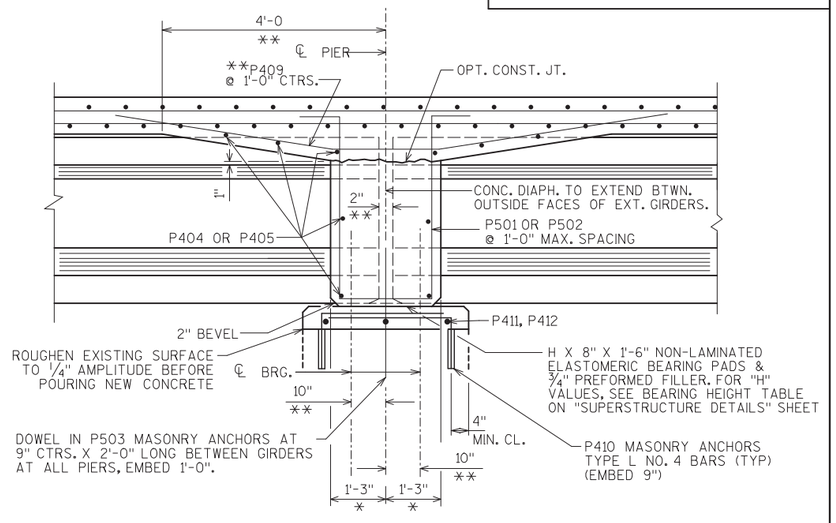


PIERS 2 & 3 - PLAN

(P409 BAR NOT SHOWN FOR CLARITY)



PIERS 2 & 3 - ELEVATION

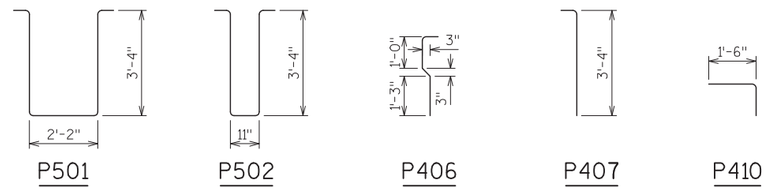


PIER DIAPHRAGM

BILL OF BARS

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
P501	218	9'-4"	X	PIER DIAPHRAGM VERT. - BETWEEN GIRDERS
P502	40	8'-2"	X	PIER 1 DIAPHRAGM VERT. - AT ENDS OF GIRDERS
P503	303	2'-0"		PIER DIAPHRAGM MASONRY ANCHORS
P404	480	2'-4"		PIER DIAPHRAGM HORIZ. - SPANS 2, 3, & 4
P405	40	7'-4"		PIER DIAPHRAGM HORIZ. - SPAN 1
P406	24	2'-11"	X	PIER PILASTER VERT.
P407	24	3'-9"	X	PIER PILASTER VERT.
P308	18	5'-11"	X	PIER PILASTER HORIZ.
P409	218	9'-3"	X	PIER DIAPHRAGM HAUNCH - HORIZ.
P410	246	2'-5"	X	PIER CAP MASONRY ANCHORS
P411	9	45'-0"	X	PIER CAP HORIZONTAL - STAGE 1
P412	9	37'-4"	X	PIER CAP HORIZONTAL - STAGE 2

TOTAL WEIGHT = 6,425 LBS



NOTES

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** DIMENSION IS TAKEN PARALLEL TO ℄ GIRDER.

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STRUCTURE B-40-265

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PIER DETAILS

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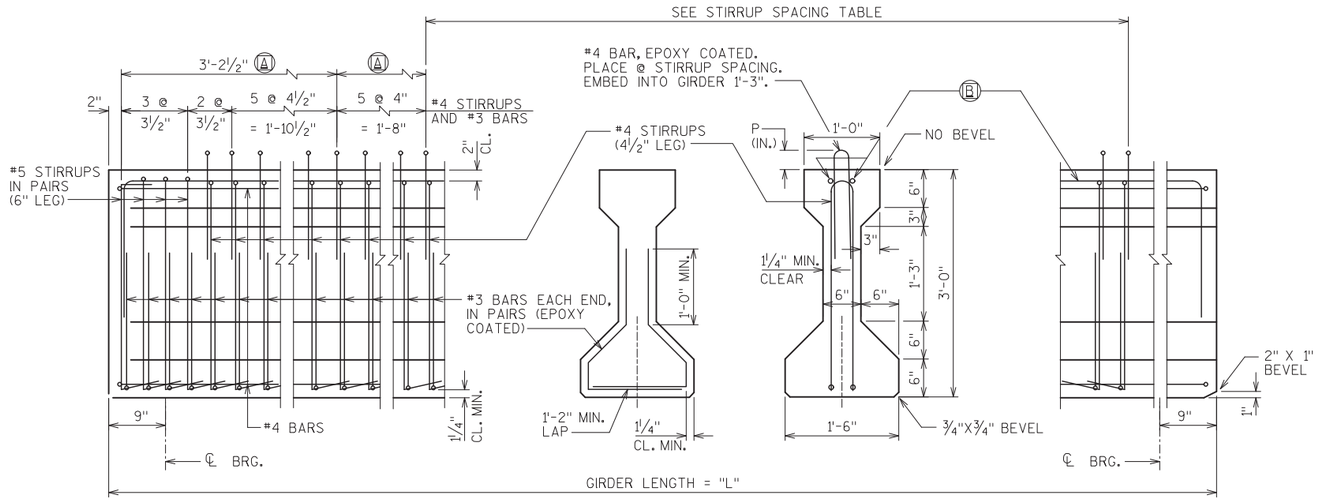


SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 2 #5 BARS BEND DOWN 16 BAR DIA. AT ENDS

STIRRUP SPACING

LOCATION	BAR SIZE	SPACING
FROM END TO 5'-2"	AS SHOWN	AS SHOWN
FROM 5'-2" TO MIDSPAN	#4	18"

SPACING IS SYMMETRIC ABOUT MIDSPAN OF GIRDER

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.

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.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

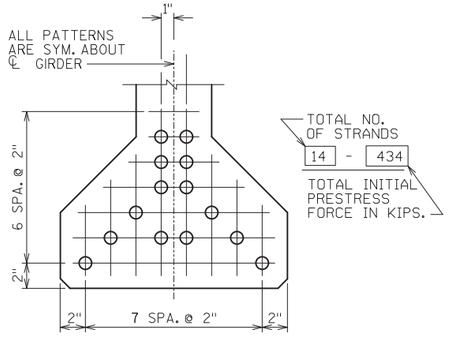
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

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.

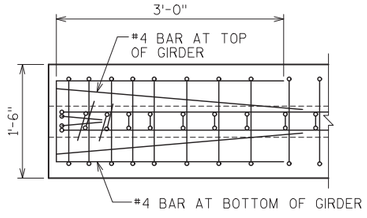
PRESTRESSING STRANDS SHALL BE (0.5" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

BEND EACH END OF #4 STIRRUPS 4½" AND #5 STIRRUPS 6".

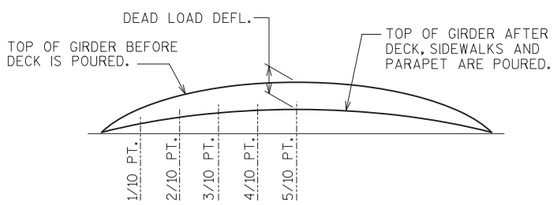
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



TYP. STRAND PATTERN



TOP VIEW OF GIRDER ENDS



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.) *
3	7/8"

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

* 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	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
3	20	68'-10"	1/4"	1/2"	11/16"	13/16"	7/8"	13/16"	11/16"	1/2"	1/4"	6000	6"	6"	6"	0.5	--	--	--	--	--	--	14	5100

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STRUCTURE B-40-265

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36" PRESTRESSED GIRDER DETAILS

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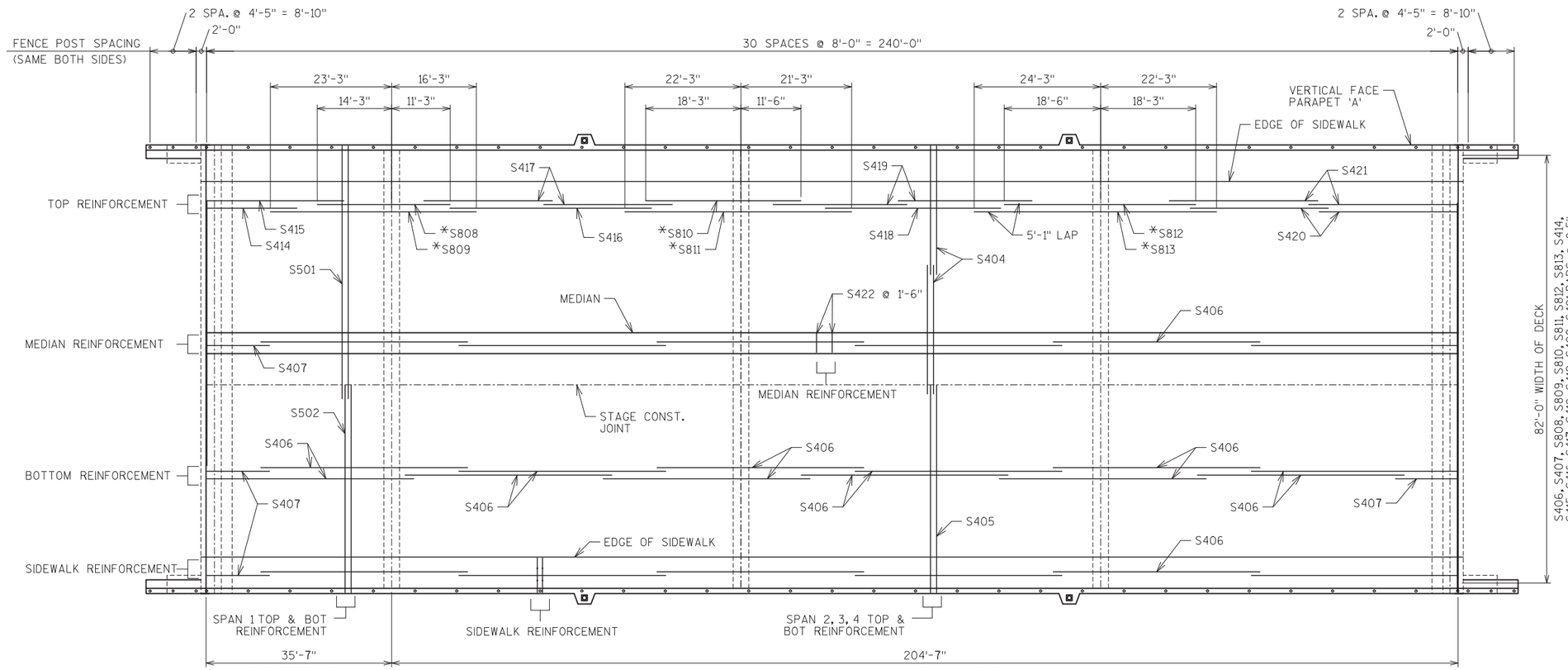
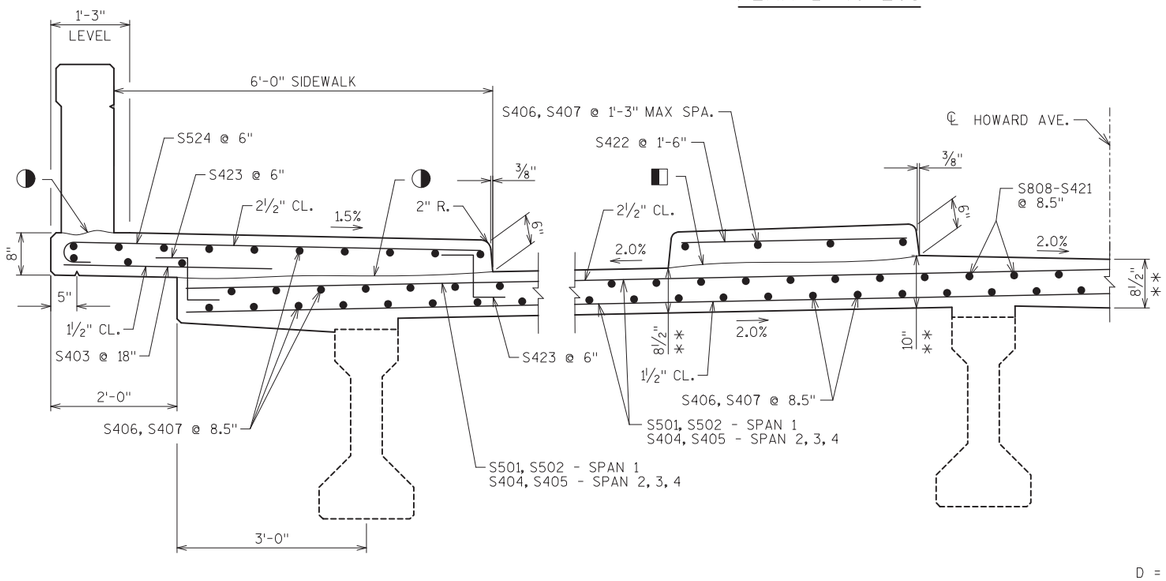


PLAN B-40-265



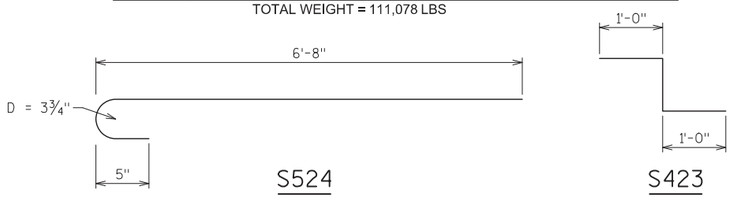
SECTION THRU DECK, SIDEWALK, & MEDIAN

BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
ALL REINFORCEMENT BARS IN THIS BILL SHALL BE EPOXY COATED.

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
S501	62	48'-6"		SPAN 1 TRANSVERSE T&B - STAGE 1
S502	62	39'-9"		SPAN 1 TRANSVERSE T&B - STAGE 2
S403	962	3'-4"		TRANSVERSE - SIDEWALK
S404	704	24'-8"		SPANS 2, 3, 4 TRANSVERSE T&B - STAGE 1
S405	352	39'-9"		SPANS 2, 3, 4 TRANSVERSE T&B - STAGE 2
S406	882	39'-8"		LONGITUDINAL - BOTTOM, MEDIAN, SIDEWALK
S407	147	11'-10"		LONGITUDINAL - BOTTOM, MEDIAN, SIDEWALK
S808	57	25'-6"		CONTINUITY - PIER 1
S809	58	39'-6"		CONTINUITY - PIER 1
S810	57	29'-9"		CONTINUITY - PIER 2
S811	58	43'-6"		CONTINUITY - PIER 2
S812	57	36'-9"		CONTINUITY - PIER 3
S813	58	46'-6"		CONTINUITY - PIER 3
S414	58	17'-3"		LONGITUDINAL TOP - SPAN 1
S415	57	26'-3"		LONGITUDINAL TOP - SPAN 1
S416	58	38'-8"		LONGITUDINAL TOP - SPAN 2
S417	116	24'-8"		LONGITUDINAL TOP - SPAN 2
S418	58	33'-8"		LONGITUDINAL TOP - SPAN 3
S419	116	25'-8"		LONGITUDINAL TOP - SPAN 3
S420	117	26'-6"		LONGITUDINAL TOP - SPAN 4
S421	116	28'-6"		LONGITUDINAL TOP - SPAN 4
S422	162	3'-7"		TRANSVERSE - MEDIAN
S423	1,924	2'-8"	X	SIDEWALK / DECK DOWELS
S524	962	7'-3"	X	TRANSVERSE - SIDEWALK

TOTAL WEIGHT = 111,078 LBS



NOTES

1. THE BOTTOM TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS WITH A CENTER TO CENTER SPACING NOT TO EXCEED 4'-0". ONE LINE OF CONTINUOUS BAR CHAIRS SHALL BE PLACED NEAR EACH EDGE OF THE SLAB TO SUPPORT THE ENDS OF THE BOTTOM TRANSVERSE BAR STEEL.
2. THE TOP LONGITUDINAL BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS IN TRANSVERSE DIRECTION ON 4'-0" CENTERS.
3. LAP LONGITUDINAL SPLICES AT 1'-8" MIN. FOR #4 BARS, 2'-7" MIN. FOR #5 BARS AND 5'-1" MIN. FOR #8 BARS.

LEGEND

* EVERY OTHER LONGITUDINAL BAR IN THE TOP MAT OVER PIERS

** IN ORDER TO FACILITATE DRAINAGE AWAY FROM THE MEDIAN, THE DECK THICKNESS VARIES BETWEEN THE ℄ OF HOWARD AVENUE THROUGH THE MEDIAN AS SHOWN.

◑ CONST. JOINT-STRIKE OFF AS SHOWN AND LEAVE ROUGH.

◧ ROUGH FLOAT SURFACE OR SAME FINISH AS EXPOSED DECK. DO NOT APPLY PROTECTIVE SURFACE TREATMENT TO THIS AREA. 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 PROIR TO MEDIAN PLACEMENT. NEAT CEMENT IS REQUIRED AS PER 509.3.9.2 OF THE STANDARD SPECIFICATIONS UNLESS THE MEDIAN IS POURED WITHIN 45 DAYS OF COMPLETING THE DECK POUR.

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STRUCTURE B-40-265

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SUPERSTRUCTURE

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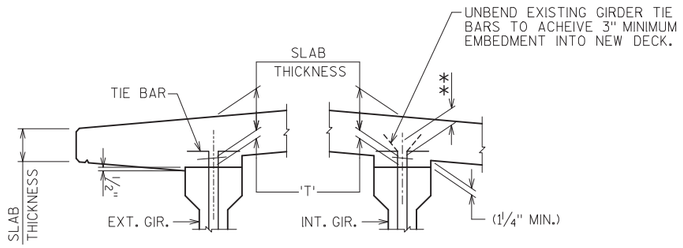


SLAB HAUNCH DETAIL

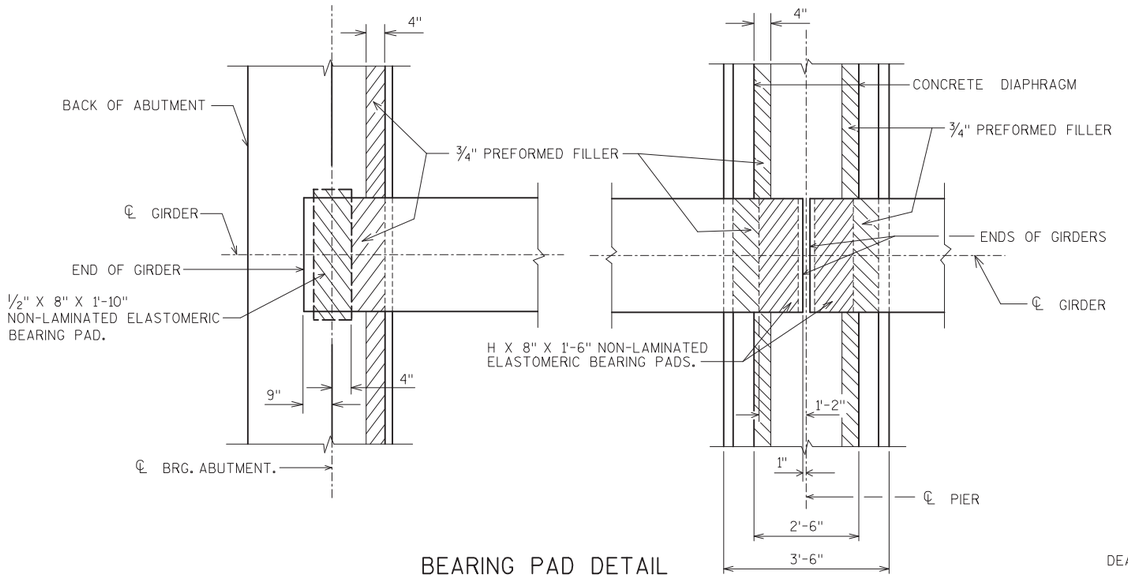
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF THE 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
\- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2½"" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



BEARING PAD DETAIL

BEARING HEIGHT

GIRDER NO.	H (IN) W. ABUT	PIER 1 SPAN 1	PIER 1 SPAN 2	PIER 2	PIER 3	E. ABUT
1	0.5	0.5	0.5	0.5	0.5	0.5
2	0.5	0.75	0.5	0.5	0.5	0.5
3	0.5	1.00	0.5	0.5	0.5	0.5
4	0.5	1.25	1.50	0.5	0.5	0.5
5	0.5	0.5	0.5	0.5	0.5	0.5
6	0.5	0.5	1.50	0.5	0.5	0.5
7	0.5	1.25	0.5	0.5	0.5	0.5
8	0.5	1.00	1.50	0.5	0.5	0.5
9	0.5	0.75	0.5	0.5	0.5	0.5
10	0.5	0.5	0.5	0.5	0.5	0.5
11	–	–	0.5	0.5	0.5	0.5
12	–	–	0.5	0.5	0.5	0.5
13	–	–	1.50	0.5	0.5	0.5
14	–	–	0.5	0.5	0.5	0.5
15	–	–	1.50	0.5	0.5	0.5
16	–	–	0.5	0.5	0.5	0.5
17	–	–	1.50	0.5	0.5	0.5
18	–	–	0.5	0.5	0.5	0.5
19	–	–	0.5	0.5	0.5	0.5
20	–	–	0.5	0.5	0.5	0.5

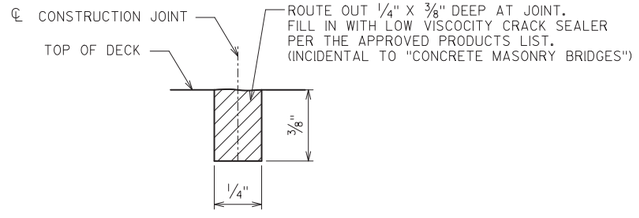
TOP OF DECK ELEVATIONS

LOCATION	SPAN 1 CL BRG W. ABUT	0.1 SPAN	0.2 SPAN	0.3 SPAN	0.4 SPAN	0.5 SPAN	0.6 SPAN	0.7 SPAN	0.8 SPAN	0.9 SPAN	CL PIER #1
N. EDGE OF DECK	698.19	698.21	698.22	698.24	698.26	698.28	698.29	698.31	698.33	698.34	698.36
GIRDER 1	698.25	698.27	698.28	698.30	698.32	698.34	698.35	698.37	698.39	698.40	698.42
GIRDER 2	698.43	698.45	698.46	698.48	698.50	698.52	698.53	698.55	698.57	698.58	698.60
GIRDER 3	698.61	698.63	698.64	698.66	698.68	698.70	698.71	698.73	698.75	698.76	698.78
GIRDER 4	698.79	698.81	698.82	698.84	698.86	698.88	698.89	698.91	698.93	698.94	698.96
PGL	698.83	698.85	698.86	698.88	698.90	698.92	698.93	698.95	698.97	698.98	699.00
GIRDER 5	699.05	699.07	699.08	699.10	699.12	699.14	699.15	699.17	699.19	699.20	699.22
GIRDER 6	698.97	698.99	699.00	699.02	699.04	699.06	699.07	699.09	699.11	699.12	699.14
STAGE JOINT	698.95	698.97	698.98	699.00	699.02	699.04	699.05	699.07	699.09	699.10	699.12
PGL	698.83	698.85	698.86	698.88	698.90	698.92	698.93	698.95	698.97	698.98	699.00
GIRDER 7	698.79	698.81	698.82	698.84	698.86	698.88	698.89	698.91	698.93	698.94	698.96
GIRDER 8	698.61	698.63	698.64	698.66	698.68	698.70	698.71	698.73	698.75	698.76	698.78
GIRDER 9	698.43	698.45	698.46	698.48	698.50	698.52	698.53	698.55	698.57	698.58	698.60
GIRDER 10	698.25	698.27	698.28	698.30	698.32	698.34	698.35	698.37	698.39	698.40	698.42
S. EDGE OF DECK	698.19	698.21	698.22	698.24	698.26	698.28	698.29	698.31	698.33	698.34	698.36

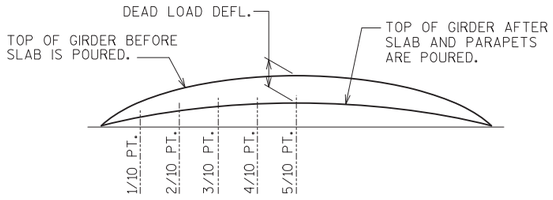
LOCATION	SPAN 2 CL PIER #1	0.1 SPAN	0.2 SPAN	0.3 SPAN	0.4 SPAN	0.5 SPAN	0.6 SPAN	0.7 SPAN	0.8 SPAN	0.9 SPAN	CL PIER #2
N. EDGE OF DECK	698.36	698.39	698.43	698.46	698.49	698.53	698.56	698.59	698.63	698.66	698.70
GIRDER 1	698.42	698.45	698.49	698.52	698.55	698.59	698.62	698.65	698.69	698.72	698.76
GIRDER 2	698.50	698.53	698.57	698.60	698.63	698.67	698.70	698.73	698.77	698.80	698.84
GIRDER 3	698.58	698.61	698.65	698.68	698.71	698.75	698.78	698.81	698.85	698.88	698.92
GIRDER 4	698.66	698.69	698.73	698.76	698.79	698.83	698.86	698.89	698.93	698.96	699.00
GIRDER 5	698.74	698.77	698.81	698.84	698.87	698.91	698.94	698.97	699.01	699.04	699.08
GIRDER 6	698.82	698.85	698.89	698.92	698.95	698.99	699.02	699.05	699.09	699.12	699.16
GIRDER 7	698.90	698.93	698.97	699.00	699.03	699.07	699.10	699.13	699.17	699.20	699.24
GIRDER 8	698.98	699.01	699.05	699.08	699.11	699.15	699.18	699.21	699.25	699.28	699.32
PGL	699.00	699.03	699.07	699.10	699.13	699.17	699.20	699.23	699.27	699.30	699.34
GIRDER 9	699.06	699.09	699.13	699.16	699.19	699.23	699.26	699.29	699.33	699.36	699.40
GIRDER 10	699.22	699.25	699.29	699.32	699.35	699.39	699.42	699.45	699.49	699.52	699.56
GIRDER 11	699.14	699.17	699.21	699.24	699.27	699.31	699.34	699.37	699.41	699.44	699.48
STAGE JOINT	699.12	699.15	699.19	699.22	699.25	699.29	699.32	699.35	699.39	699.42	699.46
GIRDER 12	699.06	699.09	699.13	699.16	699.19	699.23	699.26	699.29	699.33	699.36	699.40
PGL	699.00	699.03	699.07	699.10	699.13	699.17	699.20	699.23	699.27	699.30	699.34
GIRDER 13	698.98	699.01	699.05	699.08	699.11	699.15	699.18	699.21	699.25	699.28	699.32
GIRDER 14	698.90	698.93	698.97	699.00	699.03	699.07	699.10	699.13	699.17	699.20	699.24
GIRDER 15	698.82	698.85	698.89	698.92	698.95	698.99	699.02	699.05	699.09	699.12	699.16
GIRDER 16	698.74	698.77	698.81	698.84	698.87	698.91	698.94	698.97	699.01	699.04	699.08
GIRDER 17	698.66	698.69	698.73	698.76	698.79	698.83	698.86	698.89	698.93	698.96	699.00
GIRDER 18	698.58	698.61	698.65	698.68	698.71	698.75	698.78	698.81	698.85	698.88	698.92
GIRDER 19	698.50	698.53	698.57	698.60	698.63	698.67	698.70	698.73	698.77	698.80	698.84
GIRDER 20	698.42	698.45	698.49	698.52	698.55	698.59	698.62	698.65	698.69	698.72	698.76
S. EDGE OF DECK	698.36	698.39	698.43	698.46	698.49	698.53	698.56	698.59	698.63	698.66	698.70

LOCATION	SPAN 3 CL PIER #2	0.1 SPAN	0.2 SPAN	0.3 SPAN	0.4 SPAN	0.5 SPAN	0.6 SPAN	0.7 SPAN	0.8 SPAN	0.9 SPAN	CL PIER #3
N. EDGE OF DECK	698.70	698.73	698.76	698.80	698.83	698.87	698.90	698.94	698.97	699.01	699.04
GIRDER 1	698.76	698.79	698.82	698.86	698.89	698.93	698.96	699.00	699.03	699.07	699.10
GIRDER 2	698.84	698.87	698.90	698.94	698.97	699.01	699.04	699.08	699.11	699.15	699.18
GIRDER 3	698.92	698.95	698.98	699.02	699.05	699.09	699.12	699.16	699.19	699.23	699.26
GIRDER 4	699.00	699.03	699.06	699.10	699.13	699.17	699.20	699.24	699.27	699.31	699.34
GIRDER 5	699.08	699.11	699.14	699.18	699.21	699.25	699.28	699.32	699.35	699.39	699.42
GIRDER 6	699.16	699.19	699.22	699.26	699.29	699.33	699.36	699.40	699.43	699.47	699.50
GIRDER 7	699.24	699.27	699.30	699.34	699.37	699.41	699.44	699.48	699.51	699.55	699.58
GIRDER 8	699.32	699.35	699.38	699.42	699.45	699.49	699.52	699.56	699.59	699.63	699.66
PGL	699.34	699.37	699.40	699.44	699.47	699.51	699.54	699.58	699.61	699.65	699.68
GIRDER 9	699.40	699.43	699.46	699.50	699.53	699.57	699.60	699.64	699.67	699.71	699.74
GIRDER 10	699.56	699.59	699.62	699.66	699.69	699.73	699.76	699.80	699.83	699.87	699.90
GIRDER 11	699.48	699.51	699.54	699.58	699.61	699.65	699.68	699.72	699.75	699.79	699.82
STAGE JOINT	699.46	699.49	699.52	699.56	699.59	699.63	699.66	699.70	699.73	699.77	699.80
GIRDER 12	699.40	699.43	699.46	699.50	699.53	699.57	699.60	699.64	699.67	699.71	699.74
PGL	699.34	699.37	699.40	699.44	699.47	699.51	699.54	699.58	699.61	699.65	699.68
GIRDER 13	699.32	699.35	699.38	699.42	699.45	699.49	699.52	699.56	699.59	699.63	699.66
GIRDER 14	699.24	699.27	699.30	699.34	699.37	699.41	699.44	699.48	699.51	699.55	699.58
GIRDER 15	699.16	699.19	699.22	699.26	699.29	699.33	699.36	699.40	699.43	699.47	699.50
GIRDER 16	699.08	699.11	699.14	699.18	699.21	699.25	699.28	699.32	699.35	699.39	699.42
GIRDER 17	699.00	699.03	699.06	699.10	699.13	699.17	699.20	699.24	699.27	699.31	699.34
GIRDER 18	698.92	698.95	698.98	699.02	699.05	699.09	699.12	699.16	699.19	699.23	699.26
GIRDER 19	698.84	698.87	698.90	698.94	698.97	699.01	699.04	699.08	699.11	699.15	699.18
GIRDER 20	698.76	698.79	698.82	698.86	698.89	698.93	698.96	699.00	699.03	699.07	699.10
S. EDGE OF DECK	698.70	698.73	698.76	698.80	698.83	698.87	698.90	698.94	698.97	699.01	699.04

LOCATION	SPAN 4 0.1 SPAN	0.2 SPAN	0.3 SPAN	0.4 SPAN	0.5 SPAN	0.6 SPAN	0.7 SPAN	0.8 SPAN	0.9 SPAN	CL BRG E. ABUT
N. EDGE OF DECK	699.07	699.11	699.14	699.17	699.21	699.24	699.27	699.31	699.34	699.38
GIRDER 1	699.13	699.17	699.20	699.23	699.27	699.30	699.33	699.37	699.40	699.44
GIRDER 2	699.21	699.25	699.28	699.31	699.35	699.38	699.41	699.45	699.48	699.52
GIRDER 3	699.29	699.33	699.36	699.39	699.43	699.46	699.49	699.53	699.56	699.60
GIRDER 4	699.37	699.41	699.44	699.47	699.51	699.54	699.57	699.61	699.64	699.68
GIRDER 5	699.45	699.49	699.52	699.55	699.59	699.62	699.65	699.69	699.72	699.76
GIRDER 6	699.53	699.57	699.60	699.63	699.67	699.70	699.73	699.77	699.80	699.84
GIRDER 7	699.61	699.65	699.68	699.71	699.75	699.78	699.81	699.85	699.88	699.92
GIRDER 8	699.69	699.73	699.76	699.79	699.83	699.86	699.89	699.93	699.96	700.00
PGL	699.77	699.81	699.84	699.87	699.91	699.94	699.97	700.01	700.04	700.08
GIRDER 9	699.93	699.97	700.00	700.03	700.07	700.10	700.13	700.17	700.20	700.24
GIRDER 10	699.85	699.89	699.92	699.95	699.99	700.02	700.05	700.09	700.12	700.16
GIRDER 11	699.77	699.81	699.84	699.87	699.91	699.94	699.97	700.01	700.04	700.08
STAGE JOINT	699.83	699.87	699.90	699.93	699.97	700.00	700.03	700.07	700.10	700.14
GIRDER 12	699.77	699.81	699.84	699.87	699.91	699.94	699.97	700.01	700.04	700.08
PGL	699.71	699.75	699.78	699.81	699.85	699.88	699.91	699.95	699.98	700.02
GIRDER 13	699.69	699.73	699.76	699.79	699.83	699.86	699.89	699.93	699.96	700.00
GIRDER 14	699.61	699.65	699.68	699.71	699.75	699.78	699.81	699.85	699.88	699.92
GIRDER 15	699.53	699.57	699.60	699.63	699.67	699.70	699.73	699.77	699.80	699.84
GIRDER 16	699.45	699.49	699.52	699.55	699.59	699.62	699.65	699.69	699.72	699.76
GIRDER 17	699.37	699.41	699.44	699.47	699.51	699.54	699.57	699.61	699.64	699.68
GIRDER 18	699.29	699.33	699.36	699.39	699.43	699.46	699.49	699.53	699.56	699.60
GIRDER 19	699.21	699.25	699.28	699.31	699.35	699.38	699.41	699.45	699.48	699.52
GIRDER 20	699.13	699.17	699.20	699.23	699.27	699.30	699.33	699.37	699.40	699.44
S. EDGE OF DECK	699.07	699.11	699.14	699.17	699.21	699.24	699.27	699.31	699.34	699.38



LONGITUDINAL CONSTRUCTION JOINT DETAIL



DEAD LOAD DEFLECTION DIAGRAM

SPAN	DEAD LOAD DEFL. (IN.) 1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.
1	< 1/16"	1/16"	1/8"	1/8"	1/8"
2	1/4"	7/16"	5/8"	3/4"	13/16"
3	1/4"	1/2"	11/16"	7/8"	7/8"
4	1/4"	1/2"	11/16"	13/16"	13/16"

DEAD LOAD DEFLECTIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-265

DRAWN BY JDB | PLANS CK'D. JDL

SUPERSTRUCTURE DETAILS

SHEET 9 OF 13
603

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DATE: 1/31/2014
I.D. justin_bohler

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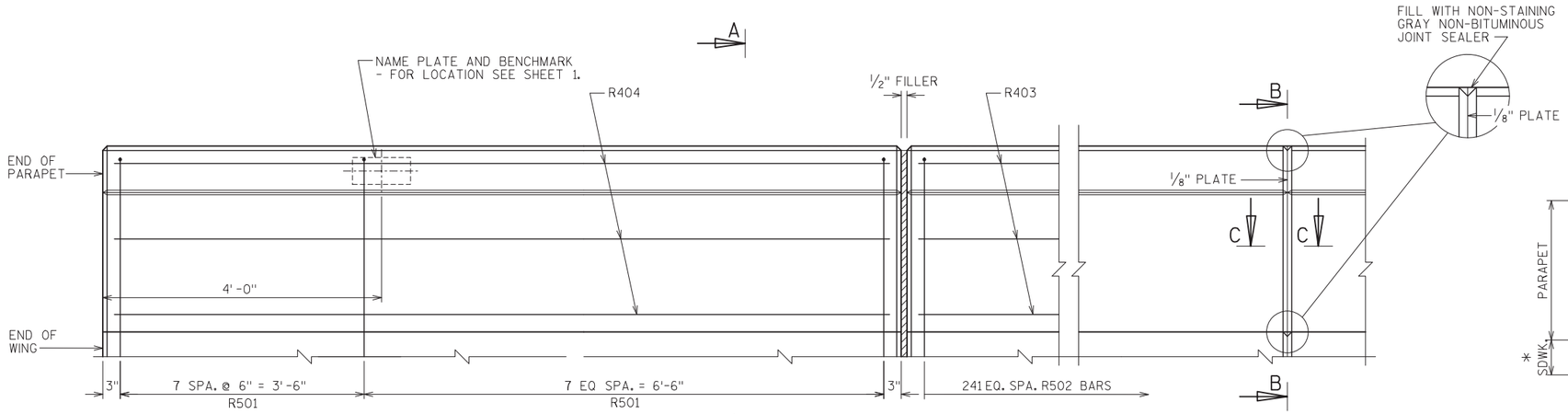
STATE PROJECT NUMBER

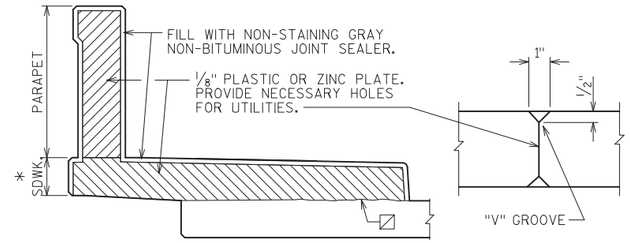
1228-25-70



AT WINGWALLS

AT DEFLECTION JOINT

ELEVATION OF PARAPET



SECTION B-B

SECTION C-C

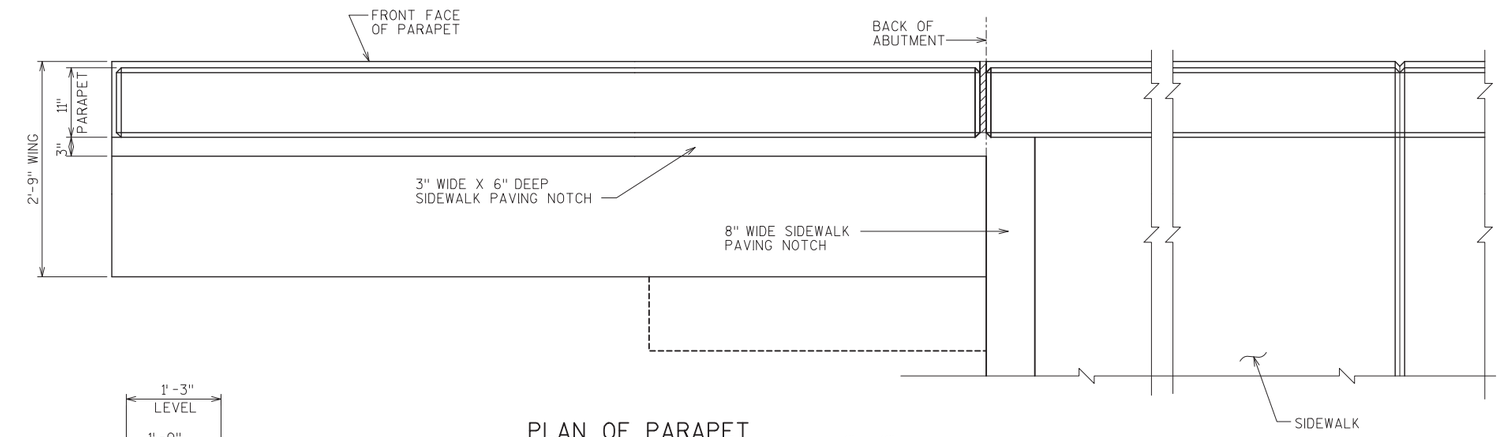
(DEFLECTION JOINT IN PARAPET AND SIDEWALK AT EACH PIER)

DO NOT RUN BAR STEEL THROUGH DEFLECTION JOINT. CUT SIDEWALK AND PARAPET REINFORCEMENT AS REQUIRED.

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION B-B BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

☒ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.

* 8" MIN. SIDEWALK THICKNESS ALSO REQ'D AT EDGE OF DECK / SLAB

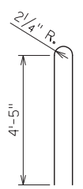


PLAN OF PARAPET

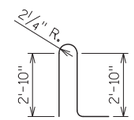
BILL OF BARS

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
R501	64	9'-5"	X	WINGWALL PARAPET VERT.
R502	484	7'-2"	X	BRIDGE PARAPET VERT.
R403	72	41'-9"		BRIDGE PARAPET HORIZ.
R404	24	10'-2"		WINGWALL PARAPET HORIZ.

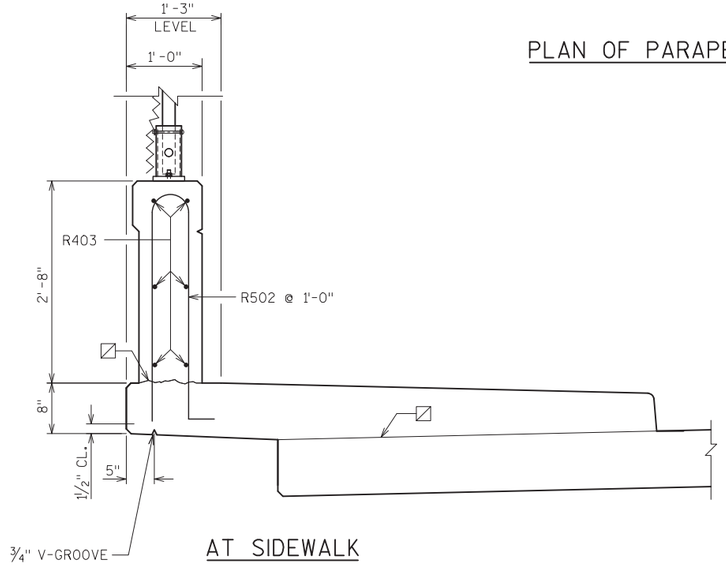
TOTAL WEIGHT = 6,418 LBS



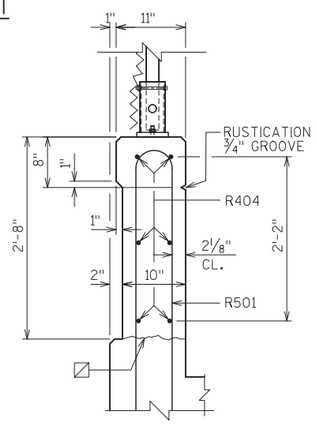
R501



R502



AT SIDEWALK



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-265

DRAWN BY JDB | PLANS CK'D. JDL

VERTICAL FACE PARAPET "A"

SHEET 10 OF 13
604

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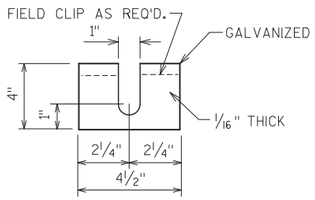
DATE: 1/31/2014
I.D. Justin_Bohler

STATE PROJECT NUMBER

1228-25-70

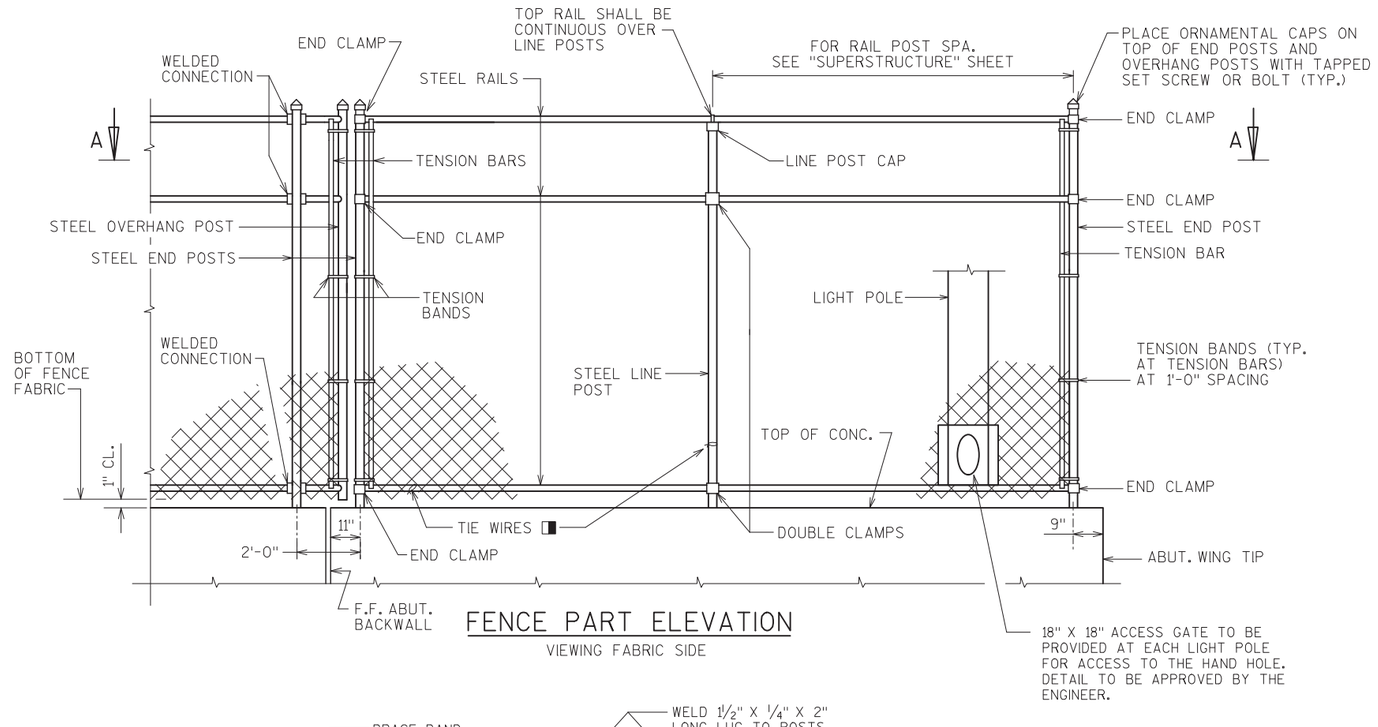
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.



FENCE PART ELEVATION

VIEWING FABRIC SIDE

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER-COATING ON THE OUTSIDE.

FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE COLOR OF POLYMER-COATING FOR THIS STRUCTURE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER-COATED 8-FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

◪ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

✳ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

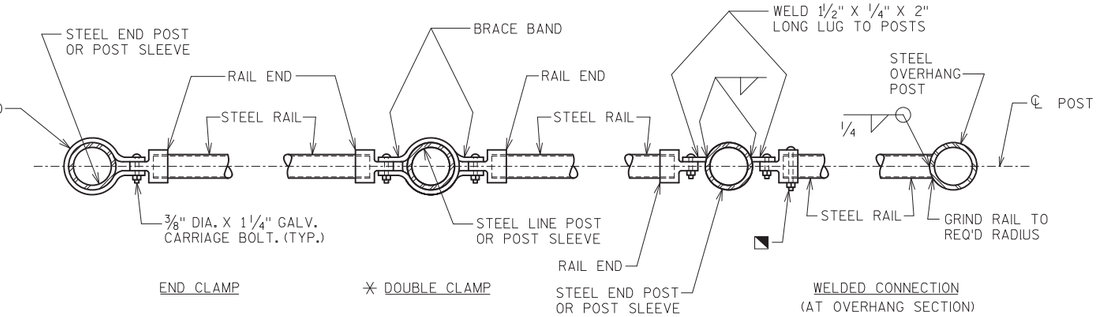
◭ 1/2" DIA. X 6 7/8" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S", 1/2" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR 1/2" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

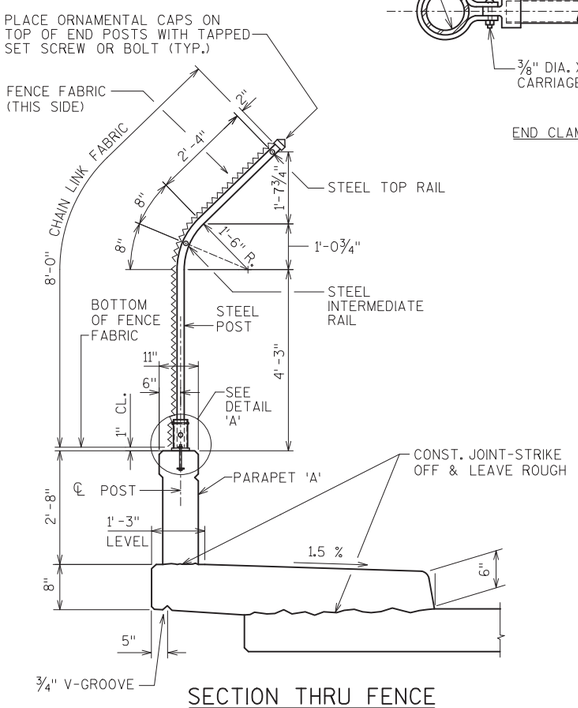
☆ 1/2" DIA. CONCRETE MASONRY ANCHOR, TYPE "S", 6" MIN. EMBEDMENT (EPOXY ANCHORED) INTO CONCRETE. ANCHOR, WASHER AND NUT SHALL BE GALVANIZED.

◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

◹ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

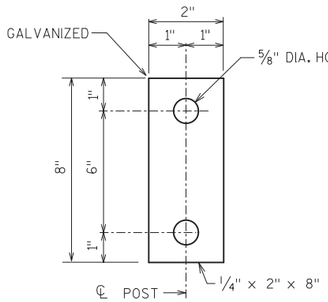
MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR 1/4 POINT OF POST SPACING.



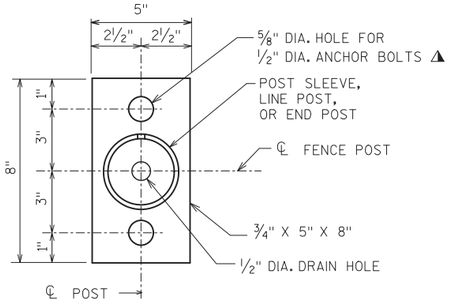


SECTION A-A

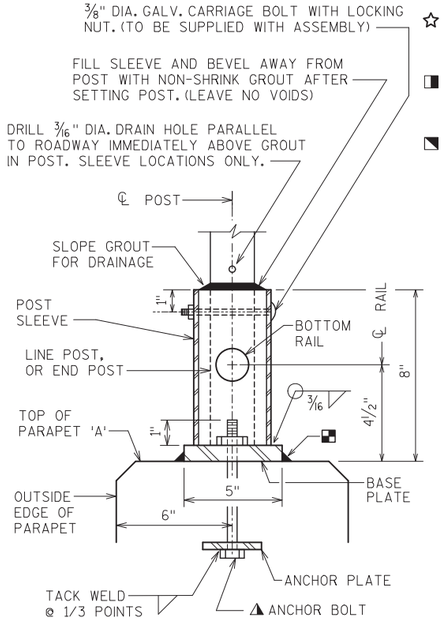
NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS



ANCHOR PLATE



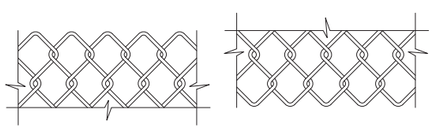
BASE PLATE



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.



