WKE

DEC 2017

PROJECT ID: 1060-33-82

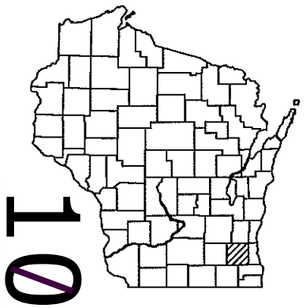
WITH:

COUNTY: WAUKESHA

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 = 682



N

DESIGN DESIGNATION IH-94 SUNNYSLOPE RD.

A.A.D.T.	2016 = 131,400	=	11,200
A.A.D.T.	2036 = 159,600	=	13,900
D.H.V.	2036 = 13,570	=	1,530
D.D.	= 58/42	=	58/42
T.	= 8.1%	=	3.4%
DESIGN SPEED	= 60 MPH	=	40 MPH
ESALS	= 16,271,700	=	963,600

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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1060-33-82	WISC 2018029	1

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ZOO IC, IH 94 AUXILIARY LANES

MOORLAND RD TO UNDERWOOD PRKWY

IH 94

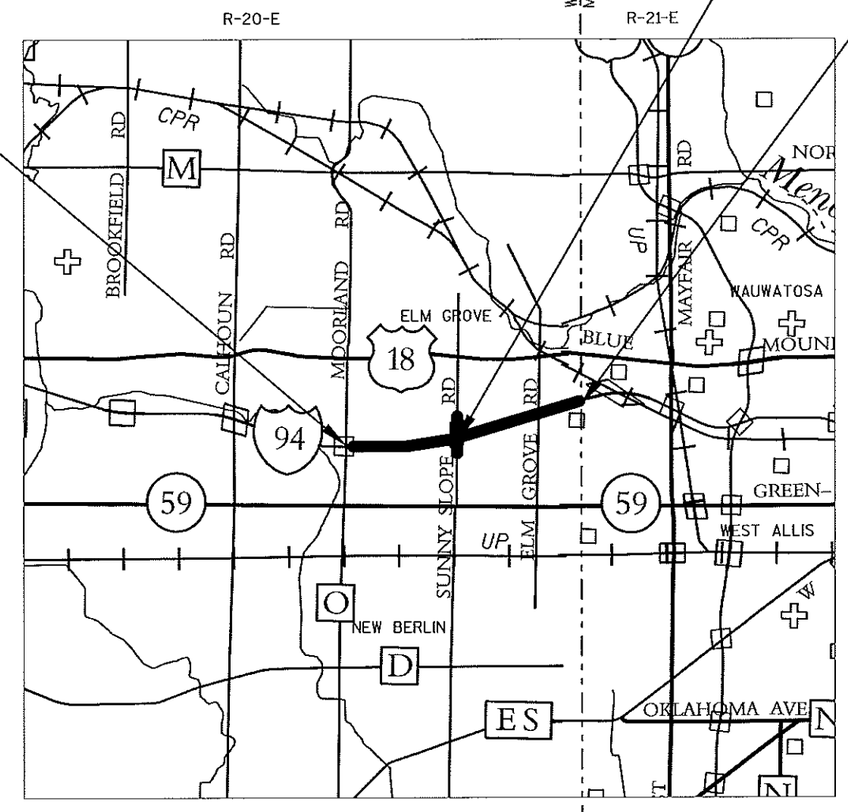
WAUKESHA COUNTY

STATE PROJECT NUMBER
1060-33-82

STRUCTURE B-67-344

END PROJECT STA. 669+05.08

BEGIN PROJECT STA. 572+64
Y= 716607.4541
X= 165856.2729



LAYOUT
SCALE 0 2

TOTAL NET LENGTH OF CENTERLINE = 1.826 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, WAUKESHA COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT, MSA
Designer	WISDOT
Project Manager	JOSHUA LEVEQUE, P.E.
Regional Examiner	
Regional Supervisor	WILLIAM S. MOHR, P.E.

APPROVED FOR THE DEPARTMENT
DATE: 9/1/17 (Signature)

E

GENERAL NOTES

DO NOT REMOVE ANY TREES OR SHRUBS WITHOUT APPROVAL OF THE ENGINEER.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATION AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH DIGGERS HOTLINE AND AFFECTED UTILITIES TO FIELD LOCATE UTILITIES PRIOR TO THE START OF WORK. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE SEPARATELY.

WHEN THE QUANTITY OF HMA PAVEMENT OR BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE. CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE.

RESTORE EXISTING DRIVEWAYS AND FIELD ENTRANCES IN KIND AND AT THE LOCATION DETERMINED BY THE ENGINEER.

PROVIDE A TYPICAL SIDEWALK CROSS SLOPE OF 1.5% WITH A CONSTRUCTION TOLERANCE OF +/- 0.5%.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 6-INCH TYPICAL DEPTH THROUGHOUT THE PROJECT.

A SAWED JOINT IS REQUIRED WHERE NEW HMA PAVEMENT MEETS EXISTING HMA PAVEMENT.

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

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND MULCH/EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN SEVEN (7) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED AND MULCH.

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

TEMPORARY SEED AND MAT ANY/ALL DISTURBED AREAS WITHIN 48 HOURS OF ANY DISTURBANCE IF AREA WILL NOT BE STABILIZED/FINISHED RESTORED IN 21 DAYS OR LESS.

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

SAWCUT ASPHALTIC AND CONCRETE DRIVEWAYS AND/OR PARKING LOTS AT THE MATCHLINE AS SHOWN ON THE PAVING DETAILS OR AS DIRECTED BY THE ENGINEER.

VERIFY EXISTING PAVEMENT ELEVATIONS AT ALL TIE-INS TO EXISTING PAVEMENT PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND BETWEEN PROPOSED PLAN ELEVATIONS AND THE EXISTING PAVEMENT ELEVATIONS, CONTRACTOR IS TO NOTIFY THE ENGINEER.

FILL ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES WITH COMPACTED BACKFILL GRANULAR UNLESS REGULATIONS REQUIRE OTHERWISE. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

FERTILIZER SHALL NOT BE USED WITHIN 100' OF NAVIGABLE WATERWAYS OR WETLANDS.

THE EXACT LOCATION OF EXCAVATION BELOW SUBGRADE (EBS) WILL BE DETERMINED BY THE ENGINEER

SQUEEGEE ALL SAWCUT SLURRY TO THE AGGREGATE SHOULDER AND/OR REMOVE INCIDENTAL TO SAWCUTTING.

ALL TYPES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

	PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS
	4 HT 58-28 V	2"	2" UPPER
A	3 HT 58-28 H	9"	3" UPPER-LOWER
	3 HT 58-28 H		3" MIDDLE-LOWER
	3 HT 58-28 H		3" LOWER-LOWER
B	4 HT 58-28 V	1 3/4"	1 3/4" UPPER
C	4MT 58-28 H	2"	2" UPPER
	4 LT 58-28 S	6"	2 1/2" UPPER
D	3 LT 58-28 S		3 1/2" LOWER

ORDER OF SECTION 2 SHEETS

GENERAL NOTES & INDEX
UTILITY CONTACTS
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLANS
PLAN DETAILS
PAVING GRADES
EROSION CONTROL
STORM SEWER
PERMANENT SIGNING
LIGHTING
PAVEMENT MARKING
TRAFFIC CONTROL
STAGE CONSTRUCTION
DETOUR PLAN
ALIGNMENT LAYOUT

STANDARD ABBREVIATIONS

AEW	APRON ENDWALL
AGG	AGGREGATE
ASPH	ASPHALTIC
BAD	BASE AGGREGATE DENSE
BM	BENCHMARK
C&G	CURB AND GUTTER
CL OR $^{C}_{L}$	CENTER LINE OR CONSTRUCTION LINE
CMCP	CULVERT PIPE CORRUGATED METAL
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
EB	EASTBOUND
FE	FIELD ENTRANCE
FL	FLOW LINE
HMA	HOT MIX ASPHALTIC
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LP	LOW POINT
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PGL	PROFILE GRADE LINE
PLE	PERMANENT LIMITED EASEMENT
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON END WALL FOR CULVERT PIPE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COURSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SI	SLOPE INTERCEPT
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
WB	WESTBOUND

UTILITY CONTACTS

AT&T CORPORATION
MR. KEN NINE
JMC ENGINEERS & ASSOCIATES, INC.
110 NORTH MAIN STREET
CULVER, IN 46511
PHONE: (574) 842-8830
CELL: (574) 904-6336
KENNETHNINE@ATT.NET

AT&T WISCONSIN
MR. CHRIS DUNCAN
2005 PEWAUKEE RD
WAUKESHA, WISCONSIN 53188
PHONE: (262) 896-7678
CELL: (414) 491-4810
CD8946@ATT.COM

BROOKFIELD MUNICIPAL WATER UTILITY
MR. MARK SIMON, SUPERINTENDENT
19700 RIVERVIEW DRIVE
BROOKFIELD, WI 53045
PHONE: (262) 796-6717
WATER@CI.BROOKFIELD.WI.US

CHARTER COMMUNICATIONS
MR. STEVE CRAMER
1320 N. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
PHONE: (414) 277-4045
CELL: (414) 688-2385
STEVE.CRAMER@CHARTER.COM
WIS.ENGINEERING@CHARTER.COM

LEVEL 3 COMMUNICATIONS
MR. BRAHIM GADDOUR
OSP ENGINEERING DEPT.
3235 INTERTECH DRIVE, SUITE 600
BROOKFIELD, WI 53045
PHONE: (414) 908-1027
CELL: (414) 704-1026
BRAHIM.GADDOUR@LEVEL3.COM
RELO@LEVEL3.COM

MIDWEST FIBER NETWORKS
MR. RICHARD TRGOVEC
6070 N. FLINT ROAD
GLENDALE, WI 53209
PHONE: (414) 459-3554
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RTRGOVEC@MIDWESTFIBERNETWORKS.COM

TELEPORT COMMUNICATIONS AMERICA, LLC
C/O JENNIFER NAVARRO
NORTHWIND TECHNICAL SERVICES
6070 N. FLINT ROAD
GLENDALE, WI 53209
PHONE: (414)459-3564
J.NAVARRO@NORTHWINDTECH.COM

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

CONSTRUCTION FIELD CONTACT:
MR. ERICH WUESTENHAGEN
500 S. 116TH STREET
WEST ALLIS, WI 53214
PHONE: (414) 944-5780
CELL: (262) 483-3896
ERICH.WUESTENHAGEN@WE-ENERGIES.COM

US CELLULAR
MR. SCOTT GUYETTE
2545 N. 124TH STREET
BROOKFIELD, WI 53005
PHONE: (920) 428-3329
CELL: (414) 349-2979
SCOTT.GUYETTE@USCELLULAR.COM

WE ENERGIES - GAS
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MR. LATROY BRUMFIELD
333 W. EVERETT STREET - A299
MILWAUKEE, WI 53203
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LATROY.BRUMFIELD@WE-ENERGIES.COM

CONSTRUCTION FIELD CONTACT:
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CELL: (262) 483-3896
ERICH.WUESTENHAGEN@WE-ENERGIES.COM

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WISDOT STOC
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433 W ST. PAUL AVE, SUITE 300
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STATE AGENCIES

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
MR. CRAIG WEBSTER
DNR SERVICE CENTER
141 NW BARSTOW ST. ROOM 180
WAUKESHA, WI 53187
PHONE: (262) 574-2141
CRAIG.WEBSTER@WISCONSIN.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION
MS. LACI KAZAN - ENVIRONMENTAL ANALYST AND REVIEW SPECIALIST
141 NW BARSTOW STREET
WAUKESHA, WI 53187-0798
CELL: (414) 322-1429
LACI.KAZAN@DOT.WI.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION
MS. LINDA MATTHEWS – SE REGION ENVIRONMENTAL COORDINATOR
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PHONE: (262) 548-6458
CELL: (414) 750-0163
LINDA.MATTHEWS@DOT.WI.GOV

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WISCONSIN DEPARTMENT OF TRANSPORTATION
MR. GREG BERRY – UTILITY COORDINATOR
141 NW BARSTOW STREET
WAUKESHA, WI 53187-0798
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GREGORY.BERRY@DOT.WI.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION
MR. HANS HALLANGER-SWEC ENGINEER
141 NW BARSTOW STREET
WAUKESHA, WI 53187-0798
PHONE: (262) 548-6706
HANS.HALLANGER@DOT.WI.GOV

2

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

2

OTHER AGENCIES

WAUKESHA COUNTY DPW
MR. GARY EVANS
1320 PEWAUKEE ROAD, ROOM 220
WAUKESHA, WI 53188
PHONE: (262) 548-7740
FAX: (262)896-8097

BROOKFIELD, CITY OF
MR. JEFF CHASE, CITY ENGINEER
2000 N. CALHOUN ROAD
BROOKFIELD, WI 53005
PHONE: (262) 787-3919
CHASE@CI.BROOKFIELD.WI.US

SOUTHEASTERN WISCONSIN
REGIONAL PLANNING COMMISSION
MR. ROB MERRY
W239 N1812 ROCKWOOD DRIVE
P.O. BOX 1607
WAUKESHA, WI 53187-1607
PHONE: (262) 953-4289
CELL: (920) 912-1036
RMERRY@SEWRPC.ORG

MILWAUKEE COUNTY TRANSIT SYSTEM -ROUTES
MS. MELANIE FLYNN
1942 N. 17TH ST.
MILWAUKEE, WI 53205
PHONE (414) 343-1764
MFLYNN@MCTS.ORG

MILWAUKEE COUNTY TRANSIT SYSTEM-BUS ROUTES
MR. ANDY TILLMAN
1942 N. 17TH ST.
MILWAUKEE, WI 53205
PHONE: (414) 343-1728
ATILLMAN@MCTS.ORG

WAUKESHA METRO
MR. BRIAN ENGELKING
2311 BADGER DRIVE
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JANE.OLDENBURG@DOT.WI.GOV

WISCONSIN COACH LINES, INC
MR. TOM DIECKELMAN
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PHONE: (262) 542-8861 EXT. 140
TOM.DIECKELMAN@COACHUSA.COM

2

N

END CONSTRUCTION
STA. 135+35.84

BISHOPS DR.

W BEECHWOOD AVE.

PI: 624+31.80

STRUCTURE
B-67-54 (EXISTING)
B-67-344 (PROPOSED)

IH-94 WB AUXILIARY LANE

PC: 593+46.17

PI: 607+81.20

MOORLAND RD.

IH-94 WB

IH-94 EB

PARK ENTRANCE

FOREST GROVE RD.

PI: 121+95.90

WALL

SUNNYSLOPE RD.

BEGIN PROJECT
STA. 572+64

IH-94 EB AUXILIARY LANE

BEGIN CONSTRUCTION
STA.121+91.92

570 580 590 600 610 620 630 140 120 110

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PROJECT OVERVIEW	SHEET 5	E

2

N

EP: 148+61.69

EP: 31+30.87

EP: 681+23.91

STRUCTURE B-67-345
TO BE CONSTRUCTED
UNDER PROJECT ID 1060-43-82

STRUCTURE
B-67-55 (EXISTING)

ELM GROVE RD.

PI: 653+79.34

IH-94 WB

IH-94 EB

END CONSTRUCTION
STA. 135+35.84

BISHOPS DR.

IH-94 WB AUXILIARY LANE

END PROJECT
STA. 669+05.08

CULVERT REPLACEMENT

W. BEECHWOOD AVE.

PI: 626+31.80

IH-94 EB AUXILIARY LANE

CULVERT REPLACEMENT

STRUCTURE
B-67-54 (EXISTING)
B-67-344 (PROPOSED)

PARK ENTRANCE

FOREST GROVE RD.

PI: 121+95.90

BP: 5+06.45

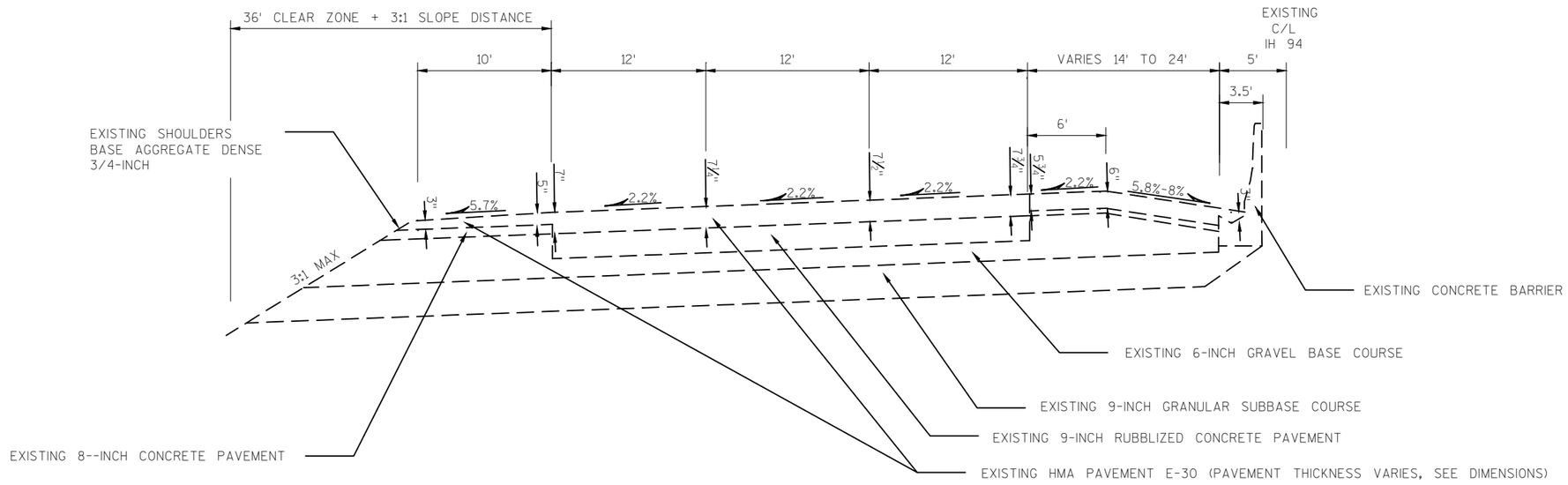
BEGIN CONSTRUCTION
STA.121+91.92

SUNNYSLOPE RD.

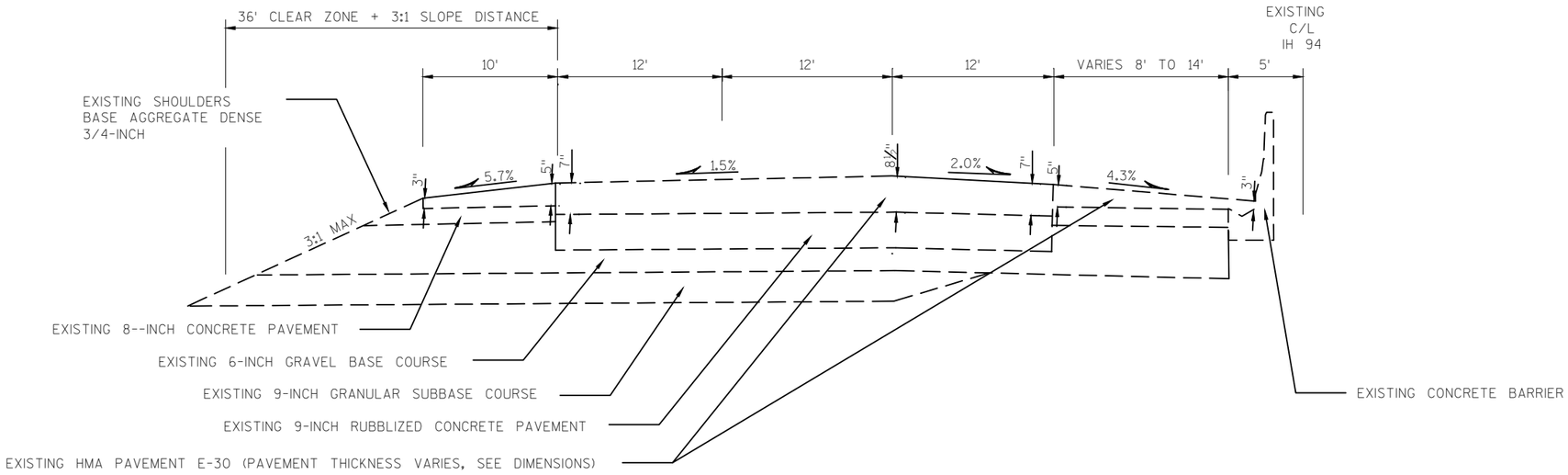
PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PROJECT OVERVIEW	SHEET 6	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\020201_PO.DWG PLOT DATE : 4/28/2017 6:39 AM PLOT BY : LOPEZ, ABRAHAM N PLOT NAME : ---------- PLOT SCALE : 1 IN:400 FT

WISDOT/CADDS SHEET 42

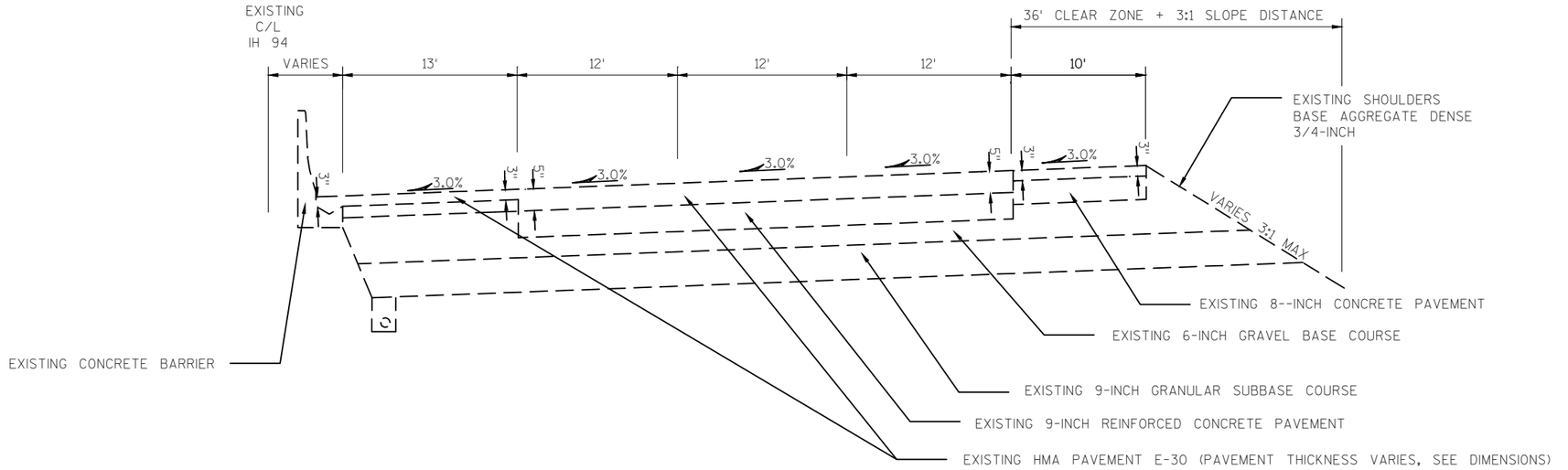


TYPICAL EXISTING SUPERELEVATED SECTION
IH 94 WB
STA. 591+02 TO STA. 610+25

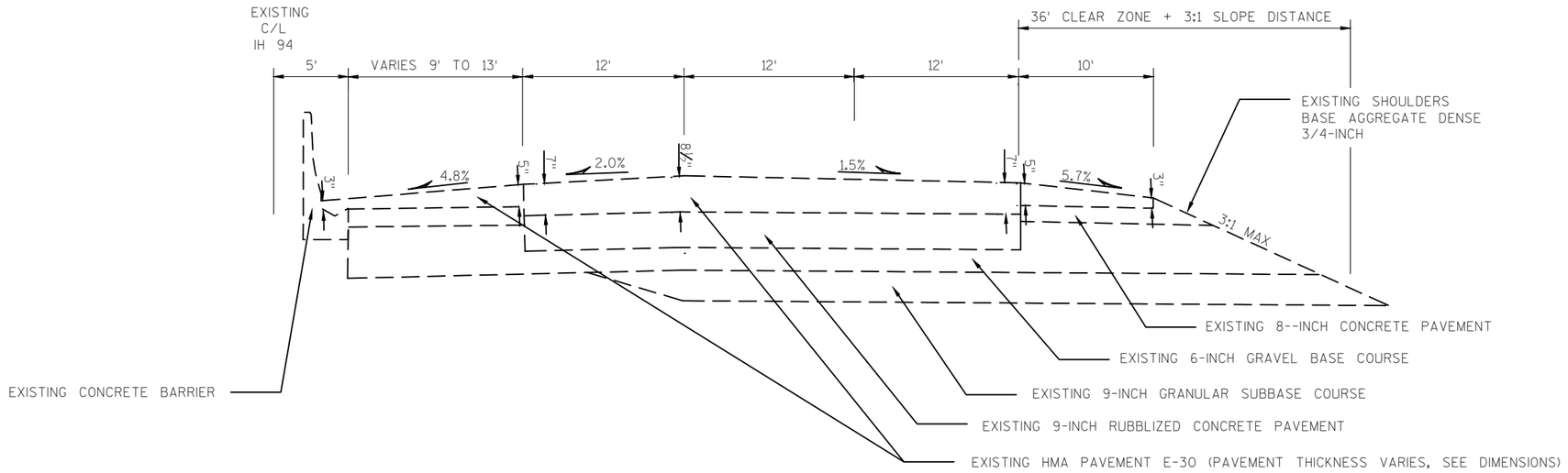


TYPICAL EXISTING SECTION
IH 94 WB
STA. 587+40 TO STA. 591+02
STA. 610+25.39 TO STA. 669+05.8

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 7	E



TYPICAL EXISTING SUPERELEVATED SECTION
IH 94 EB
STA. 597+20 TO STA. 607+81

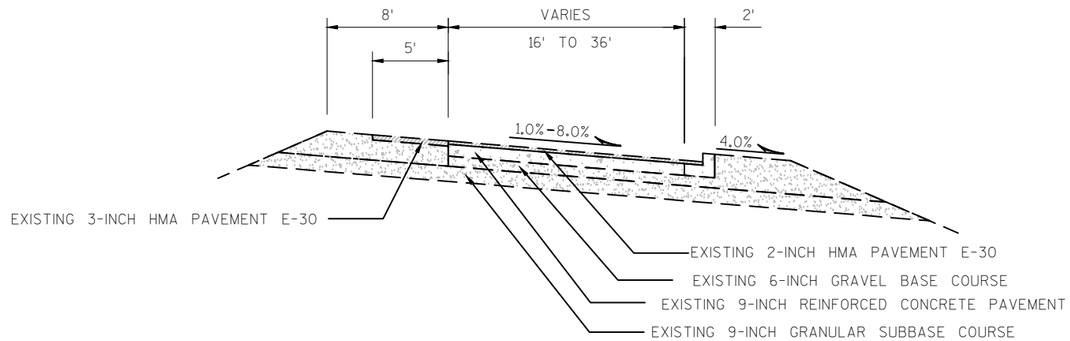


TYPICAL EXISTING SECTION
IH 94 EB

STA. 607+81 TO STA. 669+05.08

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 8	E

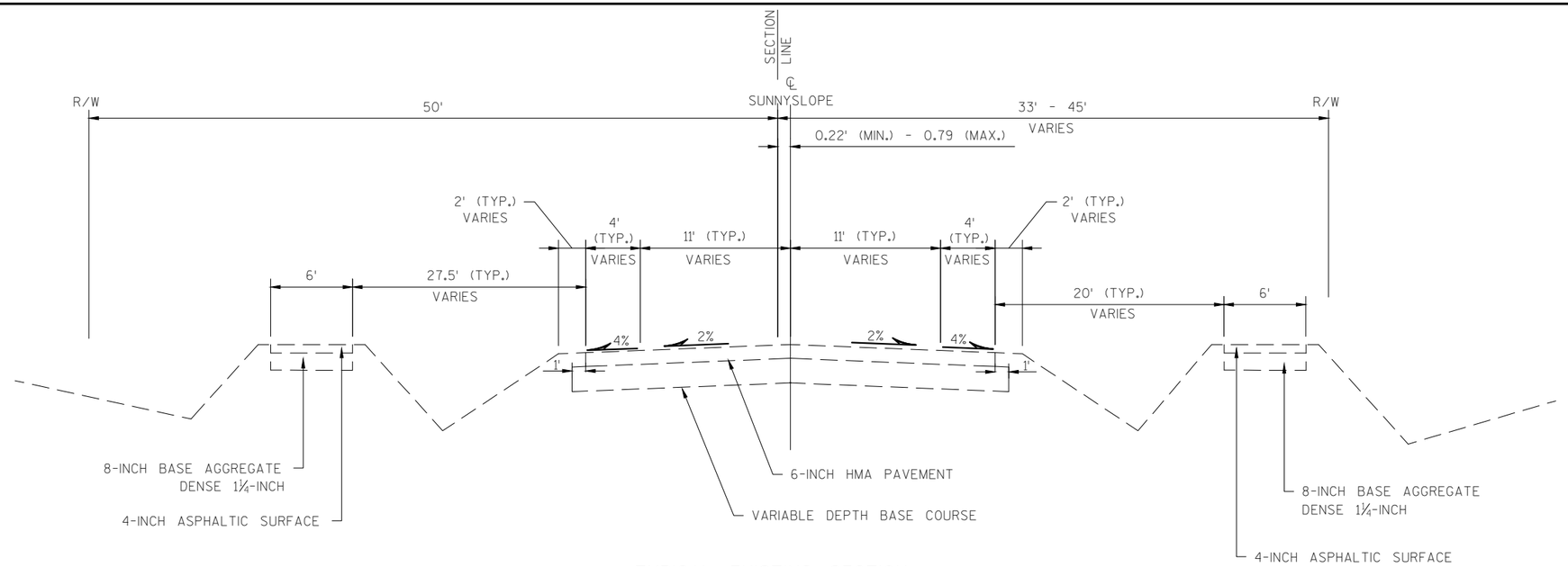
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TYPICAL EXISTING RAMP SECTION
WITH CURB AND SHOULDER

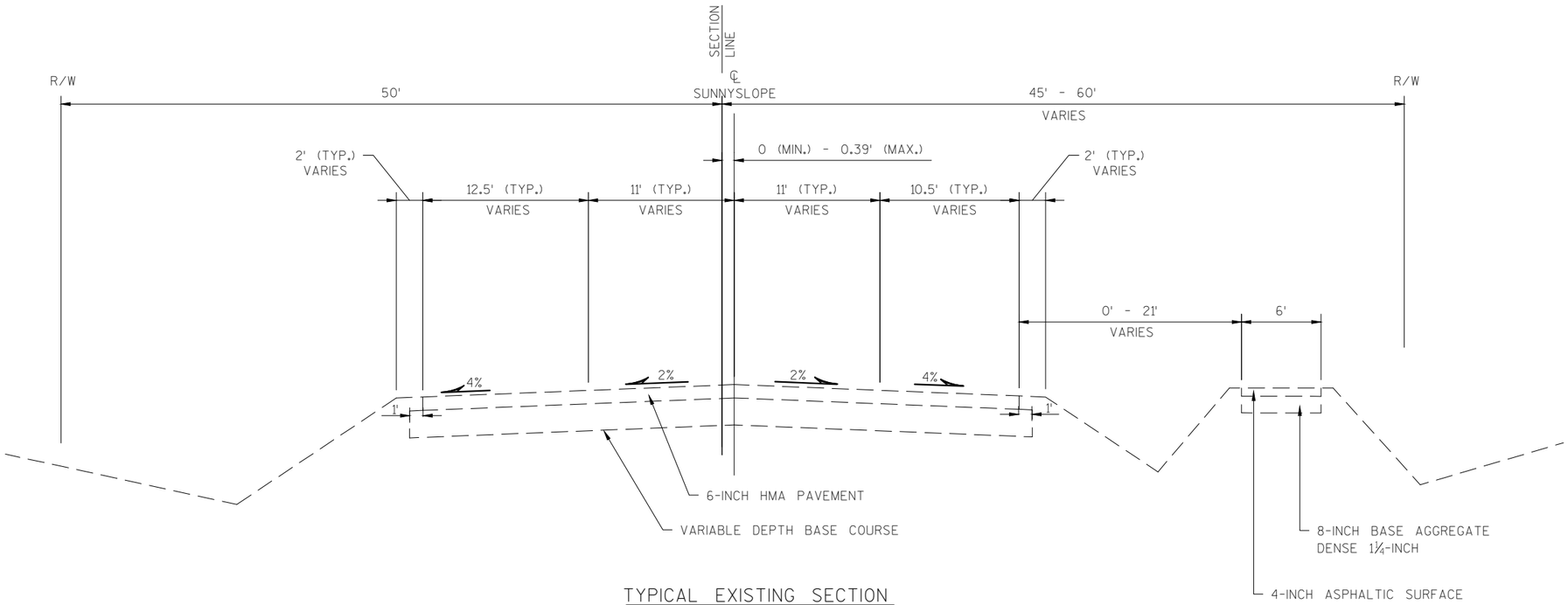
CTH O MOORLAND ROAD INTERCHANGE

N MOORLAND ROAD TO IH 94 EB ON RAMP
IH 94 WB TO N MOORLAND ROAD OFF RAMP



TYPICAL EXISTING SECTION
SUNNYSLOPE ROAD

STA. 122+22.11 TO STA. 124+42.36

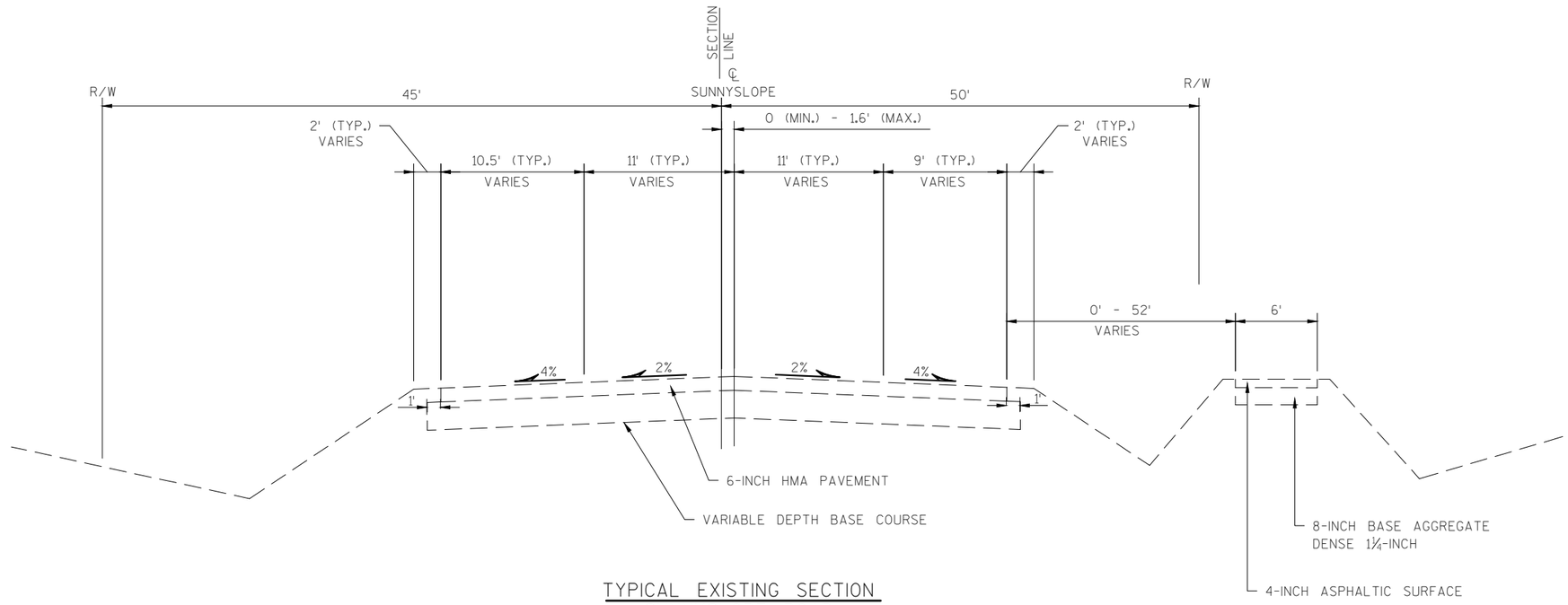


TYPICAL EXISTING SECTION
SUNNYSLOPE ROAD

STA. 124+42.36 TO STA. 128+93

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 10	E

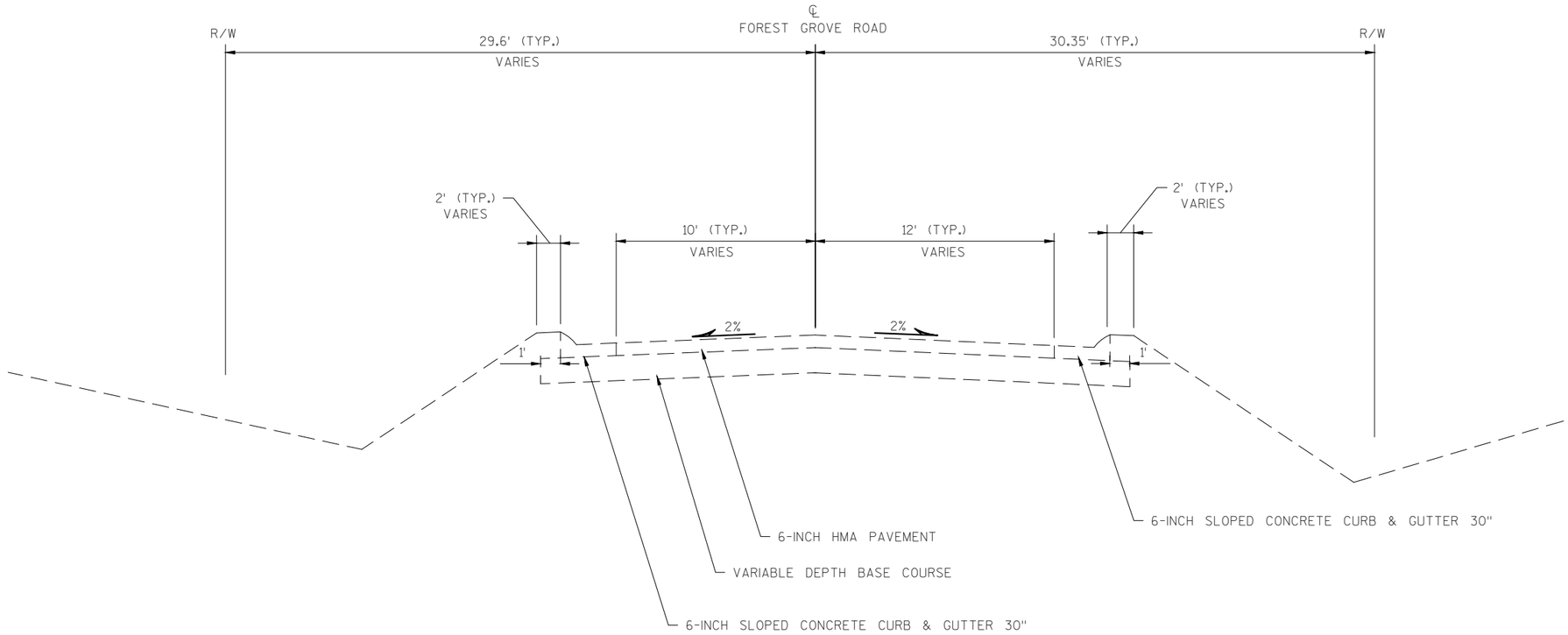
2



TYPICAL EXISTING SECTION
SUNNYSLOPE ROAD
STA. 131+17 TO STA. 135+35.84

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 11	E

2

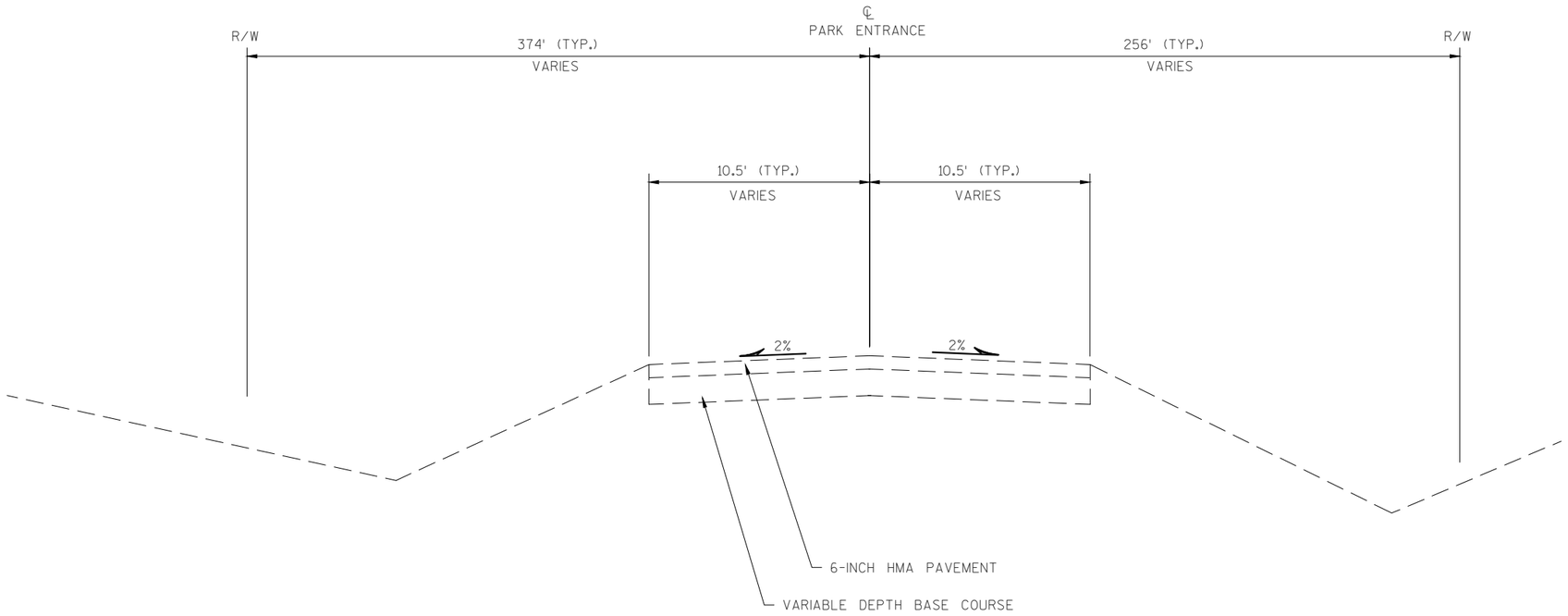


TYPICAL EXISTING SECTION
FOREST GROVE ROAD

STA. 20+16.00 TO STA. 21+00.14

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 12	E

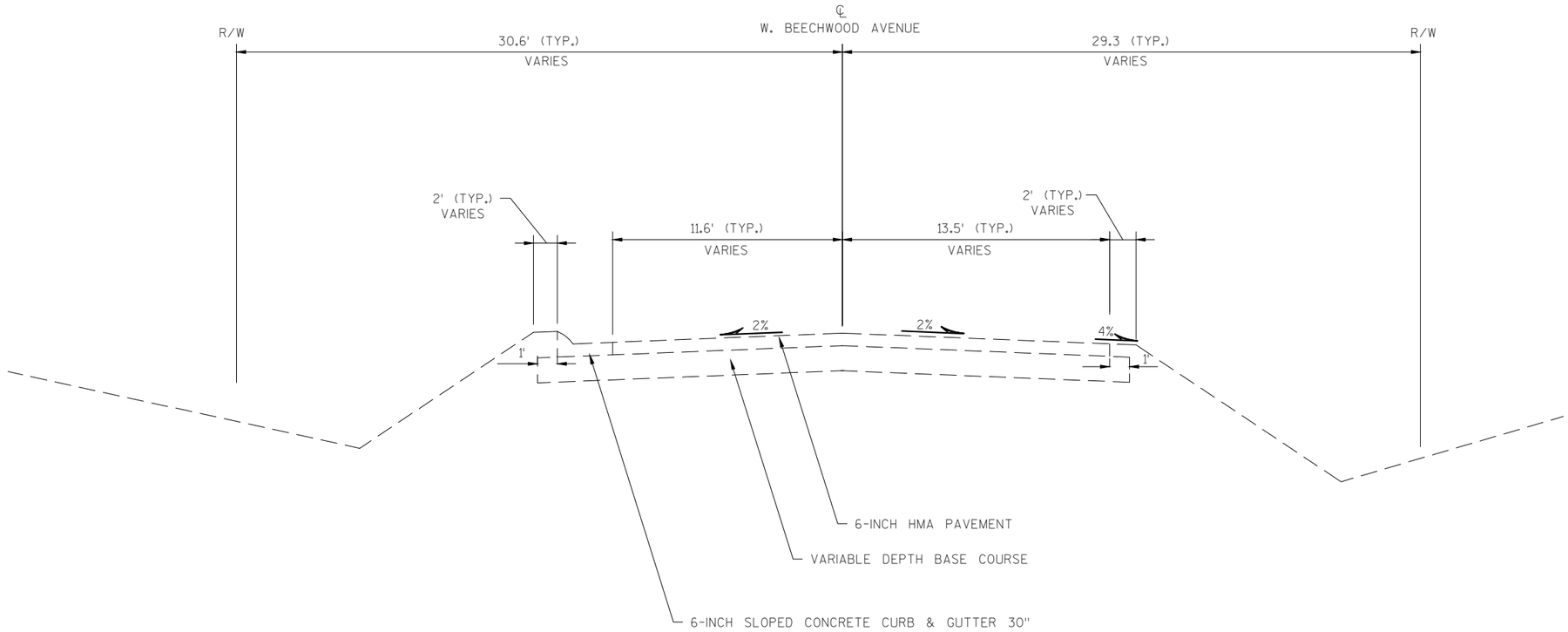
2



TYPICAL EXISTING SECTION
PARK ENTRANCE
STA. 23+64.16 TO STA. 24+90.16

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 13	E

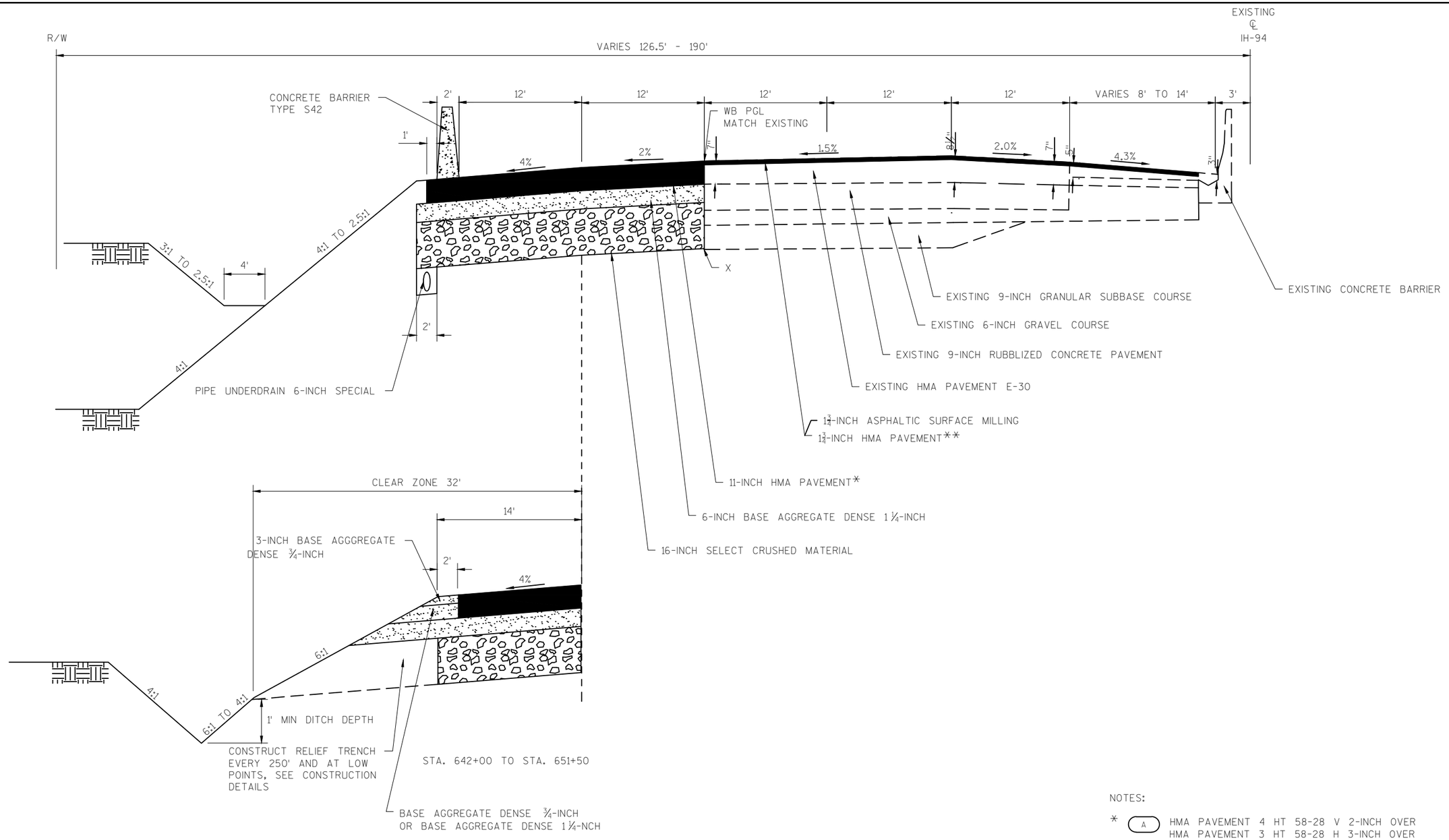
2



TYPICAL EXISTING SECTION
W. BEECHWOOD AVENUE

STA. 24+03.9 TO STA. 24+48.3

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 14	E



TYPICAL FINISHED SECTION
IH-94 WB

STA. 587+40 TO STA. 591+02
STA. 610+07 TO STA. 669+05.08

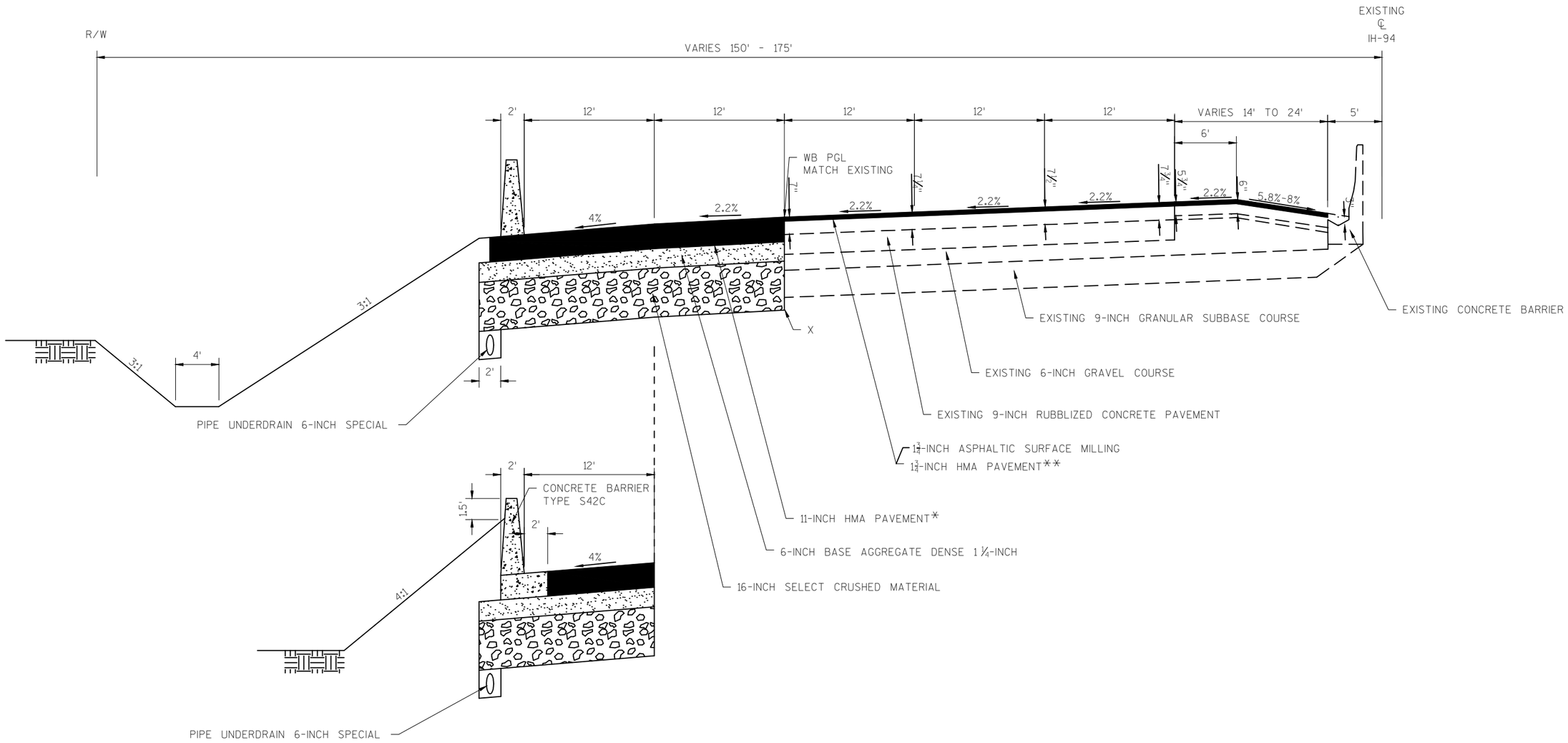
NOTES:

* (A) HMA PAVEMENT 4 HT 58-28 V 2-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER

** (B) HMA PAVEMENT 4 HT 58-28 V 1 ¾-INCH

X = POINT REFERRED TO ON CROSS SECTIONS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS - IH-94	SHEET 15	E



STA. 598+25 TO STA. 605+50

TYPICAL FINISHED SUPERELEVATED SECTION

IH-94 WB

STA. 591+18 TO STA. 610+07

NOTES:

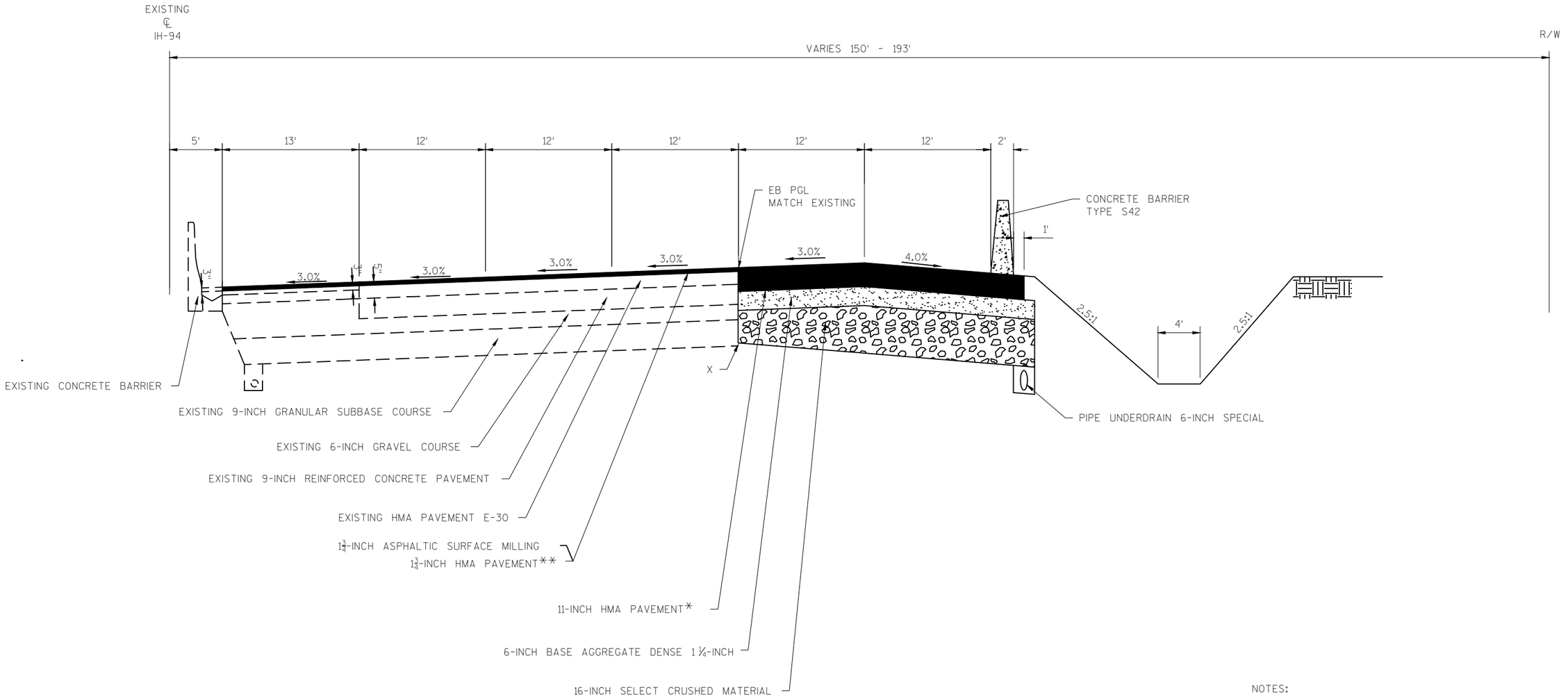
* (A) HMA PAVEMENT 4 HT 58-28 V 2-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER

** (B) HMA PAVEMENT 4 HT 58-28 V 1 ¾-INCH

X = POINT REFERRED TO ON CROSS SECTIONS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS - IH-94	SHEET 16	E

2



TYPICAL FINISHED SUPERELEVATED SECTION
IH-94 EB
STA. 597+20 TO STA. 607+81

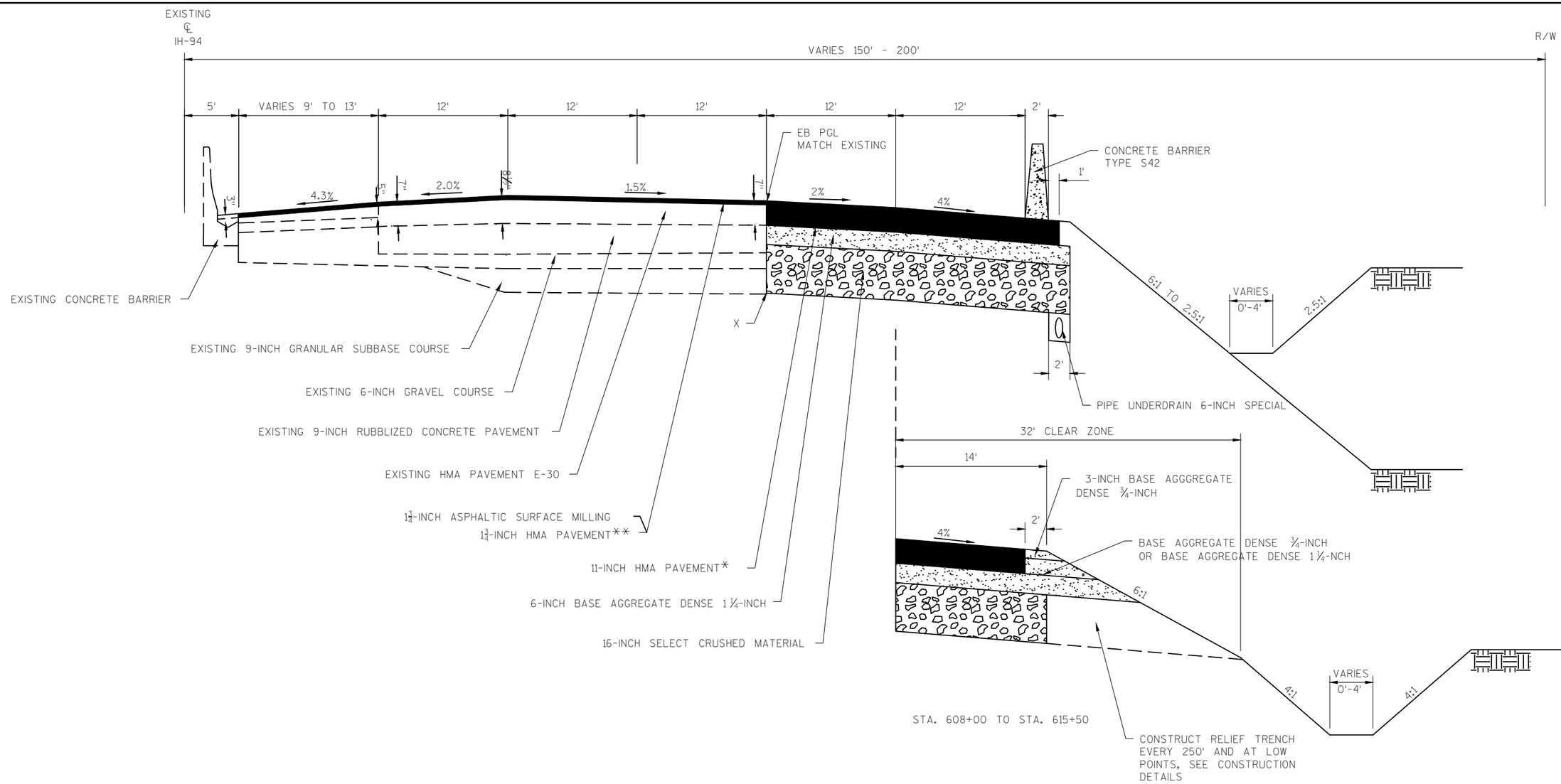
NOTES:

* (A) HMA PAVEMENT 4 HT 58-28 V 2-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER

** (B) HMA PAVEMENT 4 HT 58-28 V 1¾-INCH

X = POINT REFERRED TO ON CROSS SECTIONS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS - IH-94	SHEET 17	E



TYPICAL FINISHED SECTION
IH-94 EB

STA. 607+81 TO STA. 669+05.08

NOTES:

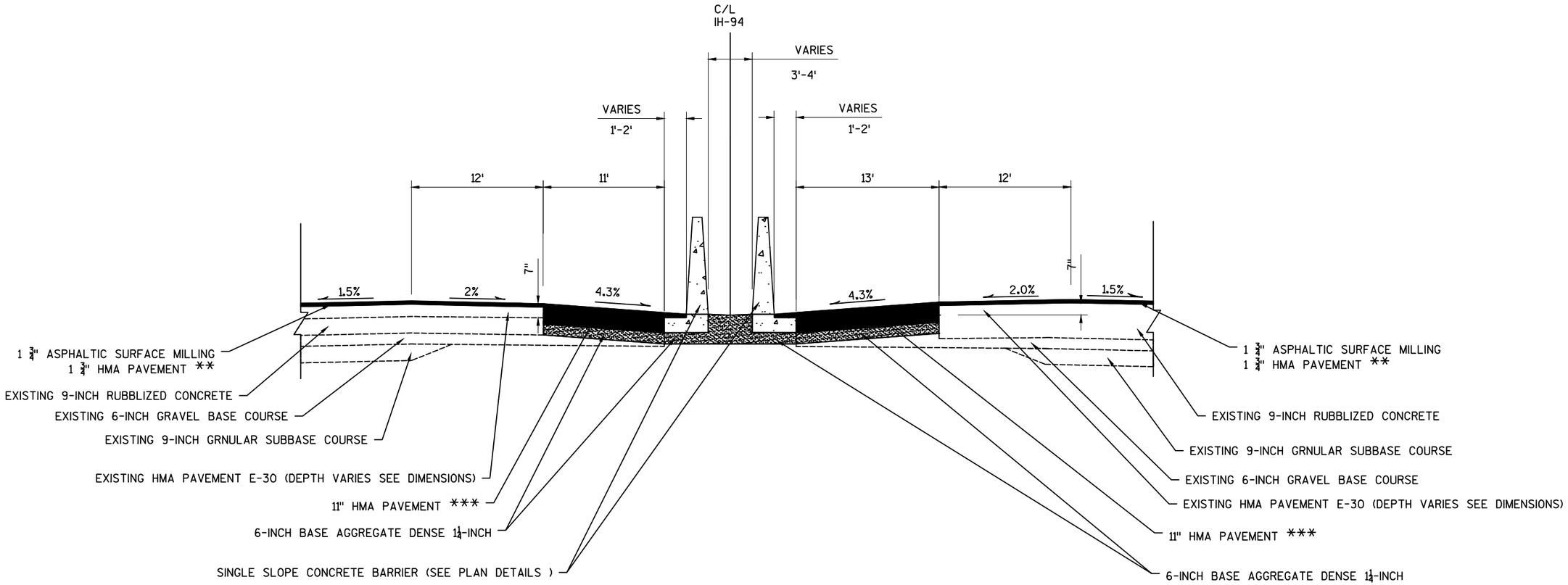
* (A) HMA PAVEMENT 4 HT 58-28 V 2-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER

** (B) HMA PAVEMENT 4 HT 58-28 V 1¾-INCH

X = POINT REFERRED TO ON CROSS SECTIONS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS - IH-94	SHEET 18	E

2



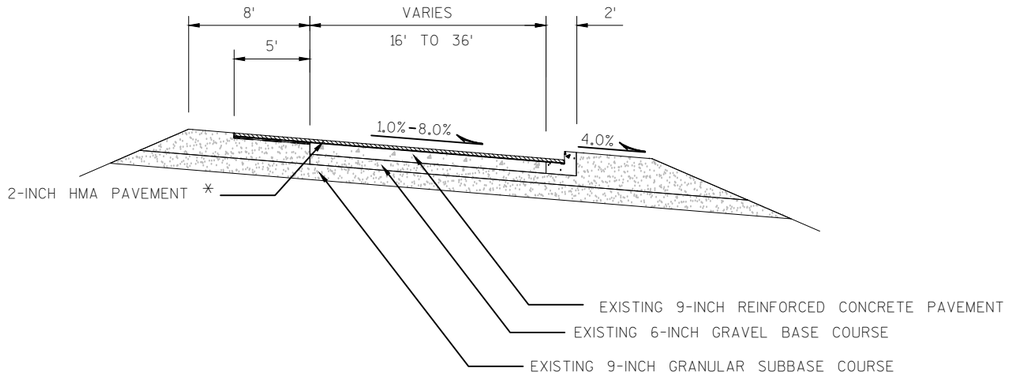
TYPICAL FINISHED SECTION
IH-94
STA. 625+40 TO STA. 627+20

NOTES:

*** (A) HMA PAVEMENT 4 HT 58-28 V 2-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER
HMA PAVEMENT 3 HT 58-28 H 3-INCH OVER

** (B) HMA PAVEMENT 4 HT 58-28 V 1 ¾"

PROJECT NO: 106-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 19	E

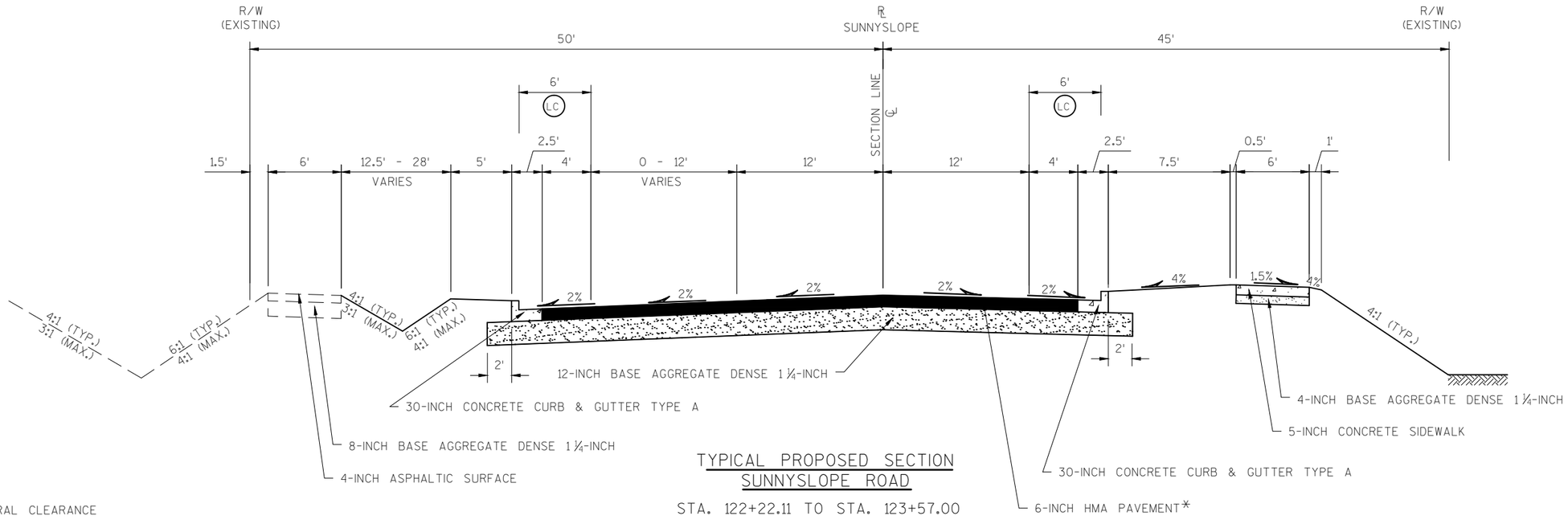


TYPICAL PROPOSED RAMP SECTION
WITH CURB AND SHOULDER

CTH O MOORLAND ROAD INTERCHANGE

N MOORLAND ROAD TO IH 94 EB ON RAMP
IH 94 WB TO N MOORLAND ROAD OFF RAMP

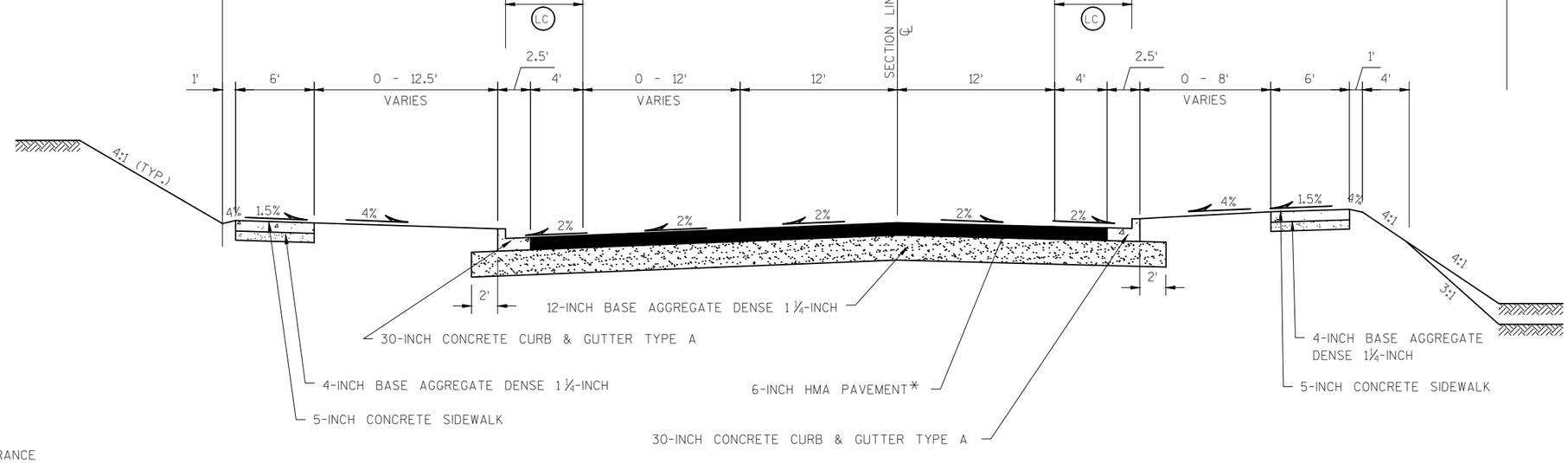
PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 20	E



LC = LATERAL CLEARANCE

TYPICAL PROPOSED SECTION
SUNNYSLOPE ROAD

STA. 122+22.11 TO STA. 123+57.00



LC = LATERAL CLEARANCE

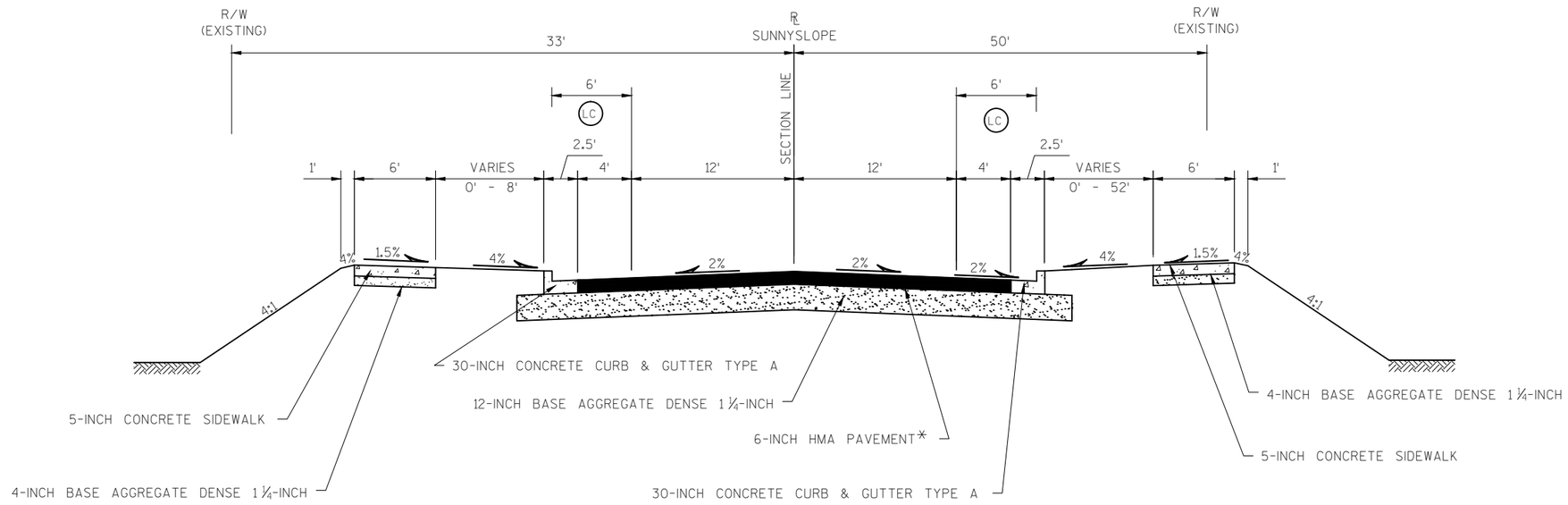
TYPICAL PROPOSED SECTION
SUNNYSLOPE ROAD

STA. 123+57.00 TO STA. 128+71.71

NOTES:

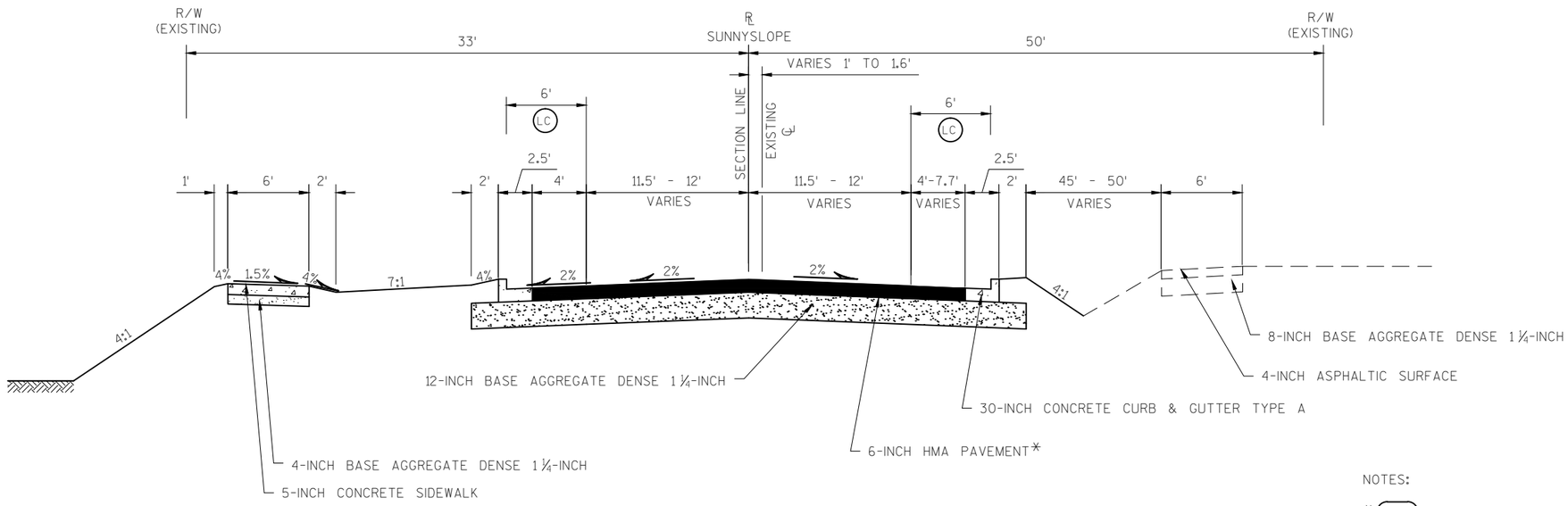
* (D) HMA PAVENT 4 LT 58-28 S 2 ½-INCH OVER HMA PAVEMENT 3 LT 58-28 S 3 ½-INCH

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 21	E



LC = LATERAL CLEARANCE

TYPICAL PROPOSED SECTION
SUNNYSLOPE ROAD
STA. 131+34.29 TO STA. 134+35.84



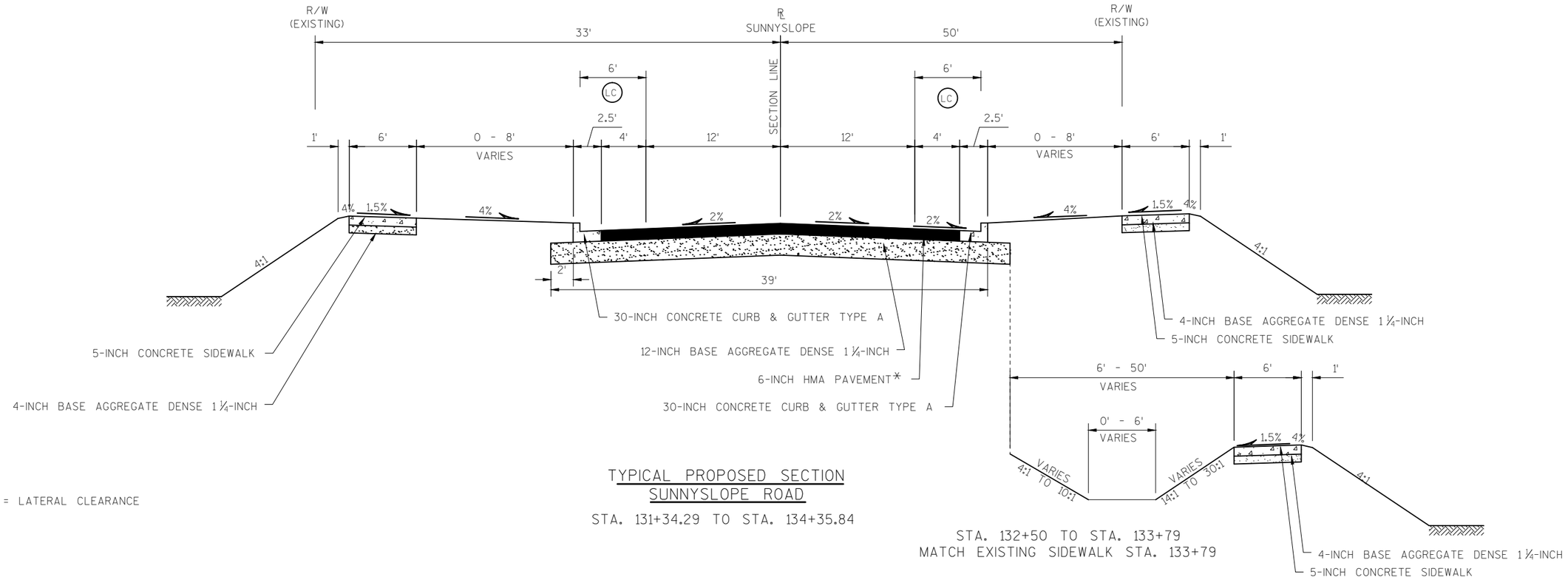
LC = LATERAL CLEARANCE

TYPICAL PROPOSED SECTION
SUNNYSLOPE ROAD
STA. 134+35.84 TO STA. 135+35.84

NOTES:

*(D) HMA PAVENT 4 LT 58-28 S 2 ½-INCH OVER HMA PAVEMENT 3 LT 58-28 S 3 ½-INCH

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 22	E

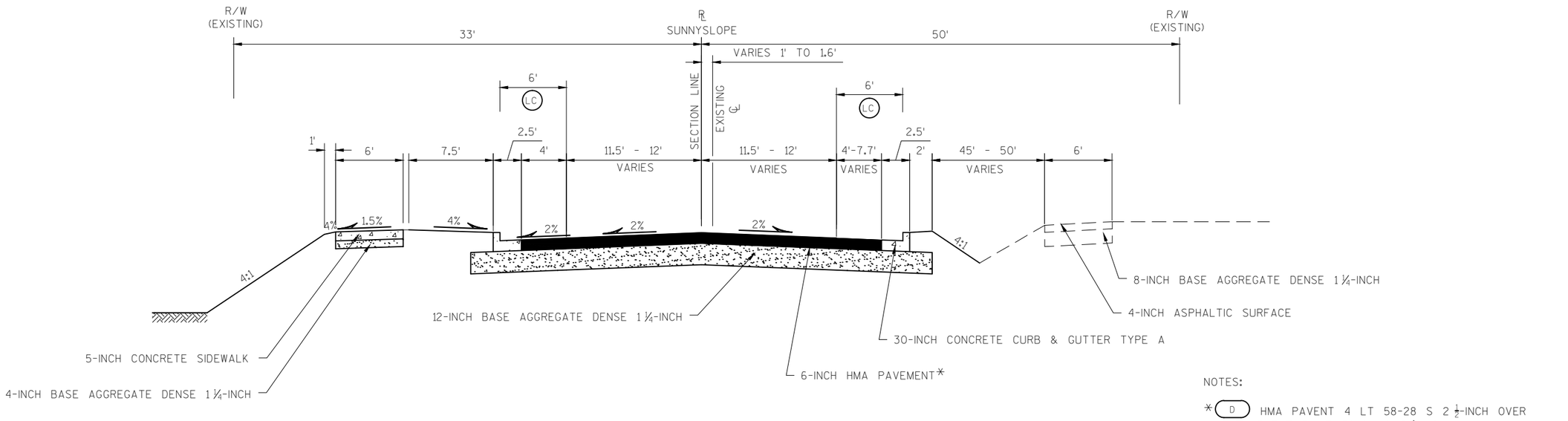


LC = LATERAL CLEARANCE

TYPICAL PROPOSED SECTION
SUNNYSLOPE ROAD

STA. 131+34.29 TO STA. 134+35.84

STA. 132+50 TO STA. 133+79
MATCH EXISTING SIDEWALK STA. 133+79



LC = LATERAL CLEARANCE

TYPICAL PROPOSED SECTION
SUNNYSLOPE ROAD

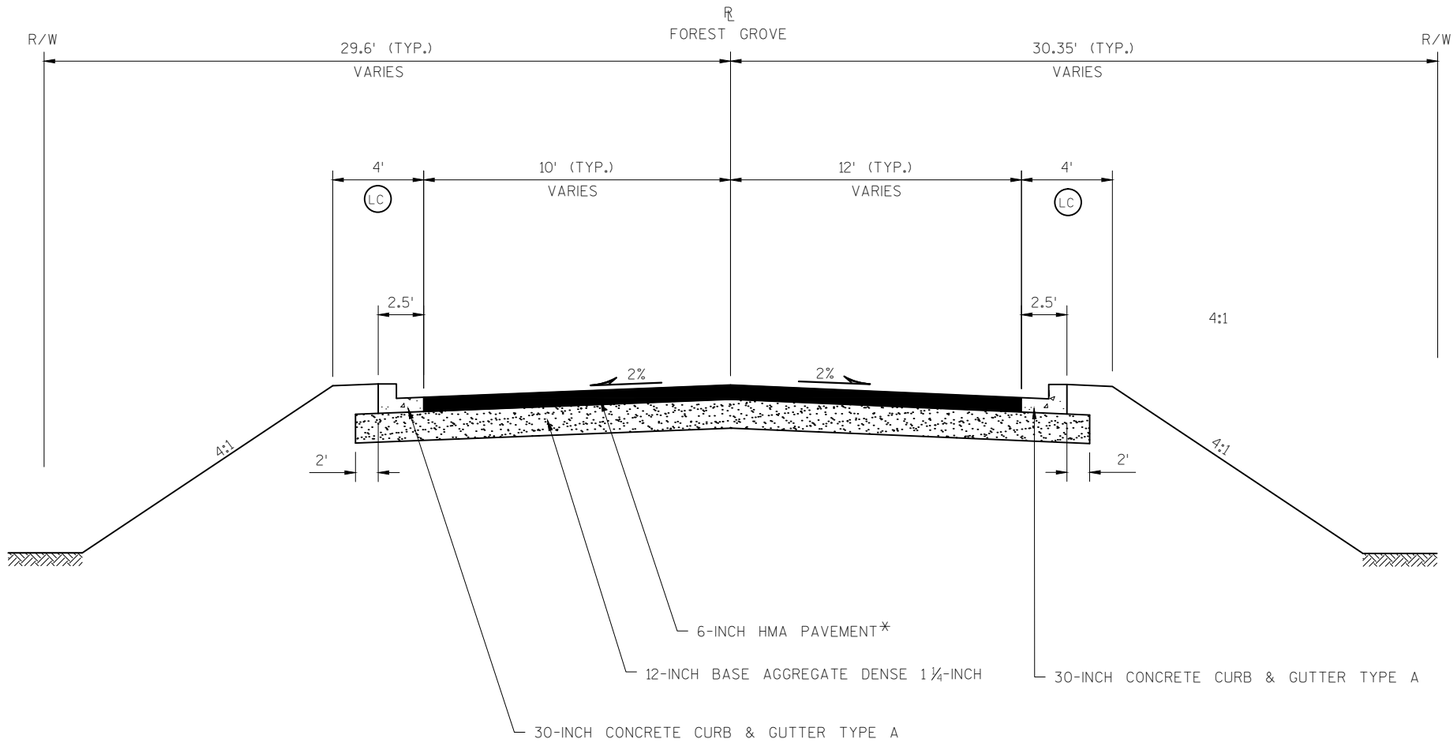
STA. 134+35.84 TO STA. 135+35.84

NOTES:

* (D) HMA PAVENT 4 LT 58-28 S 2 ½-INCH OVER HMA PAVEMENT 3 LT 58-28 S 3 ½-INCH

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 23	E

2



TYPICAL PROPOSED SECTION
FOREST GROVE ROAD

STA. 20+15.36 TO STA. 21+00.14

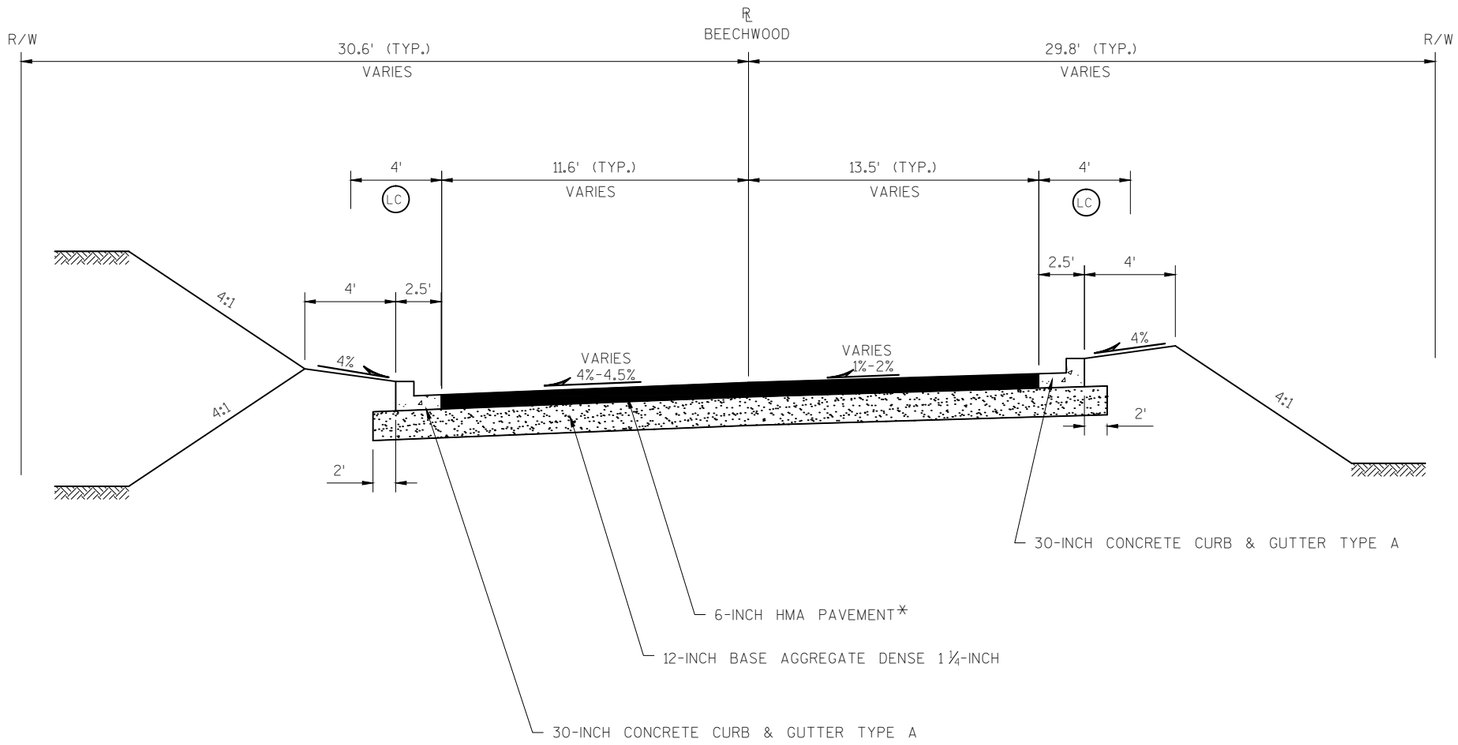
(LC) = LATERAL CLEARANCE

NOTES:

*(D) HMA PAVENT 4 LT 58-28 S 2 ½-INCH OVER HMA PAVEMENT 3 LT 58-28 S 3 ½-INCH

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 24	E

2



TYPICAL PROPOSED SECTION
W. BEECHWOOD AVENUE

STA. 24+03.5 TO STA. 24+48.3

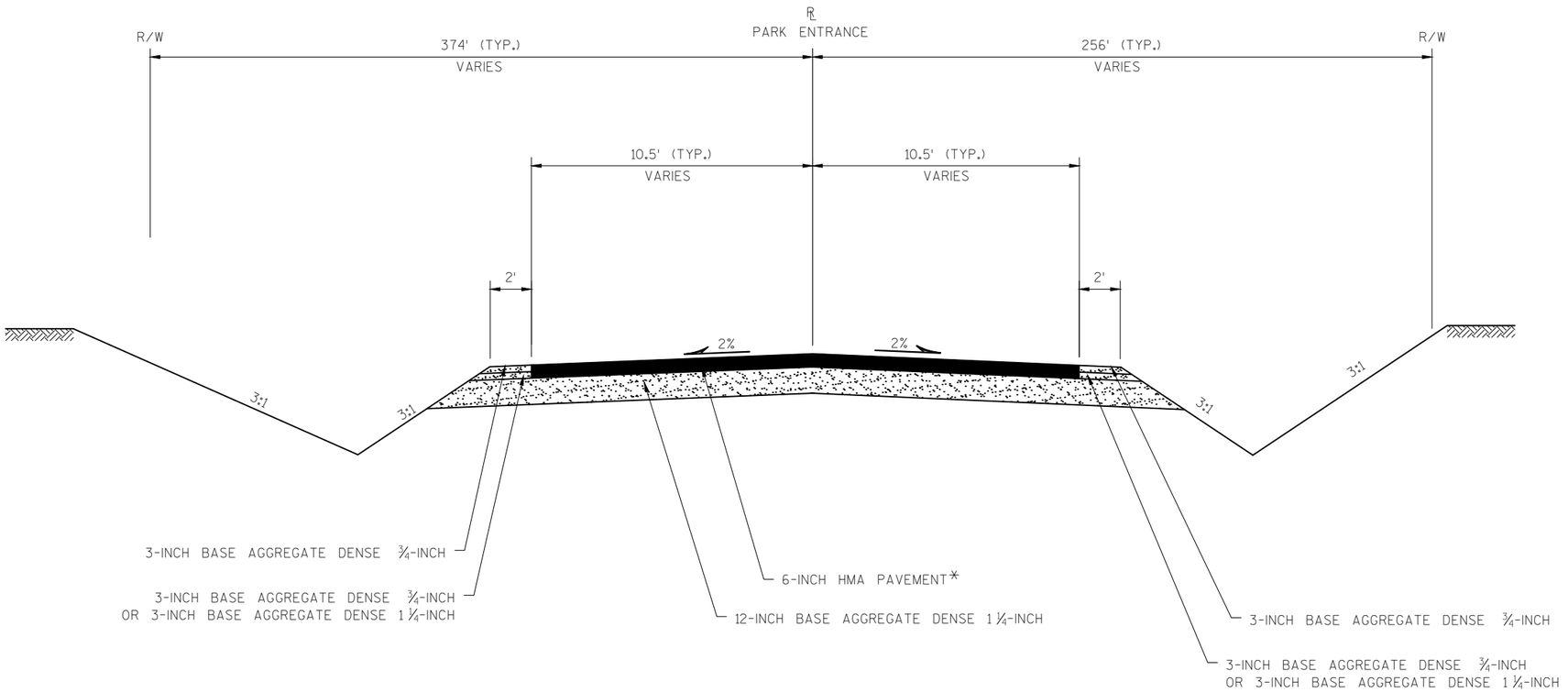
(LC) = LATERAL CLEARANCE

NOTES:

*(D) HMA PAVENT 4 LT 58-28 S 2 ½-INCH OVER HMA PAVEMENT 3 LT 58-28 S 3 ½-INCH

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 25	E

2



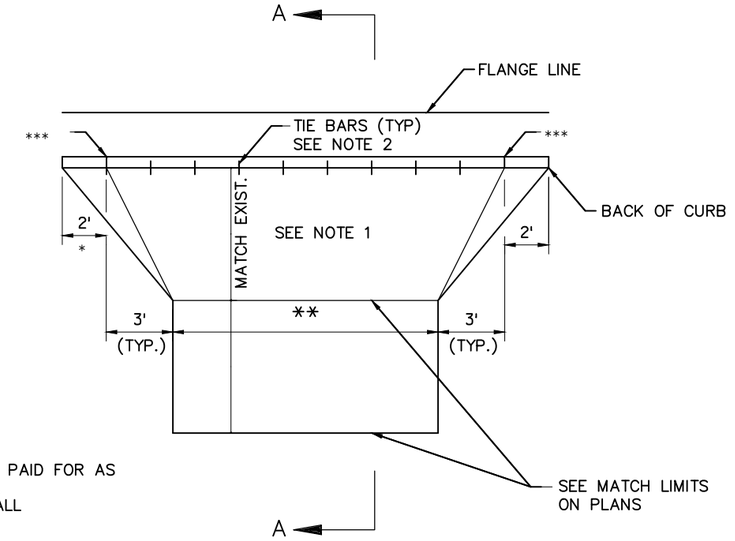
TYPICAL PROPOSED SECTION
PARK ENTRANCE

STA. 23+64.16 TO STA. 24+86.38

NOTES:

* (D) HMA PAVENT 4 LT 58-28 S 2 ½-INCH OVER HMA PAVEMENT 3 LT 58-28 S 3 ½-INCH

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 26	E

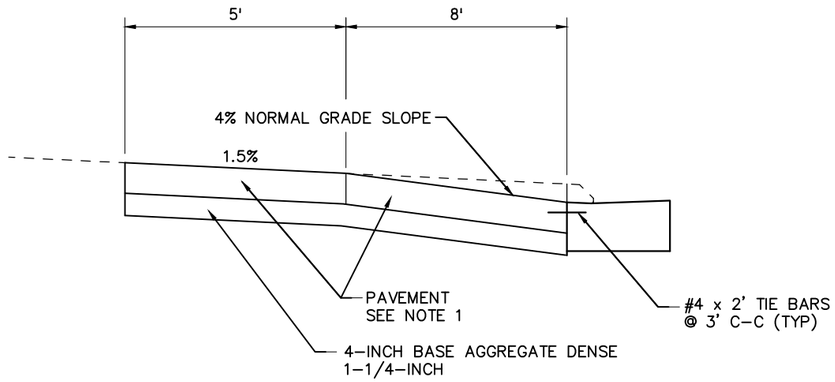


* TAPER CURB HEAD (1.5" TO 6")
** SEE PAVING DETAILS FOR WIDTH REQUIRED
*** STATION SHOWN ON PAVING DETAILS

PLAN VIEW

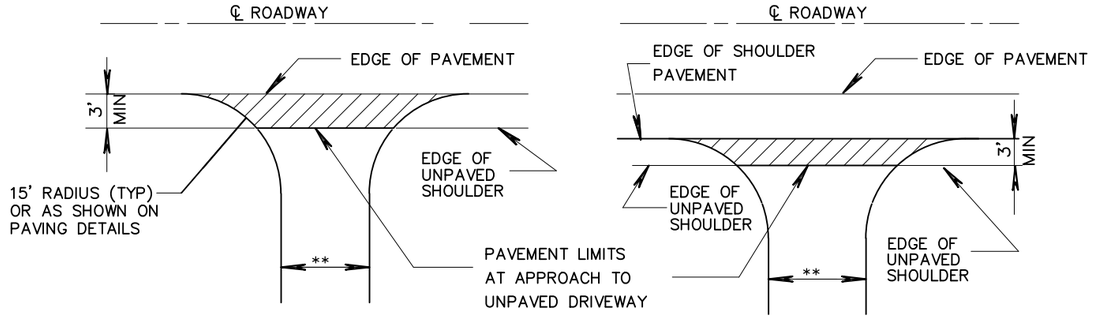
NOTES

1. URBAN DRIVEWAYS SHALL BE PAID FOR AS CONCRETE DRIVEWAY 6-INCH. PAY LIMITS OF DRIVEWAY SHALL INCLUDE SIDEWALK
2. TIE BARS ARE INCIDENTAL TO THE BID ITEM "CONCRETE DRIVEWAY 6-INCH".
3. DRIVEWAY SURFACE BEYOND SIDEWAY TO BE REPLACED IN KIND (SEE PLAN DETAILS)



SECTION A-A

URBAN DRIVEWAY WITH SIDEWALK

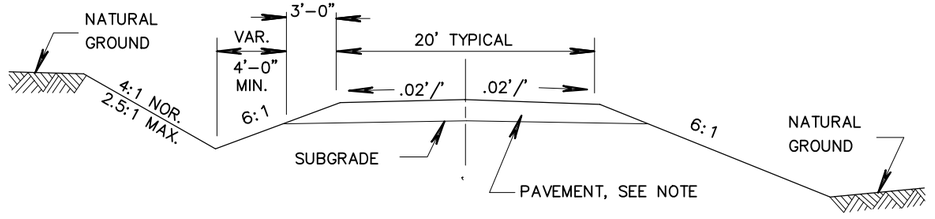


** SEE PAVING DETAILS FOR WIDTH REQUIRED

PLAN VIEW

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

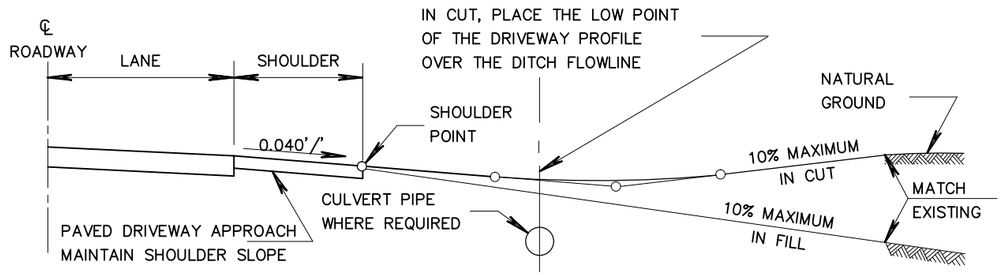
RURAL DRIVEWAY INTERSECTION DETAIL



IN CUT

IN FILL

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE



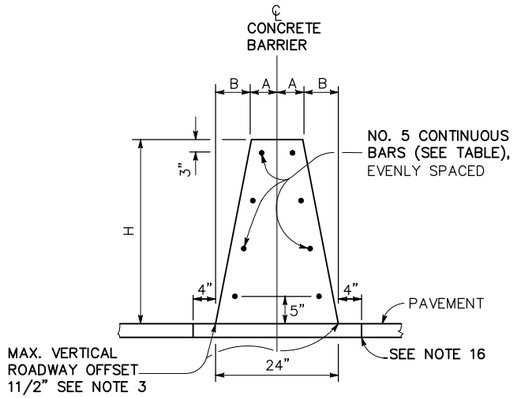
TYPICAL DRIVEWAY PROFILES

NOTE:

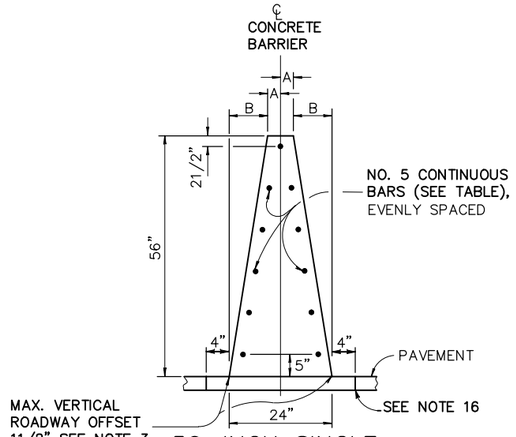
1. WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT
2. DRIVEWAY SURFACE TO BE SAME AS EXISTING WITH MINIMUM SECTION OF:

   ASPHALTIC SURFACE (3-INCH) DRIVEWAYS AND FIELD ENTRANCES OVER
   BASE AGGREGATE DENSE 1¼-INCH (4-INCH)
   OR
   CONCRETE DRIVEWAY 6-INCH OVER
   BASE AGGREGATE DENSE 1¼-INCH (4-INCH)
   OR
   BASE AGGREGATE DENSE 1¼-INCH (4-INCH)

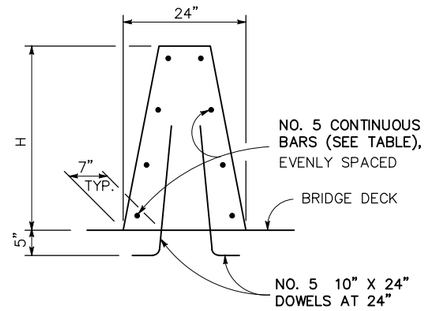
RURAL DRIVEWAY



32–INCH, 36–INCH OR 42–INCH
SINGLE SLOPE CONCRETE BARRIER
(TYPE S32, TYPE S36, AND
TYPE S42)

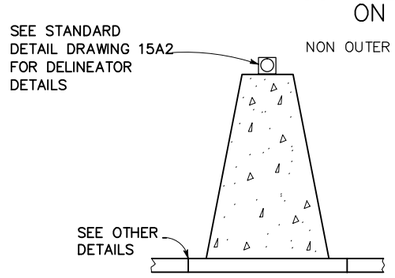


56–INCH SINGLE
SLOPE CONCRETE BARRIER
(TYPE S56)



SINGLE SLOPE
CONCRETE BARRIER
ON BRIDGE

NON OUTER PARAPET APPLICATION

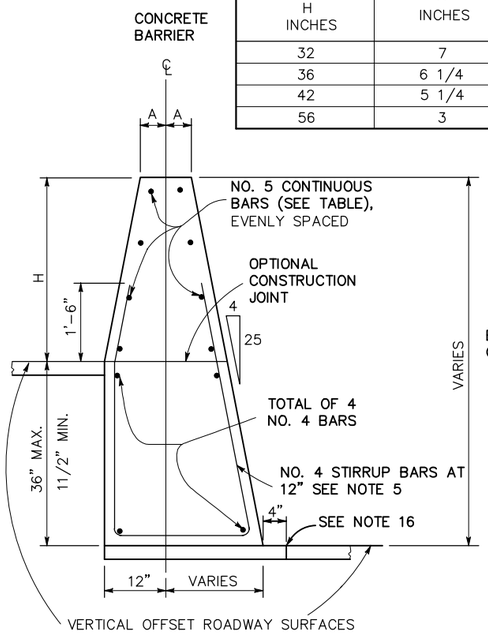


DELINEATION

GENERAL NOTES

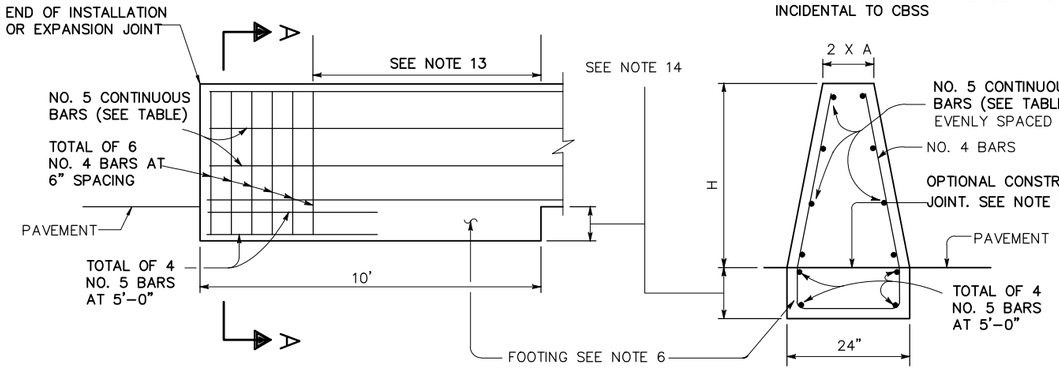
1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR 1/2" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1 1/2", 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 3/4" 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 PAID AS EACH.
16. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER. FULL–DEPTH SAWING IS INCIDENTAL TO CBSS

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6 1/4	5 3/4	8
42	5 1/4	6 3/4	10
56	3	9	11



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

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	

2

N

R/W

MOORLAND RD. EXIT RAMP

IH-94 WB

572+00 573+00 574+00 575+00 576+00 577+00 578+00 579+0

IH-94 EB

MOORLAND RD. ENTRANCE RAMP

MOORLAND RD. ENTRANCE RAMP

R/W

REMOVAL LEGEND

X	CLEARING AND GRUBBING (I.D.)
	CLEARING AND GRUBBING (STA.)
	REMOVING PAVEMENT
	REMOVING ASPHALTIC SURFACE MILLING
	REMOVING CURB AND GUTTER
	REMOVING CONCRETE BARRIER
	REMOVING FENCE
	REMOVING GUARDRAIL
	SLOPE INTERCEPT
.XXXXX..	SAWING ASPHALT
.XXXX..	SAWING CONCRETE PAVEMENT
	WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 29	E

2

2

N

MOORLAND RD. EXIT RAMP

IH-94 WB

578+00 579+00 580+00 581+00 582+00 583+00 584+00 585+00

IH-94 EB

MOORLAND RD. ENTRANCE RAMP

MOORLAND RD. ENTRANCE RAMP

R/W

R/W

REMOVAL LEGEND

X	CLEARING AND GRUBBING (I.D.)
	CLEARING AND GRUBBING (STA.)
	REMOVING PAVEMENT
	REMOVING ASPHALTIC SURFACE MILLING
	REMOVING CURB AND GUTTER
	REMOVING CONCRETE BARRIER
	REMOVING FENCE
	REMOVING GUARDRAIL
	SLOPE INTERCEPT
.XXXXX..	SAWING ASPHALT
.XXXX..	SAWING CONCRETE PAVEMENT
	WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 30	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021101_RM.DWG
LAYOUT NAME - 021101_RM

PLOT DATE : 4/27/2017 5:13 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

N

R/W

SI

REMOVE SIGN BRIDGE

IH-94 WB

585+00 586+00 587+00 588+00 589+00 590+00 591+00 592+00

S-67-315

IH-94 EB

POST

R/W

CUY

MH

REMOVAL LEGEND

X	CLEARING AND GRUBBING (I.D.)
	CLEARING AND GRUBBING (STA.)
	REMOVING PAVEMENT
	REMOVING ASPHALTIC SURFACE MILLING
	REMOVING CURB AND GUTTER
	REMOVING CONCRETE BARRIER
	REMOVING FENCE
	REMOVING GUARDRAIL
	SLOPE INTERCEPT
.XXXXX..	SAWING ASPHALT
.XXXX..	SAWING CONCRETE PAVEMENT
	WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 31	E

2

2

N

SI

R/W

PC: 593+43.17

IH-94 WB

593+00 594+00 595+00 596+00 597+00 598+00 599+00 600+00

IH-94 EB

SI

R/W

GUY

GUY

GUY

REMOVAL LEGEND

X	CLEARING AND GRUBBING (I.D.)
	CLEARING AND GRUBBING (STA.)
	REMOVING PAVEMENT
	REMOVING ASPHALTIC SURFACE MILLING
	REMOVING CURB AND GUTTER
	REMOVING CONCRETE BARRIER
	REMOVING FENCE
	REMOVING GUARDRAIL
	SLOPE INTERCEPT
.XXXXX..	SAWING ASPHALT
.X X X X..	SAWING CONCRETE PAVEMENT
	WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 32 E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021101_RM.DWG
LAYOUT NAME - 021102_RM

PLOT DATE : 4/27/2017 5:13 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

N

R/W

SI

IH-94 WB

600+00 601+00 602+00 603+00 604+00 605+00 606+00 607+00

IH-94 EB

SI

R/W

GRGE

REMOVAL LEGEND

X	CLEARING AND GRUBBING (I.D.)
	CLEARING AND GRUBBING (STA.)
	REMOVING PAVEMENT
	REMOVING ASPHALTIC SURFACE MILLING
	REMOVING CURB AND GUTTER
	REMOVING CONCRETE BARRIER
	REMOVING FENCE
	REMOVING GUARDRAIL
	SLOPE INTERCEPT
.XXXXX..	SAWING ASPHALT
.XXXX..	SAWING CONCRETE PAVEMENT
	WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 33	E

2

2

N

R/W

SI

PT: 607+55.10

PT: 607+88.20

608+00

609+00

610+00

611+00

612+00

613+00

614+00

615+00

IH-94 WB

IH-94 EB

S-67-317

R/W

SI

REMOVAL LEGEND

- X — CLEARING AND GRUBBING (I.D.)
- CLEARING AND GRUBBING (SIA.)
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING CURB AND GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- REMOVING GUARDRAIL
- SLOPE INTERCEPT
- SAWING ASPHALT
- SAWING CONCRETE PAVEMENT
- WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 34	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021101_RM.DWG
LAYOUT NAME - 021104_RM

PLOT DATE : 4/27/2017 5:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

R/W

SI

IH-94 WB

615+00 616+00 617+00 618+00 619+00 620+00 621+00 622+00

IH-94 EB

R/W

SI

REMOVAL LEGEND

- CLEARING AND GRUBBING (I.D.)
- CLEARING AND GRUBBING (STA.)
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING CURB AND GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- REMOVING GUARDRAIL
- SLOPE INTERCEPT
- SAWING ASPHALT
- SAWING CONCRETE PAVEMENT
- WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 35	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021101_RM.DWG
LAYOUT NAME - 021105_RM

PLOT DATE : 4/27/2017 5:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

R/W

SUNNYSLOPE ROAD

132+00

131+00

129+00

128+00

CREOSOTE CONTAMINATED SOIL
(REFER TO SPECIAL PROVISIONS)

SI

P.I. 626+35.80

623+00 624+00 625+00 626+00 627+00 628+00 629+00 630+00

IH-94 WB

IH-94 EB

CUY

GUY

MH

WV

REMOVAL LEGEND

X CLEARING AND GRUBBING (I.D.)

CLEARING AND GRUBBING (STA.)

REMOVING PAVEMENT

REMOVING ASPHALTIC SURFACE MILLING

REMOVING CURB AND GUTTER

REMOVING CONCRETE BARRIER

REMOVING FENCE

REMOVING GUARDRAIL

SLOPE INTERCEPT

.XXXXX.. SAWING ASPHALT

.XXXXX.. SAWING CONCRETE PAVEMENT

WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 36	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021101_RM.DWG
LAYOUT NAME - 021106_RM

PLOT DATE : 4/27/2017 5:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

R/W

SI

IH-94 WB

630+00 631+00 632+00 633+00 634+00 635+00 636+00 637+00

IH-94 EB

REMOVAL LEGEND

X	CLEARING AND GRUBBING (I.D.)
	CLEARING AND GRUBBING (STA.)
	REMOVING PAVEMENT
	REMOVING ASPHALTIC SURFACE MILLING
	REMOVING CURB AND GUTTER
	REMOVING CONCRETE BARRIER
	REMOVING FENCE
	REMOVING GUARDRAIL
	SLOPE INTERCEPT
.XXXXX..	SAWING ASPHALT
.X X X X..	SAWING CONCRETE PAVEMENT
	WETLAND BOUNDARY

SI

R/W

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 37	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021101_RM.DWG
LAYOUT NAME - 021107_RM

PLOT DATE : 4/27/2017 5:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

R/W

SI

IH-94 WB

638+00 639+00 640+00 641+00 642+00 643+00 644+00 645+00

S-67-318

IH-94 EB

REMOVAL LEGEND

- X — CLEARING AND GRUBBING (I.D.)
- CLEARING AND GRUBBING (STA.)
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING CURB AND GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- REMOVING GUARDRAIL
- SLOPE INTERCEPT
- .XXXXX.. SAWING ASPHALT
- .XXXX.. SAWING CONCRETE PAVEMENT
- WETLAND BOUNDARY

SI

R/W

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 38	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021101_RM.DWG
LAYOUT NAME - 021108_RM

PLOT DATE : 4/27/2017 5:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

R/W

SI

IH-94 WB

645+00 646+00 647+00 648+00 649+00 650+00 651+00 652+00

IH-94 EB

S-67-418

SI

R/W

REMOVAL LEGEND

- CLEARING AND GRUBBING (L.D.)
- CLEARING AND GRUBBING (STA.)
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING CURB AND GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- REMOVING GUARDRAIL
- SLOPE INTERCEPT
- SAWING ASPHALT
- SAWING CONCRETE PAVEMENT
- WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 39	E

2

N

ELM GROVE ROAD

22+00

21+00

19+00

18+00

R/W

SI

IH-94 WB

IH-94 EB

SALVAGE STEEL RAIL CAP

PI: 653+39.34

653+00 654+00 655+00 656+00 657+00 658+00 659+00 660+00

REMOVAL LEGEND

- X — CLEARING AND GRUBBING (I.D.)
- CLEARING AND GRUBBING (STA.)
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING CURB AND GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- REMOVING GUARDRAIL
- SLOPE INTERCEPT
- .XXXXX.. SAWING ASPHALT
- .XXXXX.. SAWING CONCRETE PAVEMENT
- WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 40	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021101_RM.DWG
LAYOUT NAME - 021110_RM

PLOT DATE : 4/27/2017 5:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

R/W

SI

IH-94 WB

660+00 661+00 662+00 663+00 664+00 665+00 666+00 667+00

IH-94 EB

SI

R/W

REMOVAL LEGEND

- X — CLEARING AND GRUBBING (I.D.)
- CLEARING AND GRUBBING (STA.)
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING CURB AND GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- REMOVING GUARDRAIL
- SLOPE INTERCEPT
- .XXXXX.. SAWING ASPHALT
- .XXXX.. SAWING CONCRETE PAVEMENT
- WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 41	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021101_RM.DWG
LAYOUT NAME - 021111_RM

PLOT DATE : 4/27/2017 5:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

R/W

SI

IH-94 WB

668+00 669+00 670+00 671+00 672+00 673+00 674+00 675+00

IH-94 EB

SI

R/W

GUY POST

GUY

REMOVAL LEGEND

X	CLEARING AND GRUBBING (I.D.)
	CLEARING AND GRUBBING (STA.)
	REMOVING PAVEMENT
	REMOVING ASPHALTIC SURFACE MILLING
	REMOVING CURB AND GUTTER
	REMOVING CONCRETE BARRIER
	REMOVING FENCE
	REMOVING GUARDRAIL
	SLOPE INTERCEPT
.XXXXX..	SAWING ASPHALT
.X X X X..	SAWING CONCRETE PAVEMENT
	WETLAND BOUNDARY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	REMOVAL PLAN - IH-94	SHEET 42	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021101_RM.DWG
LAYOUT NAME - 021112_RM

PLOT DATE : 4/27/2017 5:15 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

N

PARK ENTRANCE

23+00

24+00

25+00

TLE

R/W

RM

SI

121+00

122+00

123+00

124+00

125+00

126+00

127+00

128+00

PI: 121+95.90

SUNNYSLOPE ROAD

EP: 25+14.16

BP: 20+00.00

FOREST GROVE ROAD

21+00

22+00

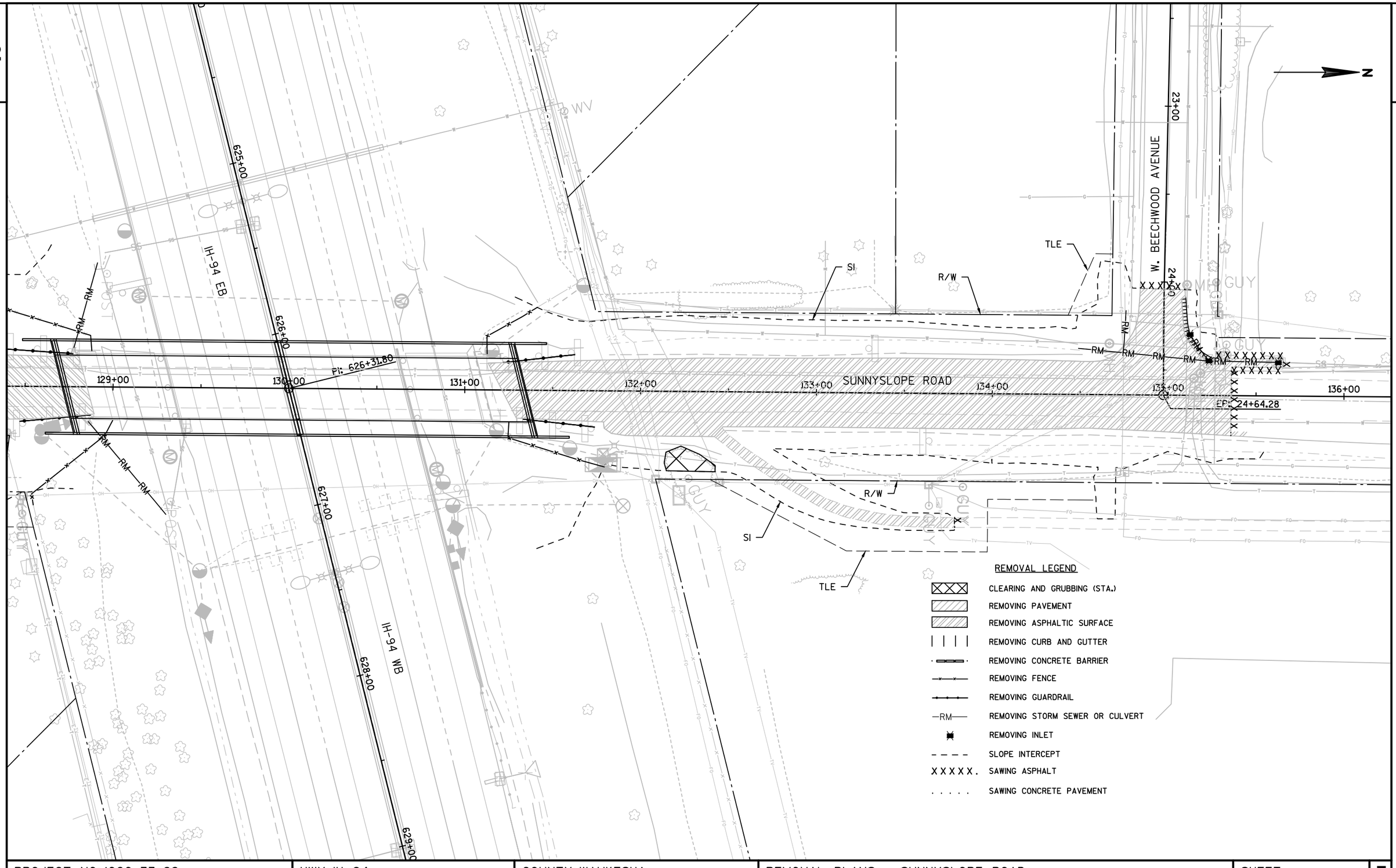
EP: 22+24.64

REMOVAL LEGEND

- CLEARING AND GRUBBING (STA.)
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE
- REMOVING CURB AND GUTTER
- REMOVING CONCRETE BARRIER
- REMOVING FENCE
- REMOVING GUARDRAIL
- RM — REMOVING STORM SEWER OR CULVERT
- REMOVING INLET
- SLOPE INTERCEPT
- XXXXX. SAWING ASPHALT
- . . . . . SAWING CONCRETE PAVEMENT

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	REMOVAL PLANS - SUNNYSLOPE ROAD	SHEET 43	E

2



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	REMOVAL PLANS - SUNNYSLOPE ROAD	SHEET 44	E

2

2

+64

+80

EXIST R/W

N

C

17'

MOORLAND RD. EXIT RAMP

S. MOORLAND RD. SB

S. MOORLAND RD. NB

B

IH-94 WB

57'

570+00

571+00

572+00

573+00

574+00

575+00

576+00

577+00

BEGIN PROJECT
STA. 572+64

℄ IH-94

B

IH-94 EB

57'

C

24'

MOORLAND RD. ENTRANCE RAMP

+05

+05

C

20'

MOORLAND RD. ENTRANCE RAMP

LEGEND

A	HMA PAVEMENT 11-INCH
B	HMA PAVEMENT 1¾-INCH
C	HMA PAVEMENT 2-INCH
AG01	BASE AGGREGATE DENSE 3/4-INCH
CB02	CONCRETE BARRIER TYPE S42
CB03	CONCRETE BARRIER TYPE S56
CB06	CONCRETE BARRIER TYPE S42C
CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
CB48	END ANCHORAGE
CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
BG10	GUARDRAIL MOW STRIP ASPHALT
BG16	MGS THRIE BEAM TRANSITION
BG17	MGS GUARDRAIL TERMINAL EAT

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 45	E

2

2

N

EXIST R/W

WETLAND

MOORLAND RD. EXIT RAMP

+61

C

B

IH-94 WB

578+00 579+00 580+00 581+00 582+00 583+00 584+00 585+00

℄ IH-94

B

IH-94 EB

MOORLAND RD. ENTRANCE RAMP

C

MOORLAND RD. ENTRANCE RAMP

C

EXIST R/W

LEGEND

A	HMA PAVEMENT 1¼-INCH	CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
B	HMA PAVEMENT 1¾-INCH	CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C	HMA PAVEMENT 2-INCH	CB48	END ANCHORAGE
AG01	BASE AGGREGATE DENSE 3/4-INCH	CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02	CONCRETE BARRIER TYPE S42	CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03	CONCRETE BARRIER TYPE S56	BG10	GUARDRAIL MOW STRIP ASPHALT
CB06	CONCRETE BARRIER TYPE S42C	BG16	MGS THRIE BEAM TRANSITION
		BG17	MGS GUARDRAIL TERMINAL EAT

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 46	E

2

N

*REDITCH STA. 585+50 TO STA. 587+40

EXIST R/W

MATCH INTO EXISTING
DITCH ELEVATION
STA. 585+50

MATCH INTO EXISTING
EXIT RAMP STA. 587+40

S-67-315
(MOVE FROM STA. 586+00)

SI

WETLAND

MOORLAND RD. EXIT RAMP

IH-94 WB

IH-94 EB

WB PGL

℄ IH-94

MOORLAND RD. ENTRANCE RAMP

+74.30 -83.08' L
+84.78 -82.69' L
+59.29 -83.63' L
CB72
CB40
CB02
+59.75 -3.00' L
+70.25 -3.00' L
+94.75 -3.00' L
+05.25 -3.00' L
+40.25 -3.00' L
+44.75 -3.00' L
+29.75 -3.00' L
+55.25 -3.00' L
CB49
+55.00 -3.00' L
+45.00 -3.00' L
CB09
+45.00 3.00' R
+55.00 3.00' R
+44.75 3.00' R
+59.75 3.00' R
+70.25 3.00' R
+94.75 3.00' R
+29.75 3.00' R
+05.25 3.00' R
+40.25 3.00' R
+55.25 3.00' R
+97
A
B
C
12"
2"
585+00
586+00
587+00
588+00
589+00
590+00
591+00
592+00

LEGEND

A	HMA PAVEMENT 11-INCH	CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
B	HMA PAVEMENT 1¾-INCH	CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C	HMA PAVEMENT 2-INCH	CB48	END ANCHORAGE
AG01	BASE AGGREGATE DENSE 3/4-INCH	CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02	CONCRETE BARRIER TYPE S42	CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03	CONCRETE BARRIER TYPE S56	BG10	GUARDRAIL MOW STRIP ASPHALT
CB06	CONCRETE BARRIER TYPE S42C	BG16	MGS THRIE BEAM TRANSITION
		BG17	MGS GUARDRAIL TERMINAL EAT

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 47	E

2

2

N

SI

EXIST R/W

BEGIN SINGLE SLOPE
ROADSIDE RETAINING WALL
+25, 88.9' L

CB06

WETLAND

CB02

2'

12'

12'

12'

A

A

A

B

PC; 593+46.17

WB PGL

IH-94 WB

593+00

594+00

595+00

596+00

597+00

598+00

599+00

600+00

B

IH-94 EB

℄ IH-94

EB PGL

+20.00
53.28' R

MOORLAND RD. ENTRANCE RAMP

+99.98
69.97' R

A

A

A

12'

12'

2'

CB02

AGO1

BG17

BG10

BG16

CB48

MATCH INTO EXISTING
ENTRANCE RAMP +20

SI

EXIST R/W

OH

GUY

GUY

LEGEND

A	HMA PAVEMENT 11-INCH	CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
B	HMA PAVEMENT 1¾-INCH	CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C	HMA PAVEMENT 2-INCH	CB48	END ANCHORAGE
AGO1	BASE AGGREGATE DENSE 3/4-INCH	CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02	CONCRETE BARRIER TYPE S42	CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03	CONCRETE BARRIER TYPE S56	BG10	GUARDRAIL MOW STRIP ASPHALT
CB06	CONCRETE BARRIER TYPE S42C	BG16	MGS THRIE BEAM TRANSITION
		BG17	MGS GUARDRAIL TERMINAL EAT

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 48	E

2

2

N

EXIST R/W

WETLAND

CB06

SI

END SINGLE SLOPE
ROADSIDE RETAINING WALL
+50, 85.1' L

CB02

A

A

12'

12'

B

WB PGL

IH-94 WB

600+00

601+00

602+00

603+00

604+00

605+00

606+00

607+00

EB PGL

B

IH-94 EB

℄ IH-94

12'

12'

A

A

A

CB02

CB02

SI

GRGE

EXIST R/W

LEGEND

A	HMA PAVEMENT 11-INCH	CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
B	HMA PAVEMENT 1¾-INCH	CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C	HMA PAVEMENT 2-INCH	CB48	END ANCHORAGE
AG01	BASE AGGREGATE DENSE 3/4-INCH	CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02	CONCRETE BARRIER TYPE S42	CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03	CONCRETE BARRIER TYPE S56	BG10	GUARDRAIL MOW STRIP ASPHALT
CB06	CONCRETE BARRIER TYPE S42C	BG16	MGS THRIE BEAM TRANSITION
		BG17	MGS GUARDRAIL TERMINAL EAT

2

2

EXIST R/W

SI

WETLAND

WETLAND

CB02

S-67-317

3.5'

12'

12'

A

A

PT: 607+81.20

B

WB PGL

IH-94 WB

+59.75
-3.00' L

CB72

+70.25
-3.00' L

+94.75
-3.00' L

+05.25
-3.00' L

CB40

+40.25
-3.00' L

+44.75
-3.00' L

CB40

CB49

CB49

CB72

+55.25
-3.00' L

+29.75
-3.00' L

608+00

609+00

610+00

611+00

612+00

613+00

614+00

615+00

+44.75
3.00' R

CB72

CB49

+55.25
3.00' R

CB72

+59.75
3.00' R

CB40

+29.75
3.00' R

+40.25
3.00' R

+70.25
3.00' R

+94.75
3.00' R

CB49

CB40

+05.25
3.00' R

A

EB PGL

B

℄ IH-94

IH-94 EB

12'

12'

2'

A

A

CB02

END BARRIER
+00, 78.6' R

AG01

WETLAND

STEEL POST

SI

WETLAND

BG10

BG17

EXIST R/W

LEGEND

A	HMA PAVEMENT 11-INCH	CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
B	HMA PAVEMENT 1¾-INCH	CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C	HMA PAVEMENT 2-INCH	CB48	END ANCHORAGE
AG01	BASE AGGREGATE DENSE 3/4-INCH	CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02	CONCRETE BARRIER TYPE S42	CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03	CONCRETE BARRIER TYPE S56	BG10	GUARDRAIL MOW STRIP ASPHALT
CB06	CONCRETE BARRIER TYPE S42C	BG16	MGS THRIE BEAM TRANSITION
		BG17	MGS GUARDRAIL TERMINAL EAT

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 50	E

2

2

N

EXIST R/W

SI

CB02

3.5'

2'

12'

A

B

IH-94 WB

WB PGL

615+00 616+00 617+00 618+00 619+00 620+00 621+00 622+00

℄ IH-94

IH-94 EB

EB PGL

BG10

BG16

CB48

BEGIN BARRIER
+50, 78.1' R

WETLAND

EXIST R/W

TOWER

LEGEND

A	HMA PAVEMENT 11-INCH	CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
B	HMA PAVEMENT 13/4-INCH	CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C	HMA PAVEMENT 2-INCH	CB48	END ANCHORAGE
AG01	BASE AGGREGATE DENSE 3/4-INCH	CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02	CONCRETE BARRIER TYPE S42	CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03	CONCRETE BARRIER TYPE S56	BG10	GUARDRAIL MOW STRIP ASPHALT
CB06	CONCRETE BARRIER TYPE S42C	BG16	MGS THRIE BEAM TRANSITION
		BG17	MGS GUARDRAIL TERMINAL EAT

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 51	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021207_PD.DWG
PLAN DETAIL SHEETS - 021207_PD - 020107_PD

PLOT DATE : 6/14/2017 3:08 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

LEGEND

A HMA PAVEMENT 11-INCH	CB09 CONCRETE BARRIER SINGLE FACED 32-INCH
B HMA PAVEMENT 1¾-INCH	CB40 CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C HMA PAVEMENT 2-INCH	CB48 END ANCHORAGE
AG01 BASE AGGREGATE DENSE 3/4-INCH	CB49 CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02 CONCRETE BARRIER TYPE S42	CB72 CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03 CONCRETE BARRIER TYPE S56	BG10 GUARDRAIL MOW STRIP ASPHALT
CB06 CONCRETE BARRIER TYPE S42C	BG16 MGS THRIE BEAM TRANSITION
	BG17 MGS GUARDRAIL TERMINAL EAT

EXIST R/W
SUNNYSLOPE RD.
132+00
131+00
130+00
129+00
128+00
STRUCTURE B-67-344
WETLAND
SI
CB02
12'
623+00
624+00
625+00
626+00
627+00
628+00
629+00
630+00
P.I. 626+31.80
+55.00 -3.00' L
+65.50 -3.00' L
+40.00 -3.00' L
+04.99 -4.00' L
+90.00 -3.00' L
+55.00 -4.00' L
+70.00 -3.00' L
+94.50 -3.00' L
+05.00 -3.00' L
+20.00 -3.00' L
+40.00 3.00' R
+55.00 3.00' R
+65.50 3.00' R
+90.00 3.00' R
+94.50 3.00' R
+70.00 3.00' R
+05.00 3.00' R
+20.00 3.00' R
+05.00 4.00' R
+55.00 4.00' R
CB72
CB40
CB49
CB03
IH-94 WB
WB PGL
℄ IH-94
IH-94 EB
EB PGL
EXIST R/W
WETLAND
SI
EXIST R/W
GUY

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 52	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021208_PD.DWG
PLAN DETAIL SHEETS - 021208_PD - 020108_PD

PLOT DATE : 6/14/2017 4:18 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

EXIST R/W

CB02

SI

WETLAND

A

A

12'

12'

IH-94 WB

WB PGL

B

630+00 631+00 632+00 633+00 634+00 635+00 636+00 637+00

CB09

A

B

IH-94 EB

℄ IH-94

EB PGL

A

A

12'

12'

SI

CB02

EXIST R/W

LEGEND

A	HMA PAVEMENT 11-INCH	CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
B	HMA PAVEMENT 13/4-INCH	CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C	HMA PAVEMENT 2-INCH	CB48	END ANCHORAGE
AG01	BASE AGGREGATE DENSE 3/4-INCH	CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02	CONCRETE BARRIER TYPE S42	CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03	CONCRETE BARRIER TYPE S56	BG10	GUARDRAIL MOW STRIP ASPHALT
CB06	CONCRETE BARRIER TYPE S42C	BG16	MGS THRIE BEAM TRANSITION
		BG17	MGS GUARDRAIL TERMINAL EAT

PROJECT NO:1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 53	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021209_PD.DWG
PLAN DETAIL SHEETS - 021209_PD - 020109_PD

PLOT DATE : 6/14/2017 4:25 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

EXIST R/W

SI

S-67-318

END BARRIER
+00, 74.2' L

CB48

WETLAND

CB02

BG16

BG10

BG17

AG01

2'

12'

A

B

+59.75
-3.00' L

+70.25
-3.00' L

+94.75
-3.00' L

+05.25
-3.00' L

+40.25
-3.00' L

+55.25
-3.00' L

+29.75
-3.00' L

+44.75
-3.00' L

CB72

CB40

CB49

IH-94 WB

WB PGL

638+00

639+00

640+00

641+00

642+00

643+00

644+00

645+00

+44.75
3.00' R

+59.75
3.00' R

+70.25
3.00' R

+94.75
3.00' R

+05.25
3.00' R

+29.75
3.00' R

+40.25
3.00' R

+55.25
3.00' R

IH-94 EB

EB PGL

℄ IH-94

SI

EXIST R/W

LEGEND

A	HMA PAVEMENT 11-INCH	CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
B	HMA PAVEMENT 1¾-INCH	CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C	HMA PAVEMENT 2-INCH	CB48	END ANCHORAGE
AG01	BASE AGGREGATE DENSE 3/4-INCH	CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02	CONCRETE BARRIER TYPE S42	CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03	CONCRETE BARRIER TYPE S56	BG10	GUARDRAIL MOW STRIP ASPHALT
CB06	CONCRETE BARRIER TYPE S42C	BG16	MGS THRIE BEAM TRANSITION
		BG17	MGS GUARDRAIL TERMINAL EAT

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 54	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021210_PD.DWG
PLAN DETAIL SHEETS - 021210_PD - 020110_PD

PLOT DATE : 6/14/2017 4:38 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

EXIST R/W

WETLAND

SI

BEGIN BARRIER
+50, 73.2' L

AGO1

CB02

2'

12'

12'

12'

+95.00
-3.33' L

+05.00
-3.33' L

+55.00
-3.00' L

CB03

CB72

+65.50
-3.00' L

+90.00
-3.00' L

CB03

+40.00
-3.00' L

CB40

CB49

+10.00
-3.00' L

A

CB03

WB PGL

B

A

A

CB09

IH-94 WB

645+00

646+00

647+00

648+00

649+00

650+00

651+00

652+00

+40.00
3.00' R

+10.00
3.00' R

CB72

CB49

CB03

+55.00
3.00' R

CB40

+89.75
3.00' R

A

EB PGL

B

A

CB09

℄ IH-94

IH-94 EB

+65.50
3.00' R

CB03

12'

12'

12'

A

A

+05.00
3.33' R

+95.00
3.33' R

CB02

S-67-418
DMS

SI

LEGEND

A	HMA PAVEMENT 11-INCH	CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
B	HMA PAVEMENT 1¾-INCH	CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C	HMA PAVEMENT 2-INCH	CB48	END ANCHORAGE
AGO1	BASE AGGREGATE DENSE 3/4-INCH	CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02	CONCRETE BARRIER TYPE S42	CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03	CONCRETE BARRIER TYPE S56	BG10	GUARDRAIL MOW STRIP ASPHALT
CB06	CONCRETE BARRIER TYPE S42C	BG16	MGS THRIE BEAM TRANSITION
		BG17	MGS GUARDRAIL TERMINAL EAT

EXIST R/W

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 55	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021211_PD.DWG
PLAN DETAIL SHEETS - 021211_PD - 020111_PD

PLOT DATE : 6/14/2017 4:58 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

N

LEGEND

A	HMA PAVEMENT 11-INCH
B	HMA PAVEMENT 1¾-INCH
C	HMA PAVEMENT 2-INCH
AG01	BASE AGGREGATE DENSE 3/4-INCH
CB02	CONCRETE BARRIER TYPE S42
CB03	CONCRETE BARRIER TYPE S56
CB06	CONCRETE BARRIER TYPE S42C
CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
CB48	END ANCHORAGE
CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
BG10	GUARDRAIL MOW STRIP ASPHALT
BG16	MGS THRIE BEAM TRANSITION
BG17	MGS GUARDRAIL TERMINAL EAT

EXIST R/W

ELM GROVE RD.

22+00

21+00

20+00

19+00

18+00

WETLAND

SI

CB02

12'

+35.00
-3.00' L

+50.00
-4.00' L

+50.00
4.00' R

+35.00
3.00' R

CB03

PI: 653+79.34

IH-94 WB

WB PGL

IH-94 EB

EB PGL

℄ IH-94

653+00 654+00 655+00 656+00 657+00 658+00 659+00 660+00

A B CB09

2

2

N

EXIST R/W

SI

CB02

WETLAND

12'

12'

IH-94 WB

WB PGL

A

B

CB09

660+00

661+00

662+00

663+00

664+00

665+00

666+00

667+00

℄ IH-94

IH-94 EB

EB PGL

12'

12'

10'

CB02

SI

EXIST R/W

LEGEND

A	HMA PAVEMENT 7¾-INCH	CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
B	HMA PAVEMENT 1½-INCH	CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C	HMA PAVEMENT 2-INCH	CB48	END ANCHORAGE
AG01	BASE AGGREGATE DENSE 3/4-INCH	CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02	CONCRETE BARRIER TYPE S42	CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03	CONCRETE BARRIER TYPE S56	BG10	GUARDRAIL MOW STRIP ASPHALT
CB06	CONCRETE BARRIER TYPE S42C	BG16	MGS THRIE BEAM TRANSITION
		BG17	MGS GUARDRAIL TERMINAL EAT

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 57	E

2

2

N

EXIST R/W

WETLAND

WETLAND

SI

END PROJECT
STA. 669+05.08

MATCH EXISTING BARRIER

CB02

A

A

12'

12'

WB PGL

B

IH-94 WB

668+00

669+00

670+00

671+00

672+00

673+00

674+00

675+00

℄ IH-94

B

EB PGL

A

A

12'

12'

10'

MATCH EXISTING BARRIER

CB02

SI

IH-94 EB

EXIST R/W

OH

OH

OH

OH

GUY

GUY

POST

POST

LEGEND

A	HMA PAVEMENT 11-INCH	CB09	CONCRETE BARRIER SINGLE FACED 32-INCH
B	HMA PAVEMENT 1¾-INCH	CB40	CONCRETE BARRIER TRANSITION TYPE S36 TO S42
C	HMA PAVEMENT 2-INCH	CB48	END ANCHORAGE
AG01	BASE AGGREGATE DENSE 3/4-INCH	CB49	CONCRETE BARRIER TRANSITION TYPE S42 TO S56
CB02	CONCRETE BARRIER TYPE S42	CB72	CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36
CB03	CONCRETE BARRIER TYPE S56	BG10	GUARDRAIL MOW STRIP ASPHALT
CB06	CONCRETE BARRIER TYPE S42C	BG16	MGS THRIE BEAM TRANSITION
		BG17	MGS GUARDRAIL TERMINAL EAT

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - IH-94	SHEET 58	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\021214_PD.DWG
PLAN DETAIL SHEETS - 021214_PD - 020114_PD

PLOT DATE : 6/14/2017 5:11 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

N

STA. 23+64.16
MATCH EXISTING

+64.16
12.51' RT

+64.16
12.07' LT

AG01

TLE

SI

PARK ENTRANCE

24+00

AG01

SI

R/W

+64.75
28.00' LT

MATCH EXISTING SIDEWALK
+57.00, 42.30' LT

+52.56
10.62' RT

CG03

+63.21
11.03' RT

+51.55
13.09' LT

96.00
43.00' LT

D

+15.76
28.00' LT

1

2

6'

6'

+91.64
28.00' LT

CG03

CM07

R/W

Fr: 121+95.90

+22.11
16.00' LT

SI

CG21

+68.78
16.00' LT

BEGIN CONSTRUCTION
STA. 121+91.92

D

12'

12'

12'

S. SUNNYSLOPE ROAD

25+00

EP: 25+14.16

00

120+00

121+00

122+00

123+00

124+00

125+00

DR04

DR04

8"

6"

4"

DR01

+16.68
16.00' RT

CG21

CM08

DR04

CM07

+22.11
12.03' RT

+25.00
12.03' RT

+22.11
30.83' RT

R/W

+60.61
26.50' RT

+60.85
16.00' RT

CM07

TLE

SI

+95.76
45.05' RT

+10.39
45.00' RT

R/W

TLE

+92.29
62.77' RT

+17.31
62.57' RT

MATCH EXISTING

LEGEND

AG01	BASE AGGREGATE DENSE ¾-INCH
CG21	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG45	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG03	CURB RAMP TYPE 2
CG10	CURB RAMP TYPE 7B
CM07	CONCRETE SIDEWALK 5-INCH
CM08	CONCRETE SIDEWALK 6-INCH
D	HMA PAVEMENT 6-INCH
DR01	CONCRETE DRIVEWAY 6-INCH
DR04	ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCES, 3-INCH
PV01	CONCRETE PAVEMENT APPROACH SLAB

RADIUS TABLE

POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
1	124+15.86	55.00' LT	24+62.15	38.01' RT	27'
2	124+91.75	55.00' LT	24+56.07	37.64' LT	27'

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - SUNNYSLOPE RD.	SHEET 59	E

RADIUS TABLE					
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
(3)	125+16.93	43.00' RT	20+43.72	39.66' RT	27'
(4)	125+92.58	43.00' RT	20+42.36	35.98' RT	27'

N

IH-94 EB

625+00

626+00

627+00

628+00

IH-94 WB

S. SUNNYSLOPE ROAD

FOREST GROVE ROAD

125+00

126+00

127+00

128+00

129+00

130+00

131+00

PI: 626+31.80

BP: 20+00.00

5+14.16

R/W

TLE

SI

96.00
43.00' LT

+32.00
38.50' LT

+91.64
28.00' LT

+1.16
38.50' LT

+1.01
28.00' LT

+97.01
16.00' LT

CM07

CG21

CG45

PV01

D

6'

8'

4'

12'

12'

12'

12'

12'

12'

4'

6'

8'

4'

+92.49
16.00' RT

+43.12
10.03' LT

+16.68
16.00' RT

+81.68
26.50' RT

CG03

+0.63
11.60' RT

21+00

+99.69
10.74' LT

STA. 20+43.00
MATCH EXISTING

128+31.83, 64.53 LT.
FENCE CHAIN LINK 6-FT

128+35.26, 43.18' LT.
GATES CHAIN LINK 6-FT

128+37.10, 31.32' LT.
GATES CHAIN LINK 6-FT

128+48.40, 27.08' LT.
FENCE CHAIN LINK 6 FT

END OF DECK
STA. 128+71.71

128+61.88, 27.08' RT.
FENCE CHAIN LINK 6-FT

STA. 128+39, 27' RT
REMOVE, SALVAGE
FEDERAL SIGNAL SIREN

STA. 128+25, 32' RT
REINSTALL FEDERAL
SIGNAL SIREN

128+55.12, 67.34' RT.
FENCE CHAIN LINK 6-FT

LEGEND	
AG01	BASE AGGREGATE DENSE ¾-INCH
CG21	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG45	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG03	CURB RAMP TYPE 2
CG10	CURB RAMP TYPE 7B
CM07	CONCRETE SIDEWALK 5-INCH
CM08	CONCRETE SIDEWALK 6-INCH
D	HMA PAVEMENT 6-INCH
DR01	CONCRETE DRIVEWAY 6-INCH
DR04	ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCES, 3-INCH
PV01	CONCRETE PAVEMENT APPROACH SLAB

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - SUNNYSLOPE RD.	SHEET 60	E

2

N

131+43.57, 32.41' LT.
GATES CHAIN LINK6-FT

131+40.89, 47.14' LT.
FENCE CHAIN LINK 6-FT

131+46.07, 27.08' LT.
FENCE CHAIN LINK 6-FT

+26.32
26.50' LT

R/W

SI

CM07

CG45

CG21

CG22

6'

8'

4'

+56.61
16.00' RT

TLE

+22.11
13.19' RT

+3.89
13.54' RT

5

D

W. BEECHWOOD AVENUE

23+00

24+00

STA. 24+03.97
MATCH EXISTING

+3.21
11.54' LT

+21.11
12.03' LT

6

END CONSTRUCTION
STA. 135+35.84

CG03

PV01

S. SUNNYSLOPE ROAD

131+00

132+00

133+00

134+00

135+00

136+00

137+00

12'

EP: 24+54.28

END OF DECK
STA. 131+34.29

131+59.34, 27.08' RT.
FENCE CHAIN LINK 6-FT

131+79.64, 43.30' RT.
FENCE CHAIN LINK 6-FT

+85.17
48.62' RT

+39.57
26.50' RT

+63.98
34.68' RT

+60.72
70.85' RT

+79.12
70.67' RT
MATCH EXISTING
SIDEWALK

BEGIN ℄ SHIFT
STA. 134+35.8, 0.0'

END ℄ SHIFT
STA. 135+35.84, 1.6' RT

SS

GUY

RADIUS TABLE					
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS
(5)	134+56.61	43.00' LT	24+22.29	40.19' RT	27'
(6)	135+35.84	43.00' LT	24+20.27	39.01' LT	27'

LEGEND

AG01	BASE AGGREGATE DENSE ¾-INCH
CG21	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG45	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG03	CURB RAMP TYPE 2
CG10	CURB RAMP TYPE 7B
CM07	CONCRETE SIDEWALK 5-INCH
CM08	CONCRETE SIDEWALK 6-INCH
D	HMA PAVEMENT 6-INCH
DR01	CONCRETE DRIVEWAY 6-INCH
DR04	ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCES, 3-INCH
PV01	CONCRETE PAVEMENT APPROACH SLAB

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN DETAILS - SUNNYSLOPE RD.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603203\73\021104_PD.DWG PLOT DATE : 4/28/2017 4:01 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1" = 40'_XREF

2

N

MATCH EXISTING

+42.39SS
-41.35' LT

885.45

+49.99SS
-41.36' LT

887.00

+74.99SS
-41.39' LT

889.15

+99.99SS
-42.13' LT

891.34

+24.98SS
-42.91' LT

892.68

+49.98SS
-42.82' LT

893.95

+74.99SS
-42.65' LT

895.19

+99.99SS
-42.18' LT

PI: 121+95.90

887.47

+01.04SS
-16.01' LT

889.00

890.53

892.04

893.51

MATCH EXISTING

121+00

SUNNYSLOPE ROAD

122+00

889.32

890.85

892.38

123+00
893.91

889.08

890.55

892.06

893.59

+51.92SS
27.47' RT

890.50

890.62

+87.86SS
26.50' RT

893.12

893.24

888.00

8.33%

2%

8.33%

2%

8.33%

+57.88SS
26.80' RT

+93.86SS
26.50' RT

+22.35SS
30.80' RT

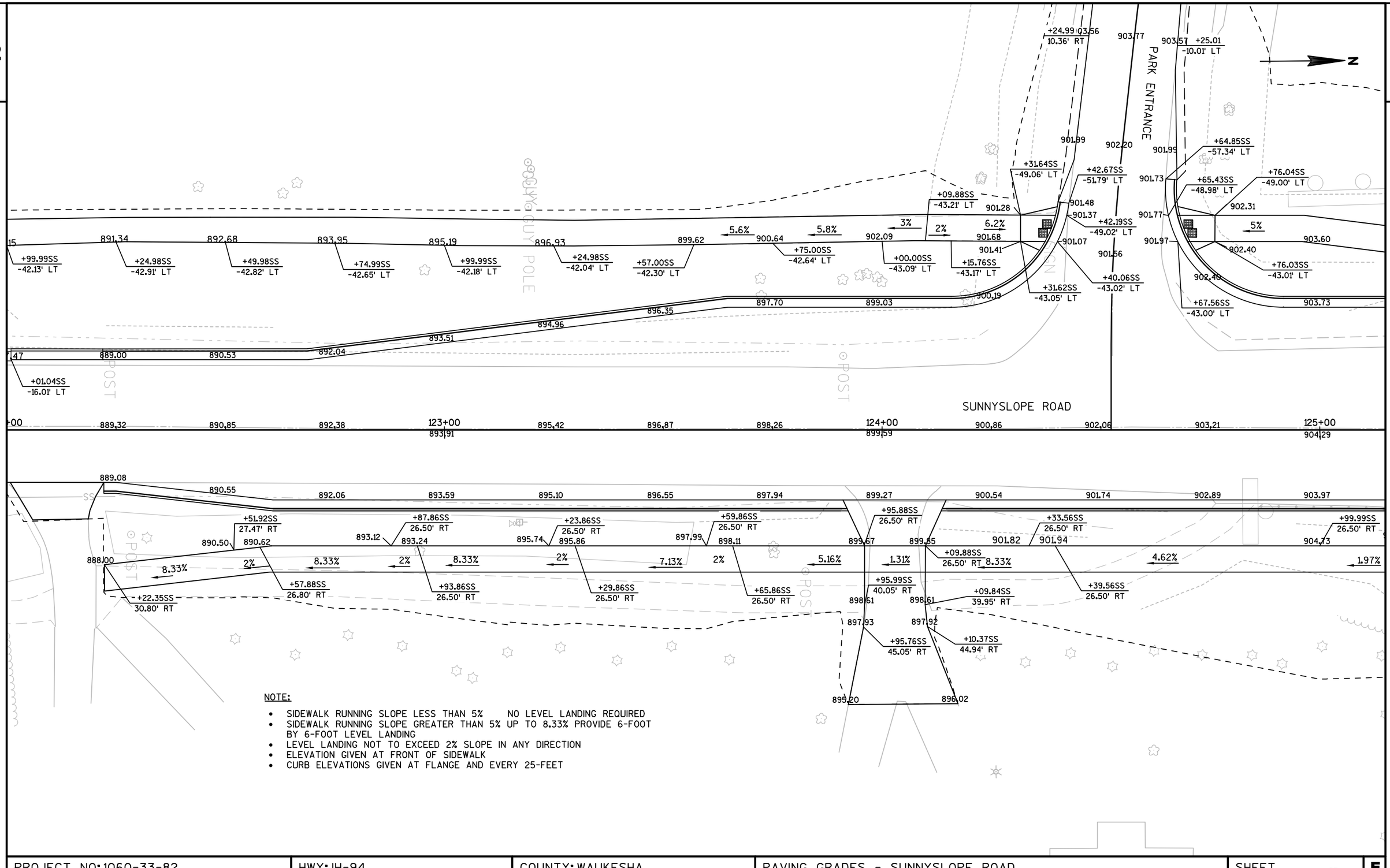
POST

SS

NOTE:

- SIDEWALK RUNNING SLOPE LESS THAN 5% → NO LEVEL LANDING REQUIRED
- SIDEWALK RUNNING SLOPE GREATER THAN 5% UP TO 8.33% PROVIDE 6-FOOT BY 6-FOOT LEVEL LANDING
- LEVEL LANDING NOT TO EXCEED 2% SLOPE IN ANY DIRECTION
- ELEVATION GIVEN AT FRONT OF SIDEWALK
- CURB ELEVATIONS GIVEN AT FLANGE AND EVERY 25-FEET

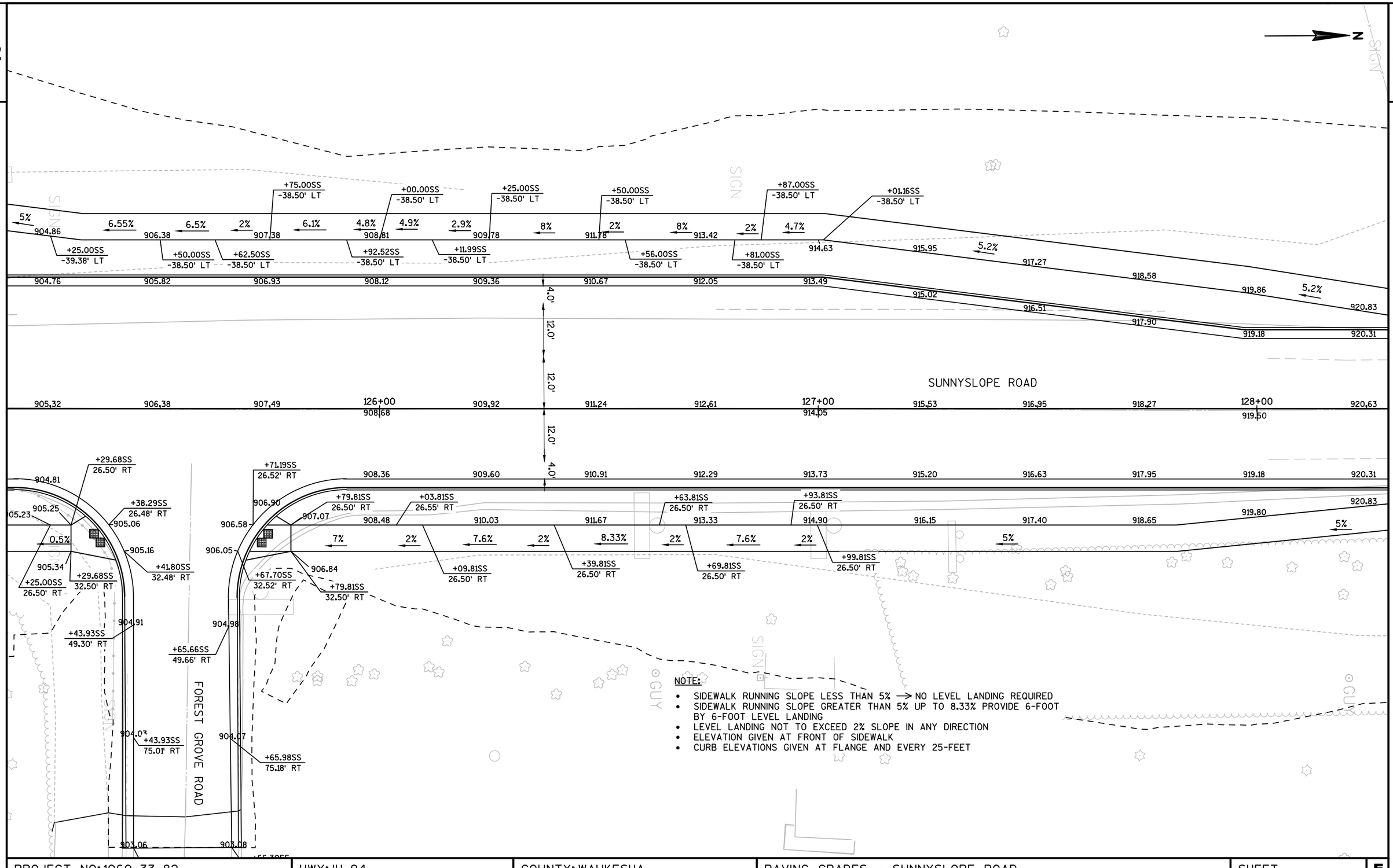
PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVING GRADES - SUNNYSLOPE ROAD	SHEET 62	E



NOTE:

- SIDEWALK RUNNING SLOPE LESS THAN 5% NO LEVEL LANDING REQUIRED
- SIDEWALK RUNNING SLOPE GREATER THAN 5% UP TO 8.33% PROVIDE 6-FOOT BY 6-FOOT LEVEL LANDING
- LEVEL LANDING NOT TO EXCEED 2% SLOPE IN ANY DIRECTION
- ELEVATION GIVEN AT FRONT OF SIDEWALK
- CURB ELEVATIONS GIVEN AT FLANGE AND EVERY 25-FEET

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVING GRADES - SUNNYSLOPE ROAD	SHEET 63	E


N
SIGN
SIGN
SIGN

2

N

IH-94 EB

IH-94 WB

B-67-344

SUNNYSLOPE ROAD

921.87
921.34
921.98
921.66
922.44
129+00
922.27
921.34
922.80
926.13
130+00
131+00
926.43
926.08

NOTE:

- SIDEWALK RUNNING SLOPE LESS THAN 5% → NO LEVEL LANDING REQUIRED
- SIDEWALK RUNNING SLOPE GREATER THAN 5% UP TO 8.33% PROVIDE 6-FOOT BY 6-FOOT LEVEL LANDING
- LEVEL LANDING NOT TO EXCEED 2% SLOPE IN ANY DIRECTION
- ELEVATION GIVEN AT FRONT OF SIDEWALK
- CURB ELEVATIONS GIVEN AT FLANGE AND EVERY 25-FEET

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVING GRADES - SUNNYSLOPE ROAD	SHEET 65	E

2

2

N

+90.18SS
-22.89' LT

+25.01SS
-26.37' LT

+00.13SS
-23.88' LT

+50.00SS
-26.50' LT

+75.00SS
-26.50' LT

+00.00SS
-26.50' LT

+35.00SS
-26.50' LT

+30.00SS
-26.50' LT

+36.00SS
-26.50' LT

926.38 926.24 926.10 925.99 925.64 925.10 924.45 923.71 922.63 921.84 920.86 918.94 918.41 918.29 917.12 916.

1.12% 1.40% 2.17% 2.59% 2.98% 3.08% 4.44% 4.44% 2% 8.33%

926.00 925.75 925.40 924.95 924.40 923.76 923.01 922.17 921.23 920.18 919.05 917.88 916.71

4.0' 12.0' 12.0' 4.0'

SUNNYSLOPE ROAD

926.32 926.07 132+00 925.72 925.27 924.72 924.08 133+00 923.33 922.49 921.55 920.50 134+00 919.37 918.20 917.03

926.00 925.75 925.40 924.95 924.40 923.75 923.01 922.17 921.22 920.18 919.04 917.88 916.70

926.38 926.17 925.94 925.55 924.96 916.22

923.83 +75.00SS 41.93' RT

922.37 +00.00SS 57.09' RT

921.06 +25.00SS 66.40' RT

920.21 +50.00SS 70.53' RT

919.81 +79.12SS 70.67' RT

MATCH EXISTING

GUY

NOTE:

- SIDEWALK RUNNING SLOPE LESS THAN 5% → NO LEVEL LANDING REQUIRED
- SIDEWALK RUNNING SLOPE GREATER THAN 5% UP TO 8.33% PROVIDE 6-FOOT BY 6-FOOT LEVEL LANDING
- LEVEL LANDING NOT TO EXCEED 2% SLOPE IN ANY DIRECTION
- ELEVATION GIVEN AT FRONT OF SIDEWALK
- CURB ELEVATIONS GIVEN AT FLANGE AND EVERY 25-FEET

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVING GRADES - SUNNYSLOPE ROAD	SHEET 66	E

2

N

W. BEECHWOOD AVENUE

MATCH EXISTING

914.76

914.13

914.71

913.93

+81.49SS
-32.52' LT

+63.04SS
-32.50' LT

+10.97SS
-32.48' LT

+19.36SS
-32.50' LT

+25.36SS
-32.50' LT

915.91

914.96

913.77

913.65

913.69

916.20

5%

1.1%

913.61

913.58

915.25

913.53

+25.40SS
-26.50' LT

+78.00SS
-26.52' LT

+14.48SS
-26.48' LT

915.59

+72.00SS
-20.82' LT

912.62

915.92

+19.32SS
-26.45' LT

+65.97SS
-17.68' LT

+63.00SS
-26.50' LT

GUY

SS

SS

SS

SS

SS

SS

SS

GUY

MH

SUNNYSLOPE ROAD

915.85

135+00

914.67

913.47

912.95

136+00

137+00

MATCH EXISTING

+65.69SS
17.44' RT

+71.69SS
17.73' RT

915.68

915.96

915.52

914.33

913.10

912.57

+68.67SS
25.58' RT

+35.80SS
20.79' RT

916.22

916.09

SS

SS

SS

SS

+62.67SS
25.55' RT

1.5%

MATCH EXISTING

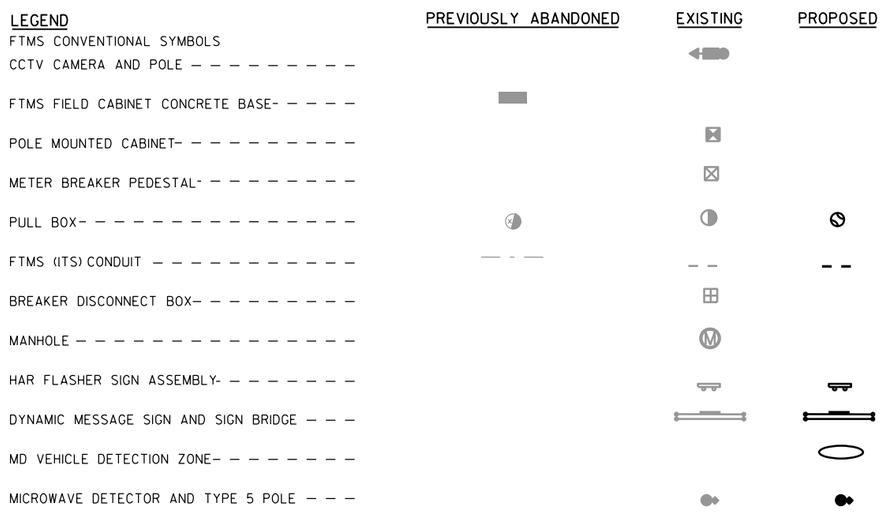
NOTE:

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- SIDEWALK RUNNING SLOPE GREATER THAN 5% UP TO 8.33% PROVIDE 6-FOOT BY 6-FOOT LEVEL LANDING
- LEVEL LANDING NOT TO EXCEED 2% SLOPE IN ANY DIRECTION
- ELEVATION GIVEN AT FRONT OF SIDEWALK
- CURB ELEVATIONS GIVEN AT FLANGE AND EVERY 25-FEET

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVING GRADES - SUNNYSLOPE ROAD	SHEET 67	E

2

LEGEND

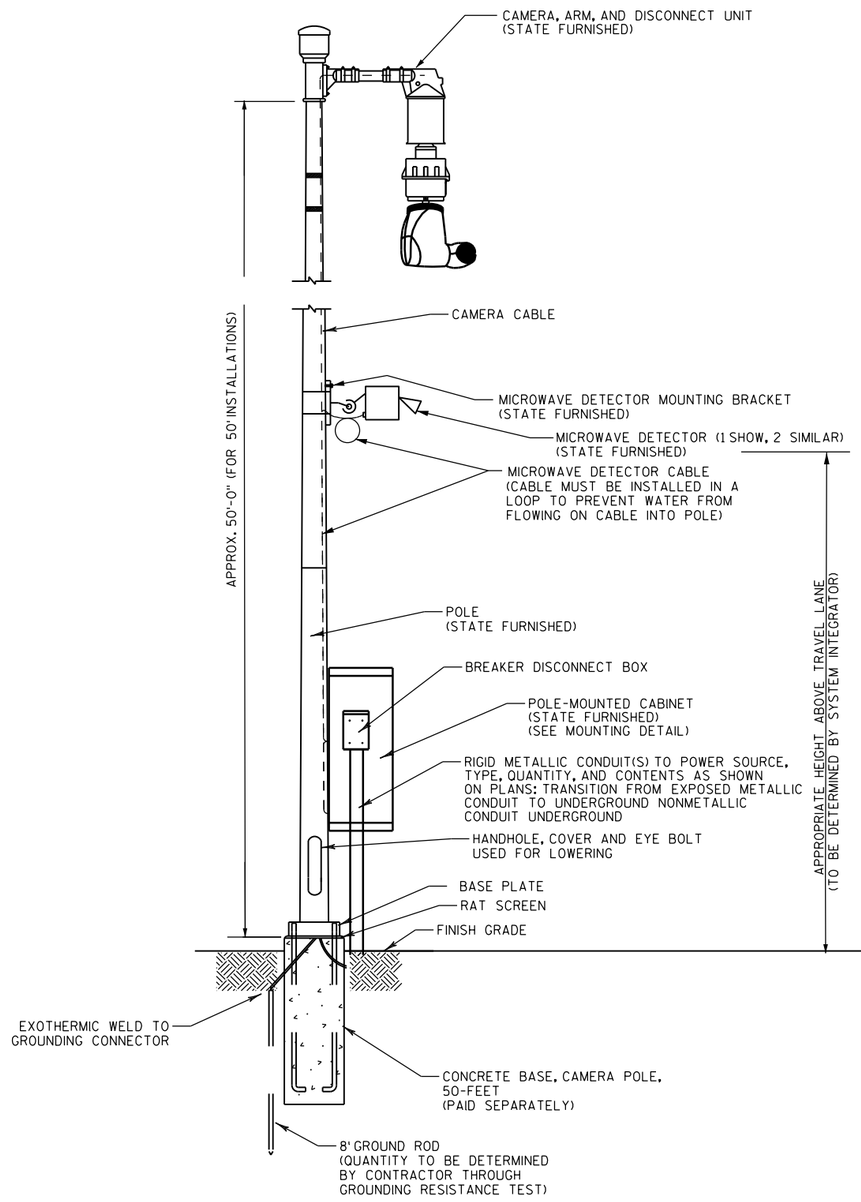


FTMS STANDARD ABBREVIATIONS

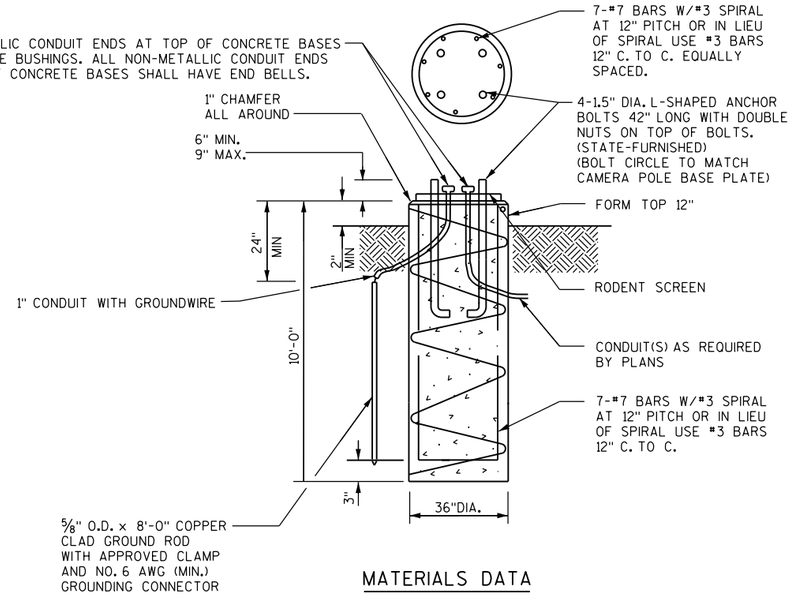
CB	CONTROLLER CABINET
CCTV	CLOSED CIRCUIT TELEVISION SITE
CV	COMMUNICATIONS VAULT
PB	PULL BOX
EX	EXISTING
HFS	HAR FLASHER SIGN
DMS	DYNAMIC MESSAGE SIGN
PP	POWER POLE

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.



CAMERA POLE WITH CAMERA LOWERING HARDWARE

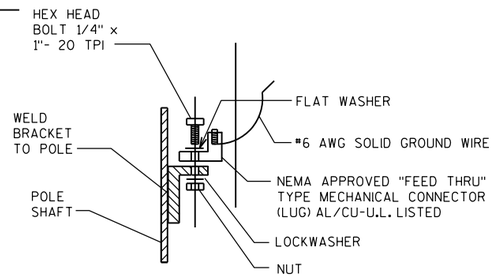


MATERIALS DATA

CONCRETE	f'c=3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

CONCRETE BASE, 50' CAMERA POLE

NOT TO SCALE



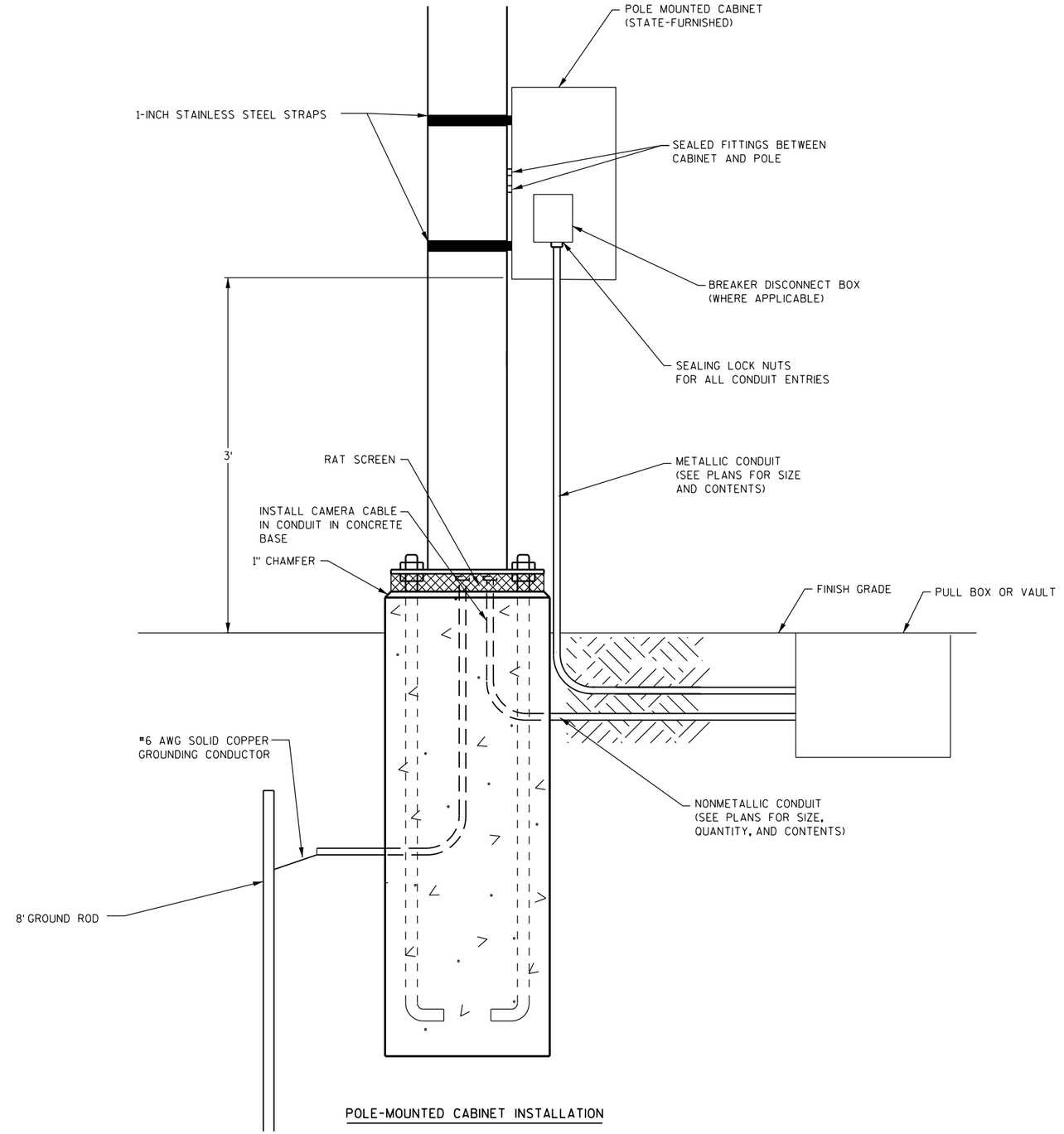
FIELD INSTALLED GROUNDING LUG

NOTES

1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE FURNISHED. BASE TO BE CONTRACTOR DESIGNED.
3) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CAMERA POLE PRIOR TO CONSTRUCTION OF CONCRETE BASE.
4) CONTRACTOR SHALL INSTALL GROUNDING LUG AS SHOWN

CAMERA POLES & FOUNDATIONS

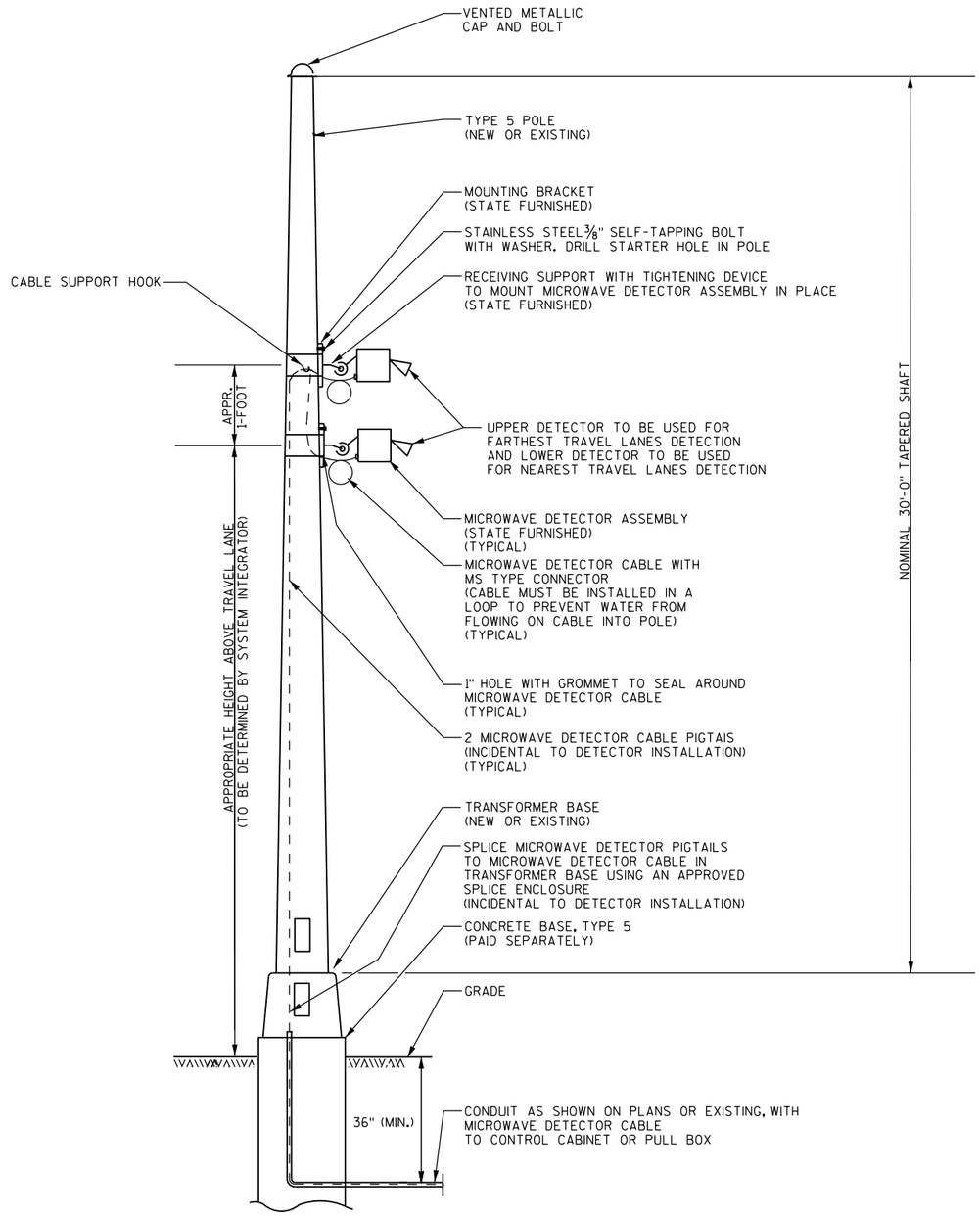
2



POLE-MOUNTED CABINET INSTALLATION

CLOGATE20.DGN

2



MICROWAVE DETECTOR INSTALLATION
ON TYPE 5 POLE

2

IH 94 EB

IH 94 WB

570

N

EXCV572

INSTALL IN EXISTING CONDUIT
(1) 72-COUNT FOC (S-F) AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

INSTALL IN EXISTING CONDUIT
(1) 72-COUNT FOC (S-F) AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

EX-HUB-67-0010
(1) 72-COUNT FO TERMINATION PANEL (S-F)
(72) FO TERMINATIONS

INSTALL IN EXISTING CONDUIT
(1) 72-COUNT FOC (S-F) AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

EXCV570

MOORLAND RD.

EXCV573

MATCHLINE 575+00

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLAN	SHEET 72	E

FILE NAME : \\mlww400\ingrproj\66067\10603312_ih94_aux_lane\10603312_ftms.dgn PLOT DATE : 4/21/2017 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

2

N

MATCHLINE 575+00

575

IH 94 WB

IH 94 EB

580

585

SLOPE INTERCEPT

MATCHLINE 587+00

INSTALL IN EXISTING CONDUIT
(1) 72-COUNT FOC (S-F) AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

EXCV579

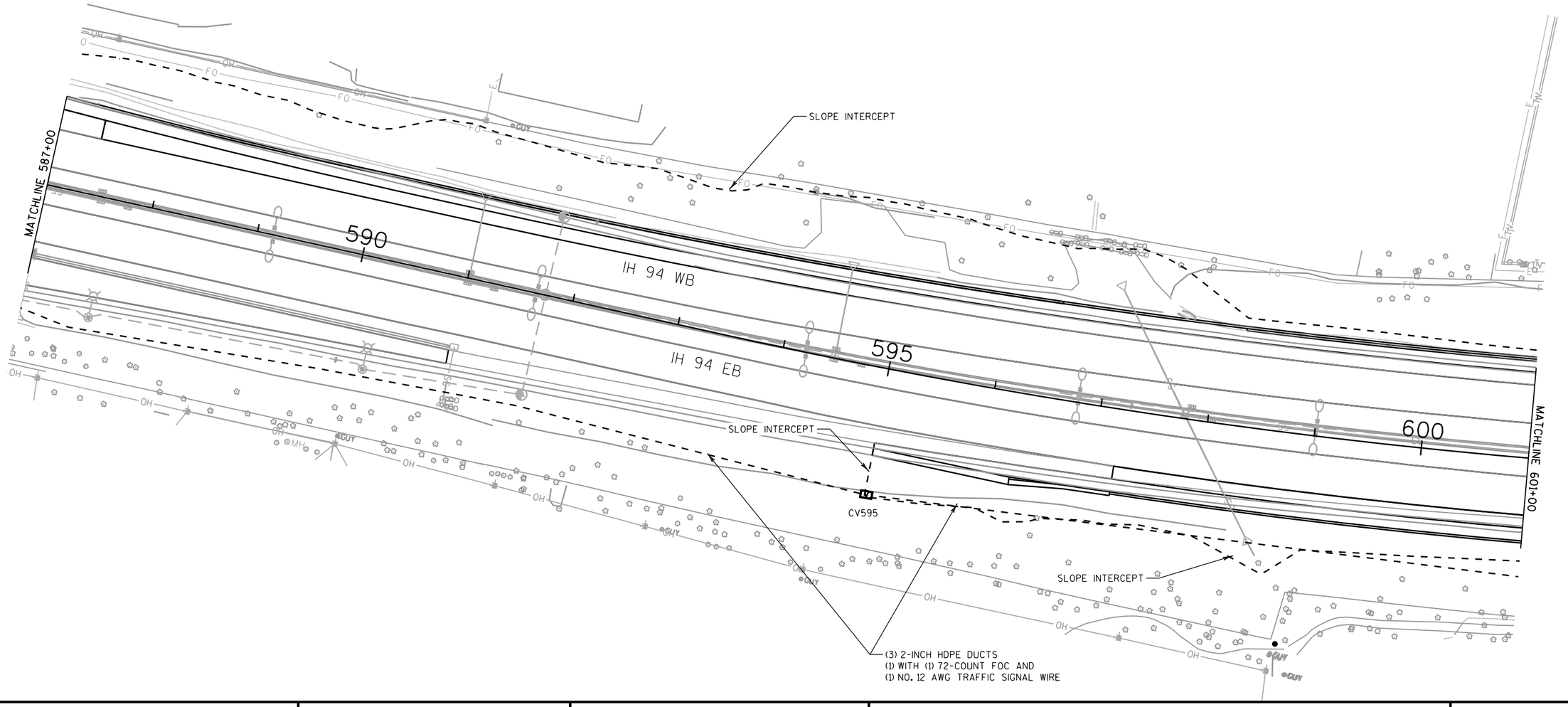
INSTALL IN EXISTING CONDUIT
(1) 72-COUNT FOC (S-F) AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

EXCV588
(1) INSTALL PROPOSED CONDUIT
INTO EXISTING COMMUNICATION VAULT

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLAN	SHEET 73	E

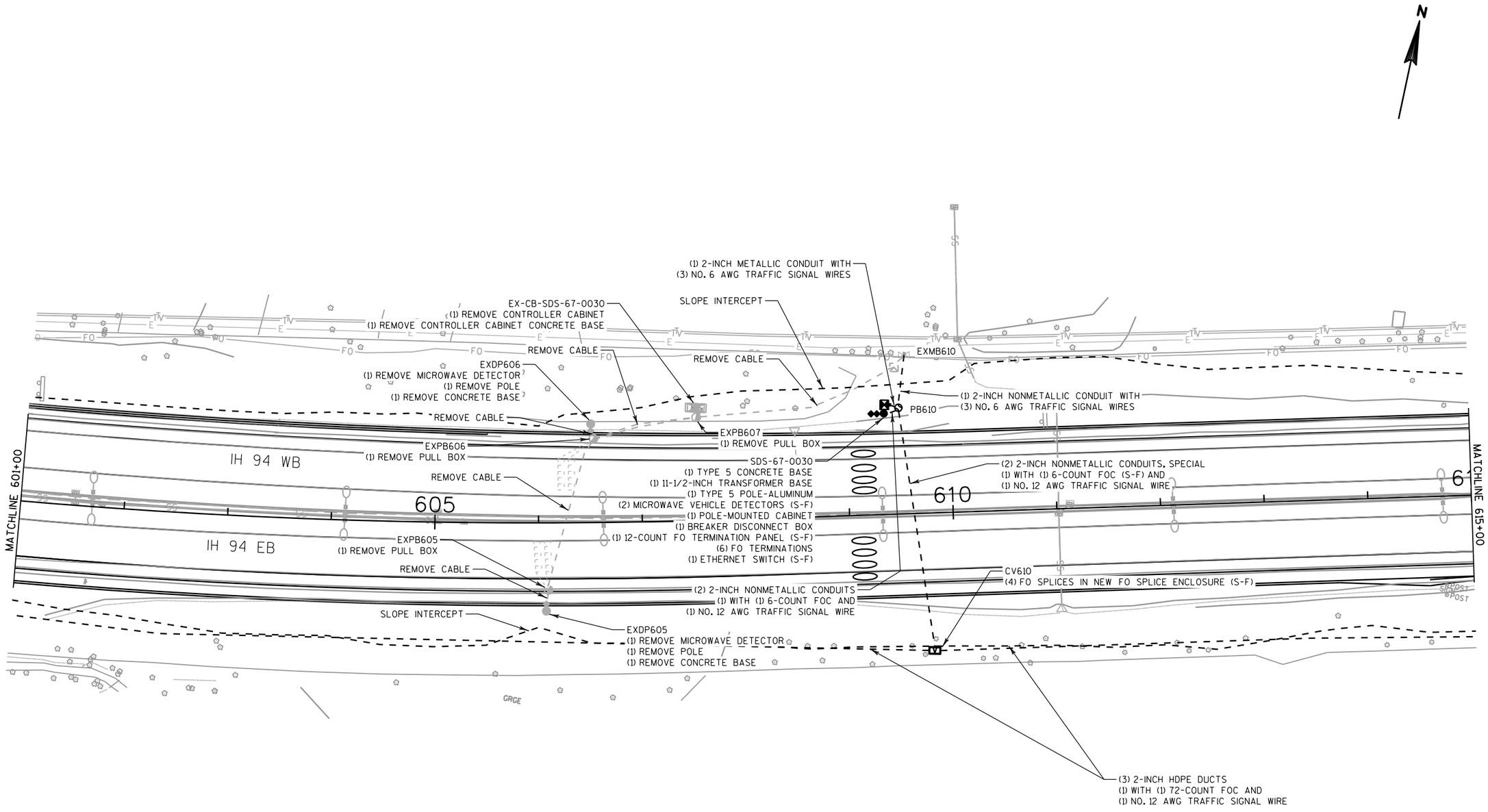
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2



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLAN	SHEET 74	E

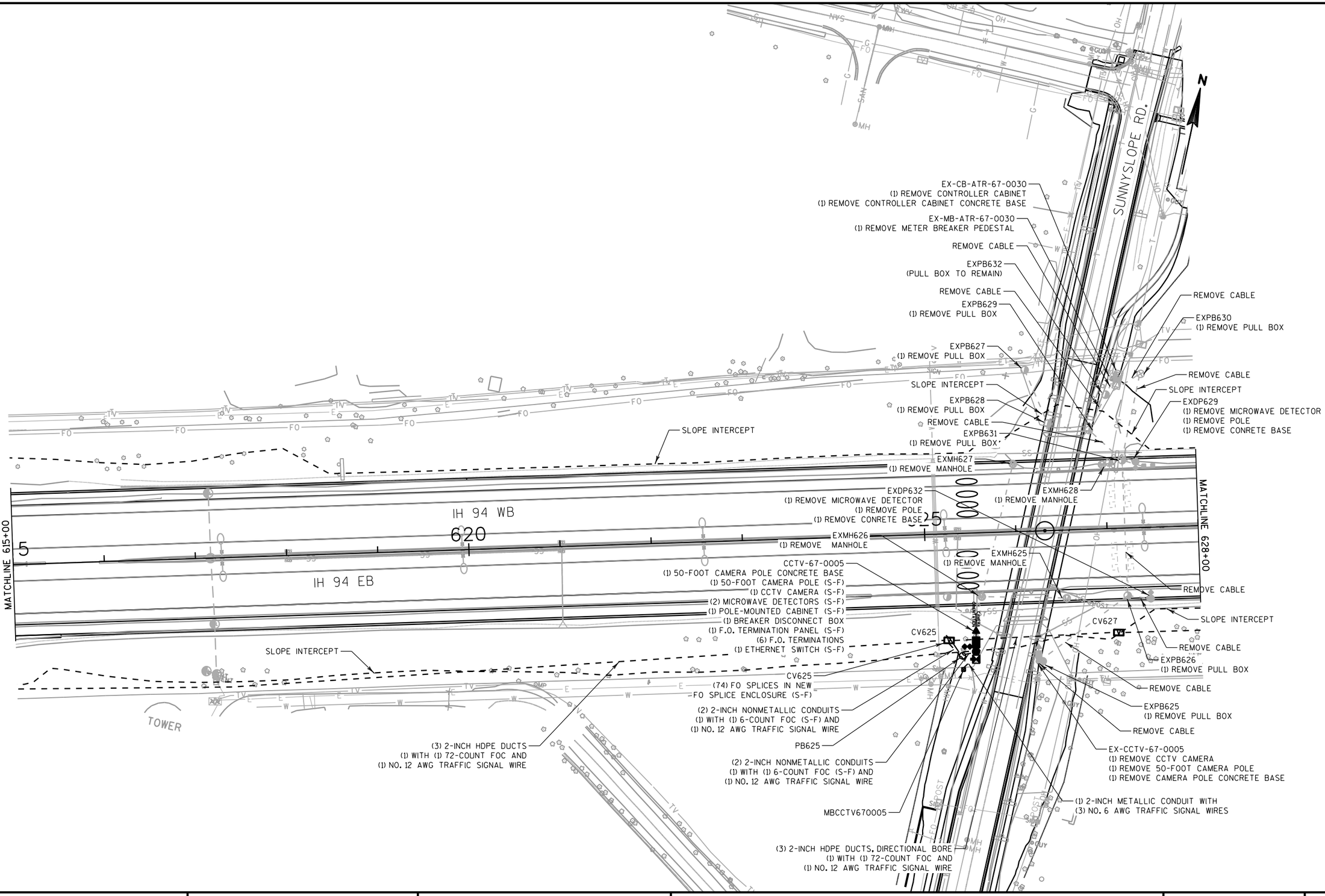
2



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLAN	SHEET 75	E

FILE NAME : \\mlww400\ingrproj\66067\10603312_ih94_aux_lane\10603312_ftms.dgn PLOT DATE : 4/21/2017 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

2



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLAN	SHEET 76	E

2

2

SLOPE RD.

N

SLOPE INTERCEPT

MATCHLINE 628+00

IH 94 WB

IH 94 EB

630

635

640

MATCHLINE 642+00

IH

SLOPE INTERCEPT

CV641

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLAN	SHEET 77	E

FILE NAME : \\mlww400\ingrproj\66067\10603312_ih94_aux_lane\10603312_ftms.dgn PLOT DATE : 4/21/2017 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

2

EX-S-67-402 / EX-DMS-67-0003
(1) REMOVE EXISTING DYNAMIC MESSAGE SIGN
(STORE SIGN FOR DEPARTMENT FORCES TO
SALVAGE USEFUL COMPONENTS FROM SIGN
AND THEN DISPOSE OF REMAINDER PROPERLY)

EX-CB-DMS-67-0003
REMOVE EXISTING POLE MOUNTED
CABINET FROM EXISTING SIGN
BRIDGE WHEN SIGN BRIDGE IS
REMOVED. STORE CABINET FOR
PICK UP BY DEPARTMENT FORCES.

S-67-418 / DMS-67-0003
(1) INSTALL FULL MATRIX
OVERHEAD FREEWAY DMS (S-F)

SLOPE INTERCEPT

EXPB03
(1) REMOVE PULL BOX

SLOPE INTERCEPT

EXPB04
(1) REMOVE PULL BOX

REMOVE EXISTING CABLES AND
ABANDON CONDUIT

REMOVE EXISTING CABLES AND
ABANDON CONDUIT

SLOPE INTERCEPT

REMOVE EXISTING OVERHEAD POWER
WIRES TO EX-DMS-67-0003.

(3) 2-INCH NONMETALLIC CONDUITS
(1) WITH (4) DMS POWER WIRES
(1) WITH (1) DMS CONTROL CABLE
(1) WITH (3) NO. 6 AWG LIGHTING WIRES

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) DMS CONTROL CABLE
(1) WITH (4) DMS POWER WIRES

(3) 2-INCH HDPE DUCTS, DIRECTIONAL BORE
(1) WITH (1) 72-COUNT FOC AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 6-COUNT FOC (S-F) AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

EXPP01
(1) REMOVE UTILITY POLE.

REMOVE EXISTING POWER WIRES CONNECTING
EXMB01 TO EX-DMS-67-0003.
INSTALL (4) DMS POWER WIRES
BETWEEN EXMB01 AND DMS-67-0003.

EXPB01
(1) INSTALL PROPOSED CONUIT INTO
EXISTING PULL BOX

EXMB01

(1) REMOVE PULL BOX

SLOPE INTERCEPT

(1) 2-INCH NONMETALLIC CONDUIT WITH
(3) NO. 6 AWG LIGHTING WIRES

EXPB05
REMOVE PULL BOX

EX-CCTV-67-0052 / EX-SDS-67-0029
CONNECT OUTDOOR RATED NETWORK CABLE
FROM DMS-67-0003 TO EXISTING ETHERNET
SWITCH IN EX-CB-CCTV-67-0052.
REFOCUS EXISTING MICROWAVE DETECTORS
AS NEEDED FOR TRAFFIC CONTROL CHANGES
AND TO ULTIMATE LANE CONFIGURATION
AT COMPLETION OF PROJECT.
(1) 12-COUNT F.O. TERMINATION PANEL (S-F)
(6) F.O. TERMINATIONS

IN EXISTING CONDUITS
(1) WITH (4) DMS POWER WIRES
(1) WITH (1) DMS CONTROL CABLE AND
(1) 6-COUNT FOC (S-F)
(1) WITH (3) NO. 6 AWG LIGHTING WIRES

REMOVE EXISTING POWER WIRES CONNECTING
METER BREAKER PEDESTAL TO EX-DMS-67-0003.
DO NOT DISTURB EXISTING POWER WIRES
CONNECTING METER BREAKER PEDESTAL TO
EX-CCTV-67-0052.

EX-HFS-644
(1) REMOVE AND SALVAGE HAR FLASHER ASSEMBLY

(1) 2-INCH NONMETALLIC CONDUIT WITH
(3) NO. 6 AWG LIGHTING WIRES

(1) 2-INCH METALLIC CONDUIT WITH
(3) NO. 6 AWG LIGHTING WIRES

HFS-644
(1) INSTALL SALVAGED HAR FLASHER ASSEMBLY

SLOPE INTERCEPT

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

IH 94 WB
IH 94 EB
645
650
655
S. ELM GROVE RD.
MATCHLINE 642+00
MATCHLINE 657+00
PB01
PB02
PB03
PB04
EXPB02
EXPB05
CV653
CV655

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLAN	SHEET 78	E

FILE NAME : \\mlww400\ingrproj\66067\10603312_ih94_aux_lane\10603312_ftms.dgn PLOT DATE : 4/21/2017 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

2

2

N

(3) 2-INCH HDPE DUCTS, DIRECTIONAL BORE
(1) WITH (1) 72-COUNT FOC AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

SLOPE INTERCEPT

EXCV669
(72) F.O. SPLICES IN EXISTING
SPLICE ENCLOSURE IN EXISTING
COMMUNICATIONS VAULT
(1) INSTALL PROPOSED CONDUIT
INTO EXISTING COMMUNICATION VAULT

CV665

IH 94 WB

660

665

IH 94 EB

MATCHLINE 657+00

SLOPE INTERCEPT

CV664

SLOPE INTERCEPT

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC AND
(1) NO. 12 AWG TRAFFIC SIGNAL WIRE

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLAN	SHEET 79	E

FILE NAME : \\mlww400\ingrproj\66067\10603312_ih94_aux_lane\10603312_ftms.dgn PLOT DATE : 4/21/2017 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

PI STA = 1+57.52
DELTA = 46°08'42"
D = 229°10'59"
T = 10.65'
L = 20.13'
R = 25.00'
PC STA = 1+46.87
PT STA = 1+67.01

PT: 1+67.01
PC: 1+46.87
EP: 1+90.36
00+1
STA 131+71, 17.3' LT
INLETS 4-H
111
PI: 0+56.79
IH-94 WESTBOUND
SUNNY SLOPE ROAD
N

5
5

⑦ ⑥ ⑤ ④③② ①

2+00.00 1+00.00 0+50.00

930
920
910
900
895

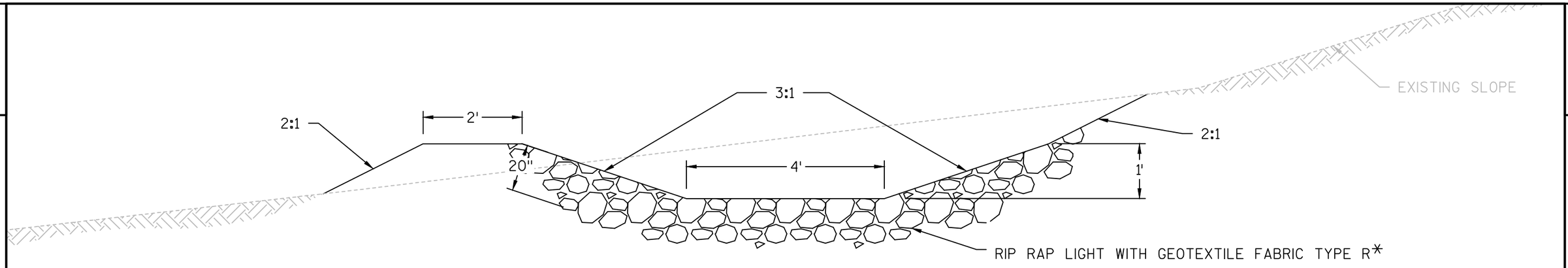
STA 1+75.00
EL 905.21
STA 1+72.57
EL 904.24
STA 1+68.57
EL 904.24
VPT STA 1+37.97
VPT EL 913.17
VPI STA 1+36.22
VPI EL 913.68
VPC STA 1+34.47
VPC EL 913.68
STA 1+31.22
EL 913.68
STA 1+26.23
EL 913.88
40.00%
4.0'
-33.33%
2.0'
-4.00%
R=12.0'

2 1 0

PROJECT NO: 1060-33-82	HWY: SUNNY SLOPE ROAD	COUNTY: WAUKESHA	EROSION CONTROL: ROCK CHUTE PLAN AND PROFILE	SHEET 80	E

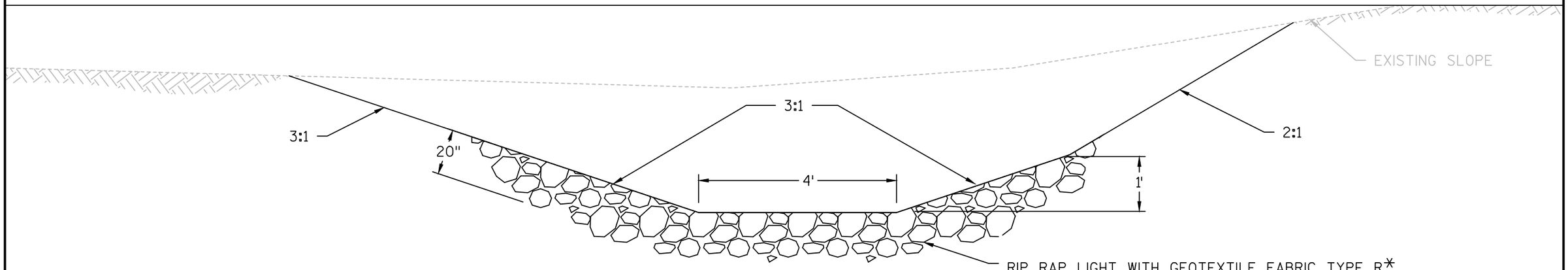
FILE NAME : W:\PDS\C3D\10603203\73\DSN\DRAINAGE_SUNNYSLOPE\PLAN SHEETS\ROCK CHUTES PP.DWG
LAYOUT NAME - WB ROCK CHUTE PP
PLOT DATE : 4/17/2017 9:51 AM PLOT BY : ANDERSON, SCOTT M PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 44

2



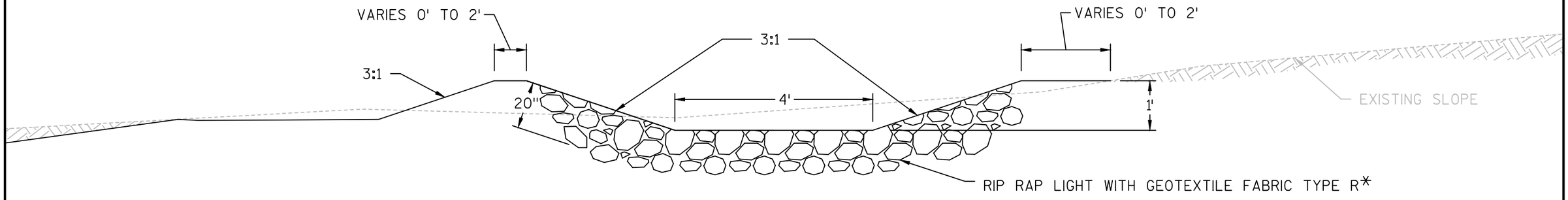
ROCK CHUTE - PROPOSED TYPICAL SECTION

REFERS TO POINTS ① ② ③ ④ ON THE PLAN AND PROFILE



ROCK CHUTE - PROPOSED TYPICAL SECTION

REFERS TO POINTS ⑤ ⑥ ON THE PLAN AND PROFILE



ROCK CHUTE - PROPOSED TYPICAL SECTION

REFERS TO POINTS ⑦ ON THE PLAN AND PROFILE

* REFER TO "SOD, RIP RAP AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS" FOR INFORMATION ON PLACEMENT OF RIP RAP AND GEOTEXTILE FABRIC.

PROJECT NO: 1060-32-73	HWY: SUNNY SLOPE ROAD	COUNTY: WAUKESHA	EROSION CONTROL - ROCK CHUTE CONSTRUCTION DETAIL	SHEET 81	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\DRAINAGE_SUNNYSLOPE\PLAN SHEETS\ROCK CHUTES CONSTRUCTION DETAIL.DWG
LAYOUT NAME - ****
PLOT DATE : 4/17/2017 9:39 AM PLOT BY : ANDERSON, SCOTT M PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2

2

N

WETLAND BOUNDARY

IH-94 WB

IH-94 EB

575+00 576+00 577+00 578+00 579+00 580+00 581+00 582+00

D

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- A INLET PROTECTION TYPE A
- C INLET PROTECTION TYPE C
- D INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 82	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\022001_EC.DWG
LAYOUT NAME - 022001_EC

PLOT DATE : 6/15/2017 10:24 AM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

N

WETLAND BOUNDARY

IH-94 WB

583+00 584+00 585+00 586+00 587+00 588+00 589+00 590+00

IH-94 EB

WETLAND BOUNDARY

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 83	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\022001_EC.DWG
LAYOUT NAME - 022002_EC
PLOT DATE : 6/15/2017 10:25 AM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

2

N

WETLAND BOUNDARY

GUY

D

PC: 593+46.17

IH-94 WB

590+00

591+00

592+00

593+00

594+00

595+00

596+00

597+00

IH-94 EB

WETLAND BOUNDARY

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 84	E

2

2

N

IH-94 WB

598+00

599+00

600+00

601+00

602+00

603+00

604+00

605+00

IH-94 EB

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 85	E

2

2

WETLAND BOUNDARY

N

PTI: 6607+81.20
PT: 607+81.20

IH-94 WB

IH-94 EB

605+00 606+00 607+00 608+00 609+00 610+00 611+00 612+00

WETLAND BOUNDARY

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 86	E

2

2

N

D

D

IH-94 WB

613+00 614+00 615+00 616+00 617+00 618+00 619+00 620+00

D

D

IH-94 EB

D

TOWER

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

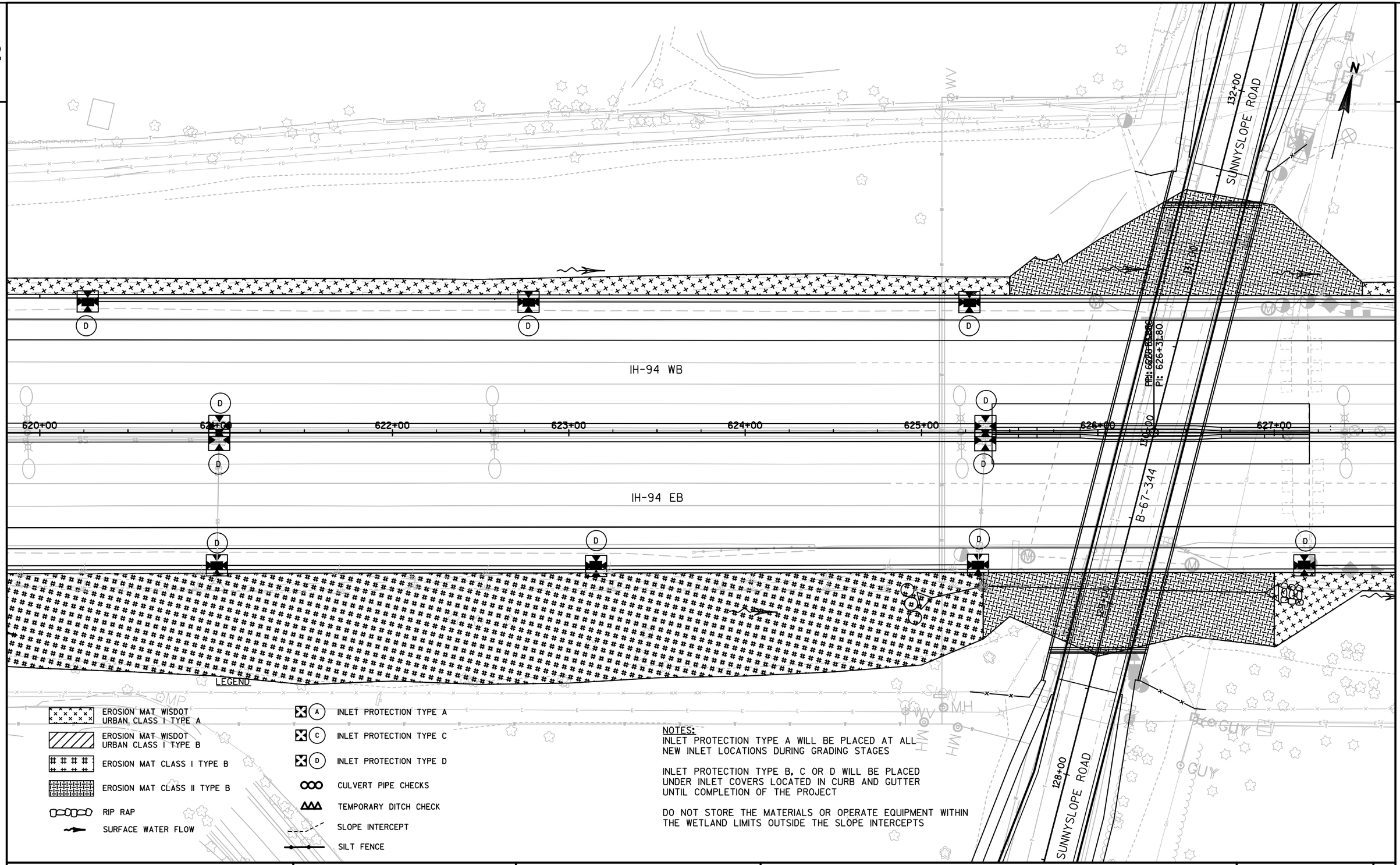
NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 87	E

2



NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 88	E

2

2

N

GUY

IH-94 WB

628+00 629+00 630+00 631+00 632+00 633+00 634+00 635+00

IH-94 EB

D

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- A INLET PROTECTION TYPE A
- C INLET PROTECTION TYPE C
- D INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 89	E

2

N

IH-94 WB

635+00 636+00 637+00 638+00 639+00 640+00 641+00 642+00

IH-94 EB

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 90	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\022001_EC.DWG
LAYOUT NAME - 022009_EC

PLOT DATE : 6/15/2017 10:25 AM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

IH-94 WB

643+00 644+00 645+00 646+00 647+00 648+00 649+00 650+00

D

IH-94 EB

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 91	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\022001_EC.DWG
LAYOUT NAME - 022010_EC

PLOT DATE : 6/15/2017 10:25 AM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

ELM GROVE ROAD

22+00

24+00

20+00

18+00

PI: 653+79.34

IH-94 WB

IH-94 EB

650+00 651+00 652+00 653+00 654+00 655+00 656+00 657+00

D

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 92	E

2

2

N

IH-94 WB

IH-94 EB

658+00 659+00 661+00 662+00 664+00 665+00

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 93	E

WETLAND BOUNDARY

N

IH-94 WB

665+00 666+00 667+00 668+00 669+00 670+00 671+00 672+00

IH-94 EB

WETLAND BOUNDARY

WETLAND BOUNDARY

LEGEND

- EROSION MAT WISDOT URBAN CLASS I TYPE A
- EROSION MAT WISDOT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B
- RIP RAP
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT
- SILT FENCE

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - IH-94	SHEET 94	E

2

2

N

23+00

PARK ENTRANCE

24+00

25+00

121+00

122+00

123+00

124+00

125+00

126+00

SUNNYSLOPE ROAD

127+00

128+00

FOREST GROVE ROAD

21+00

22+00

LEGEND

- SOD LAWN
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- RIP RAP
- SILT FENCE
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - SUNNYSLOPE RD.	SHEET 95	E

2

2

624+00

625+00

626+00

627+00

628+00

ROCK CHUTE, SEE CONSTRUCTION DETAIL

W. BEECHWOOD AVENUE

23+00

24+00

128+00

129+00

130+00

131+00

132+00

SUNNYSLOPE ROAD

133+00

134+00

135+00

B-67-344

N

LEGEND

- SOD LAWN
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- RIP RAP
- SILT FENCE
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT

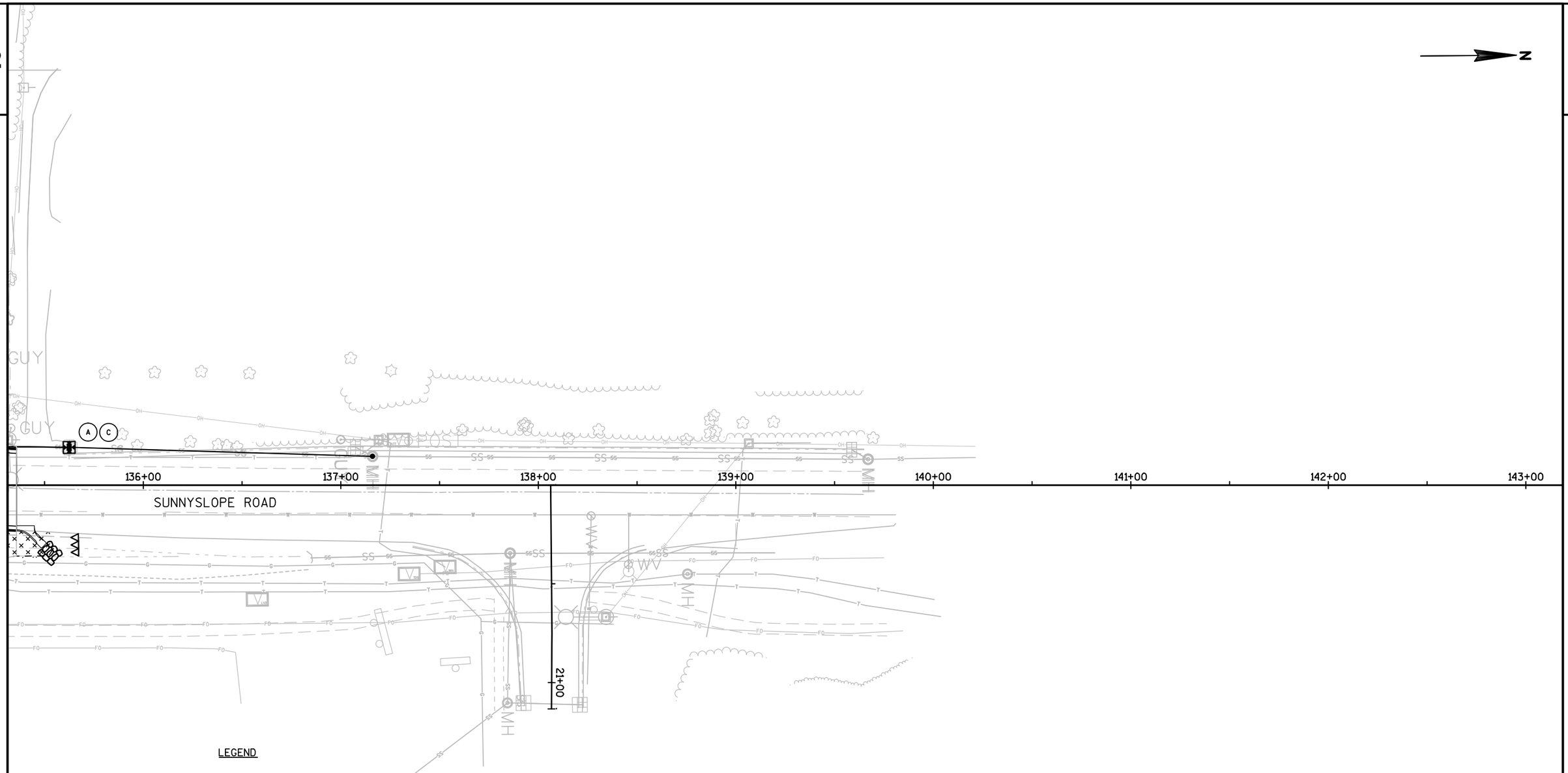
NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - SUNNYSLOPE RD.	SHEET 96	E

2



LEGEND

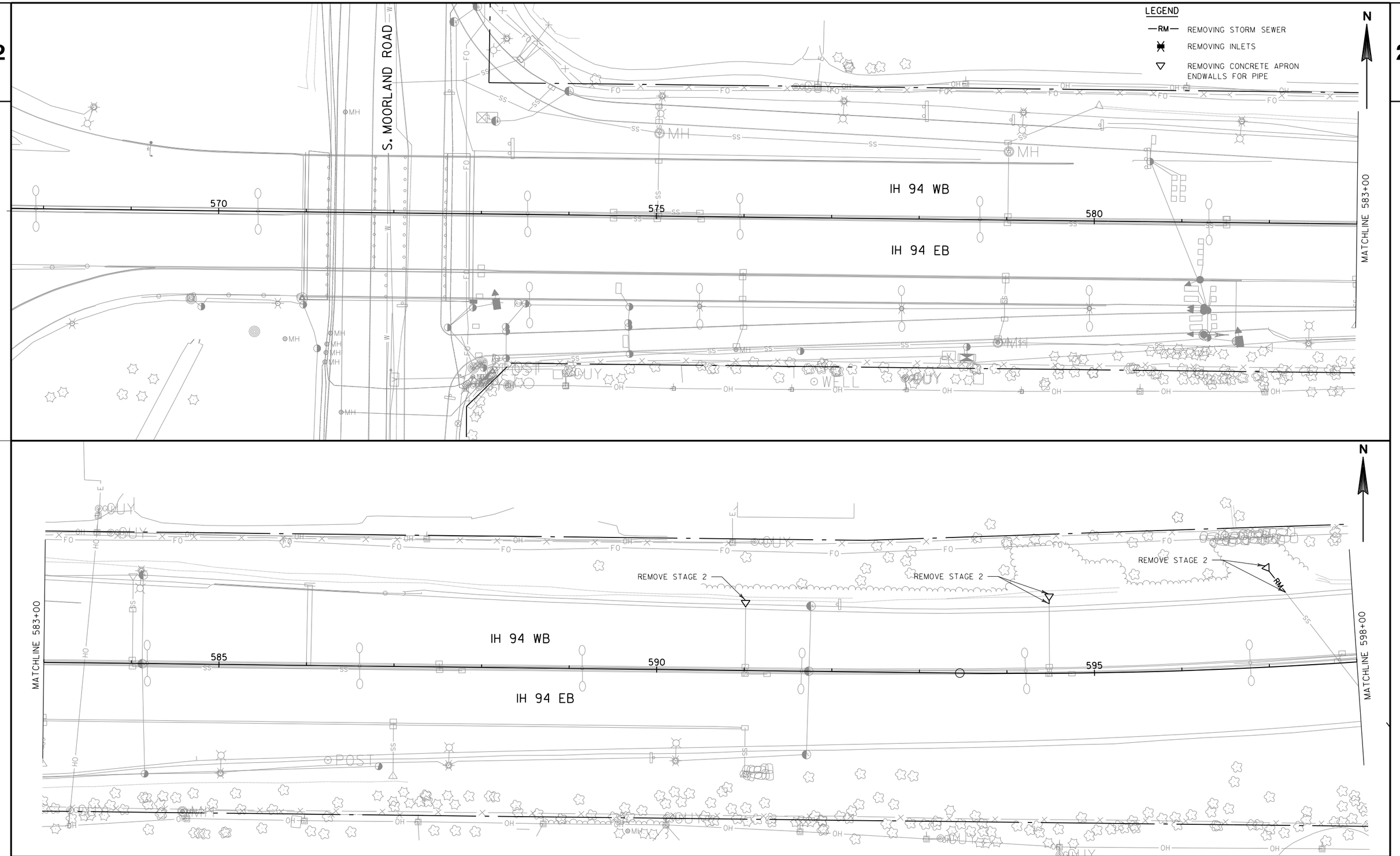
- SOD LAWN
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- RIP RAP
- SILT FENCE
- SURFACE WATER FLOW
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SLOPE INTERCEPT

NOTES:
INLET PROTECTION TYPE A WILL BE PLACED AT ALL NEW INLET LOCATIONS DURING GRADING STAGES

INLET PROTECTION TYPE B, C OR D WILL BE PLACED UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT

DO NOT STORE THE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL - SUNNYSLOPE RD.	SHEET 97	E



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER REMOVAL PLAN	SHEET 98	E

FILE NAME : s:\dot\dot_se\110222-zoo ic\i-94 e-w aux lane\design\roads\cds\021101_RM.dgn PLOT DATE : 4/25/2017 PLOT BY : badams PLOT NAME : $FILE$ PLOT SCALE : 1:100

WISDOT/CADDS SHEET 41

LEGEND

—RM— REMOVING STORM SEWER

REMOVING INLETS

REMOVING CONCRETE APRON ENDWALLS FOR PIPE

N

MATCHLINE 598+00

600

605

610

IH 94 WB

IH 94 EB

REMOVE STAGE 2

REMOVE STAGE 2

REMOVE STAGE 2

REMOVE STAGE 2

MATCHLINE 613+00

2

N

MATCHLINE 613+00

615

620

625

IH 94 WB

IH 94 EB

REMOVE STAGE 2

REMOVE STAGE 2

S. SUNNY SLOPE ROAD

MATCHLINE 628+00

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER REMOVAL PLAN	SHEET 99	E

FILE NAME : s:\dot\dot_se\110222-zoo ic\i-94 e-w aux lane\design\roads\cds\021102_RM.dgn PLOT DATE : 4/25/2017 PLOT BY : badams PLOT NAME : $FILE$ PLOT SCALE : 1:100

2

LEGEND

—RM— REMOVING STORM SEWER

REMOVING INLETS

REMOVING CONCRETE APRON ENDWALLS FOR PIPE

N

MATCHLINE 628+00

MATCHLINE 643+00

IH 94 WB

IH 94 EB

630

635

640

REMOVE STAGE 2

REMOVE STAGE 1

REMOVE STAGE 2

REMOVE STAGE 2

REMOVE STAGE 2

REMOVE STAGE 2

MATCHLINE 643+00

MATCHLINE 658+00

IH 94 WB

IH 94 EB

645

650

655

S. ELM GROVE ROAD

REMOVE STAGE 1

REMOVE STAGE 2

REMOVE STAGE 2

REMOVE STAGE 2

REMOVE STAGE 2

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER REMOVAL PLAN	SHEET 100	E

FILE NAME : s:\dot\dot_se\110222-zoo ic\i-94 e-w aux lane\design\roads\cds\021103_RM.dgn PLOT DATE : 8/23/2017 PLOT BY : badams PLOT NAME : $FILE$ PLOT SCALE : 1:100

2

LEGEND

—RM— REMOVING STORM SEWER

REMOVING INLETS

REMOVING CONCRETE APRON ENDWALLS FOR PIPE

N

MATCHLINE 658+00

REMOVE STAGE 2

REMOVE STAGE 1

RM

IH 94 WB

IH 94 EB

660

665

670

GENERAL DRAINAGE NOTES

LOCATION OF STRUCTURES IN CURB AND GUTTER OR BARRIER SECTION REFER TO CURB AND GUTTER OR BARRIER FLOW LINE. LOCATION OF STRUCTURES NOT IN CURB AND GUTTER SECTION REFER TO CENTER OF STRUCTURE OR AS NOTED ON PLAN.

RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET GRATE OR AT CENTER OF MANHOLE GRATE. SEE STRUCTURE LOCATION DETAIL.

ADJUSTMENT RINGS MAY BE USED TO A COMBINED MAXIMUM THICKNESS OF 6-INCHES.

PLAN LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND IS USED FOR ESTIMATING. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE AND IS USED TO COMPUTE PIPE SLOPE.

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

UTILITY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE. LOCATIONS SHOWN ARE TAKEN FROM EXISTING RECORDS AND BEST INFORMATION AVAILABLE FROM EXISTING PLANS. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION OF UTILITIES AND STRUCTURES SHOWN. VERIFY ALL LOCATIONS IN THE FIELD.

COORDINATE WITH DIGGERS HOTLINE TO FIELD LOCATE UTILITIES. SHEETING SHALL NOT GO THROUGH UTILITIES. ANY UTILITIES DAMAGED DUE TO CONTRACTOR ACTIVITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE UTILITY FACILITY.

SEE STORM SEWER REMOVAL PLANS FOR REMOVAL OF EXISTING STORM SEWER SYSTEM.

VERIFY THE STORM SEWER SYSTEM CONNECTIONS, LOCATIONS, AND ELEVATIONS PRIOR TO ORDERING DRAINAGE STRUCTURES AND PIPES. NOTIFY THE ENGINEER OF ANY DEVIATIONS FROM THE INFORMATION SHOWN ON THE PLANS PRIOR TO INSTALLING THE PROPOSED STORM SEWER.

PROVIDE TEMPORARY POSITIVE DRAINAGE THROUGHOUT THE PROJECT DURING ALL PROJECT STAGES. PROVIDING TEMPORARY POSITIVE DRAINAGE IS INCIDENTAL TO CONSTRUCTION.

SUPPORTING UTILITIES DURING STORM SEWER CONSTRUCTION IS INCIDENTAL TO STORM SEWER PIPE AND/OR STORM SEWER STRUCTURE.

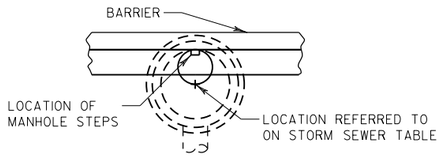
CONCRETE PIPE JOINT TIES SHALL CONNECT ALL CONCRETE APRON ENDWALLS AND THE LAST THREE PIPE SEGMENTS PRECEDING THE APRON ENDWALL. THE COST OF JOINT TIES SHALL BE INCIDENTAL TO THE STORM SEWER PIPE.

STORM SEWER PLAN & PROFILE NOTE:
PLAN VIEW HIGHLIGHTS CORRESPOND TO PROFILES SHOWN IN PROFILE BELOW PLAN VIEW (SAME SHEET). STORM SEWER STRUCTURES AND PIPES LABELED IN PLAN VIEW WITHOUT HIGHLIGHT ARE SHOWN ON THE NEXT PROFILE ONLY SHEET(S).

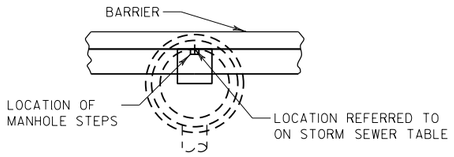
STORM SEWER LEGEND

EXISTING	
AUE***	EXISTING DRAINAGE STRUCTURE
AU***	PROPOSED DRAINAGE STRUCTURE
●	PROPOSED MANHOLE
■	PROPOSED INLET / PROPOSED CATCH BASIN
△	PROPOSED ENDWALL
EXISTING	
PE***	EXISTING STORM SEWER PIPE
P***	PROPOSED STORM SEWER PIPE
◄———	PROPOSED STORM SEWER PIPE PLAN VIEW
	PROPOSED STONE DITCH CHECKS

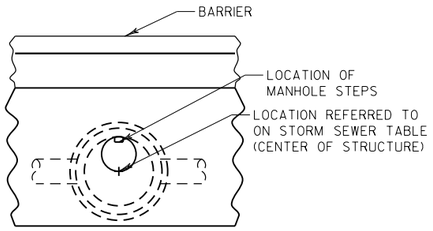
2



MANHOLE AT BARRIER



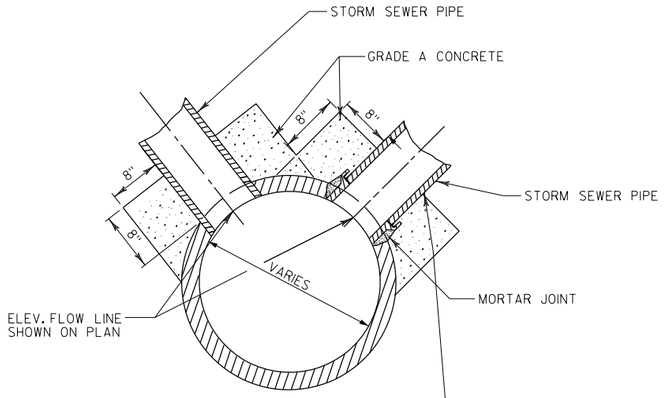
MANHOLE WITH INLET COVER AT BARRIER



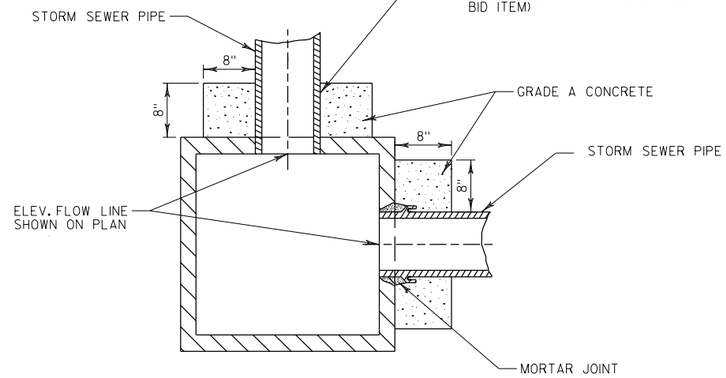
MANHOLE NOT AT BARRIER

STRUCTURE LOCATION DETAIL

NOTE
1) LOCATION OF STRUCTURE MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
2) LOCATION AND SIZE OF STRUCTURE COVER OPENING DEPENDS ON TYPE OF CASTING. CASTING TYPES ARE SHOWN ON THE STORM SEWER TABLE.



AT MANHOLE
INCIDENTAL TO NEW STRUCTURE AND NEW PIPE ITEMS



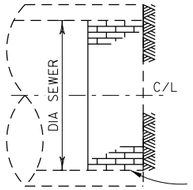
AT STORM SEWER INLET
INCIDENTAL TO NEW STRUCTURE AND NEW PIPE ITEMS

NOTE

CONCRETE COLLAR TO BE PAID AS A BID ITEM WHEN CONNECTING AN EXISTING PIPE TO A NEW STRUCTURE.

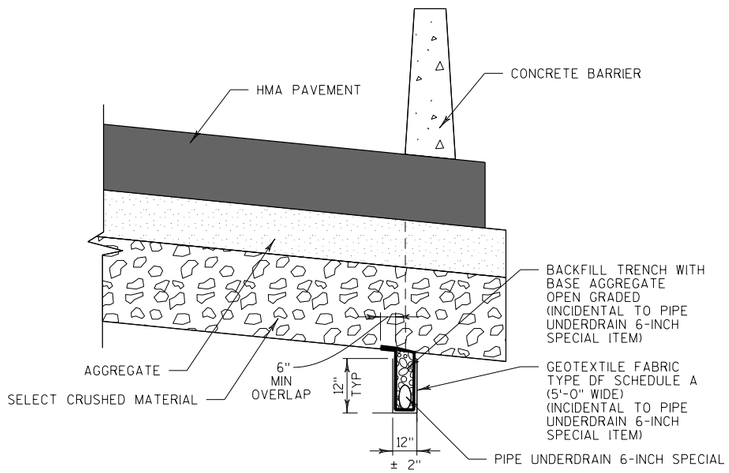
CONCRETE COLLAR DETAIL

FOR LOCATIONS SEE MISCELLANEOUS QUANTITIES SHEETS



REMOVING BULKHEAD

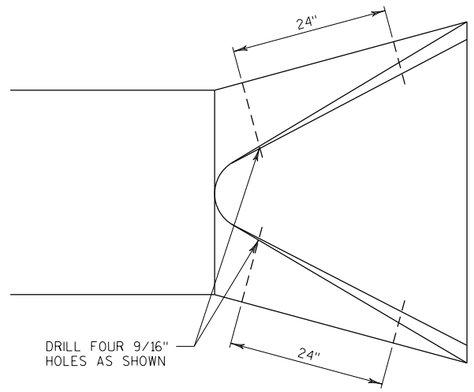
FOR LOCATIONS SEE MISCELLANEOUS QUANTITIES SHEETS

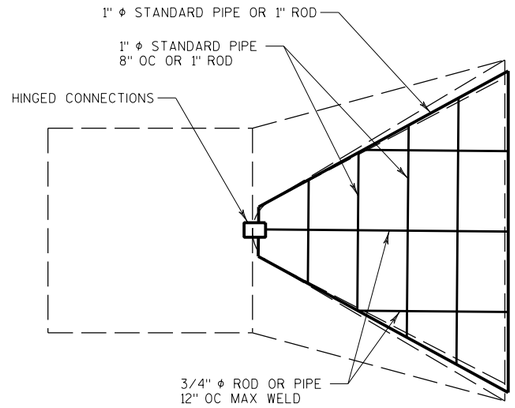


BARRIER SECTION

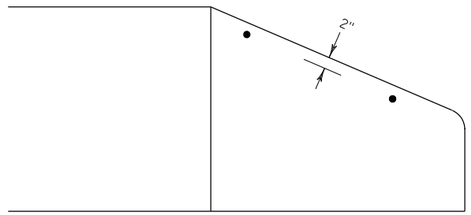
PIPE UNDERDRAIN 6-INCH SPECIAL - TRENCH DETAIL

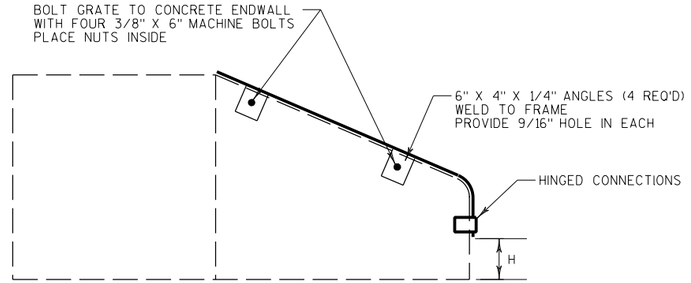
N.T.S.





AT EACH PIPE





GRATE BAR SIZES

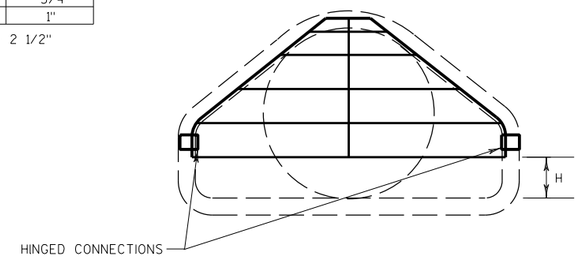
(STANDARD DESIGN)

	PIPE SIZE	HOLE DIAMETER REQUIRED	BOLT DIAMETER	BAR SIZE
ROUND PIPE	12" - 24"	3/4"	5/8"	5/8"
	27" - 48"	7/8"	3/4"	3/4"
	54" - 90"	1 1/8"	1"	1"
ARCH PIPE	22" - 29"	3/4"	5/8"	5/8"
	36" - 59"	7/8"	3/4"	3/4"
	65" - 85"	1 1/8"	1"	1"

BOLT LENGTH = PIPE WALL THICKNESS + 2 1/2"

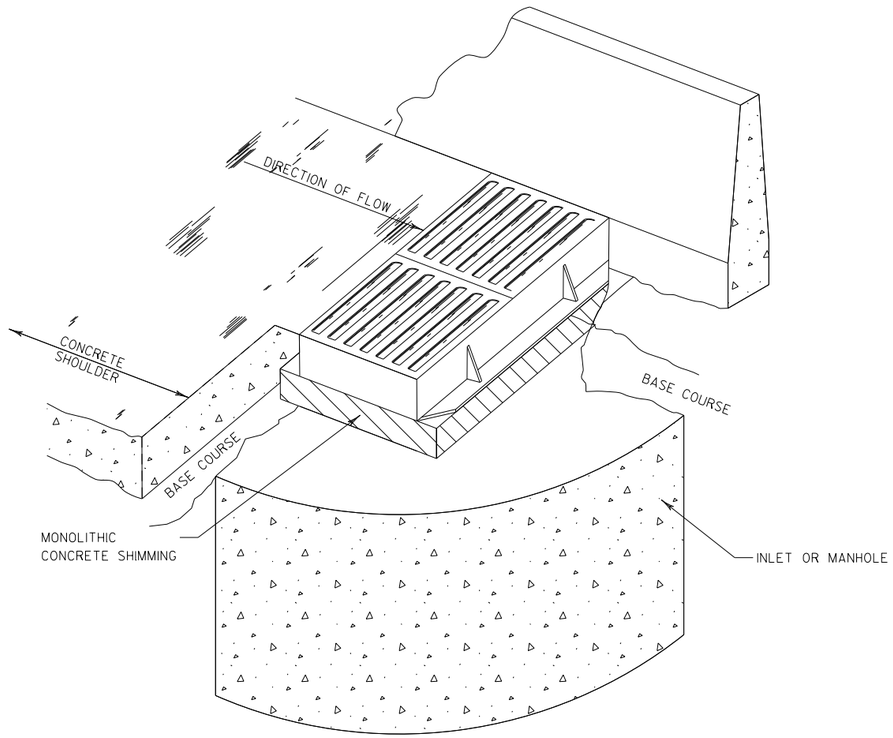
GRATE CLEARANCE HEIGHT

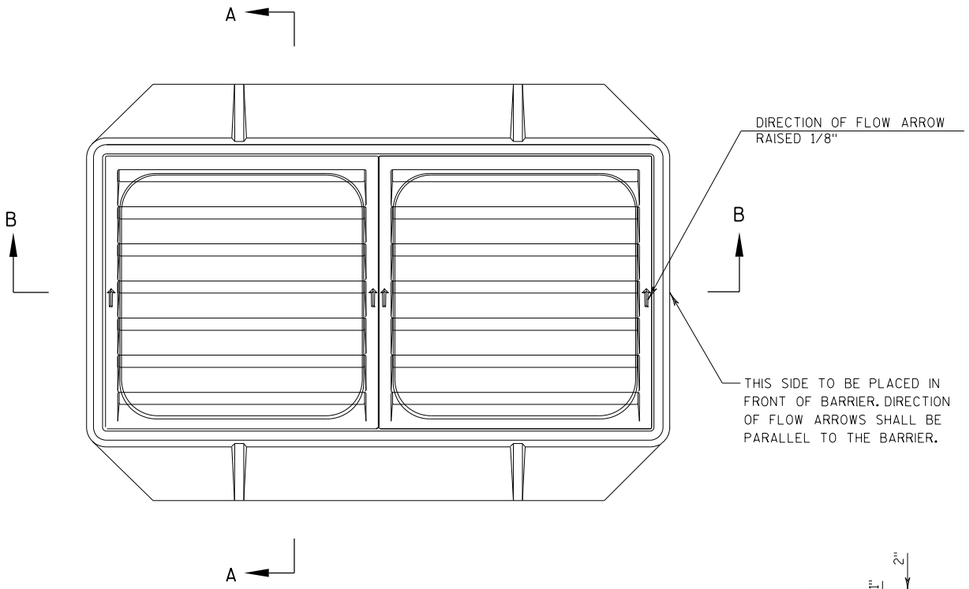
ROUND PIPE		ARCH PIPE	
PIPE SIZE	H	PIPE SIZE	H
12"	2 1/2"	22" - 29"	4"
15"	3"	36" - 44"	5"
18" - 24"	4"	51" - 65"	6"
27" - 36"	5"	73" - 85"	7"
42" - 54"	6"		
60" - 72"	7"		
78" - 90"	8"		

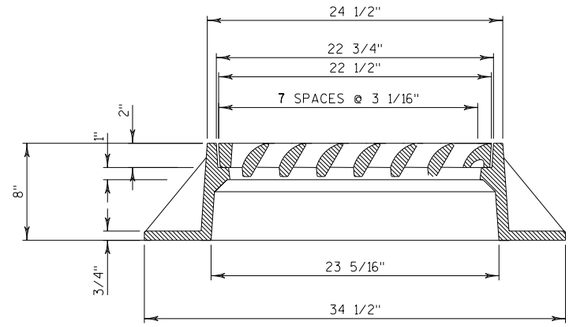


PIPE GRATE DETAIL

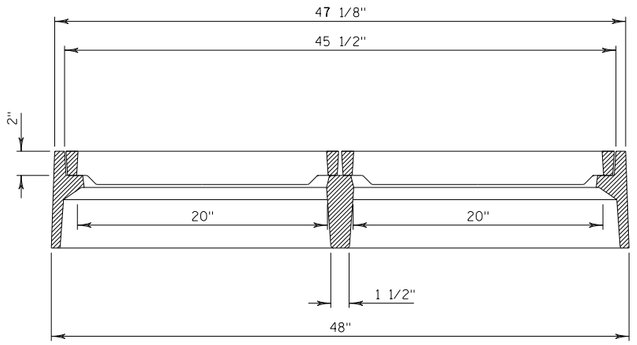
2







SECTION A-A



SECTION B-B

INLET COVERS TYPE 27-M

HEAVY DUTY
MATERIAL: CAST IRON GRAY ASTM A-48, CLASS 35B
(APPROXIMATE WEIGHT 638 LBS.)
FRAME 502 LBS
GRATE 136 LBS.
SQUARE FOOT OPENING 3.4
WEIR PERIMETER LINEAL FEET 11.3

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND 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 PROVISIONS FOR EQUIVALENT CAPACITY AND STRENGTH.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

USE INLET COVER OPENING SIZE 2'X4'.

2

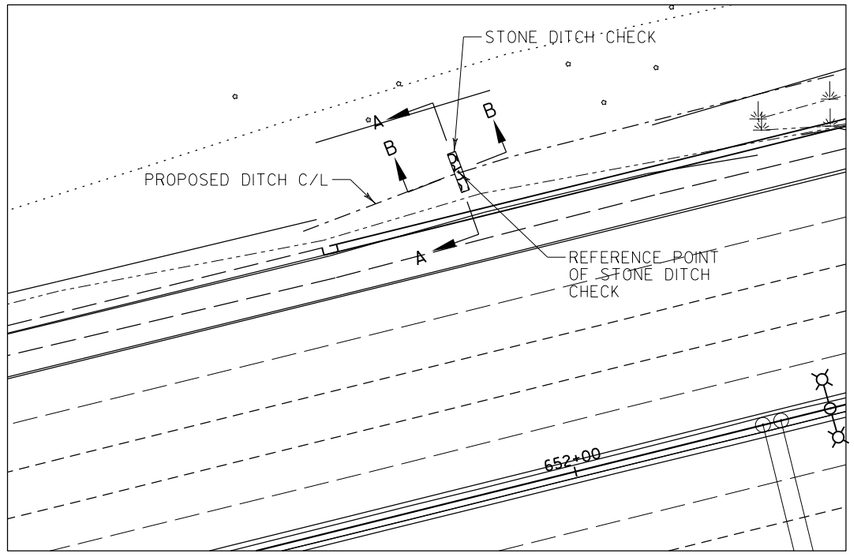
GENERAL NOTES

STONE DITCH CHECKS MUST BE INSTALLED WITH THE CENTER LOWER THAN THE SIDES FORMING A WEIR (SEE SECTION A-A).

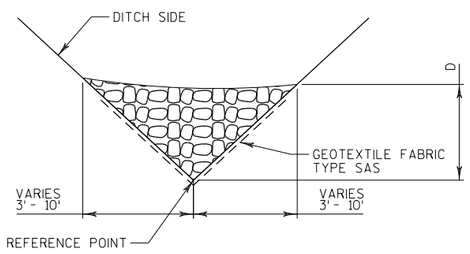
STONE DITCH CHECKS SHALL HAVE A MINIMUM TOP WIDTH OF 2-FT MEASURED IN THE DIRECTION OF FLOW WITH MAXIMUM SLOPES OF 2:1 ON THE UPSLOPE AND 2:1 ON THE DOWN SLOPE SIDE.

STONE DITCH CHECKS SHALL BE CONSTRUCTED OF A WELL-GRADED LIGHT RIPRAP MATERIAL.

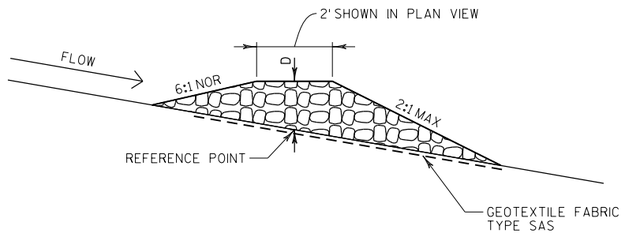
STONE DITCH CHECKS IDENTIFIED IN STORM SEWER PLAN ARE PERMANENT AND SHALL NOT BE REMOVED UPON COMPLETION OF CONSTRUCTION.



PLAN VIEW



SECTION A-A



SECTION B-B

STONE DITCH CHECKS (FOR INFORMATION ONLY)

	LOCATION		ELEVATION OF DITCH BOTTOM	DEPTH (D)
	STATION	OFFSET	FT	FT
IH 94 WB				
	619+47	88' LT	918.60	1.00
	621+41	88' LT	914.90	1.50
	622+38	87' LT	912.60	1.50
	623+35	89' LT	909.50	1.50
	624+34	90' LT	905.90	2.00
	625+29	88' LT	903.00	1.50
	628+20	85' LT	893.00	1.00
	629+17	84' LT	889.50	1.00
	630+14	84' LT	886.40	1.00
	631+11	84' LT	883.00	1.00
	632+08	84' LT	879.30	1.00
	633+05	84' LT	875.85	1.00

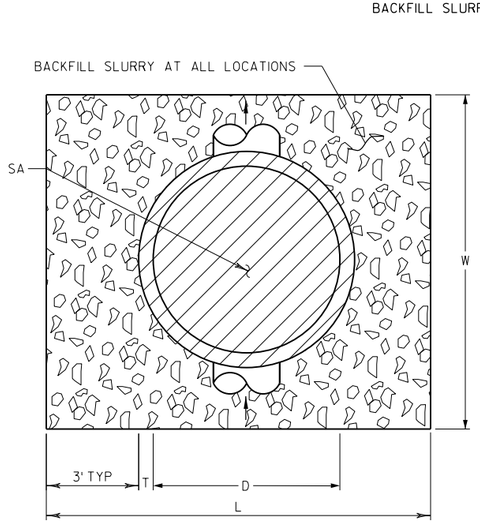
STONE DITCH CHECKS

SEE TABLE FOR DETAILED INFORMATION REGARDING STONE DITCH CHECK LOCATIONS AND ELEVATIONS

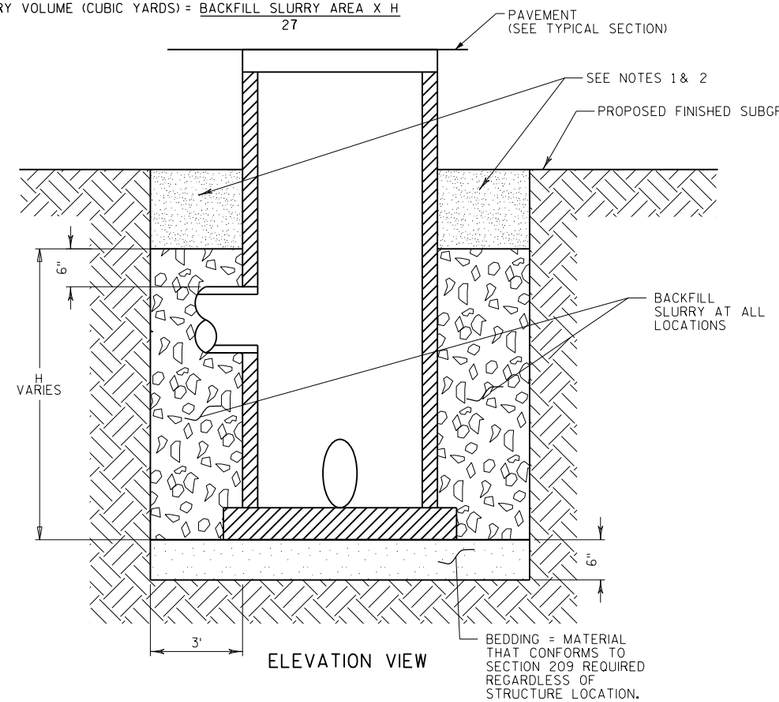
BACKFILL SLURRY STRUCTURES									
DESCRIPTION	DIAMETER / STR LENGTH D FT	RECTANGULAR STR WIDTH RW FT	WALL THICKNESS T INCH	SLAB THICKNESS ST INCH	STRUCTURE EXCAVATION LENGTH L FT	STRUCTURE EXCAVATION WIDTH W FT	STRUCTURE EXCAVATION AREA SF	STRUCTURE AREA SA SF	BACKFILL SLURRY AREA SF
INLETS 4-FT DIAMETER	4	---	5	6	10.83	10.83	117.36	18.34	99.02
MANHOLES 5-FT DIAMETER	5	---	6	8	12.00	12.00	144.00	28.26	115.74
MANHOLES 6-FT DIAMETER	6	---	7	8	13.17	13.17	173.36	40.32	133.04

H = UP TO 6" ABOVE THE TOP OF THE HIGHEST PIPE IN THE STRUCTURE

BACKFILL SLURRY VOLUME (CUBIC YARDS) = $\frac{\text{BACKFILL SLURRY AREA X H}}{27}$



PLAN VIEW



ELEVATION VIEW

NOTES

(1) IF THE STRUCTURE IS OUTSIDE THE TRAVELED WAY INCLUSIVE OF SHOULDERS AND AUXILIARY LANES, NATIVE BACKFILL MAY BE USED ABOVE BACKFILL SLURRY AND SHALL CONFORM TO SECTION 207 EMBANKMENT SPECIFICATIONS.

(2) IF THE STRUCTURE IS WITHIN THE TRAVELED WAY INCLUSIVE OF SHOULDERS AND AUXILIARY LANES, BACKFILL ABOVE BACKFILL SLURRY SHALL CONFORM TO SECTION 209.

(3) WHEN TEMPORARY SUBGRADE IS HIGHER THAN PROPOSED FINISHED SUBGRADE, PROVIDE GRANULAR BACKFILL AT ALL LOCATIONS. COST FOR GRANULAR BACKFILL IS CONSIDERED INCIDENTAL TO CONSTRUCTION.

(4) PAYMENT FOR BACKFILL SLURRY QUANTITY IS LIMITED TO THE DETAIL AS SHOWN. BACKFILL SLURRY QUANTITY FOR ANY OVER EXCAVATED AREA IS CONSIDERED PART OF CONSTRUCTION, AND NO ADDITIONAL PAYMENT WILL BE MADE.

BACKFILL SLURRY DETAIL - STORM SEWER STRUCTURES

NOTES

(1) IF THE PIPE IS OUTSIDE THE TRAVELED WAY INCLUSIVE OF SHOULDERS, NATIVE BACKFILL MAY BE USED ABOVE BACKFILL SLURRY AND SHALL CONFORM TO SECTION 209.

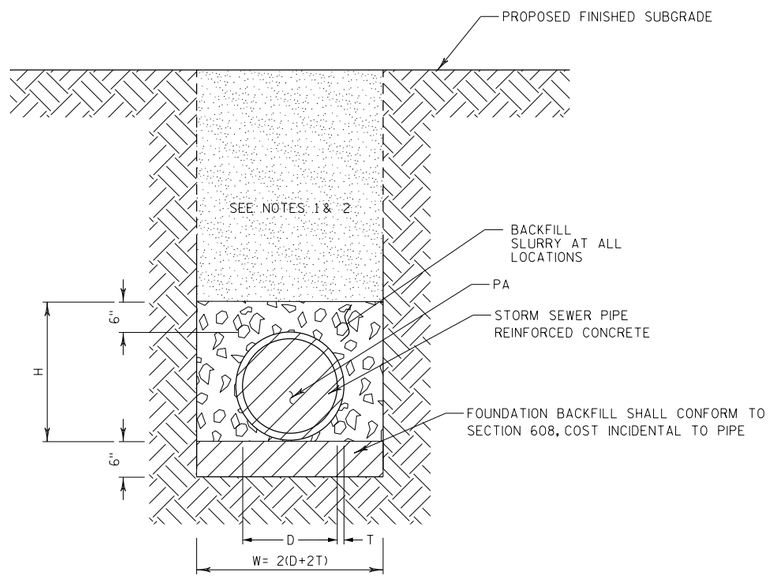
(2) IF THE PIPE IS WITHIN THE TRAVELED WAY INCLUSIVE OF SHOULDERS, BACKFILL ABOVE BACKFILL SLURRY SHALL CONFORM TO SECTION 209.

(3) WHEN TEMPORARY SUBGRADE IS HIGHER THAN PROPOSED FINISHED SUBGRADE, PROVIDE GRANULAR BACKFILL AT ALL LOCATIONS. COST FOR GRANULAR BACKFILL IS CONSIDERED INCIDENTAL TO CONSTRUCTION.

(4) PAYMENT FOR BACKFILL SLURRY QUANTITY IS LIMITED TO THE DETAIL AS SHOWN. BACKFILL SLURRY QUANTITY FOR ANY OVER EXCAVATED AREA IS CONSIDERED PART OF CONSTRUCTION, AND NO ADDITIONAL PAYMENT WILL BE MADE.

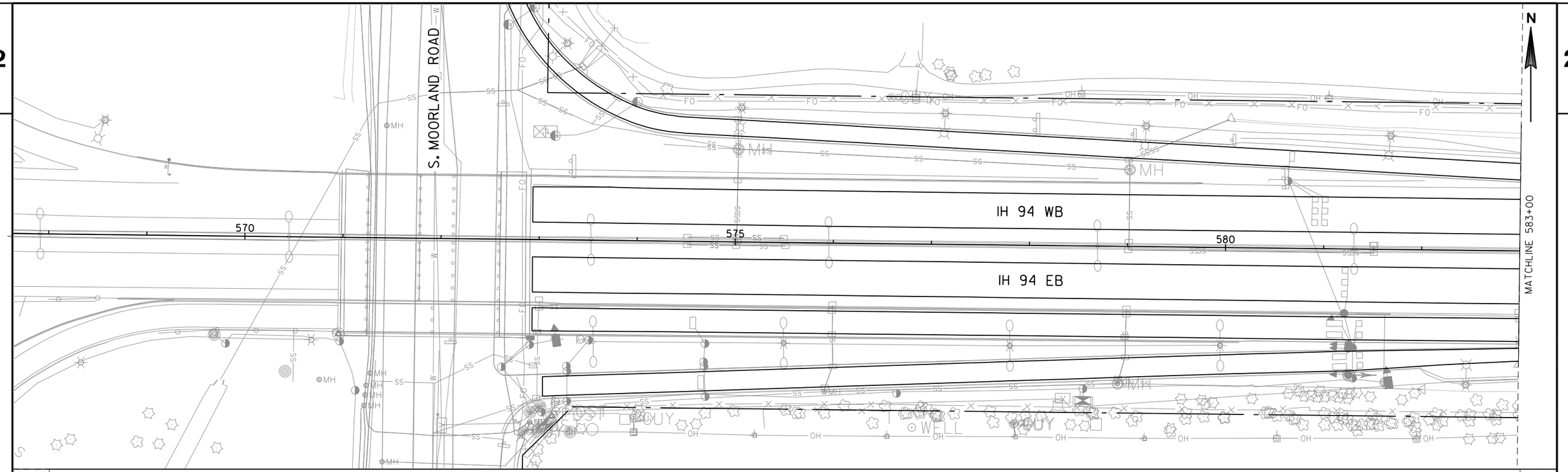
BACKFILL SLURRY TRENCHES						
Pipe Diameter PW INCHES	Wall Thickness T Inches	Trench Width W FT	Height of Pipe Zone H (From pipe bottom to 6" above top of pipe)	Area of Pipe Zone SF	Area of Pipe PA SF	Backfill Slurry Area SF
12	2.00	2.67	1.83	4.89	1.40	3.49
15	2.25	3.25	2.13	6.91	2.07	4.83
18	2.50	3.83	2.42	9.26	2.89	6.38
24	3.00	5.00	3.00	15.00	4.91	10.09
30	3.50	6.17	3.58	22.10	7.47	14.63
36	4.00	7.33	4.17	30.56	10.56	20.00
42	4.50	8.50	4.75	40.38	14.19	26.19

BACKFILL SLURRY VOLUME (CUBIC YARDS) = $\frac{\text{(PIPE ZONE AREA - PIPE AREA) X PIPE PLAN LENGTH}}{27}$



BACKFILL SLURRY DETAIL - STORM SEWER TRENCH

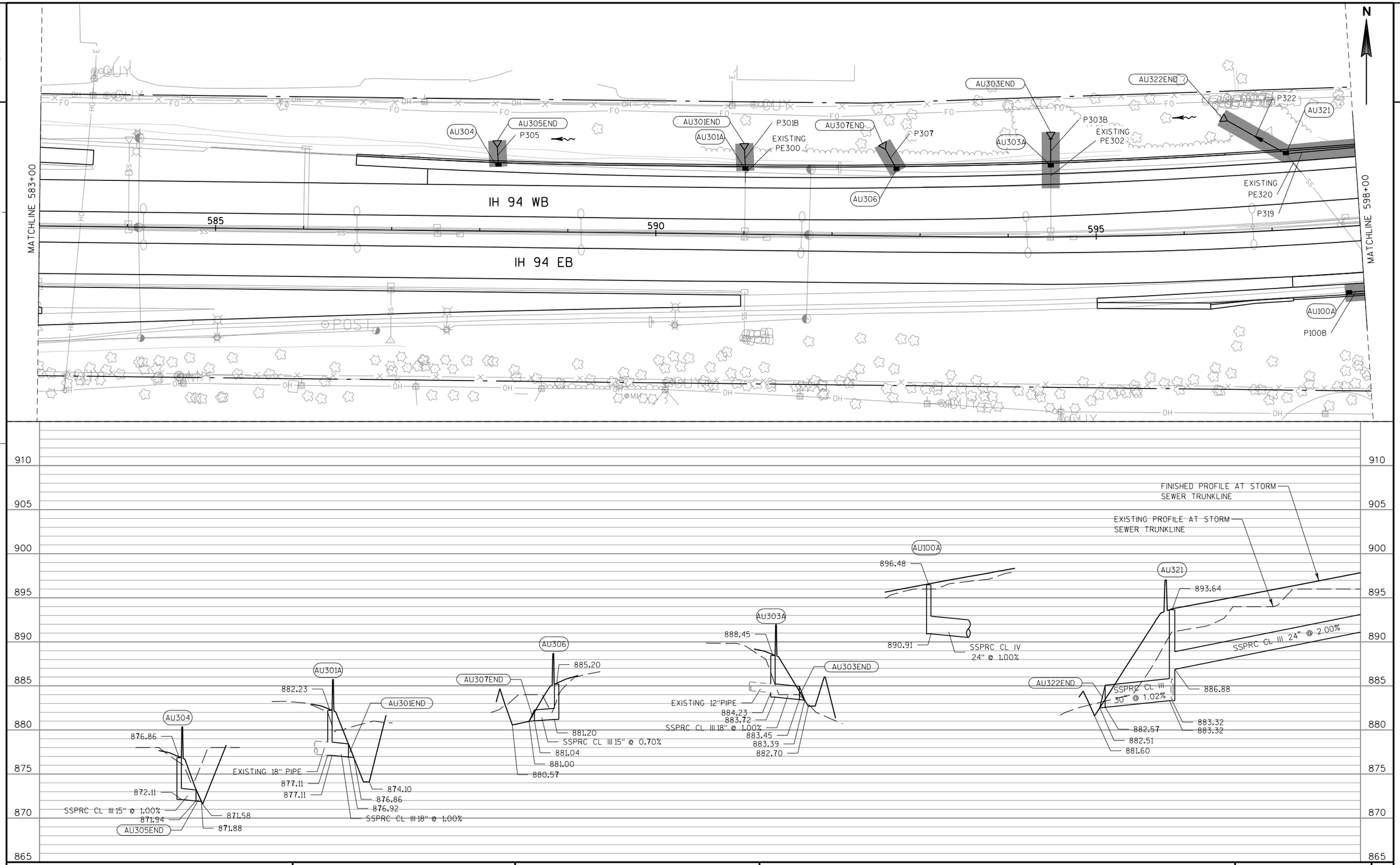
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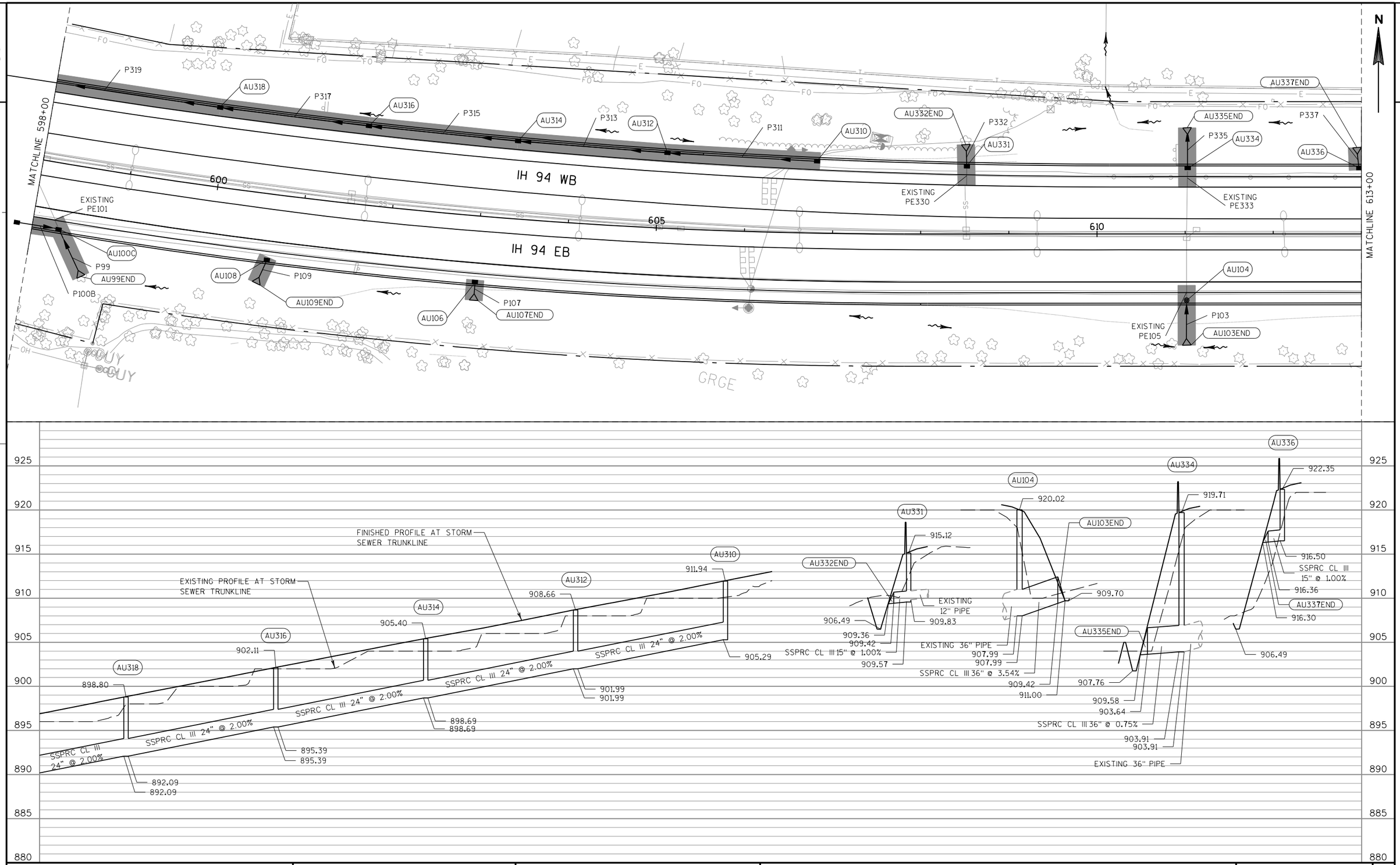
2

NO PROFILES ON THIS SHEET

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 108	E

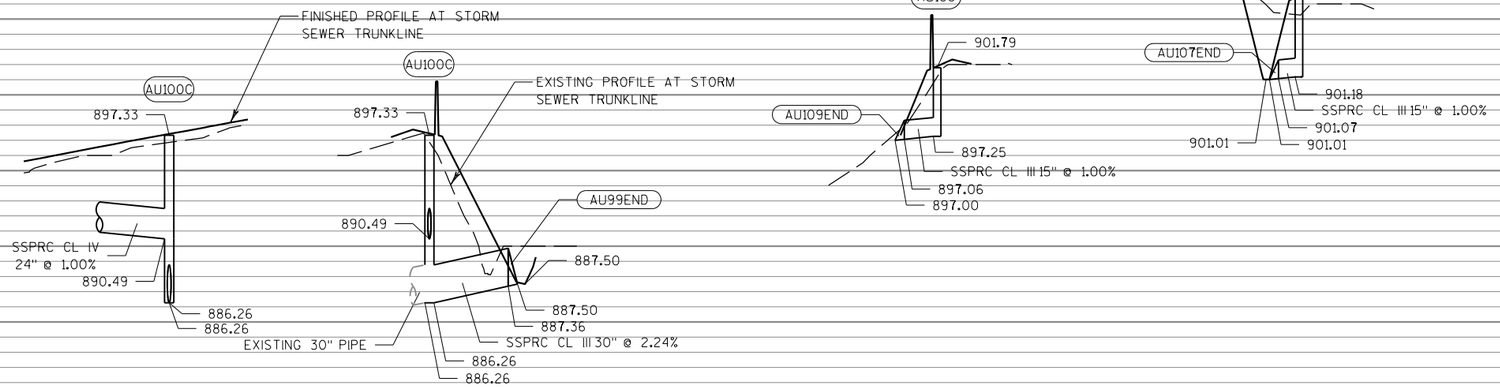


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 109 E



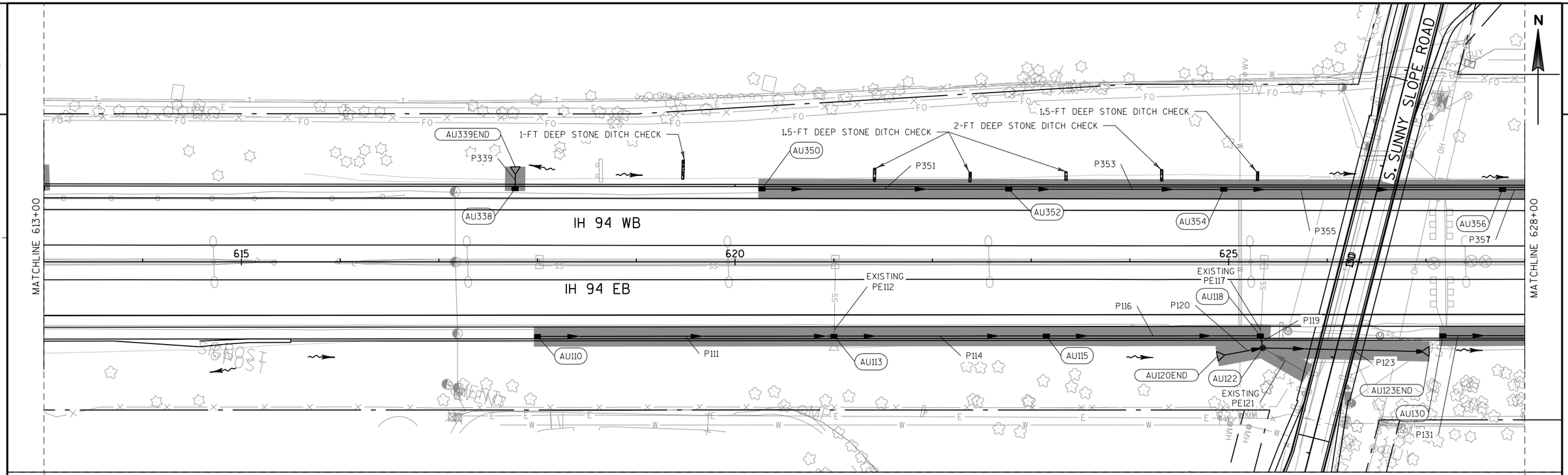
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 110	E

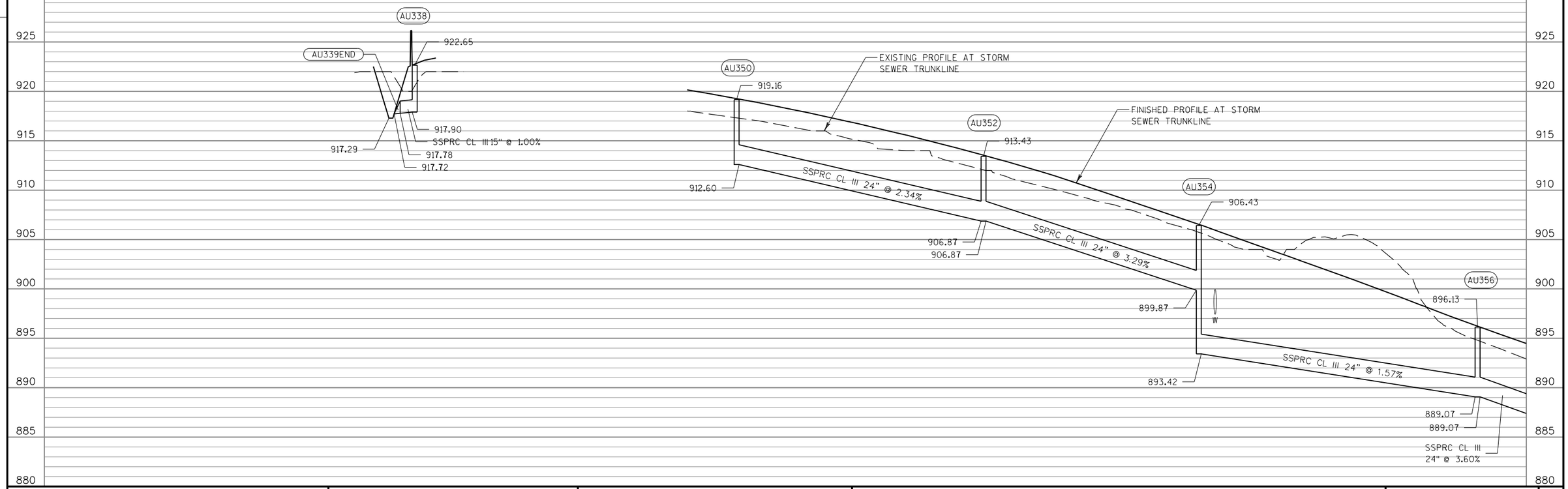
FILE NAME : \\kapur-assoc.com\kna\milw\s-drive\DOT\DOT_SE\110222-Zoo IC\I-94 E-W Aux Lane\Design\Roads\cds\022513_ss.dgn PLOT DATE : 8/15/2017 PLOT BY : badams PLOT NAME : $FILE$ PLOT SCALE : 1:100



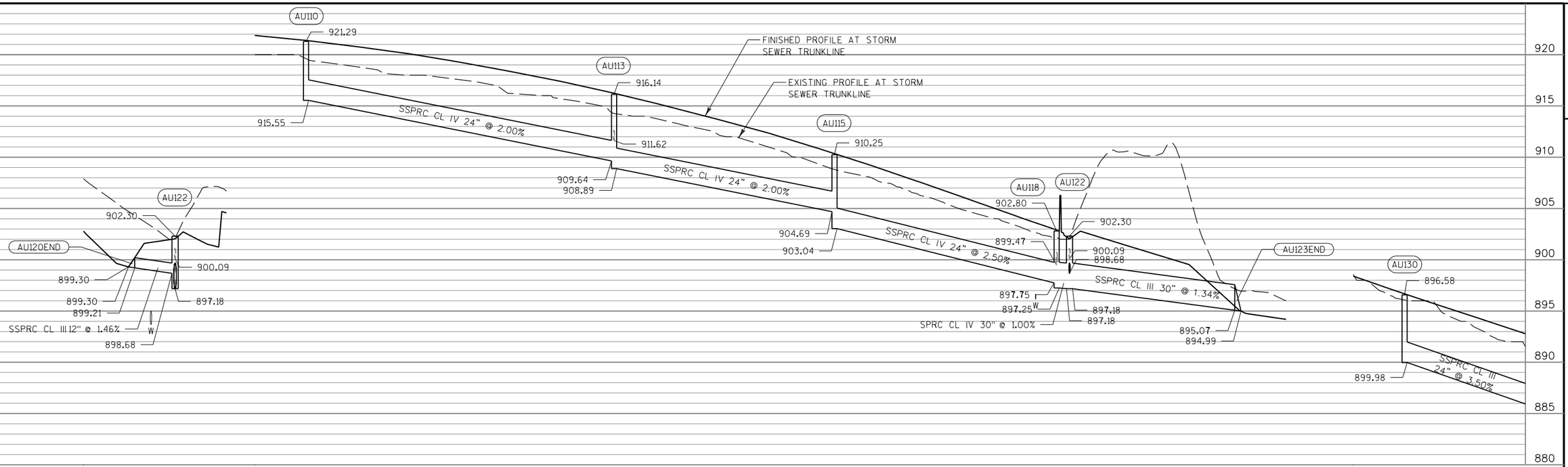
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 111	E



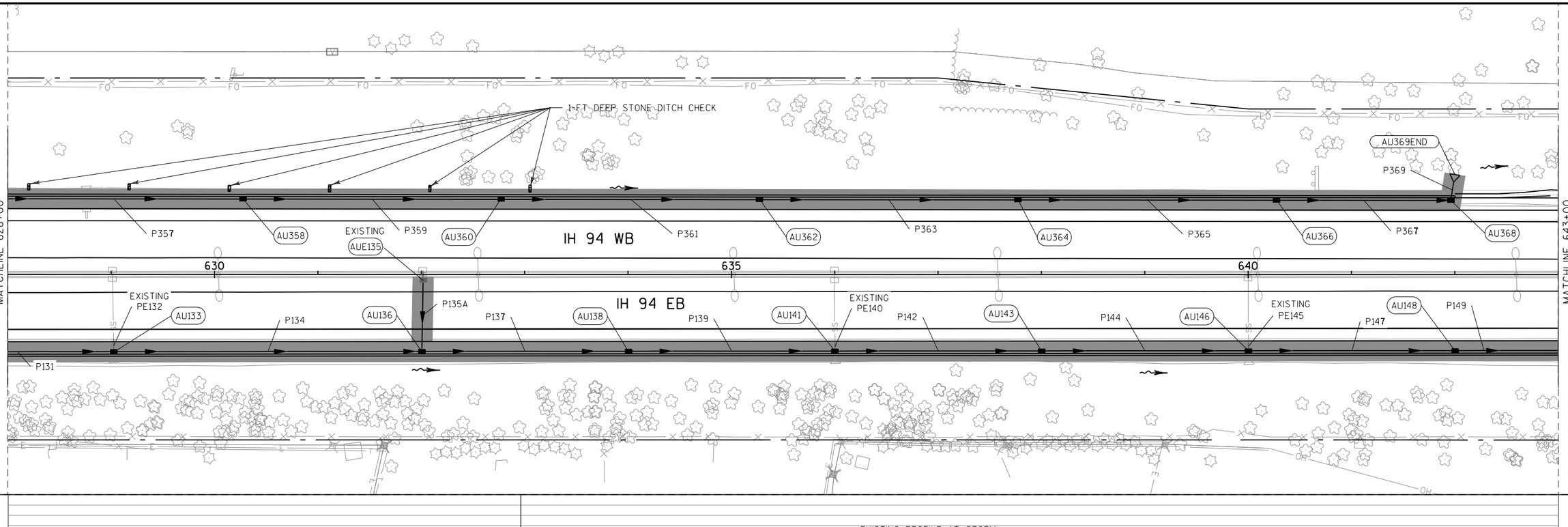


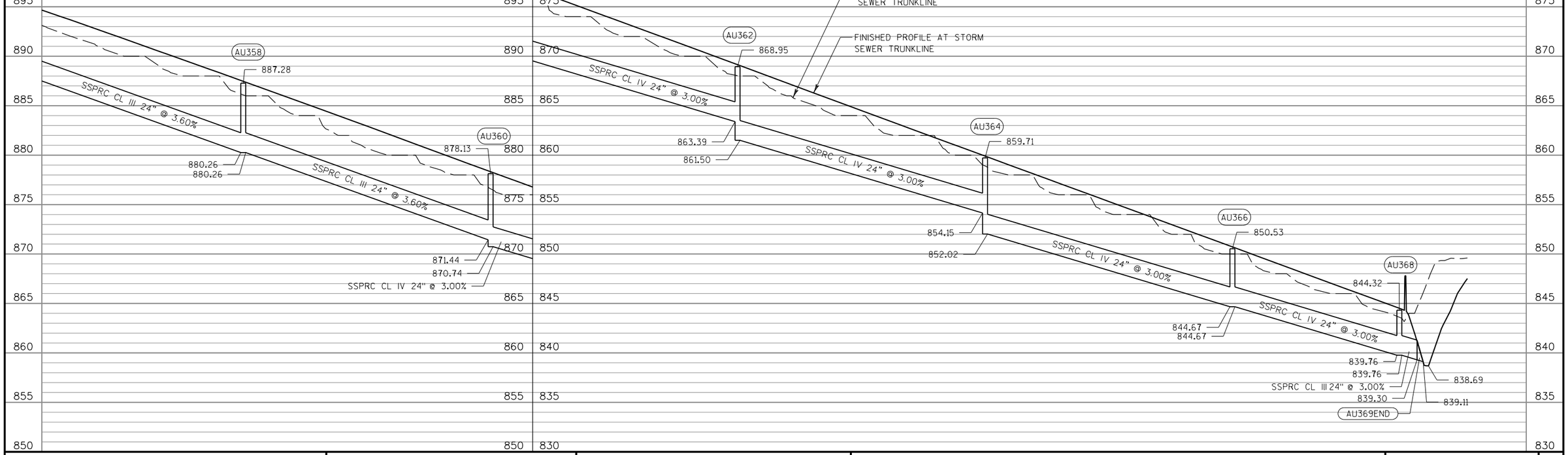
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 112	E



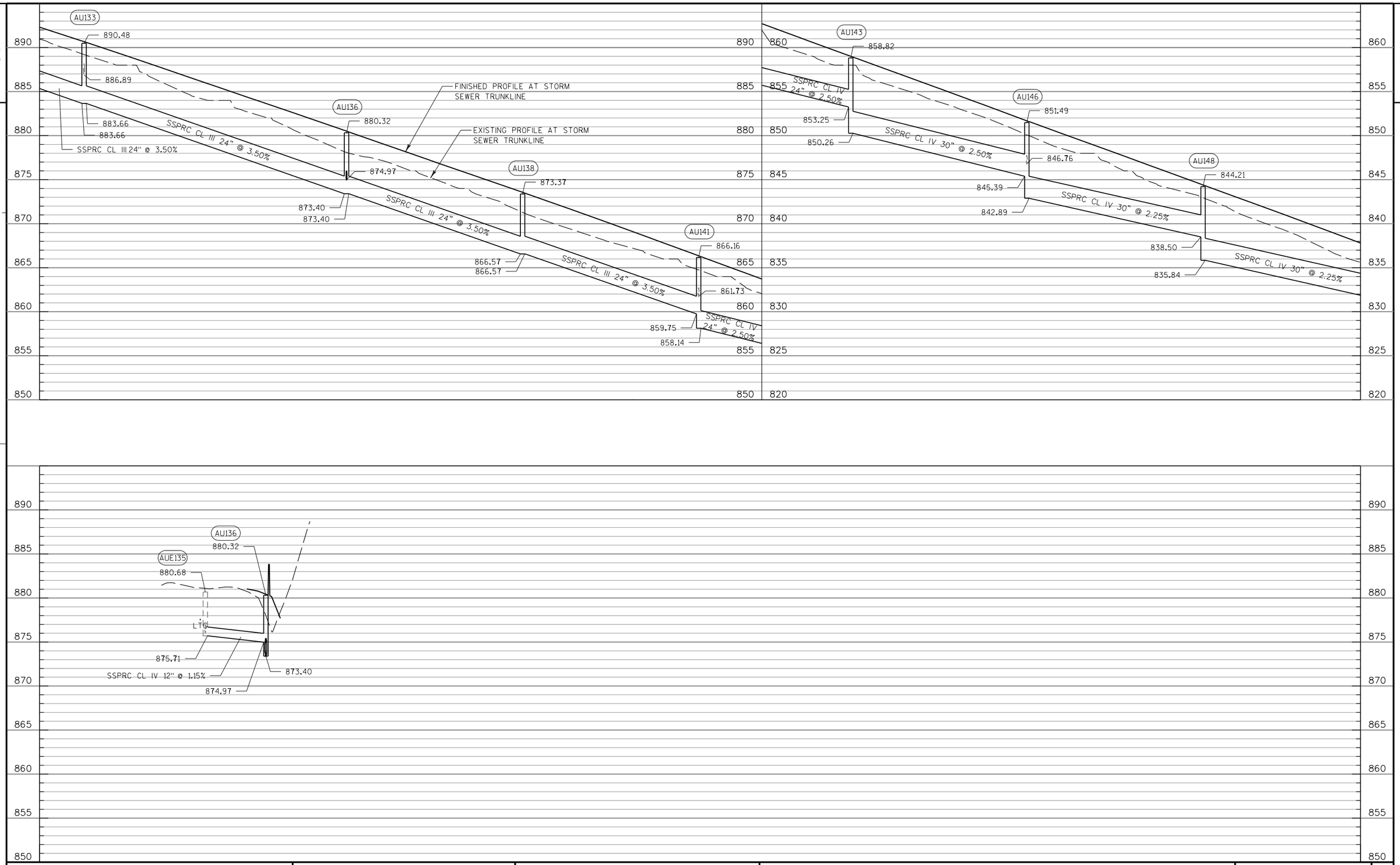
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 113	E

FILE NAME : \\kapur-assoc.com\kna\milw\s-drive\DOT\DOT_SE\110222-Zoo IC\I-94 E-W Aux Lane\Design\Roads\cds\022514a_ss.dgn PLOT DATE : 8/15/2017 PLOT BY : badams PLOT NAME : $FILE$ PLOT SCALE : 1:100
WISDOT/CADDS SHEET 41



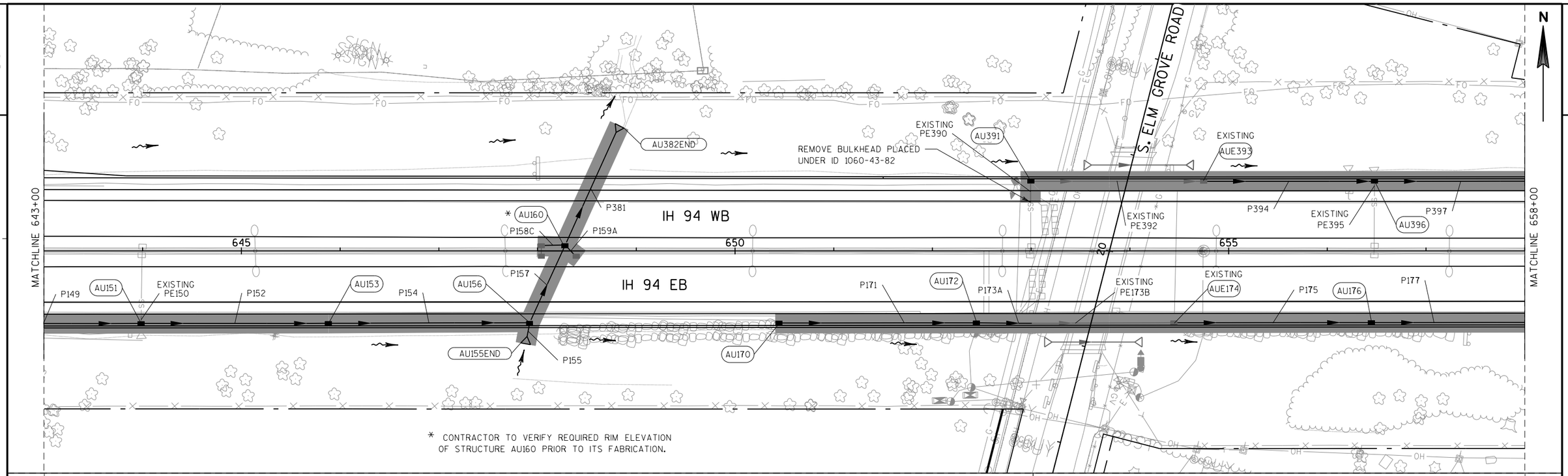


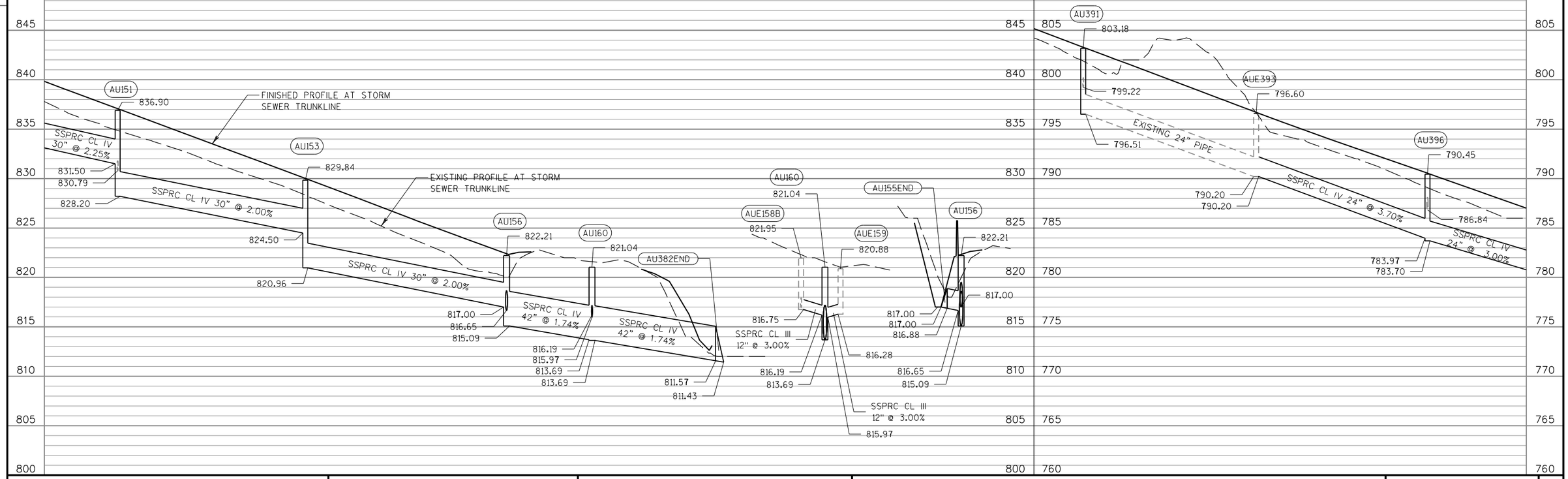
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 114	E



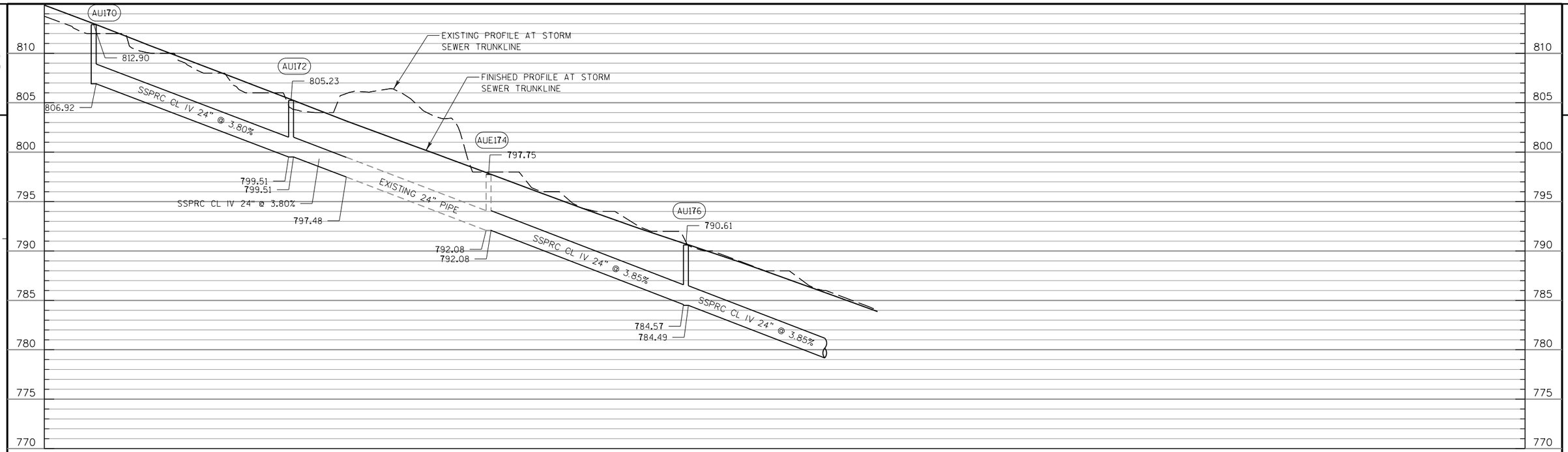
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 115 E

FILE NAME : \\kapur-assoc.com\kna\milw\s-drive\DOT\DOT_SE\110222-Zoo IC\I-94 E-W Aux Lane\Design\Roads\cds\022515a_ss.dgn PLOT DATE : 8/15/2017 PLOT BY : badams PLOT NAME : $FILE$ PLOT SCALE : 1:100
WISDOT/CADDS SHEET 41

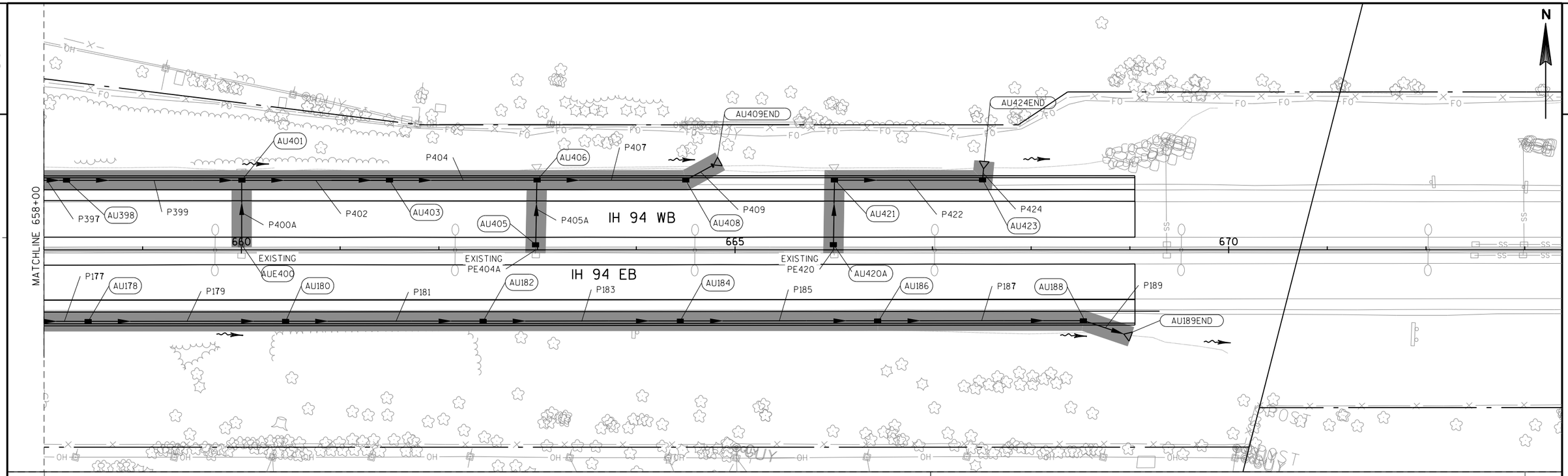


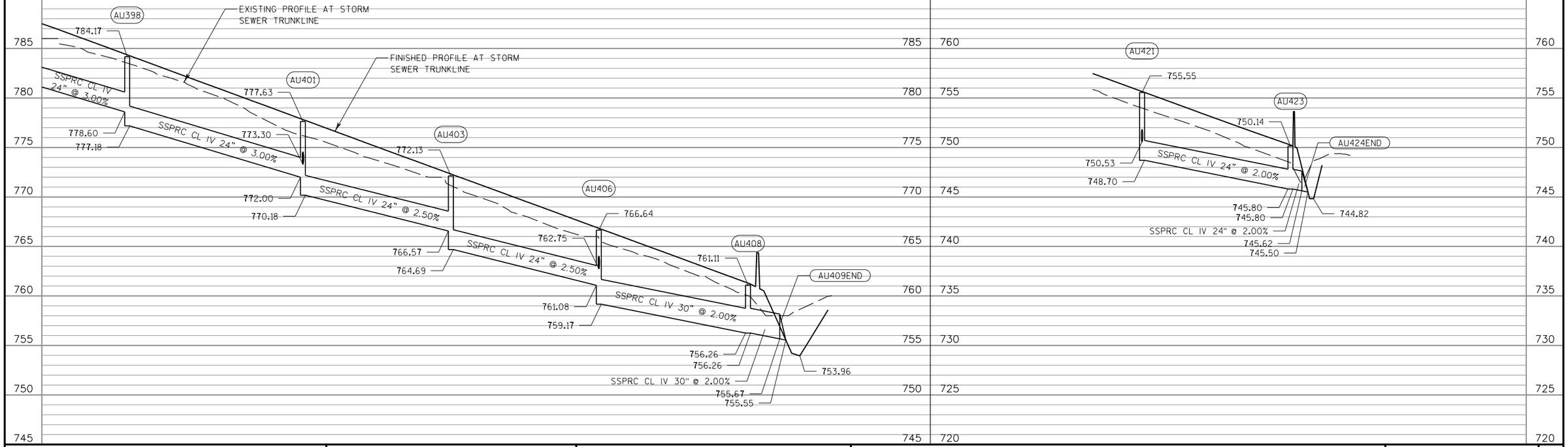


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 116 E

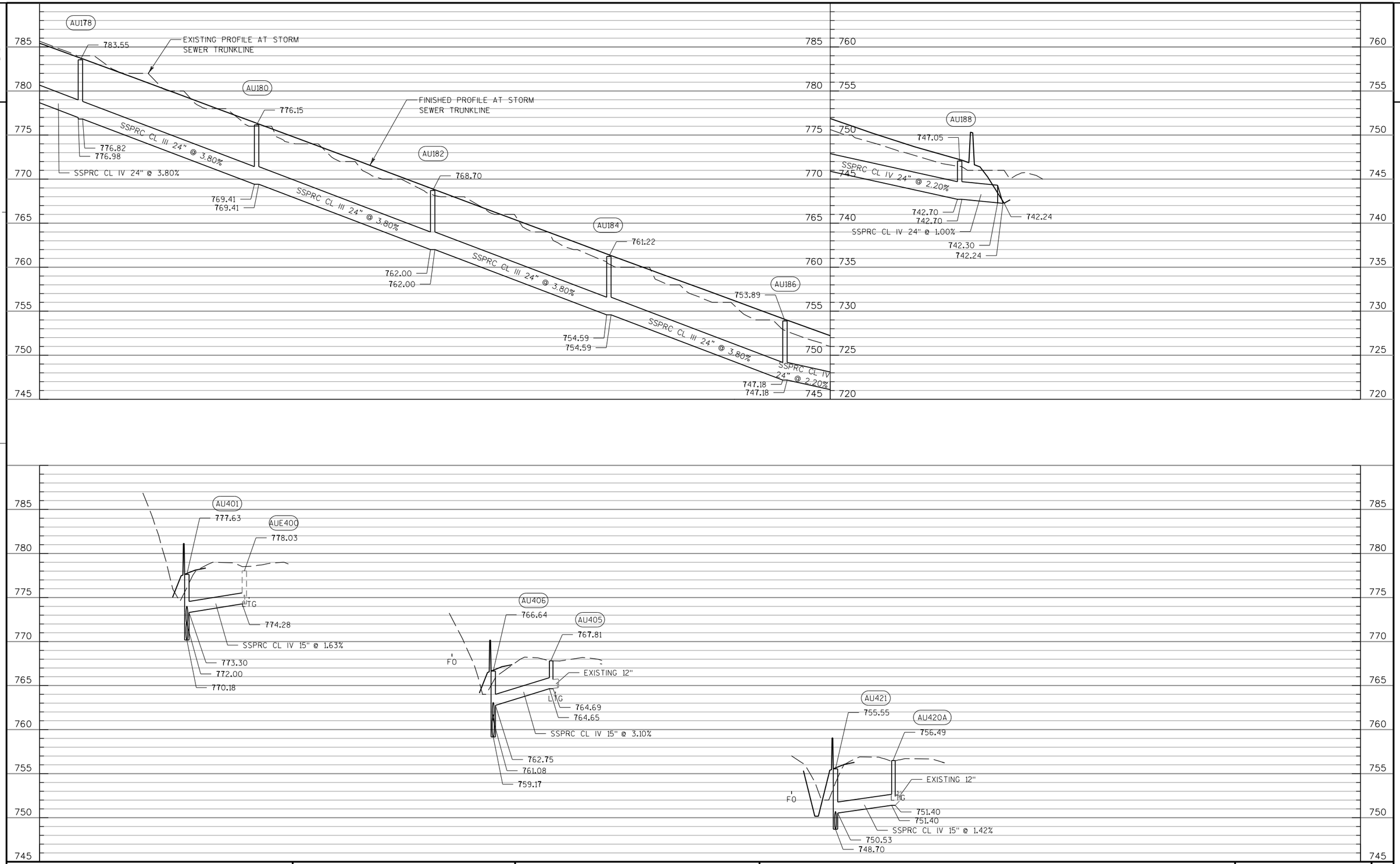


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 117	E



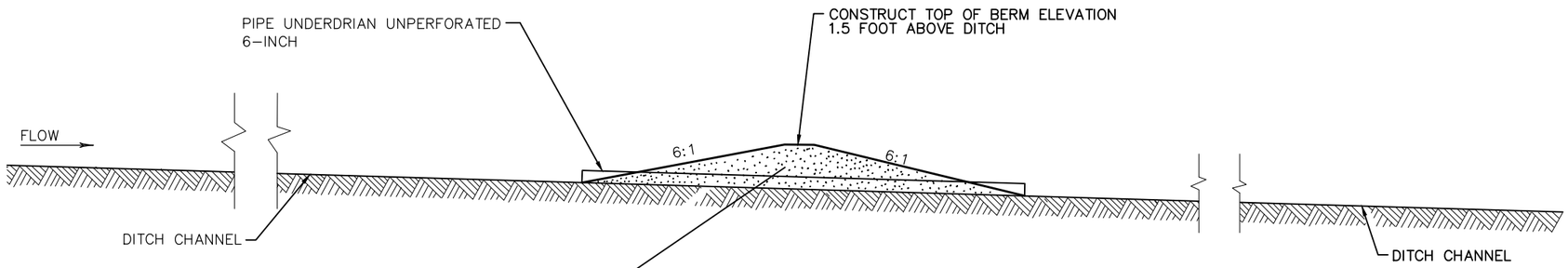


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 118	E

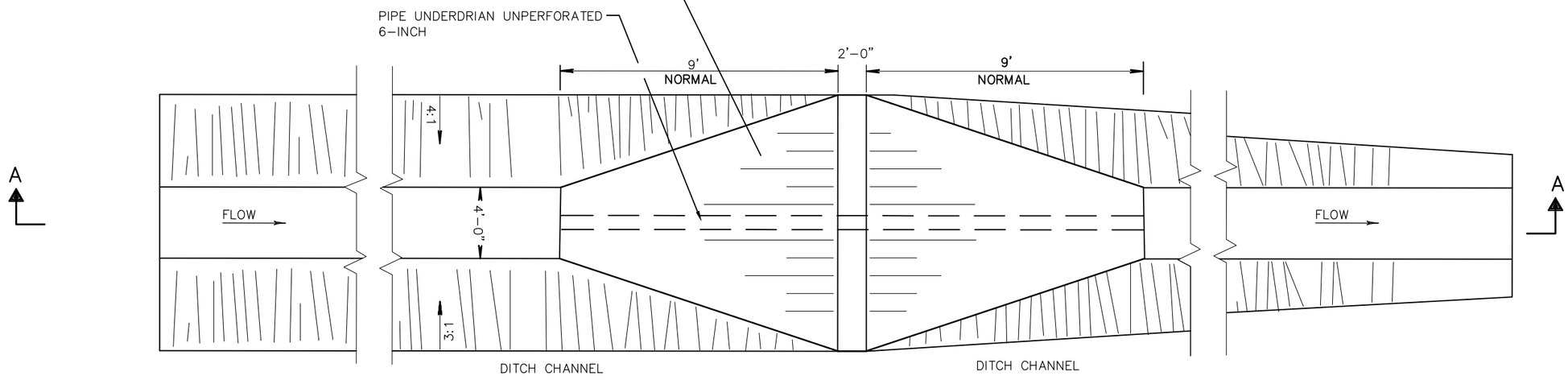


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 119 E

2



SECTION A–A



PLAN VIEW

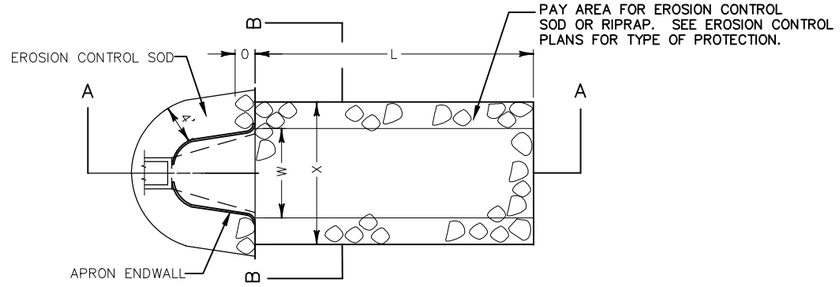
PERMANENT DITCH CHECK DETAIL

SUNNYSLOPE ROAD STA 125+28 LT

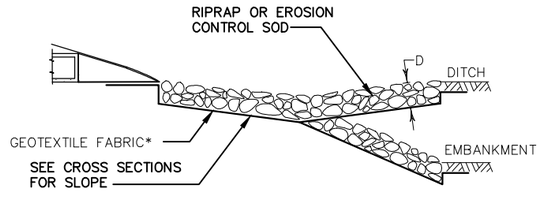
GENERAL NOTES

CONSTRUCT PERMANENT DITCH CHECK WHERE INDICATED ON PLAN

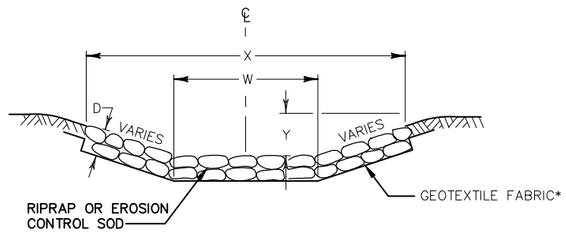
PROTECT DOWNSTREAM AND CULVERT ENTRANCES FROM SEDIMENTATION DURING AND AFTER CONSTRUCTION OF PERMANENT DITCH CHECKS



PLAN VIEW



SECTION A–A



SECTION B–B

L = 3 x W (NOR) OR 10' MIN
OR AS INDICATED IN THE PLANS
OR AS DIRECTED BY THE ENGINEER

D = 12" FOR RIPRAP LIGHT
18" FOR RIPRAP MEDIUM
24" FOR RIPRAP HEAVY

X = W+2' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
W+5' FOR CULVERT DISCHARGE
DOWN EMBANKMENT SLOPE

Y = 0' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
12" FOR CULVERT DISCHARGE
DOWN EMBANKMENT SLOPE

* TYPE R (FOR RIPRAP LIGHT ONLY)
TYPE HR (FOR RIPRAP HEAVY AND MEDIUM ONLY)

SOD, RIPRAP AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS

SEE EROSION CONTROL PLAN FOR LOCATIONS

2

GENERAL DRAINAGE NOTES

RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET GRATE OR CENTER OF MANHOLE GRATE.

ADJUSTMENT RINGS MAY BE USED TO A COMBINED MAXIMUM THICKNESS OF 6-INCHES.

LENGTH IS MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE. IF END STRUCTURE IS AN APRON ENDWALL, THE LENGTH OF PIPE IS MEASURED FROM THE CENTER OF THE UPSTREAM STRUCTURE TO THE END OF THE APRON ENDWALL.

LENGTH OF CULVERT IS FROM END OF APRON ENDWALL TO END OF APRON ENDWALL.

OFFSET IS MEASURED FROM THE REFERENCE LINE TO THE CENTER OF THE STRUCTURE. LOCATION OF STRUCTURE MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

DEPTH IS MEASURED FROM THE RIM ELEVATION TO THE BOTTOM INSIDE OF THE STRUCTURE AND DOES NOT INCLUDE THE THICKNESS OF THE STRUCTURE BASE OR BEDDING MATERIAL.

STATION AND OFFSET FOR CULVERTS IS TO THE PIPE CENTER LINE AT THE MID POINT OF THE RUN.

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

UTILITY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE. LOCATIONS SHOWN ARE TAKEN FROM EXISTING RECORDS AND PLANS. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION OF UTILITIES AND STRUCTURES SHOWN. VERIFY ALL LOCATIONS IN THE FIELD.

COORDINATE WITH DIGGERS HOTLINE TO FIELD LOCATE UTILITIES. SHEETING SHALL NOT GO THROUGH UTILITIES. ANY UTILITIES DAMAGED DUE TO CONTRACTOR ACTIVITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE TO THE COMPLETE SATISFACTION OF THE UTILITY OWNER.

VERIFY THE STORM SEWER CONNECTIONS, LOCATIONS, AND ELEVATIONS PRIOR TO ORDERING DRAINAGE STRUCTURES AND PIPES. NOTIFY THE ENGINEER OF ANY DEVIATIONS FROM THE INFORMATION SHOWN ON THE PLANS PRIOR TO INSTALLING THE PROPOSED STORM SEWER.

PROVIDE TEMPORARY POSITIVE DRAINAGE THROUGHOUT THE PROJECT DURING ALL PROJECT STAGES. PROVIDING TEMPORARY DRAINAGE IS INCIDENTAL TO CONSTRUCTION.

SUPPORTING UTILITIES DURING STORM SEWER CONSTRUCTION IS INCIDENTAL TO STORM SEWER PIPE AND/OR STORM SEWER STRUCTURE.

CONCRETE PIPE JOINT TIES SHALL CONNECT ALL CONCRETE APRON ENDWALLS AND THE LAST THREE PIPE SEGMENTS PRECEDING THE APRON ENDWALL. THE COST OF JOINT TIES SHALL BE INCIDENTAL TO THE STORM SEWER PIPE.

STORM SEWER LEGEND

- (XX**) PROPOSED DRAINAGE STRUCTURE
- PROPOSED MANHOLE
- PROPOSED INLET
- PROPOSED ENDWALL
- PROPOSED PIPE (PLAN VIEW)
- PROPOSED DITCH

STA 121+93, 33.1' LT
APRON ENDWALLS FOR CPRC 15-INCH A02

STA 122+64, 37.5' LT
MANHOLES 6-J MH04A

STA 124+21, 37.5' LT
MANHOLES 6-J MH04

STA 124+36, 56.3' LT
INLETS MEDIAN 1G-MS I04

I05 STA 124+74, 60.9' LT
INLETS MEDIAN 1G-MS

I06 STA 124+93, 29.0' LT
INLETS 2x3-H

1.5-FT DEEP STONE DITCH CHECK

STA 125+69, 50.1' LT
APRON ENDWALLS FOR CPRC 12-INCH A04

STA 126+00, 29.0' LT
INLETS 4-H I08

STA 126+01, 17.0' RT
INLETS 2x3-H I07

I02 STA 122+48, 15.7' RT
INLETS 2x3-H

I03 STA 124+18, 17.0' RT
INLETS 2x3-H

STA 121+44, 18.9' RT
APRON ENDWALLS FOR CPRC 12-INCH A01

MH01 STA 122+46, 25.0' RT
MANHOLES 4-J

MH02 STA 124+18, 25.0' RT
MANHOLES 4-J

I01 STA 121+85, 20.2' RT
INLETS MEDIAN 1G-MS

STA 121+95.90

125

N

905
900
895
890

MH04
901.2
894.3
891.5
888.4
888.5
886.09
A02
SSPRC CLASS III 42-INCH @ 2.0%
SSPRC CLASS III 15-INCH @ 3.0%

MH04
901.2
I04
900.24
896.1
895.6
SSPRC CLASS III 15-INCH @ 2.2%

I04
I05
900.24
900.3
896.1
897.0
SSPRC CLASS III 15-INCH @ 2.4%

I05
I06
900.3
903.16
897.25
897.75
SSPRC CLASS III 12-INCH @ 1.3%

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: MILWAUKEE	STORM SEWER - SUNNYSLOPE RD	SHEET E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\DRAINAGE_SUNNYSLOPE\PLAN SHEETS\POST DRAFT - 022501-SS.DWG
LAYOUT NAME - 022501
PLOT DATE : 5/1/2017 10:16 AM PLOT BY : ANDERSON, SCOTT M PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 41

STA 121+93, 33.1' LT
APRON ENDWALLS FOR CPRC 15-INCH A02

STA 122+64, 37.5' LT
MANHOLES 6-J MH04A

STA 124+36, 56.3' LT
INLETS MEDIAN 1G-MS I04

STA 124+21, 37.5' LT
MANHOLES 6-J MH04

I05 STA 124+74, 60.9' LT
INLETS MEDIAN 1G-MS

I06 STA 124+93, 29.0' LT
INLETS 2x3-H

1.5-FT DEEP STONE DITCH CHECK

STA 121+95.50

STA 125+69, 50.1' LT
APRON ENDWALLS FOR CPRC 12-INCH A04

STA 126+00, 29.0' LT
INLETS 4-H I08

125

I02 STA 122+48, 15.7' RT
INLETS 2x3-H

I03 STA 124+18, 17.0' RT
INLETS 2x3-H

STA 126+01, 17.0' RT
INLETS 2x3-H I07

STA 121+44, 18.9' RT
APRON ENDWALLS FOR CPRC 12-INCH A01

MH01 STA 122+46, 25.0' RT
MANHOLES 4-J

MH02 STA 124+18, 25.0' RT
MANHOLES 4-J

I01 STA 121+85, 20.2' RT
INLETS MEDIAN 1G-MS

I03
MH02
900.06
900.60
896.05
896.00
SSPRC CLASS III 12-INCH @ 1.0%

MH01
I02
890.30
890.60
887.06
887.00
SSPRC CLASS III 12-INCH @ 1.0%

900.60
MH02
896.00
MH01
890.60
SSPRC CLASS III 12-INCH @ 5.0%
887.00
I01
SSPRC CLASS III 12-INCH @ 1.0%
885.63
885.00
SSPRC CLASS III 12-INCH @ 3.8%
882.26
882.67

900
895
890
885

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: MILWAUKEE	STORM SEWER - SUNNYSLOPE RD	SHEET 124 E

2

N

AU122 STA 128+92, 72.5' LT
MANHOLES 6-C

A07 STA 131+20, 65.1' LT
APRON ENDWALLS FOR CPRC 12-INCH

109 STA 128+32, 17.0' LT
INLETS 4-H

111 STA 131+71, 17.3' LT
INLETS 4-H

PI: 626+31.80

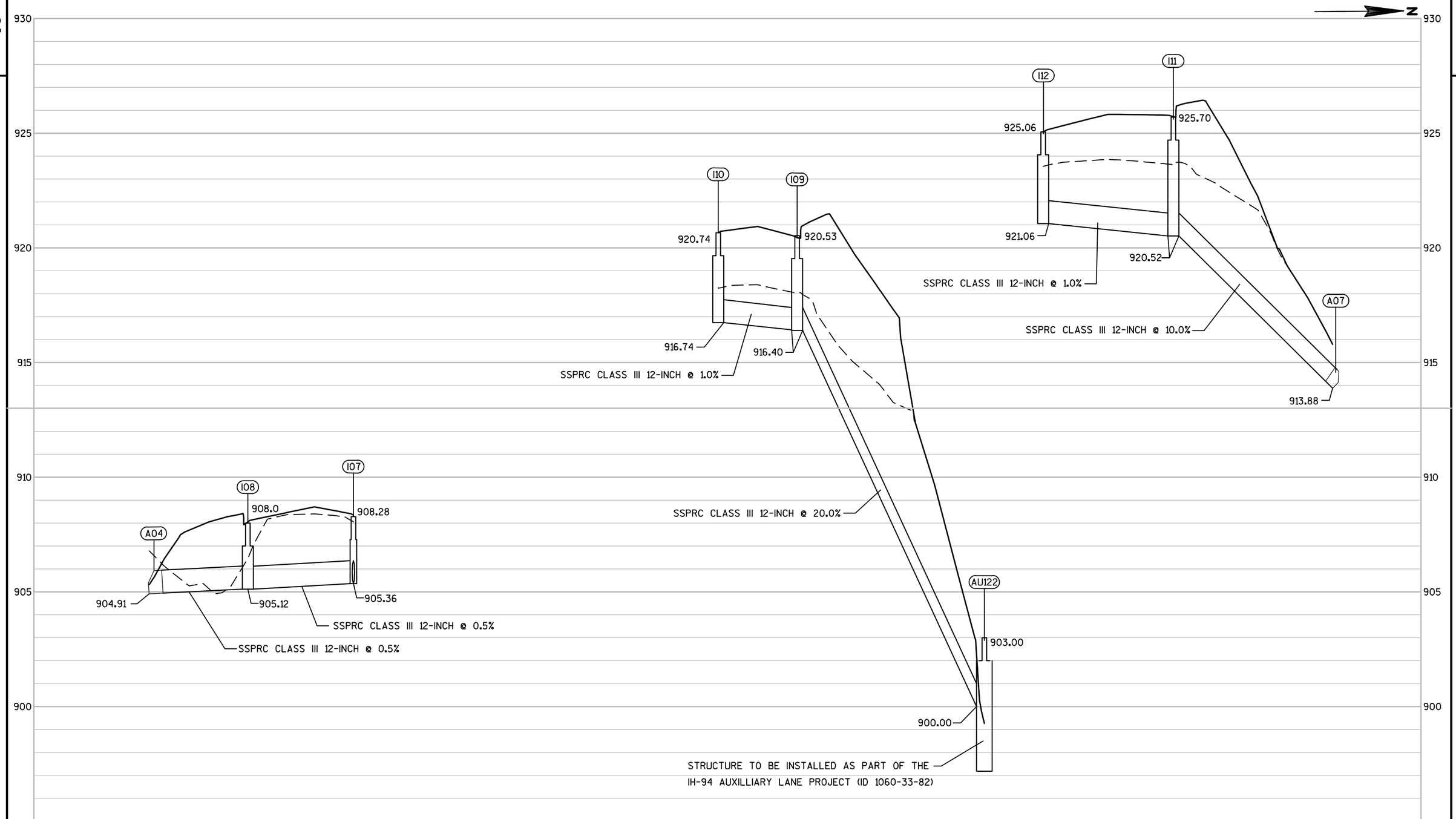
110 STA 128+37, 17.0' RT
INLETS 4-H

STA 132+16, 17.0' RT
112NEW INLETS 4-H

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: MILWAUKEE	STORM SEWER	SHEET E

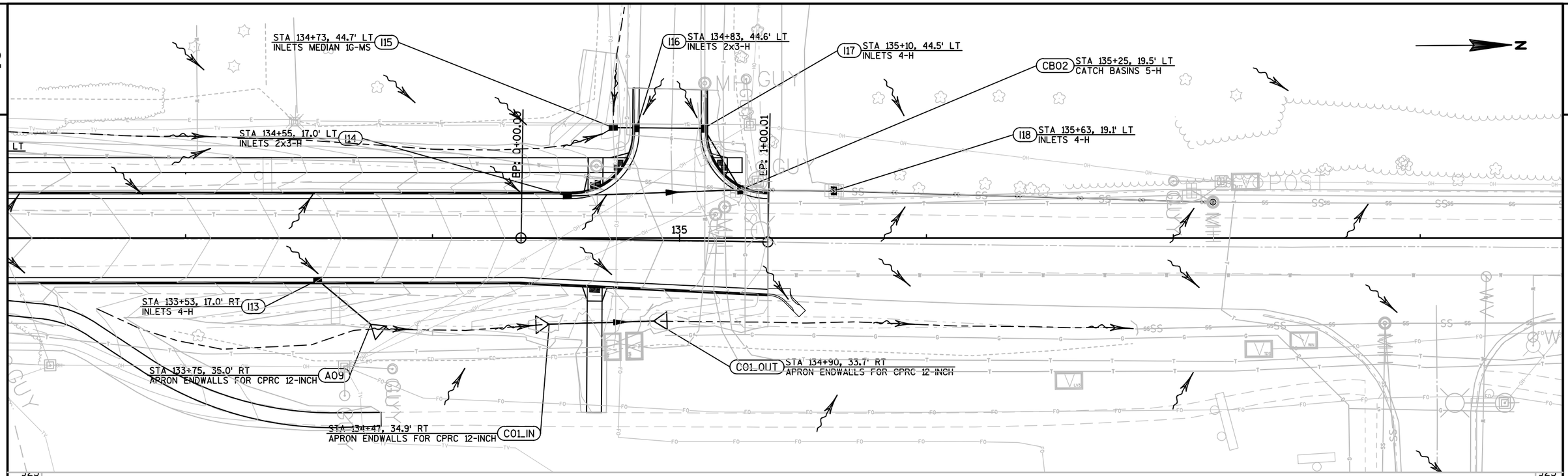
FILE NAME : W:\PDS\C3D\10603203\73\DSN\DRAINAGE_SUNNYSLOPE\PLAN SHEETS\POST DRAFT - 022501-SS.DWG
LAYOUT NAME - 022502

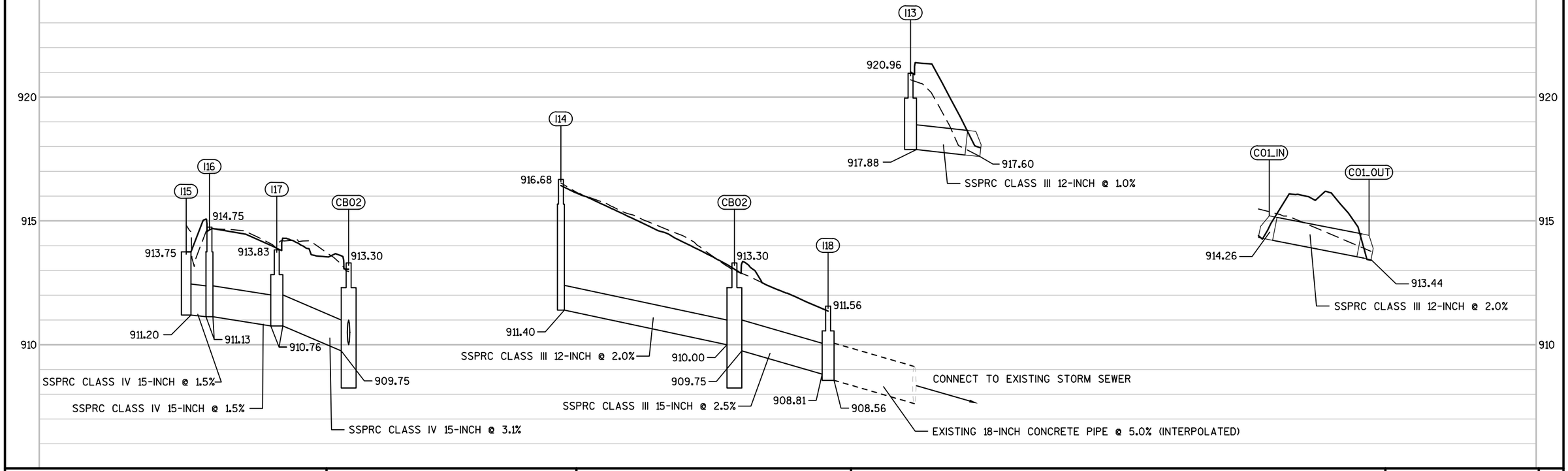
PLOT DATE : 2/27/2017 8:40 AM PLOT BY : ANDERSON, SCOTT M PLOT NAME : PLOT SCALE : 1 IN:40 FT



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: MILWAUKEE	STORM SEWER - SUNNYSLOPE RD	SHEET 126	E

2





PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: MILWAUKEE	STORM SEWER - SUNNYSLOPE RD	SHEET 127	E

2

10

EXIT
301B

REMOVE

EXIT
301B

E5-1B (5)

10B

W5-54S (2M)

10A

W5-54S (2M)

9

EXIT 301A

Moorland Rd
SOUTH
1/4 MILE

COVER PLAQUE
OVER ARROW
24"x36"

REMOVE TYPE I SIGN ON
SIGN BRIDGE
MOVE TEMPORARILY TO
WOOD POSTS

8

EXIT 301A

Moorland Rd
NORTH

REMOVE TYPE I SIGN ON
SIGN BRIDGE
MOVE TEMPORARILY TO
WOOD POSTS

7A

7

EXIT 301A

O

Moorland Rd
SOUTH
1/4 MILE

TYPE I SIGN
ON SIGN BRIDGE

EXIT 301B

6A

O

Moorland Rd
NORTH

EXIT ONLY

6

TYPE I SIGN
ON SIGN BRIDGE

N

CUY
SS
MH
IH 94
536
538
540
542
544
546
548
550
WELL
GUY
POST

S-67-315

EXISTING SIGN BRIDGE
S-67-315 REMOVE AND
RELOCATE TO STATION 588+00
SEE SIGN BRIDGE PLANS

EAST
94
MILE
301
.4

D10-5

WEST
94
MILE
301
.4

D10-5

MOVE TO
LIGHT POLE

1 2

EAST
94
MILE
301
.6

D10-5

WEST
94
MILE
301
.6

D10-5

MOVE TO
LIGHT POLE

3 4

M1-1

EAST
INTERSTATE
94

J4-1(5)

5

EAST
INTERSTATE
94

REMOVE

SHEET 1 OF 8

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 128	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\SIGN\023201_PS.DWG
LAYOUT NAME - 023201_PS

PLOT DATE : 4/25/2017 2:54 PM PLOT BY : DODGE, BRIAN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

EXIT
15
MPH
REMOVE

EXIT
15
MPH
W13-2D (5)
15

(SIS)
FOOD
TYPE I SIGN
MOVE BY OTHERS
CONTACT WISC.
BUSINESS LOGOS
608-579-1570

GUY

TH 94

592
594
596
598
598
600
602
604
606

EAST
94
MILE
301
.8
D10-5
WEST
94
MILE
301
.8
D10-5
MOVE TO
LIGHT POLE
11
12

SPEED
LIMIT
55
R2-1(5)
13
SPEED
LIMIT
55
REMOVE

SPEED
LIMIT
55
R2-1(5)
ON LIGHT
POLE
14
SPEED
LIMIT
55
REMOVE

GUY
GUY
GUY
GUY

SHEET 2 OF 8

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 129	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\SIGN\023201_PS.DWG
LAYOUT NAME - 023202_PS

PLOT DATE : 4/5/2017 8:53 AM PLOT BY : DODGE, BRIAN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

CRASH
INVESTIGATION
SITE
EXIT 301A

REMOVE

31

CRASH
INVESTIGATION
SITE
EXIT 301A

D4-52
TYPE I SIGN
ON STEEL POST
REMOVE EXISTING
STEEL POST

30

WEST
94
AHEAD

29A

EXIT 301A

29

0
Moorland Rd
SOUTH
3/4 MILE

TYPE I SIGNS
ON SIGN BRIDGE

EXIT 301B

28A

0
Moorland Rd
NORTH
1/2 MILE

28

EXIT ONLY

N

(SIS)
LODGING

TYPE I SIGN
MOVE BY OTHERS
CONTACT WISC.
BUSINESS LOGOS
608-579-1570

23 24

REMOVE
ON STEEL
POST TOP
OF WALL

606 608 610 612 614 616 618 620

S-67-317

GRGE

EAST 94 MILE 301 .0
WEST 94 MILE 301 .0

D10-5 D10-5
MOVE TO
LIGHT POLE

17 18

EAST 94 MILE 301 .1
WEST 94 MILE 301 .1

D10-5 D10-5
MOVE TO
LIGHT POLE

19 20

21 22

R3-4 (5)

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

R3-4-A (5)

EAST 94 MILE 301 .2
WEST 94 MILE 301 .2

D10-5 D10-5
MOVE TO
LIGHT POLE

25 26

HWY 794
Public Museum
EXIT 1H
Performing Arts Ctr
EXIT 1H
Milw School of Engr
EXIT 1E

27

MOVE
DO NOT REPLACE

SHEET 3 OF 8

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 130	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\SIGN\023201_PS.DWG
LAYOUT NAME - 023203_PS

PLOT DATE : 4/5/2017 8:53 AM PLOT BY : DODGE, BRIAN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

SUNNY SLOPE RD

IH 94

STOP REMOVE
STOP R1-1(2S) 57

63 RIGHT LANE PEDS ONLY MOVE
62 NO PARKING ANY TIME R7-1-D (2S)
NO PARKING ANY TIME REMOVE

SPEED LIMIT 35 REMOVE
59 SPEED LIMIT 35 R2-1(2S)

53 REMOVE

REMOVE 56 REMOVE
W5-52L(2S)

Sunny Slope Rd 14000 WEST REMOVE
Sunny Slope Rd 14000 WEST 55 D1-65 MOD

51 EAST 94 MILE 302 .5 D10-5
52 WEST 94 MILE 302 .5 D10-5
MOVE TO LIGHT POLE

60 EAST 94 MILE 302 .3 D10-5
61 WEST 94 MILE 302 .3 D10-5
MOVE TO LIGHT POLE

58 REMOVE W5-52R(2S)

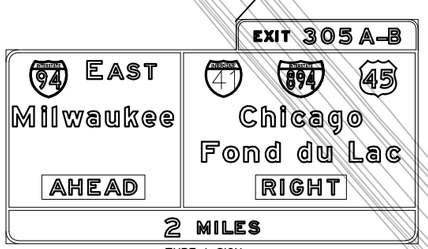
SPEED LIMIT 55 REMOVE
40 SPEED LIMIT 55 R2-1(5) ON BRIDGE

49 50 PRIVATE SIGN MOVE

NO PARKING ANY TIME 47 48 R7-1-D (2S) MOUNT ON FENCE

34 32 28 26

SIGN



TYPE I SIGN
TO BE INSTALLED
UNDER 1060-33-81

54 Sunny Slope Rd 14000 WEST D1-65 MOD
Sunny Slope Rd 14000 WEST REMOVE

REMOVE 32 W5-52L(2S)

44 SPEED LIMIT 35 REMOVE
SPEED LIMIT 35 R2-1(2S)

REMOVE 35 W5-52R(2S) ON STEEL POST

STOP REMOVE
57 STOP R1-1(2S) AT PARK ENTRANCE FACING WEST

NO PARKING ANY TIME 45 46 R7-1-D (2S) MOUNT ON FENCE

41 W5-52R(2S) REMOVE

36 EAST 94 MILE 302 .4 D10-5
37 WEST 94 MILE 302 .4 D10-5
MOVE TO LIGHT POLE

42 RIGHT LANE PEDS ONLY MOVE
43 NO PARKING ANY TIME R7-1-D (2S)
NO PARKING ANY TIME REMOVE

NA ME STR EET
STREET NAME SIGN BY OTHERS (CITY)

34 STOP R1-1(2S) STOP REMOVE

SHEET 4 OF 8

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 131	E

2

2

N

74A

73A

EXIT 301B

0

Moorland Rd

NORTH

1 MILE

EXIT ONLY

TYPE I SIGN
ON SIGN BRODGES

73

EXIT 301A

0

Moorland Rd

SOUTH

1¼ MILES

TYPE I SIGN
ON SIGN BRODGES

74

75

WEST

INTERSTATE 94

AHEAD

TYPE I SIGN
ON SIGN BRODGES

76

EXIT 301 A-B

Moorland Rd

1 MILE

REMOVE TYPE I SIGN
& STEEL POSTS

Brookfield

NEXT 2 EXITS

REMOVE
TYPE I SIGN
& STEEL POSTS

Brookfield

NEXT 2 EXITS

71

TYPE I SIGN
ON STEEL POSTS

85

SPEED LIMIT 55

REMOVE

87

FRANK LLOYD WRIGHT

FOLLOW 94

EXISTING
SIGN ON
LIGHT POLE
MOVE

S-67-318

IH 94

636 638 640 642 644 646 648 650

EAST 94 MILE 302 .6

WEST 94 MILE 302 .6

D10-5 D10-5
MOVE TO
LIGHT POLE

64 65

SPEED LIMIT 55

86

R2-1(5)
ON LIGHT
POLE

SPEED LIMIT 55

REMOVE

68

TRAFFIC INFO
TUNE RADIO TO
1610 AM
IMPORTANT
WHEN FLASHING

TYPE I SIGN ON
STEEL POSTS SEE
FTMS FOR FLASHER

TRAFFIC INFO
TUNE RADIO TO
1610 AM
IMPORTANT
WHEN FLASHING

EAST 94 MILE 302 .7

WEST 94 MILE 302 .7

D10-5 D10-5
MOVE TO
LIGHT POLE

66 67

72

SLOWER TRAFFIC KEEP RIGHT

R4-3 (5)
ON LIGHT
POLE

SLOWER TRAFFIC KEEP RIGHT

REMOVE

41 FOLLOW INTERSTATE 41

TYPE I SIGN
MOVE
NEW STEEL POSTS

EAST 94 MILE 302 .8

WEST 94 MILE 302 .8

D10-5 D10-5
MOVE TO
LIGHT POLE

69 70

SHEET 5 OF 8

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 132	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\SIGN\023201_PS.DWG
LAYOUT NAME - 023205_PS

PLOT DATE : 4/5/2017 8:54 AM PLOT BY : DODGE, BRIAN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

EXIT 305 A–B

41 | 894 | 45 | ✈

BYPASS
Chicago
Fond du Lac

EXIT ONLY

EXIT 304

100

Mayfair Rd
108 th St
To Greenfield Ave
1/4 MILE

94 EAST
Milwaukee

TYPE I SIGNS
TO BE INSTALLED
UNDER 1060-33-81

Elm Grove Rd
13200 WEST
REMOVE

Elm Grove Rd
13200 WEST
82
D1-65 MODIFIED

ELM GROVE RD
BRIDGE CONSTRUCTED
UNDER 1060-43-82

ELM GROVE RD

IH 94

S-67-47
TO BE INSTALLED
& SIGNS UNDER
1060-33-~~81~~

NEW S-67-418
SIGN STRUCTURE

OVERSIZE LOADS
RESTRICTED
BEYOND NEXT EXIT
88
TYPE I SIGN
MOVE INSTALLED
UNDER 1060-33-81

Elm Grove Rd
13200 WEST
81
D1-65 MODIFIED

Elm Grove Rd
13200 WEST
REMOVE

EAST 94 MILE 302 .9 | WEST 94 MILE 302 .9
D10-5 D10-5
MOVE TO
LIGHT POLE
77 78

EXIT 305B
NORTH
45
LEFT

EXIT 305A
EAST SOUTH
894 45
RIGHT

2 MILES

TYPE I SIGN
TO BE REMOVED
UNDER 1060-33-81

EAST 94 MILE 303 .0 | WEST 94 MILE 303 .0
D10-5 D10-5
MOVE TO
LIGHT POLE
79 80

Greenfield Ave
TRAFFIC
USE THIS EXIT

TYPE I SIGN
TO BE INSTALLED
UNDER 1060-33-81

SHEET 6 OF 8

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 133	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\SIGN\023201_PS.DWG
LAYOUT NAME - 023206_PS

PLOT DATE : 4/5/2017 8:54 AM PLOT BY : DODGE, BRIAN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

88

MOVE OVER OR SLOW
DOWN FOR STOPPED
EMERGENCY VEHICLES

R5-60
MOVE
ON 3 WOOD POST

83 84

EAST 94 MILE 303 .1

WEST 94 MILE 303 .1

D10-5 D10-5
MOVE TO
LIGHT POLE

EXISTING TYPE I SIGN
BRIDGE TO REMAIN
BUTTERFLY SIGN BRIDGE

IH 94

666 668 670 672 674 676 678

Milwaukee Co Zoo
CRASH INVESTIGATION SITE
EXIT 304

TYPE I SIGN
TO BE INSTALLED
UNDER 1060-33-81

Wisconsin
Lutheran College
EXIT 304 A-B

TO BE REMOVED
UNDER 1060-33-81

Moorland Rd 1¾
18 164 SOUTH Y 4¾
F 7

TYPE I SIGN

100 ¾
41 894 45 1
84th St 2½

TO BE INSTALLED
UNDER 1060-33-81

TYPE I SIGN

SHEET 7 OF 8

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 134	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\SIGN\023201_PS.DWG
LAYOUT NAME - 023207_PS

PLOT DATE : 4/5/2017 8:54 AM PLOT BY : DODGE, BRIAN M PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

568

570

572

574

I 94

89

RIGHT LANE WEST

94

ONLY

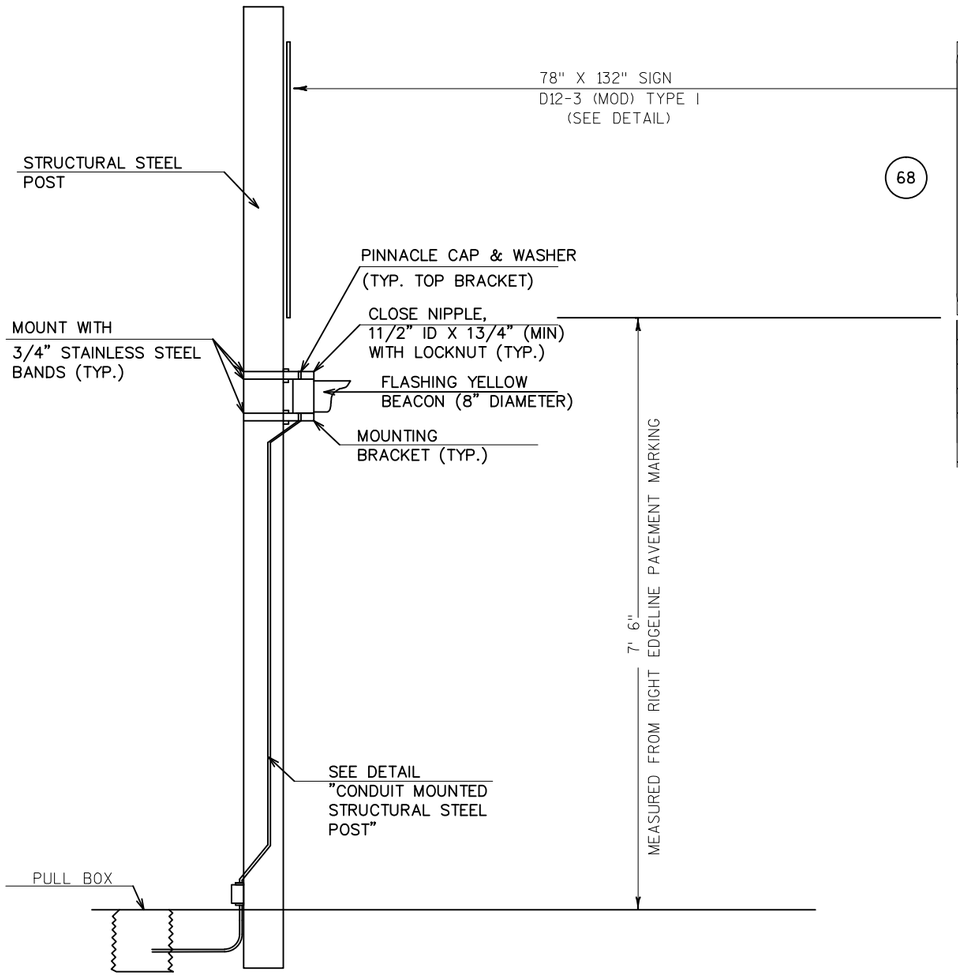
S. MOORLAND RD.

SS

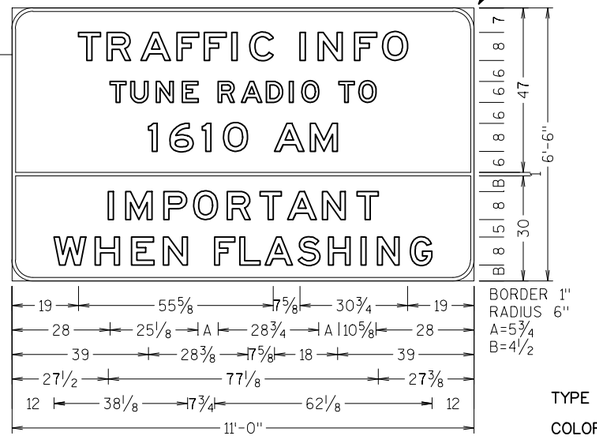
SHEET 8 OF 8

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 135	E

2



68



SIGN IS ATTACHED TO STRUCTURAL STEEL POSTS TYPE A

BORDER 1"
RADIUS 6"
A=5 3/4
B=4 1/2

TYPE 1

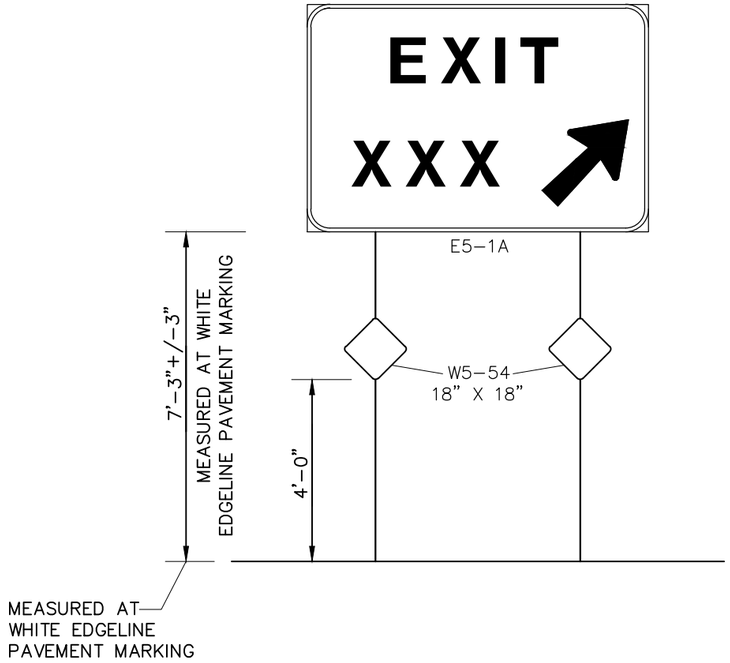
COLOR:
BLUE BACKGROUND – TOP
WHITE MESSAGE – TOP
YELLOW BACKGROUND – BOTTOM
BLACK MESSAGE – BOTTOM

TYPICAL DETAIL
HARS FLASHER ASSEMBLY
(NOT TO SCALE)

NOTES:

1. ALL SIGNS ARE TYPE 1 (EXCEPT AS NOTED) – TYPE SH REFLECTIVE–REFERENCE WIS DOT STANDARD SPECIFICATION FOR HIGHWAY AND STRUCTURE CONSTRUCTION" LATEST EDITION.
2. 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.
3. ALL CAP LETTERS ARE SERIES E MODIFIED. ALL UPPER AND LOWER CASE LETTERS ARE SERIES E MODIFIED.
4. SIGN NUMBERS SHOWN BY: ( )
5. DO NOT SCALE.

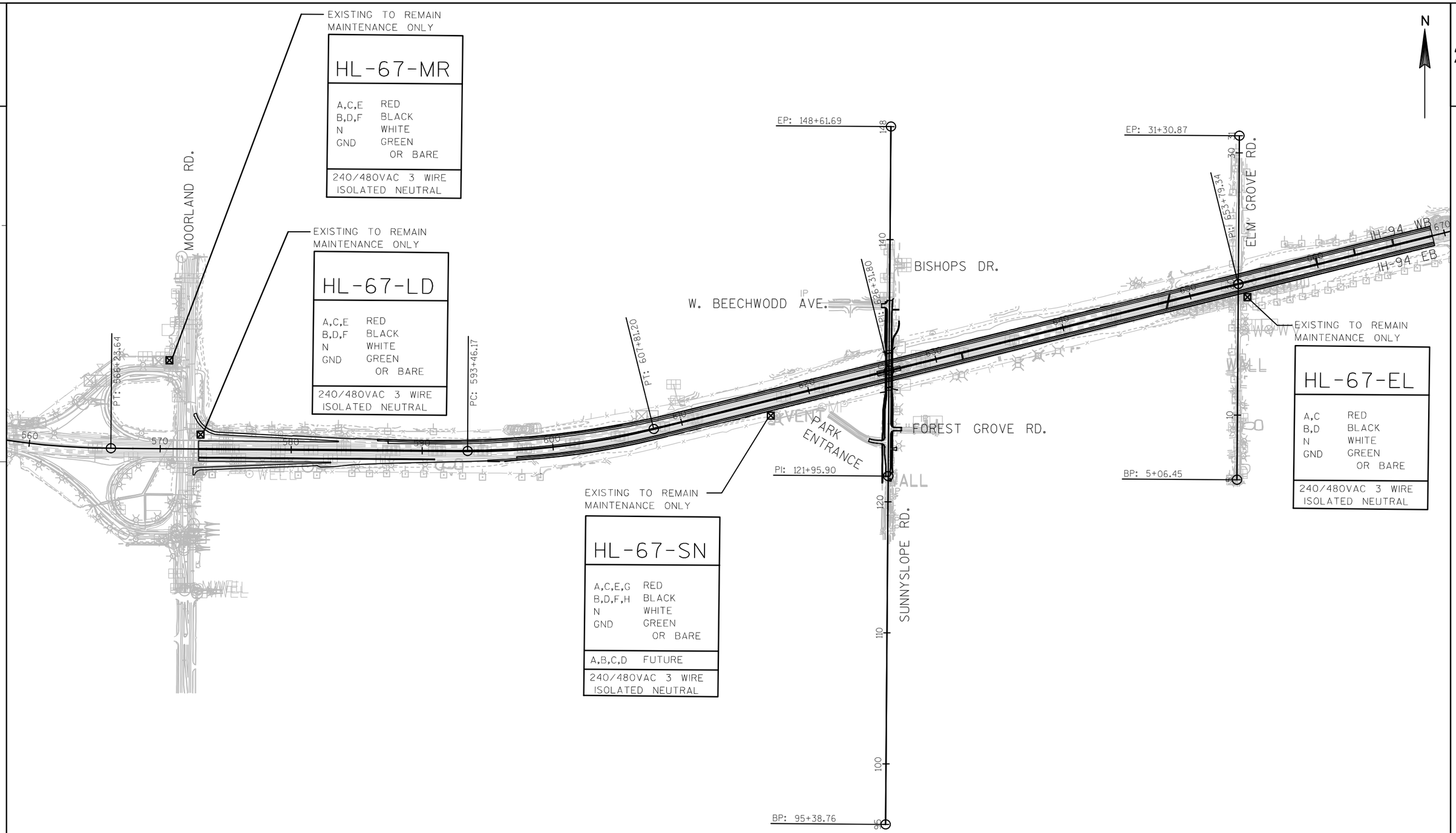
2



SEE STATE PLATE A4–2
FOR LOCATION LATERALLY
OF E5–1A SIGN.

EXIT GORE SIGN DETAIL

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	EXIT GORE SIGN DETAIL	SHEET 137	E



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PROJECT OVERVIEW - LIGHTING	SHEET 138	E

2

GENERAL NOTES:

FREEWAY LIGHTING SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTIONS 652 TO 657 AND 659 EXCEPT:

1. DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

2. LOCATIONS OF THE PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION WILL REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE ENGINEER, APPROPRIATE ADJUSTMENT OF CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.

3. THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION ON THE CONDUIT.

4. ALL OPEN AND UN-TERMINATED CONDUITS SHALL BE CAPPED OR PLUGGED WITH ENGINEER APPROVED FITTINGS IMMEDIATELY AFTER INSTALLATION.

5. BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

6. ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

7. PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT THAT CAN BE EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

8. CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX-TO-PULL BOX, JUNCTION BOX OR BASE-TO-BASE, ETC.) UNLESS OTHERWISE NOTED ON PLANS.

9. PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUITS.

10. CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS (.PDF FORMAT) FOR ALL THE WORK BEING DONE.

11. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.

12. UNDERGROUND WIRE & CONDUIT SHOWN ON REMOVAL PLANS FOR REMOVAL SHALL BE ABANDONED IN PLACE UNLESS DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.

13. PROVIDE MINIMUM CABLE SLACK AS MENTIONED BELOW:
    PULL BOXES: 3-FT
    EMBEDDED JUNCTION BOXES: 3-FT
    DISTRIBUTION CENTER/LOAD CENTER: 10-FT
POLES: 5-FT IN AND 5-FT OUT

STAGING NOTES

MAINTAIN LIGHTING AT ALL TIMES DURING CONSTRUCTION USING EXISTING LIGHTING, PROPOSED TEMPORARY LIGHTING, FINAL LIGHTING OR COMBINATIONS.

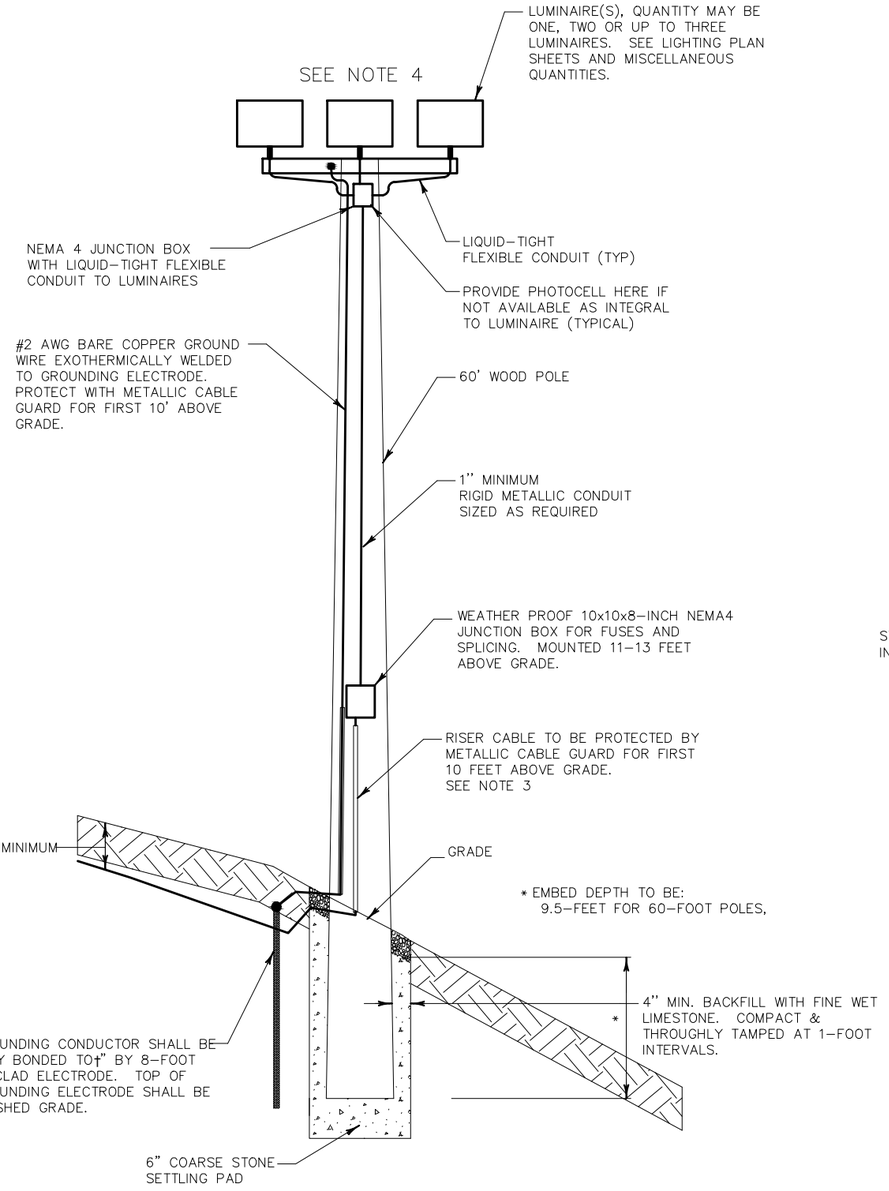
DO NOT REMOVE EXISTING LIGHTING UNTIL THE NEW OR TEMPORARY LIGHTING IS OPERATIONAL. REFER TO DRAWINGS FOR STAGING INFORMATION.

MAINTAINING SYSTEM CONTINUITY SHALL BE INCIDENTAL TO THE REMOVAL/SALVAGE BID ITEM.

DUE TO THE PHASING OF CONSTRUCTION SOME FINAL LIGHTING UNITS MAY BE ORPHANED UNTIL A LATER STAGE IS COMPLETE. IT IS AT THE DISCRETION OF THE CONTRACTOR TO SCHEDULE THESE ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE PLACEMENT OF RACEWAY THAT SPANS TWO DIFFERENT PHASES OF CONSTRUCTION.

TEMPORARY LIGHTING MAY ILLUMINATE AN AREA BEFORE EXISTING LIGHTING UNITS IN THE AREA ARE SCHEDULED FOR REMOVAL. THE SCHEDULING OF REMOVAL IS AT THE DISCRETION OF THE CONTRACTOR WITH THE PROVISION THAT LIGHTING OF THE ROADWAY IS PROVIDED AT ALL TIMES.

2

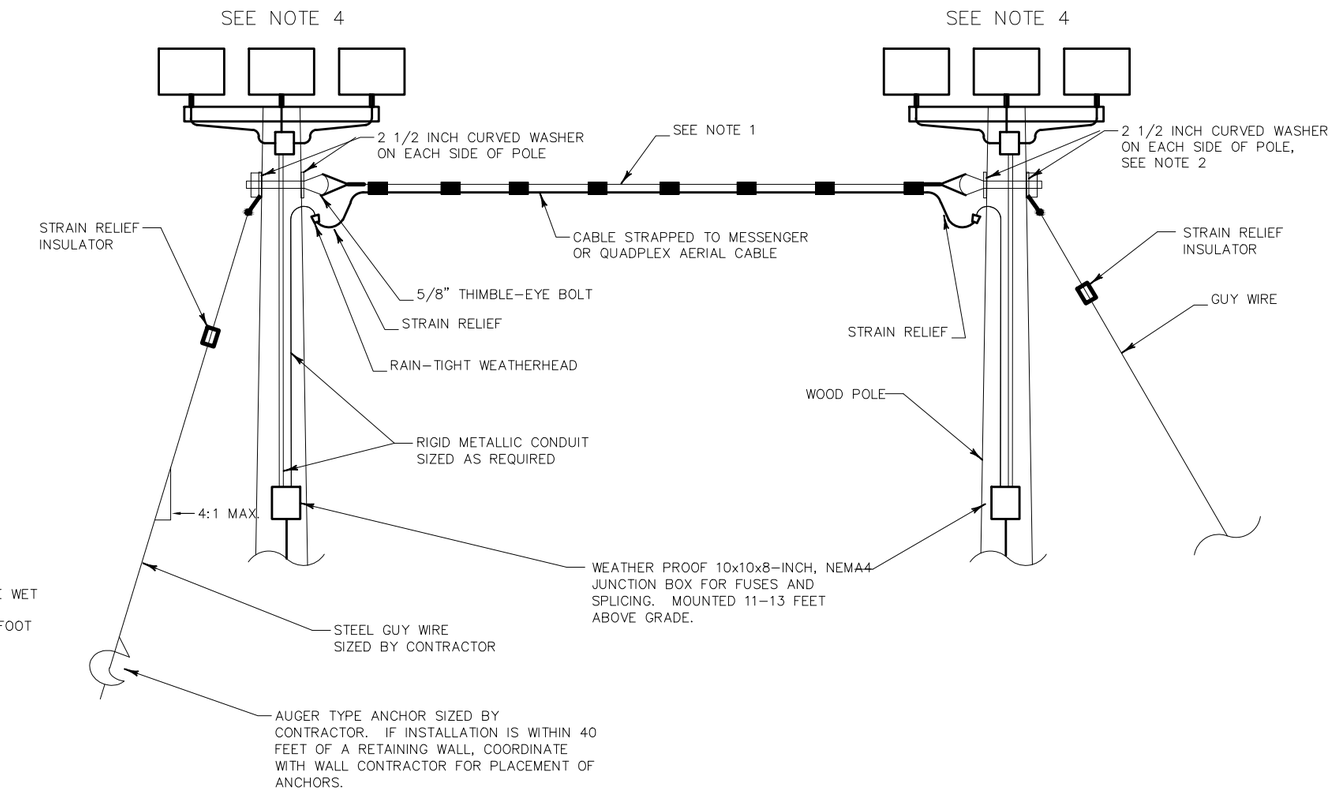


WOODEN POLE INSTALLATION DETAIL

SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION
NTS

NOTES

1. MINIMUM CLEARANCE AT CENTER OF SPAN: 20-FT. ABOVE ROADWAY OR GRADE.
2. CONSTRUCT DEAD ENDS WITH SECONDARY RACK, CLEVISES, OR OTHER APPROVED METHOD.
3. SECURELY BAND OR CLAMP RISERS TO POLES. USE METALLIC CABLE GUARD TO PROTECT RISERS FOR 10-FEET ABOVE GRADE.
4. FOR CLARITY, LIGHTNING PROTECTION NOT SHOWN IN ITS ENTIRETY. PROVIDE AIR TERMINAL PROTRUDING 18" ABOVE HIGHEST FIXTURE WITH #2 AWG DOWN CONDUCTOR TO A† X 8-FOOT COPPER CLAD ELECTRODE FOR LIGHTNING PROTECTION. DOWN CONDUCTOR MAY TRAVEL ONLY IN A DOWNWARD DIRECTION UNTIL IT IS CONNECTED TO THE GROUNDING ELECTRODE. LIGHTNING PROTECTION GROUNDING ELECTRODE TO BE BONDED TO EQUIPMENT GROUNDING ELECTRODE WITH BARE, SOLID #2 COPPER CONDUCTOR; EXOTHERMIC WELD LOWER, MECHANICAL ON UPPER END.
5. LUMINAIRES AND AERIAL CABLES ARE SEPARATE BID ITEMS AND ARE NOT PART OF THE BID ITEM "WOOD POLE LIGHTING 60-FOOT. THE REMAINING ITEMS SHOWN ARE INCIDENTAL TO BID ITEM "WOOD POLES LIGHTING 60-FOOT.



