WKE

DEC 2016

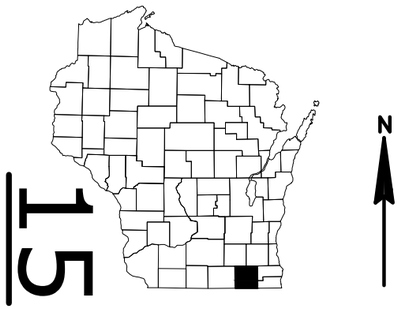
PROJECT ID: 3180-07-60

COUNTY: WALWORTH

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 = 240



DESIGN DESIGNATION

A.A.D.T.	2017	= 5,200
A.A.D.T.	2037	= 6,300
D.H.V.		= 720
D.D.		= 59/41
T.		= 6.0%
DESIGN SPEED		= 55 MPH
ESALS		= 1,030,234

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 OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3180-07-60		

ILLINOIS - LAKE GENEVA

ILLINOIS STATE LINE TO WILLOW ROAD

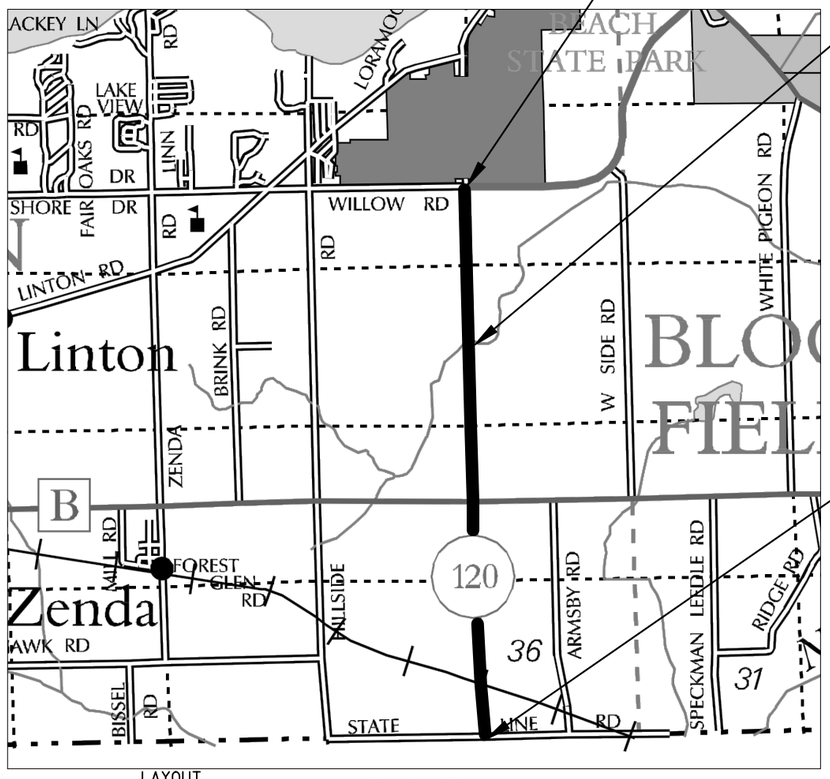
STH 120

WALWORTH COUNTY

STATE PROJECT NUMBER
3180-07-60

END PROJECT
STA. 318+60

STRUCTURE:
B-64-007



T-1-N

BEGIN PEOJECT
STA. 140+06
X = 789794.896
Y = 300805.908

LAYOUT
SCALE 0 1 MILE

R-17-E

TOTAL NET LENGTH OF CENTERLINE = 3.381 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, WALWORTH COUNTY, NAD83 (2011) 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 OF 1988 NAVD 88 (2012).

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	EMCS
Designer	WHEELER & KRMPOTICH
Project Manager	ANDREW WHEELER
Regional Examiner	
Regional Supervisor	JANET CANNON

APPROVED FOR THE DEPARTMENT

DATE: 7/12/16 (Signature)

E

UTILITY & GENERAL CONTACTS:

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COM ED
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EMAIL: LINNFIRE@WI.RR.COM

SEWRPC
JOHN WASHBURN
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WE ENERGIES (GAS OPERATIONS)
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BURLINGTON, WI 53105
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WISCONSIN & SOUTHERN RAILROAD COMPANY
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WISDOT - PROJECT MANAGER
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GENERAL NOTES:

COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

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

EXISTING DRIVEWAY AND FIELD ENTRANCE SURFACES SHALL BE RESTORED IN-KIND AS DIRECTED BY THE ENGINEER.

MAINTAIN ACCESS TO ALL DRIVEWAYS AND BUSINESSES AT ALL TIMES.

PLACE ALL TRAFFIC CONTROL DEVICES PRIOR TO BEGINNING ANY WORK ON THE ROADWAY.

WHEN TEMPORARY PAVEMENT MARKING REMOVABLE TAPE IS REQUIRED, IT SHALL BE CUT THROUGH IT'S FULL WIDTH AND THICKNESS AT 25 FOOT INTERVALS.

LANDMARK REFERENCE MONUMENTS EXIST IN THE EXISTING ROADWAY. DO NOT DISTURB.

ALL DISTRUBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE TOPSOILED, SEEDED, AND EROSION MATTED AS DIRECTED BY THE ENGINEER.

DO NOT USE FERTILIZER WITHIN 20 FEET OF WATERWAYS OR WETLAND AREAS.

USE SEED MIXTURE NO. 60 FOR WETLAND AREAS AND WITHIN 20 FEET OF WETLAND AREAS.

IF AN EXISTING SIGN IS TO BE REMOVED AND REPLACED WITH A NEW SIGN, DO NOT REMOVE THE EXISTING SIGN PRIOR TO INTALLATION OF THE NEW SIGN.

EXISTING MAILBOXES AND SIGNS SHALL REMAIN IN PLACE. PROTECT FROM DAMAGE AND COMPLETE SHOULDER WORK AROUND THESE ITEMS.

FOR GRADING AREA ADJACENT TO OR CONTAINING WETLANDS, FLOODPLAINS, OR WATERWAYS, COMPLETE ROUGH GRADING THROUGH FINISHED LANDSCAPING WITHIN FOURTEEN (14) CALENDAR DAYS.

FOR ALL OTHER GRADING AREAS, IF THE DURATION FROM BEGINNING ROUGH GRADING TO COMPLETING FINAL LANDSCAPING WILL BE LONGER THAN 14 DAYS, WITHIN 3 DAYS OF BEGINNING ROUGH GRADING SEED THE AREA WITH TEMPORARY SEED AND MULCH.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLAND, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS TO BE LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED AND MULCH WITHIN 3 DAYS OF CREATION.

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

CONTACT THE PROJECT ENGINEER AND SEWRPC (JOHN WASHBURN), AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENT.

2

HMA PAVING

LOCATION		THICKNESS	HMA TYPE
STH 120	UPPER LAYER	2 1/2 - INCH	4 LT 58-28 S
STH 120 UNDER WISCONSIN AND SOUTHERN RAILROAD	UPPER LAYER	2 - INCH	4 LT 58-28 S
STH 120 RR (STA 157+55 - STA 158+85)	UPPER LAYER	2 - INCH	4 LT 58-28 S
	LOWER LAYER	3 1/2 - INCH	3 LT 58-28 S

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

2

APPROXIMATE
WISCONSIN-ILLINOIS
BORDER

120 130 140 150 160 170 180 190 200 210 220 23

IL47

STH120

BEGIN PROJECT
STA 140+06

STATE LINE
ROAD

WISCONSIN &
SOUTHERN
RAILROAD
BRIDGE (B-64-671)

CTH B

N

30 240 250 260 270 280 290 300 310 320 330 340 350

STH 120

WILLOW ROAD

WEST BRANCH
NORTH BRANCH
NIPPERSINK CREEK
BRIDGE (B-64-007)
POLYMER MODIFIED ASPHALT OVERLAY

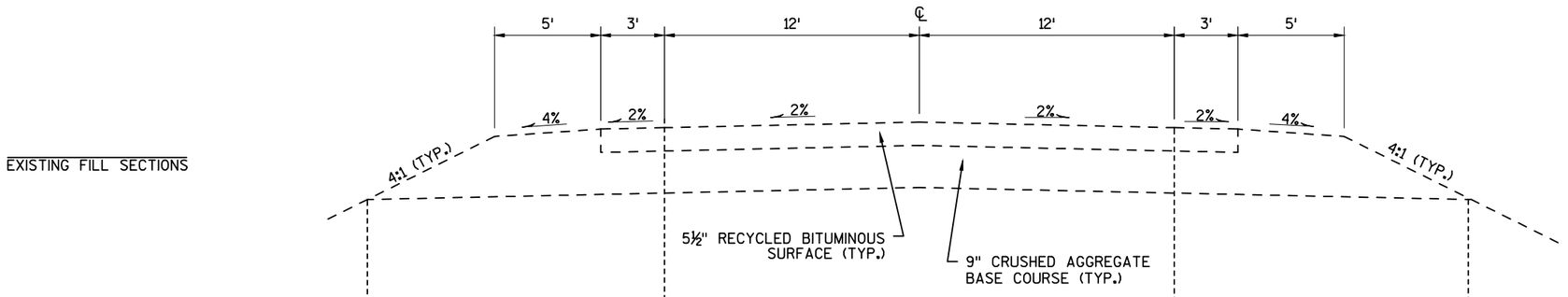
END PROJECT
STA 318+60

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PROJECT OVERVIEW	SHEET 3	E

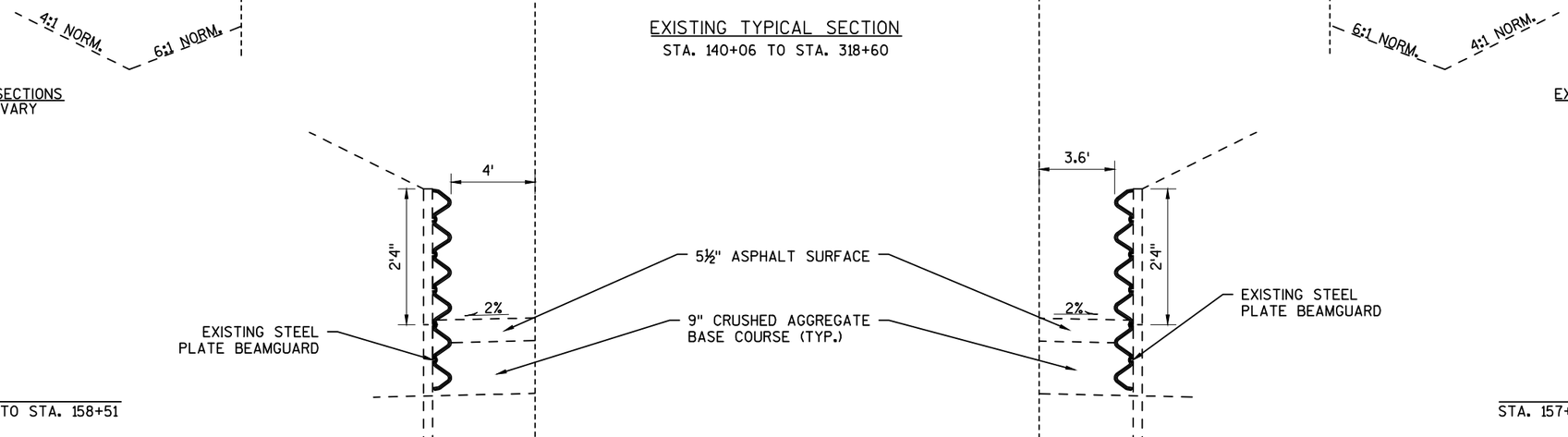
2

EXISTING FILL SECTIONS

EXISTING FILL SECTIONS



EXISTING TYPICAL SECTION
STA. 140+06 TO STA. 318+60

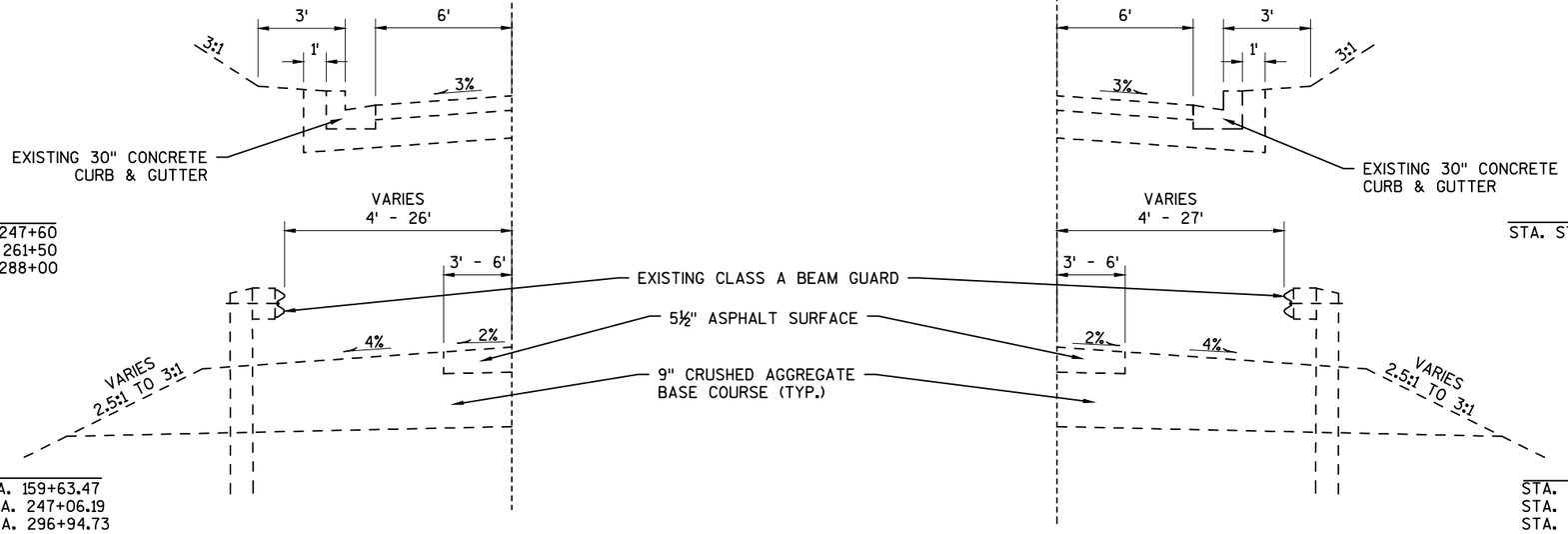


EXISTING CUT SECTIONS
STA. LIMITS VARY

EXISTING CUT SECTIONS
STA. LIMITS VARY

STA. 157+88.5 TO STA. 158+51

STA. 157+75 TO STA. 158+37.5



STA. 241+50 TO STA. 247+60
STA. 256+50 TO STA. 261+50
STA. 281+50 TO STA. 288+00

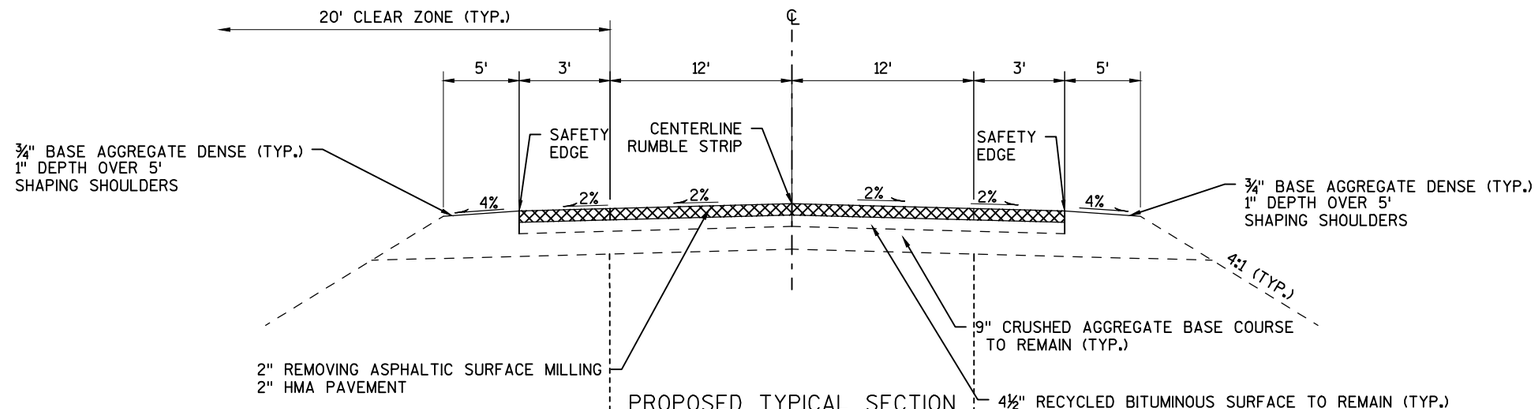
STA. STA. 254+50 TO STA. 262+20

STA. 156+79.24 TO STA. 159+63.47
STA. 272+39.67 TO STA. 247+06.19
STA. 293+05.85 TO STA. 296+94.73

STA. 156+63.85 TO STA. 159+45.17
STA. 272+42.08 TO STA. 274+10.67
STA. 293+03.13 TO STA. 296+97.74

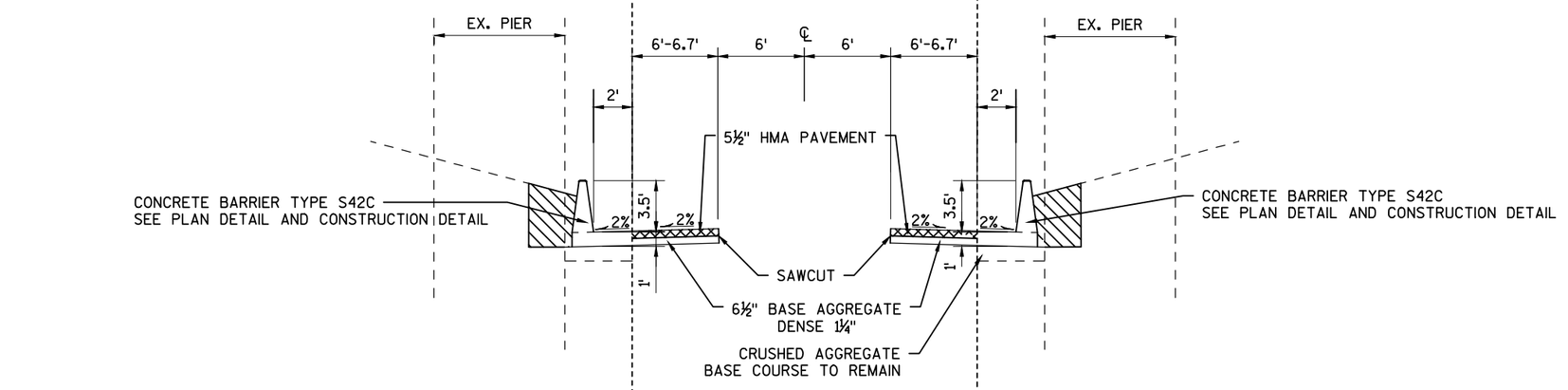
PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	TYPICAL SECTIONS	SHEET 4	E

2



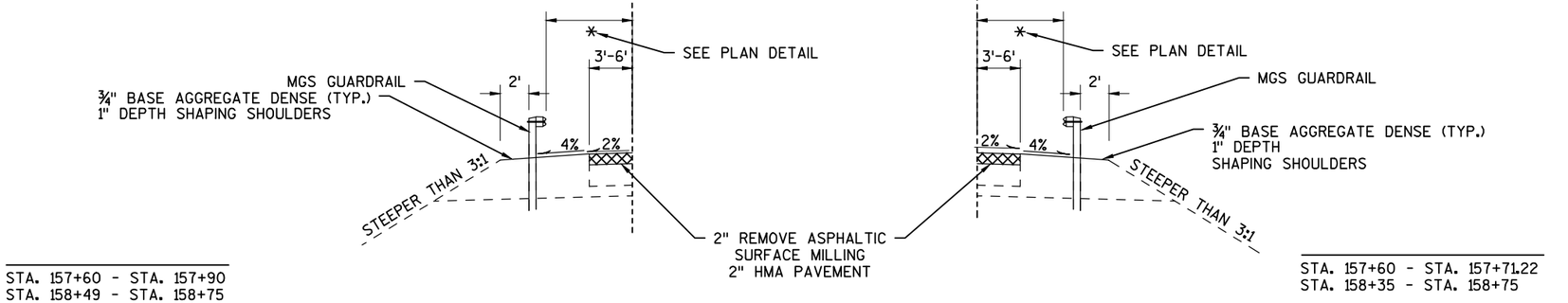
PROPOSED TYPICAL SECTION

STA. 140+00 - STA. 140+66
STA. 157+60 - STA. 158+75



STA. 157+90 - STA. 158+49 (BARRIER LIMITS)
STA 157+55 - STA. 158+85 (FULL DEPTH PAVING LIMITS)

STA. 157+71.22 - STA. 158+35 (BARRIER LIMITS)
STA. 157+67.30 - STA. 158+40 (FULL DEPTH PAVING LIMITS)

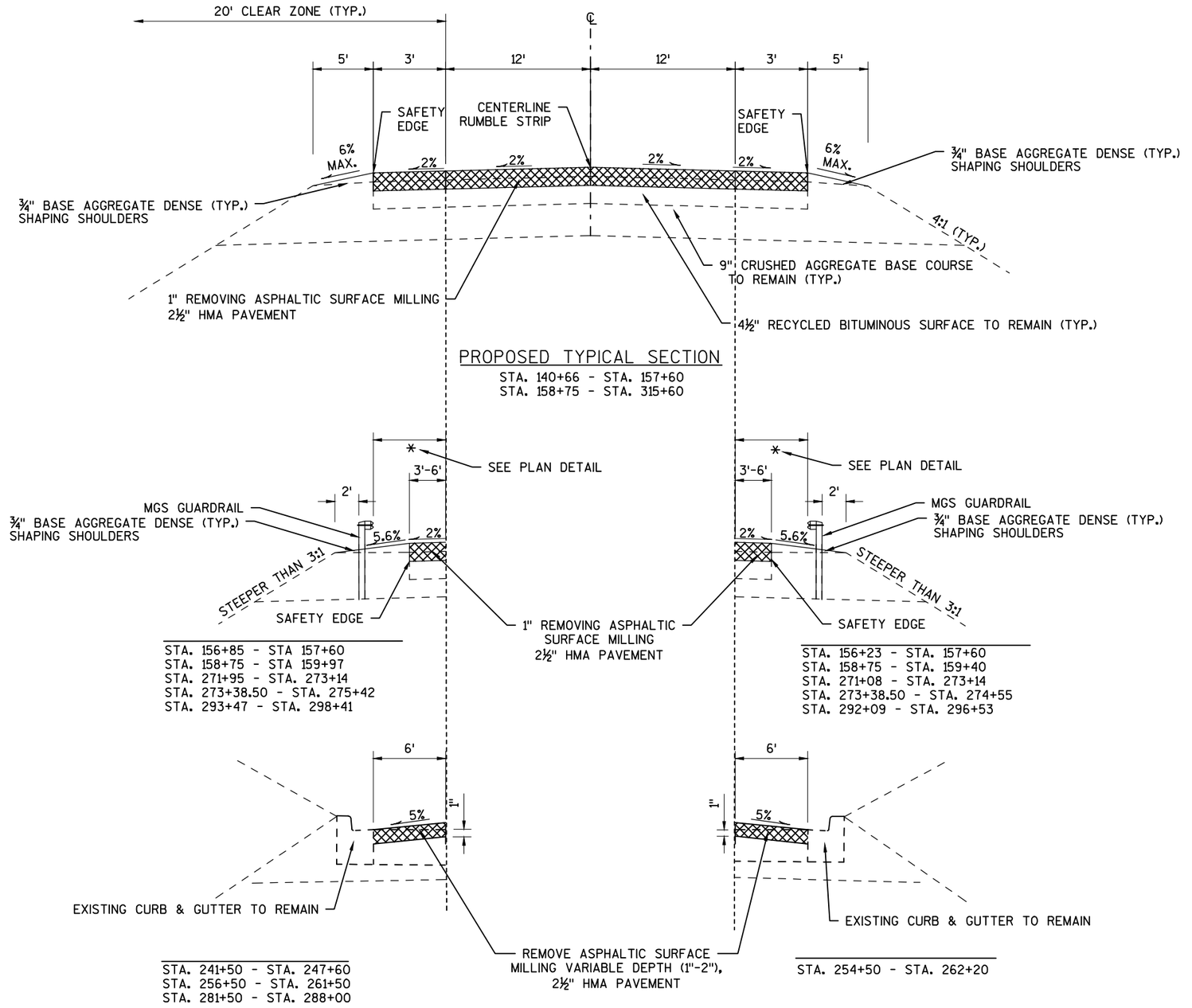


STA. 157+60 - STA. 157+90
STA. 158+49 - STA. 158+75

STA. 157+60 - STA. 157+71.22
STA. 158+35 - STA. 158+75

NOTE:
SEE CONSTRUCTION DETAILS FOR ASPHALT PAVING DEPTH AND SLOPE TRANSITIONS.

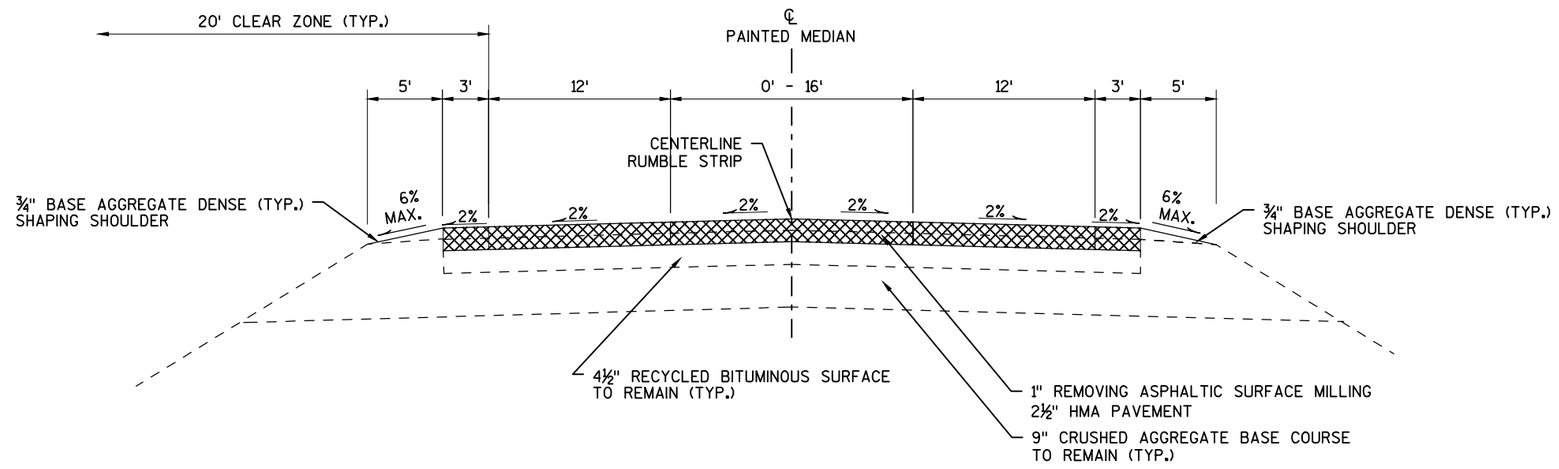
PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	TYPICAL SECTIONS	SHEET 5	E



NOTE:
SEE CONSTRUCTION DETAILS FOR ASPHALT PAVING DEPTH AND SLOPE TRANSITIONS.

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	TYPICAL SECTIONS	SHEET 6	E

2



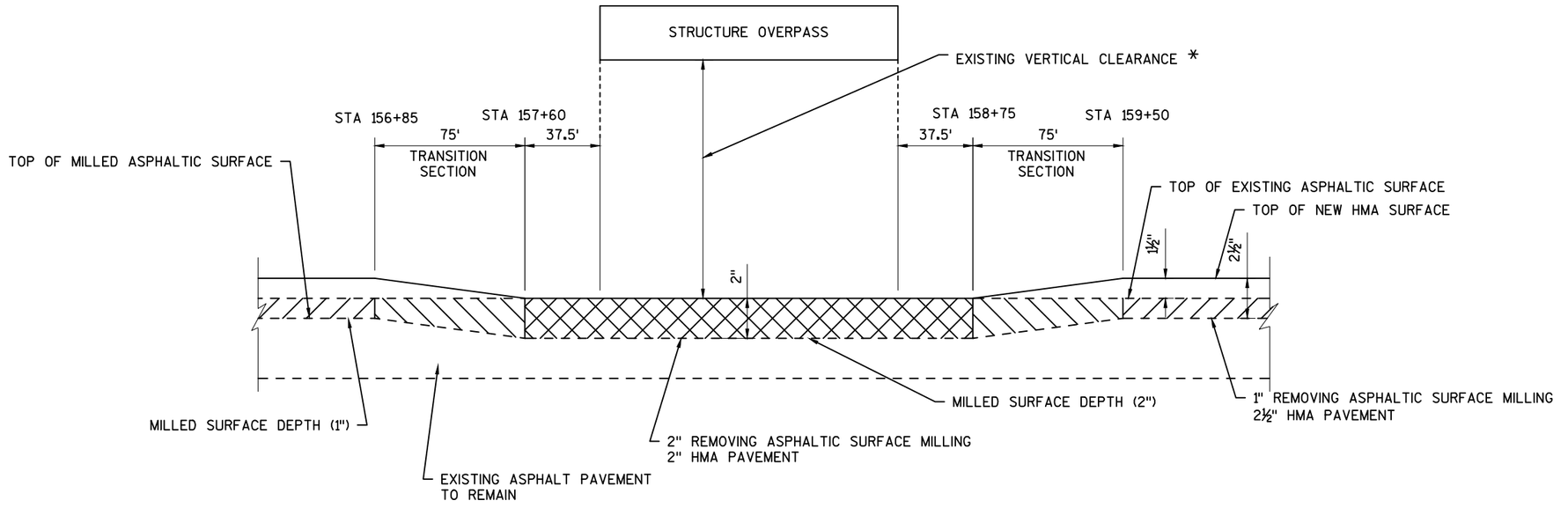
PROPOSED TYPICAL SECTION

STA. 315+60 - STA. 318+60

NOTE:

SEE CONSTRUCTION DETAILS FOR ASPHALT PAVING DEPTH AND SLOPE TRANSITIONS.

2



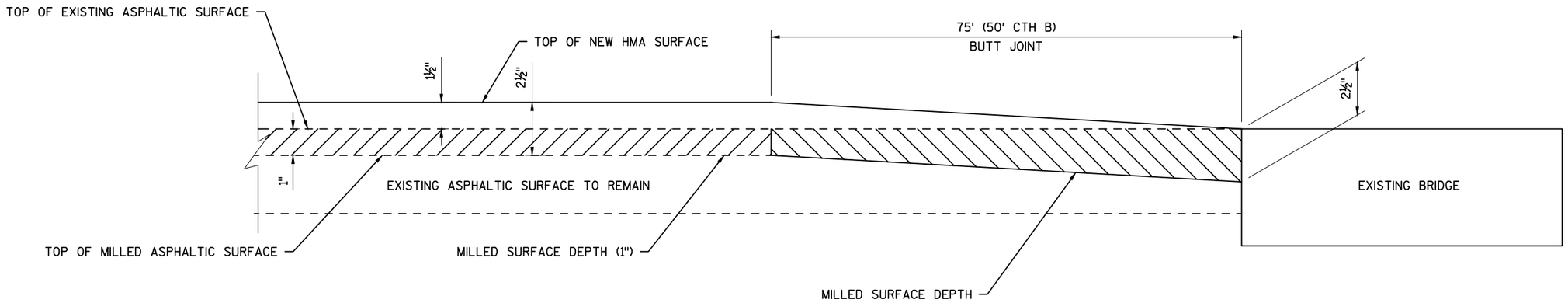
B-64-671 UNDERPASS CLEARANCE CORRECTION

NOTE:
*THE EXISTING MINIMUM VERTICAL CLEARANCE AT THE B-64-671 UNDERPASS STRUCTURE (14.92') MUST BE MAINTAINED

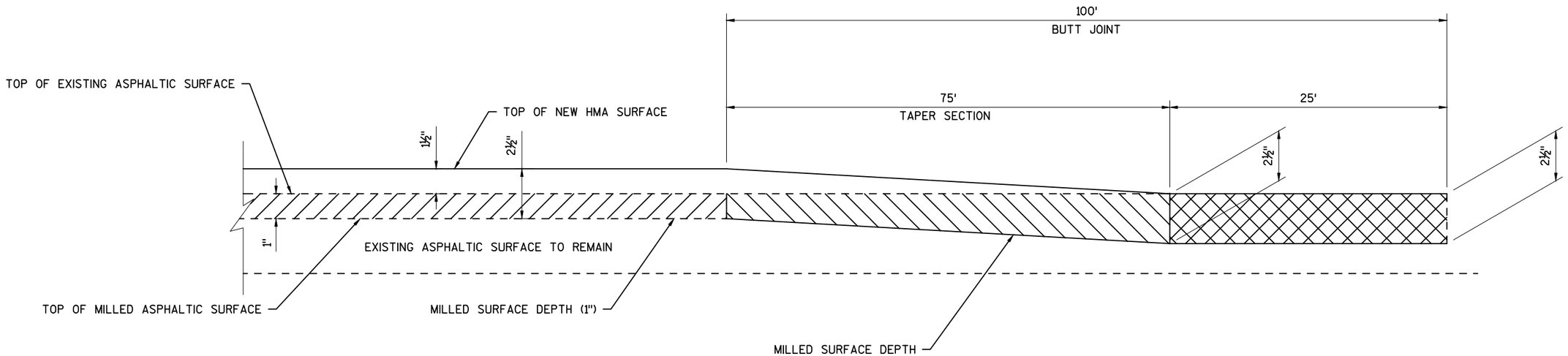
TRANSITION SECTIONS
REMOVING ASPHALTIC SURFACE MILLING
VARIES 1" TO 2" HMA PAVEMENT VARIES 2½" TO 2"

LEGEND

- REMOVING ASPHALTIC SURFACE MILLING 1"
- REMOVING ASPHALTIC SURFACE MILLING 2"
- REMOVING ASPHALTIC SURFACE MILLING VARIABLE DEPTH 1-2"



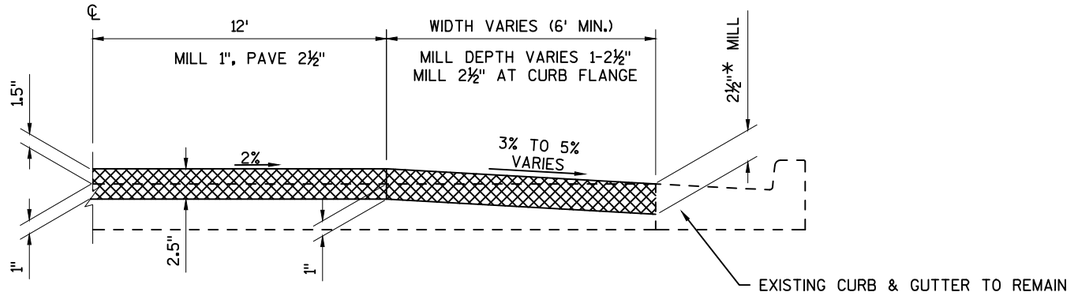
BUTT JOINT DETAIL: B-64-007 AND CTH B



BUTT JOINT DETAIL: NORTH PROJECT LIMITS - STH 120

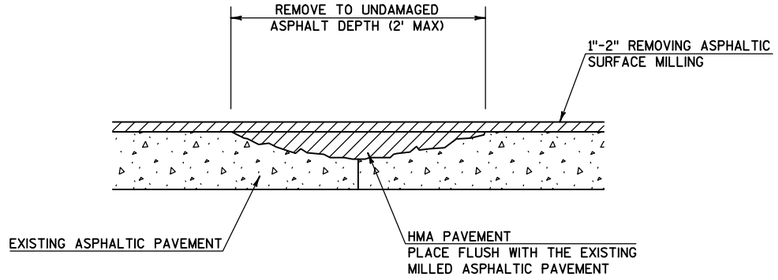
LEGEND

- REMOVING ASPHALTIC SURFACE MILLING 1"
- REMOVING ASPHALTIC SURFACE MILLING 2½"
- REMOVING ASPHALTIC SURFACE MILLING VARIABLE DEPTH 1-2½"



*TRANSITION FROM 1" TO 2½" DEPTH OVER 50' INTO AND OUT OF CURB AND GUTTER, DO NOT OVELAY PAN

MILLING AND PAVING ABUTTING CURB & GUTTER DETAIL

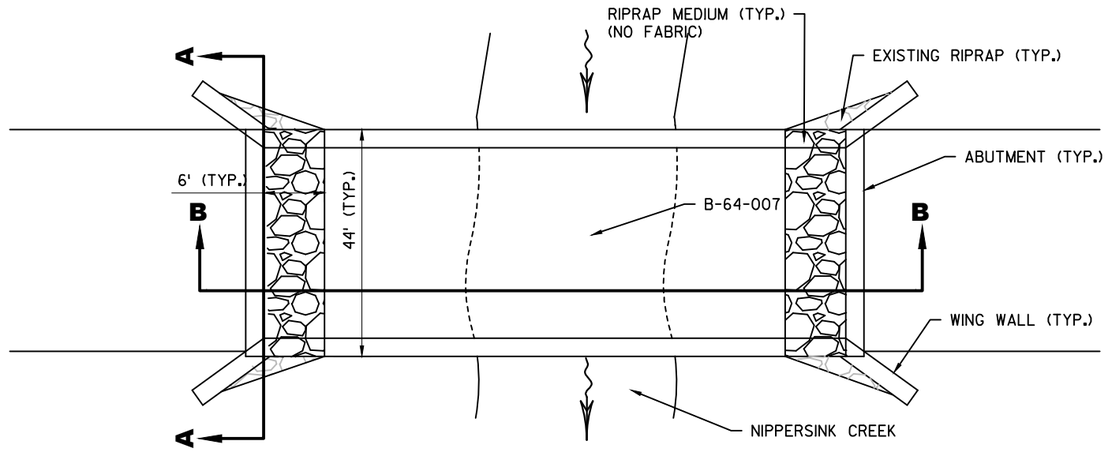


JOINT AND CRACK REPAIR DETAIL

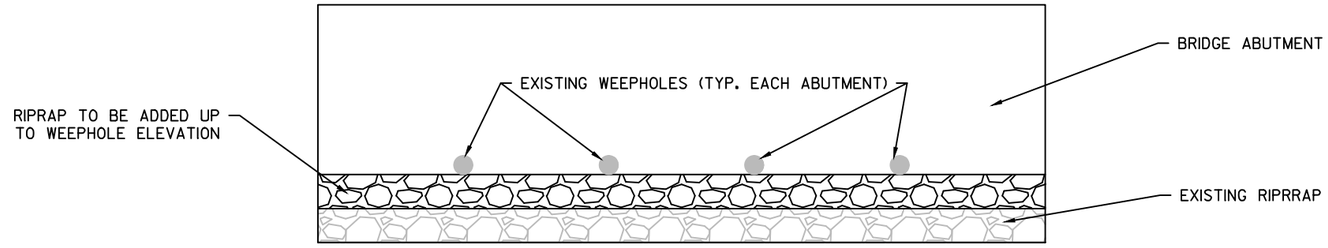
2

*RIPRAP SHALL BE PLACED VIA NON-MECHANICAL METHODS TO AVOID SENSITIVE AREA DISTURBANCE. LIMITS SHOWN ON DETAIL ARE APPROXIMATE, LIMITS WILL BE DETERMINED BY ENGINEER DURING CONSTRUCTION.