TOP DETAIL BOTTOM DETAIL

FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 1" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-265

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FENCE DETAILS

SHEET 11 OF 13
605

DATE: 1/31/2014
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FILE= P:\Transportation\143 Valley Bridge Overpasses\CADD\Structures\B-40-265\Final\11-265_Fence Details.dgn

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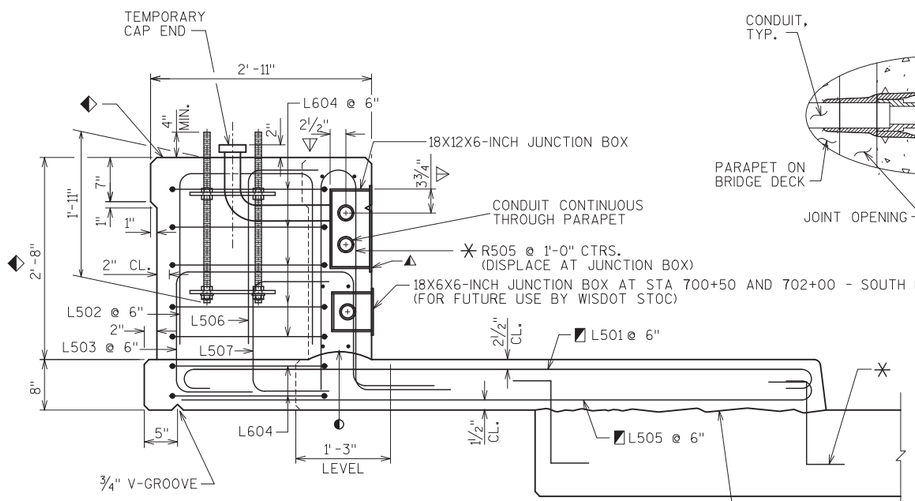
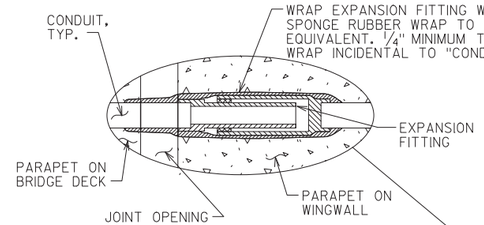
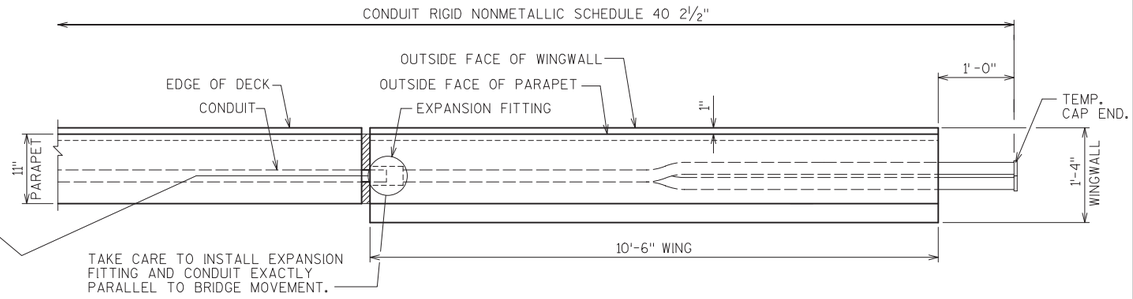
STATE PROJECT NUMBER

1228-25-70



SECTION A-A





PLAN OF PARAPET AT WINGWALL

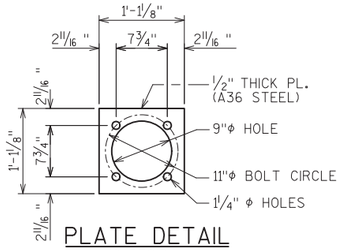
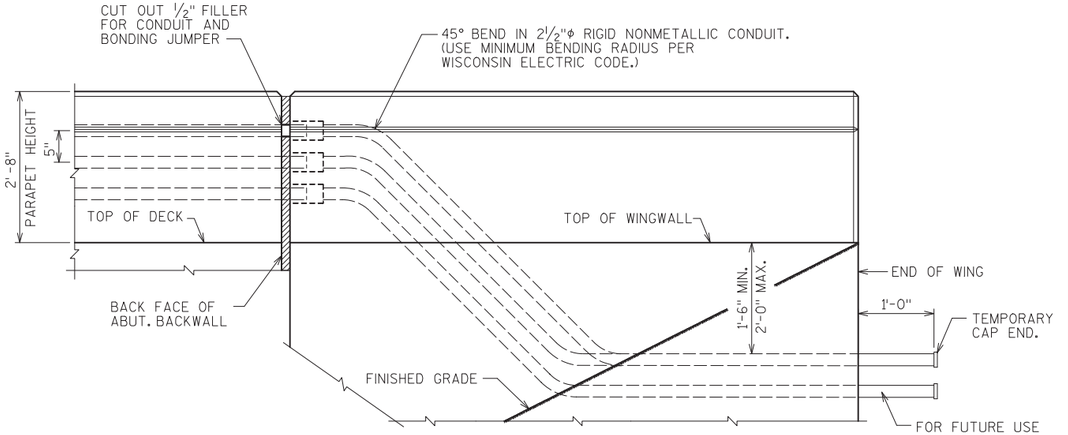
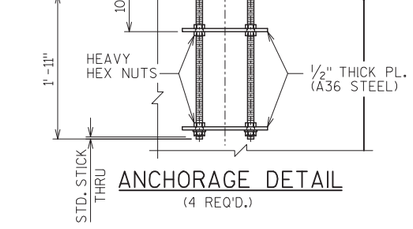


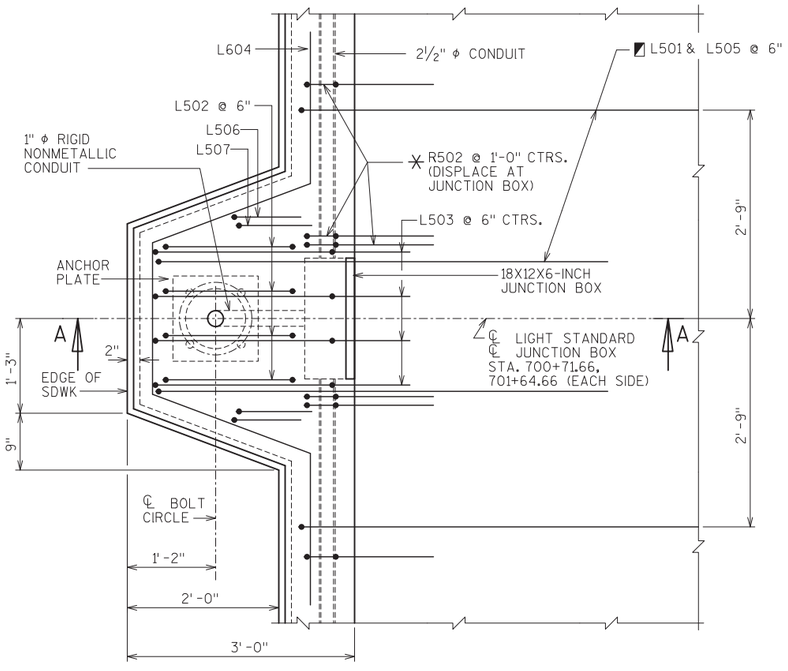
PLATE DETAIL
(8 REQ'D.)



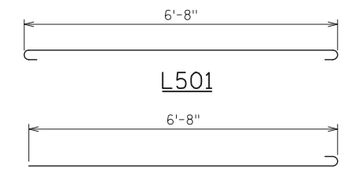
OUTSIDE ELEVATION OF PARAPET AT WINGWALL



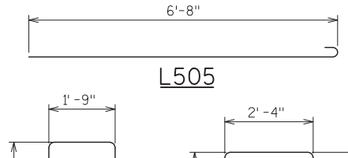
ANCHORAGE DETAIL
(4 REQ'D.)



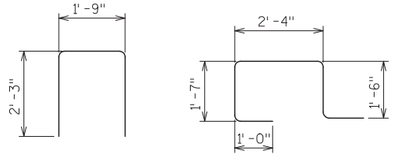
PLAN AT LIGHT STANDARD



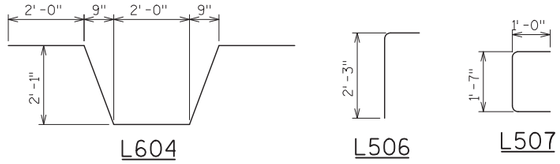
L501



L505



L502 L503



L604 L506 L507

- ◐ CONSTR. 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.
- ◩ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.
- ◒ 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.
- ✳ SEE "SUPERSTRUCTURE" AND "VERTICAL FACE PARAPET 'A'" SHEETS FOR ADDITIONAL BAR STEEL DETAILS.
- ◆ TOP SURFACE OF LIGHT STANDARD TO BE LEVEL IN DIRECTION PARALLEL TO PARAPET AND SLOPE ⅛" PER FOOT AWAY FROM PARAPET. 2'-8" DIMENSION IS MAXIMUM AND WILL VARY BASED ON SLOPE OF GRADE.

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X12X6-INCH"
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES"
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH"
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2½-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
CARLON TYPE E945K (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID NONMETALLIC 2½-INCH".

ADAPTER FITTINGS U.L. LISTED FOR ELECTRICAL USE SHALL BE USED.

BILL OF BARS

BAR MARK	NO. REQ'D	LENGTH	BENT	LOCATION
L501	48	7'-10"	X	SIDEWALK HORIZ. @ JUNCTION BOX
L502	16	6'-0"	X	PARAPET VERT. @ JUNCTION BOX
L503	16	7'-0"	X	PARAPET VERT. @ LIGHT STD.
L604	28	10'-0"	X	PARAPET HORIZ. @ LIGHT STD.
L505	48	7'-3"		SIDEWALK HORIZ. @ JUNCTION BOX
L506	8	3'-2"	X	PARAPET VERT. @ LIGHT STD.
L507	8	3'-5"	X	PARAPET VERT. @ LIGHT STD.

TOTAL WEIGHT = 1,448 LBS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-265

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LIGHT STANDARD

SHEET 12 OF 13
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DATE: 1/31/2014
I.D. Justin_bohler

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STATE PROJECT NUMBER

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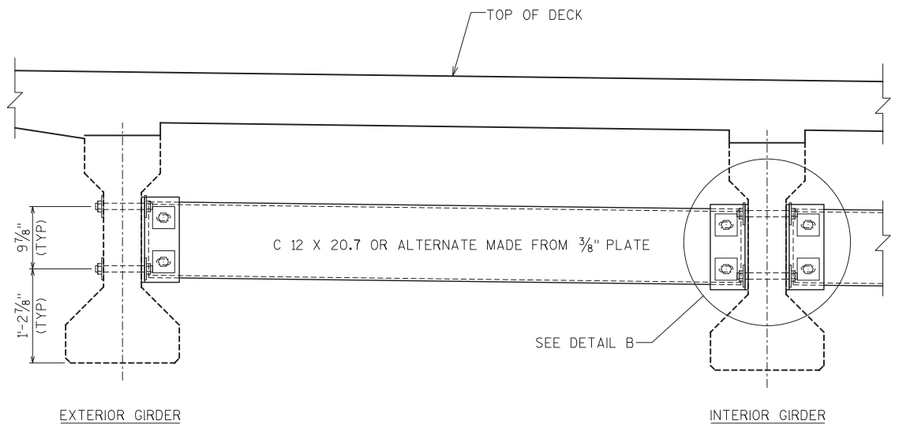
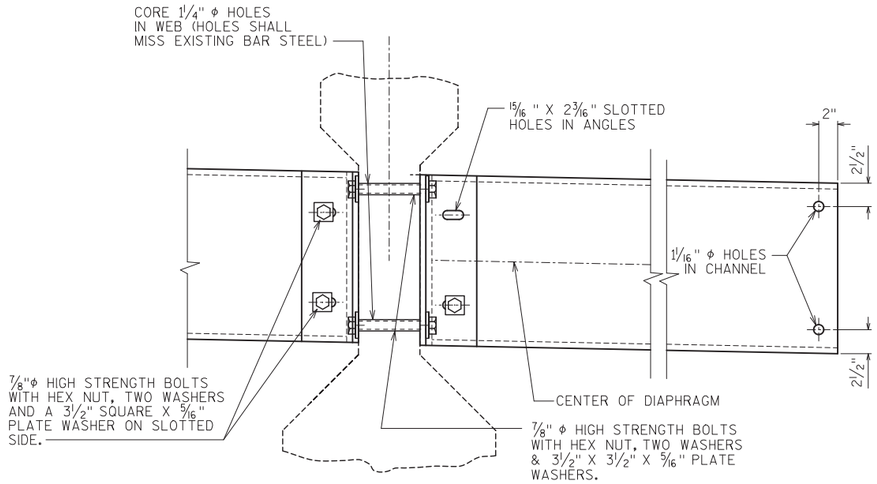


PART TRANSVERSE SECTION AT DIAPHRAGM



DETAIL B

NOTES

ALL DIAPHRAGM MATERIAL AND CORED HOLES SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-265", EACH.

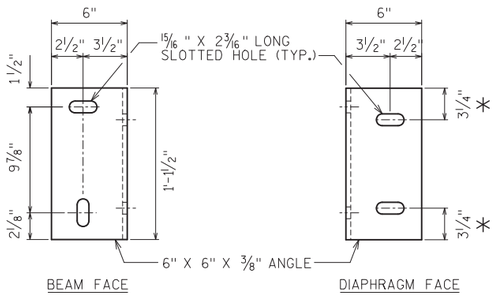
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

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.

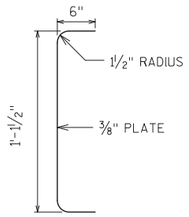
REMOVAL OF EXISTING INTERMEDIATE CONCRETE DIAPHRAGMS IS INCIDENTAL TO BID ITEM "REMOVING OLD STRUCTURE STA. 701+01.66"

ATTACHMENTS FOR STEEL DIAPHRAGMS WILL NEED TO BE CORED THROUGH EXISTING GIRDERS. OFFSET NEW STEEL DIAPHRAGMS TO AVOID INTERFERENCE WITH EXISTING SLEEVES FOR EXISTING INTERMEDIATE CONCRETE DIAPHRAGM.

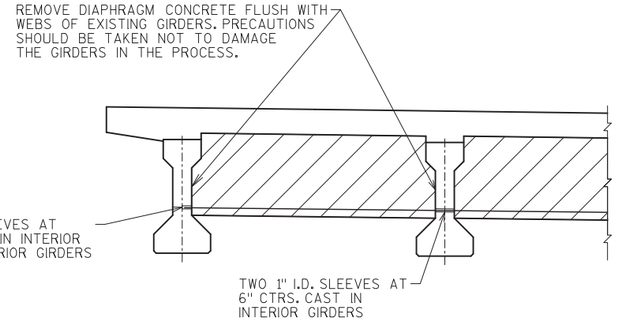


DIAPHRAGM SUPPORT

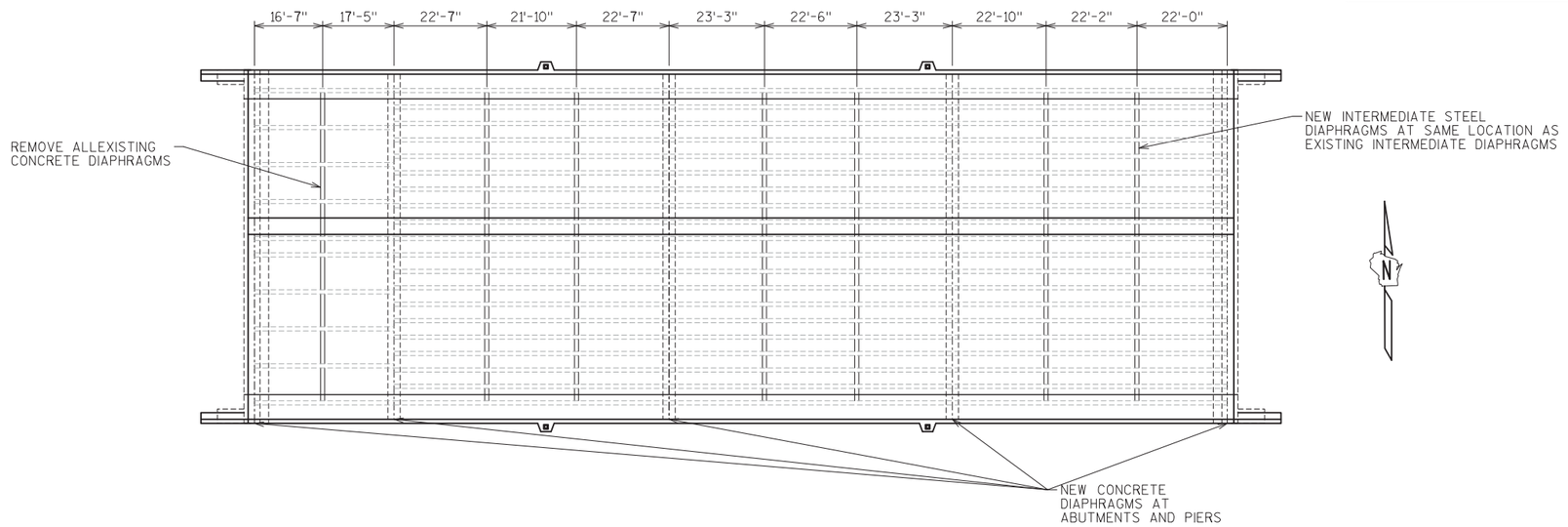
* 2½" FOR ALTERNATE PLATE DIAPHRAGM



SECTION THRU ALTERNATE DIAPHRAGM



INTERMEDIATE CONCRETE DIAPHRAGM REMOVAL



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-265

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STEEL DIAPHRAGM

SHEET 13 OF 13
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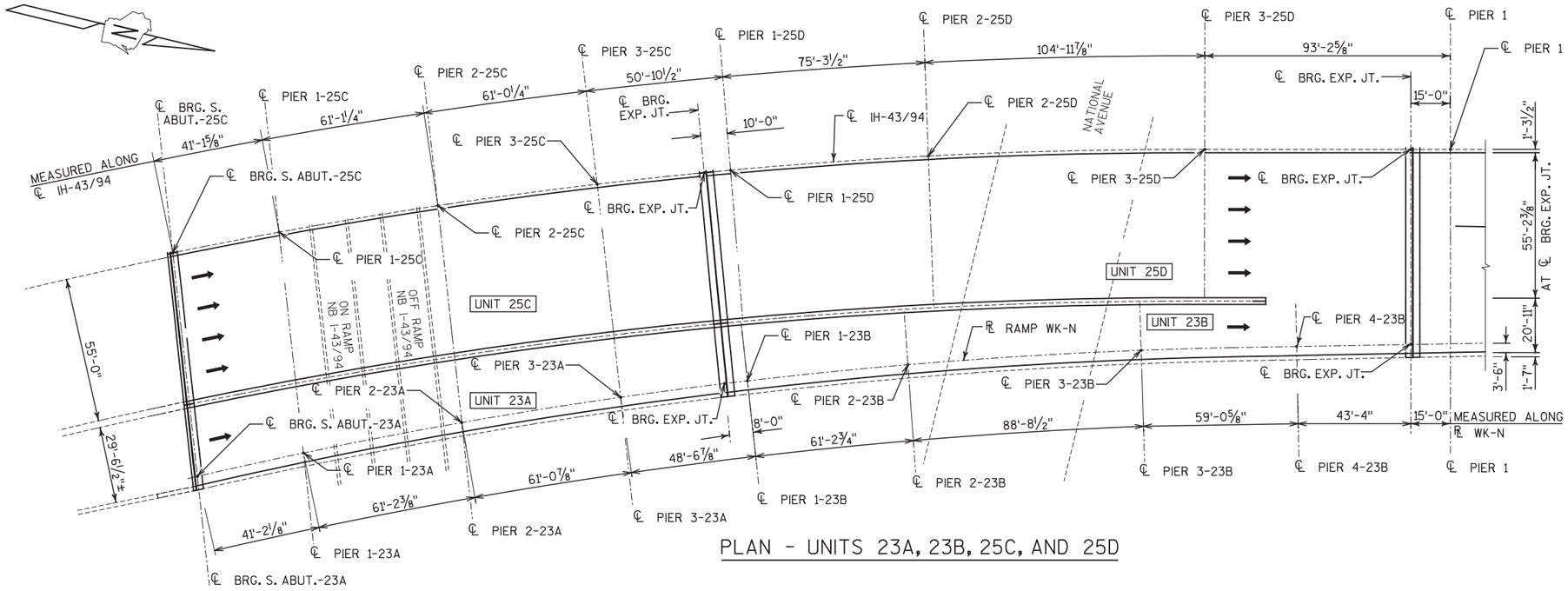
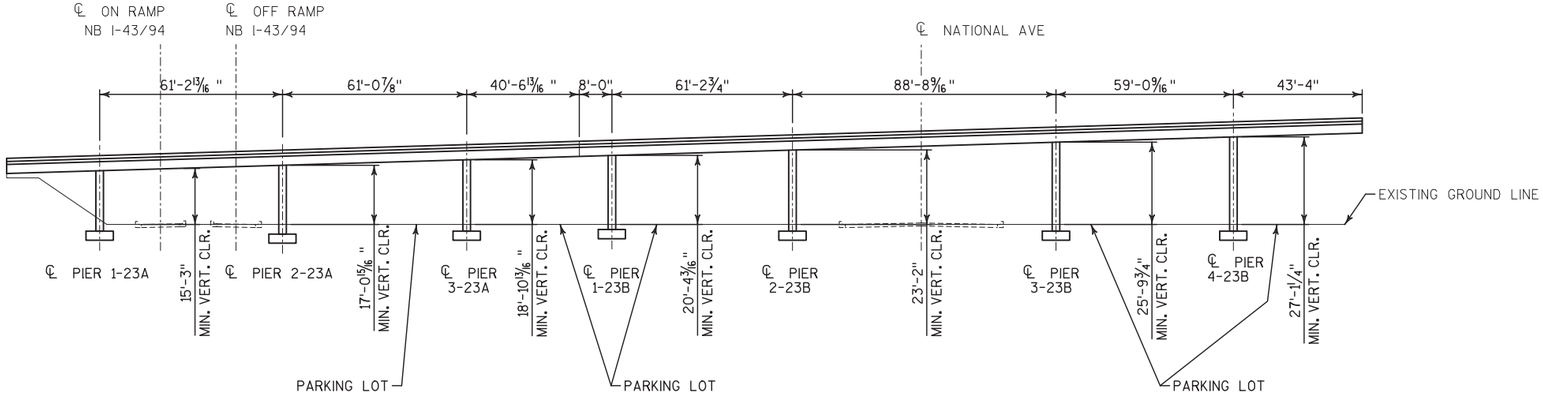
DATE: 1/31/2014
I.D. Justin_bohler



PLAN - UNITS 23A, 23B, 25C, AND 25D



ELEVATION - UNITS 23A, 23B, 25C, AND 25D

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION 1
2. QUANTITIES
3. GENERAL PLAN & ELEVATION 2
4. GENERAL PLAN & ELEVATION 3
5. GENERAL PLAN & ELEVATION 4
6. GENERAL PLAN & ELEVATION 5
7. GENERAL PLAN & ELEVATION 6
8. GENERAL PLAN & ELEVATION 7
9. GENERAL PLAN & ELEVATION 8
10. TYPICAL SECTIONS 1
11. TYPICAL SECTIONS 2
12. TYPICAL SECTIONS 3
13. TYPICAL SECTIONS 4
14. TYPICAL SECTIONS 5

SEE SHEET 15 FOR LIST OF DRAWINGS FOR STEEL RETROFIT SHEETS 15 THROUGH 28

STATE PROJECT NUMBER

1228-25-70

GENERAL NOTES

THE PROPOSED WORK INCLUDES CLEANING AND PAINTING ALL EXPOSED STEEL, INCLUDING BEARINGS, AND STEEL RETROFITS.

DRAWINGS SHALL NOT BE SCALED.

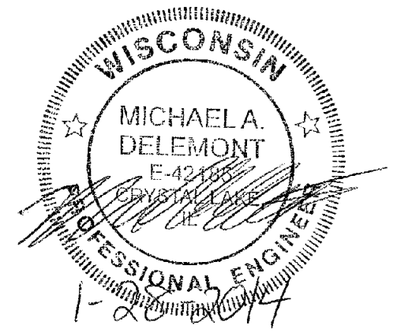
DIMENSIONS OF EXISTING ELEMENTS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE FIELD ENGINEER.

ORIGINAL PLANS AND OVERLAY PLANS OF EXISTING BRIDGE AND MARQUETTE INTERCHANGE PLANS ARE AVAILABLE AT WISDOT SOUTHEAST REGION OFFICE.

ALL STEEL NOT PAINTED AS PART OF THE MARQUETTE INTERCHANGE PROJECT IN 2004-2008 SHALL BE PAINTED DENIM (BLUE)-SW6523, B-G/B/138, IN ACCORDANCE WITH THE SPECIAL PROVISIONS. IN GENERAL, STEEL THAT IS PAINTED GRAY REQUIRES PAINTING, AND STEEL THAT IS PAINTED BLUE DOES NOT REQUIRE PAINTING.

HAUL ROADS AND ANY OTHER METHOD OF GAINING ACCESS TO THE BRIDGE IS CONSIDERED INCIDENTAL TO THE PAINTING OPERATIONS.



(SEAL APPLIES TO SHEETS 1 TO 14 ONLY)

NO.	DATE	REVISION	BY

URS
342 North Water Street
Seventh Floor
Milwaukee, WI 53202
(414) 831-4100

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 01/31/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-285

IH-43/94 OVER MENOMONEE RIVER VALLEY

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KNW	JDB	KNW	JDB

GENERAL PLAN AND ELEVATION

SHEET 1 OF 28
608

SE REGION CONTACT:
JOE GALLAMORE: 262-548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
MICHAEL DELEMONT (414) 831-4157

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STATE PROJECT NUMBER
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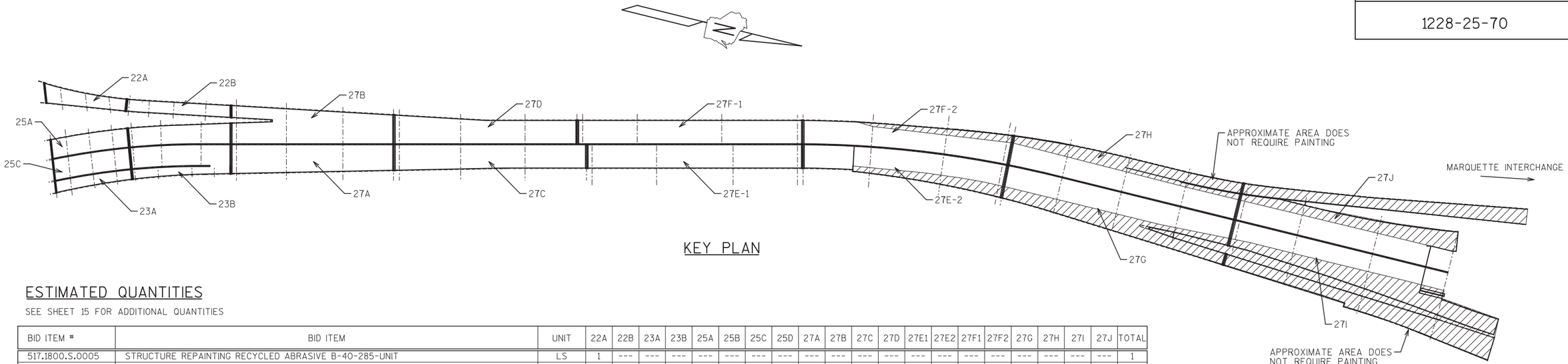

KEY PLAN

ESTIMATED QUANTITIES

SEE SHEET 15 FOR ADDITIONAL QUANTITIES

BID ITEM #	BID ITEM	UNIT	22A	22B	23A	23B	25A	25B	25C	25D	27A	27B	27C	27D	27E1	27E2	27F1	27F2	27G	27H	27I	27J	TOTAL
517.1800.S.0005	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
517.1800.S.0006	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
517.1800.S.0007	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
517.1800.S.0008	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
517.1800.S.0009	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
517.1800.S.0010	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
517.1800.S.0011	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	1
517.1800.S.0012	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	1
517.1800.S.0013	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1
517.1800.S.0014	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1
517.1800.S.0015	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	1
517.1800.S.0016	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
517.1800.S.0017	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1
517.1800.S.0018	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	1
517.1800.S.0019	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	1
517.1800.S.0020	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	1
517.1800.S.0021	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
517.1800.S.0022	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	1
517.1800.S.0023	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	1
517.1800.S.0024	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
517.4500.S.0005	NEGATIVE PRESSURE CONTAINMENT COLLECTION OF WASTE MATERIALS B-40-285-UNIT	LS	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
517.4500.S.0006	NEGATIVE PRESSURE CONTAINMENT COLLECTION OF WASTE MATERIALS B-40-285-UNIT	LS	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
517.4500.S.0007	NEGATIVE PRESSURE CONTAINMENT COLLECTION OF WASTE MATERIALS B-40-285-UNIT	LS	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
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517.4500.S.0010	NEGATIVE PRESSURE CONTAINMENT COLLECTION OF WASTE MATERIALS B-40-285-UNIT	LS	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
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517.4500.S.0012	NEGATIVE PRESSURE CONTAINMENT COLLECTION OF WASTE MATERIALS B-40-285-UNIT	LS	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	1
517.4500.S.0013	NEGATIVE PRESSURE CONTAINMENT COLLECTION OF WASTE MATERIALS B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1
517.4500.S.0014	NEGATIVE PRESSURE CONTAINMENT COLLECTION OF WASTE MATERIALS B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1
517.4500.S.0015	NEGATIVE PRESSURE CONTAINMENT COLLECTION OF WASTE MATERIALS B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	1
517.4500.S.0016	NEGATIVE PRESSURE CONTAINMENT COLLECTION OF WASTE MATERIALS B-40-285-UNIT	LS	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
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517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20
SPV.0060.4000	CLEANING AND PAINTING BEARINGS	EACH	22	16	16	16	28	21	32	24	12	18	12	12	16	12	16	12	12	12	16	16	341
		CATEGORY	2100	2110	2120	2130	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240	2250	2260	2270	2280	2290	

BID PRICE FOR THE ABOVE ITEMS INCLUDES ALL COORDINATION AND EFFORT REQUIRED TO ACCESS THE STEEL. SEE SPECIAL PROVISIONS FOR DETAILS.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

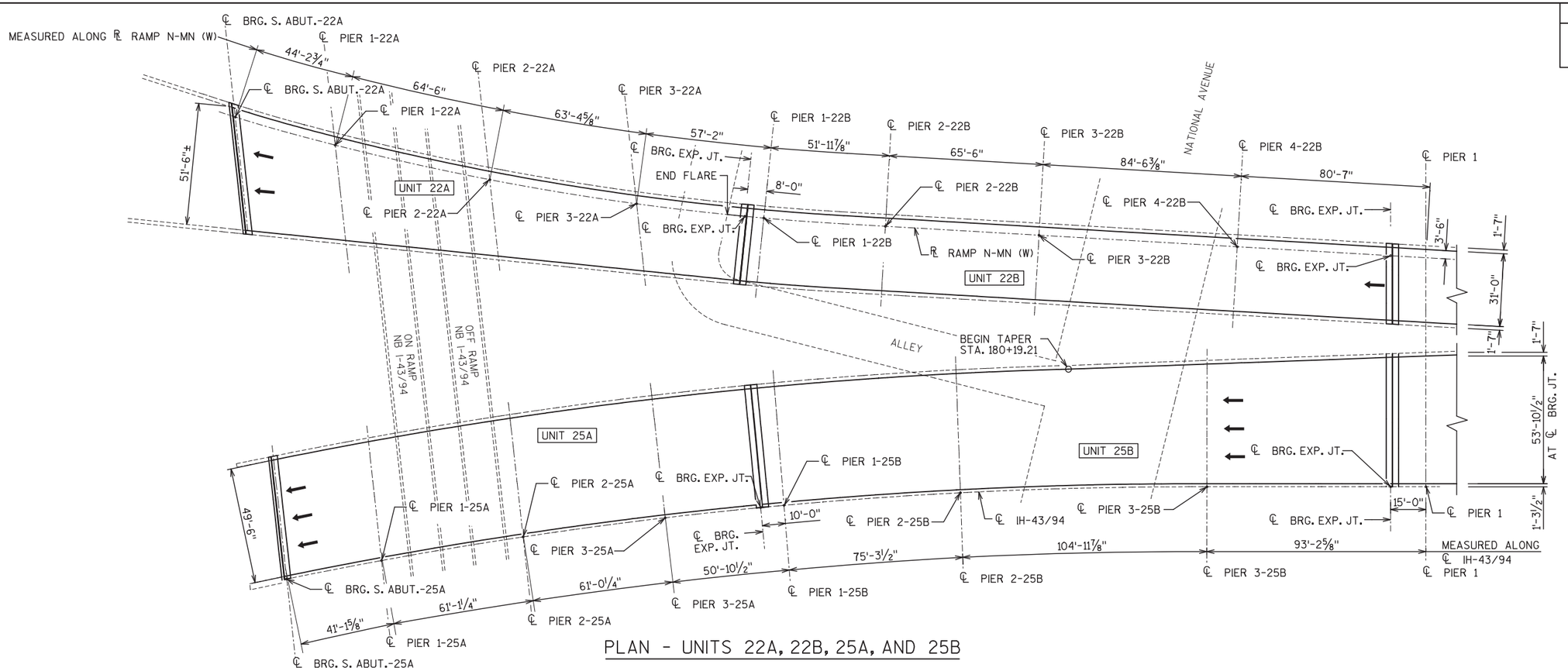
DRAWN BY KNW | PLANS CK'D. JDB

QUANTITIES

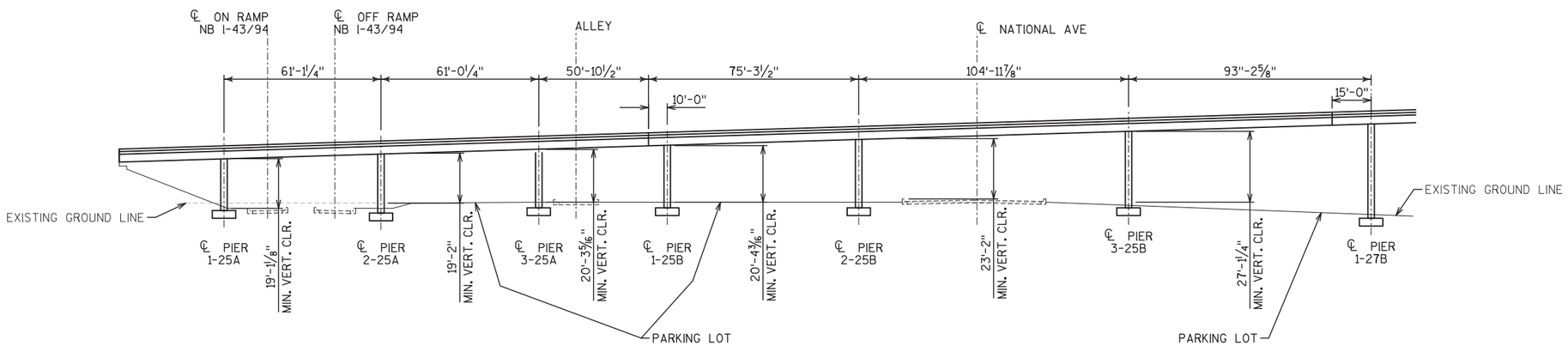
SHEET 2 OF 28
609

STATE PROJECT NUMBER

1228-25-70



PLAN - UNITS 22A, 22B, 25A, AND 25B



ELEVATION - UNITS 22A, 22B, 25A, AND 25B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

DRAWN BY KNW | PLANS CK'D. JDB

GENERAL PLAN AND ELEVATION

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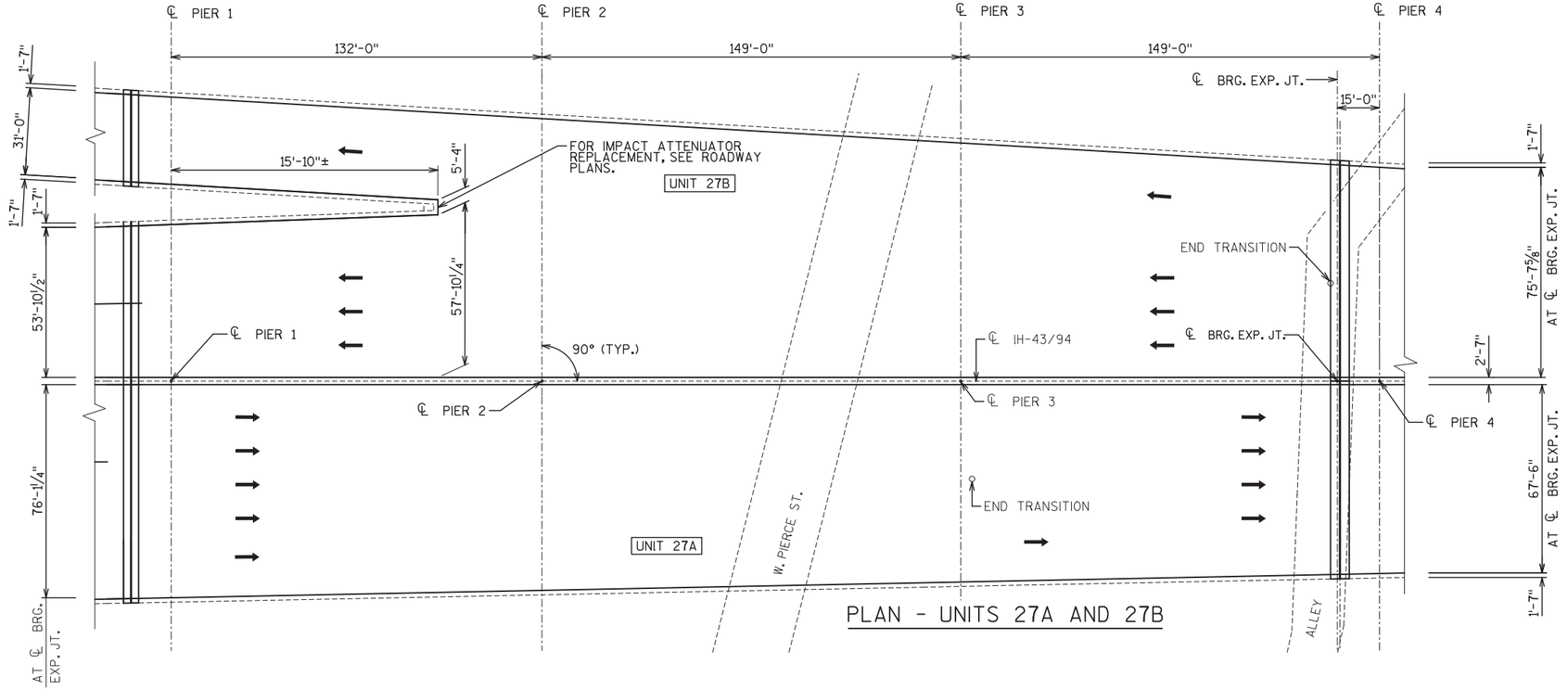
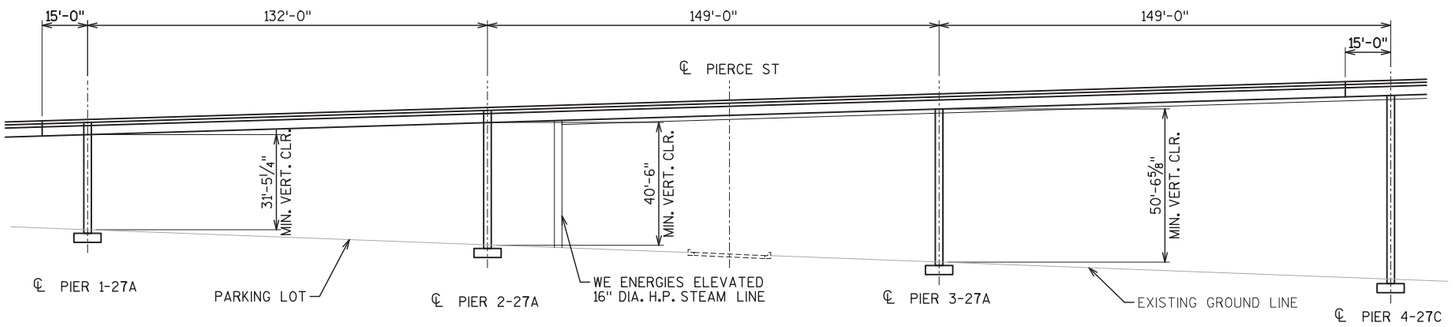
STATE PROJECT NUMBER

1228-25-70



PLAN - UNITS 27A AND 27B



ELEVATION - UNITS 27A AND 27B

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

DRAWN BY KNW | PLANS CK'D. JDB

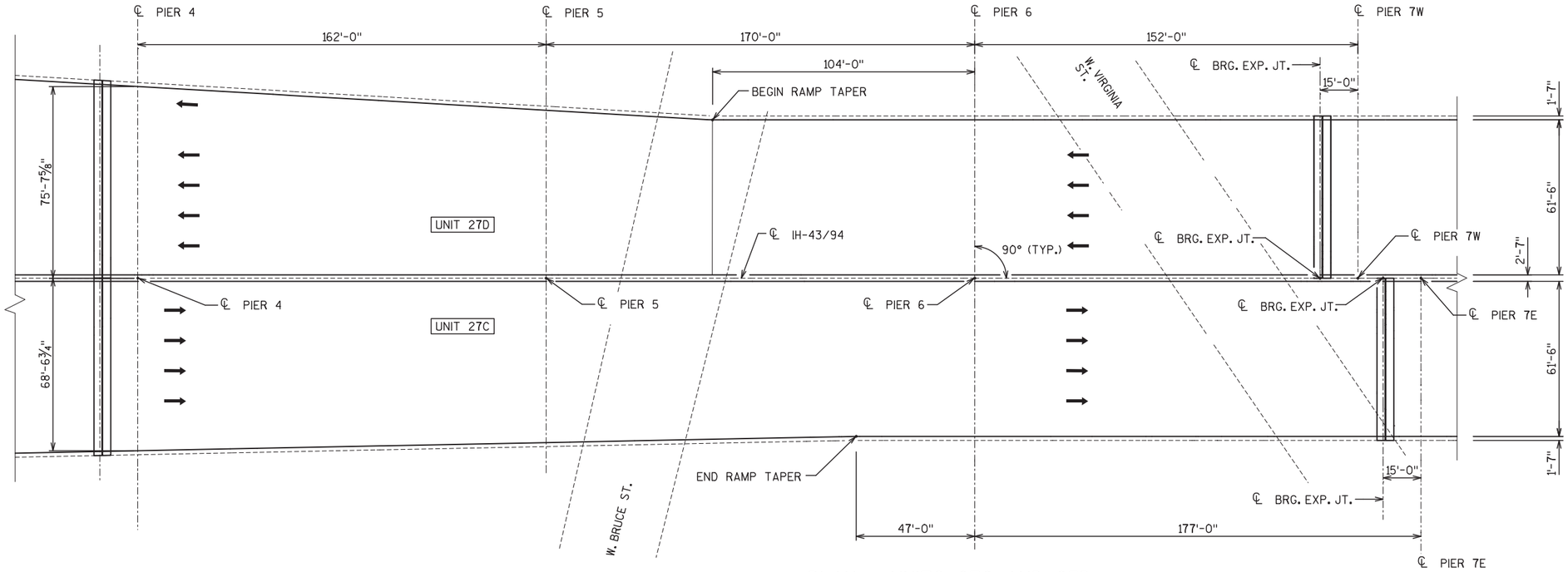
GENERAL PLAN AND ELEVATION

SHEET 4 OF 28

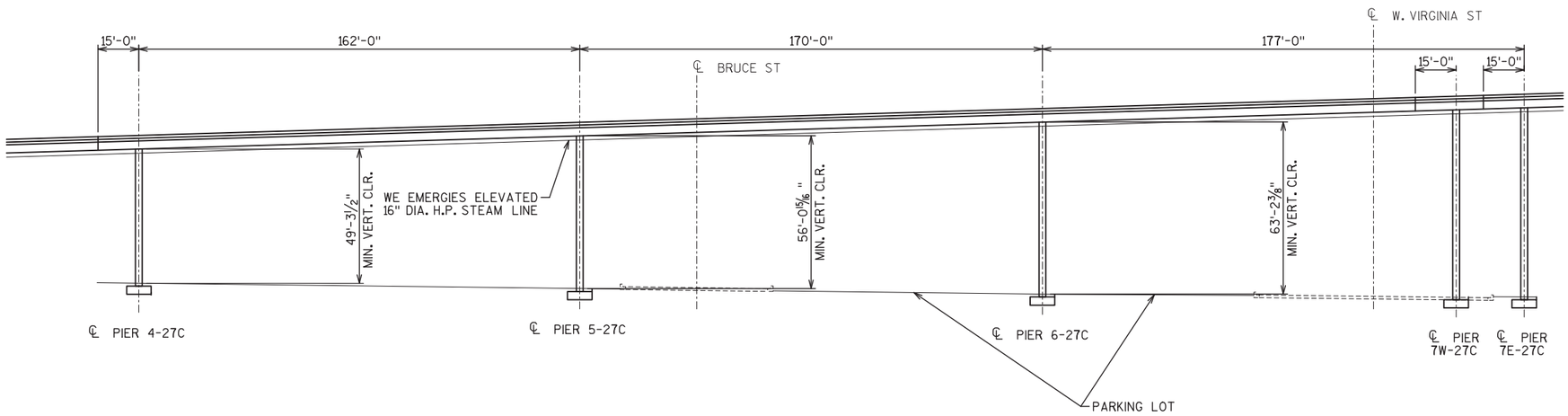
611

STATE PROJECT NUMBER

1228-25-70



PLAN - UNITS 27C AND 27D



ELEVATION - UNITS 27C AND 27D

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

DRAWN BY	KNW	PLANS CK'D.	JDB

GENERAL PLAN AND ELEVATION

SHEET 5 OF 28

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8

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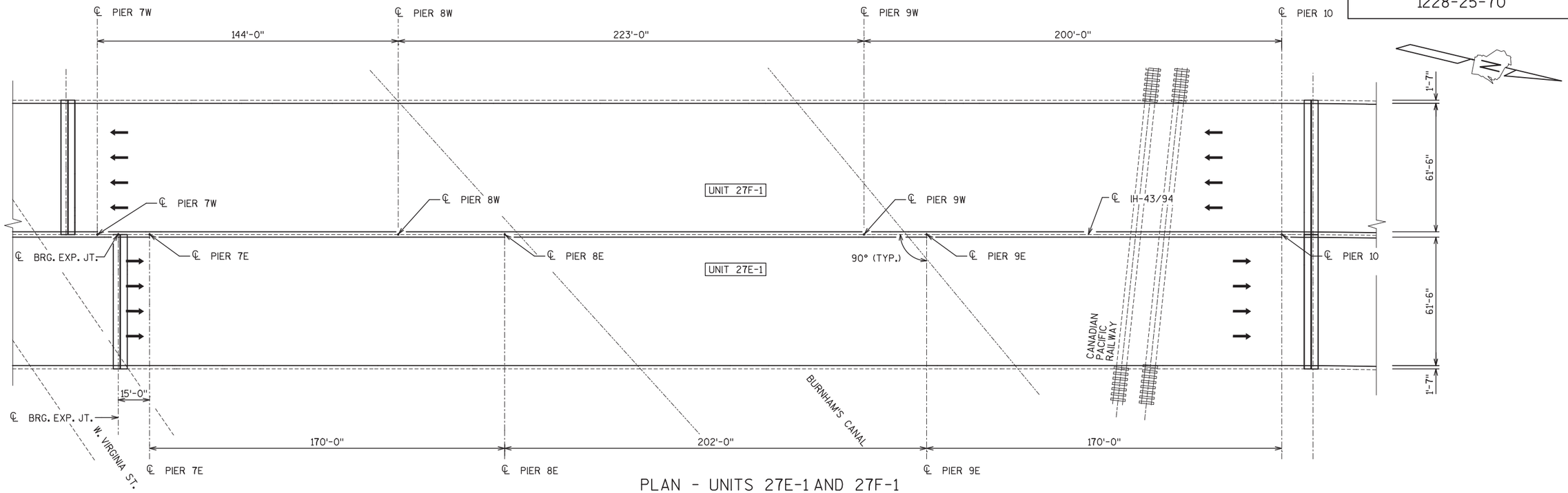
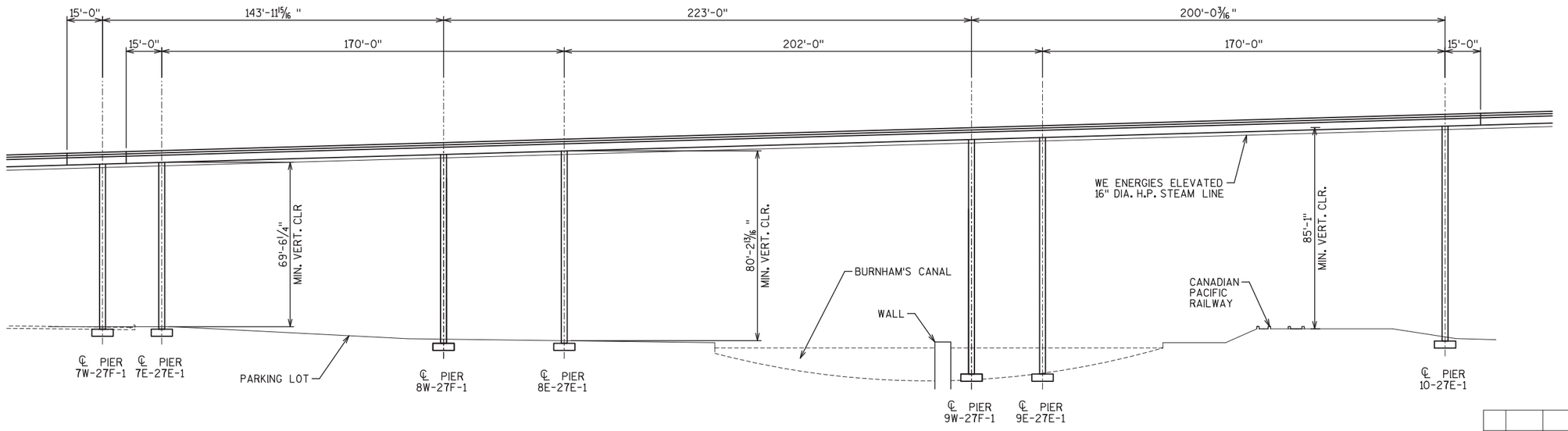
STATE PROJECT NUMBER

1228-25-70



PLAN - UNITS 27E-1 AND 27F-1



ELEVATION - UNITS 27E-1 AND 27F-1

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

DRAWN BY KNW | PLANS CK'D. JDB

GENERAL PLAN AND ELEVATION

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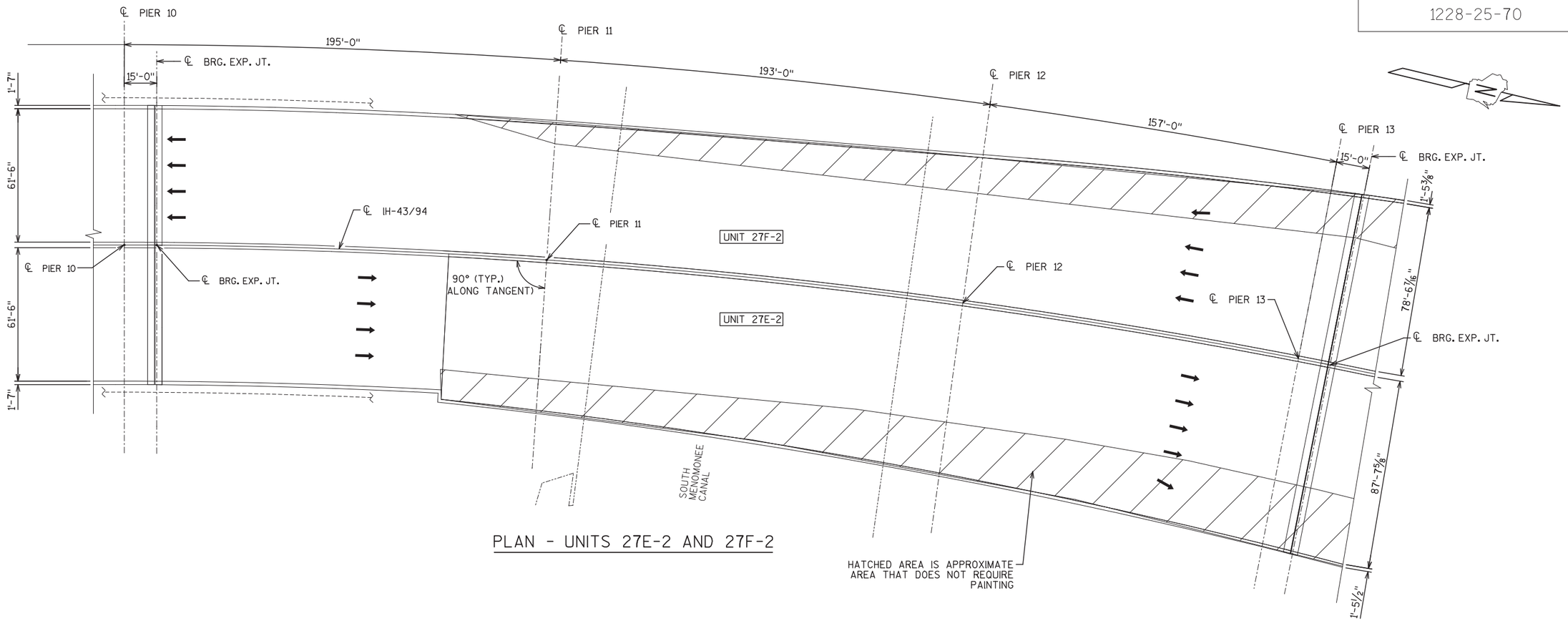
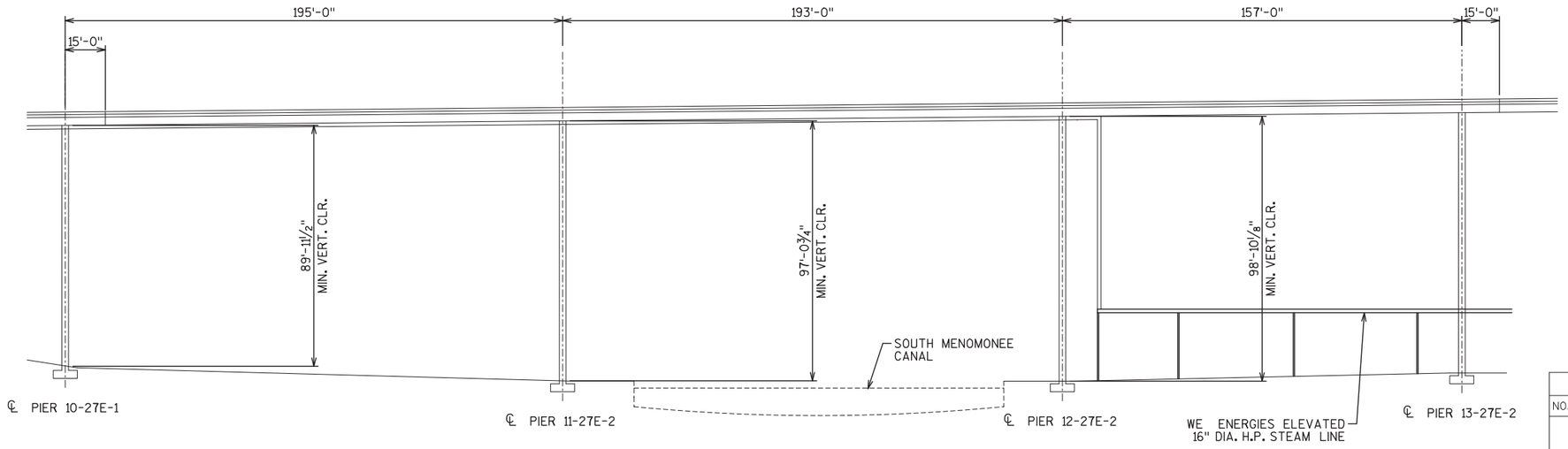
STATE PROJECT NUMBER
1228-25-70



PLAN - UNITS 27E-2 AND 27F-2

HATCHED AREA IS APPROXIMATE AREA THAT DOES NOT REQUIRE PAINTING



ELEVATION - UNITS 27E-2 AND 27F-2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