OVERHEAD WIRE DETAIL

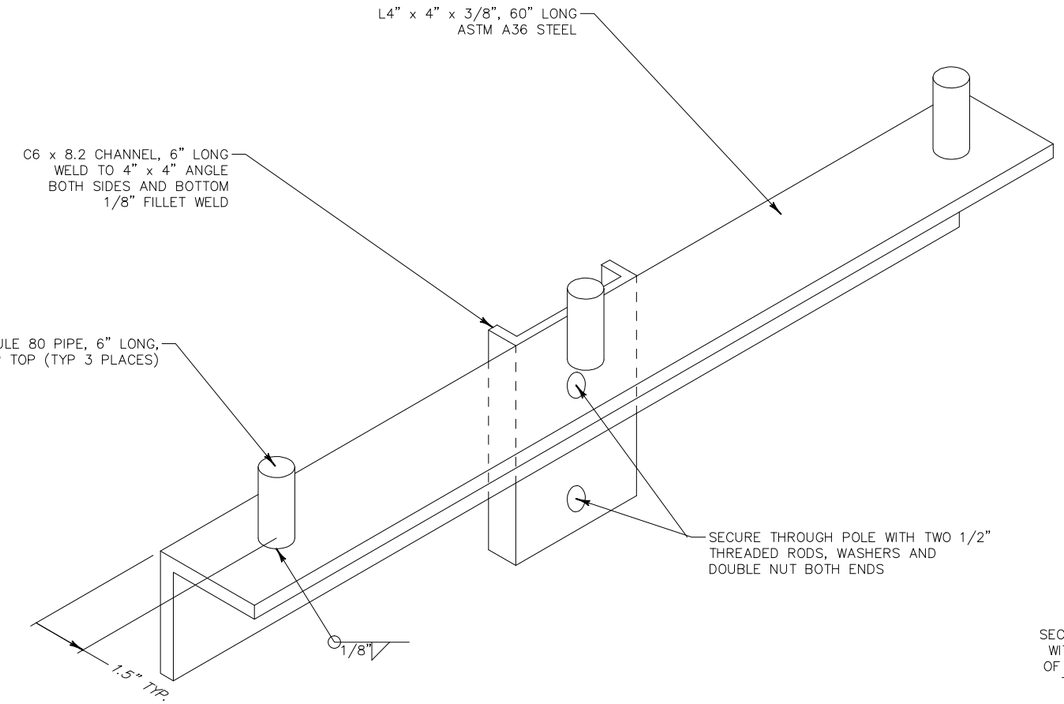
SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION
NTS

SHEET 1 OF 3

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	LIGHTING PLAN - DETAIL	SHEET 140	E

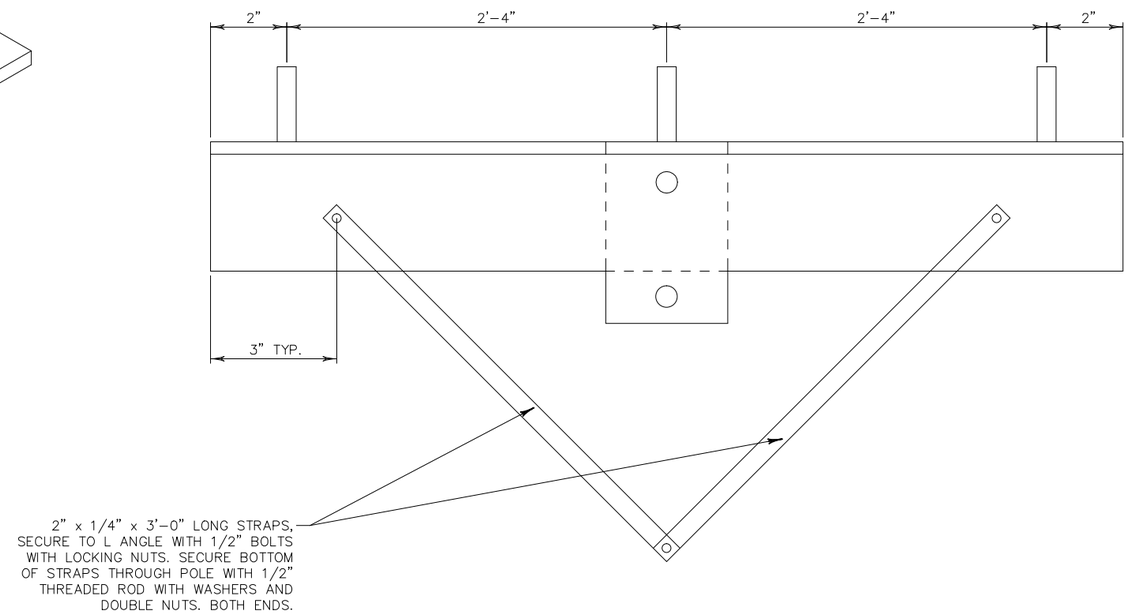
NOTES

1. HOT DIP GALVANIZE AFTER FABRICATION.
2. POLE WITH 2 OR 3 LUMINAIRES TO USE BRACKET AS SHOWN. PROVIDE ONLY THE CENTER PORTION WITH 4" L ANGLE, 6" LONG FOR A SINGLE FIXTURE.



ISOMETRIC VIEW

STRAPS NOT SHOWN FOR CLARITY



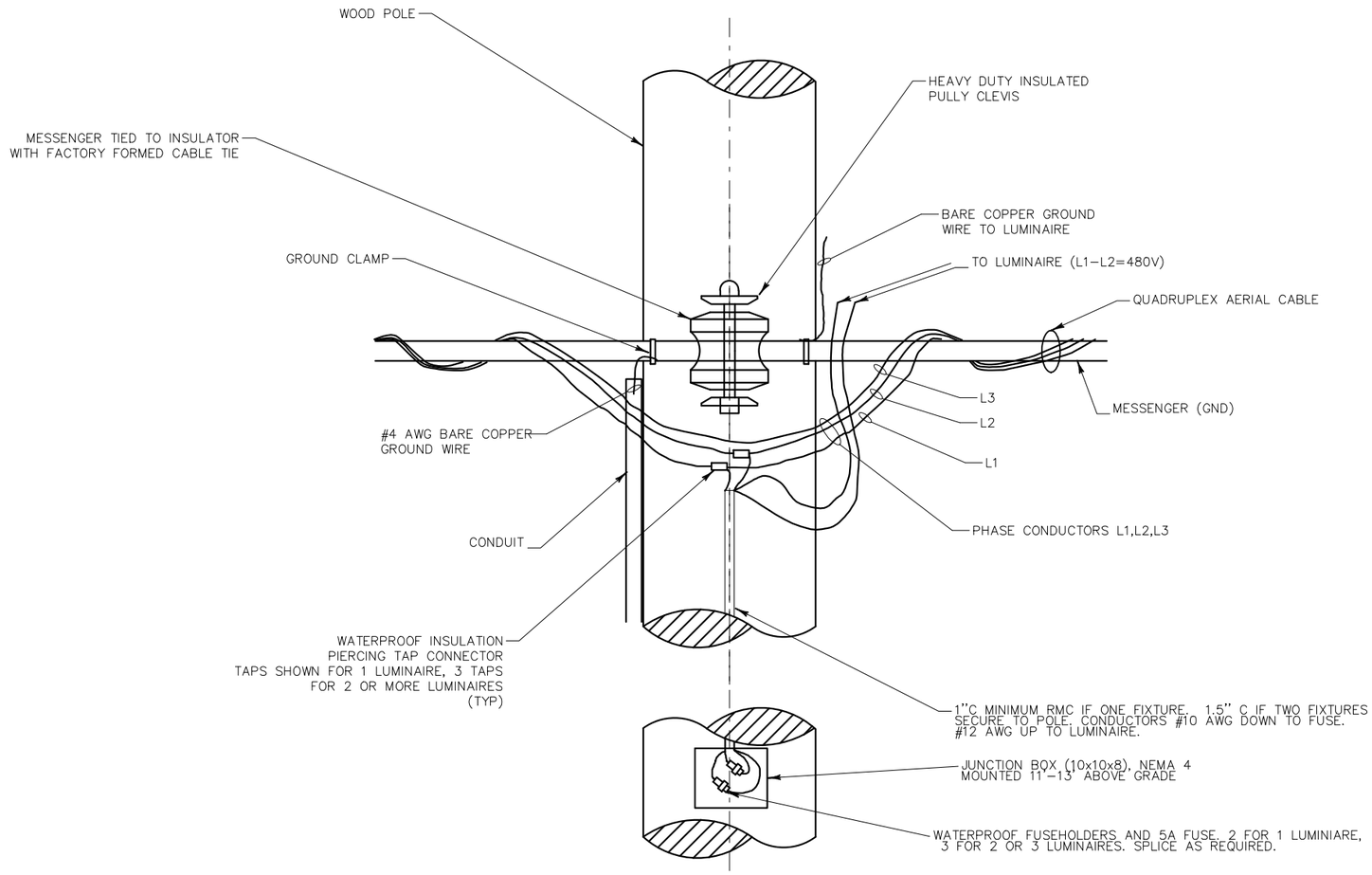
FRONT VIEW

FLOODLIGHT MOUNTING BRACKET

NTS

NOTES

1. IF TWO OR MORE CABLES ON A POLE ARE FOR THE SAME CIRCUIT, CONNECT THE EQUIPMENT GROUNDING CONDUCTOR AND GROUNDED CONDUCTOR (NEUTRAL) AT EACH POLE.
2. TAPS, CONDUIT, JUNCTION BOX, INSULATIOR, CLEVIS FUSE HOLDERS, WIRING TO/FROM JUNCTION BOX AND TO LUMINAIRE ARE PART OF THE BID ITEM "WOOD POLE LIGHTING 60-FOOT".

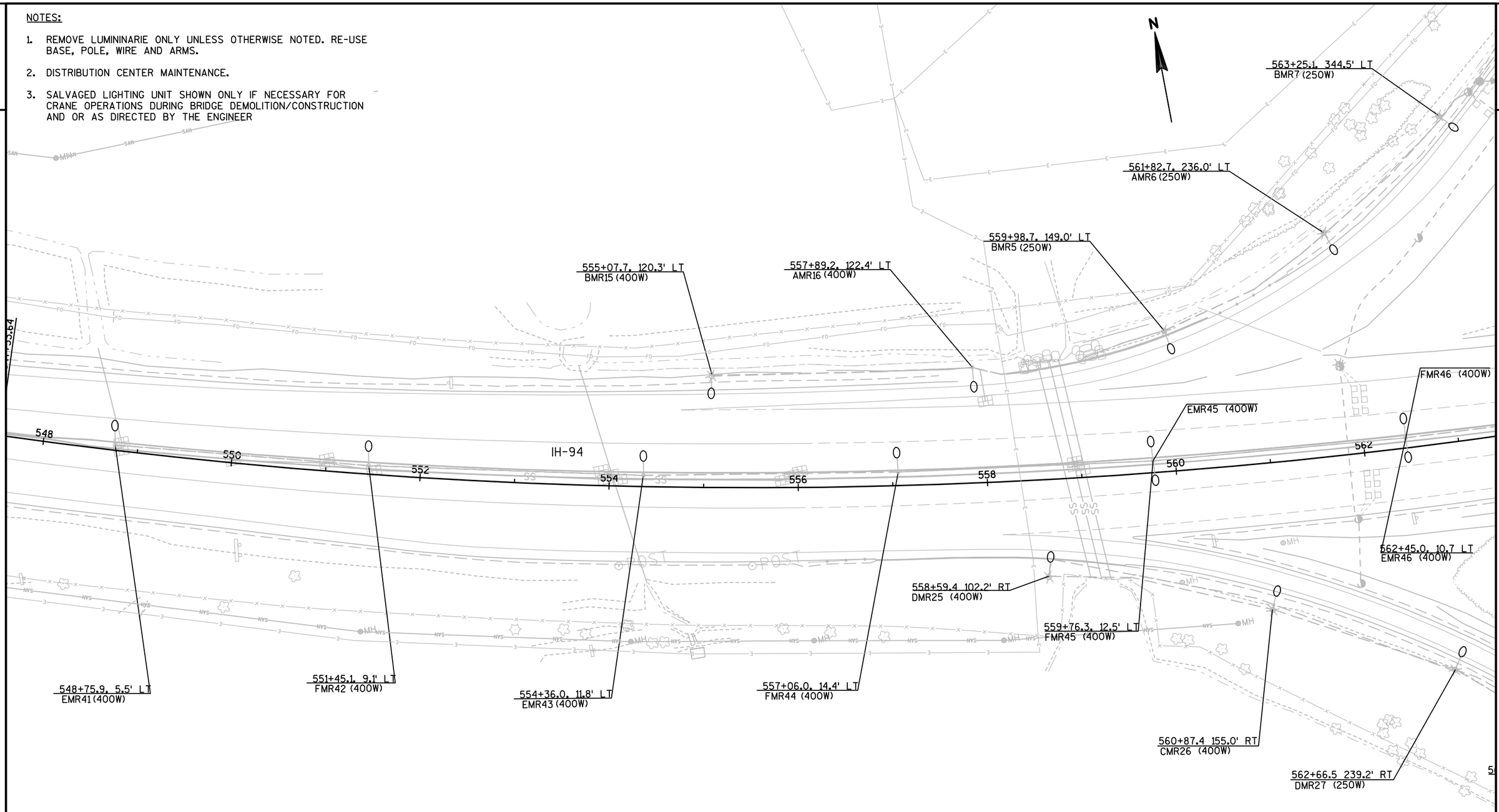


OVERHEAD CABLE SPLICE AT WOOD POLE-TEMPORARY 480V FIXTURES WIRED PHASE-PHASE

NTS

NOTES:

1. REMOVE LUMININARIE ONLY UNLESS OTHERWISE NOTED. RE-USE BASE, POLE, WIRE AND ARMS.
2. DISTRIBUTION CENTER MAINTENANCE.
3. SALVAGED LIGHTING UNIT SHOWN ONLY IF NECESSARY FOR CRANE OPERATIONS DURING BRIDGE DEMOLITION/CONSTRUCTION AND OR AS DIRECTED BY THE ENGINEER



SHEET 1 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - REMOVAL	SHEET 143	E

NOTES:

1. REMOVE LUMINARIE ONLY UNLESS OTHERWISE NOTED. RE-USE BASE, POLE, WIRE AND ARMS.
2. DISTRIBUTION CENTER MAINTENANCE.
3. SALVAGED LIGHTING UNIT SHOWN ONLY IF NECESSARY FOR CRANE OPERATIONS DURING BRIDGE DEMOLITION/CONSTRUCTION AND OR AS DIRECTED BY THE ENGINEER

EXISTING TO REMAIN SEE NOTE 2
HL-67-MR
A,C,E RED B,D,F BLACK
240/480 VAC 3 WIRE ISOLATED NEUTRAL
SUBPANEL

573+27.5, 200.0' LT
CLD6 (250W)

573+53.2, 0.4' LT
DLD14/CLD14(400W)

EXISTING HL-67-LD
TO REMAIN
SEE NOTE 2

573+19.2, 101.6' RT
ALD1/BLD1
(250W)

572

571+50.0, 440.0' LT
BMR18 (250W)

571+35.0, 673.5' LT
AMR17 (250W)

570+53.3, 637.9' LT
BMR11(250W)

570+76.1, 526.7' LT
AMR19 (250W)

MOORLAND ROAD

571+12.3, 618.8' RT
DMR33
(250W)

570+86.7, 411.2' RT
CMR34
(250W)

570+69.1, 105.1' RT
CMR40
(400W)

570+21.9, 700.7' RT
CMR32
(250W)

570+45.1 0.3' RT
FMR49 (400W)

570

EMR49 (400W)

569+82.9, 530.5' RT
DMR35
(250W)

568+92.2, 534.7' LT
BMR20 (250W)

IH-94

568+56.6, 116.2' LT
BMR24 (400W)

568+34.1, 131.4' RT
DMR39
(250W)

568+19.4, 546.4' RT
CMR36
(250W)

568+63.7, 639.8' LT
AMR10 (250W)

567+56.3, 516.5' LT
AMR21 (250W)

568

566+89.4, 273.7' RT
CMR38
(250W)

567+91.3 0.2' RT
EMR48 (400W)

FMR48 (400W)

566+74.3, 416.7' RT
DMR37
(250W)

568+18.2, 694.1' RT
DMR31
(250W)

566+54.0, 237.8' LT
AMR23 (400W)

566+35.8, 437.8' LT
BMR22 (250W)

566+58.4, 605.6' LT
BMR9(250W)

PT: 566+23.64

566

566+22.1, 606.6' RT
CMR30
(250W)

565+39.6, 525.0' RT
DMR29
(250W)

564+80.6, 483.0' LT
AMR8 (250W)

565+16.7, 5.4' LT
FMR47 (400W)

EMR47 (400W)

564

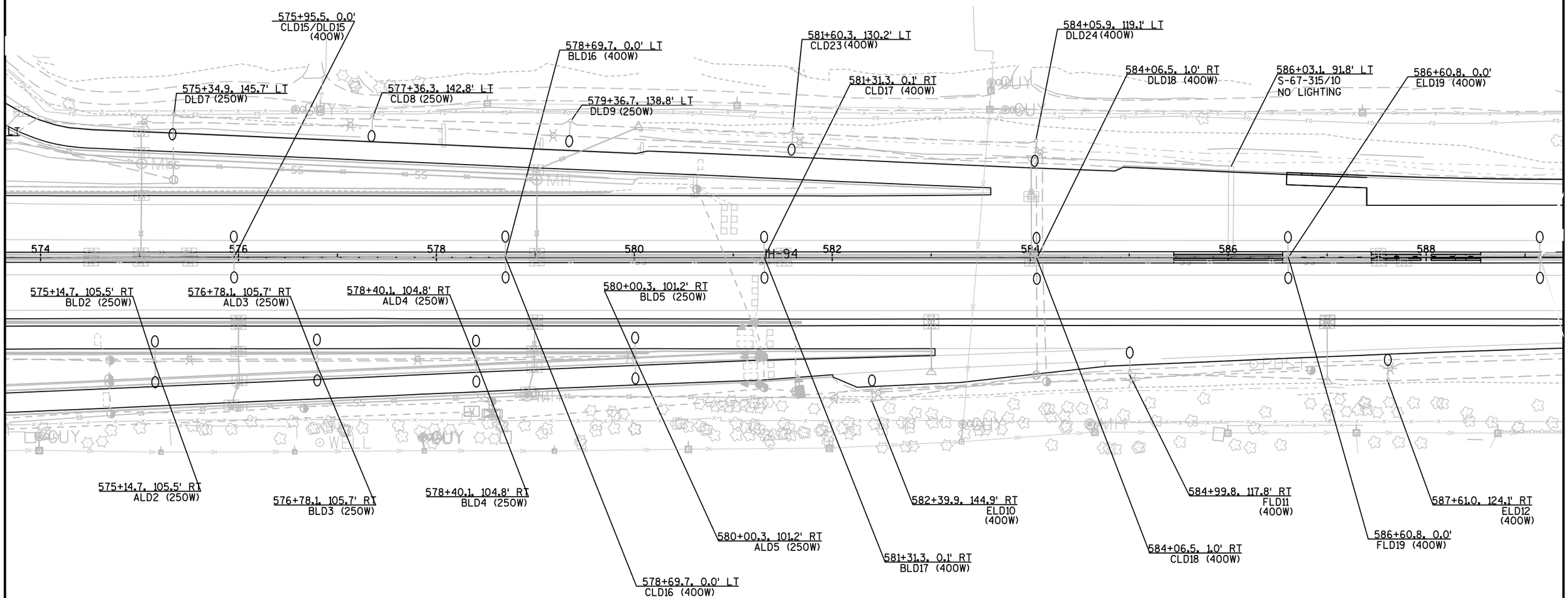
564+17.0 365.4' RT
CMR28 (250W)

SHEET 2 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - REMOVAL	SHEET 144	E

NOTES:

1. REMOVE LUMININARIE ONLY UNLESS OTHERWISE NOTED. RE-USE BASE, POLE, WIRE AND ARMS.
2. DISTRIBUTION CENTER MAINTENANCE.
3. SALVAGED LIGHTING UNIT SHOWN ONLY IF NECESSARY FOR CRANE OPERATIONS DURING BRIDGE DEMOLITION/CONSTRUCTION AND OR AS DIRECTED BY THE ENGINEER



SHEET 3 OF 9

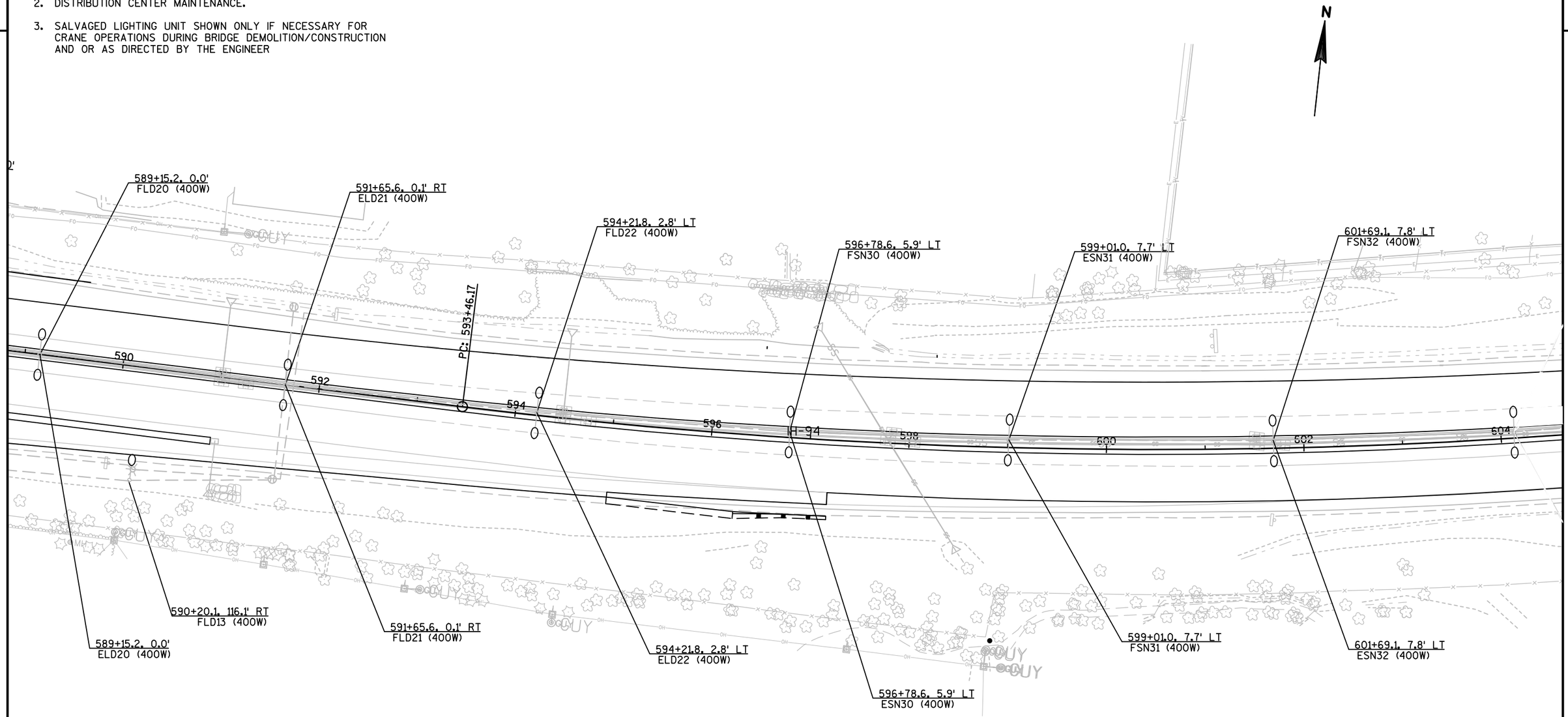
PROJECT NO:	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - REMOVAL	SHEET 145 E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023501_LP.DWG PLOT DATE : 8/31/2017 2:01 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

NOTES:

1. REMOVE LUMININARIE ONLY UNLESS OTHERWISE NOTED. RE-USE BASE, POLE, WIRE AND ARMS.
2. DISTRIBUTION CENTER MAINTENANCE.
3. SALVAGED LIGHTING UNIT SHOWN ONLY IF NECESSARY FOR CRANE OPERATIONS DURING BRIDGE DEMOLITION/CONSTRUCTION AND OR AS DIRECTED BY THE ENGINEER

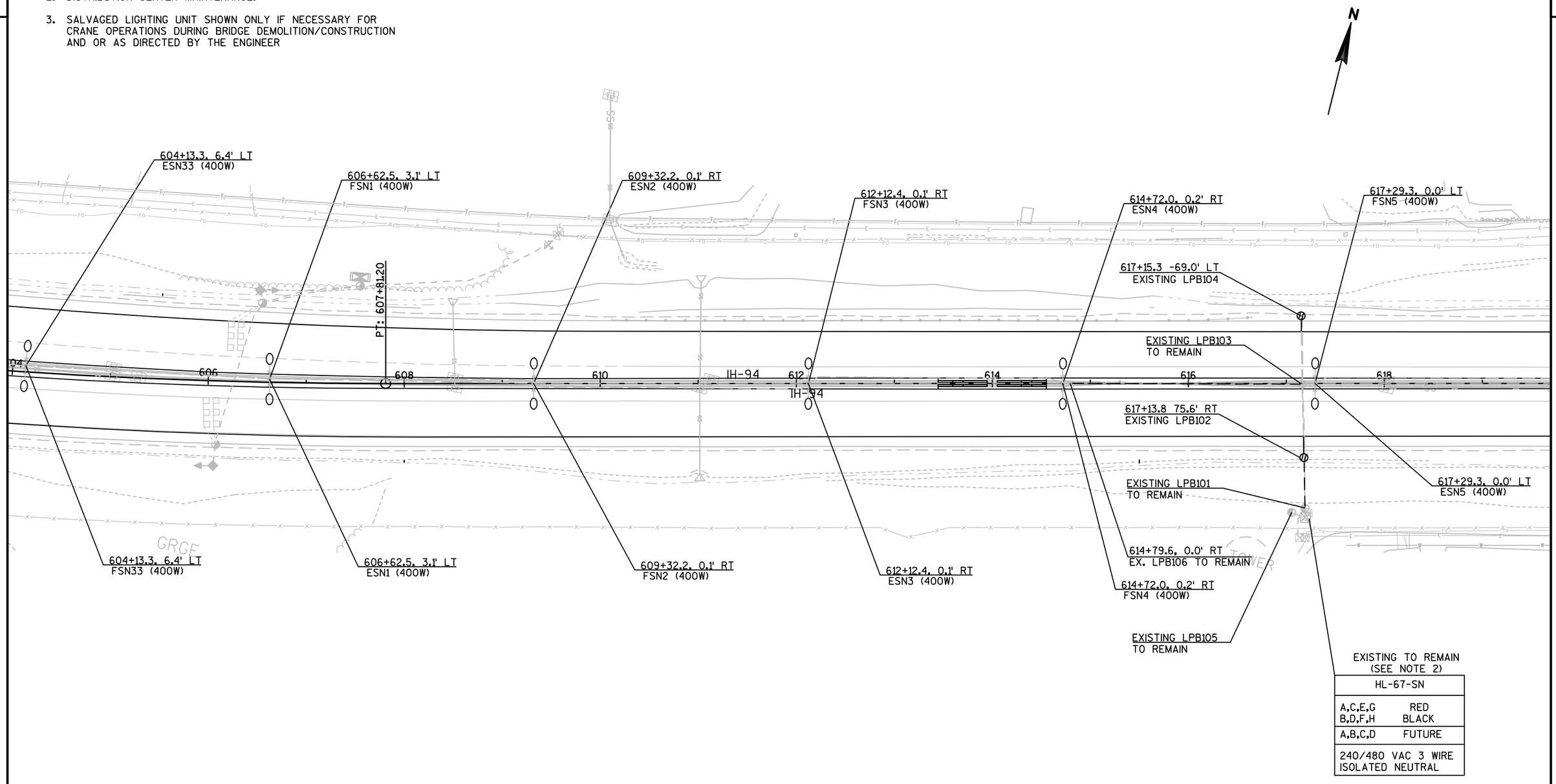


SHEET 4 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - REMOVAL	SHEET 146	E

NOTES:

1. REMOVE LUMININARIE ONLY UNLESS OTHERWISE NOTED. RE-USE BASE, POLE, WIRE AND ARMS.
2. DISTRIBUTION CENTER MAINTENANCE.
3. SALVAGED LIGHTING UNIT SHOWN ONLY IF NECESSARY FOR CRANE OPERATIONS DURING BRIDGE DEMOLITION/CONSTRUCTION AND OR AS DIRECTED BY THE ENGINEER



EXISTING TO REMAIN
(SEE NOTE 2)

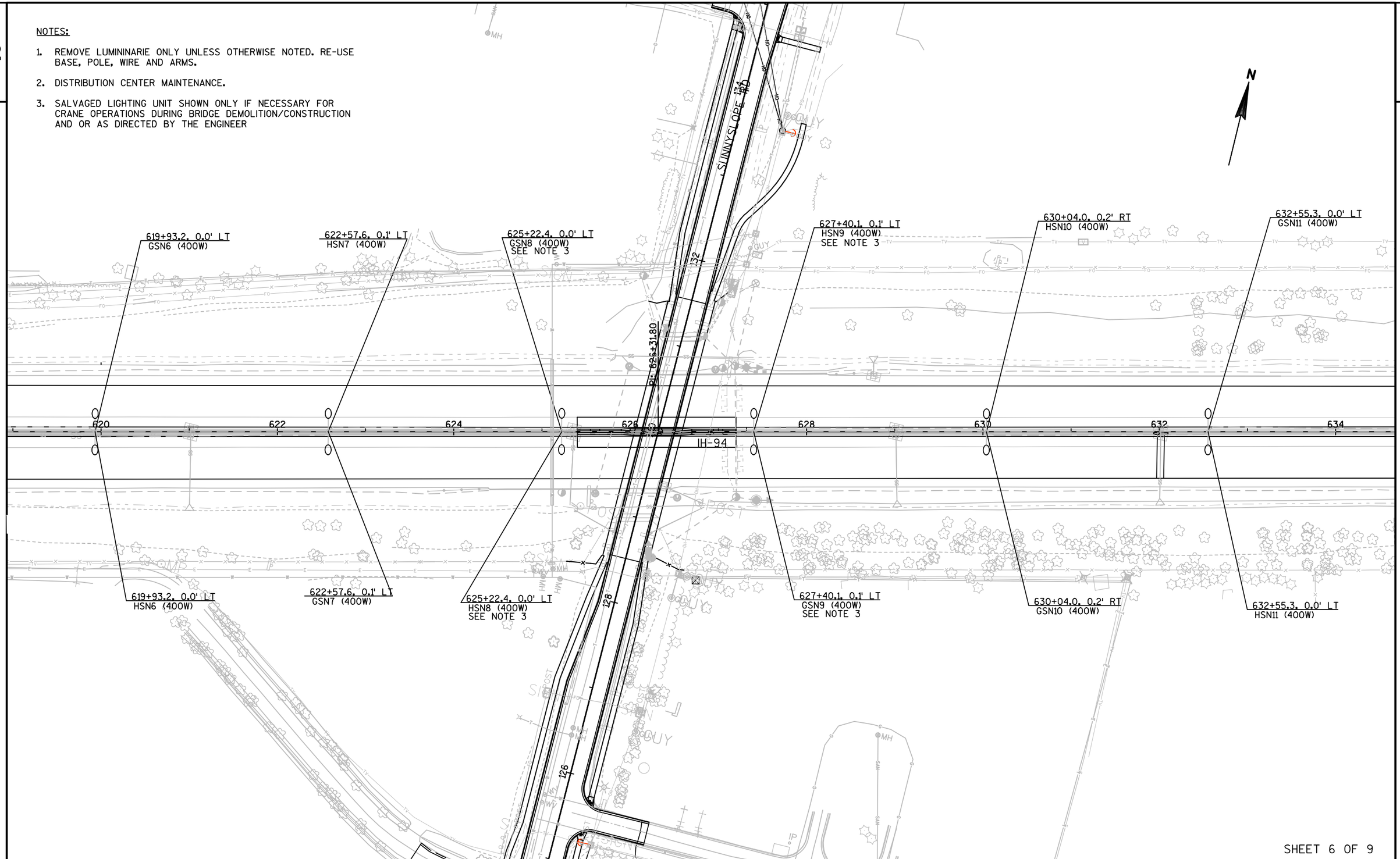
HL-67-SN	
A,C,E,G B,D,F,H	RED BLACK
A,B,C,D	FUTURE
240/480 VAC 3 WIRE ISOLATED NEUTRAL	

SHEET 5 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - REMOVAL	SHEET 147	E

NOTES:

1. REMOVE LUMININARIE ONLY UNLESS OTHERWISE NOTED. RE-USE BASE, POLE, WIRE AND ARMS.
2. DISTRIBUTION CENTER MAINTENANCE.
3. SALVAGED LIGHTING UNIT SHOWN ONLY IF NECESSARY FOR CRANE OPERATIONS DURING BRIDGE DEMOLITION/CONSTRUCTION AND OR AS DIRECTED BY THE ENGINEER



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - REMOVAL	SHEET 148 E

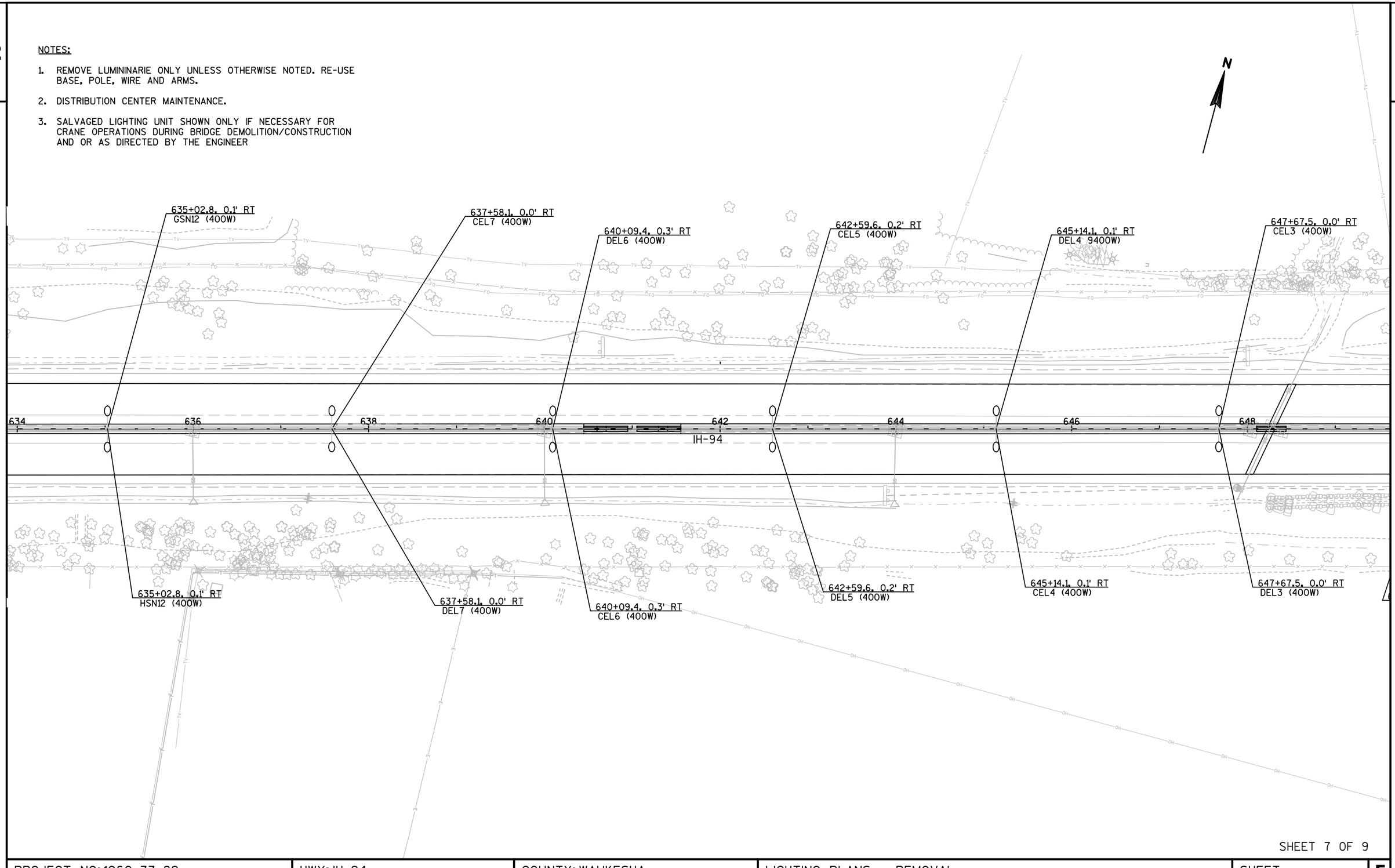
FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023501_LP.DWG
LAYOUT NAME - 023506_LP

PLOT DATE : 8/31/2017 2:01 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

NOTES:

1. REMOVE LUMININARIE ONLY UNLESS OTHERWISE NOTED. RE-USE BASE, POLE, WIRE AND ARMS.
2. DISTRIBUTION CENTER MAINTENANCE.
3. SALVAGED LIGHTING UNIT SHOWN ONLY IF NECESSARY FOR CRANE OPERATIONS DURING BRIDGE DEMOLITION/CONSTRUCTION AND OR AS DIRECTED BY THE ENGINEER



SHEET 7 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - REMOVAL	SHEET 149	E

NOTES:

1. REMOVE LUMININARIE ONLY UNLESS OTHERWISE NOTED. RE-USE BASE, POLE, WIRE AND ARMS.
2. DISTRIBUTION CENTER MAINTENANCE.
3. SALVAGED LIGHTING UNIT SHOWN ONLY IF NECESSARY FOR CRANE OPERATIONS DURING BRIDGE DEMOLITION/CONSTRUCTION AND OR AS DIRECTED BY THE ENGINEER

ELM GROVE RD

IH-94

650+18.1, 0.0' RT
DEL2 (400W)

652+71.0, 0.0' LT
DEL1 (400W)

654+74.6, 0.1' RT
EX. LPB102 TO REMAIN

654+87.5, 0.1' RT
AEL1 (400W)

657+23.6, 0.2' RT
BEL2 (400W)

659+73.4, 0.2' RT
AEL3 (400W)

662+16.6, 0.1' RT
AEL4 (400W)

PI: 653+79.34

650 652 654 656 658 660 662 664

650+18.1, 0.0' RT
CEL2 (400W)

652+71.0, 0.0' LT
CEL1 (400W)

654+87.5, 0.1' RT
BEL1 (400W)

657+23.6, 0.2' RT
AEL2 (400W)

659+73.4, 0.2' RT
BEL3 (400W)

662+16.6, 0.1' RT
BEL4 (400W)

EXISTING TO REMAIN
SEE NOTE 2

HL-67-EL	
A,C	BLACK
B,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D	30 A
480 VAC 2 WIRE GROUNDED NEUTRAL	

SHEET 8 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - REMOVAL	SHEET 150	E

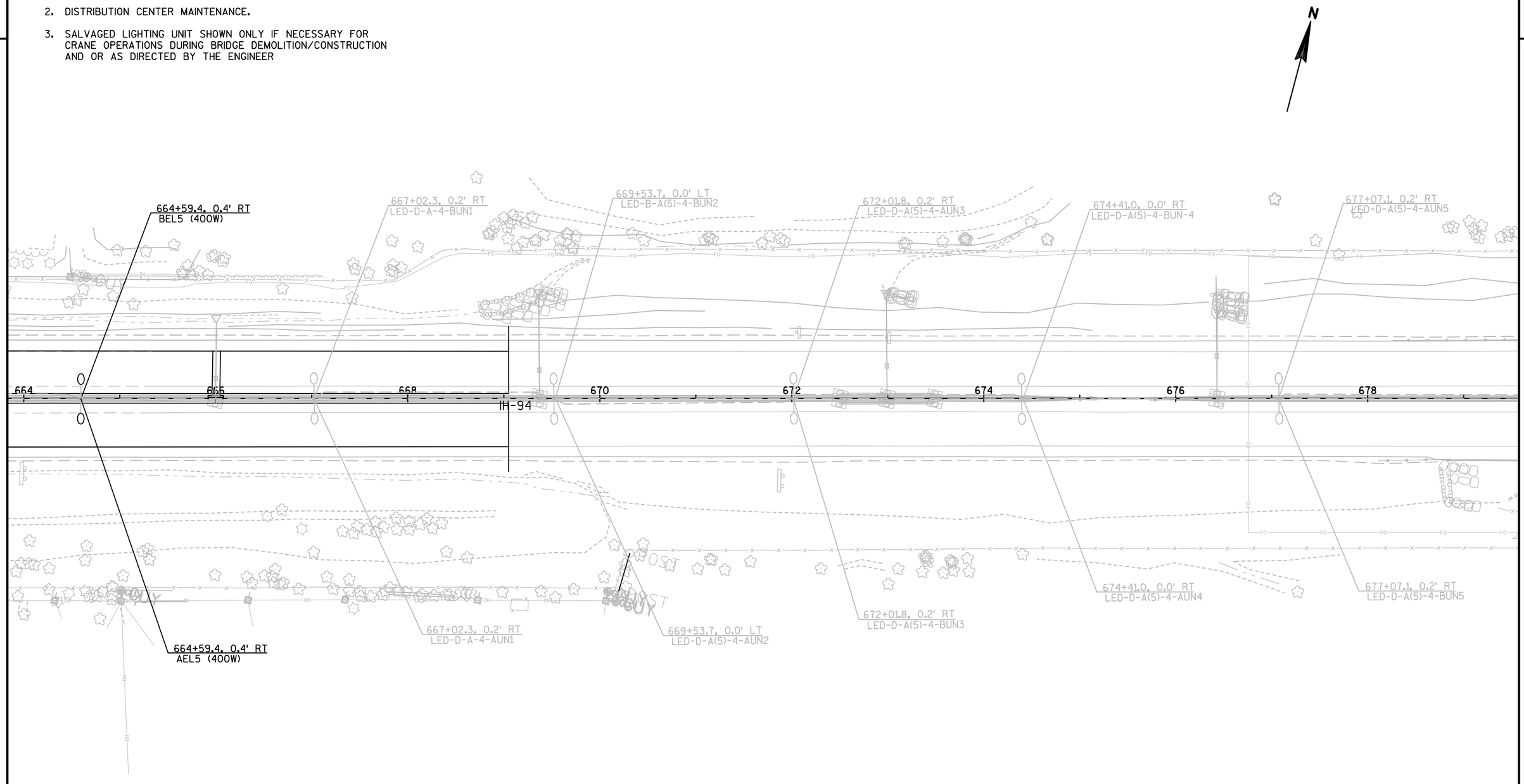
FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023501_LP.DWG
LAYOUT NAME - 023508_LP

PLOT DATE : 8/31/2017 2:01 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

NOTES:

1. REMOVE LUMININARIE ONLY UNLESS OTHERWISE NOTED. RE-USE BASE, POLE, WIRE AND ARMS.
2. DISTRIBUTION CENTER MAINTENANCE.
3. SALVAGED LIGHTING UNIT SHOWN ONLY IF NECESSARY FOR CRANE OPERATIONS DURING BRIDGE DEMOLITION/CONSTRUCTION AND OR AS DIRECTED BY THE ENGINEER



SHEET 9 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - REMOVAL	SHEET 151	E

NOTE:
1. SALVAGE TEMPORARY CABLE (CID) AND RE-USE FOR FINAL LIGHTING CONFIGURATION.

577+36.3, 142.8' LT
CLD8 TO REMAIN

578+69.7, 0.0' LT
DLD16 TO REMAIN

574+36.7, 138.8' LT
DLD19 TO REMAIN

581+31.3, 0.1' RT
CLD17 TO REMAIN

581+60.3, 130.2' LT
CLD23 TO REMAIN

584+05.9, 119.1' LT
DLD24 TO REMAIN

584+06.5, 1.0' LT
CLD18 TO REMAIN

N

MOORLAND RD. EXIT RAMP

IH-94 WB

578+00 579+00 580+00 581+00 582+00 583+00 584+00 585+00

IH-94 EB

MOORLAND RD. ENTRANCE RAMP

MOORLAND RD. ENTRANCE RAMP

584+06.5, 1.0' RT
CLD18 TO REMAIN

581+31.3, 0.1' RT
DLD17 TO REMAIN

584+99.8, 117.8' RT
FLD11 TO REMAIN

580+00.3, 101.2' RT
BLD5/ALD5 TO REMAIN

582+39.9, 144.9' RT
ELD10 TO REMAIN

578+69.7, 0.0' RT
DLD16 TO REMAIN

578+40.2, 104.9' RT
TO REMAIN

SHEET 1 OF 8

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - TEMPORARY	SHEET 152	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023701_LP.DWG
023701_LP - 023701_LP

PLOT DATE : 8/31/2017 2:15 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 50'_XREF

2

NOTE:
1. SALVAGE TEMPORARY CABLE (CID) AND RE-USE FOR FINAL LIGHTING CONFIGURATION.

N

586+60.8, 0.0' LT
ELD19 TO REMAIN

589+15.2, 0.0' LT
FLD20 TO REMAIN

591+65.6, 0.1' LT
ELD21 TO REMAIN

MOORLAND RD. EXIT RAMP

IH-94 WB

585+00 586+00 587+00 588+00 589+00 590+00 591+00 592+00

IH-94 EB

MOORLAND RD. ENTRANCE RAMP

CABLE IN DUCT (CID)
3-4AWG AND 1-8AWG
(E,N,F,GND) IN
CONDUIT RIGID
METALLIC 3-INCH
SEE NOTE 1

586+60.8, 0.0' RT
FLD19 TO REMAIN

CABLE IN DUCT (CID)
3-4AWG AND 1-8AWG
(E,N,F,GND) IN
CONDUIT RIGID
METALLIC 3-INCH
SEE NOTE 1

589+15.2, 0.0' RT
ELD20 TO REMAIN

591+65.6, 0.1' RT
FLD21 TO REMAIN

584+99.8, 117.8' RT
FLD11 TO REMAIN

587+61.0, 124.1' RT
ELD12 TO REMAIN

590+20.1, 116.1' RT
FLD13 TO REMAIN

SHEET 2 OF 8

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - TEMPORARY	SHEET 153	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023701_LP.DWG
023701_LP - 023702_LP

PLOT DATE : 8/31/2017 2:15 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 50'_XREF

WISDOT/CADDS SHEET 42

2

NOTE:
1. SALVAGE TEMPORARY CABLE (CID) AND RE-USE FOR FINAL LIGHTING CONFIGURATION.

N

609+32.2, 0.0' LT
ESN1 TO REMAIN

612+12.4, 0.1' RT
FSN3 TO REMAIN

614+72.0, 0.2' RT
ESN4 TO REMAIN

PT: 607+81.20

IH-94 WB

608+00 609+00 610+00 611+00 612+00 613+00 614+00 615+00

IH-94 EB

612+12.4, 0.1' RT
ESN3 TO REMAIN

609+32.2, 0.0' RT
FSN2 TO REMAIN

CABLE IN DUCT (CID)
3-4AWG AND 1-8AWG
(E,N,F,GND) IN
CONDUIT RIGID
METALLIC 3-INCH
SEE NOTE 1

614+72.0, 0.2' RT
FSN4 TO REMAIN

614+79.6, 0.2' LT
EX. LPB106 TO REMAIN

SHEET 3 OF 8

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - TEMPORARY	SHEET 154	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023701_LP.DWG
023701_LP - 023703_LP

PLOT DATE : 8/31/2017 2:15 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 50'_XREF

NOTE:
1. SALVAGE TEMPORARY CABLE (CID) AND RE-USE FOR FINAL LIGHTING CONFIGURATION.

N

CABLE IN DUCT (CID)
6-2AWG AND 2-8AWG
(G,N,H,GND) AND
(E,N,F,GND)
SEE NOTE 1

617+15.3, 69.0' LT
EXISTING LPB104

619+92.8, 0.0' LT
GSN6 TO REMAIN

622+55.6, 0.2' LT
HSN7 TO REMAIN

617+16.2, 0.0' LT
EXISTING LPB103

617+29.3, 0.0' LT
FSN5 TO REMAIN

617+07.7, 0.0' RT
WP-SN-02

4-2AWG

IH-94 WB

616+00 617+00 618+00 619+00 620+00 621+00 622+00

4-2AWG

617+29.3, 0.0' RT
ESN5 TO REMAIN

IH-94 EB

*2 AL QUADRUPLEX
E,N,F, GND
*2 AL QUADRUPLEX
G,N,H, GND

619+92.8, 0.0' RT
HSN6 TO REMAIN

622+55.6, 0.2' RT
GSN7 TO REMAIN

617+07.7 110.0' RT
WP-SN-01

3"

617+13.8, 75.6' RT
EXISTING LPB102

617+06.0, 126.3' RT
EXISTING LPB102

617+19.3, 124.1' RT
LPB101 TO REMAIN

617+16.7, 136' RT
HL-67-SN TO REMAIN

TOWER

SHEET 4 OF 8

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - TEMPORARY	SHEET 155	E

NOTE:
1. SALVAGE TEMPORARY CABLE (CID) AND RE-USE FOR FINAL LIGHTING CONFIGURATION.
2. LIGHTING UNIT TO REMAIN AFTER FIELD VERIFICATION OF NO CONFLICT WITH CRANE OPERATIONS DURING BRIDGE RECONSTRUCTION.

N

CABLE IN DUCT (CID) 3-4AWG AND 1-8AWG (G,N,H,GND) IN CONDUIT RIGID METALLIC 3-INCH
SEE NOTE 1

622+55.6, 0.2' LT
HSN7 TO REMAIN

625+22.4, 0.4' LT
GSN8 TO REMAIN
SEE NOTE 2

627+40.2, 0.0' LT
HSN9 TO REMAIN
SEE NOTE 2

630+4.0, 0.0' LT
HSN10 TO REMAIN

IH-94 WB

PI: 626+31.80

623+00 624+00 625+00 626+00 627+00 628+00 629+00 630+00

132+00 131+00 130+00 129+00 128+00

622+55.6, 0.2' RT
GSN7 TO REMAIN

625+22.4, 0.4' RT
HSN8 TO REMAIN
SEE NOTE 2

627+40.2, 0.0' RT
GSN9 TO REMAIN
SEE NOTE 2

IH-94 EB

630+4.0, 0.0' RT
GSN10 TO REMAIN

SUNNYSLOPE RD.

SHEET 5 OF 8

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - TEMPORARY	SHEET 156	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023701_LP.DWG
023701_LP - 023704_LP

PLOT DATE : 8/31/2017 2:16 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 50'_XREF

NOTE:
1. SALVAGE TEMPORARY CABLE (CID) AND RE-USE FOR FINAL LIGHTING CONFIGURATION.

N

637+58.1, 0.0' LT
CEL7 TO REMAIN

640+9.4, 0.3' RT
DEL6 TO REMAIN

642+59.6, 0.2' RT
CEL5 TO REMAIN

IH-94 WB

638+00 639+00 640+00 641+00 642+00 643+00 644+00 645+00

IH-94 EB

637+58.1, 0.0' RT
DEL7 TO REMAIN

640+9.4, 0.3' RT
CEL6 TO REMAIN

642+59.6, 0.2' RT
DEL5 TO REMAIN

CABLE IN DUCT (CID)
3-4AWG AND 1-8AWG
(C,N,D,GND) IN
CONDUIT RIGID
METALLIC 3-INCH
SEE NOTE 1

SHEET 6 OF 8

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - TEMPORARY	SHEET 157	E

2

2

N

CABLE IN DUCT (CID)
3-4AWG AND 1-8AWG
(C,N,D,GND) IN
CONDUIT RIGID
METALLIC 3-INCH
SEE NOTE 1

645+14.1, 0.0' RT
DEL4 TO REMAIN

647+67.5, 0.0' LT
CEL3 TO REMAIN

650+17.8, 0.0' LT
DEL2 TO REMAIN

IH-94 WB

645+00 646+00 647+00 648+00 649+00 650+00 651+00 652+00

IH-94 EB

645+14.1, 0.0' RT
CEL4 TO REMAIN

650+17.8, 0.0' RT
CEL2 TO REMAIN

647+67.5, 0.0' RT
DEL3 TO REMAIN

CAMERA ORIENTATION

SHEET 7 OF 8

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - TEMPORARY	SHEET 158	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023701_LP.DWG
023701_LP - 023706_LP

PLOT DATE : 8/31/2017 2:16 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 50'_XREF

2

N

652+70.0, 0.0' LT
DEL1 TO REMAIN

654+74.6, 0.1' RT
EXISTING LPB102

657+23.6, 0.2' LT
BEL2 TO REMAIN

659+73.4, 0.2' LT
AEL3 TO REMAIN

654+87.6, 0.1' LT
AEL1 TO REMAIN

655+50.0, 0.0' RT
WP-EL-02

IH-94 WB

IH-94 EB

652+70.0, 0.0' RT
CEL1 TO REMAIN

654+87.6, 0.1' RT
BEL1 TO REMAIN

657+23.6, 0.2' RT
AEL2 TO REMAIN

659+73.4, 0.2' RT
BEL3 TO REMAIN

SEE NOTE 1

654+37.0, 162.0' RT
EXISTING LPB101
TO REMAIN

655+50.0, 160.0' RT
WP-EL-01

654+23.0, 164.0' RT
HL-67-EL
TO REMAIN

22+00
21+00
20+00
19+00
18+00
PI: 653+79.34
653+00
654+00
655+00
656+00
657+00
658+00
659+00
660+00
ELM GROVE RD.

NOTE:
1. EXISTING TEMPORARY WOOD POLE AND FROM PREVIOUS PROJECT (1060-43-82) WILL BE REMOVED AS PART OF THIS PROJECT FOR FINAL LIGHTING CONFIGURATION.

SHEET 8 OF 8

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - TEMPORARY	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023701_LP.DWG
023701_LP - 023707_LP
PLOT DATE : 8/31/2017 2:16 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1" = 50'_XREF
WISDOT/CADDS SHEET 42

2

LEGEND

- CONTROL CABINET
- CONDUIT - 2" UNLESS OTHERWISE NOTED
- INSTALL LIGHTING UNIT WITH LED LUMINAIRE
- INSTALL LED LUMINAIRE
- PULL BOX, 24"x42"
- PULL BOX 24"x36"

N

563+25.1, 344.5' LT
LED-C-7(T)-15-BMR7

561+82.7, 236.0' LT
LED-C-7(T)-15-AMR6

559+98.7, 149.0' LT
LED-C-7(T)-15-BMR5

555+07.7, 120.3' LT
LED-D-E(T)-20-BMR15

557+89.2, 122.4' LT
LED-D-E(T)-20-AMR16

LED-D-R-10-FMR46

LED-D-E-10-EMR45

IH-94

548 550 552 554 556 558 560 562

562+45.0, 10.7 LT
LED-D-E-10-EMR46

558+59.4 102.2' RT
LED-D-E(T)-20-DMR25

559+76.3, 12.5' LT
LED-D-E-10-FMR45

548+75.9, 5.5' LT
LED-D-E-10-EMR41

551+45.1, 9.1' LT
LED-D-E-10-FMR42

554+36.0, 11.8' LT
LED-D-E-10-EMR43

557+06.0, 14.4' LT
LED-D-E-10-FMR44

560+87.4 155.0' RT
LED-D-E(T)-20-CMR26

562+66.5 239.2' RT
LED-C-7(T)-15-DMR27

SHEET 1 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - FINAL LIGHTING	SHEET 160	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023601_LP.DWG
LAYOUT NAME - 023601_LP

PLOT DATE : 8/31/2017 2:25 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- CONDUIT - 2" UNLESS OTHERWISE NOTED
- INSTALL LIGHTING UNIT WITH LED LUMINAIRE
- INSTALL LED LUMINAIRE
- PULL BOX, 24"x42"
- PULL BOX 24"x36"

EXISTING TO REMAIN
HL-67-MR
A,C,E RED B,D,F BLACK
240/480 VAC 3 WIRE ISOLATED NEUTRAL
SUBPANEL

573+27.5, 200.0' LT
LED-C-7(T)-10-CLD6

573+53.2, 0.4' LT
LED-D-A-4-DLD14

LED-D-A-4-CLD14

573+19.2, 101.6' RT
LED-C-5-6-BLD1

LED-C-5-6-ALD1

572

MOORLAND ROAD

571+50.0, 440.0' LT
LED-C-7(T)-8-BMR18

571+35.0, 673.5' LT
LED-C-7(T)-8-AMR17

EXISTING HL-67-LD
TO REMAIN

570+53.3, 637.9' LT
LED-C-7(T)-25-BMR11

570+76.1, 526.7' LT
LED-C-7(T)-15-AMR19

570+45.1 0.3' RT
LED-D-A-4-FMR49

570

LED-D-A-4-EMR49

570+69.1, 105.1' RT
LED-D-A-4-CMR40

570+86.7, 411.2' RT
LED-C-7(T)-10-CMR34

571+12.3, 618.8' RT
LED-C-7(T)-15-DMR33

570+21.9, 700.7' RT
LED-C-7(T)-15-CMR32

569+82.9, 530.5' RT
LED-C-7(T)-10-DMR35

568+92.2, 534.7' LT
LED-C-7(T)-10-BMR20

568+56.6, 116.2' LT
LED-D-E(T)-20-BMR24

IH-94

568+34.1, 131.4' RT
LED-C-7(T)-10-DMR39

568+19.4, 546.4' RT
LED-C-7(T)-10-CMR36

568+63.7, 639.8' LT
LED-C-7(T)-15-AMR10

567+56.3, 516.5' LT
LED-C-7(T)-10-AMR21

568

567+91.3 0.2' RT
LED-D-E-10-EMR48

LED-D-E-10-FMR48

566+89.4, 273.7' RT
LED-C-7(T)-10-CMR38

566+74.3, 416.7' RT
LED-C-7(T)-10-DMR37

568+18.2, 694.1' RT
LED-C-7(T)-15-DMR31

566+54.0, 237.8' LT
LED-D-E(T)-20-AMR23

566+35.8, 437.8' LT
LED-C-7(T)-15-BMR22

566+58.4, 605.6' LT
LED-C-7(T)-15-BMR9

PT: 566+23.64

566

566+22.1, 606.6' RT
LED-C-7(T)-10-CMR30

565+39.6, 525.0' RT
LED-C-7(T)-10-DMR29

564+80.6, 483.0' LT
LED-C-7(T)-15-AMR8

565+16.7, 5.4' LT
LED-D-E-10-FMR47

LED-D-E-10-BMR47

564+17.0 365.4' RT
LED-C-7(T)-15-CMR28

564

SHEET 2 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - FINAL LIGHTING	SHEET 161 E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023601_LP.DWG
LAYOUT NAME - 023602_LP

PLOT DATE : 8/31/2017 2:26 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- CONDUIT - 2" UNLESS OTHERWISE NOTED
- INSTALL LIGHTING UNIT WITH LED LUMINAIRE
- INSTALL LED LUMINAIRE
- PULL BOX, 24"x42"
- PULL BOX 24"x36"

N

575+95.5, 0.0' LT
LED-D-A-4-CLD15

575+34.9, 145.7' LT
LED-C-7(T)-10-DLD7

577+36.3, 142.8' LT
LED-C-7(T)-15-CLD8

578+69.7, 0.0' LT
LED-D-A-4-DLD16

579+36.7, 138.8' LT
LED-C-7(T)-15-DLD9

581+60.3, 130.2' LT
LED-D-E(T)-20-CLD23

581+31.3, 0.1' RT
LED-D-A-4-CLD17

584+05.9, 119.1' LT
LED-D-E(T)-20-DLD24

584+06.5, 1.0' RT
LED-D-A-4-DLD18

SEE NOTE 1

586+03.1, 91.8' LT
S-67-315/10
NO LIGHTING

586+60.8, 0.0'
LED-D-E-10-ELD19

574 576 578 580 582 584 586 588

IH-94

576+78.1, 105.7' RT
LED-C-5-6-ALD3

575+14.7, 105.5' RT
LED-C-5-6-BLD2

578+40.1, 104.8' RT
LED-C-5-6-ALD4

580+00.3, 101.2' RT
LED-C-5-6-BLD5

575+14.7, 105.5' RT
LED-C-5-6-ALD2

576+78.1, 105.7' RT
LED-C-5-6-BLD3

578+40.1, 104.8' RT
LED-C-5-6-BLD4

575+95.5, 0.0' RT
LED-D-A-4-DLD15

580+00.3, 101.2' RT
LED-C-5-6-ALD5

578+69.7, 0.0' LT
LED-D-A-4-CLD16

582+39.9, 144.9' RT
LED-D-B(T)-20-ELD10

581+31.3, 0.1' RT
LED-D-A-4-DLD17

584+99.8, 117.8' RT
LED-D-E(T)-20-FLD11

584+06.5, 1.0' RT
LED-D-A-4-CLD18

587+61.0, 124.1' RT
LED-D-E(T)-20-ELD12

SEE NOTE 1

586+60.8, 0.0'
LED-D-E-10-FLD19

NOTE:

1. SALVAGE TEMPORARY CABLE (CID) AND RE-USE FOR FINAL LIGHTING CONFIGURATION.

SHEET 3 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - FINAL LIGHTING	SHEET 162 E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023601_LP.DWG
LAYOUT NAME - 023603_LP

PLOT DATE : 8/31/2017 2:26 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- CONDUIT - 2" UNLESS OTHERWISE NOTED
- INSTALL LIGHTING UNIT WITH LED LUMINAIRE
- INSTALL LED LUMINAIRE
- PULL BOX, 24"x42"
- PULL BOX 24"x36"

N

589+15.2, 0.0'
LED-D-E-10-FLD20

591+65.6, 0.1' RT
LED-D-E-10-ELD21

594+21.8, 2.8' LT
LED-D-E-10-FLD22

596+78.6, 5.9' LT
LED-D-E-10-FSN30

599+01.0, 7.7' LT
LED-D-E-10-ESN31

601+69.1, 7.8' LT
LED-D-E-10-FSN32

PC: 593+46.17

590 592 594 596 598 600 602 604

IH-94

590+20.1, 116.1' RT
LED-D-E(T)-20-FLD13

589+15.2, 0.0'
LED-D-E-10-ELD20

591+65.6, 0.1' RT
LED-D-E-10-FLD21

594+21.8, 2.8' LT
LED-D-E-10-ELD22

596+78.6, 5.9' LT
LED-D-E-10-ESN30

599+01.0, 7.7' LT
LED-D-E-10-FSN31

601+69.1, 7.8' LT
LED-D-E-10-ESN32

SHEET 4 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - FINAL LIGHTING	SHEET 163 E

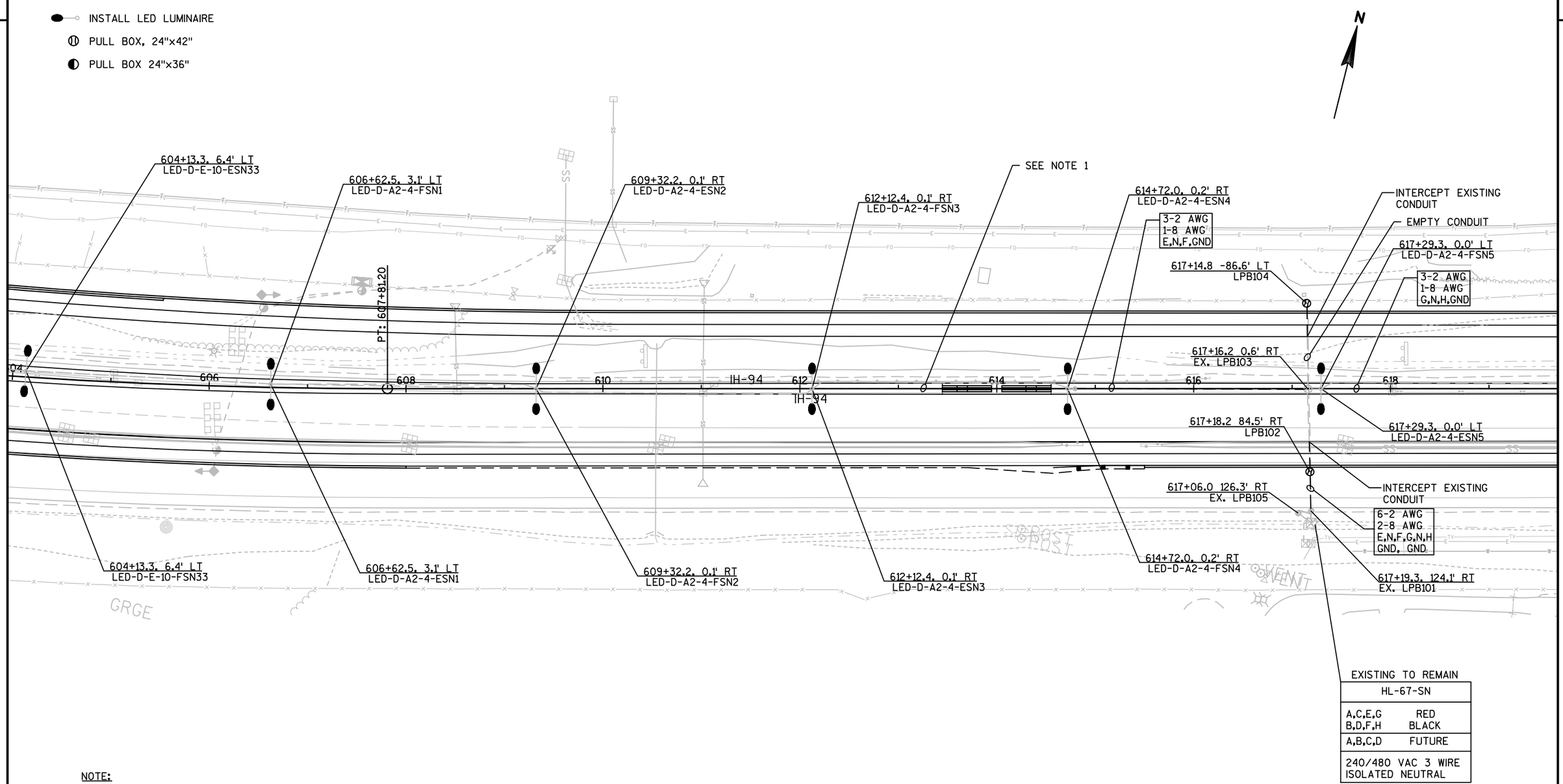
FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023601_LP.DWG
LAYOUT NAME - 023604_LP

PLOT DATE : 8/31/2017 2:26 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- CONDUIT - 2" UNLESS OTHERWISE NOTED
- INSTALL LIGHTING UNIT WITH LED LUMINAIRE
- INSTALL LED LUMINAIRE
- PULL BOX, 24"x42"
- PULL BOX 24"x36"



NOTE:

1. SALVAGE TEMPORARY CABLE (CID) AND RE-USE FOR FINAL LIGHTING CONFIGURATION.

SHEET 5 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - FINAL LIGHTING	SHEET 164 E

LEGEND

- CONTROL CABINET
- CONDUIT - 2" UNLESS OTHERWISE NOTED
- INSTALL LIGHTING UNIT WITH LED LUMINAIRE
- INSTALL LED LUMINAIRE
- PULL BOX, 24"x42"
- PULL BOX 24"x36"

619+93.2, 0.0' LT
LED-D-A2-4-GSN6

622+57.6, 0.1' LT
LED-D-A2-4-HSN7

625+22.4, 0.0' LT
LED-D-A2-4-GSN8
SEE NOTE 2

627+40.1, 0.1' LT
LED-D-A2-4-HSN9
SEE NOTE 2

SEE NOTE 1

630+04.0, 0.2' RT
LED-D-A2-4-HSN10

632+55.3, 0.0' LT
LED-D-A2-4-GSN11

622+57.6, 0.1' LT
LED-D-A2-4-GSN7

625+22.4, 0.0' LT
LED-D-A2-4-HSN8
SEE NOTE 2

627+40.1, 0.1' LT
LED-D-A2-4-GSN9
SEE NOTE 2

630+04.0, 0.2' RT
LED-D-A2-4-GSN10

632+55.3, 0.0' LT
LED-D-A2-4-HSN11

619+93.2, 0.0' LT
LED-D-A2-4-HSN6

SUNNYSLOPE RD

IH-94

620 622 624 626 628 630 632 634

132 130 128 126

NOTE:

1. SALVAGE TEMPORARY CABLE (CID) AND RE-USE FOR FINAL LIGHTING CONFIGURATION.
2. RE-INSTALL LIGHTING UNITS SALVAGED AND LED LUMINAIRE FOR FINAL LIGHTING CONFIGURATION.

SHEET 6 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - FINAL LIGHTING	SHEET 165	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023601_LP.DWG
LAYOUT NAME - 023606_LP

PLOT DATE : 8/31/2017 2:26 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND

- CONTROL CABINET
- CONDUIT - 2" UNLESS OTHERWISE NOTED
- INSTALL LIGHTING UNIT WITH LED LUMINAIRE
- INSTALL LED LUMINAIRE
- PULL BOX, 24"x42"
- PULL BOX 24"x36"

N

635+02.8, 0.1' RT
LED-D-A2-4-GSN12

637+58.1, 0.0' RT
LED-D-A2-4-CEL7

640+09.4, 0.3' RT
LED-D-A2-4-DEL6

SEE NOTE 1

642+59.6, 0.2' RT
LED-D-A2-4-CEL5

645+14.1, 0.1' RT
LED-D-A2-4-DEL4

647+67.5, 0.0' RT
LED-D-A2-4-CEL3

634 636 638 640 642 644 646 648

IH-94

635+02.8, 0.1' RT
LED-D-A2-4-HSN12

637+58.1, 0.0' RT
LED-D-A2-4-DEL7

640+09.4, 0.3' RT
LED-D-A2-4-CEL6

642+59.6, 0.2' RT
LED-D-A2-4-DEL5

645+14.1, 0.1' RT
LED-D-A2-4-CEL4

647+67.5, 0.0' RT
LED-D-A2-4-DEL3

EMPTY CONDUIT

NOTE:

1. SALVAGE TEMPORARY CABLE (CID) AND RE-USE FOR FINAL LIGHTING CONFIGURATION.

SHEET 7 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - FINAL LIGHTING	SHEET 166	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023601_LP.DWG
LAYOUT NAME - 023607_LP

PLOT DATE : 8/31/2017 2:26 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- CONDUIT - 2" UNLESS OTHERWISE NOTED
- INSTALL LIGHTING UNIT WITH LED LUMINAIRE
- INSTALL LED LUMINAIRE
- PULL BOX, 24"x42"
- PULL BOX 24"x36"

ELM GROVE RD

IH-94

650+18.1, 0.0' RT
LED-D-A2-4-DEL2

652+71.0, 0.0' LT
LED-D-A2-4-CEL1

654+74.6, 0.1' RT
LPB102

3-2 AWG
1-8 AWG
C,N,D,GND

3-2 AWG
1-8 AWG
A,N,B,GND

654+87.5, 0.1' RT
LED-D-A2-4-AEL1

657+23.6, 0.2' RT
LED-D-A2-4-BEL2

659+73.4, 0.2' RT
LED-D-A2-4-AEL3

662+16.6, 0.1' RT
LED-D-A2-4-BEL4

PI 653+79.34

650 652 654 656 658 660 662 664

654+87.5, 0.1' RT
LED-D-A2-4-BEL1

INTERCEPT EXISTING CONDUIT

3"

654+77.0, 82.3' RT
EX. LPB103

654+37.0, 162.0' RT
EX. LPB101

6-2 AWG
2-8 AWG
A,N,B,C,N,D
GND,GND

650+18.1, 0.0' RT
LED-D-A2-4-CEL2

652+71.0, 0.0' LT
LED-D-A2-4-DEL1

SEE NOTE 1

EXISTING TO REMAIN

HL-67-EL	
A,C	RED
B,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D	30 A
240/480 VAC 3 WIRE ISOLATED NEUTRAL	

657+23.6, 0.2' RT
LED-D-A2-4-AEL2

659+73.4, 0.2' RT
LED-D-A2-4-BEL3

662+16.6, 0.1' RT
LED-D-A2-4-AEL4

NOTE:
1. SALVAGE TEMPORARY CABLE (CID) AND RE-USE FOR FINAL LIGHTING CONFIGURATION.

SHEET 8 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - FINAL LIGHTING	SHEET 167	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\LTG\023601_LP.DWG
LAYOUT NAME - 023608_LP

PLOT DATE : 8/31/2017 2:26 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- CONTROL CABINET
- CONDUIT - 2" UNLESS OTHERWISE NOTED
- INSTALL LIGHTING UNIT WITH LED LUMINAIRE
- INSTALL LED LUMINAIRE
- PULL BOX, 24"x42"
- PULL BOX 24"x36"

N

664+59.4, 0.4' RT
LED-D-A2-4-AEL5

667+02.3, 0.2' RT
LED-D-A-4-BUN1

669+53.7, 0.0' LT
LED-B-A(5)-4-BUN2

672+01.8, 0.2' RT
LED-D-A(5)-4-AUN3

674+41.0, 0.0' RT
LED-D-A(5)-4-BUN-4

677+07.1, 0.2' RT
LED-D-A(5)-4-AUN5

664 666 668 670 672 674 676 678

IH-94

664+59.4, 0.4' RT
LED-D-A2-4-BEL5

667+02.3, 0.2' RT
LED-D-A-4-AUN1

669+53.7, 0.0' LT
LED-D-A(5)-4-AUN2

672+01.8, 0.2' RT
LED-D-A(5)-4-BUN3

674+41.0, 0.0' RT
LED-D-A(5)-4-AUN4

677+07.1, 0.2' RT
LED-D-A(5)-4-BUN5

SHEET 9 OF 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	LIGHTING PLANS - FINAL LIGHTING	SHEET 168	E

2

LEGEND

———	1	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
———	2	PAVEMENT MARKING EPOXY 4-INCH (WHITE)
- - -

2

2

BEGIN PAVEMENT MARKING
STA. 572+73 IH-94 RAMP

N

2

1

17

BEGIN PAVEMENT MARKING
STA. 573+05 IH-94

183

184

30

10

12

12

IH-94 WB

12

57

57

57

58

BEGIN PAVEMENT MARKING
STA. 573+05 IH-94 RAMP

12

12

IH-94 EB

12

30

12

12

1

2

BEGIN PAVEMENT MARKING
STA. 573+05 IH-94 RAMP

10

10

BEGIN PAVEMENT MARKING
STA. 573+05 IH-94 RAMP

MH

SS

OHUY

WELL

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH-94	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\024501_PM.DWG
LAYOUT NAME - 02450101_PM

PLOT DATE : 6/15/2017 11:38 AM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

N

IH-94 WB

IH-94 EB

STA. 585+00 IH-94

585

585

585

2
183
13
29
30
16
183
17
12
12
12
12
12
12
10
10
30
7
29
10
183
30
2
183
184

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH-94	SHEET 171	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\024501_PM.DWG
LAYOUT NAME - 02450102_PM

PLOT DATE : 6/15/2017 11:38 AM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

N

183
30
16
2
39
11
10

IH-94 WB

12
12
12

588
590
592
594

12
12
12

IH-94 EB

183
2
184
29
30

MH

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH 94	SHEET 172	E

2

N

183

11

30

184

39

10

IH-94 WB

596

598

600

602

12

IH-94 EB

29

STA. 597+17 IH-94

30

11

183

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH-94	SHEET 173	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\024501_PM.DWG
LAYOUT NAME - 02450104_PM

PLOT DATE : 6/15/2017 11:38 AM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

N

11

183

39

30

10

12

12

12

IH-94 WB

604

606

608

12

12

12

IH-94 EB

183

30

184

11

GRGE

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH-94	SHEET 174	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\024501_PM.DWG
LAYOUT NAME - 02450105_PM

PLOT DATE : 6/15/2017 11:39 AM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

39

183

30

11

IH-94 WB

610

612

614

616

12

12

12

IH-94 EB

12

183

11

30

10

184

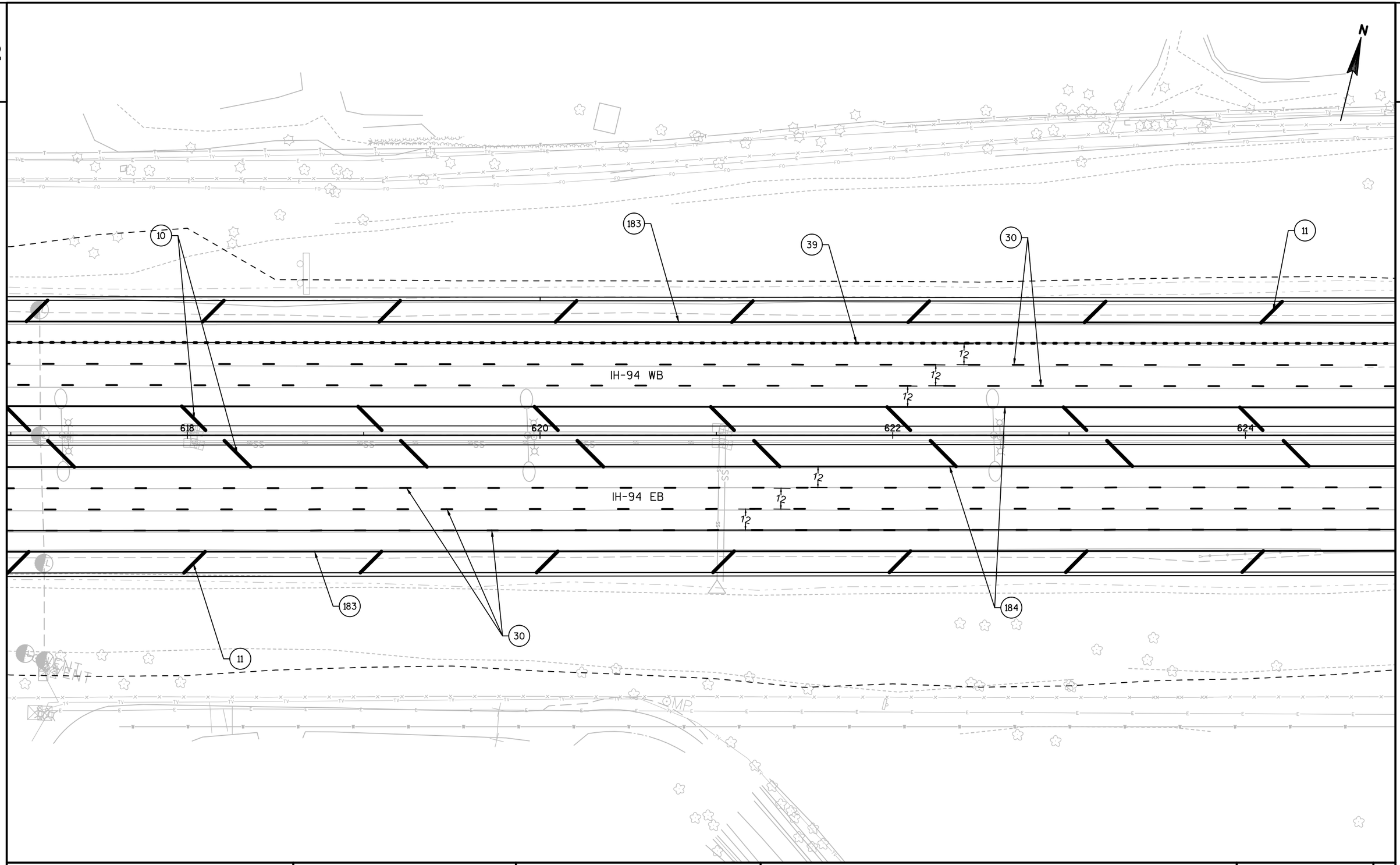
SIGNPOST

SIGNPOST

TOWER

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH-94	SHEET 175	E

2



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH-94	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\024501_PM.DWG
LAYOUT NAME - 02450107_PM

PLOT DATE : 6/15/2017 11:39 AM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

132+00

131+00

129+00

128+00

B-67-344

SUNNYSLOPE ROAD

IH-94 WB

IH-94 EB

626

628

630

632

12

39

184

183

30

11

10

PROJECT NO: 1060-33-82 | HWY: IH-94 | COUNTY: WAUKESHA | PAVEMENT MARKING - IH-94 | SHEET 177 | E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\024501_PM.DWG
LAYOUT NAME - 02450108_PM

PLOT DATE : 6/15/2017 11:39 AM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

10

39

30

183

11

IH-94 WB

12

12

12

634

636

638

12

IH-94 EB

12

12

11

183

30

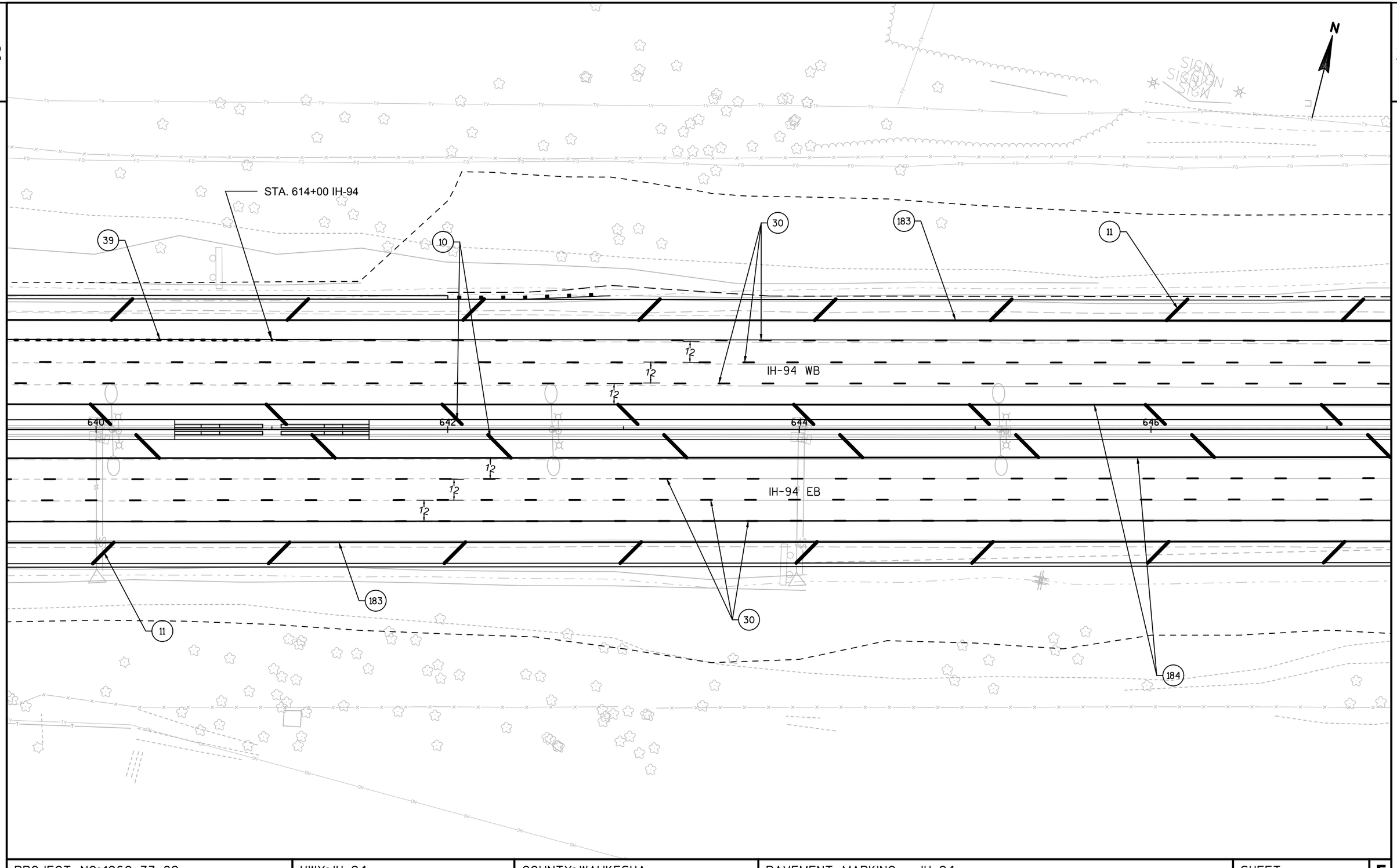
184

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH-94	SHEET 178	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\024501_PM.DWG
LAYOUT NAME - 02450109_PM

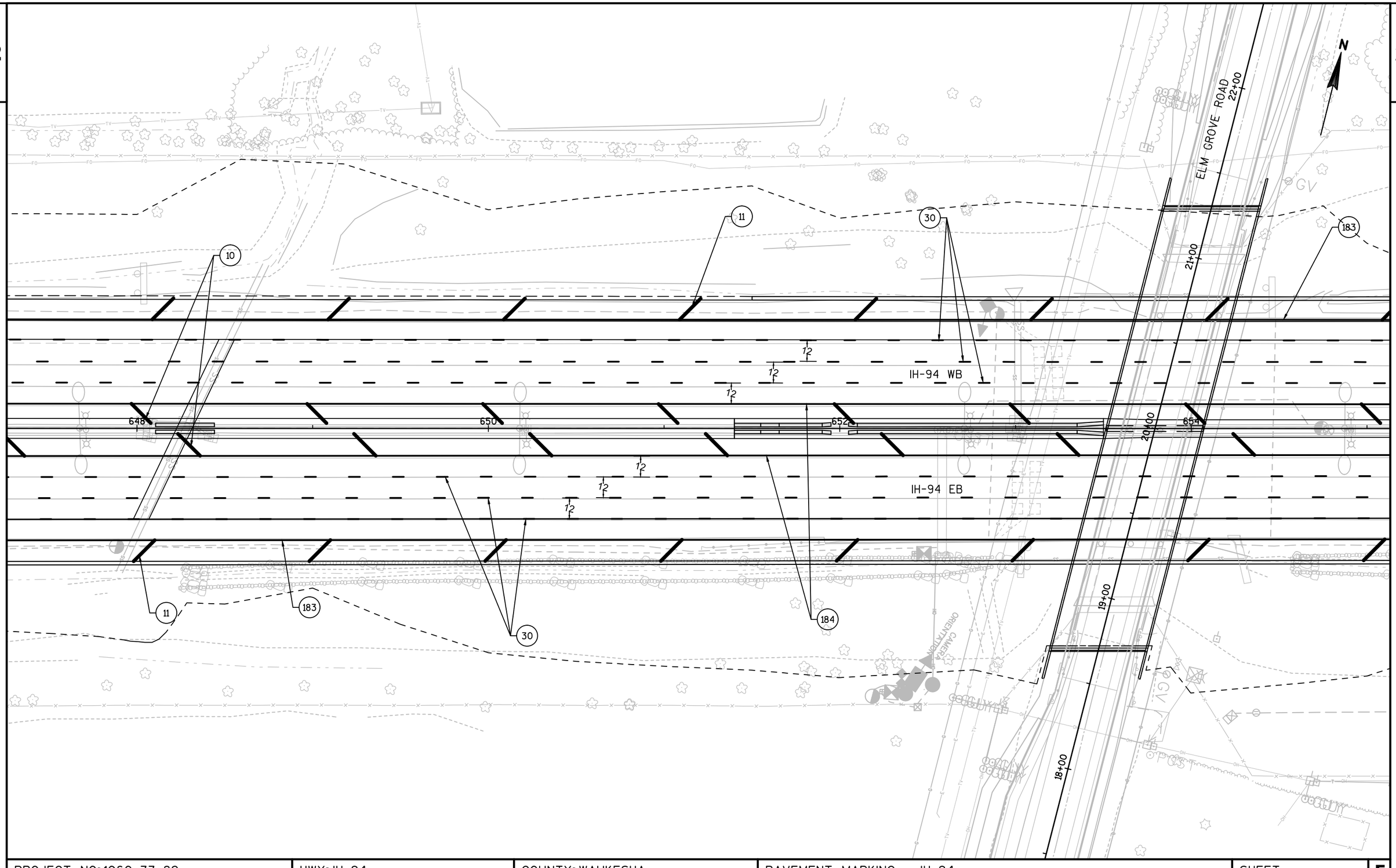
PLOT DATE : 6/15/2017 11:39 AM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

2



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH-94	SHEET 179	E

2



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH-94	SHEET 180	E

2

2

N

184

30

183

11

IH-94 WB

12

12

12

656

658

660

662

IH-94 EB

12

12

12

11

183

30

10

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH-94	SHEET 181	E

2

2

N

END PAVEMENT MARKING
STA. 669+05 IH-94
COORDINATE PAVEMENT MARKING TIE-IN WITH
ZOO IC - ZOO INTERCHANGE PHASE 2 (PROJECT 1060-33-81)

30 183 11 184 10

IH-94 WB

12 12 12

662 664 666 668

IH-94 EB

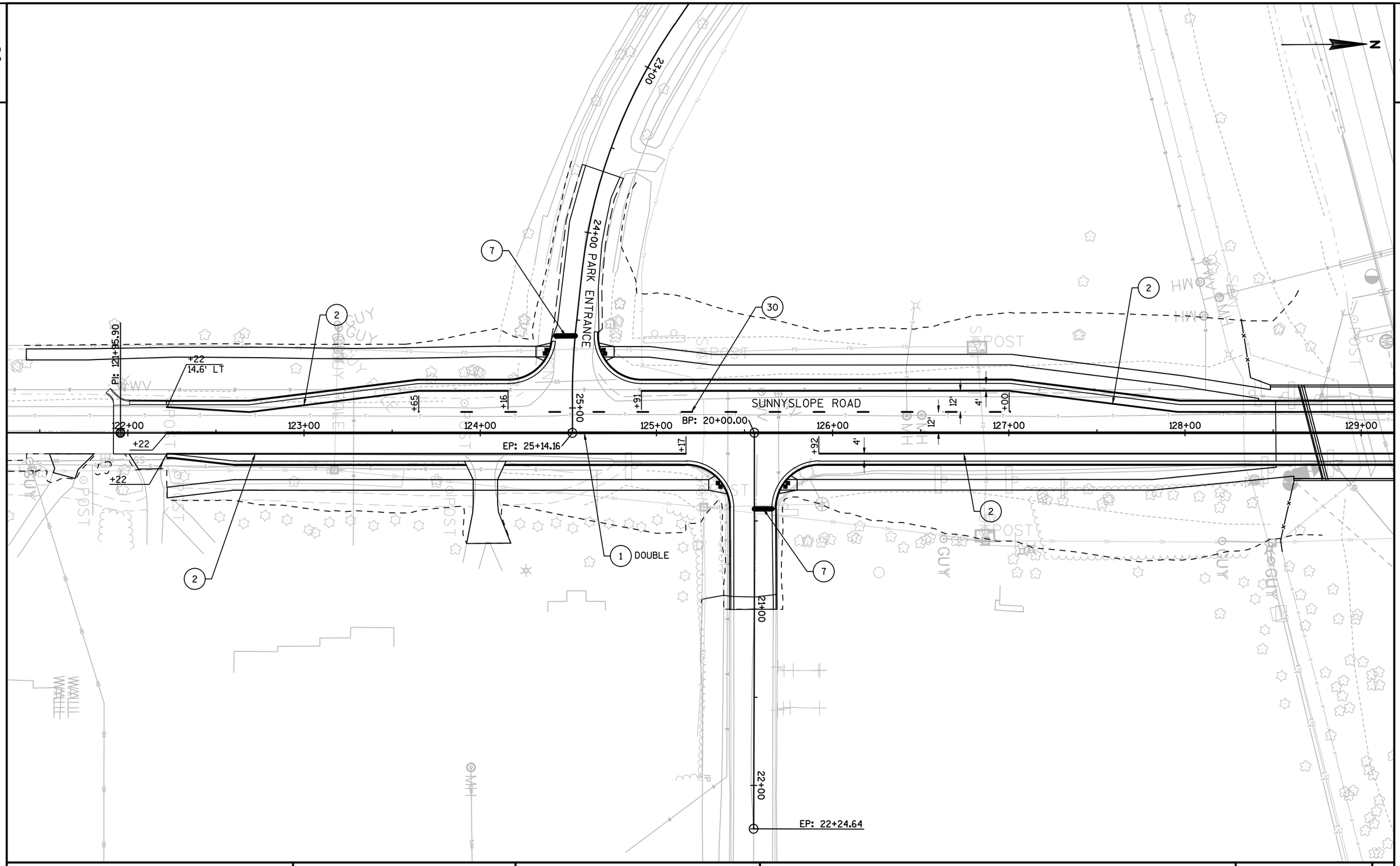
12 12 12

11 183 30

END PAVEMENT MARKING
STA. 669+05 IH-94
COORDINATE PAVEMENT MARKING TIE-IN WITH
ZOO IC - ZOO INTERCHANGE PHASE 2 (PROJECT 1060-33-81)

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING - IH-94	SHEET 182	E

2



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING- SUNNYSLOPE ROAD	SHEET 183 E

FILE NAME : W:\PDS\C3D\CAD\10603203\73\024502_PM.DWG
LAYOUT NAME - 024501_PM
PLOT DATE : 6/15/2017 1:51 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

624+00
625+00
626+00
627+00
628+00
PI: 626+31.80
129+00
130+00
131+00
132+00
133+00
134+00
135+00
136+00
SUNNYSLOPE ROAD
W. BEECHWOOD AVENUE
23+00
24+00
+57
+36
+36
EP: 24+64.28
12'
4'
12'
4'
7.8'
1 DOUBLE
2
2
7
N
WV
GUY
SS
OH
FO
TV

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING- SUNNYSLOPE ROAD	SHEET 184 E

GENERAL NOTES FOR TRAFFIC CONTROL

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

2) A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE WORK AREAS IF WARRANTED BY CONDITIONS OR AS DIRECTED BY THE ENGINEER. FLAGGING IS NOT PERMITTED ON FREEWAY LANES.

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

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

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

6) ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, AND EQUIPPED WITH TWO TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

7) DIMENSIONS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER ADJACENT TO TRAFFIC. STATION CALL-OUTS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER.

8) WORK AREAS SHOWN MAY NOT ILLUSTRATE ALL REMOVALS. SEE REMOVAL SHEETS FOR ADDITIONAL INFORMATION.

9) ALL TRAFFIC CONTROL SIGNS LOCATED IN MEDIANS SHALL BE MOUNTED ON CONCRETE BARRIER UNLESS OTHERWISE NOTED, SEE TRAFFIC CONTROL DETAILS.

10) WHEN A SEGMENT OF THE PROJECT IS NOT SHOWN ON THE STAGING PLANS, USE THE SAME TRAFFIC CONTROL AS THE PREVIOUS STAGE FOR THAT SEGMENT.

11) TRAFFIC CONTROL DRUM SPACING SHALL BE 50' UNLESS OTHERWISE NOTED.

12) 16" X 16" ORANGE FLAGS SHALL BE INCIDENTAL TO TRAFFIC CONTROL SIGN BID ITEM.

TEMPORARY PAVEMENT MARKING LEGEND

(1) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)

(2) PAVEMENT MARKING EPOXY 4-INCH (WHITE)

(3) PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

(19) PAVEMENT MARKING ARROWS EPOXY TYPE 5 (WHITE)

(163) TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)

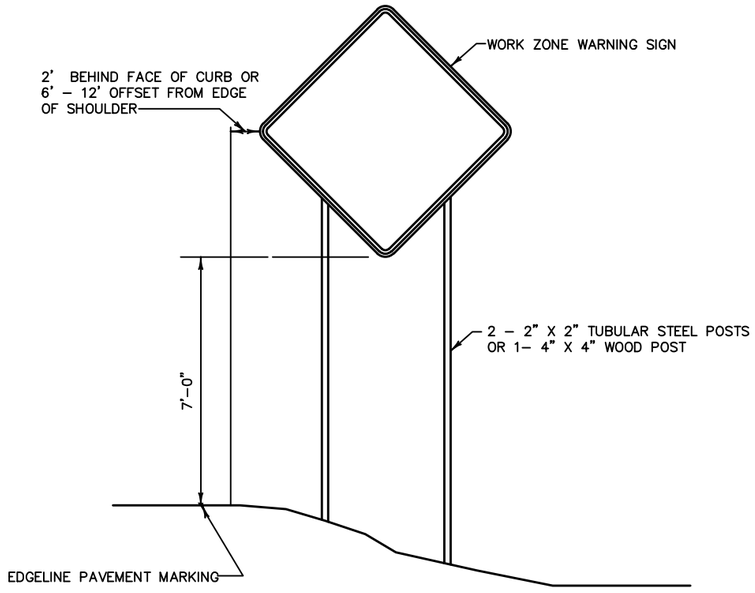
(164) TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)

▶ TEMPORARY RAISED PAVEMENT MARKERS (ONE-WAY REFLECTOR)

2

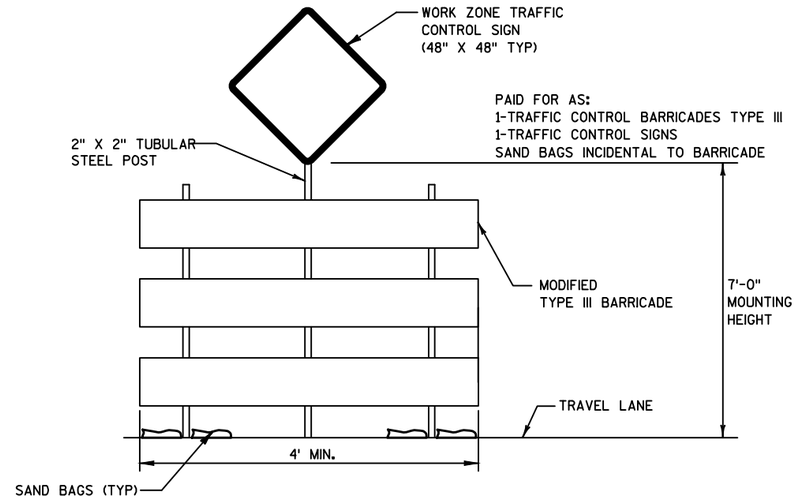
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL NOTES AND LEGENDS	SHEET 185	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\DISPLAY\TC_GN.DWG
LAYOUT NAME - ****
PLOT DATE : 4/24/2017 2:24 PM PLOT BY : SARAUER, ADAM N PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



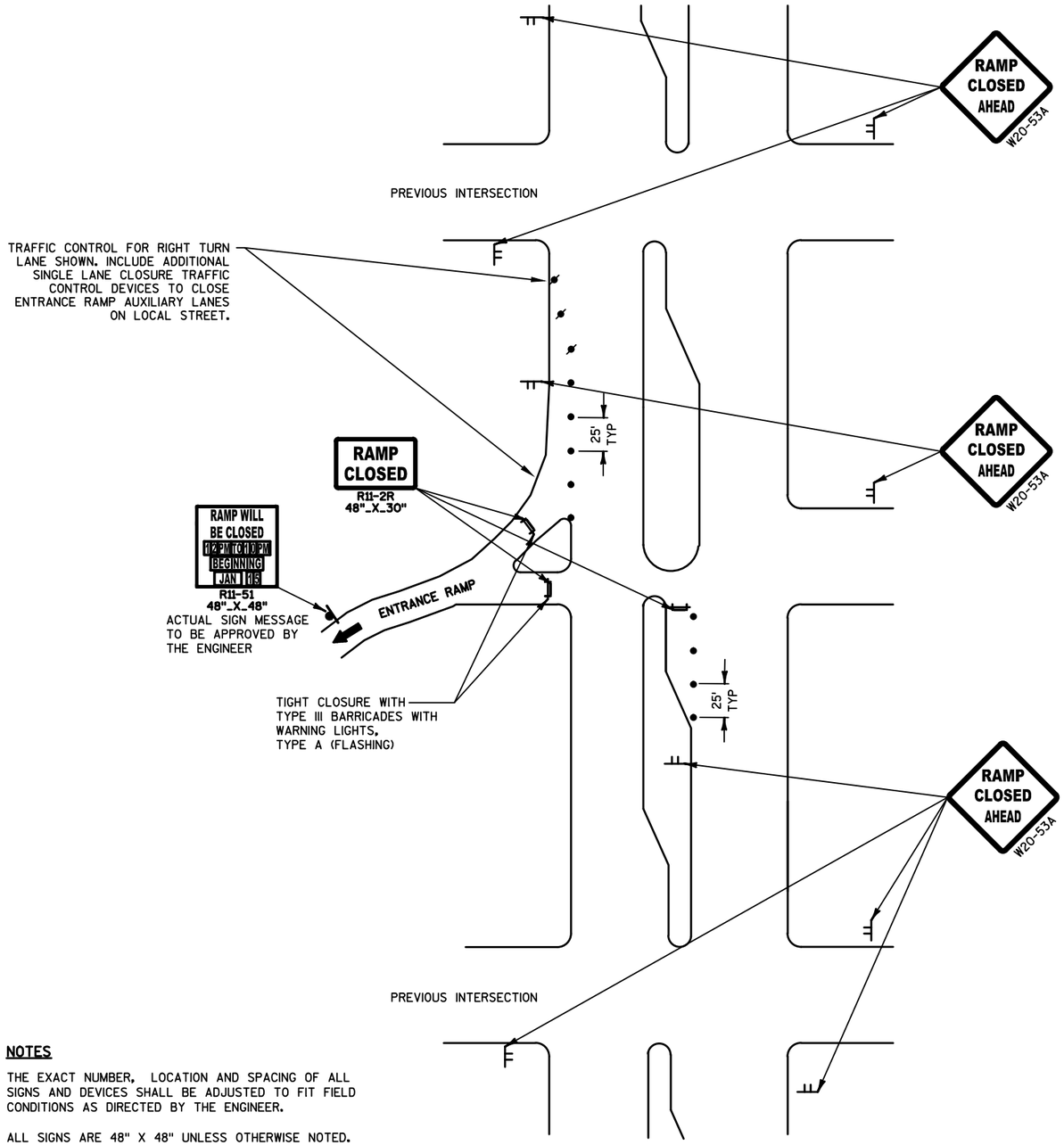
TYPICAL TEMPORARY TRAFFIC CONTROL SIGN
MOUNTING ON FIXED SUPPORT

LONG TERM
7 DAYS OR MORE



TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL
MOUNTING ON TEMPORARY SUPPORT

2



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.

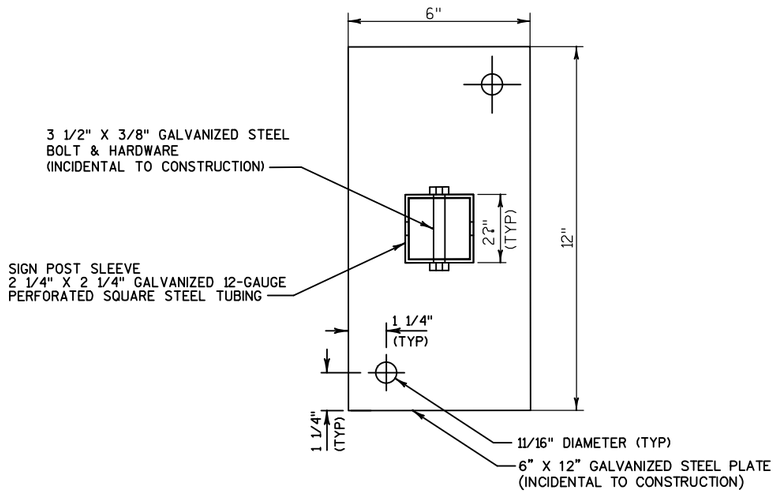
LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL III BARRICADE FOR SHORT TERM 3 DAYS OR LESS
- TRAFFIC CONTROL III BARRICADE WITH LIGHT TYPE A AND ATTACHED SIGN
- DIRECTION OF TRAFFIC

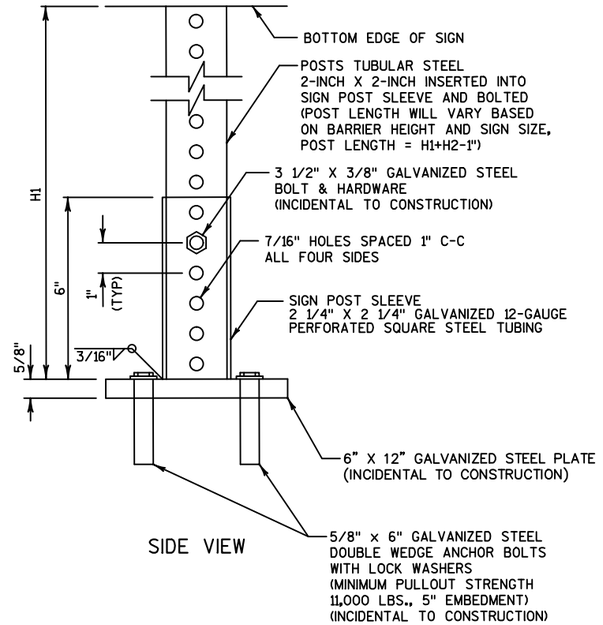
TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

(SHORT TERM ONLY)

2

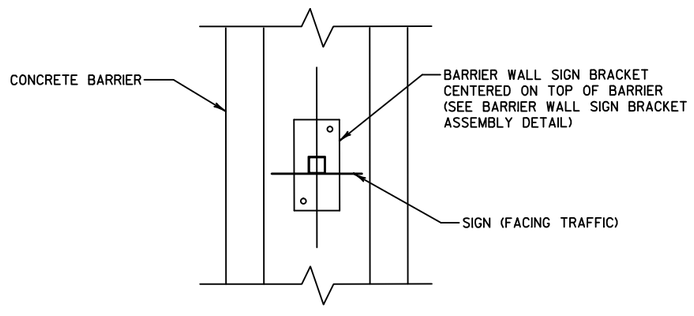


PLAN VIEW

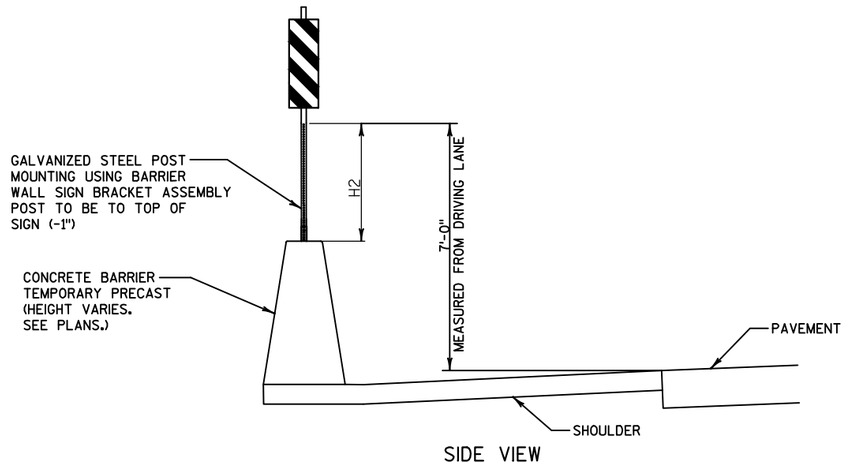


SIDE VIEW

BARRIER WALL SIGN BRACKET ASSEMBLY DETAIL



PLAN VIEW



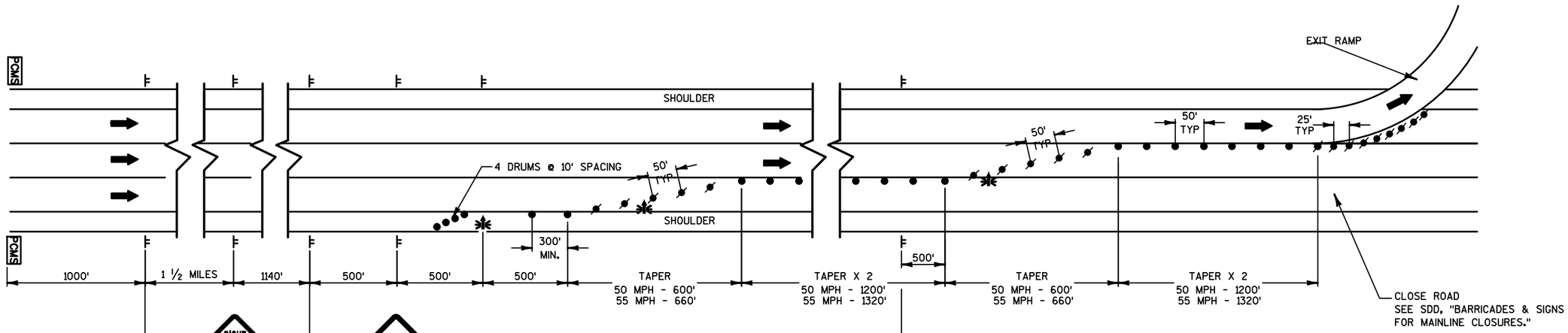
SIDE VIEW

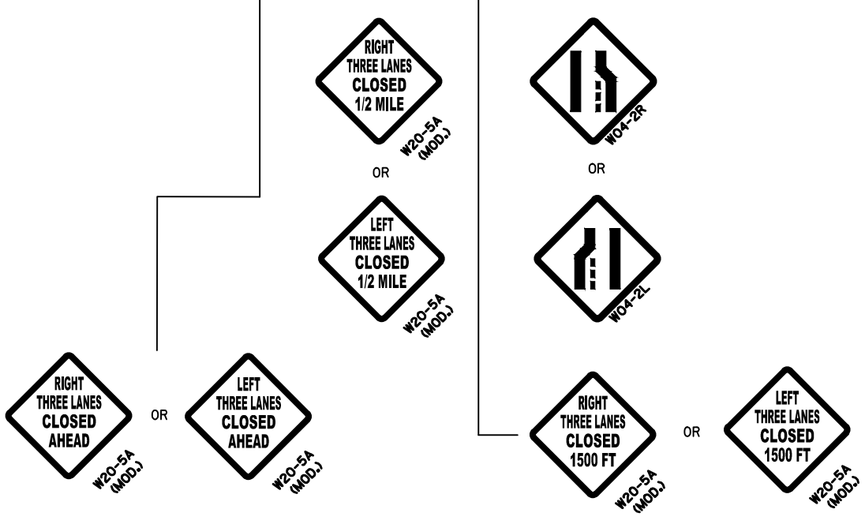
MEDIAN BARRIER MOUNTING DETAIL

MOUNTING SIGNS TO MEDIAN BARRIER

NOT TO SCALE

2





LEGEND

- ● TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- DIRECTION OF TRAFFIC
- PCMS TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE

FULL FREEWAY CLOSURE DETAIL

3 LANE CLOSURE - SPEEDS 45 MPH OR GREATER

TRAFFIC CONTROL NOTES

RIGHT LANE CLOSURE SHOWN (LEFT LANE CLOSURE SIMILAR).

THREE LANE CLOSURE SHOWN. ADJUST DETAIL ACCORDINGLY FOR ROADWAY WITH FEWER LANES.
THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED 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, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED 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.

ALL WARNING SIGNS FOR LONG TERM OPERATIONS SHALL BE NON-FLUORESCENT DIAMOND GRADE SHEETING. TYPE A LIGHTS AND FLAGS ARE NOT REQUIRED.

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 WITH LANE CLOSED SIGN.

SEE DETOUR PLANS FOR ADDITIONAL SIGNING REQUIREMENTS.

2

STAGE 1

CONSTRUCTION
- REMOVE EXISTING STRUCTURE B-67-54
- CONSTRUCT THE FOOTINGS WITHIN THE MEDIAN AREA FOR B-67-344
- CONSTRUCT THE FOOTINGS WITHIN THE MEDIAN AREA FOR S-67-315, S-67-317, S-67-318, AND S-67-418

- REMOVE S-67-315

- REMOVE S-67-402

TRAFFIC
- CLOSE SUNNYSLOPE ROAD
- CLOSE INSIDE SHOULDER OF BOTH EASTBOUND AND WESTBOUND IH 94

STAGE 2

CONSTRUCTION
- BEGIN CONSTRUCTION OF BOTH EASTBOUND AND WESTBOUND OUTSIDE LANE AND SHOULDER

- CONTINUE CONSTRUCTION OF B-67-344

- CONTINUE CONSTRUCTION OF S-67-315, S-67-317, S-67-344, S-67-318, S-67-418

TRAFFIC
- SHIFT IH 94 EASTBOUND AND WESTBOUND TRAFFIC TOWARD THE INSIDE MEDIAN
- IH 94 WESTBOUND EXIT RAMP TO MOORLAND RD. TEMPORARY CONFIGURATION
- IH 94 ENTRANCE RAMP FROM MOORLAND RD. TEMPORARY CONFIGURATION

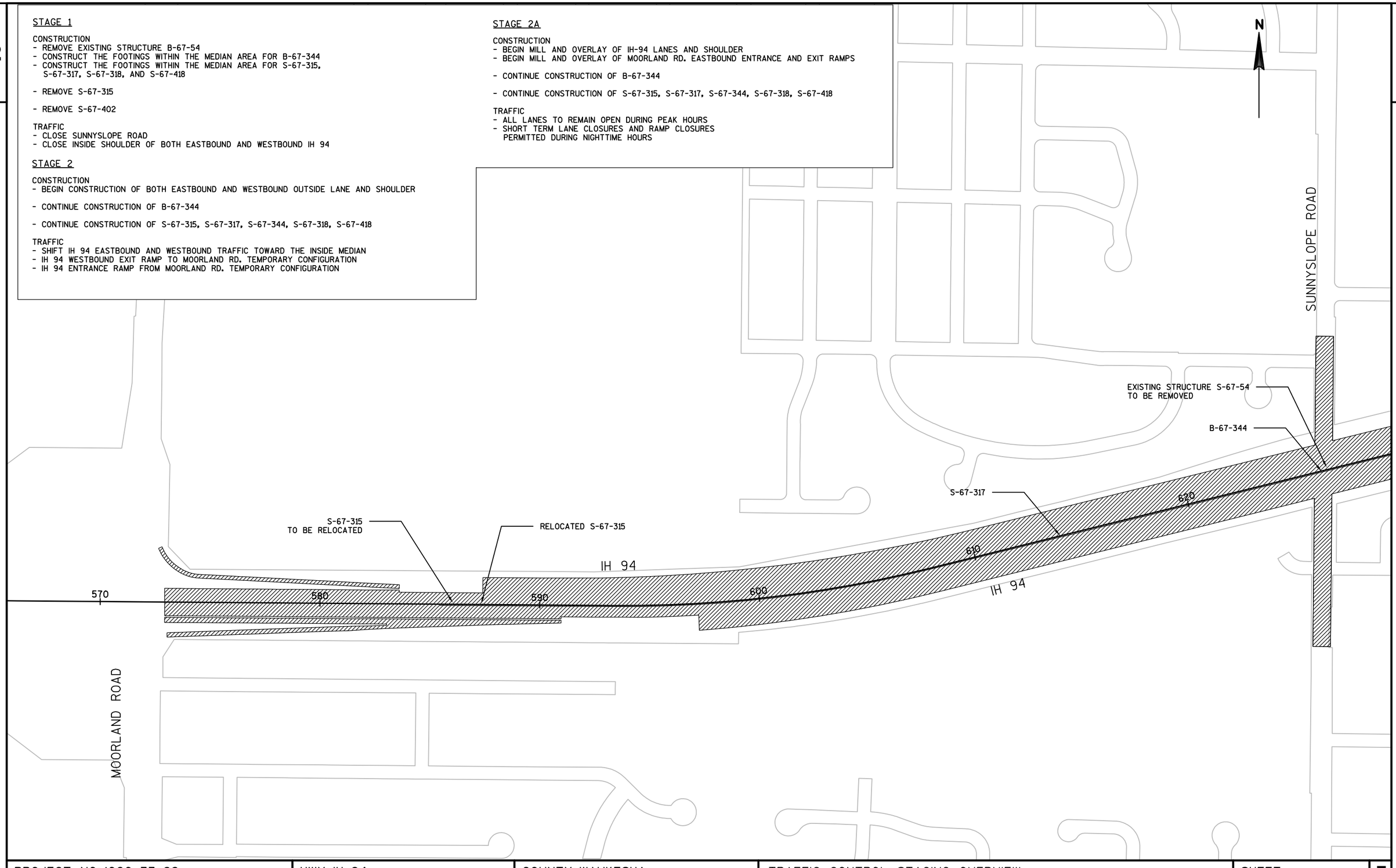
STAGE 2A

CONSTRUCTION
- BEGIN MILL AND OVERLAY OF IH-94 LANES AND SHOULDER
- BEGIN MILL AND OVERLAY OF MOORLAND RD. EASTBOUND ENTRANCE AND EXIT RAMPS

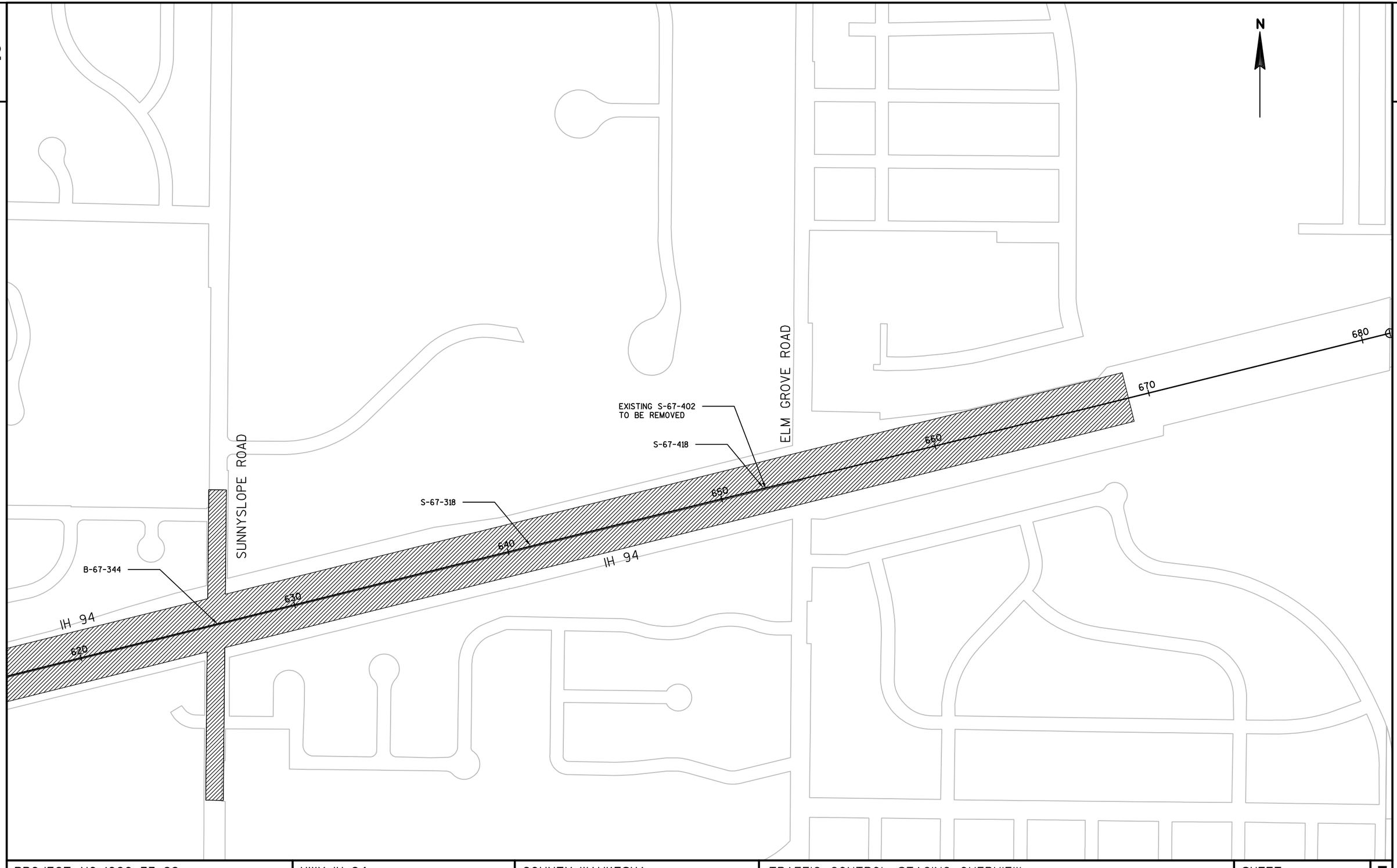
- CONTINUE CONSTRUCTION OF B-67-344

- CONTINUE CONSTRUCTION OF S-67-315, S-67-317, S-67-344, S-67-318, S-67-418

TRAFFIC
- ALL LANES TO REMAIN OPEN DURING PEAK HOURS
- SHORT TERM LANE CLOSURES AND RAMP CLOSURES PERMITTED DURING NIGHTTIME HOURS



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGING OVERVIEW	SHEET 190	E



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGING OVERVIEW	SHEET 191	E

ADVANCED TRAFFIC CONTROL SIGNING FOR EASTBOUND TRAFFIC

5280' 2640' 2640'

ROAD WORK 2 MILES W20-1

ROAD WORK 1 MILE W20-1-F

FINES DOUBLE IN WORK ZONES — Give 'em a BRAKE SLOW DOWN

W21-62 96"X48"

*INSTALL SIGNS ON BOTH THE EASTBOUND MAINLINE INSIDE AND OUTSIDE SHOULDERS

MOORLAND ROAD

G20-2A 48"X24" END ROAD WORK

S-67-315 TO BE RELOCATED

END CONCRETE BARRIER TEMPORARY PRECAST +40

IH 94 WB

IH 94 EB

36'

50' (TYP)

100' (TYP)

572 574 576 578 580 582 584 586

1000' 500'

CC

**BEGIN CONCRETE BARRIER TEMPORARY PRECAST TAPER 8:1 +36

LEFT SHOULDER CLOSED AHEAD W21-5-BL

LEFT SHOULDER CLOSED W21-5-AL

*INSTALL SIGNS ON EASTBOUND MAINLINE INSIDE AND OUTSIDE SHOULDERS

ROAD WORK AHEAD W20-1-A

(ENTRANCE RAMPS)

W5-52L 18"X54"

**NOTES:

1. ENTRANCE AND EXIT LOCATIONS AT MEDIAN WORK ZONE AREAS SHOULD BE LIMITED TO ONE DIRECTION OR AS APPROVED BY THE ENGINEER.
2. TAPER TEMPORARY CONCRETE BARRIERS ACCORDINGLY TO ALLOW TRUCKS TO ENTER THE WORK ZONE

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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET 192	E

2

N

**NOTES:

1. ENTRANCE AND EXIT LOCATIONS AT MEDIAN WORK ZONE AREAS SHOULD BE LIMITED TO ONE DIRECTION OR AS APPROVED BY THE ENGINEER.
2. TAPER TEMPORARY CONCRETE BARRIERS ACCORDINGLY TO ALLOW TRUCKS TO ENTER THE WORK ZONE

W5-52L
12"X36"

RELOCATED S-67-315

**BEGIN CONCRETE BARRIER TEMPORARY PRECAST TAPER 8:1
+75

END CONCRETE BARRIER TEMPORARY PRECAST
+60

MOORLAND ROAD ENTRANCE RAMP

IH 94 WB

IH 94 EB

36'

36'

100'
(TYP)

588 590 592 594 596 598 600

GUY

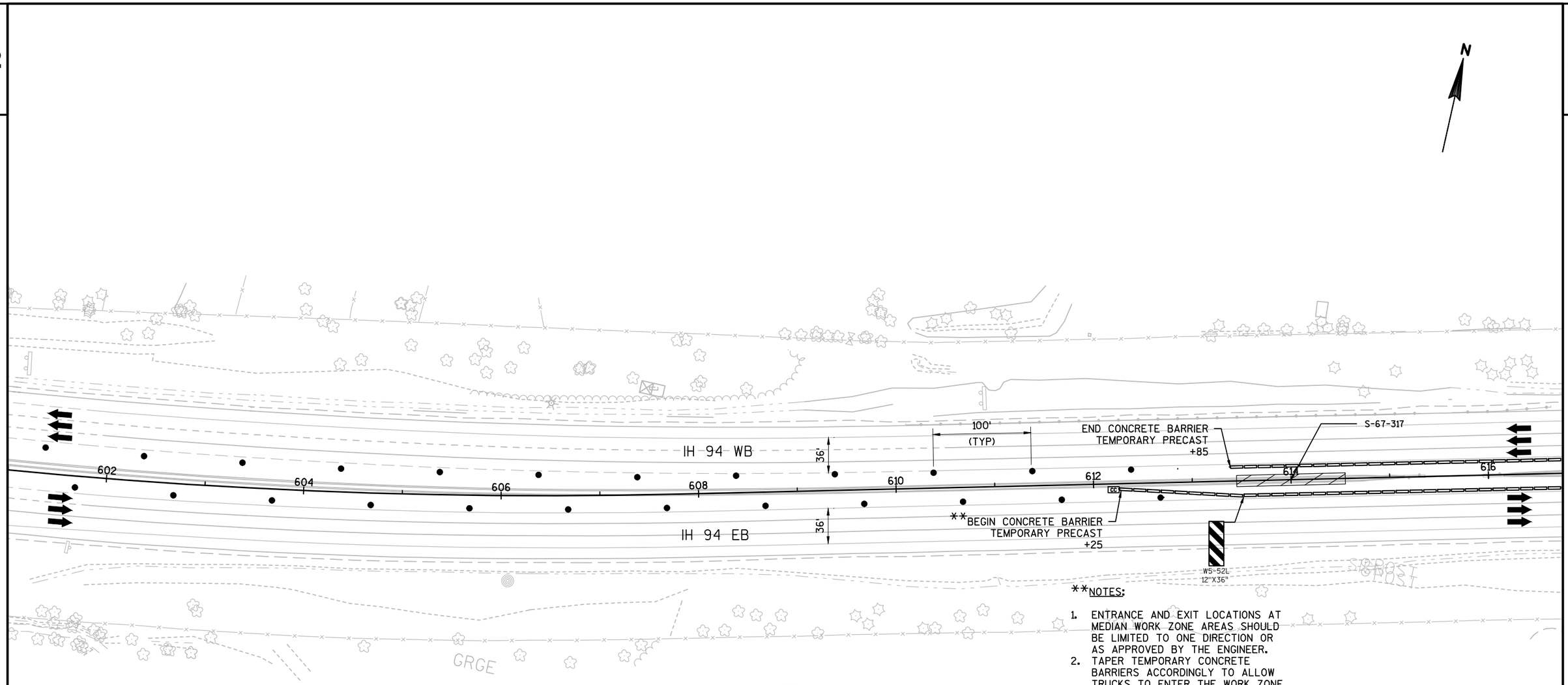
POST

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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

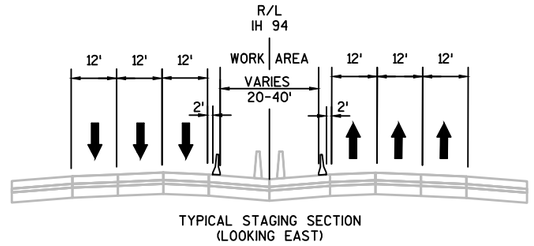
PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET 193	E

2



**NOTES:

1. ENTRANCE AND EXIT LOCATIONS AT MEDIAN WORK ZONE AREAS SHOULD BE LIMITED TO ONE DIRECTION OR AS APPROVED BY THE ENGINEER.
2. TAPER TEMPORARY CONCRETE BARRIERS ACCORDINGLY TO ALLOW TRUCKS TO ENTER THE WORK ZONE



TYPICAL STAGING SECTION
(LOOKING EAST)

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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET 194	E

2

2

N

REMOVE EXISTING PAVEMENT MARKING IN TAPER/SHIFT AREA FOR EASTBOUND AND WESTBOUND TRAFFIC

SUNNYSLOPE ROAD

IH 94 WB

IH 94 EB

300' LANE SHIFT

300' LANE SHIFT

300' LANE SHIFT

300' LANE SHIFT

B-67-344

163

164

163

164

36'

36'

36'

36'

36'

20'

20'

616 618 620 622 624 626 628 630

END CONCRETE BARRIER
TEMPORARY PRECAST
+45

BEGIN CONCRETE BARRIER
TEMPORARY PRECAST
+45

END CONCRETE BARRIER
TEMPORARY PRECAST
+09

W22-1-SR

45 M.P.H.

W13-1
18"X18"

GUY

POST

SIGN

SIGN

SIGN

SIGN

LEGEND

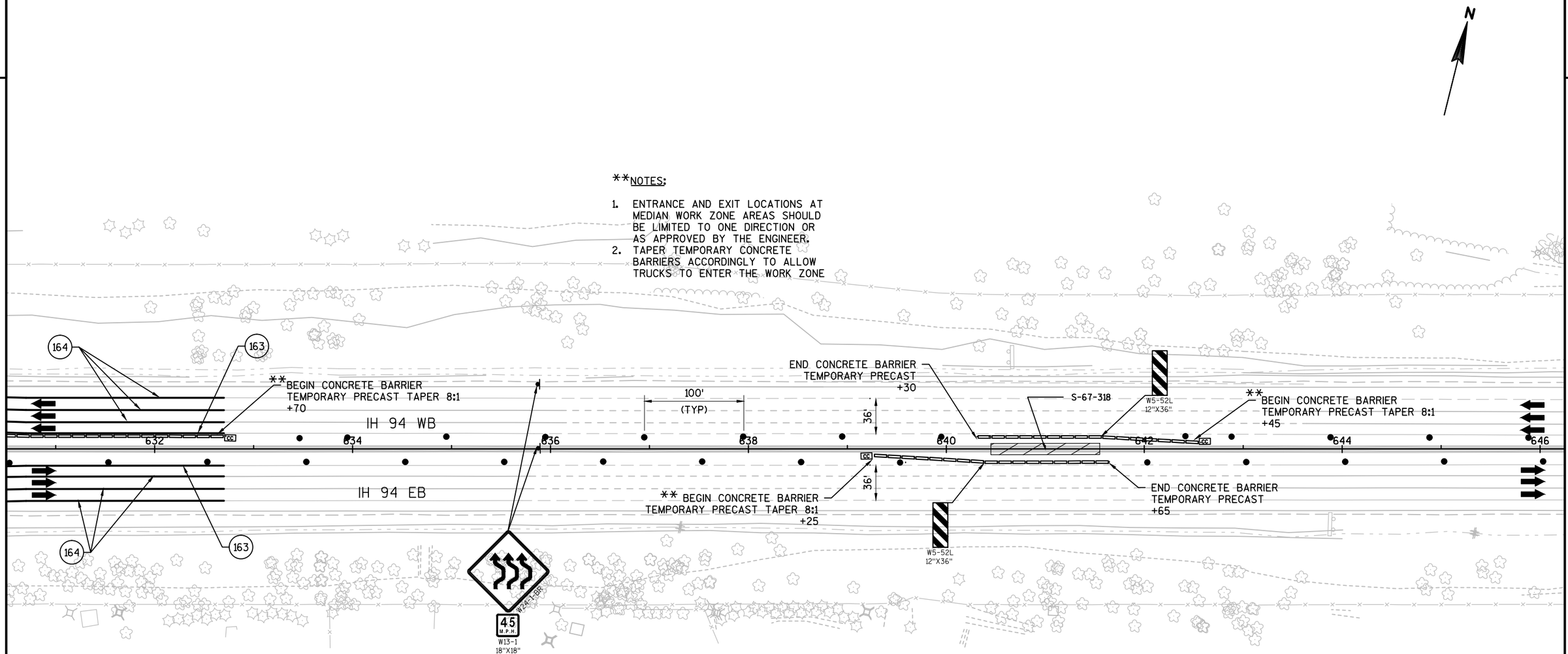
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET 195	E

2

**NOTES:

1. ENTRANCE AND EXIT LOCATIONS AT MEDIAN WORK ZONE AREAS SHOULD BE LIMITED TO ONE DIRECTION OR AS APPROVED BY THE ENGINEER.
2. TAPER TEMPORARY CONCRETE BARRIERS ACCORDINGLY TO ALLOW TRUCKS TO ENTER THE WORK ZONE



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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET 196	E

2

2

N

**NOTES:

1. ENTRANCE AND EXIT LOCATIONS AT MEDIAN WORK ZONE AREAS SHOULD BE LIMITED TO ONE DIRECTION OR AS APPROVED BY THE ENGINEER.
2. TAPER TEMPORARY CONCRETE BARRIERS ACCORDINGLY TO ALLOW TRUCKS TO ENTER THE WORK ZONE
3. SEE PROJECT 1060-33-81 & 1060-43-82 FOR ADDITIONAL CONSTRUCTION ACTIVITIES AND TRAFFIC IMPACTS. ADJUST TRAFFIC CONTROL DEVICES ACCORDINGLY.

ELM GROVE ROAD

REMOVE S-67-402

S-67-418

END CONCRETE BARRIER TEMPORARY PRECAST +40

W5-52L 18"X54"

IH 94 WB

36'

**BEGIN CONCRETE BARRIER TEMPORARY PRECAST 8:1 TAPER +50

DRUM SPACING IS 50' IN TAPER AREA, ELSE 100'

100' (TYP)

50' (TYP)

646 648 650 652 654 656 658 660

IH 94 EB

36'

**BEGIN CONCRETE BARRIER TEMPORARY PRECAST 8:1 TAPER +20

W5-52L 12"X36"

END CONCRETE BARRIER TEMPORARY PRECAST +60

END ROAD WORK G20-2A 48"X24"

NOTES

1. SEE PROJECT ID 1060-33-81 FOR ADDITIONAL CONSTRUCTION ACTIVITIES AND TRAFFIC IMPACTS. ADJUST TRAFFIC CONTROL DEVICES ACCORDINGLY.

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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET 197	E

2

2

NOTES

1. SEE PROJECT ID 1060-33-81 FOR ADDITIONAL CONSTRUCTION ACTIVITIES AND TRAFFIC IMPACTS. ADJUST TRAFFIC CONTROL DEVICES ACCORDINGLY.

N

*FINES DOUBLE IN WORK ZONES — Give 'em a BRAKE SLOW DOWN

W21-62
96"X48"

LIMITS OF WORK BY OTHERS UNDER PROJECT NO. 1060-33-81

*LEFT SHOULDER CLOSED — W21-5-4L

*LEFT SHOULDER CLOSED AHEAD — W21-5-5L

*ROAD WORK AHEAD — W20-1-4

1000'

1600'

500'

*SIGNS INSTALLED ON BOTH INSIDE AND OUTSIDE SHOULDERS

50' (TYP)

IH 94 WB

36'

IH 94 EB

36'

660 662 664 666 668 670 672 674

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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET 198	E

ADVANCED TRAFFIC CONTROL SIGNING FOR EASTBOUND TRAFFIC

5280' | 2640' | 2640'

500' | 500'

ROAD WORK 2 MILES W20-1

ROAD WORK 1 MILE W20-1-F

SPEED LIMIT 50 W03-5

FINES DOUBLE IN WORK ZONES — When Yellow Flashes BRAKE SLOW DOWN — W21-62 96"X48"

W21-62-Q 30"X48" WORK ZONE

R2-1 60"X48" SPEED LIMIT 50

W21-62-R 30"X48" FINES DOUBLE

STA 578+00

*INSTALL SIGNS ON BOTH EASTBOUND INSIDE AND OUTSIDE SHOULDERS

NOTE:

REMOVE EXISTING PAVEMENT MARKINGS THAT WILL CONFLICT IN PROPOSED CONSTRUCTION SHIFT AND "NARROW LANES" LOCATIONS

N

MOORLAND ROAD

EXIT 301B (COVER SIGN)

END CONCRETE BARRIER TEMPORARY PRECAST +80

EXIT E5-1 60"X48"

200' LANE WIDTH TRANSITION

600' SHIFTING TAPER

G20-2A 48"X24" END ROAD WORK

36'

IH 94 WB

IH 94 EB

572 574 576 578 580 582 584 586

100' (TYP)

33'

LANES NARROW AHEAD W20-1(MOD)

ROAD WORK AHEAD W20-1-A

(ENTRANCE RAMPS)

RIGHT SHOULDER CLOSED AHEAD W21-5-B

RIGHT SHOULDER CLOSED W21-5-A

1000' 500'

W01-4c

MAX. WIDTH W12-52 48"X48"

*INSTALL SIGNS ON BOTH EASTBOUND INSIDE AND OUTSIDE SHOULDERS

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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET 199	E

2

2

N

WO1-4c

1

2

3

PC: 593+46.17

IH 94 WB

IH 94 EB

588

590

592

594

596

598

600

33'

12'

600' SHIFTING TAPER

MOORLAND ROAD ENTRANCE RAMP

25'
(TYP)

W1-4L
48"X48"

W4-1R
48"X48"

W4-2R
36"X36"

W5-52R
18"X54"

BEGIN CONCRETE
BARRIER TEMPORARY
PRECAST
+10

19

GUY

POST

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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET 200	E

2

2

N

1

3

2

FT: 607+81.20

33'

33'

IH 94 WB

IH 94 EB

602

604

606

608

610

612

614

616

12'

GRGE

1

3

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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET 201	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\DISPLAY\TC_STAGE 2_REVISED.DWG
LAYOUT NAME - 026012

PLOT DATE : 4/24/2017 2:11 PM PLOT BY : SARAUER, ADAM N PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

SUNNYSLOPE ROAD

PI: 626+31.80

IH 94 WB

IH 94 EB

33'

12'

33'

616 618 620 622 624 626 628 630

131 132 133 134 129 128 127 126 125

1 3 2

1 3 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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

R/L
IH 94

11' 11' 11' 11' 11' 11'

2' 2' 4' 2' 2'

WORK AREA WORK AREA

TYPICAL STAGING SECTION
(LOOKING EAST)

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET 202	E

2

2

N

IH 94 WB

33'

12'

632 634 636 638 640 642 644 646

IH 94 EB

33'

1 3 2

1 3 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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET 203	E

2

2

N

ELM GROVE ROAD

Pt. 653+79.34

IH 94 WB

IH 94 EB

646 648 650 652 654 656 658 660

33'

12'

33'

1 3 2

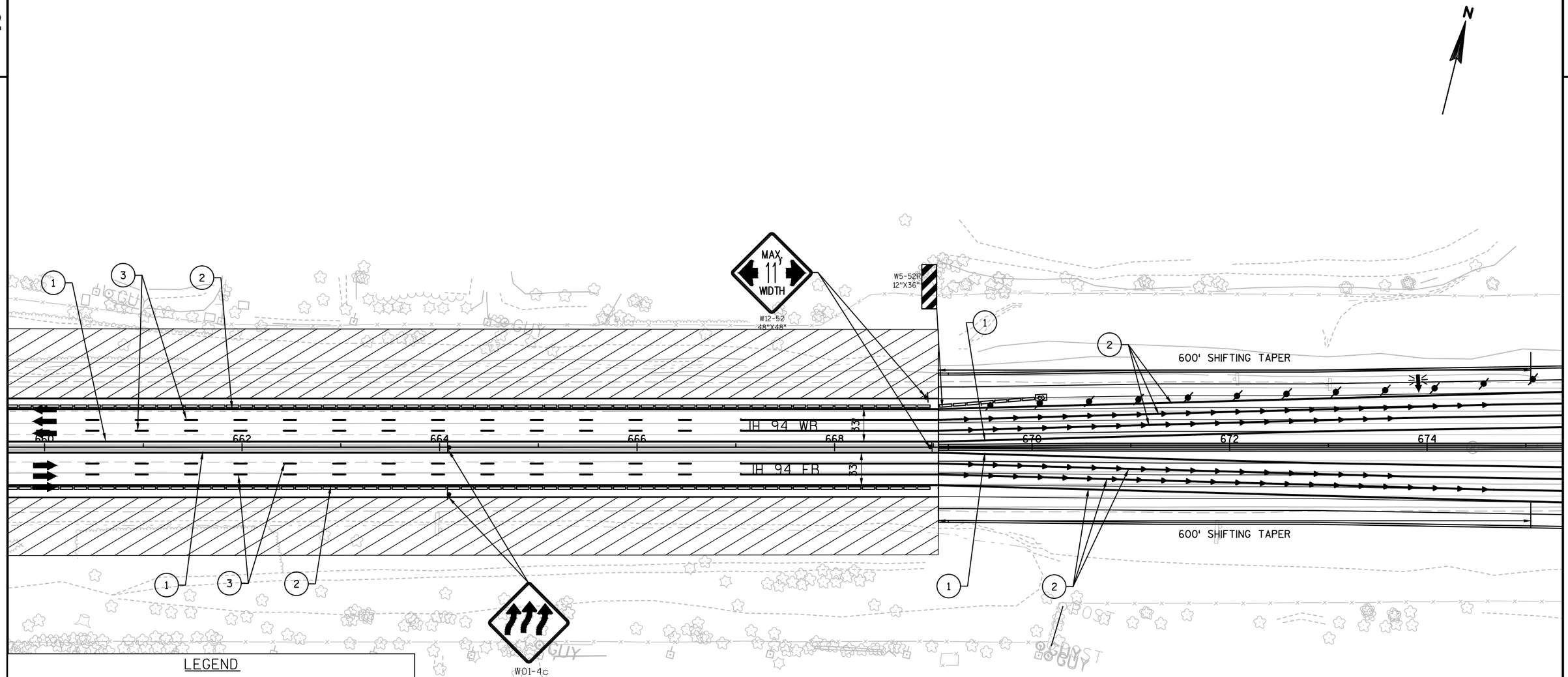
1 3 2

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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET 204	E

2



LEGEND

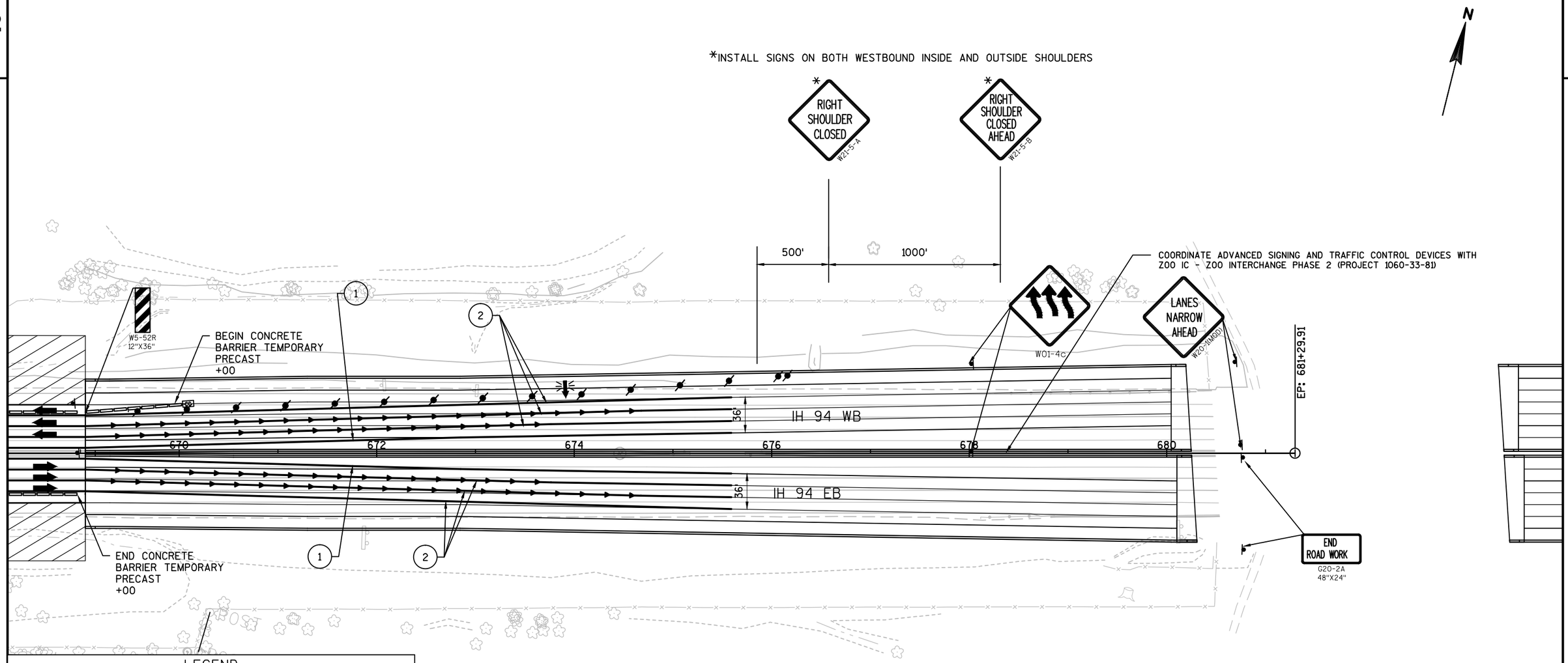
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET 205	E

2

2

*INSTALL SIGNS ON BOTH WESTBOUND INSIDE AND OUTSIDE SHOULDERS



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
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHION TEMPORARY
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER
- DIRECTION ON TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET 206	E

2

N

ROAD CLOSED AHEAD
W20-3-A

ROAD CLOSED 1000 FT
W20-3-C

ROAD CLOSED 500 FT
W20-3-D

500'

500'

SIDEWALK CLOSED
R9-9
24"X12"

BRIDGE OUT
R11-2-B
48"X30"

SIDEWALK CLOSED
R9-9
24"X12"

117SS 118SS 119SS 120SS 121SS 122SS 123SS 124SS 125SS 126SS 127SS 128SS 129SS 130SS 131SS 132SS

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

SIDEWALK CLOSED
R9-9
24"X12"

SIDEWALK CLOSED
R9-9
24"X12"

ROAD CLOSED AHEAD
W20-3-A

HWY

LEGEND

- TYPE II BARRICADE WITH ATTACHED SIGN
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - LOCAL STREETS	SHEET 207	E

2

LEGEND

- TYPE II BARRICADE WITH ATTACHED SIGN
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA

N

ROAD CLOSED AHEAD W20-3-A

BRIDGE OUT R11-2-B 48"X30"

SIDEWALK CLOSED R9-9 24"X12"

SIDEWALK CLOSED R9-9 24"X12"

SIDEWALK CLOSED R9-9 24"X12"

SIDEWALK CLOSED R9-9 24"X12"

ROAD CLOSED TO THRU TRAFFIC R11-4 60"X30"

ROAD CLOSED AHEAD W20-3-A

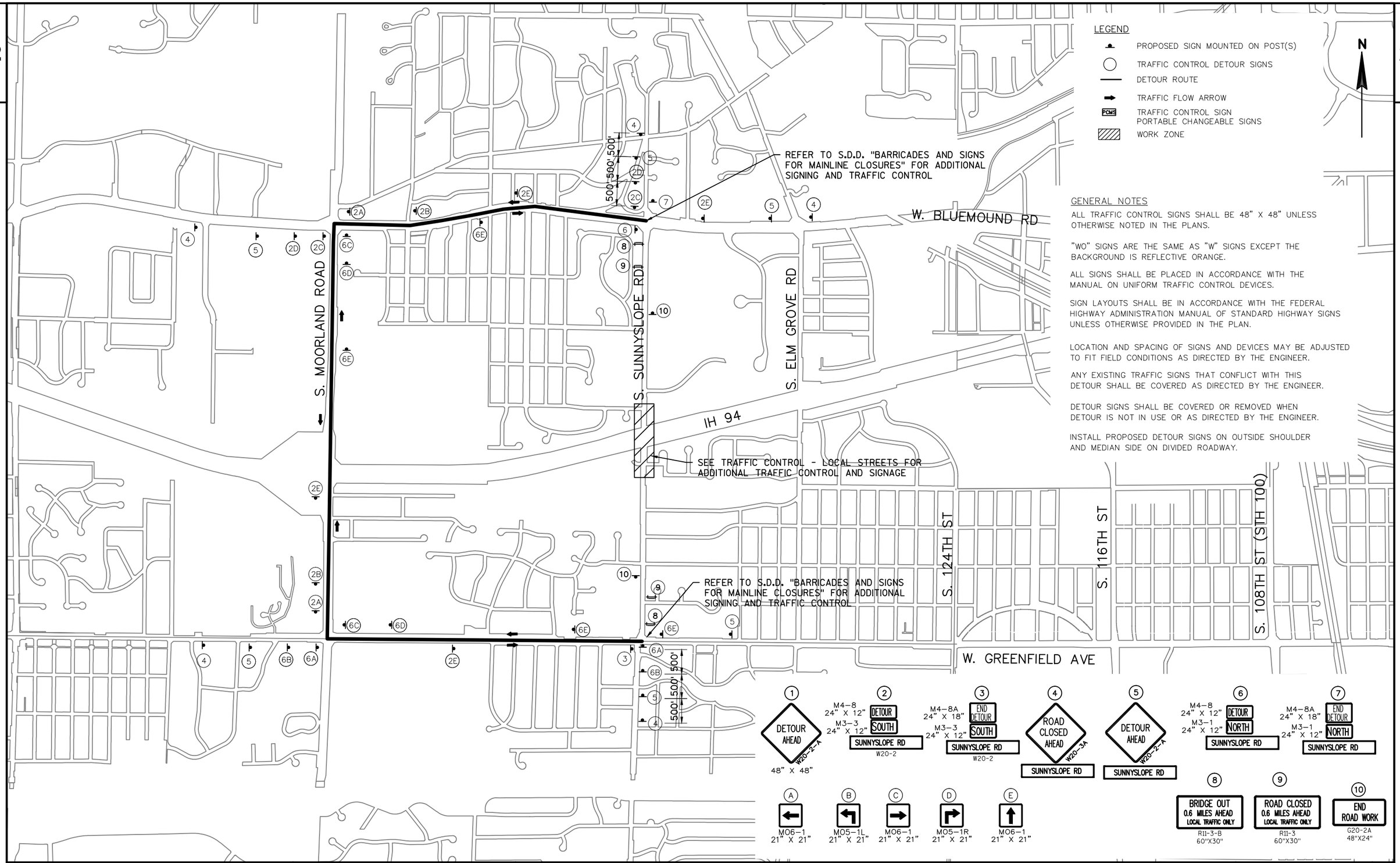
ROAD CLOSED 500 FT W20-3-D

500'

ROAD CLOSED 1000 FT W20-3-C

131SS 132SS 133SS 134SS 135SS 136SS 137SS 138SS 139SS 140SS 141SS 142SS 143SS 144SS 145SS 146SS

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - LOCAL STREETS	SHEET 208	E



GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

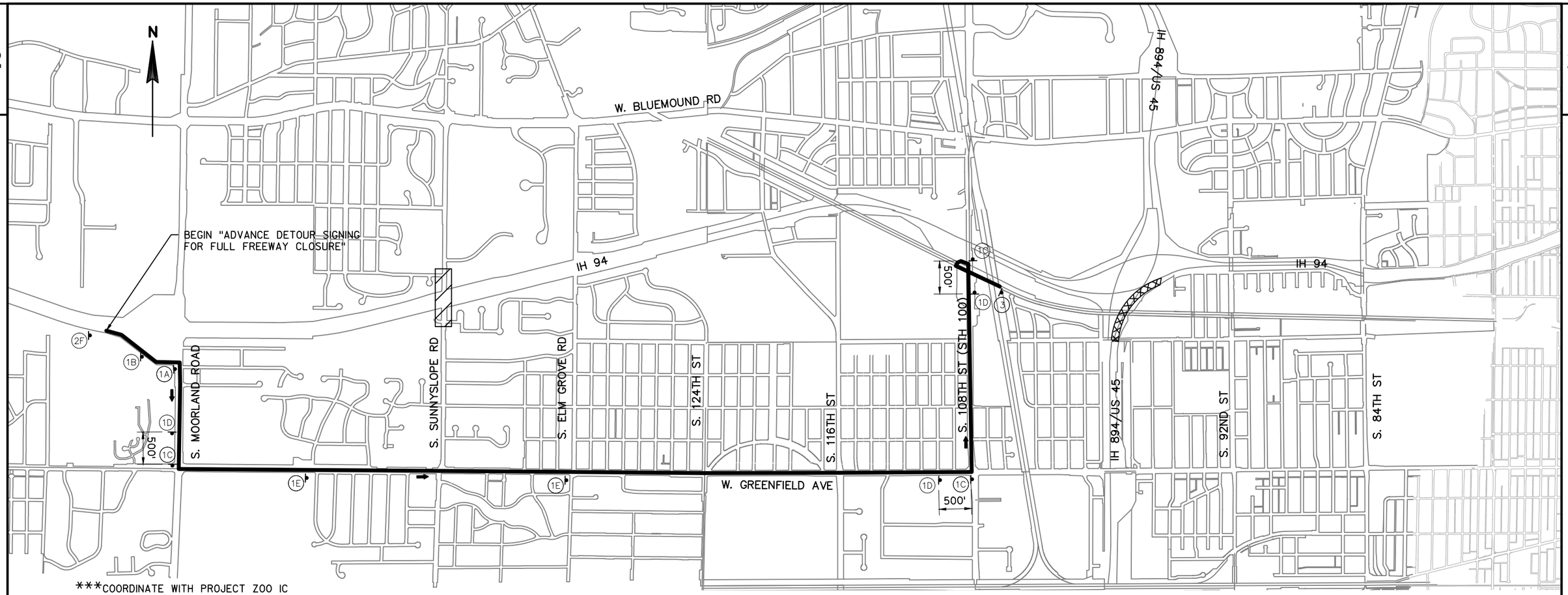
ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	DETOUR - SUNNYSLOPE RD.	SHEET 209	E

2



COORDINATE WITH PROJECT ZOO IC CORE II PROJECT 1060-33-81

LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- TRAFFIC FLOW ARROW
- PCMS TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE SIGNS
- WORK ZONE
- XX CLOSED SYSTEM RAMP

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

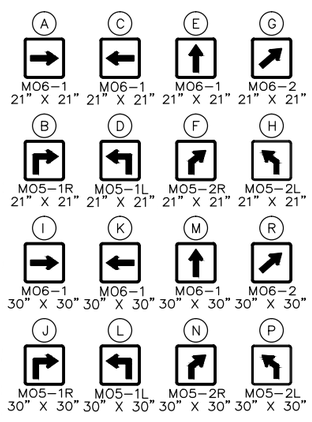
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

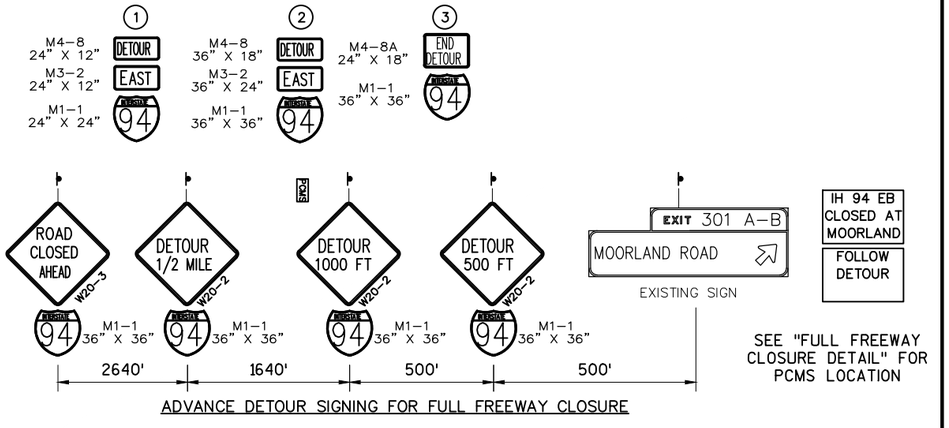
LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

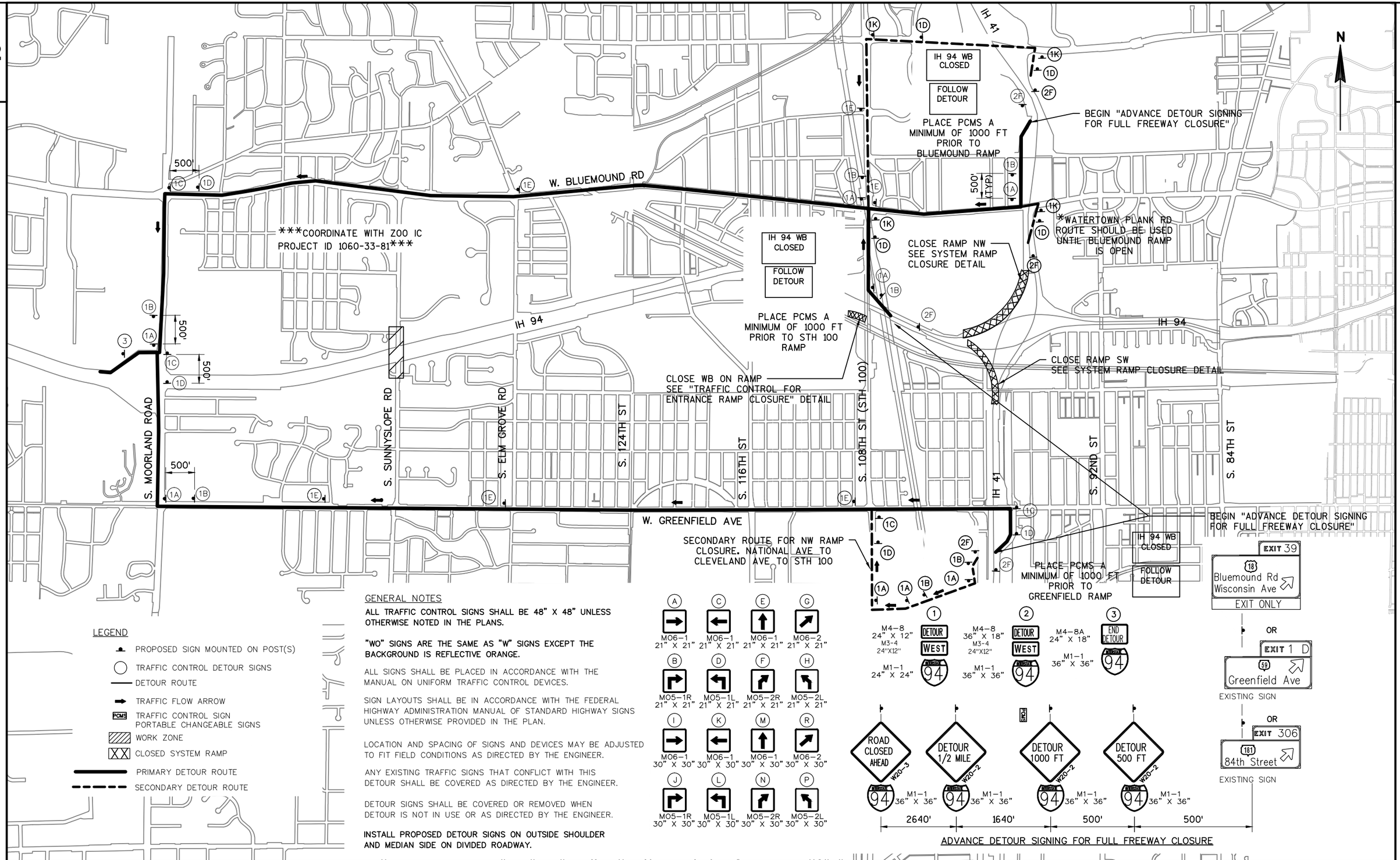
INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.





ADVANCE DETOUR SIGNING FOR FULL FREEWAY CLOSURE

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	FULL FREEWAY CLOSURE DETOUR - IH 94 EASTBOUND	SHEET 210	E



LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- TRAFFIC FLOW ARROW
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE SIGNS
- WORK ZONE
- XX — CLOSED SYSTEM RAMP
- PRIMARY DETOUR ROUTE
- SECONDARY DETOUR ROUTE

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

A M06-1 21" X 21"	C M06-1 21" X 21"	E M06-1 21" X 21"	G M06-2 21" X 21"
B M05-1R 21" X 21"	D M05-1L 21" X 21"	F M05-2R 21" X 21"	H M05-2L 21" X 21"
I M06-1 30" X 30"	K M06-1 30" X 30"	M M06-1 30" X 30"	R M06-2 30" X 30"
J M05-1R 30" X 30"	L M05-1L 30" X 30"	N M05-2R 30" X 30"	P M05-2L 30" X 30"

1 DETOUR WEST 94 — M4-8 24" X 12" (M3-4 24"X12") — M1-1 24" X 24"

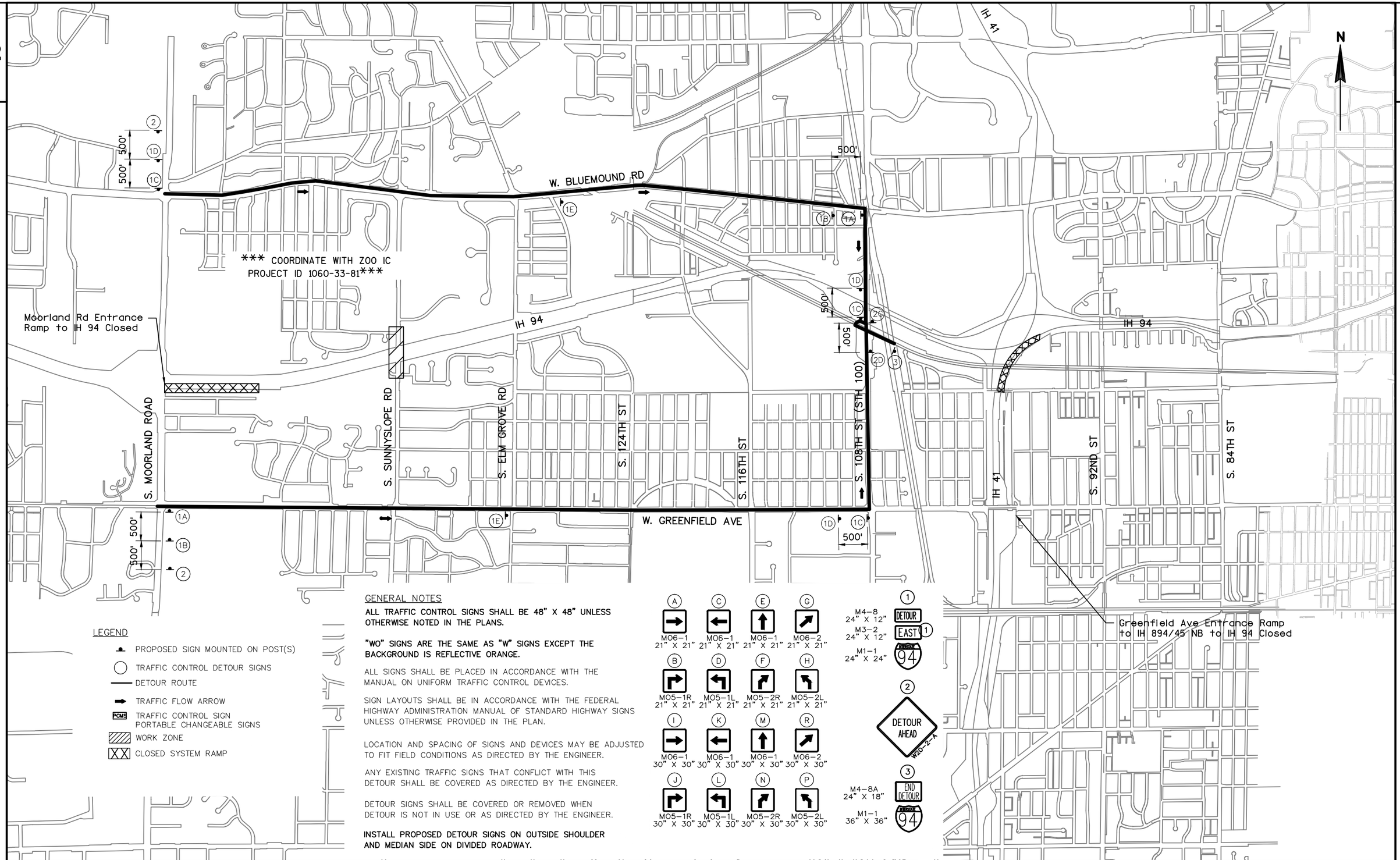
2 DETOUR WEST 94 — M4-8 36" X 18" (M3-4 24"X12") — M1-1 36" X 36"

3 END DETOUR 94 — M4-8A 24" X 18" — M1-1 36" X 36"

ADVANCE DETOUR SIGNING FOR FULL FREEWAY CLOSURE

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	OVERNIGHT FULL FREEWAY CLOSURE DETOUR - IH 94 WESTBOUND	SHEET 211 E

2



LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- TRAFFIC FLOW ARROW
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE SIGNS
- WORK ZONE
- CLOSED SYSTEM RAMP

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

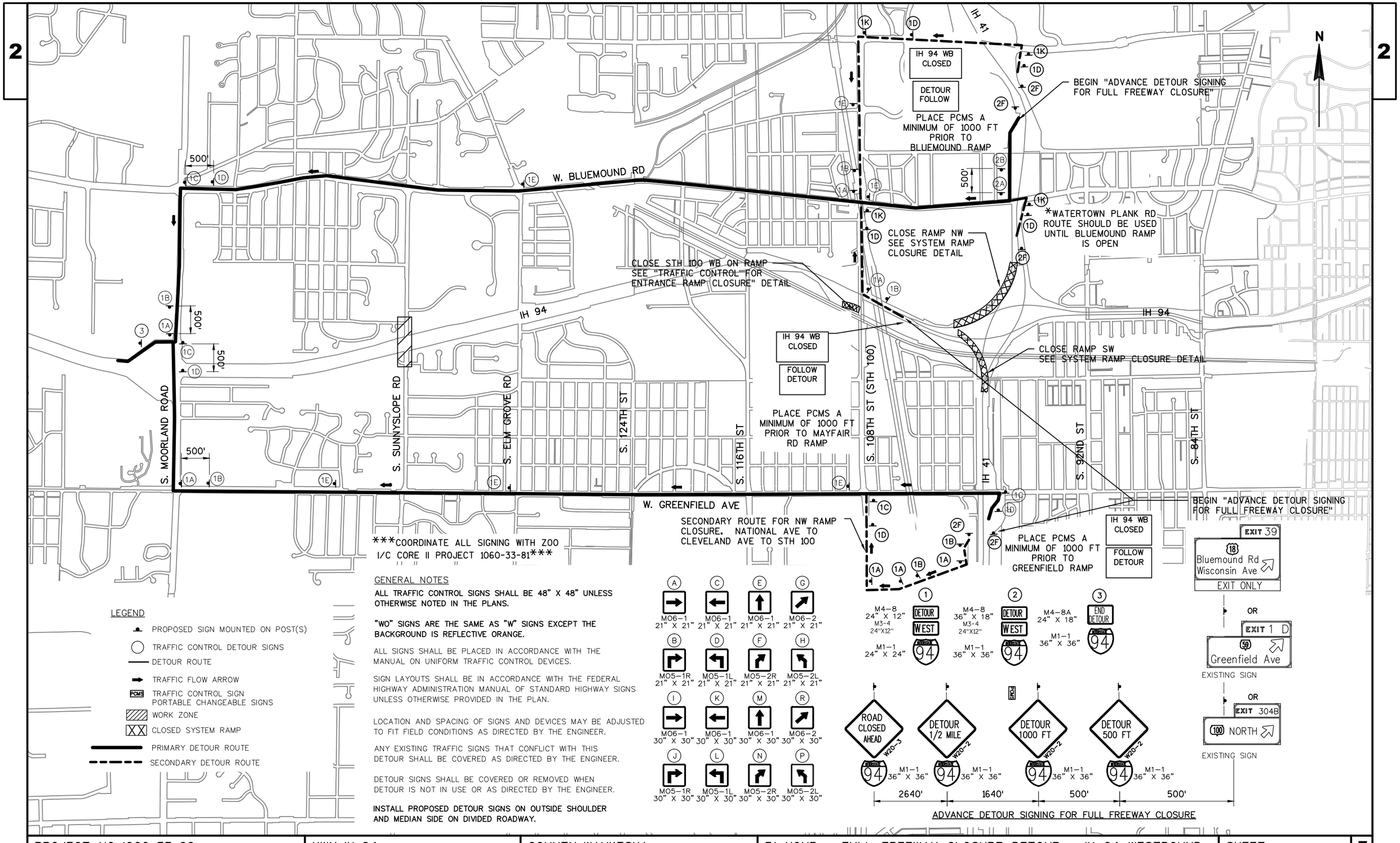
A MO6-1 21" X 21"	C MO6-1 21" X 21"	E MO6-1 21" X 21"	G MO6-2 21" X 21"
B MO5-1R 21" X 21"	D MO5-1L 21" X 21"	F MO5-2R 21" X 21"	H MO5-2L 21" X 21"
I MO6-1 30" X 30"	K MO6-1 30" X 30"	M MO6-1 30" X 30"	R MO6-2 30" X 30"
J MO5-1R 30" X 30"	L MO5-1L 30" X 30"	N MO5-2R 30" X 30"	P MO5-2L 30" X 30"

1 — M4-8 24" X 12" DETOUR EAST 1 M3-2 24" X 12"; M1-1 24" X 24" (QUESTAR 94)

2 — DETOUR AHEAD W20-2-A

3 — M4-8A 24" X 18" END DETOUR; M1-1 36" X 36" (QUESTAR 94)

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	DETOUR - MOORLAND EASTBOUND ENTRANCE RAMPS	SHEET 212 E



LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- TRAFFIC FLOW ARROW
- PCMS TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE SIGNS
- WORK ZONE
- CLOSED SYSTEM RAMP
- PRIMARY DETOUR ROUTE
- SECONDARY DETOUR ROUTE

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

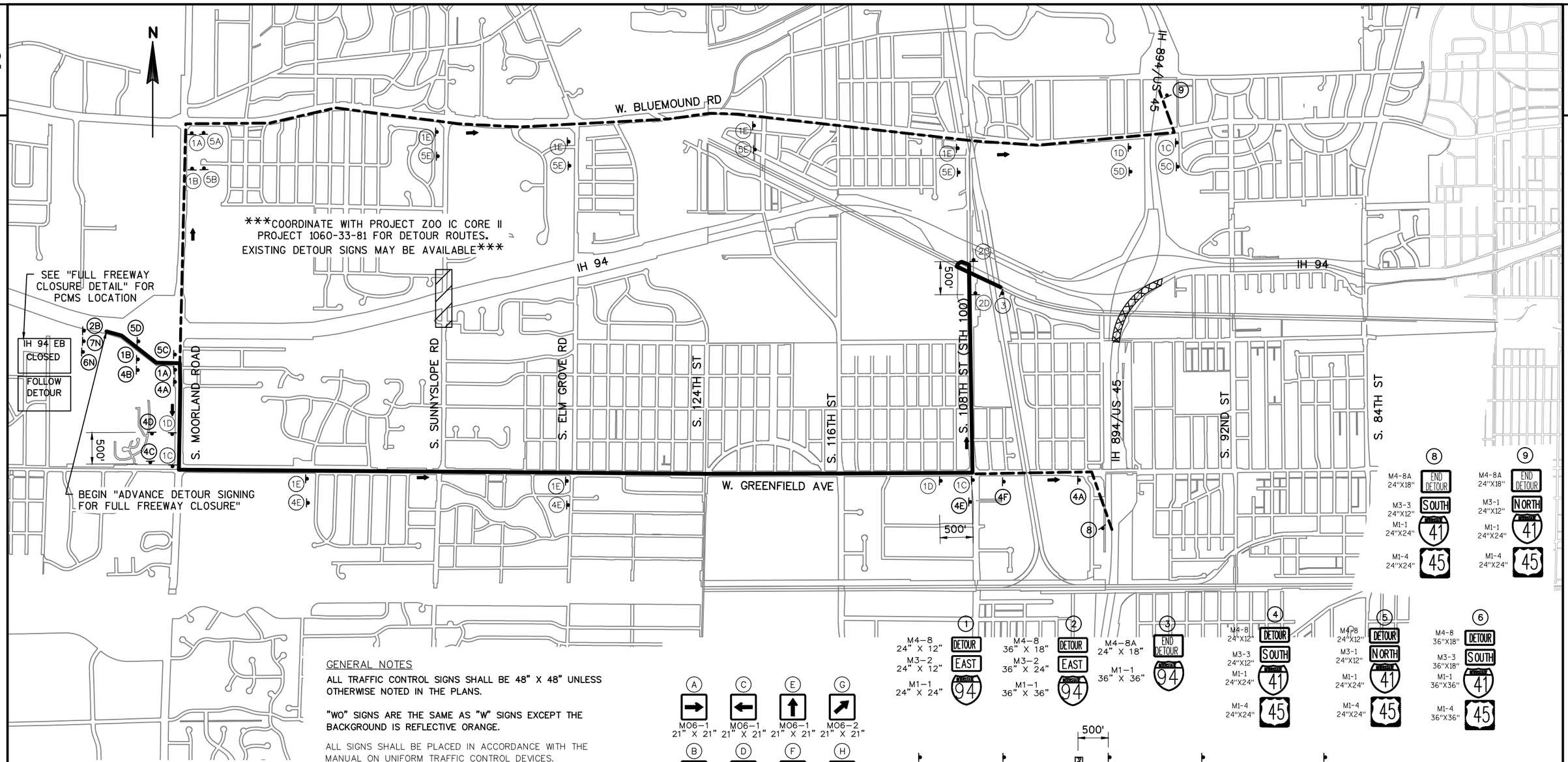
INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

A MO6-1 21" X 21"	C MO6-1 21" X 21"	E MO6-1 21" X 21"	G MO6-2 21" X 21"
B MO5-1R 21" X 21"	D MO5-1L 21" X 21"	F MO5-2R 21" X 21"	H MO5-2L 21" X 21"
I MO6-1 30" X 30"	K MO6-1 30" X 30"	M MO6-1 30" X 30"	R MO6-2 30" X 30"
J MO5-1R 30" X 30"	L MO5-1L 30" X 30"	N MO5-2R 30" X 30"	P MO5-2L 30" X 30"

1 M4-8 24" X 12" (M3-4 24"X12")	DETOUR WEST	M1-1 24" X 24"	IH 94
2 M4-8 36" X 18" (M3-4 24"X12")	DETOUR WEST	M1-1 36" X 36"	IH 94
3 M4-8A 24" X 18"	END DETOUR	M1-1 36" X 36"	IH 94

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	31 HOUR - FULL FREEWAY CLOSURE DETOUR - IH 94 WESTBOUND	SHEET 213	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\PLAN\027001_DT.DWG
LAYOUT NAME - 027005_DT
PLOT DATE : 4/28/2017 7:51 PM PLOT BY : SARAUER, ADAM N PLOT NAME : PLOT SCALE : 1 IN:1500 FT
WISDOT/CADDS SHEET 42



LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- TRAFFIC FLOW ARROW
- PCMS TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE SIGNS
- WORK ZONE
- CLOSED SYSTEM RAMP

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

A	C	E	G				
MO6-1 21" X 21"	MO6-1 21" X 21"	MO6-1 21" X 21"	MO6-2 21" X 21"				
B	D	F	H				
MO5-1R 21" X 21"	MO5-1L 21" X 21"	MO5-2R 21" X 21"	MO5-2L 21" X 21"				
I	K	M	R				
MO6-1 30" X 30"	MO6-1 30" X 30"	MO6-1 30" X 30"	MO6-2 30" X 30"				
J	L	N	P				
MO5-1R 30" X 30"	MO5-1L 30" X 30"	MO5-2R 30" X 30"	MO5-2L 30" X 30"				

1 — M4-8 24" X 12" DETOUR; M3-2 24" X 12" EAST; M1-1 24" X 24" 94

2 — M4-8 36" X 18" DETOUR; M3-2 36" X 24" EAST; M1-1 36" X 36" 94

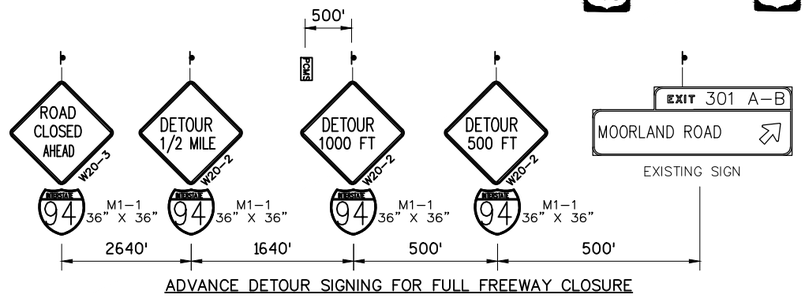
3 — M4-8A 24" X 18" END DETOUR; M1-1 36" X 36" 94

4 — M4-8 24"X12" DETOUR; M3-3 24"X12" SOUTH; M1-1 24"X24" 41; M1-4 24"X24" 45

5 — M4-8 24"X12" DETOUR; M3-1 24"X12" NORTH; M1-1 24"X24" 41; M1-4 24"X24" 45

6 — M4-8 36"X18" DETOUR; M3-3 36"X18" SOUTH; M1-1 36"X36" 41; M1-4 36"X36" 45

7 — M4-8 36"X18" DETOUR; M3-1 36"X18" NORTH; M1-1 36"X36" 41; M1-4 36"X36" 45



ADVANCE DETOUR SIGNING FOR FULL FREEWAY CLOSURE

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	31-HOUR FULL FREEWAY CLOSURE DETOUR - IH 94 EASTBOUND	SHEET 214	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\PLAN\027001_DT.DWG
LAYOUT NAME - 027007_dt
PLOT DATE : 4/28/2017 7:51 PM PLOT BY : SARAUER, ADAM N PLOT NAME : PLOT SCALE : 1 IN:1500 FT
WISDOT/CADDS SHEET 42

2

2

BP: 517+65.66
N = 167157.486
E = 711309.717

137
849.040
CP *T37 MAG NAIL

219
844.080
CP FENO MONUMENT

136
843.520
CP *T36 MAG NAIL

218
836.210
CP FENO MONUMENT

135
840.390
CP *T35 MAG NAIL

217
835.530
CP FENO MONUMENT

PC: 547+53.64

520 525 530 S70°51'35"E 2987.98' 535 IH-94 540 545

220
847.760
CP FENO MONUMENT

102
849.630
CP *T2 MAG NAIL

103
844.390
CP *T3 MAG NAIL

104
841.390
CP *T4 MAG NAIL

N = 168424.77
E = 713912.09

T 7 N 2.7 2.7 3.4 3.4 R 20 E

N

N = 165686.50
E = 716577.82

720151
N=165736.55
E=713882.05
SEC C34-7-20

T 7 N 3.4 3.5 3.4 3.5 R 20 E

N = 165792.68
E = 711210.72

T 7 N 3.3 3.4 3.3 3.4 R 20 E

N = 163059.77
E = 713872.61

T 7 N 3.4 3.4 . . R 20 E

N = 165736.55
E = 713882.05

T 7 N 3.4 3.4 3.4 3.4 R 20 E

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT	SHEET 215	E

2

MENT

PC: 547+53.64

166
839.390
CP *T66 MAG NAIL

105
842.300
CP *T5 MAG NAIL

550

555

CURVE 94EW1

134
841.270
CP *T34 MAG NAIL

560

106
842.920
CP *T6 MAG NAIL

216
836.000
CP FENO MONUMENT

565

PT: 566+23.64

215
846.750
CP FENO MONUMENT

167
858.410
CP *T67 MAG NAIL

133
856.270
CP *T33 MAG NAIL

IH-94

570

107
857.840
CP *T7 MAG NAIL

170
854.360
CP *T70 MAG NAIL

148
854.930
CP *T48 CUT CROSS

151
853.890
CP *T51 CUT CROSS

147
852.700
CP *T47 MAG NAIL

146
846.060
CP *T46 CUT CROSS

145
846.050
CP *T45 MAG NAIL

132
862.100
CP *T32 MAG NAIL

575

S89°33'34"E
2722.53'

720152
N=165686.50
E=716577.82
SEC E34-7-20 CAP WITH X

139
841.440
CP *T39 CUT CROSS

140
841.390
CP *T40 CUT CROSS

144
840.580
CP *T44 CUT CROSS

141
839.930
CP *T41 CUT CROSS

142

? CUT CROSS

169
843.030
CP *T69 MAG NAIL

168
840.300
CP *T68 MAG NAIL

T 7 N
2.7 2.6
3.4 3.5
R 20 E

N = 168370.69
E = 716608.90

T 7 N
3.4 3.4
3.4 3.4
R 20 E

N = 165736.55
E = 713882.05

T 7 N
3.4 3.5
R 20 E

N = 163036.03
E = 716559.02

T 7 N
3.4 3.5
3.4 3.5
R 20 E

N = 165686.50
E = 716577.82

T 7 N
3.5 3.5
3.5 3.5
R 20 E

N = 165666.36
E = 719247.25

CURVE 94EW1

PI STA = 556+97.03
Y = 165868.453
X = 715023.750
DELTA = 18°41'59"
D = 1°00'00"
T = 943.39'
L = 1870.00'
R = 5729.65'
PC STA = 547+53.64
PT STA = 566+23.64

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT	SHEET 216	E

2

2

N

N = 168370.70
E = 719271.49

CURVE 94EW2
PI STA = 600+67.47
Y = 165834.713
X = 719410.836
DELTA = 14°21'58"
D = 1°00'04"
T = 721.30'
L = 1435.03'
R = 5723.32'
PC STA = 593+46.17
PT STA = 607+81.20

MAG NAIL

212
857.540
CP FENO MONUMENT

131
869.120
CP *T31 MAG NAIL

211
878.750
CP FENO MONUMENT

130
887.390
CP *T30 MAG NAIL

PC: 593+46.17

PT: 607+81.20

WB PGL

CURVE 94EW2

129
907.150
CP *T29 MAG NAIL

580

IH-94

585

S89°33'34"E
2722.53'

590

595

600

605

PC
PGLWB1

CURVE PGLWB1

108
863.360
CP *T8 MAG NAIL

171
867.210
CP *T71 MAG NAIL

PC
PGLEB1

CRVE PGLEB1

109
884.900
CP *T9 MAG NAIL

110
905.670
CP *T10 MAG NAIL

EB PGL

720153
N=165666.36
E=719247.25
SEC C35-7-20

210
918.980
CP FENO MONUMENT

N = 165686.50
E = 716577.82

N = 165666.36
E = 719247.25

N = 165649.59
E = 721900.97

N = 163014.10
E = 719219.38

CURVE PGLWB1
PI STA = 600+62.45, 9.09' LT
Y = 165888.554
X = 719403.234
DELTA = 14°15'15"
D = 0°45'18"
T = 948.75'
L = 1887.70'
R = 7587.67'
PC STA. = 591+10.70, 52.77' LT
PT STA. 610+14.23, 53.25' LT

CURVE PGLEB1
PI STA = 600+65.80, 100.62' RT
Y = 165779.999
X = 719419.479
DELTA = 14°26'52"
D = 0°57'54"
T = 752.58'
L = 1497.18'
R = 5937.33'
PC STA. = 593+23.95, 54.12' RT
PT STA. 608+07.70, 54.63' RT

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT	SHEET 217	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\027203_AD.DWG
LAYOUT NAME - 027203_AD

PLOT DATE : 4/20/2017 4:21 PM PLOT BY : LARKIN, MICHAEL A PLOT NAME : PLOT SCALE : 1" = 200'_XREF

2

2

N

135 SUNNYSLOPE RD.

156
882.080
CP *T56 MAG NAIL

157
881.950
CP *T57 MAG NAIL

207
895.160
CP FENO MONUMENT

T 7 N
2.6 2.5
3.5 3.6
R 20 E

N = 168315.30
E = 721921.46

175
904.980
CP *T75 MAG NAIL

206
921.620
CP FENO MONUMENT

205
905.150
CP FENO MONUMENT

155
922.490
CP *T55 CUT CROSS

126
890.540
CP *T26 MAG NAIL

N = 166453.662
E = 721907.152
PI: 626+31.80

75.6356°

PT: 607+81.20

WB PGL

PT
PGLWB1

NAIL CURVE PGLWB1

128
923.840
CP *T28 MAG NAIL

610 615 N76°04'29"E 1850.60' 620 IH-94 625 630 N76°04'33"E 2747.54' 635

EB PGL

CURVE
PGLEB1

PT
PGLEB1

111
922.660
CP *T11 MAG NAIL

209
923.330
CP FENO MONUMENT

112
911.530
CP *T12 MAG NAIL

127
912.610
CP *T27 MAG NAIL

104.3644°

154
922.490
CP *T54 CUT CROSS

113
890.290
CP *T13 MAG NAIL

174
902.760
CP *T74 MAG NAIL

208
907.240
CP FENO MONUMENT

125

153
881.090
CP *T53 MAG NAIL

T 7 N
3.5 3.5
3.5 3.5
R 20 E

N = 165666.36
E = 719247.25

T 7 N
3.5 3.6
3.5 3.6
R 20 E

N = 165649.59
E = 721900.97

720154
N=165649.59
E=721900.97
SEC E35-7-20

PI: 121+95.90
N = 165649.584
E = 721901.272

T 7 N
3.5 3.6
R 20 E

N = 162992.50
E = 721880.40

152
880.930
CP *T52 MAG NAIL

T 7 N
3.6 3.6
3.6 3.6
R 20 E

N = 165621.31
E = 724563.30

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\027204_AD.DWG
LAYOUT NAME - 027204_AD
PLOT DATE : 4/20/2017 4:27 PM PLOT BY : LARKIN, MICHAEL A PLOT NAME : PLOT SCALE : 1" = 200'_XREF
WISDOT/CADDS SHEET 42

2

2

N

161
797.520
CP *T61 MAG NAIL

160
804.660
CP *T60 MAG NAIL

T 7 N
2.5 2.5
3.6 3.6
R 20 E

N = 168245.66
E = 724582.02

T 7 N
2.5 3.0
3.6 3.1
R 20 E

N = 168225.07
E = 727247.50

203
814.390
CP FENO MONUMENT

204
829.520
CP FENO MONUMENT

173
809.230
CP *T73 MAG NAIL

N = 167114.818
E = 724573.956
PI: 653+79.34

163
818.470
CP *T63 MAG NAIL

75.6598°

123
793.770
CP *T23 MAG NAIL

122
766.440
CP *T22 MAG NAIL

221
860.830
CP FENO MONUMENT

640
N76°04'33"E
2747.54'
645
IH-94
650
655
N76°04'04"E
2750.57'
660
665

125
858.550
CP *T25 MAG NAIL

114
859.600
CP *T14 MAG NAIL

124
826.010
CP *T24 MAG NAIL

115
826.490
CP *T15 MAG NAIL

172
811.000
CP *T72 MAG NAIL

104.341°

116
794.810
CP *T16 MAG NAIL

201
813.000
CP FENO MONUMENT

117
761.420
CP *T17 MAG NAIL

200
773.140
CP FENO MONUMENT

202
812.520
CP FENO MONUMENT

159
811.960
CP *T59 MAG NAIL

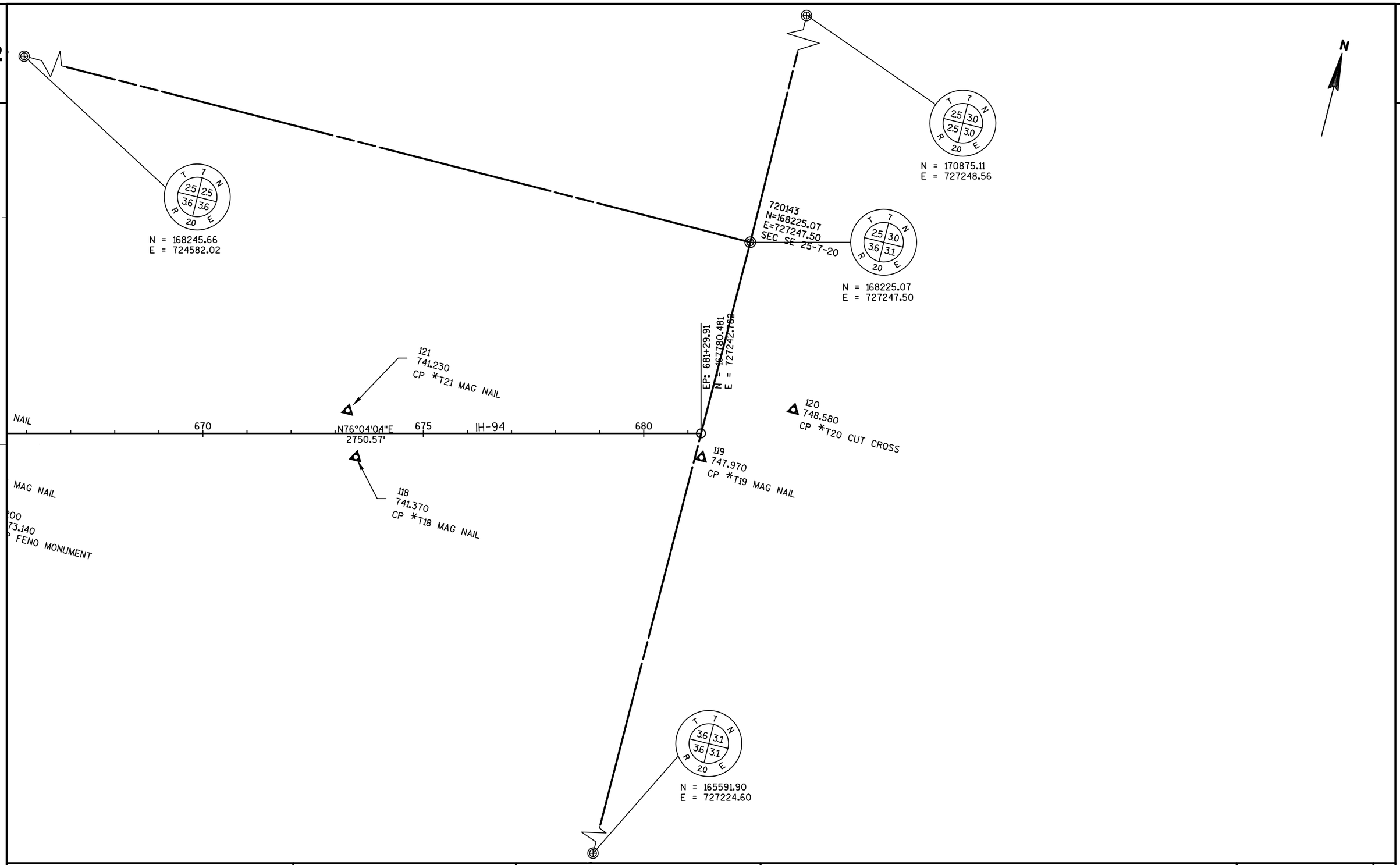
ELM GROVE RD.

N = 165621.31
E = 724563.30

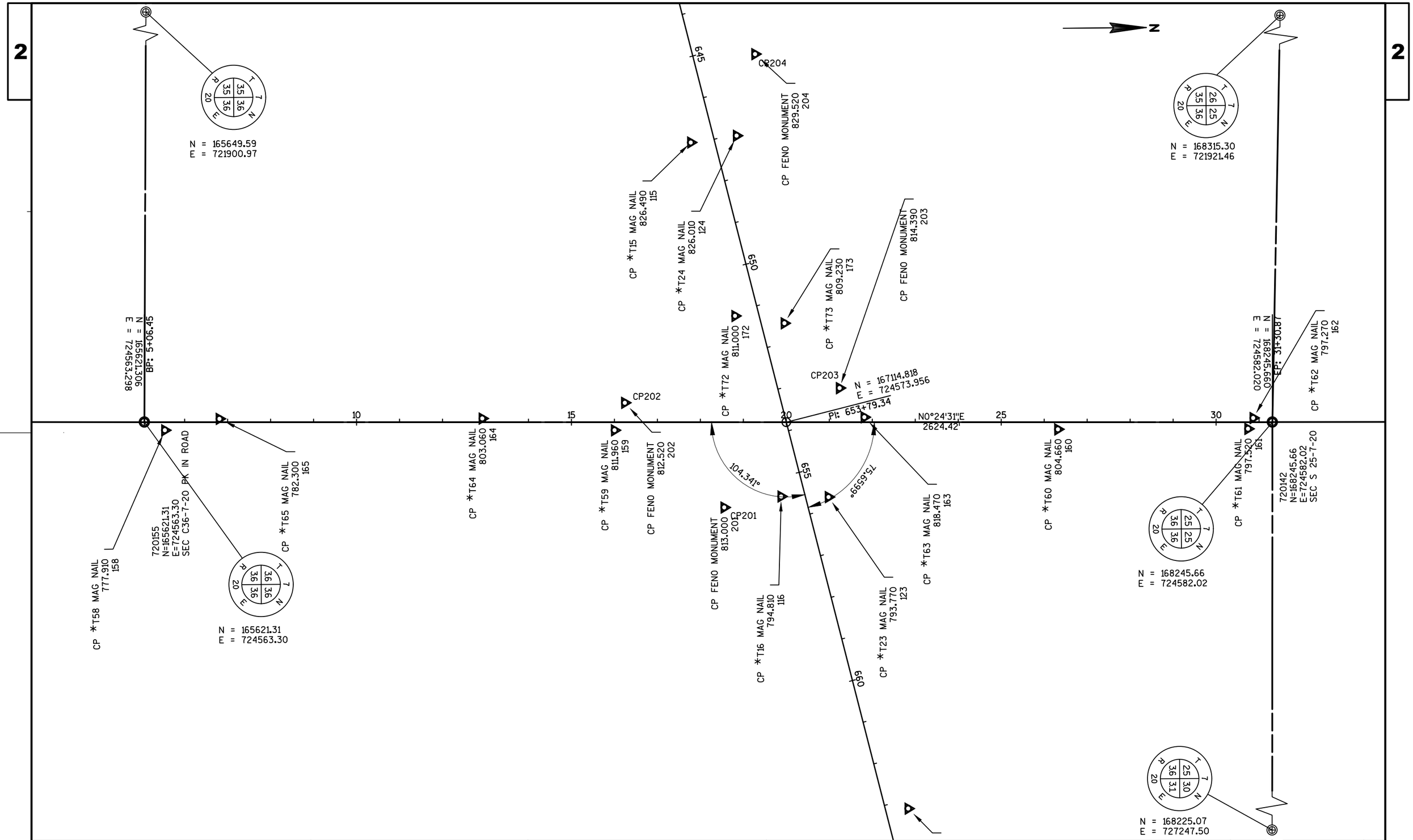
T 7 N
3.6 3.6
3.6 3.6
R 20 E

164
803.060
CP *T64 MAG NAIL

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT	SHEET 219	E



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT	SHEET 220	E

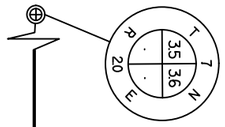


PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\027207_AD.DWG
LAYOUT NAME - 027207_AD

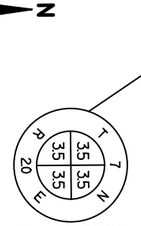
PLOT DATE : 4/20/2017 5:38 PM PLOT BY : LARKIN, MICHAEL A PLOT NAME : PLOT SCALE : 1" = 200'_XREF

2

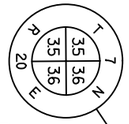


N = 163180.675
E = 721138.146

N



N = 16566.36
E = 719247.25



N = 165649.59
E = 721900.97

BP: 95+38.76

SUNNYSLOPE RD.

100 105 110 115 120

N0° 26' 40"E
2657.14'

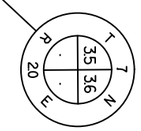
PI: 121+95.90
N = 165649.586
E = 721900.972

CP *T53 MAG NAIL
881.090
153

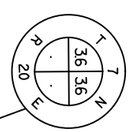
720167 620011
N=162992.501
E=721880.404
SEC SE 36-7-20

720154
N=165649.59
E=721900.97

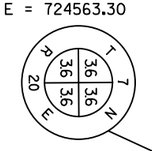
CP *T52 MAG NAIL
880.930
152



N = 162992.501
E = 721880.404



N = 163149.031
E = 722422.264



N = 165621.31
E = 724563.30

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT - SUNNYSLOPE RD.	SHEET 222	E

2

N

CP *T29 MAG NAIL 911.530 112

CP *T27 MAG NAIL 912.610 127

CP *T75 MAG NAIL 904.980 175

1350.60'
N76° 04' 29"E

104.37°

75.64°

PARK ENTRANCE

BP: 21+83.06

PC: 22+71.99

PI: 121+95.90

CP208

RT: 24+24.22

PC: 24+51.24

RT: 24+94.75

EP: 25+BP:1620+00.00

90°

90°

N 80° 26' 25"E
2665.79'

CP206

BEECHWOOD AVE.

BP: 22+06.53

PI: 24+03.94

EP: 24+64.28

SUNNYSLOPE RD.

125

130

135

140

145

EP: 148+61.89

N = 168370.70
E = 719271.49

N = 168315.30
E = 721921.46

720154
N=165649.59
E=721900.97
SEC E35-7-20

N = 165649.59
E = 721900.97

FOREST GROVE RD.

CP FENO MONUMENT 907.240 208

PI: 21+00.12

CP *T74 MAG NAIL 902.760 174

EP: 22+24.64

CP *T55 CUT CROSS 922.490 155

CP FENO MONUMENT 921.620 206

CP207

CP FENO MONUMENT 895.160 207

CP *T57 MAG NAIL 881.950 157

CP *T56 MAG NAIL 882.080 156

720141
N=168315.30
E=721921.46
SEC SE 26-7-20

CP *T54 CUT CROSS 922.490 154

CP *T13 MAG NAIL 890.290 113

2747.54'
N76° 04' 33"E

630

635

IH-94

CP205

CP *T26 MAG NAIL 890.540 126

CP FENO MONUMENT 905.150 205

N = 165621.31
E = 724563.30

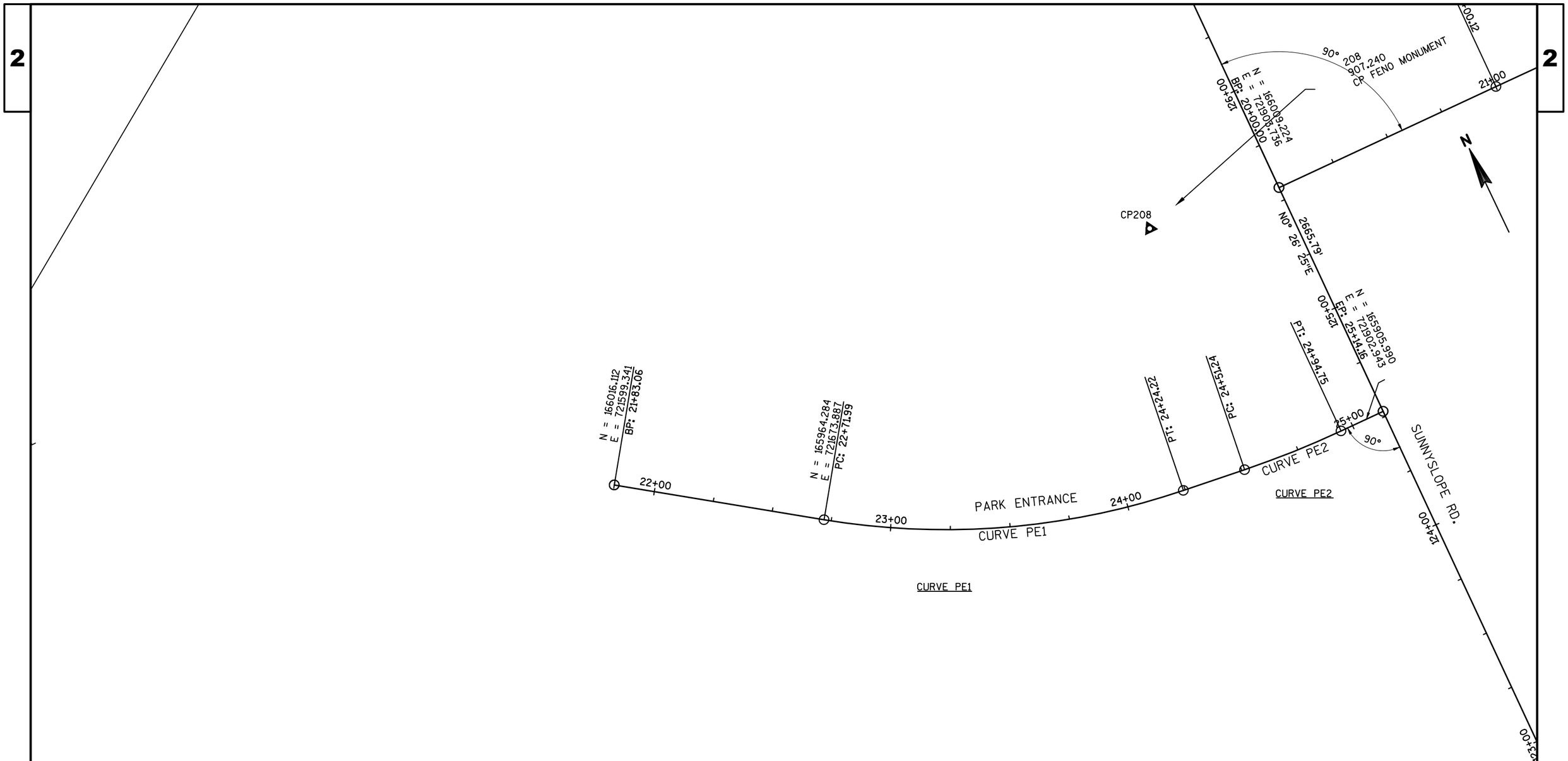
N = 168245.66
E = 724582.02

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT - SUNNYSLOPE RD.	SHEET	E

FILE NAME : W:\PDS\C3D\CAD\10603203\73\027201_AD.DWG
LAYOUT NAME - 027209_AD

PLOT DATE : 4/20/2017 5:59 PM PLOT BY : LARKIN, MICHAEL A PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



CURVE PE1

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT - PARK ENTRANCE	SHEET 224	E

FILE NAME : W:\PDS\C3D\CAD\10603203\73\027203_AD.DWG
LAYOUT NAME - 027210_AD

PLOT DATE : 4/20/2017 6:08 PM PLOT BY : LARKIN, MICHAEL A PLOT NAME : PLOT SCALE : 1 IN:40 FT

902.760
CP *T74 MAG NAIL

N

2

SUNNYSLOPE RD.

127+00

126+00

BP: 20+00.00
N = 166009.224
E = 721903.736

90°

208
907.240
CP FENO MONUMENT

PI: 21+00.12
N = 166008.455
E = 722003.856

EP: 22+24.64
N = 166007.116
E = 722128.365

CP208

21+00

S89° 23' 02"E
124.52'

22+00

FOREST GROVE RD.

N0° 26' 25"E
2665.79'

125+00

PC: 24+51.24

PT: 24+94.75

EP: 25+14.16

25+00

CURVE PE2

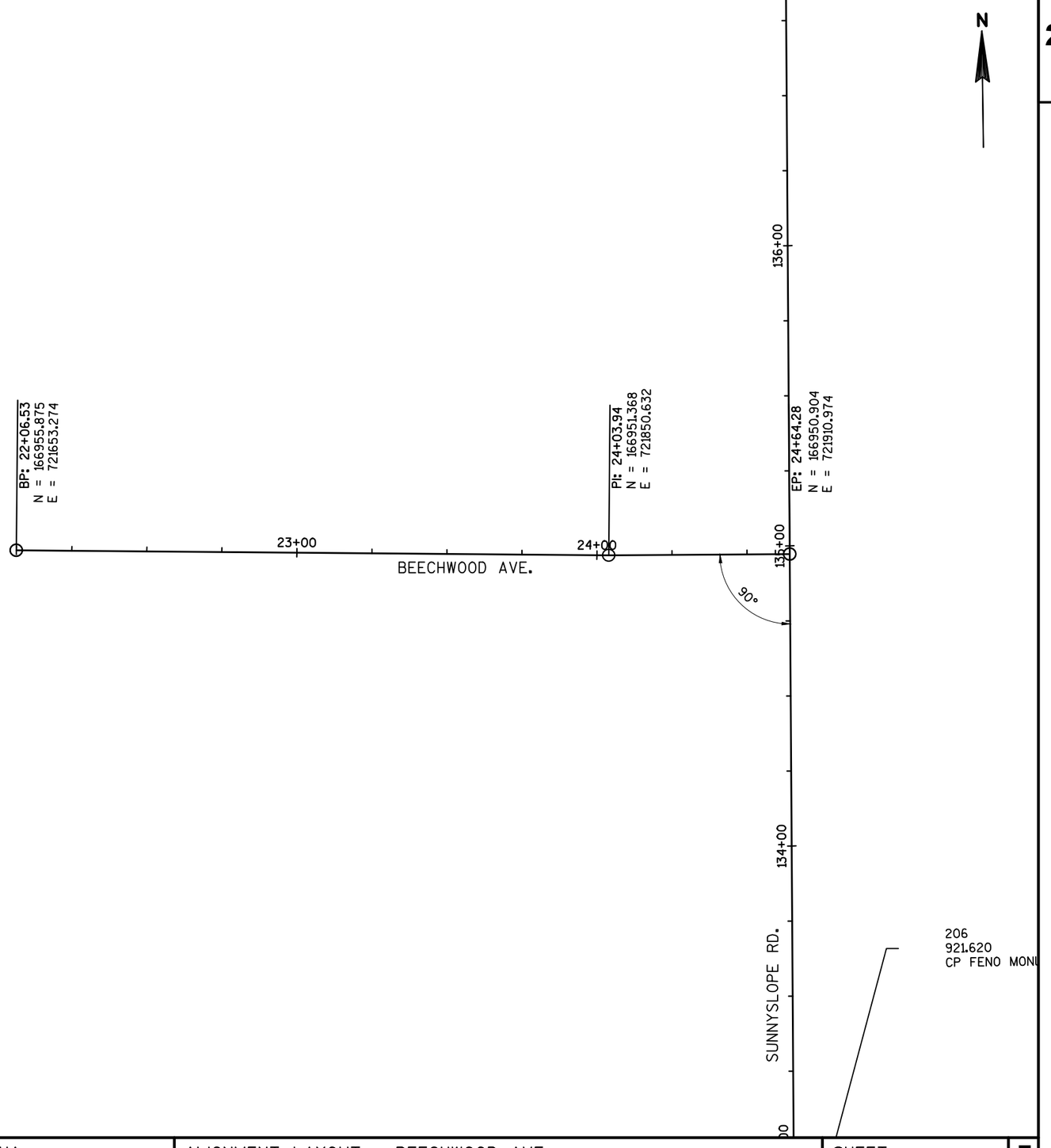
90°

CURVE PE2

124+00

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT - FOREST GROVE RD.	SHEET 225	E

2



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT - BEECHWOOD AVE.	SHEET 226	E

FILE NAME : W:\PDS\C3D\CAD\10603203\73\027203_AD.DWG
LAYOUT NAME - 027212_AD

PLOT DATE : 4/20/2017 6:10 PM PLOT BY : LARKIN, MICHAEL A PLOT NAME : PLOT SCALE : 1 IN:40 FT

CP211
BERNTSEN F1000 SPK FENO MONUMENT
WITH ALUMINUM CAP
STA. 589+98.87, 134.6' LT
N=165977.53
E=718343.31
ELEV.=878.75

131
869.120
CP *T31 MAG NAIL

212
857.540
CP FENO MONUMENT
MOORLAND RD. EXIT RAMP

80
585
590
IH-94 WB
IH-94 EB

360
*T8 MAG NAIL

171
867.210
MOORLAND RD. ENTRANCE RAMP
CP *T71 MAG NAIL

CP212
BERNTSEN F1000 SPK FENO MONUMENT
WITH ALUMINUM CAP
STA. 580+53.61, 137.6' LT
N=165987.76
E=717398.1
ELEV.=857.54

128
923.840
CP *T28 MAG NAIL

129
907.150
CP *T29 MAG NAIL

PI: 607+81.20

610
615
IH-94 WB
IH-94 EB

111
922.660
CP *T11 MAG NAIL

CP209
BERNTSEN F1000 SPK FENO MONUMENT
WITH ALUMINUM CAP
STA. 615+03.20, 141.1'
N=166045.12
E=720845.67
ELEV.=923.33

210
918.980
CP FENO MONUMENT

CP210
BERNTSEN F1000 SPK FENO MONUMENT
WITH ALUMINUM CAP
STA. 604+90.92, 130.2' RT
N=165817.76
E=719852.44
ELEV.=918.98

CP206
BERNTSEN F1000 SPK FENO
MONUMENT WITH ALUMINUM CAP
STA. 626+32.84, 135.9' LT
N=166585.86
E=721875.45
ELEV.=921.62

CP205
BERNTSEN F1000 SPK FENO MONUMENT
WITH ALUMINUM CAP
STA. 631+15.50, 174.2' LT
N=166739.13
E=722334.72
ELEV.=905.15

205
905.150
CP FENO MONUMENT

206
921.620
CP FENO MONUMENT

126
890.540
CP *T26 MAG NAIL

175
904.980
CP *T75 MAG NAIL

PI: 628+31.80

SUNNYSLOPE RD.

135
155
922.490
CP *T55 CUT CROSS
IH-94 WB
IH-94 EB
625
630

113
890.290
CP *T13

154
922.490
CP *T54 CUT CROSS

CP208
BERNTSEN F1000 SPK FENO
MONUMENTWITH ALUMINUM CAP
STA. 624+68.91, 409.5' RT
N=166016.96
E=721847.6
ELEV.=907.24

127
912.610
CP *T27 MAG NAIL

174
902.760
CP *T74 MAG NAIL

208
907.240
CP FENO MONUMENT

CP204
BERNTSEN F1000 SPK FENO MONUMENT
WITH ALUMINUM CAP
STA. 645+31.67, 141.5' LT
N=167045.18
E=723717.14
ELEV.=829.52

204
829.520
CP FENO MONUMENT

221
860.830
CP FENO MONUMENT

640
645
IH-94 WB
IH-94 EB

CP221
BERNTSEN F1000 SPK FENO
MONUMENTWITH ALUMINUM CAP
STA. 638+28.30, 98.9' LT
N=166837.59
E=723044.69
ELEV.=860.83

125
858.550
CP *T25 MAG NAIL

114
859.600
CP *T14 MAG NAIL

CP203
BERNTSEN F1000 SPK FENO MONUMENT
WITH ALUMINUM CAP
STA. 653+33.25, 139.4' LT
N=167239.27
E=724495.61
ELEV.=814.39

203
814.390
CP FENO MONUMENT

163
818.470
CP *T63 MAG NAIL

123
793.770
CP *T23 MAG NAIL

173
809.230
CP *T73 MAG NAIL

ELM GROVE RD.

PI: 653+79.34

650
655
IH-94 WB
IH-94 EB

116
794.810
CP *T16 MAG NAIL

172
811.000
CP *T72 MAG NAIL

201
813.000
CP FENO MONUMENT

124
826.010
CP *T24 MAG NAIL

115
826.490
CP *T15 MAG NAIL

202
812.520
CP FENO MONUMENT

CP201
BERNTSEN F1000 SPK FENO
MONUMENT WITH ALUMINUM CAP
STA. 655+35.93, 189.1' RT
N=166969.02
E=724771.46
ELEV.=813.00

CP202
BERNTSEN F1000 SPK FENO MONUMENT
WITH ALUMINUM CAP
STA. 16+24.29, 44.9' LT
N=166739.43
E=724526.32
ELEV.=812.52

159
811.960
CP *T59 MAG NAIL

122
766.440
CP *T22 MAG NAIL

660
665
670
IH-94 WB
IH-94 EB

117
761.420
CP *T17 MAG NAIL

200
773.140
CP FENO MONUMENT

CP200
BERNTSEN F1000 SPK FENO MONUMENT
WITH ALUMINUM CAP
STA. 664+41.77, 125.0' RT
N=167249.31
E=725635.22
ELEV.=773.14

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT LAYOUT - SURVEY CONTROL	SHEET 227	E

FILE NAME : W:\PDS\C3D\CAD\10603312\82\027208_AD.DWG
LAYOUT NAME - ****
PLOT DATE : 4/21/2017 10:21 AM PLOT BY : LARKIN, MICHAEL A PLOT NAME : ---------- PLOT SCALE : **********
WISDOT/CADDS SHEET 42

1060-33-82

Line	Item	Item Description	Unit	Total	Qty
0002	108.4400	CPM Progress Schedule	EACH	1.000	1.000
0004	201.0105	Clearing	STA	165.000	165.000
0006	201.0205	Grubbing	STA	165.000	165.000
0008	203.0200	Removing Old Structure (station) 0001. 130+05	LS	1.000	1.000
0010	204.0100	Removing Pavement	SY	20,374.000	20,374.000
0018	204.0120	Removing Asphaltic Surface Milling	SY	118,055.000	118,055.000
0020	204.0150	Removing Curb & Gutter	LF	48.000	48.000
0024	204.0157	Removing Concrete Barrier	LF	2,705.000	2,705.000
0026	204.0165	Removing Guardrail	LF	1,259.000	1,259.000
0028	204.0170	Removing Fence	LF	260.000	260.000
0030	204.0195	Removing Concrete Bases	EACH	5.000	5.000
0032	204.0205	Removing Utility Poles	EACH	1.000	1.000
0034	204.0210	Removing Manholes	EACH	4.000	4.000
0036	204.0220	Removing Inlets	EACH	4.000	4.000
0038	204.0245	Removing Storm Sewer (size) 0001. 12-Inch	LF	171.000	171.000
0040	204.0245	Removing Storm Sewer (size) 0002. 15-Inch	LF	253.000	253.000
0042	204.0245	Removing Storm Sewer (size) 0003. 18-Inch	LF	8.000	8.000
0044	204.0245	Removing Storm Sewer (size) 0004. 30-Inch	LF	256.000	256.000
0046	204.0245	Removing Storm Sewer (size) 0005. 36-Inch	LF	52.000	52.000
0048	204.9035.S	Removing (item description) 0001. Riprap Heavy	CY	573.000	573.000
0050	204.9060.S	Removing (item description) 0001. Concrete Apron Endwalls for Pipe	EACH	20.000	20.000
0052	204.9060.S	Removing (item description) 1001. Luminaires	EACH	141.000	141.000
0054	204.9060.S	Removing (item description) 1002. Poles Wood 60-FT	EACH	4.000	4.000
0056	204.9060.S	Removing (item description) 1301. Electrical Service Meter Breaker Pedestal	EACH	1.000	1.000
0058	204.9060.S	Removing (item description) 1302. Overhead Freeway DMS	EACH	1.000	1.000
0060	204.9060.S	Removing (item description) 1303. Pole	EACH	4.000	4.000
0062	204.9060.S	Removing (item description) 1304. Microwave Detector	EACH	4.000	4.000
0064	204.9060.S	Removing (item description) 1305. Controller Cabinet	EACH	2.000	2.000
0066	204.9060.S	Removing (item description) 1306. Controller Cabinet Base	EACH	2.000	2.000
0068	204.9060.S	Removing (item description) 8001. Bulkhead	EACH	2.000	2.000
0074	205.0100	Excavation Common	CY	67,899.000	67,899.000
0076	206.1000	Excavation for Structures Bridges (structure) 0001. B-67-344	LS	1.000	1.000
0078	210.1100	Backfill Structure Type A	CY	323.000	323.000
0080	210.1500	Backfill Structure Type A **P**	TON	1,245.000	1,245.000
0082	213.0100	Finishing Roadway (project) 0001. 1060-33-82	EACH	1.000	1.000
0084	305.0110	Base Aggregate Dense 3/4-Inch	TON	305.000	305.000

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Line	Item	Item Description	Unit	Total	Qty
0086	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	19,420.000	19,420.000
0088	312.0110	Select Crushed Material	TON	39,537.000	39,537.000
0092	415.0410	Concrete Pavement Approach Slab	SY	119.000	119.000
0094	416.0160	Concrete Driveway 6-Inch	SY	23.000	23.000
0100	455.0605	Tack Coat	GAL	15,746.000	15,746.000
0102	460.2000	Incentive Density HMA Pavement	DOL	32,660.000	32,660.000
0104	460.5223	HMA Pavement 3 LT 58-28 S	TON	1,012.000	1,012.000
0106	460.5224	HMA Pavement 4 LT 58-28 S	TON	736.000	736.000
0108	460.6424	HMA Pavement 4 MT 58-28 H	TON	1,251.000	1,251.000
0110	460.7423	HMA Pavement 3 HT 58-28 H	TON	25,635.000	25,635.000
0112	460.7624	HMA Pavement 4 HT 58-28 V	TON	22,392.000	22,392.000
0114	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	18.000	18.000
0118	465.0315	Asphaltic Flumes	SY	18.000	18.000
0120	502.0100	Concrete Masonry Bridges **P**	CY	955.000	955.000
0122	502.3200	Protective Surface Treatment **P**	SY	1,572.000	1,572.000
0124	502.3210	Pigmented Surface Sealer	SY	64.000	64.000
0126	503.0155	Prestressed Girder Type I 54W-Inch **P**	LF	2,347.000	2,347.000
0128	505.0400	Bar Steel Reinforcement HS Structures	LB	11,665.000	11,665.000
0130	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	162,530.000	162,530.000
0132	506.2605	Bearing Pads Elastomeric Non-Laminated **P**	EACH	36.000	36.000
0134	506.4000	Steel Diaphragms (structure) 0001. B-67-344	EACH	32.000	32.000
0136	511.1200	Temporary Shoring (structure) 0001. B-67-344	SF	960.000	960.000
0138	516.0500	Rubberized Membrane Waterproofing **P**	SY	45.000	45.000
0140	517.1010.S	Concrete Staining (structure) 0001. B-67-344 **P**	SF	12,940.000	12,940.000
0142	520.8000	Concrete Collars for Pipe	EACH	20.000	20.000
0144	520.8700	Cleaning Culvert Pipes	EACH	15.000	15.000
0146	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	7.000	7.000
0148	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	8.000	8.000
0150	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	2.000	2.000
0152	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000	4.000
0154	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	4.000	4.000
0156	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	2.000	2.000
0158	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	1.000	1.000
0160	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	1,280.000	1,280.000

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Line	Item	Item Description	Unit	Total	Qty
0162	550.1120	Piling Steel HP 12-Inch X 53 Lb	LF	825.000	825.000
0164	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	750.000	750.000
0166	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	2,077.000	2,077.000
0172	602.0410	Concrete Sidewalk 5-Inch	SF	10,611.000	10,611.000
0174	602.0415	Concrete Sidewalk 6-Inch	SF	75.000	75.000
0176	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	64.000	64.000
0178	603.0105	Concrete Barrier Single-Faced 32-Inch	LF	220.000	220.000
0180	603.1142	Concrete Barrier Type S42	LF	12,980.000	12,980.000
0182	603.1156	Concrete Barrier Type S56	LF	340.000	340.000
0184	603.1442	Concrete Barrier Type S42C	LF	725.000	725.000
0186	603.3113	Concrete Barrier Transition Type NJ32SF to S36	EACH	18.000	18.000
0188	603.3535	Concrete Barrier Transition Type S36 to S42	EACH	19.000	19.000
0190	603.3559	Concrete Barrier Transition Type S42 to S56	EACH	19.000	19.000
0192	603.8000	Concrete Barrier Temporary Precast Delivered	LF	21,846.000	21,846.000
0194	603.8125	Concrete Barrier Temporary Precast Installed	LF	22,212.000	22,212.000
0196	606.0100	Riprap Light	CY	29.000	29.000
0198	606.0200	Riprap Medium	CY	120.000	120.000
0200	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	858.000	858.000
0202	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	309.000	309.000
0204	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	57.000	57.000
0206	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	3,923.000	3,923.000
0208	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	289.000	289.000
0210	608.0336	Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	LF	83.000	83.000
0212	608.0342	Storm Sewer Pipe Reinforced Concrete Class III 42-Inch	LF	157.000	157.000
0214	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	69.000	69.000
0216	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	265.000	265.000
0218	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	3,781.000	3,781.000
0220	608.0430	Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	LF	1,188.000	1,188.000
0222	608.0442	Storm Sewer Pipe Reinforced Concrete Class IV 42-Inch	LF	211.000	211.000
0226	611.0530	Manhole Covers Type J	EACH	4.000	4.000

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Line	Item	Item Description	Unit	Total	Qty
0228	611.0535	Manhole Covers Type J-Special	EACH	2.000	2.000
0230	611.0624	Inlet Covers Type H	EACH	14.000	14.000
0232	611.0642	Inlet Covers Type MS	EACH	4.000	4.000
0234	611.0654	Inlet Covers Type V	EACH	3.000	3.000
0236	611.1005	Catch Basins 5-FT Diameter	EACH	1.000	1.000
0238	611.2004	Manholes 4-FT Diameter	EACH	2.000	2.000
0240	611.2005	Manholes 5-FT Diameter	EACH	57.000	57.000
0242	611.2006	Manholes 6-FT Diameter	EACH	9.000	9.000
0244	611.3004	Inlets 4-FT Diameter	EACH	9.000	9.000
0246	611.3230	Inlets 2x3-FT	EACH	6.000	6.000
0248	611.3901	Inlets Median 1 Grate	EACH	4.000	4.000
0254	611.9710	Salvaged Inlet Covers	EACH	2.000	2.000
0256	611.9800.S	Pipe Grates	EACH	4.000	4.000
0258	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	18.000	18.000
0260	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	230.000	230.000
0262	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0264	614.0396	Guardrail Mow Strip Asphalt	SY	27.000	27.000
0266	614.0905	Crash Cushions Temporary	EACH	10.000	10.000
0268	614.2500	MGS Thrie Beam Transition	LF	285.000	285.000
0270	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0272	616.0206	Fence Chain Link 6-FT	LF	162.000	162.000
0274	616.0329	Gates Chain Link (width) 0001. 6-Feet	EACH	3.000	3.000
0276	616.0700.S	Fence Safety	LF	300.000	300.000
0278	618.0100	Maintenance And Repair of Haul Roads (project) 0001. 1060-33-82	EACH	1.000	1.000
0280	619.1000	Mobilization	EACH	0.900	0.900
0282	623.0200	Dust Control Surface Treatment	SY	186,000.000	186,000.000
0284	624.0100	Water	MGAL	339.000	339.000
0290	628.1104	Erosion Bales	EACH	52.000	52.000
0292	628.1504	Silt Fence	LF	5,830.000	5,830.000
0294	628.1520	Silt Fence Maintenance	LF	5,830.000	5,830.000
0296	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0298	628.1910	Mobilizations Emergency Erosion Control	EACH	8.000	8.000
0300	628.2004	Erosion Mat Class I Type B	SY	24,419.000	24,419.000
0302	628.2006	Erosion Mat Urban Class I Type A	SY	22,881.000	22,881.000
0304	628.2008	Erosion Mat Urban Class I Type B	SY	30,476.000	30,476.000
0306	628.2023	Erosion Mat Class II Type B	SY	6,250.000	6,250.000
0308	628.6510	Soil Stabilizer Type B	ACRE	4.000	4.000
0310	628.7005	Inlet Protection Type A	EACH	64.000	64.000
0314	628.7015	Inlet Protection Type C	EACH	39.000	39.000

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Line	Item	Item Description	Unit	Total	Qty
0316	628.7020	Inlet Protection Type D	EACH	221.000	221.000
0318	628.7504	Temporary Ditch Checks	LF	315.000	315.000
0320	628.7515.S	Stone or Rock Ditch Checks	CY	53.000	53.000
0322	628.7555	Culvert Pipe Checks	EACH	8.000	8.000
0324	628.7570	Rock Bags	EACH	78.000	78.000
0326	629.0210	Fertilizer Type B	CWT	52.000	52.000
0328	630.0120	Seeding Mixture No. 20	LB	1,395.000	1,395.000
0330	630.0200	Seeding Temporary	LB	2,176.000	2,176.000
0332	631.0300	Sod Water	MGAL	44.000	44.000
0334	631.1000	Sod Lawn	SY	2,243.000	2,243.000
0336	631.1100	Sod Erosion Control	SY	14.000	14.000
0338	633.5200	Markers Culvert End	EACH	21.000	21.000
0340	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	15.000	15.000
0342	634.0622	Posts Wood 4x6-Inch X 22-FT	EACH	12.000	12.000
0344	634.0818	Posts Tubular Steel 2x2-Inch X 18-FT	EACH	13.000	13.000
0346	635.0200	Sign Supports Structural Steel HS	LB	4,400.000	4,400.000
0348	635.0300	Sign Supports Replacing Base Connection Bolts	EACH	2.000	2.000
0350	636.0100	Sign Supports Concrete Masonry **P**	CY	179.400	179.400
0352	636.0500	Sign Supports Steel Reinforcement	LB	432.000	432.000
0354	636.1500	Sign Supports Steel Coated Reinforcement HS **P**	LB	23,200.000	23,200.000
0356	637.1220	Signs Type I Reflective SH	SF	1,706.500	1,706.500
0358	637.2210	Signs Type II Reflective H	SF	284.340	284.340
0360	637.2230	Signs Type II Reflective F	SF	49.500	49.500
0362	638.2101	Moving Signs Type I	EACH	5.000	5.000
0364	638.2102	Moving Signs Type II	EACH	35.000	35.000
0366	638.2601	Removing Signs Type I	EACH	8.000	8.000
0368	638.2602	Removing Signs Type II	EACH	25.000	25.000
0370	638.3000	Removing Small Sign Supports	EACH	42.000	42.000
0372	638.3100	Removing Structural Steel Sign Supports	EACH	12.000	12.000
0374	641.6600	Sign Bridge (structure) 0001. S-67-317	LS	1.000	1.000
0376	641.6600	Sign Bridge (structure) 0002. S-67-318	LS	1.000	1.000
0378	641.6600	Sign Bridge (structure) 0003. S-67-418	LS	1.000	1.000
0380	643.0100	Traffic Control (project) 0001. 1060-33-82	EACH	1.000	1.000
0384	643.0300	Traffic Control Drums	DAY	67,416.000	67,416.000
0386	643.0410	Traffic Control Barricades Type II	DAY	2,403.000	2,403.000
0388	643.0420	Traffic Control Barricades Type III	DAY	8,688.000	8,688.000
0390	643.0705	Traffic Control Warning Lights Type A	DAY	22,992.000	22,992.000
0392	643.0715	Traffic Control Warning Lights Type C	DAY	26,616.000	26,616.000
0394	643.0800	Traffic Control Arrow Boards	DAY	1,368.000	1,368.000
0396	643.0900	Traffic Control Signs	DAY	34,896.000	34,896.000

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Line	Item	Item Description	Unit	Total	Qty
0398	643.0910	Traffic Control Covering Signs Type I	EACH	20.000	20.000
0400	643.0920	Traffic Control Covering Signs Type II	EACH	90.000	90.000
0402	643.1050	Traffic Control Signs PCMS	DAY	100.000	100.000
0404	643.1055.S	Truck or Trailer Mounted Attenuator	DAY	50.000	50.000
0406	643.2000	Traffic Control Detour (project) 0001. 1060-33-82	EACH	1.000	1.000
0410	643.3000	Traffic Control Detour Signs	DAY	21,670.000	21,670.000
0416	645.0130	Geotextile Type R	SY	110.000	110.000
0418	645.0140	Geotextile Type SAS	SY	205.000	205.000
0420	646.0106	Pavement Marking Epoxy 4-Inch	LF	14,210.000	14,210.000
0422	646.0126	Pavement Marking Epoxy 8-Inch	LF	1,920.000	1,920.000
0424	646.0600	Removing Pavement Markings	LF	88,096.000	88,096.000
0426	646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF	50,410.000	50,410.000
0428	646.0843.S	Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	LF	86.000	86.000
0432	646.2304.S	Pavement Marking Grooved Wet Reflective Epoxy 4-Inch	LF	35,707.000	35,707.000
0434	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	2.000	2.000
0442	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	32.000	32.000
0446	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	6,371.000	6,371.000
0448	647.0746	Pavement Marking Diagonal Epoxy 24-Inch	LF	200.000	200.000
0454	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	10,248.000	10,248.000
0456	649.0403	Temporary Pavement Marking Epoxy 4-Inch	LF	77,848.000	77,848.000
0462	649.2100	Temporary Raised Pavement Markers Type I	EACH	176.000	176.000
0464	652.0125	Conduit Rigid Metallic 2-Inch	LF	65.000	65.000
0466	652.0135	Conduit Rigid Metallic 3-Inch	LF	1,495.000	1,495.000
0468	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,095.000	1,095.000
0470	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	290.000	290.000
0472	652.0605	Conduit Special 2-Inch	LF	490.000	490.000
0474	652.0700.S	Install Conduit into Existing Item	EACH	3.000	3.000
0476	653.0140	Pull Boxes Steel 24x42-Inch	EACH	10.000	10.000
0478	653.0905	Removing Pull Boxes	EACH	17.000	17.000
0480	654.0105	Concrete Bases Type 5	EACH	1.000	1.000
0482	655.0510	Electrical Wire Traffic Signals 12 AWG	LF	11,720.000	11,720.000
0484	655.0525	Electrical Wire Traffic Signals 6 AWG	LF	2,850.000	2,850.000
0486	655.0620	Electrical Wire Lighting 8 AWG	LF	978.000	978.000
0488	655.0635	Electrical Wire Lighting 2 AWG	LF	2,934.000	2,934.000
0490	656.0200	Electrical Service Meter Breaker Pedestal (location) 2001. MBCCTV670005	LS	1.000	1.000
0492	656.0500	Electrical Service Breaker Disconnect Box (location) 2001. CCTV670005	LS	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
0494	656.0500	Electrical Service Breaker Disconnect Box (location) 2002. SDS670030	LS	1.000	1.000
0496	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	1.000	1.000
0498	657.0322	Poles Type 5-Aluminum	EACH	1.000	1.000
0500	659.1125	Luminaires Utility LED C	EACH	40.000	40.000
0502	659.1130	Luminaires Utility LED D	EACH	101.000	101.000
0504	670.0100	Field System Integrator	LS	1.000	1.000
0506	670.0200	ITS Documentation	LS	1.000	1.000
0508	671.0132	Conduit HDPE 3-Duct 2-Inch	LF	8,320.000	8,320.000
0510	671.0232	Conduit HDPE Directional Bore 3-Duct 2-Inch	LF	550.000	550.000
0512	672.0250	Base Camera Pole 50-FT	EACH	1.000	1.000
0514	673.0105	Communication Vault Type 1	EACH	9.000	9.000
0516	673.0225.S	Install Pole Mounted Cabinet	EACH	2.000	2.000
0518	674.0300	Remove Cable	LF	1,620.000	1,620.000
0520	675.0300	Install Mounted Controller Microwave Detector Assembly	EACH	4.000	4.000
0522	675.0400.S	Install Ethernet Switch	EACH	2.000	2.000
0524	677.0150	Install Camera Pole 50-FT	EACH	1.000	1.000
0526	677.0200	Install Camera Assembly	EACH	1.000	1.000
0528	677.9051.S	Removing 50-FT Camera Pole	EACH	1.000	1.000
0530	677.9200.S	Removing CCTV Camera	EACH	1.000	1.000
0532	678.0006	Install Fiber Optic Cable Outdoor Plant 6-CT	LF	600.000	600.000
0534	678.0072	Install Fiber Optic Cable Outdoor Plant 72-CT	LF	12,855.000	12,855.000
0536	678.0100.S	Install Overhead Freeway DMS Full Matrix	EACH	1.000	1.000
0538	678.0300	Fiber Optic Splice	EACH	84.000	84.000
0540	678.0400	Fiber Optic Termination	EACH	90.000	90.000
0542	678.0500	Communication System Testing	LS	1.000	1.000
0544	690.0150	Sawing Asphalt	LF	242.000	242.000
0546	690.0250	Sawing Concrete	LF	16,763.000	16,763.000
0548	715.0502	Incentive Strength Concrete Structures	DOL	7,730.000	7,730.000
0550	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	4,800.000	4,800.000
0552	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	9,000.000	9,000.000
0554	SPV.0035	Special 8001. Backfill Slurry	CY	5,161.000	5,161.000
0556	SPV.0045	Special 0001. Portable Speed Trailer	DAY	400.000	400.000
0558	SPV.0060	Special 0001. Concrete Barrier Type S42 End Anchor	EACH	3.000	3.000
0560	SPV.0060	Special 0002. Traffic Control Full Freeway Closure	EACH	16.000	16.000
0562	SPV.0060	Special 0003. Traffic Control Close-Open Freeway Entrance Ramp	EACH	108.000	108.000
0564	SPV.0060	Special 0004. Traffic Control Interim Freeway Lane Closure	EACH	180.000	180.000
0566	SPV.0060	Special 0006. Traffic Control Close-Open Freeway to	EACH	16.000	16.000

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Line	Item	Item Description	Unit	Total	Qty
		Freeway System Ramp			
0570	SPV.0060	Special 1001. Lamp Disposal High Intensity Discharge	EACH	141.000	141.000
0572	SPV.0060	Special 1002. Lighting Units Salvaged	EACH	2.000	2.000
0574	SPV.0060	Special 1003. Poles Wood 60-FT	EACH	2.000	2.000
0576	SPV.0060	Special 2006. Salvage Hardwired HAR Sign Flasher Assembly	EACH	1.000	1.000
0578	SPV.0060	Special 2007. Install Salvaged Hardwired HAR Sign Flasher Assembly	EACH	1.000	1.000
0580	SPV.0060	Special 2008. Refocus Vehicle detector Assembly	EACH	6.000	6.000
0582	SPV.0060	Special 2009. Ground Rod	EACH	2.000	2.000
0584	SPV.0060	Special 4000. Removing Old Sign Structure S-67-402	EACH	1.000	1.000
0586	SPV.0060	Special 5000. Adjusting Water Valve	EACH	2.000	2.000
0588	SPV.0060	Special 5001. Reconstruct Water Manhole	EACH	1.000	1.000
0590	SPV.0060	Special 8015. Pipe Connection To Existing Structure	EACH	6.000	6.000
0592	SPV.0060	Special 8050. Inlet Covers Type 27-M	EACH	61.000	61.000
0596	SPV.0075	Special 0002. Pavement Cleanup Project 1060-33-82	HRS	1,000.000	1,000.000
0598	SPV.0075	Special 4000. Obstructions Sign Supports Concrete Masonry	HRS	9.000	9.000
0602	SPV.0090	Special 0002. Pipe Underdrain 6-Inch Special	LF	15,670.000	15,670.000
0604	SPV.0090	Special 0301. Heavy Duty Silt Fence	LF	65.000	65.000
0606	SPV.0090	Special 1001. Conduit Flexible Metallic 3-Inch	LF	120.000	120.000
0608	SPV.0090	Special 1002. Cable In Duct 3-2 AWG, 1-8 AWG	LF	1,635.000	1,635.000
0610	SPV.0090	Special 1003. Cable Aerial Aluminum 2 AWG Quadruplex	LF	250.000	250.000
0612	SPV.0090	Special 4001. Fence Decorative Bridge B-67-344 **P**	LF	596.000	596.000
0616	SPV.0105	Special 0002. Survey Project 1060-33-82	LS	1.000	1.000
0618	SPV.0105	Special 0003. Remove, Salvage, and Reinstall Federal Signal Siren	LS	1.000	1.000
0620	SPV.0105	Special 1001. Maintenance of Lighting Systems	LS	1.000	1.000
0622	SPV.0105	Special 1002. Lighting System Integrator	LS	1.000	1.000
0624	SPV.0105	Special 1003. Lighting System Survey	LS	1.000	1.000
0626	SPV.0105	Special 4000. Remove and Relocate Existing Sign Bridge S-67-315	LS	1.000	1.000
0628	SPV.0135	Special 0001. Vibration Monitoring	MON	10.000	10.000
0630	SPV.0180	Special 0001. Topsoil Special	SY	79,658.000	79,658.000
0632	SPV.0180	Special 0002. Epoxy Resin Binder	SY	500.000	500.000
0634	SPV.0180	Special 0003. Slope Paving Crushed Aggregate Special	SY	515.000	515.000
0636	SPV.0195	Special 0001. Excavation, Hauling, and Disposal of Creosote Contaminated Soil	TON	408.000	408.000

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CLEARING AND GRUBBING ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
1000	IH 94 EB	595+00		669+00	RT	74	74
	IH 94 WB	585+00		669+00	LT	84	84
	SUNNY SLOPE ROAD	122+00		126+00	RT/LT	4	4
	SUNNY SLOPE ROAD	127+00		129+00	RT	2	2
	SUNNY SLOPE ROAD	132+00		133+00	RT	1	1
	TOTALS					165	165

REMOVING PAVEMENT

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	204.0100 REMOVING PAVEMENT SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0150 REMOVING CURB & GUTTER LF
1000	IH 94 EB	572+64		669+06	RT	8,964	62,211	--
	IH 94 WB	572+64		669+06	LT	11,410	55,844	--
	SUNNY SLOPE ROAD	122+22		135+36	RT/LT	--	--	48
	TOTALS					20,374	118,055	48

REMOVING RIPRAP

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.9035.S REMOVING RIP RAP HEAVY CY
1000	1	IH 94	663+80		669+05	RT	573
			TOTAL				573

PROJECT NO: 1060-33-82	HWY: IH - 94	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

REMOVING CONCRETE BARRIER

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0157 REMOVING CONCRETE BARRIER LF
1000	1	IH 94	572+64		669+65	RT/LT	2705
			TOTAL				2,705

REMOVING GUARDRAIL

CATEGORY	ROADWAY	STA	TO	STA	OFFSET	204.0165 REMOVING GUARDRAIL LF
1000	IH 94	572+64		669+06	LT/RT	999
	SUNNY SLOPE RD	128+25		131+75	LT/RT	260
		TOTAL:				1259

REMOVING FENCE

CATEGORY	ROADWAY	STA	TO	STA	OFFSET	204.0170 REMOVING FENCE LF
1000	SUNNY SLOPE ROAD	128+31		128+48	LT	82
		128+55		128+61	RT	69
		131+40		131+47	LT	43
		131+59		131+80	RT	66
		TOTAL:				260

EXCAVATION

CATEGORY	LOCATION	SPV.0195.0001 EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL TON
1000	B-67-54 NORTH ABUTMENT	204
	B-67-54 SOUTH ABUTMENT	204
	TOTALS	408

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EARTHWORK SUMMARY TABLE

Division	From/To Station	205.0100 Common Excavation (1)	Available Material (3)	Unexpanded Fill	Expanded Fill (4)	Mass Ordinate +/- (5)	Waste (6)
Division 1		Cut (2)			Factor 1.20		
IH 94 WB	585+50/669+05	32,825	32,825	8,502	10,203	22,622	22,622
IH 94 EB	597+20/669+05	32,622	32,622	6,620	7,944	24,678	24,678
SUNNYSLOPE ROAD	122+25/128+50	1,786	1,786	3,362	4,035	-2,249	0
SUNNYSLOPE ROAD	131+41.62/135+35.84	666	666	1,034	1,240	-574	0
Division 1 Subtotal		67,899	67,899	19,518	23,422	44,477	47,300
Grand Total		67,899	67,899	19,518	23,422	44,477	47,300
Total Common Exc		67,899					

Notes:

(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) Available Material = Cut - Salvaged/Unusuable Pavement Material

(4) Expanded Fill Factor = 1.2

(5) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material wit

(6) Structure excavation and storm sewer excavation spoils are considered waste and incidental to those specific bid items

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BACKFILL STRUCTURE

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	210.1100 BACKFILL STRUCTURE TYPE A CY
1000	IH 94	598+25		605+50	LT	323
	TOTALS:					323

BASE AGGREGATE ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON
1000	1	IH 94 EB	585+45		653+50	--	413	227
		IH 94 WB	585+45		653+50	--	413	227
		SUNNY SLOPE ROAD	122+22		135+36	--	3,720	--
	2	IH 94 EB	572+64		669+06	143	7,013	18,392
		IH 94 WB	572+64		669+06	162	7,861	20,691
		TOTALS				305	19,420	39,537

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CONCRETE ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	416.0160 CONCRETE DRIVEWAY 6-INCH SY	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF
1000		SUNNY SLOPE ROAD	122+22		128+16	--	23	--	1,347
		SUNNY SLOPE ROAD	128+16		131+90	119	--	750	--
		SUNNY SLOPE ROAD	131+90		135+660	--	--	--	730
		TOTALS				119	23	750	2,077

ASPHALTIC PAVEMENT ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	460.6424 HMA PAVEMENT 4 MT 58-28 H TON	460.7423 HMA PAVEMENT 3 HT 58-28 H TON	460.7624 HMA PAVEMENT 4 HT 58-28 V TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0315 ASPHALTIC FLUMES SY	614.0396 GUARDRAIL MOW STRIP ASPHALT SY
1000	1	IH 94 EB	585+45		653+50	96	--	--	--	252	108	--	--	--
		IH 94 WB	585+45		653+50	88	--	--	--	237	102	--	--	--
		SUNNY SLOPE ROAD	122+22		135+36	250	1,012	736	--	--	--	18	18	--
	2	IH 94 EB	572+64		669+06	7,407	--	--	942	11,352	10,609	--	--	18
		IH 94 WB	572+64		669+06	7,905	--	--	309	13,794	11,573	--	--	9
		TOTAL:				15,746	1,012	736	1,251	25,635	22,392	18	18	27

CONCRETE SIDEWALK

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0415 CONCRETE SIDEWALK 6-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
1000	SUNNY SLOPE ROAD	122+22		134+75	RT	4409	75	24
	SUNNY SLOPE ROAD	123+57		135+25	LT	6,202	--	40
	TOTALS:					10,611	75	64

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CPM PROGRESS SCHEDULE

CATEGORY	STAGE	LOCATION	108.4400 CPM PROGRESS SCHEDULE EACH
1000	ALL	PROJECT	1
		TOTAL:	1

FINISHING ROADWAY PROJECT ID 1060-33-82

CATEGORY	STAGE		213.0100 FINISHING ROADWAY (1060-33-82) EACH
1000	ALL	PROJECT	1
TOTAL:			1

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MOBILIZATION

CATEGORY	STAGE	LOCATION	619.1000 MOBILIZATION EACH
1000	ALL	PROJECT	0.9
	TOTAL:		0.9

HAUL ROAD MAINTENANCE

CATEGORY	STAGE	LOCATION	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (1060-33-82) EACH
1000	ALL	PROJECT	1
TOTAL:			1

SURVEY PROJECT

CATEGORY	STAGE	LOCATION	SPV.0105.0002 SURVEY PROJECT (1060-33-82) LS
1000	ALL	PROJECT	1
		TOTAL:	1

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REMOVING SIREN

CATEGORY	STAGE	LOCATION	SPV.0105.0003 REMOVE, SALVAGE AND REINSTALL FEDERAL SIGNAL SIREN LS
7000	ALL	PROJECT	1
		TOTAL:	1

VIBRATION MONITORING

CATEGORY	STAGE	LOCATION	SPV.0135.0001 VIBRATION MONITORING MON
1000	ALL	PROJECT	10
		TOTAL:	10

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EPOXY RESIN BINDER

CATEGORY	STAGE	LOCATION	SPV.0180.0002 EPOXY RESIN BINDER SY
1000	ALL	ELM GROVE BRIDGE	500
		TOTAL:	500

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CONCRETE BARRIER ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	603.0105 CONCRETE BARRIER SINGLE FACED 32-INCH LF	603.1142 CONCRETE BARRIER TYPE S42 LF	603.1156 CONCRETE BARRIER TYPE S56 LF	603.1442 CONCRETE BARRIER TYPE S42C LF	603.3113 CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36 EACH	603.3535 CONCRETE BARRIER TRANSITION TYPE S36 TO S42 EACH	603.3559 CONCRETE BARRIER TRANSITION TYPE S42 TO S56 EACH	614.0905 CRASH CUSHIONS TEMPORARY EACH	SPV.0060.0001 CONCRETE BARRIER TYPE S42 END ANCHOR EACH
1000	1	IH 94 EB	585+45		653+50	RT	3189	3189	110	--	170	--	9	9	9	4	--
		IH 94 WB	585+45		653+50	LT	2845	2845	110	--	170	--	9	9	9	4	--
		SUNNY SLOPE RD	UNDISTRIBUTED				62	62	--	--	--	--	--	--	--	--	--
	2	IH 94 EB	572+64		669+06	RT	6950	7316	--	6435	--	--	--	--	--	1	1
		IH 94 WB	572+64		669+06	LT	8738	8738	--	6545	--	725	--	1	1	1	2
		SUNNY SLOPE RD	UNDISTRIBUTED				62	62	--	--	--	--	--	--	--	--	--
		TOTAL					21,846	22,212	220	12,980	340	725	18	19	19	10	3

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GUARDRAIL ITEMS

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	614.2500 MGS GUARDRAIL THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
1000	IH 94 EB	596+25		597+20	RT	95	1
	IH 94 WB	614+70		615+65	RT	95	1
		642+00		642+95	LT	95	1
	TOTAL					285	3

SAWCUTTING ITEMS

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
1000	IH 94 EB	572+64		669+06	RT	--	7858
	IH 94 WB	572+64		669+06	LT	--	8905
	SUNNY SLOPE ROAD	122+22		135+36	RT/LT	242	--
	TOTALS:					242	16,763

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TRAFFIC CONTROL

CATEGORY	STAGE	LOCATION	643.0100 TRAFFIC CONTROL (1060-33-82) EACH	643.2000 TRAFFIC CONTROL DETOUR (1060-33-82) EACH
1000	ALL	PROJECT	1	1
	TOTAL:		1	1

TRUCK MOUNTED ATTENUATOR/PORTABLE SPEED TRAILER

CATEGORY	STAGE	LOCATION	643.1055.S TRUCK OR TRAILER-MOUNTED ATTENUATOR DAY	SPV.0045.0001 PORTABLE SPEED TRAILER DAY
1000	ALL	PROJECT	50	400
	TOTAL:		50	400

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TRAFFIC CONTROL ITEMS (DETOUR)

CATEGORY	STAGE	LOCATION	STAGE DURATION DAYS	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS
1000	1	SUNNYSLOPE ROAD	60	59	3540
		MOORLAND ENTRANCE RAMP	20	31	620
		MOORLAND EXIT RAMP	20	25	500
		FULL FREEWAY CLOSURE IH 94 EB	2	24	48
		FULL FREEWAY CLOSURE IH 94 WB	2	44	88
		31-HR FREEWAY CLOSURE IH 94 EB	2	85	170
		31-HR FREEWAY CLOSURE IH 94 WB	2	85	170
	2	SUNNYSLOPE ROAD	240	59	14160
		MOORLAND ENTRANCE RAMP	70	31	2170
		FULL FREEWAY CLOSURE H 94 EB	3	24	72
		FULL FREEWAY CLOSURE IH 94 WB	3	44	132
		TOTALS			21,670

TRAFFIC CONTROL CLOSURES

CATEGORY	STAGE	LOCATION	SPV.0060.0002 TRAFFIC CONTROL FULL FREEWAY CLOSURE EACH	SPV.0060.0003 TRAFFIC CONTROL CLOSE-OPEN FREEWAY ENTRANCE RAMP EACH	SPV.0060.0004 TRAFFIC CONTROL INTERIM FREEWAY LANE CLOSURE EACH	SPV.0060.0006 TRAFFIC CONTROL CLOSE-OPEN FREEWAY TO FREEWAY SYSTEM RAMP EACH
1000	1	IH 94 EB	2	30	20	2
		IH 94 WB	2	2	20	2
	2	IH 94 EB	6	70	70	6
		IH 94 WB	6	6	70	6
	TOTAL:		16	108	180	16

TRAFFIC CONTROL

				643.0300		643.0410		643.0420		643.0705		643.0715		643.0800		643.0900		643.1050		643.0910	643.0920	
						TRAFFIC CONTROL																
						BARRICADES		BARRICADES		WARNING LIGHTS		WARNING LIGHTS									COVERING SIGNS	
			*	DRUMS		TYPE II		TYPE III		TYPE A		TYPE C		ARROW BOARDS		SIGNS		SIGNS PCMS		TYPE I	TYPE II	
CATEGORY	STAGE	LOCATION	DAYS	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	EACH	CYCLES
1000	1	IH 94 EB	60	61	3,660	--	--	--	--	--	--	--	--	1	60	30	1,800	--	--	--	--	--
	1	IH 94 WB	60	63	3,780	--	--	--	--	--	--	--	--	1	60	15	900	--	--	--	--	--
	1	SUNNYSLOPE ROAD	60	--	--	8	480	14	840	44	2,640	--	--	--	--	26	1,560	--	--	--	--	--
	1	SINGLE LANE FREEWAY CLOSURE EB	5	129	645	--	--	8	40	16	80	14	70	2	10	22	110	--	--	--	--	--
	1	SINGLE LANE FREEWAY CLOSURE WB	5	129	645	--	--	8	40	16	80	14	70	2	10	22	110	--	--	--	--	--
	1	TWO LANE FREEWAY CLOSURE EB	15	170	2,550	--	--	16	240	32	480	28	420	3	45	22	330	--	--	--	--	--
	1	TWO LANE FREEWAY CLOSURE WB	15	140	2,100	--	--	16	240	32	480	28	420	3	45	22	330	--	--	--	--	--
	1	FULL FREEWAY CLOSURE EB	2	100	200	--	--	12	24	12	24	42	84	4	8	25	50	--	--	--	--	--
	1	ENTRANCE RAMP CLOSURE (MOORLAND)	20	8	160	--	--	4	80	8	160	0	0		0	13	260	--	--	--	--	--
	1	FULL FREEWAY CLOSURE WB	2	100	200	--	--	12	24	12	24	42	84	4	8	25	50	--	--	--	--	--
1000	2	IH 94 EB	240	68	16,320	--	--	--	--	--	--	56	13,440	1	240	36	8,640	--	--	--	--	--
	2	IH 94 WB	240	16	3,840	--	--	--	--	--	--	16	3,840	1	240	19	4,560	--	--	--	--	--
	2	SUNNYSLOPE ROAD	240	--	--	8	1,920	14	3,360	44	10,560	--	--	--	--	26	6,240	--	--	--	--	--
	2	SINGLE LANE FREEWAY CLOSURE EB	15	129	1,935	--	--	8	120	16	240	14	210	2	30	22	330	--	--	--	--	--
	2	SINGLE LANE FREEWAY CLOSURE WB	15	129	1,935	--	--	8	120	16	240	14	210	2	30	22	330	--	--	--	--	--
	2	TWO LANE FREEWAY CLOSURE EB	55	170	9,350	--	--	16	880	32	1,760	28	1,540	3	165	22	1,210	--	--	--	--	--
	2	TWO LANE FREEWAY CLOSURE WB	55	140	7,700	--	--	16	880	32	1,760	28	1,540	3	165	22	1,210	--	--	--	--	--
	2	FULL FREEWAY CLOSURE EB	3	100	300	--	--	12	36	12	36	42	126	4	12	25	75	--	--	--	--	--
	2	ENTRANCE RAMP CLOSURE (MOORLAND)	70	8	560	--	--	4	280	8	560	0	0		0	13	910	--	--	--	--	--
	2	FULL FREEWAY CLOSURE WB	3	100	300	--	--	12	36	12	36	42	126	4	12	25	75	--	--	--	--	--
		UNDISTRIBUTED			11,236		3		1,448		3,832		4,436		228		5,816		100	20	90	2
		TOTAL:			67,416		2,403		8,688		22,992		26,616		1,368		34,896		100	20	90	2

* FOR INFORMATION ONLY

ADDITIONAL PAVEMENT MARKING, TRAFFIC CONTROL SIGNS AND OTHER TRAFFIC CONTROL DEVICES WILL BE PLACED BY OTHERS UNDER PROJECT I.D. 1060-33-81

PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH 3 FT LINE, 9 FT SKIP WHITE LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH 3 FT LINE, 9 FT SKIP WHITE LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH 3 FT LINE, 9 FT SKIP YELLOW LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH WHITE LF	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH WHITE LF	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH YELLOW LF	647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH WHITE LF	646.2304.S PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH WHITE LF	646.2304.S PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH YELLOW LF	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE II WHITE EACH	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH WHITE LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH WHITE LF
1000	IH 94 EB	573+05		669+05	--	--	--	--	--	--	--	28068	--	--	--	--	--
	IH 94 EB	597+19.80		669+05	--	--	--	--	--	--	--	--	--	--	--	--	--
	IH 94 EB	572+93.45		580+71	--	--	--	--	--	--	--	--	--	--	--	--	--
	IH 94 EB	572+93.45		580+84	--	--	--	--	--	--	--	--	--	--	--	--	--
	IH 94 WB	573+05		669+05	--	--	--	--	--	--	--	22006	--	--	2	--	86
	IH 94 WB	614+00.00		669+05	--	--	--	--	--	--	--	--	--	--	--	--	--
	IH 94 WB	590+41.75		614+00	2,342	--	--	--	--	--	--	--	--	--	--	--	--
	IH 94 EB	5730+06.80		590+47	--	1,743	--	--	--	--	--	--	--	--	--	--	--
	IH 94 EB	572+93.75		597+19.80	--	829	--	--	--	--	--	--	--	--	--	--	--
	IH 94 WB	572+79.75		582+75.75	--	1,049	--	--	--	--	--	--	--	--	--	--	--
	IH 94 EB	572+93.45		581+22.75	--	--	818	--	--	--	--	--	--	--	--	--	--
	IH 94 EB	572+93.45		597+19.80	--	--	2,430	--	--	--	--	--	--	--	--	--	--
	IH 94 WB	572+64		583+10	--	--	1,103	--	--	--	--	--	--	--	--	--	--
	IH 94 EB	581+22.75		585+00	--	--	--	377	--	--	--	--	--	--	--	--	--
	IH 94 EB	581+22.75		585+00	--	--	--	377	--	--	--	--	--	--	--	--	--
	IH 94 EB	581+22.75		585+00	--	--	--	377	--	--	--	--	--	--	--	--	--
	IH 94 WB	583+10		587+41.75	--	--	--	432	--	--	--	--	--	--	--	--	--
	IH 94 WB	583+10		587+41.75	--	--	--	432	--	--	--	--	--	--	--	--	--
	IH 94 WB	587+41.75		590+41.75	--	--	--	302	--	--	--	--	--	--	--	--	--
	IH 94 EB	598+09		669+05	--	--	--	--	1,206	--	--	--	--	--	--	--	--
	IH 94 EB	573+00		668+36	--	--	--	--	--	1,996	--	--	--	--	--	--	--
	IH 94 WB	590+89		669+05	--	--	--	--	1,321	--	--	--	--	--	--	--	--
	IH 94 WB	573+90		669+05	--	--	--	--	--	1,848	--	--	--	--	--	--	--
	IH 94 WB	583+60.35		586+60.80	--	--	--	--	--	--	200	--	--	--	--	--	--
	IH 94 EB	590+47		669+05	--	--	--	--	--	--	--	--	7,875	--	--	--	--
	IH 94 EB	572+93.45		669+05	--	--	--	--	--	--	--	--	--	9,616	--	--	--
	IH 94 WB	582+75.75		669+05	--	--	--	--	--	--	--	--	8,611	--	--	--	--
	IH 94 WB	572+93.45		669+05	--	--	--	--	--	--	--	--	--	9,605	--	--	--
SUNNY SLOPE ROAD		122+22		134+56.50	--	1,268	2,628	--	--	--	--	336	--	--	--	32	--
					2,342	4,889	6,979	1,920	2,527	3,844	200	50,410	16,486	19,221	2	32	86
TOTALS:						14,210		1,920	6,371		200	50,410	35,707		2	32	86

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TEMPORARY PAVEMENT MARKING ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	646.0600 REMOVING PAVEMENT MARKING LF	649.0402 TEMPORARY PAVMENT MARKING PAINT 4-INCH WHITE LF	649.0402 TEMPORARY PAVMENT MARKING PAINT 4-INCH YELLOW LF	649.0403 TEMPORARY PAVEMENT MARKING EPOXY 4-INCH 12 FT LINE, 37.5 FT SKIP WHITE LF	649.0403 TEMPORARY PAVEMENT MARKING EPOXY 4-INCH WHITE LF	649.0403 TEMPORARY PAVEMENT MARKING EPOXY 4-INCH YELLOW LF	649.2100 TEMPORARY RAISED PAVEMENT MARKERS EACH
1000	1	IH 94 EB	619+90		632+70	5,124	3,843	1,281	--	--	--	--
		IH 94 WB	619+90		632+70	5,124	3,843	1,281	--	--	--	--
	2	IH 94 WB	577+00		583+00	2,448	--	--	--	1,848	600	48
		IH 94 WB	583+00		585+00	1,002	--	--	--	802	200	--
		IH 94 EB	583+00		585+00	800	--	--	--	600	200	--
		IH 94 EB	585+00		591+00	2,400	--	--	--	1,800	600	48
		IH 94 WB	585+00		591+00	2,532	--	--	1,200	732	600	--
		IH 94 WB	591+00		667+00	30,456	--	--	15,228	7,614	7,614	--
		IH 94 EB	591+00		667+00	31,512	--	--	15,228	8,670	7,614	--
		IH 94 EB	667+00		669+06	824	--	--	--	618	206	--
		IH 94 WB	669+06		669+06	824	--	--	--	618	206	--
		IH 94 EB	669+06		674+68	2,249	--	--	--	1,686	563	40
		IH 94 WB	669+06		674+68	2,249	--	--	--	1,686	563	40
		IH 94 WB	674+68		675+60	276	--	--	--	184	92	--
		IH 94 WB	674+68		675+60	276	--	--	--	184	92	--
						88,096	7,686	2,562	31,656	27,042	19,150	176
TOTALS						88,096	10,248		77,848			176

FENCING ITEMS

CATEGORY	ROADWAY	STATION	TO STATION	OFFSET	616.0206 FENCE CHAIN LINK (6 FEET) LF	616.0329 GATES CHAIN LINK (6 FEET) EACH	616.0700.S FENCE SAFETY LF
1000	SUNNY SLOPE ROAD	128+31	128+48	LT	55	2	--
		128+55	128+61	RT	41	--	--
		131+40	131+47	LT	40	1	--
		131+59	131+80	RT	26	--	--
		UNDISTRIBUTED			--	--	300
	TOTAL				162	3	300

CITY OF BROOKFIELD WATER

CATEGORY	ROADWAY	STATION	OFFSET	SPV.0060.5000 ADJUSTING WATER VALVE EACH	SPV.0060.5001 RECONSTRUCT WATER MANHOLE EACH
1000	SUNNY SLOPE ROAD				
		125+60	23' LT	1	-
		125+69	22' LT	1	-
		134+66	29' LT	-	1
	CATEGORY TOTAL			2	1
	PROJECT TOTAL			2	1

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DUST CONTROL SURFACE TREATMENT

CATEGORY	LOCATION	623.0200 DUST CONTROL SURFACE TREATMENT SY
1000	IH 94 EB	90,000
	IH 94 WB	90,000
	SUNNY SLOPE ROAD	6,000
TOTALS		186,000

WATER

CATEGORY	LOCATION	624.0100 WATER MGAL
1000	PROJECT - EXCAVATION	339
	TOTAL:	339

PAVEMENT CLEANUP

CATEGORY	STAGE	LOCATION	SPV.0075.0002 PAVEMENT CLEANUP HRS
1000	ALL	PROJECT	1000
		TOTAL:	1000

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RIPRAP

CATEGORY	STATION	LOCATION	L X W	606.0100 RIPRAP LIGHT CY	606.0200 RIPRAP MEDIUM CY	645.0130 GEOTEXTILE FABRIC TYPE R SY	631.1100 SOD EROSION CONTROL SY
1000	588+25 IH94	LT	10.0' x 7.0'	--	4	--	--
	591+00 IH94	LT	10.0' x 7.0'	--	4	--	--
	592+50 IH94	LT	10.0' x 7.0'	--	4	--	--
	594+50 IH 94	LT	10.0' x 7.0'	--	4	--	--
	596+50 IH94	LT	10.0' x 7.0'	--	4	--	--
	598+70 IH94	RT	10.0' x 7.0'	--	4	--	--
	600+50 IH94	RT	10.0' x 7.0'	--	4	--	--
	603+00 IH94	RT	10.0' x 7.0'	--	4	--	--
	608+50 IH94	LT	10.0' x 7.0'	--	4	--	--
	611+00 IH94	LT	10.0' x 7.0'	--	4	--	--
	611+00 IH94	RT	10.0' x 7.0'	--	4	--	--
	613+00 IH94	LT	10.0' x 7.0'	--	4	--	--
	617+85 IH94	LT	10.0' x 7.0'	--	4	--	--
	627+10 IH94	RT	10.0' x 7.0'	--	4	--	--
	632+00 IH94	RT	10.0' x 7.0'	--	4	--	--
	642+05 IH94	LT	10.0' x 7.0'	--	4	--	--
	647+80 IH94	RT	10.0' x 7.0'	--	4	--	--
	648+75 IH94	LT	20.0' x 14.0'	--	12	--	--
	654+10 IH94	RT	10.0' x 7.0'	--	4	--	--
	654+60 IH94	LT	10.0' x 7.0'	--	4	--	--
	664+90 IH94	LT	10.0' x 7.0'	--	4	--	--
	667+50 IH94	LT	10.0' x 7.0'	--	4	--	--
	669+05 IH94	RT	10.0' x 7.0'	--	4	--	--
1000	120+54 SS	27.0' LT	--	4	--	16	--
	122+35 SS	26.0' LT	--	2	--	7	--
	123+10 SS	31.4' LT	10.0' x 7.0'	2	--	10	6
	125+28 SS	56.0' LT	--	4	--	16	--
	134+85 SS	36.6' RT	10.0' x 5.0'	2	--	10	6
		NW QUAD ROCK CHUTE	43.0' x 5.0	12		39	--
		UNDISTRIBUTED		3	20	12	2
		TOTAL		29	120	110	14

INLET PROTECTION

CATEGORY	ROADWAY	STATION	TO	STATION	LOCATION	628.7005 TYPE A EACH	628.7015 TYPE C EACH	628.7020 TYPE D EACH
1000	IH-94 WB	581+51		669+37	LT	--	--	104
	IH-94 EB	581+51		669+37	RT	--	--	68
	SUNNY SLOPE ROAD	121+85		135+63	LT/RT	20	15	5
	UNDISTRIBUTED					44	24	44
	TOTALS					64	39	221

PIPE UNDERDRAIN

CATEGORY	ROADWAY	STATION	LOCATION	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	SPV.0090.0002 * PIPE UNDERDRAIN 6-INCH SPECIAL LF
1000	IH 94 EB	585+45	653+50	--	7,405
	IH 94 WB	585+45	653+50	--	8,265
	SUNNY SLOPE ROAD	125+28	LT	18	
	TOTAL			18	15670

* INCIDENTAL QUANTITIES (FOR INFORMATION ONLY)

GEOTEXTILE FABRIC TYPE DF SCHEDULE A: 8706 SY

BASE AGGREGATE OPEN-GRADED: 466 CY

EROSION CONTROL ITEMS

CATEGORY	ROADWAY	STATION	TO	STATION	LOCATION	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH	628.2004 EROSION MAT CLASS I TYPE B SY	628.2023 EROSION MAT CLASS II TYPE B SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.6510 SOIL STABALIZER TYPE B ACRE	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.757 ROCK BAGS EACH	SPV.0090.0301 HEAVY DUTY SILT FENCE LF
1000	IH-94	572+64		669+05		40	--	--	--	--	--	--	--	--	3	150	6	60	50
		592+50		597+60	LT	--	506	506	--	--	--	--	--	--	--	--	--	--	--
		597+15		601+00	RT	--	437	437	--	--	--	--	--	--	--	--	--	--	--
		609+99		612+00	LT	--	207	207	--	--	--	--	--	--	--	--	--	--	--
		627+50		638+50	RT	--	682	682	--	--	--	--	--	--	--	--	--	--	--
		648+50		649+50	LT	--	100	100	--	--	--	--	--	--	--	--	--	--	--
		664+00		669+10	RT	--	537	537	--	--	--	--	--	--	--	--	--	--	--
		668+50		669+10	LT	--	88	88	--	--	--	--	--	--	--	--	--	--	--
		609+85		613+00	LT	--	--	--	--	--	2,071	--	--	--	--	--	--	--	--
		615+50		625+35	RT	--	--	--	--	--	6,062	--	--	--	--	--	--	--	--
		638+50		652+75	RT	--	622	622	--	--	6537	--	--	--	--	--	--	--	--
		655+00		664+00	RT	--	--	--	--	--	4,114	--	--	--	--	--	--	--	--
		625+35		627+00	RT	--	--	--	--	--	--	702	--	--	--	--	--	--	--
		625+50		627+00	LT	--	--	--	--	--	--	843	--	--	--	--	--	--	--
		652+75		655+00	RT	--	--	--	--	--	--	1,529	--	--	--	--	--	--	--
		652+00		655+44	LT	--	--	--	--	--	--	1,734	--	--	--	--	--	--	--
		595+00		601+11	RT	--	--	--	--	--	--	--	2058	--	--	--	--	--	--
		598+25		606+00	LT	--	--	--	--	--	--	--	743	--	--	--	--	--	--
		607+50		615+50	RT	--	--	--	--	--	--	--	4273	--	--	--	--	--	--
		618+50		625+50	LT	--	--	--	--	--	--	--	770	--	--	--	--	--	--
		627+00		638+50	RT	--	--	--	--	--	--	--	1498	--	--	--	--	--	--
		627+50		641+50	LT	--	--	--	--	--	--	--	1119	--	--	--	--	--	--
		585+50		598+25	LT	--	--	--	--	--	--	--	--	6906	--	--	--	--	--
		601+11		607+50	RT	--	--	--	--	--	--	--	--	2261	--	--	--	--	--
		606+00		609+85	LT	--	--	--	--	--	--	--	--	1470	--	--	--	--	--
		613+00		618+50	LT	--	--	--	--	--	--	--	--	2234	--	--	--	--	--
		641+50		652+00	LT	--	--	--	--	--	--	--	--	5897	--	--	--	--	--
		655+44		669+05	LT	--	--	--	--	--	--	--	--	2568	--	--	--	--	--
		664+00		669+05	RT	--	--	--	--	--	--	--	--	2107	--	--	--	--	--
		619+47		633+05	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		598+63		669+05	RT	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		589+66		667+61	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1000	SUNNY SLOPE ROAD																		
		122+21 SS		133+79 SS	RT	--	1117	1117	--	--	--	--	--	--	--	--	--	--	--
		126+48 SS		131+75 SS	LT	--	368	368	--	--	--	--	--	--	--	--	--	--	--
		122+22 SS		123+95 SS	RT	--	--	--	--	--	--	--	164	--	--	--	--	--	--
		123+56 SS		124+60 SS	LT	--	--	--	--	--	--	--	232	--	--	--	--	--	--
		124+10 SS		125+42 SS	RT	--	--	--	--	--	--	--	221	--	--	--	--	--	--
		124+67 SS		128+73 SS	LT	--	--	--	--	--	--	--	1188	--	--	--	--	--	--
		125+69 SS		128+78 SS	RT	--	--	--	--	--	--	--	1028	--	--	--	--	--	--
		131+26 SS		133+79 SS	RT	--	--	--	--	--	--	--	458	--	--	--	--	--	--
		131+37 SS		134+81 SS	LT	--	--	--	--	--	--	--	414	--	--	--	--	--	--
		131+61 SS		134+67 SS	RT	--	--	--	--	--	--	--	933	--	--	--	--	--	--
		134+66 SS		135+37 SS	RT	--	--	--	--	--	--	--	155	--	--	--	--	--	--
	UNDISTRIBUTED					12	1,166	1,166	6	8	5,635	1,442	7,627	7,033	1	165	2	18	15
	TOTALS:					52	5,830	5,830	6	8	24,419	6,250	22,881	30,476	4	315	8	78	65

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RESTORATION ITEMS

CATEGORY	ROADWAY	STATION	TO	STATION	LOCATION	SPV.0180.0001 TOPSOIL SPECIAL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
1000	IH-94	609+85 IH94		613+00 IH94	LT	2,071	1.4	37	56	--	--
		615+50 IH94		625+35 IH94	RT	6,062	3.9	109	164	--	--
		638+50 IH94		652+75 IH94	RT	6,537	4.2	118	177	--	--
		655+00 IH94		664+00 IH94	RT	4,114	2.6	74	111	--	--
		625+35 IH94		627+00 IH94	RT	702	0.5	13	19	--	--
		625+50 IH94		627+00 IH94	LT	843	0.6	15	23	--	--
		652+75 IH94		655+00 IH94	RT	1,529	1.0	28	41	--	--
		652+00 IH94		655+44 IH94	LT	1,734	1.1	31	47	--	--
		595+00 IH94		601+11 IH94	RT	2,058	1.3	37	56	--	--
		598+25 IH94		606+00 IH94	LT	743	0.5	13	20	--	--
		607+50 IH94		615+50 IH94	RT	4,273	2.7	77	116	--	--
		618+50 IH94		625+50 IH94	LT	770	0.5	14	21	--	--
		627+00 IH94		638+50 IH94	RT	1,498	1.0	27	41	--	--
		627+50 IH94		641+50 IH94	LT	1,119	0.8	20	30	--	--
		585+50 IH94		598+25 IH94	LT	6,906	4.4	124	186	--	--
		601+11 IH94		607+50 IH94	RT	2,261	1.5	41	61	--	--
		606+00 IH94		609+85 IH94	LT	1,470	1.0	27	40	--	--
		613+00 IH94		618+50 IH94	LT	2,234	1.5	40	60	--	--
		641+50 IH94		652+00 IH94	LT	5,897	3.8	106	159	--	--
		655+44 IH94		669+05 IH94	LT	2,568	1.7	46	69	--	--
		664+00 IH94		669+05 IH94	RT	2,107	1.4	38	57	--	--
1000	SUNNY SLOPE ROAD	120+68 SS		121+59 SS	RT	62	0.1	--	--	2.0	62
		121+70 SS		122+04 SS	RT	37	0.1	--	--	1.0	37
		121+43 SS		124+60 SS	LT	757	0.5	3	4	11.0	619
		122+21 SS		123+97 SS	RT	346	0.3	3	5	3.0	162
		124+10 SS		125+34 SS	RT	366	0.3	5	7	2.0	102
		124+66 SS		128+66 SS	LT	1,552	1.0	22	33	6.0	326
		125+68 SS		128+80 SS	RT	1,213	0.8	18	27	4.0	213
		131+23 SS		135+55 SS	RT	1,190	0.8	22	32	0.0	0
		131+37 SS		134+81 SS	LT	673	0.5	8	12	5.0	239
		135+09 SS		135+31 SS	LT	34	0.1	--	--	1.0	34
	UNDISTRIBUTED					15,932	10	279	502	9	449
	TOTALS:					79,658	52	1,395	2,176	44	2,243

REMOVING CONCRETE APRON ENDWALLS FOR PIPE

STAGE	ROADWAY	STATION	OFFSET	204.9060.S.0001 REMOVING CONCRETE APRON ENDWALLS FOR PIPE EACH
2	**IH 94**			
		591+01	73' LT	1
		594+49	83' LT	1
		597+05	109' LT	1
		598+48	101' RT	1
		608+50	79' LT	1
		611+02	92' RT	1
		611+03	102' LT	1
		621+00	82' RT	1
		628+76	78' LT	1
		629+03	78' RT	1
		632+01	76' RT	1
		636+00	79' RT	1
		640+00	80' RT	1
		643+98	81' RT	1
		652+99	72' LT	1
		656+22	79' LT	1
		656+48	77' LT	1
		660+00	74' LT	1
		662+99	79' LT	1
		666+01	79' LT	1
TOTAL				20

STORM SEWER STRUCTURE REMOVALS

STAGE	ROADWAY	STATION	OFFSET	204.0220 REMOVING INLETS EACH
1	**IH 94**			
		662+98	5' LT	1
		666+00	5' LT	1
	SUBTOTAL			2
2	**IH 94**			
		628+76	64' LT	1
		656+22	62' LT	1
	SUBTOTAL			2
	TOTAL			4

STORM SEWER PIPE REMOVALS

STAGE	ROADWAY	STATION	OFFSET	TO	STATION	OFFSET	204.0245.0001 REMOVING STORM SEWER 12-INCH LF	204.0245.0002 REMOVING STORM SEWER 15-INCH LF	204.0245.0003 REMOVING STORM SEWER 18-INCH LF	204.0245.0004 REMOVING STORM SEWER 30-INCH LF	204.0245.0005 REMOVING STORM SEWER 36-INCH LF
1	**IH 94**										
		632+02	8' RT	--	632+01	76' RT	68	---	---	---	---
		647+88	81' RT	--	648+27	3' LT	---	---	---	93	---
		648+06	5' LT	--	648+25	5' LT	19	---	---	---	---
		648+29	8' LT	--	648+72	94' LT	---	---	---	96	---
		648+30	4' LT	--	648+37	4' RT	11	---	---	---	---
		660+00	74' LT	--	660+00	8' LT	---	67	---	---	---
		662+99	79' LT	--	662+98	8' LT	---	71	---	---	---
		666+01	73' LT	--	666+00	8' LT	---	65	---	---	---
	SUBTOTALS						98	203	---	189	---
2	**IH 94**										
		591+01	80' LT	--	591+01	71' LT	---	---	8	---	---
		594+49	83' LT	--	594+49	78' LT	5	---	---	---	---
		597+05	109' LT	--	597+23	84' LT	---	---	---	31	---
		598+28	71' RT	--	598+48	101' RT	---	---	---	36	---
		608+52	85' LT	--	608+52	74' LT	11	---	---	---	---
		611+02	72' RT	--	611+02	92' RT	---	---	---	---	20
		611+03	102' LT	--	611+03	71' LT	---	---	---	---	32
		621+01	72' RT	--	621+00	82' RT	10	---	---	---	---
		625+32	72' RT	--	625+32	83' RT	---	11	---	---	---
		628+76	78' LT	--	628+76	64' LT	14	---	---	---	---
		629+02	72' RT	--	629+03	84' RT	---	12	---	---	---
		636+00	71' RT	--	636+00	79' RT	8	---	---	---	---
		640+00	71' RT	--	640+00	80' RT	9	---	---	---	---
		643+98	70' RT	--	643+98	81' RT	11	---	---	---	---
		652+99	72' LT	--	652+99	68' LT	5	---	---	---	---
		656+22	79' LT	--	656+22	62' LT	---	17	---	---	---
		656+48	77' LT	--	656+48	67' LT	---	10	---	---	---
	SUBTOTALS						73	50	8	67	52
	TOTALS						171	253	8	256	52

ALL ITEMS CATEGORY 1000

ENDWALLS & PIPE GRATES

STAGE	ROADWAY	PIPE ID	ENDWALL ID	ENDWALL ELEVATION	ENDWALL STATION	ENDWALL OFFSET	522.1012* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	522.1015* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH EACH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH EACH	522.1042 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 42-INCH EACH	611.9800.S PIPE GRATES EACH	633.5200 MARKERS CULVERT END EACH
2	**IH 94**														
		P305	AU305END	871.88	588+19	101' LT	--	1	--	--	--	--	--	--	1
		P301B	AU301END	876.86	590+99	101' LT	--	--	1	--	--	--	--	--	1
		P307	AU307END	881.00	592+57	103' LT	--	1	--	--	--	--	--	--	1
		P303B	AU303END	883.39	594+49	117' LT	--	--	1	--	--	--	--	--	1
		P322	AU322END	882.51	596+49	130' LT	--	--	--	--	1	--	--	--	1
		P99	AU99END	887.36	598+62	122' RT	--	--	--	--	1	--	--	1	1
		P109	AU109END	897.00	600+58	101' RT	--	1	--	--	--	--	--	--	1
		P107	AU107END	901.01	603+00	94' RT	--	1	--	--	--	--	--	--	1
		P332	AU332END	909.36	608+52	100' LT	--	1	--	--	--	--	--	--	1
		P335	AU335END	909.58	611+01	127' RT	--	--	--	--	--	1	--	--	1
		P103	AU103END	909.71	611+03	121' LT	--	--	--	--	--	1	--	1	1
		P337	AU337END	916.30	612+95	97' LT	--	1	--	--	--	--	--	--	1
		P339	AU339END	917.72	617+78	95' LT	--	1	--	--	--	--	--	--	1
		P120	AU120END	899.30	624+90	95' RT	1	--	--	--	--	--	--	1	1
		P123	AU123END	894.99	627+02	91' RT	--	--	--	--	1	--	--	--	1
		P369	AU369END	839.11	642+00	95' LT	--	--	--	1	--	--	--	--	1
		P155	AU155END	817.00	647+88	93' RT	--	--	--	1	--	--	--	1	1
		P381	AU382END	811.43	648+83	127' LT	--	--	--	--	--	--	1	--	1
		P409	AU409END	755.55	664+84	89' LT	--	--	--	--	1	--	--	--	1
		P424	AU424END	745.50	667+52	88' LT	--	--	--	1	--	--	--	--	1
		P189	AU189END	742.24	669+00	87' RT	--	--	--	1	--	--	--	--	1
TOTALS							1	7	2	4	4	2	1	4	21

NOTES

1) ENDWALL ELEVATION / STATION / OFFSET ARE TO END CENTER OF ENDWALL
2) PIPE LENGTHS AND SLOPES ARE MEASURED TO THE END OF PIPE
3) *ADDITIONAL QUANTITIES LISTED ELSEWHERE IN THE PLAN

ALL ITEMS CATEGORY 1000

REMOVING BULKHEAD

STAGE	ROADWAY	STATION	OFFSET	204.9060.S.8001 REMOVING BULKHEAD EACH
2	**IH 94**			
		653+01	73' RT	1
		653+02	71' LT	1
	TOTAL			2

CLEANING CULVERT PIPES

STAGE	ROADWAY	PIPE ID	520.8700 CLEANING CULVERT PIPES EACH
2	**IH 94**		
		PE101	1
		PE105	1
		PE112	1
		PE117	1
		PE132	1
		PE140	1
		PE145	1
		PE150	1
		PE300	1
		PE302	1
		PE320	1
		PE330	1
		PE333	1
		PE390	1
		PE395	1
	TOTAL		15

CONCRETE COLLARS FOR PIPE

STAGE	ROADWAY	STATION	OFFSET	520.8000 CONCRETE COLLARS FOR PIPE EACH
1	**IH 94**			
		662+98	3' LT	1
		666+00	3' LT	1
	SUBTOTAL			2
2	**IH 94**			
		591+01	72' LT	1
		594+49	79' LT	1
		597+22	84' LT	1
		598+28	72' RT	1
		608+52	74' LT	1
		611+02	72' RT	1
		611+03	71' LT	1
		621+01	73' RT	1
		625+32	72' RT	1
		625+37	89' RT	1
		629+03	72' RT	1
		636+00	72' RT	1
		640+00	71' RT	1
		643+98	71' RT	1
		652+99	68' LT	1
		653+01	73' RT	1
		653+02	71' LT	1
		656+48	68' LT	1
	SUBTOTAL			18
	TOTAL			20

PIPE CONNECTION TO EXISTING STRUCTURE

STAGE	ROADWAY	STATION	OFFSET	SPV.0060.8015 PIPE CONNECTION TO EXISTING STRUCTURE EACH
1	**IH 94**			
		648+06	6' LT	1
		648+37	4' RT	1
	SUBTOTAL			2
2	**IH 94**			
		632+02	8' RT	1
		654+47	73' RT	1
		654+76	71' LT	1
		660+00	8' LT	1
	SUBTOTAL			4
	TOTAL			6

SALVAGED INLET COVERS

STAGE	ROADWAY	STRUCTURE ID	STATION	OFFSET	611.9710 SALVAGED INLET COVERS EACH
2	**IH 94**				
		AUE174	654+45	75' RT	1
		AUE393	654+75	73' LT	1
	TOTAL				2

ALL ITEMS CATEGORY 1000

3

STONE DITCH CHECKS

STAGE	ROADWAY	STATION	OFFSET	DEPTH LF	628.7515.S STONE DITCH CHECKS CY	645.0140 GEOTEXTILE FABRIC TYPE SAS SY
2	**IH 94**					
		619+47	88' LT	1.0	0.9	6
		621+41	88' LT	1.5	2.7	11
		622+38	87' LT	1.5	2.7	11
		623+35	89' LT	1.5	2.7	11
		624+34	90' LT	2.0	5.9	19
		625+29	88' LT	1.5	2.7	11
		628+20	85' LT	1.0	0.9	6
		629+17	84' LT	1.0	0.9	6
		630+14	84' LT	1.0	0.9	6
		631+11	84' LT	1.0	0.9	6
		632+08	84' LT	1.0	0.9	6
		633+05	84' LT	1.0	0.9	6
		UNDISTRIBUTED			30.0	100
TOTALS					53.0	205

ALL ITEMS CATEGORY 1000

FILE NAME : S:\DOT\DOT_SE\110222-Zoo IC\I-94 E-W Aux Lane\Design\Roads\cds\030202_ss_mq.ppt PLOT DATE : 8/23/2017 2:50:01 PM PLOT BY : BRIAN C. ADAMS PLOT NAME : 030202_ss_mq4 PLOT SCALE : 1:1

STORM SEWER STRUCTURES												STORM SEWER PIPES												
ROADWAY	STRUCTURE NO.	STRUCTURE STAGE	STATION	OFFSET (FT)	LOCATION	RIM OR FLOW ELEV	STRUCTURE TYPE	INLET/MANHOLE COVERS TYPE	DEPTH[1] (FT)	BACKFILL SLURRY CY	STRUCTURE COMMENTS	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] (FT)	PLAN LENGTH[C] (FT)	PIPE CLASS	PIPE SIZE (INCH)	BACKFILL SLURRY CY	PIPE COMMENTS	SPV.0035.8001 BACKFILL SLURRY CY
IH 94	---	---	---	---	---	---	---	---	--	---	---	P99	2	AU99END	AU100C	887.36	886.26	2.24	49	52	III	30	27	---	27
IH 94	AU100A	2	597+82.71	77.2	RT	896.48	MANHOLES 5-FT DIAMETER	27-M	5.57	15	---	P100B	2	AU100A	AU100C	890.91	890.49	1.00	42	48	IV	24	16	---	31
IH 94	AU100C	2	598+30.04	77.2	RT	897.33	MANHOLES 6-FT DIAMETER	27-M	11.07	38	---	PE101	---	AU100C	---	886.26	---	---	---	---	---	30	---	EXIST PIPE INTERPOL ELEV	38
IH 94	---	---	---	---	---	---	---	---	--	---	---	P103	2	AU103END	AU104	909.42	907.99	3.54	41	44	III	36	30	---	30
IH 94	AU104	2	611+01.67	75.1	RT	920.02	MANHOLES 6-FT DIAMETER	J	12.03	22	---	PE105	---	AU104	---	907.99	---	---	---	---	---	36	---	EXIST PIPE INTERPOL ELEV	22
IH 94	AU106	2	603+00.14	77.3	RT	906.39	MANHOLES 5-FT DIAMETER	27-M	5.21	11	---	P107	2	AU106	AU107END	901.18	901.07	1.00	11	13	III	15	2	---	13
IH 94	AU108	2	600+65.78	77.1	RT	901.79	MANHOLES 5-FT DIAMETER	27-M	4.54	11	---	P109	2	AU108	AU109END	897.25	897.06	1.00	19	22	III	15	3	---	14
IH 94	AU110	2	618+00.06	77.9	RT	921.29	MANHOLES 5-FT DIAMETER	27-M	5.74	15	---	P111	2	AU110	AU113	915.55	909.64	2.00	295	300	IV	24	110	---	125
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE112	---	---	AU113	---	911.62	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU113	2	621+00.47	77.7	RT	916.14	MANHOLES 5-FT DIAMETER	27-M	7.25	18	---	P114	2	AU113	AU115	908.89	904.69	2.00	210	215	IV	24	78	---	96
IH 94	AU115	2	623+15.47	77.5	RT	910.25	MANHOLES 5-FT DIAMETER	27-M	7.21	22	---	P116	2	AU115	AU118	903.04	897.75	2.50	212	217	IV	24	79	---	101
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE117	---	---	AU118	---	899.47	---	---	---	---	15	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU118	2	625+32.08	77.4	RT	902.80	MANHOLES 5-FT DIAMETER	27-M	5.55	21	---	P119	2	AU118	AU122	897.25	897.18	1.00	7	13	IV	30	4	---	25
IH 94	---	---	---	---	---	---	---	---	--	---	---	P120	2	AU120END	AU122	899.21	898.68	1.46	36	39	III	12	5	---	5
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE121	---	---	AU122	---	900.09	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU122	2	625+34.64	87.1	RT	902.30	MANHOLES 6-FT DIAMETER	J	5.12	26	---	P123	2	AU122	AU123END	897.18	895.07	1.34	158	161	III	30	86	---	112
IH 94	AU130	2	627+17.09	77.2	RT	896.58	MANHOLES 5-FT DIAMETER	27-M	6.60	15	---	P131	2	AU130	AU133	889.98	883.66	3.50	180	185	III	24	67	---	82
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE132	---	---	AU133	---	886.89	---	---	---	---	15	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU133	2	629+02.56	77.1	RT	890.48	MANHOLES 5-FT DIAMETER	27-M	6.82	25	---	P134	2	AU133	AU136	883.66	873.40	3.50	293	298	III	24	110	---	135
IH 94	AUE135	---	632+01.80	3.1	RT	880.68	---	---	---	---	---	P135A	2	AUE135	AU136	875.71	874.97	1.15	64	69	IV	12	8	---	8
IH 94	AU136	2	632+00.56	76.9	RT	880.32	MANHOLES 5-FT DIAMETER	27-M	6.92	17	---	P137	2	AU136	AU138	873.40	866.57	3.50	195	200	III	24	73	---	90
IH 94	AU138	2	634+00.56	76.7	RT	873.37	MANHOLES 5-FT DIAMETER	27-M	6.80	15	---	P139	2	AU138	AU141	866.57	859.75	3.50	195	200	III	24	73	---	88
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE140	---	---	AU141	---	861.73	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU141	2	636+00.37	76.6	RT	866.16	MANHOLES 5-FT DIAMETER	27-M	8.02	25	---	P142	2	AU141	AU143	858.14	853.25	2.51	195	200	IV	24	73	---	98
IH 94	AU143	2	638+00.37	76.4	RT	858.82	MANHOLES 5-FT DIAMETER	27-M	8.56	27	---	P144	2	AU143	AU146	850.26	845.39	2.50	195	200	IV	30	106	---	133

[1] DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION UNLESS STRUCTURE IN MOMENT SLAB. STRUCTURES IN MOMENT SLAB DEPTH SHOWN FROM BOTTOM OF MOMENT SLAB TO LOWEST PIPE INVERT ELEVATION.

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE

[B] PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.
[C] PLAN LENGTH SHOWN FOR PAY QUANTITY.

ALL ITEMS CATEGORY 1000

STORM SEWER STRUCTURES												STORM SEWER PIPES													
ROADWAY	STRUCTURE NO.	STRUCTURE STAGE	STATION	OFFSET (FT)	LOCATION	RIM OR FLOW ELEV	STRUCTURE TYPE	INLET/MANHOLE COVERS TYPE	DEPTH[1] (FT)	BACKFILL SLURRY CY	STRUCTURE COMMENTS	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] (FT)	PLAN LENGTH[C] (FT)	PIPE CLASS	PIPE SIZE (INCH)	BACKFILL SLURRY CY	PIPE COMMENTS	SPV.0035.8001 BACKFILL SLURRY CY
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE145	---	---	AU146	---	846.76	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU146	2	640+00.35	76.3	RT	851.49	MANHOLES 5-FT DIAMETER	27-M	8.60	28	---	P147	2	AU146	AU148	842.89	838.50	2.25	195	200	IV	30	106	---	134
IH 94	AU148	2	642+00.35	76.1	RT	844.21	MANHOLES 5-FT DIAMETER	27-M	8.37	28	---	P149	2	AU148	AU151	835.84	831.50	2.25	193	198	IV	30	105	---	133
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE150	---	---	AU151	---	830.79	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU151	2	643+98.38	75.9	RT	836.90	MANHOLES 5-FT DIAMETER	27-M	8.70	31	---	P152	2	AU151	AU153	828.20	824.50	2.00	185	190	IV	30	100	---	131
IH 94	AU153	2	645+88.38	75.8	RT	829.84	MANHOLES 5-FT DIAMETER	27-M	8.88	32	---	P154	2	AU153	AU156	820.96	817.00	2.00	198	204	IV	30	107	---	139
IH 94	---	---	---	---	---	---	---	---	--	---	---	P155	1	AU155END	AU156	816.88	816.65	2.00	11	14	III	24	4	---	4
IH 94	AU156	1	647+92.04	75.7	RT	822.21	MANHOLES 6-FT DIAMETER	27-M	7.12	29	---	P157	1	AU156	AU160	815.09	813.69	1.74	80	86	IV	42	78	---	107
IH 94	AUE158	---	648+03.72	3.1	RT	822.36	---	---	---	---	---	PE158A	---	AUE158	AUE158B	---	---	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AUE158B	---	648+03.86	3.0	LT	821.95	---	---	---	---	---	P158C	1	AUE158B	AU160	816.75	816.19	3.00	19	24	III	12	2	---	2
IH 94	AUE159	---	648+38.78	3.1	RT	820.88	---	---	---	---	---	P159A	1	AUE159	AU160	816.28	815.97	3.00	10	16	III	12	1	---	1
IH 94	AU160	1	648+28.00	3.0	LT	821.04	MANHOLES 6-FT DIAMETER	V	7.35	25	---	P381	1	AU160	AU382END	813.69	811.57	1.74	122	125	IV	42	118	---	143
IH 94	AU170	2	650+44.78	75.5	RT	812.90	MANHOLES 5-FT DIAMETER	27-M	5.98	15	---	P171	2	AU170	AU172	806.92	799.51	3.80	195	200	IV	24	73	---	88
IH 94	AU172	2	652+44.77	75.3	RT	805.23	MANHOLES 5-FT DIAMETER	27-M	5.72	15	---	P173A	2	AU172	PE173B	799.51	797.48	3.80	53	56	IV	24	20	---	35
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE173B	---	P173A	AUE174	797.48	---	---	---	---	---	24	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AUE174	---	654+44.76	75.2	RT	797.75	---	---	---	---	---	P175	2	AUE174	AU176	792.08	784.57	3.85	195	200	IV	24	73	---	73
IH 94	AU176	2	656+44.76	75.0	RT	790.61	MANHOLES 5-FT DIAMETER	27-M	6.12	15	---	P177	2	AU176	AU178	784.49	776.98	3.85	195	200	IV	24	73	---	88
IH 94	AU178	2	658+44.76	74.9	RT	783.55	MANHOLES 5-FT DIAMETER	27-M	6.73	15	---	P179	2	AU178	AU180	776.82	769.41	3.80	195	200	III	24	73	---	88
IH 94	AU180	2	660+44.76	74.8	RT	776.15	MANHOLES 5-FT DIAMETER	27-M	6.74	15	---	P181	2	AU180	AU182	769.41	762.00	3.80	195	200	III	24	73	---	88
IH 94	AU182	2	662+44.76	74.7	RT	768.70	MANHOLES 5-FT DIAMETER	27-M	6.70	15	---	P183	2	AU182	AU184	762.00	754.59	3.80	195	200	III	24	73	---	88
IH 94	AU184	2	664+44.76	74.5	RT	761.22	MANHOLES 5-FT DIAMETER	27-M	6.63	15	---	P185	2	AU184	AU186	754.59	747.18	3.80	195	200	III	24	73	---	88
IH 94	AU186	2	666+44.76	74.4	RT	753.89	MANHOLES 5-FT DIAMETER	27-M	6.71	15	---	P187	2	AU186	AU188	747.18	742.70	2.20	203	208	IV	24	76	---	91
IH 94	AU188	2	668+53.05	74.3	RT	747.05	MANHOLES 5-FT DIAMETER	27-M	4.35	10	---	P189	2	AU188	AU189END	742.70	742.30	1.00	40	43	IV	24	15	---	25
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE300	---	---	AU301A	---	877.11	---	---	---	---	18	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU301A	2	591+00.73	76.8	LT	882.23	MANHOLES 5-FT DIAMETER	27-M	5.12	12	---	P301B	2	AU301A	AU301END	877.11	876.92	1.00	19	21	III	18	4	---	16

[1] DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION UNLESS STRUCTURE IN MOMENT SLAB. STRUCTURES IN MOMENT SLAB DEPTH SHOWN FROM BOTTOM OF MOMENT SLAB TO LOWEST PIPE INVERT ELEVATION.

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE

[B] PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.
[C] PLAN LENGTH SHOWN FOR PAY QUANTITY.

ALL ITEMS CATEGORY 1000

STORM SEWER STRUCTURES												STORM SEWER PIPES													
ROADWAY	STRUCTURE NO.	STRUCTURE STAGE	STATION	OFFSET (FT)	LOCATION	RIM OR FLOW ELEV	STRUCTURE TYPE	INLET/MANHOLE COVERS TYPE	DEPTH[1] (FT)	BACKFILL SLURRY CY	STRUCTURE COMMENTS	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] (FT)	PLAN LENGTH[C] (FT)	PIPE CLASS	PIPE SIZE (INCH)	BACKFILL SLURRY CY	PIPE COMMENTS	SPV.0035.8001 BACKFILL SLURRY CY
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE302	---	---	AU303A	---	884.23	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU303A	2	594+48.77	83.7	LT	888.45	MANHOLES 5-FT DIAMETER	27-M	4.73	12	---	P303B	2	AU303A	AU303END	883.72	883.45	1.00	28	30	III	18	7	---	19
IH 94	AU304	2	588+20.36	78.1	LT	876.86	MANHOLES 5-FT DIAMETER	27-M	4.75	11	---	P305	2	AU304	AU305END	872.11	871.94	1.00	17	20	III	15	3	---	14
IH 94	AU306	2	592+72.12	78.7	LT	885.20	MANHOLES 5-FT DIAMETER	27-M	4.00	11	---	P307	2	AU306	AU307END	881.20	881.04	0.70	23	25	III	15	4	---	15
IH 94	AU310	2	606+80.97	84.0	LT	911.94	MANHOLES 5-FT DIAMETER	27-M	6.65	15	---	P311	2	AU310	AU312	905.29	901.99	2.00	165	170	III	24	62	---	77
IH 94	AU312	2	605+08.46	87.9	LT	908.66	MANHOLES 5-FT DIAMETER	27-M	6.67	15	---	P313	2	AU312	AU314	901.99	898.69	2.00	165	170	III	24	62	---	77
IH 94	AU314	2	603+35.83	90.6	LT	905.40	MANHOLES 5-FT DIAMETER	27-M	6.71	15	---	P315	2	AU314	AU316	898.69	895.39	2.00	165	170	III	24	62	---	77
IH 94	AU316	2	601+63.11	92.0	LT	902.11	MANHOLES 5-FT DIAMETER	27-M	6.72	15	---	P317	2	AU316	AU318	895.39	892.09	2.00	165	170	III	24	62	---	77
IH 94	AU318	2	599+90.37	92.0	LT	898.80	MANHOLES 5-FT DIAMETER	27-M	6.71	15	---	P319	2	AU318	AU321	892.09	886.88	2.00	261	266	III	24	97	---	112
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE320	---	---	AU321	---	883.32	---	---	---	---	30	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU321	2	597+20.18	89.5	LT	893.64	MANHOLES 6-FT DIAMETER	27-M	10.32	34	---	P322	2	AU321	AU322END	883.32	882.57	1.02	73	76	III	30	40	---	74
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE330	---	---	AU331	---	909.83	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU331	2	608+52.33	79.1	LT	915.12	MANHOLES 5-FT DIAMETER	27-M	5.55	11	---	P332	2	AU331	AU332END	909.57	909.42	1.00	15	17	III	15	3	---	14
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE333	---	---	AU334	---	903.91	---	---	---	---	36	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU334	2	611+02.68	77.2	LT	919.71	MANHOLES 6-FT DIAMETER	27-M	15.80	22	---	P335	2	AU334	AU335END	903.91	903.64	0.75	36	39	III	36	26	---	48
IH 94	AU336	2	612+97.24	77.0	LT	922.35	MANHOLES 5-FT DIAMETER	27-M	5.85	11	---	P337	2	AU336	AU337END	916.50	916.36	1.00	14	16	III	15	2	---	13
IH 94	AU338	2	617+77.18	76.6	LT	922.65	MANHOLES 5-FT DIAMETER	27-M	4.75	11	---	P339	2	AU338	AU339END	917.90	917.78	1.00	12	15	III	15	2	---	13
IH 94	AU350	2	620+27.19	76.4	LT	919.16	MANHOLES 5-FT DIAMETER	27-M	6.56	15	---	P351	2	AU350	AU352	912.60	906.87	2.34	245	250	III	24	92	---	107
IH 94	AU352	2	622+77.19	76.1	LT	913.43	MANHOLES 5-FT DIAMETER	27-M	6.56	15	---	P353	2	AU352	AU354	906.87	899.87	3.29	213	218	III	24	80	---	95
IH 94	AU354	2	624+95.05	76.0	LT	906.43	MANHOLES 5-FT DIAMETER	27-M	13.01	42	---	P355	2	AU354	AU356	893.42	889.07	1.57	277	282	III	24	104	---	146
IH 94	AU356	2	627+77.19	75.7	LT	896.13	MANHOLES 5-FT DIAMETER	27-M	7.06	15	---	P357	2	AU356	AU358	889.07	880.26	3.60	245	250	III	24	92	---	107
IH 94	AU358	2	630+27.19	75.4	LT	887.28	MANHOLES 5-FT DIAMETER	27-M	7.02	15	---	P359	2	AU358	AU360	880.26	871.44	3.60	245	250	III	24	92	---	107
IH 94	AU360	2	632+77.19	75.2	LT	878.13	MANHOLES 5-FT DIAMETER	27-M	7.39	18	---	P361	2	AU360	AU362	870.74	863.39	3.00	245	250	IV	24	92	---	110
IH 94	AU362	2	635+27.19	74.9	LT	868.95	MANHOLES 5-FT DIAMETER	27-M	7.45	23	---	P363	2	AU362	AU364	861.50	854.15	3.00	245	250	IV	24	92	---	115
IH 94	AU364	2	637+77.19	74.6	LT	859.71	MANHOLES 5-FT DIAMETER	27-M	7.69	24	---	P365	2	AU364	AU366	852.02	844.67	3.00	245	250	IV	24	92	---	116

[1] DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION UNLESS STRUCTURE IN MOMENT SLAB. STRUCTURES IN MOMENT SLAB DEPTH SHOWN FROM BOTTOM OF MOMENT SLAB TO LOWEST PIPE INVERT ELEVATION.

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE

[B] PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.
[C] PLAN LENGTH SHOWN FOR PAY QUANTITY.

ALL ITEMS CATEGORY 1000

STORM SEWER STRUCTURES												STORM SEWER PIPES													
ROADWAY	STRUCTURE NO.	STRUCTURE STAGE	STATION	OFFSET (FT)	LOCATION	RIM OR FLOW ELEV	STRUCTURE TYPE	INLET/MANHOLE COVERS TYPE	DEPTH[1] (FT)	BACKFILL SLURRY CY	STRUCTURE COMMENTS	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] (FT)	PLAN LENGTH[C] (FT)	PIPE CLASS	PIPE SIZE (INCH)	BACKFILL SLURRY CY	PIPE COMMENTS	SPV.0035.8001 BACKFILL SLURRY CY
IH 94	AU366	2	640+27.19	74.4	LT	850.53	MANHOLES 5-FT DIAMETER	27-M	5.86	15	---	P367	2	AU366	AU368	844.67	839.76	3.00	164	169	IV	24	61	---	76
IH 94	AU368	2	641+95.91	74.2	LT	844.32	MANHOLES 5-FT DIAMETER	27-M	4.56	15	---	P369	2	AU368	AU369END	839.76	839.30	3.00	15	18	III	24	6	---	21
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE390	---	---	AU391	---	799.22	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU391	2	652+99.46	73.0	LT	803.18	MANHOLES 5-FT DIAMETER	27-M	6.67	22	---	PE392	---	AU391	AUE393	796.51	---	---	---	---	---	24	---	EXIST PIPE INTERPOL ELEV	22
IH 94	AUE393	---	654+74.47	73.0	LT	796.60	---	---	---	---	---	P394	2	AUE393	AU396	790.20	783.97	3.70	168	173	IV	24	63	---	63
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE395	---	---	AU396	---	786.84	---	---	---	---	15	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU396	2	656+47.78	73.0	LT	790.45	MANHOLES 5-FT DIAMETER	27-M	6.75	25	---	P397	2	AU396	AU398	783.70	778.60	3.00	170	175	IV	24	64	---	89
IH 94	AU398	2	658+22.78	73.0	LT	784.17	MANHOLES 5-FT DIAMETER	27-M	6.99	21	---	P399	2	AU398	AU401	777.18	772.00	3.00	173	178	IV	24	64	---	85
IH 94	AUE400	---	660+00.34	2.8	LT	778.03	---	---	---	---	---	P400A	2	AUE400	AU401	774.28	773.30	1.63	60	65	IV	15	11	---	11
IH 94	AU401	2	660+00.34	73.0	LT	777.63	MANHOLES 5-FT DIAMETER	27-M	7.45	25	---	P402	2	AU401	AU403	770.18	766.57	2.50	144	149	IV	24	54	---	79
IH 94	AU403	2	661+49.82	73.1	LT	772.13	MANHOLES 5-FT DIAMETER	27-M	7.44	23	---	P404	2	AU403	AU406	764.69	761.08	2.50	145	150	IV	24	54	---	77
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE404A	---	---	AU405	---	764.69	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU405	2	662+98.15	2.8	LT	767.81	INLETS 4-FT DIAMETER	V	3.16	9	---	P405A	2	AU405	AU406	764.65	762.75	3.10	61	66	IV	15	11	---	20
IH 94	AU406	2	662+99.35	73.1	LT	766.64	MANHOLES 5-FT DIAMETER	27-M	7.47	27	---	P407	2	AU406	AU408	759.17	756.26	2.00	146	151	IV	30	79	---	106
IH 94	AU408	2	664+50.06	73.1	LT	761.11	MANHOLES 5-FT DIAMETER	27-M	4.85	17	---	P409	2	AU408	AU409END	756.26	755.67	2.00	30	32	IV	30	16	---	33
IH 94	---	---	---	---	---	---	---	---	--	---	---	PE420	---	---	AU420A	---	751.40	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	---
IH 94	AU420A	2	665+99.78	2.9	LT	756.49	INLETS 4-FT DIAMETER	V	5.09	9	---	P420B	2	AU420A	AU421	751.40	750.53	1.42	61	66	IV	15	11	---	20
IH 94	AU421	2	666+00.75	73.1	LT	755.55	MANHOLES 5-FT DIAMETER	27-M	6.85	19	---	P422	2	AU421	AU423	748.70	745.80	2.00	145	150	IV	24	54	---	73
IH 94	AU423	2	667+50.75	73.2	LT	750.14	MANHOLES 5-FT DIAMETER	27-M	4.34	15	---	P424	2	AU423	AU424END	745.80	745.62	2.00	9	12	III	24	3	---	18
																								TOTAL	5,161

[1] DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION UNLESS STRUCTURE IN MOMENT SLAB. STRUCTURES IN MOMENT SLAB DEPTH SHOWN FROM BOTTOM OF MOMENT SLAB TO LOWEST PIPE INVERT ELEVATION.

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE

[B] PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.
[C] PLAN LENGTH SHOWN FOR PAY QUANTITY.

ALL ITEMS CATEGORY 1000

3

611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006* MANHOLES 6-FT DIAMETER EACH	611.3004* INLETS 4-FT DIAMETER EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0654 INLET COVERS TYPE V EACH	SPV.0060.8050 INLET COVERS TYPE 27-M EACH
57	7	2	2	3	61

608.0312* STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315* STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318* STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0415* STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	608.0442 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 42-INCH LF
79	128	51	3923	289	83	69	197	3781	1188	211

NOTES

1) THESE QUANTITIES REPRESENT THE TOTALS OF THE DRAINAGE STRUCTURES AND STORM SEWER PIPES LISTED ON THE PREVIOUS FOUR SHEETS
2) *ADDITIONAL QUANTITIES LISTED ELSEWHERE IN THE PLAN

ALL ITEMS CATEGORY 1000

STORM SEWER

CATEGORY	STRUCTURE NUMBER	STATION	OFFSET FT		RIM OR FLANGE ELEV	STR DEPTH FT	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE %	522.1012* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	522.1015* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH EACH	608.0312* STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315* STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318* STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0342 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH LF	608.0415* STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	NOTES
1000	I01	121+85	20.2	RT	885.63	3.0	I01	A01	882.67	882.26	1.0	1	--	48	--	--	--	--	FIELD DRAIN, DISCHARGES TO DITCH
	MH01	122+46	25.0	RT	890.60	7.1	MH01	I01	885.00	882.67	3.8	--	--	62	--	--	--	--	1.5-FT SUMP
	I02	122+48	15.7	RT	890.30	3.2	I02	MH01	887.06	887.00	1.0	--	--	10	--	--	--	--	
	I03	124+18	17.0	RT	900.06	4.0	I03	MH02	896.05	896.00	1.0	--	--	8	--	--	--	--	
	MH02	124+18	25.0	RT	900.60	6.1	MH02	MH01	896.00	887.00	5.0	--	--	172	--	--	--	--	1.5-FT SUMP
	I04	124+36	56.3	LT	900.24	5.6	I04	MH04	896.10	895.60	2.2	--	--	--	28	--	--	--	FIELD DRAIN
	MH04	124+21	37.5	LT	901.20	11.2	MH04	MH04A	891.50	888.50	2.0	--	--	--	--	--	157	--	1.5-FT SUMP
	MH04A	122+64	37.5	LT	894.30	7.4	MH04A	A02	888.40	886.09	3.0	--	1	--	77	--	--	--	1.5-FT SUMP, DISCHARGES TO DITCH
	I05	124+74	60.9	LT	900.30	3.3	I05	I04	897.00	896.10	2.4	--	--	--	38	--	--	--	FIELD DRAIN
	I06	124+93	29.0	LT	903.16	5.4	I06	I05	897.75	897.25	1.3	--	--	39	--	--	--	--	
	I07	126+01	17.0	RT	908.28	2.9	I07	I08	905.36	905.12	0.5	--	--	46	--	--	--	--	
	I08	126+00	29.0	LT	908.00	2.9	I08	A04	905.12	904.91	0.5	1	--	44	--	--	--	--	DISCHARGES TO DITCH
	I09	128+32	17.0	LT	920.53	4.1	I09	AU122	916.40	900.00	20.0	--	--	84	--	--	--	--	CONNECTS TO MANHOLE INSTALLED UNDER PROJECT 1060-33-82
	I10	128+37	17.0	RT	920.74	4.0	I10	I09	916.74	916.40	1.0	--	--	34	--	--	--	--	DISCHARGES TO ROCK CHUTE
	I11	131+71	17.3	LT	925.70	5.2	I11	A07	920.52	913.88	10.0	1	--	35	--	--	--	--	DISCHARGES TO DITCH
	I12	132+16	17.0	RT	925.06	4.0	I12	I11	921.06	920.52	1.0	--	--	54	--	--	--	--	
	I13	133+53	17.0	RT	920.96	3.1	I13	A09	917.88	917.60	1.0	1	--	29	--	--	--	--	DISCHARGES TO DITCH
	I14	134+55	17.0	LT	916.68	5.3	I14	CB02	911.40	910.00	2.0	--	--	71	--	--	--	--	
	C01	134+68	34.3	RT	--	--	--	--	914.26	913.44	2.0	2	--	43	--	--	--	--	SIDEWALK CULVERT
	I15	134+73	44.7	LT	913.75	2.5	I15	I16	911.20	911.13	1.5	--	--	--	--	--	--	10	FIELD DRAIN
	I16	134+83	44.6	LT	914.75	3.6	I16	I17	911.13	910.76	1.5	--	--	--	--	--	--	28	
	I17	135+10	44.5	LT	913.83	3.1	I17	CB02	910.76	909.75	3.1	--	--	--	--	--	--	30	
	CB02	135+25	19.5	LT	913.30	3.5	CB02	I18	909.75	908.81	2.5	--	--	--	38	--	--	--	1.5-FT SUMP
	I18	135+63	19.1	LT	911.56	3.0	I18	EXISTING SS	908.56	898.70	5.0	--	--	--	--	6	--	--	CONNECTS TO EXISTING STORM SEWER, SLOPE INTERPOLATED
												6	1	779	181	6	157	68	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE IN THE PLAN

STORM SEWER (CONTINUED)

CATEGORY	STRUCTURE NUMBER	STATION	OFFSET FT		RIM OR FLANGE ELEV	STR DEPTH FT	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE %	611.0530 MANHOLE COVERS TYPE J EACH	611.0624 INLET COVERS TYPE H EACH	611.0642 INLET COVERS TYPE MS EACH	611.1005 CATCH BASINS 5-FT DIAMETER EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2006* MANHOLES 6-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3230 INLETS 2x3-FT EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	NOTES
1000	I01	121+85	20.2	RT	885.63	3.0	I01	A01	882.67	882.26	1.0	--	--	1	--	--	--	--	--	1	FIELD DRAIN, DISCHARGES TO DITCH
	MH01	122+46	25.0	RT	890.60	7.1	MH01	I01	885.00	882.67	3.8	1	--	--	--	1	--	--	--	--	1.5-FT SUMP
	I02	122+48	15.7	RT	890.30	3.2	I02	MH01	887.06	887.00	1.0	--	1	--	--	--	--	--	1	--	
	I03	124+18	17.0	RT	900.06	4.0	I03	MH02	896.05	896.00	1.0	--	1	--	--	--	--	--	1	--	
	MH02	124+18	25.0	RT	900.60	6.1	MH02	MH01	896.00	887.00	5.0	1	--	--	--	1	--	--	--	--	1.5-FT SUMP
	I04	124+36	56.3	LT	900.24	5.6	I04	MH04	896.10	895.60	2.2	--	--	1	--	--	--	--	--	1	FIELD DRAIN
	MH04	124+21	37.5	LT	901.20	11.2	MH04	MH04A	891.50	888.50	2.0	1	--	--	--	--	1	--	--	--	1.5-FT SUMP
	MH04A	122+64	37.5	LT	894.30	7.4	MH04A	A02	888.40	886.09	3.0	1	--	--	--	--	1	--	--	--	1.5-FT SUMP, DISCHARGES TO DITCH
	I05	124+74	60.9	LT	900.30	3.3	I05	I04	897.00	896.10	2.4	--	--	1	--	--	--	--	--	1	FIELD DRAIN
	I06	124+93	29.0	LT	903.16	5.4	I06	I05	897.75	897.25	1.3	--	1	--	--	--	--	--	1	--	
	I07	126+01	17.0	RT	908.28	2.9	I07	I08	905.36	905.12	0.5	--	1	--	--	--	--	--	1	--	
	I08	126+00	29.0	LT	908.00	2.9	I08	A04	905.12	904.91	0.5	--	1	--	--	--	--	1	--	--	DISCHARGES TO DITCH
	I09	128+32	17.0	LT	920.53	4.1	I09	AU122	916.40	900.00	20.0	--	1	--	--	--	--	1	--	--	CONNECTS TO MANHOLE INSTALLED UNDER PROJECT 1060-33-82
	I10	128+37	17.0	RT	920.74	4.0	I10	I09	916.74	916.40	1.0	--	1	--	--	--	--	1	--	--	DISCHARGES TO ROCK CHUTE
	I11	131+71	17.3	LT	925.70	5.2	I11	A07	920.52	913.88	10.0	--	1	--	--	--	--	1	--	--	DISCHARGES TO DITCH
	I12	132+16	17.0	RT	925.06	4.0	I12	I11	921.06	920.52	1.0	--	1	--	--	--	--	1	--	--	
	I13	133+53	17.0	RT	920.96	3.1	I13	A09	917.88	917.60	1.0	--	1	--	--	--	--	1	--	--	DISCHARGES TO DITCH
	I14	134+55	17.0	LT	916.68	5.3	I14	CB02	911.40	910.00	2.0	--	1	--	--	--	--	--	1	--	
	C01	134+68	34.3	RT	--	--	--	--	914.26	913.44	2.0	--	--	--	--	--	--	--	--	--	SIDEWALK CULVERT
	I15	134+73	44.7	LT	913.75	2.5	I15	I16	911.20	911.13	1.5	--	--	1	--	--	--	--	--	1	FIELD DRAIN
	I16	134+83	44.6	LT	914.75	3.6	I16	I17	911.13	910.76	1.5	--	1	--	--	--	--	--	1	--	
	I17	135+10	44.5	LT	913.83	3.1	I17	CB02	910.76	909.75	3.1	--	1	--	--	--	--	1	--	--	
	CB02	135+25	19.5	LT	913.30	3.5	CB02	I18	909.75	908.81	2.5	--	1	--	1	--	--	--	--	--	1.5-FT SUMP
	I18	135+63	19.1	LT	911.56	3.0	I18	EXISTING SS	908.56	898.70	5.0	--	--	--	--	--	--	--	--	--	CONNECTS TO EXISTING STORM SEWER, SLOPE INTERPOLATED
												4	14	4	1	2	2	7	6	4	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE IN THE PLAN

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0818 POSTS TUBULAR STEEL 2 X 2 X 18 EA	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	638.2101 MOVING SIGNS TYPE I [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
1	D10-5	EAST 94 MILE 301/4						1					MOUNT ON LIGHT POLE														
2	D10-5	WEST 94 MILE 301/4						1					MOUNT ON LIGHT POLE														
3	D10-5	EAST 94 MILE 301/6						1					MOUNT ON LIGHT POLE														
4	D10-5	WEST 94 MILE 301/6						1					MOUNT ON LIGHT POLE														
5	J4-1(5)		36 X 54	13.500		1	2		2																		
	MB3-2		36 X 18																								
	M1-1	IH 94	36 X 36																								
6	E6-1	O											MOUNT ON S-67-315	15 x 12.5	187.50												
		MOORLAND RD											I BEAMS INCIDENTAL														
		NORTH																									
		EXIT ONLY (ARROW RIGHT)																									
6A	E1-5P	EXIT 301B											MOUNT ON SIGN # 6	11 x 2.5	27.50												
7	E6-51	O											MOUNT ON S-67-315	15 x 11.5	172.50												
		MOORLAND RD											I BEAMS INCIDENTAL														
		SOUTH																									
		1/4 MILE																									
7A	E1-5P	EXIT 301A											MOUNT ON SIGN # 7	11 x 2.5	27.50												
8	E6-1						4			4			SIGN BRIDGE 67-10 - REMOVE FROM SIGN BRIDGE & MOVE TEMPORARILY OF PROJECT			1	2										
9	E6-51						4			4			SIGN BRIDGE 67-10 - COVER ARROW (24"x36") TEMPORARILY INCIDENTAL TO SIGN #9			1	2										
10	E5-1B(5)	EXIT 301B	114 X 60	47.500						2																	
10A	W5-54S(2M)		18 X 18		2.250								MOUNT UNDER SIGN 10														
10B	W5-54S(2M)		18 X 18		2.250								MOUNT UNDER SIGN 10														
11	D10-5	EAST 94 MILE 301/8						1					MOUNT ON LIGHT POLE														
12	D10-5	WEST 94 MILE 301/8						1					MOUNT ON LIGHT POLE														
13	R2-1(5)	SPEED LIMIT 55	48 X 60	20.000		1	1		2																		
14	R2-1(5)	SPEED LIMIT 55	48 X 60	20.000		1							LIGHT POLE														
15	W13-2D(5)	15 MPH	48 X 90		30.000	1	2			2																	
16	NOT USED																										
17	D10-5	EAST 94 MILE 301/0						1					MOUNT ON LIGHT POLE														
18	D10-5	WEST 94 MILE 301/0						1					MOUNT ON LIGHT POLE														
19	D10-5	EAST 94 MILE 301/1						1					MOUNT ON LIGHT POLE														
20	D10-5	WEST 94 MILE 301/1						1					MOUNT ON LIGHT POLE														
21	R3-4(5)		36 X 36	9.000		1	1		1																		
22	R3-4A(5)		36 X 12	3.000									MOUNT UNDER SIGN 21														
23	R3-4					1	1																				
24	R3-4					1	1																				
25	D10-5	EAST 94 MILE 301/2						1					MOUNT ON LIGHT POLE														
26	D10-5	WEST 94 MILE 301/2						1					MOUNT ON LIGHT POLE														
27	NONE	GENERATOR SIGN											GENERATOR SIGN			1		2	C	1.8	100	1200					
28	E6-51	O											MOUNT ON S-67-317	15 x 14.5	217.50												
		MOORLAND RD											I BEAMS INCIDENTAL														
		NORTH																									
		1/2 MILE																									
28A	E1-5P	EXIT 301B											MOUNT ON # 28	11 x 2.5	27.50												
29	E6-51	O											MOUNT ON S-67-317	15 x 11.5	172.50												
		MOORLAND RD																									
		SOUTH																									
		3/4 MILE																									
29A	E1-5P	EXIT 301A											MOUNT ON SIGN 29	11 x 2.5	27.50												

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	634.0818 POSTS TUBULAR STEEL 2 X 2 X 18 EA	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	638.2101 MOVING SIGNS TYPE I [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
30	NONE	94 WEST											MOUNT ON S-67-317	8 x 9	72.00											
		AHEAD											I BEAMS INCIDENTAL													
31	D4-52	CRASH												13 X 10.5	136.50		1	2	B	1.6	98	1000				
		INVESTIGATION																								
		SITE																								
		EXIT 301A																								
32	W5-52L (2S)		12 X 36		3.000	1	1				1		4 FOOT MOUNTING HEIGHT													
33	NOT USED																									
34	R1-1(2S)		30 X 30	5.180		1	1				1															
35	W5-52R(2S)		12 X 36		3.000	1	1				1		4 FOOT MOUNTING HEIGHT													
36	D10-5	EAST 94 MILE 302/4						1					MOUNT ON LIGHT POLE													
37	D10-5	WEST 94 MILE 302/4						1					MOUNT ON LIGHT POLE													
38	NOT USED																									
39	NOT USED																									
40	R2-1(5)	SPEED LIMIT 55	48 X 60	20.000		1							MOUNT ON BRIDGE													
41	W5-52R(2S)		12 X 36		3.000						1		4 FOOT MOUNTING HEIGHT													
42	NONE	RIGHT LANE PEDS BIKES					1	1			1															
43	R7-1D(2S)		18 X 24	3.000			1						MOUNT UNDER SIGN 42													
44	R2-1(2S)	35 MPH	24 X 30	5.000		1	1				1															
45	R7-1D(2S)		24 X 30	5.000									MOUNT ON FENCE													
46	R7-1D(2S)		24 X 30	5.000									MOUNT ON FENCE													
47	R7-1D(2S)		24 X 30	5.000									MOUNT ON FENCE													
48	R7-1D(2S)		24 X 30	5.000									MOUNT ON FENCE													
49	NONE	PRIVATE SIGN					1	1			1															
50	NONE	PRIVATE SIGN					1	1			1															
51	D10-5	EAST 94 MILE 302/5						1					MOUNT ON LIGHT POLE													
52	D10-5	WEST 94 MILE 302/5						1					MOUNT ON LIGHT POLE													
53	W11-3					1	1																			
54	D1-65	SUNNYSLOPE RD	108 X 30	22.500		1	2		2																	
		14000 WEST																								
55	D1-65	SUNNYSLOPE RD	108 X 30	22.500		1	2		2																	
		14000 WEST																								
56	W5-52L(2S)		12 X 36		3.000	1	1				1		4 FOOT MOUNTING HEIGHT													
57	R1-1(2S)		30 X 30	5.160		1	1				1															
58	W5-52R(2S)		12 X 36		3.000	1	1				1		4 FOOT MOUNTING HEIGHT													
59	R1-1(2S)	SPEED LIMIT 35	24 X 30	5.000		1	1				1															
60	D10-5	EAST 94 MILE 302/3						1					MOUNT ON LIGHT POLE													
61	D10-5	WEST 94 MILE 302/3						1					MOUNT ON LIGHT POLE													
62	R7-1D(2S)		18 X 24	3.000		1	1				1															
63	NONE	RIGHT LANE PEDS BIKES						1					MOUNT ABOVE SIGN 62													
64	D10-5	EAST 94 MILE 302/6						1					MOUNT ON LIGHT POLE													
65	D10-5	WEST 94 MILE 302/6						1					MOUNT ON LIGHT POLE													
66	D10-5	EAST 94 MILE 302/7						1					MOUNT ON LIGHT POLE													
67	D10-5	WEST 94 MILE 302/7						1					MOUNT ON LIGHT POLE													
68	NONE	TRAVEL INFO											SEE ELECTRICAL FOR FLASHERS	11 X 6.5	71.50		1	2	A	1.2	68	600				
		TUNE RADIO TO											BOTTOM PORTION IS YELLOW FLOURESCENT													
		1610 AM																								
		IMPORTANT MESSAGE																								
		WHEN FLASHING																								

TYPE I&II PERMANENT SIGNING -

1060-34-87 IH 41 / USH 45

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	**637.2210** SIGNS TYPE II REFLECTIVE H [SF]	**637.2230** SIGNS TYPE II RELFECTIVE F [SF]	**638.2602** REM SIGNS TYPE II [EA]	**638.3000** REM SMALL SIGN SUP [EA]	**638.2102** MOVING SIGNS TYPE II [EA]	**634.0618** WOOD POSTS 4" X 6" X 18' [EA]	**634.0622** WOOD POSTS 4" X 6" X 22' [EA]	**634.0818** POSTS TUBULAR STEEL 2 X 2 X 18 EA	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	**637.1220** SIGNS TYPE I REFLECTIVE SH [SF]	**638.2101** MOVING SIGNS TYPE I [EA]	**638.2601** REM SIGNS TYPE I [EA]	**638.3100** REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	**636.0100** SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	**636.0500** SIGN SUPPORTS STEEL REINF. [LBS]	**635.0200** SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	**635.0300** SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
69	D10-5	EAST 94 MILE 302/8						1					MOUNT ON LIGHT POLE														
70	D10-5	WEST 94 MILE 302/8						1					MOUNT ON LIGHT POLE														
71	E3-1	BROOKFIELD NEXT 2 EXITS												11 X 4.5	49.50		1	2	A	1.2	68	600					
72	R4-3(5)		48 X 60	20.000		1	2		2																		
73	E6-51	O											MOUNT ON SIGN BRIDGE S-67-318	15 x 11.5	172.50												
		MOORLAND RD											I BEAMS INCIDENTAL														
		NORTH																									
		1 MILE																									
73A	E1-5P	EXIT 301B											MOUNT ON SIGN 73	11 x 2.5	27.50												
74	E6-51	O											MOUNT ON SIGN BRIDGE S-67-318	15 x 14.5	217.50												
		MOORLAND RD											I BEAMS INCIDENTAL														
		SOUTH																									
		1 1/4 MILES																									
74A	E1-5P	EXIT 301A											MOUNT ON SIGN 74	11 x 2.5	27.50												
75	NONE	94 WEST											MOUNT ON SIGN BRIDGE S-67-318	8 x 9	72.00												
		AHEAD											I BEAMS INCIDENTAL														
76	E4-1A	MOORLAND RD															1	2									
		1 MILE																									
77	D10-5	EAST 94 MILE 302/9						1					MOUNT ON LIGHT POLE														
78	D10-5	WEST 94 MILE 302/9						1					MOUNT ON LIGHT POLE														
79	D10-5	EAST 94 MILE 303/0						1					MOUNT ON LIGHT POLE														
80	D10-5	WEST 94 MILE 303/0						1					MOUNT ON LIGHT POLE														
81	D10-65	ELM GROVE RD	96 X 30	20.000		1	2		2																		
		13200 WEST																									
82	D10-65	ELM GROVE RD	96 X 30	20.000		1	2		2																		
		13200 WEST																									
83	D10-5	EAST 94 MILE 303/1						1					MOUNT ON LIGHT POLE														
84	D10-5	WEST 94 MILE 303/1						1					MOUNT ON LIGHT POLE														
85	R2-1(5)	SPEED LIMIT 55				1	2																				
86	R2-1(5)	SPEED LIMIT 55				1							MOUNT ON LIGHT POLE														
87	NONE	FRANK LLOYD WRIGHT, FOLLOW 94						1					MOUNT ON LIGHT POLE														
88		OVERSIZE LOADS RESTRICTED BEYOUND NEXT EXIT														1		2	B	1.6	98	1000					
		UNDISTRIBUTED														1							2				
TOTALS				284.340	49.500	25	42	35	15	12	13	--	--		1706.500	5	8	12	0	7.4	432	4400	2				

SHEET 3 OF 3

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET: 265	E

3

3

LIGHTING - REMOVAL

204.9060.S.1001 REMOVING LUMINAIRES
653.0905 REMOVING PULL BOXES
SPV.0060.1001 LAMP DISPOSAL HIGH INTENSITY DISCHARGE
SPV.0060.1002 LIGHTING UNITS SALVAGED

CATEGORY	STAGE	SYSTEM	DESCRIPTION	LOCATION	OFFSET	204.9060.S.1001 REMOVING LUMINAIRES	653.0905 REMOVING PULL BOXES	SPV.0060.1001 LAMP DISPOSAL HIGH INTENSITY DISCHARGE	SPV.0060.1002 LIGHTING UNITS SALVAGED	COMMENTS
						EACH	EACH	EACH	EACH	
1100	1	HL-67-MR	EMR41	548+75.9	5.5' LT	1	--	1	--	--
			FMR42	551+45.1	9.1' LT	1	--	1	--	--
			EMR43	554+36.0	11.8' LT	1	--	1	--	--
			FMR44	557+06.0	14.4' LT	1	--	1	--	--
			EMR45/FMR45	559+76.3	12.5' LT	2	--	2	--	--
			EMR46/FMR46	562+45.0	10.7' LT	2	--	2	--	--
			EMR47/FMR47	565+16.7	5.4' LT	2	--	2	--	--
			EMR48/FMR48	567+91.3	0.2' RT	2	--	2	--	--
			EMR49/FMR49	570+45.1	0.3' RT	2	--	2	--	--
			BMR15	555+07.7	120.3' LT	1	--	1	--	IH 94 WB ON RAMP
			AMR16	557+89.2	122.4' LT	1	--	1	--	"
			BMR05	559+98.7	149.0' LT	1	--	1	--	"
			AMR06	561+82.7	236.0' LT	1	--	1	--	"
			BMR07	563+25.1	344.5' LT	1	--	1	--	"
			AMR08	564+80.6	483.0' LT	1	--	1	--	"
			BMR09	566+58.4	605.6' LT	1	--	1	--	"
			AMR10	568+63.7	639.8' LT	1	--	1	--	"
			BMR11-PCMR	570+53.3	637.9' LT	1	--	1	--	"
			AMR17	571+35.0	673.5' LT	1	--	1	--	"
			BMR18	571+50.0	440.0' LT	1	--	1	--	IH 94 WB OFF RAMP
			AMR19	570+76.1	526.7' LT	1	--	1	--	"
			BMR20	568+92.2	534.7' LT	1	--	1	--	"
			AMR21	567+56.3	516.5' LT	1	--	1	--	"
			BMR22	566+35.8	437.8' LT	1	--	1	--	"
			AMR23	566+54.0	237.8' LT	1	--	1	--	"
			BMR24	568+56.6	116.2' LT	1	--	1	--	"
			DMR25	558+59.4	102.2' RT	1	--	1	--	IH 94 EB OFF RAMP
			CMR26	560+87.4	155.0' RT	1	--	1	--	"
			DMR27	562+66.5	239.2' RT	1	--	1	--	"
			CMR28	564+17.0	365.4' RT	1	--	1	--	"
			DMR29	565+39.6	525.0' RT	1	--	1	--	"
			CMR30	566+22.1	606.6' RT	1	--	1	--	"
			DMR31	568+18.2	694.1' RT	1	--	1	--	"
			CMR32	570+21.9	700.7' RT	1	--	1	--	"
			DMR33	571+12.3	618.8' RT	1	--	1	--	"
			CMR34	570+86.7	411.2' RT	1	--	1	--	IH 94 EB ON RAMP
			DMR35	569+82.9	530.5' RT	1	--	1	--	"
			CMR36	568+19.4	546.4' RT	1	--	1	--	"
			DMR37	566+74.3	416.7' RT	1	--	1	--	"
			CMR38	566+89.4	273.7' RT	1	--	1	--	"
			DMR39	568+34.1	131.4' RT	1	--	1	--	"
			CMR40	570+69.1	105.1' RT	1	--	1	--	"
1100	1	HL-67-MR			SUBTOTAL	47	0	47	0	

SHEET 1 OF 8

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET:	E

LIGHTING - REMOVAL CONTINUED

204.9060.S.1001 REMOVING LUMINAIRES
653.0905 REMOVING PULL BOXES
SPV.0060.1001 LAMP DISPOSAL HIGH INTENSITY DISCHARGE
SPV.0060.1002 LIGHTING UNITS SALVAGED

CATEGORY	STAGE	SYSTEM	DESCRIPTION	LOCATION	OFFSET	204.9060.S.1001 REMOVING LUMINAIRES	653.0905 REMOVING PULL BOXES	SPV.0060.1001 LAMP DISPOSAL HIGH INTENSITY DISCHARGE	SPV.0060.1002 LIGHTING UNITS SALVAGED	COMMENTS
						EACH	EACH	EACH	EACH	
1100	1	HL-67-LD	CLD14/DLD14	573+53.2	0.4' LT	2	--	2	--	--
			CLD15/DLD15	575+95.5	0.0' LT	2	--	2	--	--
			CLD16/DLD16	578+69.7	0.0' LT	2	--	2	--	--
			CLD17/DLD17	581+31.3	0.1' RT	2	--	2	--	--
			CLD18/DLD18	584+06.5	1.0' RT	2	--	2	--	--
			ELD19/FLD19	586+60.8	0.0' RT	2	--	2	--	--
			ELD20/FLD20	589+15.2	0.0' RT	2	--	2	--	--
			ELD21/FLD21	591+65.6	0.1' RT	2	--	2	--	--
			ELD22/FLD22	594+21.8	2.8' LT	2	--	2	--	--
			ALD01/BLD01	573+19.2	101.6' RT	2	--	2	--	IH 94 EB ON RAMP
			ALD02/BLD02	575+14.7	105.5' RT	2	--	2	--	"
			ALD03/BLD03	576+78.1	105.7' RT	2	--	2	--	"
			ALD04/BLD04	578+40.1	104.8' RT	2	--	2	--	"
			ALD05/BLD05	580+00.3	101.2' RT	2	--	2	--	"
			ELD10	582+39.9	144.9' RT	1	--	1	--	"
			FLD11	584+99.8	117.8' RT	1	--	1	--	"
			ELD12	587+61.0	124.1' RT	1	--	1	--	"
			FLD13	590+20.1	116.1' RT	1	--	1	--	"
			CLD06	573+27.5	200.0' LT	1	--	1	--	IH 94 WB OFF RAMP
			DLD07	575+34.9	145.7' LT	1	--	1	--	"
			CLD08	577+36.3	142.8' LT	1	--	1	--	"
			DLD09	579+36.7	138.8' LT	1	--	1	--	"
			CLD23	581+60.3	130.2' LT	1	--	1	--	"
			DLD24	584+05.9	119.1' LT	1	--	1	--	"
1100	1	HL-67-LD			SUBTOTAL	38	0	38	0	
1100	1	HL-67-SN	ESN30/FSN30	596+78.6	5.9' LT	2	--	2	--	--
			ESN31/FSN31	599+01.0	7.7' LT	2	--	2	--	--
			ESN32/FSN32	601+69.1	7.8' LT	2	--	2	--	--
			ESN33/FSN33	604+13.3	6.4' LT	2	--	2	--	--
			ESN01/FSN01	606+62.5	3.1' LT	2	--	2	--	--
			ESN02/FSN02	609+32.2	0.1' RT	2	--	2	--	--
			ESN03/FSN03	612+12.4	0.1' RT	2	--	2	--	--
			ESN04/FSN04	614+72.0	0.2' RT	2	--	2	--	--
			EX. LPB102	617+13.8	75.6' RT	--	1	--	--	EXISTING PULL BOX
			EX. LPB104	617+15.3	69.0' LT	--	1	--	--	EXISTING PULL BOX
			ESN05/FSN05	617+29.3	0.0' LT	2	--	2	--	--
			GSN06/HSN06	619+93.2	0.0' LT	2	--	2	--	--
			GSN07/HSN07	622+57.6	0.1' LT	2	--	2	--	--
			GSN08/HSN08	625+22.4	0.0' LT	2	--	2	1	FIELD VERIFY TO SALVAGE
			GSN09/HSN09	627+40.1	0.1' LT	2	--	2	1	FIELD VERIFY TO SALVAGE
			GSN10/HSN10	630+04.0	0.2' RT	2	--	2	--	--
			GSN11/HSN11	632+55.3	0.0' LT	2	--	2	--	--
			GSN12/HSN12	635+02.8	0.1' RT	2	--	2	--	
1100	1	HL-67-SN			SUBTOTAL	32	2	32	2	

3

LIGHTING - REMOVAL CONTINUED

204.9060.S.1001 REMOVING LUMINAIRES
653.0905 REMOVING PULL BOXES
SPV.0060.1001 LAMP DISPOSAL HIGH INTENSITY DISCHARGE
SPV.0060.1002 LIGHTING UNITS SALVAGED

CATEGORY	STAGE	SYSTEM	DESCRIPTION	LOCATION	OFFSET	204.9060.S.1001 REMOVING LUMINAIRES	653.0905 REMOVING PULL BOXES	SPV.0060.1001 LAMP DISPOSAL HIGH INTENSITY DISCHARGE	SPV.0060.1002 LIGHTING UNITS SALVAGED	COMMENTS
						EACH	EACH	EACH	EACH	
1100	1	HL-67-EL	CEL07/DEL07	637+58.1	0.0' RT	2	--	2	--	--
			CEL06/DEL06	640+09.4	0.3' RT	2	--	2	--	--
			CEL05/DEL05	642+59.6	0.2' RT	2	--	2	--	--
			CEL04/DEL04	645+14.1	0.1' RT	2	--	2	--	--
			CEL03/DEL03	647+67.5	0.0' RT	2	--	2	--	--
			CEL02/DEL02	650+18.1	0.0' RT	2	--	2	--	--
			CEL01/DEL01	652+71.0	0.0' LT	2	--	2	--	--
			EX. LPB102	654+74.6	0.0' RT	--	1	--	--	FIELD VERIFY TO REMOVE
			AEL01/BEL01	654+87.5	0.1' RT	2	--	2	--	--
			AEL02/BEL02	657+23.6	0.2' RT	2	--	2	--	--
			AEL03/BEL03	659+73.4	0.2' RT	2	--	2	--	--
			AEL04/BEL04	662+16.6	0.1' RT	2	--	2	--	--
			AEL05/BEL05	664+59.4	0.4' RT	2	--	2	--	--
1100	1	HL-67-EL			SUBTOTAL	24	1	24	0	
1100					TOTALS	141	3	141	2	

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3

LIGHTING - FINAL LIGHTING

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
653.0140 PULL BOXES STEEL 24X42-INCH
655.0620 ELECTRICAL WIRE LIGHTING 8 AWG*
655.0635 ELECTRICAL WIRE LIGHTING 2 AWG*
659.1215 LUMINAIRES UTILITY LED C
659.1130 LUMINAIRES UTILITY LED D

CATEGORY	STAGE	SYSTEM	DESCRIPTION	LOCATION	OFFSET	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	653.0140 PULL BOXES STEEL 24X42-INCH EACH	655.0620* ELECTRICAL WIRE LIGHTING 8 AWG LF	655.0635* ELECTRICAL WIRE LIGHTING 2 AWG LF	659.1215 LUMINAIRES UTILITY LED C EACH	659.1130 LUMINAIRES UTILITY LED D EACH	COMMENTS
1100	1	HL-67-MR	EMR41	548+75.9	5.5' LT	--	--	--	--	--	1	--
			FMR42	551+45.1	9.1' LT	--	--	--	--	--	1	--
			EMR43	554+36.0	11.8' LT	--	--	--	--	--	1	--
			FMR44	557+06.0	14.4' LT	--	--	--	--	--	1	--
			EMR45/FMR45	559+76.3	12.5' LT	--	--	--	--	--	2	--
			EMR46/FMR46	562+45.0	10.7' LT	--	--	--	--	--	2	--
			EMR47/FMR47	565+16.7	5.4' LT	--	--	--	--	--	2	--
			EMR48/FMR48	567+91.3	0.2' RT	--	--	--	--	--	2	--
			EMR49/FMR49	570+45.1	0.3' RT	--	--	--	--	--	2	--
			BMR15	555+07.7	120.3' LT	--	--	--	--	--	1	IH 94 WB ON RAMP
			AMR16	557+89.2	122.4' LT	--	--	--	--	--	1	"
			BMR05	559+98.7	149.0' LT	--	--	--	--	1	--	"
			AMR06	561+82.7	236.0' LT	--	--	--	--	1	--	"
			BMR07	563+25.1	344.5' LT	--	--	--	--	1	--	"
			AMR08	564+80.6	483.0' LT	--	--	--	--	1	--	"
			BMR09	566+58.4	605.6' LT	--	--	--	--	1	--	"
			AMR10	568+63.7	639.8' LT	--	--	--	--	1	--	"
			BMR11-PCMR	570+53.3	637.9' LT	--	--	--	--	1	--	"
			AMR17	571+35.0	673.5' LT	--	--	--	--	1	--	"
			BMR18	571+50.0	440.0' LT	--	--	--	--	1	--	IH 94 WB OFF RAMP
			AMR19	570+76.1	526.7' LT	--	--	--	--	1	--	"
			BMR20	568+92.2	534.7' LT	--	--	--	--	1	--	"
			AMR21	567+56.3	516.5' LT	--	--	--	--	1	--	"
			BMR22	566+35.8	437.8' LT	--	--	--	--	1	--	"
			AMR23	566+54.0	237.8' LT	--	--	--	--	--	1	"
			BMR24	568+56.6	116.2' LT	--	--	--	--	--	1	"
			DMR25	558+59.4	102.2' RT	--	--	--	--	--	1	IH 94 EB OFF RAMP
			CMR26	560+87.4	155.0' RT	--	--	--	--	--	1	"
			DMR27	562+66.5	239.2' RT	--	--	--	--	1	--	"
			CMR28	564+17.0	365.4' RT	--	--	--	--	1	--	"
			DMR29	565+39.6	525.0' RT	--	--	--	--	1	--	"
			CMR30	566+22.1	606.6' RT	--	--	--	--	1	--	"
			DMR31	568+18.2	694.1' RT	--	--	--	--	1	--	"
			CMR32	570+21.9	700.7' RT	--	--	--	--	1	--	"
			DMR33	571+12.3	618.8' RT	--	--	--	--	1	--	"
			CMR34	570+86.7	411.2' RT	--	--	--	--	1	--	IH 94 EB ON RAMP
			DMR35	569+82.9	530.5' RT	--	--	--	--	1	--	"
			CMR36	568+19.4	546.4' RT	--	--	--	--	1	--	"
			DMR37	566+74.3	416.7' RT	--	--	--	--	1	--	"
			CMR38	566+89.4	273.7' RT	--	--	--	--	1	--	"
			DMR39	568+34.1	131.4' RT	--	--	--	--	1	--	"
			CMR40	570+69.1	105.1' RT	--	--	--	--	--	1	"
1100	1	HL-67-MR			SUBTOTAL	0	0	0	0	26	21	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LIGHTING - FINAL LIGHTING CONTINUED

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
653.0140 PULL BOXES STEEL 24X42-INCH
655.0620 ELECTRICAL WIRE LIGHTING 8 AWG*
655.0635 ELECTRICAL WIRE LIGHTING 2 AWG*
659.1215 LUMINAIRES UTILITY LED C
659.1130 LUMINAIRES UTILITY LED D

CATEGORY	STAGE	SYSTEM	DESCRIPTION	LOCATION	OFFSET	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	653.0140 PULL BOXES STEEL 24X42-INCH EACH	655.0620* ELECTRICAL WIRE LIGHTING 8 AWG LF	655.0635* ELECTRICAL WIRE LIGHTING 2 AWG LF	659.1215 LUMINAIRES UTILITY LED C EACH	659.1130 LUMINAIRES UTILITY LED D EACH	COMMENTS
1100	1	HL-67-LD	CLD14/DLD14	573+53.2	0.4' LT	--	--	--	--	--	2	--
			CLD15/DLD15	575+95.5	0.0' LT	--	--	--	--	--	2	--
			CLD16/DLD16	578+69.7	0.0' LT	--	--	--	--	--	2	--
			CLD17/DLD17	581+31.3	0.1' RT	--	--	--	--	--	2	--
			CLD18/DLD18	584+06.5	1.0' RT	--	--	--	--	--	2	--
			ELD19/FLD19	586+60.8	0.0' RT	--	--	--	--	--	2	--
			ELD20/FLD20	589+15.2	0.0' RT	--	--	--	--	--	2	--
			ELD21/FLD21	591+65.6	0.1' RT	--	--	--	--	--	2	--
			ELD22/FLD22	594+21.8	2.8' LT	--	--	--	--	--	2	--
			ALD01/BLD01	573+19.2	101.6' RT	--	--	--	--	2	--	IH 94 EB ON RAMP
			ALD02/BLD02	575+14.7	105.5' RT	--	--	--	--	2	--	"
			ALD03/BLD03	576+78.1	105.7' RT	--	--	--	--	2	--	"
			ALD04/BLD04	578+40.1	104.8' RT	--	--	--	--	2	--	"
			ALD05/BLD05	580+00.3	101.2' RT	--	--	--	--	2	--	"
			ELD10	582+39.9	144.9' RT	--	--	--	--	--	1	"
			FLD11	584+99.8	117.8' RT	--	--	--	--	--	1	"
			ELD12	587+61.0	124.1' RT	--	--	--	--	--	1	"
			FLD13	590+20.1	116.1' RT	--	--	--	--	--	1	"
			CLD06	573+27.5	200.0' LT	--	--	--	--	1	--	IH 94 WB OFF RAMP
			DLD07	575+34.9	145.7' LT	--	--	--	--	1	--	"
			CLD08	577+36.3	142.8' LT	--	--	--	--	1	--	"
			DLD09	579+36.7	138.8' LT	--	--	--	--	1	--	"
			CLD23	581+60.3	130.2' LT	--	--	--	--	--	1	"
			DLD24	584+05.9	119.1' LT	--	--	--	--	--	1	"
1100	1	HL-67-LD			SUBTOTAL	0	0	0	0	14	24	
1100	1	HL-67-SN	ESN30/FSN30	596+78.6	5.9' LT	--	--	--	--	--	2	"
			ESN31/FSN31	599+01.0	7.7' LT	--	--	--	--	--	2	"
			ESN32/FSN32	601+69.1	7.8' LT	--	--	--	--	--	2	"
			ESN33/FSN33	604+13.3	6.4' LT	--	--	--	--	--	2	"
			ESN01/FSN01	606+62.5	3.1' LT	--	--	--	--	--	2	"
			ESN02/FSN02	609+32.2	0.1' RT	--	--	--	--	--	2	"
			ESN03/FSN03	612+12.4	0.1' RT	--	--	--	--	--	2	"
			ESN04/FSN04	614+72.0	0.2' RT	--	--	--	--	--	2	"
			LPB102	617+18.2	84.5' RT	50	1	--	--	--	--	INTERCEPT EXISTING CONDUIT
			LPB104	617+14.8	86.6' LT	50	1	--	--	--	--	INTERCEPT EXISTING CONDUIT
			EX. LPB101 - LPB102	617+19.3	124.1' RT	40	--	--	--	--	--	--
			HL-67-SN - ESN5/FSN5	617+19.3	127.1' RT	--	--	380	1,140	--	--	NEW WIRE - CABINET TO POLE ESN5/FSN5
			ESN05/FSN05	617+29.3	0.0' LT	--	--	--	--	--	2	"
			GSN06/HSN06	619+93.2	0.0' LT	--	--	--	--	--	2	"
			GSN07/HSN07	622+57.6	0.1' LT	--	--	--	--	--	2	"
			GSN08/HSN08	625+22.4	0.0' LT	--	--	--	--	--	2	"
			GSN09/HSN09	627+40.1	0.1' LT	--	--	--	--	--	2	"
			GSN10/HSN10	630+04.0	0.2' RT	--	--	--	--	--	2	"
			GSN11/HSN11	632+55.3	0.0' LT	--	--	--	--	--	2	"
			GSN12/HSN12	635+02.8	0.1' RT	--	--	--	--	--	2	"
1100	1	HL-67-SN			SUBTOTAL	140	2	380	1,140	0	32	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

LIGHTING - FINAL LIGHTING CONTINUED

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
653.0140 PULL BOXES STEEL 24X42-INCH
655.0620 ELECTRICAL WIRE LIGHTING 8 AWG*
655.0635 ELECTRICAL WIRE LIGHTING 2 AWG*
659.1215 LUMINAIRES UTILITY LED C
659.1130 LUMINAIRES UTILITY LED D

CATEGORY	STAGE	SYSTEM	DESCRIPTION	LOCATION	OFFSET	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	653.0140 PULL BOXES STEEL 24X42-INCH	655.0620* ELECTRICAL WIRE LIGHTING 8 AWG	655.0635* ELECTRICAL WIRE LIGHTING 2 AWG	659.1215 LUMINAIRES UTILITY LED C	659.1130 LUMINAIRES UTILITY LED D	COMMENTS
						LF	EACH	LF	LF	EACH	EACH	
1100	1	HL-67-EL	CEL07/DEL07	637+58.1	0.0' RT	--	--	--	--	--	2	--
			CEL06/DEL06	640+09.4	0.3' RT	--	--	--	--	--	2	--
			CEL05/DEL05	642+59.6	0.2' RT	--	--	--	--	--	2	--
			CEL04/DEL04	645+14.1	0.1' RT	--	--	--	--	--	2	--
			CEL03/DEL03	647+67.5	0.0' RT	--	--	--	--	--	2	--
			CEL02/DEL02	650+18.1	0.0' RT	--	--	--	--	--	2	--
			CEL01/DEL01	652+71.0	0.0' LT	--	--	--	--	--	2	--
			LPB102	654+74.6	0.0' RT	--	1	--	--	--	--	FIELD VERIFY
			LPB103	654+77.0	100.0' RT	--	1	--	--	--	--	--
			EX. LPB101 - LPB102	654+38.0	164.0' RT	100	--	--	--	--	--	--
			LPB102 - LPB103	654+75.0	100.0' RT	50	--	--	--	--	--	INTERCEPT EXISTING CONDUIT
			HL-67-EL - AEL1/BEL1	654+23.0	164.0' RT	--	--	200	600	--	--	NEW WIRE - CABINET TO POLE AEL1/BEL1
			HL-67-EL - CEL1/DEL1	654+23.0	164.0' RT	--	--	318	954	--	--	NEW WIRE - CABINET TO POLE CEL1/DEL1
			AEL01/BEL01	654+87.5	0.1' RT	--	--	--	--	--	2	--
			AEL02/BEL02	657+23.6	0.2' RT	--	--	--	--	--	2	--
			AEL03/BEL03	659+73.4	0.2' RT	--	--	--	--	--	2	--
			AEL04/BEL04	662+16.6	0.1' RT	--	--	--	--	--	2	--
			AEL05/BEL05	664+59.4	0.4' RT	--	--	--	--	--	2	--
1100	1	HL-67-EL			SUBTOTAL	150	2	518	1,554	0	24	
1100					TOTALS	290	4	898	2,694	40	101	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHEET 6 OF 8

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET:	E

3

LIGHTING - TEMPORARY

204.9060.S.1002	REMOVING POLES WOOD 60-FT
652.0135	CONDUIT RIGID METALLIC 3-INCH
655.0620	ELECTRICAL WIRE LIGHTING 8 AWG*
655.0635	ELECTRICAL WIRE LIGHTING 2 AWG*
SPV.0060.1003	POLE WOOD 60-FT
SPV.0090.1001	CONDUIT FLEXIBLE METALLIC 3-INCH
SPV.0090.1002	CABLE IN DUCT 3-2 AWG, 1-8 AWG
SPV.0090.1003	CABLE AERIAL ALUMINUM 2 AWG QUADRUPLEX

CATEGORY	SYSTEM	STAGE	LOCATION	OFFSET	204.9060.S.1002 REMOVING POLES WOOD 60-FT	652.0135 CONDUIT RIGID METALLIC 3-INCH	655.0620* ELECTRICAL WIRE LIGHTING 8 AWG	655.0635* ELECTRICAL WIRE LIGHTING 2 AWG	SPV.0060.1003 POLE WOOD 60-FT	SPV.0090.1001 CONDUIT FLEXIBLE METALLIC 3-INCH	SPV.0090.1002 CABLE IN DUCT 3-2 AWG, 1-8 AWG	SPV.0090.1003 CABLE AERIAL ALUMINUM 2 AWG QUADRUPLEX	COMMENTS
					EACH	LF	LF	LF	EACH	LF	LF	LF	
1100	HL-67-LD	1	DLD18/CLD18 - ELD19/FLD19		--	255	--	--	--	20	265	--	--
			ELD19/FLD19 - FLD20/ELD20		--	255	--	--	--	20	265	--	--
	HL-67-SN		FSN3/ESN3 - ESN4/FSN4		--	260	--	--	--	20	270	--	--
			617+07.7	C/L	1	--	--	--	1	--	--	--	--
			617+07.7	125.0' RT	1	--	--	--	1	--	--	--	--
			HL-67-SN - EX. LPB105		--	--	40	120	--	--	--	--	--
			EX. LPB105 - WP-SN-01		--	--	40	120	--	--	--	--	--
			WP-SN-01 - WP-SN-02		--	--	--	--	--	--	--	250	--
			WP-SN-02 - ESN5/FSN5		--	--	--	--	--	--	80	--	--
			GSN8/HSN8 - GSN9/HSN9		--	220	--	--	--	20	230	--	--
	HL-67-EL		DEL6/CEL6 - CEL5/DEL5		--	250	--	--	--	20	260	--	--
			DEL2/CEL2 - CEL1/DEL1		--	255	--	--	--	20	265	--	--
			655+50.0	C/L	1	--	--	--	--	--	--	--	ID# 1060-43-82
			655+50.0	160.0' RT	1	--	--	--	--	--	--	--	ID# 1060-43-82
1100				TOTALS	4	1,495	80	240	2	120	1,635	250	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

LIGHTING - SYSTEMS

SPV.0105.1001 MAINTENANCE OF LIGHTING SYSTEMS
SPV.0105.1002 LIGHTING SYSTEM INTEGRATOR
SPV.0105.1003 LIGHTING SYSTEM SURVEY

CATEGORY	DESCRIPTION / SYSTEM	LOCATION	SPV.0105.1001 MAINTENANCE OF LIGHTING SYSTEMS	SPV.0105.1002 LIGHTING SYSTEM INTEGRATOR	SPV.0105.1003 LIGHTING SYSTEM SURVEY
			LS	LS	LS
1100	HL-67-MR, HL-67-LD, HL-67-EL	IH 94	1	1	1
1100		TOTALS	1	1	1

FTMS REMOVALS

CATEGORY	ROADWAY	ITEM ID	204.0195 REMOVING CONCRETE BASE EACH	204.0205 REMOVING UTILITY POLES EACH	204.0210 REMOVING MANHOLES EACH	204.9060.S.1302 REMOVING OVERHEAD FREEWAY DMS EA	204.9060.S.1303 REMOVING POLE EACH	204.9060.S.1304 REMOVING MICROWAVE DETECTOR EACH	204.9060.S.1305 REMOVING CONTROLLER CABINET EACH	204.9060.S.1306 REMOVING CONTROLLER CABINET BASE EACH	653.0905 REMOVING PULL BOXES EACH	674.0300 REMOVE CABLE LF	677.9051.S REMOVING 50-FOOT CAMERA POLE EACH	677.9200.S REMOVING CCTV CAMERA EACH	SPV.0060.2006 SALVAGE HARDWIRED HAR SIGN FLASHER ASSEMBLY EA
1300	IH 94														
		EXMB01 - EXPB01	--	--	--	--	--	--	--	--	--	20	--	--	--
		EXPP01	--	1	--	--	--	--	--	--	--	--	--	--	--
		EXPB01 - EX-DMS-67-0003	--	--	--	1	--	--	--	--	--	75	--	--	--
		EX-CB-CCTV-67-0052 - EXPB02	--	--	--	--	--	--	--	--	1	15	--	--	--
		EXPB02 - EXPB03	--	--	--	--	--	--	--	--	1	55	--	--	--
		EXPB03 - EXPB04	--	--	--	--	--	--	--	--	1	45	--	--	--
		EXPB04 - EXPB05	--	--	--	--	--	--	--	--	1	500	--	--	--
		EXPB05 - EX-HFS-644	--	--	--	--	--	--	--	--	--	400	--	--	1
		EX-CCTV-67-0005	1	--	--	--	--	--	--	--	--	--	1	1	--
		EX-CB-ATR-67-0030	--	--	--	--	--	--	1	1	--	--	--	--	--
		EXDP629	1	--	--	--	1	1	--	--	--	--	--	--	--
		EXPB625	--	--	--	--	--	--	--	--	1	--	--	--	--
		EXPB630	--	--	--	--	--	--	--	--	1	--	--	--	--
		EXMH628	--	--	1	--	--	--	--	--	--	--	--	--	--
		EXPB631	--	--	--	--	--	--	--	--	1	--	--	--	--
		EXMH627	--	--	1	--	--	--	--	--	--	--	--	--	--
		EXPB628	--	--	--	--	--	--	--	--	1	--	--	--	--
		EXPB627	--	--	--	--	--	--	--	--	1	--	--	--	--
		EXPB629	--	--	--	--	--	--	--	--	1	--	--	--	--
		EXPB626	--	--	--	--	--	--	--	--	1	--	--	--	--
		EXDP632	1	--	--	--	1	1	--	--	--	--	--	--	--
		EXMH626	--	--	1	--	--	--	--	--	--	--	--	--	--
		EXMH625	--	--	1	--	--	--	--	--	--	--	--	--	--
		EX-CB-SDS-67-0030	--	--	--	--	--	--	1	1	--	--	--	--	--
		EXDP606	1	--	--	--	1	1	--	--	--	--	--	--	--
		EXDP605	1	--	--	--	1	1	--	--	--	--	--	--	--
		EXMB610 - EXPB607	--	--	--	--	--	--	--	--	--	220	--	--	--
		EXPB607 - EX-CB-SDS-0030	--	--	--	--	--	--	--	--	--	10	--	--	--
		EXPB607 - EXPB606	--	--	--	--	--	--	--	--	--	105	--	--	--
		EXPB606 - EXDP606	--	--	--	--	--	--	--	--	--	10	--	--	--
		EXPB606 - EXPB605	--	--	--	--	--	--	--	--	--	155	--	--	--
		EXPB605 - EXDP605	--	--	--	--	--	--	--	--	--	10	--	--	--
		EXPB606	--	--	--	--	--	--	--	--	1	--	--	--	--
		EXPB607	--	--	--	--	--	--	--	--	1	--	--	--	--
		EXPB605	--	--	--	--	--	--	--	--	1	--	--	--	--
	TOTAL		5	1	4	1	4	4	2	2	14	1,620	1	1	1

FTMS UNDER GROUND EACH ITEMS

CATEGORY	ROADWAY	ITEM ID	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	653.0140 PULL BOXES STEEL 24 X 42- INCH EACH	673.0105 COMMUNICATION VAULT TYPE 1 EACH	678.0400 FIBER OPTIC TERMINATION EACH	SPV.0060.2007 INSTALL SALVAGED HARDWIRED HAR SIGN FLASHER ASSEMBLY EACH
1300	IH 94						
		EXCV669	1	--	--	--	--
		CV665	--	--	1	--	--
		CV664	--	--	1	--	--
		CV655	--	--	1	--	--
		CV653	--	--	1	--	--
		EXPB01	1	--	--	--	--
		PB01	--	1	--	--	--
		PB02	--	1	--	--	--
		PB03	--	1	--	--	--
		PB04	--	1	--	--	--
		HFS-644	--	--	--	--	1
		EX-CCTV-67-0052	--	--	--	6	--
		CV641	--	--	1	--	--
		CV627	--	--	1	--	--
		CV625	--	--	1	--	--
		PB625	--	1	--	--	--
		CCTV-67-0005	--	--	--	6	--
		CV610	--	--	1	--	--
		PB610	--	1	--	--	--
		SDS-67-0030	--	--	--	6	--
		CV595	--	--	1	--	--
		EXCV588	1	--	--	--	--
		EX-HUB-67-0010	--	--	--	72	--
TOTALS			3	6	9	90	1

FTMS ELECTRICAL SERVICES

CATEGORY	ROADWAY	ITEM ID	204.9060.S.1301 REMOVING ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH	656.0200.2001 ELECTRICAL SERVICE METER BREAKER PEDESTAL (MBCCTV670005) LS	656.0500.2001 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CCTV670005) LS	656.0500.2002 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (SDS670030) LS
1300	IH 94					
		MB670005	--	1	--	--
		CCTV-67-0005	--	--	1	--
		SDS-67-0030	--	--	--	1
		EX-MB-ATR-67-0030	1	--	--	--
		TOTALS	1	1	1	1

FTMS ABOVE GROUND EACH ITEMS

CATEGORY	ROADWAY	ITEM ID	654.0105 CONCRETE BASES TYPE 5 EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5-ALUMINUM EACH	672.0250 BASE CAMERA POLE 50-FT EACH	673.0225.S INSTALL POLE MOUNTED CABINET EACH	675.0300 INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY EACH	675.0400.S INSTALL ETHERNET SWITCH EACH	677.0150 INSTALL CAMERA POLE 50-FT EACH	677.0200 INSTALL CAMERA ASSEMBLY EACH	678.0100.S INSTALL OVERHEAD FREEWAY DMS FULL MATRIX EACH	678.0300 FIBER OPTIC SPLICE EACH	SPV.0060.2008 REFOCUS VEHICLE DETECTOR ASSEMBLY EACH	SPV.0060.2009 GROUND ROD EACH
1300	IH 94														
		EXCV669	--	--	--	--	--	--	--	--	--	--	72	--	--
		CV653	--	--	--	--	--	--	--	--	--	--	4	--	--
		DMS-67-0003	--	--	--	--	--	--	--	--	--	1	--	--	--
		CV625	--	--	--	--	--	--	--	--	--	--	4	--	--
		CCTV-67-0005	--	--	--	1	1	2	1	1	1	--	--	--	1
		CV610	--	--	--	--	--	--	--	--	--	--	4	--	--
		SDS-67-0030	1	1	1	--	1	2	1	--	--	--	--	--	1
		UNDISTRIBUTED	--	--	--	--	--	--	--	--	--	--	--	6	--
	TOTALS		1	1	1	1	2	4	2	1	1	1	84	6	2

FTMS CONDUIT AND CABLE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	652.0125 CONDUIT RIGID METALLIC 2-INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF	655.0510 ELECTRICAL WIRE TRAFFIC SIGNALS 12 AWG LF	655.0525 ELECTRICAL WIRE TRAFFIC SIGNALS 6 AWG LF	671.0132 CONDUIT HDPE 3-DUCT 2-INCH LF	671.0232 CONDUIT HDPE DIRECTIONAL BORE 3-DUCT 2-INCH LF	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT LF	678.0072 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT LF
1300	IH 94											
		EXCV669 - CV665	650	--	--	--	650	--	650	--	--	750
		CV665 - CV664	200	--	--	--	200	--	--	200	--	300
		CV664 - CV655	1225	--	--	--	1225	--	1225	--	--	1325
		CV655 - CV653	160	--	--	--	160	--	--	160	--	260
		CV653 - EXPB01	40	--	--	--	40	--	--	--	90	--
		EX-CCTV-67-0052 - EXPB01	20	--	--	--	--	60	--	--	--	--
		EXPB01 - PB01	35	--	105	--	--	105	--	--	--	--
		PB01 - S-67-418	25	--	50	--	--	--	--	--	--	--
		PB01 - PB02	260	--	260	--	--	780	--	--	--	--
		PB02 - PB03	260	--	260	--	--	780	--	--	--	--
		PB03 - PB04	260	--	260	--	--	780	--	--	--	--
		PB04 - HFS-644	25	25	--	--	--	75	--	--	--	--
		CV653 - CV641	1210	--	--	--	1210	--	1210	--	--	1310
		CV641 - CV627	1350	--	--	--	1350	--	1350	--	--	1450
		CV627 - CV625	190	--	--	--	190	--	--	190	--	290
		CV625 - PB625	30	--	60	--	30	--	--	--	80	--
		PB625 - CCTV-67-0005	15	--	30	--	30	--	--	--	65	--
		MBCCTV670005 - CCTV-67-0005	20	20	--	--	--	60	--	--	--	--
		CV625 - CV610	1550	--	--	--	1550	--	1550	--	--	1650
		CV610 - PB610	245	--	--	490	245	--	--	--	295	--
		PB610 - SDS-67-0030	20	20	20	--	20	60	--	--	70	--
		EXMB610 - PB610	50	--	50	--	--	150	--	--	--	--
		CV610 - CV595	1505	--	--	--	1505	--	1505	--	--	1605
		CV595 - EXCV588	830	--	--	--	830	--	830	--	--	930
		EXCV588 - EXCV579	855	--	--	--	855	--	--	--	--	955
		EXCV579 - EXCV572	650	--	--	--	650	--	--	--	--	750
		EXCV572 - EXCV573	860	--	--	--	860	--	--	--	--	960
		EXCV573 - EXCV570	100	--	--	--	100	--	--	--	--	200
		EXCV570 - EX-HUB-67-0010	20	--	--	--	20	--	--	--	--	120
		TOTALS		65	1095	490	11720	2850	8320	550	600	12855

FTMS LUMP SUM ITEMS

CATEGORY	ROADWAY	670.0100 FIELD SYSTEM INTEGRATOR LS	670.0200 ITS DOCUMENTATION LS	678.0500 COMMUNICATION SYSTEM TESTING LS
1300	IH 94			
	PROJECT	1	1	1
	TOTALS	1	1	1

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
1060-33-29		
FEDERAL PROJECT NUMBER	4.1	3

PLAT OF RIGHT-OF-WAY REQUIRED FOR

IH 94 AUXILLARY LANES
SUNNYSLOPE ROAD
WAUKESHA COUNTY

CONSTRUCTION PROJECT NUMBER
1060-33-82

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	REEL	R.
ACRES	AC.	REFERENCE LINE	RL
AND OTHERS	ET.AL.	RELEASE OF RIGHTS	ROR
CENTERLINE	CL	REMAINING	REM.
CERTIFIED SURVEY MAP	CSM	RIGHT-OF-WAY	R/W
CORNER	COR.	SECTION	SEC.
DOCUMENT	DOC.	STATION	STA.
EASEMENT	EASE.	TEMPORARY LIMITED EASEMENT	TLE
IMAGE	I.	VOLUME	V.
HIGHWAY EASEMENT	H.E.	**CURVE DATA**	
LAND CONTRACT	LC	LONG CHORD	LCH
MONUMENT	MON.	LONG CHORD BEARING	LCB
PAGE	P.	RADIUS	R
PERMANENT LIMITED EASEMENT	PLE	DEGREE OF CURVE	D
PROPERTY LINE	PL	CENTRAL ANGLE OR DELTA	DELTA
RECORDED AS	(100')	LENGTH OF CURVE	L
		TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LP (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	●(SET)	PROPERTY LINE	
R/W STANDARD	▲(SET)	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT		CORPORATE LIMITS	
SECTION CORNER SYMBOL		ACCESS RESTRICTED (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		ACCESS RESTRICTED (BY ACQUISTION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	92	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

WATER	W
GAS	G
TELEPHONE	T
OVERHEAD TRANSMISSION LINES	OH
ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SAN
STORM SEWER	SS

	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
UTILITY PEDESTAL		
ELECTRIC TOWER	⊠	

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, WAUKESHA COUNTY, NAD83 (2007) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL ¾" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

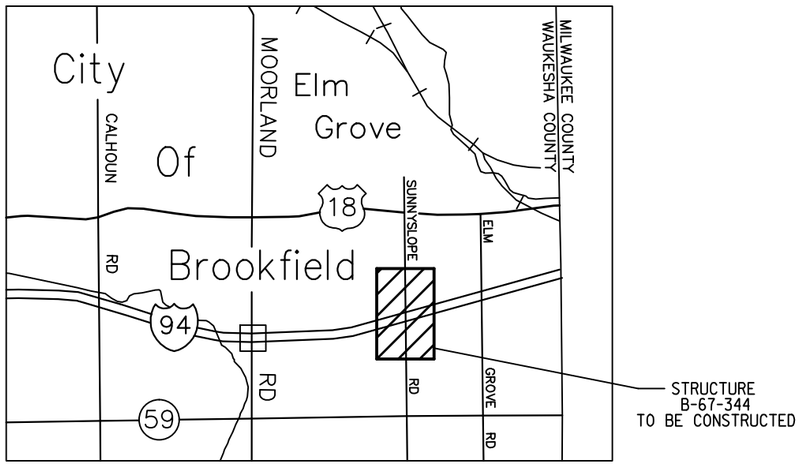
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.