CONTRACTOR ACCESS FROM SE AND NE WING WALL ONLY.

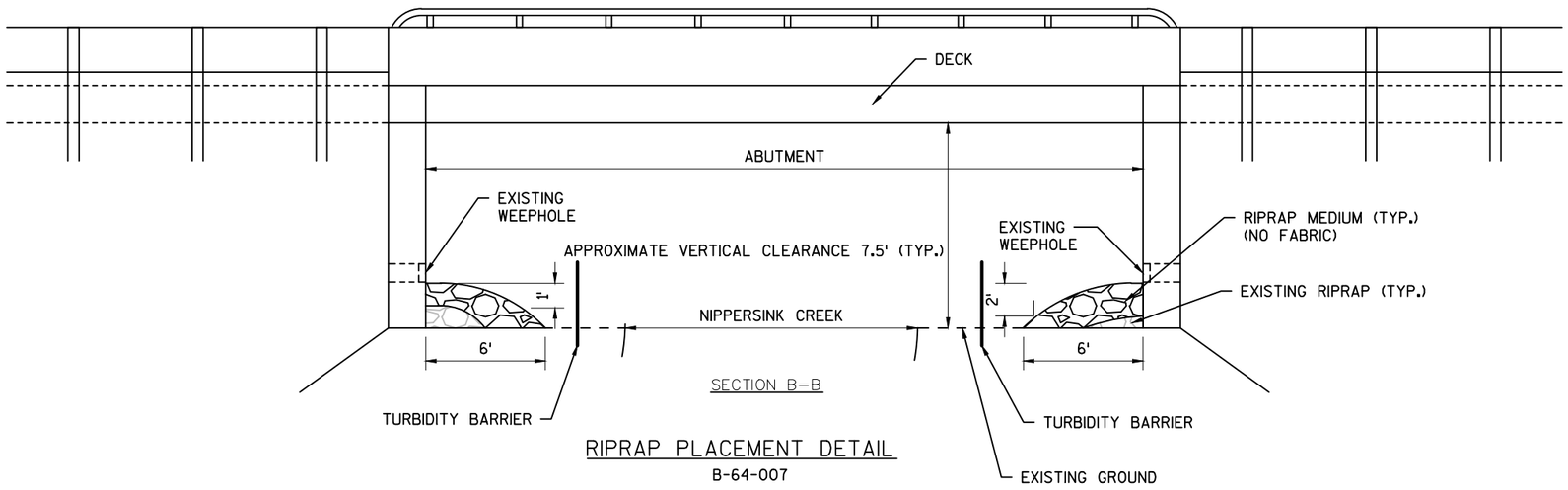


PLAN



ELEVATION

SECTION A–A



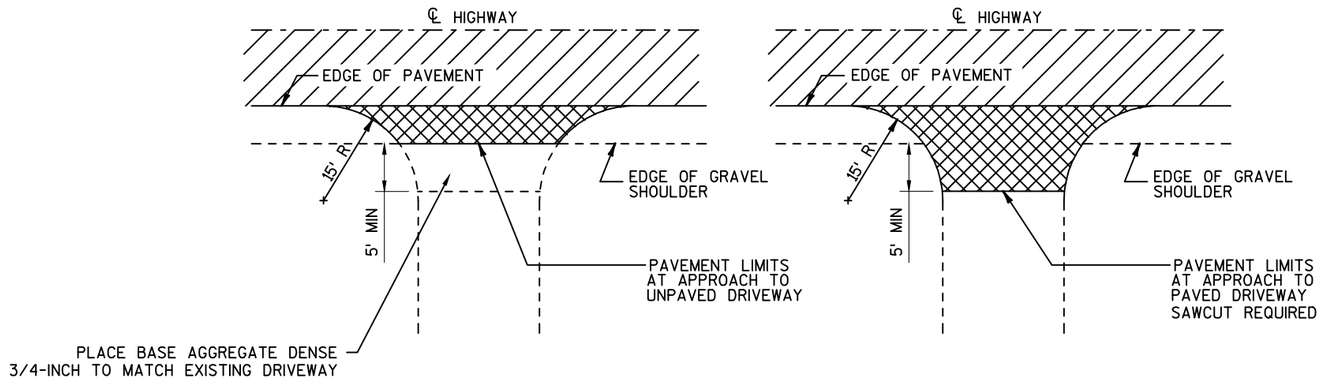
ELEVATION

RIPRAP PLACEMENT DETAIL

B-64-007

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CONSTRUCTION DETAILS	SHEET 11	E

2



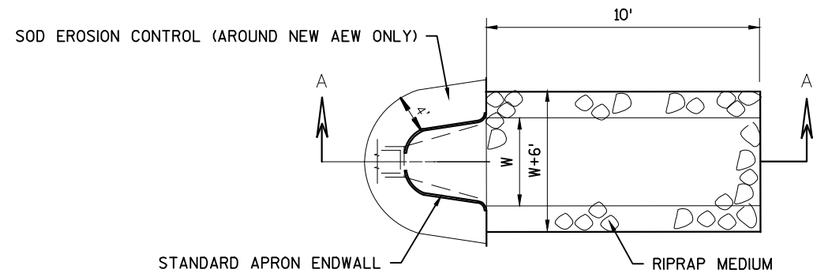
RURAL DRIVEWAY DETAIL

NOTE:
DRIVEWAY SURFACE TO BE SAME AS EXISTING WITH MINIMUM SECTION OF 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES.
PLACE BASE AGGREGATE DENSE 3/4-INCH UNDER ASPHALT DRIVEWAYS AS NEEDED TO MATCH ROADWAY ELEVATION.

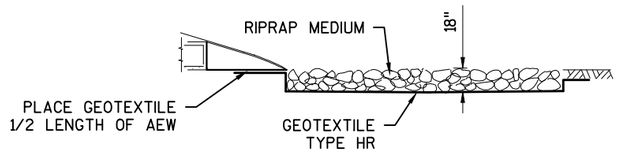
HMA PAVEMENT

3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

2



PLAN VIEW



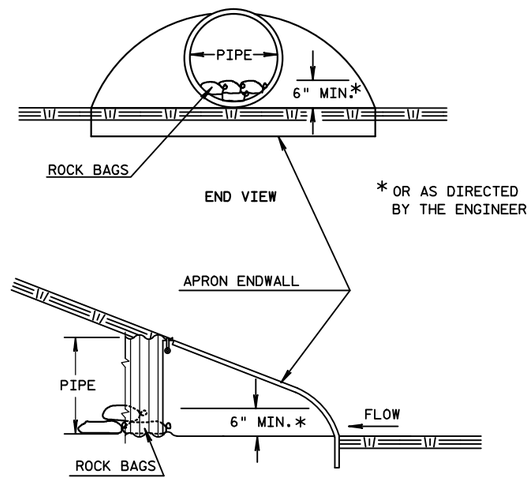
SECTION A–A

NOTE:

PLACE RIPRAP AT AEW OUTLETS

AT AEW INLET, PLACE ONLY SOD EROSION CONTROL

APRON ENDWALL DETAIL



SIDE VIEW

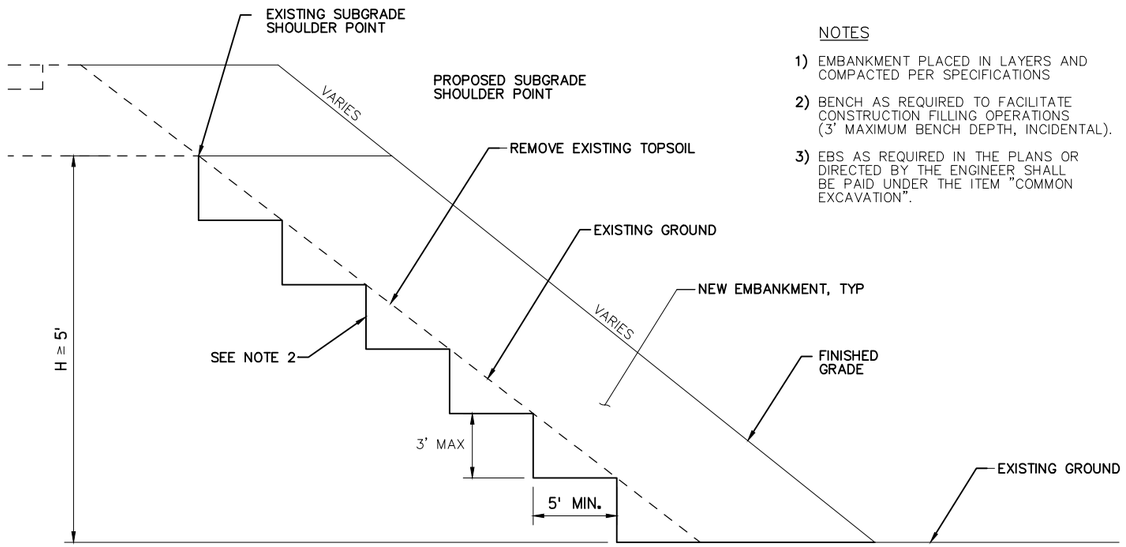
PIPE SIZE (IN)	# BAGS
24"	2

CULVERT PIPE ENDS

ROCK BAGS

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CONSTRUCTION DETAIL	SHEET 13	E

2



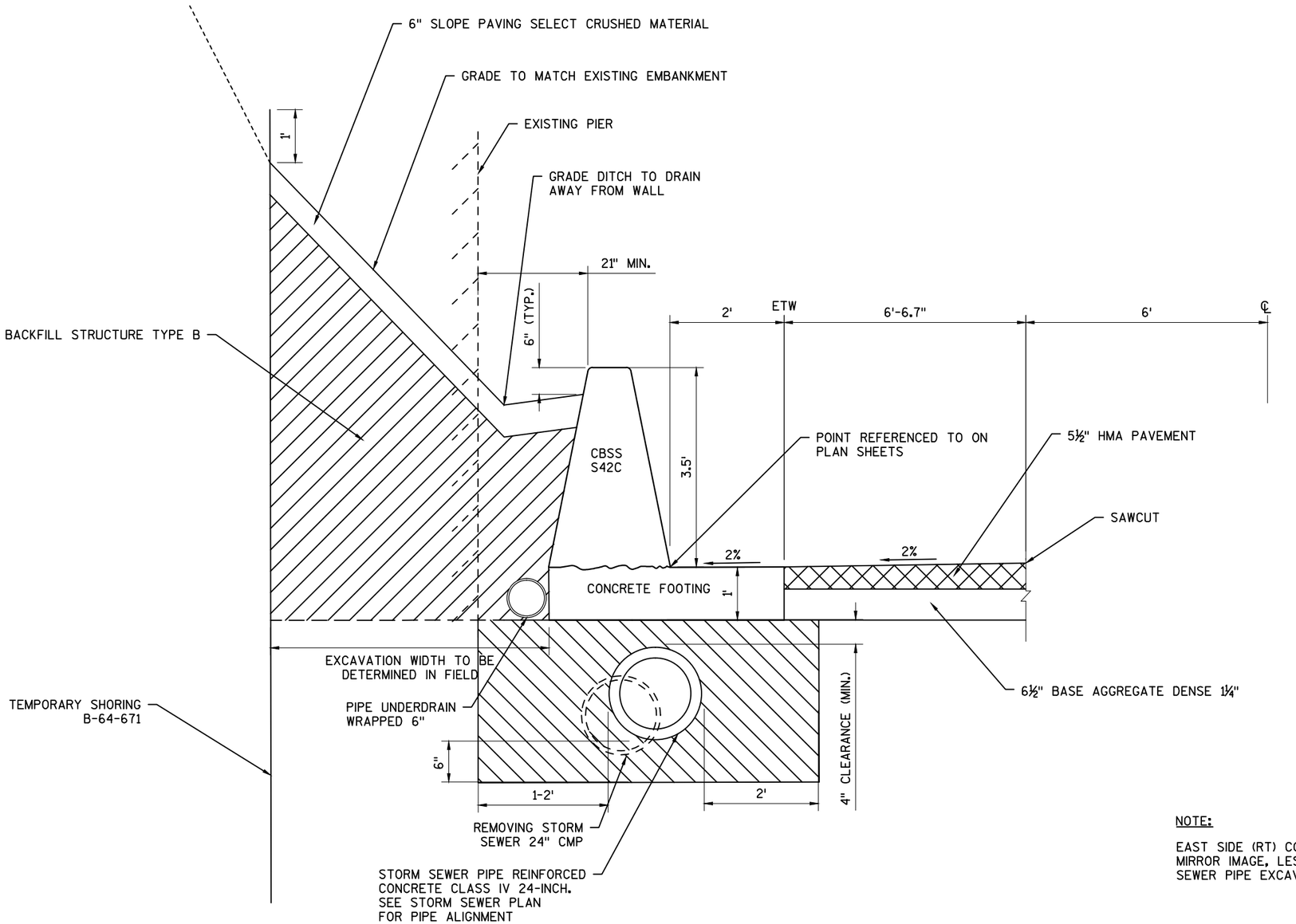
NOTES

1) EMBANKMENT PLACED IN LAYERS AND COMPACTED PER SPECIFICATIONS
2) BENCH AS REQUIRED TO FACILITATE CONSTRUCTION FILLING OPERATIONS (3' MAXIMUM BENCH DEPTH, INCIDENTAL).
3) EBS AS REQUIRED IN THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE PAID UNDER THE ITEM "COMMON EXCAVATION".

STEPPED EMBANKMENT

FOR FILLS OF 5 FEET OR GREATER AGAINST SLOPES 3:1 OR STEEPER

2



NOTE:

EAST SIDE (RT) CONCRETE BARRIER TYPE S42C DETAIL IS MIRROR IMAGE, LESS STORM SEWER PIPE(S) AND STORM SEWER PIPE EXCAVATION

WEST SIDE (LT) STH 120

CONCRETE BARRIER S42C/
ROADSIDE RETAINING WALL

2

N

WETLAND BOUNDARY (TYP.)

OUTLET AEW
SEE CONSTRUCTION DETAIL
FOR EROSION CONTROL

TOPSOIL, SEED NO. 60

SLOPE INTERCEPT

TOPSOIL, SEED NO. 60

INLET AEW
SEE CONSTRUCTION DETAIL
FOR EROSION CONTROL

WETLAND BOUNDARY (TYP.)

SLOPE INTERCEPT

+85
21' LT

+65
27' LT

+17
26' LT

STH 120

155+00 156+00 157+00 158+00 159+00 160+00 161+00

STH 120

STH 120 ℄

+85
24' RT

+64
28' RT

+20
24' RT

OH

WETLAND BOUNDARY (TYP.)

WISCONSIN AND SOUTHERN RAILROAD

SLOPE INTERCEPT

TEMP. SEED, TOPSOIL, FERTILIZER TYPE B, SEED NO. 30
(INCLUDED IN BARRIER SYSTEM GRADING, SHAPING FINISHING)

LEGEND

- RIPRAP MEDIUM
- SILT FENCE
- CULVERT PIPE CHECKS
- TURBIDITY BARRIER
- TEMPORARY DITCH CHECKS
- EROSION MAT CLASS I TYPE B
- TEMPORARY SHORING B-64-671
- SURFACE WATER FLOW

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	EROSION CONTROL - WISCONSIN AND SOUTHERN RAILROAD	SHEET 16	E

FILE NAME : N:\PDS\C3D\CAD\31800760\022001A_EC.DWG
LAYOUT NAME - 022001_EC

PLOT DATE : 4/27/2016 10:56 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : _____ PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

SEE DETAIL, NEXT SHEET

TOPSOIL, SEED NO. 60
(INCLUDED IN BARRIER SYSTEM GRADING, SHAPING FINISHING)

WETLAND BOUNDARY (TYP.)

+96
34' LT

SLOPE INTERCEPT

+40
34' LT

+50
29' LT

NIPPERSINK CREEK

WETLAND BOUNDARY (TYP.)

TEMP. SEED, TOPSOIL, FERTILIZER TYPE B, SEED NO. 30
(INCLUDED IN BARRIER SYSTEM GRADING, SHAPING FINISHING)

SLOPE INTERCEPT

+99
38' LT

+80
28' LT

271+00 272+00 273+00 274+00 STH 120 275+00 276+00

STH 120

STH 120 ℄

SLOPE INTERCEPT

WETLAND BOUNDARY (TYP.)

SLOPE INTERCEPT

WETLAND BOUNDARY (TYP.)

LEGEND

- RIPRAP MEDIUM
- SILT FENCE
- CULVERT PIPE CHECKS
- TURBIDITY BARRIER
- TEMPORARY DITCH CHECKS
- EROSION MAT CLASS I TYPE B
- TEMPORARY SHORING B-64-671
- SURFACE WATER FLOW

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	EROSION CONTROL - NIPPERSINK CREEK	SHEET 17	E

FILE NAME : N:\PDS\C3D\CAD\31800760\022001A_EC.DWG
LAYOUT NAME - 022002_EC

PLOT DATE : 4/27/2016 10:56 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : _____ PLOT SCALE : 1 IN:40 FT

NOTE: SEE CONSTRUCTION DETAIL

WETLAND BOUNDARY (TYP.)

+08
28' LT

SLOPE INTERCEPT

TOPSOIL, SEED NO. 60
(INCLUDED IN BARRIER SYSTEM GRADING, SHAPING, FINISHING)

PLACE RIPRAP MEDIUM
SEE CONSTRUCTION DETAIL

NIPPERSINK CREEK

+50
39' LT

+43
28' LT

+75
27' LT

SLOPE INTERCEPT (TYP.)

WETLAND BOUNDARY (TYP.)

TOPSOIL, SEED NO. 60
(INCLUDED IN BARRIER SYSTEM GRADING, SHAPING, FINISHING)

PLACE RIPRAP MEDIUM
SEE CONSTRUCTION DETAIL

NOTE:
NO CONTRACTION ACCESS TO PLACE
RIPRAP FROM WEST SIDE OF STH 120

STH 120 273+00 274+00

7' MIN

STH 120 ℄

TOPSOIL, SEED NO. 60
(INCLUDED IN BARRIER SYSTEM GRADING, SHAPING, FINISHING)

SLOPE INTERCEPT (TYP.)

CONTRACTOR ACCESS POINT

+78
25' RT

+44
28' RT

+50
36' RT

WETLAND BOUNDARY (TYP.)

CONTRACTOR ACCESS POINT

SLOPE INTERCEPT

WETLAND BOUNDARY (TYP.)

LEGEND

- RIPRAP MEDIUM
- SILT FENCE
- CULVERT PIPE CHECKS
- TURBIDITY BARRIER
- TEMPORARY DITCH CHECKS
- EROSION MAT CLASS I TYPE B
- TEMPORARY SHORING B-64-671
- SURFACE WATER FLOW

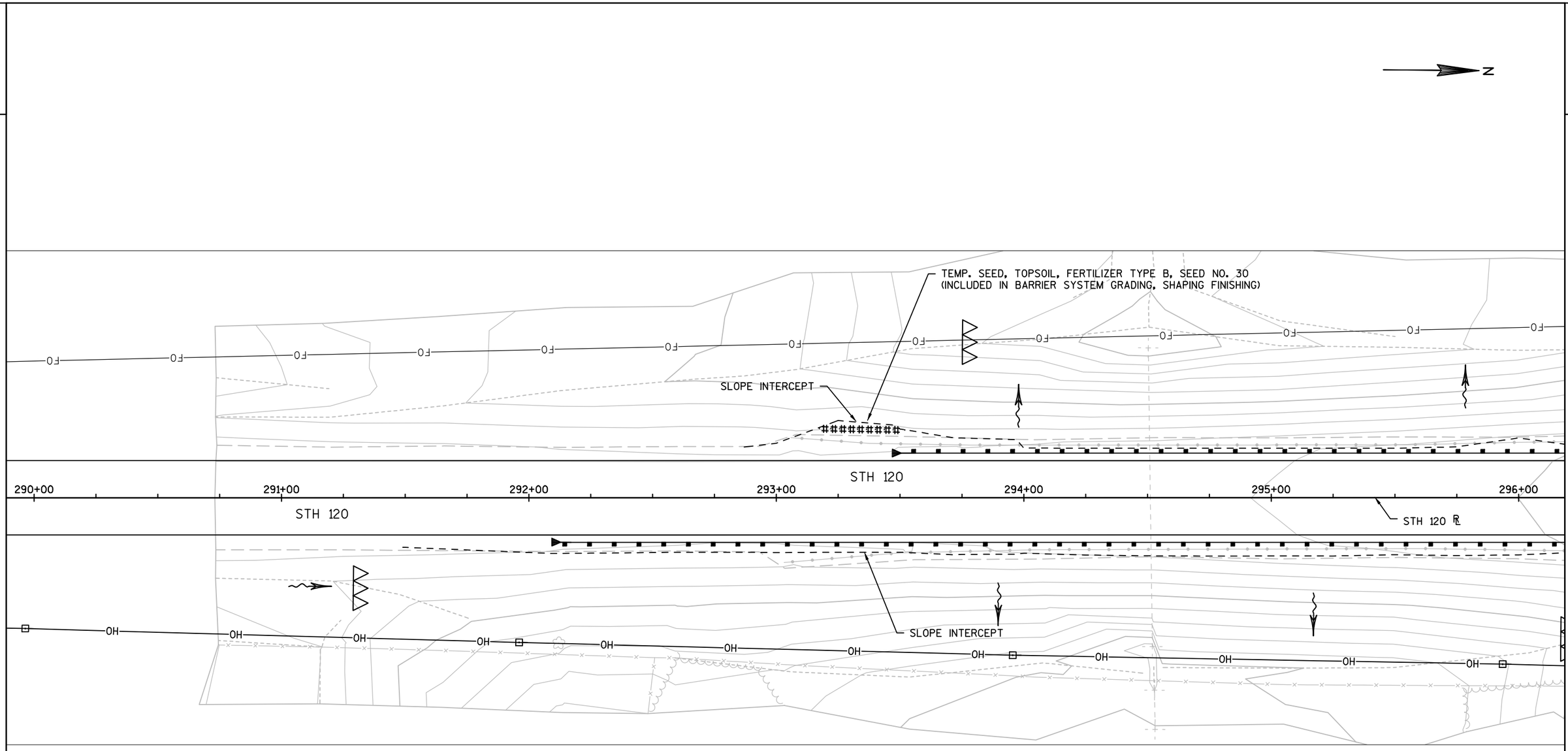
PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	EROSION CONTROL - NIPPERSINK CREEK	SHEET 18	E

FILE NAME : N:\PDS\C3D\CAD\31800760\022001B_EC.DWG
LAYOUT NAME - 022101_EC

PLOT DATE : 4/27/2016 10:57 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

2



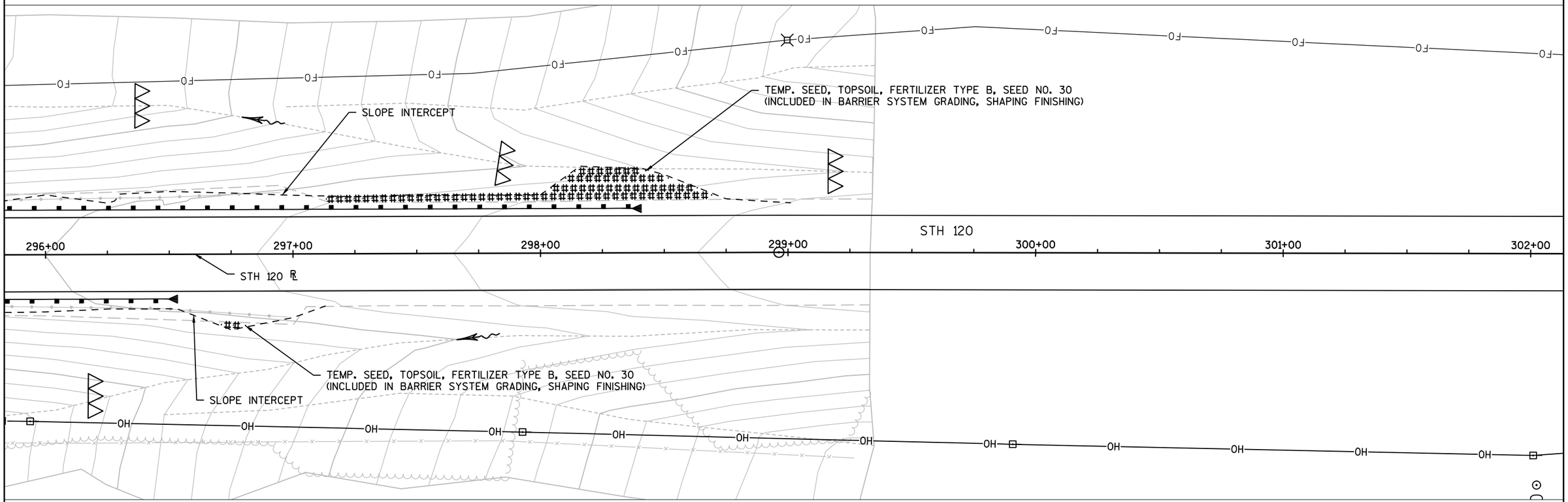
LEGEND

- RIPRAP MEDIUM
- SILT FENCE
- CULVERT PIPE CHECKS
- TURBIDITY BARRIER
- TEMPORARY DITCH CHECKS
- EROSION MAT CLASS I TYPE B
- TEMPORARY SHORING B-64-671
- SURFACE WATER FLOW

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	EROSION CONTROL - CULVERT	SHEET 19	E

2

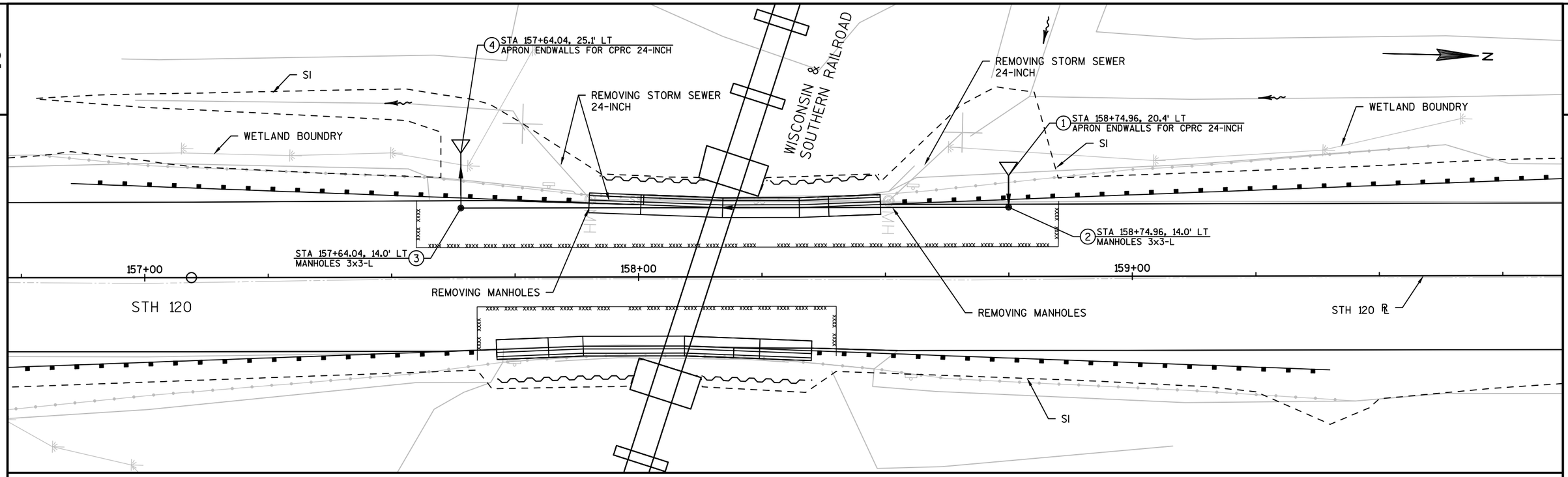
N

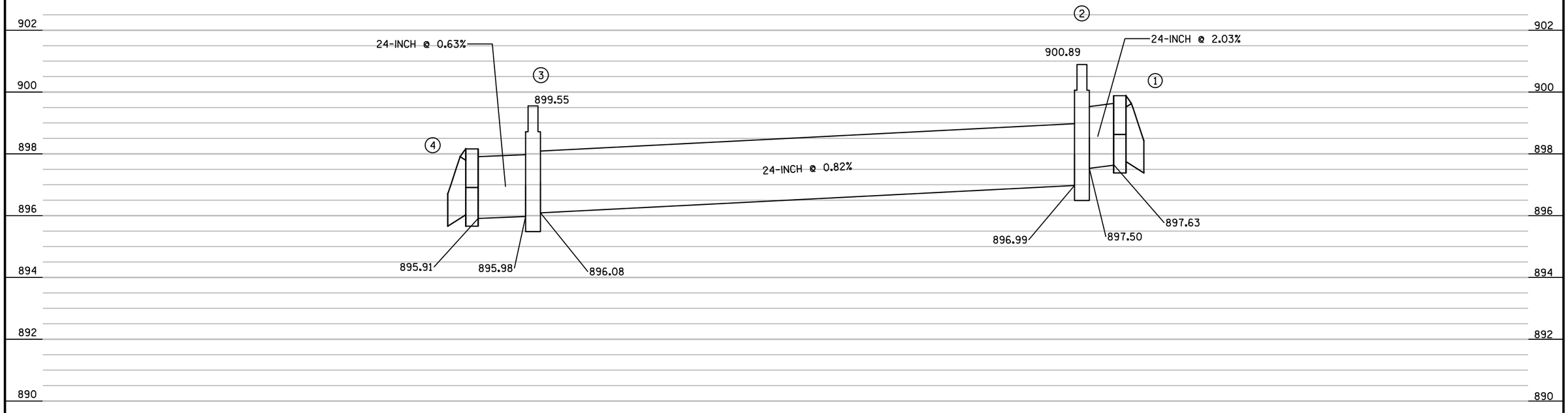


LEGEND

- RIPRAP MEDIUM
- SILT FENCE
- CULVERT PIPE CHECKS
- TURBIDITY BARRIER
- TEMPORARY DITCH CHECKS
- EROSION MAT CLASS I TYPE B
- TEMPORARY SHORING B-64-671
- SURFACE WATER FLOW

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	EROSION CONTROL - CULVERT	SHEET 20	E





PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	STORM SEWER	SHEET 21	E

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS.

THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKFIFT (SEE SPECIAL PROVISION 638.3.4).

THE REGIONAL SIGN SHOP (414) 266-1165 SHALL BE NOTIFIED 3 WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS

WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AN A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POST SIZES, FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

STREET NAME SIGNS ARE THE PROPERTY OF THE MUNICIPALITY. THE MUNICIPALITY SHALL BE CONTACTED TO REMOVE THEIR STREET NAME SIGNS PRIOR TO CONSTRUCTION AND IT IS THEIR RESPONSIBILITY TO REINSTALL THE OLD SIGNS OR REPLACE THEM FOLLOWING CONSTRUCTION. WISDOT DOES NOT FURNISH OR INSTALL STREET NAME SIGNS.

STREET NAME SIGNS SHALL NOT BE PLACED ON TOP OF STOP SIGNS.

LOCATION OF NO PASSING PENNANTS ARE APPROXIMATE AND FINAL LOCATIONS DETERMINED THROUGH LOCATING NO PASSING ZONES BID ITEM.

N

100 REMOVE W3-1(2S)

101 REMOVE STOP R1-1(2S)

101A 120 J13-1(2S)

102 REMOVE NO PASSING ZONE W14-3(2S)

103 END 120 REMOVE END 120 J1-1(2S)

104 State Line Rd D1-61(2)

105 STOP R1-1(2S)

106 W3-1(2S)

107 MOVE SPONSOR1 SPONSOR2 SPONSOR3

108 WELCOME TO WISCONSIN Walworth Co I2-2(2S)

108A WELCOME TO WISCONSIN I2-1B(2S)

109 NORTH 120 REMOVE NORTH 120 J4-1(2S)

110 STOP SCHOOL BUS FLASHING RED LIGHTS REMOVE R59-51(2S)

111 FINES DOUBLE IN WORK ZONES REMOVE W21-61(2S)

112 SPEED LIMIT 55 R2-1(2S)

ESTR WEIGHT LIMIT 6 TONS PER AXLE

STATE LINE ROAD

GUY

LOCAL STREET SIGNS

STH 120

136 138 140 142 144 146 148 150

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 1 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 22	E

FILE NAME : N:\PDS\C3D\CAD\31800760\SIGN\023201_PS.DWG
LAYOUT NAME - 023201_PS

PLOT DATE : 2/1/2016 7:41 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS.

THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKFIFT (SEE SPECIAL PROVISION 638.3.4).

THE REGIONAL SIGN SHOP (414) 266-1165 SHALL BE NOTIFIED 3 WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS

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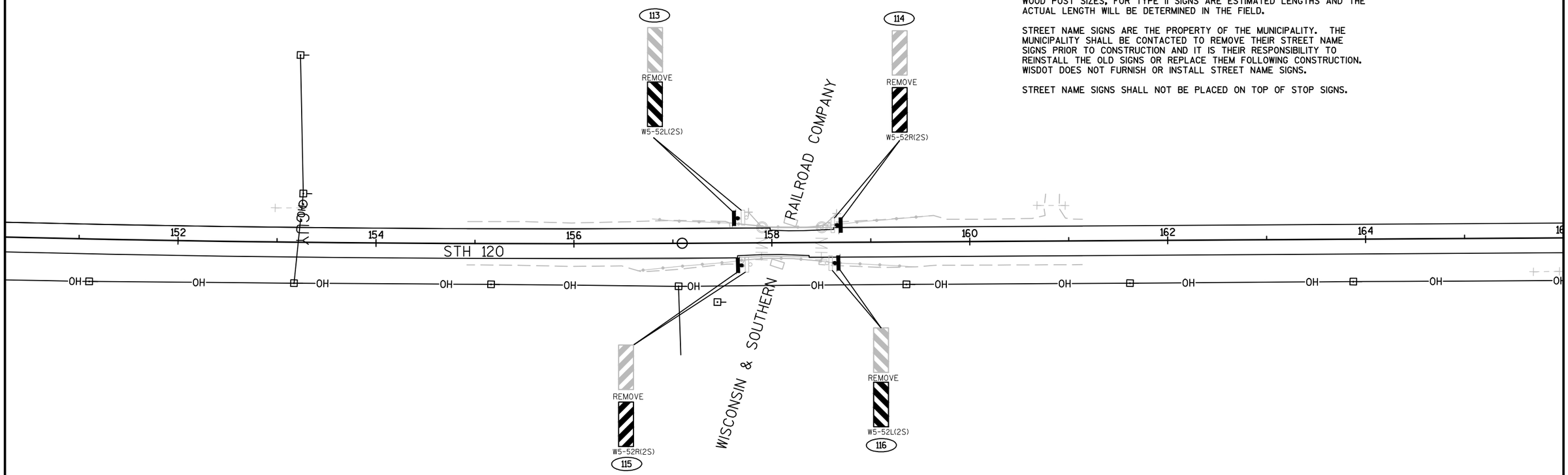
WOOD POST SIZES, FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

STREET NAME SIGNS ARE THE PROPERTY OF THE MUNICIPALITY. THE MUNICIPALITY SHALL BE CONTACTED TO REMOVE THEIR STREET NAME SIGNS PRIOR TO CONSTRUCTION AND IT IS THEIR RESPONSIBILITY TO REINSTALL THE OLD SIGNS OR REPLACE THEM FOLLOWING CONSTRUCTION. WISDOT DOES NOT FURNISH OR INSTALL STREET NAME SIGNS.

STREET NAME SIGNS SHALL NOT BE PLACED ON TOP OF STOP SIGNS.