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GENERAL PLAN AND ELEVATION

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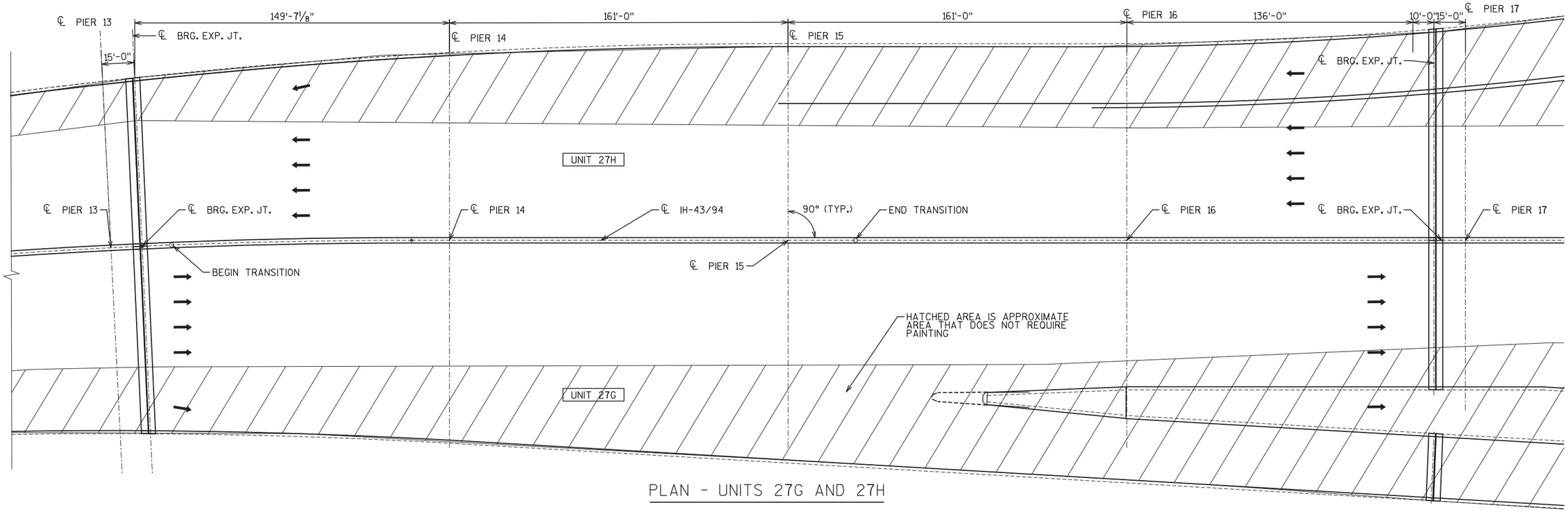
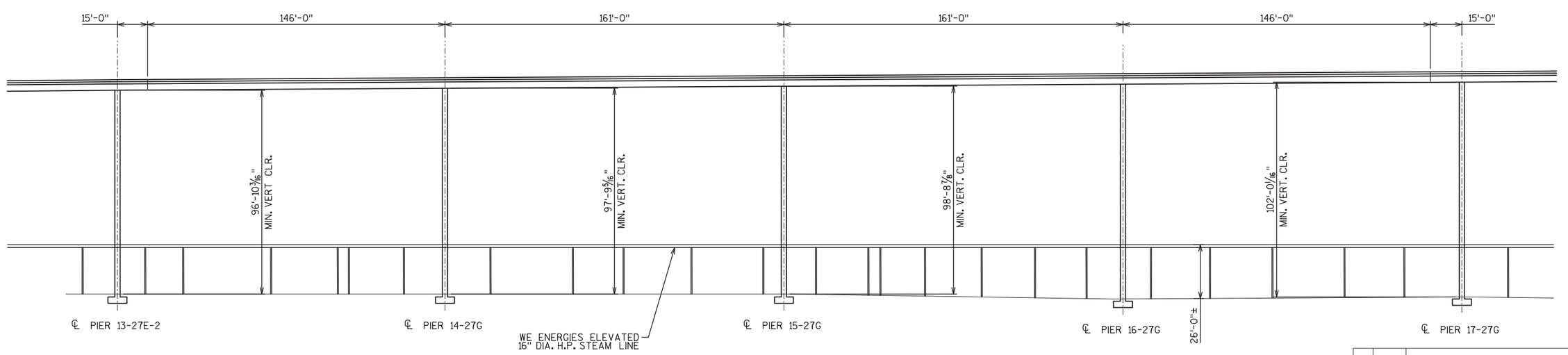
STATE PROJECT NUMBER

1228-25-70



PLAN - UNITS 27G AND 27H



ELEVATION - UNITS 27G AND 27H

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

DRAWN BY KNW | PLANS CK'D. JDB

GENERAL PLAN AND ELEVATION

SHEET 8 OF 28

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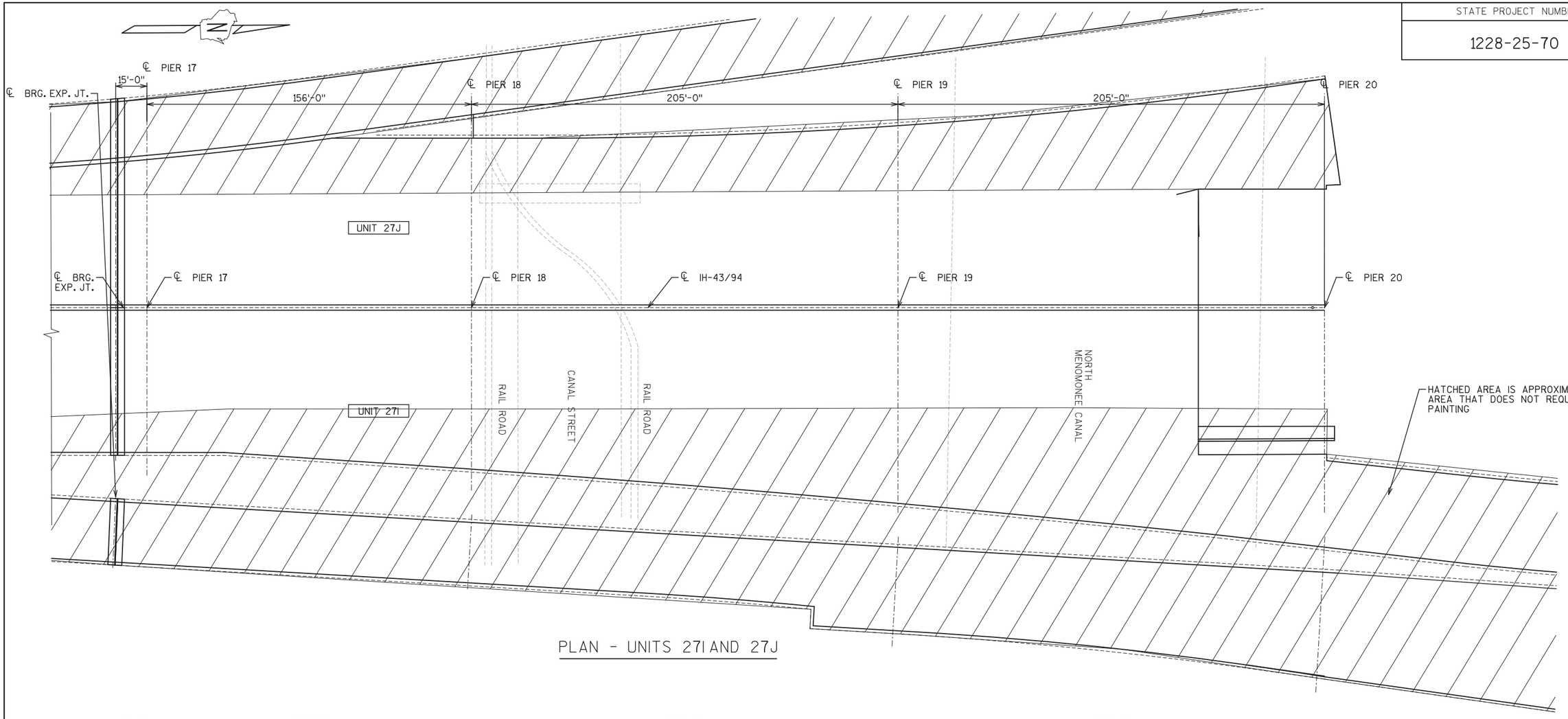
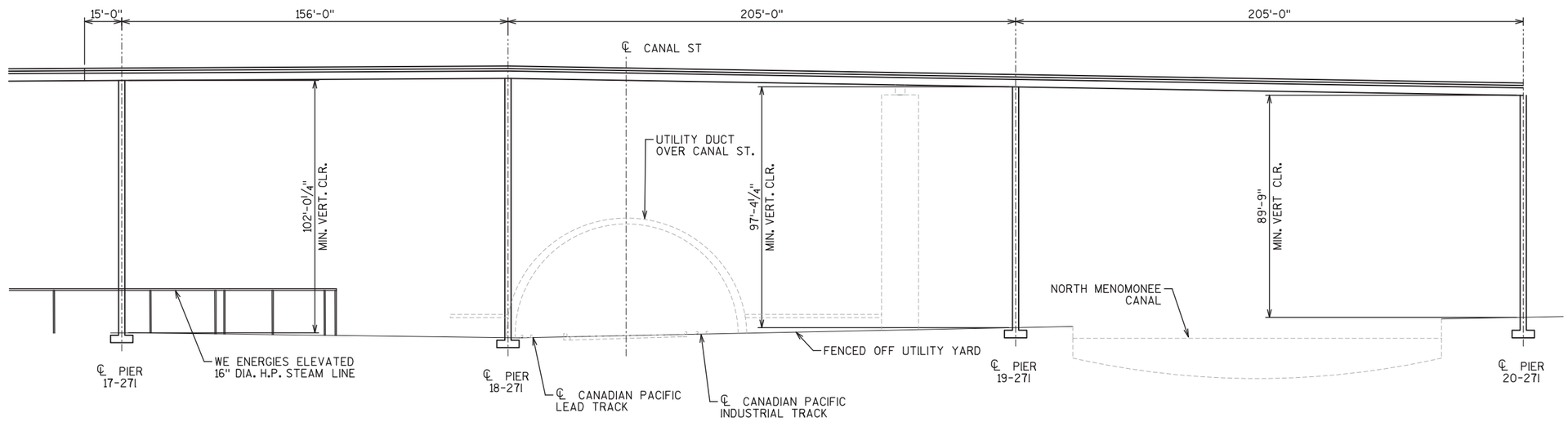
STATE PROJECT NUMBER

1228-25-70



PLAN - UNITS 27I AND 27J



ELEVATION - UNITS 27I AND 27J

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

DRAWN BY KNW | PLANS CK'D. JDB

GENERAL PLAN AND ELEVATION

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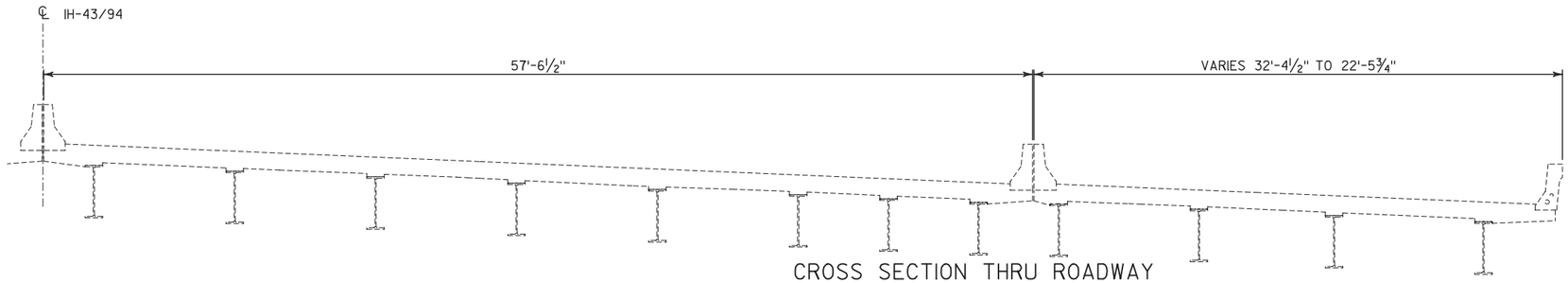
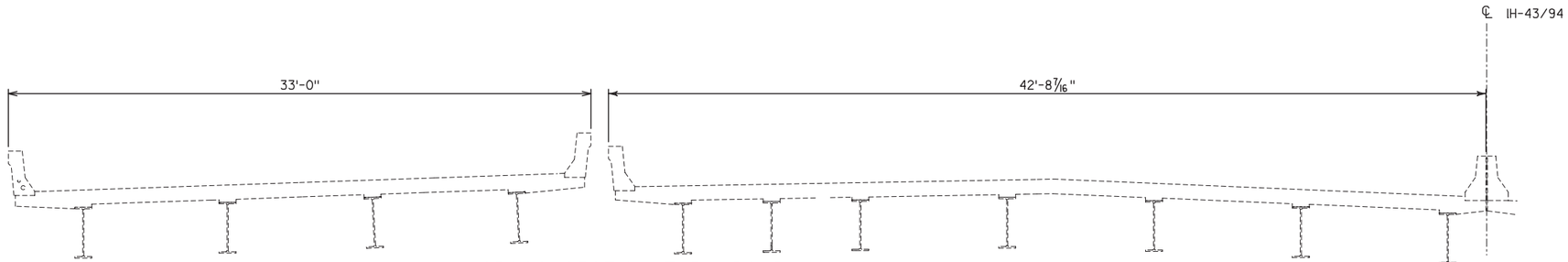
STATE PROJECT NUMBER
1228-25-70



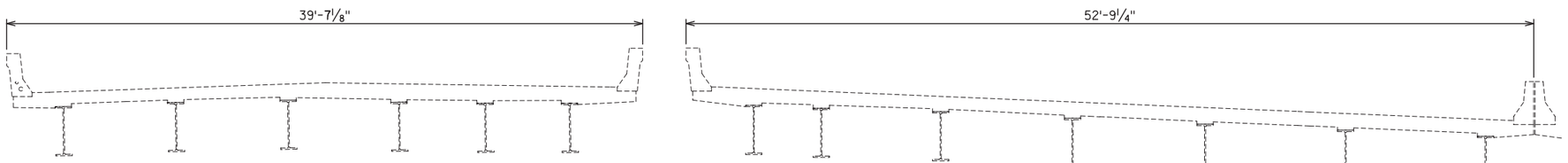
CROSS SECTION THRU ROADWAY

UNITS 23A, 23B, 25C, & 25D (LOOKING NORTH)
ALL STEEL TO BE PAINTED



CROSS SECTION THRU ROADWAY

UNITS 22B AND 25B
(LOOKING NORTH)
ALL STEEL TO BE PAINTED



CROSS SECTION THRU ROADWAY

UNITS 22A AND 25A
(LOOKING NORTH)
ALL STEEL TO BE PAINTED

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

DRAWN BY	KNW	PLANS CK'D.	JDB

TYPICAL SECTIONS

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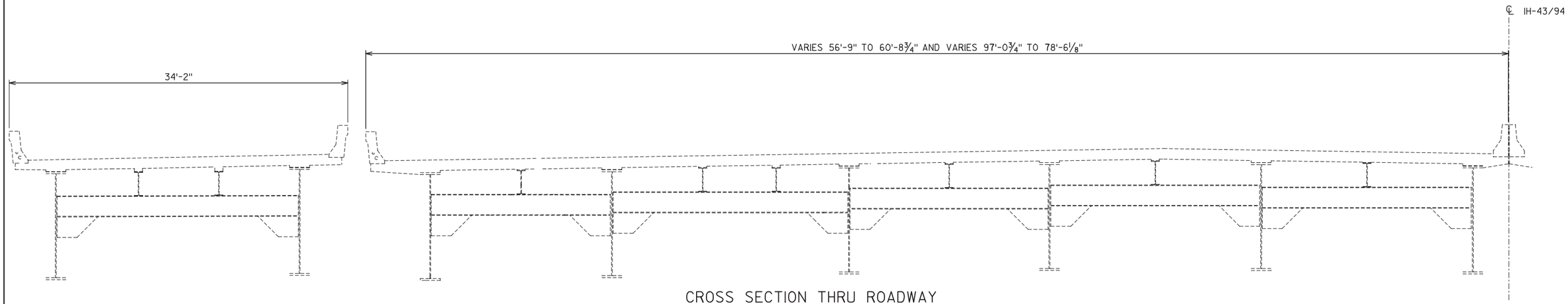
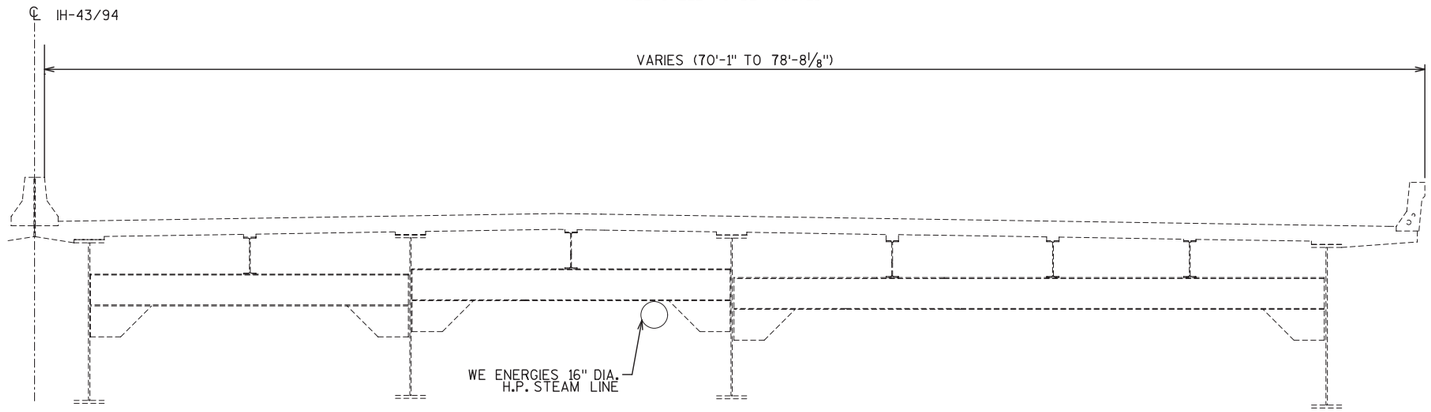
617

STATE PROJECT NUMBER
1228-25-70



CROSS SECTION THRU ROADWAY

UNIT 27B
(LOOKING NORTH)
ALL STEEL TO BE PAINTED



CROSS SECTION THRU ROADWAY

UNIT 27A
(LOOKING NORTH)
ALL STEEL TO BE PAINTED

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

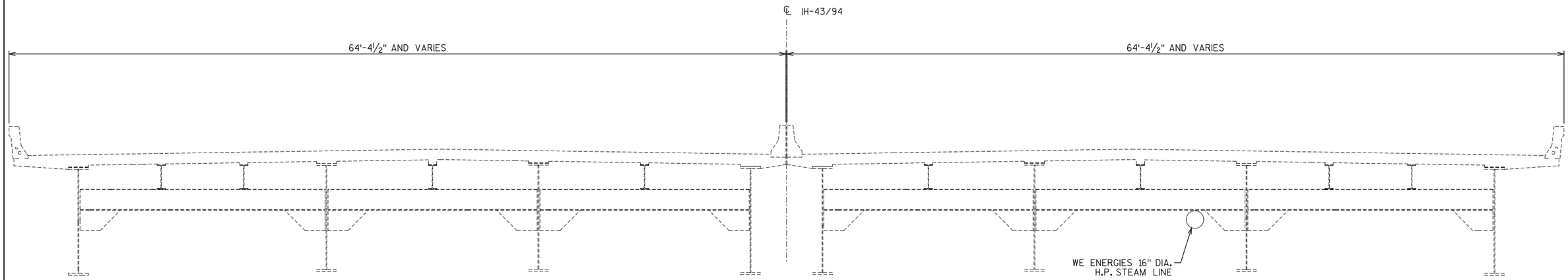
STRUCTURE B-40-285

DRAWN BY KNW | PLANS CK'D. JDB

TYPICAL SECTIONS

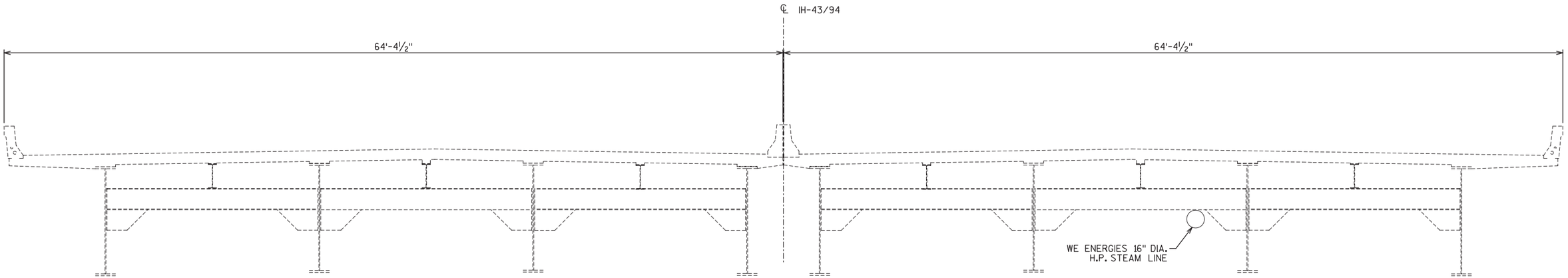
SHEET 11 OF 28
618

STATE PROJECT NUMBER
1228-25-70



CROSS SECTION THRU ROADWAY

UNITS 27C AND 27D
(LOOKING NORTH)
ALL STEEL TO BE PAINTED



CROSS SECTION THRU ROADWAY

UNITS 27E-1 AND 27F-1
(LOOKING NORTH)
ALL STEEL TO BE PAINTED

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

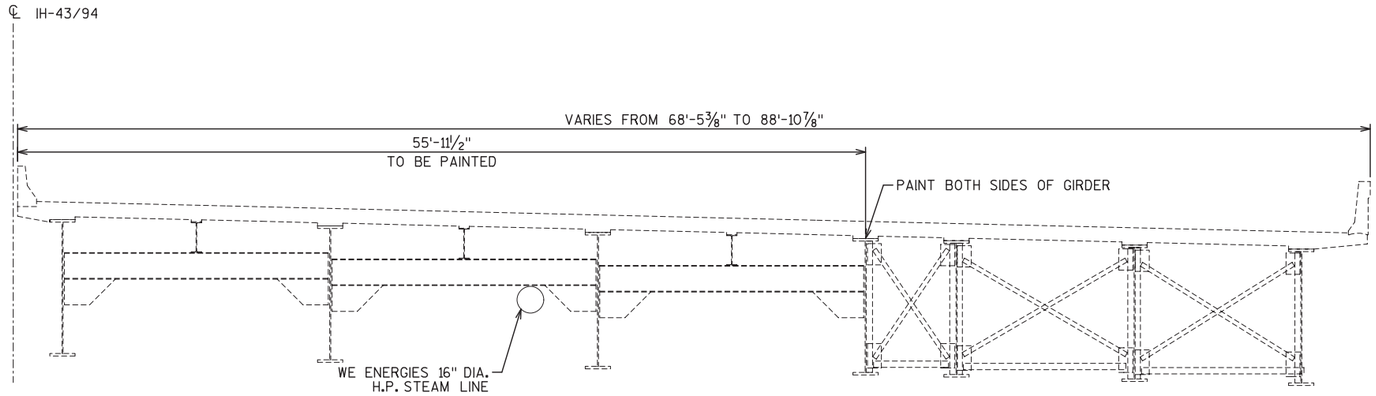
DRAWN BY KNW | PLANS CK'D. JDB

TYPICAL SECTIONS

SHEET 12 OF 28
619

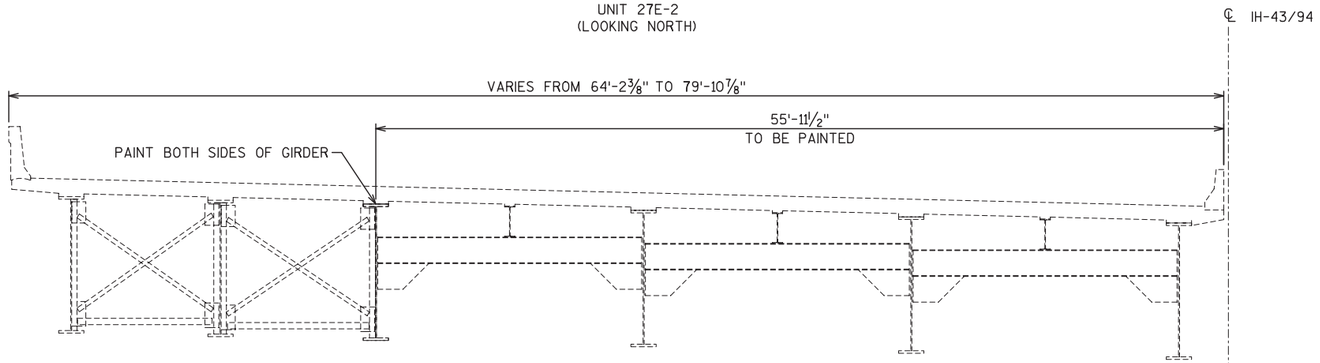
STATE PROJECT NUMBER

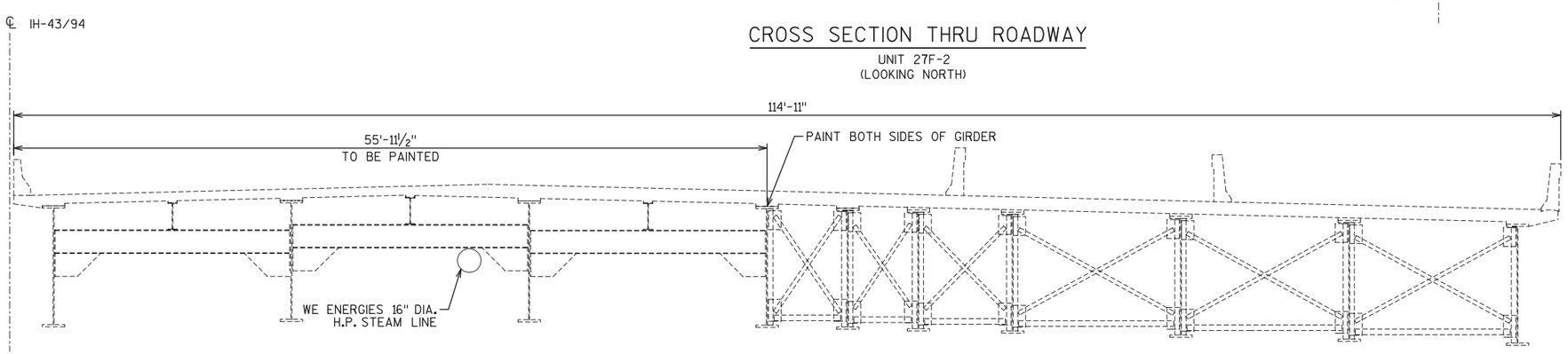
1228-25-70



CROSS SECTION THRU ROADWAY

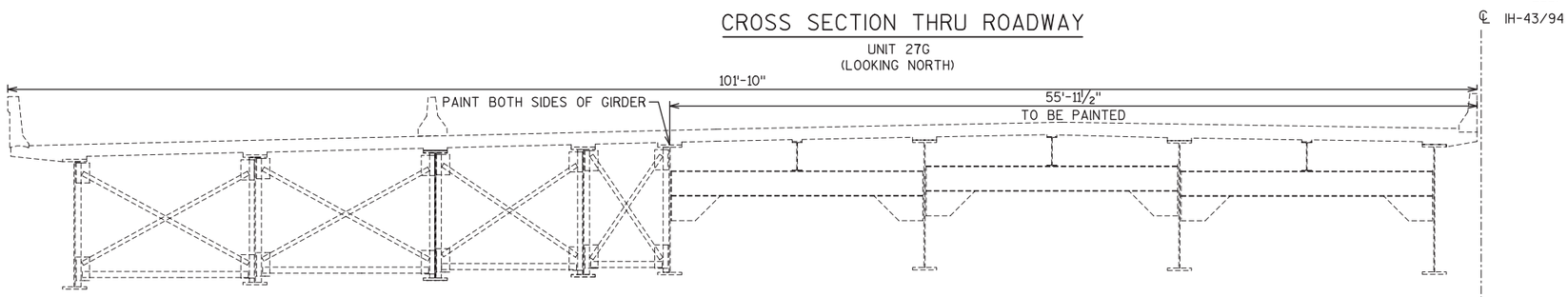
UNIT 27E-2
(LOOKING NORTH)





CROSS SECTION THRU ROADWAY

UNIT 27F-2
(LOOKING NORTH)



CROSS SECTION THRU ROADWAY

UNIT 27G
(LOOKING NORTH)

CROSS SECTION THRU ROADWAY

UNIT 27H
(LOOKING NORTH)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

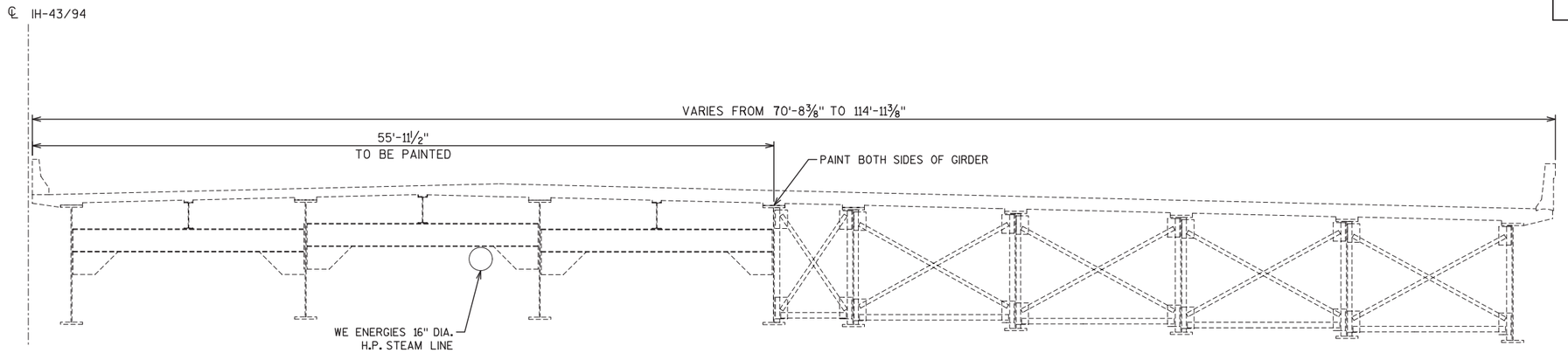
DRAWN BY KNW | PLANS CK'D. JDB

TYPICAL SECTIONS

SHEET 13 OF 28
620

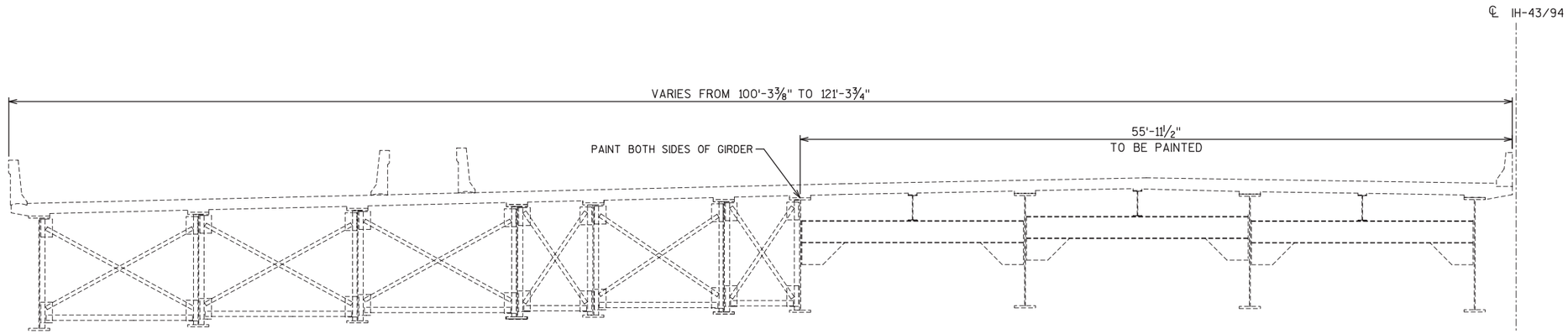
STATE PROJECT NUMBER

1228-25-70



CROSS SECTION THRU ROADWAY

UNITS 27I
(LOOKING NORTH)



CROSS SECTION THRU ROADWAY

UNITS 27J
(LOOKING NORTH)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-285

DRAWN BY KNW | PLANS CK'D. JDB

TYPICAL SECTIONS

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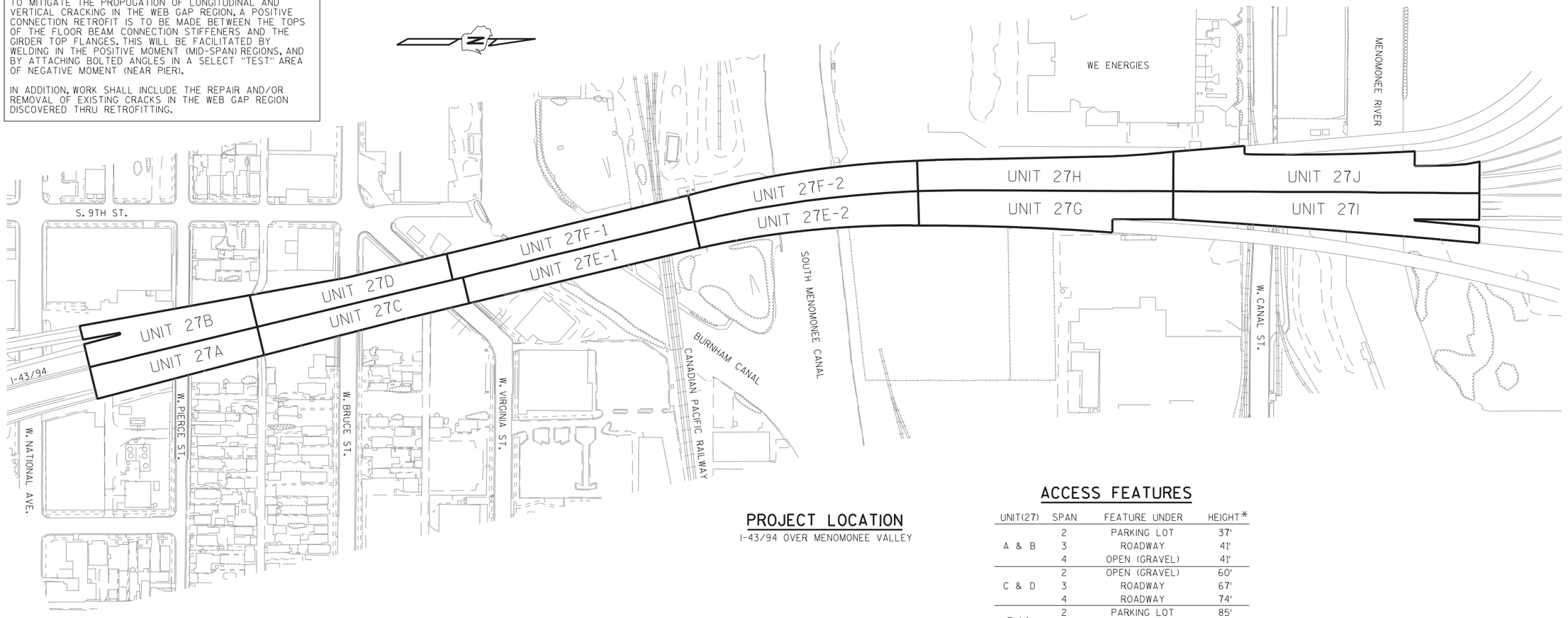
STATE PROJECT NUMBER

1228-25-70

SUMMARY OF WORK TO BE PERFORMED:

TO MITIGATE THE PROPOGATION OF LONGITUDINAL AND VERTICAL CRACKING IN THE WEB GAP REGION, A POSITIVE CONNECTION RETROFIT IS TO BE MADE BETWEEN THE TOPS OF THE FLOOR BEAM CONNECTION STIFFENERS AND THE GIRDER TOP FLANGES. THIS WILL BE FACILITATED BY WELDING IN THE POSITIVE MOMENT (MID-SPAN) REGIONS, AND BY ATTACHING BOLTED ANGLES IN A SELECT "TEST" AREA OF NEGATIVE MOMENT (NEAR PIER).

IN ADDITION, WORK SHALL INCLUDE THE REPAIR AND/OR REMOVAL OF EXISTING CRACKS IN THE WEB GAP REGION DISCOVERED THRU RETROFITTING.



PROJECT LOCATION

I-43/94 OVER MENOMONEE VALLEY

ACCESS FEATURES

UNIT(27)	SPAN	FEATURE UNDER	HEIGHT*
A & B	2	PARKING LOT	37'
	3	ROADWAY	41'
	4	OPEN (GRAVEL)	41'
C & D	2	OPEN (GRAVEL)	60'
	3	ROADWAY	67'
	4	ROADWAY	74'
E-1 & F-1	2	PARKING LOT	85'
	3	WATERWAY	96'
	4	RAILROAD	104'
E-2 & F-2	1	OPEN (GRASS/GRAVEL)	106'
	2	WATERWAY	111'
	3	OPEN (GRAVEL)	110'
G & H	1	OPEN (GRAVEL)**	111'
	2	OPEN (GRAVEL)**	111'
	3	OPEN (GRAVEL)**	112'
	4	OPEN (GRAVEL)**	114'
I & J	2	OPEN (GRAVEL)**	113'
	3	OPEN (GRAVEL)**	112'
	4	WATERWAY	111'
	5	OPEN (GRAVEL)**	102'

* HEIGHT IS THE APPROXIMATE DISTANCE BTWN THE TOP OF CONNECTION STIFFENER AND THE GROUND/WATERWAY SURFACE BELOW THE STRUCTURE.

** FENCED IN AREA, SOME WE ENERGIES SURFACE UTLITIES

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS. EXISTING STRUCTURE PLANS ARE AVAILABLE AT THE WISCONSIN DEPARTMENT OF TRANSPORTATION WEBSITE.

THE TABLE "ACCESS FEATURES" IS FOR REFERENCE ONLY. CONTRACTOR TO VERIFY THE EXISTING FIELD CONDITIONS AND ACCESS CONSTRAINTS.

☆ RETROFIT QUANTITIES ARE THE NUMBER OF CONNECTION STIFFENERS (OR "LOCATIONS") TO BE RETROFITTED WITH THE APPROPRIATE DETAIL PROVIDED ON THE FOLLOWING SHEETS.

△ STEEL CRACK REPAIR QUANTITY IS BASED ON THE RATE OF CRACK PROPAGATION DOCUMENTED THRU CONSECUTIVE INSPECTIONS. THE ACTUAL NUMBER OF CRACKS REPAIRED WILL BE THE BASIS FOR PAYMENT.

LIST OF DRAWINGS

SEE SHEET 1 FOR LIST OF DRAWINGS FOR STRUCTURE REPAINTING SHEETS 1 THROUGH 14

15. GENERAL PLAN
16. RETROFIT AND REPAIR DETAILS
17. UNIT 27A
18. UNIT 27B
19. UNIT 27C
20. UNIT 27D
21. UNIT 27E-1
22. UNIT 27F-1
23. UNIT 27E-2
24. UNIT 27F-2
25. UNIT 27G
26. UNIT 27H
27. UNIT 27I
28. UNIT 27J

TOTAL ESTIMATED QUANTITIES

	BID ITEM #	BID ITEM	UNIT	22A	22B	23A	23B	25A	25B	25C	25D	27A	27B	27C	27D	27E1	27E2	27F1	27F2	27G	27H	27I	27J	TOTAL
☆	SPV.0060.4005	BOLTED ANGLE RETROFIT SPECIAL	EACH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	24	---	24
☆	SPV.0060.4006	WELD RETROFIT SPECIAL	EACH	---	---	---	---	---	---	---	---	80	71	71	84	80	80	80	77	109	105	94	103	1,034
△	SPV.0060.4007	STEEL CRACK REPAIR SPECIAL	EACH	---	---	---	---	---	---	---	---	3	6	9	9	3	3	3	11	11	22	14	6	100
			CATEGORY	2100	2110	2120	2130	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240	2250	2260	2270	2280	2290	

STRUCTURE DESIGN CONTACTS:

CRAIG WEHRLE	(608) 266-8487
ANDREW SMITH	(608) 266-0989

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher KAR 01/31/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-285

MENOMONEE VALLEY BRIDGE

COUNTY MILWAUKEE | ~~TOWN~~ CITY ~~VILLAGE~~ MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY N/A | DESIGN CK'D. N/A | DRAWN BY ADS | PLANS CK'D. SAD

GENERAL PLAN

SHEET 15 OF 28

622

8

8

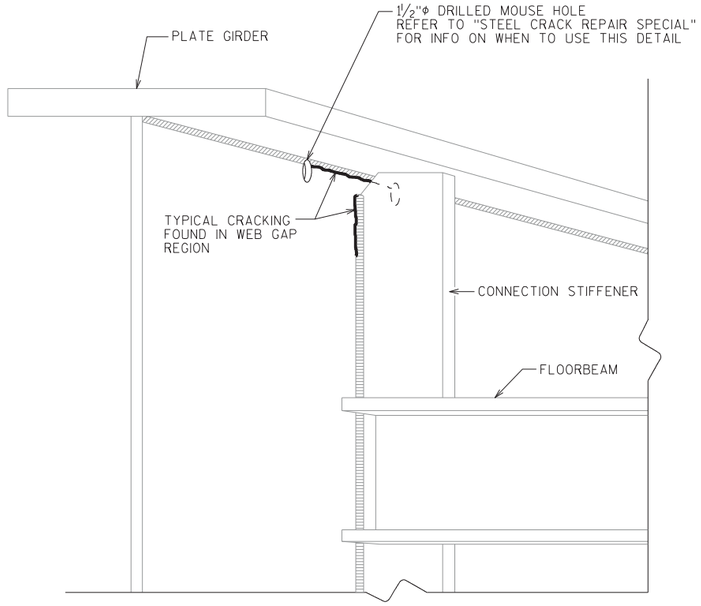
SCALE = 125

I.D. 1228-25-00

DATE: JAN 2014

STATE PROJECT NUMBER

1228-25-70



STEEL CRACK REPAIR

NOTES:

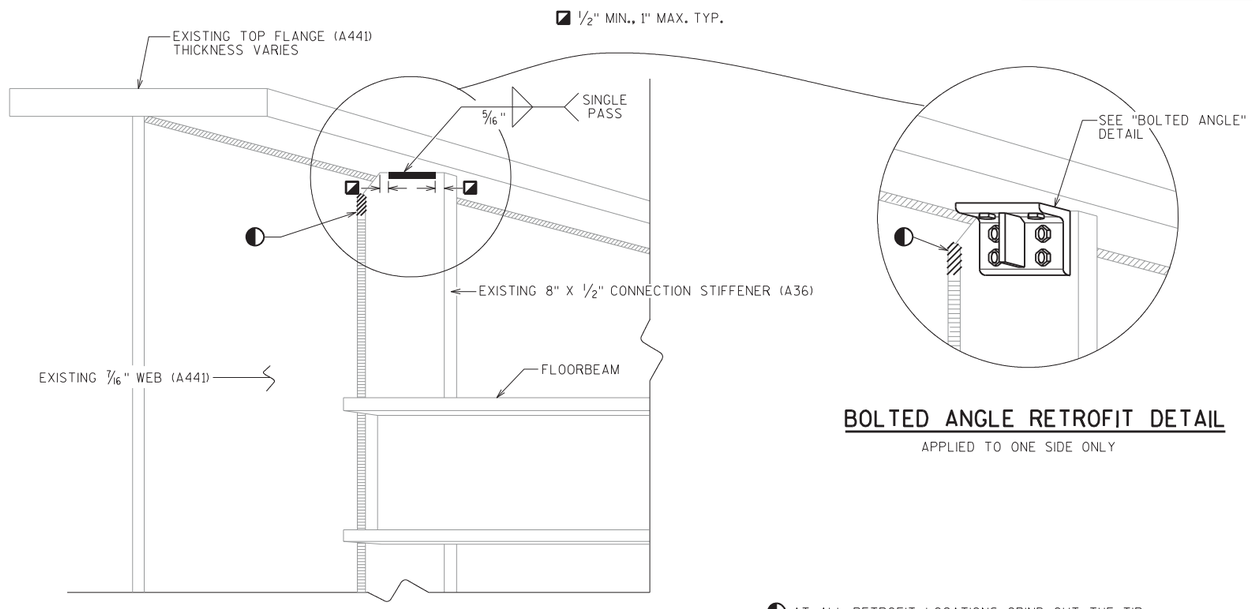
SEE SPECIAL PROVISIONS FOR RETROFIT PREPARATION AND INSTALLATION REQUIREMENTS.

SEE UNIT FRAMING PLANS FOR RETROFIT LOCATIONS.

DURING RETROFITTING, THE EXISTING WELDS SHALL BE INSPECTED FOR CRACKS. SEE RETROFIT SPECIALS FOR DETAILS. INSPECTION TO BE PAID FOR UNDER THE APPLICABLE RETROFIT SPECIAL.

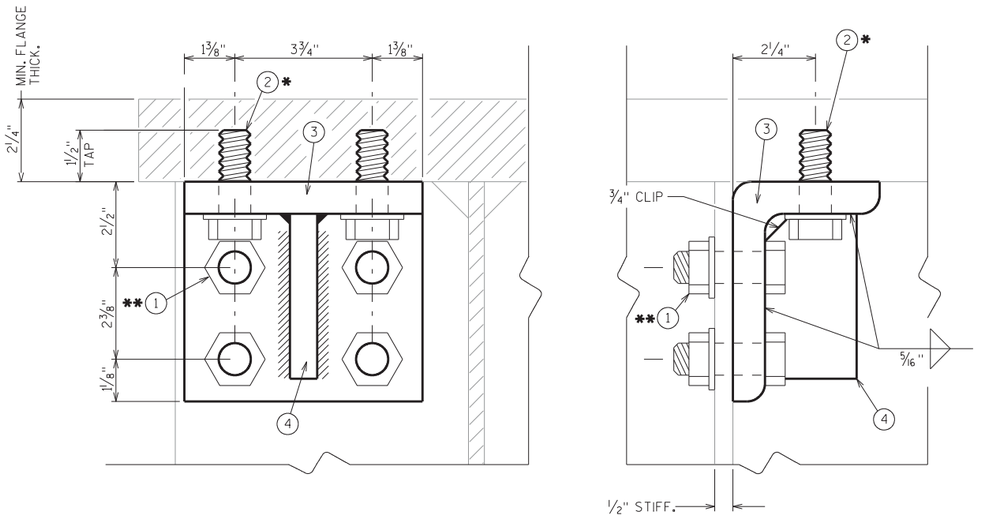
CRACKS DISCOVERED THRU INSPECTION SHALL BE REPAIRED AND PAID FOR IN ACCORDANCE WITH THE SPECIAL PROVISION "STEEL CRACK REPAIR".

CRACKS FOUND BUT NOT FOLLOWING THE TYPICAL NATURE DEPICTED IN THE STEEL CRACK REPAIR DETAIL SHALL BE BROUGHT TO THE ATTENTION OF THE FIELD ENGINEER BEFORE REPAIRING.



WELD RETROFIT DETAIL

◐ AT ALL RETROFIT LOCATIONS GRIND OUT THE TIP OF THE EXISTING VERTICAL WELD TO ½" BELOW THE COPE (NEAR AND FAR SIDE). IF EXISTING WELD IS ½" OR MORE BELOW THE COPE, LEAVE AS IS. WORK INCIDENTAL TO THE APPLICABLE RETROFIT SPECIAL.



BOLTED ANGLE DETAIL

1. GALVANIZED ⅞"Φ A325 BOLTS, NUTS & WASHERS, TYP.
2. PLAIN ⅞"Φ A325 BOLTS & WASHERS. BOLT LENGTH = 2.375" DRILL AND TAP 1½" INTO THE EXISTING FLANGE.
3. STEEL L6X4X⅞"X6½"
4. ¾" THICK STEEL STIFFENER PLATE, CENTERED AND WELDED TO ANGLE

* MUST BE PLACED PRIOR TO ** BOLTS.