R-20-E

T-7-N



WAUKESHA COUNTY

PROJECT LOCATION
NORTHWEST QUARTER OF SECTION 36 &
NORTHEAST QUARTER OF SECTION 35

N

SCALE 0 1MI.
LAYOUT

REVISION DATE	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
05-05-2016	APPROVED FOR THE DEPARTMENT DATE: 12-01-2015 (Signature)

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSED ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

* DENOTES AREAS COMPUTED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	NEW	EXISTING	TOTAL	REMAINING ACRES	TEMP. ACRES	PERM. ACRES	PARCEL NUMBER
1(2)	4.03	WILLARD CARLOS HAGA	FEE TLE	1.439	0.052	0.142	0.194	1.245	0.011	0.000	1(2)
2	4.03	MATTHEW W. & KATHRYN J. BUCHAN	TLE	0.500	0.000	0.000	0.000	0.500	0.058	0.000	2
3	4.03	JOHN R. & CELINE PIERSON REVOCABLE TRUST	TLE	0.580	0.000	0.000	0.000	0.580	0.017	0.000	3
4	4.03	JAMES P. YUMANG	TLE	0.681	0.000	0.000	0.000	0.681	0.063	0.000	4
5	4.03	JOINT COMMON SCHOOL DISTRICT NO. 1	FEE TLE	36.023	0.091	0.000	0.091	35.932	0.263	0.000	5
6	4.03	WILLIAM STEPHENS TRUMP JR. & CATHY D. YOUNGER	TLE	0.603	0.000	0.000	0.000	0.603	0.014	0.000	6
7(2)	4.03	PINNACLE PROPERTY HOLDINGS LLC	PLE TLE	18.181	0.000	0.000	0.000	18.181	0.123	0.011	7(2)
8											8
9											9
10											10
11											11
12											12
13											13
14											14
15											15
16											16
17											17
18											18
19											19
20											20
21											21
22											22
23											23
24											24
25											25
26											26
27											27
28											28
29											29
30											30
31											31
32											32
33											33
34											34
UTILITY NUMBER											UTILITY NUMBER
500	4.03	WE ENERGIES ELECTRIC	RELEASE OF RIGHTS	--	--	--	--	--	--	--	500
503	4.03	AT&T WISCONSIN	RELEASE OF RIGHTS	--	--	--	--	--	--	--	503
512	4.03	US CELLULAR	RELEASE OF RIGHTS	--	--	--	--	--	--	--	512
565	4.03	BROOKFIELD MUNICIPAL WATER UTILITY	RELEASE OF RIGHTS	--	--	--	--	--	--	--	565
UA 665	4.03	BROOKFIELD MUNICIPAL WATER UTILITY	UTILITY AGREEMENT	--	--	--	--	--	--	--	UA 665

4

4

REVISION DATE
05-05-2016

DATE 12-01-2015 | HWY: SUNNYSLOPE ROAD | STATE R/W PROJECT NUMBER 1060-33-29 | PLAT SHEET 4.02

COUNTY: WAUKESHA | CONSTRUCTION PROJECT NUMBER 1060-33-82

E

FILE NAME : N:\PDS\C3D\ROW\10603329\040402_RS.DWG PLOT DATE : 5/5/2016 6:20 AM PLOT BY : KRAUSE, PAUL H PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 75

HIGHWAY	BASIS OF EXISTING RIGHT-OF-WAY	WIDTH	YEAR
I-94	1060-02-26	VARIES	1957
SUNNYSLOPE ROAD	1060-02-26	VARIES	1957
SUNNYSLOPE ROAD	CSM 927	45'	1968
SUNNYSLOPE ROAD	CSM 4119	45'	1981
SUNNYSLOPE ROAD	WOODRIDGE SUBDIVISION	45'	1966
SUNNYSLOPE ROAD	DOC. 653241	50'	1966
SUNNYSLOPE ROAD	CHR V.8 P.2	33'	1843

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, WAUKESHA COUNTY, NAD83 (2007) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.

A Concrete Monument w/ A Brass Cap
X 719241.25
Y 165666.36
720153

A Concrete Monument w/ A Brass Cap
X 721900.97
Y 165649.59
720154

A Concrete Monument w/ A Brass Cap
X 724563.30
Y 165621.31
720155

A Concrete Monument w/ A Brass Cap
X 721921.46
Y 168315.30
720141

CITY OF BROOKFIELD

SE1/4 - NE1/4

SW1/4 - NW1/4

RL I - 94

RL SUNNY SLOPE = SECTION LINE

N89°31'17"W

N00° 26' 25"E

S89°23'29"E 2322.48'

N89°23'35"W

N76° 04' 29"E

N72° 38' 28"E

S76° 04' 29"W

N76° 04' 33"E

622 624 626 628 630

150' 180' 190' 160'

WOODRIDGE SUBDIVISION

WOODCREST COURT

BEECHWOOD AVE. 60'

BLOCK 2

TRUMP 6

TOWER

SCHOOL DISTRICT 5

HAGA 1

BUCHAN 2

PIERSON 3

YUMANG 4

PINNACLE 7

CSM 927 LOT 1

CSM 927 DOC. 727442 V.6 P.114 LOT 2

CSM 9414 DOC. 2829733 V.85 P.343 LOT 1

TRANS 233 RESTRICTIONS APPLY

FOREST GROVE SUBDIVISION

FOREST GROVE ROAD

OUTLOT 1

SUNNYSLOPE ROAD

STA.121+95.90

STA.148+61.69

STA.626+31.80 I-94

STA.130+00.00 SUNNYSLOPE

PL (187.56') 187.25' PL

187.25' TO SW CORNER LOT 1

187.26'

142.36'

154.68'

175.00'

69.85'

105.15'

240.44'

156.84'

90.00'

91.42'

136.85'

120.00'

128.60'

248.87'

217.87'

87.54'

102.36'

40'

10'

15'

25'

30'

80'

60'

45'

33'

50'

340'

200.00'

65.00'

63.13'

105.29'

28.94'

56.86'

22.32'

16.08'

20.65'

25.81'

98.05'

38.21'

N66°06'35"W

N69°13'13"W

N22°40'13"E

N19°15'58"E

N76°42'23"W

S89°41'15"E

N89°33'37"E

N10° 34' 04"E

N27°37'44"E

S16° 04' 29"W

N76° 04' 29"E

N76° 04' 33"E

N89° 23' 35"W

N89° 33' 33"W

S89°23'29"E

N89°23'35"W

PRW9001 PRW9002 PRW9003 PRW9004 PRW9005 PRW9006 PRW9007 PRW9008

PLE9951 PLE9952 PLE9953 PLE9954

123+50.51 65.00', 50.00'

125+25.51 65.00'

125+85.51 65.00'

126+75.51 65.00', 50.00'

121+95.77 45.00'

123+83.02 45.00'

134+57.80 50.00', 75.00'

134+77.80 50.00', 75.00'

DOC. 2766653 16' INGRESS & EGRESS

DOC. 2640007

DOC. 3671266

DOC. 2766653

DOC. 3921955

DOC. 667011

DOC. 505924

DOC. 859325 DOC. 2829733 DOC. 2150414

DOC. 695616

8' DOC. 695616

8' DOC. 667011

50' ROAD RESERVATION DOC. 3899262

30' ROAD RESERVATION DOC. 3899262

49' INGRESS & EGRESS EASEMENT DOC. 287351

12' BIKE PATH EASEMENT DOC. 3702779

100' BY 5' TLE SLOPES

TLE SLOPES & DRIVE

TLE SLOPES

TLE SLOPES & BIKE PATH

20' BIKE PATH CSM 8094 DOC. 2150414

20' X 25' PLE WALK

18' PRIVATE SANITARY DOC. 1438936

MH

FO

PL

1/16 LINE

1/8 LINE

500 WE ENERGIES - ELECTRIC
DOC. 695616 V. 1098 P. 31
PCL. 3, 4
DOC. 3671266
PCL. 5
DOC. 667011 V. 1056 P. 276
PCL. 6
DOC. 859325 R. 50 I. 6
PCL. 7
DOC. 505924 V. 819 P. 561
PCL. 7
DOC. 21504014 V. 70 P. 177
PCL. 7
DOC. 2829733 V. 85 P. 343
PCL. 7

512 US CELLULAR
DOC. 2766653
PCL. 5

565 BROOKFIELD MUNICIPAL WATER UTILITY
DOC. 3921955
PCL. 5

UA 665 - BROOKFIELD MUNICIPAL WATER UTILITY

503 AT&T WISCONSIN
DOC. 695616 V. 1098 P. 31
PCL. 3, 4
DOC. 2640007
PCL. 5
DOC. 2766653
PCL. 5
DOC. 667011 V. 1056 P. 276
PCL. 6
DOC. 505924 V. 819 P. 561
PCL. 7
DOC. 21504014 V. 70 P. 177
PCL. 7
DOC. 2829733 V. 85 P. 343
PCL. 7

PREVIOUS ACCESS CONTROL
1060-02-26
DOC. 653241
WOODRIDGE SUBDIVISION
FOREST GROVE SUBDIVISION
CSM 9414
CSM 8094

REVISION DATE			
05-05-2016			

DATE 12-01-2015

SCALE, FEET 0 50 100

HWY: SUNNYSLOPE ROAD

COUNTY: WAUKESHA

STATE R/W PROJECT NUMBER 1060-33-29

CONSTRUCTION PROJECT NUMBER 1060-33-82.

PLAT SHEET 4.03

PS&E SHEET --279

E

FILE NAME : N:\PDS\C3D\ROW\10603329\040403_RP.DWG

PLOT DATE : 5/5/2016 6:58 AM PLOT BY : KRAUSE, PAUL H PLOT NAME : PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 75

4

4

BEGIN CONSTRUCTION
STA. 121+91.92

PI: 121+95.90

PARK ENTRANCE

FOREST GROVE ROAD

SUNNYSLOPE ROAD

EP: 25+14.16

BP: 20+00.00

EP: 22+24.64

℄ SUNNYSLOPE

W. BEECHWOOD AVE.

IH-94 EB

IH-94 WB

EP: 24+64.28

END CONSTRUCTION
STA. 135+35.84

R/W

SI

TLE

5

5

STA. 130+00 REMOVE STRUCTURE B-67-54
4 SPAN PRESTRESSED GIRDER
224.0' OVERALL LENGTH
38.0' OVERALL WIDTH

STA. 130+00
STRUCTURE B-67-344 REQUIRED
2 SPAN 54W" PRESTRESSED GIRDER
SKEW 14° 21' 54.3" RHF

FINISHED PROFILE AT ℄ SUNNYSLOPE RD.

EXISTING PROFILE AT ℄ SUNNYSLOPE RD.

VCL = 170.00
K = 96.59

VCL = 200.00
K = 100.83

VCL = 669.45
K = 65.40

STA 121+89.14 EL 889.15

VPC STA 123+07.02 VPC EL 894.34

VPI STA 124+07.02 VPI EL 900.450

VPT STA 125+07.02 VPT EL 904.58

VPC STA 125+29.63 VPC EL 905.51

VPI STA 126+14.63 VPI EL 909.02

VPT STA 126+99.63 VPT EL 914.03

VPC STA 127+25.17 VPC EL 915.53

VPI STA 130+59.89 VPI EL 935.250

VPT STA 133+94.61 VPT EL 919.62

STA 134+97.55 EL 914.81

STA 135+35.84 EL 912.95

6.11%

5.89%

4.13%

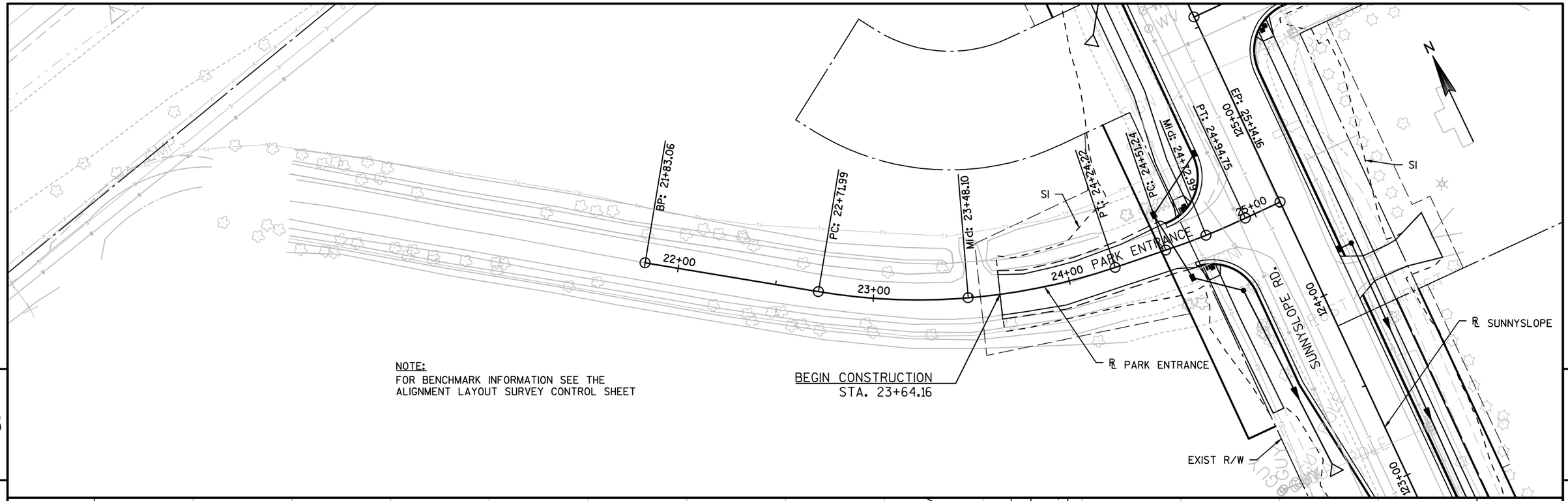
-4.67%

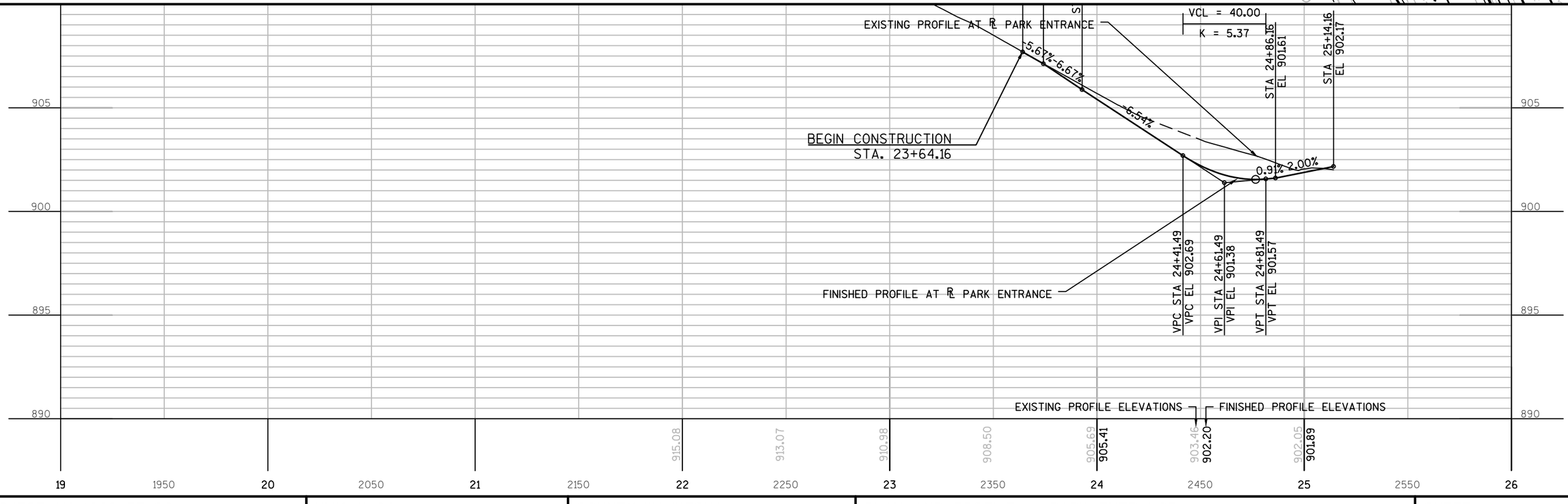
-4.86%

FINISHED PROFILE ELEVATIONS

EXISTING PROFILE ELEVATIONS

| | | |



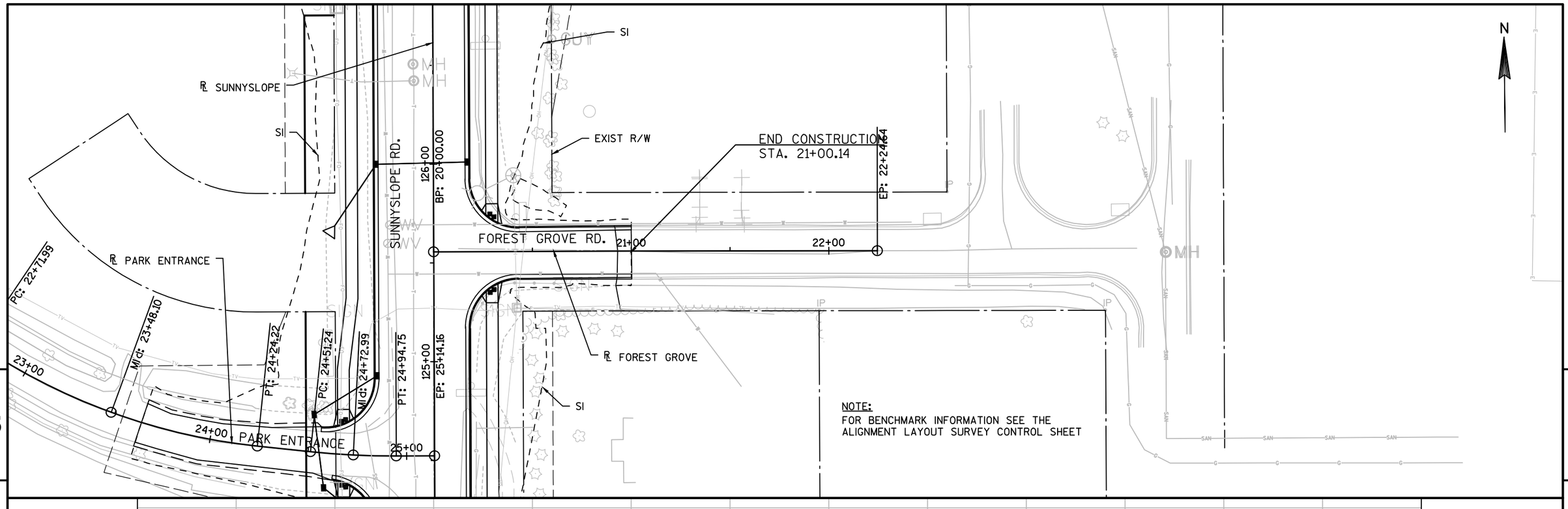


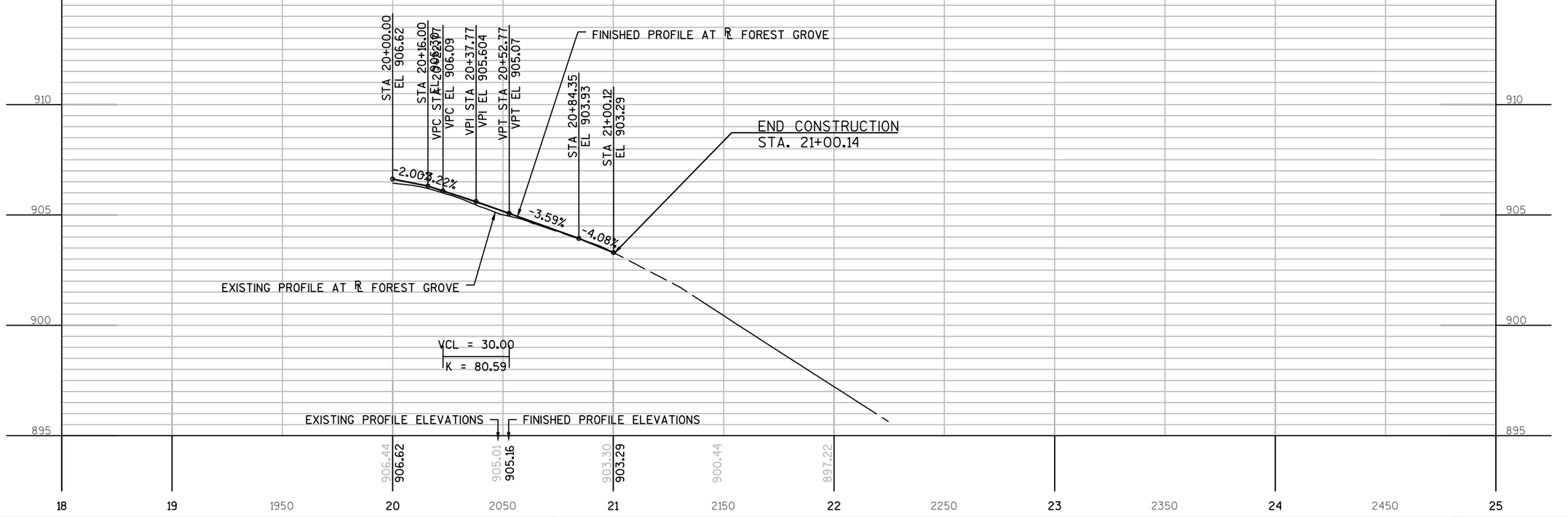
PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN AND PROFILE - PARK ENTRANCE	SHEET 281	E

FILE NAME : W:\PDS\C3D\CAD\10603203\73\050102_PP.DWG
LAYOUT NAME - 050102_PP

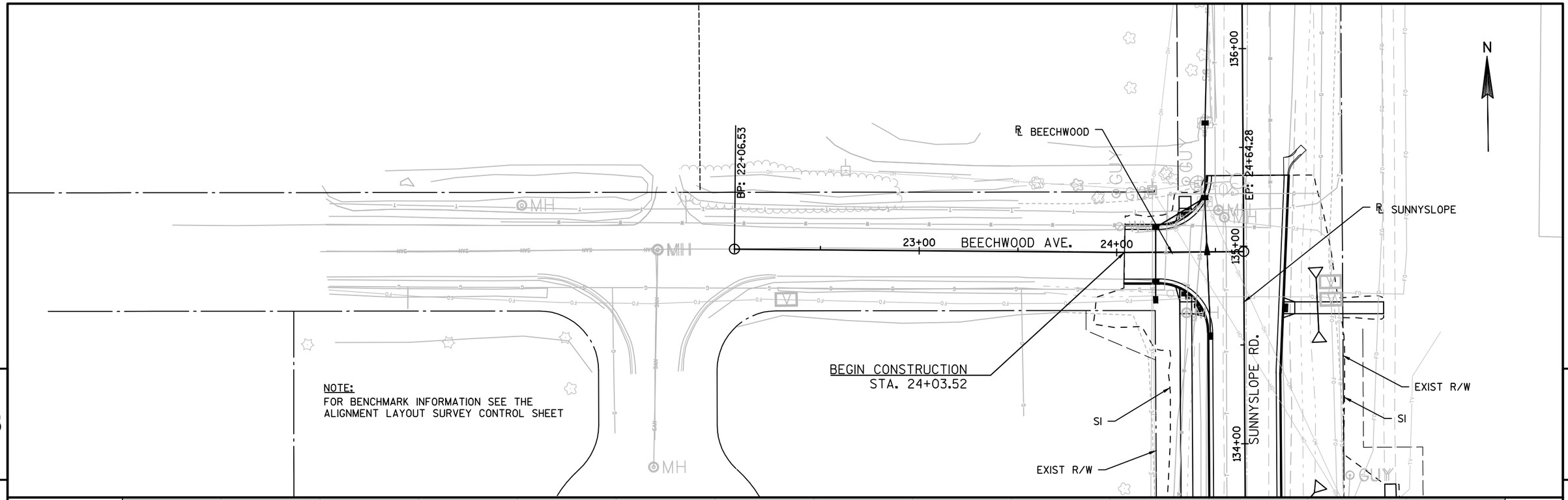
PLOT DATE : 3/2/2017 6:12 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:50 FT

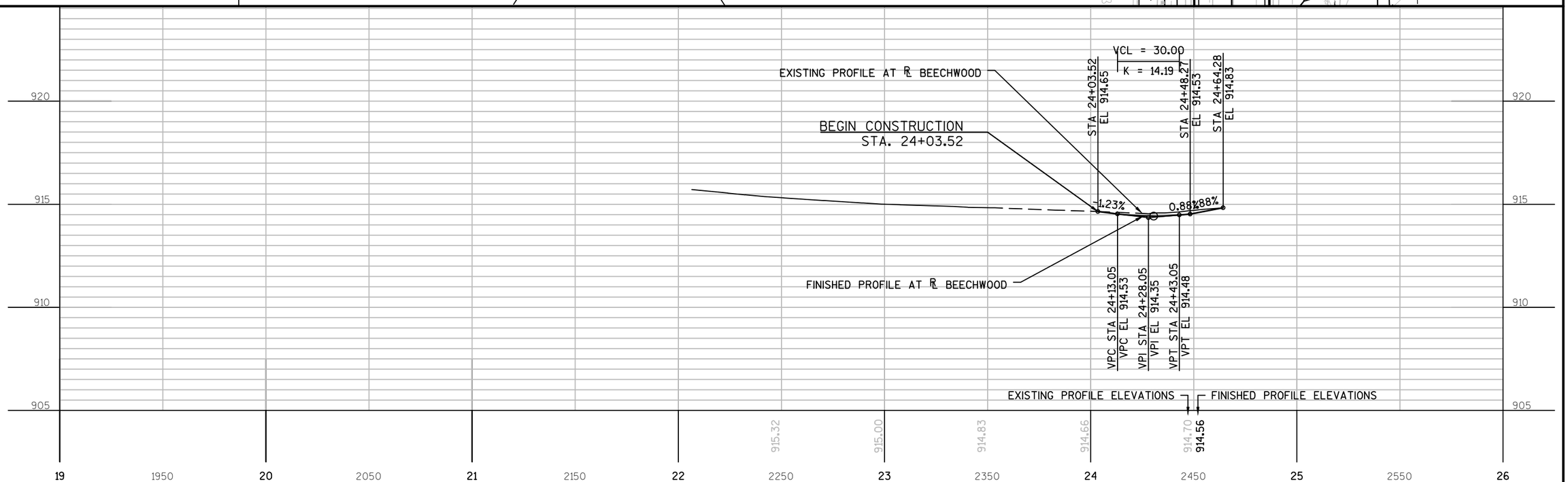
WISDOT/CADDS SHEET 44





PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN AND PROFILE - FOREST GROVE RD.	SHEET 282	E





PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	PLAN AND PROFILE - BEECHWOOD AVE.	SHEET 283	E

FILE NAME : W:\PDS\C3D\CAD\10603203\73\050102_PP.DWG
LAYOUT NAME - 050104_PP
PLOT DATE : 3/2/2017 6:12 PM
PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

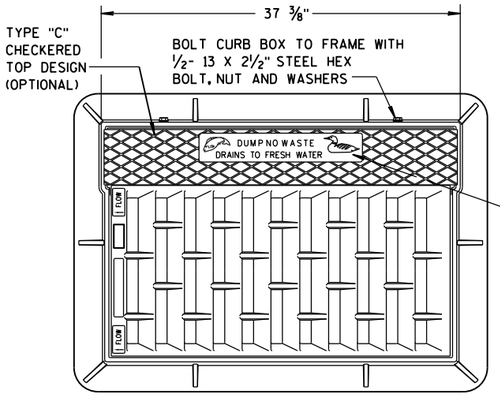
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D19 - 01	DRIVEWAY AND SIDEWALK RAMPS TYPE Z
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-09	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E02-04	FREEWAY LIGHTING UNIT POLE WIRING
09H03-01	2 CIRCUIT METER BREAKER PEDESTAL
09H04-01	2 CIRCUIT ELECTRICAL SERVICE METER BREAKER PEDESTAL AND BREAKER DISCONNECT BOX
09H05-01	CABINET BREAKER DISCONNECT BOX INSTALLATION
09H09-01	COMMUNICATION VAULT
10A01-03	ELECTRICAL HANDHOLE WIRING
10A02-03	IDENTIFICATION PLAQUES LIGHT POLES
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
14B20-11G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B20-11H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
14B28-03	GUARDRAIL MOW STRIP
14B32-04A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-04B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-04C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-04D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-04E	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B35-01C	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
14B35-01D	32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
14B39-01C	36-INCH SSCB TO 42-INCH SSCB HEIGHT TRANSITION
14B39-01E	42-INCH SSCB TO 56-INCH SSCB HEIGHT TRANSITION
14B41-02A	SINGLE SLOPE ROADSIDE RETAINING WALL
14B41-02B	SINGLE SLOPE ROADSIDE RETAINING WALL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

6

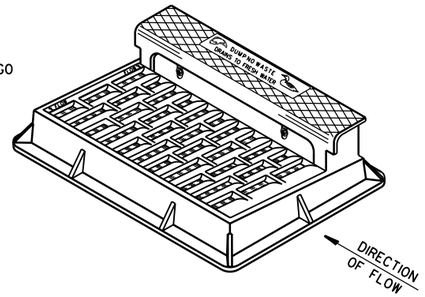
Standard Detail Drawing List

14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C19-04C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D14-03	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

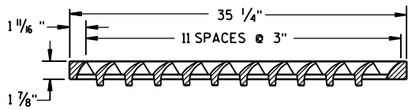
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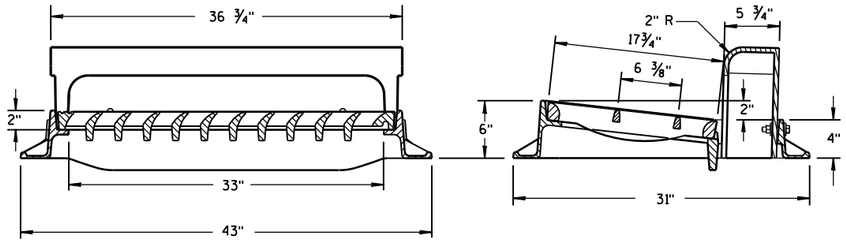


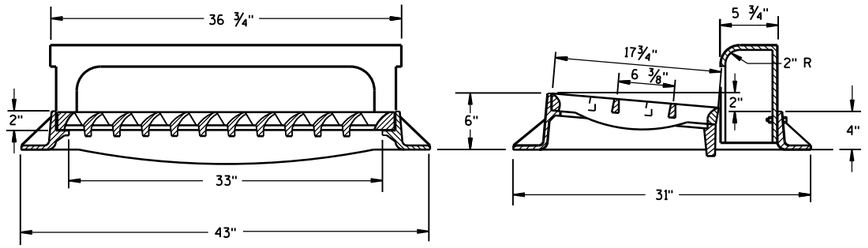
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

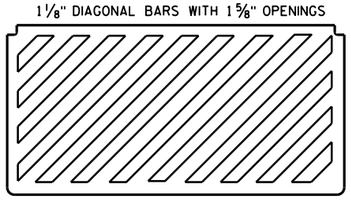






TYPE "H"

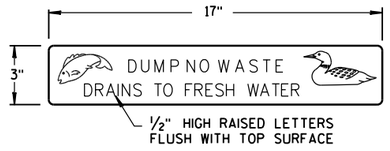
NOTE: EITHER CASTING IS ACCEPTABLE



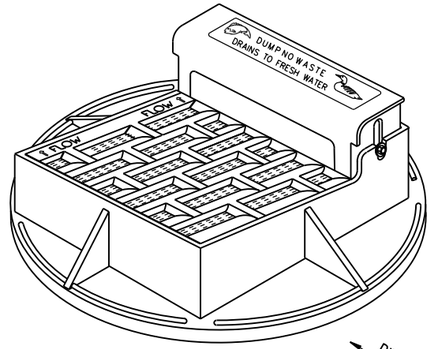
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

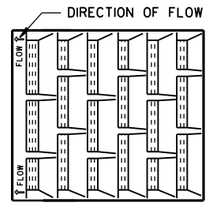
NOTE:
GRATE IS REVERSIBLE.

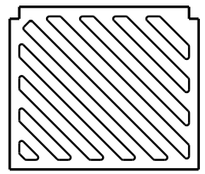
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

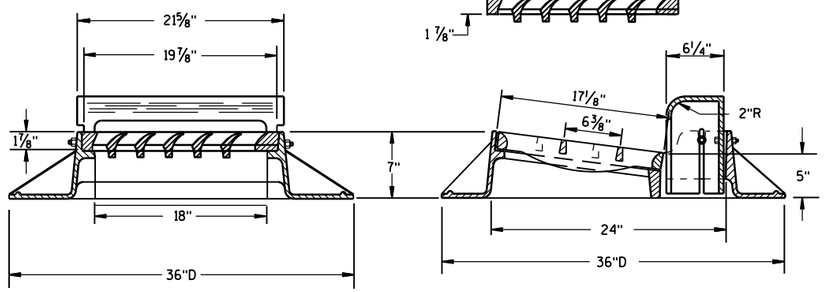




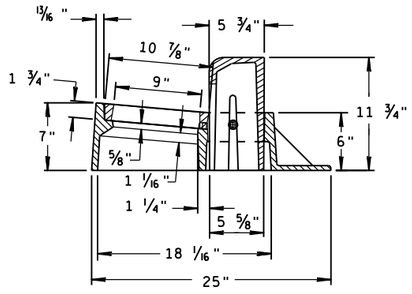
SPECIAL GRATE FOR TYPE "A" COVER

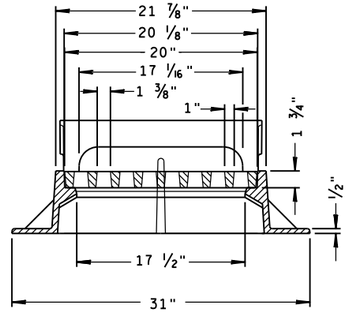
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

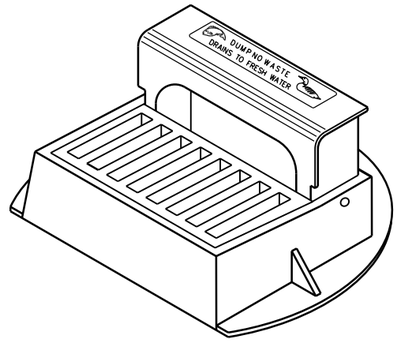


TYPE "A"





TYPE "Z"



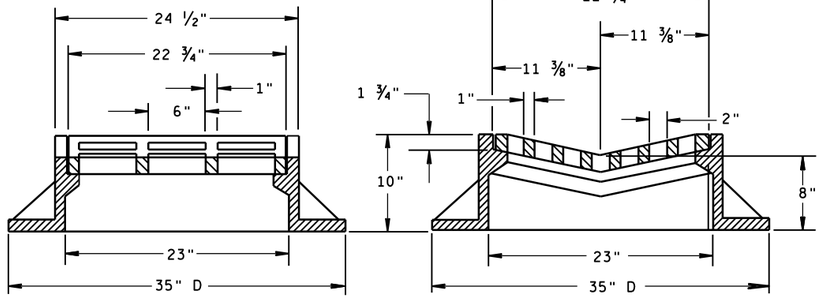
INLET COVERS
TYPE A, H, A-S, H-S & Z

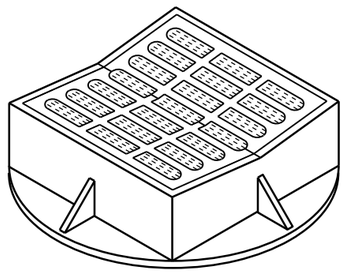
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

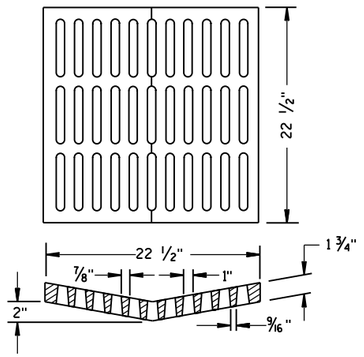
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S.D.D. 8 A 5-19a



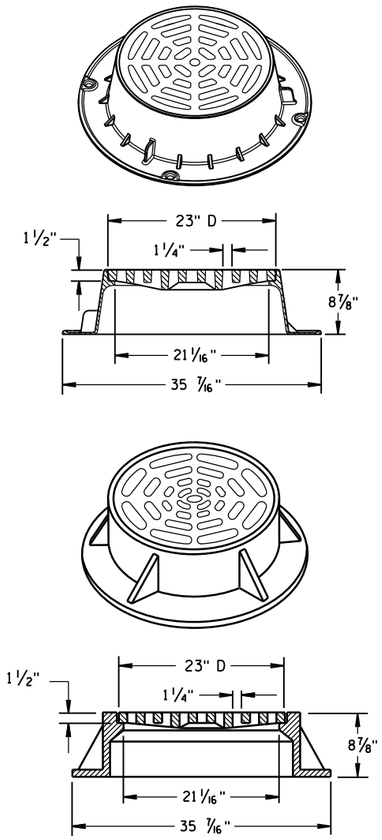


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

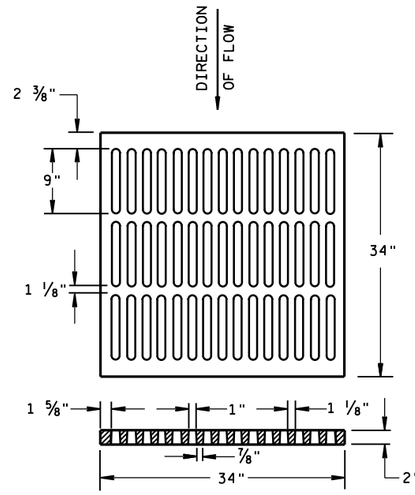
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

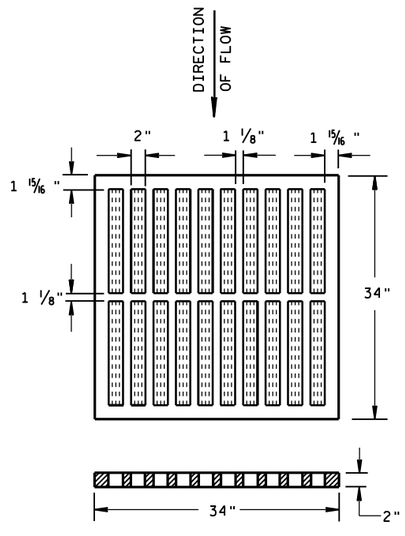
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



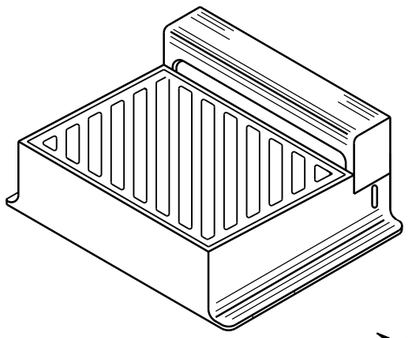
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

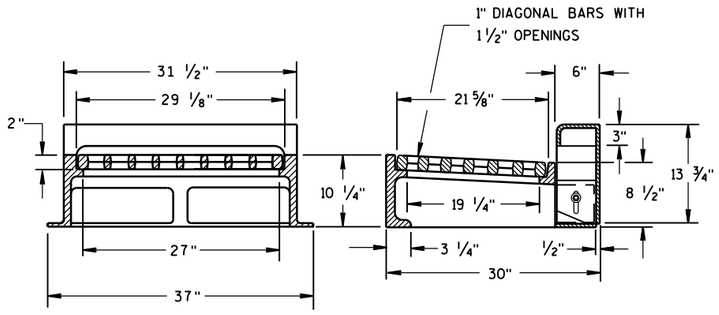


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

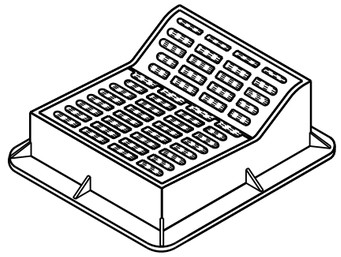
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

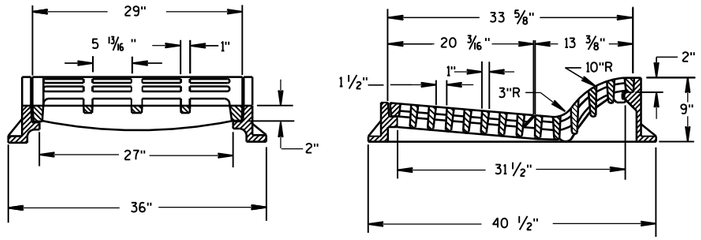
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

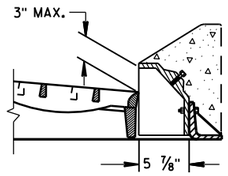
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

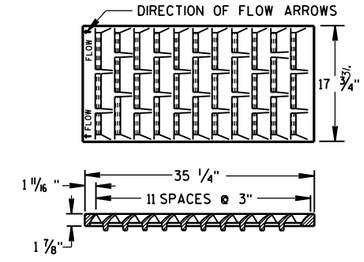
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

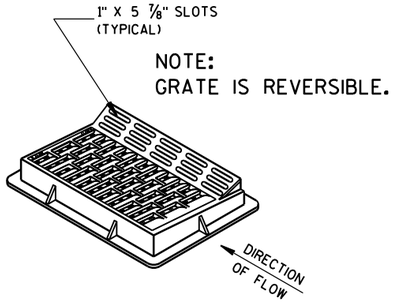
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

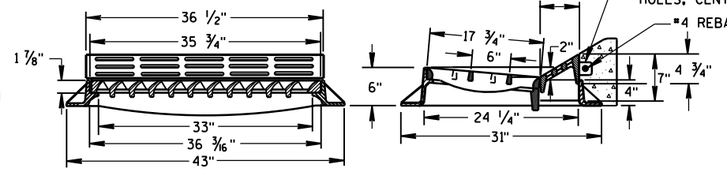
GENERAL NOTES

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.



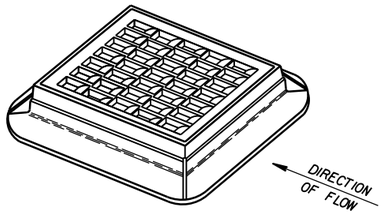


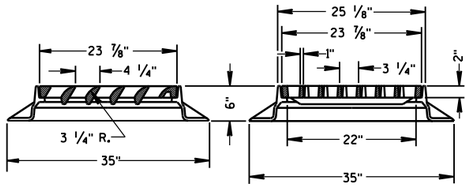


TYPE "HM"

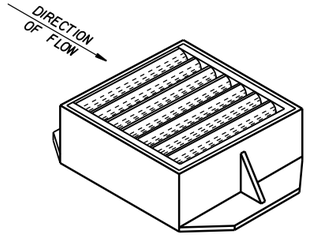
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

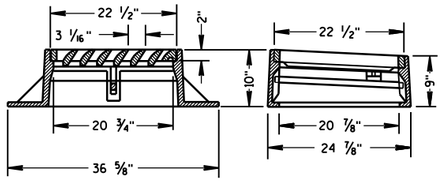
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



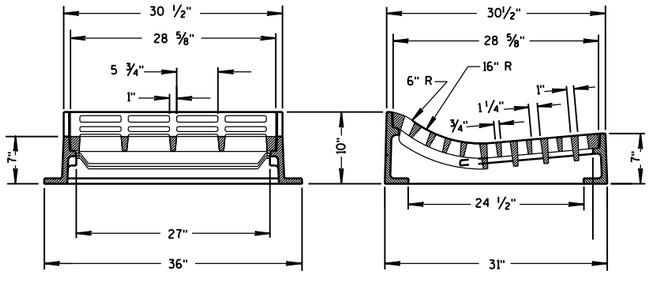


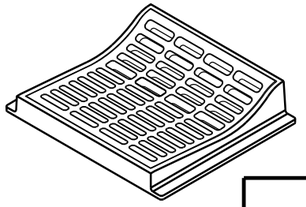
TYPE "S"





TYPE "V"





TYPE "T"

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

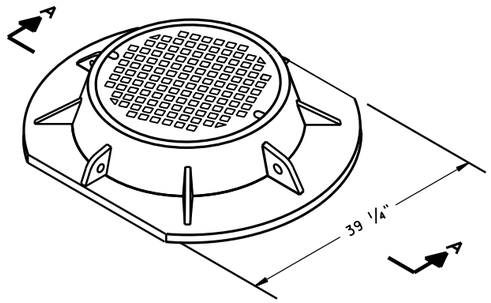
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

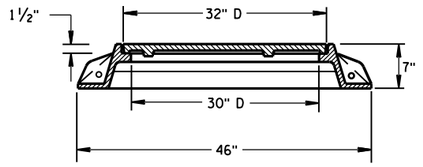
APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

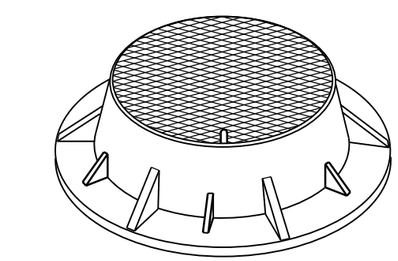
FHWA

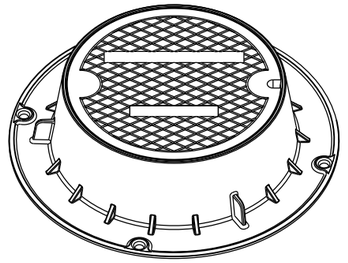
6
S.D.D. 8 A 5-19c

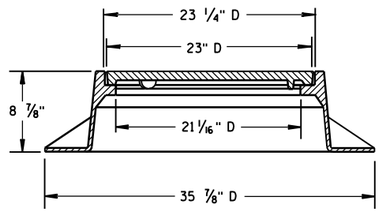


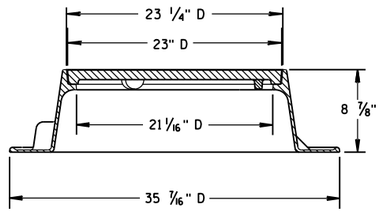


SECTION A-A
TYPE "K"









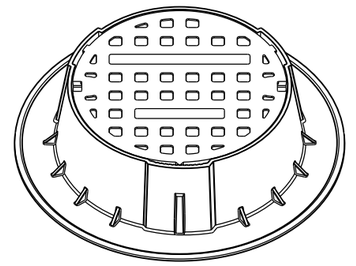
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

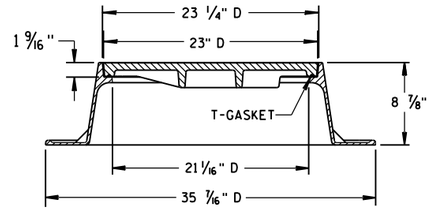
GENERAL NOTES

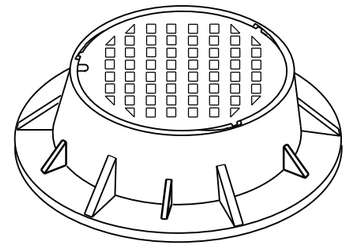
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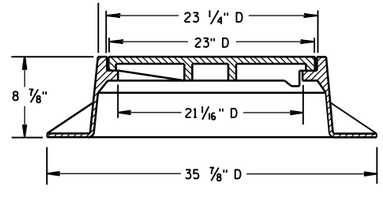
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

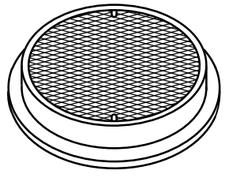


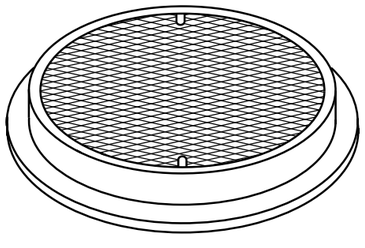


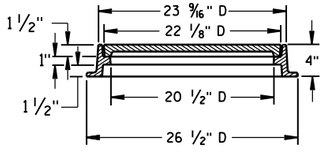




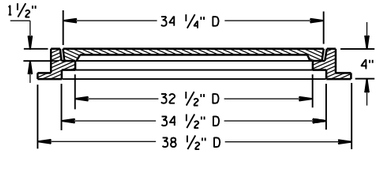
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



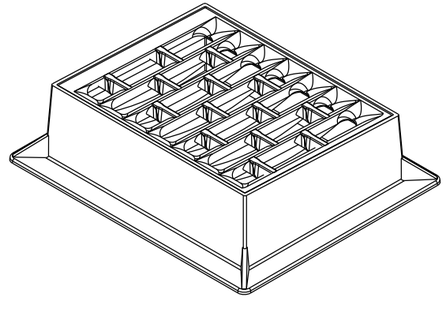


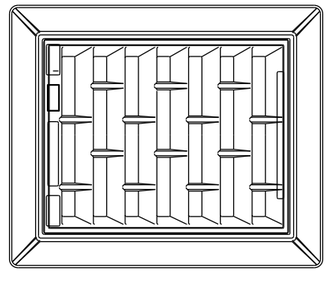


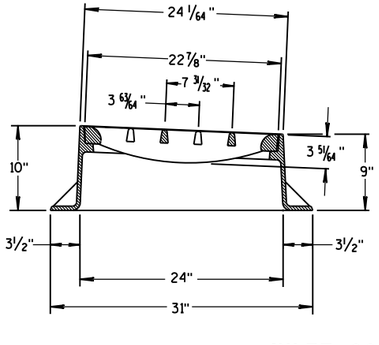
TYPE "L"

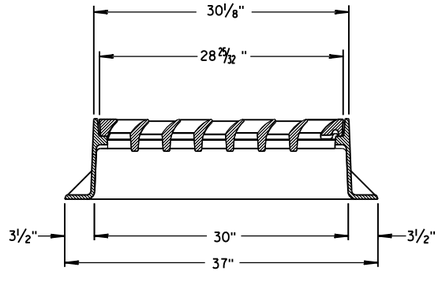


TYPE "M"









INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

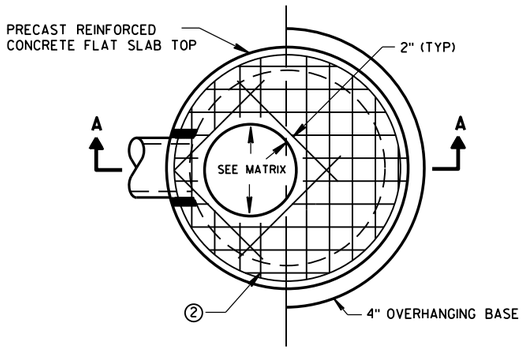
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

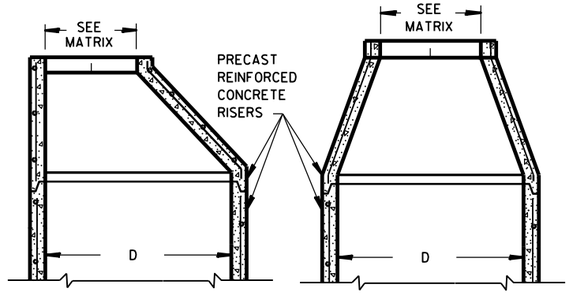
S.D.D. 8 A 5-19d

6

S.D.D. 8 A 5-19d

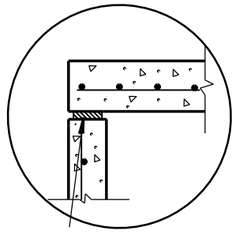


PLAN VIEW CIRCULAR OPENING

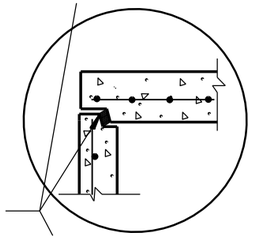


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

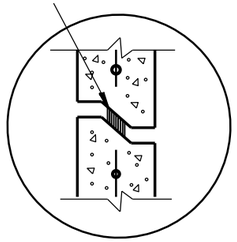
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT

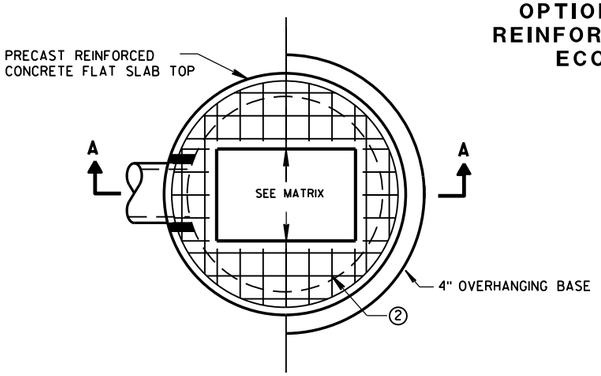


TOP WITH TONGUE AND GROOVE JOINT

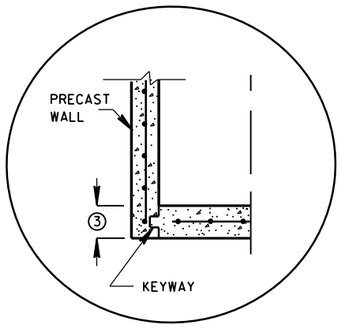


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

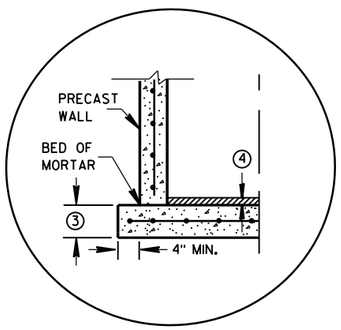


PLAN VIEW RECTANGULAR OPENING



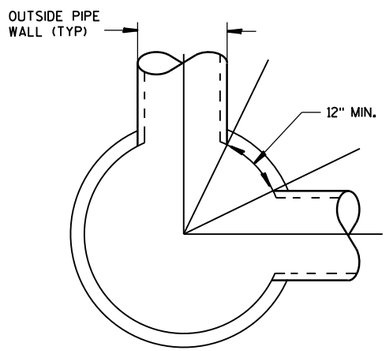
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

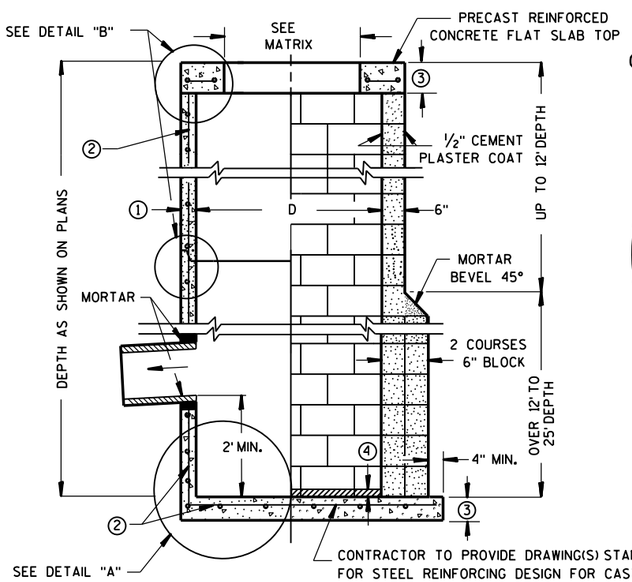


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT)											
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

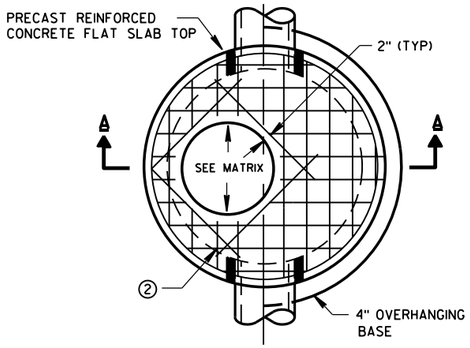
CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

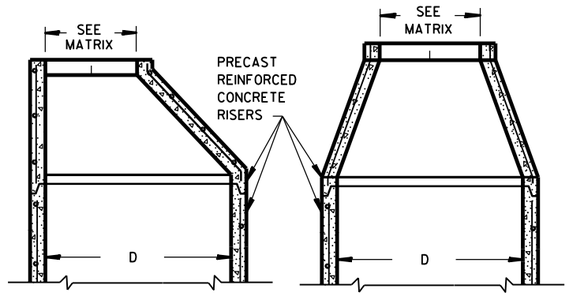
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

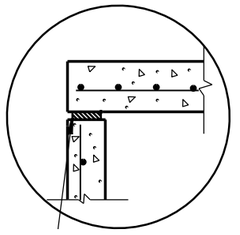


PLAN VIEW CIRCULAR OPENING

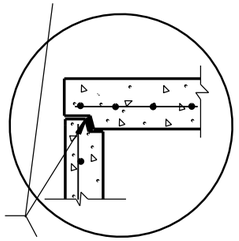


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

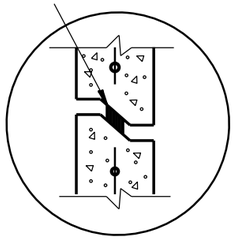


TOP WITH PLAIN END JOINT



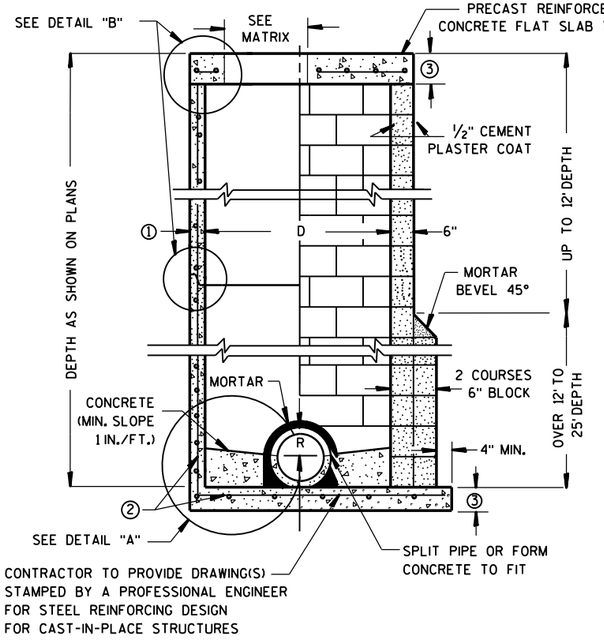
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



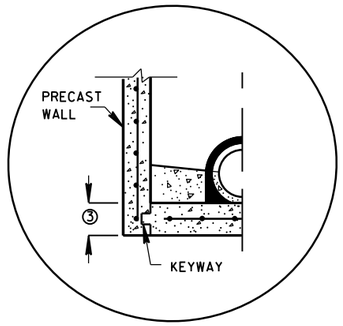
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

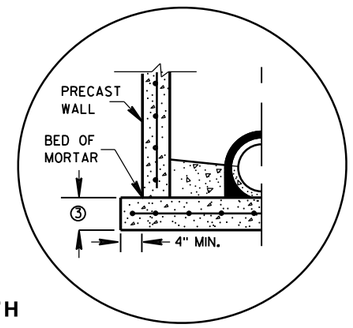


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

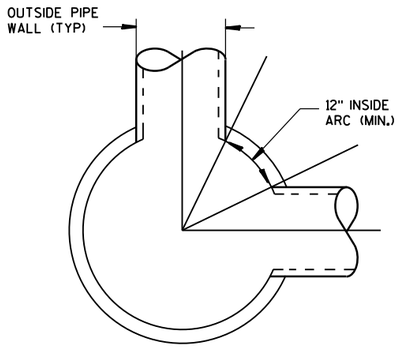


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

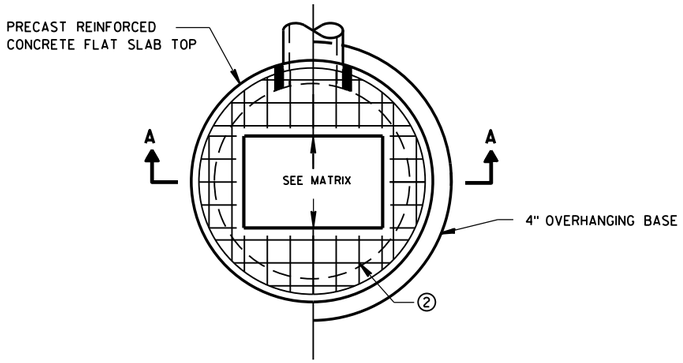
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

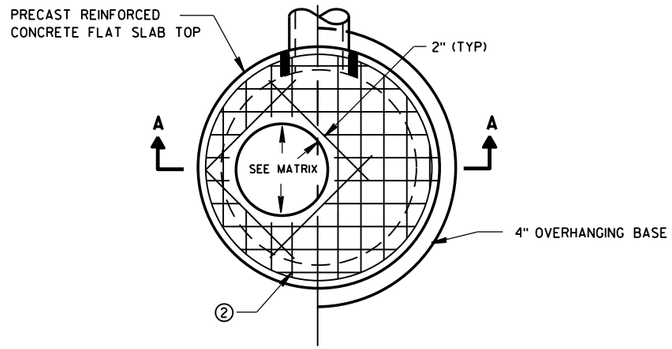
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

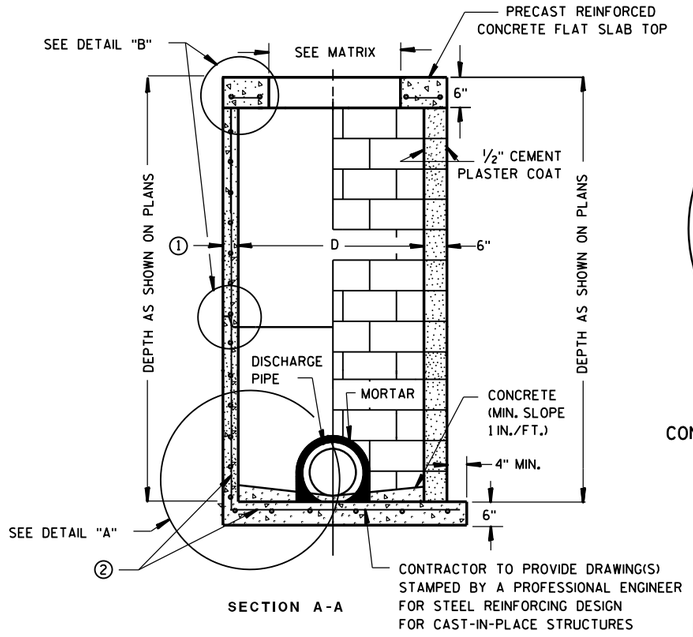
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PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

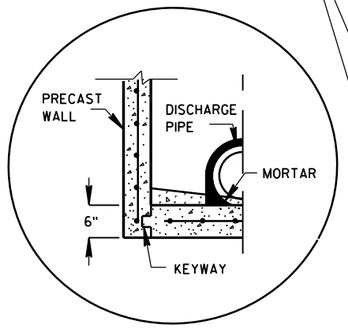


SECTION A-A

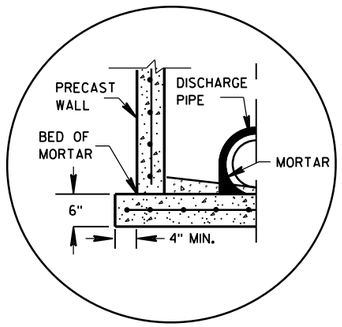
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

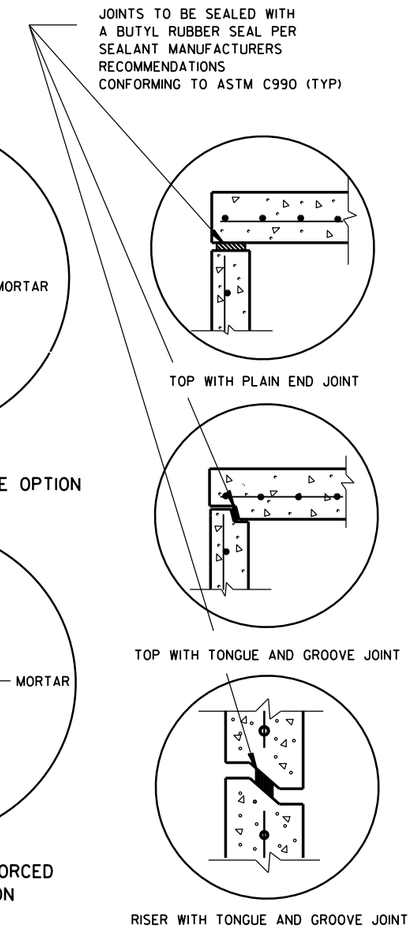


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



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 FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

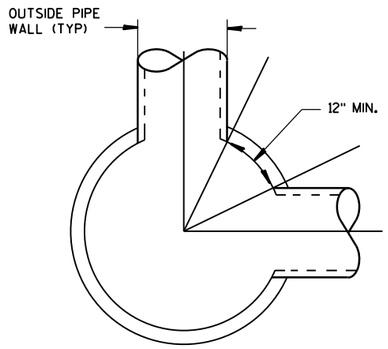
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

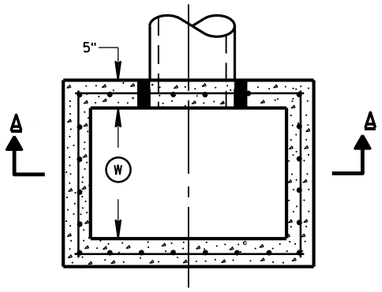
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept.. 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS | UNIT SUPERVI ENT
FHWA

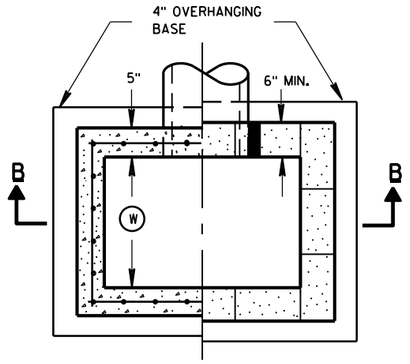
INLETS 3-FT AND 4-FT DIAMETER

6

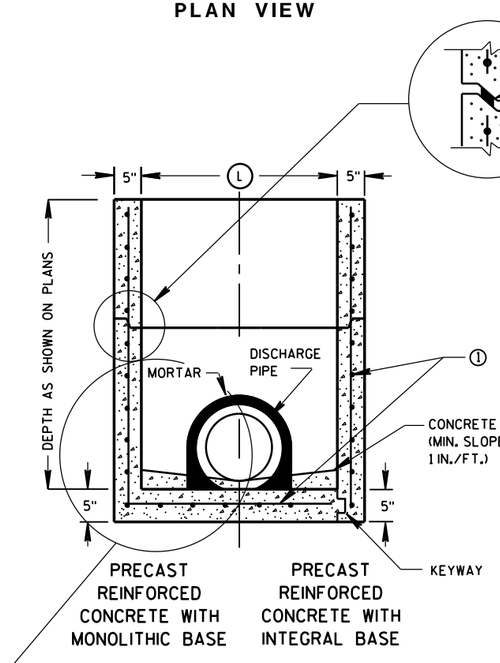
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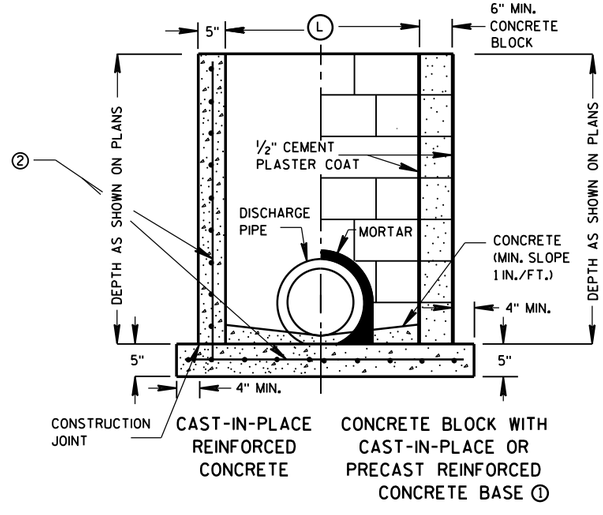
PLAN VIEW



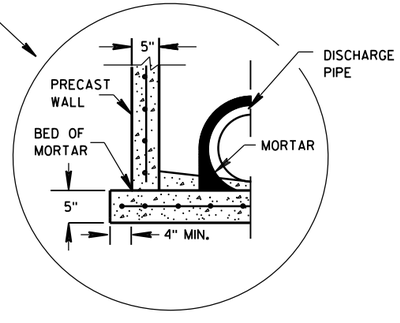
PLAN VIEW



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.

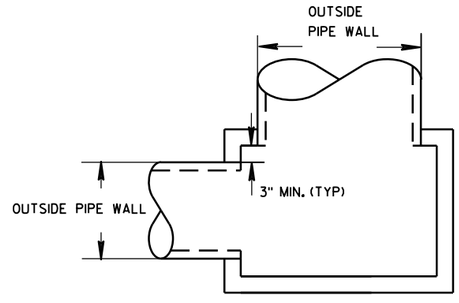
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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"

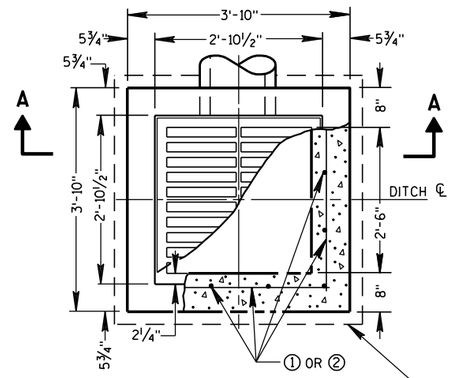
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

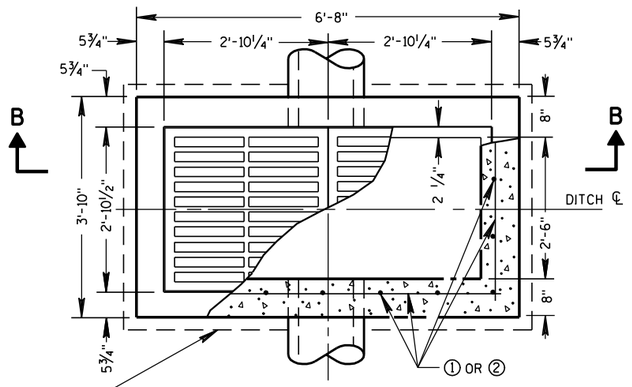
APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER

6
S.D.D. 8 C 7-1

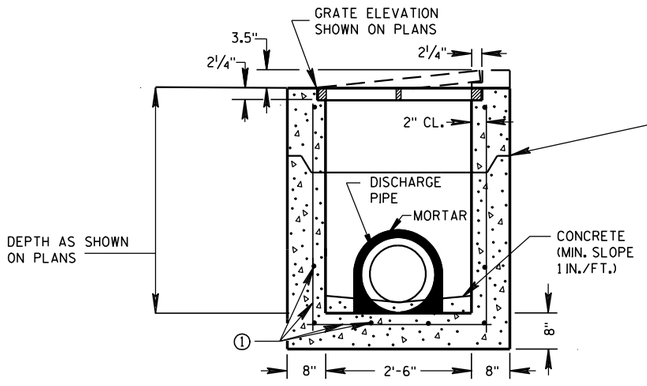


PLAN VIEW

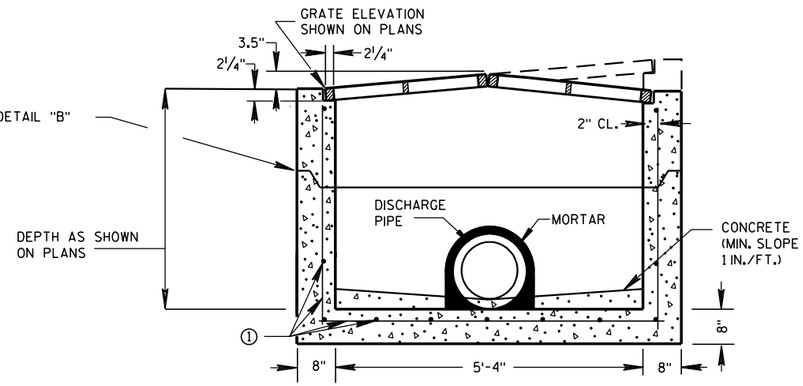


PLAN VIEW

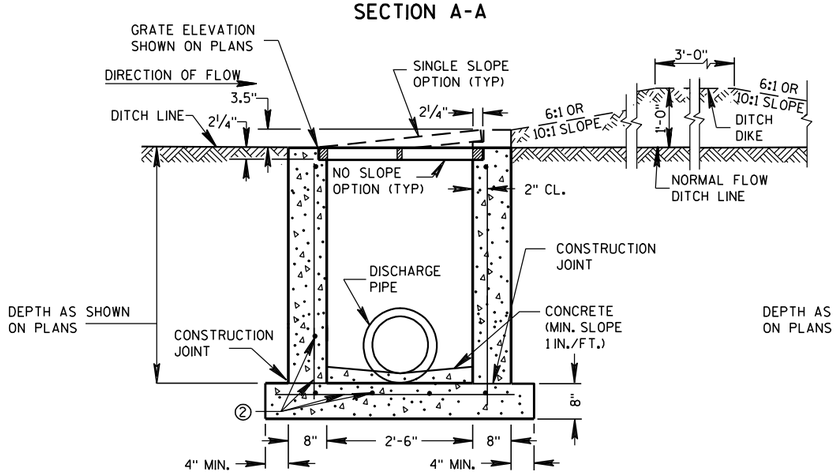
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



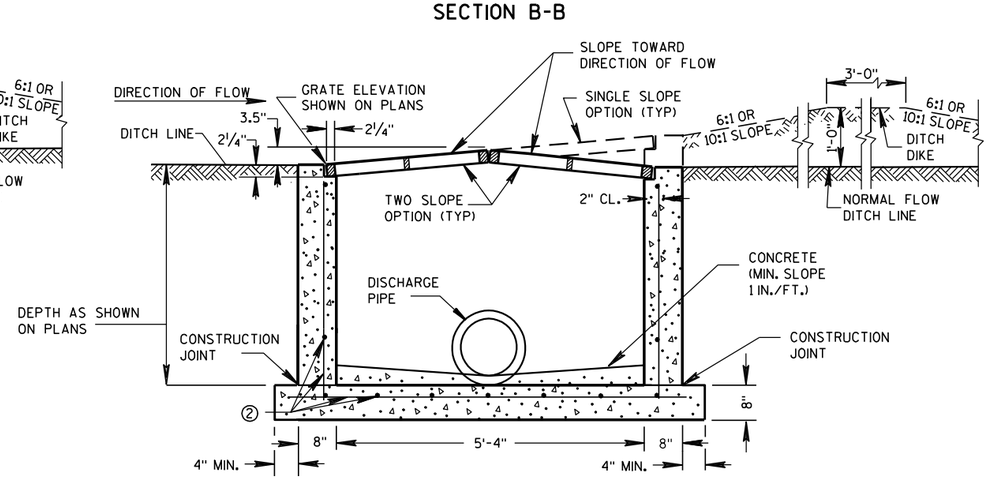
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

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 INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

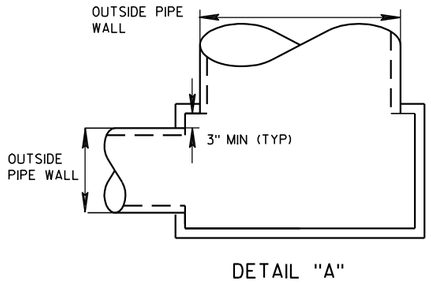
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

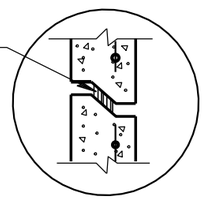
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

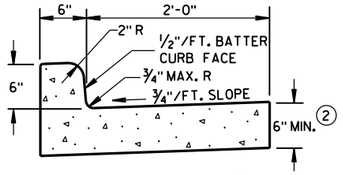
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

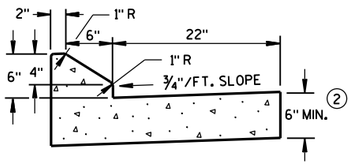
S.D.D. 8 C 8-1

6

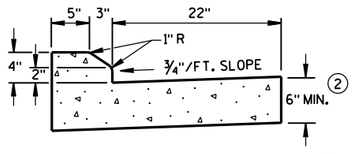
S.D.D. 8 C 8-1



TYPES A & D ①

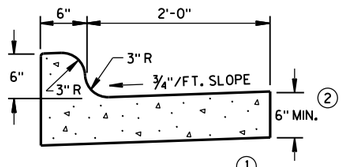


6" SLOPED CURB TYPES G & J ①

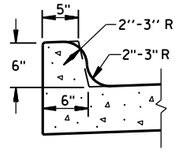


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

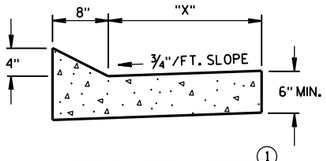


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

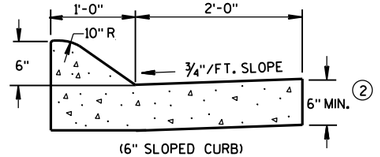
CONCRETE CURB & GUTTER 30"



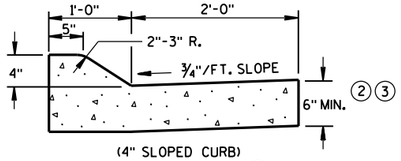
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

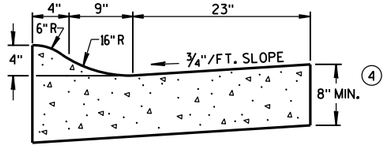


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

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, R AND TBTT.

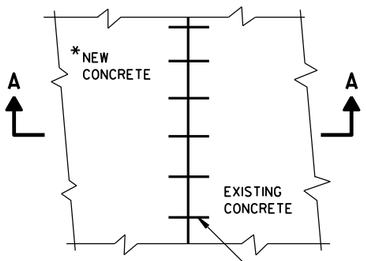
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

④ 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.

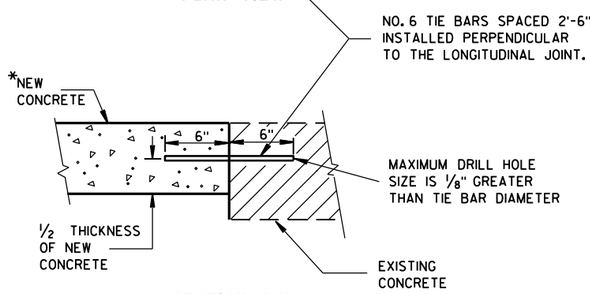
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



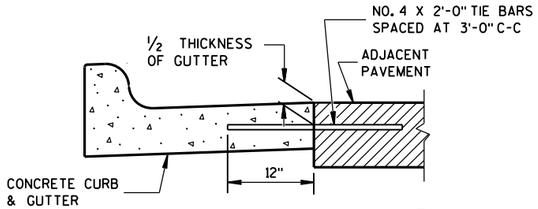
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

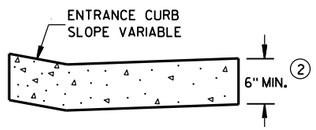


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

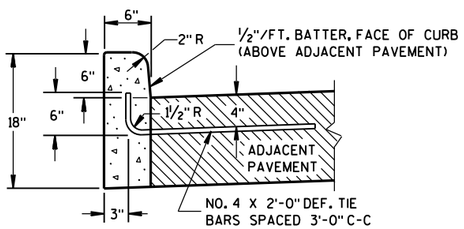


TYPICAL TIE BAR LOCATION ①

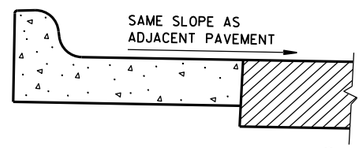


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

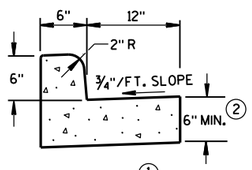


① TYPES A & D



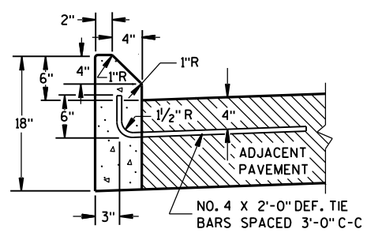
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



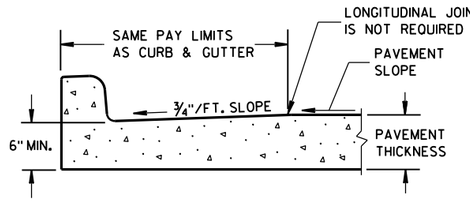
① TYPES A & D

CONCRETE CURB & GUTTER 18"

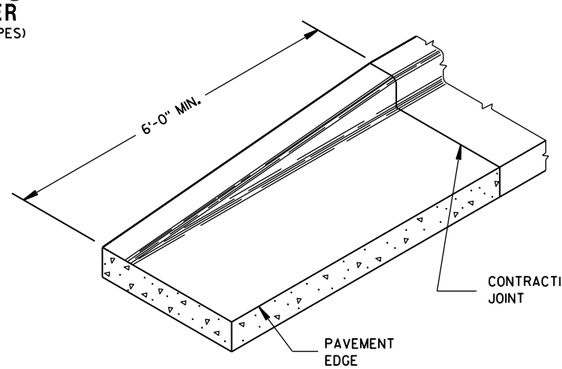


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2016 — DATE

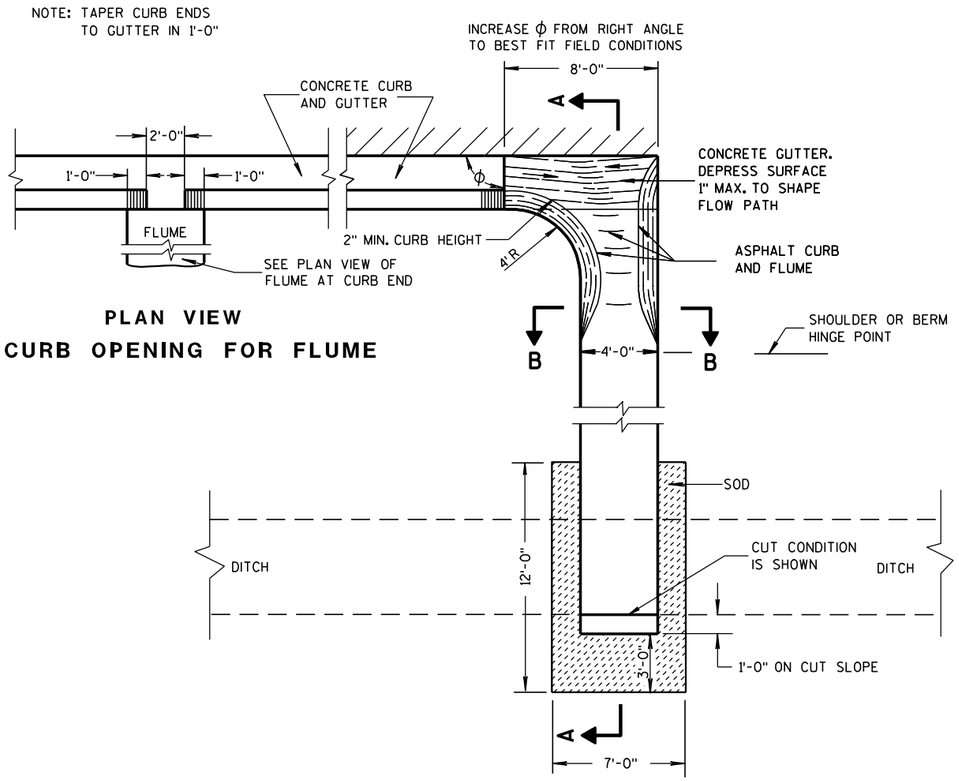
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

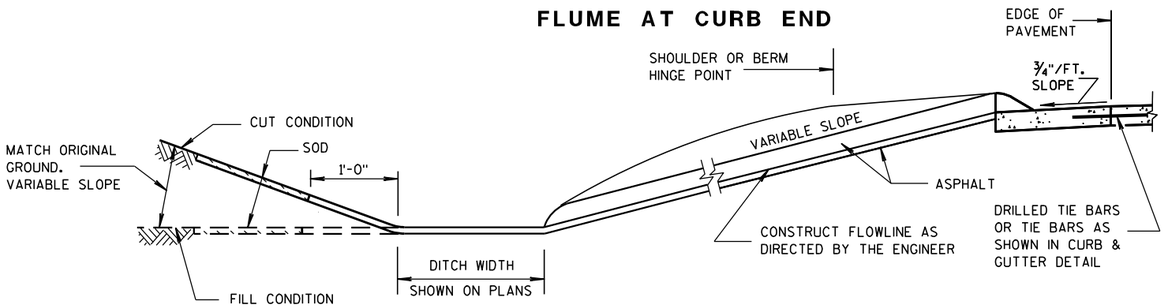
S.D.D. 8 D 1-19

ASPHALTIC FLUME

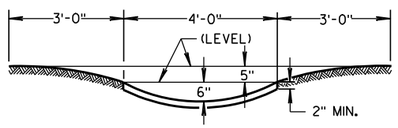


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

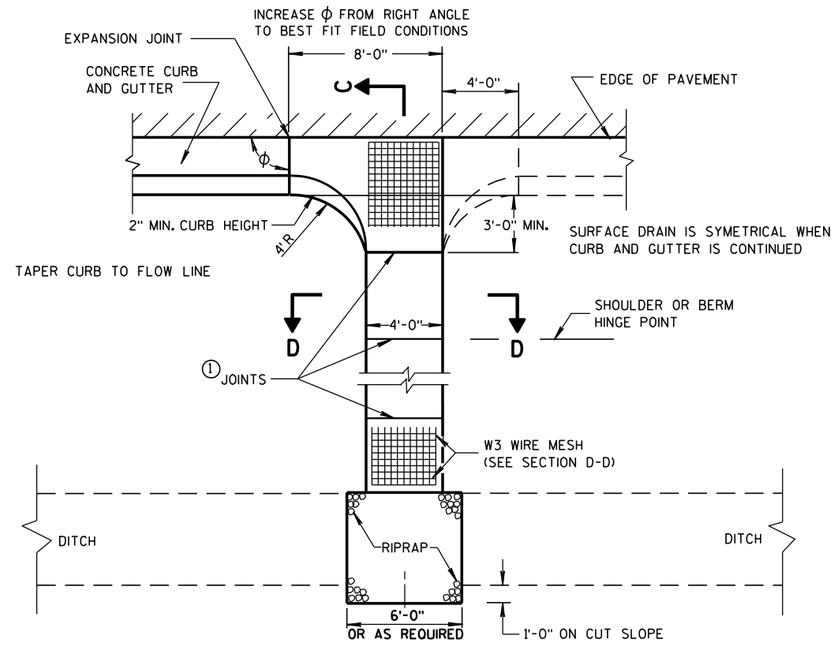
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

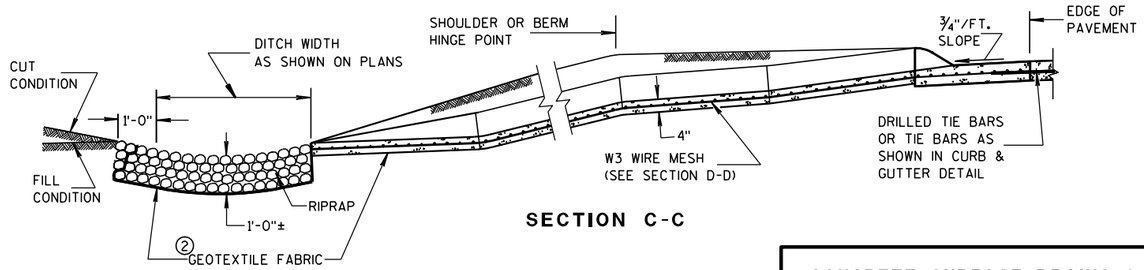
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

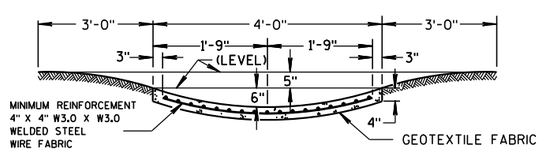
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

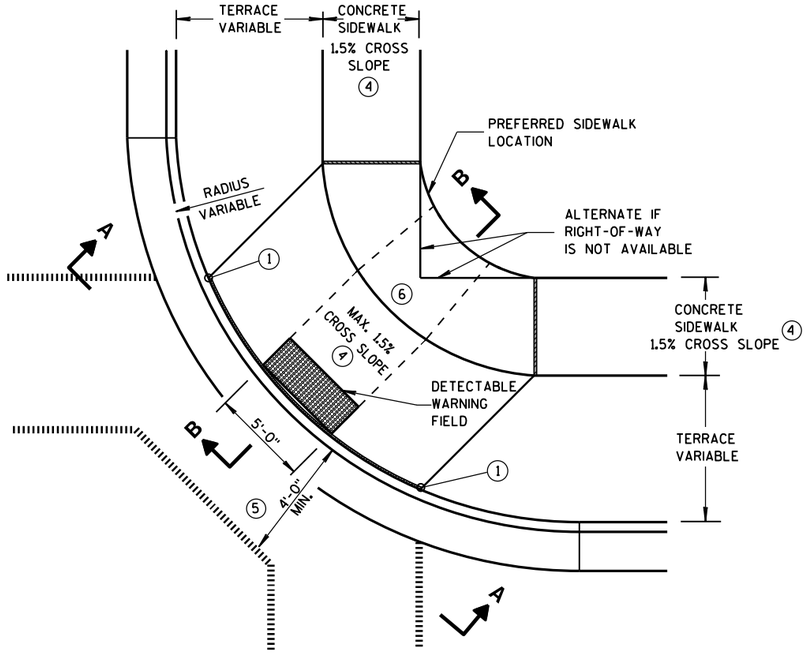
APPROVED
9-4-08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 D 4-5

6

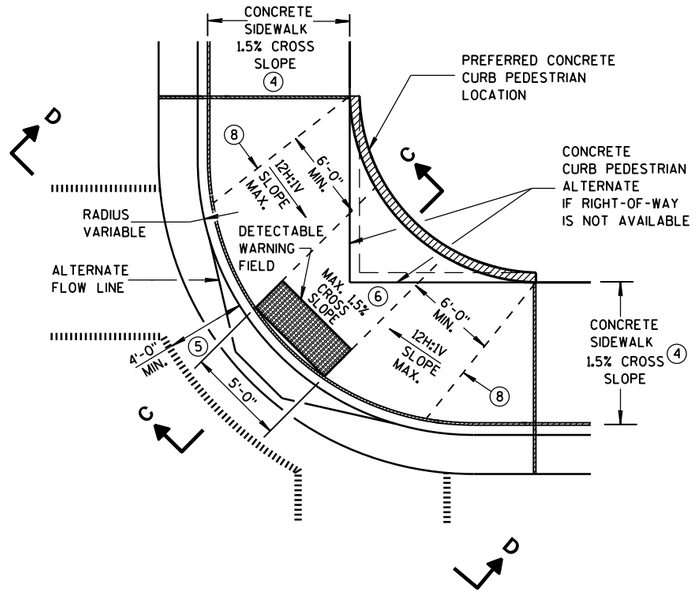
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

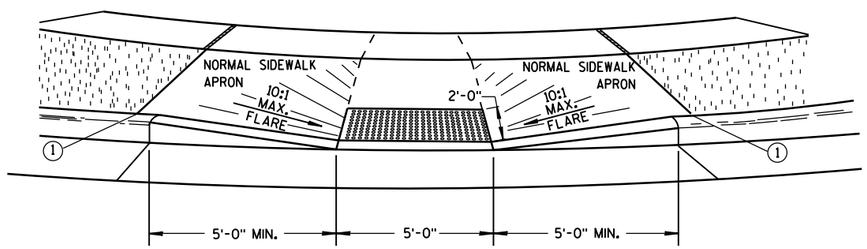
(CENTER OF CORNER RADIUS)



PLAN VIEW

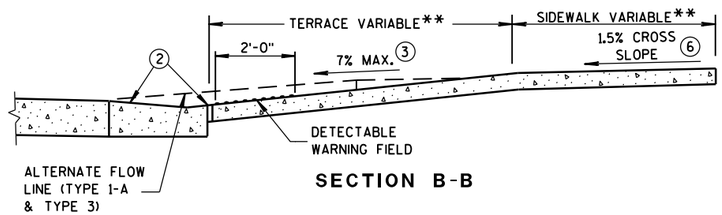
TYPE 1-A RAMP

(NO TERRACE)

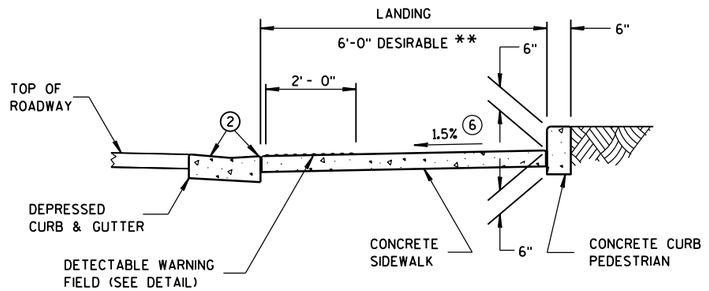


VIEW A-A

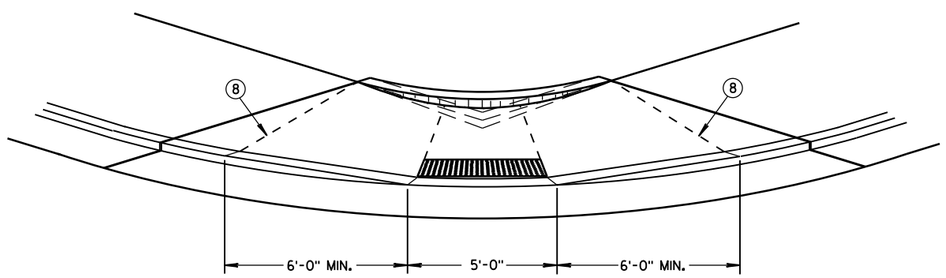
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

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.

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. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

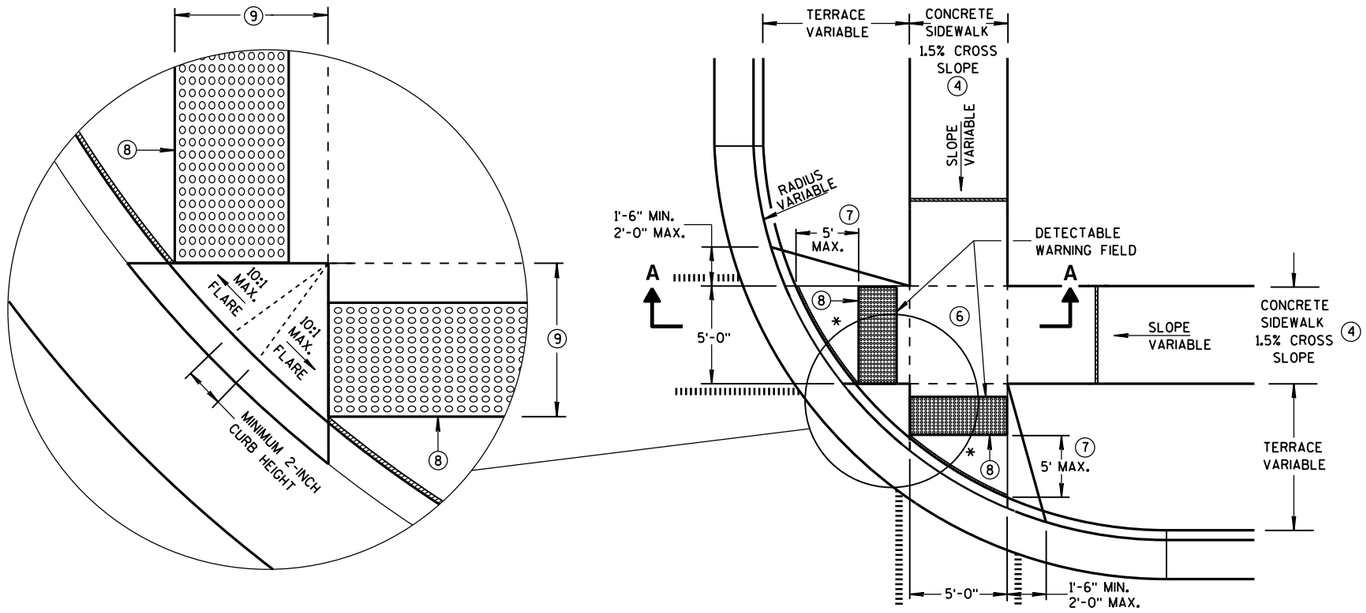
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 8 D 5-18a

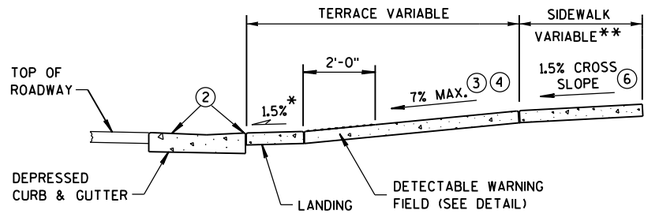


PLAN VIEW

TYPE 2 RAMP

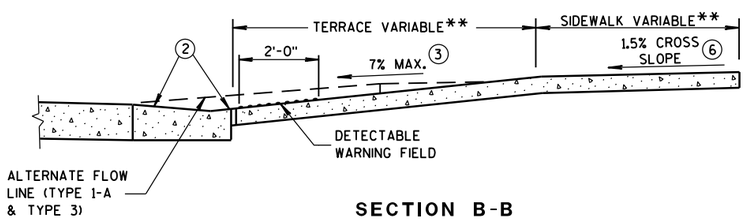
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

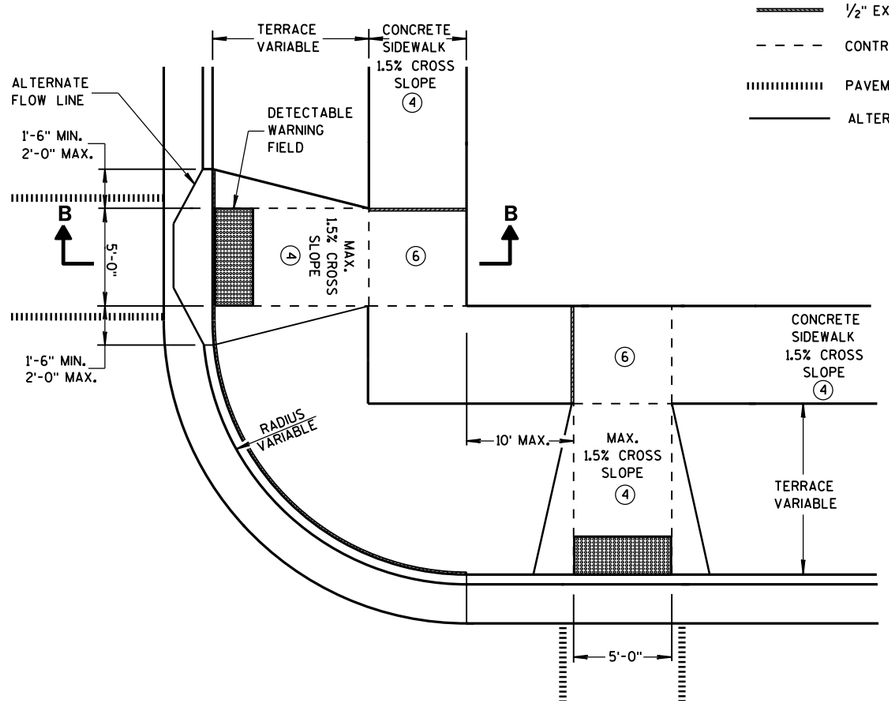
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW

TYPE 3 RAMP

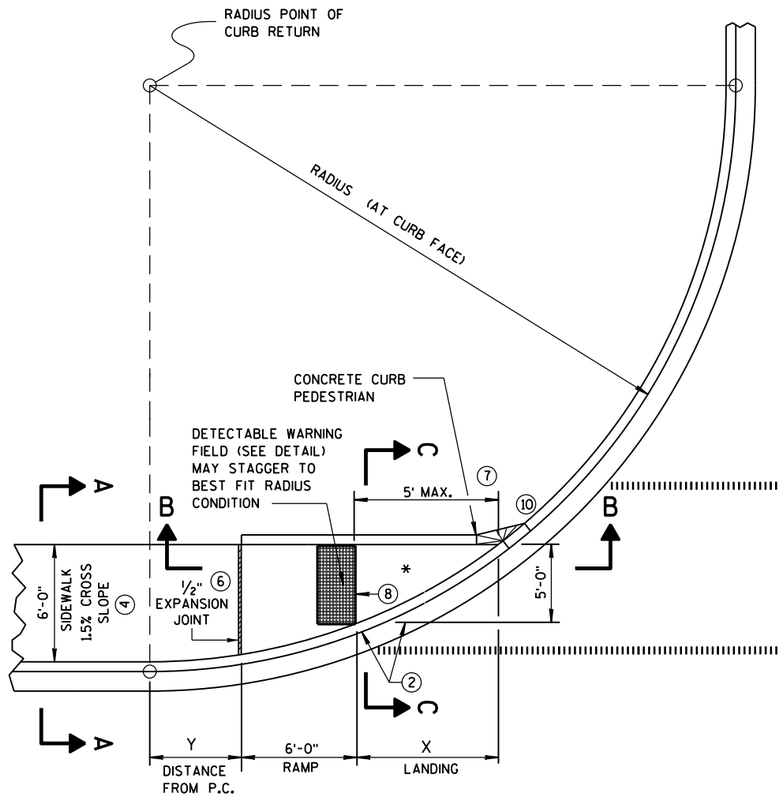
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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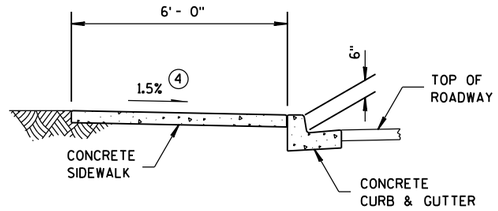
S.D.D. 8 D 5-18b



CURB RAMP TYPE 4A
PLAN VIEW

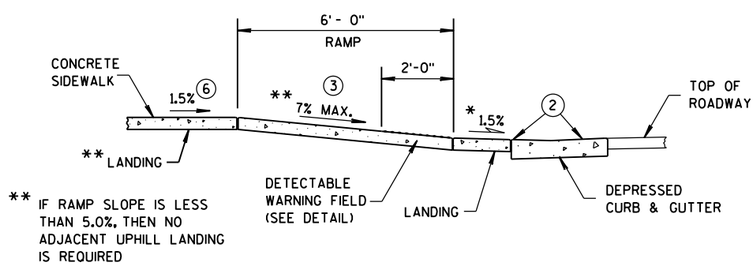
RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2¾"	1'-7½"
40 FEET	12'-1¼"	2'-10"
50 FEET	13'-8¾"	3'-10¾"
60 FEET	15'-2"	4'-10¼"

INTERMEDIATE RADII CAN BE INTERPOLATED

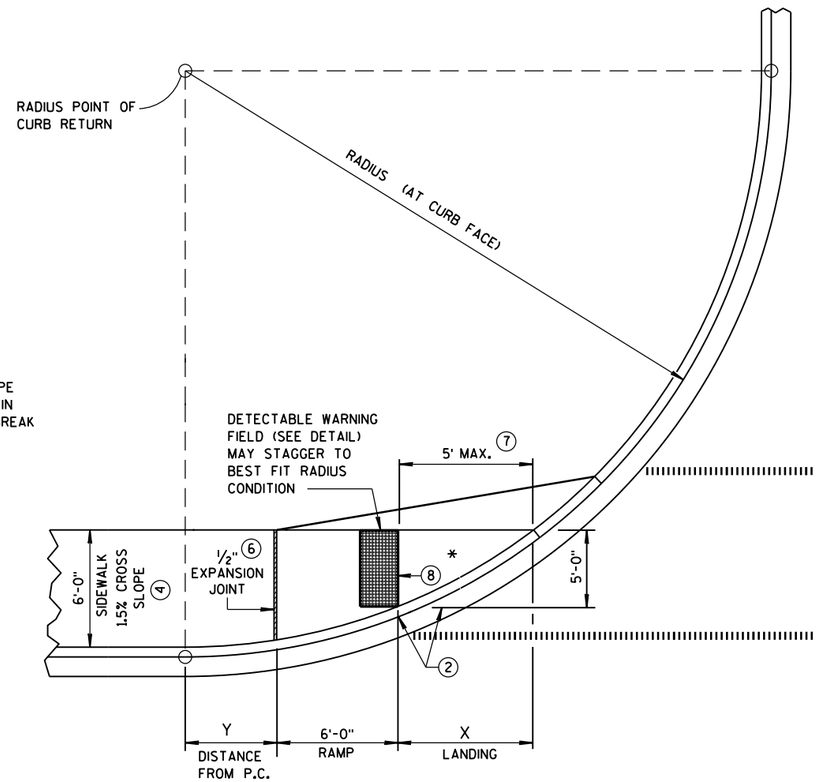


SECTION A-A FOR TYPE 4A

SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

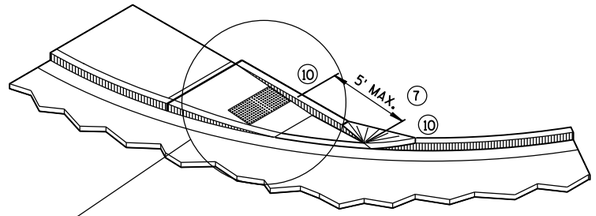
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

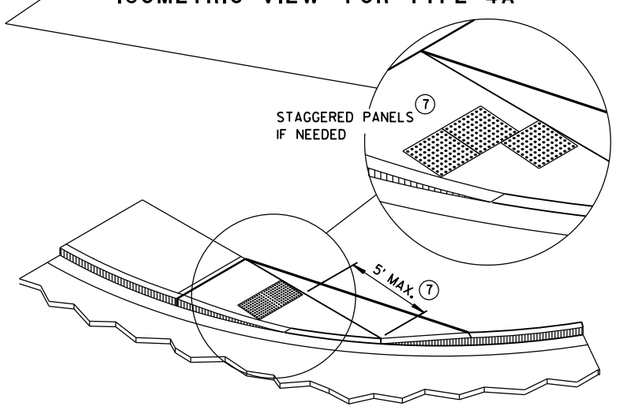
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

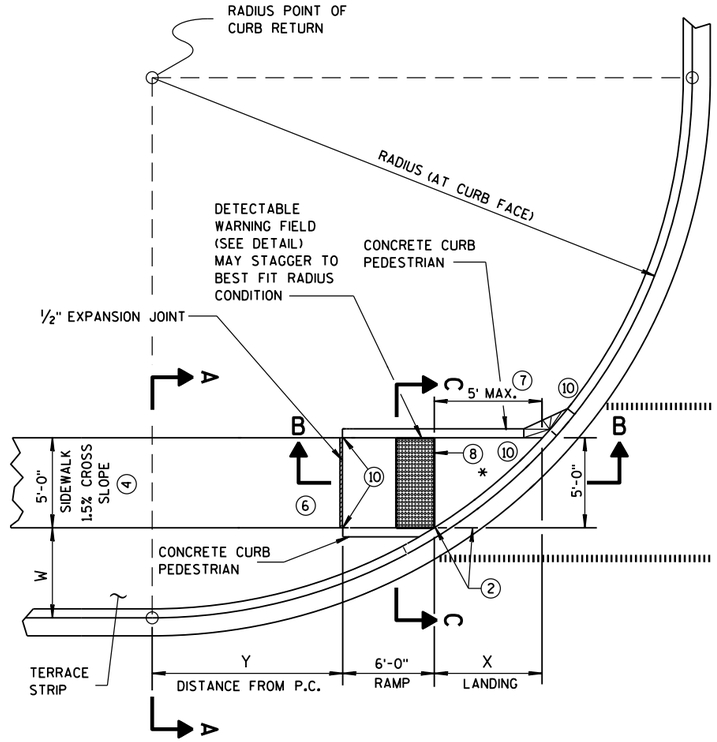
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 299

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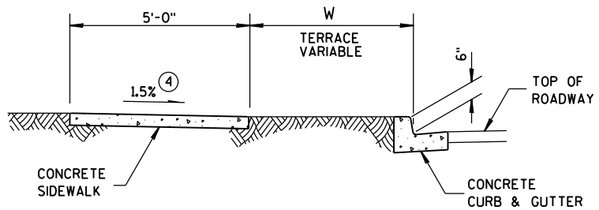
S.D.D. 8 D 5-18c

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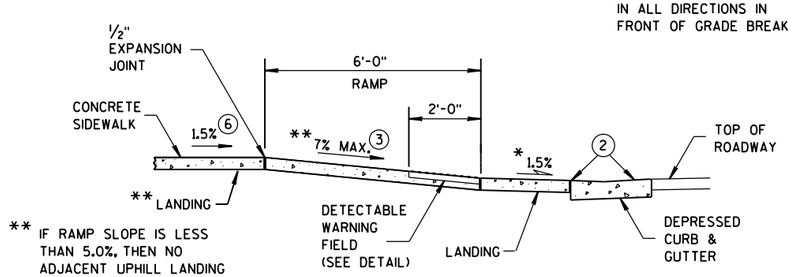
S.D.D. 8 D 5-18c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

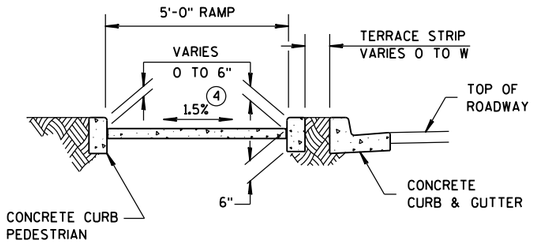
SECTION B-B FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

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'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-6¾"	3'-3"	8'-6¼"
30 FEET	7'-9¼"	5'-10½"	6'-9½"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"
40 FEET	9'-4"	7'-10"	8'-2¾"	10'-3"	7'-4¾"	12'-3¾"	6'-8½"	14'-1¼"	6'-1¾"	15'-8½"
50 FEET	10'-8"	9'-6½"	9'-5½"	12'-3¼"	8'-6½"	14'-7½"	7'-9¾"	16'-8¼"	7'-2½"	18'-6¼"
60 FEET	11'-10¼"	11'-0¾"	10'-6½"	14'-1¼"	9'-6½"	16'-8½"	8'-9¼"	18'-11¾"	8'-1½"	21'-0½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

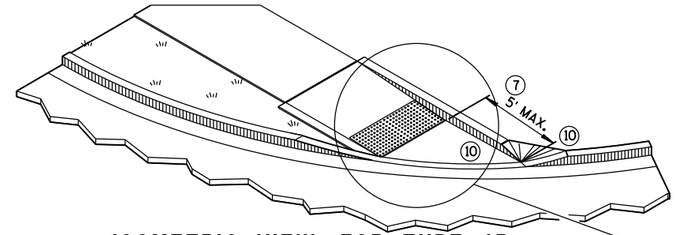
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

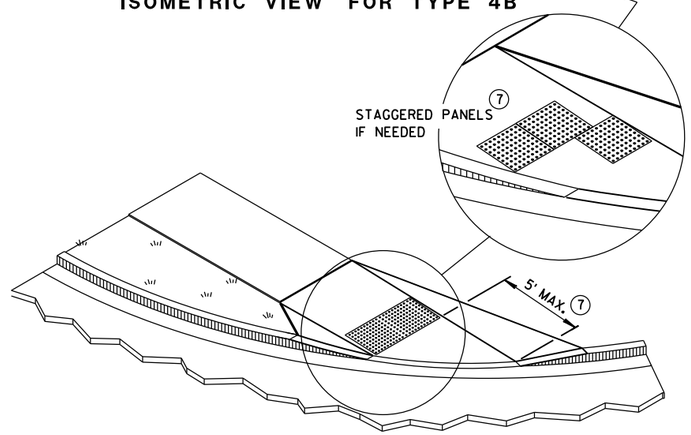
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

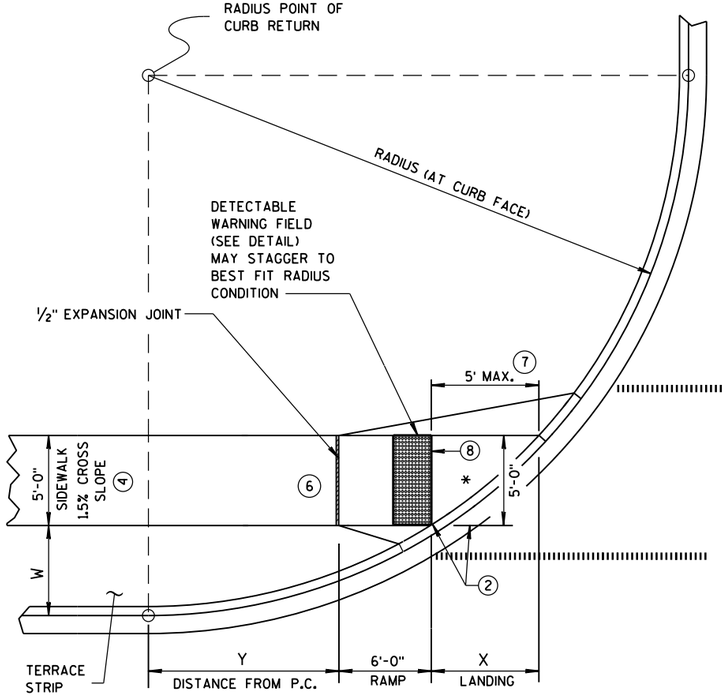
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS
TYPE 4B AND 4B1

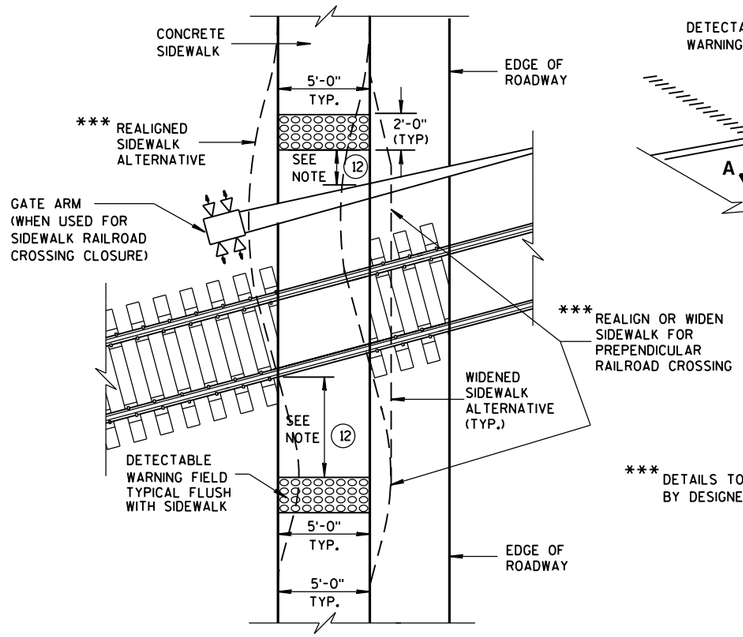
STATE OF WISCONSIN
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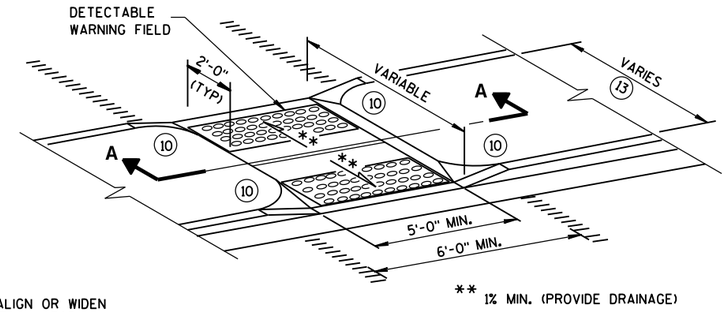
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S.D.D. 8 D 5-18d



*** DETAILS TO BE DETERMINED BY DESIGNER

TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



** 1% MIN. (PROVIDE DRAINAGE)

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.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

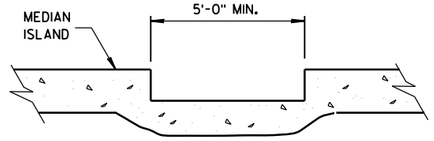
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) 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.

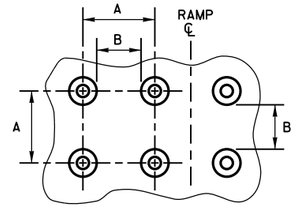
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



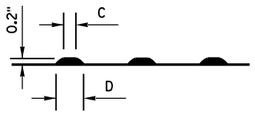
SECTION A-A

	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.

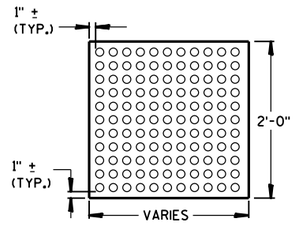


PLAN VIEW

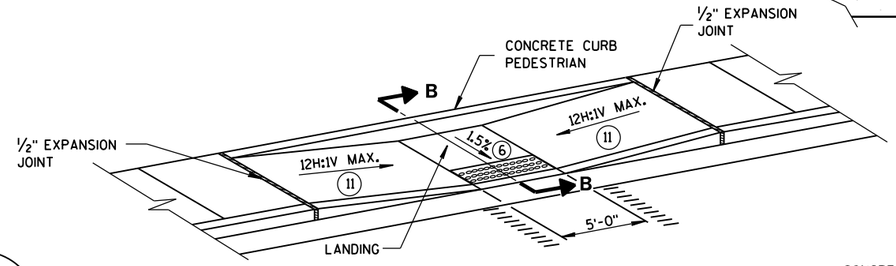


ELEVATION VIEW

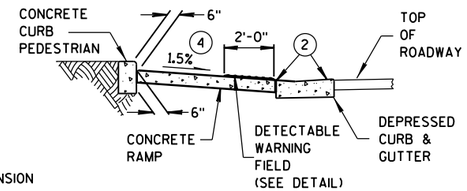
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW
DETECTABLE WARNING FIELD (TYPICAL)

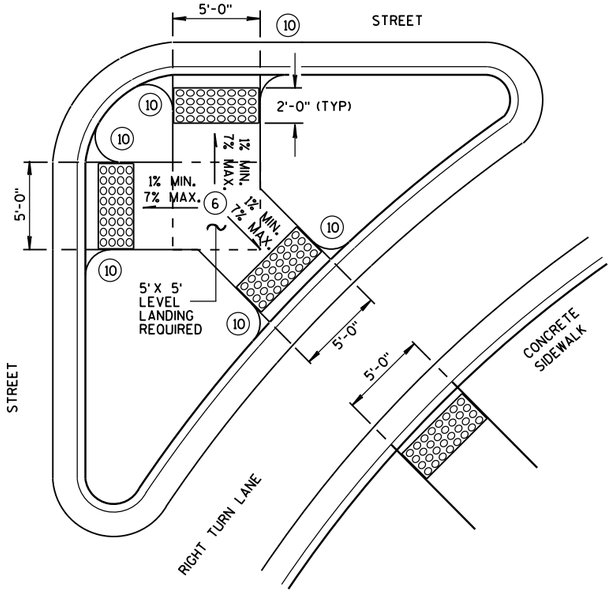


MID-BLOCK CROSSING
TYPE 7A

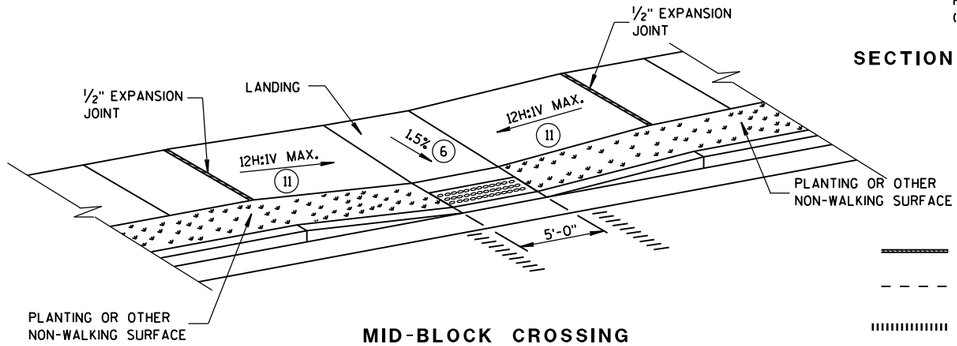


SECTION B-B

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



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

- 1/2" 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
Sept., 2016
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV

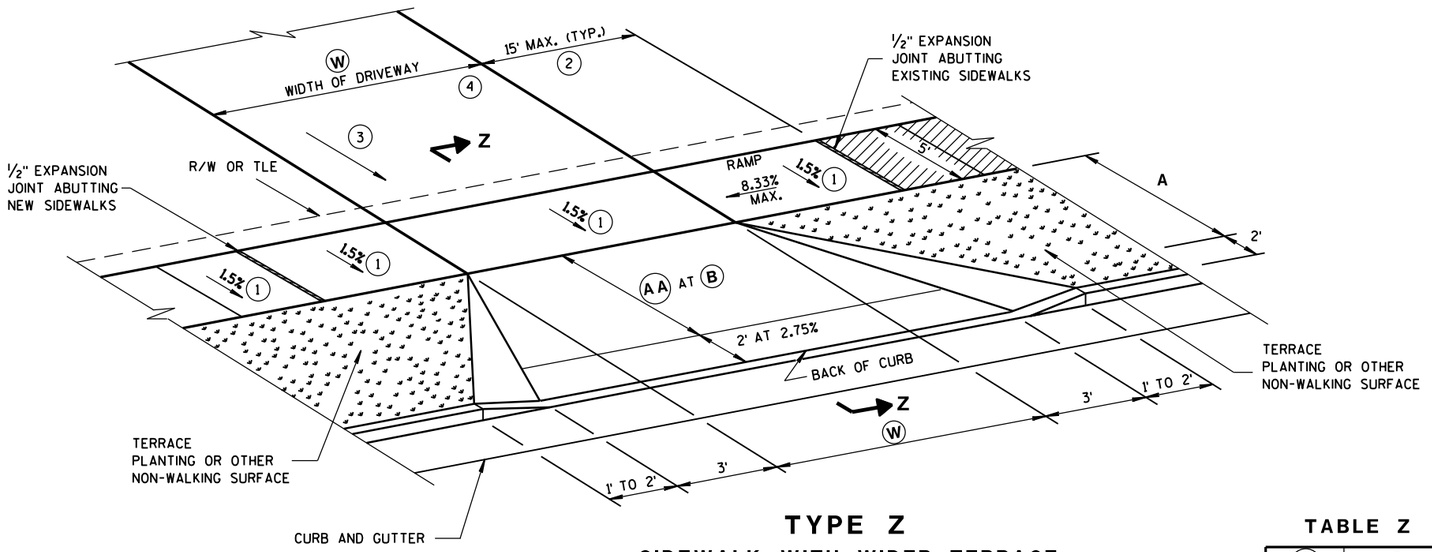
ENT

6

S.D.D. 8 D 5-18e

6

S.D.D. 8 D 5-18e

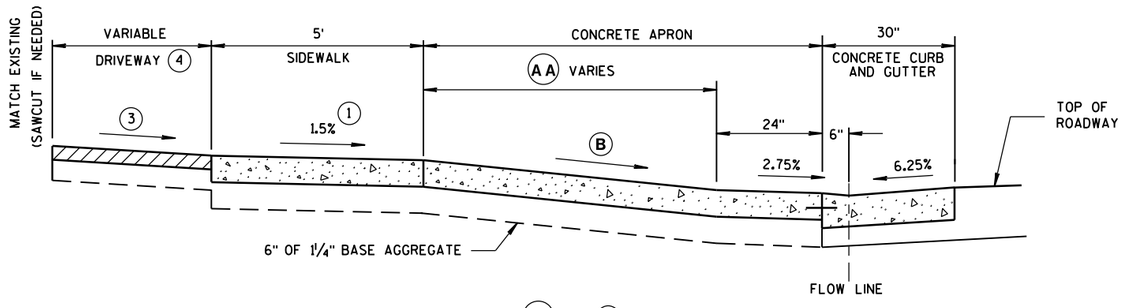


TYPE Z

SIDEWALK WITH WIDER TERRACE
TERRACE VARIES 7 TO 12 FEET

TABLE Z

(AA) FEET	(B) %
4.5'	11.5%
5.5'	9-11.5%
6.5'	8-11.5%
7.5'	7-11.5%
8.5'	6-11.5%
9.5'	5-11.5%



PROVIDE (AA) AND (B) AS SHOWN ON CROSS SECTIONS.

NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS FOR **B** VALUES NOT SHOWN IN TABLE Z.

SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY, 6-INCH.

SEPARATE PAYMENT FOR BASE AGGREGATE WILL BE MADE.

CONCRETE APRON MEASURED AND PAID FOR AS CONCRETE DRIVEWAY, 6-INCH

SECTION Z-Z

DRIVEWAY DETAIL WITH CONCRETE CURB & GUTTER

(URBAN AND SUBURBAN)

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)

GENERAL NOTES

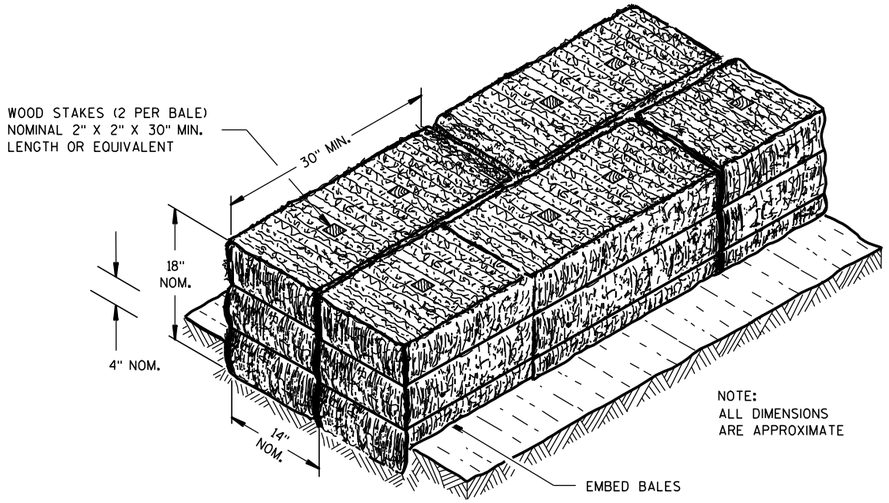
1. CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
2. THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.
3. DRIVEWAY SLOPES: DESIRABLE MAXIMUM
   10.5% UP AWAY FROM SIDEWALK (SAG)
   8.5% DOWN AWAY FROM SIDEWALK (CREST)
   ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG
4. DRIVEWAY TYPES
   - 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
   - 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
   - 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)
5. PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.
6. (W) IS SHOWN ON PLAN AND PROFILE SHEETS.
7. OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

NOT TO SCALE

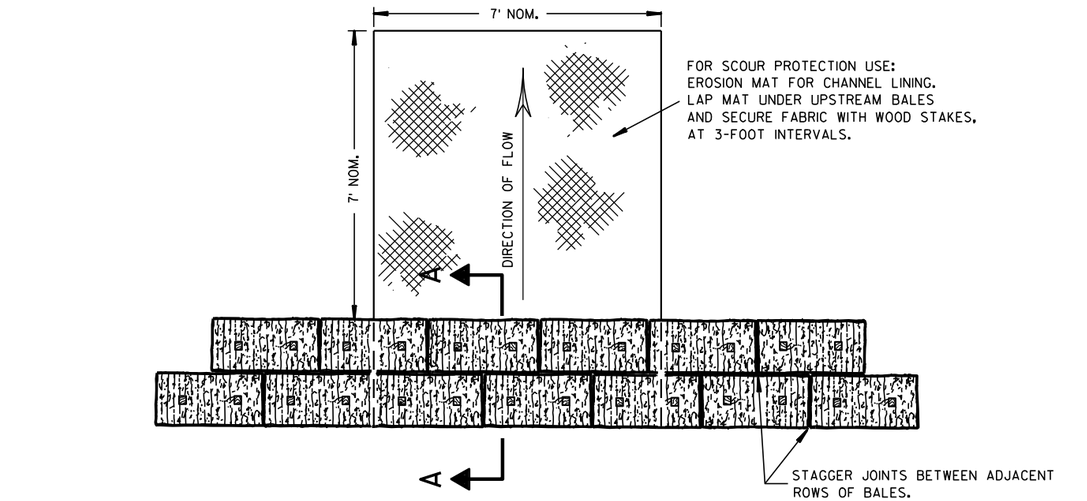
DRIVEWAY AND SIDEWALK RAMPS TYPE Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

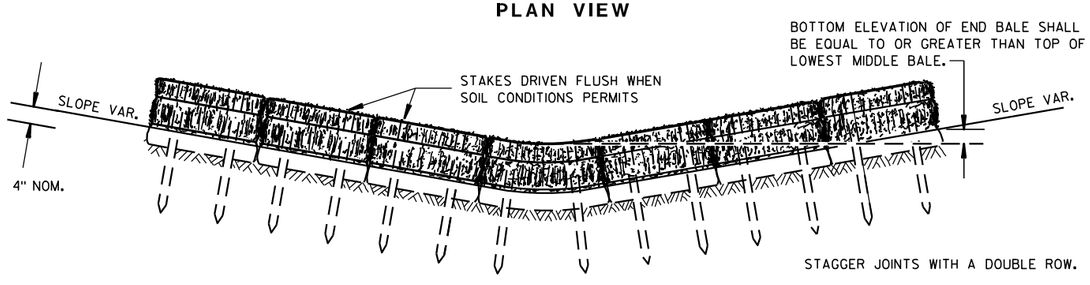
APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV
FHWA



SECTION A-A



PLAN VIEW



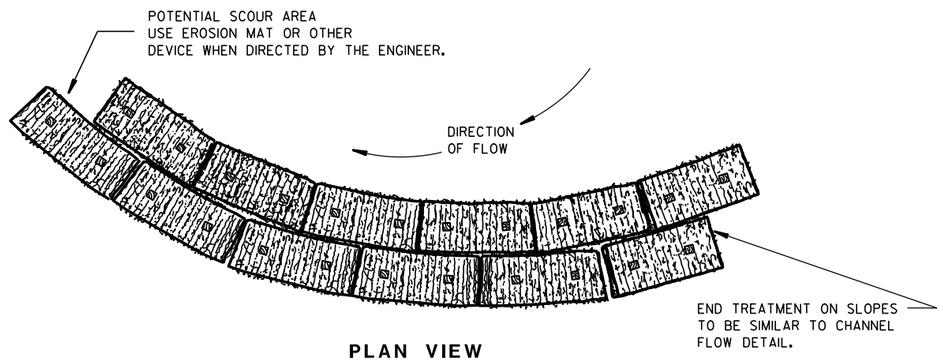
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

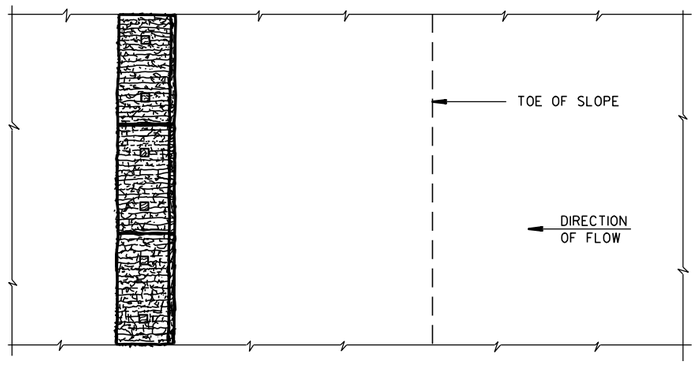
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

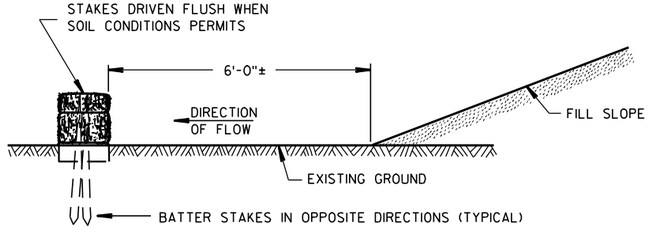


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

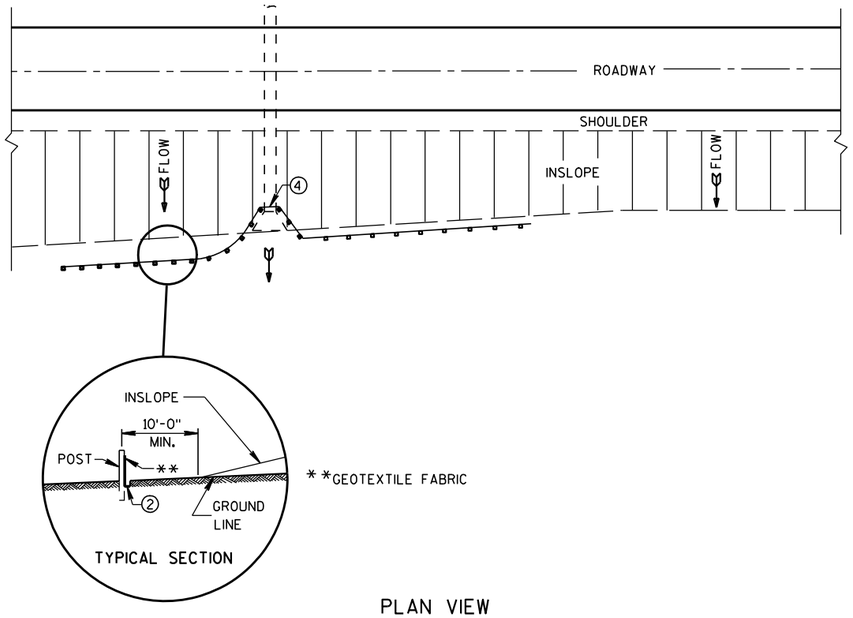
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

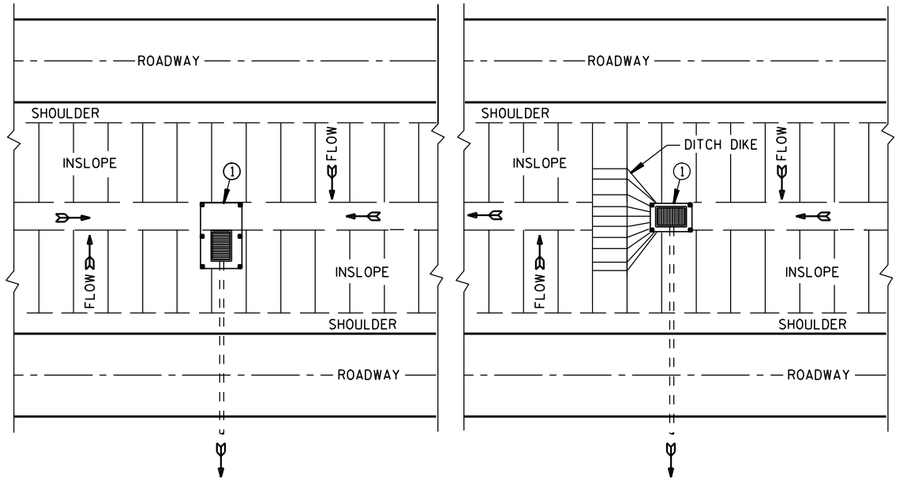
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



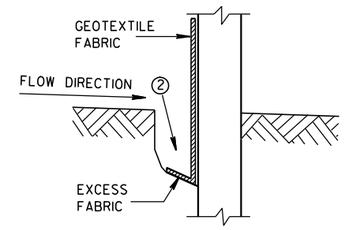
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

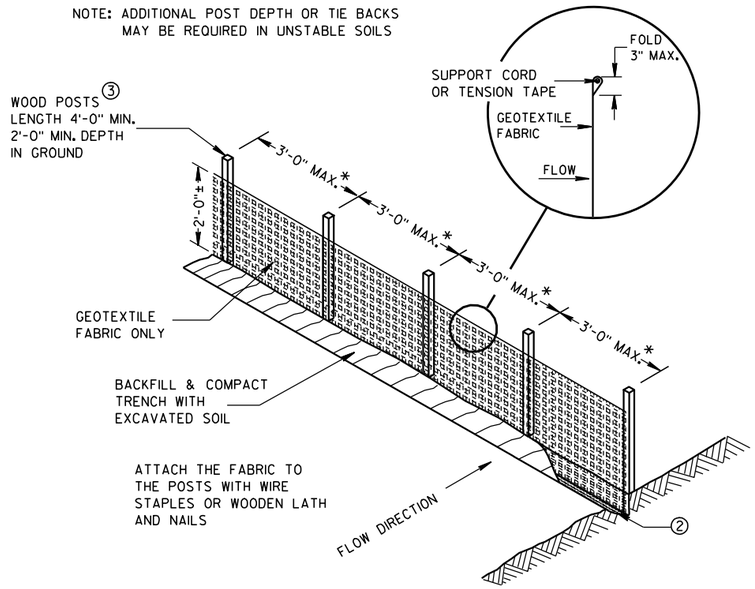
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

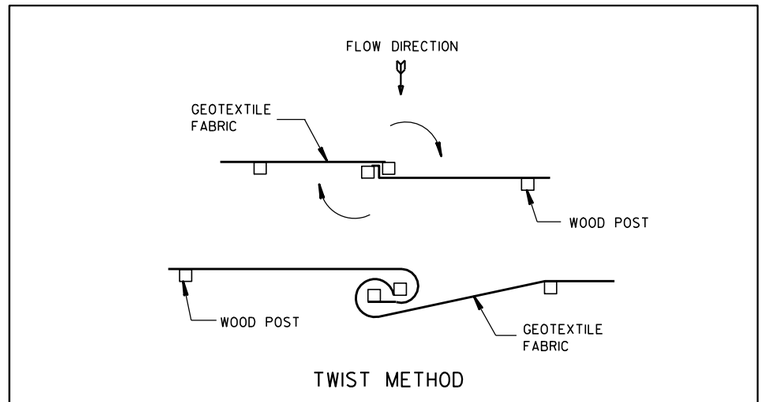
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



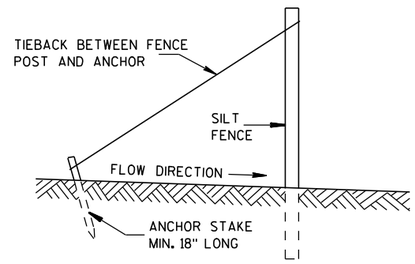
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

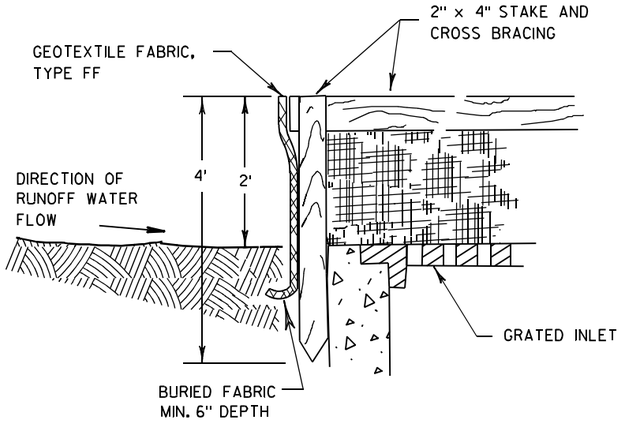
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

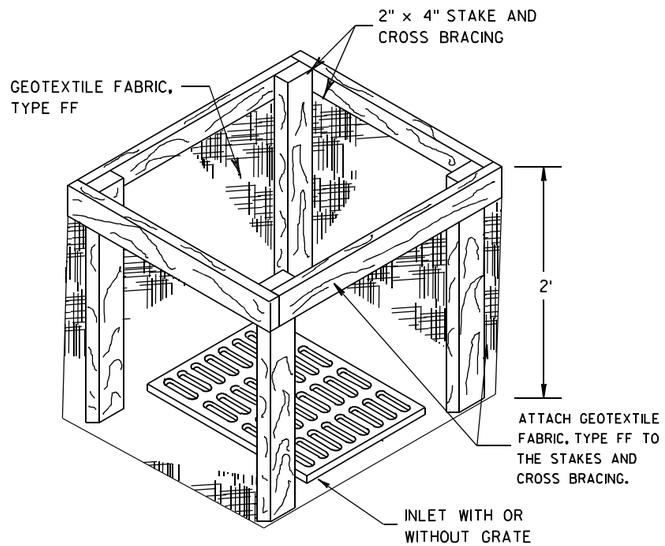
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S.D.D. 8 E 9-6

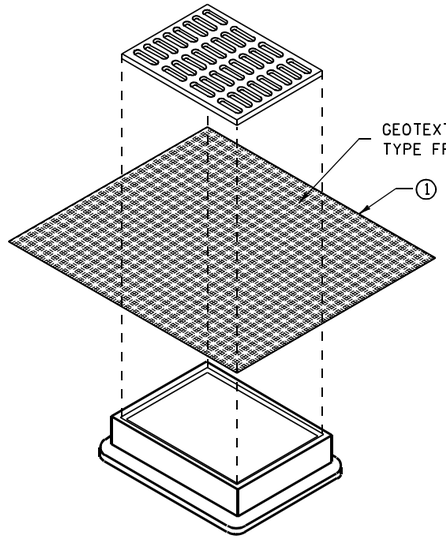
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S.D.D. 8 E 9-6



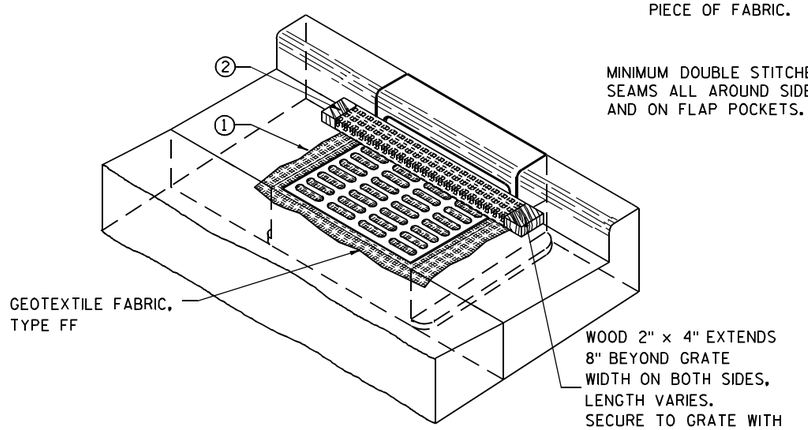


INLET PROTECTION, TYPE A

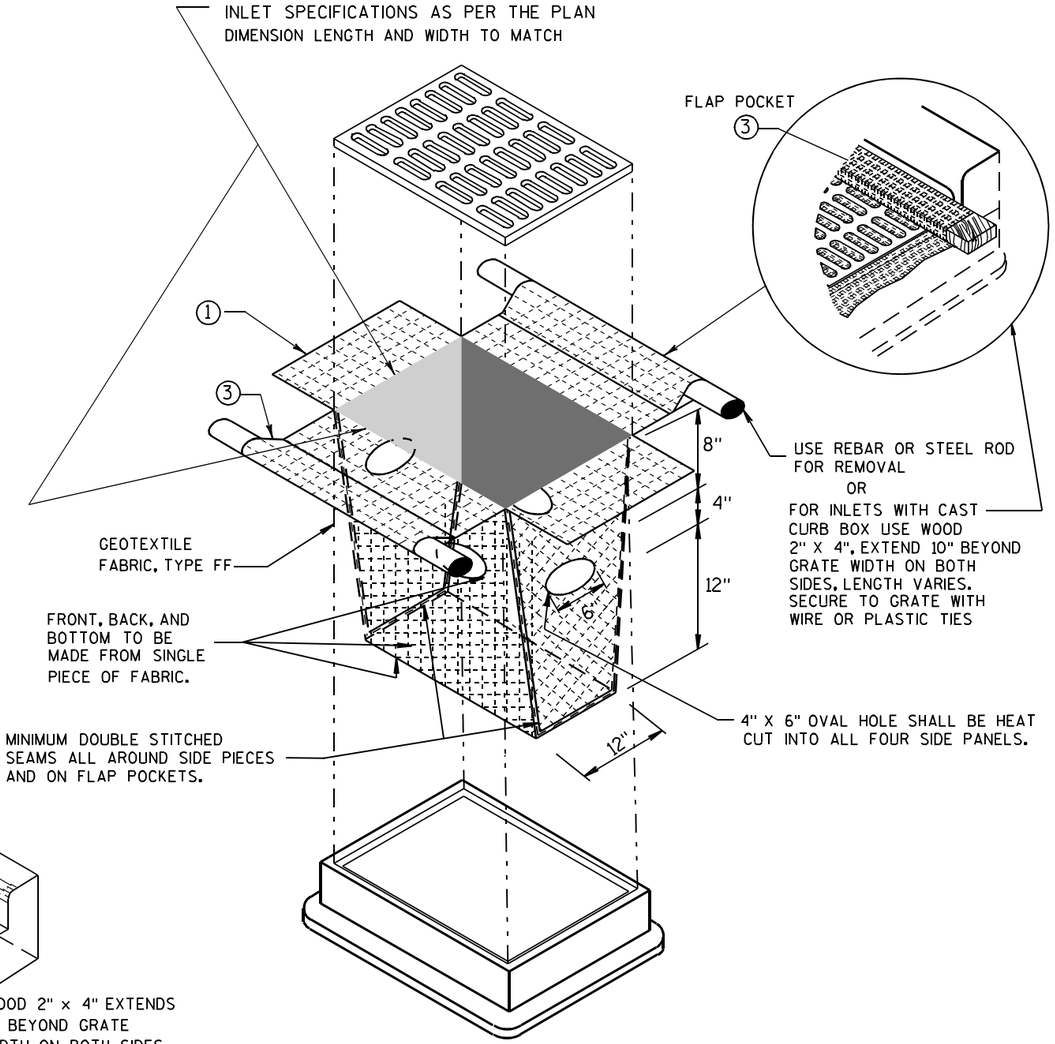


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

6

S.D.D. 8 E 10-2

METAL APRON ENDWALLS

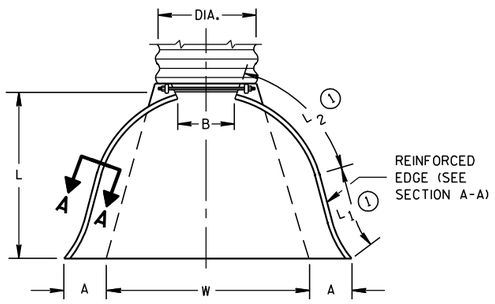
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

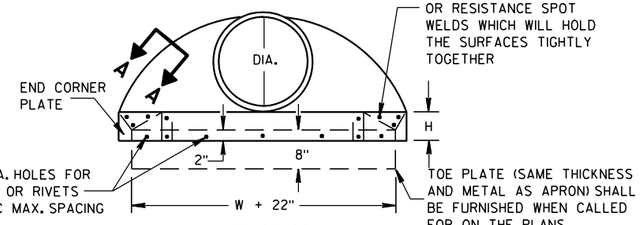
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

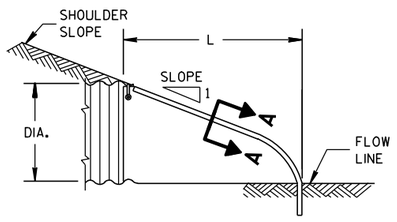
* MINIMUM
** MAXIMUM



PLAN VIEW

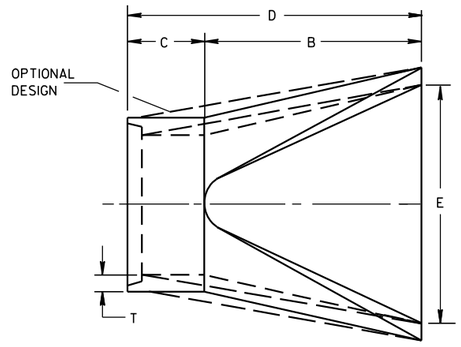


END VIEW

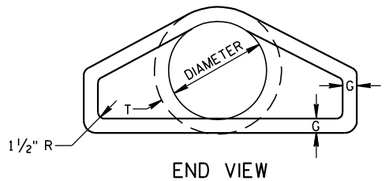


SIDE ELEVATION

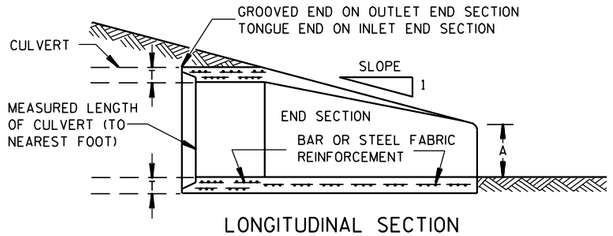
METAL ENDWALLS



PLAN

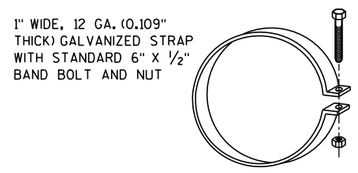


END VIEW



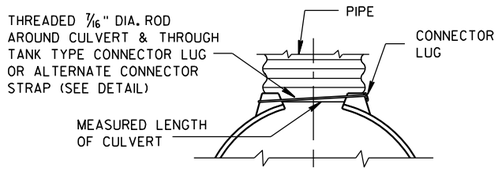
LONGITUDINAL SECTION

CONCRETE ENDWALLS

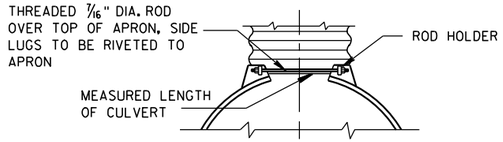


ALTERNATE FOR TYPE 1 CONNECTION

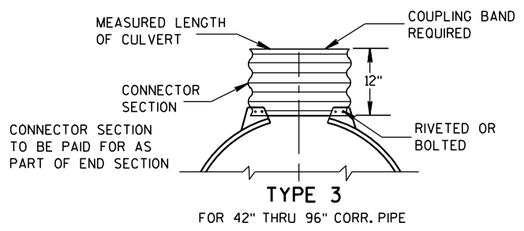
END SECTION CONNECTOR STRAP



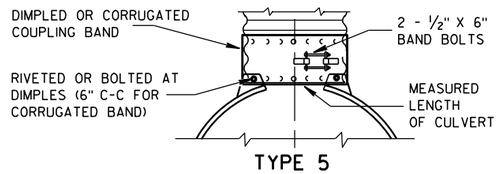
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

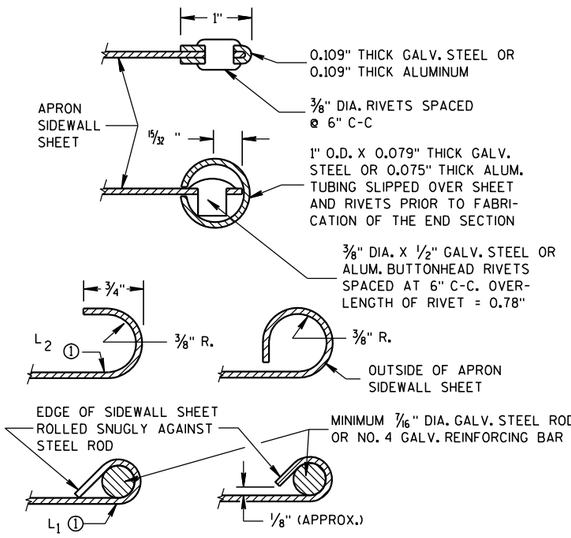
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

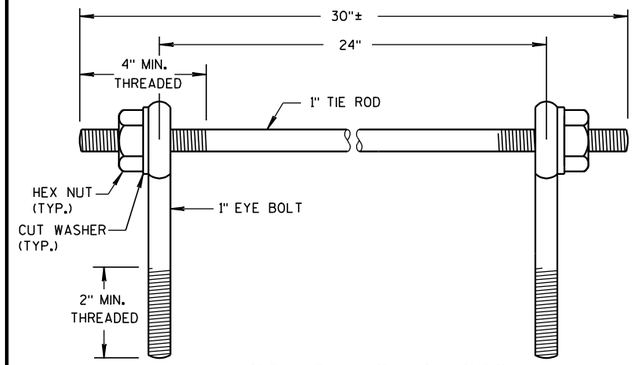
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

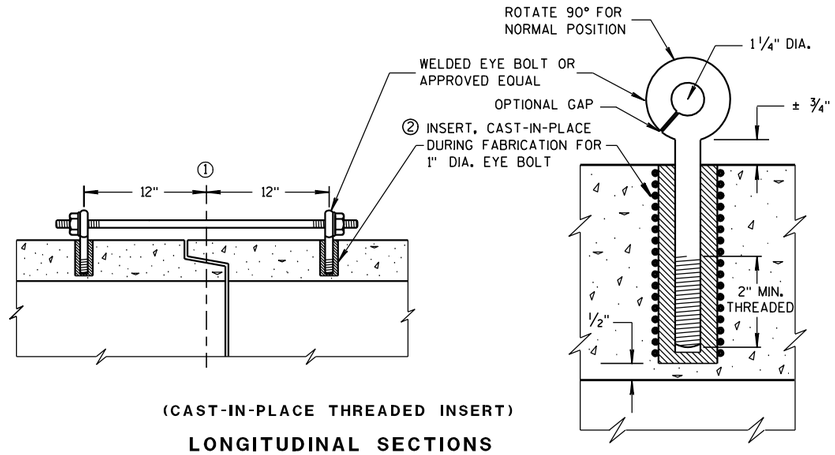
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
306
FHWA

6

S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

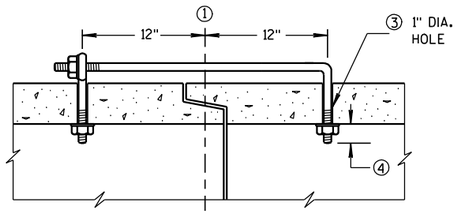
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

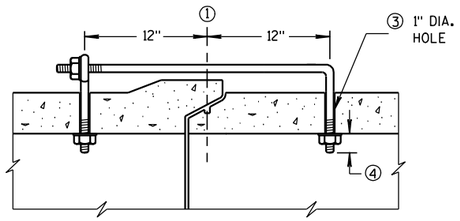
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

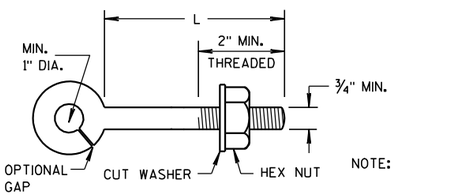


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

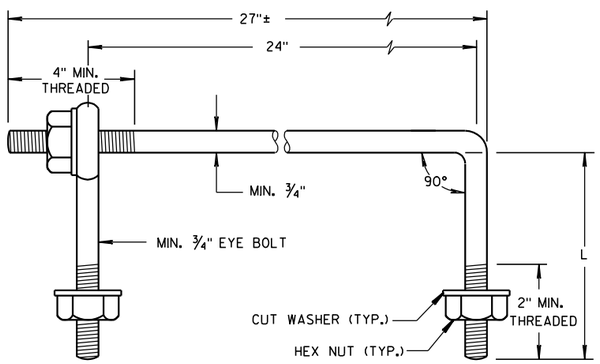
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

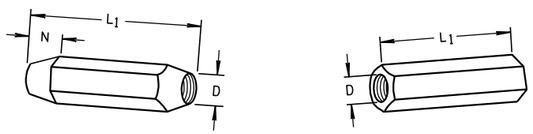
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

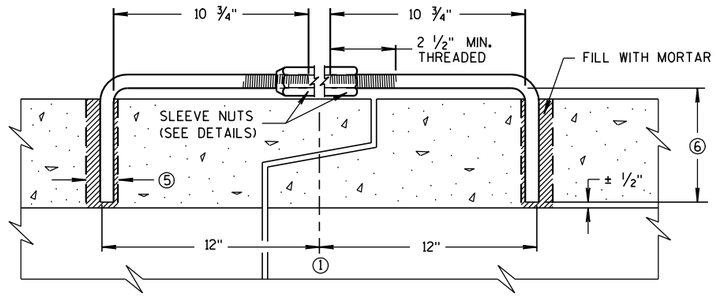
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

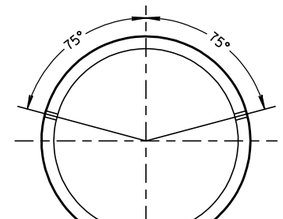
SLEEVE NUTS



LONGITUDINAL SECTION

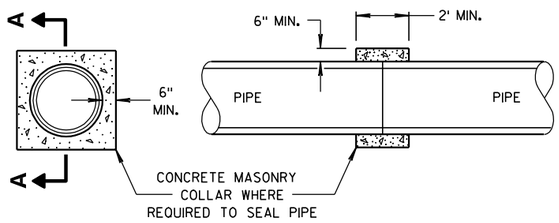
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

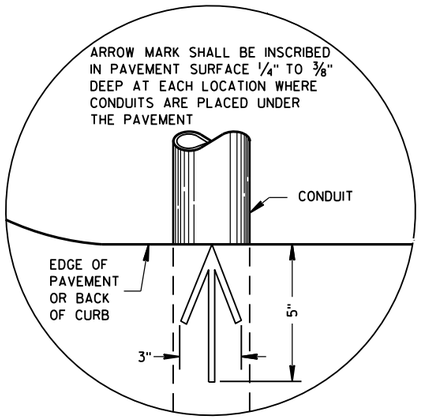
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
307
FHWA

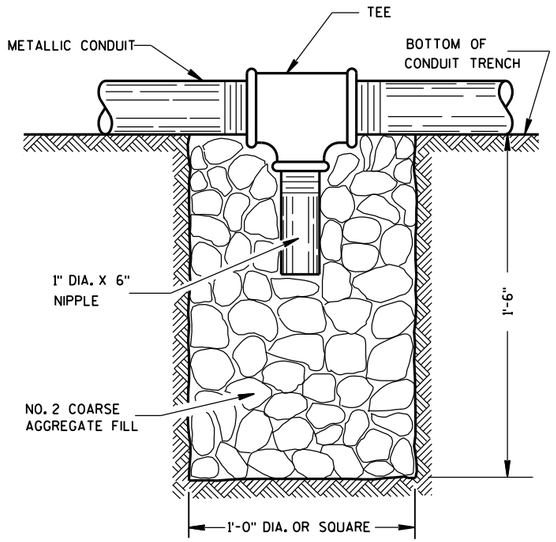
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S.D.D. 8 F 4-7



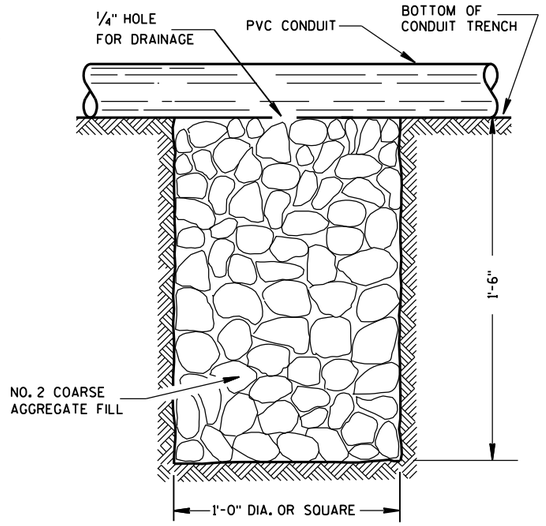
PLAN VIEW

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.

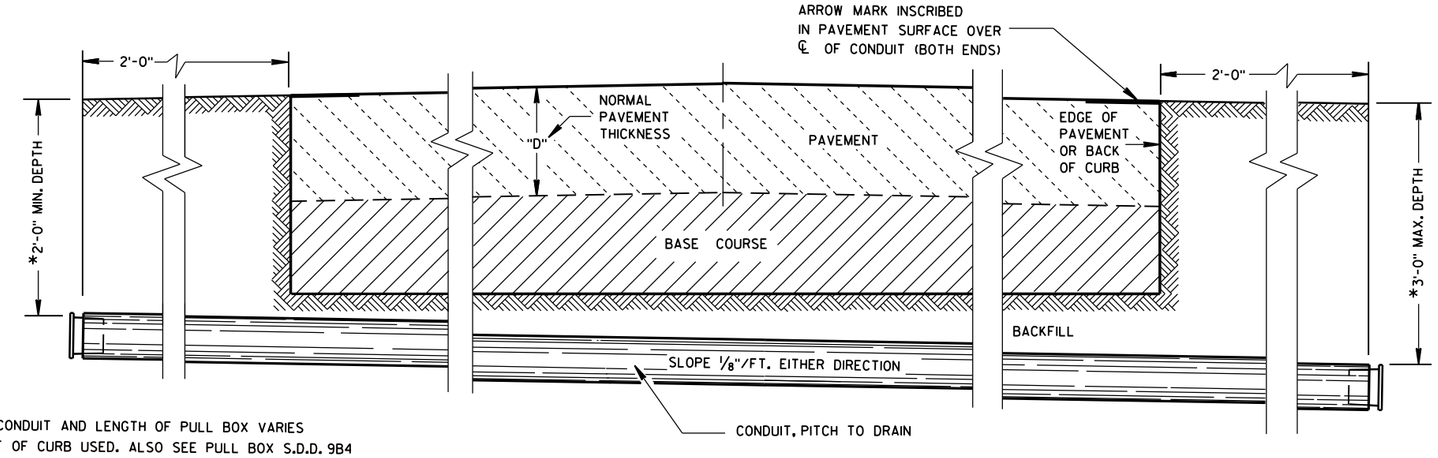
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.).

TRACER 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
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

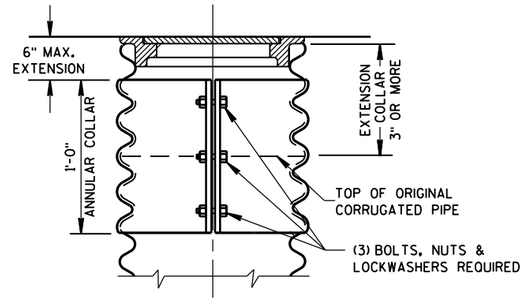
S.D.D. 9 B 2-9

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

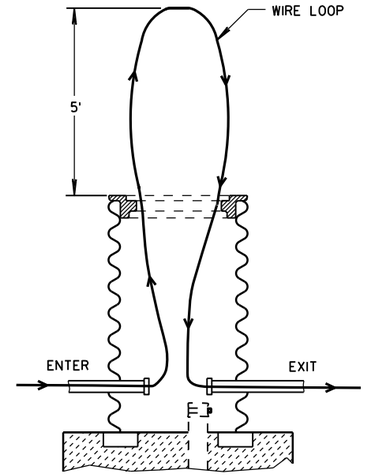
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

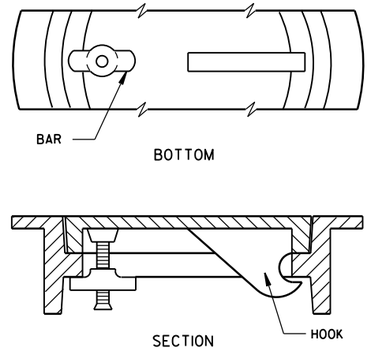
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

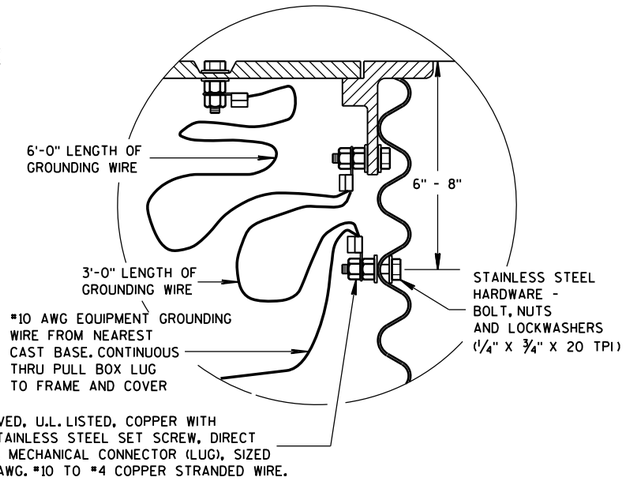


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

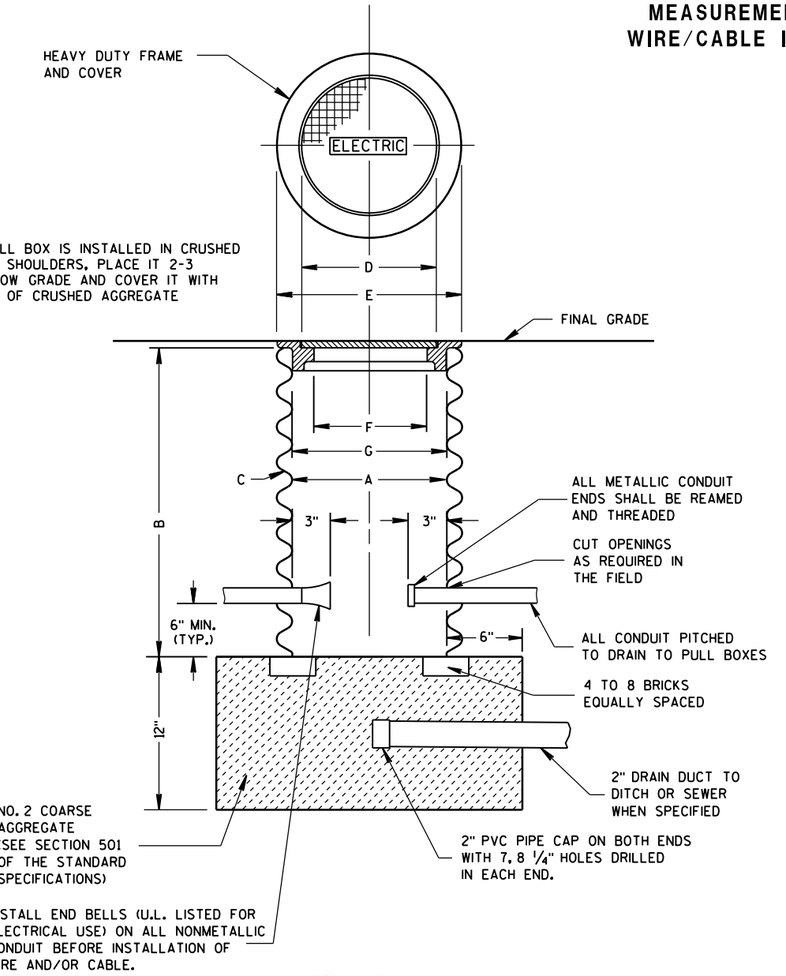


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

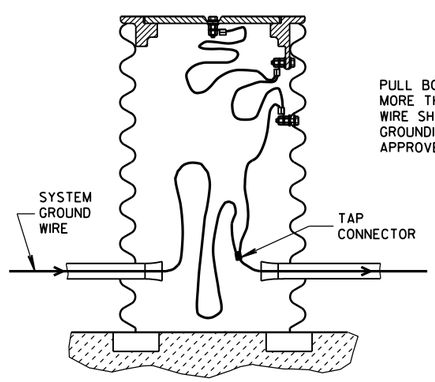
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

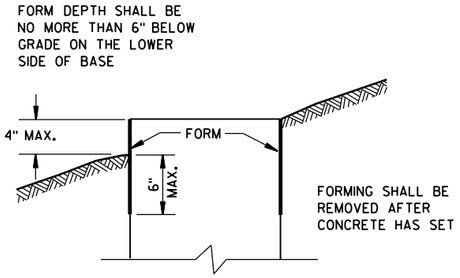
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

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

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

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

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

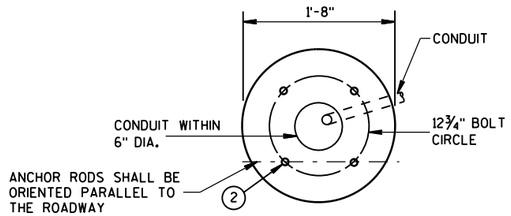
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

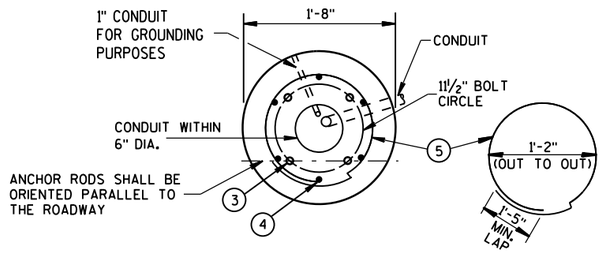
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

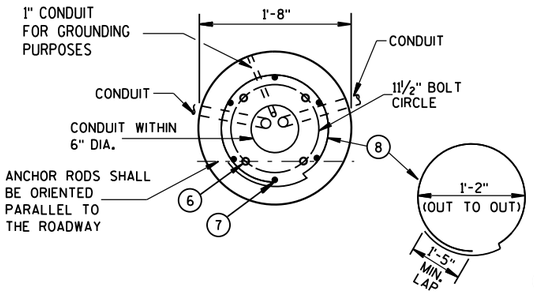
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

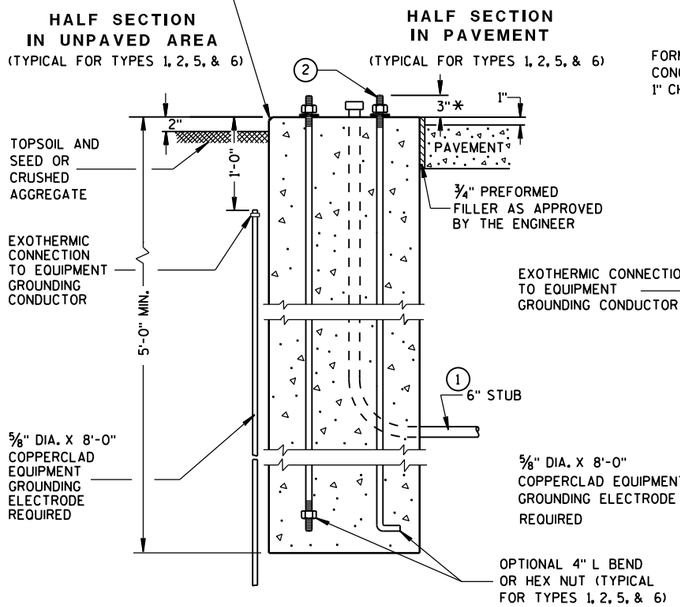






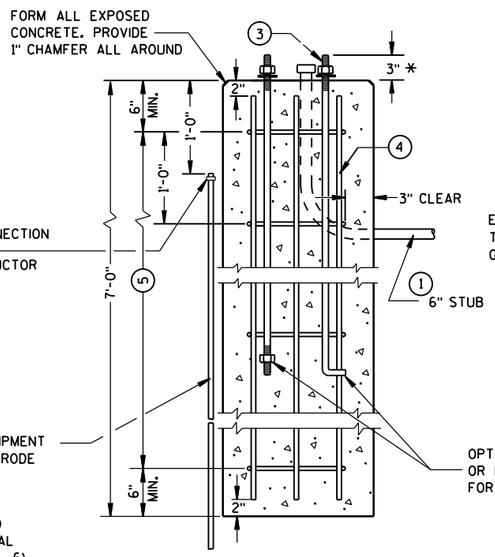
HALF SECTION IN UNPAVED AREA

(TYPICAL FOR TYPES 1, 2, 5, & 6)

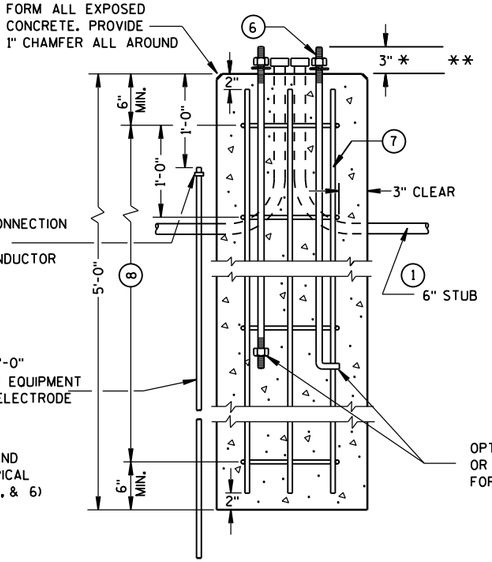


HALF SECTION IN PAVEMENT

(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
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/S/ Ahmet Demirbilek — STATE ELECTRICAL
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GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

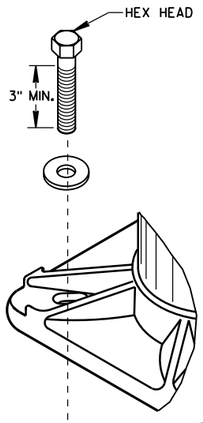
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

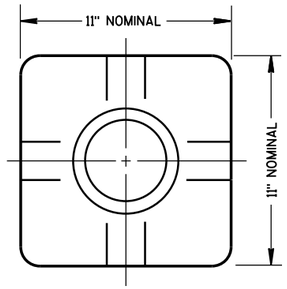
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

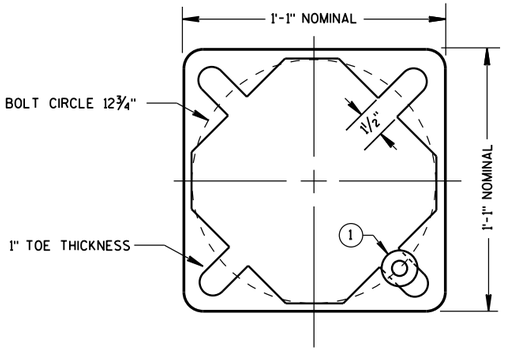
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

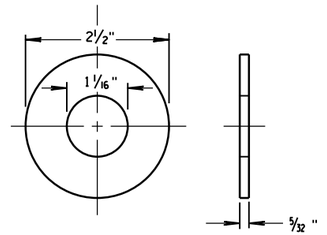




TOP VIEW
(PEDESTAL BASE)

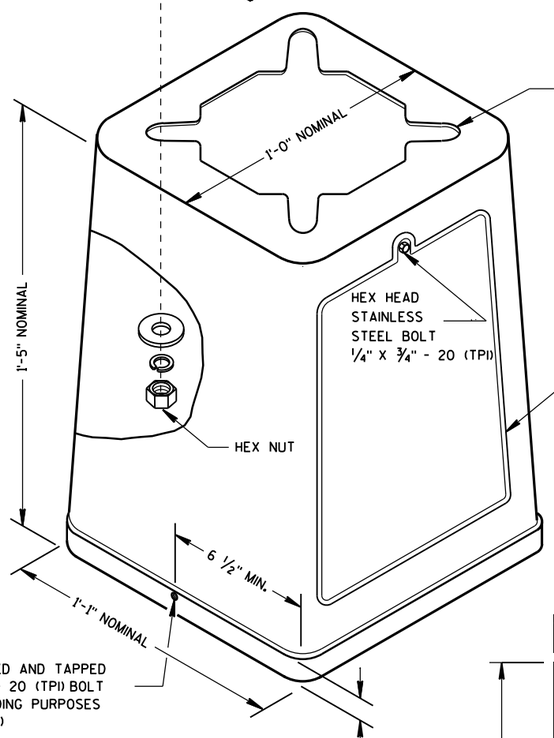


BOTTOM VIEW
(PEDESTAL BASE)

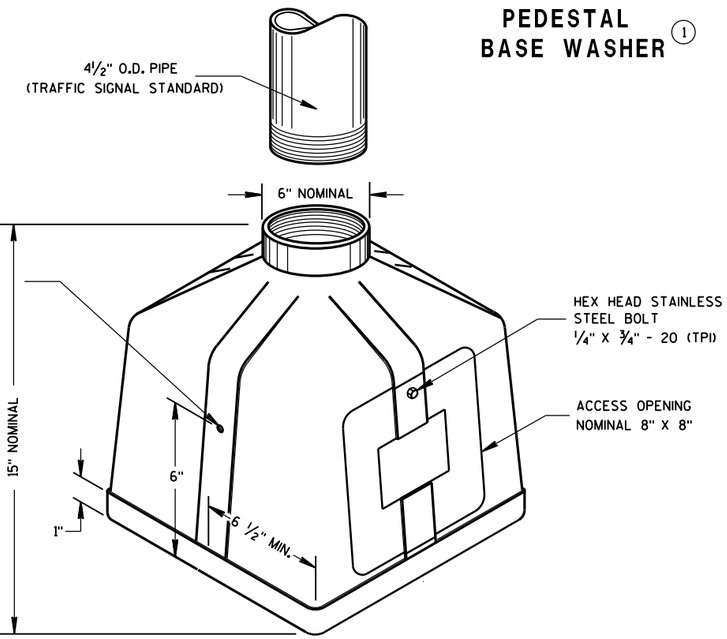


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

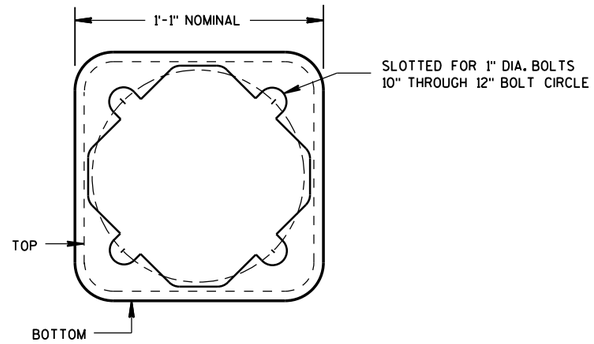


ISOMETRIC VIEW

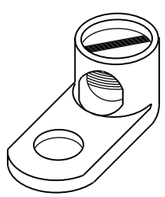


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

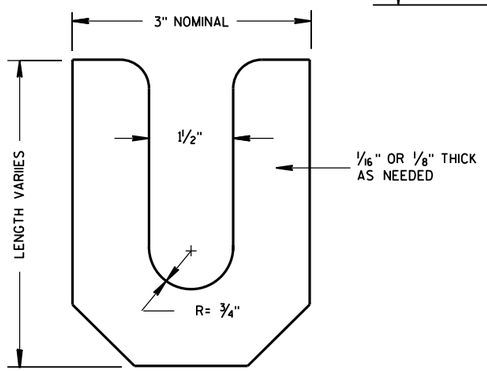


TYPICAL MECHANICAL CONNECTOR LUG

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
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

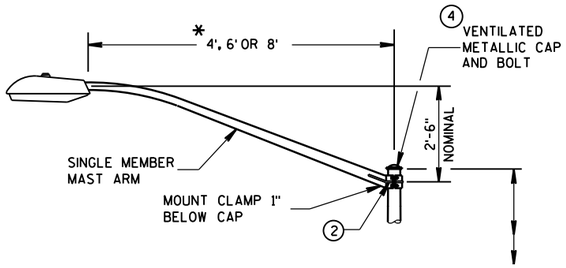
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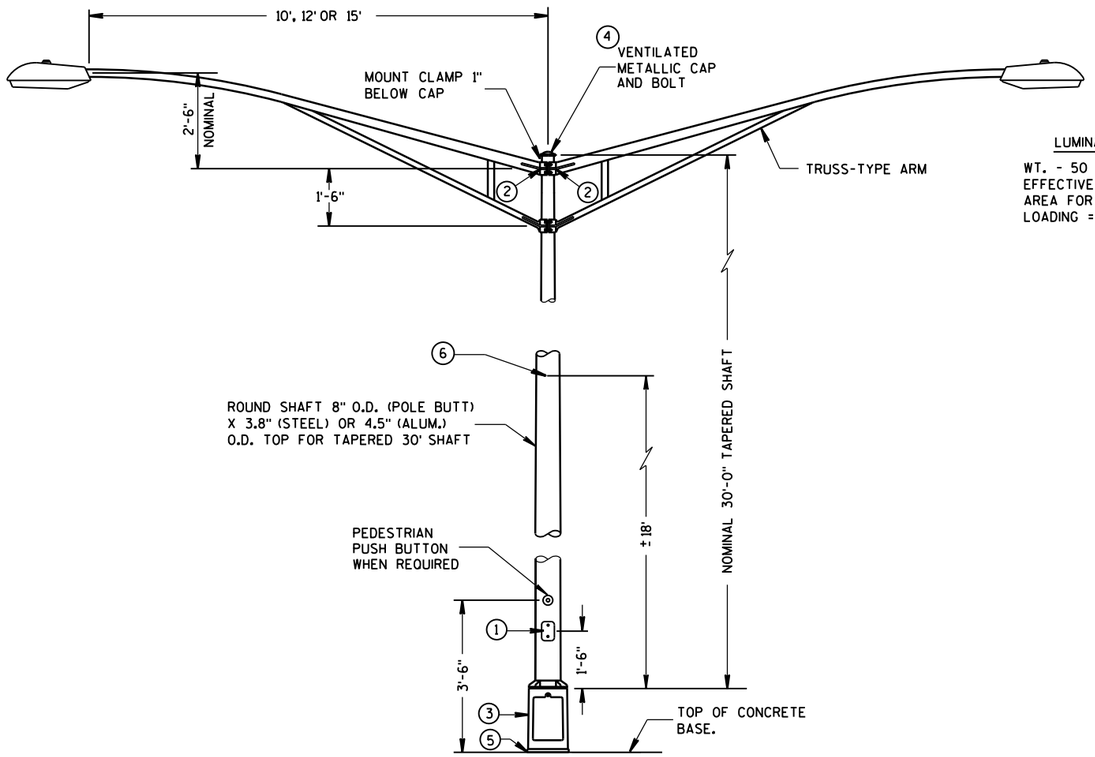
S.D.D. 9 C 3-4

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S.D.D. 9 C 3-4

*RISE FOR 4' ARM SHALL BE 2'-0".

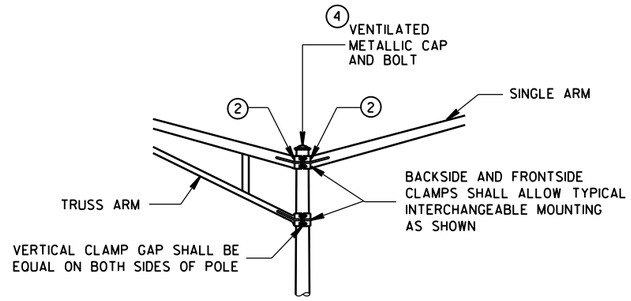




TYPE 5 POLE MOUNTING CONFIGURATION

(MAXIMUM LOAD)

LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

6

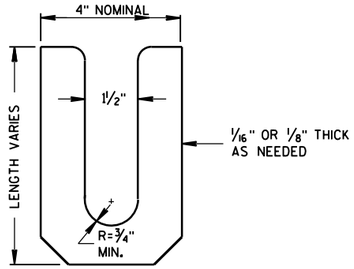
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POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

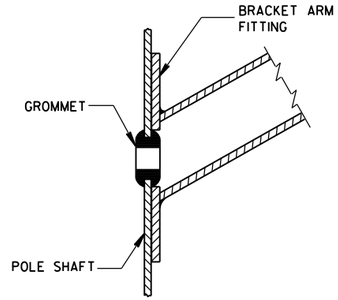
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S.D.D. 9 E 1-14d

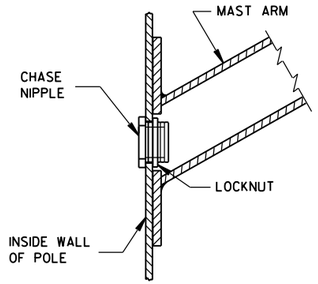


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

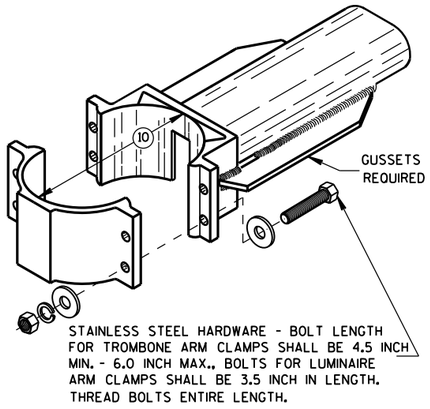
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

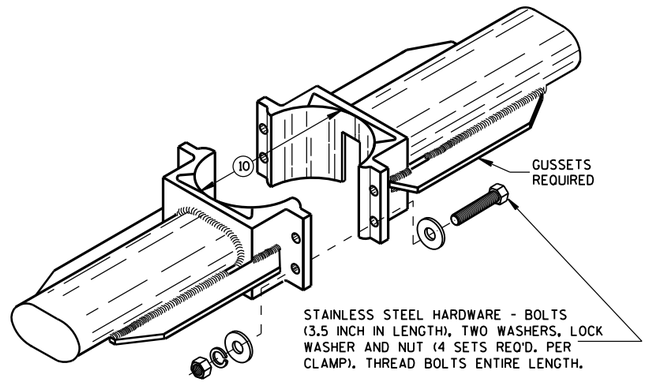
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

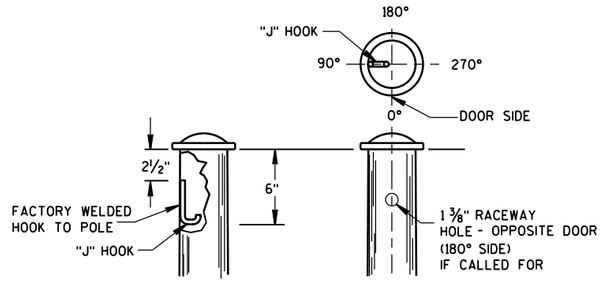
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



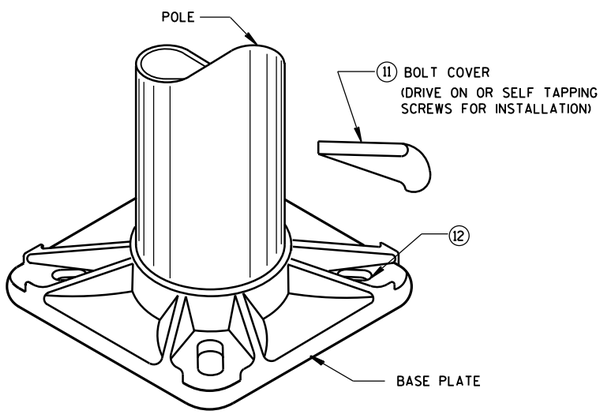
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



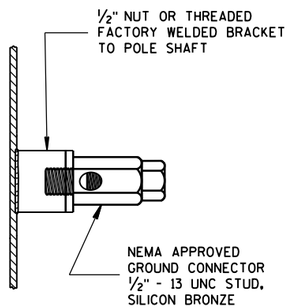
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

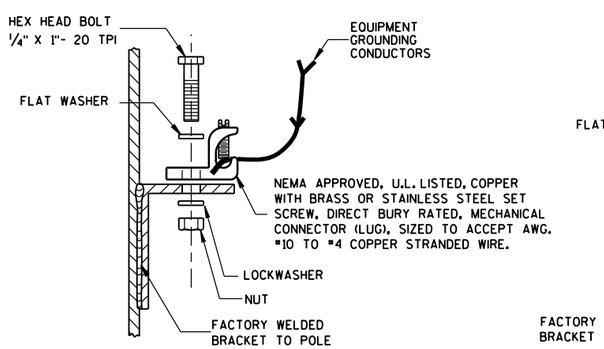


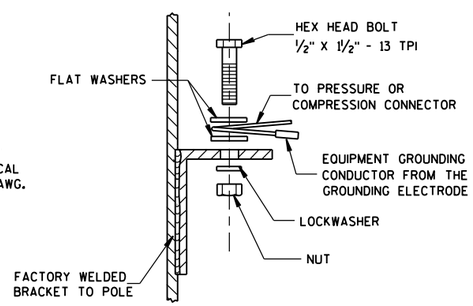
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

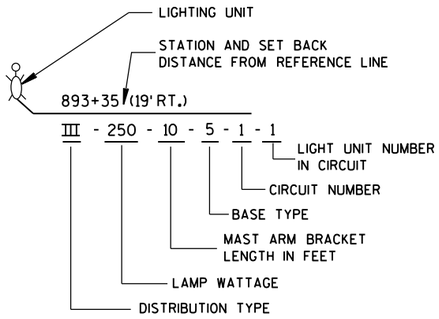
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

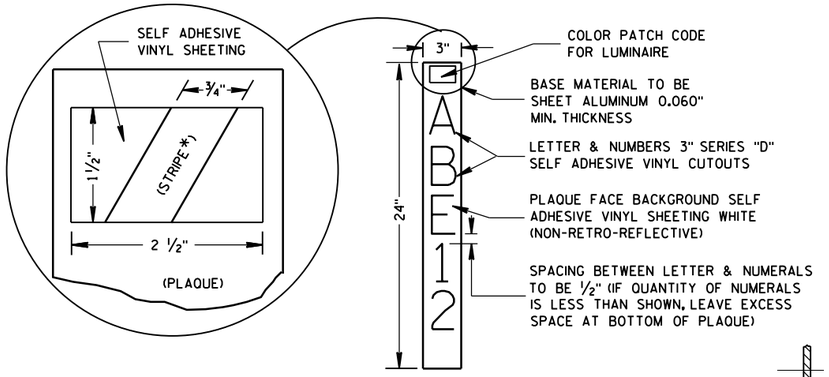
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LIGHTING UNIT CODE
(TYPICAL)



COLOR PATCH CODE FOR LUMINAIRES

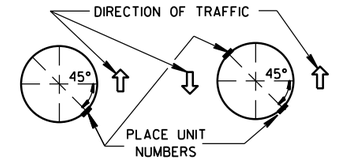
(HIGH PRESSURE SODIUM)

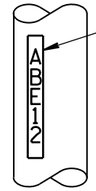
1000 WATT - NO PATCH
400 WATT - ORANGE
310 WATT - BLUE
250 WATT - ORANGE W/WHITE STRIPE*
200 WATT - RED
150 WATT - GREEN
100 WATT - BROWN

(MERCURY VAPOR)

400 WATT - (NO PATCH)
250 WATT - YELLOW

IDENTIFICATION PLAQUE





FASTEN TOP, CENTER AND BOTTOM OF PLAQUE WITH 3 ALUMINUM POP RIVETS (ALUM. POLES) OR STAINLESS STEEL POP RIVETS (STEEL POLES)

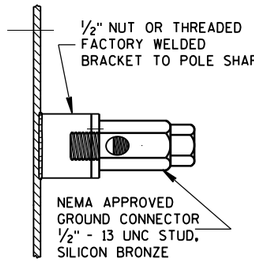
NOTES:

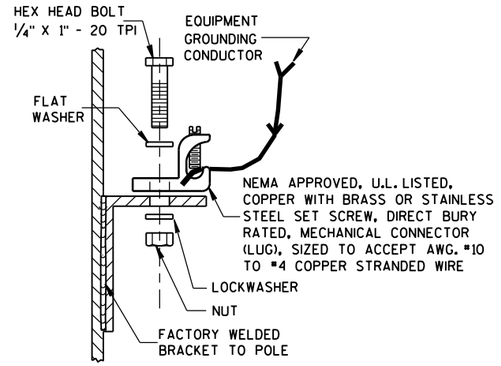
1) PLACE BOTTOM OF UNIT NUMBER PLAQUE 5'-0" ABOVE ELEVATION OF ADJACENT CURB OR SHOULDER.

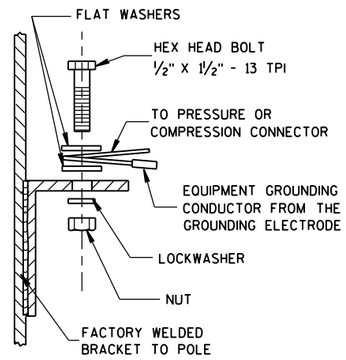
2) UNIT NUMBERS: ONE REQUIRED FOR SINGLE ARM POLES TWO REQUIRED FOR MEDIAN MOUNT POLES.

LIGHTING UNIT IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENT
(TYPICAL ALL LIGHTING UNITS)

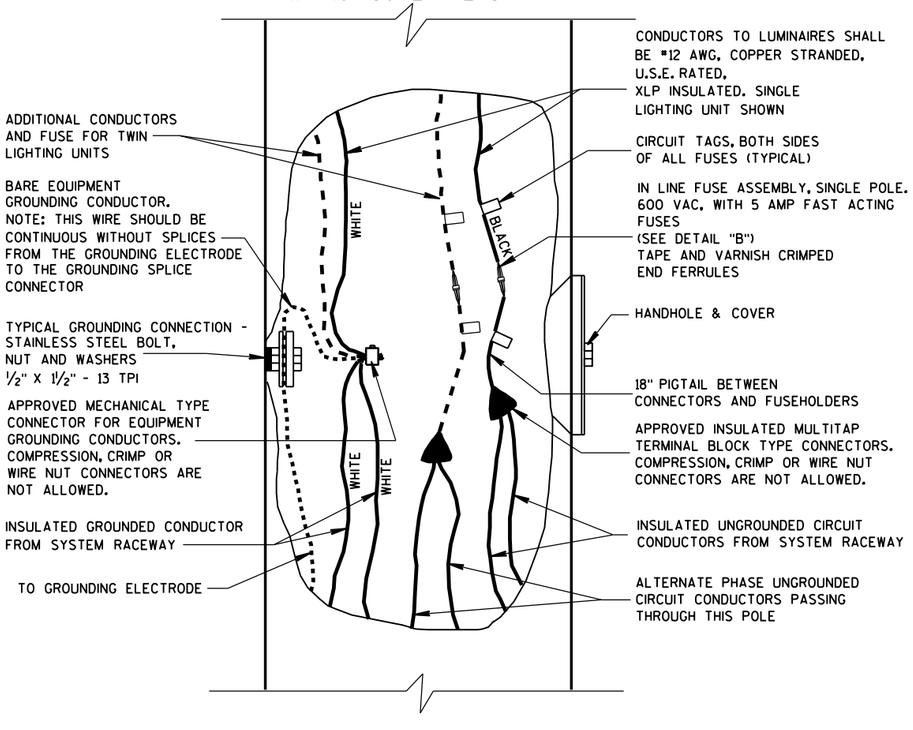
FURNISH PLAQUE WHEN CALLED FOR BY SPECIAL PROVISIONS



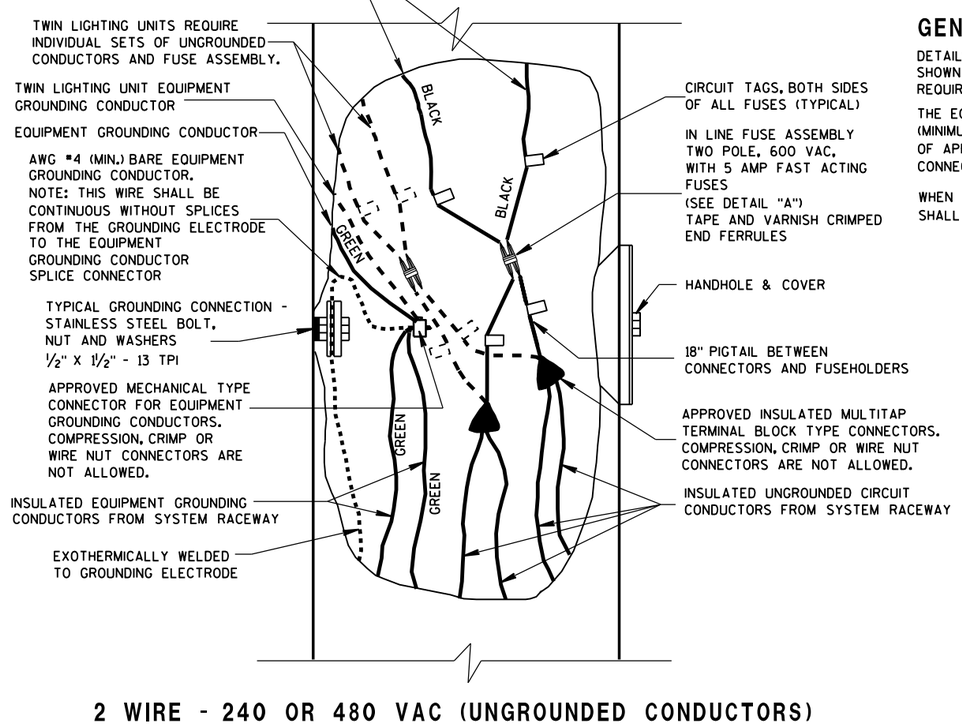




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



2 WIRE - 120, 240 OR 480 VAC TO GROUND



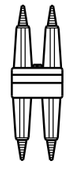
2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

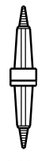
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT

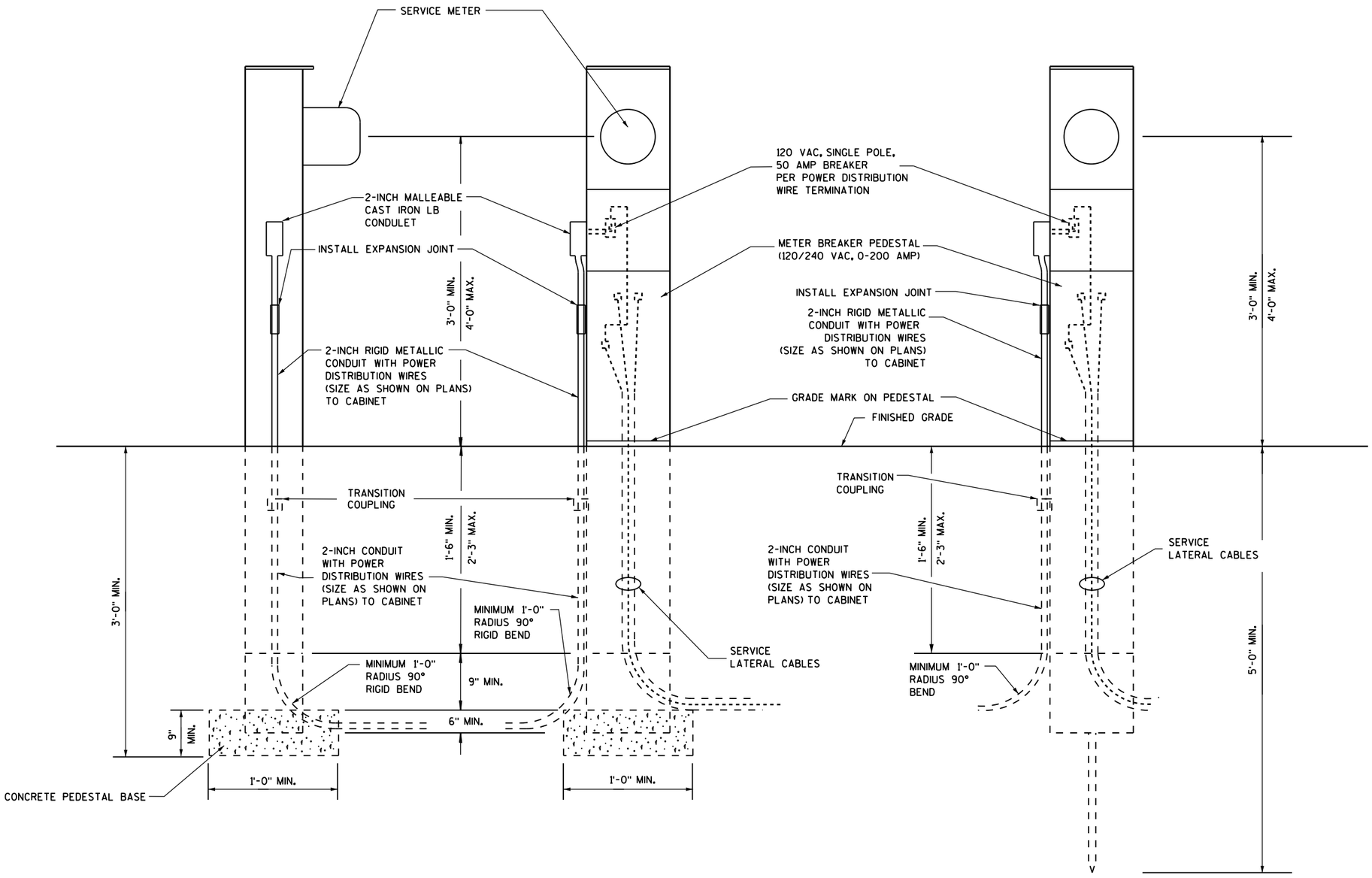
FREEWAY LIGHTING UNIT POLE WIRING

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S.D.D. 9 E 2-4



2 CIRCUIT METER BREAKER PEDESTAL

ALTERNATE SUPPORTING STAKE

(IF APPROVED BY UTILITY)

6

S.D.D. 9 H 3-1

2 CIRCUIT
METER BREAKER PEDESTAL

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Sept. 2014
DATE

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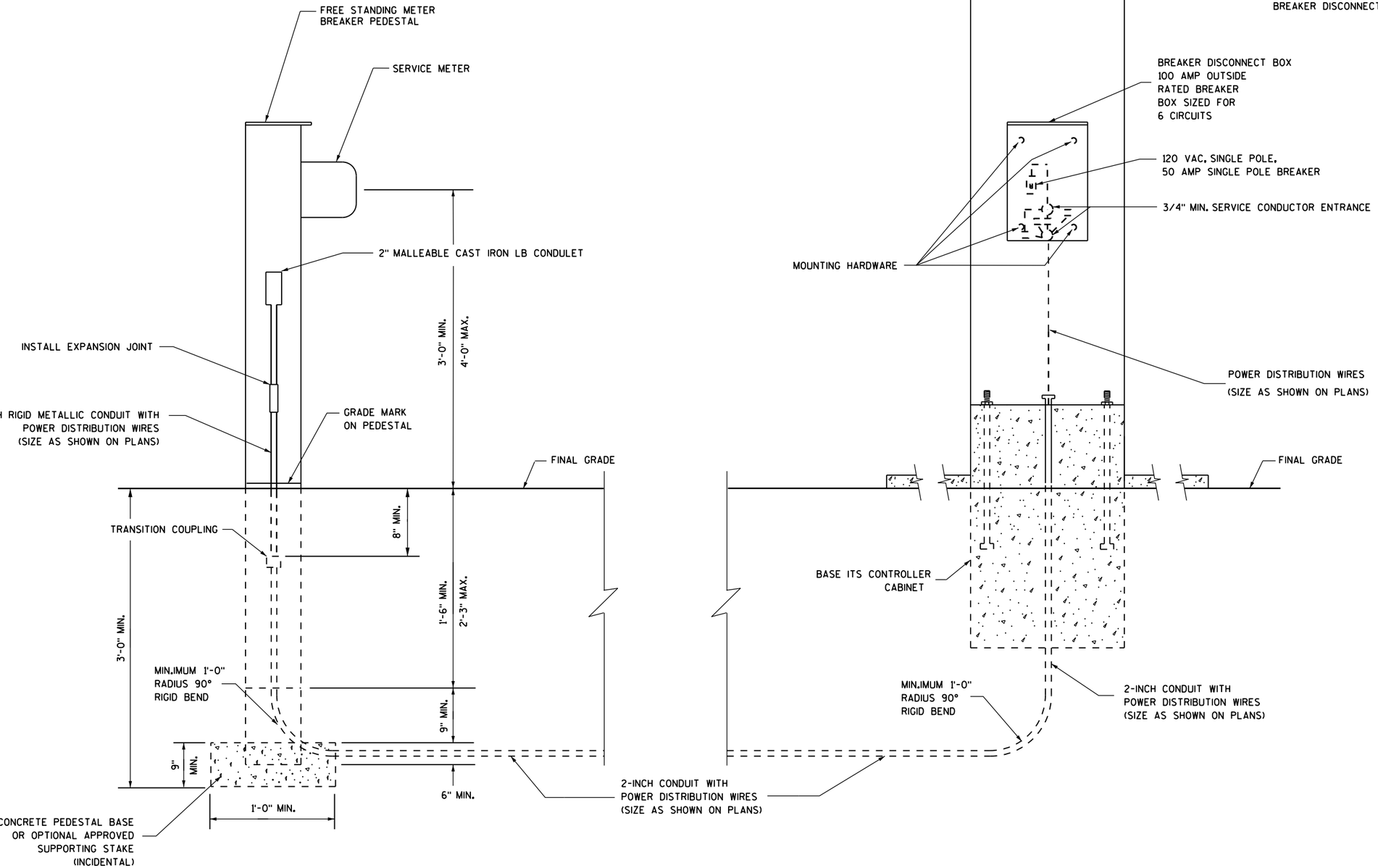
6

S.D.D. 9 H 3-1

GENERAL NOTES

MINIMUM REQUIREMENT SHOWN. ADDITIONAL BREAKERS MAY BE REQUIRED.

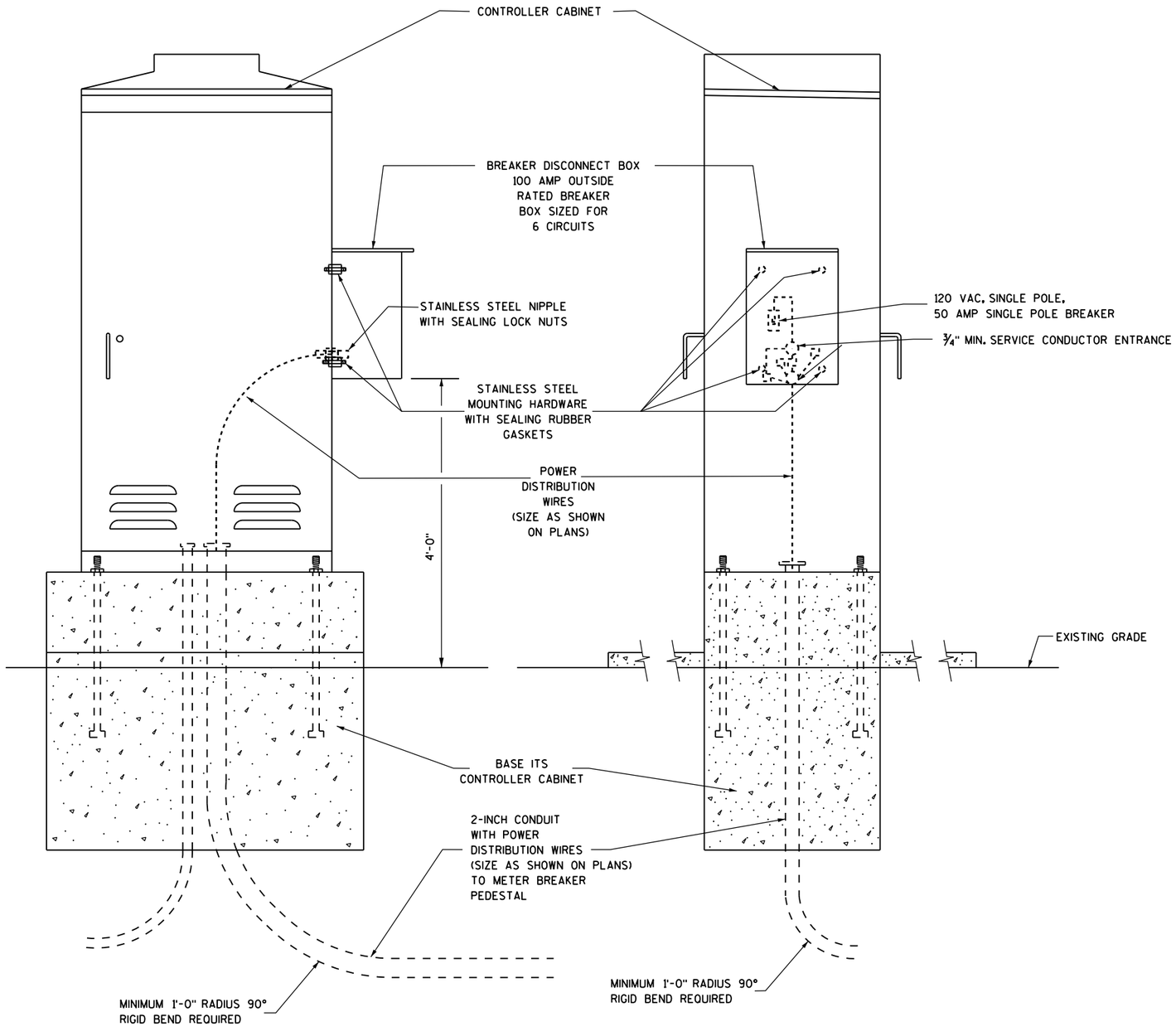
UP TO THREE BREAKERS WILL BE CONSIDERED INCIDENTAL TO THE ITEM BREAKER DISCONNECT BOX.



2 CIRCUIT ELECTRICAL SERVICE METER BREAKER PEDESTAL AND BREAKER DISCONNECT BOX

2 CIRCUIT ELECTRICAL SERVICE METER BREAKER PEDESTAL AND BREAKER DISCONNECT BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
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S.D.D. 9 H 4-1



CABINET BREAKER DISCONNECT BOX INSTALLATION

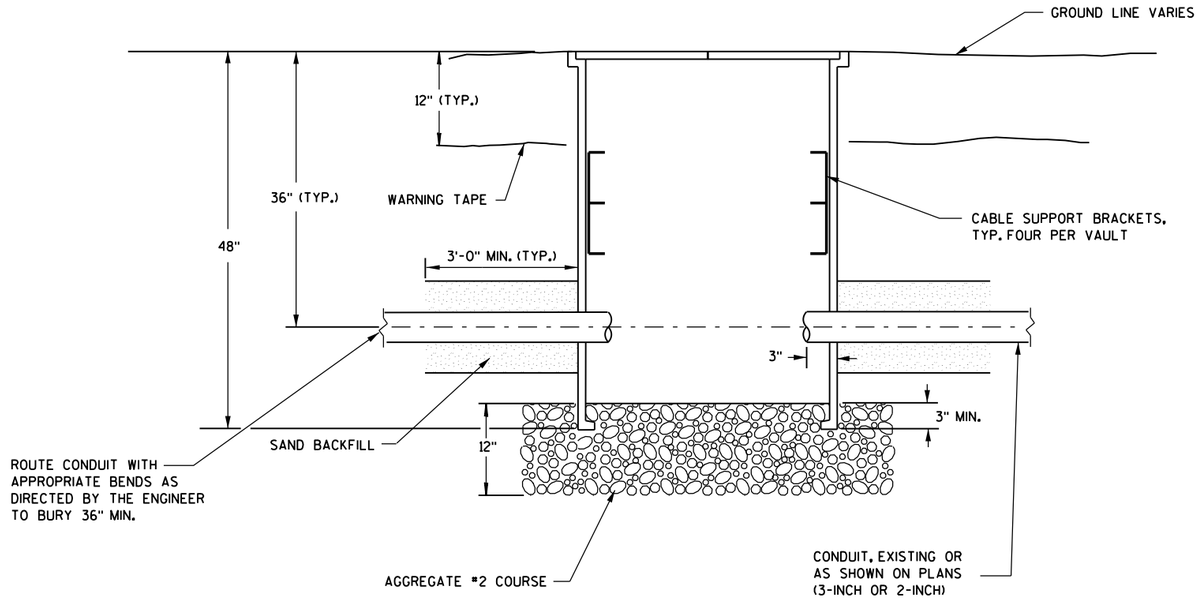
GENERAL NOTES

MINIMUM REQUIREMENT SHOWN. ADDITIONAL BREAKERS MAY BE REQUIRED.

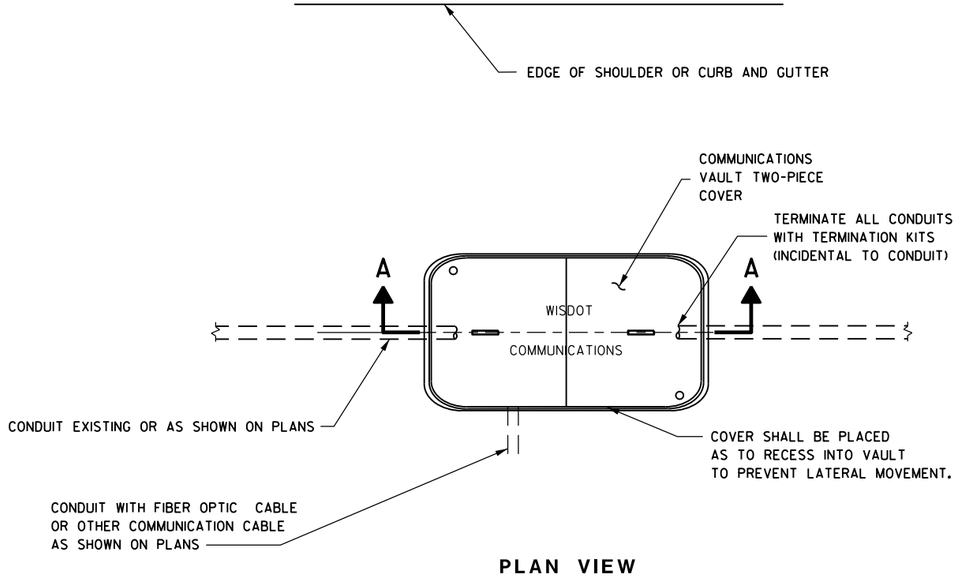
UP TO THREE BREAKERS WILL BE CONSIDERED INCIDENTAL TO THE ITEM BREAKER DISCONNECT BOX.

CABINET BREAKER DISCONNECT BOX INSTALLATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 — DATE /S/ Ahmet Demirbilek — STATE ELECTRICAL FHWA

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S.D.D. 9 H 5-1



SECTION A-A



PLAN VIEW

COMMUNICATIONS VAULT

GENERAL NOTES

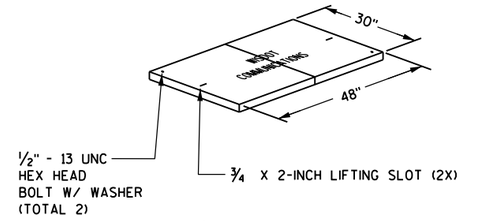
BOX SHALL HAVE AN OPEN BASE.

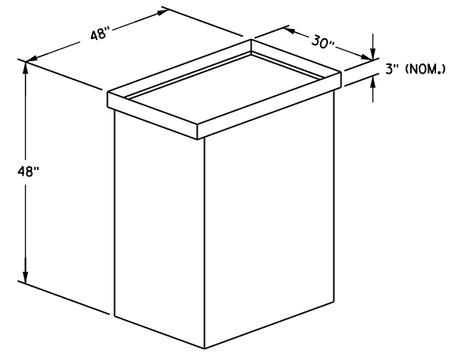
COVER SHALL BE DETECTABLE, AND HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.



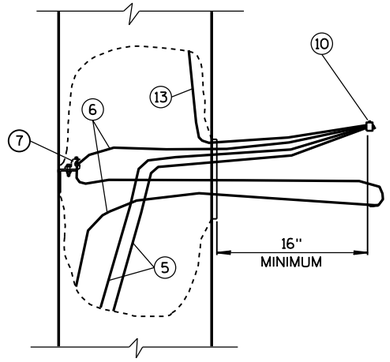


ISOMETRIC VIEW

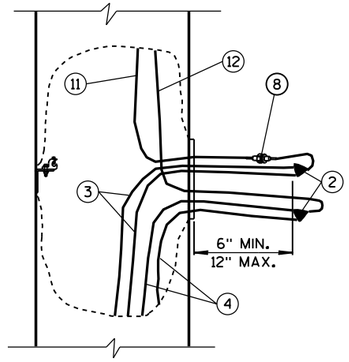
COMMUNICATION VAULT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
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S.D.D. 9 H 9-1

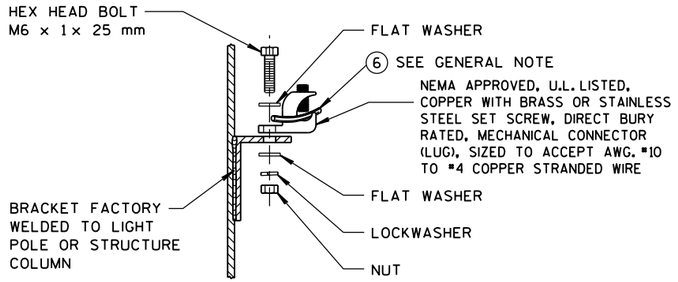


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



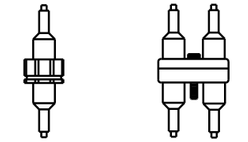
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



1 POLE (1P) 2 POLE (2P)

FUSE ASSEMBLIES

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

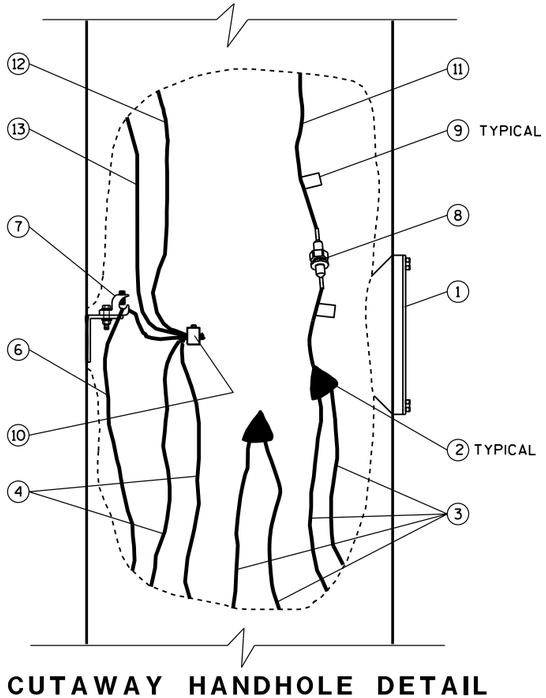
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

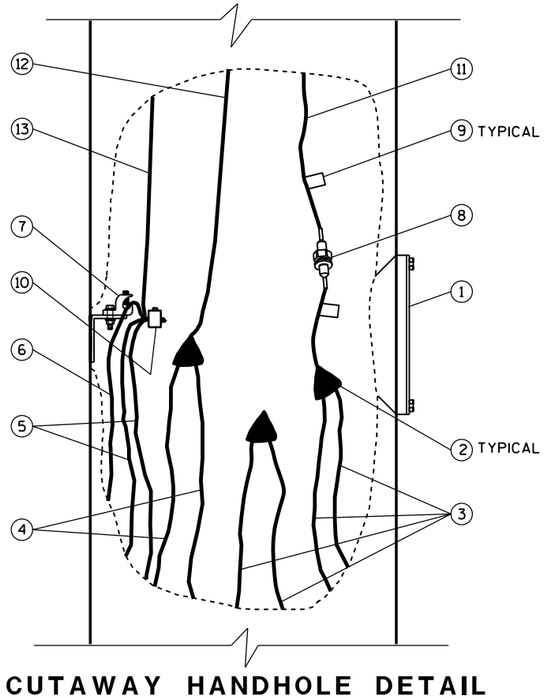
THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

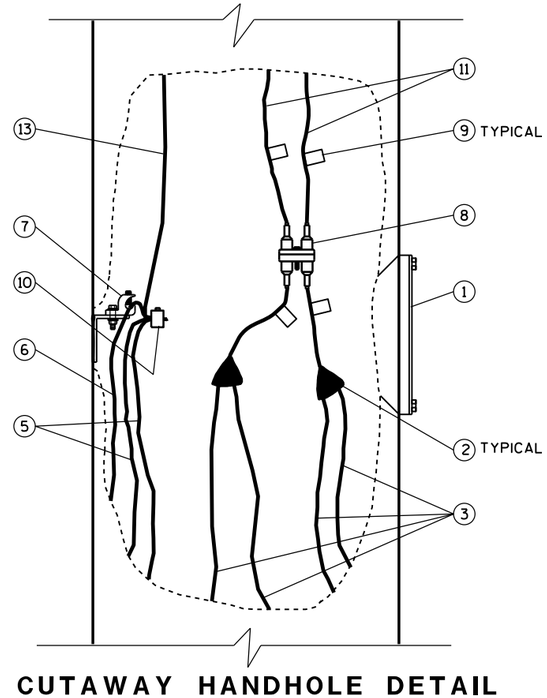
CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



CUTAWAY HANDHOLE DETAIL
GROUNDED NEUTRAL SYSTEMS
1-Φ



CUTAWAY HANDHOLE DETAIL
ISOLATED NEUTRAL SYSTEMS
1-Φ SHOWN; 3-Φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL
PHASE-TO-PHASE SYSTEMS
1-Φ SHOWN; 3-Φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED LINE WIRE
4. GROUNDED LINE WIRE
5. SYSTEM GROUNDING LINE WIRE
6. GROUNDING ELECTRODE CONDUCTOR
7. HANDHOLE GROUNDING LUG
8. FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
9. CIRCUIT TAG (SEE GENERAL NOTE)
10. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
11. UNGROUNDED POLE WIRE
12. GROUNDED POLE WIRE
13. EQUIPMENT GROUNDING POLE WIRE

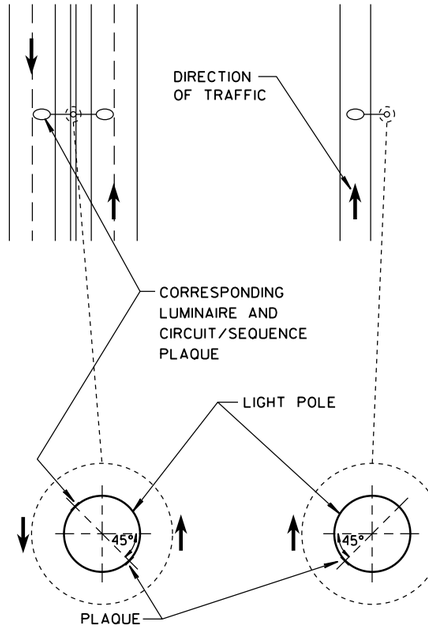
ELECTRICAL HANDHOLE WIRING

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S.D.D. 10 A 1-3



MEDIAN POLE SINGLE ARM POLE

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

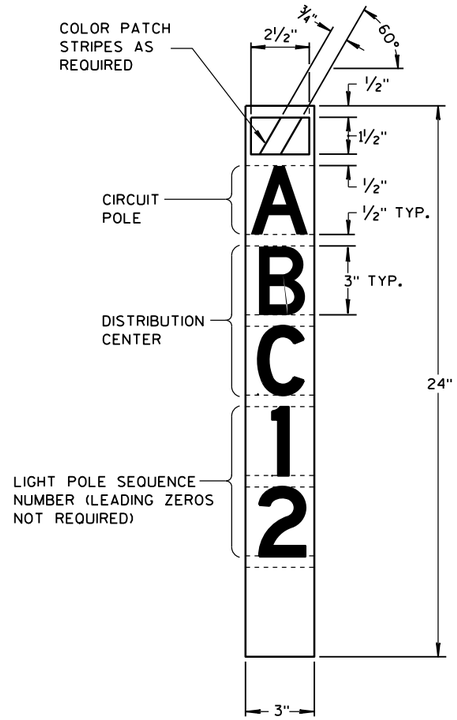
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS AND LED LUMINAIRES

HPS	LED	COLOR PATCH CODE
1000 WATT		NO PATCH
400 WATT	CATEGORY D	ORANGE
310 WATT		BLUE
250 WATT	CATEGORY C	ORANGE WITH WHITE STRIPE
200 WATT		RED
150 WATT	CATEGORY B	GREEN
100 WATT	CATEGORY A	BROWN
70 WATT	CATEGORY UDL	BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

6

S.D.D. 10 A 2-3

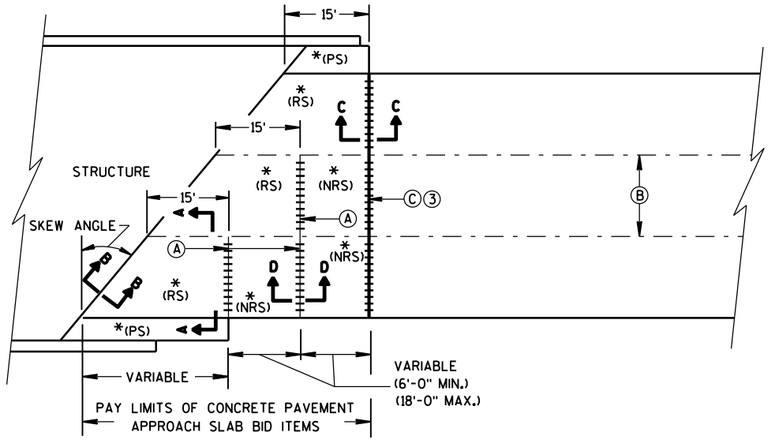
IDENTIFICATION PLAQUES
LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

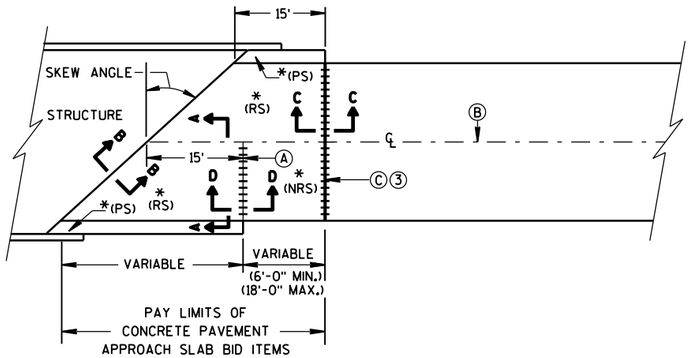
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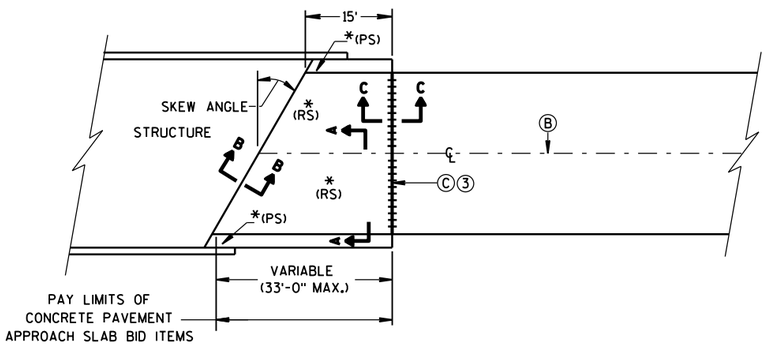
S.D.D. 10 A 2-3



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

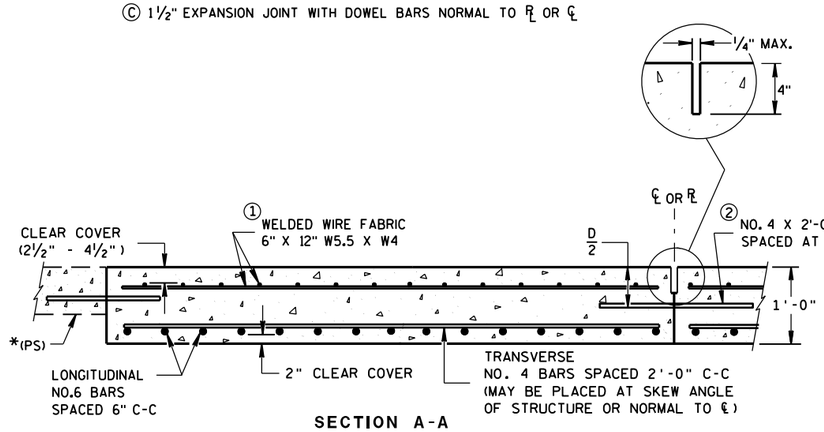
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

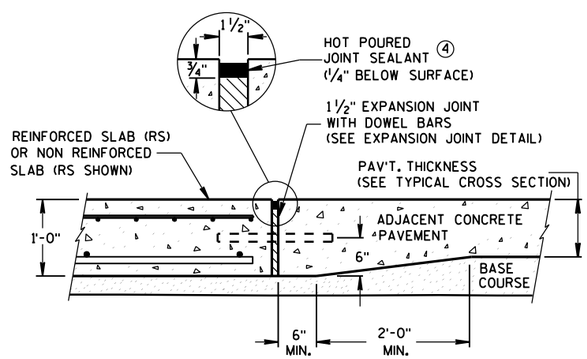
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

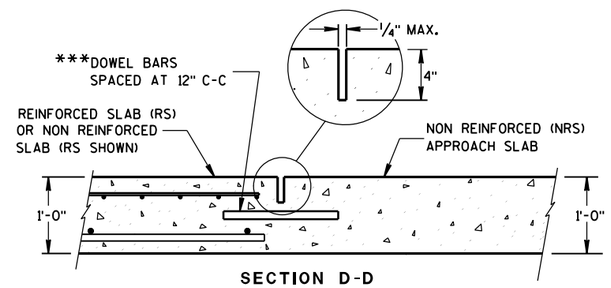
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

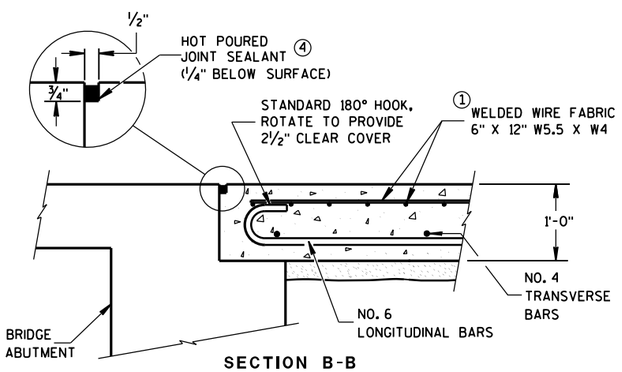
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

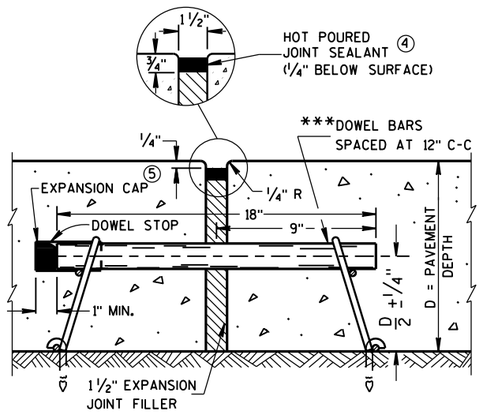
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

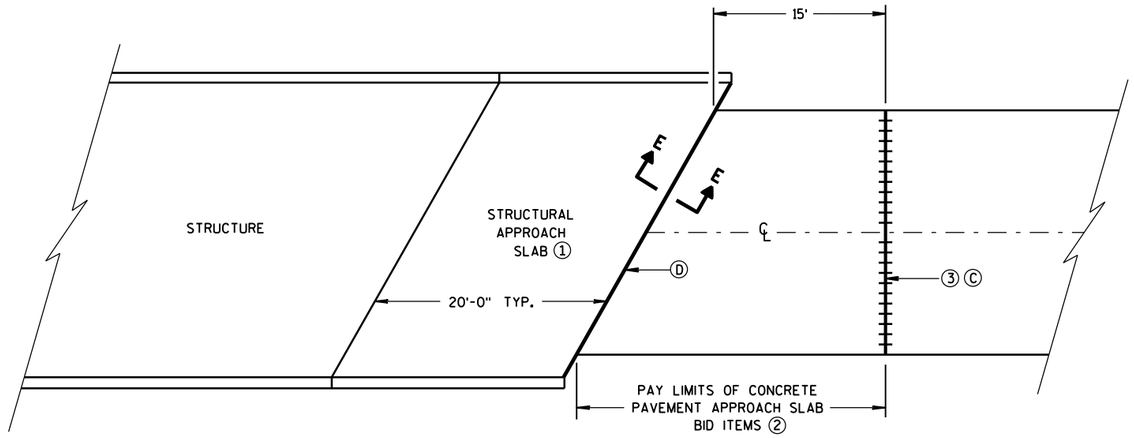
6

S.D.D. 13 B 2-8a

6

S.D.D. 13 B 2-8a

BRIDGE APPROACHES



GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

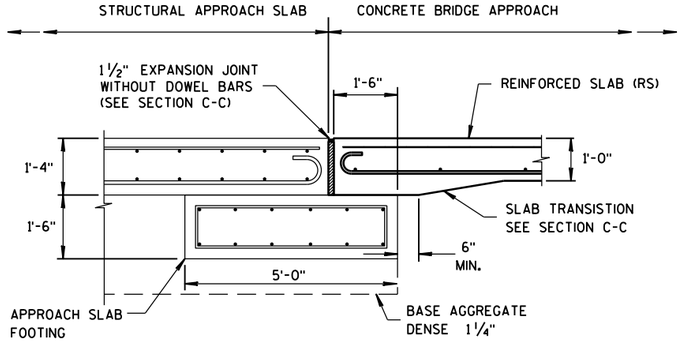
① SEE BRIDGE PLAN.

② CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.

③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄

Ⓓ 1½" EXPANSION JOINT (NO DOWELS)



SECTION E-E

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

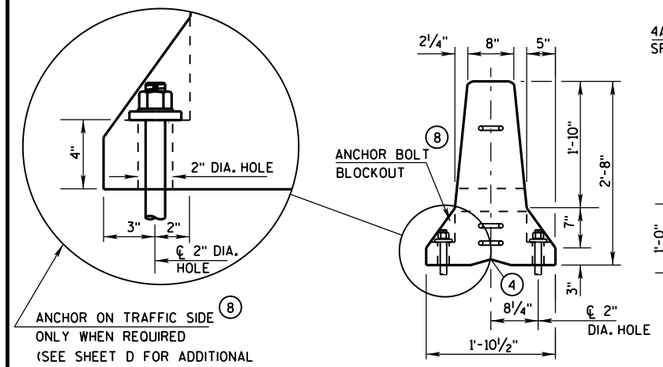
STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

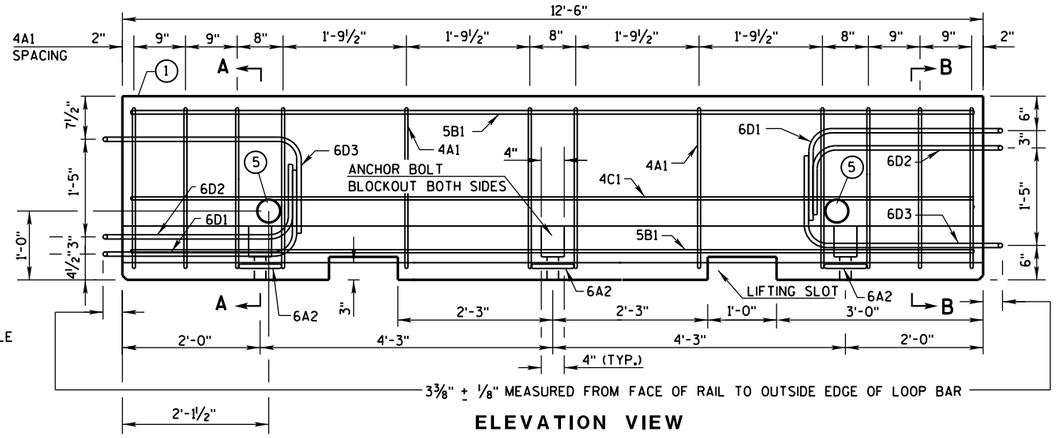
APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPERV
FHWA

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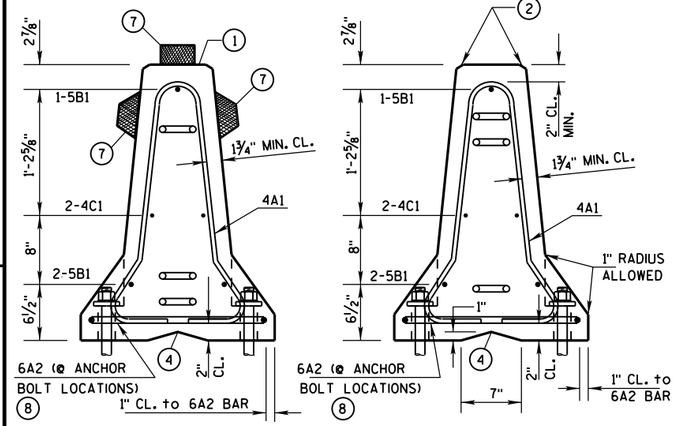
S.D.D. 13 B 2-8b



END VIEW

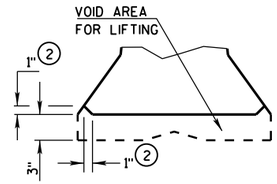


ELEVATION VIEW

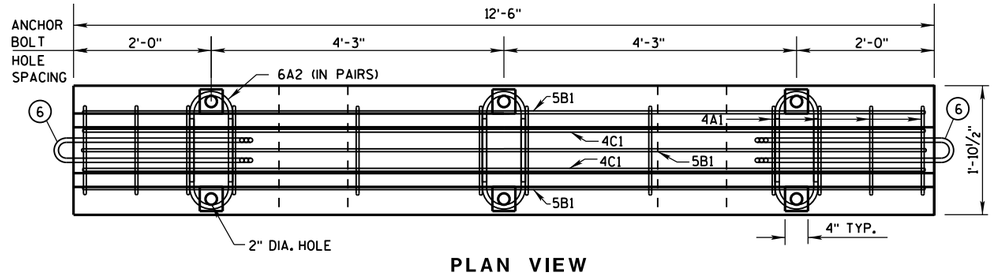


SECTION A-A
(STIRRUP PLACEMENT)

SECTION B-B
(STIRRUP PLACEMENT)

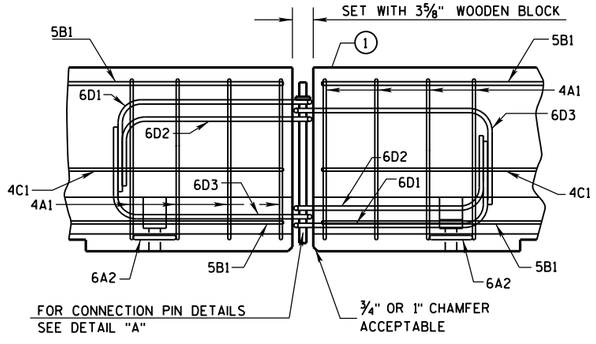


DETAIL "B"
LIFTING SLOT DETAIL

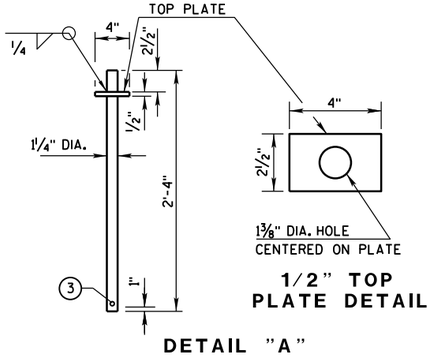


PLAN VIEW

DETAILS OF BARRIER SECTION

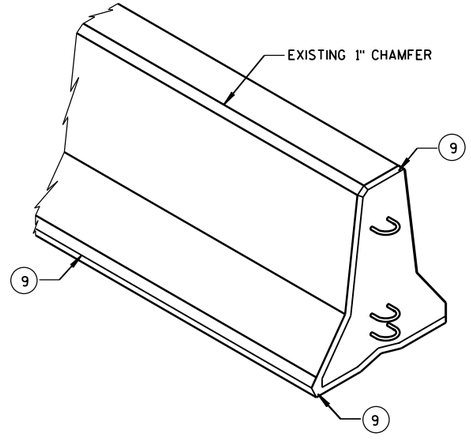


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

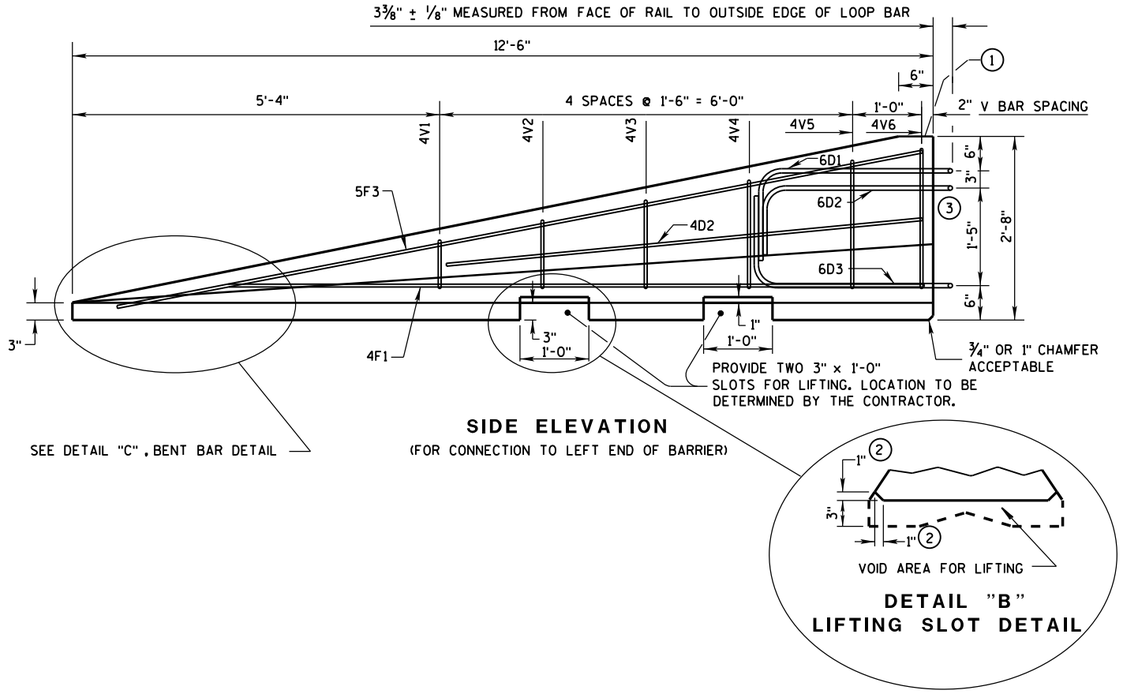
(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

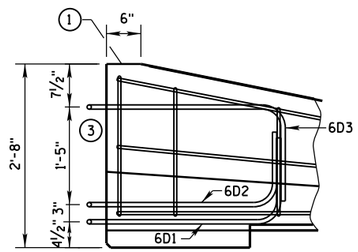
(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

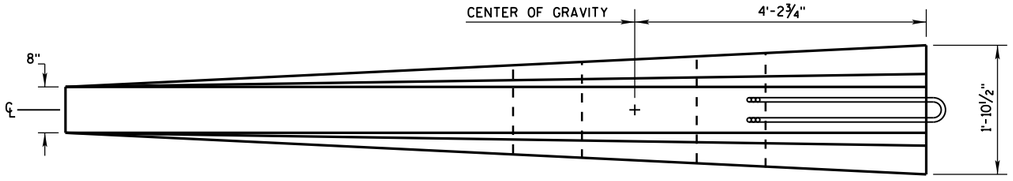
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 323

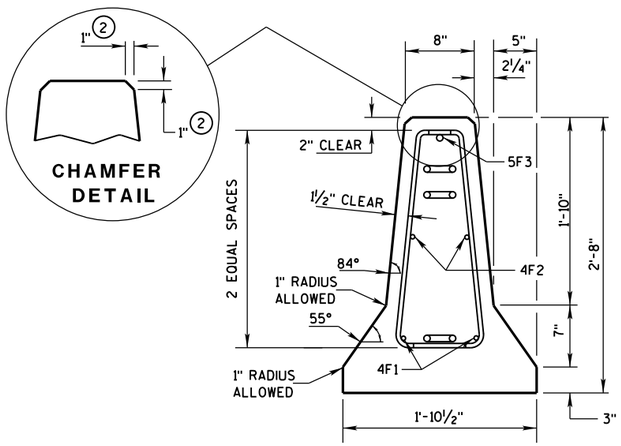


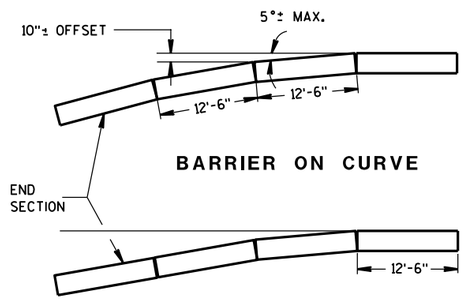


GENERAL NOTES

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"

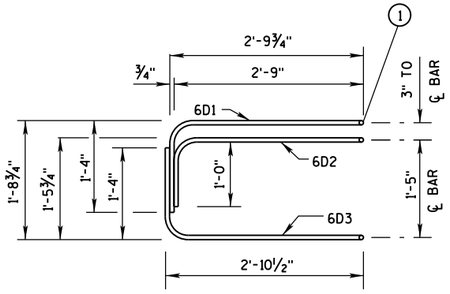
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-14b

BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY

DETAIL "C"
BENT BAR DETAIL

BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

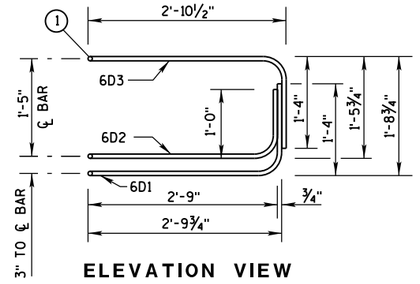
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

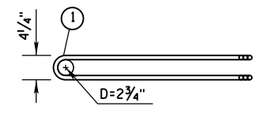
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

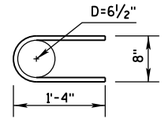
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



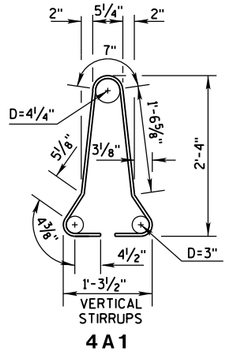
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



4A1

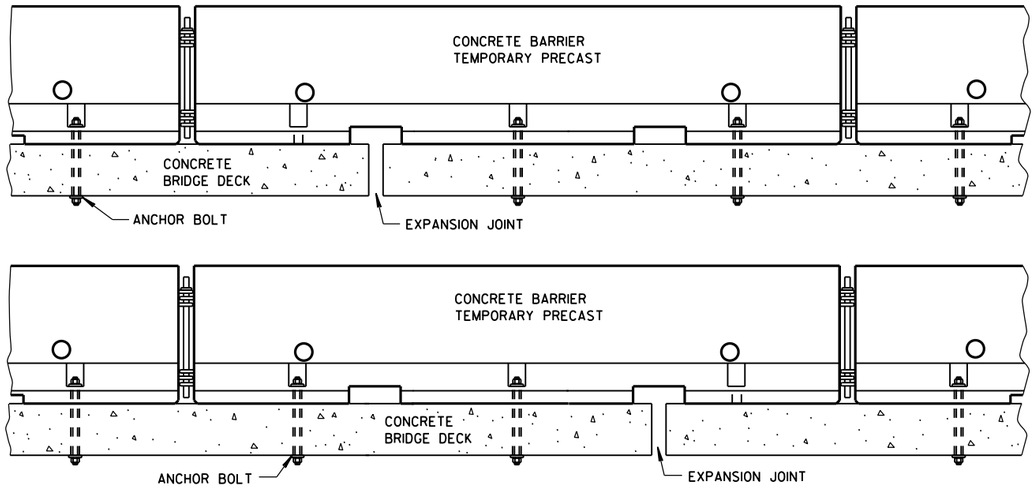
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

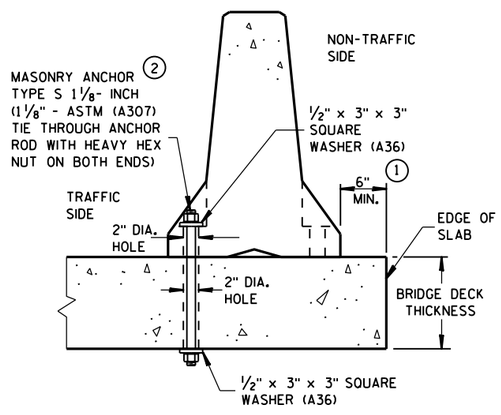
6

S.D.D. 14 B 7-14c



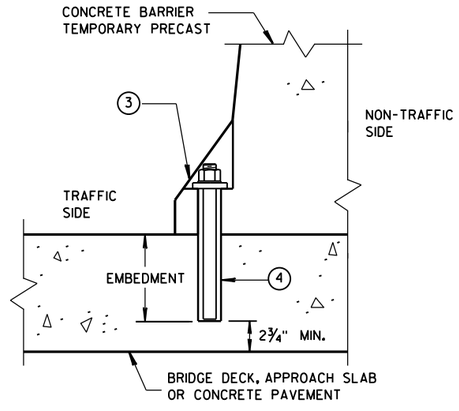
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



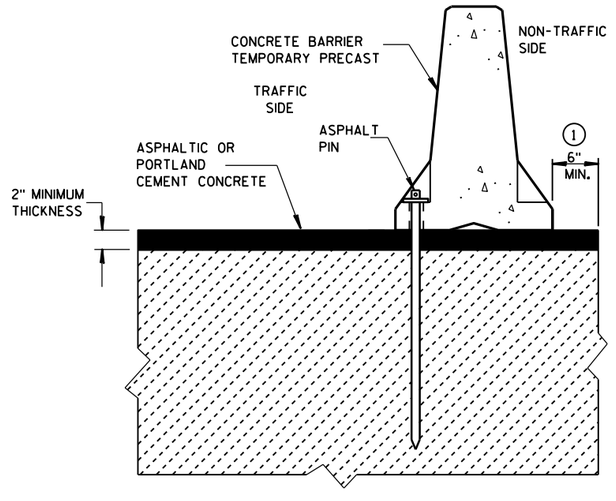
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



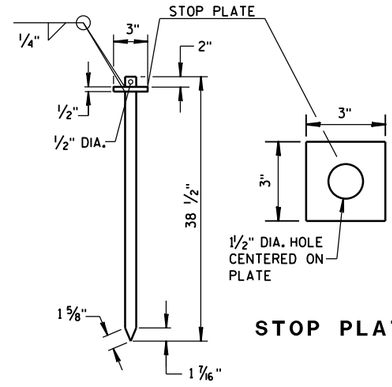
REMOVABLE ADHESIVE BONDED ANCHOR ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

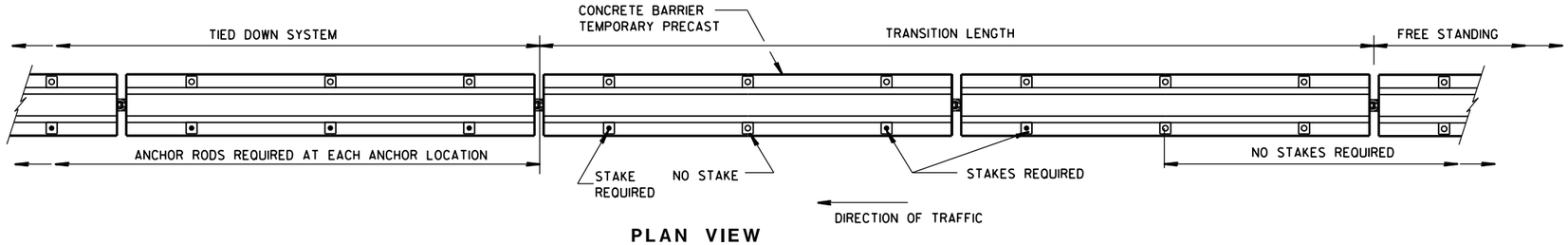
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

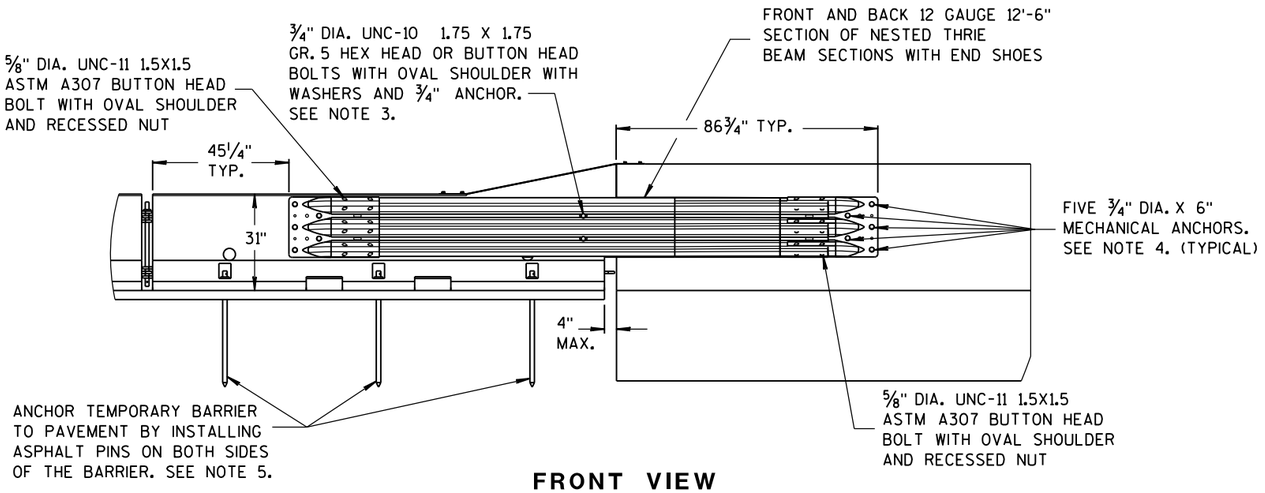
④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

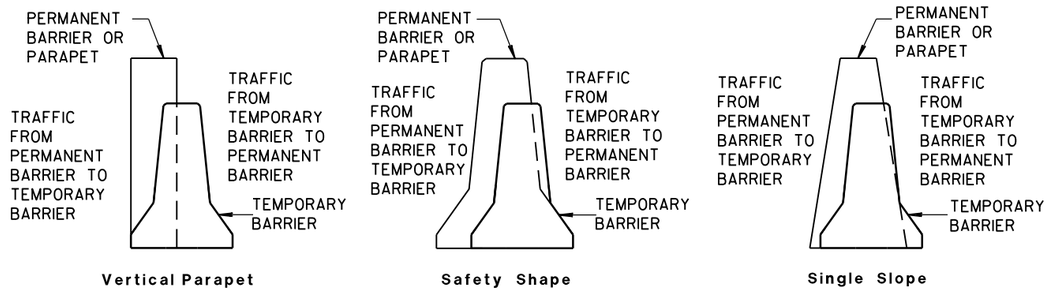
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 7-14d



FRONT VIEW

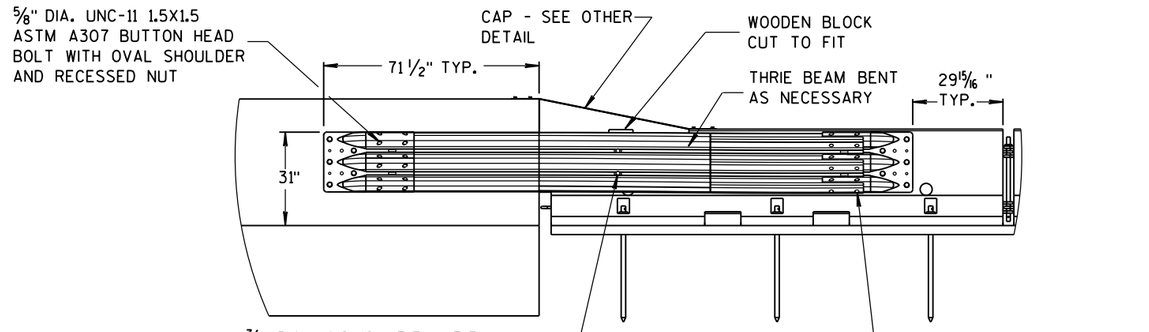


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

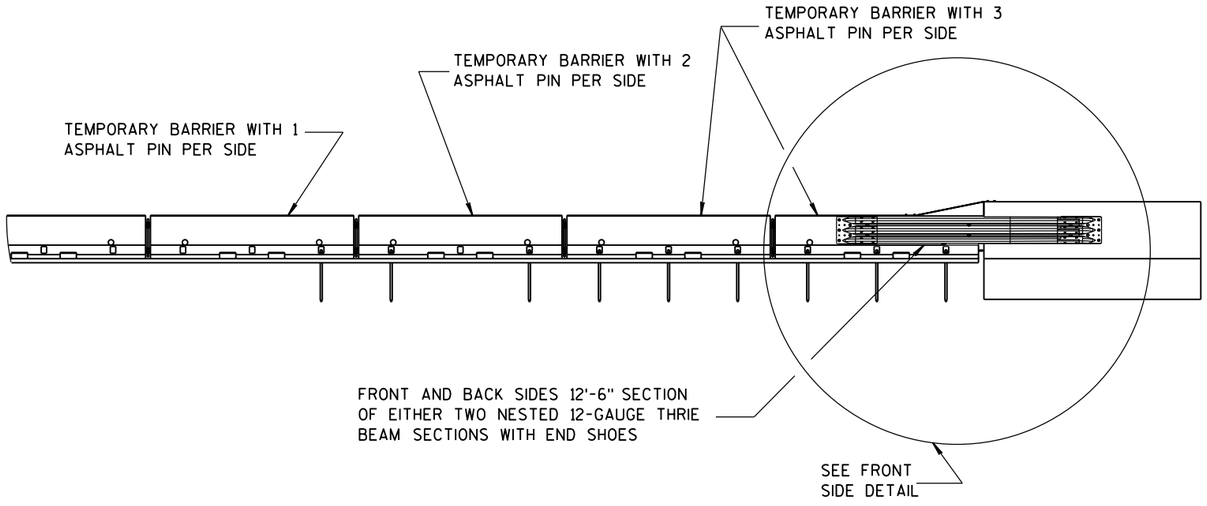
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

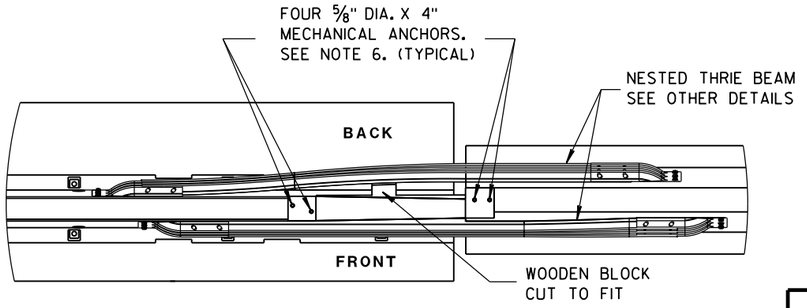
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BACK VIEW



FRONT VIEW



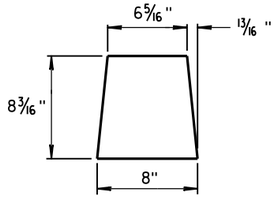
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

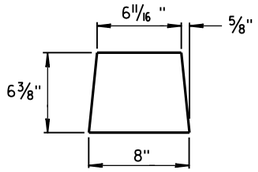
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

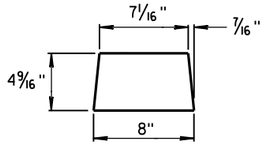
6
S.D.D. 14 B 7-14e



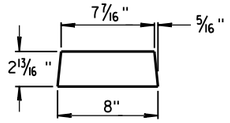
GUSSET 1



GUSSET 2

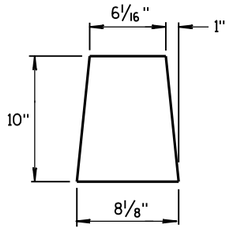


GUSSET 3

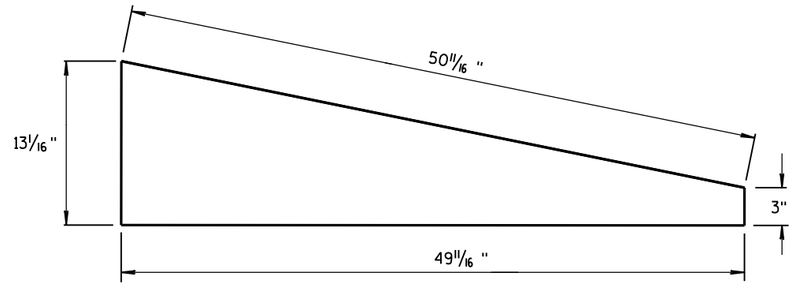


GUSSET 4

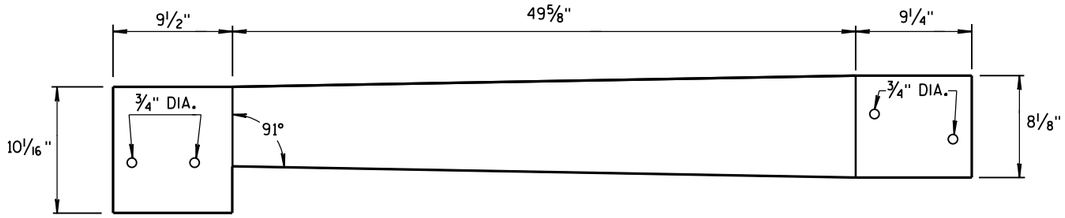
GUSSETS

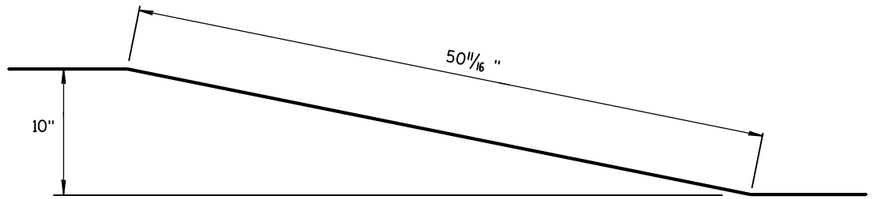


END PLATE



SIDE PLATE

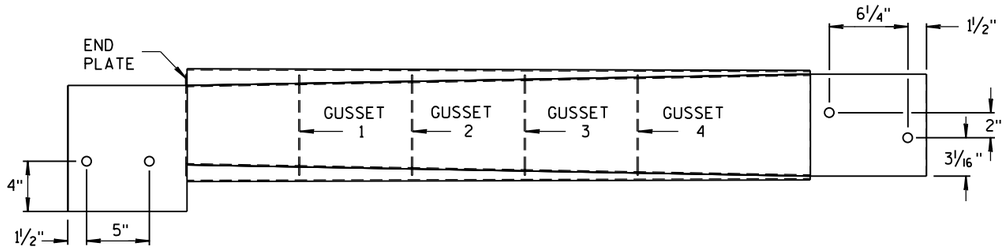


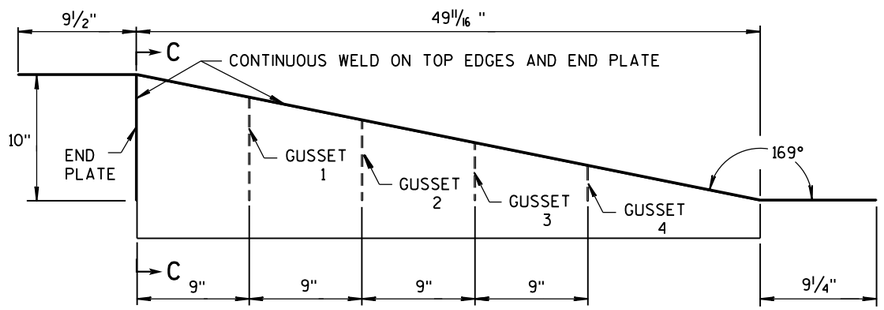


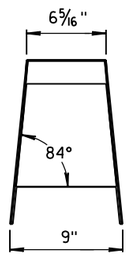
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

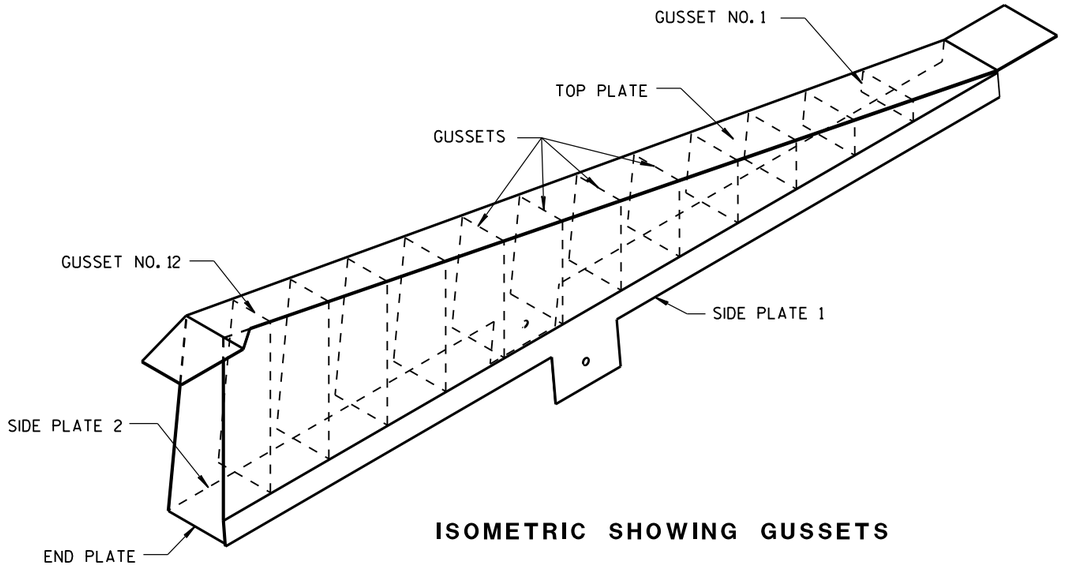
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

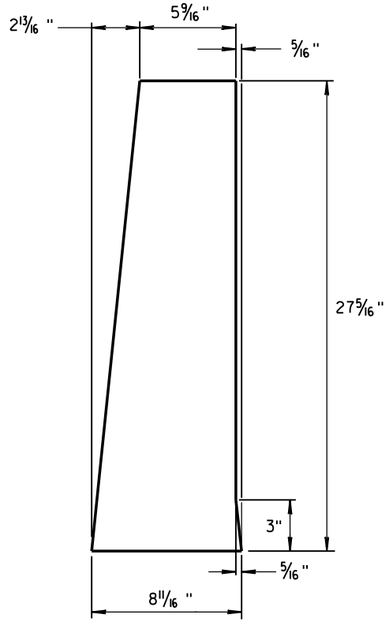
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 7-14f

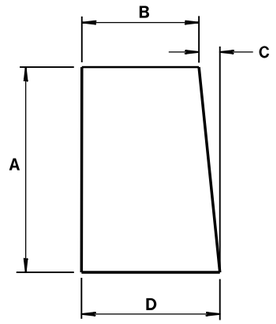


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



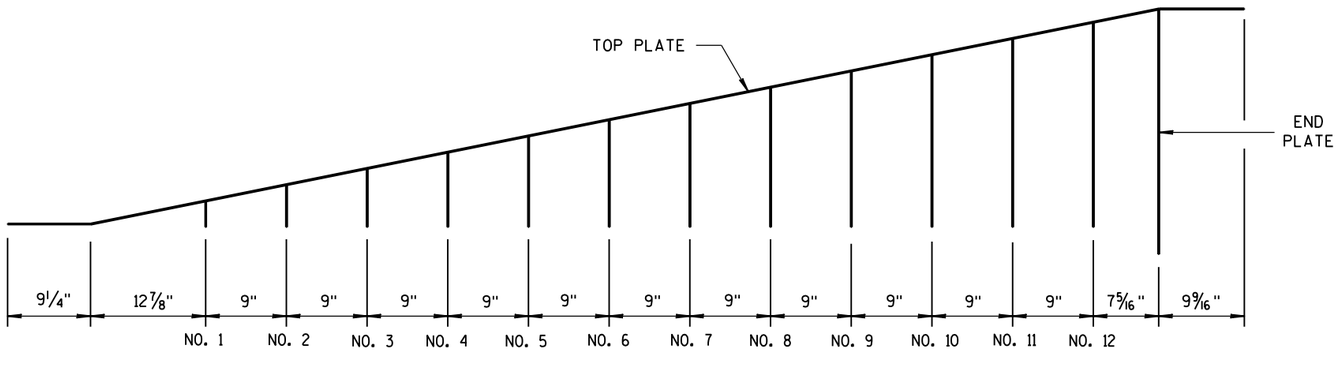
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

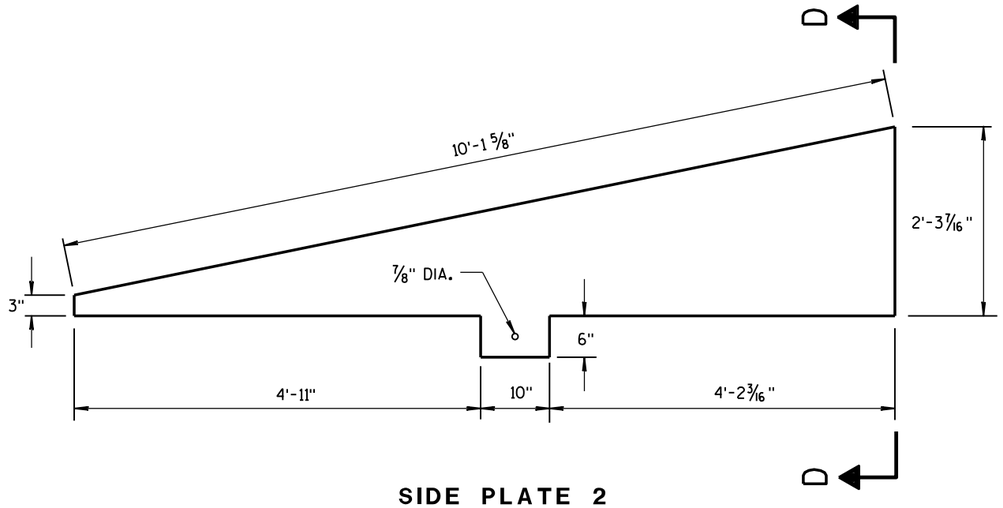
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

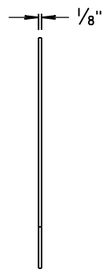
STATE OF WISCONSIN
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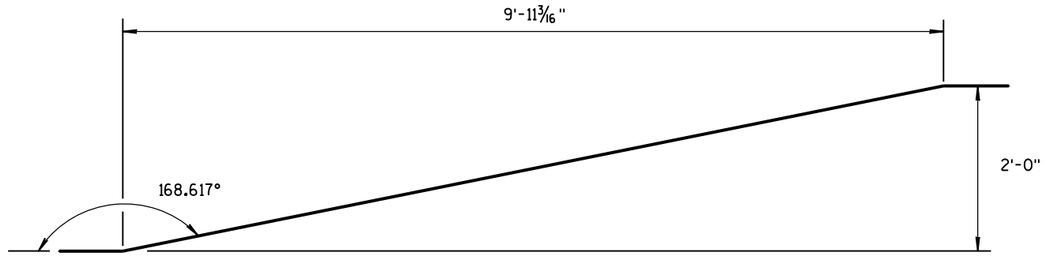
S.D.D. 14 B 7-14g



SIDE PLATE 2

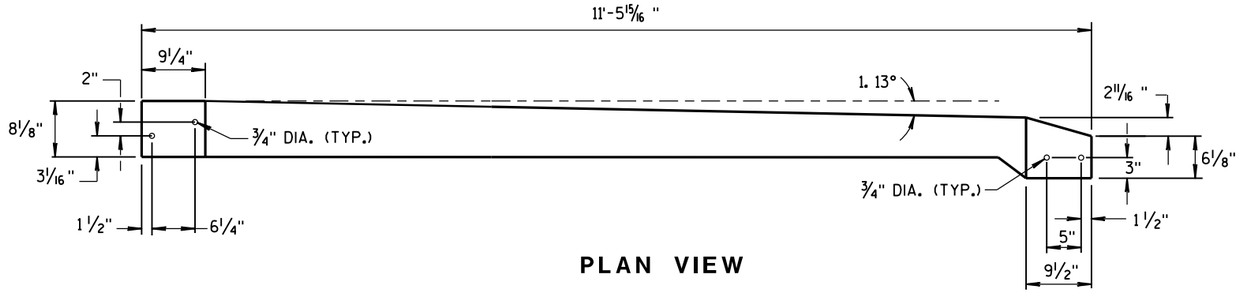


END VIEW



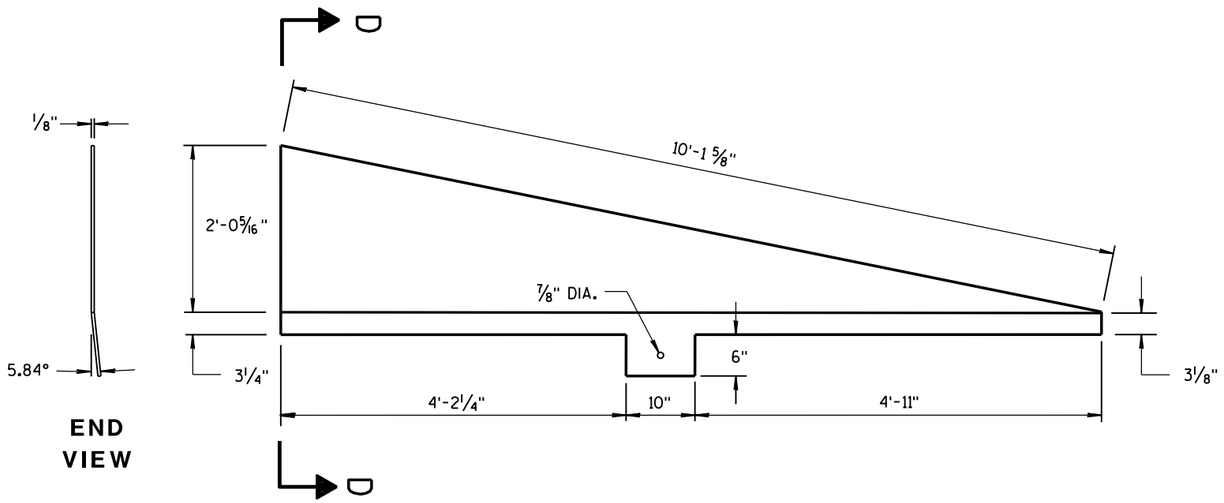
SIDE VIEW

TOP PLATE



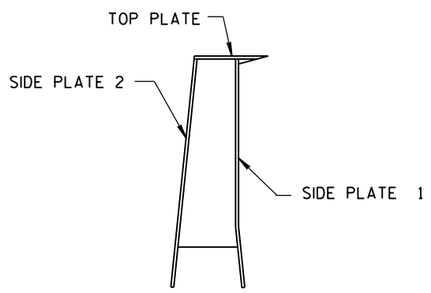
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

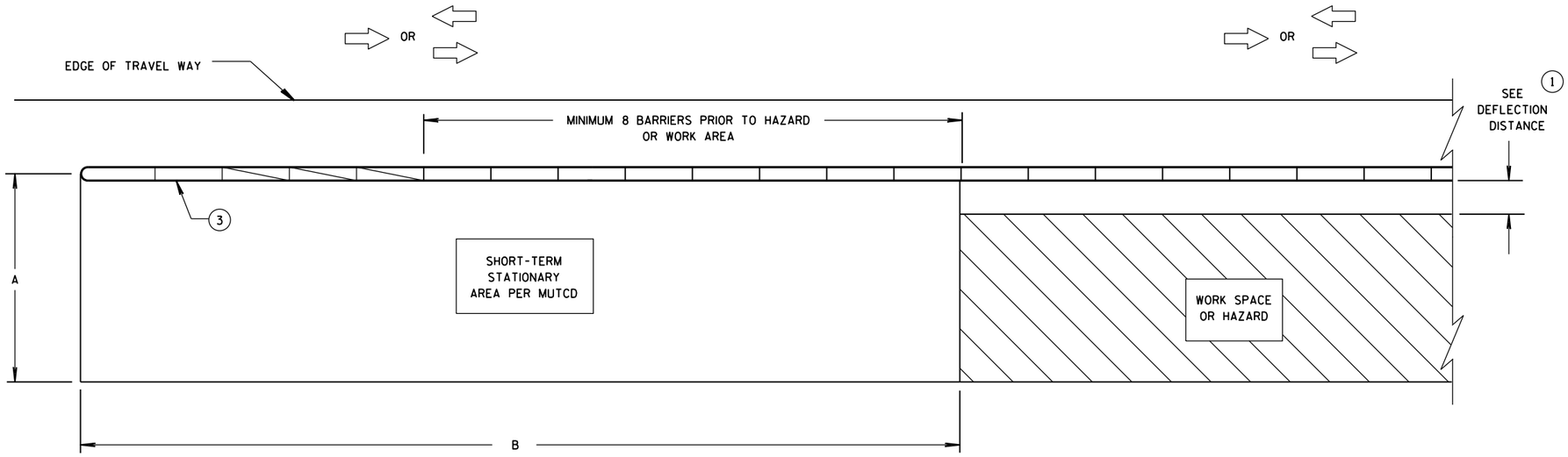
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S.D.D. 14 B 7-14h

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S.D.D. 14 B 7-14h



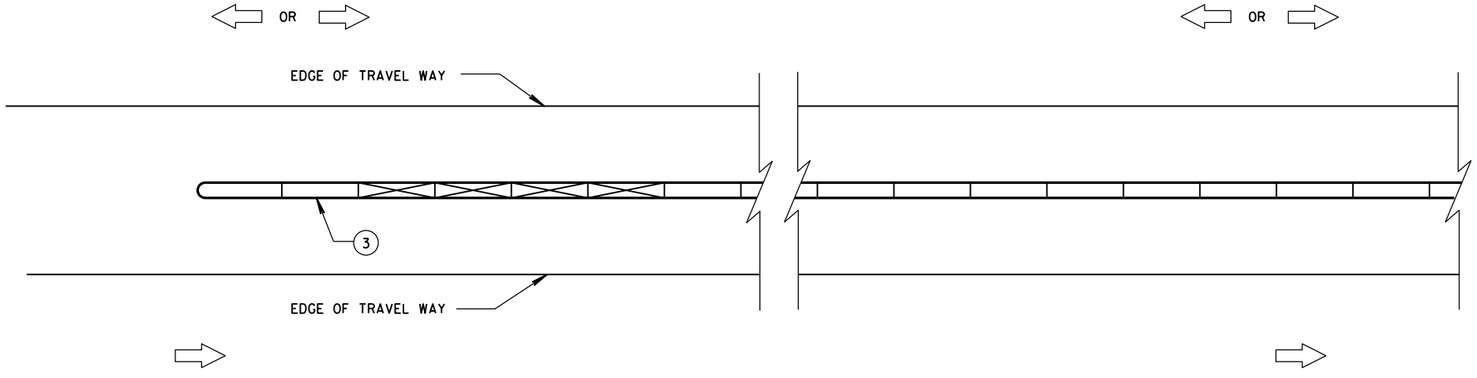
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

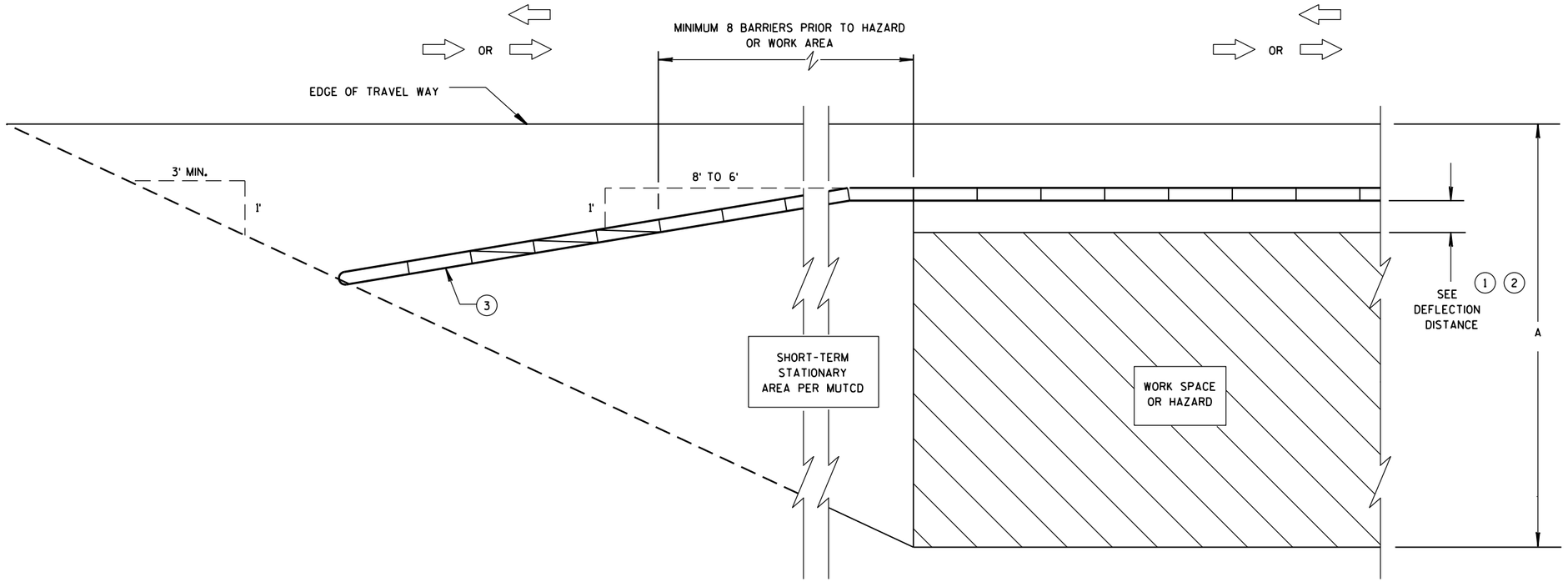
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

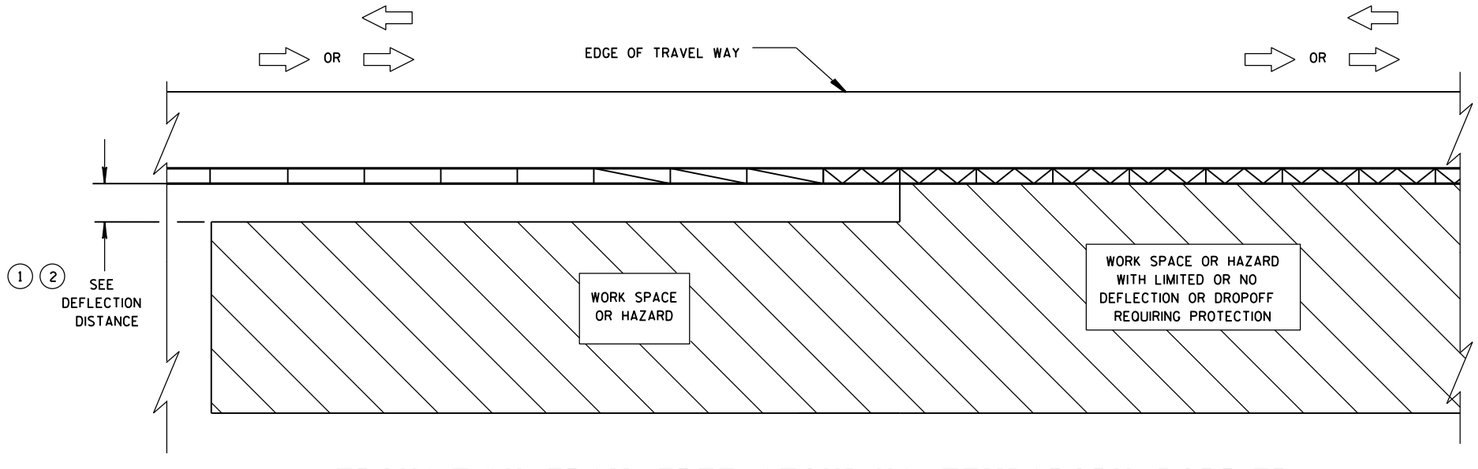
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 8-2a
S.D.D. 14 B 8-2a



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

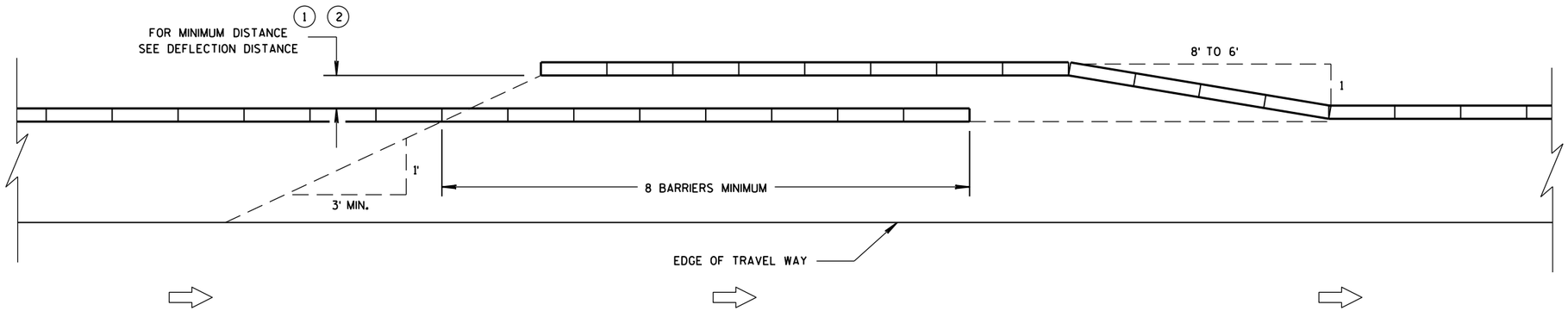
STATE OF WISCONSIN
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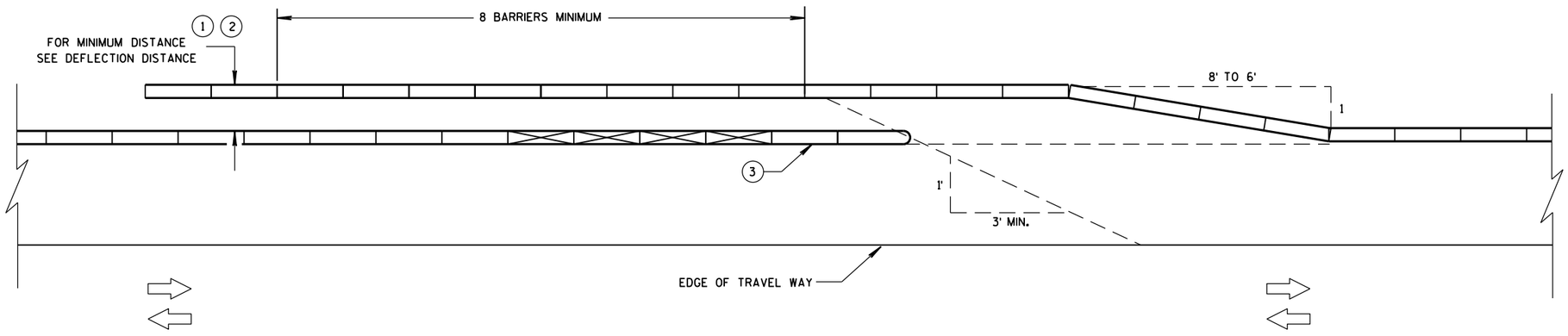
S.D.D. 14 B 8-2b

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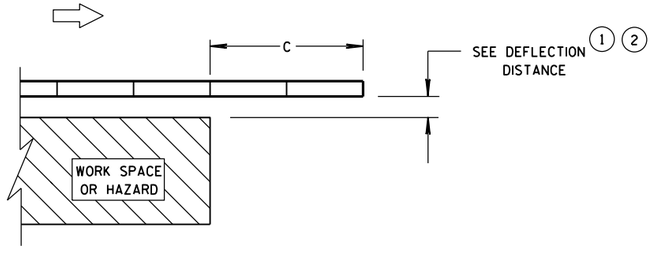
S.D.D. 14 B 8-2b



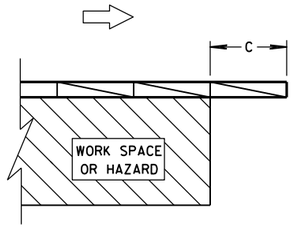
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

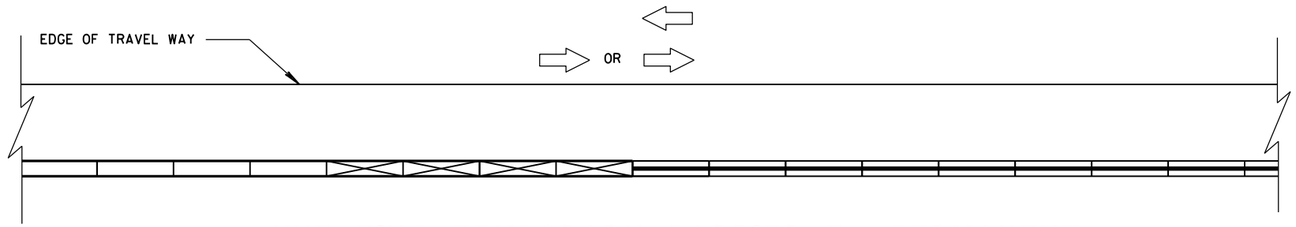
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

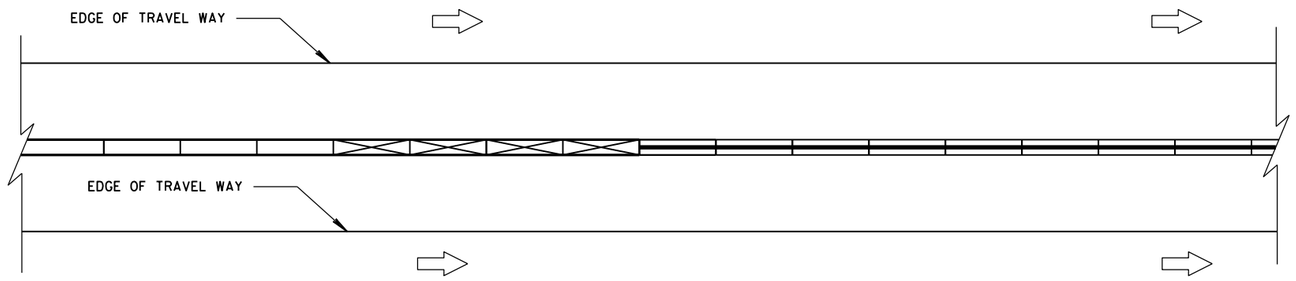
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CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

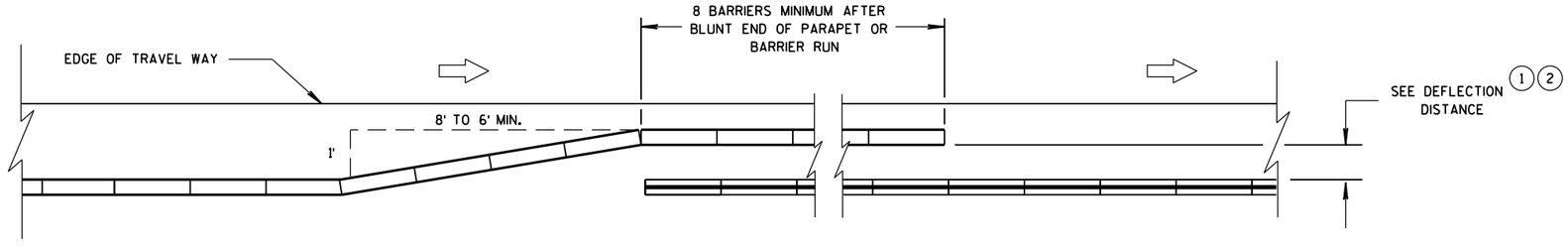
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

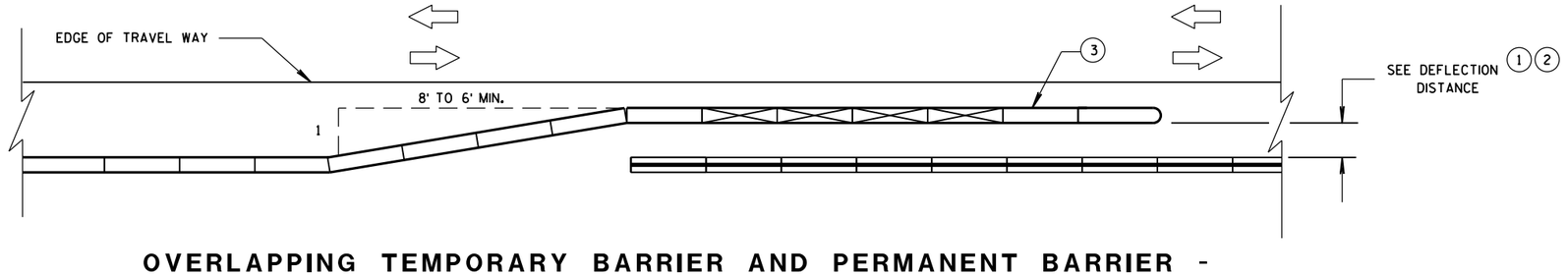
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

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
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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

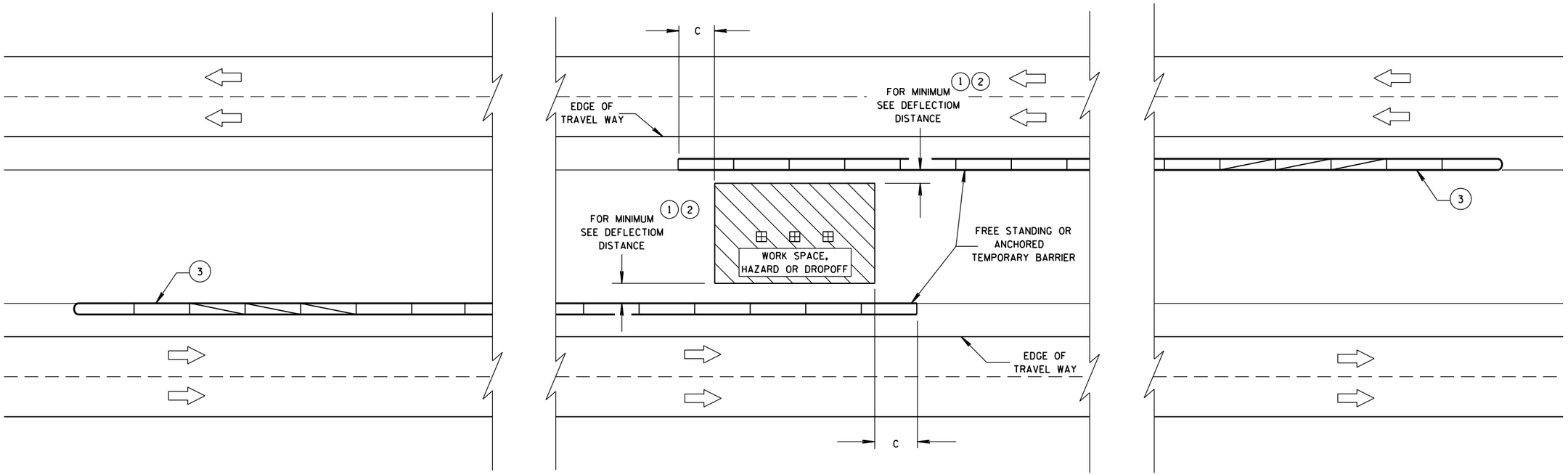
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

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

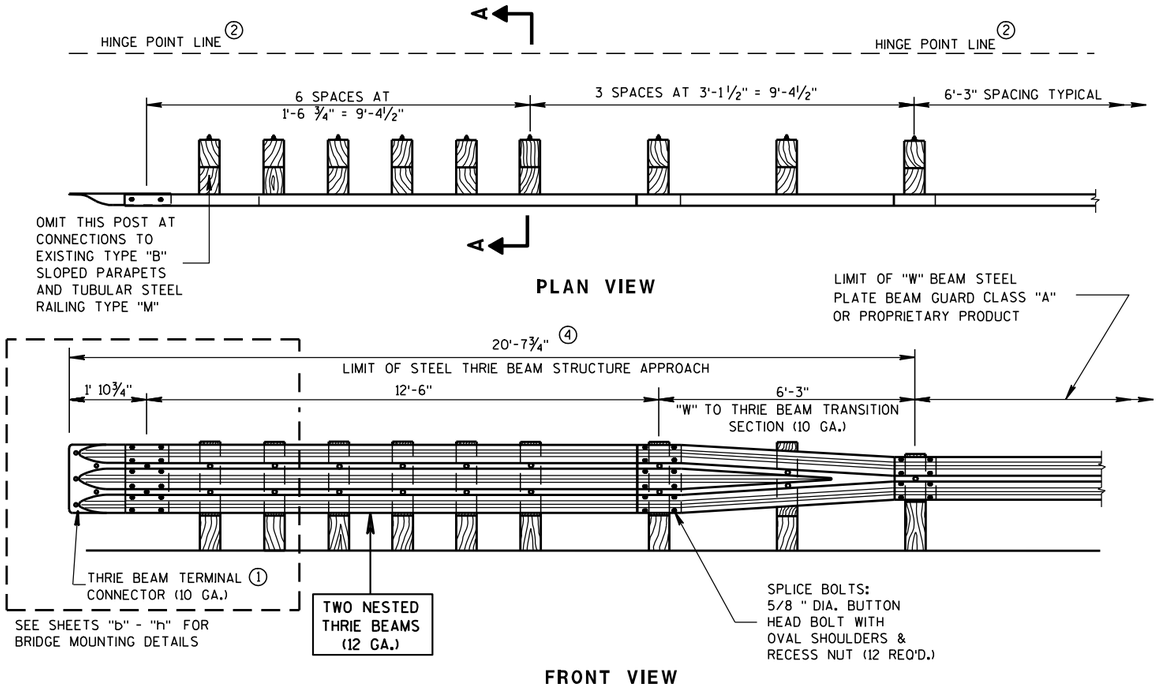
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June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
335
FHWA

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S.D.D. 14 B 8-2e



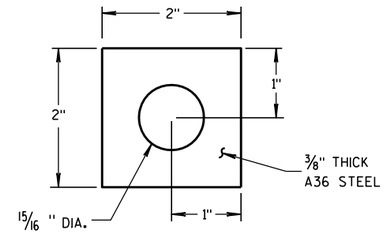


PLATE WASHER DETAIL

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".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

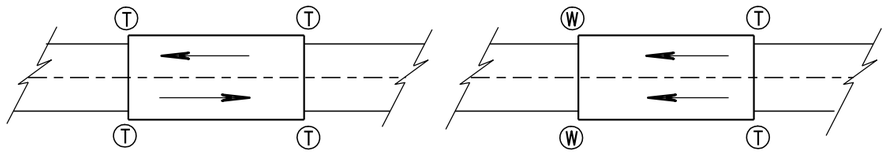
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



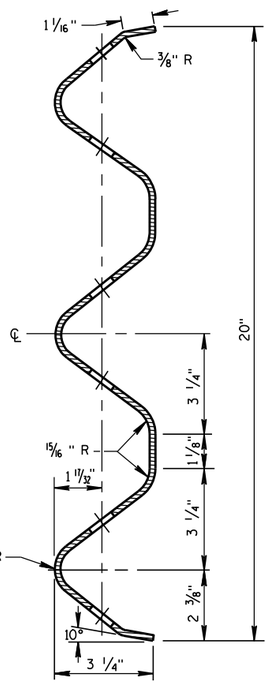
TWO WAY TRAFFIC

ONE WAY TRAFFIC

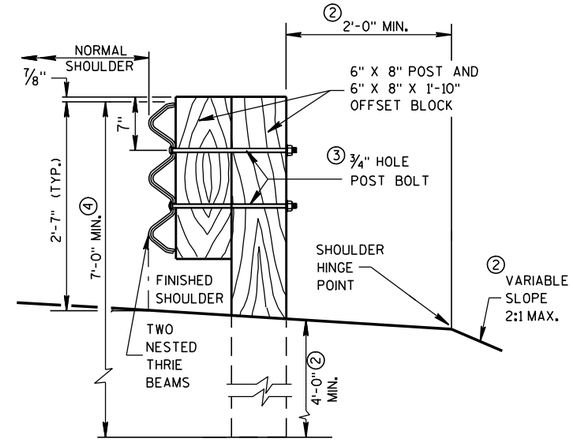
(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

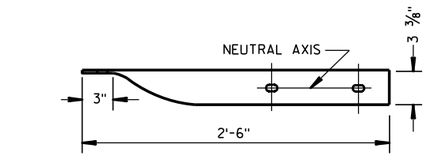
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

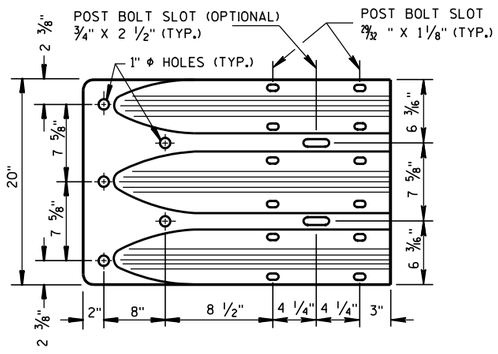


SECTION THRU THRIE BEAM RAIL ELEMENT

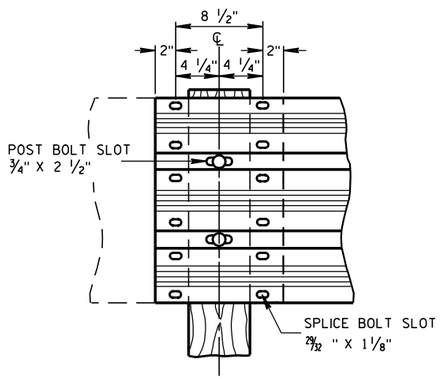


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

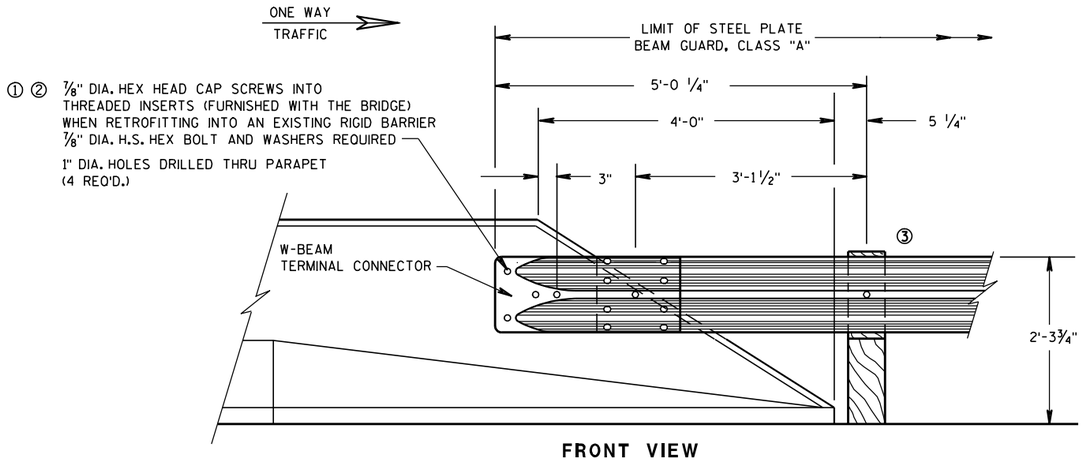
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APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

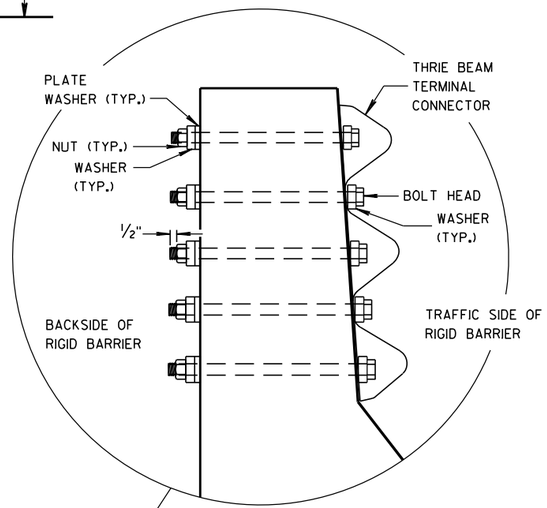
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

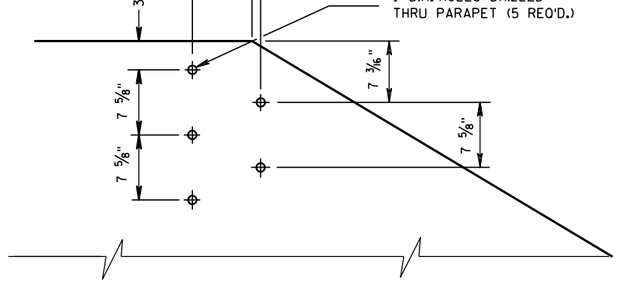
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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 TERMINAL CONNECTOR. 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.

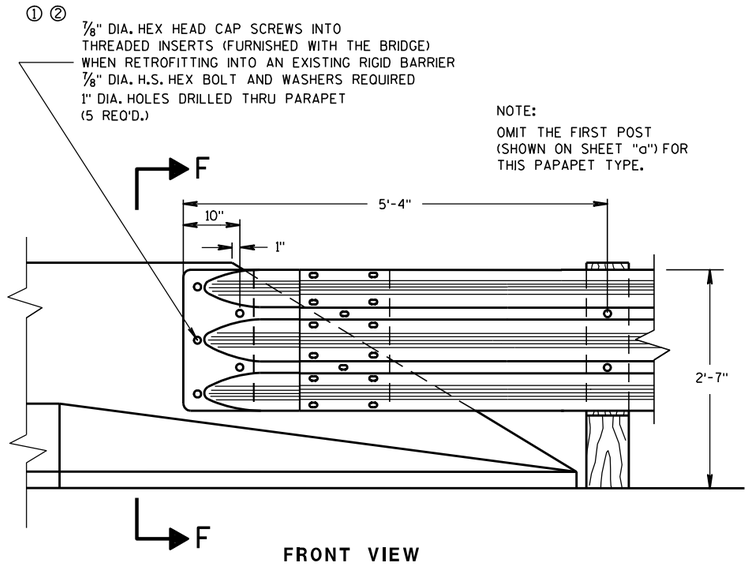
③ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

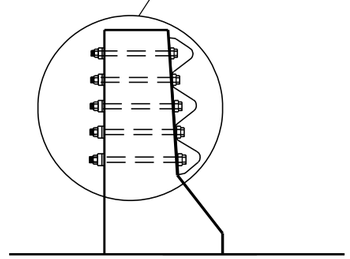




DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION F-F

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS

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APPROVED
8/31/2012 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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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.

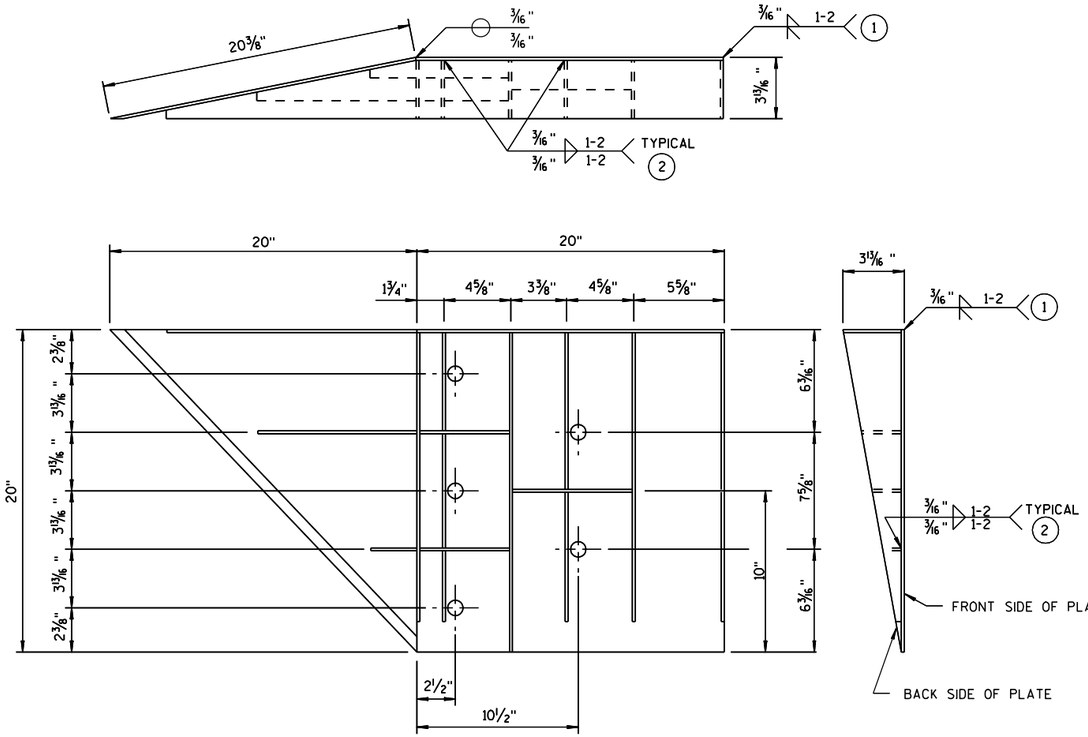
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

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".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

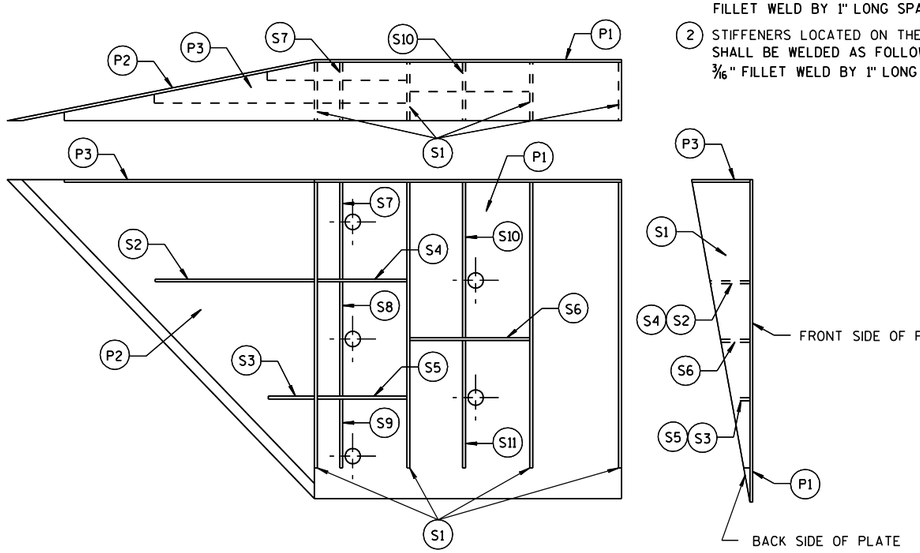


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

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 5/32" 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 3/32"	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"

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

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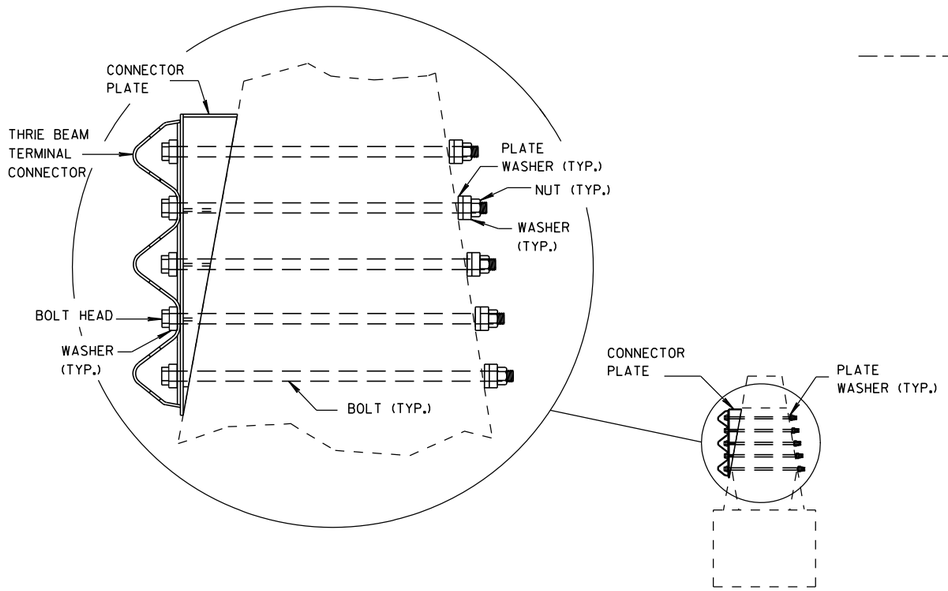
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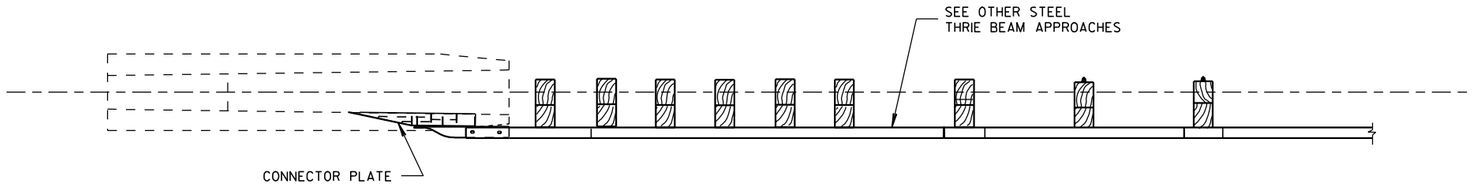
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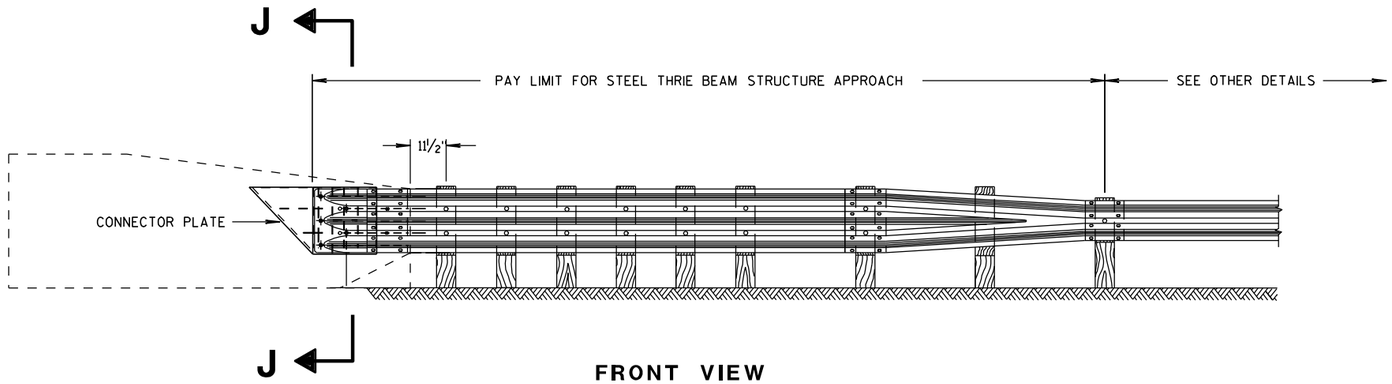
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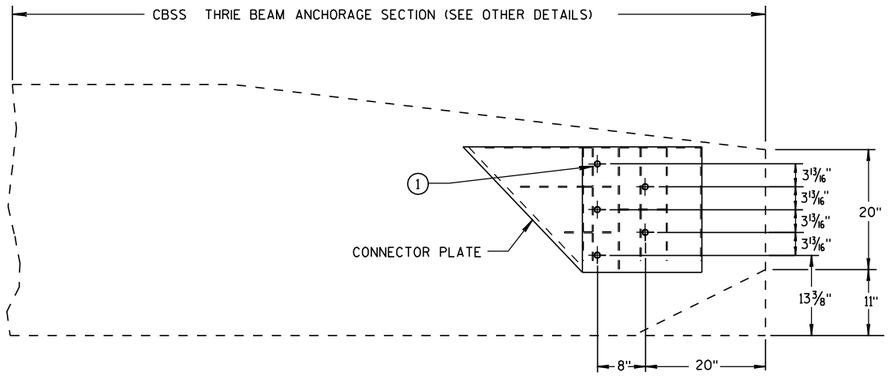
SECTION J-J



PLAN VIEW



FRONT VIEW



CONNECTOR PLATE LOCATION

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

CONNECTOR PLATE, DRILLING HOLES THROUGH 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 TERMINAL CONNECTOR. 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.

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT

STATE OF WISCONSIN
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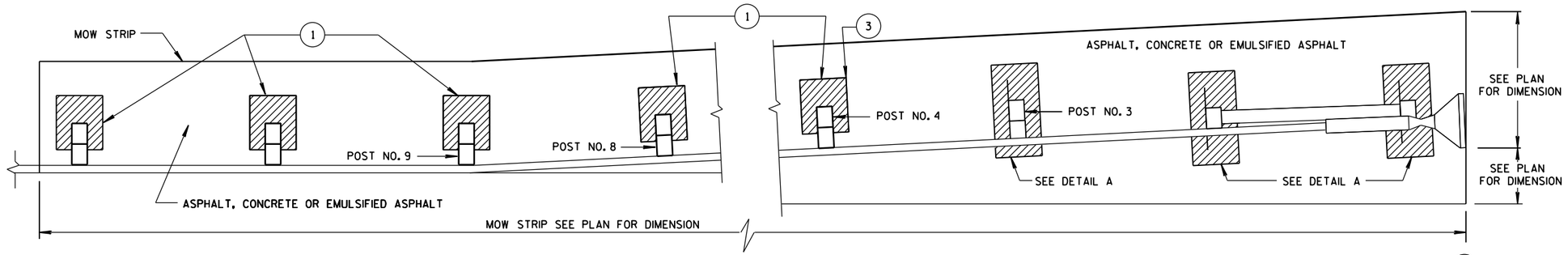
8/31/2012
DATE

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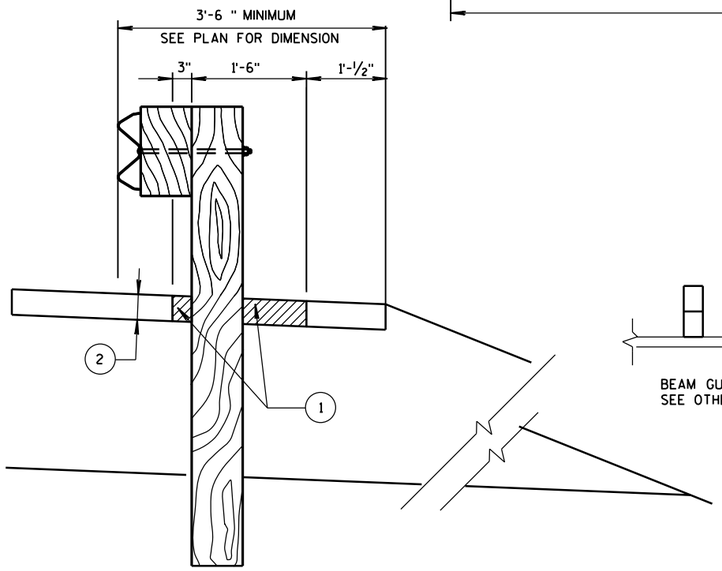
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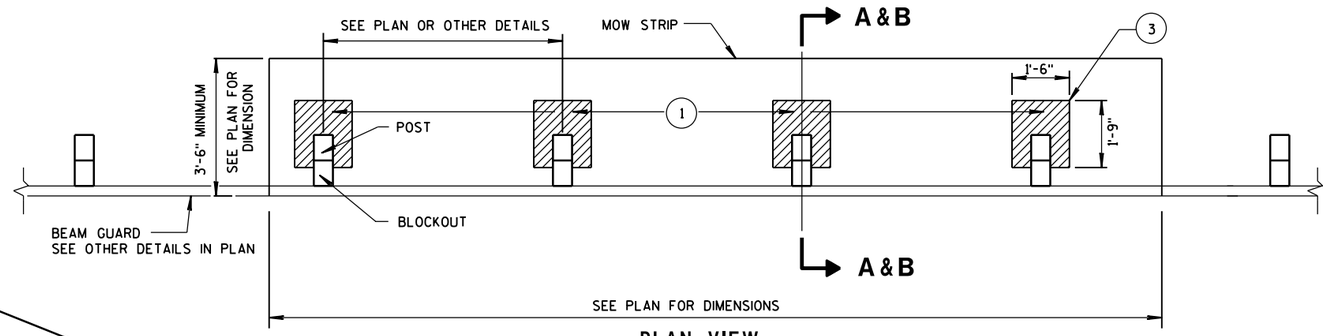


PLAN VIEW

MOW STRIP LAYOUT FOR ENERGY ABORBING TERMINAL

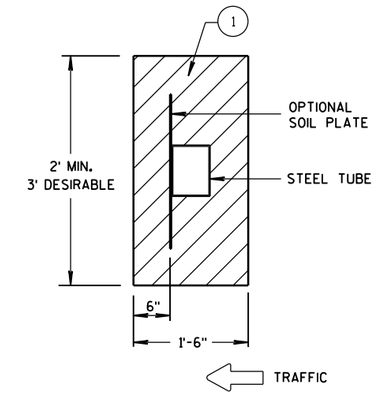


SECTION A-A

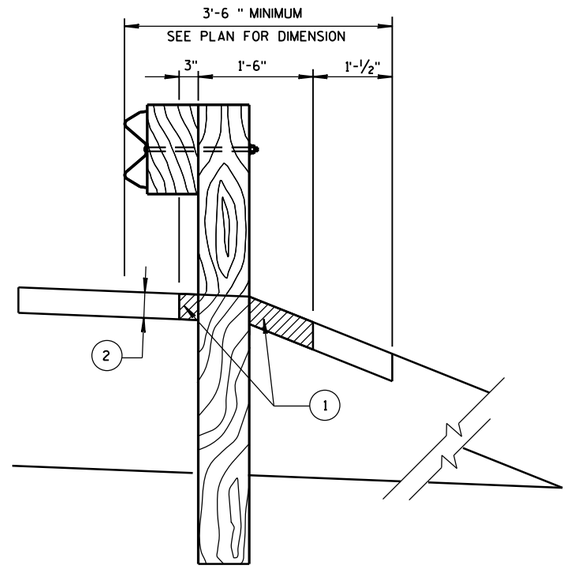


PLAN VIEW

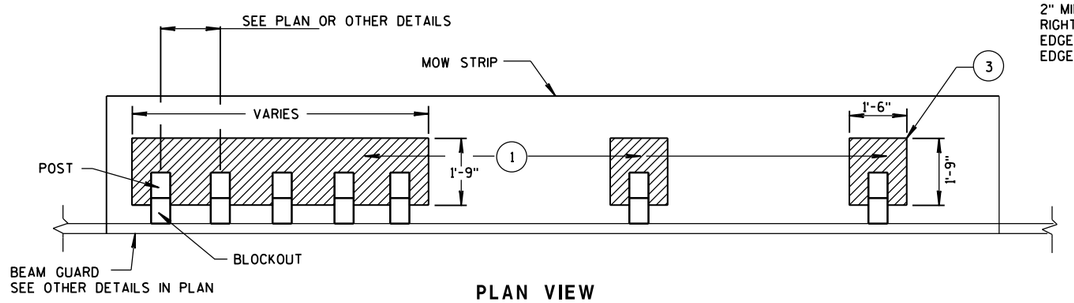
MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT



DETAIL A

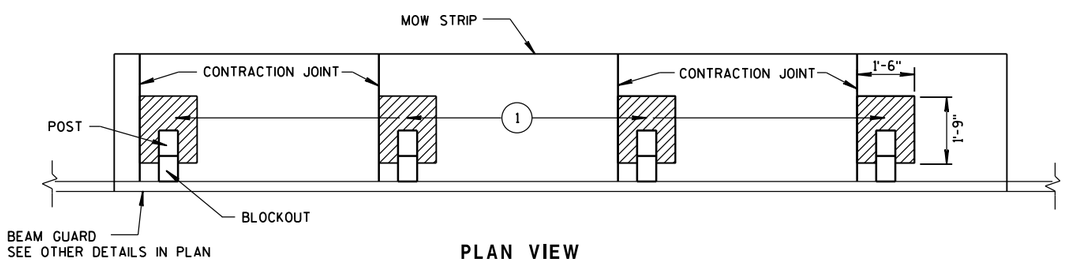


SECTION B-B



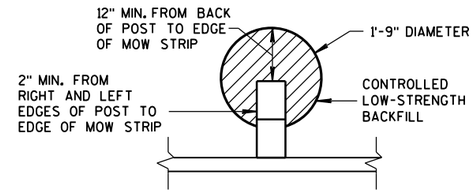
PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT



PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP



ALTERNATIVE HMA
MOW STRIP DESIGN

(1) CONTROLLED LOW-STRENGTH BACKFILL OR EMULSIFIED ASPHALT.

(2) DEPTH OF MOW STRIP:
ASPHALT - 4"
CONCRETE - 4"
EMULSIFIED ASPHALT - 1" OR LESS

(3) FOR EMULSIFIED ASPHALT MOW STRIP LEAVE OUTS NOT REQUIRED. (TYPICAL FOR ALL POSTS.)

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
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APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

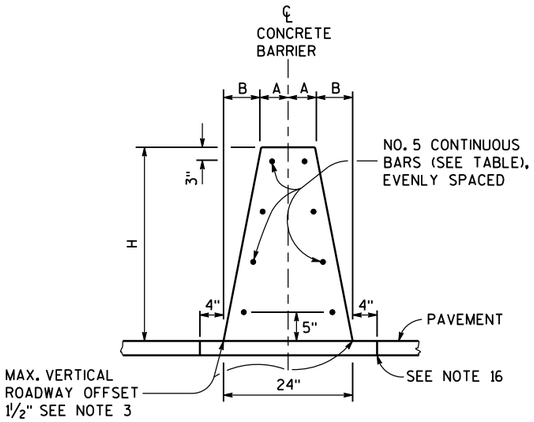
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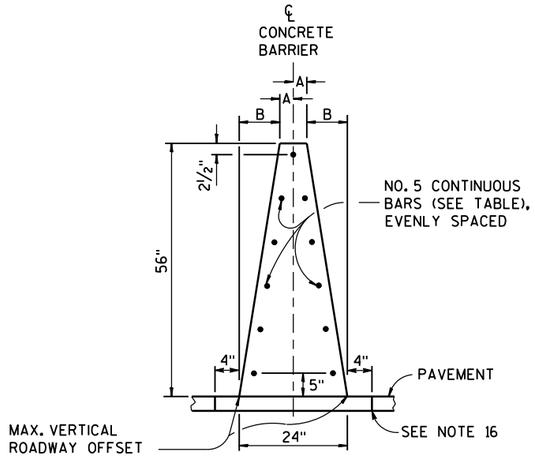
S.D.D. 14 B 28-3

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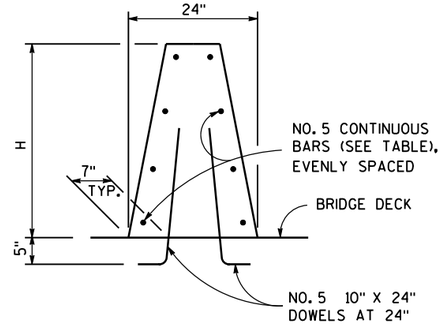
S.D.D. 14 B 28-3



32-INCH, 36-INCH OR 42-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S32, TYPE S36, AND TYPE S42)



56-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S56)



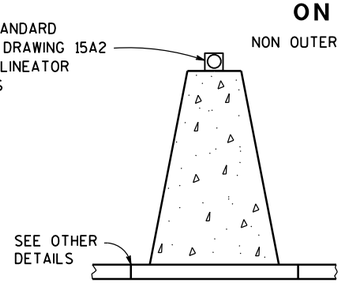
SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

NON OUTER PARAPET APPLICATION

GENERAL NOTES

1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR ½" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1½", USE TYPE A
4. PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.
5. EXCEPT IN ANCHORS, VERTICAL REINFORCING STIRRUP NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 1'-0".
6. FOR TYPE S32, TYPE S36, TYPE S42, AND S56 MONOLITHIC FOOTING OR DOWELED FOOTING WITH 2-#8 x 8" @ 2'-0".
7. STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL 2 FEET. BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
8. 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.
9. WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.
10. USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
11. 2" CLEAR COVER TYPICAL.
12. COLD-JOINTS MAY BE USED BETWEEN ANCHOR INSTALLATIONS. WHEN A COLD JOINT IS NEEDED, 3 FEET OF LAP OF LONGITUDINAL STEEL IS REQUIRED. LAPS TO BE FIRMLY TIED.
13. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 NO ADDITIONAL VERTICAL STEEL NEEDED. IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A REQUIRES VERTICAL STEEL. SEE OTHER DETAIL.
14. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 DEPTH OF FOOTING 10". IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A MATCH TOTAL HEIGHT OF SINGLE SLOPE BARRIER RETAINING WALL.
15. FOR ALL BARRIER TYPES SHOWN, ANCHOR IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN ON DRAWING OR DETAILS SHOWN ON S.D.D. 14B33. ANCHORS INCIDENTAL TO CBSS.
16. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



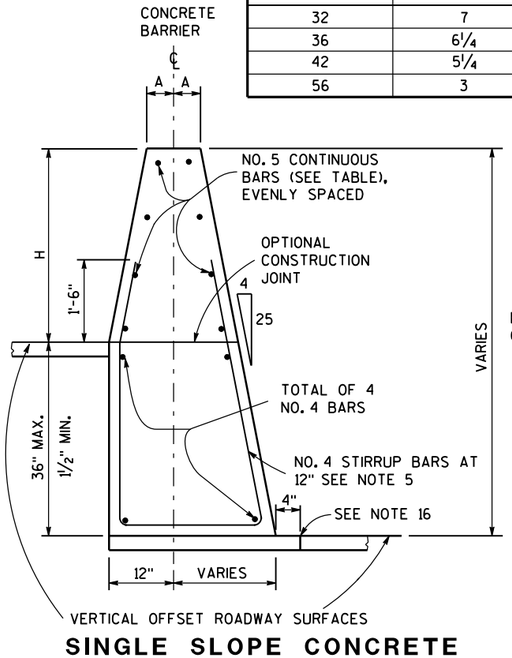
DELINEATION

DELINEATOR SPACING ON HORIZONTAL CURVES

RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

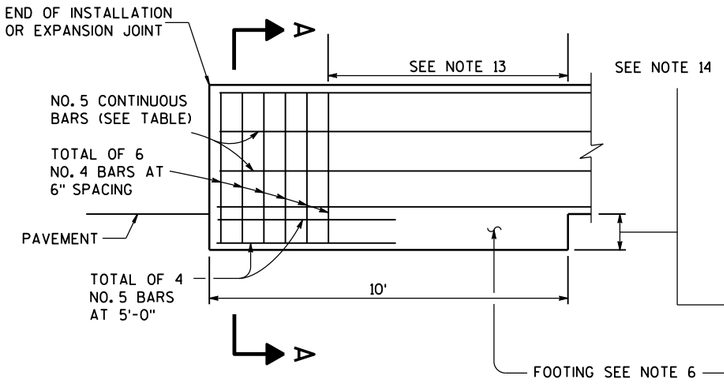
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	LENGTH OF BARRIER	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	



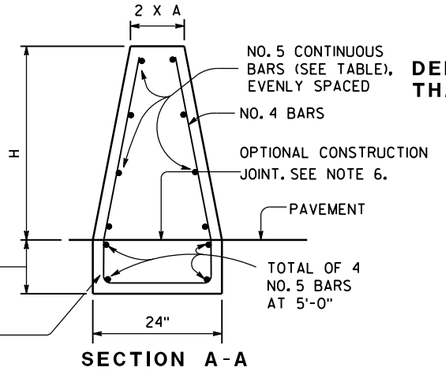
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(BETWEEN ADJACENT ROADWAYS)



END ANCHOR SINGLE SLOPE CONCRETE BARRIER

AT CONSTRUCTION JOINT

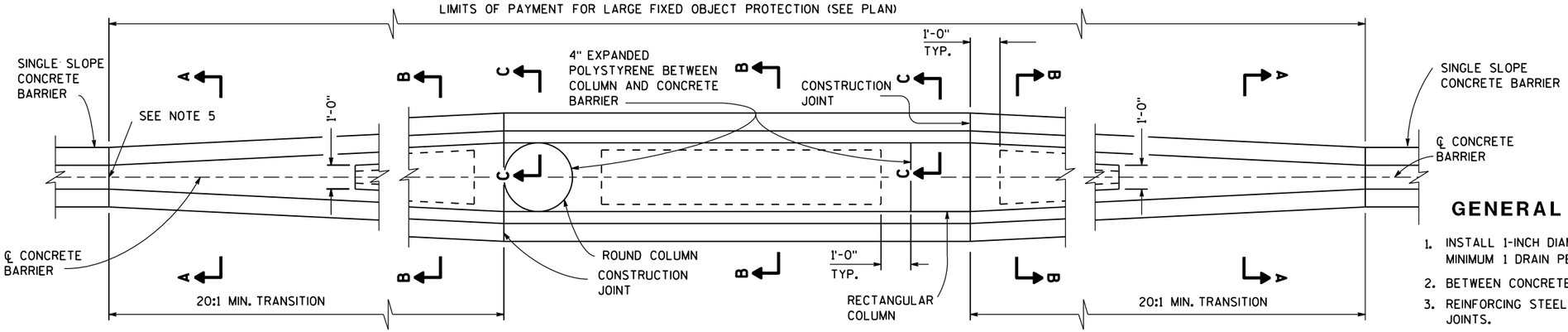


SECTION A-A

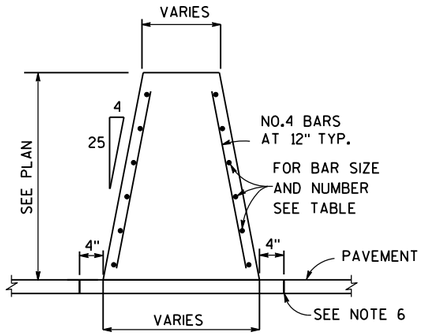
CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

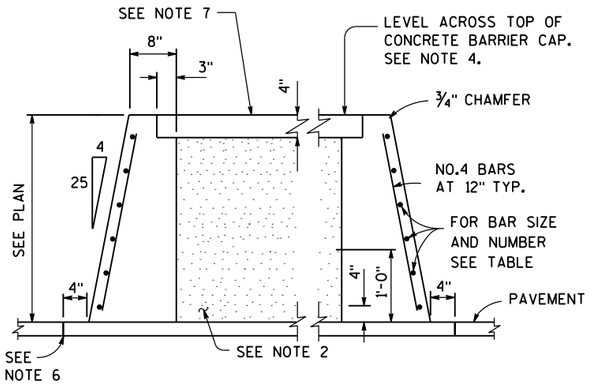
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S.D.D. 14 B 32-4a



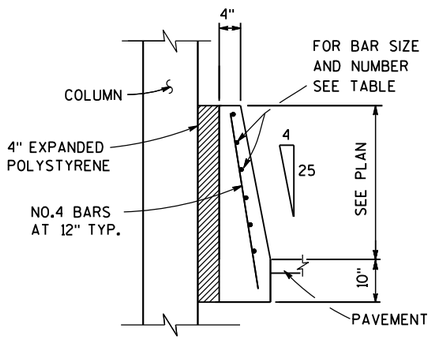
LARGE FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56



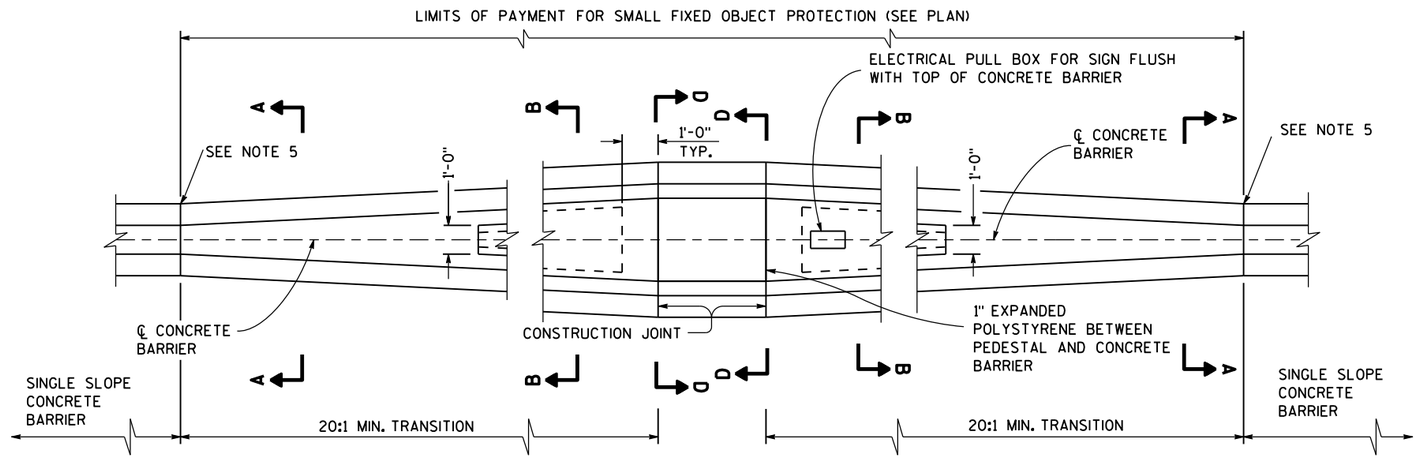
SECTION A-A



SECTION B-B



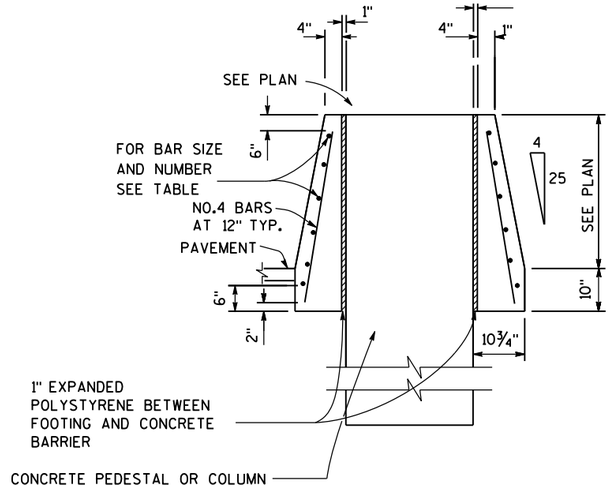
SECTION C-C



SMALL FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56

GENERAL NOTES

1. INSTALL 1-INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B-B. MINIMUM 1 DRAIN PER CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH FOUNDATION BACKFILL.
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.
5. IF FIXED OBJECT PROTECTION IS INSTALLED FIRST, USE COLD JOINTS. IF CBSS PLACED FIRST, USE EXPANSION JOINT.
6. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
7. USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.