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 2 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 23	E

FILE NAME : N:\PDS\C3D\CAD\31800760\SIGN\023201_PS.DWG
LAYOUT NAME - 023202_PS

PLOT DATE : 2/1/2016 7:41 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS.

THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKFIST (SEE SPECIAL PROVISION 638.3.4).

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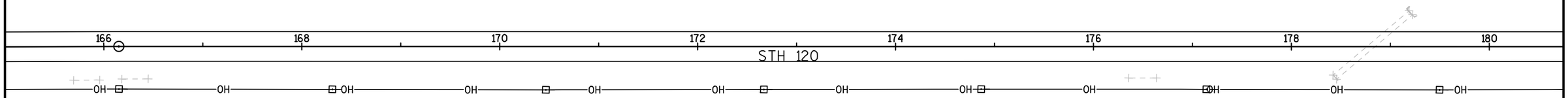
N



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

SHEET 3 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 24	E

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

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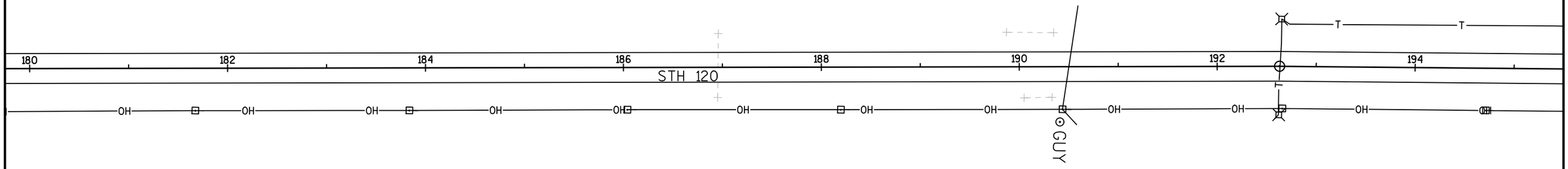

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 4 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 25	E

FILE NAME : N:\PDS\C3D\CAD\31800760\SIGN\023201_PS.DWG
LAYOUT NAME - 023204_PS

PLOT DATE : 2/1/2016 7:41 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS.

THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKFIFT (SEE SPECIAL PROVISION 638.3.4).

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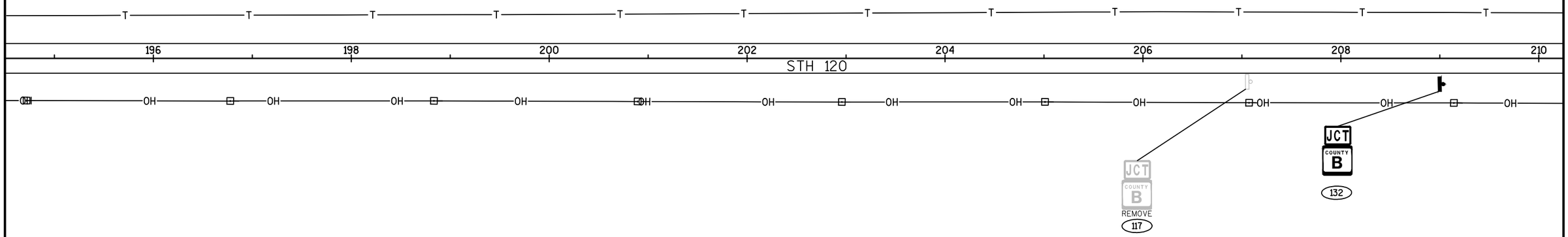

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

SHEET 5 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 26	E

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS.

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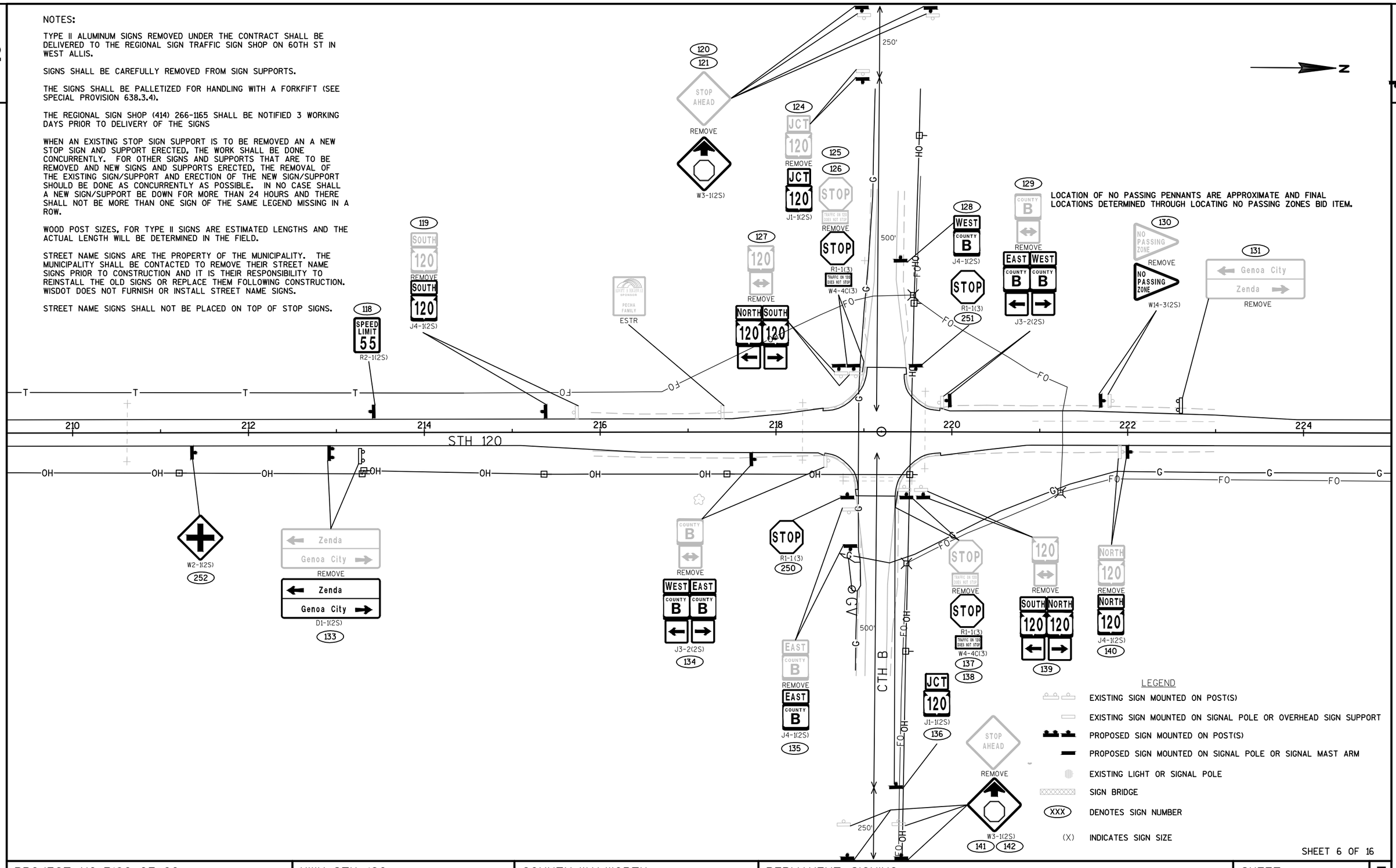
LOCATION OF NO PASSING PENNANTS ARE APPROXIMATE AND FINAL LOCATIONS DETERMINED THROUGH LOCATING NO PASSING ZONES BID ITEM.



SHEET 6 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 27	E

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

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THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKFIFT (SEE SPECIAL PROVISION 638.3.4).

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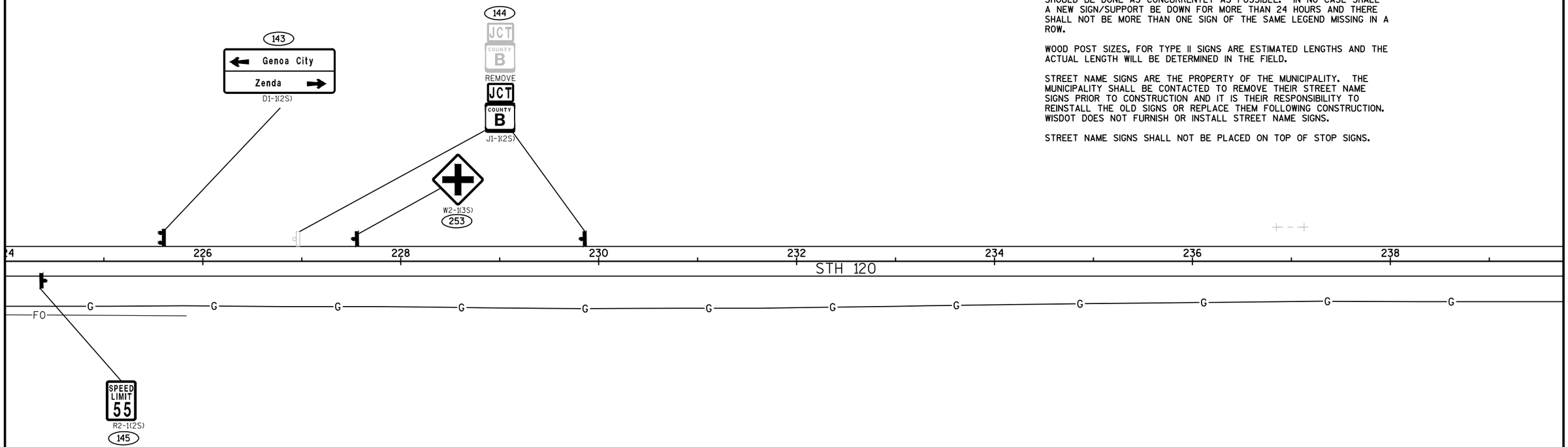
STREET NAME SIGNS SHALL NOT BE PLACED ON TOP OF STOP SIGNS.



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 7 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 28	E

FILE NAME : N:\PDS\C3D\CAD\31800760\SIGN\023201_PS.DWG
LAYOUT NAME - 023207_PS

PLOT DATE : 2/1/2016 7:41 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS.

THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKFIFT (SEE SPECIAL PROVISION 638.3.4).

THE REGIONAL SIGN SHOP (414) 266-1165 SHALL BE NOTIFIED 3 WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS

WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AN A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POST SIZES, FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

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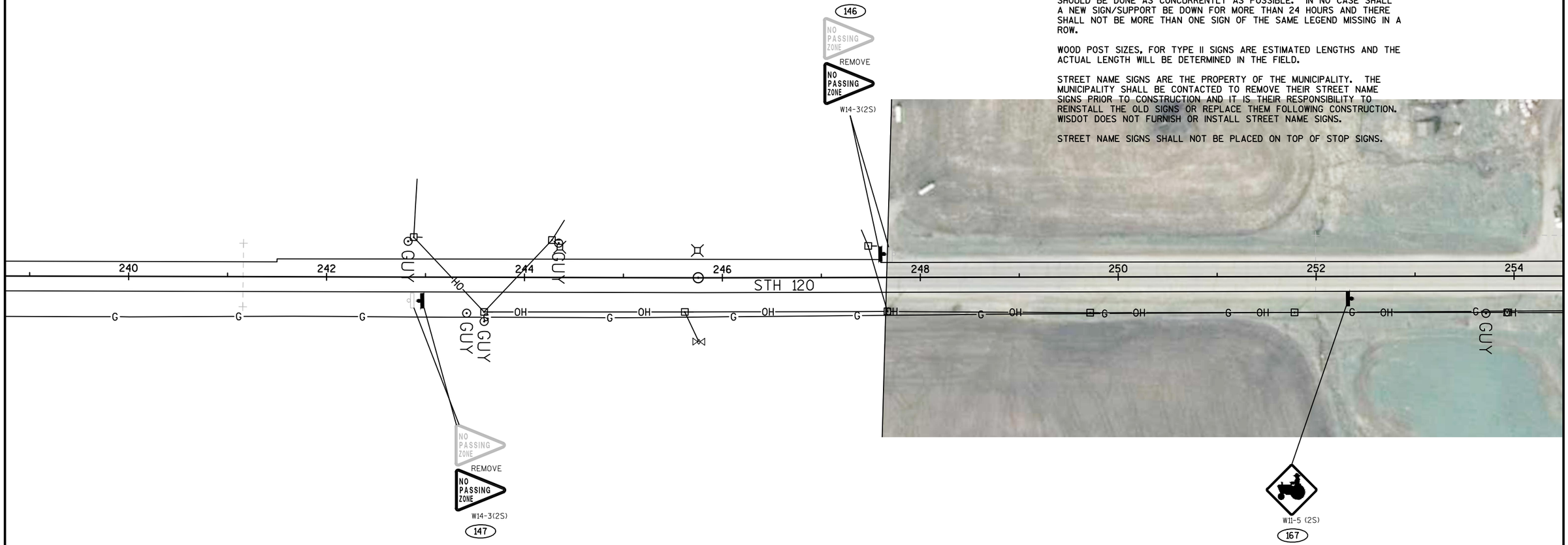
N



LOCATION OF NO PASSING PENNANTS ARE APPROXIMATE AND FINAL LOCATIONS DETERMINED THROUGH LOCATING NO PASSING ZONES BID ITEM.

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 8 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 29	E

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

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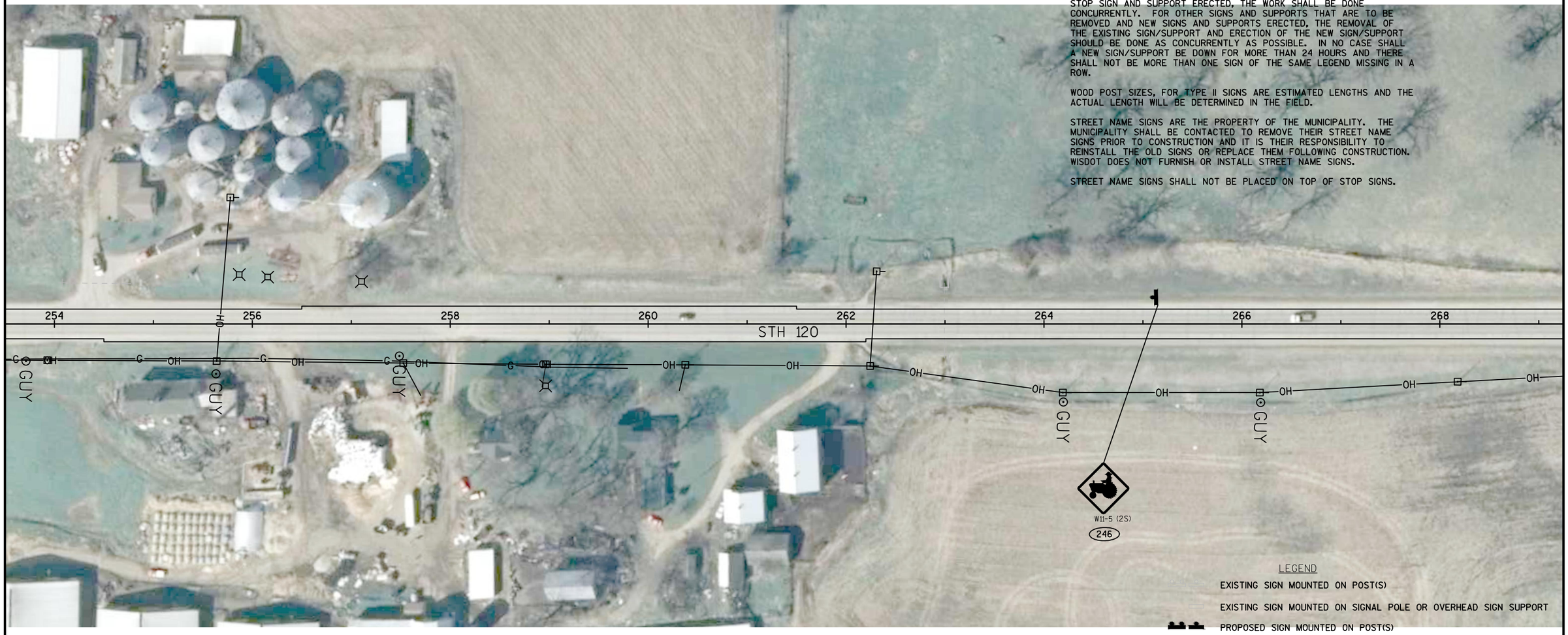

LEGEND

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- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

SHEET 9 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 30	E

FILE NAME : N:\PDS\C3D\CAD\31800760\SIGN\023201_PS.DWG
LAYOUT NAME - 023209_PS

PLOT DATE : 2/1/2016 7:41 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS.

THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKFIFT (SEE SPECIAL PROVISION 638.3.4).

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N

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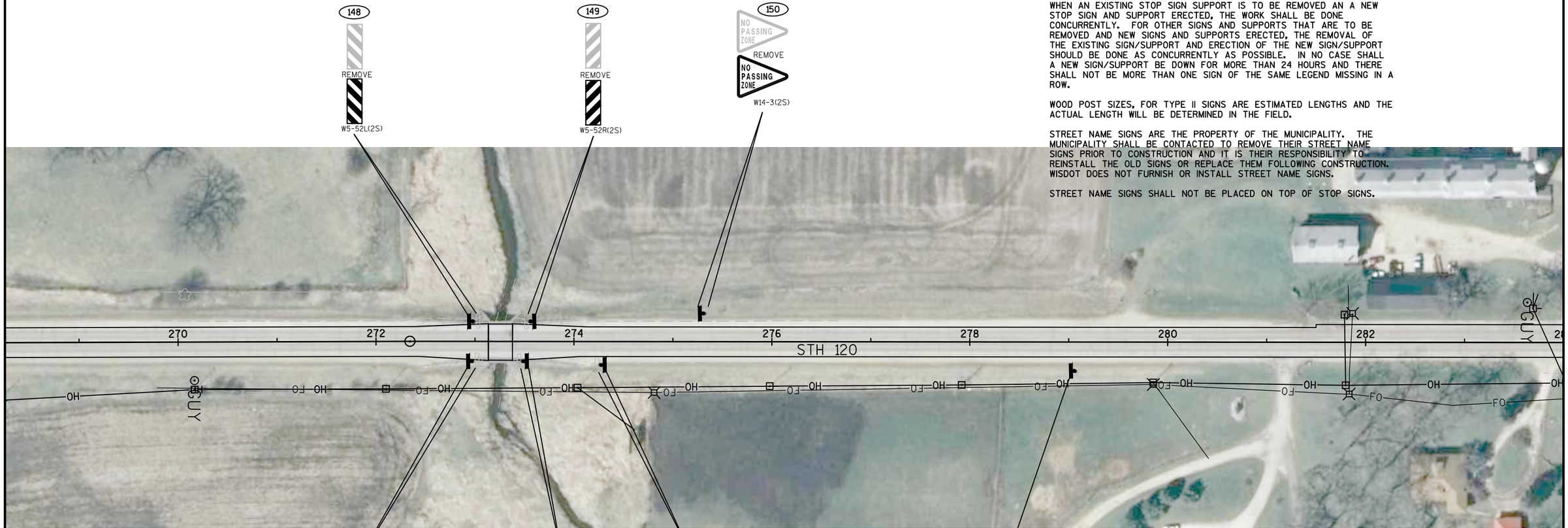

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 10 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 31	E

NOTES:

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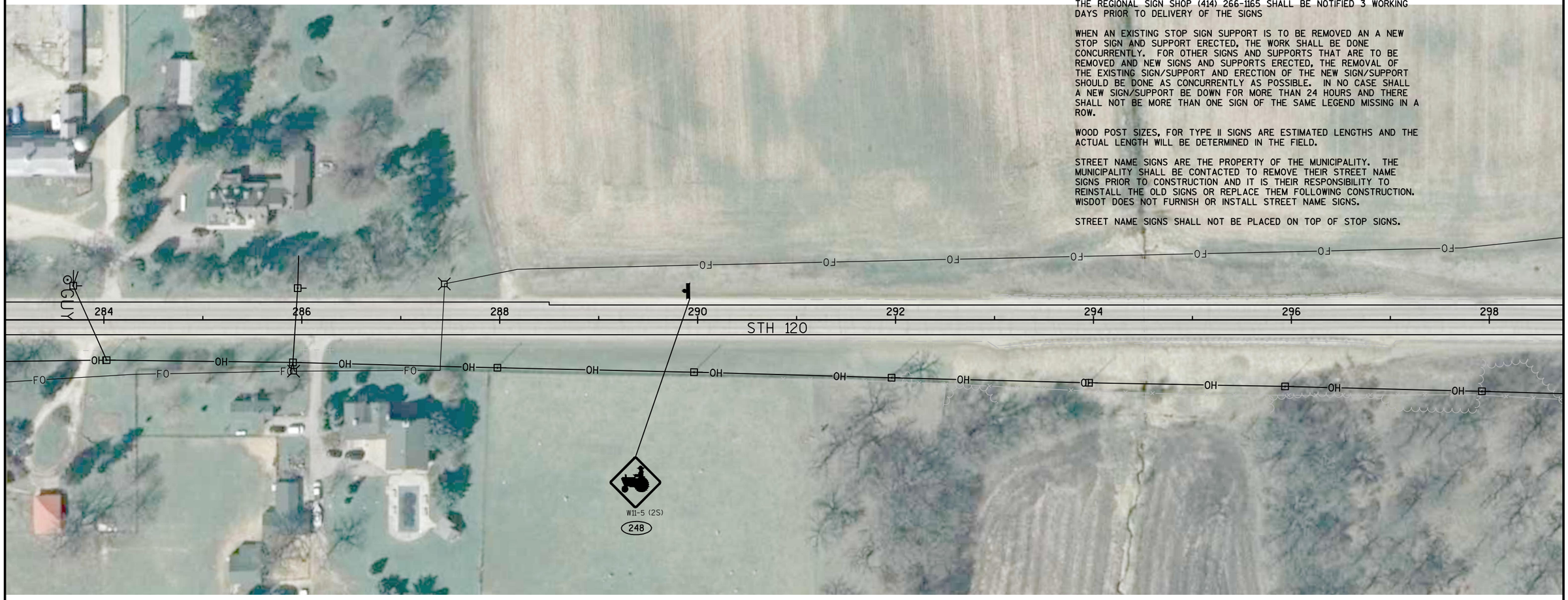

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

SHEET 11 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 32	E

FILE NAME : N:\PDS\C3D\CAD\31800760\SIGN\023201_PS.DWG
LAYOUT NAME - 023211_PS

PLOT DATE : 2/1/2016 7:41 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

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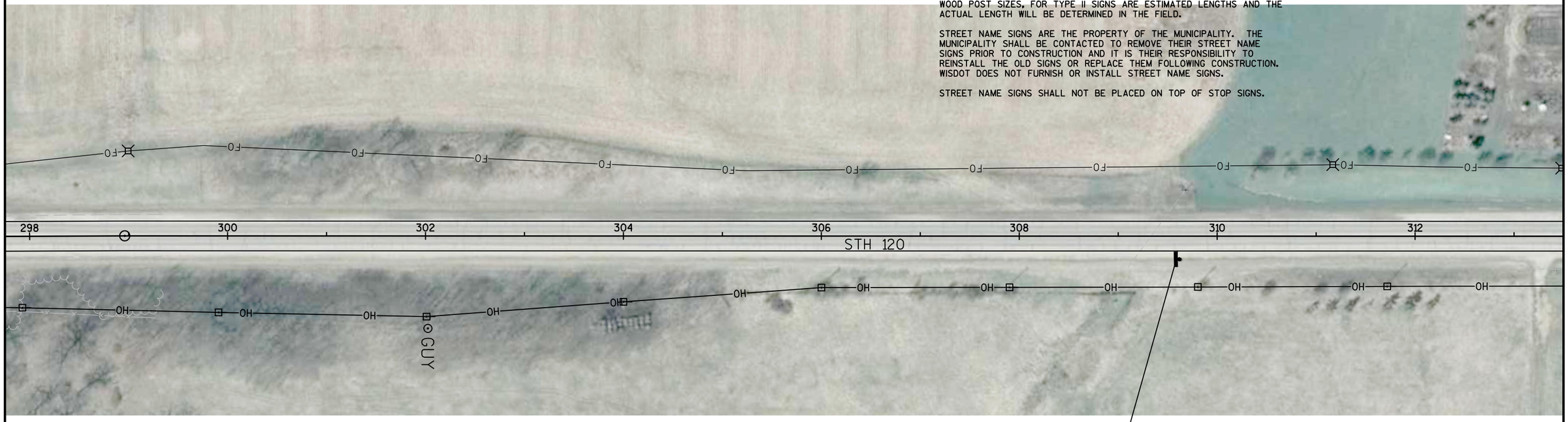
N



W6-1(2S)
154

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 12 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 33	E

FILE NAME : N:\PDS\C3D\CAD\31800760\SIGN\023201_PS.DWG
LAYOUT NAME - 023212_PS

PLOT DATE : 2/1/2016 7:41 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL SIGN TRAFFIC SIGN SHOP ON 60TH ST IN WEST ALLIS.

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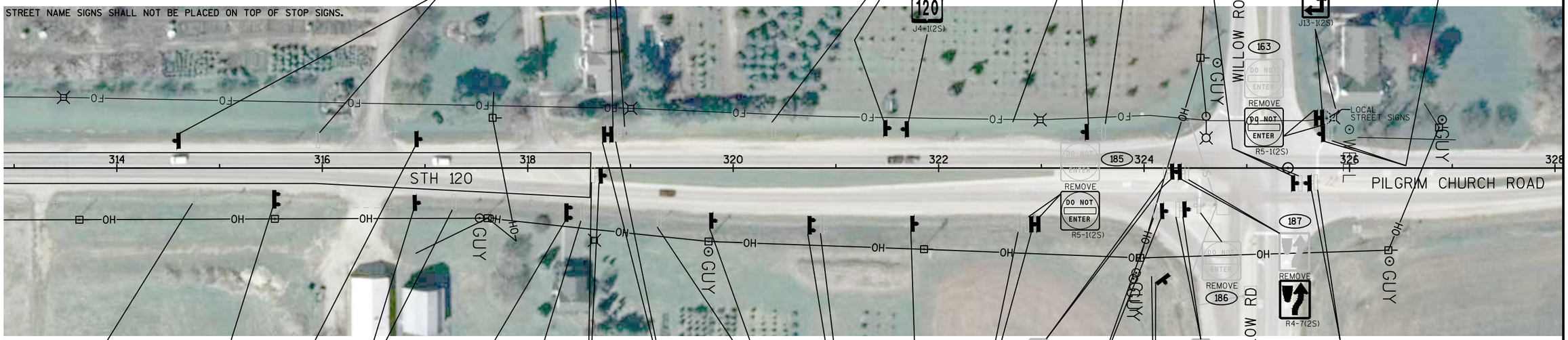
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE



SHEET 13 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 34	E

2

N

191
WRONG WAY
REMOVE
WRONG WAY
R5-1A(2S)

192
ONLY
REMOVE
ONLY
R3-8-A(2S)

193
194
REMOVE
R4-7(3)

W5-54(2S)

195
JCT
120
REMOVE
JCT
120
J1-1(2S)

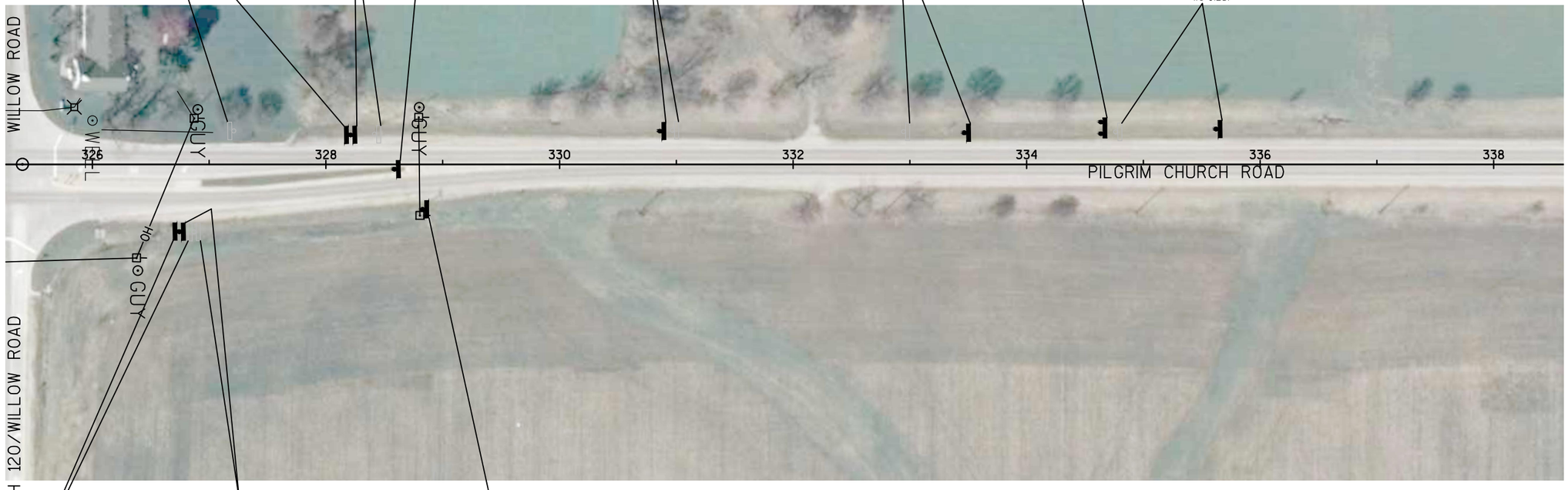
196
STOP AHEAD
REMOVE

W3-1(2S)

197
Willow Rd
D1-61(2)

198
REMOVE

W6-1(2S)



WRONG WAY
REMOVE
WRONG WAY
R5-1A(2S)
200

DO NOT ENTER
R5-1(3)
201

REMOVE

W6-2(2S)
199

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL POLE OR OVERHEAD SIGN SUPPORT
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE OR SIGNAL MAST ARM
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
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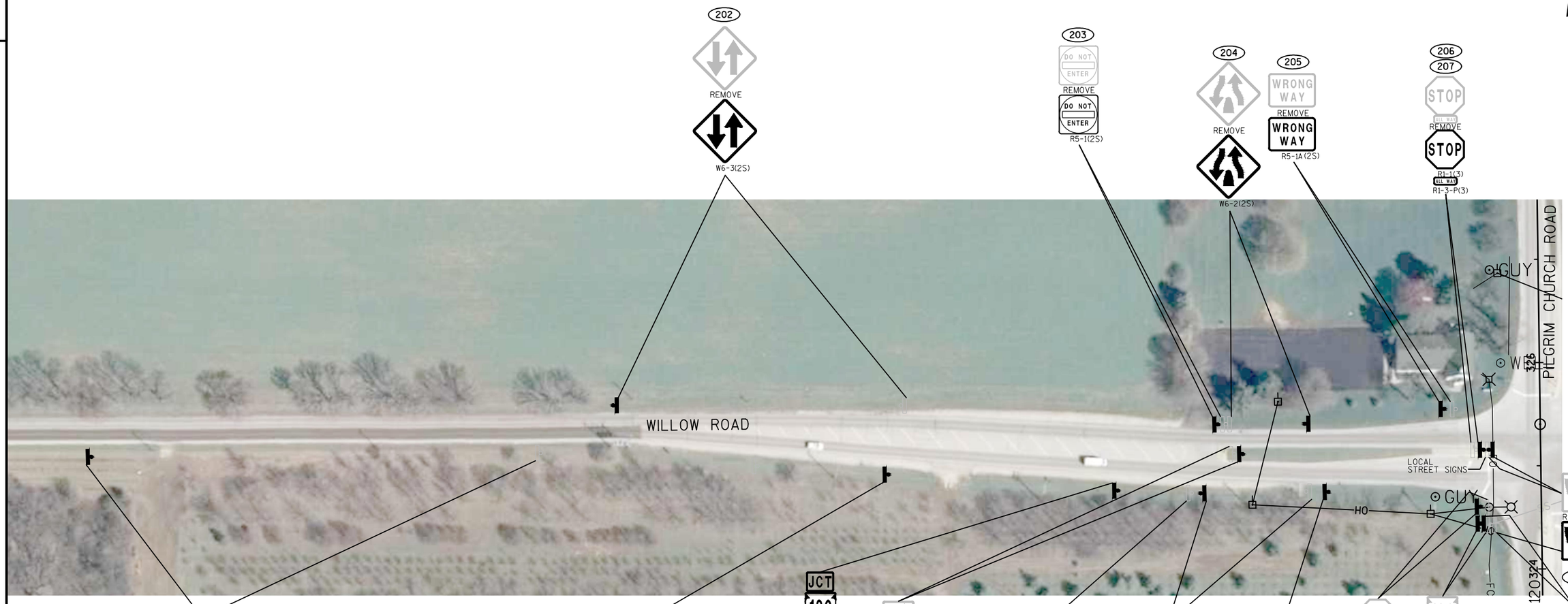
SHEET 14 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 35	E

2



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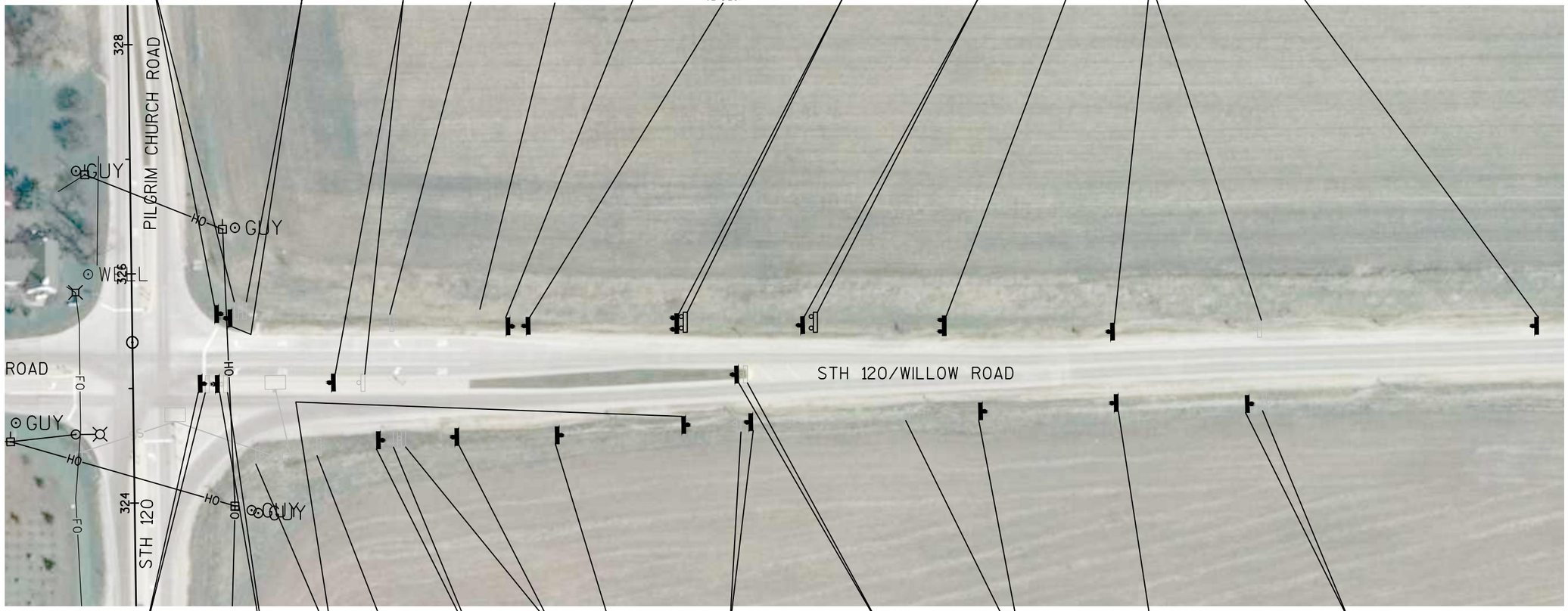
SHEET 15 OF 16

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 36	E

2



N

221 REMOVE DO NOT ENTER — R5-1(2S)

222 223 STOP ALL WAY REMOVE — STOP R1-1(3) ALL WAY — R1-3-P(3)