** REQUIRES WRENCH ON ANGLE SIDE AND SOCKET ON OPPOSITE FOR TIGHTENING. MUST BE PLACED AFTER * BOLTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

RETROFIT AND REPAIR DETAILS

SHEET 16

623

8

8

SCALE = 0.5

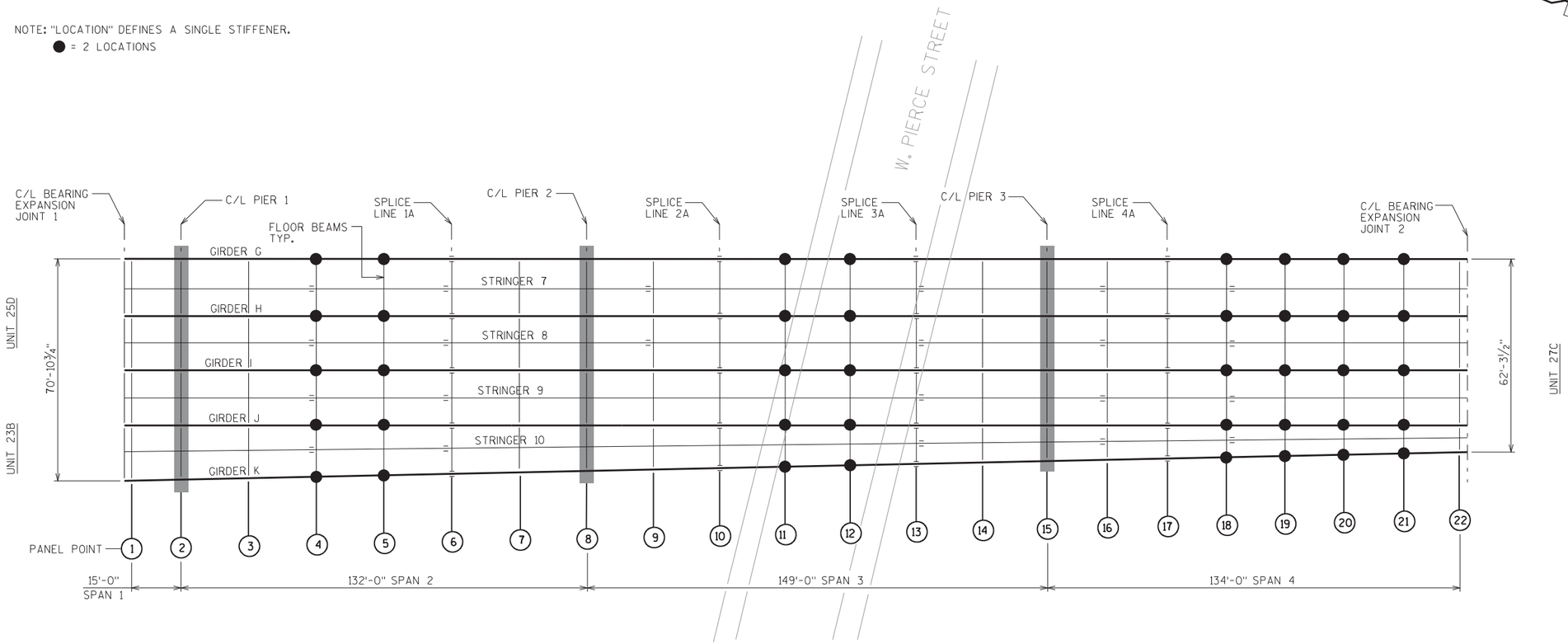
STATE PROJECT NUMBER
1228-25-70

LEGEND

NO. OF LOCATIONS, THIS SHEET

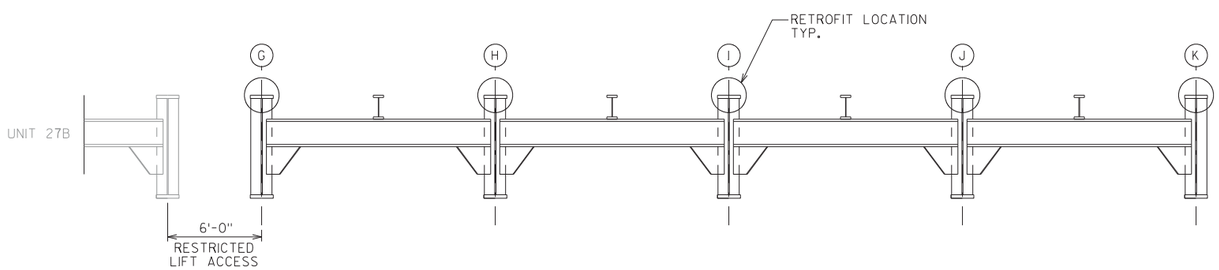
- PROPOSED WELD RETROFIT LOCATION (80)
- FIELD SPLICE

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● = 2 LOCATIONS



FRAMING PLAN - UNIT 27A

NORTHBOUND



SECTION

LOOKING NORTH

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27A

SHEET 17

624

SCALE = 20

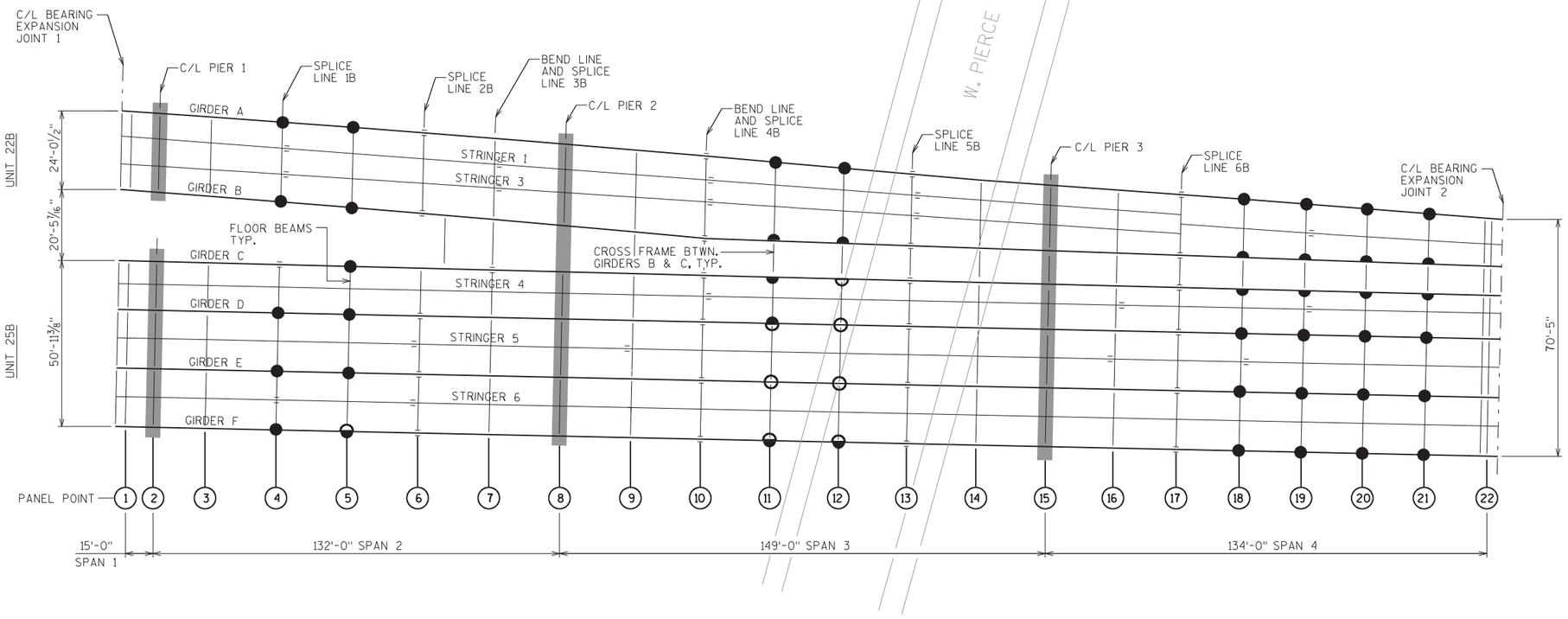
STATE PROJECT NUMBER

1228-25-70

LEGEND

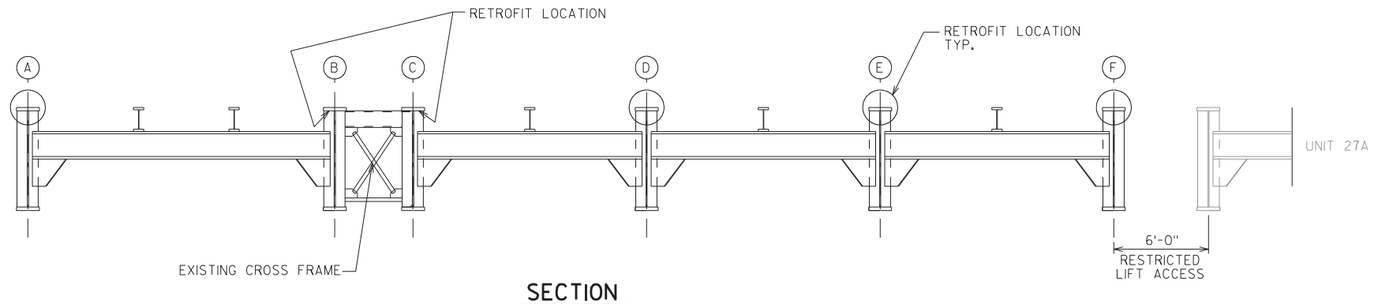
- PROPOSED WELD RETROFIT LOCATION (71)
- EXISTING WELD RETROFIT LOCATION (TO REMAIN)
- FIELD SPLICE

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● ○ = 2 LOCATIONS



FRAMING PLAN - UNIT 27B

SOUTHBOUND



SECTION

LOOKING NORTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27B

SHEET 18

625

SCALE = 20

8

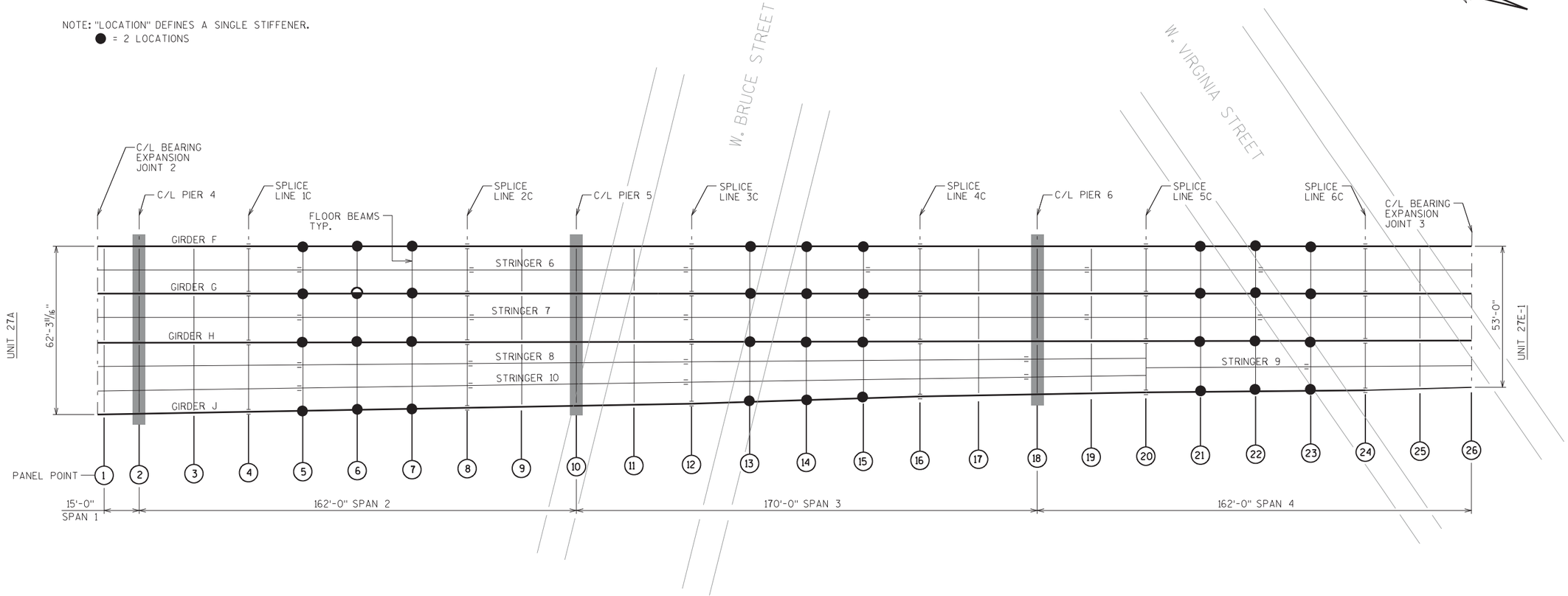
8

STATE PROJECT NUMBER
1228-25-70

LEGEND

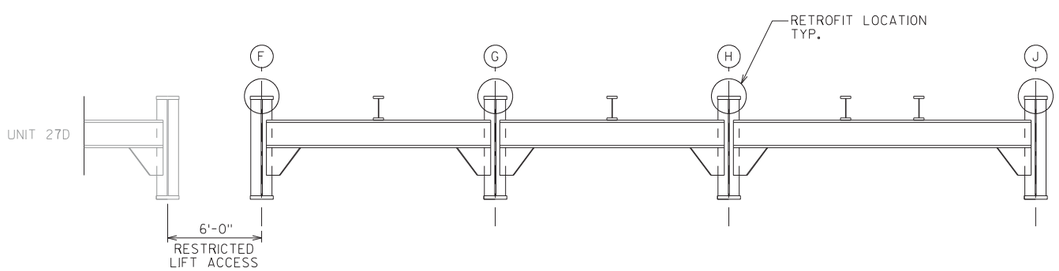
- PROPOSED WELD RETROFIT LOCATION (71)
- EXISTING WELD RETROFIT LOCATION (TO REMAIN)
- FIELD SPLICE

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● = 2 LOCATIONS



FRAMING PLAN - UNIT 27C

NORTHBOUND



SECTION

LOOKING NORTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27C

SHEET 19

626

SCALE = 20

8

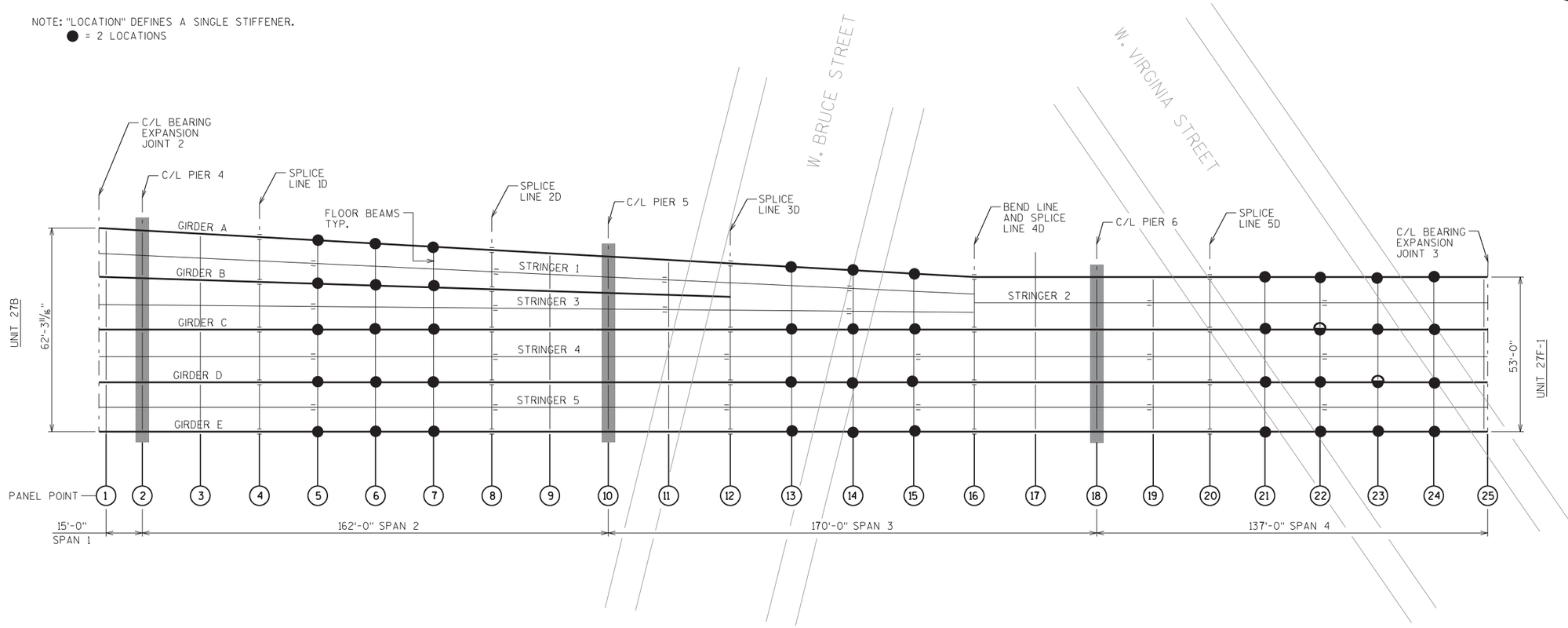
8

STATE PROJECT NUMBER
1228-25-70

LEGEND

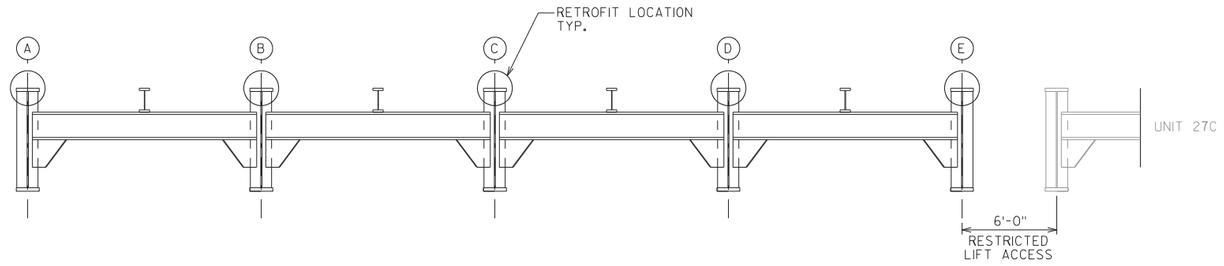
- PROPOSED WELD RETROFIT LOCATION (84)
- EXISTING WELD RETROFIT LOCATION (TO REMAIN)
- FIELD SPLICE

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● = 2 LOCATIONS



FRAMING PLAN - UNIT 27D

SOUTHBOUND



SECTION

LOOKING NORTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27D

SHEET 20

627

SCALE = 20

8

8

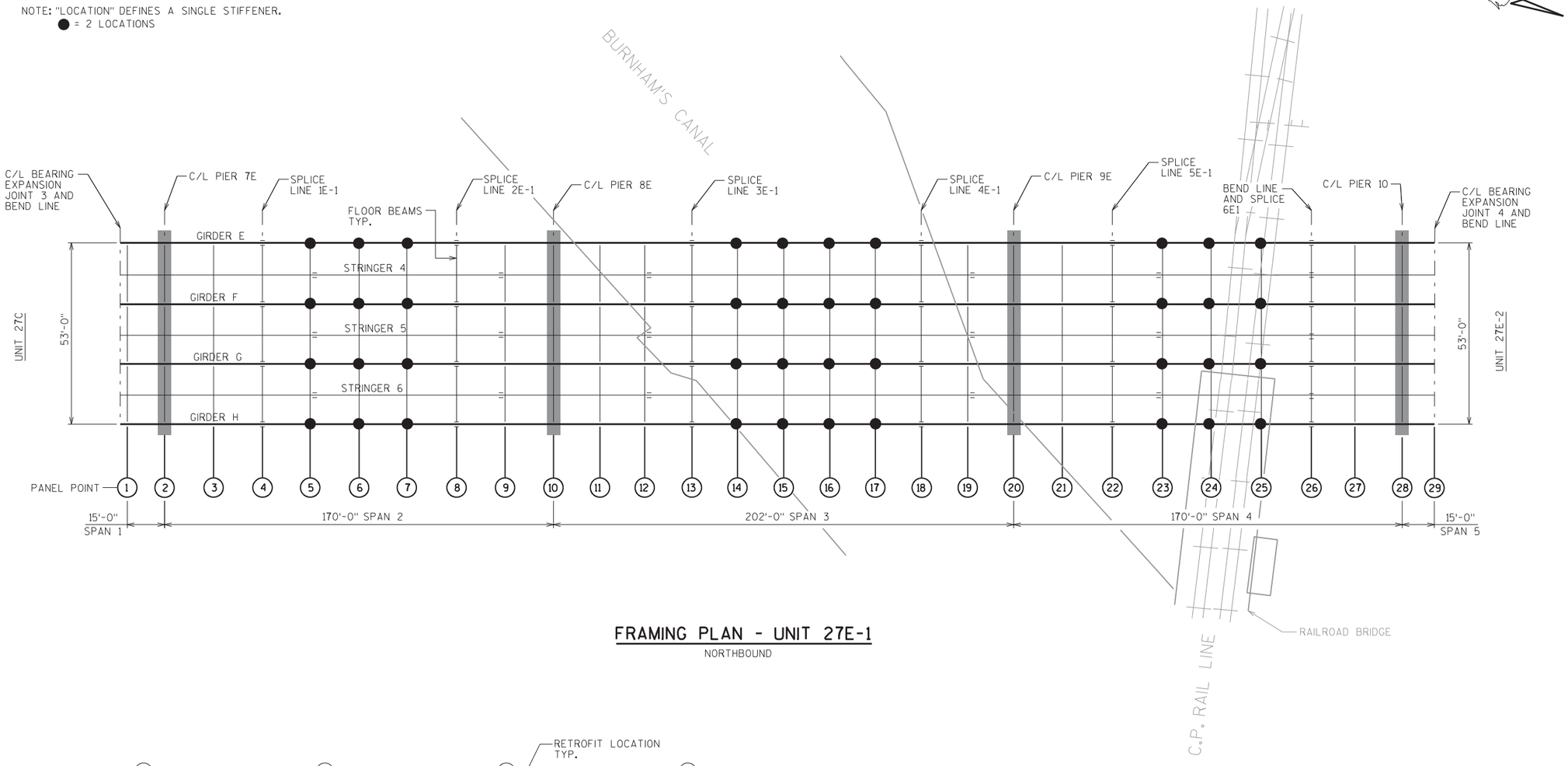
STATE PROJECT NUMBER

1228-25-70

LEGEND

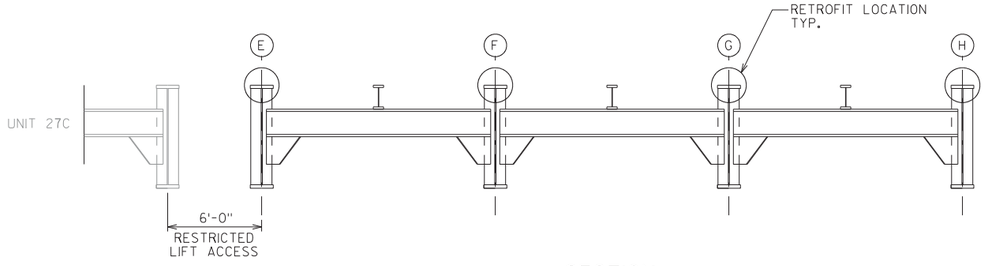
- PROPOSED WELD RETROFIT LOCATION (80)
- FIELD SPLICE

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● = 2 LOCATIONS



FRAMING PLAN - UNIT 27E-1

NORTHBOUND



SECTION

LOOKING NORTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27E-1

SHEET 21

628

SCALE = 20

8

8

STATE PROJECT NUMBER

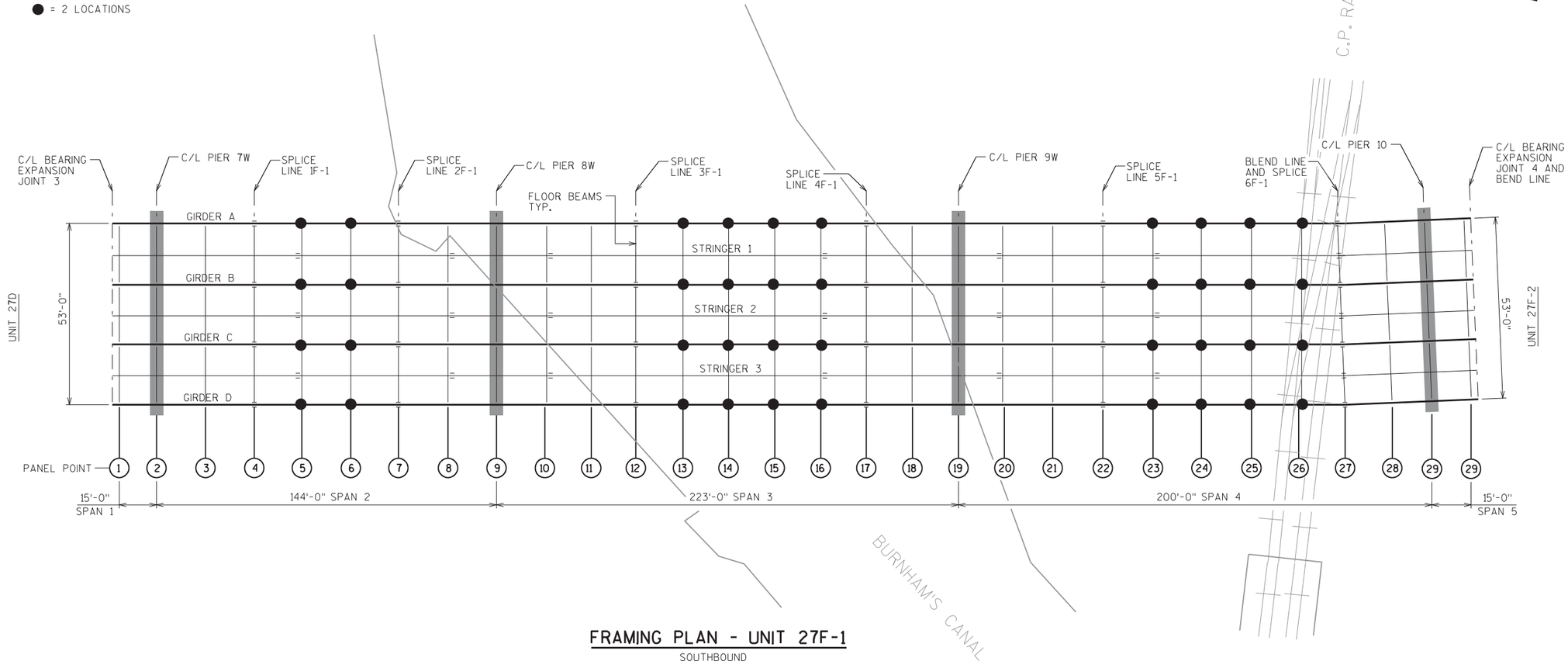
1228-25-70

LEGEND

PROPOSED WELD RETROFIT LOCATION (80)

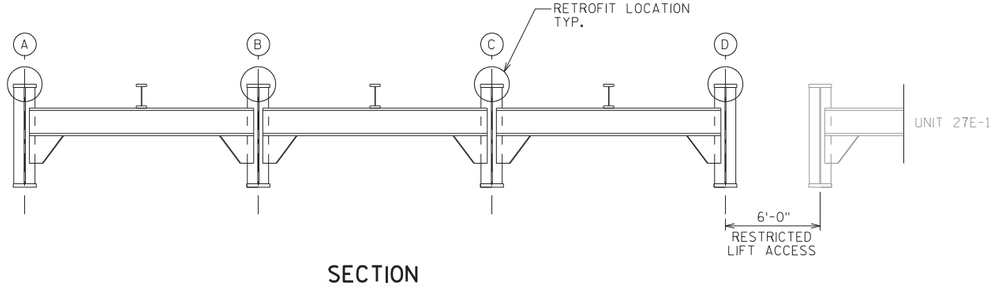
FIELD SPLICE

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● = 2 LOCATIONS



FRAMING PLAN - UNIT 27F-1

SOUTHBOUND



SECTION

LOOKING NORTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27F-1

SHEET 22

629

SCALE = 20

8

8

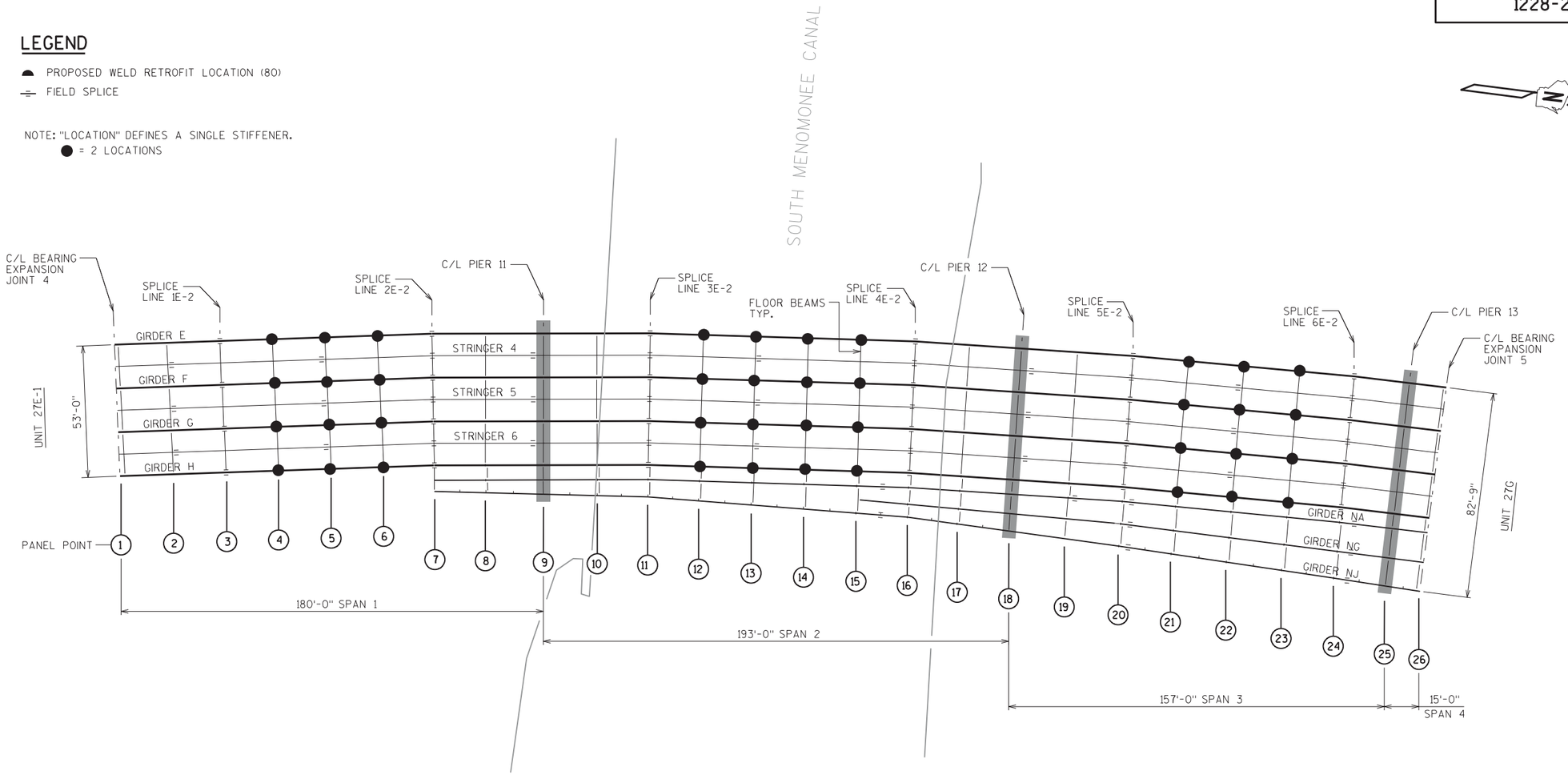
STATE PROJECT NUMBER

1228-25-70

LEGEND

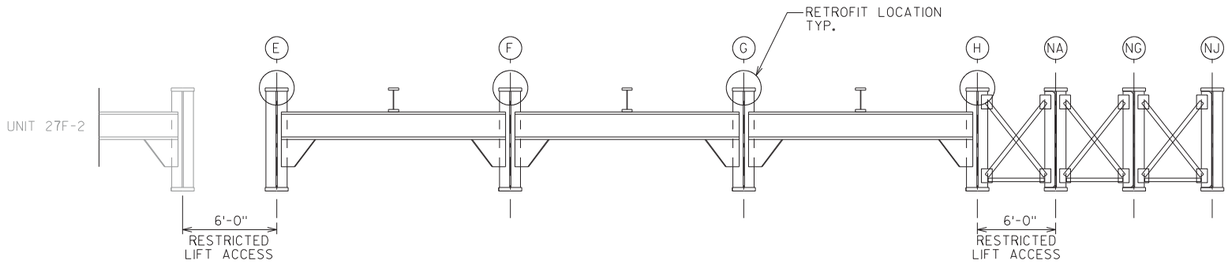
- PROPOSED WELD RETROFIT LOCATION (80)
- FIELD SPLICE

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● = 2 LOCATIONS



FRAMING PLAN - UNIT 27E-2

NORTHBOUND



SECTION

LOOKING NORTH

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27E-2

SHEET 23

630

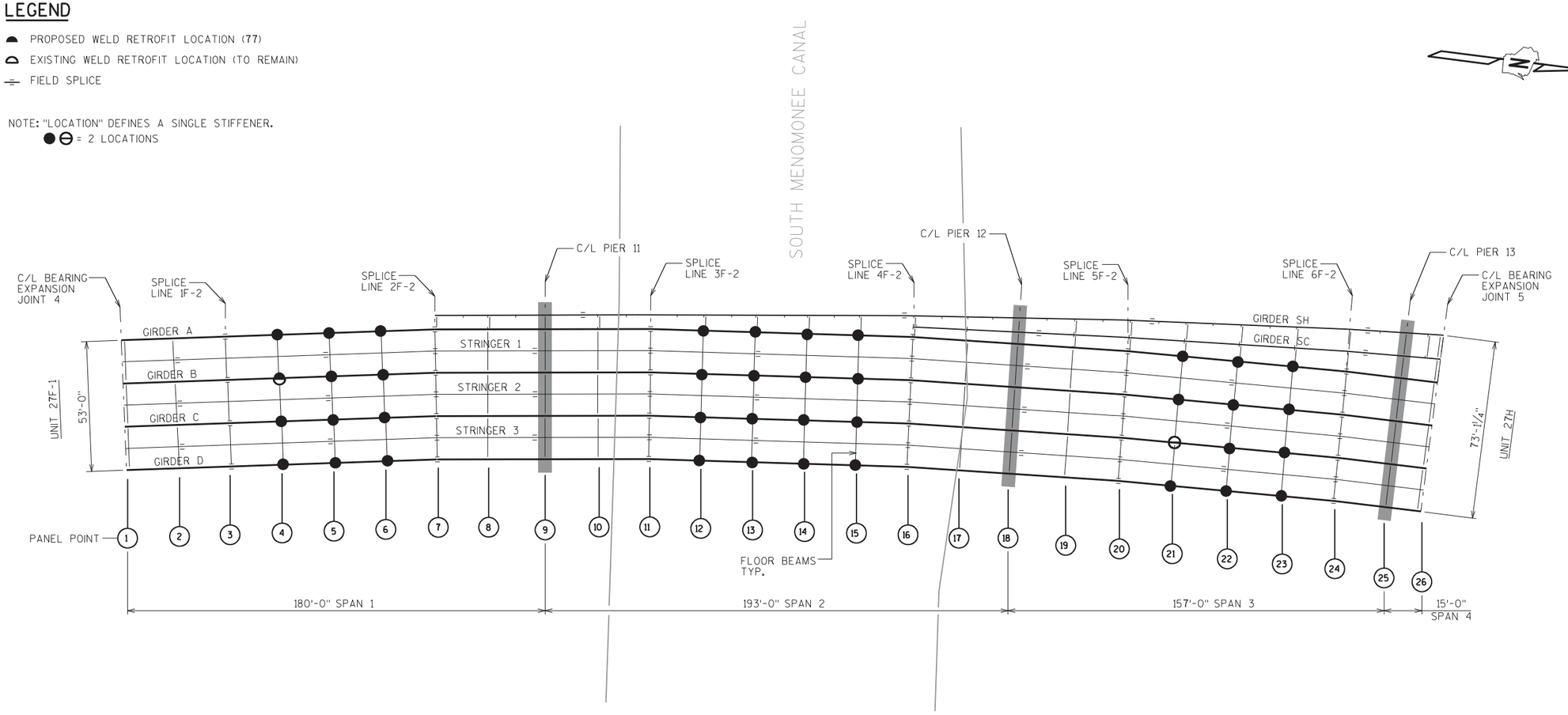
SCALE = 20

STATE PROJECT NUMBER
1228-25-70

LEGEND

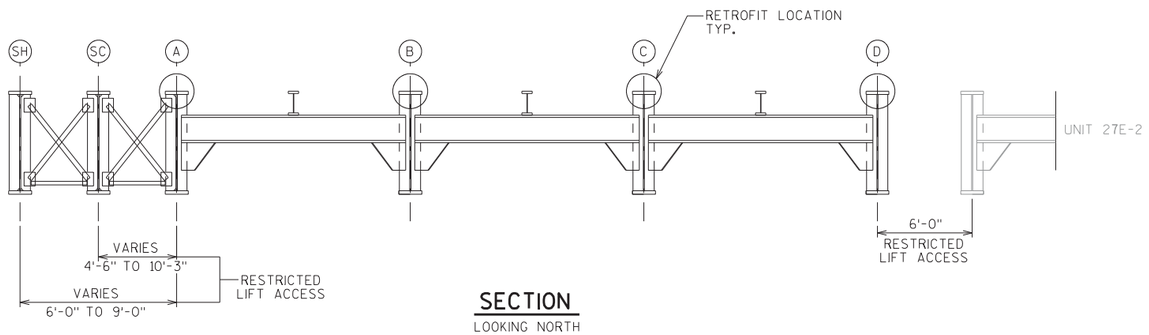
- PROPOSED WELD RETROFIT LOCATION (77)
- EXISTING WELD RETROFIT LOCATION (TO REMAIN)
- FIELD SPLICE

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● ⊖ = 2 LOCATIONS



FRAMING PLAN - UNIT 27F-2

SOUTHBOUND



SECTION

LOOKING NORTH

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27F-2

SHEET 24

631

SCALE = 20

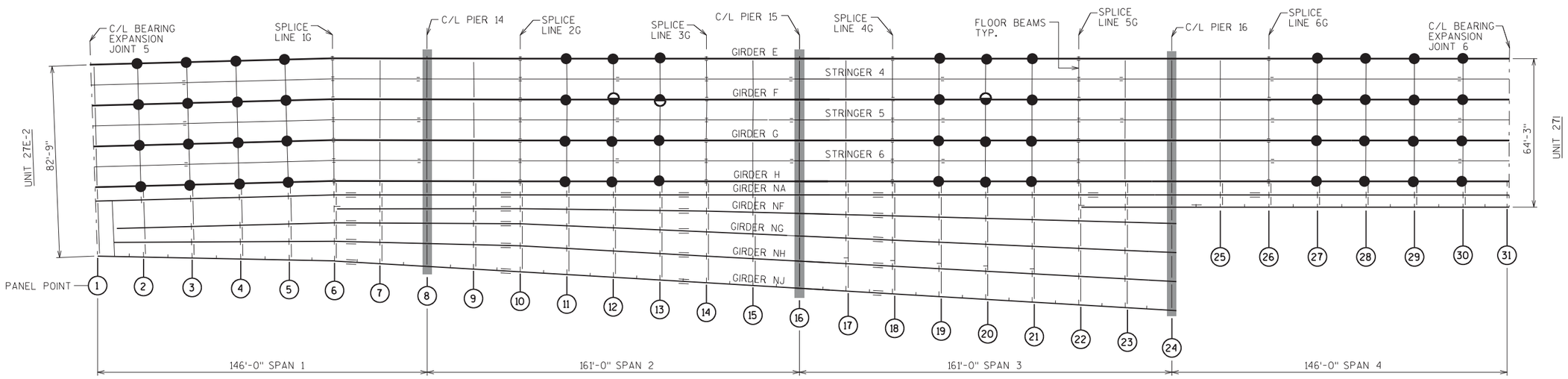
STATE PROJECT NUMBER

1228-25-70

LEGEND

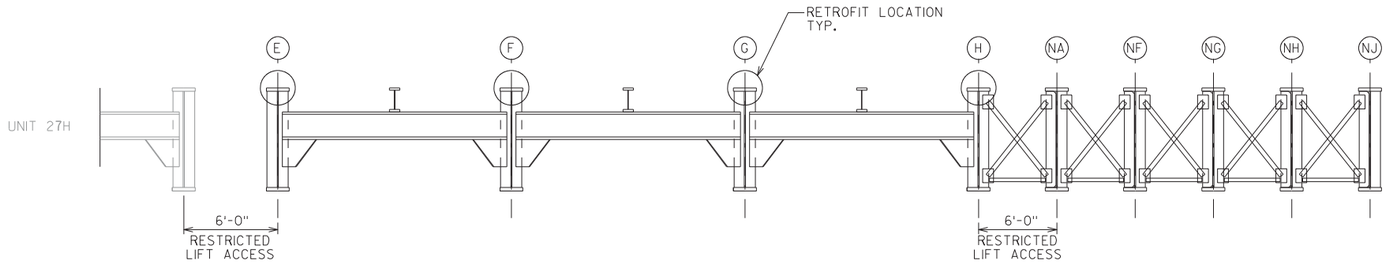
- PROPOSED WELD RETROFIT LOCATION (109)
- EXISTING WELD RETROFIT LOCATION (TO REMAIN)
- FIELD SPLICE

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● = 2 LOCATIONS



FRAMING PLAN - UNIT 27G

NORTHBOUND



SECTION

LOOKING NORTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27G

SHEET 25

632

SCALE = 20

8

8

STATE PROJECT NUMBER

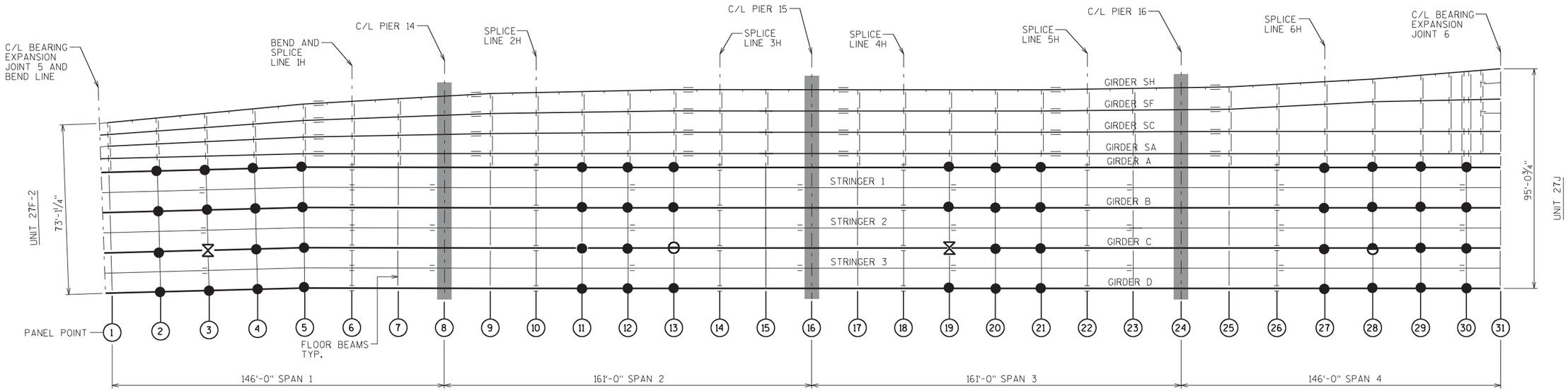
1228-25-70

WE ENERGIES PLANT

LEGEND

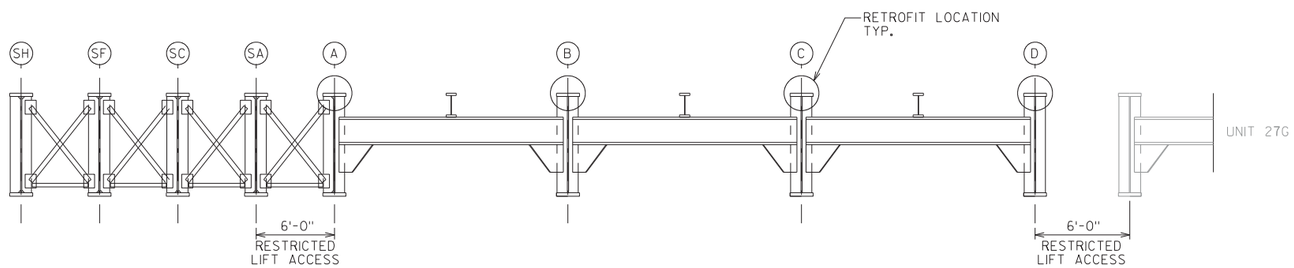
- PROPOSED WELD RETROFIT LOCATION (105)
- EXISTING WELD RETROFIT LOCATION (TO REMAIN)
- EXISTING BOLTED ANGLE RETROFIT LOCATION (TO REMAIN)
- FIELD SPLICE

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● ⊖ ⧖ = 2 LOCATIONS



FRAMING PLAN - UNIT 27H

SOUTHBOUND



SECTION

LOOKING NORTH

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27H

SHEET 26

633

SCALE = 20

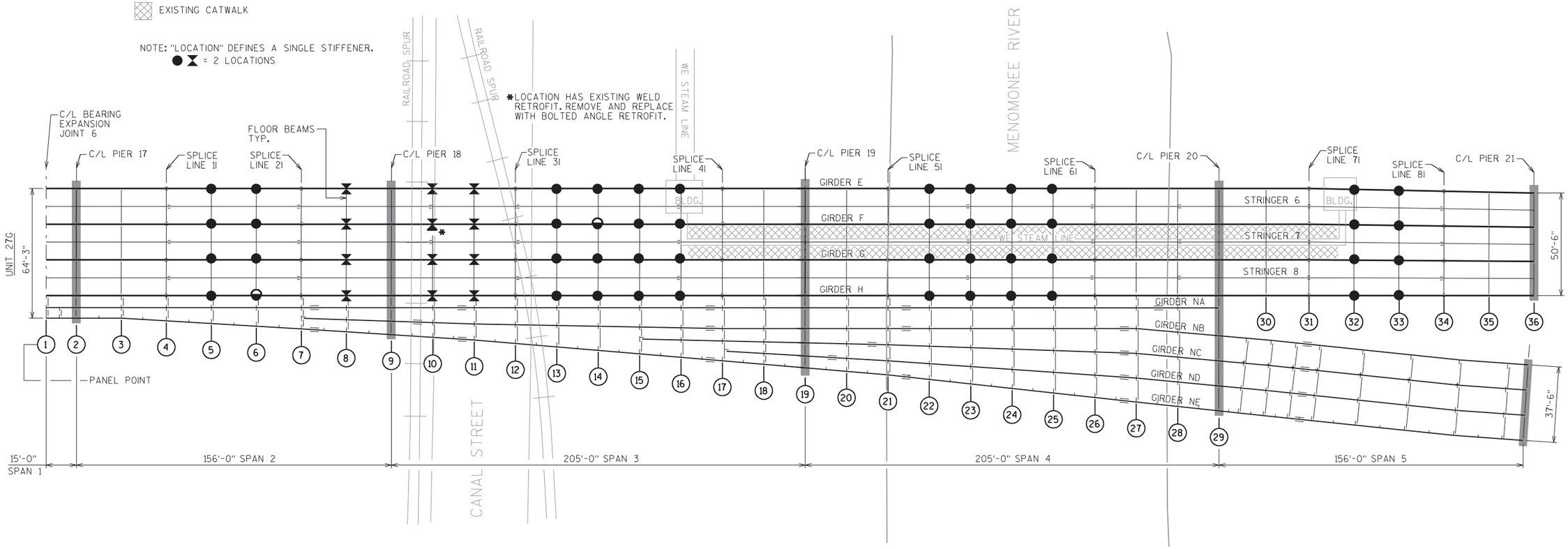
STATE PROJECT NUMBER

1228-25-70

LEGEND

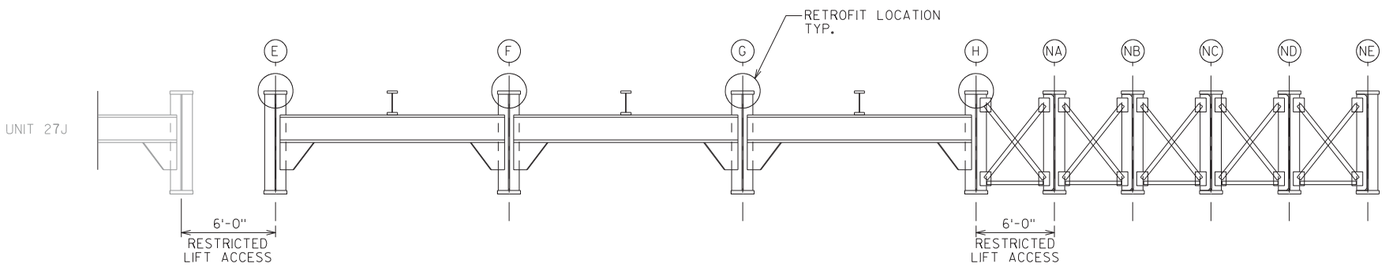
- PROPOSED WELD RETROFIT LOCATION (94)
- EXISTING WELD RETROFIT LOCATION (TO REMAIN)
- PROPOSED BOLTED ANGLE RETROFIT LOCATION (24)
- FIELD SPLICE
- EXISTING CATWALK

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● ⧗ = 2 LOCATIONS



FRAMING PLAN - UNIT 27I

NORTHBOUND



SECTION

LOOKING NORTH

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27I

SHEET 27

634

SCALE = 20

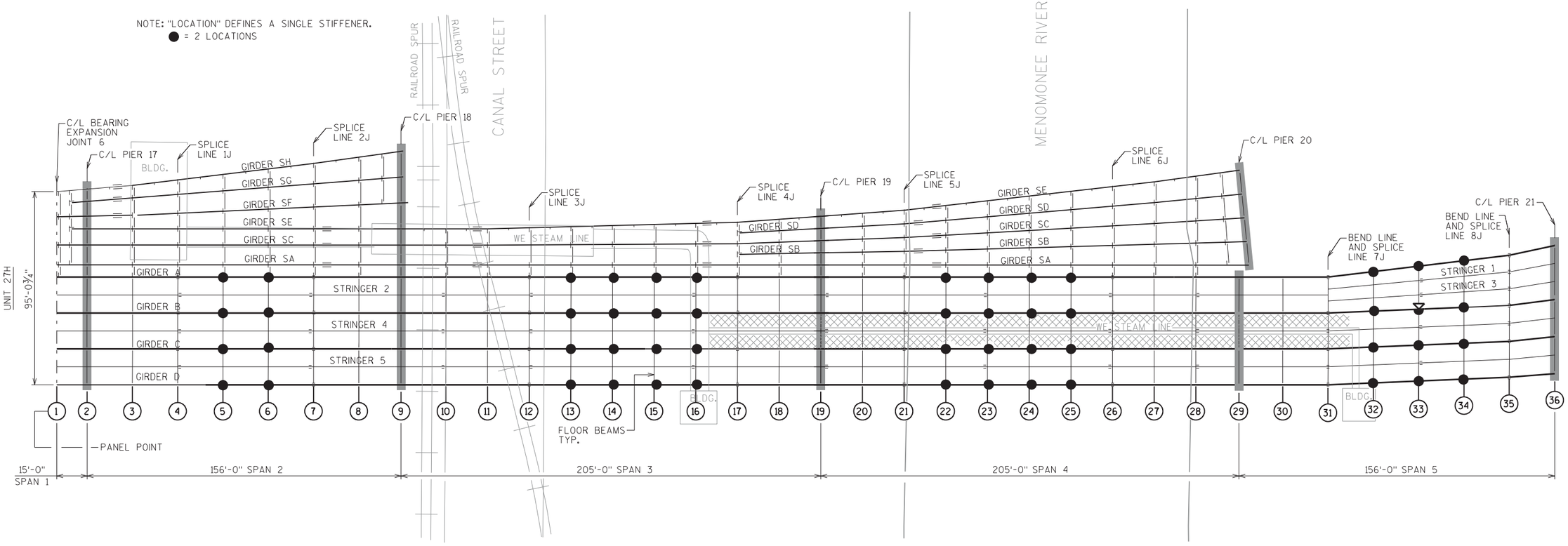
STATE PROJECT NUMBER

1228-25-70

LEGEND

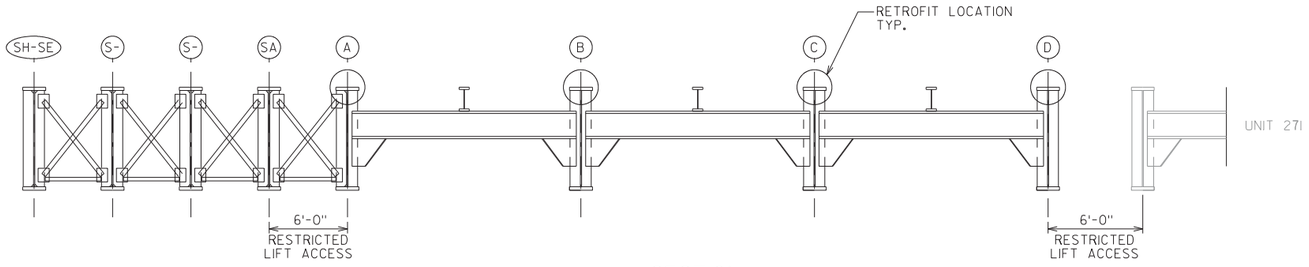
- PROPOSED WELD RETROFIT LOCATION (103)
- EXISTING BOLTED ANGLE RETROFIT LOCATION (TO REMAIN)
- FIELD SPLICE
- EXISTING CATWALK

NOTE: "LOCATION" DEFINES A SINGLE STIFFENER.
● = 2 LOCATIONS



FRAMING PLAN - UNIT 27J

SOUTHBOUND



SECTION

LOOKING NORTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-285

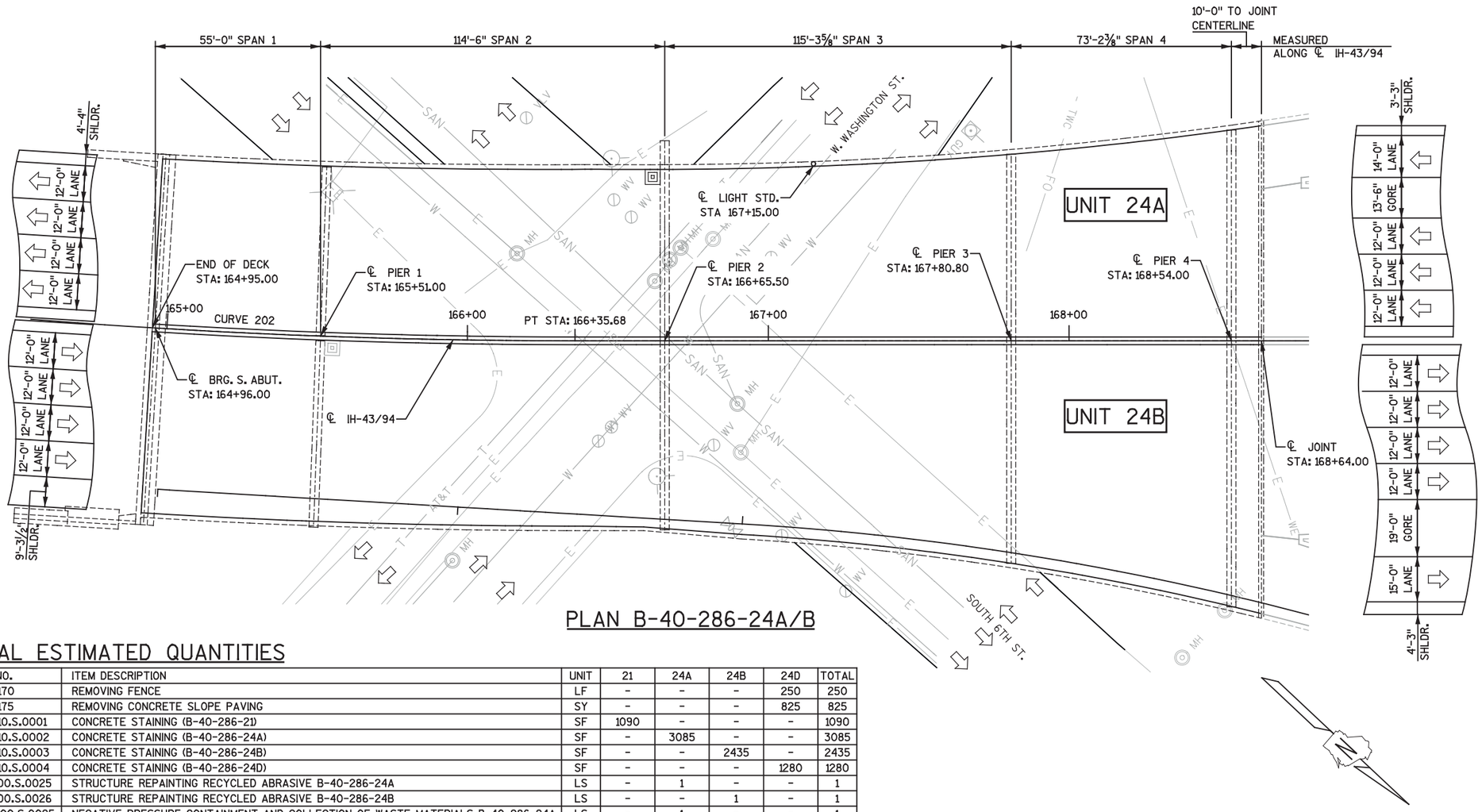
DRAWN BY ADS | PLANS CK'D. SAD

UNIT 27J

SHEET 28

635

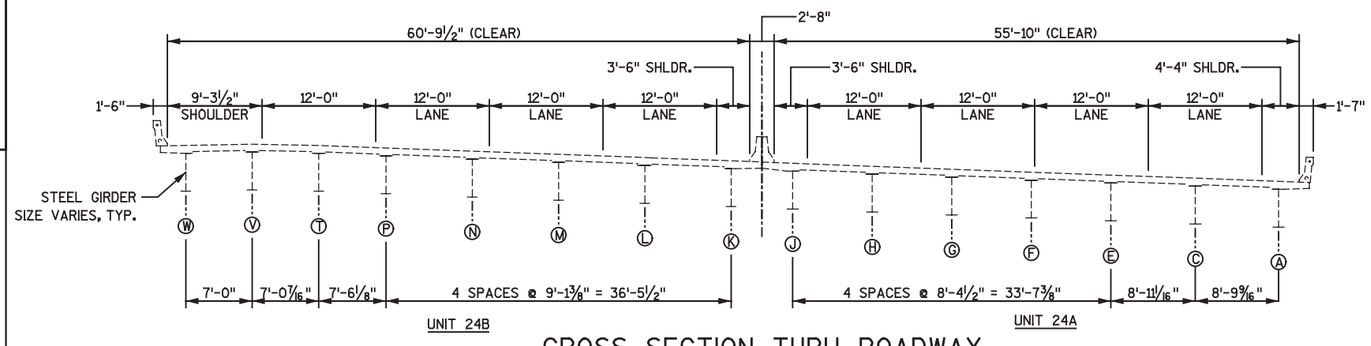
SCALE = 20



PLAN B-40-286-24A/B

TOTAL ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	21	24A	24B	24D	TOTAL
204.0170	REMOVING FENCE	LF	-	-	-	250	250
204.0175	REMOVING CONCRETE SLOPE PAVING	SY	-	-	-	825	825
517.1010.S.0001	CONCRETE STAINING (B-40-286-21)	SF	1090	-	-	-	1090
517.1010.S.0002	CONCRETE STAINING (B-40-286-24A)	SF	-	3085	-	-	3085
517.1010.S.0003	CONCRETE STAINING (B-40-286-24B)	SF	-	-	2435	-	2435
517.1010.S.0004	CONCRETE STAINING (B-40-286-24D)	SF	-	-	-	1280	1280
517.1800.S.0025	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-286-24A	LS	-	1	-	-	1
517.1800.S.0026	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-286-24B	LS	-	-	1	-	1
517.4500.S.0025	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-286-24A	LS	-	1	-	-	1
517.4500.S.0026	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-286-24B	LS	-	-	1	-	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	-	1	1	-	2
604.0400	SLOPE PAVING CONCRETE	SY	-	-	-	825	825
616.0205	FENCE CHAIN LINK 5-FT	LF	-	-	-	250	250
SPV.0060.4000	CLEANING AND PAINTING BEARINGS	EACH	-	33	39	-	72
SPV.0165.4001	REMOVE EXISTING MURAL	SF	1090	3085	2435	1280	7890
	CATEGORY	-	2300	2310	2320	2330	-



CROSS SECTION THRU ROADWAY

(LOOKING SOUTH AT S. ABUT. STA 164+96.00)

DESIGN DATA

LIVE LOAD:

INVENTORY RATING	HS-18
OPERATIONAL RATING	HS-30
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV)	168 KIPS

WISCONSIN STEVEN J. MILLER 36937 MILWAUKEE, WI PROFESSIONAL ENGINEER

Steven J. Miller 1/27/2014

STATE PROJECT NUMBER

1228-25-70

LIST OF DRAWINGS

1. PLAN & ELEVATION

TRAFFIC DATA

IH-43/94 SB
A.D.T. (2030) = 130,000

GENERAL NOTES

THE PROPOSED WORK INCLUDES CLEANING AND PAINTING OF STRUCTURAL STEEL,REMOVAL OF EXISTING MURALS AND CONCRETE STAINING ON SUBSTRUCTURE UNITS AND SLOPE PAVING REPAIR.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL STRUCTURAL STEEL SHALL BE PAINTED. FINISH COLOR DENIM (BLUE) - SW6523, B-G/B/138.

MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

NO.	DATE	REVISION	BY

COLLINS ENGINEERS INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 01/31/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-286-24A/B

IH-43/94 OVER WASHINGTON ST.