SECTION D-D

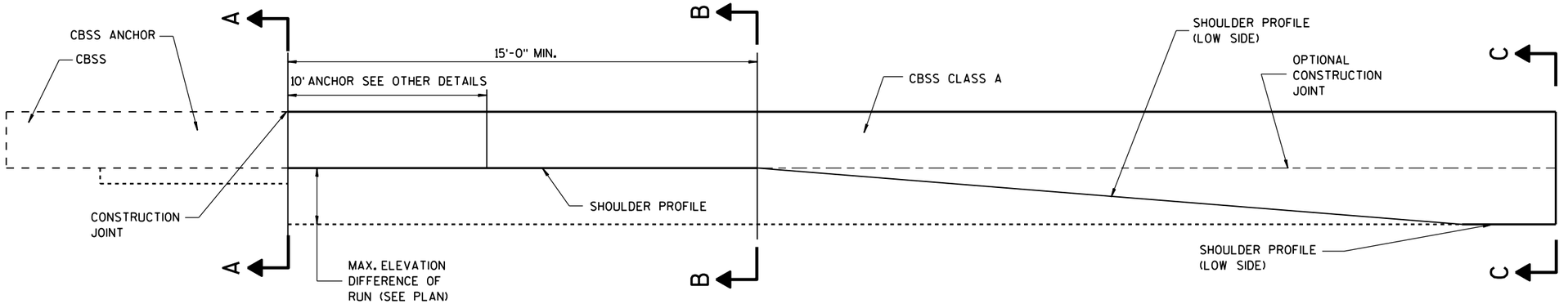
BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	9

CONCRETE BARRIER SINGLE SLOPE (CBSS)

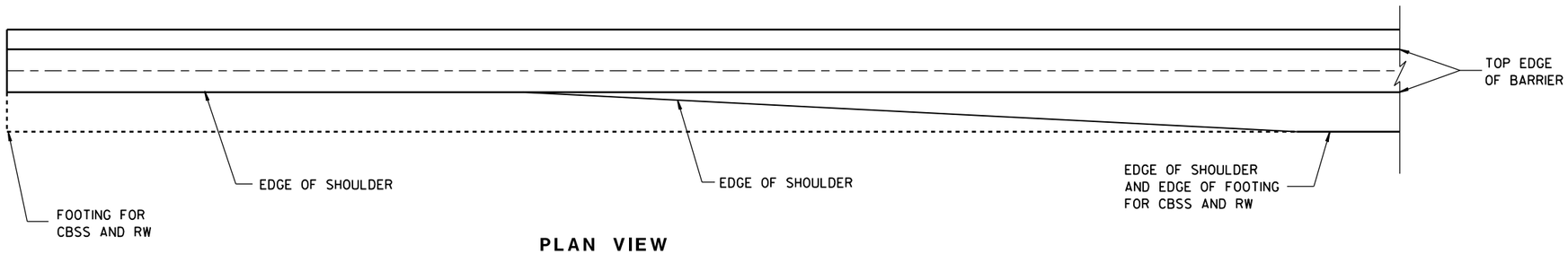
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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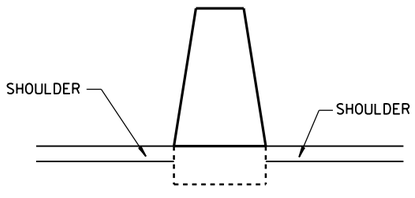
S.D.D. 14 B 32-4b



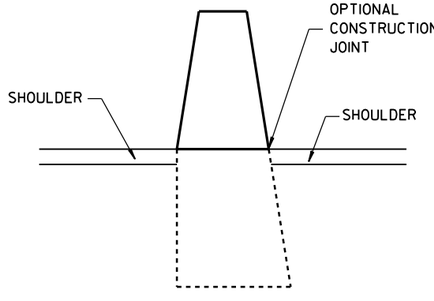
ELEVATION VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



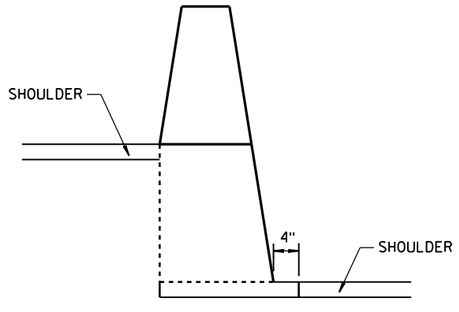
PLAN VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



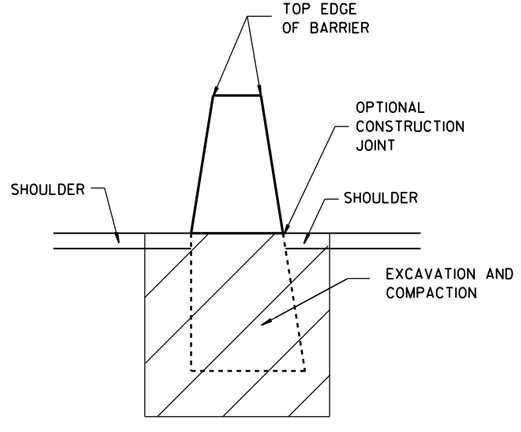
SECTION A-A



SECTION B-B



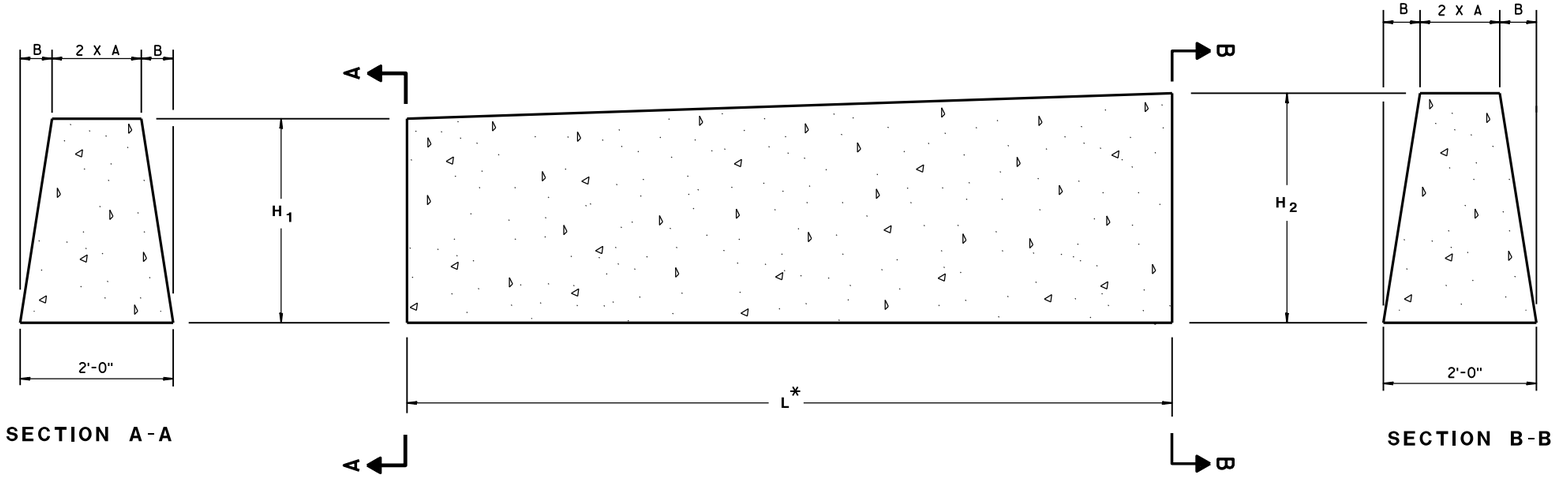
SECTION C-C



CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 14 B 32-4c



SECTION A-A

SECTION B-B

DOUBLE COLD JOINT HEIGHT TRANSITION

BARRIER DIMENSIONS

BARRIER HEIGHT INCHES	A INCHES	B INCHES
32	7	5
36	6 1/4	5 3/4
42	5 1/4	6 3/4
56	3	9

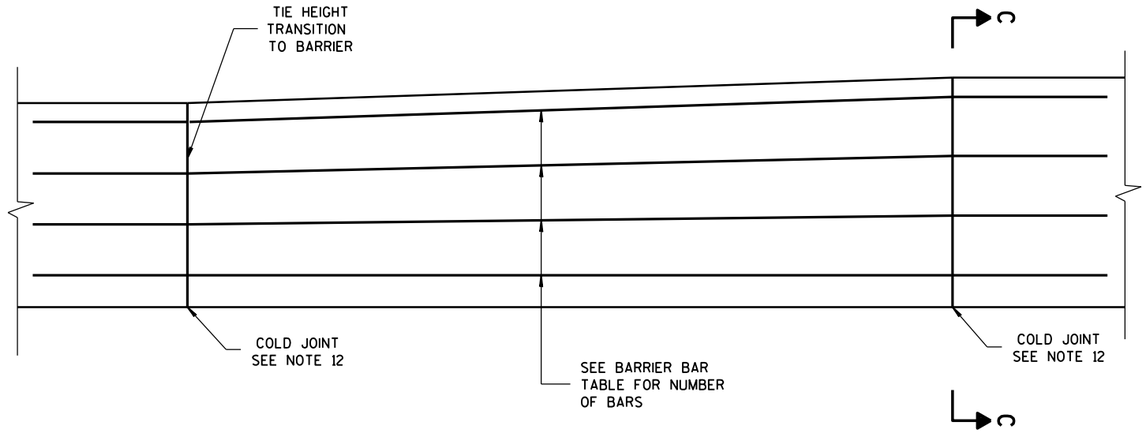
MULTIPLE HEIGHT TRANSITIONS MAY BE USED IN SEQUENCE TO GET TO APPROPRIATE HEIGHT.

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

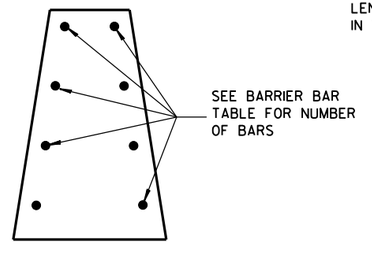
BARRIER BARS

H_1	H_2	L*	NUMBER OF NO. 5 BARS
32"	36"	10'-0"	8
36"	42"	10'-6"	10
42"	56"	24'-6"	11

* LENGTH OF DOUBLE COLD JOINT INCLUDED IN THE TOTAL LENGTH OF CBSS.



STEEL REINFORCEMENT DETAIL



SECTION C-C

CONCRETE BARRIER SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

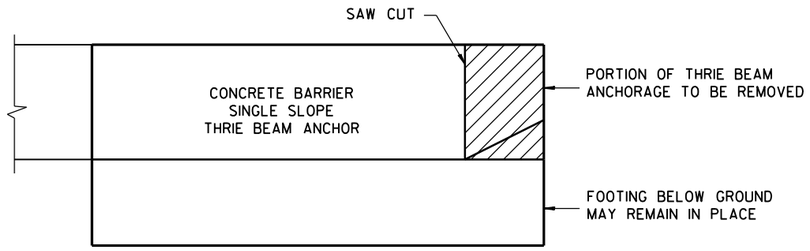
APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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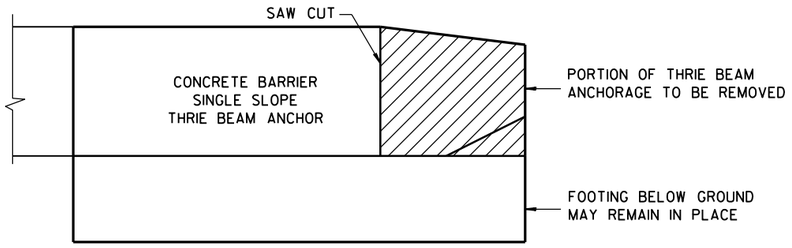
S.D.D. 14 B 32-4d

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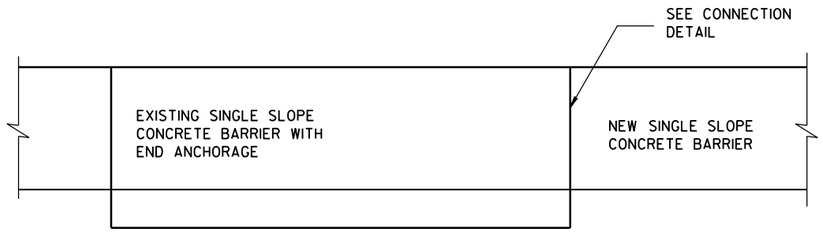
S.D.D. 14 B 32-4d



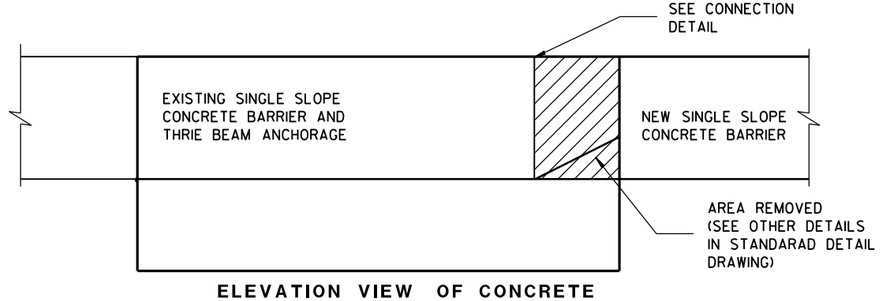
REMOVAL AREA OF
32" CONCRETE THRIE BEAM ANCHORAGE



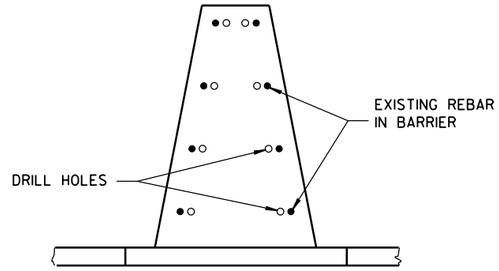
REMOVAL AREA OF CONCRETE THRIE BEAM
ANCHORAGE WITH HEIGHT GREATER THAN 32"



ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR END ANCHORAGE



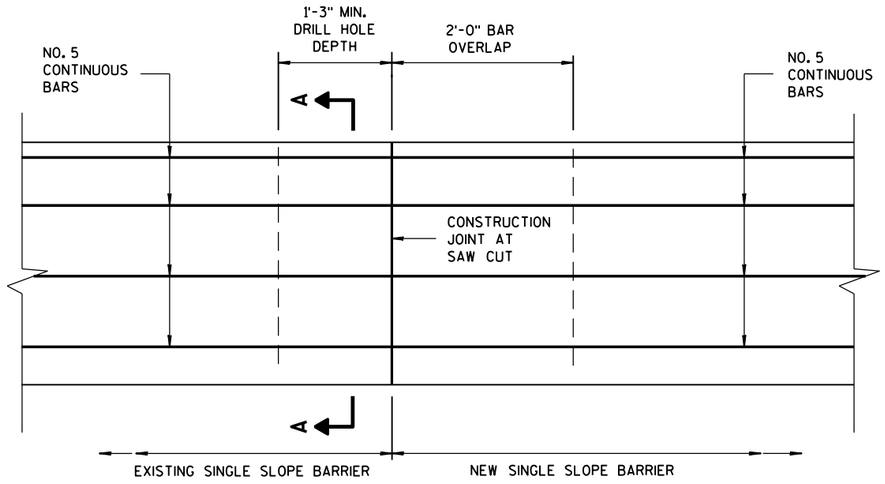
ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR THRIE BEAM TERMINAL



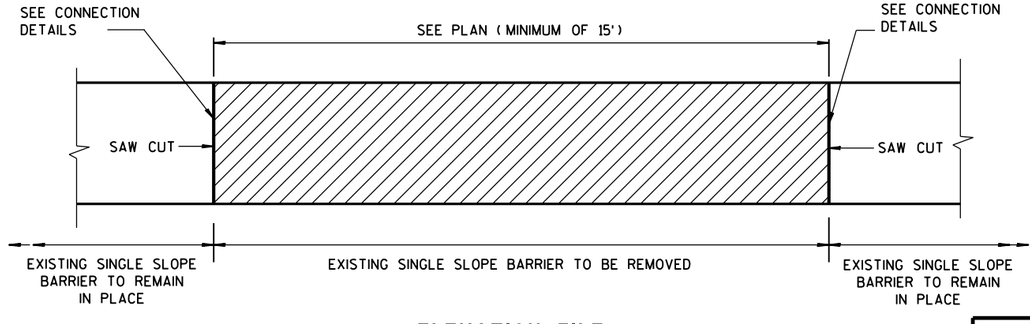
SECTION A-A

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.



CONNECTION OF EXISTING SINGLE SLOPE CONCRETE BARRIER TO
NEW SINGLE SLOPE CONCRETE BARRIER



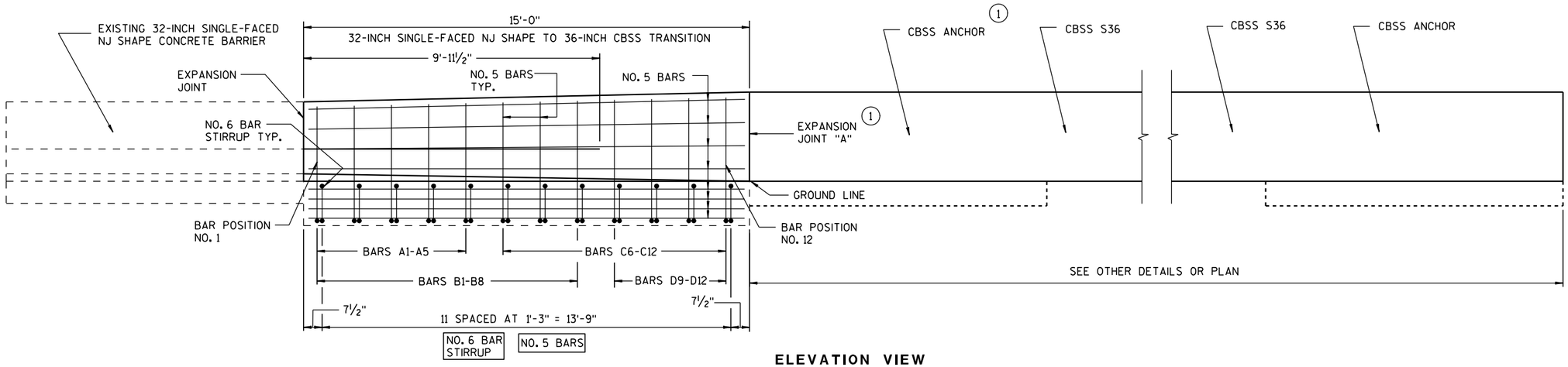
ELEVATION FILE
BARRIER REMOVAL AND REPLACEMENT

CONCRETE BARRIER
SINGLE SLOPE

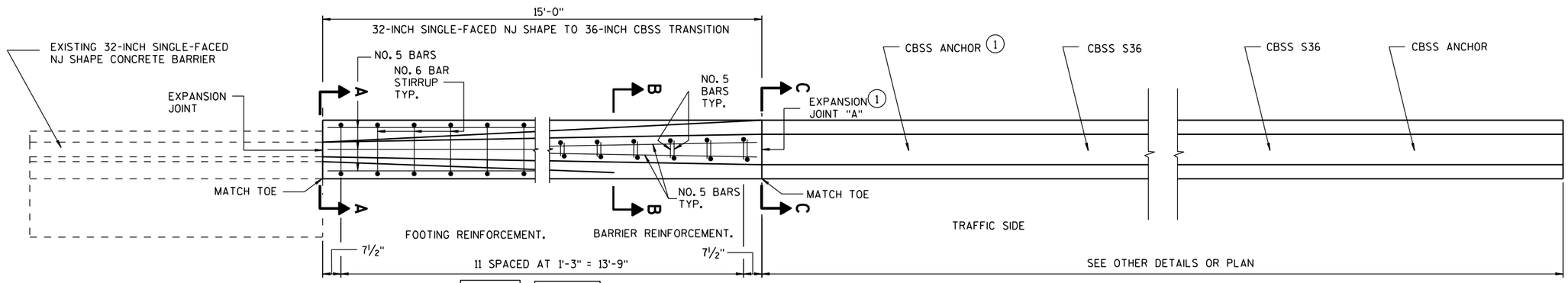
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June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

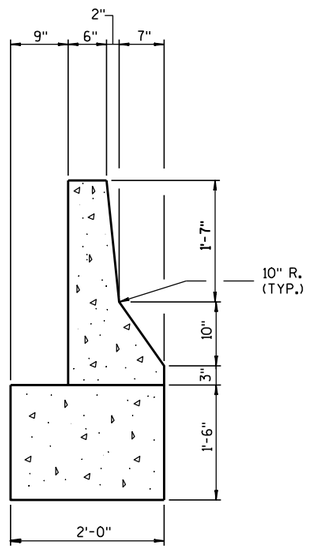
RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER



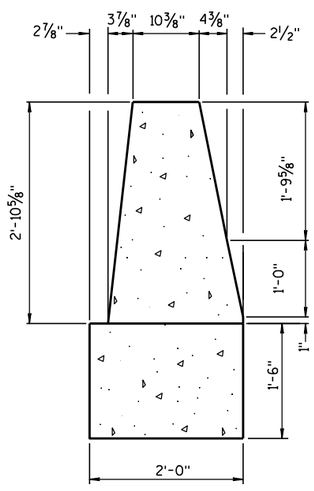
ELEVATION VIEW



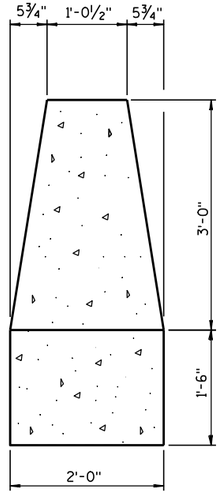
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

32-INCH SINGLE-FACED NJ SHAPE CONCRETE BARRIER TO 36-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

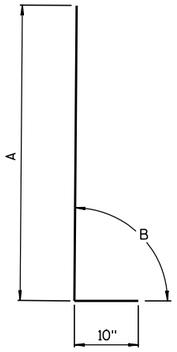
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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S.D.D. 14 B 35-1c

"A" BAR CHART
BAR POSITIONS NO.1 - NO.5

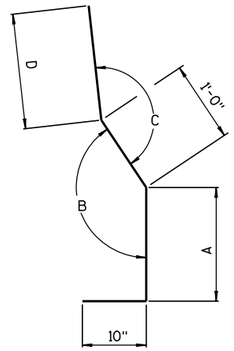
BAR	A	B
A1	3'-10"	89°-35'
A2	3'-10"	88°-40'
A3	3'-11"	87°-50'
A4	3'-11"	87°-10'
A5	3'-11½"	86°-15'



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS NO.1 - NO. 8

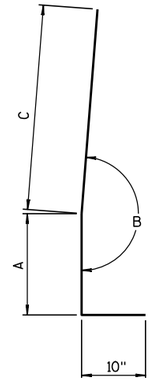
BAR	A	B	C	D
B1	1'-6"	146°-20'	152°-40'	1'-6"
B2	1'-6"	149°-25'	156°-45'	1'-6"
B3	1'-6"	152°-40'	160°-55'	1'-6½"
B4	1'-6"	155°-40'	164°-30'	1'-7"
B5	1'-5½"	158°-30'	167°-55'	1-'7"
B6	1'-5"	161°-45'	172°	1'-7½
B7	1'-5"	164°-25'	175°-05'	1'-8"
B8	1'-5"	167°-30'	179°	1'-8"



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS NO. 6 - NO. 12

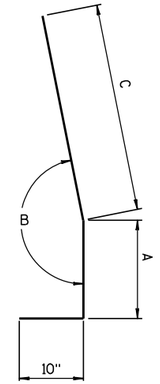
BAR	A	B	C
C6	1'-4"	175°-35'	2'-8"
C7	1'-4"	174°-45'	2'-8"
C8	1'-4"	174°	2'-8½"
C9	1'-4"	173°-15'	2'-9"
C10	1'-4"	172°-45'	2'-9½"
C11	1'-3½"	172°	2'-9½"
C12	1'-3½"	171°-15'	2'-10"



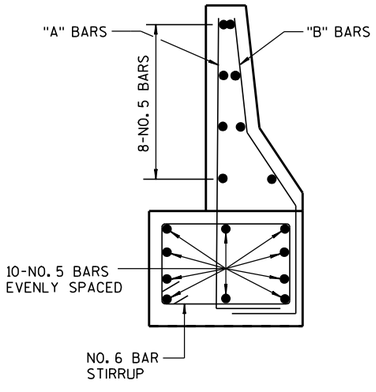
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS NO. 9 - NO. 12

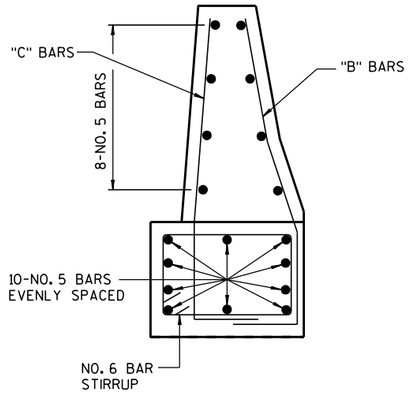
BAR	A	B	C
D9	1'-5"	168°-45'	2'-8½"
D10	1'-4½"	169°-30'	2'-9"
D11	1'-4"	170°-15'	2'-9½"
D12	1'-4"	170°-40'	2'-10"



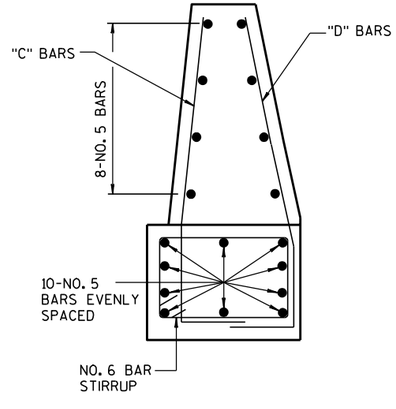
"D" BAR
BENDING DETAIL



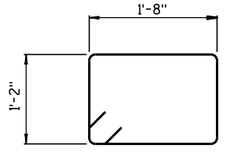
BAR DETAIL
BAR POSITIONS NO. 1 - NO. 5



BAR DETAIL
BAR POSITION NO. 6 - NO. 8



BAR DETAIL
BAR POSITIONS NO. 9 - NO. 12



STIRRUP BAR
BENDING DETAIL

32-INCH SINGLE-FACED NJ SHAPE
CONCRETE BARRIER TO 36-INCH SINGLE
SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

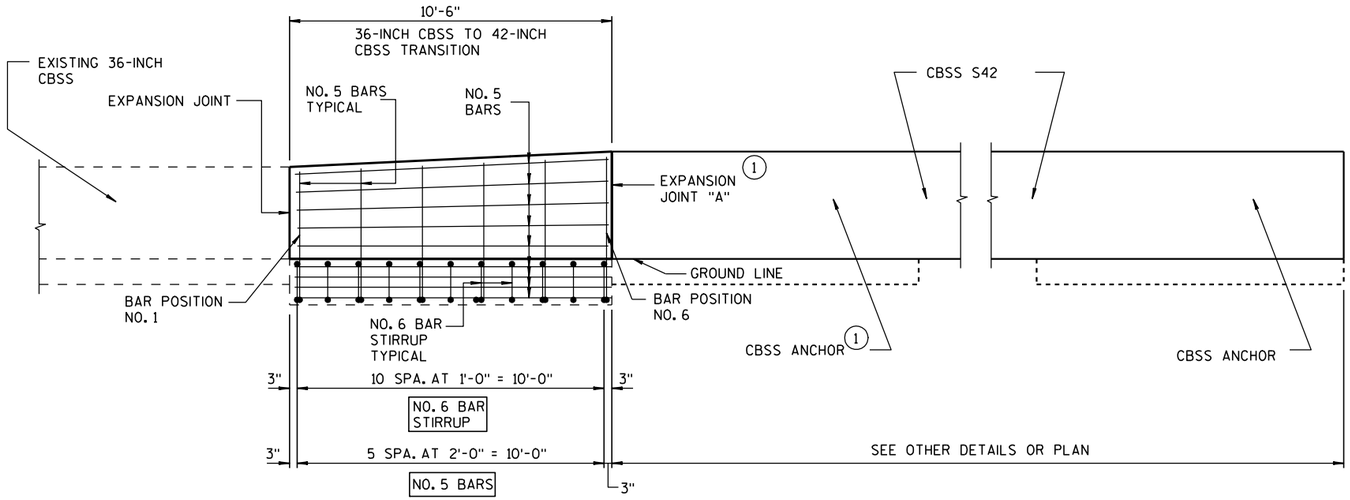
APPROVED
6-3-2010
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

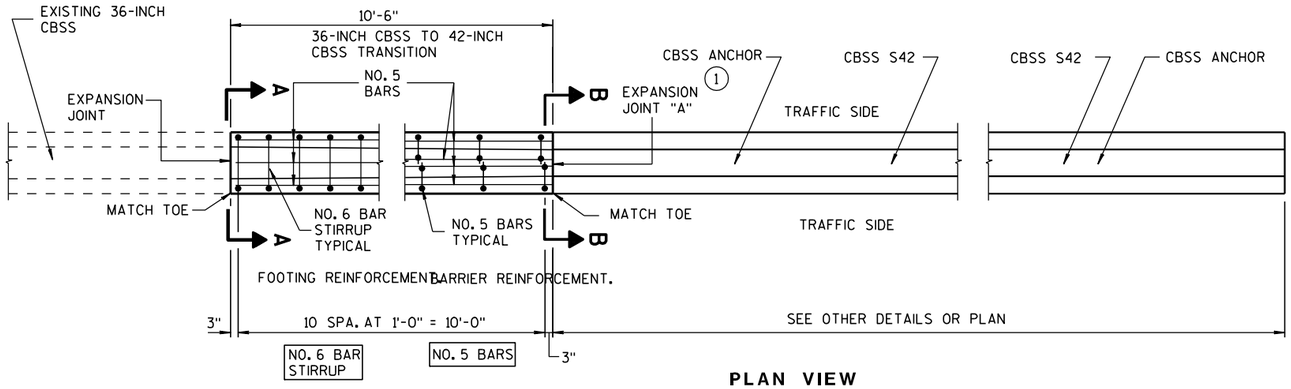
S.D.D. 14 B 35-1d

6

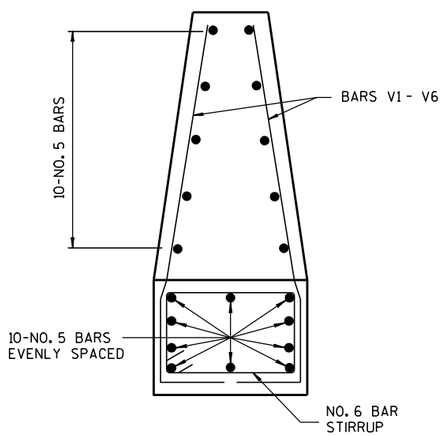
S.D.D. 14 B 35-1d



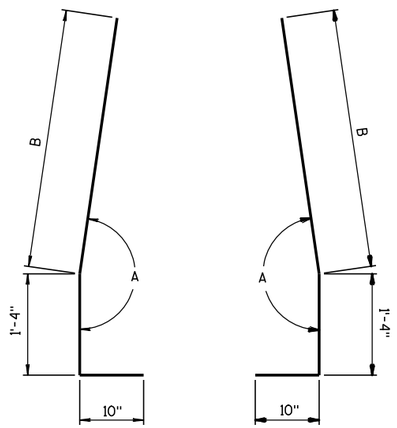
ELEVATION VIEW



PLAN VIEW



BAR DETAIL
BAR POSITION NO. 1 - NO. 6



BAR BENDING DETAIL
FOR BARS V1 - V6

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

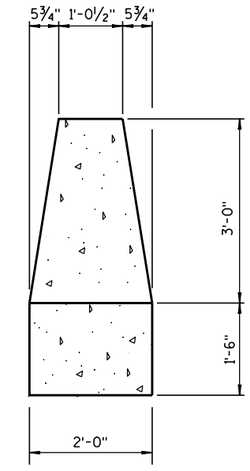
4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

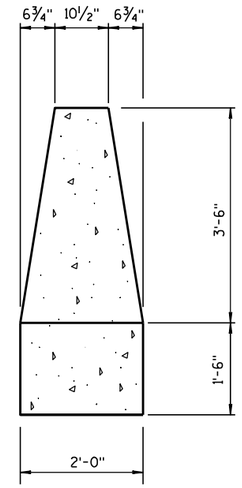
THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.



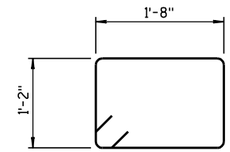
SECTION A-A



SECTION B-B

BAR CHART
SECTIONS V1 - V6

BAR	A	B
V1	170°-55'	2'-10½"
V2	171°-05'	3'-0"
V3	171°-20'	3'-1"
V4	171°-20'	3'-2"
V5	171°-35'	3'-3"
V6	171°-40'	3'-4½"



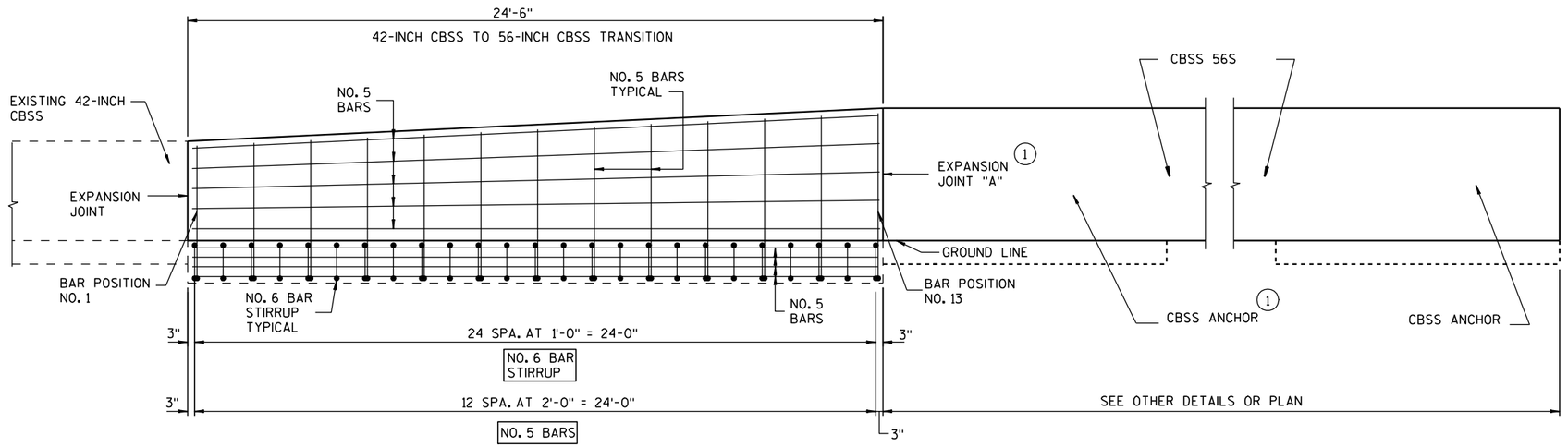
STIRRUP BAR
BENDING DETAIL

36-INCH SINGLE SLOPE CONCRETE BARRIER TO 42-INCH SINGLE SLOPE CONCRETE BARRIER HEIGHT TRANSITION

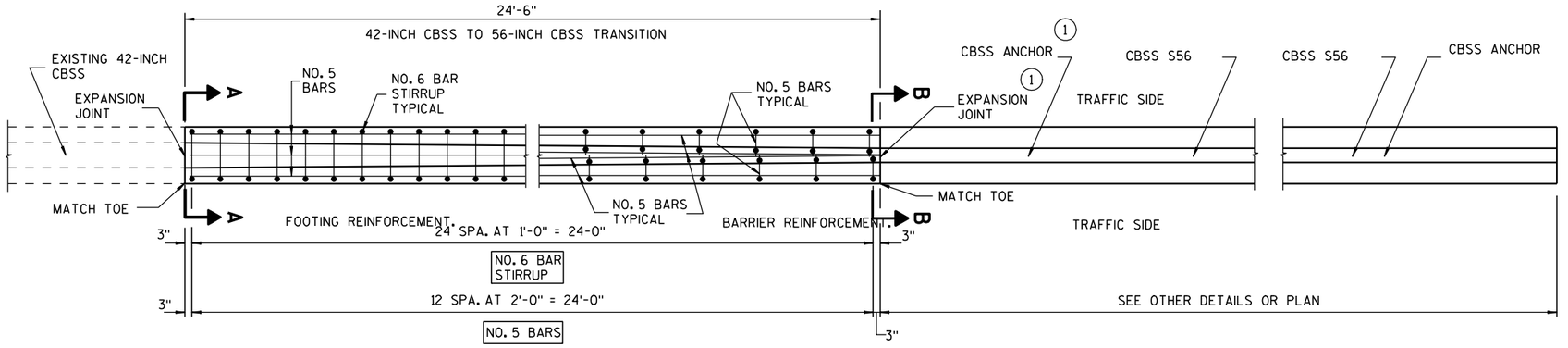
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-3-2010
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 39-1c



ELEVATION VIEW



PLAN VIEW

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

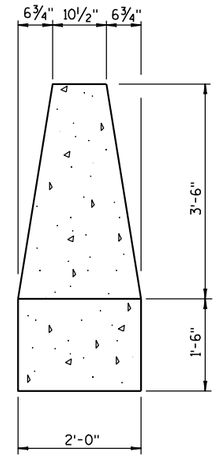
4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE 3/4" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

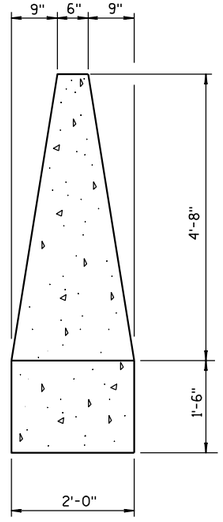
THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

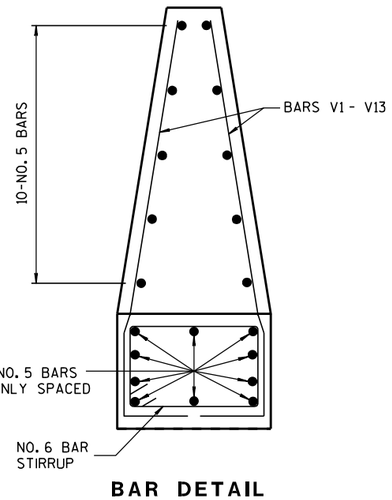
(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.



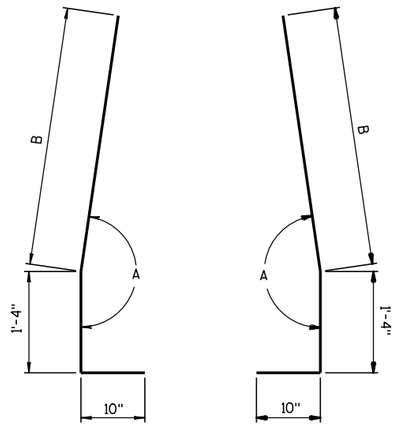
SECTION A-A



SECTION B-B



BAR DETAIL
BAR POSITION NO. 1 - NO. 13

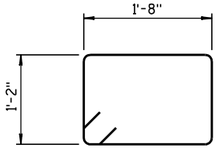


BAR BENDING DETAIL
FOR BARS V1 - V13

BAR CHART SECTIONS V1 - V13

BAR	A	B
V1	170°-50'	3'-4 1/2"
V2	170°-50'	3'-6"
V3	170°-55'	3'-7"
V4	171°	3'-8"
V5	170°-55'	3'-9 1/2"
V6	170°-50'	3'-10 1/2"
V7	170°-50'	3'-11 1/2"

BAR	A	B
V8	170°-55'	4'-0 1/2"
V9	170°-50'	4'-2"
V10	170°-50'	4'-3"
V11	170°-50'	4'-4 1/2"
V12	170°-55'	4'-5 1/2"
V13	170°-50'	4'-6 1/2"



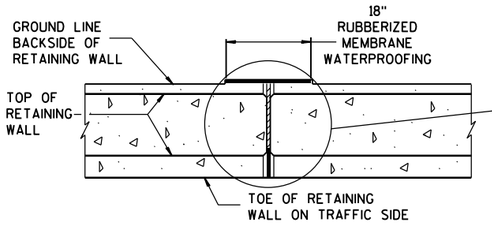
STIRRUP BAR
BENDING DETAIL

42-INCH SINGLE SLOPE CONCRETE BARRIER TO 56-INCH SINGLE SLOPE CONCRETE BARRIER HEIGHT TRANSITION

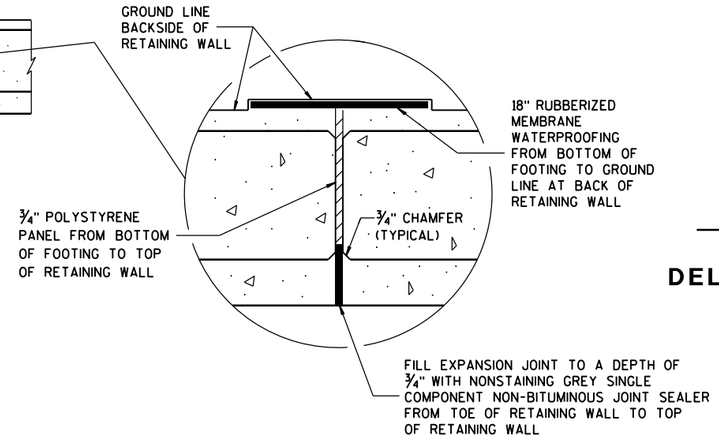
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

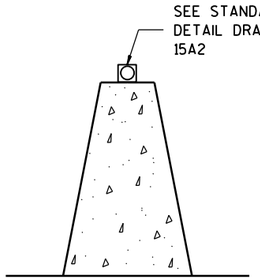
APPROVED
6-3-2010 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 39-1e



VERTICAL EXPANSION JOINT PLAN VIEW





DELINEATION

SPACING FOR DELINEATORS 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

GENERAL NOTES

PROVIDE EXPANSION JOINTS WHERE THERE ARE EXISTING EXPANSION JOINTS OR AT THE END OF EACH POUR.

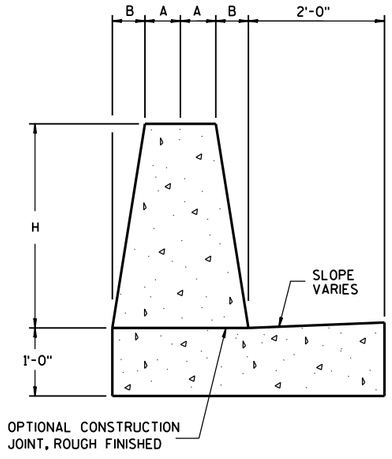
NO HORIZONTAL STEEL CROSSES EXPANSION JOINTS.

CONSTRUCT PER STANDARD SPECIFICATION 603. SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASETENED TOGETHER UNLESS NOTED OTHERWISES.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

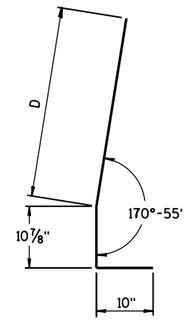
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR.



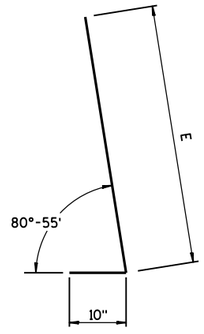
ROADSIDE RETAINING WALL

BARRIER WALL DIMENSIONS

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



V1 BAR BENDING DETAIL



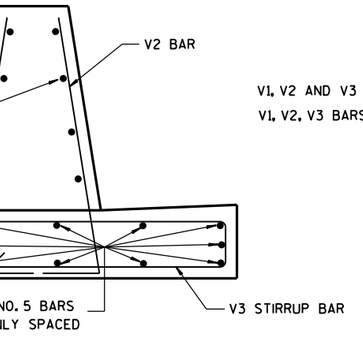
V2 BAR BENDING DETAIL

REFLECTOR SPACING

	LENGTH OF BARRIER	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	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2	3

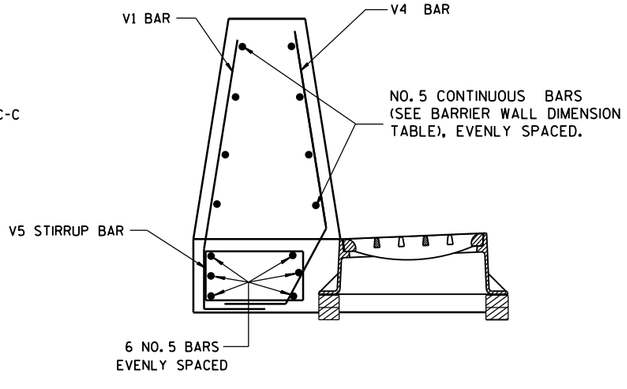
BAR CHART ROADSIDE RETAINING WALL

BARRIER HEIGHT	V1 BAR D	V2 BAR E	V4 BAR F
32"	2'-5½"	3'-4½"	2'-6½"
36"	2'-9½"	3'-9¾"	2'-10¾"
42"	3'-3½"	4'-2½"	3'-4¾"
56"	4'-5¾"	5'-4¾"	4'-6¾"

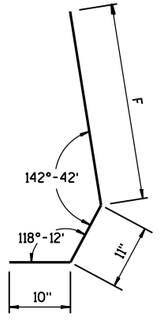


V1, V2 AND V3 ARE SPACED 18" C-C
V1, V2, V3 BARS ARE NO. 5 BARS

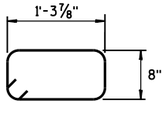
ROADSIDE RETAINING WALL NORMAL BAR PLACEMENT



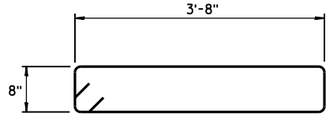
ROADSIDE RETAINING WALL BAR PLACEMENT NEAR INLET



V4 BAR BENDING DETAIL



V5 STIRRUP BAR BENDING DETAIL

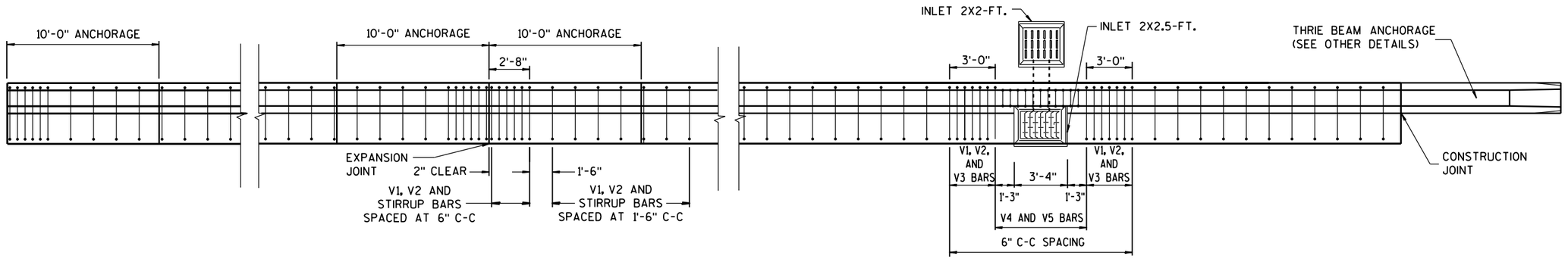


V3 STIRRUP BAR BENDING DETAIL

SINGLE SLOPE ROADSIDE RETAINING WALL

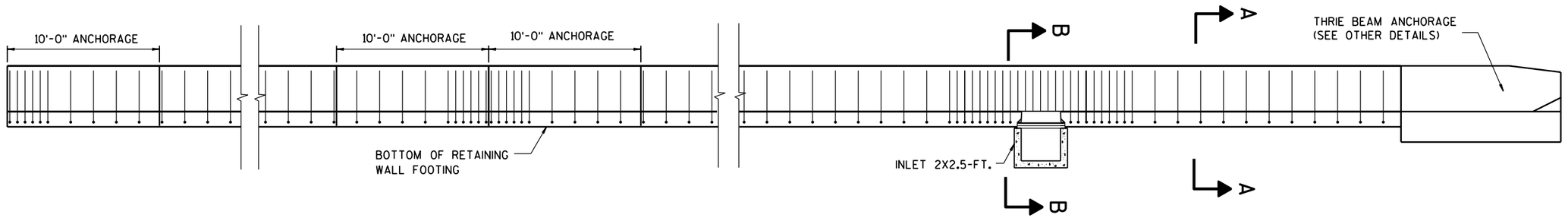
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 41-2a



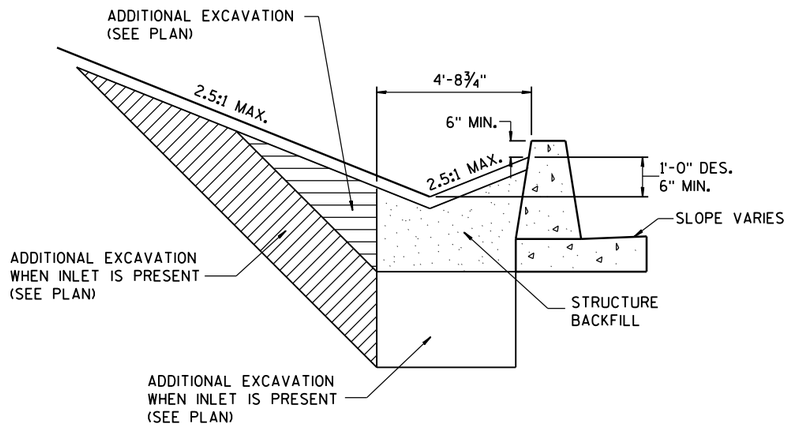
PLAN VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

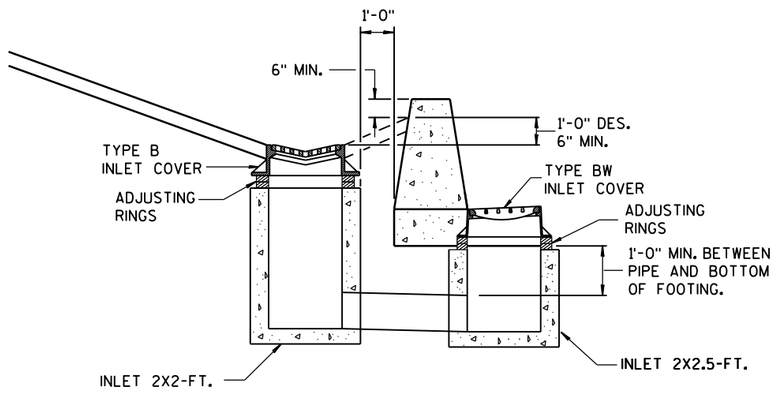


ELEVATION VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

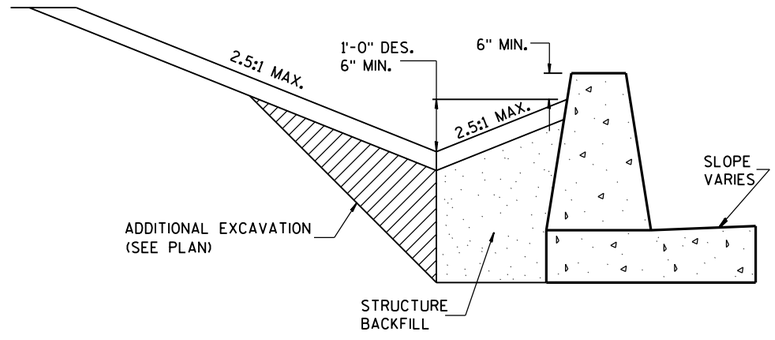


SECTION A-A



SECTION B-B

MINIMUM DESIGN OF EARTH WORK FOR INLET



MINIMUM DESIGN OF EARTH WORK

SINGLE SLOPE ROADSIDE RETAINING WALL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 41-2b

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S.D.D. 14 B 41-2b

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, 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) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(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.

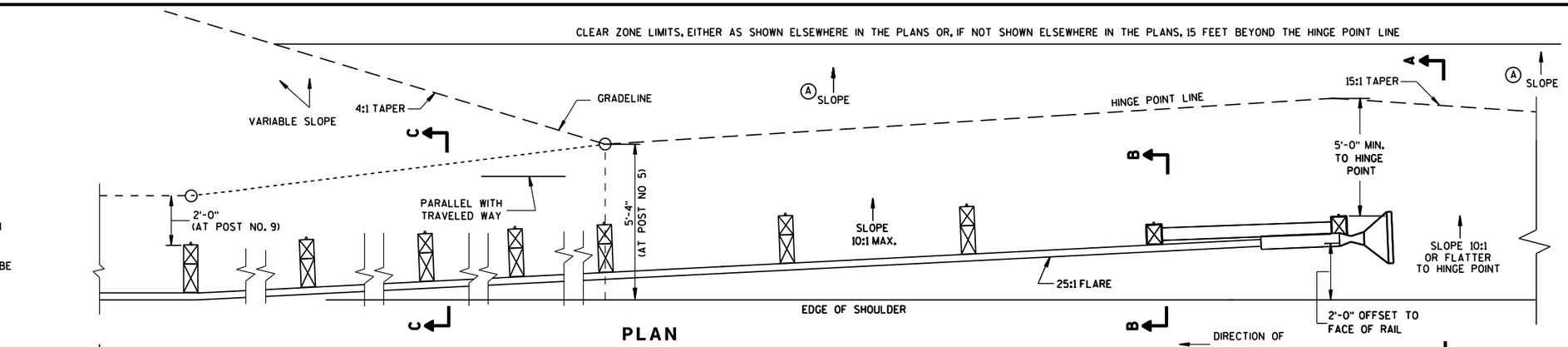
SEE SDD 14B42 FOR MORE INFORMATION.

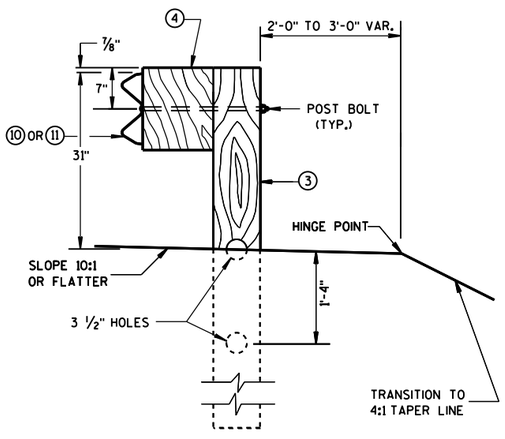
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

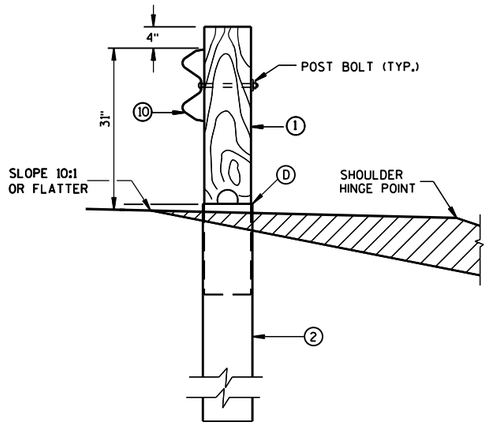
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

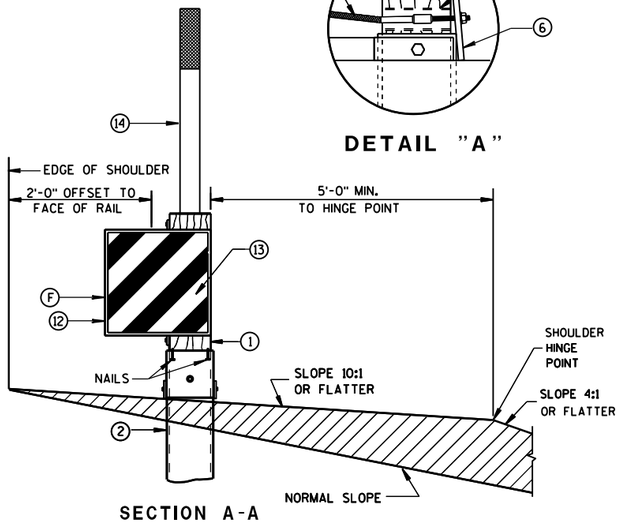




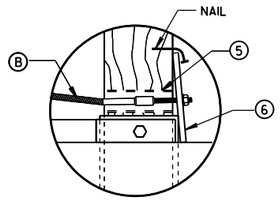
SECTION C-C
TYPICAL AT POST NOS. 3-9

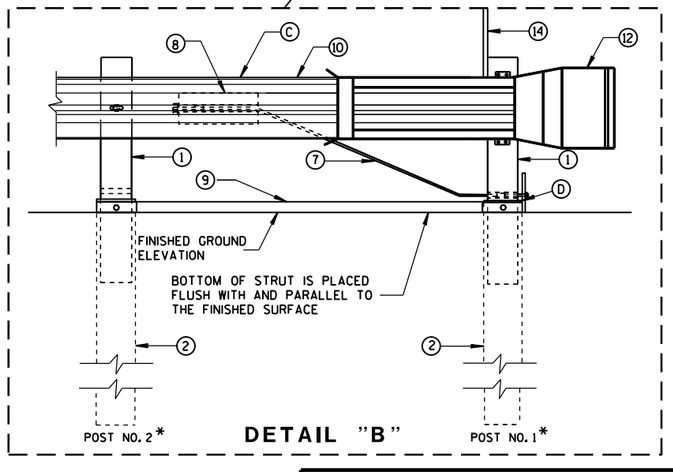


SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



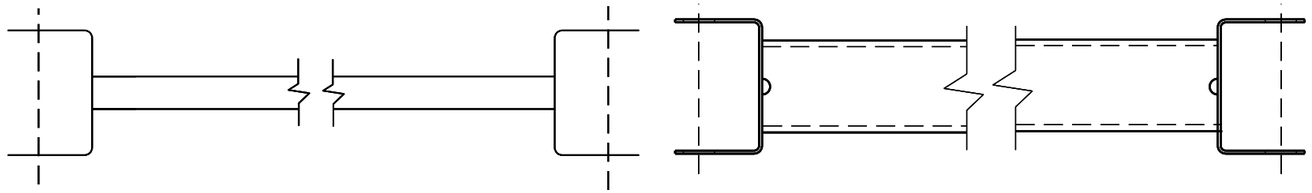


MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 352

S.D.D. 14 B 44-2a

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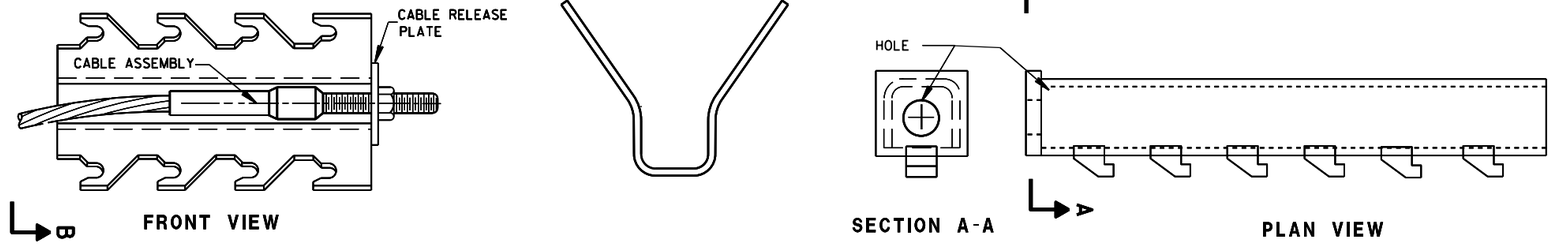


⑨ Ⓗ

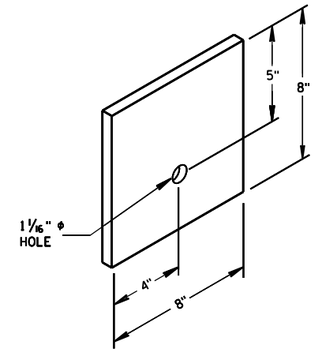
GENERIC GROUND STRUT

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 F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX ⑧ Ⓗ



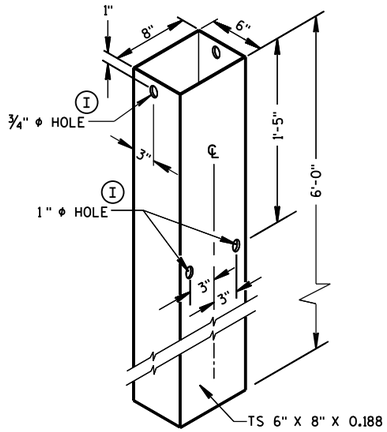
BEARING PLATE ⑥

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

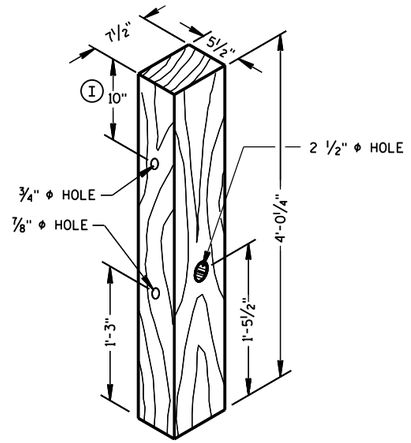
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 44-2b

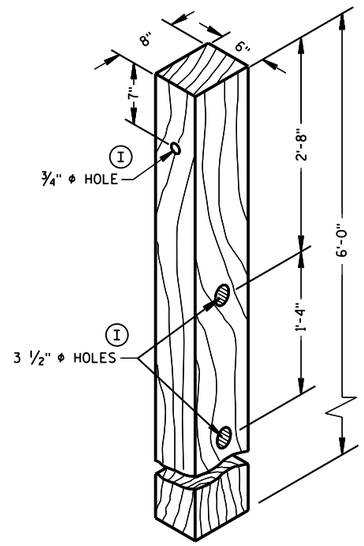


FOUNDATION TUBE (2)



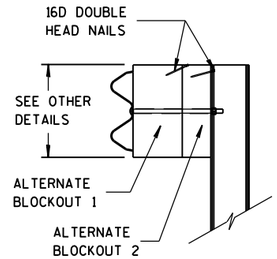
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

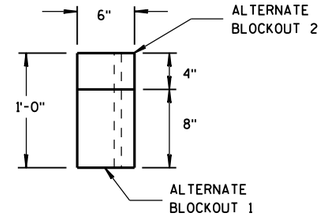


POSTS NUMBER 3-9

WOOD CRT POST (3)

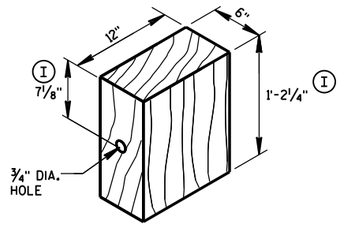


SIDE VIEW



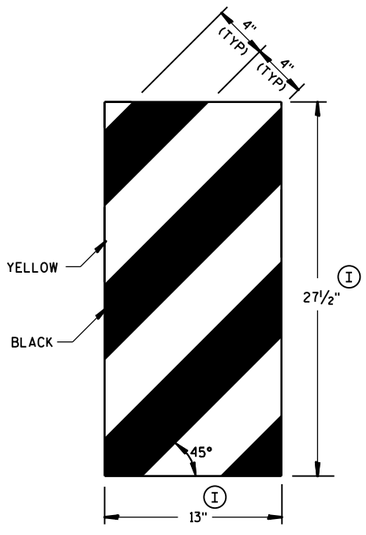
TOP VIEW

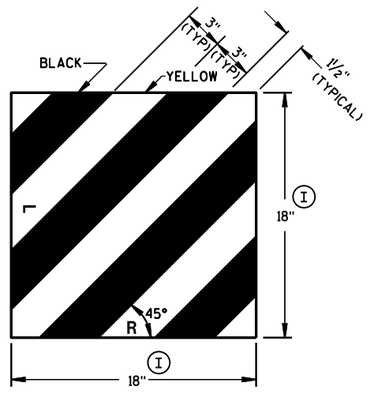
ALTERNATE WOOD BLOCKOUT DETAIL



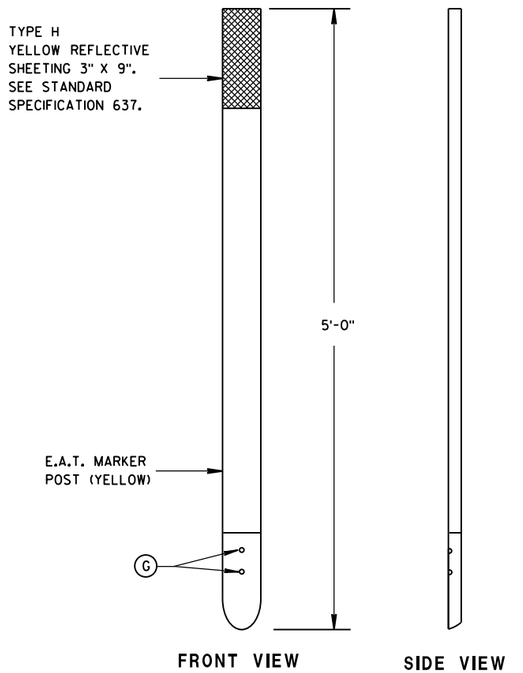
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





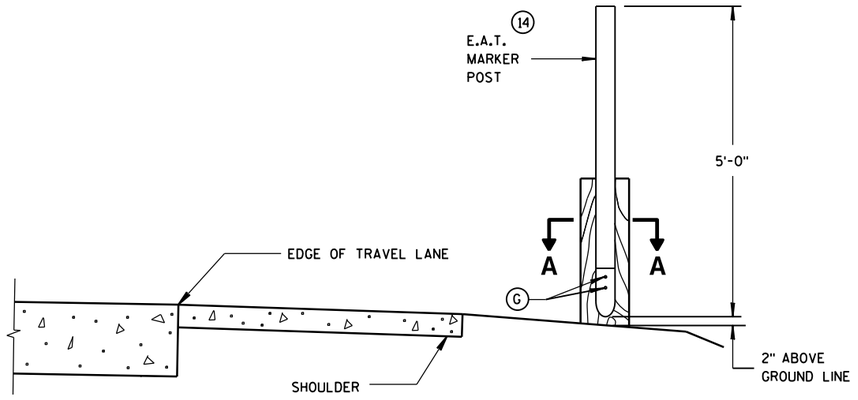
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

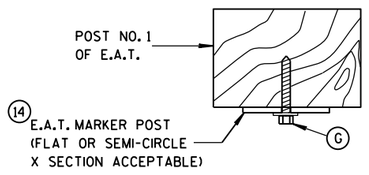
SIDE VIEW

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

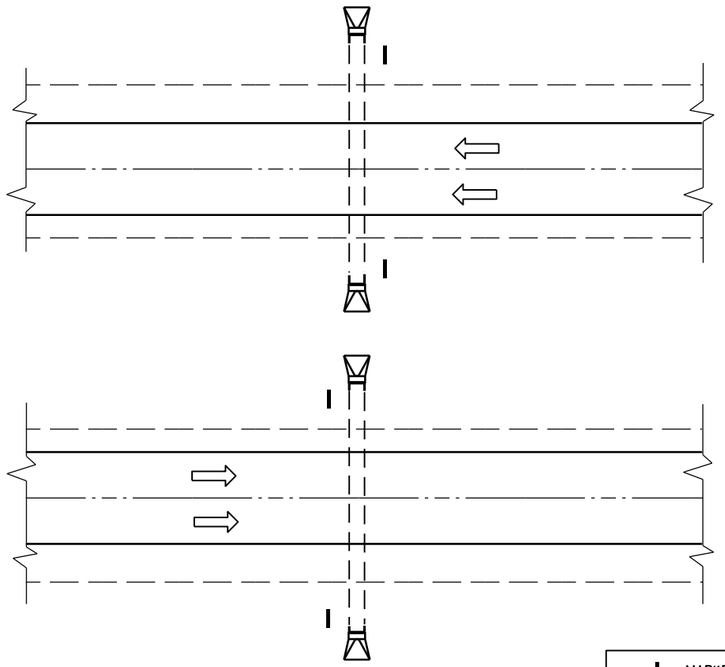
APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 44-2c

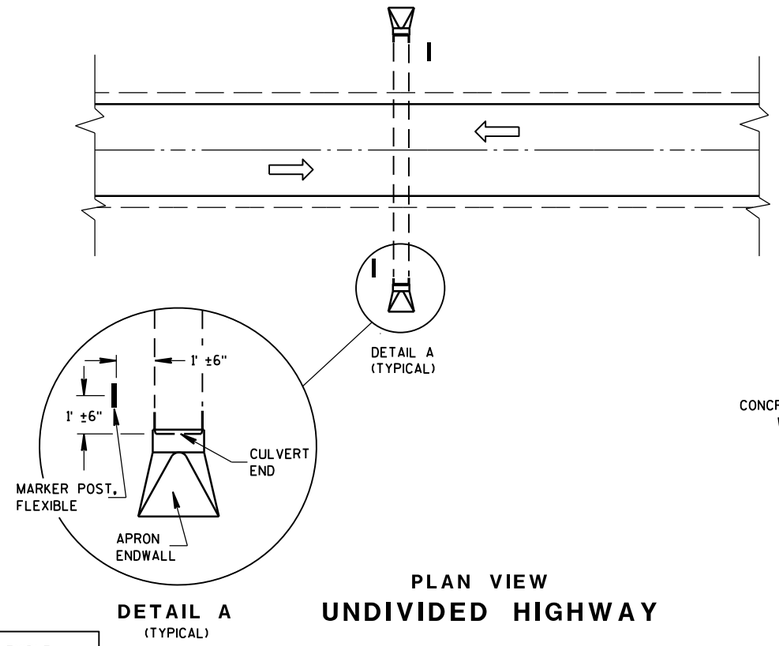
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S.D.D. 14 B 44-2c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

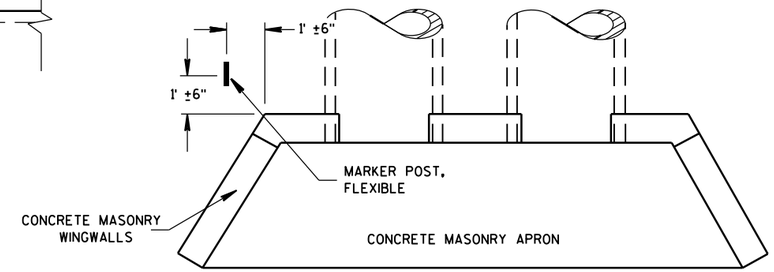
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

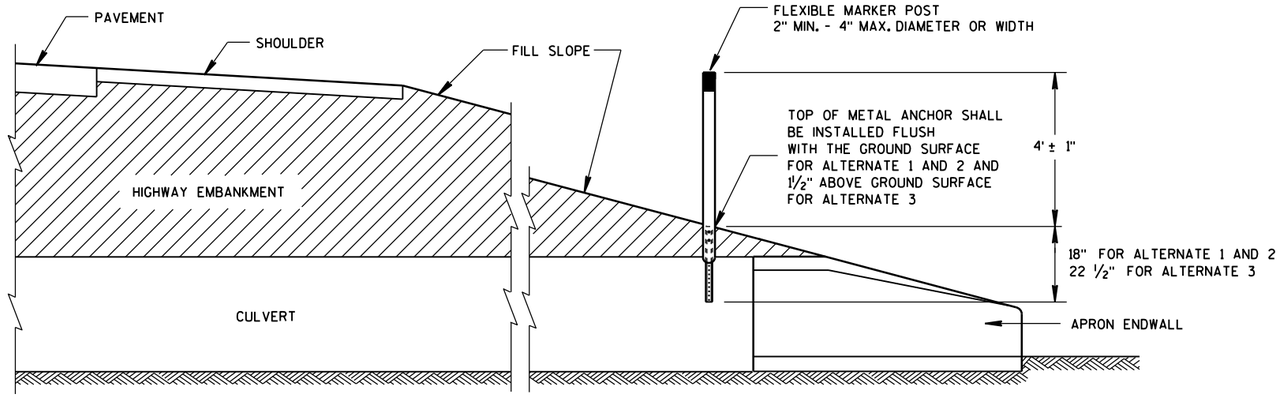
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

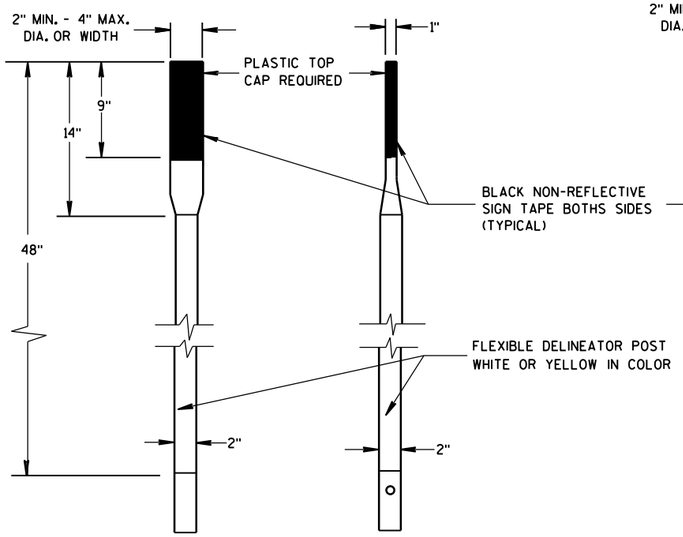
FLEXIBLE MARKER POST

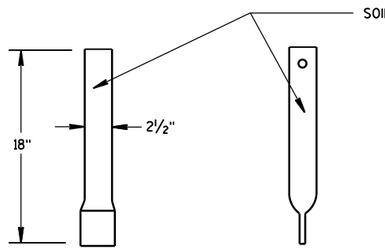
FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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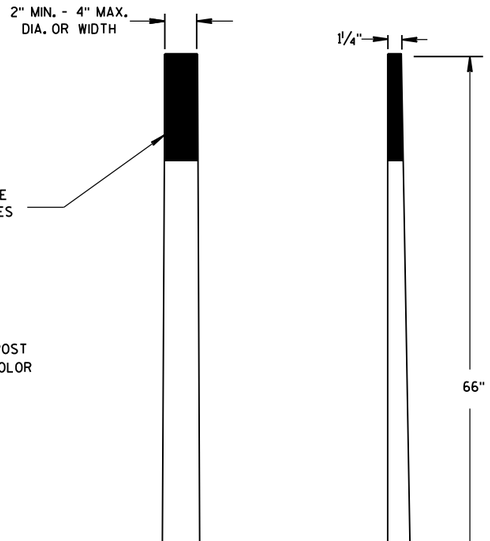
S.D.D. 15 A 3-2a





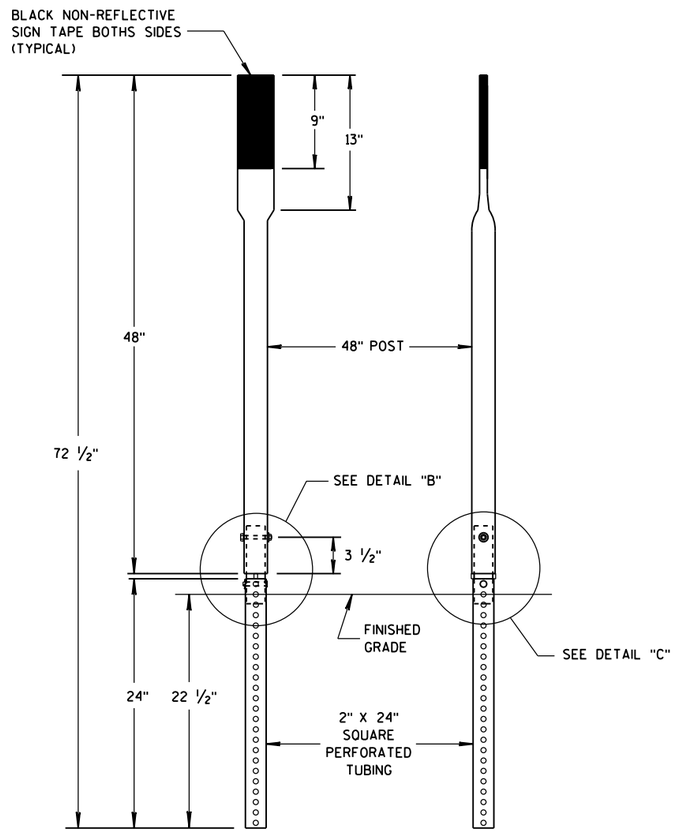
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

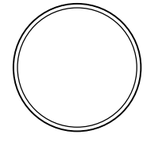
ALTERNATE 2



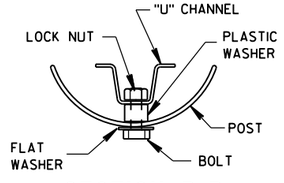
FRONT VIEW SIDE VIEW

ALTERNATE 3

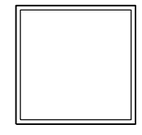
FLEXIBLE MARKER POSTS



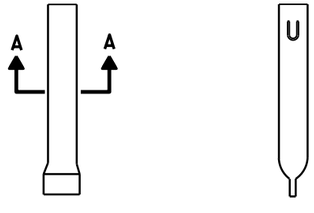
SECTION A-A



SECTION B-B

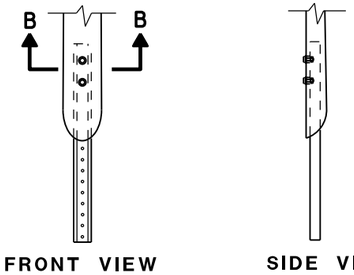


SECTION C-C



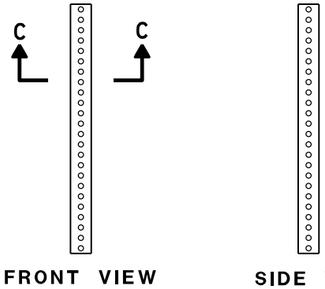
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

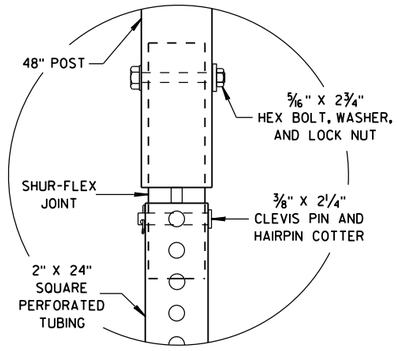
ALTERNATE 2



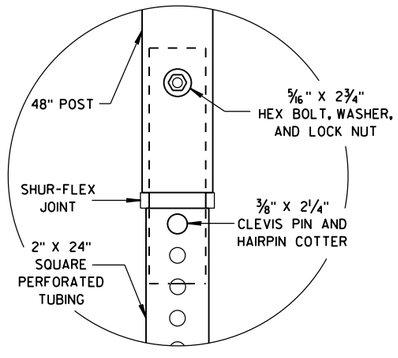
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

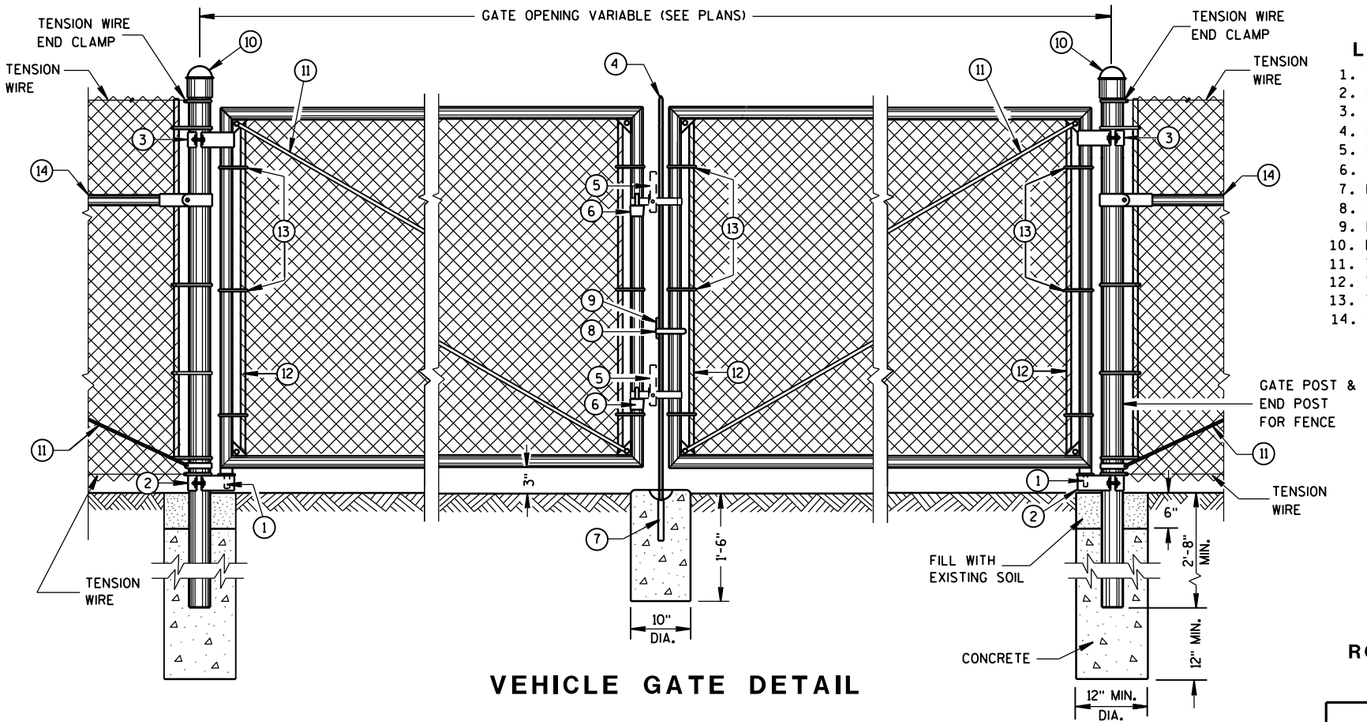
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

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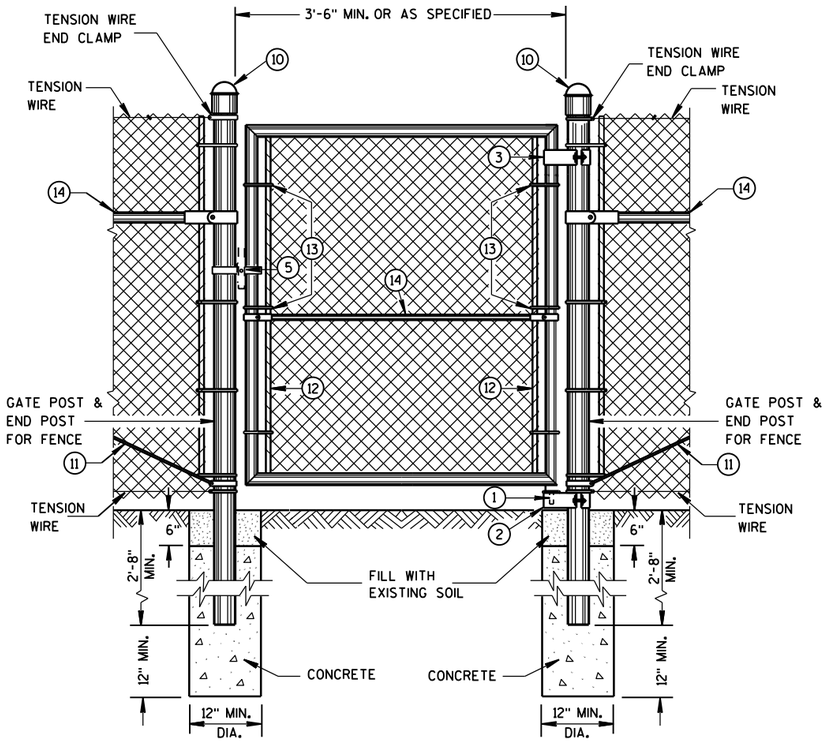
S.D.D. 15 A 3-2b

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S.D.D. 15 A 3-2b



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

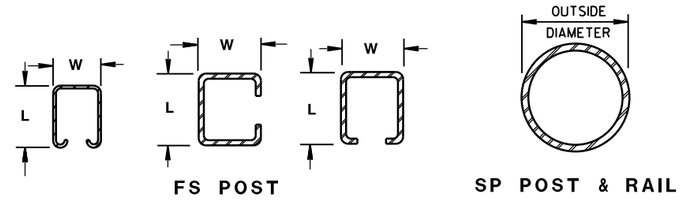
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



CROSS SECTIONS OF POSTS AND RAILS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

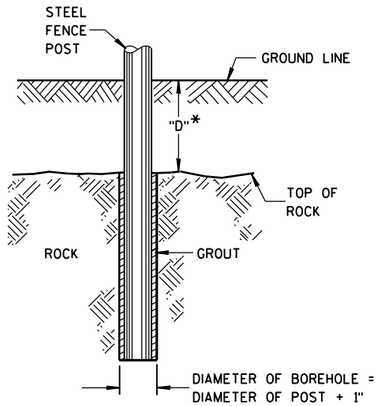
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

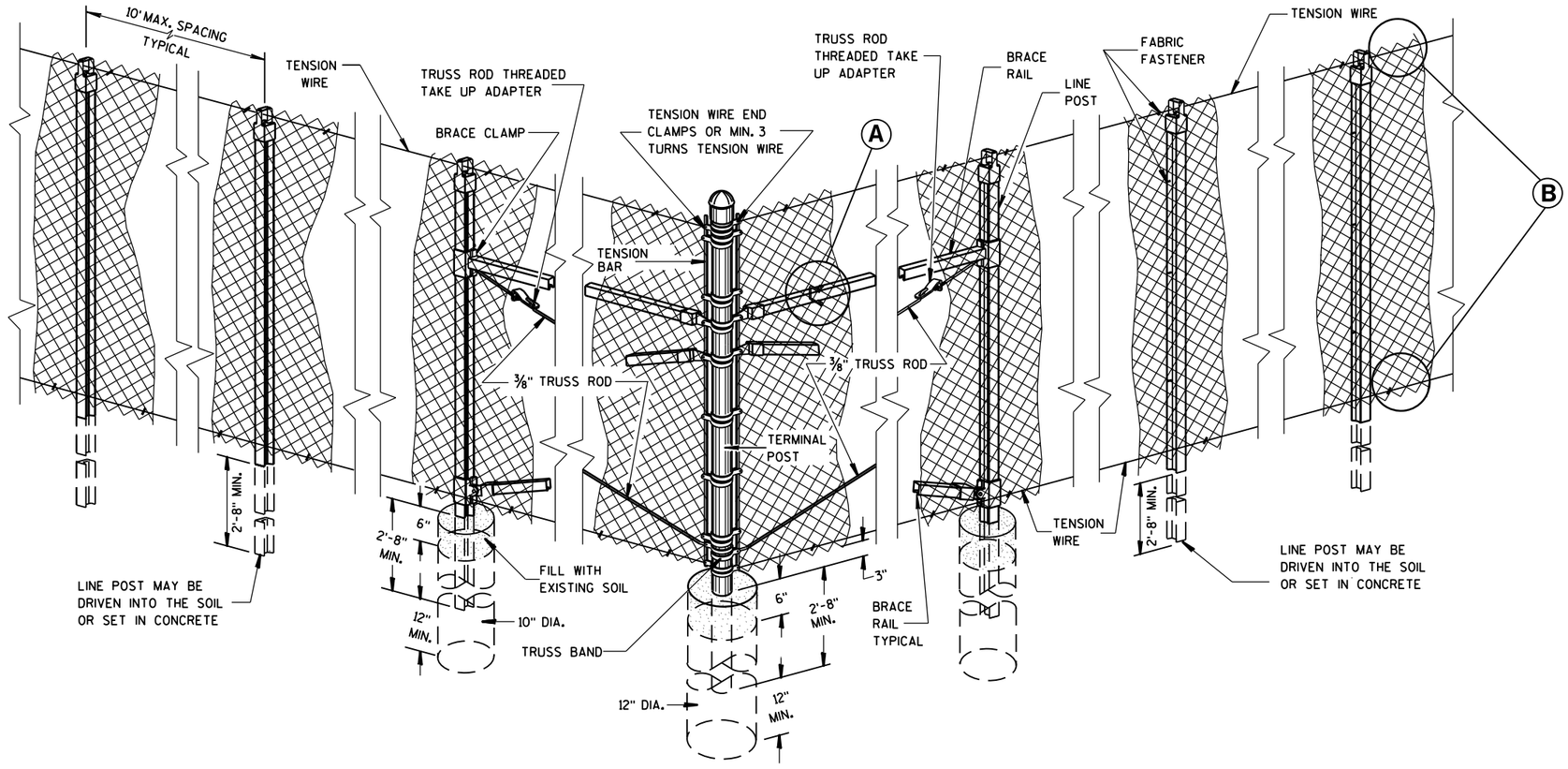
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S.D.D. 15 B 3-15a
S.D.D. 15 B 3-15a

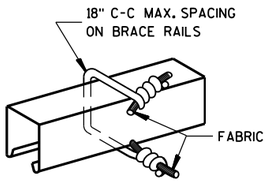


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



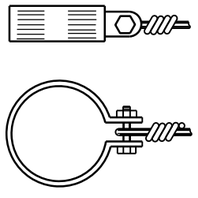
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



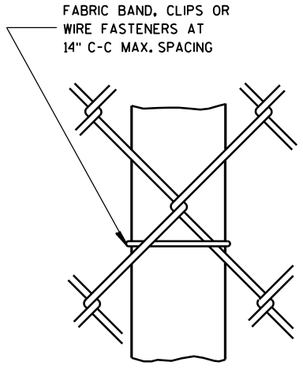
BRACE RAIL

FABRIC FASTENER

Ⓐ



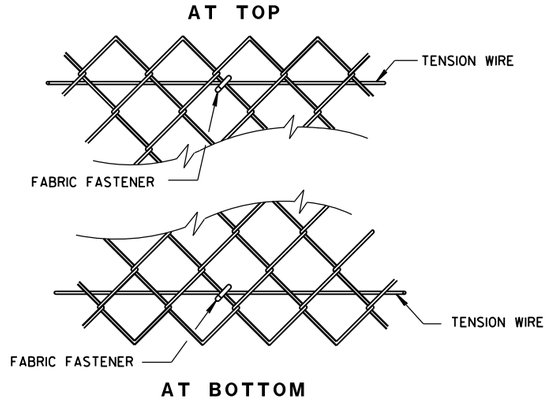
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

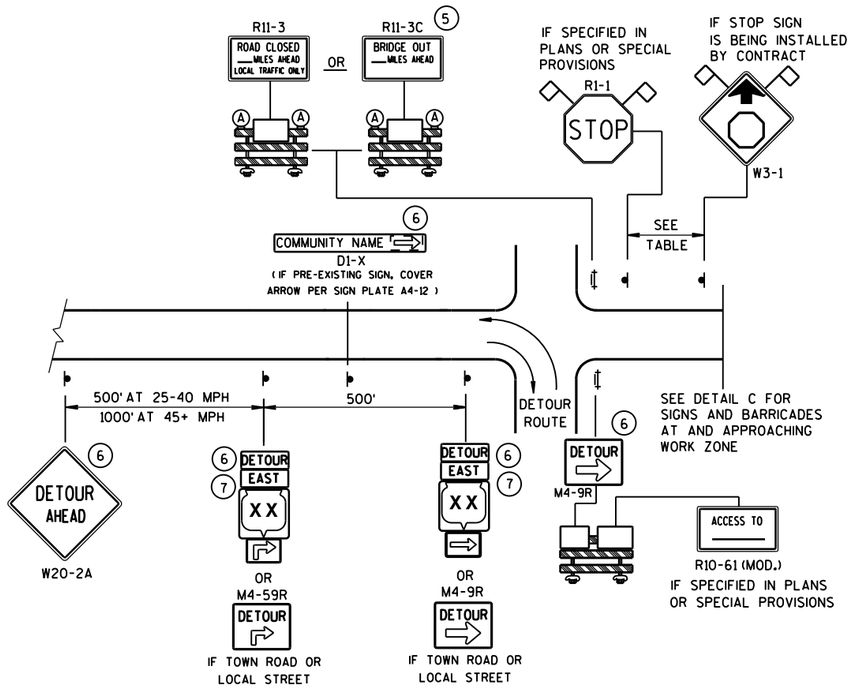
FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
FEB. 2015 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

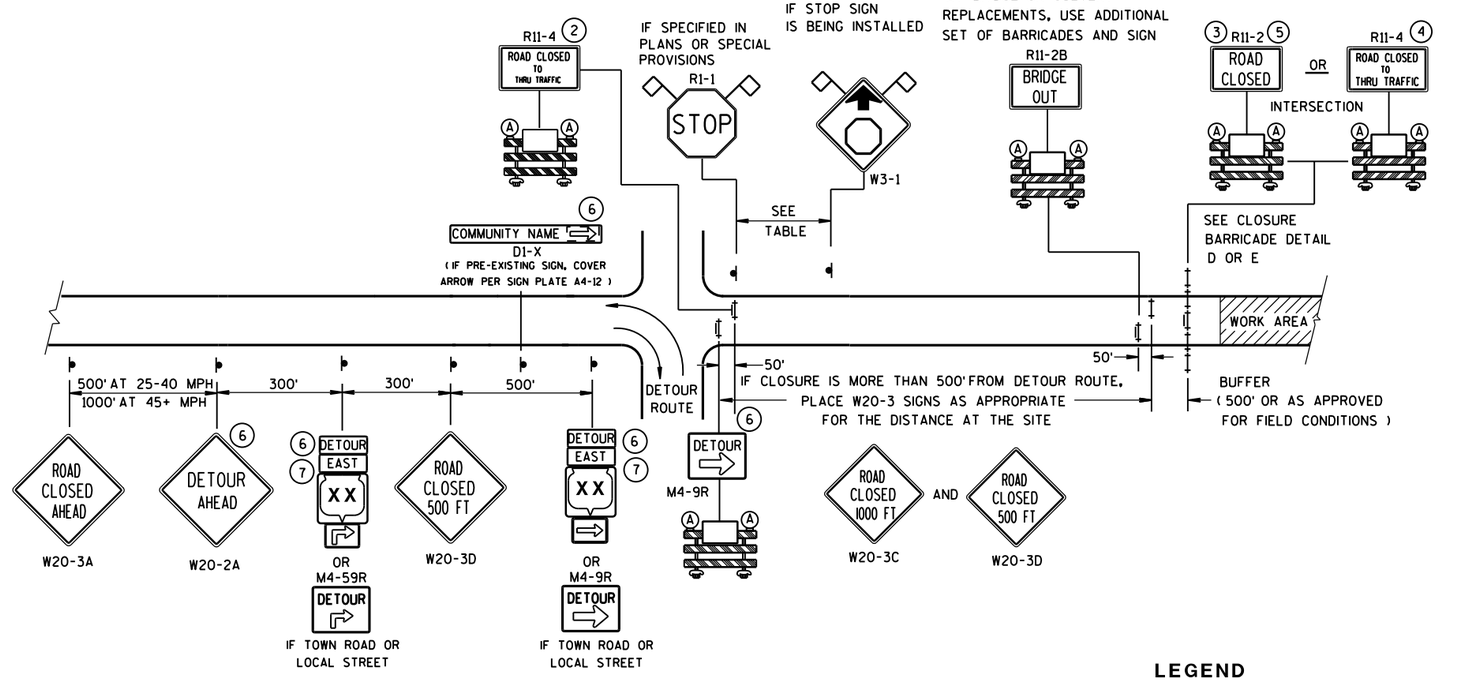
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S.D.D. 15 B 3-15b



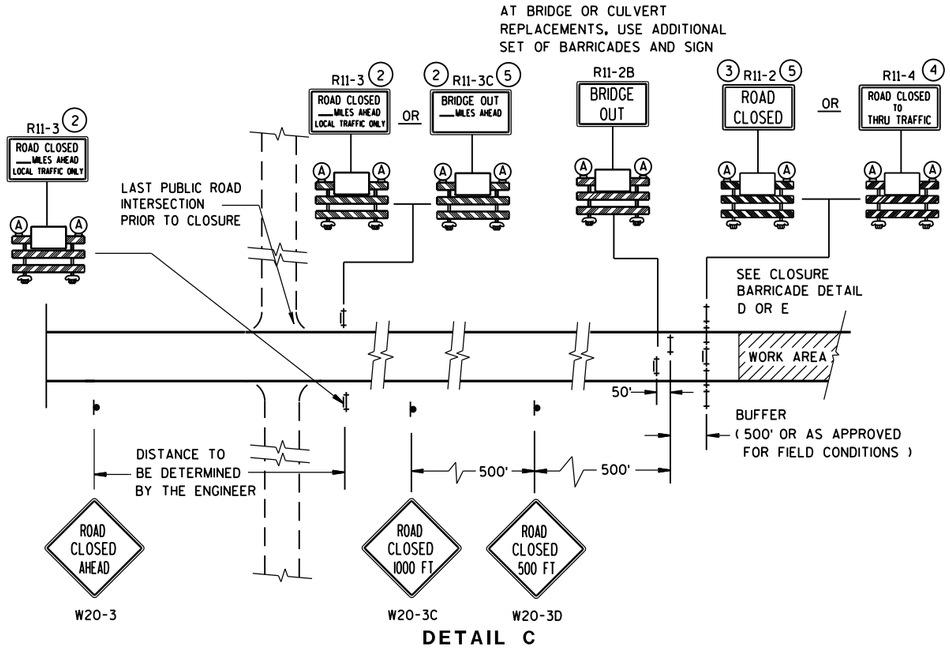
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "**b**"
FOR GENERAL NOTES
AND FOOTNOTES (1) THROUGH (7)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

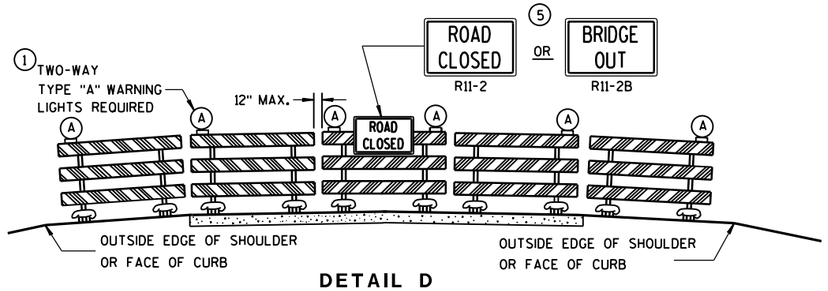
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

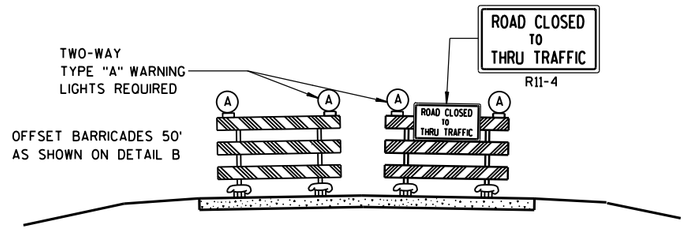
S.D.D. 15 C 2-6a



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

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI

FHWA

FIC

6

S.D.D. 15 C 2-6b

6

S.D.D. 15 C 2-6b

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.

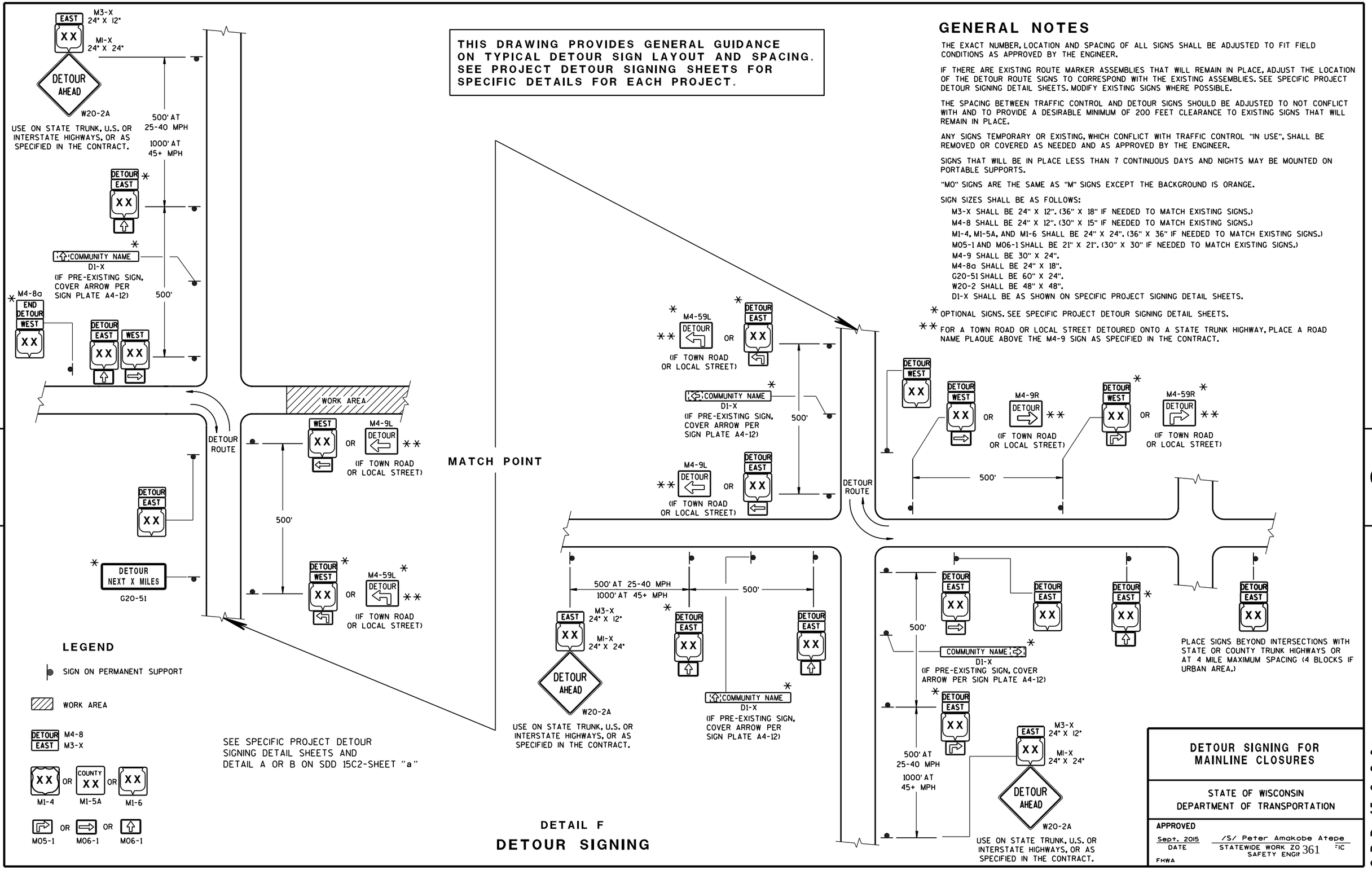
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

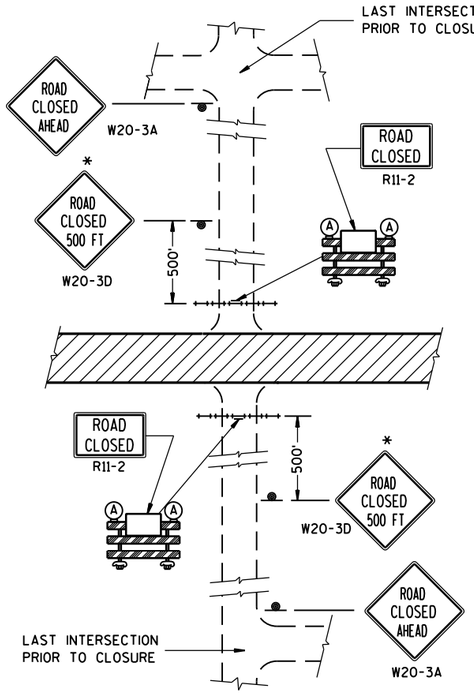
Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI FIC

FHWA

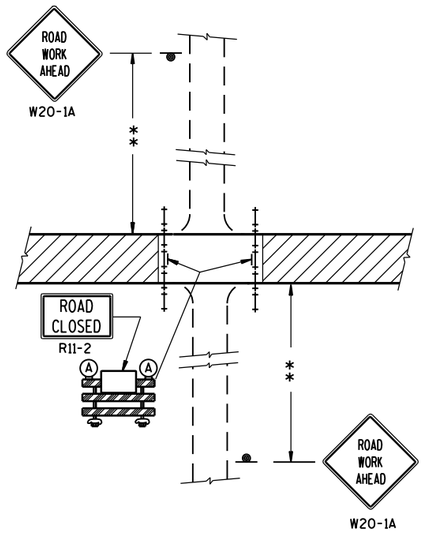
S.D.D. 15 C 2-6c

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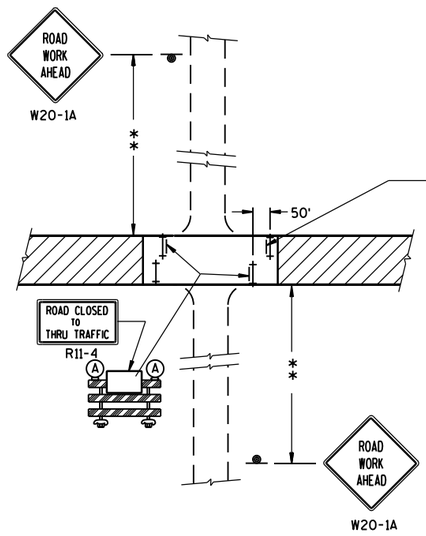
DETAIL 1

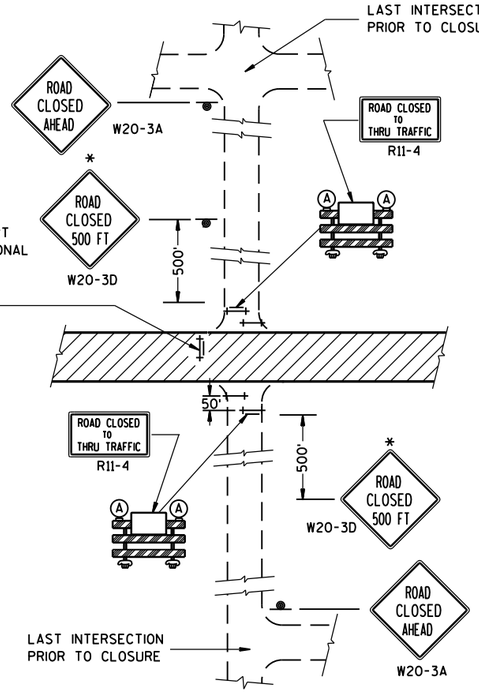
(NO ACCESS TO PROJECT)



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

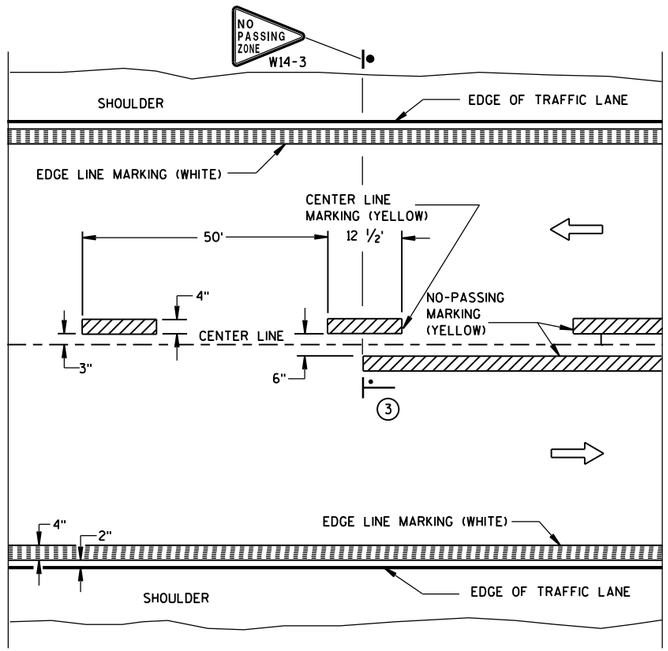
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible]FIC SAFETY ENGI[illegible]
FHWA

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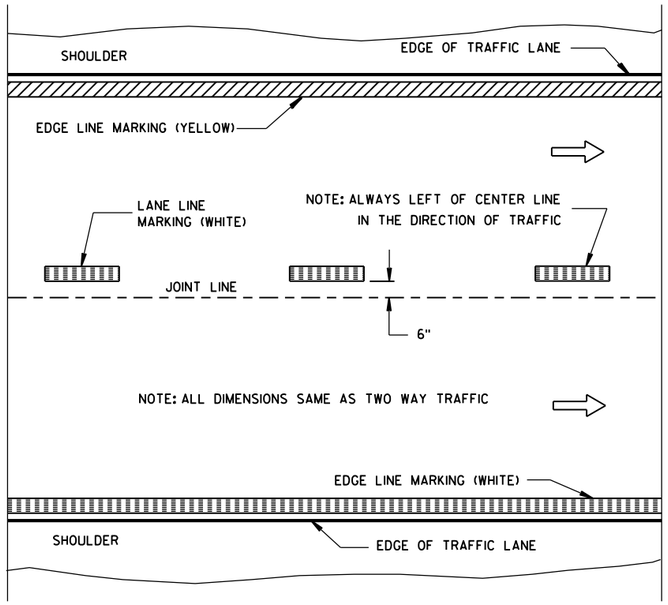
S.D.D. 15 C 3-3

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S.D.D. 15 C 3-3

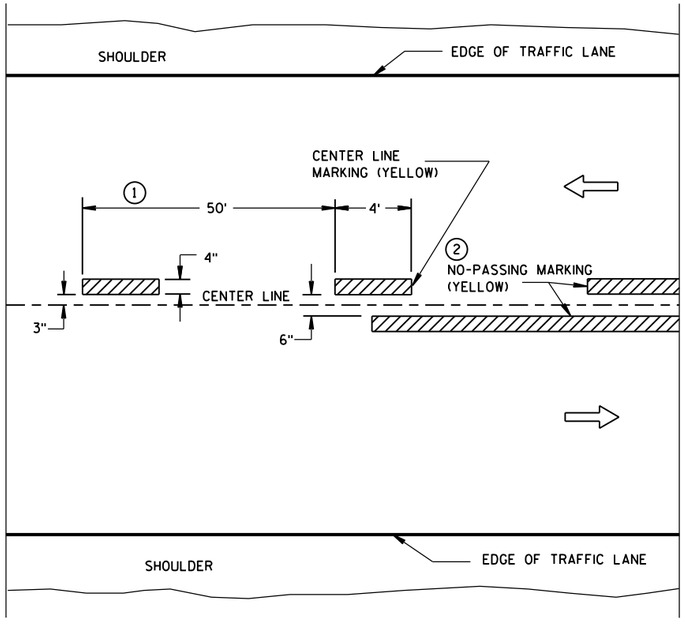


TWO WAY TRAFFIC

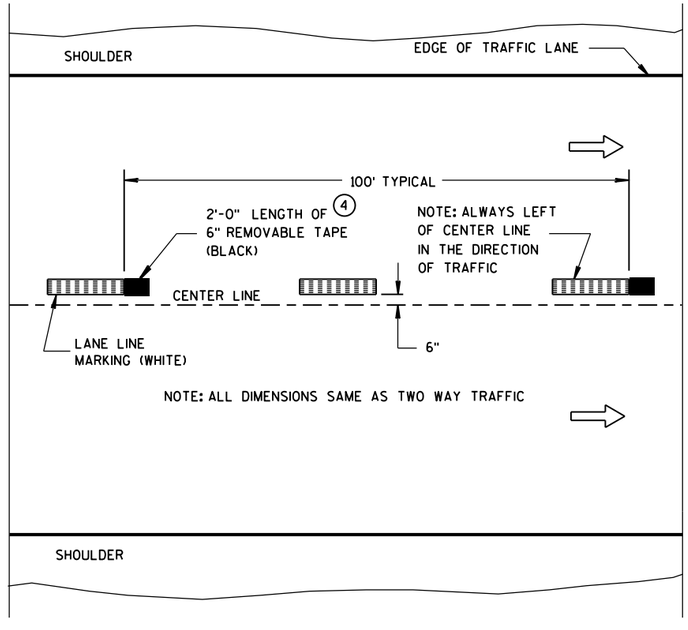


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

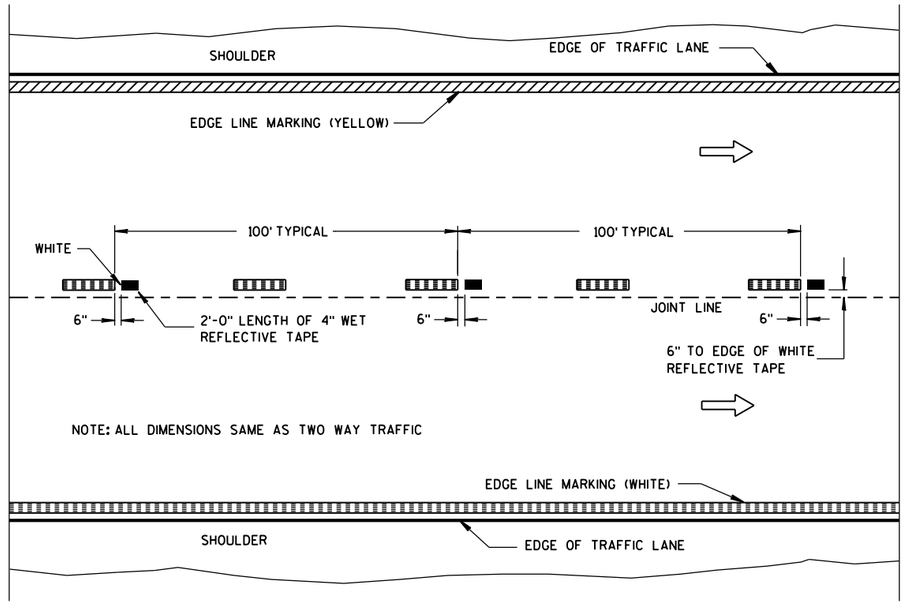
GENERAL NOTES

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

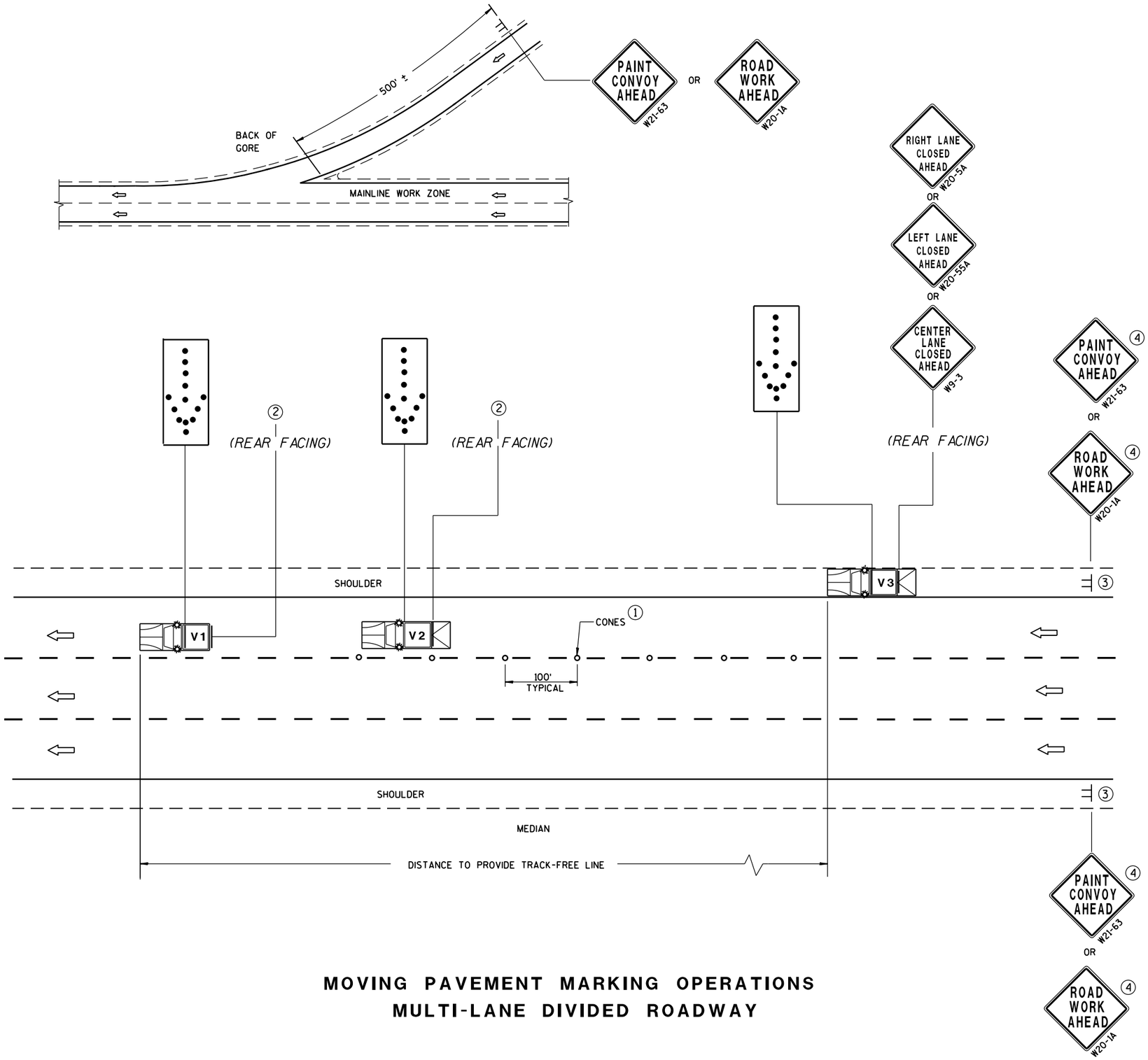
FHWA

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S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

(4) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

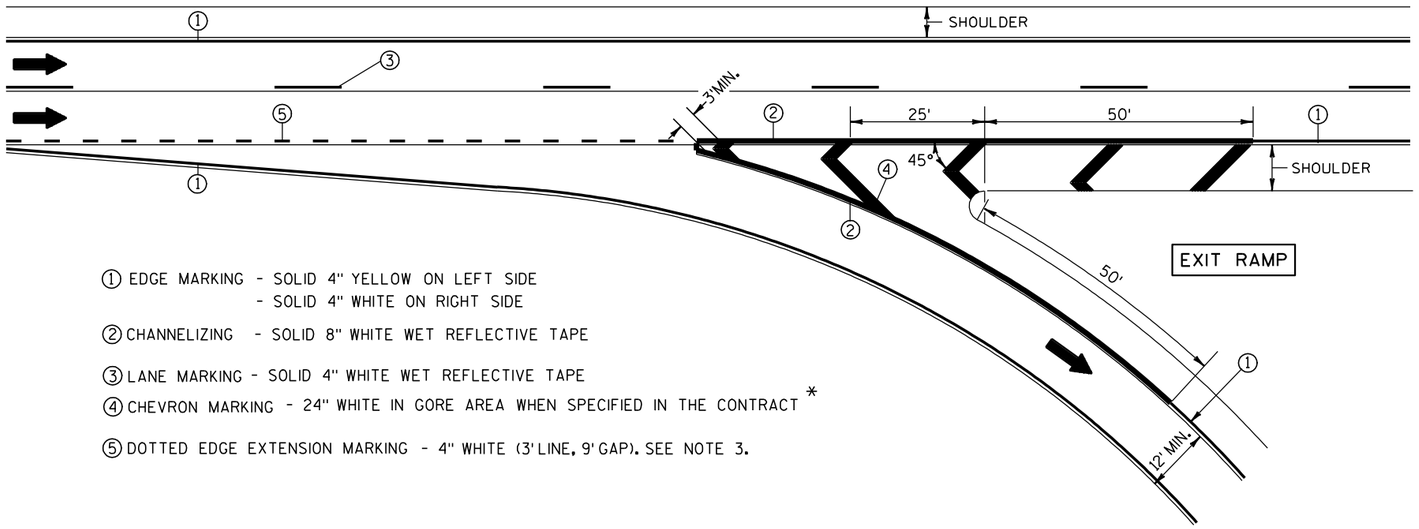
APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZON SAFETY ENGINI
FHWA

6

S.D.D. 15 C 19-4c

6

S.D.D. 15 C 19-4c



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE

② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE

③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE

④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *

⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

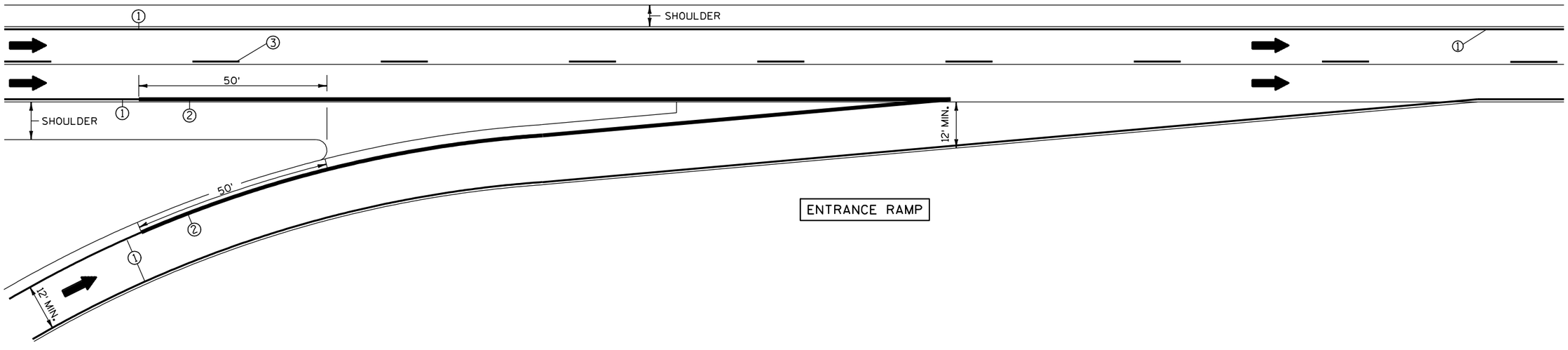
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

3. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



6

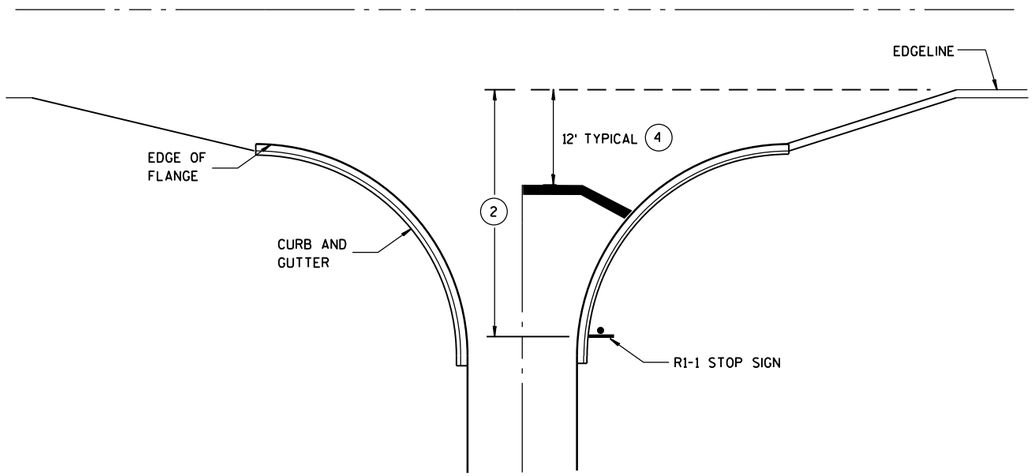
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S.D.D. 15 C 31-1a

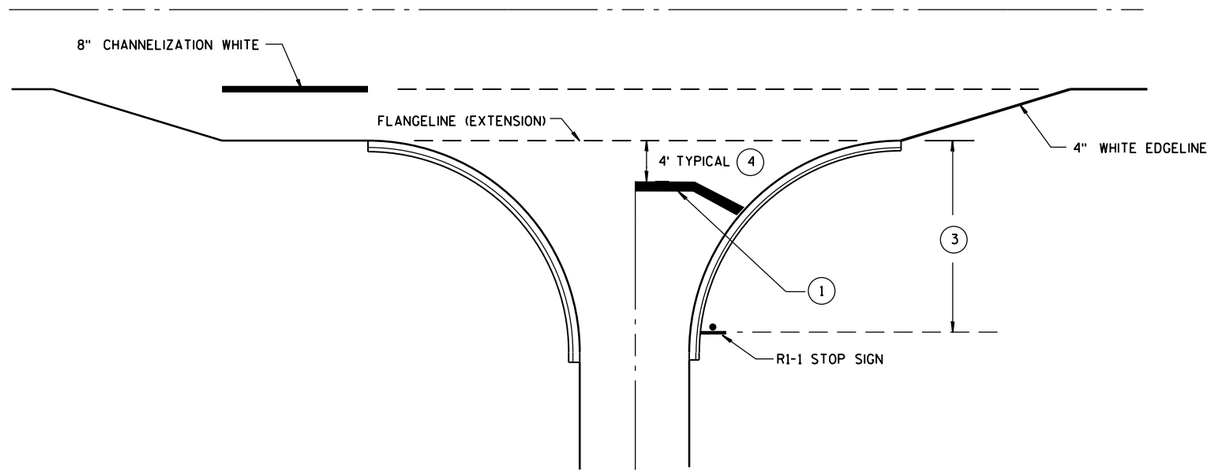
S.D.D. 15 C 31-1a

PAVEMENT MARKING
(RAMPS AND GORES)

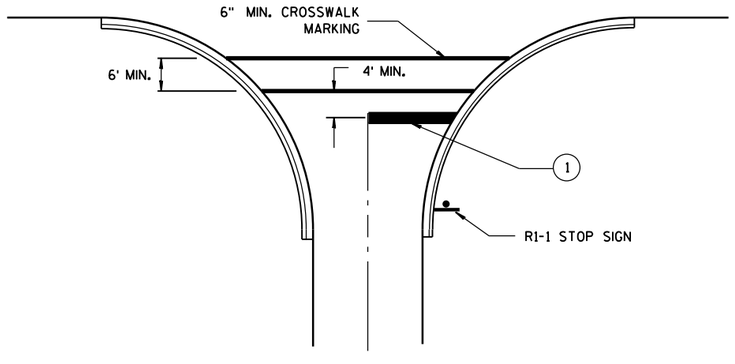
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



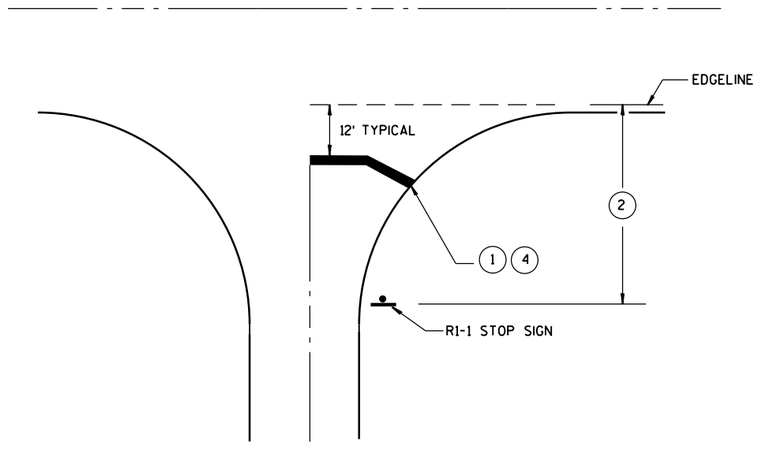
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR 366 NEER

FHWA

6
S.D.D. 15 C 33-2

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

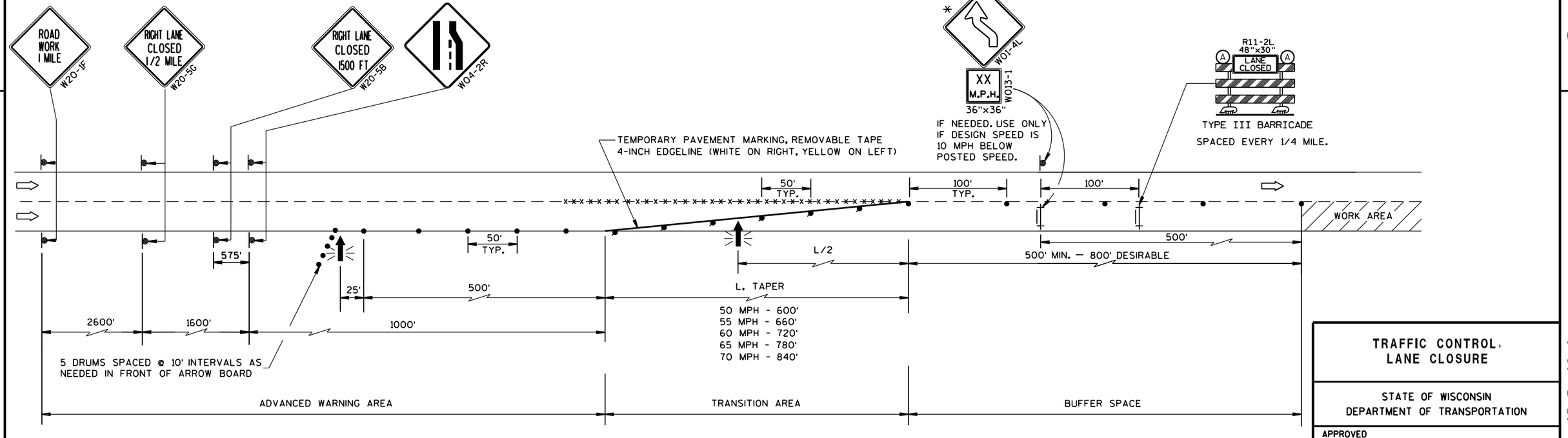
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

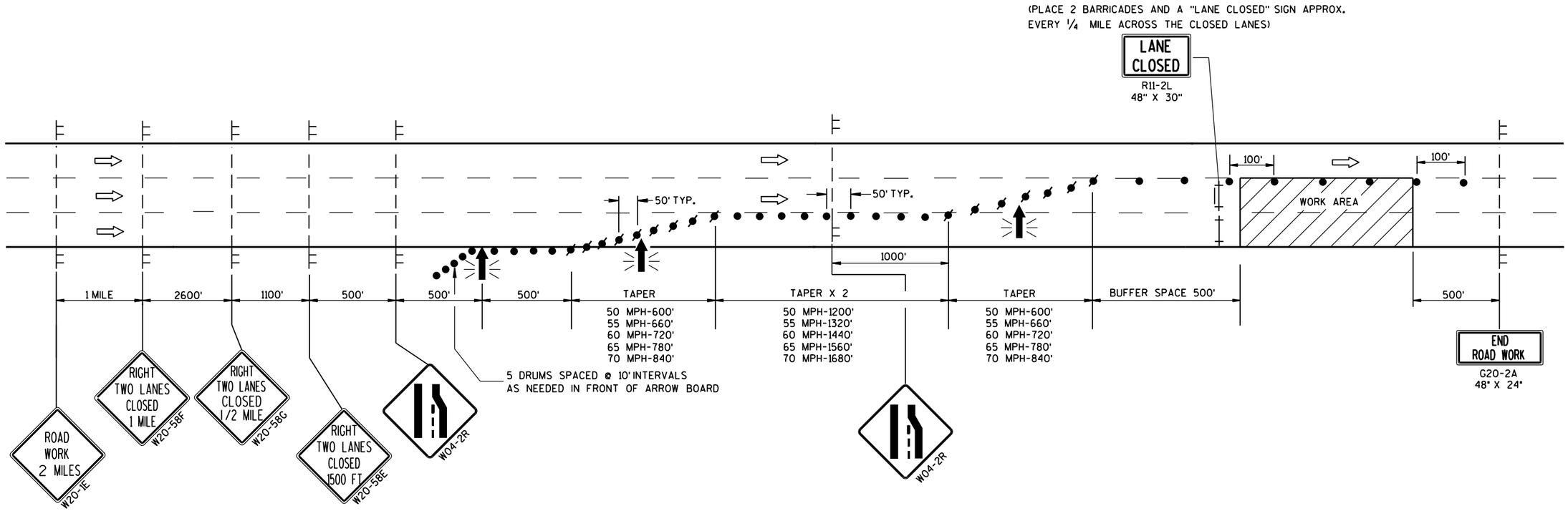
APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 12-6a

6

S.D.D. 15 D 12-6a



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.

W20-1E 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
July 14, 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6
S.D.D. 15 D 14-3

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.

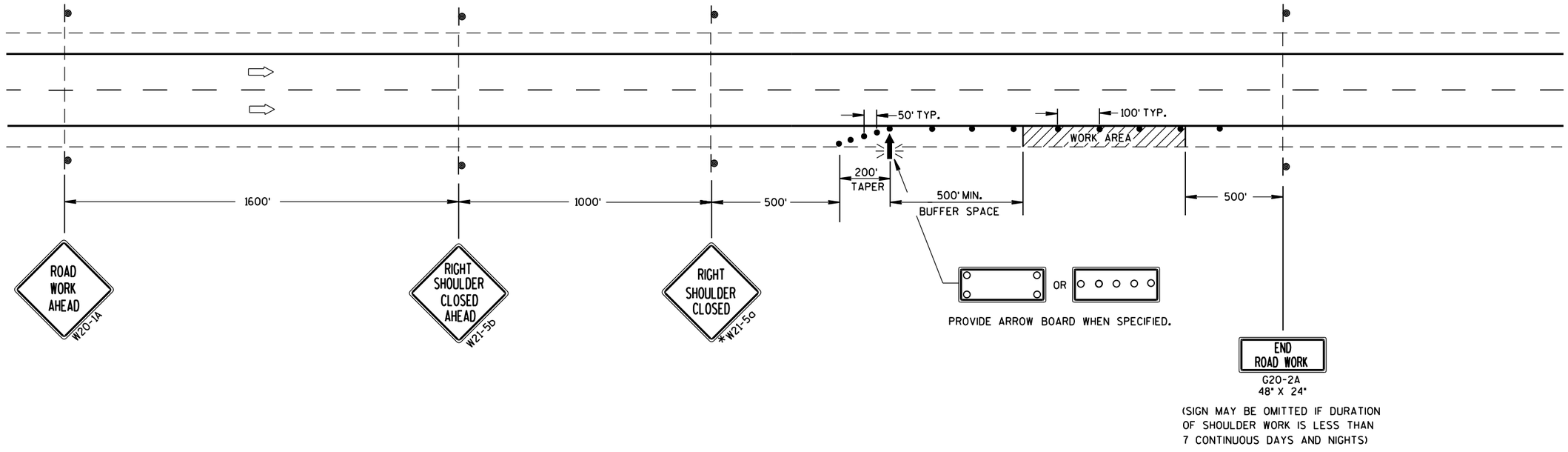
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] TIC SAFETY ENGI[illegible]

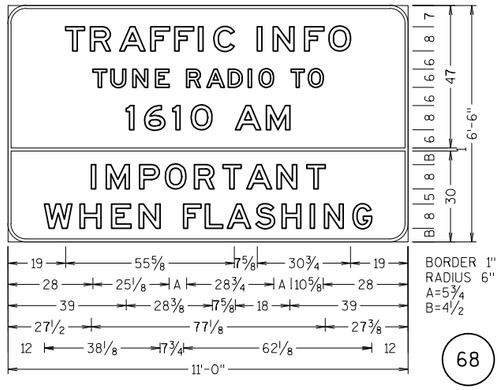
FHWA

6

S.D.D. 15 D 27-3

NOTES:

1. All Signs Type I - Type SH Reflective.
2. Color:
   Background Top - Blue
   Message Top - White
   Background Bottom - Yellow
   Message Bottom - Black
3. Message Series - E Modified except all CAP words Series E.



BLUE BACKGROUND - TOP
WHITE MESSAGE - TOP
YELLOW BACKGROUND - BOTTOM
BLACK MESSAGE - BOTTOM

7

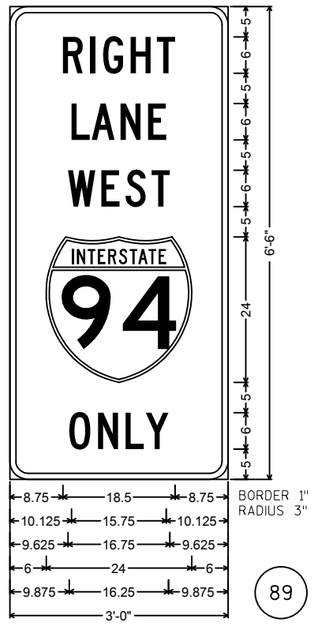
7

SHEET 1 OF 2

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: MILWAUKEE	SIGN DETAIL - TYPE I SIGN	SHEET 370	E

NOTES:

1. All Signs Type II - Type H Reflective.
2. Color:
   Background - White
   Message - Black
3. Message Series - Series C.



7

7

SHEET 2 OF 2

PROJECT NO:1060-33-82	HWY: IH 94	COUNTY: MILWAUKEE	SIGN DETAIL - TYPE I SIGN	SHEET 371	E

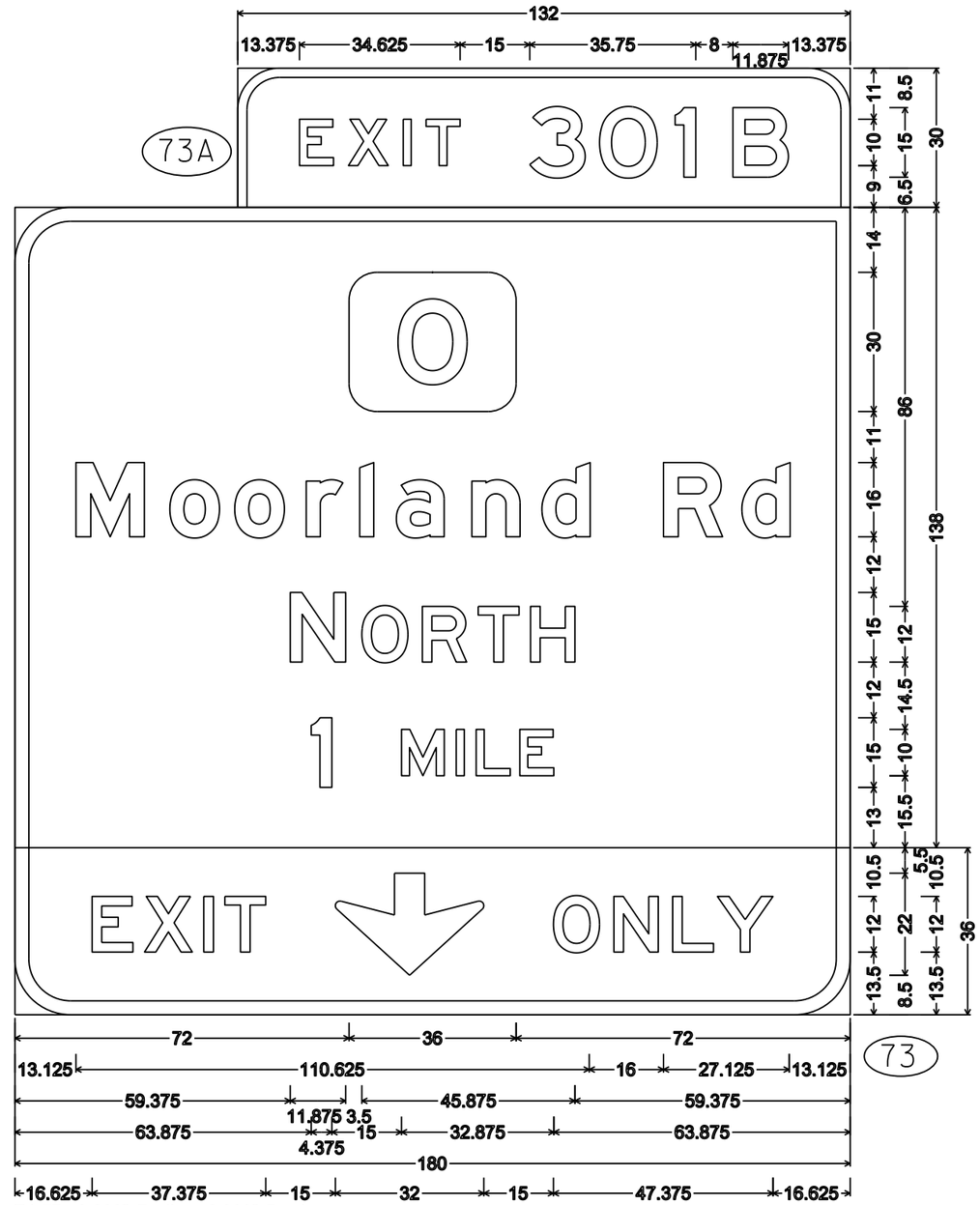
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LAYOUT NAME - 070101_MS (2)

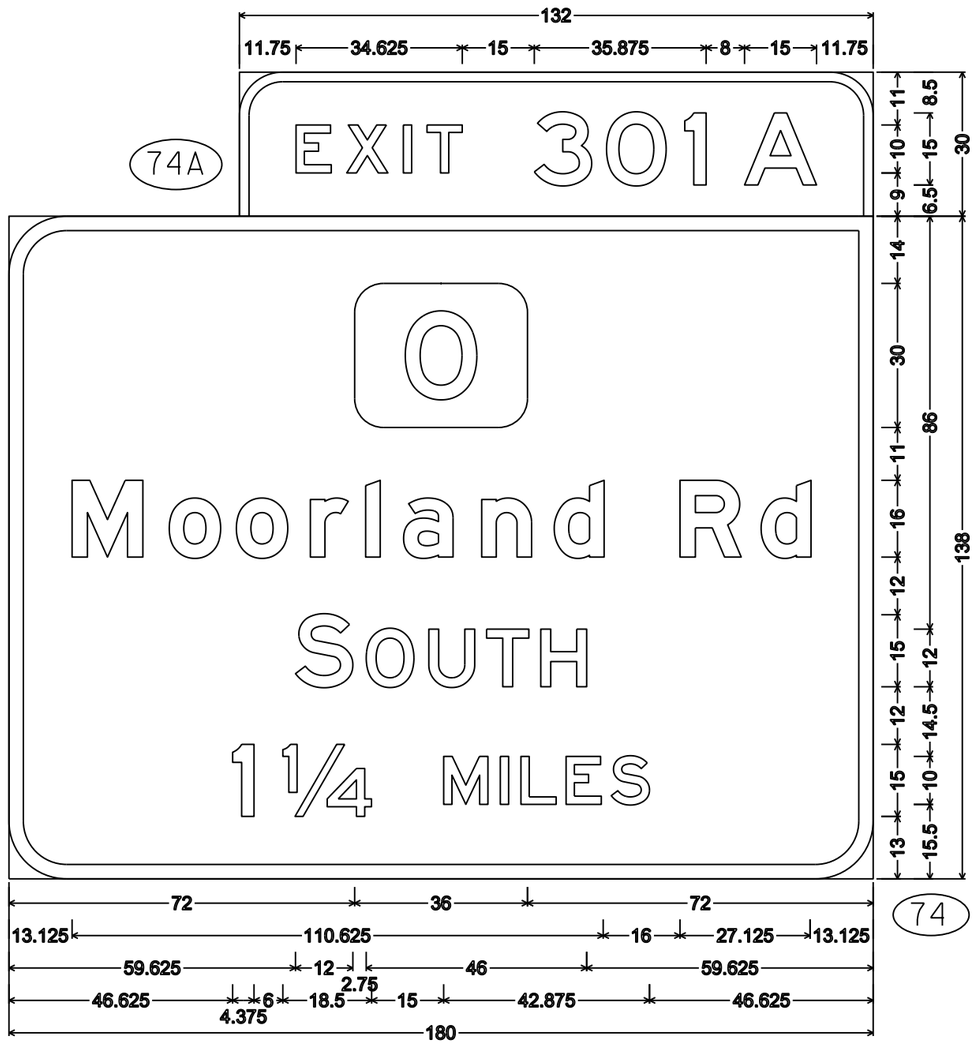
PLOT DATE : 4/6/2017 10:59 AM PLOT BY : DODGE, BRIAN M PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET

NOTES

1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E
4. EXIT ONLY Panels are on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



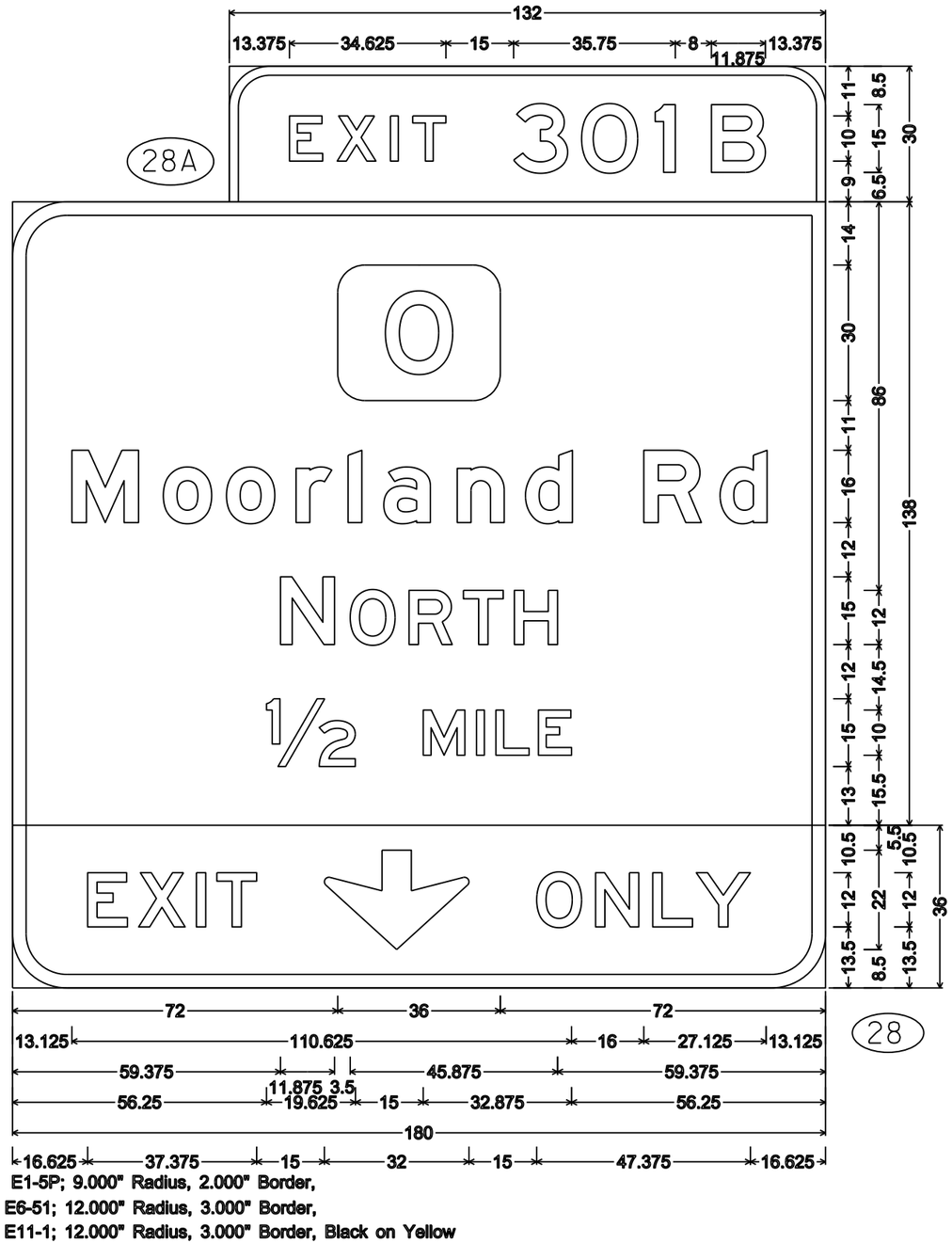


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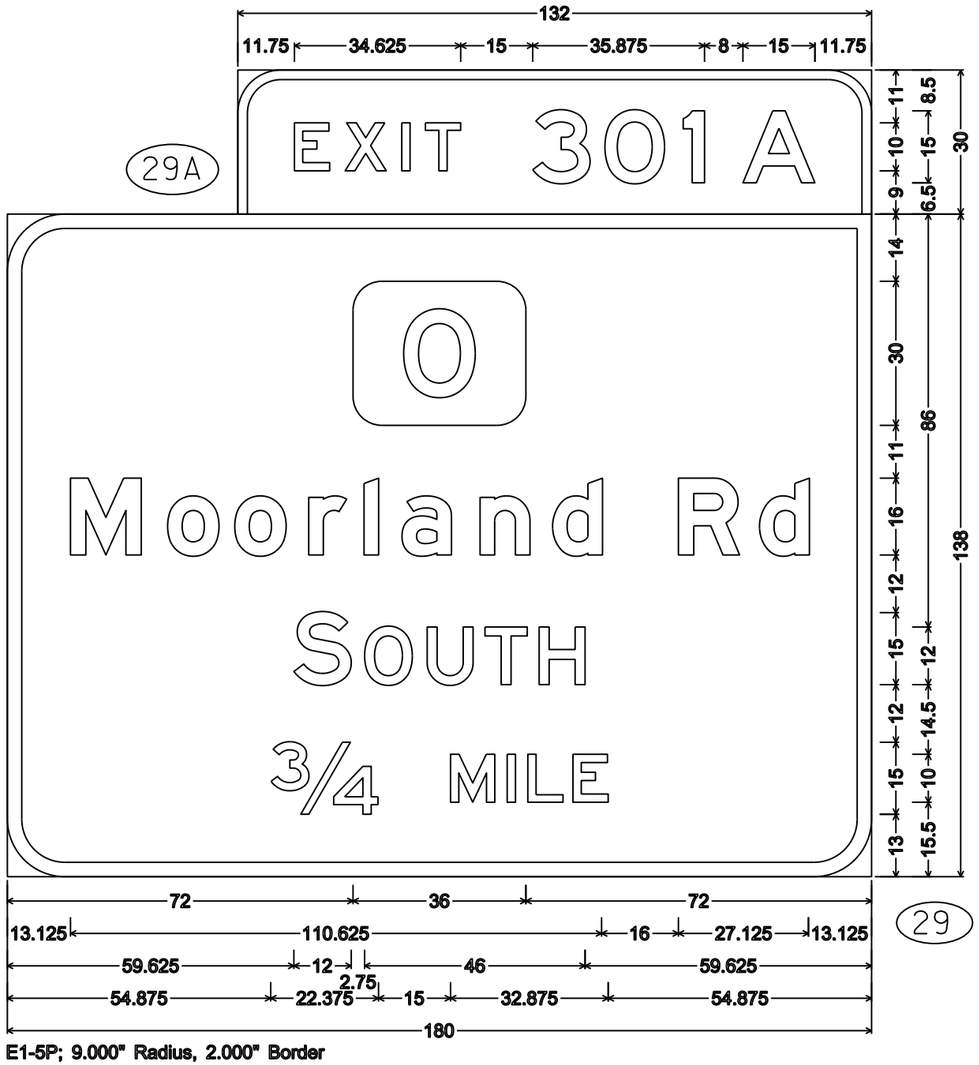
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NOTES

1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E
4. EXIT ONLY Panels are on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



E1-5P; 9.000" Radius, 2.000" Border,
E6-51; 12.000" Radius, 3.000" Border,
E11-1; 12.000" Radius, 3.000" Border, Black on Yellow



E1-5P; 9.000" Radius, 2.000" Border
E6-51; 12.000" Radius, 3.000" Border

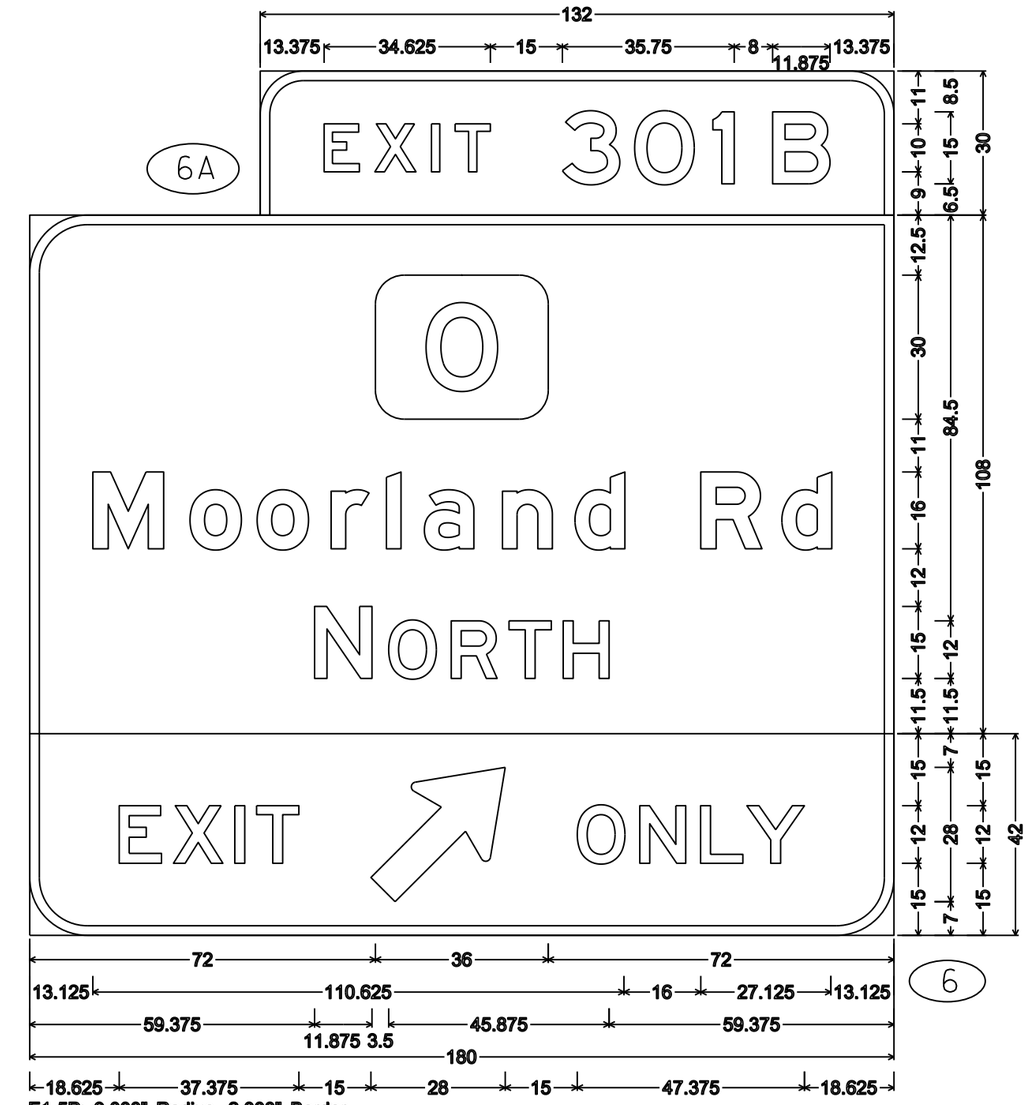
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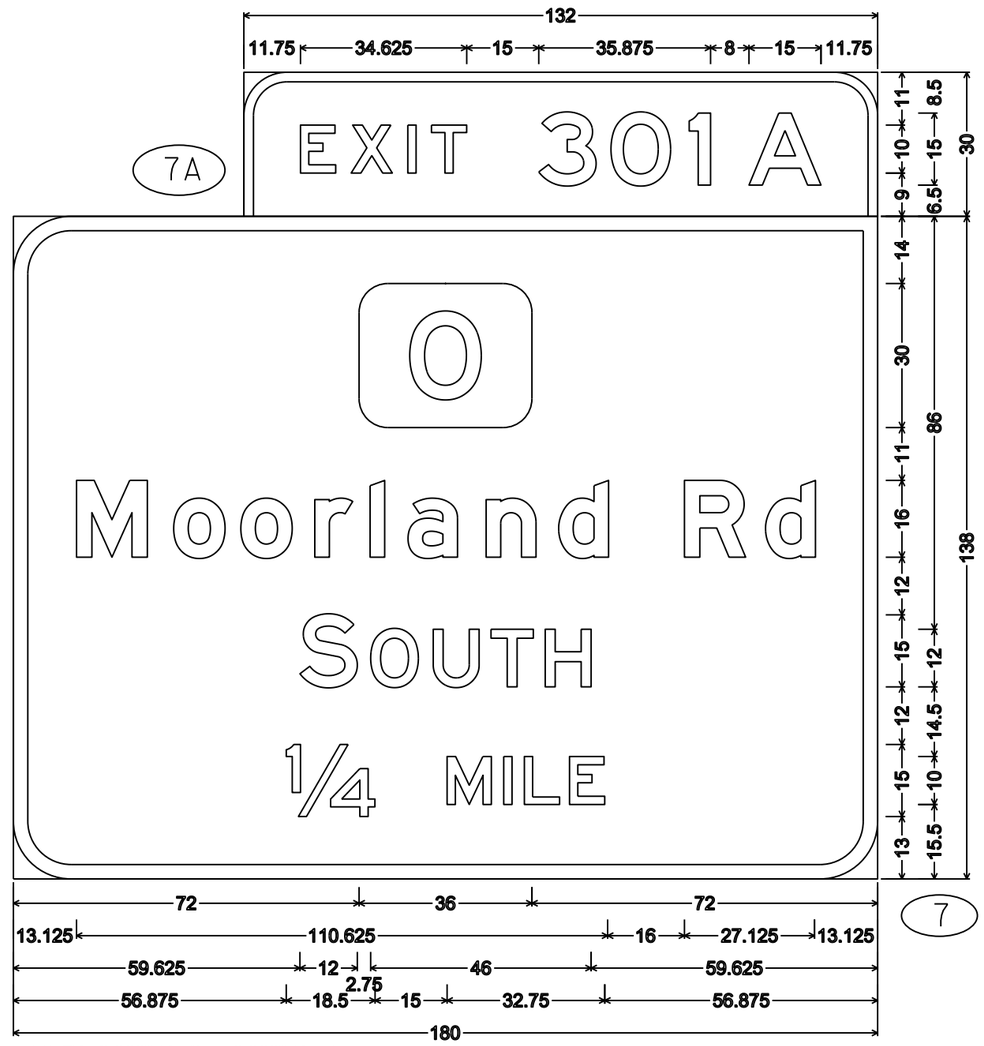
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 373	E

NOTES

1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E
4. EXIT ONLY Panels are on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



E1-5P; 9.000" Radius, 2.000" Border,
E6-1; 12.000" Radius, 2.000" Border,
E11-1D; 12.000" Radius, 2.000" Border, Black on Yellow;



E1-5P; 9.000" Radius, 2.000" Border,
E6-51; 12.000" Radius, 3.000" Border

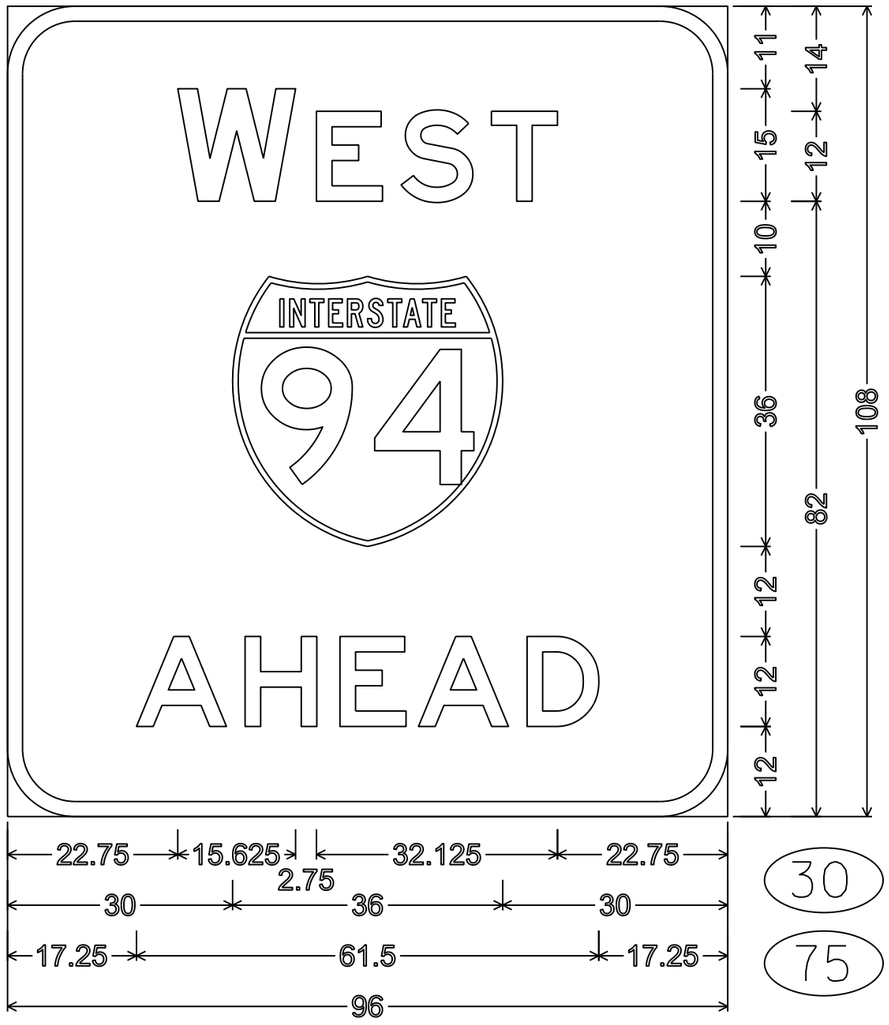
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 374	E

NOTES

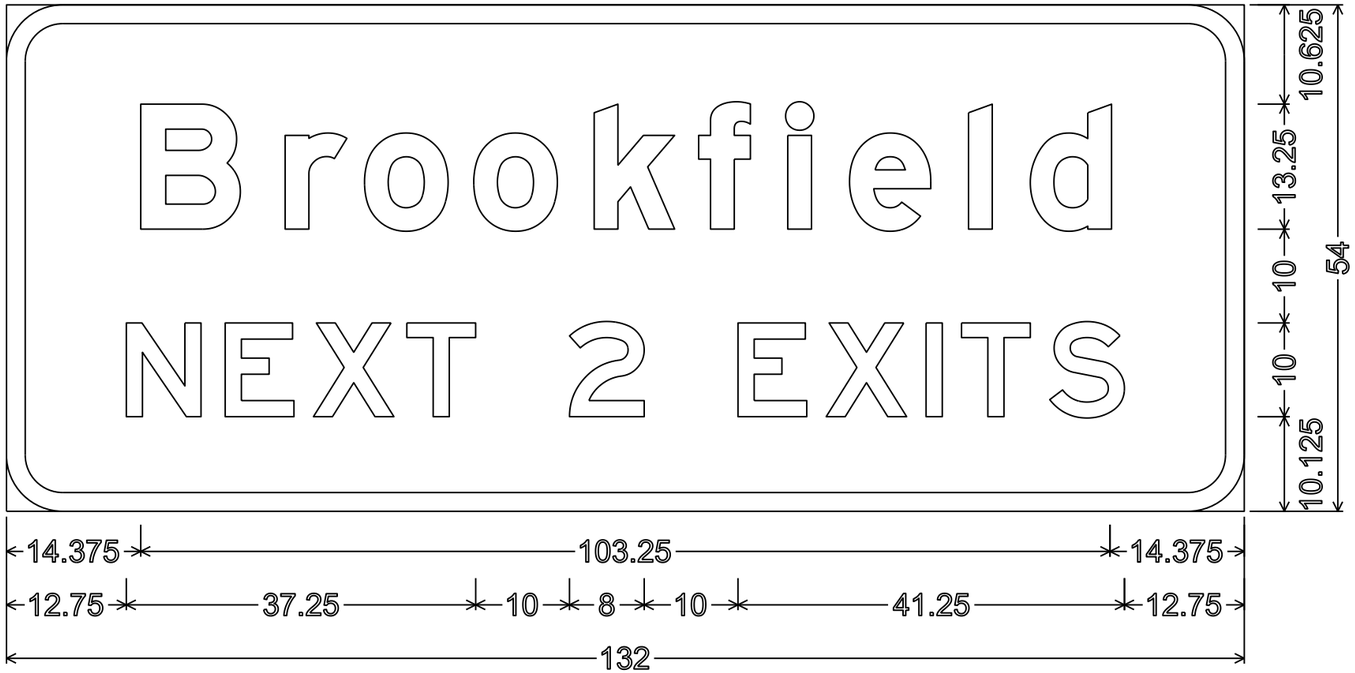
1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



E6-51;
9.000" Radius, 2.000" Border

NOTES

1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - As noted



E3-1; 6.000" Radius, 2.000" Border
"Brookfield" E Mod; "NEXT" E; "2" E; "EXITS" E;

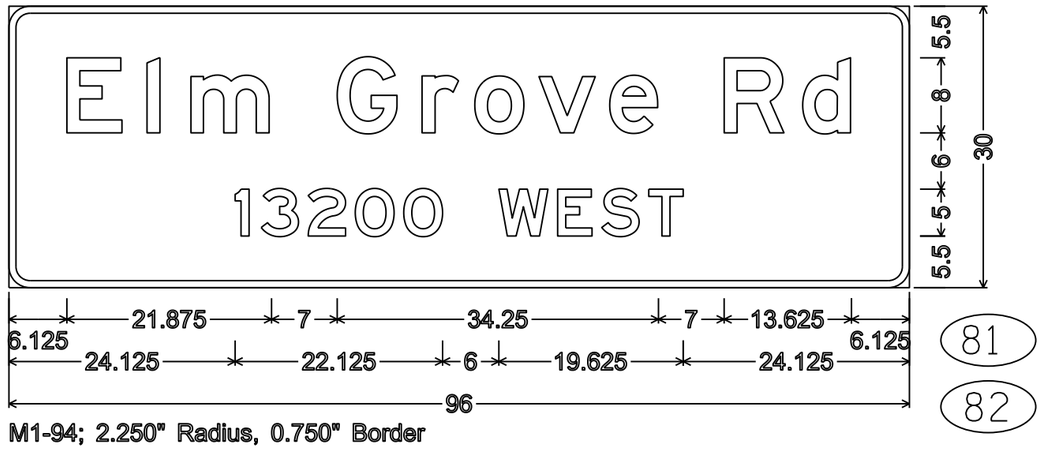
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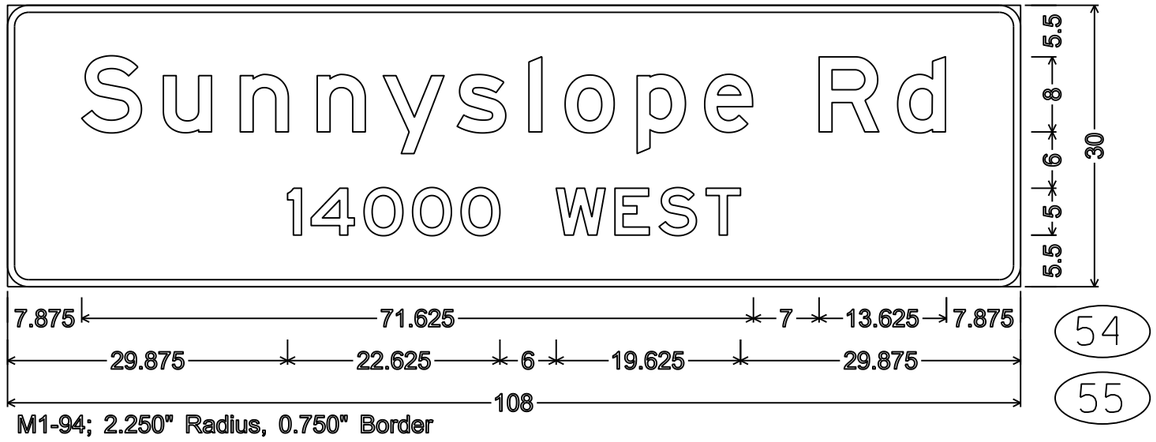
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 376	E

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



M1-94; 2.250" Radius, 0.750" Border



M1-94; 2.250" Radius, 0.750" Border

7

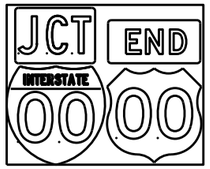
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 377	E

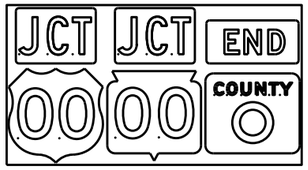
TYPICAL ASSEMBLIES



J1-1



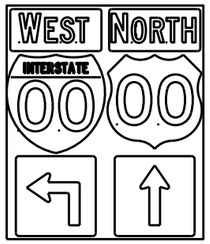
J1-2



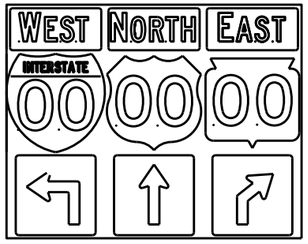
J1-3



J2-1



J2-2

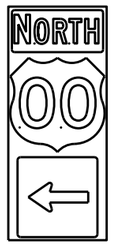


J2-3

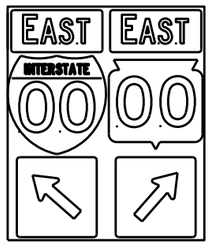


JV

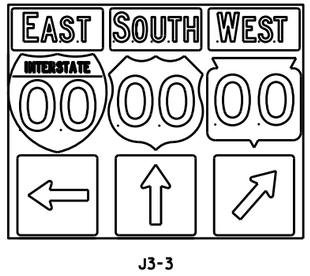
(Typical Vertical J-Assembly
See Note 10 and 11)



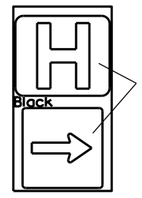
J3-1



J3-2



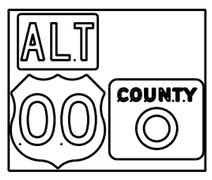
J3-3



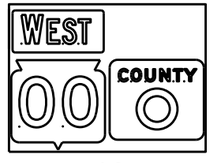
JH-1



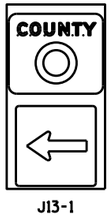
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

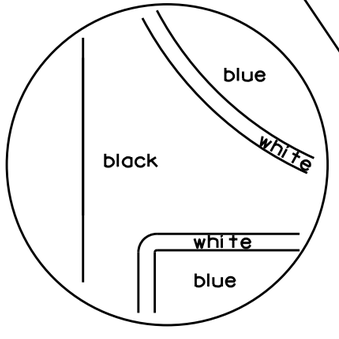


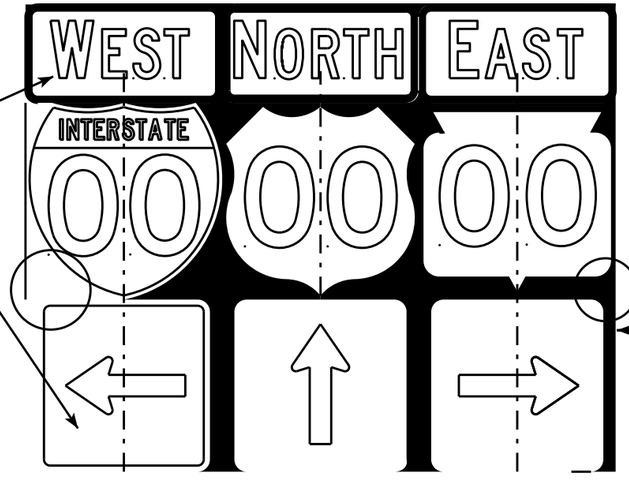
J23-1

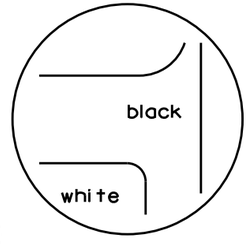


J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

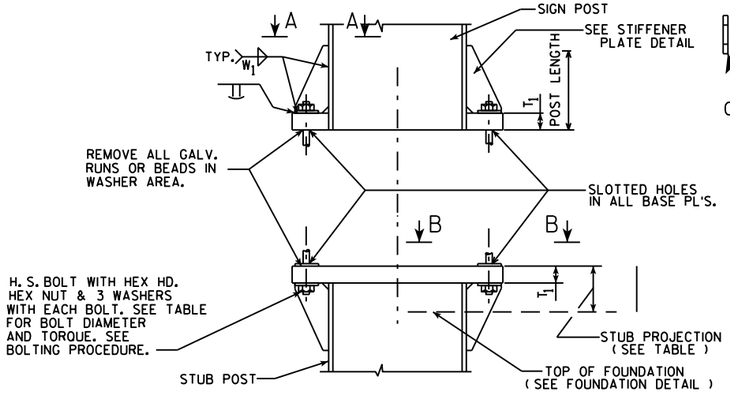
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

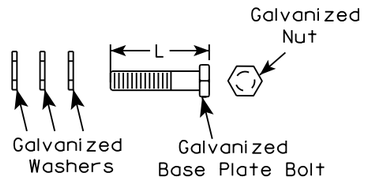
PROJECT NO: | SHEET NO: E

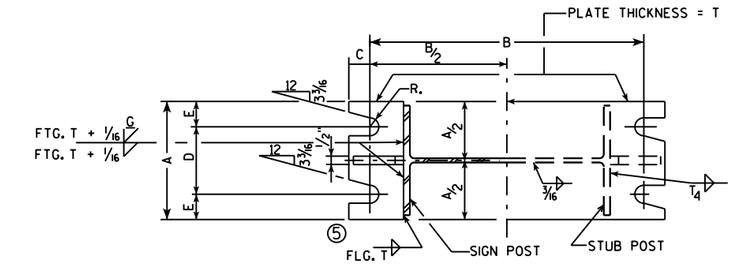
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42

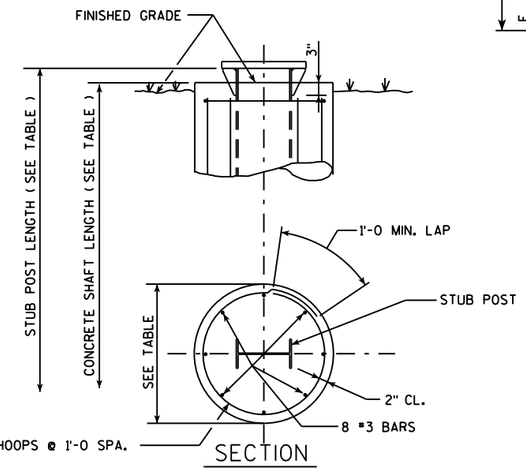


SIGN POST AND STUB POST ELEVATION

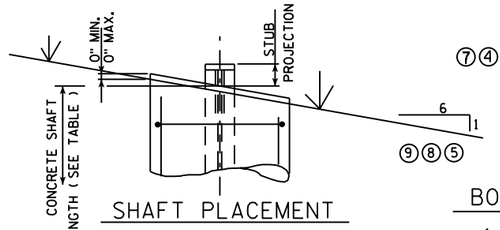




SECTION A-A SECTION B-B



SECTION



SHAFT PLACEMENT

DESIGN DATA

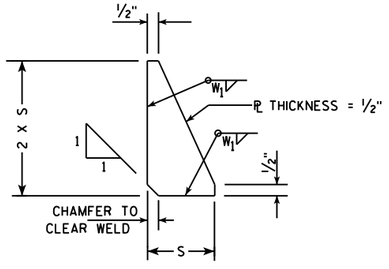
WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & 1/2 WIND[4]	140 [4]25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1 1/2 T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

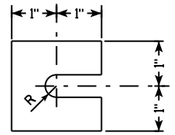
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123. (9)
THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
FURNISH STEEL BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SECTION 635 OF THE STANDARD SPECIFICATIONS.



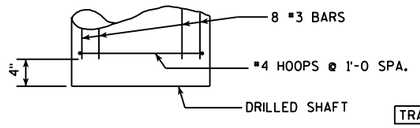
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)



FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

SHIM DETAIL



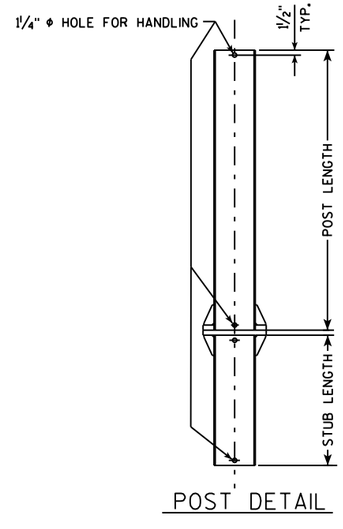
FOUNDATION DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

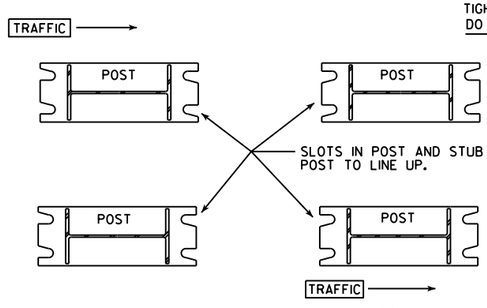
(7)

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3

(7)



POST DETAIL



POST SLOT ORIENTATION (7)

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

BASE CONNECTION DATA TABLE														FOUNDATION DATA				(2)
L	X	TYPE	DIMENSION / POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K	
3 3/4	(4)	A	W10"X12.0 #/FT.	3/4" Φ @ 75#-FT.	5 1/4"	1'-0 3/8"	7/8"	3 1/2"	7/8"	1"	3/16"	5/16"	13/32"	2 1/8"	3'-6	3"	2'-0 Φ	5'-0	76.0#	(4)
4 3/4	(4)	B	W12"X16.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/4"	1/4"	5/16"	13/32"	3"	5'-6	3"	2'-0 Φ	7'-0	146.5#	(4)
5		C	W12"X19.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/2"	5/16"	5/16"	13/32"	3"	6'-0	3"	2'-0 Φ	7'-6	182.1#	
5		D	W12"X22.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/2"	3/8"	5/16"	13/32"	3"	6'-6	3"	2'-0 Φ	8'-0	210.5#	
5	(3)	E	W12"X26.0 #/FT.	1" Φ @ 90#-FT.	7"	1'-4 1/4"	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	5/16"	17/32"	3"	7'-0	3"	2'-0 Φ	8'-6	293.0#	(3)

(1) (6) (1)

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/15 PLATE NO. A3-1.16

(10)	1-21-14	LUBRICATION OF BASE BOLTS
(9)	4-26-11	REMOVE NON-GALVANIZED
(8)	10-30-96	NOT GALVANIZED/GALVANIZED
(7)	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
(6)	8-24-87	BASE CONN. WELD
(5)	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
(4)	10-19-79	POST A & B, A572 GR. 50, & K
(2)	11-28-78	"K" (3) 4-23-79 TYPE "E"
(1)	5-4-78	T_1 , T_2 & W_1
NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2011	JPH	

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

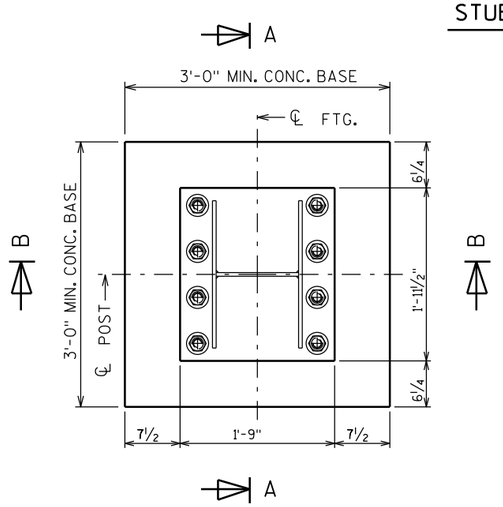
SHEET

379

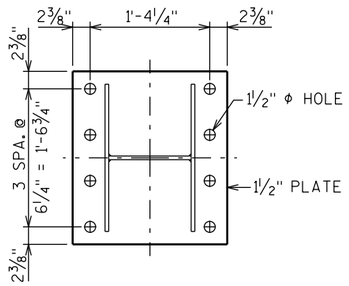
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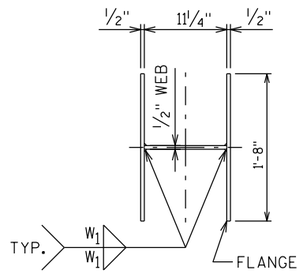
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



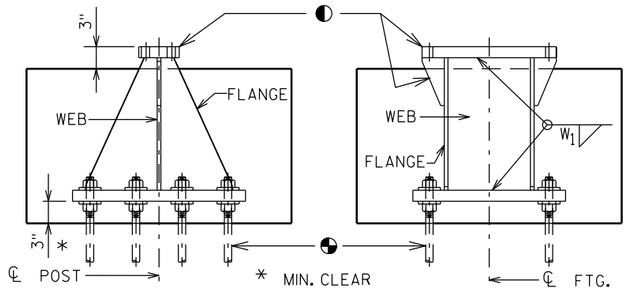
BASE PLATE



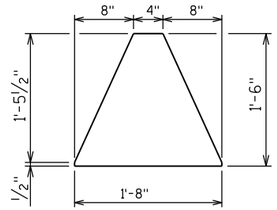
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



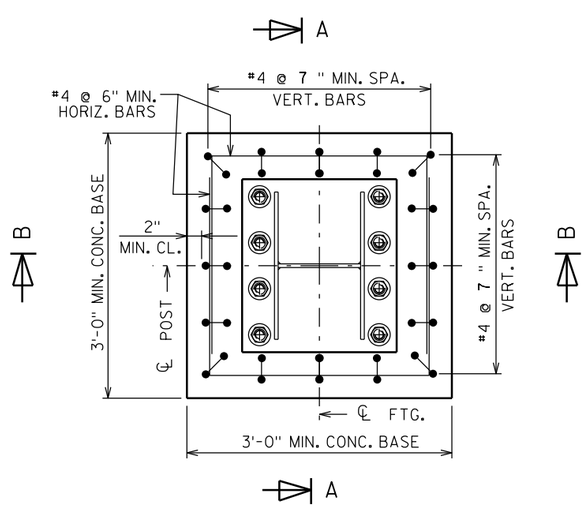
FLANGE

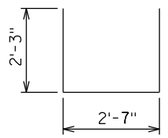
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

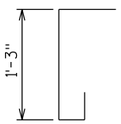
CONCRETE BASE SECTION





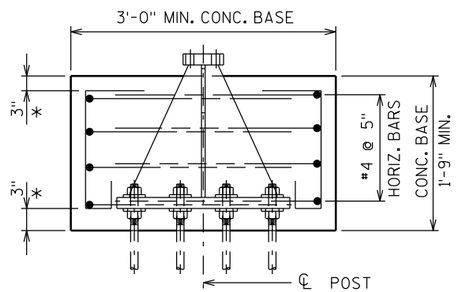
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



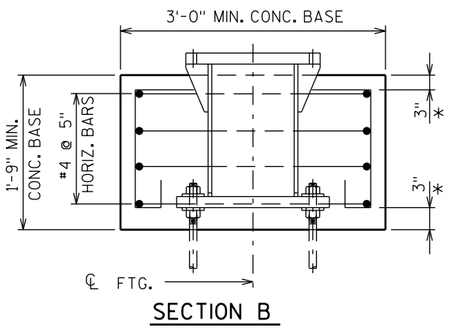
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

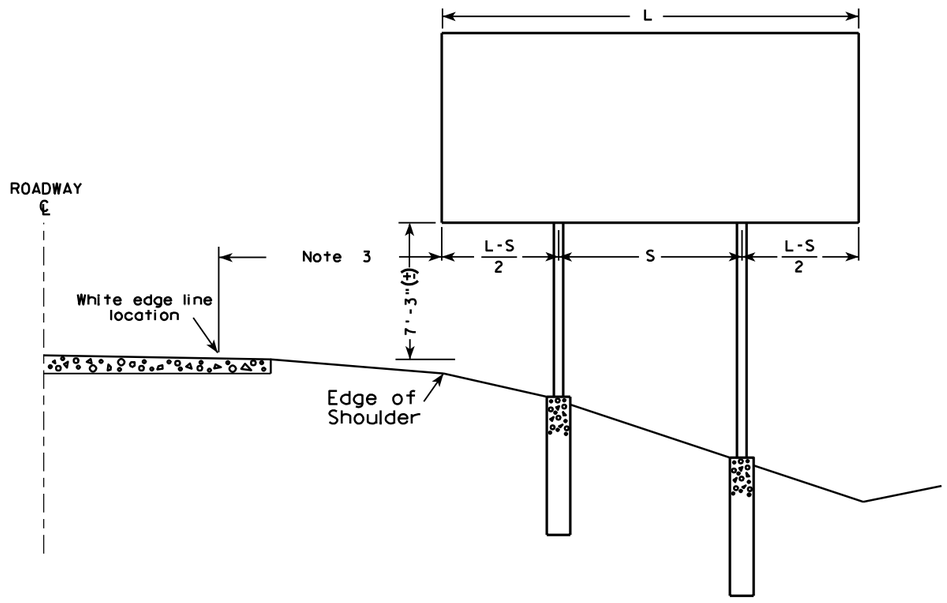
APPROVED Matthew R Rauch
for State Traffic Engineer

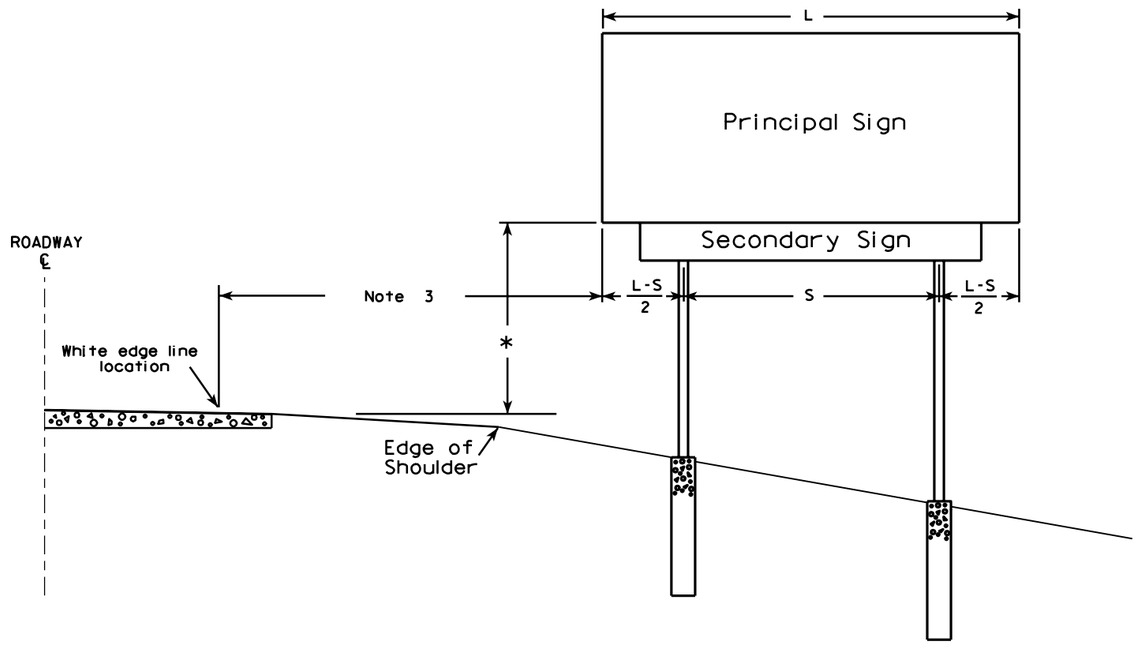
DATE 2/06/2014 PLATE A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31M.DGN PLOT DATE : 10-MAR-2014 15:16 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.556674:1.000000

WISDOT/CADDS SHEET 42





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

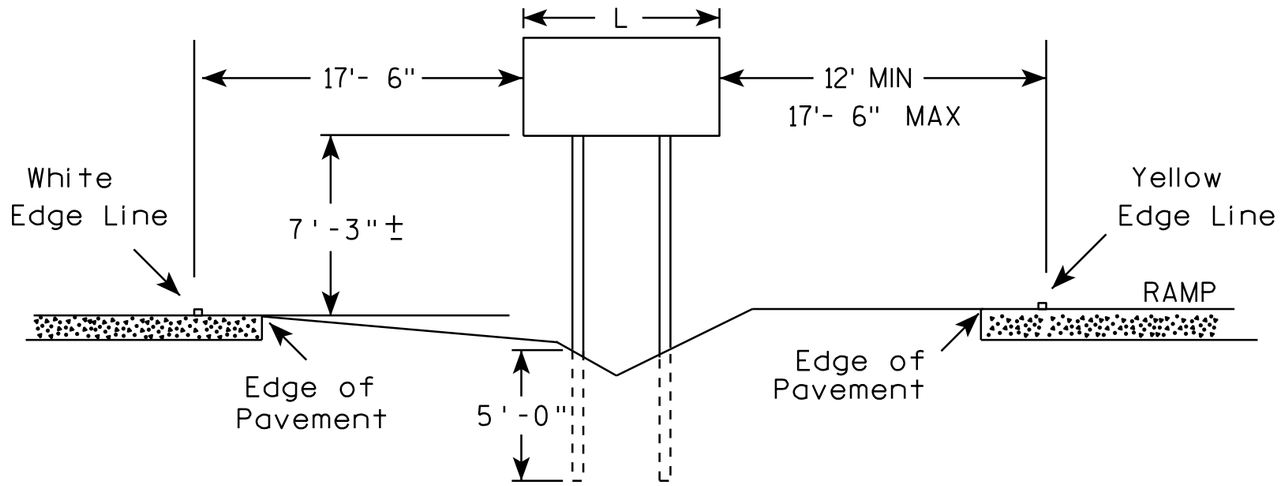
TYPICAL INSTALLATION
OF TYPE I SIGNS

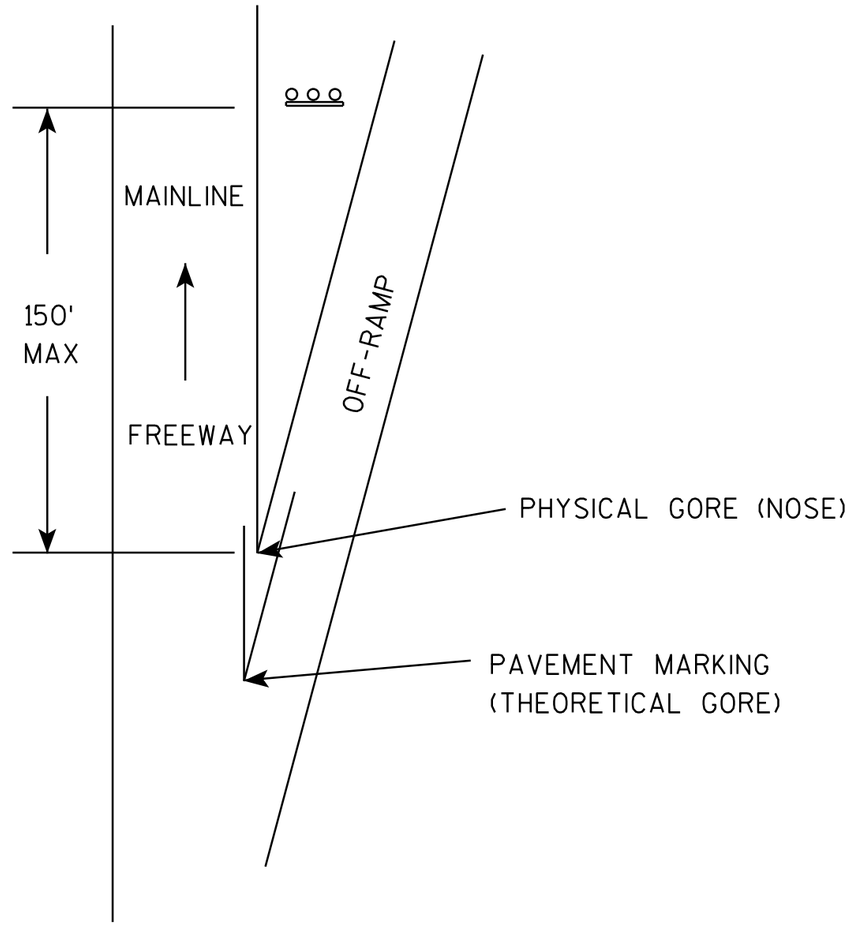
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 381	E





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The (∓) tolerance for the mounting height is 3 inches.

7

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TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

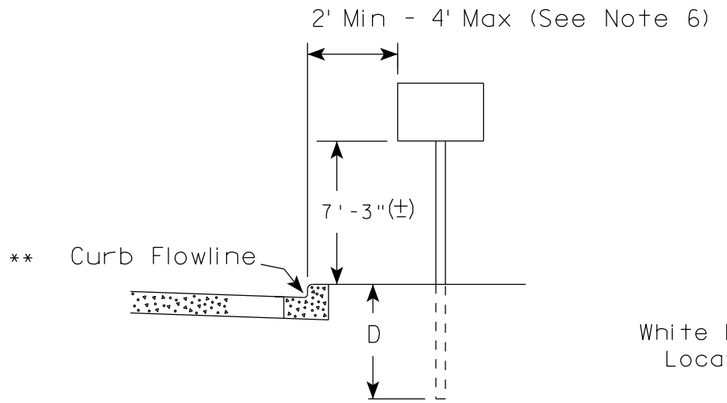
DATE 2/06/14 PLA... A4-2.3

PROJECT NO: | SHEET NO: E

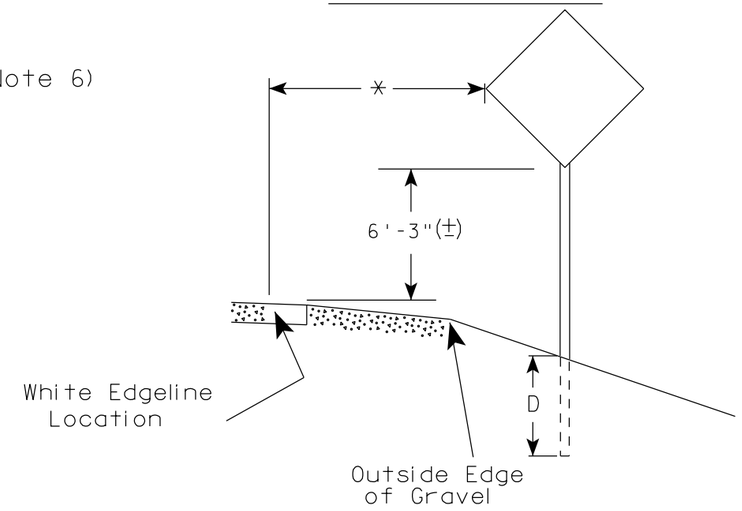
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A42.DGN PLOT DATE : 06-FEB-2014 12:36 PLOT BY : mscsja

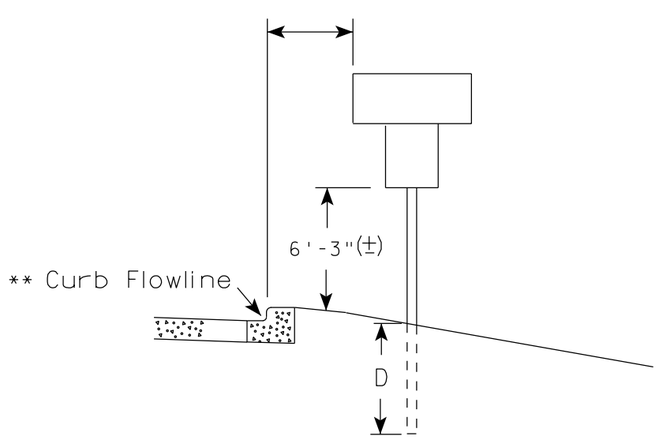
WISDOT/CADDS SHEET 42

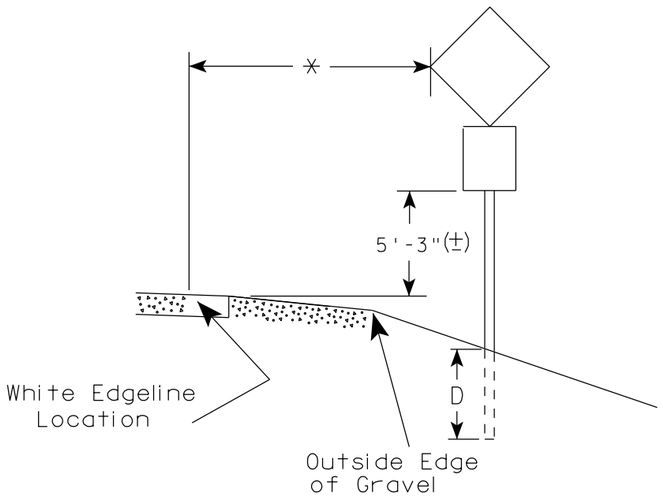
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

** 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.

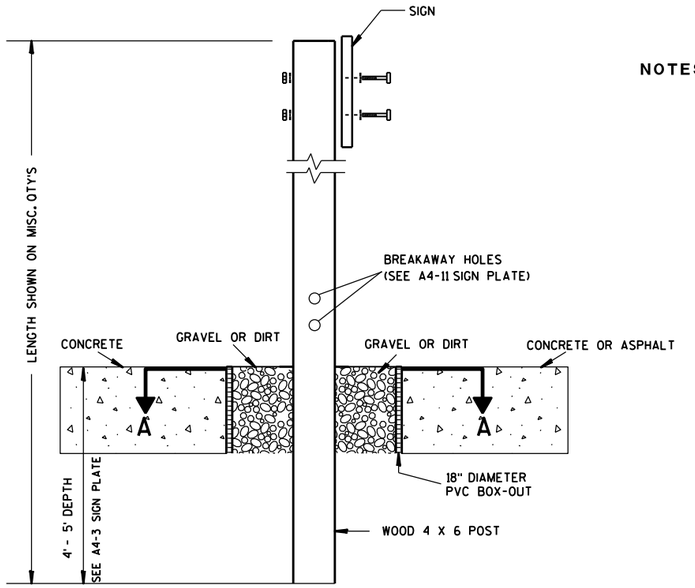
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

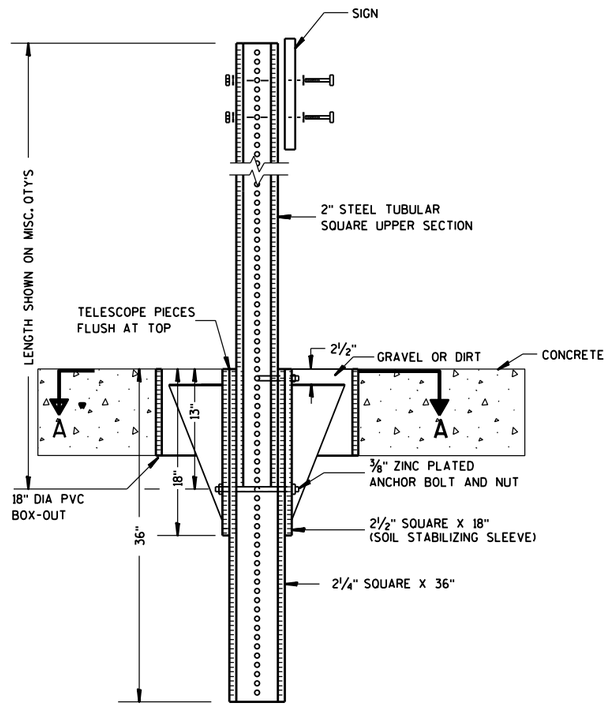
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

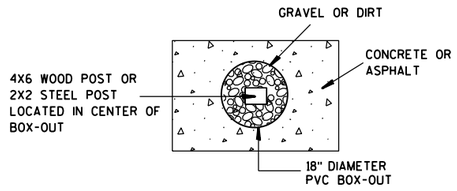
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

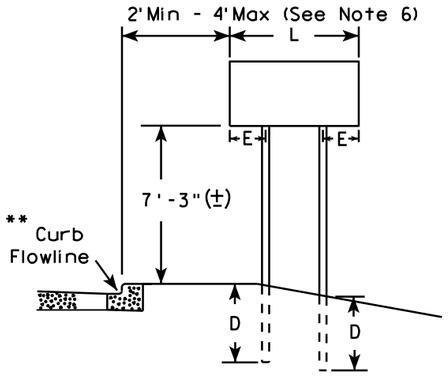
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

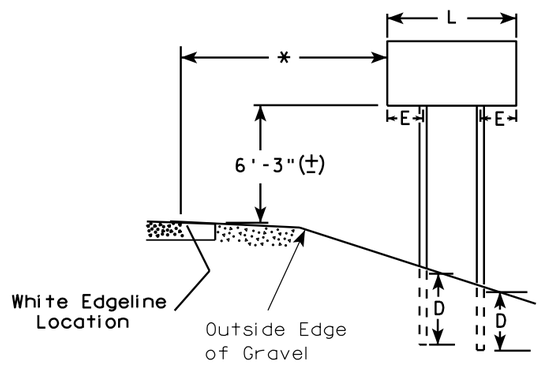
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

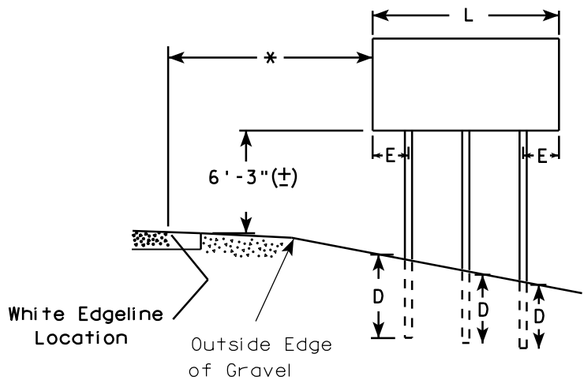
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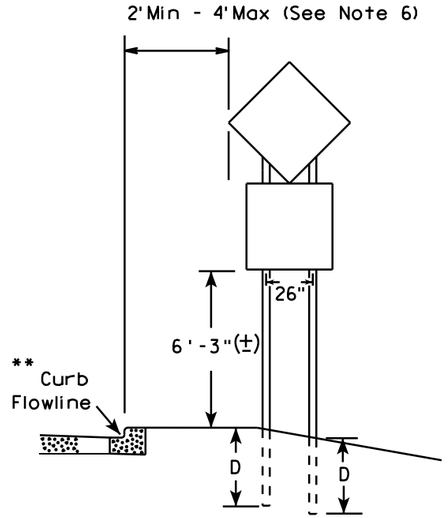
URBAN AREA



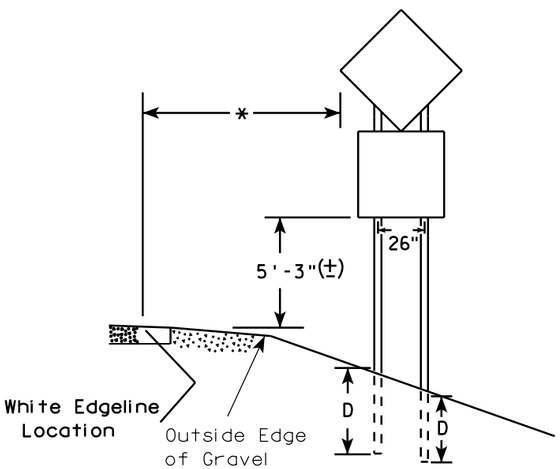
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

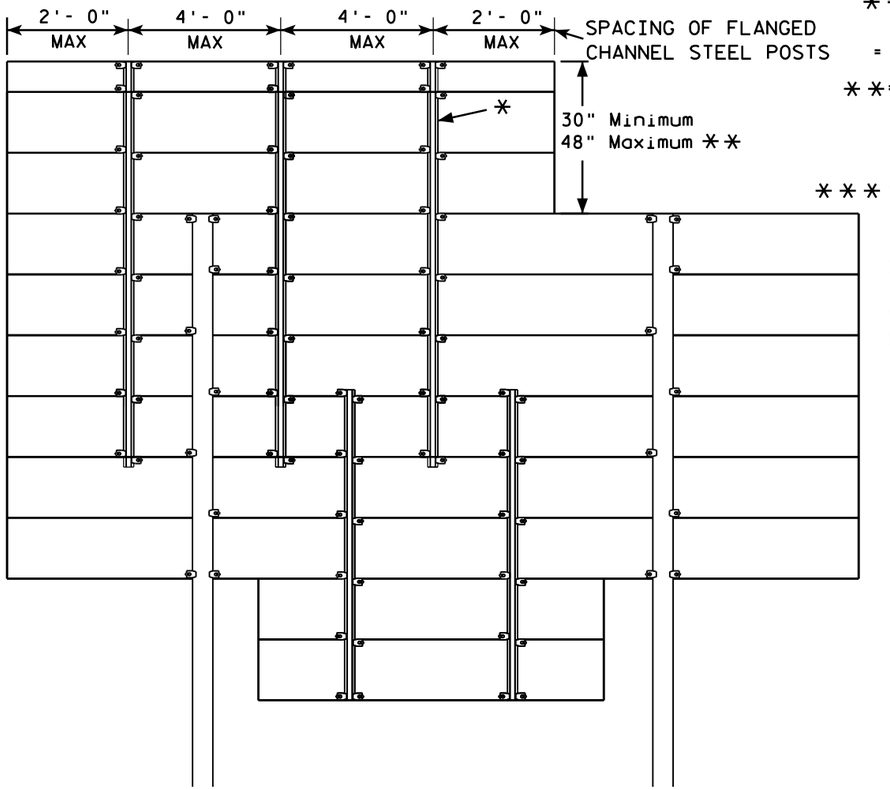
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 385 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

GROUND MOUNTED SIGN

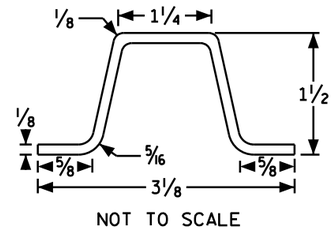


* =2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

** =FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

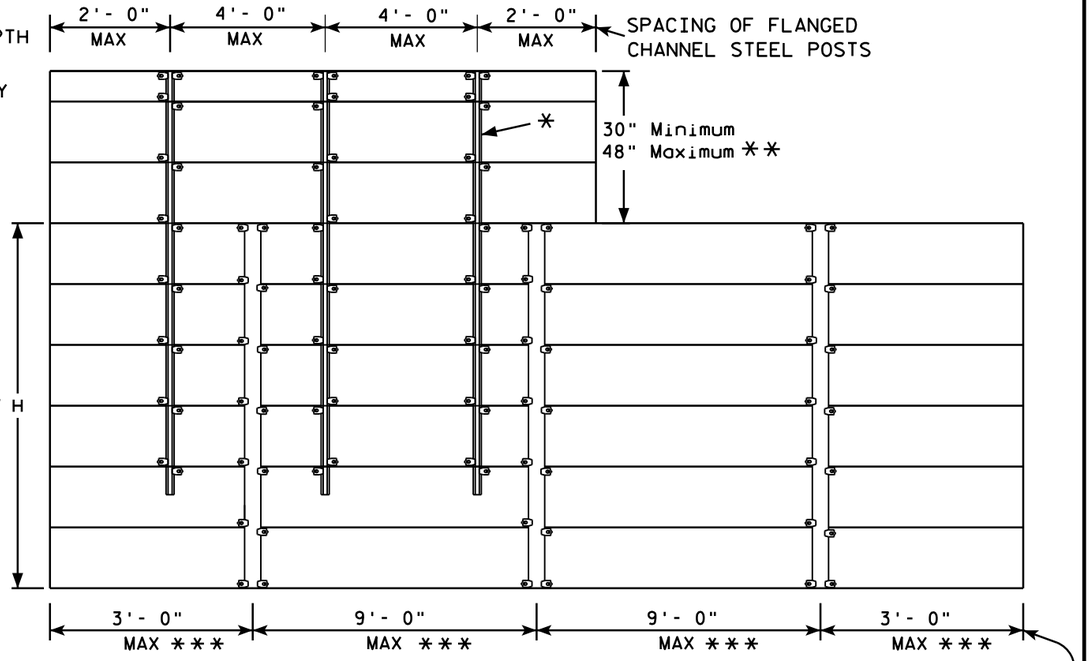
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

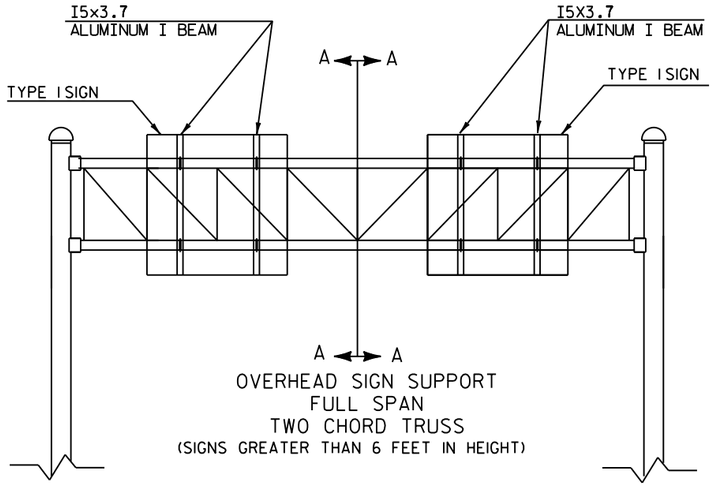
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

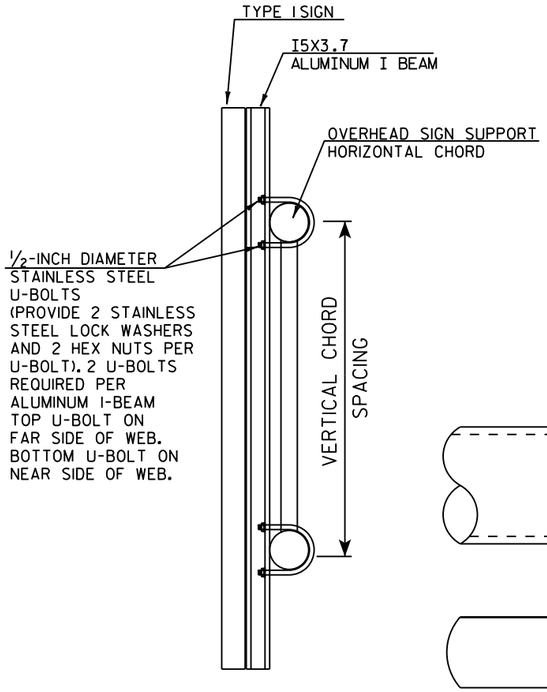
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 386 A4-6.12

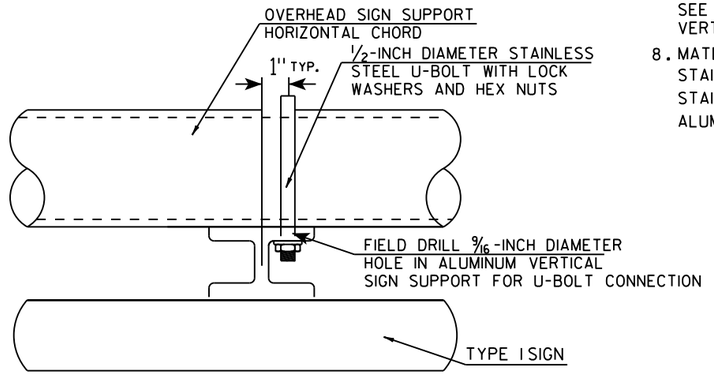
PROJECT NO: | SHEET NO: E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



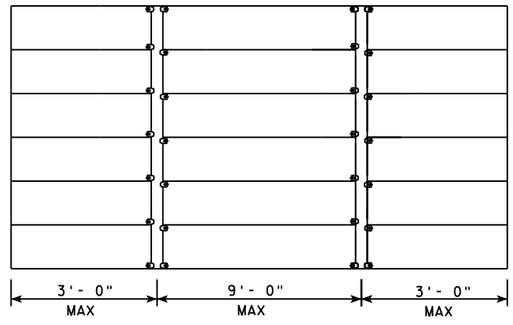
CUT SECTION A-A



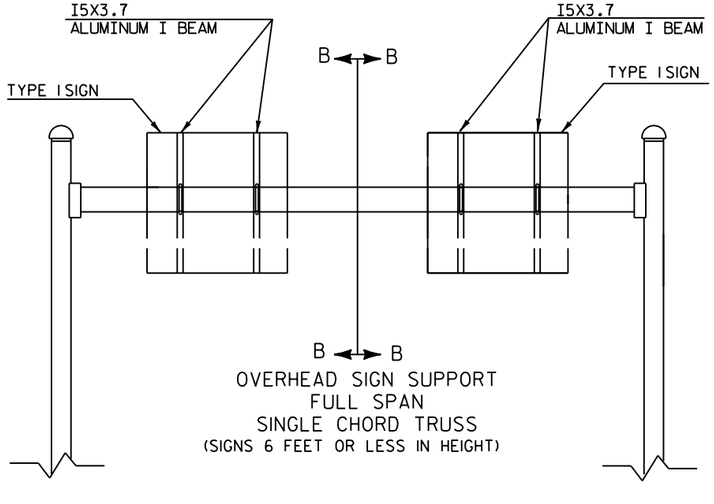
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

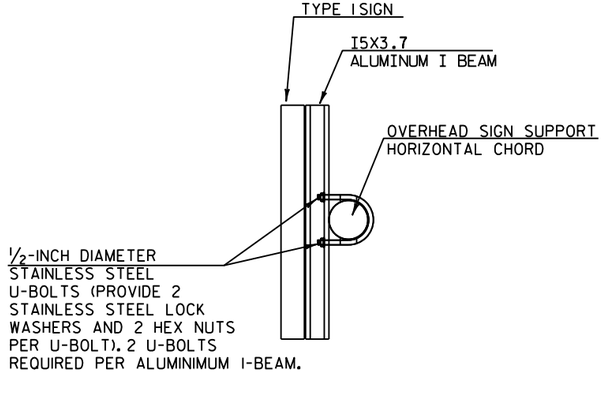
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



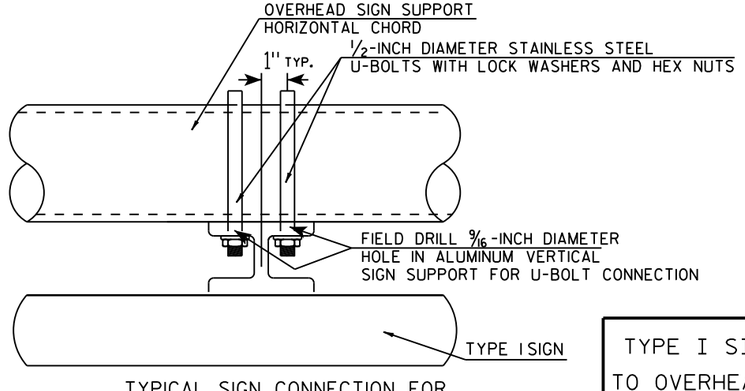
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

TYPE I SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

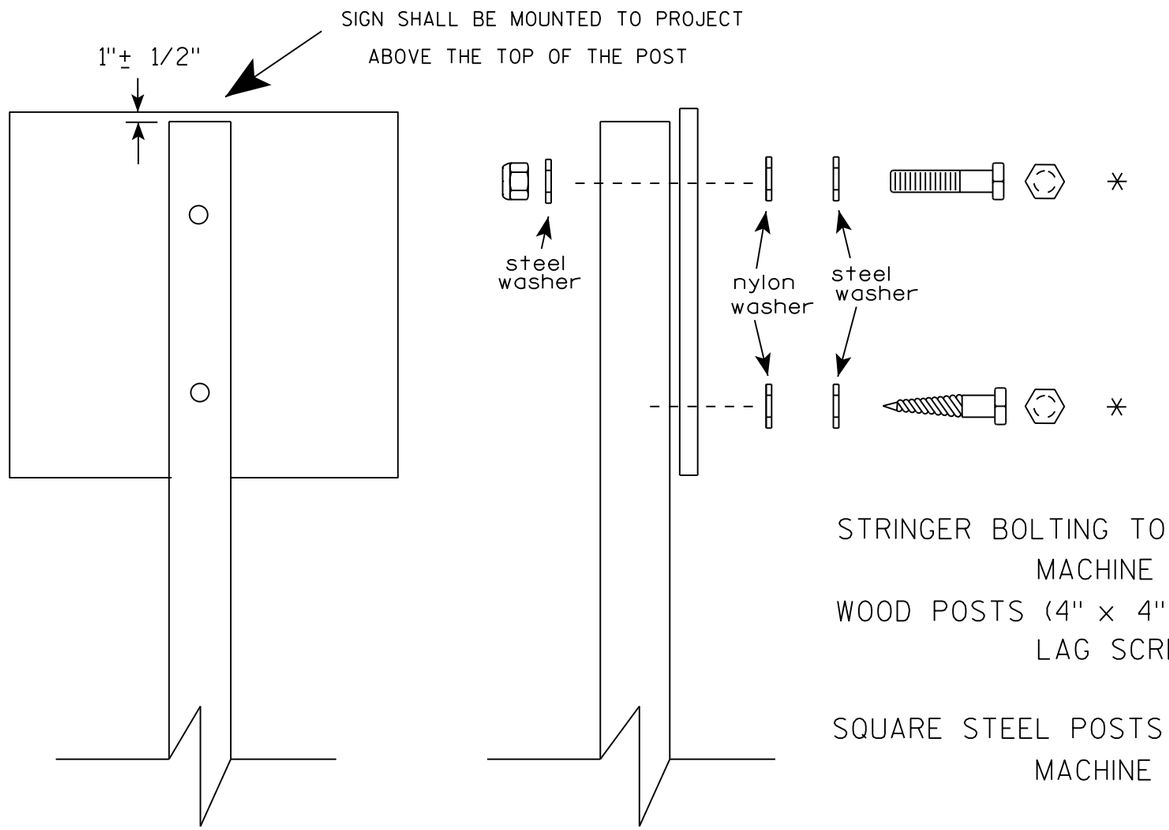
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/15 PLATE NO. A4-7.4

7

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A47.DGN PLOT DATE : 01-DEC-2015 17:42 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 38.916838:1.000000



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.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

* 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 8/11/16 PLATE NO. A4-8.8

7

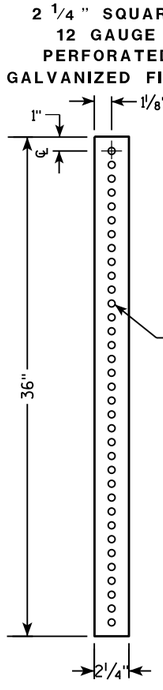
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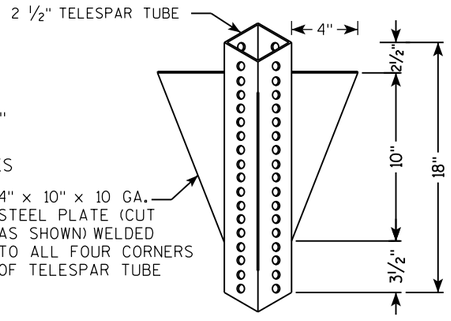
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

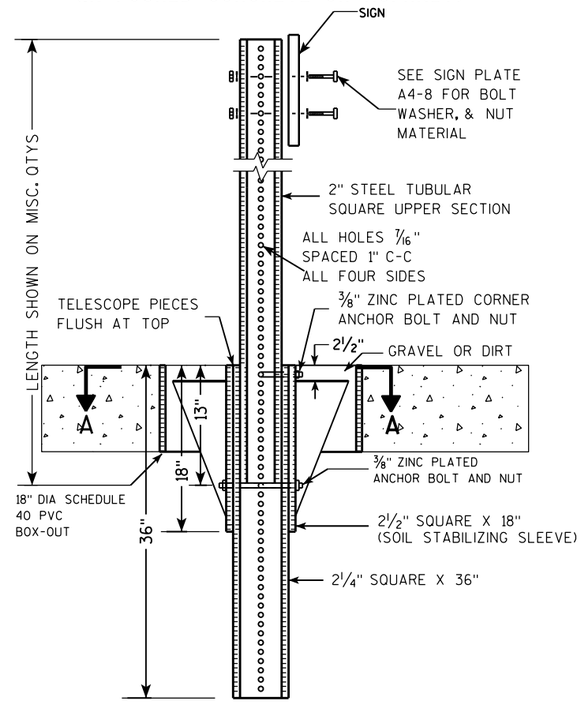
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



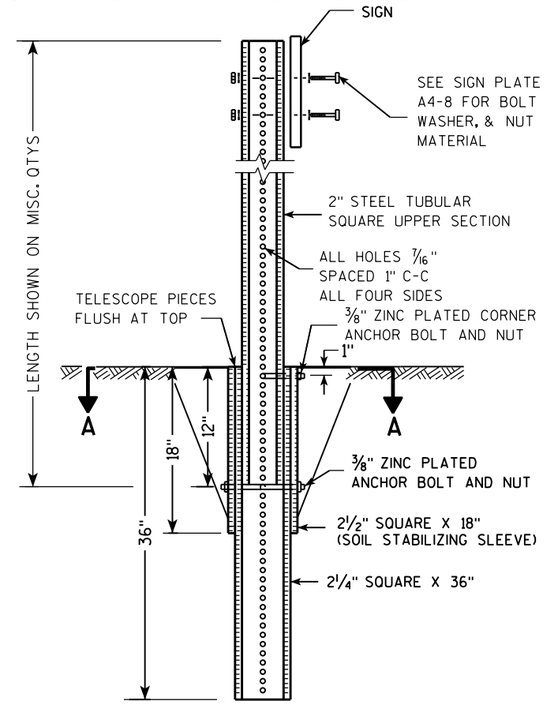
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

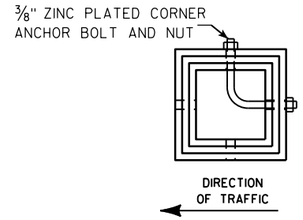


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

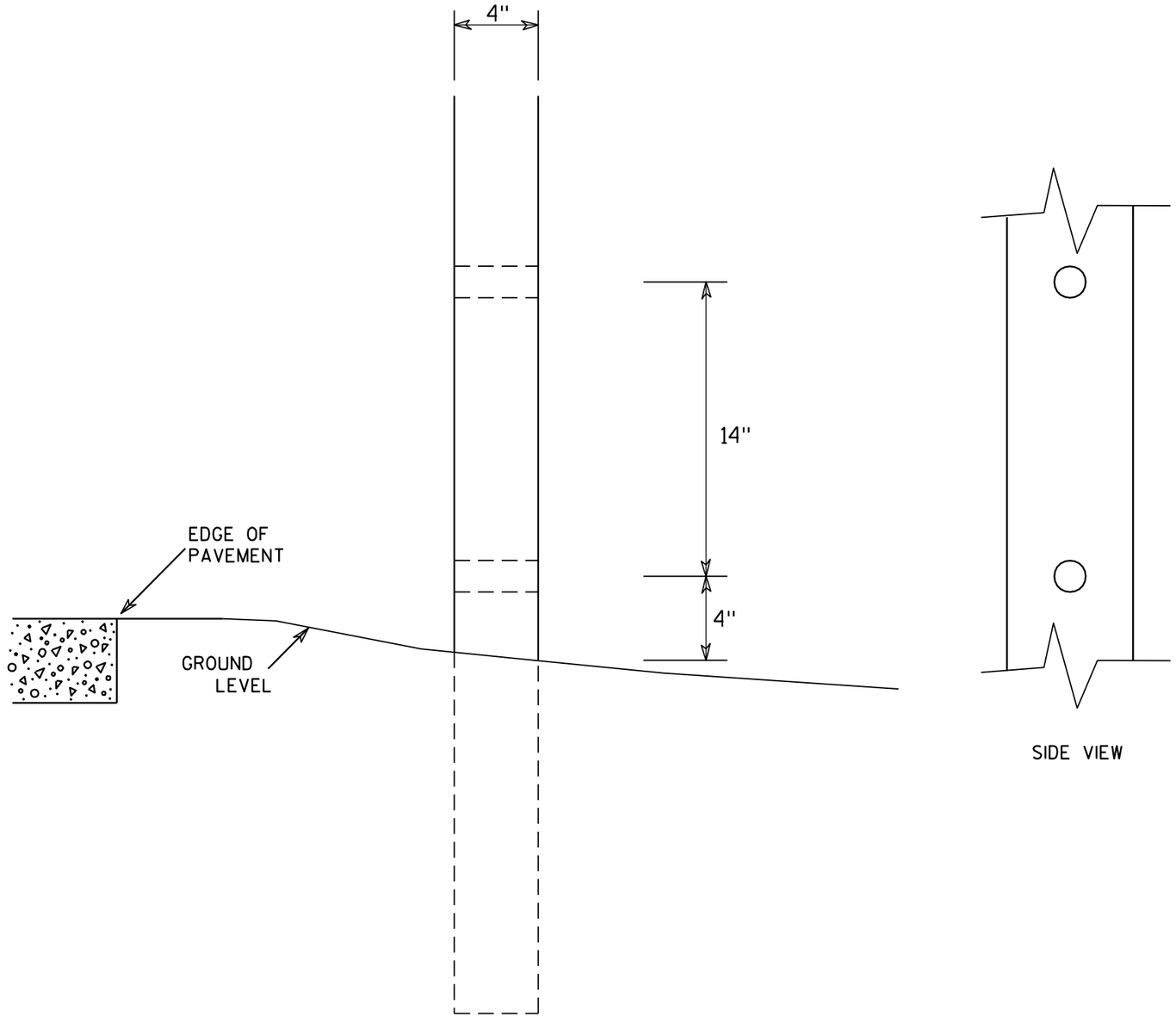
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 389 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

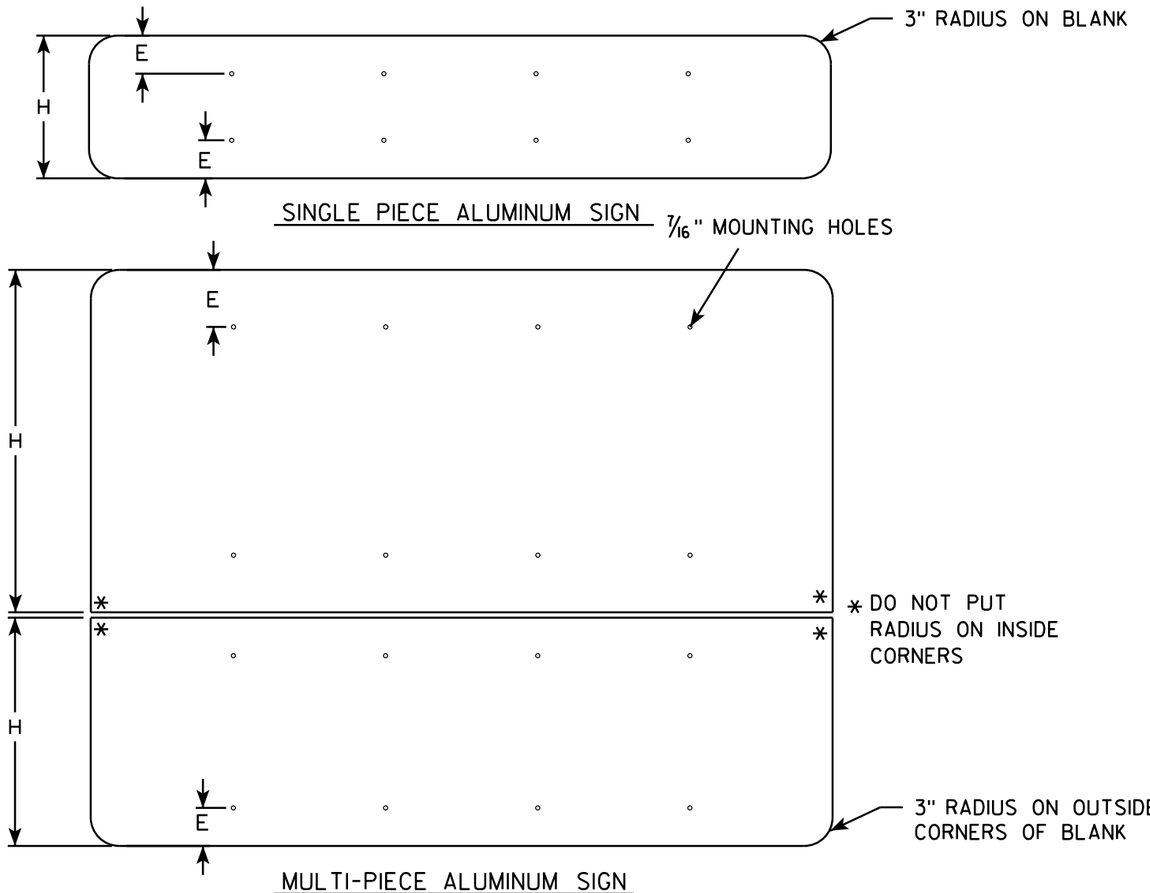
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

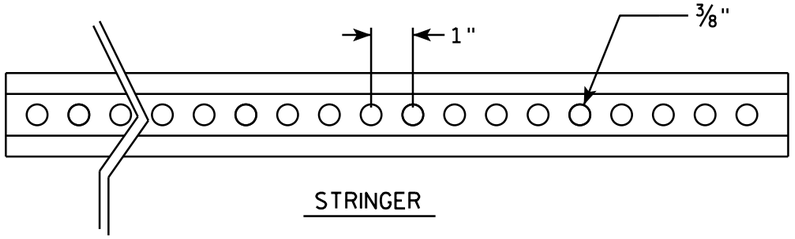
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 390	E



GENERAL NOTES

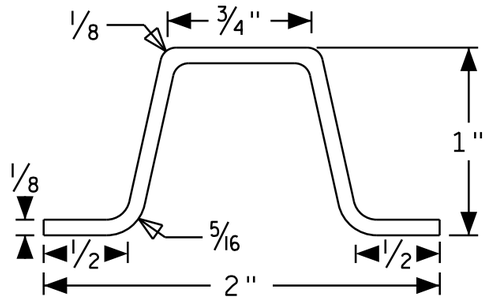
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

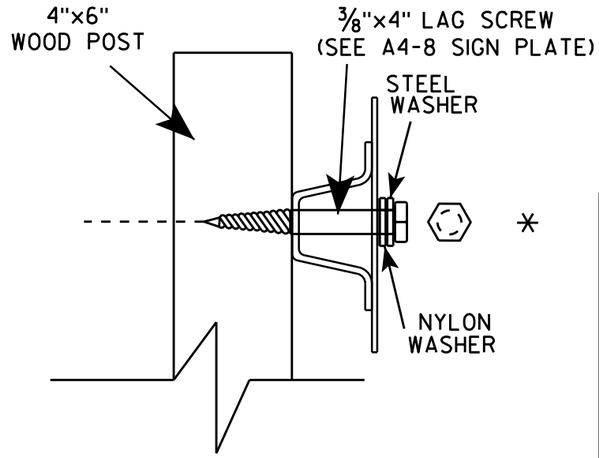


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

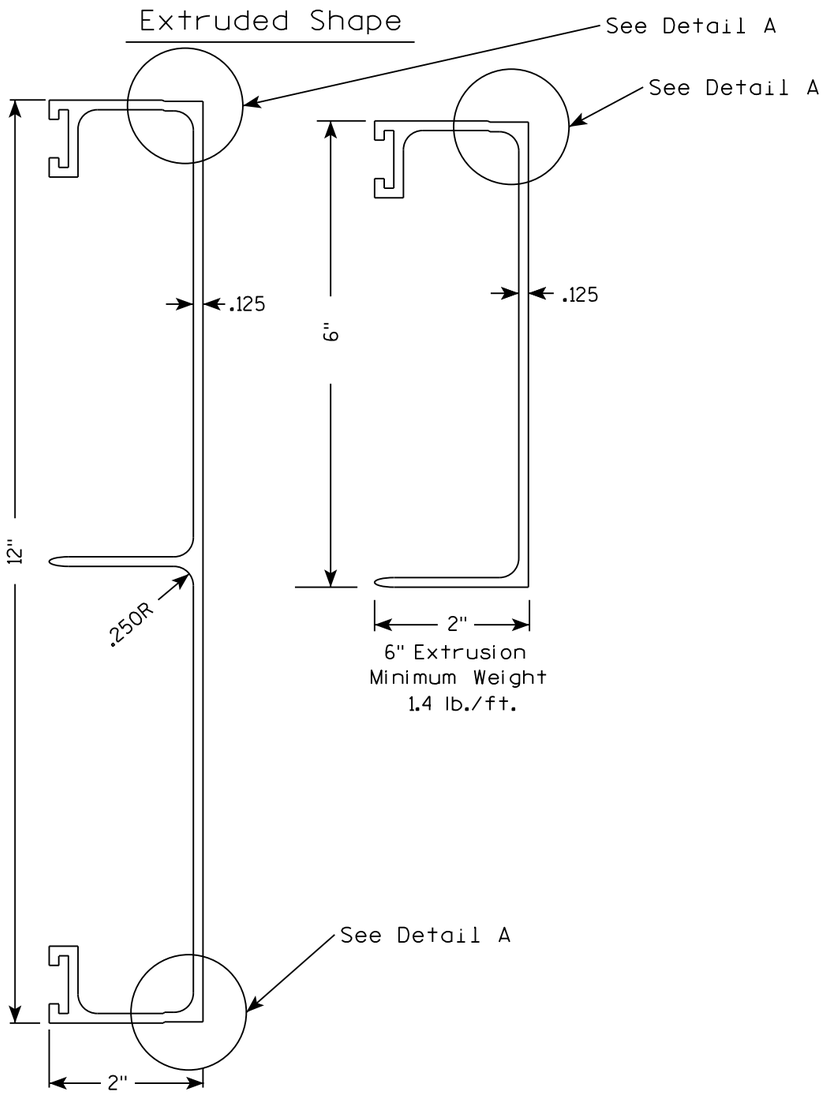
for State Traffic Engineer

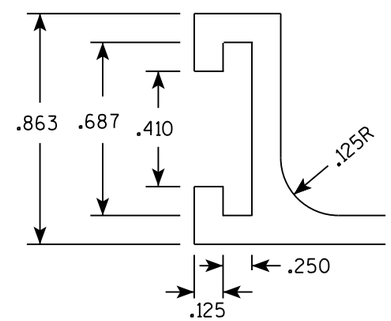
DATE 4/26/16 PLATE NO A4-18.1

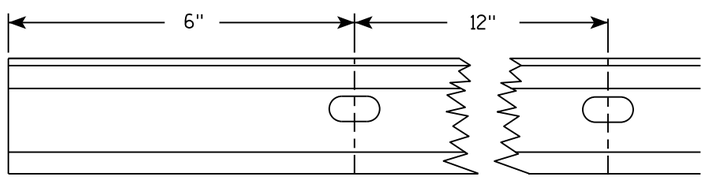
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

Extruded Shape







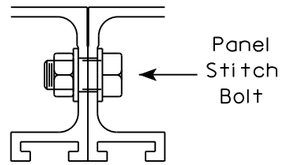
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

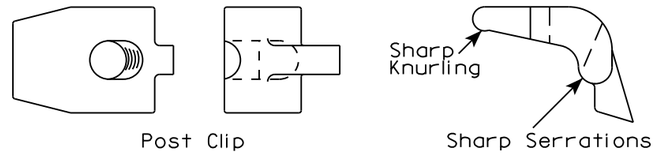
The hardware includes:

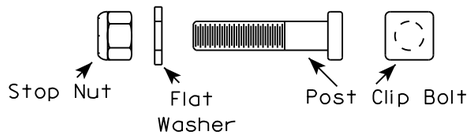
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

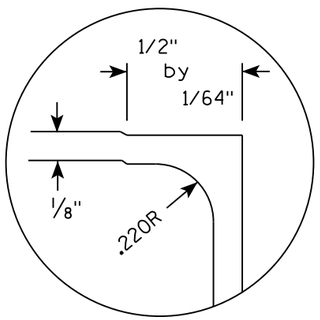
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.



DETAIL A (EDGE WRAP JOINT)

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

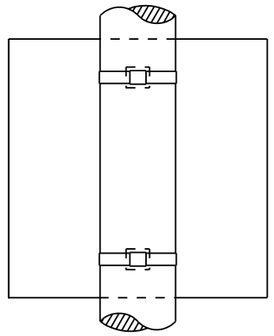
APPROVED Matthew R Rauch
for State Traffic Engineer

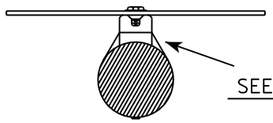
DATE 11/30/16 PLATE NO. A5-2.10

PROJECT NO:				SHEET NO: 392	E

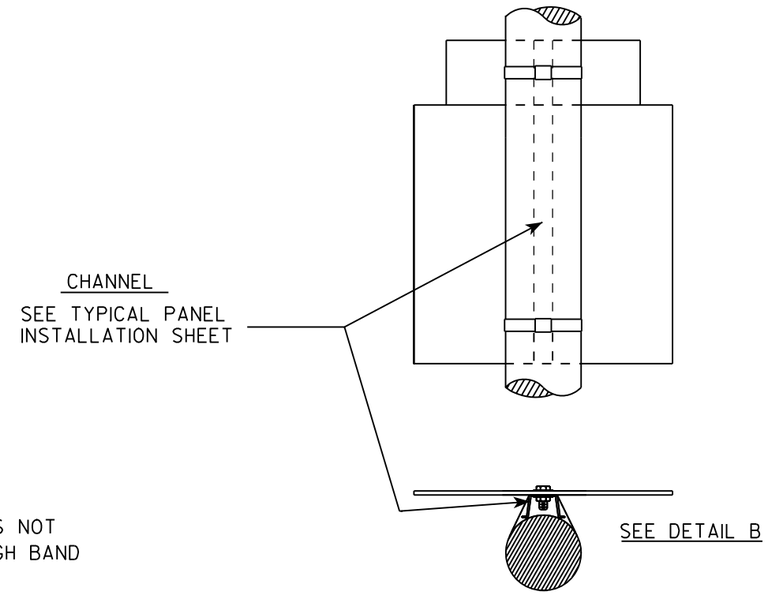
BANDING

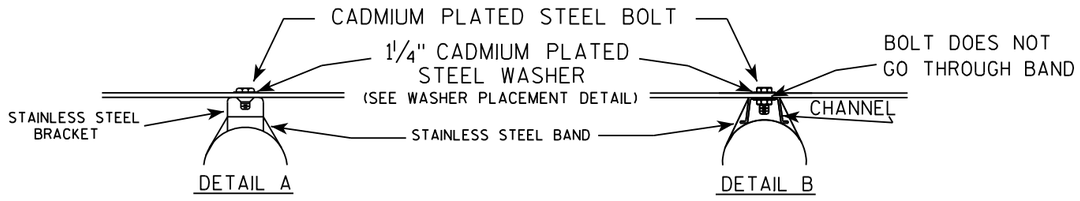
SINGLE SIGN



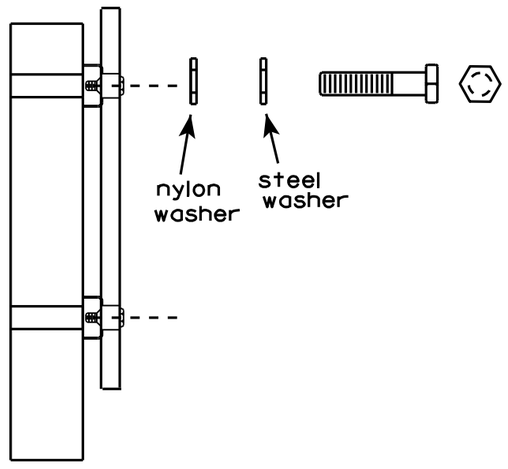


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

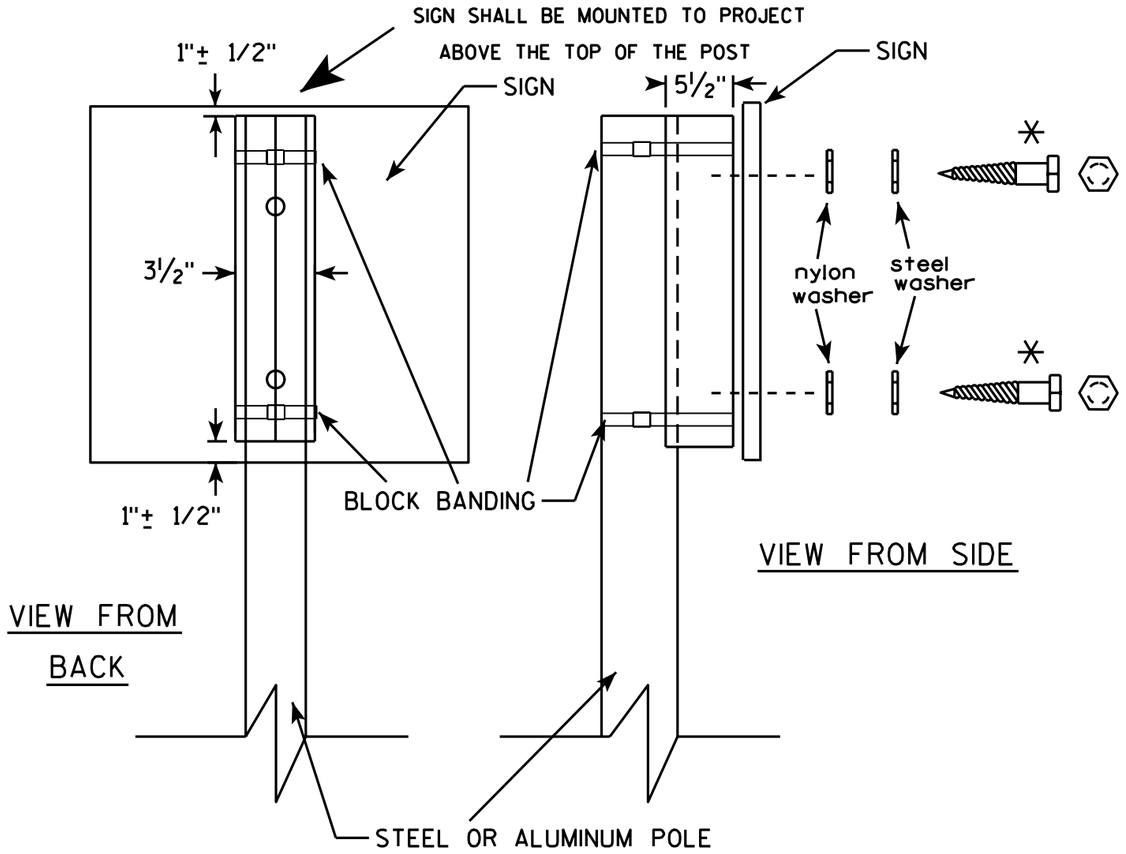
STANDARD SIGN
SIGN BANDING DETAILS

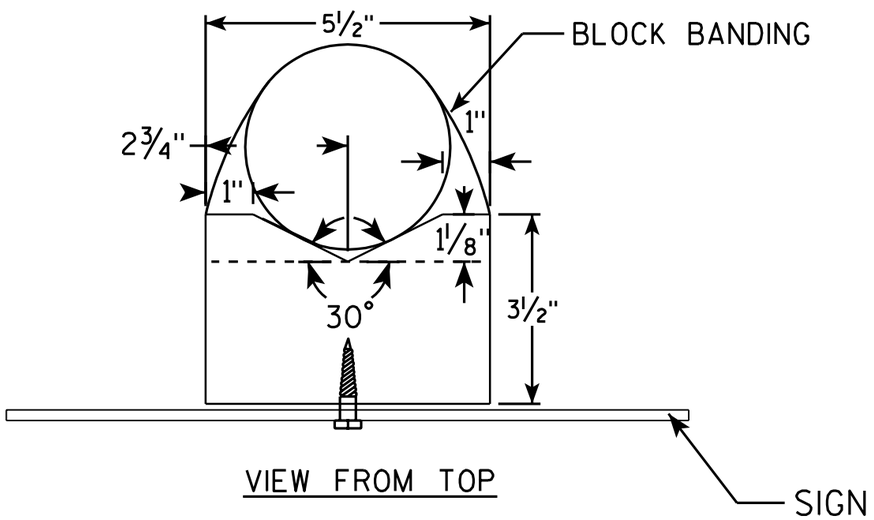
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 393	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

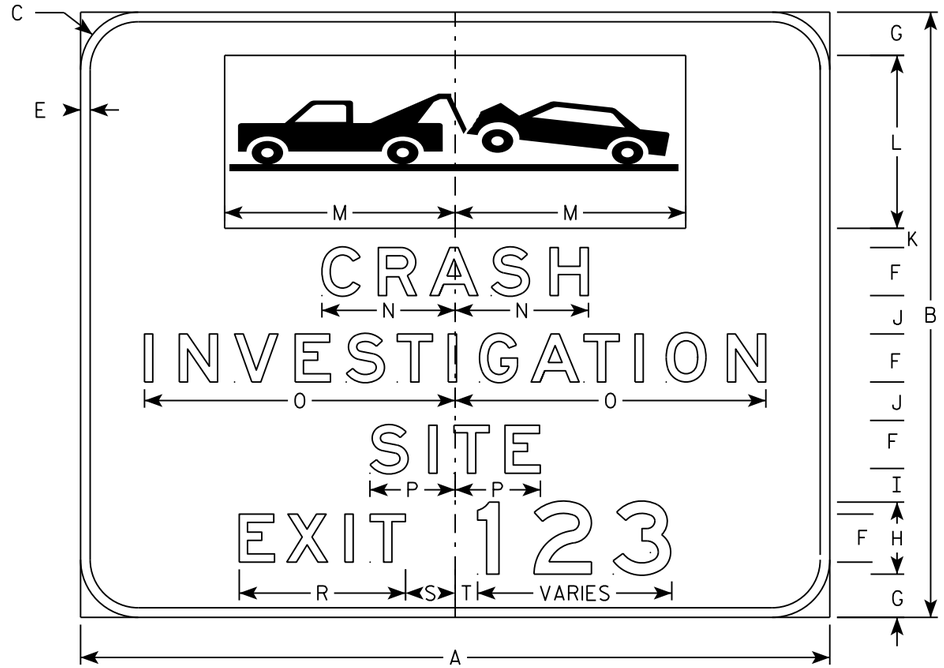
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 394 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

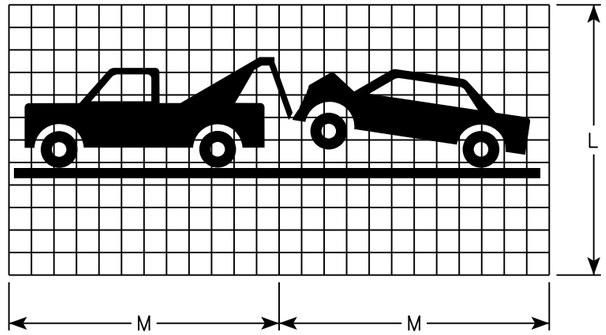
WISDOT/CADDS SHEET 42



D4-52

NOTES

1. Sign is Type I - Type SH Reflective
2. Color:
   Background - BLUE
   Message - WHITE
3. Message Series - E
4. Logo shall be white in color mounted on 96 x 36 .040 aluminmum with Blue SH Reflective Background sheeting.



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																											
3																											
4	156	126	12		2	10	9	15	7	8	4	36	48	27 3/4	64 3/4	17 3/4		34 5/8	10 3/8	4 5/8							136.5
5	156	126	12		2	10	9	15	7	8	4	36	48	27 3/4	64 3/4	17 3/4		34 5/8	10 3/8	4 5/8							136.5

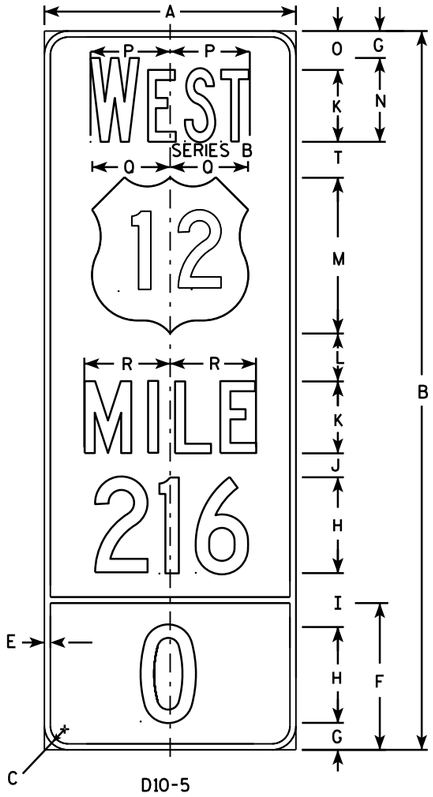
STANDARD SIGN
D4-52

WISCONSIN DEPT OF TRANSPORTATION

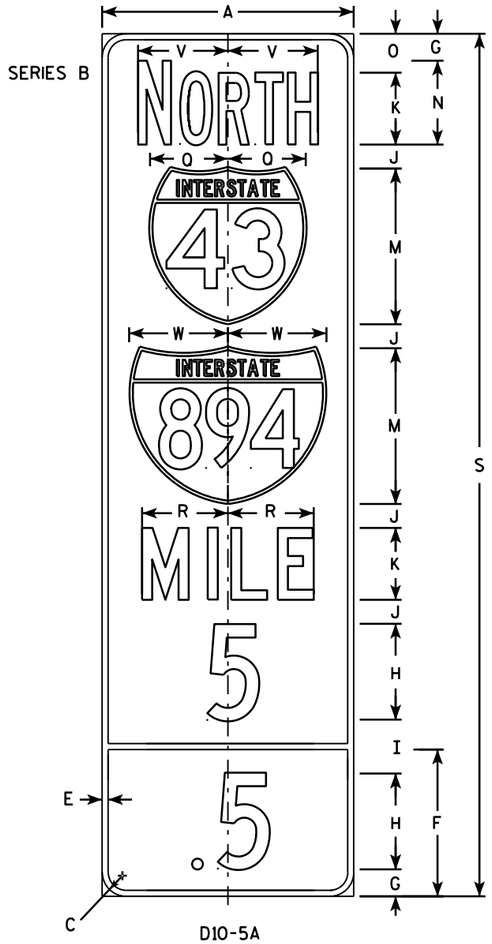
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/17 PLATE NO. D4-52.2

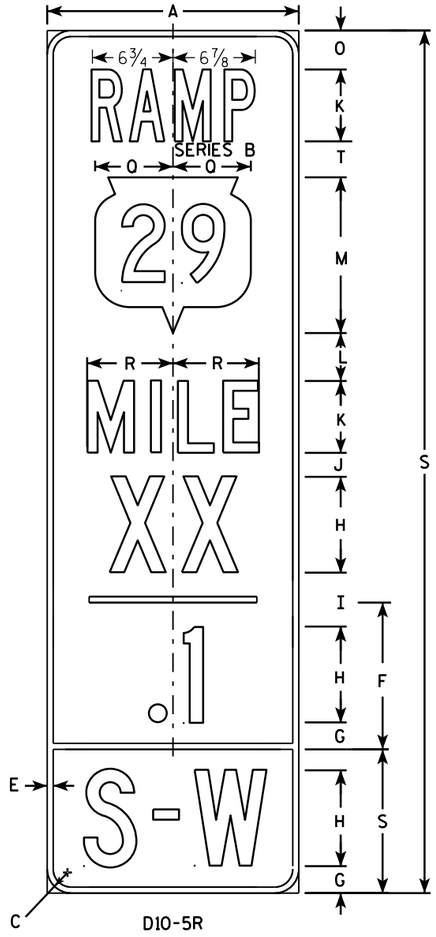
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 395 | E



D10-5



D10-5A



D10-5R

1. Sign is Type II - Type H Reflective
2. Color:
   Background - BLUE
   Message - WHITE
3. Interstate Shield Color
   Background - Top Red
   - Bottom Blue
   Message - White
4. Message Series - C or as noted on the Sign.
5. 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.
6. The decimal point is required for all digits except "0".
7. Optically adjust mileage numbers about the centerline of the sign to achieve proper balance.
8. Optically adjust Ramp direction letters about the centerline of the sign to achieve proper balance.



SERIES B



SERIES B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	D10-5 Area sq. ft.	D10-5A Area sq. ft.	D10-5R Area sq. ft.
1																													
2																													
3																													
4	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	10.5	10.5
5	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	7	3 ¼	6 ⅝	6 ½	7 ⅛	72	3		7 ½	8 ¼				8.75	10.5	10.5

STANDARD SIGN
D10-5

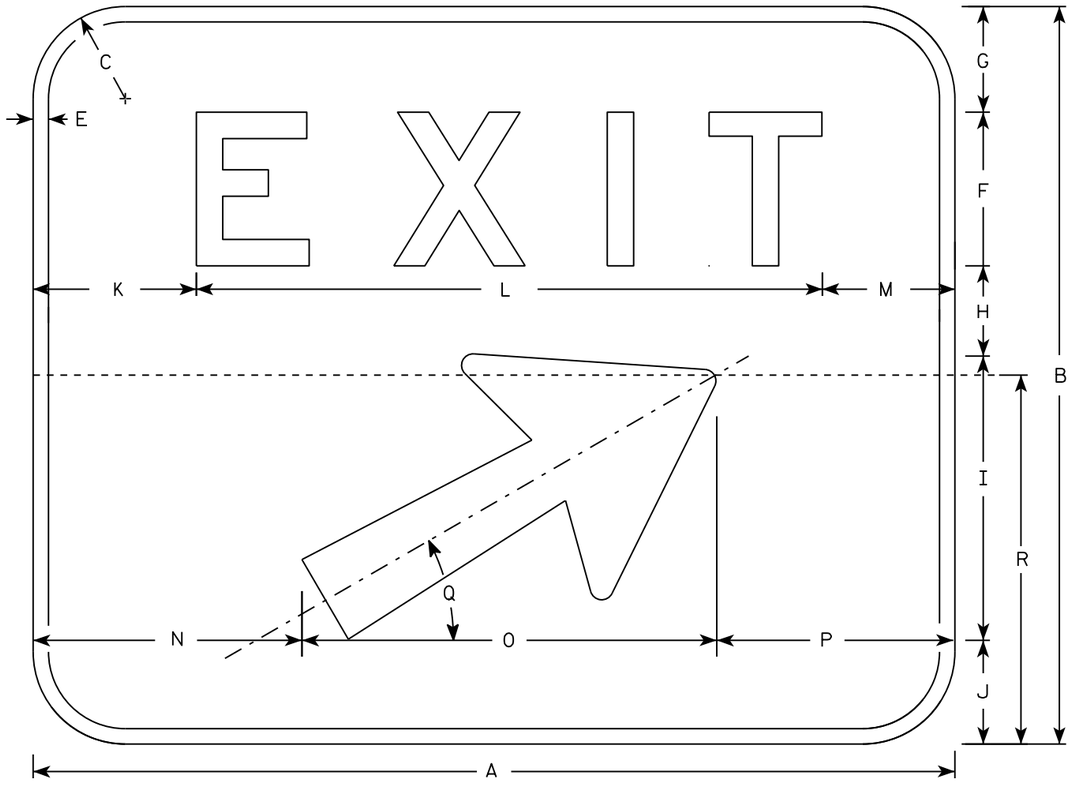
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/26/14 PL 396 D10-5.2

PROJECT NO:

SHEET NO: E



E5-1

NOTES

1. Sign is Type II - Type H reflective
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.
5. When Base material for this sign is plywood sign shall be split into two seperate pieces for the 72 x 60 size as shown on the detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. As per the Standard Spec's, this sign shall not have a vertical joint.

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																											
3																											
4	60	48	6		1	10	6 7/8	5 7/8	18 1/2	6 3/4	10 5/8	40 3/4	8 5/8	17 1/2	27	15 1/2	30°	30									20.0
5	72	60	6		1	12	9 3/4	10	18 1/2	9 3/4	13 1/4	48 1/2	10 1/4	23 1/2	27	21 1/2	30°	30									30.0

STANDARD SIGN
E5 - 1

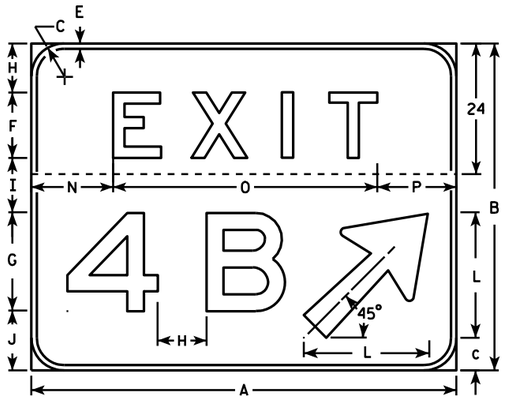
WISCONSIN DEPT OF TRANSPORTATION

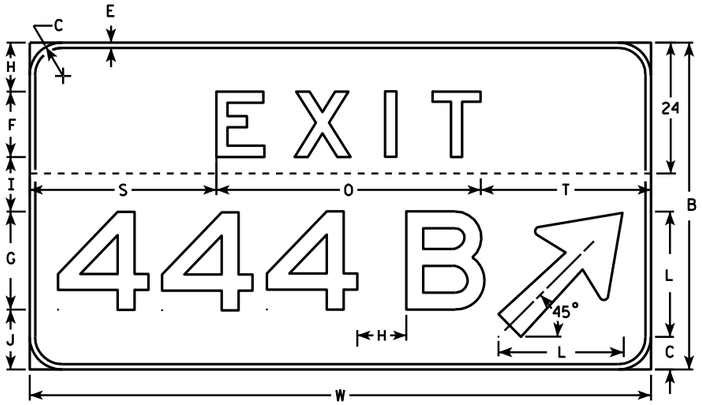
APPROVED Matthew R Rauch
for State Traffic Engineer

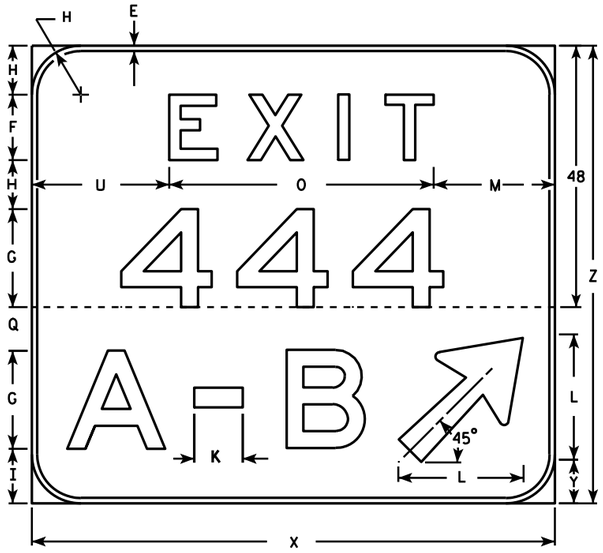
DATE 3/21/17 PLATE NO. E5-1.9

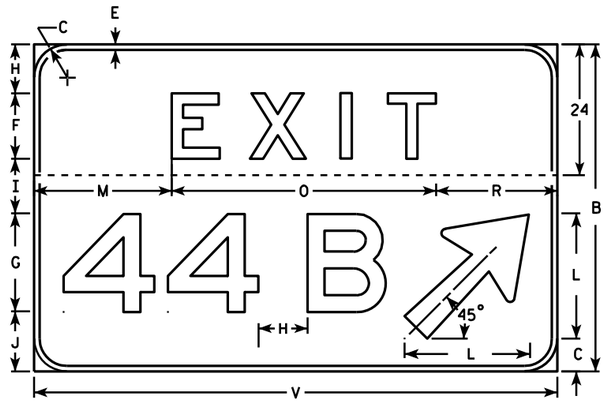
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 397 | E

7

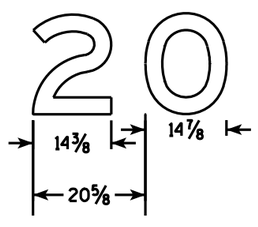








EXAMPLE FOR USING SPACING CHART



NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces as shown on each detail by the dashed line (- - - - - - - - - - -).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. When two letters are hyphenated, the distance between them should be equal to two letter heights and the hyphen is spaced optically between them.
9. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8	19 7/8	22 1/8	22 1/8
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14	9 7/8	14	14
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8	20 1/4	21 1/8	21 1/8
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4	20 1/4	21 1/8	21 1/8
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8	22 1/2	25 1/2	23 3/8
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8	19 1/4	20 5/8	20 5/8
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8	18	20 3/4	20 3/4
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/4	21 1/2	21 1/2
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18	21 3/4	21 3/4
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2																										
3																										
4																										
5	78	60	6		1	12	18	9	10	11	8 7/8	23	25 1/4	15	48 1/2	14 1/2	8	22 1/4	34 1/4	31 1/4	25 1/4	96	114	96	7 1/2	84

2 Digit Bid Area	3 Digit Bid Area	4 Digit Bid Area	5 Digit Bid Area
Sq. Ft.			
32.5	40.0	47.5	56.0

STANDARD SIGN
E5-1B

WISCONSIN DEPT OF TRANSPORTATION

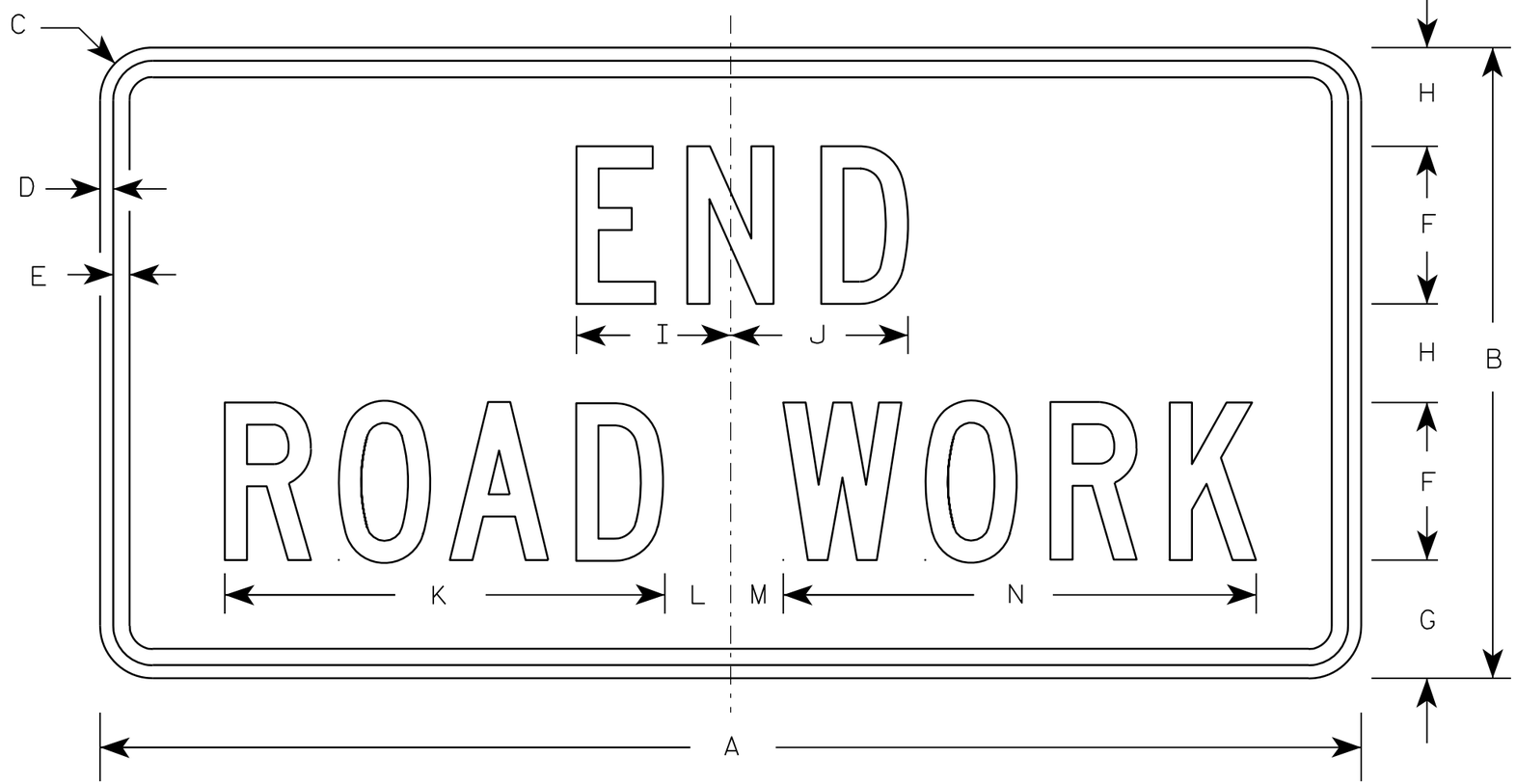
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/8/10 PLATE NO. E5-1B.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 398 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\E51B.DGN PLOT DATE : 08-JUN-2010 12:42 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 27.808870:1.000000
WISDOT/CADDS SHEET 42



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

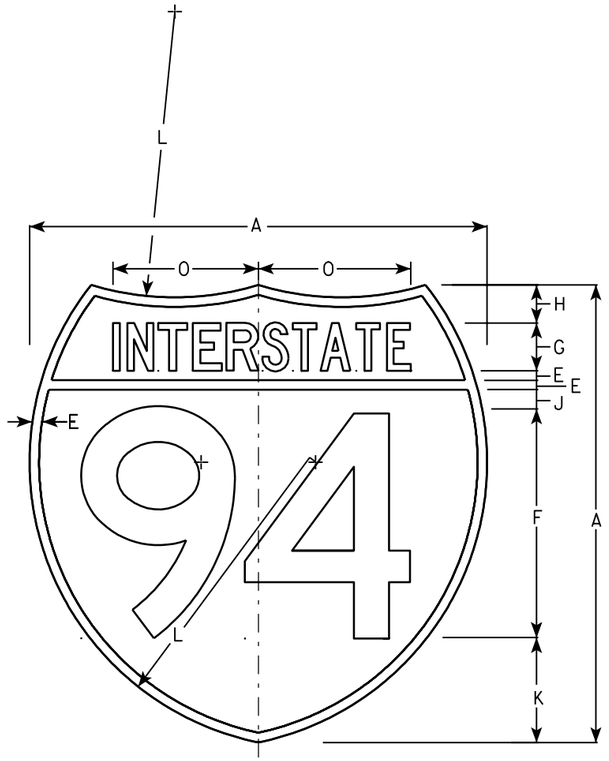
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

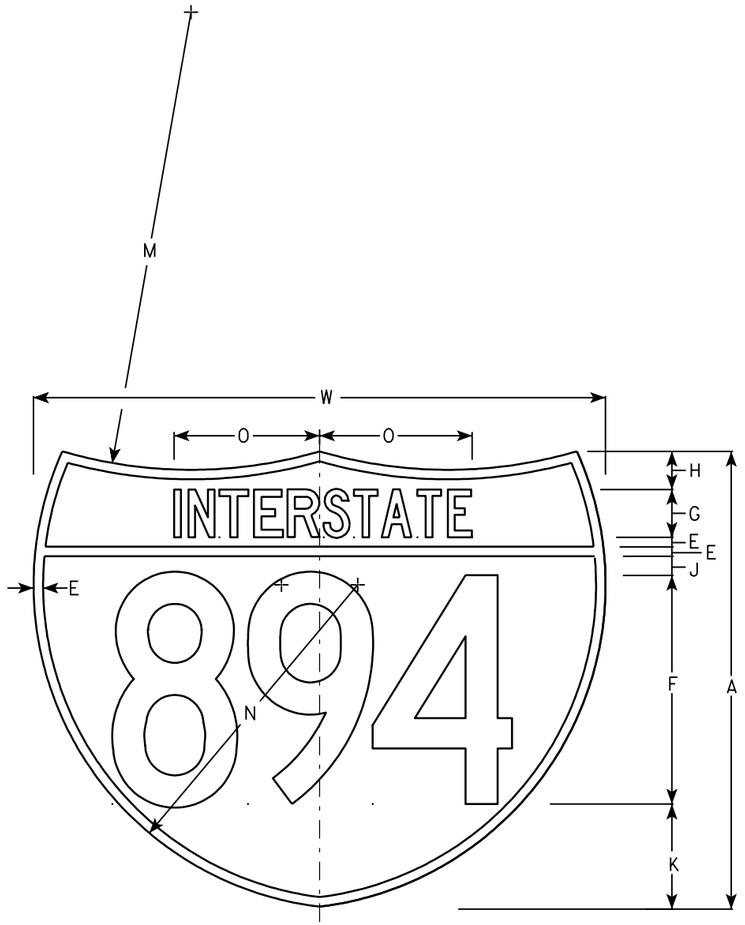
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 399	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

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

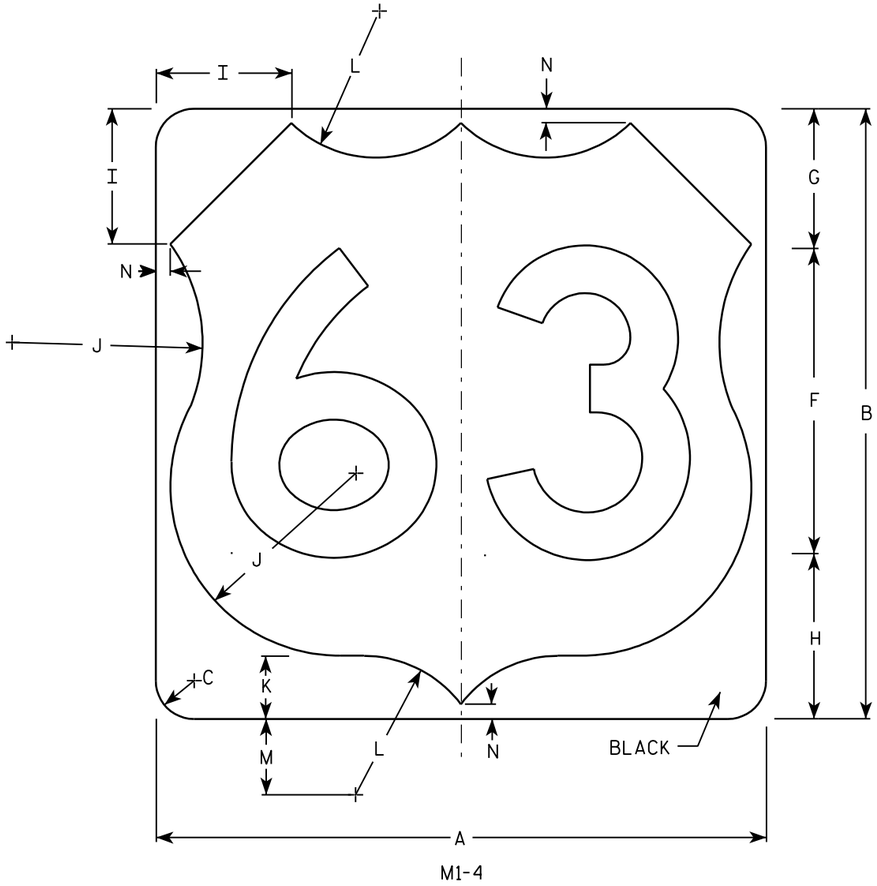
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

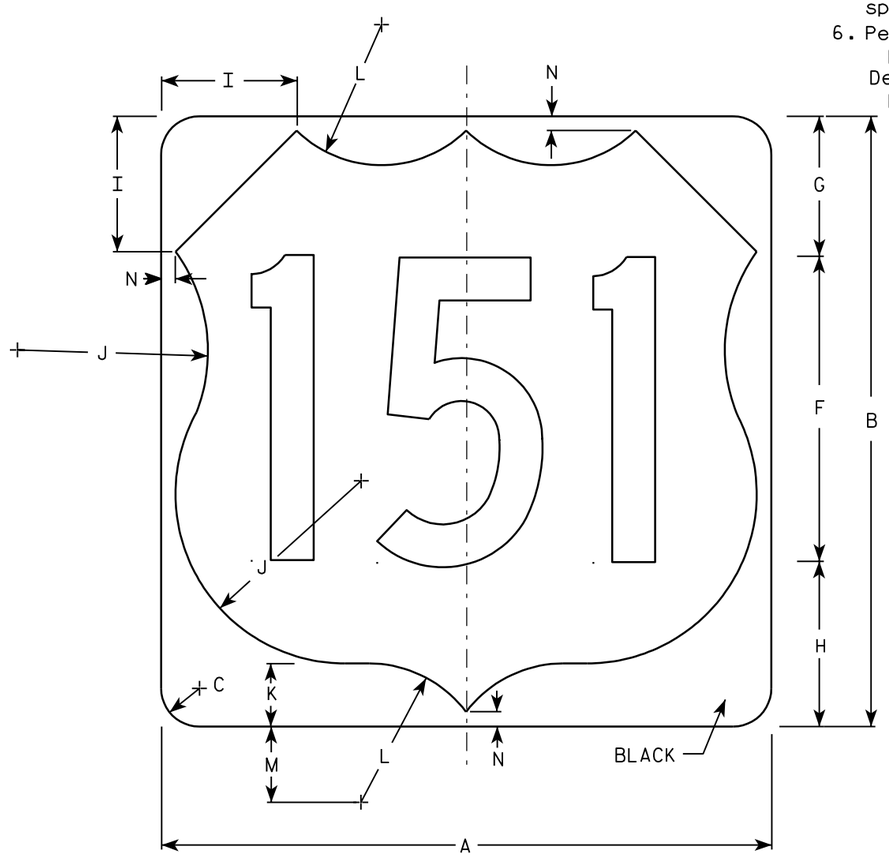
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 400	E

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 numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

7

7

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	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

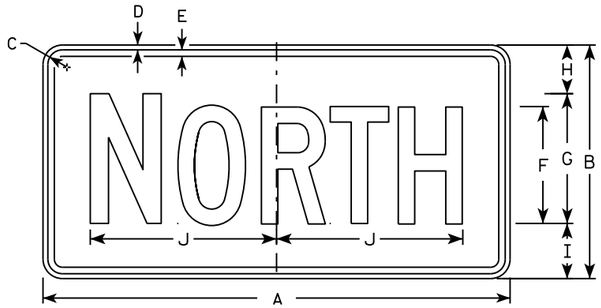
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

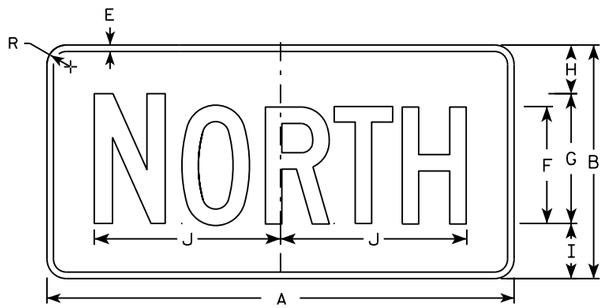
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 401	E



M3-1
MM3-1
MP3-1



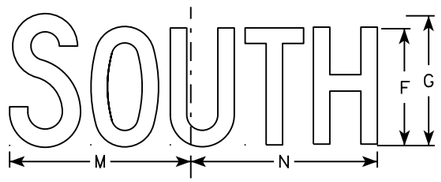
MB3-1
MK3-1
MN3-1



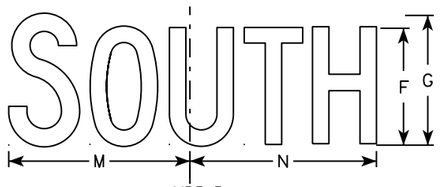
M3-2
MM3-2
MP3-2



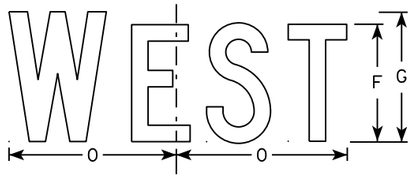
MB3-2
MK3-2
MN3-2



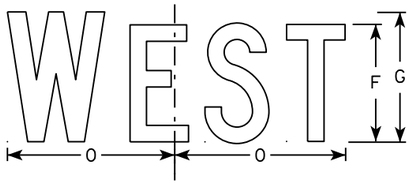
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
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

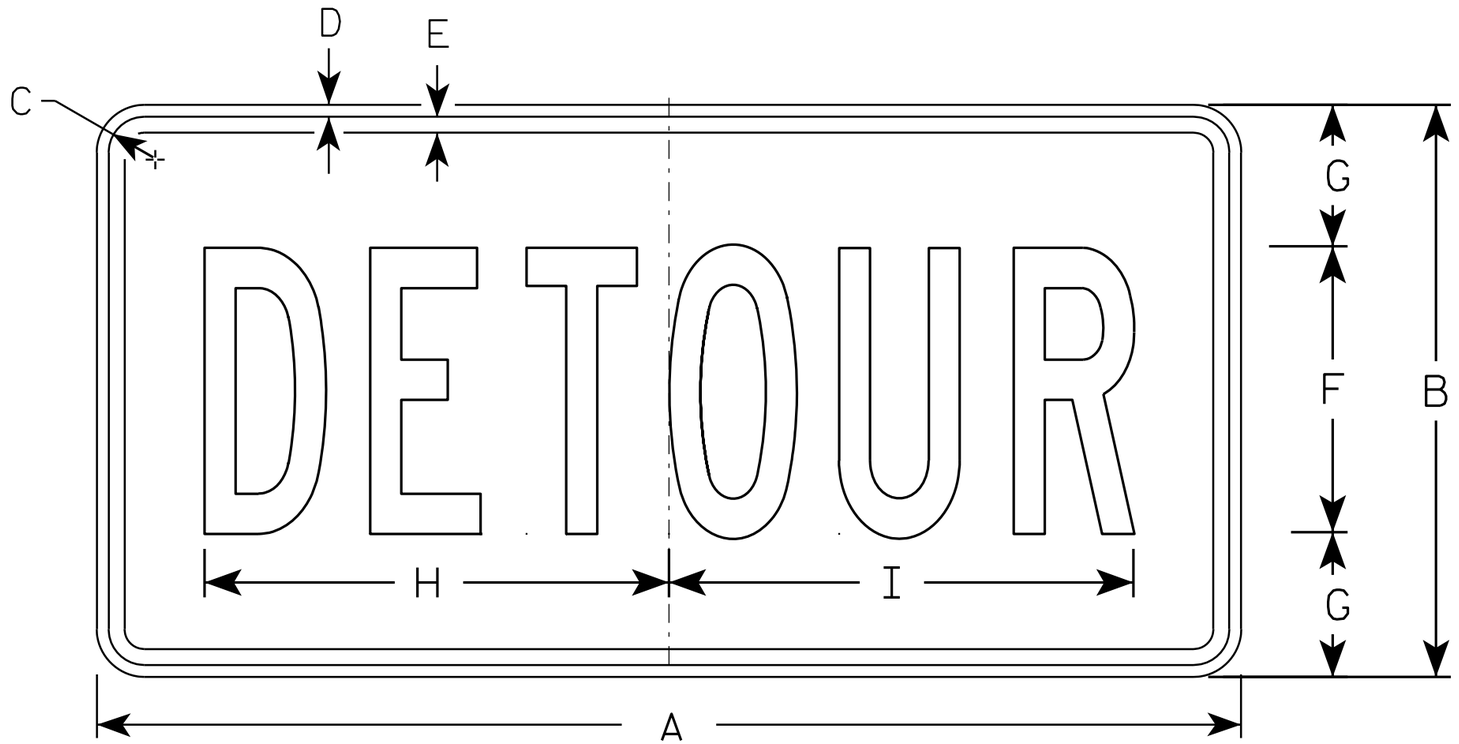
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

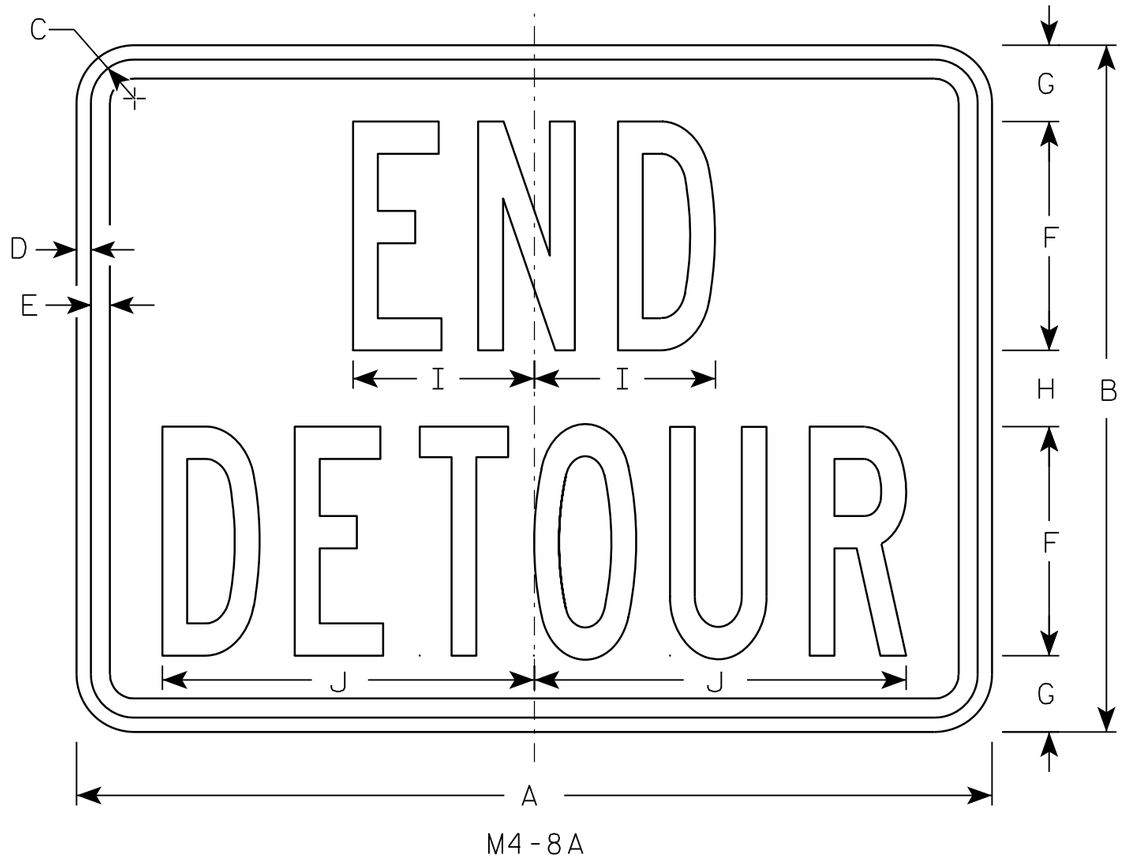
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 403	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

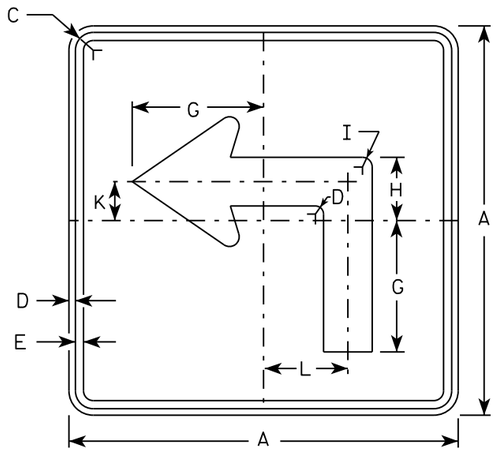
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

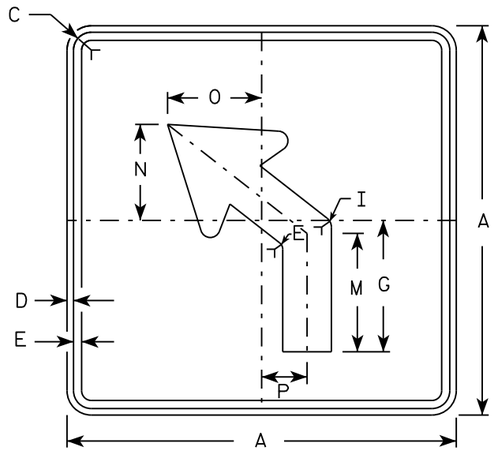
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

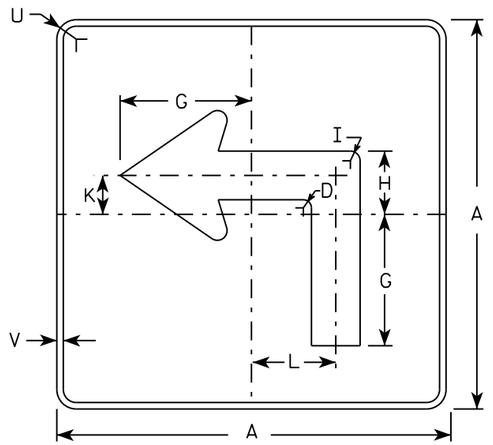
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 404	E



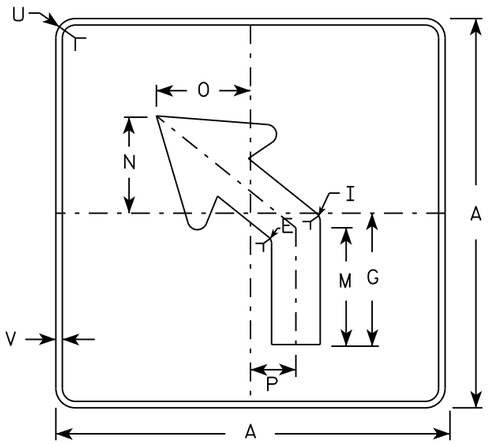
M5-1L
MM5-1L
MO5-1L
MP5-1L



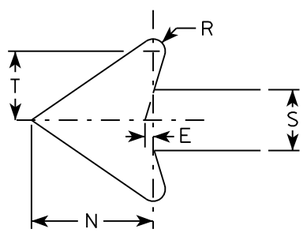
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   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
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 7/8	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 7/8	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 7/8	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

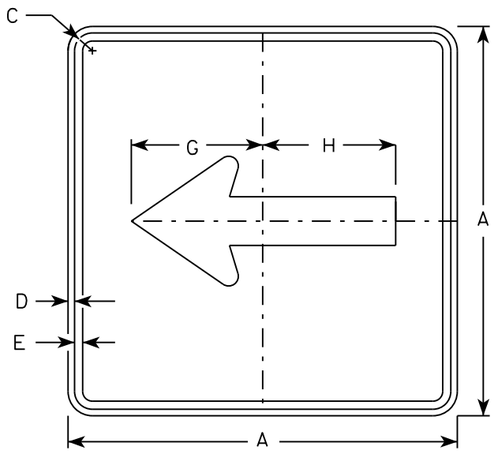
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

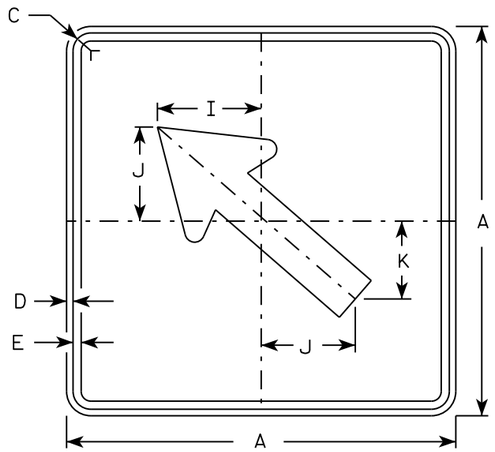
DATE 10/15/15 PLATE NO. M5-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



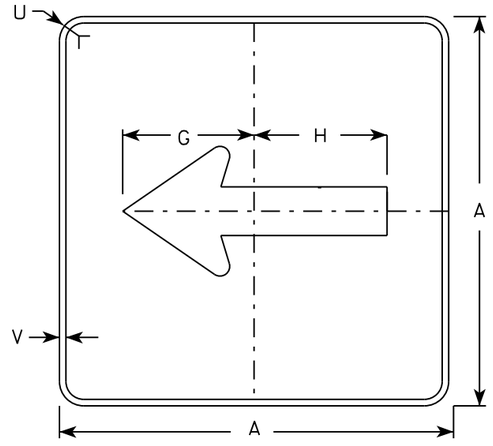
M6-1
MM6-1
MO6-1
MP6-1



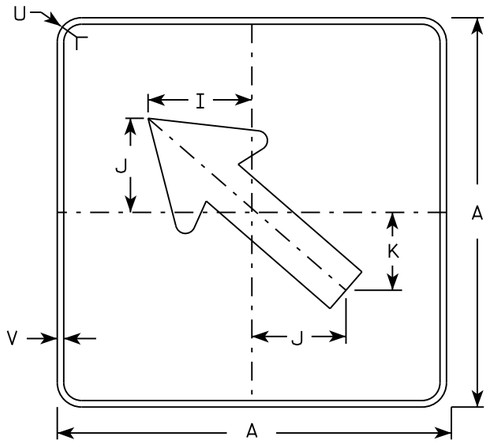
M6-2
MM6-2
MO6-2
MP6-2

NOTES

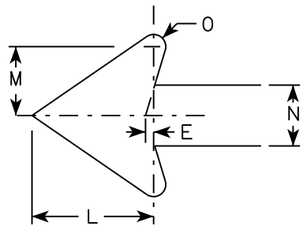
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN M6-1 & M6-2 SERIES

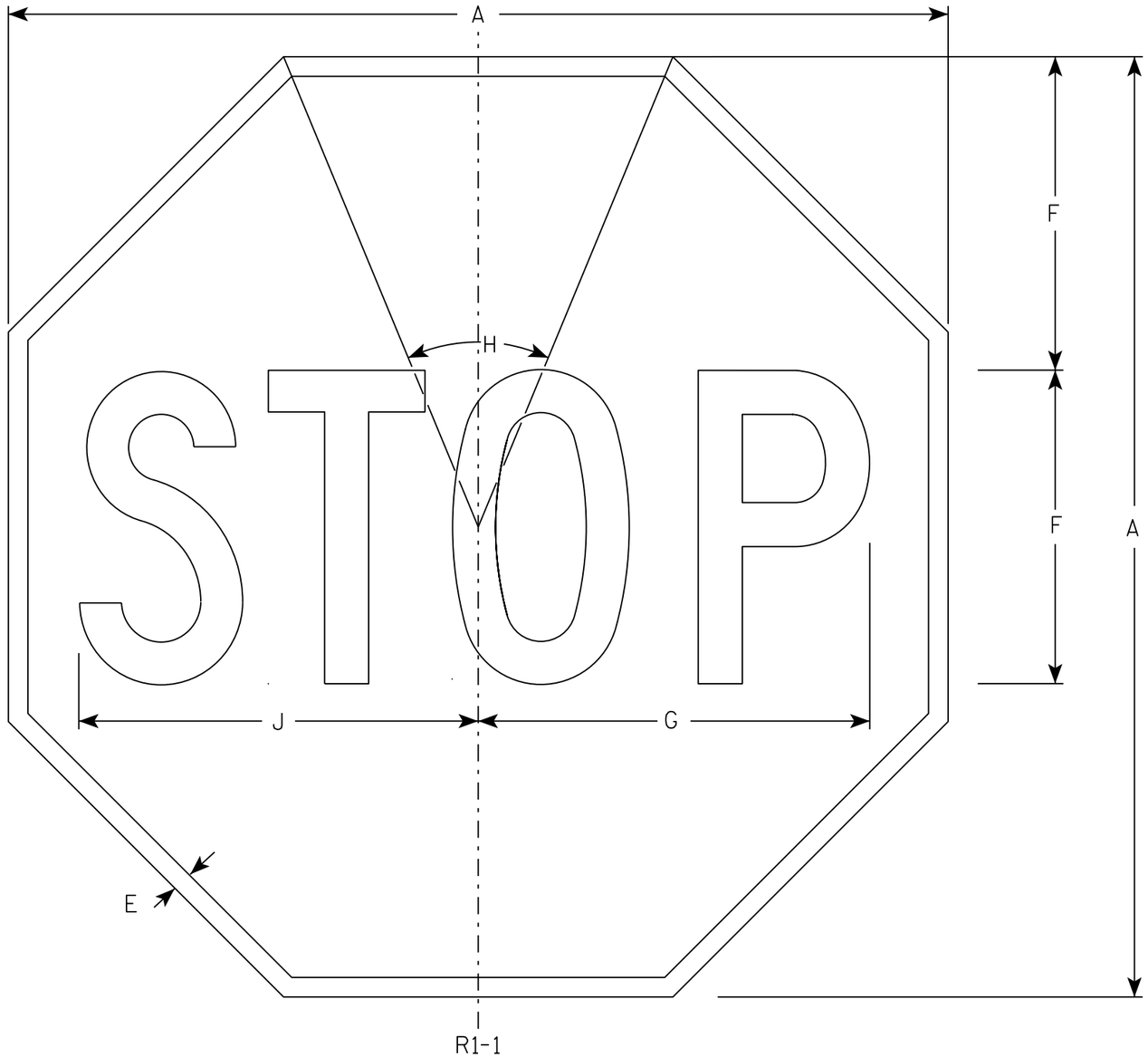
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 406 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



R1-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
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

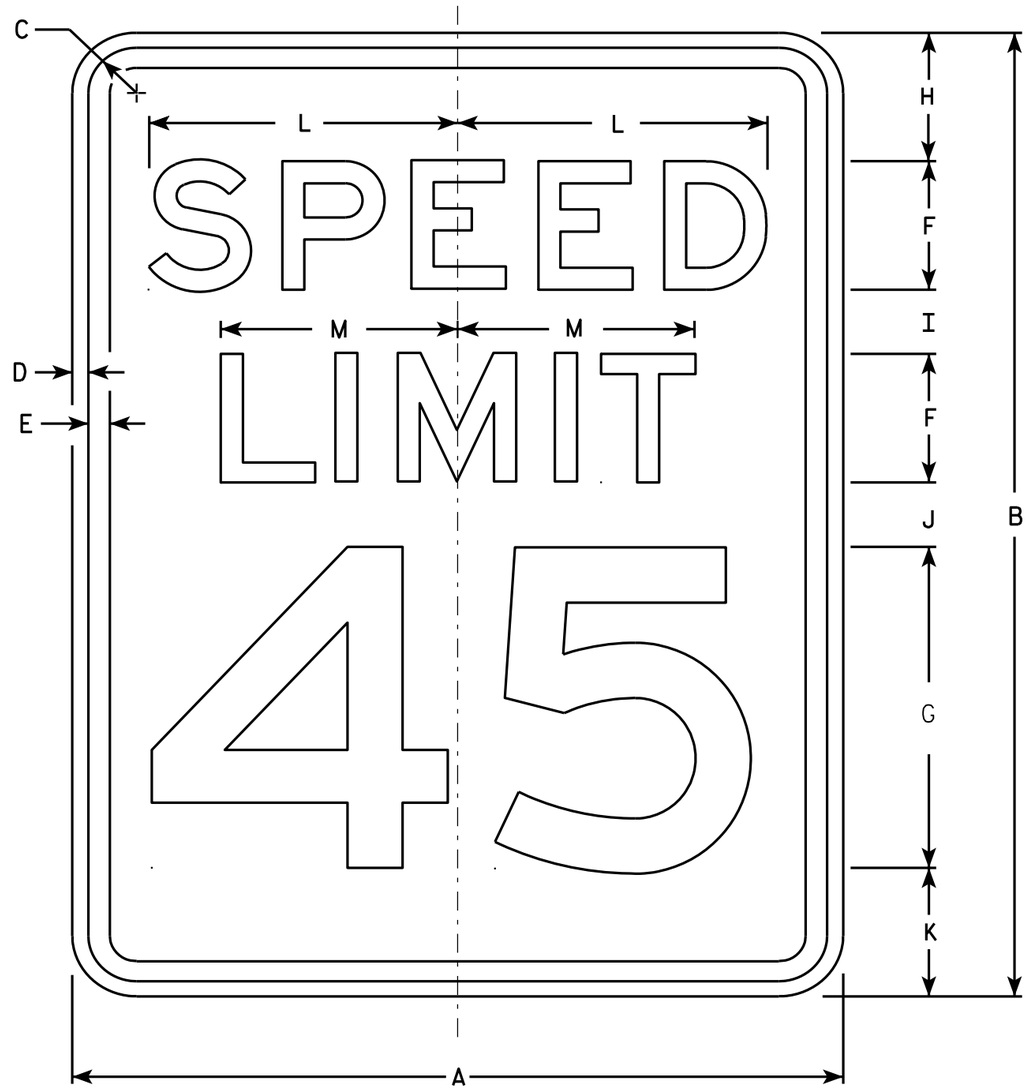
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE 407 R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R11.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.378143:1.000000



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

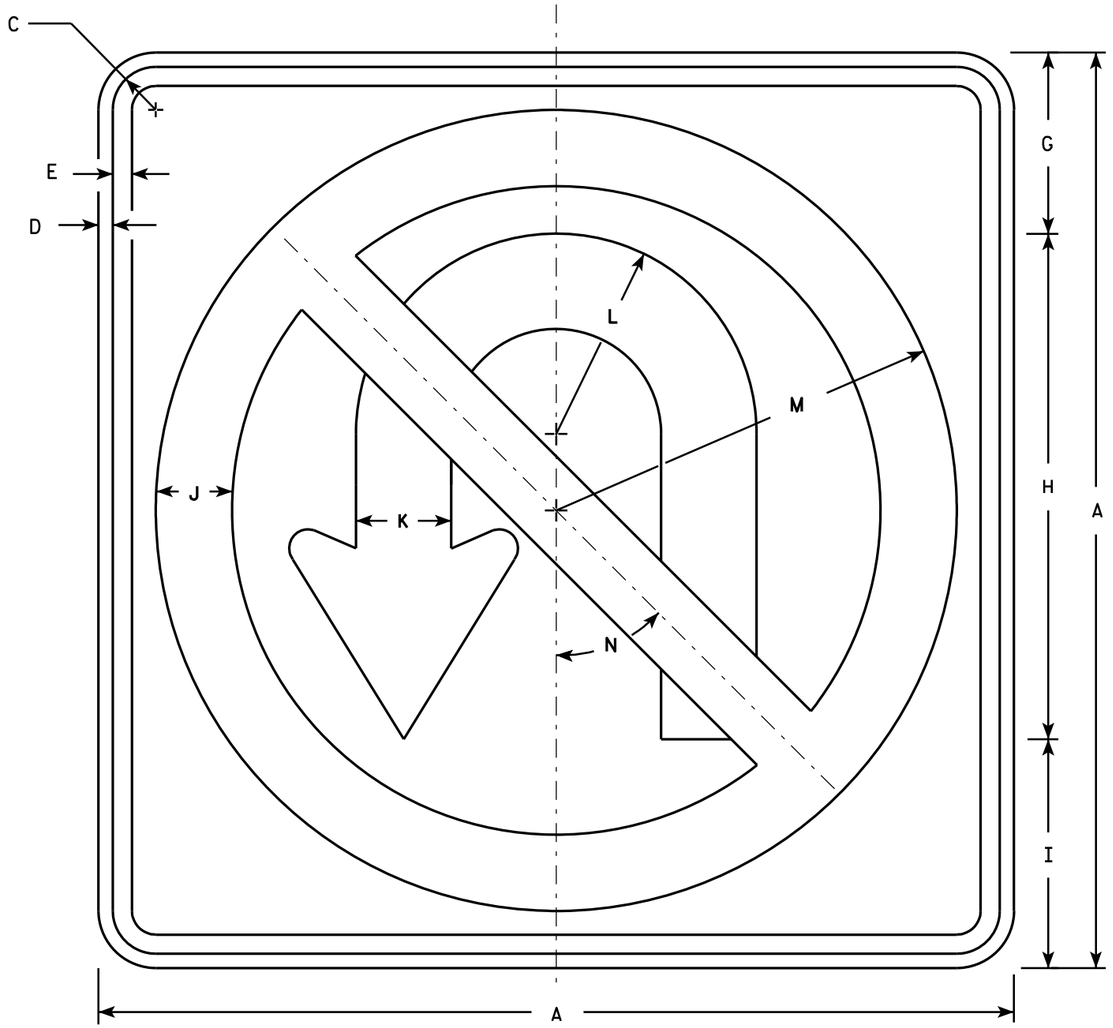
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

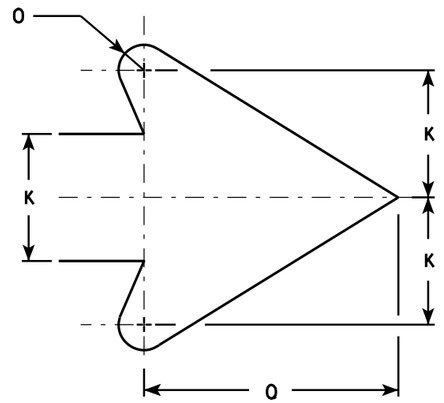
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 408	E



R3-4

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		4 3/4	13 1/4	6	2	2 1/2	5 1/4	10 1/2	45°	1/2		5										4.0
2M	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
3	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
4	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
5	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0

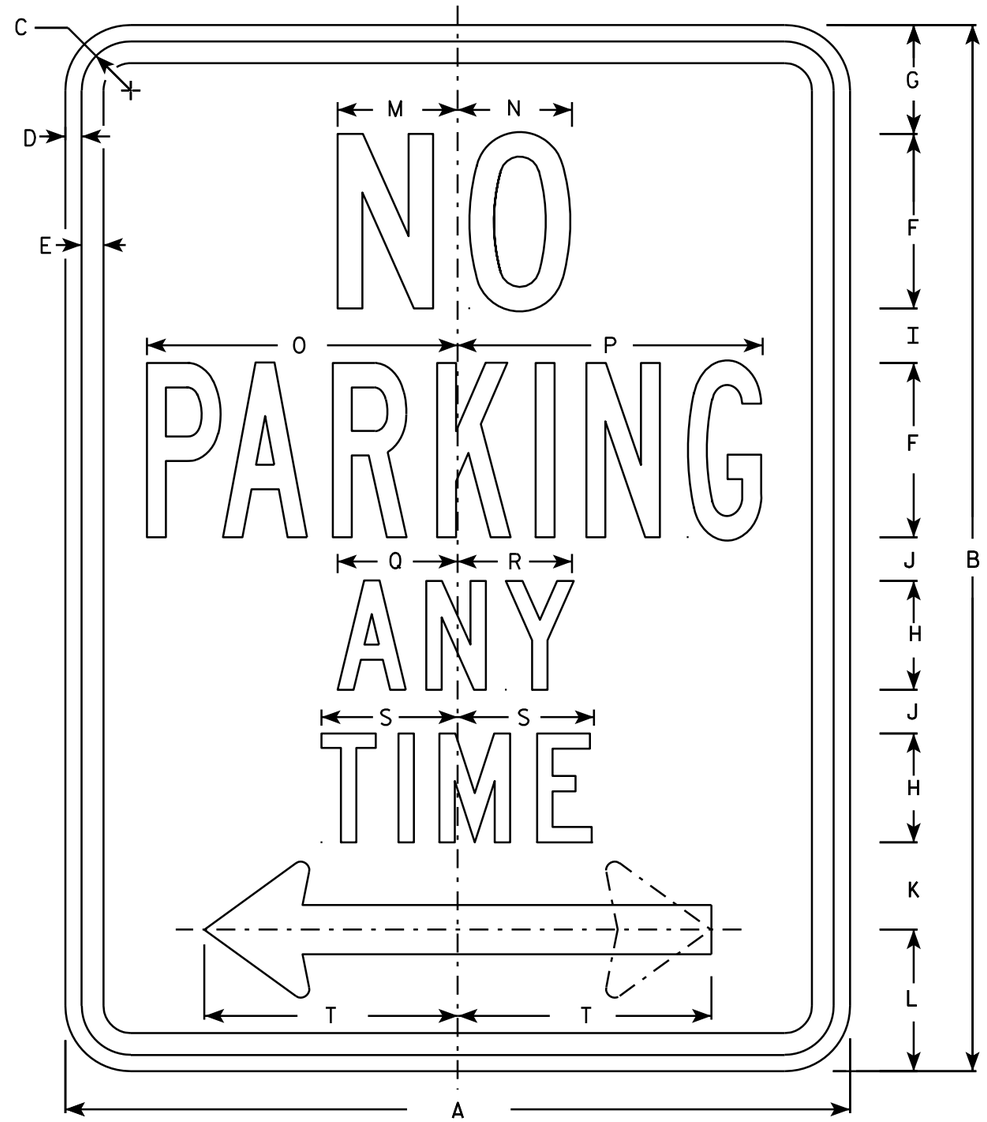
STANDARD SIGN
R3-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-4.11

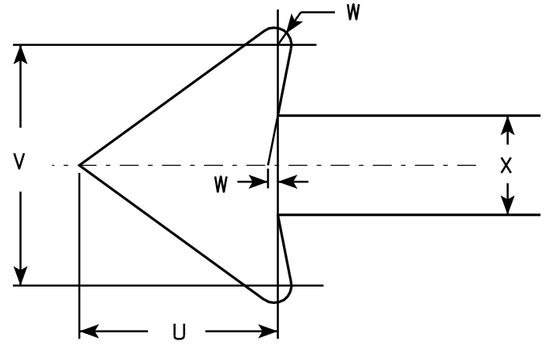
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 409	E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

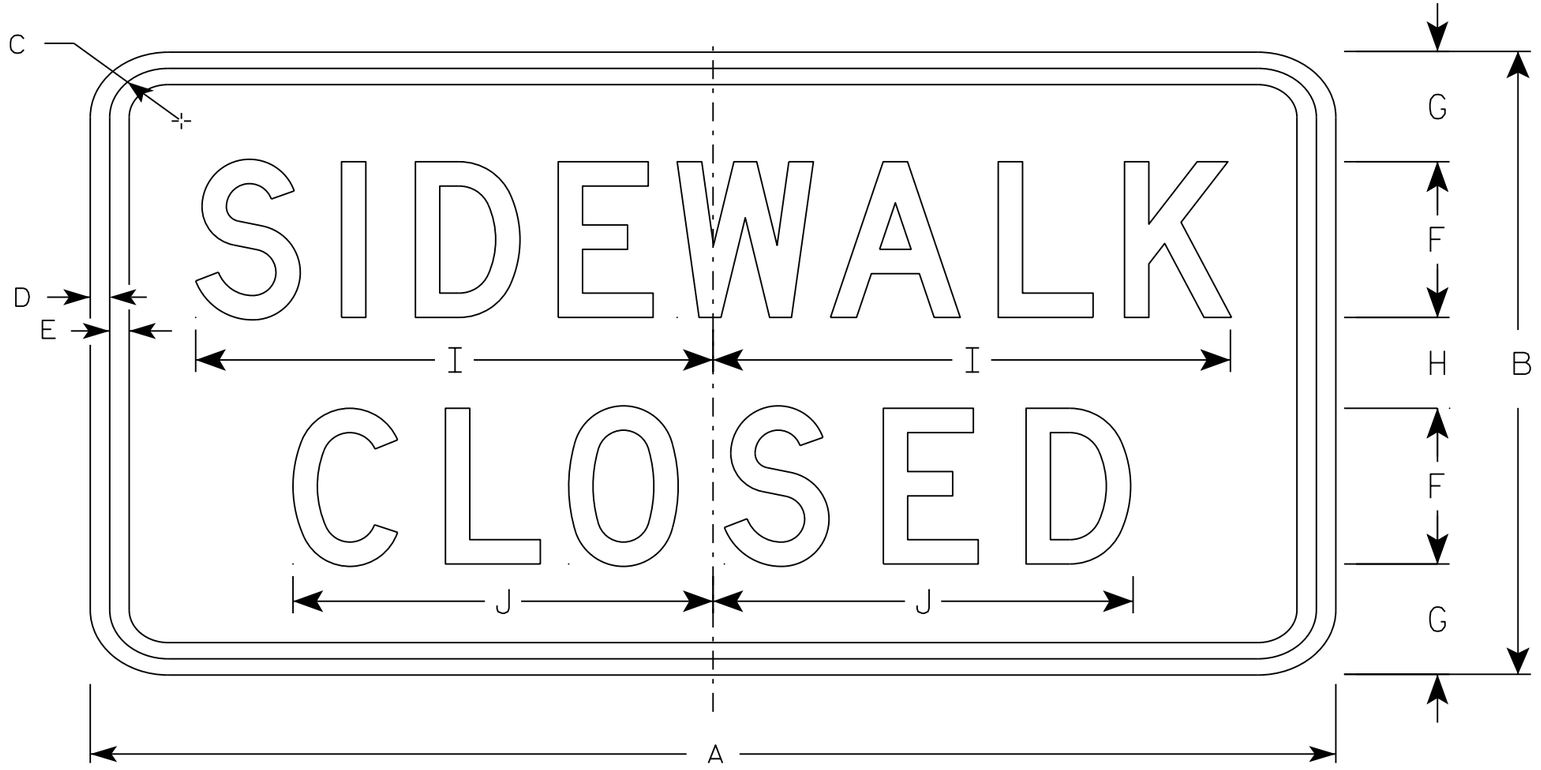
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 410 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42



R9-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN
R9-9

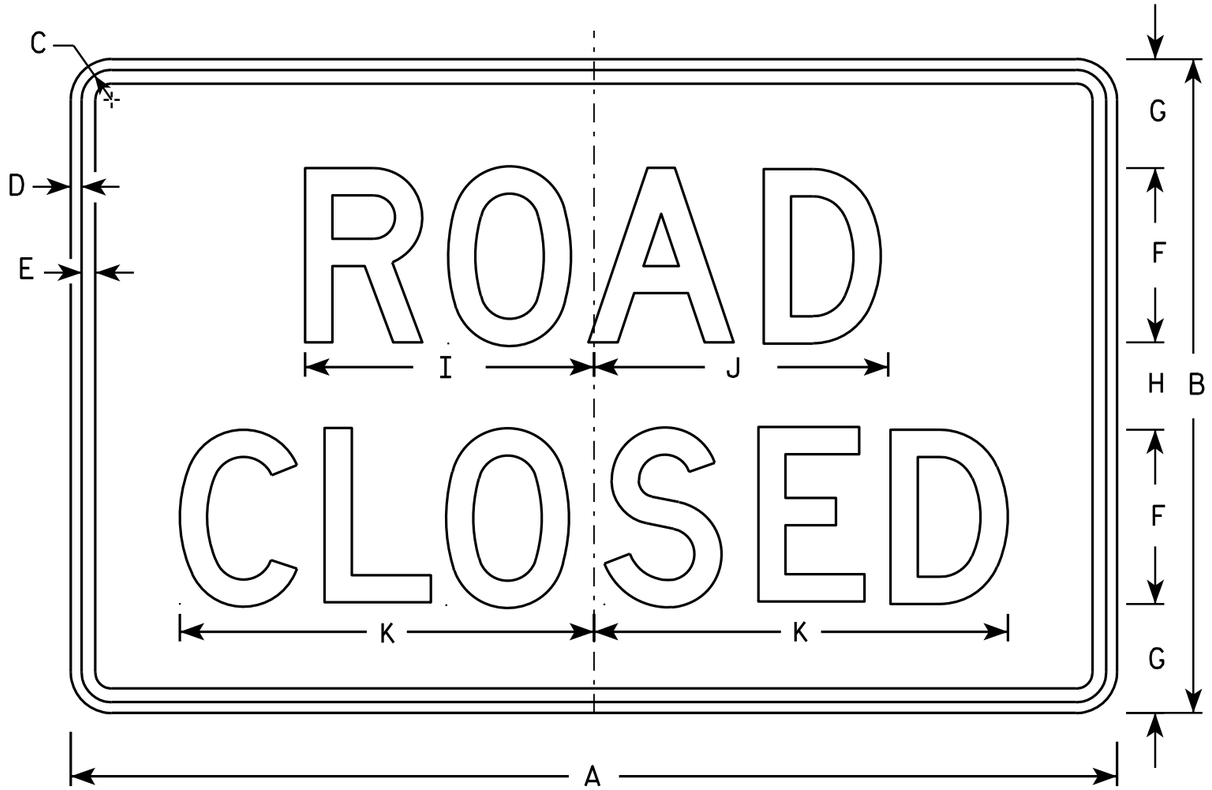
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE 411 R9-9.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

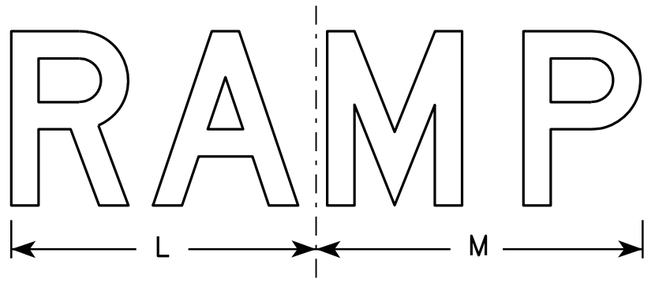
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R99.DGN PLOT DATE : 11-AUG-2016 11:33 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 2.918761:1.000000



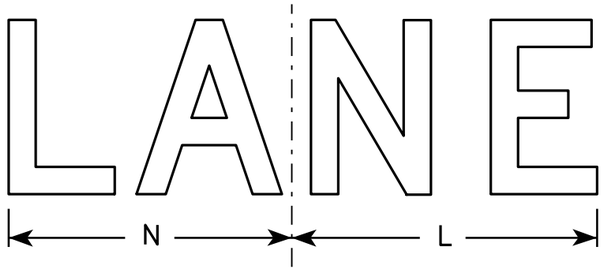
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

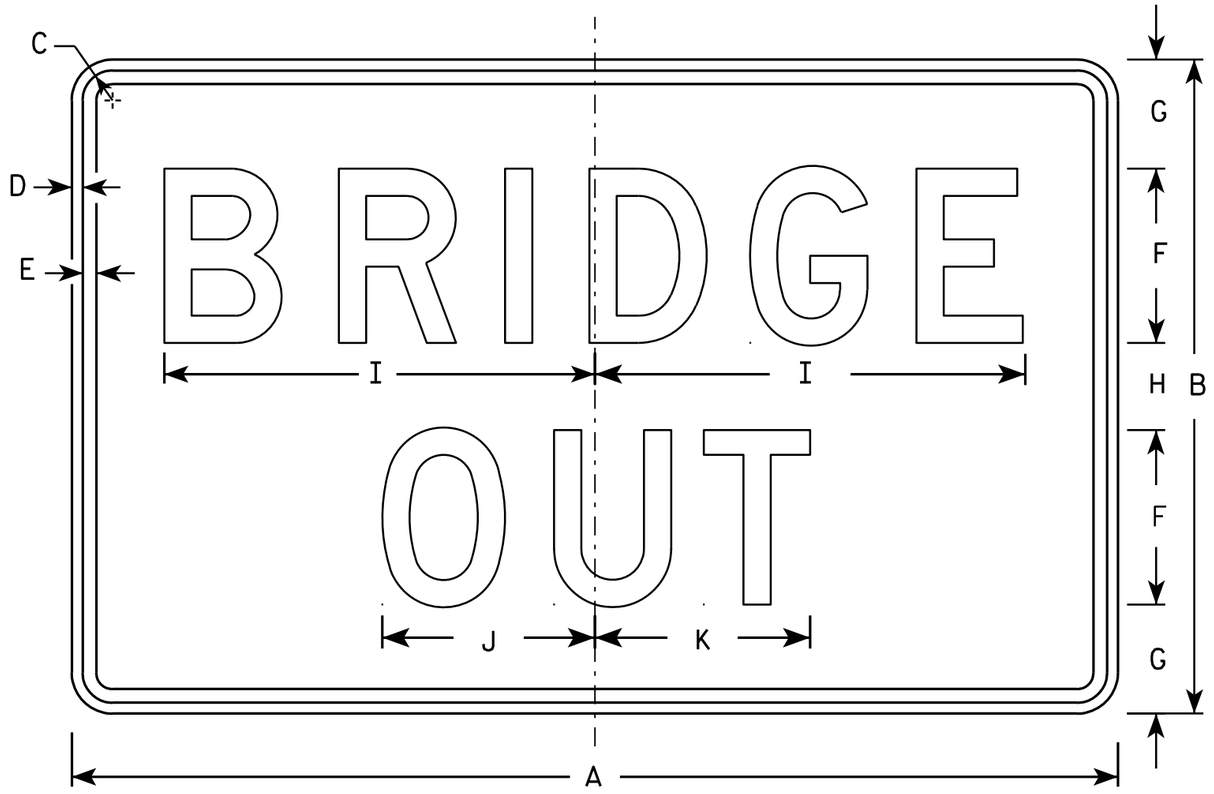
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 412 | E



R11-2B

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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

SHEET NO: 413 E

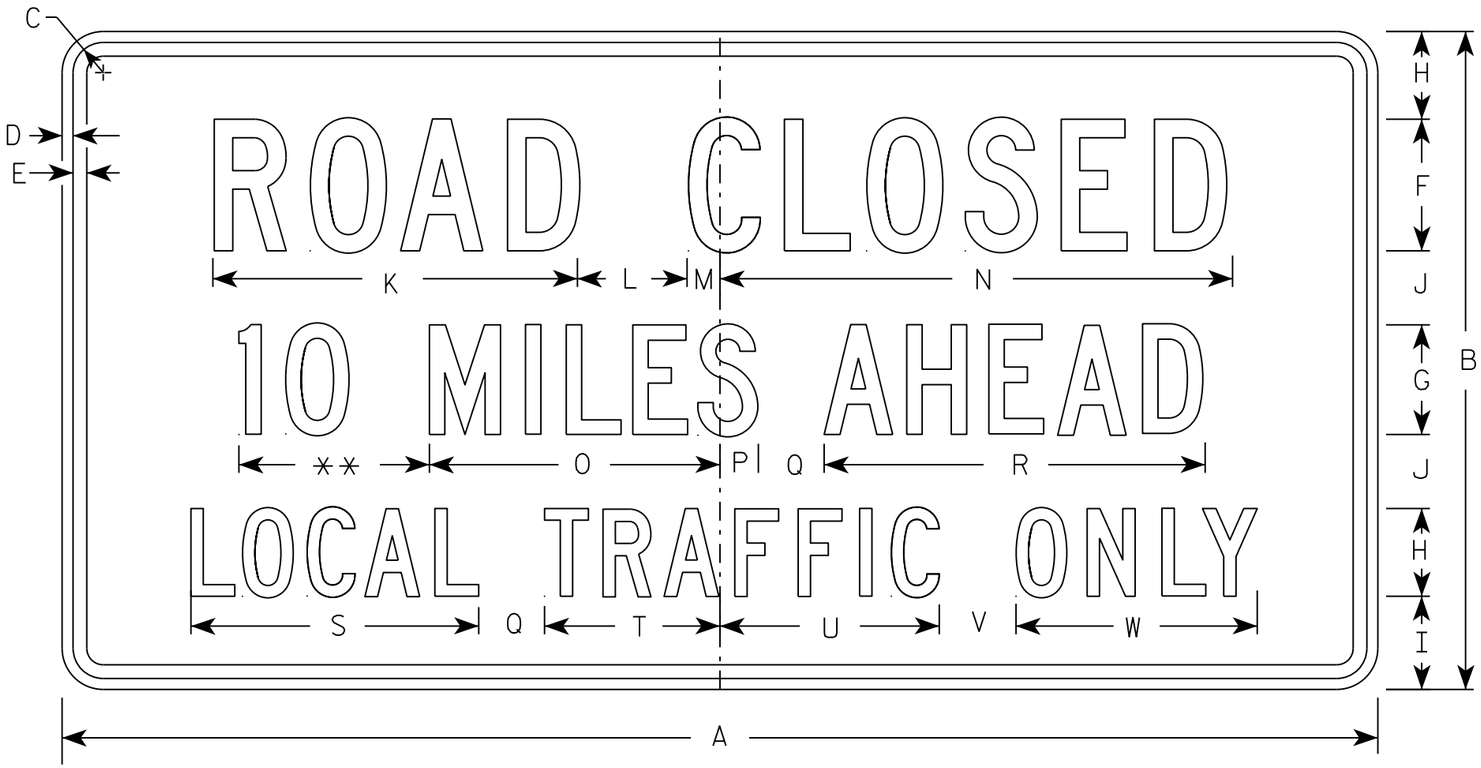
7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112B.DGN PLOT DATE : 01-APR-2011 14:23 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

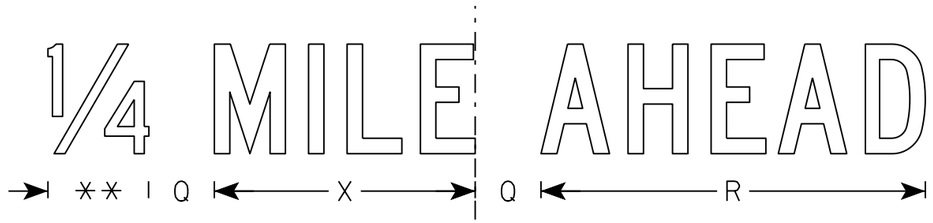
NOTES

1. Sign is Type II - Type H Reflective
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. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

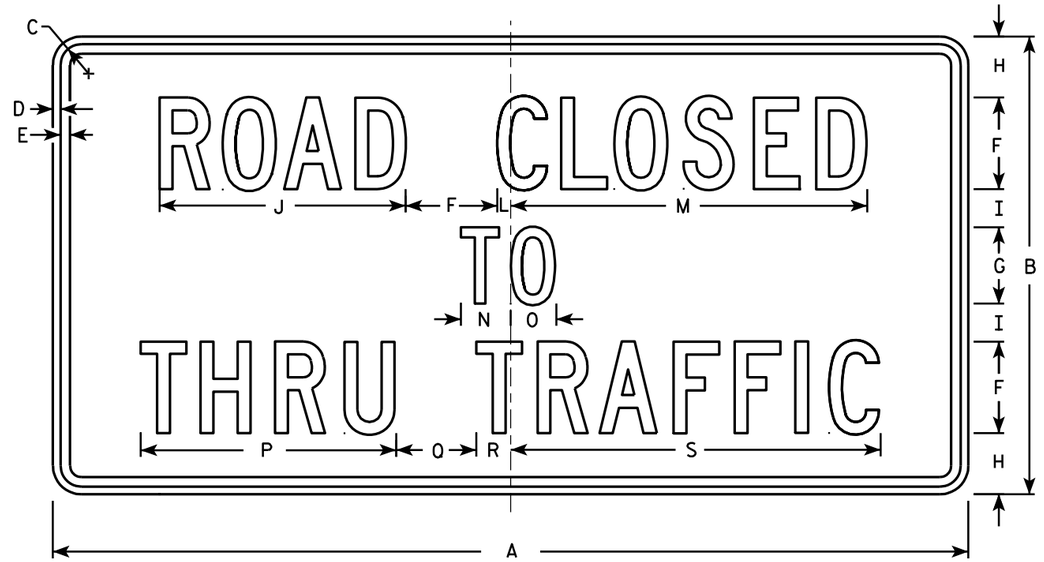
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/17 PLATE NO. R11-3.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 414	E



R11-4

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

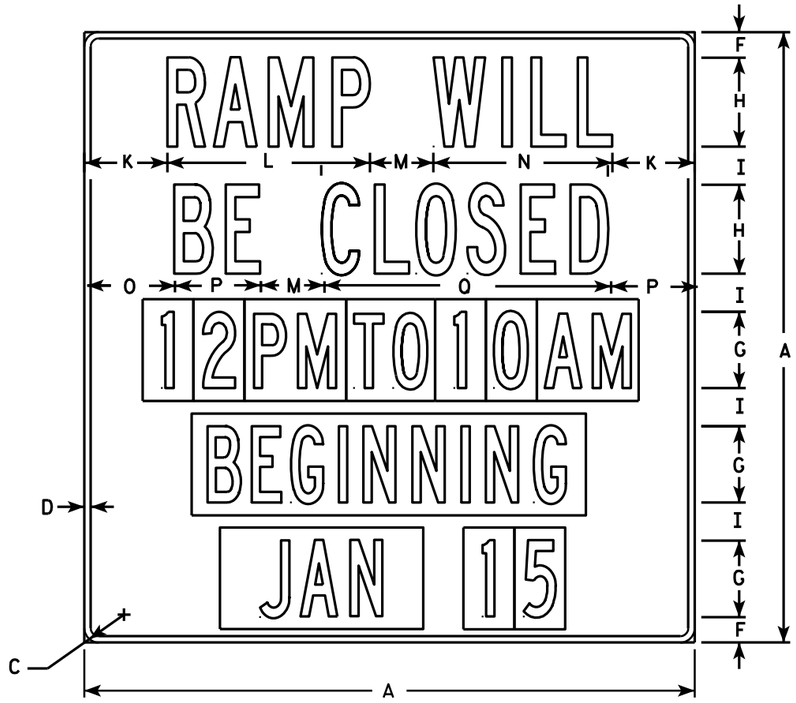
STANDARD SIGN
R11 - 4

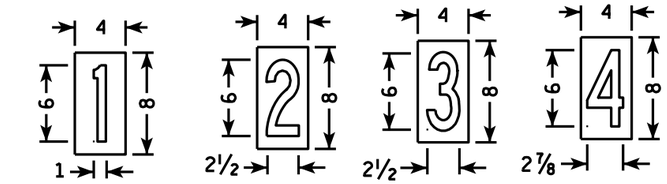
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

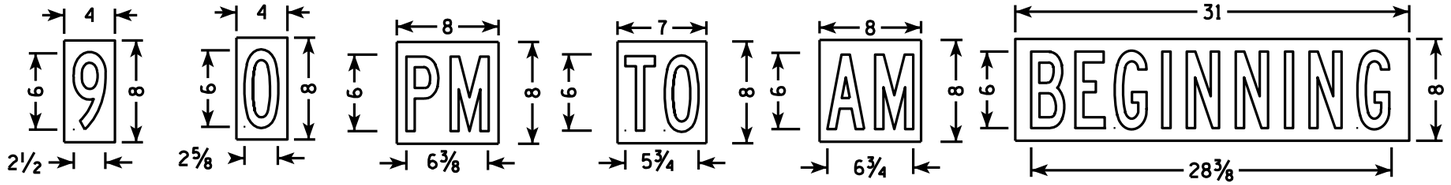
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 415	E

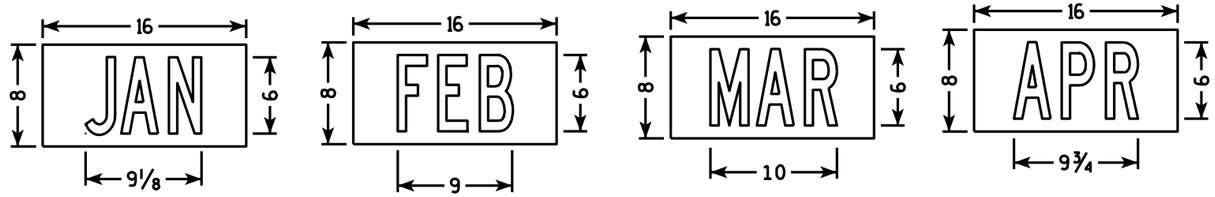


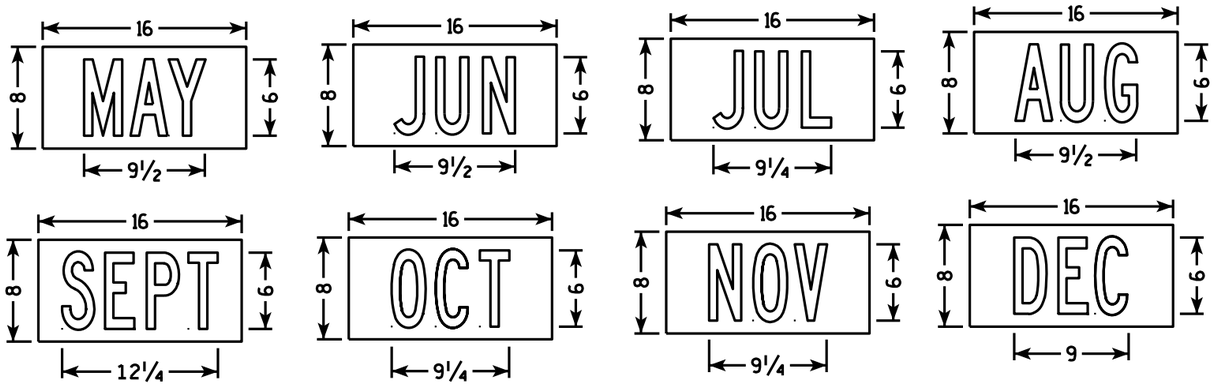


NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - B
4. Message plaques consist of Type H Reflective sheeting with the appropriate non-reflective black message applied to .040 aluminum and screwed to the base sign.