224 SOUTH 120 REMOVE — SOUTH 120 — J3-1(2S)

225 WRONG WAY REMOVE

226 SOUTH 120 REMOVE

227 WRONG WAY — R5-1A(2S)

228 SOUTH 120 — J2-1(2S)

229 Big Foot Beach State Park — D7-53(2)

Big Foot Beach State Park REMOVE

230 ONLY ONLY ONLY REMOVE — ONLY ONLY ONLY — R3-8-W(2S)

231 Pilgrim Church Rd — D1-61(2)

232 REMOVE — W3-1(2S)

233 REMOVE — W6-1(2S)

REMOVE — R4-7(2S) — 234

STOP ALL WAY REMOVE — STOP R1-1(3) ALL WAY — R1-3-P(3) — 235 236

SPORTSMAN CLUB MOVE — 237

NORTH 120 REMOVE — 238

REMOVE — W6-2(2S) — 239

WRONG WAY REMOVE — WRONG WAY — R5-1A(2S) — 240

NORTH 120 — J4-1(2S) — 241

DO NOT ENTER REMOVE — DO NOT ENTER — R5-1(3) — 242

REMOVE — R4-7(3) — W5-54(2S) — 243 244

REMOVE — W6-3(2S) — 245

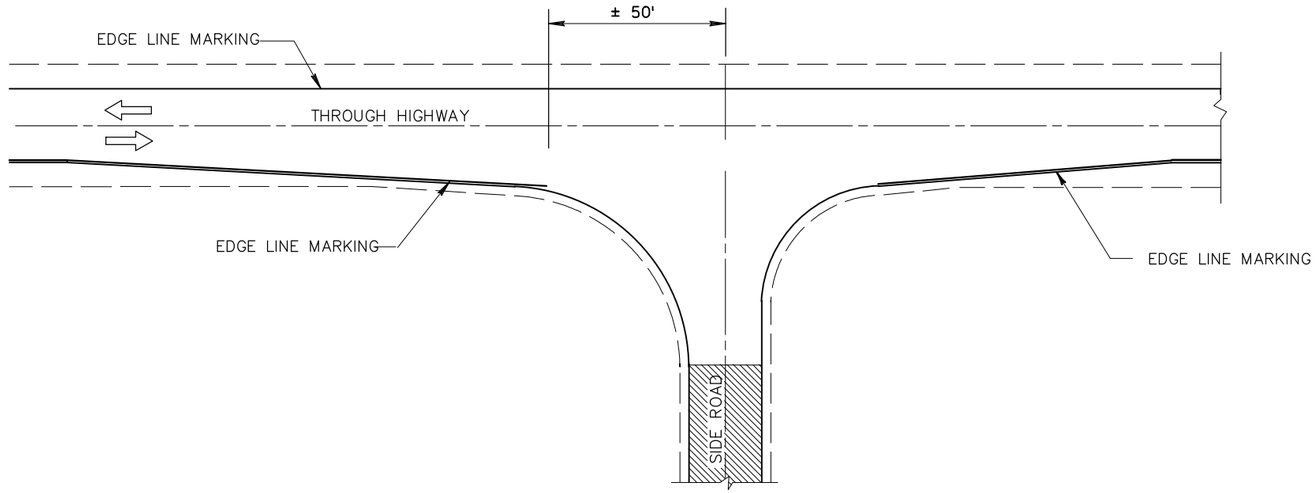
W3-1(2S) — 232A

SPEED LIMIT 55 REMOVE — SPEED LIMIT 55 — R2-1(2S) — 249

SHEET 16 OF 16

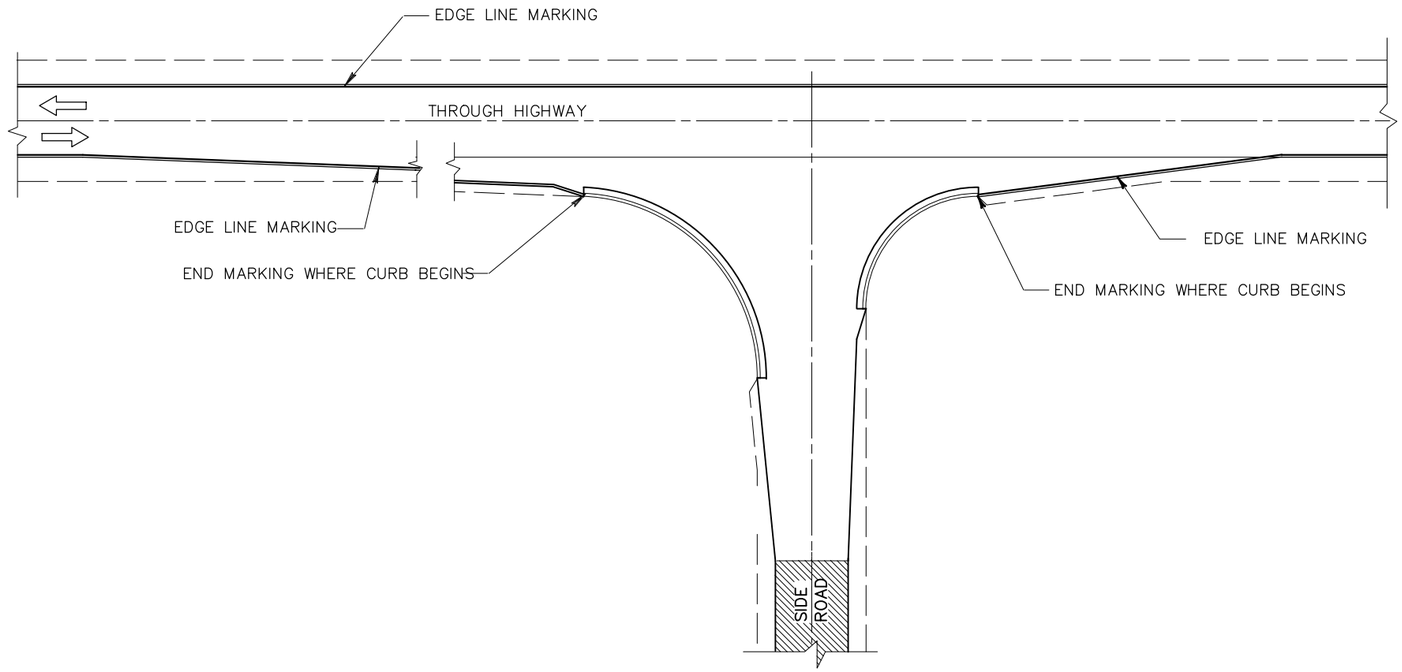
PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET 37	E

2



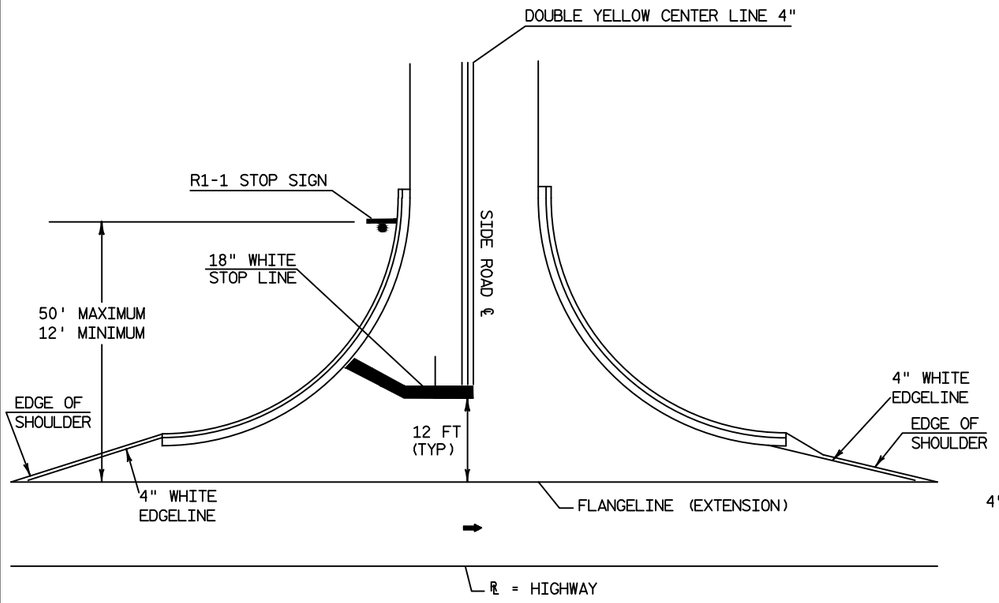
MINOR INTERSECTION WITHOUT CURBS

(TYPICAL MARKING)

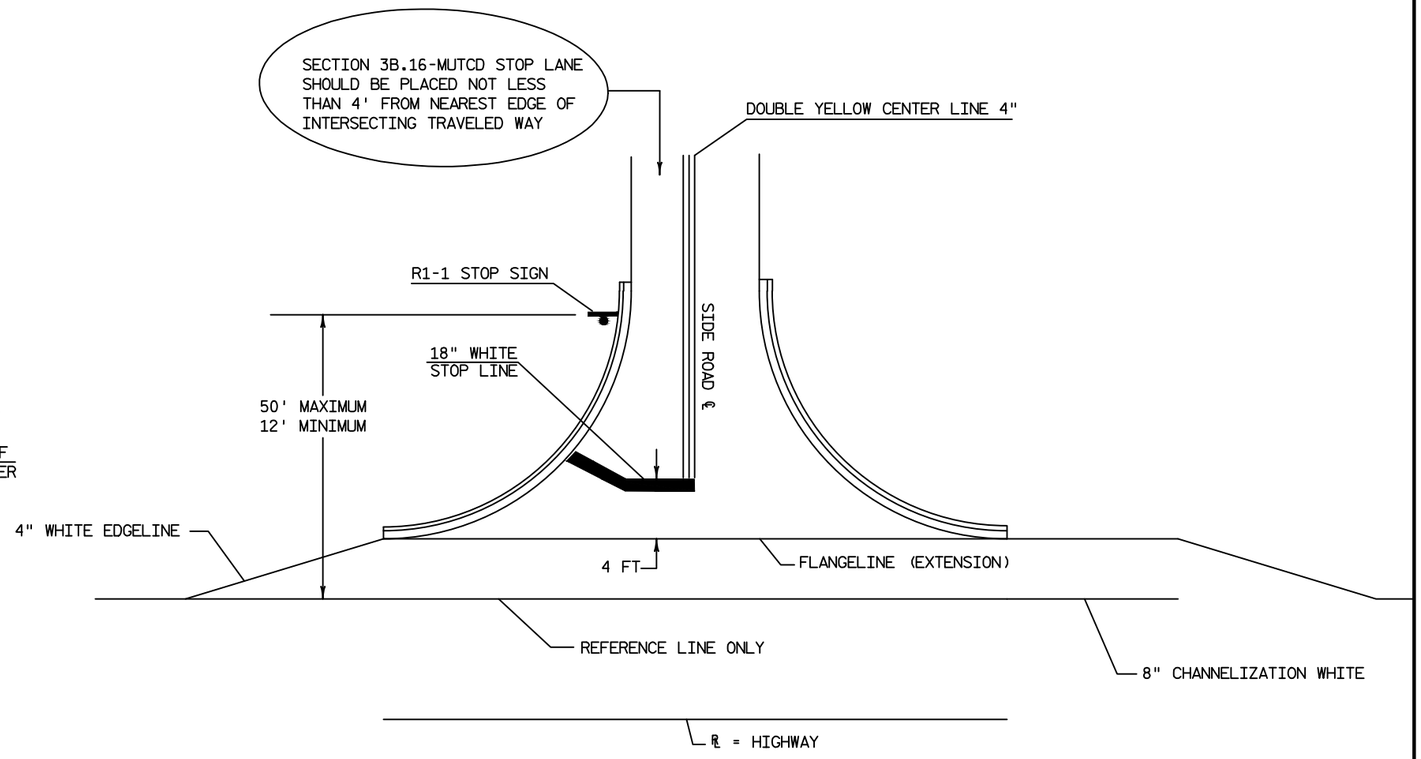


MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



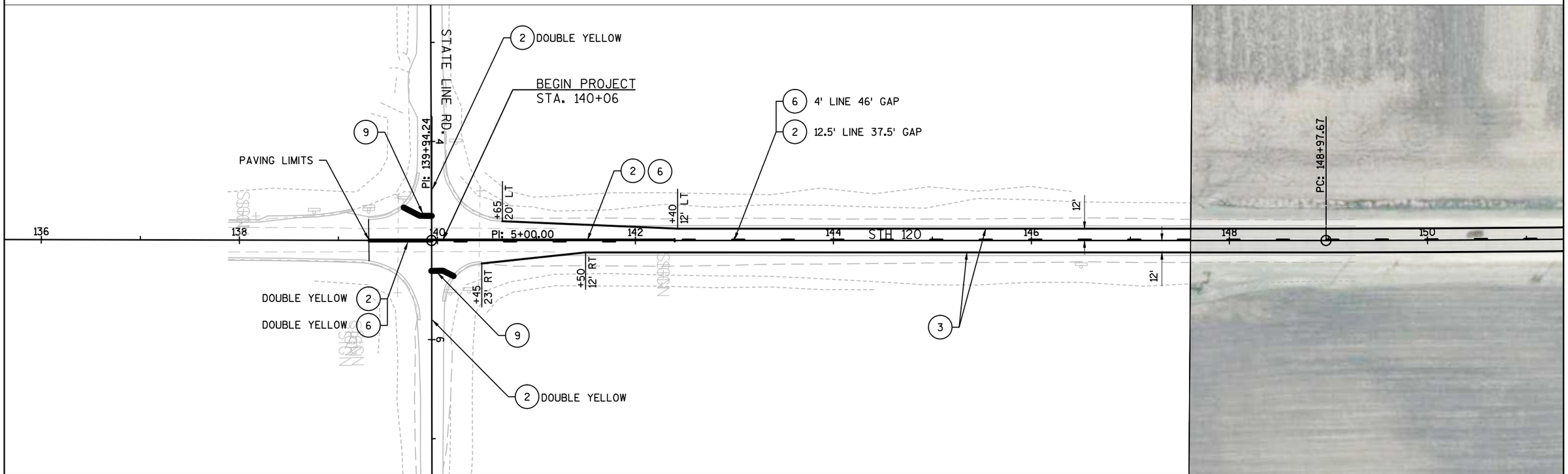
TYPICAL PAVEMENT MARKING FOR SIDEROADS



TYPICAL PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE

2

N



LEGEND

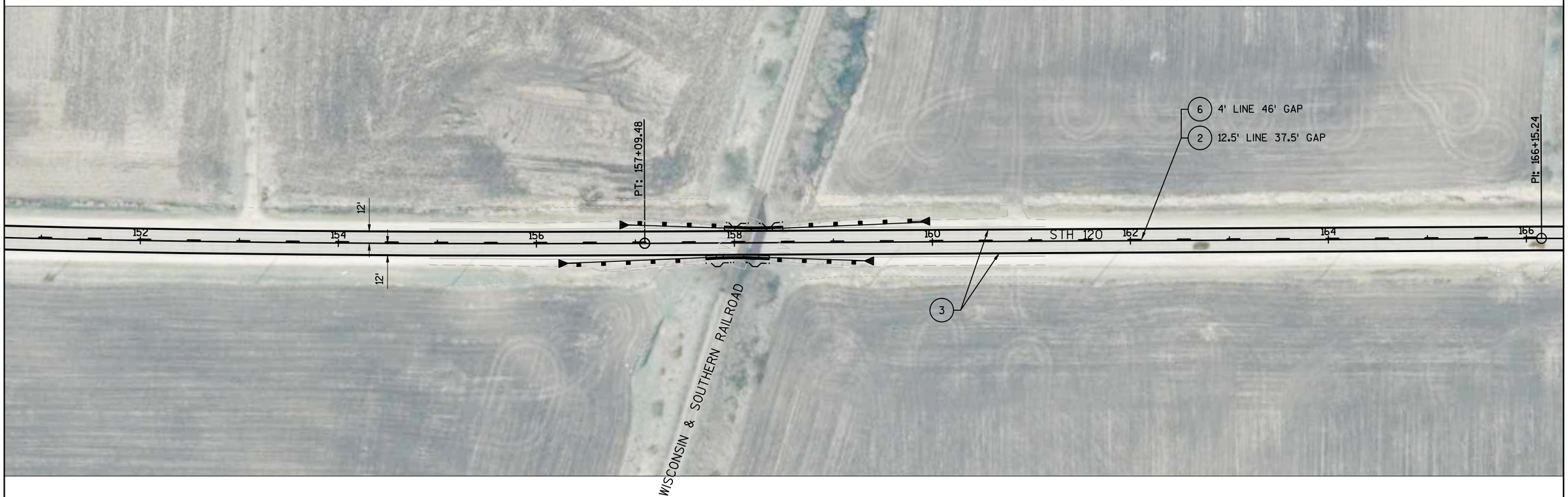
1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
5. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
6. TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
7. PAVEMENT MARKING ARROWS EPOXY TYPE 2
8. PAVEMENT MARKING WORDS EPOXY
9. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 40	E

FILE NAME : N:\PDS\C3D\CAD\31800760\024501_PM.DWG
LAYOUT NAME - 024501_PM
PLOT DATE : 7/7/2016 2:19 PM
PLOT BY : GUENETTE, JEFFREY J PLOT NAME : _____ PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2



LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
5. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
6. TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
7. PAVEMENT MARKING ARROWS EPOXY TYPE 2
8. PAVEMENT MARKING WORDS EPOXY
9. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

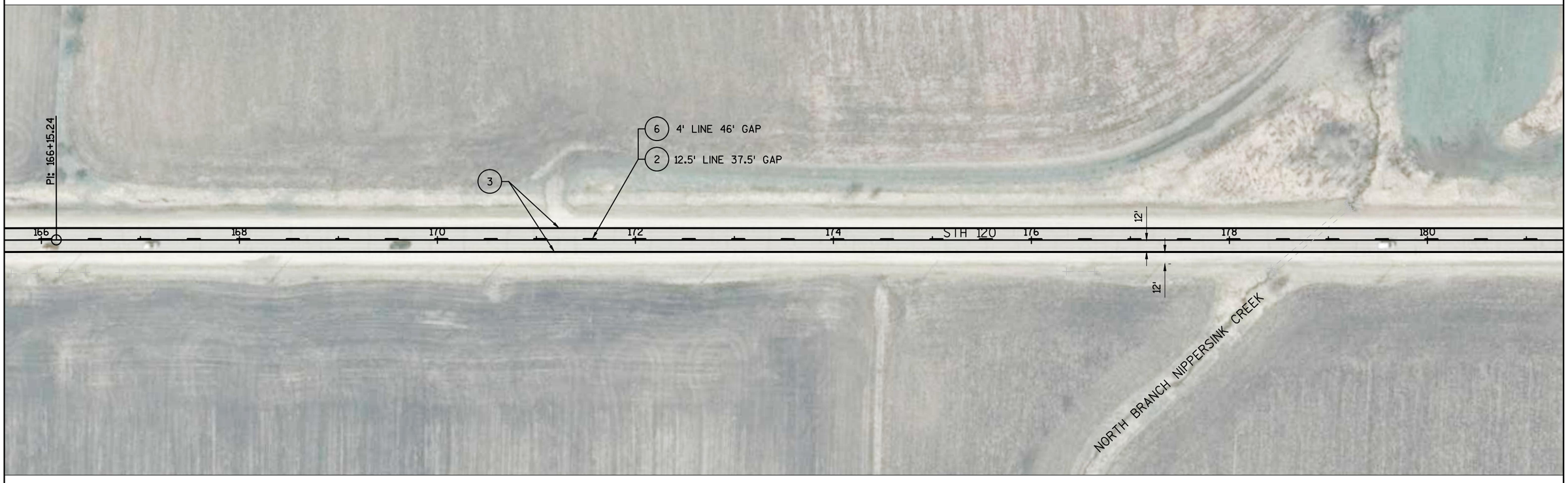
NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 41	E

FILE NAME : N:\PDS\C3D\CAD\31800760\024501_PM.DWG
LAYOUT NAME - 024502_PM
PLOT DATE : 7/7/2016 2:19 PM
PLOT BY : GUENETTE, JEFFREY J PLOT NAME : _____ PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2

N



LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
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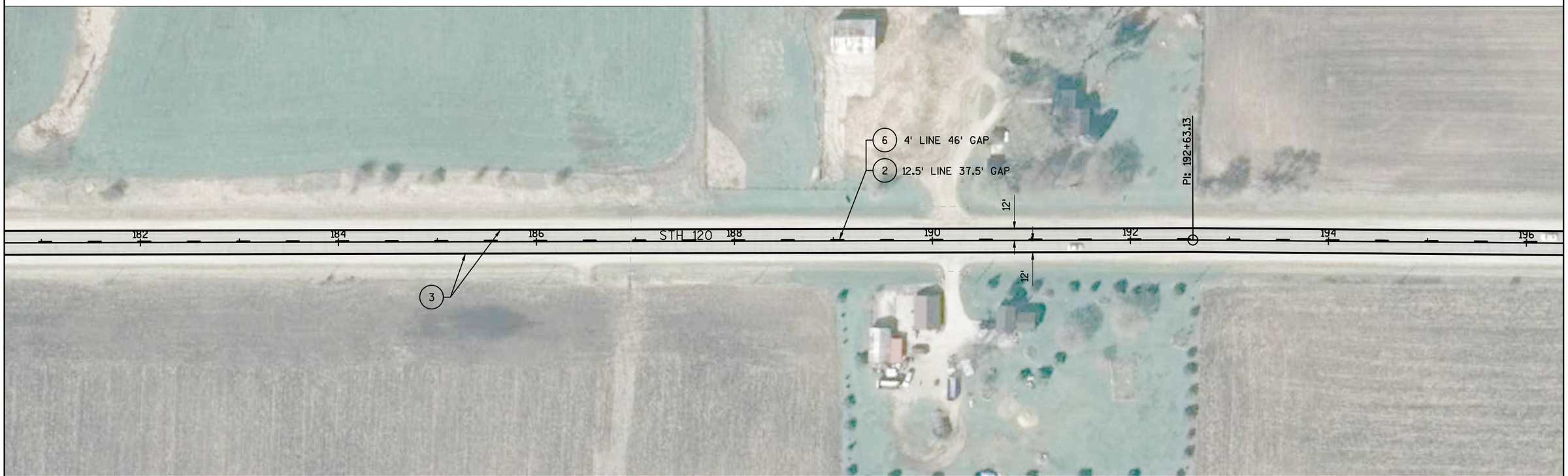
6. TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
7. PAVEMENT MARKING ARROWS EPOXY TYPE 2
8. PAVEMENT MARKING WORDS EPOXY
9. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 42	E

2



LEGEND

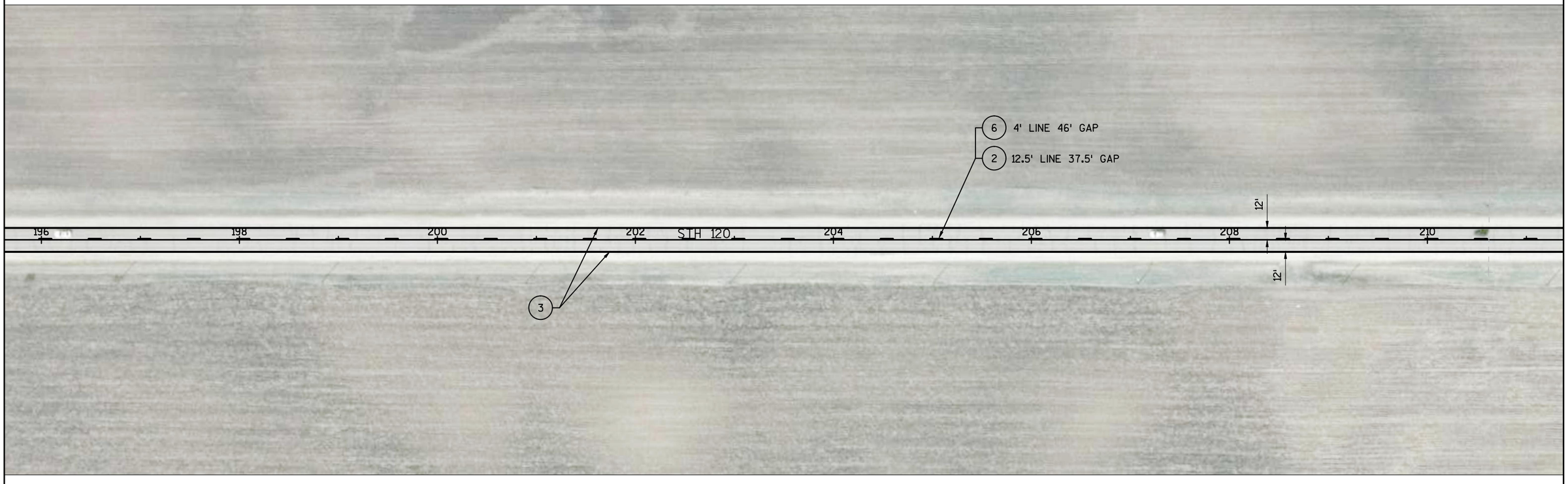
1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
5. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
6. TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
7. PAVEMENT MARKING ARROWS EPOXY TYPE 2
8. PAVEMENT MARKING WORDS EPOXY
9. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 43	E

2

N



LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
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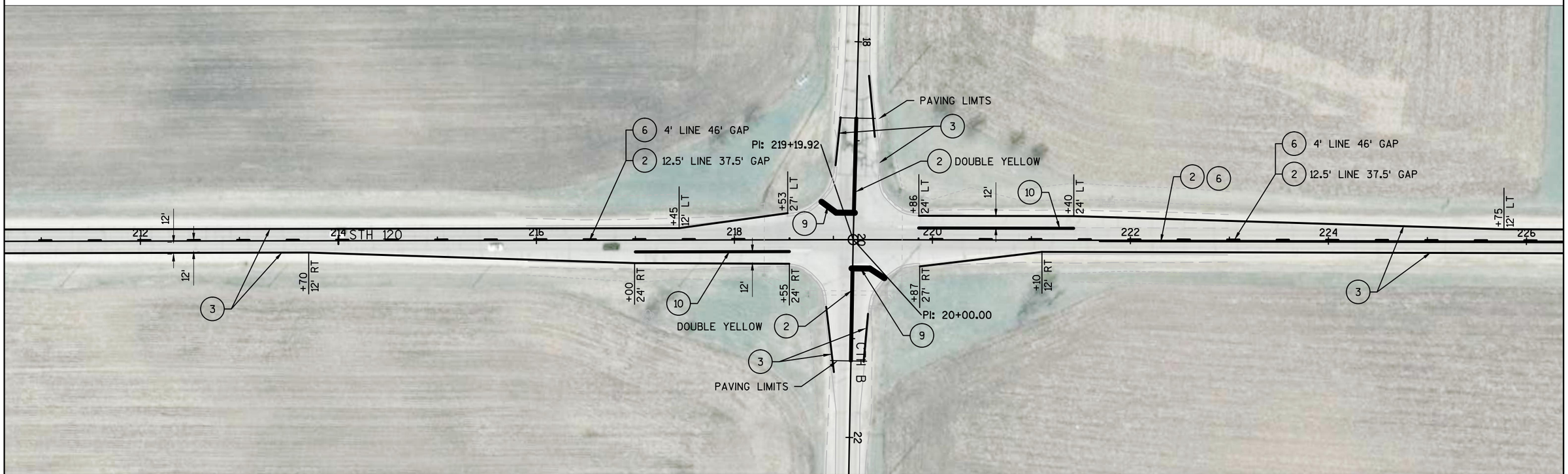
10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 44	E

2



LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
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6. TEMPORARY PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
7. PAVEMENT MARKING ARROWS EPOXY TYPE 2
8. PAVEMENT MARKING WORDS EPOXY
9. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

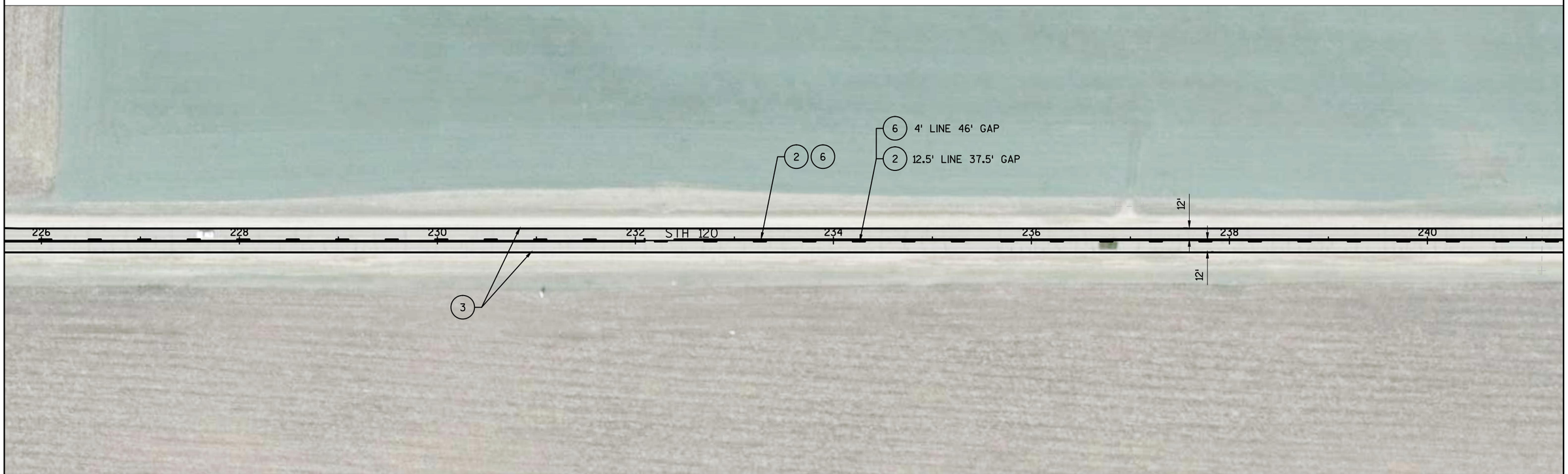
NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 45	E

FILE NAME : N:\PDS\C3D\CAD\31800760\024501_PM.DWG
LAYOUT NAME - 024506_PM
PLOT DATE : 7/7/2016 2:19 PM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : ---------- PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2

N



LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
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8. PAVEMENT MARKING WORDS EPOXY
9. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 46	E

FILE NAME : N:\PDS\C3D\CAD\31800760\024501_PM.DWG
LAYOUT NAME - 024507_PM
PLOT DATE : 7/7/2016 2:19 PM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : ---------- PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2

N

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
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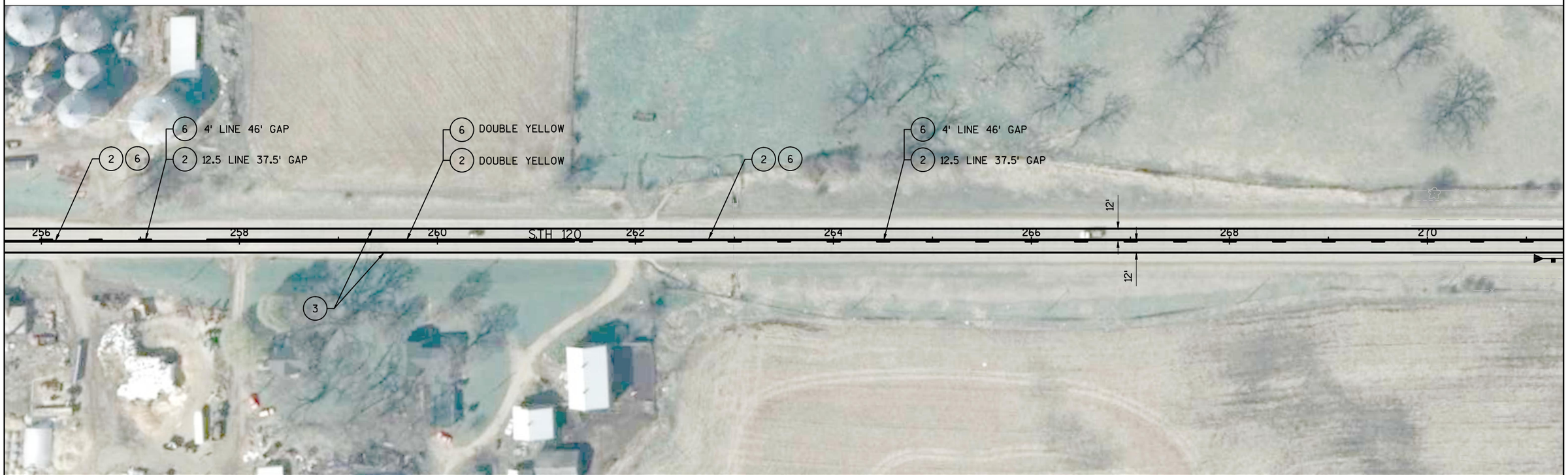
7. PAVEMENT MARKING ARROWS EPOXY TYPE 2
8. PAVEMENT MARKING WORDS EPOXY
9. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 47	E

2

N



LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
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10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 48	E

FILE NAME : N:\PDS\C3D\CAD\31800760\024501_PM.DWG
LAYOUT NAME - 024509_PM
PLOT DATE : 7/7/2016 2:19 PM
PLOT BY : GUENETTE, JEFFREY J PLOT NAME : ---------- PLOT SCALE : **********

2

N

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
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5. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
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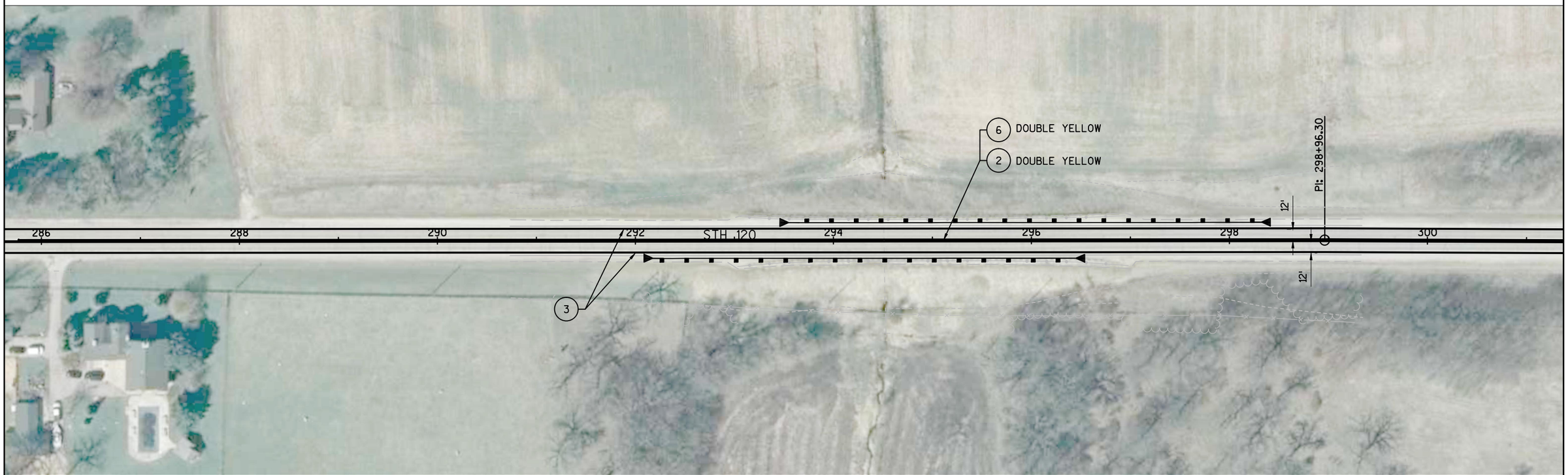
8. PAVEMENT MARKING WORDS EPOXY
9. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 49	E

2

N



LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
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10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 50	E

FILE NAME : N:\PDS\C3D\CAD\31800760\024501_PM.DWG
LAYOUT NAME - 024511_PM
PLOT DATE : 7/7/2016 2:19 PM
PLOT BY : GUENETTE, JEFFREY J PLOT NAME : ---------- PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2

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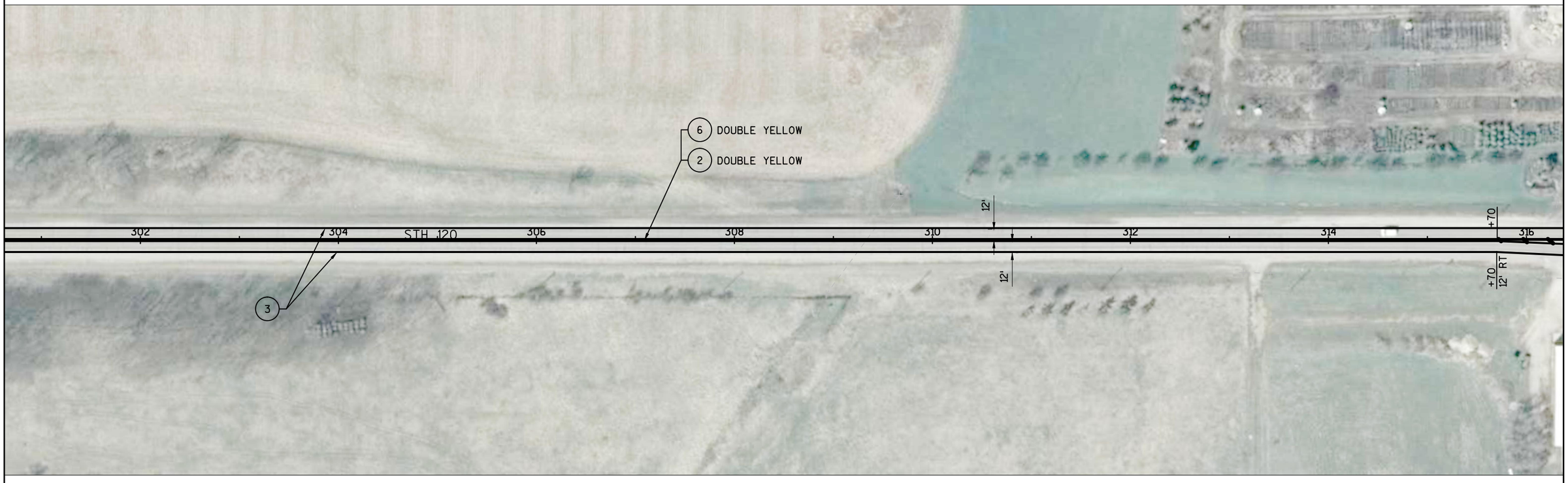