COUNTY	MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~	MILWAUKEE
DESIGN SPEC.	REHABILITATION N/A		
DESIGNED BY	NJH	DESIGN CK'D.	RJW
DRAWN BY	MJH	PLANS CK'D.	RJW

PLAN & ELEVATION

SHEET 1 OF 1

636

SE REGION CONTACT:
JOE GALLAMORE (262) 548-5601

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
NICHOLAS HORNYAK (414) 282-6905

8

8

FILE NAME :01_B-40-286-24_Painting.dgn
PLOT DATE :1/27/2014 12:48:07 PM PLOT BY : NicholasHornyak-v8i DRV :Pdf_bw_HS.plt PEN :CEL_TEXTSUB.TBL

DIVISION 1 - HOWARD EXIT RAMP

		AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
STATION	Distance	Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
645+15		54	2	0	0	0	0	0
645+50	35	54	2	70	3	70	3	51
646+00	50	64	2	109	4	179	8	131
646+50	50	64	3	119	5	298	14	215
647+00	50	74	5	128	7	426	23	303
647+50	50	94	4	156	8	581	33	414
648+00	50	94	4	174	7	755	43	541
648+50	50	95	4	175	7	930	52	670
649+00	50	102	4	182	7	1113	61	806
649+50	50	110	4	196	7	1309	70	957
650+00	50	110	5	204	8	1513	81	1115
650+50	50	116	5	209	9	1722	92	1277
651+00	50	129	5	227	9	1949	104	1453
651+50	50	141	5	250	9	2199	116	1649
652+00	50	145	5	265	9	2464	127	1856
652+50	50	133	5	257	9	2721	139	2053
653+00	50	121	5	235	9	2956	150	2226
653+50	50	113	5	217	9	3173	162	2382
654+00	50	113	5	209	9	3382	173	2528
654+45	45	250	0	303	4	3685	178	2749
			Column totals	3685	143			

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PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	EARTHWORK	SHEET 637	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090101_ew.dgn PLOT DATE : 1/28/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 200.0000 sf / in.

DIVISION 1 - HOWARD ENTRANCE RAMP

STATION	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
644+50		101	7	0	0	0	0	0
645+00	50	107	9	193	15	193	19	124
645+50	50	94	3	186	11	379	32	252
646+00	50	107	3	186	6	565	39	389
646+50	50	66	7	160	9	725	51	503
647+00	50	66	6	122	12	847	66	584
647+41	41	68	5	102	8	949	76	654
647+50	9	68	5	23	2	972	78	670
647+68	18	67	5	45	3	1017	83	701
647+94	26	68	6	65	5	1082	89	747
648+00	6	67	4	15	1	1097	91	758
648+50	50	62	5	119	8	1216	101	845
649+00	50	60	10	113	14	1329	118	917
649+50	50	63	8	114	17	1443	139	984
650+00	50	71	4	124	11	1567	153	1068
650+50	50	74	4	134	7	1701	162	1167
651+00	50	76	4	139	7	1840	172	1271
651+50	50	72	4	137	7	1977	181	1373
652+00	50	66	5	128	8	2105	191	1464
652+50	50	66	4	122	8	2227	202	1550
653+00	50	64	4	120	7	2348	211	1635
653+50	50	62	4	117	7	2464	220	1717
654+00	50	63	4	116	7	2580	229	1797
654+46	46	180	0	207	3	2787	234	1951
			Column totals	2787	187			

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DIVISION 2 - NATIONAL RAMPS

		AREA (SF)			Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
STATION	Distance	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
10+18		7	27	0	0	0	0	0	0
10+50	32	214	27	0	131	0	131	0	99
11+00	50	121	21	2	310	2	441	2	362
11+50	50	104	24	2	208	4	649	7	524
12+00	50	109	14	3	197	5	847	13	681
12+50	50	114	14	1	206	4	1053	17	857
13+00	50	117	14	1	214	2	1267	20	1042
13+50	50	120	14	1	219	2	1487	22	1233
14+00	50	127	14	0	229	1	1715	23	1435
14+50	50	125	12	0	233	0	1949	23	1644
15+00	50	123	12	3	230	3	2178	27	1848
15+50	50	119	12	2	224	5	2402	32	2044
16+00	50	119	14	0	220	2	2623	35	2238
16+04	4	119	14	2	18	0	2640	35	2254
				Column totals	2640	28			

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PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	EARTHWORK	SHEET 639	E

GREENFIELD AVE

Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 6
99+60		70	0	0	0	0	0	0	0	0
99+95	34	54	0	0	79	0	0	79	0	79
99+99	4	27	0	0	6	0	0	85	0	85
102+56		9	0	1	0	0	0	85	0	85
102+61	4	56	0	0	5	0	0	90	0	90
103+00	39	68	0	2	90	0	1	180	2	179
103+21	21	78	0	0	57	0	1	238	3	235
					238	238	2			

NOTES:
1) Cut includes Salvaged/Unusable Pavement material.
2) Not shown in cross-sections.
3) Will be backfilled with Granular Backfill
6) [(Cut - Salvaged/Unusable Pavement Material) - ((Fill - Reduced Marsh in Fill - Reduced EBS in Fill - Expanded Rock) * Fill Factor)]

LAPHAM BOULEVARD

Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 6
199+54		71	0	0	0	0	0	0	0	0
199+99	45	65	0	0	114	0	0	114	0	114
202+26		67	0	0	0	0	0	114	0	114
202+50	24	63	0	2	58	0	1	172	1	171
202+86	36	71	0	0	90	0	1	262	3	260
					262	262	2			

NOTES:
1) Cut includes Salvaged/Unusable Pavement material.
2) Not shown in cross-sections.
3) Will be backfilled with Granular Backfill
6) [(Cut - Salvaged/Unusable Pavement Material) - ((Fill - Reduced Marsh in Fill - Reduced EBS in Fill - Expanded Rock) * Fill Factor)]

MITCHELL STREET

Station	Distance	AREA (SF) Cut	Salvaged /Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut	Salvaged /Unusable Pavement Material	Fill	Cumulative Vol (CY) Cut 1.00	Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 6
299+60		62	0	0	0	0	0	0	0	0
299+99	39	54	0	0	84	0	0	84	0	84
302+75		61	0	1	0	0	0	84	0	84
303+00	25	77	0	0	63	0	0	147	1	147
303+09	9	58	0	0	22	0	0	169	1	169
					169	169	0			

NOTES:
1) Cut includes Salvaged/Unusable Pavement material.
2) Not shown in cross-sections.
3) Will be backfilled with Granular Backfill
6) [(Cut - Salvaged/Unusable Pavement Material) - ((Fill - Reduced Marsh in Fill - Reduced EBS in Fill - Expanded Rock) * Fill Factor)]

MAPLE STREET

Station	Distance	AREA (SF) Cut	Salvaged /Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut	Salvaged /Unusable Pavement Material	Fill	Cumulative Vol (CY) Cut 1.00	Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 6
399+60		68	0	0	0	0	0	0	0	0
399+99	39	46	0	0	83	0	0	83	0	83
403+00		47	0	0	0	0	0	83	0	83
403+00	0	47	0	0	0	0	0	83	0	83
403+50	50	103	0	0	139	0	0	222	0	222
403+75	25	50	0	0	71	0	0	293	0	293
					293	293	0			

NOTES:
1) Cut includes Salvaged/Unusable Pavement material.
2) Not shown in cross-sections.
3) Will be backfilled with Granular Backfill
6) [(Cut - Salvaged/Unusable Pavement Material) - ((Fill - Reduced Marsh in Fill - Reduced EBS in Fill - Expanded Rock) * Fill Factor)]

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LINCOLN AVENUE

Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 6
499+46		103	0	0	0	0	0	0	0	0
499+50	4	95	0	0	13	0	0	13	0	13
499+99	49	57	0	0	139	0	0	152	0	152
502+33		57	0	0	0	0	0	152	0	152
502+50	17	68	0	0	40	0	0	192	0	192
502+76	26	102	0	0	83	0	0	275	1	274
					275	275	0			

NOTES:
1) Cut includes Salvaged/Unusable Pavement material.
2) Not shown in cross-sections.
3) Will be backfilled with Granular Backfill
6) [(Cut - Salvaged/Unusable Pavement Material) - ((Fill - Reduced Marsh in Fill - Reduced EBS in Fill - Expanded Rock) * Fill Factor)]

CHASE AVENUE

Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 6
598+91		67	0	0	0	0	0	0	0	0
599+00	9	64	0	0	23	0	0	23	0	23
599+50	50	46	0	2	101	0	2	124	2	122
599+98	48	24	0	0	62	0	2	186	5	182
603+27		34	0	0	0	0	0	186	5	182
603+50	23	43	0	0	33	0	0	219	5	214
604+00	50	71	0	4	106	0	4	325	10	315
604+21	21	85	0	2	61	0	2	386	13	373
					386	386	10			

NOTES:
1) Cut includes Salvaged/Unusable Pavement material.
2) Not shown in cross-sections.
3) Will be backfilled with Granular Backfill
6) [(Cut - Salvaged/Unusable Pavement Material) - ((Fill - Reduced Marsh in Fill - Reduced EBS in Fill - Expanded Rock) * Fill Factor)]

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HOWARD AVENUE

Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 6
695+00		0	0	0	0	0	0	0	0	0
695+50	50	0	0	0	0	0	0	0	0	0
696+00	50	1	0	0	1	0	0	1	0	1
696+50	50	0	0	0	1	0	0	2	0	2
697+00	50	0	0	0	0	0	0	2	0	2
697+50	50	0	0	0	0	0	0	2	0	2
698+00	50	0	0	0	0	0	0	2	0	2
698+50	50	2	0	0	2	0	0	4	0	4
699+00	50	1	0	0	3	0	0	7	0	7
699+25	25	1	0	0	1	0	0	8	0	8
699+53	28	108	0	0	56	0	0	64	0	64
699+79	27	78	0	1	91	0	0	155	1	154
702+60		80	0	1	0	0	0	155	1	154
702+87	27	98	0	0	89	0	0	244	1	243
703+75	88	17	0	0	188	0	0	432	1	430
704+00	25	15	0	0	15	0	0	446	1	445
704+50	50	16	0	1	29	0	1	475	3	472
705+00	50	17	0	0	30	0	1	506	4	502
705+50	50	17	0	0	31	0	0	537	5	532
706+00	50	18	0	0	32	0	0	569	5	564
706+50	50	17	0	0	32	0	0	601	6	595
707+00	50	0	0	0	16	0	0	616	6	611
					616	616	5			

NOTES:

1) Cut includes Salvaged/Unusable Pavement material.
2) Not shown in cross-sections.
3) Will be backfilled with Granular Backfill
6) [(Cut - Salvaged/Unusable Pavement Material) - ((Fill - Reduced Marsh in Fill - Reduced EBS in Fill - Expanded Rock) * Fill Factor)]

BECHER CDN

Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 6
1186+97		22	0	1	0	0	0	0	0	0
1187+00	3	21	0	1	2	0	0	2	0	2
1187+50	50	15	0	1	33	0	2	36	2	33
1187+88	38	25	0	0	28	0	1	63	3	60
1198+64		26	0	0	0	0	0	63	3	60
1199+00	36	20	0	0	31	0	0	94	3	91
1199+47	47	22	0	0	37	0	0	131	3	128
					131	131	3			

NOTES:

1) Cut includes Salvaged/Unusable Pavement material.
2) Not shown in cross-sections.
3) Will be backfilled with Granular Backfill
6) [(Cut - Salvaged/Unusable Pavement Material) - ((Fill - Reduced Marsh in Fill - Reduced EBS in Fill - Expanded Rock) * Fill Factor)]

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BECHER CDS

Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged /Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged /Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate
					Note 1	Note 2	Note 3	Note 1		Note 6
1185+96		23	0	0	0	0	0	0	0	0
1186+00	4	22	0	0	3	0	0	3	0	3
1186+50	50	12	0	3	31	0	2	35	3	32
1187+00	50	14	0	1	25	0	3	60	6	53
1187+50	50	15	0	2	27	0	3	87	10	77
1187+88	38	33	0	0	33	0	1	120	11	109
1195+99		36	0	0	0	0	0	120	11	109
1196+00	1	36	0	0	1	0	0	121	11	110
1196+50	50	16	0	1	48	0	1	170	13	157
1197+00	50	18	0	0	31	0	1	200	14	186
1197+50	50	24	0	0	38	0	0	238	14	224
1197+54	4	24	0	0	3	0	0	242	14	227
					242	242	12			

NOTES:

1) Cut includes Salvaged/Unusable Pavement material.
2) Not shown in cross-sections.
3) Will be backfilled with Granular Backfill
6) [(Cut - Salvaged/Unusable Pavement Material) - ((Fill - Reduced Marsh in Fill - Reduced EBS in Fill - Expanded Rock) * Fill Factor)]

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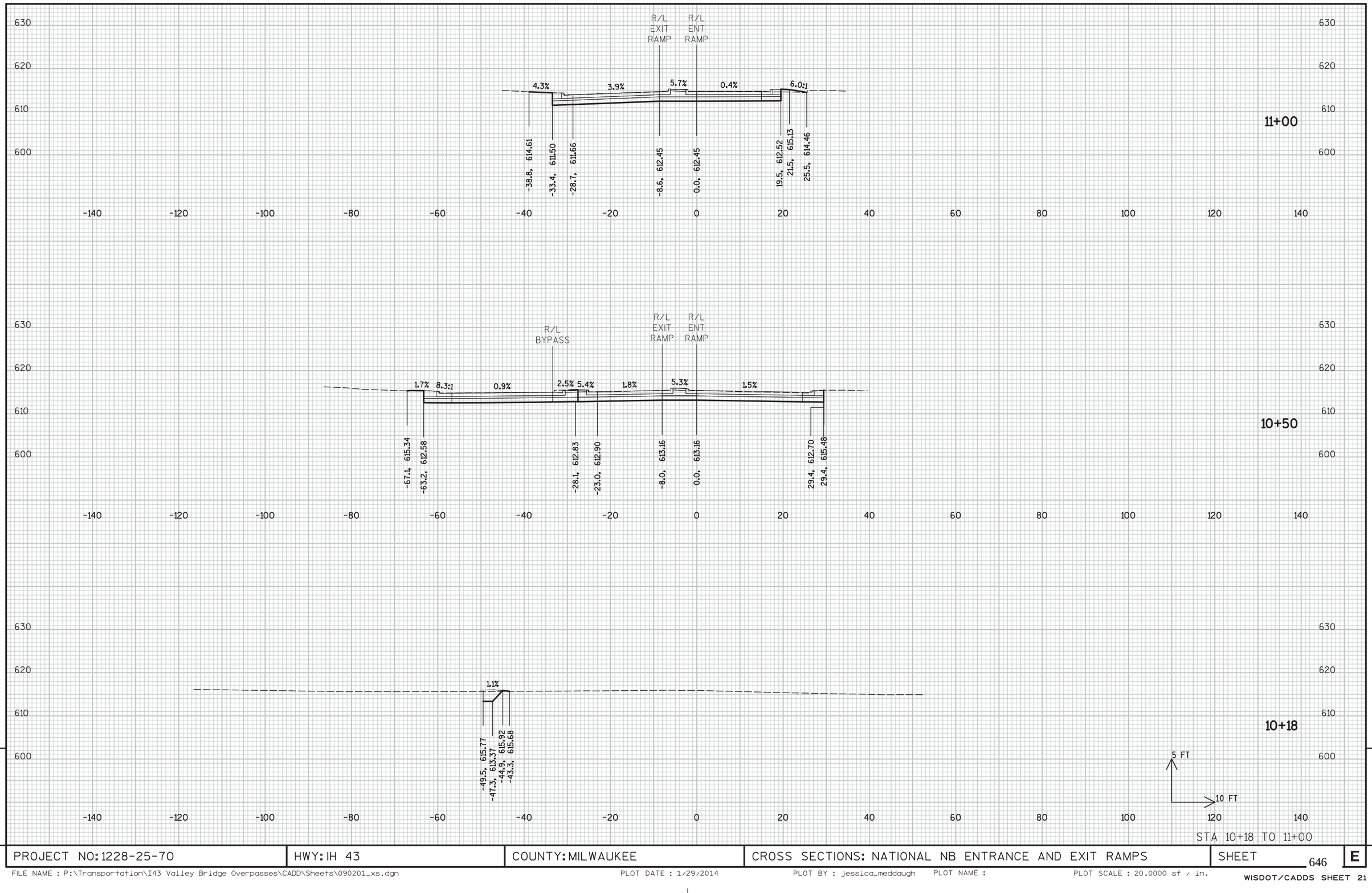

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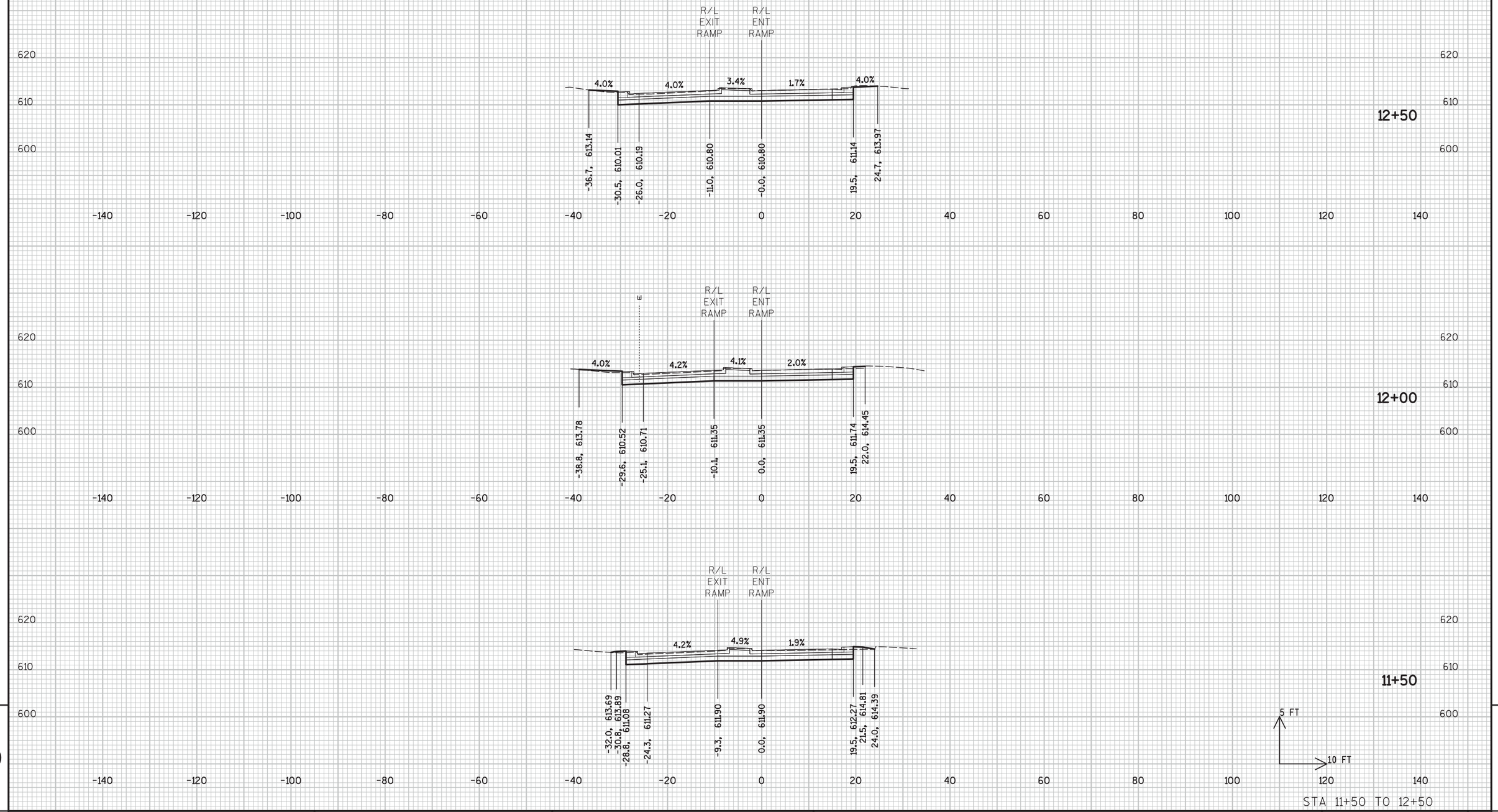
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: NATIONAL NB ENTRANCE AND EXIT RAMPS	SHEET 646	E

STA 10+18 TO 11+00

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090201_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



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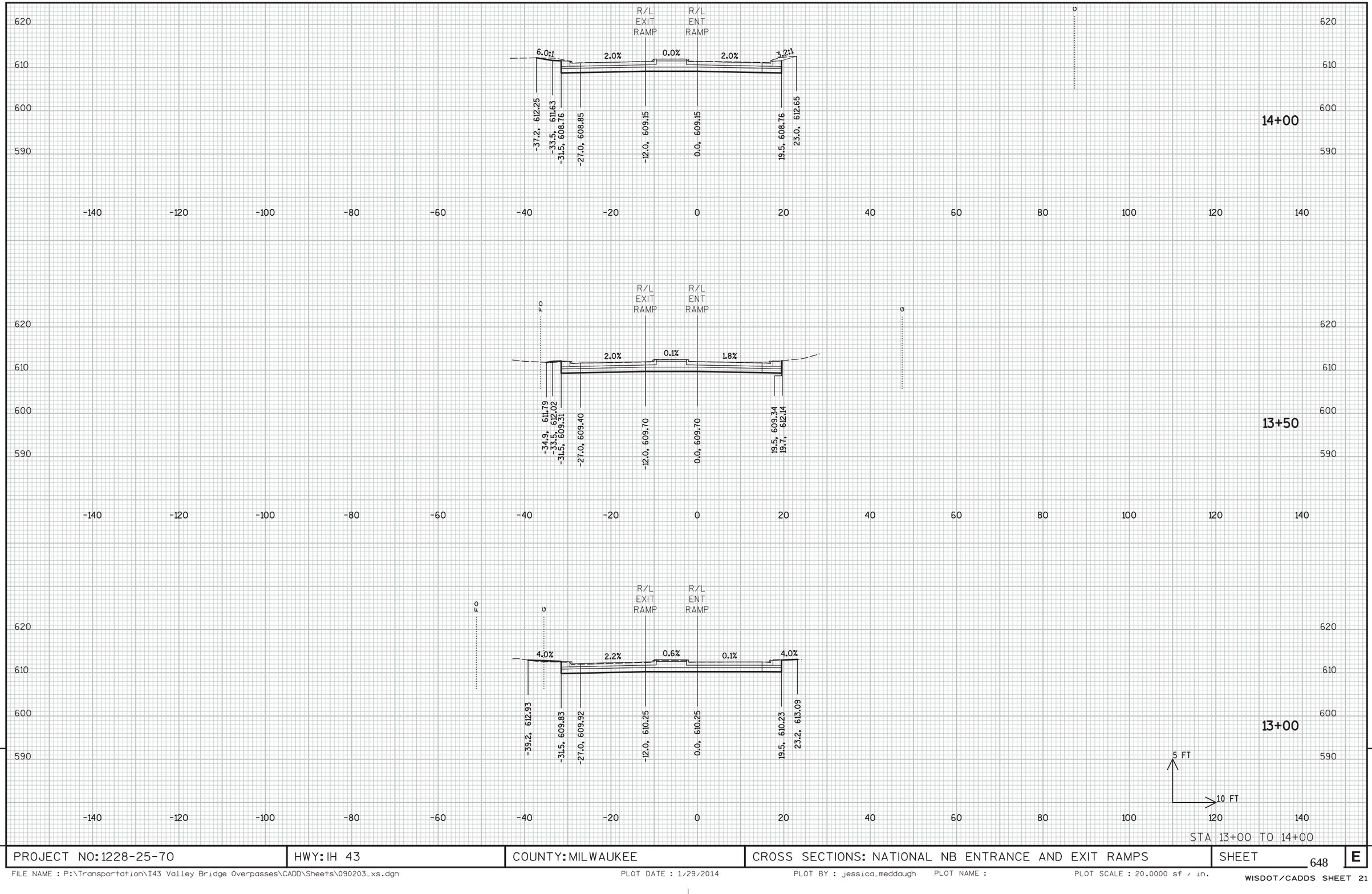
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: NATIONAL NB ENTRANCE AND EXIT RAMPS	SHEET 647	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090202_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.



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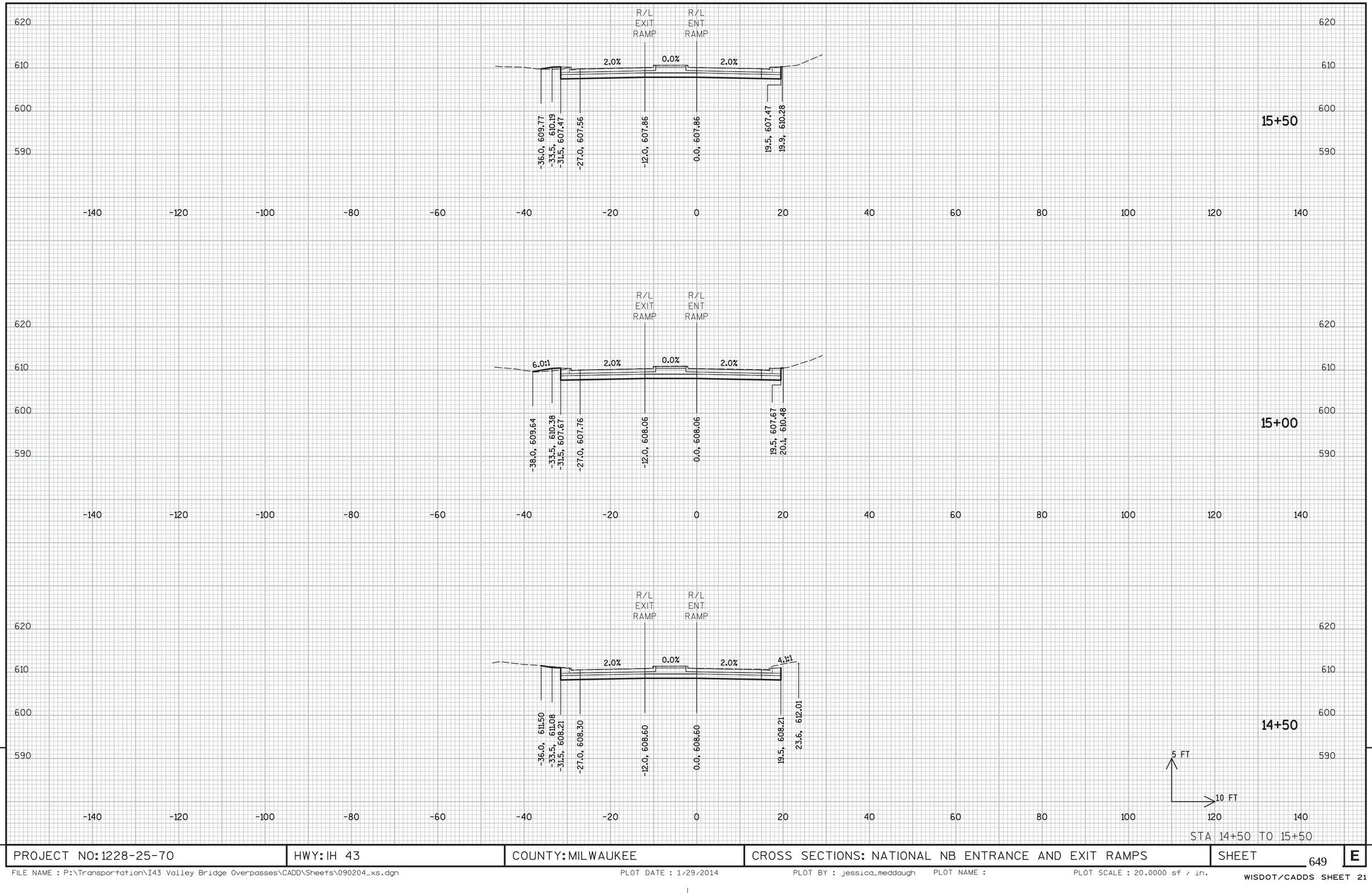
STA 13+00 TO 14+00

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: NATIONAL NB ENTRANCE AND EXIT RAMPS	SHEET 648	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090203_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



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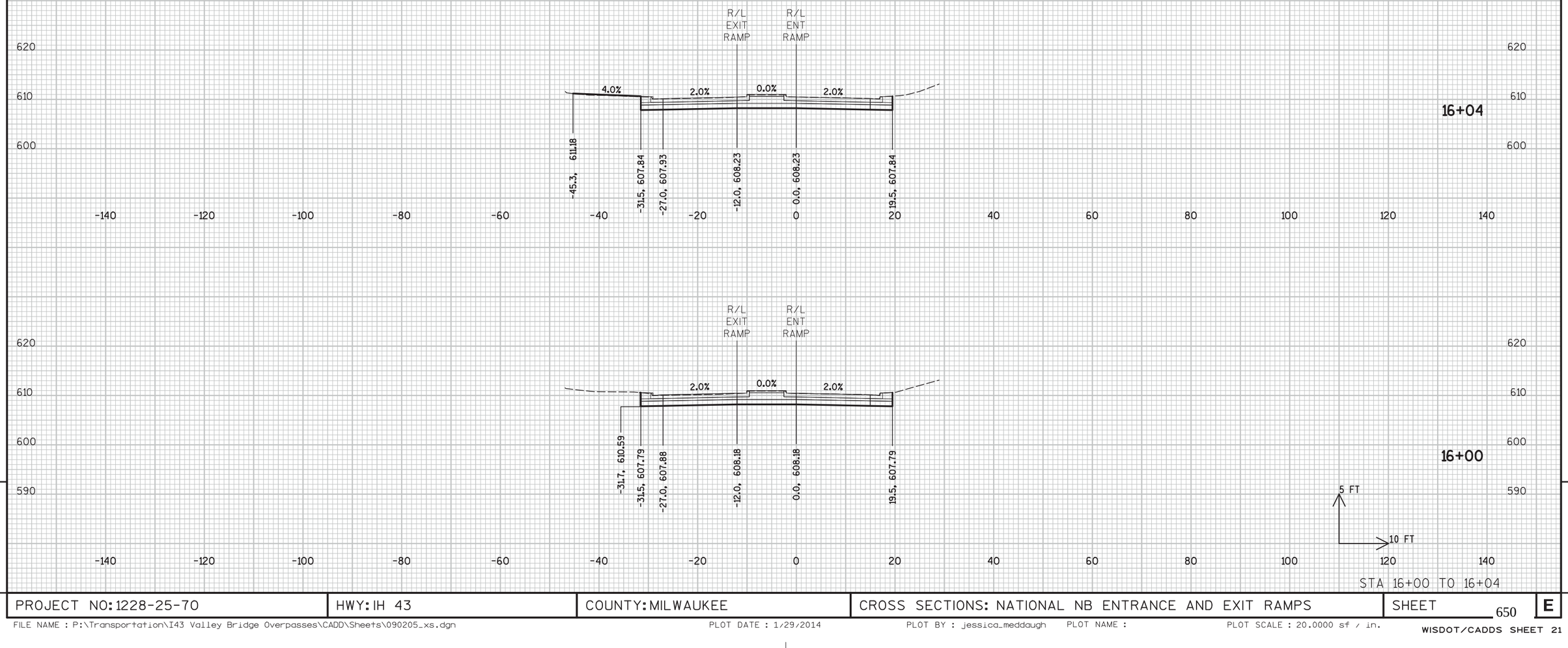
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: NATIONAL NB ENTRANCE AND EXIT RAMPS	SHEET 649	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090204_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



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PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: NATIONAL NB ENTRANCE AND EXIT RAMPS	SHEET 650	E

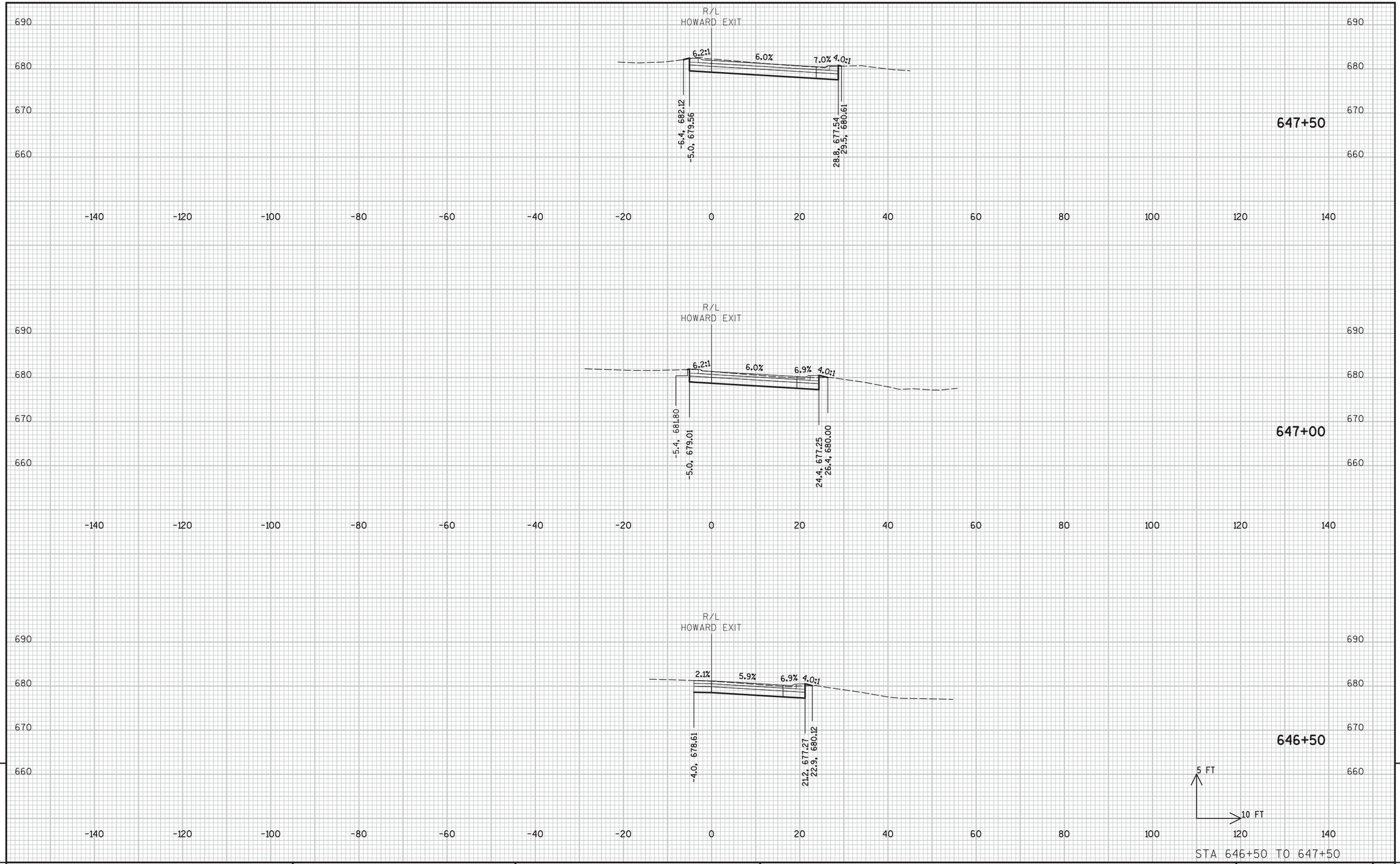
FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090205_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21

STA 645+15 TO 646+00

9 9

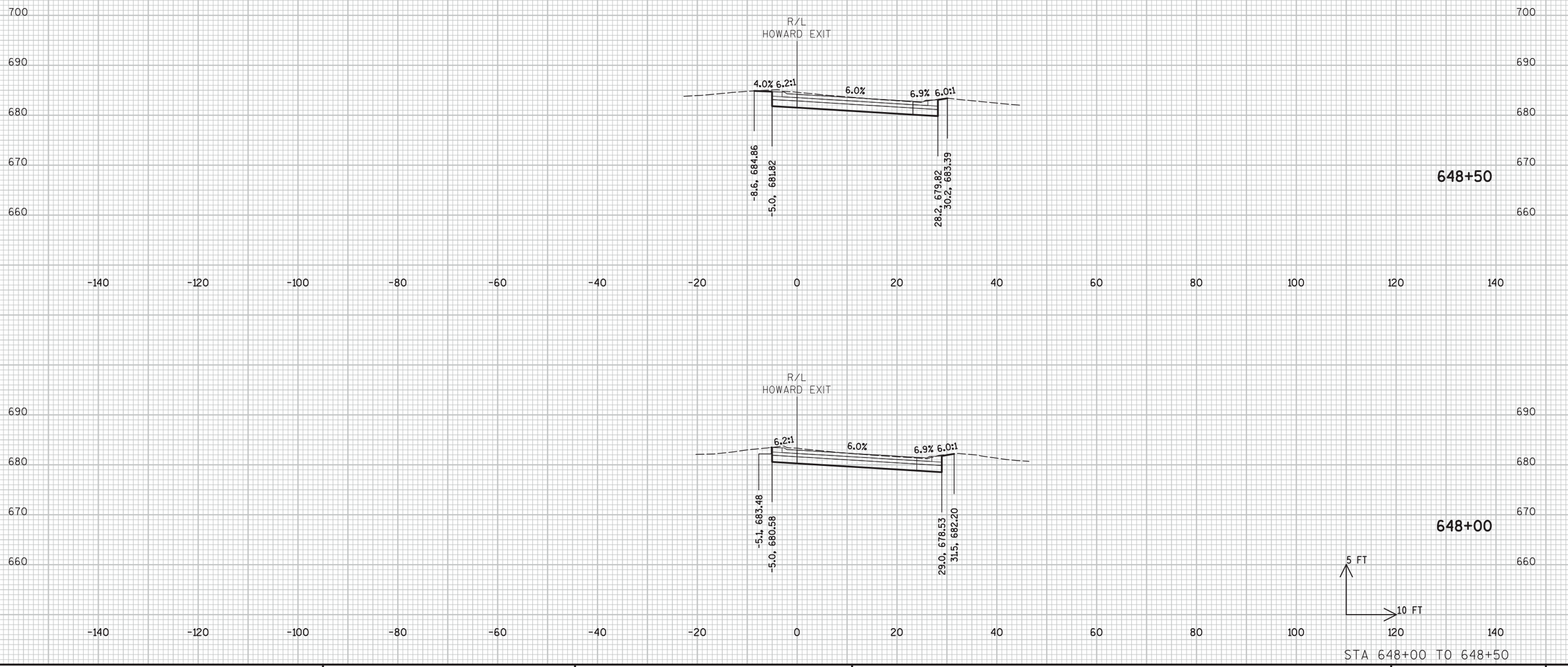
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD EXIT RAMPS	SHEET 651	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090210_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.



STA 646+50 TO 647+50

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD EXIT RAMPS	SHEET 652	E



STA 648+00 TO 648+50

9

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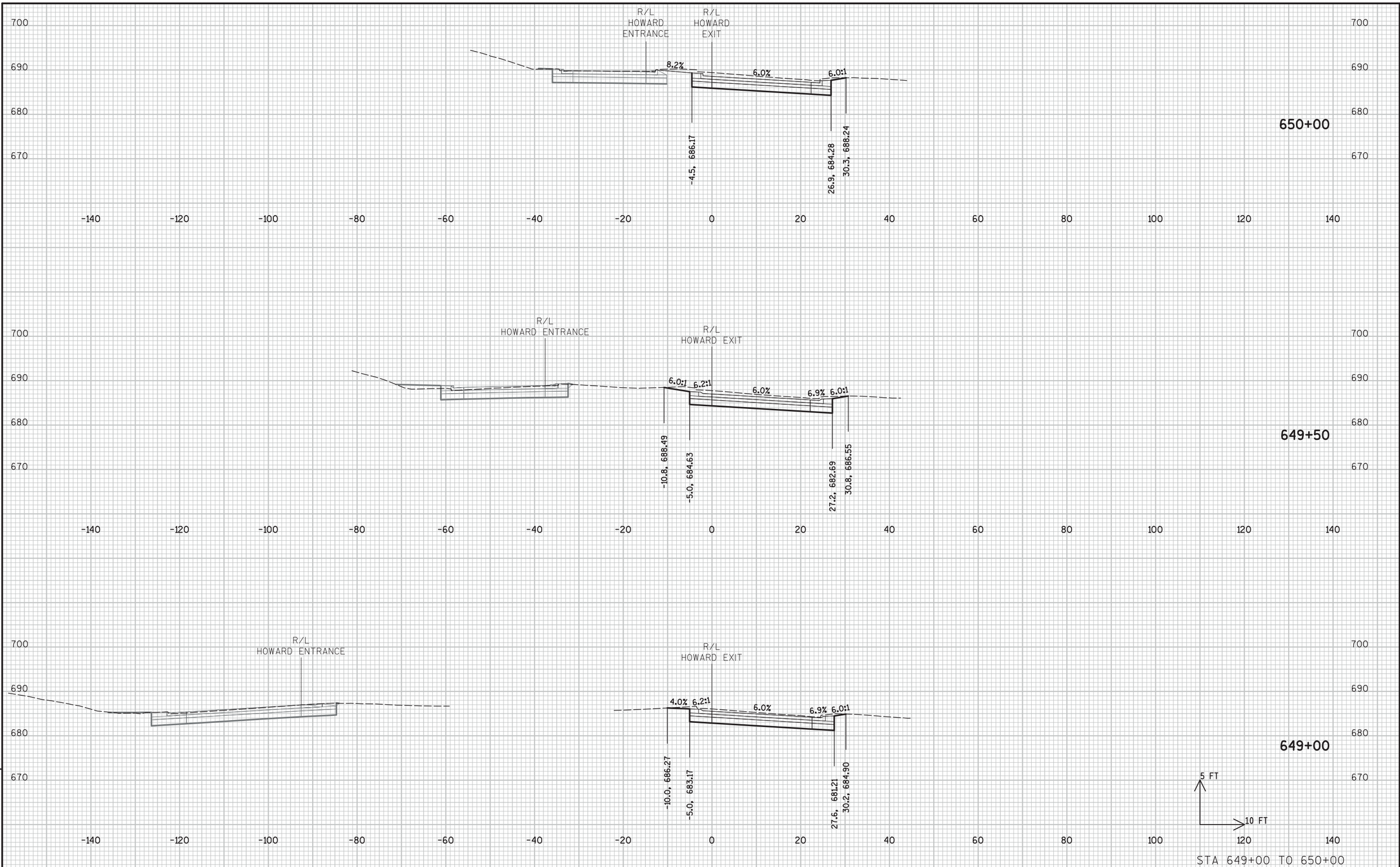
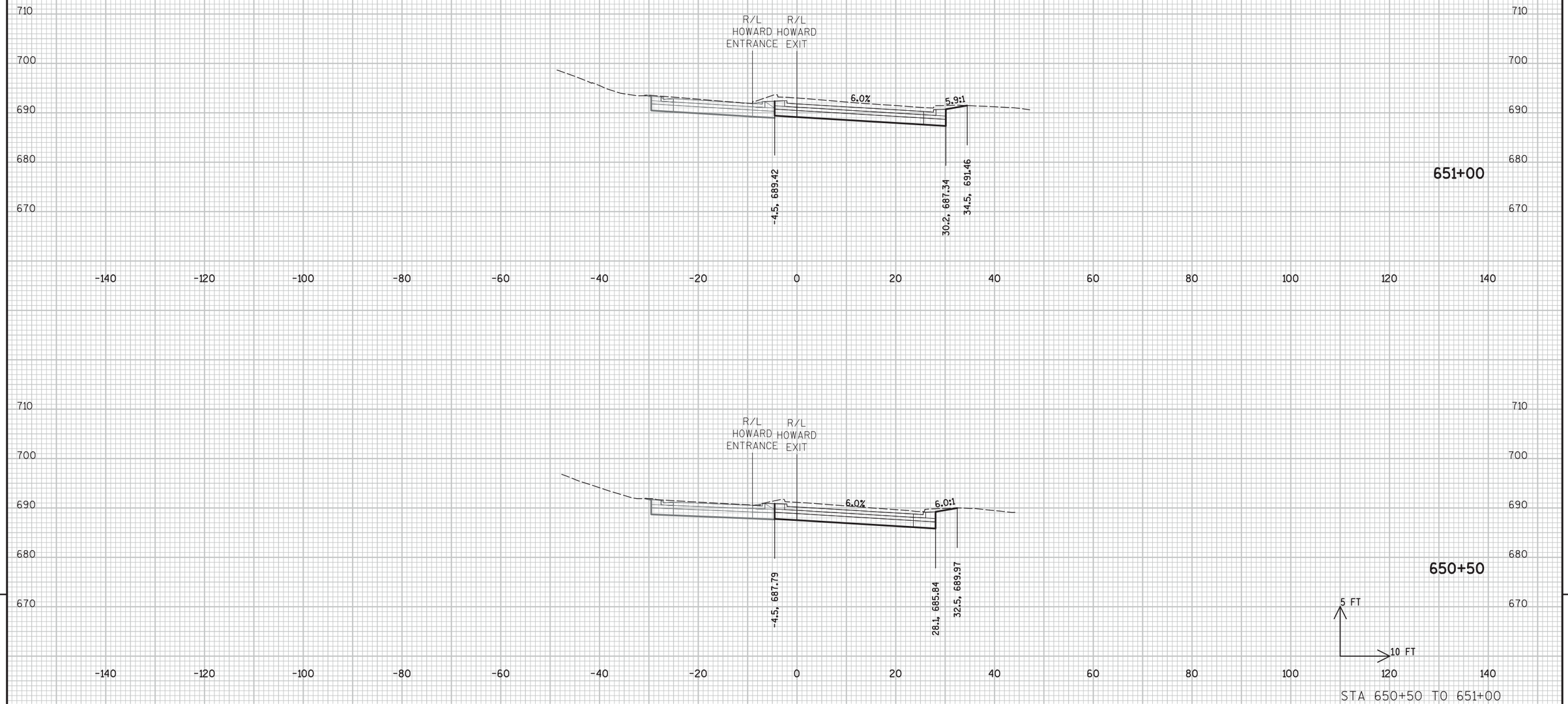
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD EXIT RAMPS	SHEET 653	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090212_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.



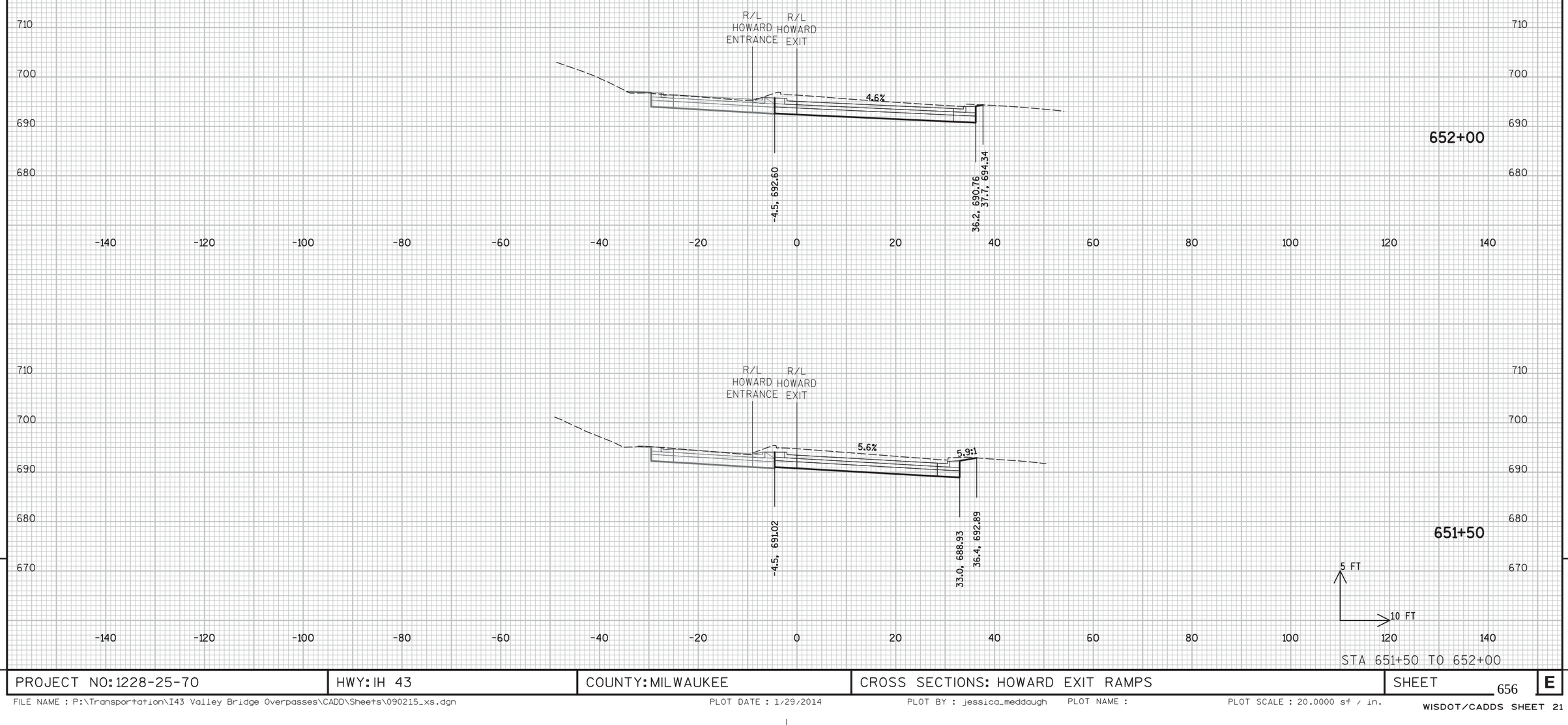
STA 649+00 TO 650+00

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD EXIT RAMPS	SHEET 654	E



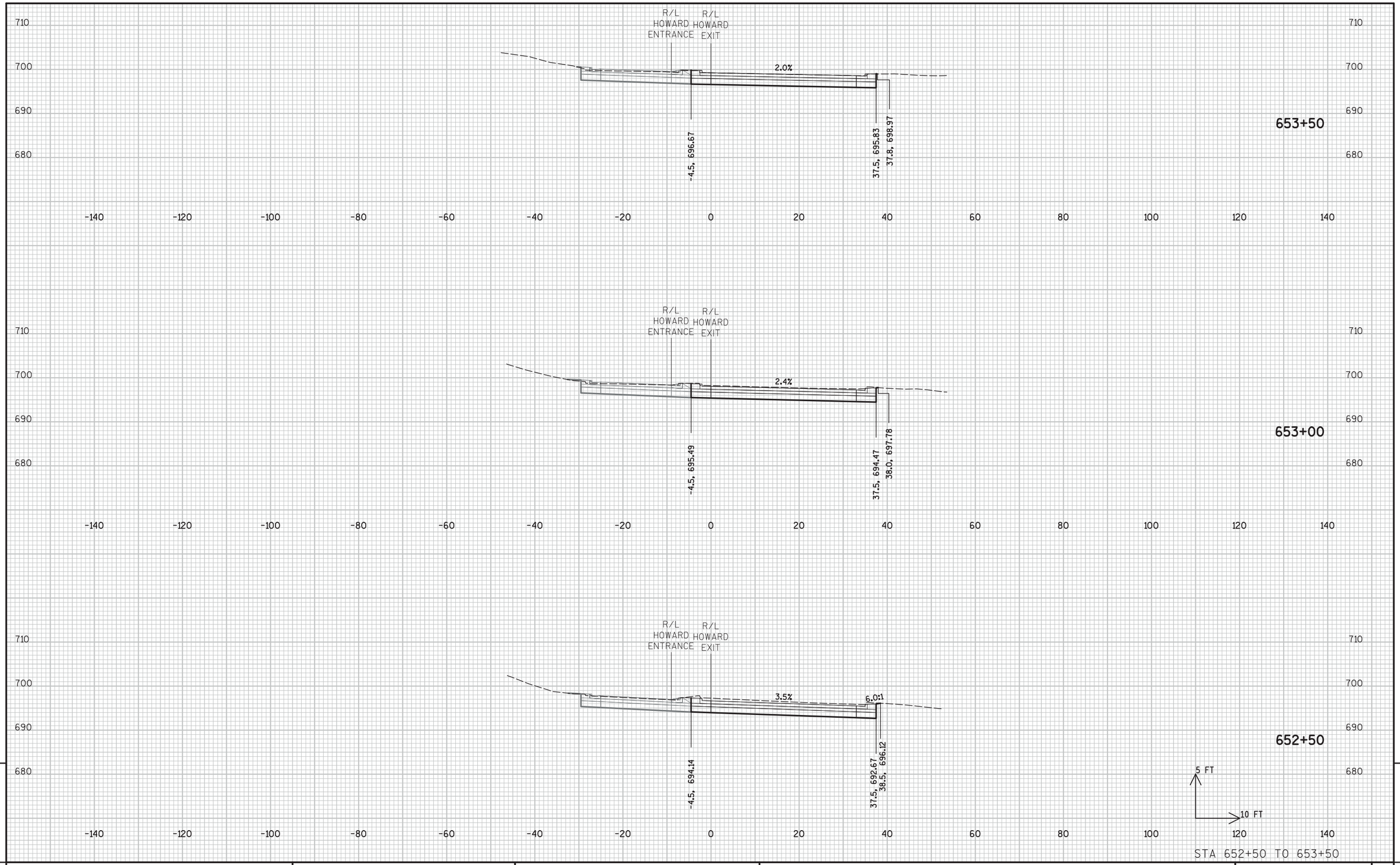
STA 650+50 TO 651+00

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD EXIT RAMPS	SHEET 655	E



STA 651+50 TO 652+00

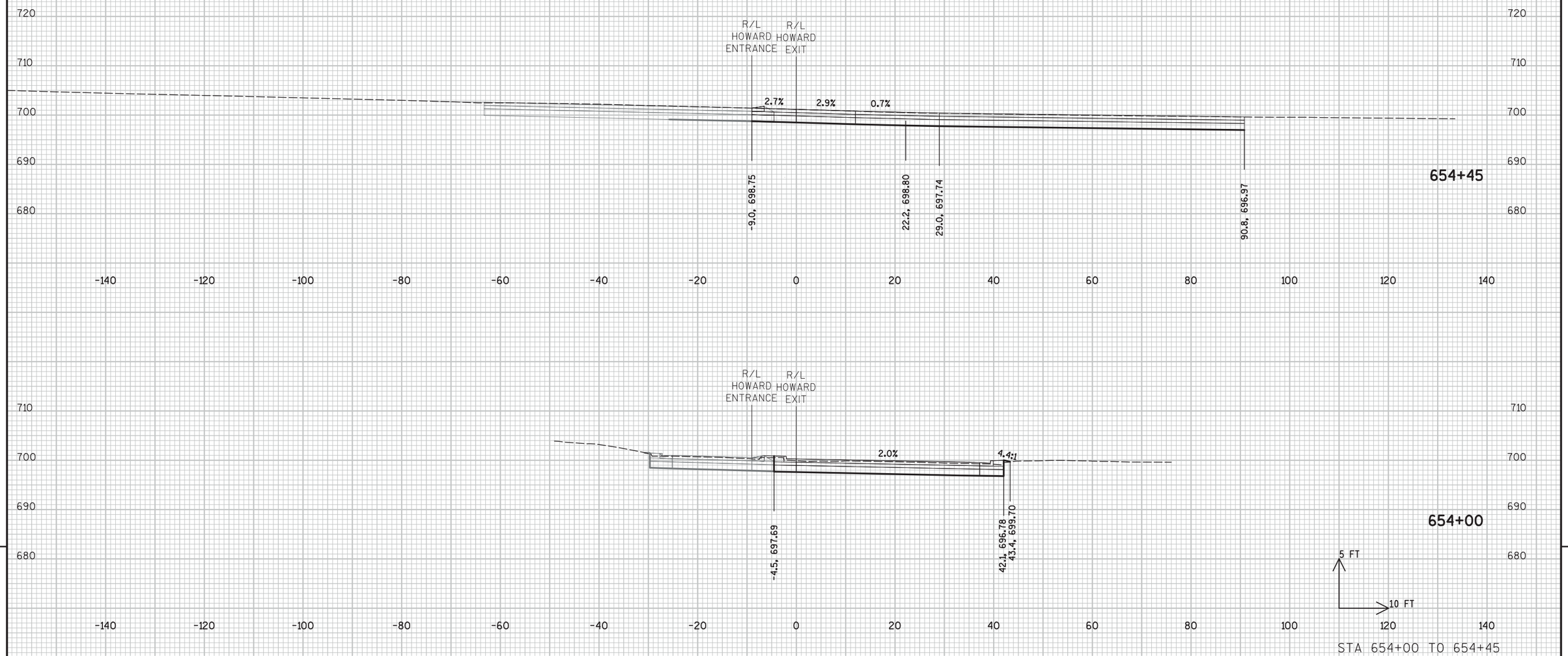
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD EXIT RAMPS	SHEET 656	E



STA 652+50 TO 653+50

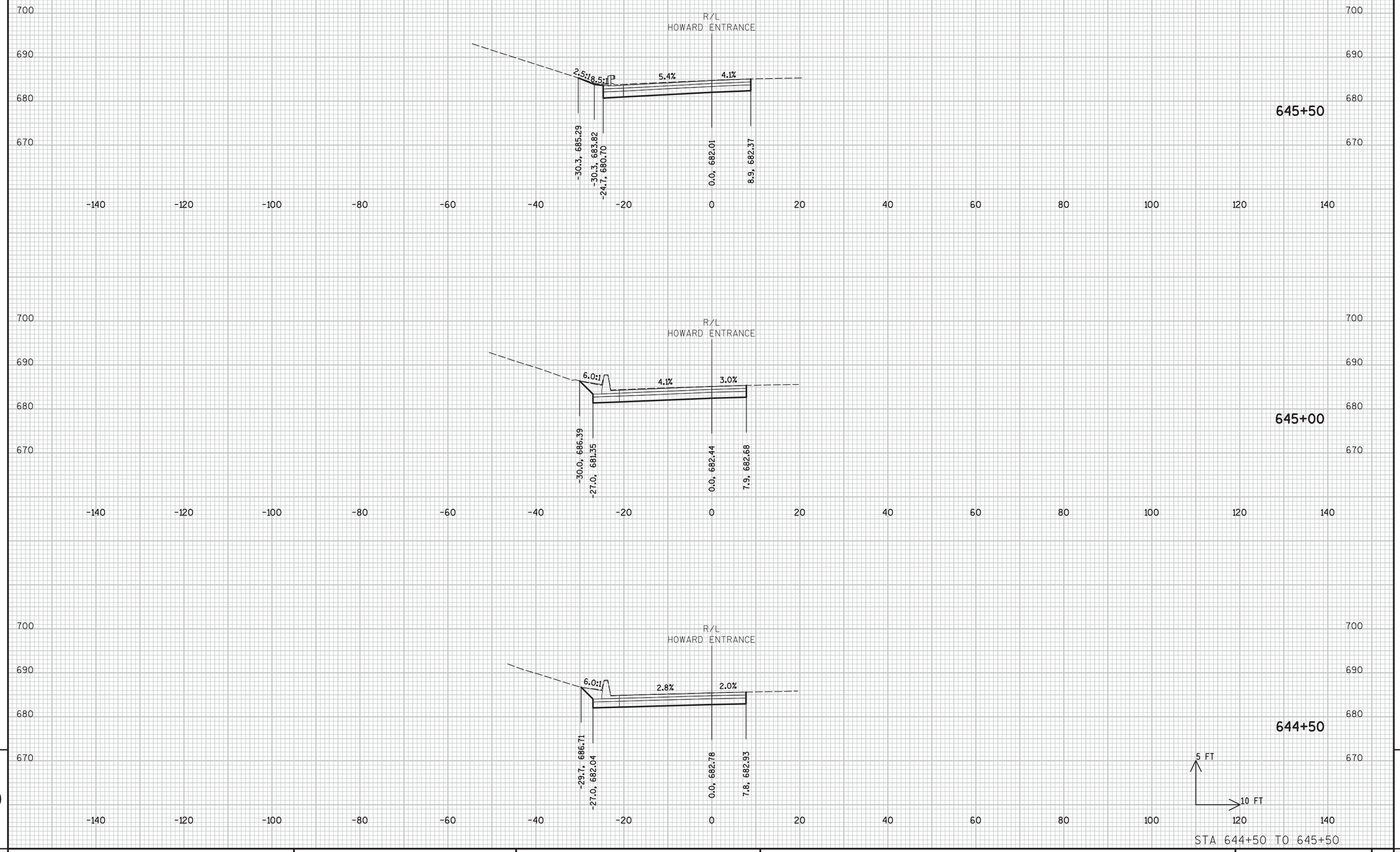
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD EXIT RAMPS	SHEET 657	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090216_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.