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		2 1/4	1/2		2	6	7	3		6 1/2	15 7/8	5	14 1/8	6 7/8	6 3/4	22 1/2										16.0
2M	48		2 1/4	1/2		2	6	7	3		6 1/2	15 7/8	5	14 1/8	6 7/8	6 3/4	22 1/2										16.0
3																											
4																											
5																											

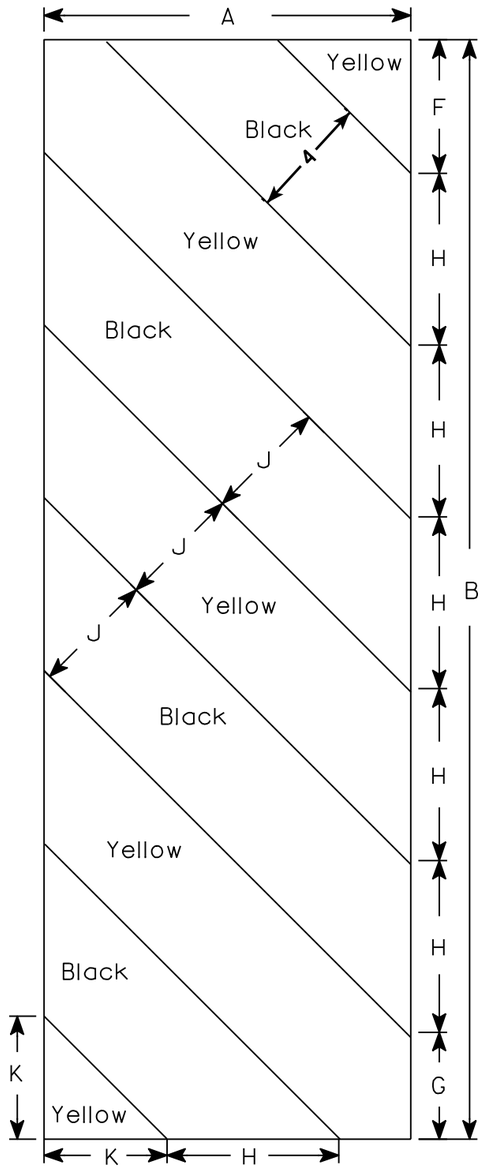
STANDARD SIGN
R11-51

WISCONSIN DEPT OF TRANSPORTATION

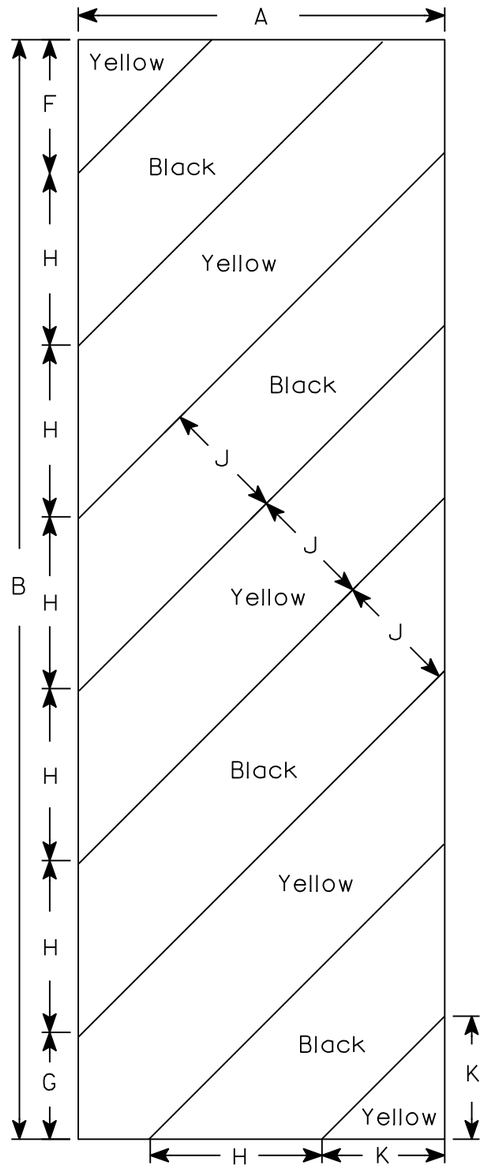
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-51.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 416	E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

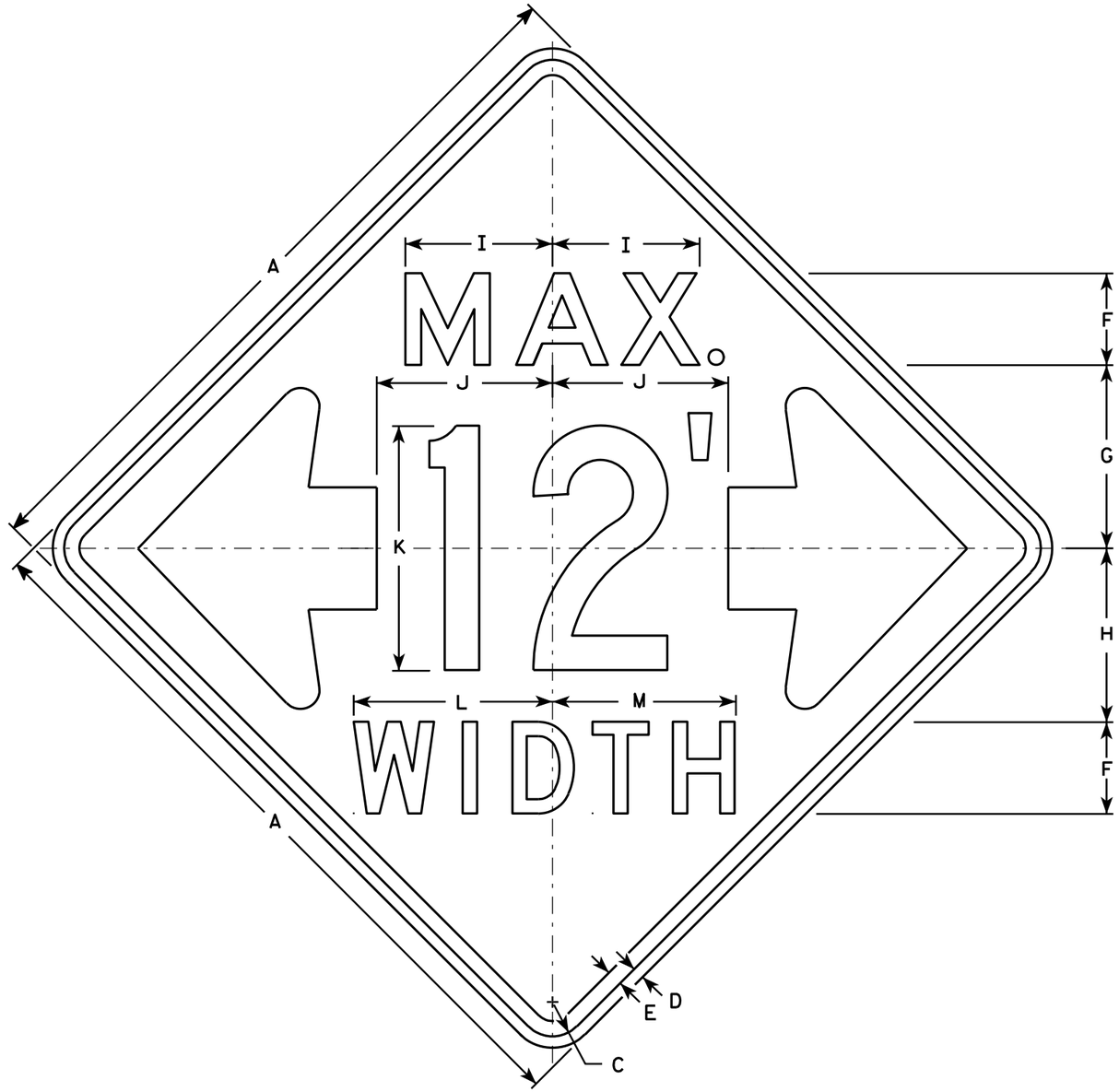
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

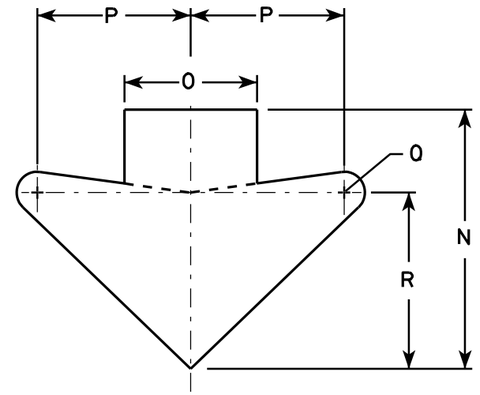
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 417	E



W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



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	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

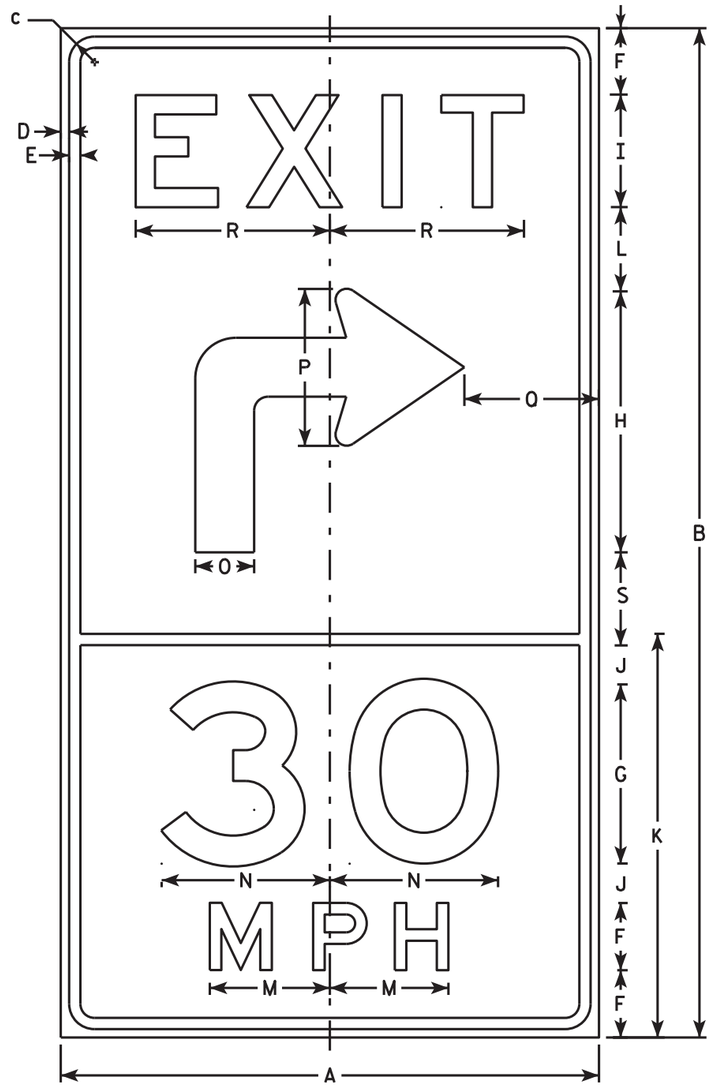
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 418 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000
WISDOT/CADDS SHEET 42



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - 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	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	90	2 1/4	3/4	1	6	16	23 1/4	10	3 1/2	36	7 1/2	10 3/4	15	5 1/4	14	12	17 3/8	8 1/4								30
2M	48	90	2 1/4	3/4	1	6	16	23 1/4	10	3 1/2	36	7 1/2	10 3/4	15	5 1/4	14	12	17 3/8	8 1/4								30
3																											
4																											
5																											

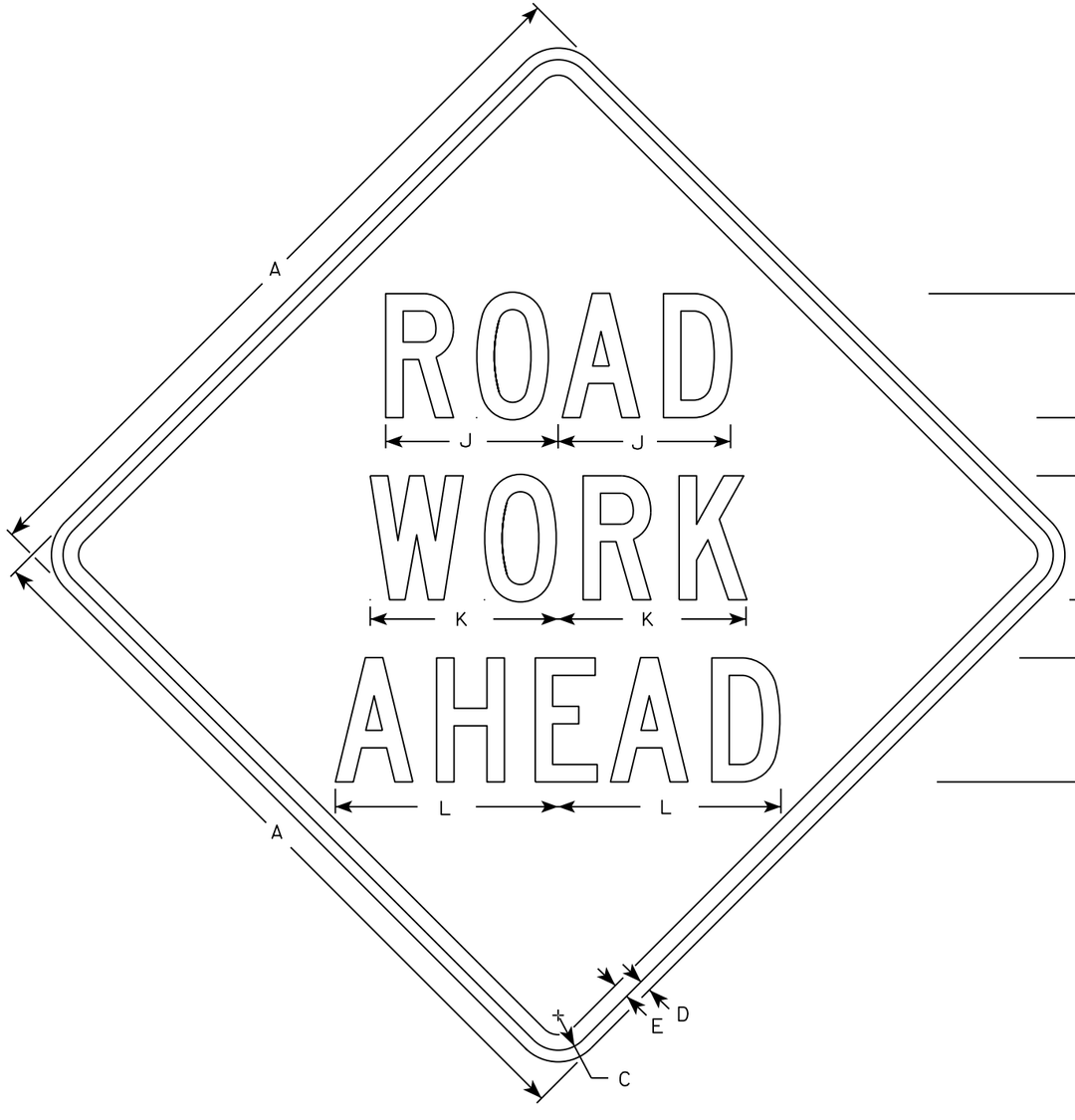
STANDARD SIGN
W13-2D

WISCONSIN DEPT OF TRANSPORTATION

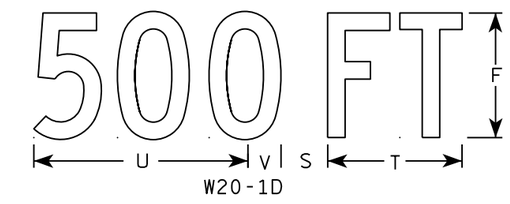
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/12/13 PLATE NO. W13-2D.1

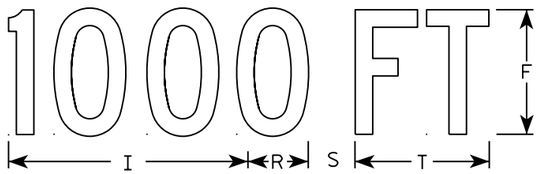
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



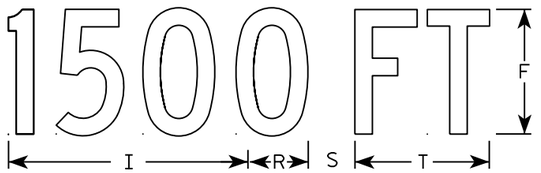
W20-1A



W20-1D



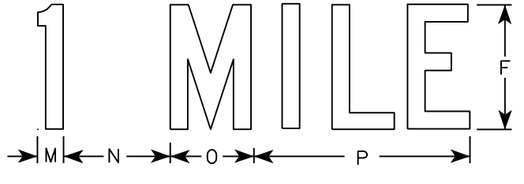
W20-1C



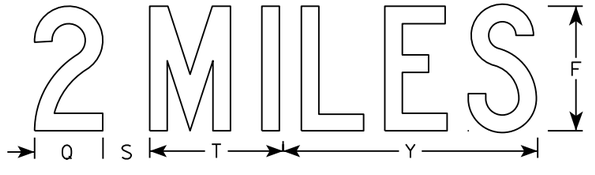
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

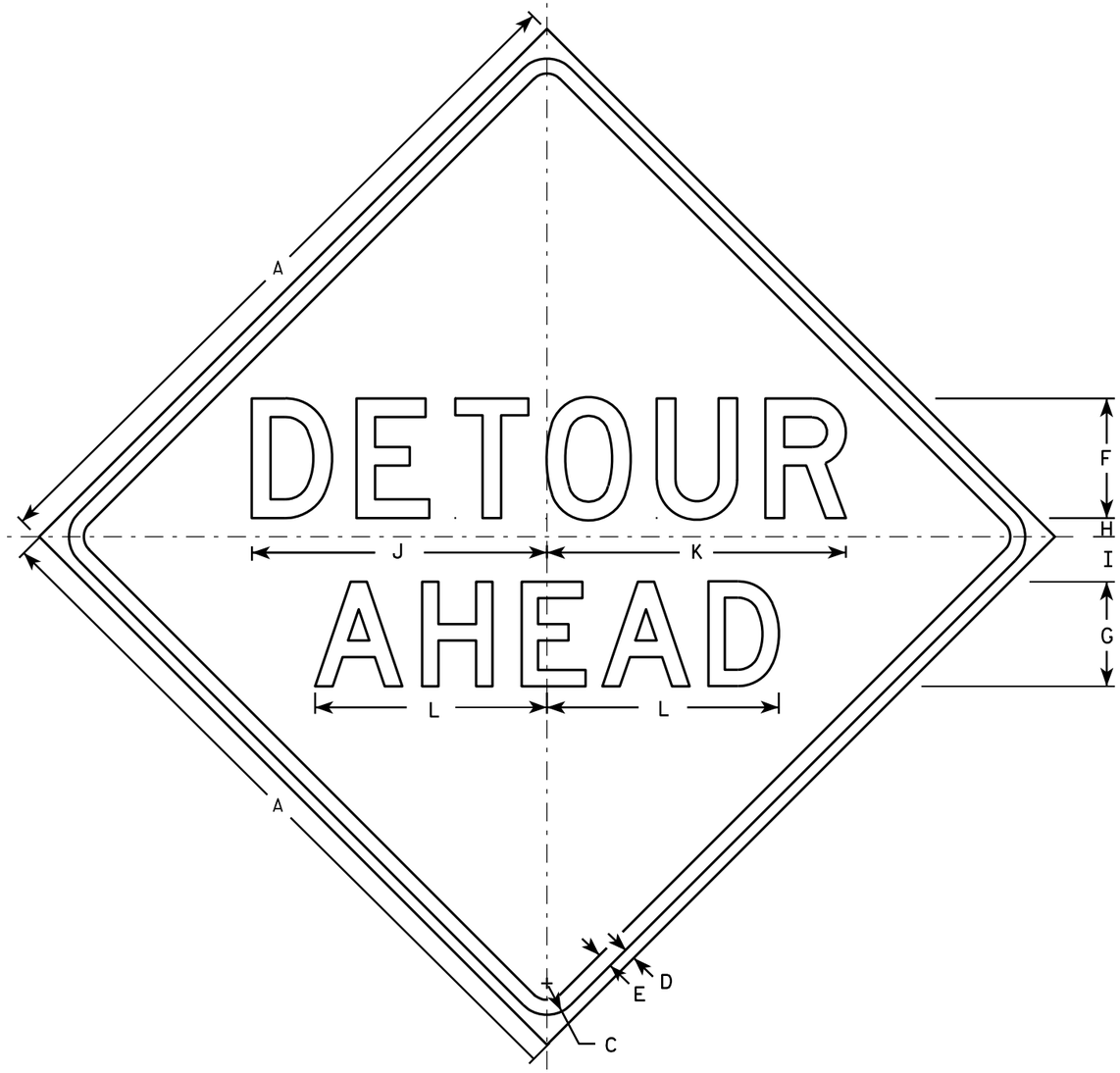
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

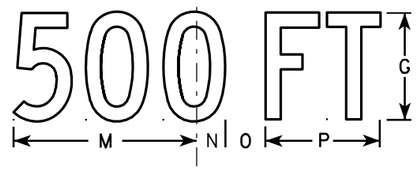
PROJECT NO:

SHEET NO: E

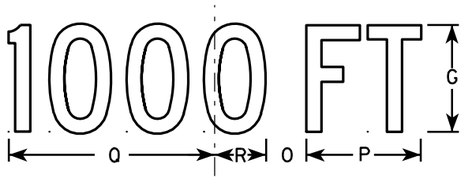
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



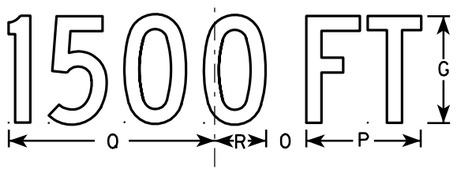
W20-2A



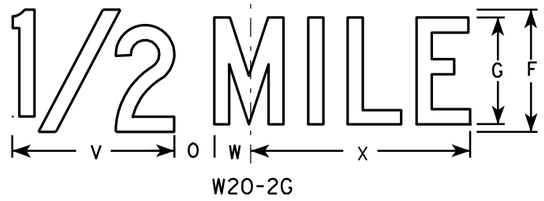
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

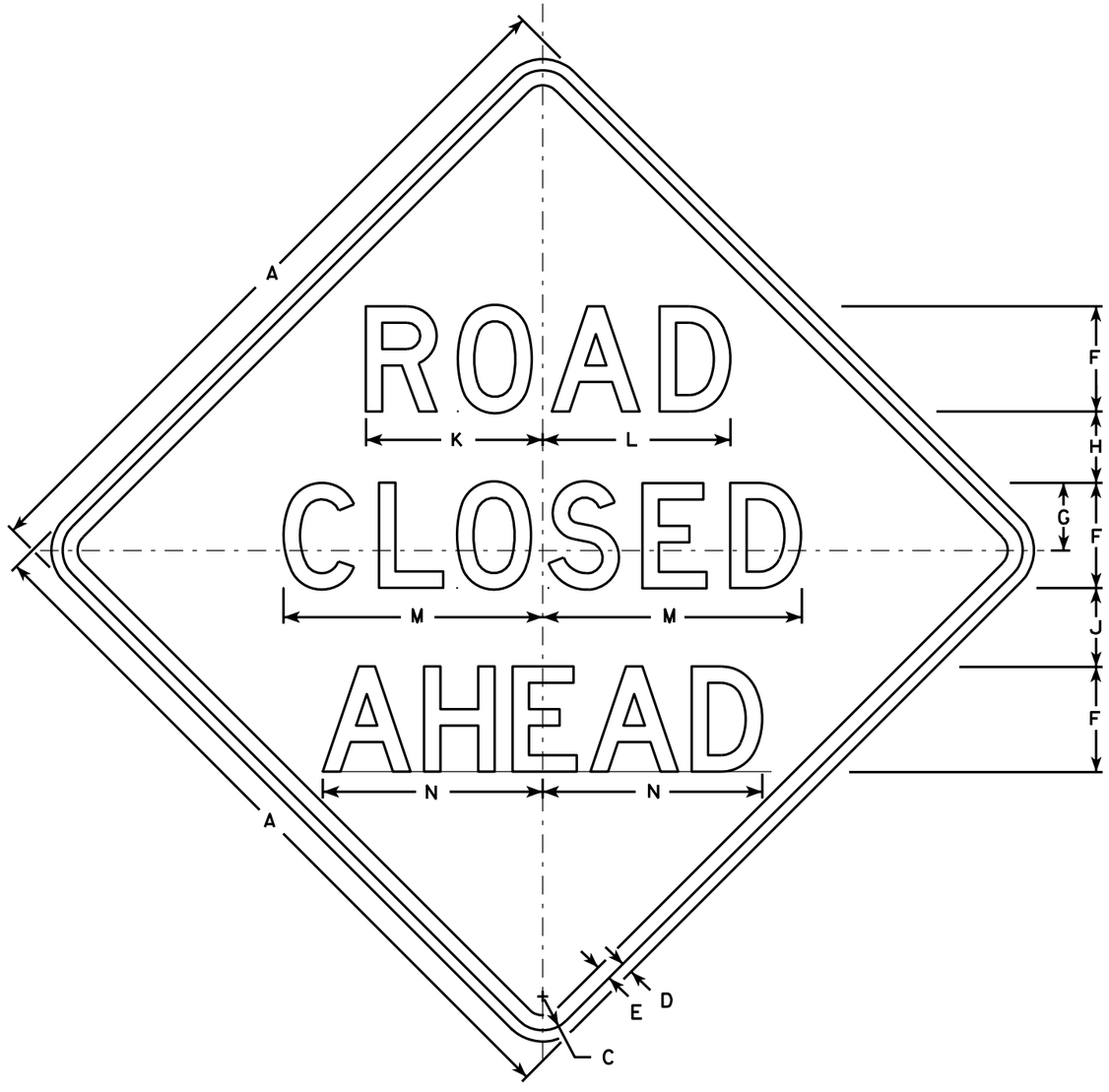
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

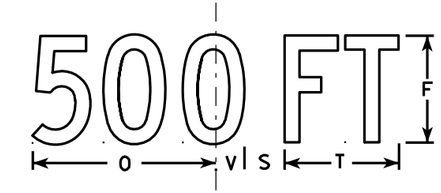
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

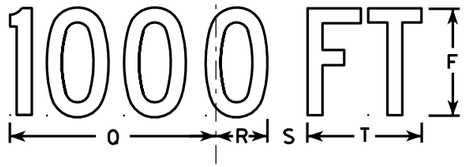
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 421 | E



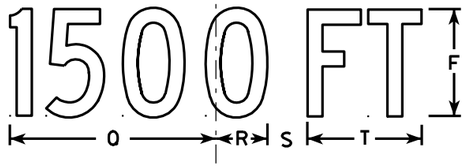
W20-3A



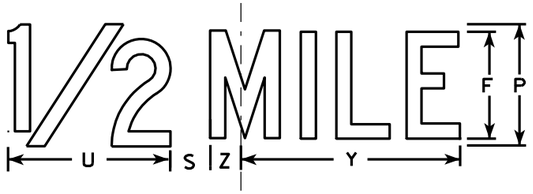
W20-3D



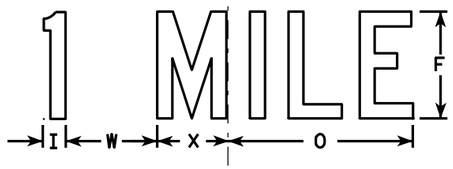
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 422 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000

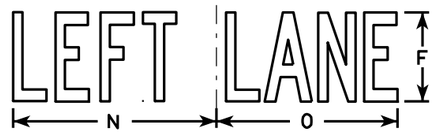
WISDOT/CADDS SHEET 42

7

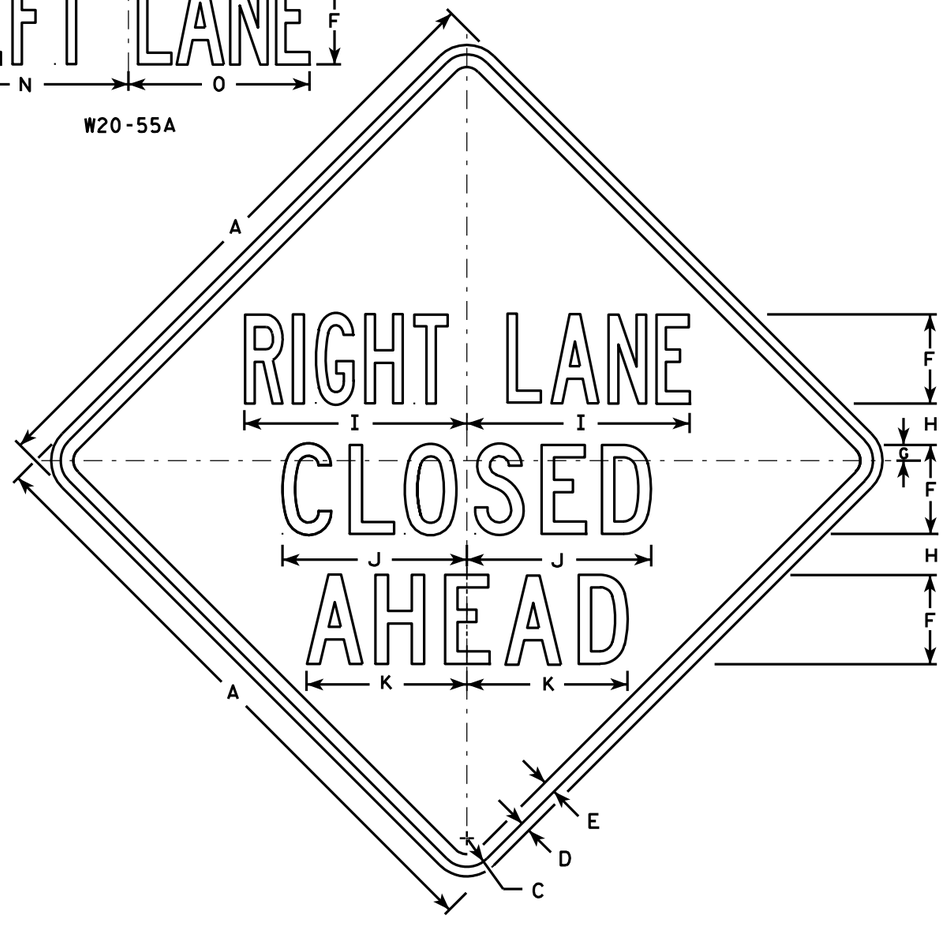
7



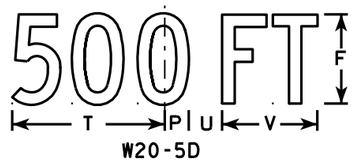
W20-56A



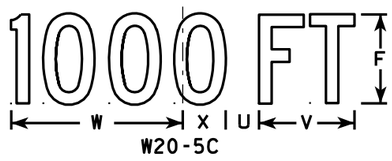
W20-55A



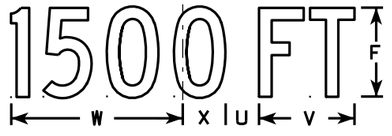
W20-5A



W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

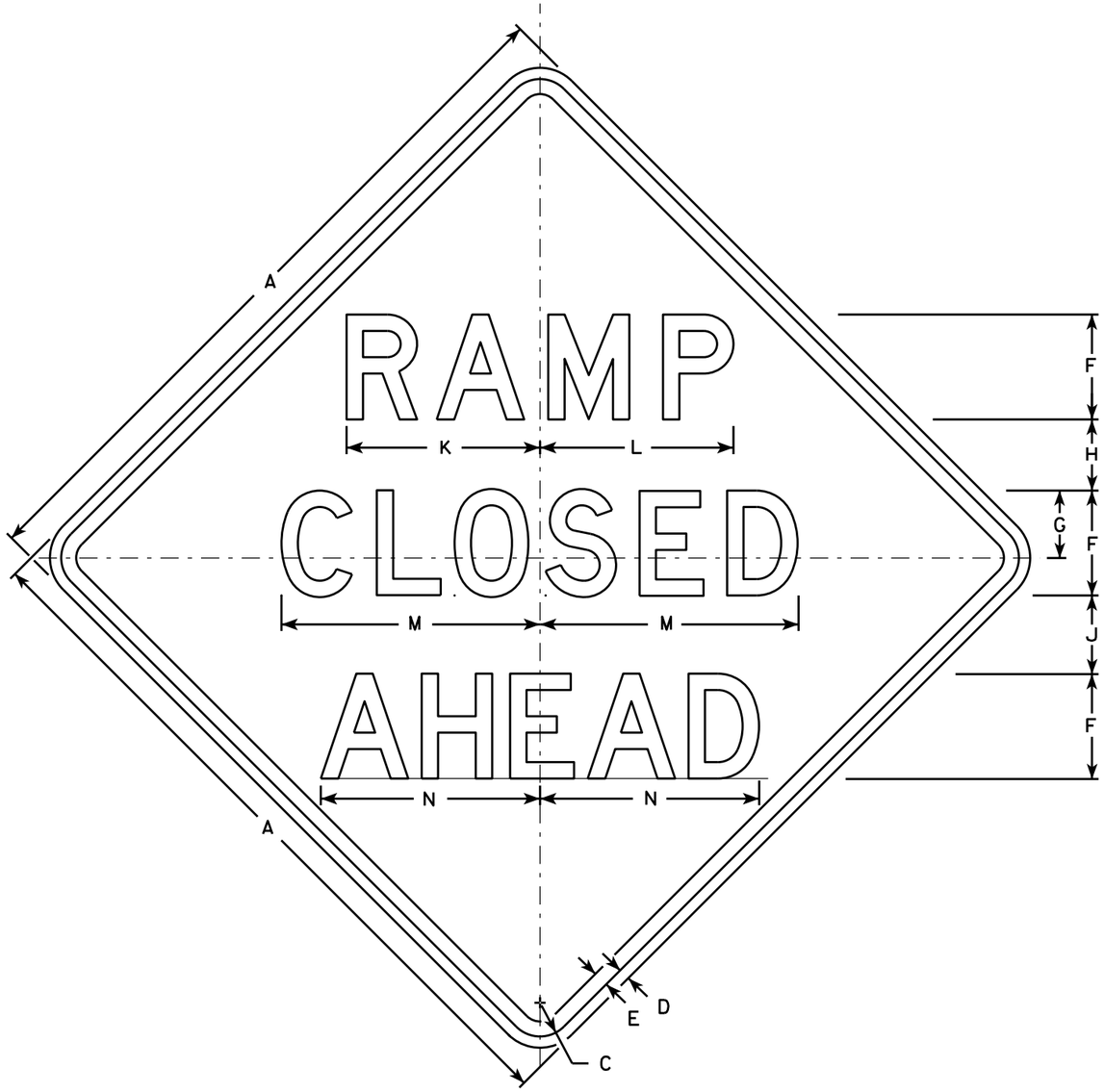
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

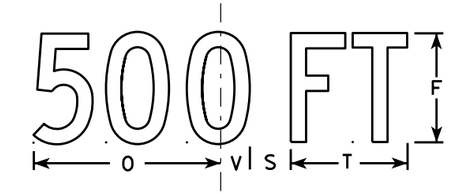
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 423 | E

7

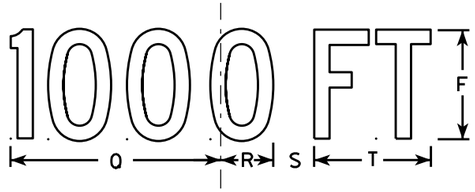
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000



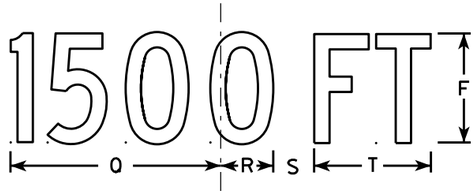
W20-53A



W20-53D



W20-53C



W20-53B



W20-53G



W20-53F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	9 1/4	9 1/4	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-53A,B,C,D,F,G

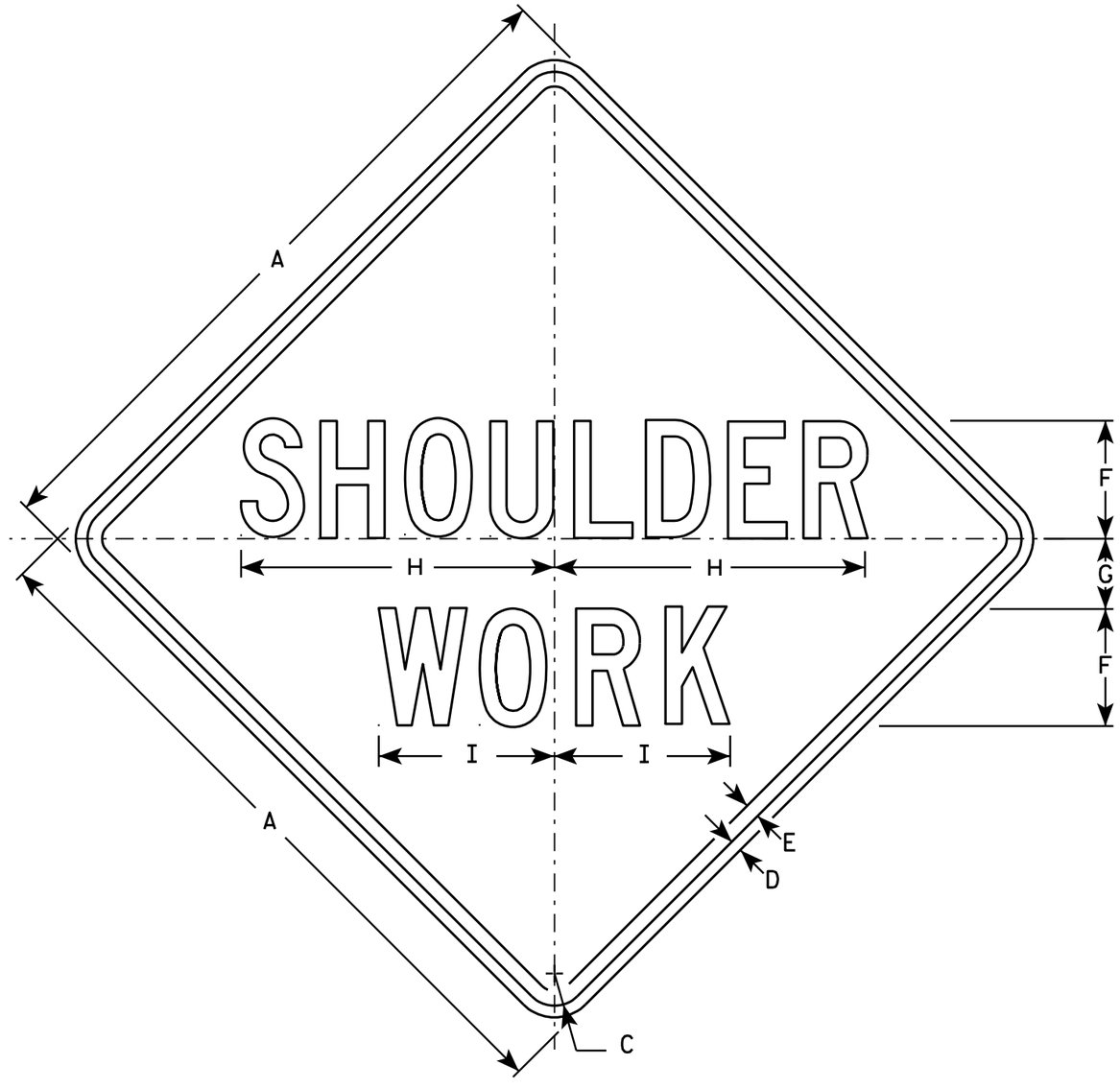
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/27/15 PLATE NO. W20-53.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W2053.DGN PLOT DATE : 27-MAY-2015 19:40 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.729210:1.000000
WISDOT/CADDS SHEET 42



W21-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

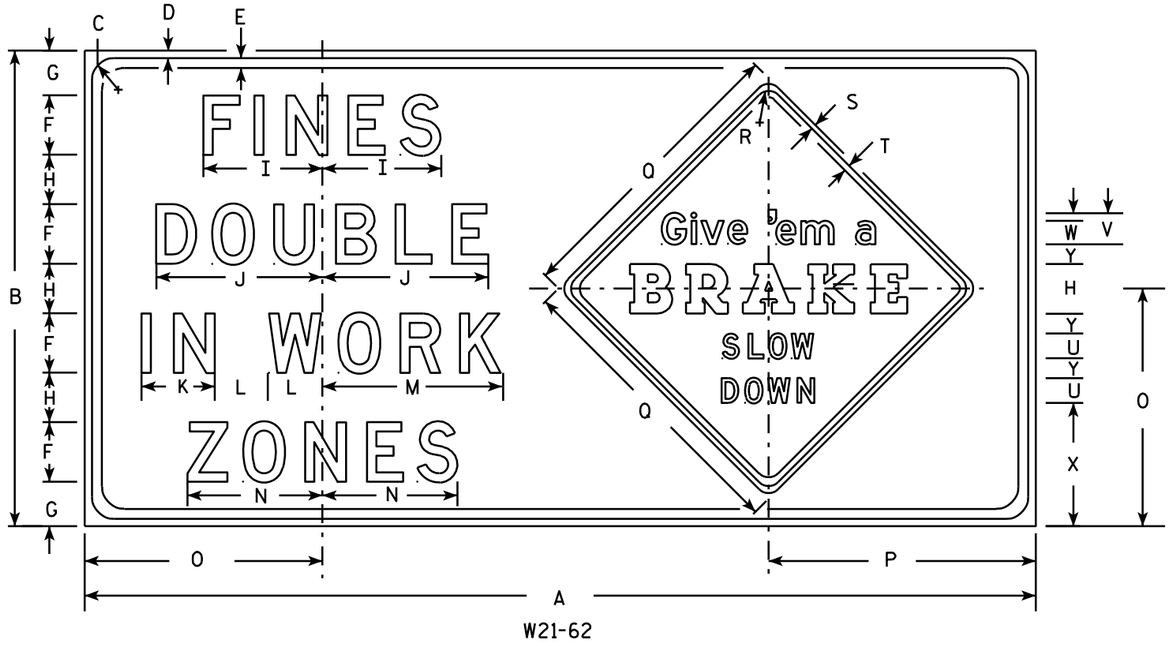
STANDARD SIGN
W21-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5.5

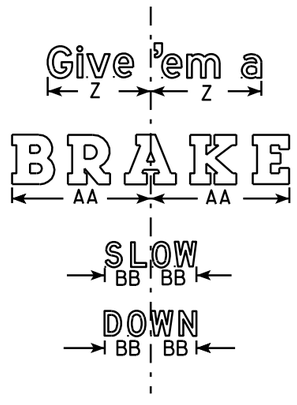
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 425	E



W21-62

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 - (See Note 5)
   Message - Black
3. Message Series -
   Fines Double Message - All lines are Series D
   Give 'em a Brake -
   Line one is Series E, line two is a Special Graphic Series and lines three and four are Series D.
4. The base material shall be plywood. Corners may be square or rounded, but borders shall be rounded as shown. The base material for Give 'em a Brake sign can be a seperate sheet of aluminum with the corners and borders rounded as shown. This seperate panel shall then be attached to the plywood with aluminum or stainless steel sheet metal screws.
5. Background for the Give 'em a Brake sign shall be Type F reflective orange.





W21-62P

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	AA	BB	CC	DD	Area sq. ft.
1																															
2S																															
2M																															
3	96	48	2 1/4	3/4	1	6	4 1/2	5	12	16 3/4	7 3/8	5 1/2	18 1/4	13 5/8	24	27	30	1 3/8	1/2	5/8	2 1/2	3 1/8	2 3/8	12 1/2	2	10 3/4	14	4 5/8	34 1/2	4	32.0
4																															
5																															

STANDARD SIGN
W21-62

WISCONSIN DEPT OF TRANSPORTATION

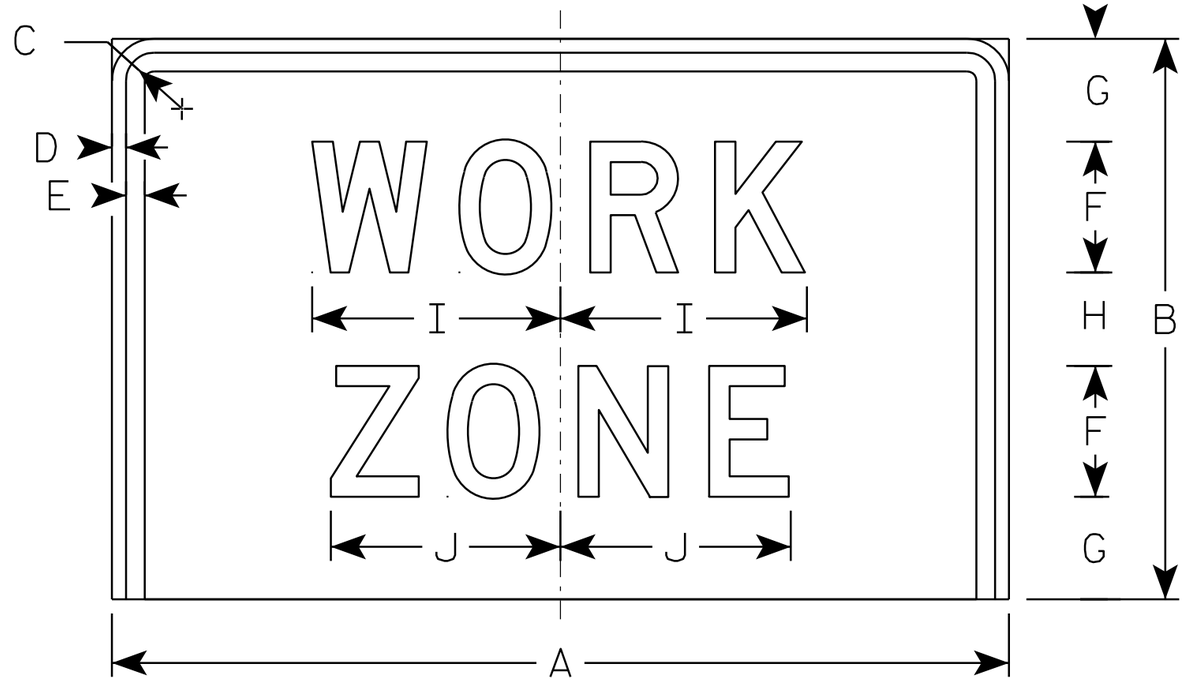
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-62.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 426 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W2162.DGN PLOT DATE : 21-MAR-2011 10:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 15.294877:1.000000
WISDOT/CADDS SHEET 42



W21-620

NOTES

1. Sign is Type II - Type F - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	12 1/4																	10.0
2M	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	12 1/4																	10.0
3																											
4																											
5																											

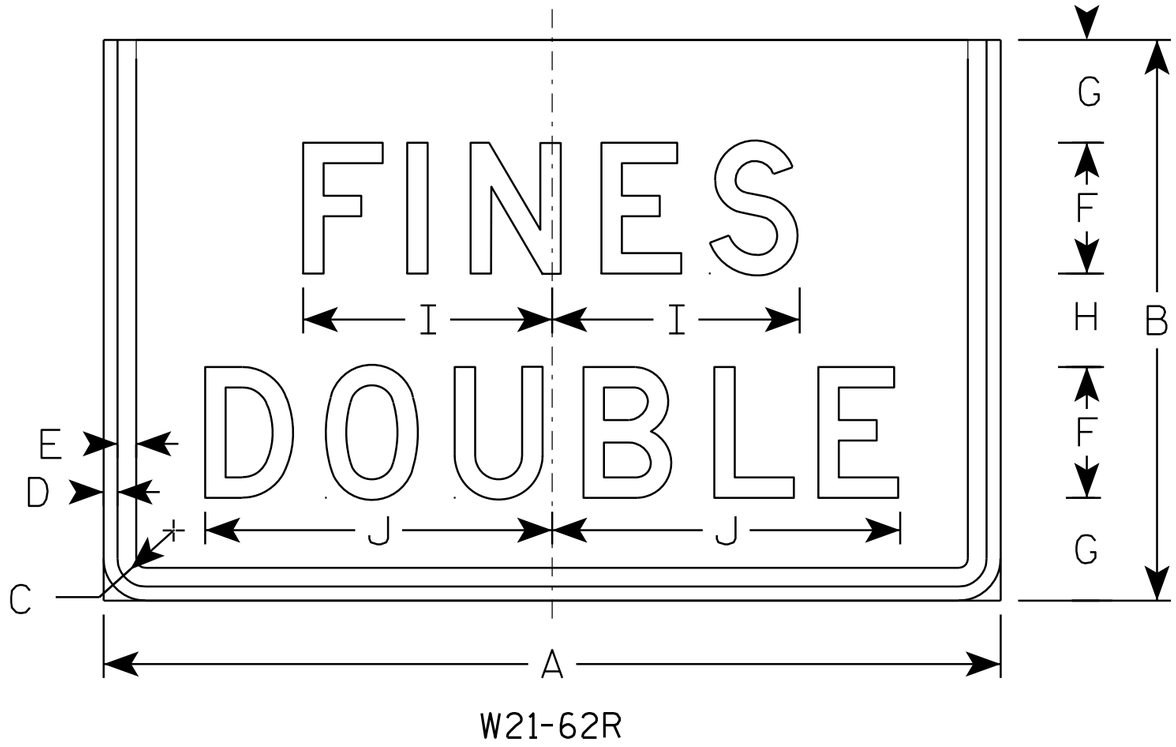
STANDARD SIGN
W21-620

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-620.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 427	E



W21-62R

NOTES

1. Sign is Type II - Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	18 5/8																	10.0
2M	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	18 5/8																	10.0
3																											
4																											
5																											

STANDARD SIGN
W21-62R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-62R.2

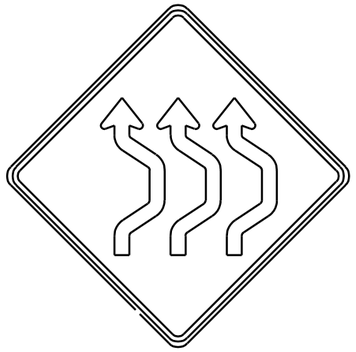
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 428	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W2162R.DGN PLOT DATE : 21-MAR-2011 10:51 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 8.108332:1.000000

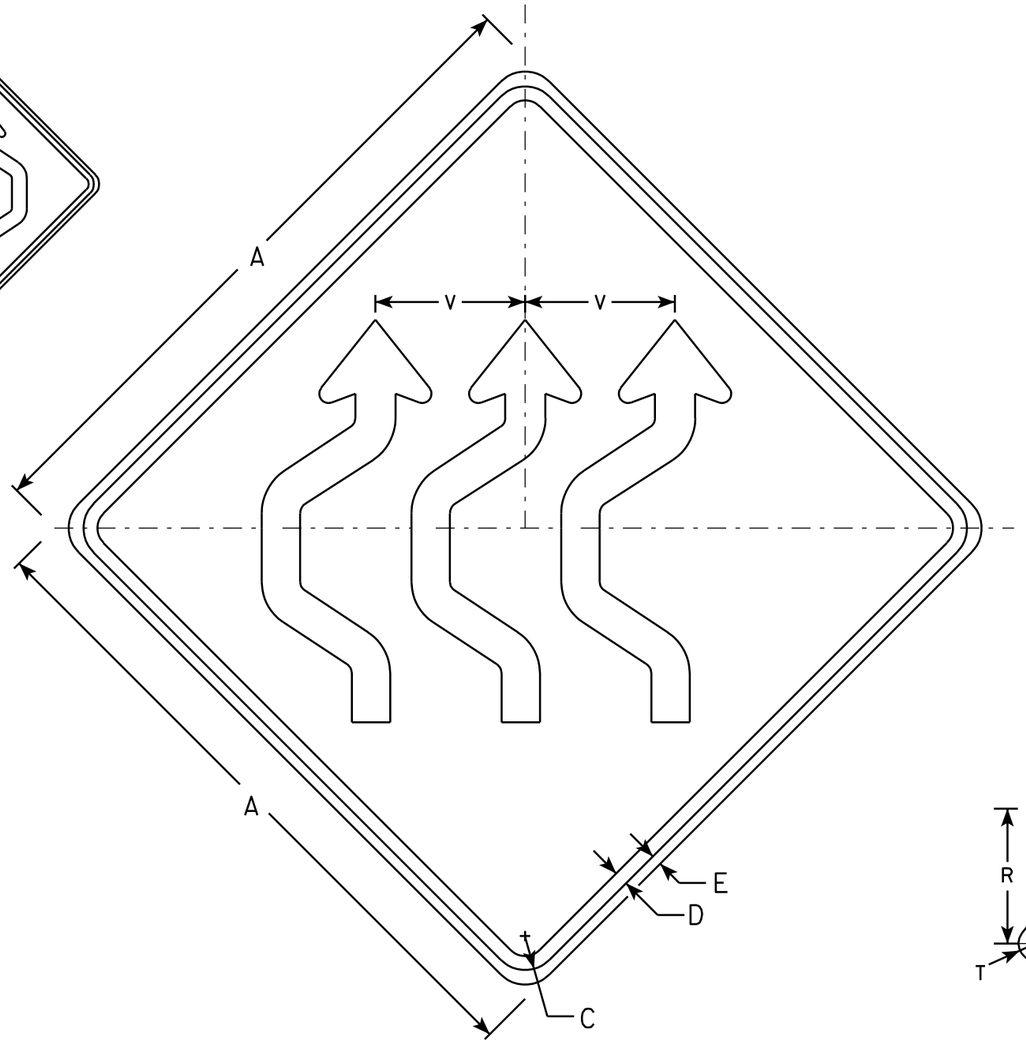
WISDOT/CADDS SHEET 42

7

7



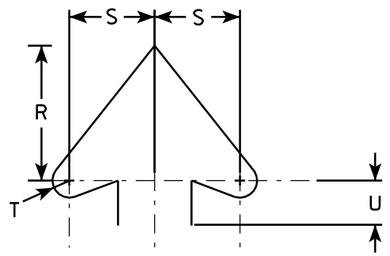
W24-1BR



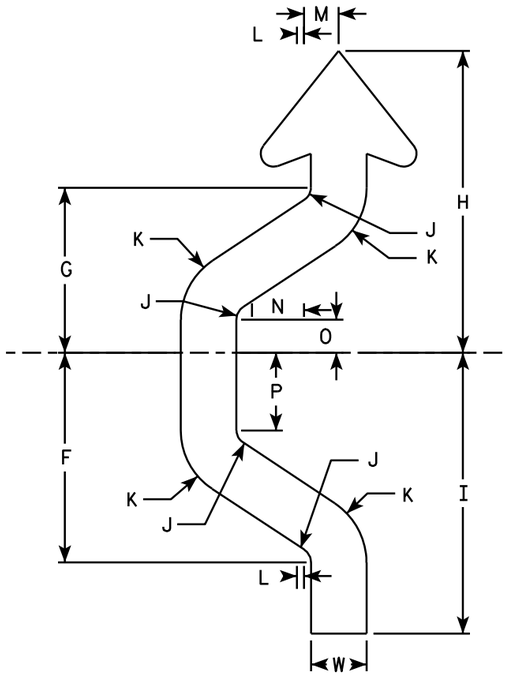
W24-1bL

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	5/8	1/2	7 7/8	6 1/4	11 3/8	10 5/8	1/2	2 5/8	1/4	1 1/4	2	1 1/4	3		4	2 1/2	1/2	1 1/4	8 1/8	2 1/8				9
2S	48		2 1/4	1	3/4	10 1/2	8 1/4	15	14	3/4	3 1/2	3/8	1 3/4	2 5/8	1 5/8	3 7/8		5 3/8	3 3/8	5/8	1 3/4	10 3/4	2 3/4				16
2M	48		2 1/4	1	3/4	10 1/2	8 1/4	15	14	3/4	3 1/2	3/8	1 3/4	2 5/8	1 5/8	3 7/8		5 3/8	3 3/8	5/8	1 3/4	10 3/4	2 3/4				16
3	48		2 1/4	1	3/4	10 1/2	8 1/4	15	14	3/4	3 1/2	3/8	1 3/4	2 5/8	1 5/8	3 7/8		5 3/8	3 3/8	5/8	1 3/4	10 3/4	2 3/4				16
4	48		2 1/4	1	3/4	10 1/2	8 1/4	15	14	3/4	3 1/2	3/8	1 3/4	2 5/8	1 5/8	3 7/8		5 3/8	3 3/8	5/8	1 3/4	10 3/4	2 3/4				16
5	48		2 1/4	1	3/4	10 1/2	8 1/4	15	14	3/4	3 1/2	3/8	1 3/4	2 5/8	1 5/8	3 7/8		5 3/8	3 3/8	5/8	1 3/4	10 3/4	2 3/4				16

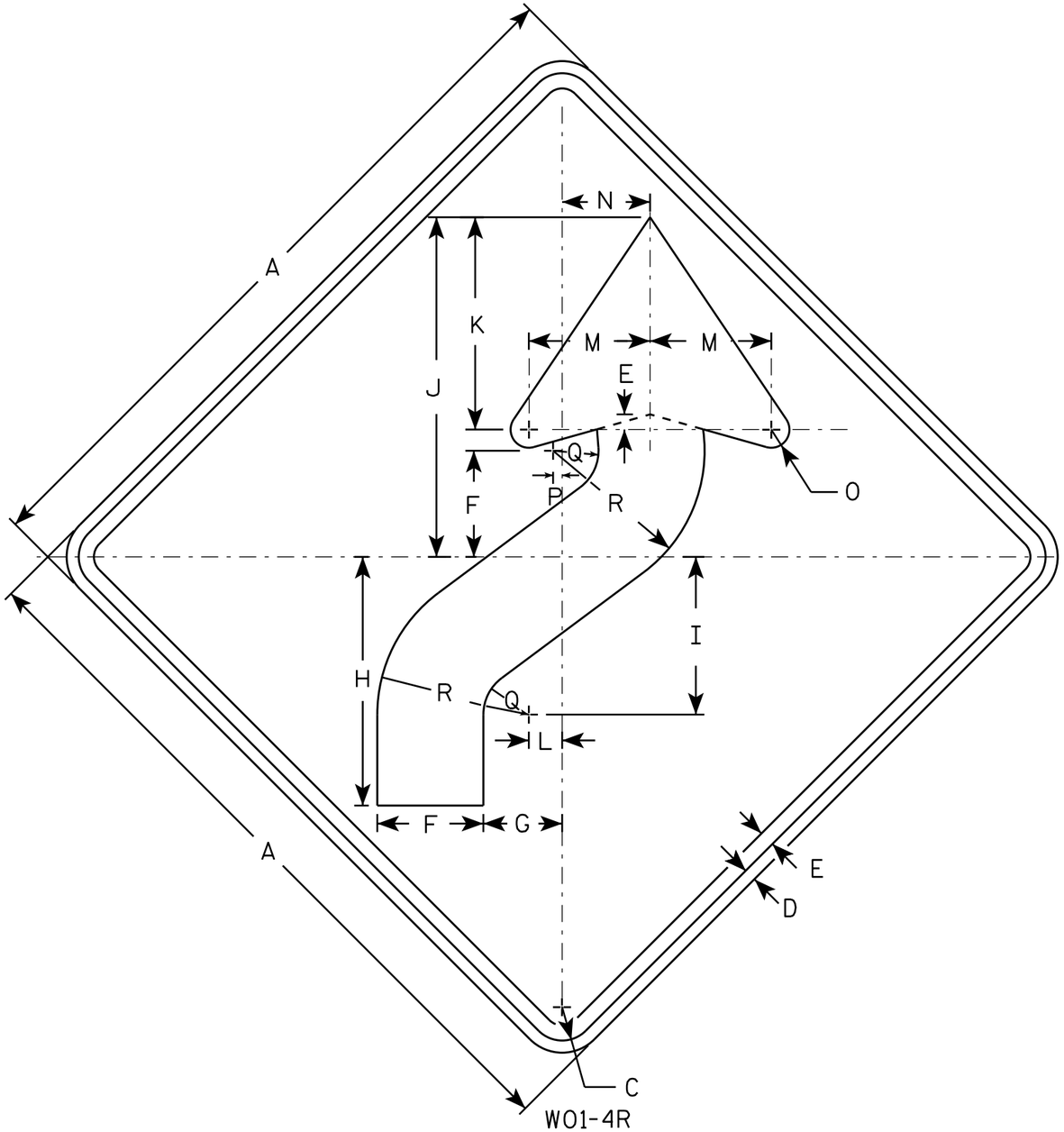
STANDARD SIGN
W24-1BL

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W24-1BL.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 429 | E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

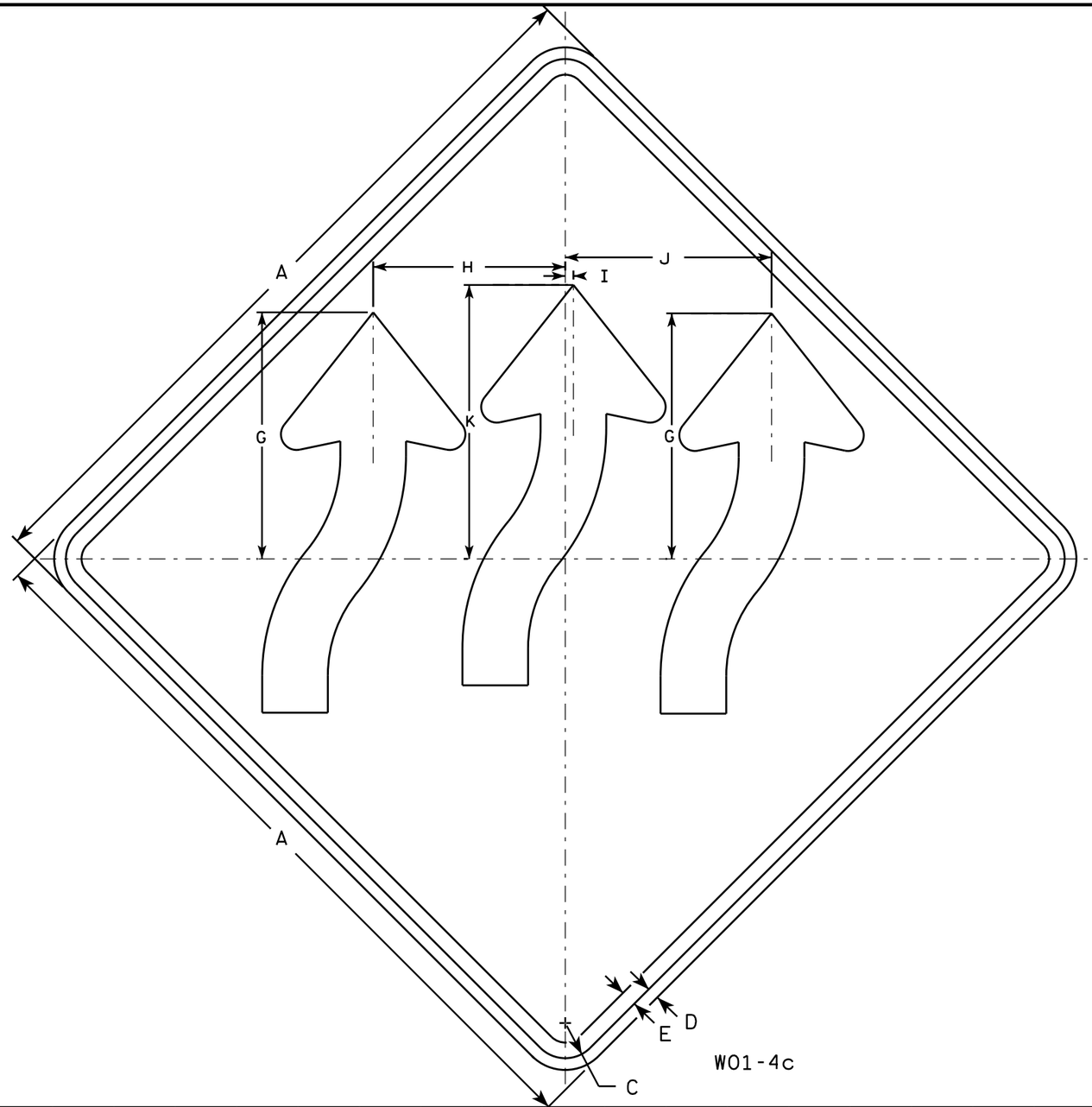
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

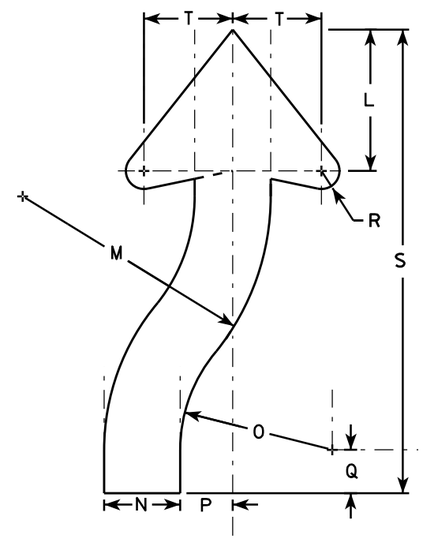
DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42



W01-4c



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		11 3/4	9 1/4	3/8	9 7/8	13 1/8	5 7/8	10 1/4	3 1/8	6 1/4	2 1/4	1 7/8	3/4	19 1/4	3 3/4							9.0
2S	48		2 1/4	3/4	1		15 3/4	12 1/4	1/2	13 1/4	17 1/2	7 3/4	13 3/4	4 1/4	8 1/2	2 7/8	2 3/8	1	25 5/8	4 7/8							16.0
2M	48		2 1/4	3/4	1		15 3/4	12 1/4	1/2	13 1/4	17 1/2	7 3/4	13 3/4	4 1/4	8 1/2	2 7/8	2 3/8	1	25 5/8	4 7/8							16.0
3	48		2 1/4	3/4	1		15 3/4	12 1/4	1/2	13 1/4	17 1/2	7 3/4	13 3/4	4 1/4	8 1/2	2 7/8	2 3/8	1	25 5/8	4 7/8							16.0
4	48		2 1/4	3/4	1		15 3/4	12 1/4	1/2	13 1/4	17 1/2	7 3/4	13 3/4	4 1/4	8 1/2	2 7/8	2 3/8	1	25 5/8	4 7/8							16.0
5	48		2 1/4	3/4	1		15 3/4	12 1/4	1/2	13 1/4	17 1/2	7 3/4	13 3/4	4 1/4	8 1/2	2 7/8	2 3/8	1	25 5/8	4 7/8							16.0

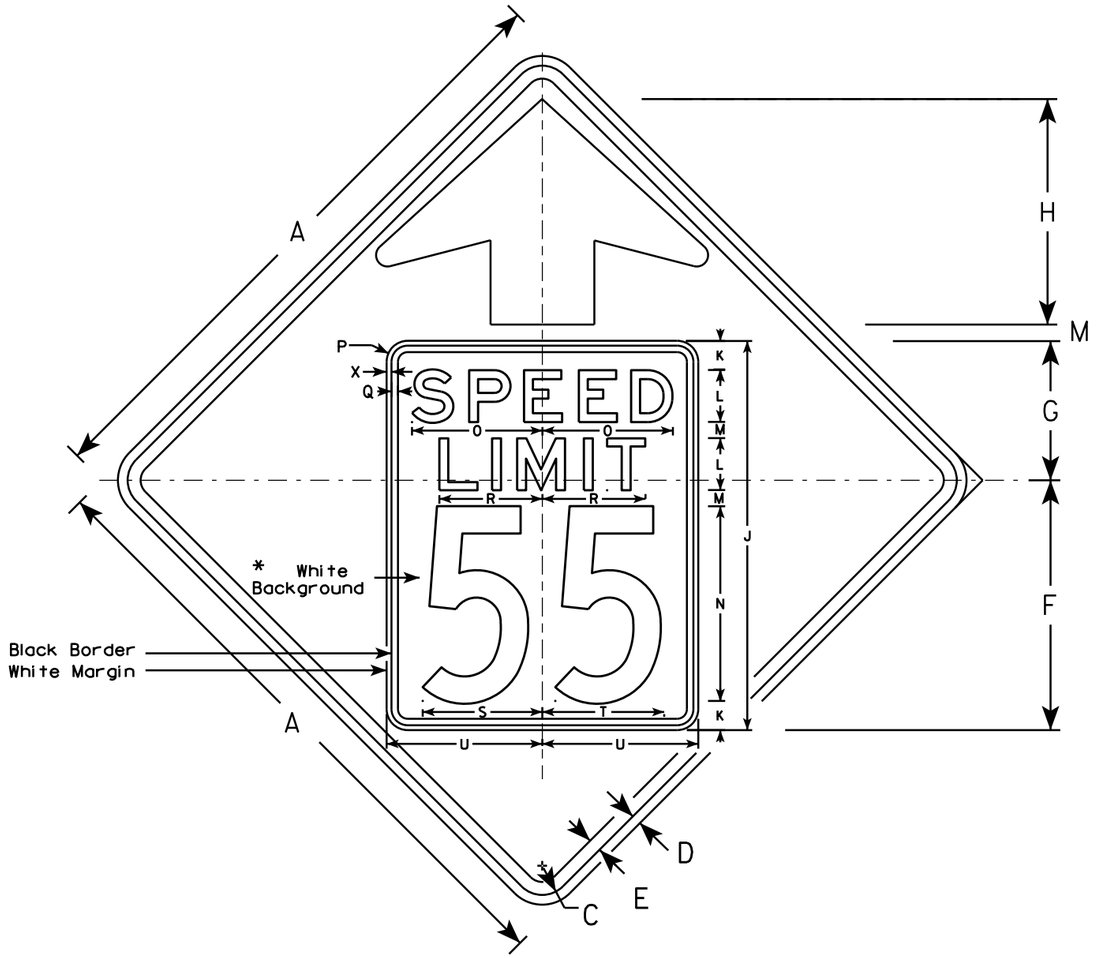
STANDARD SIGN
W01-4c

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE 431 W01-4c.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

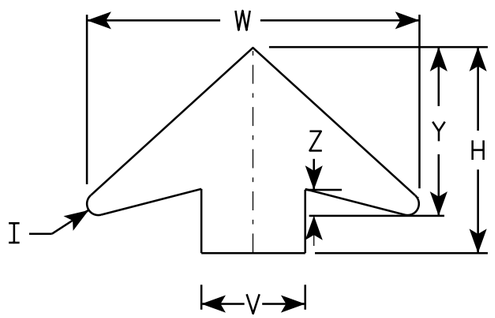


W03-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
   Background - ORANGE*
   Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2S	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
2M	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
3	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W03-5

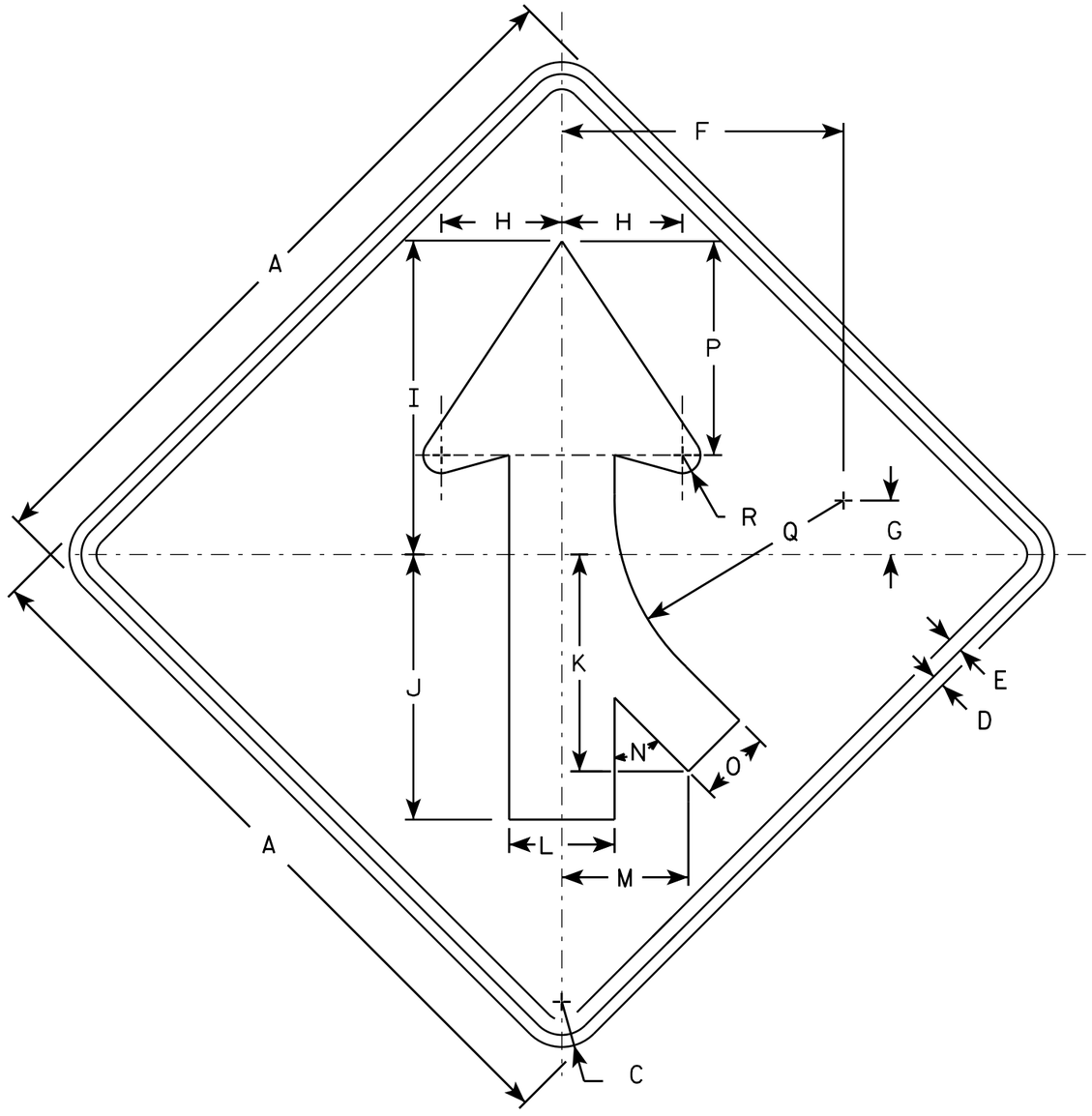
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W03-5.1

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W035.DGN PLOT DATE : 20-NOV-2013 11:32 PLOT BY : mscsja



W04-1R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2S	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
2M	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
3	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

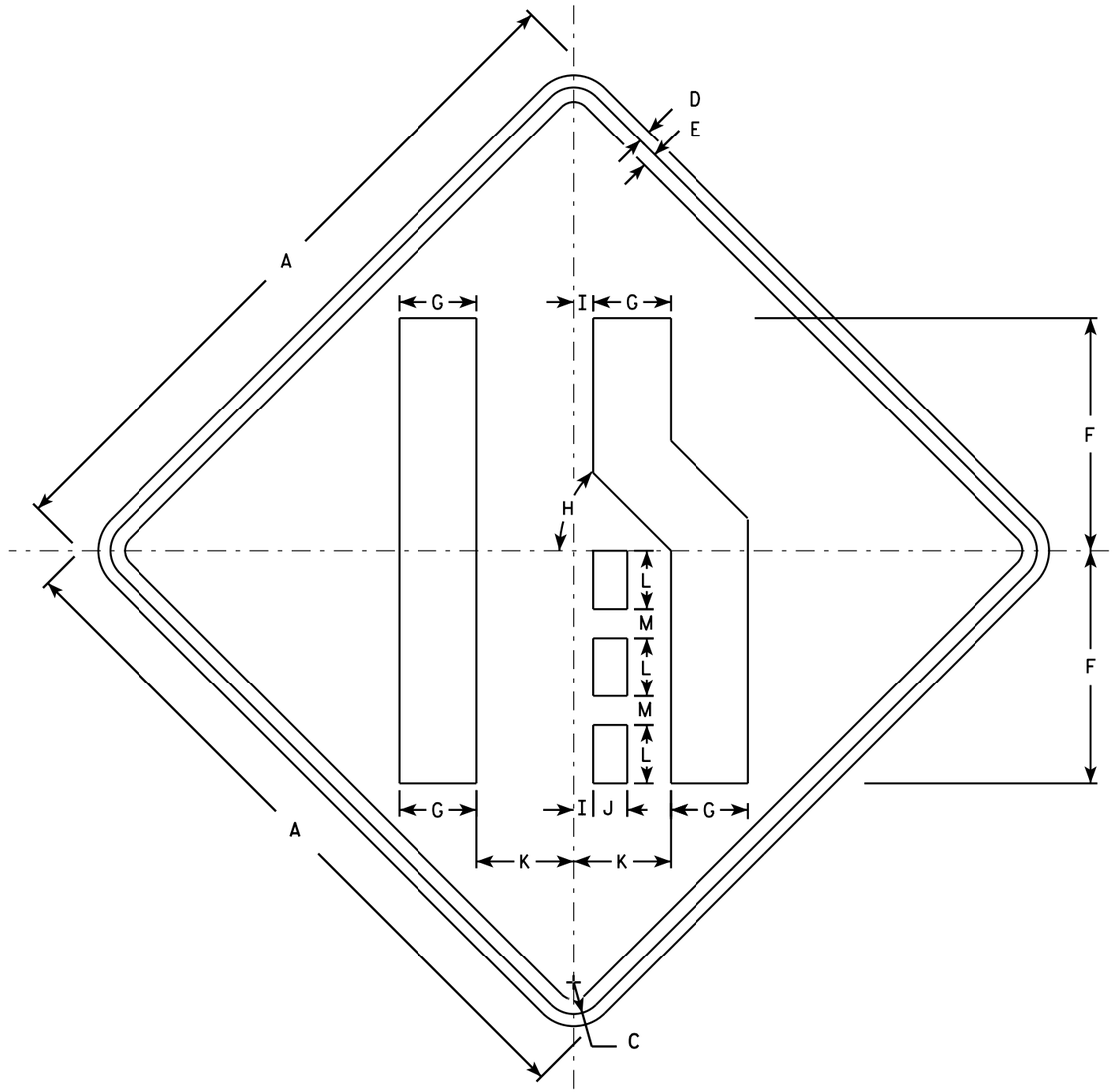
STANDARD SIGN
W04-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W04-1.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

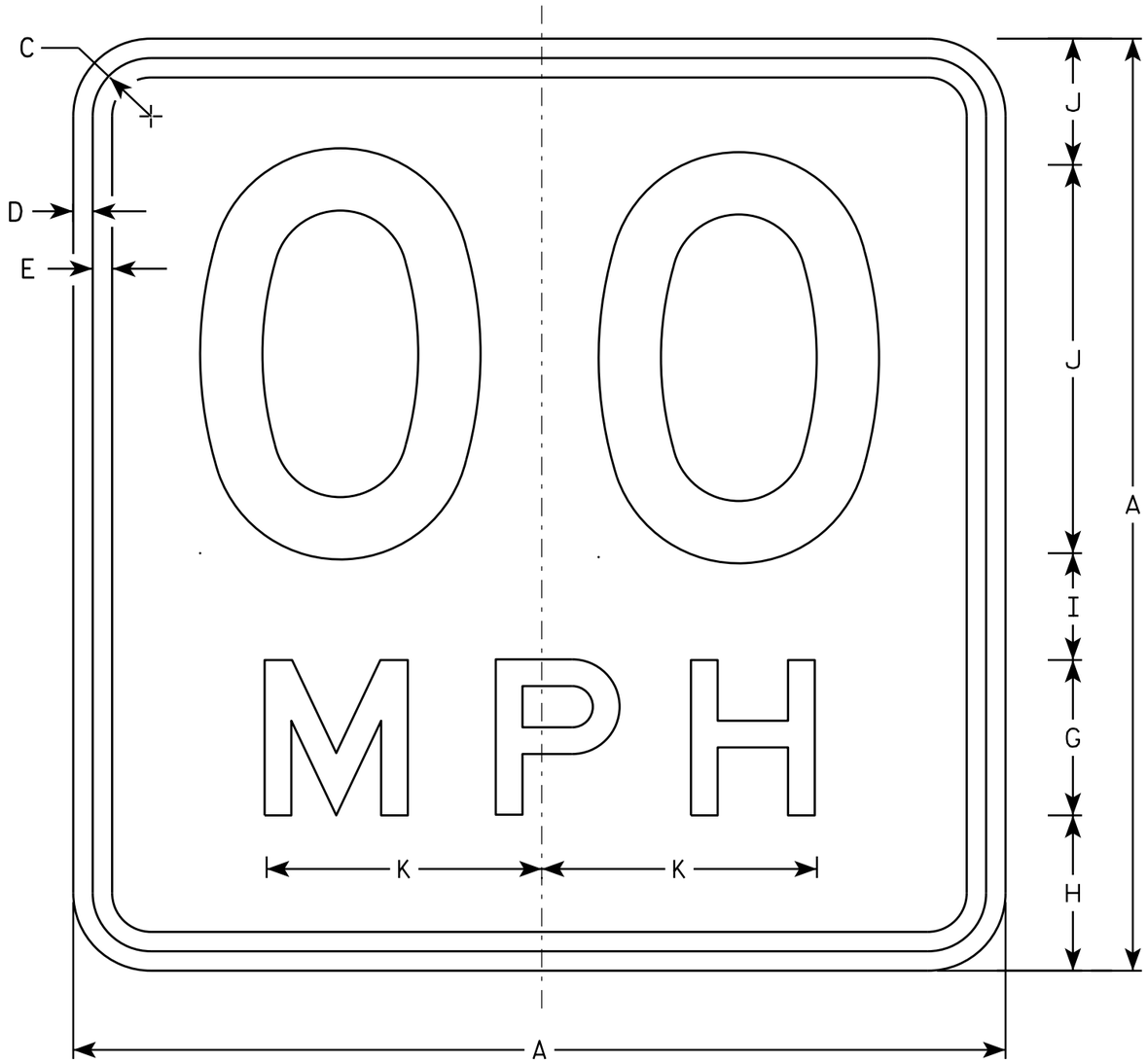
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 434 W04-2.1

PROJECT NO: | SHEET NO: E



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

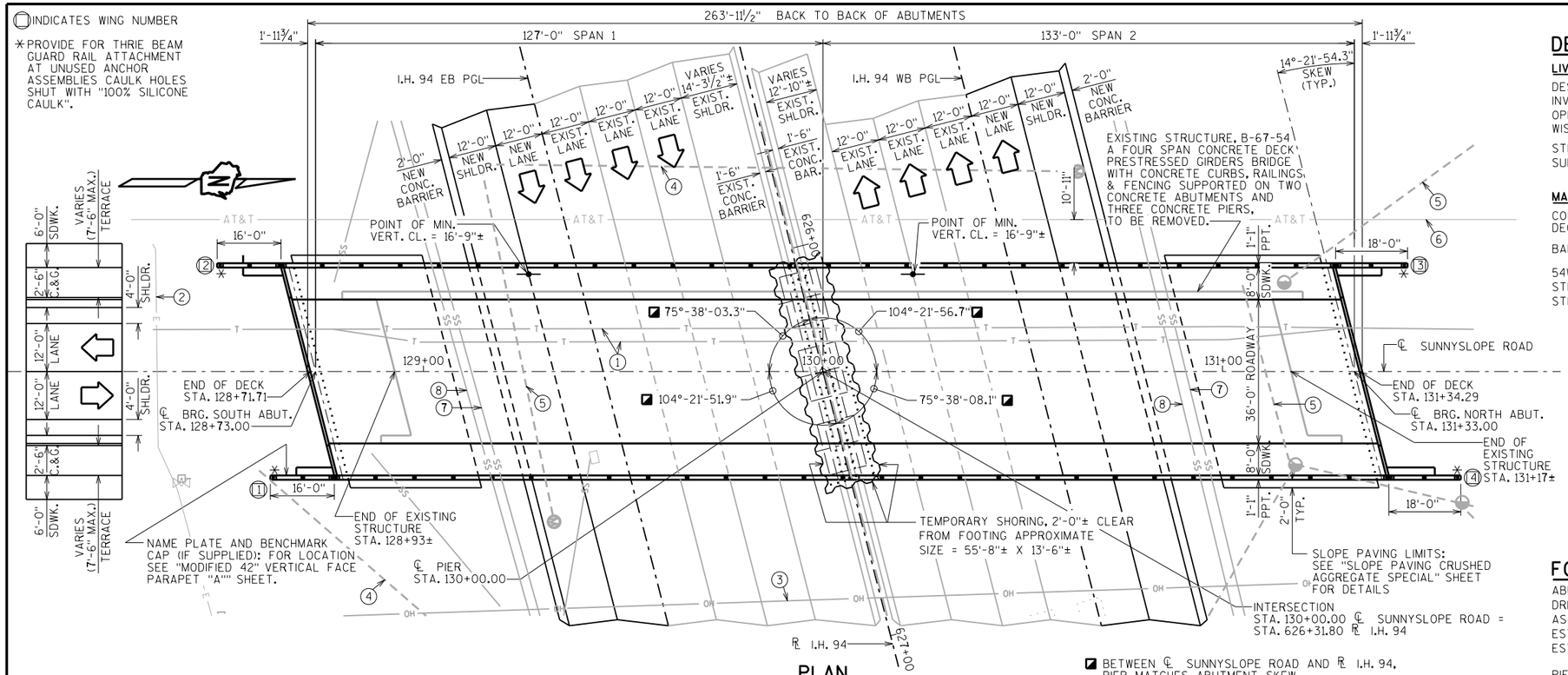
DATE 11/21/13 PLATE 435 W013-1.1

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W0131.DGN PLOT DATE : 02-DEC-2013 13:55 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.794391:1.000000
WISDOT/CADDS SHEET 42

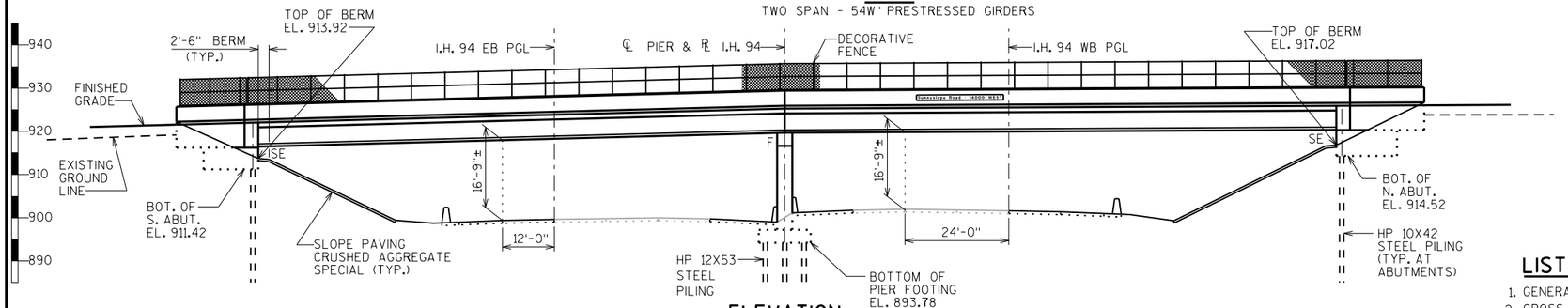
STATE PROJECT NUMBER

1060-33-82



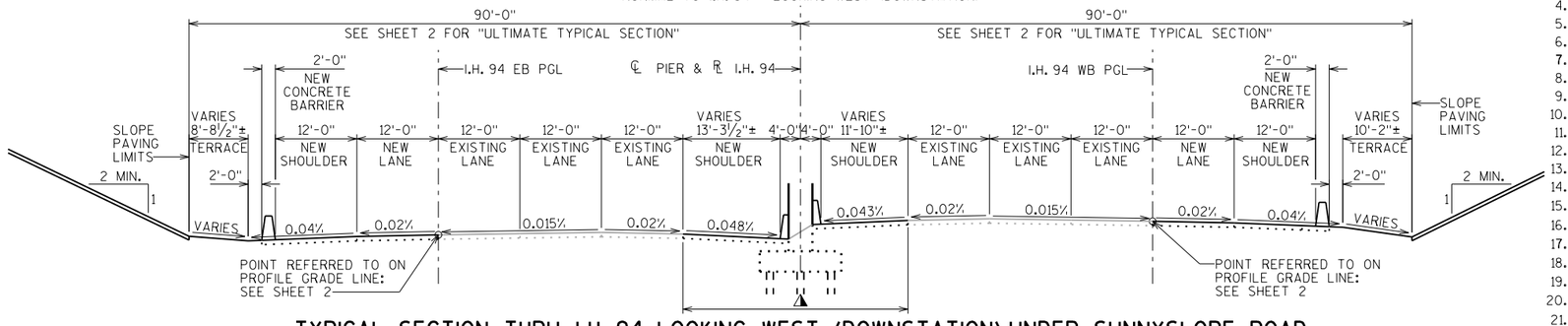
PLAN

TWO SPAN - 54W" PRESTRESSED GIRDERS



ELEVATION

NORMAL TO I.H. 94 - LOOKING WEST (DOWNSTATION)



TYPICAL SECTION THRU I.H. 94 LOOKING WEST (DOWNSTATION) UNDER SUNNYSLOPE ROAD

NORMAL TO ℄ PIER

⚠ THIS AREA OF EXISTING ROADWAY AND BARRIERS AROUND EXISTING PIER SHALL BE REDESIGNED AND RECONSTRUCTED TO ACCOMMODATE THE PIER REMOVALS AND PLACEMENT OF THE NEW PIER. (WORK SHALL BE DONE BY OTHERS - SEE ROADWAY PLANS)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING; HL-93
INVENTORY RATING FACTOR: RF=1.17
OPERATING RATING FACTOR: RF=1.56
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
DECK — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

54W" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS- 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

UTILITIES LEGEND

1. EXISTING AT&T CONDUIT TO BE REMOVED BY OTHERS
2. EXISTING WE ENERGIES ELECTRIC TO REMAIN
3. EXISTING OVERHEAD WE ENERGIES ELECTRIC TO REMAIN
4. EXISTING WISDOT FTMS CONDUIT TO BE DISCONTINUED
5. EXISTING WISDOT FTMS CONDUIT TO BE REMOVED
6. RELOCATED AT&T UTILITY
7. EXISTING WISDOT STORM SEWER TO BE REMOVED
8. PROPOSED WISDOT STORM SEWER

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING
DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE
AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 40'-0" LONG AT SOUTH ABUTMENT.
ESTIMATED 40'-0" LONG AT NORTH ABUTMENT.

PIER TO BE SUPPORTED ON HP 12X53 STEEL PILING
DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS ** PER PILE
AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 25'-0" LONG AT PIER.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

SUNNYSLOPE ROAD	I.H. 94
A.D.T. = 13,900 (2036)	A.D.T. = 159,600 (2036)
R.D.S. = 40 M.P.H.	R.D.S. = 60 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. PIER
9. PIER DETAILS
10. 54W" PRESTRESSED GIRDER DETAILS
11. 54W" PRESTRESSED GIRDER DETAILS 2
12. STEEL DIAPHRAGM
13. SUPERSTRUCTURE CROSS SECTION
14. SUPERSTRUCTURE END DIAPHRAGMS
15. SUPERSTRUCTURE DETAILS
16. FENCE DETAILS 1
17. FENCE DETAILS 2
18. FENCE DETAILS 3
19. FENCE DETAILS 4
20. MODIFIED 42" VERTICAL FACE PARAPET "A"
21. PARAPET AESTHETICS
22. AESTHETIC DETAILS
23. SLOPE PAVING CRUSHED AGGREGATE SPECIAL
24. ALERTNATE CONSTRUCTION JOINT

STRUCTURES DESIGN CONTACTS:
TIM BOROWSKI (608) 266-4547
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS — 6/9/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-67-344

SUNNYSLOPE ROAD OVER I.H. 94

COUNTY	CITY
WAUKESHA	BROOKFIELD

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
TAB	MJK	JPH/DDS	TAB

GENERAL PLAN

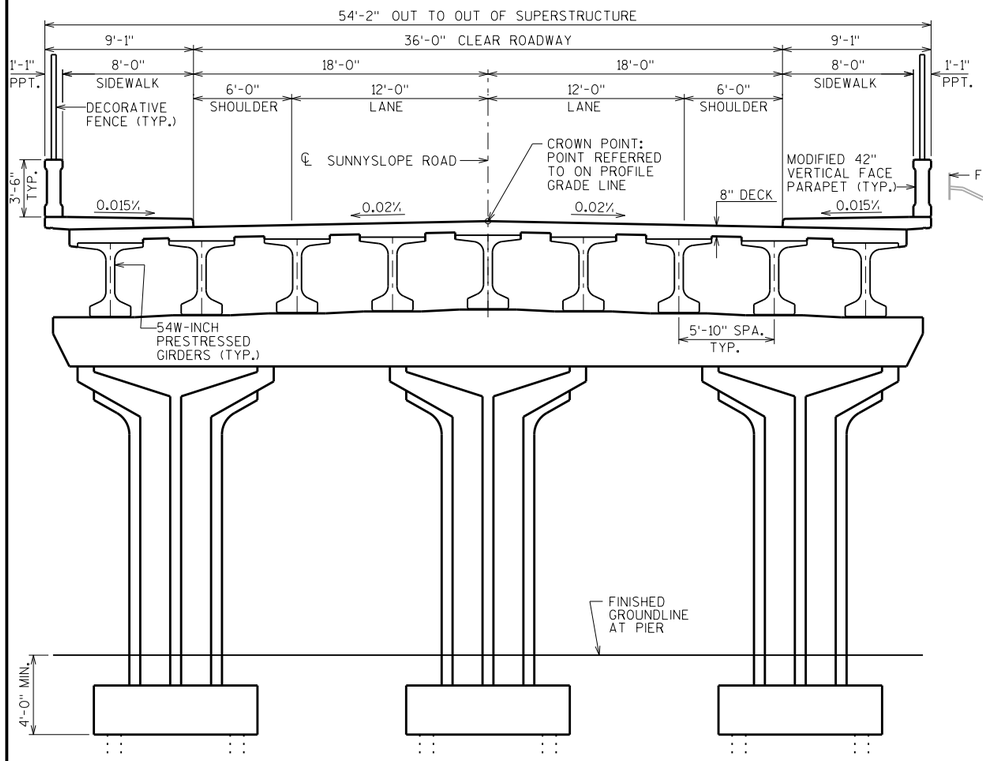
SHEET 1 OF 24

436

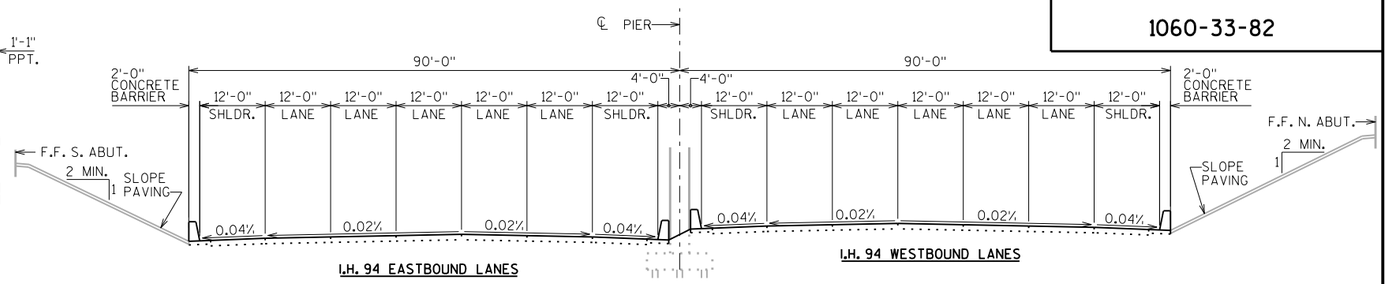
I.D. 1060-33-12A

DATE: AUGUST 2015

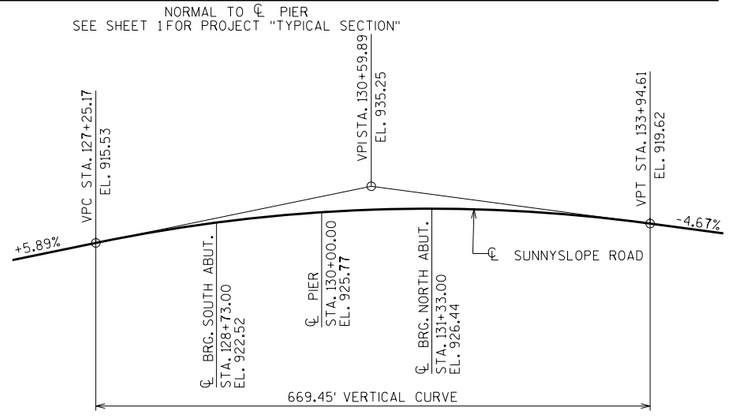
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CROSS SECTION THRU ROADWAY LOOKING NORTH (UPSTATION)



ULTIMATE TYPICAL SECTION THRU I.H. 94 LOOKING WEST UNDER SUNNYSLOPE ROAD



PROFILE GRADE LINE SUNNYSLOPE ROAD

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	PIER	NORTH ABUT.	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 130+05	LS	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-67-344	LS	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	510	155	580	1,245
502.0100	CONCRETE MASONRY BRIDGES	CY	713	61	108	73	955
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,565	3	———	4	1,572
502.3210	PIGMENTED SURFACE SEALER	SY	56	4	———	4	64
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	2,347	———	———	———	2,347
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	3,725	3,570	4,370	11,665
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	137,670	3,030	17,850	3,980	162,530
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	36	———	———	———	36
506.4000	STEEL DIAPHRAGMS B-67-344	EACH	32	———	———	———	32
511.1200	TEMPORARY SHORING B-67-344	SF	———	———	960	———	960
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	22	———	23	45
517.1010.S	CONCRETE STAINING B-67-344	SF	9,920	686	1,530	804	12,940
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	———	640	———	640	1,280
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	———	———	825	———	825
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	115	———	115	230
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	2	———	2	4
SPV.0090	FENCE DECORATIVE BRIDGE B-67-344	LF	528	32	———	36	596
SPV.0180	SLOPE PAVING CRUSHED AGGREGATE SPECIAL	SY	———	235	———	280	515
	NON-BID ITEMS						
	FILLER	SIZE	———	———	———	———	1/2" & 3/4"
	PLASTIC OR ZINC PLATE	SIZE	———	———	———	———	1/8"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

AT THE BACKFACE OF ABUTMENT AND AT PIER ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT/PIER CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIER.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK, EXPOSED SIDEWALK SURFACES, AND SURFACES OF PAVING NOTCHES.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE TOP OF PARAPETS, INCLUDING PARAPETS ON WINGS.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE SHOWN OR NOTED.

AT ABUTMENTS, HP 12X53 STEEL PILING MAY BE USED IN LIEU OF HP 10X42 STEEL PILING. PAYMENT SHALL BE BASED ON BID PRICE FOR HP 10X42 STEEL PILING.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "54W" PRESTRESSED CONCRETE GIRDER DETAILS 2" SHEET.

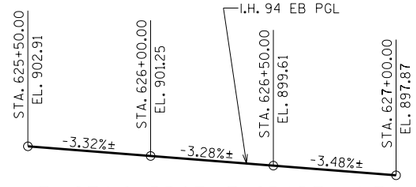
THE QUANTITY FOR "BACKFILL STRUCTURE", BID ITEM 210.0100, IS CALCULATED BASED ON THE APPLICABLE FIGURES 12.6-1 AND 12.6-2 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.

THE SLOPE OF THE FILL IN FRONT OF THE OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1, THE "SLOPE PAVING CRUSHED AGGREGATE SPECIAL" SHEET, AND ON THE "ABUTMENT DETAILS" SHEETS.

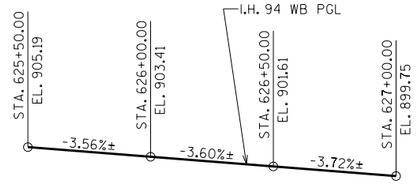
CONCRETE STAINING REQUIRED ON BRIDGE. SEE "AESTHETIC DETAILS" SHEET FOR DETAILS.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WAUKESHA COUNTY ZONE, NAD 83 (2007). ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).



EXISTING PROFILE GRADE LINE EASTBOUND I.H. 94



EXISTING PROFILE GRADE LINE WESTBOUND I.H. 94

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-344

DRAWN BY JPH/DDS | PLANS CK'D. TAB

CROSS SECTION & QUANTITIES

SHEET 2

437

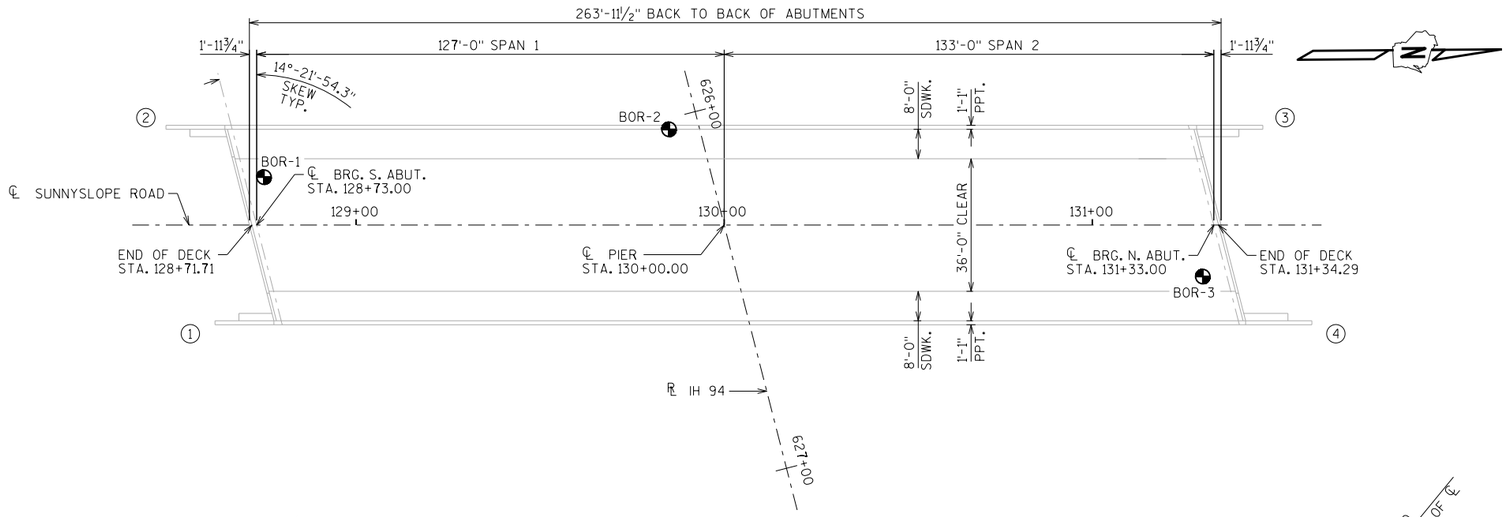
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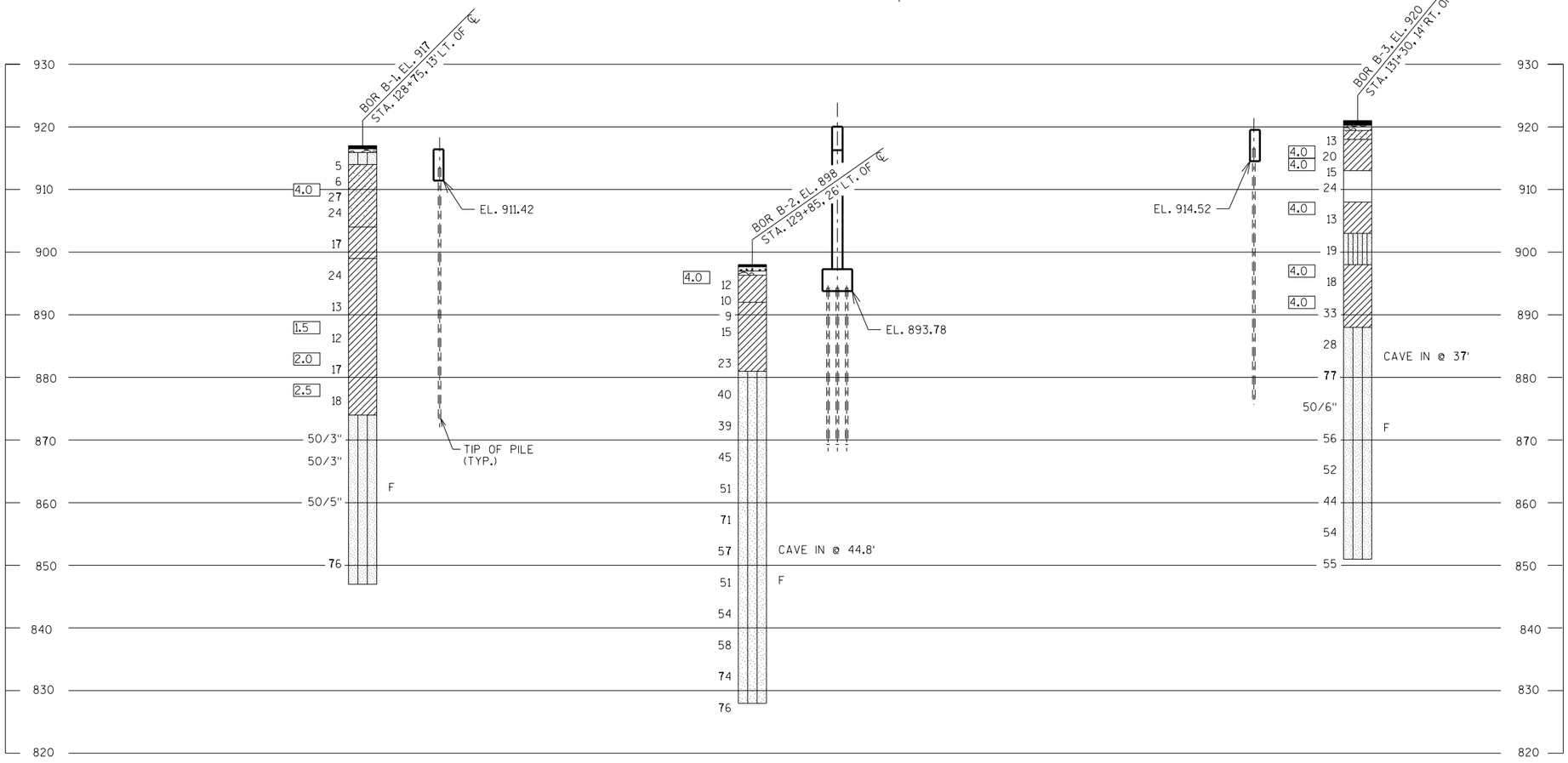
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SUNNYSLOPE ROAD OVER IH 94

(2) WING NUMBERS





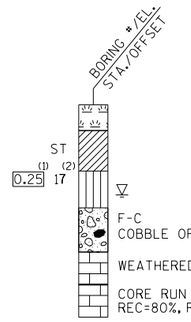
STATE PROJECT NUMBER

1060-33-82

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-344

DRAWN BY PR/DDS | PLANS CK'D. TAB

SUBSURFACE EXPLORATION

SHEET 3

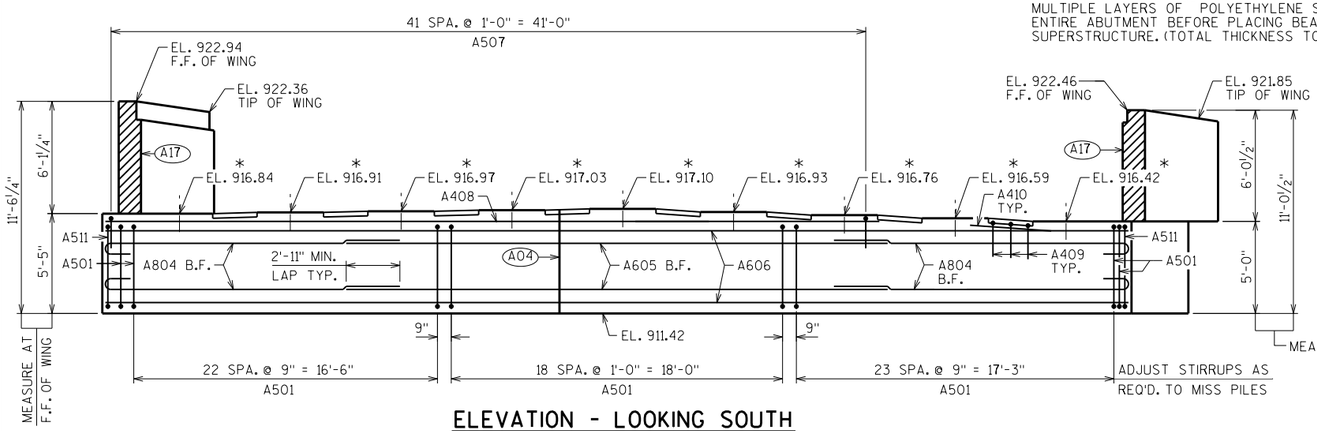
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STATE PROJECT NUMBER

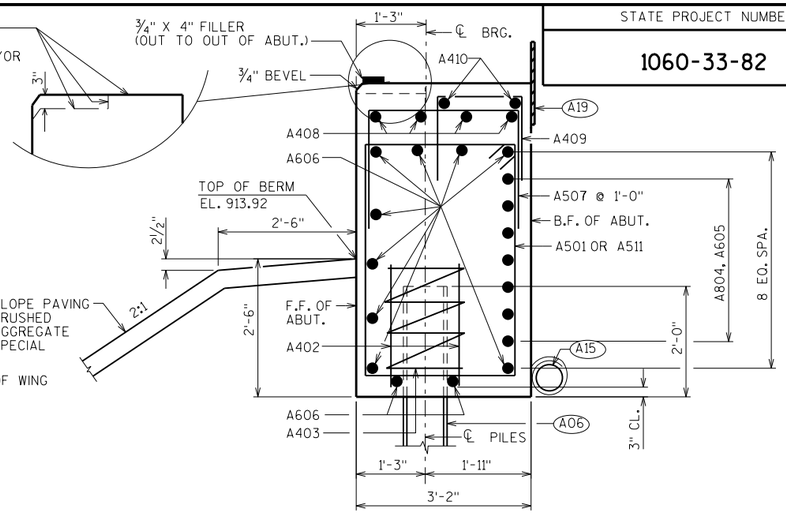
1060-33-82

* = ELEV. TAKEN AT ℄ BRG. & ℄ GIRDER INTERSECTION

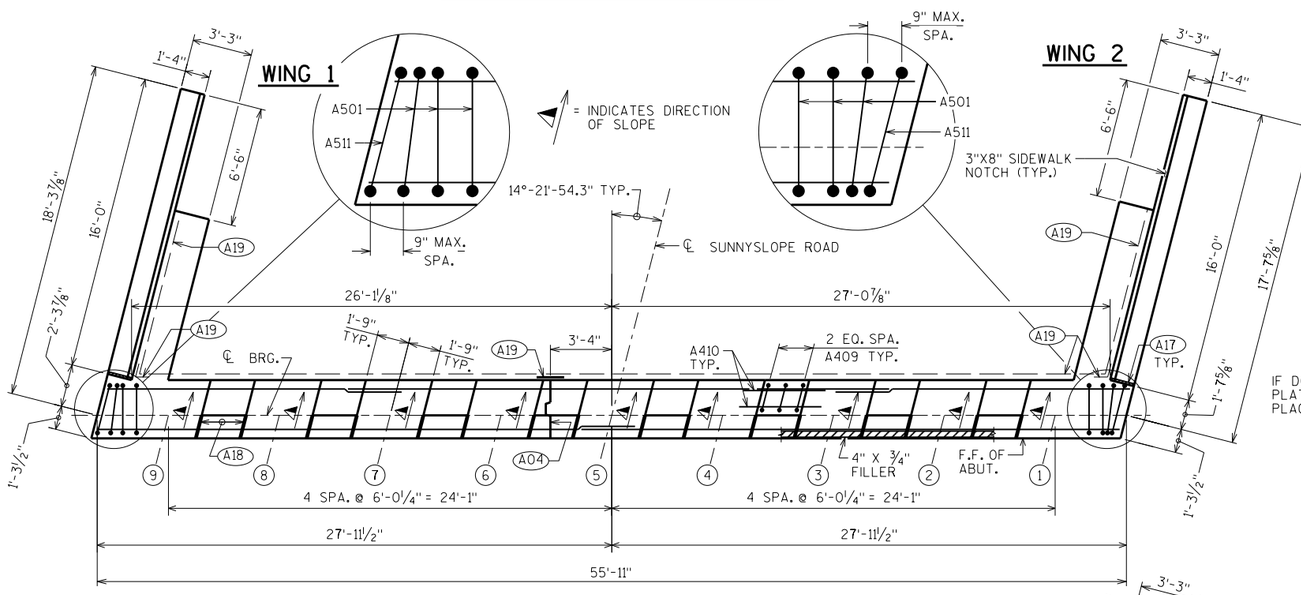


ELEVATION - LOOKING SOUTH

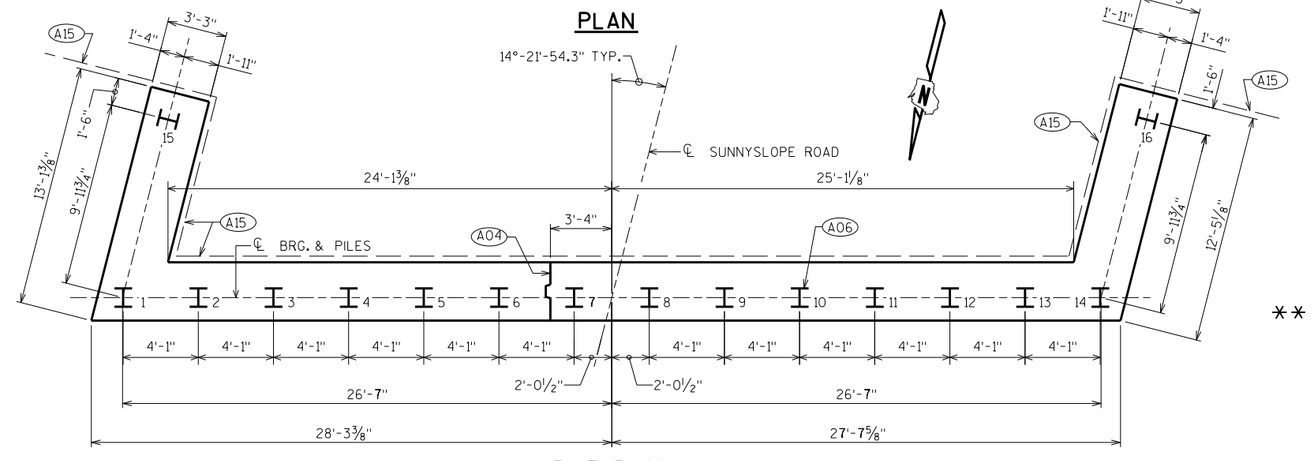
STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETING OVER ENTIRE ABUTMENT BEFORE PLACING BEARING PADS AND/OR SUPERSTRUCTURE. (TOTAL THICKNESS TO BE 0.03" MIN)



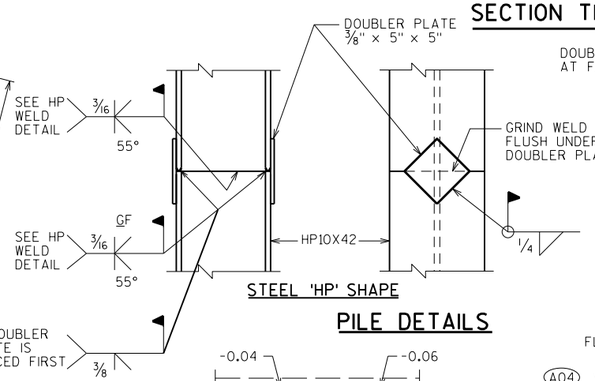
SECTION THRU BODY



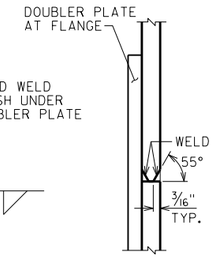
PLAN



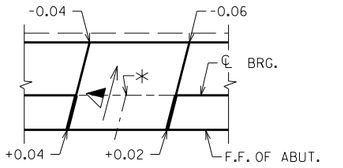
PILE PLAN



STEEL 'HP' SHAPE

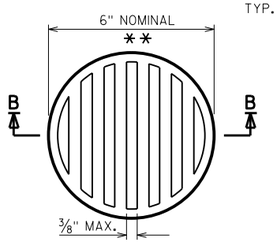


PILE DETAILS

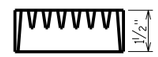


SLOPED BEAM SEAT DETAILS

TYP. - ALL BEAM SEATS



RODENT SHIELD DETAIL



SECTION B-B

** DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NOTE:
PILE SPLICE DETAILS ON "PIER DETAILS" SHALL BE USED IF HP12X53 PILES ARE USED AT ABUTMENT LOCATIONS.

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 40'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-67-344

DRAWN BY	DDS	PLANS CK'D.	TAB

SOUTH ABUTMENT

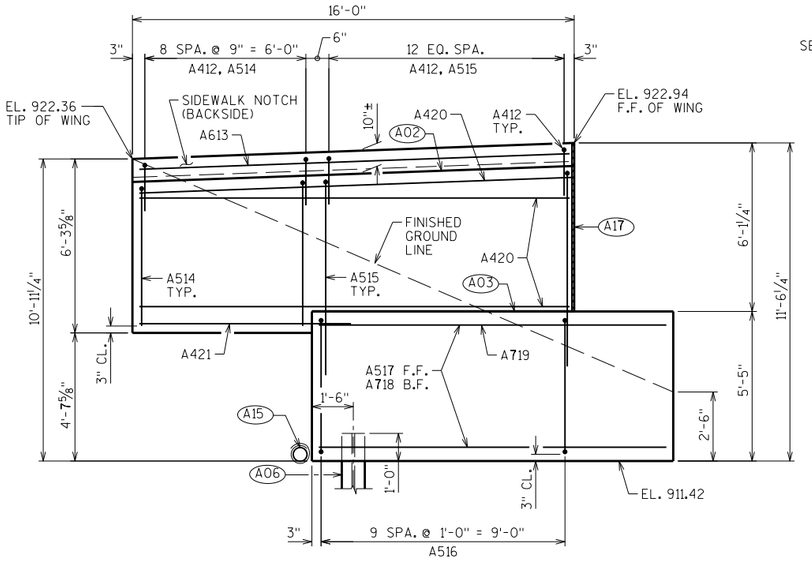
SHEET 4

439

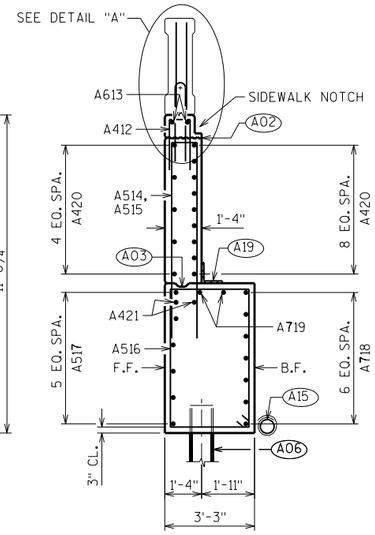
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WING 1 ELEVATION



SECTION THRU WING 1

A02 CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

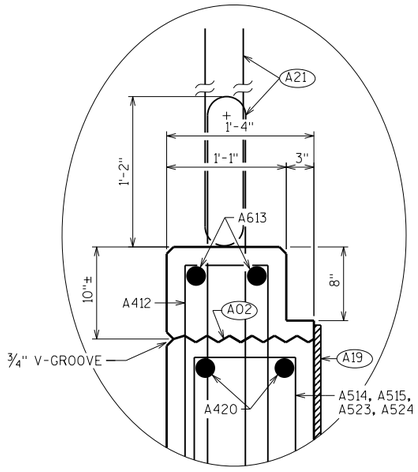
A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 40'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQ'D. SEE "SOUTH ABUTMENT" SHEET FOR DETAILS.

A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

A21 FOR PPT. BARS & DIMENSION SEE "MODIFIED 42" VERTICAL FACE PARAPET" SHEET.



DETAIL "A"

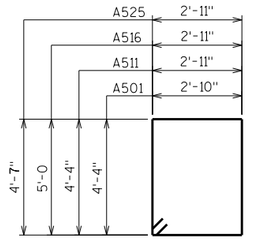
STATE PROJECT NUMBER

1060-33-82

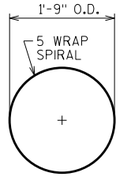
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

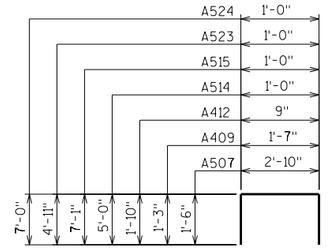
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		68	15'-0"	X		BODY - STIRRUPS
A402		28	2'-3"			PILES - 2 PER BODY PILE
A403		14	28'-0"	X		PILES - 1 PER BODY PILE
A804		14	16'-11"	X		BODY - HORIZ. - B.F.
A605		7	29'-5"			BODY - HORIZ. - B.F.
A606		11	55'-7"			BODY - HORIZ.
A507		42	5'-7"	X		BODY - VERT. - OVER GIRS. 3-9
A408		4	42'-1"			BODY - HORZ. - OVER GIRS. 3-9
A409		24	3'-11"	X		BODY - VERT. - BTWN. BEAM SEATS
A410		16	4'-6"			BODY - HORIZ. - BTWN. BEAM SEATS
A511		2	15'-2"	X		BODY - STIRRUPS - ENDS
A412	X	44	4'-3"	X		WINGS 1&2 - VERT. - TOP
A613	X	4	15'-8"			WINGS 1&2 - HORIZ. - TOP
A514	X	9	10'-9"	X		WING 1 - VERT.
A515	X	13	14'-11"	X		WING 1 - VERT.
A516	X	10	16'-6"	X		WING 1 - STIRRUP
A517	X	6	12'-8"			WING 1 - HORIZ. - F.F.
A718	X	7	11'-11"			WING 1 - HORIZ. - B.F.
A719	X	2	12'-2"			WING 1 - HORIZ.
A420	X	27	15'-8"			WINGS 1&2 - HORIZ.
A421	X	4	7'-9"			WINGS 1&2 - HORIZ. - OVERHANG
A722	X	2	12'-4"			WING 2 - HORIZ.
A523	X	9	10'-7"	X		WING 2 - VERT.
A524	X	13	14'-9"	X		WING 2 - VERT.
A525	X	10	15'-8"	X		WING 2 - STIRRUP
A526	X	6	12'-1"			WING 2 - HORIZ. - F.F.
A727	X	7	12'-7"			WING 2 - HORIZ. - B.F.



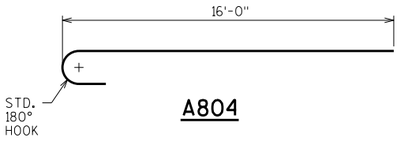
A501, A511, A516, A525



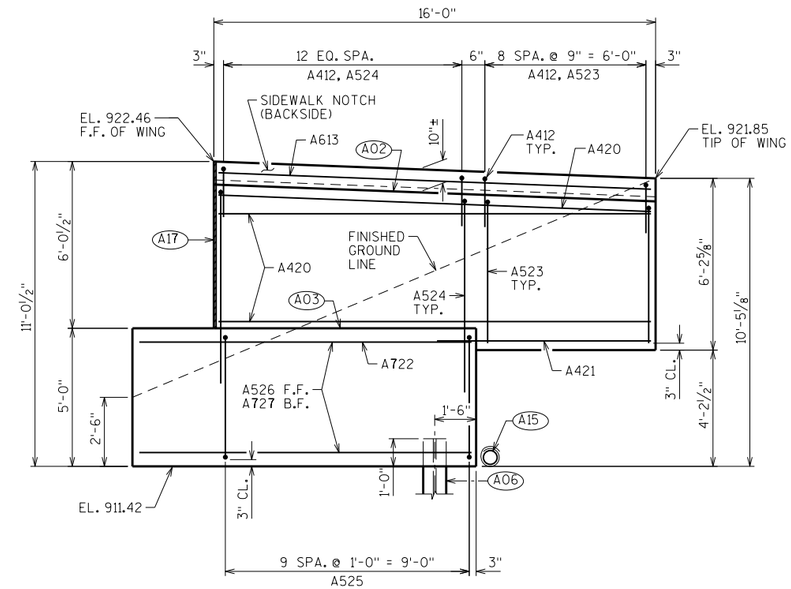
A403



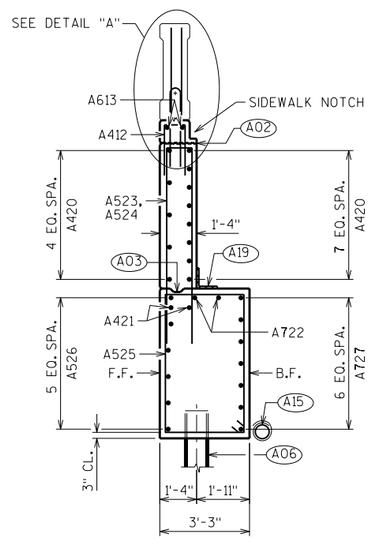
A507, A409, A412, A514, A515, A523, A524



A804



WING 2 ELEVATION



SECTION THRU WING 2

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SOUTH ABUTMENT DETAILS

SHEET 5

440

SCALE = 2.6667

8

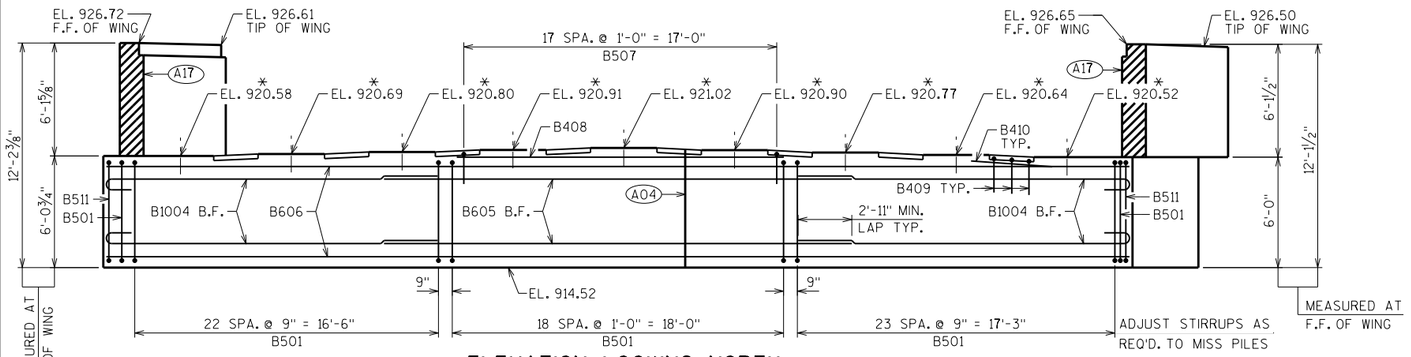
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STATE PROJECT NUMBER

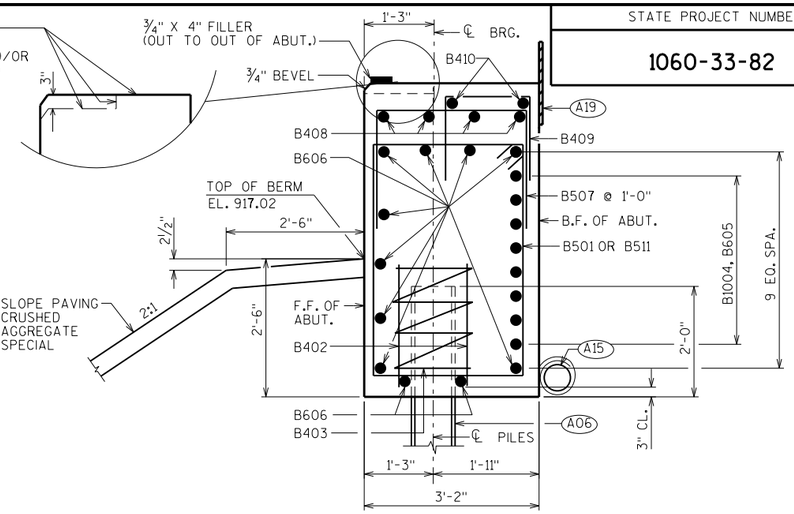
1060-33-82

* = ELEV. TAKEN AT ℄ BRG. & ℄ GIRDER INTERSECTION

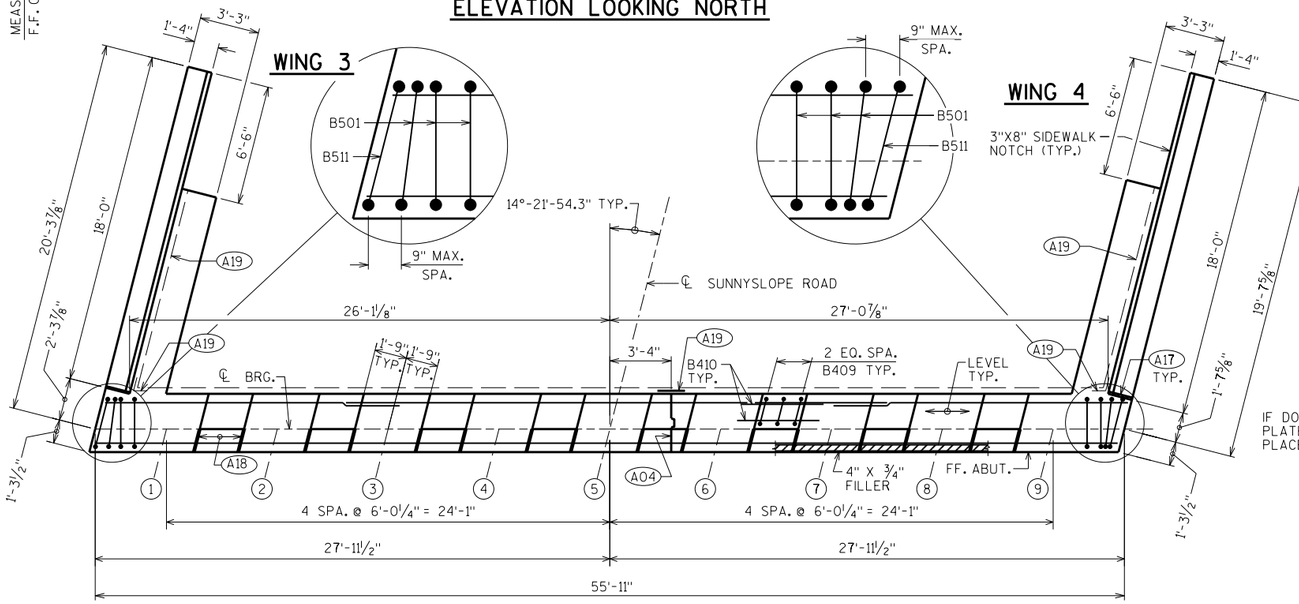
STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETING OVER ENTIRE ABUTMENT BEFORE PLACING BEARING PADS AND/OR SUPERSTRUCTURE. (TOTAL THICKNESS TO BE 0.03" MIN)



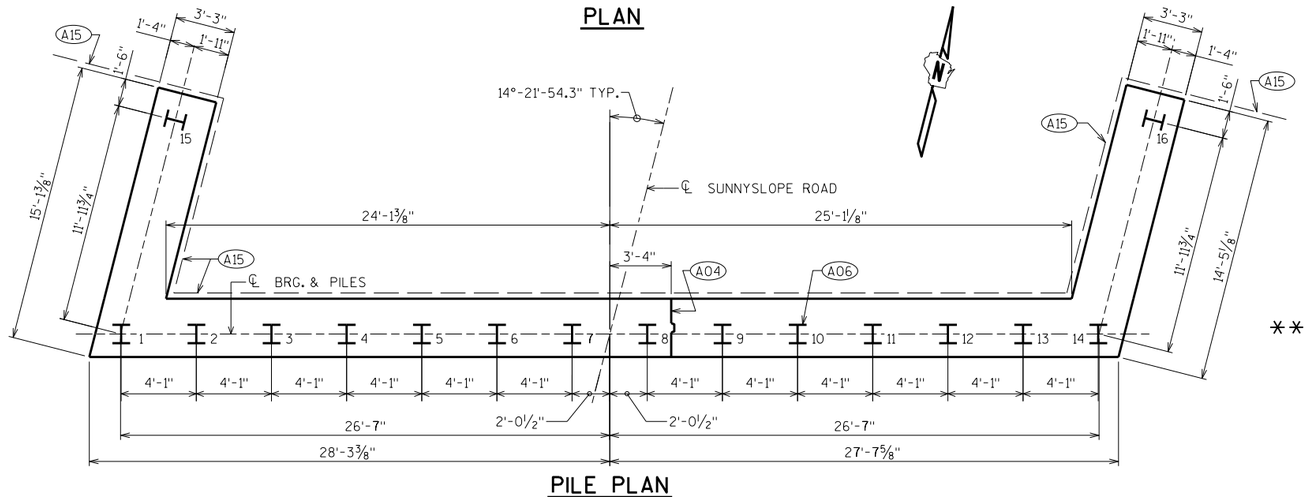
ELEVATION LOOKING NORTH



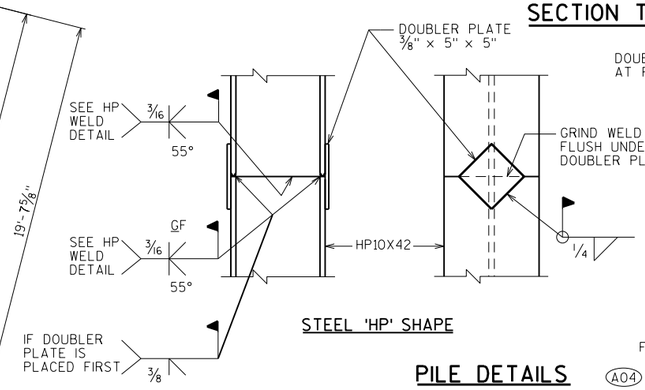
SECTION THRU BODY



PLAN



PILE PLAN



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

NOTE:
PILE SPLICE DETAILS ON "PIER DETAILS" SHALL BE USED IF HP12X53 PILES ARE USED AT ABUTMENT LOCATIONS.

PILE DETAILS

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

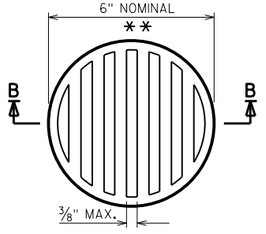
(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 40'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

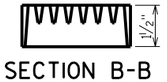
(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



RODENT SHIELD DETAIL



SECTION B-B

** DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

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NORTH ABUTMENT

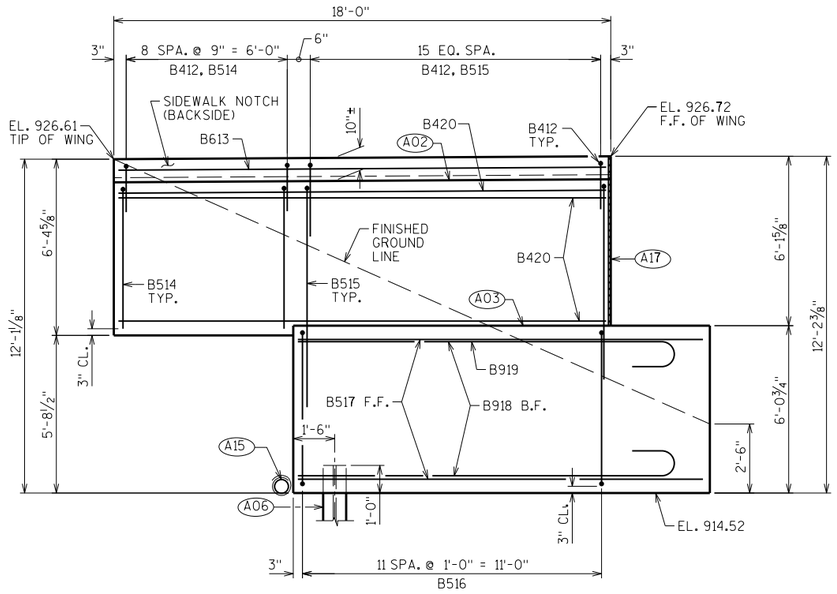
SHEET 6

441

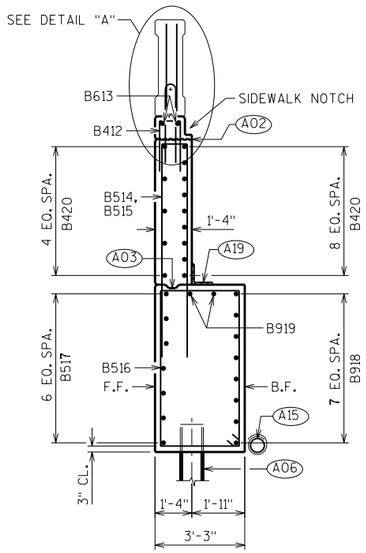
SCALE = 4

8

8



WING 3 ELEVATION



SECTION THRU WING 3

(A02) CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

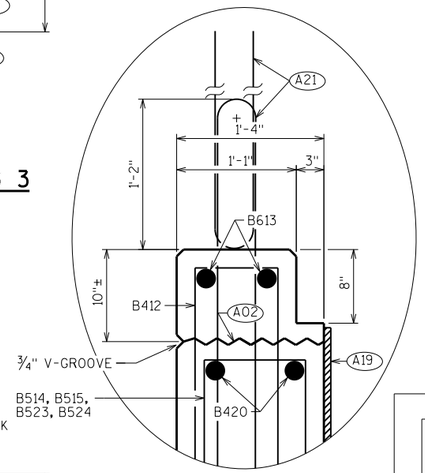
(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 40'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQ'D. SEE "NORTH ABUTMENT" SHEET FOR DETAILS.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A21) FOR PPT. BARS & DIMENSION SEE "MODIFIED 42" VERTICAL FACE PARAPET" SHEET.



DETAIL "A"

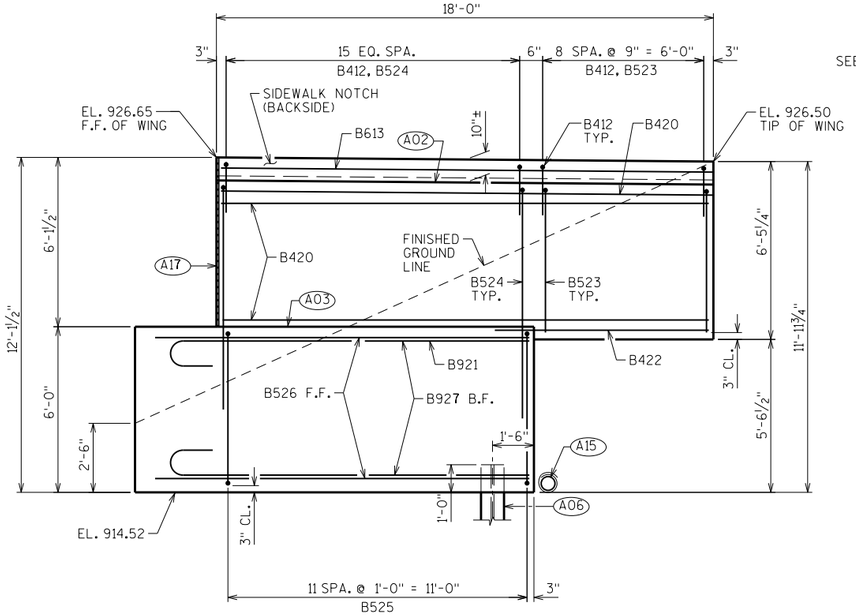
STATE PROJECT NUMBER

1060-33-82

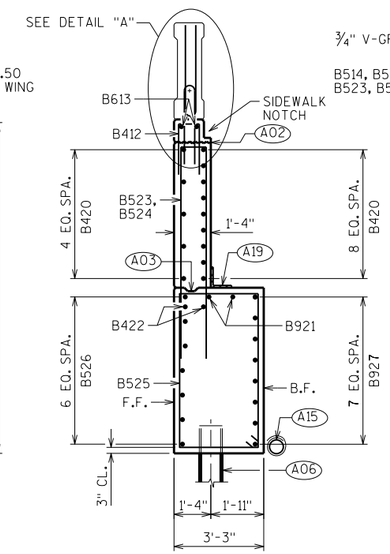
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

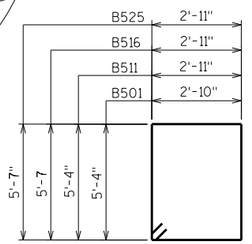
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		68	17'-0"	X		BODY - STIRRUPS
B402		28	2'-3"			PILES - 2 PER BODY PILE
B403		14	28'-0"	X		PILES - 1 PER BODY PILE
B1004		16	19'-5"	X		BODY - HORIZ. - B.F.
B605		8	25'-5"			BODY - HORIZ. - B.F.
B606		11	55'-7"			BODY - HORIZ.
B507		18	5'-7"	X		BODY - VERT. - OVER GIRS. 4-6
B408		4	17'-9"			BODY - HORZ. - OVER GIRS. 4-6
B409		24	3'-11"	X		BODY - VERT. - BTWN. BEAM SEATS
B410		16	4'-6"			BODY - HORIZ. - BTWN. BEAM SEATS
B511		2	17'-2"	X		BODY - STIRRUPS - ENDS
B412	X	50	4'-3"	X		WINGS 3&4 - VERT. - TOP
B613	X	4	17'-8"			WINGS 3&4 - HORIZ. - TOP
B514	X	9	10'-11"	X		WING 3 - VERT.
B515	X	16	14'-11"	X		WING 3 - VERT.
B516	X	12	17'-8"	X		WING 3 - STIRRUP
B517	X	7	14'-8"			WING 3 - HORIZ. - F.F.
B918	X	8	13'-4"	X		WING 3 - HORIZ. - B.F.
B919	X	2	13-9"	X		WING 3 - HORIZ.
B420	X	28	17'-8"			WINGS 3&4 - HORIZ.
B921	X	2	14'-1"	X		WING 4 - HORIZ.
B422	X	2	7'-9"			WING 4 - HORIZ. - OVERHANG
B523	X	9	11'-1"	X		WING 4 - VERT.
B524	X	16	14'-11"	X		WING 4 - VERT.
B525	X	12	17'-8"	X		WING 4 - STIRRUP
B526	X	7	14'-1"			WING 4 - HORIZ. - F.F.
B927	X	8	14'-3"	X		WING 4 - HORIZ. - B.F.



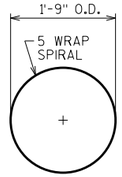
WING 4 ELEVATION



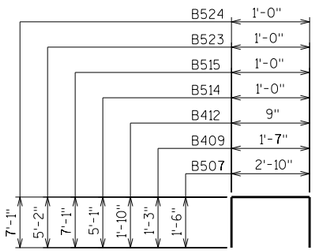
SECTION THRU WING 4



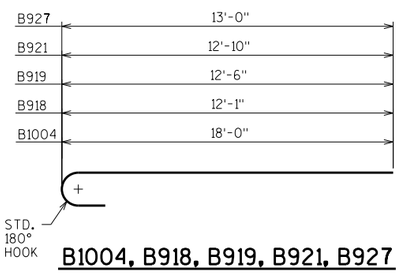
B501, B511, B516, B525



B403



B507, B409, B412, B514, B515, B523, B524



B1004, B918, B919, B921, B927

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NORTH ABUTMENT DETAILS

SHEET 7

442

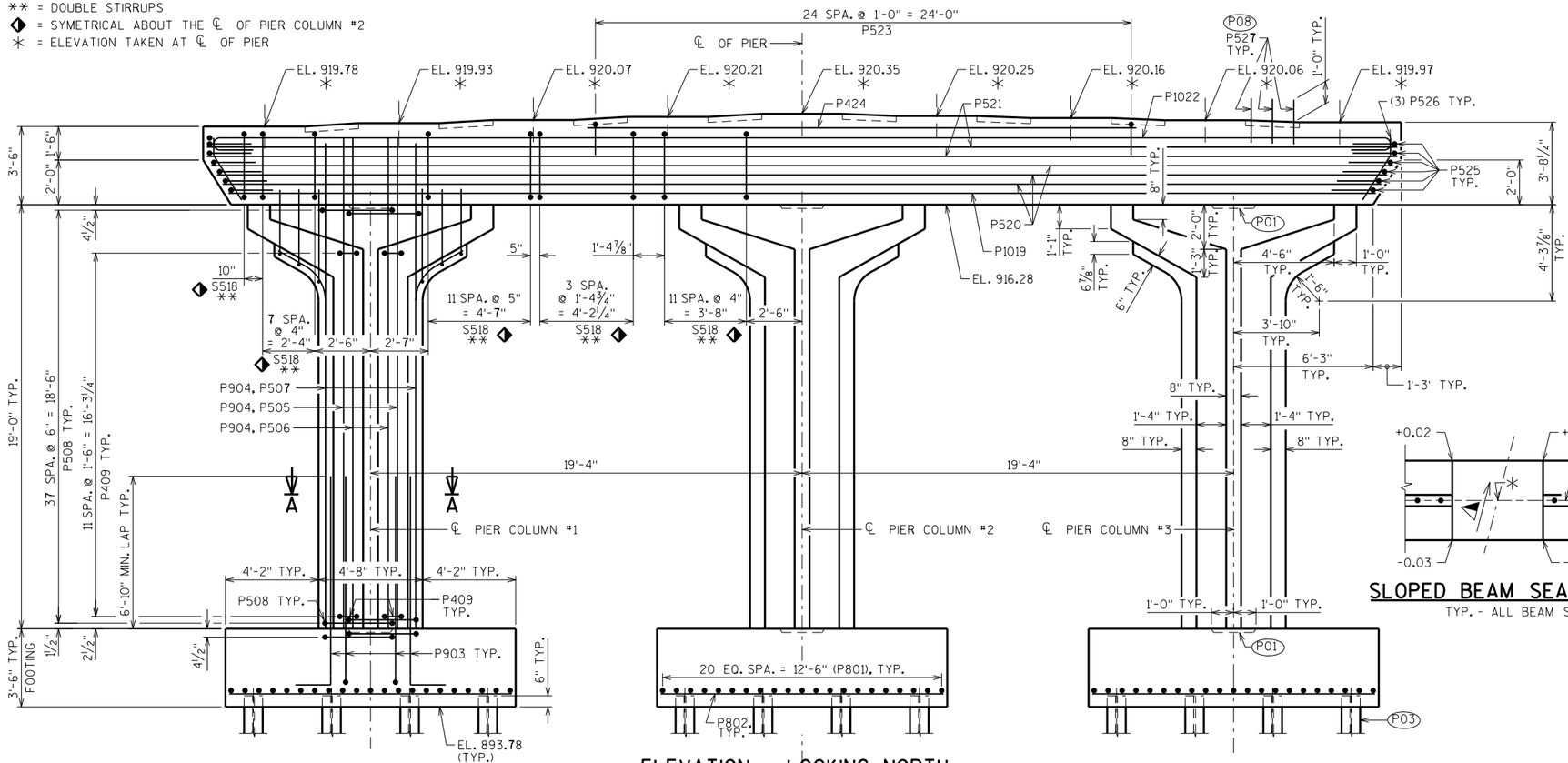
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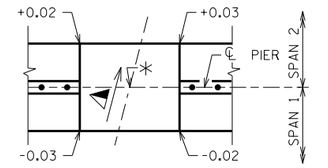
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1060-33-82

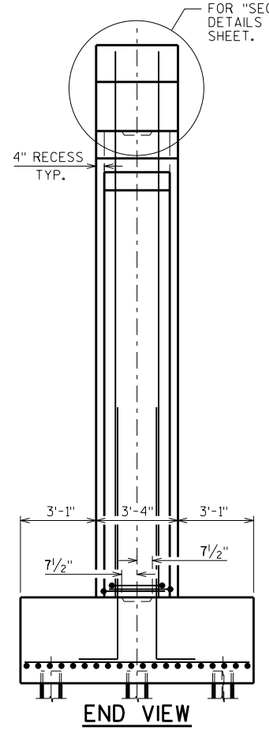
** = DOUBLE STIRRUPS
◆ = SYMETRICAL ABOUT THE ℄ OF PIER COLUMN #2
✳ = ELEVATION TAKEN AT ℄ OF PIER



ELEVATION - LOOKING NORTH

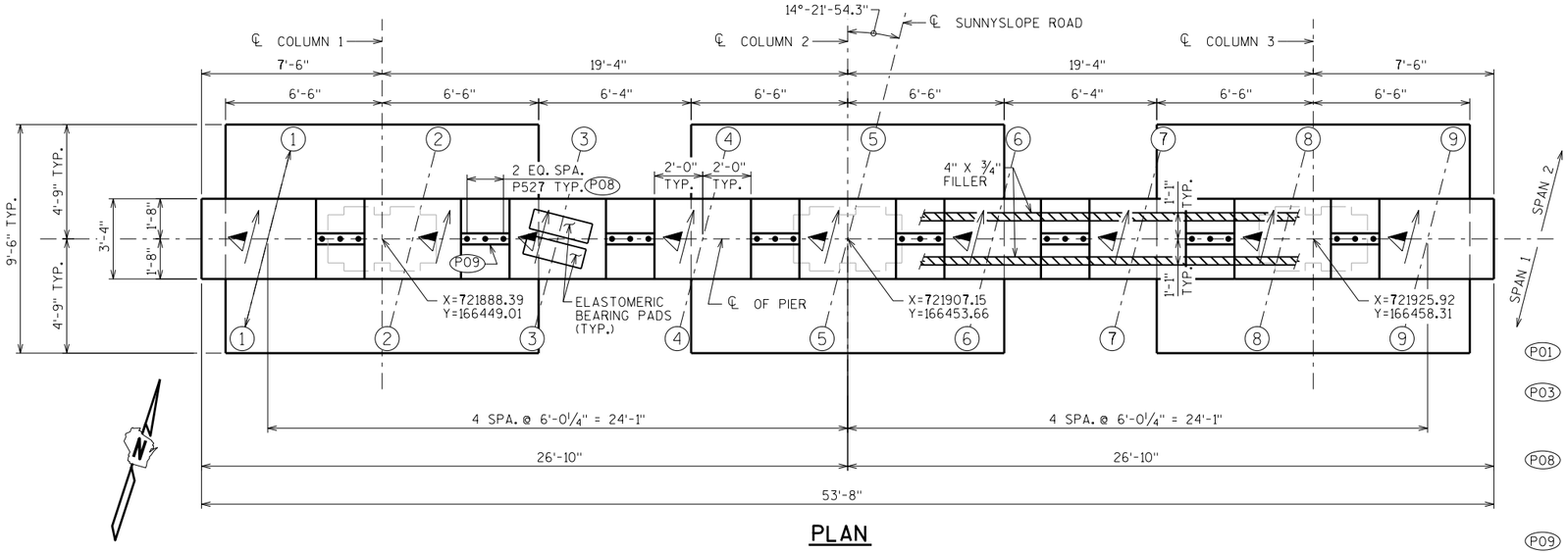


SLOPED BEAM SEAT DETAILS
TYP. - ALL BEAM SEATS

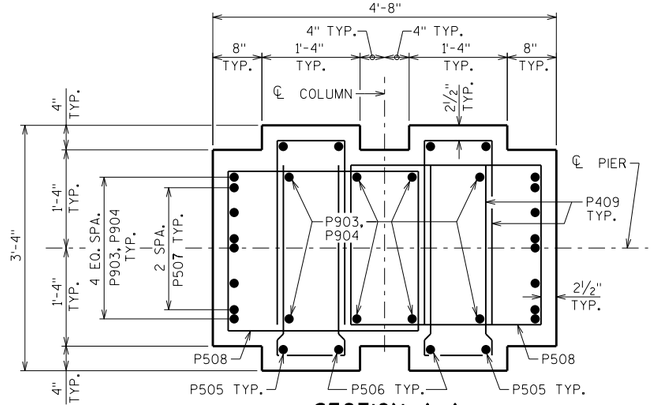


END VIEW

= DIRECTION OF BEAM SEAT SLOPE



PLAN



SECTION A-A

(P01) 1'-3" X 2'-0" X 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P03) SUPPORT PIER ON HP 12 x 53 STEEL PILING, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE.

(P08) P527 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2x6 BETWEEN BEAM SEATS.

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PIER

SHEET 8

443

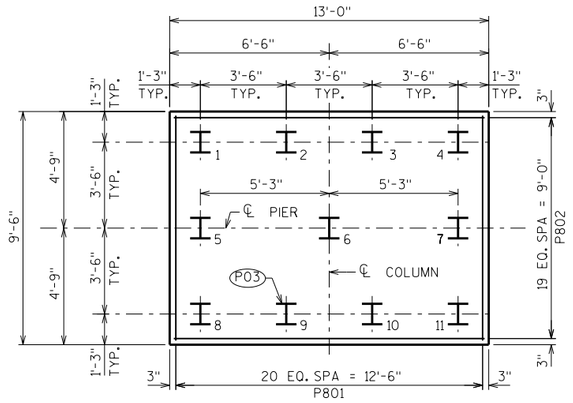
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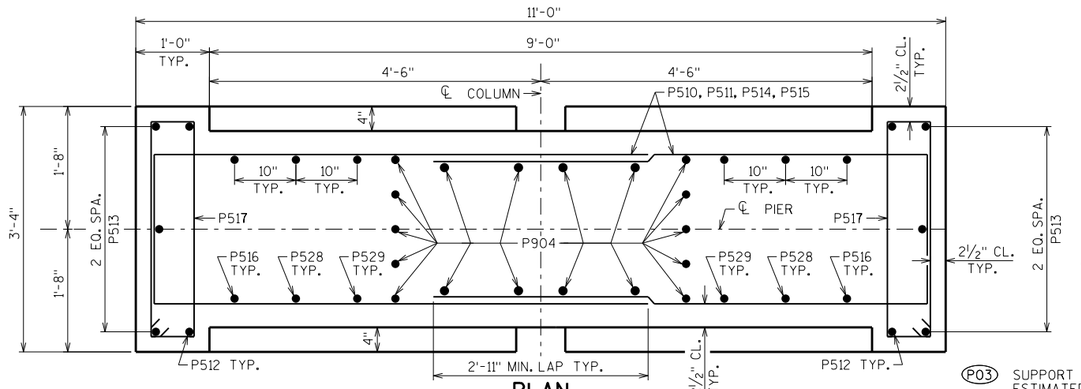
STATE PROJECT NUMBER

1060-33-82

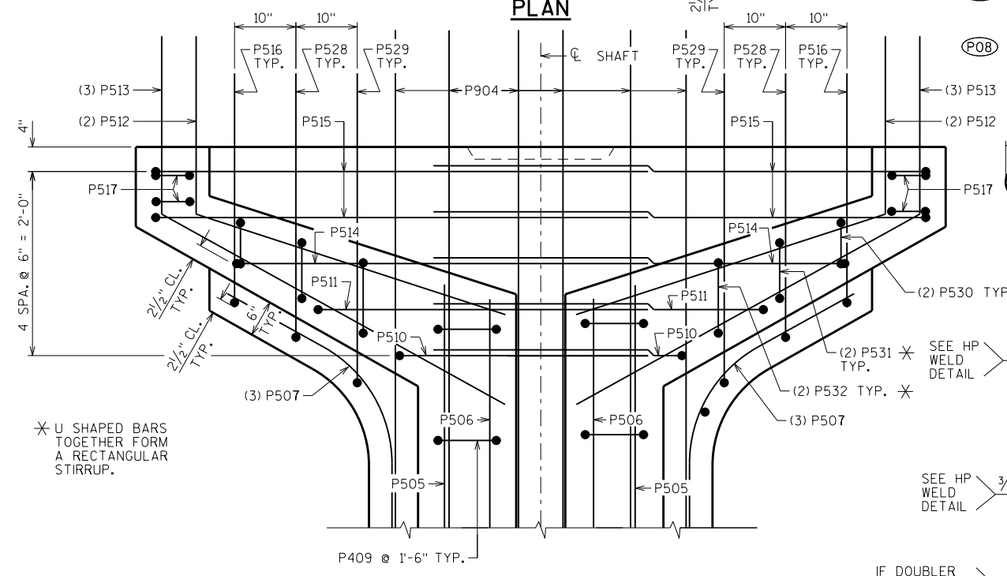


PILE/FOOTING PLAN

ALL COLUMN LOCATIONS



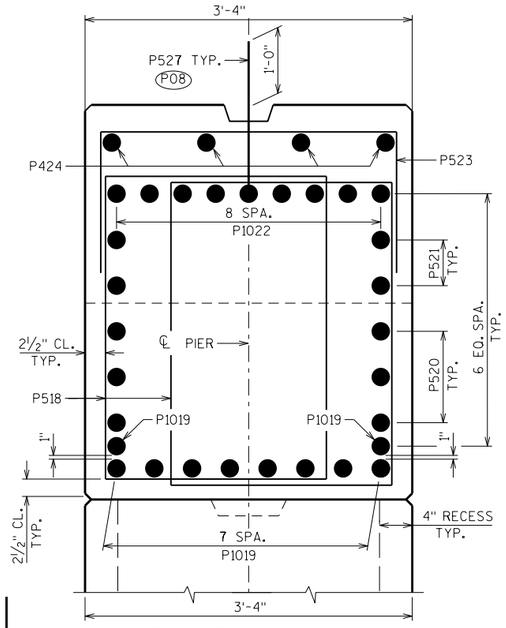
PLAN



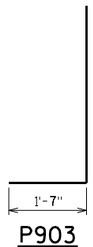
✳ U SHAPED BARS TOGETHER FORM A RECTANGULAR STIRRUP.

ELEVATION - LOOKING NORTH

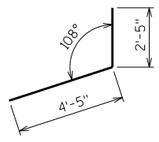
P508 BARS NOT SHOWN FOR CLARITY. SEE "PIER" SHEET FOR P508 LOCATIONS.



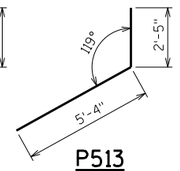
SECTION THRU PIER CAP



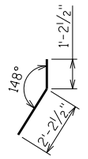
P903



P512



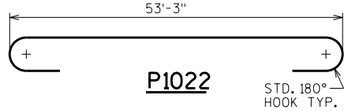
P513



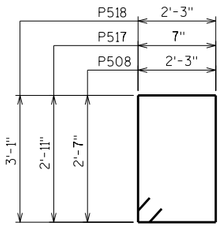
P526

P03 SUPPORT PIER ON HP 12 X 53 STEEL PILING, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE.

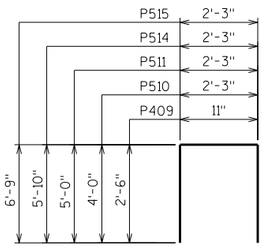
P08 P527 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)



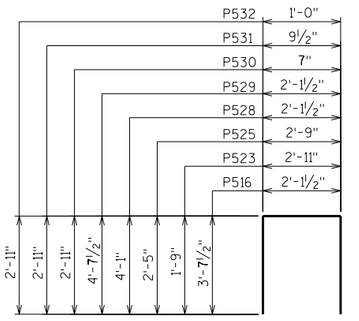
P1022



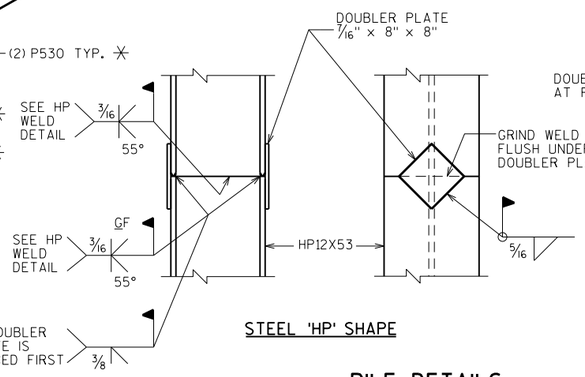
P508, P517, P518



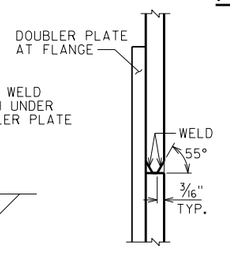
P409, P510, P511, P514, P515



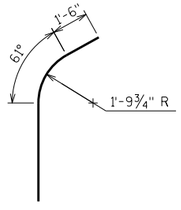
P516, P523, P525, P528, P529, P530, P531, P532



STEEL 'HP' SHAPE



HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR



P507

PILE DETAILS

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P801		63	9'-2"			FOOTING - HORIZ.
P802		60	12'-8"			FOOTING - HORIZ.
P903	X	54	11'-1"	X		FOOTING/SHAFT - VERT.
P904	X	54	22'-2"			SHAFT - VERT.
P505	X	12	17'-1"			SHAFT - VERT. - F.F. & B.F.
P506	X	12	16'-10"			SHAFT - VERT. - F.F. & B.F.
P507	X	18	18'-1"	X		SHAFT - VERT. - ENDS
P508	X	234	10'-4"	X		FOOTING/SHAFT - STIRRUPS
P409	X	144	5'-9"	X		SHAFT - HORIZ.
P510	X	6	10'-0"	X		SHAFT - HORIZ. - FLARE
P511	X	6	12'-0"	X		SHAFT - HORIZ. - FLARE
P512	X	12	6'-9"	X		SHAFT - VERT. - FLARE
P513	X	18	7'-8"	X		SHAFT - VERT. - FLARE
P514	X	6	13'-8"	X		SHAFT - HORIZ. - FLARE
P515	X	12	15'-6"	X		SHAFT - HORIZ. - FLARE
P516	X	6	9'-2"	X		SHAFT/CAP - VERT. - FLARE
P517	X	12	7'-8"	X		SHAFT - HORIZ. - FLARE
P518	X	148	9'-4"	X		CAP - STIRRUPS
P1019	X	10	50'-11"			CAP - HORIZ. - BOTTOM
P520	X	6	51'-7"			CAP - HORIZ. - SIDES
P521	X	4	53'-3"			CAP - HORIZ. - SIDES
P1022	X	9	56'-1"	X		CAP - HORIZ. - TOP
P523	X	25	6'-2"	X		CAP - VERT. - TOP
P424	X	4	24'-6"			CAP - HORIZ. - TOP
P525	X	12	7'-4"	X		CAP - HORIZ. - ENDS
P526	X	6	3'-5"	X		CAP - VERT. - ENDS
P527	X	24	2'-0"			CAP - VERT. - BETWEEN BEAM SEATS
P528	X	6	10'-1"	X		SHAFT/CAP - VERT. - FLARE
P529	X	6	11'-2"	X		SHAFT/CAP - VERT. - FLARE
P530	X	12	6'-2"	X		SHAFT - VERT. - FLARE
P531	X	12	6'-4"	X		SHAFT - VERT. - FLARE
P532	X	12	6'-7"	X		SHAFT - VERT. - FLARE

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PIER DETAILS

SHEET 9

444

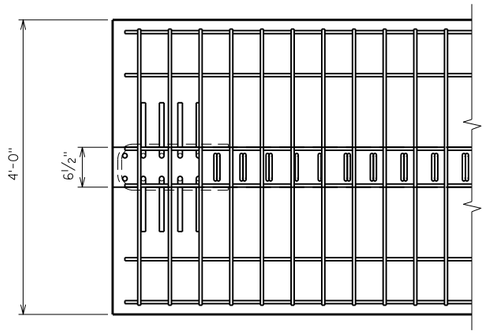
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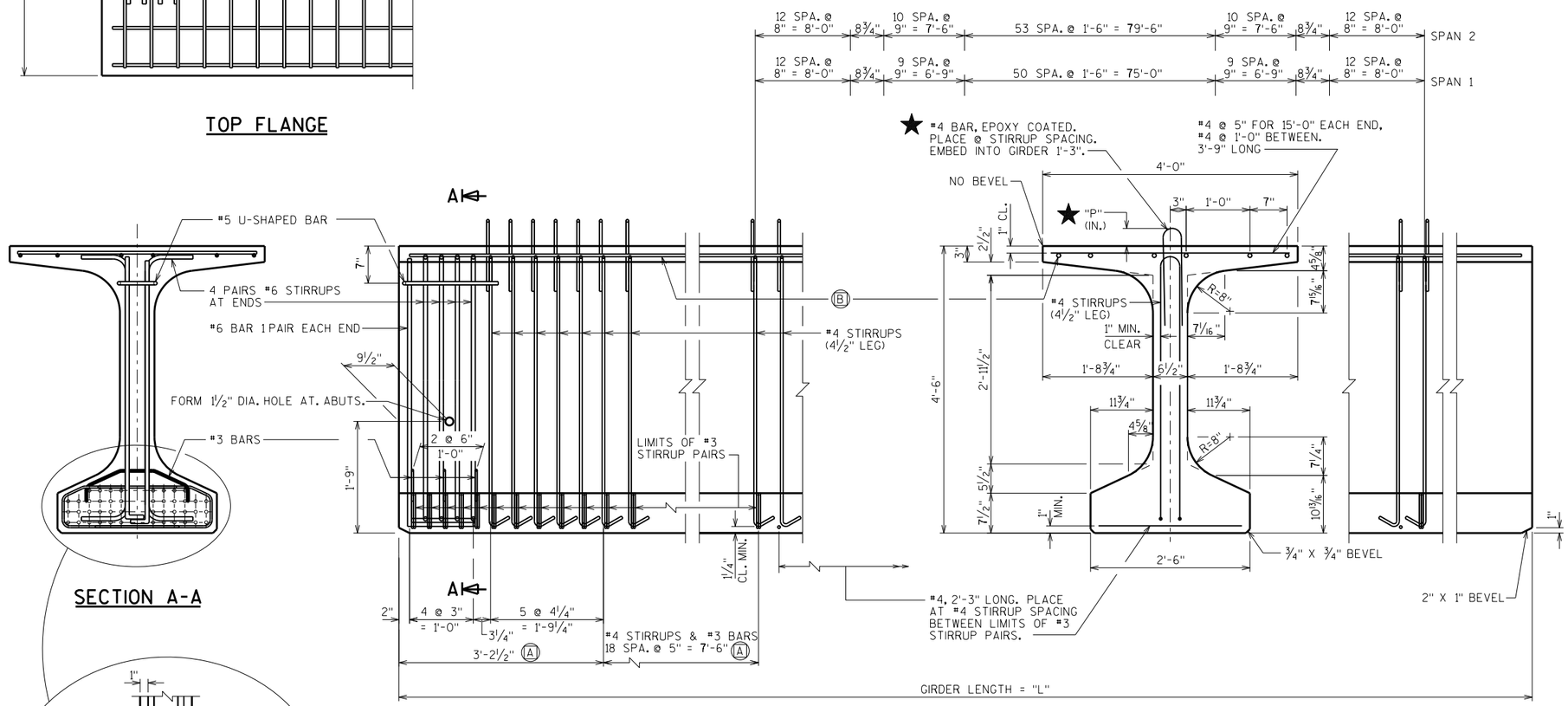
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STATE PROJECT NUMBER

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TOP FLANGE



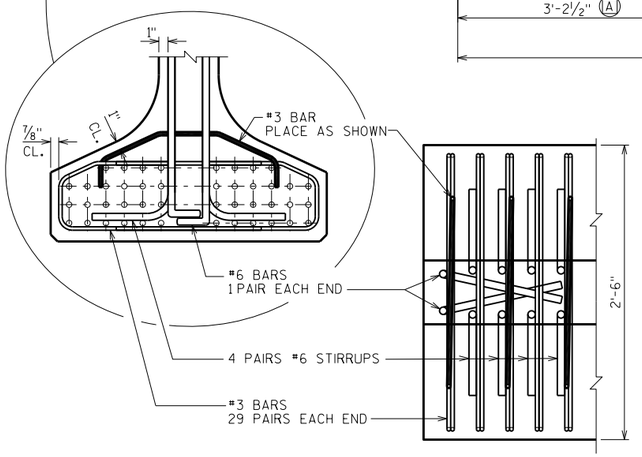
SECTION A-A

SIDE VIEW & TYP. SECTION IN SPAN

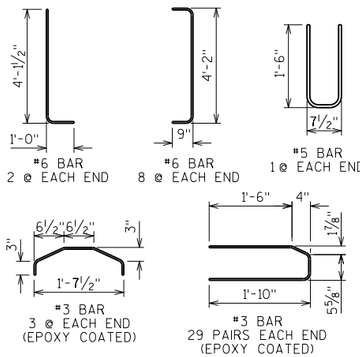
Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

★ STIRRUP PROJECTION VARIES OVER THE LENGTH OF THE GIRDER. SEE "GIRDER DATA" FOR LOCATIONS AND HEIGHTS.



BOTTOM FLANGE



NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE 0.6" DIA.-7 WIRE LOW-RELAXATION STRANDS WITH AN UNLIMATE STRENGTH OF 270,000 psi.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

⚹ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" IST ¼ OF GIRDER	"P" MID ½ OF GIRDER	"P" END ¼ 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.) ⚹
1	ALL	127.38	0.8	1.5	2.0	2.3	2.4	2.3	1.9	1.4	0.7	8000	8	9	8	0.6	38	6800	49.0	16.0	19.0	5.0		
2	ALL	133.38	0.9	1.7	2.4	2.8	3.0	2.9	2.5	1.8	1.0	8000	8	9	8	0.6	42	6800	49.0	16.0	19.0	5.0		

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54W" PRESTRESSED GIRDER DETAILS

SHEET 10

445

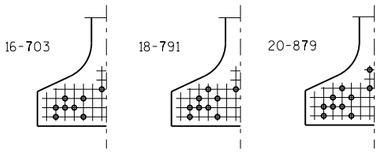
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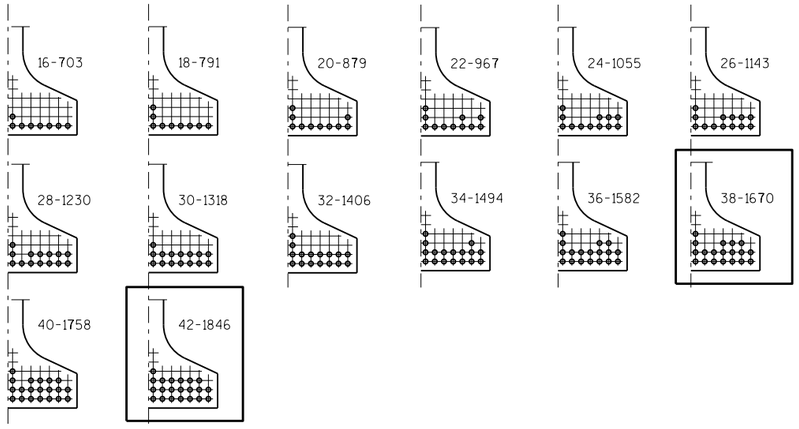
STATE PROJECT NUMBER

1060-33-82



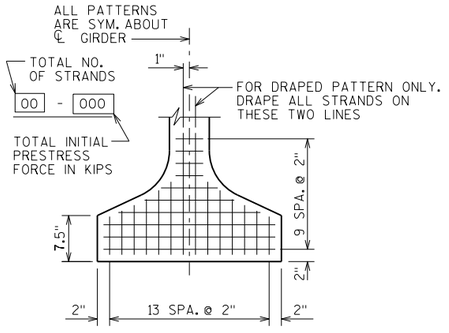
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

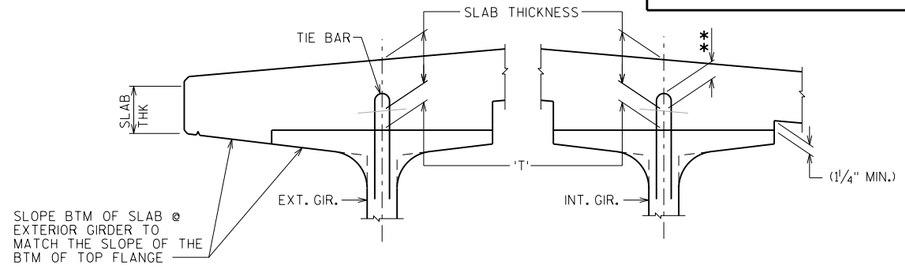


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



SLAB HAUNCH DETAIL

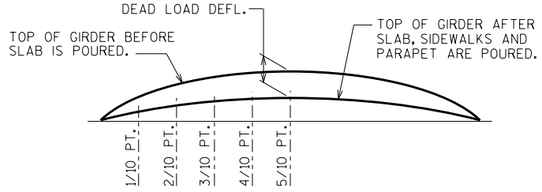
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

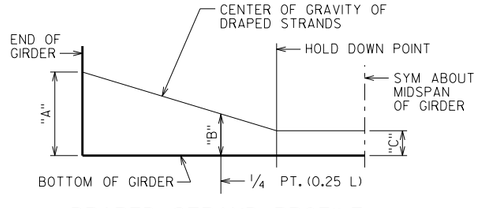
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

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 4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3.91
2	4.68

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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54W" PRESTRESSED GIRDER DETAILS 2

SHEET 11

446

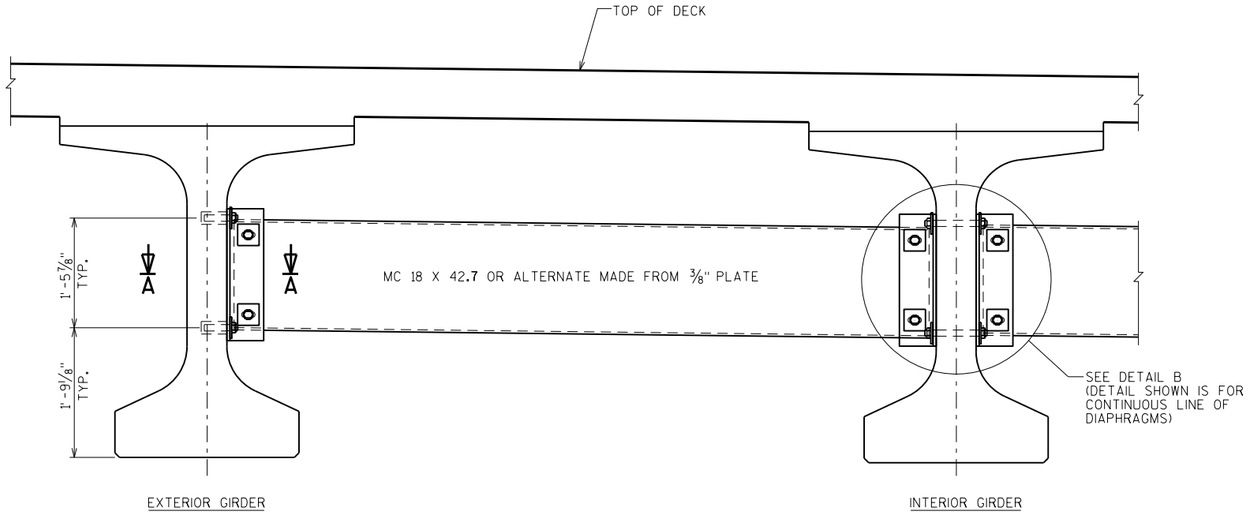
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PART TRANSVERSE SECTION AT DIAPHRAGM

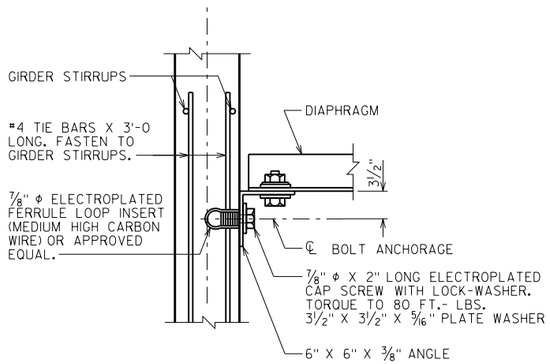
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-67-344", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

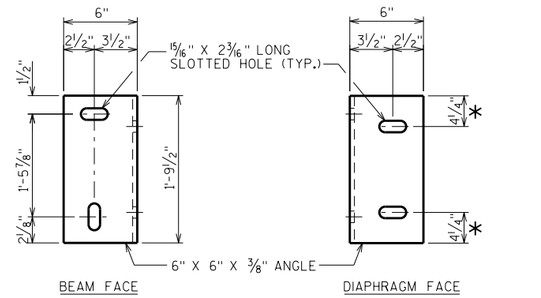
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

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.



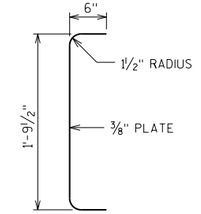
SECTION A-A

(FOR EXTERIOR ATTACHMENT)

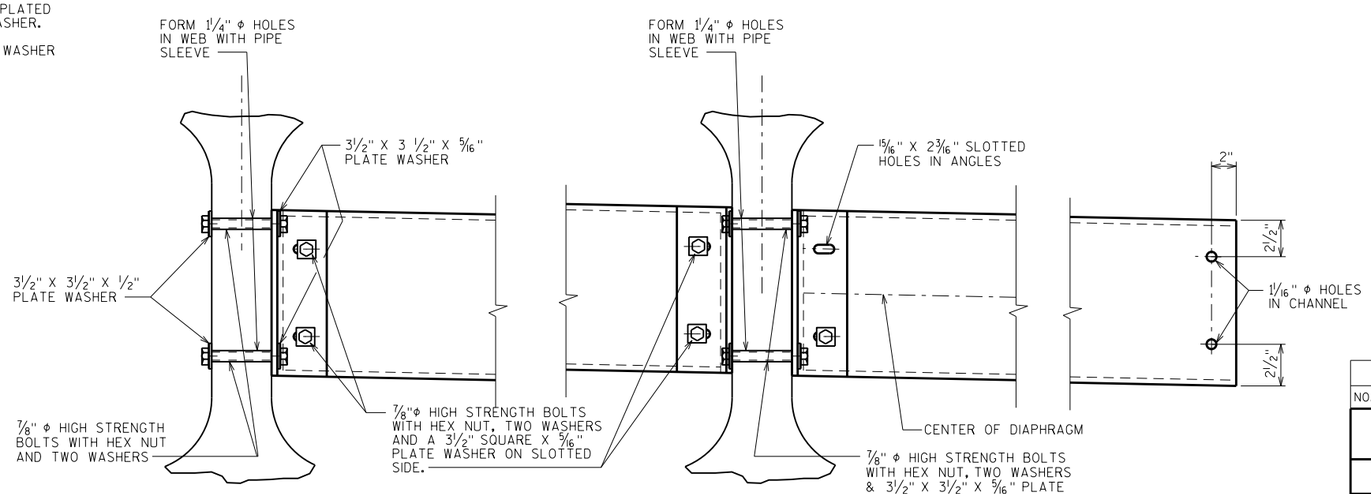


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



SECTION THRU ALTERNATE DIAPHRAGM



DETAIL B

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STEEL DIAPHRAGM

SHEET 12

447

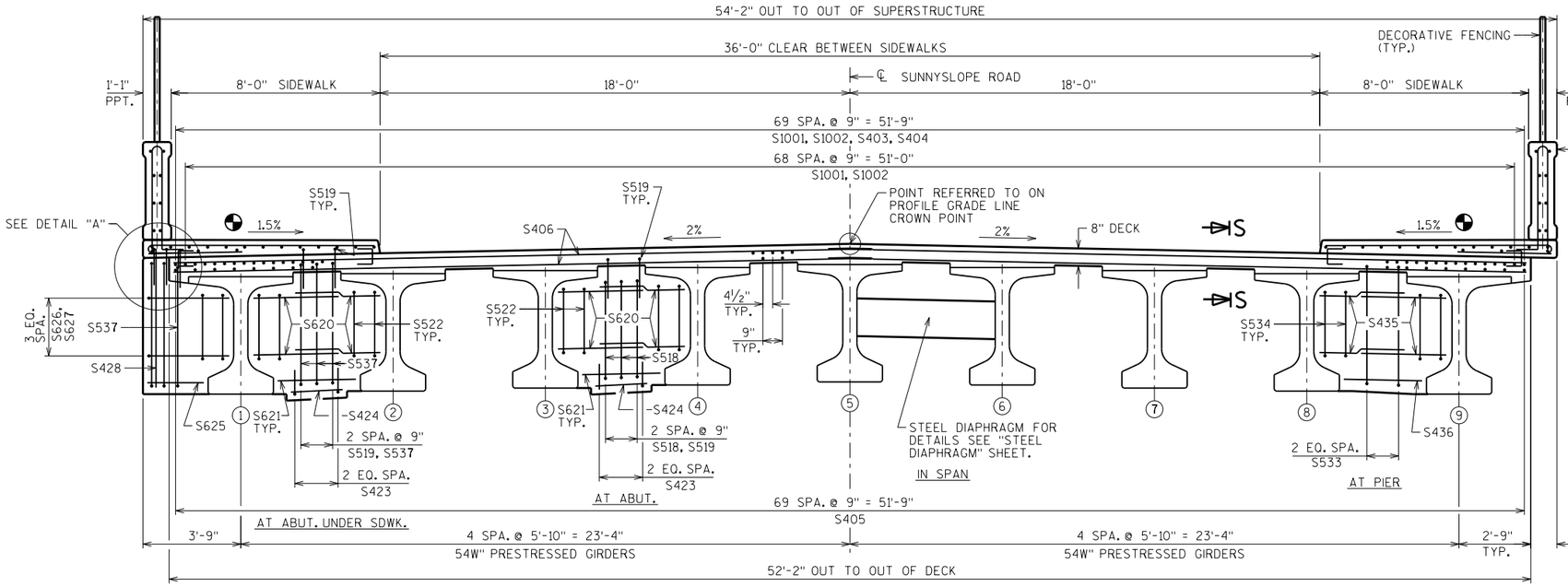
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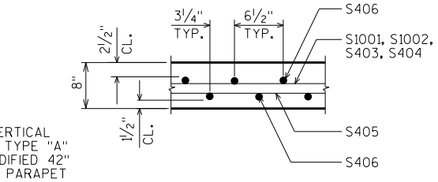
STATE PROJECT NUMBER

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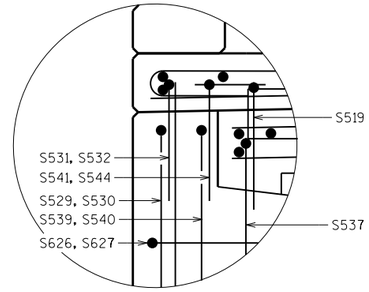
CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

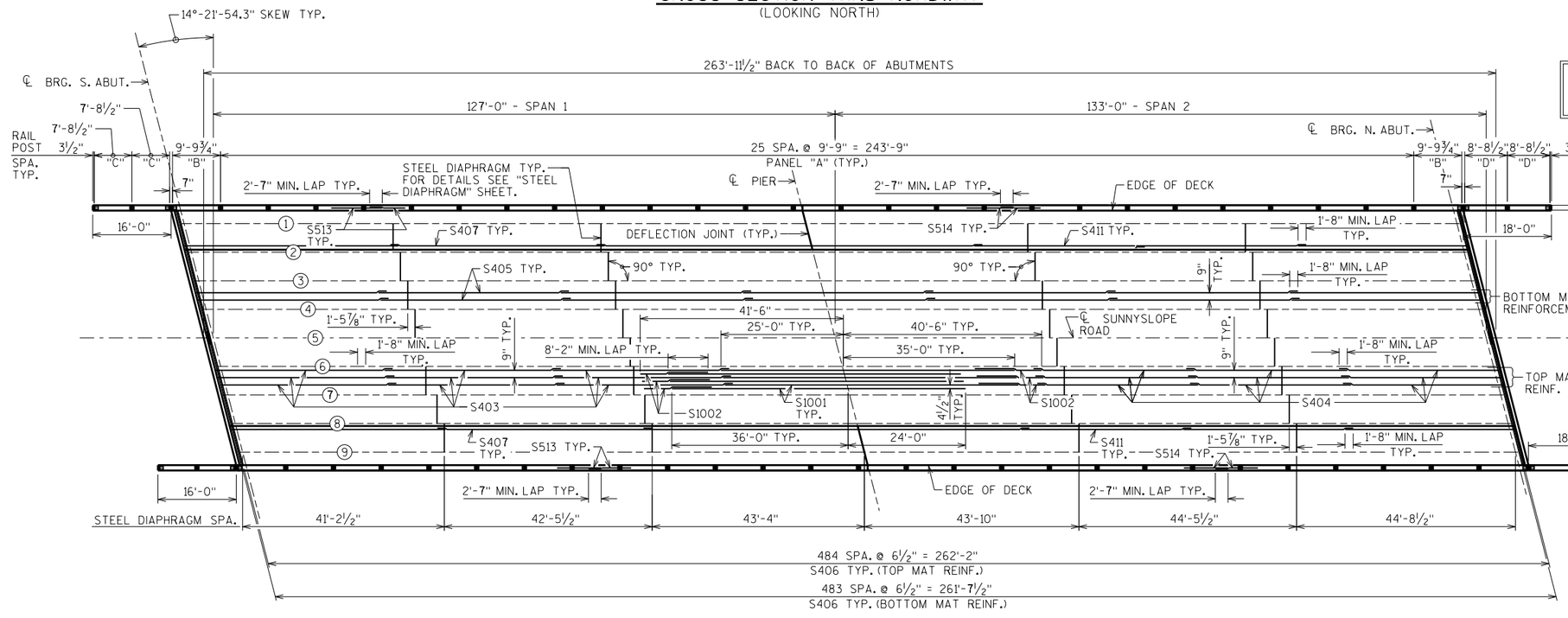


SECTION S-S

+0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



DETAIL "A"



PLAN

"B" = PANEL "B" - SEE "FENCING DETAILS 2&3" SHEETS.
"C" = PANEL "C" - SEE "FENCING DETAILS 2&3" SHEETS.
"D" = PANEL "D" - SEE "FENCING DETAILS 2&3" SHEETS.

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SUPERSTRUCTURE CROSS SECTION

SHEET 13

448

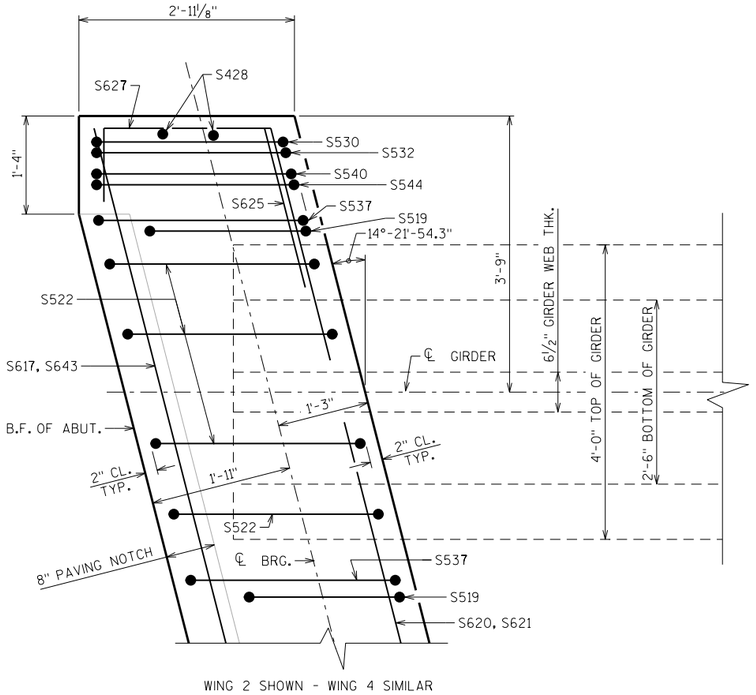
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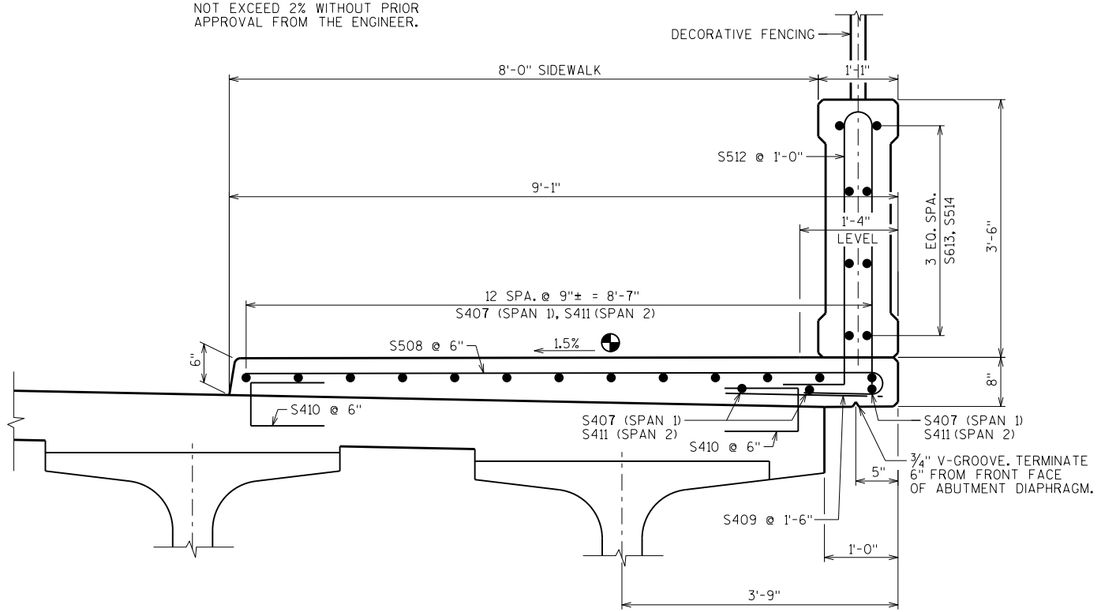
STATE PROJECT NUMBER

1060-33-82

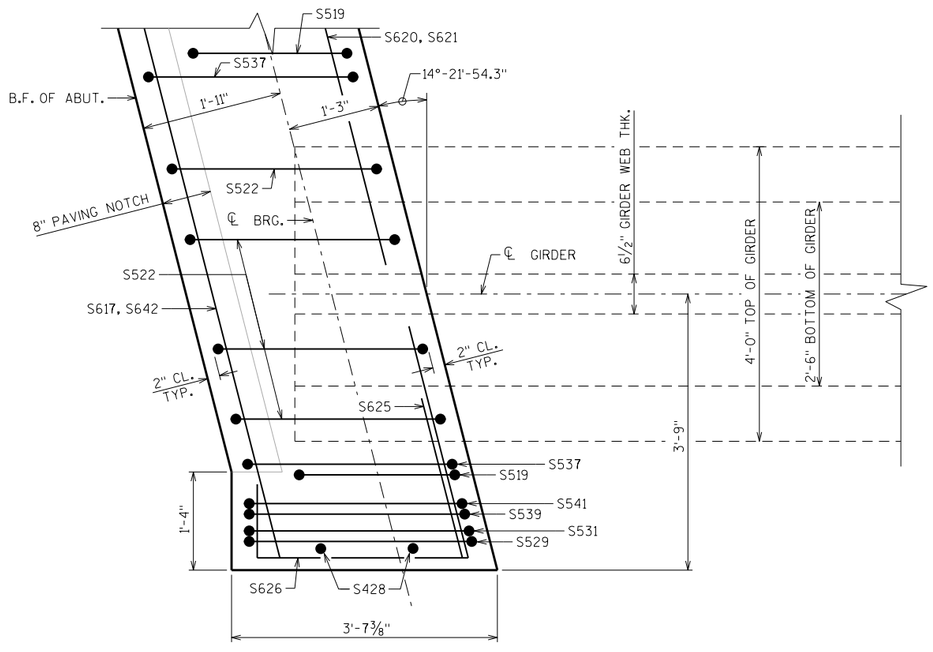


WING 2 SHOWN - WING 4 SIMILAR

±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

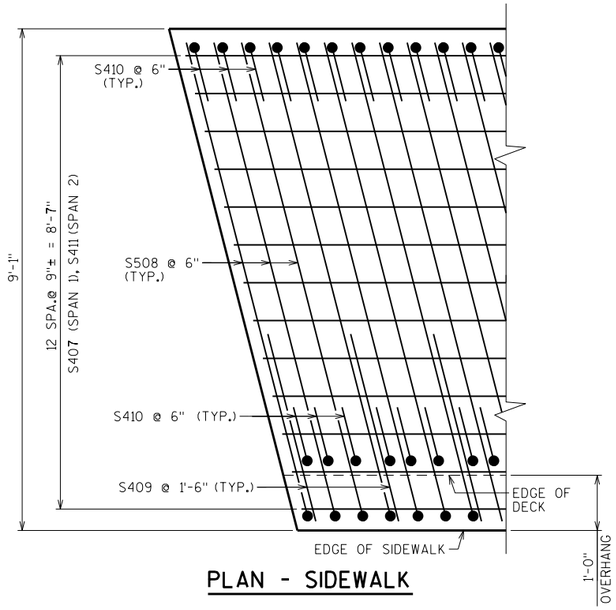


SIDEWALK CROSS SECTION DETAIL



PLAN - DIAPHRAGM ENDS

WING 1 SHOWN - WING 3 SIMILAR



PLAN - SIDEWALK

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STRUCTURE B-67-344

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SUPERSTRUCTURE END DIAPHRAGMS

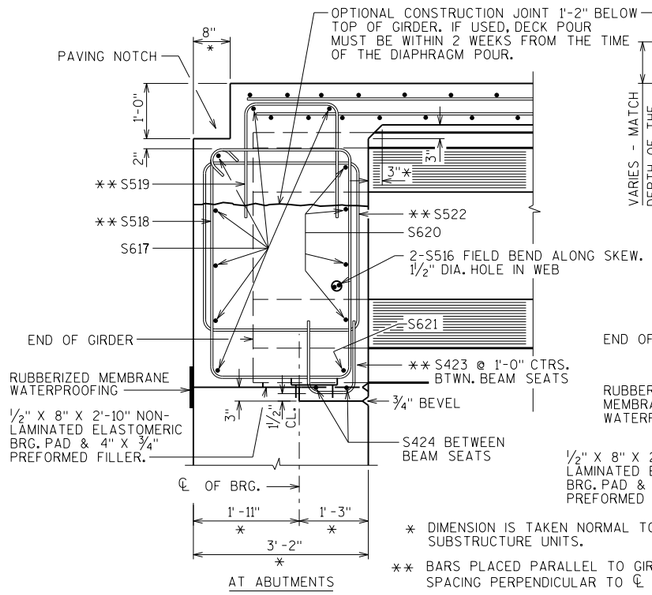
SHEET 14

449

8

8

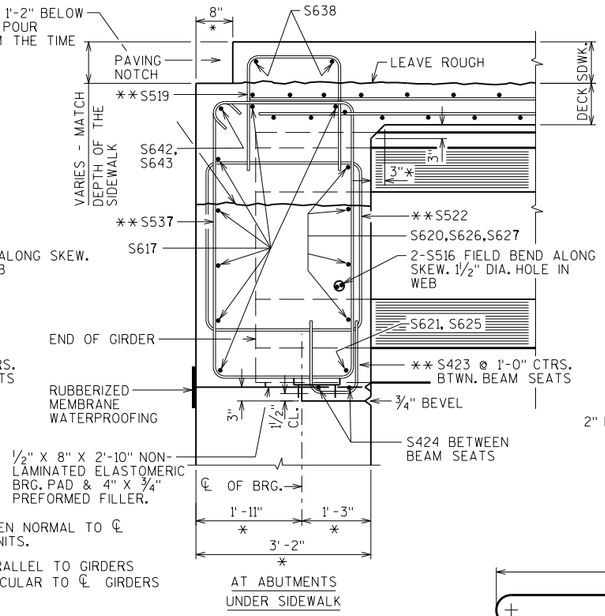
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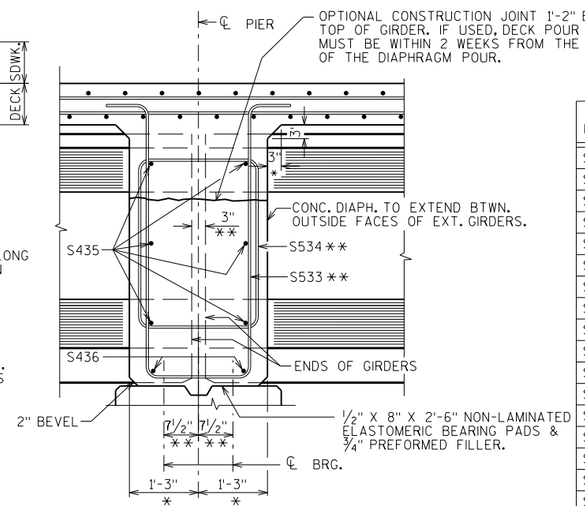
PART LONGIT. SECTION

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

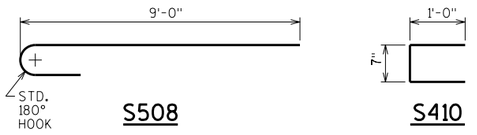
** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS



PART LONGIT. SECTION



AT PIER DIAPHRAGM



S508

S410

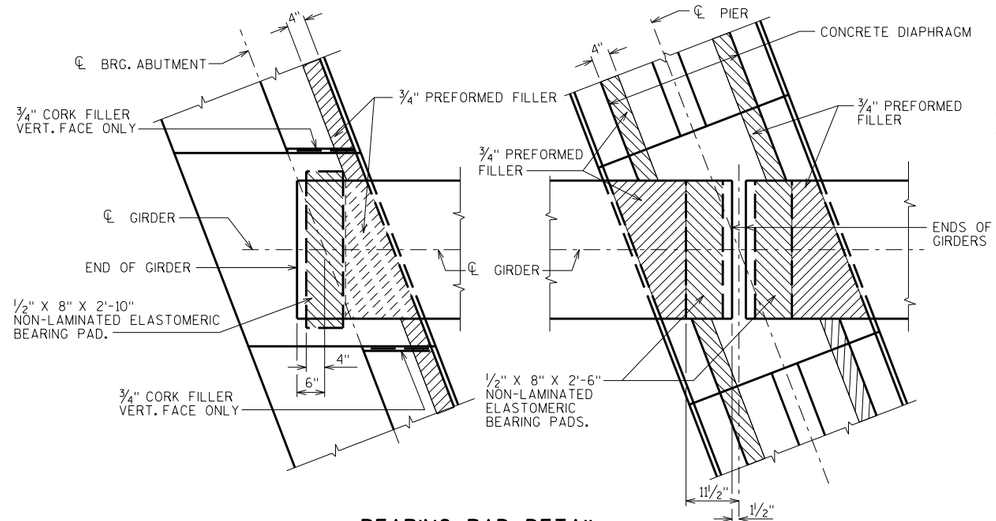
TOP OF DECK ELEVATIONS

	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	N. ABUT.
EOD	921.75	922.21	922.63	923.03	923.41	923.76	924.09	924.39	924.66	924.91	925.13	925.34	925.52	925.67	925.80	925.89	925.96	926.00	926.01	925.99	925.95
GIR. 1	921.83	922.28	922.71	923.11	923.49	923.84	924.16	924.46	924.73	924.98	925.20	925.41	925.58	925.73	925.86	925.95	926.02	926.05	926.06	926.05	926.00
GIR. 2	922.00	922.45	922.88	923.27	923.64	923.99	924.31	924.61	924.88	925.12	925.34	925.54	925.72	925.87	925.98	926.08	926.14	926.17	926.18	926.16	926.11
GIR. 3	922.18	922.62	923.04	923.43	923.80	924.15	924.47	924.76	925.03	925.27	925.48	925.68	925.85	926.00	926.11	926.20	926.26	926.29	926.30	926.27	926.22
GIR. 4	922.35	922.79	923.20	923.60	923.96	924.30	924.62	924.91	925.17	925.41	925.62	925.82	925.99	926.13	926.24	926.33	926.38	926.41	926.41	926.38	926.33
GIR. 5/℄	922.52	922.95	923.37	923.76	924.12	924.46	924.77	925.06	925.32	925.55	925.76	925.96	926.12	926.26	926.37	926.45	926.50	926.53	926.53	926.50	926.44
GIR. 6	922.45	922.89	923.30	923.68	924.04	924.38	924.69	924.97	925.23	925.46	925.67	925.86	926.02	926.16	926.26	926.34	926.39	926.41	926.41	926.37	926.31
GIR. 7	922.39	922.82	923.23	923.61	923.97	924.30	924.61	924.89	925.14	925.37	925.58	925.76	925.92	926.05	926.16	926.23	926.28	926.30	926.29	926.25	926.19
GIR. 8	922.32	922.75	923.16	923.54	923.89	924.22	924.52	924.80	925.05	925.28	925.48	925.67	925.82	925.95	926.05	926.12	926.16	926.18	926.17	926.13	926.06
GIR. 9	922.26	922.69	923.09	923.46	923.82	924.14	924.44	924.72	924.97	925.19	925.39	925.57	925.72	925.84	925.94	926.01	926.05	926.06	926.05	926.01	925.94
EOD	922.23	922.65	923.05	923.43	923.78	924.10	924.40	924.68	924.92	925.15	925.34	925.52	925.67	925.80	925.89	925.96	926.00	926.01	925.99	925.95	925.88

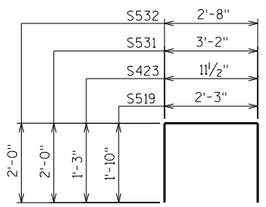
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

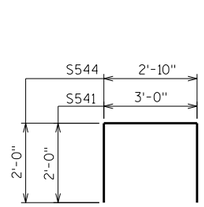
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S1001	X	139	60'-0"			CONTINUITY STEEL - OVER PIER
S1002	X	139	13'-8"			CONTINUITY STEEL - TOP
S403	X	210	36'-1"			LONGITUDINAL - TOP - SPAN 1
S404	X	210	32'-11"			LONGITUDINAL - TOP - SPAN 2
S405	X	490	38'-11"			LONGITUDINAL - BOTTOM
S406	X	1938	27'-8"			TRANSVERSE - TOP & BOTTOM
S407	X	96	43'-10"			SIDEWALK - HORIZ. - SPAN 1
S508	X	1052	9'-7"	X		SIDEWALK - TRANSVERSE - TOP
S409	X	352	1'-11"			SIDEWALK - TRANSVERSE - BOTTOM
S410	X	2104	2'-5"	X		SIDEWALK - TIE BARS
S411	X	128	35'-0"			SIDEWALK - HORIZ. - SPAN 2
S512	X	526	8'-6"	X		PARAPET - VERT.
S513	X	48	44'-7"			PARAPET - HORIZ. - SPAN 1
S514	X	48	46'-9"			PARAPET - HORIZ. - SPAN 2
S515	X	4	6'-2"	X		PARAPET - VERT. - AT PAVING NOTCHES
S516	X	36	6'-0"			ABUT. DIAPH. - HORIZ.- THRU GIRDERS
S617	X	28	29'-7"			ABUT. DIAPH. - HORIZ.- B.F.
S518	X	36	14'-8"	X		ABUT. DIAPH. - STIRRUP
S519	X	52	5'-8"	X		ABUT. DIAPH. - VERT.
S620	X	128	3'-8"			ABUT. DIAPH. - HORIZ.
S621	X	16	3'-1"			ABUT. DIAPH. - HORIZ.
S522	X	72	12'-4"	X		ABUT. DIAPH. - STIRRUP AT GIRDERS
S423	X	48	3'-4"	X		ABUT. DIAPH. - VERT.
S424	X	32	2'-0"			ABUT. DIAPH. - HORIZ.
S625	X	4	2'-2"			ABUT. DIAPH. - HORIZ.- ENDS
S626	X	8	7'-2"	X		ABUT. DIAPH. - HORIZ. - ENDS - WINGS 1&3
S627	X	8	6'-7"	X		ABUT. DIAPH. - HORIZ. - ENDS - WINGS 2&4
S428	X	8	5'-9"			ABUT. DIAPH. - VERT. - ENDS
S529	X	2	17'-2"	X		ABUT. DIAPH. - STIRRUP - ENDS - WINGS 1&3
S530	X	2	16'-0"	X		ABUT. DIAPH. - STIRRUP - ENDS - WINGS 2&4
S531	X	2	6'-11"	X		ABUT. DIAPH. - VERT. - ENDS - WINGS 1&3
S532	X	2	6'-5"	X		ABUT. DIAPH. - VERT. - ENDS - WINGS 2&4
S533	X	24	13'-2"	X		PIER DIAPH. - VERT.
S534	X	32	10'-10"	X		PIER DIAPH. - STIRRUP AT GIRDERS
S435	X	96	3'-3"			PIER DIAPH. - HORIZ.
S436	X	16	3'-0"			PIER DIAPH. - HORIZ.
S537	X	16	16'-8"	X		ABUT. DIAPH. - STIRRUPS - UNDER SIDEWALK
S638	X	8	8'-9"			ABUT. DIAPH. - HORIZ. - IN SIDEWALK
S539	X	2	16'-9"	X		ABUT. DIAPH. - STIRRUP - ENDS - WINGS 1&3
S540	X	2	16'-5"	X		ABUT. DIAPH. - STIRRUP - ENDS - WINGS 2&4
S541	X	2	6'-9"	X		ABUT. DIAPH. - VERT. - ENDS - WINGS 1&3
S642	X	2	8'-6"			ABUT. DIAPH. - HORIZ. - ENDS - WINGS 1&3
S643	X	2	7'-6"			ABUT. DIAPH. - HORIZ. - ENDS - WINGS 2&4
S544	X	2	6'-7"	X		ABUT. DIAPH. - VERT. ENDS - WINGS 2&4



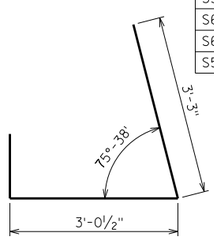
BEARING PAD DETAIL



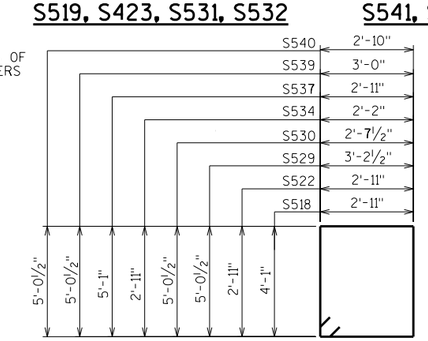
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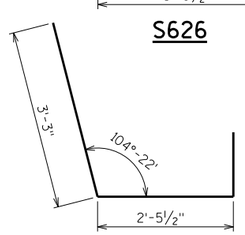
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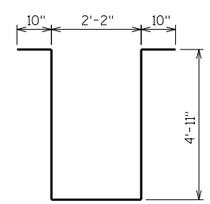
S626



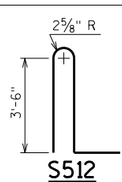
S518, S522, S529, S530, S534, S537, S539, S540



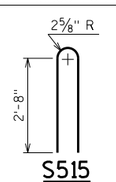
S627



S533



S512



S515

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STRUCTURE B-67-344

DRAWN BY DDS | PLANS CK'D. TAB

SUPERSTRUCTURE DETAILS

SHEET 15

450

STATE PROJECT NUMBER

1060-33-82

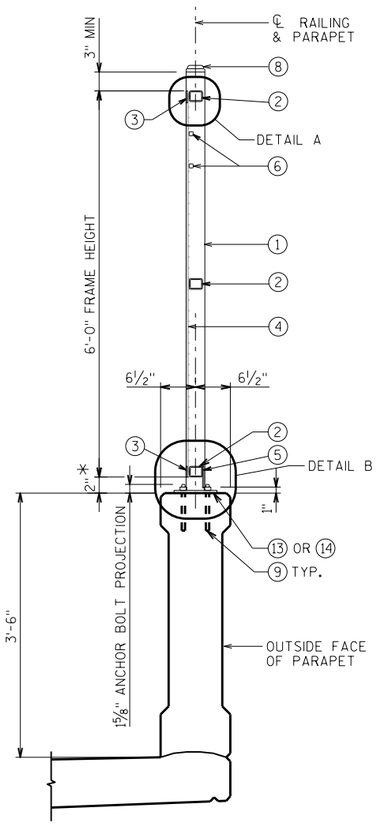
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8

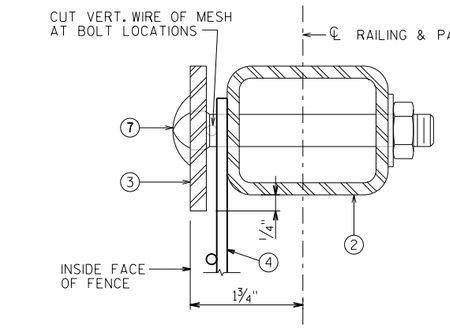
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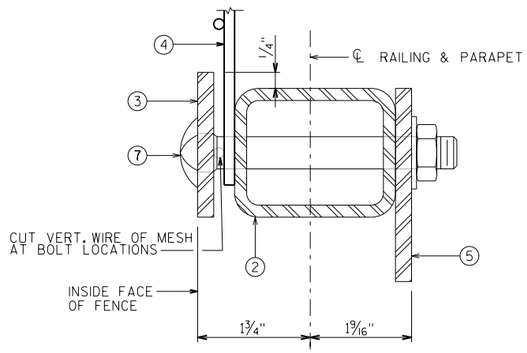
1060-33-82



SECTION THRU PARAPET



DETAIL A



DETAIL B

LEGEND

1. HSS 3½ X 3½ X 3⁄16 POST WITH ⅛" DIA. VENT HOLES TOP & BOTTOM ON OUTSIDE FACE. RESIZE AS NECESSARY FOR GALVANIZING PROCESS. WELD TO NO. 8 & BASE PLATE, TYP.
2. HSS 2½ X 2½ X 3⁄16. WELD TO NO. 6.
3. PL 2¾" X ¼" WELDED FRAME. BOLT TO NO. 2 WITH NO. 7 AFTER PAINTING.
4. STEEL MESH 2" X 2" X 0.162 (8 GA.). PLACE VERTICAL WIRES ON INSIDE FACE OF PARAPET.
5. PL ¼" X WIDTH VARIES. PROVIDE SHORT SLOTTED VERT. HOLES FOR NO. 7.
6. ¾" × ¾" BAR. WELD TO NO. 2 & 6.
7. ½" DIA. CARRIAGE BOLT, WASHER & NUT. PROVIDE ⅝" X ⅝" SQUARE HOLE IN NO. 3 & NO. 2 WHERE CONNECTED TO DECORATIVE INSET PLATE FOR SQUARE PORTION OF THE BOLT HEAD.
8. 3½" X 3½" SQUARE END CAP. WELD TO NO. 1.
9. ⅝" DIA. CONCRETE MASONRY ANCHOR TYPE S EPOXY, 7" MINIMUM EMBEDMENT.
10. PL 5⁄16" X 4½" X 6" CONNECTION WITH 2" DIA. HOLE FOR NO. 7. USE NO. 11 TO COVER 2" DIA. ADJUSTMENT HOLES.
11. PL ⅜" X 2" X 4½".
12. PL WASHER ¼" X 3½" X 3½".
13. PL ½" X 8" X 10" BASE PLATE. WELD TO NO. 1.
14. PL ½" X 8" X 1'-0" BASE PLATE. WELD TO NO. 1.
15. ½" DIA. BOLT, WASHER & NUT. TACK WELD NUT TO NO. 2.
16. ¼" DECORATIVE SILHOUETTE INSET PLATE AT SPECIAL 9'-8" PANEL. BOLT TO NO. 2 WITH NO. 7. ELECTRONIC COPIES OF THE CUTTING PATTERN ARE AVAILABLE BY CONTACTING: MR. JOSHUA LeVEQUE, WISDOT, 141 NW BARSTOW ST., WAUKESHA, WI 53187 PHONE: (414) 750-1468 EMAIL: JOSHUA.LEVEQUE@DOT.WI.GOV

✳ THE DIMENSION BETWEEN THE BOTTOM OF THE WELDED FRAME AND THE TOP OF THE PARAPET VARIES DUE TO THE VERTICAL PROFILE OF THE STRUCTURE. SET THIS DIMENSION TO 2" ADJACENT TO THE POST WHERE NO. 5 HAS THE SMALLEST VERTICAL DIMENSION.

NOTES

THE BID ITEM SHALL BE "FENCE DECORATIVE BRIDGE B-67-344" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

FOR ELEVATIONS OF FENCE PANELS, SEE "FENCE DETAILS 2" AND "FENCE DETAILS 3" SHEETS.

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.

STRUCTURAL TUBING SHALL BE A.S.T.M. A500, GRADE B. ROLLED SHAPES, PLATES, BARS AND SHIMS SHALL BE A.S.T.M. A709, GRADE 36.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE POST VERTICAL.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE A.S.T.M. A307 AND SHALL BE GALVANIZED.

STANDARD WASHERS SHALL BE USED TO SHIM BASE PLATES IF REQUIRED. ALL WASHERS SHALL BE GALVANIZED.

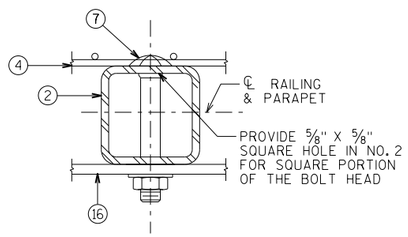
VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

AFTER FABRICATION AND PRIOR TO BOLTING AND ASSEMBLING THE FENCE COMPONENTS, STEEL SHALL BE BLAST CLEANED PER SSPC-SP 6 AND GALVANIZED ACCORDING TO ASTM A 123. REPAIR ZINC COATING DAMAGED DURING FENCE ASSEMBLAGE AS SPECIFIED IN 635.3.4.

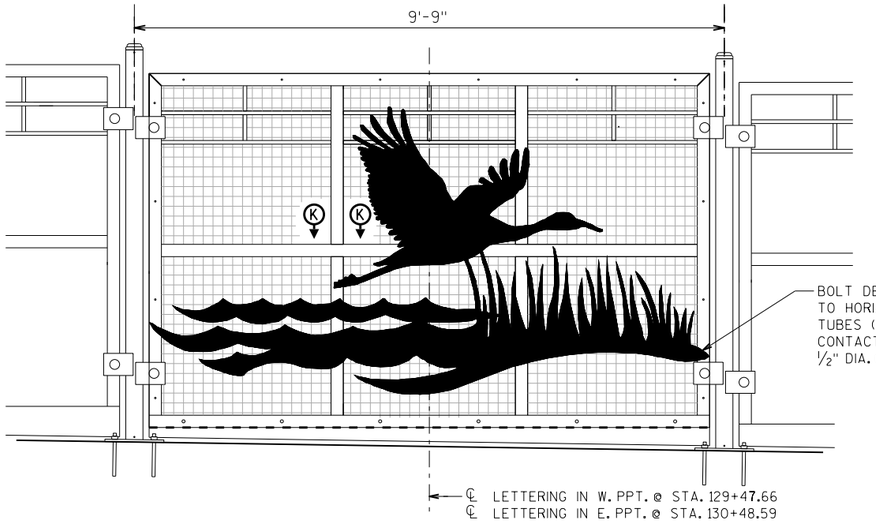
PRIOR TO FINAL ASSEMBLY OF THE FENCE PANELS, PAINT THE GALVANIZED FENCE COMPONENTS WITH A TWO COAT SYSTEM SPECIFICALLY INTENDED FOR PAINTING OF GALVANIZED SURFACES PER THE SPECIAL PROVISIONS. THE FINISH COLOR SHALL BE FEDERAL COLOR NO. 27038 BLACK.

ALL WELDS SHALL BE PREQUALIFIED ACCORDING TO THE STRUCTURAL WELDING CODE STEEL (AWS D1.1). THE MINIMUM SIZE OF FILLET WELDS IS ⅜".

COVER THE 2" X 2" STEEL MESH WITH A COLORED POLYMER COATING. COAT ALL OTHER FENCING COMPONENTS WITH AN EPOXY PAINT SYSTEM. TOUCH UP DAMAGED PORTIONS OF PAINT AFTER PANEL ERECTION. SEE SPECIAL PROVISIONS FOR REQUIREMENTS.



SECTION K-K



DECORATIVE SILHOUETTE INSET PLATE

OUTSIDE ELEVATION OF PANEL

(2 DECORATIVE SILHOUETTES REQUIRED - LOCATE IN FENCE PANELS DIRECTLY ABOVE ℄ OF STREET NAME LETTERING ON EACH PARAPET)

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FENCE DETAILS 1

SHEET 16

451

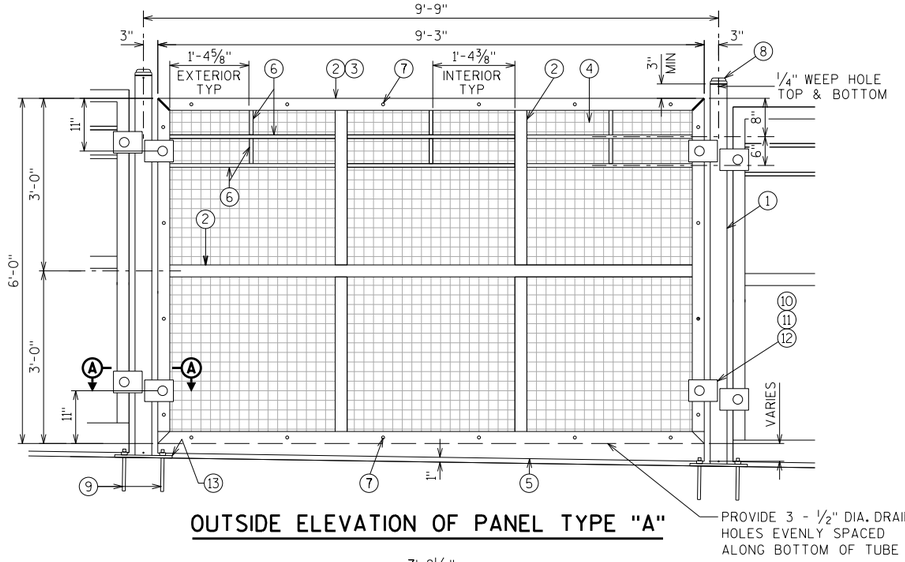
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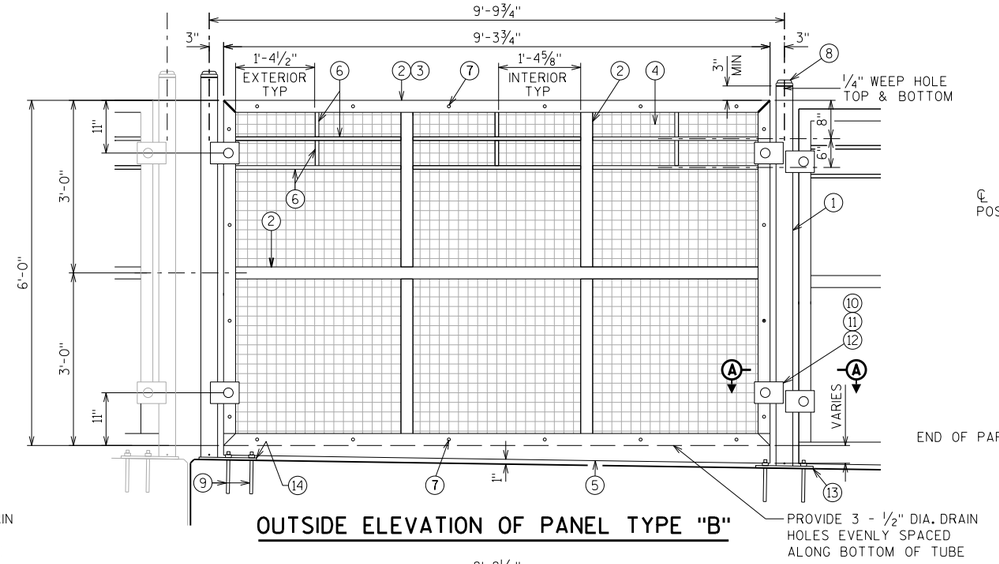
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STATE PROJECT NUMBER

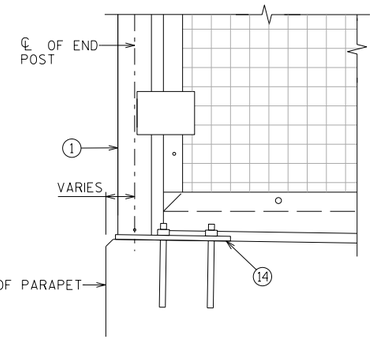
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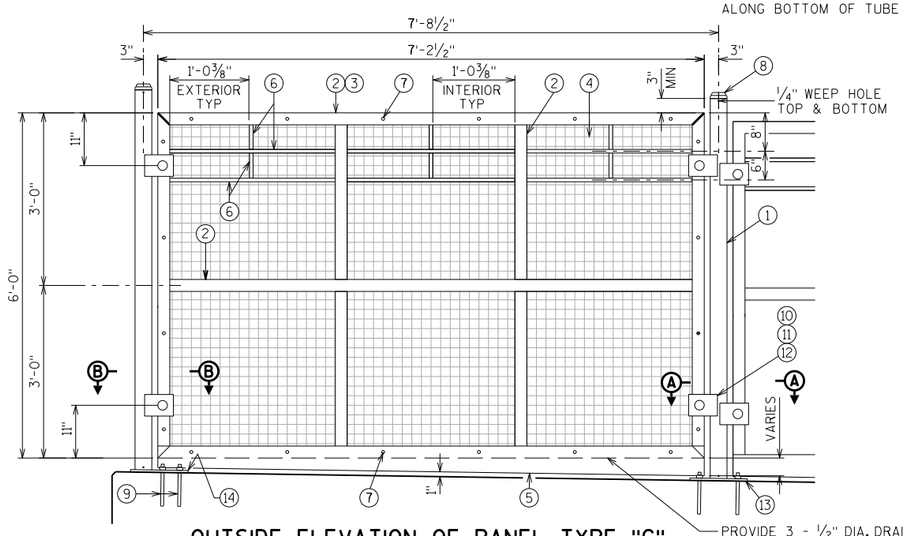
OUTSIDE ELEVATION OF PANEL TYPE "A"



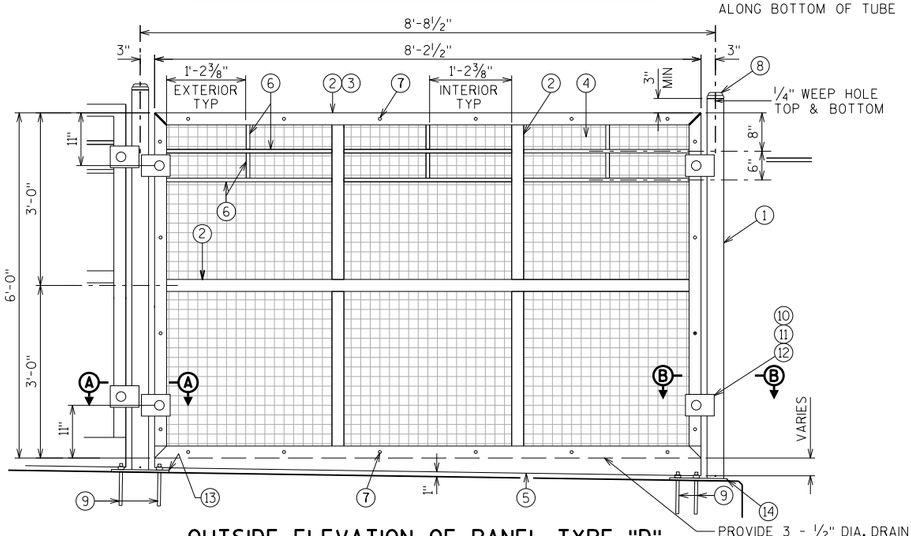
OUTSIDE ELEVATION OF PANEL TYPE "B"



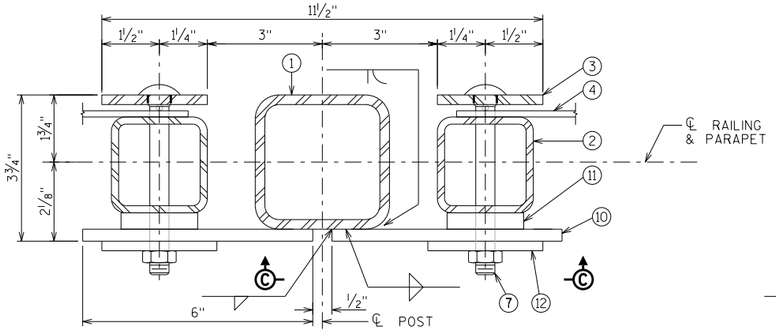
END POST DETAIL



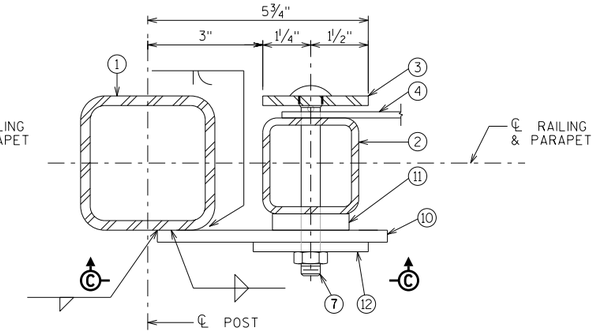
OUTSIDE ELEVATION OF PANEL TYPE "C"



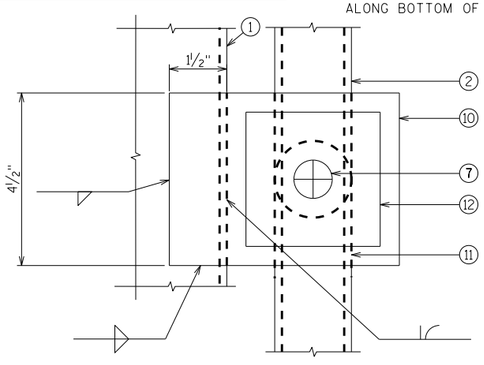
OUTSIDE ELEVATION OF PANEL TYPE "D"



SECTION A-A



SECTION B-B



ELEVATION C-C

NOTES

FOR NOTES AND LEGEND, SEE "FENCE DETAILS 1" SHEET.

TYPICAL MEMBER SIZES, WELDING AND BOLTING DETAILS, AND MATERIALS ARE SHOWN ON "FENCE DETAILS 4" SHEET.

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STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-67-344

DRAWN BY DDS | PLANS CK'D. TAB

FENCE DETAILS 2

SHEET 17

452

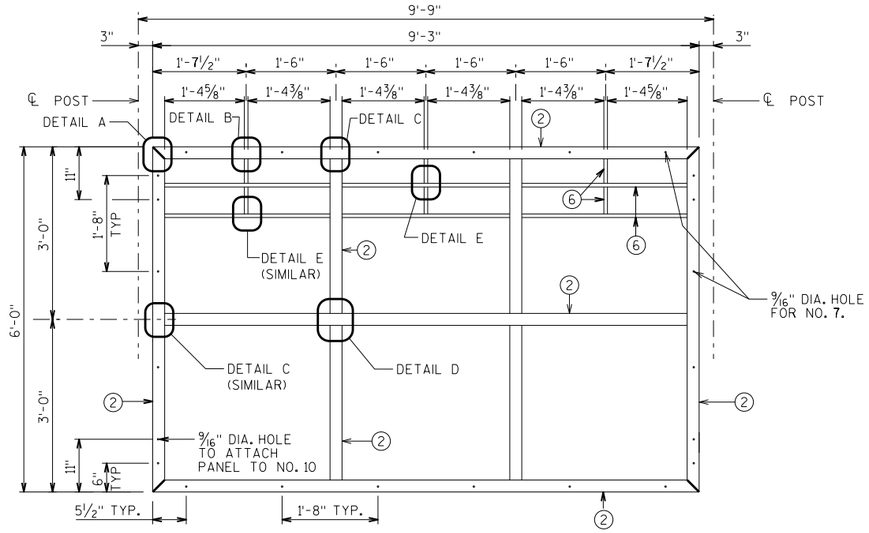
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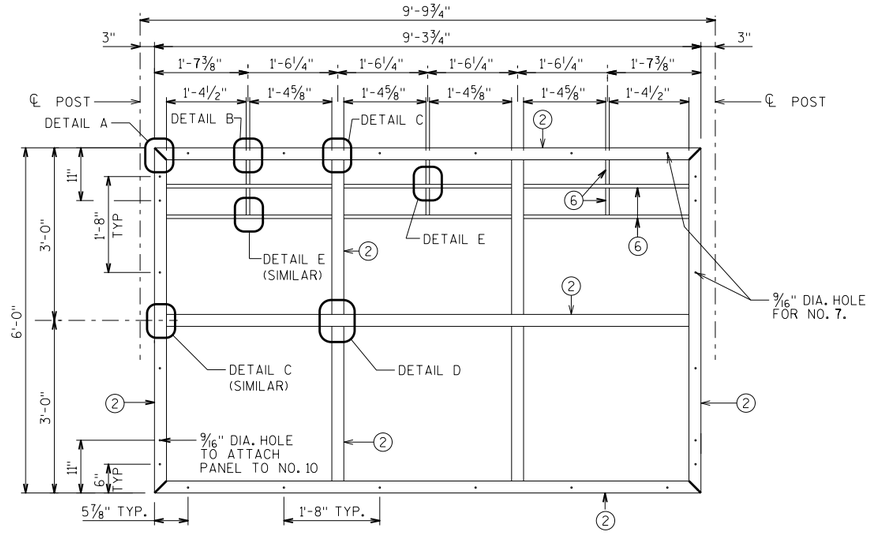
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STATE PROJECT NUMBER

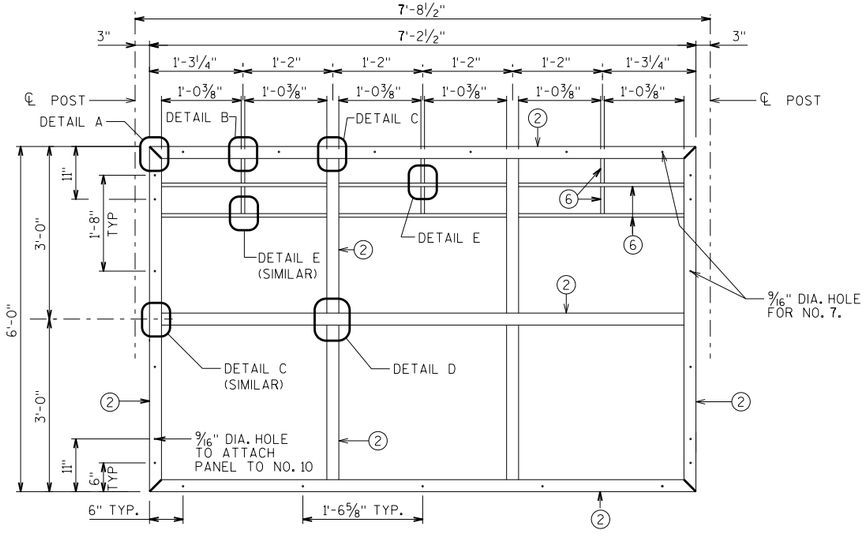
1060-33-82



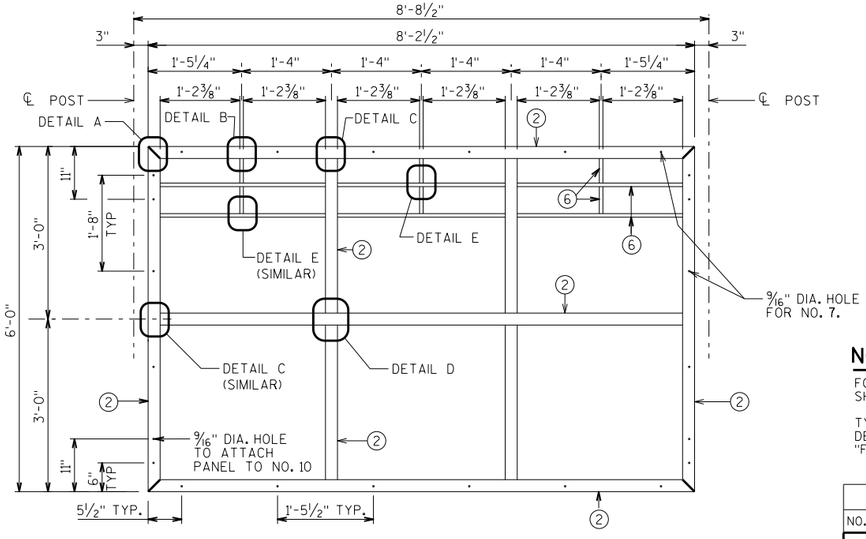
DECORATIVE FENCE BRIDGE PANEL "A"



DECORATIVE FENCE BRIDGE PANEL "B"



DECORATIVE FENCE BRIDGE PANEL "C"



DECORATIVE FENCE BRIDGE PANEL "D"

NOTE

FOR NOTES AND LEGEND, SEE "FENCE DETAILS 1" SHEET.

TYPICAL MEMBER SIZES, WELDING AND BOLTING DETAILS, AND MATERIALS ARE SHOWN ON "FENCE DETAILS 4" SHEET.

NO.	DATE	REVISION	BY

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DRAWN BY DDS | PLANS CK'D. TAB

FENCE DETAILS 3

SHEET 18

453

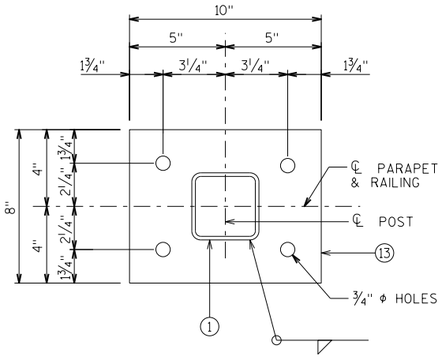
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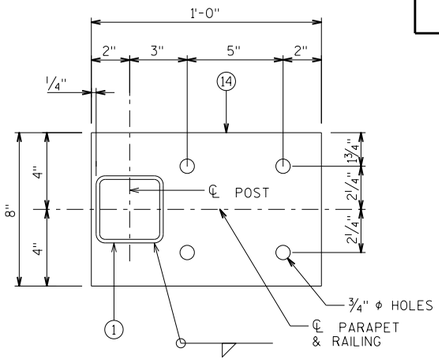
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STATE PROJECT NUMBER

1060-33-82



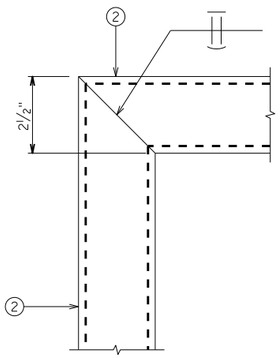
BASE PLATE



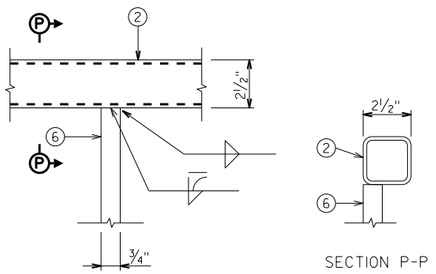
END BASE PLATE

(INSTALL AT END SECTIONS)

BASE PLATE DETAILS

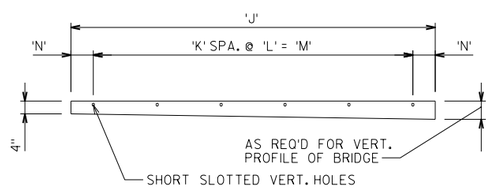


DETAIL A



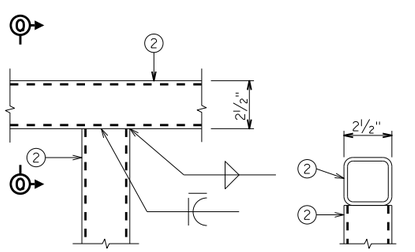
SECTION P-P

DETAIL B



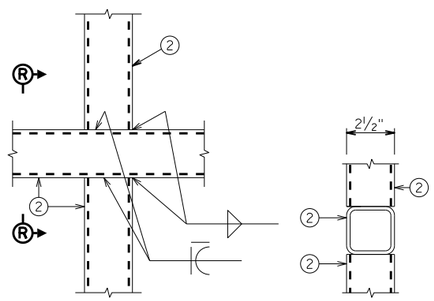
¼" PLATE (NO. 5)

PANEL TYPE	DIM 'J'	NO. 'K'	SPA 'L'	DIM 'M'	DIM 'N'
A	9'-3"	5	1'-8"	8'-4"	5½"
B	9'-3¾"	5	1'-8"	8'-4"	5⅞"
C	7'-2½"	4	1'-6⅝"	6'-2½"	6"
D	8-2½"	5	1'-5½"	7'-3½"	5½"



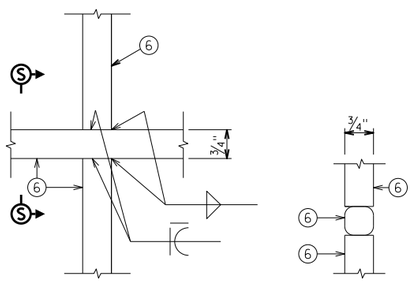
SECTION Q-Q

DETAIL C



SECTION R-R

DETAIL D



SECTION S-S

DETAIL E

NOTES

FOR NOTES AND LEGEND, SEE "FENCE DETAILS 1" SHEET.

DETAILS SHOWN ARE TYPICAL FOR ALL FENCE PANELS.

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STRUCTURES DESIGN SECTION

STRUCTURE B-67-344

DRAWN BY DDS | PLANS CK'D. TAB

FENCE DETAILS 4

SHEET 19

454

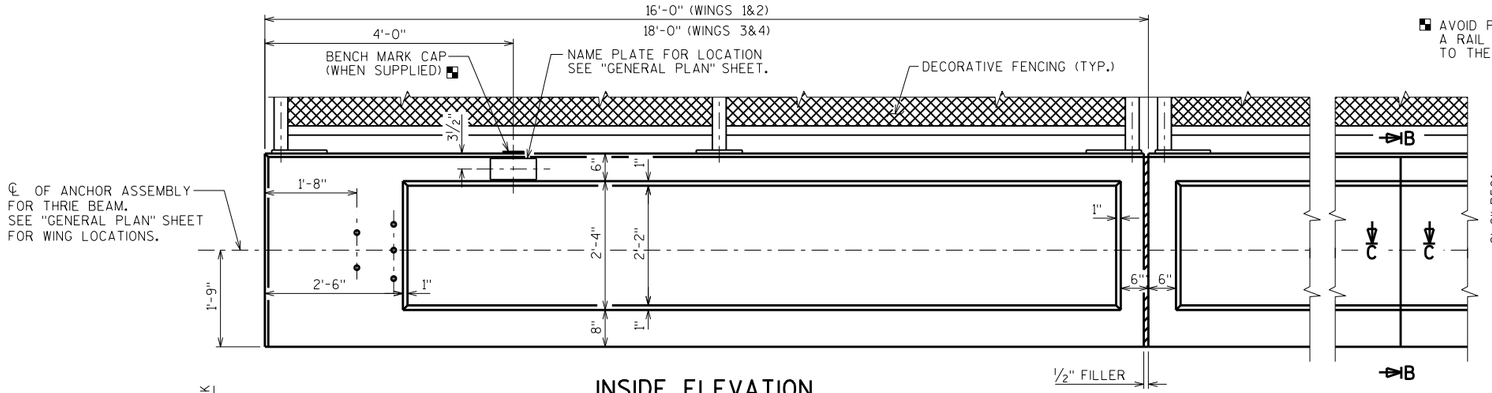
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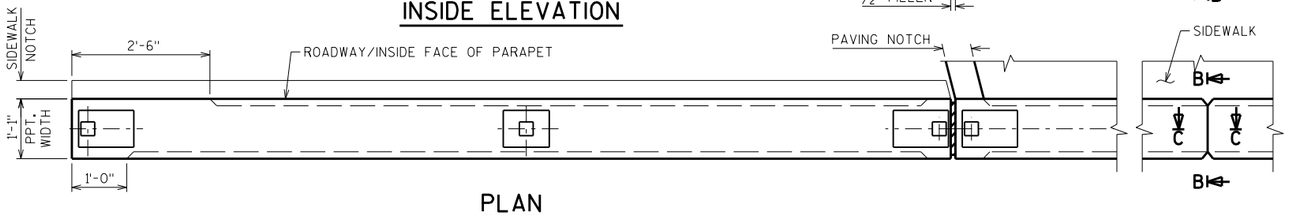
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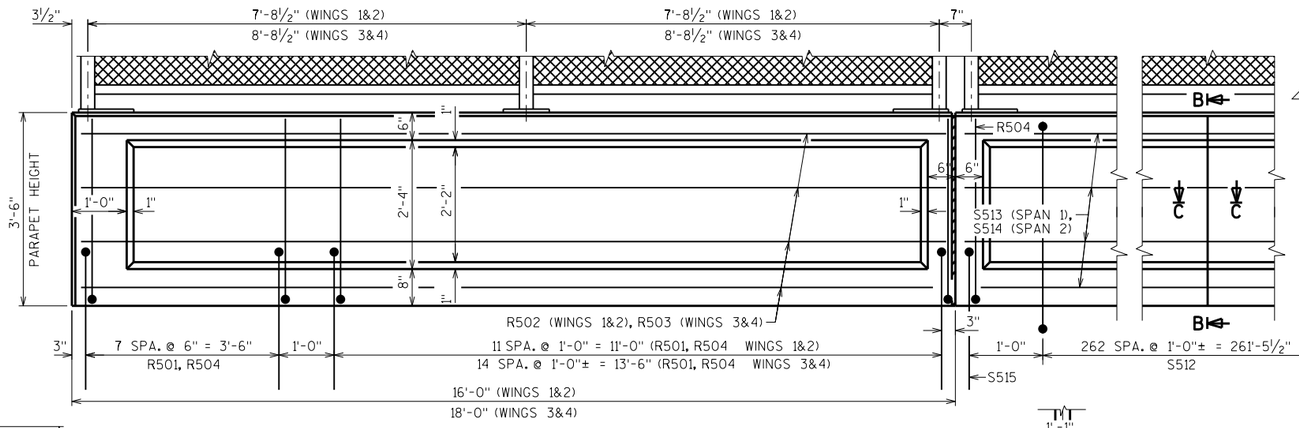


INSIDE ELEVATION

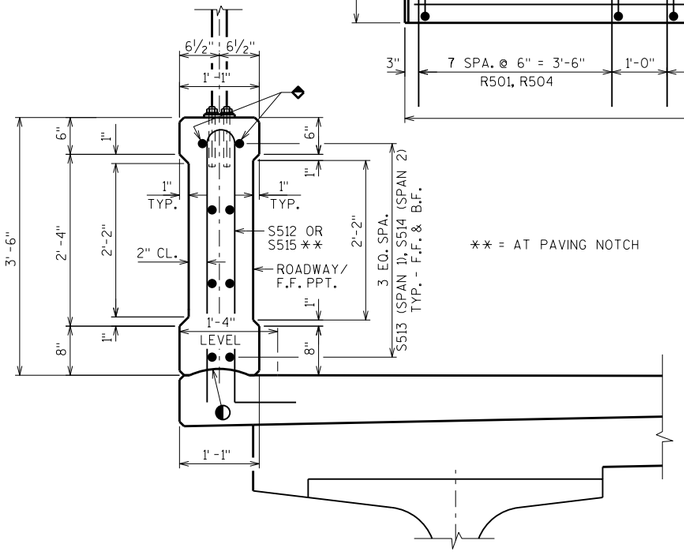


PLAN

WING 1 SHOWN - WINGS 2 THRU 4 SIMILIAR



OUTSIDE ELEVATION

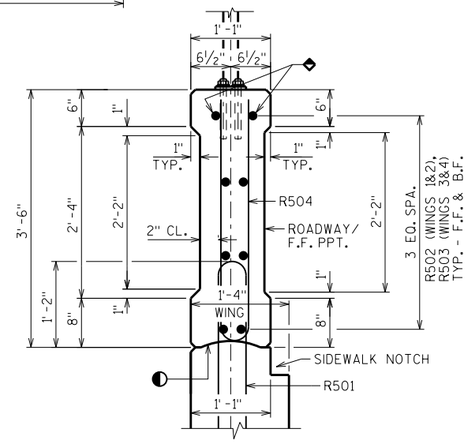


** = AT PAVING NOTCH

◆ PLACE TOP LONGITUDINAL BARS OUTSIDE OF VERTICAL BARS AT THE START OF THE BEND TO AVOID DRILLED IN ANCHORS.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

SECTION THRU PARAPET ON BRIDGE



SECTION THRU PARAPET ON WINGS

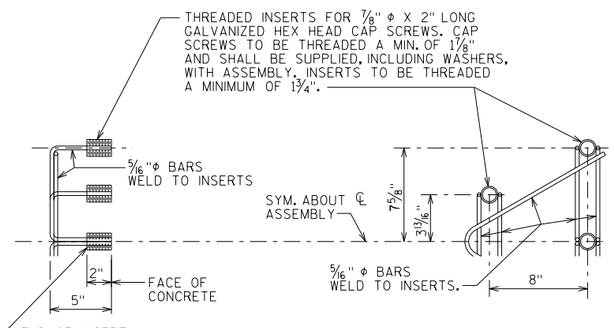
■ AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



BILL OF BARS

FOR ABUTMENT PARAPETS

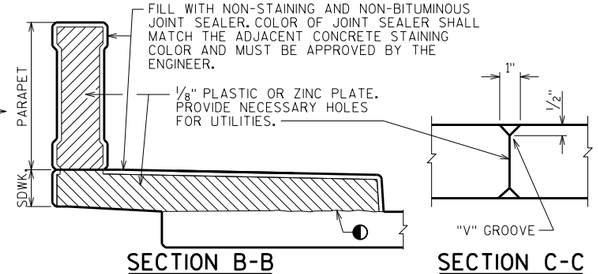
BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	40	46	6'-2"	X		PARAPET VERT.
R502	X	16	—	15'-8"			PARAPET HORIZ. - WINGS 1&2
R503	X	—	16	17'-8"			PARAPET HORIZ. - WINGS 3&4
R504	X	42	48	7'-0"	X		PARAPET VERT.



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.



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 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.

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STRUCTURE B-67-344

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MODIFIED 42" VERTICAL FACE PARAPET "A"

SHEET 20

455

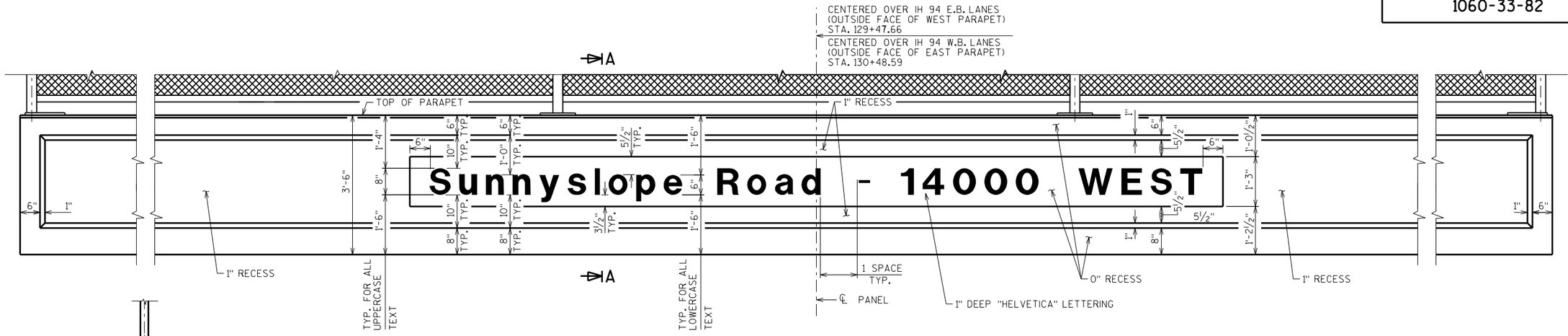
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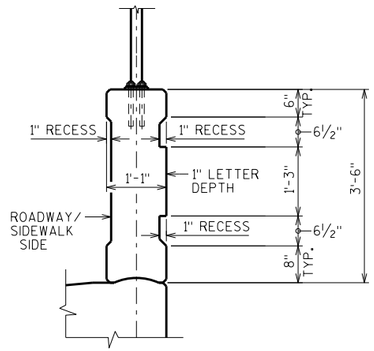
8

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OUTSIDE PARAPET ELEVATION - AESTHETIC DETAILS



SECTION A-A

8

8

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STRUCTURES DESIGN SECTION

STRUCTURE B-67-344

DRAWN BY DDS | PLANS CK'D. TAB

PARAPET AESTHETICS

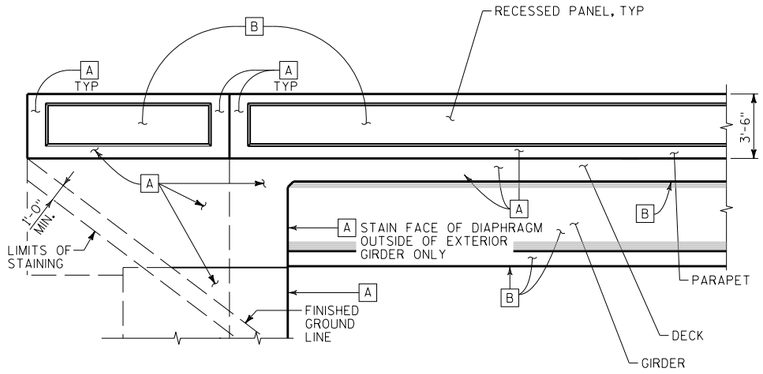
SHEET 21

456

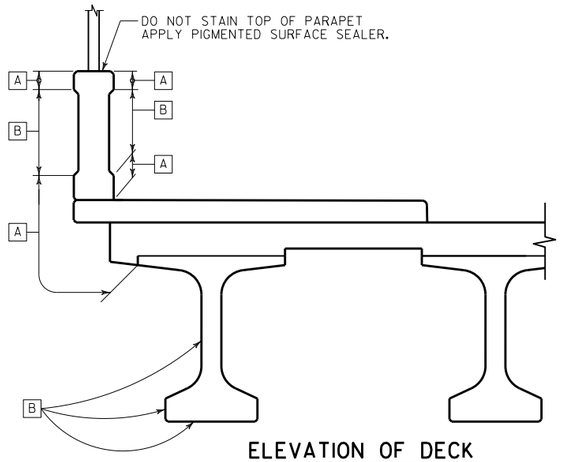
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STATE PROJECT NUMBER

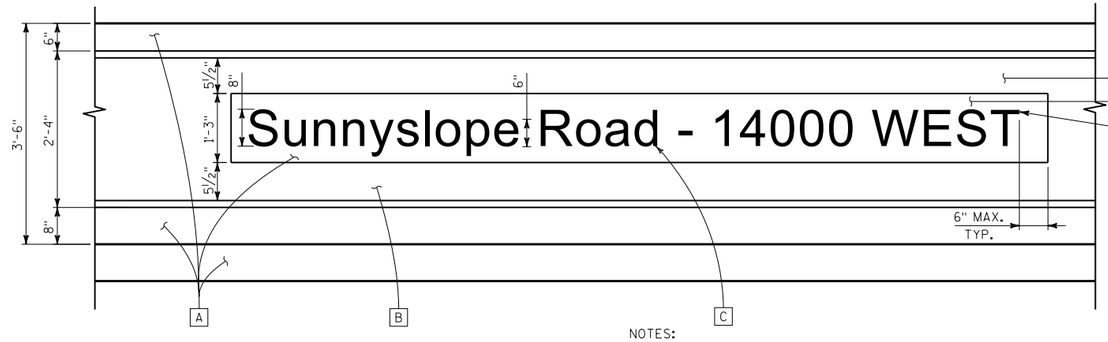
1060-33-82



OUTSIDE ELEVATION OF PARAPET



ELEVATION OF DECK



INDENTED TEXT

EXTERIOR FACE OF PARAPET ONLY

NOTES:

LETTERING SHALL BE HELVETICA, 8" UPPER CASE AND 6" LOWER CASE.

LETTERING IS ONLY ON OUTSIDE FACE OF PARAPET.

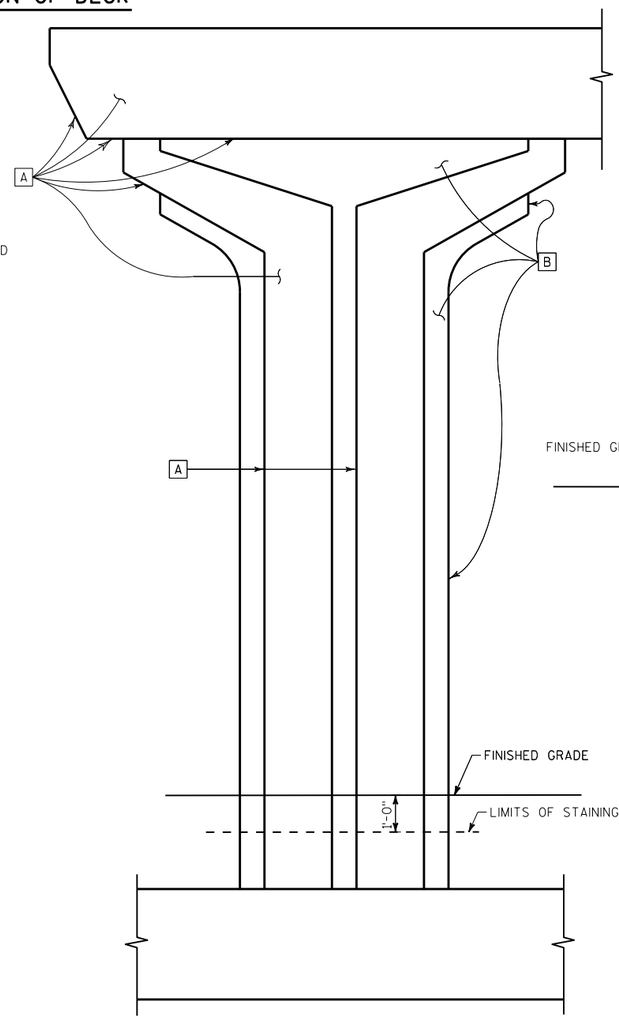
SEE "PAPARAPET AESTHETICS" SHEET FOR LOCATIONS.

CONCRETE STAINING SCHEDULE

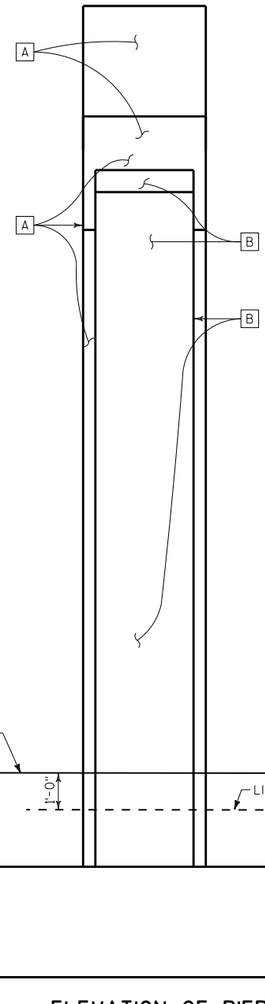
MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	PARAPETS	BOTH SIDES, EXCEPT AS NOTED FOR ACCENT COLORS
		SIDEWALKS	EXTERIOR VERTICAL FASCIA & EXPOSED UNDERSIDE
		DECK	FASCIA & EXPOSED UNDERSIDE TO EXTERIOR GIRDER FLANGE
		ABUTMENT	FRONT FACE FROM TOP OF ABUTMENT TO 1'-0" BELOW FINISHED GROUND LINE
		ABUT. DIAPHRAGM	EXPOSED END FACES AND FRONT FACES OUTSIDE EXTERIOR GIRDERS.
		PIERS	SIDES AND BOTTOM OF CAP AND COLUMNS TO 1'-0" BELOW FINISHED GRADE EXCEPT AS NOTED FOR ACCENT COLORS
B	ACCENT COLOR #1	PIERS, GIRDERS, PARAPETS	REVEALS ON COLUMNS, EXTERIOR FACE AND UNDERSIDE OF EXTERIOR GIRDERS REVEALS ON PARAPETS
C	ACCENT COLOR #2	PARAPETS	LETTERING AT ROADWAY NAME

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE SHERWIN-WILLIAMS STANDARD COLOR SYSTEM LISTED.

BASE COLOR : FEDERAL COLOR 33564
ACCENT COLOR #1: FEDERAL COLOR 33448
ACCENT COLOR #2: BLACK - FEDERAL COLOR 37038



ELEVATION OF PIER



ELEVATION OF PIER

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AESTHETIC DETAILS

SHEET 22

457

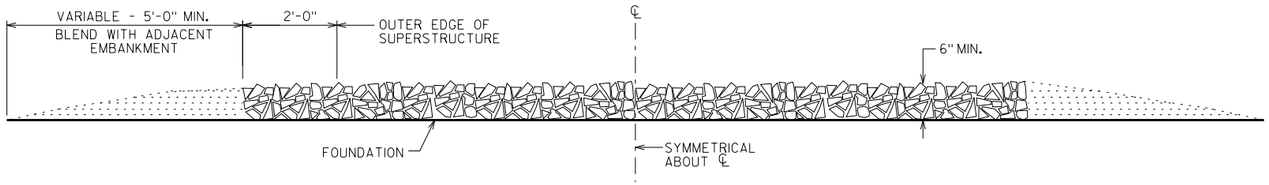
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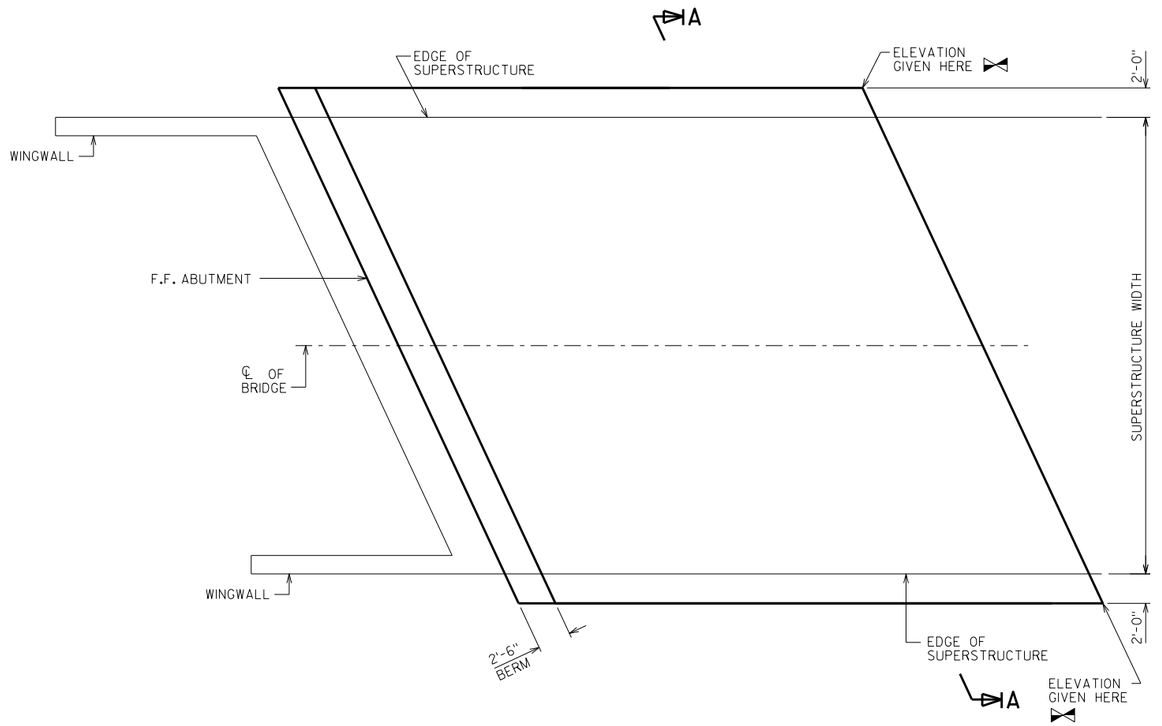
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STATE PROJECT NUMBER

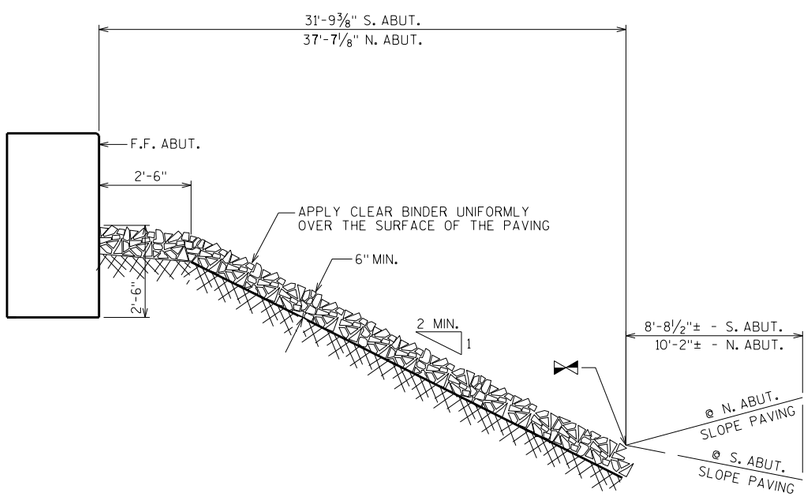
1060-33-82



SECTION A-A



PLAN



TYPICAL SECTION
NORMAL TO ℄ OF ABUTMENT

ELEVATIONS GIVEN HERE AT SOUTH ABUTMENT VARIES BETWEEN EL. 899.0± AT THE EAST END AND EL. 901.22± AT WEST END.

ELEVATIONS GIVEN HERE AT NORTH ABUTMENT VARIES BETWEEN EL. 899.3± AT EAST END AND EL. 901.6± AT WEST END.

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

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SLOPE PAVING CRUSHED AGGREGATE SPECIAL

SHEET 23

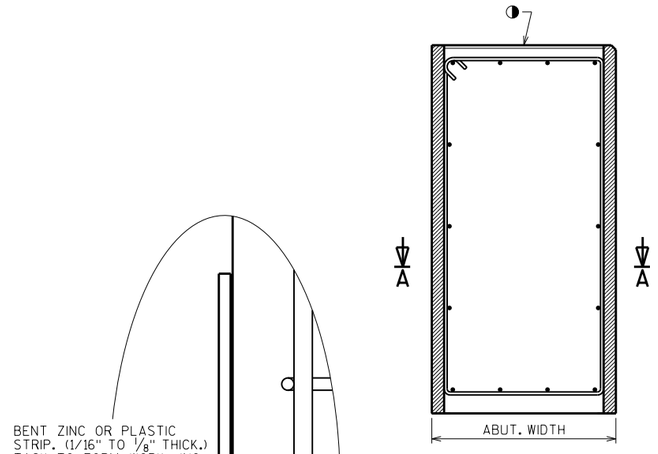
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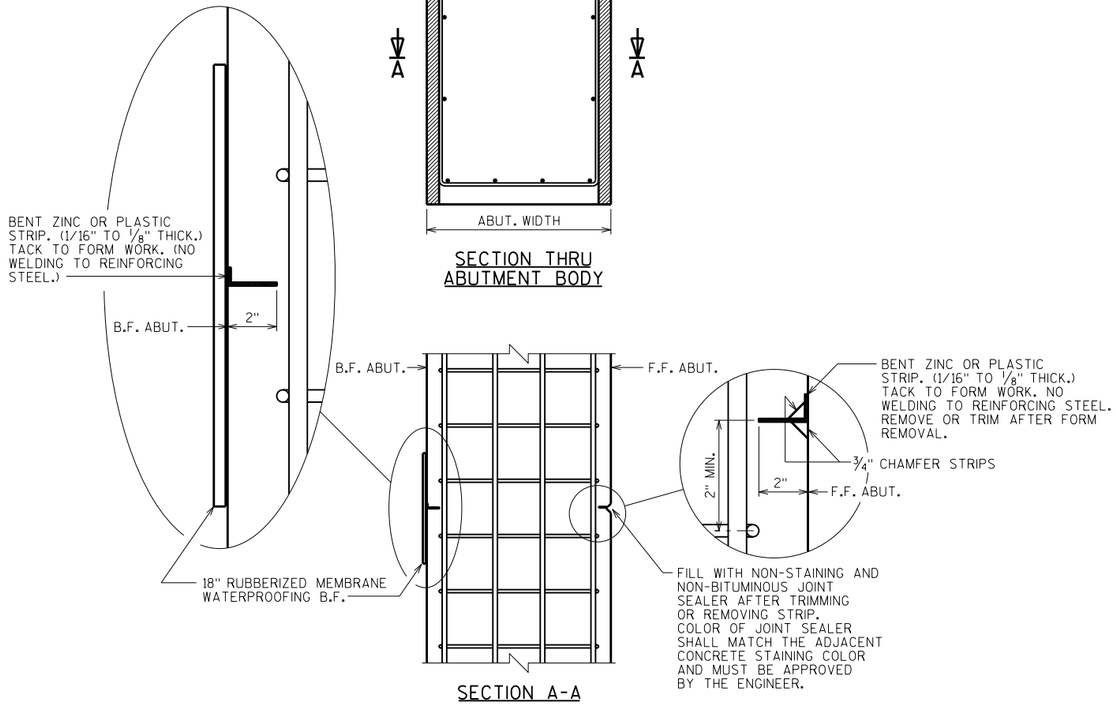
SLPPAVCIP
1-15

8 8 1 2 3

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SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

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ALTERNATE CONSTRUCTION JOINT

SHEET 24

459

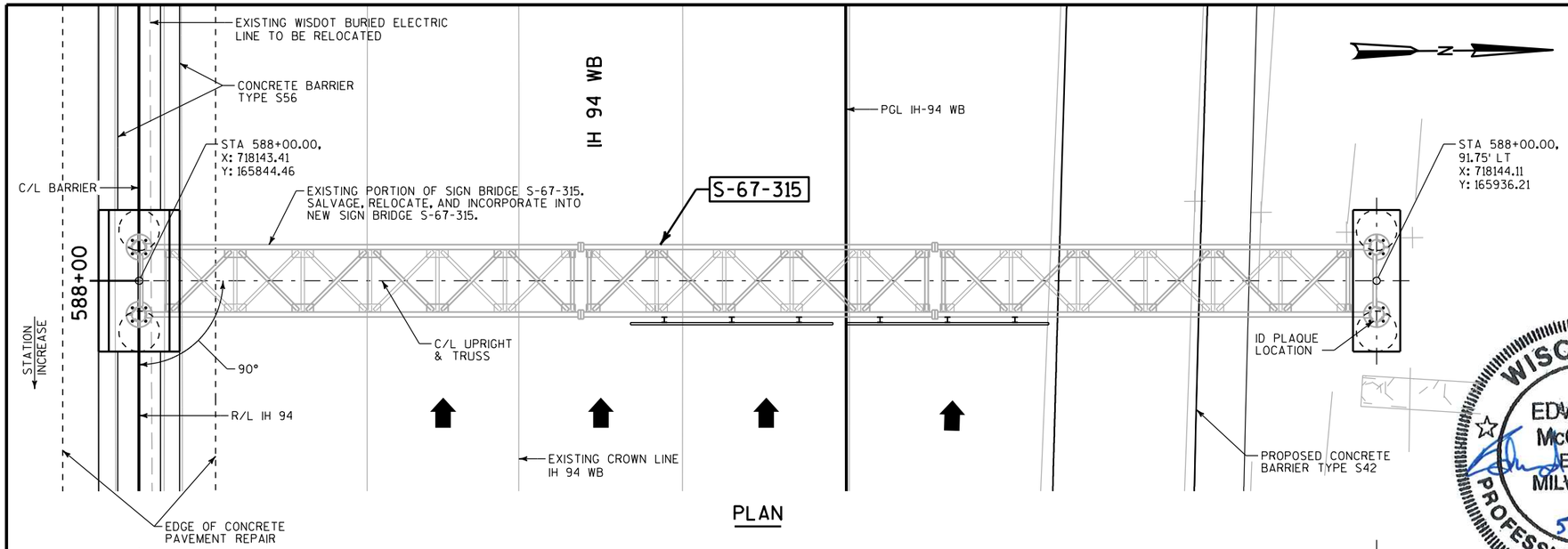
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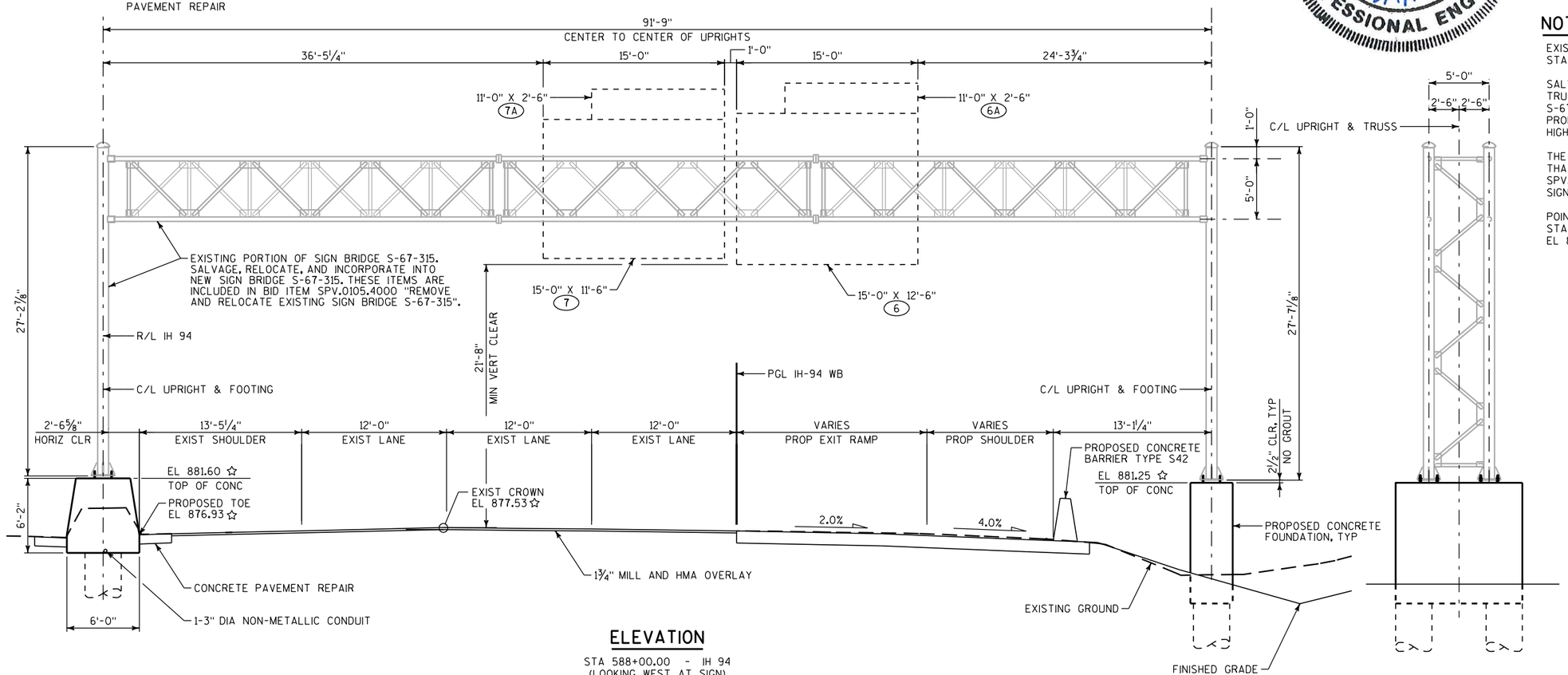
1 2 3

SCALE = 1.0

STATE PROJECT NUMBER
1060-33-82



PLAN



ELEVATION

STA 588+00.00 - IH 94
(LOOKING WEST AT SIGN)

SIDE VIEW

LOOKING SOUTH AT NORTH COLUMN

ELEVATION CONTROL POINTS

PT #	TYPE	X	Y	ELEV
131	MAG NAIL	717720.645	165908.798	869.12
171	MAG NAIL	717658.763	165752.930	867.21
211	MAG NAIL	718343.310	165977.530	878.75

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GENERAL NOTES & QUANTITIES
3. MEDIAN CONCRETE FOOTING DETAILS
4. OUTER CONCRETE FOOTING DETAILS
5. SIGN BRIDGE DETAILS
6. SUBSURFACE EXPLORATION

LEGEND

☆ ELEVATIONS GIVEN ALONG C/L UPRIGHT & TRUSS

(XXX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

NOTES

EXISTING SIGN BRIDGE IS LOCATED AT APPROXIMATE STA 586+00.00.

SALVAGE, RELOCATE, AND INCORPORATE EXISTING TRUSS AND UPRIGHT PORTION OF SIGN BRIDGE S-67-315 INTO NEW SIGN BRIDGE S-67-315. ERECT ON PROPOSED CONCRETE FOUNDATIONS. REPLACE ALL HIGH-STRENGTH BOLTS AND CONNECTING HARDWARE.

THE REMOVAL OF PORTIONS OF EXISTING S-67-315 THAT ARE NOT SALVAGED IS INCLUDED IN BID ITEM SPV.0105.4000 "REMOVE AND RELOCATE EXISTING SIGN BRIDGE S-67-315".

POINT OF MIN VERTICAL CLEARANCE
STA 588+03.27, 28.17' LEFT,
EL 877.59

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
ED MCCRIGHT (414) 272-2426

WISCONSIN
EDWARD K. McCRIGHT
E-37422
MILWAUKEE, WI
5/4/17
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 05/17/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE S-67-315

IH 94 WB

COUNTY	TOWN/CITY/VILLAGE
WAUKESHA	BROOKFIELD

DESIGN SPEC.
AASHTO STD SPECS FOR HIGHWAY SIGNS 6TH ED

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EKM	KES	TEK	EKM

GENERAL PLAN & ELEVATION

SHEET 1 OF 6

STATE PROJECT NUMBER
1060-33-82

MATERIAL PROPERTIES

CONCRETE MASONRY ---------- f'c = 3,500 psi

HIGH STRENGTH STEEL
REINFORCEMENT, GRADE 60 ---------- fy = 60,000 psi

STRUCTURAL ANGLES,
PLATE AND BARS - ASTM A709 GRADE 36 ---- fy = 36,000 psi

CHORDS & COLUMN
(INCLUDING HANDHOLE) - API-5L-X42 ---------- fy = 42,000 psi

HIGH STRENGTH BOLTS - A325 ---------- fy = 92,000 psi

ANCHOR BOLTS - ASTM F1554 GRADE 55------ fy = 55,000 psi

HARDWARE GALVANIZED ---------- ASTM A153 CLASS C

FOUNDATION DATA

ALLOWABLE SHAFT END BEARING PRESSURE = 8,000 PSF

ALLOWABLE SKIN FRICTION = 625 PSF

UNDRAINED SHEAR STRENGTH AT BASE OF SHAFT = 2,000 PSF

SOIL FRICTION ANGLE AT BASE OF SHAFT = 0°

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE CONSIDERED INCIDENTAL TO "REMOVE AND RELOCATE EXISTING SIGN BRIDGE S-67-315". LOCATE PLAQUE ON FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

CENTER SIGNS VERTICALLY ON TRUSS UNLESS OTHERWISE SHOWN OR NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

COORDINATES ON THE PLANS ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WAUKESHA COUNTY ZONE, NAD 83 (2007).

ALTERNATE DESIGNS ARE NOT ALLOWED.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO TRAFFIC OPS SE REGION: MR. TOM HEYDEL, WISDOT, 141 NW BARSTOW ST. WAUKESHA, WI 53187 AND THE PROJECT ENGINEER FOR APPROVAL.

SEE CONSTRUCTION DETAILS SHEETS FOR SIGN CONFIGURATION DURING VARIOUS STAGES OF CONSTRUCTION AND CONFIGURATION AT COMPLETION OF THIS CONTRACT.

SIGN CONFIGURATION SHOWN ON THE PLANS IS FINAL CONFIGURATION.

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	48
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	6,150
SPV.0075.4000	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2
SPV.0105.4000	REMOVE AND RELOCATE EXISTING SIGN BRIDGE S-67-315	LS	1

ALL ITEMS ARE CATEGORY 4000

DESIGN DATA

SIGN STR.	DESIGN SIGN AREA	MAX. SIGN DEPTH	
S-67-315	528 SF	15'-0"	ORIGINAL DESIGN INCLUDED CATWALK LOADING

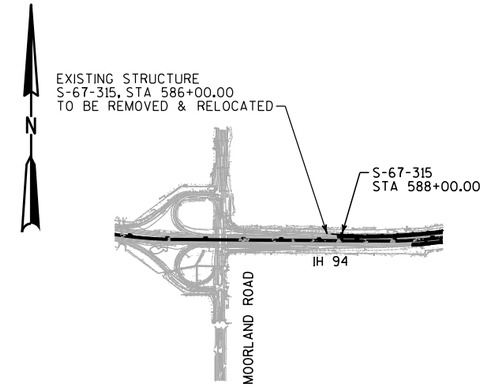
DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 6TH EDITION. WISDOT BRIDGE MANUAL & SE FREEWAYS DESIGN MANUAL

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

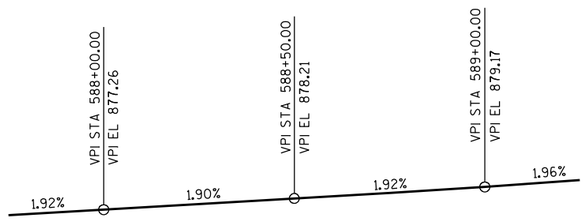
WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
I. DEAD	100
II. DEAD + WIND	133
III. DEAD + ICE + ½WIND	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.



LOCATION MAP



PROFILE GRADE LINE IH-94 WB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

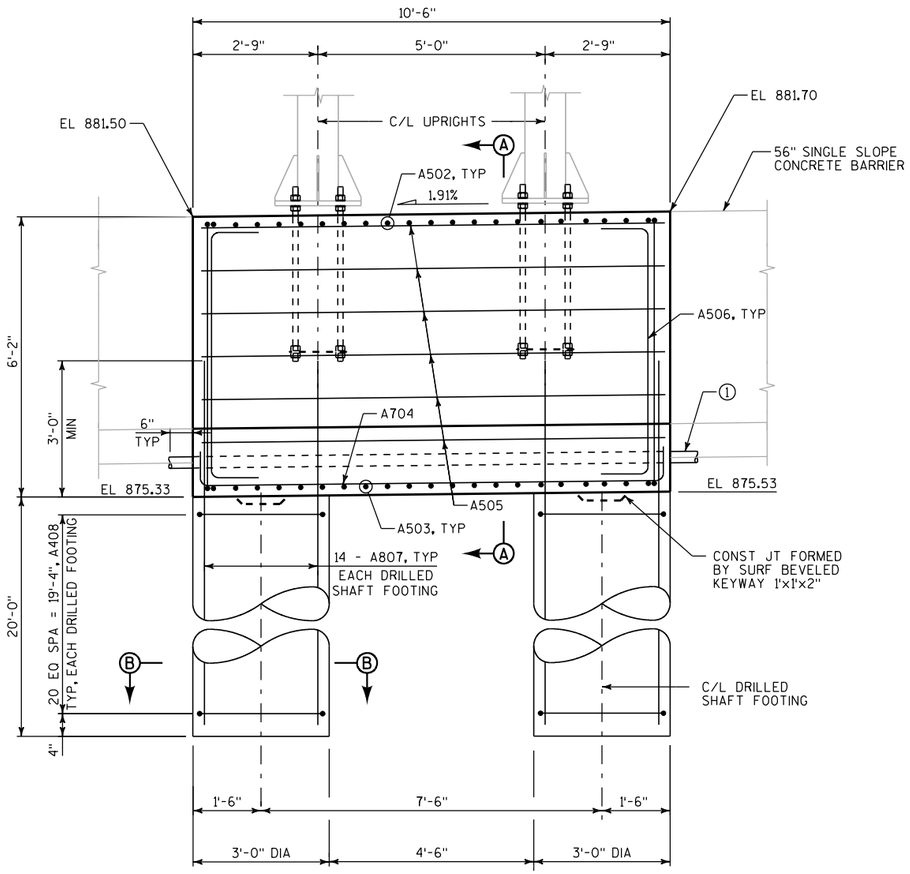
STRUCTURE S-67-315

DRAWN BY TEK | PLANS CK'D. EKM

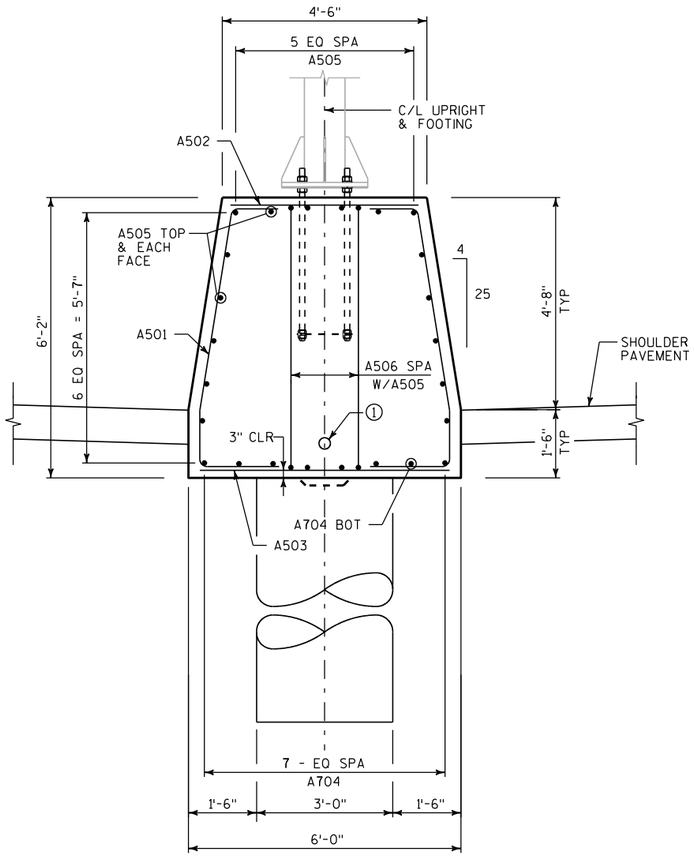
GENERAL NOTES & QUANTITIES

SHEET 2 OF 6

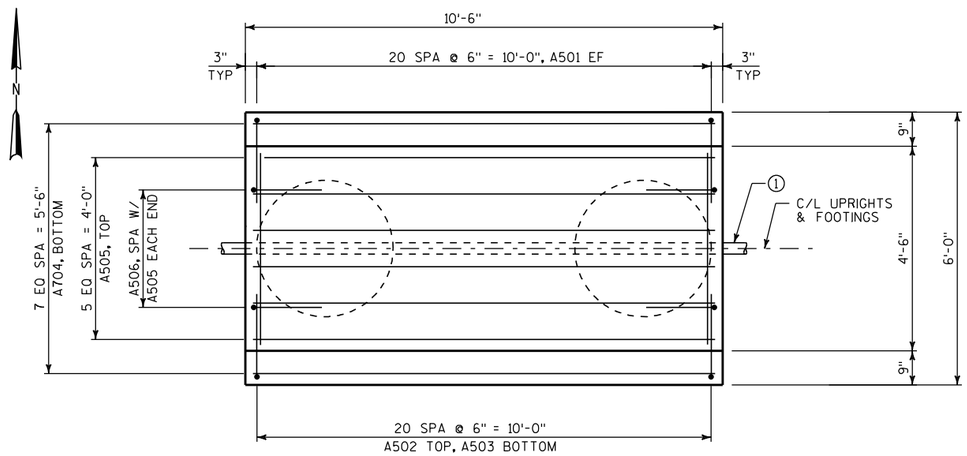
STATE PROJECT NUMBER
1060-33-82



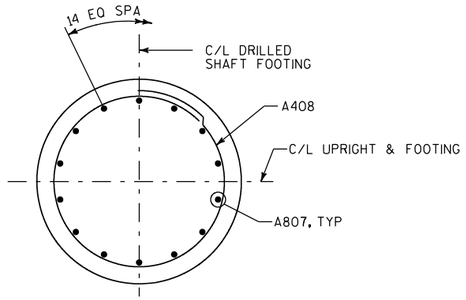
ELEVATION
(LOOKING NORTH)



SECTION A-A
(LOOKING WEST)



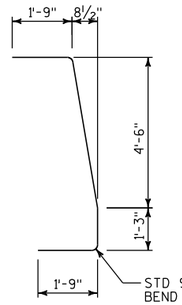
PLAN



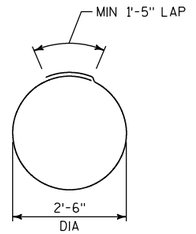
SECTION B-B
TYPICAL FOR EACH DRILLED SHAFT FOOTING

NOTES

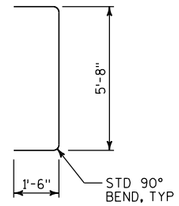
1. 1 - 3" DIA NON-METALLIC CONDUIT PASSING THROUGH MEDIAN FOOTING. EXTEND CONDUIT AS SHOWN AND CAP OR SEAL WITH SUITABLE REMOVABLE PLUG. INCLUDED IN THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".



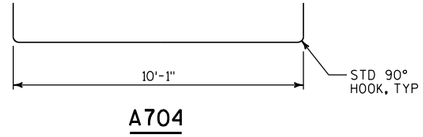
A501



A408



A506



A704

BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
A501	X	42	9'-0"	X	FOOTING - TRANSVERSE - STIRRUP
A502	X	21	4'-0"		FOOTING - TRANSVERSE - TOP
A503	X	21	5'-6"		FOOTING - TRANSVERSE - BOTTOM
A704	X	8	12'-1"	X	FOOTING - LONGITUDINAL - BOTTOM
A505	X	16	10'-0"		FOOTING - LONGITUDINAL - TOP & SIDES
A506	X	8	8'-5"	X	FOOTING - VERTICAL - EACH END
A807	X	28	23'-0"		DRILLED FOOTING - VERTICAL
A408	X	42	9'-4"	X	DRILLED FOOTING - HORIZONTAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-315

DRAWN BY TEK | PLANS CK'D. EKM

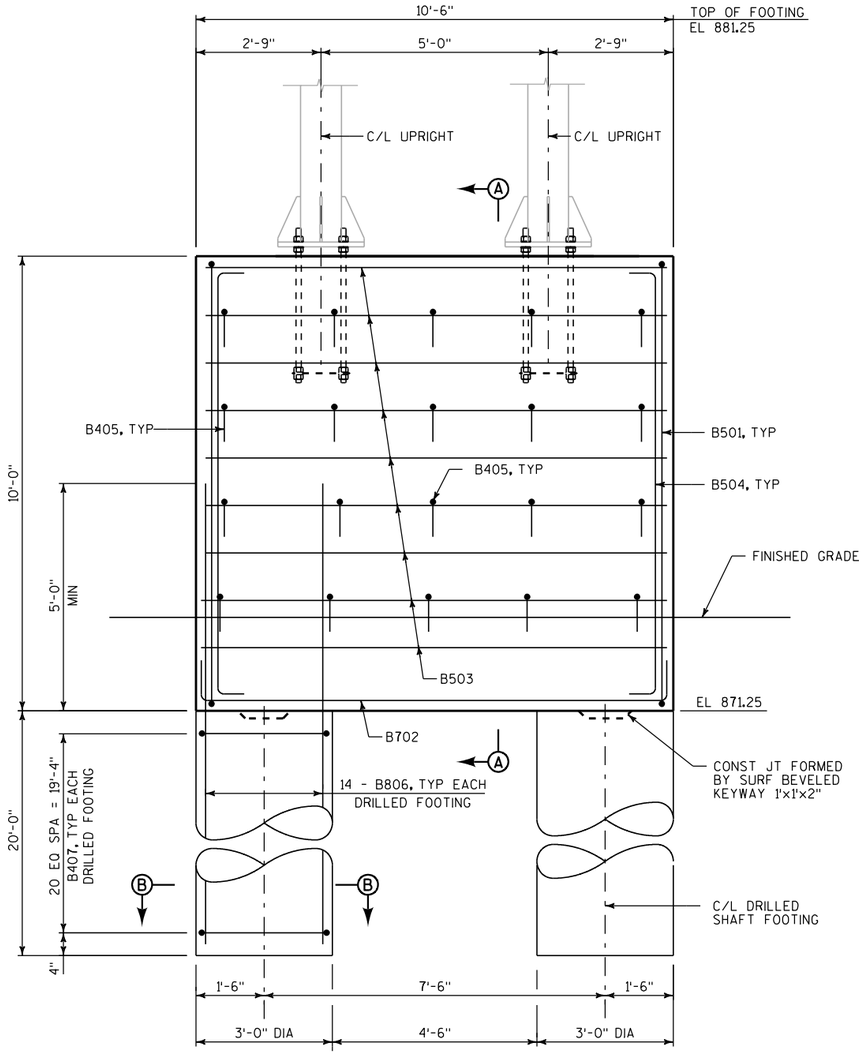
MEDIAN CONCRETE FOOTING DETAILS

SHEET 3 OF 6

8

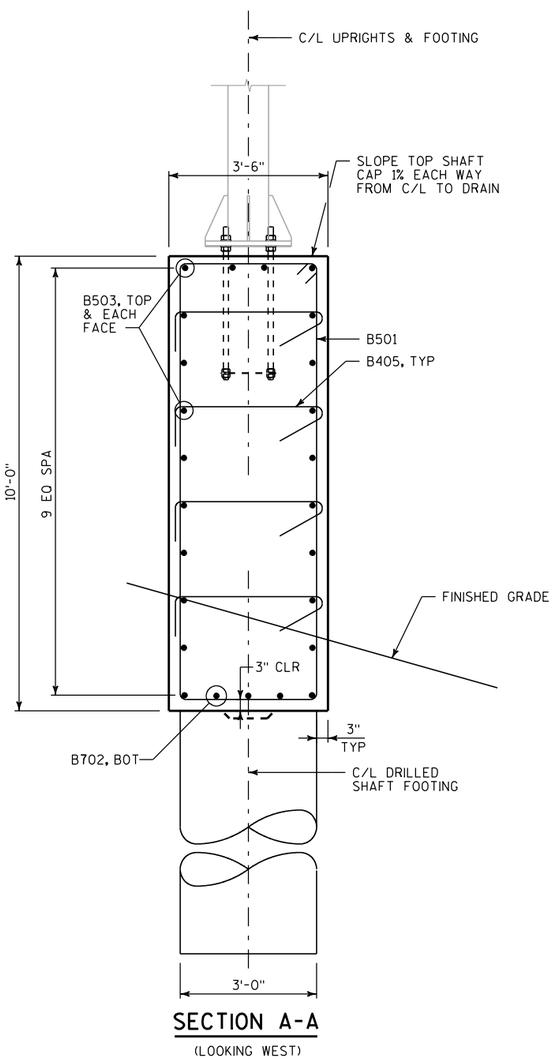
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STATE PROJECT NUMBER
1060-33-82



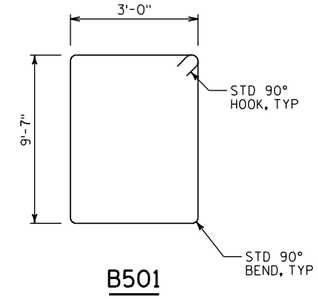
ELEVATION

(LOOKING NORTH)

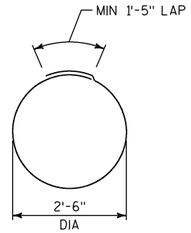


SECTION A-A

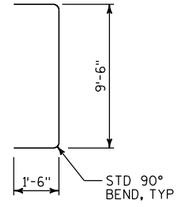
(LOOKING WEST)



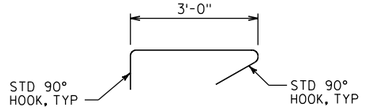
B501



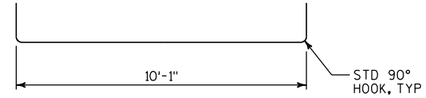
B407



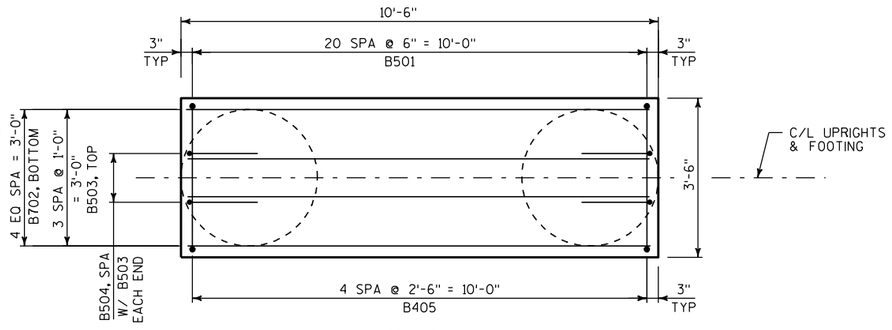
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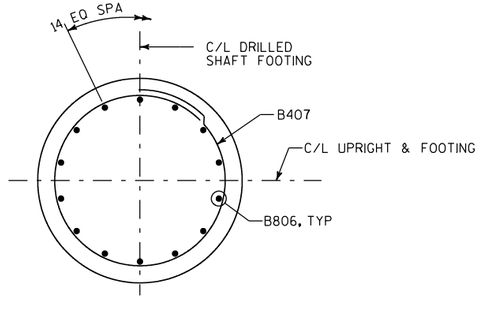
B405



B702



PLAN



SECTION B-B

TYPICAL FOR EACH DRILLED SHAFT FOOTING

BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
B501	X	21	25'-10"	X	FOOTING - VERTICAL - STIRRUP
B702	X	5	12'-1"	X	FOOTING - LONGITUDINAL - BOTTOM
B503	X	20	10'-0"		FOOTING - LONGITUDINAL - TOP & SIDES
B504	X	4	12'-3"	X	FOOTING - VERTICAL - EACH END
B405	X	20	3'-8"	X	FOOTING - LATERAL - TIE
B806	X	28	25'-0"		DRILLED FOOTING - VERTICAL
B407	X	42	9'-4"	X	DRILLED FOOTING - HORIZONTAL

NO.	DATE	REVISION	BY

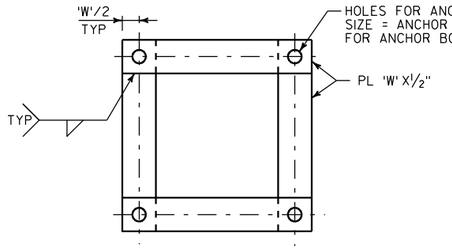
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-315

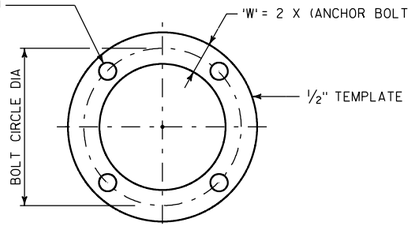
DRAWN BY TEK | PLANS CK'D. EKM

OUTER CONCRETE FOOTING DETAILS

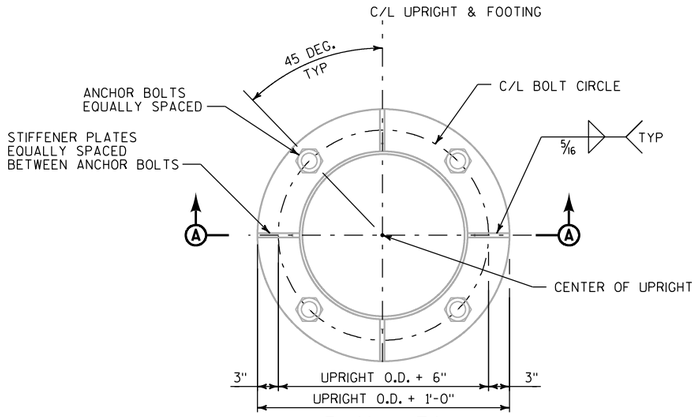
SHEET 4 OF 6



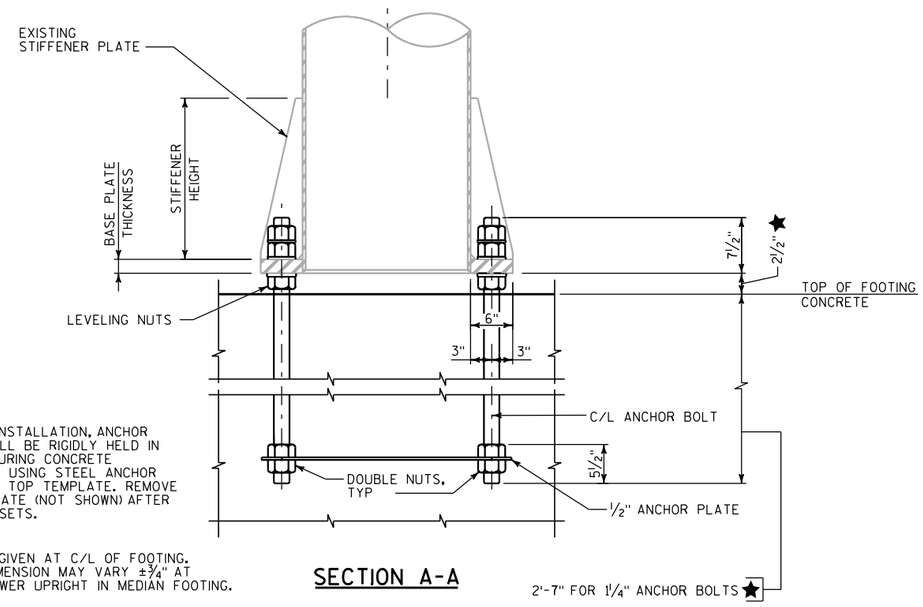
ALTERNATE
ANCHOR PLATE/TEMPLATE PLAN



ANCHOR PLATE/TEMPLATE PLAN



PLAN VIEW
(EXISTING BASE PLATE)



NOTE:
PRIOR TO INSTALLATION, ANCHOR BOLTS SHALL BE RIGIDLY HELD IN POSITION DURING CONCRETE PLACEMENT USING STEEL ANCHOR PLATE AND TOP TEMPLATE. REMOVE TOP TEMPLATE (NOT SHOWN) AFTER CONCRETE SETS.

★ DIMENSION GIVEN AT C/L OF FOOTING. ANCHOR DIMENSION MAY VARY ±3/4" AT C/L OF TOWER UPRIGHT IN MEDIAN FOOTING.

SECTION A-A

NOTES

PLANS OF THE EXISTING S-67-315 STRUCTURE ARE AVAILABLE FOR REVIEW AT WISDOT SE REGION OFFICE 141 NW BARSTOW STREET, WAUKESHA, WI OR THROUGH THE WISDOT STRUCTURES WEBSITE.

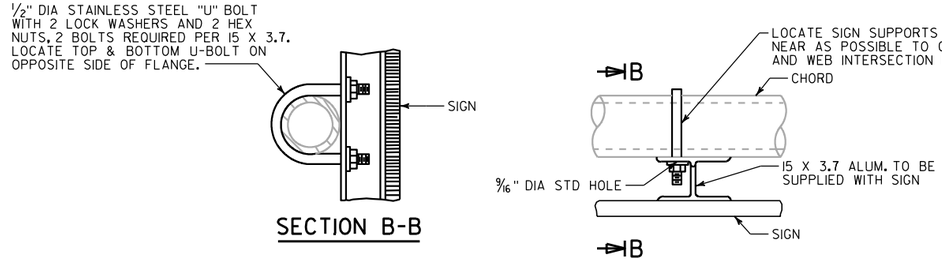
REPLACE ALL HIGH STRENGTH BOLTS AND CONNECTING HARDWARE. WORK INCIDENTAL TO BID ITEM "REMOVE AND RELOCATE EXISTING SIGN BRIDGE S-67-315".

ALL BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" DIA A325 BOLTS, GALVANIZED ASTM A153, CLASS C. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

STEEL ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 55, Fy = 55,000 P.S.I.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE 1/4 THE LENGTH OF THE BRIDGE, 2'-0" DEEPER THAN C/L TO C/L OF CHORDS & SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED IN PLANS.

THE UPPER 12" OF ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH A.A.S.H.T.O. SPECIFICATION AS STATED IN SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.



SECTION B-B

TYPICAL SIGN CONNECTION

BASE PLATE & UPRIGHT COLUMN DETAILS

STRUCTURE	EXISTING COLUMN O.D. X THICKNESS	ANCHOR BOLTS	EXISTING BASE PLATE THICKNESS (IN.)	EXISTING STIFF. PLATE THICKNESS (IN.)	EXISTING STIFF. PLATE HEIGHT (IN.)	EXISTING Tw (IN.)
S-67-315	10.75" O.D. x 0.438"	1 1/4"	1 1/2"	1/2"	10"	5/16"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-315

DRAWN BY TEK | PLANS CK'D. EKM

SIGN BRIDGE DETAILS

SHEET 5 OF 6

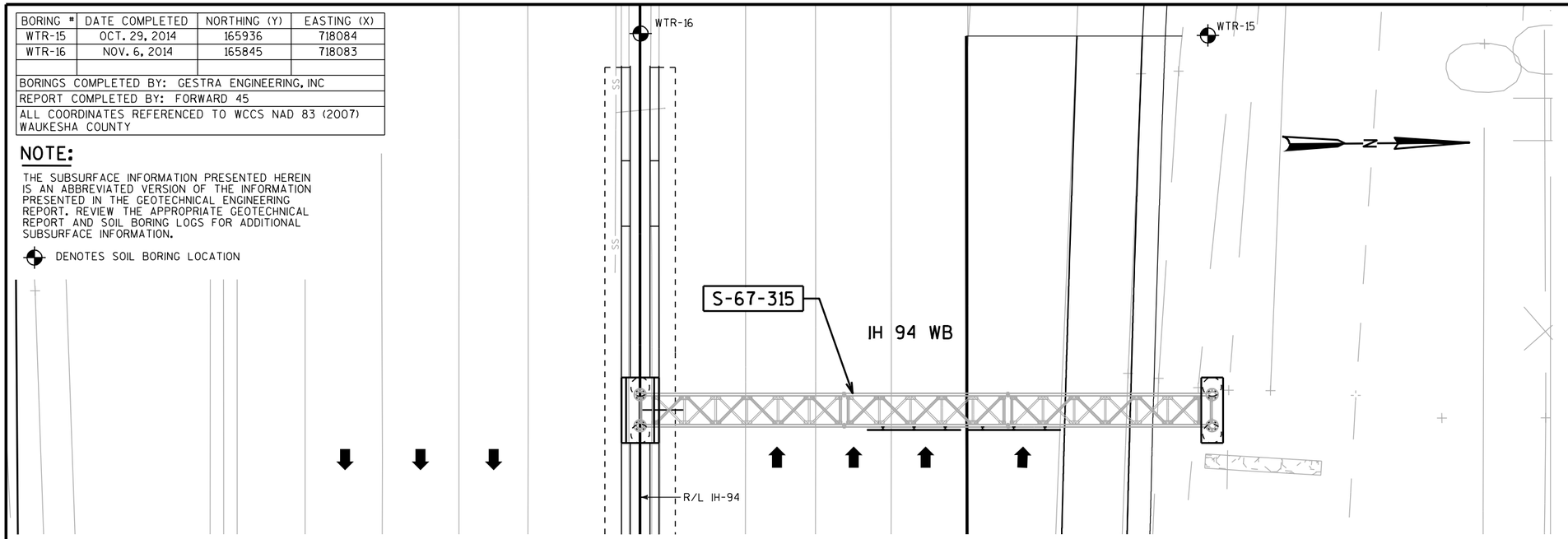
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PLOT DATE : 26-APR-2017 15:40
PLOT BY : mscekm
PLOT NAME : S-67-315_080203_de
PLOT SCALE : 10:1

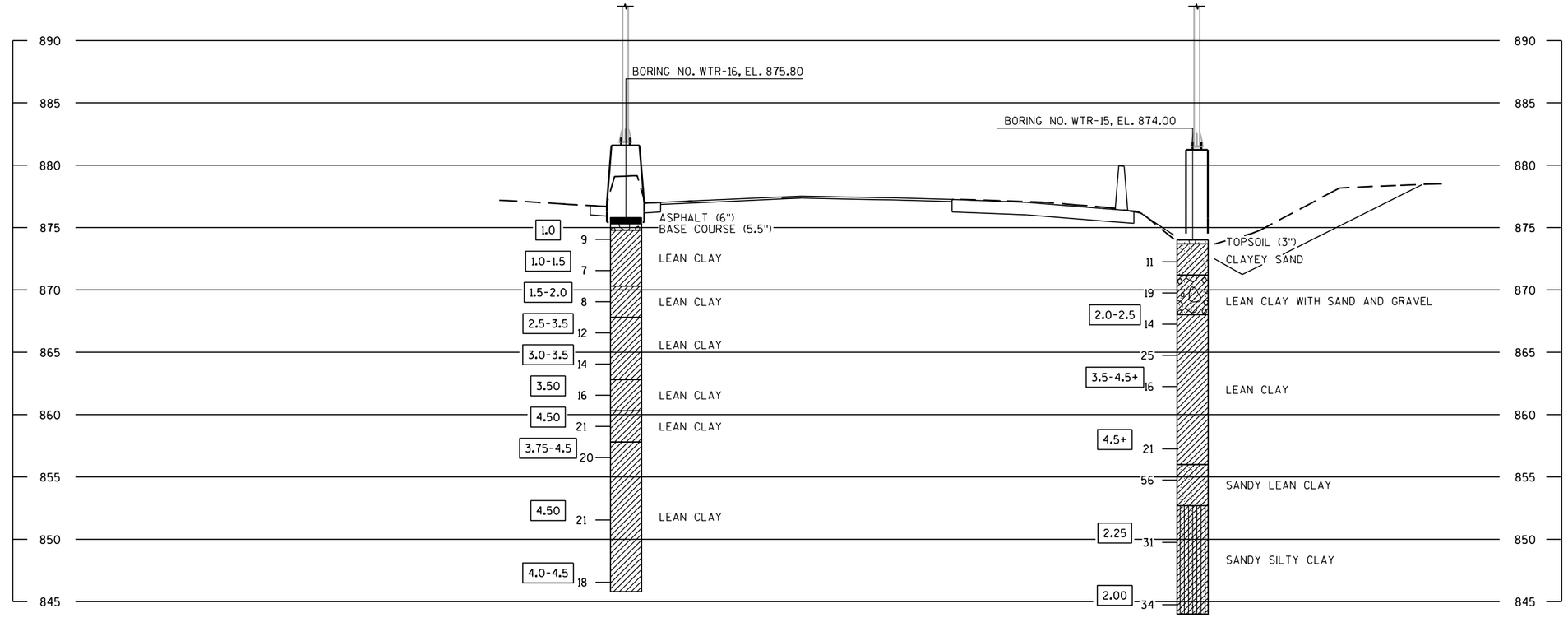
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
WTR-15	OCT. 29, 2014	165936	718084
WTR-16	NOV. 6, 2014	165845	718083
BORINGS COMPLETED BY: GESTRA ENGINEERING, INC			
REPORT COMPLETED BY: FORWARD 45			
ALL COORDINATES REFERENCED TO WCCS NAD 83 (2007) WAUKESHA COUNTY			

NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

DENOTES SOIL BORING LOCATION





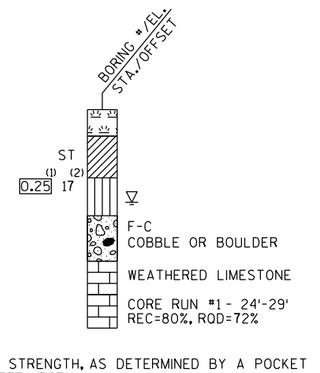
STATE PROJECT NUMBER

1060-33-82

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-315

DRAWN BY TEK | PLANS CK'D. EKM

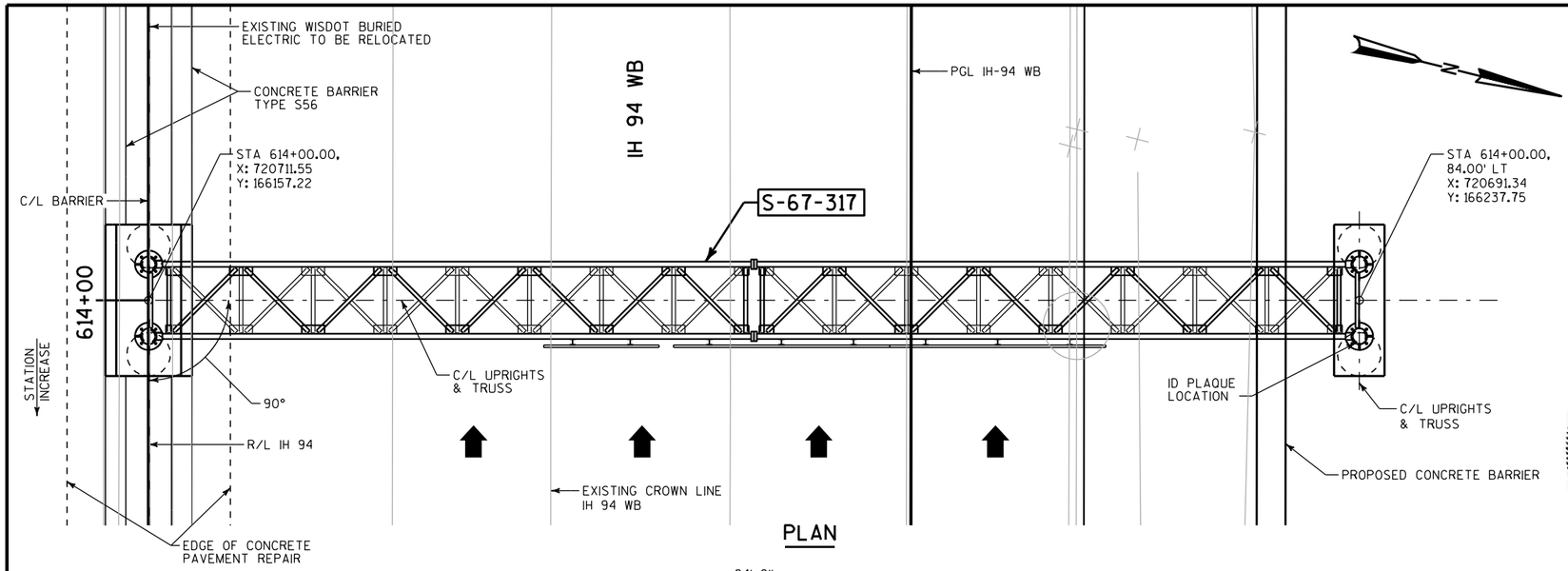
SUBSURFACE EXPLORATION

SHEET 6 OF 6

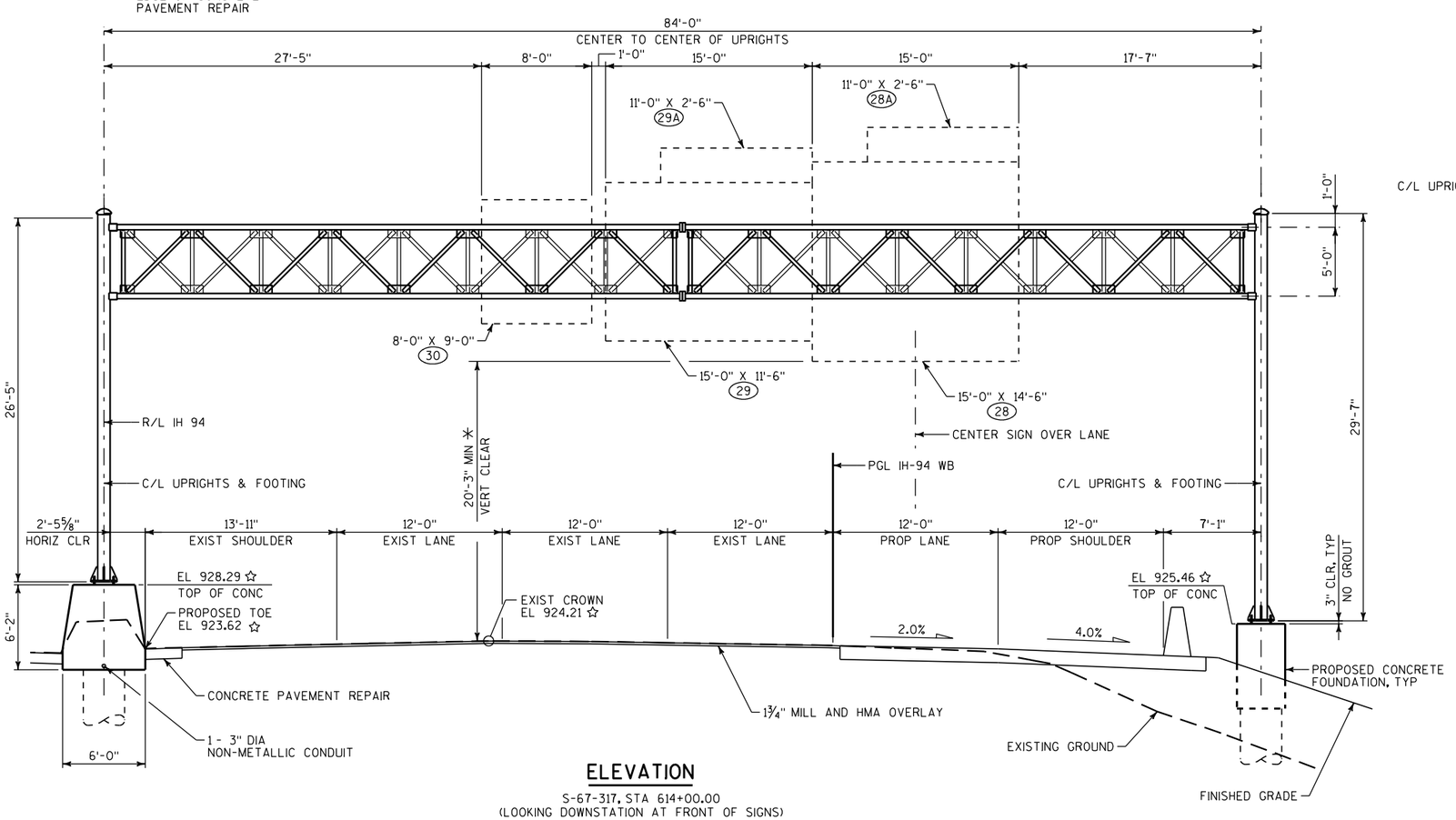
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8

STATE PROJECT NUMBER
1060-33-82

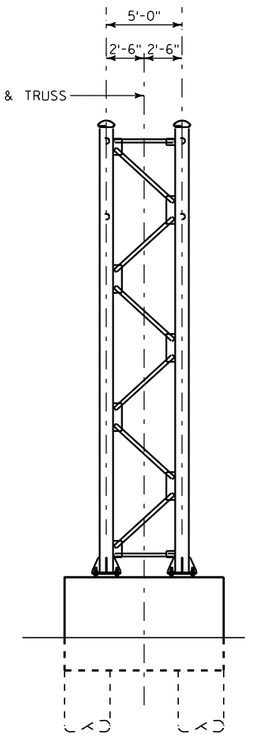


PLAN



ELEVATION

S-67-317, STA 614+00.00
(LOOKING DOWNSTATION AT FRONT OF SIGNS)



SIDE VIEW

LOOKING SOUTH AT NORTH COLUMN

ELEVATION CONTROL POINTS

PT #	TYPE	X	Y	ELEV
128	MAG NAIL	720709.279	166214.056	923.84
111	MAG NAIL	720608.802	166073.373	922.66
209	MAG NAIL	720845.670	166045.120	923.33

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GENERAL NOTES & QUANTITIES
3. MEDIAN CONCRETE FOOTING DETAILS
4. OUTER CONCRETE FOOTING DETAILS
5. 4-CHORD SIGN BRIDGE
6. 4-CHORD SIGN BRIDGE DETAILS
7. SUBSURFACE EXPLORATION

WISCONSIN
EDWARD K. McCRIGHT
E-37422
MILWAUKEE, WI
5/1/17
PROFESSIONAL ENGINEER

LEGEND

☆ ELEVATIONS GIVEN ALONG C/L UPRIGHTS & TRUSS

(XXX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

✳ INCLUDES ADDITIONAL 2'-0" OF CLEARANCE FOR FUTURE CATWALK INSTALLATION

NOTE

POINT OF MIN VERTICAL CLEARANCE
STA 614+03.27, 27.93' LEFT,
EL 924.23

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
ED MCCRIGHT (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 05/17/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE S-67-317

IH 94 WB

COUNTY	TOWN/CITY/VILLAGE
WAUKESHA	BROOKFIELD

DESIGN SPEC.
AASHTO STD SPECS FOR HIGHWAY SIGNS 6TH ED

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EKM	KES	TEK	EKM

GENERAL PLAN & ELEVATION

SHEET 1 OF 7

STATE PROJECT NUMBER
1060-33-82

MATERIAL PROPERTIES

CONCRETE MASONRY ---------- f'c = 3,500 psi

HIGH STRENGTH STEEL
REINFORCEMENT, GRADE 60 ---------- fy = 60,000 psi

STRUCTURAL ANGLES,
PLATE AND BARS - ASTM A709 GRADE 36 ---- fy = 36,000 psi

CHORDS & COLUMN
(INCLUDING HANDHOLE) - API-5L-X42 ---------- fy = 42,000 psi

HIGH STRENGTH BOLTS - A325 ---------- fy = 92,000 psi

ANCHOR BOLTS - ASTM F1554 GRADE 55------ fy = 55,000 psi

HARDWARE GALVANIZED ---------- ASTM A153 CLASS C

FOUNDATION DATA

ALLOWABLE SHAFT END BEARING PRESSURE = 8,000 PSF

ALLOWABLE SKIN FRICTION = 625 PSF

UNDRAINED SHEAR STRENGTH AT BASE OF SHAFT = 2,000 PSF

SOIL FRICTION ANGLE AT BASE OF SHAFT = 0°

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE CONSIDERED INCIDENTAL TO "SIGN BRIDGE STRUCTURE S-67-317". LOCATE PLAQUE ON FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

CENTER SIGNS VERTICALLY ON TRUSS UNLESS OTHERWISE SHOWN OR NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

COORDINATES ON THE PLANS ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WAUKESHA COUNTY ZONE, NAD 83 (2007).

ALTERNATE DESIGNS ARE NOT ALLOWED.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO TRAFFIC OPS SE REGION: MR. TOM HEYDEL, WISDOT, 141 NW BARSTOW ST. WAUKESHA, WI 53187 AND THE PROJECT ENGINEER FOR APPROVAL.

SEE CONSTRUCTION DETAILS SHEETS FOR SIGN CONFIGURATION DURING VARIOUS STAGES OF CONSTRUCTION AND CONFIGURATION AT COMPLETION OF THIS CONTRACT.

SIGN CONFIGURATION SHOWN ON THE PLANS IS FINAL CONFIGURATION.

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	43
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	5,710
641.6600.0001	SIGN BRIDGE S-67-317	LS	1
SPV.0075.4000	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4010

DESIGN DATA

SIGN STR.	DESIGN SIGN AREA	MAX. SIGN DEPTH
S-67-317	754 SF	14'-6"

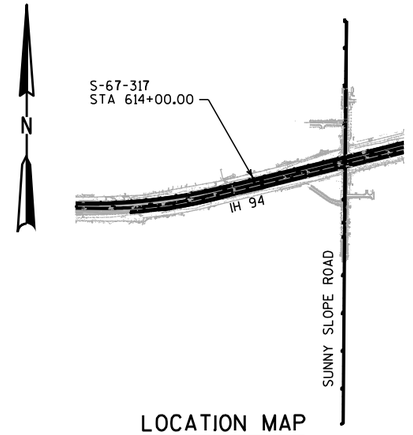
DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 6TH EDITION. WISDOT BRIDGE MANUAL & SE FREEWAYS DESIGN MANUAL

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

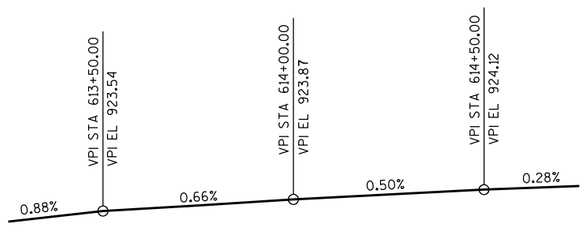
WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
I. DEAD	100
II. DEAD + WIND	133
III. DEAD + ICE + ½WIND	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.



LOCATION MAP



PROFILE GRADE LINE IH-94 WB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-317

DRAWN BY TEK | PLANS CK'D. EKM

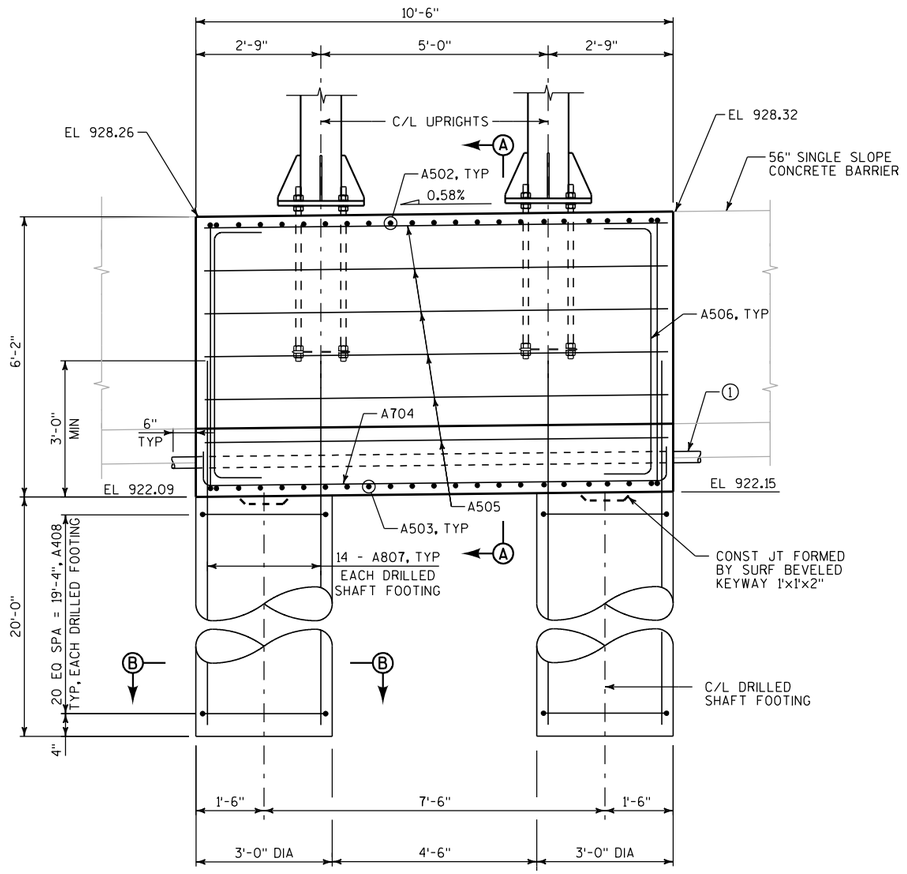
GENERAL NOTES & QUANTITIES

SHEET 2 OF 7

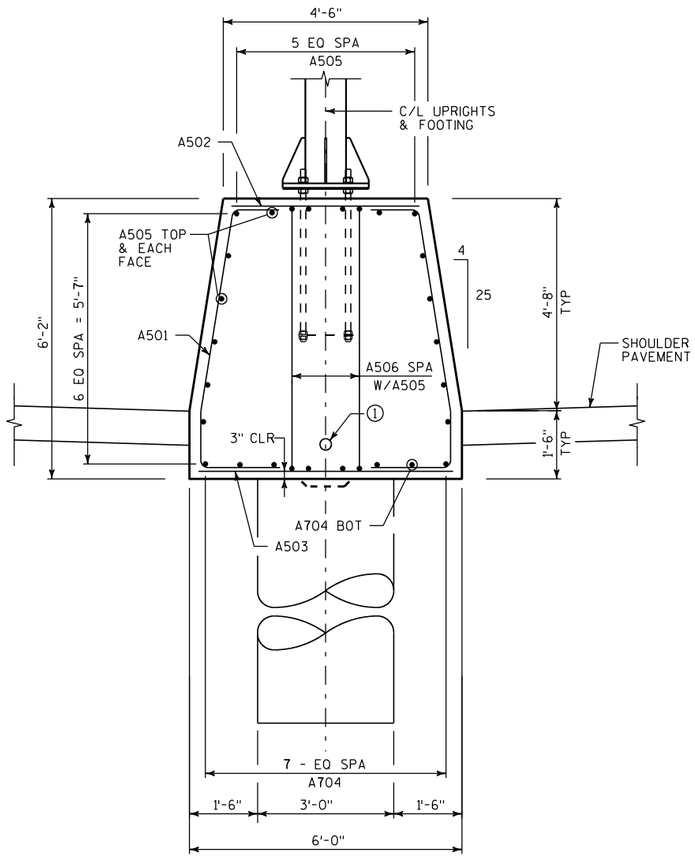
8

8

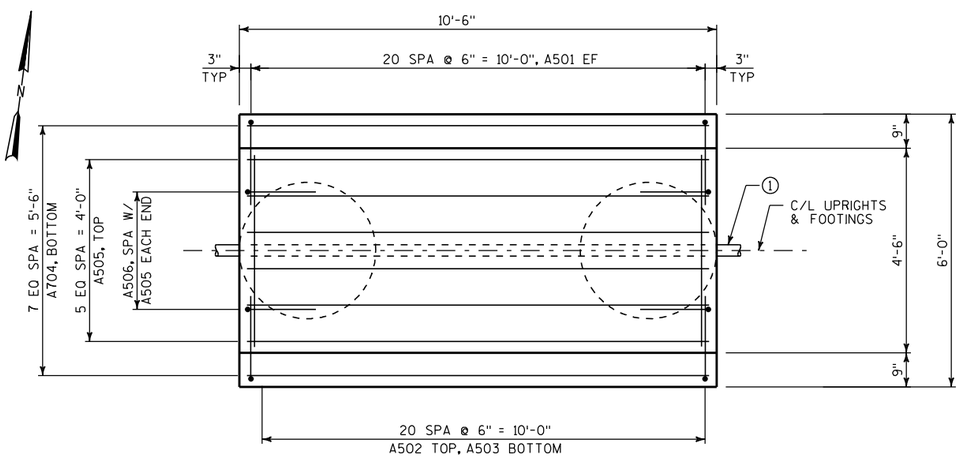
STATE PROJECT NUMBER
1060-33-82



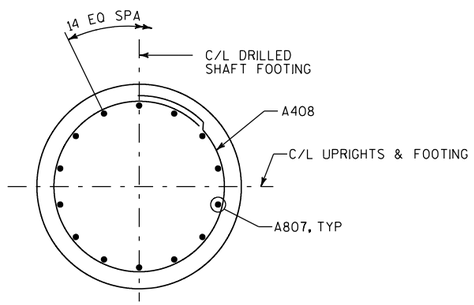
ELEVATION
(LOOKING NORTH)



SECTION A-A
(LOOKING WEST)



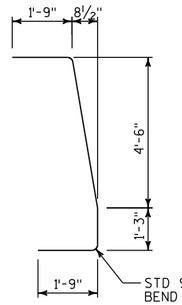
PLAN



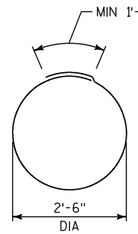
SECTION B-B
TYPICAL FOR EACH DRILLED SHAFT FOOTING

NOTES

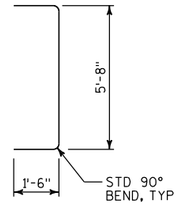
① 1 - 3" DIA NON-METALLIC CONDUIT PASSING THROUGH MEDIAN FOOTING. EXTEND CONDUIT AS SHOWN AND CAP OR SEAL WITH SUITABLE REMOVABLE PLUG. INCLUDED IN THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".



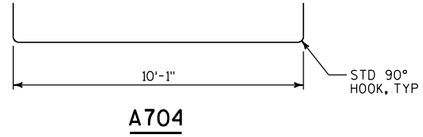
A501



A408



A506



A704

BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
A501	X	42	9'-0"	X	FOOTING - TRANSVERSE - STIRRUP
A502	X	21	4'-0"		FOOTING - TRANSVERSE - TOP
A503	X	21	5'-6"		FOOTING - TRANSVERSE - BOTTOM
A704	X	8	12'-1"	X	FOOTING - LONGITUDINAL - BOTTOM
A505	X	16	10'-0"		FOOTING - LONGITUDINAL - TOP & SIDES
A506	X	8	8'-5"	X	FOOTING - VERTICAL - EACH END
A807	X	28	23'-0"		DRILLED FOOTING - VERTICAL
A408	X	42	9'-4"	X	DRILLED FOOTING - HORIZONTAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-317

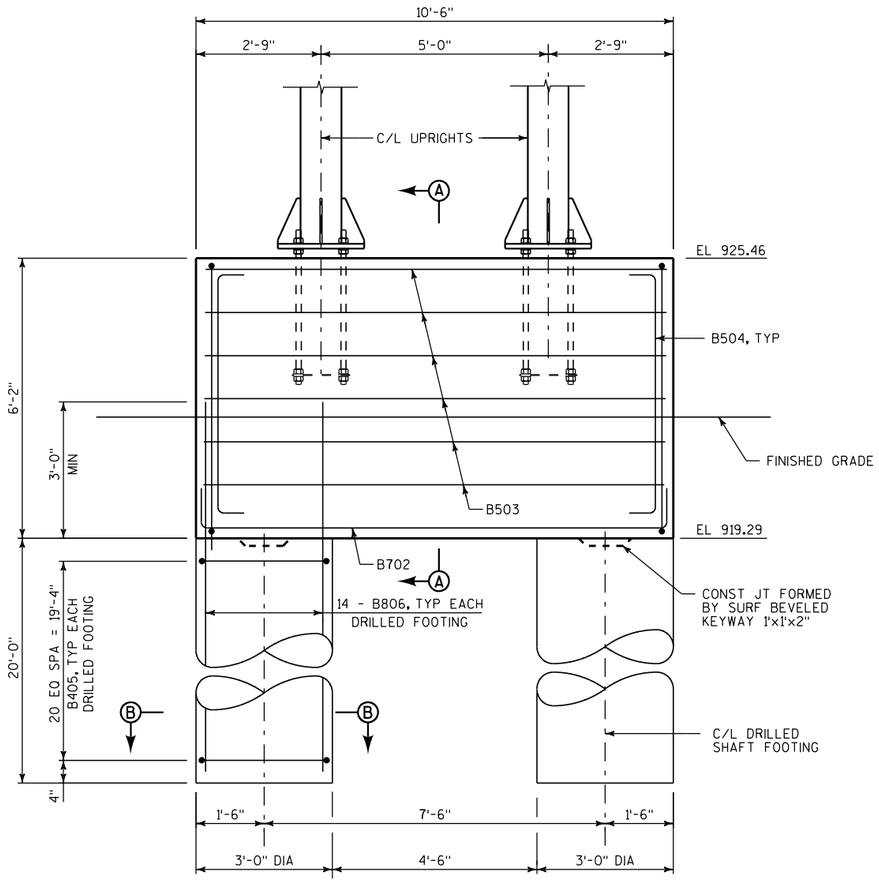
DRAWN BY TEK | PLANS CK'D. EKM

MEDIAN CONCRETE FOOTING DETAILS

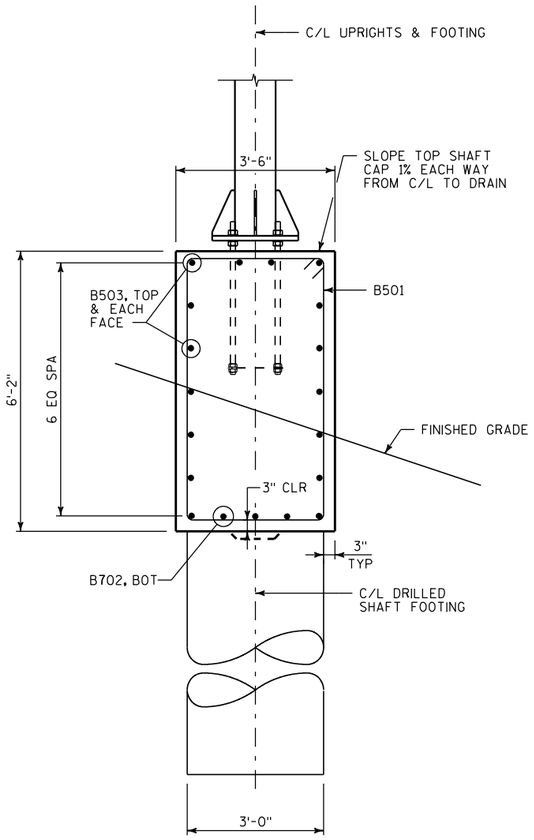
SHEET 3 OF 7

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PLOT BY : mscekm
PLOT NAME : S-67-317_080201_de
PLOT SCALE : 3.333333:1

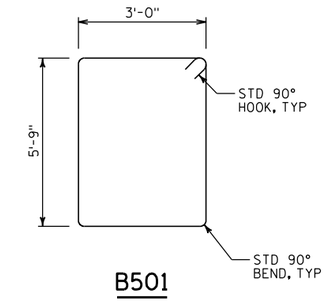
STATE PROJECT NUMBER
1060-33-82



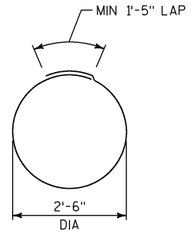
ELEVATION
(LOOKING NORTH)



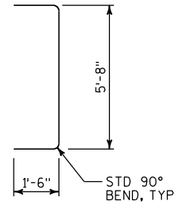
SECTION A-A
(LOOKING WEST)



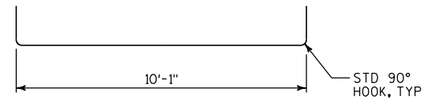
B501



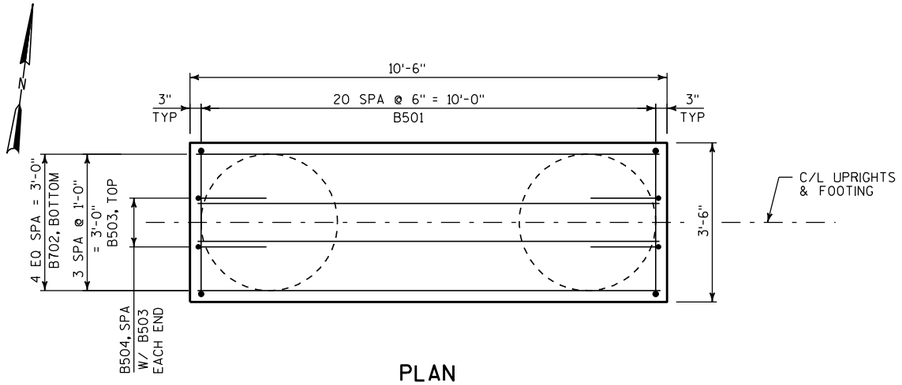
B405



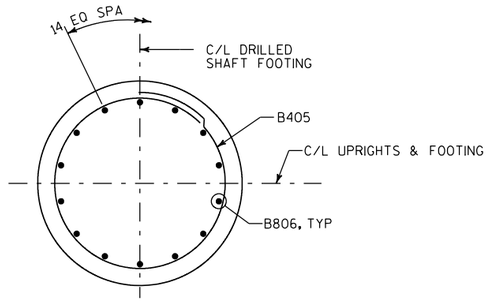
B504



B702



PLAN



SECTION B-B

TYPICAL FOR EACH DRILLED SHAFT FOOTING

BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
B501	X	21	18'-2"	X	FOOTING - VERTICAL - STIRRUP
B702	X	5	12'-1"	X	FOOTING - LONGITUDINAL - BOTTOM
B503	X	14	10'-0"		FOOTING - LONGITUDINAL - TOP & SIDES
B504	X	4	8'-5"	X	FOOTING - VERTICAL - EACH END
B405	X	42	9'-4"		DRILLED FOOTING - HORIZONTAL
B806	X	28	23'-0"	X	DRILLED FOOTING - VERTICAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

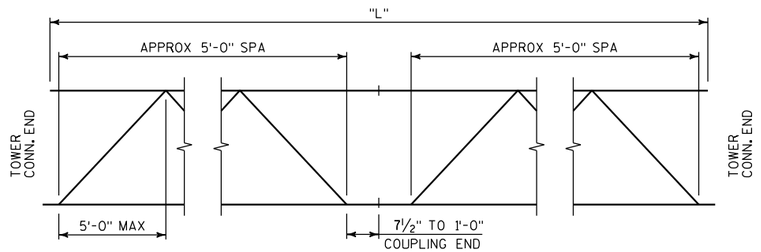
STRUCTURE S-67-317

DRAWN BY TEK | PLANS CK'D. EKM

OUTER CONCRETE FOOTING DETAILS

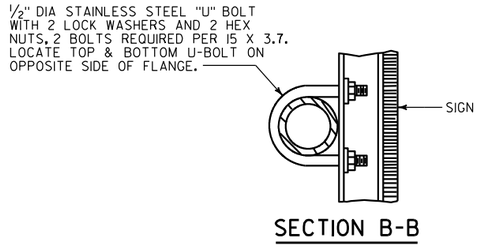
SHEET 4 OF 7

STATE PROJECT NUMBER
1060-33-82

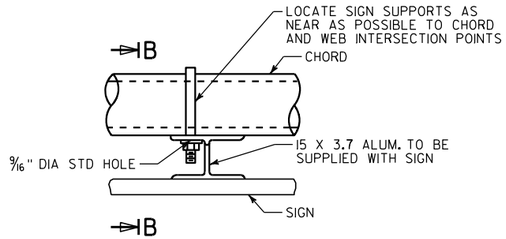


TRUSS ARRANGEMENT

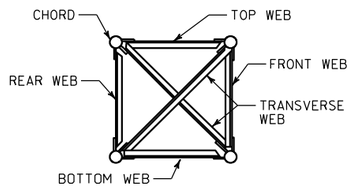
FABRICATOR MAY MAKE TRUSSES ANY LENGTH KEEPING A SECTION A MINIMUM OF 20'-0" & A MULTIPLE OF 5'-0". CHORD FIELD SPLICES SHALL BE MADE WITH COUPLINGS. CHORD SHOP SPLICE SHALL BE THE WELDED SPLICE SHOWN ABOVE.



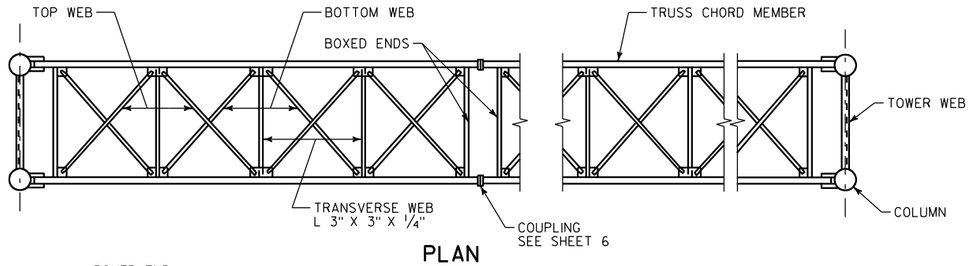
SECTION B-B



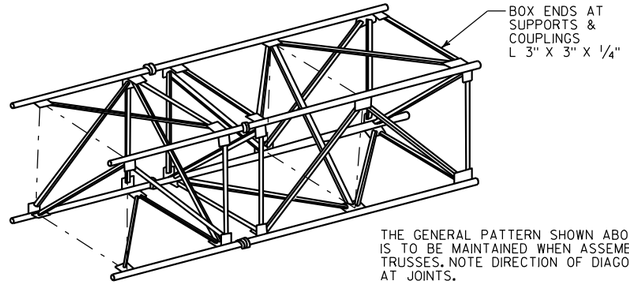
TYPICAL SIGN CONNECTION



SECTION A-A

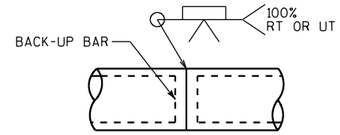


PLAN

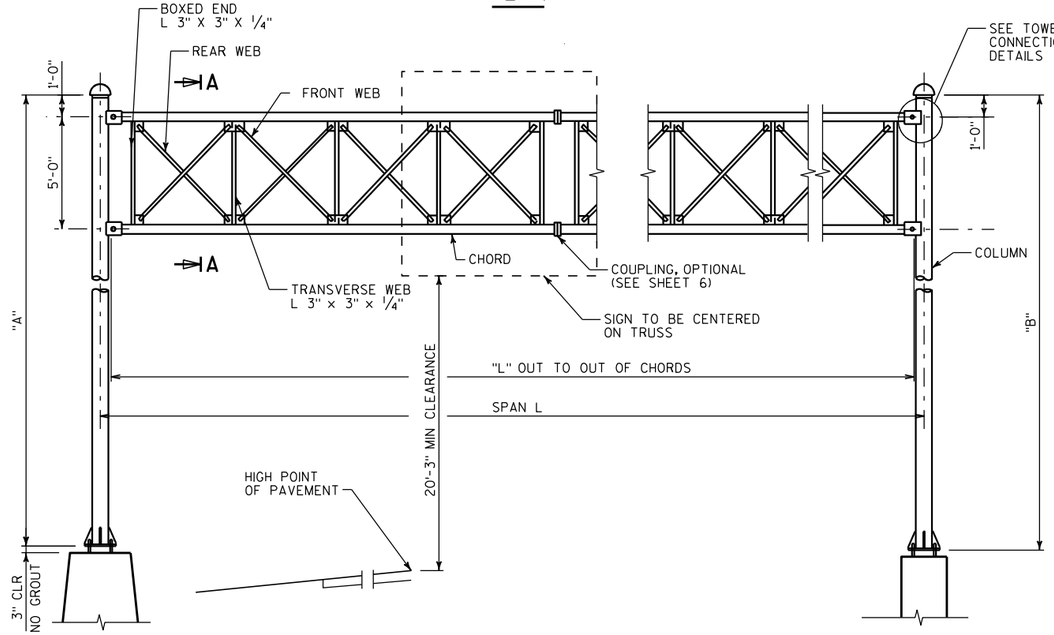


THE GENERAL PATTERN SHOWN ABOVE IS TO BE MAINTAINED WHEN ASSEMBLING TRUSSES. NOTE DIRECTION OF DIAGONALS AT JOINTS.

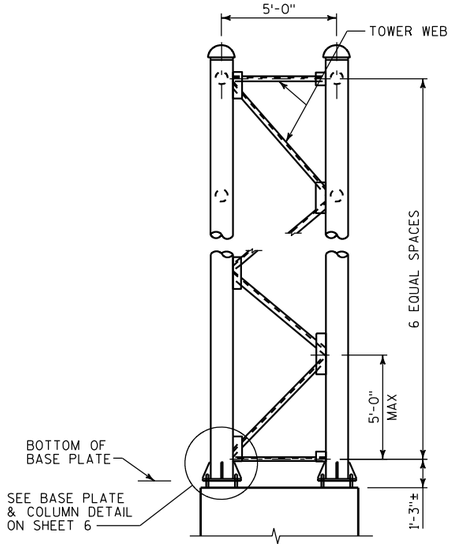
TYPICAL TRUSS SECTION



CHORD SPLICE



ELEVATION



END VIEW

NOTES

STEEL COLUMN AND CHORD PIPES SHALL BE A.P.I. SPEC. 5L GRADE X42, Fy = 42,000 P.S.I. SEE WISDOT BRIDGE MANUAL SECTION 39.3 FOR ACCEPTABLE ALTERNATIVE MATERIAL.

PLATES, BARS & STRUCTURAL ANGLES SHALL BE ASTM A709 GRADE 36, Fy = 36,000 P.S.I.

STEEL ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554 GRADE 55, ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.

UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

ALL STRUCTURAL STEEL MEMBERS, PLATES, ANCHOR RODS, H.S. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED PER SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF A TRUSS UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D1.1.

SEE SIGN PLATE NO. A4-6 OF THE SIGN PLATE MANUAL FOR INSTRUCTION ON CENTERING SIGN VERTICALLY ON TRUSS.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE ¼ THE LENGTH OF THE BRIDGE, 2'-0" DEEPER THAN C TO C OF CHORDS & SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED IN PLANS.

TABLE

STRUCTURE	A	B	CHORDS O.D. x THK.	TOP & BOTTOM WEB	FRONT & REAR WEB	CAMBER	COLUMN O.D. x THK.	TOWER WEBS	L
S-67-317	26'-9"	29'-7"	5.563" x 0.375"	L 3½" x 3½" x ⅜"	L 3½" x 3½" x ⅜"	1⅝"	10.75" O.D. x 0.500"	L 3½" x 3½" x ⅜"	82'-8¼"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

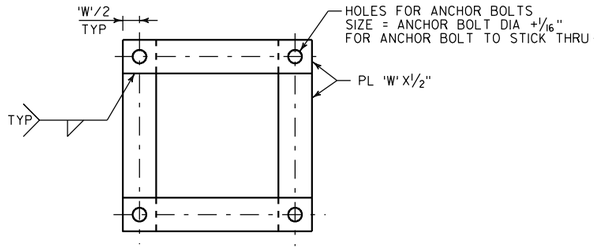
STRUCTURE S-67-317

DRAWN BY TEK | PLANS CK'D. EKM

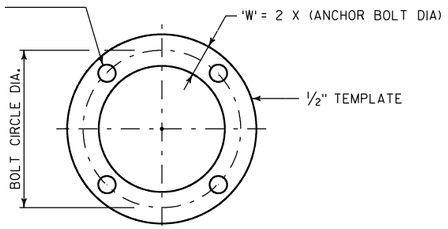
4-CHORD SIGN BRIDGE

SHEET 5 OF 7

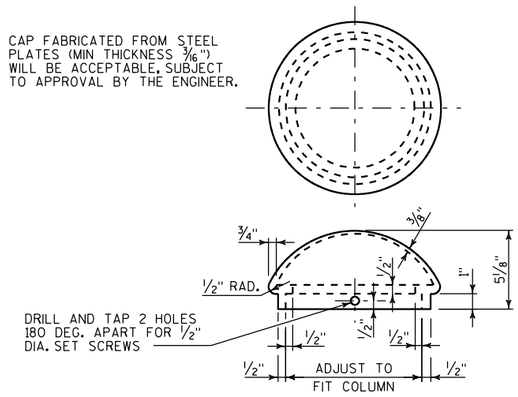
STATE PROJECT NUMBER
1060-33-82



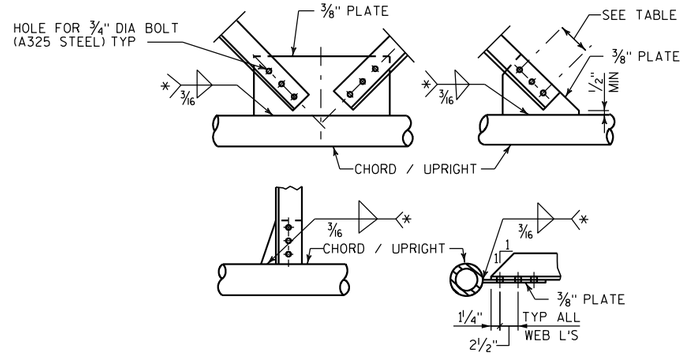
ALTERNATE
ANCHOR PLATE/TEMPLATE PLAN



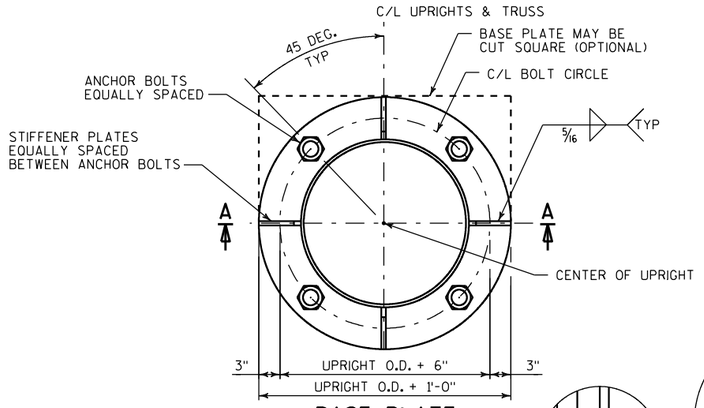
ANCHOR PLATE/TEMPLATE PLAN



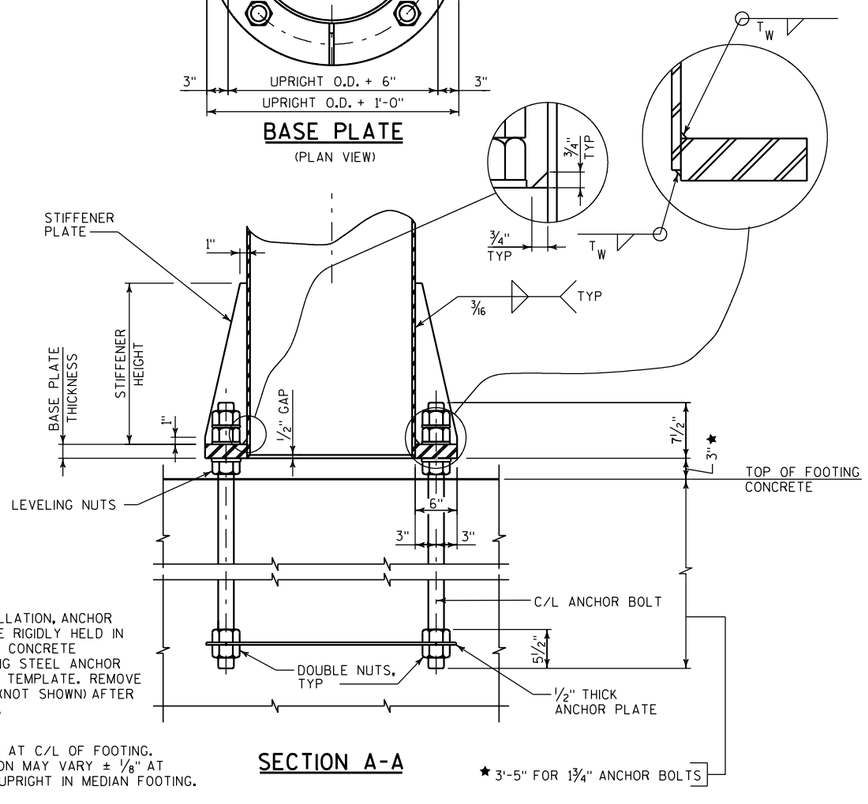
TOWER CAP DETAIL



TYPICAL TRUSS / TOWER CONNECTION DETAILS



BASE PLATE
(PLAN VIEW)

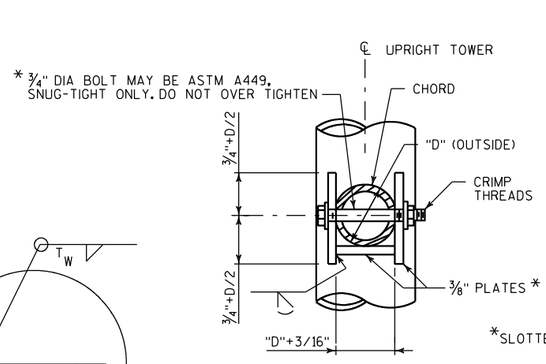


NOTE:
PRIOR TO INSTALLATION, ANCHOR BOLTS SHALL BE RIGIDLY HELD IN POSITION DURING CONCRETE PLACEMENT USING STEEL ANCHOR PLATE AND TOP TEMPLATE. REMOVE TOP TEMPLATE (NOT SHOWN) AFTER CONCRETE SETS.

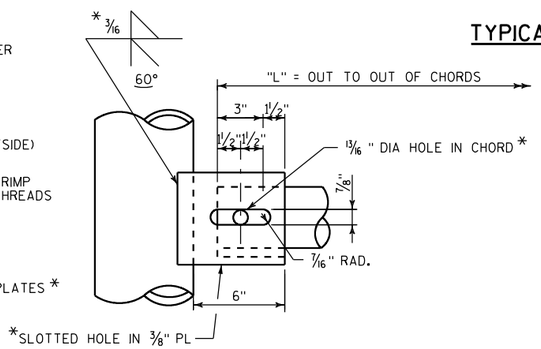
★ DIMENSION GIVEN AT C/L OF FOOTING. ANCHOR DIMENSION MAY VARY ± 1/8" AT C/L OF TOWER UPRIGHT IN MEDIAN FOOTING.

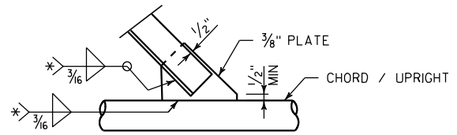
SECTION A-A

★ 3'-5" FOR 1 3/4" ANCHOR BOLTS



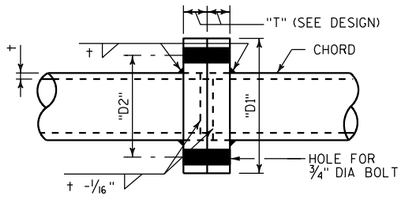
TOWER CONNECTION DETAIL





TYPICAL WELDED ALTERNATE

* BOLT, PLATE & HOLE DETAILS ARE MINIMUM



COUPLING DETAIL

CONTRACTOR SHALL PROVIDE #16 GA. GALVANIZED STEEL SHIMS, AS REQUIRED TO PROVIDE FOR CAMBER

*ANGLE	WELD LENGTH	NO. OF BOLTS
L2 1/2 X 2 1/2 X 1/4	11"	3
L3X3X3/16	10"	3
L3X3X1/4	13"	4
L3X3X5/16	16 1/2"	5
L3X3X3/8	19 1/2"	6
L3 1/2 X 3 1/2 X 3/8	22 3/4"	7
L4X4X1/4	18"	5
L4X4X5/16	22"	6
L4X4X3/8	26"	8
L4X4X7/16	30"	9
L4X4X1/2	34"	10

BASE PLATE & UPRIGHT TOWER DETAILS

STRUCTURE	COLUMN O.D. X THICKNESS	ANCHOR BOLTS	BASE PLATE THICKNESS (IN.)	STIFF. PLATE THICKNESS (IN.)	STIFF. PLATE HEIGHT (IN.)	Tw (IN.)
S-67-317	10.75" O.D. x 0.500"	1 3/4"	2 1/2"	1/2"	12"	5/16"

COUPLING VARIABLES

STRUCTURE	COUPLING PL 01 & T	BOLT CIRCLE DIA, D2	NO. OF BOLTS TO COUPLING
S-67-317	11" DIA & 1 1/4"	8"	8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-317

DRAWN BY TEK | PLANS CK'D. EKM

4-CHORD SIGN BRIDGE DETAILS

SHEET 6 OF 7

8

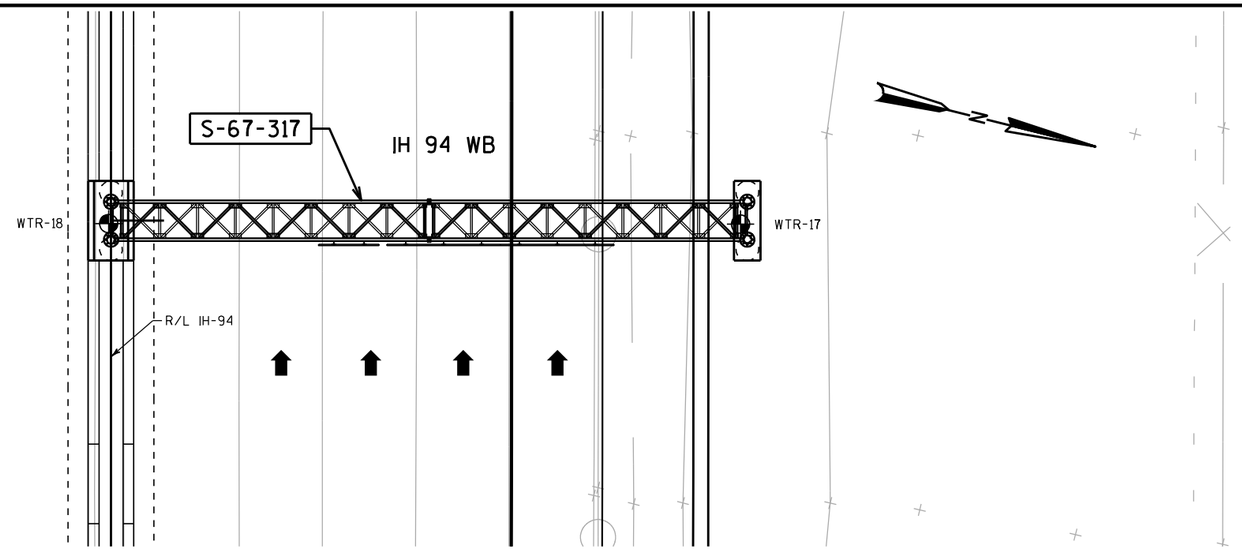
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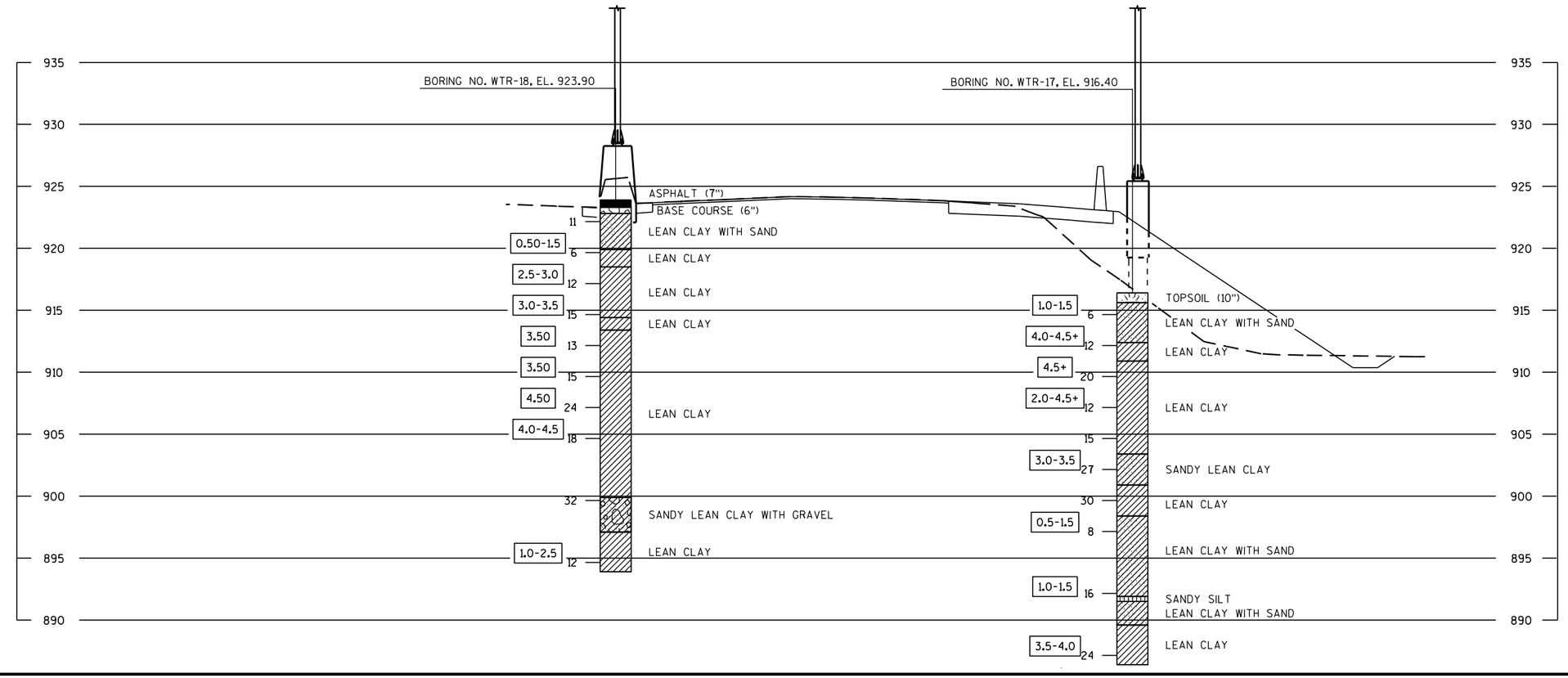
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
WTR-17	OCT. 26, 2014	166238	720692
WTR-18	NOV. 6, 2014	166157	720712
BORINGS COMPLETED BY: GESTRA ENGINEERING, INC			
REPORT COMPLETED BY: FORWARD 45			
ALL COORDINATES REFERENCED TO WCCS NAD 83 (2007) WAUKESHA COUNTY			

NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

DENOTES SOIL BORING LOCATION





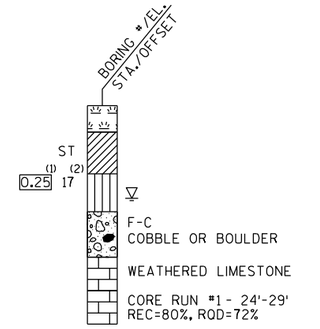
STATE PROJECT NUMBER

1060-33-82

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-317

DRAWN BY TEK | PLANS CK'D. EKM

SUBSURFACE EXPLORATION

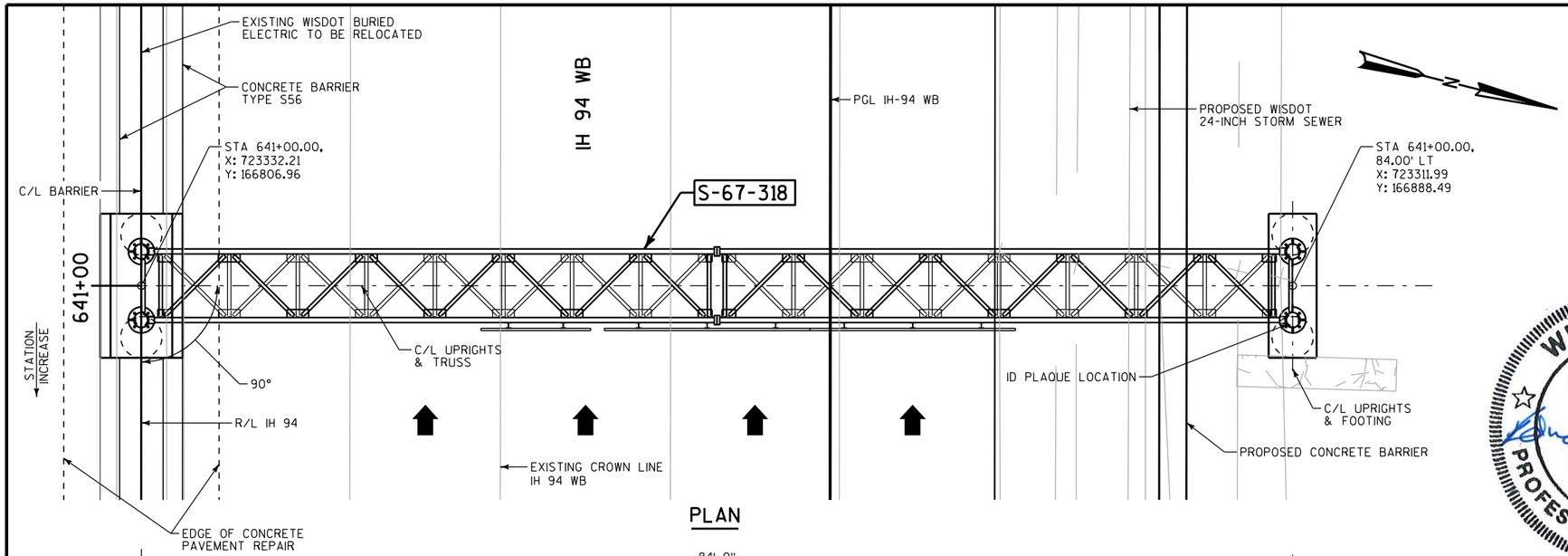
SHEET 7 OF 7

8

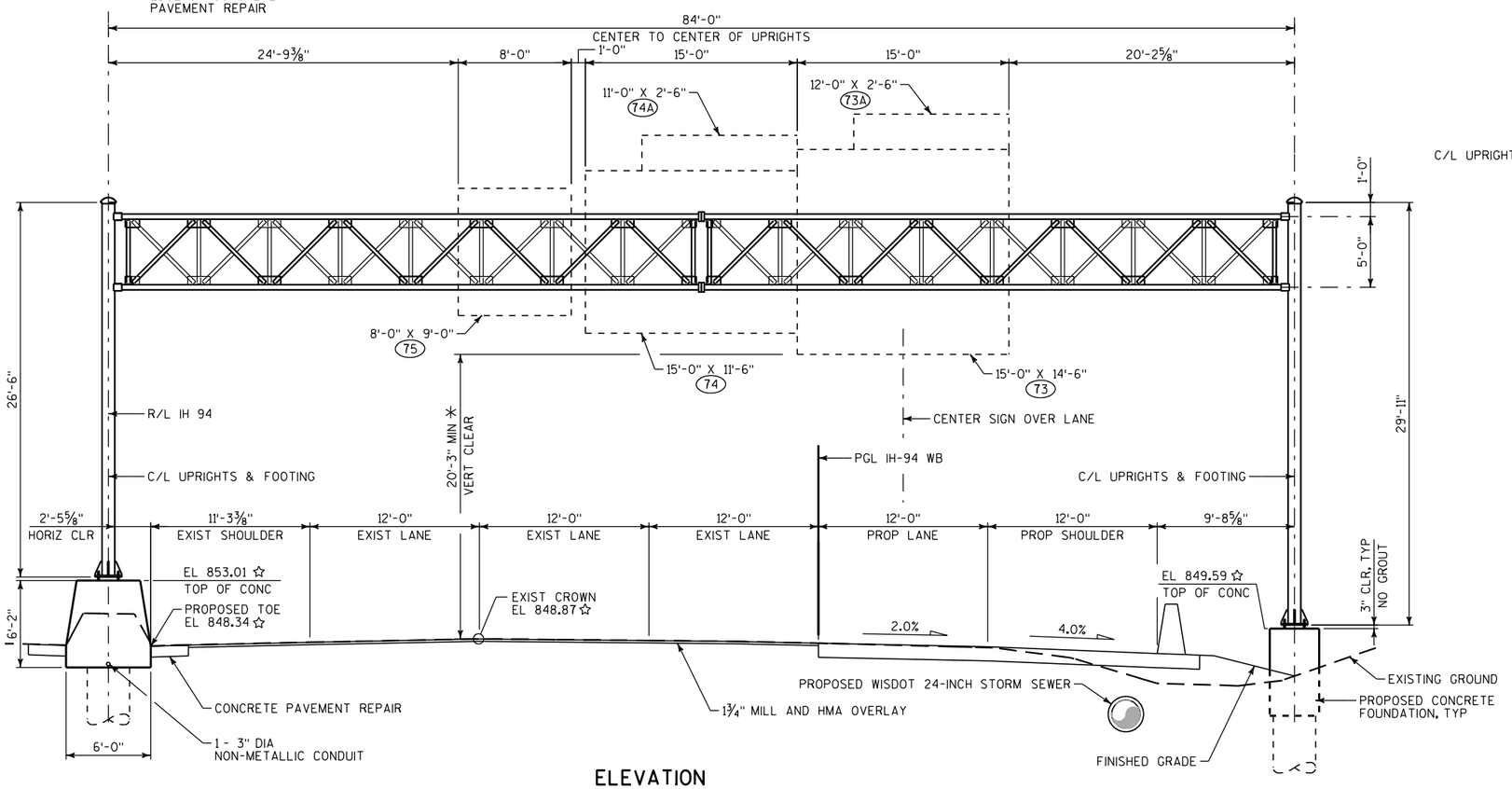
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STATE PROJECT NUMBER
1060-33-82

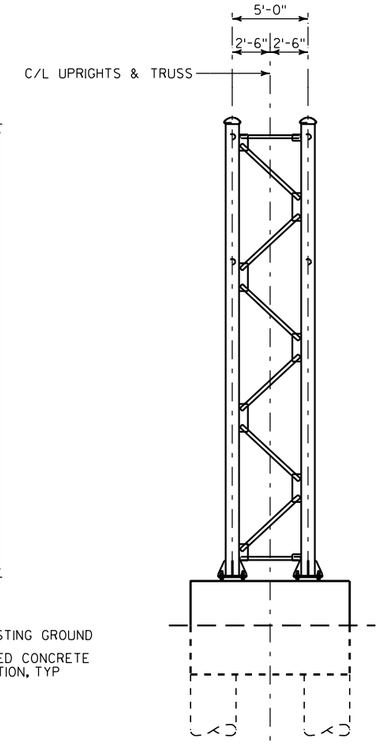


PLAN



ELEVATION

S-67-318, STA 641+00.00
(LOOKING DOWNSTATION AT FRONT OF SIGNS)



SIDE VIEW

LOOKING SOUTH AT NORTH COLUMN

ELEVATION CONTROL POINTS

PT #	TYPE	X	Y	ELEV
221	MAG NAIL	7233044.691	166837.590	860.83
125	MAG NAIL	723051.666	166793.710	858.55
114	MAG NAIL	723050.521	166680.751	859.60
204	MAG NAIL	723717.140	167048.180	829.52

WISCONSIN
EDWARD K. McCRIGHT
E-37422
MILWAUKEE, WI
5/1/17
PROFESSIONAL ENGINEER

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GENERAL NOTES & QUANTITIES
3. MEDIAN CONCRETE FOOTING DETAILS
4. OUTER CONCRETE FOOTING DETAILS
5. 4-CHORD SIGN BRIDGE
6. 4-CHORD SIGN BRIDGE DETAILS
7. SUBSURFACE EXPLORATION

LEGEND

☆ ELEVATIONS GIVEN ALONG C/L UPRIGHTS & TRUSS

(XXX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

* INCLUDES ADDITIONAL 2'-0" OF CLEARANCE FOR FUTURE CATWALK INSTALLATION

NOTE

POINT OF MIN VERTICAL CLEARANCE
STA 641+03.27, 26.21' LEFT,
EL 879.99

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
ED MCCRIGHT (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 05/17/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-67-318

IH 94 WB

COUNTY	TOWN/CITY/VILLAGE
WAUKESHA	BROOKFIELD

DESIGN SPEC.
AASHTO STD SPECS FOR HIGHWAY SIGNS 6TH ED

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EKM	KES	TEK	EKM

GENERAL PLAN & ELEVATION

SHEET 1 OF 7

STATE PROJECT NUMBER
1060-33-82

MATERIAL PROPERTIES

CONCRETE MASONRY ---------- f'c = 3,500 psi

HIGH STRENGTH STEEL
REINFORCEMENT, GRADE 60 ---------- fy = 60,000 psi

STRUCTURAL ANGLES,
PLATE AND BARS - ASTM A709 GRADE 36 ---- fy = 36,000 psi

CHORDS & COLUMN
(INCLUDING HANDHOLE) - API-5L-X42 ---------- fy = 42,000 psi

HIGH STRENGTH BOLTS - A325 ---------- fy = 92,000 psi

ANCHOR BOLTS - ASTM F1554 GRADE 55------ fy = 55,000 psi

HARDWARE GALVANIZED ---------- ASTM A153 CLASS C

FOUNDATION DATA

ALLOWABLE SHAFT END BEARING PRESSURE = 8,000 PSF

ALLOWABLE SKIN FRICTION = 625 PSF

UNDRAINED SHEAR STRENGTH AT BASE OF SHAFT = 2,000 PSF

SOIL FRICTION ANGLE AT BASE OF SHAFT = 0°

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE CONSIDERED INCIDENTAL TO "SIGN BRIDGE STRUCTURE S-67-318". LOCATE PLAQUE ON FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

CENTER SIGNS VERTICALLY ON TRUSS UNLESS OTHERWISE SHOWN OR NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

COORDINATES ON THE PLANS ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WAUKESHA COUNTY ZONE, NAD 83 (2007).