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
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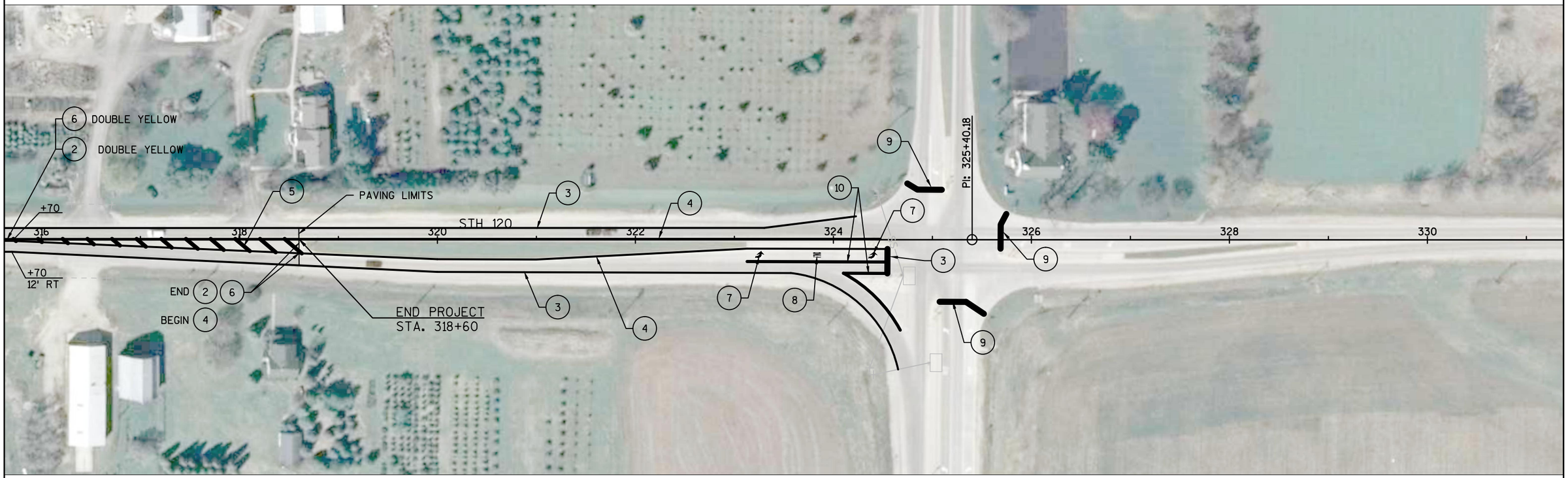
8. PAVEMENT MARKING WORDS EPOXY
9. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 51	E

2



LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
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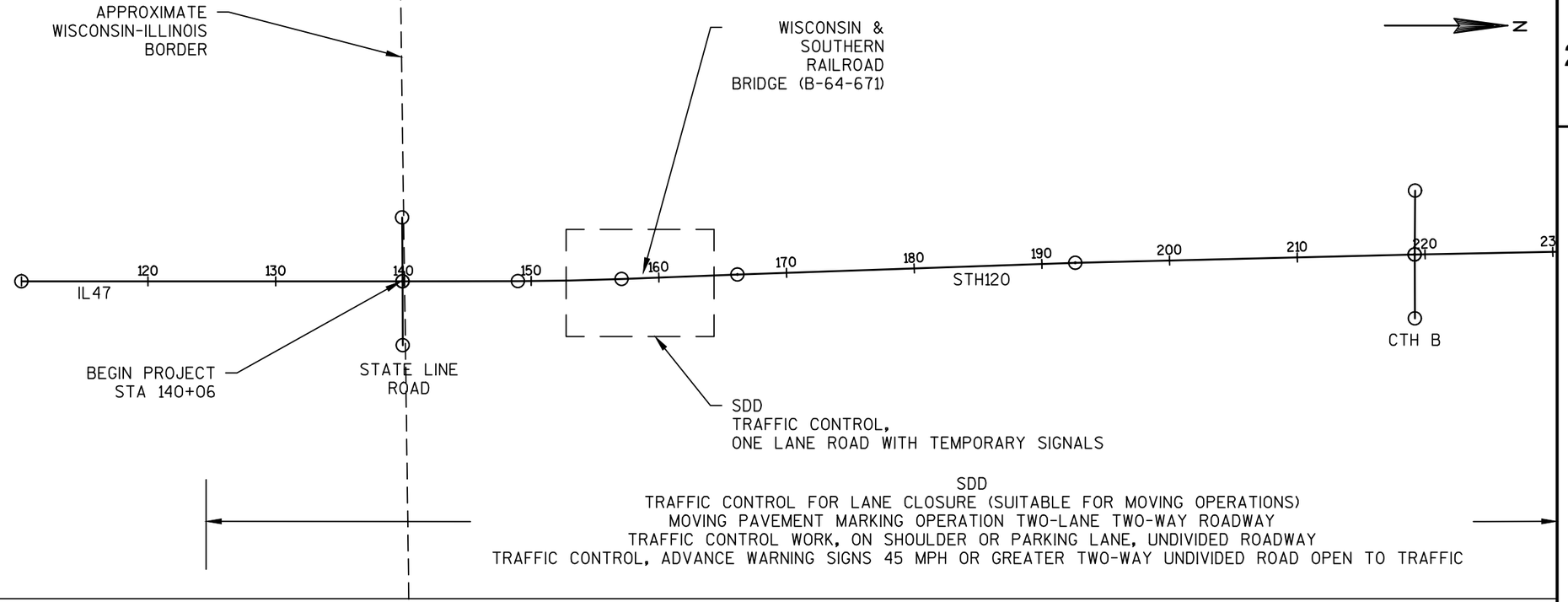
8. PAVEMENT MARKING WORDS EPOXY
9. PAVEMENT MARKING STOP LINE EPOXY 18-INCH
10. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH (WHITE)

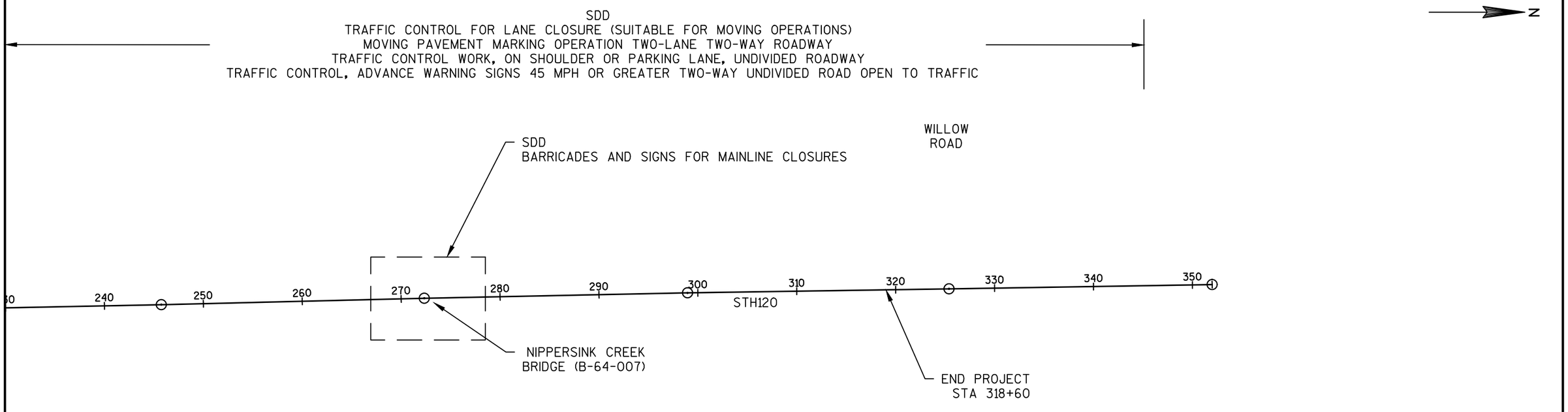
NOTE:
ESTABLISH NO PASSING ZONE PER
BID ITEM "LOCATING NO-PASSING ZONES"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PAVEMENT MARKING	SHEET 52	E

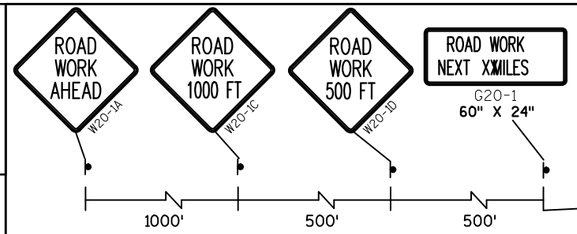
2



SDD
TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
TRAFFIC CONTROL WORK, ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC



PROJECT NO: 3180-07-30/60	HWY: STH120	COUNTY: WALWORTH	TRAFFIC CONTROL OVERVIEW	SHEET 53	E



SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

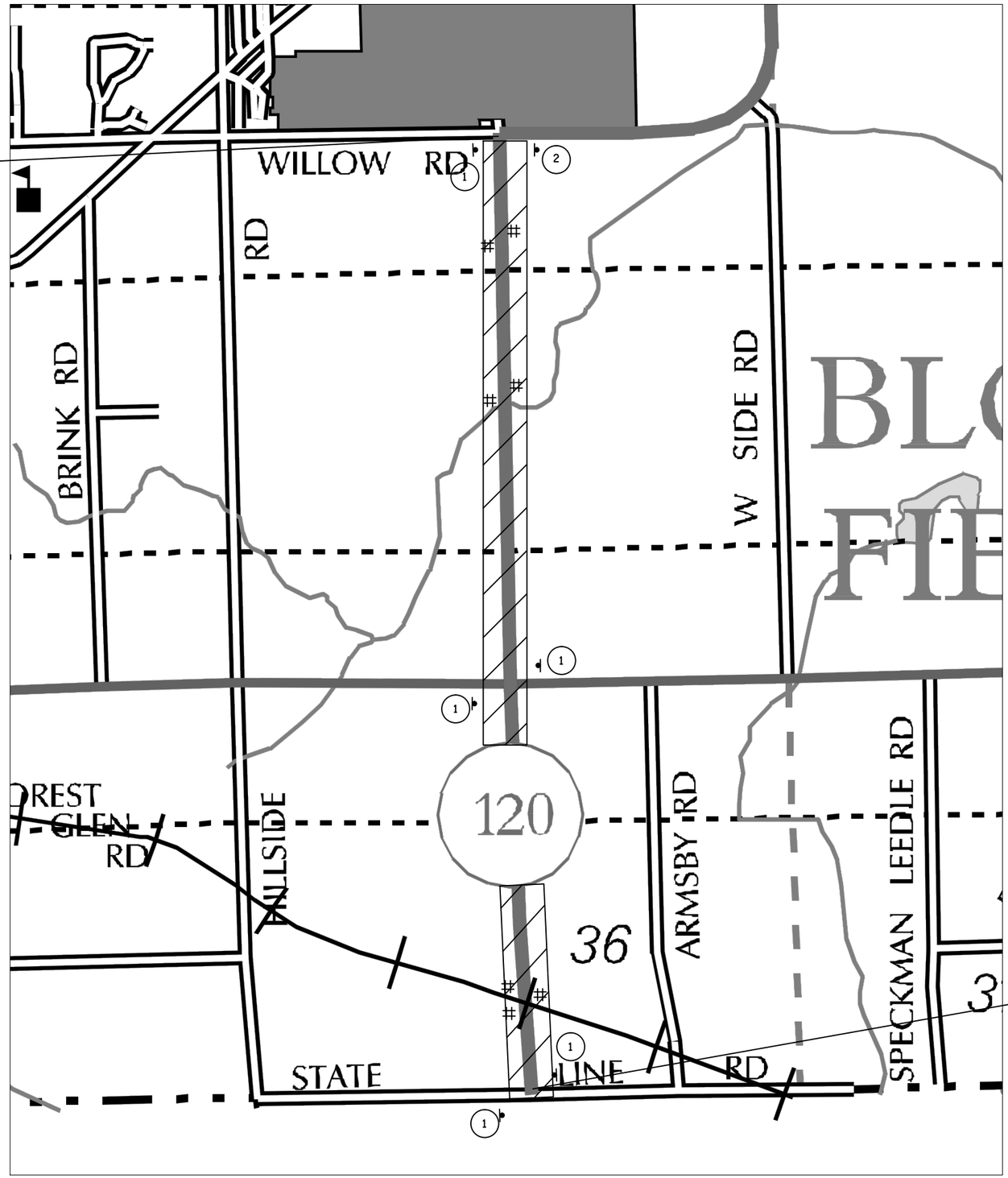
SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL GUIDANCE. SIGNS SUCH AS "NO CENTER STRIPE," "DO NOT PASS," AND "PASS WITH CARE." SHALL BE PLACED PRIOR TO OBLITERATING EXISTING PAVEMENT MARKING. PLACE EVERY 1500' AND AFTER SIDE ROADS.

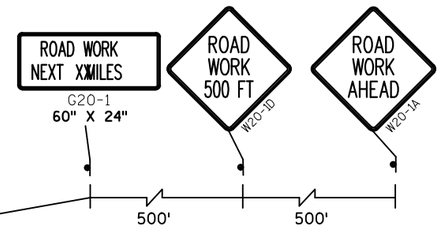
SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)". MAXIMUM LANE CLOSURE = 1 MILE.

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR TRAFFIC CONTROL DURING BEAM GUARD WORK.

LEGEND

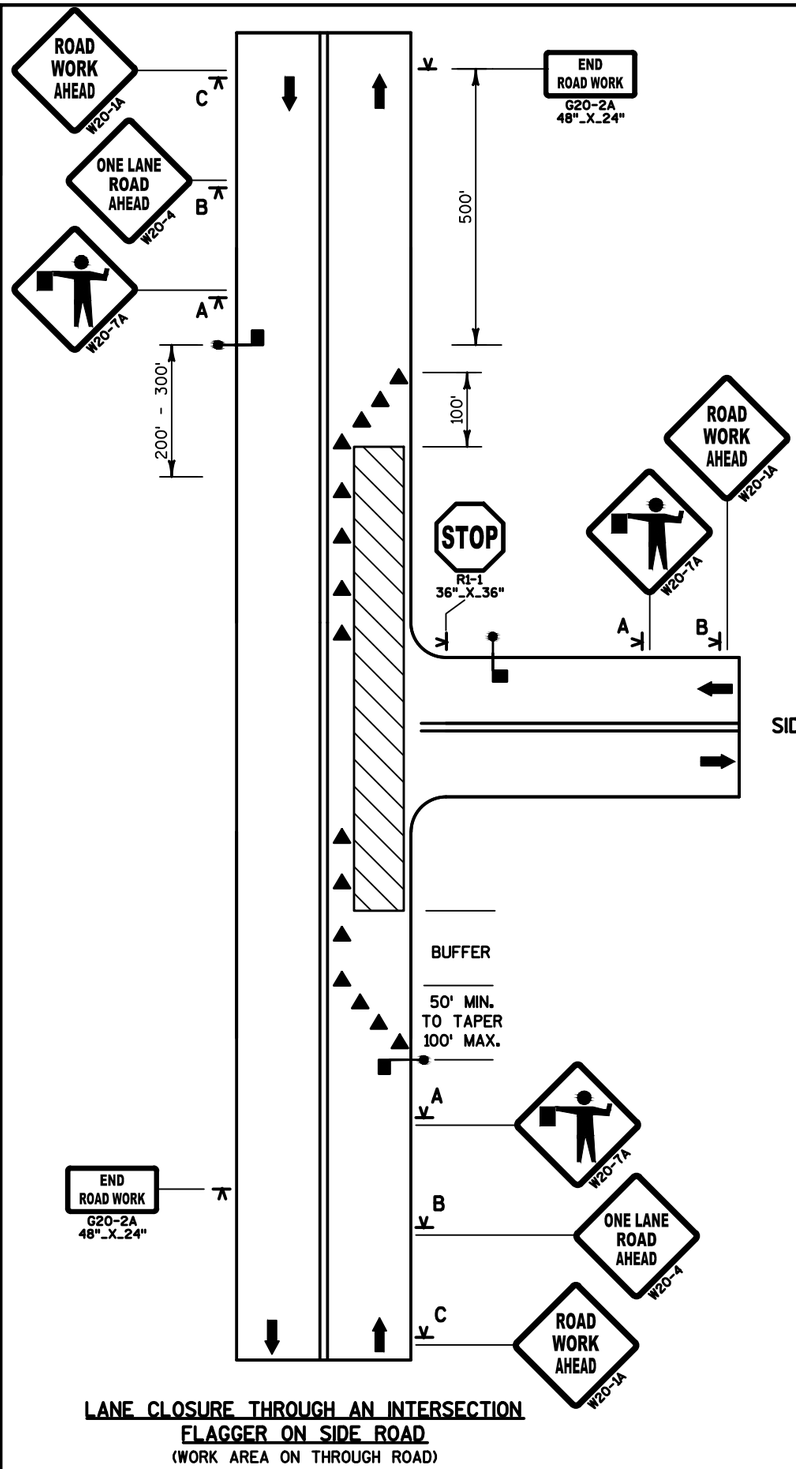
- POST MOUNTED SIGN
- WORK ZONE





SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	TRAFFIC CONTROL	SHEET 54	E



LANE CLOSURE THROUGH AN INTERSECTION
FLAGGER ON SIDE ROAD
(WORK AREA ON THROUGH ROAD)

LEGEND

- CHANNELIZING DEVICE
- PORTABLE SIGN SUPPORT
- WORK AREA
- TRAFFIC FLOW
- FLAGGER
- POST MOUNTED SIGN

SPEED LIMIT (MPH)	SIGN SPACING A, B, C ,(FT)	BUFFER (FT)
25	200	55
30	200	85
35	350	120
40	350	170
45	500	220
50	500	280
55	500	335

NOTES

1. DEPENDING ON TRAFFIC CONDITIONS, CONSIDER ADDITIONAL TRAFFIC CONTROL ON THE SIDE ROAD APPROACHES, SUCH AS FLAGGERS AND APPROPRIATE SIGNS.

GENERAL NOTES

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP QUEUE.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE "FLAGGER AHEAD", THE "ROAD CONSTRUCTION AHEAD" AND THE ONE LANE ROAD AHEAD" SIGN SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

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

2

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

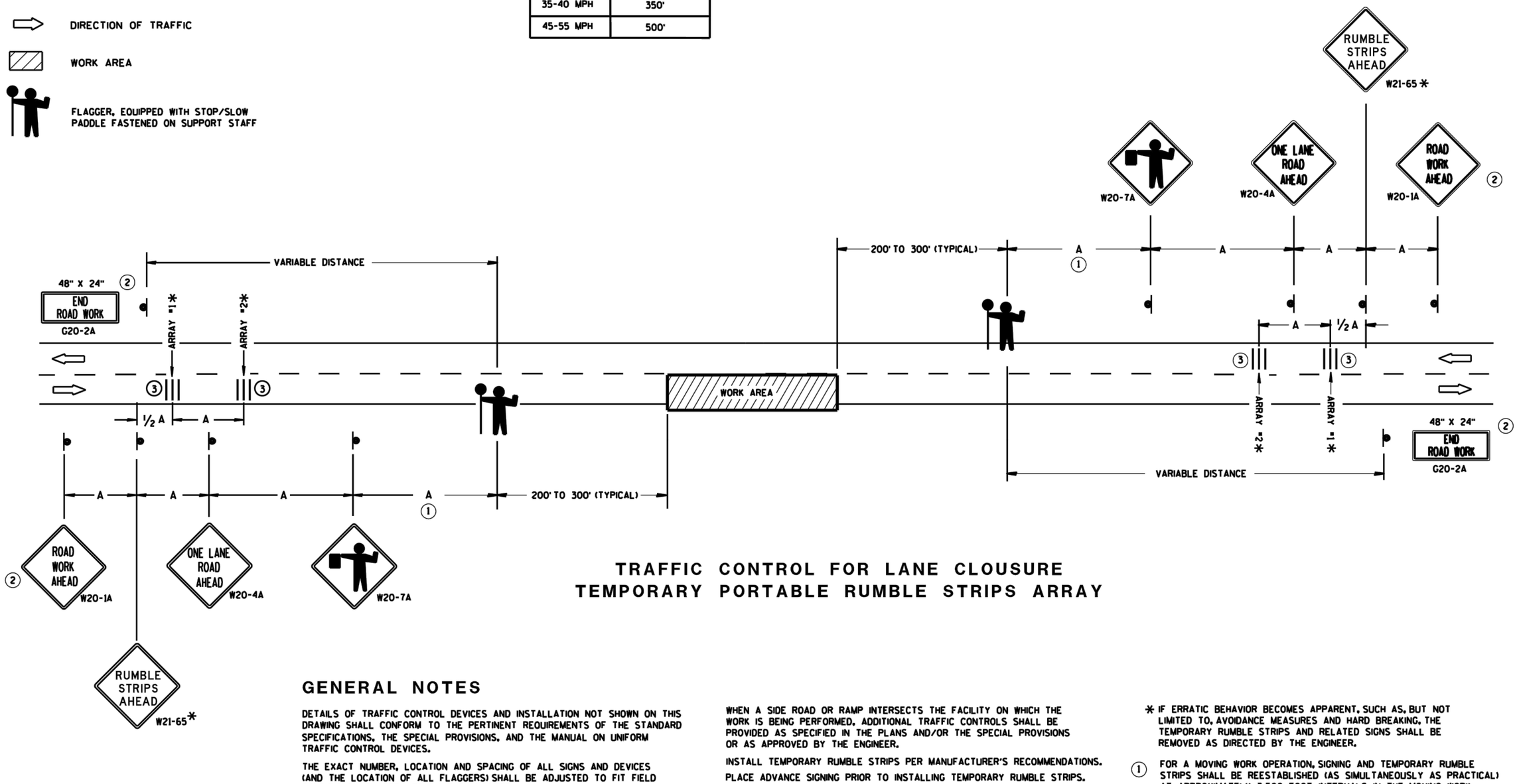
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

BE PREPARED TO STOP
W03-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING A.



TRAFFIC CONTROL FOR LANE CLOUSURE
TEMPORARY PORTABLE RUMBLE STRIPS ARRAY

GENERAL NOTES

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

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

WHEN A SIDE ROAD OR 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.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

* IF ERRATIC BEHAVIOR BECOMES APPARENT, SUCH AS, BUT NOT LIMITED TO, AVOIDANCE MEASURES AND HARD BREAKING, THE TEMPORARY RUMBLE STRIPS AND RELATED SIGNS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.

(1) FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(3) EACH RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED 8 - 10 FEET CENTER TO CENTER, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

2

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 SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

ADDITIONAL WORK VEHICLES MAY BE USED BETWEEN V1 AND V2.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE AND OTHER FACTORS.

IF THERE IS A SIDE ROAD INTERSECTION BETWEEN THE FLAGGER STATIONS PROVIDE "ROAD WORK AHEAD" SIGNS ON THE SIDE ROAD AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE "ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

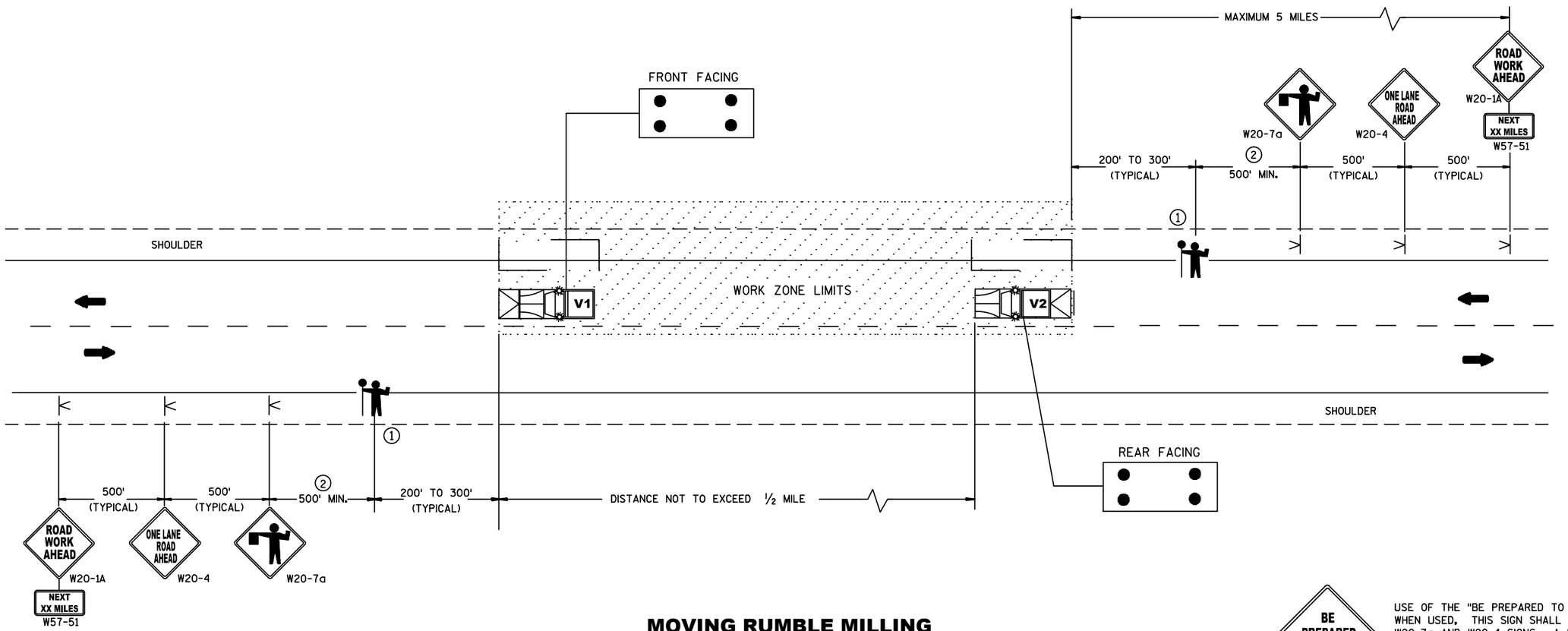
THIS DRAWING SHALL BE USED FOR CENTERLINE AND SHOULDER MILLING OF RUMBLE STRIPS.

① MAXIMUM DISTANCE BETWEEN FLAGGER STATIONS SHALL BE ONE MILE.

② FOR MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

LEGEND

- **V1** LEAD VEHICLE
- **V2** TRAIL VEHICLE WITH TMA
- **TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON PORTABLE SUPPORT
- DIRECTION OF TRAVEL
- FLASHING ARROW PANEL (CAUTION)
- (FLAGGER STATION) FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- WORK AREA



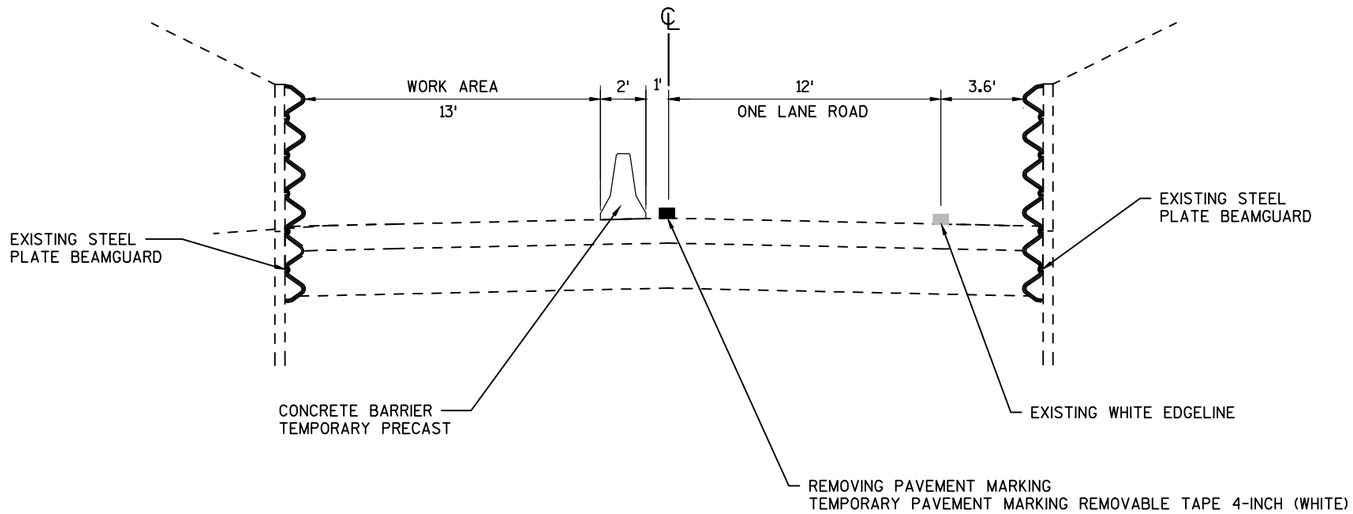
MOVING RUMBLE MILLING OPERATIONS TWO-LANE TWO-WAY ROADWAY

(REPOSITION VEHICLES TO OUTER EDGE FOR SHOULDER MILLING)

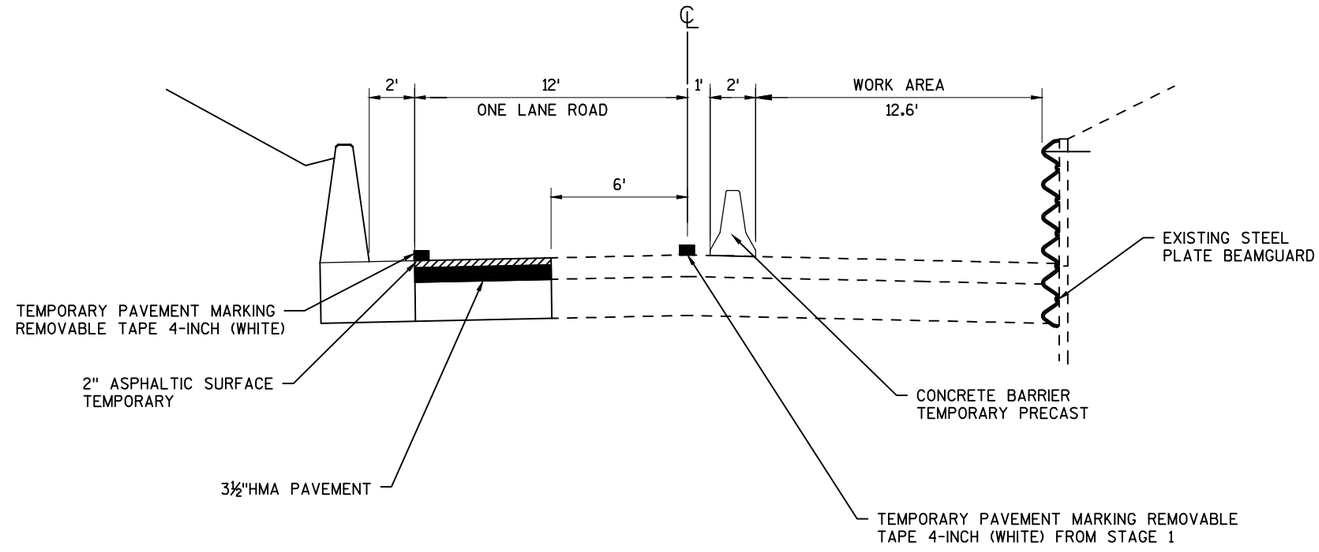
BE PREPARED TO STOP
W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.

2



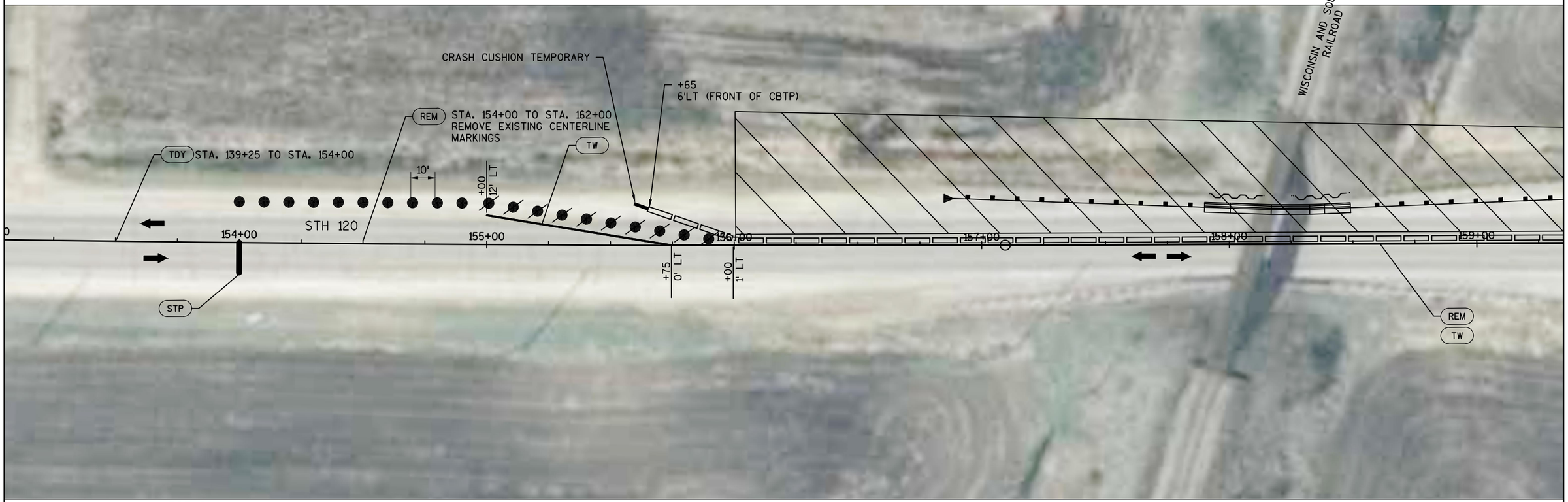
STAGE 1 TYPICAL SECTION
WISCONSIN & SOUTHERN RAILROAD



STAGE 2 TYPICAL SECTION
WISCONSIN & SOUTHERN RAILROAD

2

N



LEGEND

- CONCRETE BARRIER TEMPORARY PRECAST
- WORK ZONE
- DIRECTION OF TRAVEL
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- REM — REMOVING PAVEMENT MARKING
- TW — TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- TDY — TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- STP — TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH
- TEMPORARY SHORING B-64-671

WORK IN STAGE 1

WEST SIDE OF STH 120 CONCRETE BARRIER, STORM SEWER, TEMP. SHEET PILING, BEAM GUARD, LANDSCAPING, AND EROSION CONTROL

TRAFFIC

TEMPORARY SIGNALS AT BRIDGE

NOTE:

SEE SDD "TRAFFIC CONTROL ONE LANE ROAD WITH TEMPORARY SIGNALS" FOR SIGNING AND ADDITIONAL INFORMATION.

SEE SDD "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL INFORMATION.

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	TRAFFIC CONTROL - STAGE 1	SHEET 59	E

FILE NAME : N:\PDS\C3D\CAD\31800760\026001_S1.DWG
LAYOUT NAME - 022001_TC
PLOT DATE : 4/27/2016 11:09 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : ---------- PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

WISCONSIN AND SOUTHERN RAILROAD

+35
6' LT (FRONT OF CBTP)

CRASH CUSHION TEMPORARY

TW

10'

REM
STA. 154+00 TO STA. 162+00
REMOVE EXISTING CENTERLINE MARKINGS

+00
12' LT

STP

157+00 158+00 159+00 160+00 161+00 162+00 163+00

+00
1' LT

+25
0' LT

REM

TW

STH 120

TDY STA. 162+00 TO STA. 169+00

LEGEND

- CONCRETE BARRIER TEMPORARY PRECAST
- WORK ZONE
- DIRECTION OF TRAVEL
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- REM REMOVING PAVEMENT MARKING
- TW TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- TDY TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- STP TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH
- TEMPORARY SHORING B-64-671

WORK IN STAGE 1

WEST SIDE OF STH 120 CONCRETE BARRIER, STORM SEWER, TEMP. SHEET PILING, BEAM GUARD, LANDSCAPING, AND EROSION CONTROL

TRAFFIC

TEMPORARY SIGNALS AT BRIDGE

NOTE:

SEE SDD "TRAFFIC CONTROL ONE LANE ROAD WITH TEMPORARY SIGNALS" FOR SIGNING AND ADDITIONAL INFORMATION.

SEE SDD "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL INFORMATION.

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	TRAFFIC CONTROL - STAGE 1	SHEET 60	E

2

N

TDY STA. 139+25 TO STA. 154+00
FROM STAGE 1

REM STA. 154+00 TO STA. 162+00
REMOVE EXISTING CENTERLINE
MARKINGS FROM STAGE 1

STH 120

154+00 155+00 156+00 157+00 158+00 159+00

FROM STAGE 1 STP

10'

TW +75 0' RT

+00 12' RT

+00 1' RT

CRASH CUSHION TEMPORARY

+65
6'RT (FRONT OF CBTP)

FROM STAGE 1 TW REM

+70 12' LT

WISCONSIN AND SOUTHERN RAILROAD

TW +80 12' LT

12'

LEGEND

- CONCRETE BARRIER TEMPORARY PRECAST
- WORK ZONE
- DIRECTION OF TRAVEL
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- REM REMOVING PAVEMENT MARKING
- TW TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- TDY TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- STP TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH
- TEMPORARY SHORING B-64-671

WORK IN STAGE 2

EAST SIDE OF STH 120 CONCRETE BARRIER, TEMP. SHEET PILING, BEAM GUARD, LANDSCAPING, AND EROSION CONTROL

TRAFFIC

TEMPORARY SIGNALS AT BRIDGE

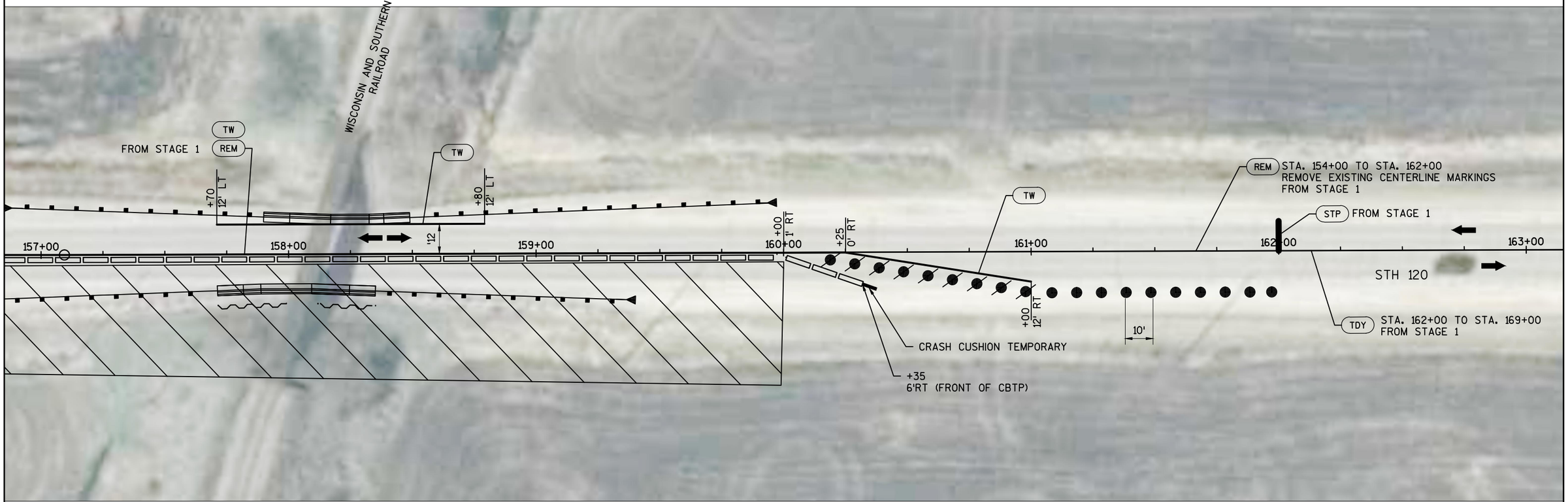
NOTE:

SEE SDD "TRAFFIC CONTROL ONE LANE ROAD WITH TEMPORARY SIGNALS" FOR SIGNING AND ADDITIONAL INFORMATION.