STA 654+00 TO 654+45

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD EXIT RAMPS	SHEET 658	E

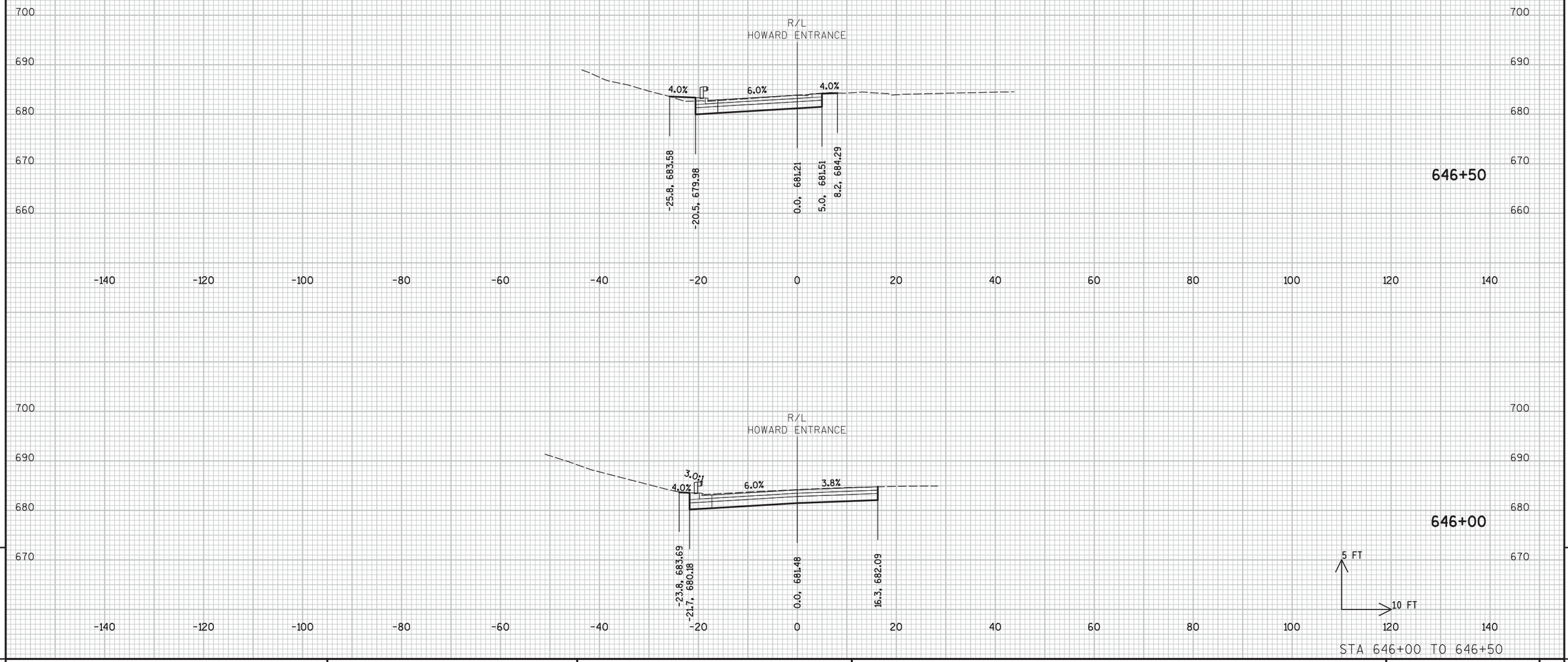


STA 644+50 TO 645+50

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD ENTRANCE RAMPS	SHEET 659	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090220_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



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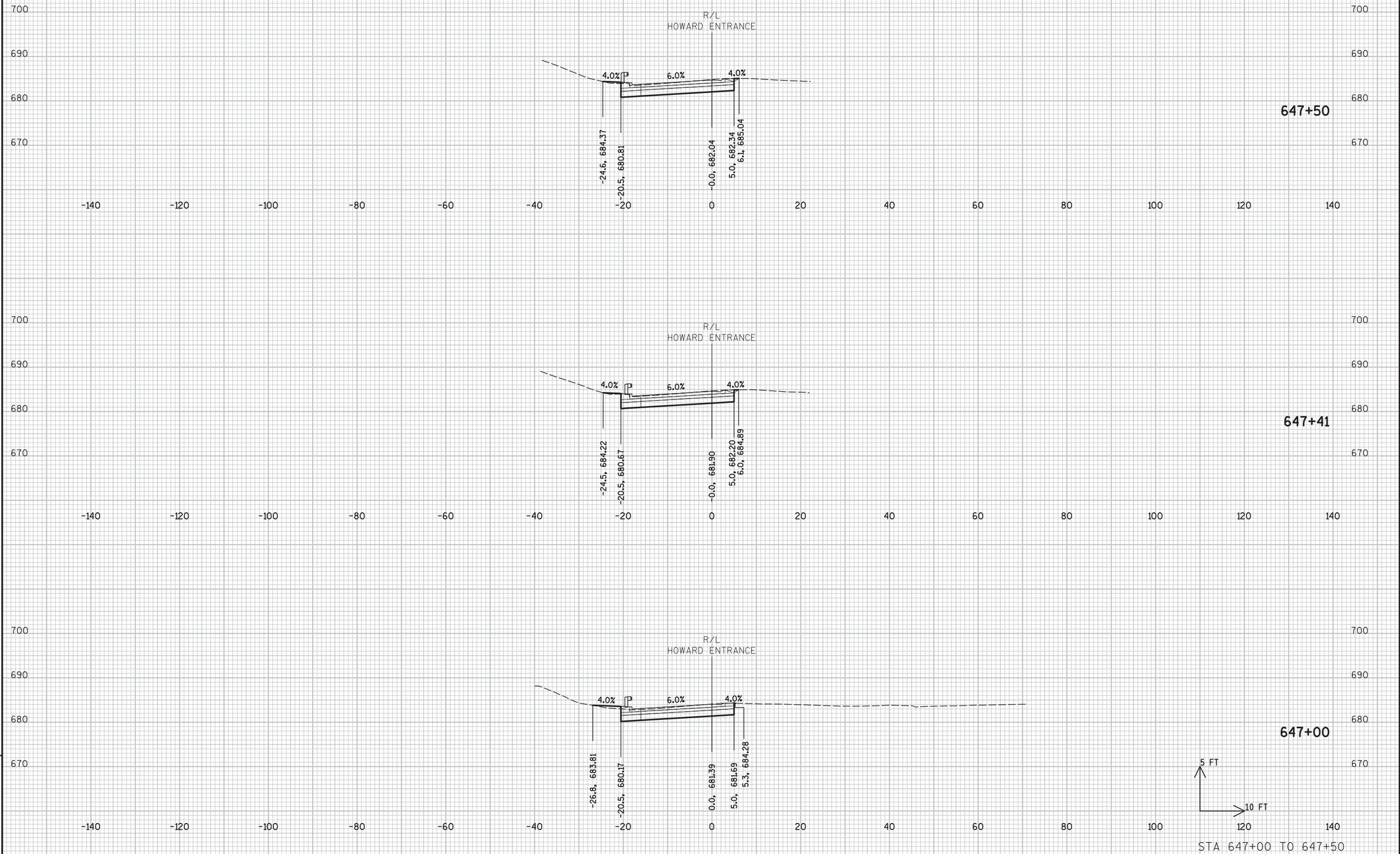
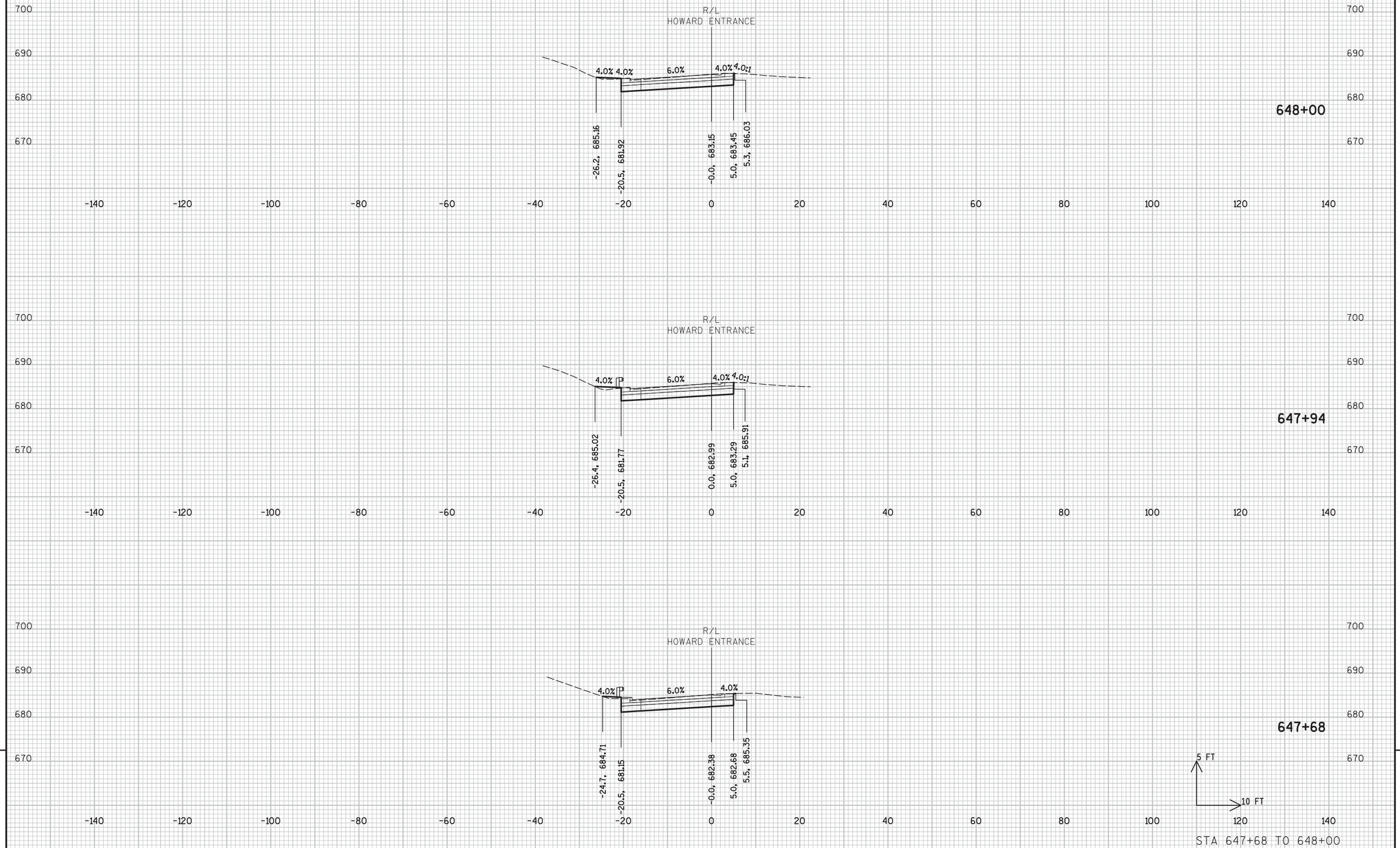
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD ENTRANCE RAMPS	SHEET 660	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090221_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.



STA 647+00 TO 647+50

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD ENTRANCE RAMPS	SHEET 661	E



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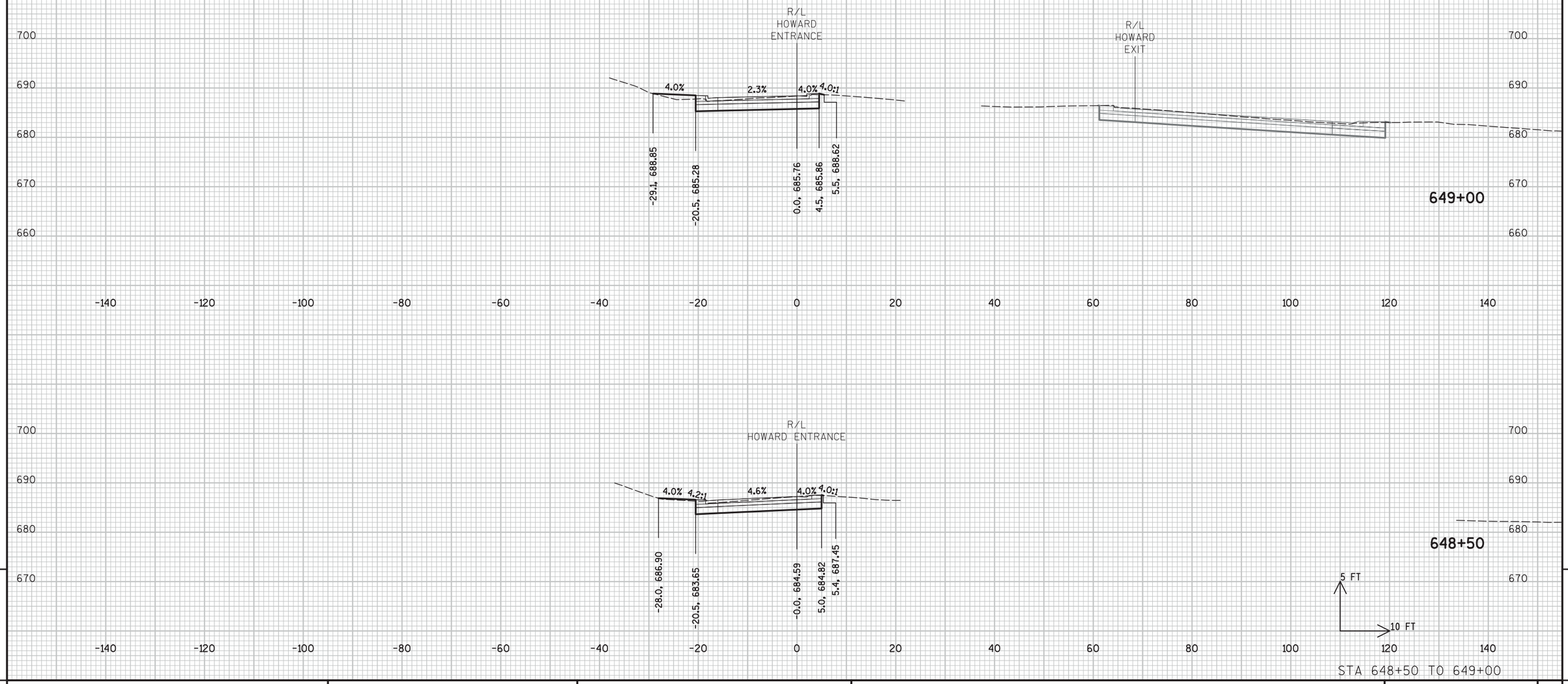
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD ENTRANCE RAMPS	SHEET 662	E

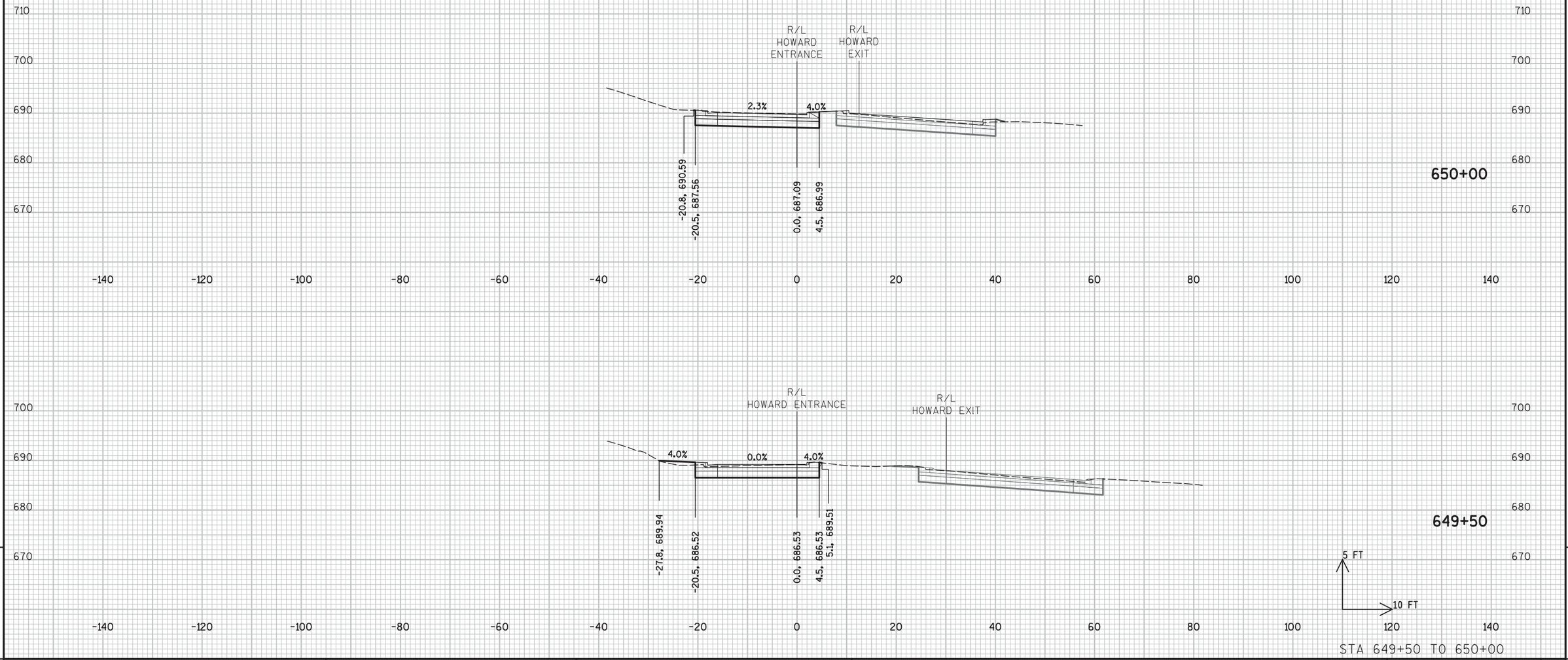
FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090223_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.
WISDOT/CADDS SHEET 21



STA 648+50 TO 649+00

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD ENTRANCE RAMPS	SHEET 663	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090224_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.

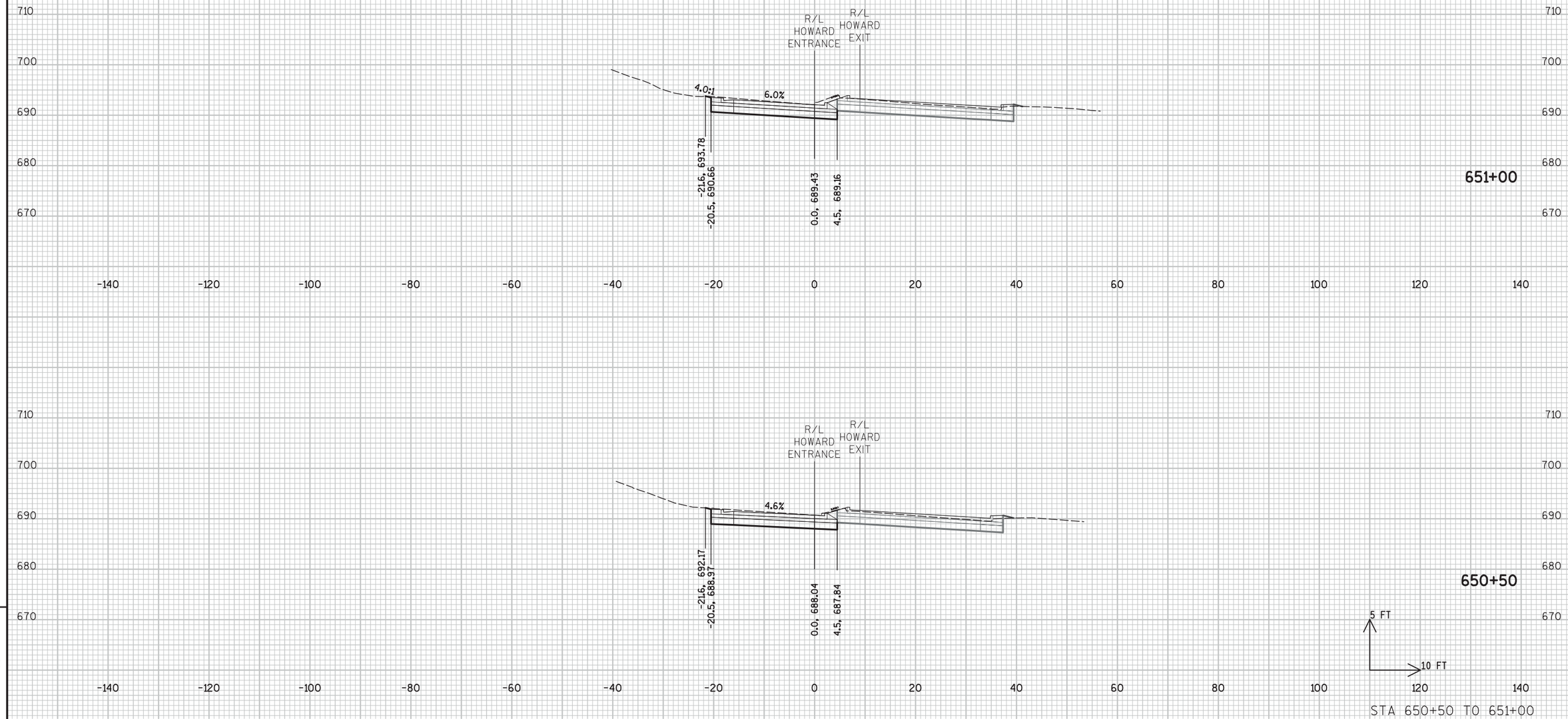


STA 649+50 TO 650+00

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD ENTRANCE RAMPS	SHEET 664	E

FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090225_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



STA 650+50 TO 651+00

9

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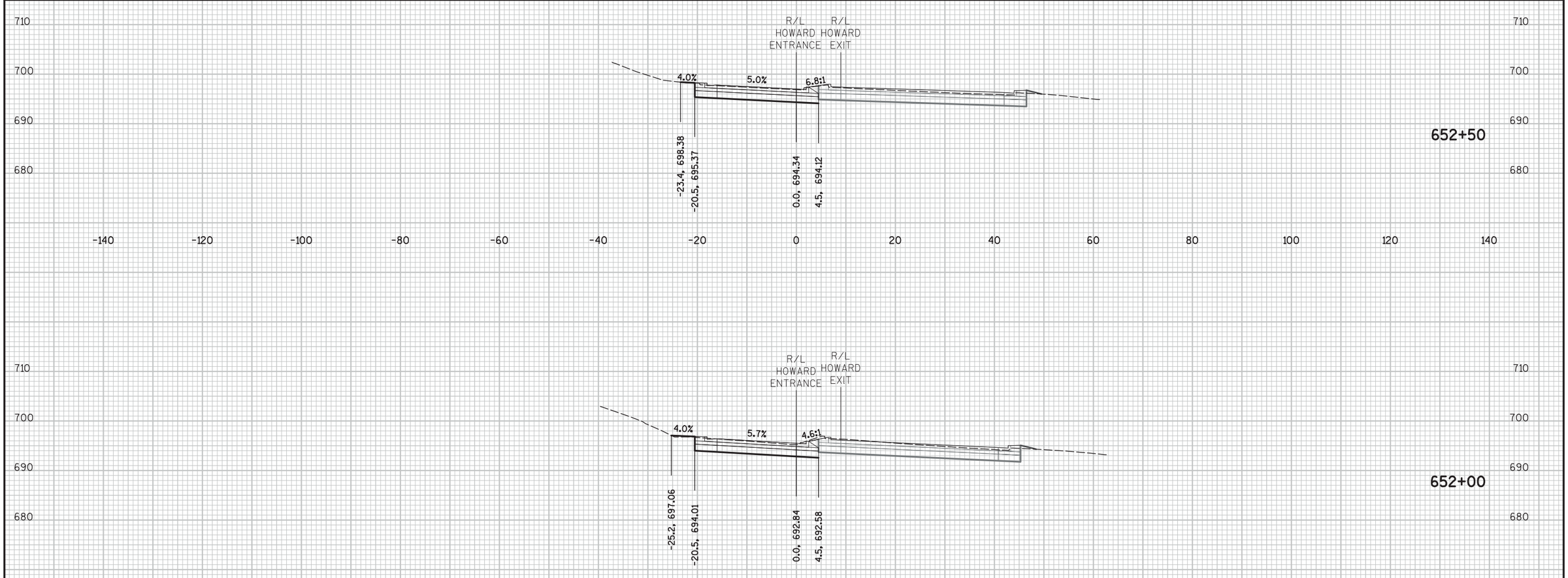
PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD ENTRANCE RAMPS	SHEET 665	E

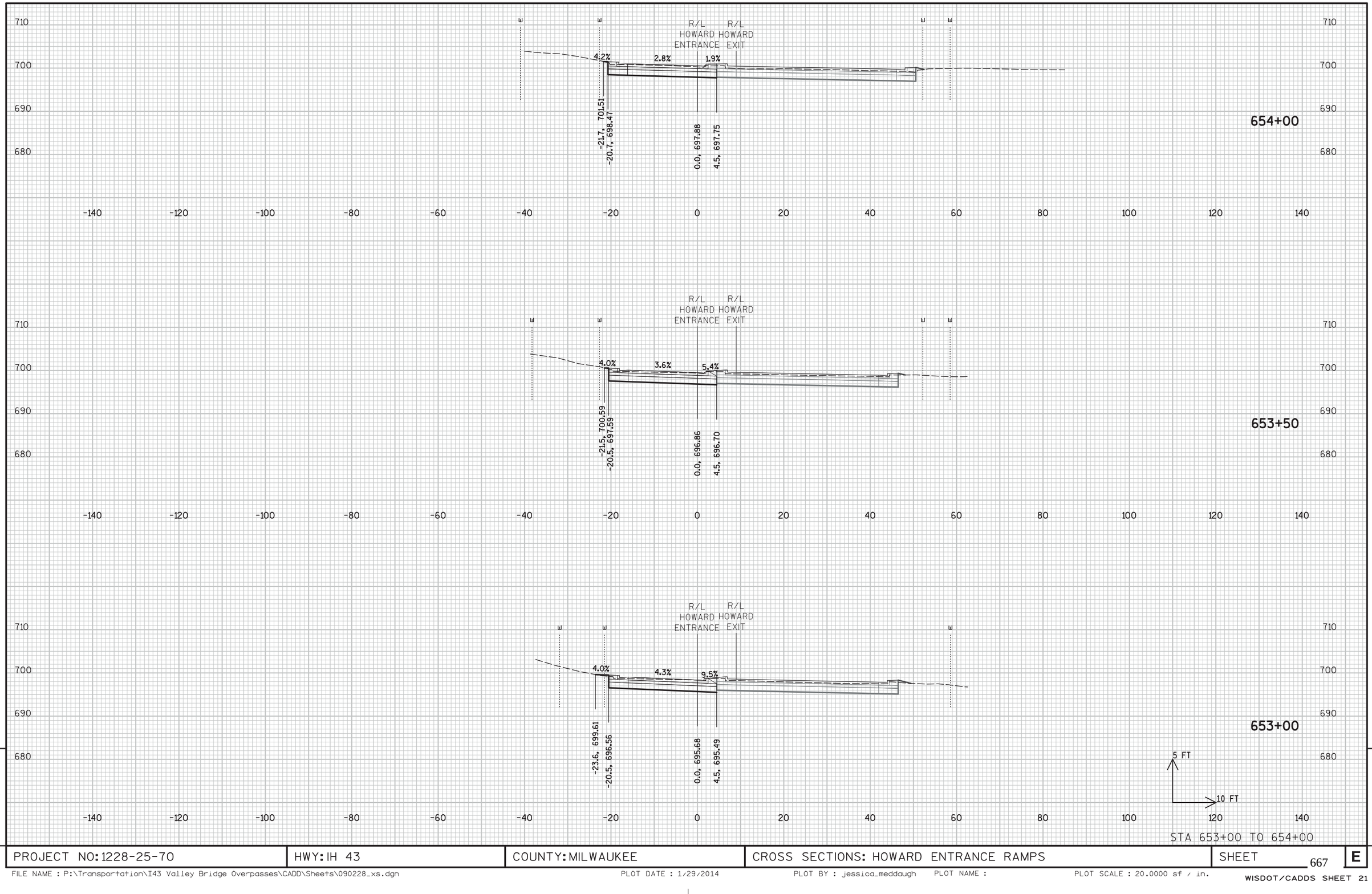
FILE NAME : P:\Transportation\I43 Valley Bridge Overpasses\CADD\Sheets\090226_xs.dgn PLOT DATE : 1/29/2014 PLOT BY : jessica_meddaugh PLOT NAME : PLOT SCALE : 20.0000 sf / in.

WISDOT/CADDS SHEET 21



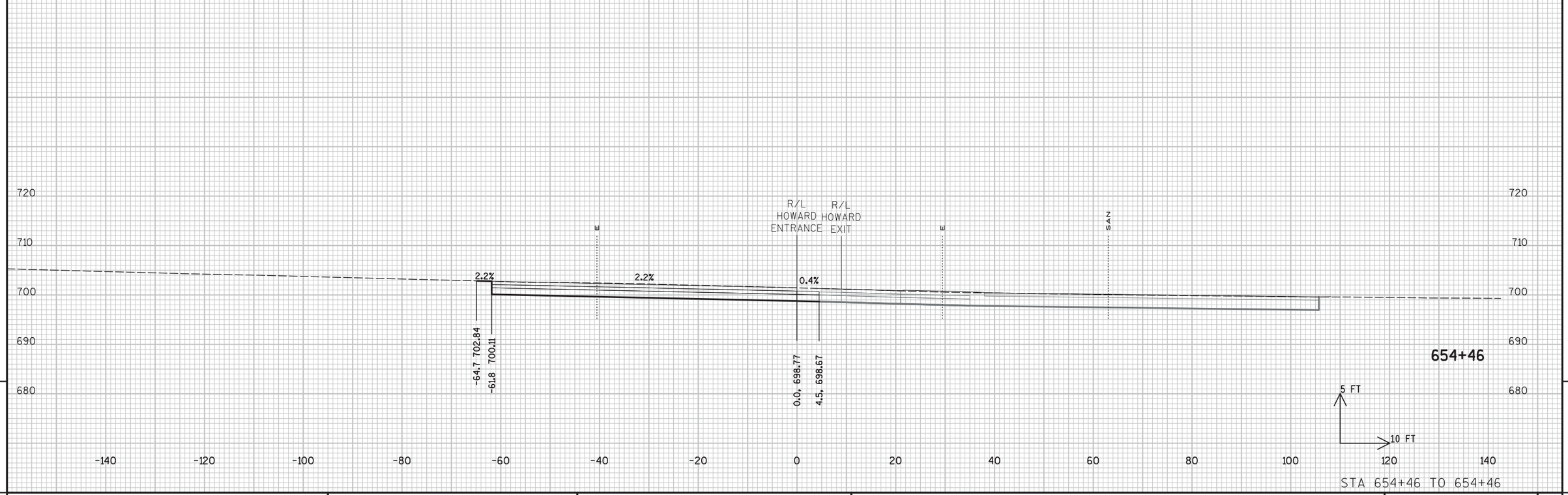
STA 651+50 TO 652+50

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD ENTRANCE RAMPS	SHEET 666	E



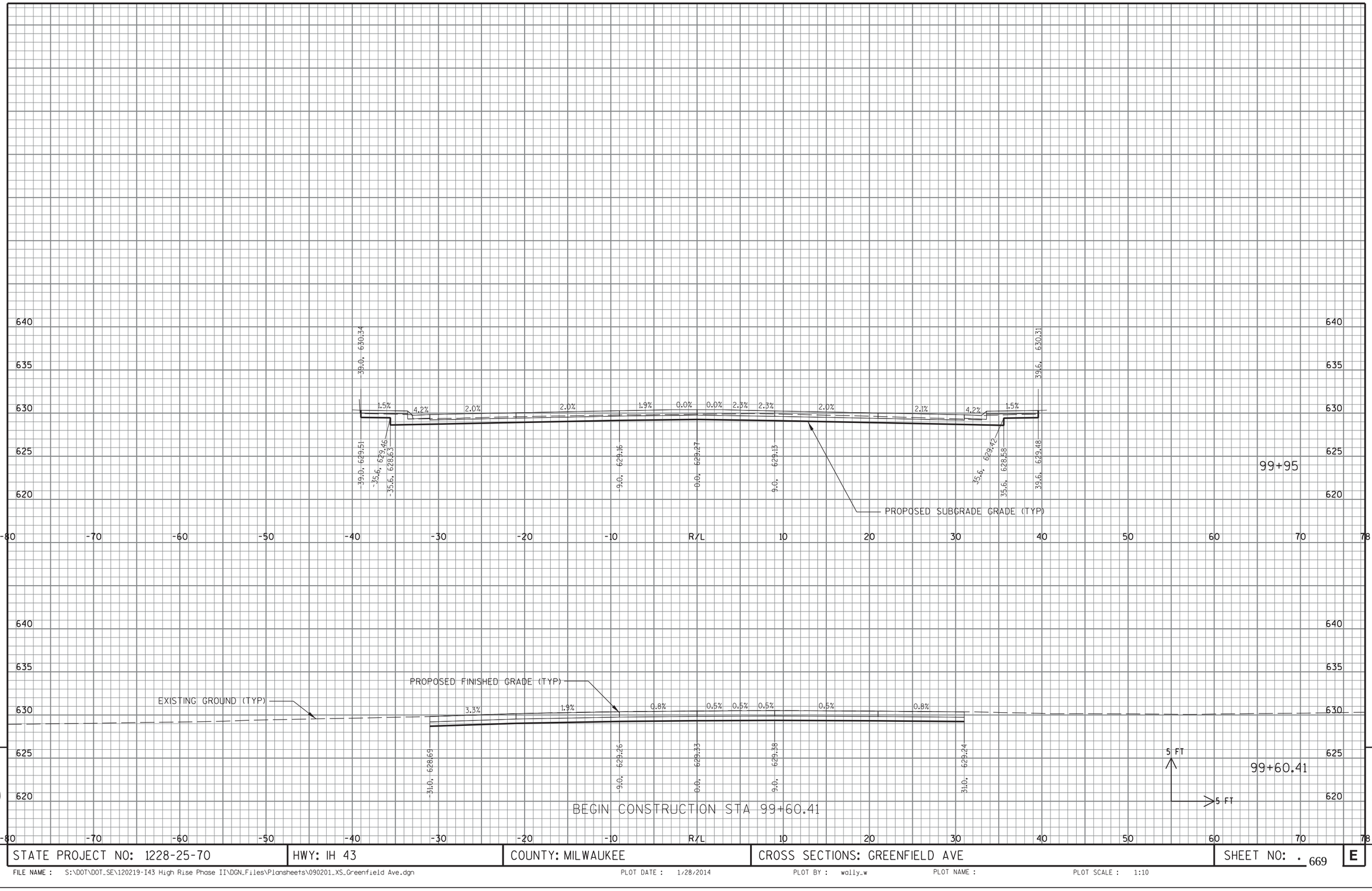
STA 653+00 TO 654+00

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD ENTRANCE RAMPS	SHEET 667	E



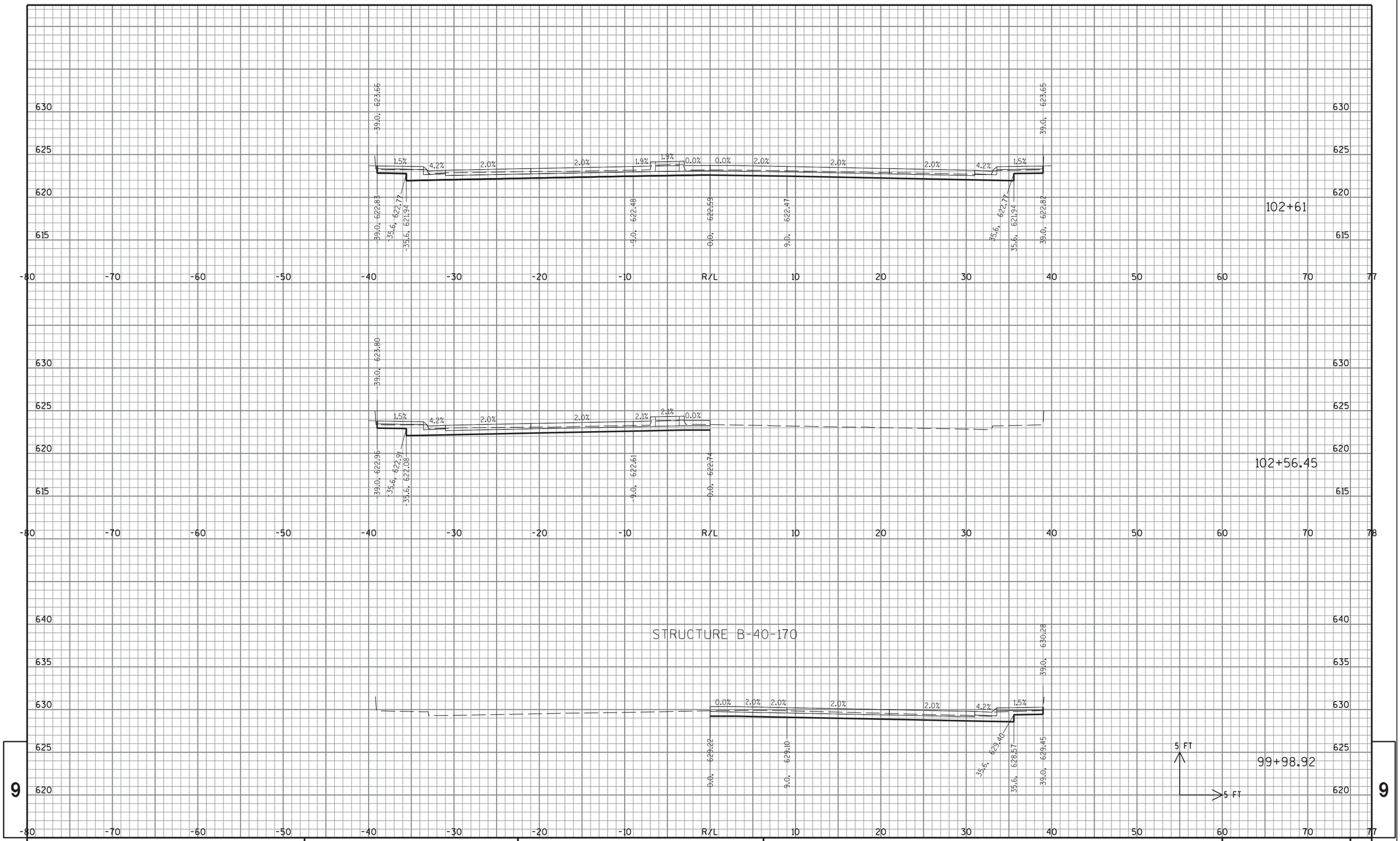
STA 654+46 TO 654+46

PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD ENTRANCE RAMPS	SHEET 668	E



STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD AVE	SHEET NO: . 669	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090201_XS_Greenfield Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



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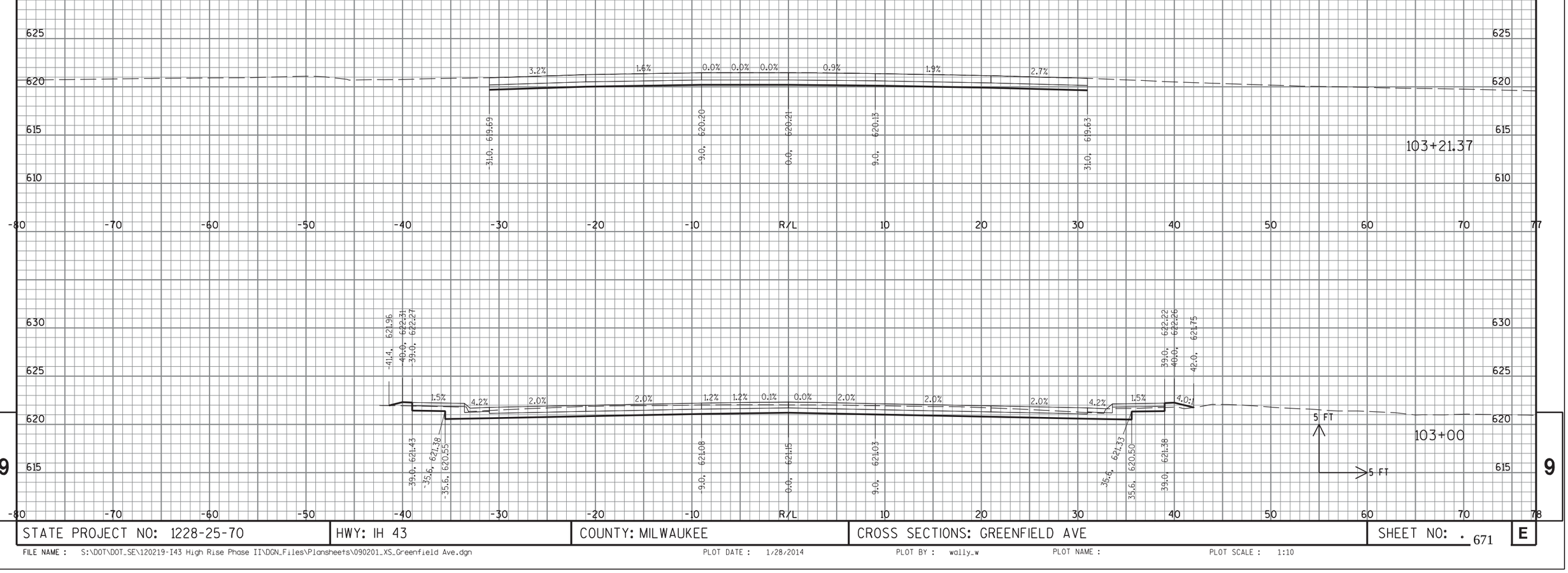
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD AVE	SHEET NO: . 670	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090201_XS_Greenfield Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10

END CONSTRUCTION STA 103+22.12



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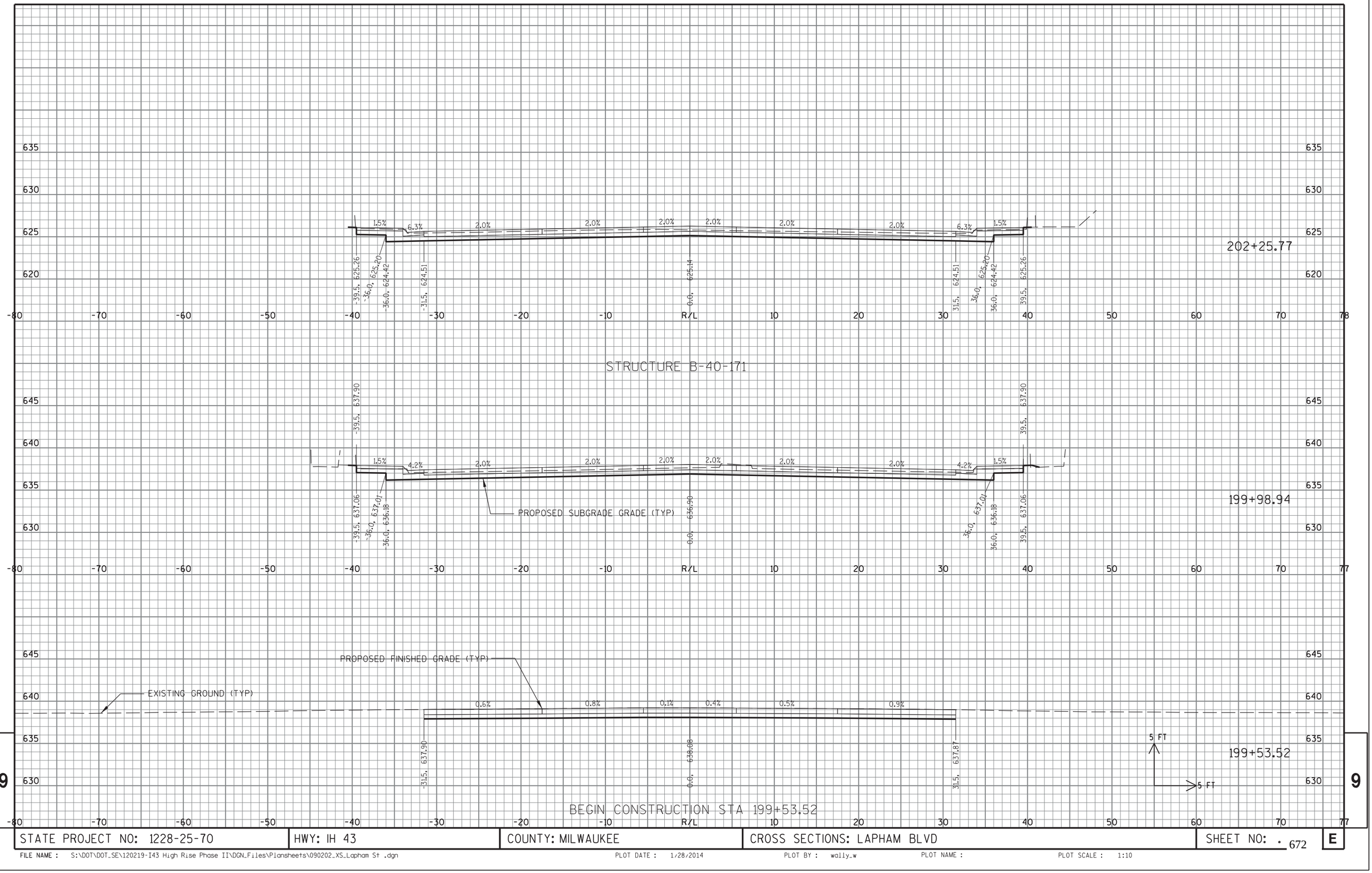
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD AVE	SHEET NO: . 671	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090201_XS_Greenfield Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



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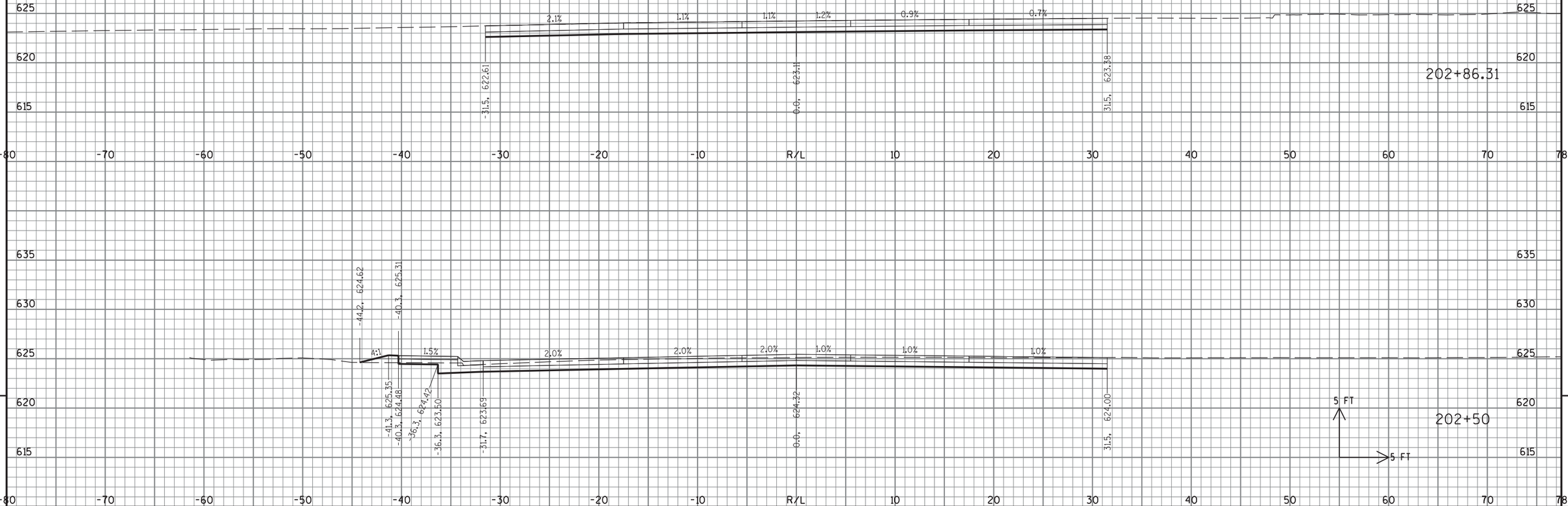
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: LAPHAM BLVD	SHEET NO: . 672	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090202_XS_Lapham St .dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10