ALTERNATE DESIGNS ARE NOT ALLOWED.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO TRAFFIC OPS SE REGION: MR. TOM HEYDEL, WISDOT, 141 NW BARSTOW ST. WAUKESHA, WI 53187 AND THE PROJECT ENGINEER FOR APPROVAL.

SEE CONSTRUCTION DETAILS SHEETS FOR SIGN CONFIGURATION DURING VARIOUS STAGES OF CONSTRUCTION AND CONFIGURATION AT COMPLETION OF THIS CONTRACT.

SIGN CONFIGURATION SHOWN ON THE PLANS IS FINAL CONFIGURATION.

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	43
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	5,710
641.6600.0002	SIGN BRIDGE S-67-318	LS	1
SPV.0075.4000	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	2

ALL ITEMS ARE CATEGORY 4020

DESIGN DATA

SIGN STR.	DESIGN SIGN AREA	MAX. SIGN DEPTH
S-67-318	754 SF	14'-6"

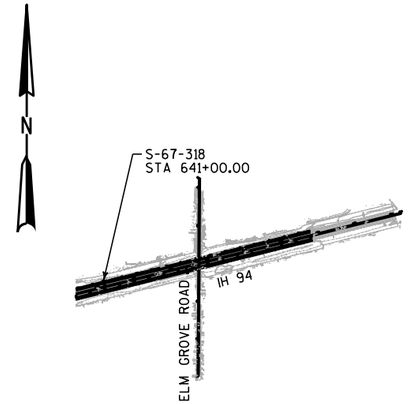
DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 6TH EDITION. WISDOT BRIDGE MANUAL & SE FREEWAYS DESIGN MANUAL

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

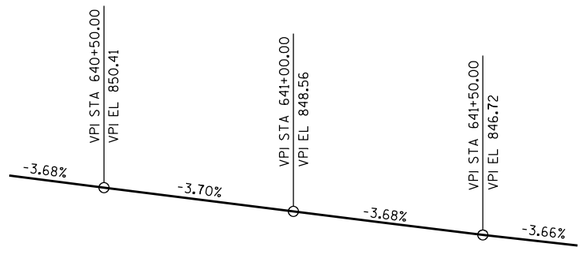
WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
I. DEAD	100
II. DEAD + WIND	133
III. DEAD + ICE + ½WIND	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.



LOCATION MAP



PROFILE GRADE LINE IH-94 WB

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-318

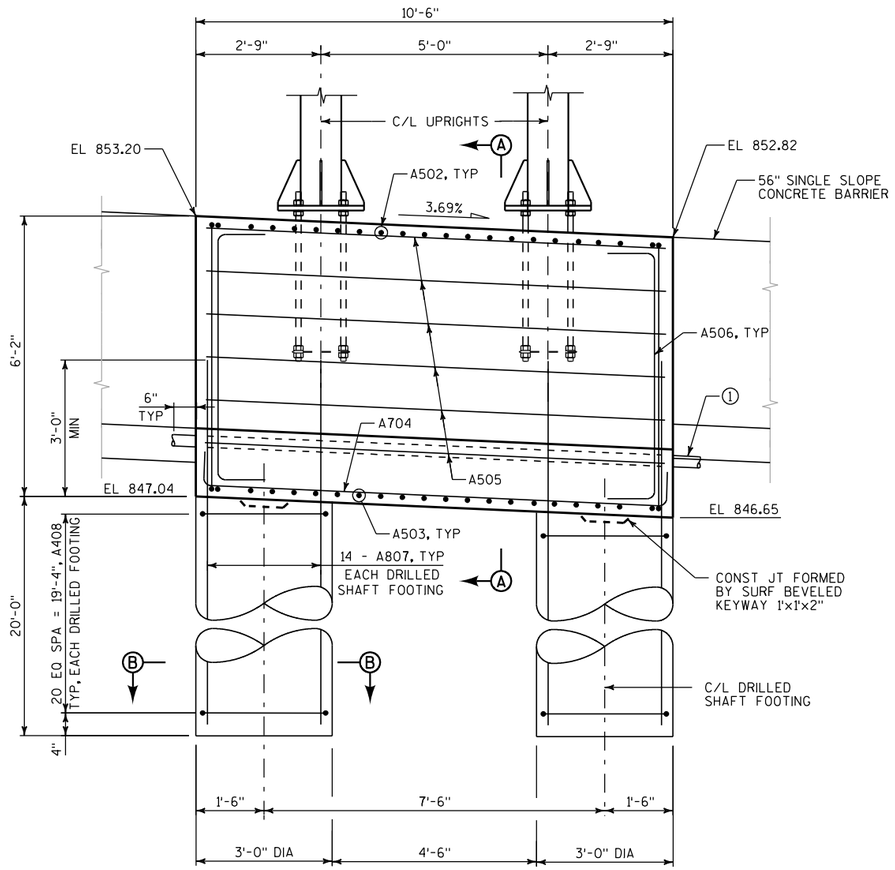
DRAWN BY TEK | PLANS CK'D. EKM

GENERAL NOTES & QUANTITIES

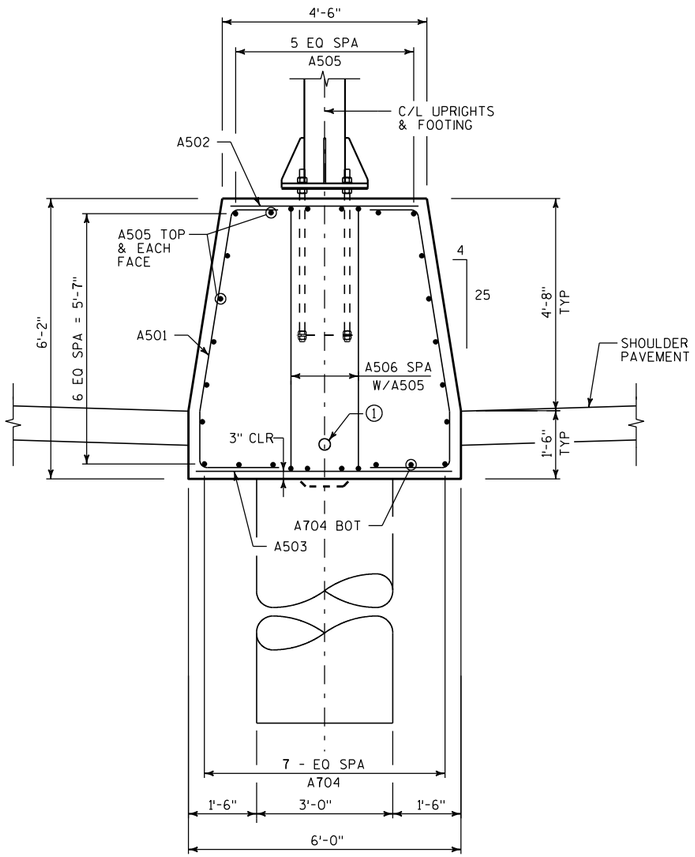
SHEET 2 OF 7

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PLOT BY : mscekm
PLOT NAME : S-67-318_080102_gn
PLOT SCALE : 2:1

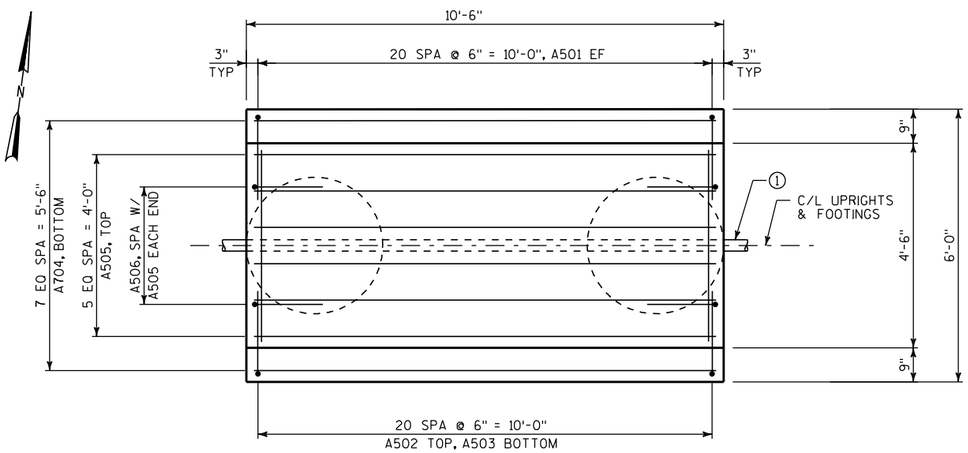
STATE PROJECT NUMBER
1060-33-82



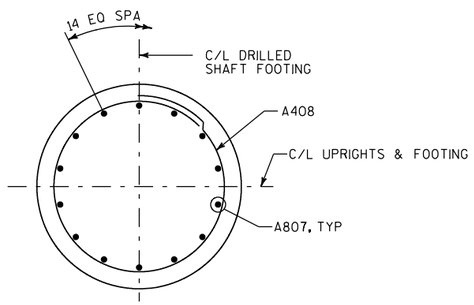
ELEVATION
(LOOKING NORTH)



SECTION A-A
(LOOKING WEST)



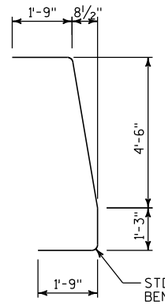
PLAN



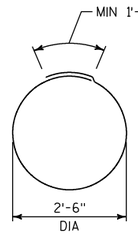
SECTION B-B
TYPICAL FOR EACH DRILLED SHAFT FOOTING

NOTES

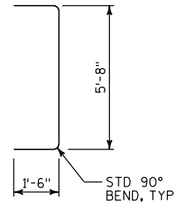
1. 1 - 3" DIA NON-METALLIC CONDUIT PASSING THROUGH MEDIAN FOOTING. EXTEND CONDUIT AS SHOWN AND CAP OR SEAL WITH SUITABLE REMOVABLE PLUG. INCLUDED IN THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".



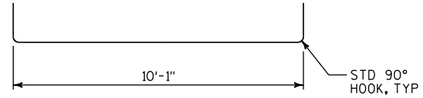
A501



A408



A506



A704

BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
A501	X	42	9'-0"	X	FOOTING - TRANSVERSE - STIRRUP
A502	X	21	4'-0"		FOOTING - TRANSVERSE - TOP
A503	X	21	5'-6"		FOOTING - TRANSVERSE - BOTTOM
A704	X	8	12'-1"	X	FOOTING - LONGITUDINAL - BOTTOM
A505	X	16	10'-0"		FOOTING - LONGITUDINAL - TOP & SIDES
A506	X	8	8'-5"	X	FOOTING - VERTICAL - EACH END
A807	X	28	23'-0"		DRILLED FOOTING - VERTICAL
A408	X	42	9'-4"	X	DRILLED FOOTING - HORIZONTAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-318

DRAWN BY TEK | PLANS CK'D. EKM

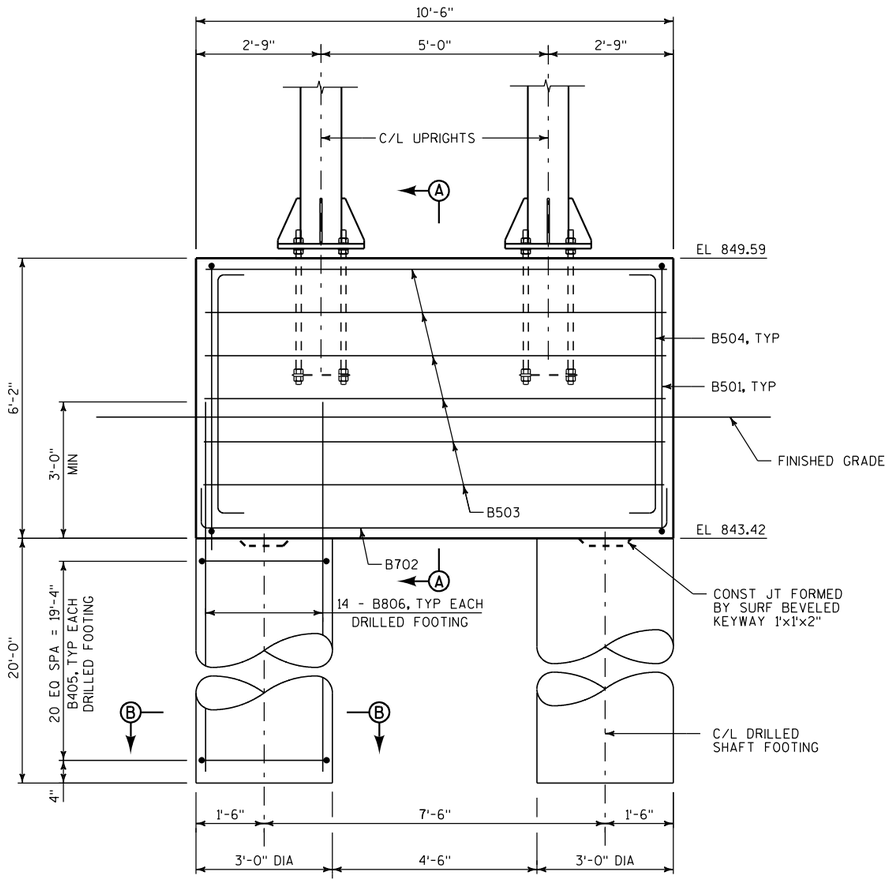
MEDIAN CONCRETE FOOTING DETAILS

SHEET 3 OF 7

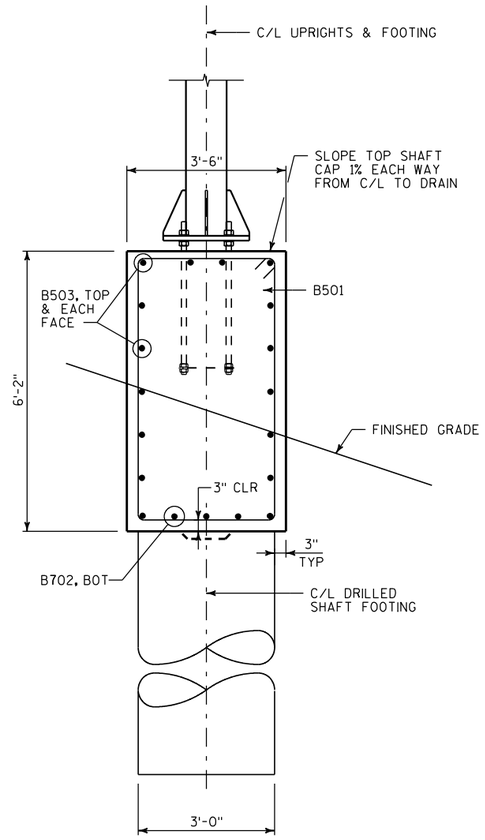
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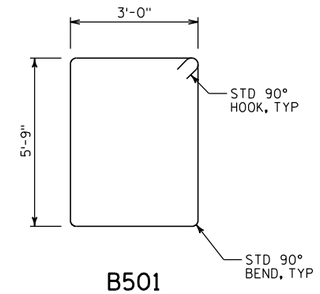
STATE PROJECT NUMBER
1060-33-82



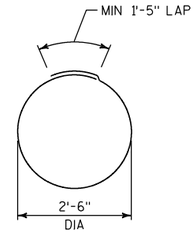
ELEVATION
(LOOKING NORTH)



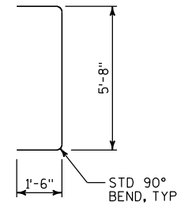
SECTION A-A
(LOOKING WEST)



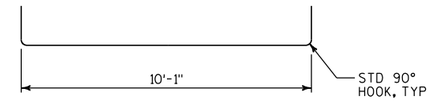
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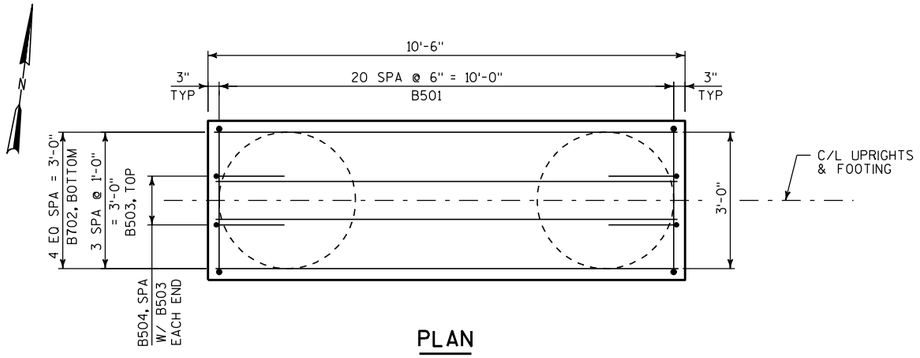
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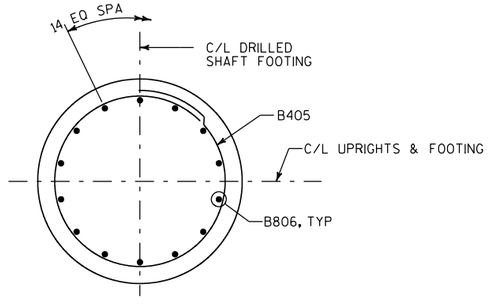
B504



B702



PLAN



SECTION B-B

TYPICAL FOR EACH DRILLED SHAFT FOOTING

BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
B501	X	21	18'-2"	X	FOOTING - VERTICAL - STIRRUP
B702	X	5	12'-1"	X	FOOTING - LONGITUDINAL - BOTTOM
B503	X	14	10'-0"		FOOTING - LONGITUDINAL - TOP & SIDES
B504	X	4	8'-5"	X	FOOTING - VERTICAL - EACH END
B405	X	42	9'-4"		DRILLED FOOTING - HORIZONTAL
B806	X	28	23'-0"	X	DRILLED FOOTING - VERTICAL

NO.	DATE	REVISION	BY

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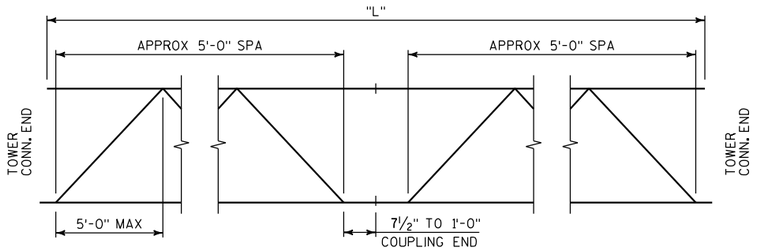
STRUCTURE S-67-318

DRAWN BY TEK | PLANS CK'D. EKM

OUTER CONCRETE FOOTING DETAILS

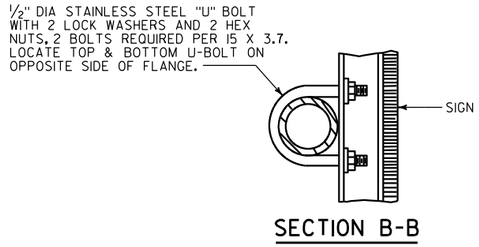
SHEET 4 OF 7

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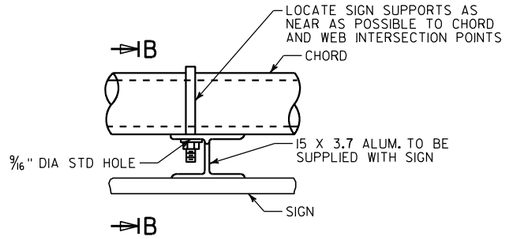


TRUSS ARRANGEMENT

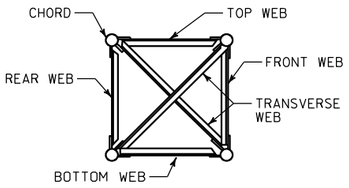
FABRICATOR MAY MAKE TRUSSES ANY LENGTH KEEPING A SECTION A MINIMUM OF 20'-0" & A MULTIPLE OF 5'-0". CHORD FIELD SPLICES SHALL BE MADE WITH COUPLINGS. CHORD SHOP SPLICE SHALL BE THE WELDED SPLICE SHOWN ABOVE.



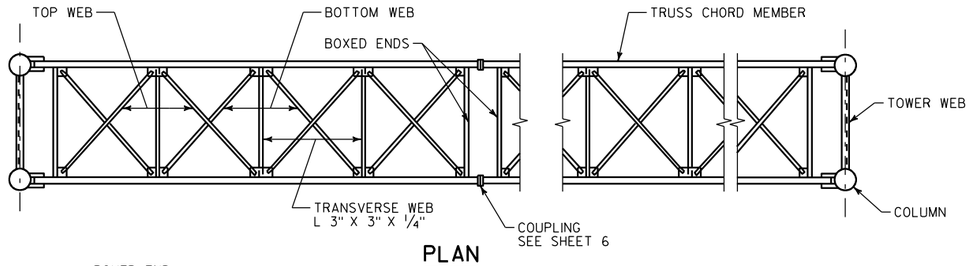
SECTION B-B



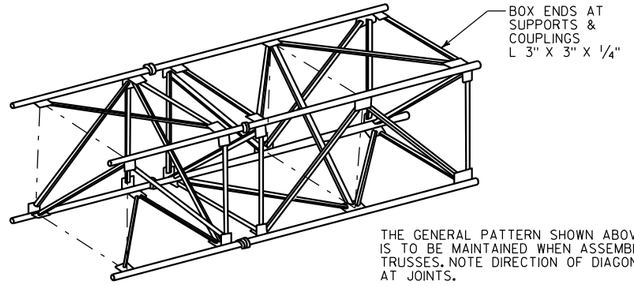
TYPICAL SIGN CONNECTION



SECTION A-A

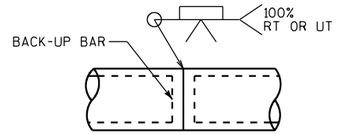


PLAN

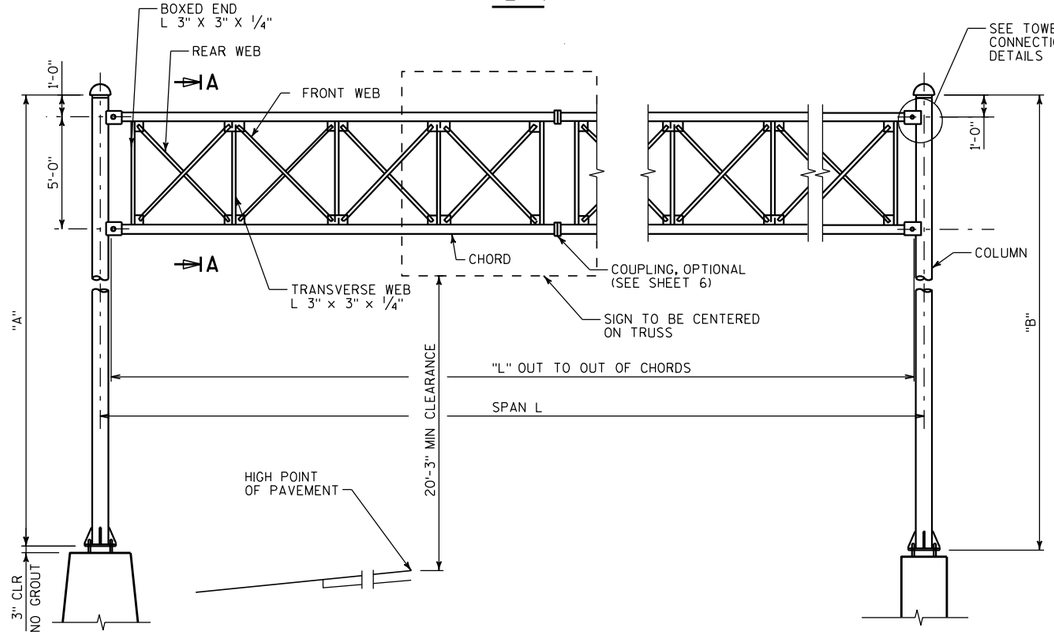


THE GENERAL PATTERN SHOWN ABOVE IS TO BE MAINTAINED WHEN ASSEMBLING TRUSSES. NOTE DIRECTION OF DIAGONALS AT JOINTS.

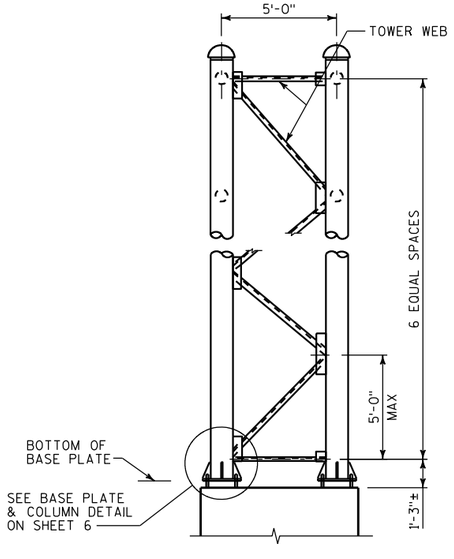
TYPICAL TRUSS SECTION



CHORD SPLICE



ELEVATION



END VIEW

NOTES

STEEL COLUMN AND CHORD PIPES SHALL BE A.P.I. SPEC. 5L GRADE X42, Fy = 42,000 P.S.I. SEE WISDOT BRIDGE MANUAL SECTION 39.3 FOR ACCEPTABLE ALTERNATIVE MATERIAL.

PLATES, BARS & STRUCTURAL ANGLES SHALL BE ASTM A709 GRADE 36, Fy = 36,000 P.S.I.

STEEL ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554 GRADE 55, ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.

UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

ALL STRUCTURAL STEEL MEMBERS, PLATES, ANCHOR RODS, H.S. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED PER SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF A TRUSS UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D1.1.

SEE SIGN PLATE NO. A4-6 OF THE SIGN PLATE MANUAL FOR INSTRUCTION ON CENTERING SIGN VERTICALLY ON TRUSS.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE ¼ THE LENGTH OF THE BRIDGE, 2'-0" DEEPER THAN C TO C OF CHORDS & SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED IN PLANS.

TABLE

STRUCTURE	A	B	CHORDS O.D. x THK.	TOP & BOTTOM WEB	FRONT & REAR WEB	CAMBER	COLUMN O.D. x THK.	TOWER WEBS	L
S-67-318	26'-6"	29'-11"	5.563" x 0.375"	L 3½" x 3½" x ⅜"	L 3½" x 3½" x ⅜"	1⅝"	10.75" O.D. x 0.500"	L 3½" x 3½" x ⅜"	82'-8¼"

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DEPARTMENT OF TRANSPORTATION

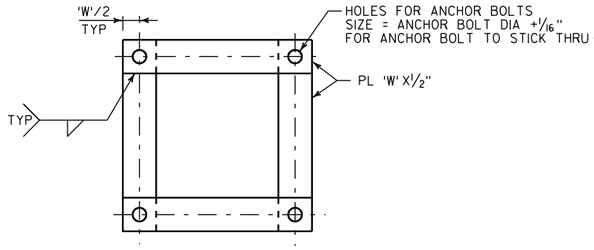
STRUCTURE S-67-318

DRAWN BY TEK | PLANS CK'D. EKM

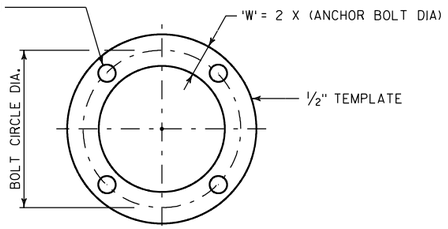
4-CHORD SIGN BRIDGE

SHEET 5 OF 7

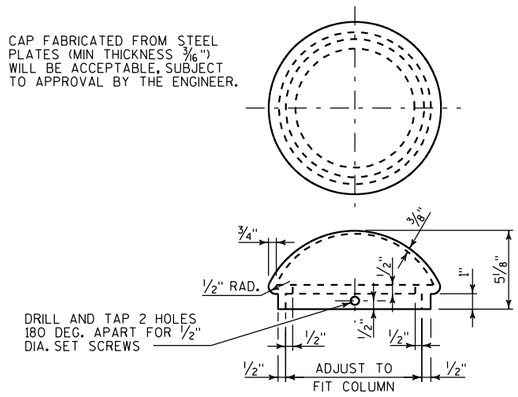
STATE PROJECT NUMBER
1060-33-82



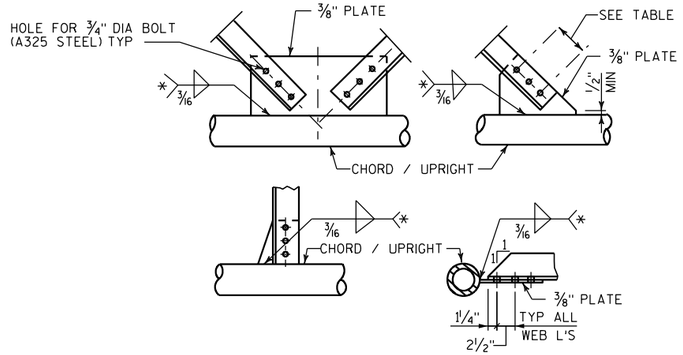
ALTERNATE
ANCHOR PLATE/TEMPLATE PLAN



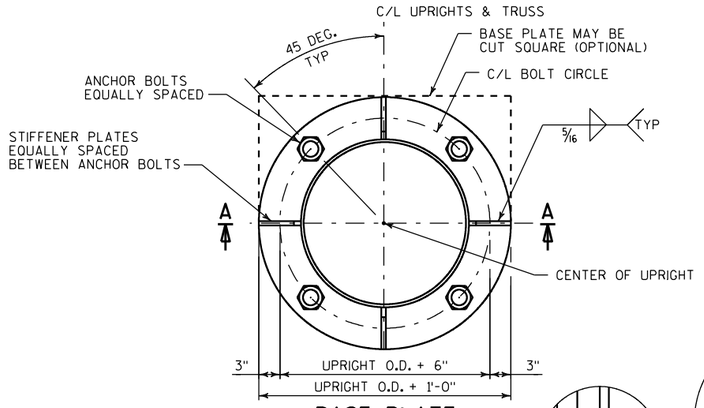
ANCHOR PLATE/TEMPLATE PLAN



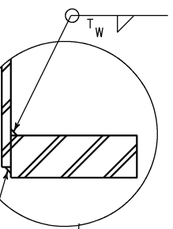
TOWER CAP DETAIL

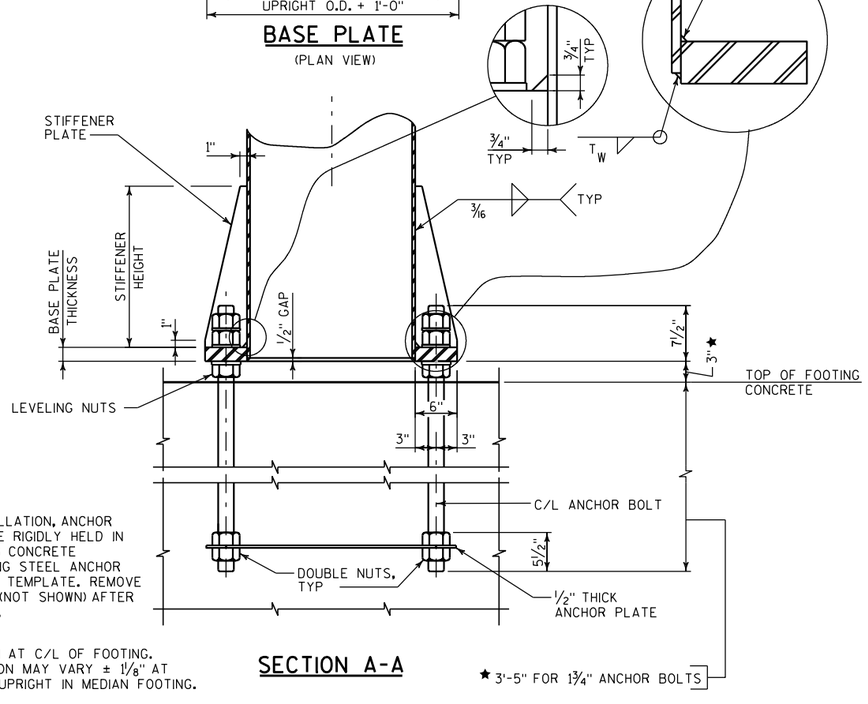


TYPICAL TRUSS / TOWER CONNECTION DETAILS



BASE PLATE
(PLAN VIEW)



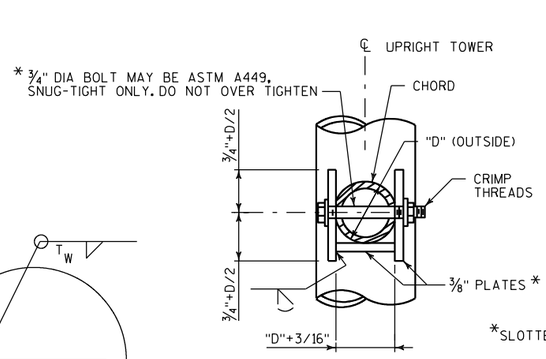


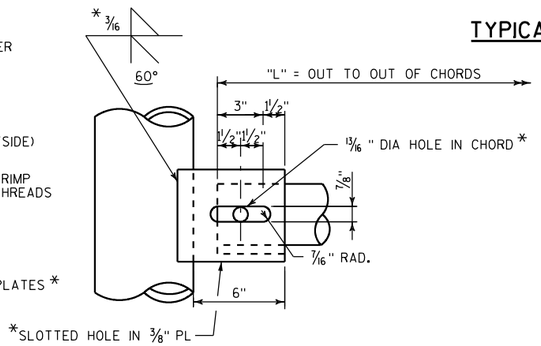
NOTE:
PRIOR TO INSTALLATION, ANCHOR BOLTS SHALL BE RIGIDLY HELD IN POSITION DURING CONCRETE PLACEMENT USING STEEL ANCHOR PLATE AND TOP TEMPLATE. REMOVE TOP TEMPLATE (NOT SHOWN) AFTER CONCRETE SETS.

★ DIMENSION GIVEN AT C/L OF FOOTING. ANCHOR DIMENSION MAY VARY ± 1 1/8" AT C/L OF TOWER UPRIGHT IN MEDIAN FOOTING.

SECTION A-A

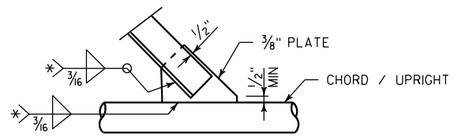
★ 3'-5" FOR 1 3/4" ANCHOR BOLTS



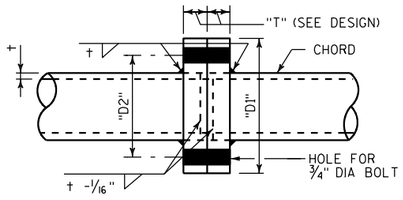


TOWER CONNECTION DETAIL

* BOLT, PLATE & HOLE DETAILS ARE MINIMUM



TYPICAL WELDED ALTERNATE



COUPLING DETAIL

CONTRACTOR SHALL PROVIDE #16 GA. GALVANIZED STEEL SHIMS, AS REQUIRED TO PROVIDE FOR CAMBER

*ANGLE	WELD LENGTH	NO. OF BOLTS
L2 1/2 X 2 1/2 X 1/4	11"	3
L3X3X3/16	10"	3
L3X3X1/4	13"	4
L3X3X5/16	16 1/2"	5
L3X3X3/8	19 1/2"	6
L3 1/2 X 3 1/2 X 3/8	22 3/4"	7
L4X4X1/4	18"	5
L4X4X5/16	22"	6
L4X4X3/8	26"	8
L4X4X7/16	30"	9
L4X4X1/2	34"	10

BASE PLATE & UPRIGHT TOWER DETAILS

STRUCTURE	COLUMN O.D. X THICKNESS	ANCHOR BOLTS	BASE PLATE THICKNESS (IN.)	STIFF. PLATE THICKNESS (IN.)	STIFF. PLATE HEIGHT (IN.)	Tw (IN.)
S-67-318	10.75" O.D. x 0.500"	1 3/4"	2 1/2"	1/2"	12"	5/16"

COUPLING VARIABLES

STRUCTURE	COUPLING PL 01 & T	BOLT CIRCLE DIA, D2	NO. OF BOLTS TO COUPLING
S-67-318	11" DIA & 1 1/4"	8"	8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-318

DRAWN BY TEK | PLANS CK'D. EKM

4-CHORD SIGN BRIDGE DETAILS

SHEET 6 OF 7

8

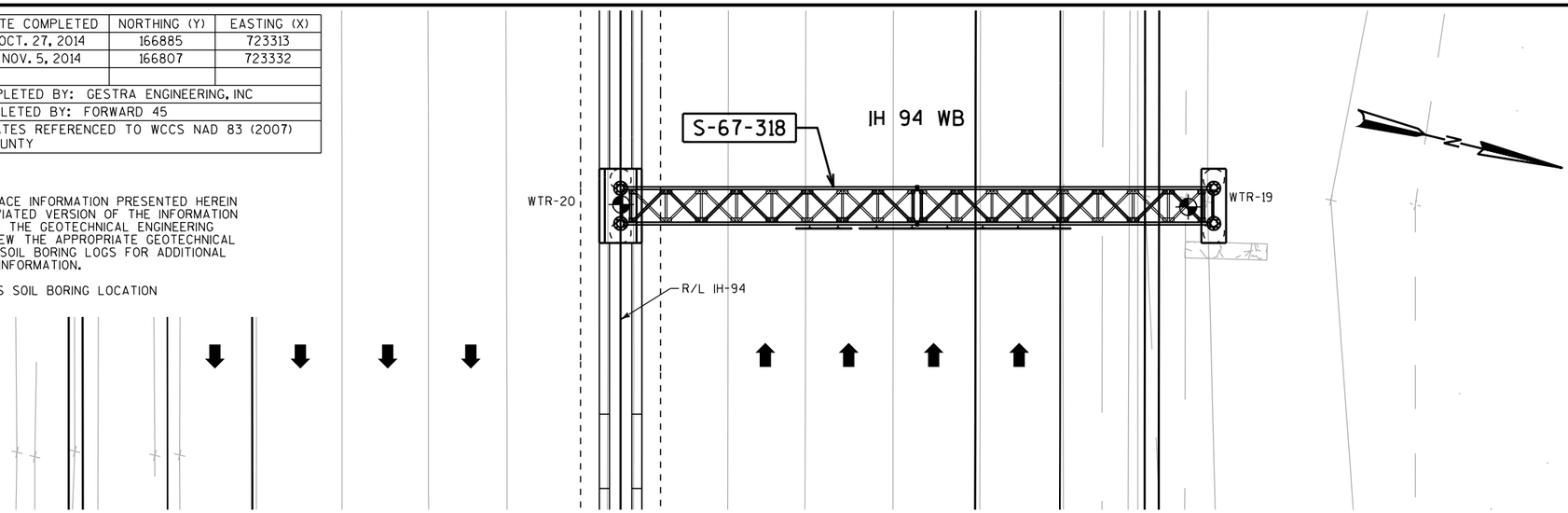
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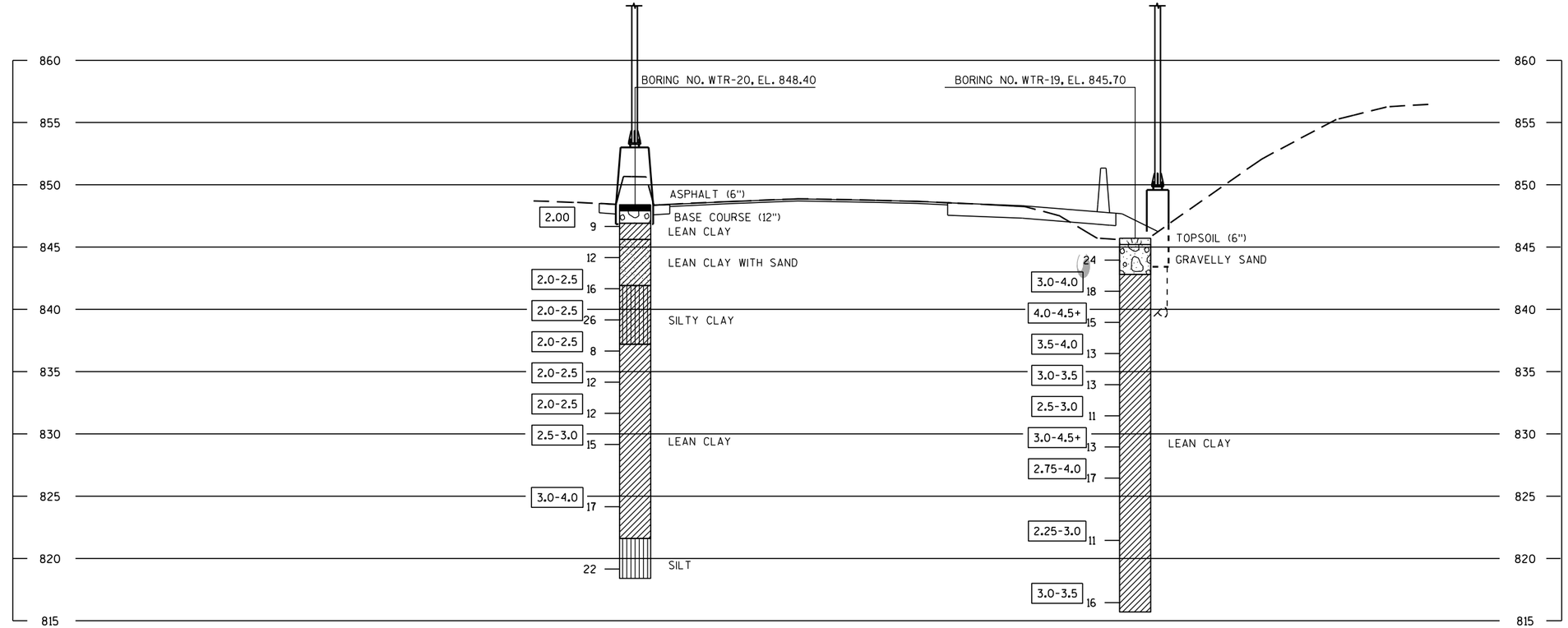
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
WTR-19	OCT. 27, 2014	166885	723313
WTR-20	NOV. 5, 2014	166807	723332
BORINGS COMPLETED BY: GESTRA ENGINEERING, INC			
REPORT COMPLETED BY: FORWARD 45			
ALL COORDINATES REFERENCED TO WCCS NAD 83 (2007) WAUKESHA COUNTY			

NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

DENOTES SOIL BORING LOCATION





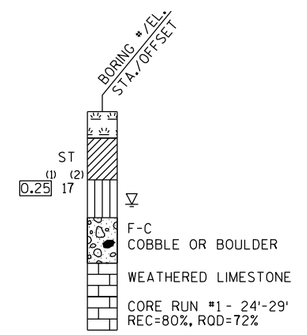
STATE PROJECT NUMBER

1060-33-82

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-318

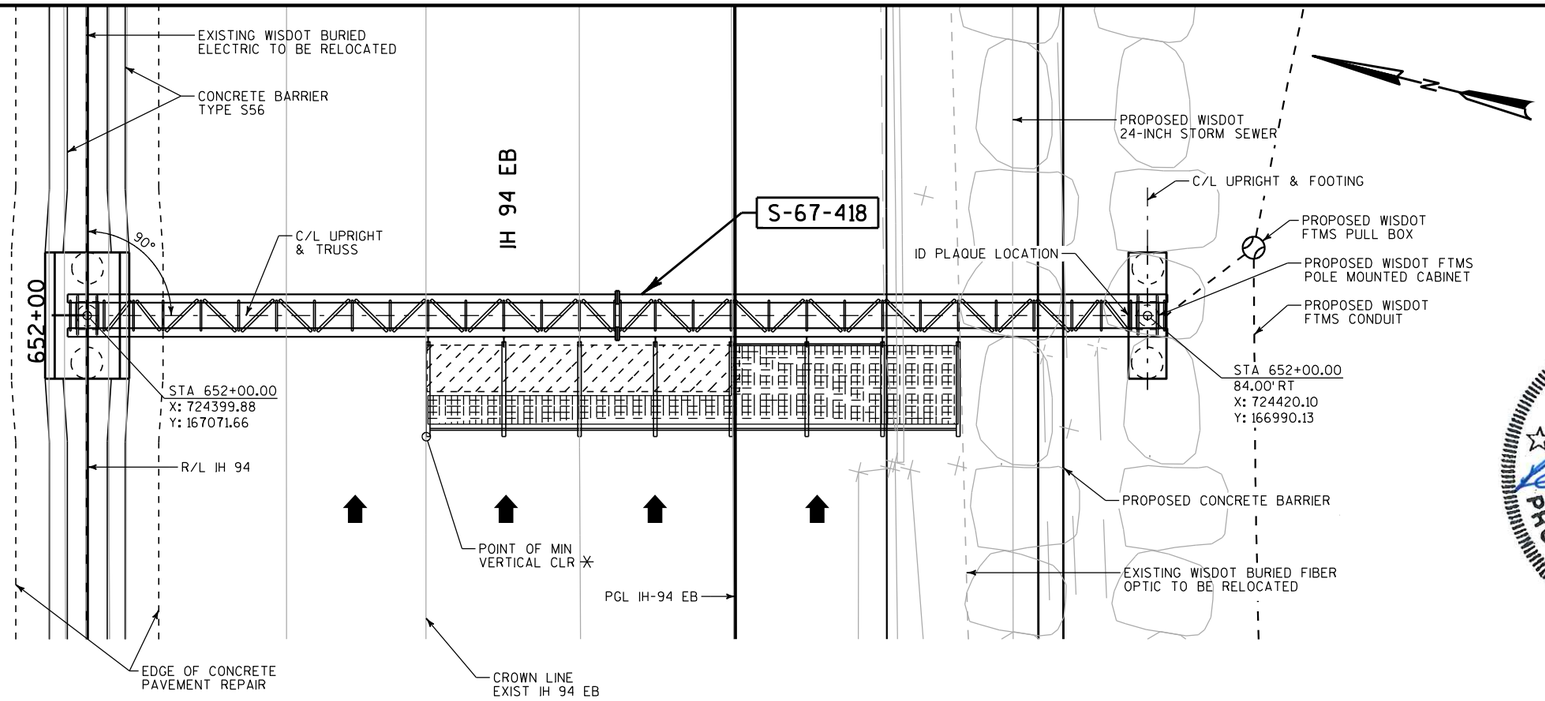
DRAWN BY	TEK	PLANS CK'D.	EKM

SUBSURFACE EXPLORATION

SHEET 7 OF 7

8

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STATE PROJECT NUMBER

1060-33-82

ELEVATION CONTROL POINTS

PT #	TYPE	X	Y	ELEV
172	MAG NAIL	724326.095	166997.380	811.00
173	MAG NAIL	724343.732	167111.977	809.23
203	FENO MON.	724495.610	167239.270	814.39

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GENERAL NOTES & QUANTITIES
3. MEDIAN CONCRETE FOOTING DETAILS
4. OUTER CONCRETE FOOTING DETAILS
5. SIGN BRIDGE DETAILS
6. DMS MOUNTING DETAILS
7. TRUSS/POST CONNECTION DETAILS
8. SIGN BRIDGE CATWALK DETAILS (1 OF 2)
9. SIGN BRIDGE CATWALK DETAILS (2 OF 2)
10. HANDHOLE DETAILS
11. SUBSURFACE EXPLORATION

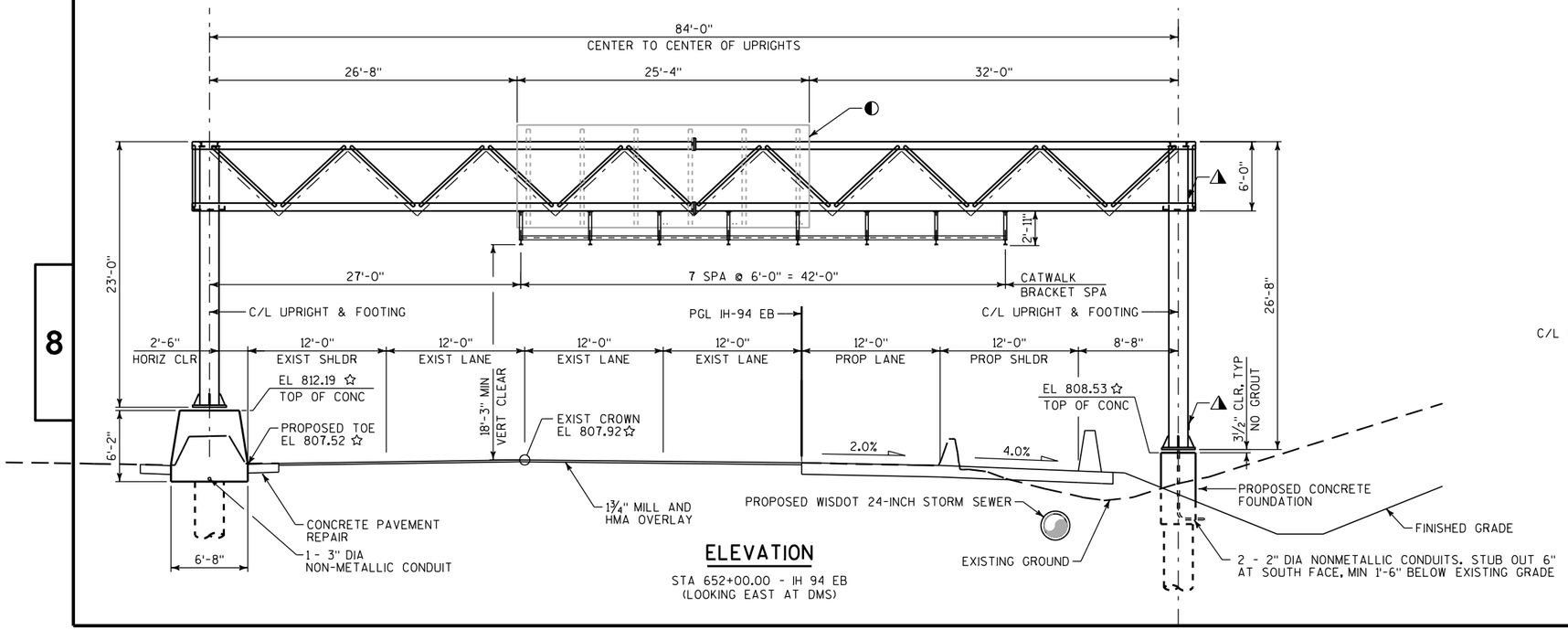
LEGEND

◐ 25'-4" x 8'-10½" DYNAMIC MESSAGE SIGN, CENTERED VERTICALLY ON TRUSS (NOT A STRUCTURE BID ITEM)

☆ ELEVATIONS GIVEN ALONG C/L UPRIGHT & TRUSS

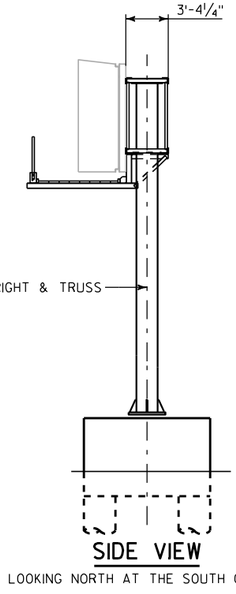
✳ POINT OF MIN VERTICAL CLEARANCE STA 651+90.41, 26.85' RIGHT, EL 808.28

⚠ HANDHOLE, REQ'D ON OUTER COLUMN ONLY



ELEVATION

STA 652+00.00 - IH 94 EB
(LOOKING EAST AT DMS)



SIDE VIEW

LOOKING NORTH AT THE SOUTH COLUMN

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
ED MCCRIGHT (414) 272-2426

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 05/17/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE S-67-418

IH 94 EB

COUNTY WAUKESHA	~~TOWN~~/CITY/~~VILLAGE~~ BROOKFIELD
DESIGN SPEC. AASHTO STD SPECS FOR HIGHWAY SIGNS 6TH ED	
DESIGNED BY ASW	DESIGN CK'D. KES
DRAWN BY TEK	PLANS CK'D. EKM

GENERAL PLAN & ELEVATION

SHEET 1 OF 11

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STATE PROJECT NUMBER
1060-33-82

DESIGN DATA

SIGN STRUCTURE DESIGN BASED ON:

DIGITAL MESSAGE SIGN:
SIGN AREA 225SF
SIGN WEIGHT 2,745 LBS
BRACKET SUPPORTS 12 LBS/FT

ADDITIONAL SIGNS: NONE

DEAD LOAD - WT. OF SIGN, SUPPORTING STRUCTURE, CATWALK AND RAILINGS.
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
I. DEAD	100
II. DEAD + WIND	133
III. DEAD + ICE + ½(WIND)	133
IV. FATIGUE	**

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.

** SEE SECTION 11 OF AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS 6TH EDITION FOR FATIGUE LOADS AND STRESS RANGE LIMITS

FOUNDATION DATA

ALLOWABLE SHAFT END BEARING PRESSURE = 8,000 PSF

ALLOWABLE SKIN FRICTION = 500 PSF

UNDRAINED SHEAR STRENGTH AT BASE OF SHAFT = 2,000 PSF

SOIL FRICTION ANGLE AT BASE OF SHAFT = 0°

MATERIAL PROPERTIES

CONCRETE MASONRY ---------- f'c = 3,500 psi

HIGH STRENGTH STEEL
REINFORCEMENT, GRADE 60 ---------- fy = 60,000 psi

STRUCTURAL ANGLES,
PLATE AND BARS - ASTM A709 GRADE 36 ---- fy = 36,000 psi

COLUMN (INCLUDING
HANDHOLE) - API SPEC 5L GRADE 42 ---------- fy = 42,000 psi

HIGH STRENGTH BOLTS - A325 ---------- fy = 92,000 psi

ANCHOR BOLTS - ASTM F1554---------- fy = 55,000 psi

STRUCTURAL MEMBERS GALVANIZED---------- ASTM A123

HARDWARE GALVANIZED ---------- ASTM A153 CLASS C

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

COORDINATES ON THIS PLAN ARE REFENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WAUKESHA COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE S-67-418". LOCATE THE ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL THE ID PLAQUE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

CATWALK SHALL BE INCIDENTAL TO THE BID ITEM "SIGN BRIDGE S-67-418".

CENTER DYNAMIC MESSAGE SIGN VERTICALLY ON TRUSS.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

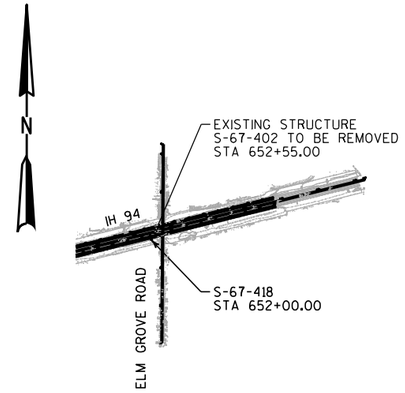
ALL BOLTED CONNECTIONS SHALL BE MADE WITH A325 BOLTS, GALVANIZED PER ASTM A153 CLASS C AND MADE WITH DTI WASHERS.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

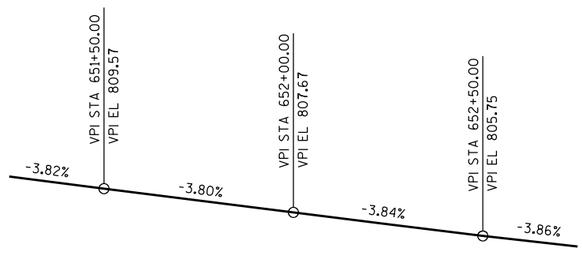
CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO TRAFFIC OPS SE REGION: MR TOM HEYDEL, WIS DOT, 141 NW BARSTOW ST, WAUKESHA, WI 53187 AND THE PROJECT ENGINEER FOR APPROVAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRILLING OR EXCAVATING AND MAINTAINING A STABLE AND OPEN HOLE FOR SUBSEQUENT INSTALLATION OF CONCRETE MASONRY FOR THE SUPPORT BASES. PARTIAL OR FULL DEPTH TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE FOR THE SIGN SUPPORT PRIOR TO FILLING THE HOLE WITH CONCRETE. TEMPORARY CASING, IF USED, SHALL BE INCIDENTAL TO THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".



LOCATION MAP



PROFILE GRADE LINE IH-94 EB

TOTAL ESTIMATED QUANTITIES

ITEM NO	BID ITEMS	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	38
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	5,630
641.6600.0003	SIGN BRIDGE S-67-418	LS	1
SPV.0060.4000	REMOVING OLD SIGN STRUCTURE S-67-402	EACH	1
SPV.0075.4000	OBSTRUCTIONS SIGN SUPPORTS CONCRETE MASONRY	HRS	3

ALL ITEMS ARE CATEGORY 4030

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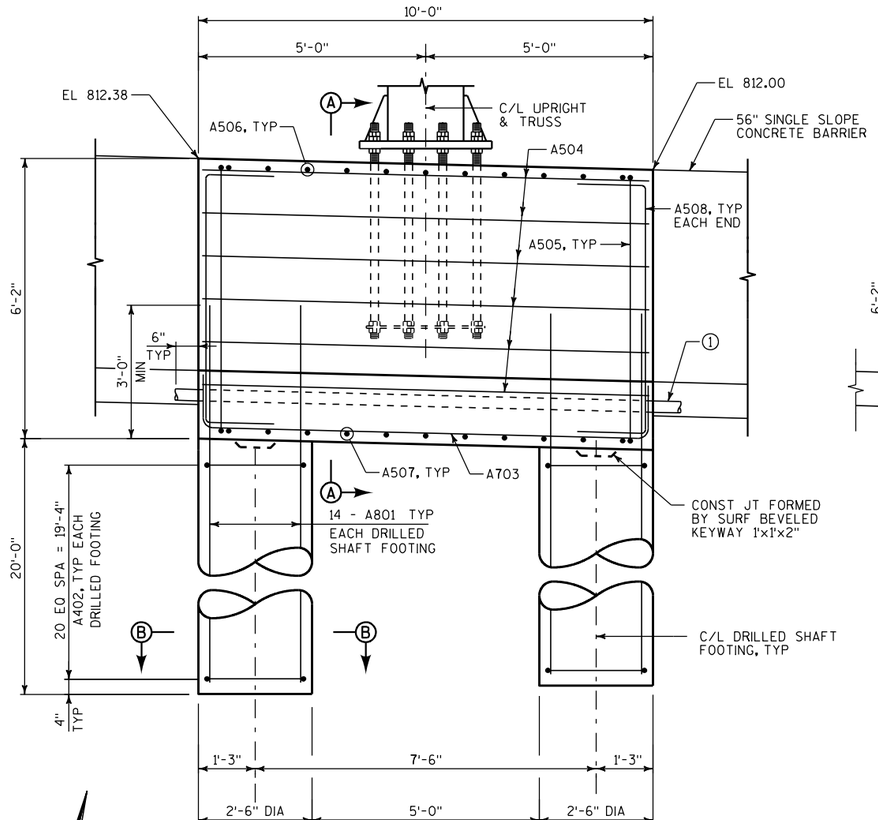
STRUCTURE S-67-418

DRAWN BY TEK | PLANS CK'D. EKM

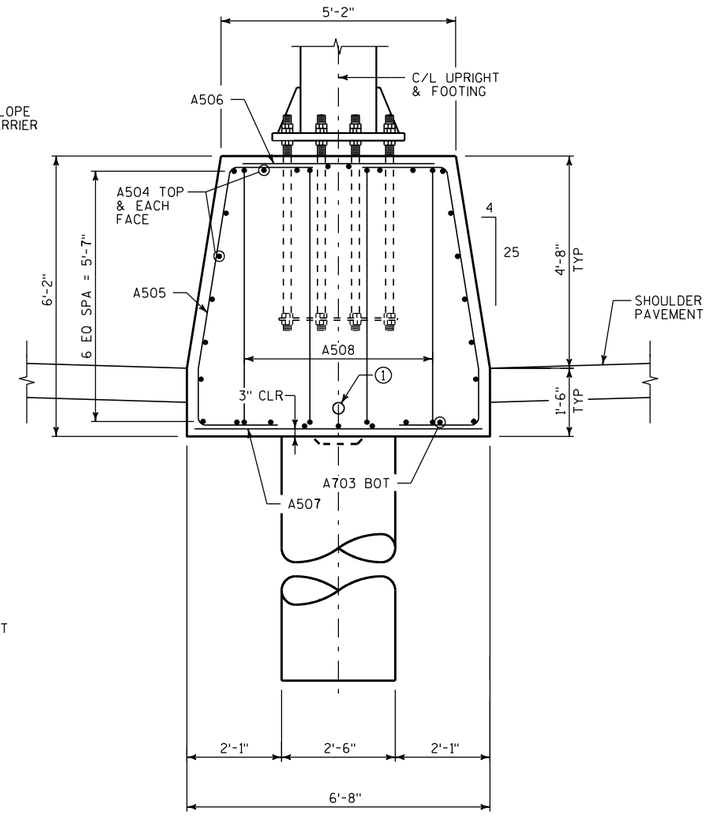
GENERAL NOTES & QUANTITIES

SHEET 2 OF 11

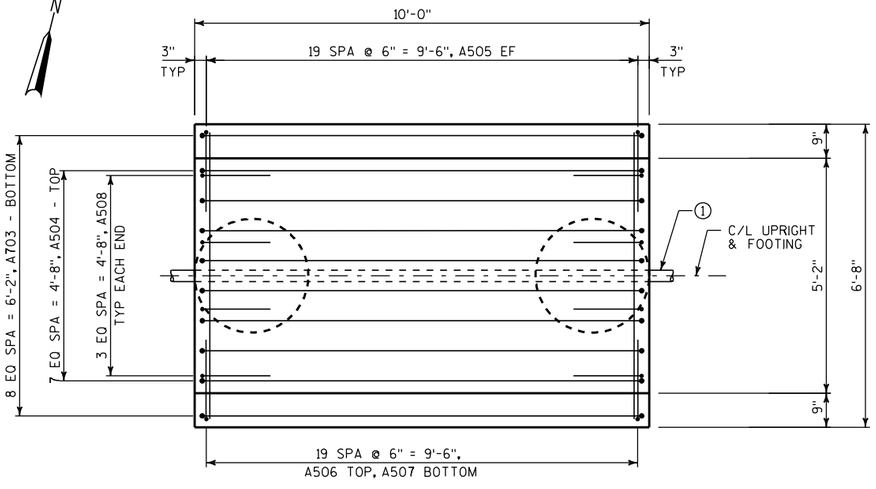
STATE PROJECT NUMBER
1060-33-82



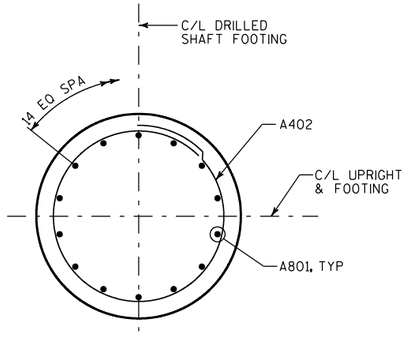
ELEVATION
(LOOKING NORTH)



SECTION A-A
(LOOKING EAST)



PLAN



SECTION B-B
TYPICAL FOR EACH DRILLED SHAFT FOOTING

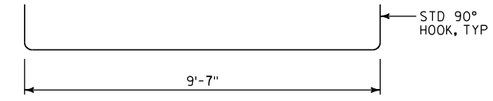
NOTES

① 1 - 3" DIA NON-METALLIC CONDUIT PASSING THROUGH MEDIAN FOOTING. EXTEND CONDUIT AS SHOWN AND CAP OR SEAL WITH SUITABLE REMOVABLE PLUG. INCLUDED IN THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

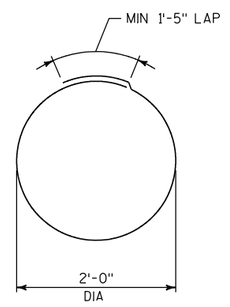
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

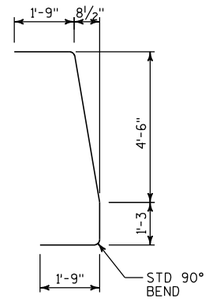
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
A801	X	28	23'-0"		DRILLED FOOTING - VERTICAL
A402	X	42	7'-9"	X	DRILLED FOOTING - HORIZONTAL
A703	X	9	11'-7"	X	FOOTING - LONGITUDINAL - BOTTOM
A504	X	18	9'-8"		FOOTING - LONGITUDINAL - TOP & SIDES
A505	X	40	9'-1"	X	FOOTING - TRANSVERSE - STIRRUP
A506	X	20	4'-8"		FOOTING - TRANSVERSE - TOP
A507	X	20	6'-2"		FOOTING - TRANSVERSE - BOTTOM
A508	X	8	8'-6"	X	FOOTING - VERTICAL - EACH END



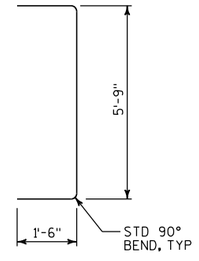
A703



A402



A505



A508

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-418

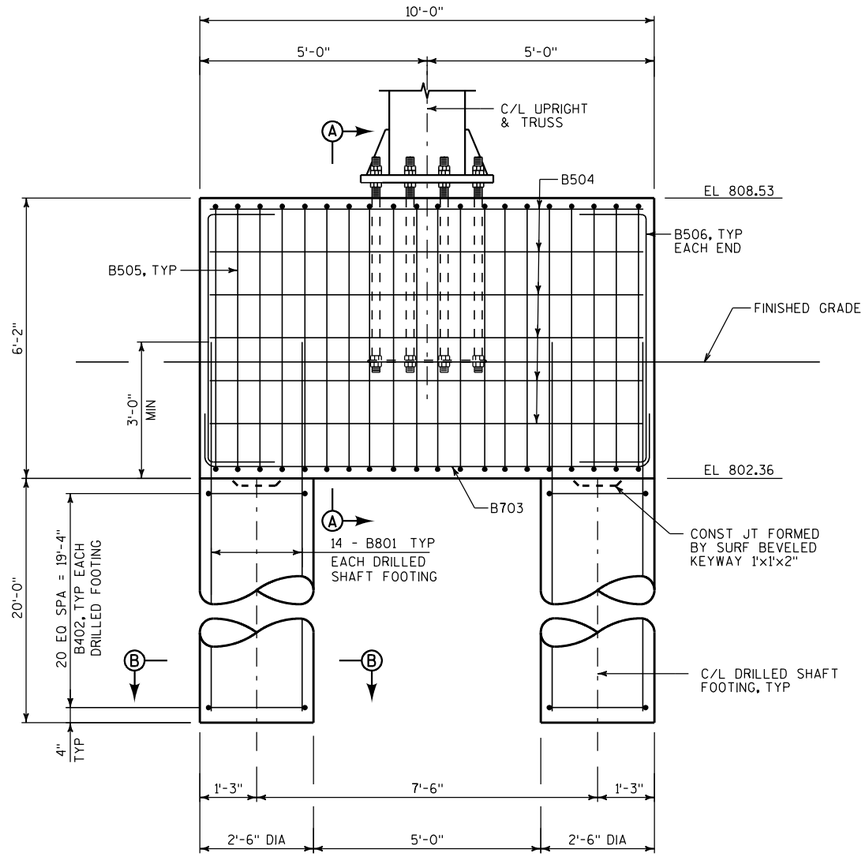
DRAWN BY TEK | PLANS CK'D. EKM

MEDIAN CONCRETE FOOTING DETAILS

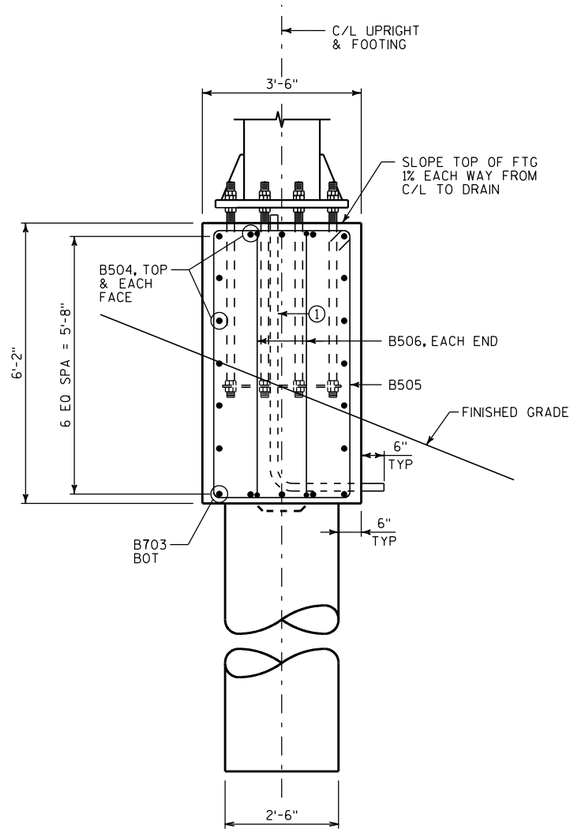
SHEET 3 OF 11

8

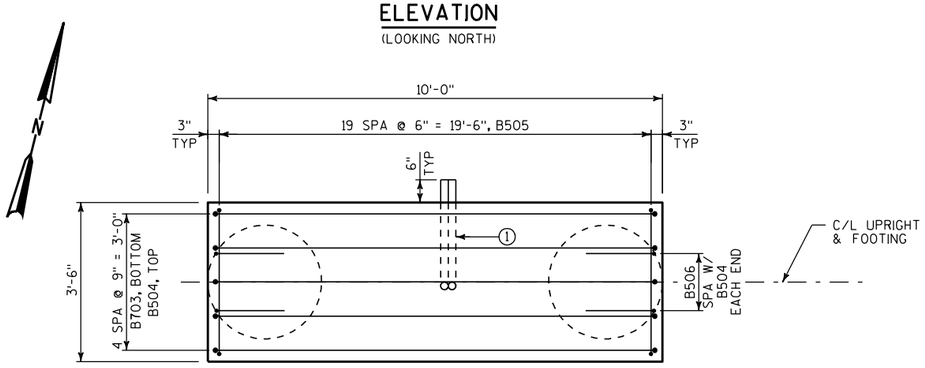
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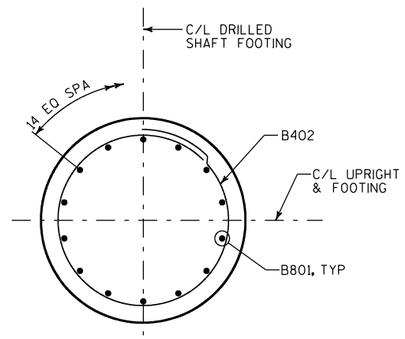
ELEVATION
(LOOKING NORTH)



SECTION A-A
(LOOKING EAST)



PLAN



SECTION B-B
TYPICAL FOR EACH DRILLED SHAFT FOOTING

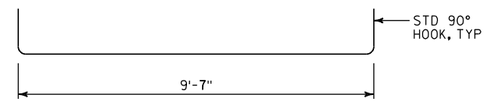
NOTES

① 2 - 2" DIA NONMETALLIC CONDUITS. CAP OR SEAL WITH SUITABLE REMOVABLE PLUG. STUB OUT CONDUITS 1'-6" BELOW FINISHED GRADE. CONDUITS ARE INCIDENTAL TO THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

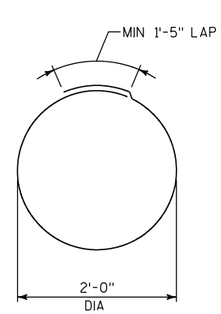
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

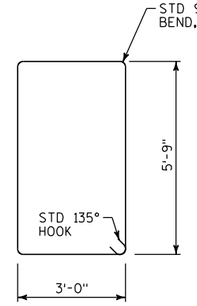
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	LOCATION
B801	X	28	23'-0"		DRILLED FOOTING - VERTICAL
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B504	X	15	9'-8"		FOOTING - LONGITUDINAL - TOP & SIDES
B505	X	20	18'-1"	X	FOOTING - VERTICAL - STIRRUP
B506	X	4	8'-5"	X	FOOTING - VERTICAL - EACH END



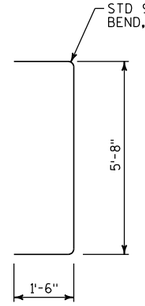
B703



B402



B505



B506

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-418

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OUTER CONCRETE FOOTING DETAILS

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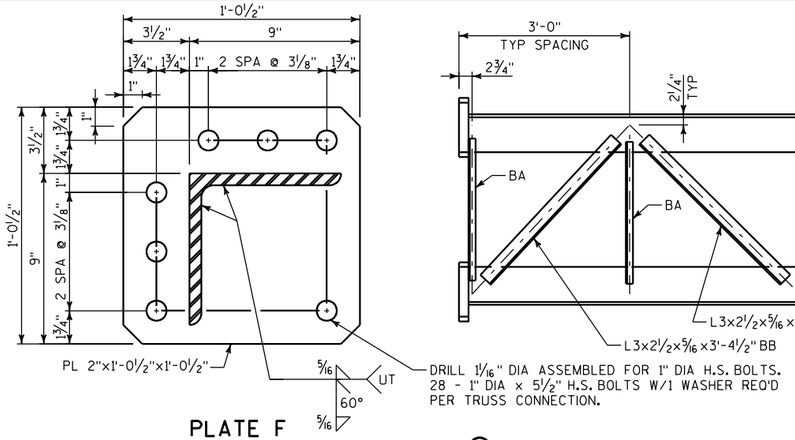
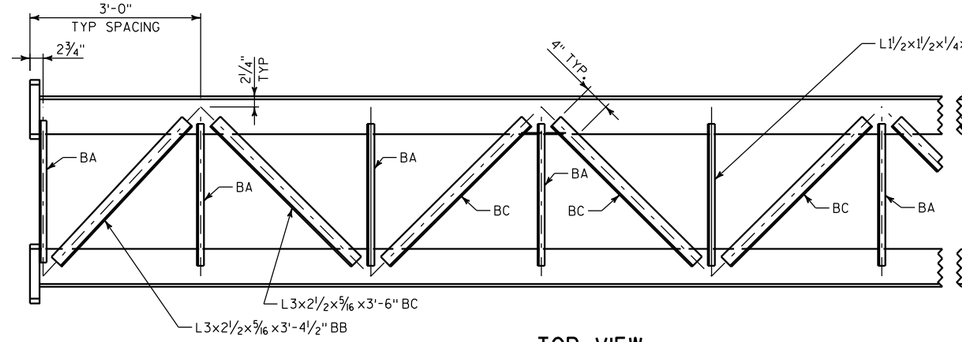
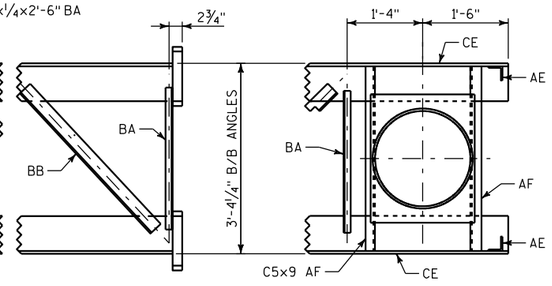


PLATE F



TOP VIEW



TOP VIEW

NOTES

TRUSS SECTIONS SHALL BE MADE IN MULTIPLES OF 6'-0", EXCEPT THAT THE BRACING PANEL NEAREST EACH POST MAY VARY TO MAKE UP THE NEEDED SECTION LENGTH. WELDED CHORD SPLICES ARE NOT PERMITTED.

UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE 1/4" FILLET WELDS ALL AROUND.

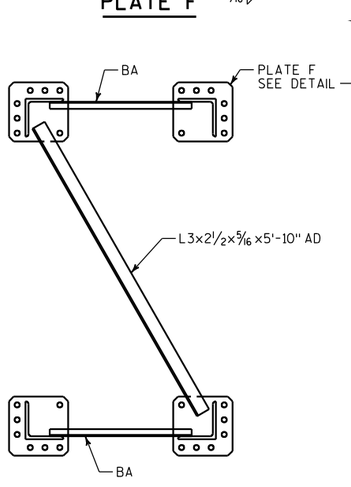
PROVIDE 2- 1/16" BRASS, STAINLESS STEEL OR GALVANIZED STEEL SHIMS AT EACH FLANGE TO BRING TRUSS INTO CORRECT CAMBER AND ALIGNMENT.

TRUSSES SHALL BE SHOP ASSEMBLED AND MATCH MARKED.

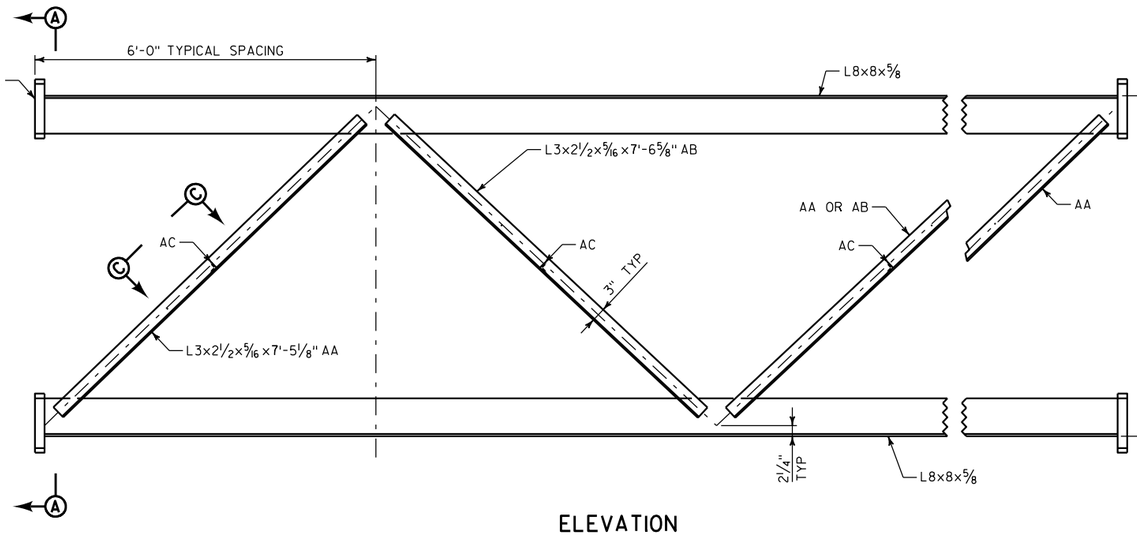
ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.

SEE SHEET 6 FOR CAMBER DETAILS.

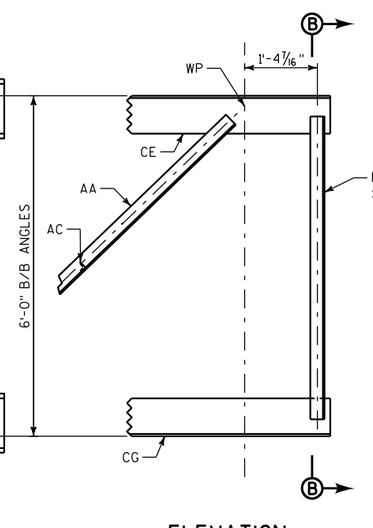
SEE SHEET 7 FOR POST CONNECTION DETAILS.



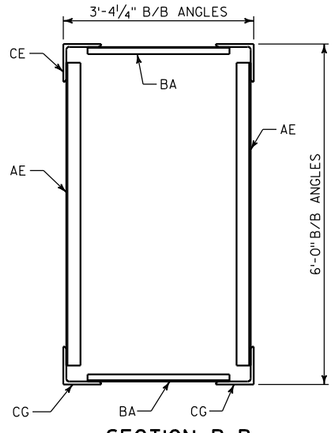
SECTION A-A



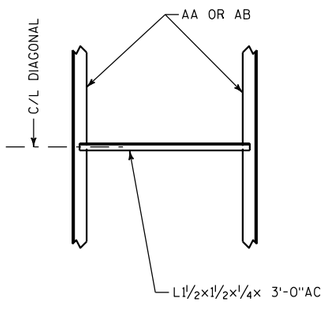
ELEVATION



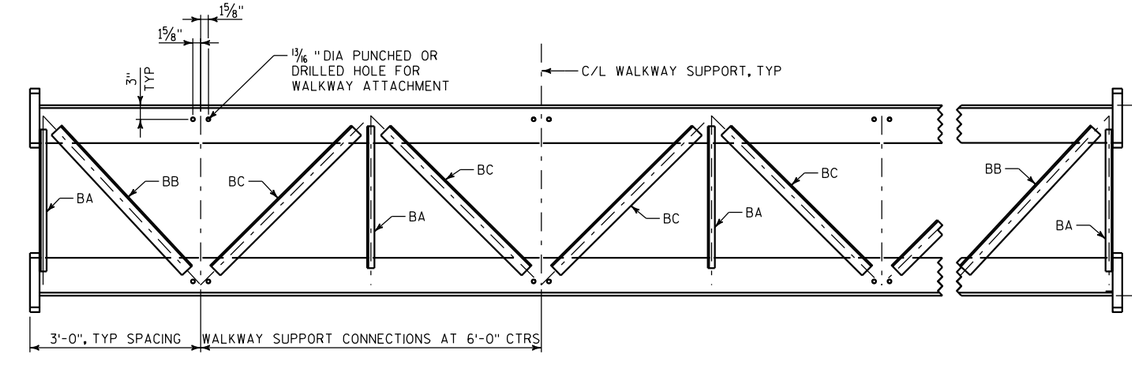
ELEVATION



SECTION B-B

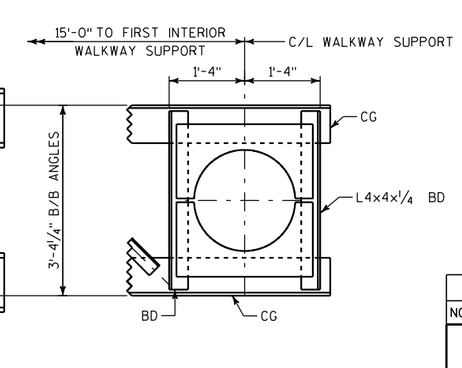


SECTION C-C



NOTE:
THE BOTTOM VIEW IS DETAILED TO PROVIDE FOR WALKWAY ATTACHMENT. WHERE THE WALKWAY IS OMITTED, PROVIDE STRUT BA AS INDICATED IN THE TOP VIEW.

BOTTOM VIEW



BOTTOM VIEW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-418

DRAWN BY TEK | PLANS CK'D. EKM

SIGN BRIDGE DETAILS

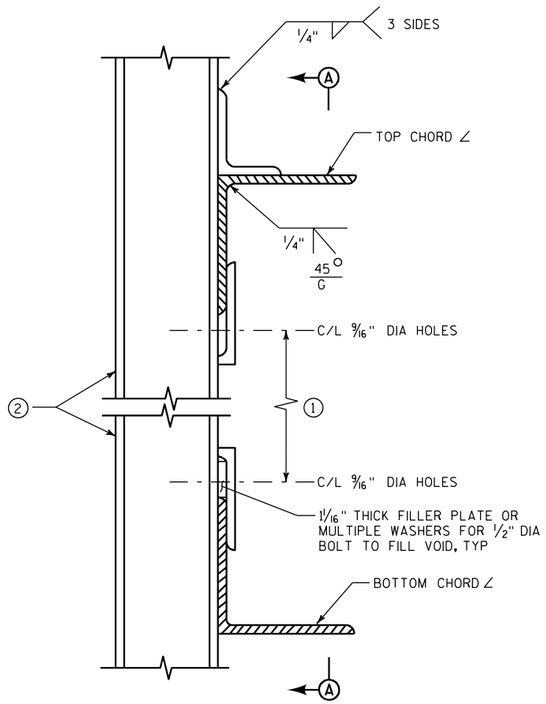
SHEET 5 OF 11

8

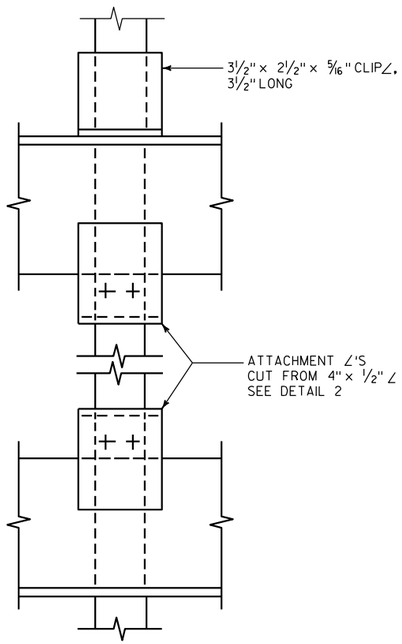
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STATE PROJECT NUMBER

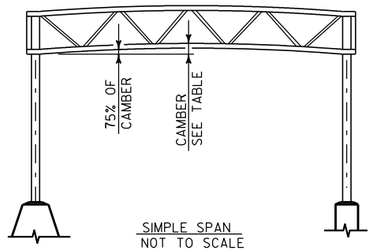
1060-33-82



DETAIL 1



SECTION A-A

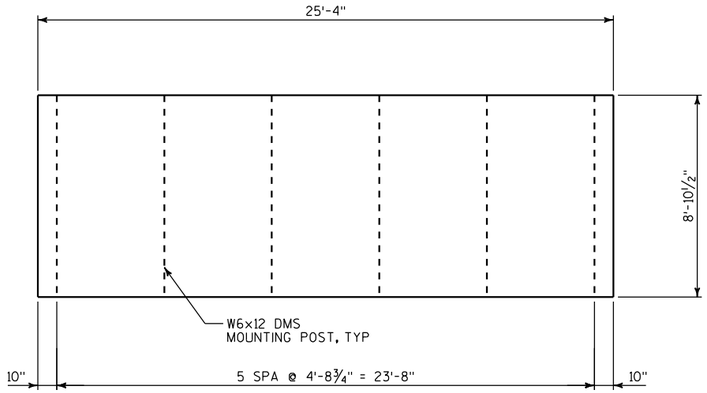


CAMBER DIAGRAM

CAMBER TABLE

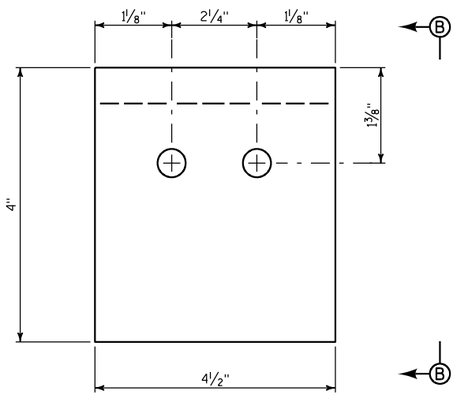
	S-67-418
SPAN	84'-0"
CAMBER	1 1/2"
DL DEFLECTION	5/8"
RESIDUAL CAMBER	1 1/8"

NOTE:
CAMBER AND DEFLECTIONS SHOWN ARE AT C/L OF SPAN. THE DEFLECTIONS AND CAMBER AT THE QUARTER POINTS SHALL BE APPROXIMATELY 75% OF THESE VALUES.

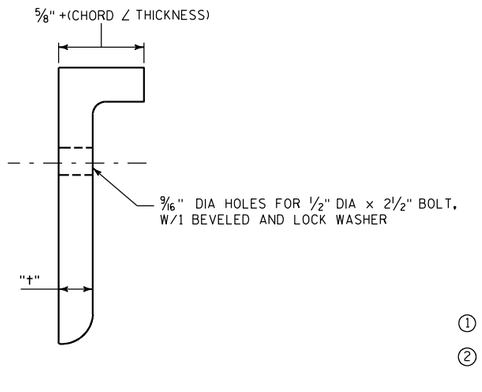


DMS MOUNTING POST SPACING DETAIL

NOTE:
POST SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS IS ENCOUNTERED.



DETAIL 2



VIEW B-B

NOTES

(1) (TRUSS DEPTH)-(TOP & BOTTOM CHORD ∠ LEGS)-1 1/4"

(2) W6x12 (STEEL) FOR DYNAMIC MESSAGE SIGN (DMS), SPACE AS SHOWN ON GENERAL PLAN & ELEVATION SHEET. SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS IS ENCOUNTERED.

THE DMS HOUSING MOUNTING POSTS AND MOUNTING ANGLES SHALL BE SUPPLIED WITH THE SIGN BRIDGE AND SHALL BE INCIDENTAL TO THE BID ITEM "SIGN BRIDGE S-67-418".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-418

DRAWN BY TEK | PLANS CK'D. EKM

DMS MOUNTING DETAILS

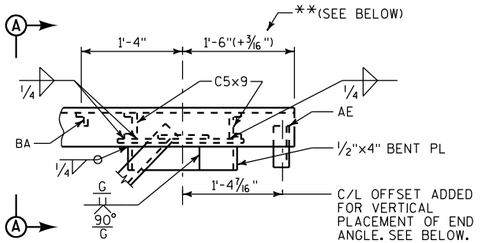
SHEET 6 OF 11

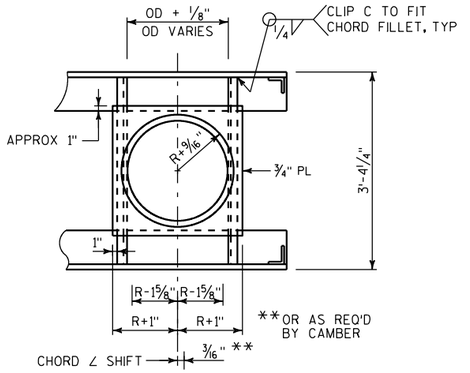
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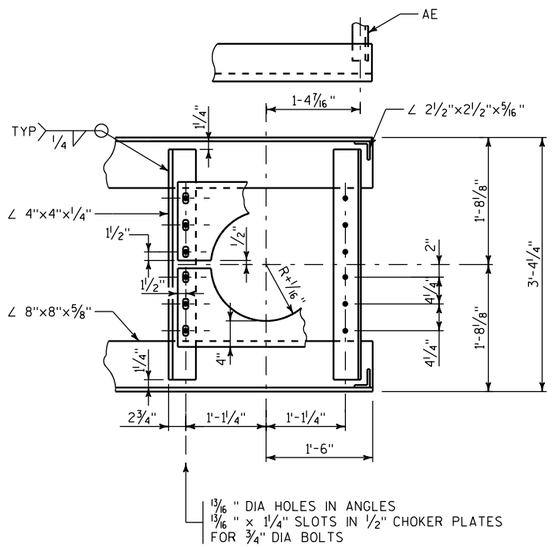
STATE PROJECT NUMBER

1060-33-82



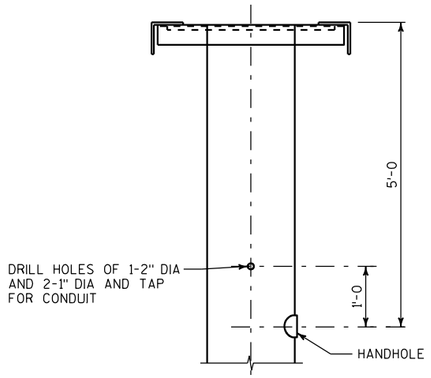


UPPER JUNCTION

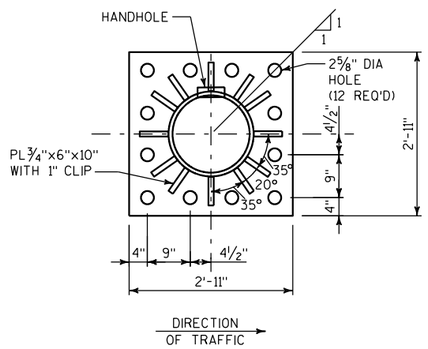


LOWER JUNCTION

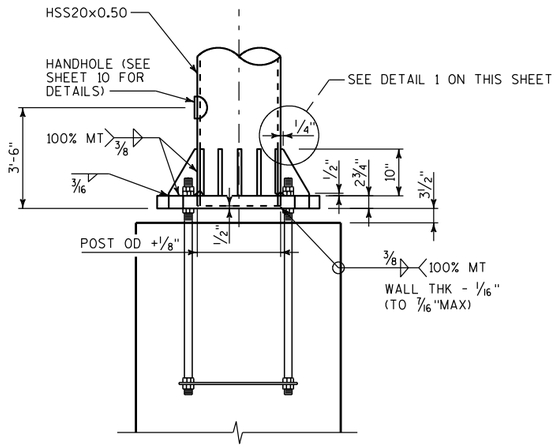
NOTE:
CHOKER PLATES AND HANDHOLE COVERS SHALL BE GALVANIZED SEPARATELY.



VIEW A-A



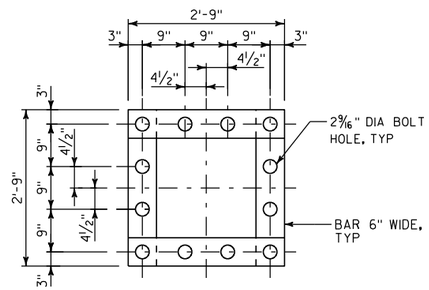
PLAN



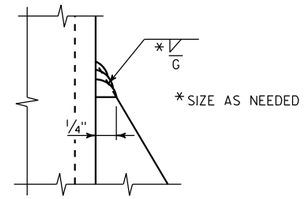
ELEVATION

PLAN & ELEVATION - BASEPLATE

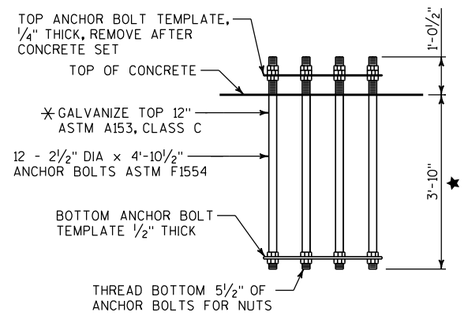
(OUTER FTG SHOWN - MEDIAN FTG SIMILAR)
(LOOKING EAST)



ANCHOR BOLT TEMPLATE PLAN



DETAIL 1



ANCHOR BOLT DETAILS

⚹ PRIOR TO INSTALLATION, ANCHOR BOLTS SHALL BE RIGIDLY HELD IN POSITION DURING CONCRETE PLACEMENT WITH TEMPLATES AT TOP & BOTTOM

★ DIMENSION GIVEN AT C/L OF FOOTING. ANCHOR DIMENSIONS MAY VARY ± 1/2" AT C/L OF TOWER UPRIGHT IN MEDIAN FOOTING.

BASE PLATE & UPRIGHT COLUMN DETAILS

STRUCTURE	OUTSIDE DIA X WALL THICKNESS	ANCHOR BOLTS	BASE PLATE THICKNESS (IN)	STIFFENER PLATE THICKNESS (IN)	STIFFENER PLATE HEIGHT (IN)	W (IN)
S-67-418	20" O.D. X 0.500"	2 1/2" DIA	2 3/4"	3/4"	10	3/8"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-418

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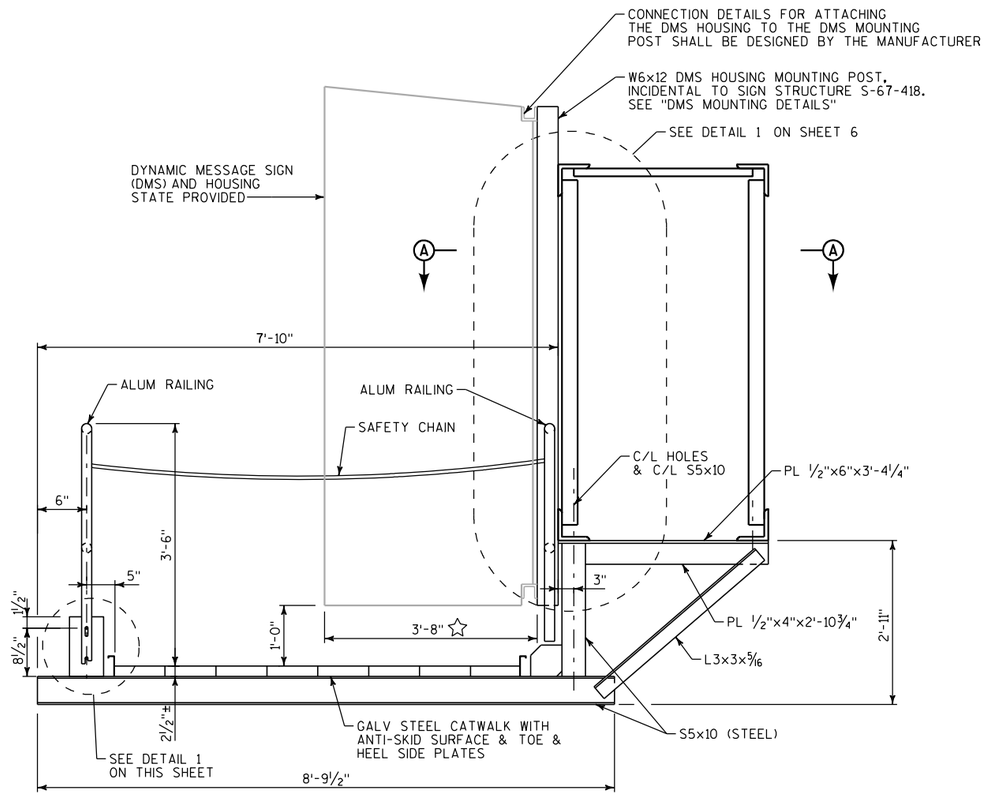
TRUSS/POST CONNECTION DETAILS

SHEET 7 OF 11

8

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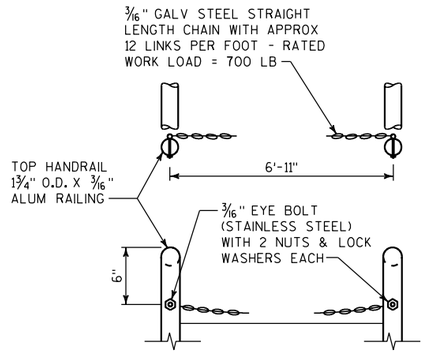


SECTION THRU WALKWAY

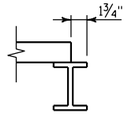
☆ IF ASSUMED DMS HOUSING WIDTH AND SUPPORT DIMENSIONS ARE GREATER THAN 3'-8", THE 7'-10" WALKWAY DIMENSION MAY NEED TO BE LENGTHENED TO ACCOMMODATE THE RAILING TO SWING DOWN INTO THE CLOSED POSITION

NOTES:
DMS SIGN SHALL NOT BE CONNECTED TO CATWALK.

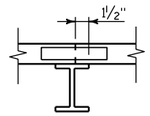
CONTRACTOR SHALL COORDINATE THE LOCATION OF THE DMS SUPPORT BRACKETS WITH THE LOCATION OF THE CATWALK AND WEB CONNECTION LOCATIONS.



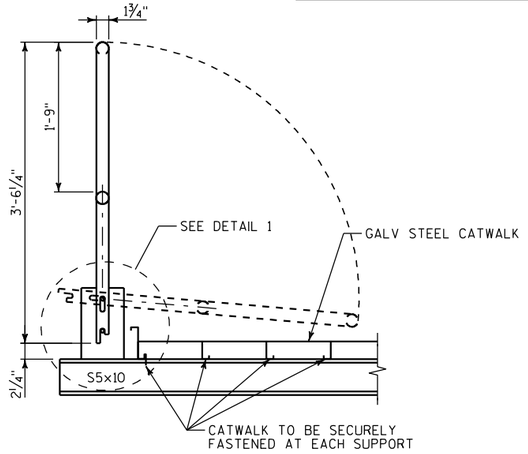
SAFETY CHAIN DETAIL



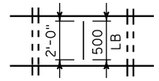
CATWALK TERMINATION DETAIL



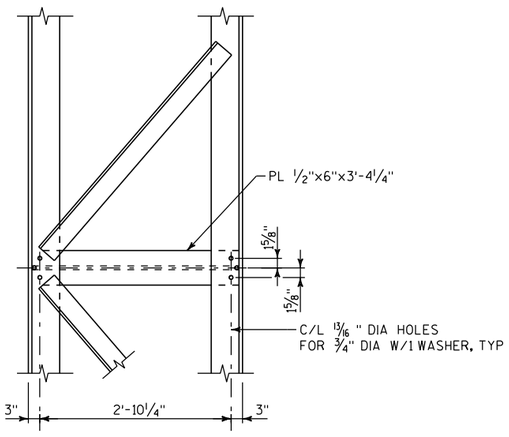
CATWALK SPLICE LOCATION DETAIL



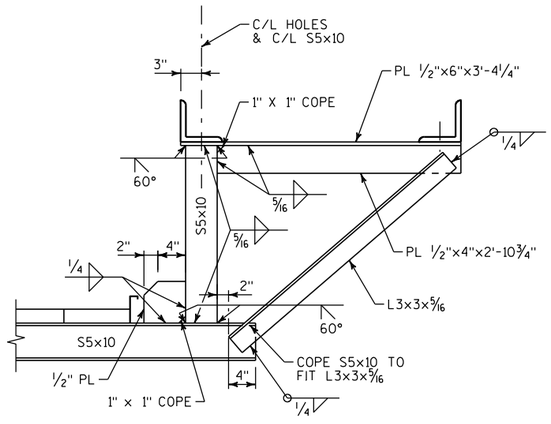
RAIL POST DETAIL



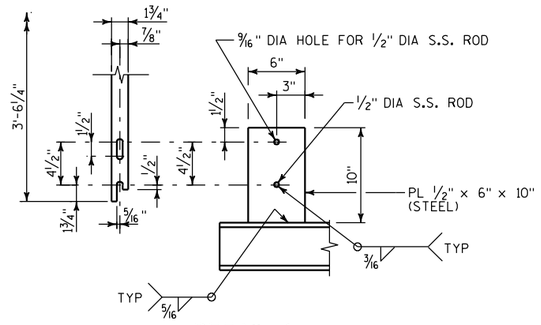
NOTE:
CATWALK SHALL MEET THE 2013 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS". (500 LB LIVE LOAD DISTRIBUTED OVER 2'-0" TRANSVERSELY - MAX SPAN IS 8'-0"). CATWALK SHALL ALSO MEET CURRENT OSHA STD'S FOR WALKING-WORKING SURFACES.



SECTION A-A



BRACKET DETAIL



DETAIL 1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-418

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SIGN BRIDGE CATWALK DETAILS (1 OF 2)

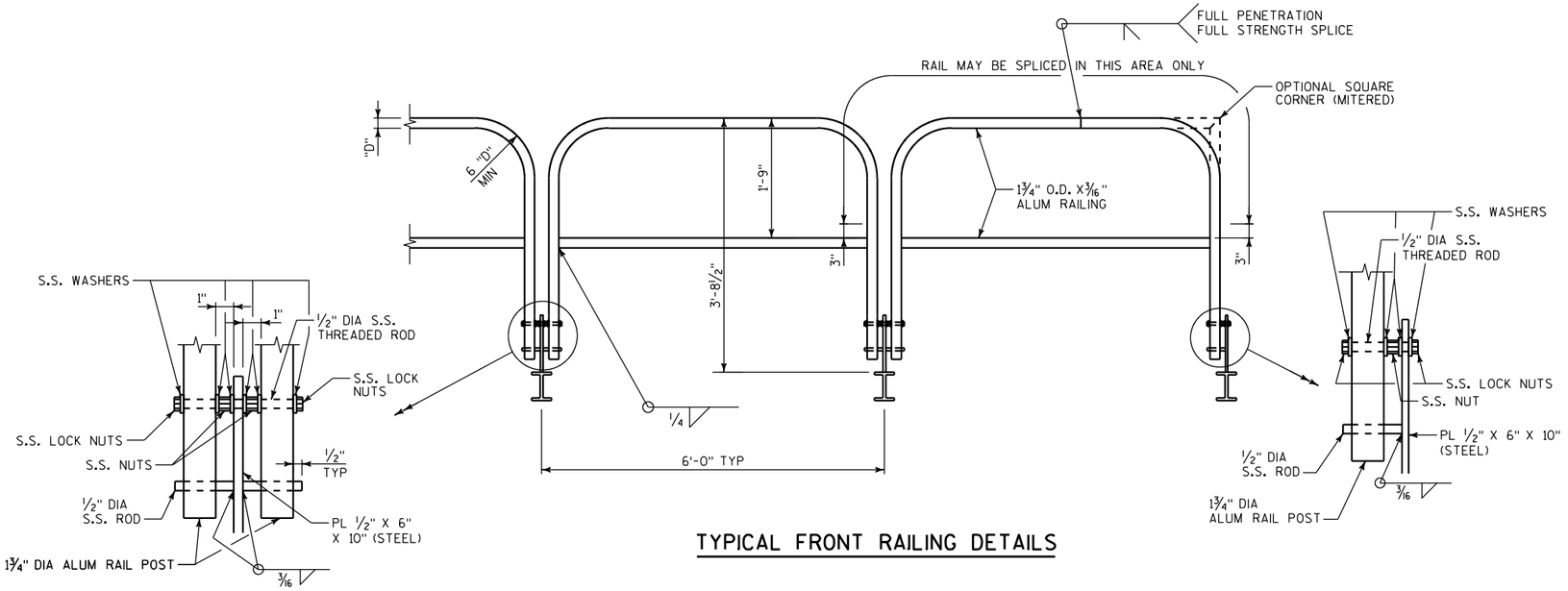
SHEET 8 OF 11

8

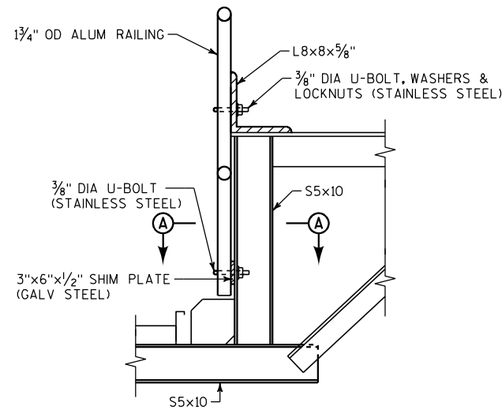
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STATE PROJECT NUMBER

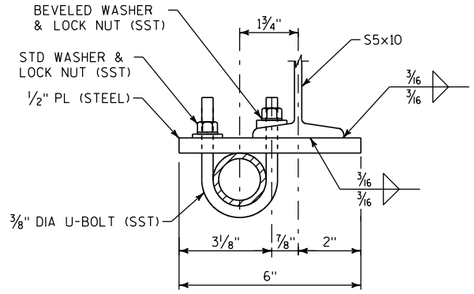
1060-33-82



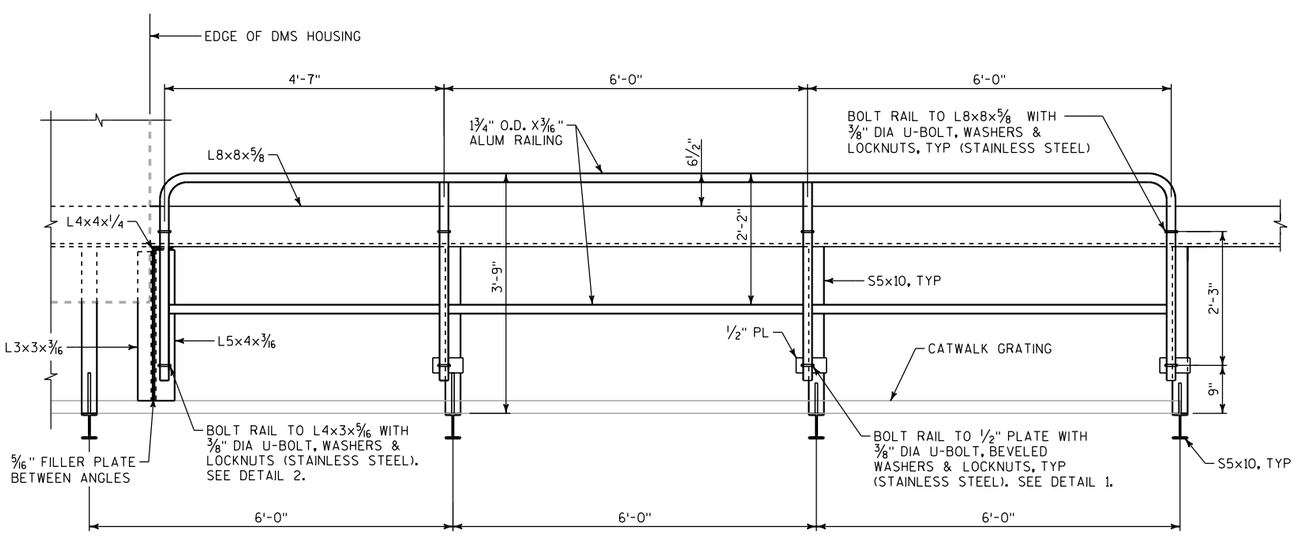
TYPICAL FRONT RAILING DETAILS



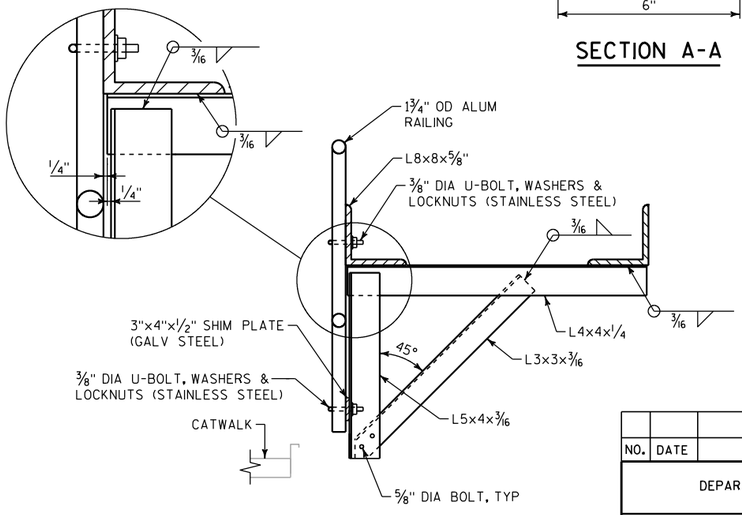
DETAIL 1



SECTION A-A



BACK RAILING DETAILS



DETAIL 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-418

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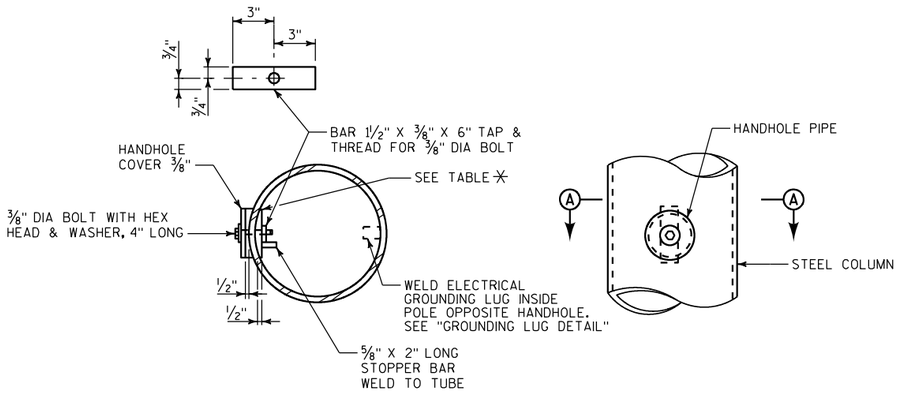
SIGN BRIDGE
CATWALK
DETAILS (2 OF 2)

SHEET 9 OF 11

8

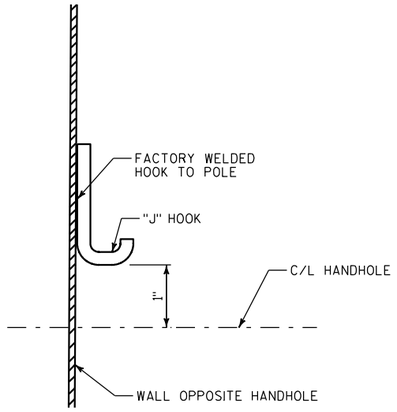
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STATE PROJECT NUMBER
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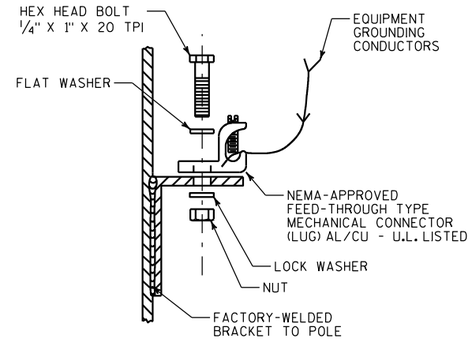
SECTION A-A

HANDHOLE DETAILS



TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



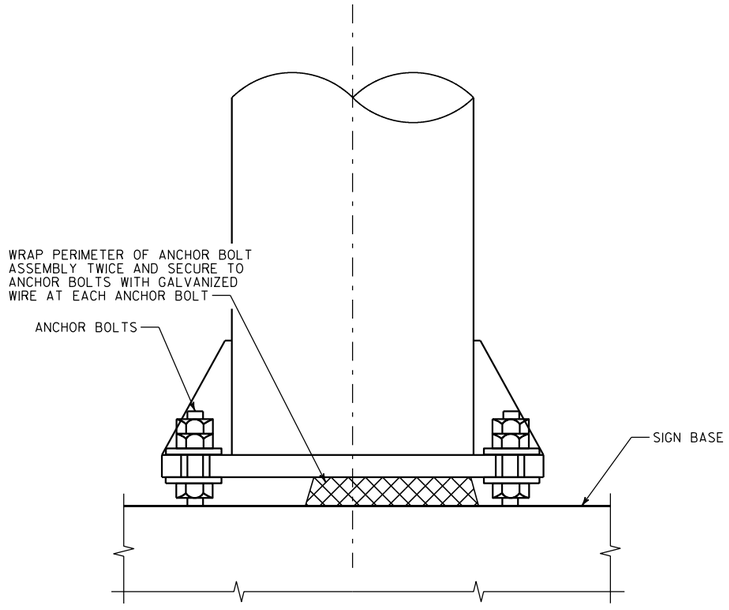
GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HANDHOLE NOTES

HANDHOLES SHALL BE LOCATED IN BOTH COLUMNS OF THE SIGN BRIDGE STRUCTURE FOR ELECTRICALLY OPERATED DEVICES INSTALLED ON/IN THE STRUCTURE IN THE FUTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE FUTURE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE FUTURE ELECTRICAL SERVICE ENTRANCE WITH THE DISTRICT TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

✳ UPRIGHT DIAMETER SIZE	HANDHOLE PIPE O.D. X MIN THICKNESS
UP TO AND INCLUDING 16" X .375"	5.562" X .500"
GREATER THAN 16" X .375" TO AND INCLUDING 24" X .562"	6.625" X .562"



RODENT SCREEN

(ONLY REQ'D. WHEN ELECTRICAL DEVICES ARE INSTALLED)
(OUTER FOOTING)

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STRUCTURE S-67-418

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HANDHOLE DETAILS

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8

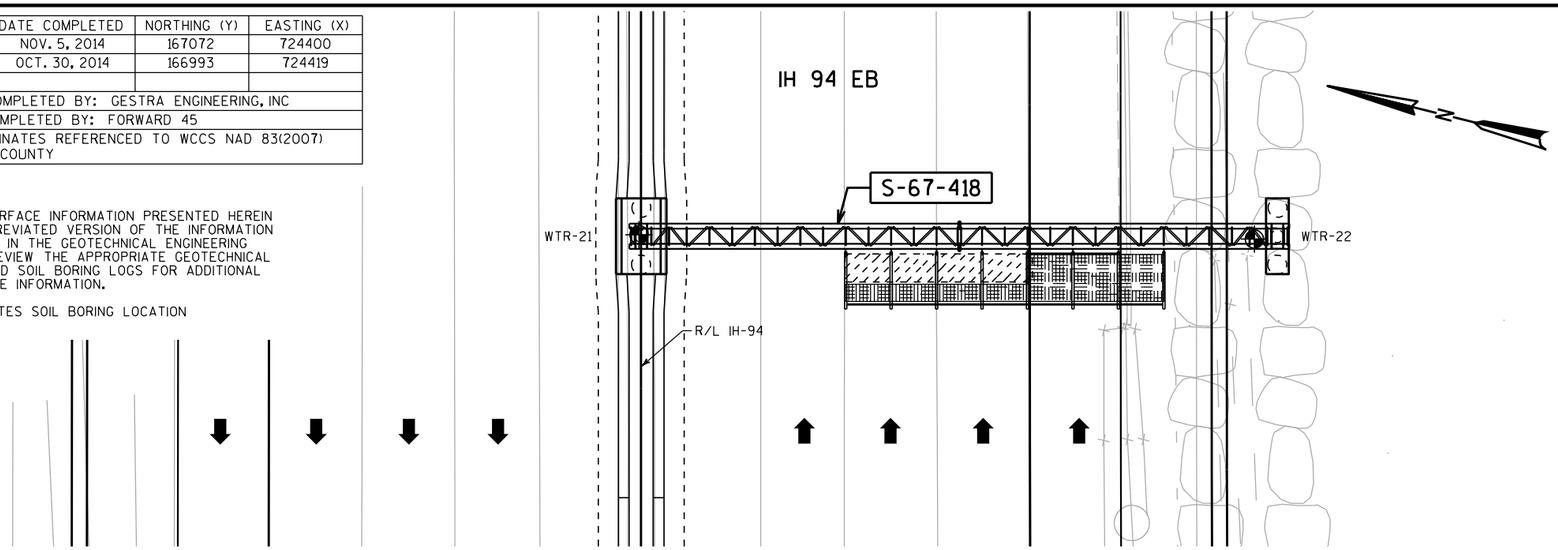
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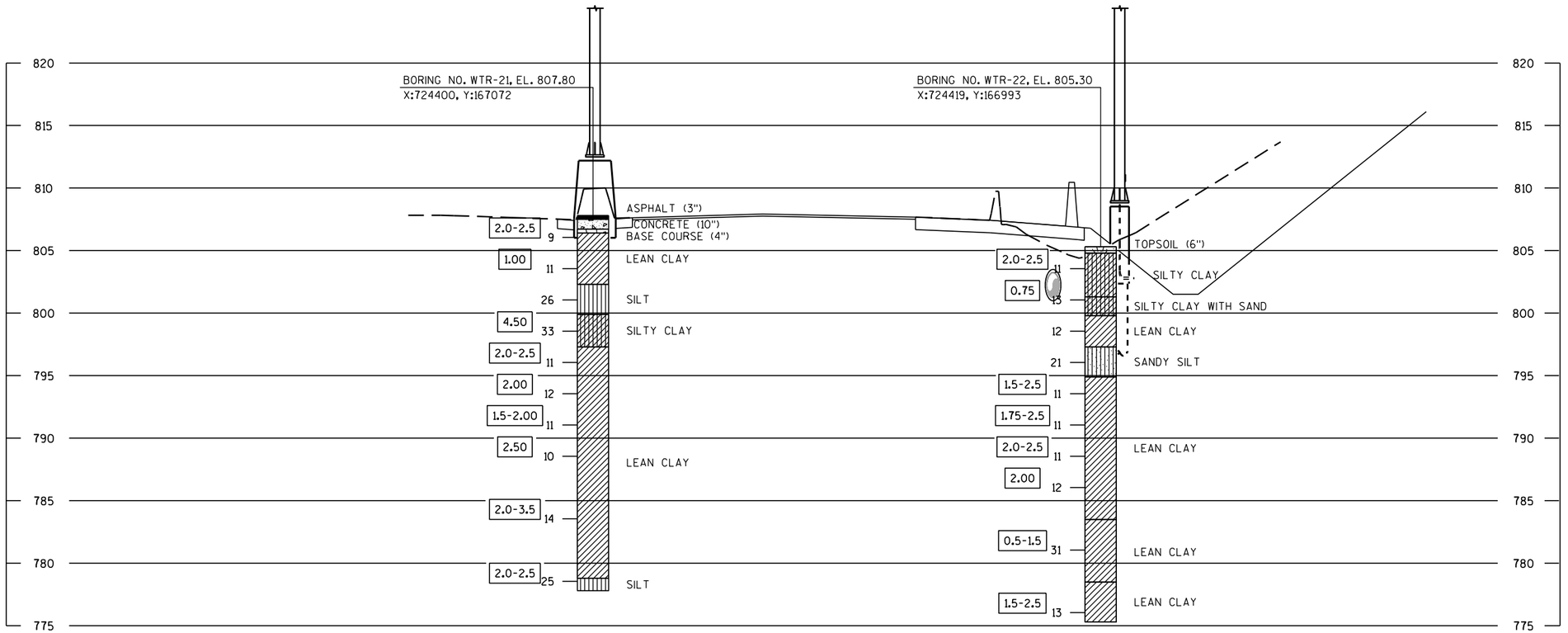
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
WTR-21	NOV. 5, 2014	167072	724400
WTR-22	OCT. 30, 2014	166993	724419
BORINGS COMPLETED BY: GESTRA ENGINEERING, INC			
REPORT COMPLETED BY: FORWARD 45			
ALL COORDINATES REFERENCED TO WCCS NAD 83(2007) WAUKESHA COUNTY			

NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

DENOTES SOIL BORING LOCATION





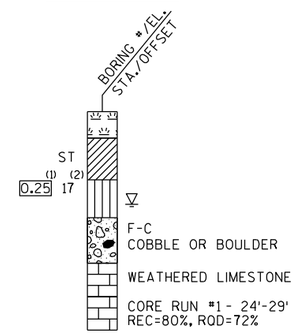
STATE PROJECT NUMBER

1060-33-82

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-67-418

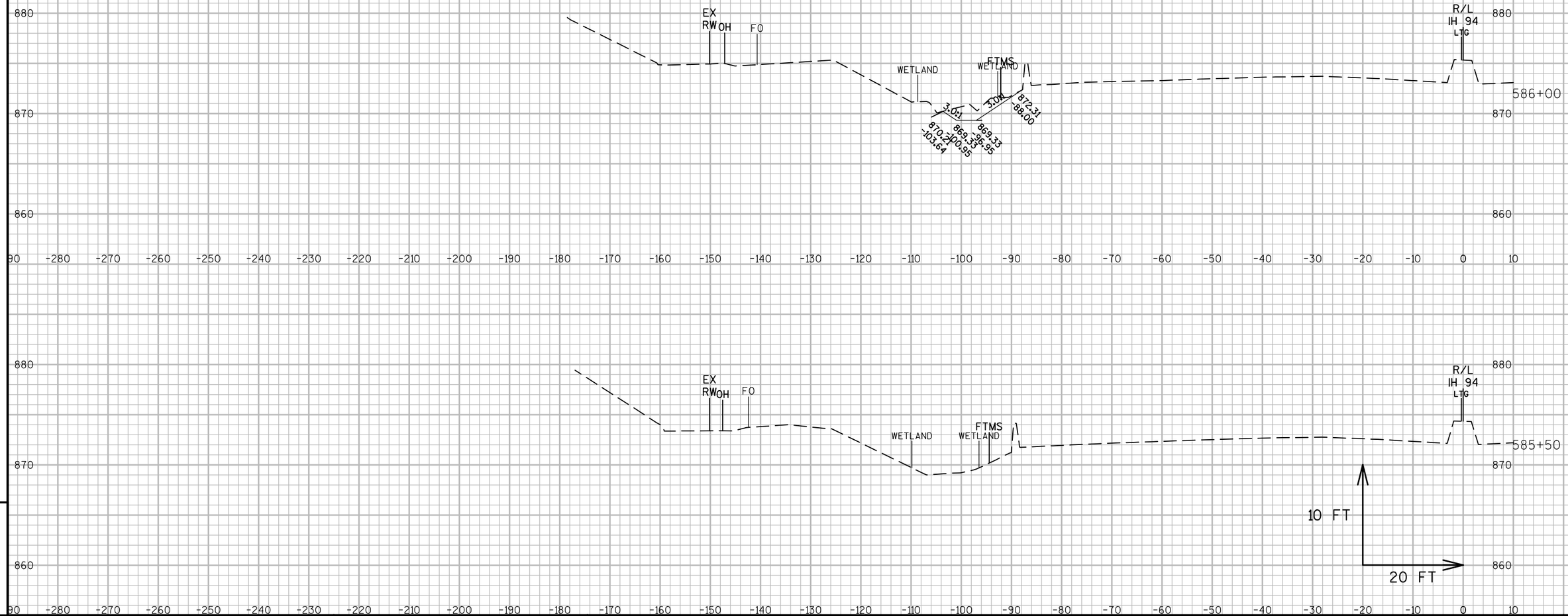
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SUBSURFACE EXPLORATION

SHEET 11 OF 11

8

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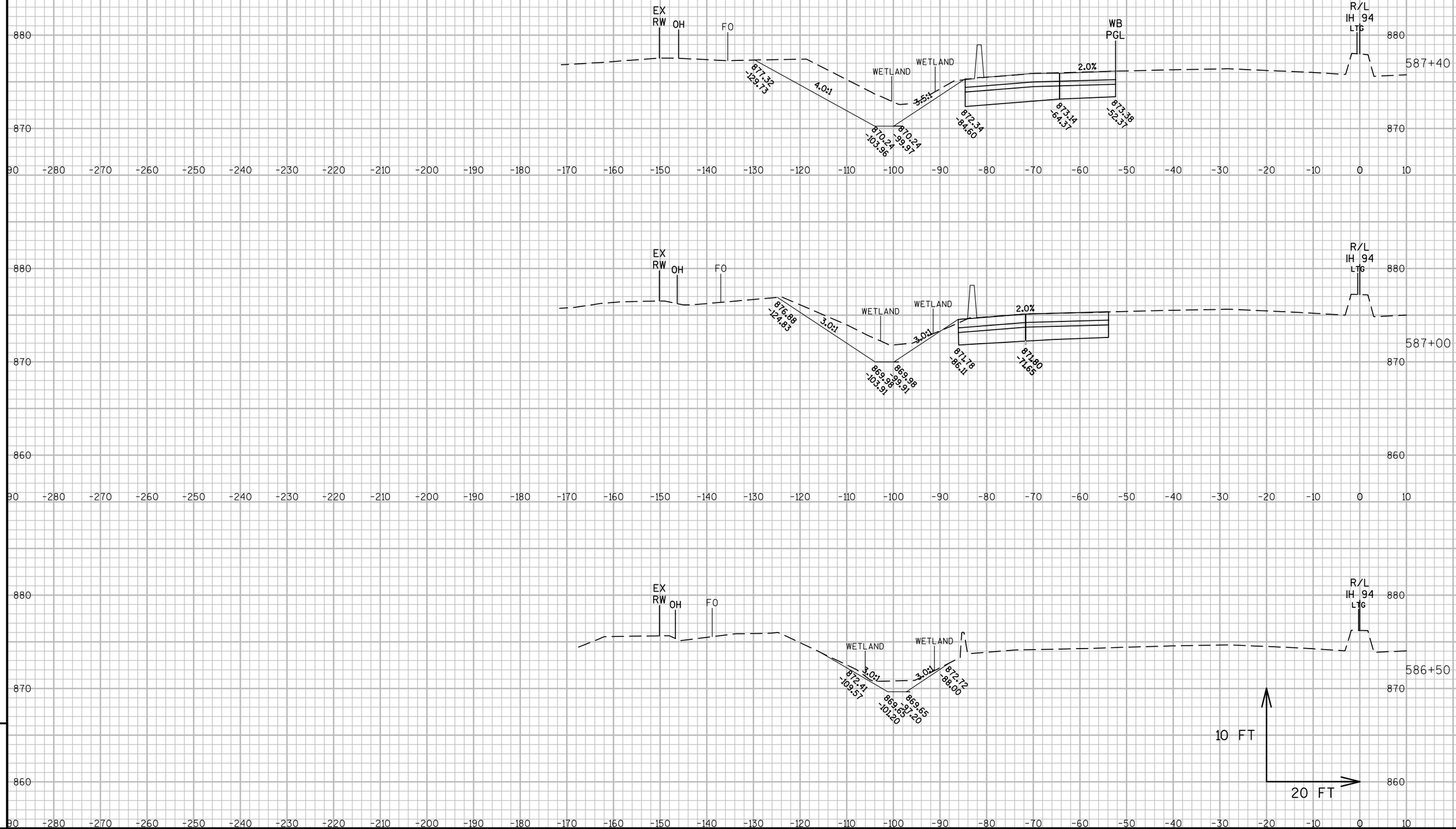
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 491	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (1)

PLOT DATE : 5/1/2017 9:57 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



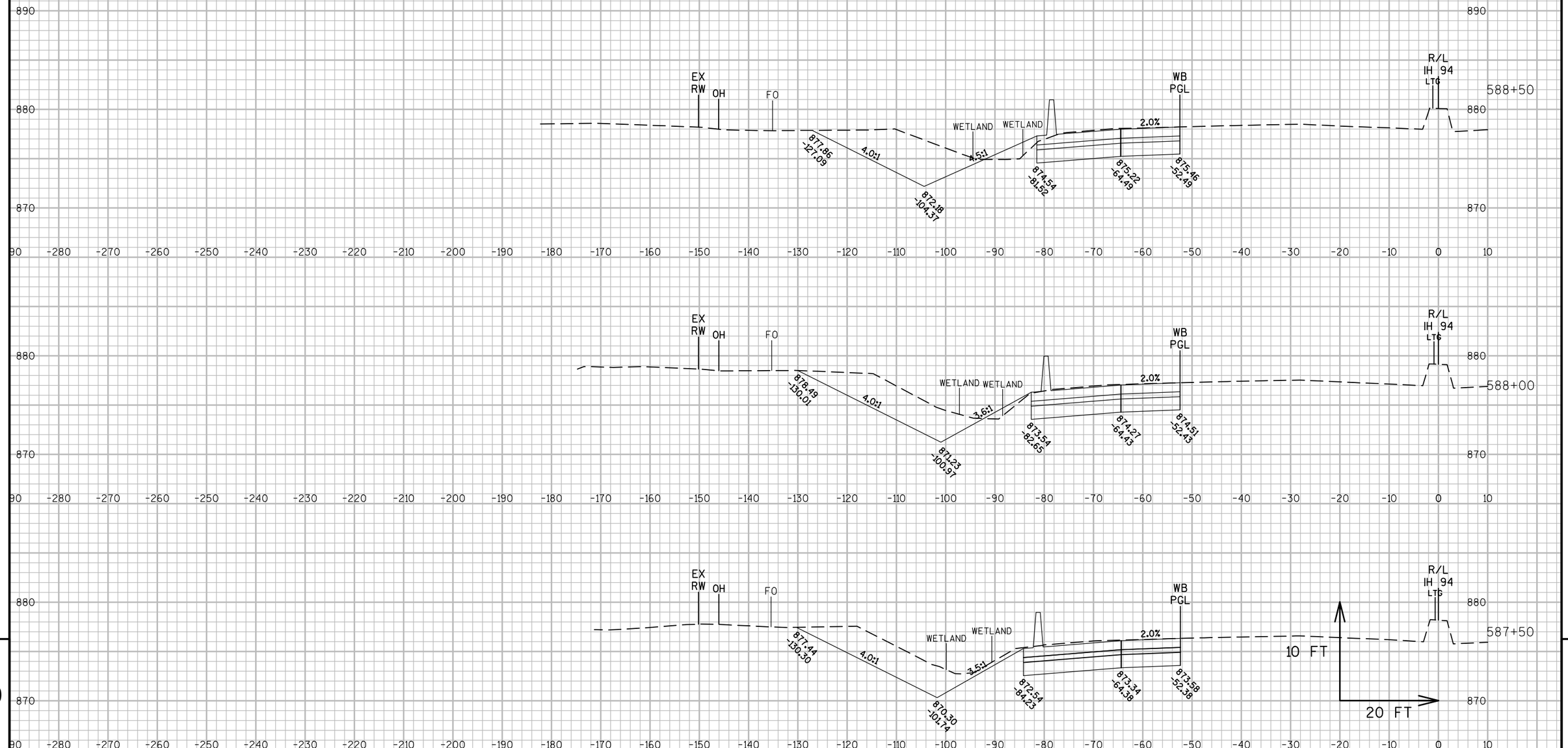
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 492	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
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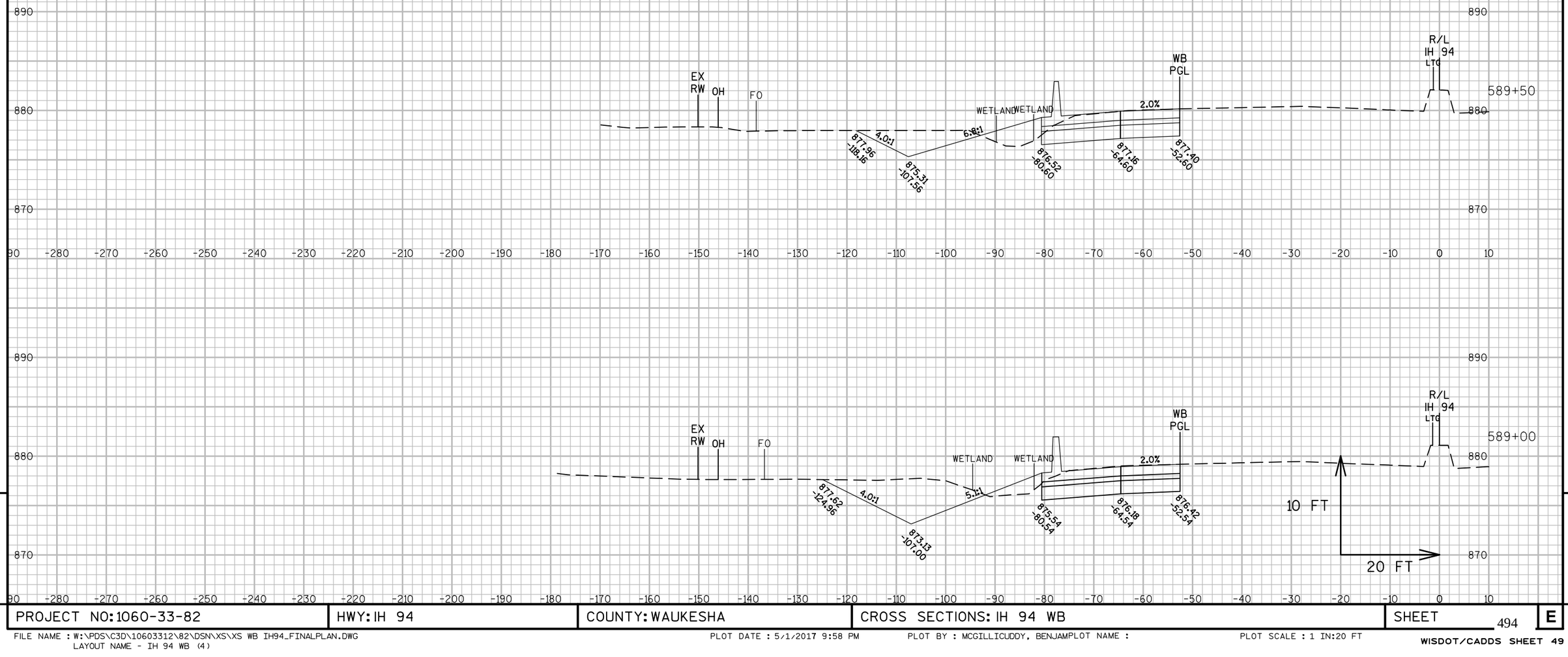
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 493	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
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PLOT DATE : 5/1/2017 9:58 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



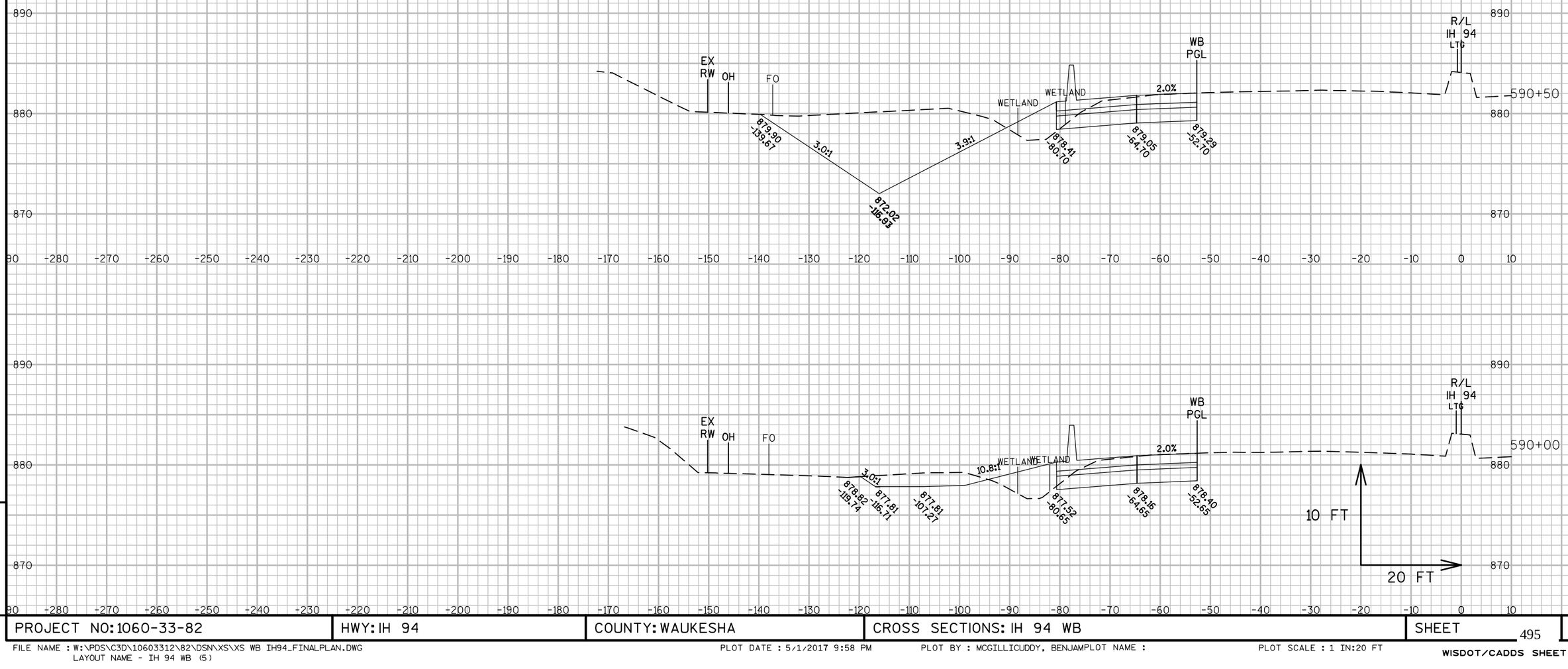
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9

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 494	E

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PLOT DATE : 5/1/2017 9:58 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



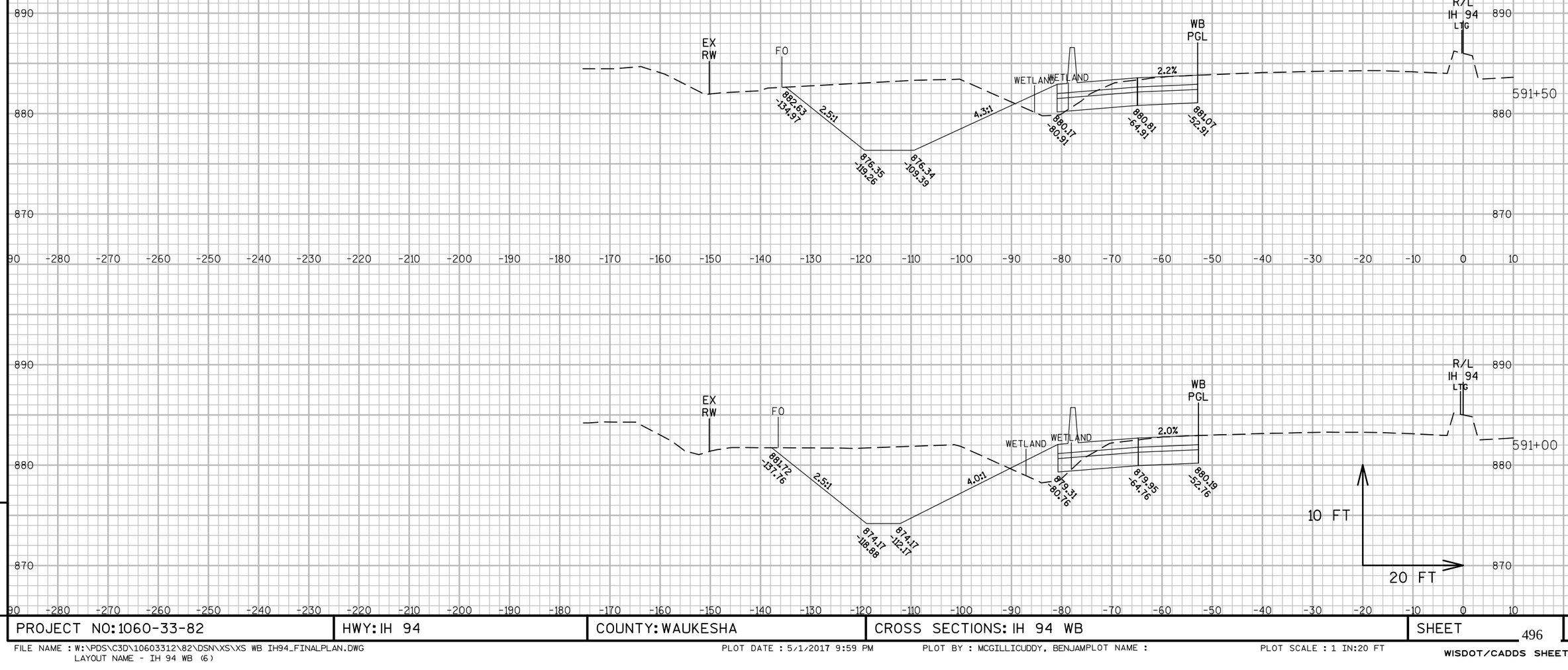
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 495	E

9

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LAYOUT NAME - IH 94 WB (5)

PLOT DATE : 5/1/2017 9:58 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

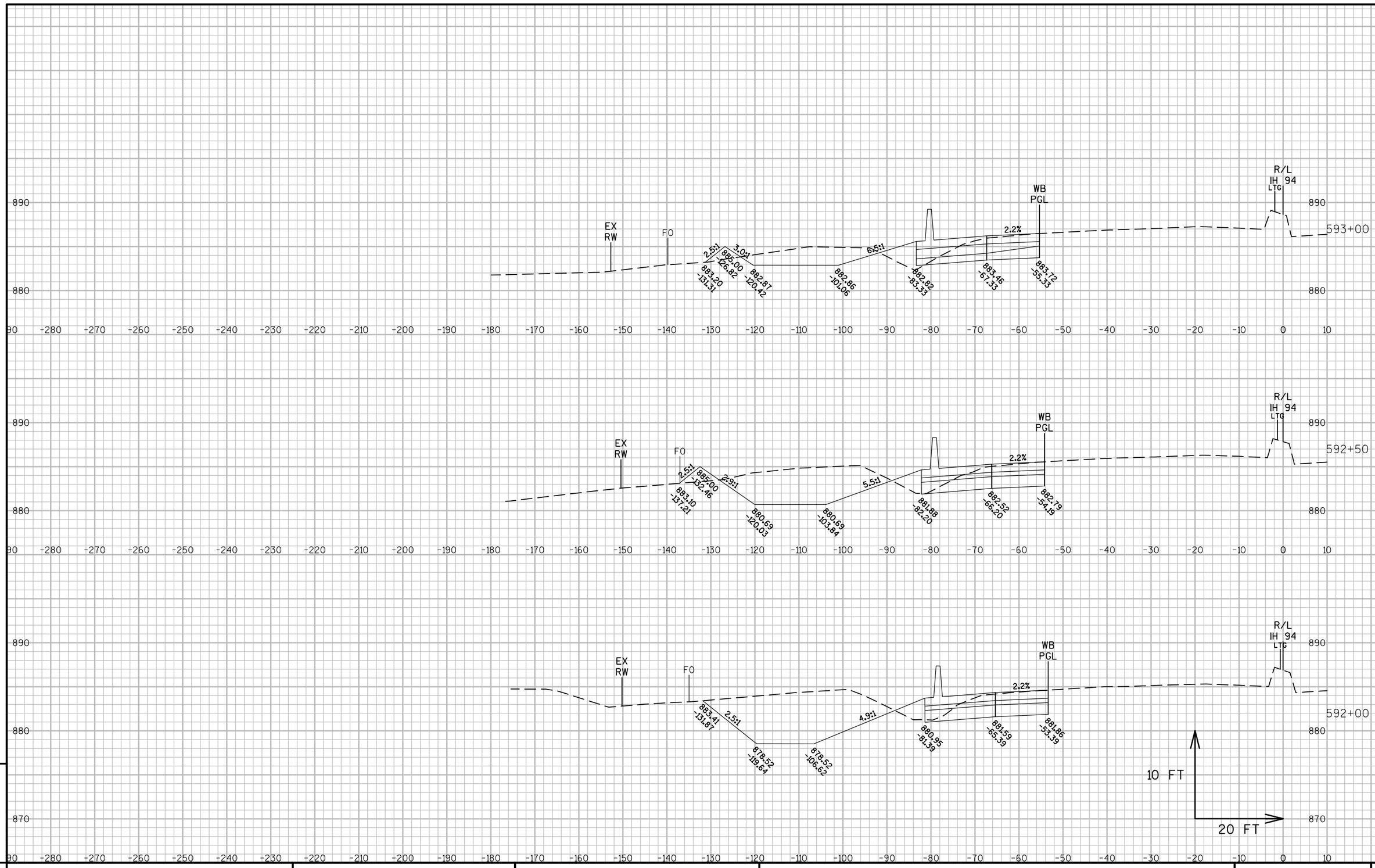


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 496	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (6)

PLOT DATE : 5/1/2017 9:59 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

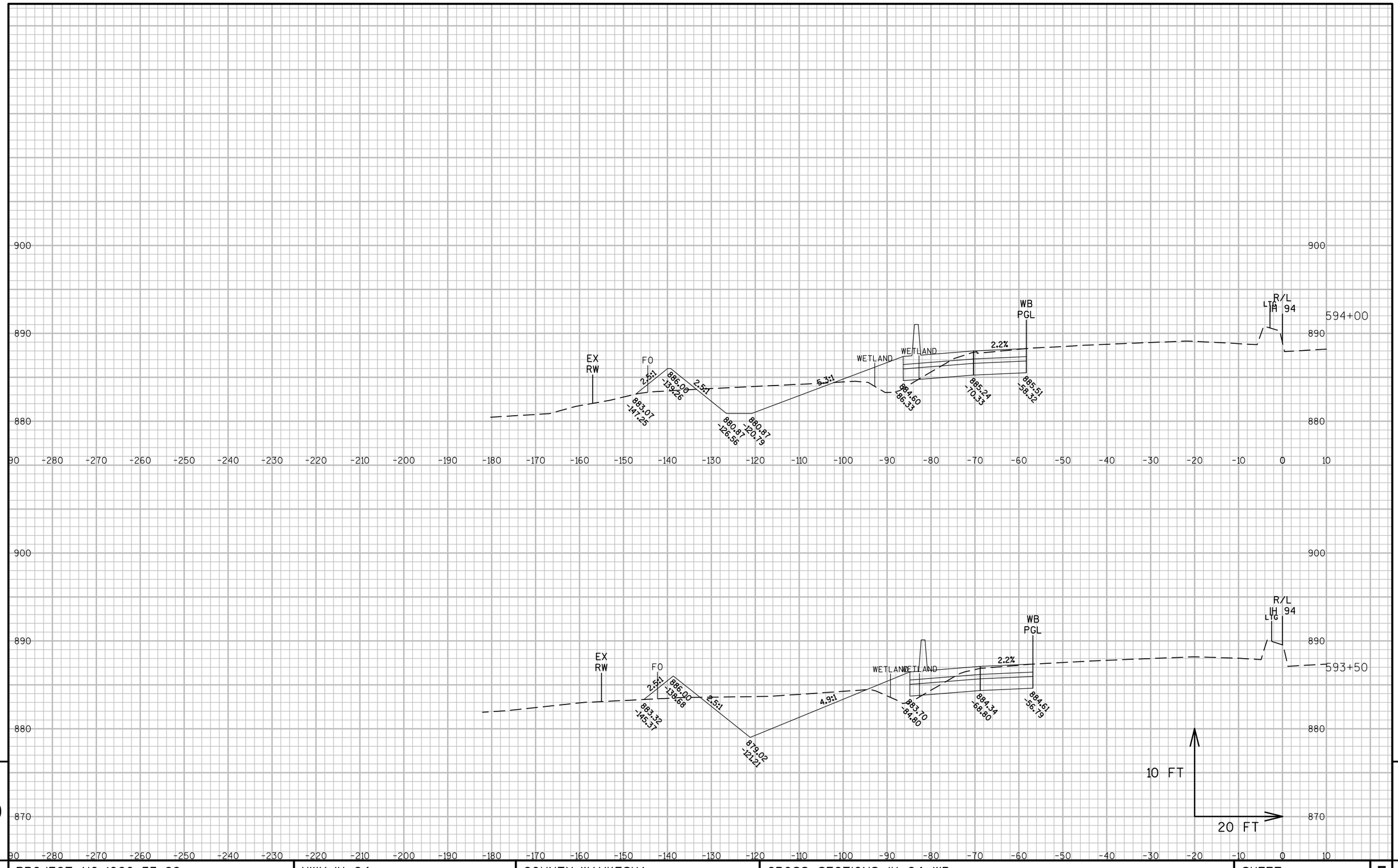
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 497	E

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FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (7)

PLOT DATE : 5/1/2017 9:59 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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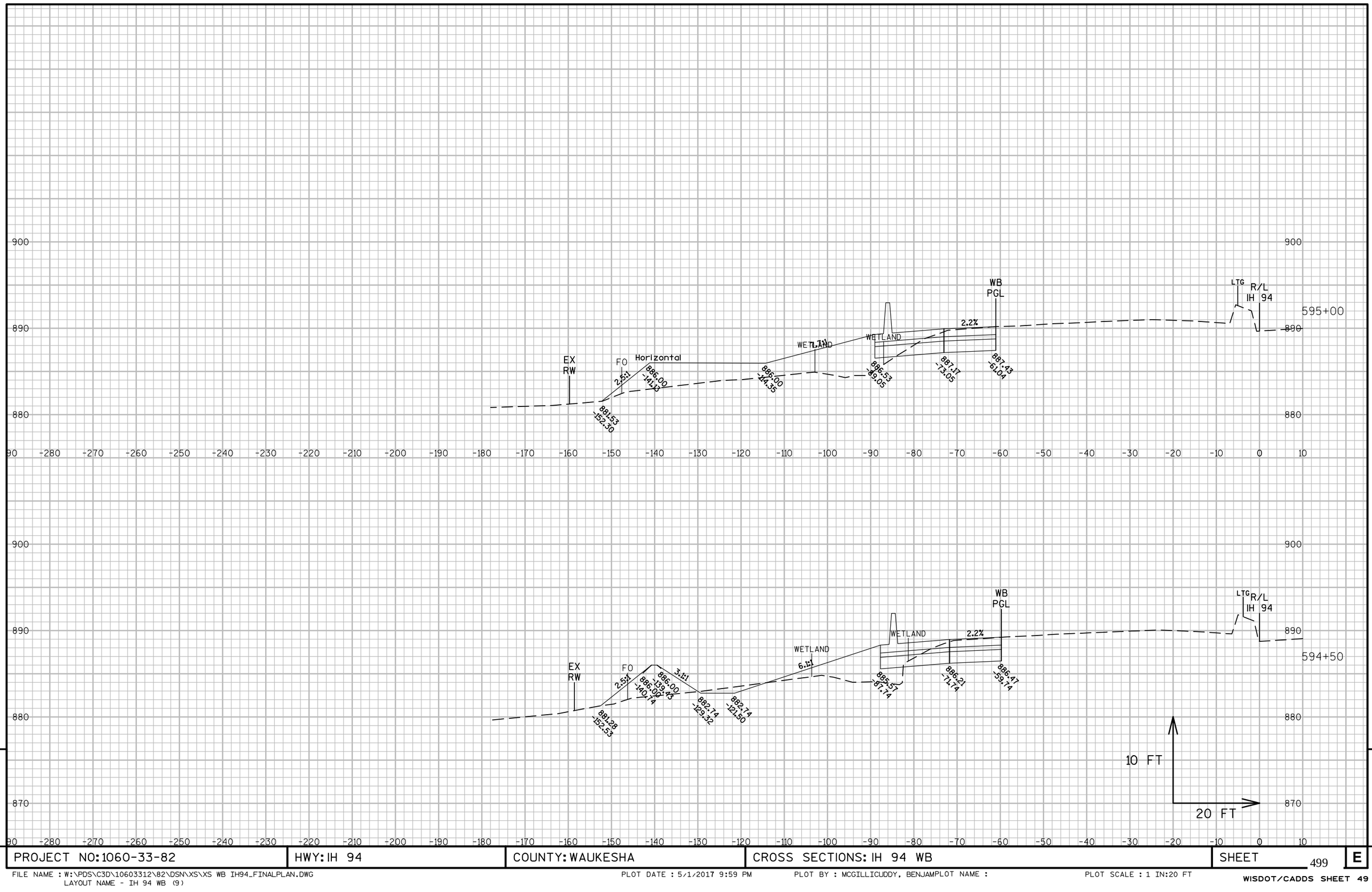
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 498	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (8)

PLOT DATE : 5/1/2017 9:59 PM

PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 499	E

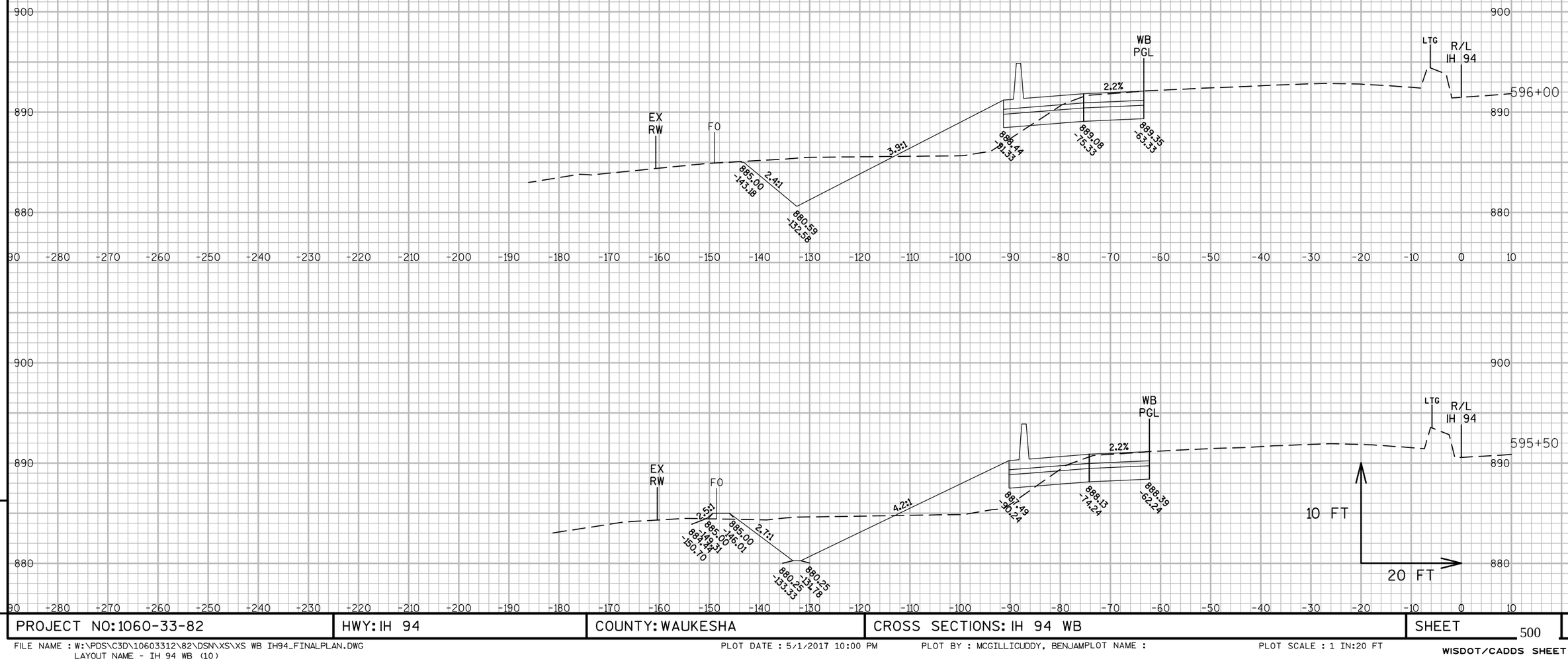
FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (9)

PLOT DATE : 5/1/2017 9:59 PM

PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



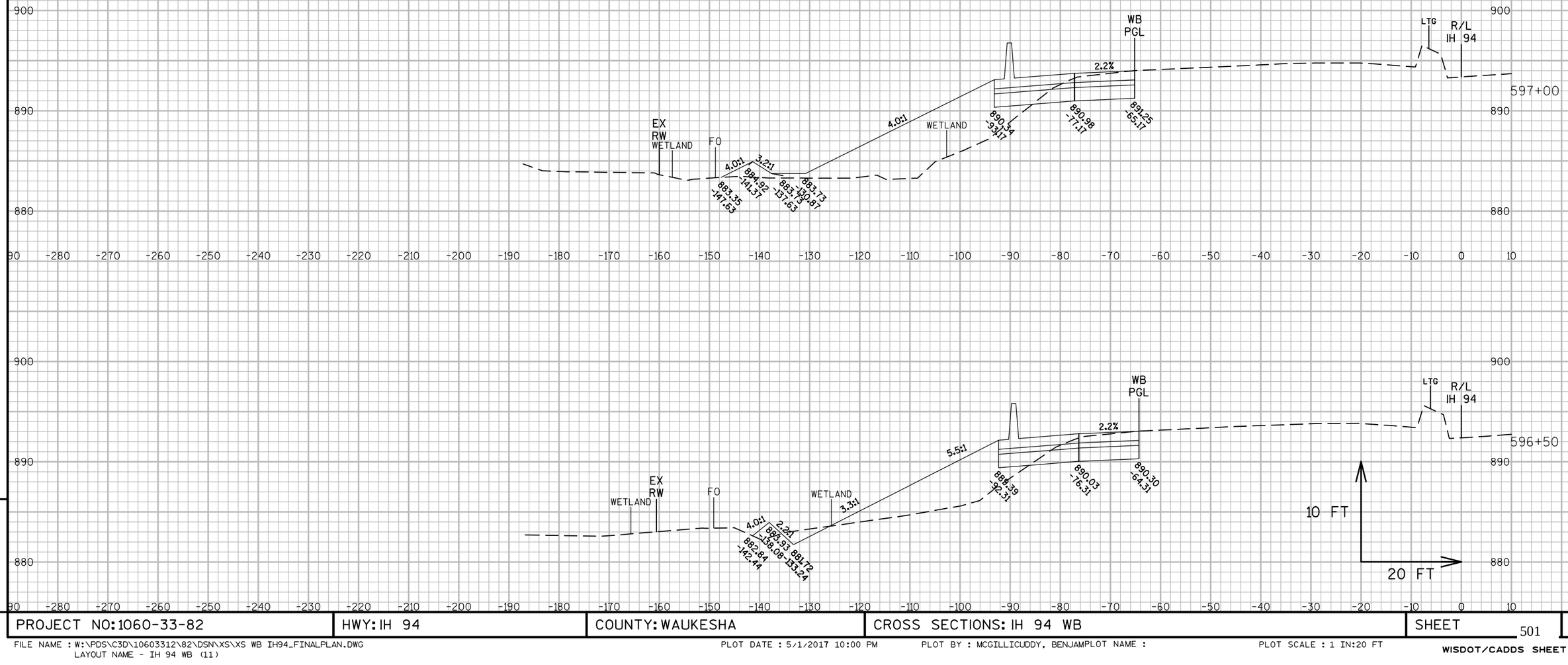
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 500	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (10)

PLOT DATE : 5/1/2017 10:00 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



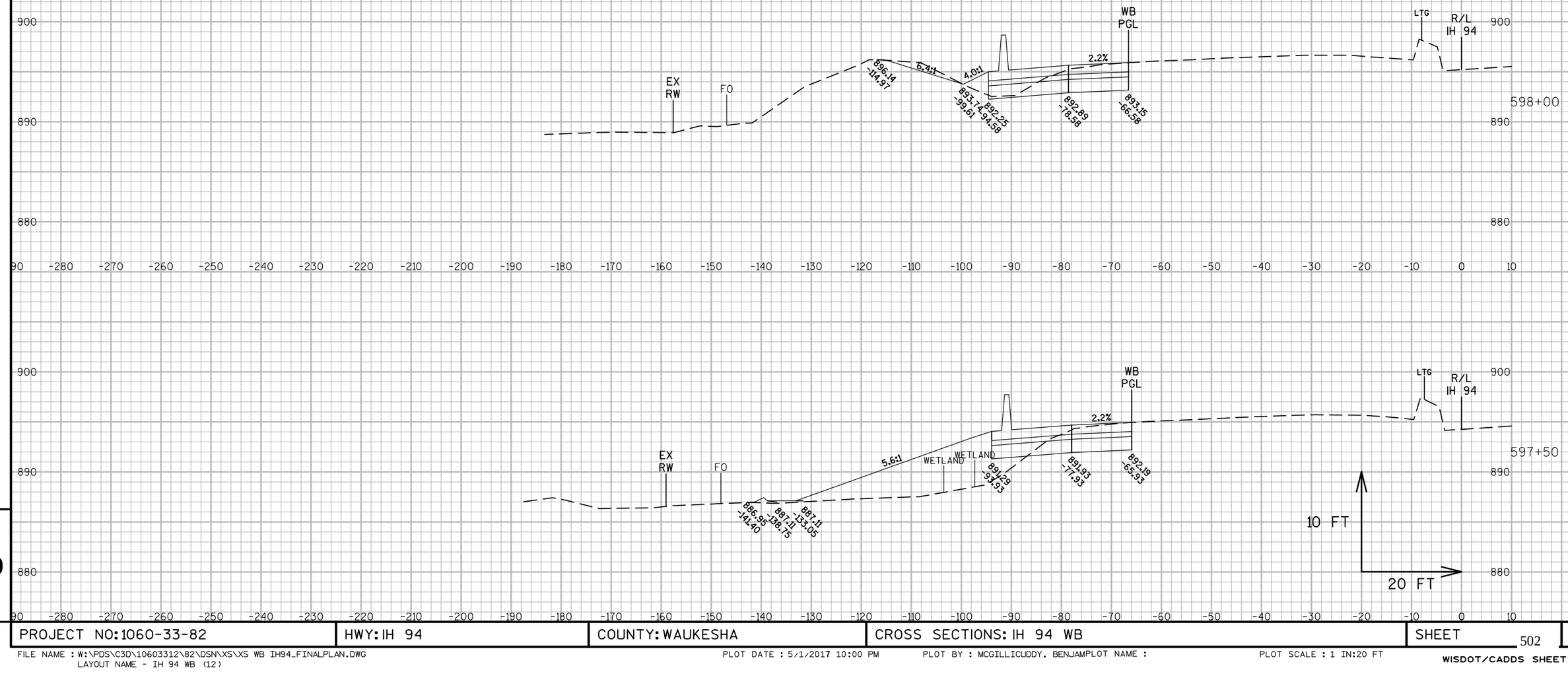
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 501	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (11)

PLOT DATE : 5/1/2017 10:00 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

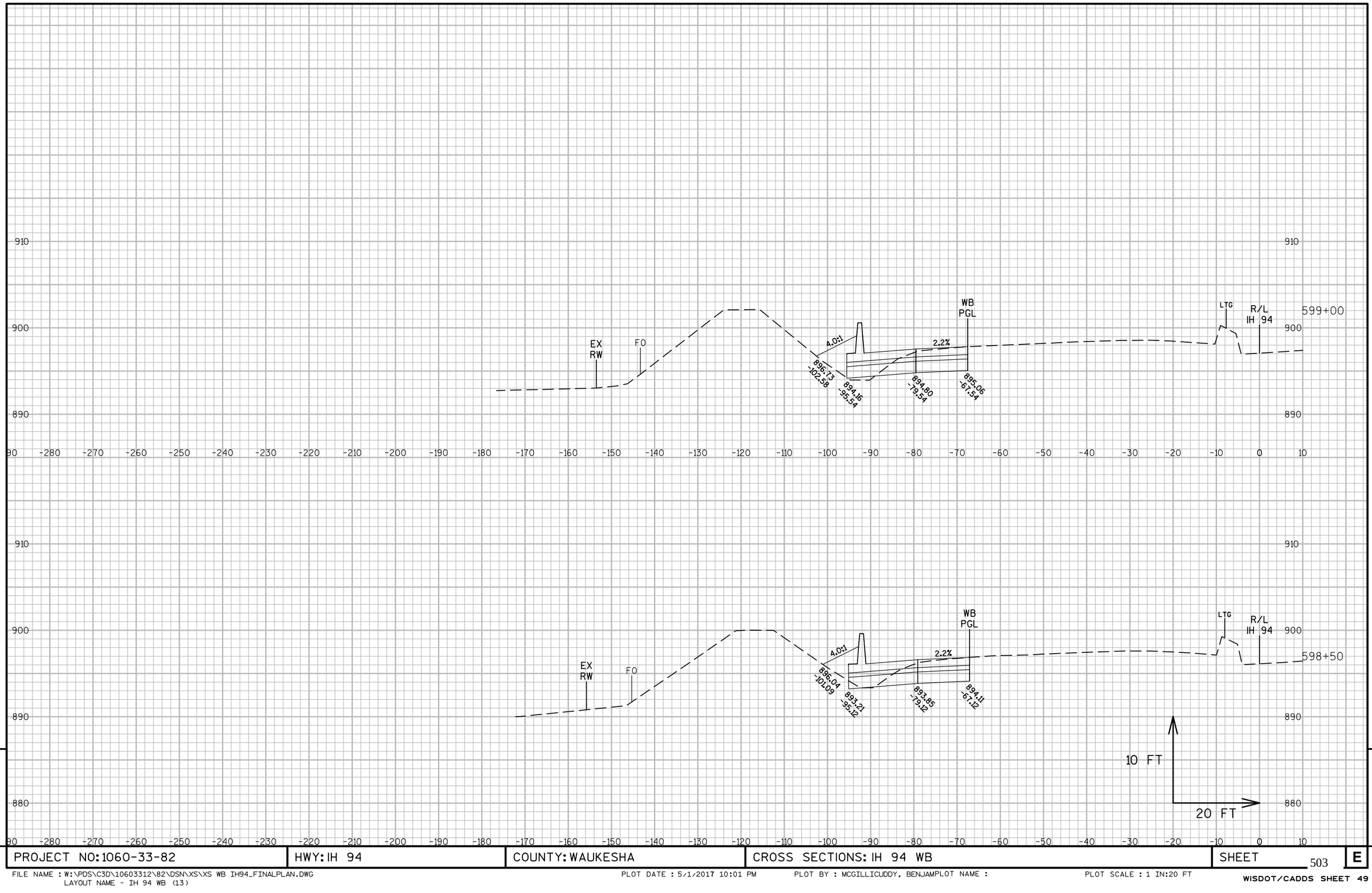


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 502	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (12)

PLOT DATE : 5/1/2017 10:00 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

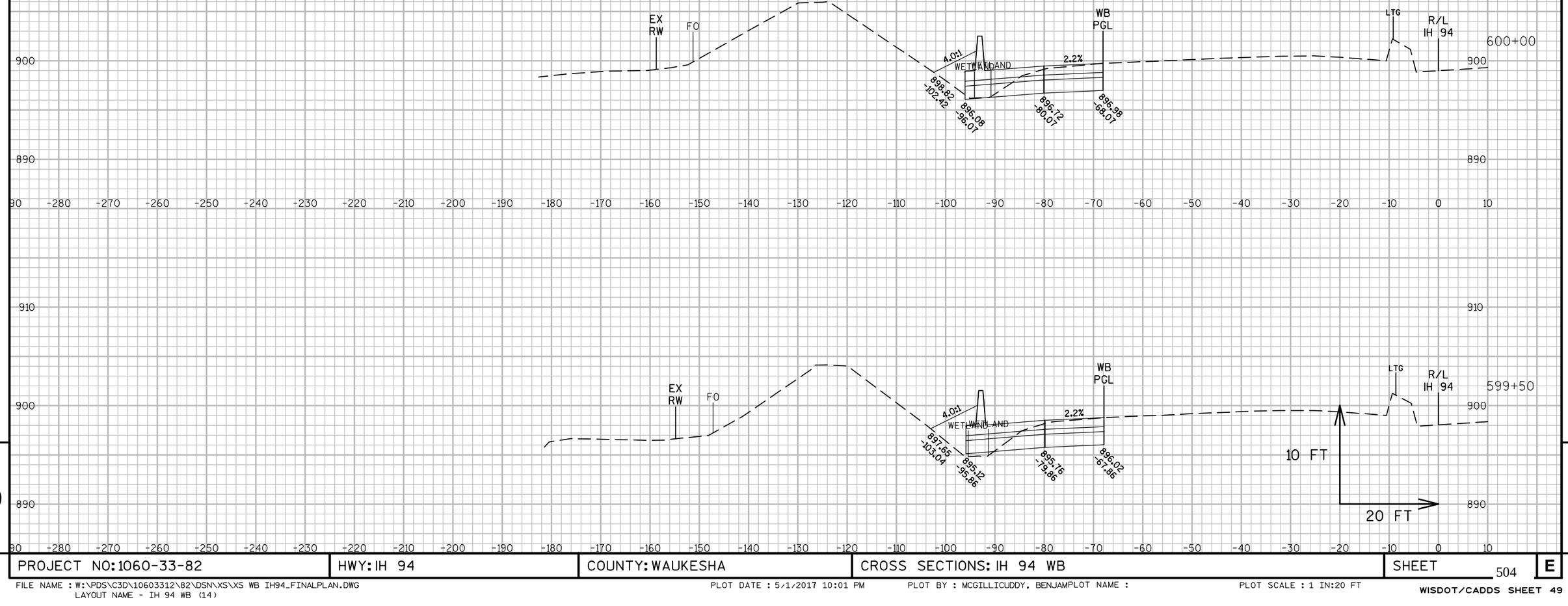


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 503	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (13)

PLOT DATE : 5/1/2017 10:01 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



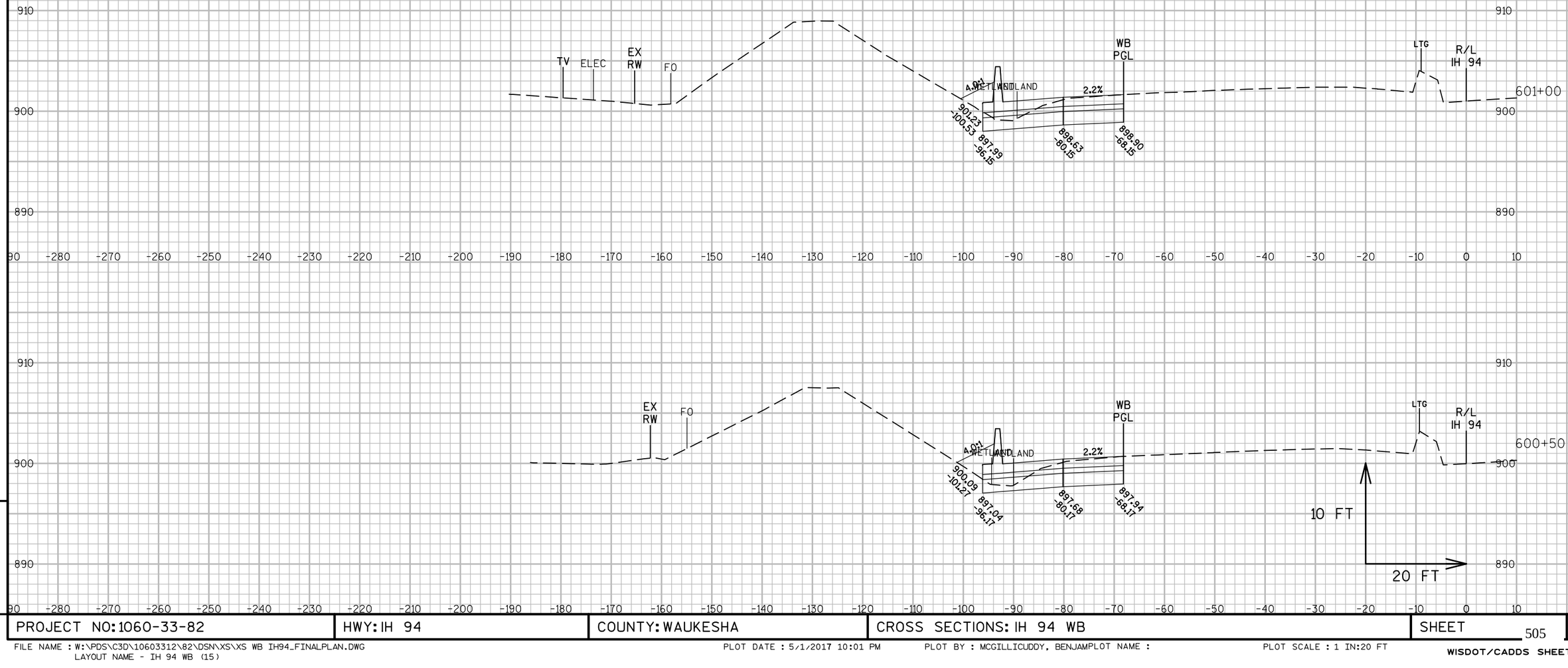
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 504	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (14)

PLOT DATE : 5/1/2017 10:01 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

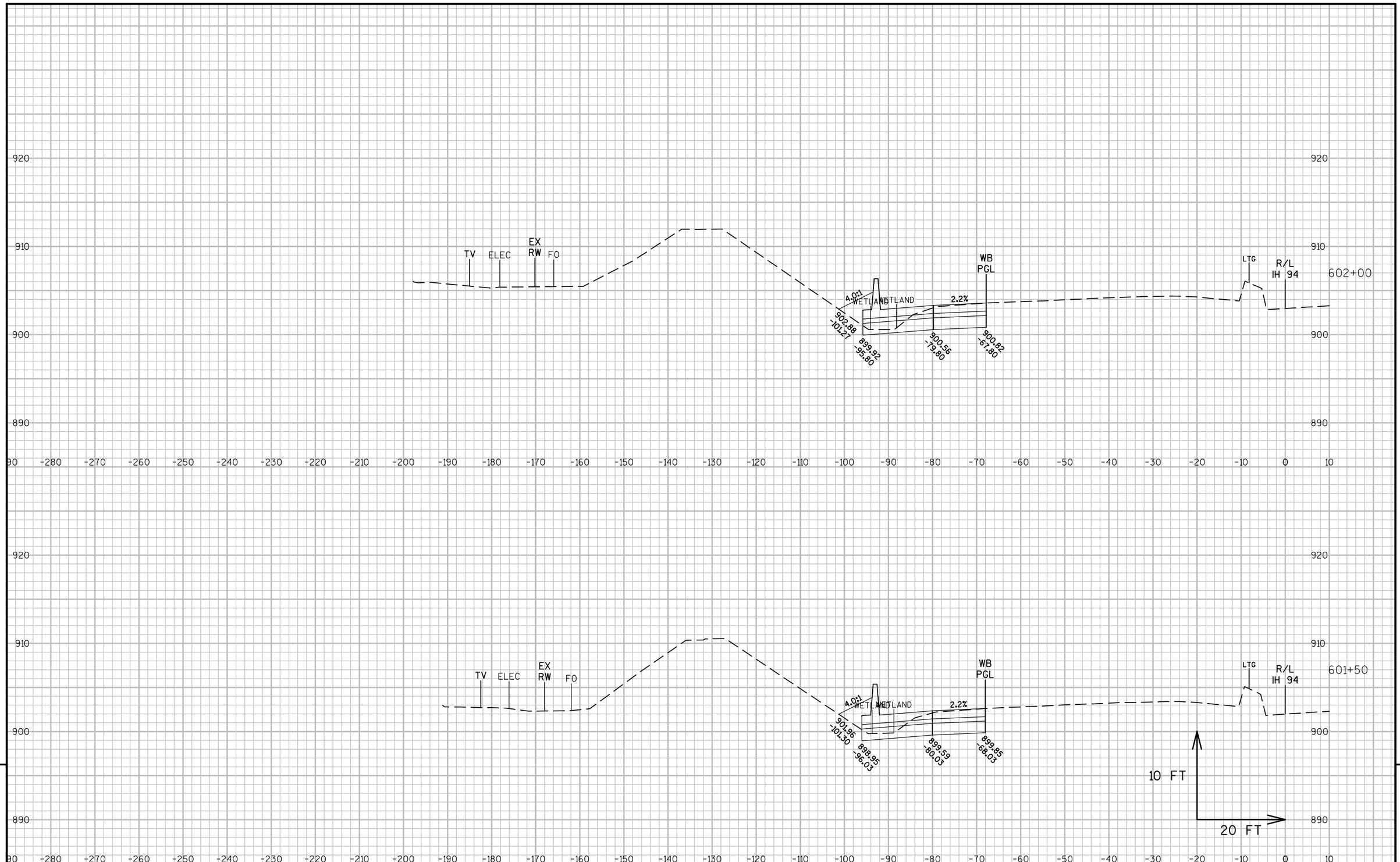


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 505	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (15)

PLOT DATE : 5/1/2017 10:01 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

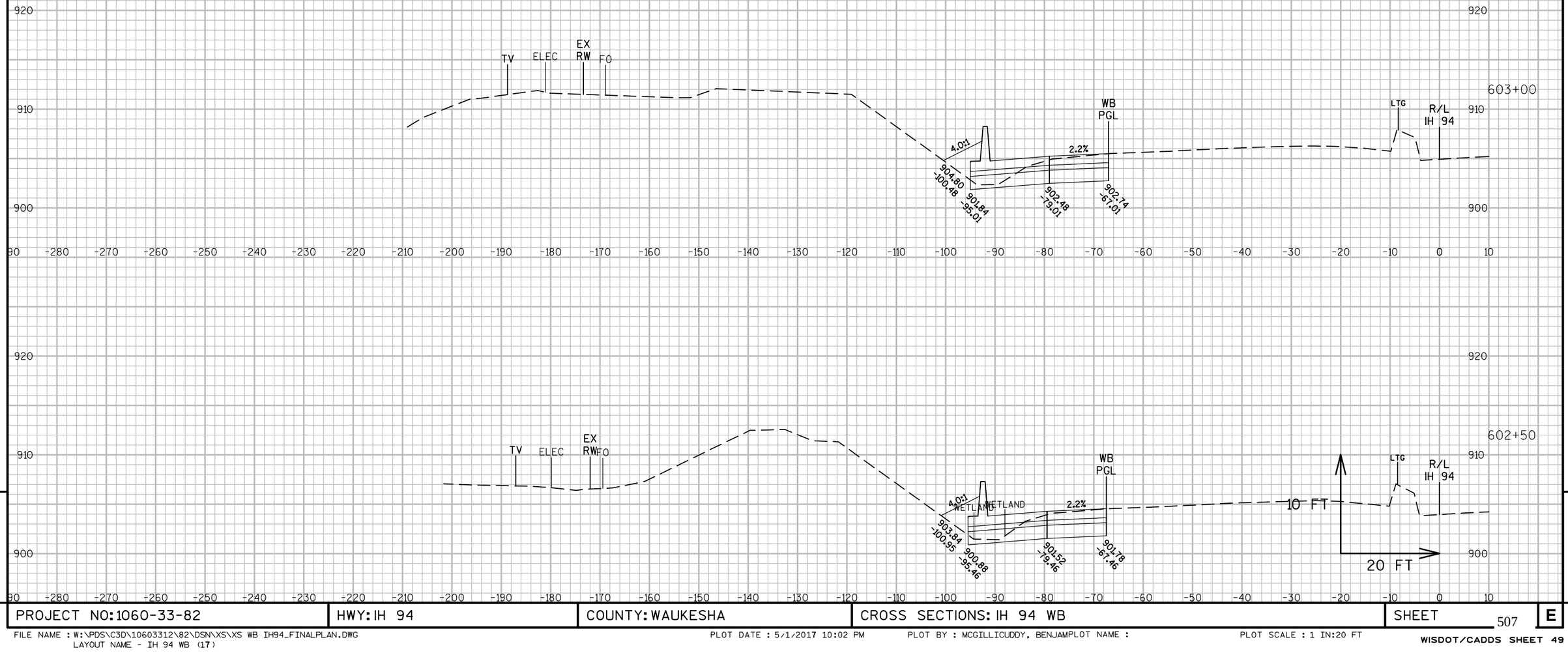
WISDOT/CADDS SHEET 49



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 506	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (16)

PLOT DATE : 5/1/2017 10:01 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

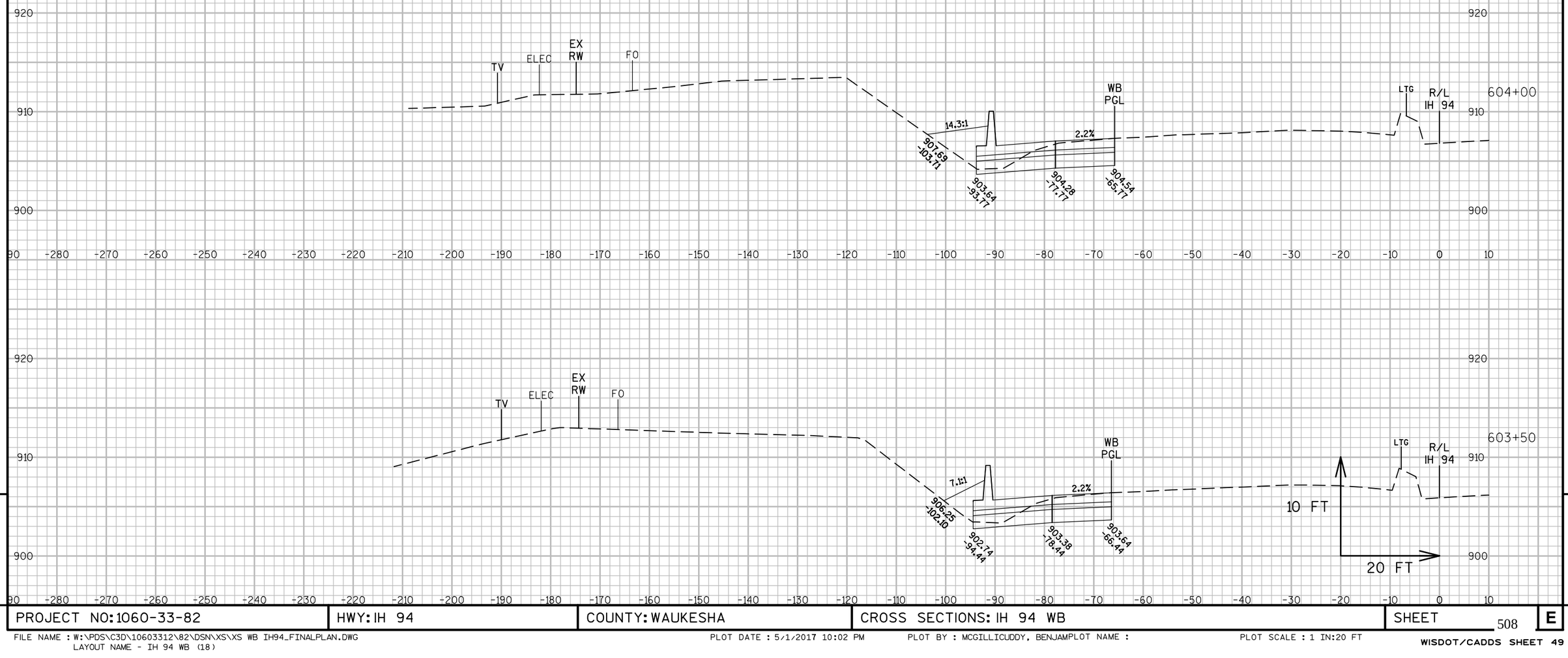


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 507	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (17)

PLOT DATE : 5/1/2017 10:02 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

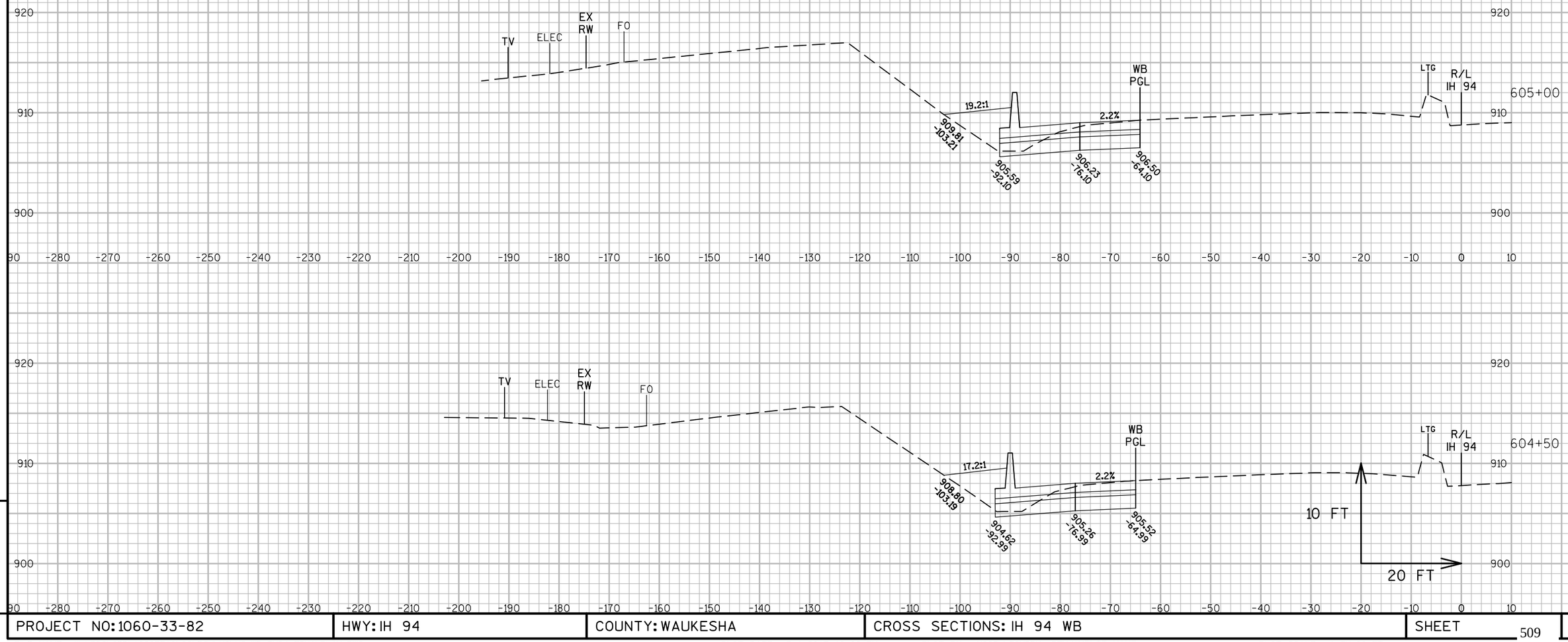


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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 508	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (18)

PLOT DATE : 5/1/2017 10:02 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



9

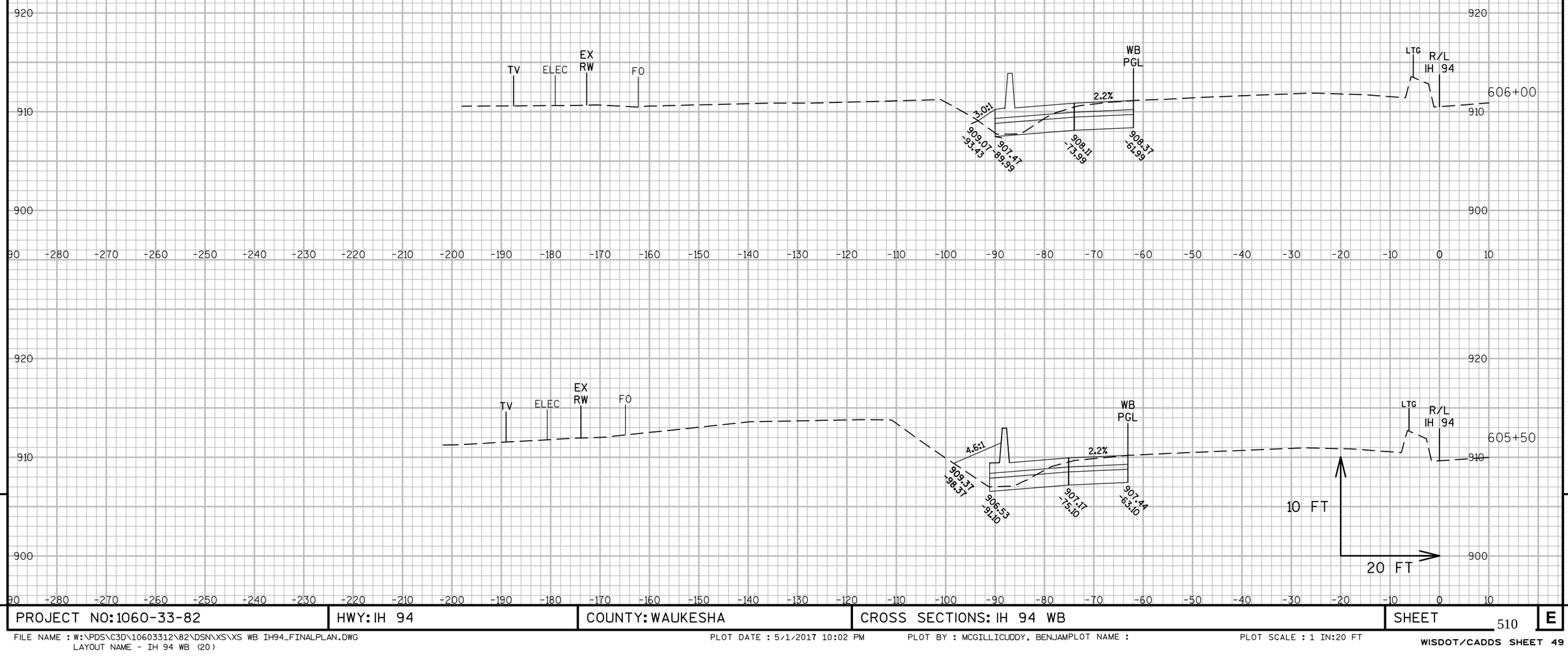
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 509	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (19)

PLOT DATE : 5/1/2017 10:02 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT



9

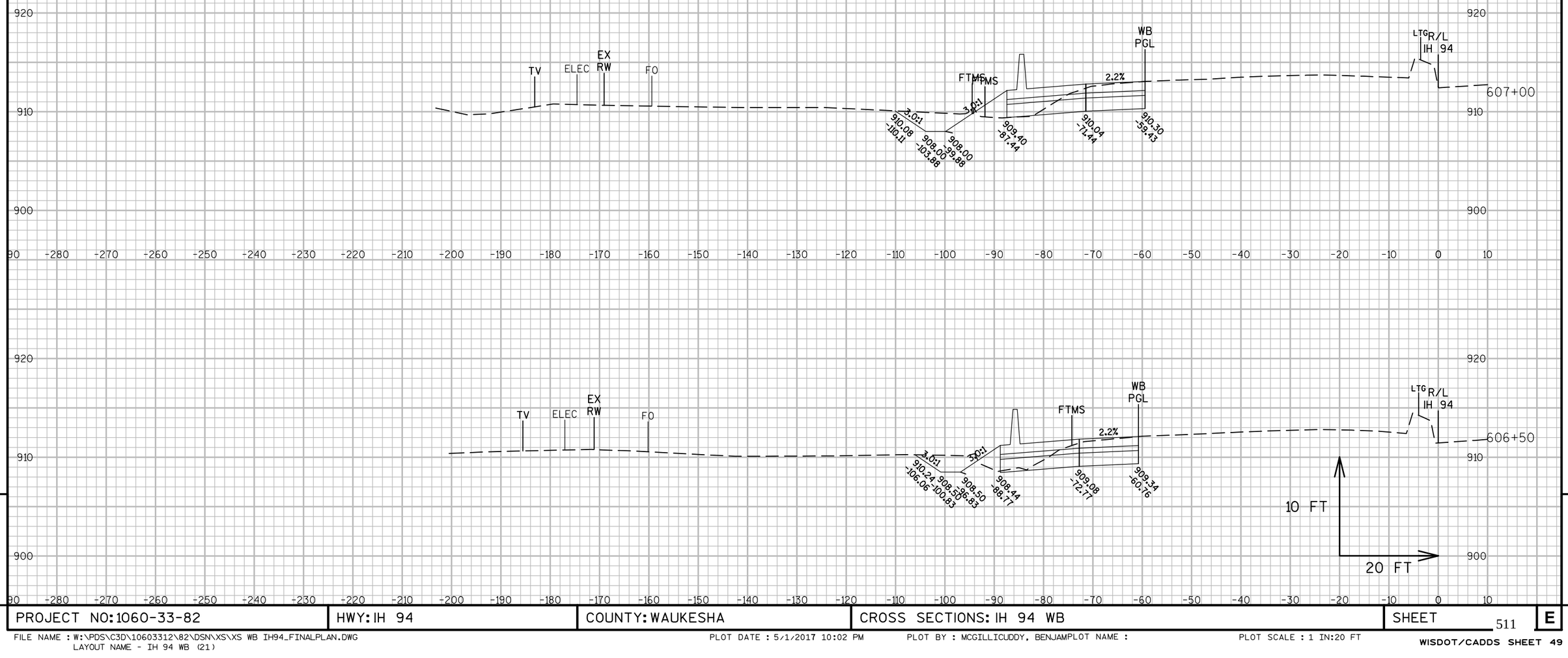
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 510	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (20)

PLOT DATE : 5/1/2017 10:02 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

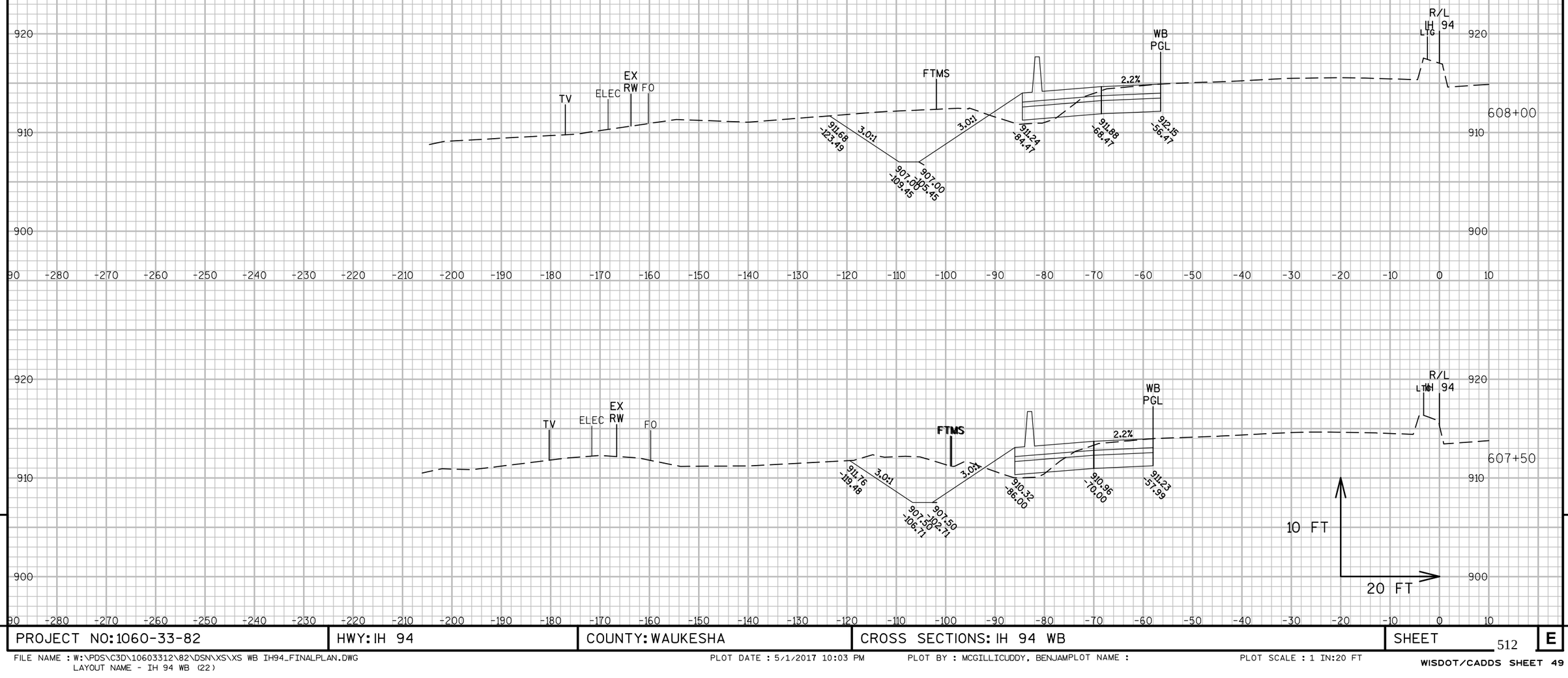


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 511	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (21)

PLOT DATE : 5/1/2017 10:02 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



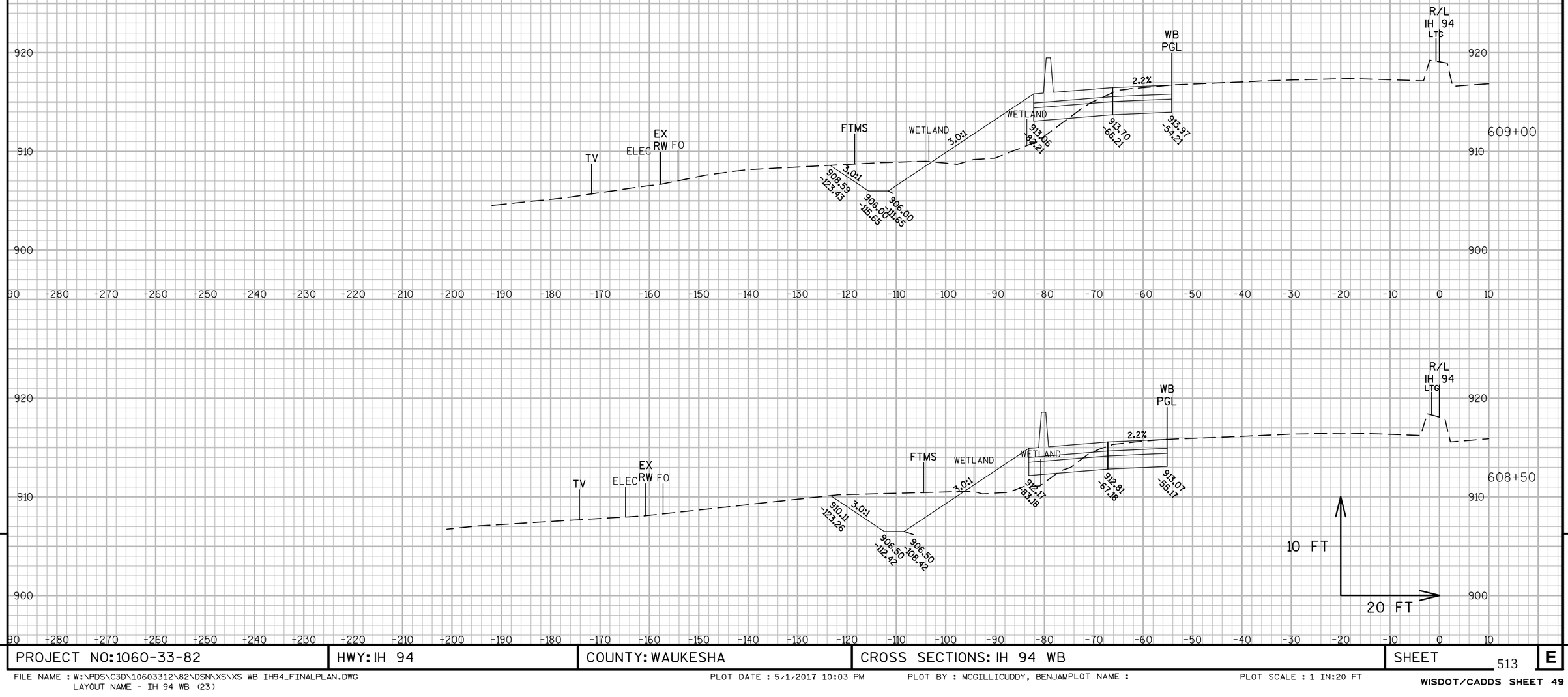
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 512	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (22)

PLOT DATE : 5/1/2017 10:03 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



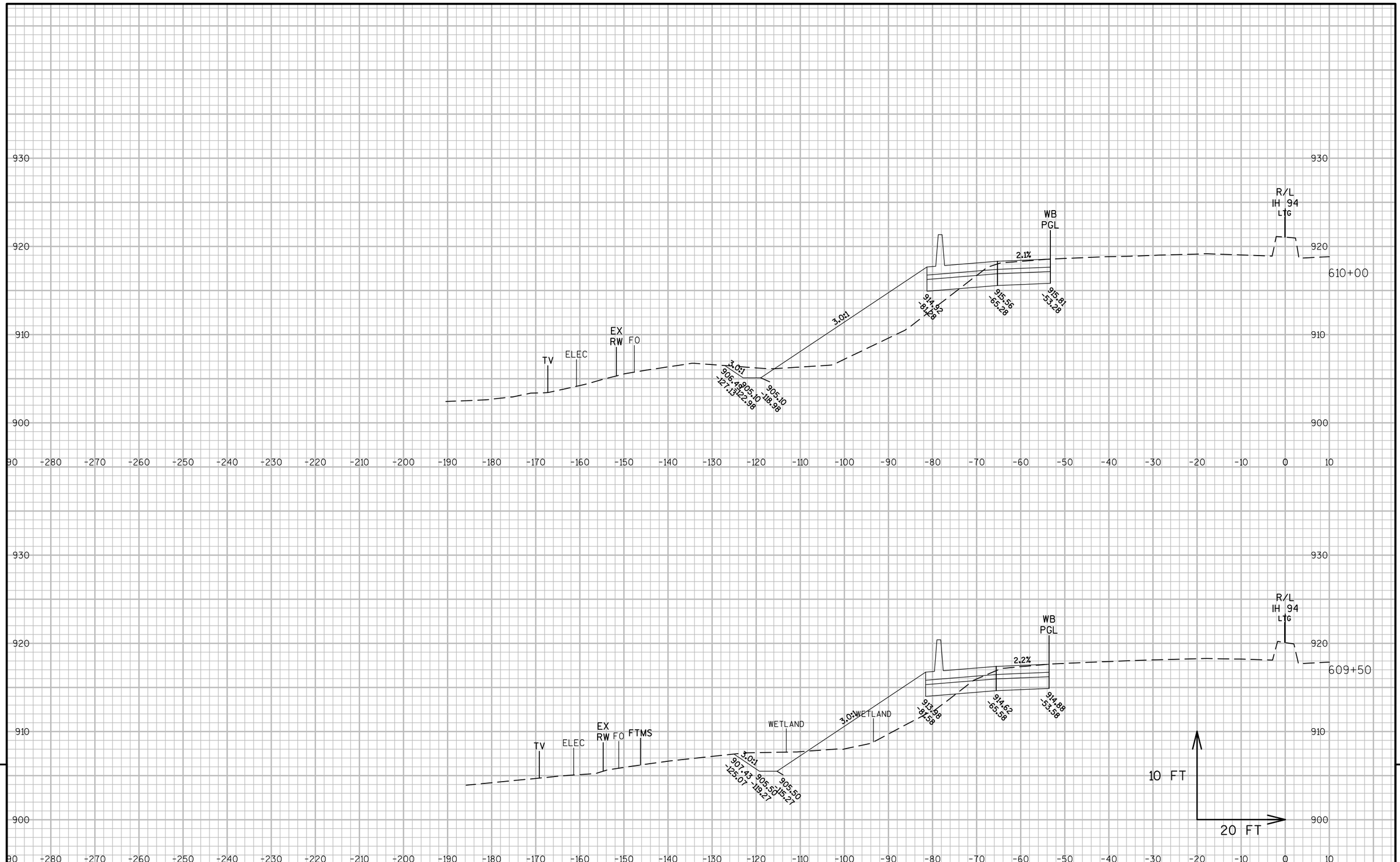
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 513	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (23)

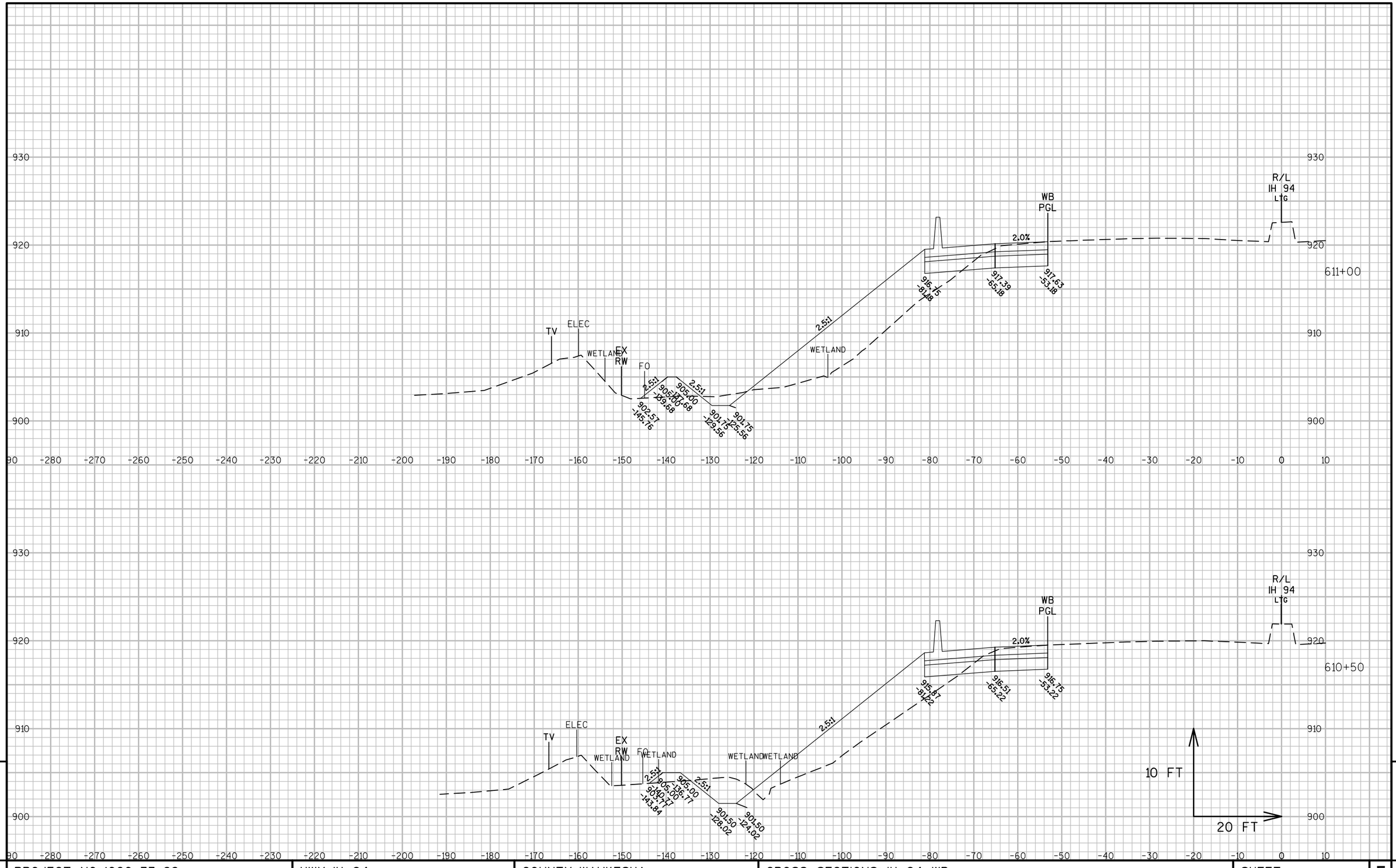
PLOT DATE : 5/1/2017 10:03 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 514	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (24)

PLOT DATE : 5/1/2017 10:03 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

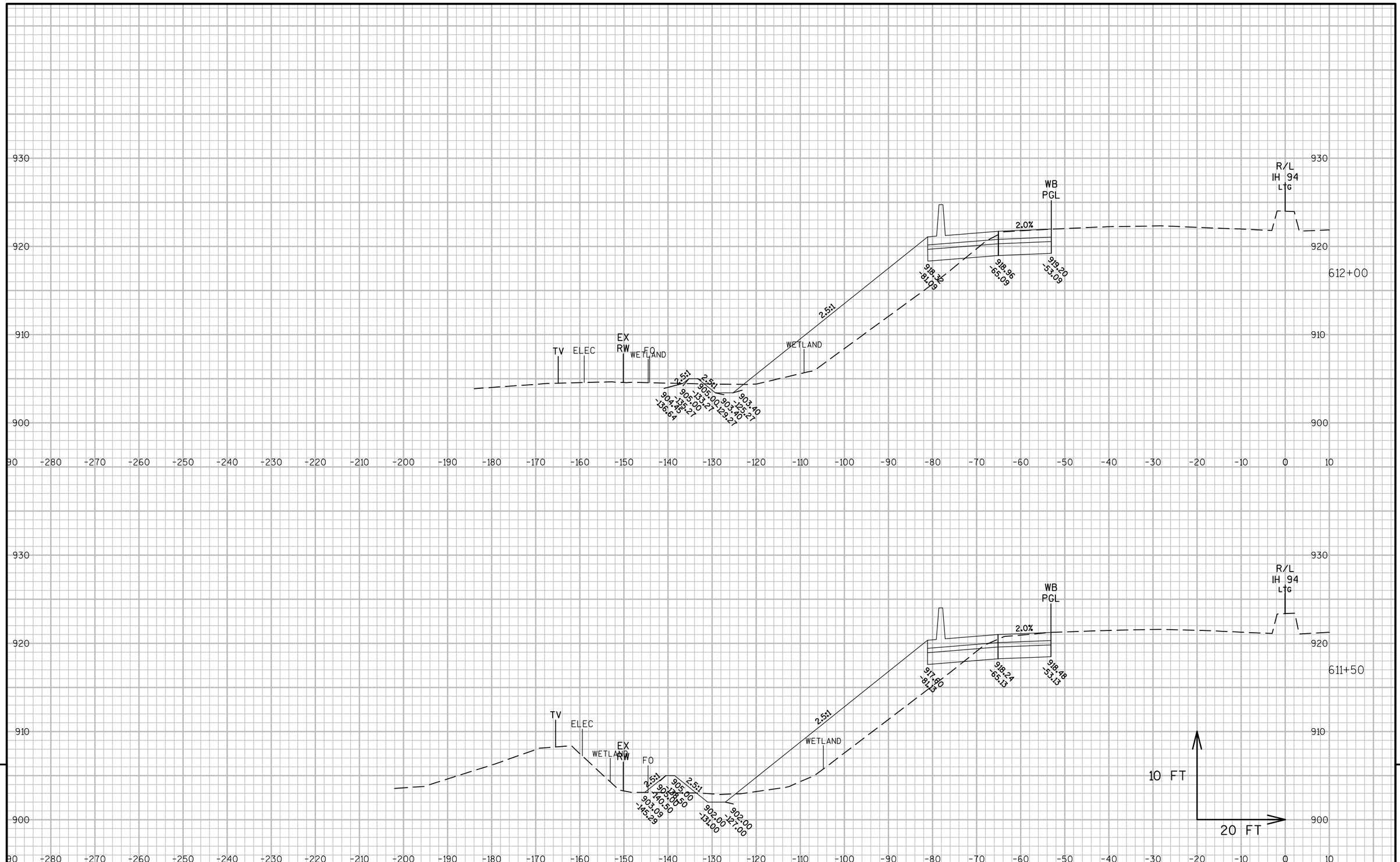


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 515	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (25)

PLOT DATE : 5/1/2017 10:03 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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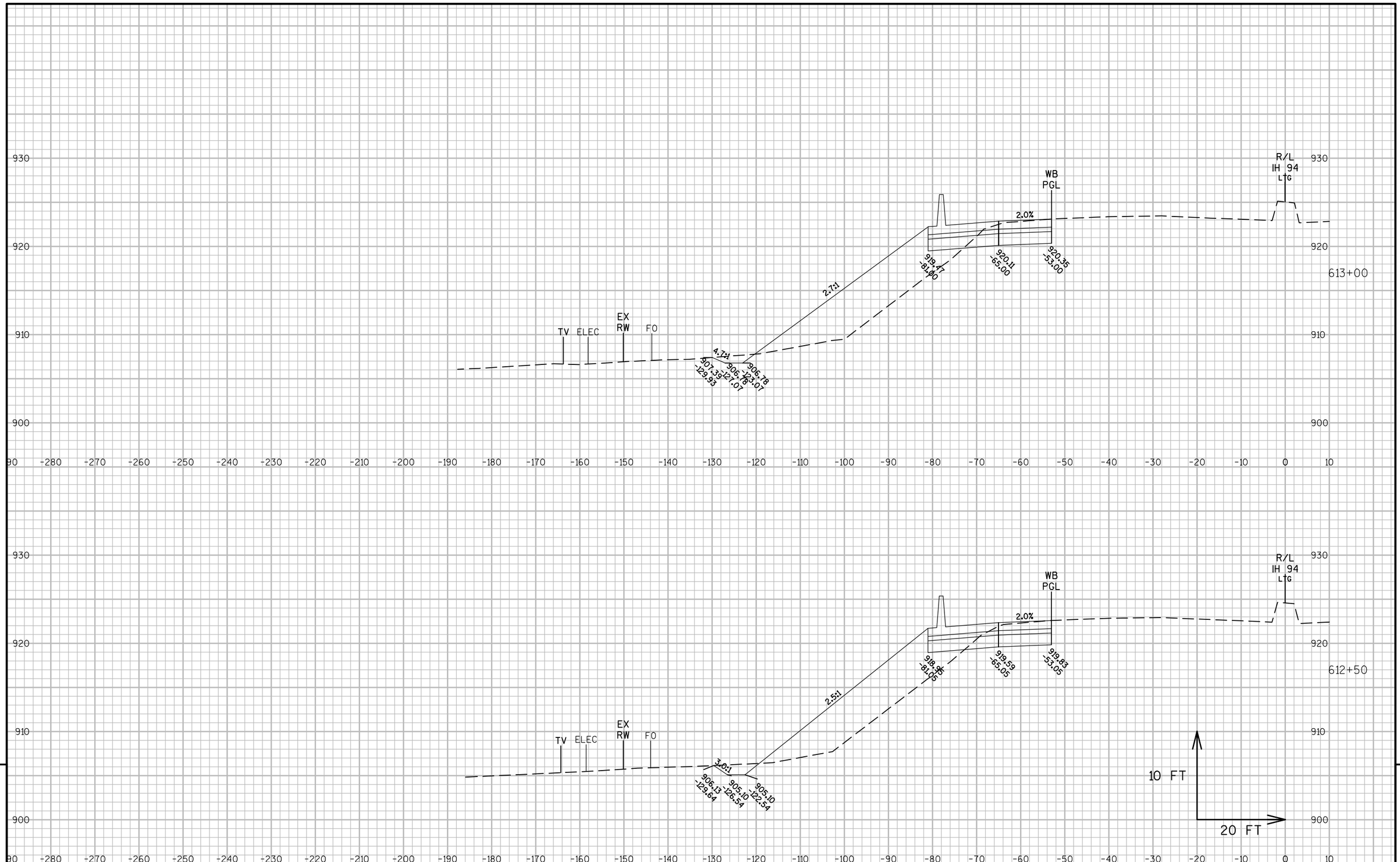
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 516	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (26)

PLOT DATE : 5/1/2017 10:04 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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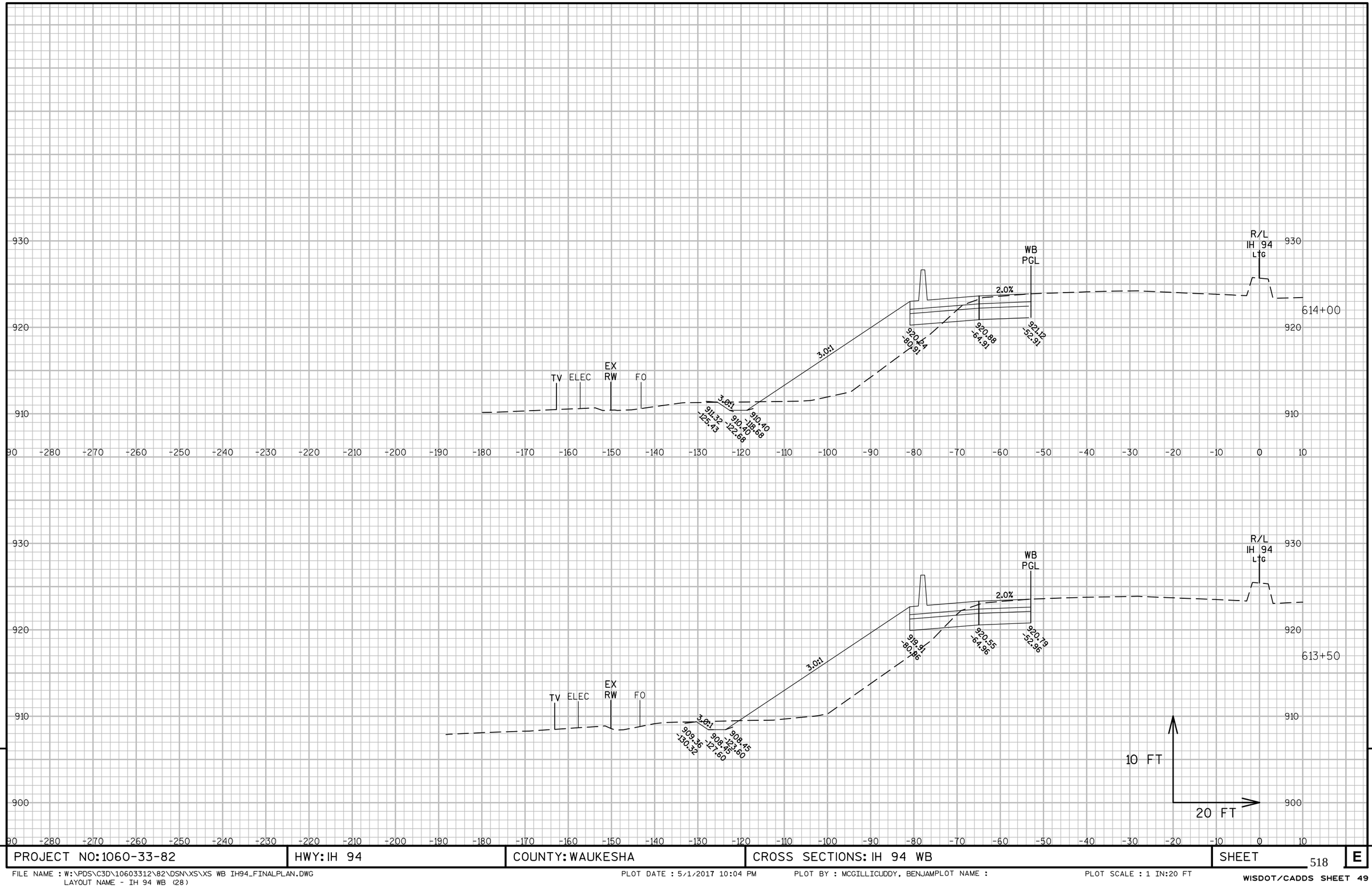
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 517	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (27)

PLOT DATE : 5/1/2017 10:04 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

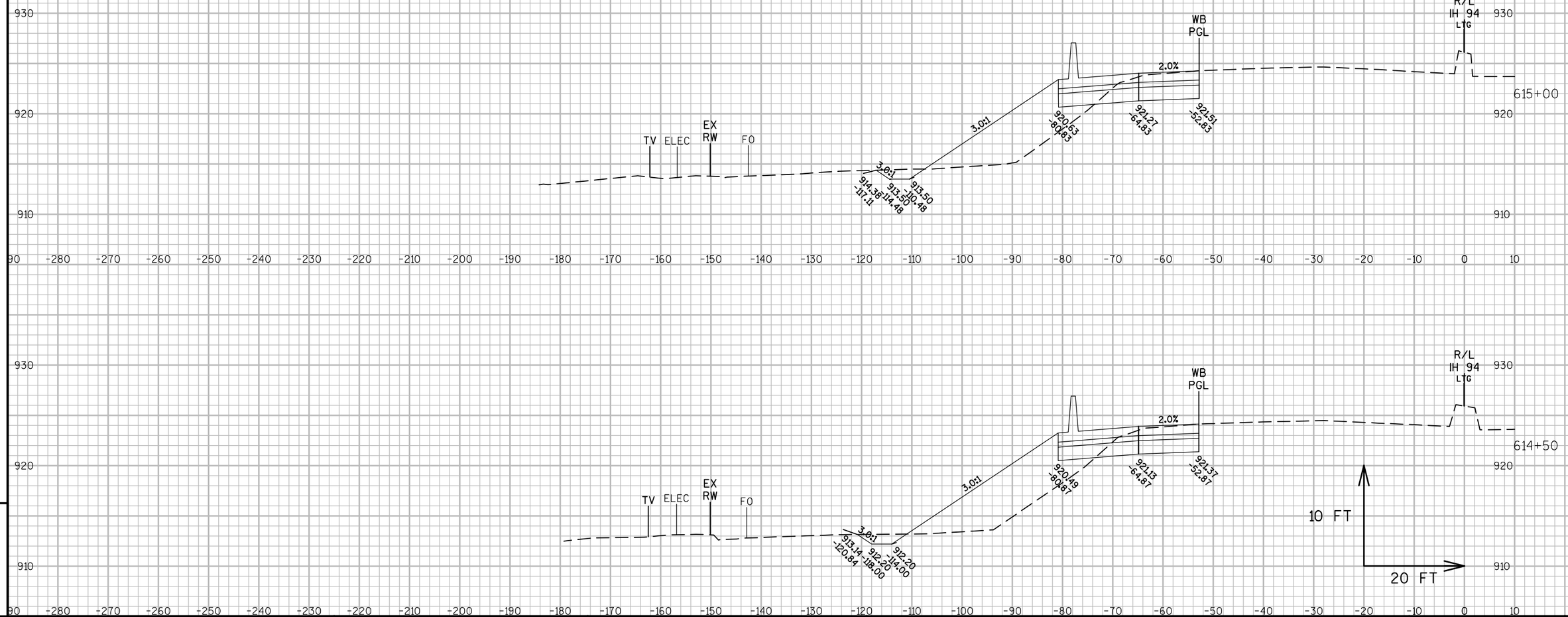


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 518	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (28)

PLOT DATE : 5/1/2017 10:04 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

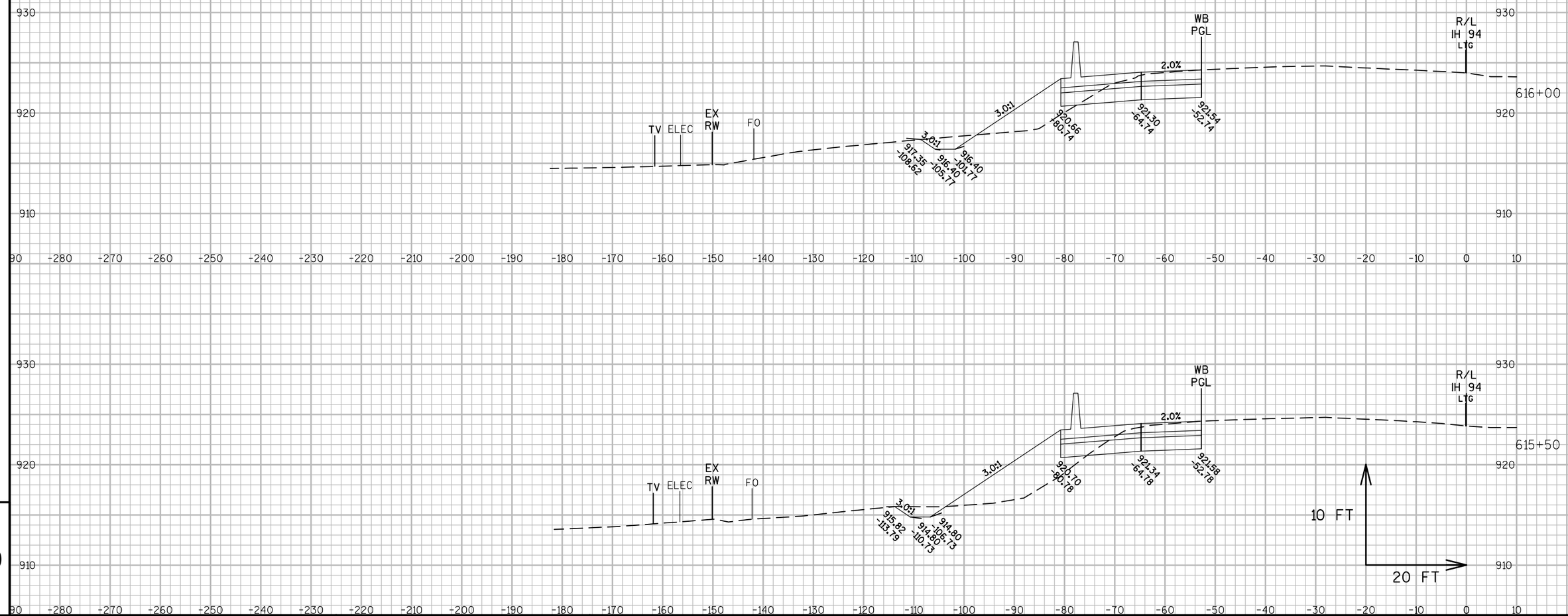
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 519	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (29)

PLOT DATE : 5/1/2017 10:04 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT



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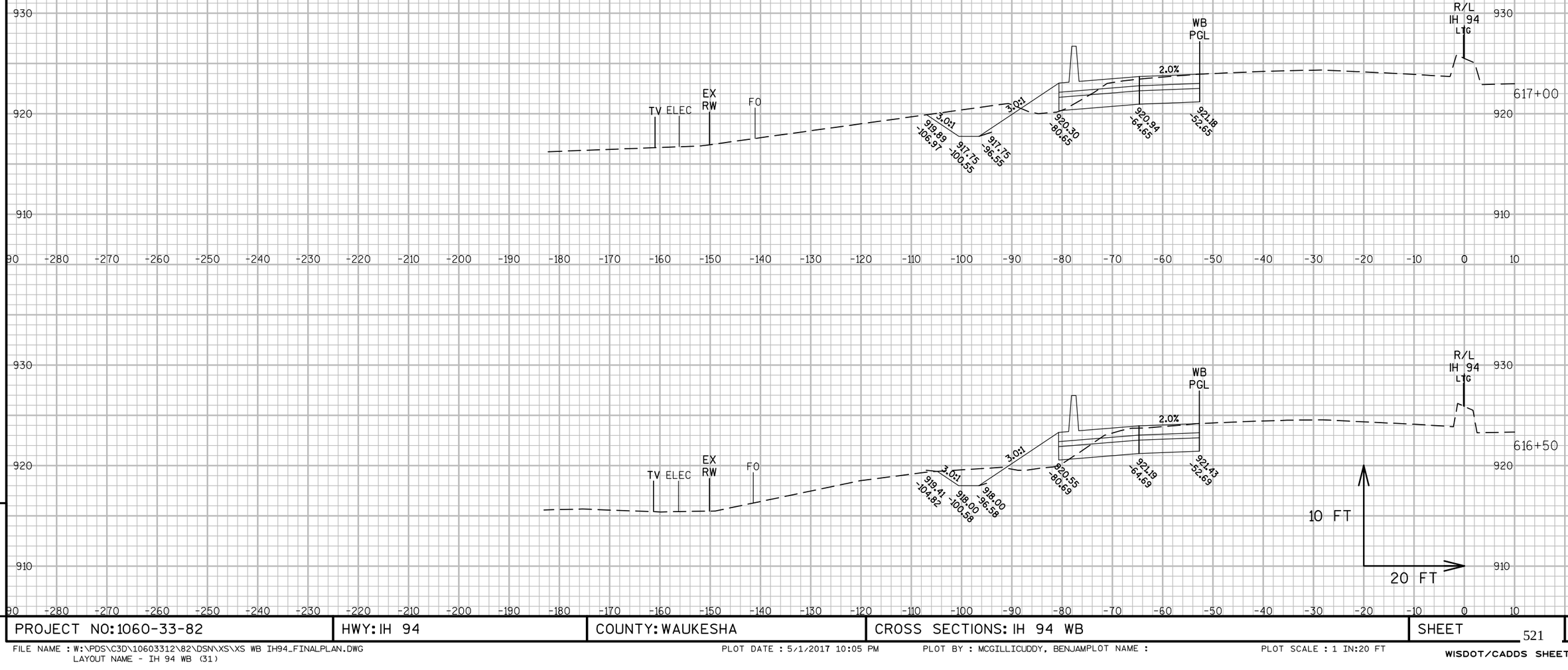
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 520	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (30)

PLOT DATE : 5/1/2017 10:05 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT



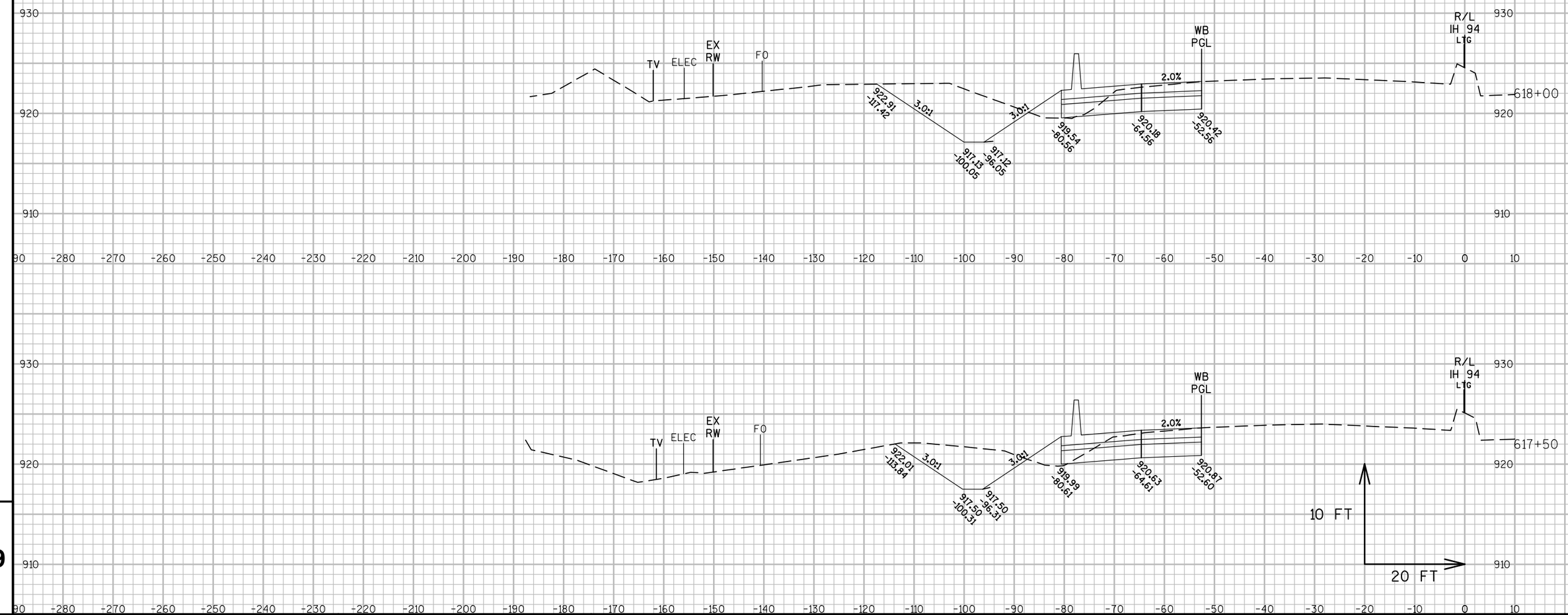
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 521	E

9

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (31)

PLOT DATE : 5/1/2017 10:05 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

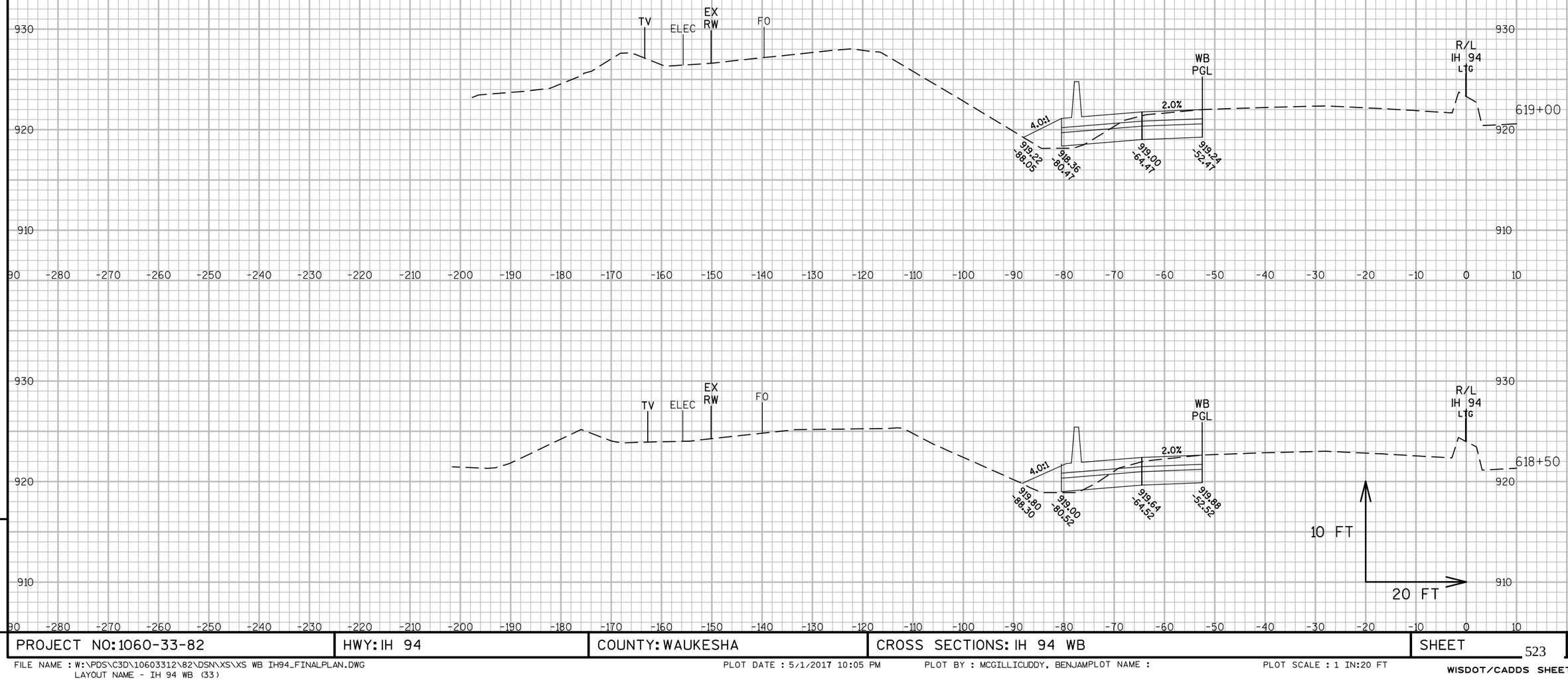


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 522	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (32)

PLOT DATE : 5/1/2017 10:05 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

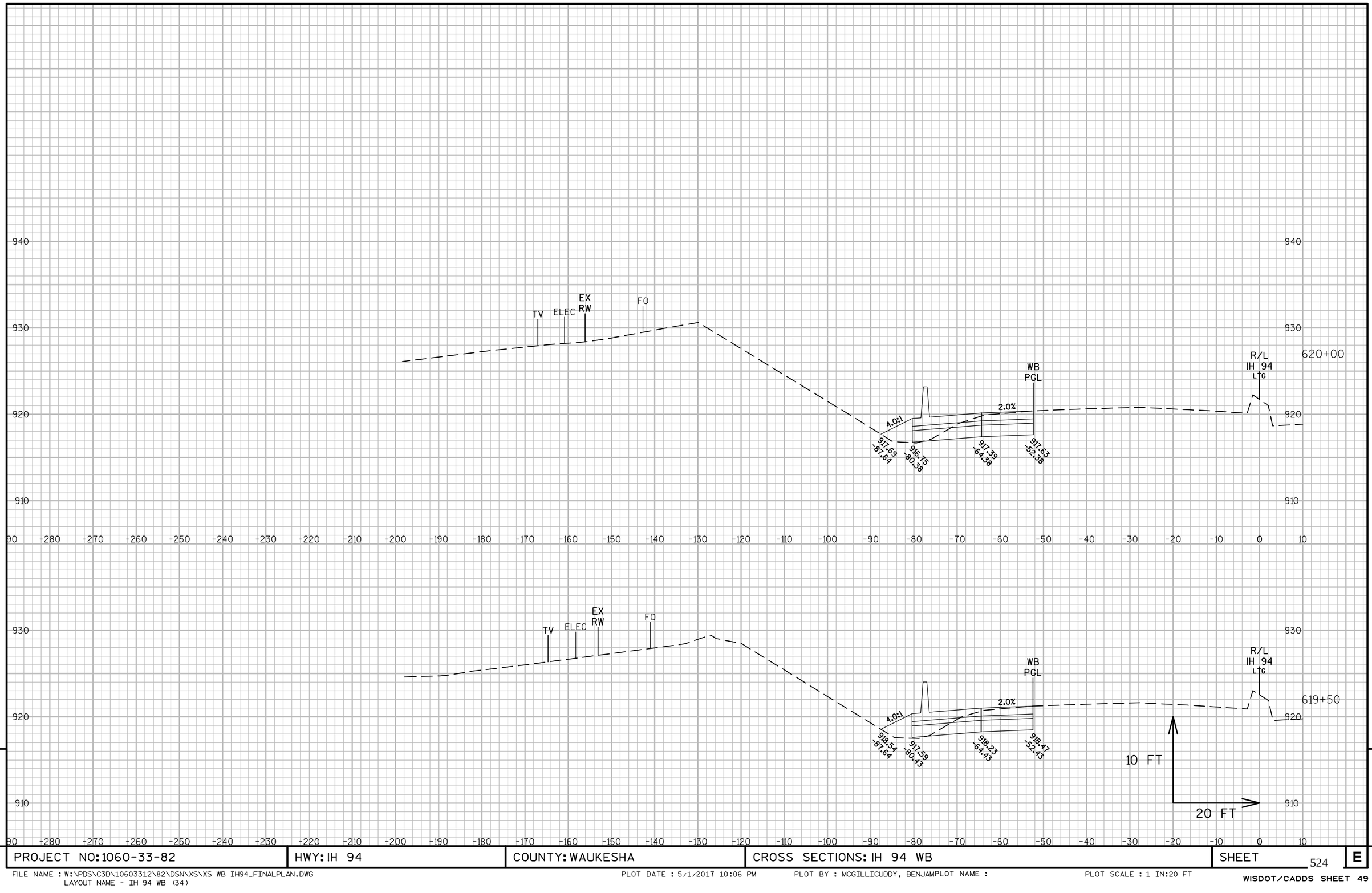


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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 523	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (33)

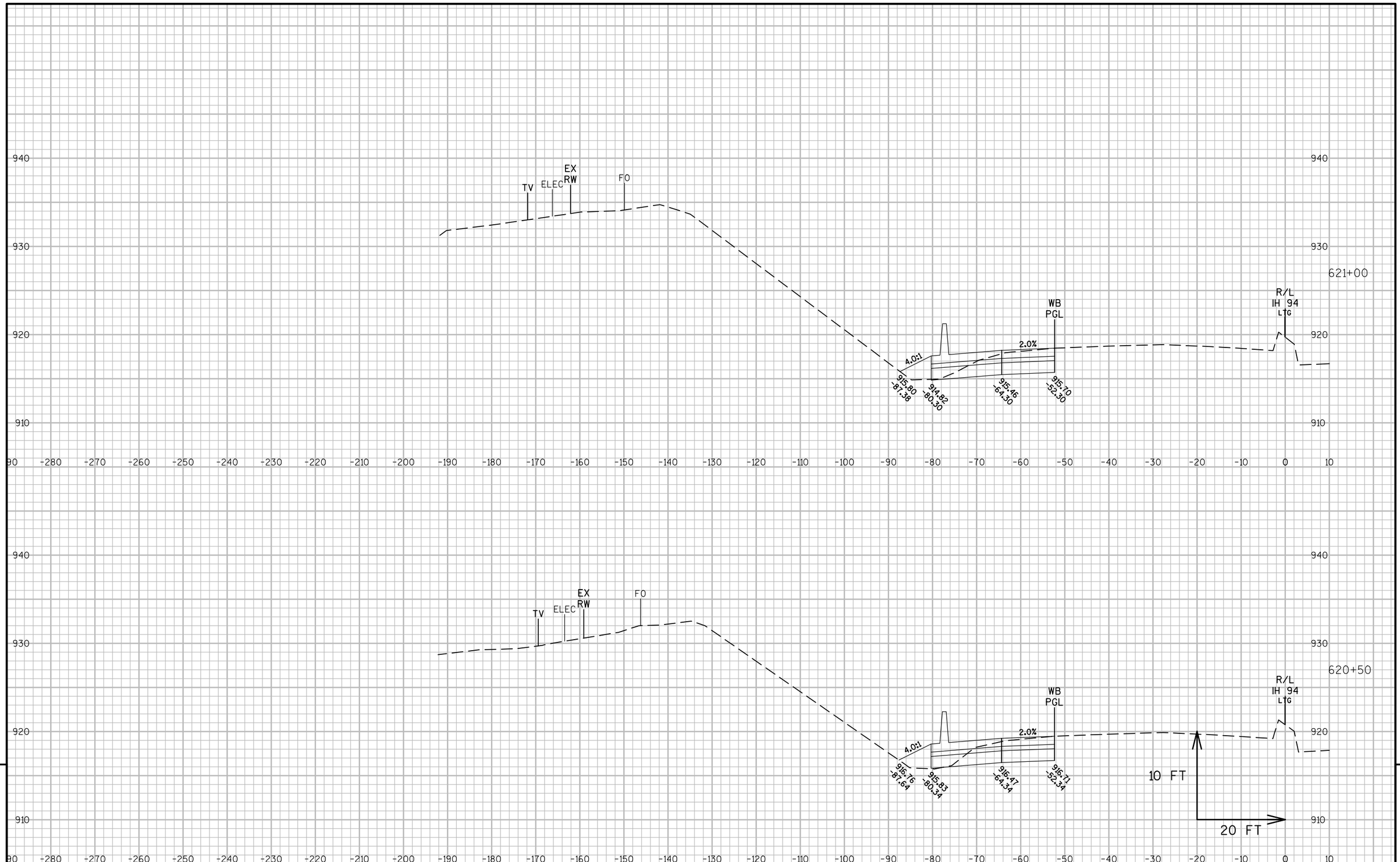
PLOT DATE : 5/1/2017 10:05 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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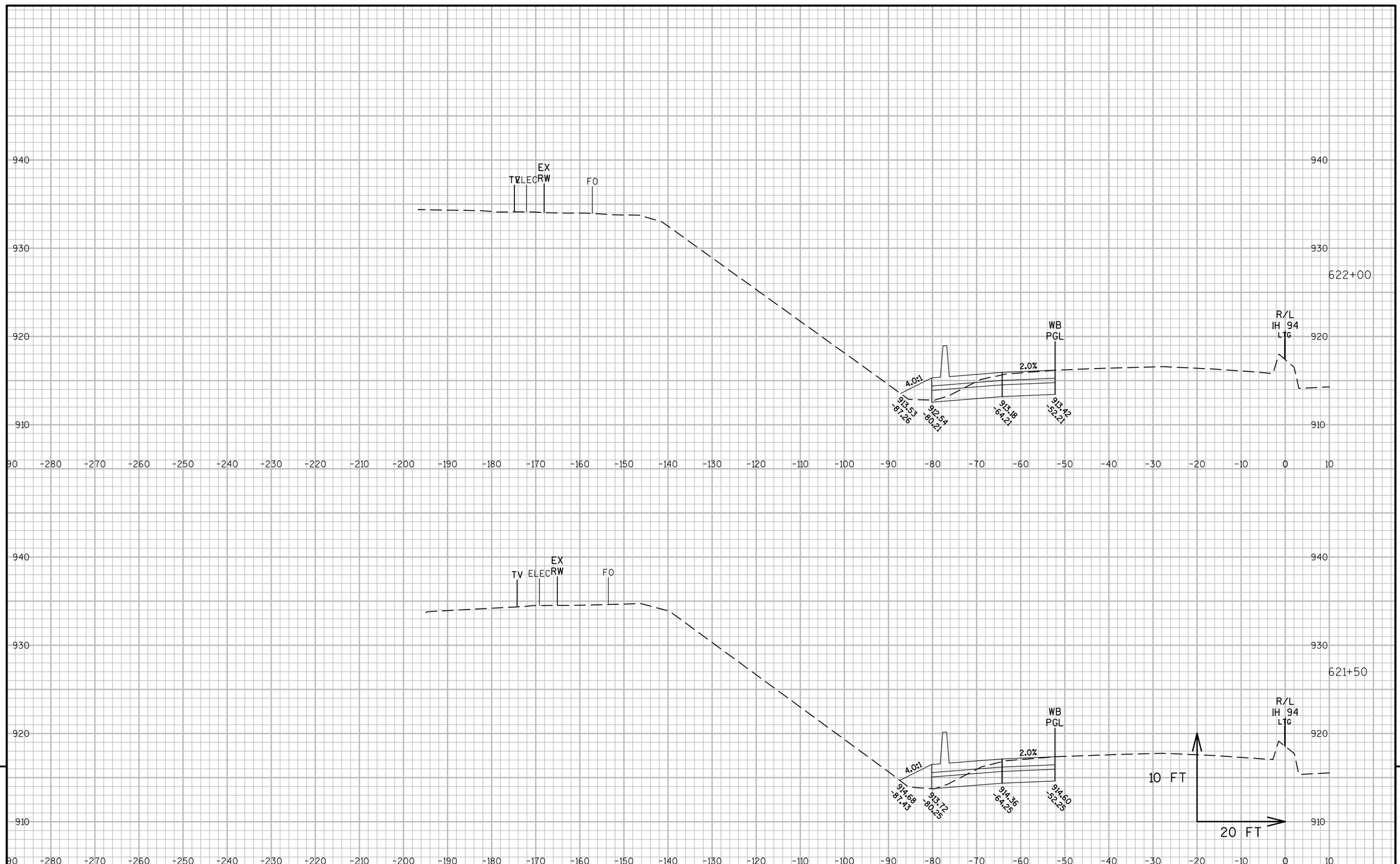
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 524	E



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 525	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (35)

PLOT DATE : 5/1/2017 10:06 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



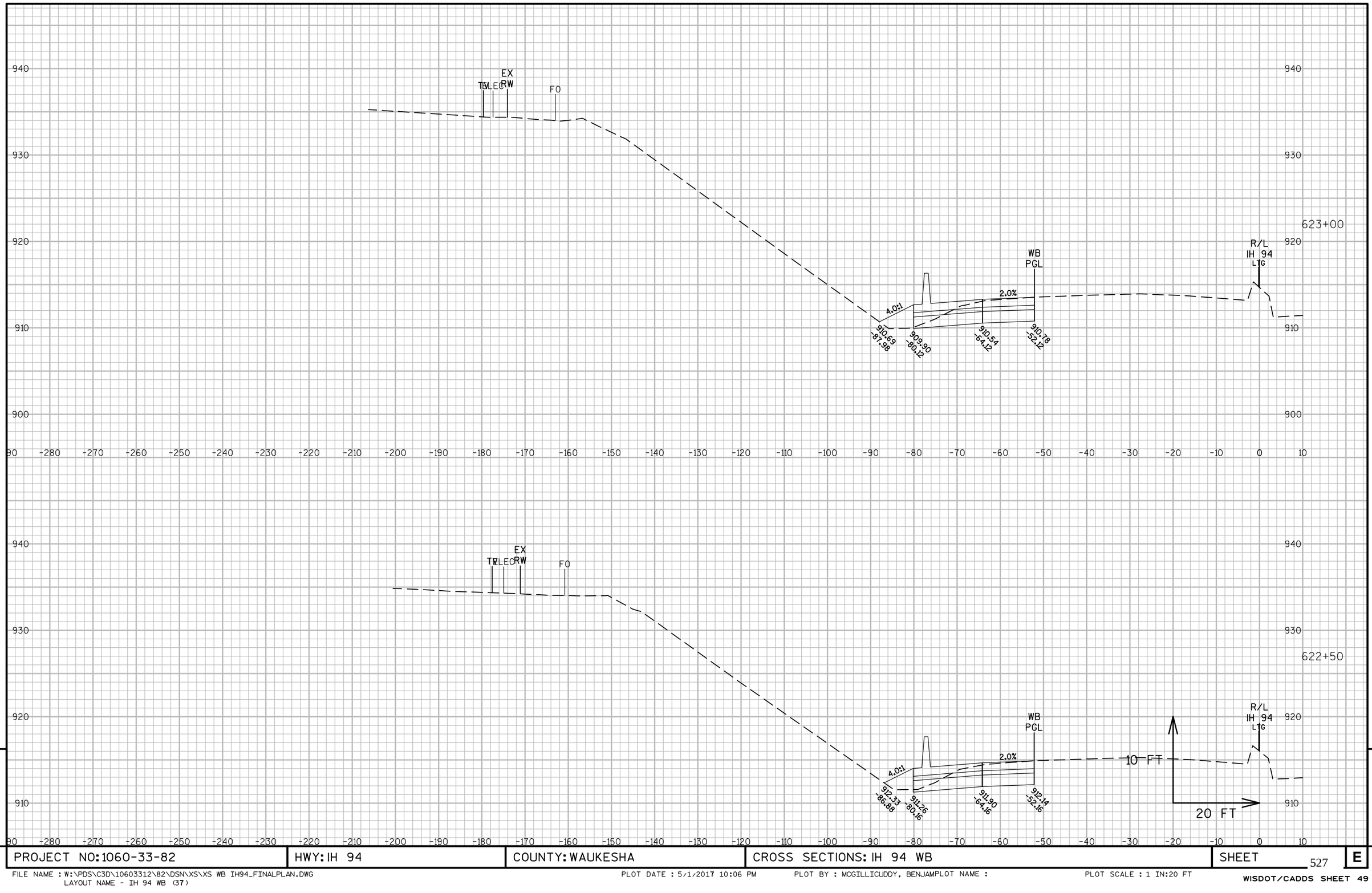
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 526	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (36)

PLOT DATE : 5/1/2017 10:06 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

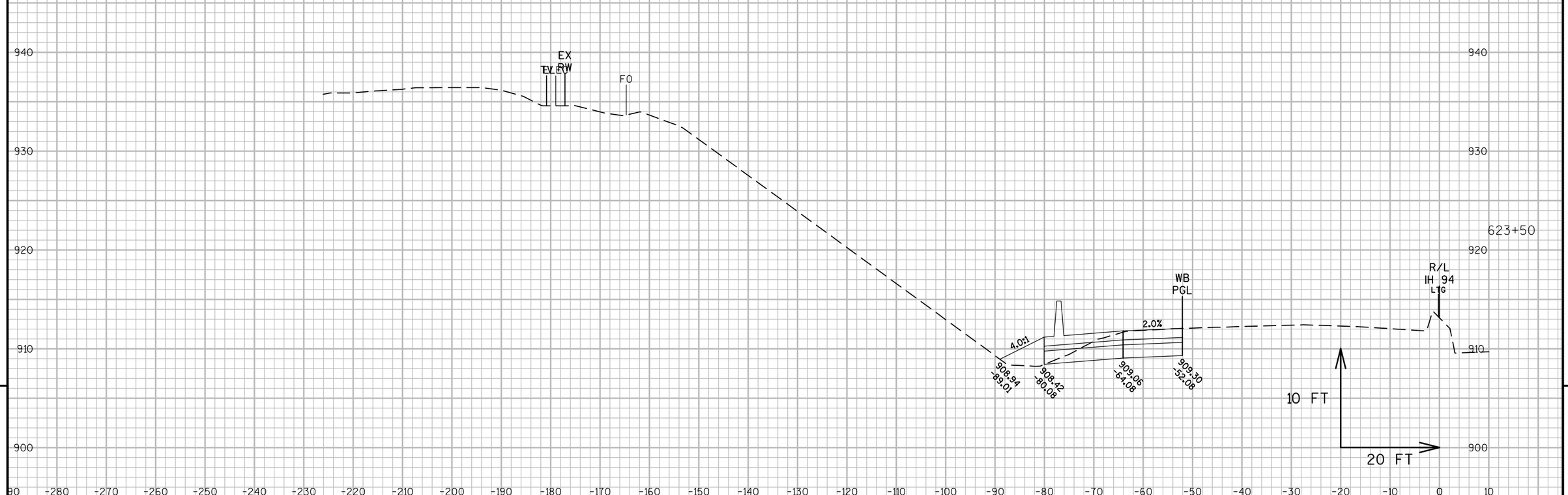


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 527	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (37)

PLOT DATE : 5/1/2017 10:06 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



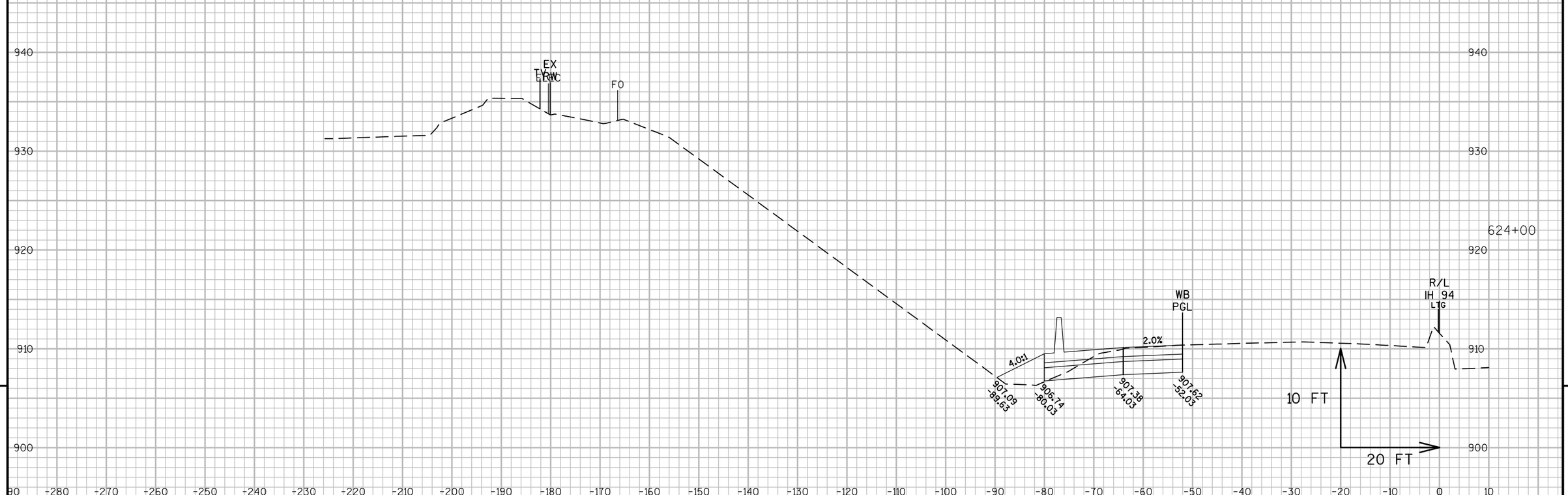
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 528	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (38)

PLOT DATE : 5/1/2017 10:06 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



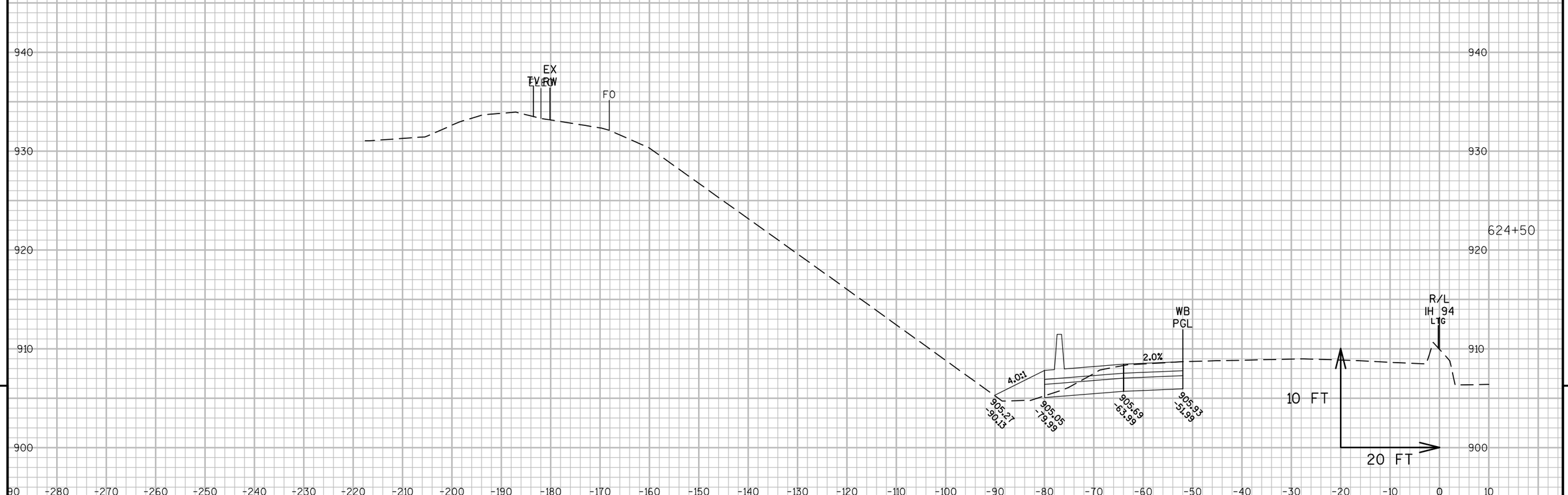
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 529 E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (39)

PLOT DATE : 5/1/2017 10:07 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



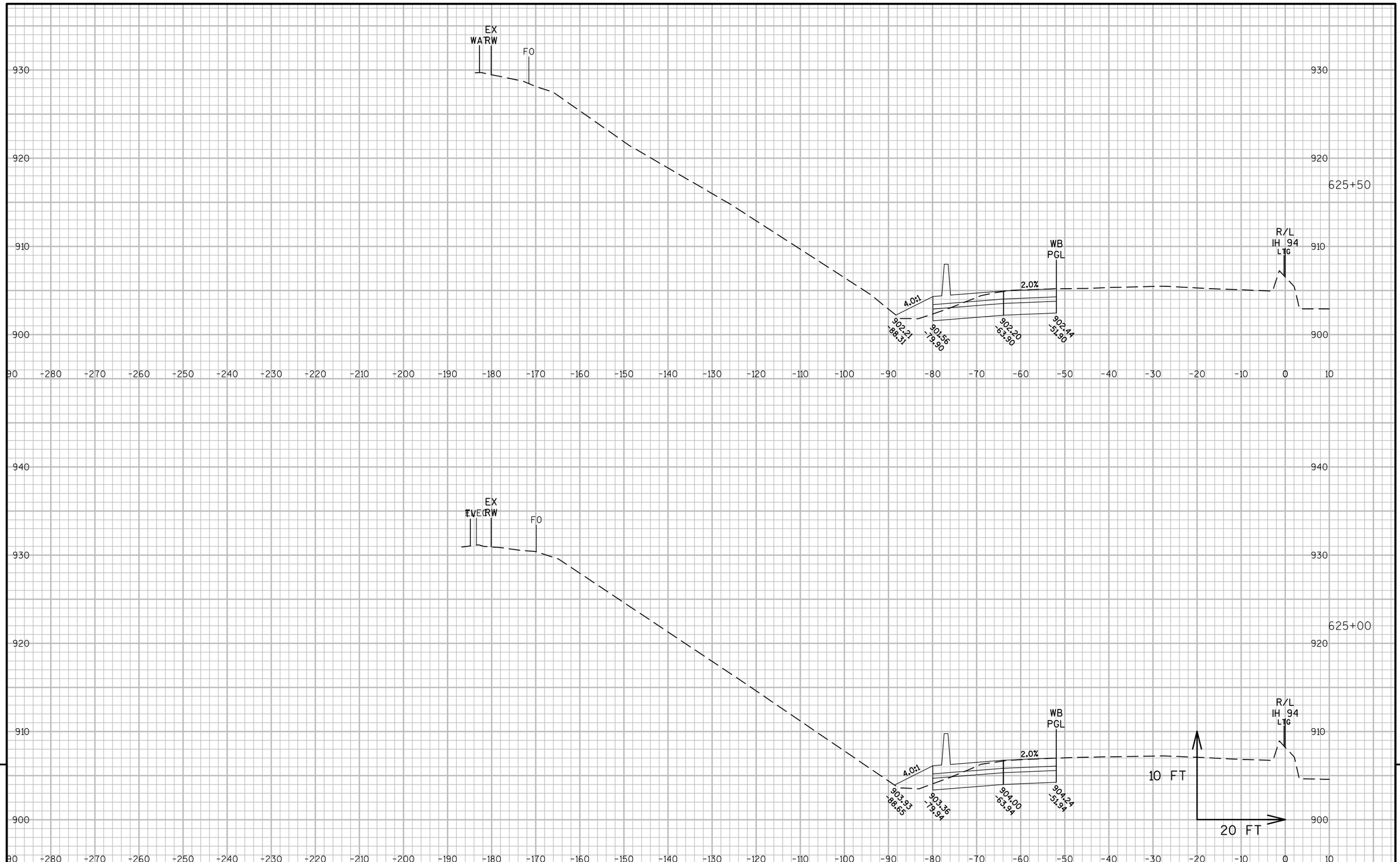
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 530	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (40)

PLOT DATE : 5/1/2017 10:07 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



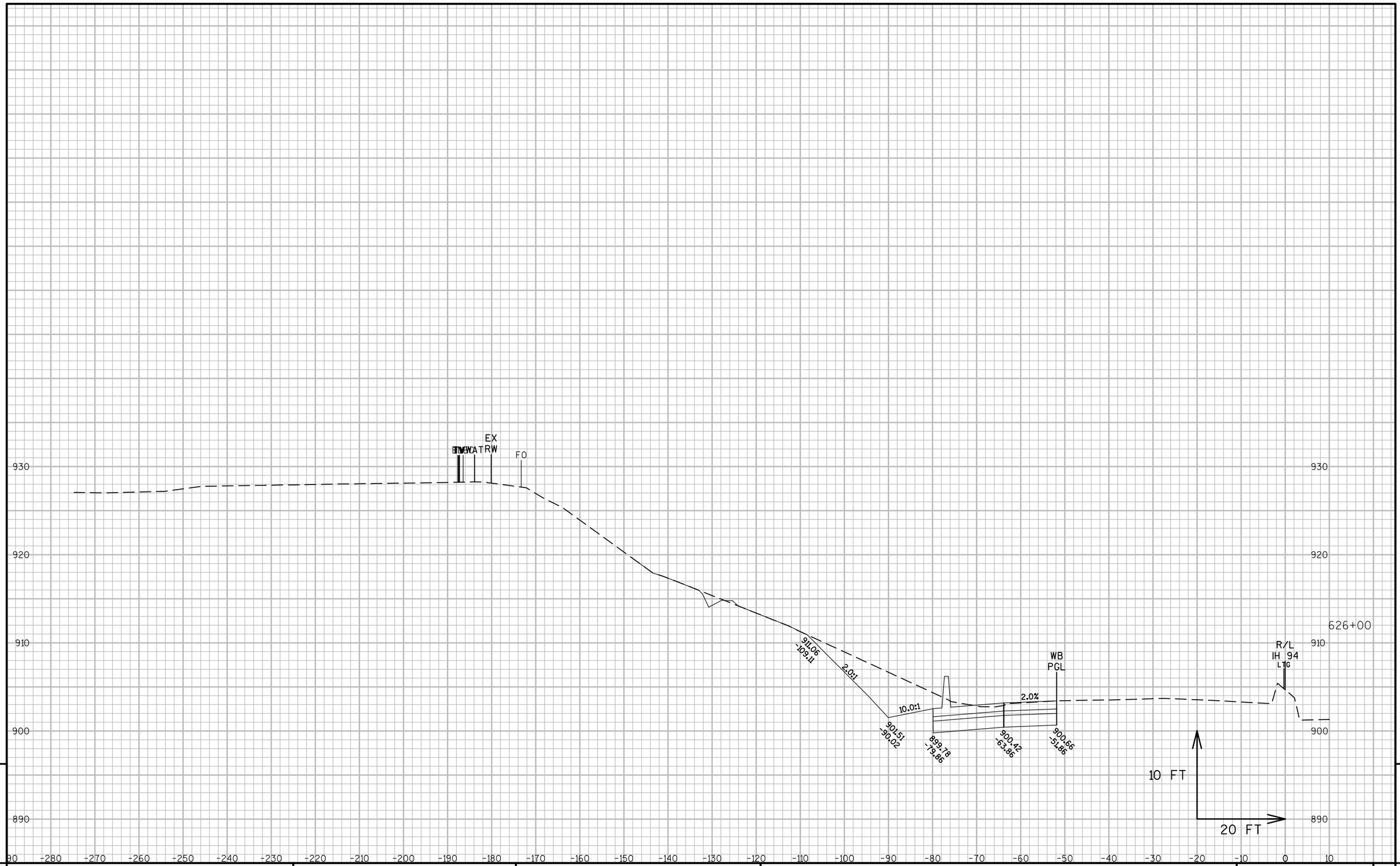
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 531	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (41)

PLOT DATE : 5/1/2017 10:07 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



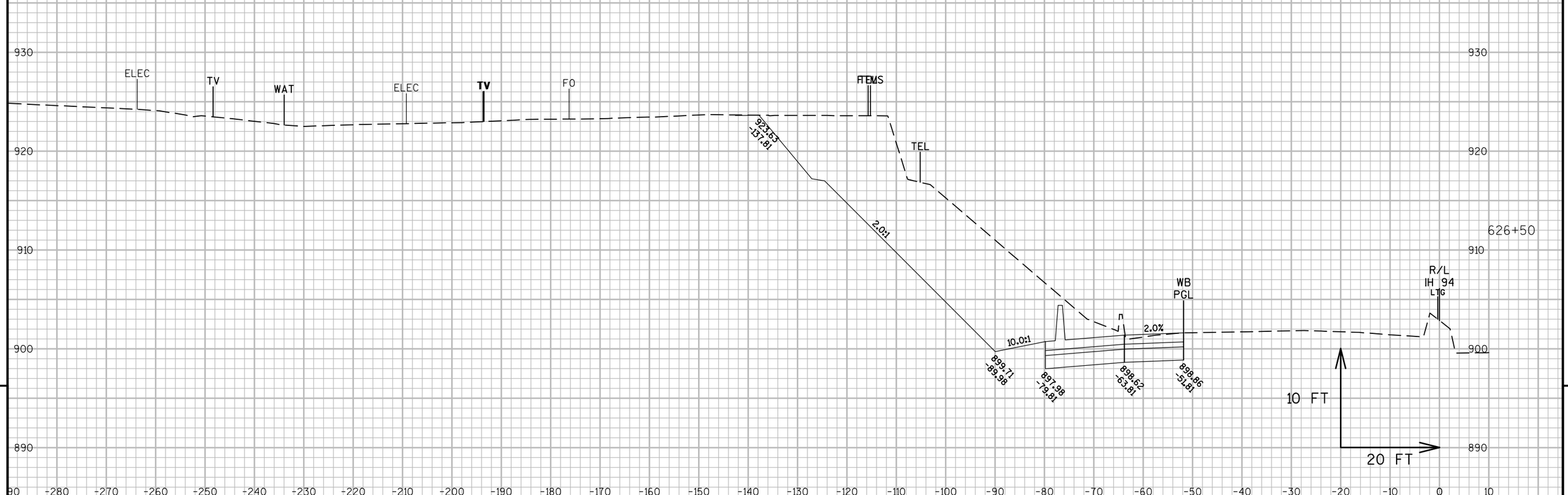
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 532	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (42)

PLOT DATE : 5/1/2017 10:07 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



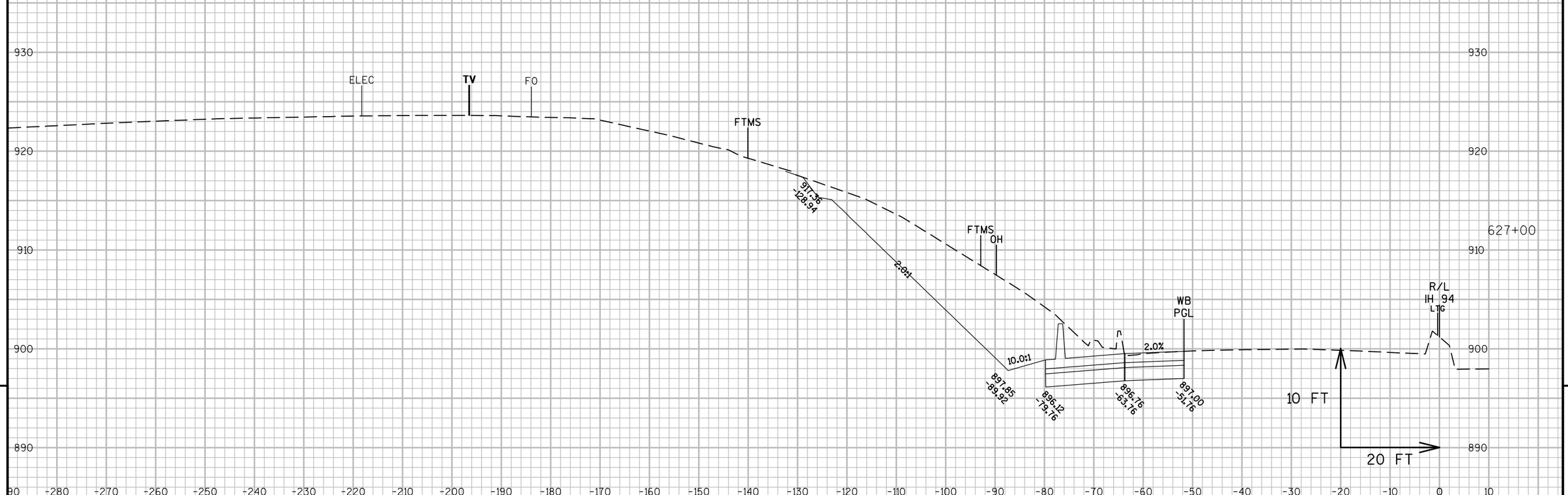
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 533	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (43)

PLOT DATE : 5/1/2017 10:08 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



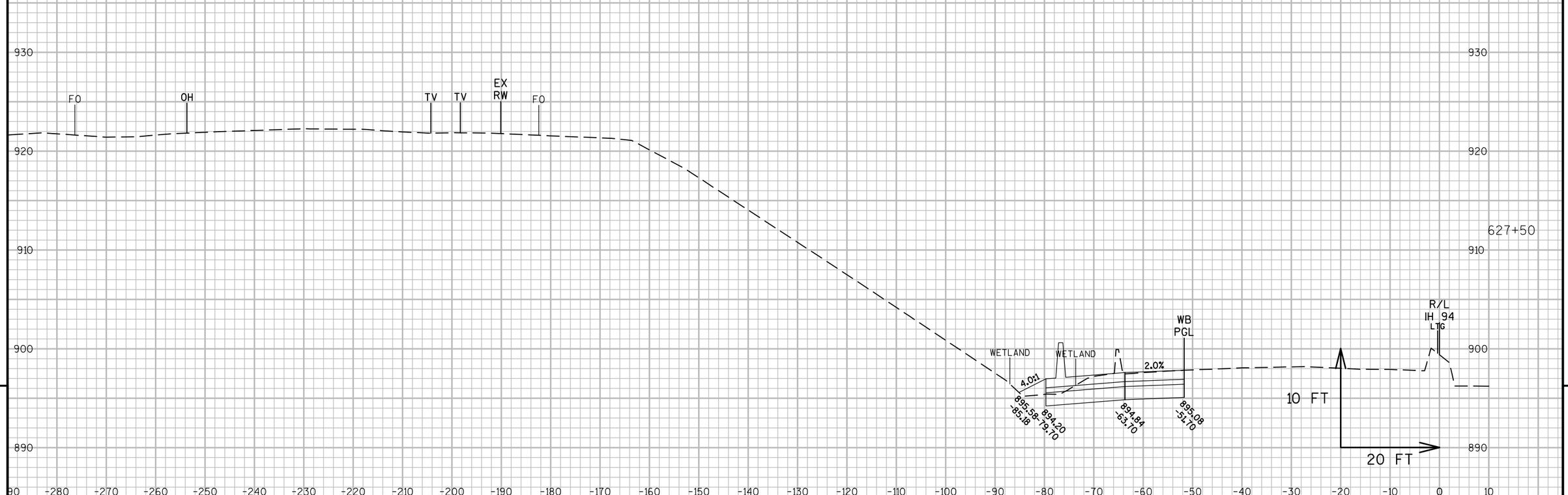
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 534	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (44)

PLOT DATE : 5/1/2017 10:08 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

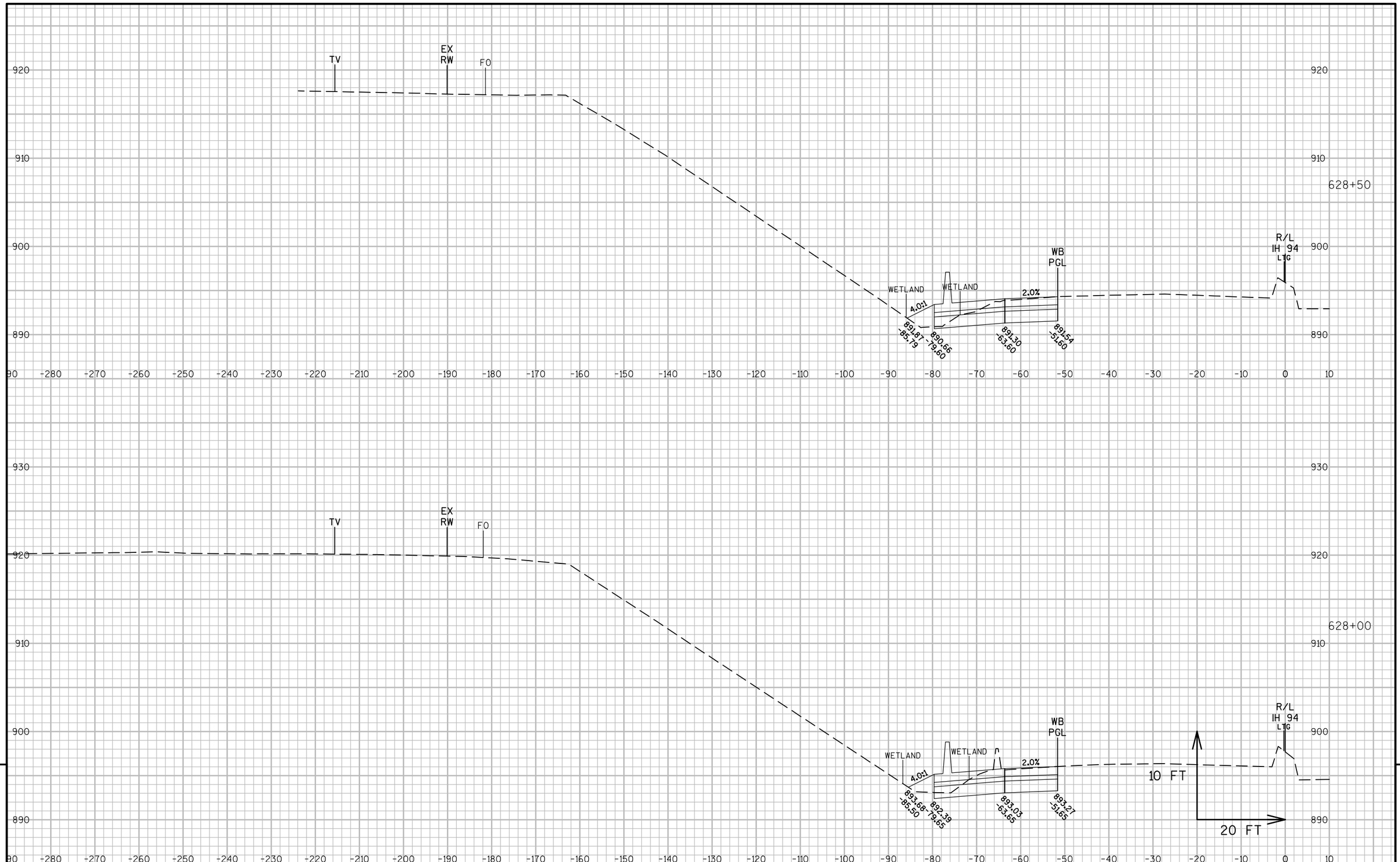


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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 535 E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (45)

PLOT DATE : 5/1/2017 10:08 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



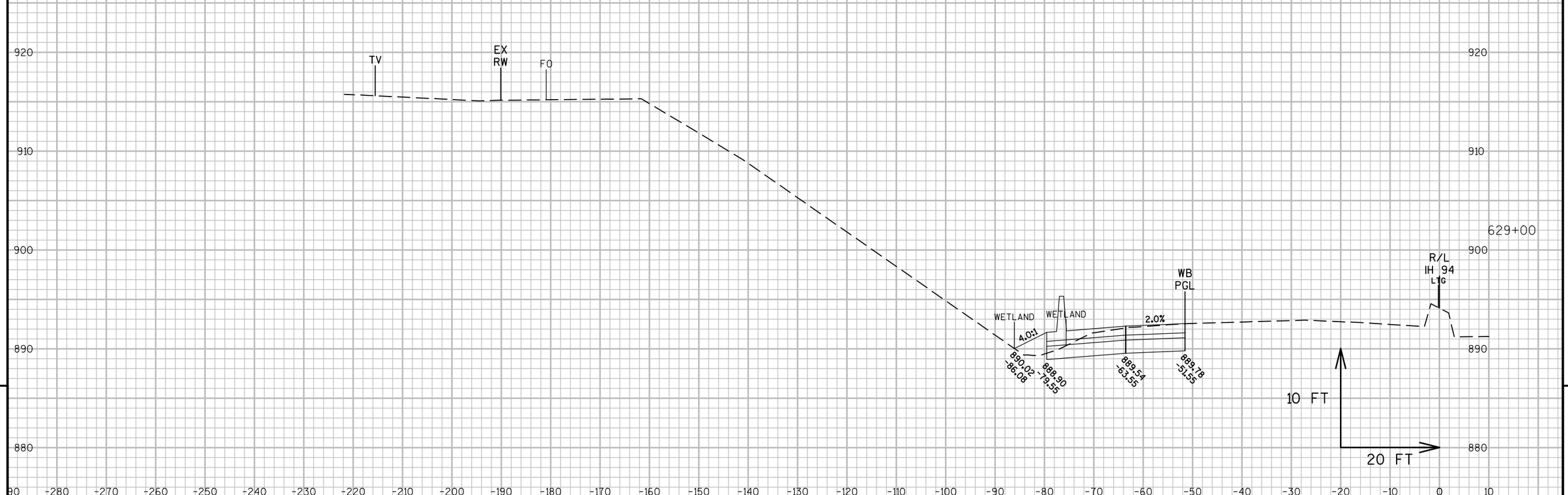
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 536	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (46)

PLOT DATE : 5/1/2017 10:08 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



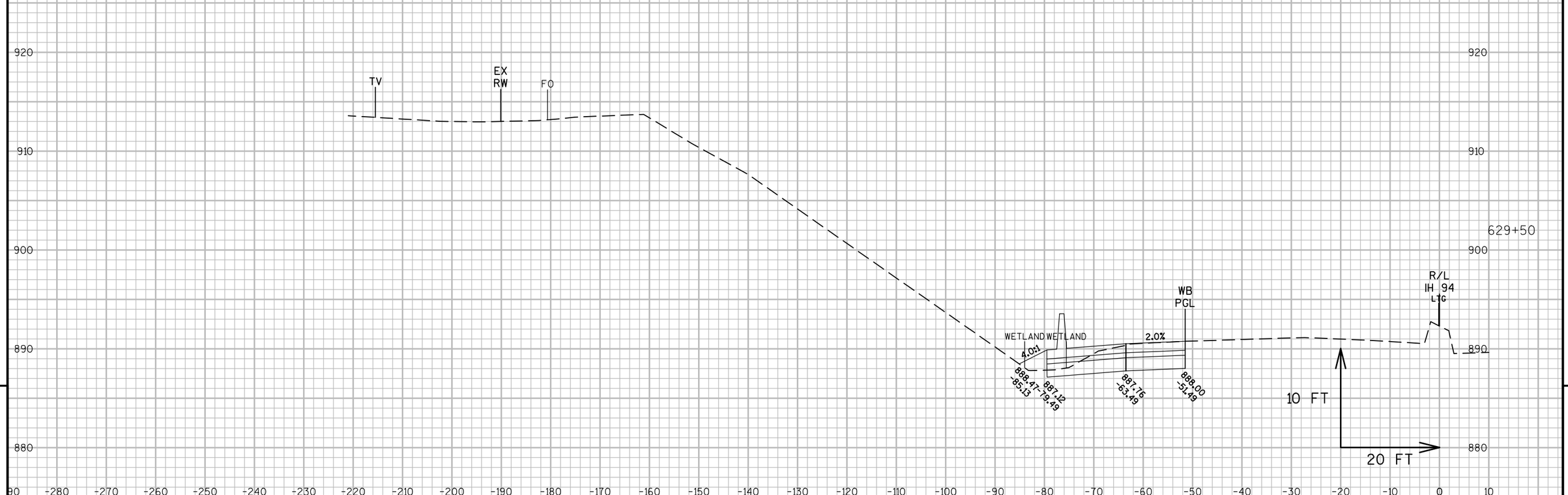
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 537	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (47)

PLOT DATE : 5/1/2017 10:09 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



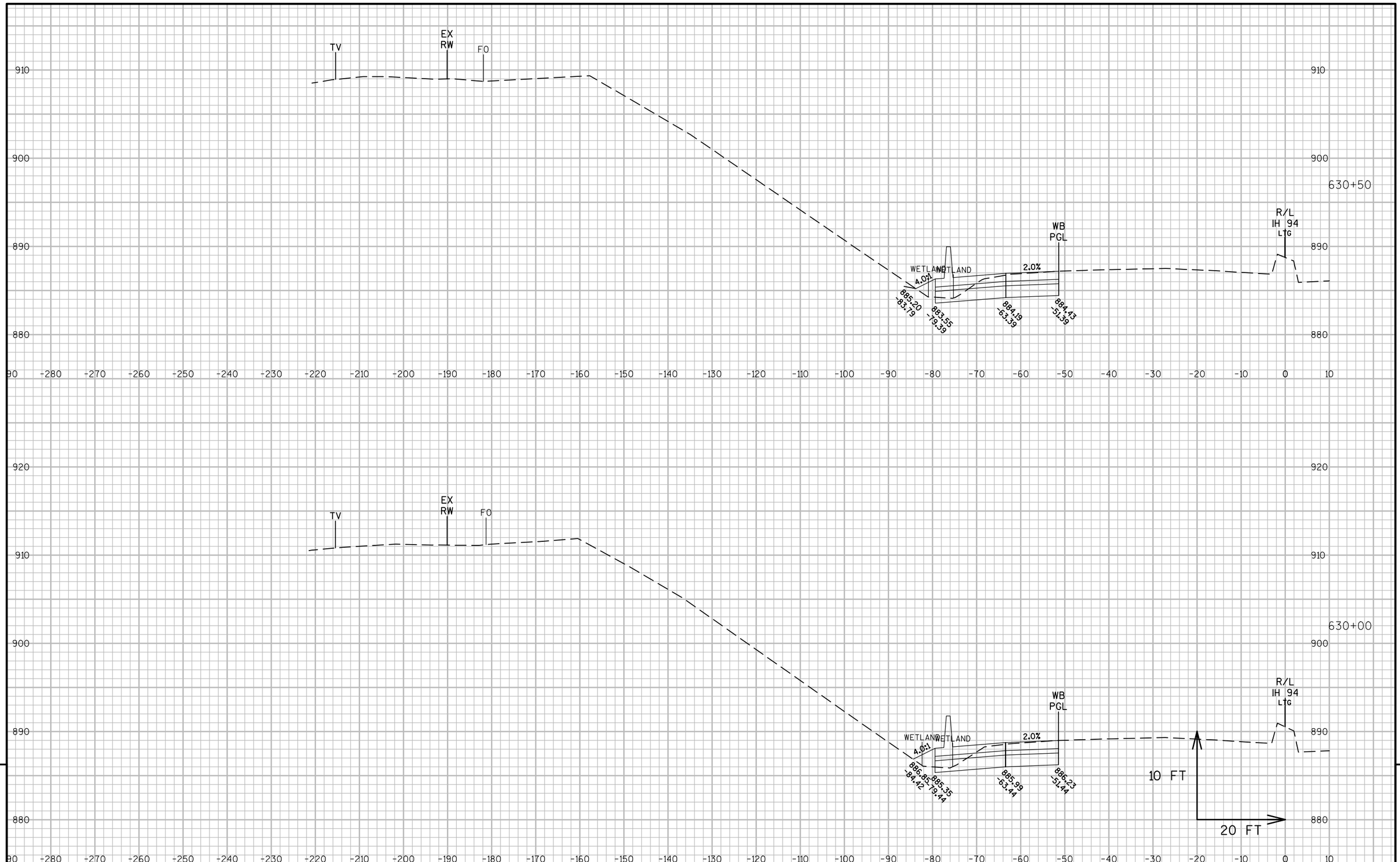
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 538	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (48)

PLOT DATE : 5/1/2017 10:09 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



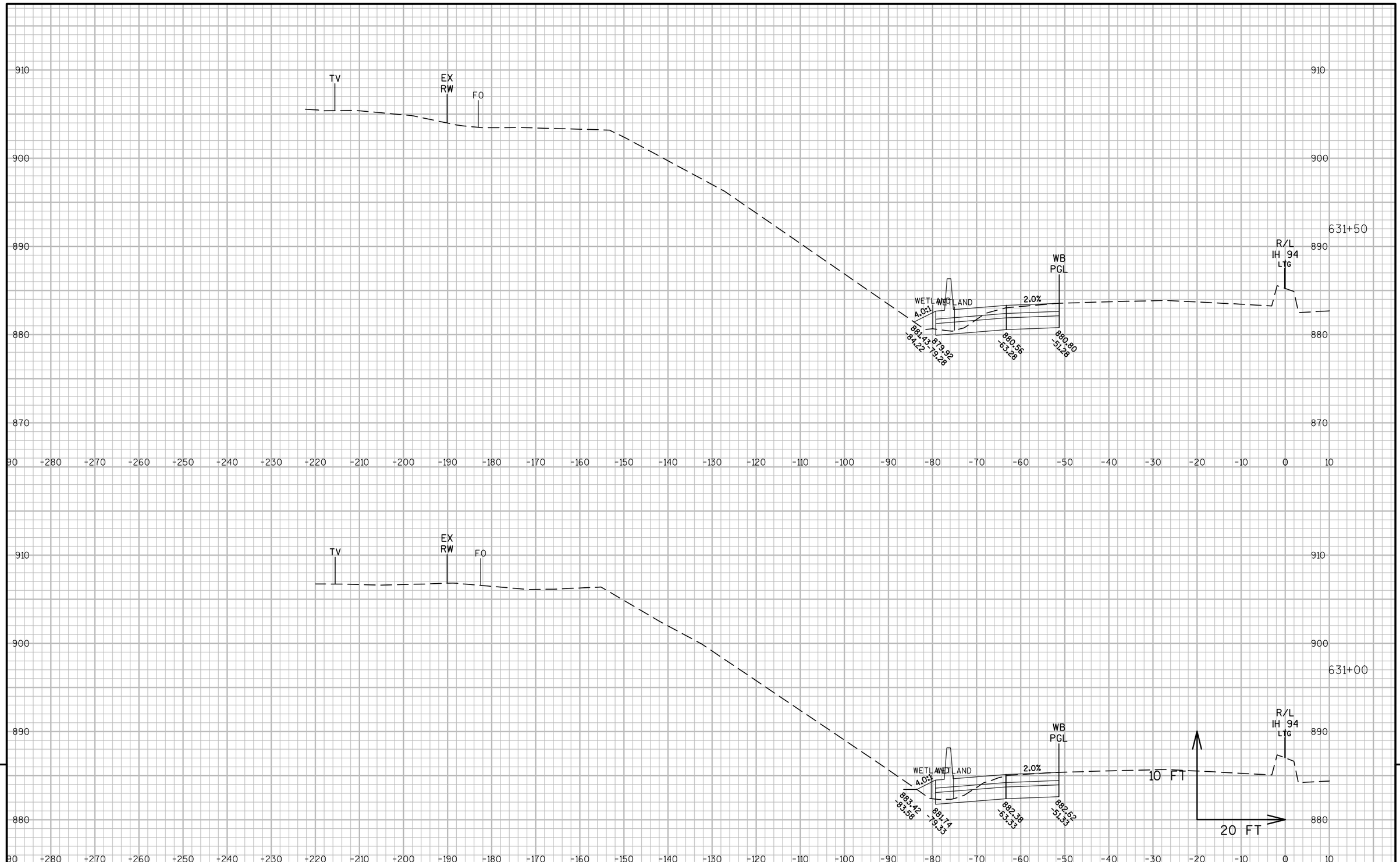
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 539	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (49)

PLOT DATE : 5/1/2017 10:09 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 540	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (50)

PLOT DATE : 5/1/2017 10:09 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 541	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (51)

PLOT DATE : 5/1/2017 10:10 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



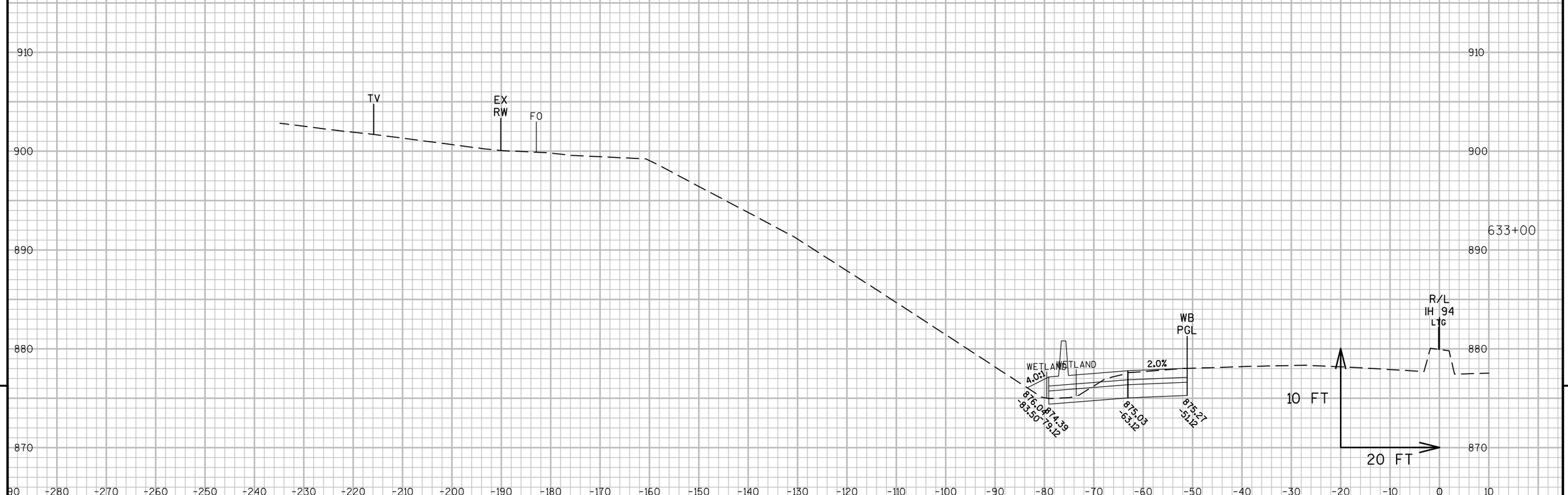
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 542	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (52)

PLOT DATE : 5/1/2017 10:10 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 543	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (53)

PLOT DATE : 5/1/2017 10:10 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

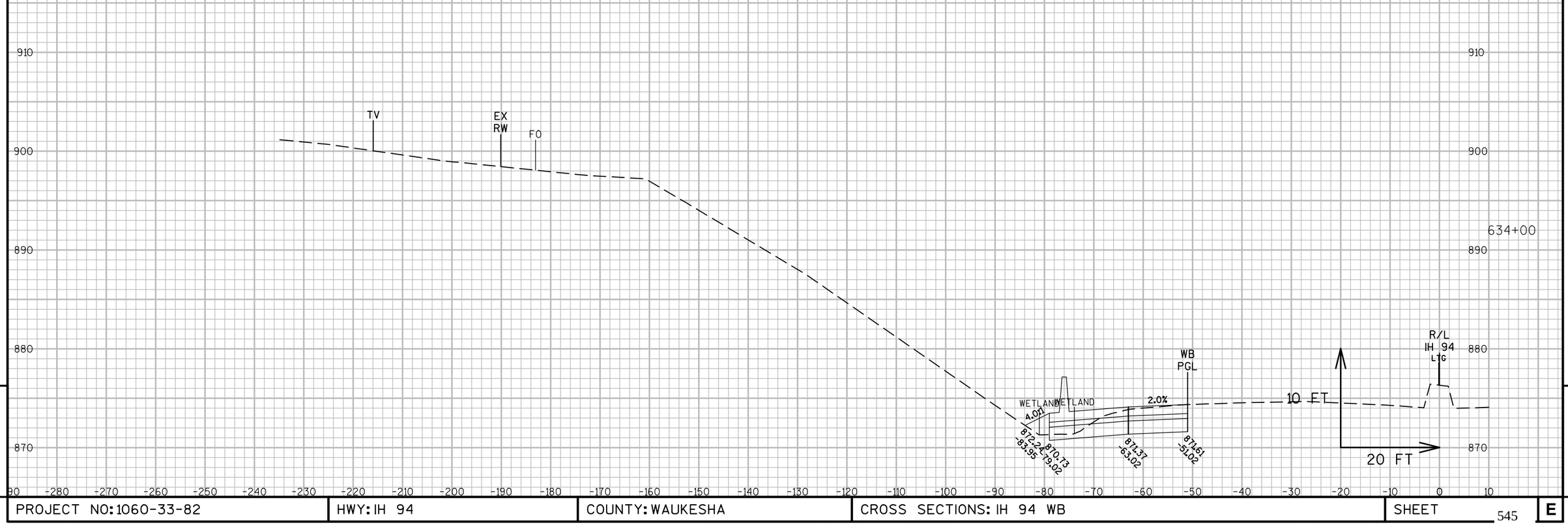


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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 544 E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (54)

PLOT DATE : 5/1/2017 10:10 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



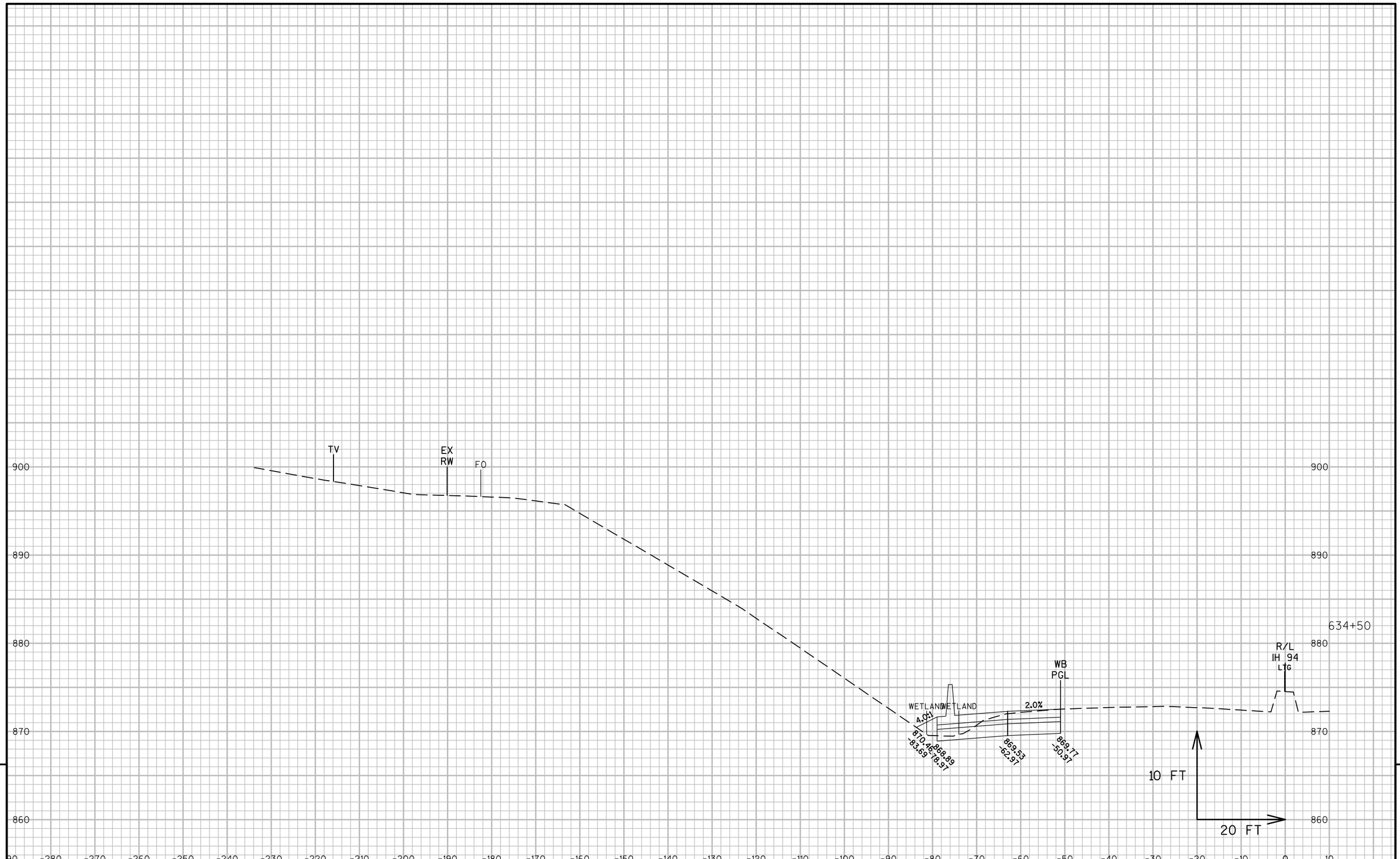
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 545	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (55)

PLOT DATE : 5/1/2017 10:10 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



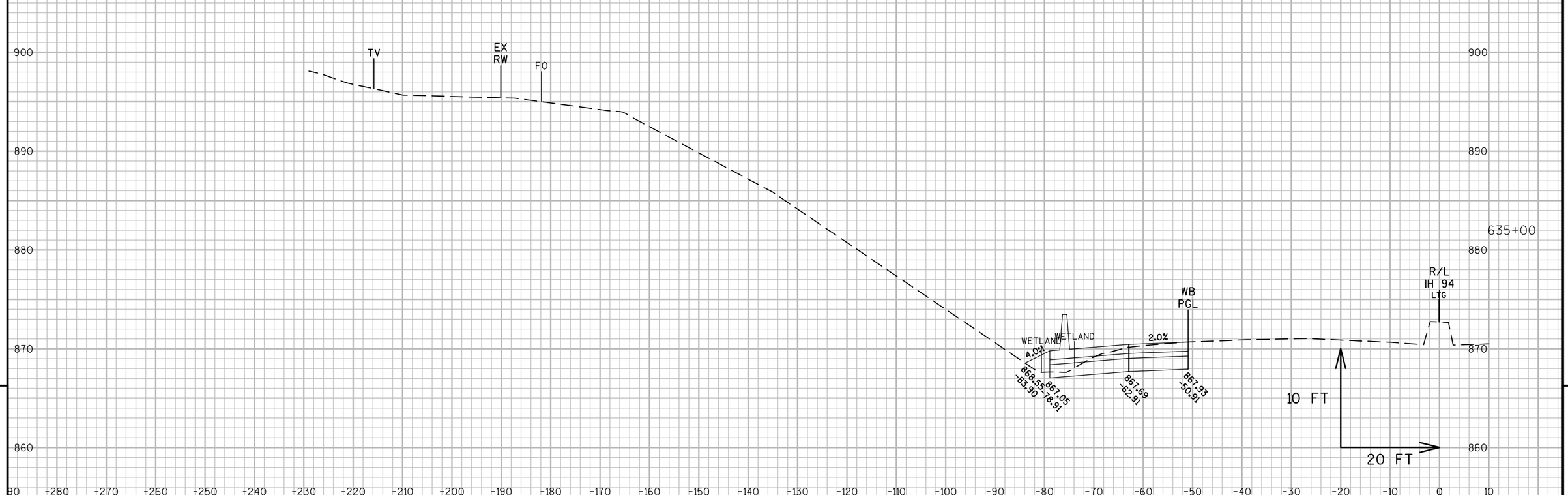
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 546	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (56)

PLOT DATE : 5/1/2017 10:11 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



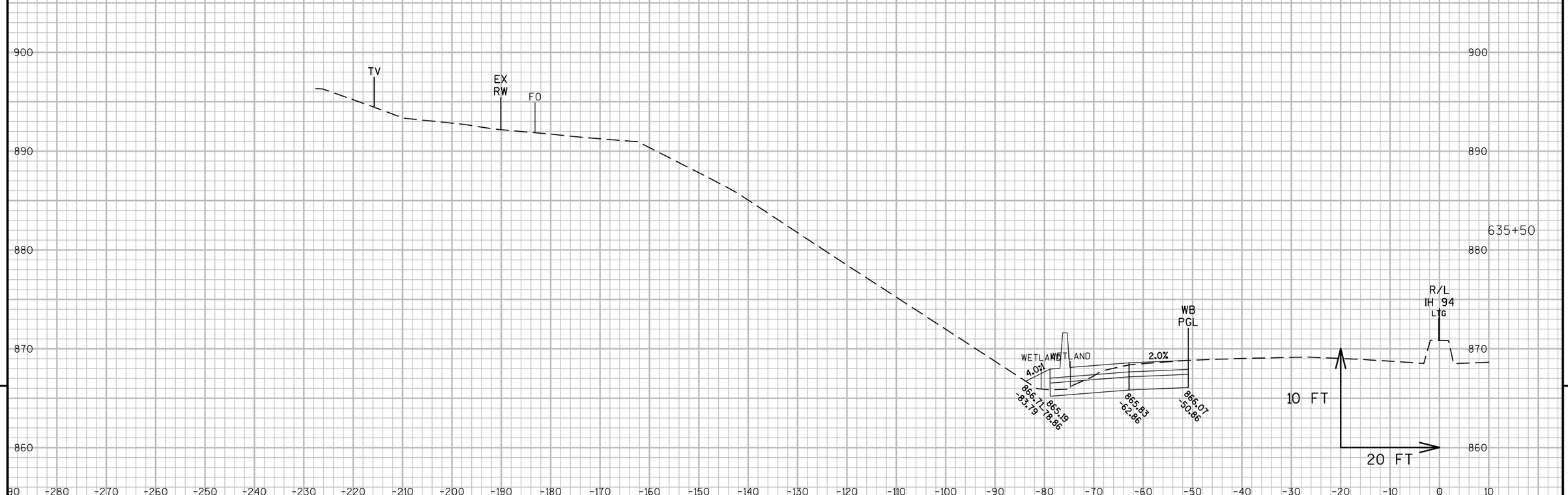
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 547	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (57)

PLOT DATE : 5/1/2017 10:11 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 548	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (58)
PLOT DATE : 5/1/2017 10:11 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 549	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (59)

PLOT DATE : 5/1/2017 10:11 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



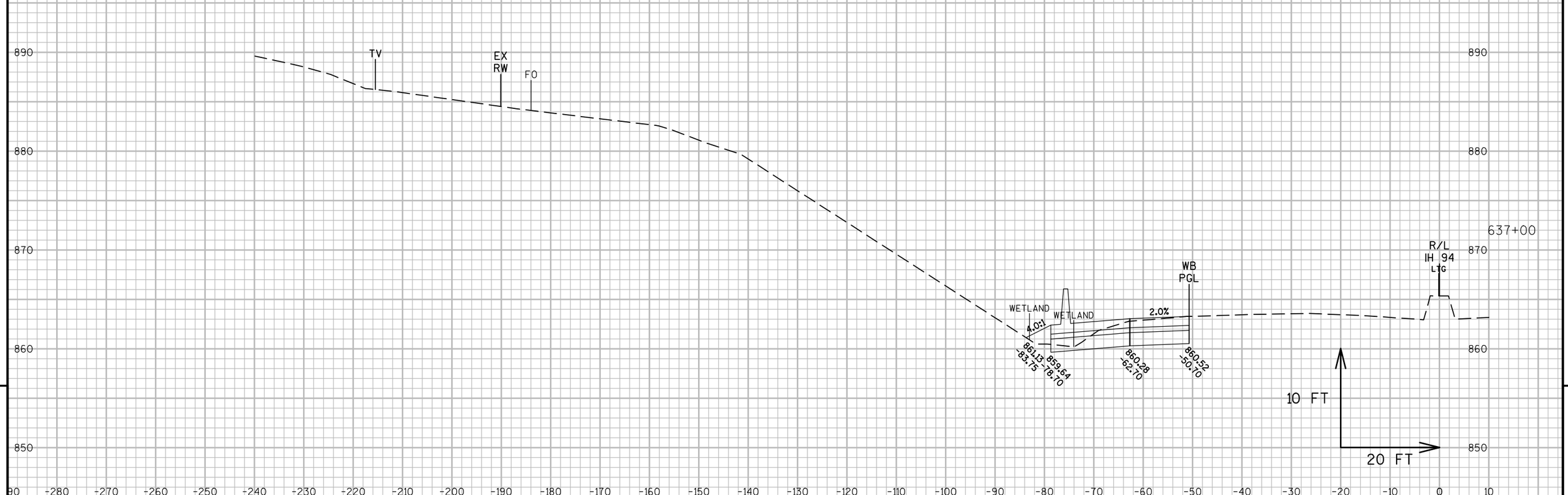
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 550	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (60)

PLOT DATE : 5/1/2017 10:12 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



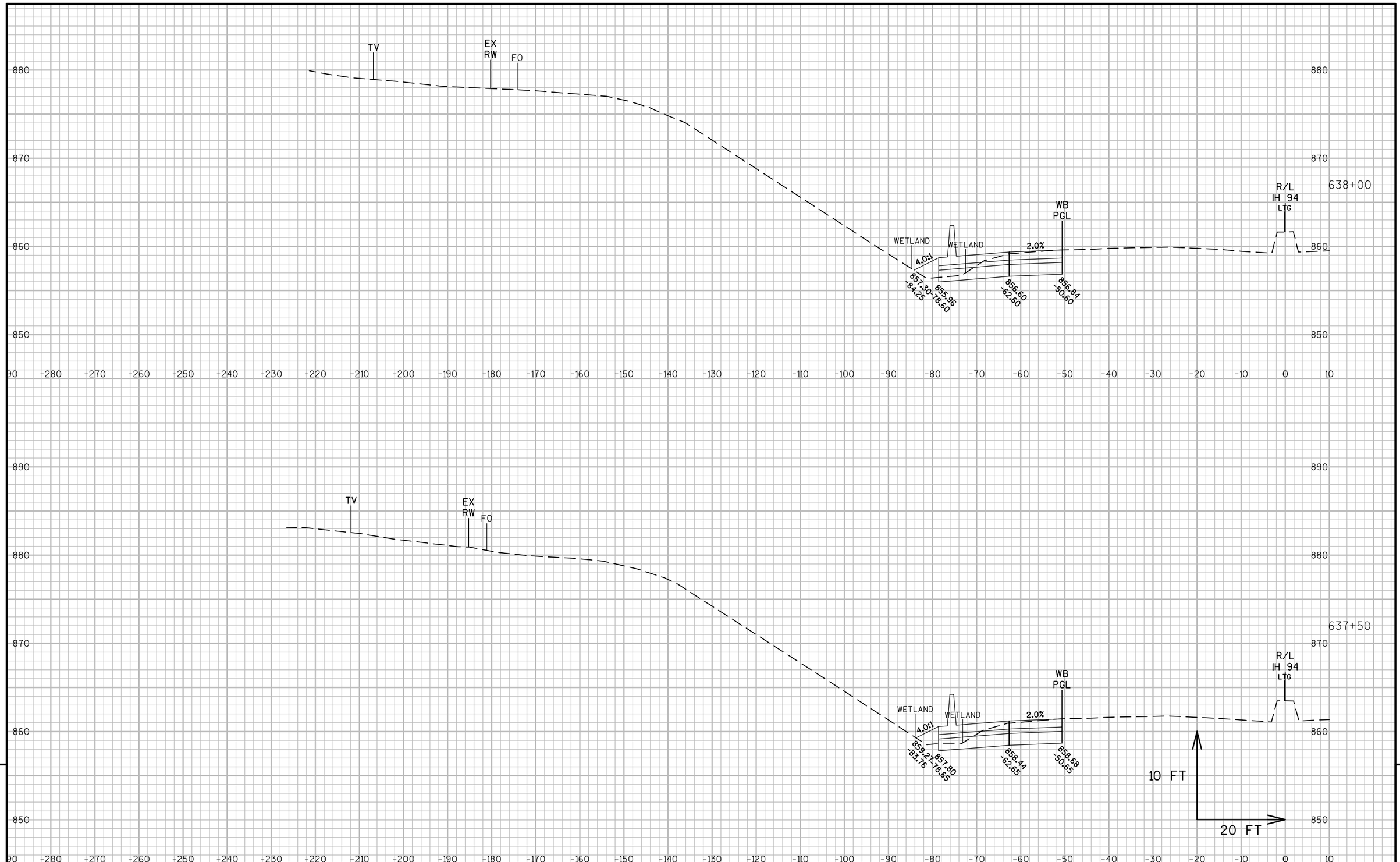
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 551	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (61)

PLOT DATE : 5/1/2017 10:12 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



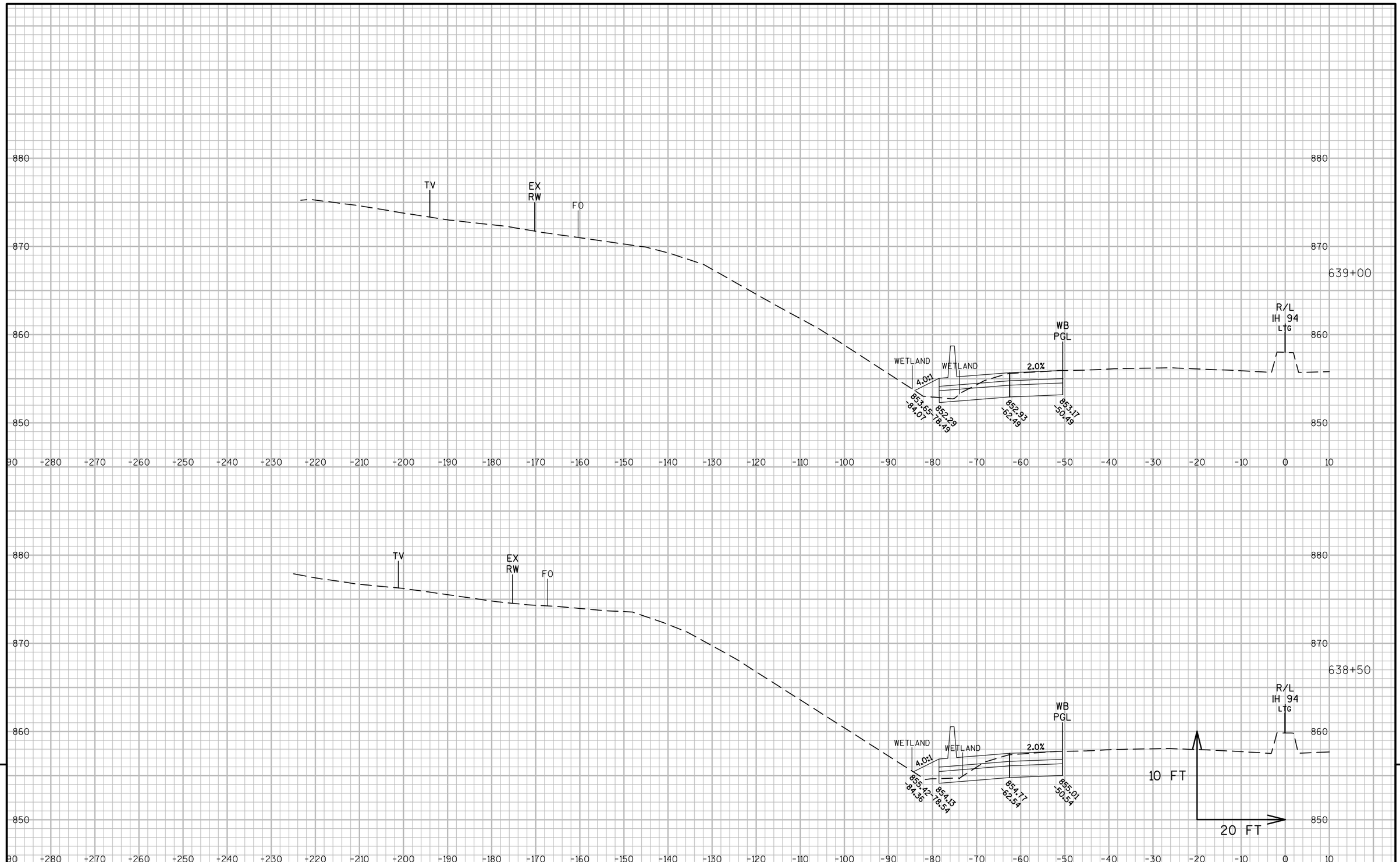
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 552	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (62)

PLOT DATE : 5/1/2017 10:12 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



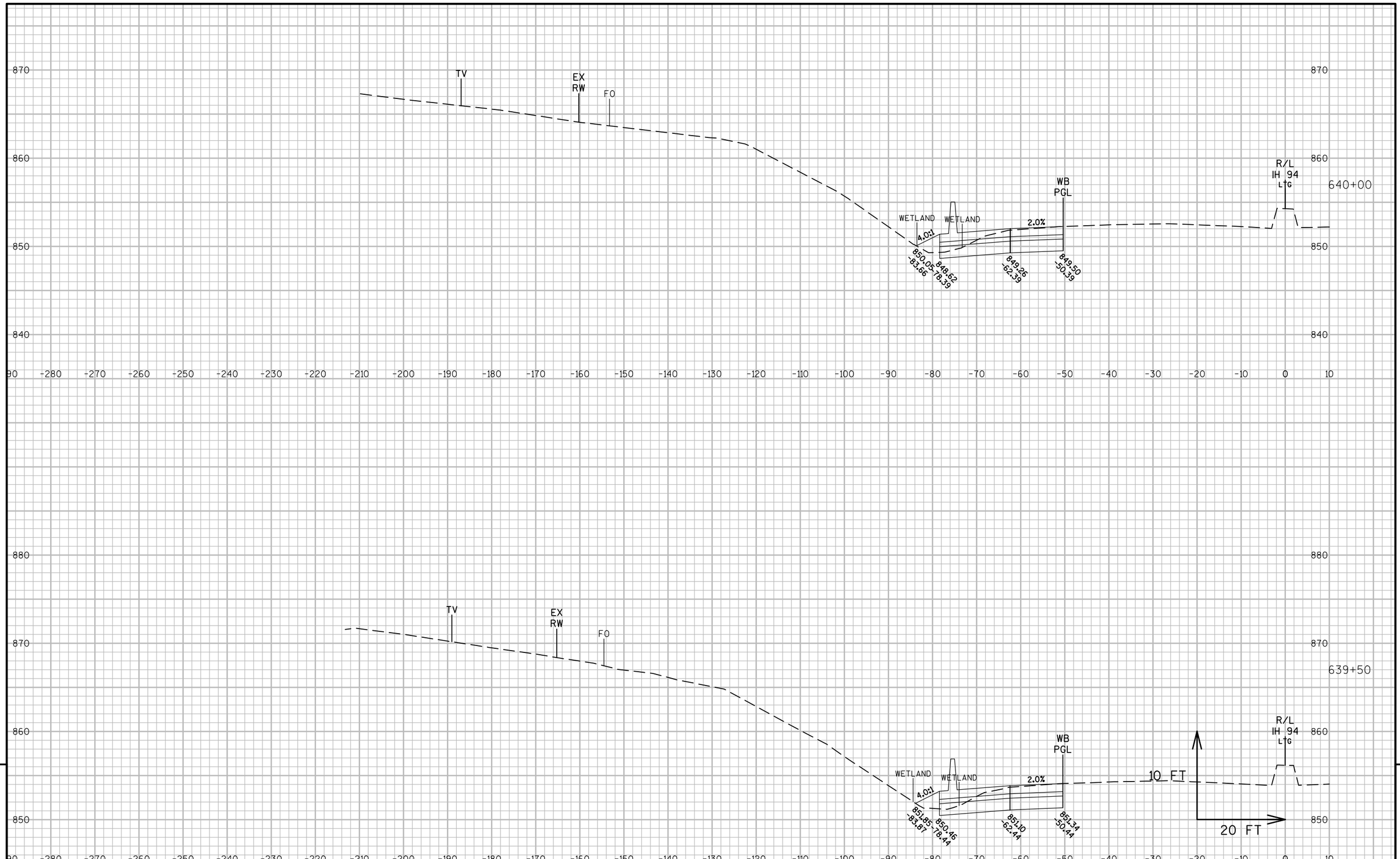
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 553	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (63)

PLOT DATE : 5/1/2017 10:12 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



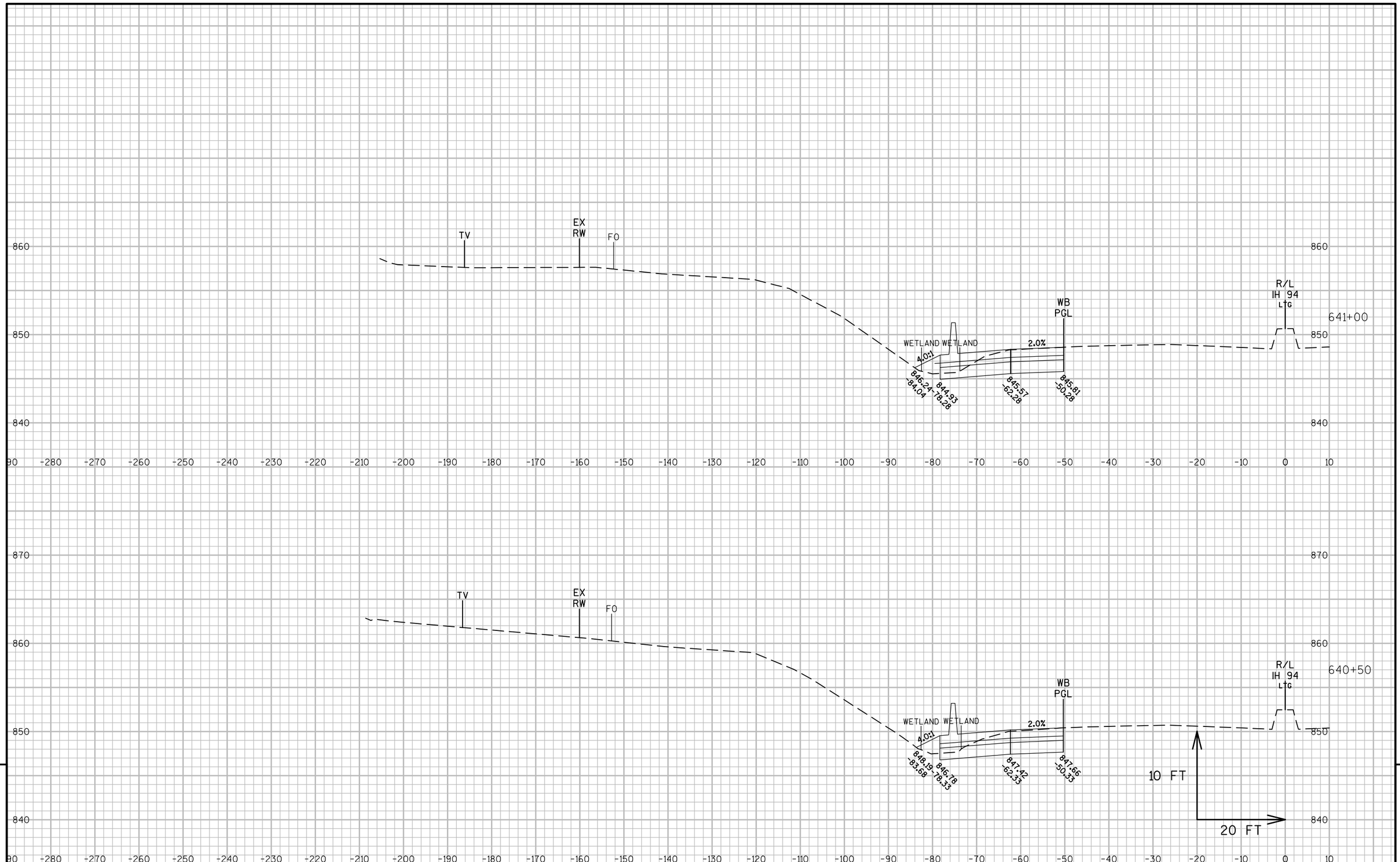
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 554	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (64)

PLOT DATE : 5/1/2017 10:13 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



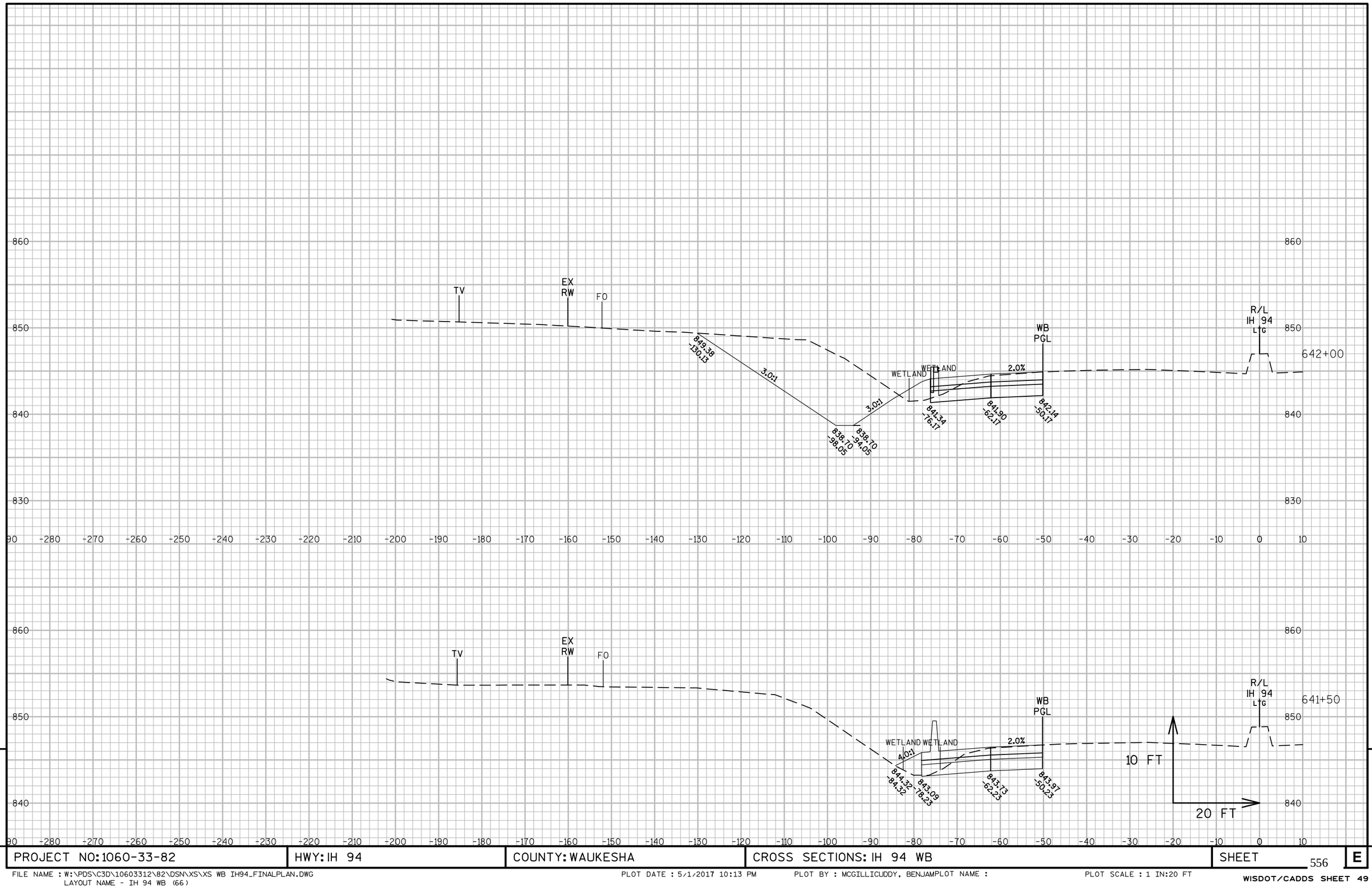
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 555	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (65)

PLOT DATE : 5/1/2017 10:13 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

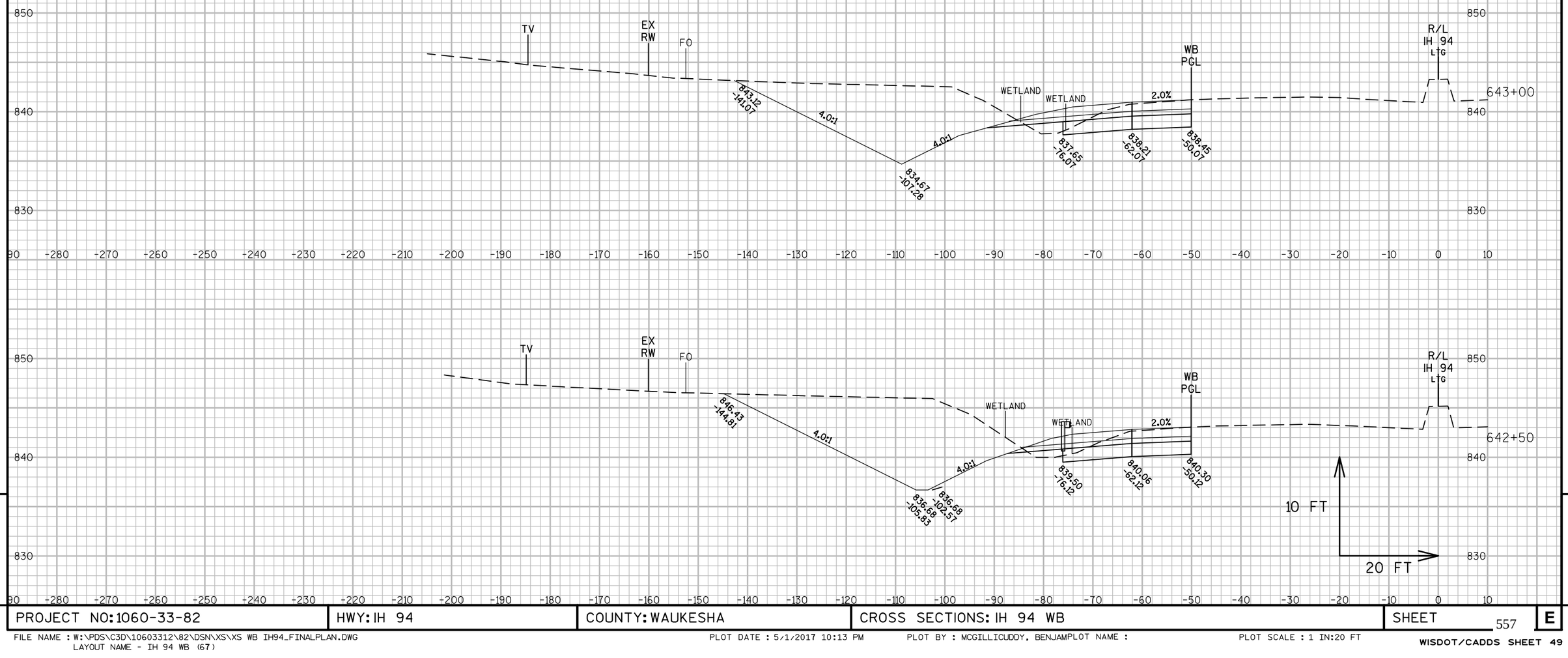


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 556	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (66)

PLOT DATE : 5/1/2017 10:13 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

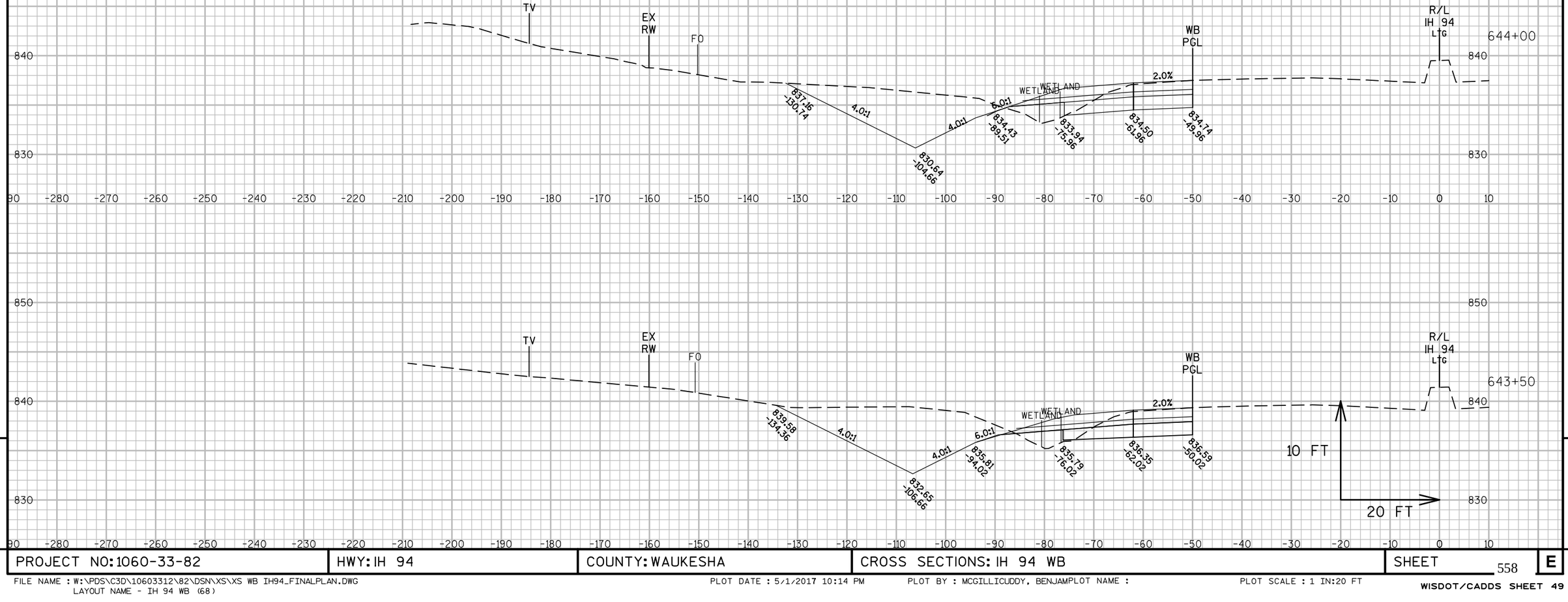


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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 557	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (67)

PLOT DATE : 5/1/2017 10:13 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



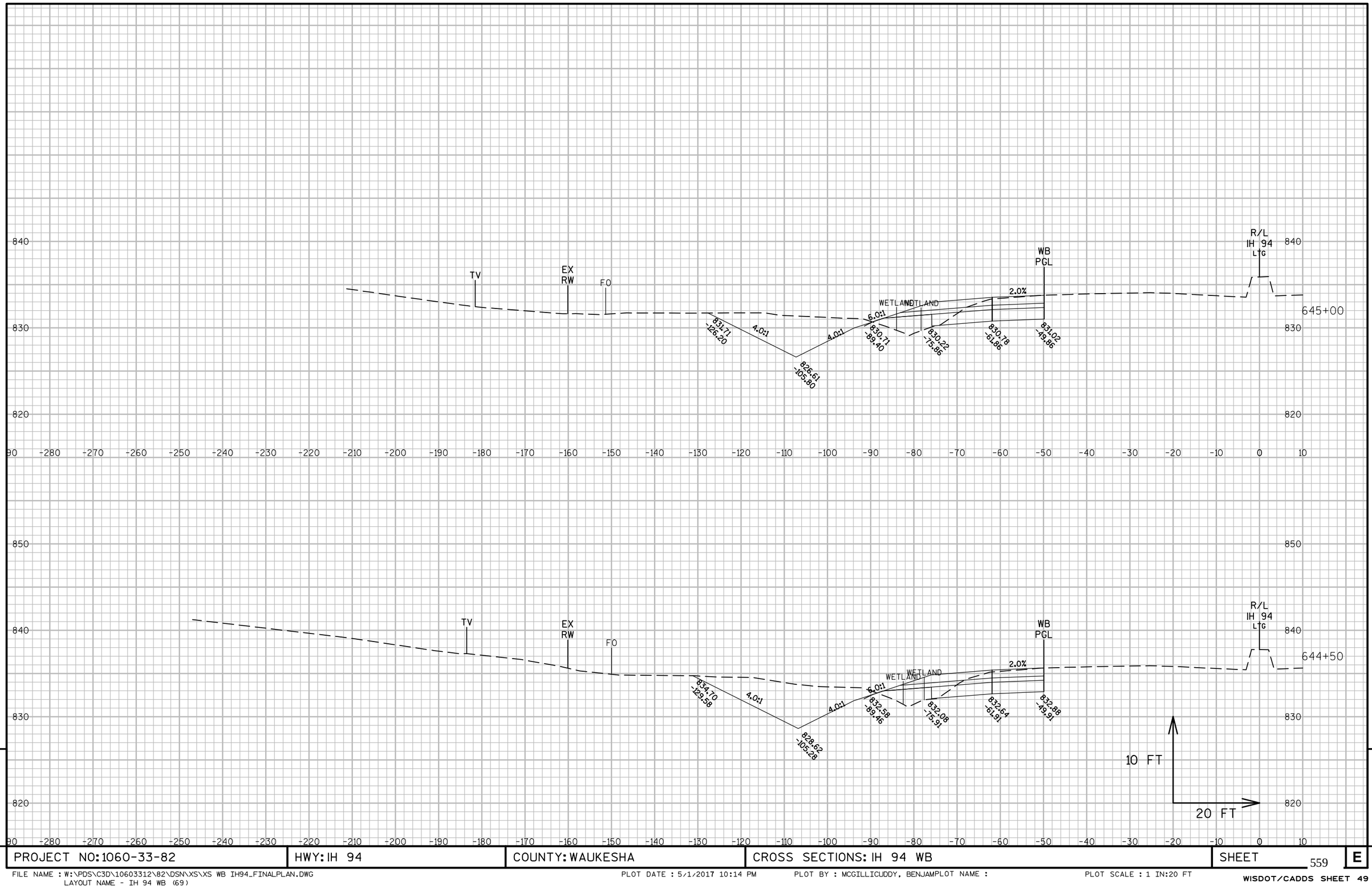
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 558	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (68)

PLOT DATE : 5/1/2017 10:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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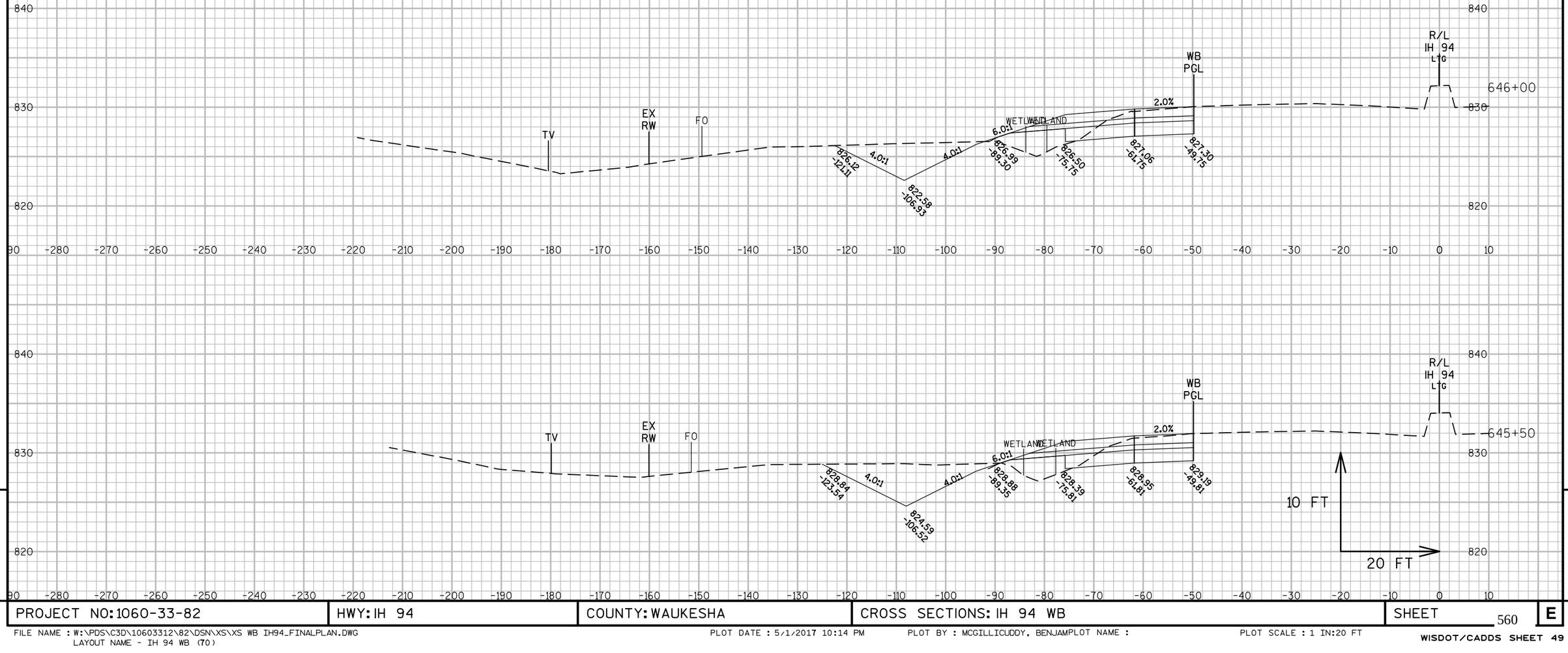
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 559	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (69)

PLOT DATE : 5/1/2017 10:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT



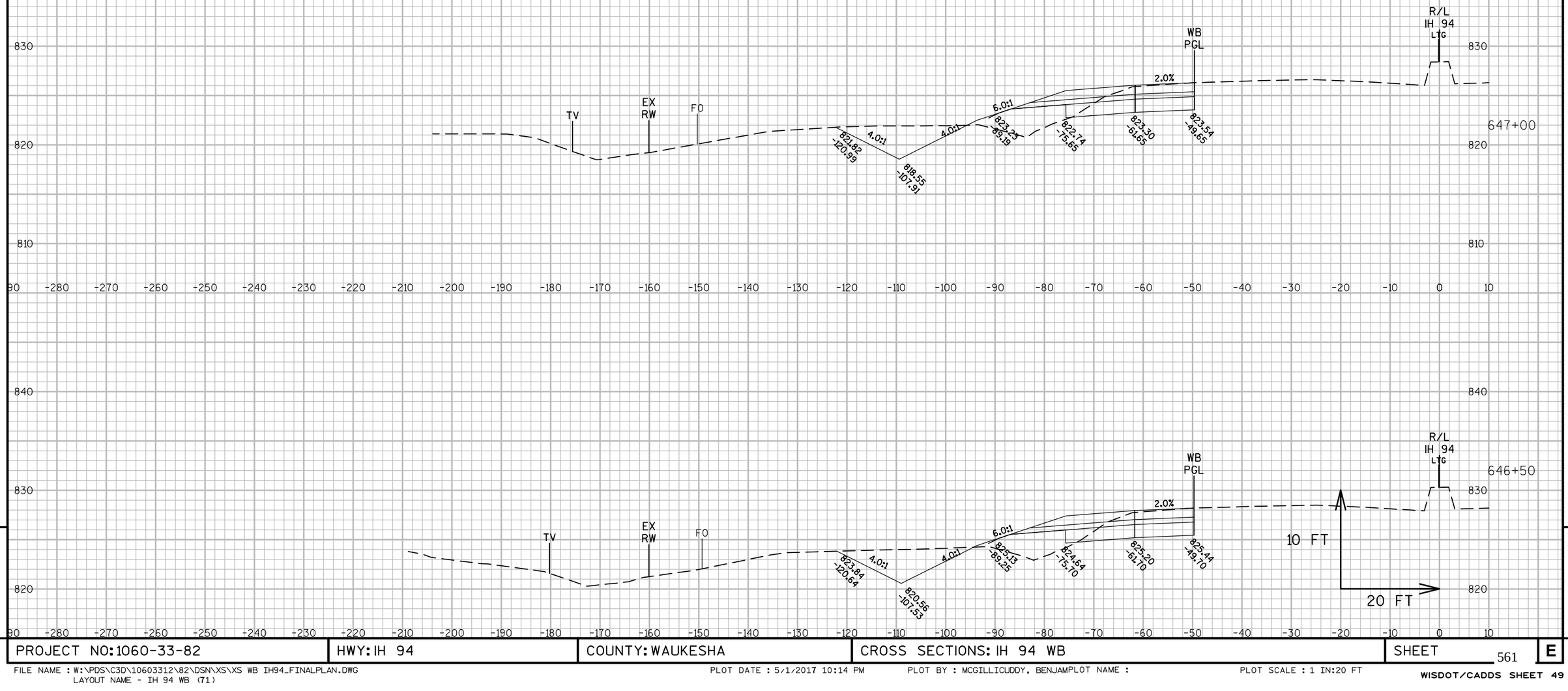
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 560	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (70)

PLOT DATE : 5/1/2017 10:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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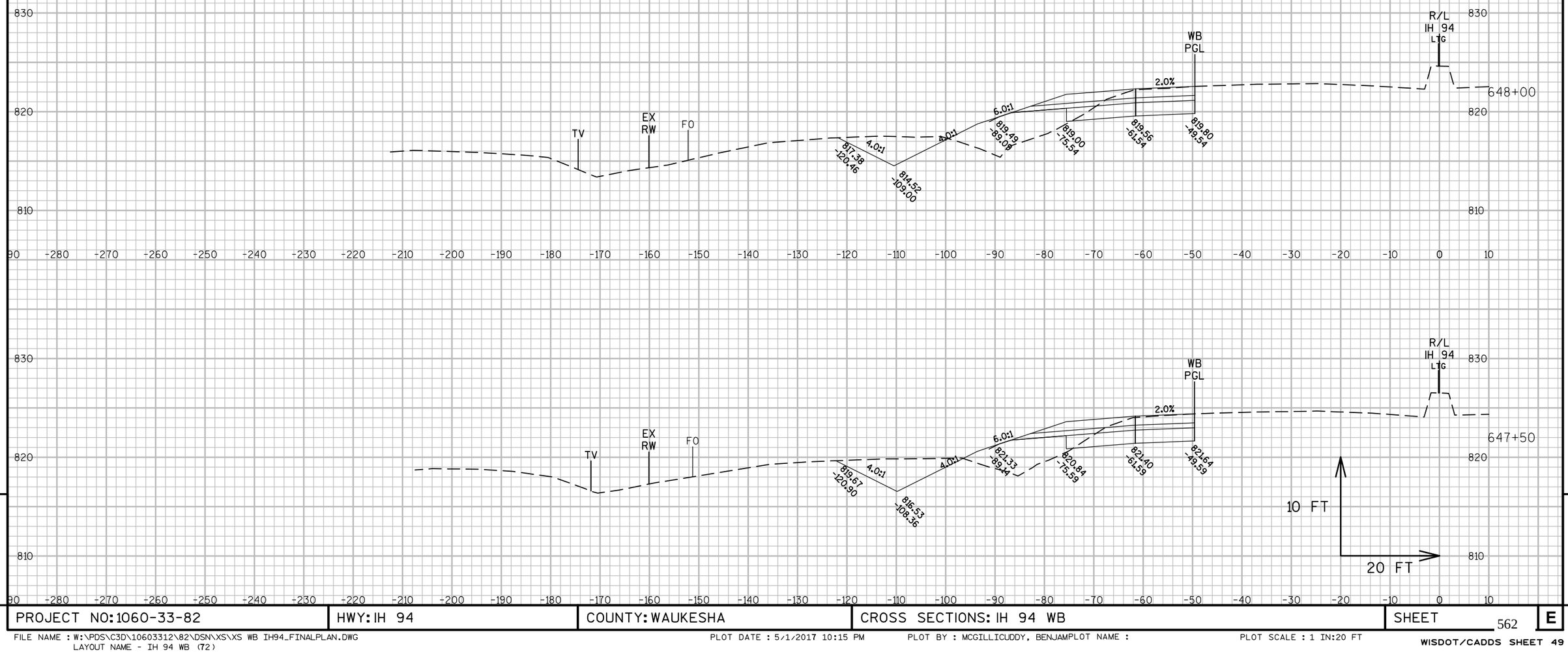
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (71)

PLOT DATE : 5/1/2017 10:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

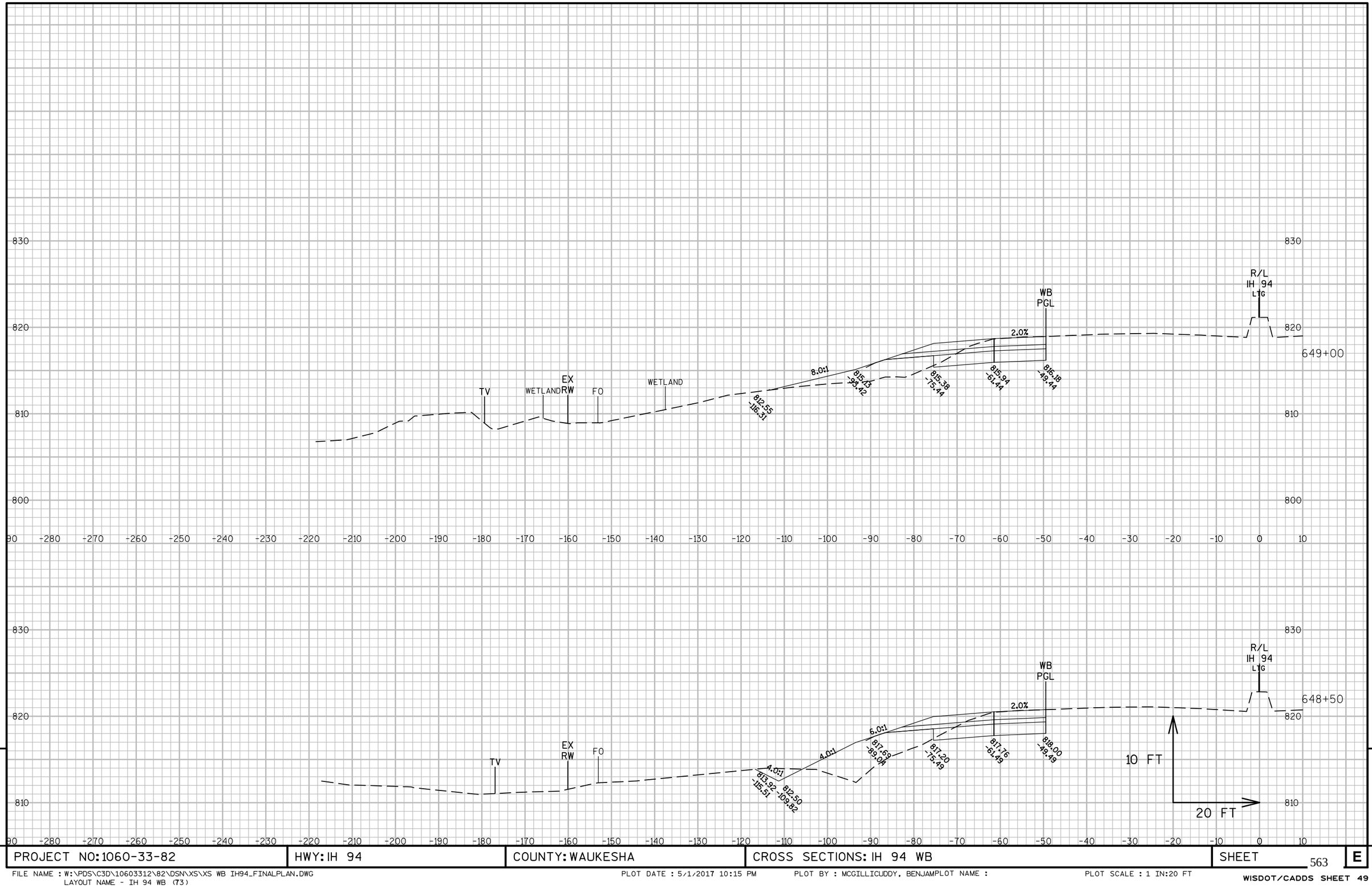


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 562	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (72)