SEE SDD "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL INFORMATION.

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PLAN: TRAFFIC CONTROL - STAGE 2	SHEET 61	E

2



LEGEND

- CONCRETE BARRIER TEMPORARY PRECAST
- WORK ZONE
- DIRECTION OF TRAVEL
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- (REM) REMOVING PAVEMENT MARKING
- (TW) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (TDY) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- (STP) TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH
- TEMPORARY SHORING B-64-671

WORK IN STAGE 2

EAST SIDE OF STH 120 CONCRETE BARRIER, TEMP. SHEET PILING, BEAM GUARD, LANDSCAPING, AND EROSION CONTROL

TRAFFIC

TEMPORARY SIGNALS AT BRIDGE

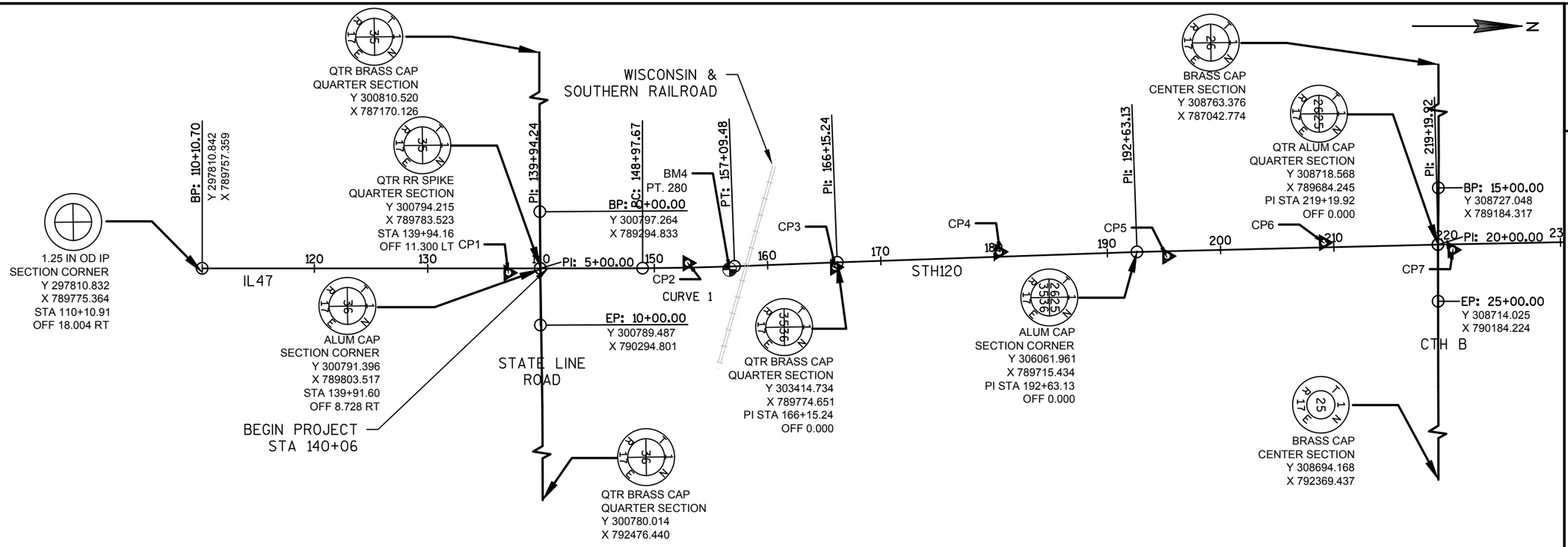
NOTE:

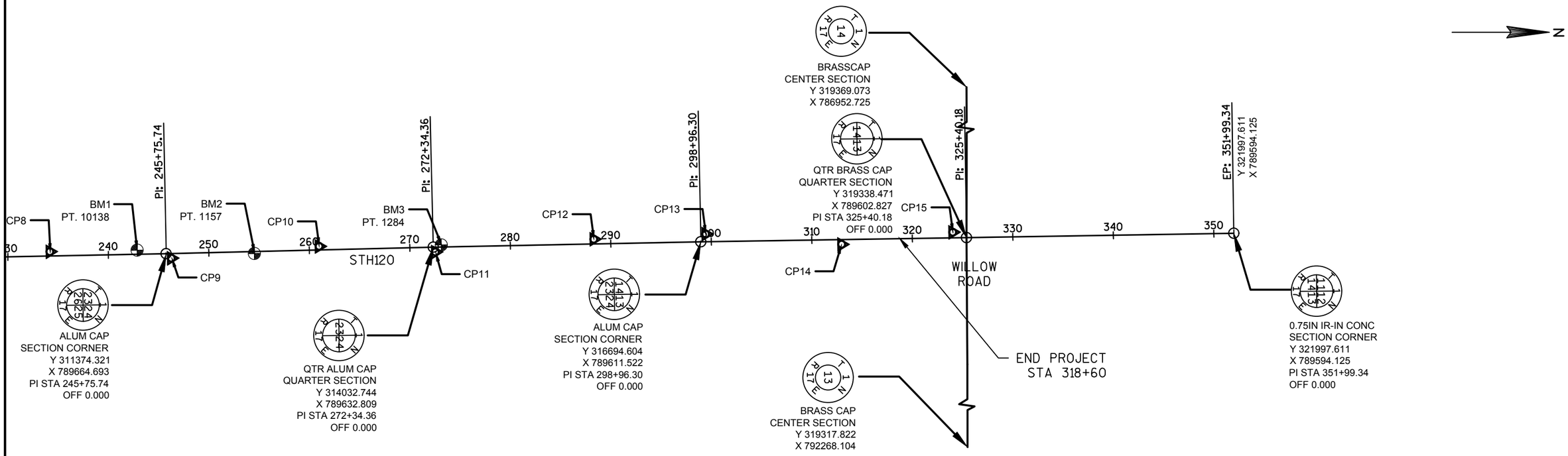
SEE SDD "TRAFFIC CONTROL ONE LANE ROAD WITH TEMPORARY SIGNALS" FOR SIGNING AND ADDITIONAL INFORMATION.

SEE SDD "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR ADDITIONAL INFORMATION.

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PLAN: TRAFFIC CONTROL - STAGE 2	SHEET 62	E

CURVE 1:
R 22561.81'
L 811.81'
T 405.95'
PC 148+97.67
PI 153+03.62
PT 157+09.48
E NC
DELTA 2.06°

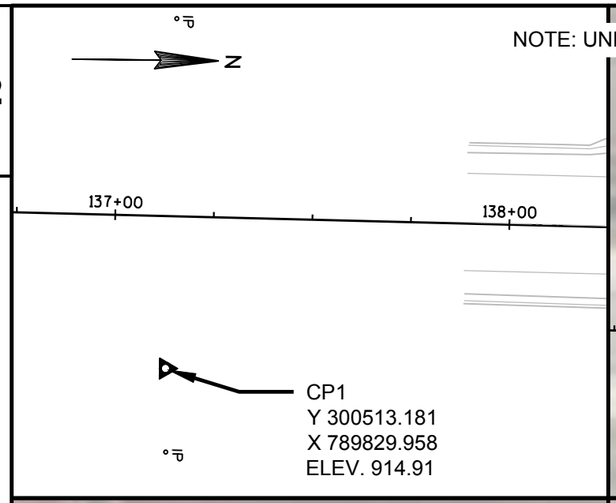




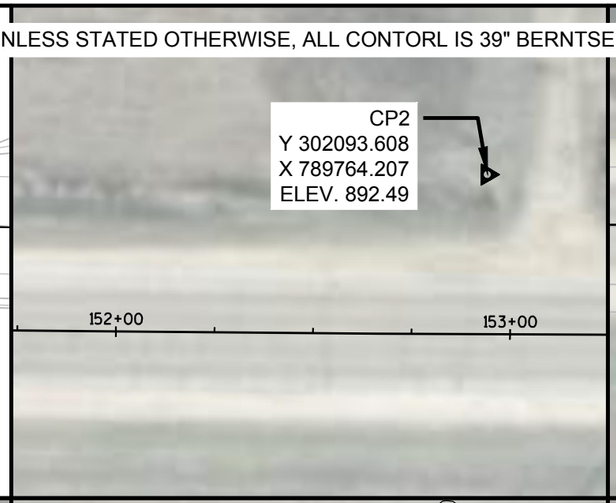
PROJECT NO: 3180-07-30/60	HWY: STH120	COUNTY: WALWORTH	ALIGNMENT & SURVEY CONTROL PLAN	SHEET 63	E

NOTE: UNLESS STATED OTHERWISE, ALL CONTORL IS 39" BERNTSEN FENO MONUMENT WITH ALUMINUM CAP AND MARKER POST

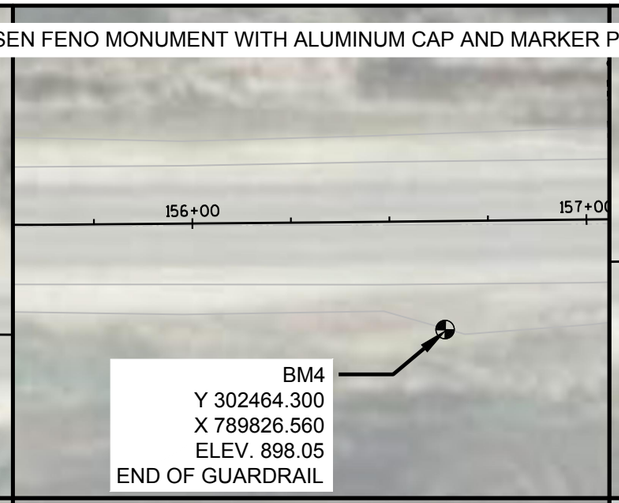
2



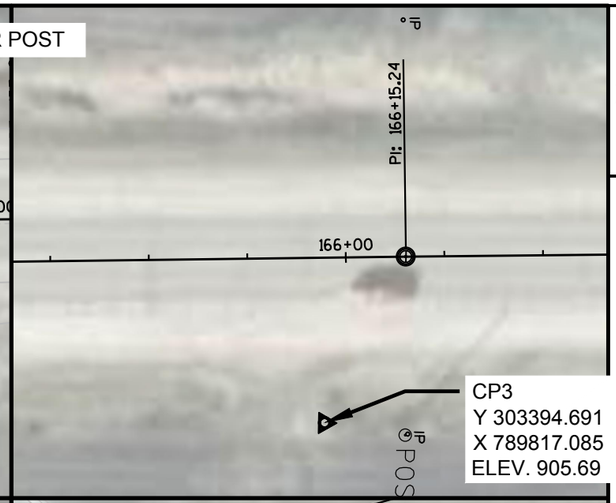
CP1
Y 300513.181
X 789829.958
ELEV. 914.91



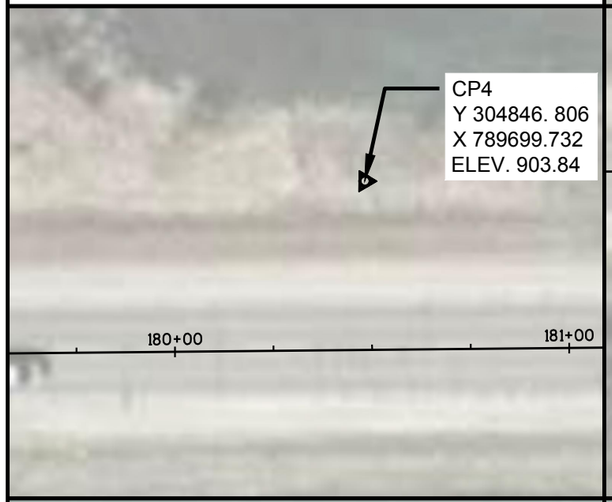
CP2
Y 302093.608
X 789764.207
ELEV. 892.49



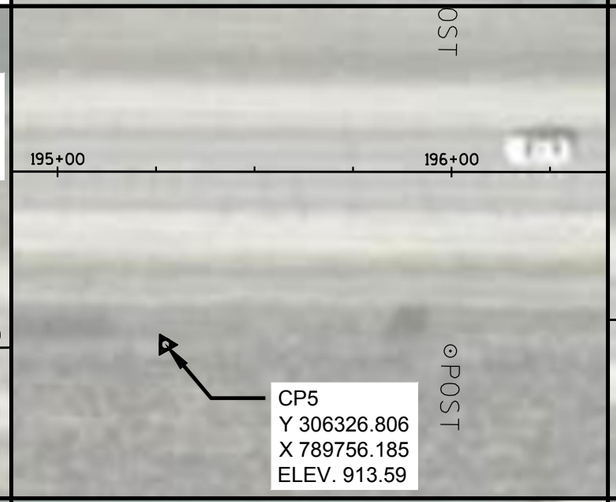
BM4
Y 302464.300
X 789826.560
ELEV. 898.05
END OF GUARDRAIL



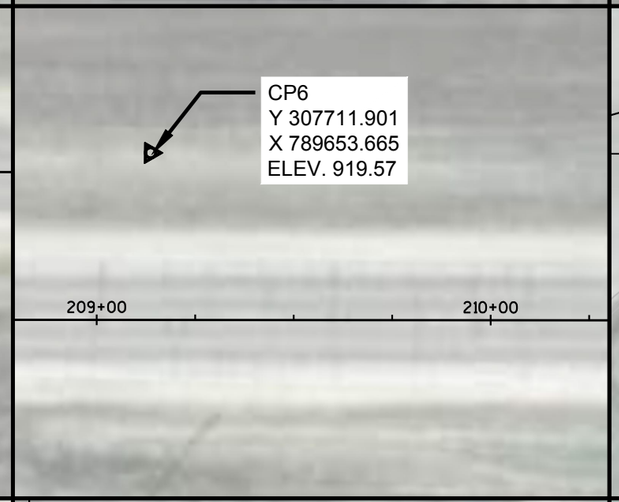
CP3
Y 303394.691
X 789817.085
ELEV. 905.69



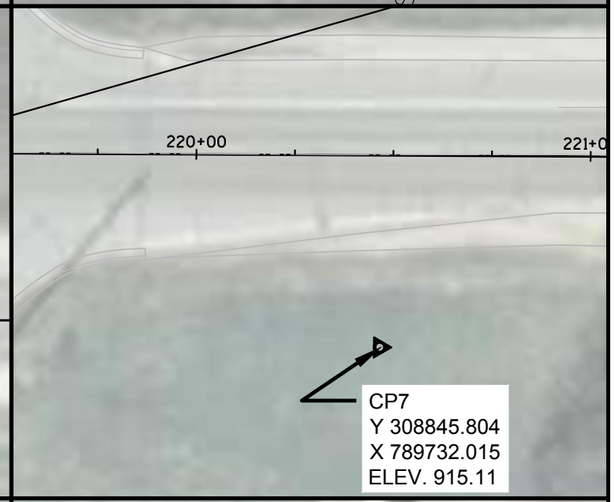
CP4
Y 304846. 806
X 789699.732
ELEV. 903.84



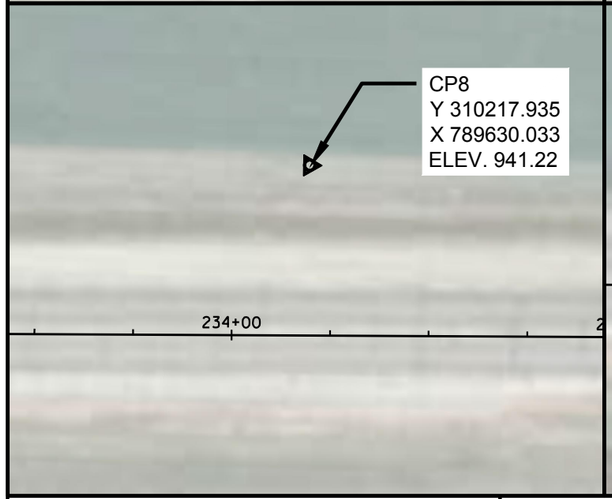
CP5
Y 306326.806
X 789756.185
ELEV. 913.59



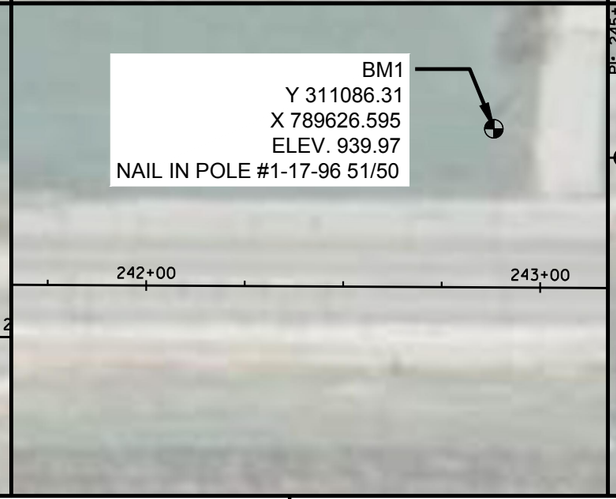
CP6
Y 307711.901
X 789653.665
ELEV. 919.57



CP7
Y 308845.804
X 789732.015
ELEV. 915.11

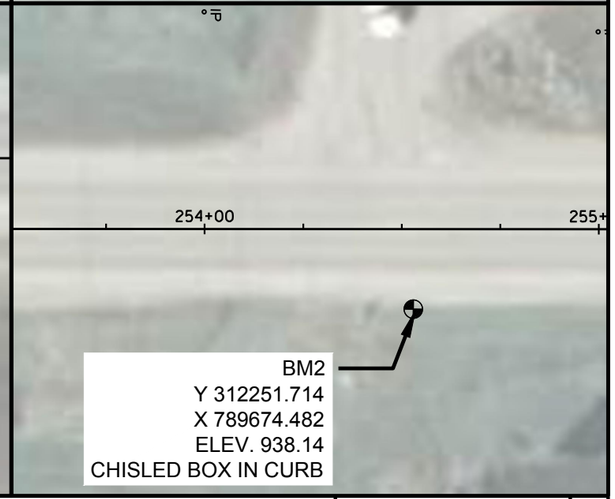


CP8
Y 310217.935
X 789630.033
ELEV. 941.22



BM1
Y 311086.31
X 789626.595
ELEV. 939.97
NAIL IN POLE #1-17-96 51/50

CP9
Y 311424.944
X 789709.898
ELEV. 936.41



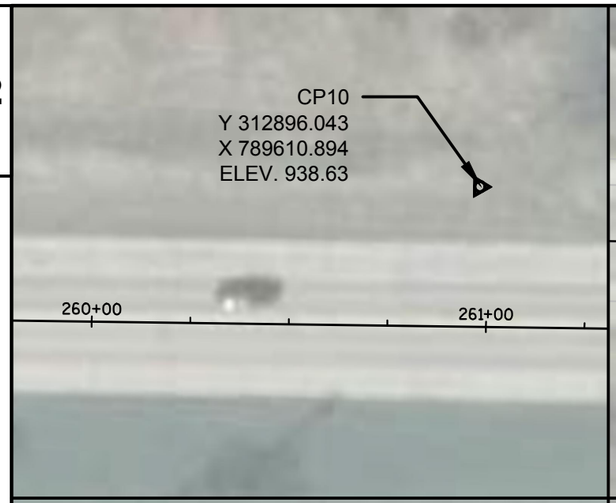
BM2
Y 312251.714
X 789674.482
ELEV. 938.14
CHISLED BOX IN CURB

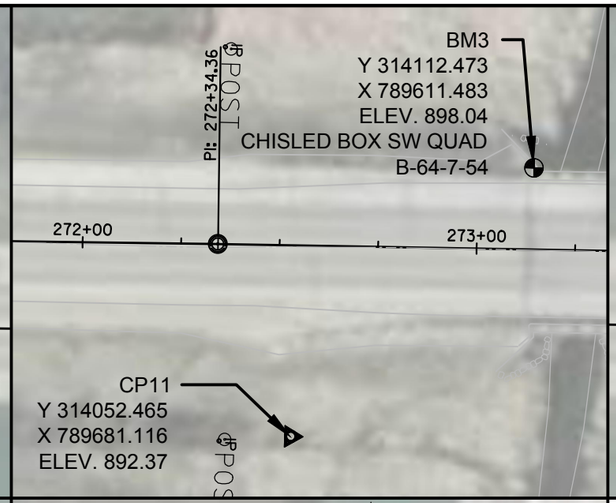
PROJECT NO: 3180-07-30/60	HWY: STH120	COUNTY: WALWORTH	SURVEY CONTROL	SHEET 64	E

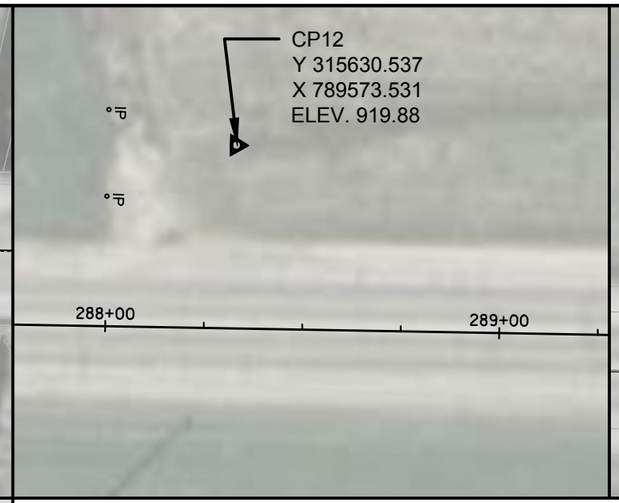
FILE NAME : N:\PDS\C3D\31800730\SHEETSPLAN\SURVEY CONTROL - PS&E.DWG
LAYOUT NAME - SHEET - (2)

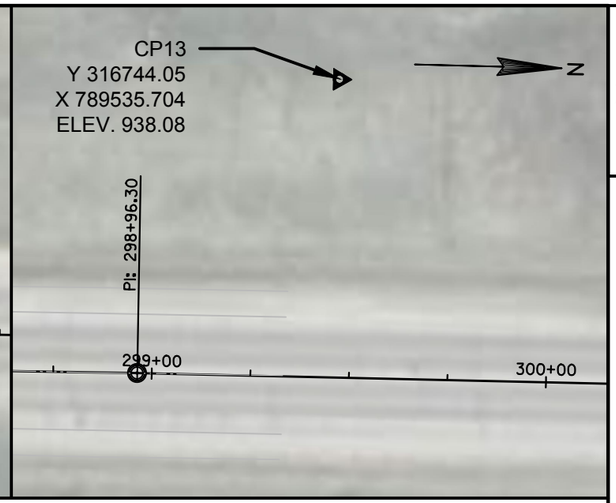
PLOT DATE : 3/21/2016 1:52 PM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:40 FT

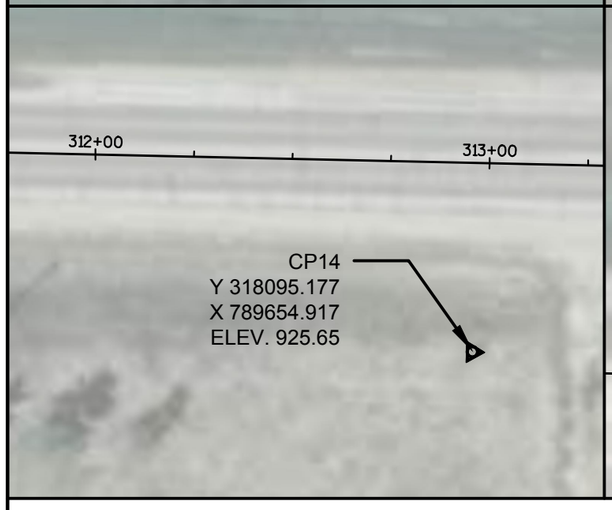
WISDOT/CADDS SHEET 44

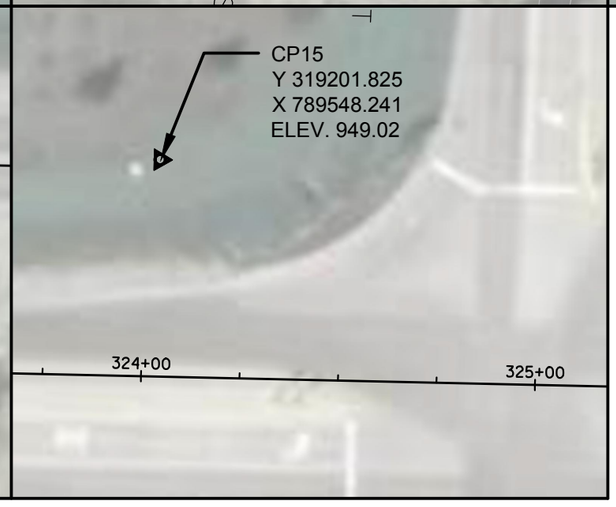












OTHER CONTROL

Point Number	Northing	Easting	Elevation	Description
LINN E GPS	319354	790611	928.29	HMOD vertical calibration point
LINN W GPS	318645	773702	1010.68	HMOD vertical calibration point
P 115	301879	792429	900.57	NGS vertical calibration point
VEEN RM 2	300848	786038	964.16	NGS vertical calibration point
PELL LAKE GPS	303503	783291	991.23	NGS vertical calibration point
VEEN	300787	786063	963.48	NGS monument

NOTE: UNLESS STATED OTHERWISE, ALL CONTORL IS 39" BERNTSEN FENO MONUMENT WITH ALUMINUM CAP AND MARKER POST

3180-07-60

Line	Item	Item Description	Unit	Total	Qty
0010	201.0120	Clearing	ID	132.000	132.000
0020	201.0220	Grubbing	ID	132.000	132.000
0030	204.0110	Removing Asphaltic Surface	SY	160.000	160.000
0040	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,460.000	1,460.000
0050	204.0125	Removing Asphaltic Surface Milling	TON	3,950.000	3,950.000
0060	204.0165	Removing Guardrail	LF	1,685.000	1,685.000
0070	204.0210	Removing Manholes	EACH	2.000	2.000
0080	204.0245	Removing Storm Sewer (size) 01. 24-INCH	LF	102.000	102.000
0090	205.0100	Excavation Common	CY	144.000	144.000
0100	210.2100	Backfill Structure Type B	CY	49.000	49.000
0110	213.0100	Finishing Roadway (project) 01. 3180-07-60	EACH	1.000	1.000
0120	305.0110	Base Aggregate Dense 3/4-Inch	TON	935.000	935.000
0130	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	60.000	60.000
0140	305.0500	Shaping Shoulders	STA	360.000	360.000
0150	440.4410	Incentive IRI Ride	DOL	13,520.000	13,520.000
0160	455.0605	Tack Coat	GAL	4,490.000	4,490.000
0170	460.2000	Incentive Density HMA Pavement	DOL	5,880.000	5,880.000
0180	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	18,630.000	18,630.000
0190	460.5223	HMA Pavement 3 LT 58-28 S	TON	34.000	34.000
0200	460.5224	HMA Pavement 4 LT 58-28 S	TON	9,150.000	9,150.000
0210	465.0110	Asphaltic Surface Patching	TON	20.000	20.000
0220	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	70.000	70.000
0230	465.0125	Asphaltic Surface Temporary	TON	24.000	24.000
0240	465.0475	Asphalt Center Line Rumble Strips 2-Lane Rural	LF	15,400.000	15,400.000
0250	509.0301	Preparation Decks Type 1	SY	10.000	10.000
0260	509.0302	Preparation Decks Type 2	SY	10.000	10.000
0270	509.1500	Concrete Surface Repair	SF	67.000	67.000
0280	509.3500.S	HMA Overlay Polymer-Modified	TON	17.000	17.000
0290	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 01. B-64-07	SY	98.000	98.000
0300	511.1200	Temporary Shoring (structure) 01. B-64-671	SF	630.000	630.000
0310	520.8700	Cleaning Culvert Pipes	EACH	6.000	6.000
0320	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	2.000	2.000
0330	603.1442	Concrete Barrier Type S42C	LF	123.000	123.000
0340	603.8000	Concrete Barrier Temporary Precast Delivered	LF	475.000	475.000
0350	603.8125	Concrete Barrier Temporary Precast Installed	LF	950.000	950.000
0360	604.0600	Slope Paving Select Crushed Material	SY	65.000	65.000
0370	606.0200	Riprap Medium	CY	35.000	35.000
0380	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-	LF	130.000	130.000

Line	Item	Item Description	Unit	Total	Qty
		Inch			
0390	611.0545	Manhole Covers Type L	EACH	2.000	2.000
0400	611.2033	Manholes 3x3-FT	EACH	2.000	2.000
0410	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	40.000	40.000
0420	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	126.000	126.000
0430	612.0806	Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	EACH	4.000	4.000
0440	614.0010	Barrier System Grading Shaping Finishing	EACH	8.000	8.000
0450	614.0905	Crash Cushions Temporary	EACH	4.000	4.000
0460	614.2300	MGS Guardrail 3	LF	851.000	851.000
0470	614.2330	MGS Guardrail 3 K	LF	225.000	225.000
0480	614.2500	MGS Thrie Beam Transition	LF	315.200	315.200
0490	614.2610	MGS Guardrail Terminal EAT	EACH	12.000	12.000
0500	619.1000	Mobilization	EACH	1.000	1.000
0510	624.0100	Water	MGAL	14.500	14.500
0520	625.0100	Topsoil	SY	238.000	238.000
0530	627.0200	Mulching	SY	100.000	100.000
0540	628.1504	Silt Fence	LF	835.000	835.000
0550	628.1520	Silt Fence Maintenance	LF	835.000	835.000
0560	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0570	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0580	628.2004	Erosion Mat Class I Type B	SY	228.000	228.000
0590	628.6005	Turbidity Barriers	SY	115.000	115.000
0600	628.7504	Temporary Ditch Checks	LF	190.000	190.000
0610	628.7555	Culvert Pipe Checks	EACH	22.000	22.000
0620	628.7570	Rock Bags	EACH	30.000	30.000
0630	630.0130	Seeding Mixture No. 30	LB	2.000	2.000
0640	630.0160	Seeding Mixture No. 60	LB	3.000	3.000
0650	630.0200	Seeding Temporary	LB	6.000	6.000
0660	631.0300	Sod Water	MGAL	1.000	1.000
0670	631.1100	Sod Erosion Control	SY	10.000	10.000
0680	633.0500	Delineator Reflectors	EACH	12.000	12.000
0690	633.1000	Delineator Brackets	EACH	6.000	6.000
0700	633.5200	Markers Culvert End	EACH	14.000	14.000
0710	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	70.000	70.000
0720	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	65.000	65.000
0730	637.2210	Signs Type II Reflective H	SF	776.760	776.760
0740	637.2230	Signs Type II Reflective F	SF	301.000	301.000
0750	638.2102	Moving Signs Type II	EACH	4.000	4.000
0760	638.2602	Removing Signs Type II	EACH	94.000	94.000

3180-07-60

Line	Item	Item Description	Unit	Total	Qty
0770	638.3000	Removing Small Sign Supports	EACH	103.000	103.000
0780	642.5201	Field Office Type C	EACH	1.000	1.000
0790	643.0100	Traffic Control (project) 01. 3180-07-60	EACH	1.000	1.000
0800	643.0300	Traffic Control Drums	DAY	2,800.000	2,800.000
0810	643.0420	Traffic Control Barricades Type III	DAY	250.000	250.000
0820	643.0705	Traffic Control Warning Lights Type A	DAY	430.000	430.000
0830	643.0715	Traffic Control Warning Lights Type C	DAY	1,350.000	1,350.000
0840	643.0900	Traffic Control Signs	DAY	2,900.000	2,900.000
0850	643.1050	Traffic Control Signs PCMS	DAY	50.000	50.000
0860	645.0120	Geotextile Type HR	SY	15.000	15.000
0870	646.0106	Pavement Marking Epoxy 4-Inch	LF	18,200.000	18,200.000
0880	646.0600	Removing Pavement Markings	LF	200.000	200.000
0890	646.2304.S	Pavement Marking Grooved Wet Reflective Epoxy 4-Inch	LF	37,910.000	37,910.000
0900	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	2.000	2.000
0910	647.0356	Pavement Marking Words Epoxy	EACH	1.000	1.000
0920	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	280.000	280.000
0930	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	156.000	156.000
0940	648.0100	Locating No-Passing Zones	MI	3.380	3.380
0950	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	4,460.000	4,460.000
0960	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	200.000	200.000
0970	649.0403	Temporary Pavement Marking Epoxy 4-Inch	LF	14,525.000	14,525.000
0980	649.1400	Temporary Pavement Marking Stop Line Removable Tape 24-Inch	LF	24.000	24.000
0990	650.4000	Construction Staking Storm Sewer	EACH	4.000	4.000
1000	650.4500	Construction Staking Subgrade	LF	130.000	130.000
1010	650.5000	Construction Staking Base	LF	130.000	130.000
1020	650.7500	Construction Staking Concrete Barrier	LF	123.000	123.000
1030	650.8000	Construction Staking Resurfacing Reference	LF	17,854.000	17,854.000
1040	650.9910	Construction Staking Supplemental Control (project) 01. 3180-07-60	LS	1.000	1.000
1050	650.9920	Construction Staking Slope Stakes	LF	130.000	130.000
1060	661.0100	Temporary Traffic Signals for Bridges (structure) 01. B-64-671	LS	1.000	1.000
1070	690.0150	Sawing Asphalt	LF	245.000	245.000
1080	SPV.0035	Special 01. BACKFILL SLURRY	CY	14.000	14.000
1090	SPV.0035	Special 02. CONCRETE MASONRY DECK PATCHING	CY	1.000	1.000
1100	SPV.0060	Special 01. SECTION CORNER MONUMENTS SPECIAL	EACH	8.000	8.000
1110	SPV.0090	Special 01. SAWING PAVEMENT DECK PREPARATION AREAS	LF	20.000	20.000

Line	Item	Item Description	Unit	Total	Qty
1120	SPV.0090	Special 02. STEEL THRIE BEAM RETRO FIT	LF	49.000	49.000
1130	SPV.0090	Special 03. PAVEMENT MARKING GROOVED PREFORMED PLASTIC TAPE 8-INCH	LF	585.000	585.000
1140	SPV.0090	Special 04. JOINT AND CRACK REPAIR	LF	5,000.000	5,000.000
1150	SPV.0105	Special 01. Temporary Portable Rumble Strip Array	LS	1.000	1.000

3

EARTHWORK SUMMARY

Division	From / To Station	Location	205.0100 Common Excavation (1) Cut (2)	Salvaged / Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13) Factor 1.20	Mass Ordinate + / - (14)	Waste	208.0100 Borrow	Comment:
			CY	CY	CY	CY	CY	CY	CY	CY	
Division 1	157+55 to 158+55	Railroad - Left	78	20	58	0	0	58	58	0	Cut includes excavation from bottom of barrier wall footing to Temporary Sheet Piling at elevation of bottom of footing.
Division 1 Subtotal			78	20	58	0	0	58	58	0	
Division 2	157+67 to 158+40	Railroad - Right	66	11	55	0	0	55	55	0	
Division 2 Subtotal			66	11	55	0	0	55	55	0	
Grand Total			144	31	113	0	0	113	113	0	
Total Common Excavation			**144**								

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.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
13) Expanded Fill. Factor = 1.20
Depending on selections: **Expanded Fill = (Unexpanded Fill) * Fill Factor**
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

CLEARING AND GRUBBING

LOCATION	OFFSET	201.0120 CLEARING ID	201.0220 GRUBBING ID
243+48	28.5' LT	20	20
243+77	28' LT	18	18
243+80	29' LT	21	21
244+22	30' LT	20	20
283+53	32' LT	22	22
285+48	29' LT	4	4
286+21	29.5' LT	5	5
286+21	29.5' LT	6	6
286+48	29' LT	6	6
286+48	29' LT	5	5
286+48	29' LT	5	5
TOTAL		132	132

AGGREGATE SHOULDER ITEMS

LOCATION	* 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0500 SHAPING SHOULDERS STA	* 624.0100 WATER MGAL
STH 120 NB	425	180	6.5
STH 120 SB	450	180	7
TOTAL	875	360	13.5

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

BASE AGGREGATE

LOCATION	210.2100 BACKFILL STRUCTURE TYPE B CY	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	604.0600 SLOPE PAVING SELECT CRUSHED MATERIAL SY	* 624.0100 WATER MGAL
157+55 TO 158+85 LT	--	40	--	0.5
157+67 TO 158+40 RT	--	20	--	0.5
157+71 TO 158+35 RT	27	--	36	--
157+90 TO 158+49 LT	22	--	29	--
TOTAL	49	60	65	1

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

NOTE: UNLESS OTHERWISE NOTED, ALL ITEMS ARE CATEGORY 0010

3

SAWING ASPHALT

LOCATION	690.0150 LF
STAGE 1 BARRIER WALL	150
STAGE 2 BARRIER WALL	95
TOTAL	245

UNDERDRAIN

LOCATION	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH LF	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH
157+80 TO 158+20 LT	10	35	1
158+27 TO 158+55 LT	10	25	1
157+62 TO 157+98 RT	10	30	1
158+03 TO 158+42 RT	10	36	1
TOTAL	40	126	4

3

DRIVEWAY ITEMS

LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	* 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
140+06 TO CTH B	--	10	10
CTH B TO 318+60	160	50	60
TOTAL	160	60	70

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ASPHALTIC ITEMS

LOCATION	204.0125 REMOVING ASPHALTIC SURFACE MILLING TON	455.0605 TACK COAT GAL	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS LF	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0450 ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL LF	SPV.0090.04 JOINT AND CRACK REPAIR LF
STAGE 1	--	10	--	23	--	--	--
STAGE 2	--	5	--	11	--	--	--
STAGE 3	3,950	4,475	18,630	--	9,150	15,400	5,000
TOTAL	3,950	4,490	18,630	34	9,150	15,400	5,000

BUTT JOINTS

LOCATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINT SY
CTH B WEST LEG	230
CTH B EAST LEG	220
B-64-007 SOUTH APPROACH	250
B-64-007 NORTH APPROACH	250
NORTH PROJECT LIMITS	510
TOTAL	1,460

ASPHALTIC SURFACE

LOCATION	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON
STAGE 1	--	13
STAGE 2	--	6
UNDISTRIBUTED	20	5
TOTAL	20	24

NOTE: UNLESS OTHERWISE NOTED, ALL ITEMS ARE CATEGORY 0010

3

CULVERT PIPES

LOCATION	DESCRIPTION	520.8700 CLEANING CULVERT PIPES EACH	633.5200 MARKERS CULVERT END EACH
140+50	30" CMP - 100'	1	2
210+50	24" CMCP - 66'	1	2
219+00	19" X 27" CMEP - 75'	2	4
241+10	20" X 28" CMPA - 64'	1	2
254+50	18" CMP - 65'	1	2
RAILROAD STORMSEWER		--	2
TOTAL		6	14

EXISTING STORM SEWER REMOVALS

STATION	OFFSET	EXISTING STRUCTURE TYPE	204.0210 REMOVING MANHOLES EACH	204.0245 REMOVING STORM SEWER 24-INCH LF
157+90	15' LT	3.5-FT DIAMETER	1	--
158+50	15' LT	3.5-FT DIAMETER	1	--
157+75 TO 157+90	--	--	--	21
157+90 TO 158+50	--	--	--	60
158+50 TO 158+65	--	--	--	21
		TOTAL	2	102

1. PIPE LENGTHS ARE MEASURED TO THE CENTER OF STRUCTURES

STORM SEWER PIPE REINFORCED CONCRETE CLASS IV

FROM STR	TO STR	INLET ELEV	DISCHARGE ELEV	SLOPE	608.0424 24-INCH LF
1	2	897.63	897.50	2.03%	7
2	3	896.99	896.08	0.82%	111
3	4	895.98	895.91	0.63%	12
				TOTAL	130

1. PIPE LENGTHS ARE MEASURED TO THE CENTER OF STRUCTURES
2. PIPE LENGTH FOR AEW ARE MEASURED FROM CENTER OF STRUCTURE TO END OF PIPE SECTIONS, NOT END OF APRON ENDWALL.