END CONSTRUCTION STA 202+86.31



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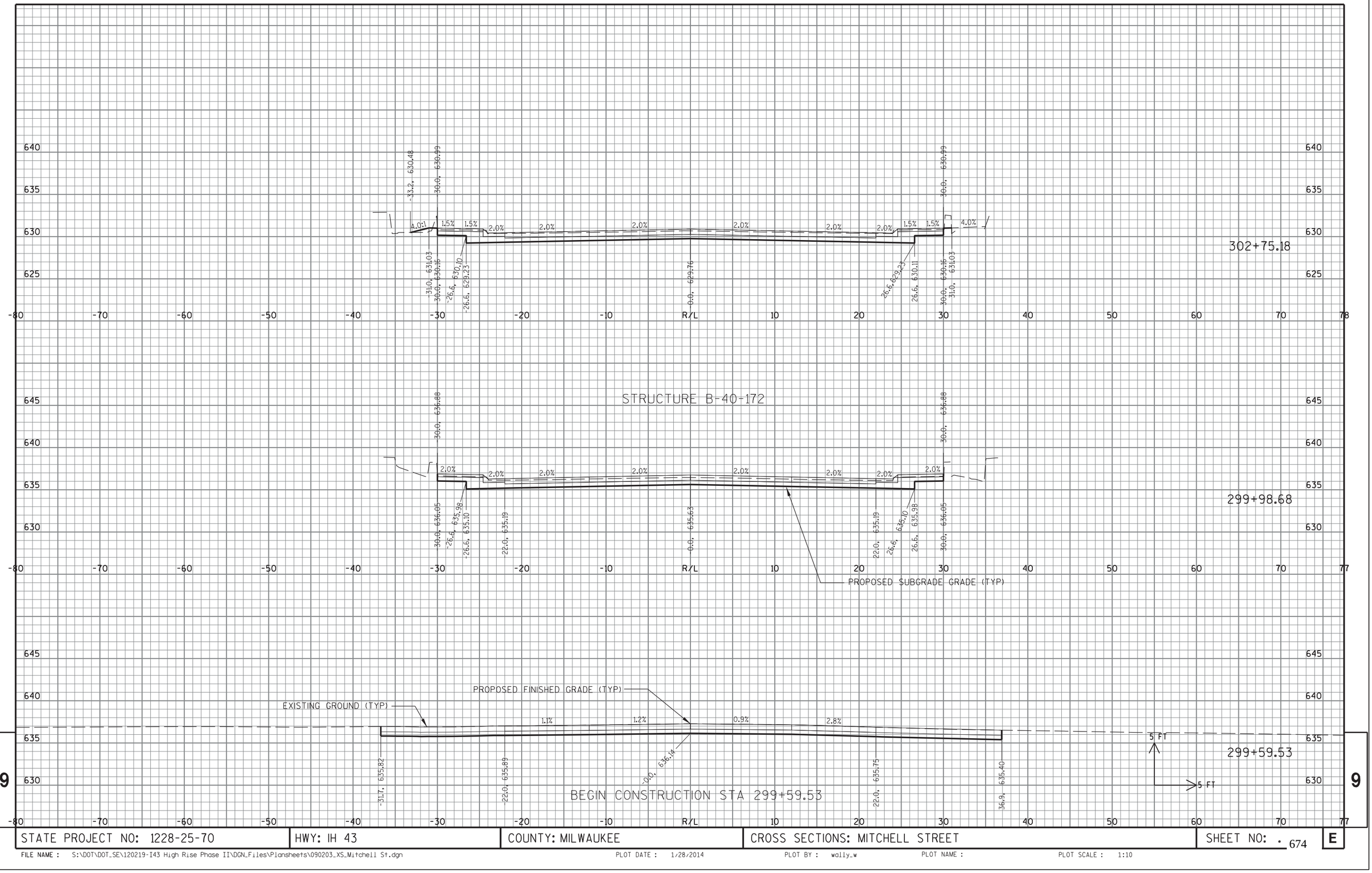
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: LAPHAM BLVD	SHEET NO: . 673	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090202_XS_Lapham St .dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



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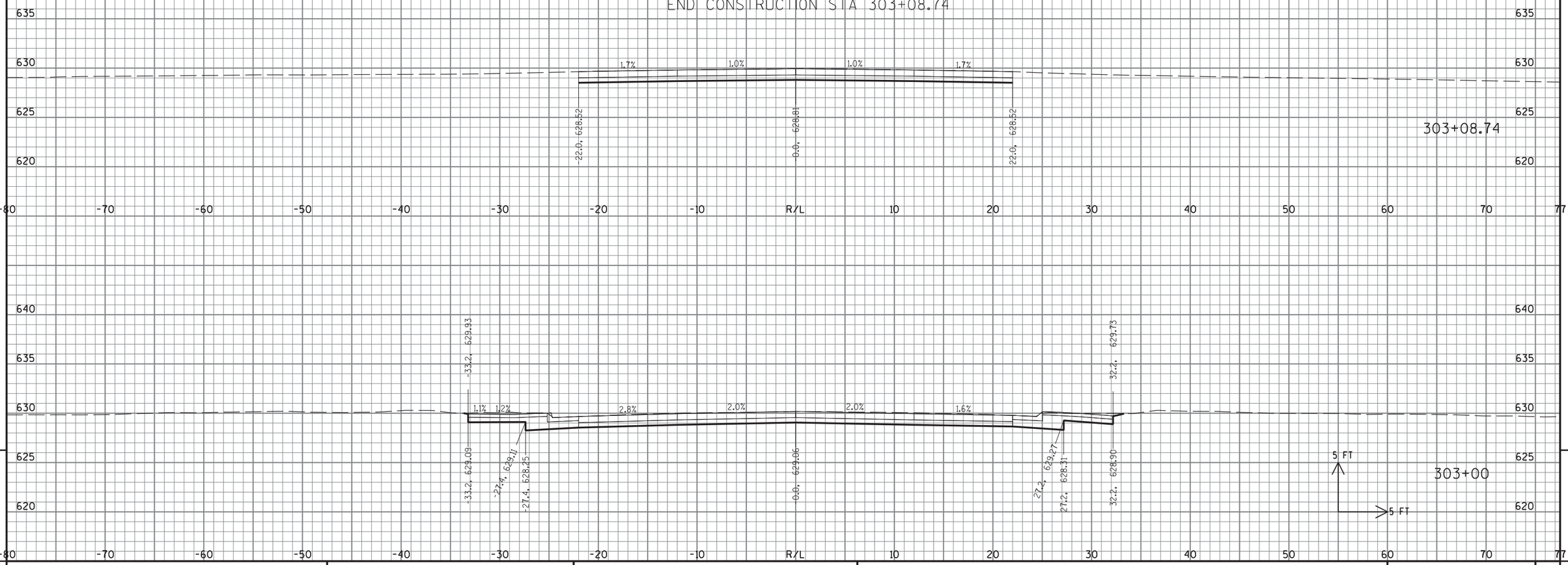
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: MITCHELL STREET	SHEET NO: . 674	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090203_XS_Mitchell St.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10

END CONSTRUCTION STA 303+08.74



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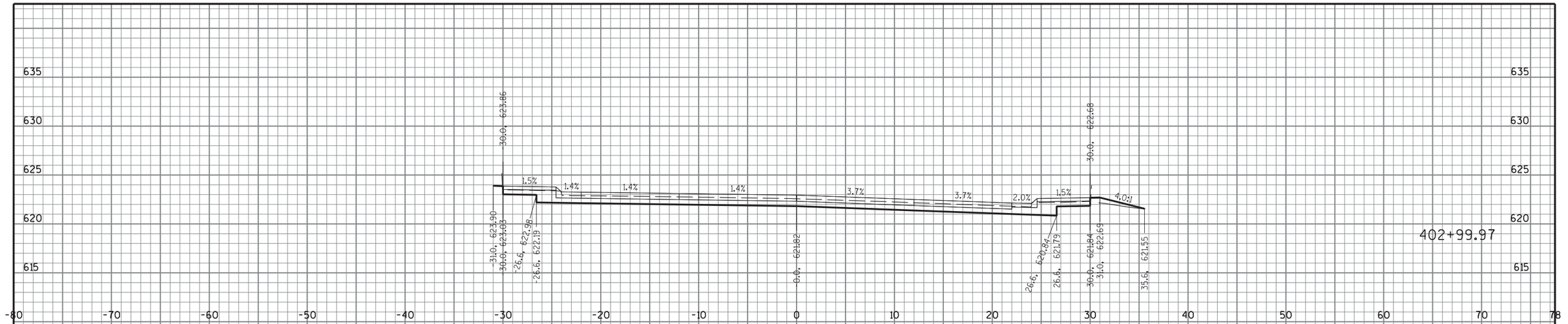
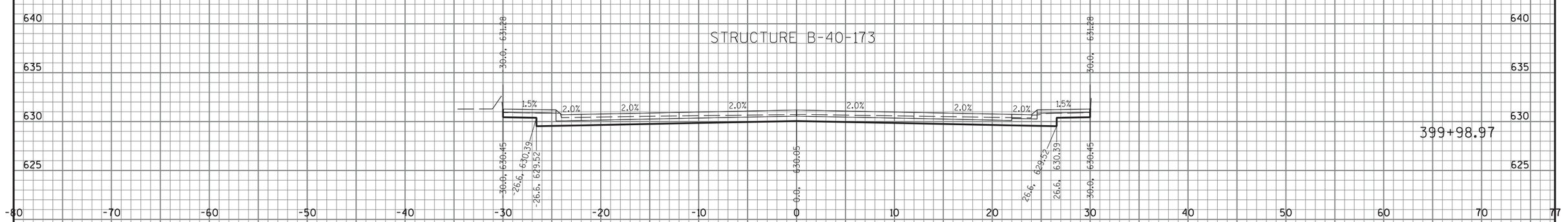
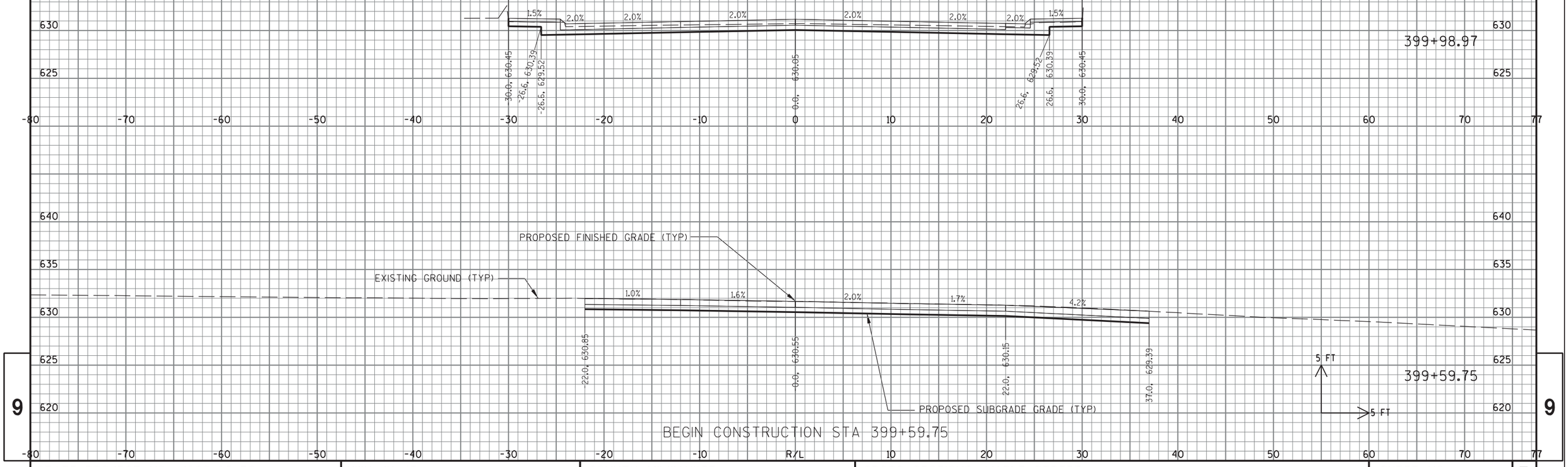
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: MITCHELL STREET	SHEET NO: . 675	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090203_XS_Mitchell St.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10







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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: MAPLE STREET	SHEET NO: . 676	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090204_XS_Maple St.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10

END CONSTRUCTION STA 403+85.00

403+85.00

1.8% 1.8% 2.7% 4.6% 5.9% 5.9%

22.0, 620.84 | 0.0, 620.33 | 22.0, 619.19

403+50

2.5% 3.1% 2.2% 4.4% 4.9% 5.7%

41.0, 621.81 | 22.0, 621.33 | 0.0, 620.55 | 22.0, 618.53 | 51.0, 617.76

403+00

1.5% 1.4% 1.4% 1.4% 3.7% 3.7% 2.0% 1.5% 4.0%

30.0, 623.86 | 31.0, 623.90 | 30.0, 623.03 | 26.6, 622.38 | 26.6, 622.19 | 0.0, 621.82 | 26.6, 620.84 | 26.6, 621.79 | 30.0, 622.68 | 30.0, 621.84 | 31.0, 622.69 | 35.6, 621.55

5 FT

5 FT

9

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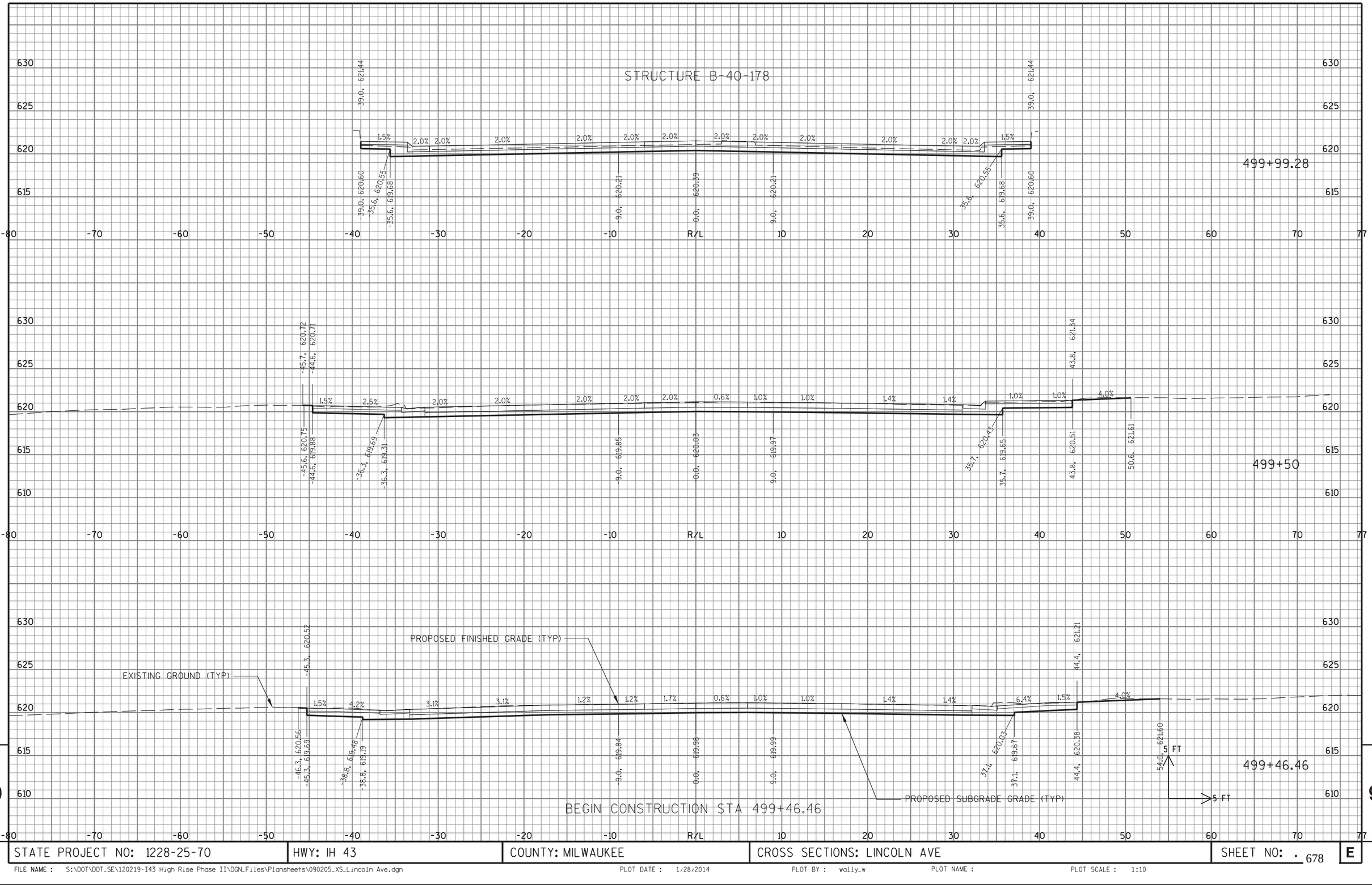
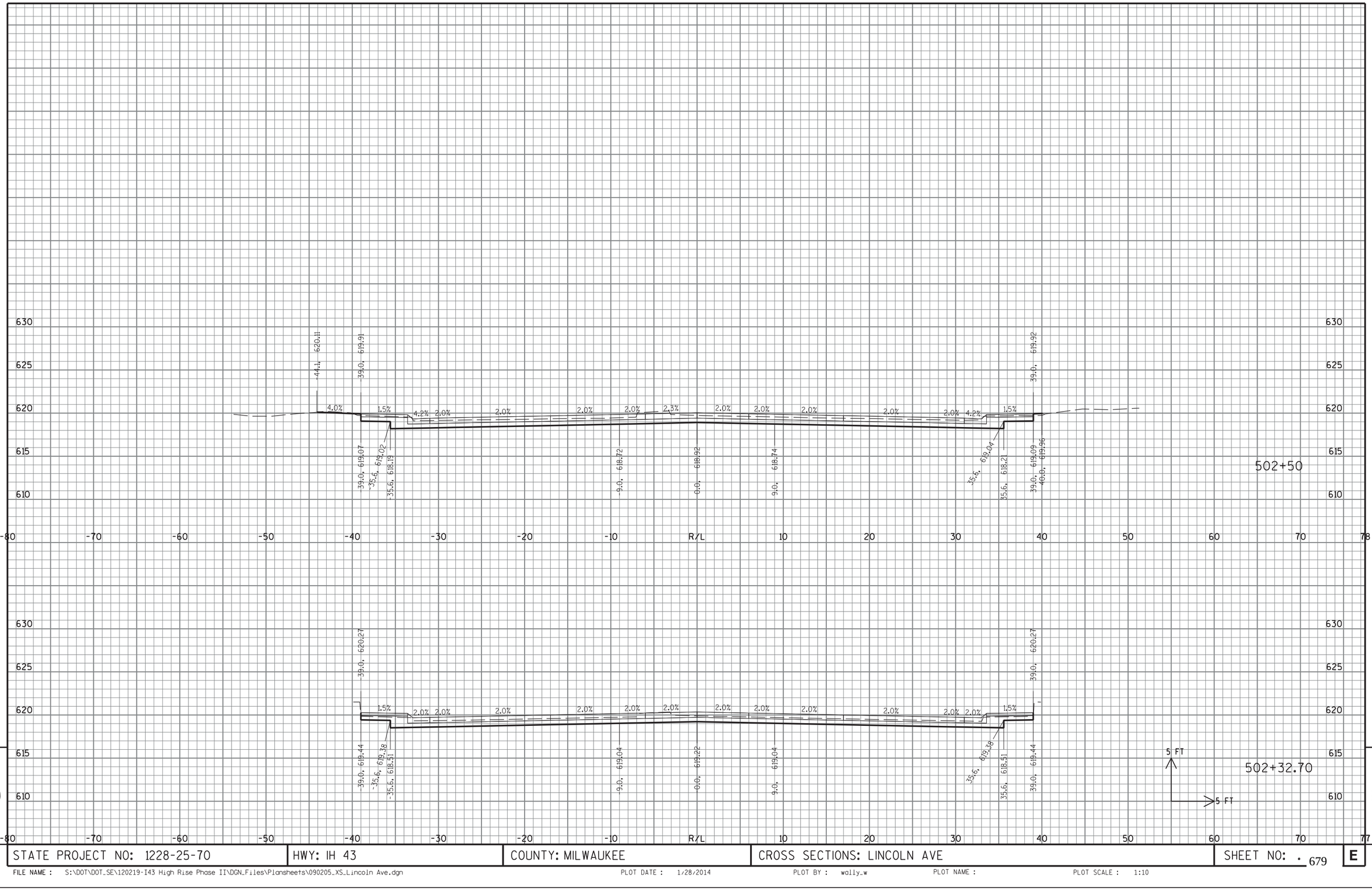
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: MAPLE STREET	SHEET NO: . 677	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090204_XS_Maple St.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



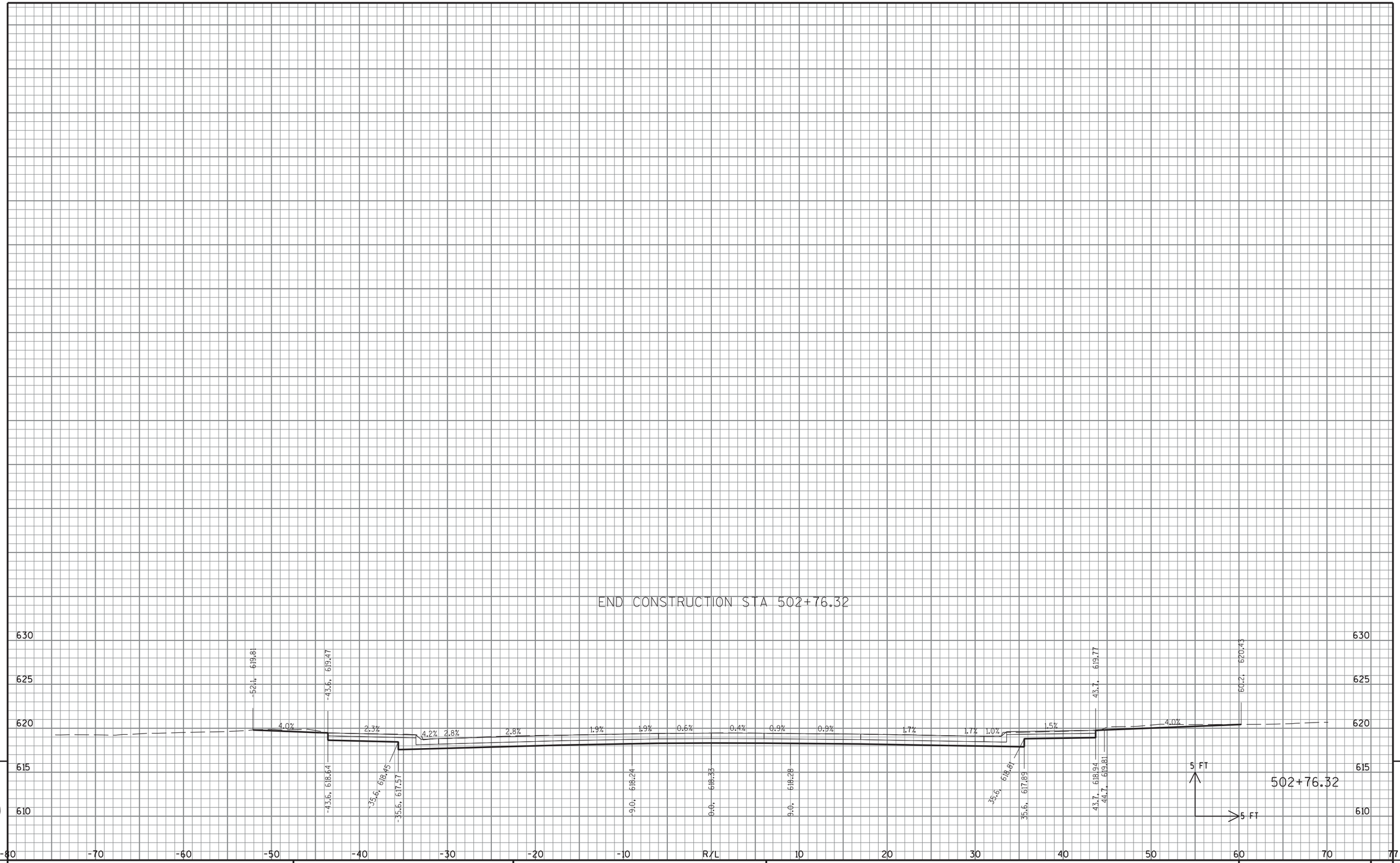
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: LINCOLN AVE	SHEET NO: . 678 E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090205_XS_Lincoln Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: LINCOLN AVE	SHEET NO: . 679	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090205_XS_Lincoln Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: LINCOLN AVE	SHEET NO: . 680	E

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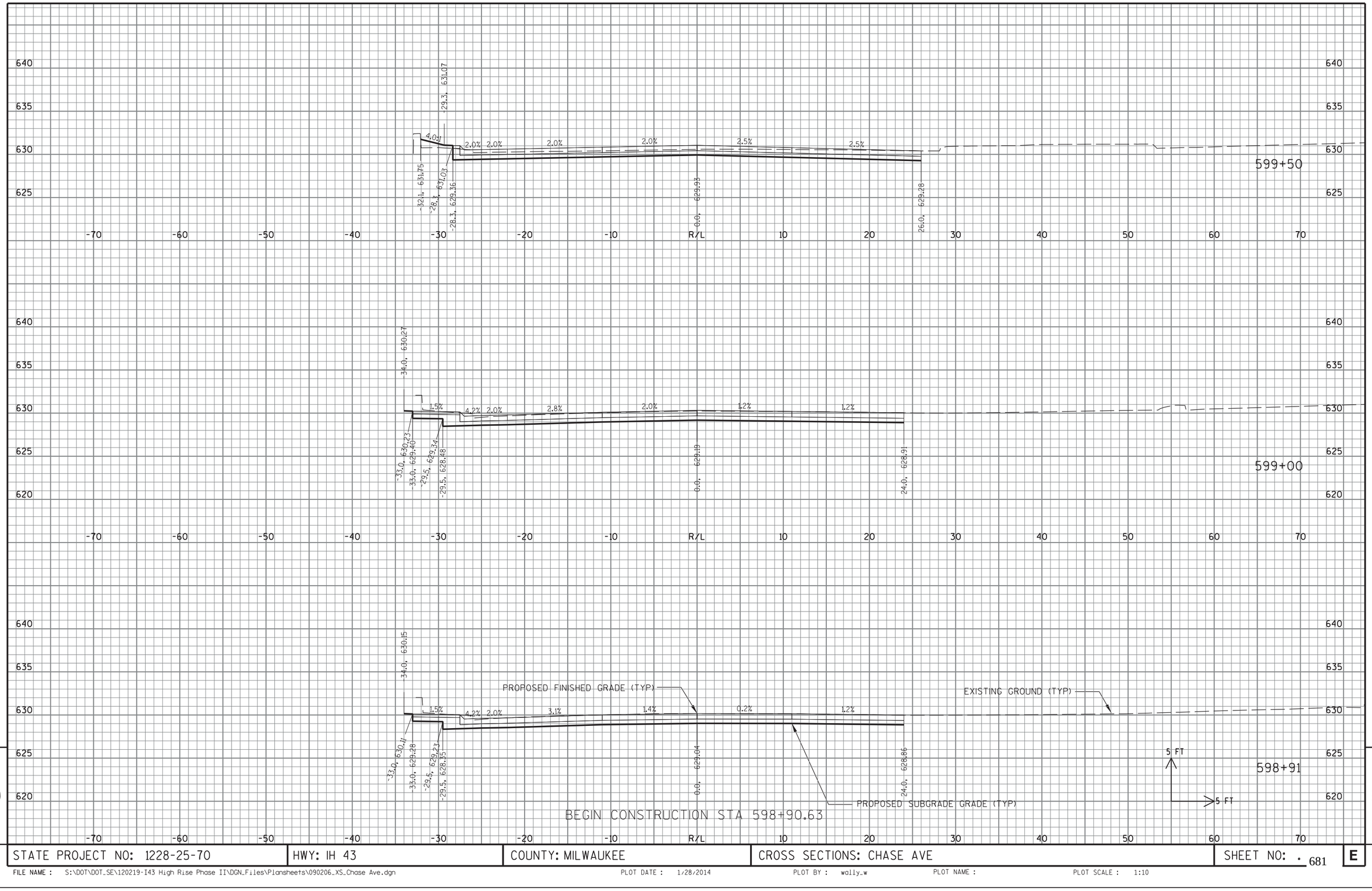
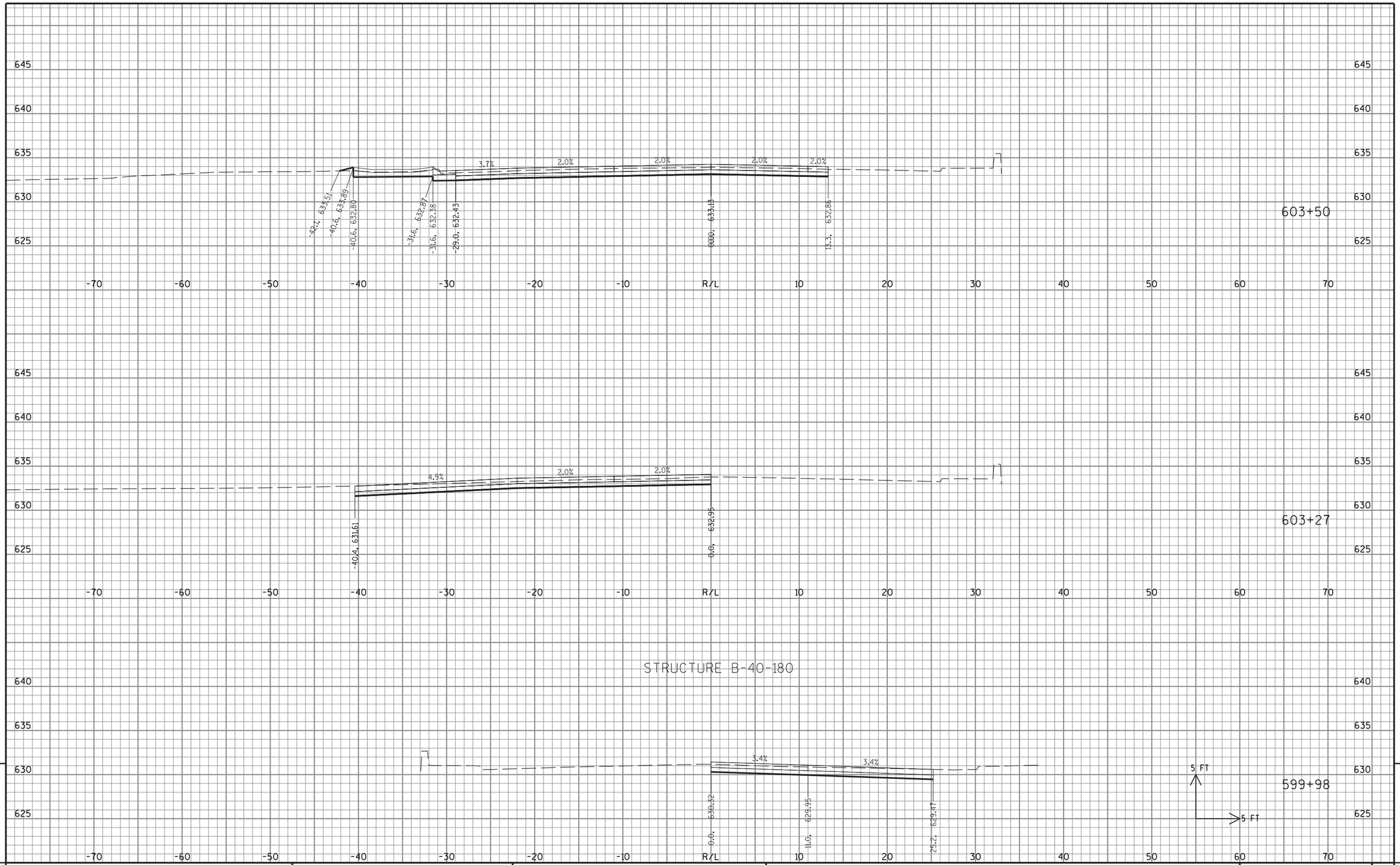


STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: CHASE AVE	SHEET NO: . 681

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090206_XS_Chase Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10

9 9 E



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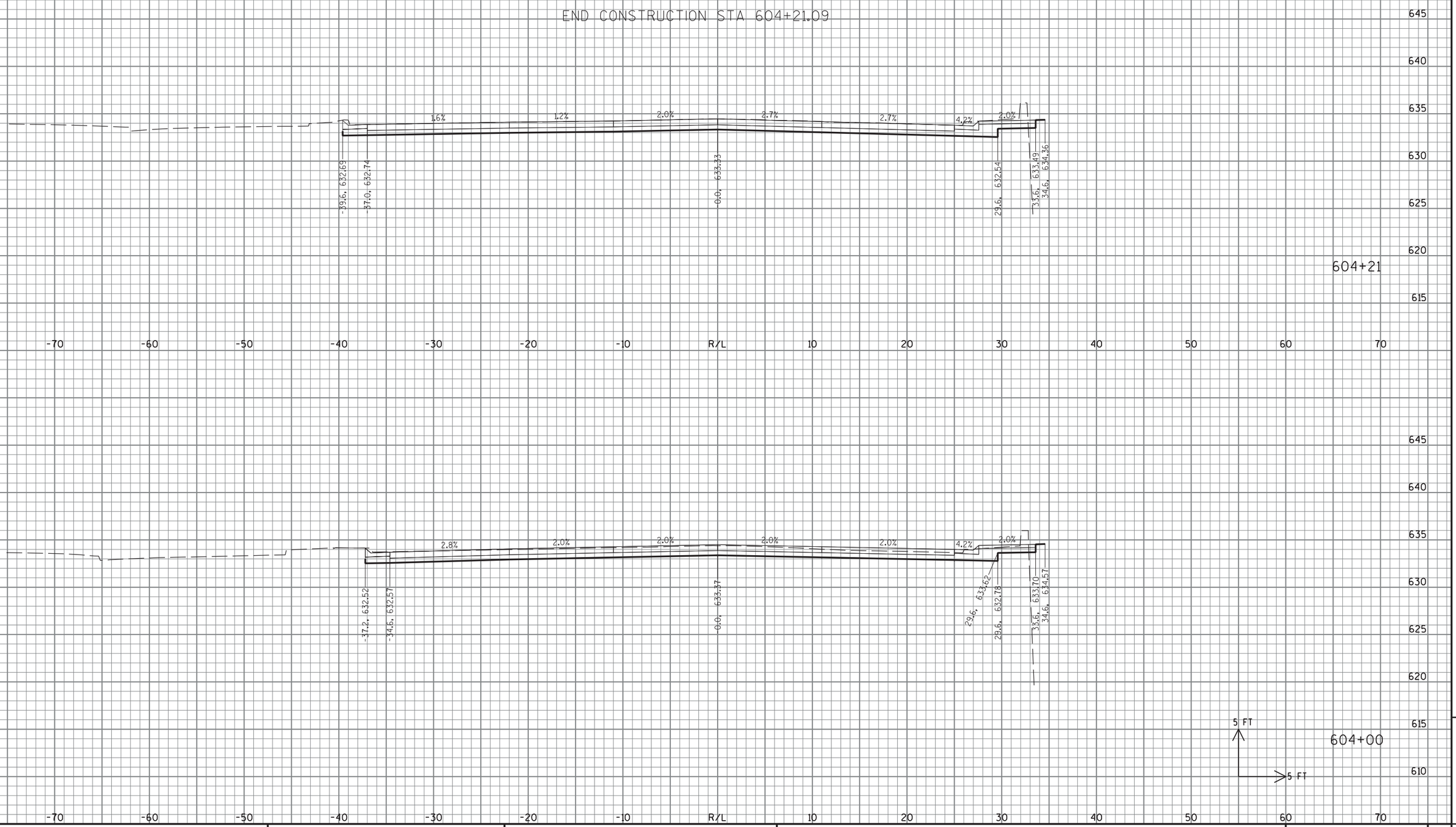
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: CHASE AVE	SHEET NO: . 682	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090206_XS_Chase Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10

END CONSTRUCTION STA 604+21.09



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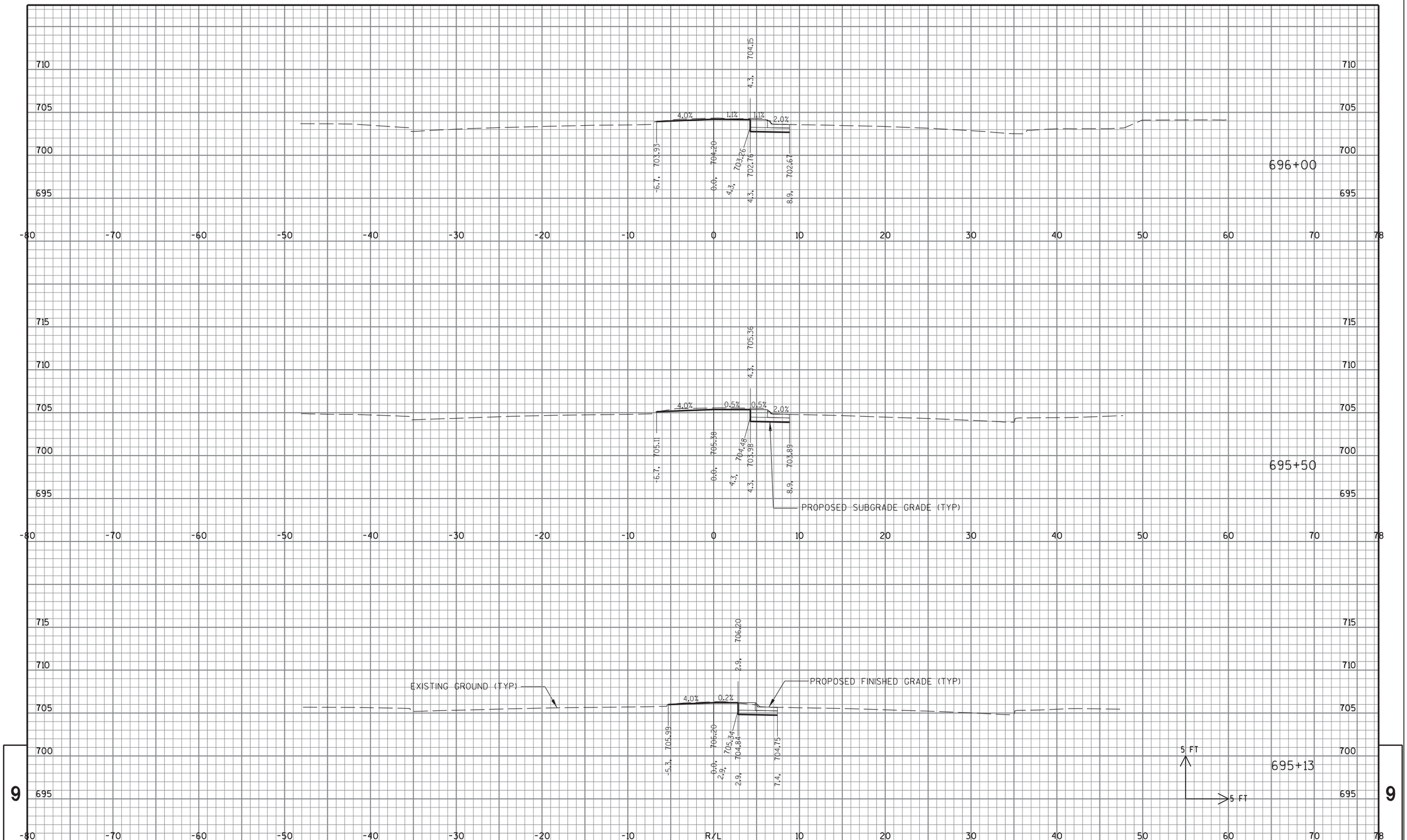
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: CHASE AVE	SHEET NO: . 683	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090206_XS_Chase Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD AVENUE	SHEET NO: . 684	E

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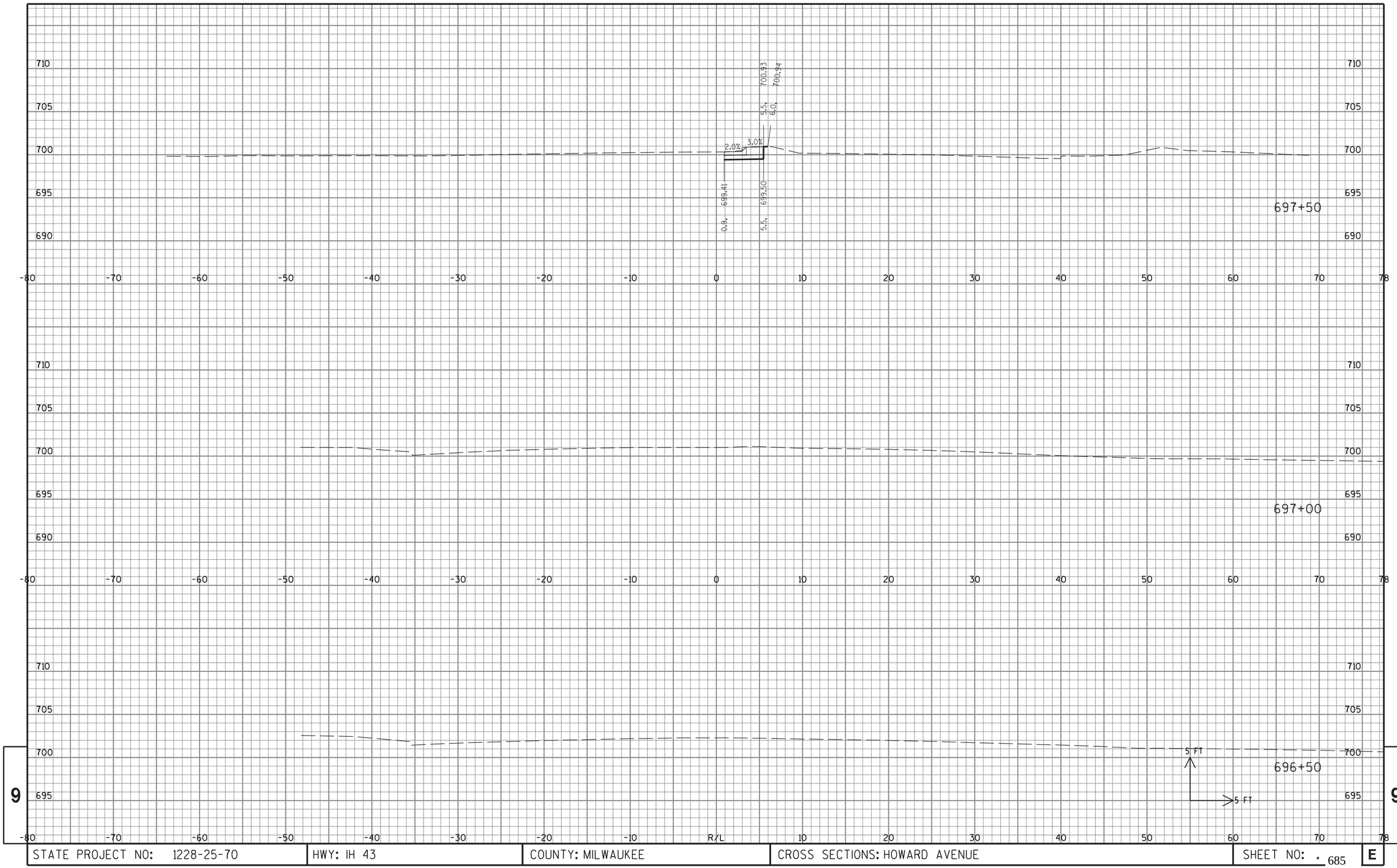
FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090207_XS_Howard Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD AVENUE	SHEET NO: . 685	E

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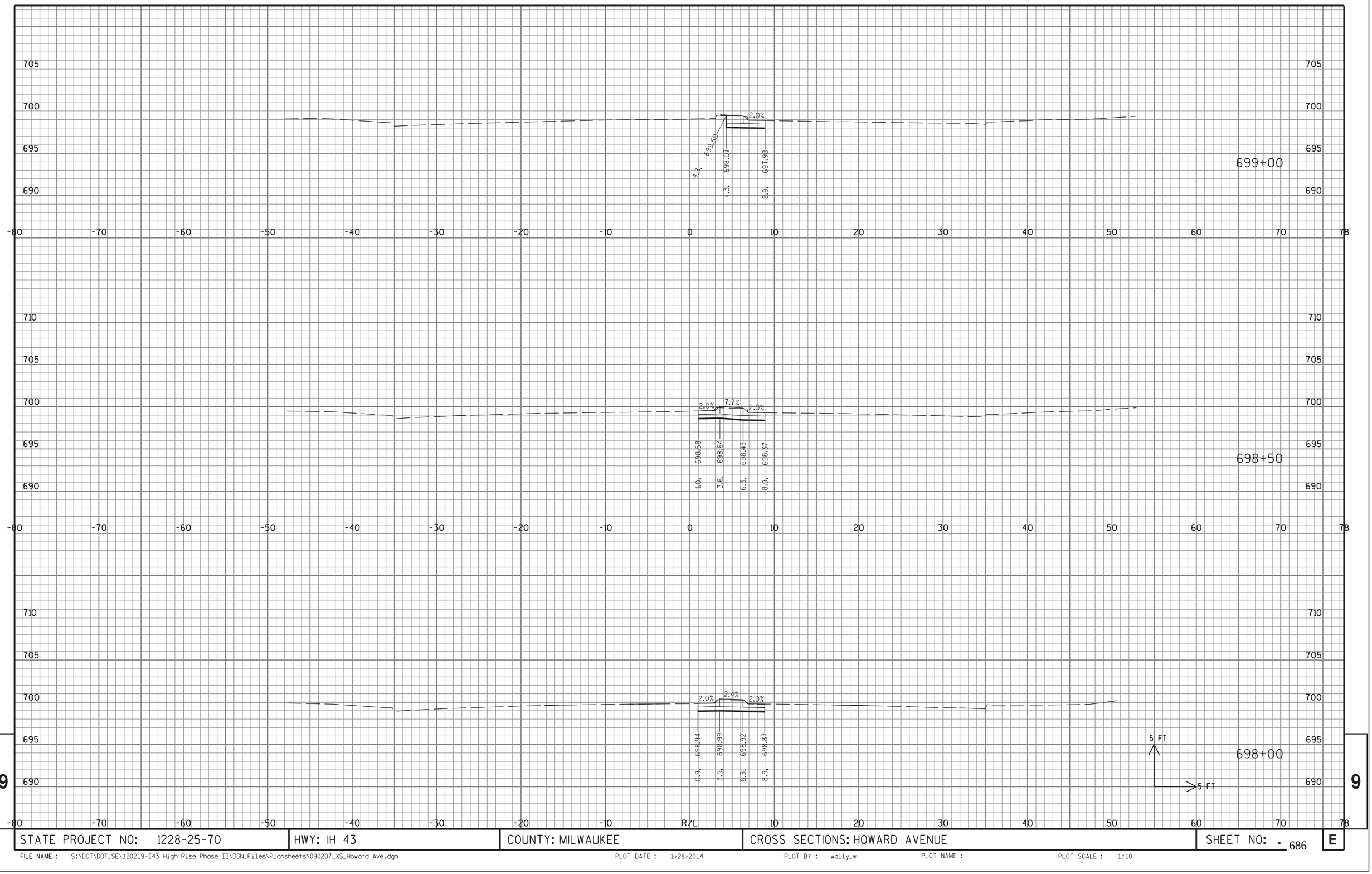

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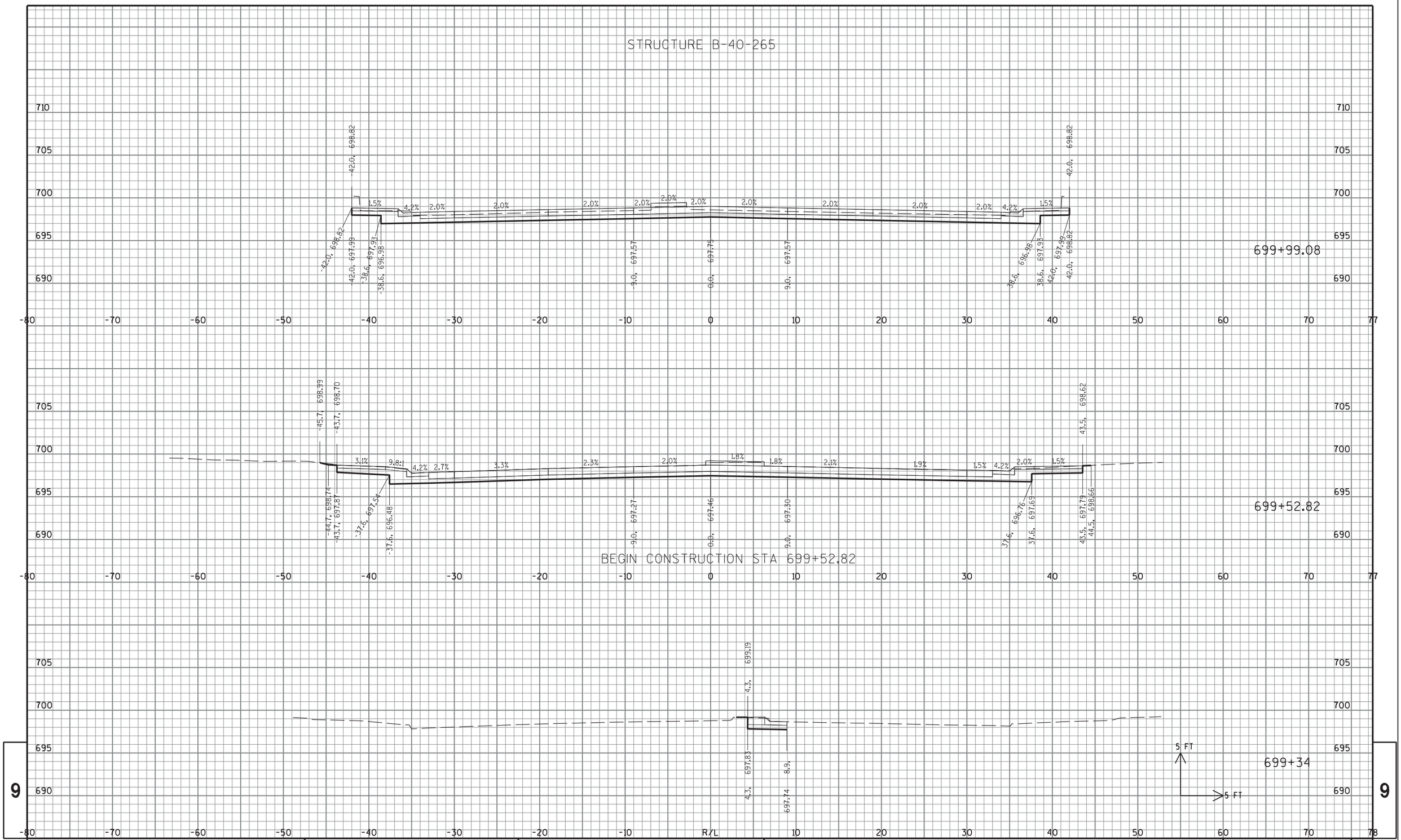
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD AVENUE	SHEET NO: . 686	E

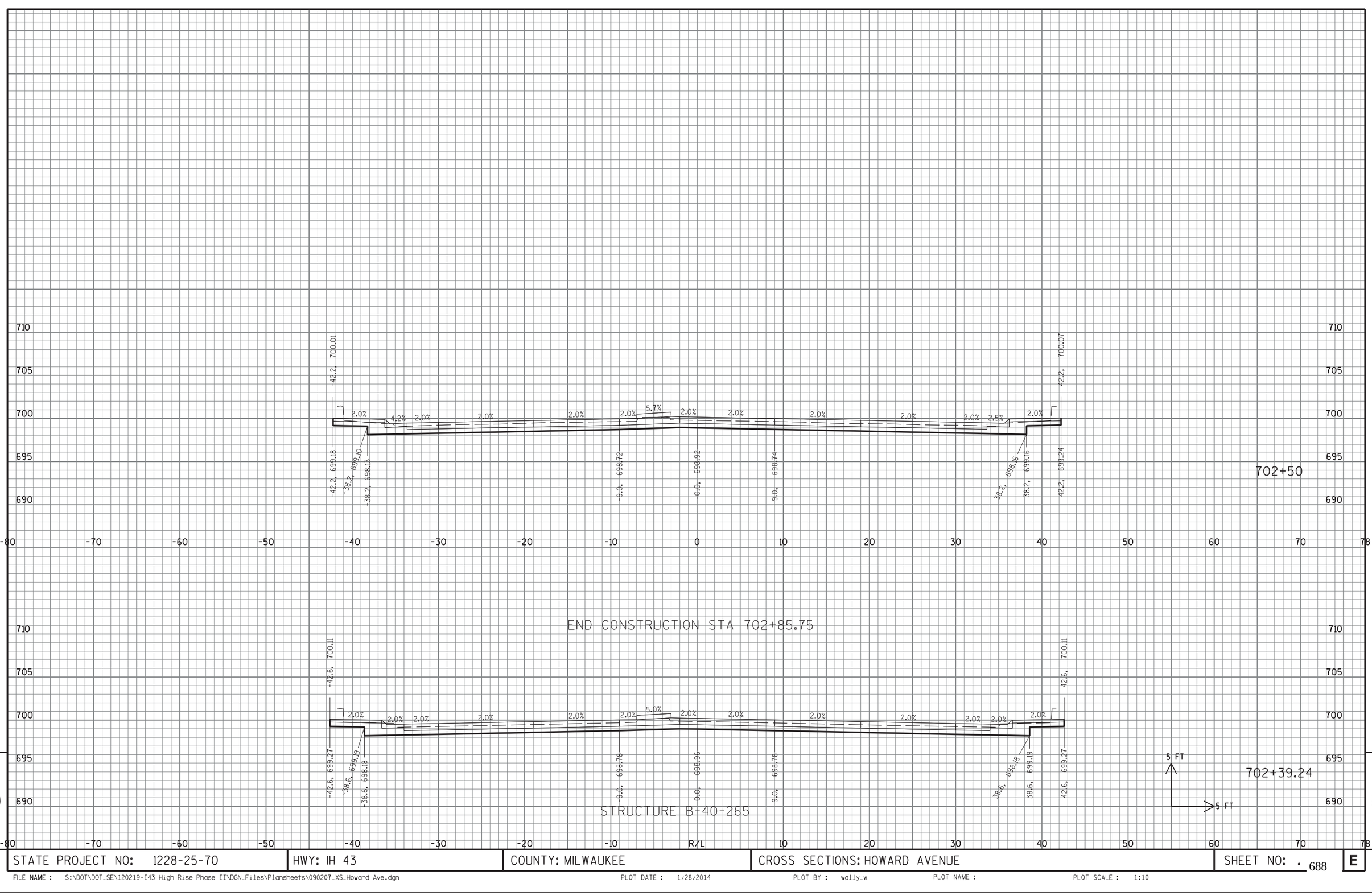
FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090207_XS_Howard Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10

STRUCTURE B-40-265



STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD AVENUE	SHEET NO: . 687	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090207_XS_Howard Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD AVENUE	SHEET NO: . 688	E