PLOT DATE : 5/1/2017 10:15 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

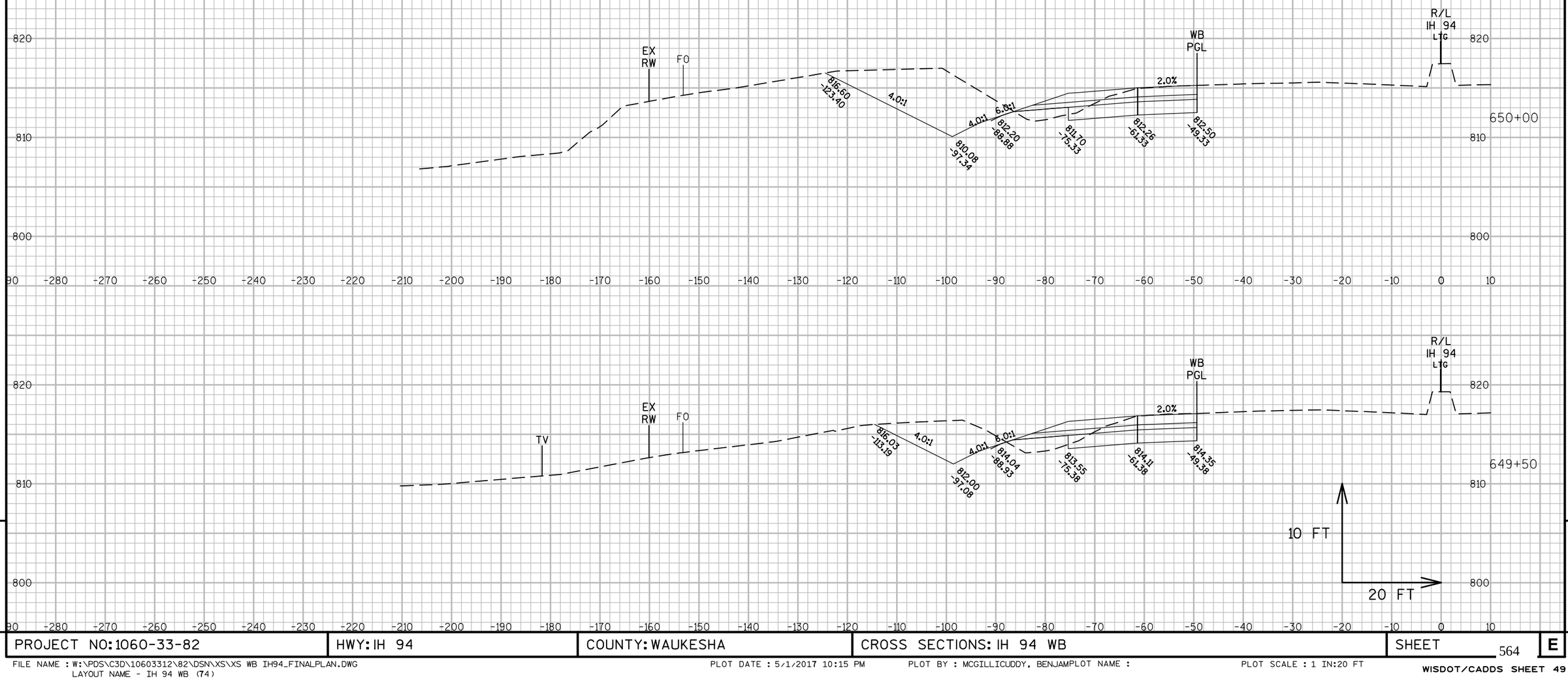


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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 563	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (73)
PLOT DATE : 5/1/2017 10:15 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

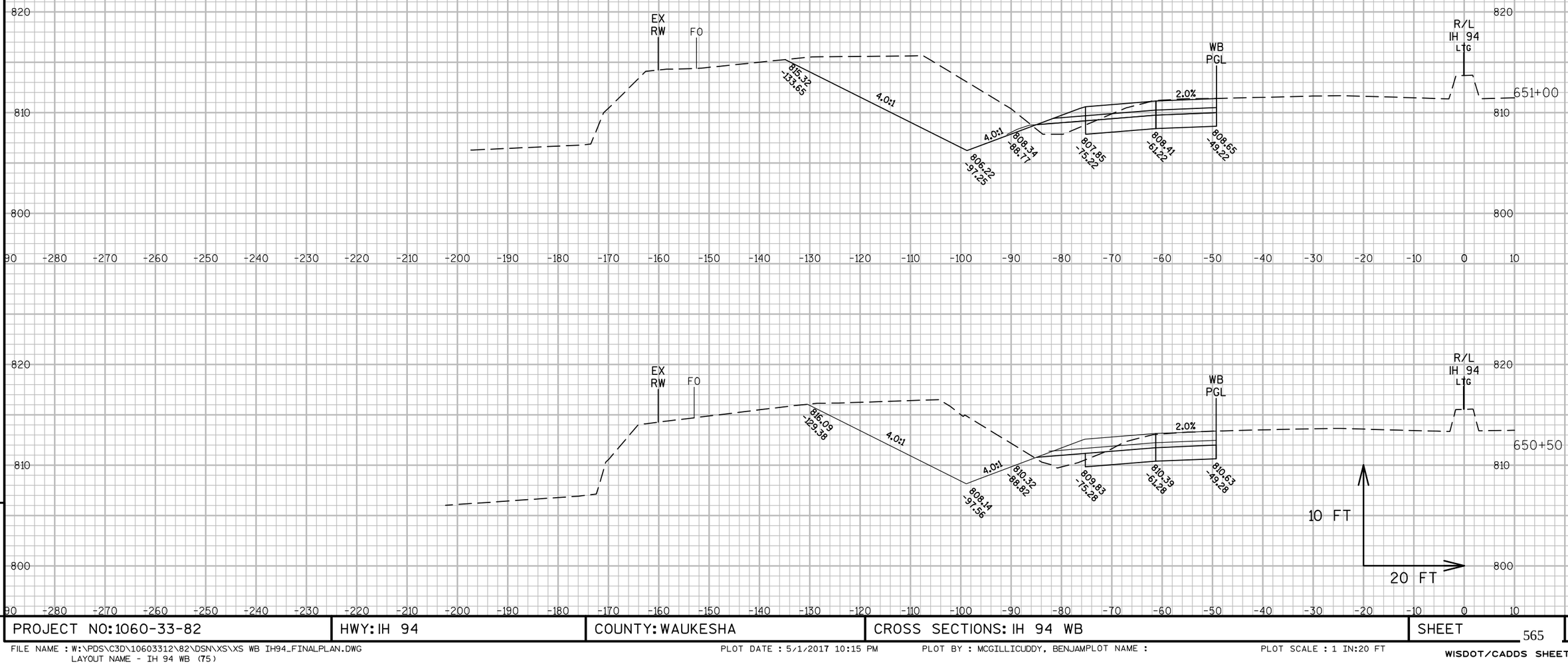


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 564	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (74)

PLOT DATE : 5/1/2017 10:15 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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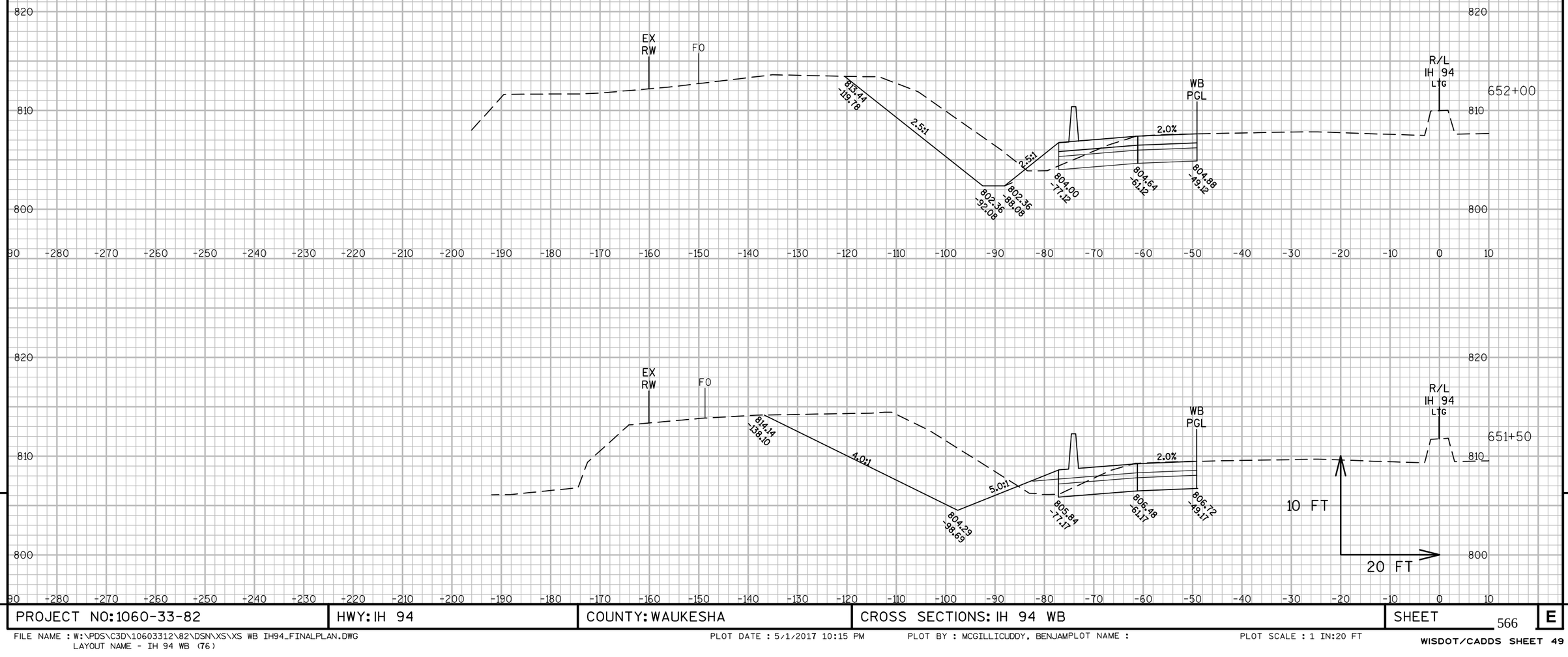
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 565	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (75)

PLOT DATE : 5/1/2017 10:15 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT



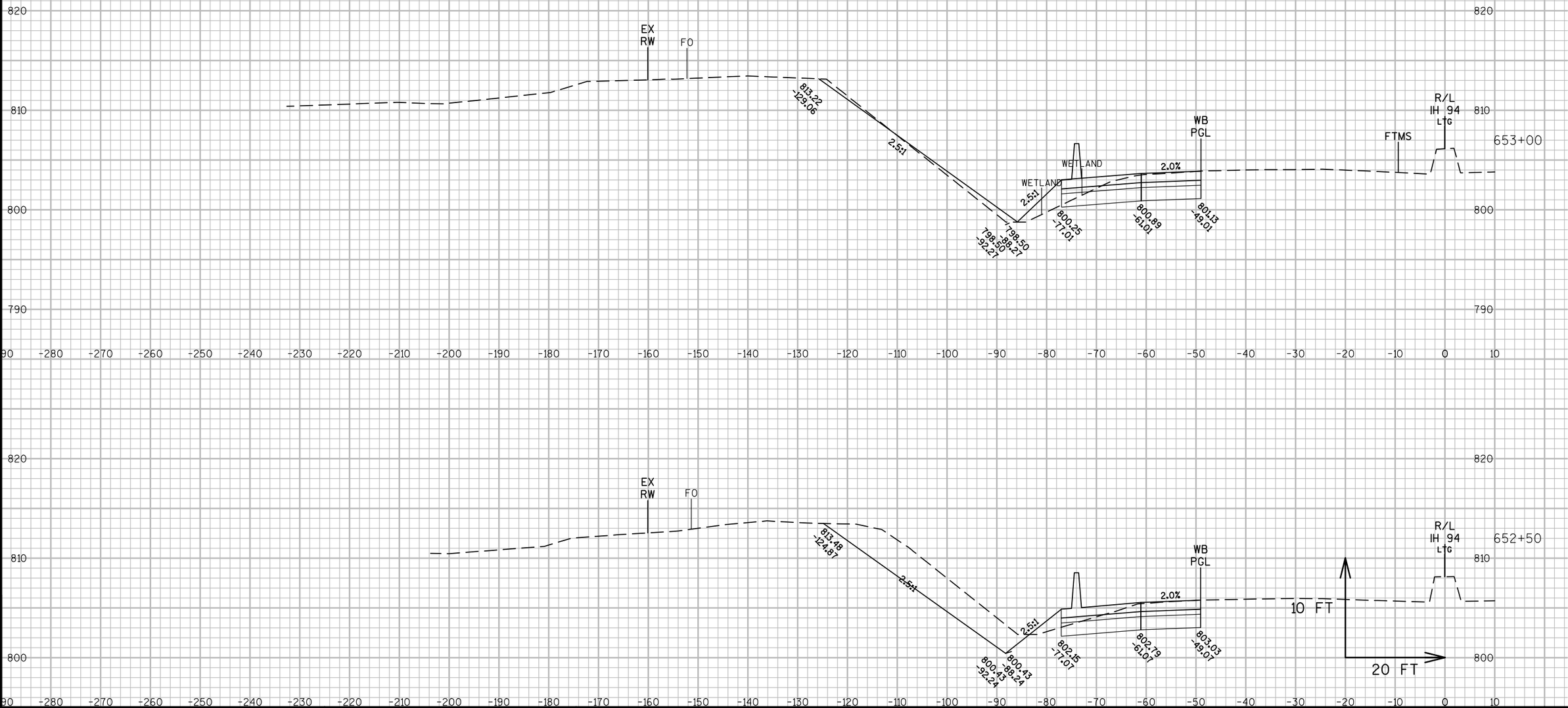
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 566	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (76)

PLOT DATE : 5/1/2017 10:15 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



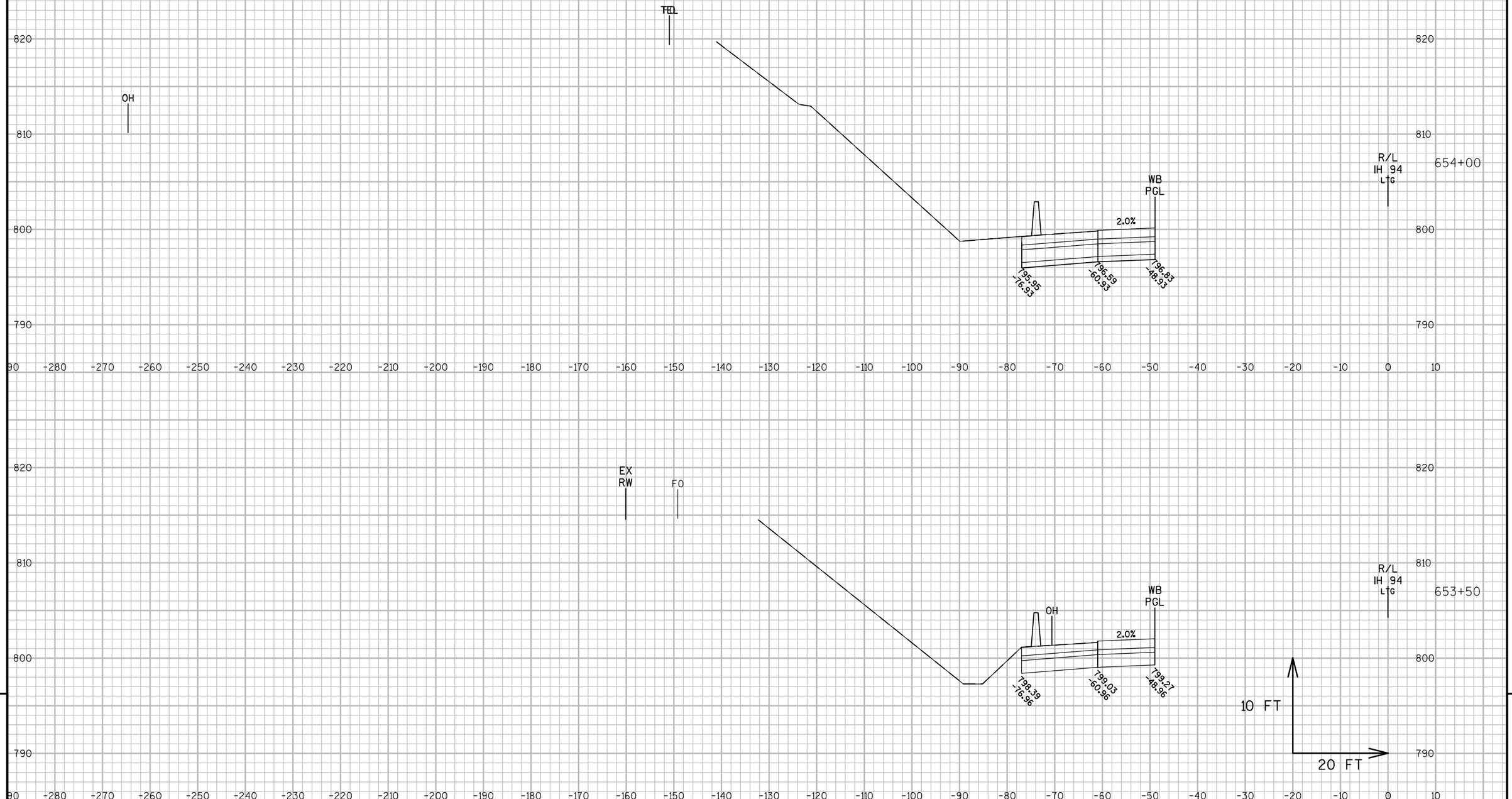
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 567	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (77)

PLOT DATE : 5/1/2017 10:16 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

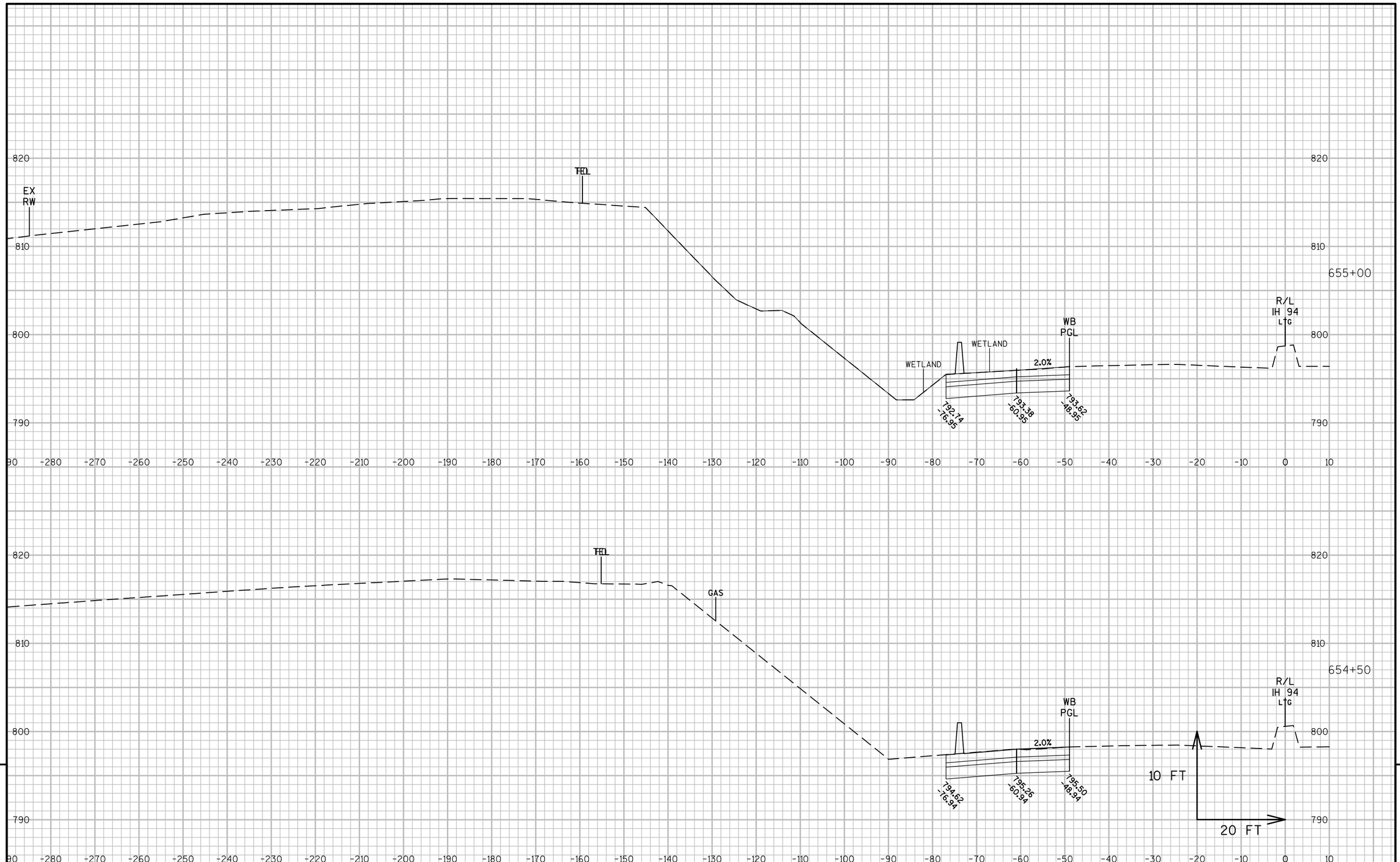
WISDOT/CADDS SHEET 49



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 568	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (78)

PLOT DATE : 5/1/2017 10:16 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



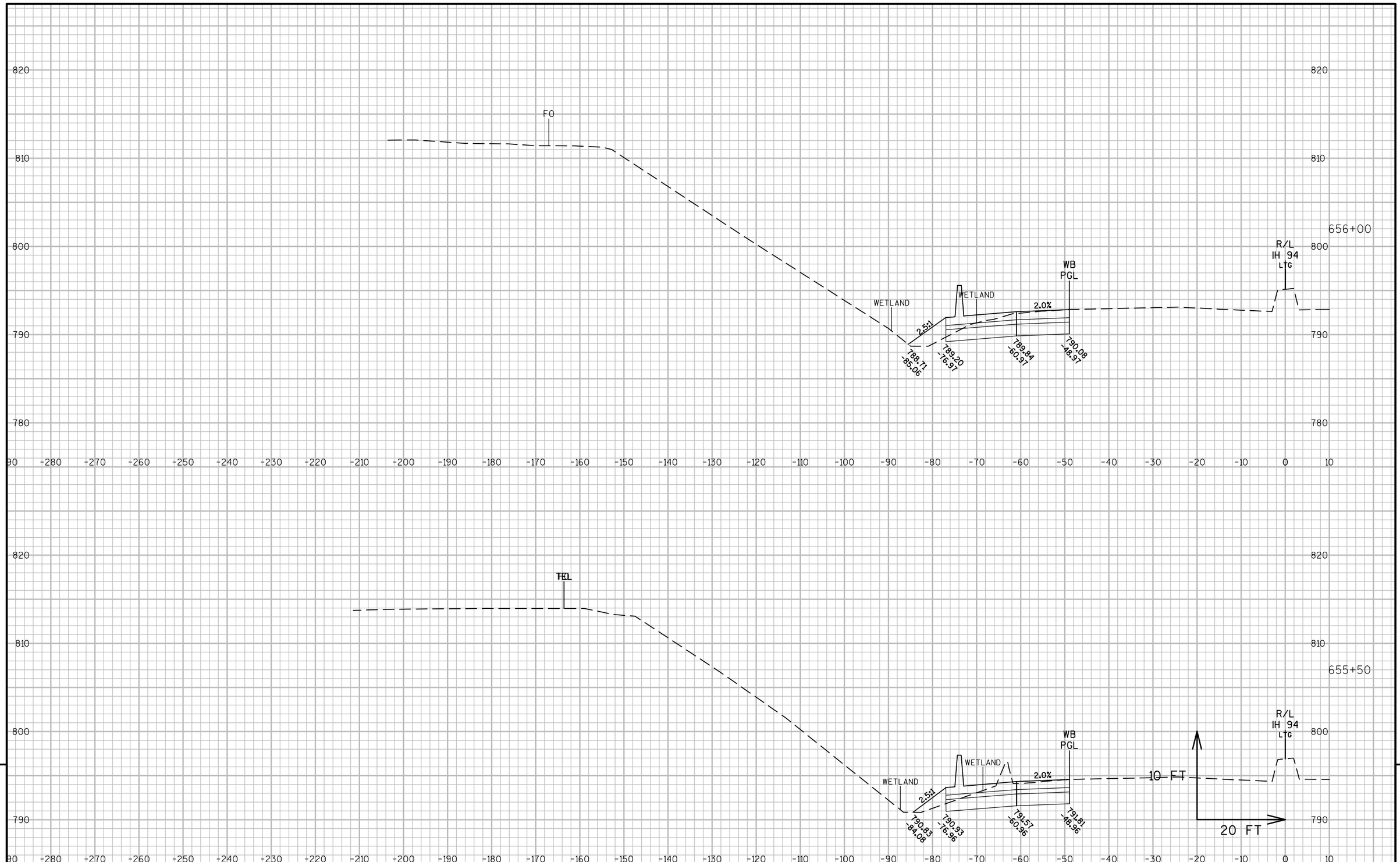
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 569	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (79)

PLOT DATE : 5/1/2017 10:16 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



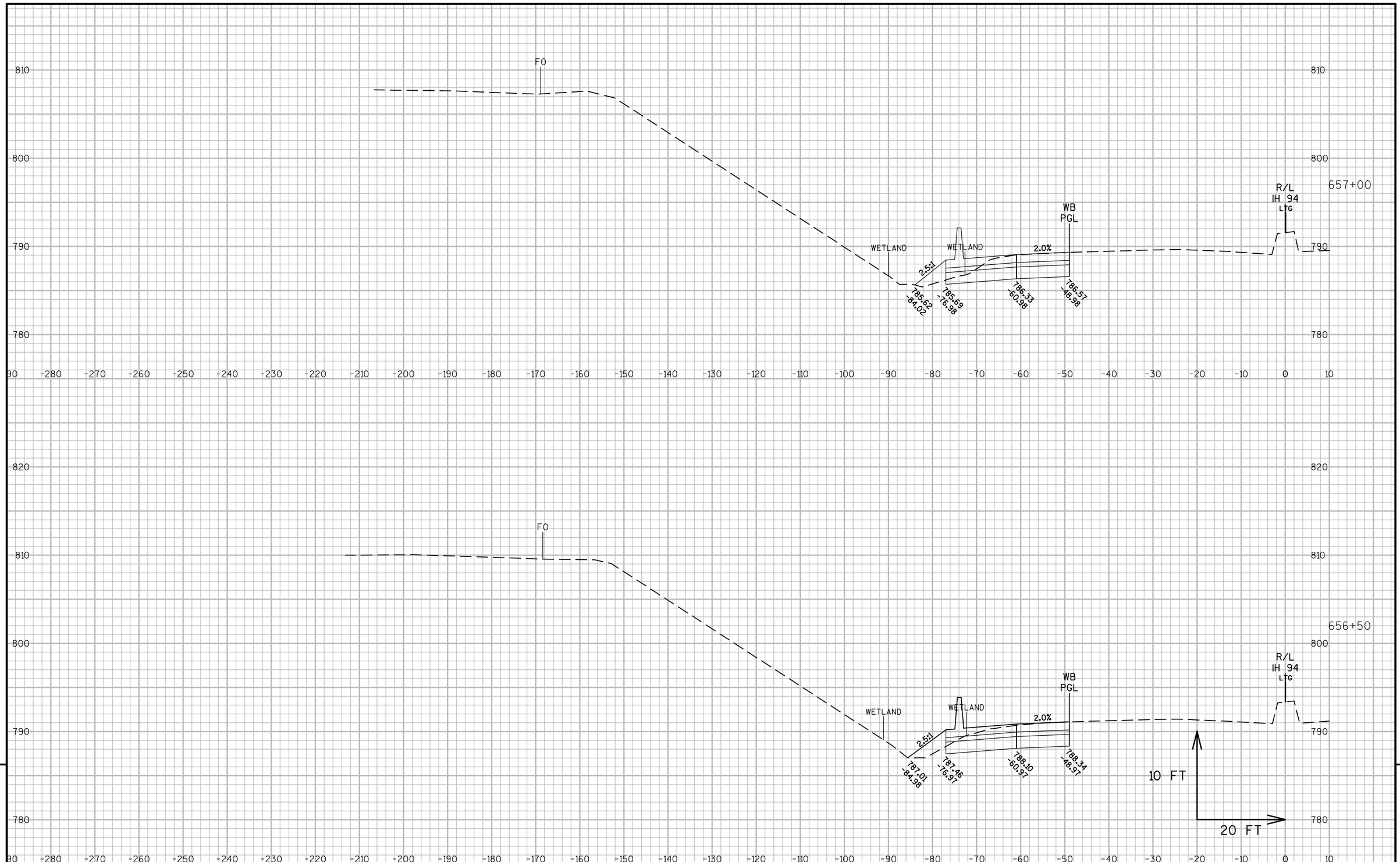
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 570	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (80)

PLOT DATE : 5/1/2017 10:16 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



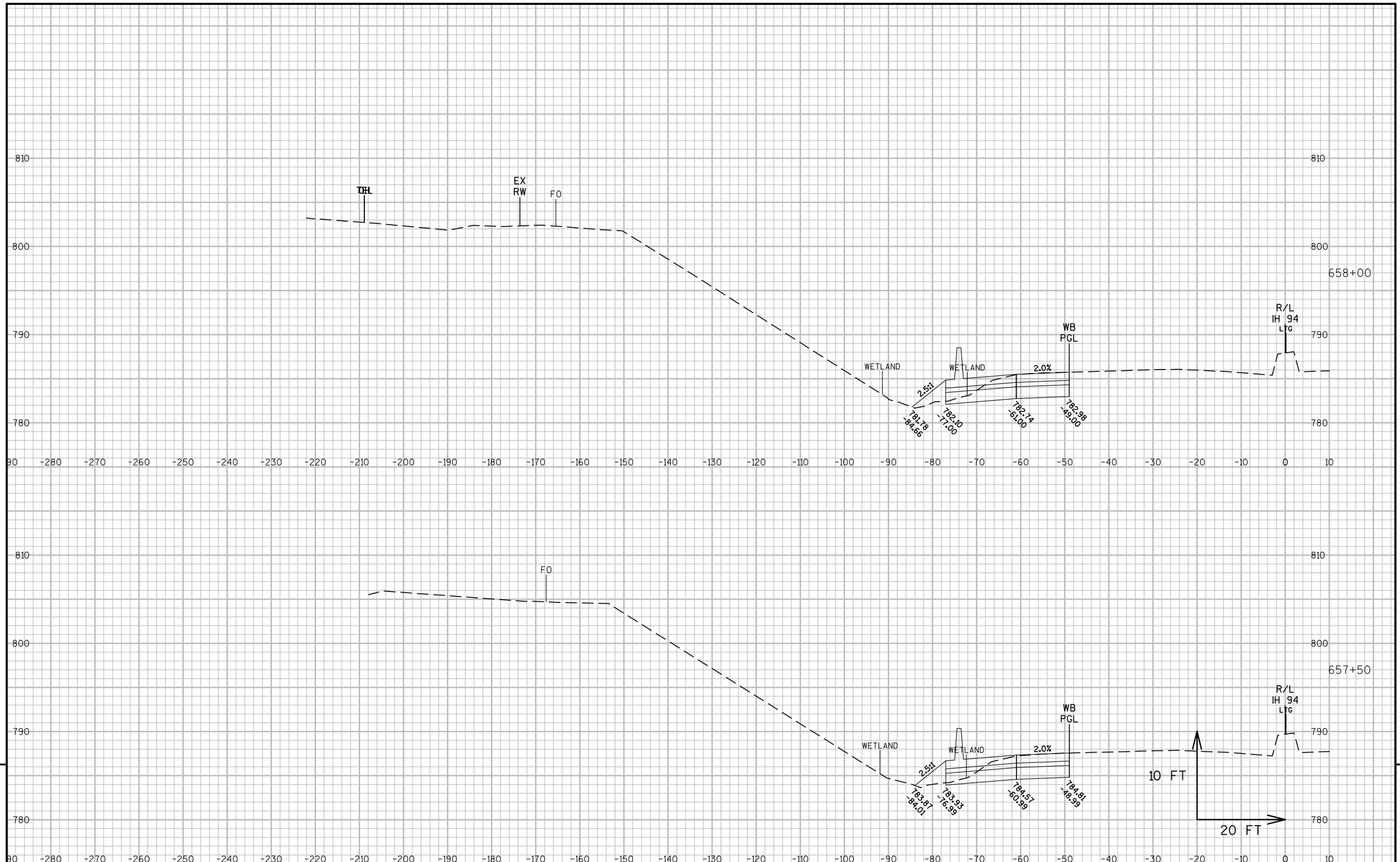
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 571	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (81)

PLOT DATE : 5/1/2017 10:17 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



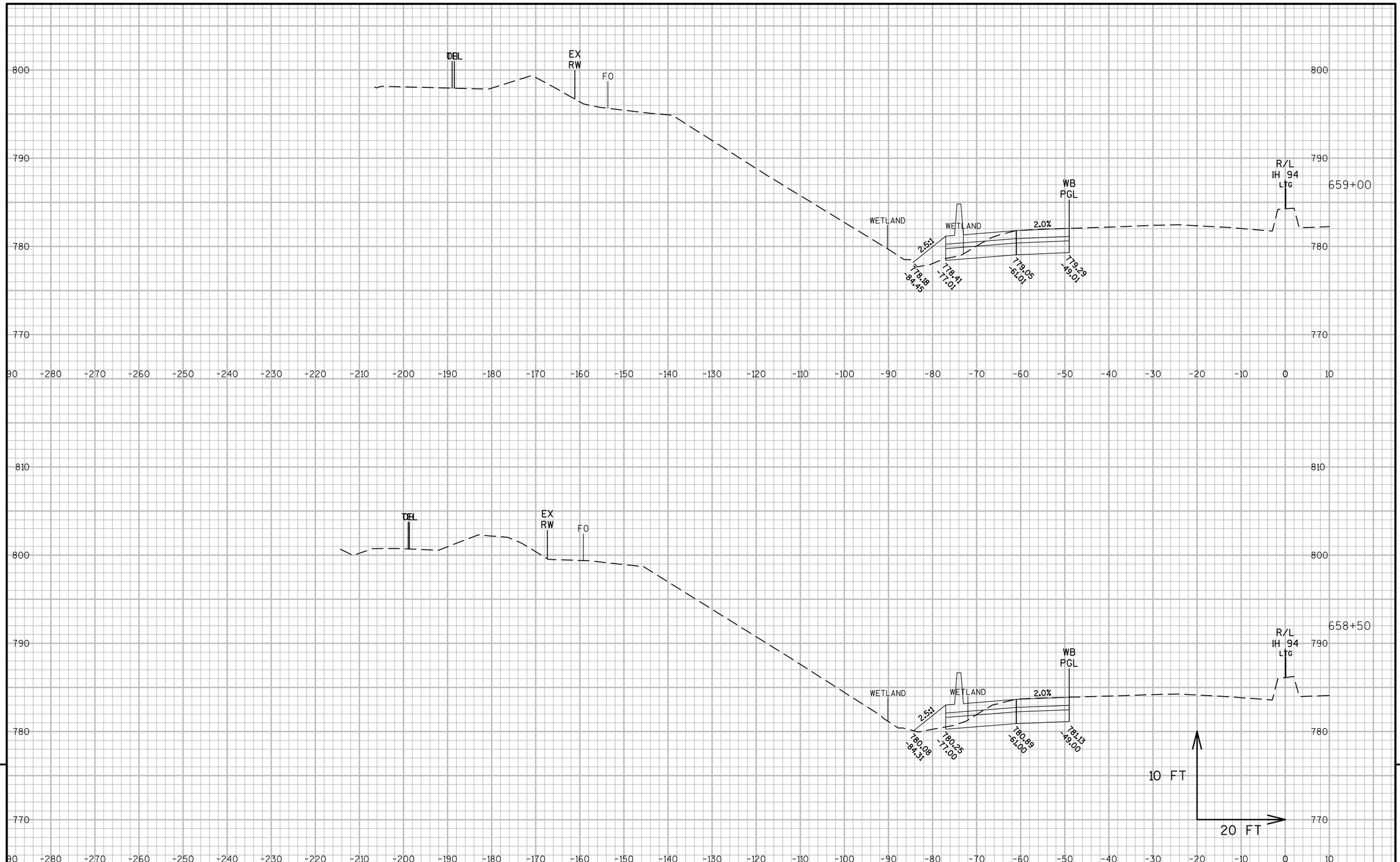
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 572	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (82)

PLOT DATE : 5/1/2017 10:17 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



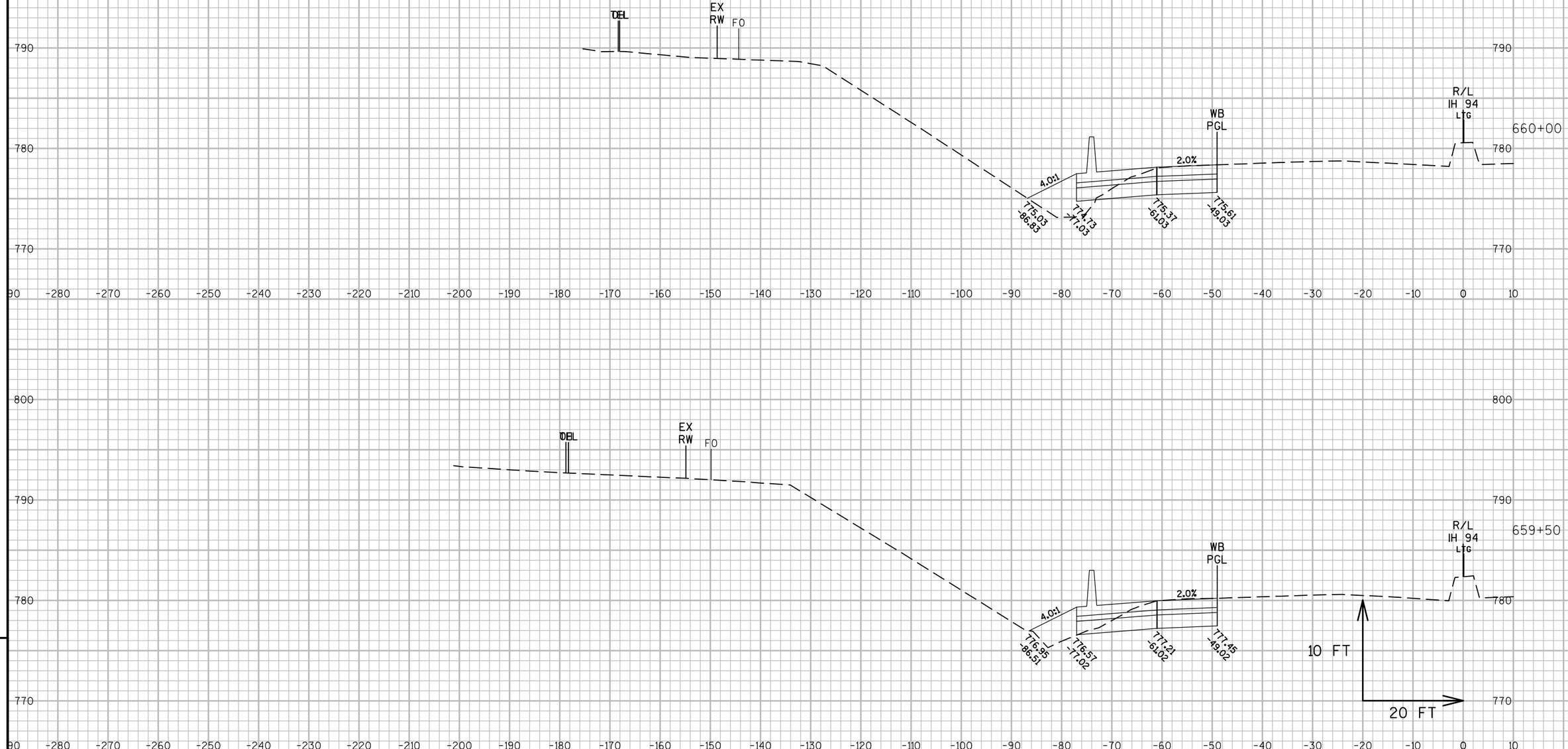
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 573	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (83)

PLOT DATE : 5/1/2017 10:17 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



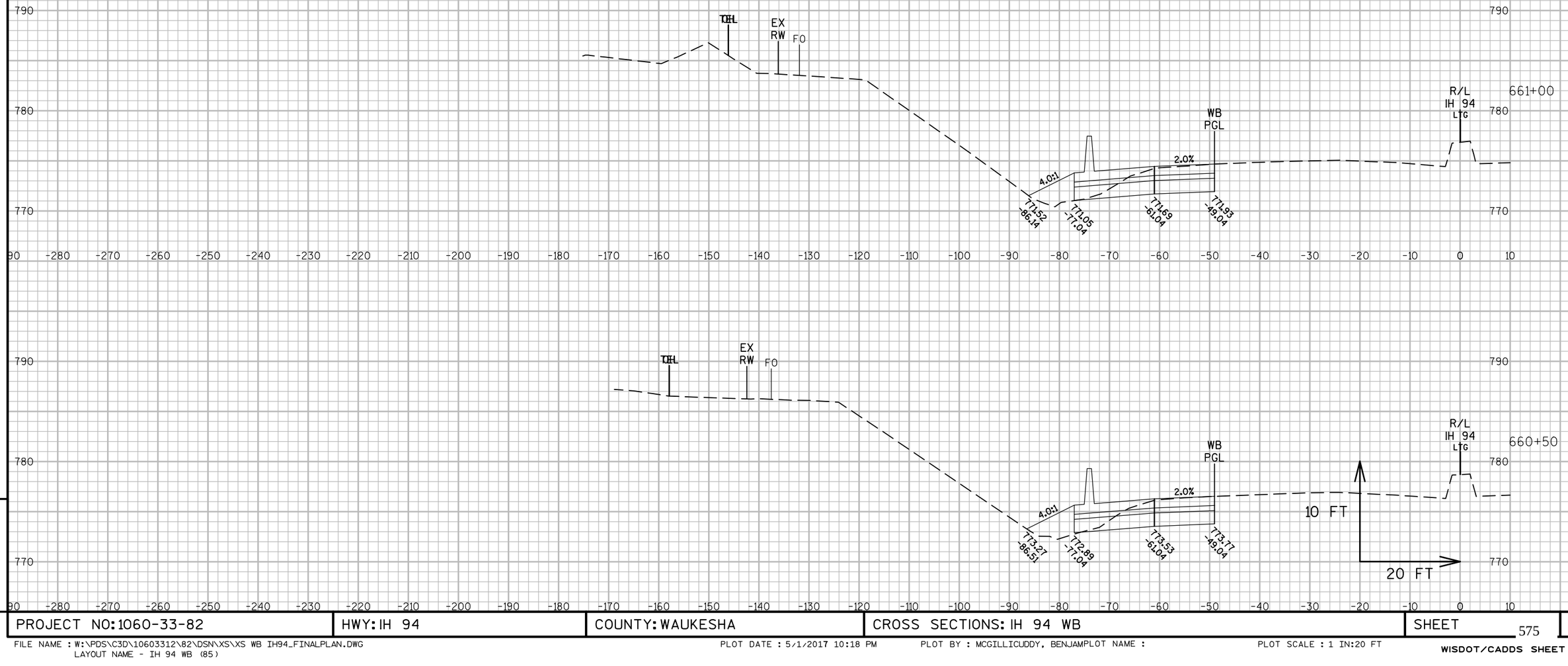
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 574	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (84)

PLOT DATE : 5/1/2017 10:17 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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9

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 575	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (85)

PLOT DATE : 5/1/2017 10:18 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

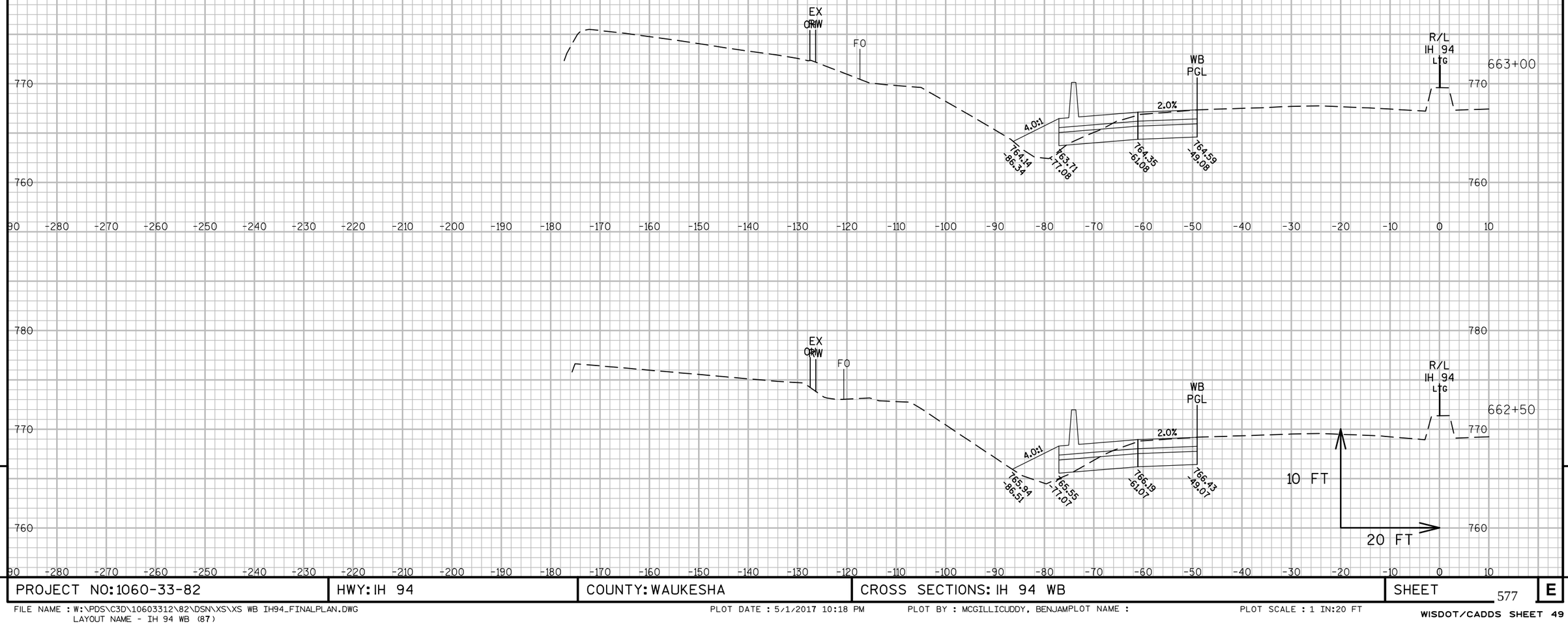


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 576	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (86)

PLOT DATE : 5/1/2017 10:18 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

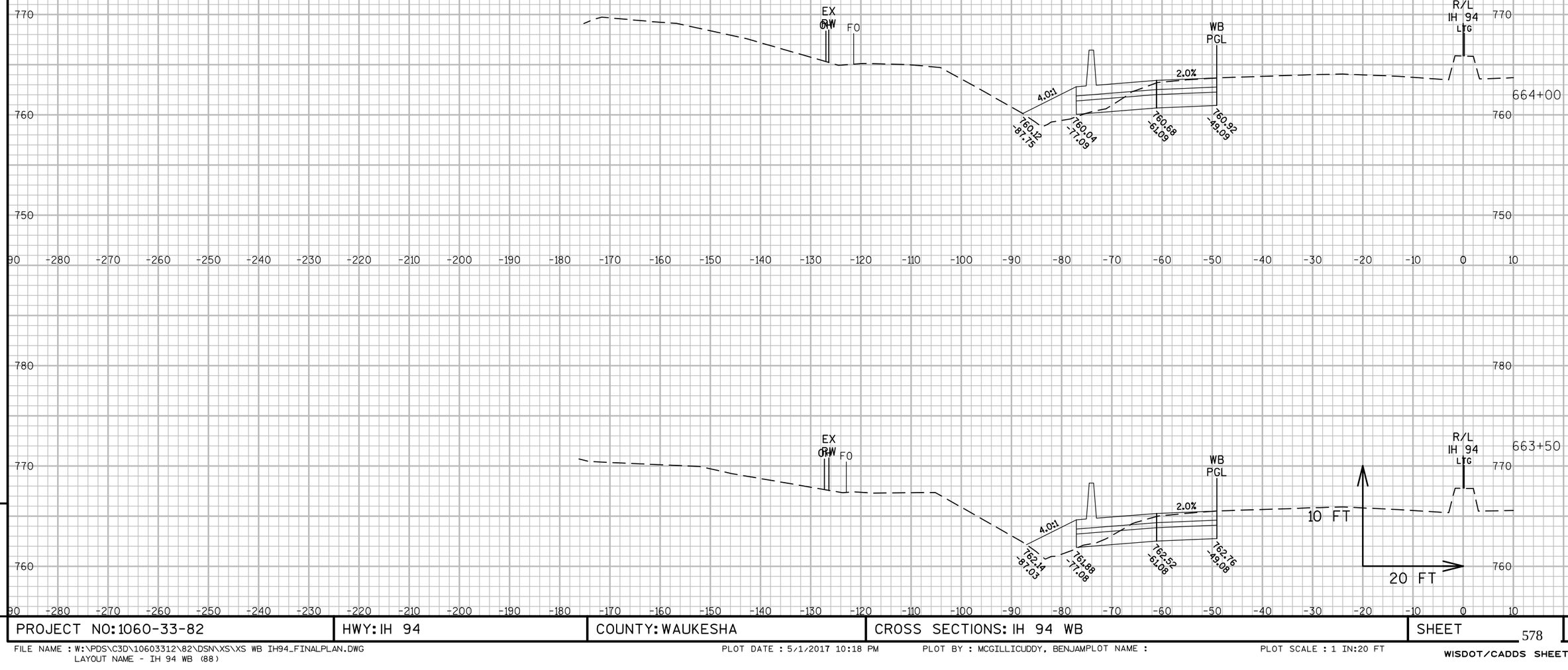


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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 577	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (87)
PLOT DATE : 5/1/2017 10:18 PM
PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :
PLOT SCALE : 1 IN:20 FT



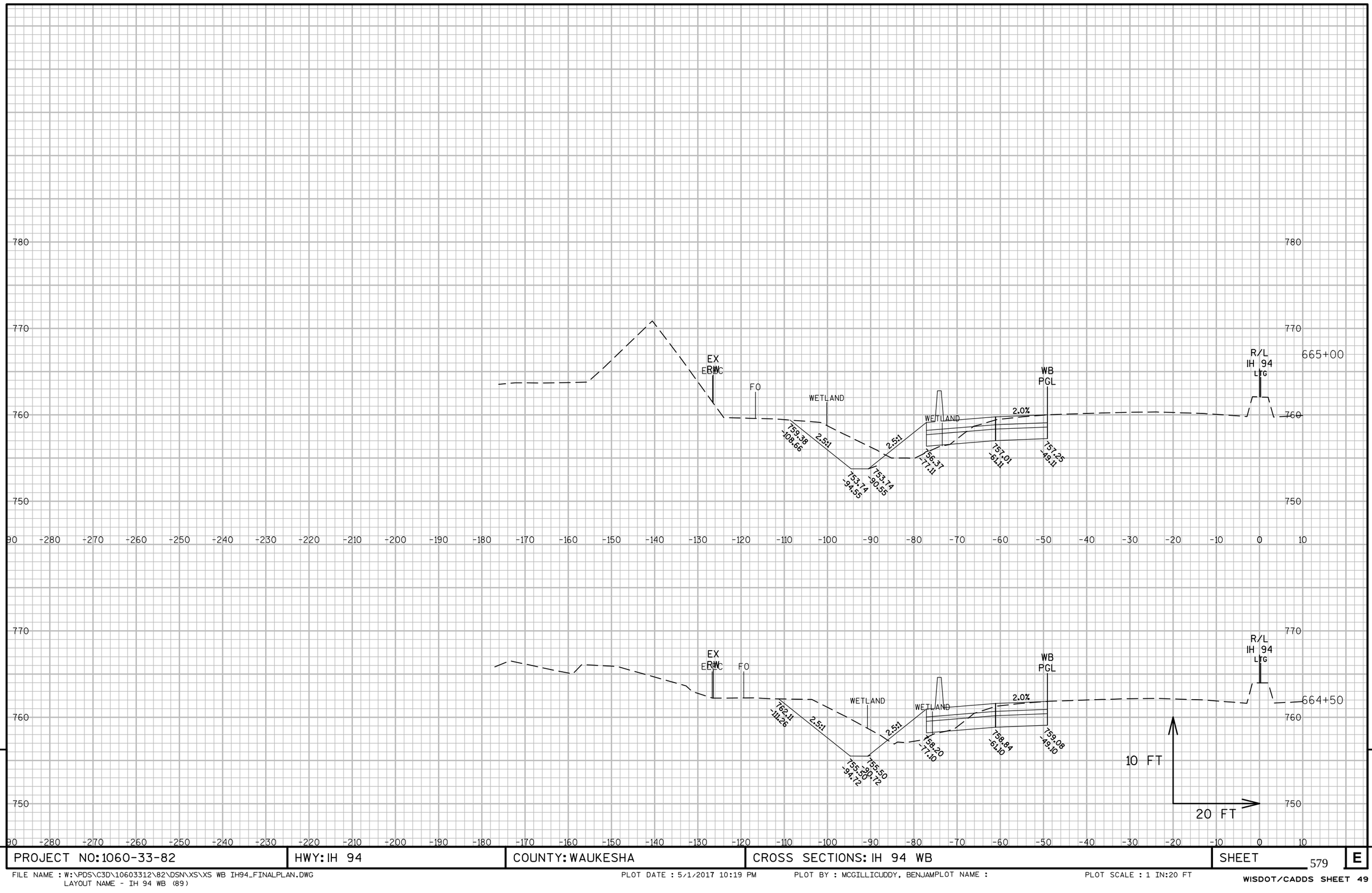
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 578	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (88)

PLOT DATE : 5/1/2017 10:18 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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9

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 579	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (89)

PLOT DATE : 5/1/2017 10:19 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

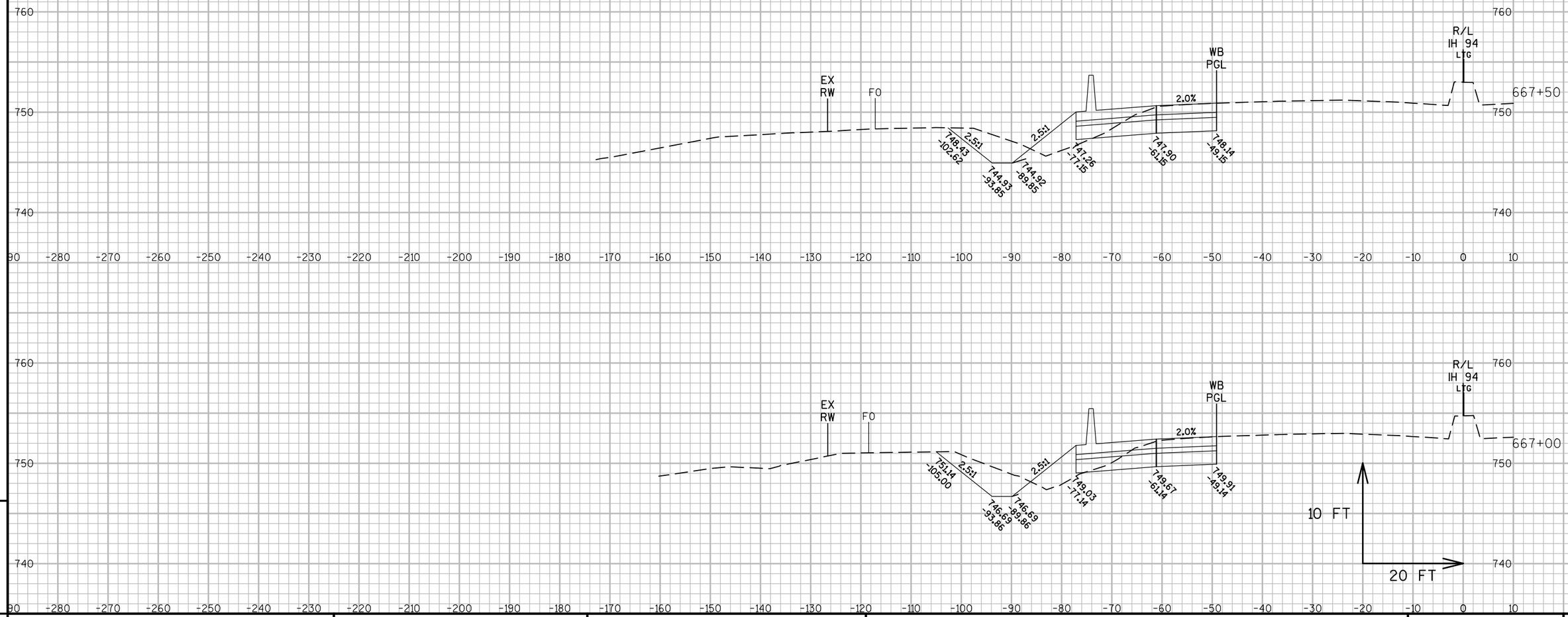
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 580	E

9

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (90)

PLOT DATE : 5/1/2017 10:19 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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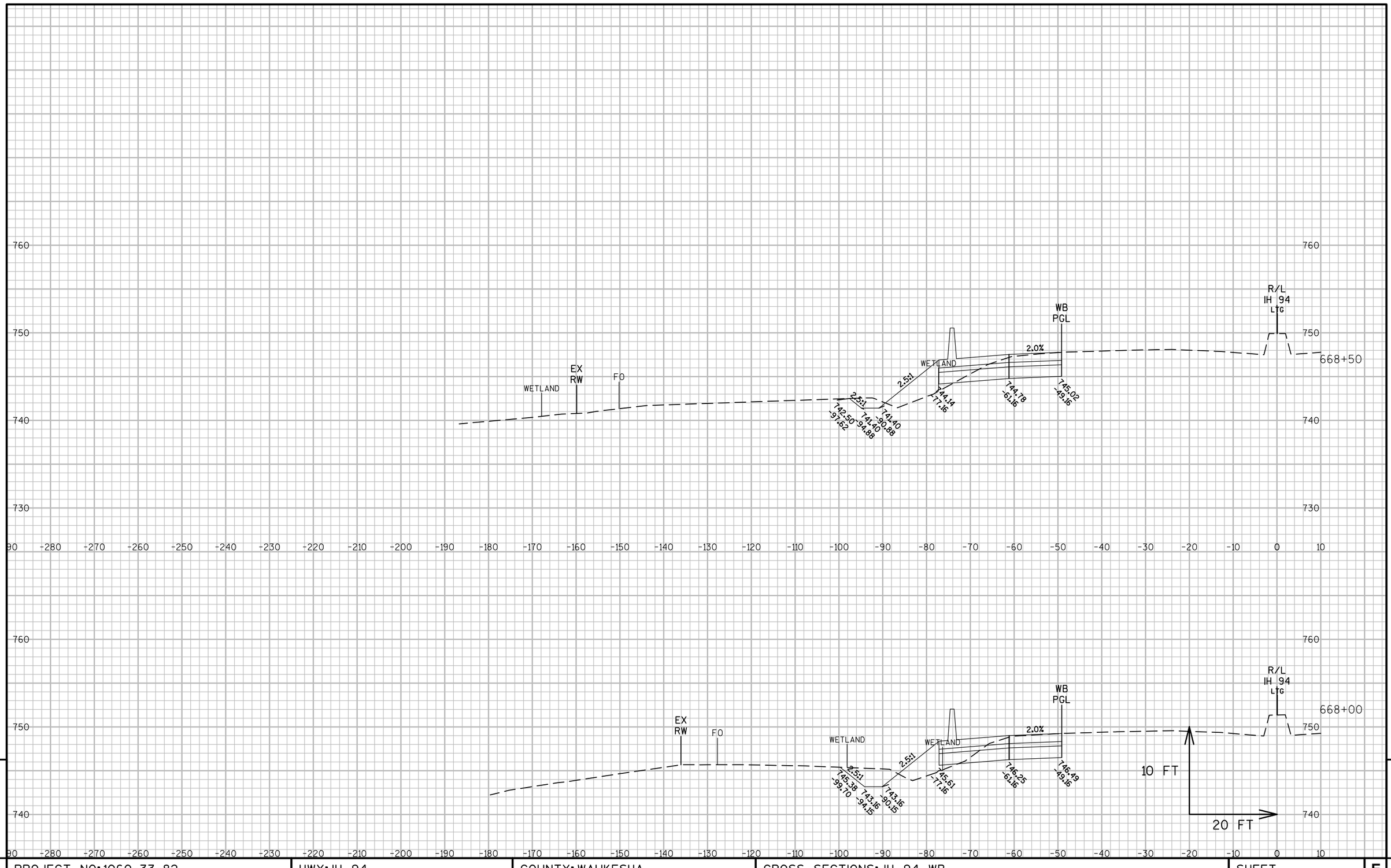
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 581	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (91)

PLOT DATE : 5/1/2017 10:19 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

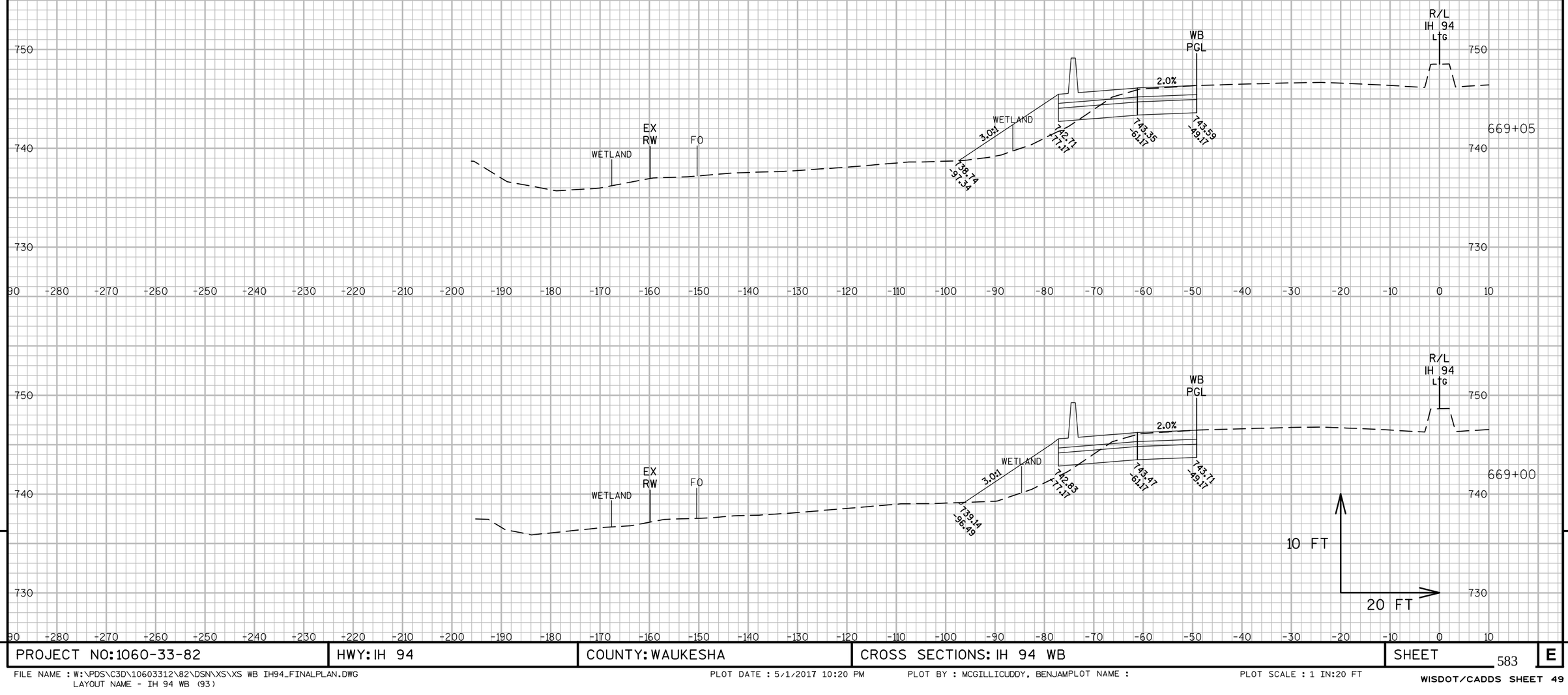


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 582	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (92)

PLOT DATE : 5/1/2017 10:19 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

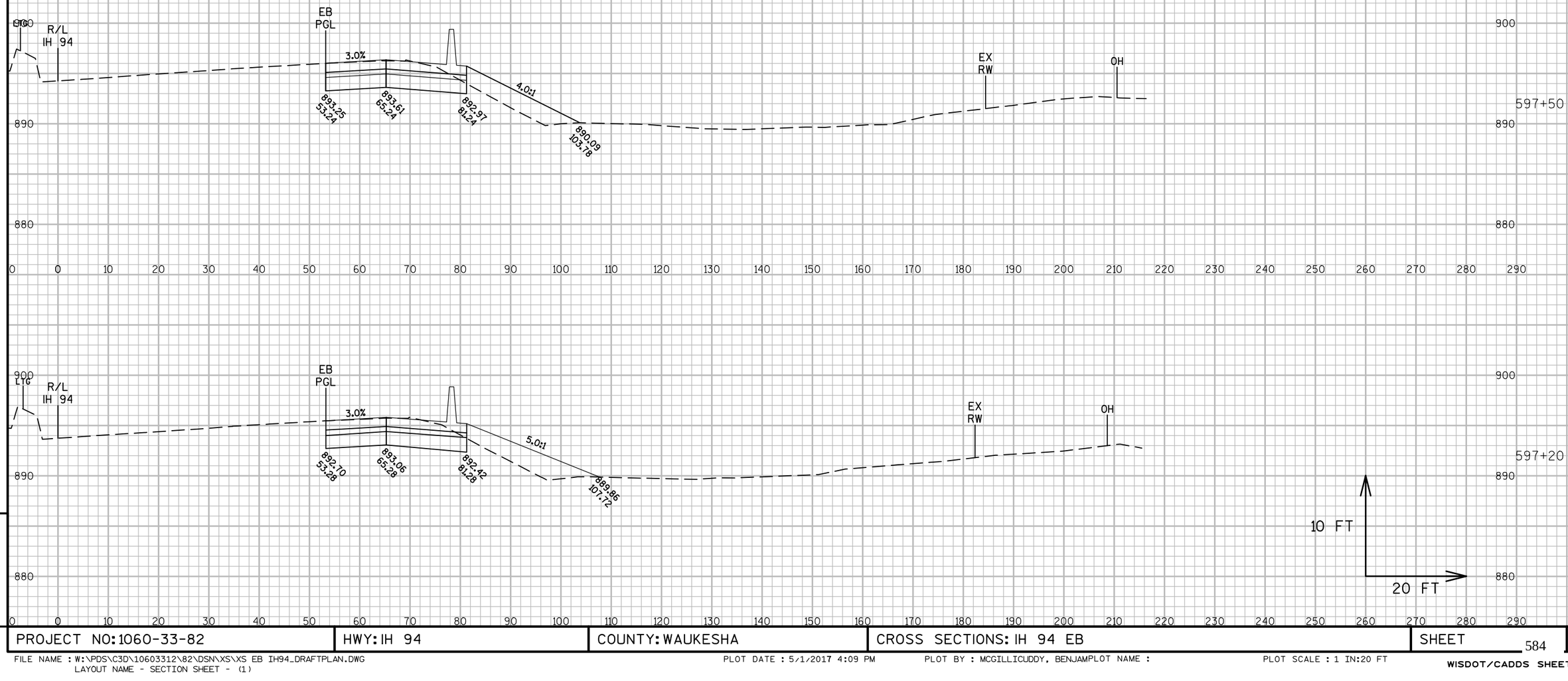


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 WB	SHEET 583	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS WB IH94_FINALPLAN.DWG
LAYOUT NAME - IH 94 WB (93)

PLOT DATE : 5/1/2017 10:20 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

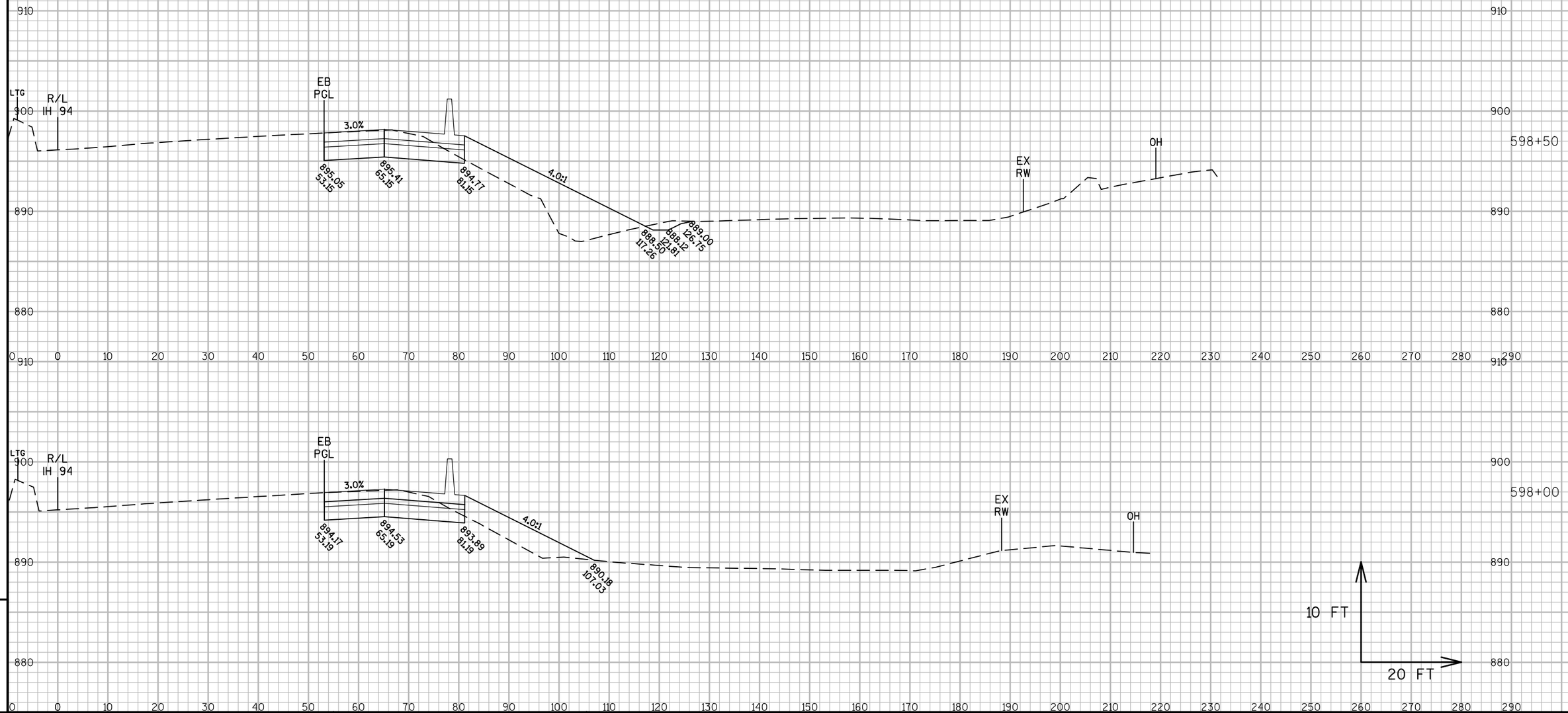


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 584	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (1)

PLOT DATE : 5/1/2017 4:09 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

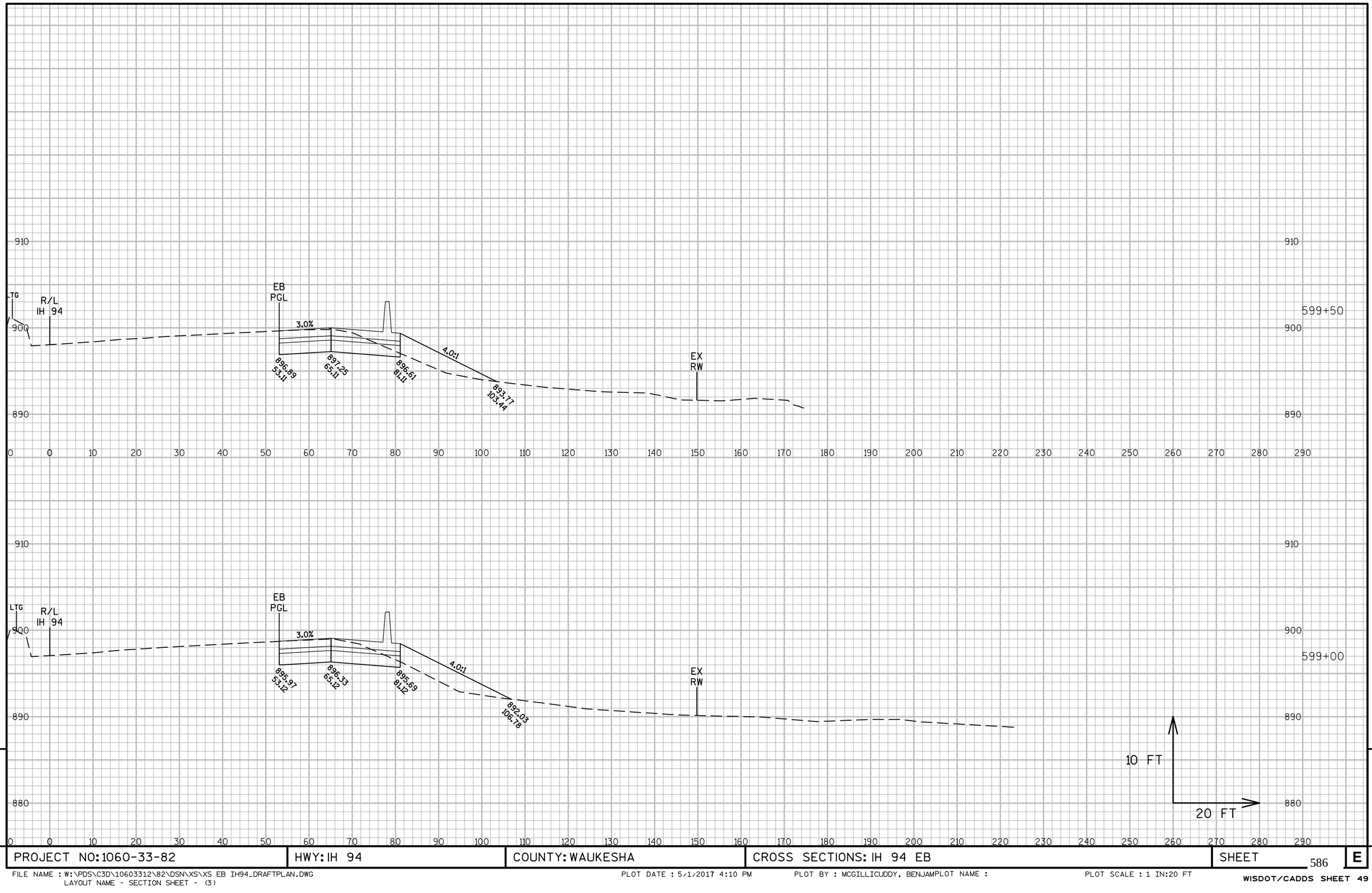


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 585	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (2)

PLOT DATE : 5/1/2017 4:10 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

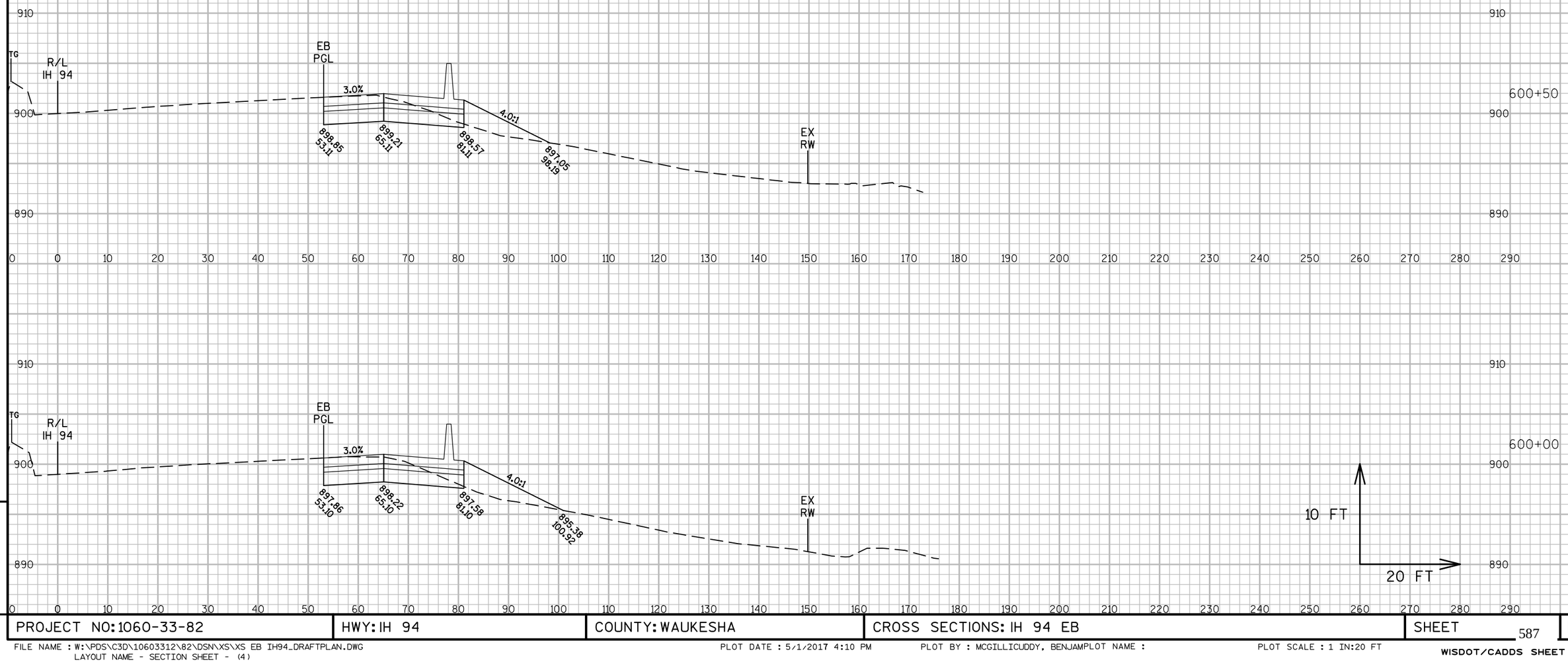
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 586	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (3)

PLOT DATE : 5/1/2017 4:10 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



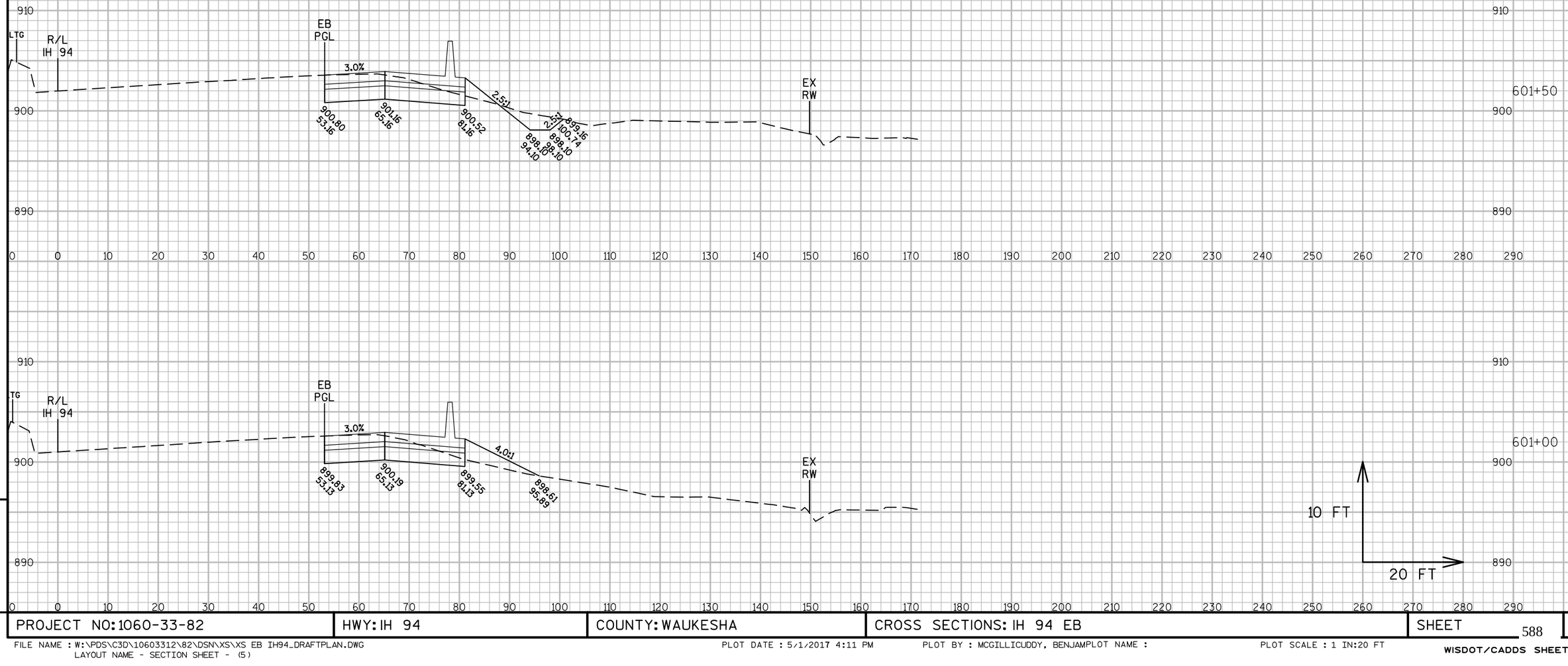
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 587	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (4)

PLOT DATE : 5/1/2017 4:10 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



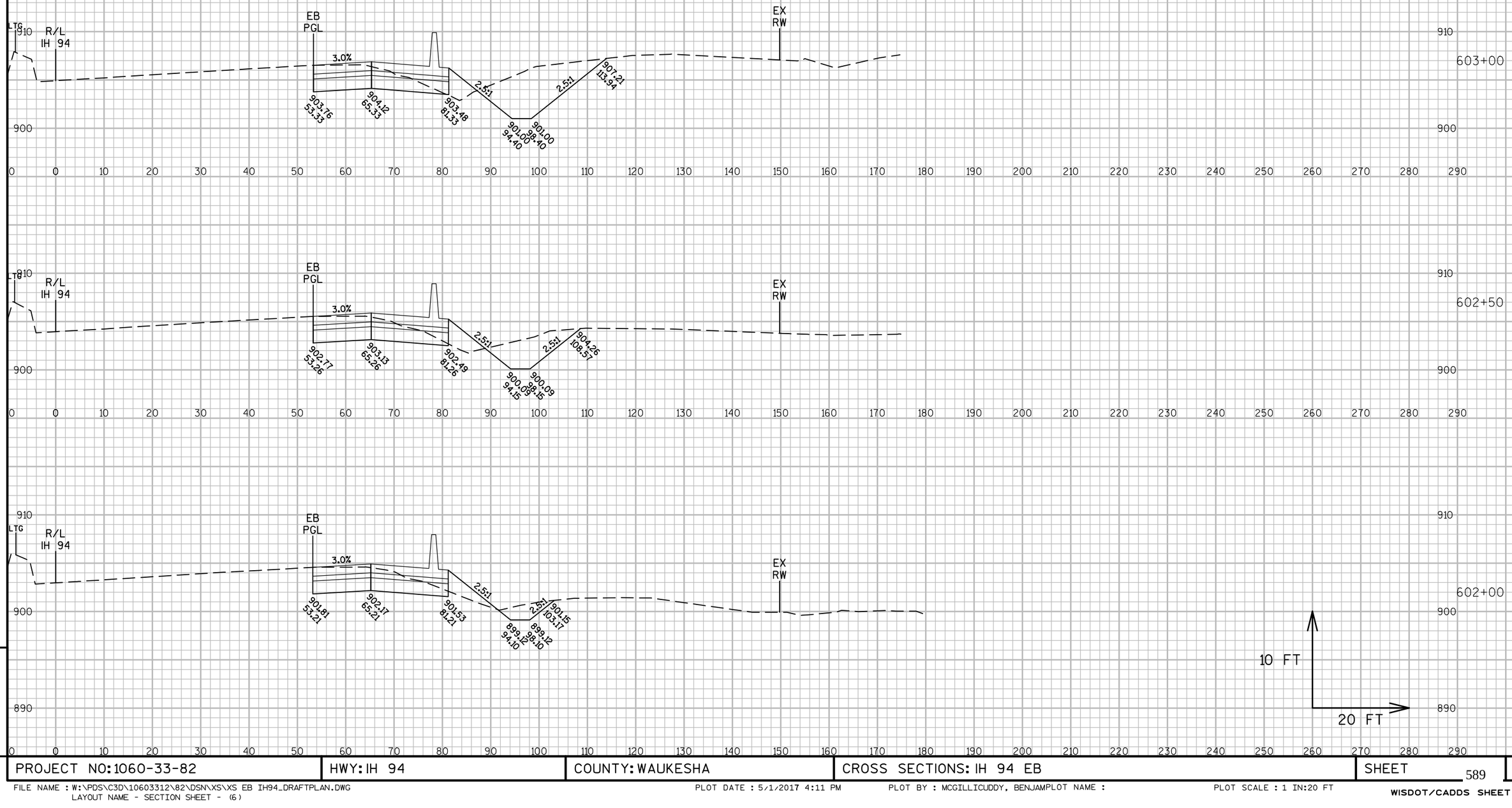
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 588	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (5)

PLOT DATE : 5/1/2017 4:11 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

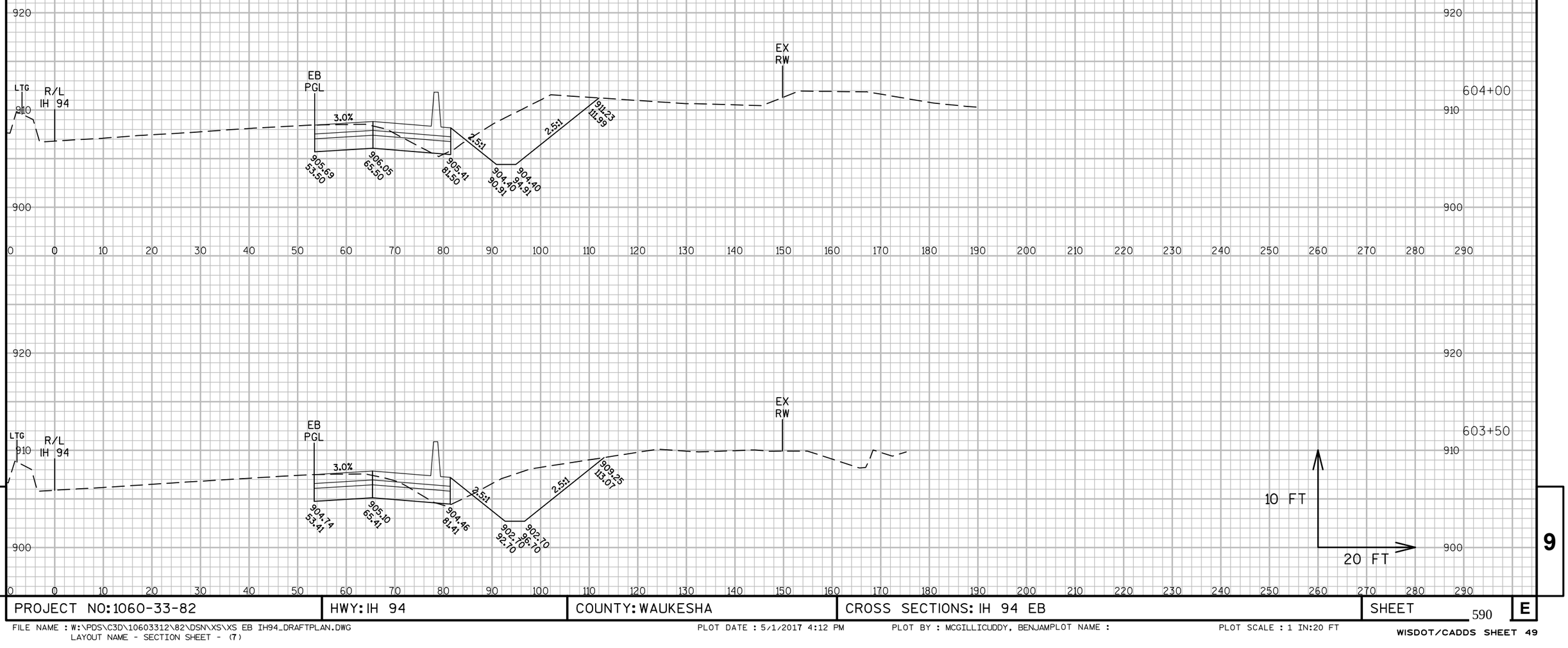
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 589	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (6)

PLOT DATE : 5/1/2017 4:11 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

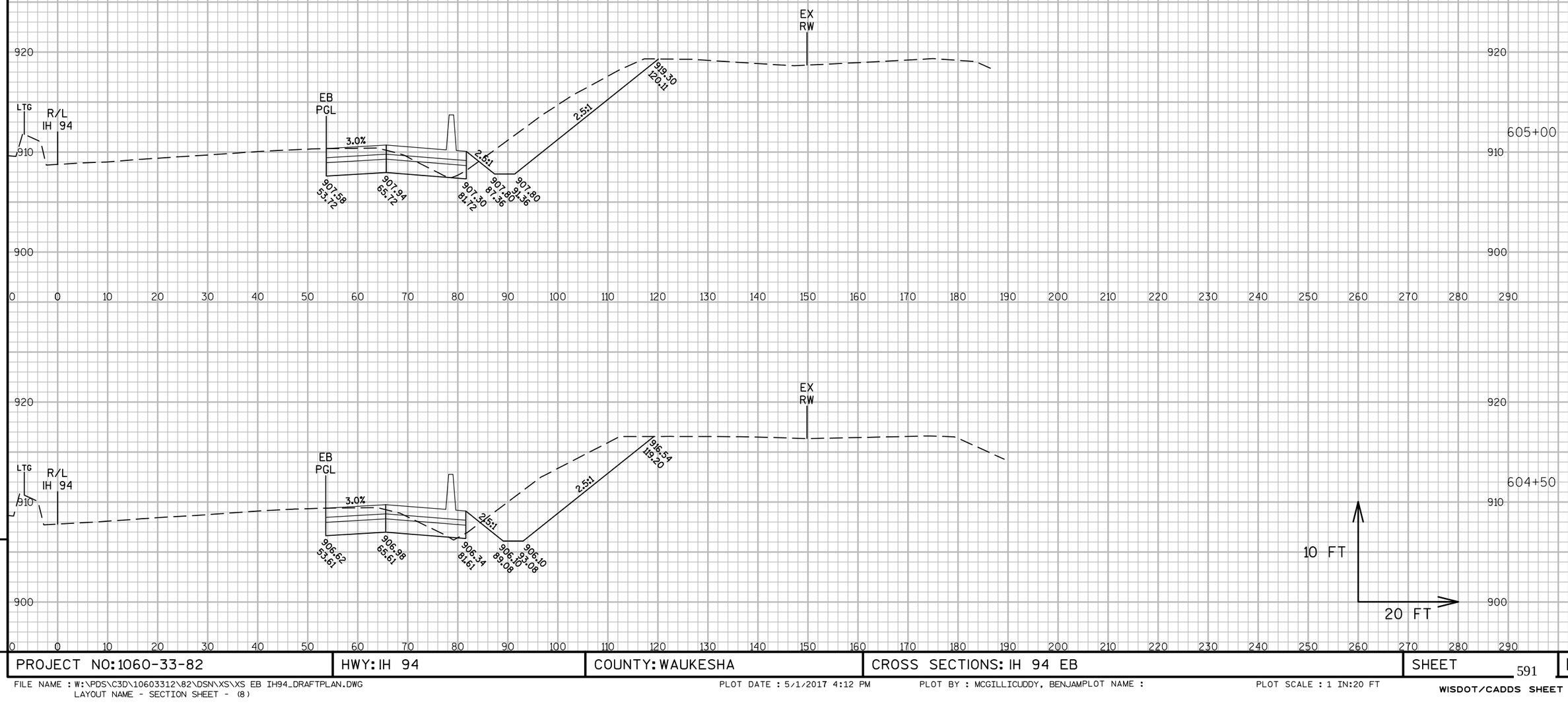
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 590	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (7)

PLOT DATE : 5/1/2017 4:12 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

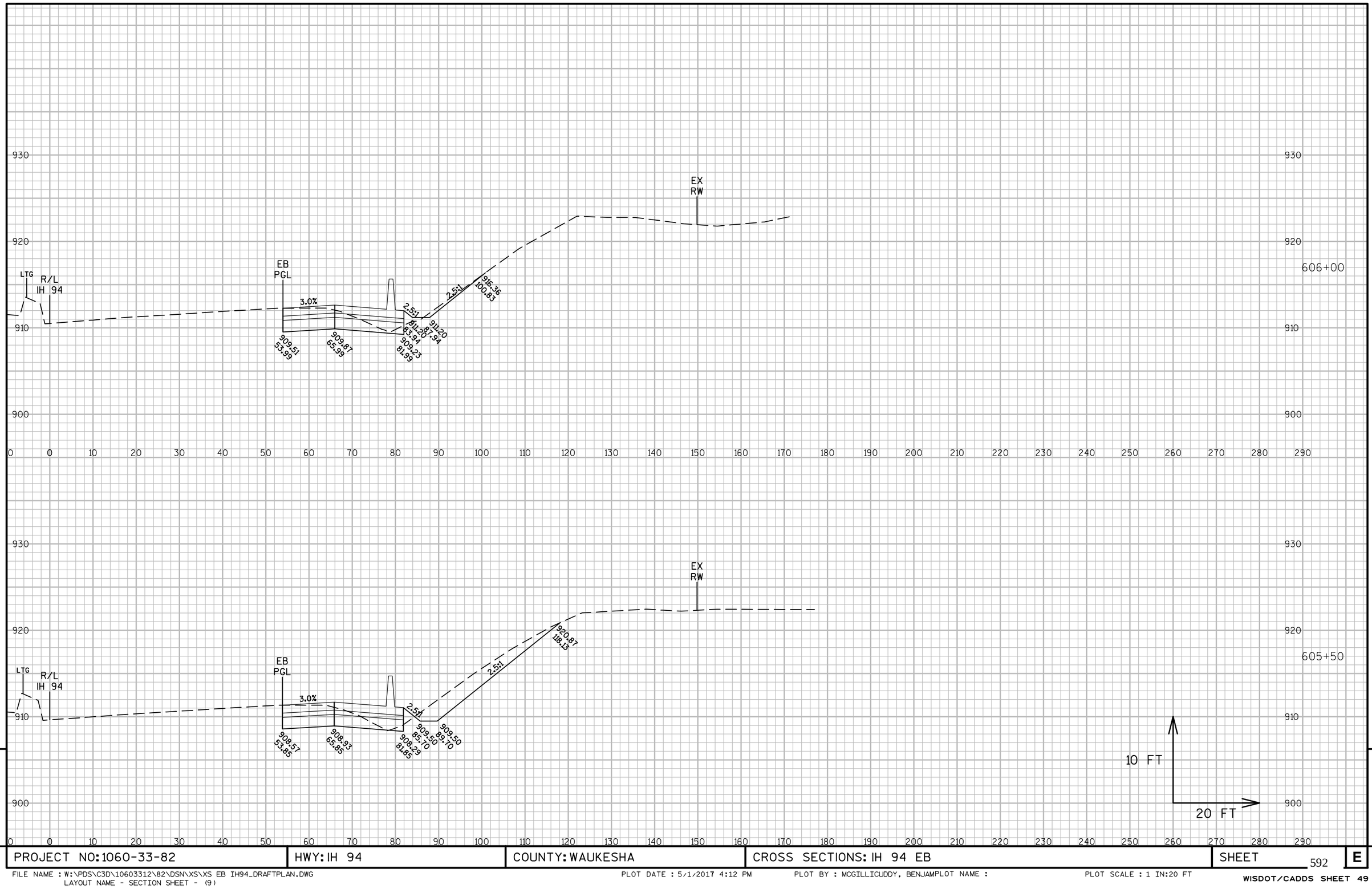


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 591	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (8)

PLOT DATE : 5/1/2017 4:12 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



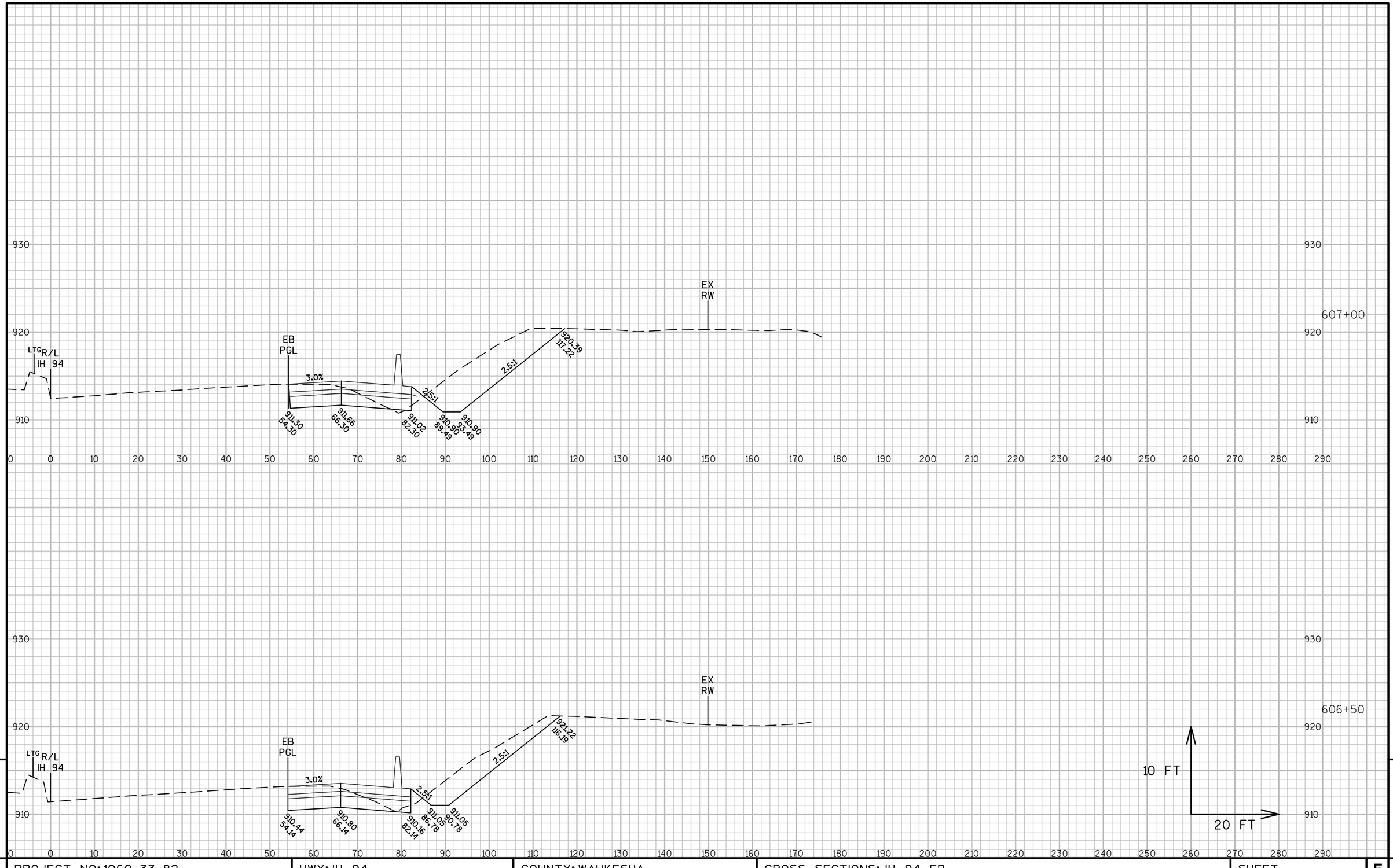
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 592	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (9)

PLOT DATE : 5/1/2017 4:12 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

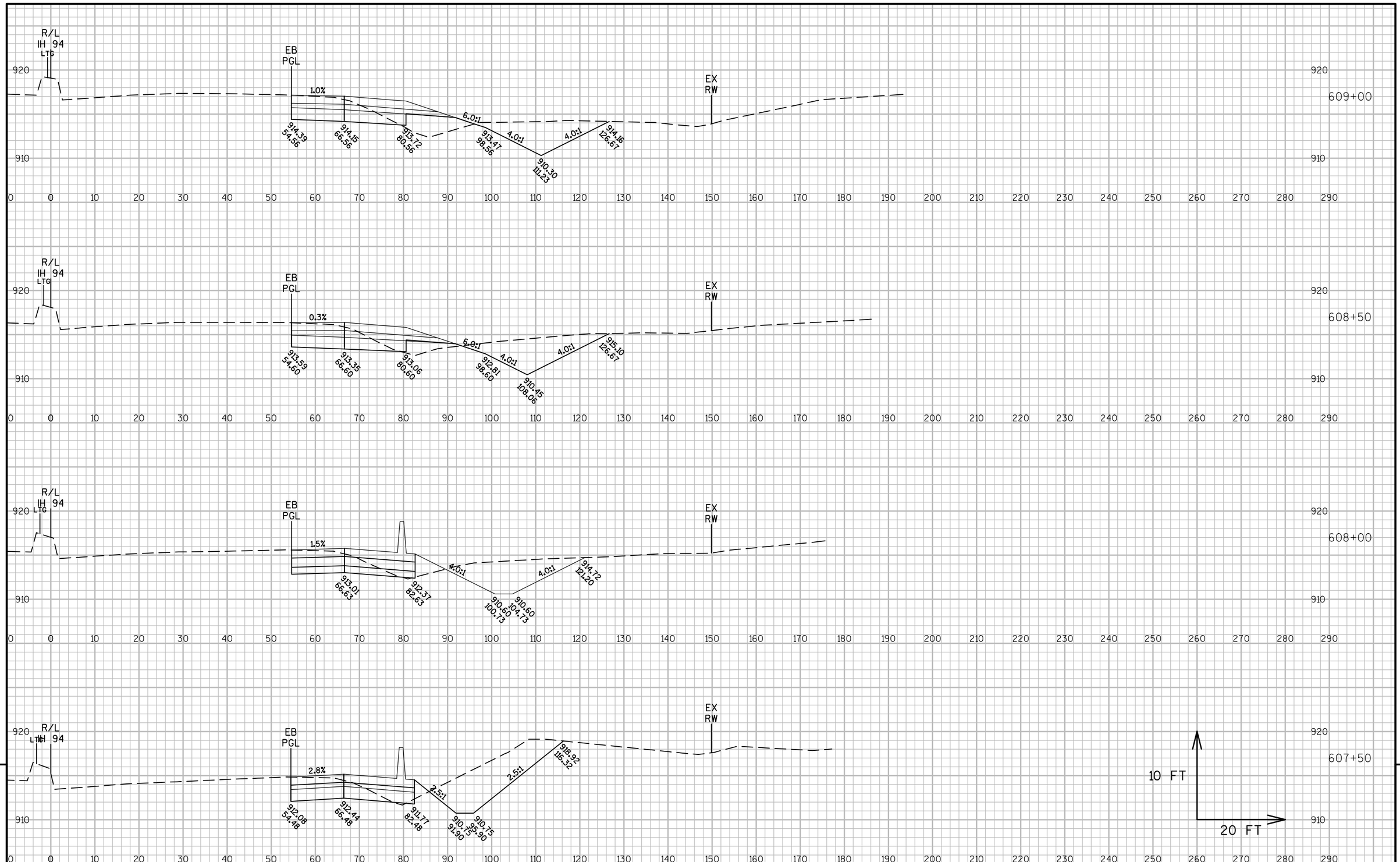


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 593	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (10)

PLOT DATE : 5/1/2017 4:13 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

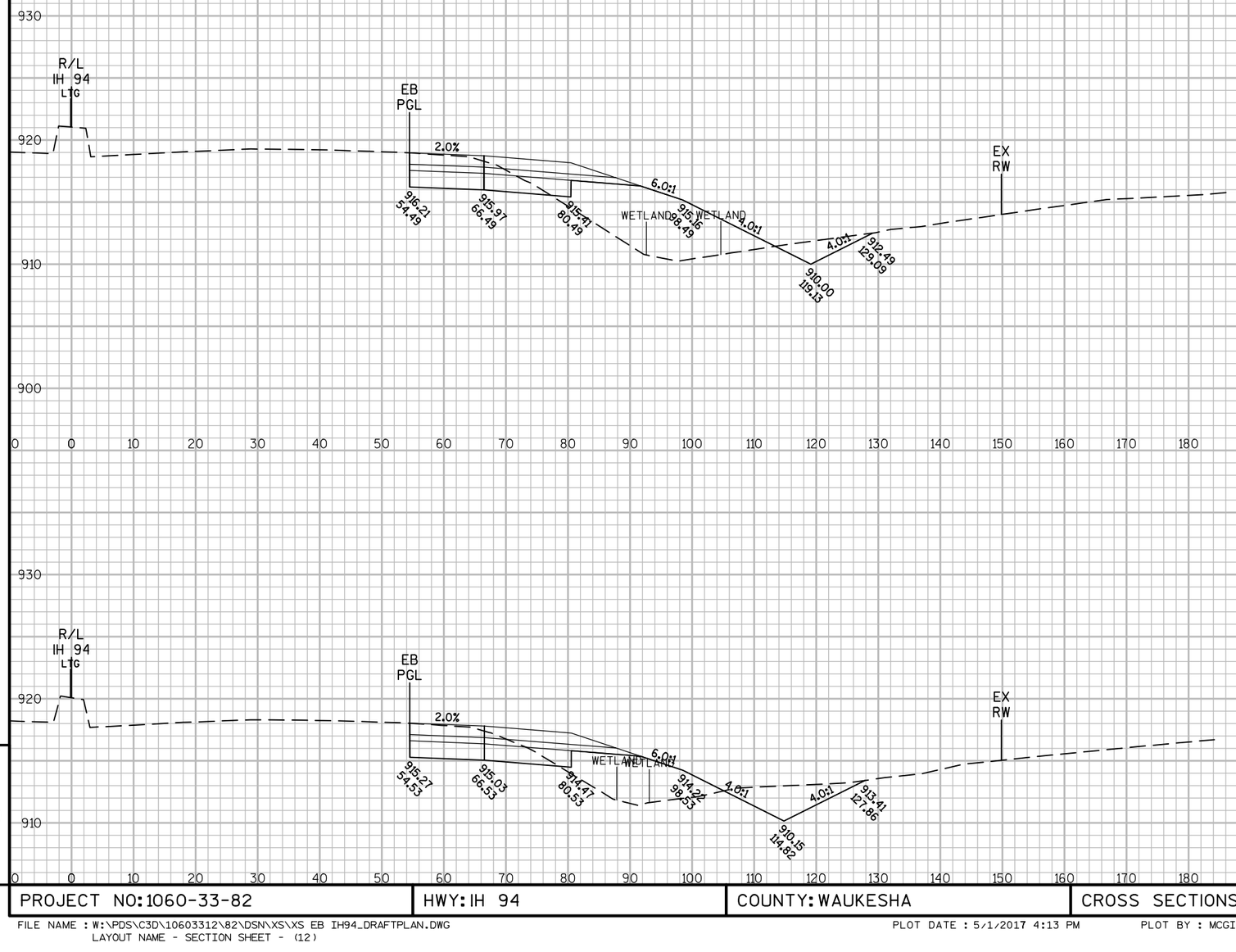
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 594	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (11)

PLOT DATE : 5/1/2017 4:13 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

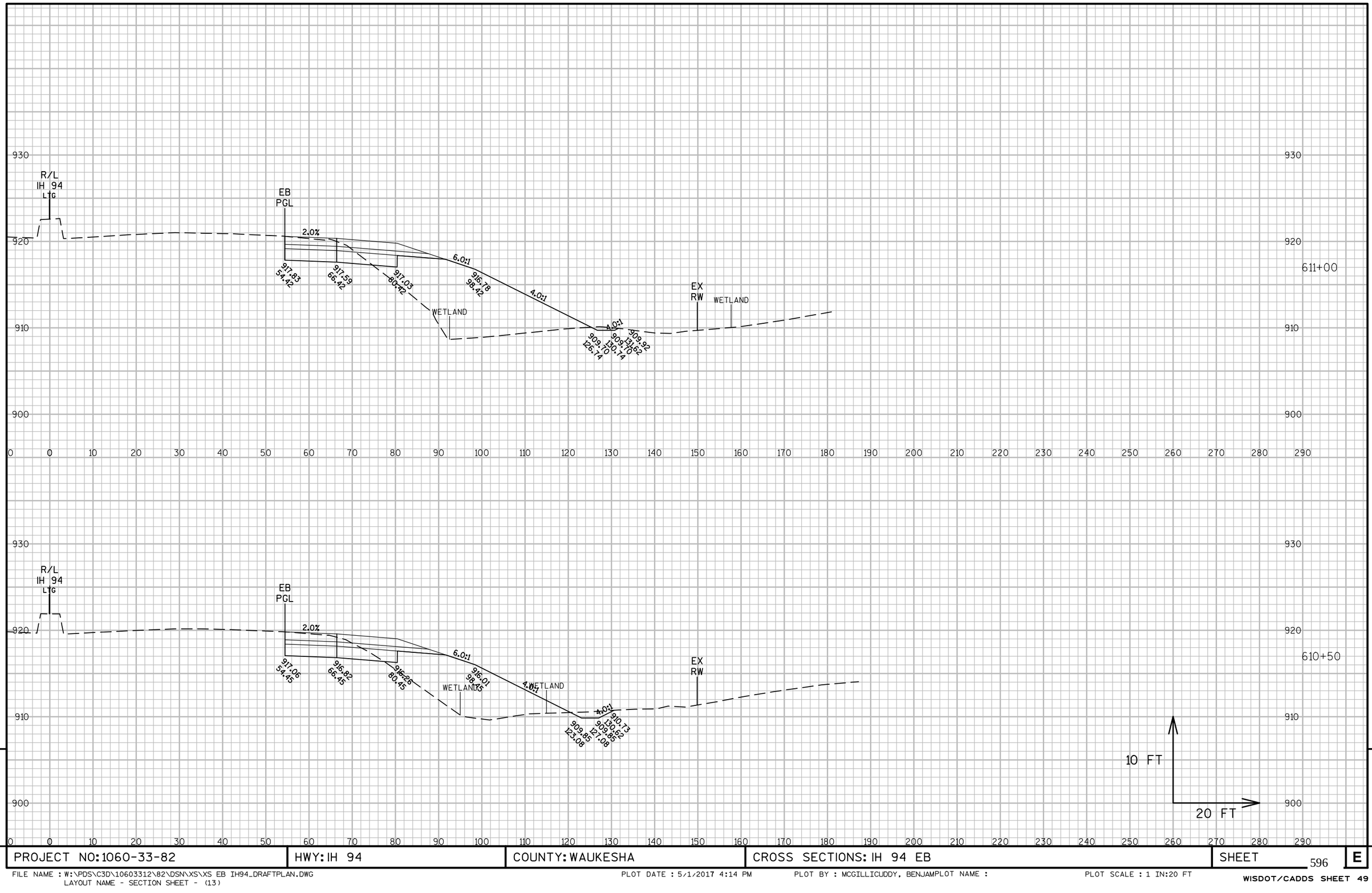
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 595	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (12)

PLOT DATE : 5/1/2017 4:13 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

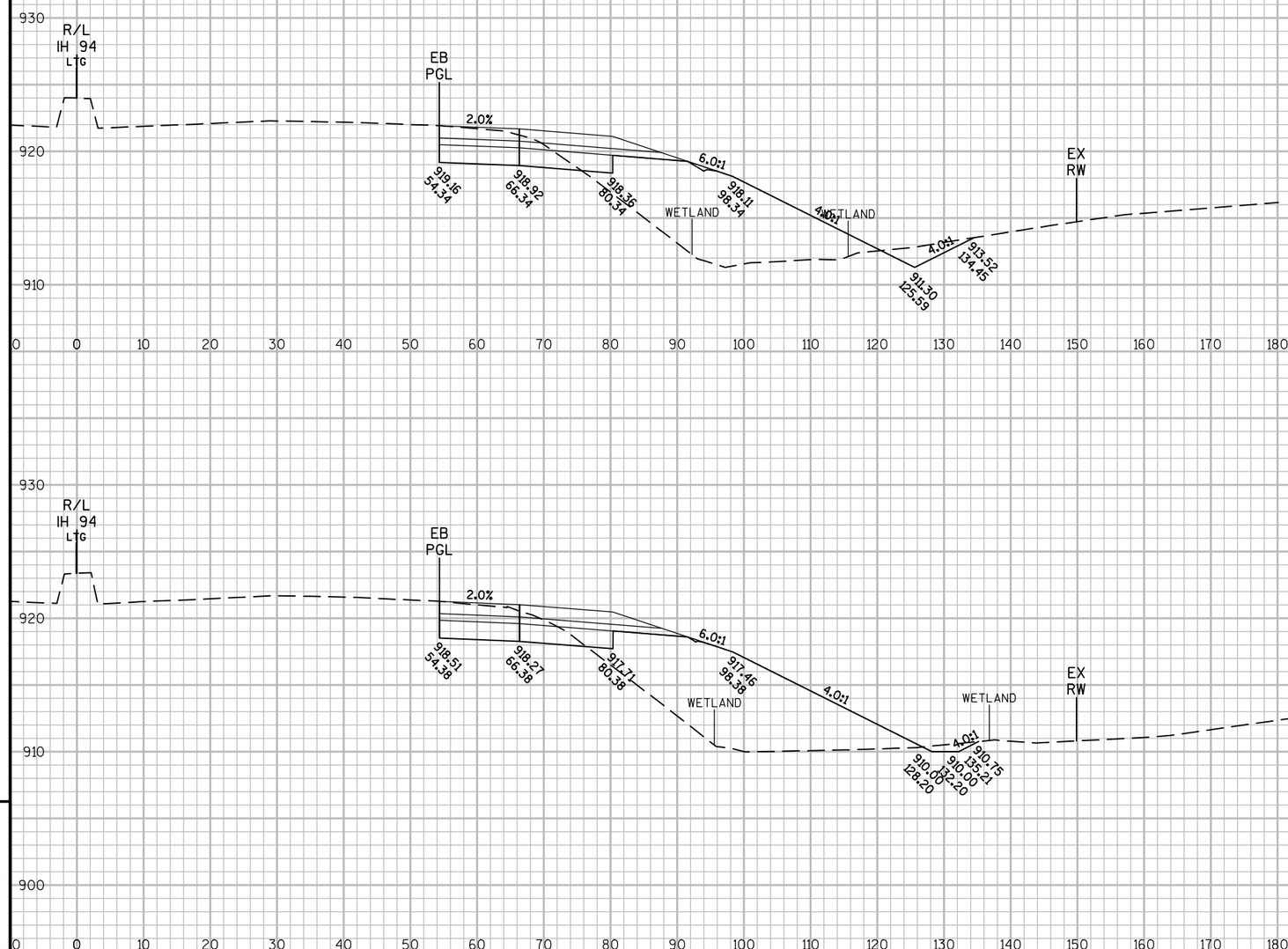
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 596	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (13)

PLOT DATE : 5/1/2017 4:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

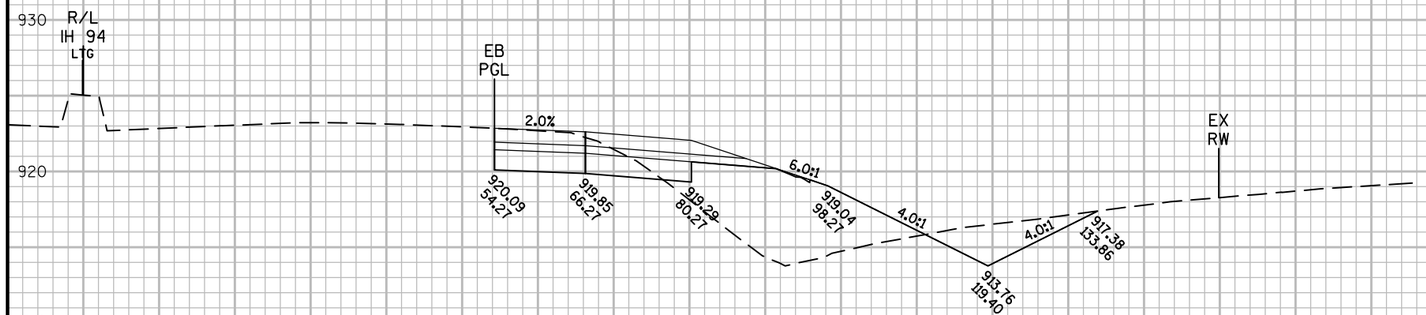


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 597 E

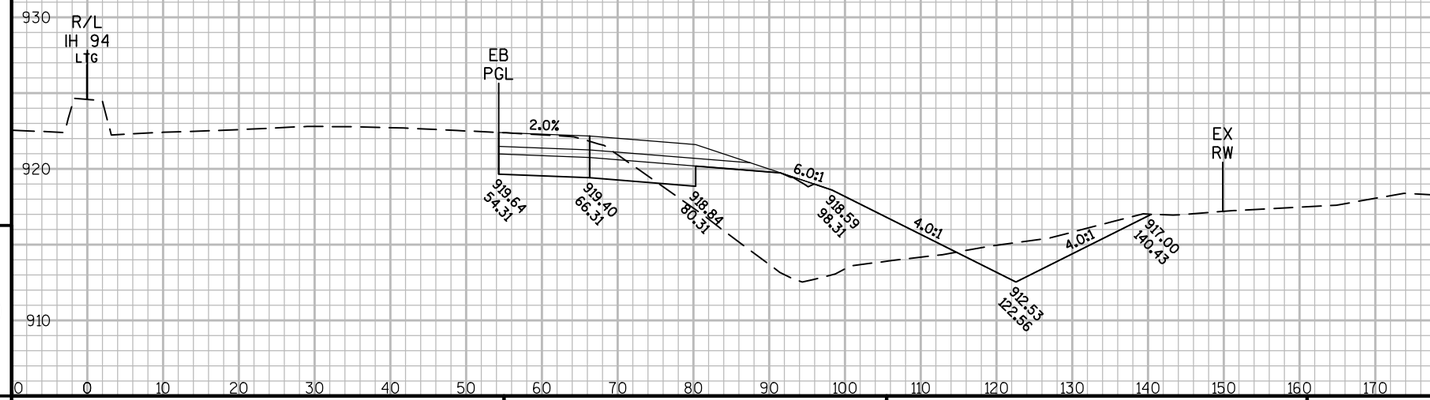
FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (14)

PLOT DATE : 5/1/2017 4:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



613+00



612+50

10 FT

20 FT

9

9

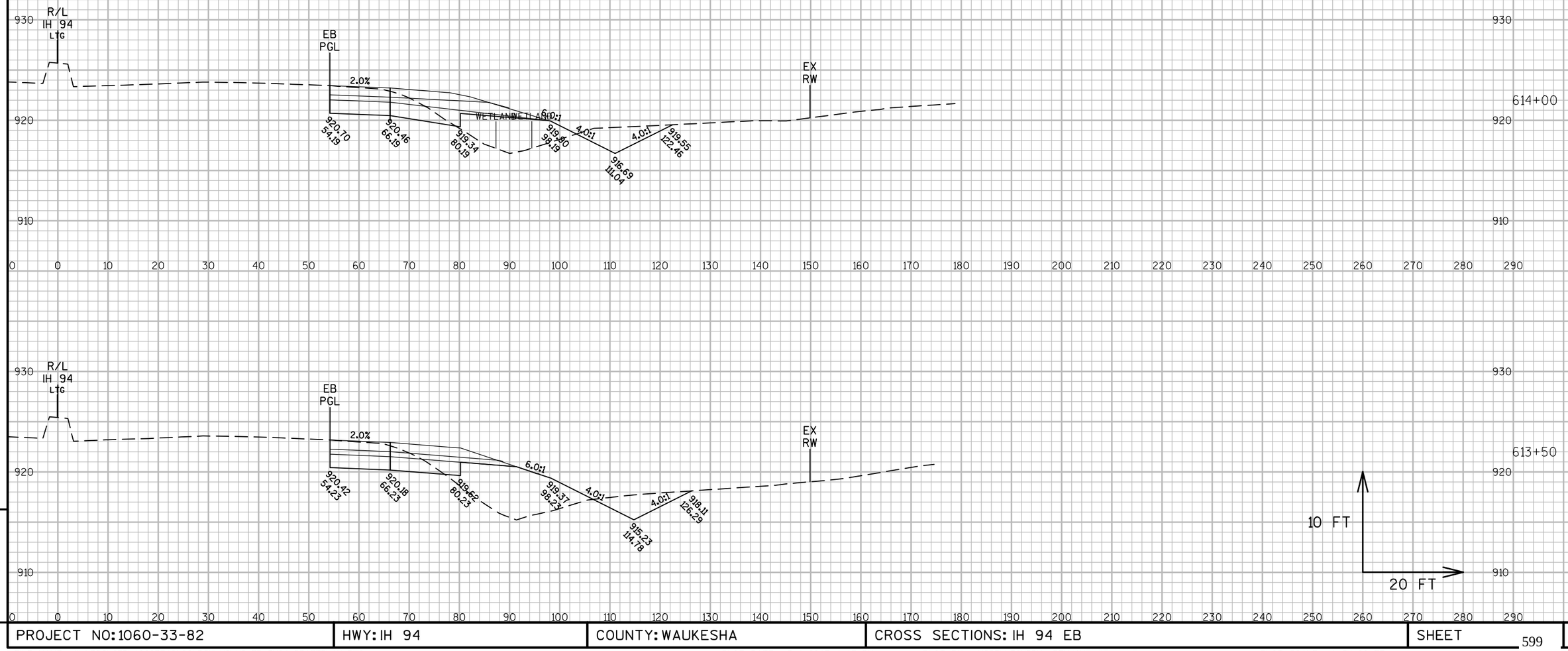
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 598	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (15)

PLOT DATE : 5/1/2017 4:14 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

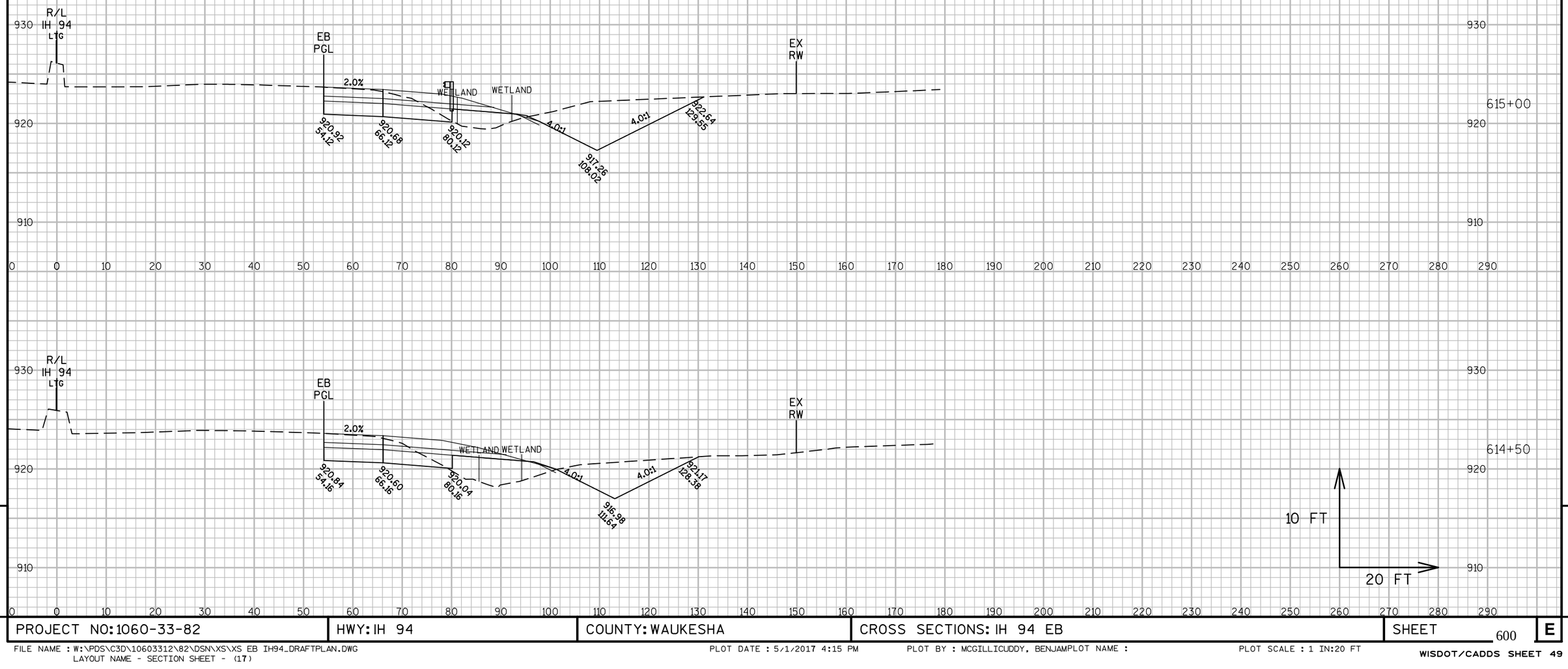
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 599	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (16)

PLOT DATE : 5/1/2017 4:15 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

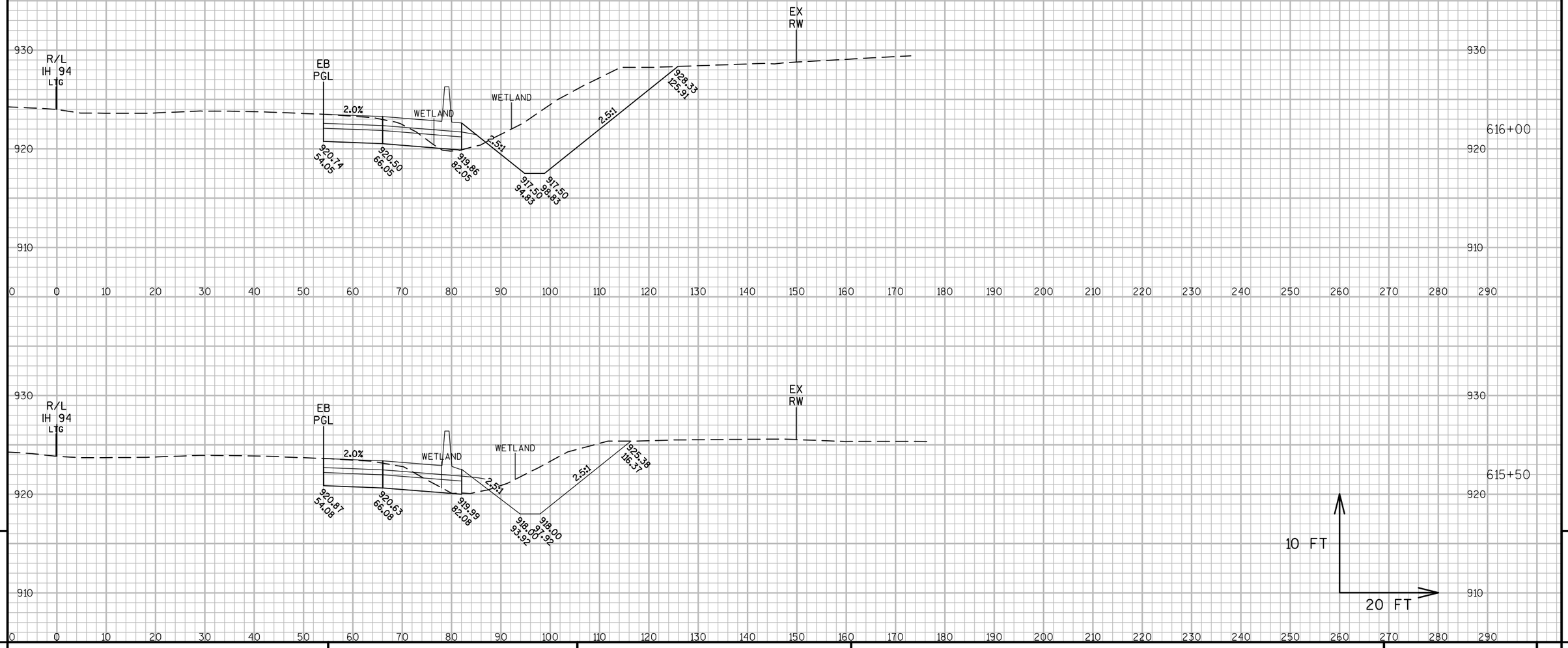


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 600	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (17)

PLOT DATE : 5/1/2017 4:15 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

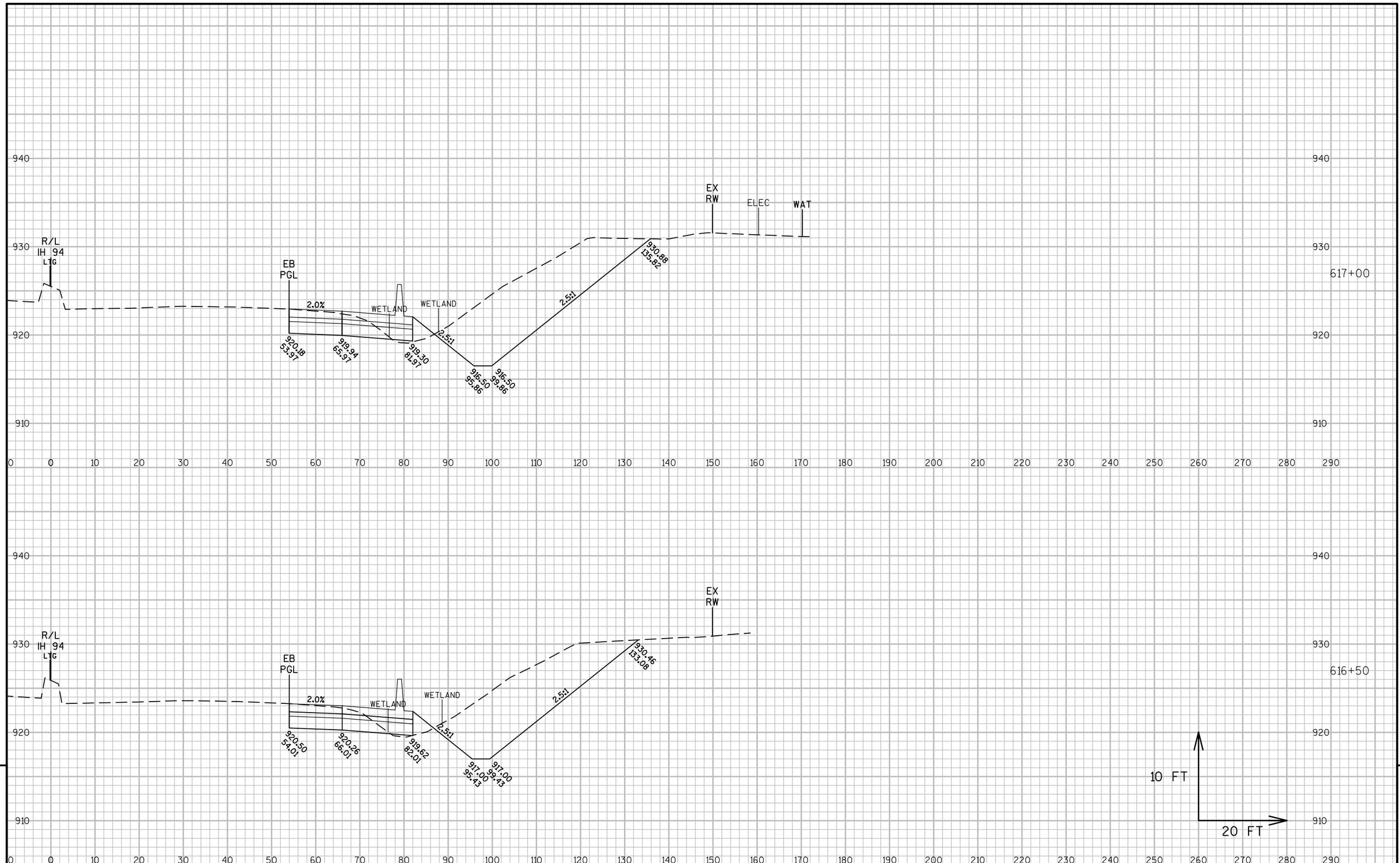


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 601	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (18)

PLOT DATE : 5/1/2017 4:15 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

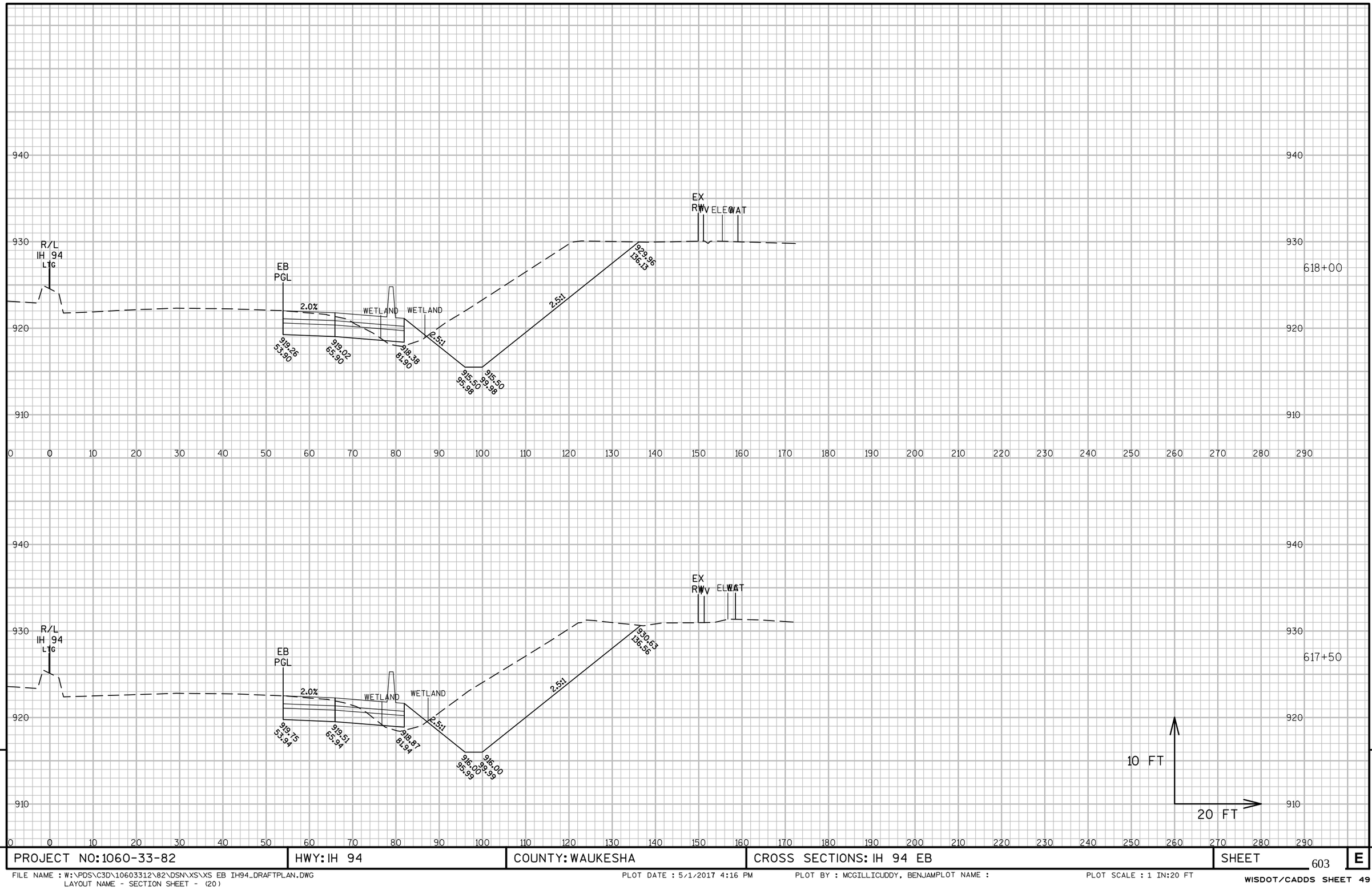


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 602 E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (19)

PLOT DATE : 5/1/2017 4:16 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

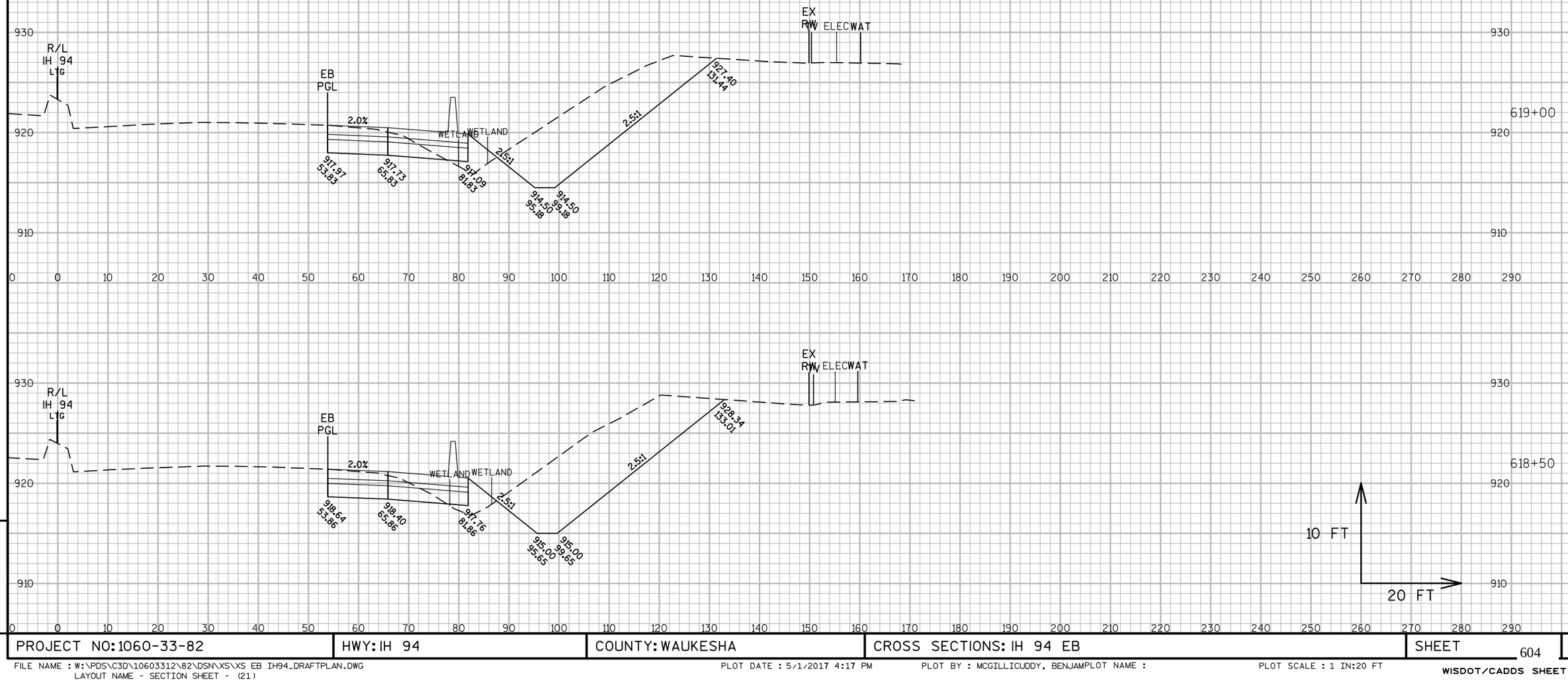


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 603	E

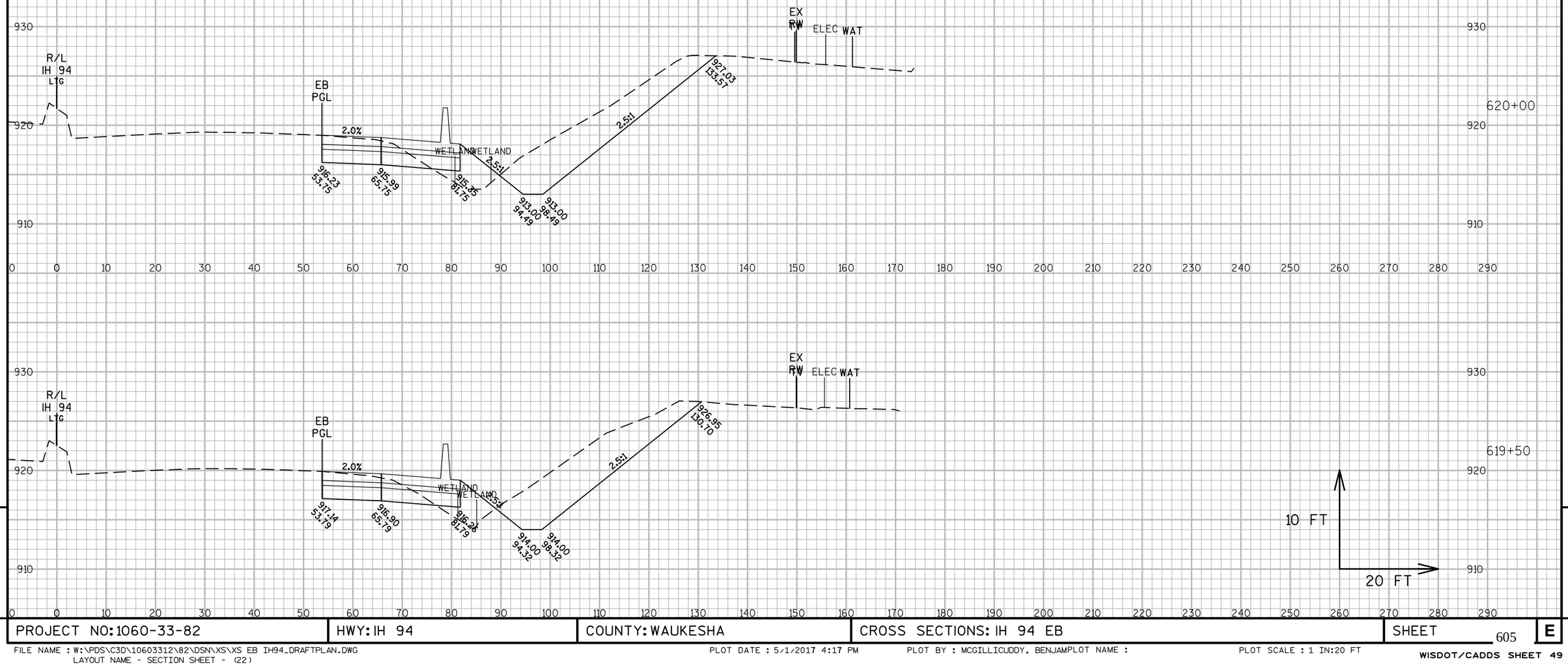
FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (20)

PLOT DATE : 5/1/2017 4:16 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 604	E



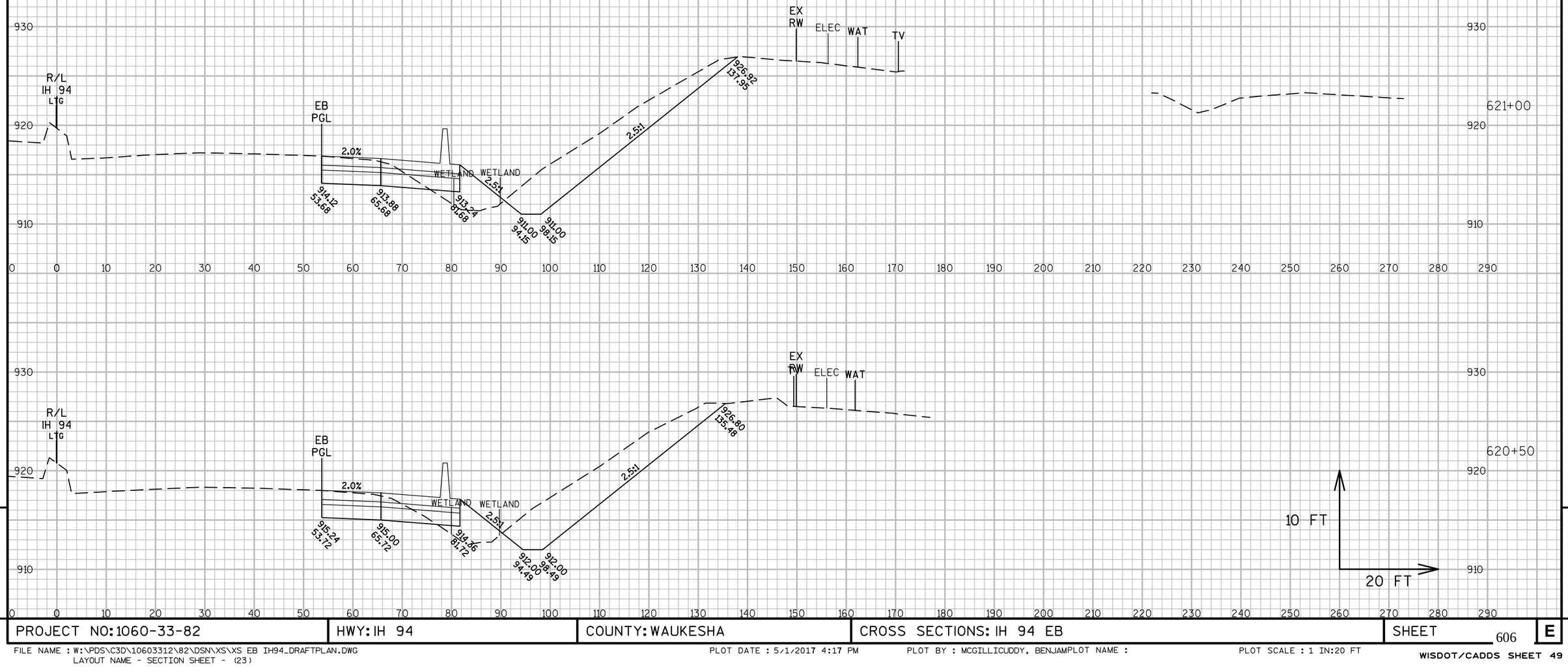
9

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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 605	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (22)

PLOT DATE : 5/1/2017 4:17 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



9

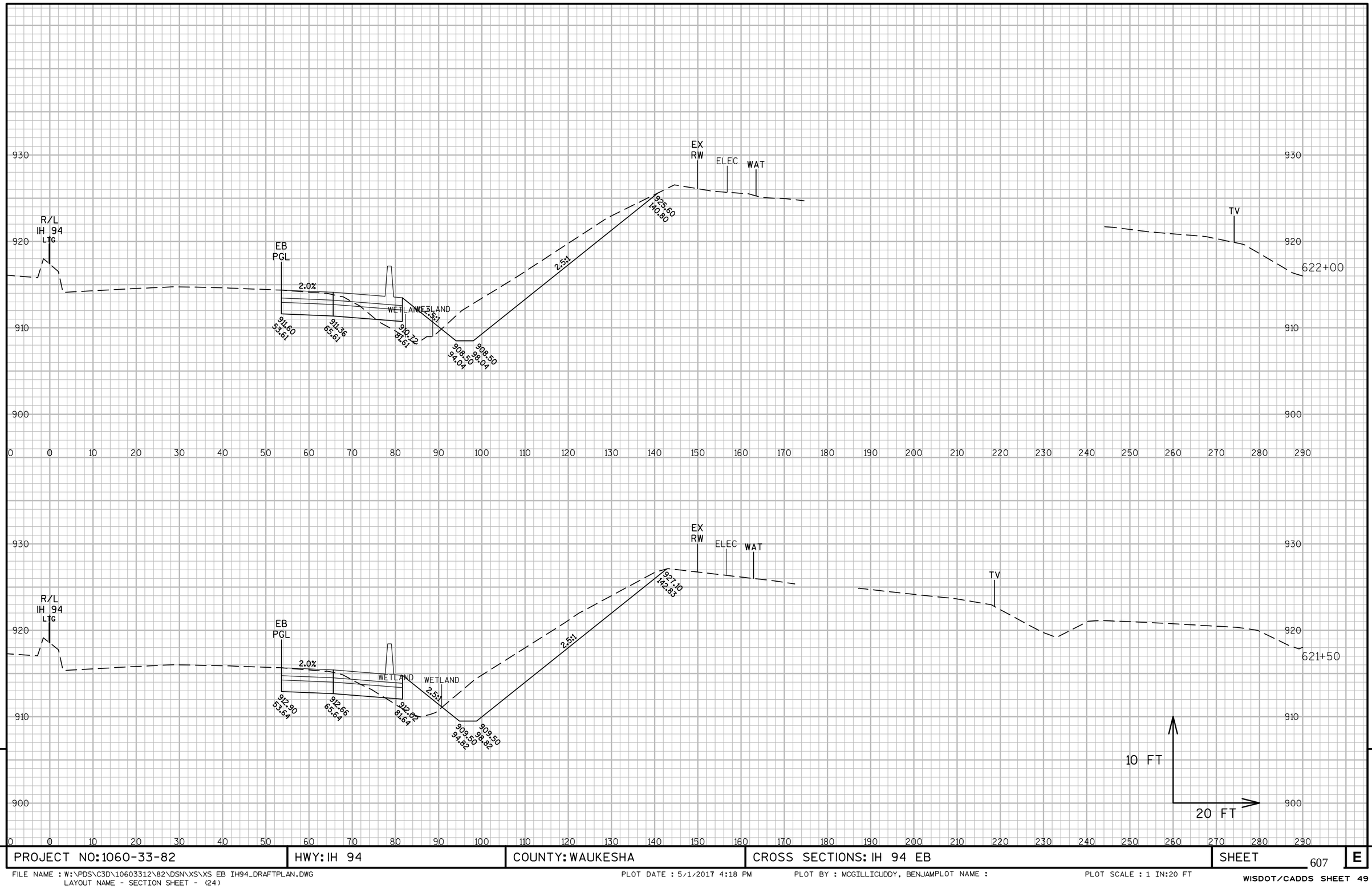
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 606	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (23)

PLOT DATE : 5/1/2017 4:17 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

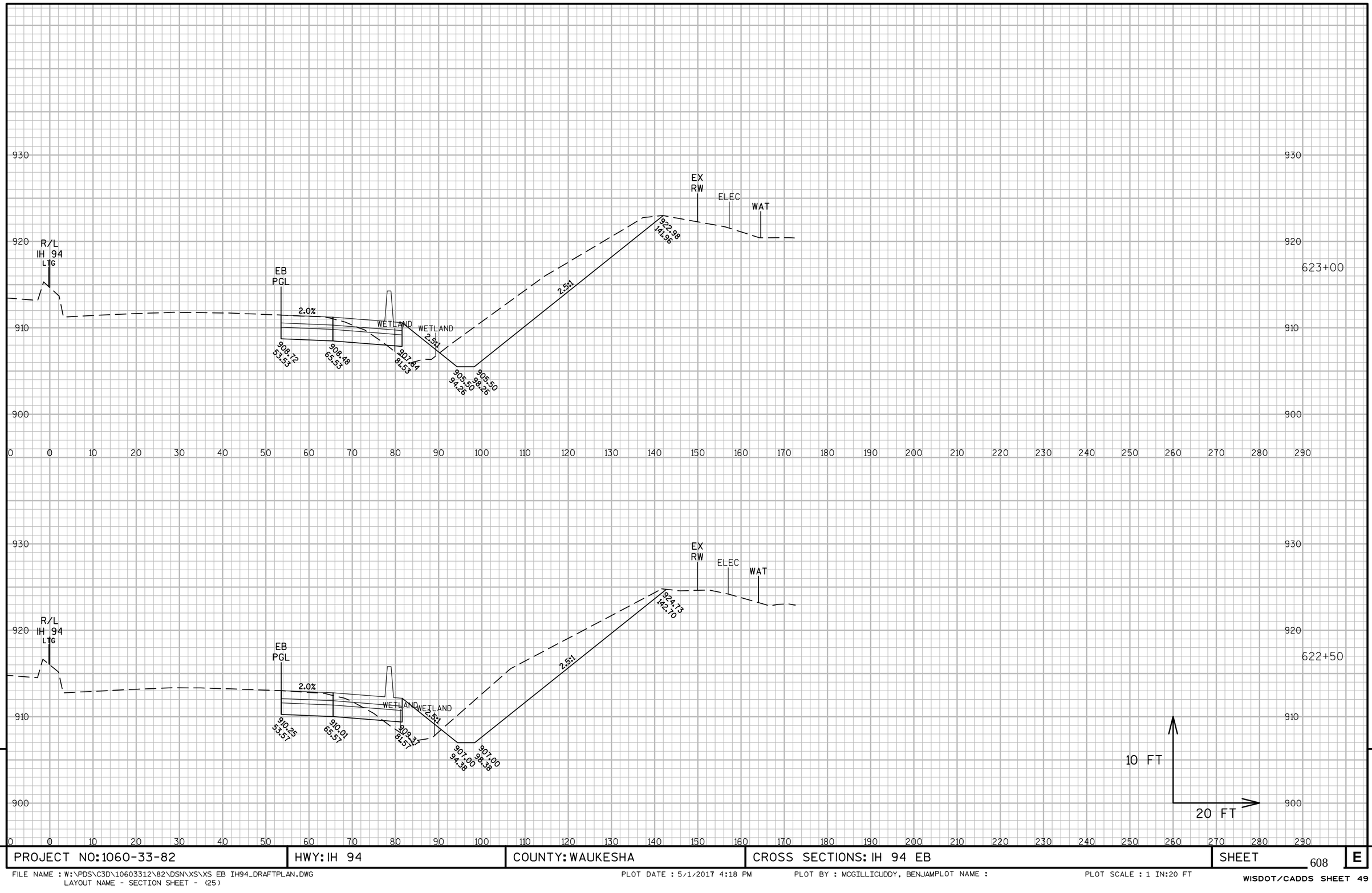


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 607	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (24)

PLOT DATE : 5/1/2017 4:18 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

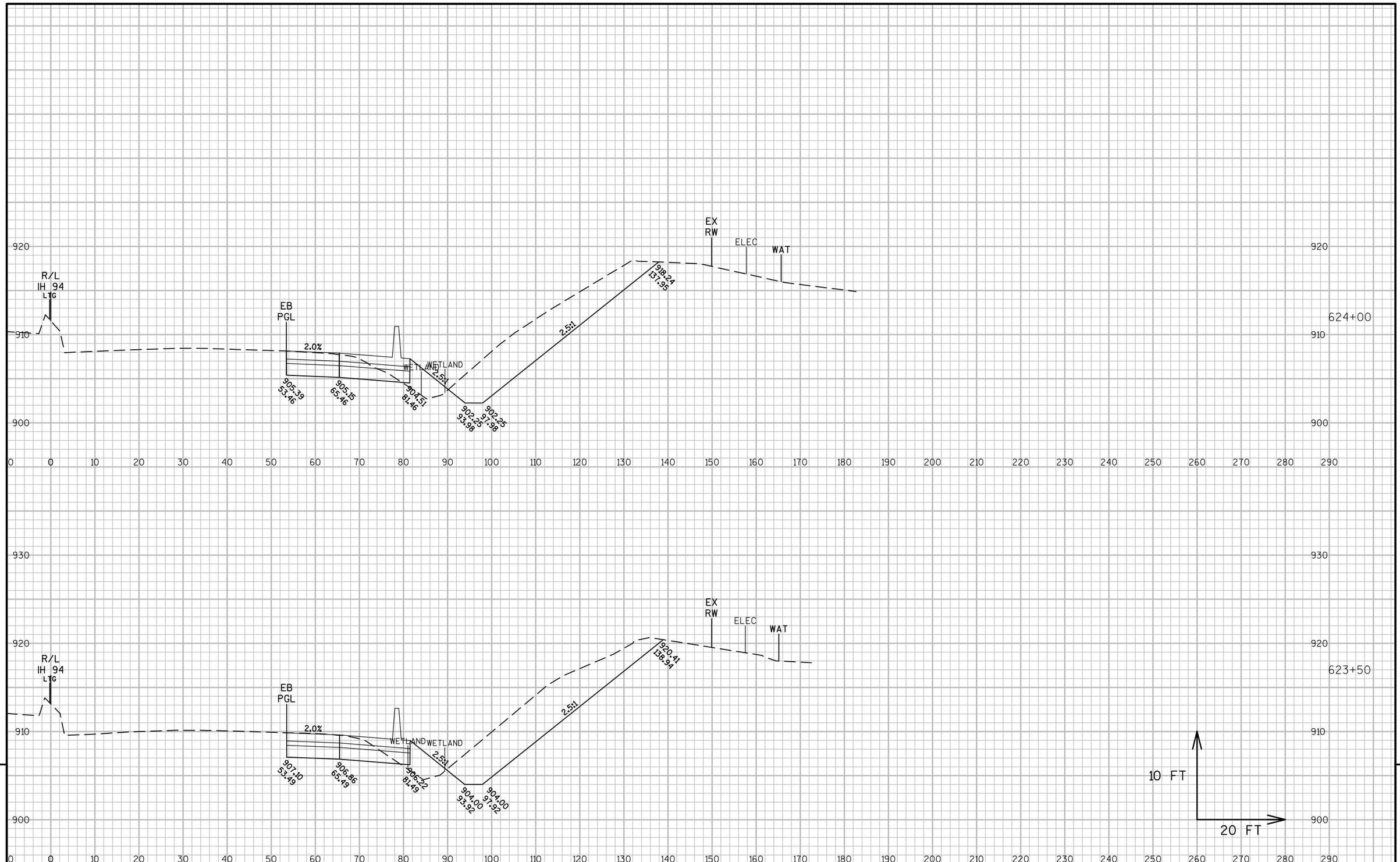


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 608	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (25)

PLOT DATE : 5/1/2017 4:18 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

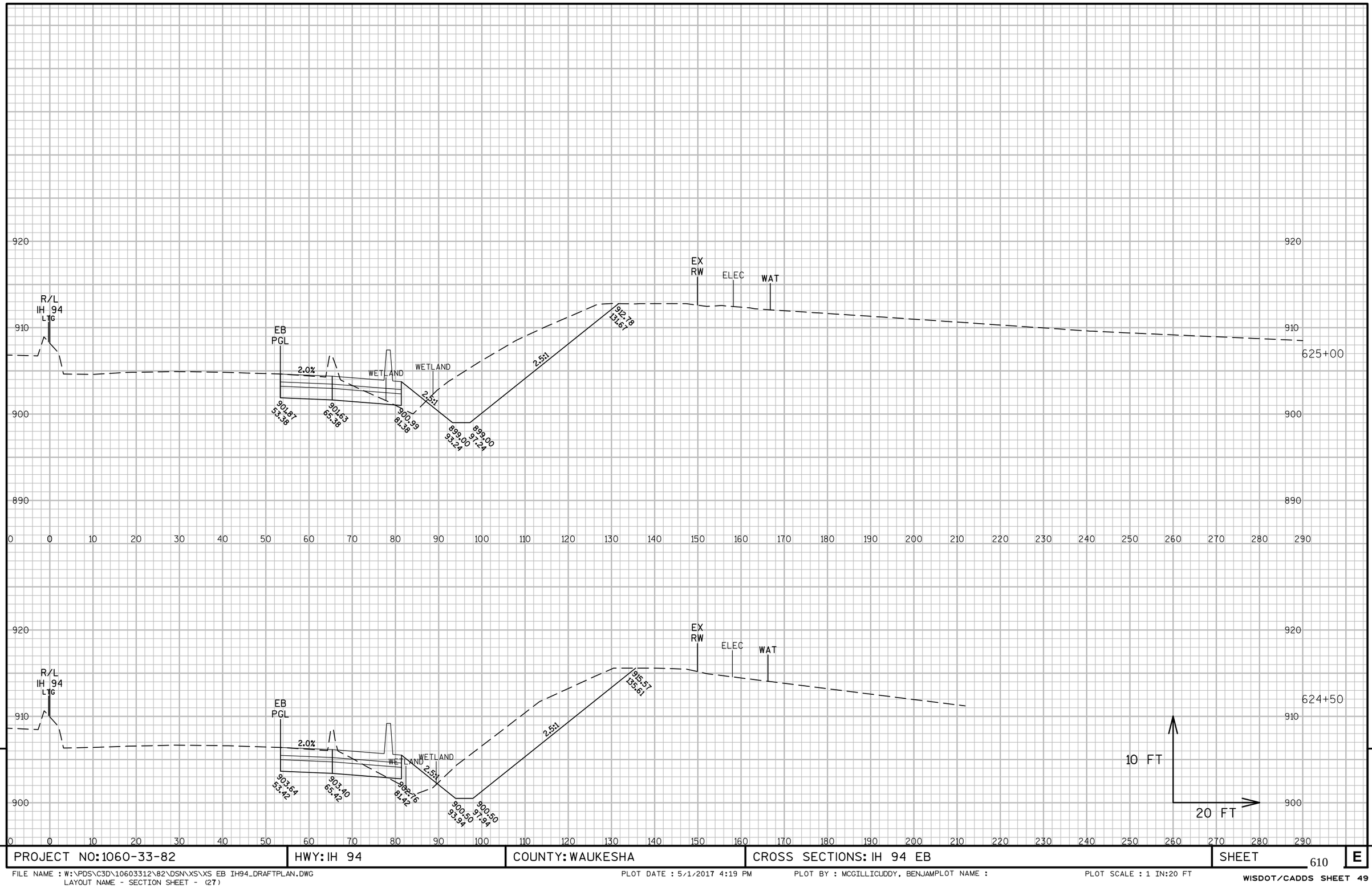


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 609	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (26)

PLOT DATE : 5/1/2017 4:18 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

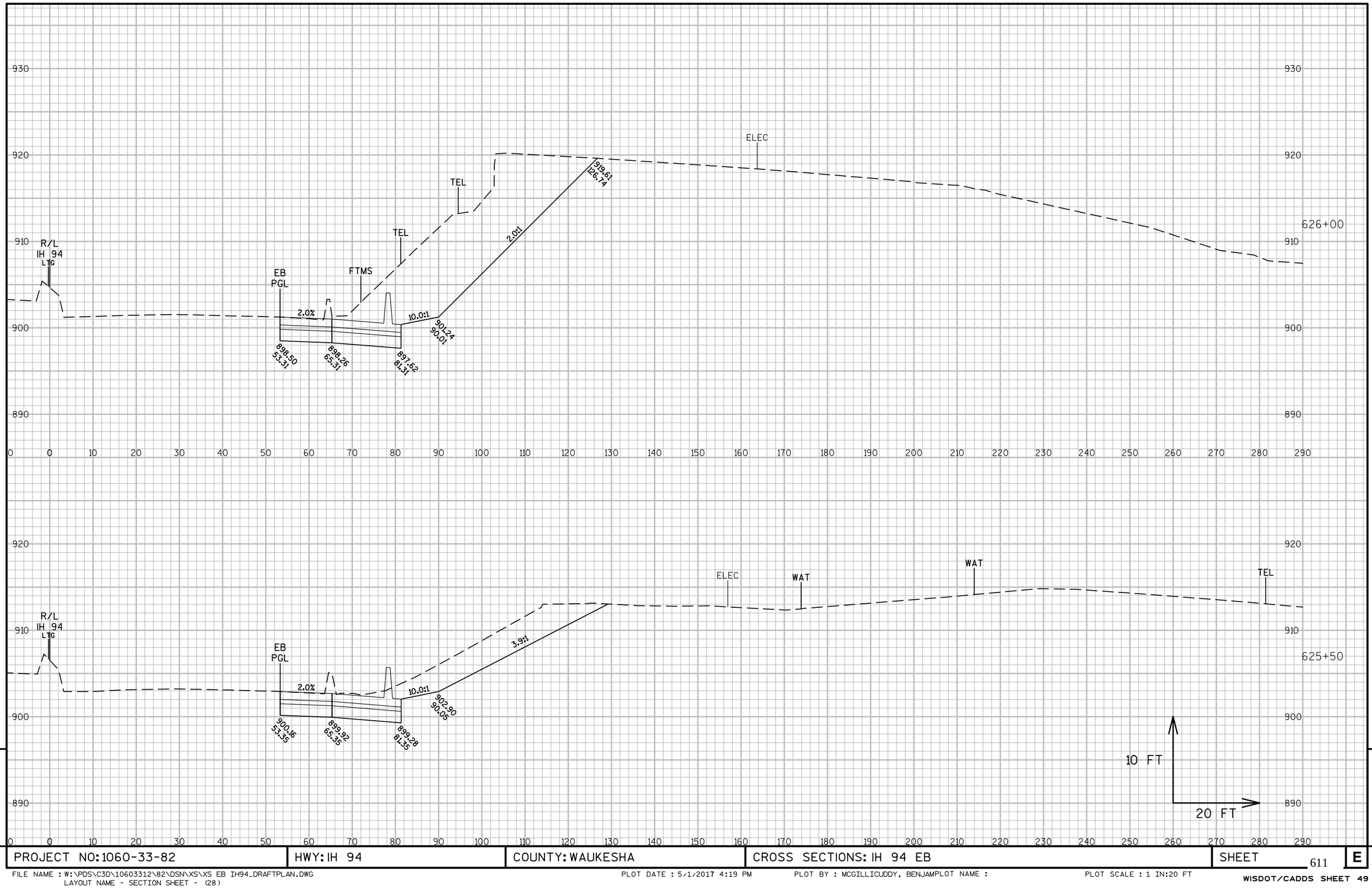
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 610	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (27)

PLOT DATE : 5/1/2017 4:19 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

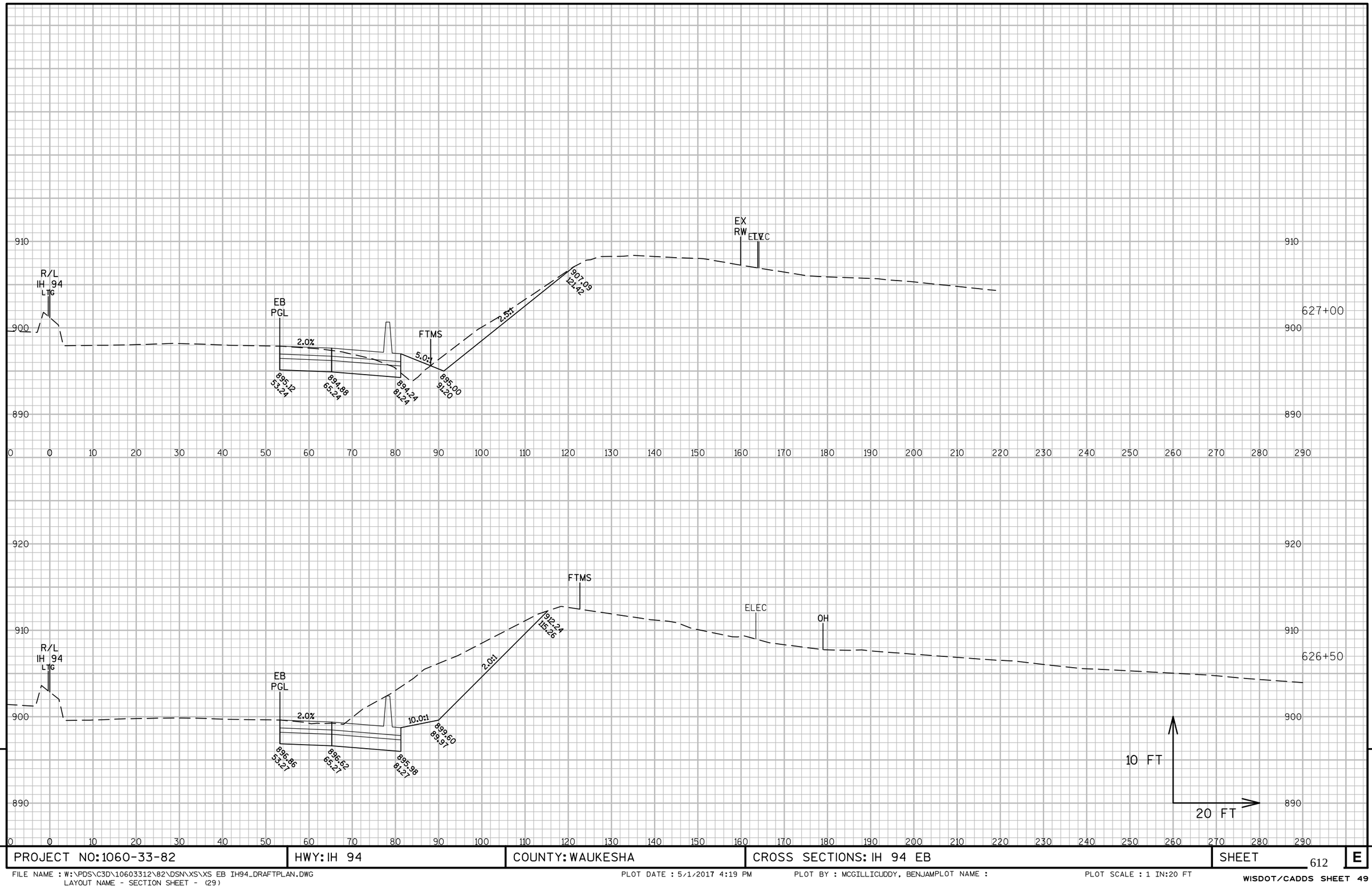


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 611 E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (28)

PLOT DATE : 5/1/2017 4:19 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 612 E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (29)

PLOT DATE : 5/1/2017 4:19 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

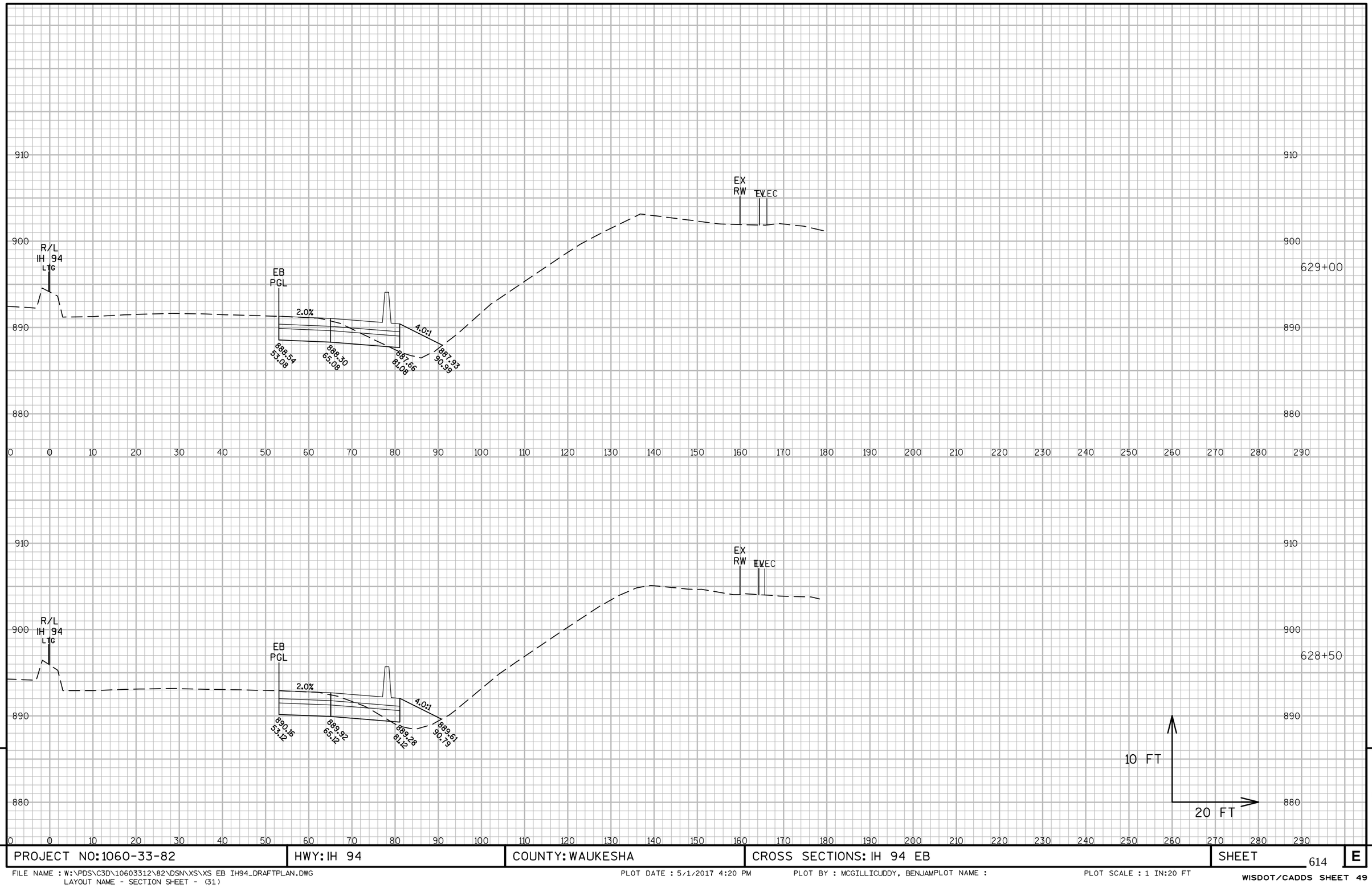
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 613	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (30)

PLOT DATE : 5/1/2017 4:20 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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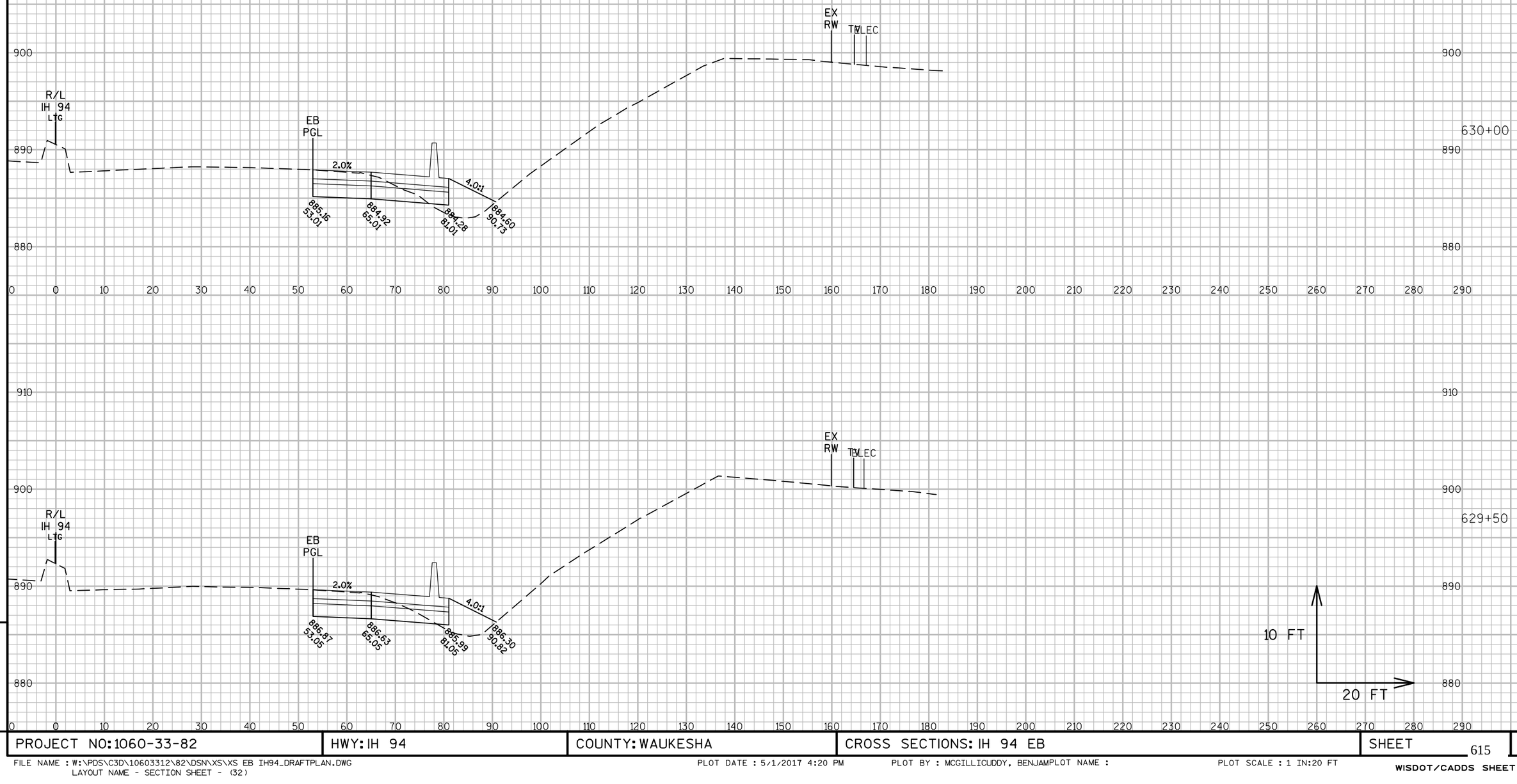
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 614	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (31)

PLOT DATE : 5/1/2017 4:20 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

9

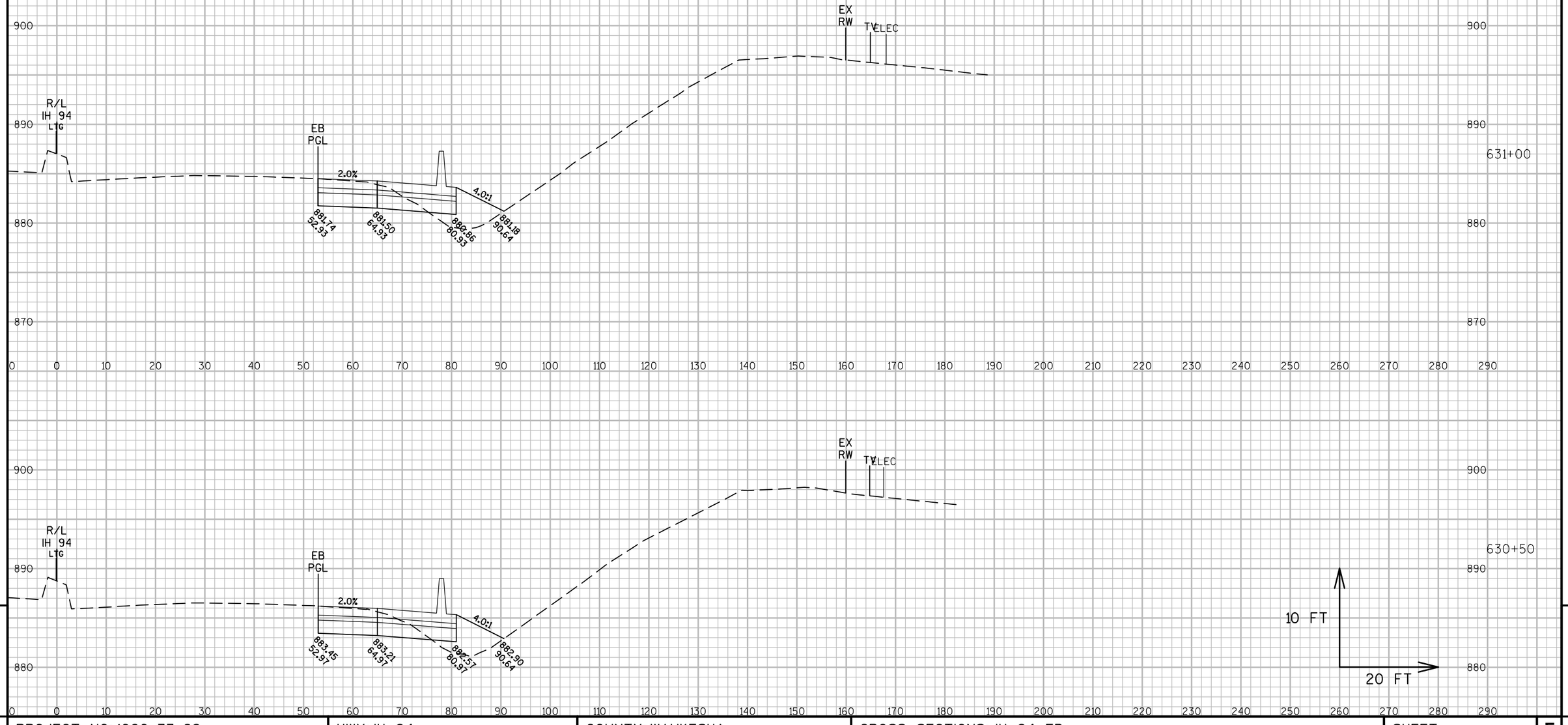
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FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (32)

PLOT DATE : 5/1/2017 4:20 PM

PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

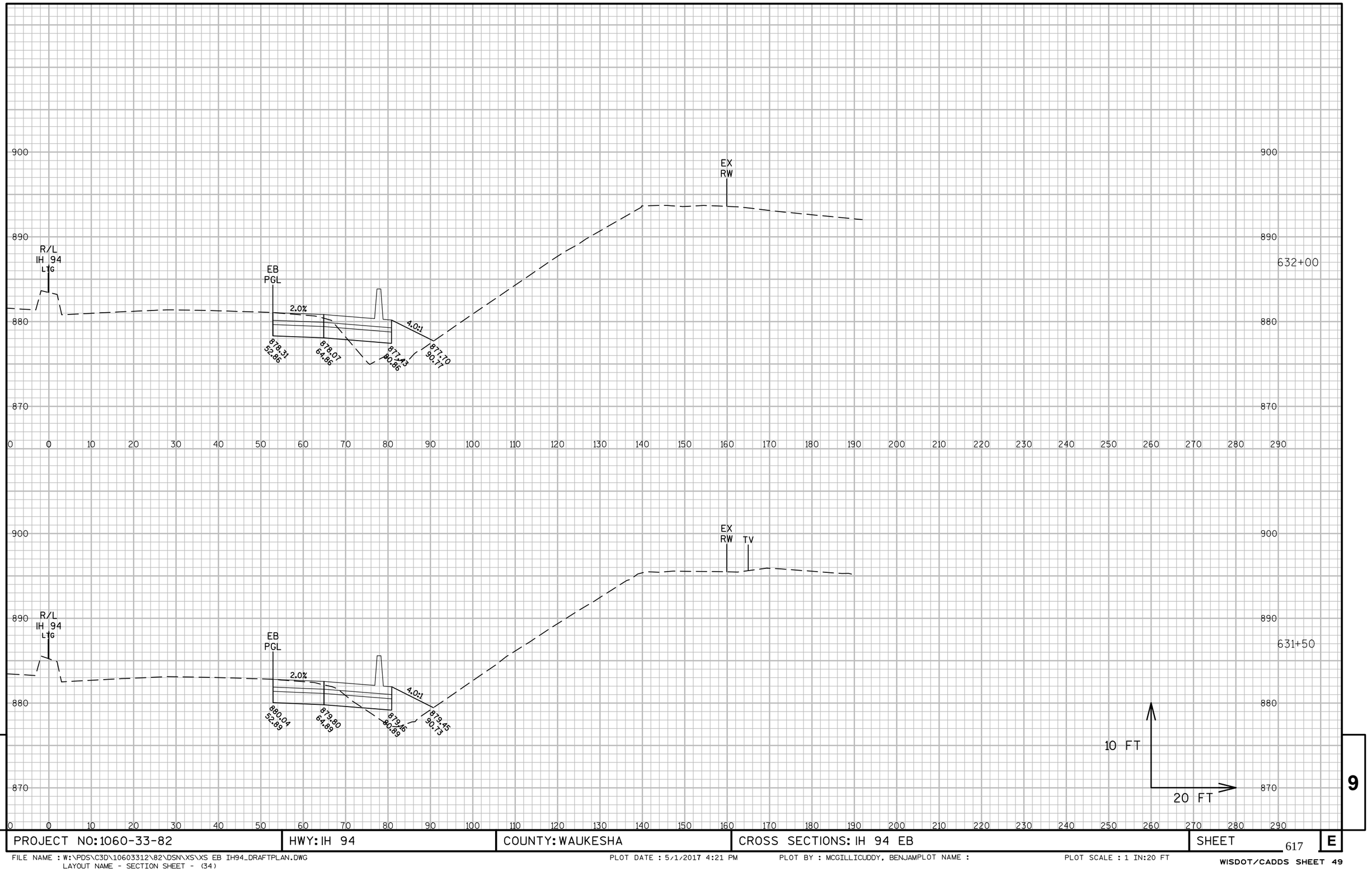


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 616	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (33)

PLOT DATE : 5/1/2017 4:21 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

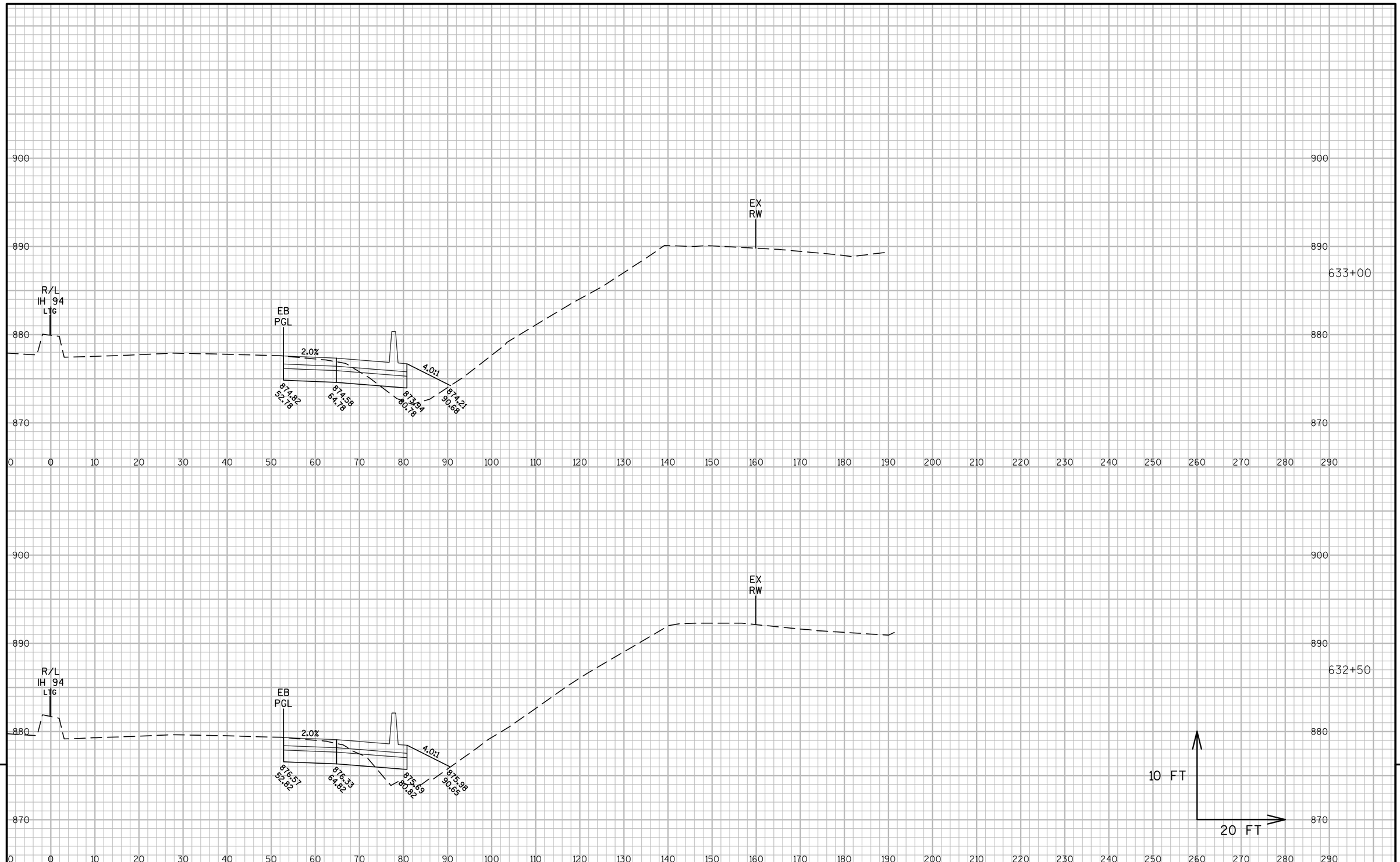
WISDOT/CADDS SHEET 49



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 617	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (34)

PLOT DATE : 5/1/2017 4:21 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



9

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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 618	E

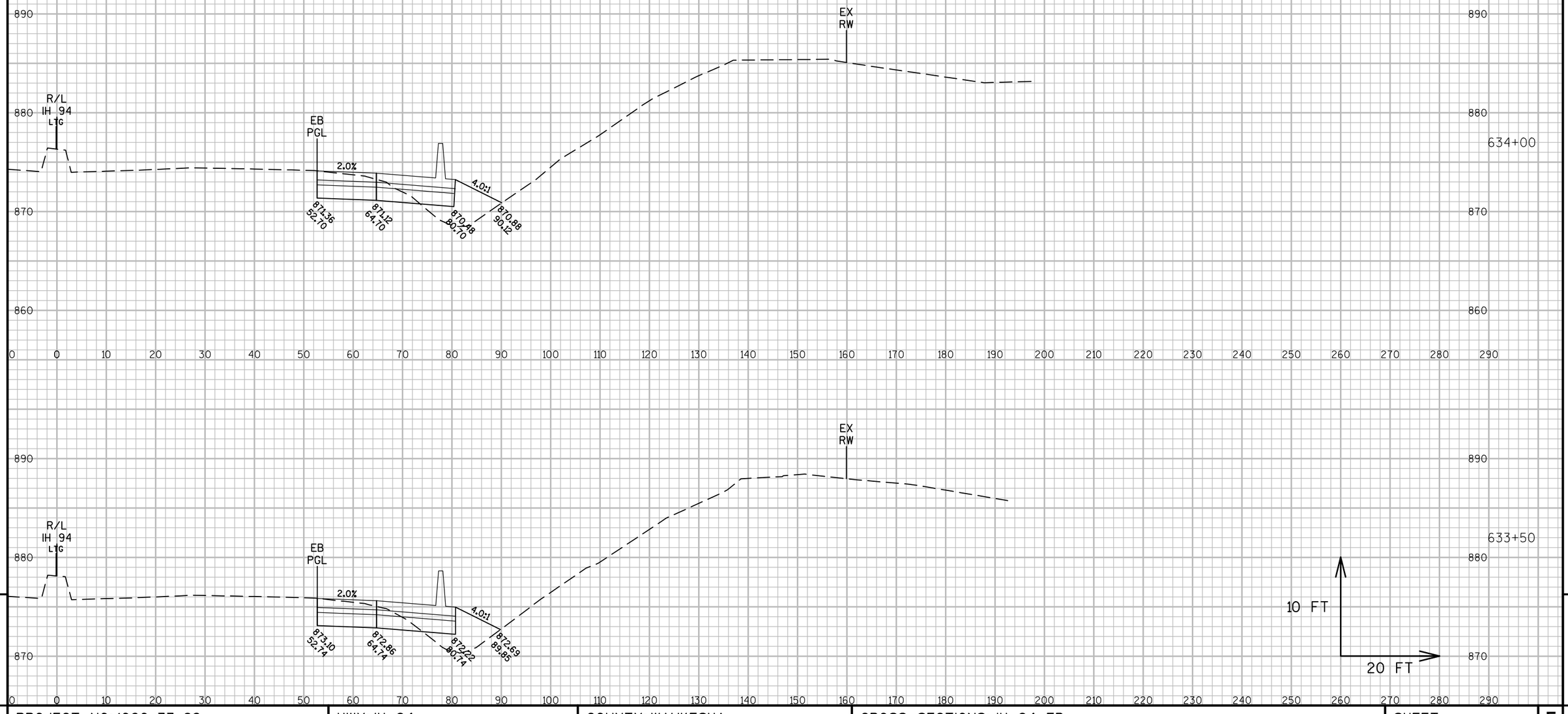
FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (35)

PLOT DATE : 5/1/2017 4:22 PM

PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

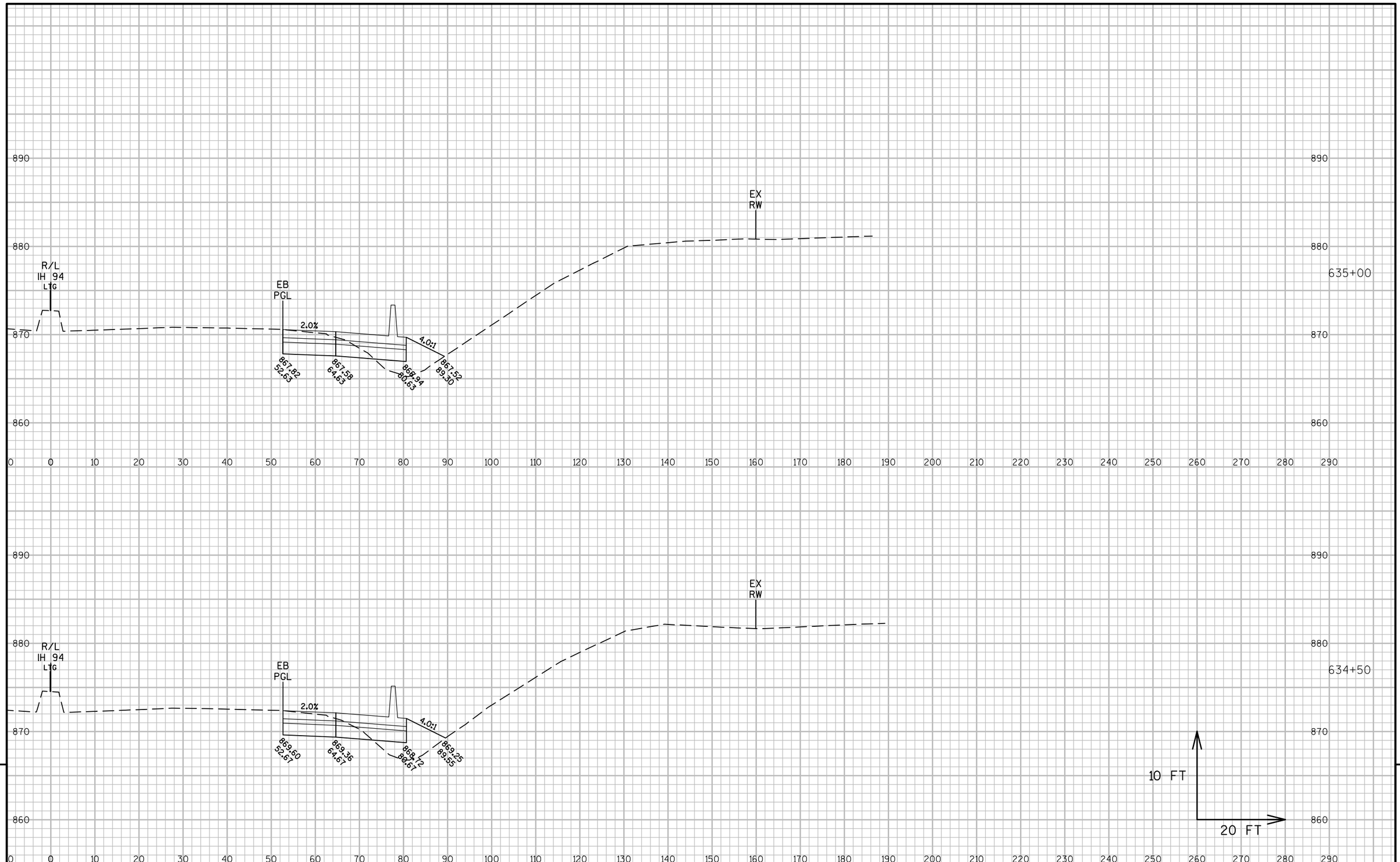
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 619	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (36)

PLOT DATE : 5/1/2017 4:22 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

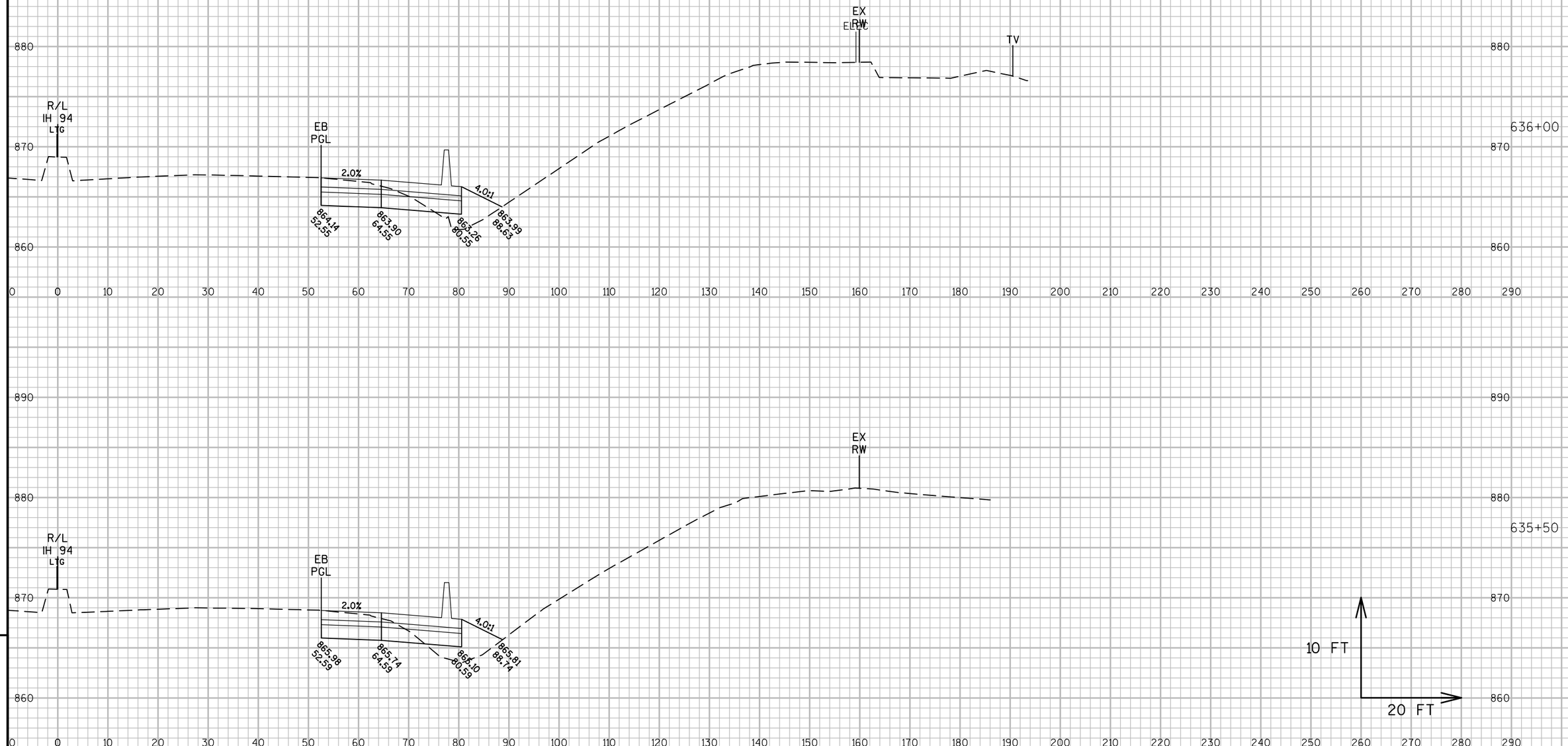
WISDOT/CADDS SHEET 49



9

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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 620	E

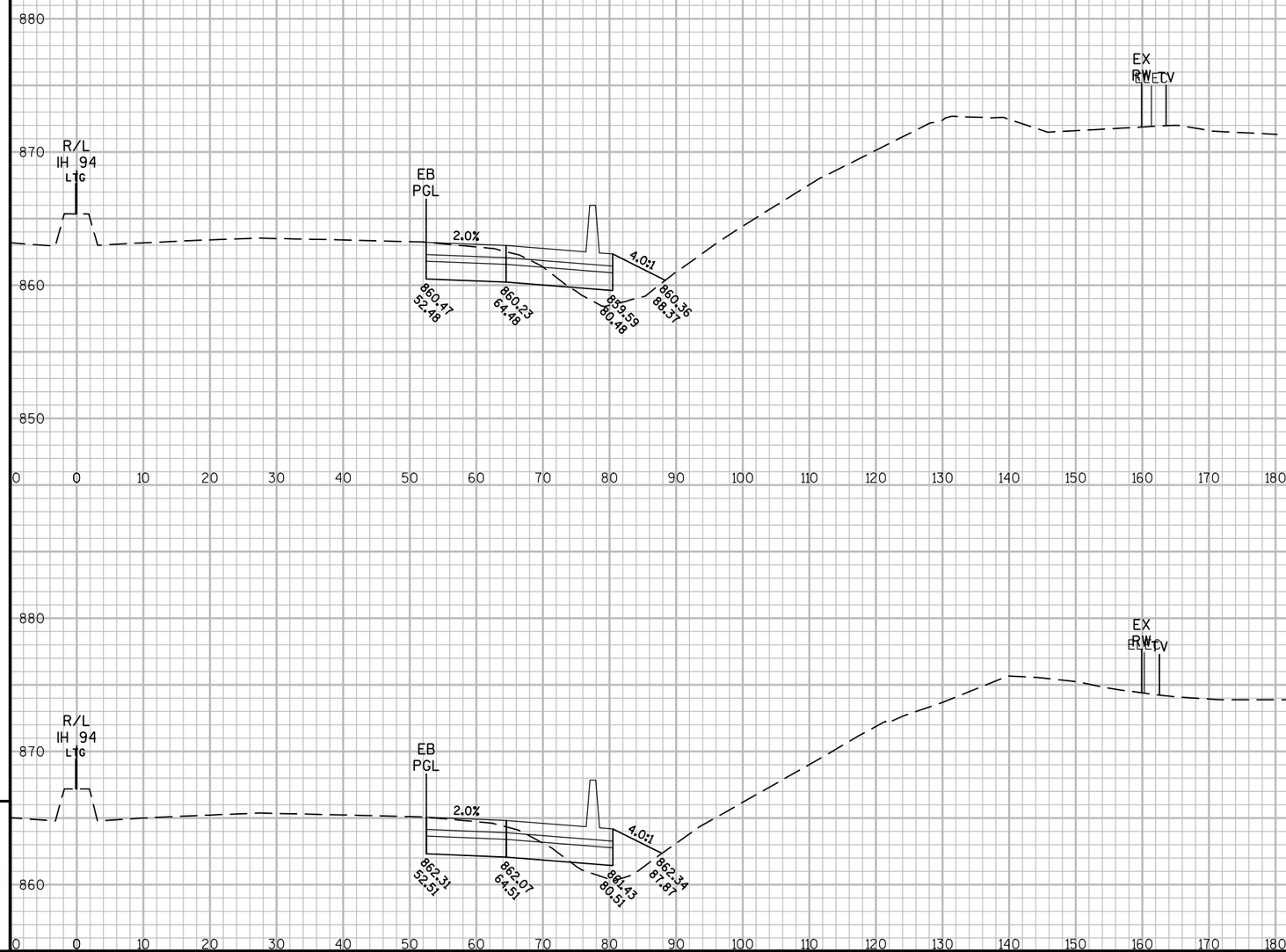


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 621	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (38)

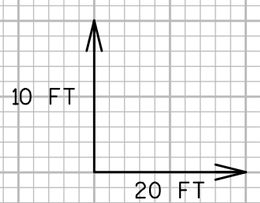
PLOT DATE : 5/1/2017 4:23 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



637+00

636+50



9

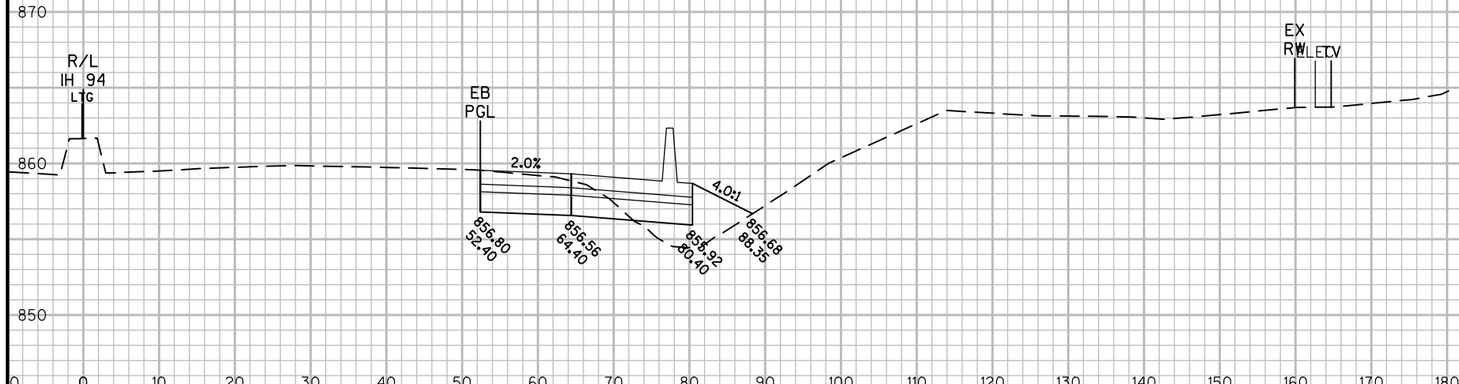
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 622	E

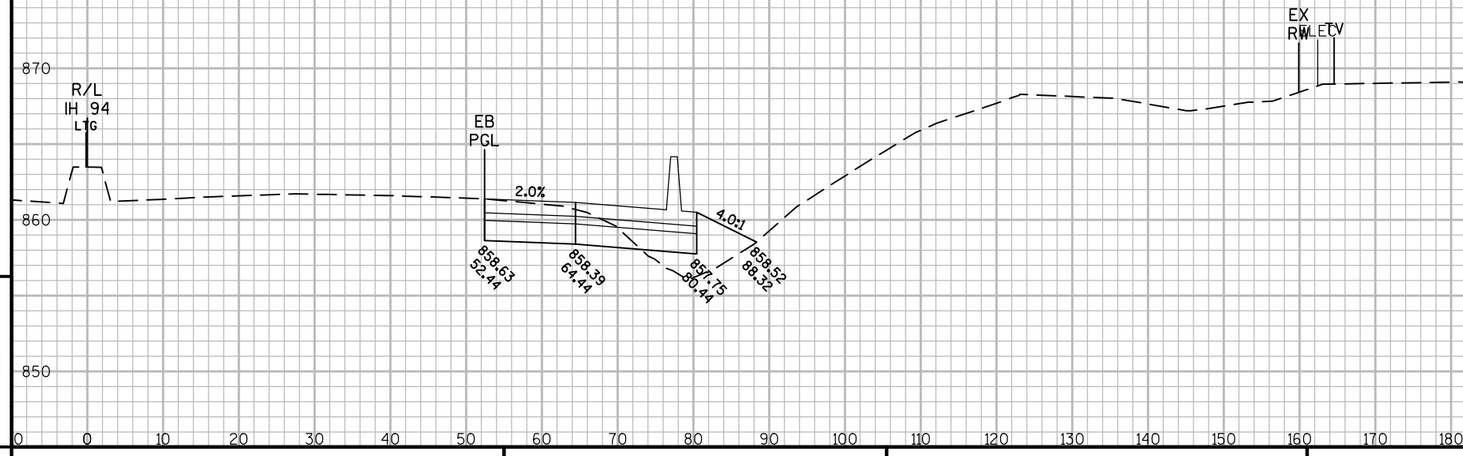
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LAYOUT NAME - SECTION SHEET - (39)

PLOT DATE : 5/1/2017 4:23 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

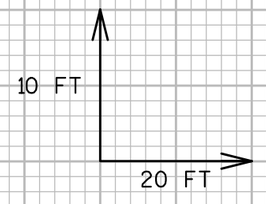
WISDOT/CADDS SHEET 49



638+00



637+50



9

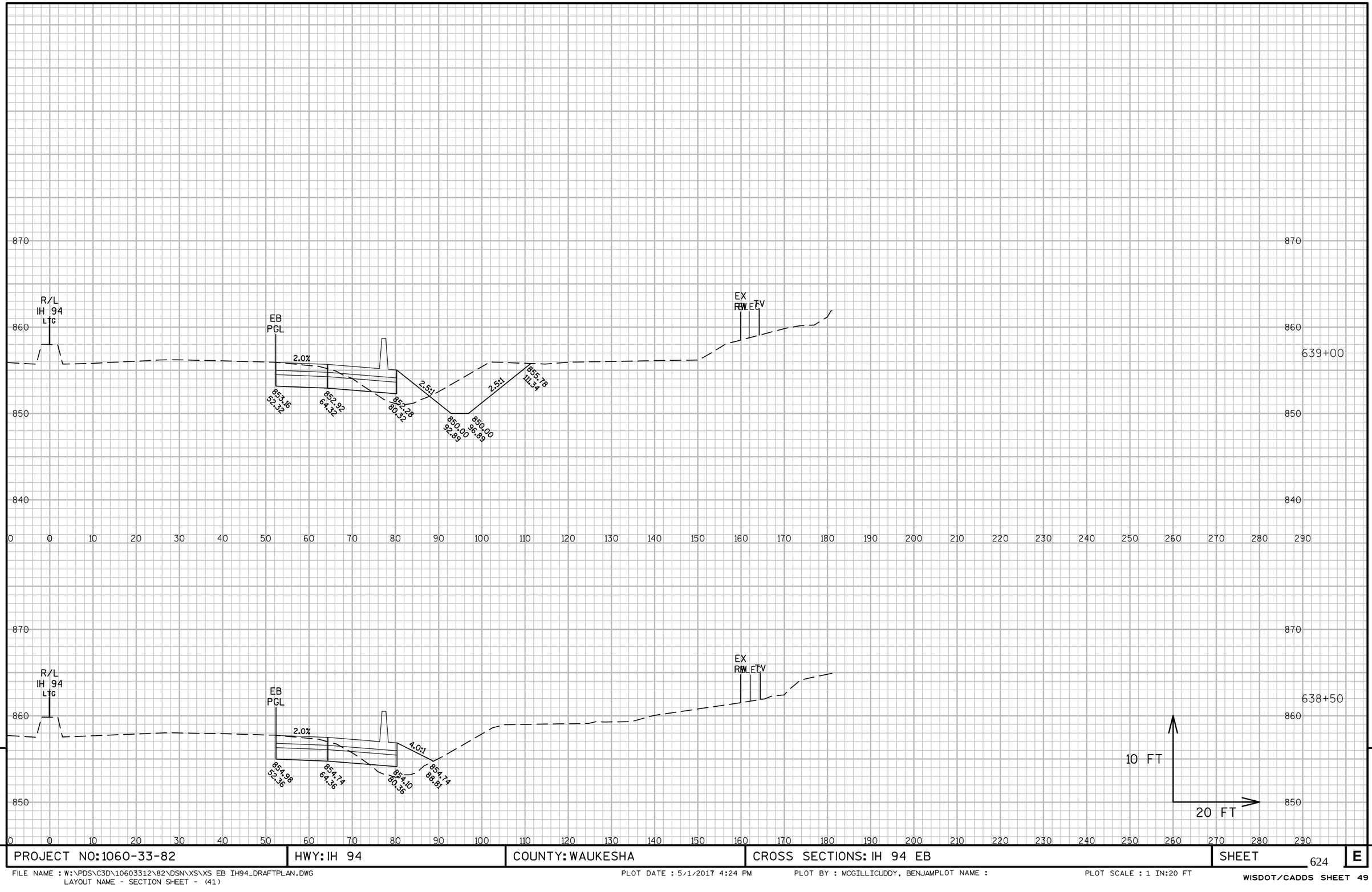
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 623	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (40)

PLOT DATE : 5/1/2017 4:23 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

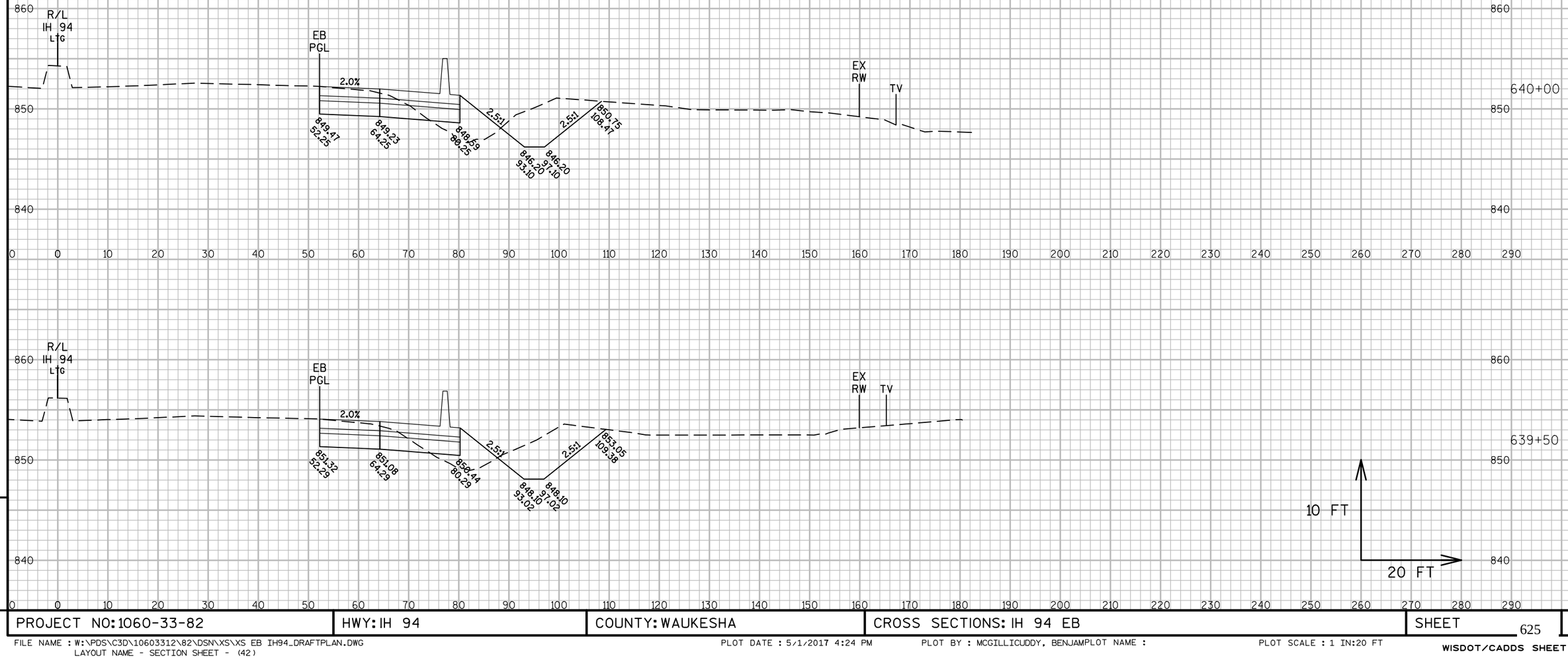


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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 624	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (41)
PLOT DATE : 5/1/2017 4:24 PM
PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :
PLOT SCALE : 1 IN:20 FT

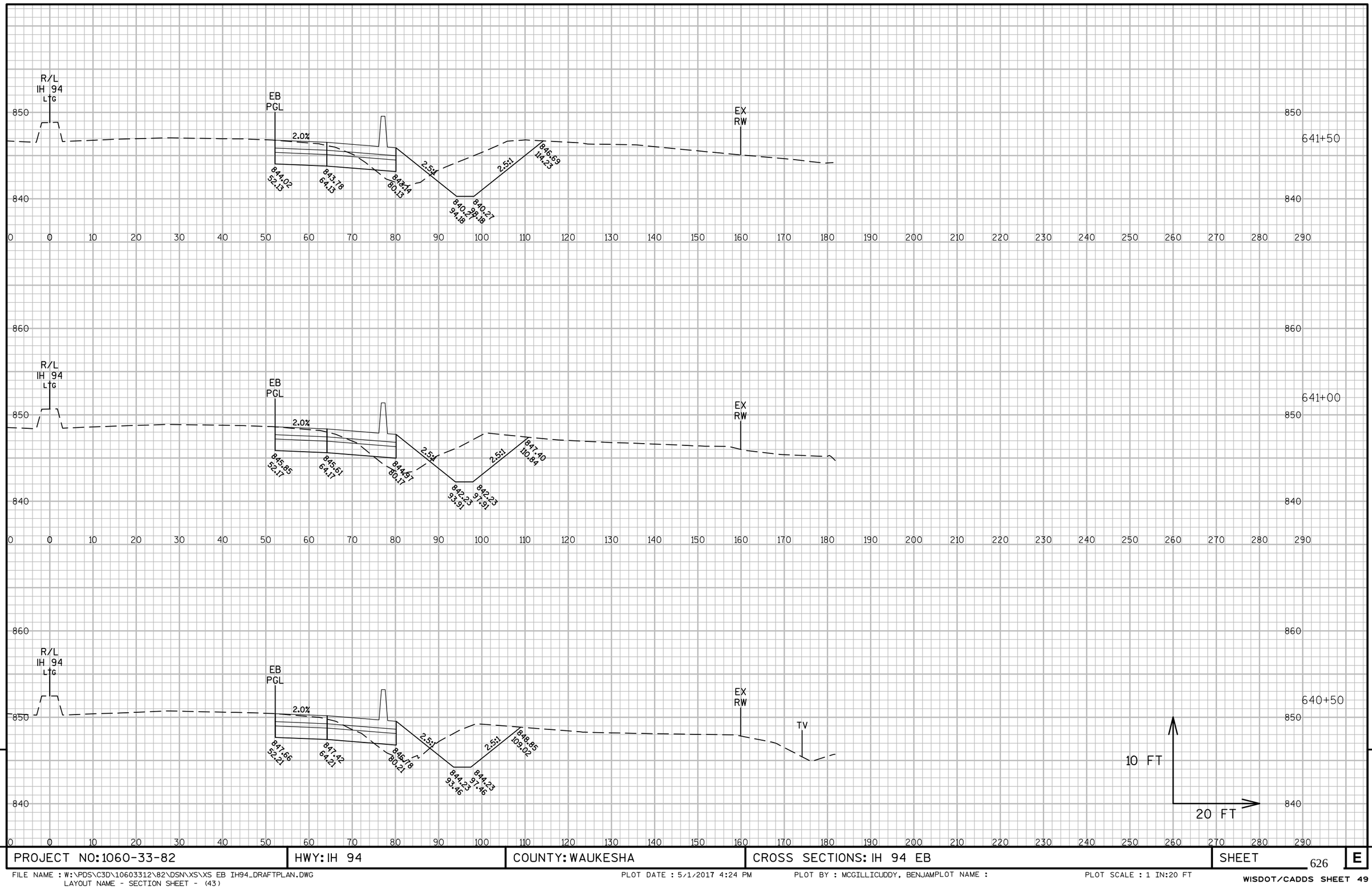


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 625	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (42)

PLOT DATE : 5/1/2017 4:24 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

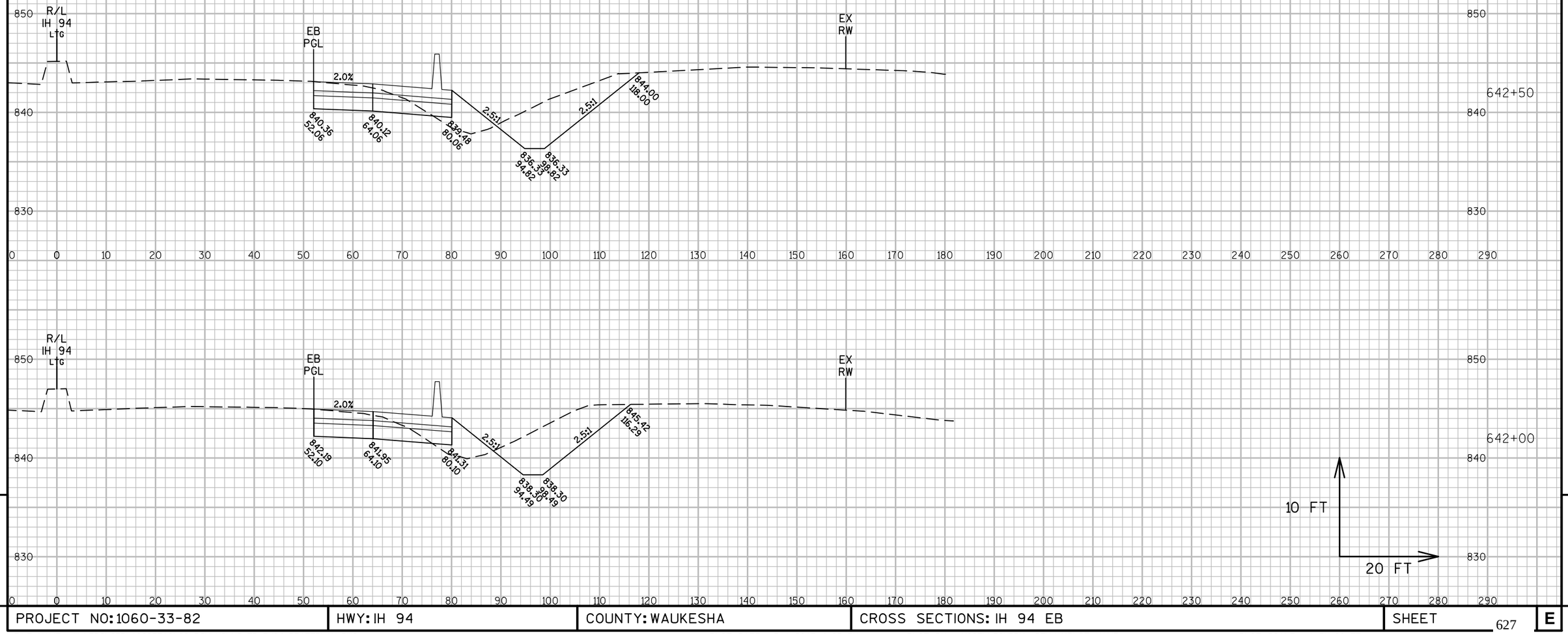
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 626	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (43)

PLOT DATE : 5/1/2017 4:24 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 627	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (44)

PLOT DATE : 5/1/2017 4:25 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

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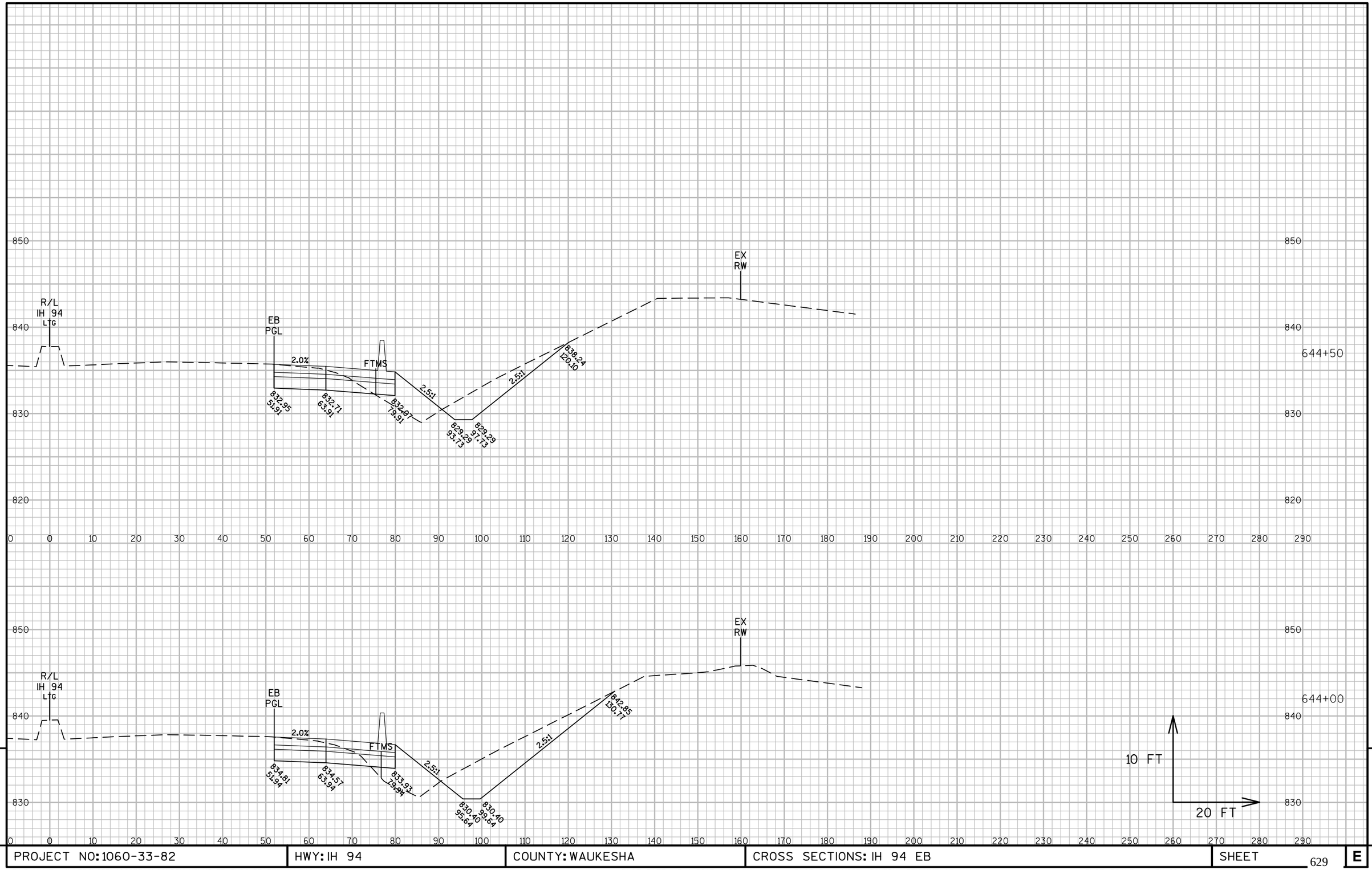
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 628	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (45)

PLOT DATE : 5/1/2017 4:25 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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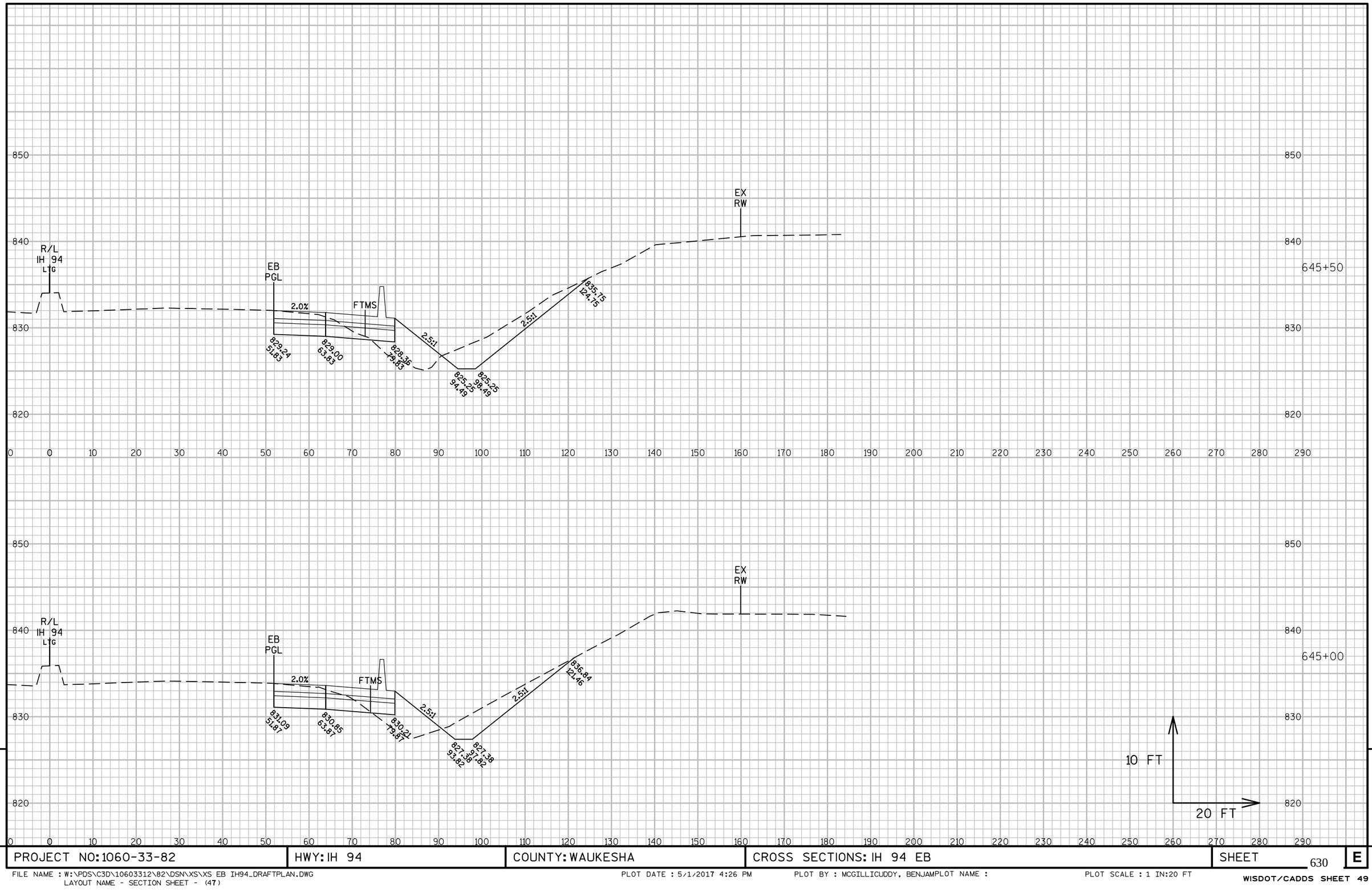
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 629	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (46)

PLOT DATE : 5/1/2017 4:26 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



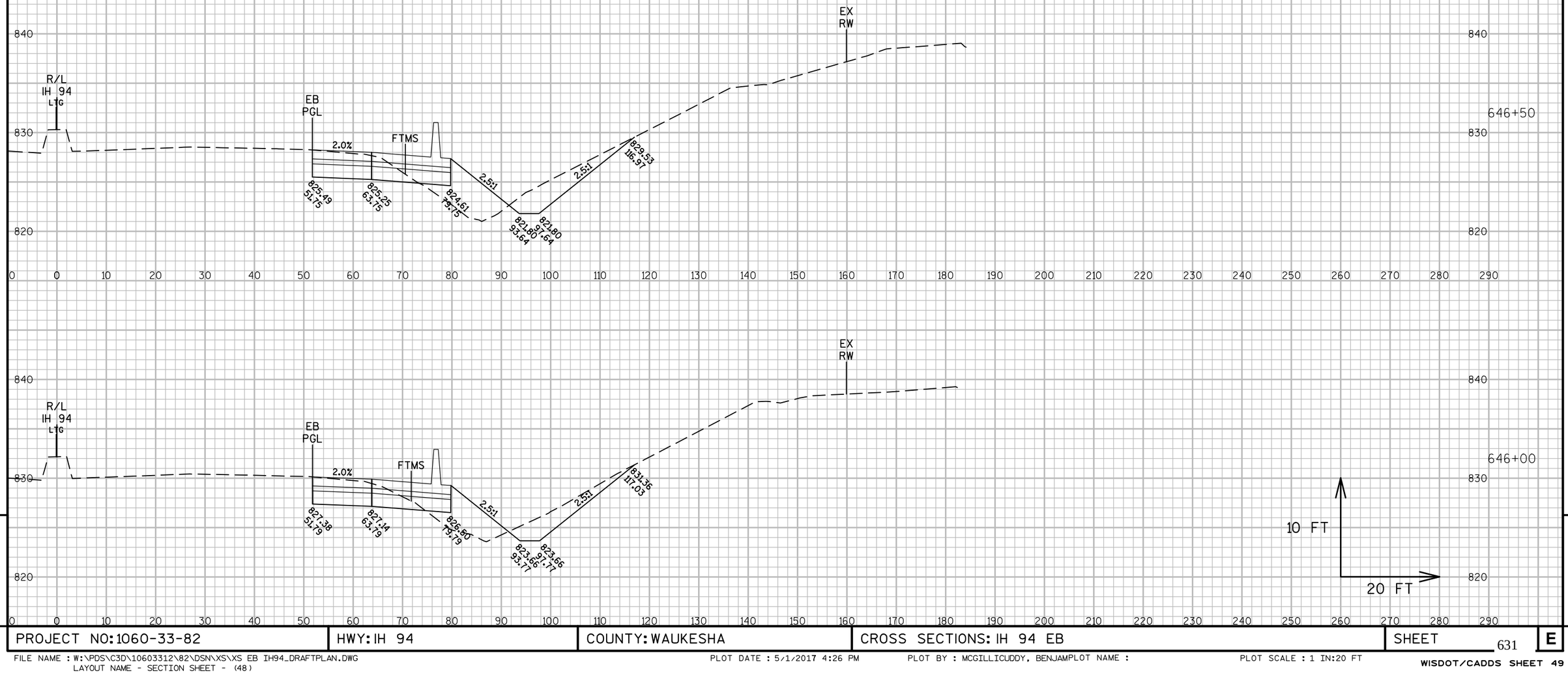
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 630	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (47)

PLOT DATE : 5/1/2017 4:26 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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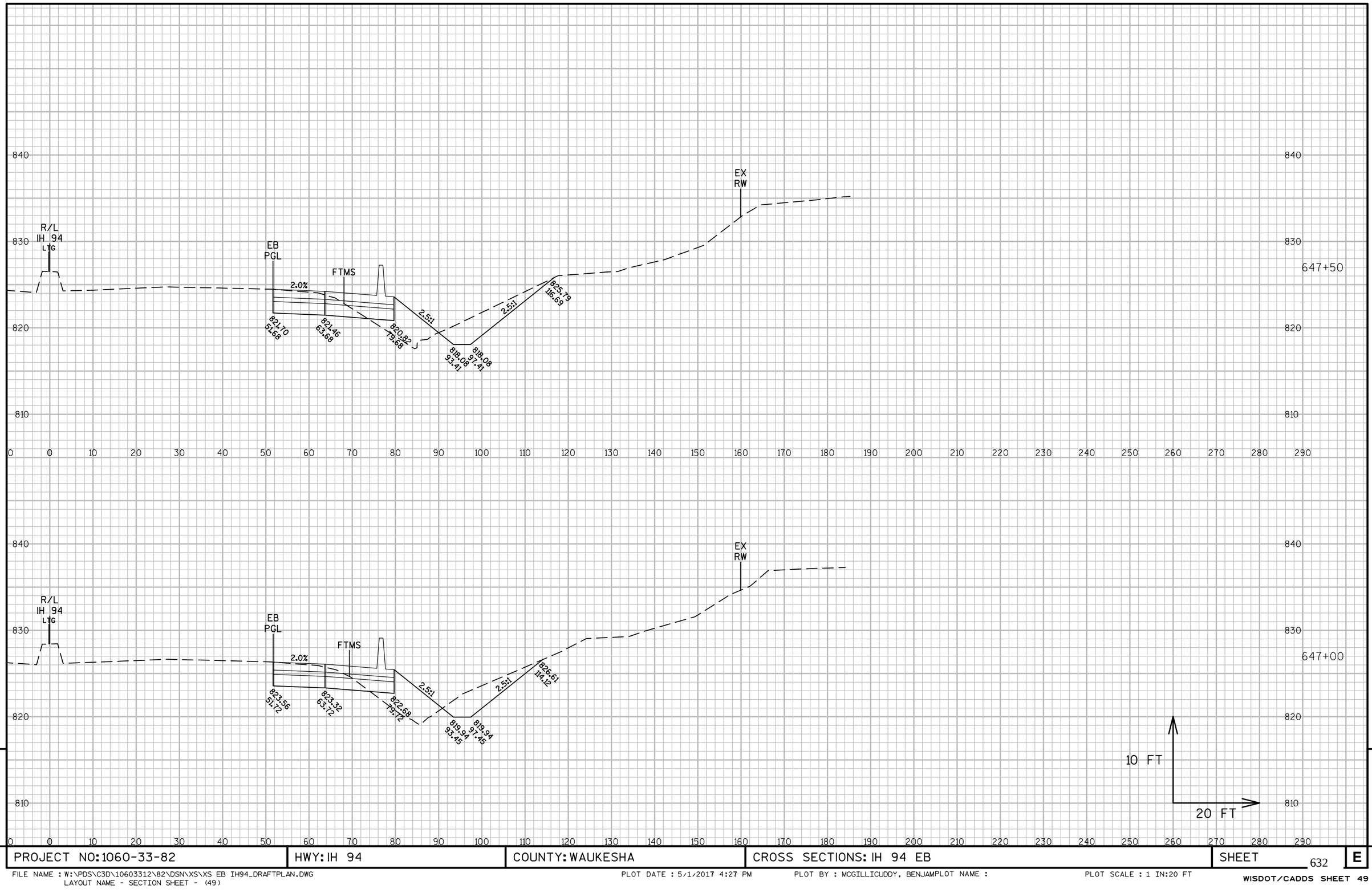
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 631	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (48)

PLOT DATE : 5/1/2017 4:26 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 632	E

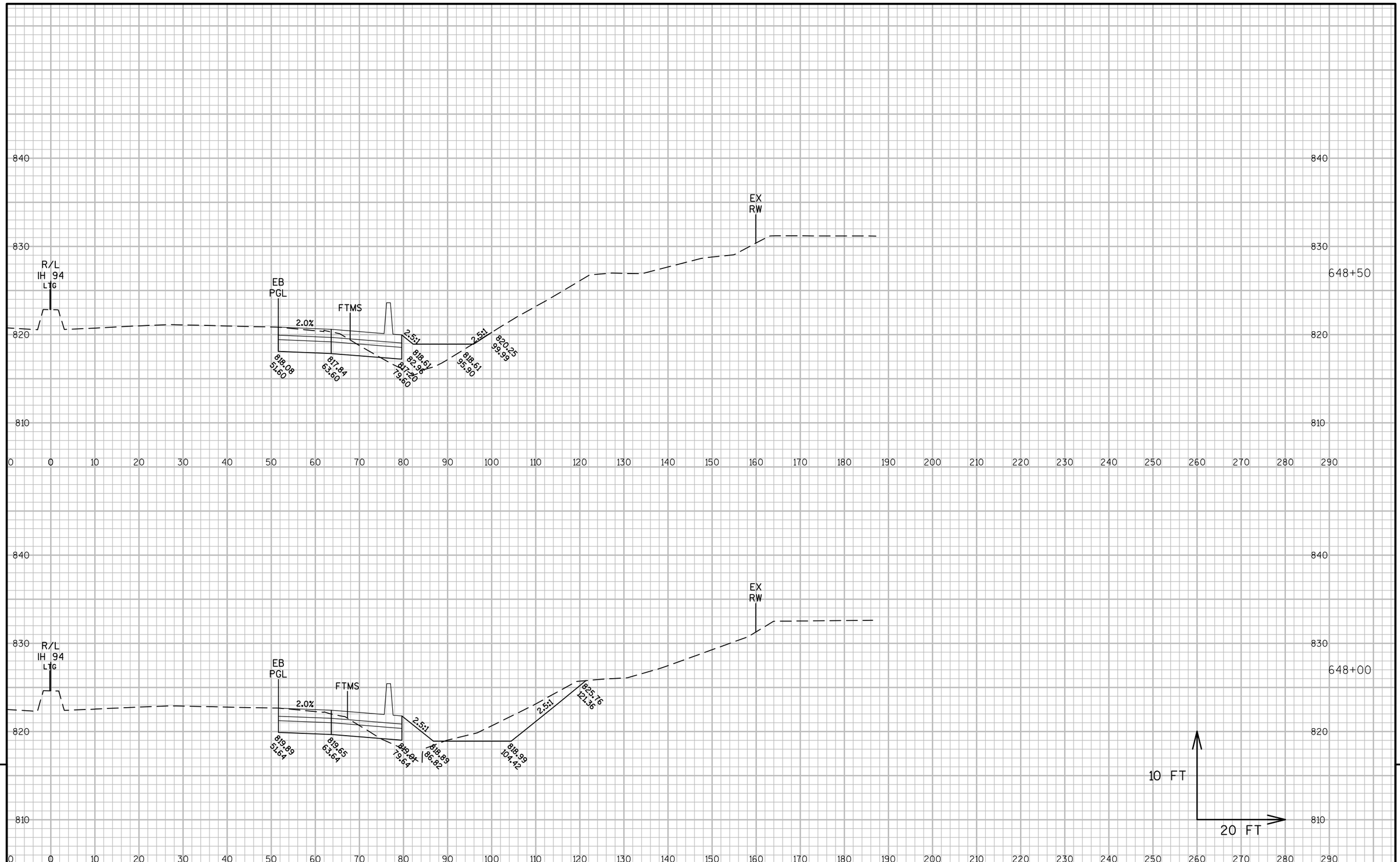
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LAYOUT NAME - SECTION SHEET - (49)

PLOT DATE : 5/1/2017 4:27 PM

PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

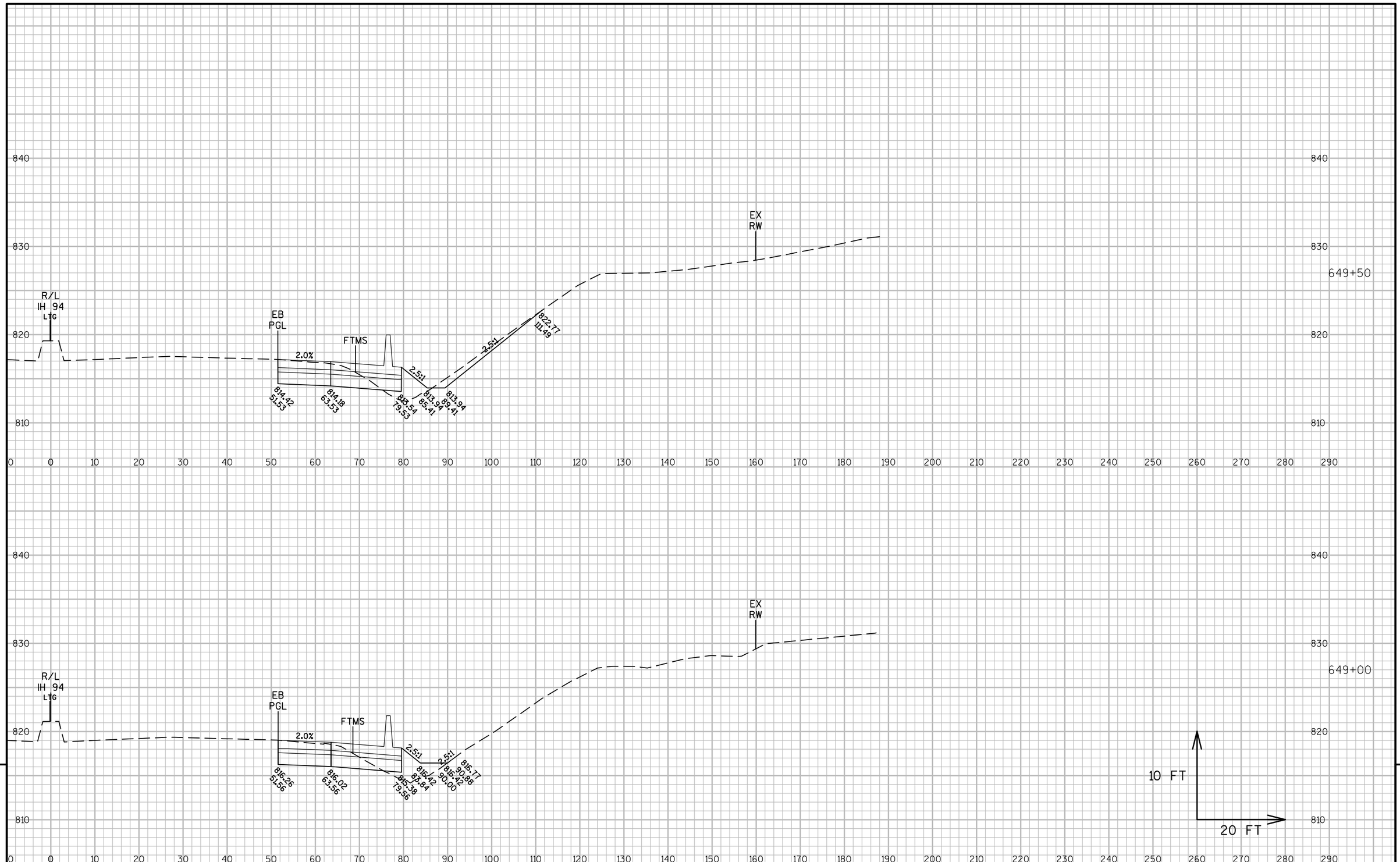
WISDOT/CADDS SHEET 49



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 633	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (50)

PLOT DATE : 5/1/2017 4:27 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

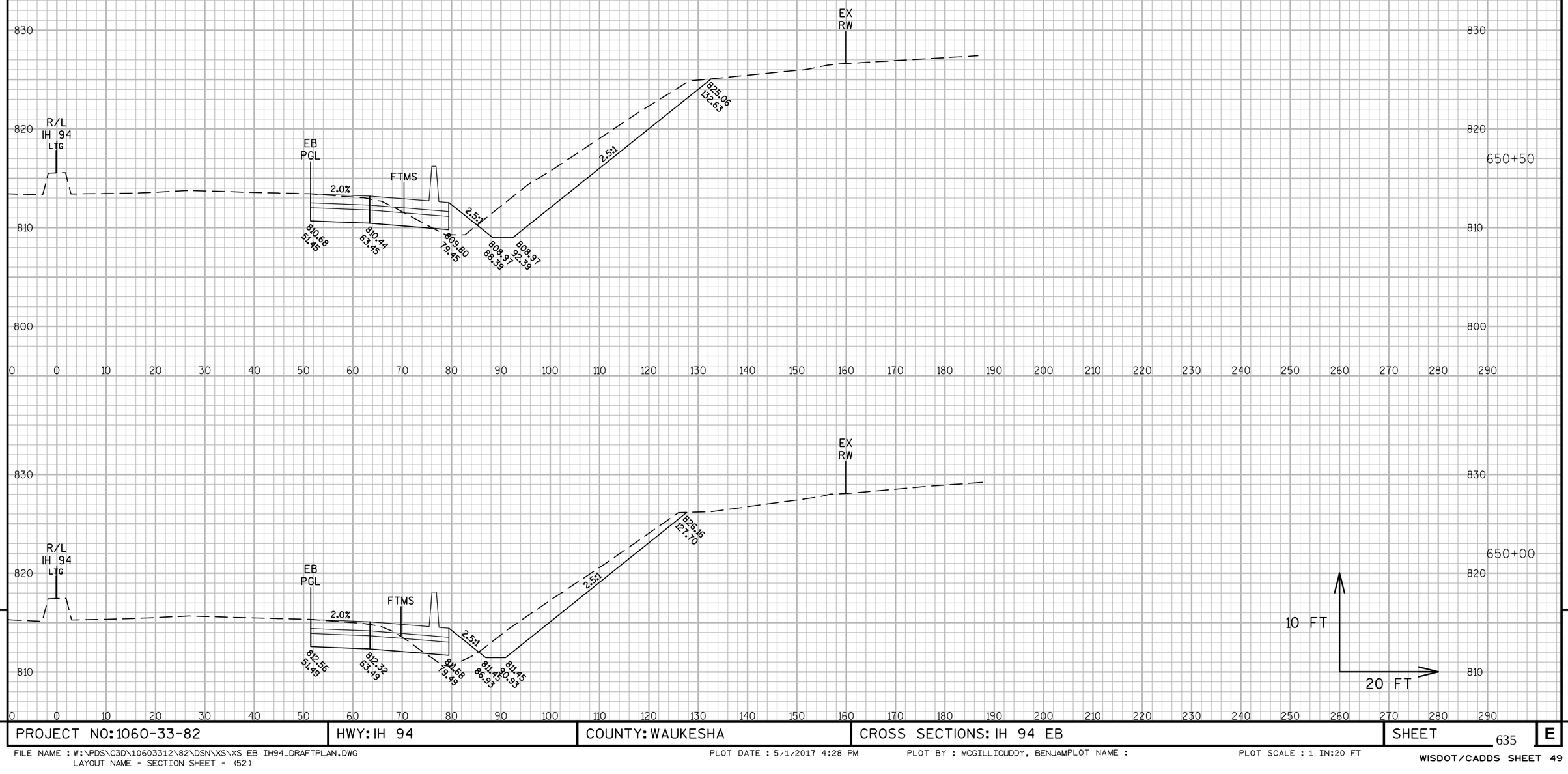


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 634	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (51)

PLOT DATE : 5/1/2017 4:27 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

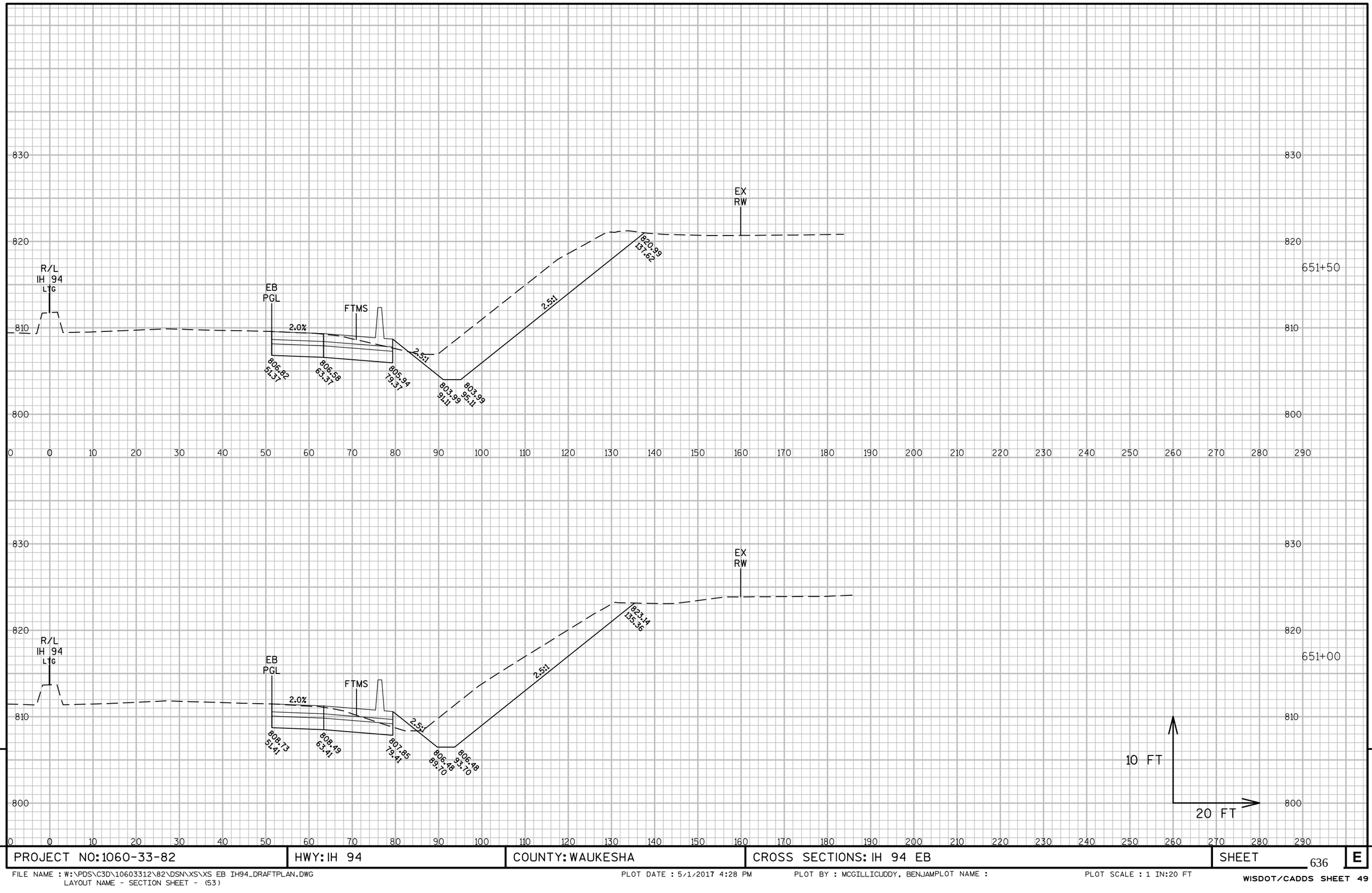


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 635	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (52)

PLOT DATE : 5/1/2017 4:28 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



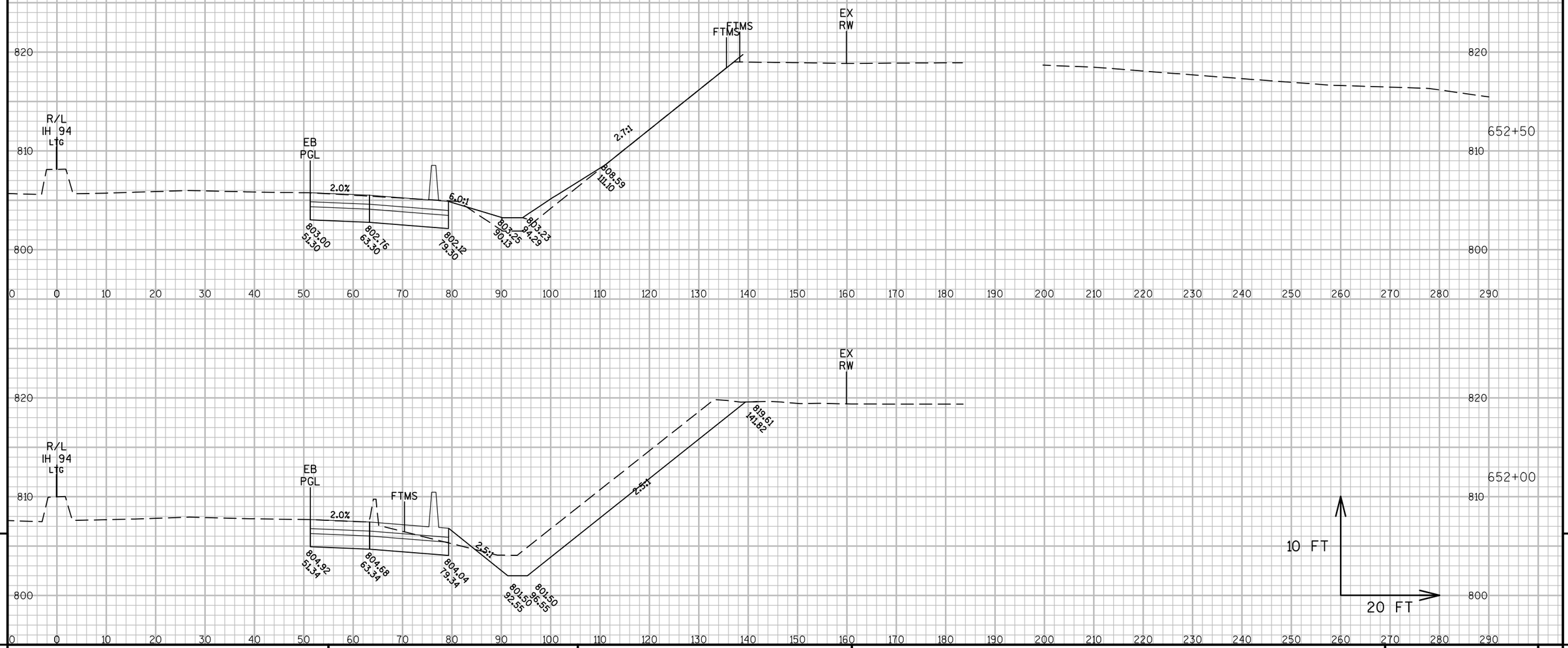
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 636	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (53)

PLOT DATE : 5/1/2017 4:28 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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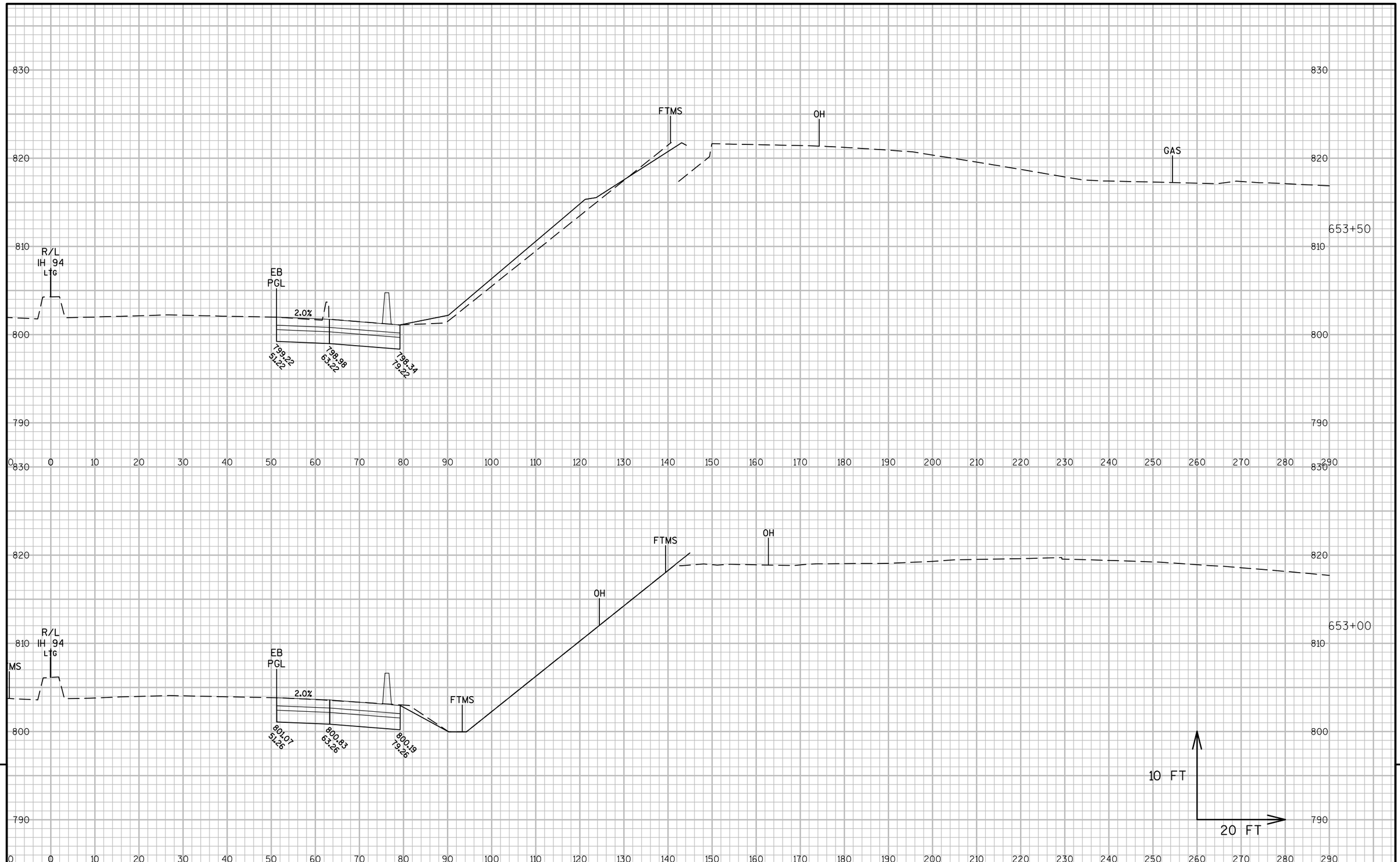
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 637	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (54)

PLOT DATE : 5/1/2017 4:28 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

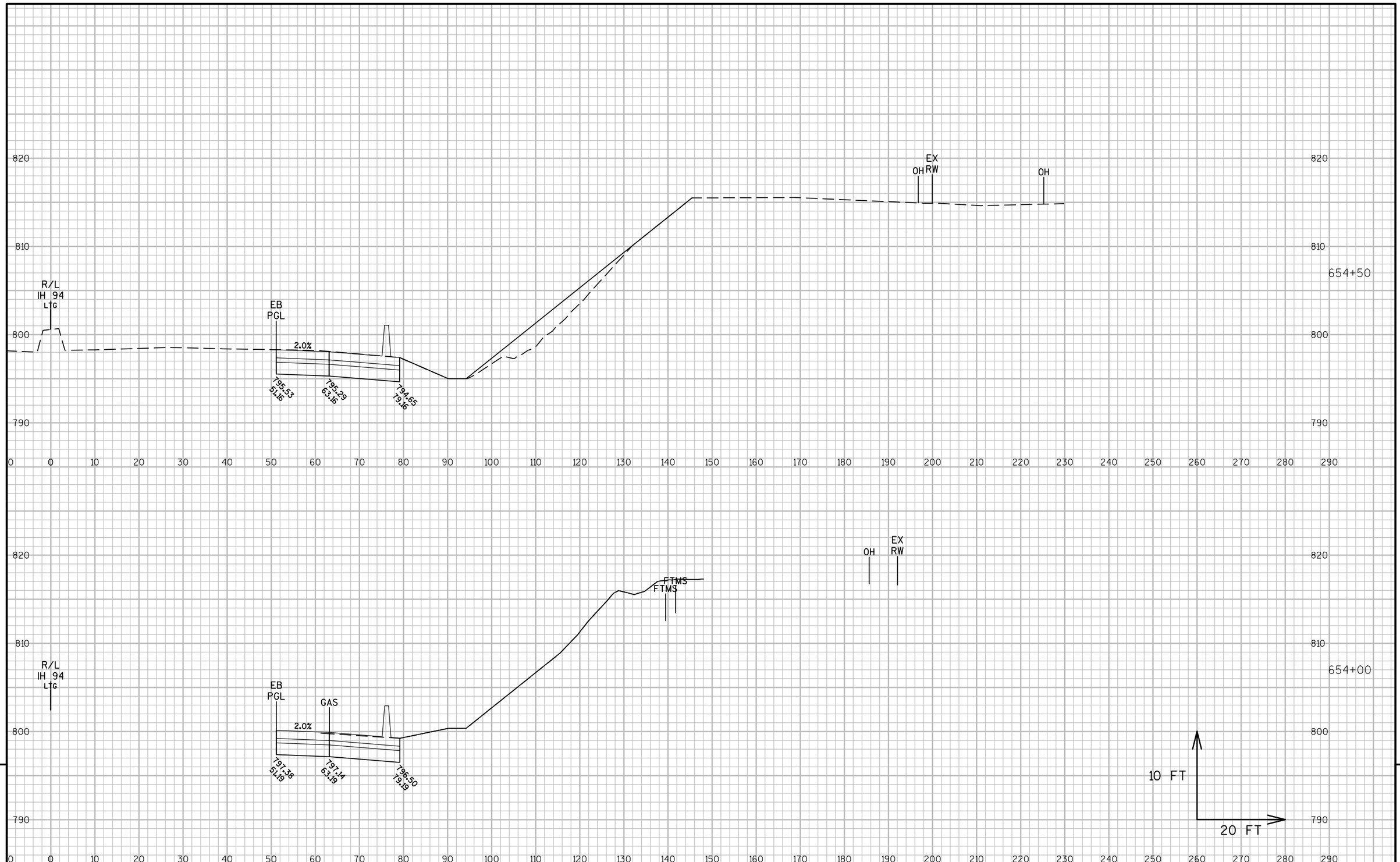


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 638	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (55)

PLOT DATE : 5/1/2017 4:29 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

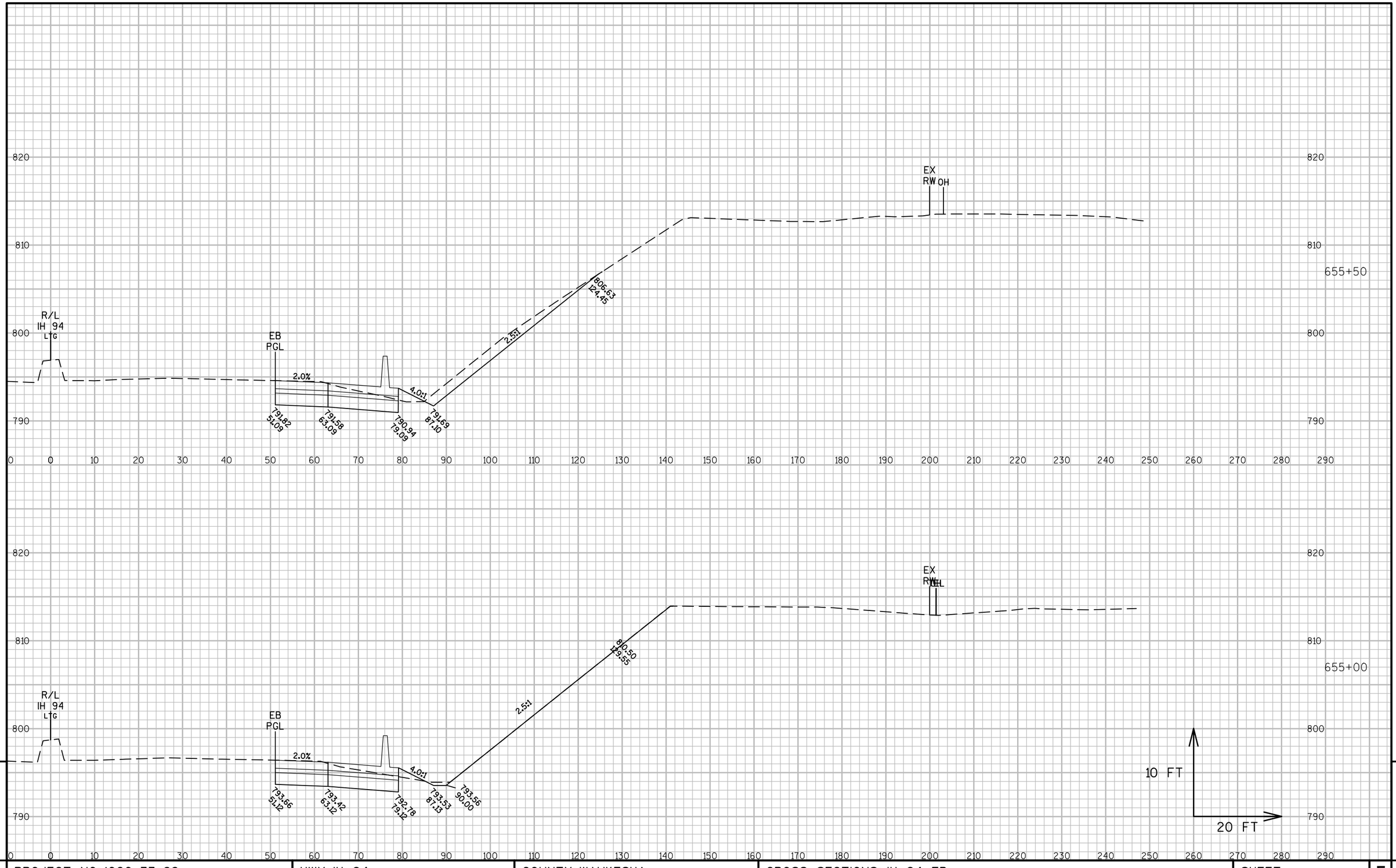
WISDOT/CADDS SHEET 49



PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 639	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (56)

PLOT DATE : 5/1/2017 4:29 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



9

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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 640	E

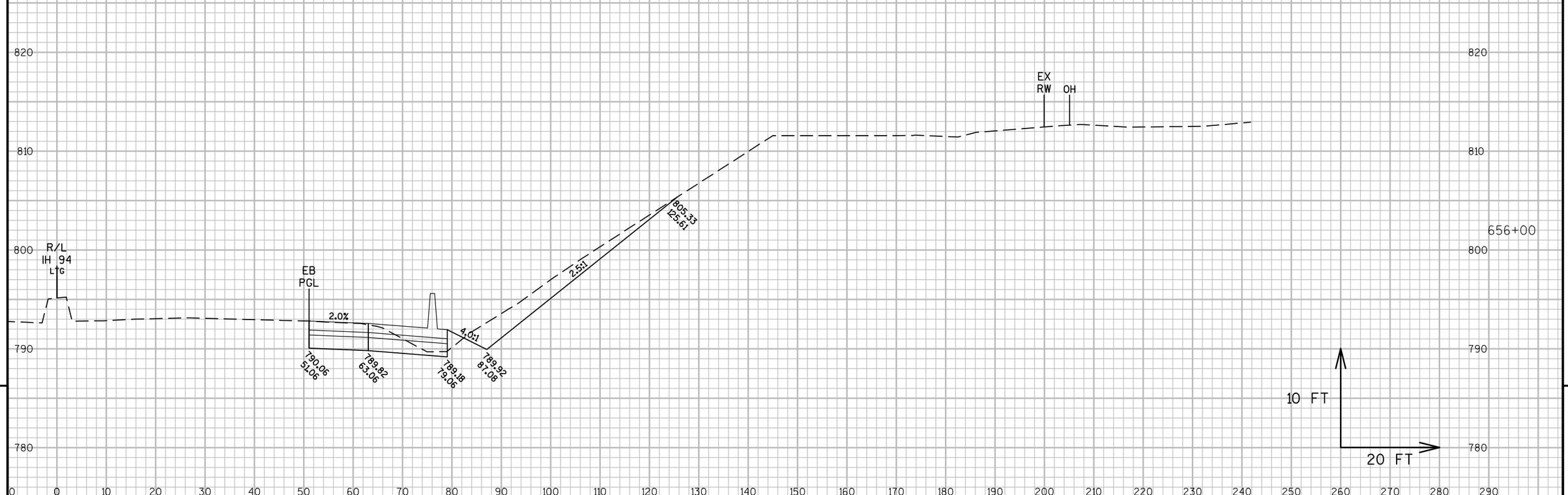
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LAYOUT NAME - SECTION SHEET - (57)

PLOT DATE : 5/1/2017 4:30 PM

PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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9

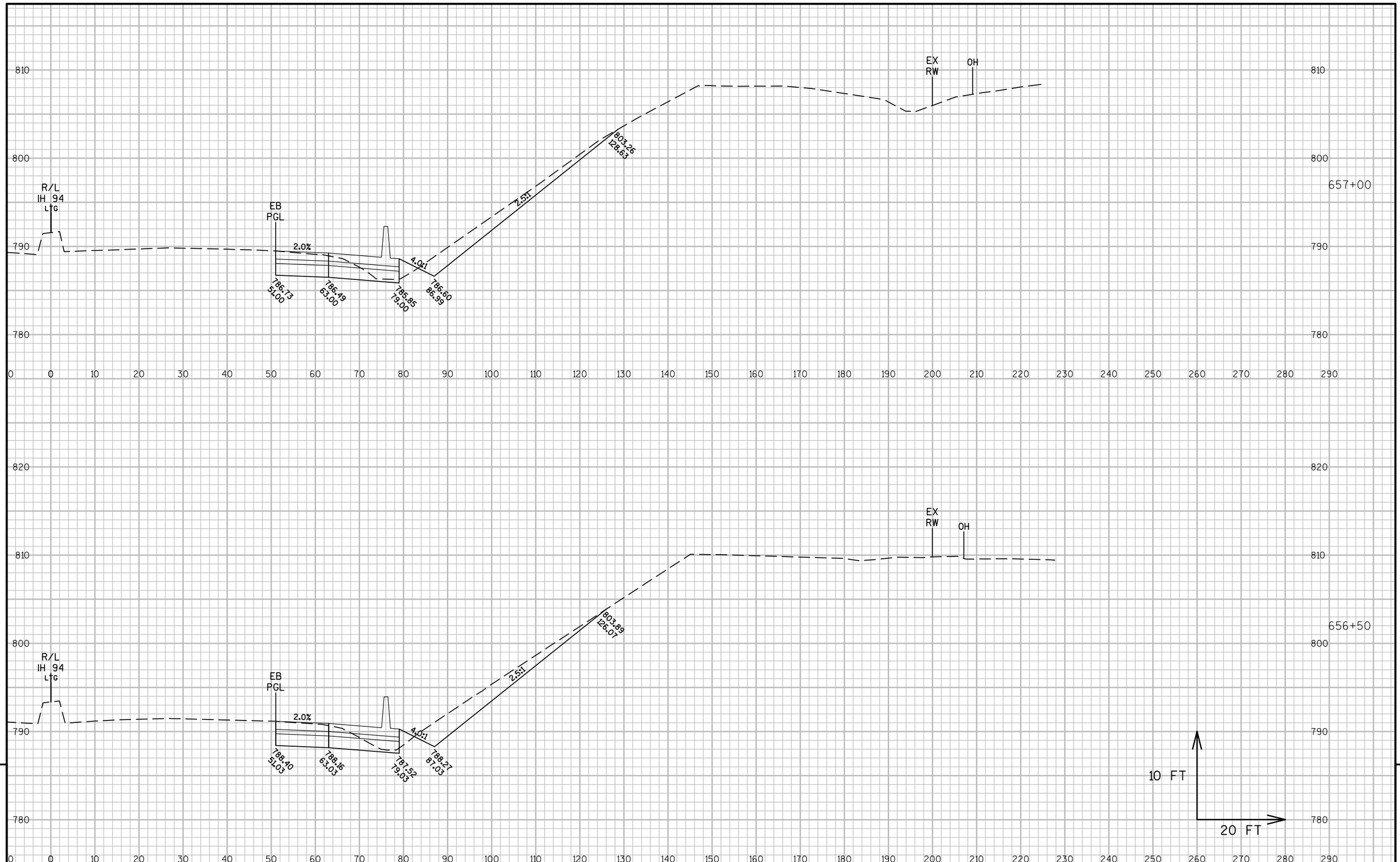
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 641	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (58)

PLOT DATE : 5/1/2017 4:30 PM

PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

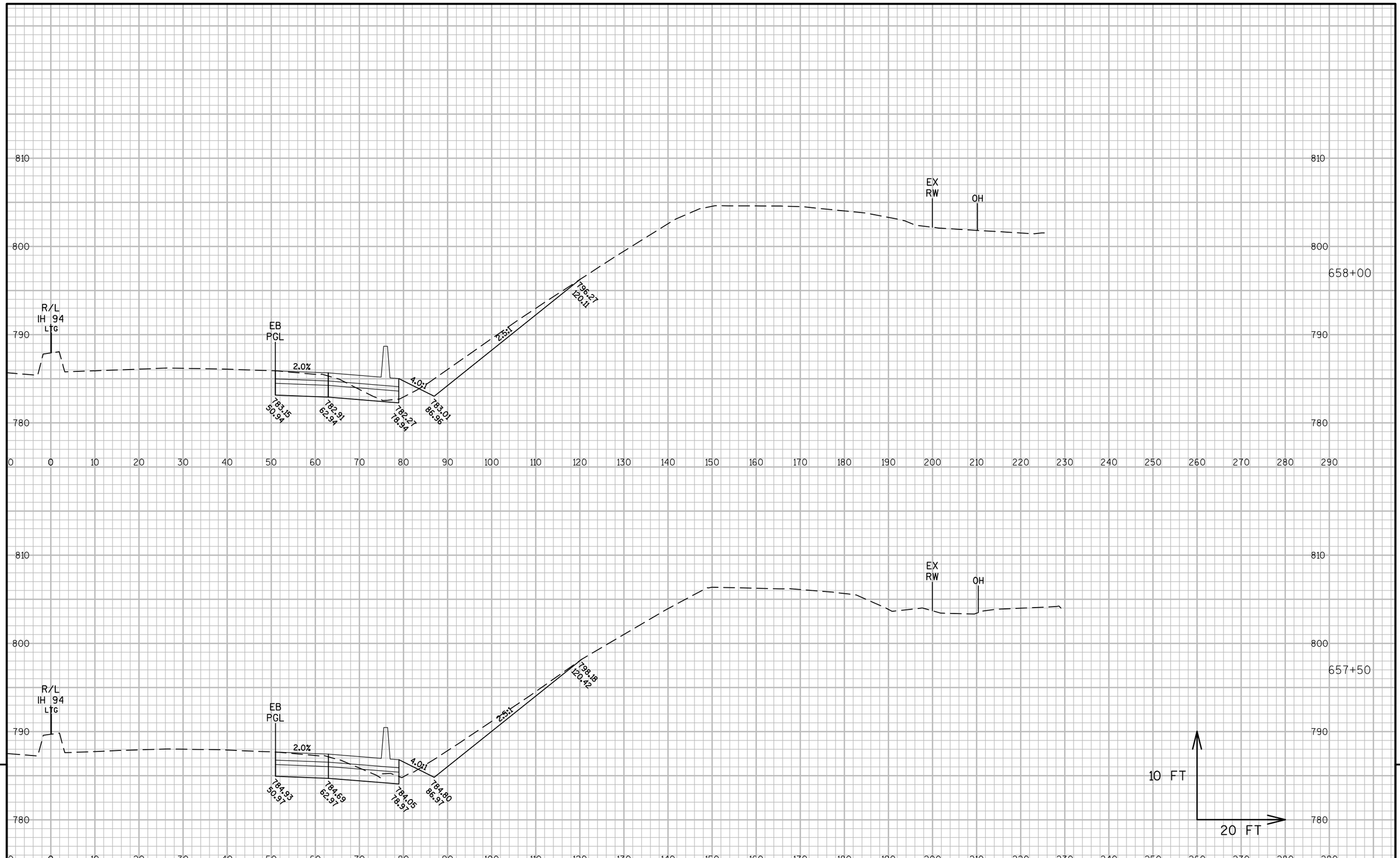


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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 642	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (59)
PLOT DATE : 5/1/2017 4:30 PM
PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

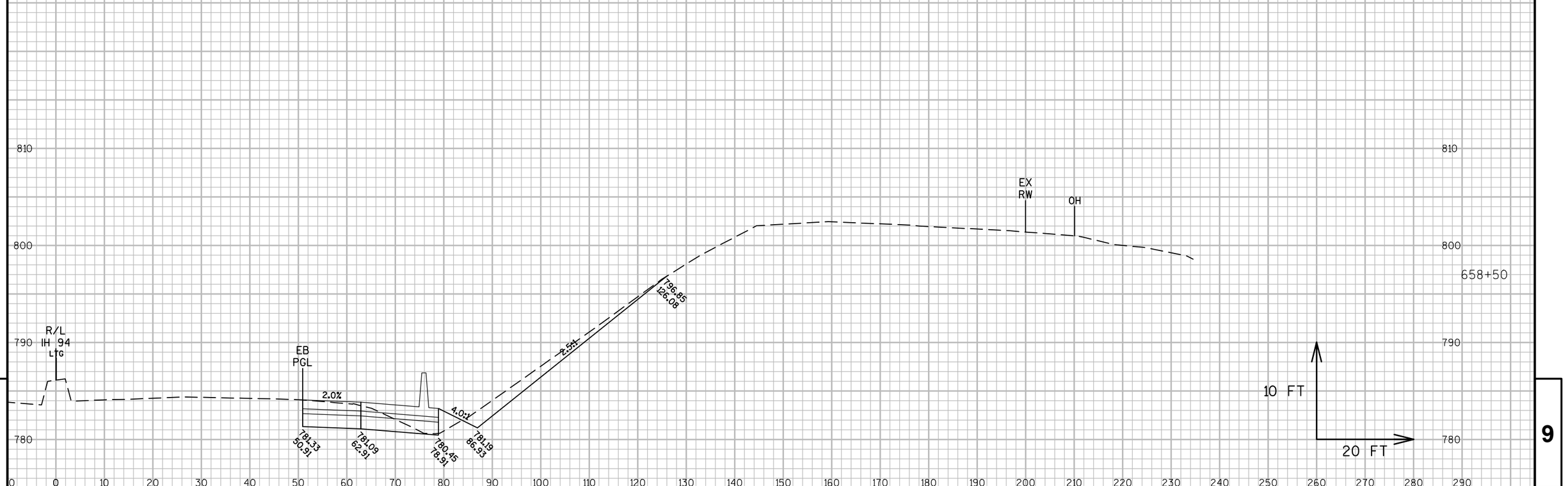


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 643	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (60)

PLOT DATE : 5/1/2017 4:31 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

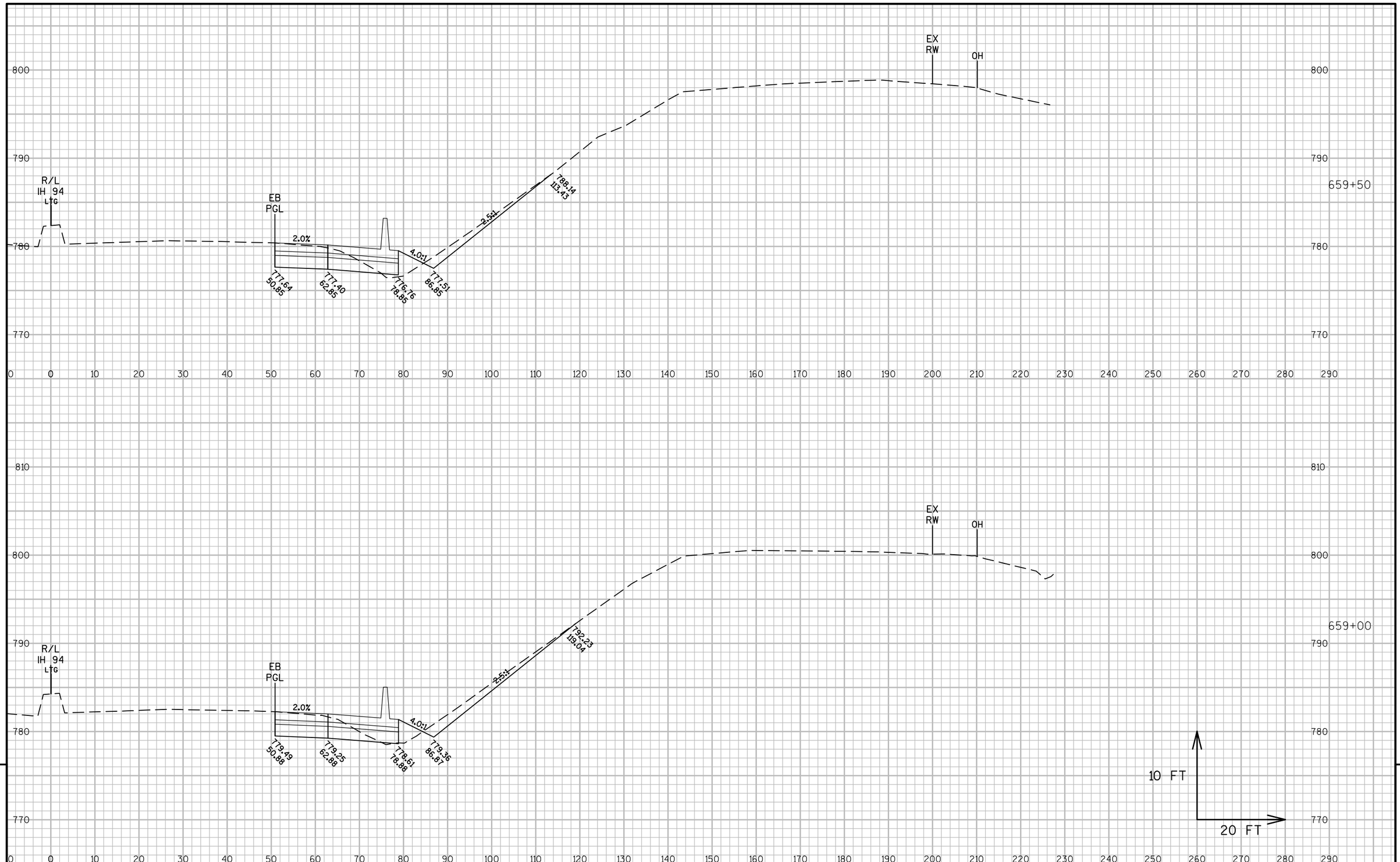
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 644	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (61)

PLOT DATE : 5/1/2017 4:31 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



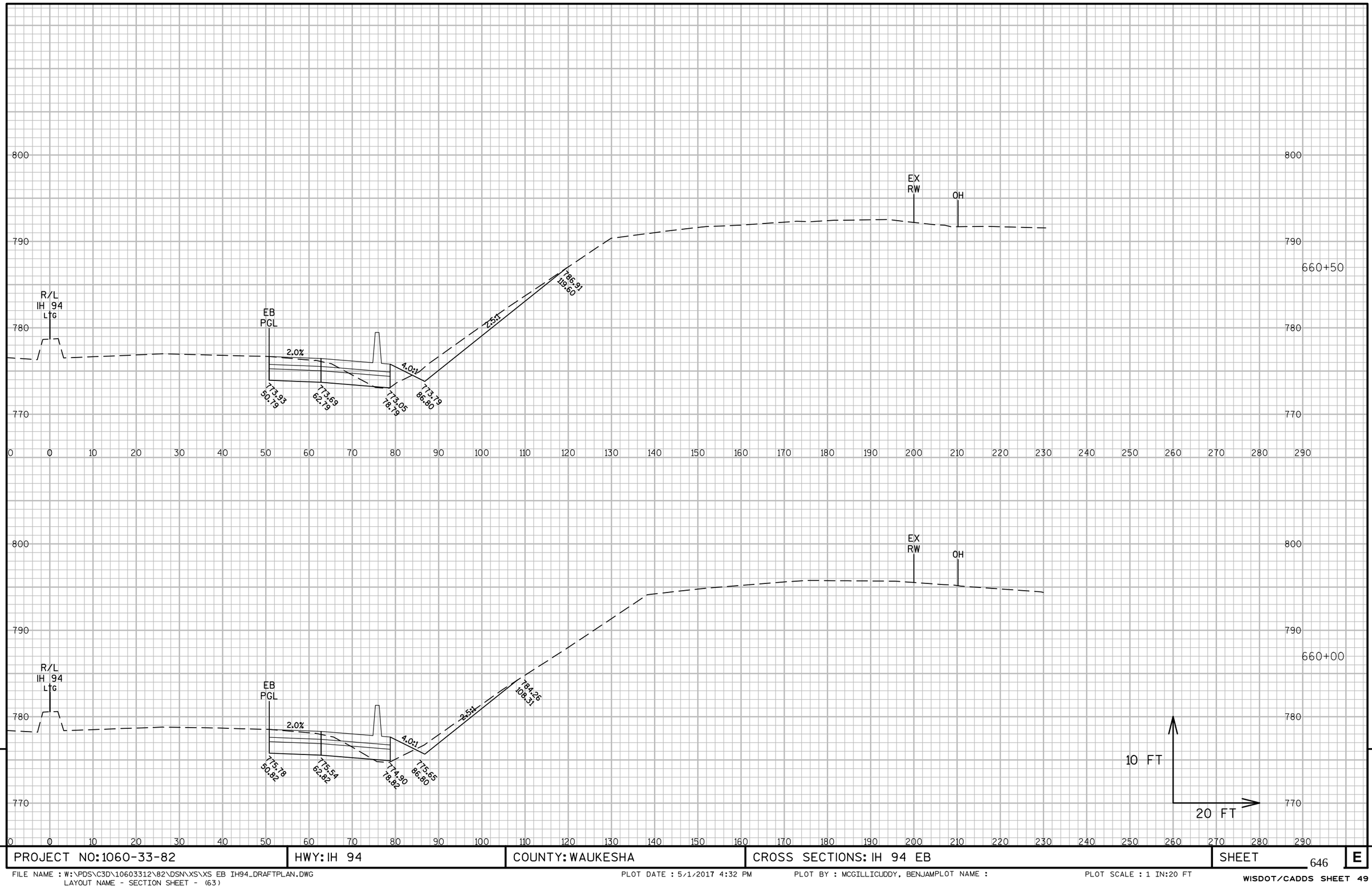
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 645	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (62)

PLOT DATE : 5/1/2017 4:31 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



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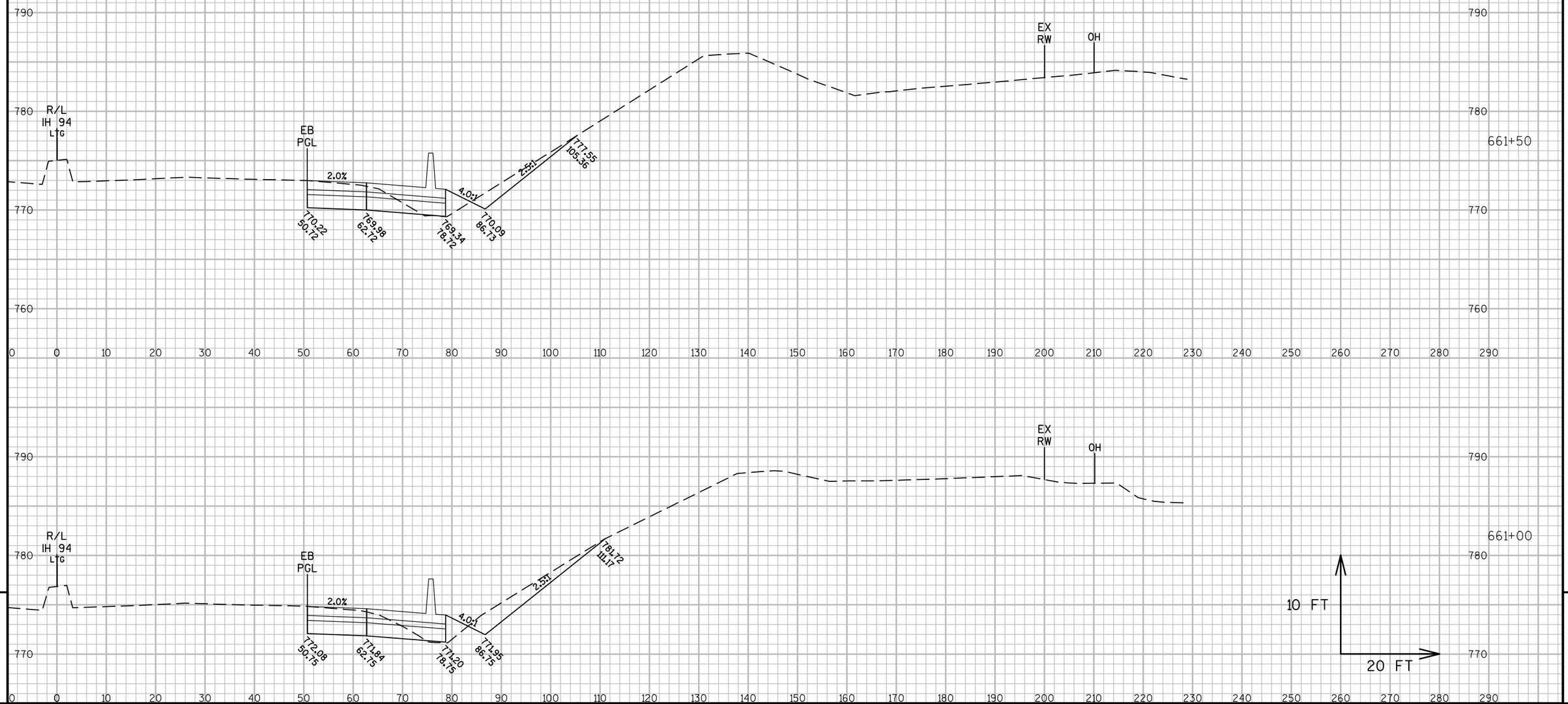
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 646	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (63)

PLOT DATE : 5/1/2017 4:32 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

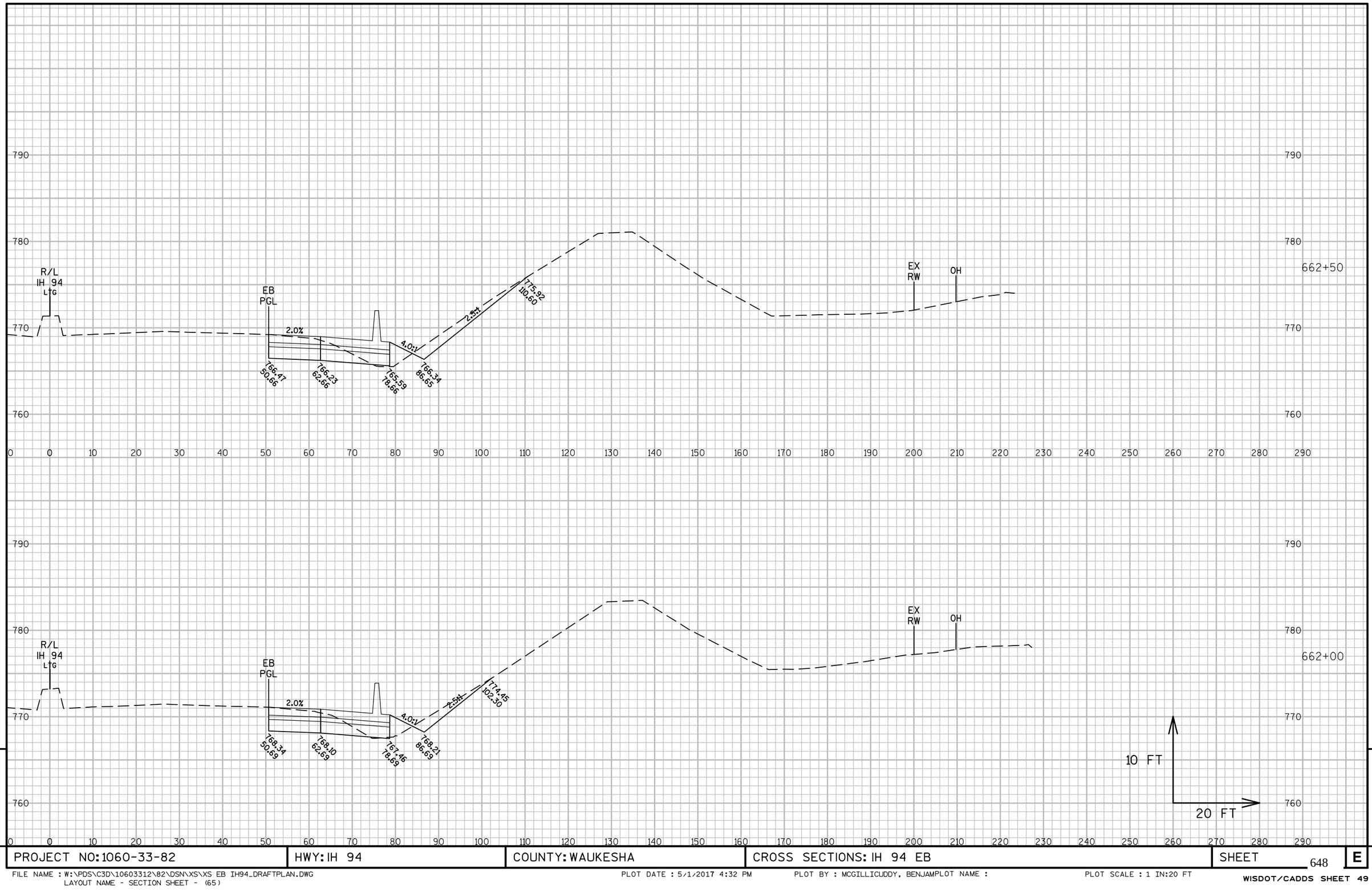
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 647	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (64)

PLOT DATE : 5/1/2017 4:32 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

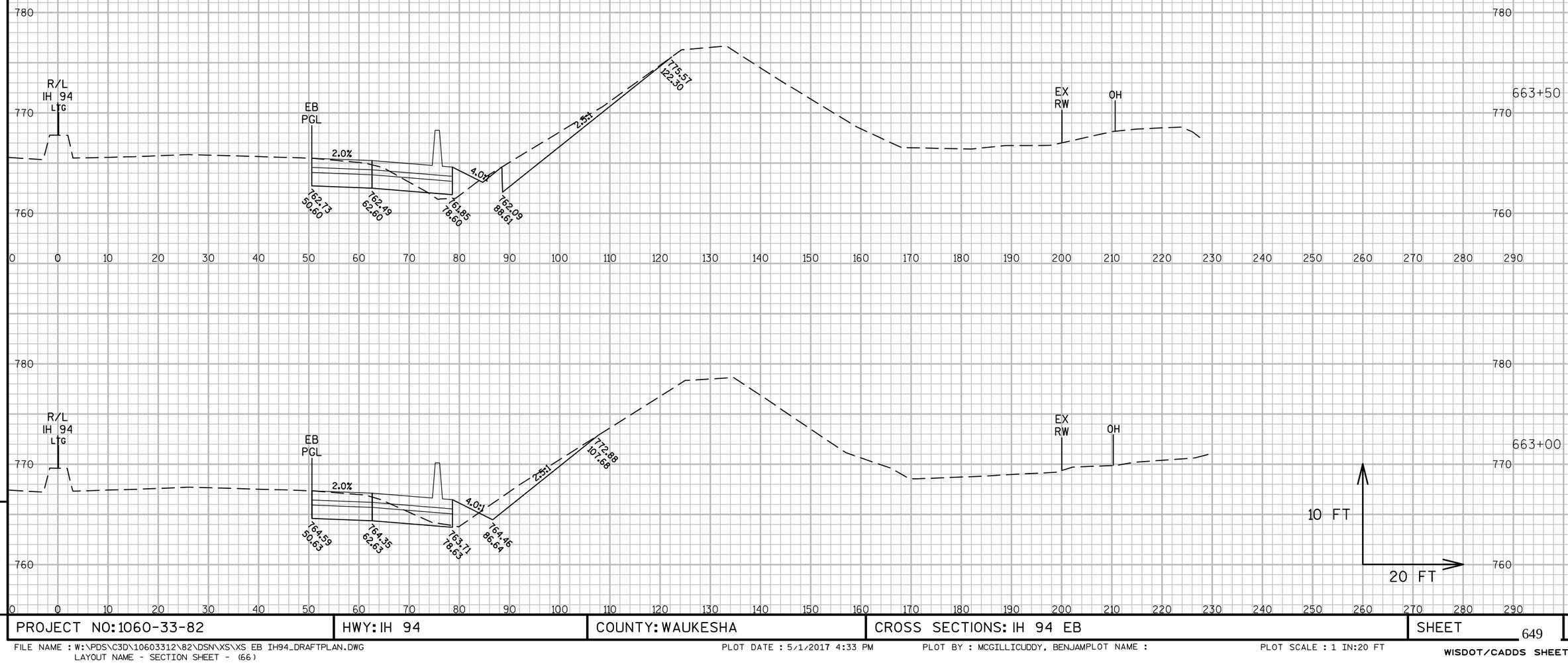


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 648	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (65)

PLOT DATE : 5/1/2017 4:32 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

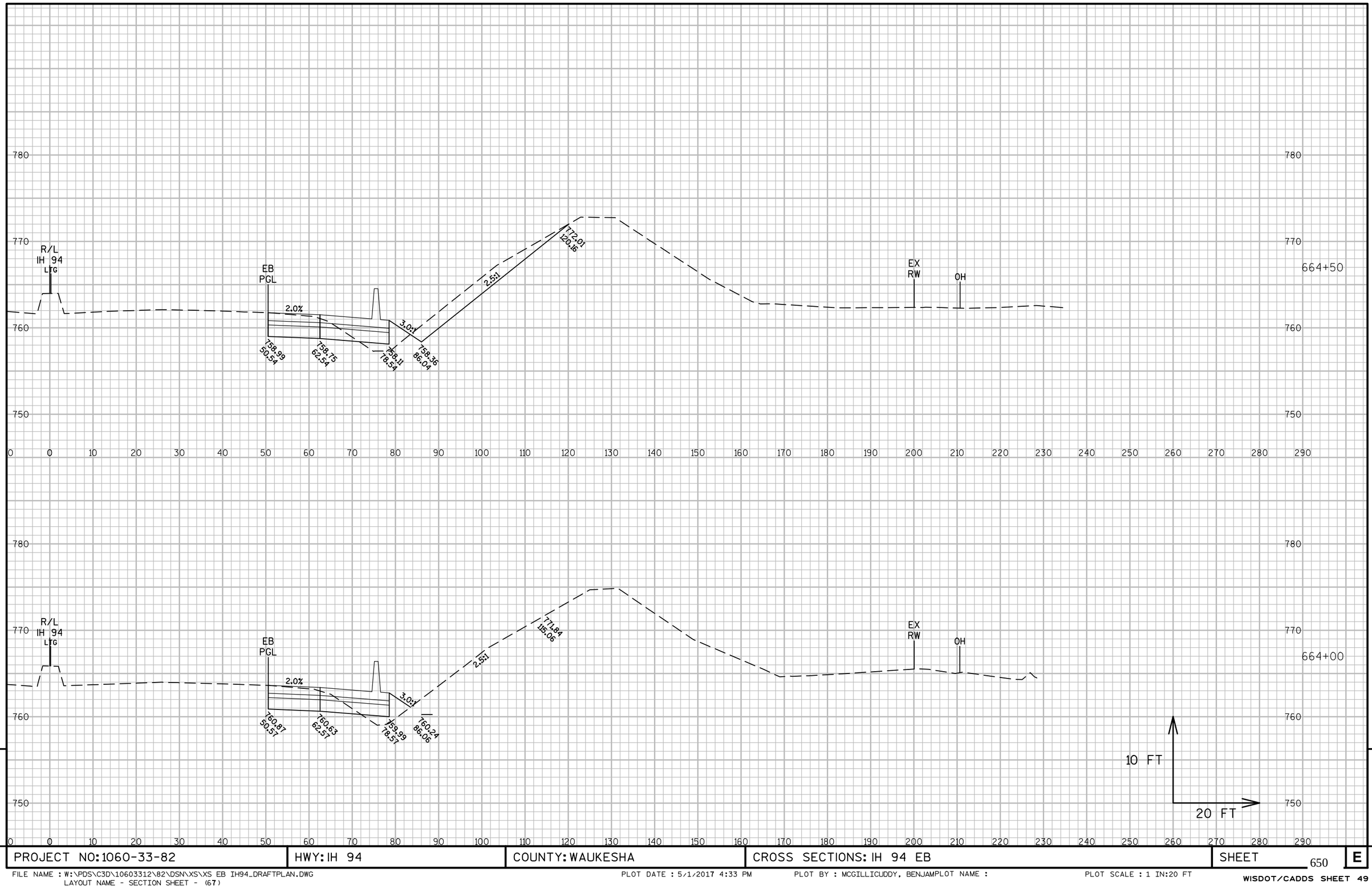
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 649	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (66)

PLOT DATE : 5/1/2017 4:33 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

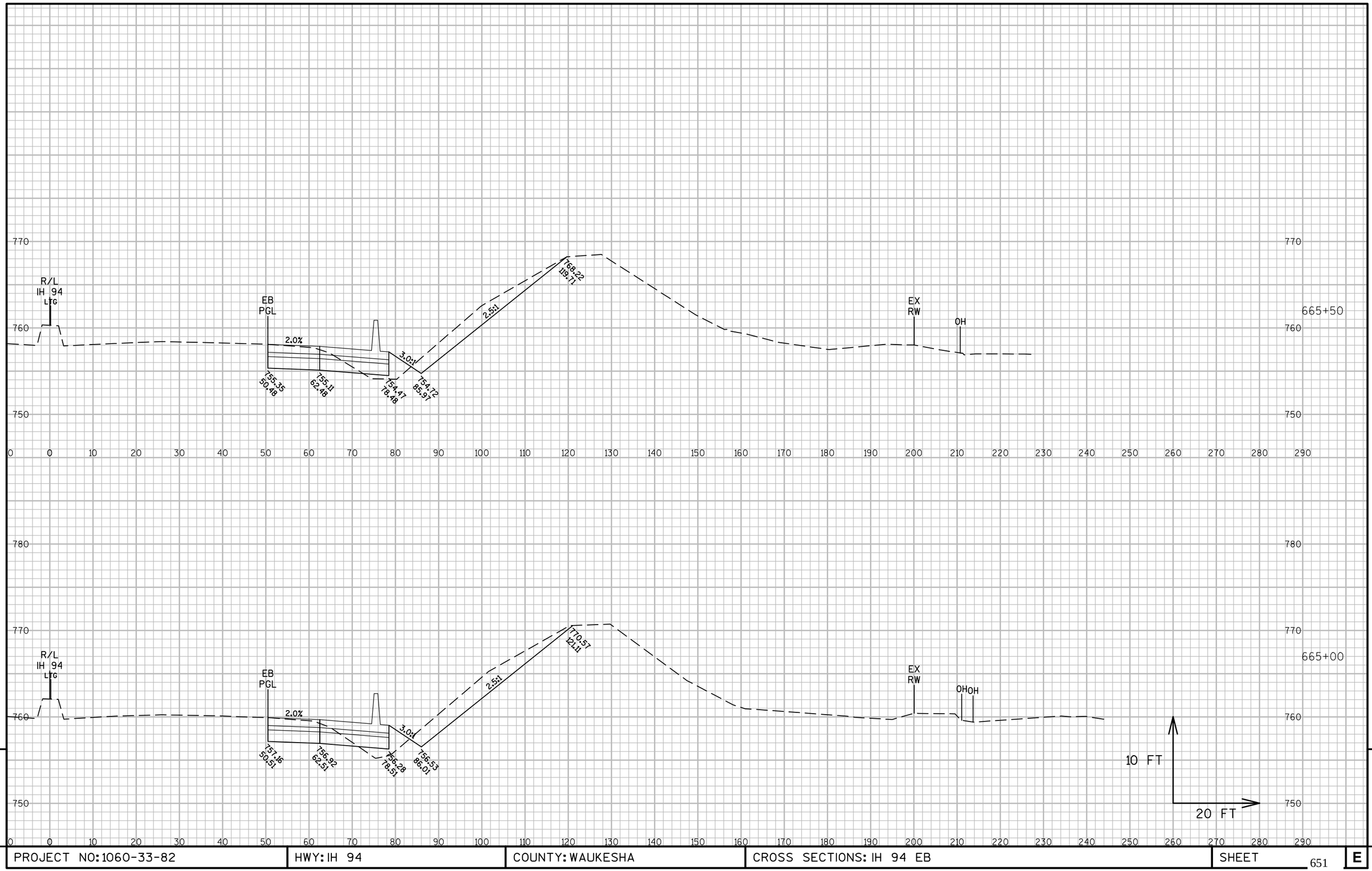
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 650	E



9

9

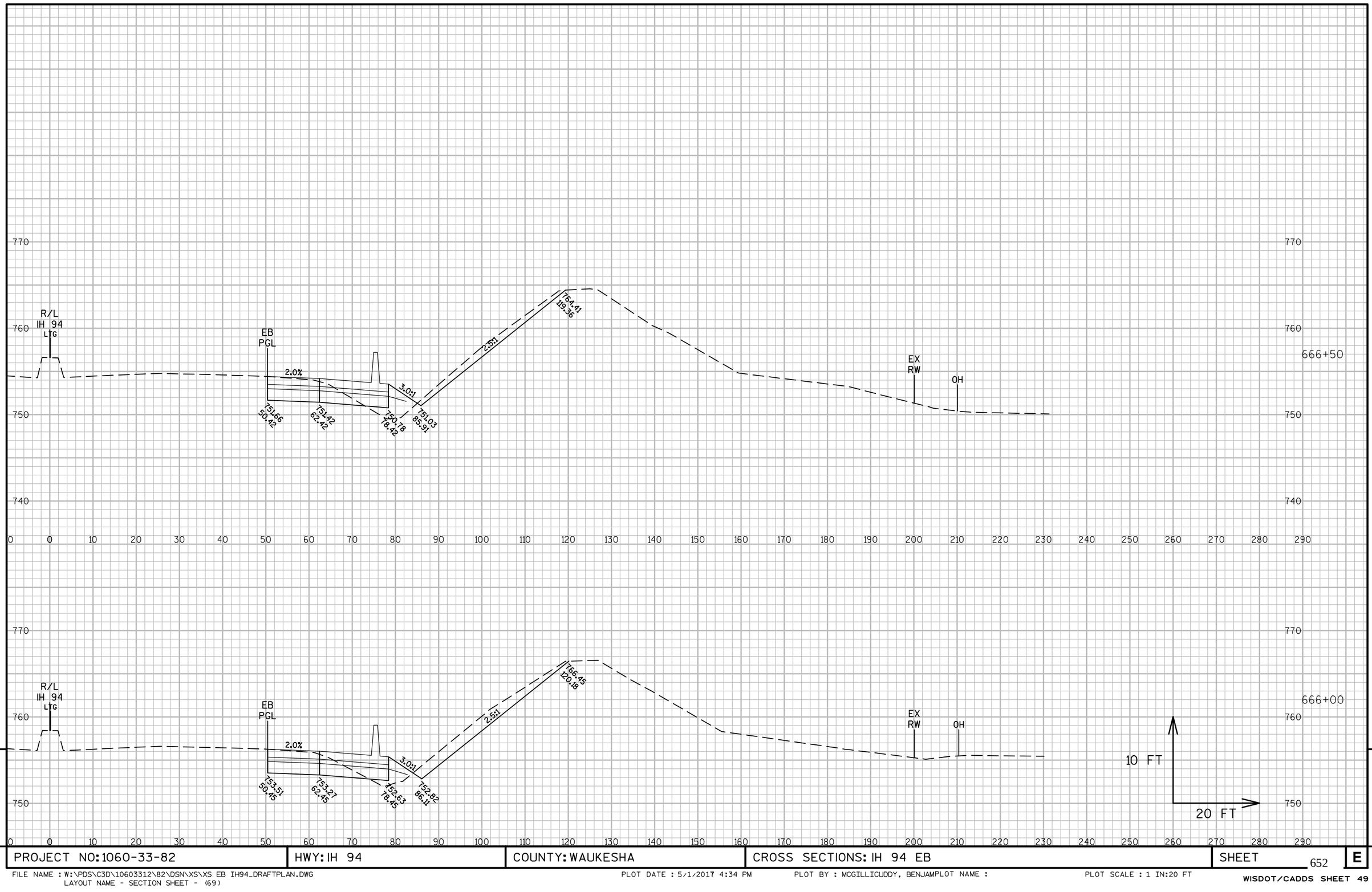
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 651	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (68)

PLOT DATE : 5/1/2017 4:33 PM

PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT



9

9

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 652	E

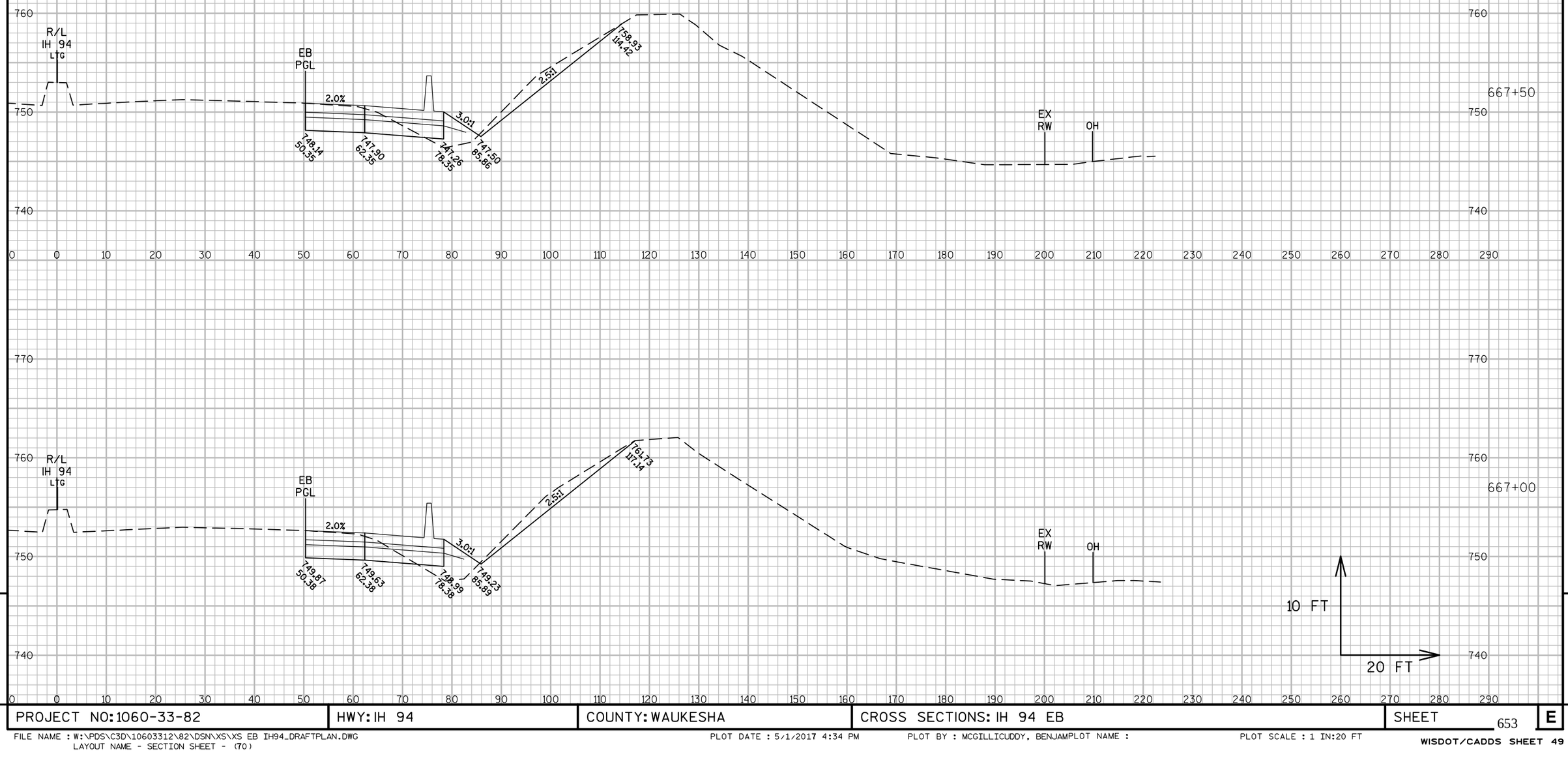
FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (69)

PLOT DATE : 5/1/2017 4:34 PM

PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 653	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (70)

PLOT DATE : 5/1/2017 4:34 PM

PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME :

PLOT SCALE : 1 IN:20 FT

760
750
740
730
0 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290

R/L
IH 94
Ltg

EB
PGL

2.0%
2.5:1
3.0:1

145.10
50.29
144.86
62.29
144.22
78.29
744.40
84.13
746.52
50.32
746.28
62.32
745.64
78.32
745.89
85.82
754.37
107.01

WETLAND
EX
RW
WETLAND
OH

668+50
668+00

10 FT
20 FT

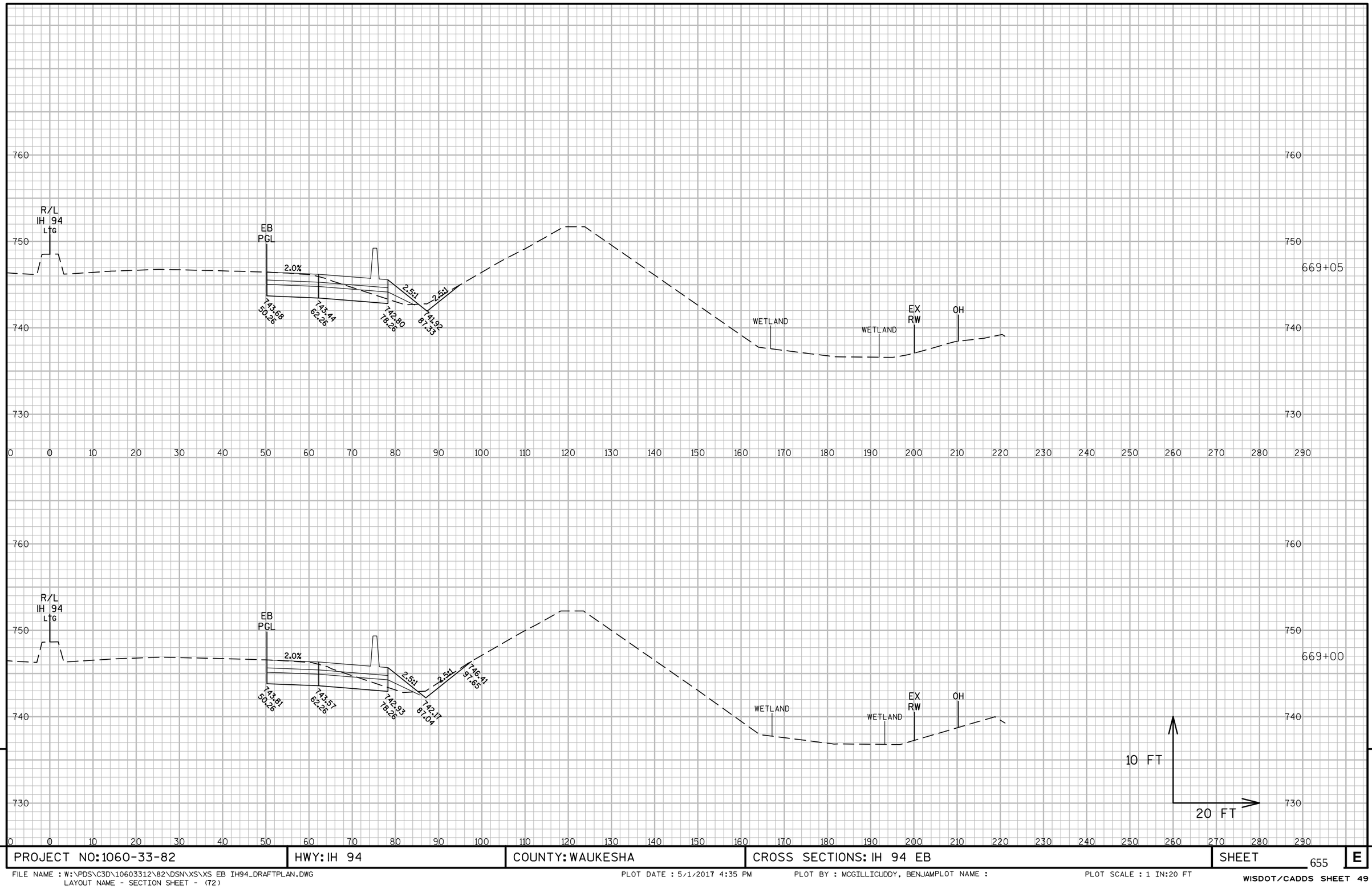
9

PROJECT NO: 1060-33-82 | HWY: IH 94 | COUNTY: WAUKESHA | CROSS SECTIONS: IH 94 EB | SHEET 654 | E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (71)

PLOT DATE : 5/1/2017 4:35 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



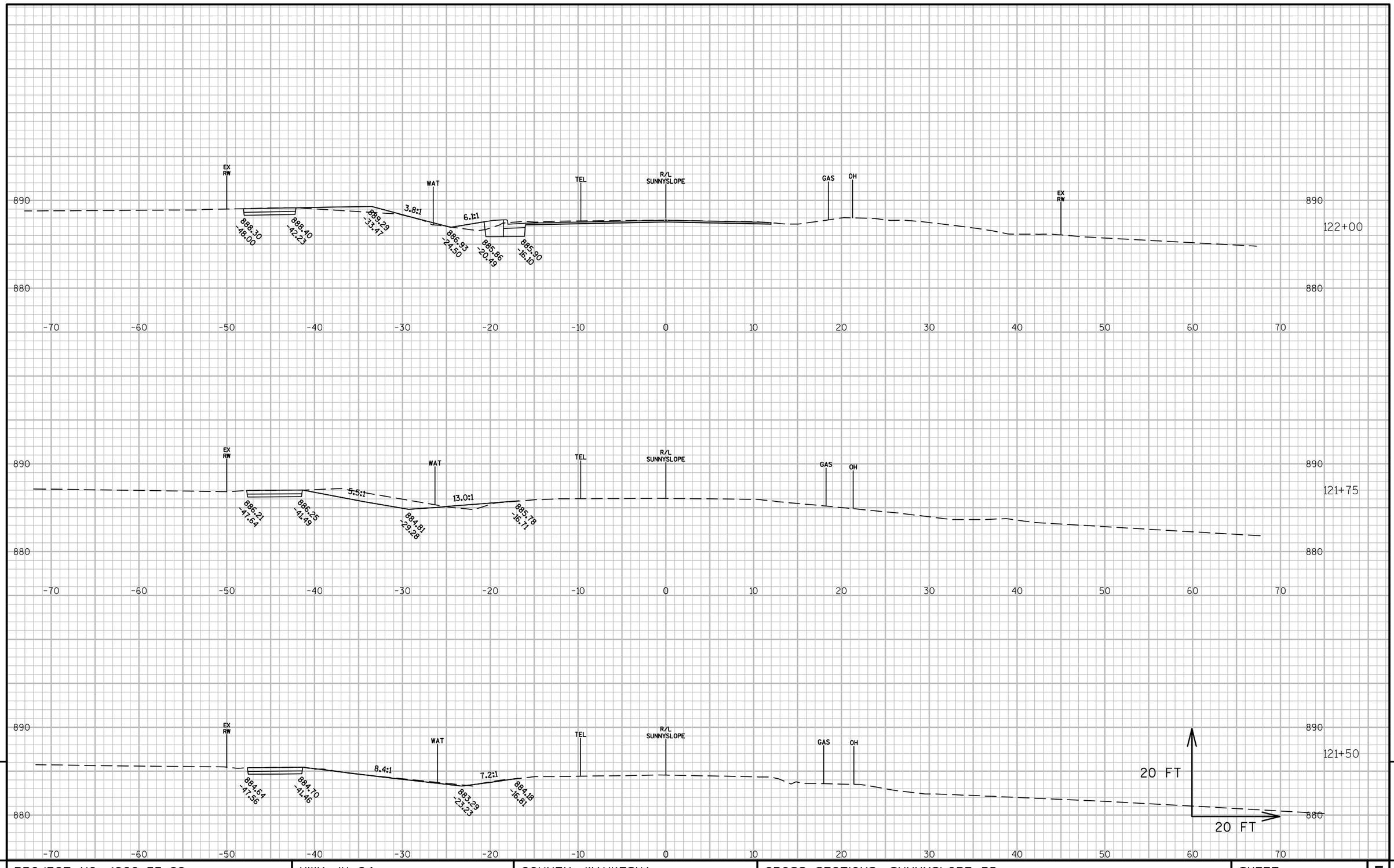
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9

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: IH 94 EB	SHEET 655	E

FILE NAME : W:\PDS\C3D\10603312\82\DSN\XS\XS EB IH94_DRAFTPLAN.DWG
LAYOUT NAME - SECTION SHEET - (72)

PLOT DATE : 5/1/2017 4:35 PM PLOT BY : MCGILLICUDDY, BENJAMPLOT NAME : PLOT SCALE : 1 IN:20 FT



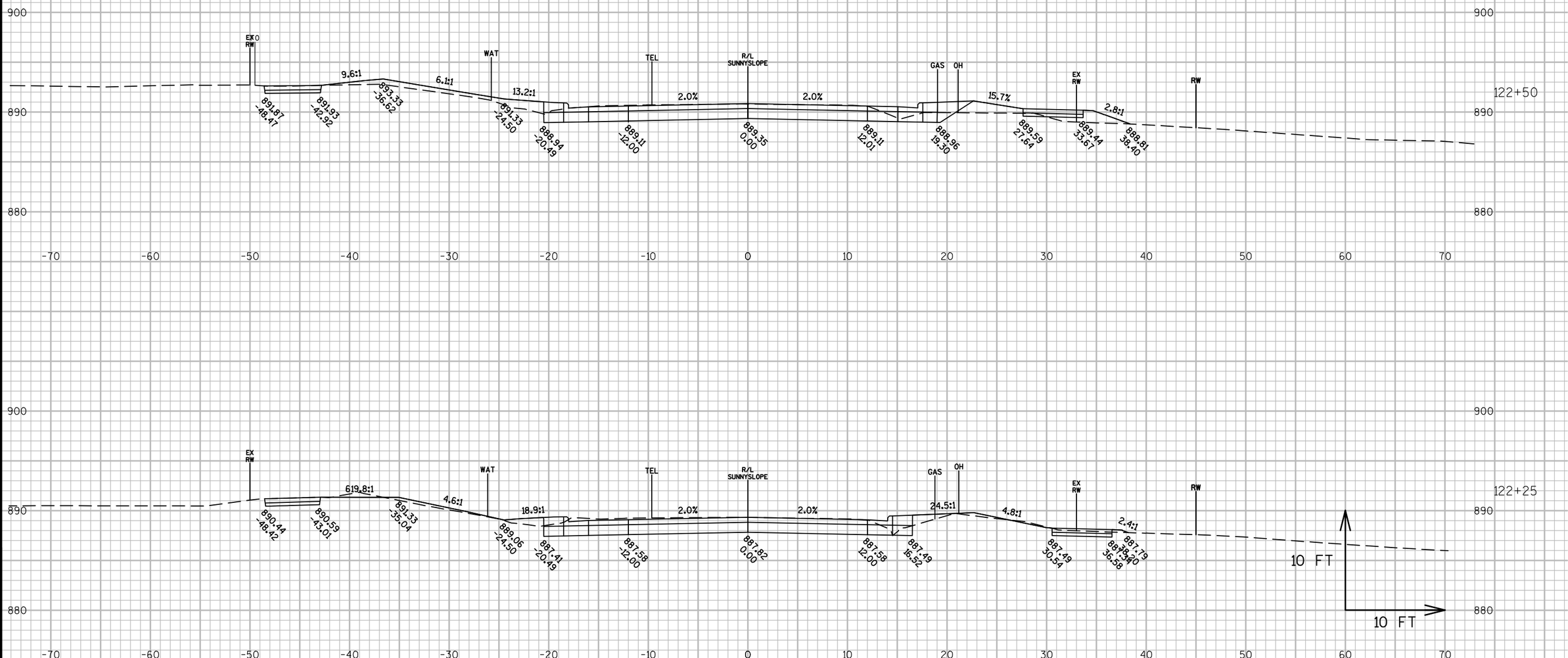
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9

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 656	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE DITCH.DWG
LAYOUT NAME - SECTION SHEET - (40)

PLOT DATE : 4/20/2017 3:07 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

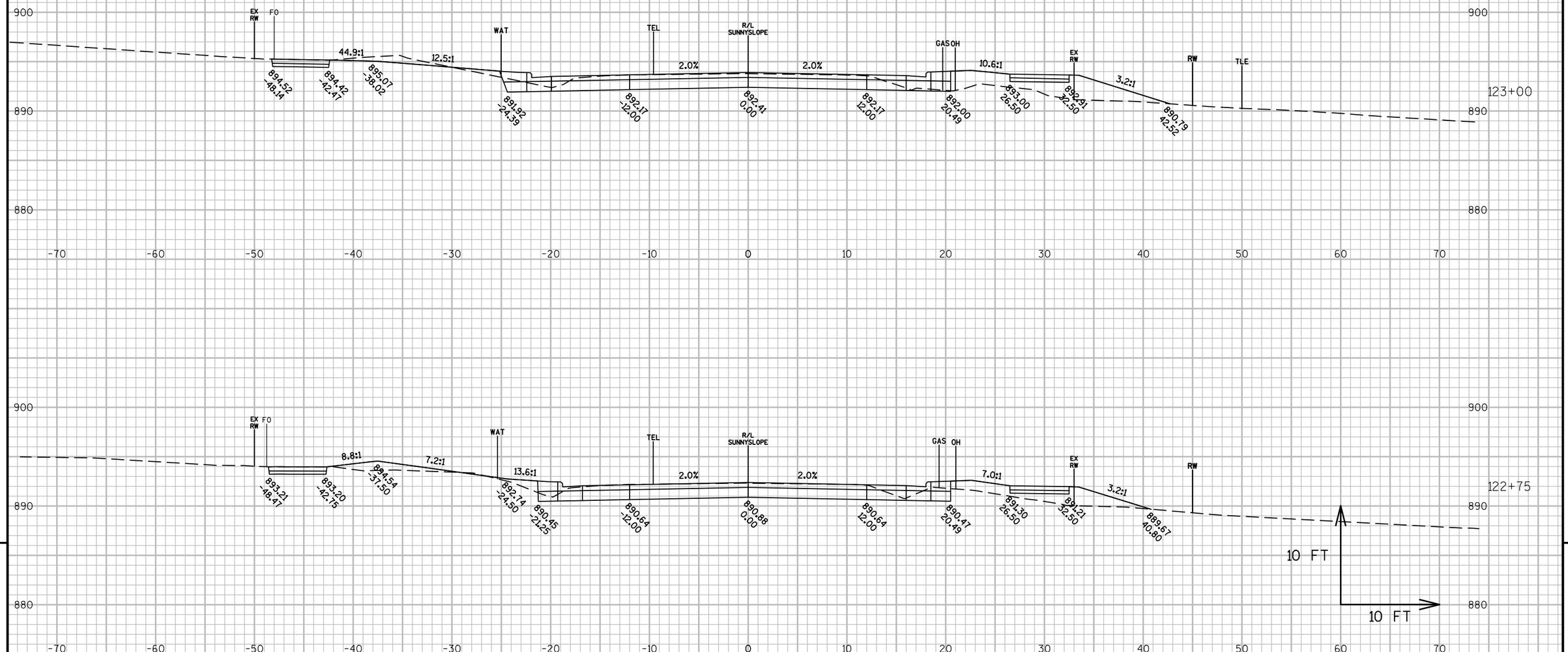


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 657	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (1)

PLOT DATE : 4/20/2017 6:48 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

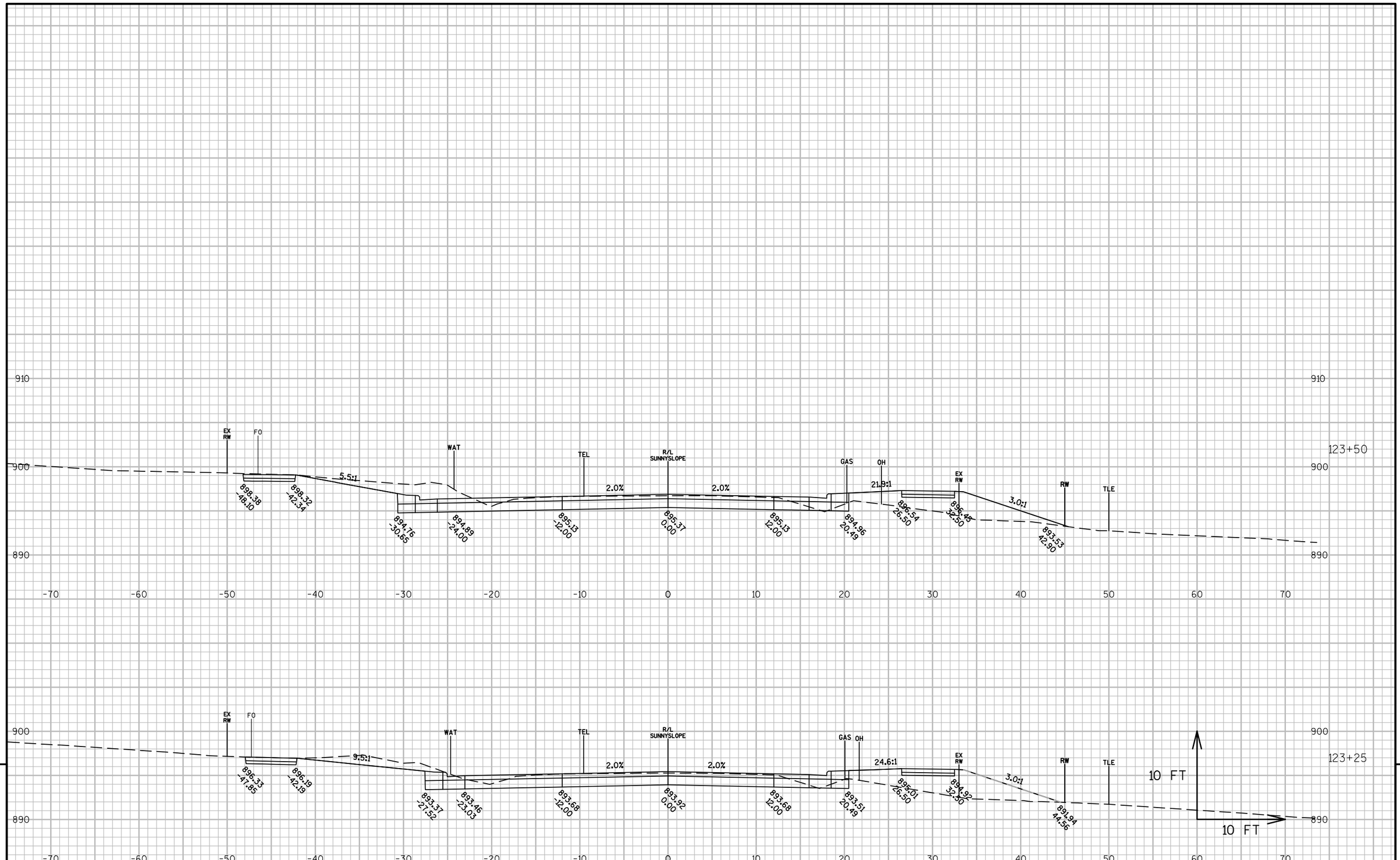


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 658 E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (2)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

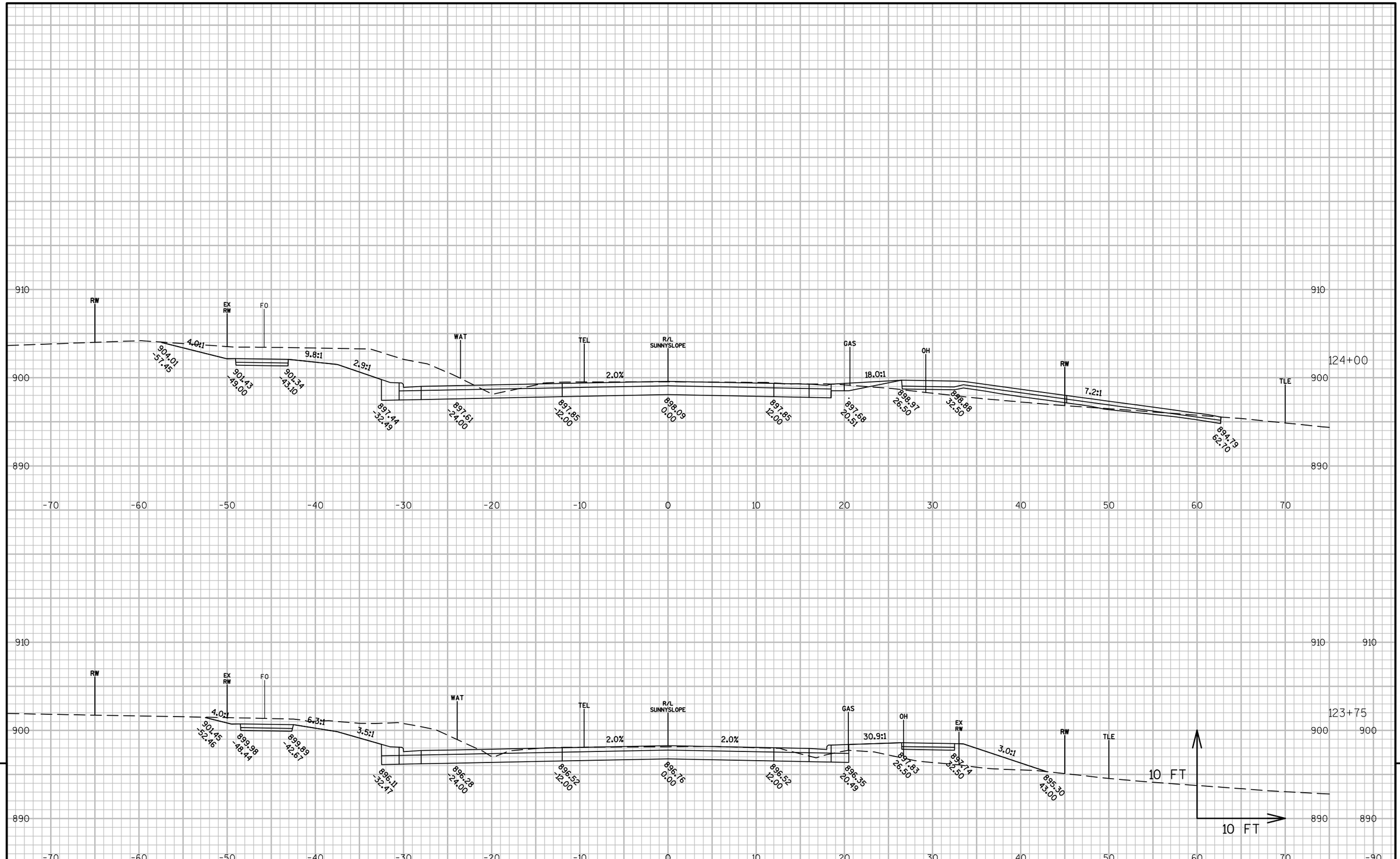
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 659	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (3)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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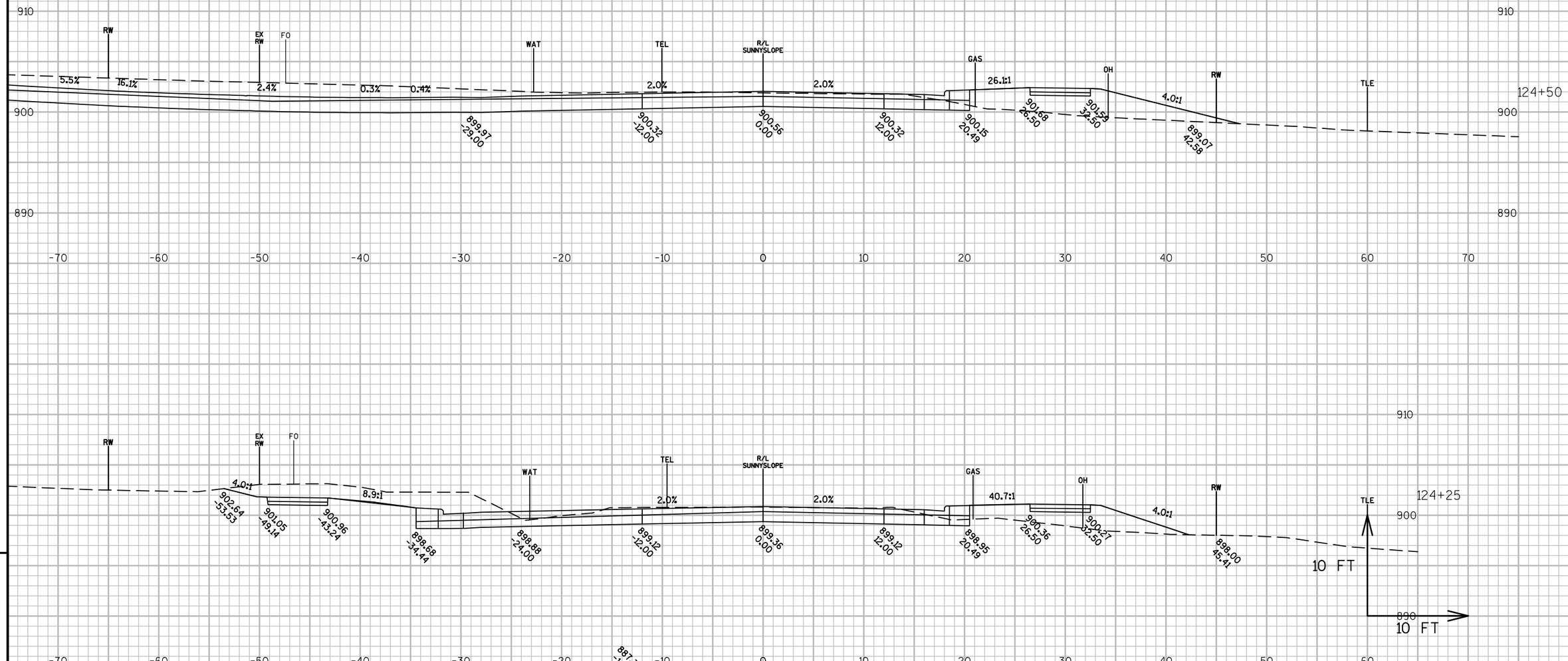
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 660	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (4)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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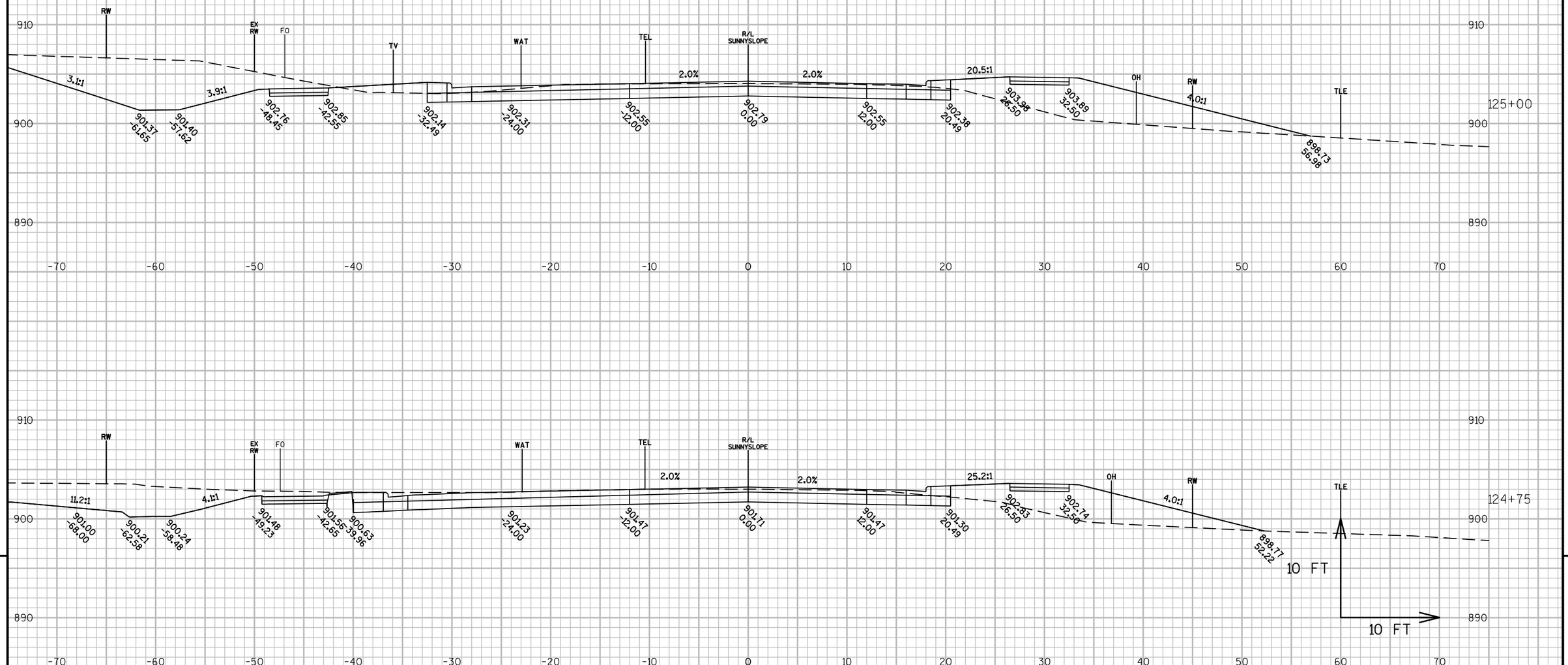
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 661	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (5)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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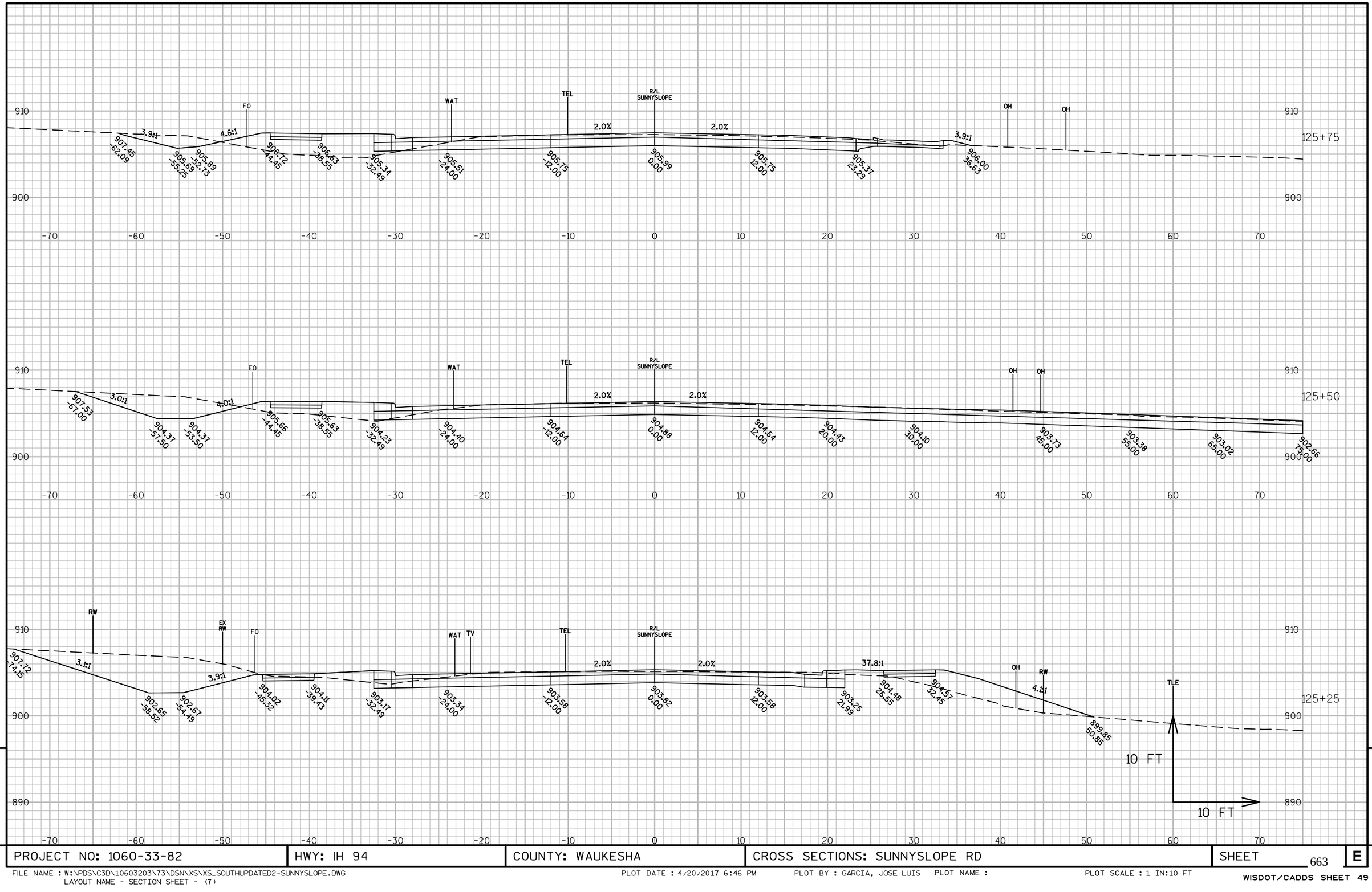
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 662	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (6)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



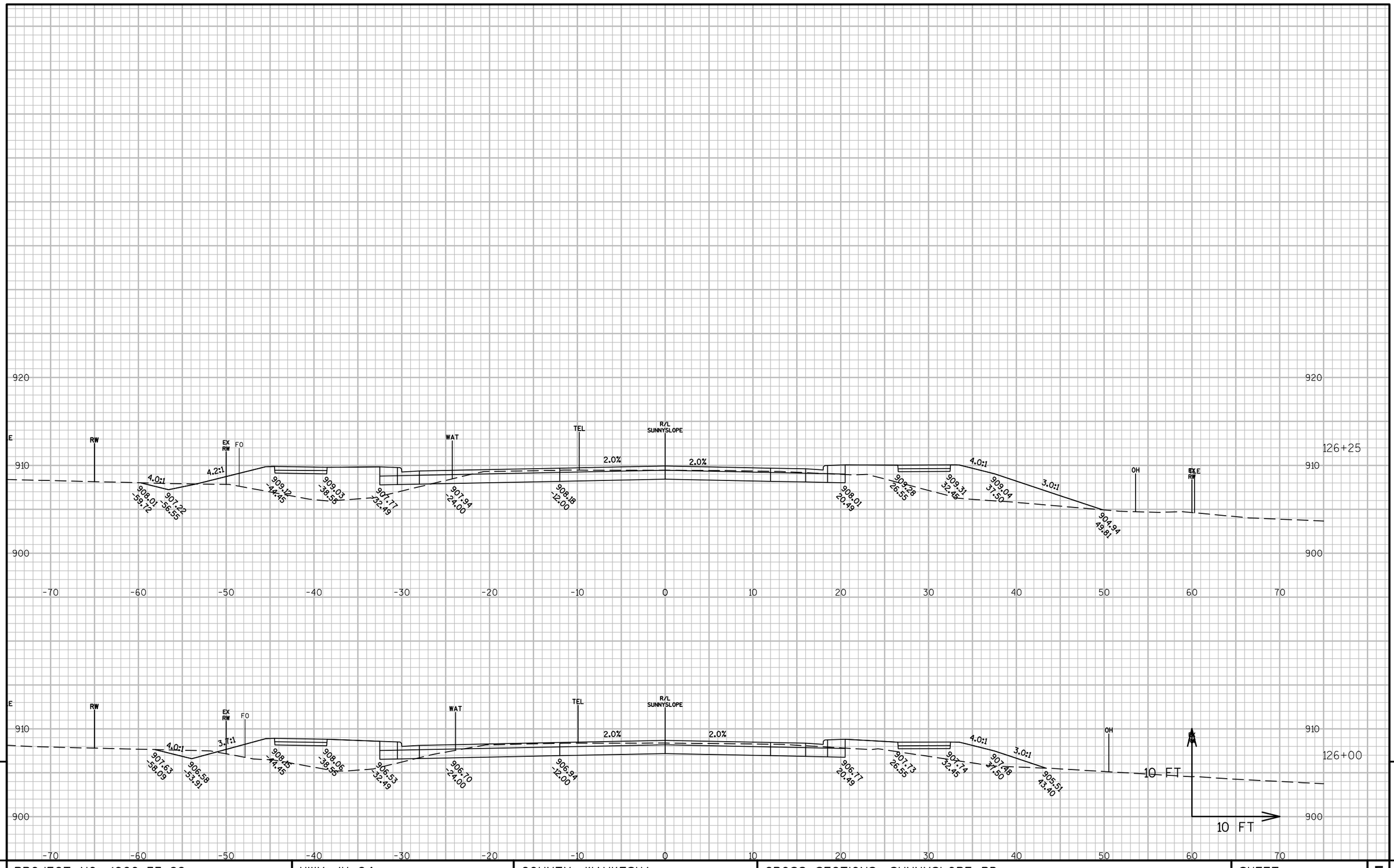
9 9

PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 663	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (7)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