3

STORM SEWER STRUCTURES

STRUCTURE NUMBER	STATION	OFFSET	RIM ELEVATION	SUMP ELEVATION	DEPTH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	611.0545 MANHOLE COVERS TYPE L EACH	611.2033 MANHOLES 3x3-FT EACH	COMMENTS
1	158+74.96	20.4' LT	897.63	--	--	1	--	--	INLET AEW
2	158+74.96	14' LT	900.89	896.99	3.57	--	1	1	
3	157+64.04	14' LT	899.55	895.98	3.24	--	1	1	
4	157+64.04	25.1' LT	895.91	--	--	1	--	--	OUTLET AEW
					TOTAL	2	2	2	

1. STATION AND OFFSETS ARE TO THE CENTER OF STRUCTURES FOR MANHOLES
2. RIM ELEVATIONS ARE GIVEN AT THE CENTER OF STRUCTURE FOR MANHOLES
3. STATION, OFFSET AND ELEVATION FOR APRON ENDWALLS ARE TO THE END OF PIPE SECTION
4. SUMP ELEVATION IS LOWEST PIPE INVERT FOR MANHOLES
5. DEPTH = RIM ELEVATION - SUMP ELEVATION - CASTING HEIGHT
   CASTING HEIGHT =
   4" FOR TYPE L

NOTE: UNLESS OTHERWISE NOTED, ALL ITEMS ARE CATEGORY 0010

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TEMPORARY SHORING B-64-671

LOCATION	511.1200 SF
STAGE 1	380
STAGE 2	250
TOTAL	630

BEAM GUARD AND BARRIER WALL ITEMS

LOCATION	204.0165 REMOVING GUARDRAIL LF	603.1442 CONCRETE BARRIER TYPE S42C LF	614.2300 MGS GUARDRAIL 3 LF	614.2330 GUARDRAIL 3 K LF	614.2500 THRIE BEAM TRANSITION LF	614.2610 GUARDRAIL TERMINAL EAT EACH	633.0500 DELINEATOR REFLECTORS EACH	633.1000 DELINEATOR BRACKETS EACH	SPV.0035.01 BACKFILL SLURRY CY
STAGE 1	290	59	62.5	--	78.8	2	6	3	2
STAGE 2	295	64	62.5	--	78.8	2	6	3	2
NIPPERSINK CREEK									
SE CORNER	80	--	100	--	39.4	1	--	--	1
SW CORNER	80	--	12.5	--	39.4	1	--	--	1
NE CORNER	80	--	12.5	--	39.4	1	--	--	1
NW CORNER	80	--	100	--	39.4	1	--	--	1
STA 294+50 CULVERT									
EAST SIDE	400	--	338	--	--	2	--	--	3
WEST SIDE	380	--	163	225	--	2	--	--	3
TOTAL	1,685	123	851	225	315.2	12	12	6	14

BARRIER SYSTEM GRADING SHAPING FINISHING

LOCATION STA TO STA	**EXCAVATION COMMON CY	**BORROW CY	**TOPSOIL SY	**FERTILIZER TYPE B CWT	**SEED MIXTURE NO. 30 LB	**SEED MIXTURE NO. 60 LB	**SEEDING TEMPORARY LB	**EROSION MAT URBAN CLASS I TYPE B SY	614.0010 EACH
155+33 TO 157+67 RT	1	--	--	--	--	--	--	--	1
156+08 TO 157+55 LT	3	--	--	--	--	--	--	--	1
158+40 TO 160+15 RT	1	2	6	0.01	1	--	1	6	1
158+85 TO 160+50 LT	--	2	--	--	--	--	--	--	1
270+48 TO 275+15 RT	2	6	20	0.02	--	1	--	20	1
271+35 TO 276+02 LT	4	18	275	0.18	3	2	3	275	1
291+49 TO 297+13 RT	4	4	7	0.01	1	--	1	7	1
292+87 TO 299+01 LT	1	20	127	0.09	3	--	2	127	1
TOTAL	15	51	435	0.31	8	3	7	435	8

**INCIDENTAL TO BARRIER SYSTEM GRADING SHAPING FINISHING

NOTE: UNLESS OTHERWISE NOTED, ALL ITEMS ARE CATEGORY 0010

EROSION CONTROL

LOCATION	* 606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS I TYPE B SY	628.6005 TURBIDITY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	630.0130 SEED MIXTURE NO. 30 LB	630.0160 SEED MIXTURE NO. 60 LB	630.0200 SEEDING TEMPORARY LB	631.0300 SOD WATER MGAL	631.1100 SOD EROSION CONTROL SY
RAILROAD BRIDGE	6	15	128	--	270	270	128	--	40	4	--	--	2	--	1	8
NIPPERSINK CREEK	--	--	--	--	390	390	--	90	50	--	--	--	--	--	--	--
STA 294+50 CULVERT	--	--	--	--	--	--	--	--	50	--	--	--	--	--	--	--
CLEARING AND GRUBBING	--	--	60	--	--	--	60	--	--	--	--	1	--	1	--	--
UNDISTRIBUTED	--	--	50	100	175	175	40	25	50	18	30	1	1	5	--	2
TOTAL	6	15	238	100	835	835	228	115	190	22	30	2	3	6	1	10

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

EROSION CONTROL MOBILIZATIONS

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
STH 120	6	4
TOTAL	6	4

CONCRETE BARRIER WALL TEMPOARY PRECAST

LOCATION	603.8000 DELIVERED LF	603.8125 INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH
STAGE 1	475	475	2
STAGE 2	--	475	2
TOTAL	475	950	4

TRAFFIC CONTROL

LOCATION	643.0300 DRUMS EACH	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III EACH	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A EACH	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C EACH	643.0715 WARNING LIGHTS TYPE C DAYS	643.0900 SIGNS EACH	643.0900 SIGNS DAYS	643.1050 SIGNS PCMS EACH	643.1050 SIGNS PCMS DAYS	661.0100 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES B-64-671 LS	SPV.1005.01 TEMPORARY PORTABLE RUMBLE STRIP ARRAY EACH	ESTIMATED DURATION
STAGE 1	40	1,360	1	34	2	68	20	680	33	1,122	2	14	0.5	--	34 CALENDAR DAYS
STAGE 2	40	1,120	1	28	2	56	20	560	33	924	--	--	0.5	--	28 CALENDAR DAYS
STAGE 3	--	--	--	--	--	--	--	--	15	585	2	6	--	4	39 CALENDAR DAYS
NIGHT CLOSURE	--	--	18	162	28	252	--	--	10	90	2	24	--	--	9 CALENDAR DAYS
SHOLDER CLOSURES	20	200	--	--	--	--	5	50	1	10	--	--	--	--	10 CALENDAR DAYS
UNDISTRIBUTED	--	120	--	26	--	54	--	60	--	169	--	6	--	--	
TOTAL		2,800		250		430		1,350		2,900		50	1	4	

NOTE: UNLESS OTHERWISE NOTED, ALL ITEMS ARE CATEGORY 0010

PAVEMENT MARKING

LOCATION	646.0106 EPOXY 4-INCH WHITE LF	646.0106 EPOXY 4-INCH YELLOW LF	646.2304.S GROOVED WET REFLECTIVE EPOXY 4-INCH WHITE LF	646.2304.S GROOVED WET REFLECTIVE EPOXY 4-INCH YELLOW LF	647.0166 ARROWS EPOXY TYPE 2 EACH	647.0356 WORDS EPOXY EACH	647.0566 STOP LINE EPOXY 18-INCH LF	647.0726 DIAGONAL EPOXY 12-INCH YELLOW LF	648.0100 LOCATING NO-PASSING ZONES MI	649.0403 TEMPORARY EPOXY 4-INCH YELLOW LF	SPV.0090.03 GROOVED PREFORMED PLASTIC TAPE 8-INCH LF
140+06 TO CTH B	--	2,675	15,825	--	--	--	55	--	1.50	1,150	--
CTH B TO B-64-007	--	7,175	10,650	--	--	--	75	--	1.02	5,650	310
B-64-007 TO 318+60	50	8,300	10,250	1,185	2	1	150	156	0.86	7,725	275
SUBTOTAL	50	18,150	36,725	1,185	--	--	--	--	--	--	--
TOTAL	18,200		37,910		2	1	280	156	3.38	14,525	585

TEMPORARY PAVEMENT MARKING

LOCATION	646.0600 REMOVING PAVEMENT MARKINGS LF	649.0400 REMOVABLE TAPE 4-INCH WHITE LF	649.0400 REMOVABLE TAPE 4-INCH DOUBLE YELLOW LF	649.0402 PAINT 4-INCH YELLOW SKIPS LF	649.1400 STOP LINE REMOVABLE TAPE 24-INCH LF
RAILROAD BRIDGE	200	110	4,350	200	24
TOTAL	200	4,460		200	24

SECTION CORNER MONUMENTS SPECIAL

LOCATION	SPV.0060.01 EACH
UNDISTRIBUTED	8
TOTAL	8

COSNTRUCTION STAKING

LOCATION	650.4000 STORM SEWER EACH	650.4500 SUBGRADE LF	650.5000 BASE LF	650.7500 CONCRETE BARRIER LF	650.8000 RESURFACING REFERENCE LF	650.9910 SUPPLEMENTAL CONTROL 3180-07-60 LS	650.9920 SLOPE STAKES LF
STH 120	4	130	130	123	17,854	1	130
TOTAL	4	130	130	123	17,854	1	130

NOTE: UNLESS OTHERWISE NOTED, ALL ITEMS ARE CATEGORY 0010

TYPE II PERMANENT SIGNING

CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II REFLECTIVE F [SF]	637.2220 SIGNS TYPE II REFLECTIVE SH [SF]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
100	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
101	R1-1(2S)	--	30 x 30	5.18	--	--	1	--	--	1	1	--	--
101A	J13-1(2S)	--	24 x 45	7.50	--	--	1	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
102	W14-3(2S)	--	48 x 36	6.00	--	--	1	--	--	1	1	--	--
103	J4-1(2S)	--	24 x 36	6.00	--	--	--	1	--	1	1	--	--
	M4-6	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
104	D1-61(2S)	STATE LINE RD, DOUBLE ARROWS	78 x 24	13.00	--	--	2	--	--	--	--	--	--
105	R1-1(2S)	--	30 x 30	5.18	--	--	1	--	--	1	1	--	--
106	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
107	ADOPT	--	-- x --	--	--	--	1	--	1	--	1	--	--
108	I2-1B(2S)	WELCOME TO WISCONSIN	108.5 x 65	41.00	--	--	--	2	--	1	2	108A	--
108A	I2-2(2S)	WALWORTH COUNTY	72 x 15	7.50	--	--	--	--	--	--	--	108	--
109	J4-1(2S)	--	24 x 36	6.00	--	--	--	1	--	--	--	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
110	R59-51(2S)	--	36 x 36	9.00	--	--	1	--	--	1	1	--	--
111	W21-61(2S)	--	36 x 36	9.00	--	--	1	--	--	1	1	--	--
112	R2-1(2S)	55 MPH	24 x 30	5.00	--	--	1	--	--	--	--	--	--
113	W5-52L(2S)	--	12 x 36	--	3.00	--	1	--	--	1	1	--	--
114	W5-52R(2S)	--	12 x 36	--	3.00	--	1	--	--	1	1	--	--
115	W5-52R(2S)	--	12 x 36	--	3.00	--	1	--	--	1	1	--	--
116	W5-52L(2S)	--	12 x 36	--	3.00	--	1	--	--	1	1	--	--
117	J1-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
118	R2-1(2S)	55 MPH	24 x 30	5.00	--	--	1	--	--	--	--	--	--
119	J4-1(2S)	--	24 x 36	6.00	--	--	--	1	--	1	1	--	--
	M3-3	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
120	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
121	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
122	R3-8A(2S)	--	30 x 36	7.50	--	--	1	--	--	--	--	--	--
123	R3-8A(2S)	--	30 x 36	7.50	--	--	1	--	--	--	--	--	--
124	J1-1(2S)	--	24 x 39	6.50	--	--	--	1	--	1	1	--	--
	M2-1	--	24 x 15	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
125	R1-1(3)	--	36 x 36	7.46	--	--	--	1	--	1	1	126	LARGER SIGNS DUE TO SAFETY ISSUES
126	W4-4C(3)	120	36 x 15	--	3.75	--	--	--	--	--	--	125	--
127	J3-2(2S)	--	48 x 57	19.00	--	--	--	1	--	1	1	--	--
	M3-1	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--

TYPE II PERMANENT SIGNING

CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II REFLECTIVE F [SF]	637.2220 SIGNS TYPE II REFLECTIVE SH [SF]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-3	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	--	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
128	J4-1(2S)	--	24 x 36	6.00	--	--	--	1	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-5A	CTH B	24 x 24	--	--	--	--	--	--	--	--	--	--
129	J3-2(2S)	--	48 x 57	19.00	--	--	--	1	--	1	1	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-5A	CTH B	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-5A	CTH B	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
130	W14-3(2S)	--	48 x 36	6.00	--	--	1	--	--	1	1	--	--
131	D1-2	LA GENOA CITY, ZENDA RA	-- x --	--	--	--	--	--	--	1	2	--	--
132	J1-1(2S)	--	24 x 39	6.50	--	--	--	1	--	--	--	--	--
	M2-1	--	21 x 15	--	--	--	--	--	--	--	--	--	--
	M1-5A	CTH B	24 x 24	--	--	--	--	--	--	--	--	--	--
133	D1-1(2S)	LA ZENDA, GENOA CITY RA	78 x 30	16.25	--	--	--	2	--	1	2	--	--
134	J3-2(2S)	--	48 x 57	19.00	--	--	--	1	--	1	1	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-5A	CTH B	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-5A	CTH B	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
135	J4-1(2S)	--	24 x 36	6.00	--	--	--	1	--	1	1	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-5A	CTH B	24 x 24	--	--	--	--	--	--	--	--	--	--
136	J1-1(2S)	--	24 x 39	6.50	--	--	--	1	--	--	--	--	--
	M2-1	--	21 x 15	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
137	R1-1(3)	--	36 x 36	7.46	--	--	--	1	--	1	1	138	LARGER SIGNS DUE TO SAFETY ISSUES
138	W4-4C(3)	120	36 x 15	--	3.75	--	--	--	--	--	--	137	--
139	J3-2(2S)	--	48 x 57	19.00	--	--	--	1	--	1	1	--	--
	M3-3	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-1	--	24 x 12	--	--	--	--	--	--	--	--	--	--

TYPE II PERMANENT SIGNING

CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II REFLECTIVE F [SF]	637.2220 SIGNS TYPE II REFLECTIVE SH [SF]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
140	J4-1(2S)	--	24 x 36	6.00	--	--	--	1	--	1	1	--	--
	M3-1	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
141	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
142	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
143	D1-2(2S)	LA GENOA CITY, ZENDA RA	78 x 30	16.25	--	--	2	--	--	--	--	--	--
144	J1-1(2S)	--	24 x 39	6.50	--	--	--	1	--	1	1	--	--
	M2-1	--	21 x 15	--	--	--	--	--	--	--	--	--	--
	M1-5A	CTH B	24 x 24	--	--	--	--	--	--	--	--	--	--
145	R2-1(2S)	55 MPH	24 x 30	5.00	--	--	1	--	--	--	--	--	--
146	W14-3(2S)	--	48 x 36	--	6.00	--	1	--	--	1	1	--	--
147	W14-3(2S)	--	48 x 36	--	6.00	--	1	--	--	1	1	--	--
148	W5-52L(2S)	--	12 x 36	--	3.00	--	1	--	--	1	1	--	--
149	W5-52R(2S)	--	12 x 36	--	3.00	--	1	--	--	1	1	--	--
150	W14-3(2S)	--	48 x 36	6.00	--	--	1	--	--	1	1	--	--
151	W5-52R(2S)	--	12 x 36	--	3.00	--	1	--	--	1	1	--	--
152	W5-52L(2S)	--	12 x 36	--	3.00	--	1	--	--	1	1	--	--
153	W14-3(2S)	--	48 x 36	6.00	--	--	1	--	--	1	1	--	--
154	W6-1(2S)	--	36 x 36	--	9.00	--	--	1	--	--	--	--	--
155	W6-3(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
156	R2-1(2S)	55 MPH	24 x 30	5.00	--	--	1	--	--	1	1	--	--
157	R5-1A(2S)	--	36 x 24	6.00	--	--	1	--	--	1	1	--	--
158	J4-1(2S)	--	24 x 36	6.00	--	--	--	1	--	--	--	--	--
	M3-3	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
159	W6-2(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
160	J4-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
161	R4-7(2S)	--	24 x 30	5.00	--	--	1	--	--	1	1	162	--
162	--	THRU TRUCKS MUST USE BY-PASS	-- x --	--	--	--	--	--	1	--	--	161	--
163	R5-1(2S)	--	30 x 30	6.25	--	--	--	1	--	--	--	164	--
164	J13-1(2S)	--	24 x 45	7.50	--	--	--	--	--	--	--	163	REMOVED WITH #163
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-6	--	21 x 21	--	--	--	--	--	--	--	--	--	--
165	R1-1(3)	--	30 x 30	7.46	--	--	1	--	--	1	1	166	--
166	R1-3P(3)	--	24 x 9	1.50	--	--	--	--	--	--	--	165	--
167	W11-5(2S)	--	30 x 30	--	6.25	--	1	--	--	--	--	--	SHEET 8
168	W6-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
169A	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	--	--	--	--

TYPE II PERMANENT SIGNING

CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II REFLECTIVE F [SF]	637.2220 SIGNS TYPE II REFLECTIVE SH [SF]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
169	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
170	D1-61(2S)	WILLOW RD	54 x 24	9.00	--	--	2	--	--	--	--	--	--
171	R3-8	--	-- x --	--	--	--	--	--	--	1	1	--	--
172	R4-7(3)	--	36 x 48	12.00	--	--	--	1	--	1	1	173	--
173	W5-54(2S)	--	18 x 18	--	2.25	--	--	--	--	--	--	172	--
174	R5-1(3)	--	36 x 36	9.00	--	--	--	--	--	--	--	156	--
175	J2-1(2S)	--	24 x 57	9.50	--	--	--	1	--	1	1	--	--
	M3-1	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
	M5-1R	--	21 x 21	--	--	--	--	--	--	--	--	--	--
176		LAKE GENEVA BUS PARK, TRUCK ROUTE	-- x --	--	--	--	--	2	1	--	2	--	--
177	R3-8A(2S)	--	30 x 36	7.50	--	--	1	--	--	--	--	--	--
178	J2-1(2S)	--	24 x 57	9.50	--	--	--	1	--	1	1	--	--
	M3-1	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
179	R1-1(3)	--	36 x 36	7.46	--	--	1	--	--	1	1	180	--
180	R1-3P(3)	--	24 x 9	1.50	--	--	--	--	--	--	--	179	--
181	W12-1D(2S)	--	24 x 24	--	4.00	--	1	--	--	1	1	--	2' MOUNTING HEIGHT
182	R1-2(2S)	--	36 x 31	3.88	--	--	1	--	--	1	1	--	--
183	R1-1(3)	--	36 x 36	7.46	--	--	1	--	--	1	1	184	--
184	R1-3P(3)	--	24 x 9	1.50	--	--	--	--	--	--	--	183	--
185	R5-1(2S)	--	30 x 30	6.25	--	--	--	--	--	1	1	178	REMOVED WITH #178
186	R5-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
187	R4-7(2S)	--	24 x 30	5.00	--	--	--	--	--	1	1	179	--
188	R1-1(3)	--	30 x 30	7.46	--	--	1	--	--	1	1	189	--
189	R1-3P(3)	--	24 x 9	1.50	--	--	--	--	--	--	--	188	--
190	D1-61(2S)	PILGRIM CHURCH RD	96 x 24	16.00	--	--	2	--	--	--	--	--	--
191	R5-1A(2S)	--	36 x 24	6.00	--	--	1	--	--	1	1	192	--
192	R3-8A(2S)	--	30 x 36	7.50	--	--	--	--	--	1	1	191	--
193	R4-7(3)	--	36 x 48	12.00	--	--	--	1	--	1	1	194	--
194	W5-54(2S)	--	18 x 18	--	2.25	--	--	--	--	--	--	193	--
195	J1-1(2S)	--	24 x 36	6.00	--	--	--	1	--	1	1	--	--
	M2-1	--	21 x 15	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
196	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
197	D1-61(2S)	WILLOW RD	54 x 24	9.00	--	--	2	--	--	--	--	--	--
198	W6-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
199	W6-2(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	200	--
200	R5-1A(2S)	--	36 x 24	6.00	--	--	--	--	--	--	--	199	REMOVED WITH #199

TYPE II PERMANENT SIGNING

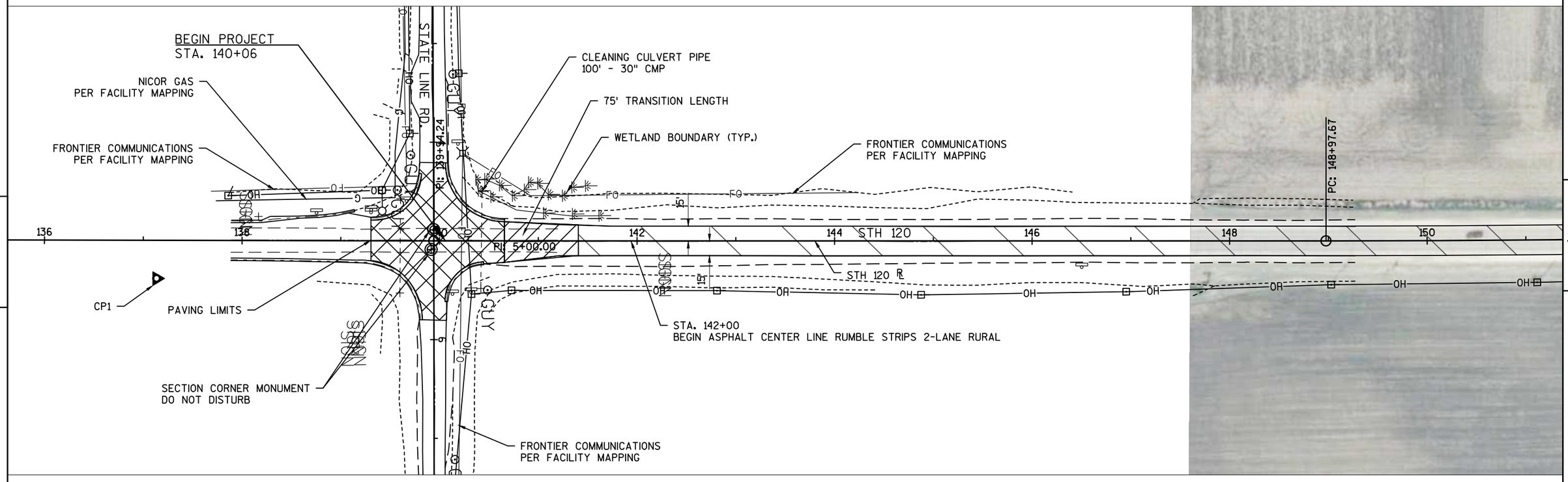
CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	**637.2210** SIGNS TYPE II REFLECTIVE H [SF]	**637.2230** SIGNS TYPE II REFLECTIVE F [SF]	**637.2220** SIGNS TYPE II REFLECTIVE SH [SF]	**634.0616** WOOD POSTS 4"x 6"X16' [EA]	**634.0618** WOOD POSTS 4"x 6"X18' [EA]	**638.2102** MOVING SIGNS TYPE II [EA]	**638.2602** REMOVING SIGNS TYPE II [EA]	**638.3000** REMOVING SMALL SIGN SUPPORTS [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
201	R5-1(3)	--	36 x 36	9.00	--	--	1	--	--	--	--	--	--
202	W6-3(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
203	R5-1(2S)	--	30 x 30	6.25	--	--	1	--	--	1	1	--	--
204	W6-2(2S)	--	36 x 36	--	9.00	--	--	1	--	--	--	--	REMOVED WITH #203
205	R5-1A(2S)	--	36 x 24	6.00	--	--	1	--	--	1	1	--	--
206	R1-1(3)	--	30 x 30	7.46	--	--	1	--	--	1	1	207	--
207	R1-3P(3)	--	24 x 9	1.50	--	--	--	--	--	--	--	206	--
208	W6-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
209	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	--	--	--	--
210	J1-1(2S)	--	24 x 39	6.50	--	--	--	1	--	--	--	--	--
	M2-1	--	21 x 15	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
211	R4-7(3)	--	36 x 48	12.00	--	--	--	1	--	1	1	212	--
212	W5-54(2S)	--	18 x 18	--	2.25	--	--	--	--	--	--	211	--
213	R3-8	--	-- x --	--	--	--	--	--	--	1	1	--	--
214	R5-1A(2S)	--	36 x 24	6.00	--	--	1	--	--	1	1	--	--
215	R3-8A(2S)	--	30 x 36	7.50	--	--	1	--	--	--	--	--	--
216	R1-1(3)	--	30 x 30	7.46	--	--	1	--	--	1	1	--	--
217	R1-3P(3)	--	24 x 9	1.50	--	--	--	--	--	--	--	216	--
218	J13-1(2S)	--	24 x 45	7.50	--	--	--	1	--	1	1	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-6	--	21 x 21	--	--	--	--	--	--	--	--	--	--
219	R5-1(2S)	--	30 x 30	6.25	--	--	--	--	--	--	--	218	REMOVED WITH #218
220	R4-7(2S)	--	24 x 30	5.00	--	--	1	--	--	1	1	--	--
221	R5-1(2S)	--	30 x 30	6.25	--	--	1	--	--	1	1	--	--
222	R1-1(3)	--	36 x 36	7.46	--	--	1	--	--	--	--	223	REMOVED WITH #221
223	R1-3P(3)	--	24 x 9	1.50	--	--	--	--	--	--	--	222	--
224	J3-1(2S)	--	24 x 57	9.50	--	--	--	1	--	1	1	--	--
	M3-3	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
225	R5-1A	--	-- x --	--	--	--	--	--	--	1	1	--	--
226	J2-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
227	R5-1A(2S)	--	36 x 24	6.00	--	--	1	--	--	--	--	--	--
228	J2-1(2S)	--	24 x 57	--	--	--	--	1	--	--	--	--	--
	M3-3	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
	M5-1L	--	21 x 21	--	--	--	--	--	--	--	--	--	--
229	D7-53(2)	--	78 x 36	19.50	--	--	--	2	--	1	2	--	--
230	R3-8W(2S)	--	54 x 30	11.25	--	--	1	--	--	1	2	--	--

TYPE II PERMANENT SIGNING

CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II REFLECTIVE F [SF]	637.2220 SIGNS TYPE II REFLECTIVE SH [SF]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
231	D1-61(2S)	--	96 x 24	16.00	--	--	2	--	--	--	--	--	--
232A	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	--	--	--	--
232	W3-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
233	W6-1(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
234	R4-7(2S)	--	24 x 30	5.00	--	--	1	--	--	1	1	--	--
235	R1-1(3)	--	30 x 30	7.46	--	--	1	--	--	--	--	236	--
236	R1-3P(3)	--	24 x 9	1.50	--	--	--	--	--	--	--	235	--
237	ADOPT	--	-- x --	--	--	--	1	--	1	--	1	--	--
238	J4-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
239	W6-2(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
240	R5-1A(2S)	--	36 x 24	6.00	--	--	1	--	--	--	--	--	REMOVED WITH #239
241	J4-1(2S)	--	24 x 36	6.00	--	--	--	1	--	--	--	--	--
	M3-1	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 120	24 x 24	--	--	--	--	--	--	--	--	--	--
242	R5-1(3)	--	36 x 36	9.00	--	--	1	--	--	1	1	--	--
243	R4-7(3)	--	36 x 48	12.00	--	--	--	1	--	1	1	244	--
244	W5-54(2S)	--	18 x 18	--	2.25	--	--	--	--	--	--	243	--
245	W6-3(2S)	--	36 x 36	--	9.00	--	--	1	--	1	1	--	--
246	W11-5(2S)	--	30 x 30	--	6.25	--	1	--	--	--	--	--	SHEET 9
247	W11-5(2S)	--	30 x 30	--	6.25	--	1	--	--	--	--	--	SHEET 10
248	W11-5(2S)	--	30 x 30	--	6.25	--	1	--	--	--	--	--	SHEET 11
249	R2-1(2S)	55 MPH	24 x 30	5.00	--	--	1	--	--	1	1	--	SHEET 16
250	R1-1(3)	--	36 x 36	7.46	--	--	--	1	--	--	--	--	SHEET 6 - DUE TO SAFETY ISSUES
251	R1-1(3)	--	36 x 36	7.46	--	--	--	1	--	--	--	--	SHEET 6 - DUE TO SAFETY ISSUES
252	W2-1(2S)	--	30 x 30	--	6.25	--	--	1	--	--	--	--	SHEET 6 - DUE TO SAFETY ISSUES
253	W2-1(2S)	--	30 x 30	--	6.25	--	--	1	--	--	--	--	SHEET 7 - DUE TO SAFETY ISSUES
--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
TOTALS				776.76	301.00	0.00	70	65	4	94	103	--	--



LEGEND

- 1" REMOVING ASPHALTIC SURFACE MILLING
  2½" HMA PAVEMENT
- 2" REMOVING ASPHALTIC SURFACE MILLING
  2" HMA PAVEMENT
- 1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
  2"-2½" HMA PAVEMENT (VARIABLE DEPTH)
- ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL	SHEET 82	E

N

SEE DETAIL, NEXT SHEET

BASE AGGREGATE DRIVEWAY

WETLAND BOUNDARY (TYP.)

SLOPE INTERCEPT (TYP.)

SEE CONSTRUCTION DETAIL FOR MAINLINE PAVING TRANSITIONS

BASE AGGREGATE DRIVEWAY

SECTION CORNER MONUMENT DO NOT DISTURB

PI: 166+15.24

PT: 157+09.48

WETLAND BOUNDARY (TYP.)

CP2

15'

152 154 156 158 160 STH 120 162 164 166

OH

STH 120 ℄

BM4

WISCONSIN & SOUTHERN RAILROAD

SLOPE INTERCEPT (TYP.)

WETLAND BOUNDARY (TYP.)