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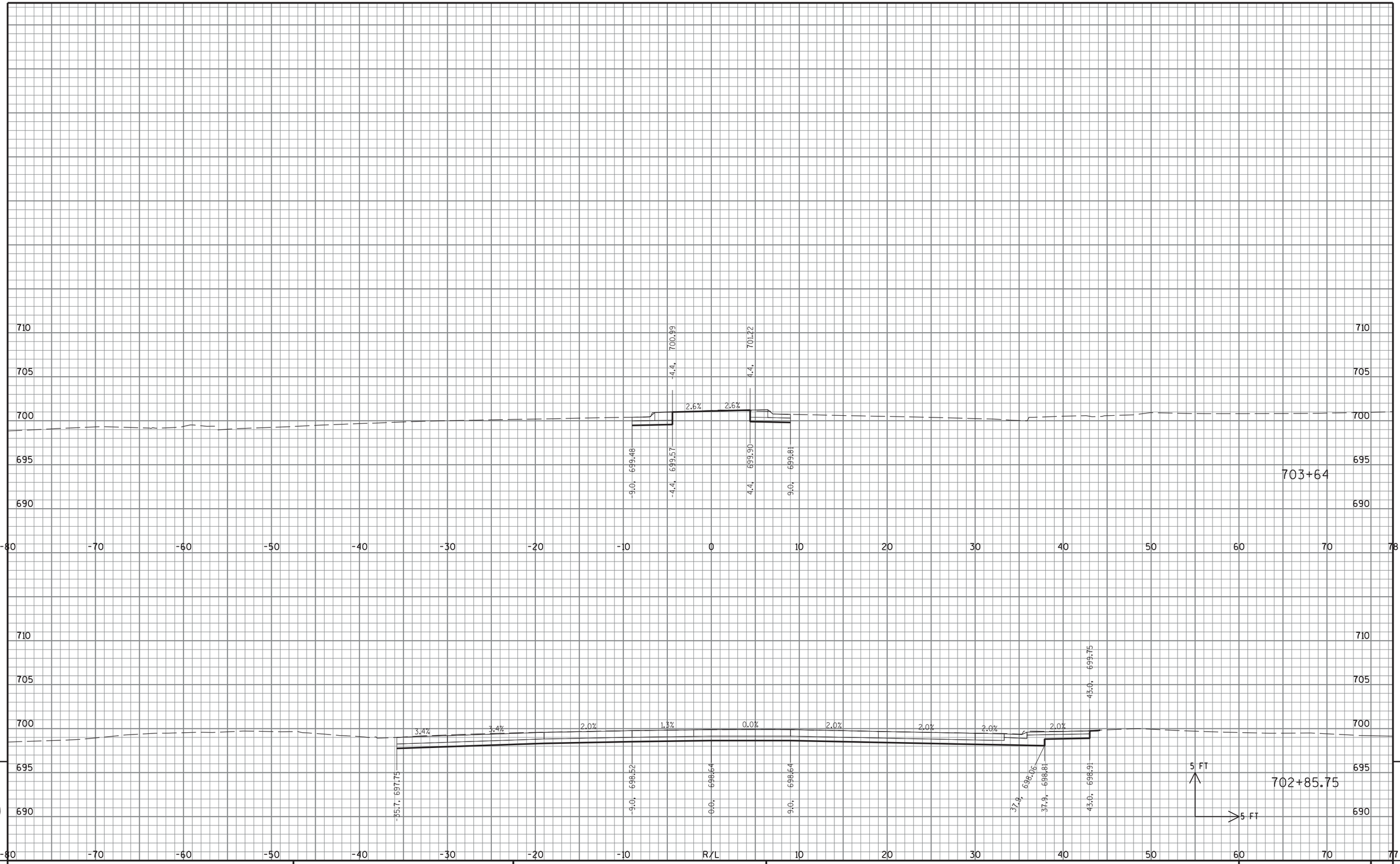

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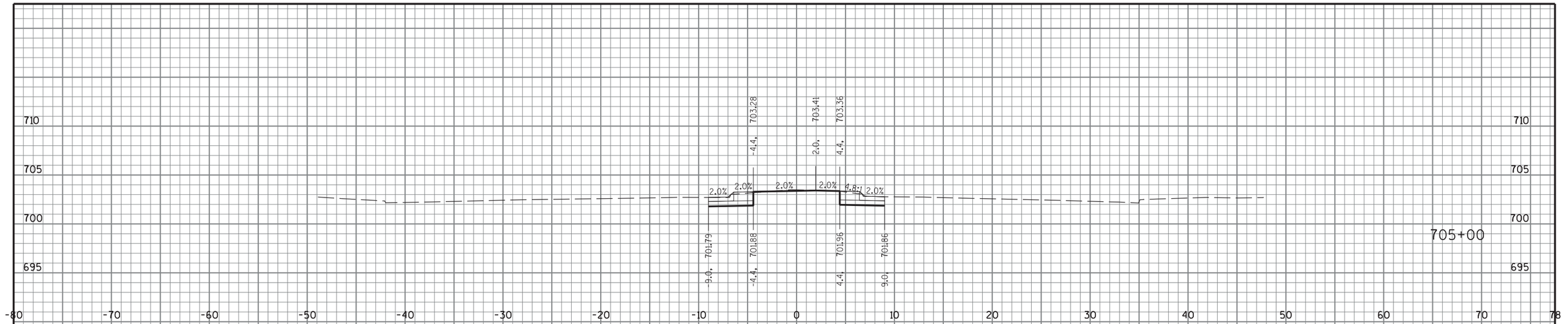
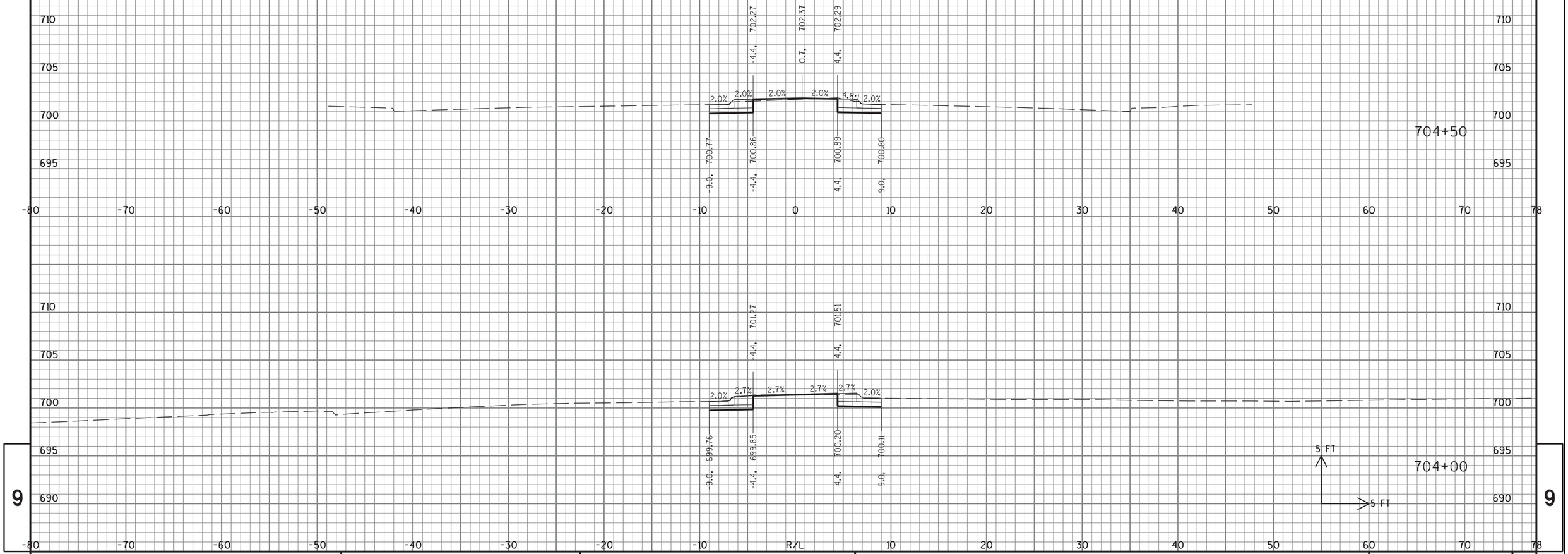
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD AVENUE	SHEET NO: . 689	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090207_XS_Howard Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10





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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD AVENUE	SHEET NO: . 690	E

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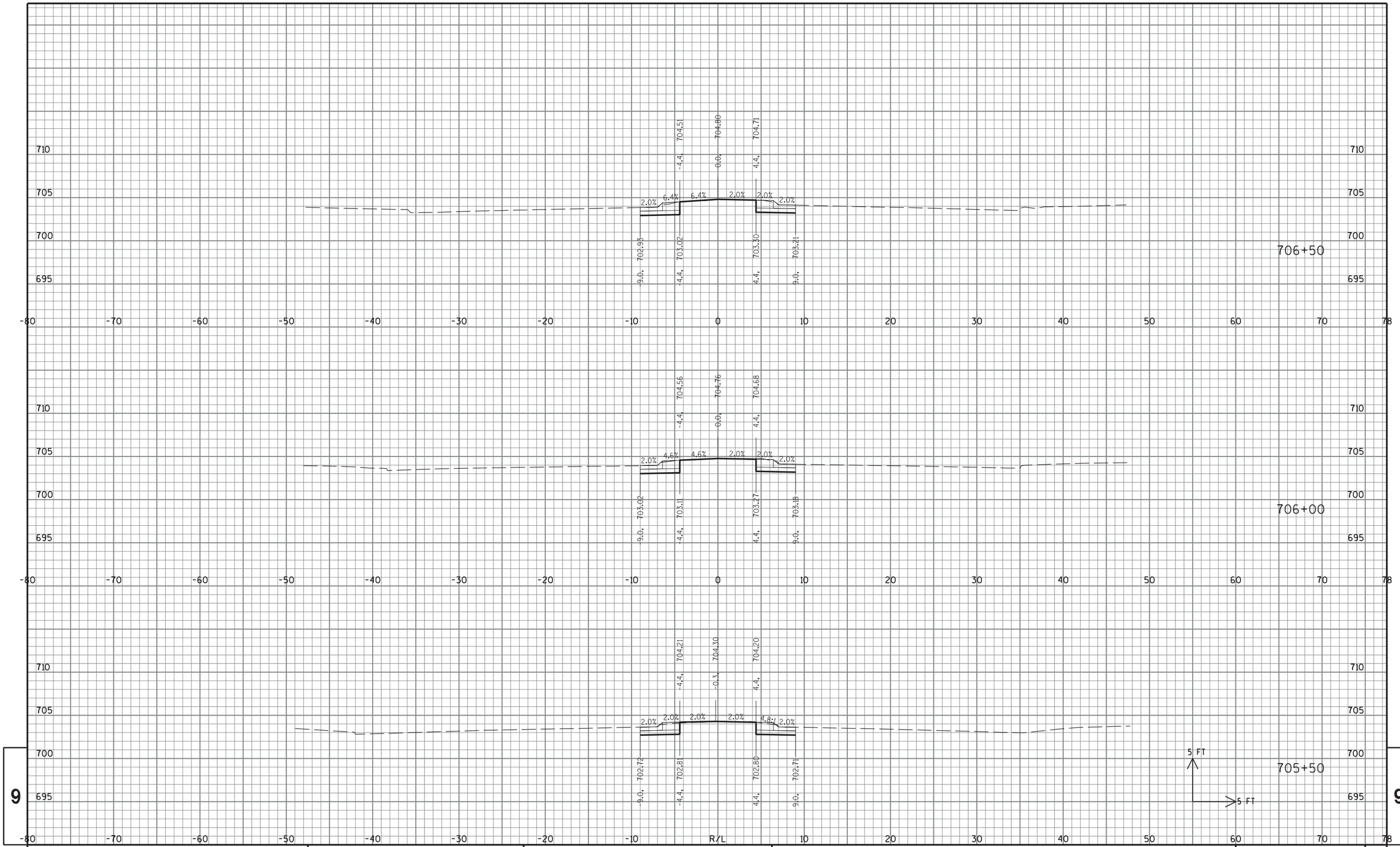

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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD AVENUE	SHEET NO: . 691	E

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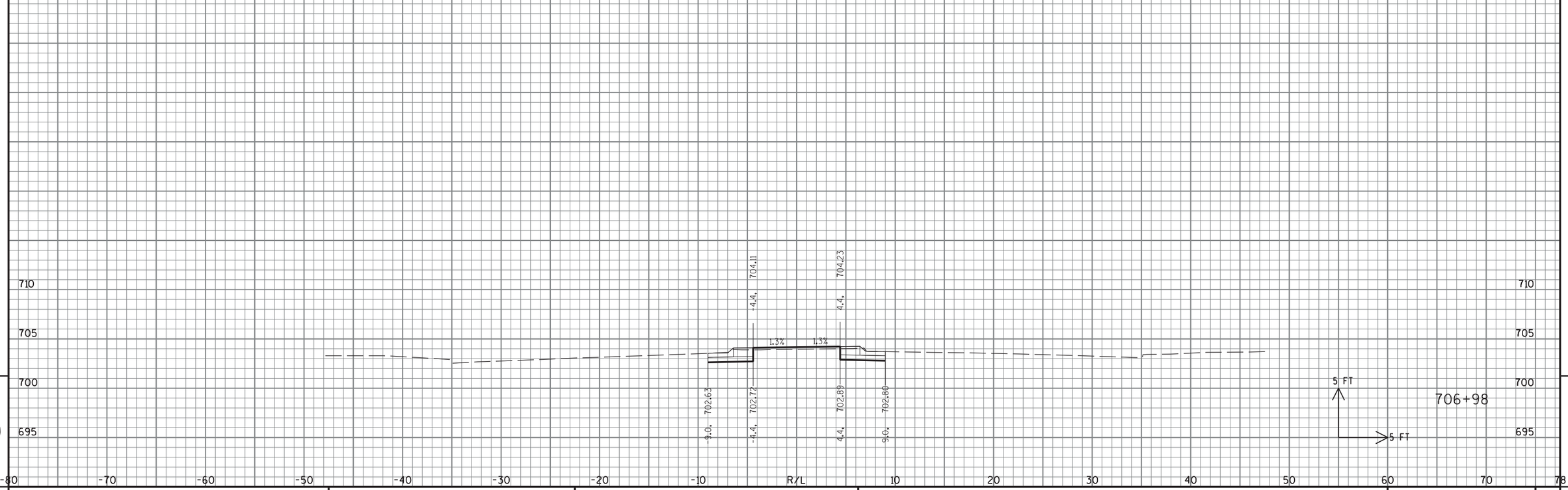

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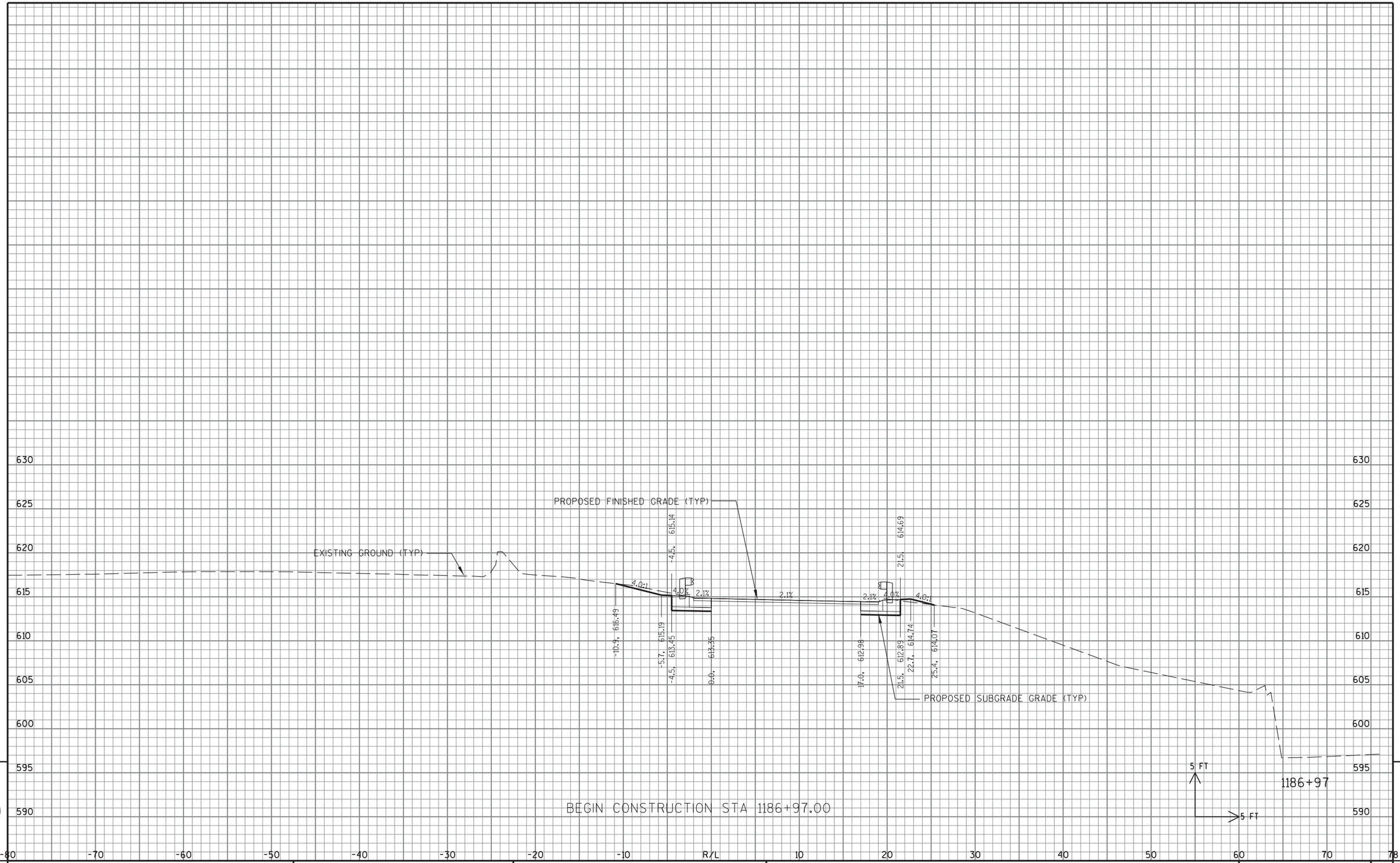
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: HOWARD AVENUE	SHEET NO: . 692	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090207_XS_Howard Ave.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



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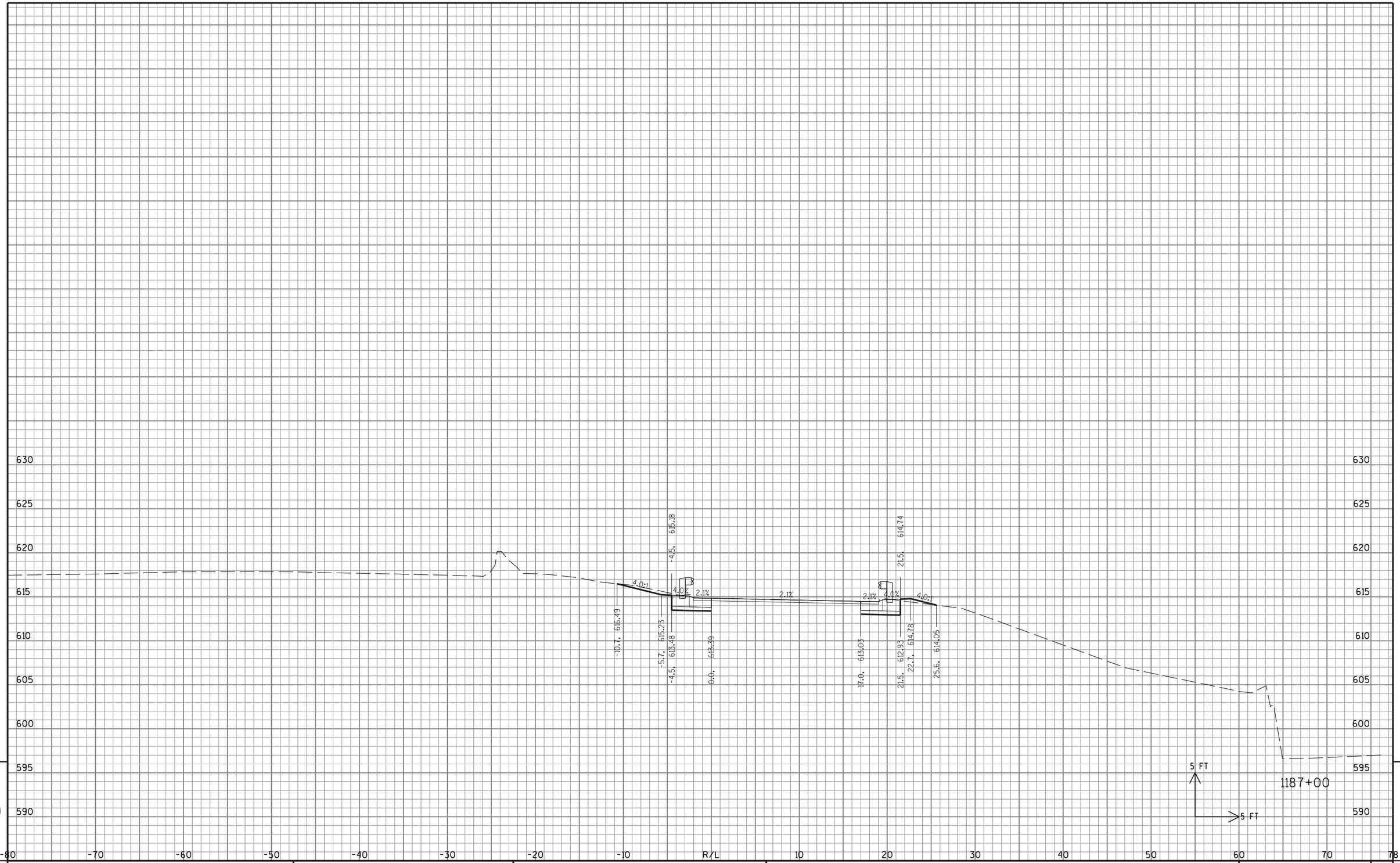
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: BECHER ST SB CD ROAD	SHEET NO: . 693	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090208_XS_Becher-CD.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: BECHER ST SB CD ROAD	SHEET NO: . 694	E

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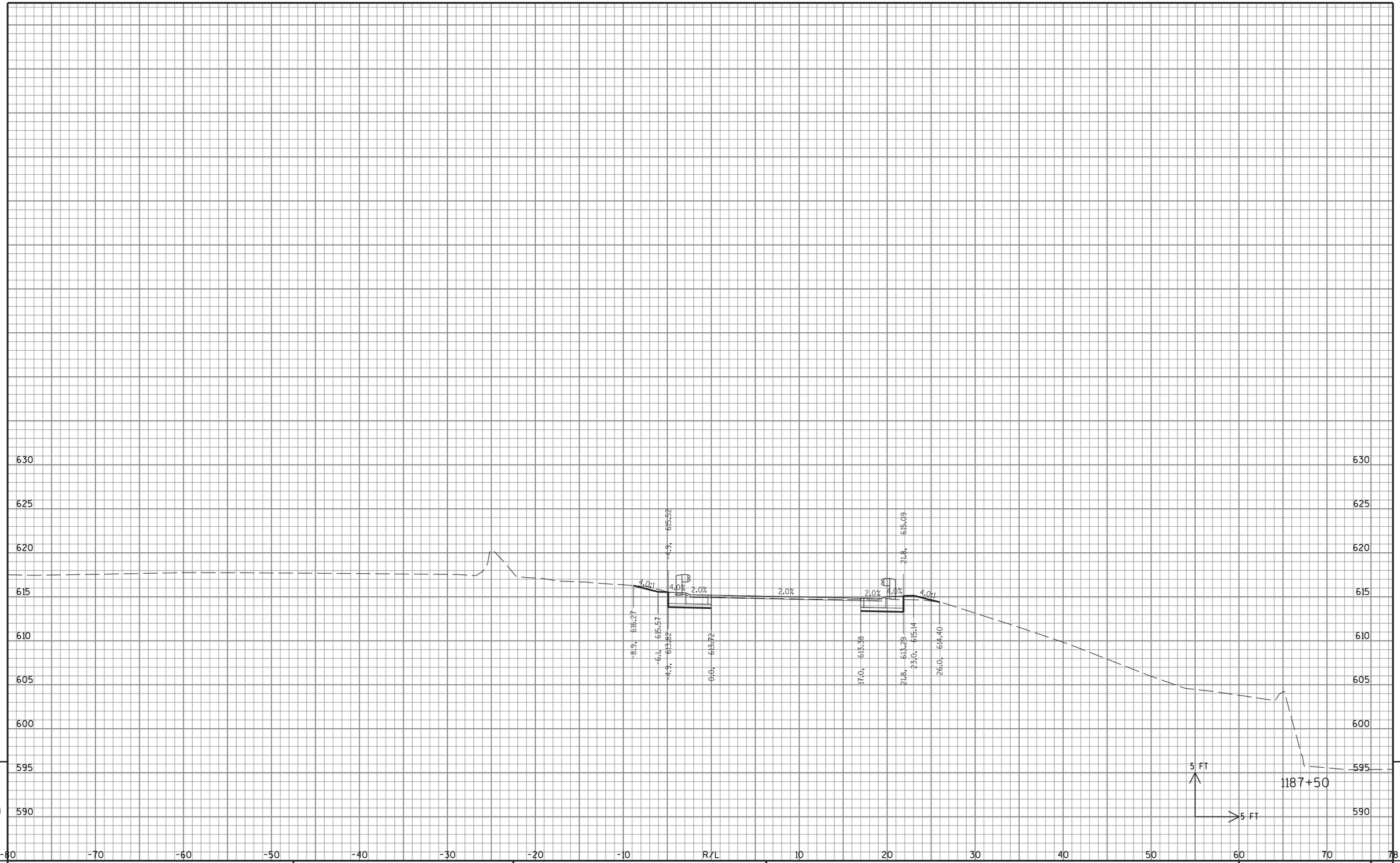

STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: BECHER ST SB CD ROAD	SHEET NO: . 695	E

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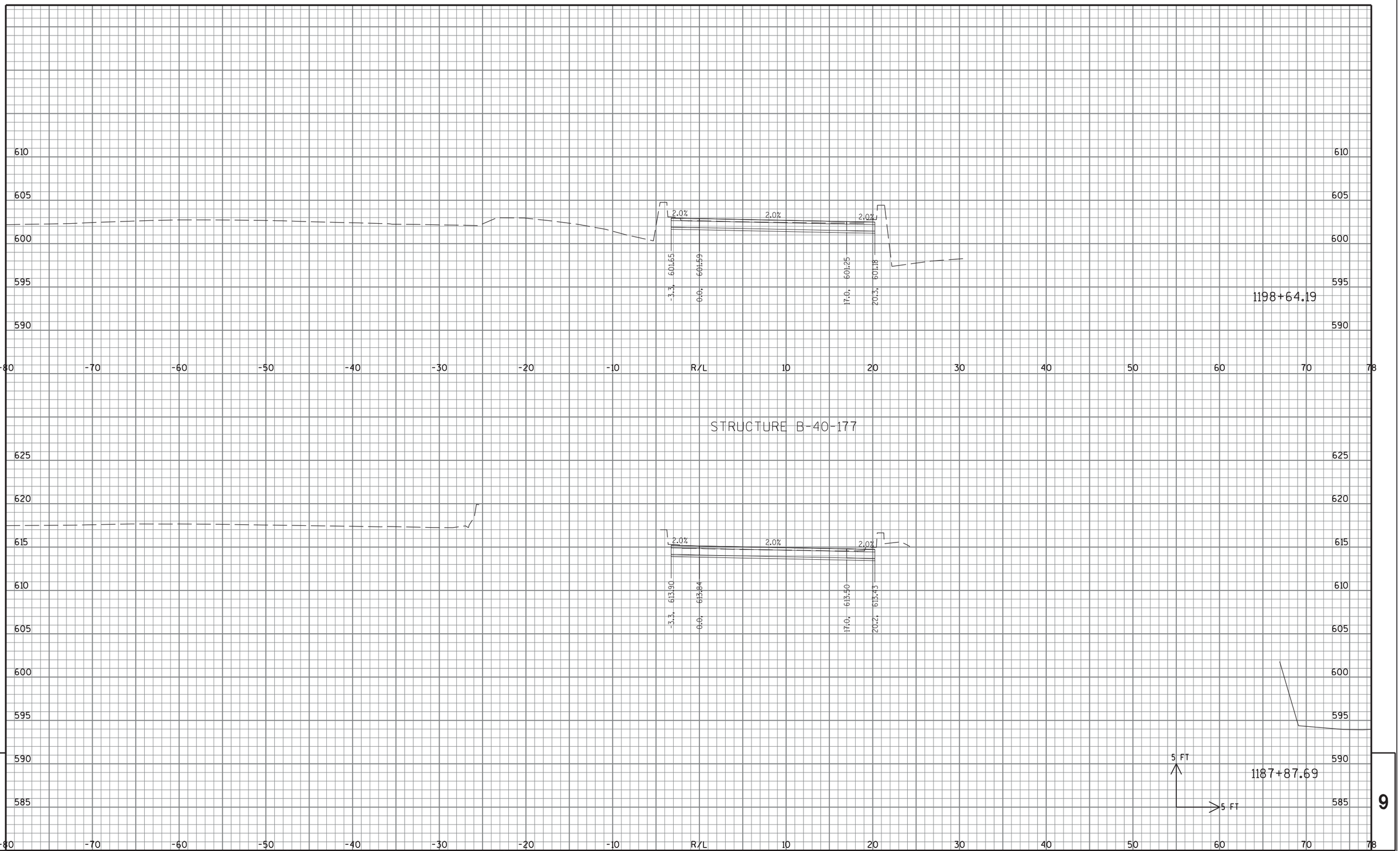

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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: BECHER ST SB CD ROAD	SHEET NO: . 696	E

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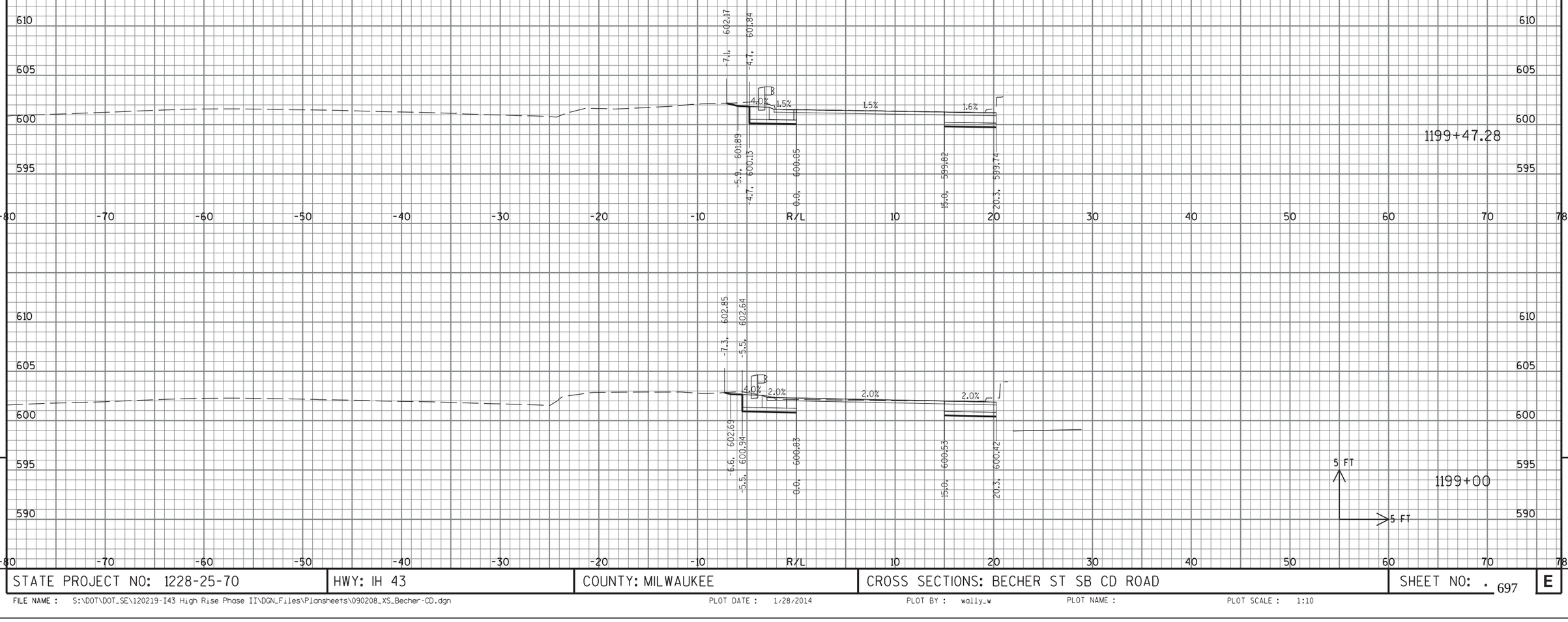
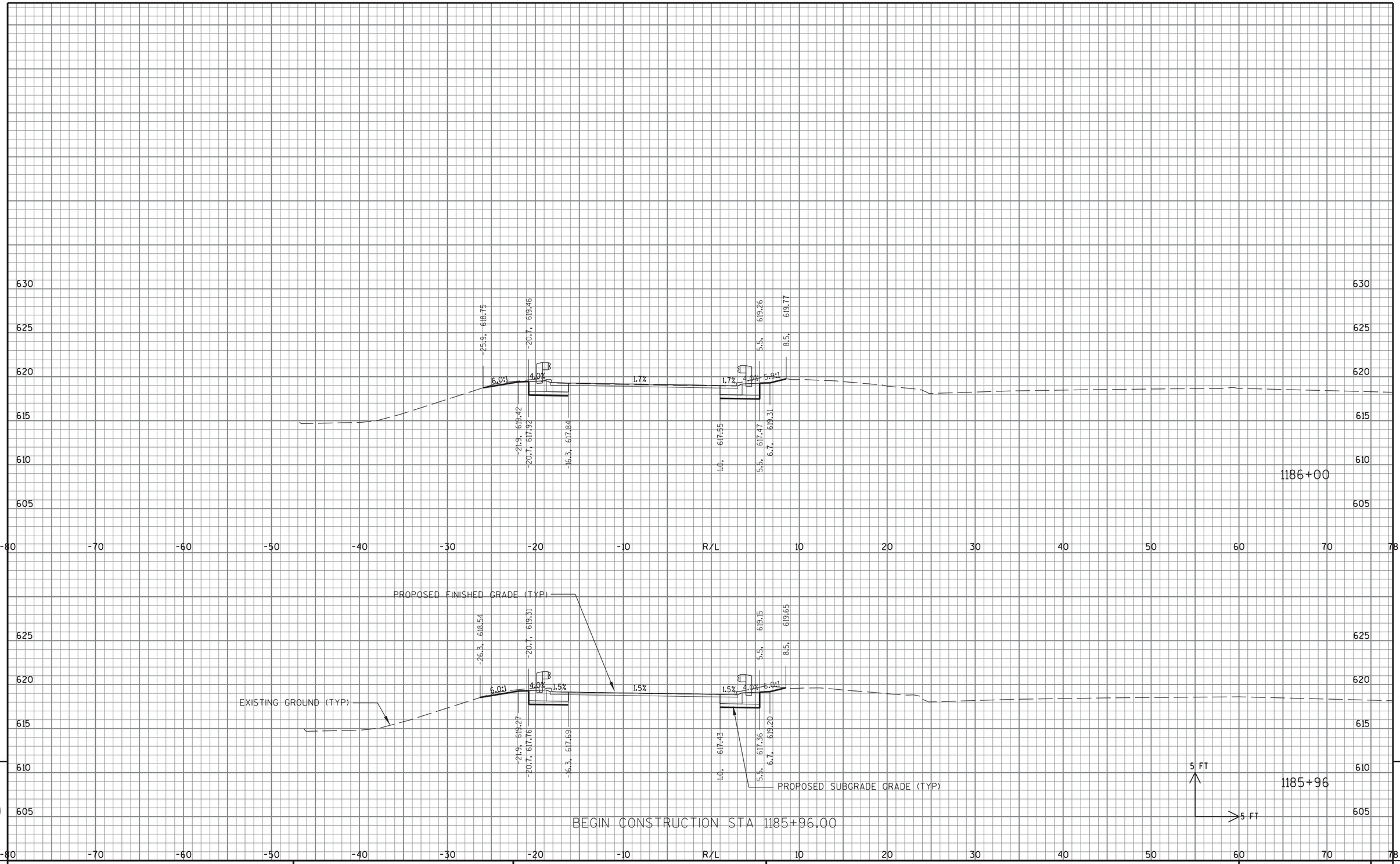
END CONSTRUCTION STA 1199+47.28



STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: BECHER ST SB CD ROAD	SHEET NO: . 697	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090208_XS_Becher-CD.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



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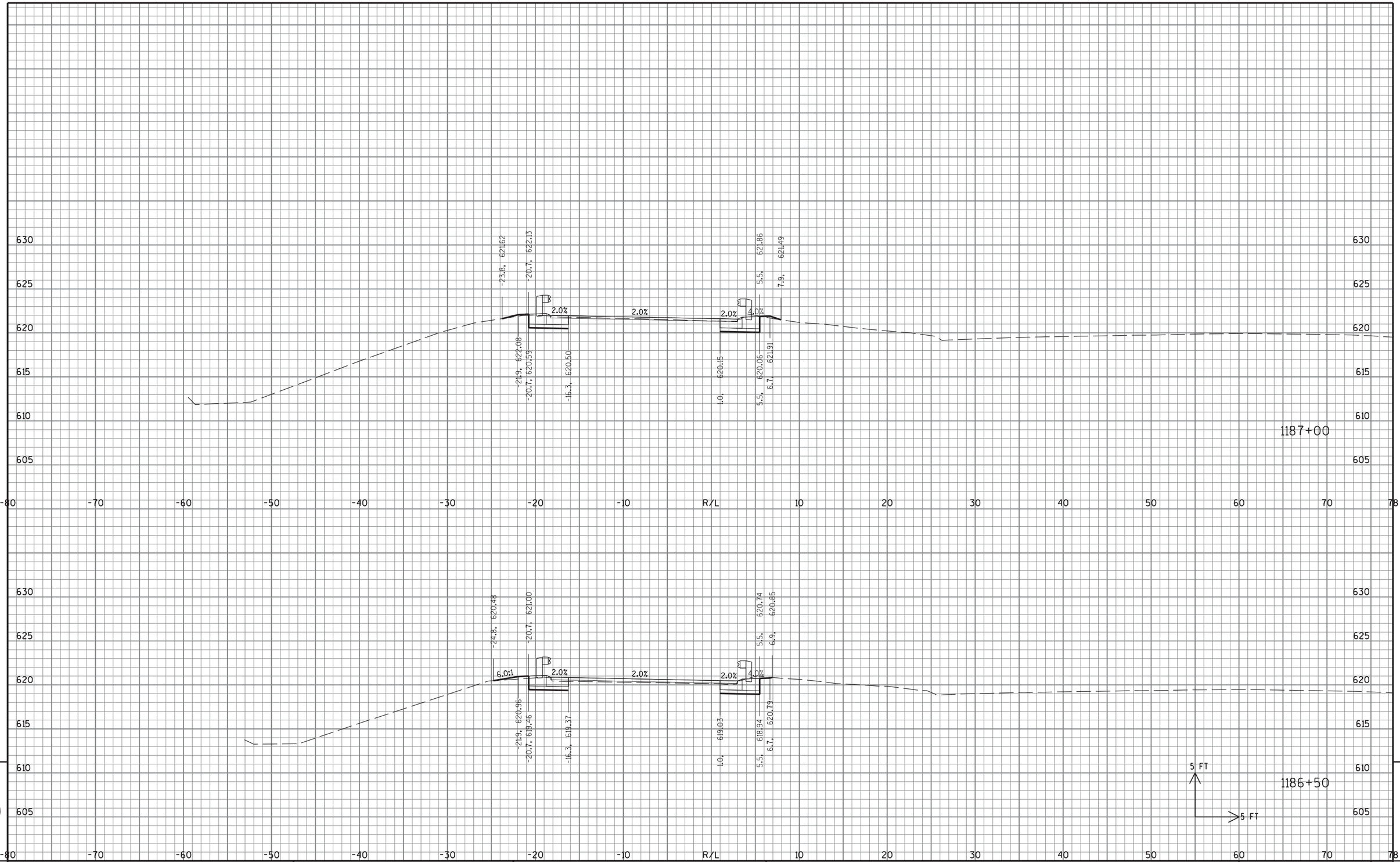
STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: BECHER ST NB CD ROAD	SHEET NO: . 698	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090208_XS_Becher-CD.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10



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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: BECHER ST NB CD ROAD	SHEET NO: . 699	E

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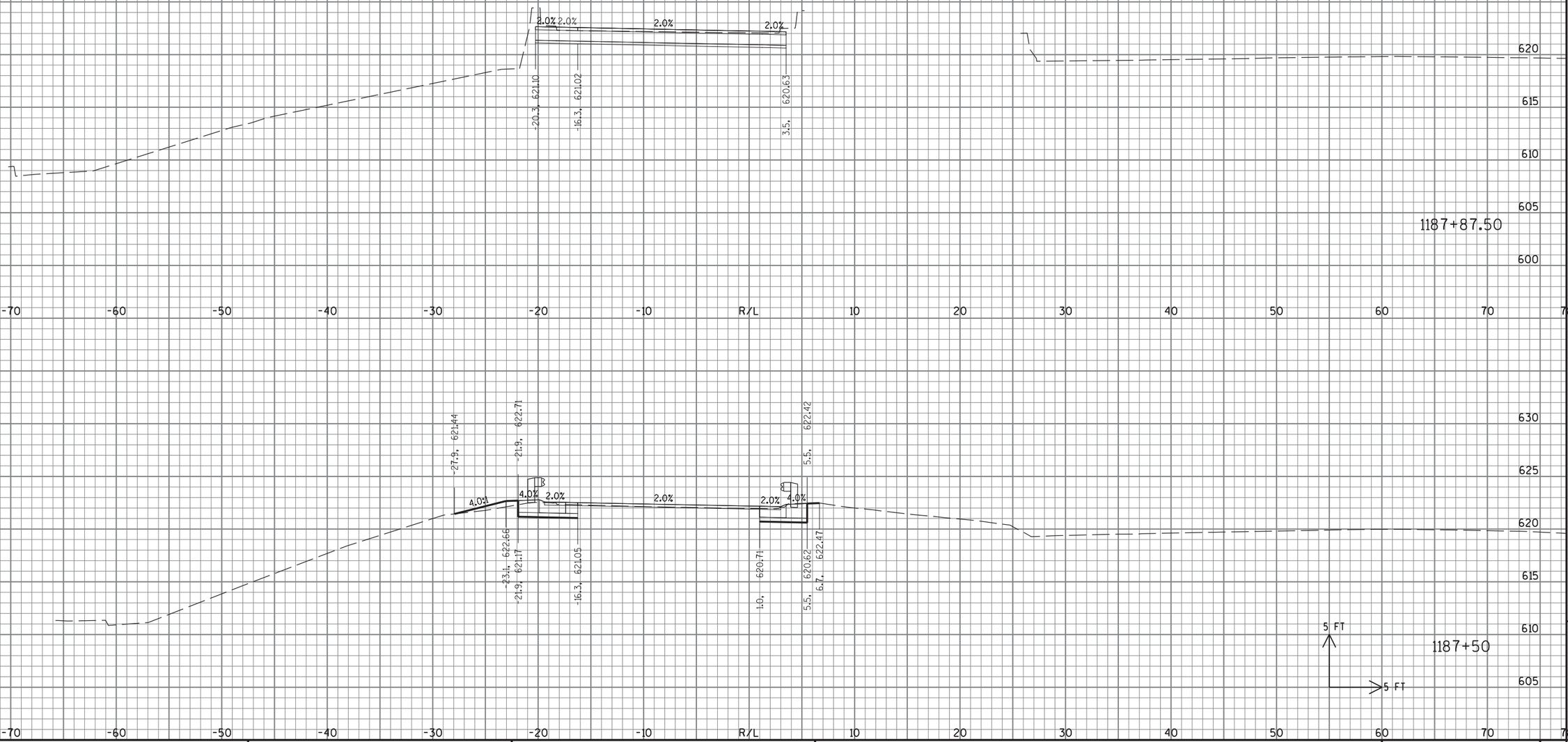
STRUCTURE B-40-174



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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: BECHER ST NB CD ROAD	SHEET NO: . 700	E

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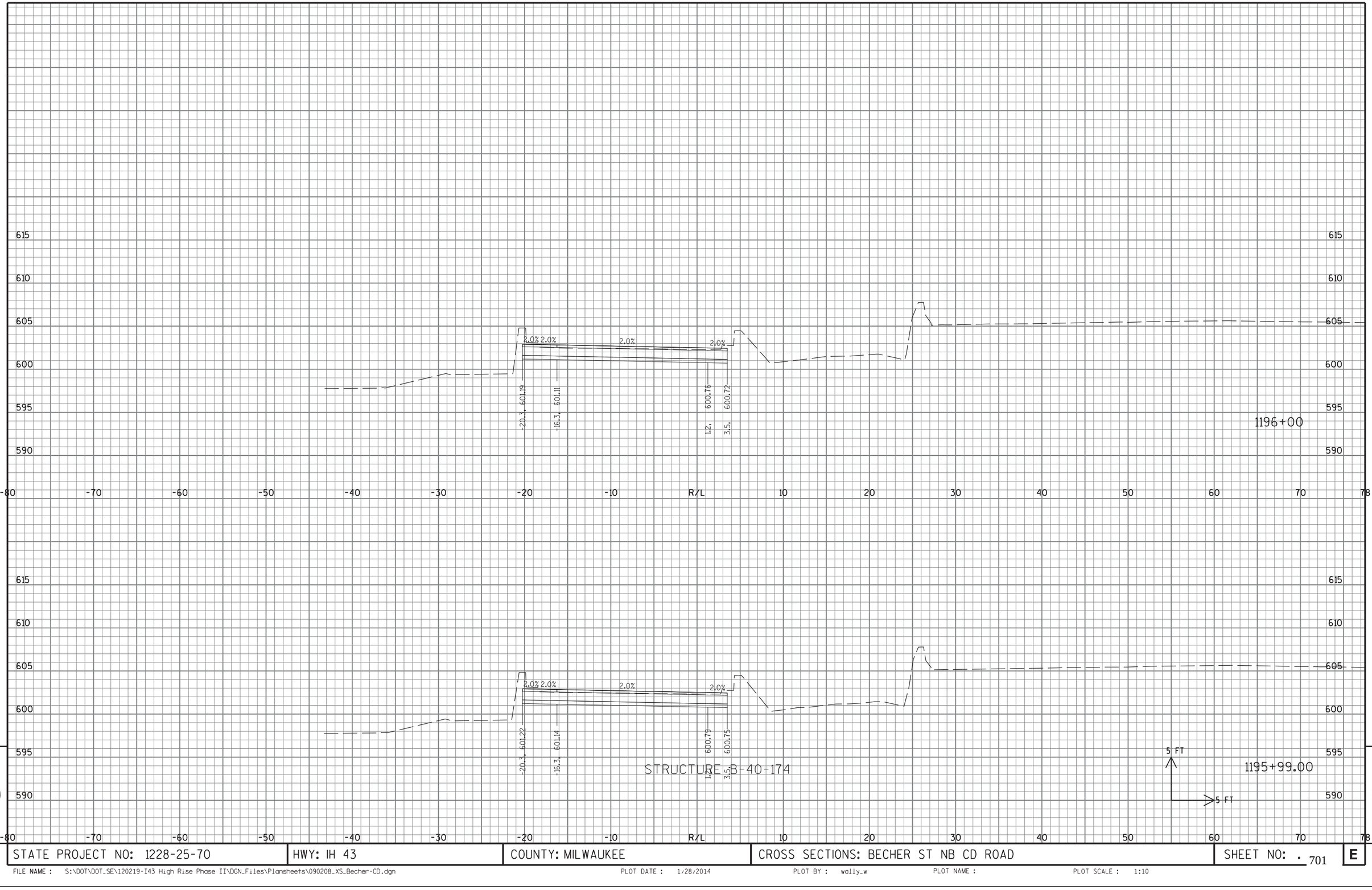

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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: BECHER ST NB CD ROAD	SHEET NO: . 701	E

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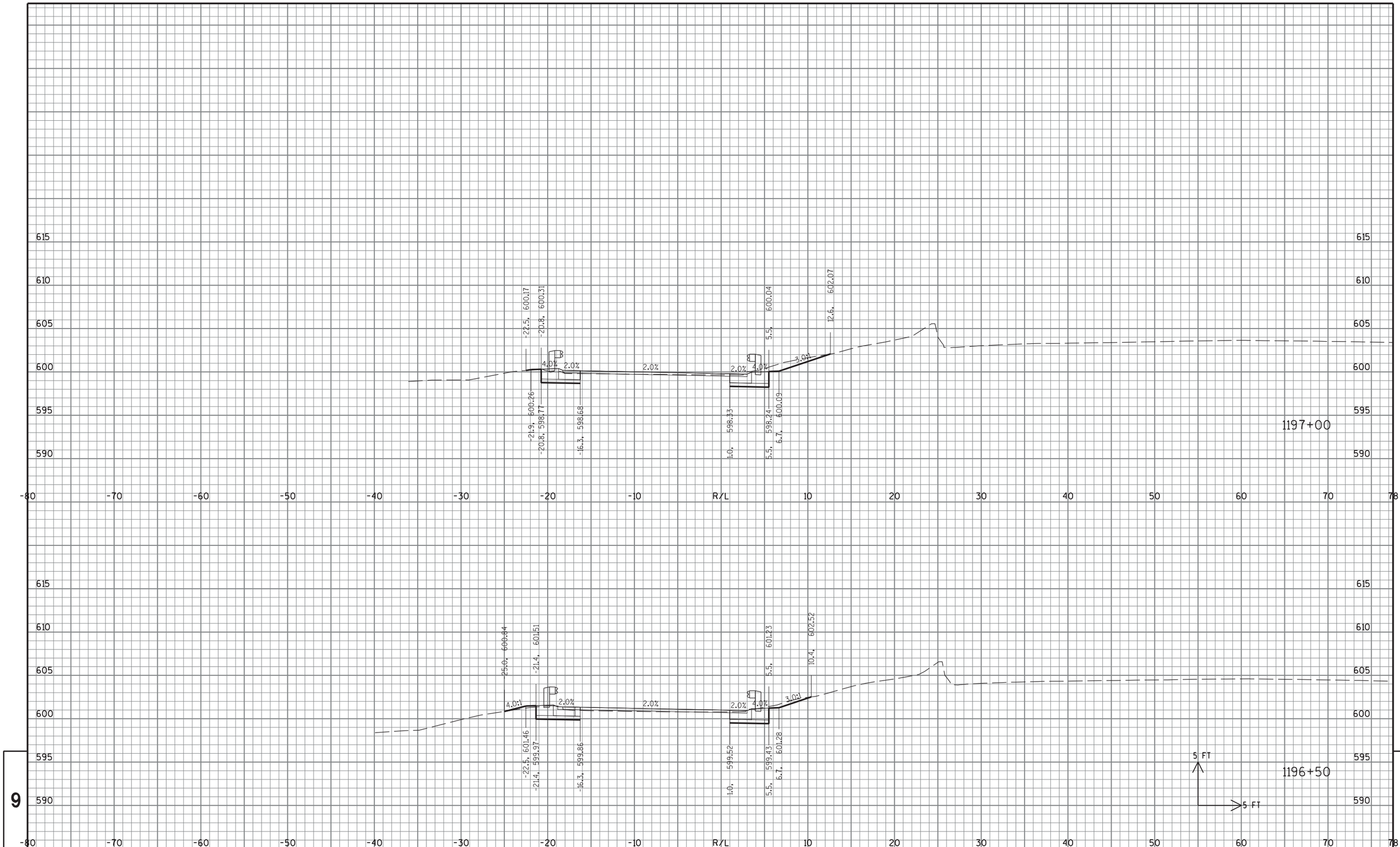

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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: BECHER ST NB CD ROAD	SHEET NO: . 702	E

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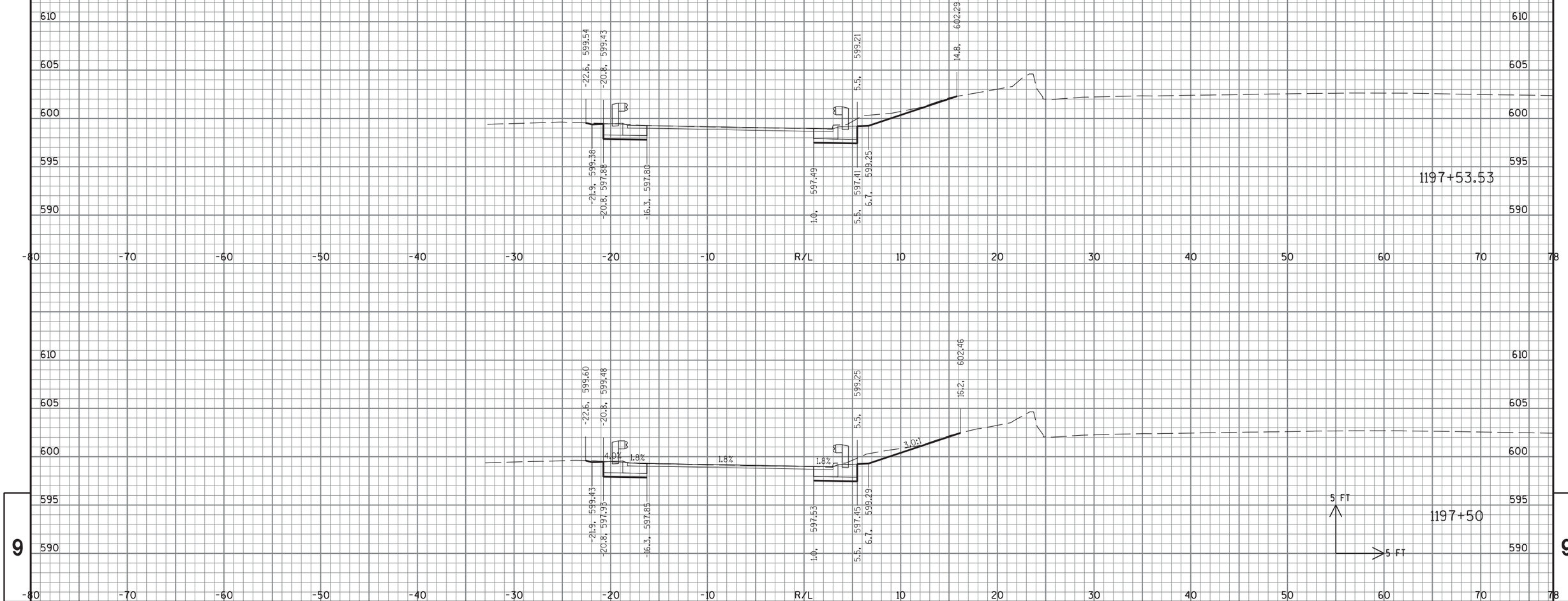
END CONSTRUCTION STA 1197+53.53



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STATE PROJECT NO: 1228-25-70	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: BECHER ST NB CD ROAD	SHEET NO: . 703	E

FILE NAME : S:\DOT\DOT_SE\120219-I43 High Rise Phase II\DGN_Files\Plansheets\090208_XS_Becher-CD.dgn PLOT DATE : 1/28/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:10

Wisconsin Department of Transportation

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