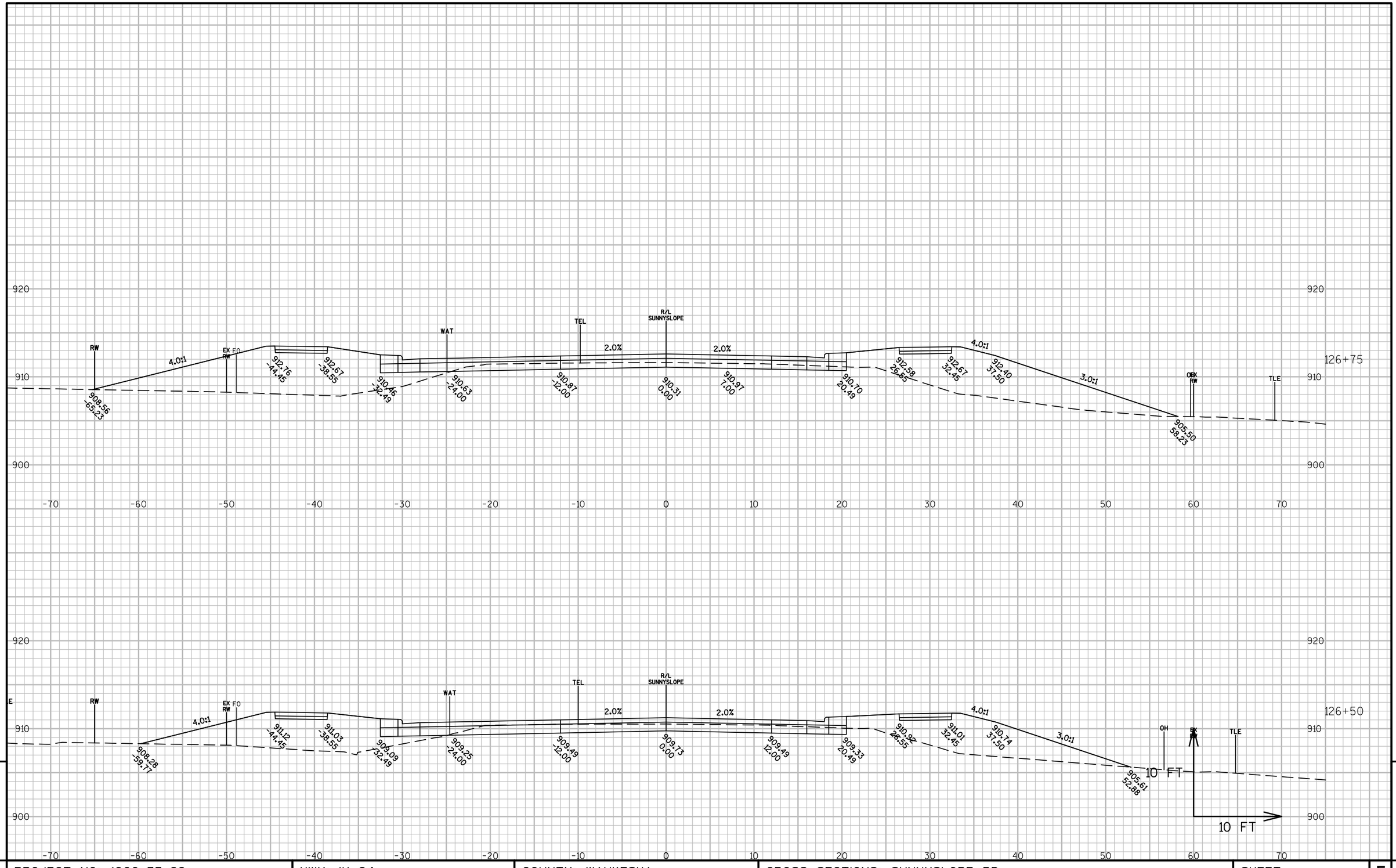


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 664	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (8)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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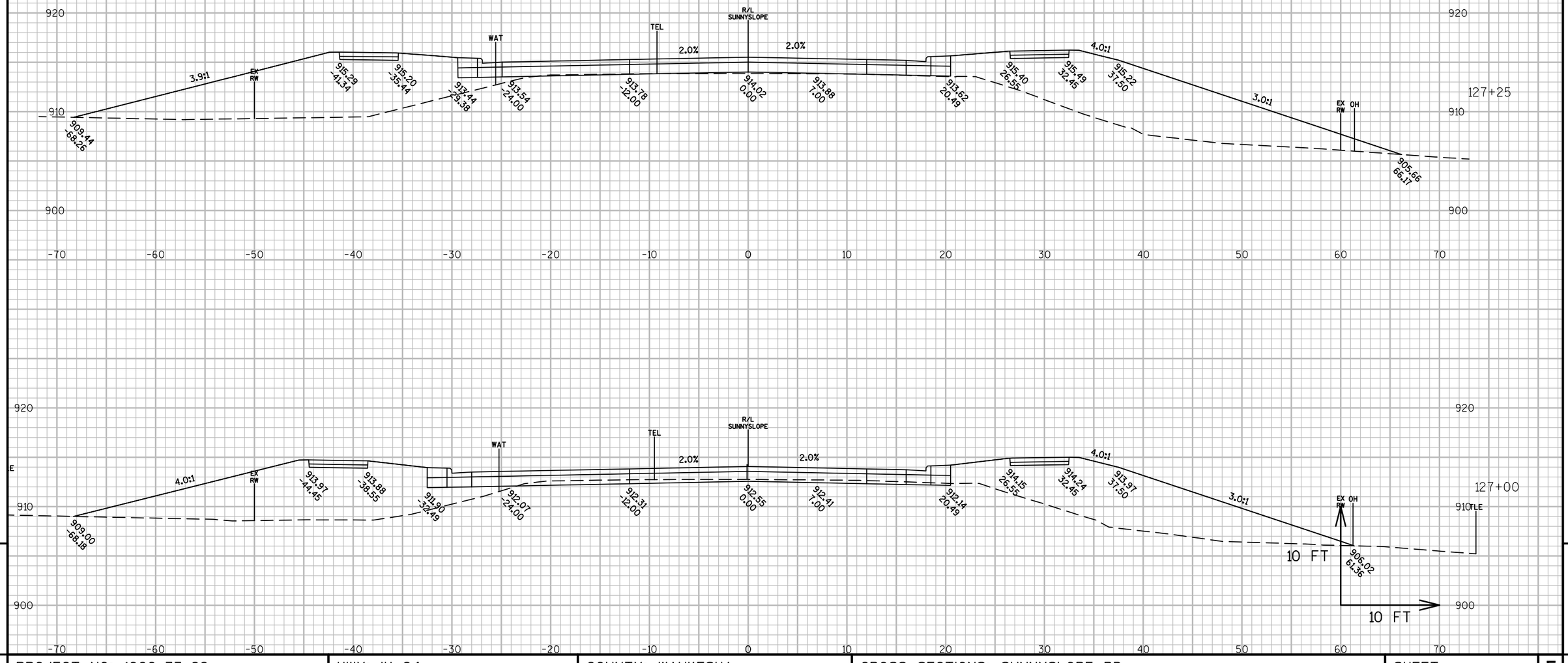
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 665	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (9)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

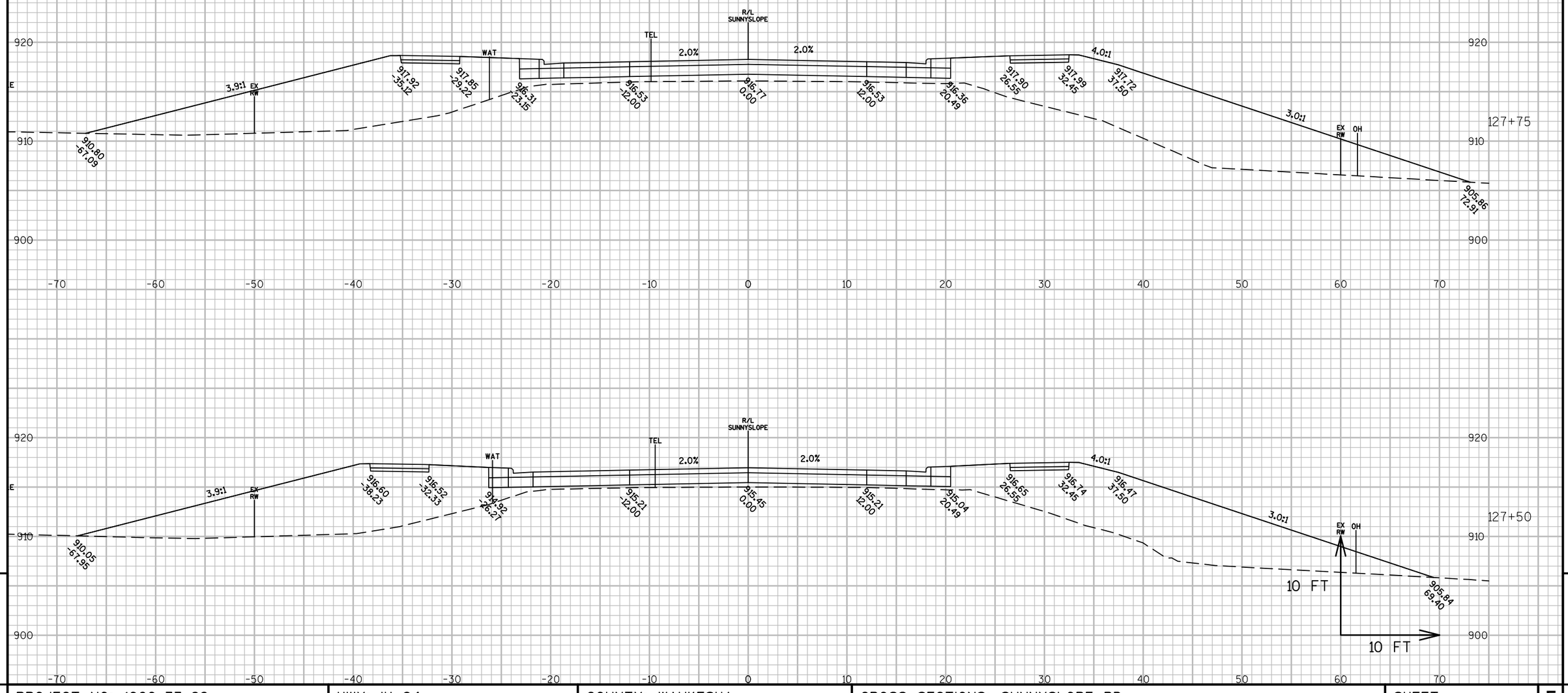


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 666	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (10)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

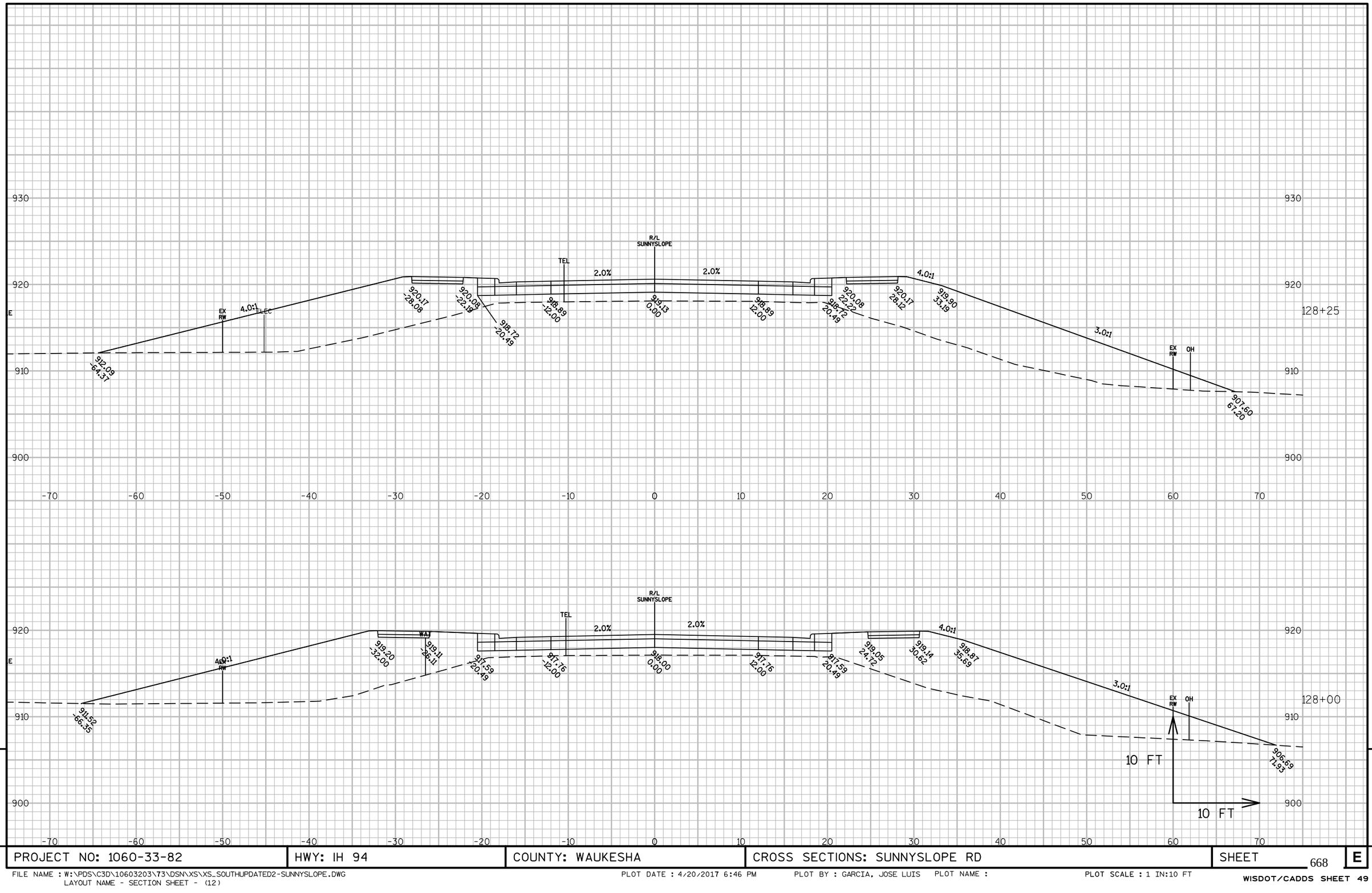


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 667	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (11)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

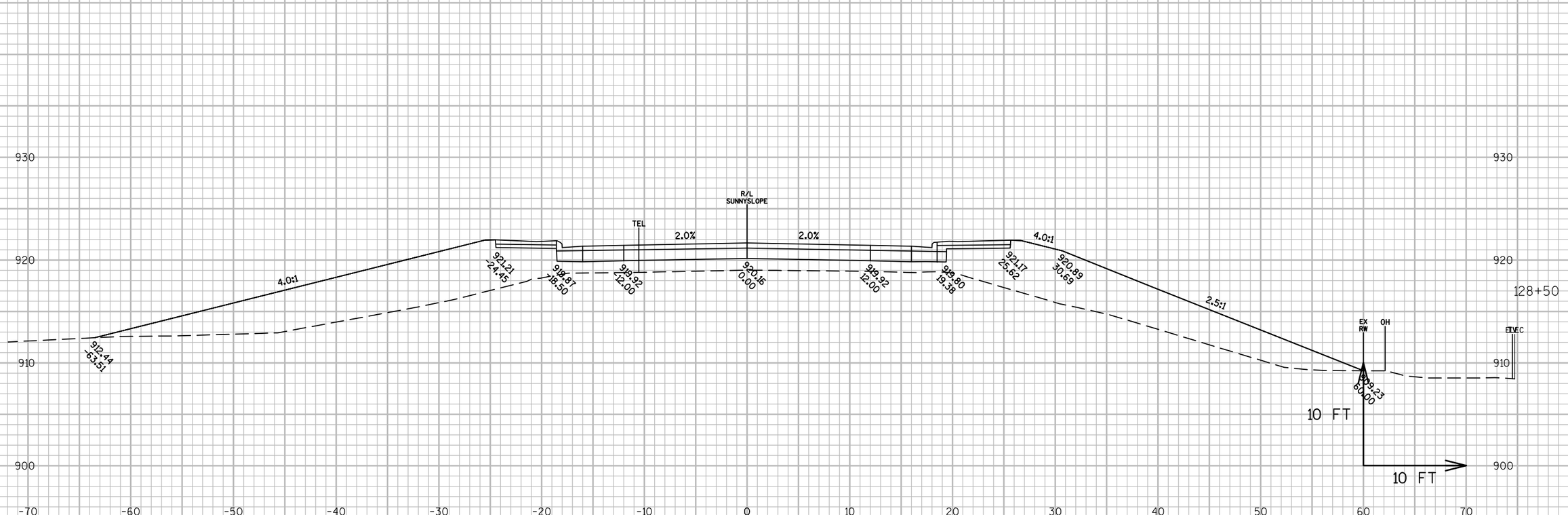


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 668	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (12)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

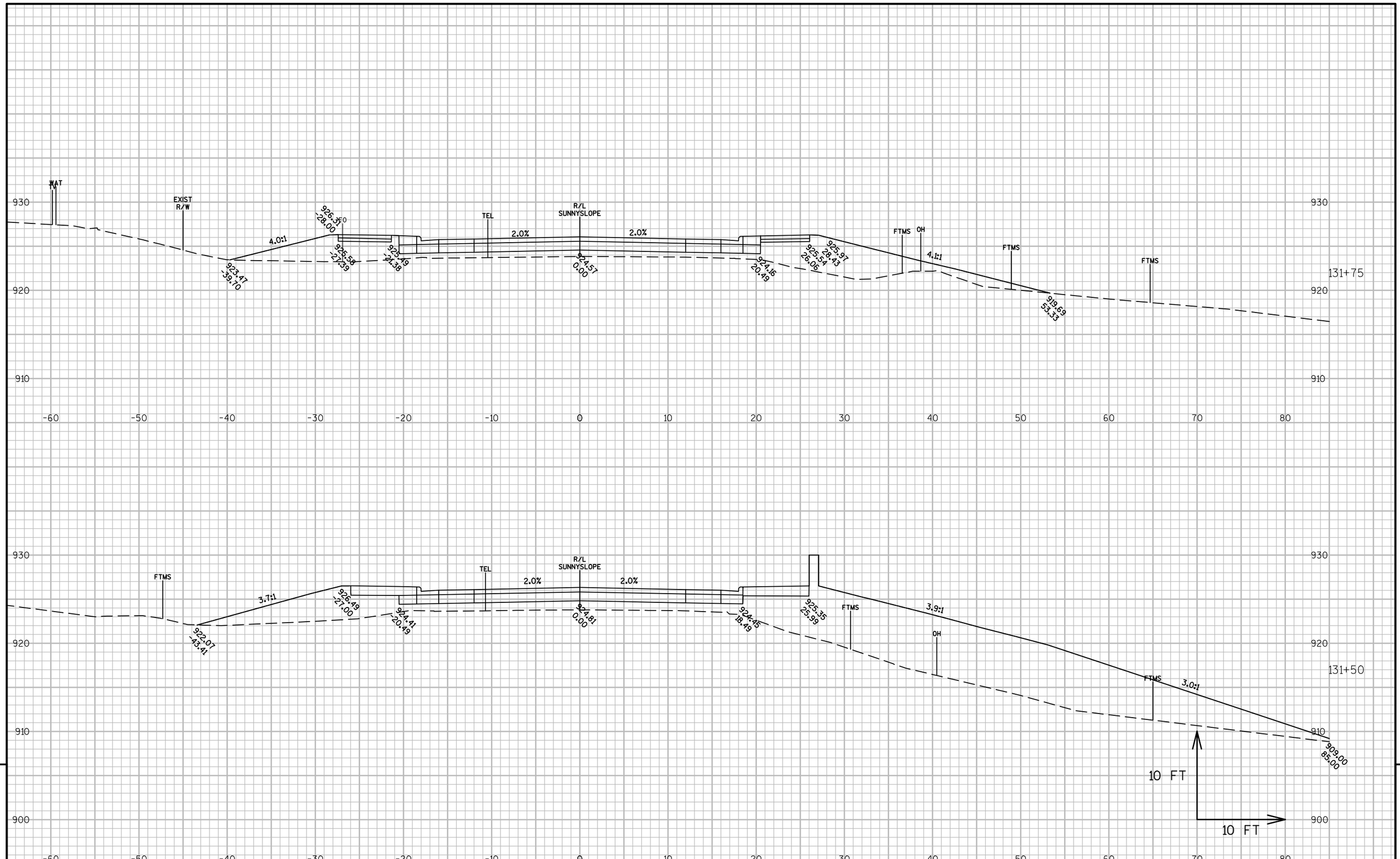
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 669	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_SOUTHUPDATED2-SUNNYSLOPE.DWG
LAYOUT NAME - SECTION SHEET - (13)

PLOT DATE : 4/20/2017 6:46 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

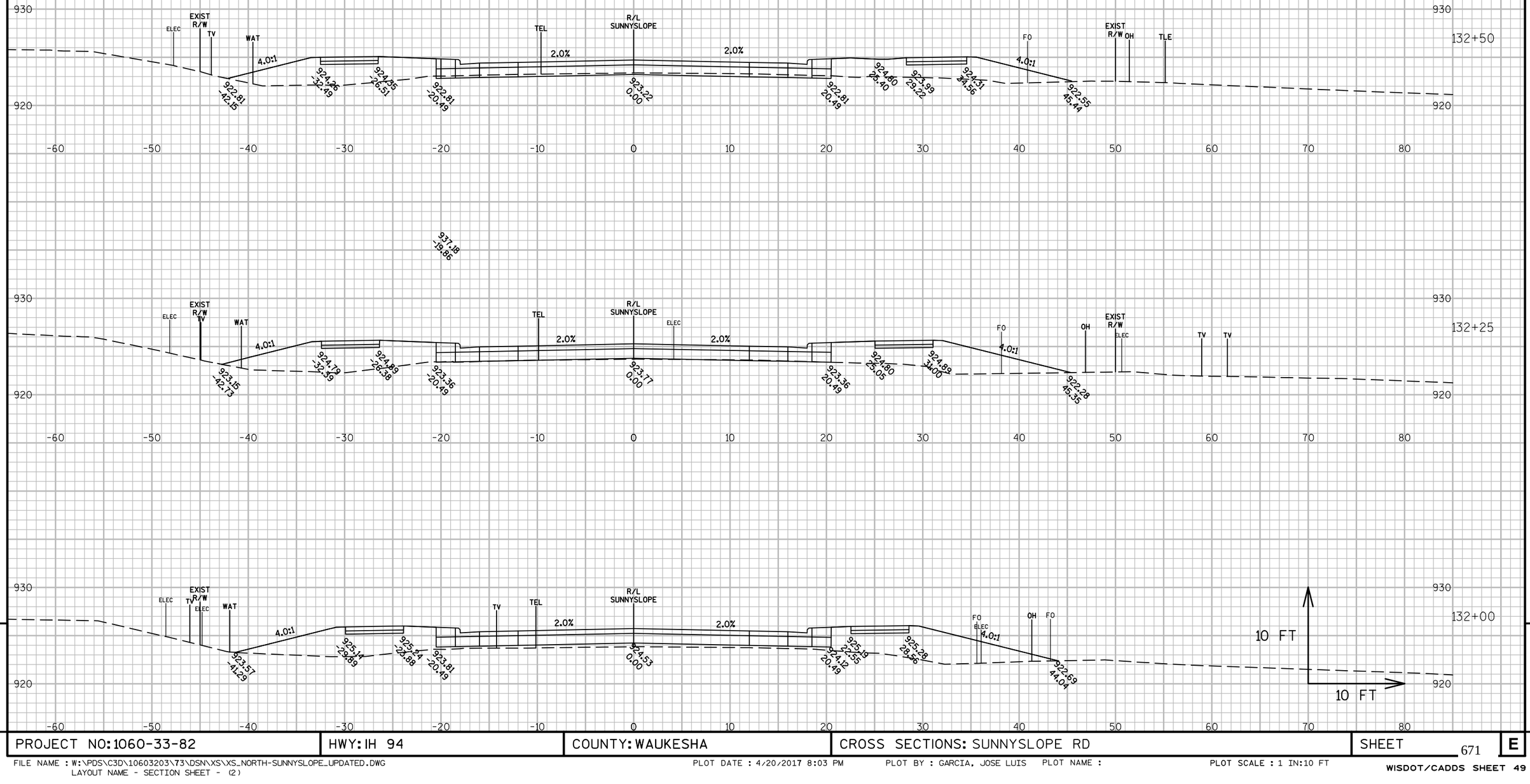


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 670 E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_NORTH-SUNNYSLOPE_UPDATED.DWG
LAYOUT NAME - SECTION SHEET - (1)

PLOT DATE : 4/20/2017 8:03 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

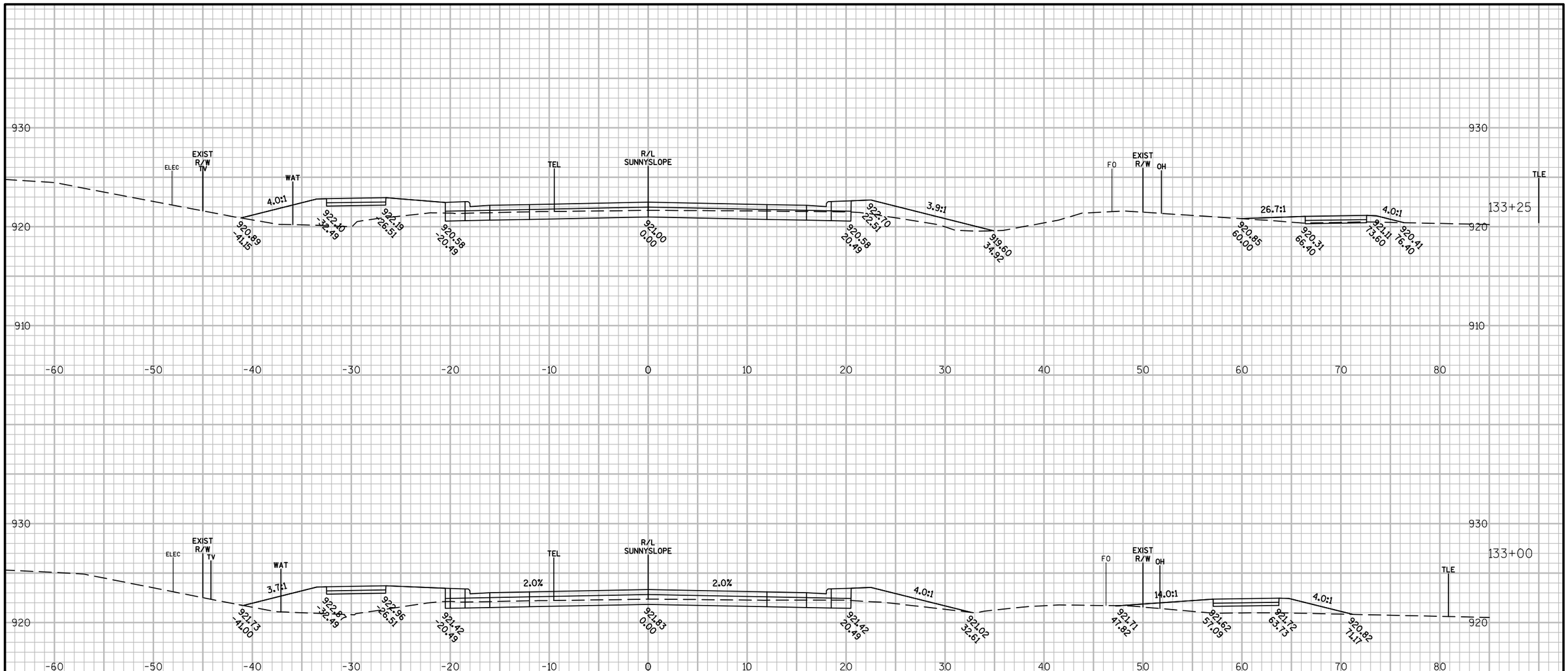


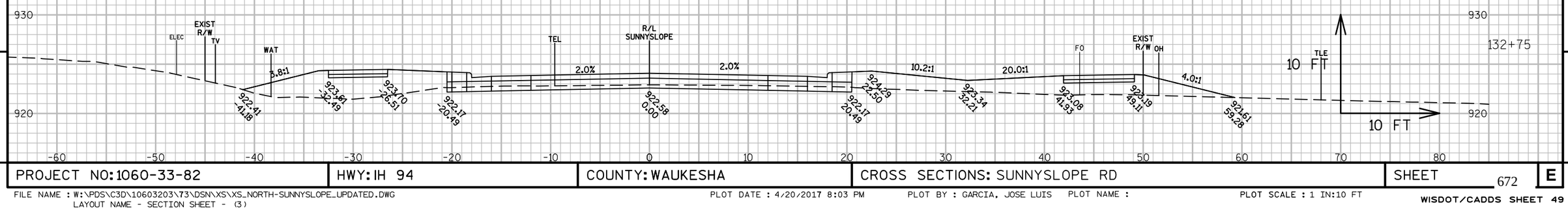
PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 671	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_NORTH-SUNNYSLOPE_UPDATED.DWG
LAYOUT NAME - SECTION SHEET - (2)

PLOT DATE : 4/20/2017 8:03 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49





9

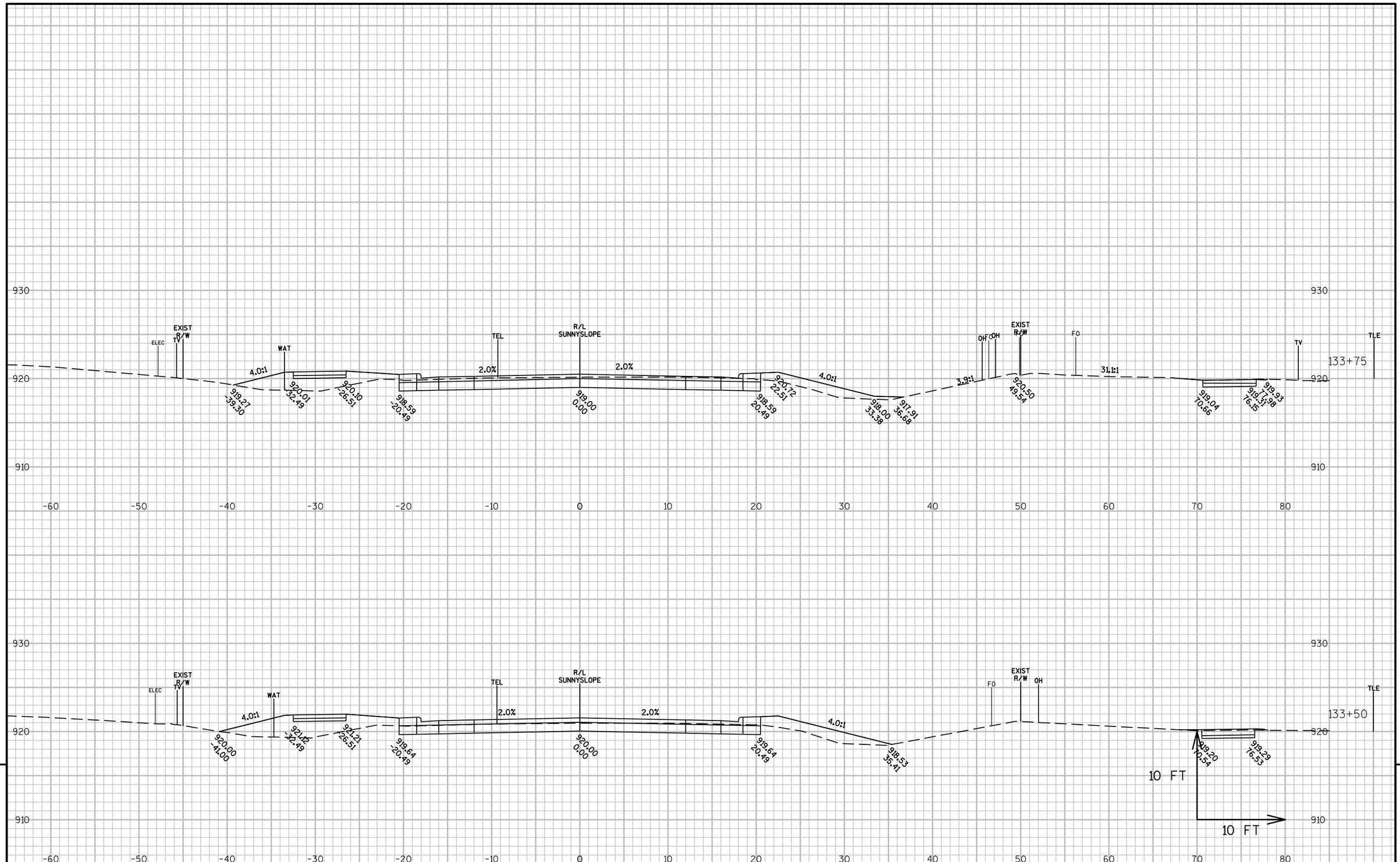
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 672	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_NORTH-SUNNYSLOPE_UPDATED.DWG
LAYOUT NAME - SECTION SHEET - (3)

PLOT DATE : 4/20/2017 8:03 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

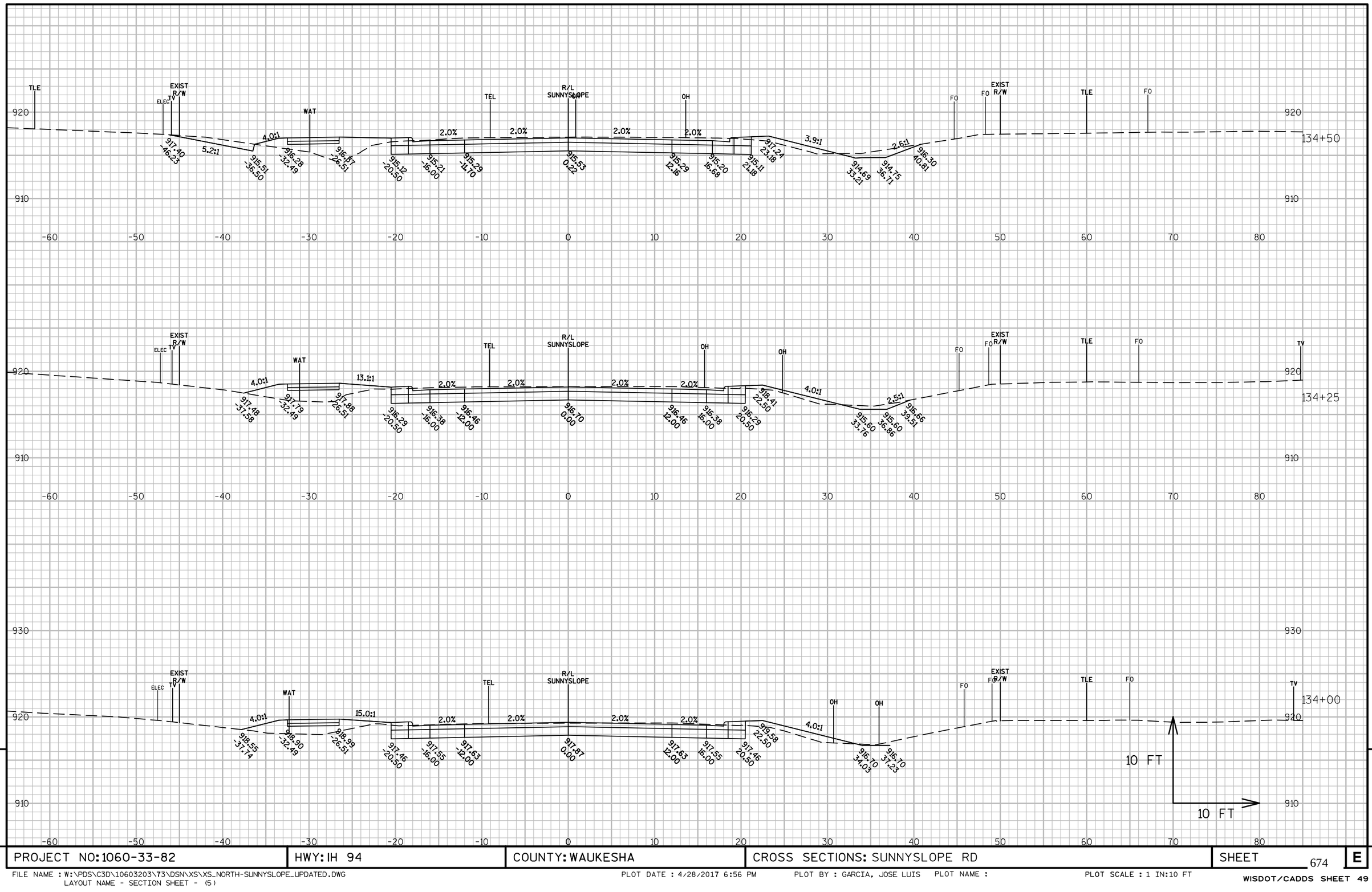
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 673	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_NORTH-SUNNYSLOPE_UPDATED.DWG
LAYOUT NAME - SECTION SHEET - (4)

PLOT DATE : 4/20/2017 8:03 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

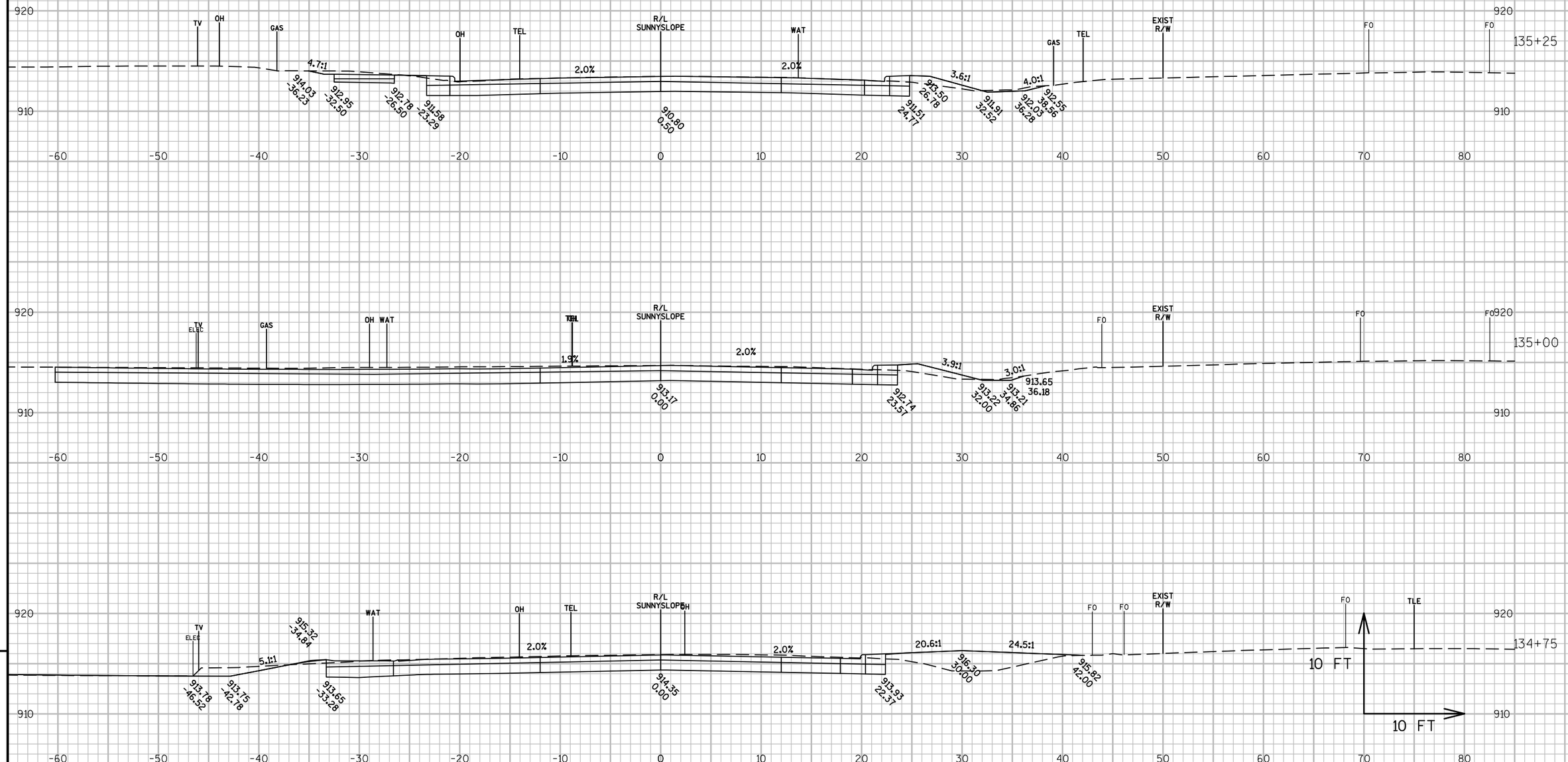


PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 674	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_NORTH-SUNNYSLOPE_UPDATED.DWG
LAYOUT NAME - SECTION SHEET - (5)

PLOT DATE : 4/28/2017 6:56 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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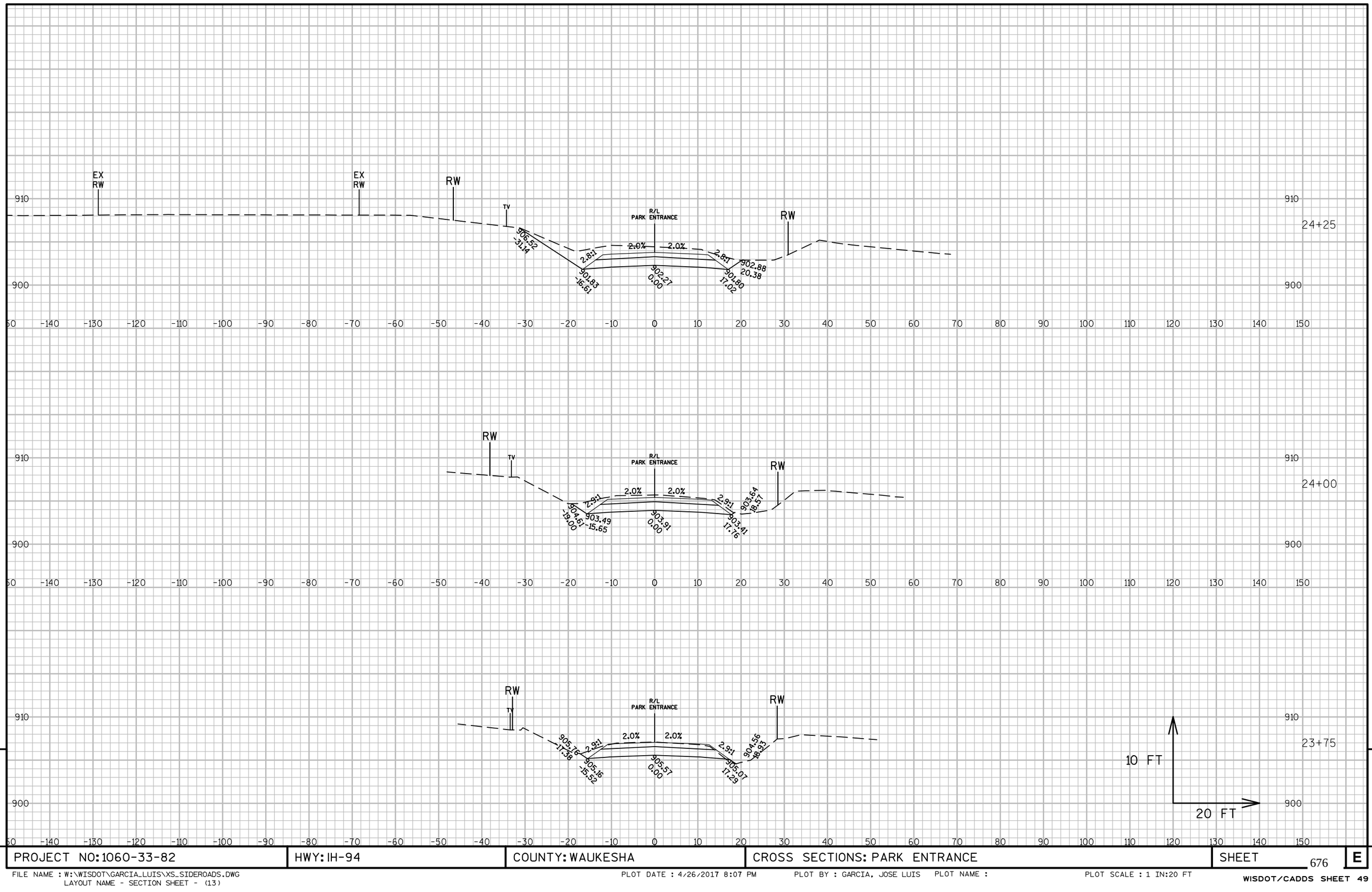
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PROJECT NO: 1060-33-82	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: SUNNYSLOPE RD	SHEET 675	E

FILE NAME : W:\PDS\C3D\10603203\73\DSN\XS\XS_NORTH-SUNNYSLOPE_UPDATED.DWG
LAYOUT NAME - SECTION SHEET - (6)

PLOT DATE : 4/28/2017 6:57 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



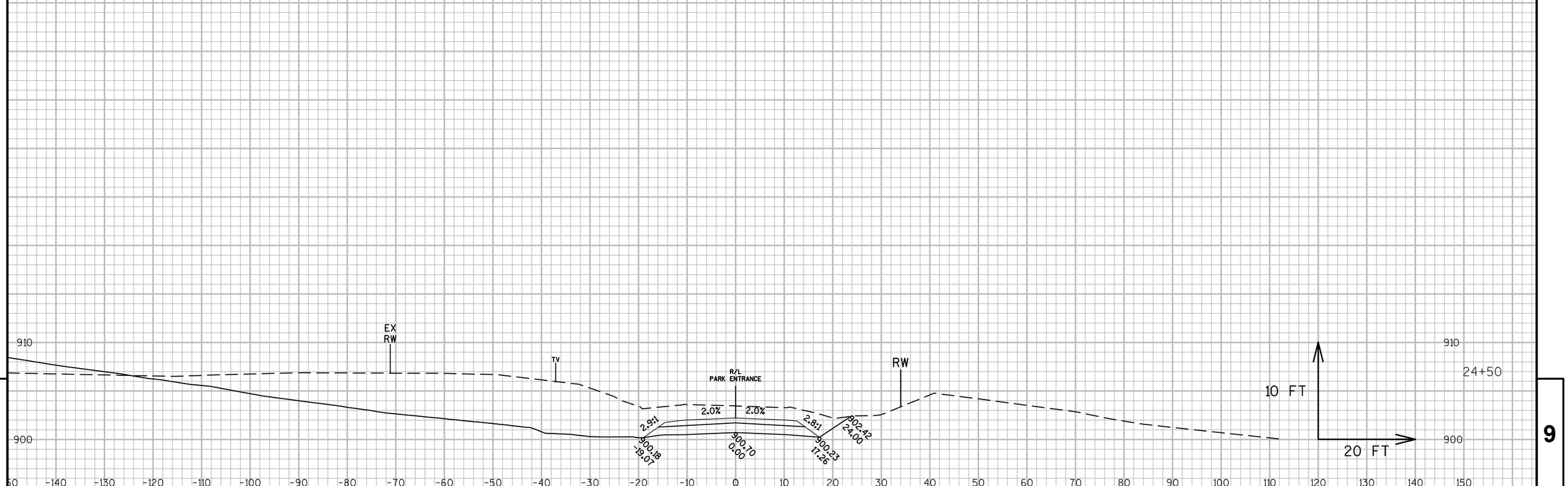
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9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	CROSS SECTIONS: PARK ENTRANCE	SHEET 676	E

FILE NAME : W:\WISDOT\GARCIA_LUIS\XS_SIDEROADS.DWG
LAYOUT NAME - SECTION SHEET - (13)

PLOT DATE : 4/26/2017 8:07 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

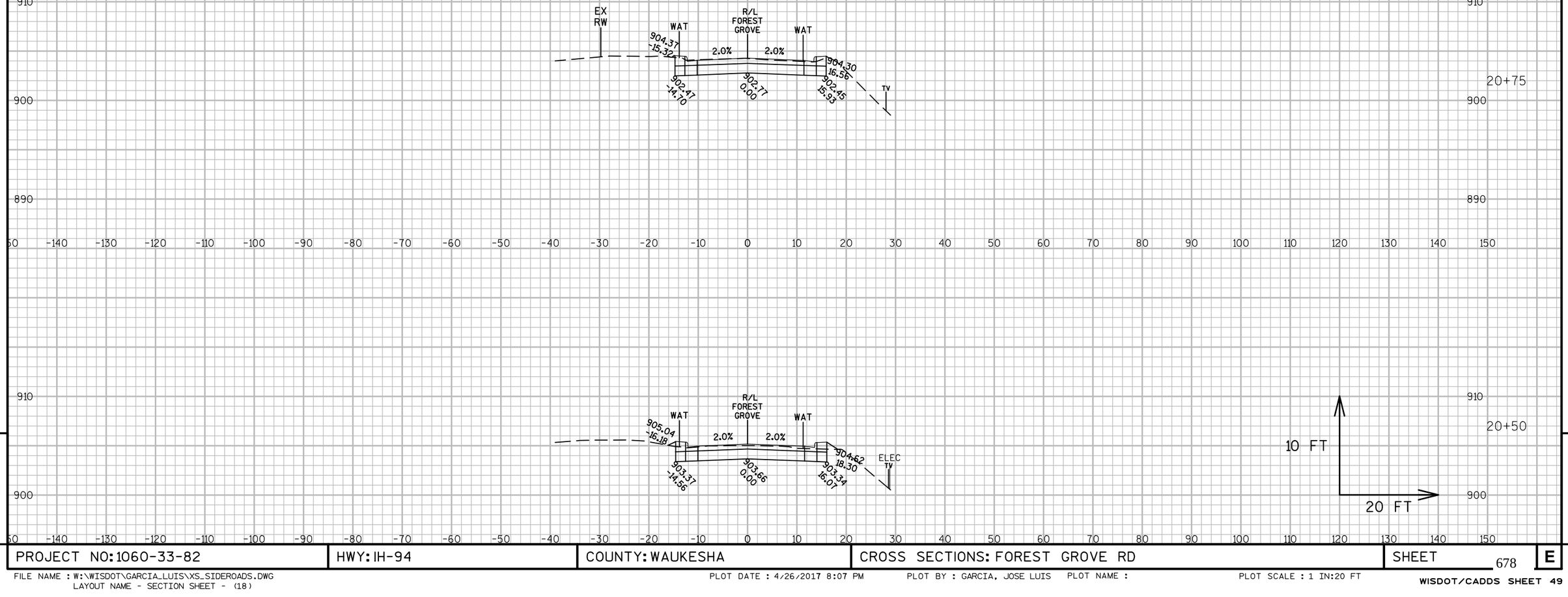


9 9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	CROSS SECTIONS: PARK ENTRANCE	SHEET 677 E

FILE NAME : W:\WISDOT\GARCIA_LUIS\XS_SIDEROADS.DWG
LAYOUT NAME - SECTION SHEET - (14)

PLOT DATE : 4/26/2017 8:07 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:20 FT



9

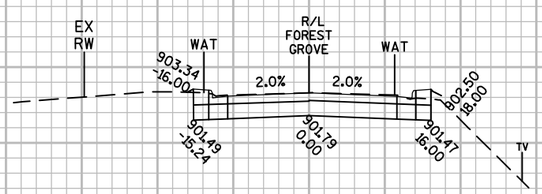
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PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	CROSS SECTIONS: FOREST GROVE RD	SHEET 678	E

FILE NAME : W:\WISDOT\GARCIA_LUIS\XS_SIDEROADS.DWG
LAYOUT NAME - SECTION SHEET - (18)

PLOT DATE : 4/26/2017 8:07 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



910
900
890

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

21+00

10 FT

20 FT

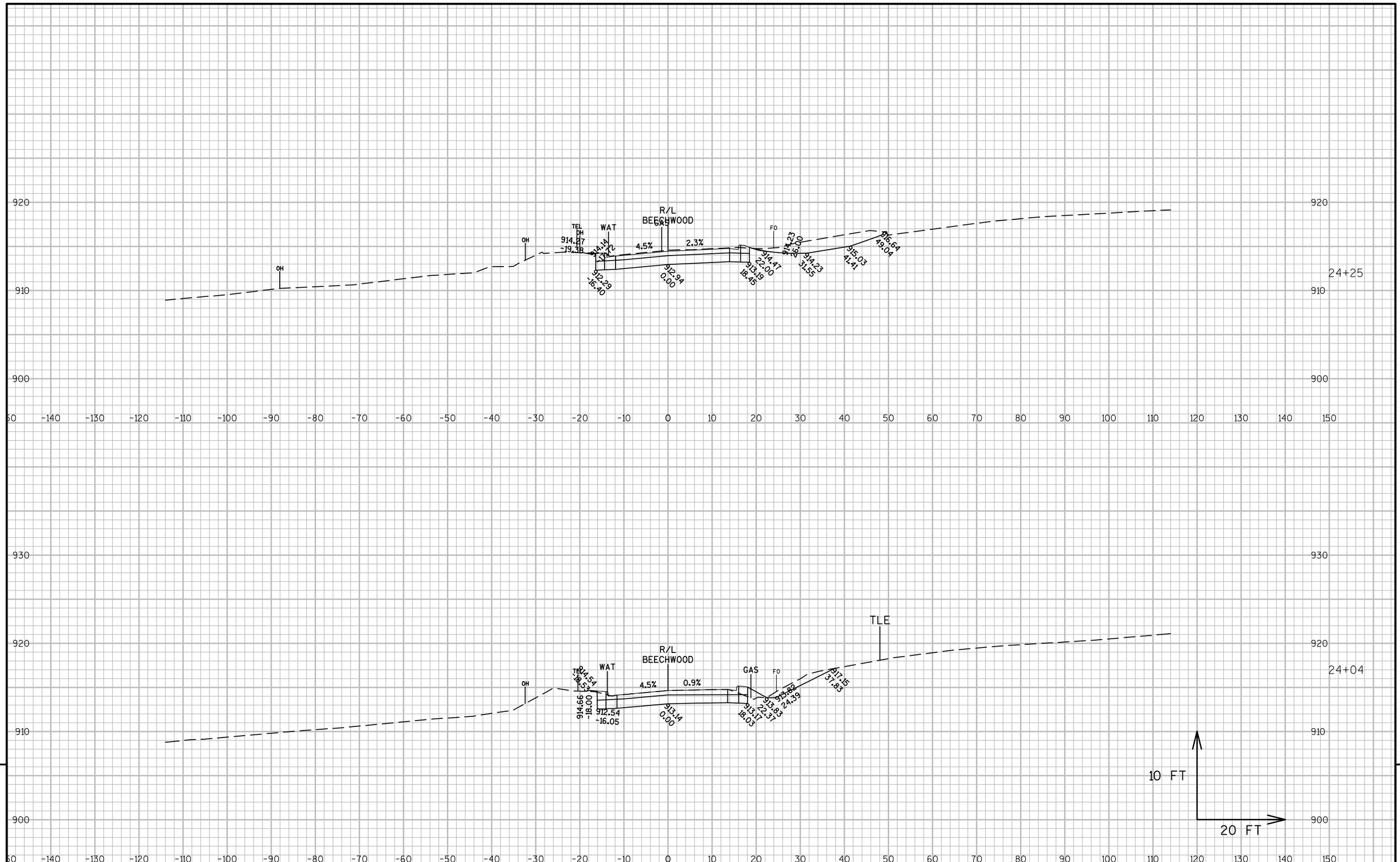
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9

PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: WAUKESHA	CROSS SECTIONS: FOREST GROVE RD	SHEET 679	E

FILE NAME : W:\WISDOT\GARCIA_LUIS\XS_SIDEROADS.DWG
LAYOUT NAME - SECTION SHEET - (19)

PLOT DATE : 4/26/2017 8:07 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1060-33-82	HWY: IH-94	COUNTY: IH-94	CROSS SECTIONS: BEECHWOOD AVE	SHEET 680 E

FILE NAME : W:\WISDOT\GARCIA_LUIS\XS_SIDEROADS.DWG
LAYOUT NAME - SECTION SHEET - (20)

PLOT DATE : 4/26/2017 8:07 PM PLOT BY : GARCIA, JOSE LUIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

WKE

DEC 2017

PROJECT ID: 1060-34-79

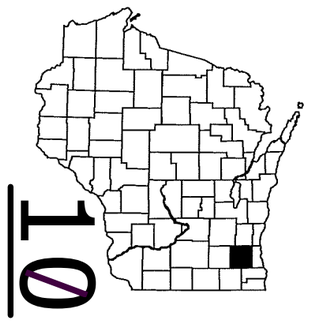
WITH: 1060-33-82

COUNTY: WAUKESHA

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 = 96



10

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

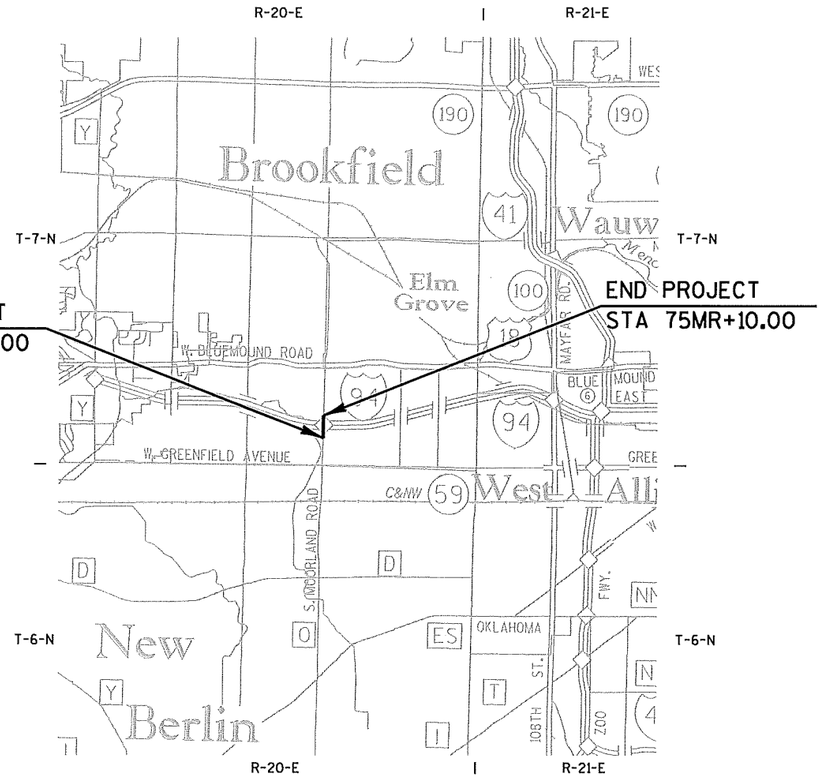
ZOO IC, MOORLAND ROAD

FRANKLIN DR TO IH-94 ON RAMP

CTH O
WAUKESHA COUNTY

STATE PROJECT NUMBER
1060-34-79

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1060-34-79		



DESIGN DESIGNATION

A.A.D.T. 2018	= 37,727
A.A.D.T. 2028	= 39,571
D.H.V. 2028	= N/A
D.D.	= 59% NB/41% SB
T.	= 6.2%
DESIGN SPEED	= N/A
ESALS	= N/A

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)
- OVERHEAD ELECTRIC (OH)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

LAYOUT

SCALE 0 1.0 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.295 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WAUKESHA COUNTY ZONE, NAD 83 (2007)

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007)

FORWARD 45

ORIGINAL PLANS PREPARED BY

MILWAUKEE, WISCONSIN

WISCONSIN
JULIE A. FERGUSON
42129-6
WAUWATOSA, WI
PROFESSIONAL ENGINEER

4/24/17 (Date)

(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	FORWARD 45
Project Manager	CHRISTOPHER HAGER, P.E.
Regional Examiner	
Regional Supervisor	WILLIAM S. MOHR, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 4/24/17 (Signature)

E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\010101_ti.dgn PLOT DATE : 24-APR-2017 07:57 PLOT BY : MSCDYB PLOT NAME : 010101_ti PLOT SCALE : 10560:1

UTILITY CONTACTS

AT&T CORPORATION
MR. KEN NINE
JMC ENGINEERS & ASSOCIATES, INC.
110 NORTH MAIN STREET
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kennethnine@att.net

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2005 PEWAUKEE RD
WAUKESHA, WISCONSIN 53188
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cd8946@att.com

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19700 RIVERVIEW DRIVE
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PHONE: (262) 796-6717
water@ci.brookfield.wi.us

CHARTER COMMUNICATIONS
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MILWAUKEE, WI 53212
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CELL: (414) 688-2385
steve.cramer@charter.com
wis.engineering@charter.com

LEVEL 3 COMMUNICATIONS
MR. BRAHIM GADDOUR
OSP ENGINEERING DEPT.
3235 INTERTECH DRIVE, SUITE 600
BROOKFIELD, WI 53045
PHONE: (414) 908-1027
CELL: (414) 704-1026
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relo@level3.com

TDS METROCOM
MR. MATTHEW SCHULTE
16924 WEST VICTOR ROAD
NEW BERLIN, WI 53151
PHONE: (262) 754-3063
CELL: (262) 409-1177
matt.schulte@tdstelecom.com

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333 W. EVERETT STREET - A299
MILWAUKEE, WI 53203
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latroy.brumfield@we-energies.com

CONSTRUCTION FIELD CONTACT:
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500 S. 116TH STREET
WEST ALLIS, WI 53214
PHONE: (414) 944-5780
CELL: (262) 483-3896
erich.wuestenhagen@we-energies.com

WE ENERGIES - GAS
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333 W. EVERETT STREET - A299
MILWAUKEE, WI 53203
PHONE: (414) 221-5617
latroy.brumfield@we-energies.com

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ELECTRICAL FIELD UNIT
935 S. 60TH STREET
WEST ALLIS, WI 53214
PHONE: (414) 266-1170

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STATE AGENCIES

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DNR SERVICE CENTER
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PHONE: (262) 574-2141
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MS. LINDA MATTHEWS – SE REGION ENVIRONMENTAL COORDINATOR
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christopher.hager@dot.wi.gov

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MR. HANS HALLANGER – WISDOT SE REGION SWEC ENGINEER LIAISON (DCIP/ECIP)
141 NW BARSTOW STREET
WAUKESHA, WI 53187-0798
PHONE: (262) 548-6706
hans.hallanger@dot.wi.gov

OTHER AGENCIES

BROOKFIELD, CITY OF
MR. JEFF CHASE, CITY ENGINEER
2000 N. CALHOUN ROAD
BROOKFIELD, WI 53005
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chase@ci.brookfield.wi.us

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
MR. ROB MERRY
W239 N1812 ROCKWOOD DRIVE
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WAUKESHA, WI 53187-1607
PHONE: (262) 953-4289
CELL: (920) 912-1036
rmerry@sewrpc.org

MILWAUKEE COUNTY TRANSIT SYSTEM - ROUTES
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MILWAUKEE COUNTY TRANSIT SYSTEM – BUS STOPS
MR. ANDY TILLMAN
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atillman@mcts.org

WAUKESHA METRO
MR. BRIAN ENGELKING
2311 BADGER DRIVE
WAUKESHA, WI 53188
PHONE: (262) 524-3634
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WISCONSIN COACH LINES, INC.
MR. TOM DIECKELMAN
1520 ARCADIAN AVENUE
WAUKESHA, WI 53186
PHONE: (262) 542-8861, EXT. 140
tom.dieckelman@coachusa.com

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

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

2

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
PLAN DETAILS
EROSION CONTROL AND STORM SEWER
EXISTING UTILITY PLAN
PAVEMENT MARKING
TRAFFIC CONTROL
STAGE CONSTRUCTION
DETOURS
ALIGNMENT LAYOUT

CONSTRUCT HMA PAVEMENT WITH THE FOLLOWING LAYERS:

	PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION
A	4 MT 58-28 H 4 MT 58-28 H	3-1/2"	1-3/4" UPPER LAYER 1-3/4" LOWER LAYER	12.5 MM 12.5 MM

GENERAL NOTES

NO EXISTING TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

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

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH COMPACTED BACKFILL GRANULAR UNLESS REGULATIONS REQUIRE OTHERWISE. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. ALL TRAFFIC CONTROL DEVICES AND SET-UPS SHALL BE COMPLIANT WITH THE MUTCD.

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

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

THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

SQUEEGEE ALL SAWCUT SLURRY TO THE GUTTER AVOIDING EXISTING INLETS AND REMOVE. INCIDENTAL TO SAWCUTTING.

STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
ASPH	ASPHALTIC
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CMCP	CULVERT PIPE CORRUGATED METAL
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
EB	EASTBOUND
ENB	EXISTING NOISE BARRIER
FE	FIELD ENTRANCE
FL	FLOW LINE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LP	LOW POINT
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PGL	PROFILE GRADE LINE
PLE	PERMANENT LIMITED EASEMENT
PNB	PROPOSED NOISE BARRIER
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COARSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
WB	WESTBOUND

2

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N

CITY OF NEW BERLIN

CITY OF BROOKFIELD

CITY OF BROOKFIELD

BROOKFIELD SQUARE DRIVE

W. BLUEMOUND ROAD

VILLAGE OF ELM GROVE

W. GREENFIELD AVENUE

PINEHURST DRIVE

BEGIN PROJECT
59MR+50.00

TRIBUTARY
TO
DEER CREEK

DEER CREEK

IH 94 EB
OFF RAMP

IH 94 EB
ON
RAMP

IH 94 WB
OFF
RAMP

IH 94 WB ON RAMP

B-67-102
(EXISTING)

B-67-52
(EXISTING)

R/L MR

CTH O

50MR

60MR

70MR

S. MOORLAND ROAD

80MR

90MR

N. MOORLAND ROAD

HACKBERRY LANE

FRANKLIN DRIVE

CARPENTER ROAD

IH 94 EB ON RAMP

IH 94

IH 94 WB OFF RAMP

B-67-53
(EXISTING)

END PROJECT
75MR+10.00

STH 59

USH 18

CITY OF NEW BERLIN

CITY OF BROOKFIELD

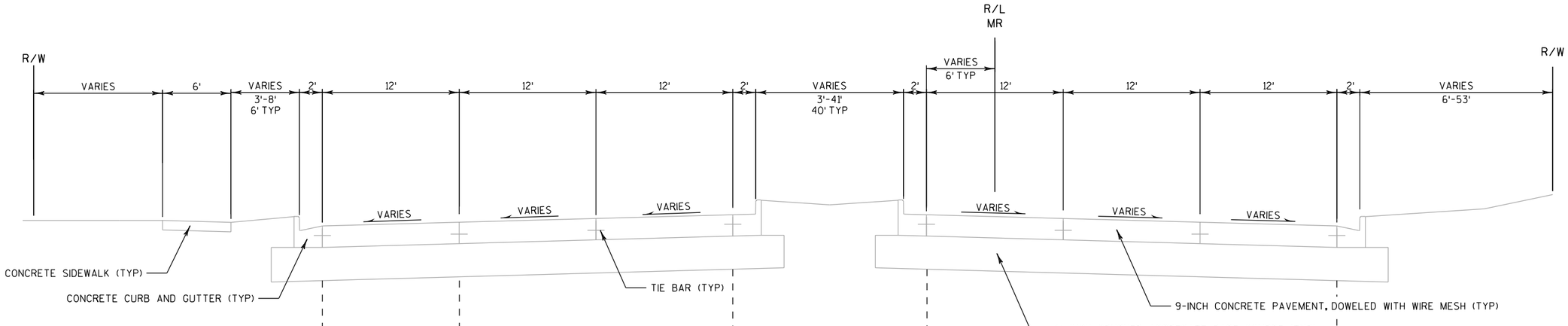
CITY OF BROOKFIELD

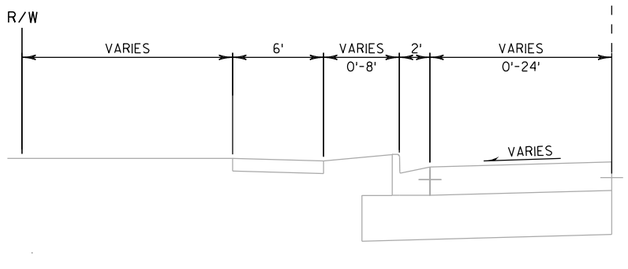
VILLAGE OF ELM GROVE

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	PROJECT OVERVIEW	SHEET	E

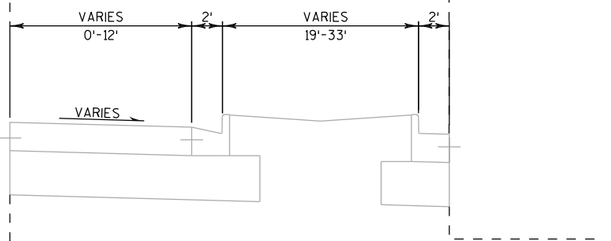
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WISDOT/CADDS SHEET 42

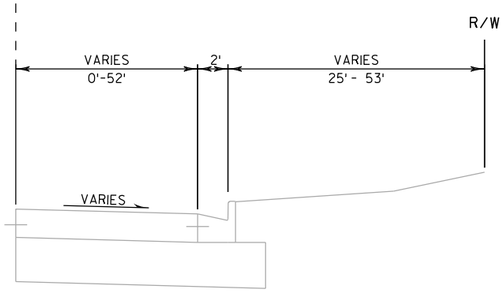




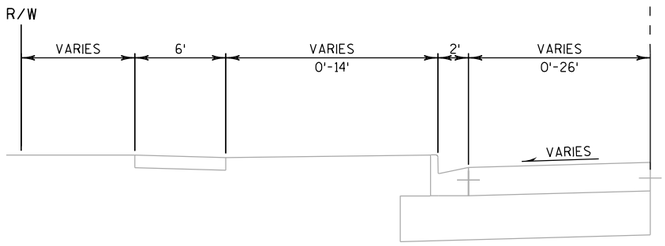
STA 64MR+25 TO STA 67MR+22



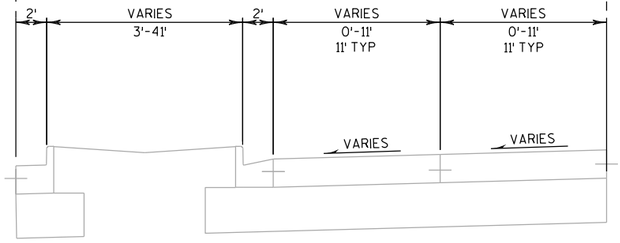
STA 59MR+50 TO STA 60MR+50



STA 64MR+94 TO STA 66MR+94
STA 70MR+76 TO STA 74MR+49



STA 72MR+17 TO STA 75MR+10



STA 68MR+93 TO STA 73MR+71

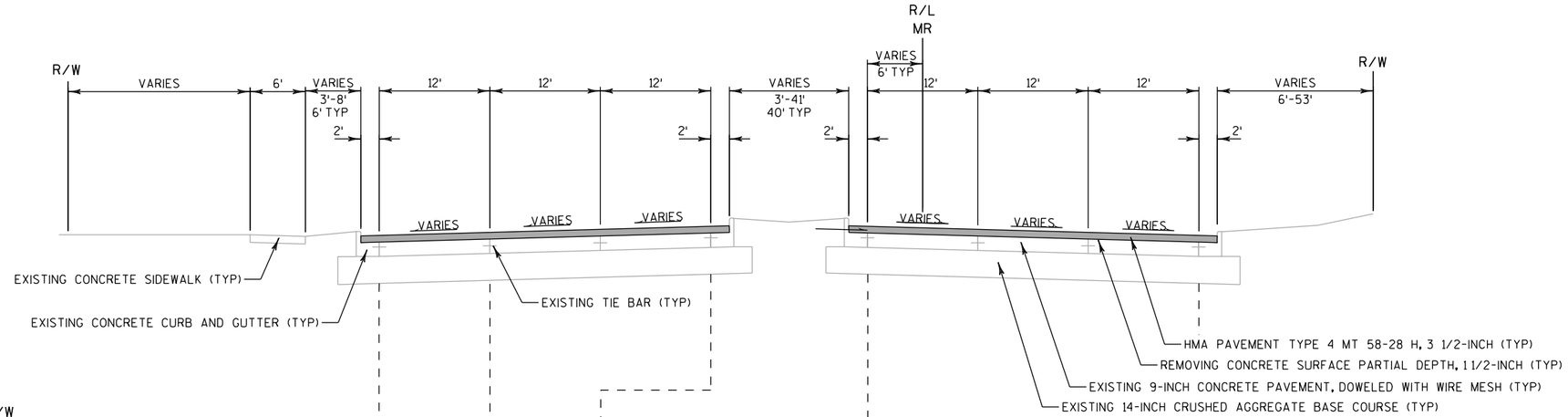
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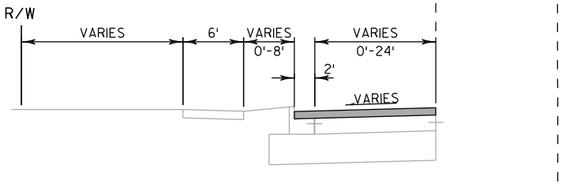
MOORLAND ROAD

STA 59MR+50 TO STA 75MR+10

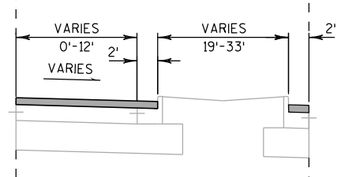
PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET	E

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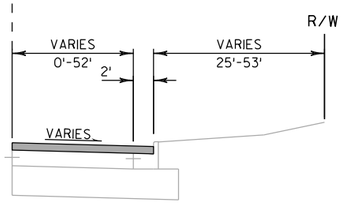




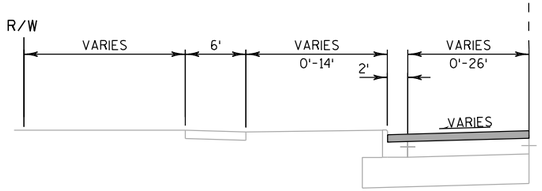
STA 64MR+25 TO STA 67MR+22



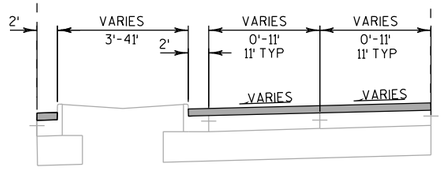
STA 59MR+50 TO STA 60MR+50



STA 64MR+94 TO STA 66MR+94
STA 70MR+76 TO STA 74MR+49



STA 72MR+17 TO STA 75MR+10



STA 68MR+93 TO STA 73MR+71

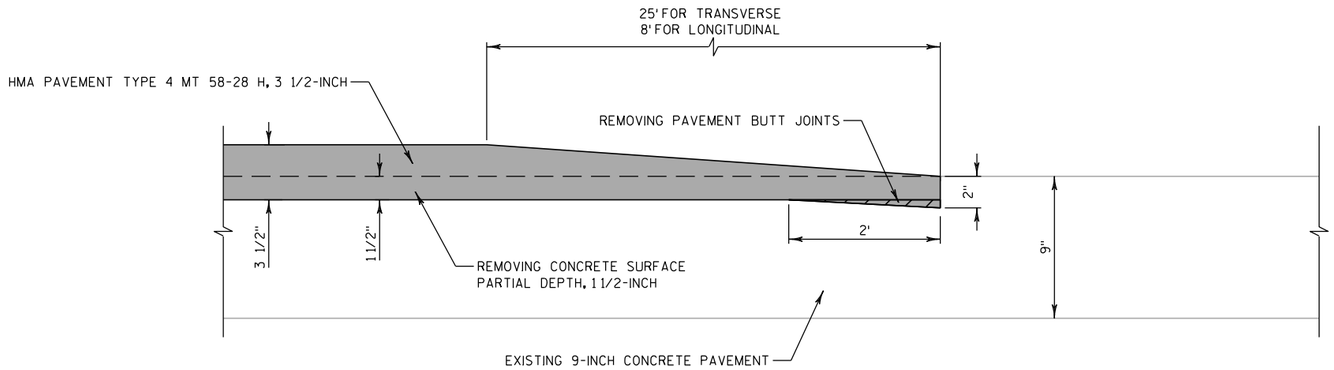
TYPICAL FINISHED SECTION

MOORLAND ROAD

STA 59MR+50.00 TO STA 75MR+10.00

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET	E

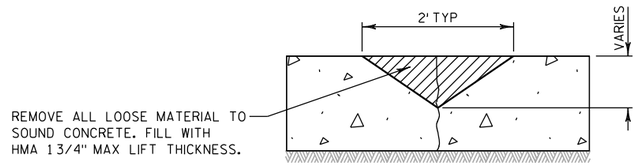
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BUTT JOINT DETAIL

TRANSVERSE - AT BEGIN CONSTRUCTION & END CONSTRUCTION
LONGITUDINAL - AT CROSS ROADS & RAMPS

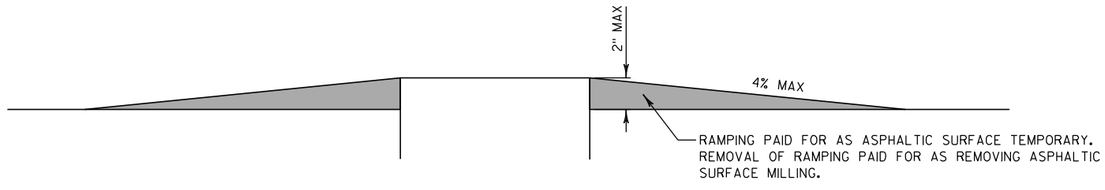
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NOTES

1. PERFORM JOINT REPAIR AFTER ALL NECESSARY BASE PATCHING AND SURFACE MILLING OPERATIONS ARE COMPLETE, AND BEFORE OVERLAY IS PLACED.
2. DEPTH OF JOINT REPAIR VARIES BASED ON CONDITION OF EXISTING PAVEMENT. DEPTH AND LENGTH OF REPAIR TO BE DETERMINED BY ENGINEER IN THE FIELD.
3. REMOVAL OF CONCRETE AND LOOSE MATERIALS PAID BY LF.
4. HMA PAID FOR UNDER THE APPROPRIATE BID ITEM.

JOINT REPAIR DETAIL



NOTE

TO AVOID MORE THAN A 2-INCH RAMP, THE ASSUMED ORDER OF OPERATIONS IS AS FOLLOWS:

(1) PERFORM BASE PATCHING

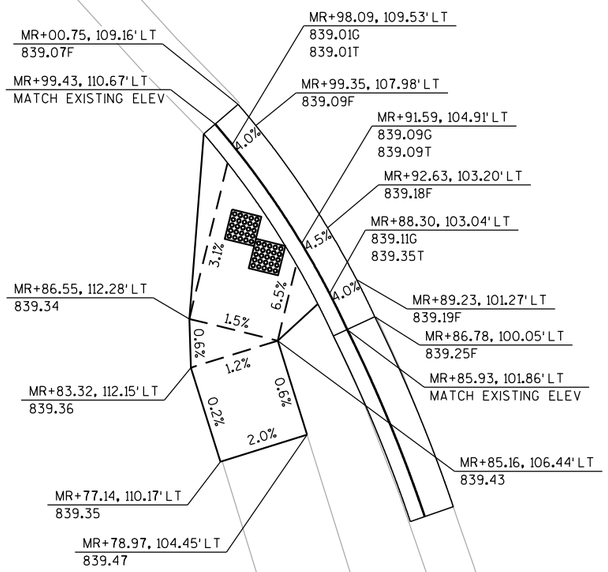
(2) MILL AND PLACE BINDER

(3) ADJUST STRUCTURES AND ADD RAMPING AS NECESSARY TO OPEN TO TRAFFIC

(4) MILL RAMPING AND PLACE SURFACE LIFT

MANHOLE & INLET RAMPING DETAIL

IH 94 EB OFF RAMP



S. MOORLAND ROAD

61MR

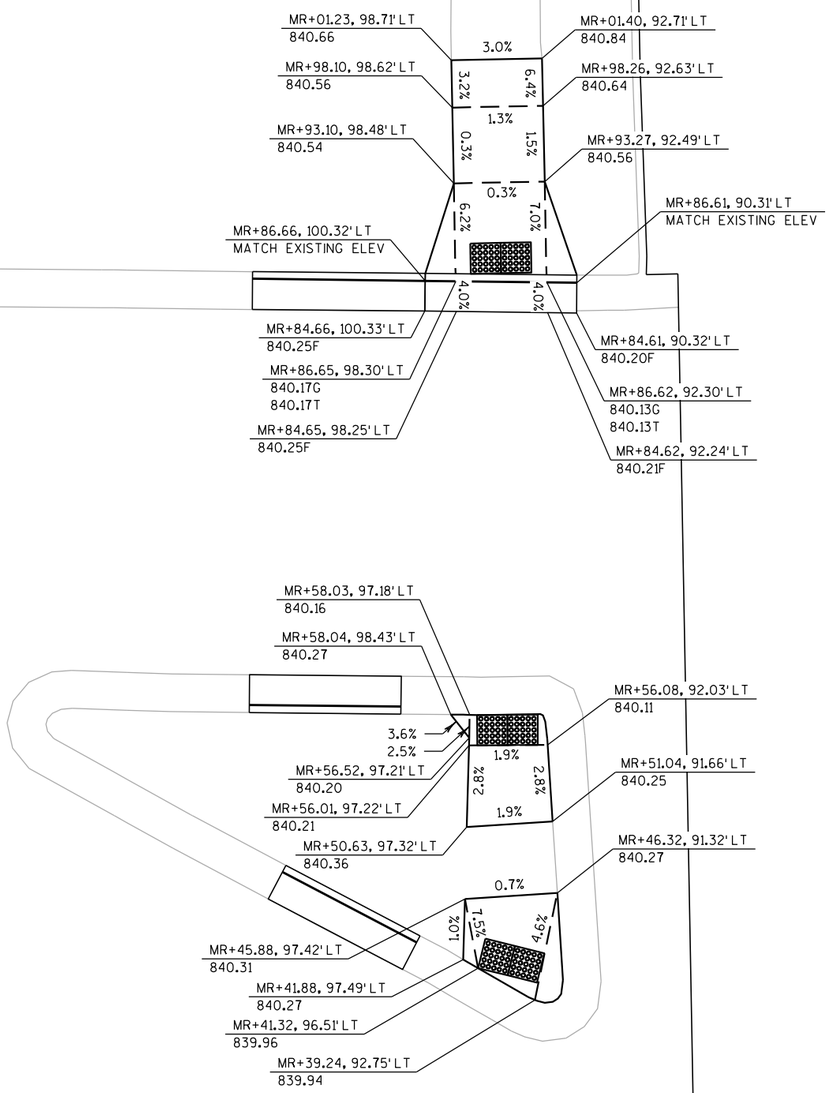
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2

NOTE

VERIFY EXISTING ELEVATIONS AND CROSS SLOPES IN THE FIELD.
WORK WITH THE FIELD ENGINEER TO ADJUST DESIGN AS NECESSARY.

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET	E

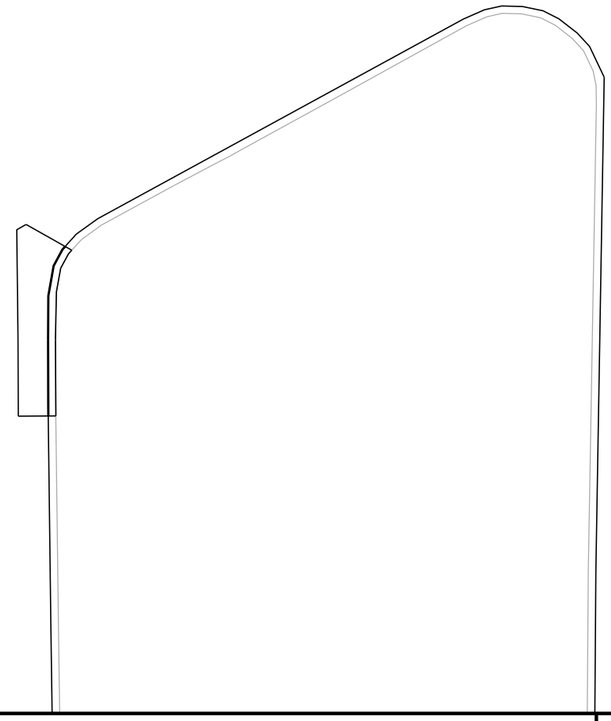


IH 94 EB OFF RAMP

S. MOORLAND ROAD

62MR

N



NOTE

VERIFY EXISTING ELEVATIONS AND CROSS SLOPES IN THE FIELD.
WORK WITH THE FIELD ENGINEER TO ADJUST DESIGN AS NECESSARY.

2

2

N

MR+08.08, 101.65' LT
840.97F

MR+05.92, 102.45' LT
840.95F

MR+07.39, 99.77' LT
MATCH EXISTING ELEV

MR+05.21, 100.58' LT
840.89G
840.89T

MR+97.47, 103.63' LT
840.92G
840.92T

MR+98.24, 105.48' LT
840.98F

MR+96.81, 106.07' LT
840.99F

MR+96.04, 104.23' LT
MATCH EXISTING ELEV

MR+98.39, 97.45' LT
840.98

MR+95.99, 97.39' LT
841.02

MR+95.86, 102.89' LT
840.94

MR+89.99, 97.25' LT
841.47

MR+89.87, 102.75' LT
841.27

3.0%
1.3%
3.0%
1.5%
1.5%
1.5%
5.5%
7.5%
3.6%

IH 94 EB ON RAMP

S. MOORLAND ROAD

64MR

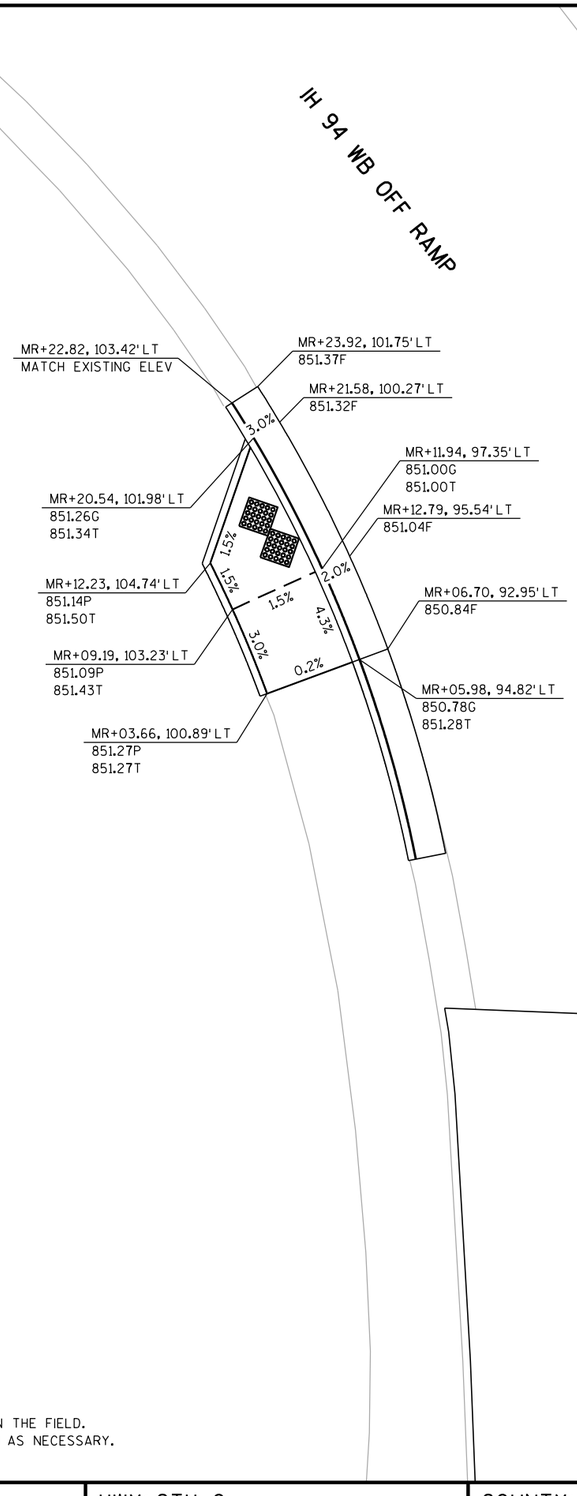
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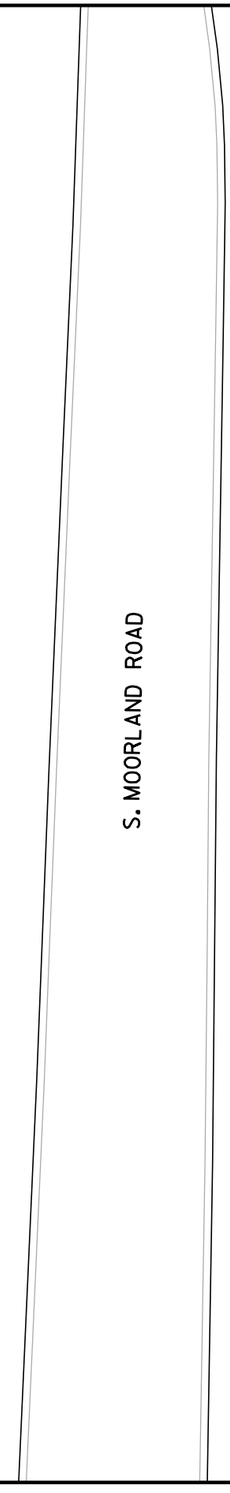
VERIFY EXISTING ELEVATIONS AND CROSS SLOPES IN THE FIELD.
WORK WITH THE FIELD ENGINEER TO ADJUST DESIGN AS NECESSARY.

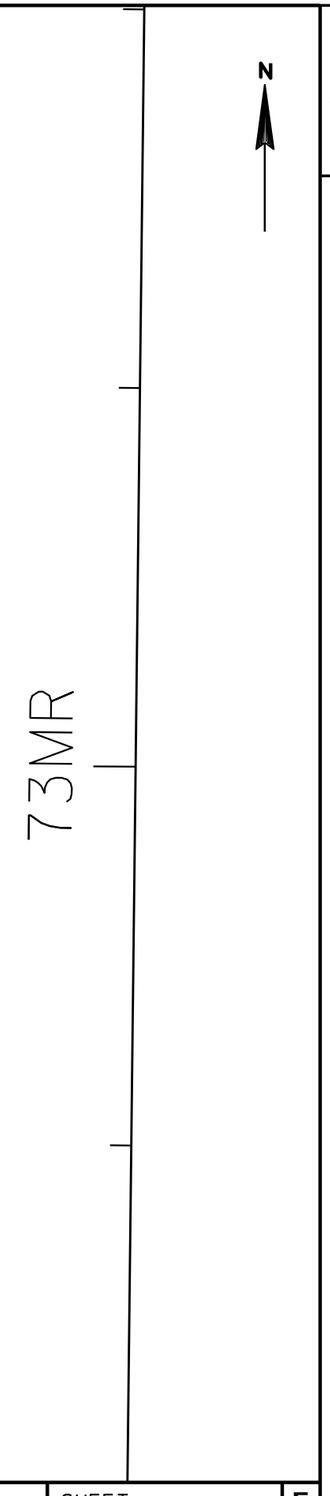
PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET	E

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WISDOT/CADDS SHEET 42







2

NOTE

VERIFY EXISTING ELEVATIONS AND CROSS SLOPES IN THE FIELD.
WORK WITH THE FIELD ENGINEER TO ADJUST DESIGN AS NECESSARY.

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET	E

2

IH 94 WB ON RAMP

IH 94 WB OFF RAMP

S. MOORLAND ROAD

74MR

N

2

MR+04.58, 74.96'LT
853.10

MR+02.55, 71.27'LT
852.98

MR+01.77, 70.01'LT
853.19

MR+05.14, 75.96'LT
853.21

0.1%
1.7%
3.5%
0.2%
0.3%

MR+98.20, 77.94'LT
853.22

MR+96.35, 71.65'LT
853.20

MR+65.54, 87.50'LT
852.68

MR+63.46, 81.24'LT
852.58

0.2%
4.7%
1.5%
4.6%
1.6%

MR+60.52, 89.33'LT
852.67

MR+54.80, 83.53'LT
852.44

MR+59.38, 88.00'LT
852.39

MR+55.93, 84.53'LT
852.20

NOTE

VERIFY EXISTING ELEVATIONS AND CROSS SLOPES IN THE FIELD.
WORK WITH THE FIELD ENGINEER TO ADJUST DESIGN AS NECESSARY.

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET	E

NOTE

VERIFY EXISTING ELEVATIONS AND CROSS SLOPES IN THE FIELD.
WORK WITH THE FIELD ENGINEER TO ADJUST DESIGN AS NECESSARY.

2

N

75MR

S. MOORLAND ROAD

MR+89.66, 95.39'LT
854.81P
854.81T

MR+88.16, 101.20'LT
854.77P
854.77T

0.7%
8.0%
8.3%

MR+77.56, 92.26'LT
853.81P
854.15T

MR+75.67, 90.80'LT
MATCH EXISTING ELEV

MR+75.87, 98.02'LT
853.72P
854.22T

1.5%
3.7%
1.5%
1.5%
1.5%

MR+71.55, 100.54'LT
853.64P
853.77T

MR+74.78, 89.01'LT
853.80F

4.5%

MR+71.49, 90.73'LT
853.72F

MR+72.52, 92.44'LT
853.63G
853.63T

0.5%

MR+68.20, 94.96'LT
853.55G
853.55T

MR+67.09, 95.67'LT
MATCH EXISTING ELEV

MR+67.17, 93.25'LT
853.56F

MR+66.01, 93.99'LT
853.54F

MR+56.55, 73.73'LT
853.95

MR+54.82, 68.61'LT
854.13

MR+56.79, 74.19'LT
853.94

MR+56.04, 74.59'LT
854.26

0.4%
3.2%
5.5%
1.3%

MR+55.99, 74.50'LT
854.25

1.5%

MR+52.08, 74.66'LT
854.19

MR+52.01, 73.92'LT
853.97

MR+51.85, 68.54'LT
854.17

MR+51.88, 69.54'LT
853.96

IH 94 WB ON RAMP

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\021002_cd.dgn PLOT DATE : 21-AUG-2017 13:39 PLOT BY : mscdyb PLOT NAME : 021002_cd5 PLOT SCALE : 10:1
WISDOT/CADDS SHEET 42

GENERAL NOTES

1) FOR ADDITIONAL UTILITY INFORMATION SEE EXISTING UTILITY PLAN.

2) THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS.

3) BASE PATCHING CONCRETE SHES IS SHOWN AT RECOMMENDED LOCATIONS. ACTUAL LOCATIONS TO BE DETERMINED BY ENGINEER IN THE FIELD.

LEGEND

REMOVING CONCRETE SURFACE PARTIAL DEPTH, 1 1/2-INCH

REMOVING ASPHALTIC SURFACE

REMOVING PAVEMENT BUTT JOINTS

REMOVING CONCRETE SIDEWALK

I I I I REMOVING CURB AND GUTTER

X X X SAWING CONCRETE PAVEMENT

X X X SAWING ASPHALT

2

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET	E

2

2

IH 94 EB OFF RAMP

IH 94 EB ON RAMP

N

REMOVING PAVEMENT BUTT JOINTS

REMOVING PAVEMENT BUTT JOINTS

BASE PATCHING CONCRETE SHES

BASE PATCHING CONCRETE SHES

REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE, CTH O & IH 94 EB RAMPS

S. MOORLAND ROAD

REMOVING PAVEMENT BUTT JOINTS

REMOVING PAVEMENT BUTT JOINTS

FRANKLIN DRIVE

59MR 60MR 61MR 62MR 63MR 64MR

MATCHLINE 64MR+15

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\021101_rm.dgn PLOT DATE : 21-AUG-2017 13:40 PLOT BY : mscdyb PLOT NAME : 021101_rm PLOT SCALE : 40:1

2

2

REMOVING PAVEMENT BUTT JOINTS

BASE PATCHING CONCRETE SHES

IH 94 EB ON RAMP

IH 94 EB ON RAMP

IH 94 WB OFF RAMP

S. MOORLAND ROAD

MATCHLINE 64MR+15

MATCHLINE 70MR+15

65MR

66MR

67MR

68MR

69MR

70MR

REMOVING PAVEMENT BUTT JOINTS

REMOVING PAVEMENT BUTT JOINTS

CARPENTER ROAD

IH 94 EB ON RAMP

IH 94 EB

IH 94 WB

IH 94 WB OFF RAMP

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\021102_rm.dgn PLOT DATE : 21-AUG-2017 13:40 PLOT BY : mscdyb PLOT NAME : 021102_rm PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

N

IH 94 WB OFF RAMP

IH 94 WB ON RAMP

S. MOORLAND ROAD

MATCHLINE 70MR+15

71MR

72MR

73MR

74MR

75MR

76MR

LOCATION OF EXISTING LOOP DETECTORS IS APPROXIMATE. USE CAUTION TO AVOID ANY IMPACTS.

REMOVING PAVEMENT BUTT JOINTS

REMOVING PAVEMENT BUTT JOINTS

REMOVING PAVEMENT BUTT JOINTS

REMOVING PAVEMENT BUTT JOINTS

REMOVING PAVEMENT BUTT JOINTS

BASE PATCHING CONCRETE SHES

REMOVING ASPHALTIC SURFACE

REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE, CTH O & IH 94 WB RAMPS

REMOVING PAVEMENT BUTT JOINTS

IH 94 WB OFF RAMP

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	REMOVAL PLAN	SHEET	E

2

LEGEND

A	HMA PAVEMENT 4 MT 58-28 H, 3 1/2-INCH
CG05	CURB RAMP TYPE 4A
CG06	CURB RAMP TYPE 4B
CG08	CURB RAMP TYPE 6
CG22	CONCRETE CURB PEDESTRIAN
CG24	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A
CG43	CURB RAMP TYPE 4B1
CG53	CONCRETE CURB & GUTTER 30-INCH TYPE A
CM07	CONCRETE SIDEWALK 5-INCH
SW01	SAWING ASPHALT
SW02	SAWING CONCRETE

NOTE

SEE CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION ON CURB RAMP LAYOUT, ELEVATIONS AND GUTTER SLOPE TRANSITIONS.

NOTE
FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEET.

2

2

IH 94 EB OFF RAMP

IH 94 EB ON RAMP

CP215

N

CAUTION

R/W

MR+45.79
110.39' LT
SW02

MR+60.58
111.73' LT

DRILLED TIE BARS

CG43
CM07
SW02

MR+41.20
101.50' LT

MR+00.75
109.16' LT
CG24
CG53
SW02

MR+74.28
94.77' LT

MR+86.78
100.05' LT

MR+24.47
84.60' LT

MR+24.60
79.50' LT

MR+65.00
80.24' LT

MR+65.00
42.77' LT

DRILLED TIE BARS

CG08
SW02
CG08
CM07

MR+48.40
43.96' LT

MR+48.34
46.31' LT

CG53

SW02
DRILLED TIE BARS
MR+60.64
46.50' LT

MR+60.99
45.88' LT

DRILLED TIE BARS
CG53
SW02
MR+60.55
101.73' LT

MR+84.68
111.73' LT
DRILLED TIE BARS
MR+84.66
100.33' LT
CG43
CM07
SW02

CG53
SW02
MR+84.61
90.32' LT

MR+87.18
85.73' LT
MR+87.23
83.65' LT

A

MR+90.83
125.80' LT
CG53
DRILLED TIE BARS
CG53
MR+81.92
130.37' LT
SW02
DRILLED TIE BARS
MR+73.70
117.45' LT
SW02
CG53
MR+82.58
112.85' LT
MR+96.81
106.07' LT
SW02
CM07
CG43
MR+08.08
101.65' LT

S. MOORLAND ROAD

59MR | 60MR | 61MR | 62MR | 63MR | 64MR

MATCHLINE 64MR+15

MR+50.00
7.98' LT
MR+50.00
32.48' RT

CG53
DRILLED TIE BARS
MR+13.59
30.11' RT
SW02
MR+26.59
30.13' RT

A

CP214

R/W

FRANKLIN DRIVE

CP212

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	PLAN DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\021201_pd.dgn
PLOT DATE : 21-AUG-2017 13:40
PLOT BY : mscdyb
PLOT NAME : 021201_pd
PLOT SCALE : 40:1

NOTE

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEET.

2

2

IH 94 EB ON RAMP

IH 94 WB OFF RAMP

S. MOORLAND ROAD

CARPENTER ROAD

IH 94 EB ON RAMP

IH 94 EB

IH 94 WB

IH 94 WB OFF RAMP

B-67-102 (EXISTING)

B-67-53 (EXISTING)

B-67-52 (EXISTING)

CP215

CP212

MR+20.76
115.37' LT
DRILLED TIE BARS
CG53
MR+41.26
107.29' LT
SW02
MR+29.58
110.53' LT
MR+14.54
97.44' LT

MR+67.66
90.82' LT
SW02
CG53
MR+80.64
90.11' LT
DRILLED TIE BARS

MR+50.76
88.33' LT
SW02
CG53
MR+63.76
88.31' LT
DRILLED TIE BARS

MR+28.78
32.65' RT
CG53
DRILLED TIE BARS
SW02
MR+41.74
33.66' RT
DRILLED TIE BARS

MR+22.63
29.16' RT
MR+22.70
40.69' RT
SW02
MR+23.17
40.84' RT
MR+10.31
39.01' RT
CG53
MR+22.11
42.61' RT

MR+79.60
28.81' RT
MR+79.56
40.13' RT
MR+81.74
40.65' RT
MR+56.61
69.37' RT
DRILLED TIE BARS
SW02
MR+60.60
81.02' RT
CG53

MR+96.65
28.86' RT
SW02
DRILLED TIE BARS
MR+09.64
29.06' RT
CG53

MR+72.32
29.78' RT
SW02
DRILLED TIE BARS
CG53
MR+85.32
29.81' RT

65MR
66MR
67MR
68MR
69MR
70MR

MATCHLINE 64MR+15

MATCHLINE 70MR+15

CAUTION

R/W

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	PLAN DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\021202_pd.dgn PLOT DATE : 21-AUG-2017 13:40 PLOT BY : mscdyb PLOT NAME : 021202_pd PLOT SCALE : 40:1

NOTE

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEET.

2

2

CP215

IH 94 WB OFF RAMP

IH 94 WB ON RAMP

WETLAND

R/W

CP213

MR+23.92
101.75'LT

CG22

CG05

CM07

SW02

MR+93.26
88.99'LT

SW02

CG53

MR+64.38
98.71'LT

DRILLED TIE BARS

SW02

CG53

MR+58.35
90.74'LT

SW01

CM07

MR+58.81
99.48'LT

CG06

CG22

CM07

SW02

MR+66.01
93.99'LT

CG53

SW02

MR+10.00
84.46'LT

MR+11.16
84.97'LT

SW02

DRILLED TIE BARS

MR+08.05
81.95'LT

SW02

MR+21.03
82.14'LT

DRILLED TIE BARS

CG53

A

MR+83.04
88.92'LT

MR+82.78
79.80'LT

MR+06.70
92.95'LT

DRILLED TIE BARS

MR+46.91
77.93'LT

MR+30.86
67.70'LT

CG53

SW02

CG08

SW02

MR+43.35
66.07'LT

DRILLED TIE BARS

CG53

MR+07.61
75.24'LT

CG08

CG53

CM07

CG08

SW02

MR+79.49
89.17'LT

MR+74.78
89.01'LT

DRILLED TIE BARS

MR+69.72
66.64'LT

MR+10.00
35.55'LT

S. MOORLAND ROAD

CG53

MR+91.15
28.39'LT

DRILLED TIE BARS

MR+03.13
28.56'LT

SW02

MR+10.00
8.14'LT

71MR

72MR

73MR

74MR

75MR

76MR

MATCHLINE 70MR+15

MR+70.59
29.58'RT

MR+70.59
31.63'RT

MR+87.17
29.59'RT

A

DRIVEWAY ENTRANCE CURB

CG53

SW02

DRILLED TIE BARS

MR+86.85
31.97'RT

MR+06.44
31.39'RT

SW02

MR+63.75
30.12'RT

DRILLED TIE BARS

MR+76.74
29.97'RT

MR+10.00
31.64'RT

CAUTION

CG53

DRILLED TIE BARS

MR+64.95
39.17'RT

SW02

MR+77.94
38.77'RT

MR+91.00
34.36'RT

MR+92.37
38.82'RT

MR+26.04
33.18'RT

MR+25.46
37.70'RT

CG53

A

SW01

MR+93.35
49.37'RT

IH 94 WB OFF RAMP

R/W

R/W

R/W

R/W

CP212

INL

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	PLAN DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\021203_pd.dgn PLOT DATE : 21-AUG-2017 13:41 PLOT BY : mscdyb PLOT NAME : 021203_pd PLOT SCALE : 40:1

2

NOTES

PLACE INLET PROTECTION TYPE B, C, OR D UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT.

DO NOT STORE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS.

RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET GRATE.

ADJUSTMENT RINGS MAY BE USED TO A COMBINED MAXIMUM THICKNESS OF 6-INCHES.

INLET ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

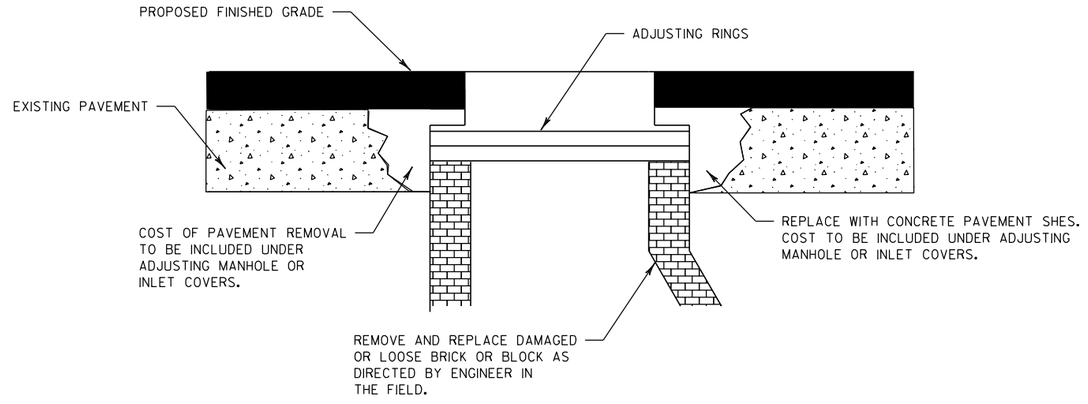
UTILITY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE. LOCATIONS SHOWN ARE TAKEN FROM EXISTING RECORDS AND BEST INFORMATION AVAILABLE FROM EXISTING PLANS. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION OF UTILITIES AND STRUCTURES SHOWN. VERIFY ALL LOCATIONS IN THE FIELD.

COORDINATE WITH DIGGERS HOTLINE TO FIELD LOCATE UTILITIES. ANY UTILITIES DAMAGED DUE TO CONTRACTOR ACTIVITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE UTILITY FACILITY.

2

LEGEND

- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (D) INLET PROTECTION TYPE D
- SURFACE WATER FLOW



PAVED LOCATION

NOTE

ADJUST 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 FRAME AND LID TO FINISHED GRADE. BACKFILL AND OTHER WORK TO BE DONE IN ACCORDANCE WITH ITEM ADJUSTING MANHOLE OR INLET COVERS.

ADJUSTING MANHOLE OR INLET COVERS

2

PINEHURST DRIVE

S. MOORLAND ROAD

HACKBERRY LANE

53MR 54MR 55MR 56MR 57MR 58MR

MATCHLINE 58MR+15

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	EROSION CONTROL AND STORM SEWER	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\022001_ec.dgn PLOT DATE : 21-AUG-2017 13:41 PLOT BY : mscdyb PLOT NAME : 022001_ec PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

IH 94 EB OFF RAMP

IH 94 EB ON RAMP

S. MOORLAND ROAD

FRANKLIN DRIVE

ADJUSTING INLET COVERS

ADJUSTING INLET COVERS

MATCHLINE 58MR+15

59MR

60MR

61MR

62MR

63MR

64MR

MATCHLINE 64MR+15

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	EROSION CONTROL AND STORM SEWER	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\022002_ec.dgn PLOT DATE : 21-AUG-2017 13:41 PLOT BY : mscdyb PLOT NAME : 022002_ec PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

RECONSTRUCTING INLETS

IH 94 EB ON RAMP

ADJUSTING INLET COVERS

IH 94 EB ON RAMP

IH 94 WB OFF RAMP

ADJUSTING INLET COVERS

S. MOORLAND ROAD

MATCHLINE 64MR+15

65MR

66MR

67MR

68MR

69MR

70MR

MATCHLINE 70MR+15

ADJUSTING INLET COVERS

ADJUSTING INLET COVERS

ADJUSTING INLET COVERS

ADJUSTING INLET COVERS

RECONSTRUCTING INLETS

CARPENTER ROAD

IH 94 EB ON RAMP

IH 94 EB

IH 94 WB

IH 94 WB OFF RAMP

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	EROSION CONTROL AND STORM SEWER	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\022003_ec.dgn PLOT DATE : 21-AUG-2017 13:41 PLOT BY : mscdyb PLOT NAME : 022003_ec PLOT SCALE : 40:1

2

N

WETLAND

IH 94 WB OFF RAMP

IH 94 WB ON RAMP

S. MOORLAND ROAD

ADJUSTING INLET COVERS

ADJUSTING INLET COVERS

ADJUSTING INLET COVERS

ADJUSTING MANHOLE COVERS

ADJUSTING MANHOLE COVERS

ADJUSTING MANHOLE COVERS

ADJUSTING INLET COVERS

ADJUSTING INLET COVERS

ADJUSTING INLET COVERS

MATCHLINE 70MR+15

71MR

72MR

73MR

74MR

75MR

76MR

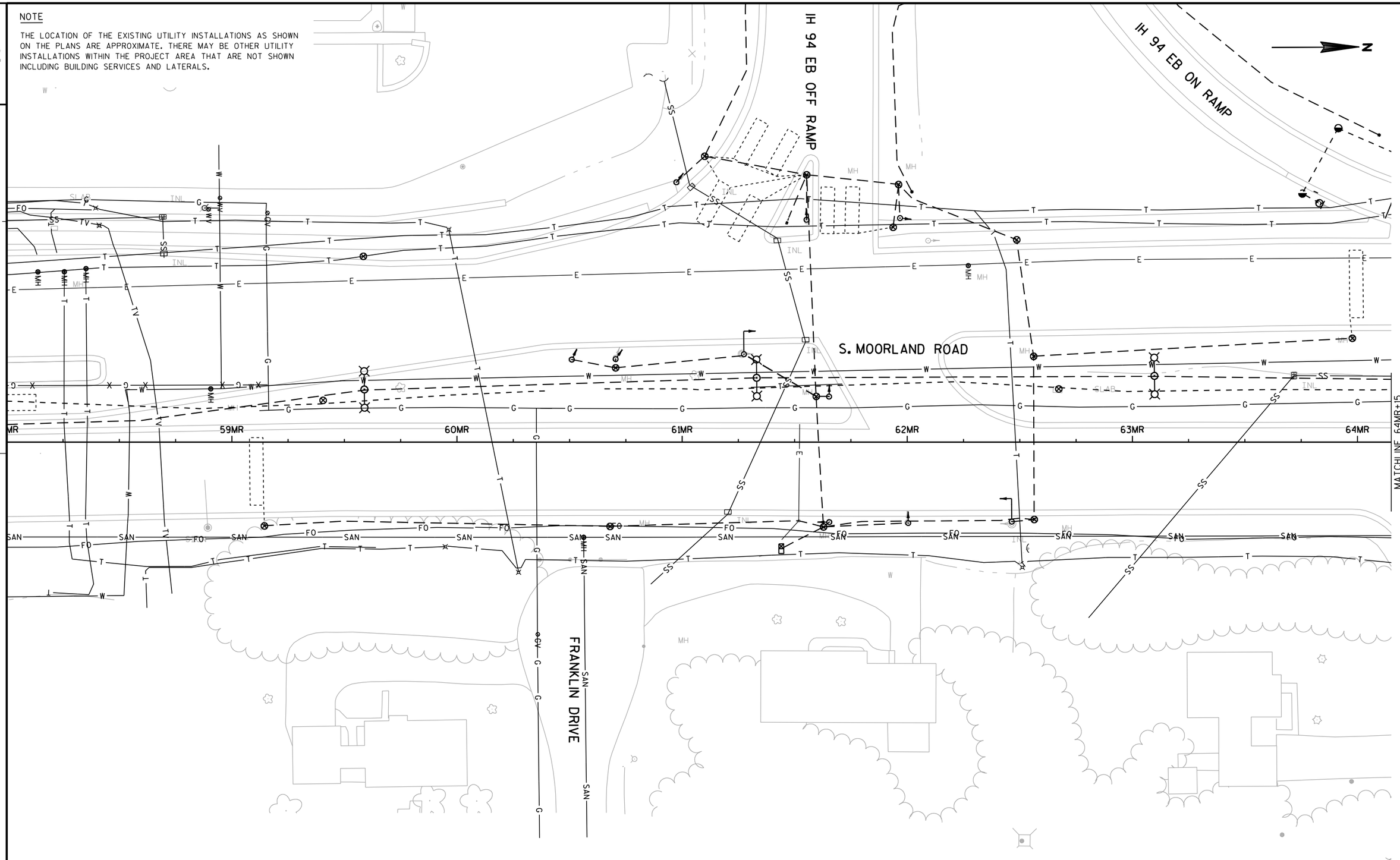
IH 94 WB OFF RAMP

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	EROSION CONTROL AND STORM SEWER	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\022004_ec.dgn PLOT DATE : 21-AUG-2017 13:41 PLOT BY : mscdyb PLOT NAME : 022004_ec PLOT SCALE : 40:1

NOTE

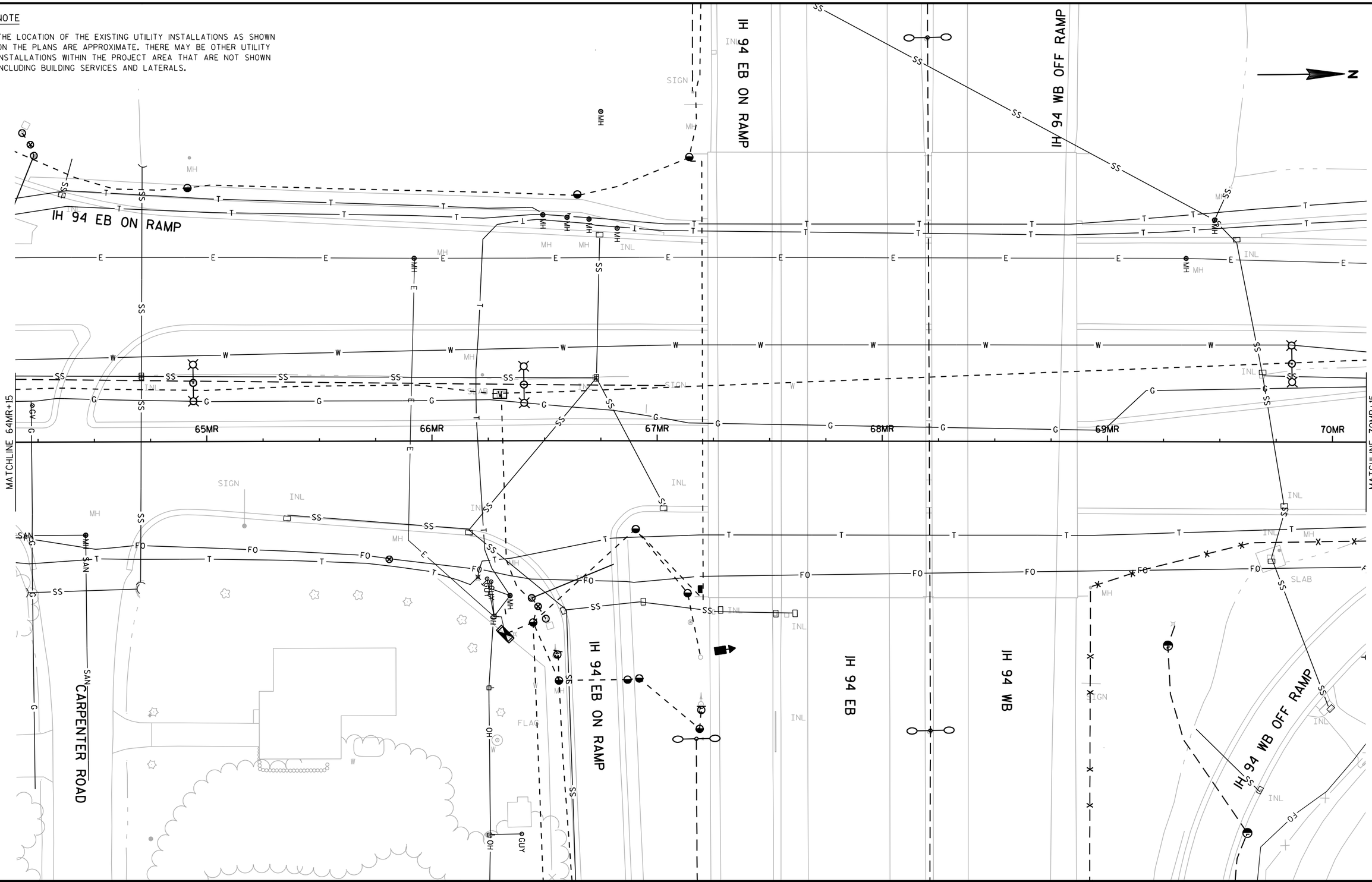
THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS.



PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	EXISTING UTILITY PLAN	SHEET	E

NOTE

THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS.



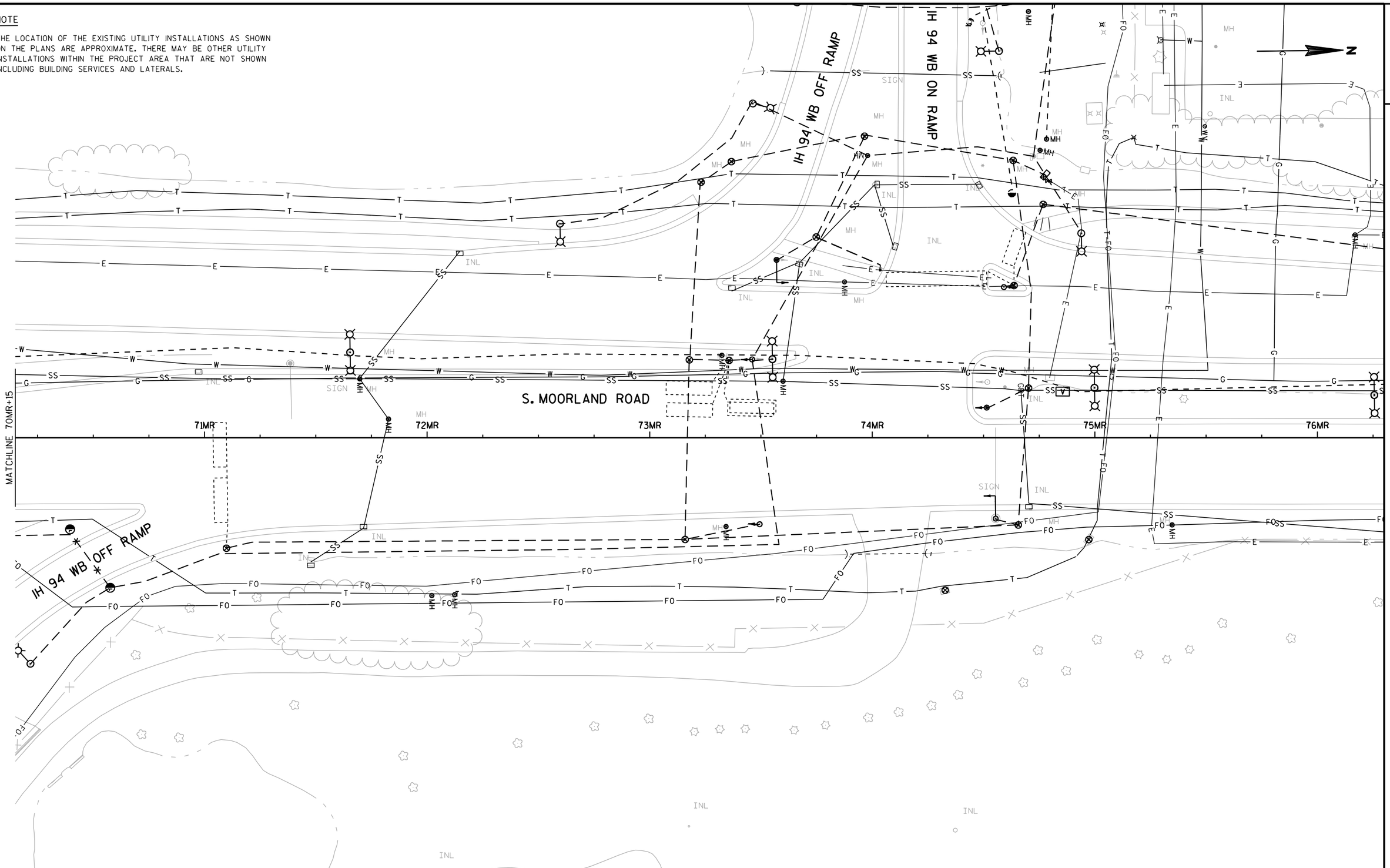
PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	EXISTING UTILITY PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\023002_up.dgn PLOT DATE : 21-AUG-2017 13:42 PLOT BY : mscdyb PLOT NAME : 023002_up PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

NOTE

THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS.



PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	EXISTING UTILITY PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\023003_up.dgn PLOT DATE : 21-AUG-2017 13:42 PLOT BY : mscdyb PLOT NAME : 023003_up PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2	PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3	PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
5	PAVEMENT MARKING EPOXY 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
6	PAVEMENT MARKING EPOXY 8-INCH (WHITE)
7	PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
9	PAVEMENT MARKING CROSSWALK 6-INCH EPOXY (WHITE)
11	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
14	PAVEMENT MARKING WORDS EPOXY (WHITE)
16	PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE)
20	PAVEMENT MARKING CURB EPOXY (YELLOW)
21	PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
121	PAVEMENT MARKING YIELD LINE SYMBOLS EPOXY 18-INCH (WHITE)
222	PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH (WHITE) (2 FT LINE 6 FT SKIP)

NOTE

PAVEMENT MARKINGS SHOWN AS SCREENED ARE EXISTING AND SHALL NOT BE REMOVED UNLESS OTHERWISE NOTED.

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\024500_pm.dgn PLOT DATE : 21-AUG-2017 13:42 PLOT BY : mscdyb PLOT NAME : 024500_pm PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

N

PINEHURST DRIVE

S. MOORLAND ROAD

HACKBERRY LANE

MR

53MR

54MR

55MR

56MR

57MR

58MR

MATCHLINE 58MR+15

MR+44

MR+44

MR+51

MR+51

MR+58

MR+59

3

6

2

7

21

20

14

1

16

12'

9'

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\024501_pm.dgn PLOT DATE : 21-AUG-2017 13:42 PLOT BY : mscdyb PLOT NAME : 024501_pm PLOT SCALE : 40:1

2

IH 94 EB OFF RAMP

IH 94 EB ON RAMP

S. MOORLAND ROAD

FRANKLIN DRIVE

MATCHLINE 58MR+15

MATCHLINE 64MR+15

59MR

60MR

61MR

62MR

63MR

64MR

MR+06

MR+14

MR+24

MR+25

MR+32

MR+36

MR+36

MR+49

MR+52

MR+56

MR+59

MR+62

MR+65

MR+65

MR+99

R=90'

222

10' TYP

12'

12'

12'

12'

11'

6.5'

6.5'

6.5'

6.5'

5'

5'

5'

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\024502_pm.dgn PLOT DATE : 21-AUG-2017 13:42 PLOT BY : mscdyb PLOT NAME : 024502_pm PLOT SCALE : 40:1

2

N

IH 94 EB ON RAMP

IH 94 WB OFF RAMP

IH 94 EB ON RAMP

6.5'

MR+67

MR+94

S. MOORLAND ROAD

MR+27

MR+90

MR+89

MR+15

MR+80

MR+61

MR+94

64MR+15

MATCHLINE

65MR

66MR

67MR

68MR

69MR

70MR

70MR+15

MATCHLINE

12'

20'

20' TYP

CARPENTER ROAD

IH 94 EB ON RAMP

IH 94 EB

IH 94 WB

IH 94 WB OFF RAMP

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET	E

2

N

IH 94 WB OFF RAMP

IH 94 WB ON RAMP

S. MOORLAND ROAD

IH 94 WB OFF RAMP

MATCHLINE 70MR+15

MATCHLINE 76MR+15

MR+14 MR+96 MR+39 MR+97 MR+91 MR+69 MR+70 MR+10 MR+32 MR+52 MR+65 MR+55 MR+60 MR+60

R=60'

71MR 72MR 73MR 74MR 75MR 76MR

12' 12' 12' 12' 12' 12' 12' 12' 11' 11'

22' 7' 6' 20' 20' TYP 20' TYP

222

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\024504_pm.dgn PLOT DATE : 21-AUG-2017 13:43 PLOT BY : mscdyb PLOT NAME : 024504_pm PLOT SCALE : 40:1

2

N

6
11
2
12'
12'
12'
16
14
MR+33
3
1
MR+83

S. MOORLAND ROAD

MATCHLINE 76MR+15

77MR
78MR
79MR
80MR
81MR
82MR

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\024505_pm.dgn PLOT DATE : 21-AUG-2017 13:43 PLOT BY : mscdyb PLOT NAME : 024505_pm PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

GENERAL NOTES FOR TRAFFIC CONTROL

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

2) A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE WORK AREAS IF WARRANTED BY CONDITIONS OR AS DIRECTED BY THE ENGINEER. FLAGGING IS NOT PERMITTED ON FREEWAY LANES.

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

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

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

6) ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, AND EQUIPPED WITH TWO TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

7) WORK AREAS SHOWN MAY NOT ILLUSTRATE ALL REMOVALS. SEE REMOVAL SHEETS FOR ADDITIONAL INFORMATION.

8) TRAFFIC CONTROL DRUM SPACING SHALL BE 50' UNLESS OTHERWISE NOTED.

9) 16" X 16" ORANGE FLAGS SHALL BE INCIDENTAL TO TRAFFIC CONTROL SIGN BID ITEM.

10) INSTALL PROPOSED TRAFFIC CONTROL SIGNS ON BOTH OUTSIDE SHOULDER AND MEDIAN SIDE OF ALL DIVIDED ROADWAYS.

TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL BARRICADE TYPE III WITH LIGHTS TYPE A
- TRAFFIC CONTROL BARRICADE TYPE III WITH LIGHTS TYPE A AND ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- TRAFFIC CONTROL DRUM
- TRAFFIC FLOW ARROW
- WORK ZONE THIS STAGE

TEMPORARY PAVEMENT MARKING LEGEND

(46) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)

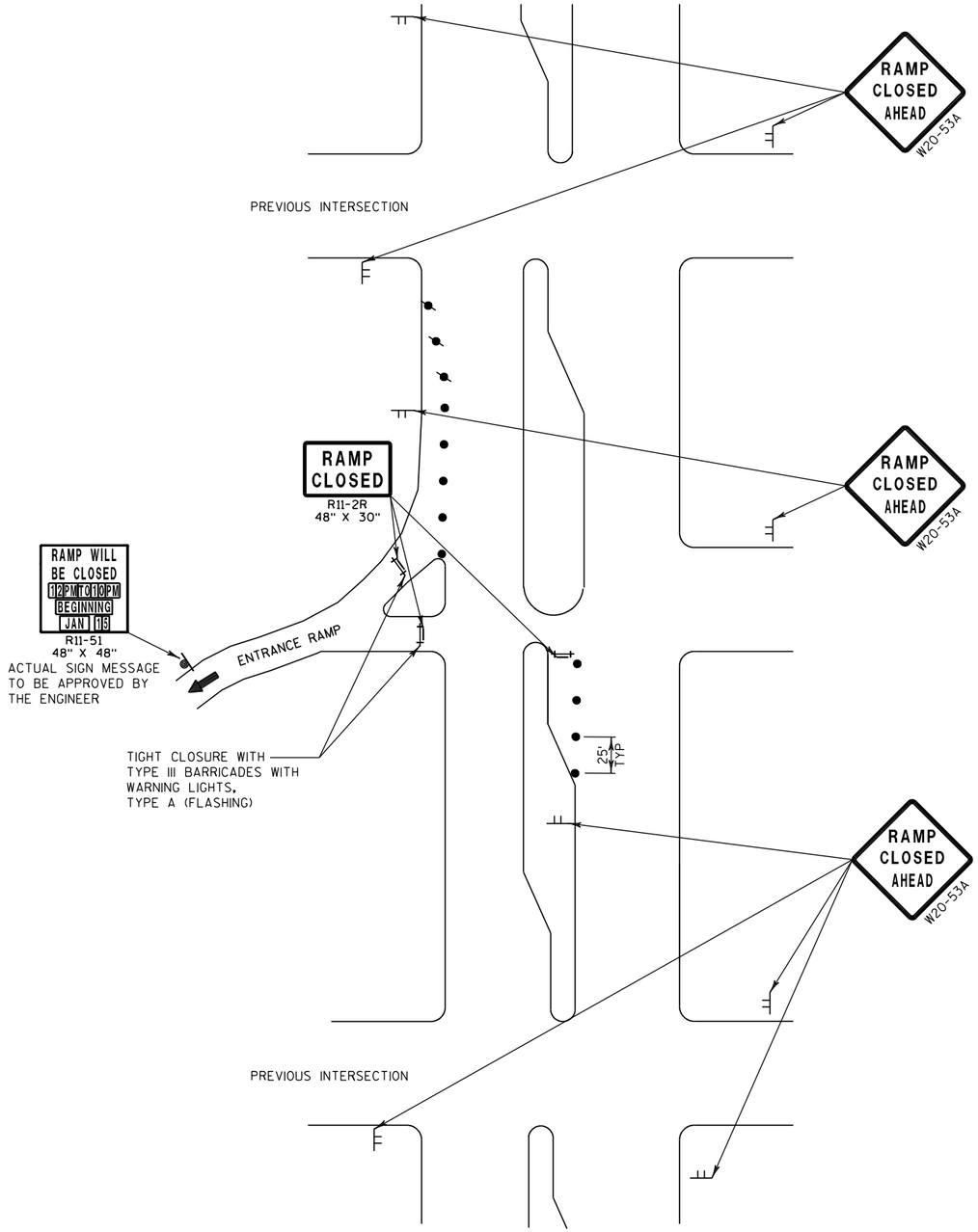
(49) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)

(50) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (DOT PATTERN WHITE)

(51) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

(52) TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

2



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

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL III BARRICADE
- TRAFFIC CONTROL III BARRICADE WITH LIGHT TYPE A AND ATTACHED SIGN
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

(SHORT TERM ONLY)

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	TRAFFIC CONTROL CONSTRUCTION DETAIL	SHEET	E

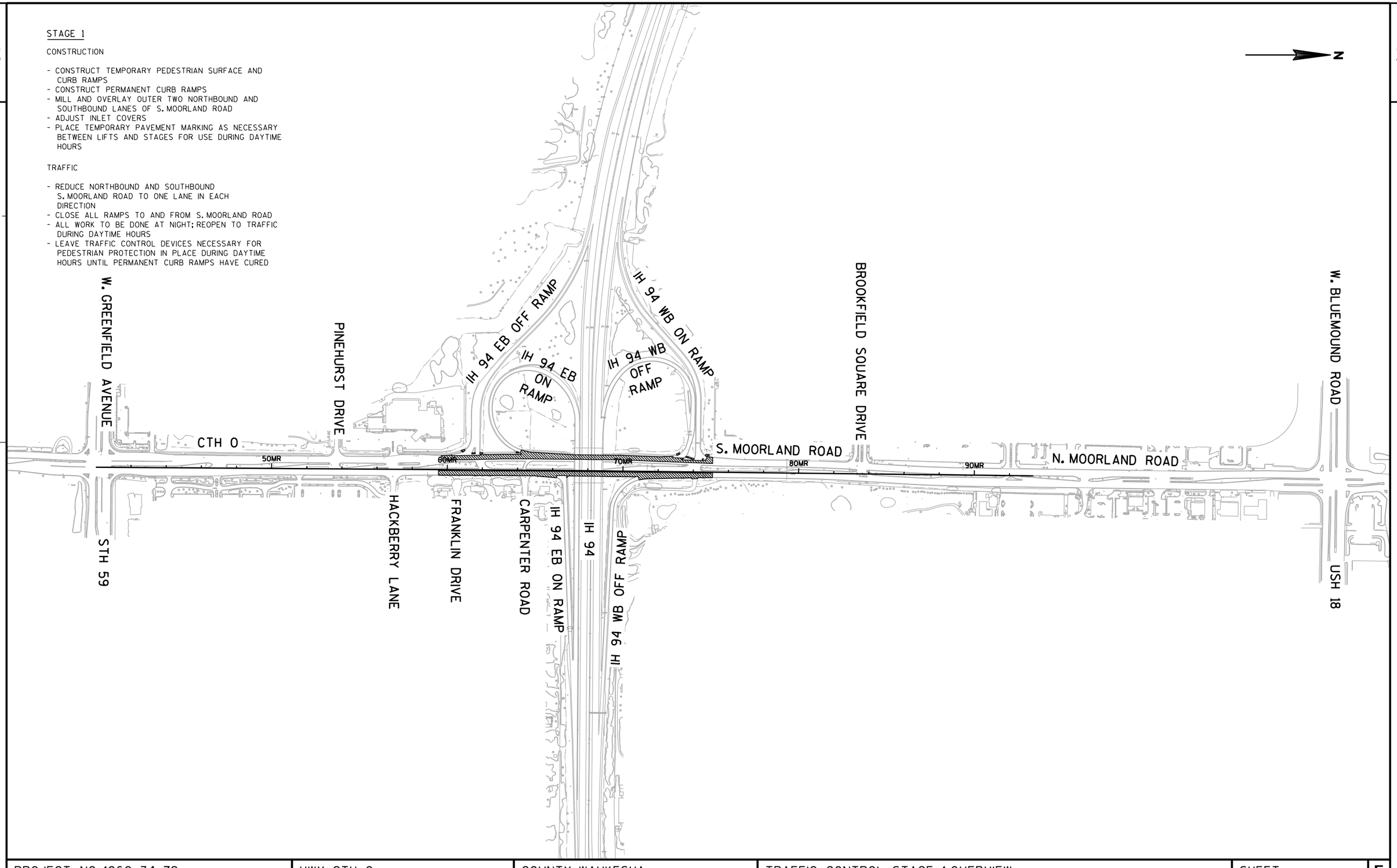
STAGE 1

CONSTRUCTION

- CONSTRUCT TEMPORARY PEDESTRIAN SURFACE AND CURB RAMPS
- CONSTRUCT PERMANENT CURB RAMPS
- MILL AND OVERLAY OUTER TWO NORTHBOUND AND SOUTHBOUND LANES OF S. MOORLAND ROAD
- ADJUST INLET COVERS
- PLACE TEMPORARY PAVEMENT MARKING AS NECESSARY BETWEEN LIFTS AND STAGES FOR USE DURING DAYTIME HOURS

TRAFFIC

- REDUCE NORTHBOUND AND SOUTHBOUND S. MOORLAND ROAD TO ONE LANE IN EACH DIRECTION
- CLOSE ALL RAMPS TO AND FROM S. MOORLAND ROAD
- ALL WORK TO BE DONE AT NIGHT; REOPEN TO TRAFFIC DURING DAYTIME HOURS
- LEAVE TRAFFIC CONTROL DEVICES NECESSARY FOR PEDESTRIAN PROTECTION IN PLACE DURING DAYTIME HOURS UNTIL PERMANENT CURB RAMPS HAVE CURED



PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGE 1 OVERVIEW	SHEET	E

2

N

W. GREENFIELD AVENUE

S. MOORLAND ROAD

42MR

44MR

46MR

48MR

50MR+00

MATCHLINE

RAMP CLOSED AHEAD W20-53A

INTERSTATE 94 M1-1 24" X 24"

SIGN

RIPRAP

COURSE GOLF

CO GOLI

ROAD WORK AHEAD W20-1A

RIGHT TWO LANES CLOSED AHEAD W20-58A

W04-2R

700'

700'

350'

245' TAPER

25' TYP

U/C

FLAG

INL

MH

T

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET	E

2

N

PINEHURST DRIVE

IH 94 EB OFF RAMP

IH 94 EB ON RAMP

END ROAD WORK
G20-2A
48" X 24"

200' TAPER

25' TYP

50' TYP

245' TAPER

TEMPORARY CURB RAMP

TEMPORARY PEDESTRIAN SURFACE PLYWOOD

TEMPORARY CURB RAMP

TEMPORARY PEDESTRIAN SURFACE PLYWOOD

TEMPORARY CURB RAMP

TEMPORARY PEDESTRIAN SURFACE PLYWOOD

RAMP CLOSED
R11-2R
48" X 30"

S. MOORLAND ROAD

MATCHLINE 50MR+00

MATCHLINE 65MR+00

50MR

52MR

54MR

56MR

58MR

60MR

62MR

64MR

PCMS

LANE CLOSED
R11-2L
48" X 30"

W04-2R

LOCAL TRAFFIC ACCESS
CARPENTER FROM HACKBERRY
PCMS MESSAGE

HACKBERRY LANE

LANE CLOSED
R11-2L
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

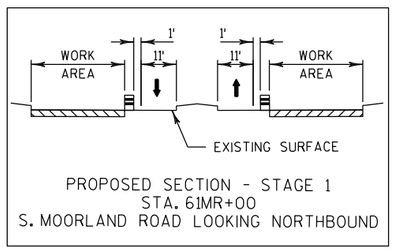
RAMP CLOSED AHEAD
W20-53A

FRANKLIN DRIVE

CARPENTER ROAD

500'

ROAD CLOSED 500 FT
W20-3D



PROPOSED SECTION - STAGE 1
STA. 61MR+00
S. MOORLAND ROAD LOOKING NORTHBOUND

NOTES

SEE SDD 15D16 FOR INFORMATION ON FREEWAY RAMP CLOSURES NOT SHOWN IN PLANS.

SEE SDD 15D30 FOR INFORMATION ON TEMPORARY PEDESTRIAN ACCOMMODATIONS. ACTUAL LOCATION OF TEMPORARY CURB RAMP TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET	E

2

N

IH 94 EB ON RAMP

IH 94 WB OFF RAMP

IH 94 WB ON RAMP

IH 94 WB OFF RAMP

S. MOORLAND ROAD

IH 94 EB

IH 94 WB

IH 94 EB ON RAMP

IH 94 EB ON RAMP

IH 94 WB OFF RAMP

MATCHLINE 65MR+00

MATCHLINE 80MR+00

66MR

68MR

70MR

72MR

74MR

76MR

78MR

80

100'

25' TYP

50' TYP

245' TAPER

200' TAPER

200' TAPER

1000'

1500'

COVERING SIGNS TYPE I

COVERING SIGNS TYPE I

RAMP CLOSED
R11-2R
48" X 30"

RAMP CLOSED
R11-2R
48" X 30"

RAMP CLOSED
R11-2R
48" X 30"

RAMP CLOSED
R11-2R
48" X 30"

LANE CLOSED
R11-2L
48" X 30"

RAMP CLOSED AHEAD
W20-53A

RAMP CLOSED AHEAD
W20-53A

RAMP CLOSED AHEAD
W20-53A

RAMP CLOSED 1000 FT
W20-53C

LOCAL TRAFFIC ACCESS CARPENTER FROM HACKBERRY

PCMS MESSAGE

PCMS

TEMPORARY PEDESTRIAN SURFACE PLYWOOD

TEMPORARY CURB RAMP

TEMPORARY CURB RAMP

46

46

SEPTIC

FLAG

SLAB

GOLF GREEN

RIPRAP

NOTE

SEE SDD 15D16 FOR INFORMATION ON FREEWAY RAMP CLOSURES NOT SHOWN IN PLANS.

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\026103_s1.dgn PLOT DATE : 21-AUG-2017 13:43 PLOT BY : mscdyb PLOT NAME : 026103_s1 PLOT SCALE : 100:1

2

N

BROOKFIELD SQUARE DRIVE

LANE CLOSED
R11-2L
48" X 30"

W04-2R

245' TAPER

350'

RIGHT TWO LANES CLOSED AHEAD
W20-5BA

ROAD WORK AHEAD
W20-1A

700'

700'

25' TYP

25' TYP

MATCHLINE 80MR+00

80MR

82MR

84MR

86MR

88MR

90MR

92MR

S. MOORLAND ROAD

N. MOORLAND ROAD

END ROAD WORK
C20-2A
48" X 24"

RAMP CLOSED AHEAD
W20-53A

LANE CLOSED
R11-2L
48" X 30"

GOLF GREEN

GOLF GREEN

POOL

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\026104_s1.dgn PLOT DATE : 21-AUG-2017 13:44 PLOT BY : mscdyb PLOT NAME : 026104_s1 PLOT SCALE : 100:1

2

2

N

W. BLUEMOUND ROAD

RAMP CLOSED AHEAD W20-53A

INTERSTATE 94 M1-1 24" X 24"

RAMP CLOSED AHEAD W20-53A

INTERSTATE 94 M1-1 24" X 24"

N. MOORLAND ROAD

PILGRIM PARKWAY

RAMP CLOSED AHEAD W20-53A

INTERSTATE 94 M1-1 24" X 24"

W. WATERTOWN PLANK ROAD

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	STAGE 1 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\026105_s1.dgn PLOT DATE : 21-AUG-2017 13:44 PLOT BY : mscdyb PLOT NAME : 026105_s1 PLOT SCALE : 100:1

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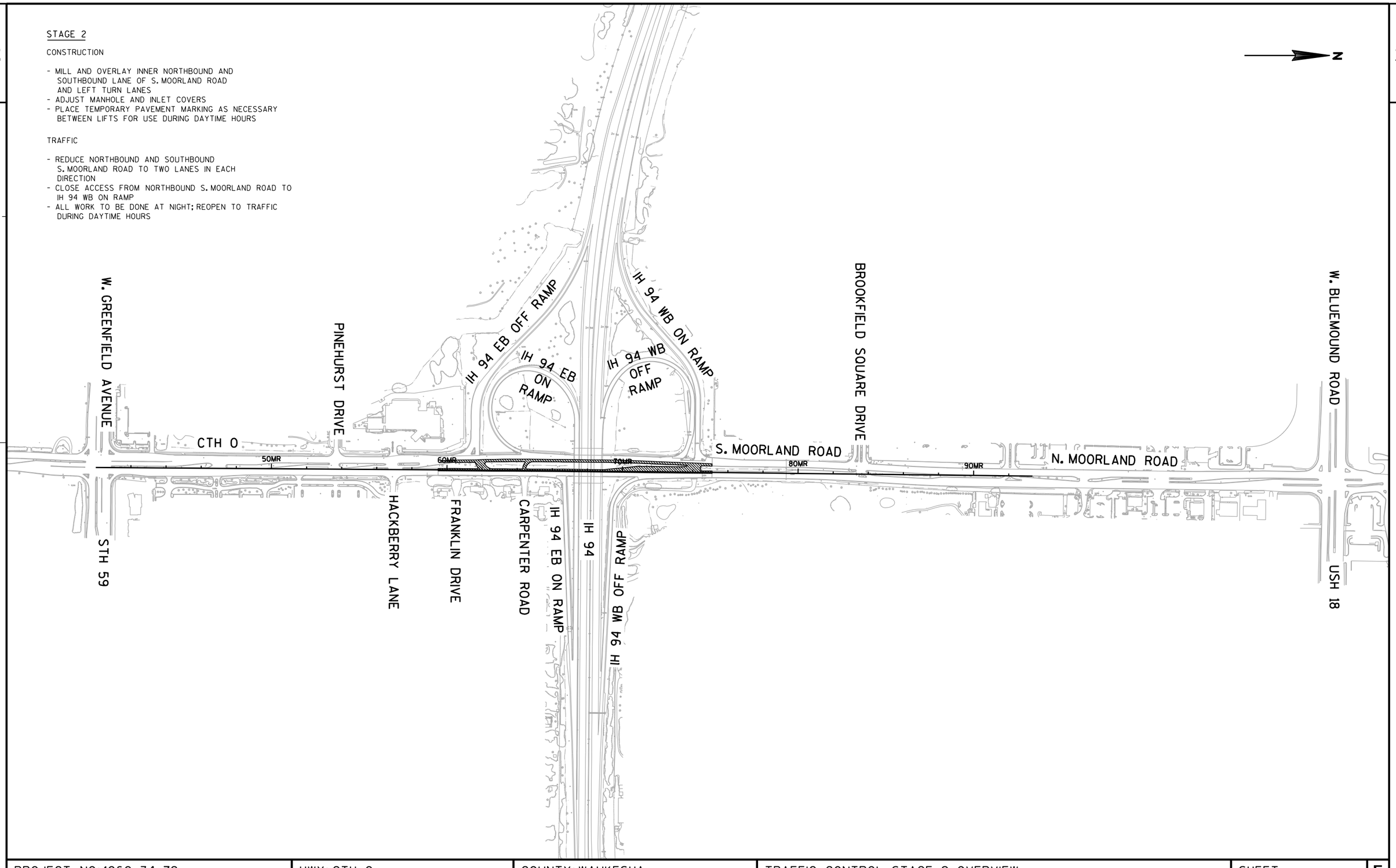
STAGE 2

CONSTRUCTION

- MILL AND OVERLAY INNER NORTHBOUND AND SOUTHBOUND LANE OF S. MOORLAND ROAD AND LEFT TURN LANES
- ADJUST MANHOLE AND INLET COVERS
- PLACE TEMPORARY PAVEMENT MARKING AS NECESSARY BETWEEN LIFTS FOR USE DURING DAYTIME HOURS

TRAFFIC

- REDUCE NORTHBOUND AND SOUTHBOUND S. MOORLAND ROAD TO TWO LANES IN EACH DIRECTION
- CLOSE ACCESS FROM NORTHBOUND S. MOORLAND ROAD TO IH 94 WB ON RAMP
- ALL WORK TO BE DONE AT NIGHT; REOPEN TO TRAFFIC DURING DAYTIME HOURS



PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGE 2 OVERVIEW	SHEET	E

2

N

W. GREENFIELD AVENUE

S. MOORLAND ROAD

42MR

44MR

46MR

48MR

50MR+00

MATCHLINE

25'
TYP

350'

245' TAPER

ROAD WORK AHEAD
W20-1A

LEFT LANE CLOSED AHEAD
W20-55A

W04-2L

700'

700'

RIPRAP

COURSE GOLF

SIGN

FLAG

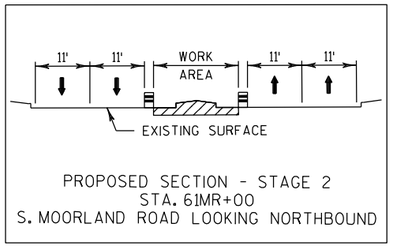
U/C

INL

MH

T

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET	E



PROPOSED SECTION - STAGE 2
STA. 61MR+00
S. MOORLAND ROAD LOOKING NORTHBOUND

MATCHLINE A

N

LANE CLOSED
R11-2L
48" X 30"

IH 94 EB OFF RAMP

IH 94 EB ON RAMP

25' TYP

PINEHURST DRIVE

END ROAD WORK
G20-2A
48" X 24"

100' TAPER

25' TYP

50' TYP

MATCHLINE 50MR+00

50MR

52MR

54MR

56MR

58MR

S. MOORLAND ROAD

60MR

62MR

64MR

MATCHLINE 65MR+00

LANE CLOSED
R11-2L
48" X 30"

LANE CLOSED
R11-2L
48" X 30"

LANE CLOSED
R11-2L
48" X 30"

HACKBERRY LANE

FRANKLIN DRIVE

CARPENTER ROAD

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET	E

2

N

IH 94 EB ON RAMP

IH 94 WB OFF RAMP

IH 94 WB OFF RAMP

IH 94 WB ON RAMP

RAMP CLOSED
R11-2R
48" X 30"

LANE CLOSED
R11-2L
48" X 30"

RAMP CLOSED
R11-2R
48" X 30"

IH 94 EB ON RAMP

S. MOORLAND ROAD

50' TYP

245' TAPER

25' TYP

100' TAPER

MATCHLINE 65MR+00

MATCHLINE 80MR+00

66MR

68MR

70MR

72MR

74MR

76MR

78MR

80

51

49

52

50

IH 94 EB

IH 94 WB

IH 94 EB ON RAMP

IH 94 EB ON RAMP

IH 94 WB OFF RAMP

SEPTIC

FLAG

SLAB

RIPRAP

GOLF GREEN

GOLF GREEN

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET	E

2

N

BROOKFIELD SQUARE DRIVE

W04-2L

LEFT LANE CLOSED AHEAD
W20-55A

ROAD WORK AHEAD
W20-1A

700'

700'

MATCHLINE 80MR+00

80MR

82MR

84MR

86MR

88MR

90MR

92MR

S. MOORLAND ROAD

N. MOORLAND ROAD

END ROAD WORK
C20-2A
48" X 24"

GOLF GREEN

GOLF GREEN

POOL

INL

MH

SIGN

W

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\026204_s2.dgn PLOT DATE : 21-AUG-2017 13:44 PLOT BY : mscdyb PLOT NAME : 026204_s2 PLOT SCALE : 100:1

2

2

IH 94 WB OFF RAMP

IH 94 WB ON RAMP

IH 94 WB

IH 94 EB

IH 94 EB OFF RAMP

RIPRAP

INL

W

MH

SIGN

GOLF COURSE

BIKE PATH

AG

GOLF GREEN

MOORLAND
NB
CLOSED
SB
ACCESS
ONLY
PCMS MESSAGE
PCMS

ROAD WORK AHEAD
W20-1A

RAMP CLOSED AHEAD
W20-53A

RAMP CLOSED 1000 FT
W20-53C

5.00'
15.00'
15.00'

RIGHT TURN ONLY
R3-53R
24" X 30"

25.00'

MATCHLINE A

N

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	STAGE 2 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\026205_s2.dgn
PLOT DATE : 21-AUG-2017 13:44
PLOT BY : mscdyb
PLOT NAME : 026205_s2
PLOT SCALE : 100:1
WISDOT/CADDS SHEET 42

2

LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- WEST — EXISTING SIGN
- XXX — CLOSURE
- TRAFFIC FLOW ARROW
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

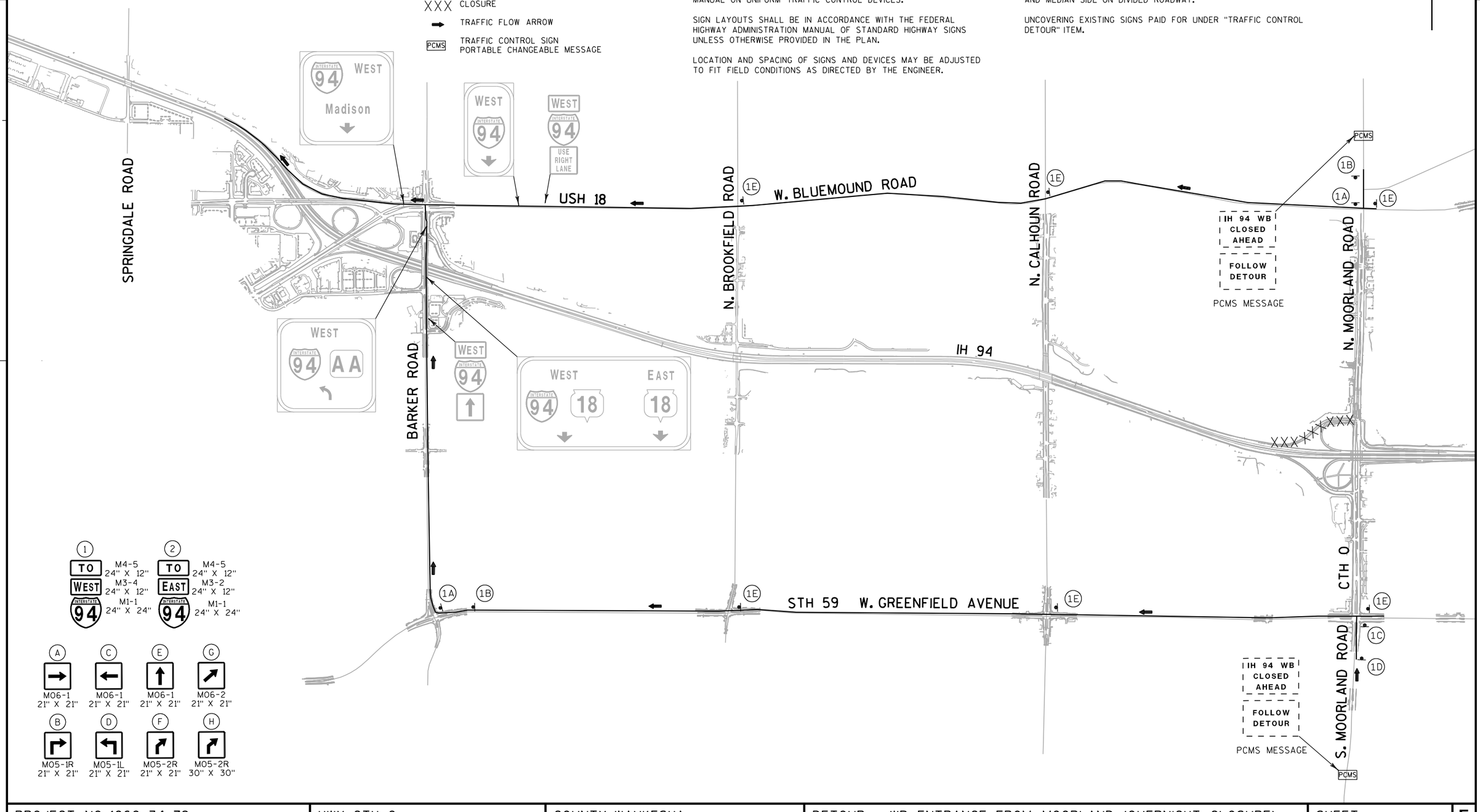
ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

UNCOVERING EXISTING SIGNS PAID FOR UNDER "TRAFFIC CONTROL DETOUR" ITEM.

N



1 TO WEST 94 — M4-5 24" X 12"; M3-4 24" X 12"; M1-1 24" X 24"

2 TO EAST 94 — M4-5 24" X 12"; M3-2 24" X 12"; M1-1 24" X 24"

A M06-1 21" X 21"
C M06-1 21" X 21"
E M06-1 21" X 21"
G M06-2 21" X 21"

B M05-1R 21" X 21"
D M05-1L 21" X 21"
F M05-2R 21" X 21"
H M05-2R 30" X 30"

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	DETOUR - WB ENTRANCE FROM MOORLAND (OVERNIGHT CLOSURE)	SHEET	E

2

LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- WEST — EXISTING SIGN
- XXX — CLOSURE
- TRAFFIC FLOW ARROW
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

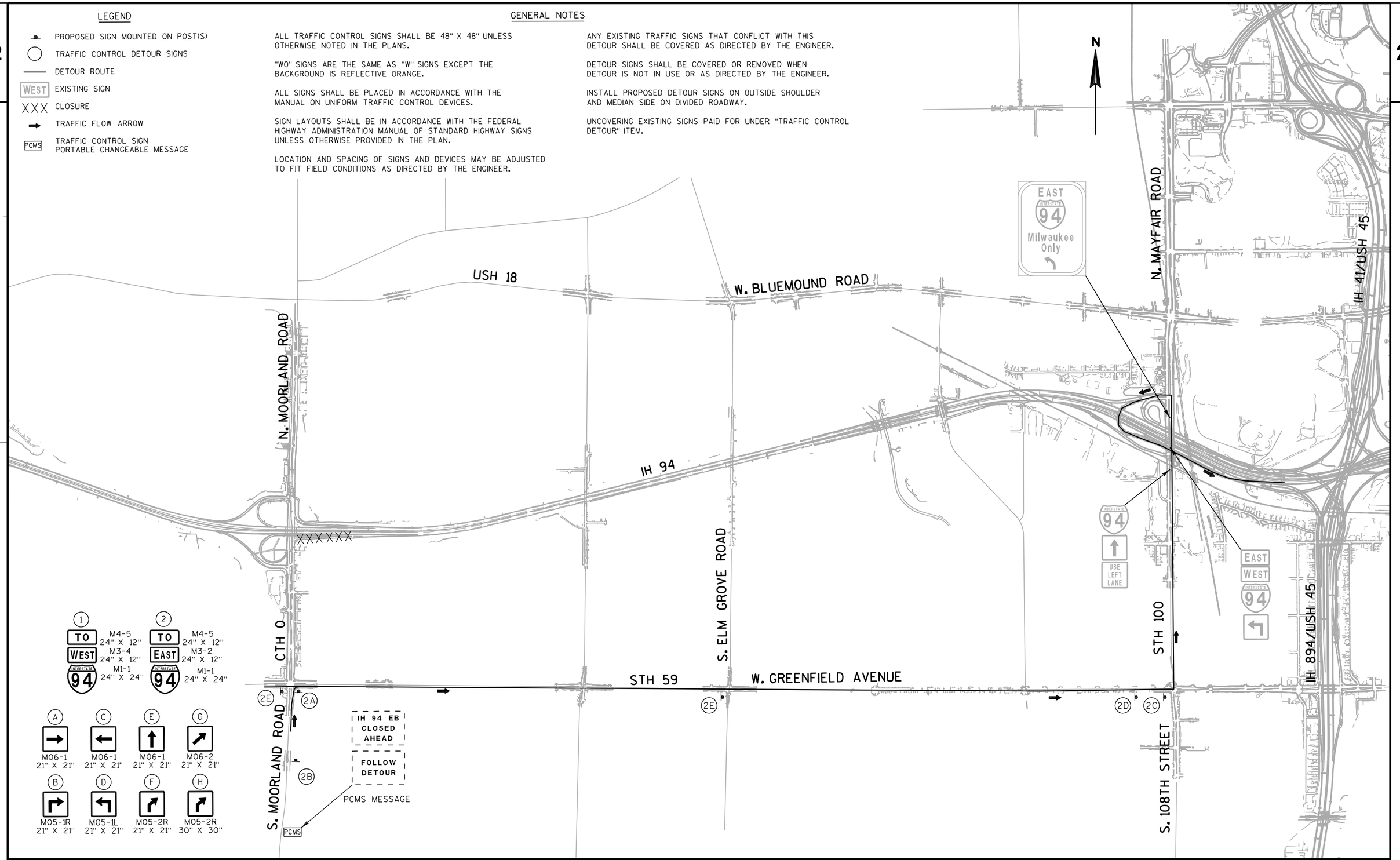
LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

UNCOVERING EXISTING SIGNS PAID FOR UNDER "TRAFFIC CONTROL DETOUR" ITEM.



PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	DETOUR - EB ENTRANCE FROM MOORLAND NB (OVERNIGHT CLOSURE)	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\027002_dt.dgn PLOT DATE : 21-AUG-2017 13:49 PLOT BY : mscdyb PLOT NAME : 027002_dt PLOT SCALE : 1600:1

WISDOT/CADDS SHEET 42

2

LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- WEST — EXISTING SIGN
- XXX — CLOSURE
- TRAFFIC FLOW ARROW
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

UNCOVERING EXISTING SIGNS PAID FOR UNDER "TRAFFIC CONTROL DETOUR" ITEM.

N

IH 94 EB CLOSED AHEAD
FOLLOW DETOUR
PCMS MESSAGE
PCMS

2D
2C
2E
USH 18
N. MOORLAND ROAD
CTH O
W. BLUEMOUND ROAD
2E
IH 94
XXXXXX
S. ELM GROVE ROAD
N. MAYFAIR ROAD
2B
2A
INTERSTATE 94 WEST EAST
EAST
WEST
INTERSTATE 94
USE RIGHT LANE
IH 41/USH 45
INTERSTATE 94 WEST EAST
Milwaukee Madison ONLY
STH 100
IH 894/USH 45
STH 59
W. GREENFIELD AVENUE
S. MOORLAND ROAD
S. 108TH STREET

1
TO M4-5 24" X 12"
WEST M3-4 24" X 12"
INTERSTATE 94 M1-1 24" X 24"

2
TO M4-5 24" X 12"
EAST M3-2 24" X 12"
INTERSTATE 94 M1-1 24" X 24"

A	C	E	G
M06-1 21" X 21"	M06-1 21" X 21"	M06-1 21" X 21"	M06-2 21" X 21"

B	D	F	H
M05-1R 21" X 21"	M05-1L 21" X 21"	M05-2R 21" X 21"	M05-2R 30" X 30"

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	DETOUR - EB ENTRANCE FROM MOORLAND SB (OVERNIGHT CLOSURE)	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\027003_dt.dgn PLOT DATE : 21-AUG-2017 13:53 PLOT BY : mscdyb PLOT NAME : 027003_dt PLOT SCALE : 1600:1

WISDOT/CADDS SHEET 42

2

LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- WEST EXISTING SIGN
- XXX CLOSURE
- TRAFFIC FLOW ARROW
- PCMS TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

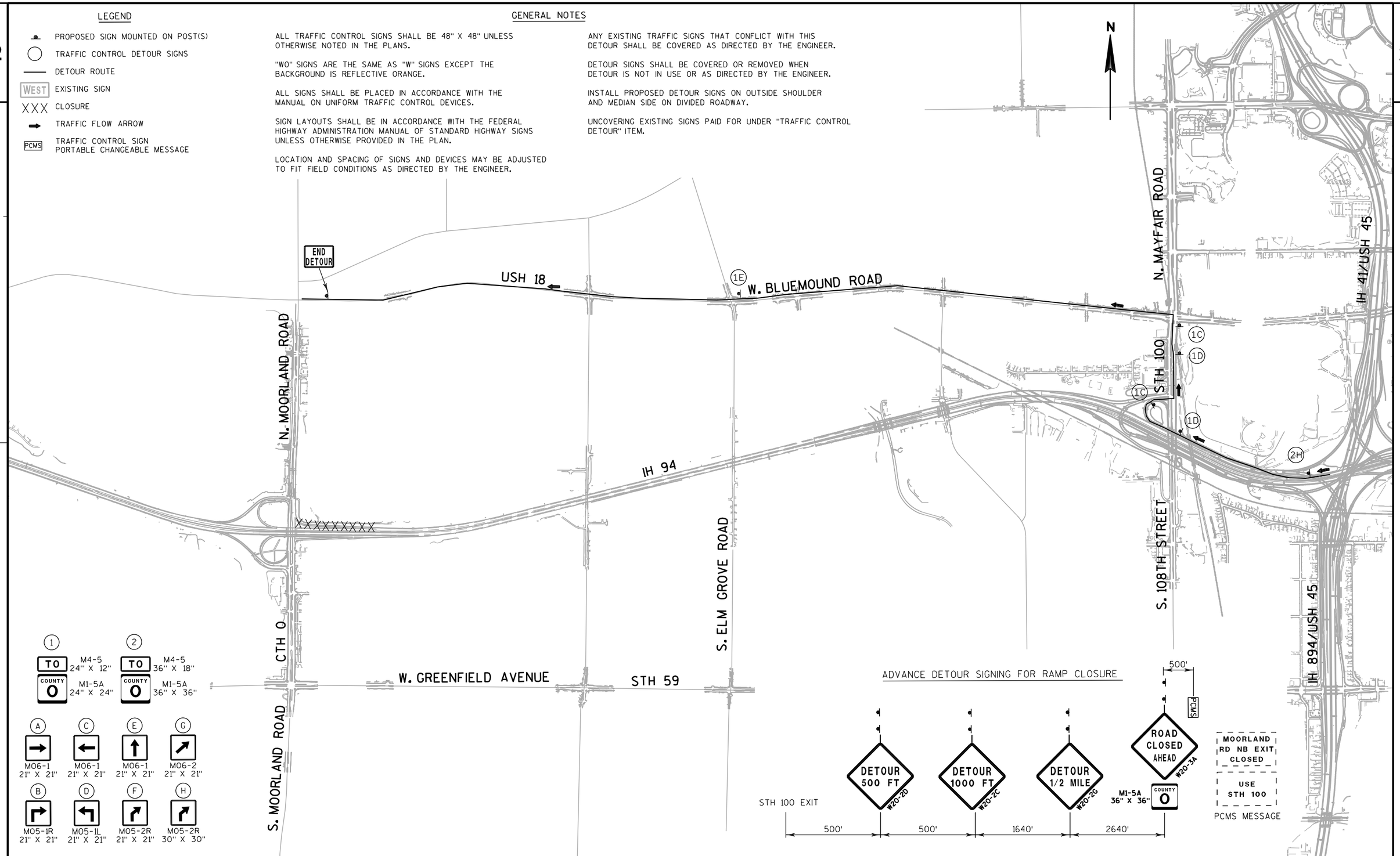
LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

UNCOVERING EXISTING SIGNS PAID FOR UNDER "TRAFFIC CONTROL DETOUR" ITEM.



1 TO M4-5 24" X 12" / COUNTY O M1-5A 24" X 24"

2 TO M4-5 36" X 18" / COUNTY O M1-5A 36" X 36"

A M06-1 21" X 21"
C M06-1 21" X 21"
E M06-1 21" X 21"
G M06-2 21" X 21"
B M05-1R 21" X 21"
D M05-1L 21" X 21"
F M05-2R 21" X 21"
H M05-2R 30" X 30"

ADVANCE DETOUR SIGNING FOR RAMP CLOSURE

MOORLAND RD NB EXIT CLOSED
USE STH 100
PCMS MESSAGE

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	DETOUR - WB EXIT TO NB MOORLAND (OVERNIGHT CLOSURE)	SHEET E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\027004_dt.dgn PLOT DATE : 21-AUG-2017 13:56 PLOT BY : mscdyb PLOT NAME : 027004_dt PLOT SCALE : 1600:1

WISDOT/CADDS SHEET 42

2

LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- WEST — EXISTING SIGN
- XXX — CLOSURE
- TRAFFIC FLOW ARROW
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

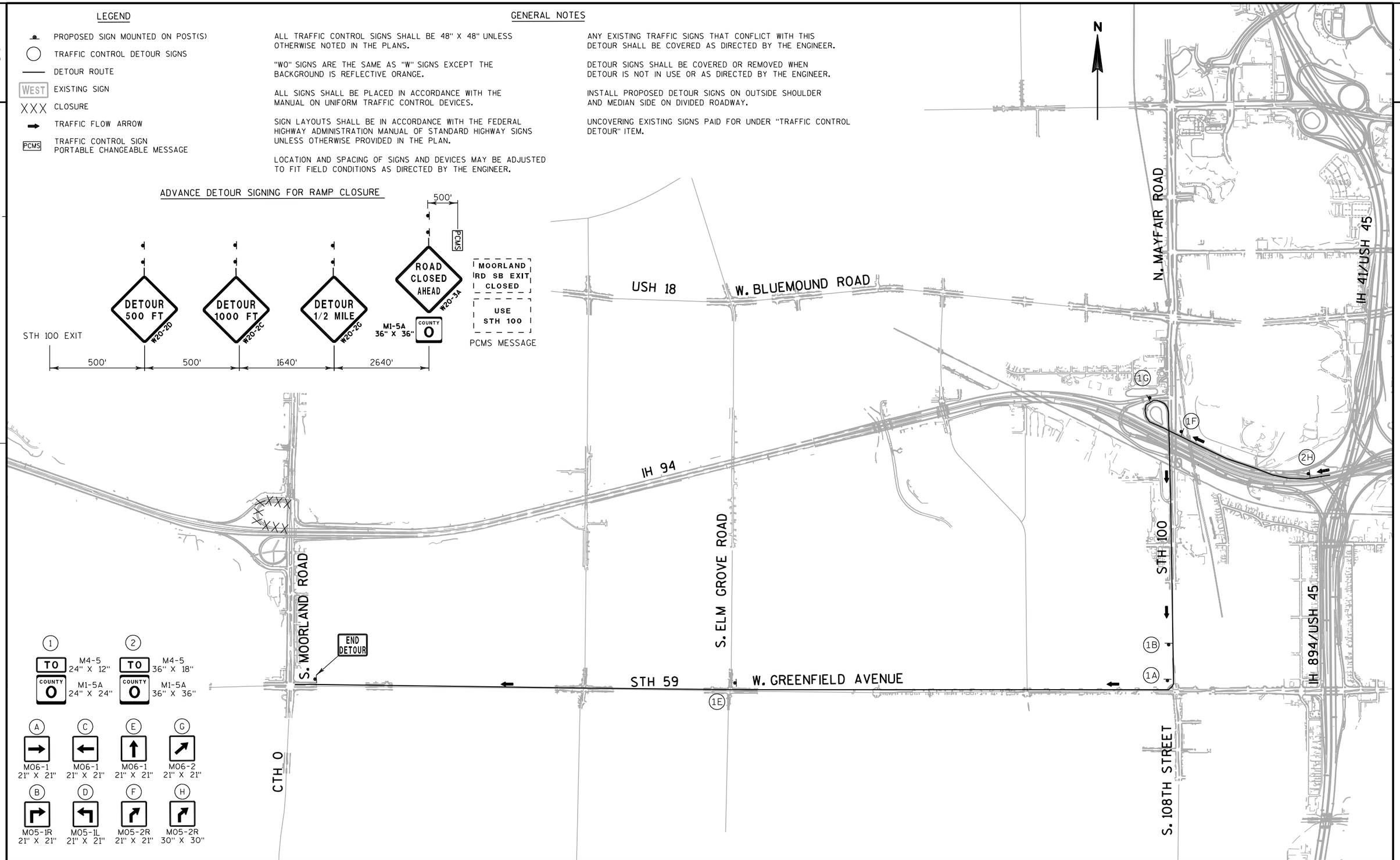
ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

UNCOVERING EXISTING SIGNS PAID FOR UNDER "TRAFFIC CONTROL DETOUR" ITEM.

ADVANCE DETOUR SIGNING FOR RAMP CLOSURE



1	TO / COUNTY O	M4-5 24" X 12" / M1-5A 24" X 24"
2	TO / COUNTY O	M4-5 36" X 18" / M1-5A 36" X 36"

A	C	E	G	
M06-1 21" X 21"	M06-1 21" X 21"	M06-1 21" X 21"	M06-2 21" X 21"	
B	D	F	H	
M05-1R 21" X 21"	M05-1L 21" X 21"	M05-2R 21" X 21"	M05-2R 30" X 30"	

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	DETOUR - WB EXIT TO SB MOORLAND (OVERNIGHT CLOSURE)	SHEET E

LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- WEST — EXISTING SIGN
- XXX — CLOSURE
- TRAFFIC FLOW ARROW
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

UNCOVERING EXISTING SIGNS PAID FOR UNDER "TRAFFIC CONTROL DETOUR" ITEM.

N

SPRINGDALE ROAD

USH 18

W. BLUEMOUND ROAD

N. BROOKFIELD ROAD

N. CALHOUN ROAD

IH 94

END DETOUR

N. MOORLAND ROAD

BARKER ROAD

STH 59 W. GREENFIELD AVENUE

S. MOORLAND ROAD CTH O

2H 1G 1D 1C 1E 1E 1E

1) TO M4-5 24" X 12" / COUNTY O M1-5A 24" X 24"

2) TO M4-5 36" X 18" / COUNTY O M1-5A 36" X 36"

A	C	E	G
M06-1 21" X 21"	M06-1 21" X 21"	M06-1 21" X 21"	M06-2 21" X 21"
B	D	F	H
M05-1R 21" X 21"	M05-1L 21" X 21"	M05-2R 21" X 21"	M05-2R 30" X 30"

PCMS MESSAGE: MOORLAND RD EXIT CLOSED / USE BLUEMOUND RD

ADVANCE DETOUR SIGNING FOR RAMP CLOSURE

500' PCMS ROAD CLOSED AHEAD W20-3A — M1-5A 36" X 36" COUNTY O — DETOUR 1/2 MILE W20-2G — DETOUR 1000 FT W20-2C — DETOUR 500 FT W20-2D — BLUEMOUND ROAD EXIT

2640' 1640' 500' 500'

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	DETOUR - EB EXIT TO MOORLAND (OVERNIGHT CLOSURE)	SHEET E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\027006_dt.dgn PLOT DATE : 21-AUG-2017 14:03 PLOT BY : mscdyb PLOT NAME : 027006_dt PLOT SCALE : 1600:1

2

N

2

BEGIN PROJECT 1060-34-79
59MR+50.00
X=716560.85
Y=164986.09

N0°24'23"E

55MR

60MR

65MR

SECTION LINE 2650.53' N00°24'23"E

1/4 LINE 2696.24' S88°56'11"E

PI 66MR+50.54
X=716565.82
Y=165686.61

R/L MR

70MR

75MR

END PROJECT 1060-34-79
75MR+10.00
X=716575.77
Y=166546.01

N0°39'48"E

80MR

SECTION LINE 2684.37' N00°39'48"E

T 7 N R20 E
34 34 34 34
X=713882.05
Y=165736.55

T 7 N R20 E
16 2 34 35
X=716559.02
Y=163036.03

T 7 N R20 E
34 35 34 35
X=716577.82
Y=165686.50

1/4 LINE 2669.5' S89°34'04"E

T 7 N R20 E
35 35 35 35
X=719247.25
Y=165666.36

T 7 N R20 E
27 26 34 35
X=716608.90
Y=168370.69

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	ALIGNMENT LAYOUT	SHEET	E

FILE NAME : W:\Cadd\Final\10603479_MR\Roads\cds\027201_ad.dgn PLOT DATE : 21-AUG-2017 14:05 PLOT BY : mscdyb PLOT NAME : 027201_ad PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

2

2

N

CP 215
FENO MONUMENT INSIDE IH 94 WB EXIT
LOOP RAMP, 45' BEHIND BACK OF CURB,
430' WEST OF S. MOORLAND ROAD
N 166068.53
E 716049.77
ELEV. 846.75

IH 94 EB ON RAMP
IH 94 EB OFF RAMP
IH 94 WB OFF RAMP
IH 94 WB ON RAMP
IH 94
IH 94

PINEHURST DRIVE
BROOKFIELD SQUARE DRIVE
CTH O
S. MOORLAND ROAD
55MR
60MR
65MR
70MR
75MR
80MR

HACKBERRY LANE
FRANKLIN DRIVE
CARPENTER ROAD

CP 214
FENO MONUMENT ON EAST SIDE OF
S. MOORLAND ROAD, 5' BEHIND BACK OF
CURB, 100' NORTH OF HACKBERRY LANE
N 164847.53
E 716600.55
ELEV. 838.85

CP 213
FENO MONUMENT
ON WEST SIDE OF
S. MOORLAND ROAD,
10' BEHIND SIDEWALK,
35' SOUTH OF ENTRANCE
TO SHERATON
N 167067.87
E 716487.76
ELEV. 862.96

CP 212
FENO MONUMENT ON NORTH SIDE
OF IH 94 WB EXIT RAMP TO S. MOORLAND
ROAD, 30' BEHIND SHOULDER, 800' EAST
OF S. MOORLAND ROAD
N 165987.76
E 717398.10
ELEV. 857.54

PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	ALIGNMENT LAYOUT - SURVEY CONTROL	SHEET	E

1060-34-79

Line	Item	Item Description	Unit	Total	Qty
0002	108.4400	CPM Progress Schedule	EACH	1.000	1.000
0012	204.0105	Removing Pavement Butt Joints	SY	188.000	188.000
0014	204.0109.S	Removing Concrete Surface Partial Depth	SF	142,191.000	142,191.000
0016	204.0110	Removing Asphaltic Surface	SY	17.000	17.000
0018	204.0120	Removing Asphaltic Surface Milling	SY	130.000	130.000
0020	204.0150	Removing Curb & Gutter	LF	345.000	345.000
0022	204.0155	Removing Concrete Sidewalk	SY	81.000	81.000
0070	204.9105.S	Removing (item description) 0001. Loop Detector Wire and Lead-In Cable CTH O & IH 94 EB Ramps	LS	1.000	1.000
0072	204.9105.S	Removing (item description) 0002. Loop Detector Wire and Lead-In Cable CTH O & IH 94 WB Ramps	LS	1.000	1.000
0090	390.0403	Base Patching Concrete Shes	SY	2,370.000	2,370.000
0096	416.0610	Drilled Tie Bars	EACH	1,864.000	1,864.000
0098	416.0620	Drilled Dowel Bars	EACH	4,706.000	4,706.000
0100	455.0605	Tack Coat	GAL	1,586.000	1,586.000
0102	460.2000	Incentive Density HMA Pavement	DOL	1,241.000	1,241.000
0108	460.6424	HMA Pavement 4 MT 58-28 H	TON	3,111.000	3,111.000
0116	465.0125	Asphaltic Surface Temporary	TON	8.000	8.000
0164	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	315.000	315.000
0168	601.0555	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	LF	30.000	30.000
0170	601.0600	Concrete Curb Pedestrian	LF	59.000	59.000
0172	602.0410	Concrete Sidewalk 5-Inch	SF	670.000	670.000
0176	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	80.000	80.000
0224	611.0430	Reconstructing Inlets	EACH	2.000	2.000
0250	611.8110	Adjusting Manhole Covers	EACH	3.000	3.000
0252	611.8115	Adjusting Inlet Covers	EACH	13.000	13.000
0280	619.1000	Mobilization	EACH	0.100	0.100
0286	625.0500	Salvaged Topsoil	SY	170.000	170.000
0288	627.0200	Mulching	SY	170.000	170.000
0292	628.1504	Silt Fence	LF	50.000	50.000
0294	628.1520	Silt Fence Maintenance	LF	50.000	50.000
0296	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0298	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0300	628.2004	Erosion Mat Class I Type B	SY	50.000	50.000
0310	628.7005	Inlet Protection Type A	EACH	6.000	6.000
0312	628.7010	Inlet Protection Type B	EACH	11.000	11.000
0316	628.7020	Inlet Protection Type D	EACH	38.000	38.000
0324	628.7570	Rock Bags	EACH	10.000	10.000
0326	629.0210	Fertilizer Type B	CWT	0.100	0.100
0328	630.0120	Seeding Mixture No. 20	LB	5.000	5.000

1060-34-79

Line	Item	Item Description	Unit	Total	Qty
0330	630.0200	Seeding Temporary	LB	5.000	5.000
0382	643.0100	Traffic Control (project) 0002. 1060-34-79	EACH	1.000	1.000
0384	643.0300	Traffic Control Drums	DAY	5,816.000	5,816.000
0388	643.0420	Traffic Control Barricades Type III	DAY	972.000	972.000
0390	643.0705	Traffic Control Warning Lights Type A	DAY	1,944.000	1,944.000
0392	643.0715	Traffic Control Warning Lights Type C	DAY	720.000	720.000
0394	643.0800	Traffic Control Arrow Boards	DAY	72.000	72.000
0396	643.0900	Traffic Control Signs	DAY	1,284.000	1,284.000
0398	643.0910	Traffic Control Covering Signs Type I	EACH	14.000	14.000
0402	643.1050	Traffic Control Signs PCMS	DAY	142.000	142.000
0408	643.2000	Traffic Control Detour (project) 0002. 1060-34-79	EACH	1.000	1.000
0410	643.3000	Traffic Control Detour Signs	DAY	4,120.000	4,120.000
0412	644.1420.S	Temporary Pedestrian Surface Plywood	SF	951.000	951.000
0414	644.1601.S	Temporary Curb Ramp	EACH	10.000	10.000
0420	646.0106	Pavement Marking Epoxy 4-Inch	LF	7,634.000	7,634.000
0422	646.0126	Pavement Marking Epoxy 8-Inch	LF	2,979.000	2,979.000
0430	646.0844.S	Pavement Marking Grooved Contrast Wet Reflective Epoxy 8-Inch	LF	58.000	58.000
0434	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	11.000	11.000
0436	647.0356	Pavement Marking Words Epoxy	EACH	10.000	10.000
0438	647.0456	Pavement Marking Curb Epoxy	LF	321.000	321.000
0440	647.0526	Pavement Marking Yield Line Symbols Epoxy 18-Inch	EACH	6.000	6.000
0442	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	235.000	235.000
0444	647.0606	Pavement Marking Island Nose Epoxy	EACH	5.000	5.000
0446	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	535.000	535.000
0450	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	377.000	377.000
0452	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	2,102.000	2,102.000
0458	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	3,060.000	3,060.000
0460	649.1200	Temporary Pavement Marking Stop Line Removable Tape 18-Inch	LF	160.000	160.000
0544	690.0150	Sawing Asphalt	LF	53.000	53.000
0546	690.0250	Sawing Concrete	LF	1,051.000	1,051.000
0568	SPV.0060	Special 0007. Traffic Control Local Road Lane Closures	EACH	6.000	6.000
0594	SPV.0075	Special 0001. Pavement Cleanup Project 1060-34-79	HRS	80.000	80.000
0600	SPV.0090	Special 0001. Joint Repair	LF	200.000	200.000
0614	SPV.0105	Special 0001. Survey Project 1060-34-79	LS	1.000	1.000

REMOVING PAVEMENT ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH SF	204.0110 REMOVING ASPHALTIC SURFACE SY
1000	1	S. MOORLAND ROAD NB							
			59MR+50	-	75MR+10	RT	--	43,626	--
			59MR+50	-	59MR+52	RT	6	--	--
			63MR+98	-	64MR+92	RT	21	--	--
			66MR+21	-	66MR+82	RT	19	--	--
			70MR+71	-	70MR+95	RT	9	--	--
			73MR+91	-	74MR+26	RT	--	--	17
			75MR+08	-	75MR+10	RT	6	--	--
		S. MOORLAND ROAD SB							
			59MR+65	-	75MR+10	LT	--	41,398	--
			59MR+65	-	59MR+67	LT	6	--	--
			60MR+23	-	61MR+87	LT	41	--	--
			64MR+15	-	64MR+23	LT	5	--	--
			72MR+81	-	73MR+47	LT	17	--	--
			74MR+02	-	74MR+50	LT	11	--	--
			74MR+68	-	74MR+81	LT	6	--	--
			75MR+08	-	75MR+10	LT	8	--	--
		SUBTOTALS					155	85,024	17
1000	2	S. MOORLAND ROAD NB							
			59MR+50	-	75MR+10	RT/LT	--	35,599	--
			59MR+50	-	59MR+52	RT/LT	4	--	--
			75MR+08	-	75MR+10	RT/LT	4	--	--
		S. MOORLAND ROAD SB							
			59MR+65	-	75MR+10	LT	--	21,568	--
			59MR+65	-	60MR+48	LT	21	--	--
			75MR+08	-	75MR+10	LT	4	--	--
		SUBTOTALS					33	57,167	--
		TOTALS					188	142,191	17

3

REMOVING CURB & GUTTER

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0150 REMOVING CURB & GUTTER LF	REMARKS
1000	1	S. MOORLAND ROAD NB						
			61MR+14	-	61MR+27	RT	10	INLET ADJUSTMENT
			65MR+29	-	65MR+42	RT	10	INLET ADJUSTMENT
			66MR+10	-	66MR+23	RT	10	INLET ADJUSTMENT
			66MR+55	-	66MR+59	RT	10	INLET RECONSTRUCTION
			66MR+97	-	67MR+10	RT	10	INLET ADJUSTMENT
			69MR+72	-	69MR+85	RT	10	INLET ADJUSTMENT
			71MR+65	-	71MR+78	RT	10	INLET ADJUSTMENT
			73MR+87	-	74MR+06	RT	20	DRIVEWAY REPAIR
			74MR+64	-	74MR+77	RT	10	INLET ADJUSTMENT
		S. MOORLAND ROAD SB						
			60MR+74	-	60MR+87	LT	14	TEMPORARY CURB RAMP
			60MR+86	-	60MR+99	LT	16	CURB RAMP REPLACEMENT
			61MR+41	-	61MR+46	LT	10	TEMPORARY CURB RAMP
			61MR+60	-	61MR+61	LT	10	TEMPORARY CURB RAMP
			61MR+85	-	61MR+85	LT	11	TEMPORARY CURB RAMP
			61MR+87	-	61MR+87	LT	10	CURB RAMP REPLACEMENT
			63MR+74	-	63MR+83	LT	10	TEMPORARY CURB RAMP
			63MR+82	-	63MR+91	LT	10	TEMPORARY CURB RAMP
			63MR+96	-	64MR+07	LT	12	CURB RAMP REPLACEMENT
			64MR+30	-	64MR+41	LT	10	INLET RECONSTRUCTION
			66MR+68	-	66MR+81	LT	10	INLET ADJUSTMENT
			69MR+51	-	69MR+64	LT	10	INLET ADJUSTMENT
			72MR+08	-	72MR+21	LT	10	INLET ADJUSTMENT
			72MR+93	-	73MR+07	LT	14	TEMPORARY CURB RAMP
			73MR+04	-	73MR+23	LT	19	CURB RAMP REPLACEMENT
			73MR+33	-	73MR+43	LT	10	INLET ADJUSTMENT
			73MR+58	-	73MR+64	LT	10	TEMPORARY CURB RAMP
			74MR+08	-	74MR+11	LT	10	TEMPORARY CURB RAMP
			74MR+59	-	74MR+66	LT	9	TEMPORARY CURB RAMP
			74MR+67	-	74MR+83	LT	10	CURB RAMP REPLACEMENT
		SUBTOTAL					325	
1000	2	S. MOORLAND ROAD NB						
			70MR+91	-	71MR+03	LT	10	INLET ADJUSTMENT
		S. MOORLAND ROAD SB						
			61MR+48	-	61MR+60	LT	10	INLET ADJUSTMENT
		SUBTOTAL					20	
		TOTAL					345	

REMOVING CONCRETE SIDEWALK

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0155 REMOVING CONCRETE SIDEWALK SY
1000	1	S. MOORLAND ROAD SB					
			60MR+77	-	60MR+98	LT	16
			61MR+39	-	61MR+46	LT	4
			61MR+51	-	61MR+58	LT	4
			61MR+87	-	62MR+01	LT	11
			63MR+90	-	64MR+05	LT	8
			73MR+04	-	73MR+22	LT	13
			73MR+55	-	73MR+66	LT	5
			73MR+96	-	74MR+05	LT	5
			74MR+52	-	74MR+57	LT	3
			74MR+67	-	74MR+90	LT	12
		SUBTOTAL					81
		TOTAL					81

REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE

CATEGORY	STAGE	LOCATION	204.9105.S.0001 REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE CTH O & IH 94 EB RAMPS LS	204.9105.S.0002 REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE CTH O & IH 94 WB RAMPS LS
1000	ALL	S. MOORLAND ROAD NB	--	1
		S. MOORLAND ROAD SB	1	--
		TOTALS	1	1

SAWING PAVEMENT

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
1000	1	S. MOORLAND ROAD NB							
			61MR+14	-	61MR+27	RT	--	16	INLET ADJUSTMENT
			65MR+29	-	65MR+42	RT	--	16	INLET ADJUSTMENT
			66MR+10	-	66MR+23	RT	--	16	INLET ADJUSTMENT
			66MR+55	-	66MR+59	RT	--	16	INLET RECONSTRUCTION
			66MR+97	-	67MR+10	RT	--	16	INLET ADJUSTMENT
			69MR+72	-	69MR+85	RT	--	16	INLET ADJUSTMENT
			71MR+65	-	71MR+78	RT	--	16	INLET ADJUSTMENT
			72MR+48	-	72MR+57	RT	--	33	BASE PATCHING
			72MR+98	-	73MR+09	RT	--	80	BASE PATCHING
			73MR+92	-	74MR+25	RT	33	--	DRIVEWAY REPAIR
			74MR+64	-	74MR+77	RT	--	16	INLET ADJUSTMENT
		S. MOORLAND ROAD SB							
			60MR+74	-	60MR+87	LT	--	14	TEMPORARY CURB RAMP
			60MR+77	-	60MR+99	LT	--	29	CURB RAMP REPLACEMENT
			61MR+41	-	61MR+46	LT	--	25	TEMPORARY CURB RAMP
			61MR+42	-	61MR+58	LT	--	23	CURB RAMP REPLACEMENT
			61MR+60	-	61MR+61	LT	--	25	TEMPORARY CURB RAMP
			61MR+85	-	61MR+85	LT	--	11	TEMPORARY CURB RAMP
			61MR+85	-	62MR+01	LT	--	21	CURB RAMP REPLACEMENT
			62MR+75	-	62MR+93	LT	--	60	BASE PATCHING
			63MR+45	-	63MR+52	LT	--	38	BASE PATCHING
			63MR+74	-	63MR+83	LT	--	25	TEMPORARY CURB RAMP
			63MR+82	-	63MR+91	LT	--	25	TEMPORARY CURB RAMP
			63MR+90	-	64MR+08	LT	--	23	CURB RAMP REPLACEMENT
			64MR+30	-	64MR+41	LT	--	16	INLET RECONSTRUCTION
			65MR+00	-	65MR+09	LT	--	88	BASE PATCHING
			66MR+68	-	66MR+81	LT	--	16	INLET ADJUSTMENT
			69MR+51	-	69MR+64	LT	--	16	INLET ADJUSTMENT
			72MR+08	-	72MR+21	LT	--	16	INLET ADJUSTMENT
			72MR+93	-	73MR+07	LT	--	14	TEMPORARY CURB RAMP
			73MR+04	-	73MR+23	LT	--	30	CURB RAMP REPLACEMENT
			73MR+31	-	73MR+43	LT	--	16	INLET ADJUSTMENT
			73MR+58	-	73MR+64	LT	10	15	TEMPORARY CURB RAMP
			73MR+63	-	73MR+98	LT	--	14	CURB RAMP REPLACEMENT
			74MR+08	-	74MR+11	LT	10	15	TEMPORARY CURB RAMP
			74MR+52	-	74MR+57	LT	--	9	CURB RAMP REPLACEMENT
			74MR+59	-	74MR+66	LT	--	9	TEMPORARY CURB RAMP
			74MR+66	-	74MR+90	LT	--	21	CURB RAMP REPLACEMENT
		SUBTOTALS					53	855	
1000	2	S. MOORLAND ROAD NB							
			59MR+59	-	59MR+84	RT/LT	--	74	BASE PATCHING
			70MR+91	-	71MR+03	LT	--	16	INLET ADJUSTMENT
			71MR+65	-	71MR+75	LT	--	30	MANHOLE ADJUSTMENT
			71MR+78	-	71MR+88	LT	--	30	MANHOLE ADJUSTMENT
			73MR+55	-	73MR+65	LT	--	30	MANHOLE ADJUSTMENT
		S. MOORLAND ROAD SB							
			61MR+48	-	61MR+59	LT	--	16	INLET ADJUSTMENT
		SUBTOTALS					--	196	
		TOTALS					53	1,051	

3

DRILLED BAR ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	REMARKS
1000	1	S. MOORLAND ROAD NB							
			61MR+14	-	61MR+27	RT	10	--	INLET ADJUSTMENT
			65MR+29	-	65MR+42	RT	10	--	INLET ADJUSTMENT
			66MR+10	-	66MR+23	RT	10	--	INLET ADJUSTMENT
			66MR+55	-	66MR+59	RT	10	--	INLET RECONSTRUCTION
			66MR+97	-	67MR+10	RT	10	--	INLET ADJUSTMENT
			69MR+72	-	69MR+85	RT	10	--	INLET ADJUSTMENT
			71MR+65	-	71MR+78	RT	10	--	INLET ADJUSTMENT
			72MR+48	-	72MR+57	RT	--	20	BASE PATCHING
			72MR+98	-	73MR+09	RT	--	46	BASE PATCHING
			73MR+87	-	74MR+06	RT	14	--	CURB REPLACEMENT
			74MR+64	-	74MR+77	RT	10	--	INLET ADJUSTMENT
		S. MOORLAND ROAD SB							
			60MR+74	-	60MR+87	LT	14	--	TEMPORARY CURB RAMP
			60MR+86	-	60MR+99	LT	13	--	CURB RAMP REPLACEMENT
			61MR+41	-	61MR+46	LT	10	--	TEMPORARY CURB RAMP
			61MR+60	-	61MR+61	LT	10	--	TEMPORARY CURB RAMP
			61MR+85	-	61MR+85	LT	11	--	TEMPORARY CURB RAMP
			61MR+87	-	61MR+87	LT	10	--	CURB RAMP REPLACEMENT
			62MR+75	-	62MR+93	LT	14	32	BASE PATCHING
			63MR+45	-	63MR+52	LT	--	20	BASE PATCHING
			63MR+74	-	63MR+83	LT	10	--	TEMPORARY CURB RAMP
			63MR+82	-	63MR+91	LT	10	--	TEMPORARY CURB RAMP
			63MR+96	-	64MR+07	LT	11	--	CURB RAMP REPLACEMENT
			64MR+30	-	64MR+41	LT	10	--	INLET RECONSTRUCTION
			65MR+00	-	65MR+09	LT	--	56	BASE PATCHING
			66MR+68	-	66MR+81	LT	10	--	INLET ADJUSTMENT
			69MR+51	-	69MR+64	LT	10	--	INLET ADJUSTMENT
			72MR+08	-	72MR+21	LT	10	--	INLET ADJUSTMENT
			72MR+93	-	73MR+07	LT	14	--	TEMPORARY CURB RAMP
			73MR+04	-	73MR+23	LT	14	--	CURB RAMP REPLACEMENT
			73MR+33	-	73MR+43	LT	10	--	INLET ADJUSTMENT
			73MR+58	-	73MR+64	LT	10	--	TEMPORARY CURB RAMP
			74MR+08	-	74MR+11	LT	10	--	TEMPORARY CURB RAMP
			74MR+59	-	74MR+66	LT	9	--	TEMPORARY CURB RAMP
			74MR+67	-	74MR+83	LT	10	--	CURB RAMP REPLACEMENT
		SUBTOTALS					324	174	
1000	2	S. MOORLAND ROAD NB							
			59MR+59	-	59MR+84	RT/LT	20	32	BASE PATCHING
			70MR+91	-	71MR+03	LT	10	--	INLET ADJUSTMENT
		S. MOORLAND ROAD SB							
			61MR+48	-	61MR+60	LT	10	--	INLET ADJUSTMENT
		SUBTOTALS					40	32	
		UNDISTRIBUTED					1,500	4,500	BASE PATCHING
		TOTALS					1,864	4,706	

BASE PATCHING CONCRETE SHES

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	390.0403 BASE PATCHING CONCRETE SHES SY
1000	1	S. MOORLAND ROAD NB					
			72MR+48	-	72MR+57	RT	12
			72MR+98	-	73MR+09	RT	35
		S. MOORLAND ROAD SB					
			62MR+75	-	62MR+93	LT	24
			63MR+45	-	63MR+52	LT	9
			65MR+00	-	65MR+09	LT	35
		SUBTOTAL					115
1000	2	S. MOORLAND ROAD NB					
			59MR+59	-	59MR+84	RT/LT	33
		SUBTOTAL					33
		UNDISTRIBUTED					2,222
		TOTAL					2,370

ASPHALTIC ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	455.0605 TACK COAT GAL	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL	460.6424 HMA PAVEMENT 4 MT 58-28 H TON	SPV.0090.0001 JOINT REPAIR LF
1000	1	S. MOORLAND ROAD NB								
			59MR+50	-	75MR+10	RT	485	380	951	--
			73MR+91	-	74MR+26	RT	--	2	4	--
		S. MOORLAND ROAD SB								
			59MR+65	-	75MR+10	LT	460	361	902	--
		SUBTOTALS					945	743	1,857	--
1000	2	S. MOORLAND ROAD NB								
			59MR+50	-	75MR+10	RT/LT	396	310	776	--
		S. MOORLAND ROAD SB								
			59MR+65	-	75MR+10	LT	240	188	470	--
		SUBTOTALS					636	498	1,246	--
		UNDISTRIBUTED					5	--	8	200
		TOTALS					1,586	1,241	3,111	200

CONCRETE CURB & GUTTER

CATEGORY	STAGE	ROADWAY	STATION		TO STATION	OFFSET	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0555 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A LF	601.0600 CONCRETE CURB PEDESTRIAN LF	REMARKS
1000	1	S. MOORLAND ROAD NB								
			61MR+14	-	61MR+27	RT	10	--	--	INLET ADJUSTMENT
			65MR+29	-	65MR+42	RT	10	--	--	INLET ADJUSTMENT
			66MR+10	-	66MR+23	RT	10	--	--	INLET ADJUSTMENT
			66MR+55	-	66MR+59	RT	10	--	--	INLET RECONSTRUCTION
			66MR+97	-	67MR+10	RT	10	--	--	INLET ADJUSTMENT
			69MR+72	-	69MR+85	RT	10	--	--	INLET ADJUSTMENT
			71MR+65	-	71MR+78	RT	10	--	--	INLET ADJUSTMENT
			73MR+87	-	74MR+06	RT	20	--	--	DRIVEWAY ENTRANCE CURB
			74MR+64	-	74MR+77	RT	10	--	--	INLET ADJUSTMENT
		S. MOORLAND ROAD SB								
			60MR+74	-	60MR+87	LT	--	14	--	TEMPORARY CURB RAMP
			60MR+86	-	60MR+99	LT	--	16	--	CURB RAMP REPLACEMENT
			61MR+41	-	61MR+46	LT	10	--	--	TEMPORARY CURB RAMP
			61MR+60	-	61MR+61	LT	10	--	--	TEMPORARY CURB RAMP
			61MR+85	-	61MR+85	LT	11	--	--	TEMPORARY CURB RAMP
			61MR+87	-	61MR+87	LT	10	--	--	CURB RAMP REPLACEMENT
			63MR+74	-	63MR+83	LT	10	--	--	TEMPORARY CURB RAMP
			63MR+82	-	63MR+91	LT	10	--	--	TEMPORARY CURB RAMP
			63MR+96	-	64MR+07	LT	12	--	--	CURB RAMP REPLACEMENT
			64MR+30	-	64MR+41	LT	10	--	--	INLET RECONSTRUCTION
			66MR+68	-	66MR+81	LT	10	--	--	INLET ADJUSTMENT
			69MR+51	-	69MR+64	LT	10	--	--	INLET ADJUSTMENT
			72MR+08	-	72MR+21	LT	10	--	--	INLET ADJUSTMENT
			72MR+93	-	73MR+07	LT	14	--	--	TEMPORARY CURB RAMP
			73MR+04	-	73MR+23	LT	19	--	18	CURB RAMP REPLACEMENT
			73MR+33	-	73MR+43	LT	10	--	--	INLET ADJUSTMENT
			73MR+58	-	73MR+64	LT	10	--	--	TEMPORARY CURB RAMP
			74MR+08	-	74MR+11	LT	10	--	--	TEMPORARY CURB RAMP
			74MR+59	-	74MR+66	LT	9	--	--	TEMPORARY CURB RAMP
			74MR+67	-	74MR+90	LT	10	--	41	CURB RAMP REPLACEMENT
		SUBTOTALS					295	30	59	
1000	2	S. MOORLAND ROAD NB								
			70MR+91	-	71MR+03	LT	10	--	--	INLET ADJUSTMENT
		S. MOORLAND ROAD SB								
			61MR+48	-	61MR+60	LT	10	--	--	INLET ADJUSTMENT
		SUBTOTALS					20	--	--	
		TOTALS					315	30	59	

CONCRETE SIDEWALK

CATEGORY	STAGE	ROADWAY	STATION		TO STATION	OFFSET	602.0410 CONCRETE SIDEWALK 5-INCH SF
1000	1	S. MOORLAND ROAD SB					
			60MR+77	-	60MR+99	LT	112
			61MR+39	-	61MR+46	LT	38
			61MR+51	-	61MR+58	LT	40
			61MR+87	-	62MR+01	LT	97
			63MR+90	-	64MR+07	LT	71
			73MR+04	-	73MR+20	LT	76
			73MR+55	-	73MR+66	LT	48
			73MR+96	-	74MR+05	LT	43
			74MR+52	-	74MR+57	LT	26
			74MR+68	-	74MR+90	LT	119
		SUBTOTAL					670
		TOTAL					670

CURB RAMP DETECTABLE WARNING FIELD

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
1000	1	S. MOORLAND ROAD SB			
			60MR+91	LT	8
			61MR+43	LT	8
			61MR+57	LT	8
			61MR+88	LT	8
			63MR+98	LT	8
			73MR+14	LT	8
			73MR+60	LT	8
			74MR+02	LT	8
			74MR+53	LT	8
			74MR+71	LT	8
		SUBTOTAL			80
		TOTAL			80

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CPM PROGRESS SCHEDULE

CATEGORY	STAGE	LOCATION	108.4400 CPM PROGRESS SCHEDULE EACH
1000	ALL	UNDISTRIBUTED	1
		TOTAL	1

MOBILIZATION

CATEGORY	STAGE	LOCATION	MOBILIZATION 619.1000 EACH
1000	ALL	PROJECT	0.1
		TOTAL	0.1

PAVEMENT CLEANUP

CATEGORY	STAGE	LOCATION	SPV.0075.0001 PAVEMENT CLEANUP PROJECT 1060-34-79 HRS
1000	ALL	PROJECT	80
		TOTAL	80

SURVEY PROJECT

CATEGORY	STAGE	ROADWAY	SPV.0105.0001 SURVEY PROJECT 1060-34-79 LS
1000	ALL	PROJECT	1
		TOTAL	1

ADJUSTING STRUCTURES

CATEGORY	STAGE	LOCATION	STATION	OFFSET	EXISTING RIM ELEVATION	PROPOSED RIM ELEVATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	465.0125 ASPHALTIC SURFACE TEMPORARY TON	611.0430 RECONSTRUCTING INLETS EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH
1000	1	S. MOORLAND ROAD NB									
			61MR+20	32' RT	839.74	839.87	7	0.4	--	--	1
			65MR+35	35' RT	841.13	841.26	7	0.4	--	--	1
			66MR+17	42' RT	841.31	841.44	7	0.4	--	--	1
			66MR+59	75' RT	841.63	841.63	--	--	1	--	--
			67MR+03	31' RT	841.54	841.67	7	0.4	--	--	1
			69MR+79	32' RT	844.21	844.34	7	0.4	--	--	1
			71MR+72	41' RT	847.38	847.51	7	0.4	--	--	1
			74MR+70	32' RT	853.88	854.01	7	0.4	--	--	1
		S. MOORLAND ROAD SB									
			64MR+36	111' LT	840.41	840.54	7	0.4	1	--	--
			66MR+74	93' LT	841.44	841.57	7	0.4	--	--	1
			69MR+57	90' LT	843.87	844.00	7	0.4	--	--	1
			72MR+15	84' LT	848.53	848.66	7	0.4	--	--	1
			73MR+37	68' LT	851.55	851.68	7	0.4	--	--	1
		SUBTOTALS					84	5	2	--	11
1000	2	S. MOORLAND ROAD NB									
			70MR+97	31' LT	846.36	846.49	7	0.4	--	--	1
			71MR+70	26' LT	847.74	847.87	10	0.6	--	1	--
			71MR+83	8' LT	848.22	848.35	11	0.6	--	1	--
			73MR+60	25' LT	852.16	852.29	11	0.6	--	1	--
		S. MOORLAND ROAD SB									
			61MR+55	44' LT	840.27	840.40	7	0.4	--	--	1
		SUBTOTALS					46	3	--	3	2
		TOTALS					130	8	2	3	13

RESTORATION ITEMS

CATEGORY	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB
1000	UNDISTRIBUTED	170	170	.1	5	5
	TOTALS	170	170	.1	5	5

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PROJECT NO: 1060-34-79	HWY: CTH O	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET:	E

EROSION CONTROL ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2004 EROSION MAT CLASS I TYPE B SY	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7570 ROCK BAGS EACH
1000	1	S. MOORLAND ROAD NB													
			57MR+50	-	75MR+00	RT/LT	--	--	--	--	--	3	2	10	--
		S. MOORLAND ROAD SB													
			57MR+50	-	75MR+00	LT	--	--	--	--	--	1	5	15	--
		SUBTOTALS					--	--	--	--	--	4	7	25	--
		UNDISTRIBUTED					50	50	2	2	50	2	4	13	10
		TOTALS					50	50	2	2	50	6	11	38	10

PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH 12.5 FT LINE, 37.5 FT SKIP WHITE LF	646.0106 YELLOW LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH 3 FT LINE 9 FT SKIP WHITE LF	646.0126 WHITE LF	646.0844.S PAVEMENT MARKING GROOVED CONTRAST WET REFLECTIVE EPOXY 8-INCH 2 FT LINE 6 FT SKIP WHITE LF	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 WHITE EACH	647.0356 PAVEMENT MARKING WORDS EPOXY WHITE EACH	647.0456 PAVEMENT MARKING CURB EPOXY YELLOW LF	647.0526 PAVEMENT MARKING YIELD LINE SYMBOLS EPOXY 18-INCH WHITE EACH	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH WHITE LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY YELLOW EACH	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH WHITE LF	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH WHITE LF
1000	S. MOORLAND ROAD NB																
		57MR+00	-	75MR+10	1,256	1,601	552	164	1,429	--	7	6	119	--	64	1	440	--
	S. MOORLAND ROAD SB																	
		57MR+00	-	76MR+83	1,706	1,717	802	--	1,386	58	4	4	202	6	171	4	95	377
	SUBTOTALS				2,962	3,318	1,354	164	2,815	58	11	10	321	6	235	5	535	377
	TOTALS					7,634		2,979		58	11	10	321	6	235	5	535	377

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TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	STAGE DURATION	643.0100.0002 TRAFFIC CONTROL 1060-34-79	643.0300 TRAFFIC CONTROL DRUMS		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800 TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS		643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I			643.1050* TRAFFIC CONTROL SIGNS PCMS		644.1420.S TEMPORARY PEDESTRIAN SURFACE PLYWOOD	644.1601.S TEMPORARY CURB RAMP
		DAYS	EACH	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	# SIGNS**	# CYCLES**	EACH	EACH**	DAY	SF	EACH
1000	**STAGE 1**	10																				
	S. MOORLAND ROAD NB		--	111	1,110	19	190	38	380	20	200	2	20	27	270	--	--	--	1	10	--	--
	S. MOORLAND ROAD SB		--	96	960	36	360	72	720	20	200	2	20	26	260	--	--	--	1	10	951	10
	IH 94 WB EXIT TO NB S. MOORLAND ROAD		--	49	490	4	40	8	80	--	--	--	--	8	80	2	2	4	1	10	--	--
	IH 94 WB EXIT TO SB S. MOORLAND ROAD		--	33	330	4	40	8	80	--	--	--	--	6	60	2	2	4	1	10	--	--
	IH 94 EB EXIT TO S. MOORLAND ROAD		--	50	500	4	40	8	80	--	--	--	--	8	80	2	2	4	1	10	--	--
	SUBTOTALS		--		3,390		670		1,340		400		40		750			12		50	951	10
1000	**STAGE 2**	10																				
	S. MOORLAND ROAD NB		--	73	730	4	40	8	80	10	100	1	10	12	120	--	--	--	--	--	--	--
	S. MOORLAND ROAD SB		--	45	454	6	60	12	120	10	100	1	10	11	110	--	--	--	--	--	--	--
	IH 94 EB EXIT TO S. MOORLAND ROAD		--	27	274	4	40	8	80	--	--	--	--	9	90	--	--	--	1	10	--	--
	SUBTOTALS		--		1,457		140		280		200		20		320			--		10	--	--
	UNDISTRIBUTED		1		969		162		324		120		12		214			2		12	--	--
	TOTALS		1		5,816		972		1,944		720		72		1,284			14		72	951	10

*ADDITIONAL QUANTITIES FOUND ELSEWHERE
**FOR INFORMATION ONLY

TRAFFIC CONTROL ITEMS (DETOUR)

CATEGORY	STAGE	LOCATION	STAGE DURATION DAYS	643.1050* TRAFFIC CONTROL SIGNS PCMS EACH**	643.1050* TRAFFIC CONTROL SIGNS PCMS DAY	643.2000.0002 TRAFFIC CONTROL DETOUR 1060-34-79 EACH	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH**	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAY
1000	1	**STAGE 1**	10					
		WB ENTRANCE FROM MOORLAND		2	20	--	96	960
		EB ENTRANCE FROM MOORLAND NB		1	10	--	48	480
		EB ENTRANCE FROM MOORLAND SB		1	10	--	48	480
		WB EXIT TO NB MOORLAND		1	10	--	48	480
		WB EXIT TO SB MOORLAND		1	10	--	48	480
		EB EXIT TO MOORLAND		1	10	--	54	540
		SUBTOTALS			70	--		3,420
		UNDISTRIBUTED			--	1		700
		TOTALS			70	1		4,120

*ADDITIONAL QUANTITIES FOUND ELSEWHERE
**FOR INFORMATION ONLY

TRAFFIC CONTROL LOCAL ROAD LANE CLOSURES

CATEGORY	STAGE	LOCATION	SPV.0060.0007 TRAFFIC CONTROL LOCAL ROAD LANE CLOSURES EACH
1000	1	S. MOORLAND RD NB	2
		S. MOORLAND RD SB	2
		SUBTOTAL	4
1000	2	S. MOORLAND RD NB	1
		S. MOORLAND RD SB	1
		SUBTOTAL	2
		TOTAL	6

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TRAFFIC CONTROL PAVEMENT MARKING

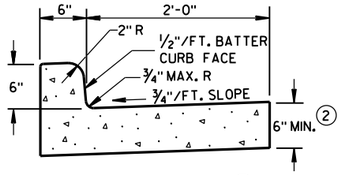
CATEGORY	STAGE	LOCATION	STATION	TO	STATION	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH DASHED WHITE[1] LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH WHITE LF	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH DOT WHITE[2] LF	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE LF	649.1200 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH WHITE LF
1000	1	S. MOORLAND RD NB								
			59MR+50	-	75MR+95	152	--	86	697	24
		S. MOORLAND RD SB								
			59MR+65	-	75MR+10	313	459	--	349	37
		SUBTOTALS				465	459	86	1,046	61
1000	2	S. MOORLAND RD NB								
			59MR+50	-	75MR+95	517	--	86	1,391	38
		S. MOORLAND RD SB								
			59MR+65	-	75MR+10	661	--	--	451	61
		SUBTOTALS				1,178	--	86	1,842	99
		TOTALS				2,102		3,060		160

[1] DASHED WHITE = 12.5-FT DASH, 37.5-FT SKIP
[2] DOT PATTERN WHITE = 3-FT LINE, 9-FT SKIP

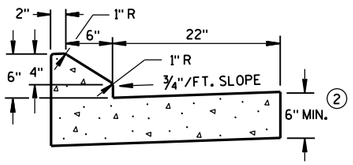
Standard Detail Drawing List

08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
13C14-06A	BASE PATCHING CONCRETE
13C14-06B	BASE PATCHING CONCRETE
13C14-06C	BASE PATCHING CONCRETE
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C08-17B	PAVEMENT MARKING (TURN LANES)
15C08-17C	PAVEMENT MARKING (ISLANDS)
15C20-02	YIELD MARKING
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D22-03	TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-03B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-03C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

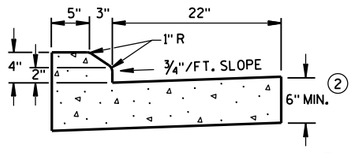
6



TYPES A & D ①

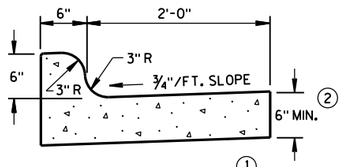


6" SLOPED CURB TYPES G & J ①

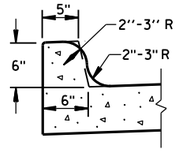


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

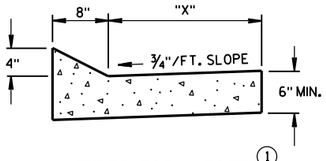


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

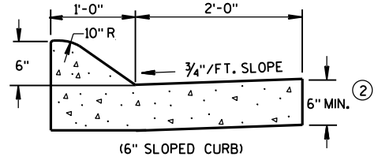
CONCRETE CURB & GUTTER 30"



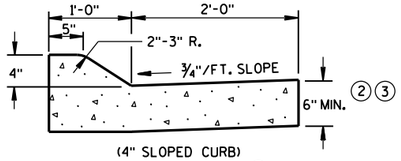
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

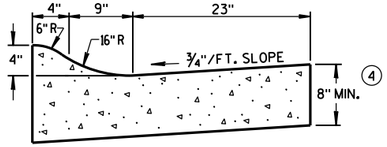


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

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, R AND TBTT.

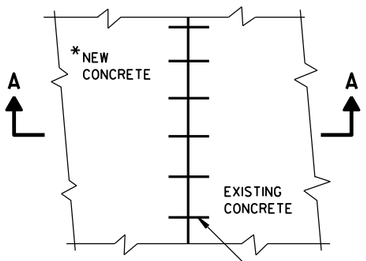
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

④ 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.

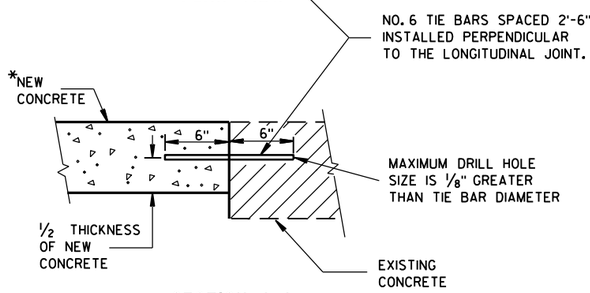
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



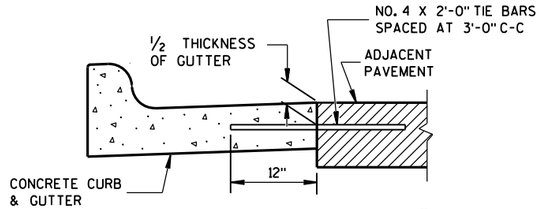
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

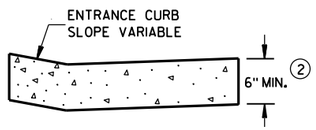


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

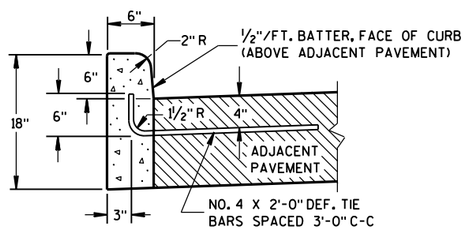


TYPICAL TIE BAR LOCATION ①

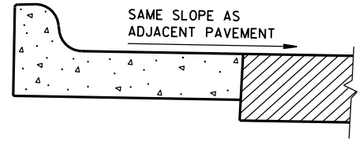


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

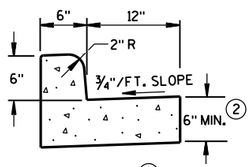


① TYPES A & D



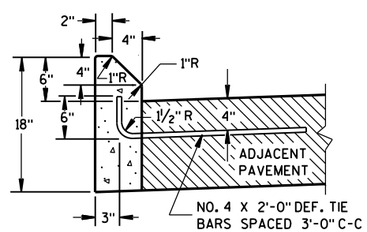
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



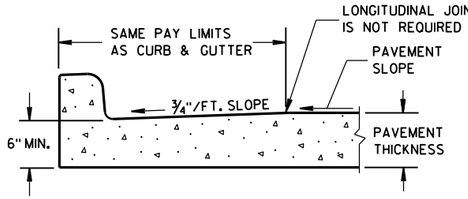
① TYPES A & D

CONCRETE CURB & GUTTER 18"

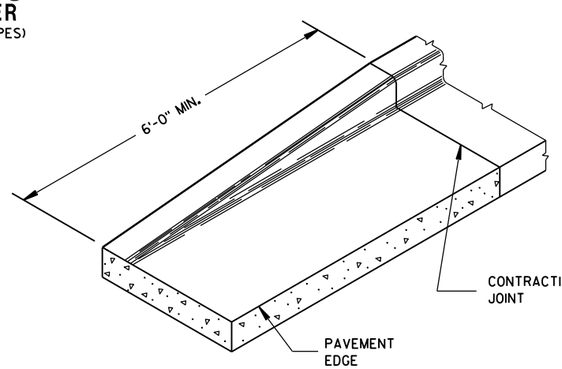


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

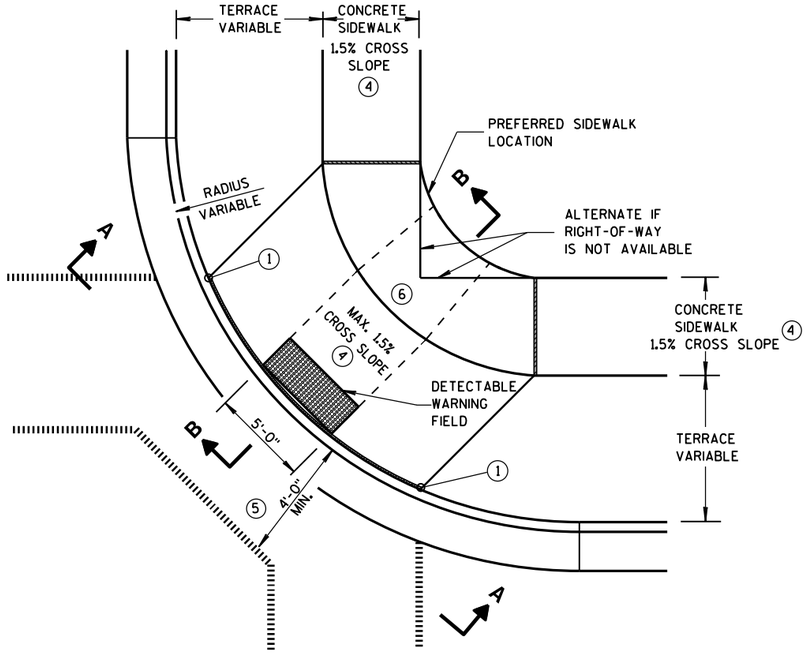
June, 2016 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

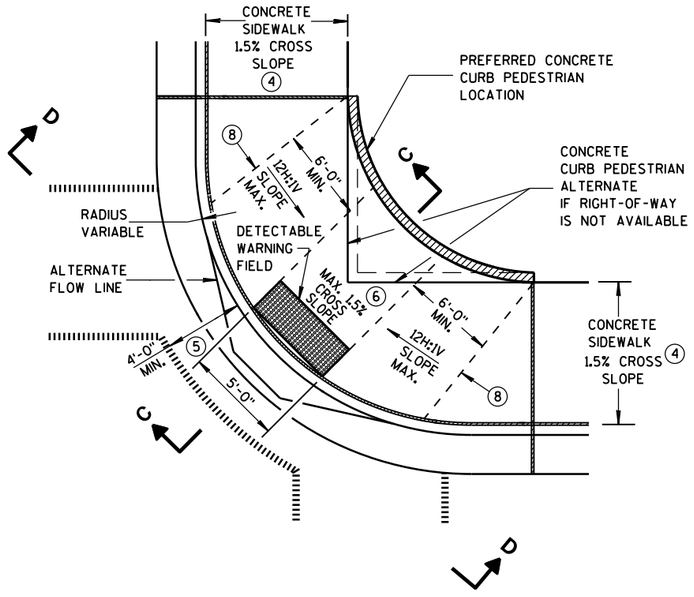
S.D.D. 8 D 1-19



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.

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. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

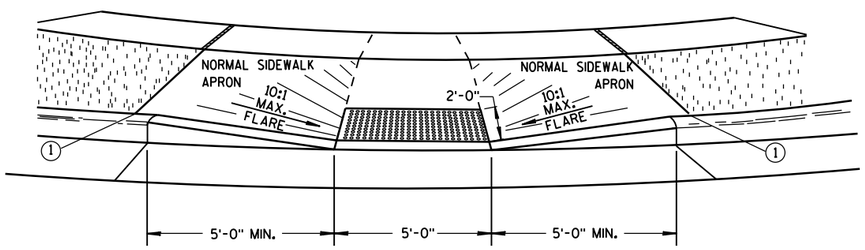
(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

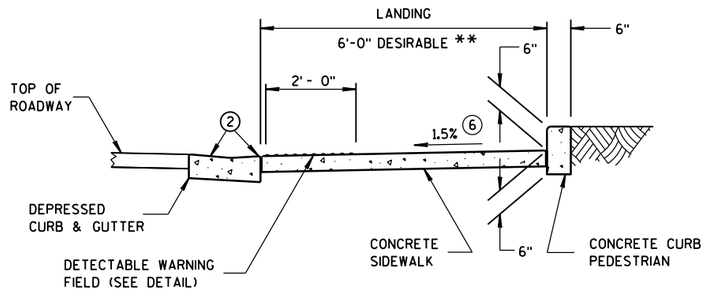
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.



VIEW A-A

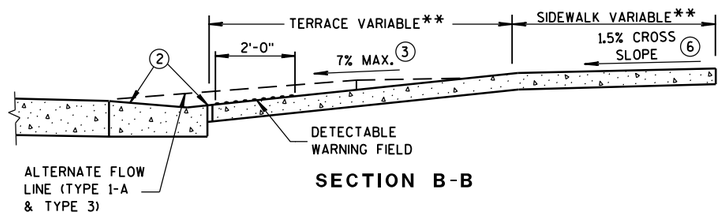
** WIDTH SHOWN ELSEWHERE IN THE PLANS



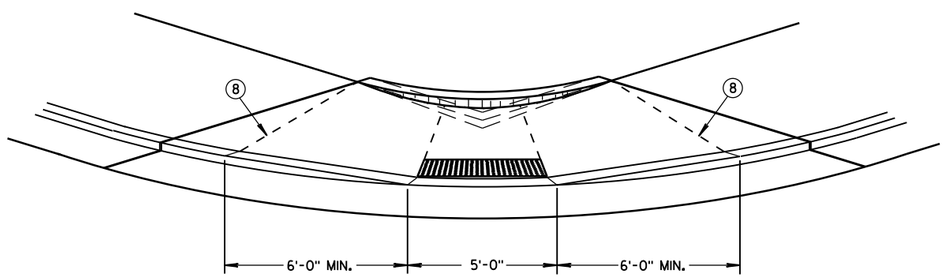
SECTION C-C

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



SECTION B-B



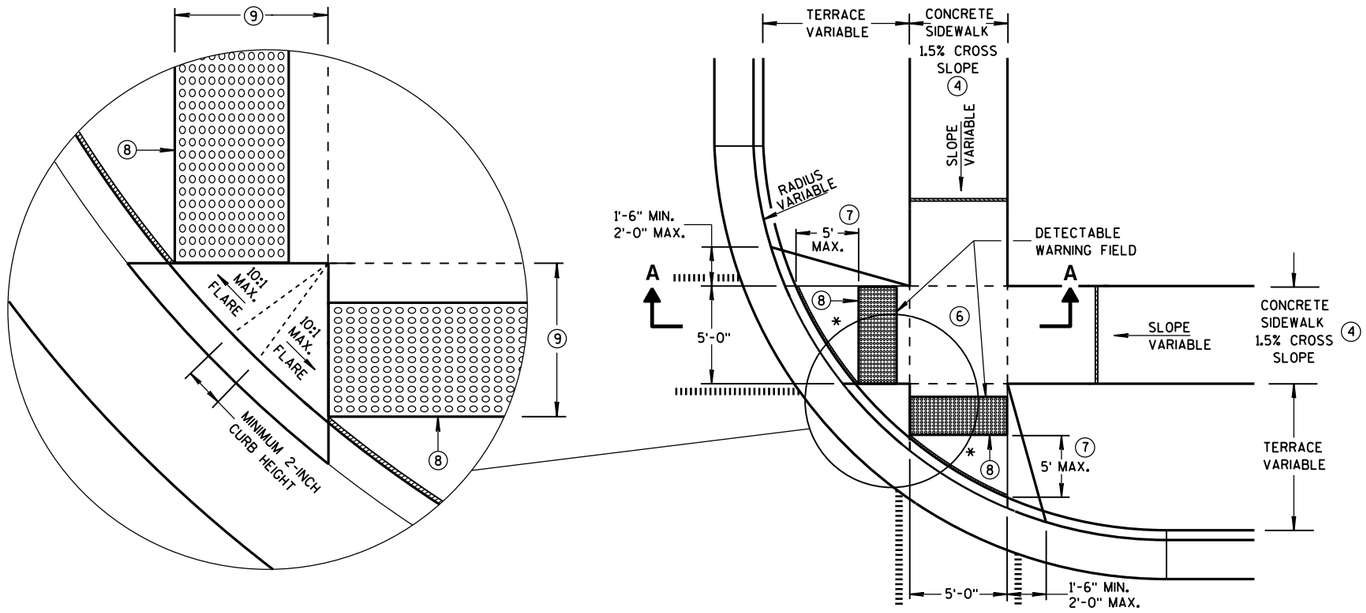
VIEW D-D

CURB RAMPS
TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 8 D 5-18a

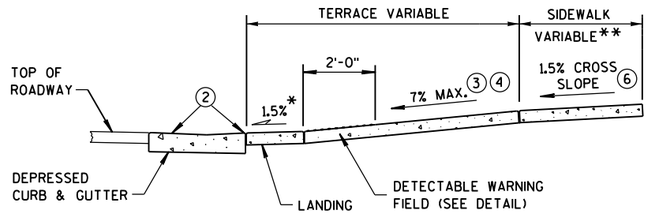


PLAN VIEW

TYPE 2 RAMP

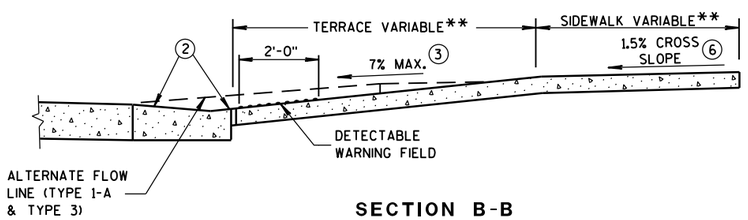
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

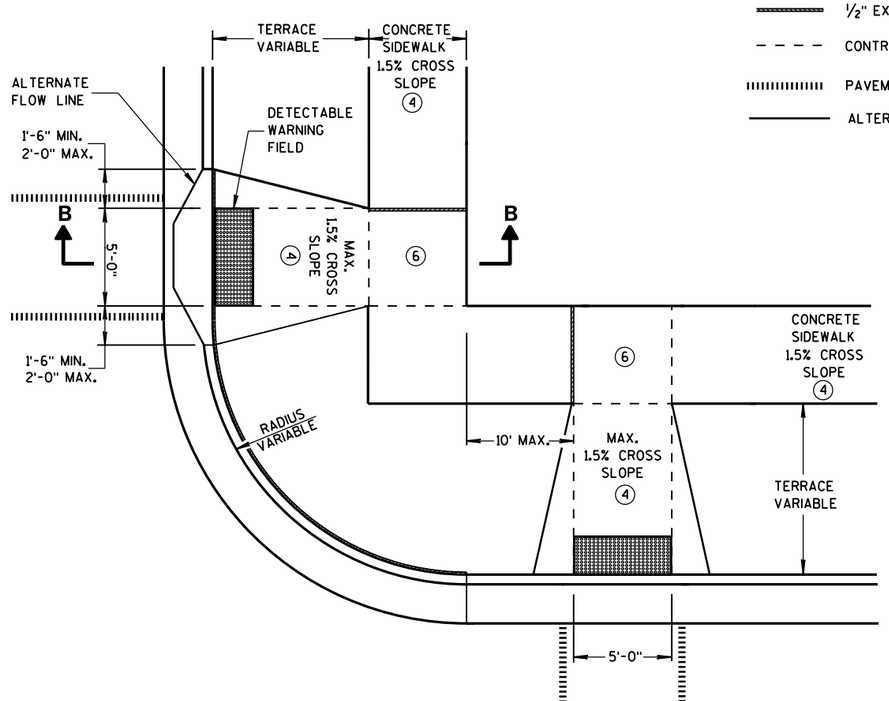
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW

TYPE 3 RAMP

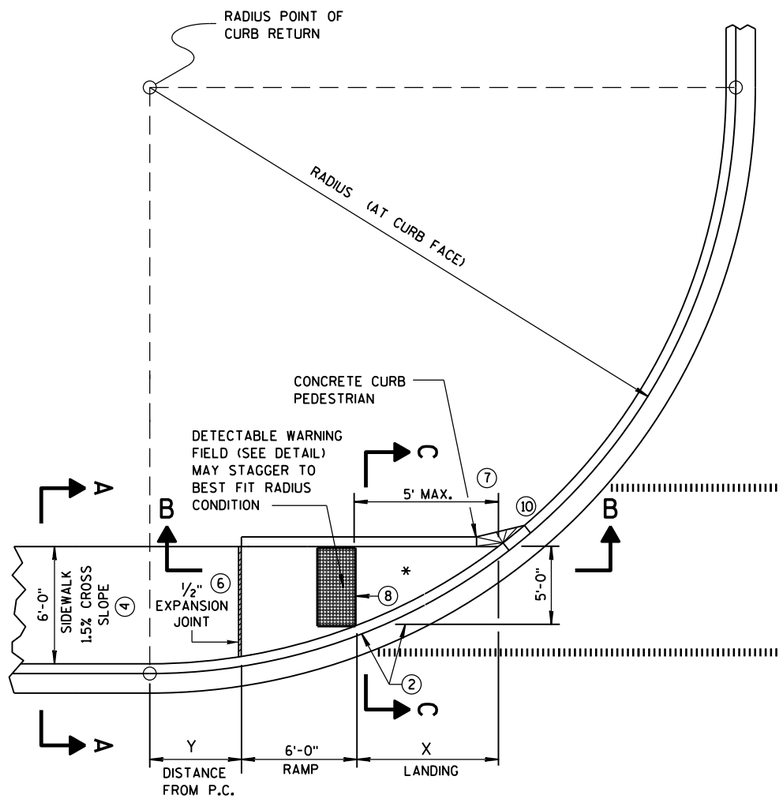
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

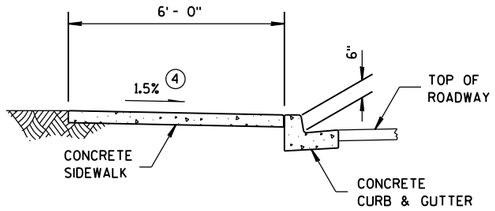
S.D.D. 8 D 5-18b



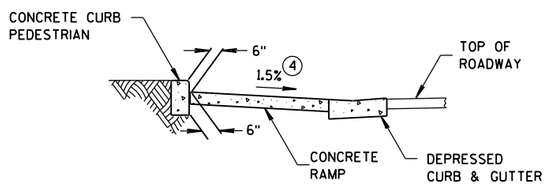
CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2¾"	1'-7½"
40 FEET	12'-1¼"	2'-10"
50 FEET	13'-8¾"	3'-10¾"
60 FEET	15'-2"	4'-10¼"

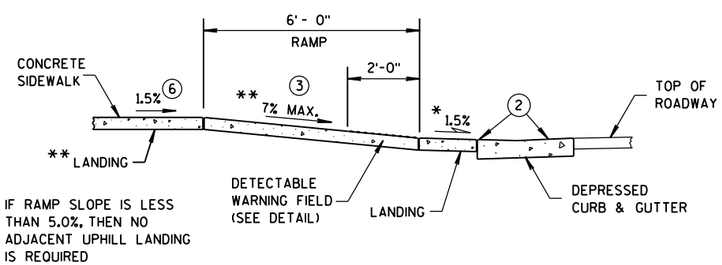
INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



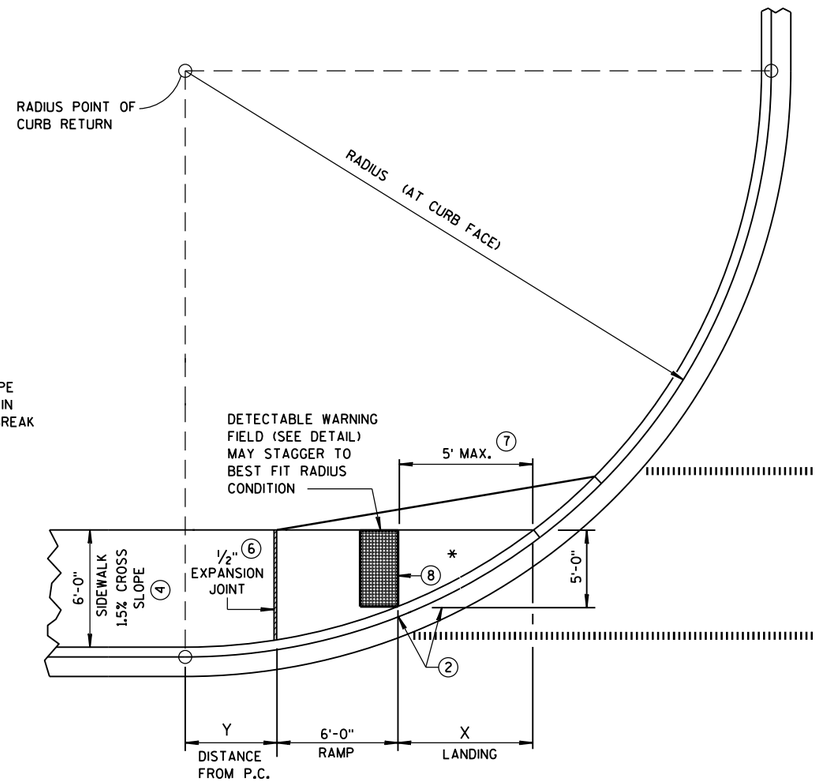
SECTION C-C FOR TYPE 4A



** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B-B FOR TYPE 4A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

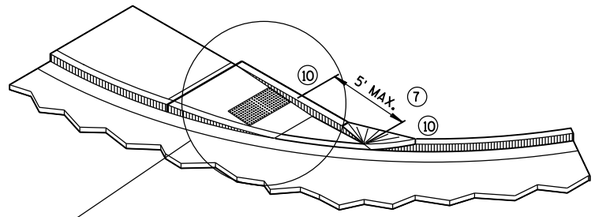
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

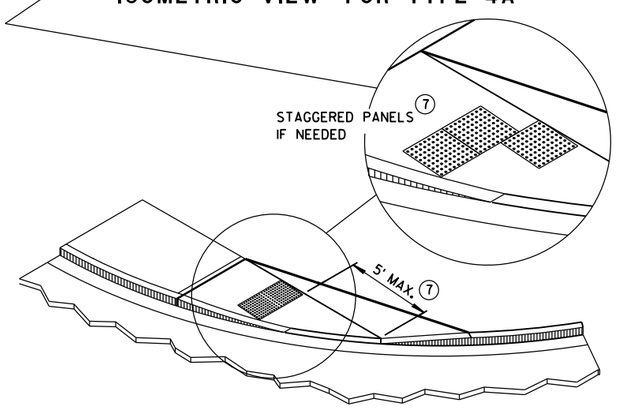
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

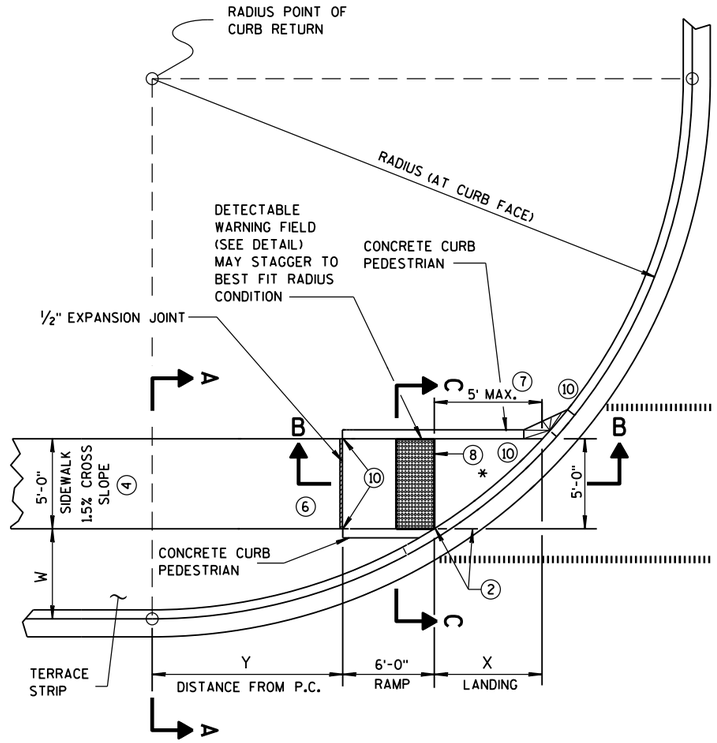
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

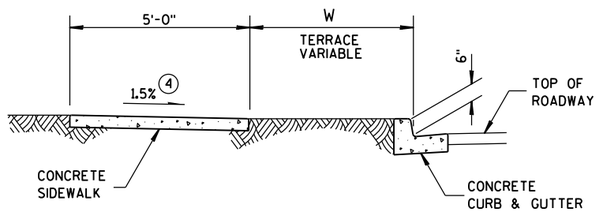
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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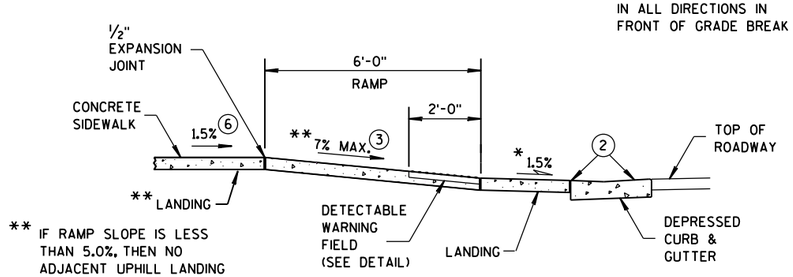
S.D.D. 8 D 5-18c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



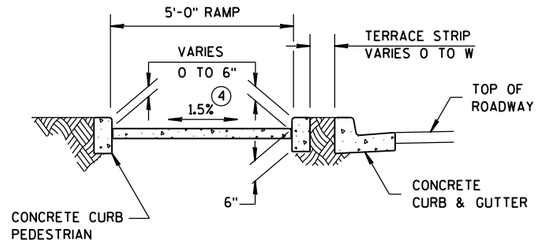
SECTION B-B FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

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'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-6¾"	3'-3"	8'-6¼"
30 FEET	7'-9¼"	5'-10½"	6'-9½"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"
40 FEET	9'-4"	7'-10"	8'-2¾"	10'-3"	7'-4¾"	12'-3¾"	6'-8½"	14'-1¼"	6'-1¾"	15'-8½"
50 FEET	10'-8"	9'-6½"	9'-5½"	12'-3¼"	8'-6½"	14'-7½"	7'-9¾"	16'-8¼"	7'-2½"	18'-6¼"
60 FEET	11'-10¼"	11'-0¾"	10'-6½"	14'-1¼"	9'-6½"	16'-8½"	8'-9¼"	18'-11¾"	8'-1½"	21'-0½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

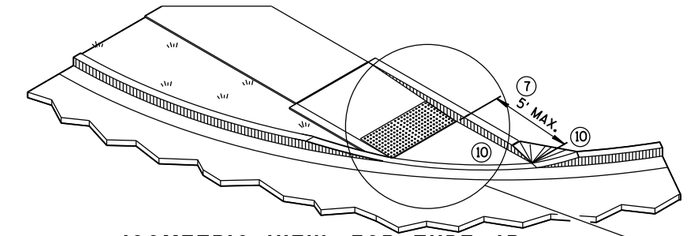
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

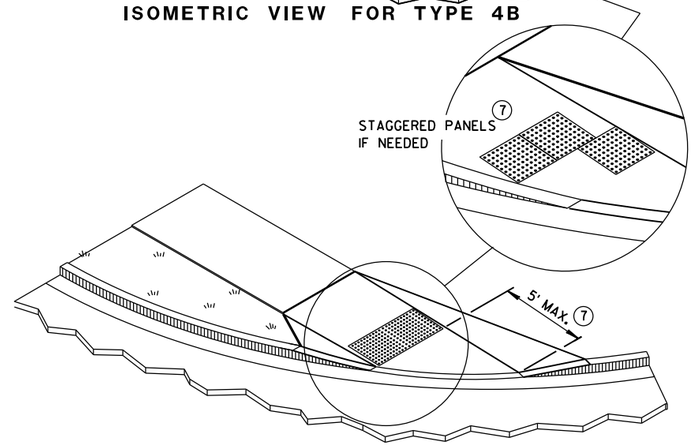
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

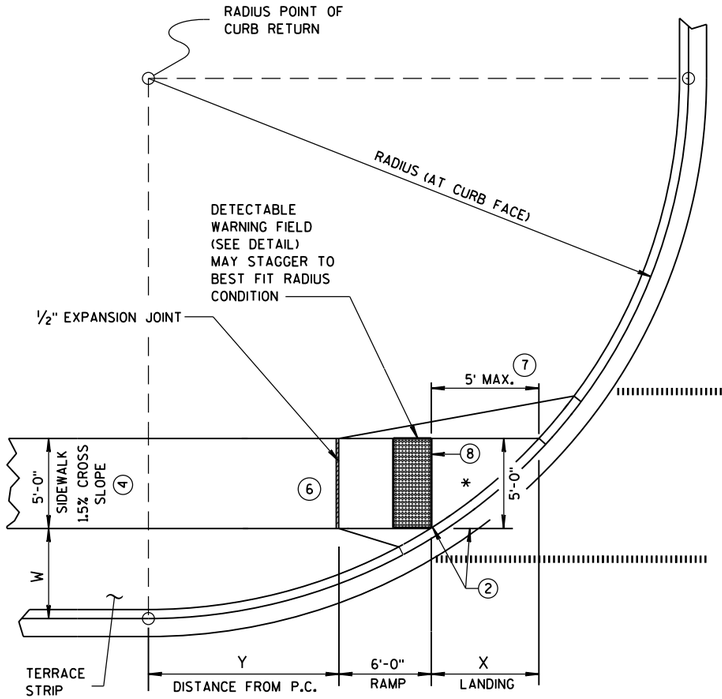
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS TYPE 4B AND 4B1

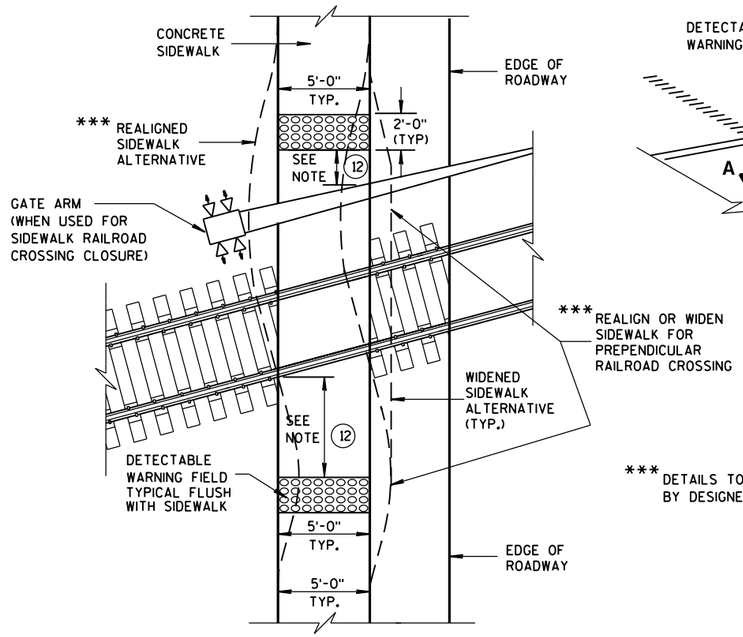
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 8 D 5-18d

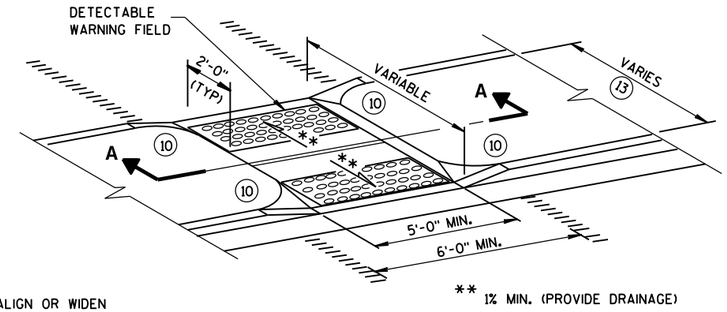
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S.D.D. 8 D 5-18d



*** DETAILS TO BE DETERMINED BY DESIGNER

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.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

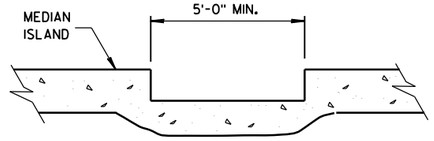
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) 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.

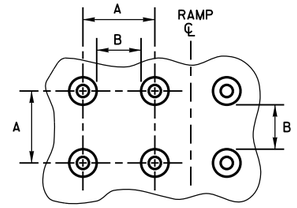
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



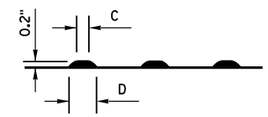
SECTION A-A

	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.

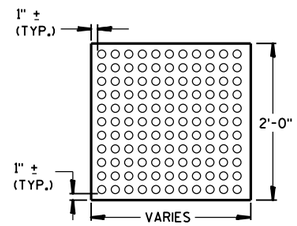


PLAN VIEW

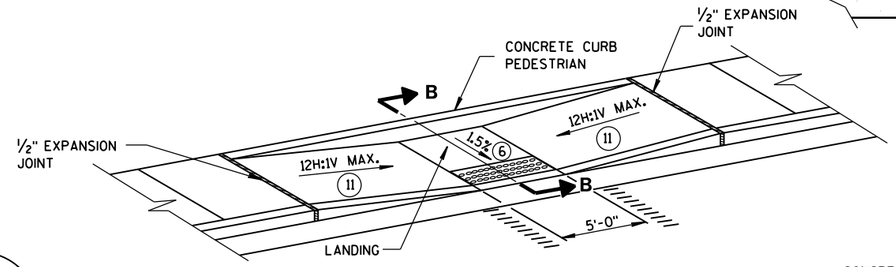


ELEVATION VIEW

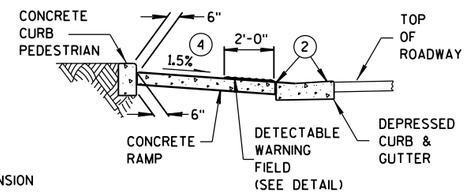
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW
DETECTABLE WARNING FIELD (TYPICAL)

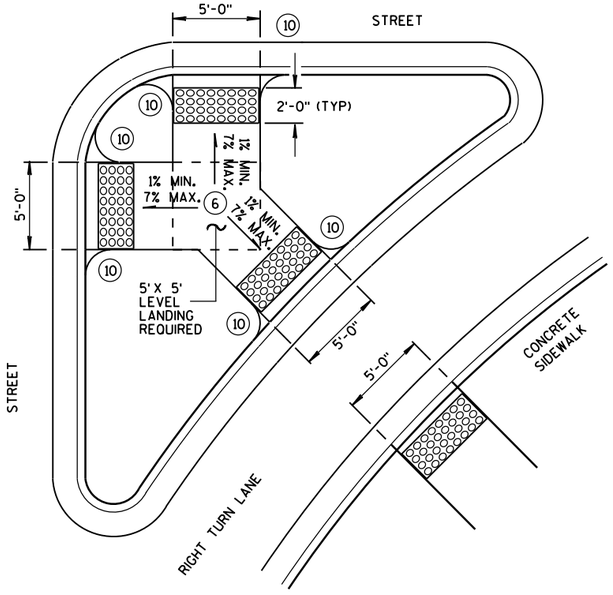


MID-BLOCK CROSSING
TYPE 7A

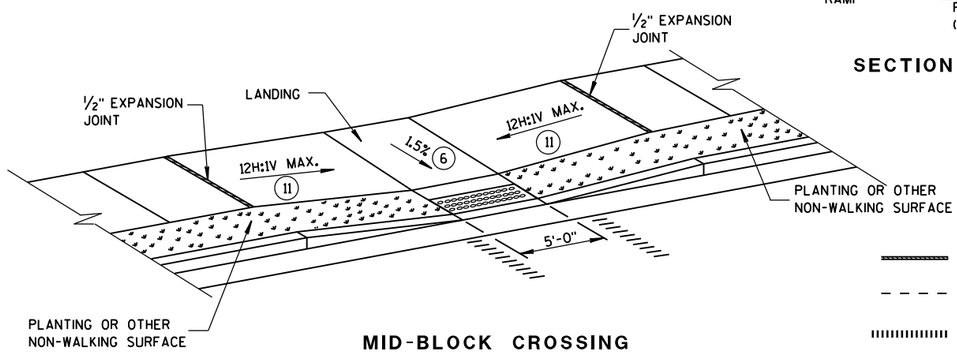


SECTION B-B

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



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

- 1/2" 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
Sept., 2016
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV

75

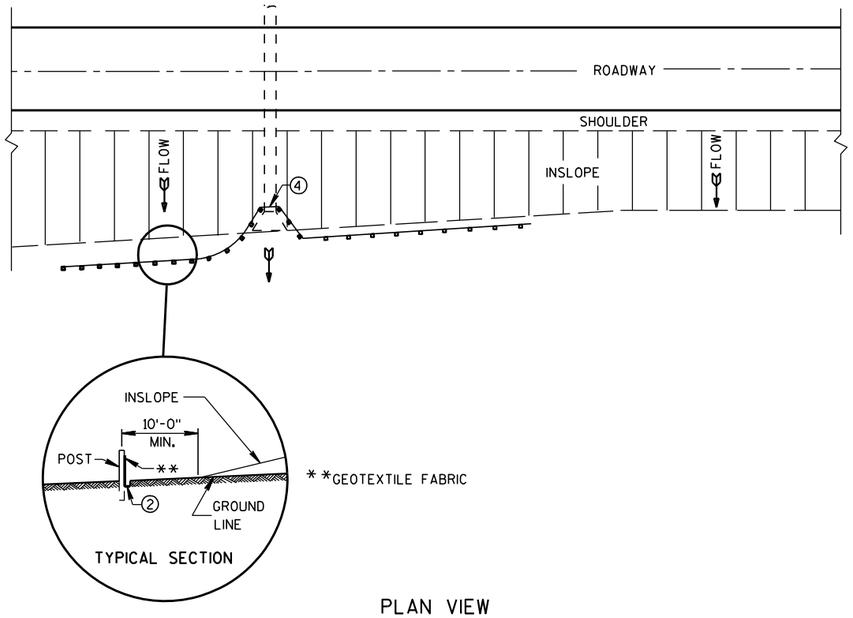
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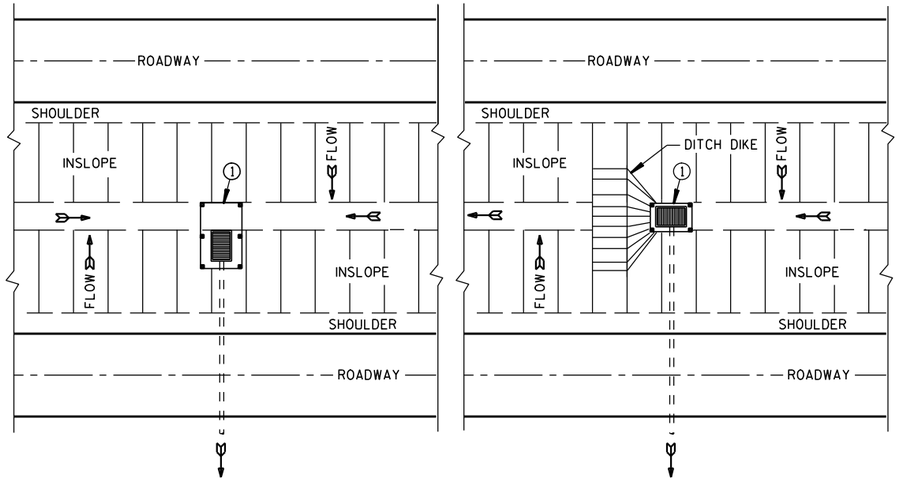
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S.D.D. 8 D 5-18e



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.

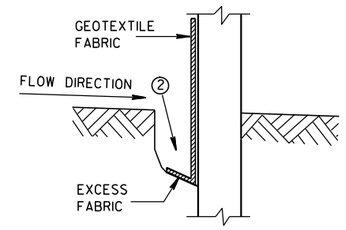
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

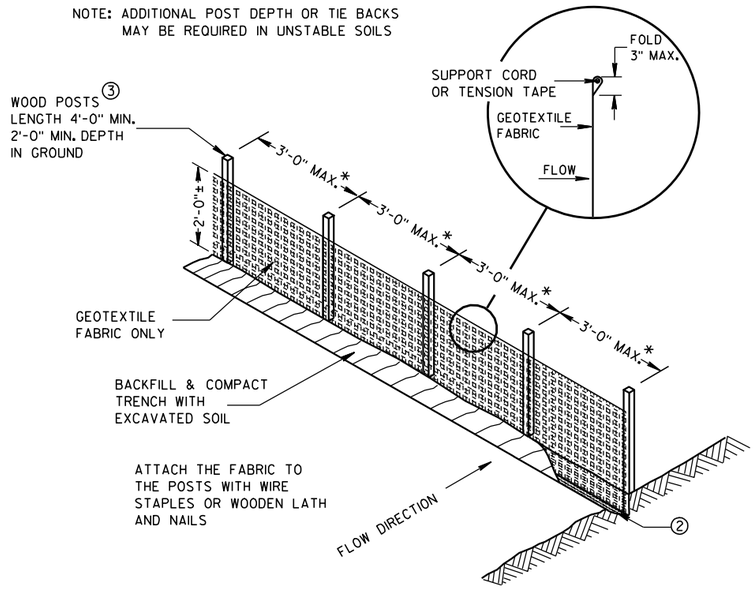
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

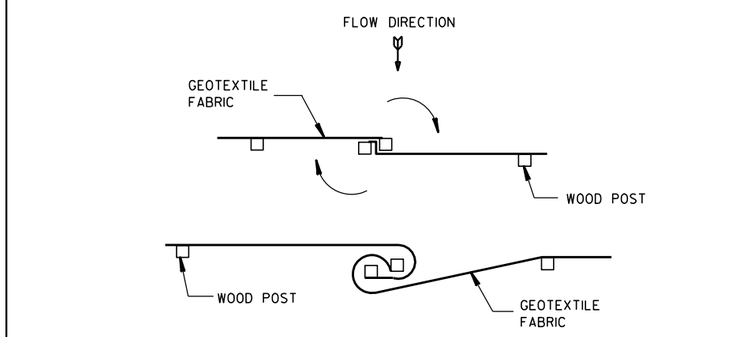
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



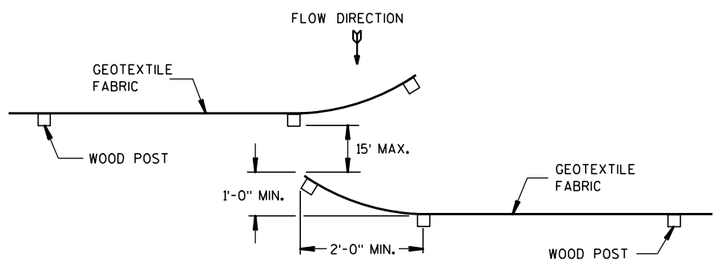
TRENCH DETAIL



SILT FENCE

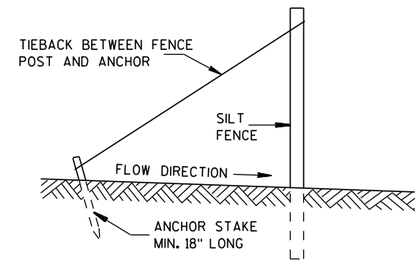


TWIST METHOD



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

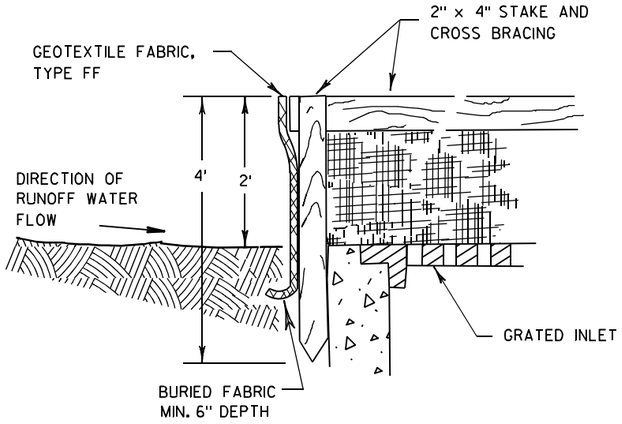
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

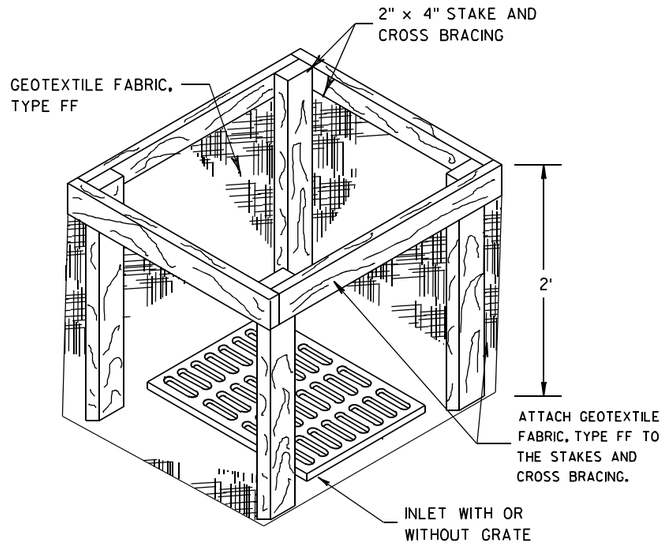
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S.D.D. 8 E 9-6

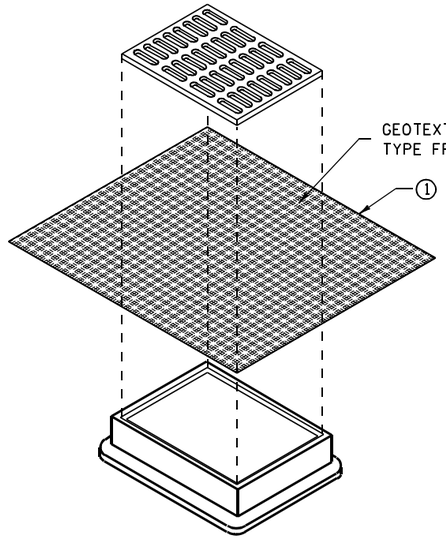
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S.D.D. 8 E 9-6



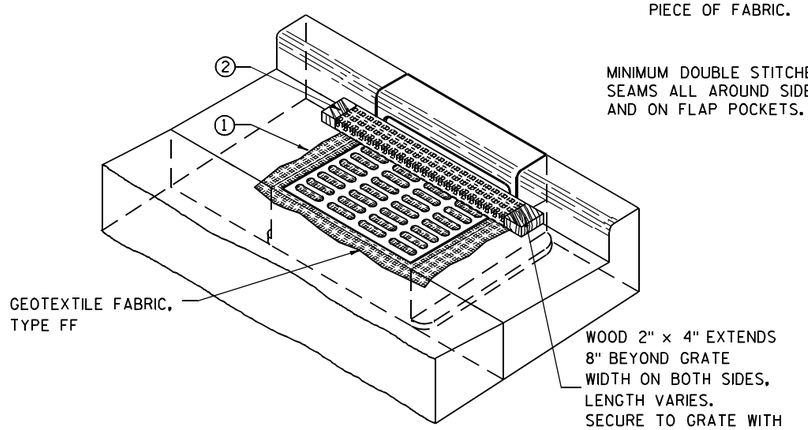


INLET PROTECTION, TYPE A

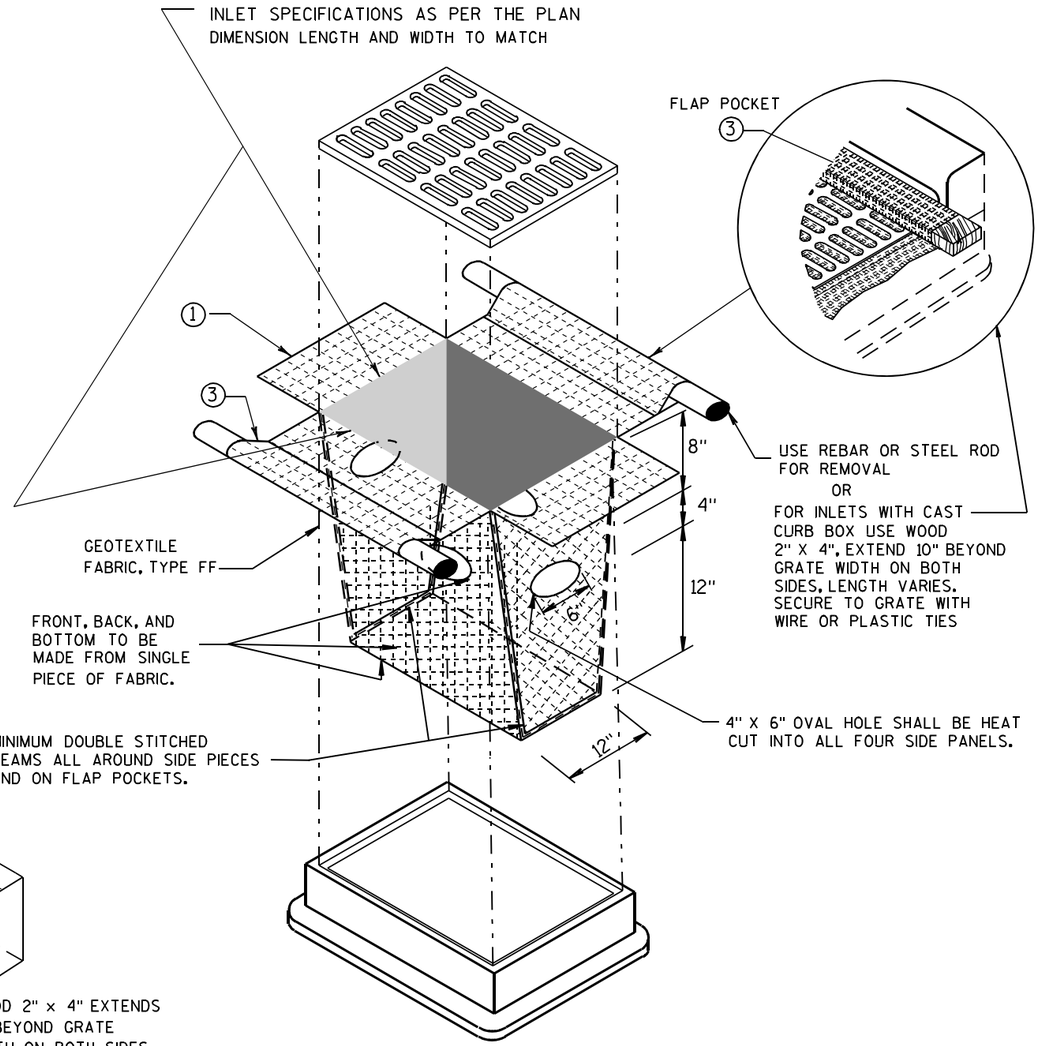


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

6

S.D.D. 8 E 10-2

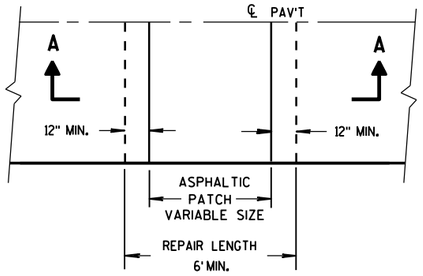
GENERAL NOTES

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.

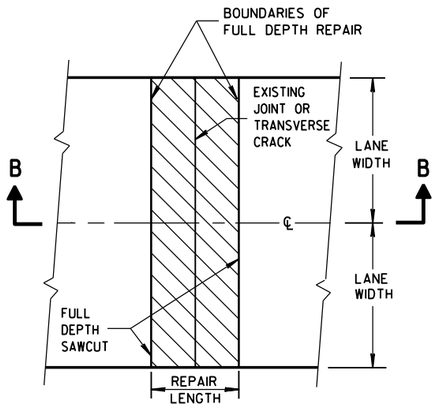
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

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.

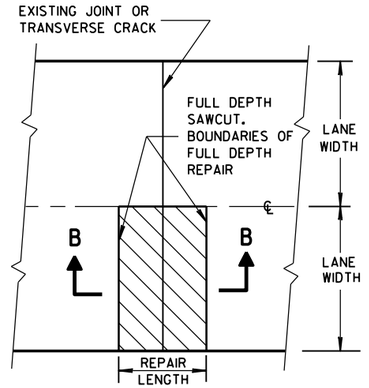
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

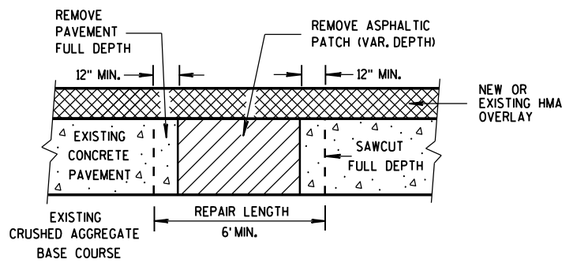


PLAN VIEW
(DOUBLE LANE REPAIR)



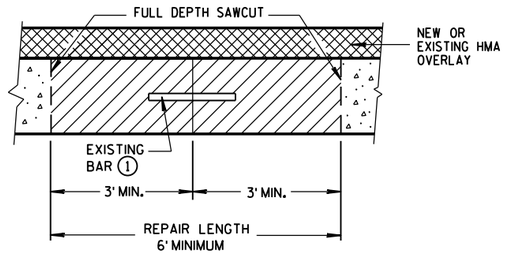
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

BASE PATCHING CONCRETE

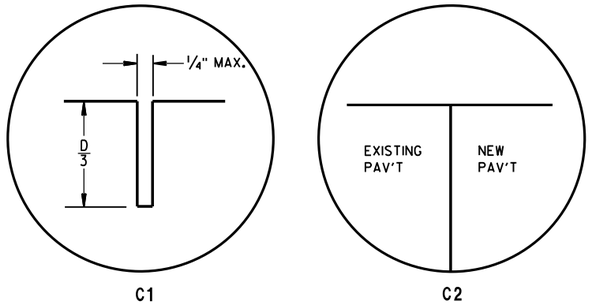
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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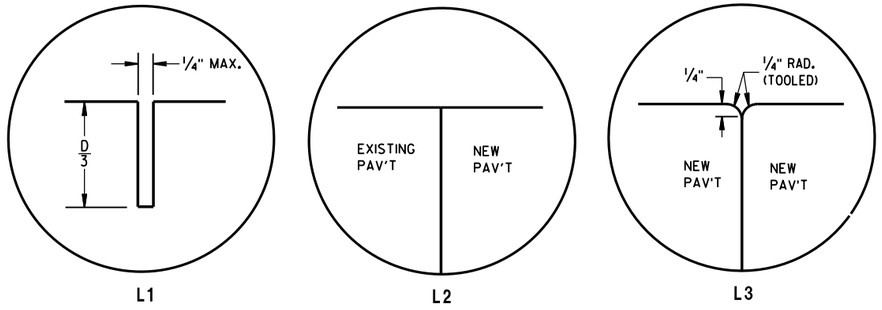
S.D.D. 13 C 14-6a

6

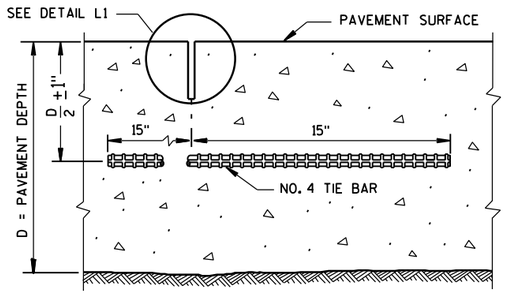
S.D.D. 13 C 14-6a



TRANSVERSE JOINTS

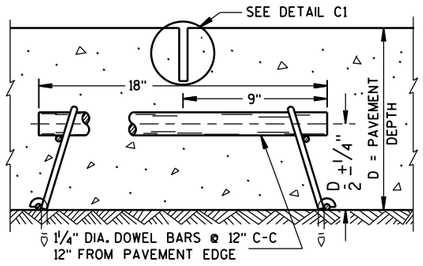


LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT



SECTION F-F

CONTRACTION JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

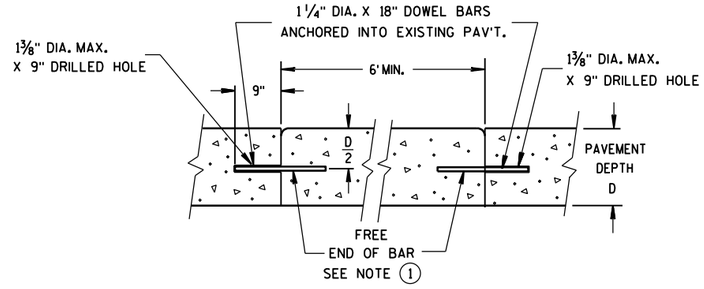
CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

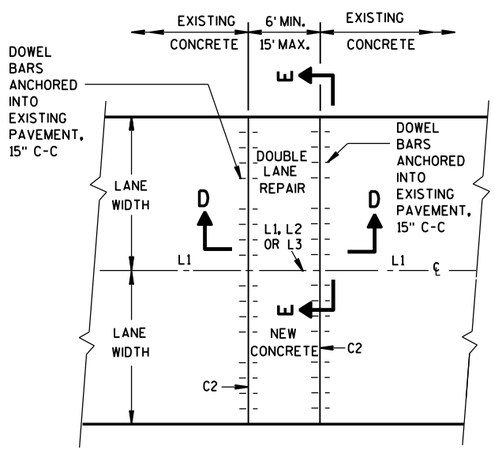
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 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.

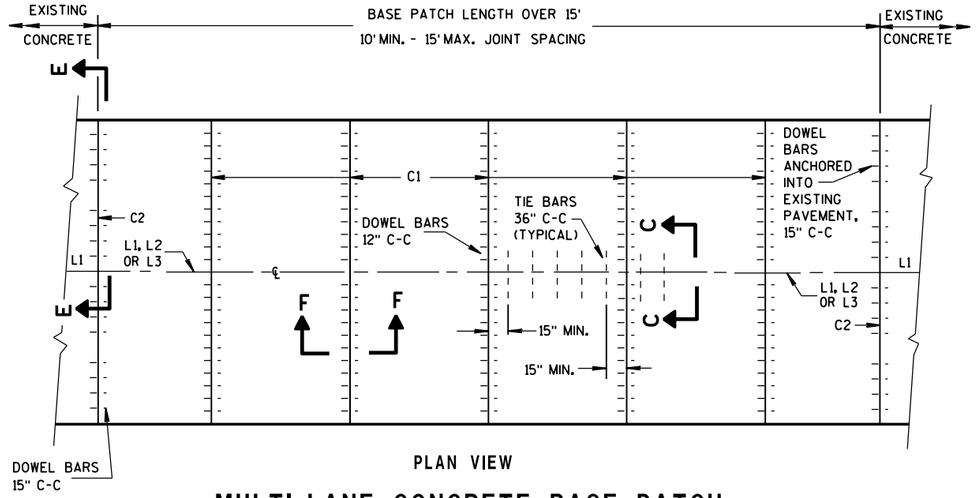


SECTION D-D



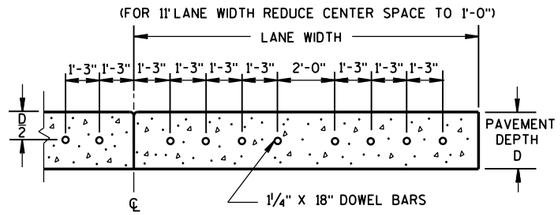
PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH



SECTION E-E

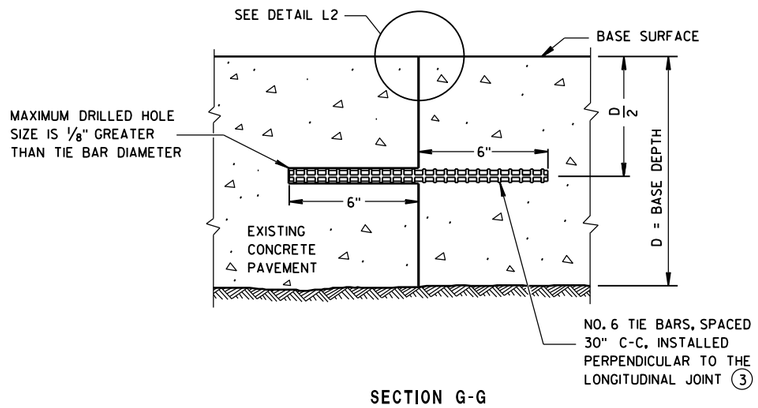
SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

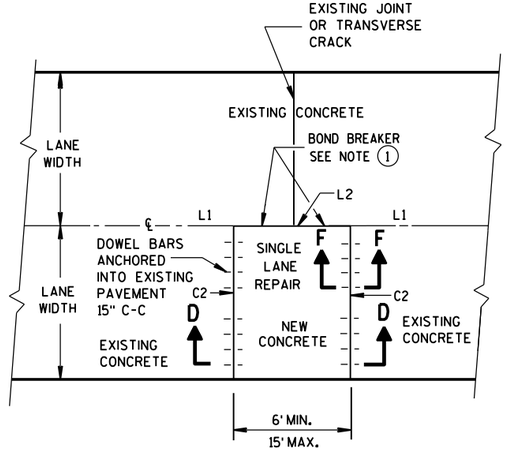
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S.D.D. 13 C 14-6b



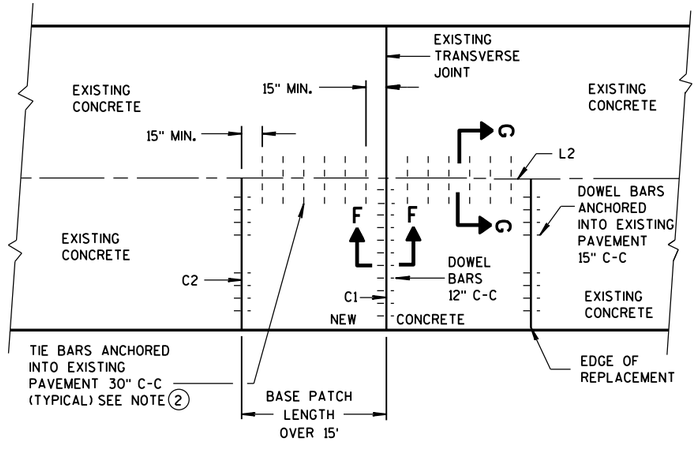
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

GENERAL NOTES

(1) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) 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 IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

(3) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

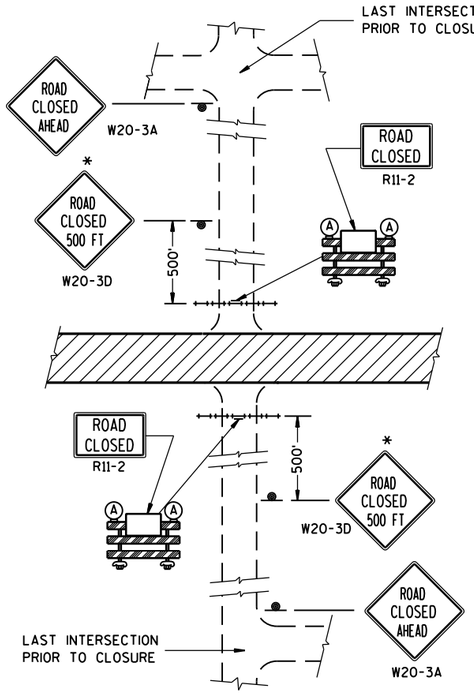
BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

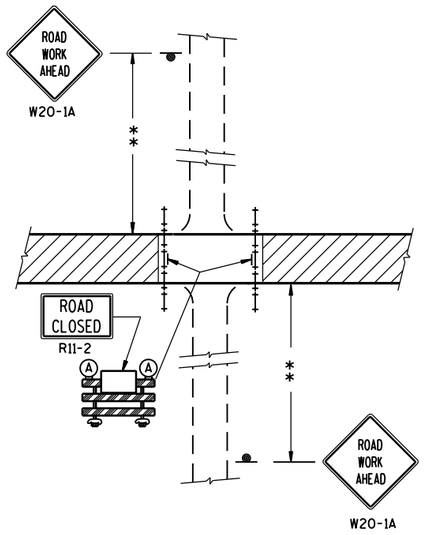
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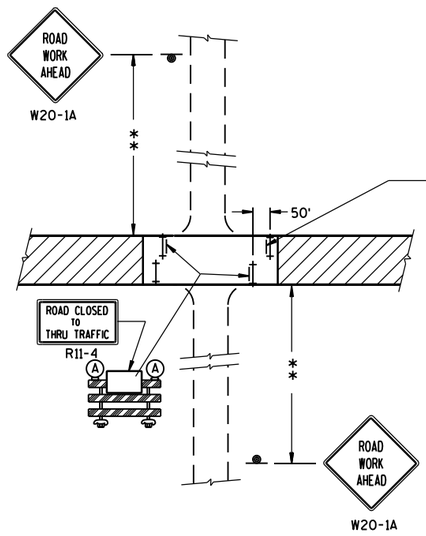
DETAIL 1

(NO ACCESS TO PROJECT)



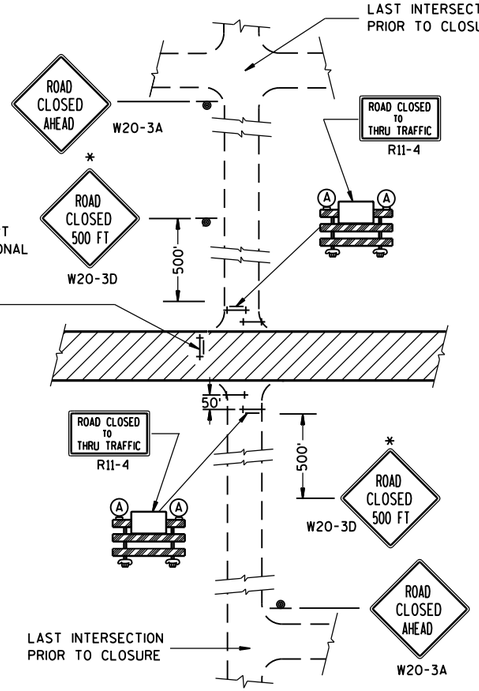
DETAIL 2

(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
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... — FHWA

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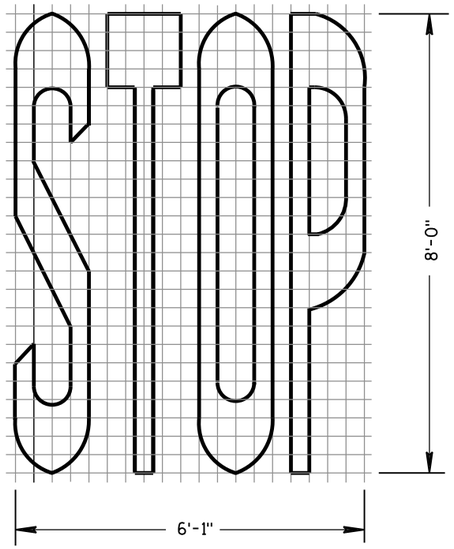
S.D.D. 15 C 3-3

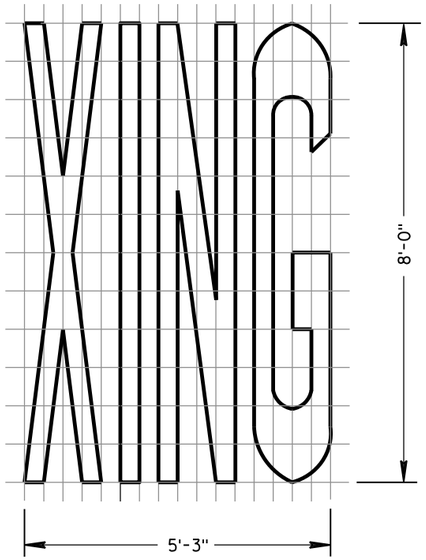
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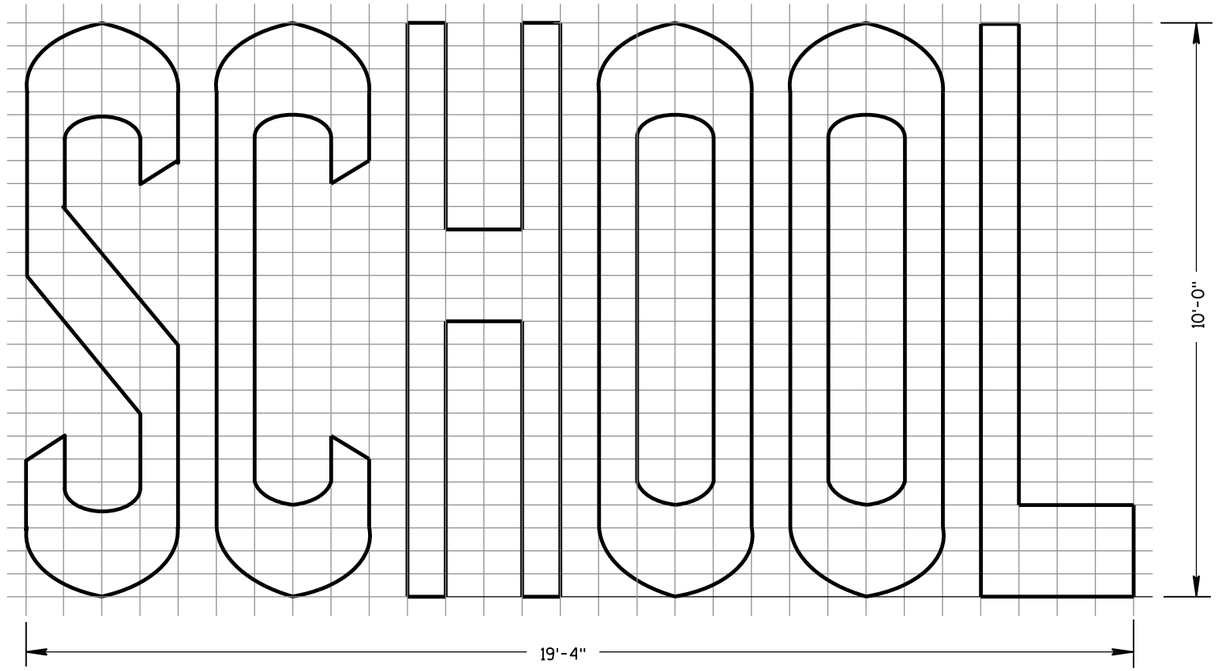
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GENERAL NOTES

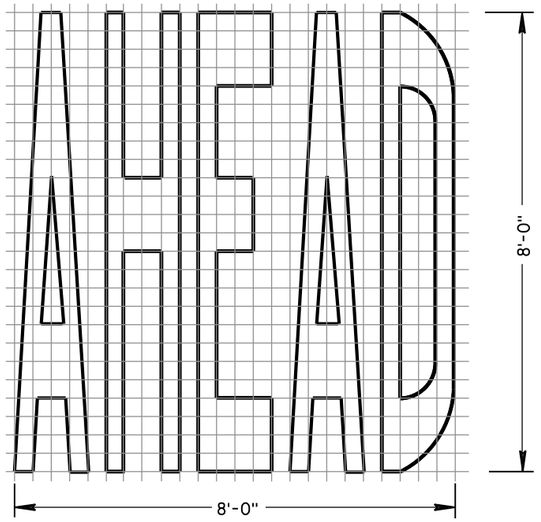
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

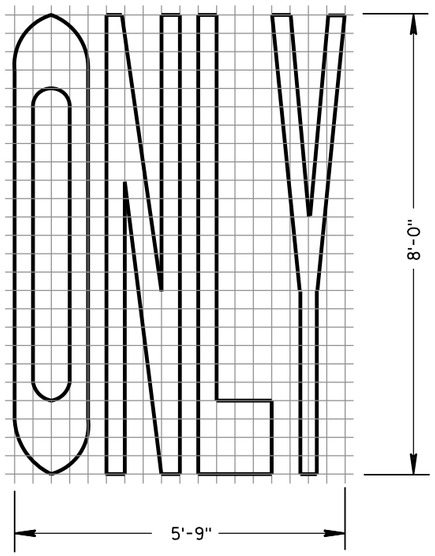


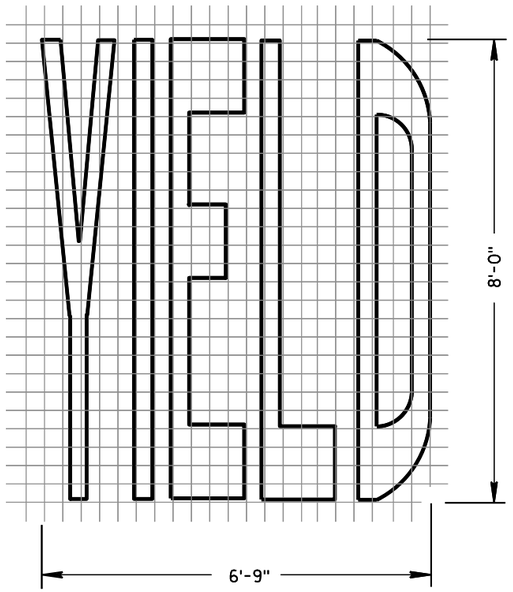


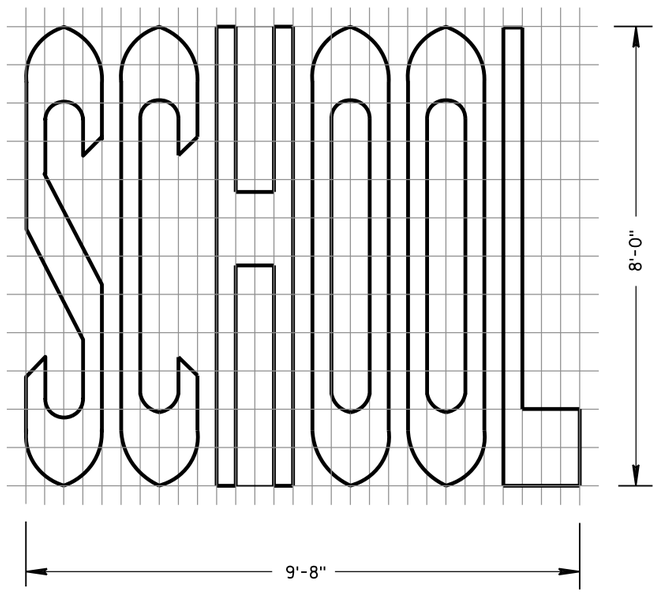


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-16	/S/ Matthew R. Rauch	
DATE	STATE SIGNING AND MARK	EER

FHWA

6

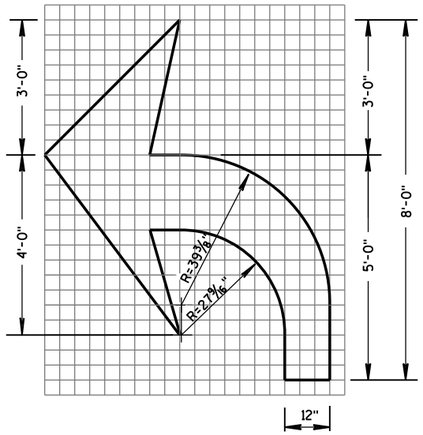
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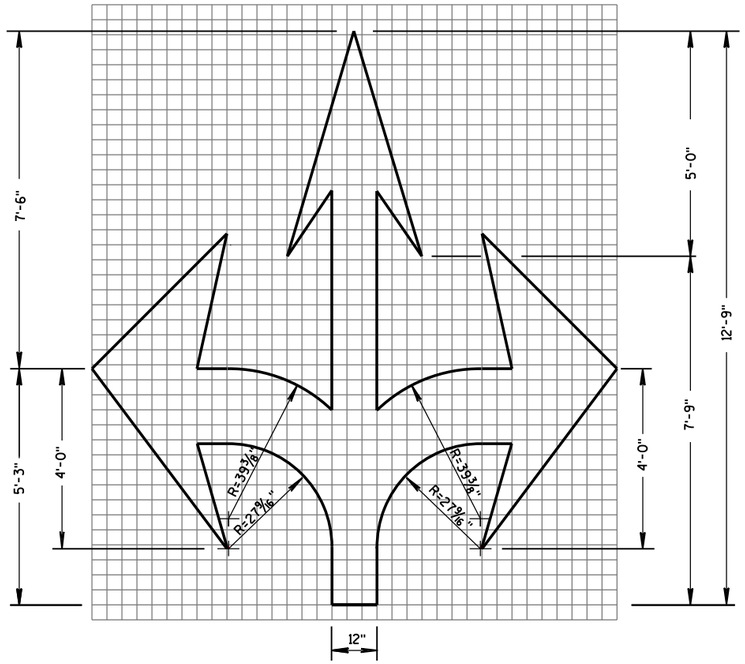
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GENERAL NOTES

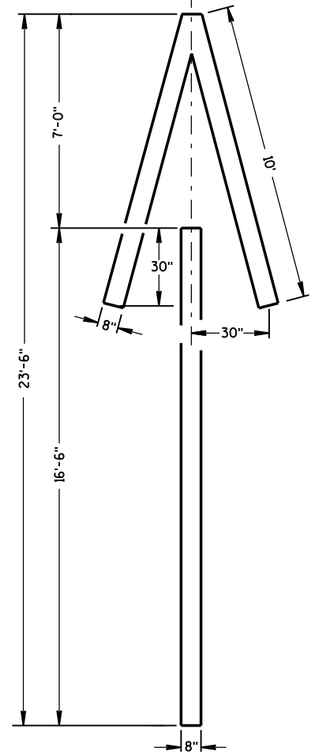
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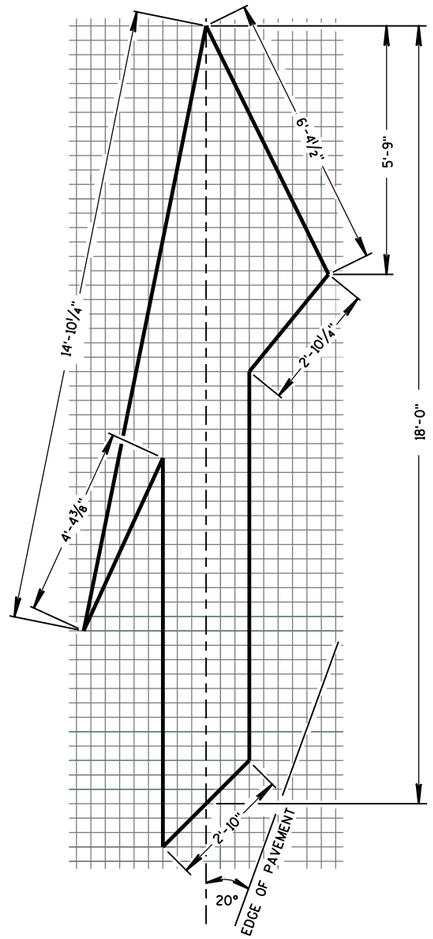
TYPE 2



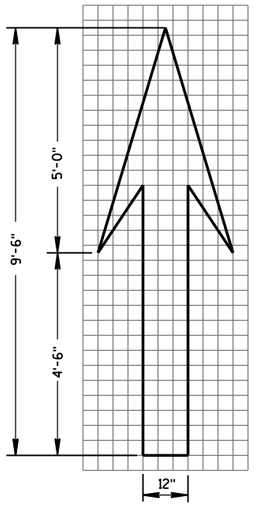
TYPE 6



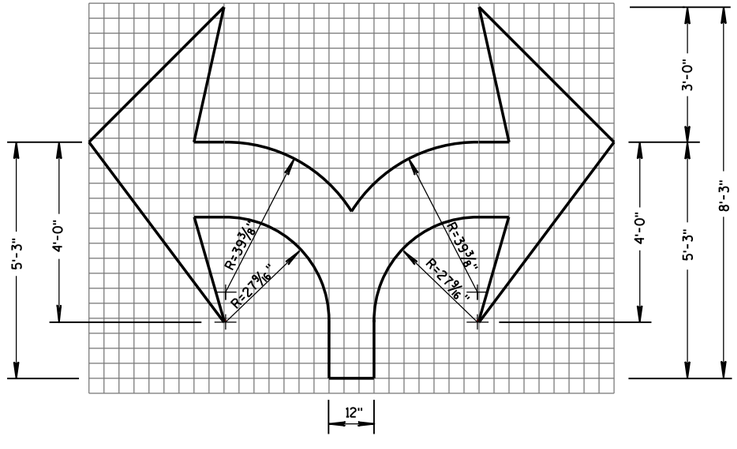
TYPE 4



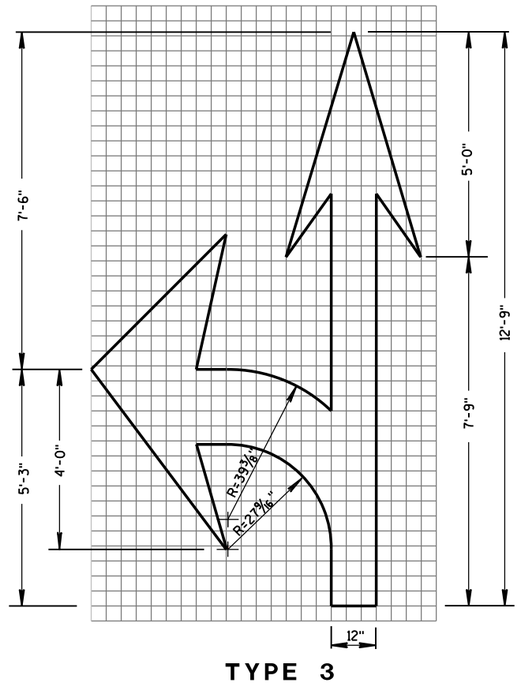
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

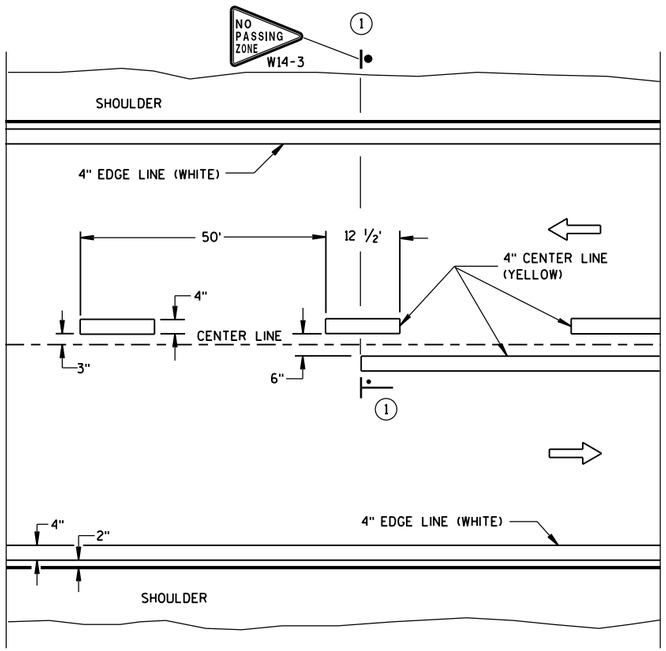
APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR ENGINEER
FHWA

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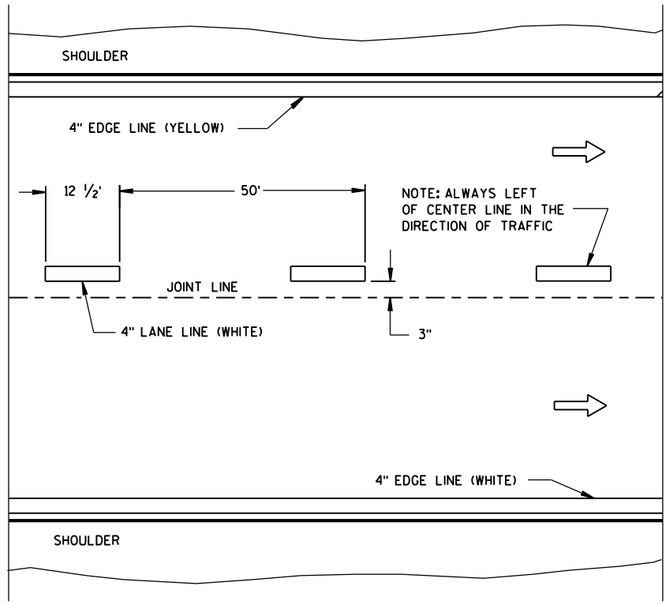
S.D.D. 15 C 7-13c

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S.D.D. 15 C 7-13c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

(1) NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

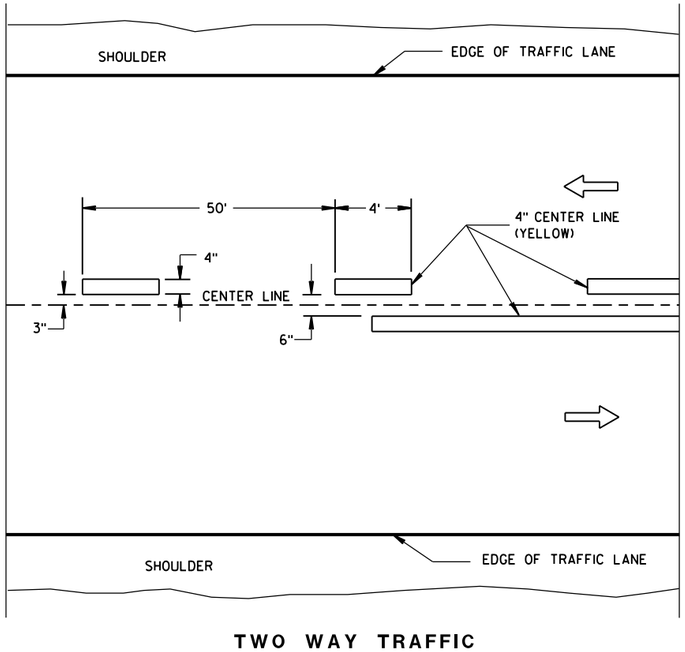
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

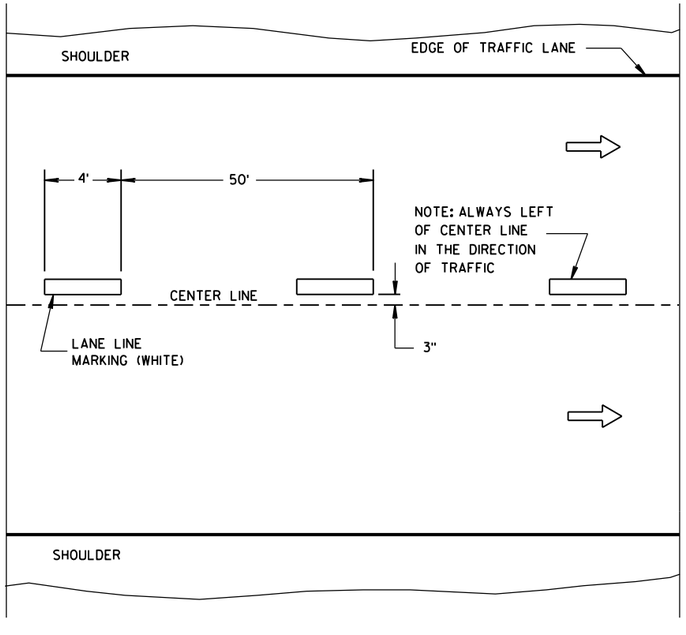
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

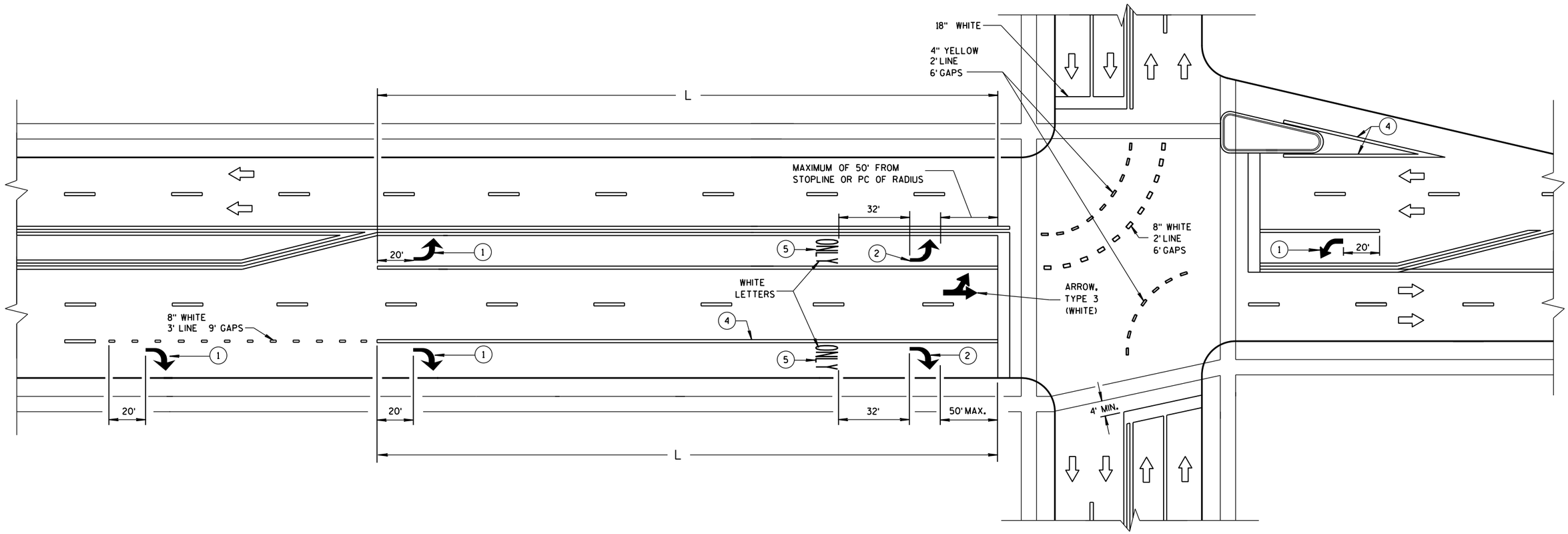
LONGITUDINAL MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept., 2016	/S/ Matthew R. Rauch
DATE	STATE SIGNING AND MAR[illegible] 84 [illegible]INEER
FHWA	

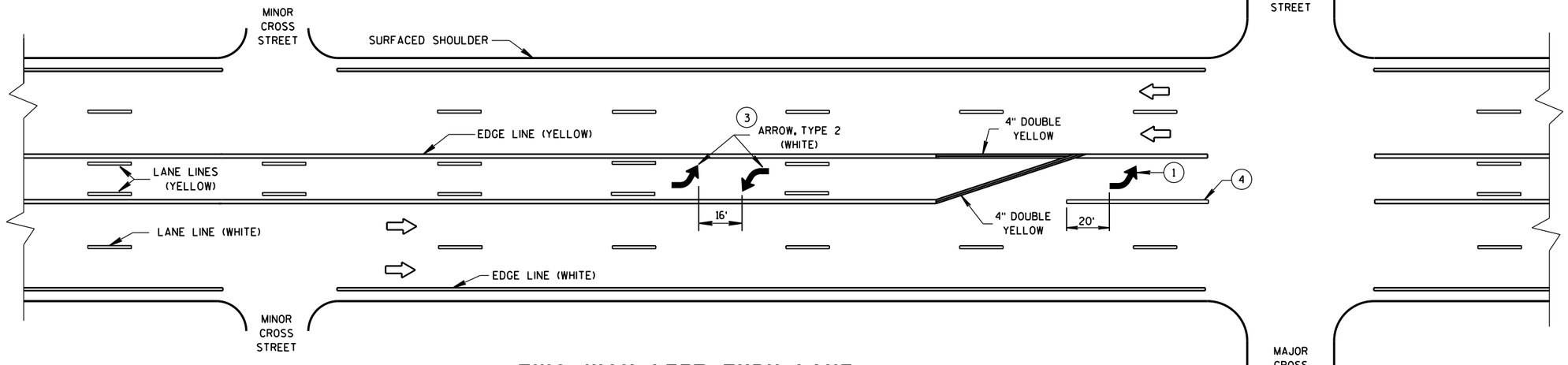
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S.D.D. 15 C 8-17a

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S.D.D. 15 C 8-17a





GENERAL NOTES

(1) REQUIRED ARROW, TYPE 2 (WHITE).

(2) REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.

(3) A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

(4) 8" WHITE

(5) REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL

L = LENGTH OF TURN BAY

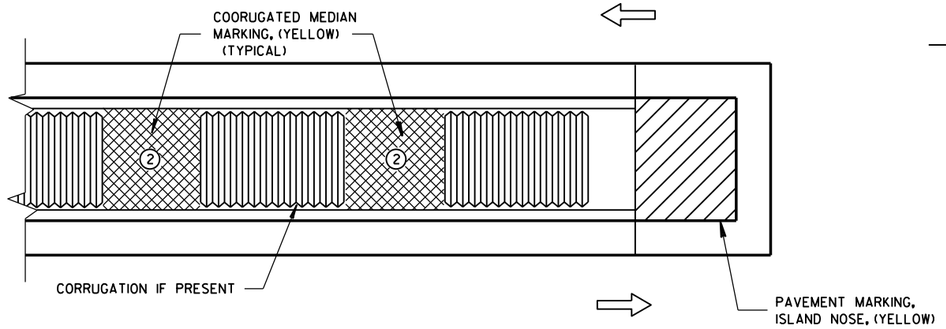
TWO WAY LEFT TURN LANE

PAVEMENT MARKING
(TURN LANES)

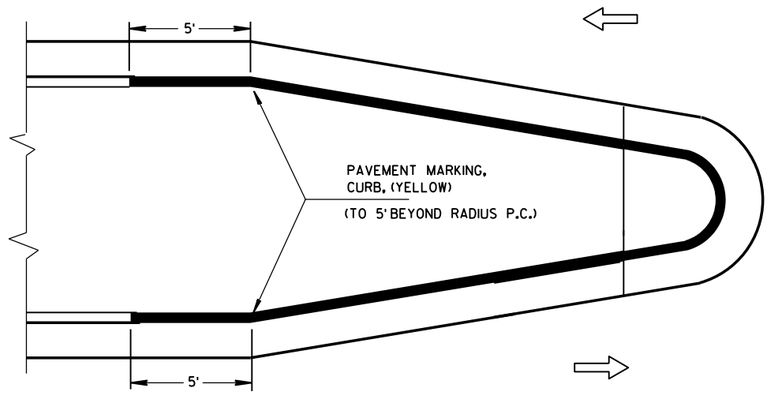
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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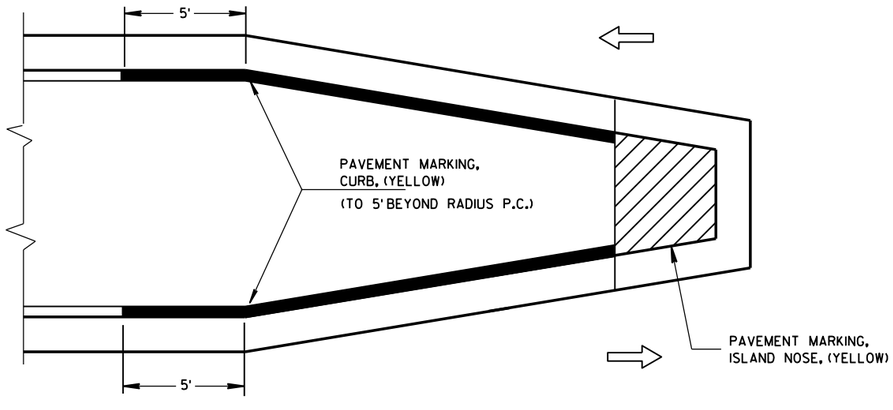
S.D.D. 15 C 8-17b



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

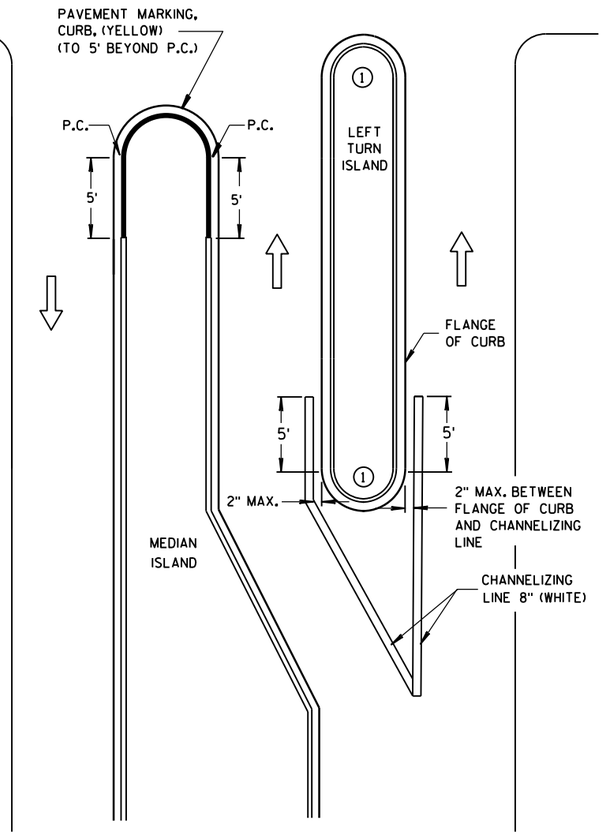


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

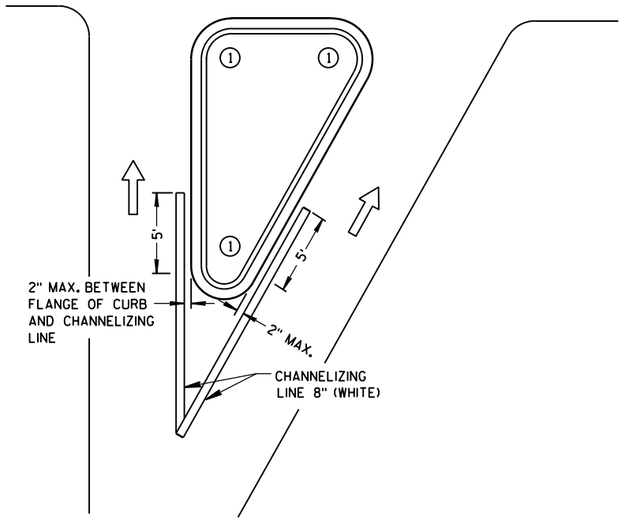


LEFT TURN & MEDIAN ISLAND

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

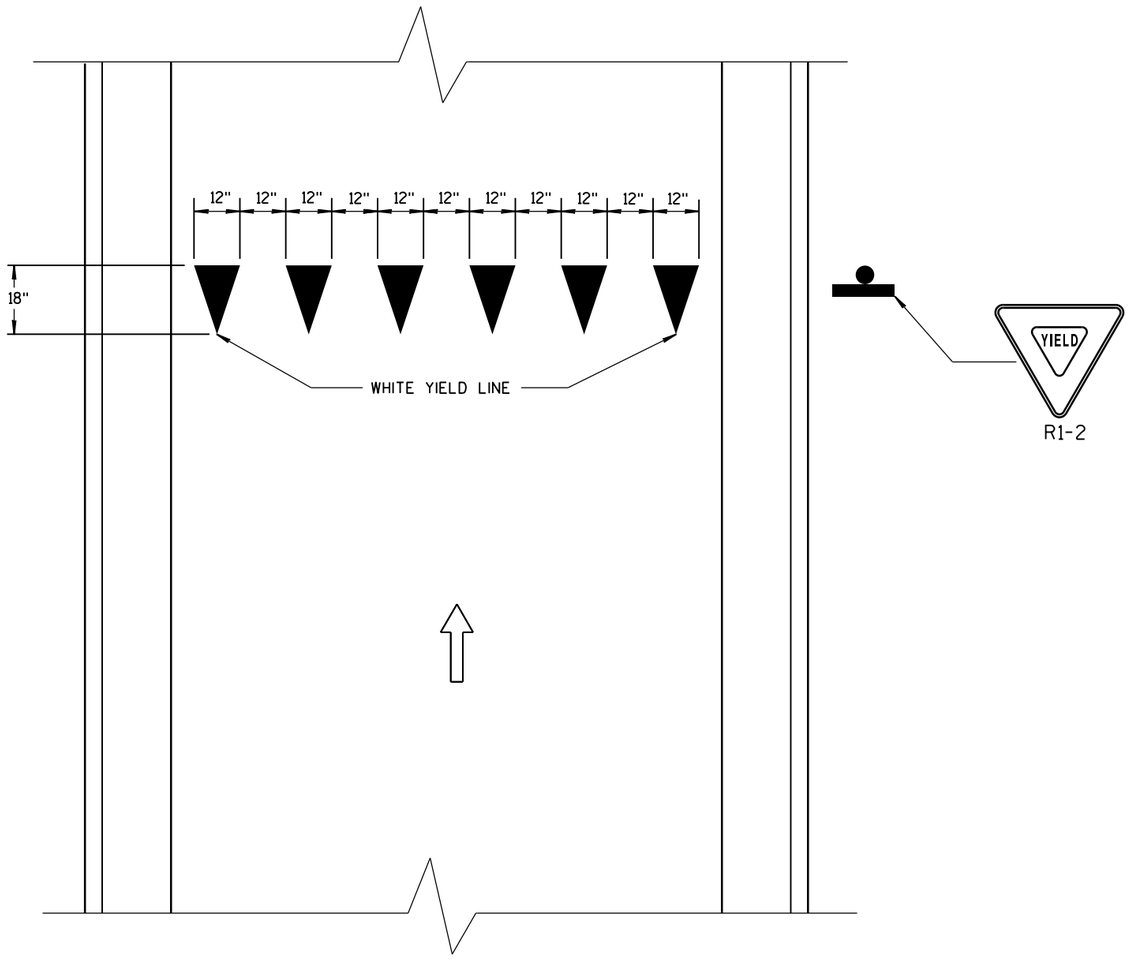
- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 15 C 8-17c



R1-2

DIRECTION OF TRAVEL

YIELD LINE

6

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S.D.D. 15 C 20-2

S.D.D. 15 C 20-2

YIELD MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

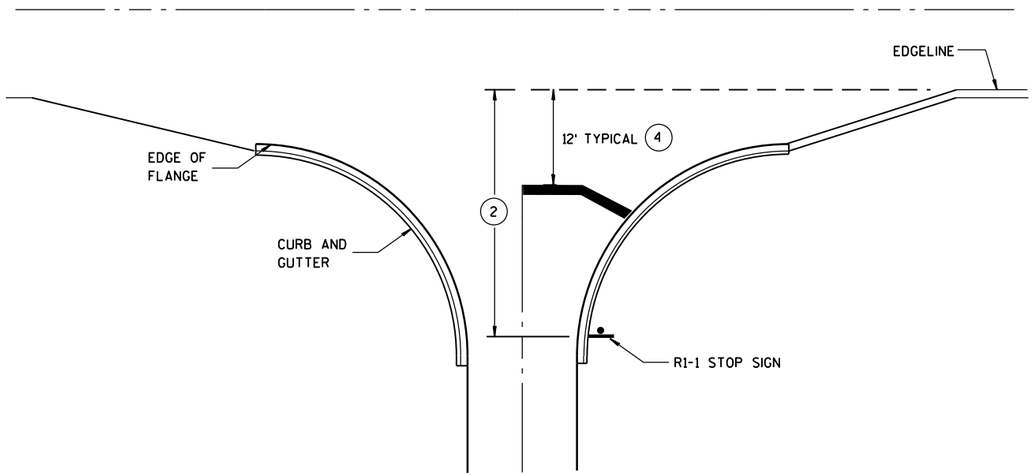
4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARI

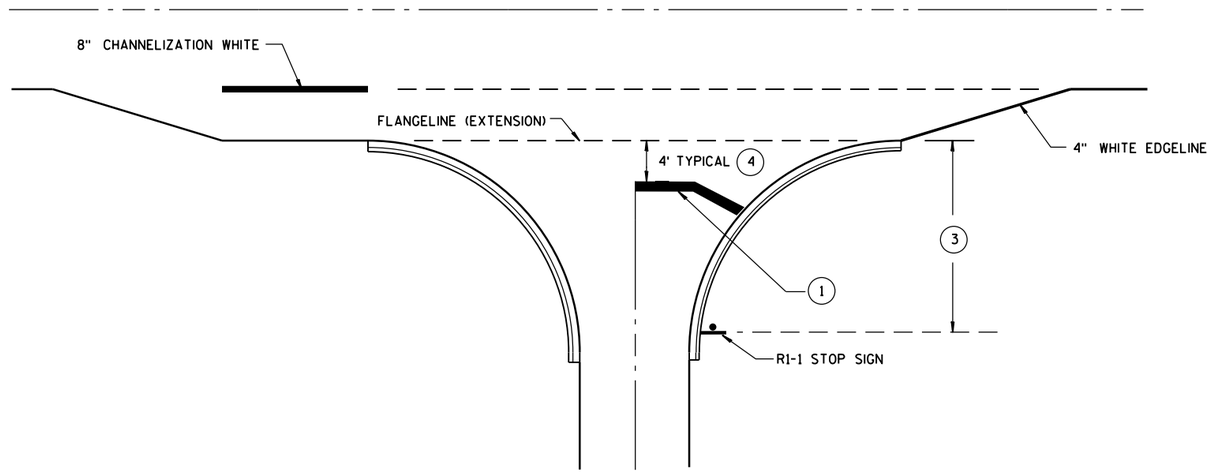
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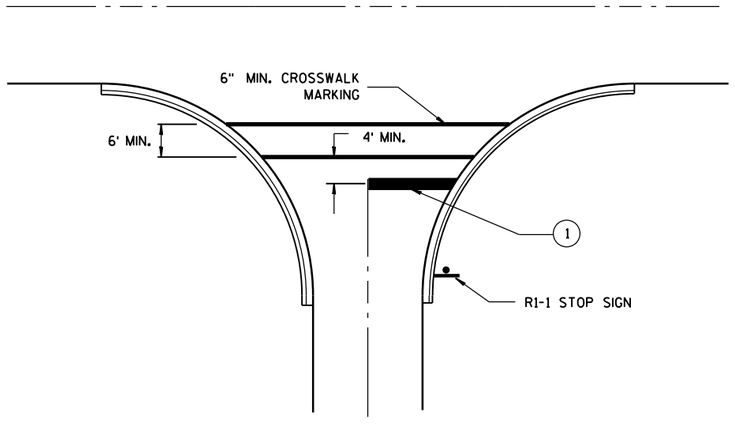
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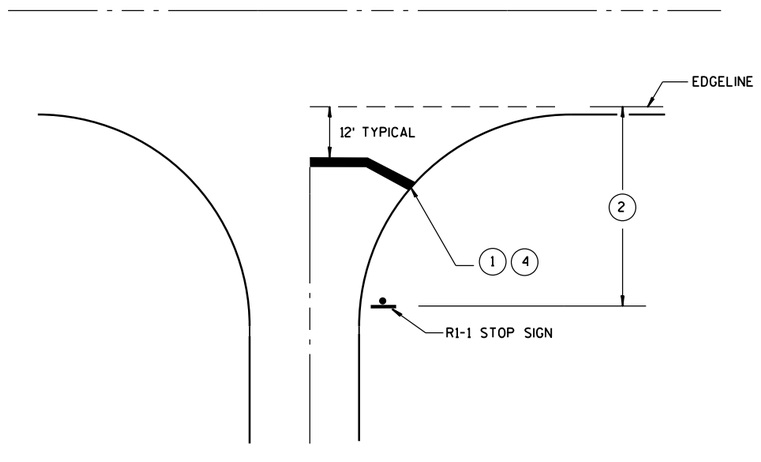
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

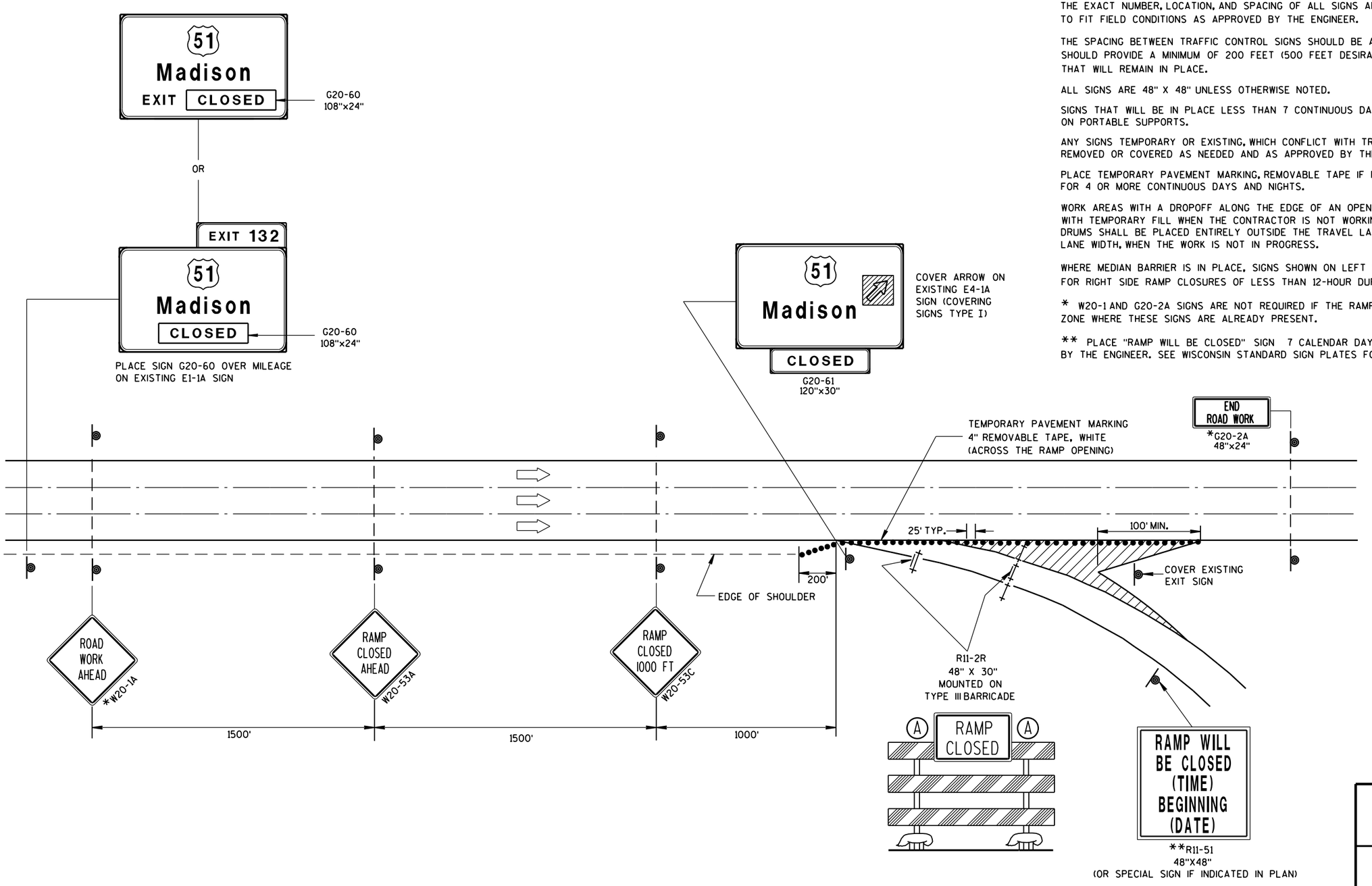
4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR 88 NEER

FHWA

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S.D.D. 15 C 33-2



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 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

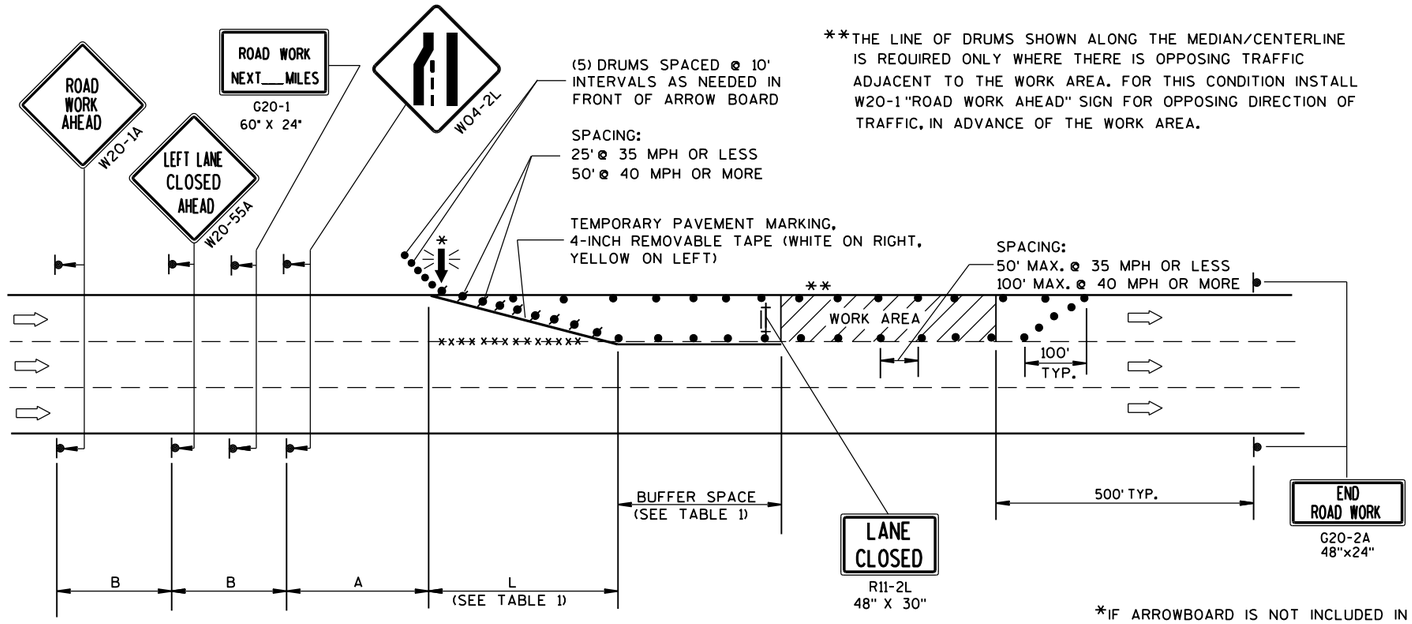
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO... SAFETY ENGI... FIC
FHWA

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S.D.D. 15 D 16-3

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S.D.D. 15 D 16-3



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

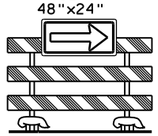


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
FHWA

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER — IC

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S.D.D. 15 D 20-4

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

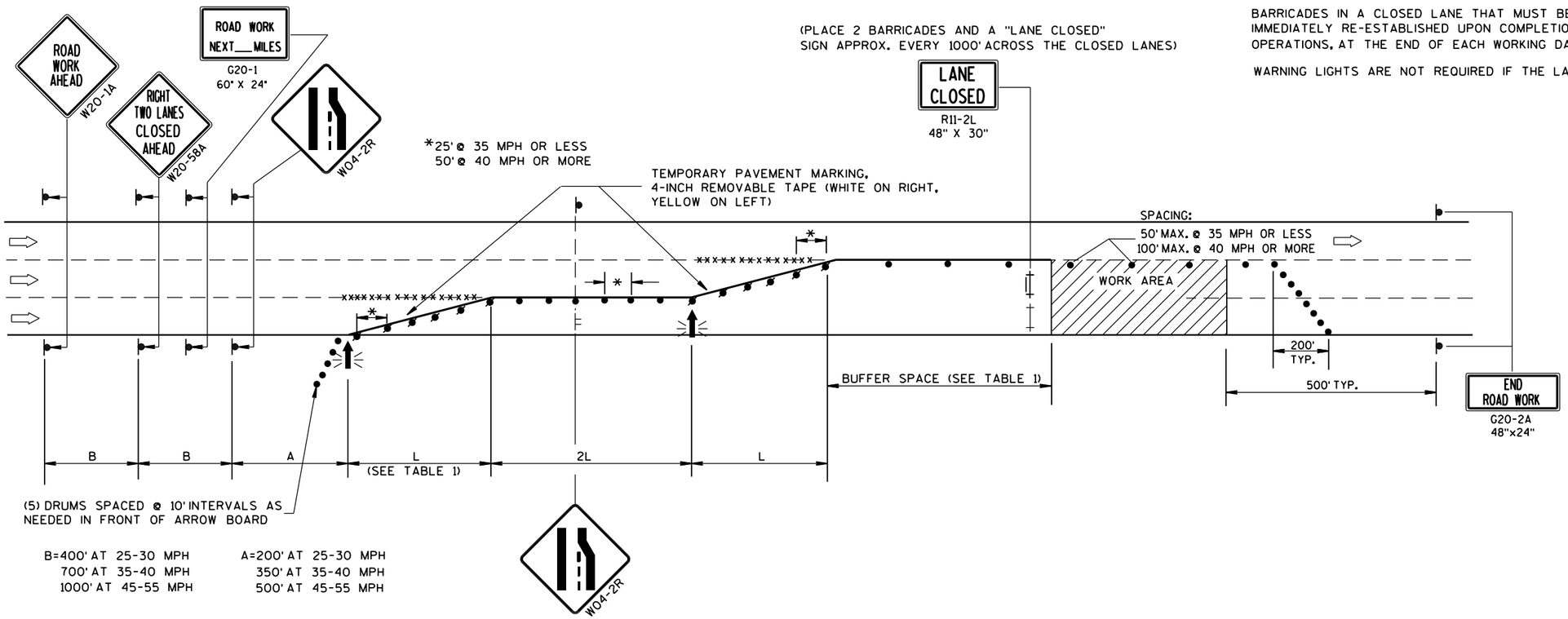
TRAFFIC CONTROL DRUM

FLASHING ARROW BOARD

DIRECTION OF TRAFFIC

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

WORK AREA



B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

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

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

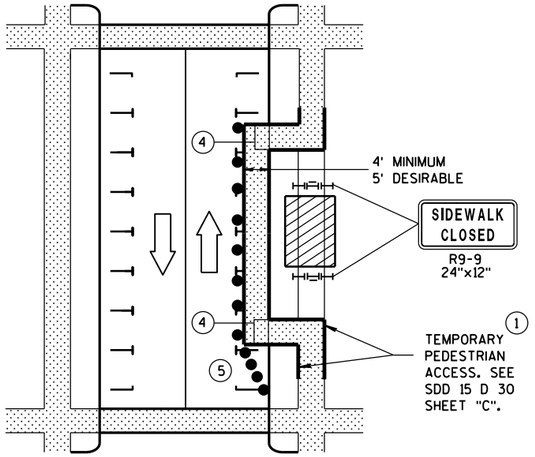
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016
DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

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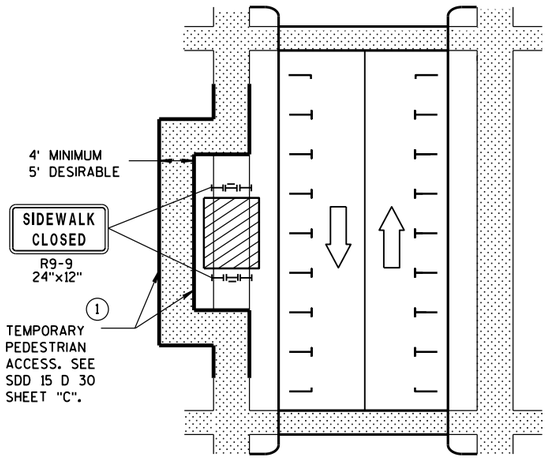
S.D.D. 15 D 22-3

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

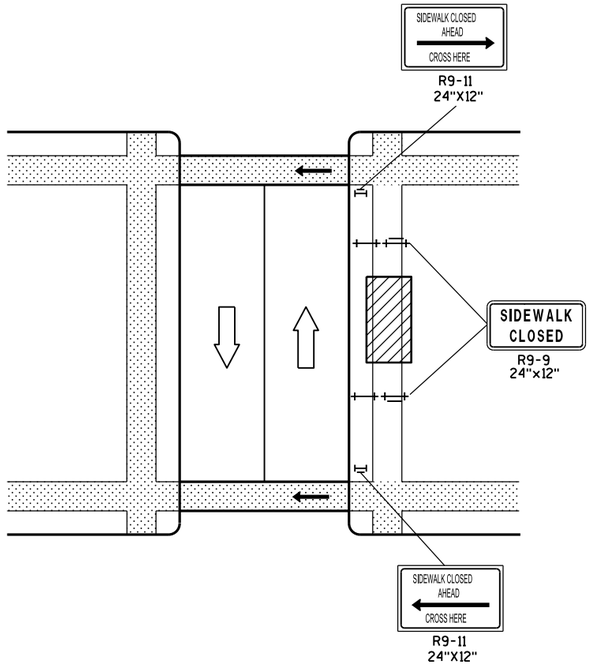


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

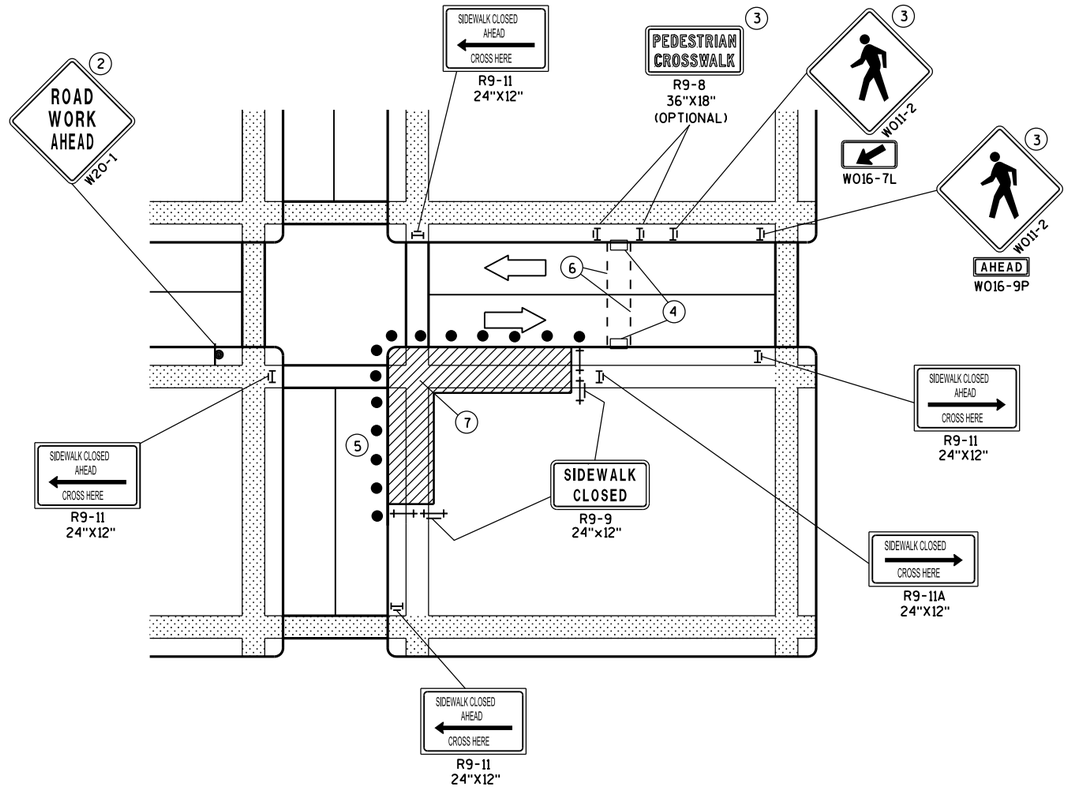
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTTIME CLOSURE USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

(1) IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.

(2) "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.

(3) IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.

(4) TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".

(5) DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.

(6) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.

(7) LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

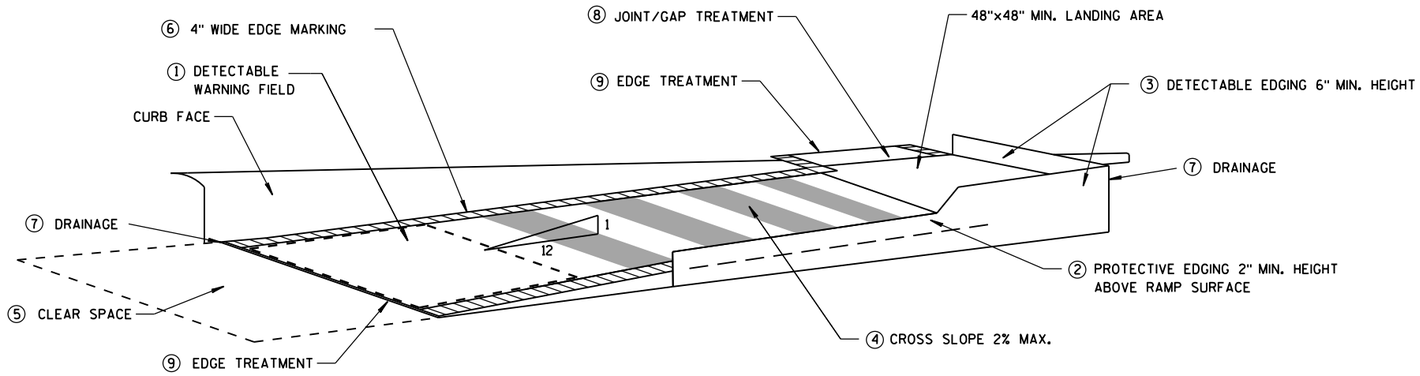
- SIGN ON PERMANENT SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC
- TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 30-3a



TEMPORARY CURB RAMP PARALLEL TO CURB

GENERAL NOTES

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 8D5 SHEET "E".

② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

④ CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

⑤ CLEAR SPACE OF 48"X48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

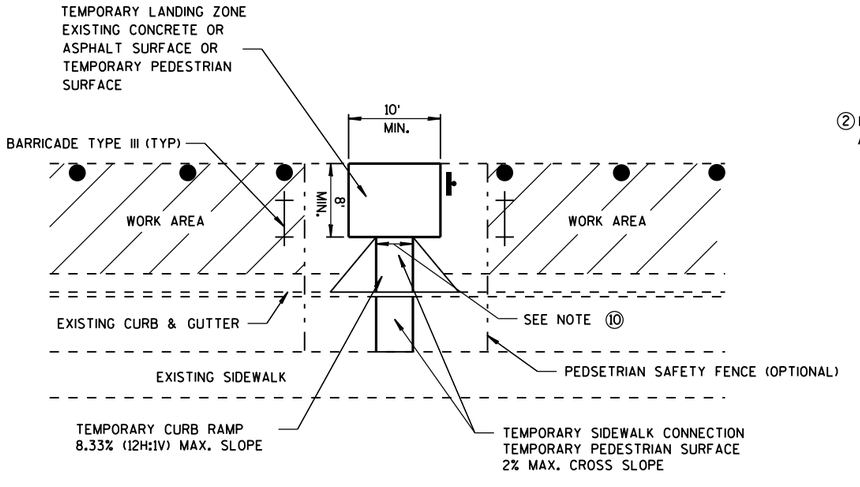
⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.

⑦ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

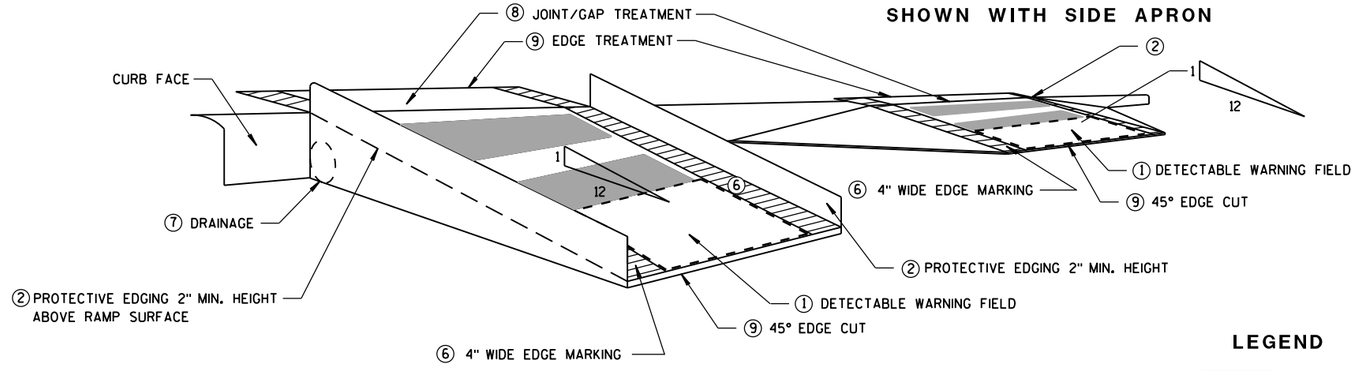
⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

⑩ 5' WIDE MIN. WITH PEDSETRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



TEMPORARY BUS STOP PAD



SHOWN WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

LEGEND

WORK AREA

TYPE III BARRICADE

TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER

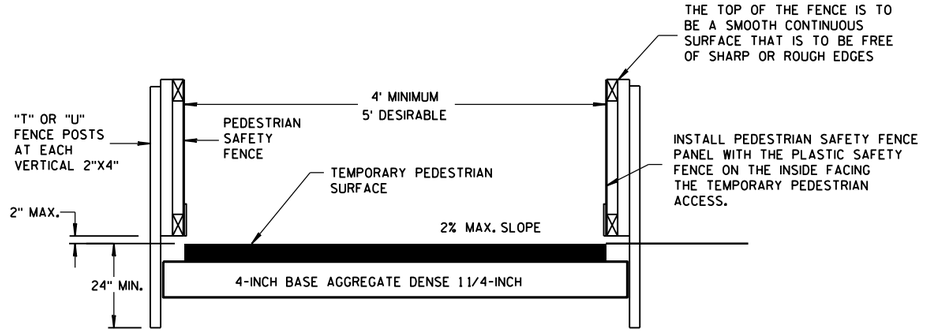
FHWA

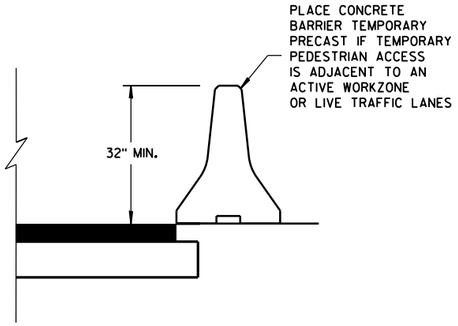
6

S.D.D. 15 D 30-3b

6

S.D.D. 15 D 30-3b

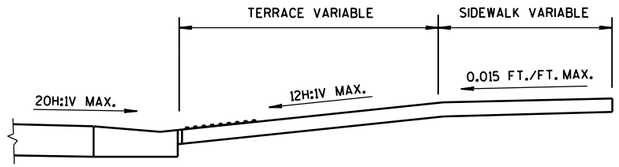




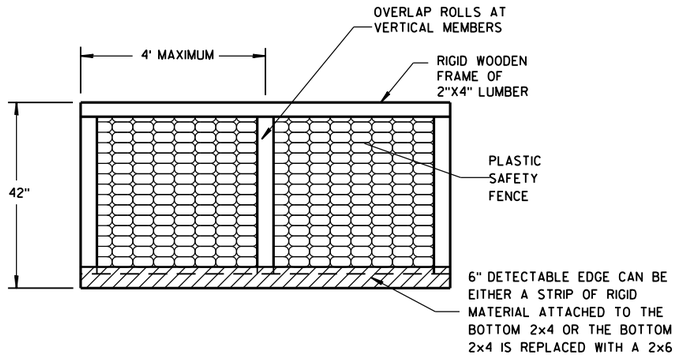
TEMPORARY PEDESTRIAN ACCESS

GENERAL NOTES

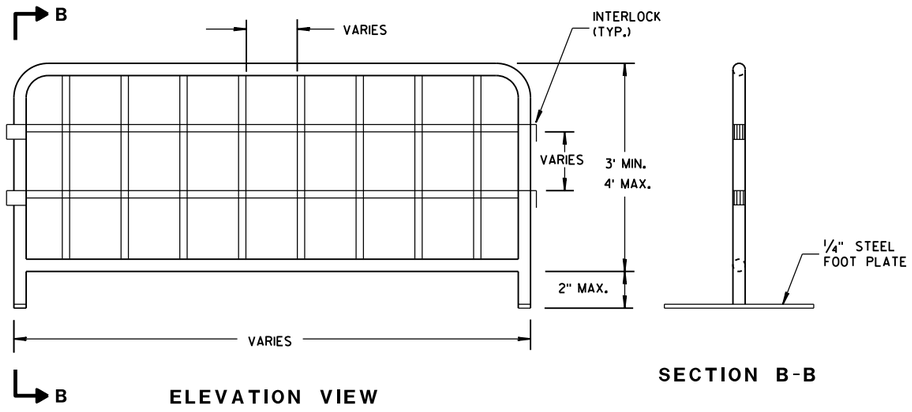
(1) INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.



SECTION A-A



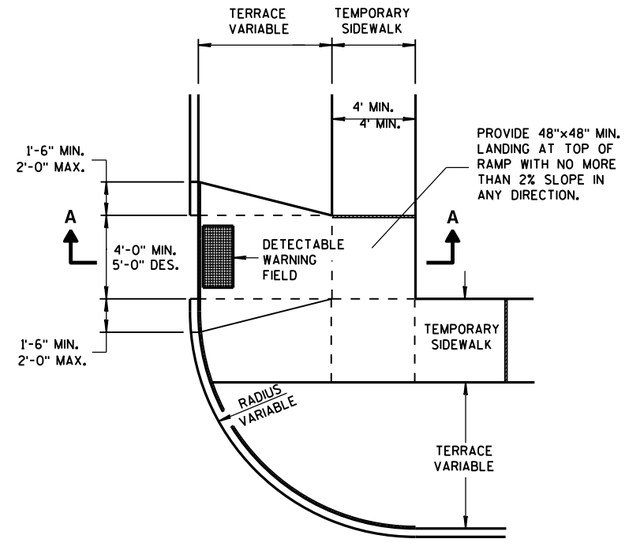
PEDESTRIAN SAFETY FENCE



ELEVATION VIEW

SECTION B-B

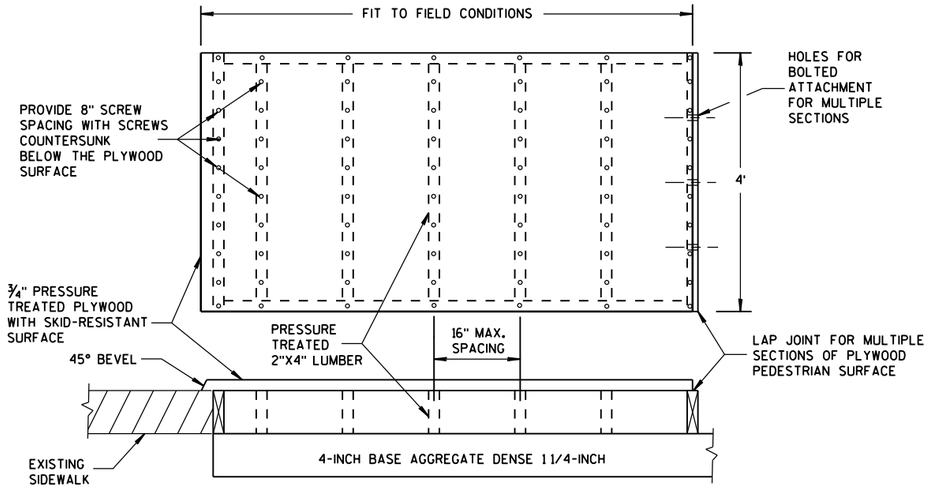
TEMPORARY PEDESTRIAN STEEL BARRICADE (1)



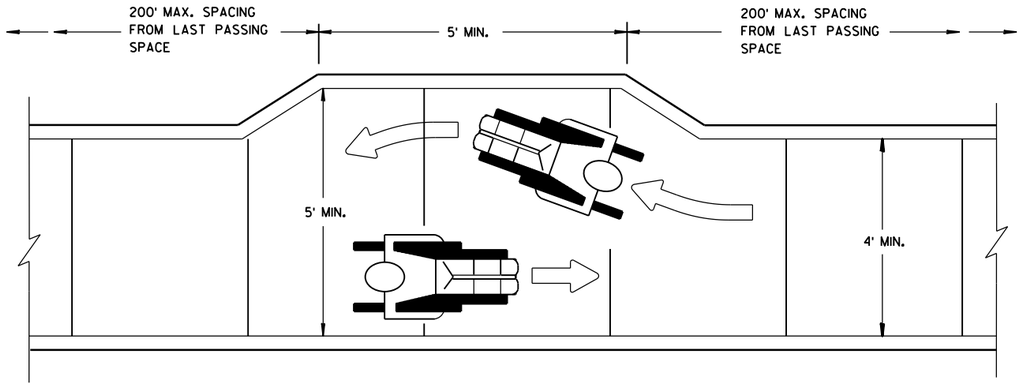
PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



NARROW SIDEWALK PASSING DETAIL

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016
DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZON SAFETY ENGIN IC
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Notes

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