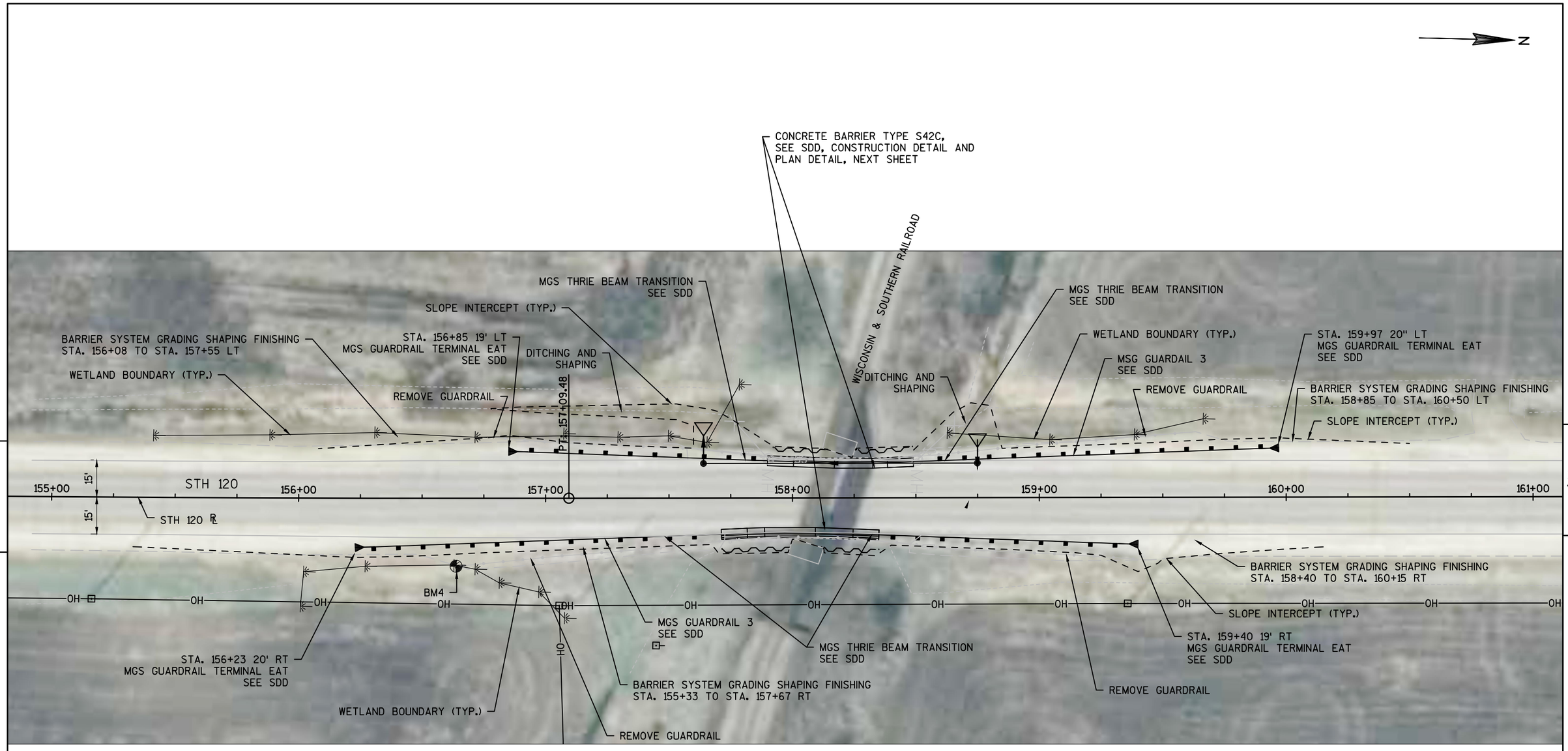
ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL

CP3

LEGEND

- 1" REMOVING ASPHALTIC SURFACE MILLING
  2½" HMA PAVEMENT
- 2" REMOVING ASPHALTIC SURFACE MILLING
  2" HMA PAVEMENT
- 1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
  2"-2½" HMA PAVEMENT (VARIABLE DEPTH)
- ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL	SHEET 83	E

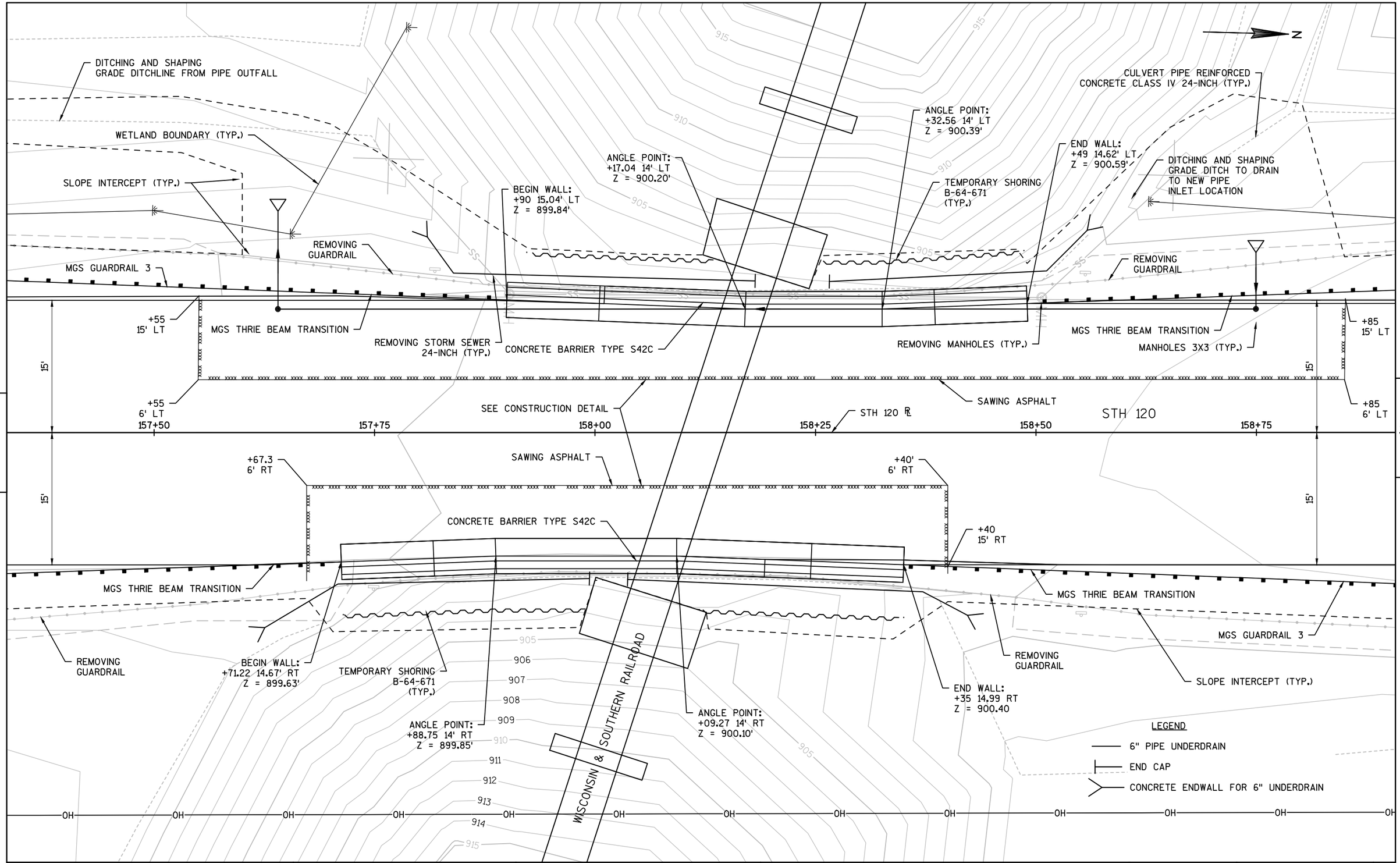


PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL - GUARDRAIL AT RR	SHEET 84	E

FILE NAME : N:\PDS\C3D\CAD\31800760\050002B_PD.DWG
LAYOUT NAME – 050001_PD

PLOT DATE : 4/7/2016 8:13 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : _____ PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL - BARRIER AND STORM SEWER AT RR	SHEET 85	E

FILE NAME : N:\PDS\C3D\CAD\31800760\050002C_PD.DWG
LAYOUT NAME – 050005_PD

PLOT DATE : 4/27/2016 11:22 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

N

PI: 166+15.24

ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL

BASE AGGREGATE DRIVEWAY

CP4

15'

166 168 170 172 STH 120 174 176 178 180

STH 120 ℄

OH

15'

CP3

NORTH BRANCH NIPPERSINK CREEK

5

5

LEGEND

1" REMOVING ASPHALTIC SURFACE MILLING
2½" HMA PAVEMENT

2" REMOVING ASPHALTIC SURFACE MILLING
2" HMA PAVEMENT

1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
2"-2½" HMA PAVEMENT (VARIABLE DEPTH)

ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL	SHEET 86	E

FILE NAME : N:\PDS\C3D\CAD\31800760\050001_PD.DWG
LAYOUT NAME – 050003_PD

PLOT DATE : 4/8/2016 8:40 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : ---------- PLOT SCALE : 1 IN:100 FT

N

ASPHALT CENTER LINE RUMBLE
STRIPS 2-LANE RURAL

STA. 189+00
END ASPHALT CENTER LINE RUMBLE
STRIPS 2-LANE RURAL

STA. 191+00
BEGIN ASPHALT CENTER LINE RUMBLE
STRIPS 2-LANE RURAL

BASE AGGREGATE
DRIVEWAY

PI: 192+63.13

15'

182 184 186 STH 120 188 190 192 194 196

STH 120 ℄

OH OH OH OH OH OH OH OH OH OH OH OH OH OH OH OH OH OH OH

BASE AGGREGATE
DRIVEWAY

GUY

SECTION CORNER MONUMENT
DO NOT DISTURB

CP5

T T T T

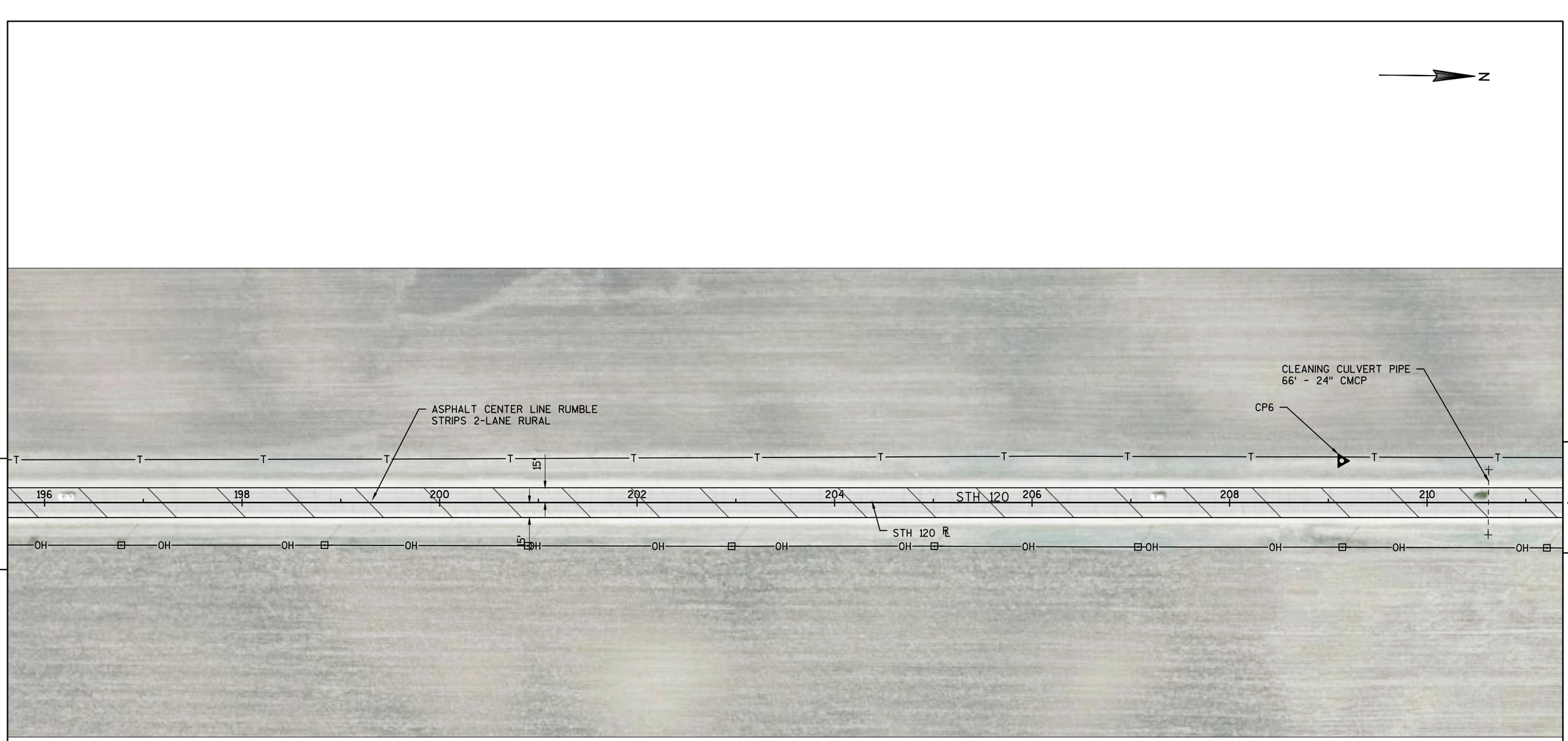
LEGEND

- 1" REMOVING ASPHALTIC SURFACE MILLING
  2½" HMA PAVEMENT
- 2" REMOVING ASPHALTIC SURFACE MILLING
  2" HMA PAVEMENT
- 1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
  2"-2½" HMA PAVEMENT (VARIABLE DEPTH)
- ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL	SHEET 87	E

FILE NAME : N:\PDS\C3D\CAD\31800760\050001_PD.DWG
LAYOUT NAME – 050004_PD

PLOT DATE : 4/8/2016 8:40 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : ---------- PLOT SCALE : 1 IN:100 FT



5

5

LEGEND

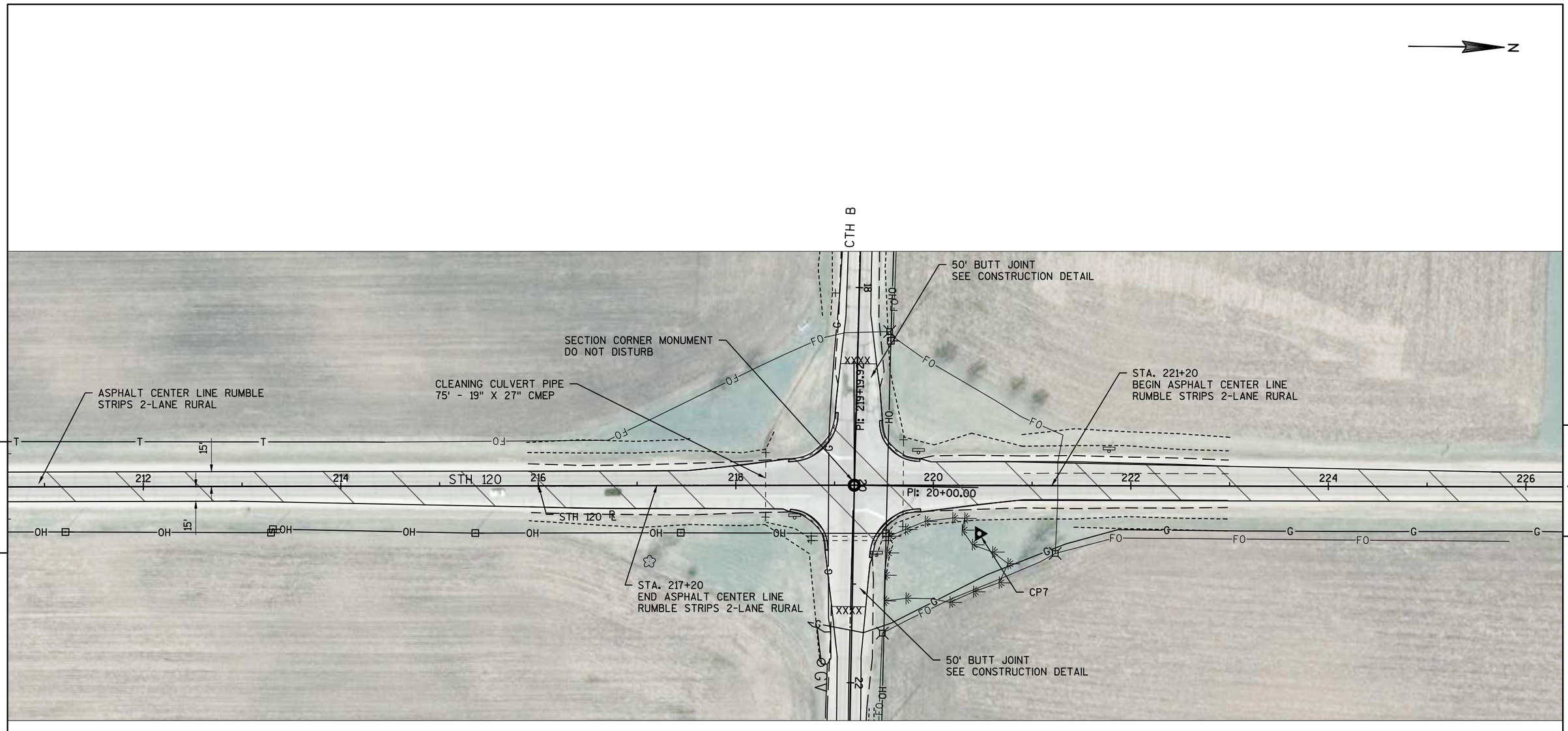
1" REMOVING ASPHALTIC SURFACE MILLING
2½" HMA PAVEMENT

2" REMOVING ASPHALTIC SURFACE MILLING
2" HMA PAVEMENT

1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
2"-2½" HMA PAVEMENT (VARIABLE DEPTH)

ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL	SHEET 88	E



LEGEND

- 1" REMOVING ASPHALTIC SURFACE MILLING
  2½" HMA PAVEMENT
- 2" REMOVING ASPHALTIC SURFACE MILLING
  2" HMA PAVEMENT
- 1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
  2"-2½" HMA PAVEMENT (VARIABLE DEPTH)
- ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL	SHEET 89	E

N

ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL

CP8

BASE AGGREGATE DRIVEWAY

15'

15'

226 228 230 232 234 STH 120 236 238 240

STH 120 ℄

G G G G G G G G G G G G G

5

5

LEGEND

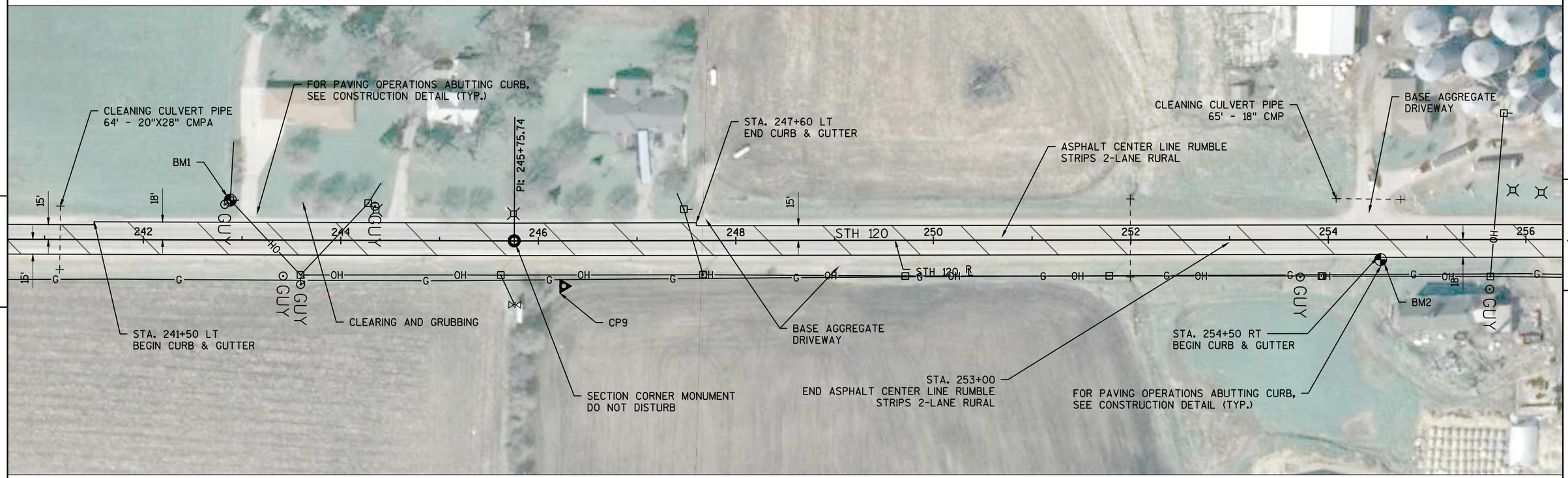
1" REMOVING ASPHALTIC SURFACE MILLING
2½" HMA PAVEMENT

2" REMOVING ASPHALTIC SURFACE MILLING
2" HMA PAVEMENT

1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
2"-2½" HMA PAVEMENT (VARIABLE DEPTH)

ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL	SHEET 90	E



5

5

LEGEND

- 1" REMOVING ASPHALTIC SURFACE MILLING
  2½" HMA PAVEMENT
- 2" REMOVING ASPHALTIC SURFACE MILLING
  2" HMA PAVEMENT
- 1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
  2"-2½" HMA PAVEMENT (VARIABLE DEPTH)
- ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PALN DETAIL	SHEET 91	E

N

STA. 256+50 LT
BEGIN CURB & GUTTER

FOR PAVING OPERATIONS ABUTTING CURB,
SEE CONSTRUCTION DETAIL (TYP.)

BASE AGGREGATE DRIVEWAY

CP10

WETLAND BOUNDARY (TYP.)

ASPHALT CENTER LINE RUMBLE
STRIPS 2-LANE RURAL

STA. 259+00
BEGIN ASPHALT CENTER LINE RUMBLE
STRIPS 2-LANE RURAL

STA. 261+50 LT AND STA. 262+20 RT
END CURB & GUTTER

WETLAND BOUNDARY (TYP.)

STH 120 ℄

15'

18'

256 258 260 262 STH 120 264 266 268 STH 120 270

OH G GUY

5

5

LEGEND

1" REMOVING ASPHALTIC SURFACE MILLING
2½" HMA PAVEMENT

2" REMOVING ASPHALTIC SURFACE MILLING
2" HMA PAVEMENT

1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
2"-2½" HMA PAVEMENT (VARIABLE DEPTH)

ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN:	SHEET 92	E

FILE NAME : N:\PDS\C3D\CAD\31800760\050001_PD.DWG
LAYOUT NAME – 050009_PD

PLOT DATE : 4/8/2016 8:40 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : ---------- PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

N

SEE DETAIL, NEXT SHEET

SEE CONSTRUCTION DETAIL FOR MAINLINE PAVING TRANSITION AT THIS LOCATION

SECTION CORNER MONUMENT DO NOT DISTURB

PI: 272+34.36

STA. 272+88
END ASPHALT CENTER LINE
RUMBLE STRIPS 2-LANE RURAL

WETLAND BOUNDARY (TYP.)

BM3

SLOPE INTERCEPT (TYP.)

BASE AGGREGATE DRIVEWAY

STA. 281+50 LT
BEGIN CURB & GUTTER

FOR PAVING OPERATIONS ABUTTING CURB, SEE CONSTRUCTION DETAIL (TYP.)

CLEARING AND GRUBBING

272 274 276 278 STH 120 280 282 284 286

STH 120 ℄

SLOPE INTERCEPT (TYP.)

CP11

B-64-007

NIPPERSINK CREEK

STA. 273+63
BEGIN ASPHALT CENTER LINE
RUMBLE STRIPS 2-LANE RUEAL

WETLAND BOUNDARY (TYP.)

STA. 280+00
END ASPHALT CENTER LINE
RUMBLE STRIPS 2-LANE RUEAL

REMOVING ASPHALTIC SURFACE
ASPHALTIC SURFACE DRIVEWAYS
AND FIELD ENTRANCES

BASE AGGREGATE DRIVEWAY

5

5

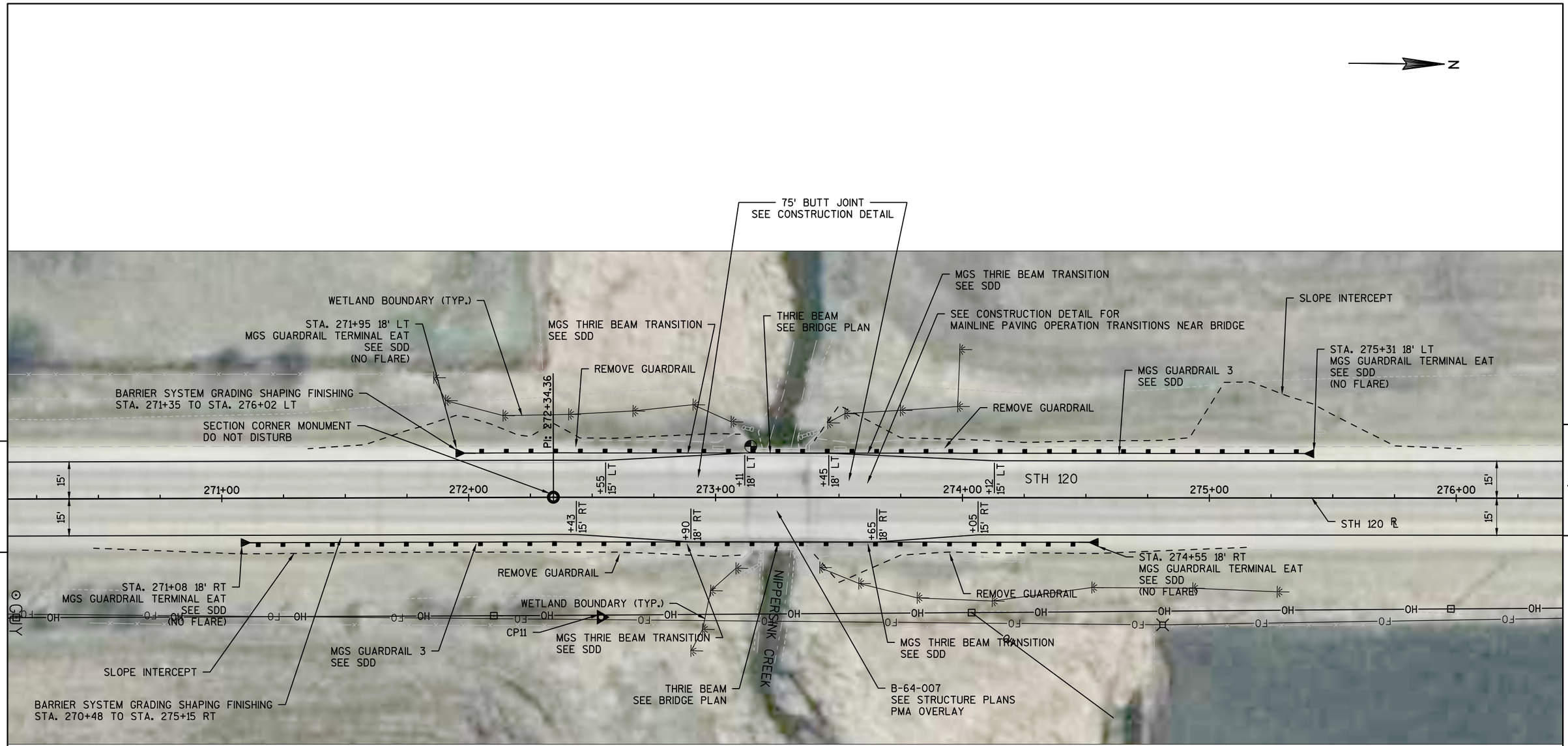
LEGEND

- 1" REMOVING ASPHALTIC SURFACE MILLING
  2½" HMA PAVEMENT
- 2" REMOVING ASPHALTIC SURFACE MILLING
  2" HMA PAVEMENT
- 1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
  2"-2½" HMA PAVEMENT (VARIABLE DEPTH)
- ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL	SHEET 93	E

FILE NAME : N:\PDS\C3D\CAD\31800760\050001_PD.DWG
LAYOUT NAME – 050010_PD

PLOT DATE : 4/8/2016 8:40 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : ---------- PLOT SCALE : 1 IN:100 FT



PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL - GUARDRAIL AT NIPPERSINK CREEK	SHEET 94	E

N

FOR PAVING OPERATIONS ABUTTING CURB,
SEE CONSTRUCTION DETAIL (TYP.)

BASE AGGREGATE DRIVEWAY

ASPHALT CENTER LINE RUMBLE
STRIPS 2-LANE RURAL

CP12

STA. 293+47 18' LT
MGS GUARDRAIL TERMINAL EAT
SEE SDD (NO FLARE)

REMOVE GURADRAIL

BARRIER SYSTEM GRADING SHAPING FINISHING
STA. 292+87 TO STA. 299+01 LT

STA. 294-00- STA. 296+25
MGS GUARDRAIL 3K
SEE SDD

MGS GUARDRAIL 3
SEE SDD

SLOPE INTERCEPT (TYP.)

STA. 298+41 18' LT
MGS GUARDRAIL TERMINAL EAT
SEE SDD (NO FLARE)

PI: 298+96.30

CP13

18'

15'

286 288 290 STH 120 292 294 296 298 300

5

5

STH 120

STA. 288+00 LT
END CURB & GUTTER

STA. 292+09 18' RT
MGS GUARDRAIL TERMINAL EAT
SEE SDD (NO FLARE)

REMOVE GUARDRAIL

SLOPE INTERCEPT (TYP.)

MGS GUARDRAIL 3
SEE SDD

STA. 296+53 18' RT
MGS GUARDRAIL TERMINAL EAT
SEE SDD (NO FLARE)

SECTION CORNER MONUMENT
DO NOT DISTURB

STA. 287+00
BEGIN ASPHALT CENTER LINE RUMBLE
STRIPS 2-LANE RURAL

BARRIER SYSTEM GRADING SHAPING FINISHING
STA. 291+49 TO STA. 297+13 RT

LEGEND

- 1" REMOVING ASPHALTIC SURFACE MILLING
  2½" HMA PAVEMENT
- 2" REMOVING ASPHALTIC SURFACE MILLING
  2" HMA PAVEMENT
- 1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
  2"-2½" HMA PAVEMENT (VARIABLE DEPTH)
- ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL	SHEET 95	E

FILE NAME : N:\PDS\C3D\CAD\31800760\050001_PD.DWG
LAYOUT NAME – 050011_PD

PLOT DATE : 4/8/2016 8:40 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : ---------- PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

N

STA. 315+45
END ASPHALT CENTER LINE
RUMBLE STRIPS 2-LANE RURAL

ASPHALT CENTER LINE RUMBLE
STRIPS 2-LANE RURAL

15'

302 304 306 308 310 STH 120 312 314 316

STH 120 ℄

CP14

BASE AGGREGATE DRIVEWAY

WETLAND BOUNDARY (TYP.)

LEGEND

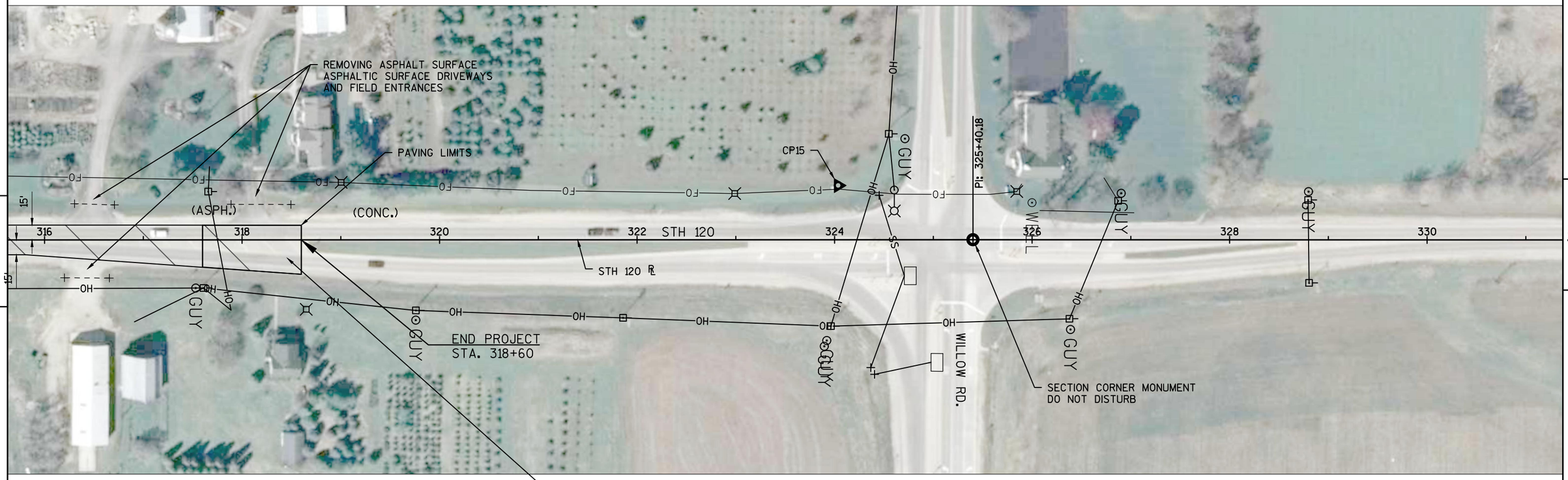
1" REMOVING ASPHALTIC SURFACE MILLING
2½" HMA PAVEMENT

2" REMOVING ASPHALTIC SURFACE MILLING
2" HMA PAVEMENT

1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
2"-2½" HMA PAVEMENT (VARIABLE DEPTH)

ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL	SHEET 96	E



5

5

LEGEND

- 1" REMOVING ASPHALTIC SURFACE MILLING
  2½" HMA PAVEMENT
- 2" REMOVING ASPHALTIC SURFACE MILLING
  2" HMA PAVEMENT
- 1-2" REMOVING ASPHALTIC SURFACE MILLING (VARIABLE DEPTH)
  2"-2½" HMA PAVEMENT (VARIABLE DEPTH)
- ARCHEOLOGICAL SITE PROTECTION

PROJECT NO: 3180-07-30	HWY: STH 120	COUNTY: WALWORTH	PLAN DETAIL	SHEET 97	E

Standard Detail Drawing List

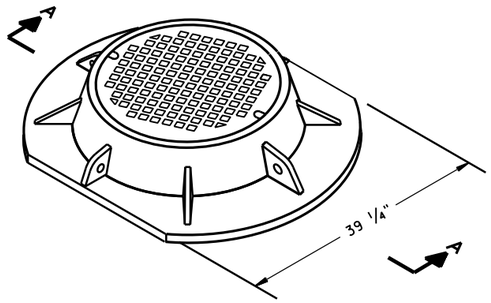
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B10-01	MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
09G02-03A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
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
14B29-01	SAFETY EDGE
14B33-01G	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B33-01H	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B41-02A	SINGLE SLOPE ROADSIDE RETAINING WALL
14B41-02B	SINGLE SLOPE ROADSIDE RETAINING WALL
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A02-09	DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C18-03	MEDIAN ISLAND MARKING
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C21-07	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D33-04	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

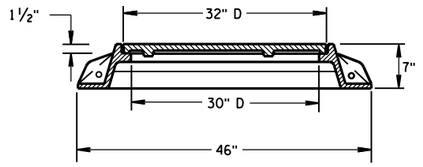
6

Standard Detail Drawing List

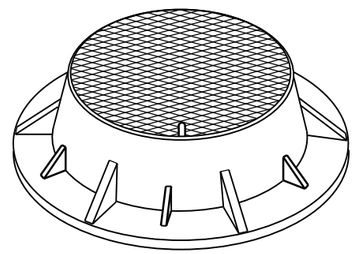
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

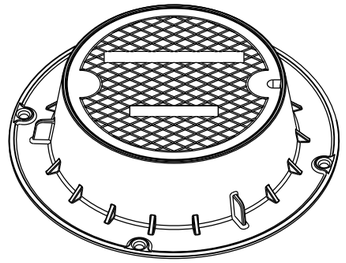
6

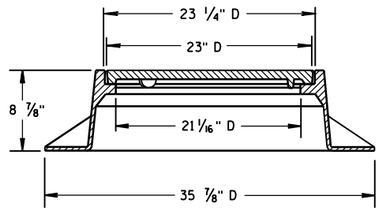


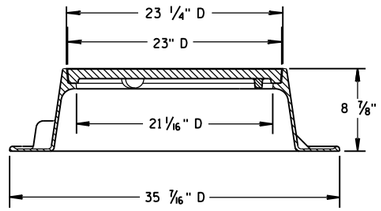


SECTION A-A
TYPE "K"









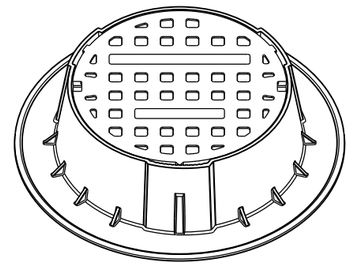
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

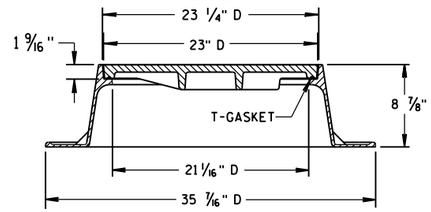
GENERAL NOTES

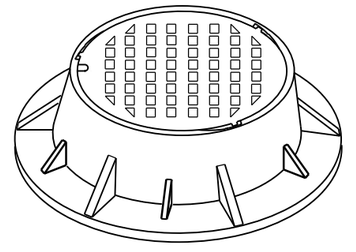
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

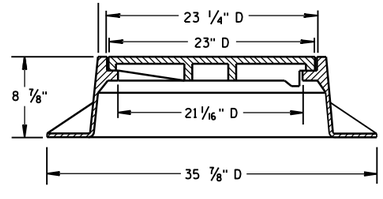
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

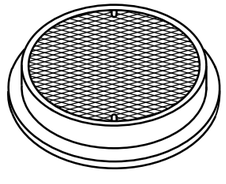


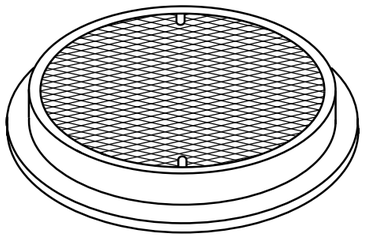


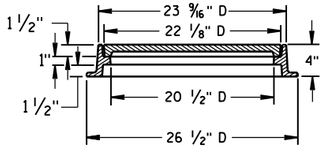




TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE







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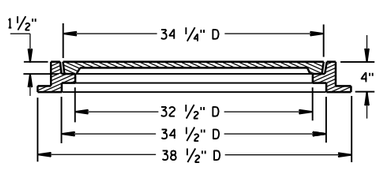
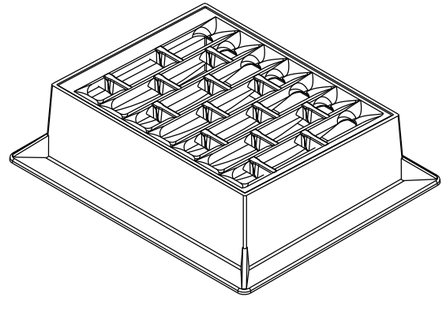
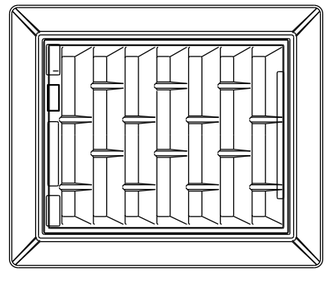
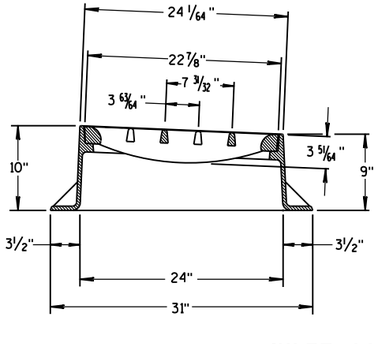
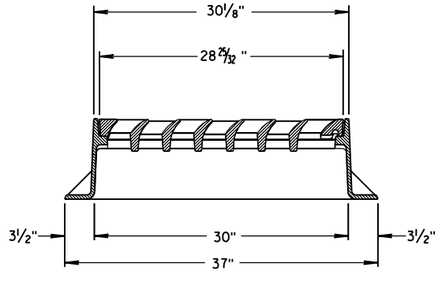


TYPE "M"









INLET COVER TYPE "BW"

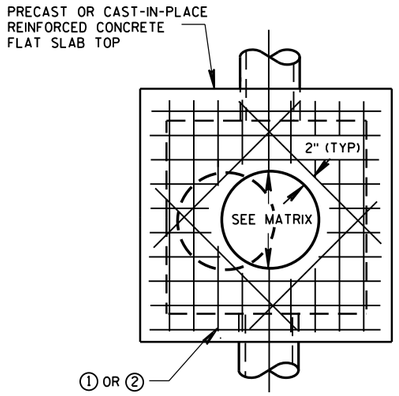
INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

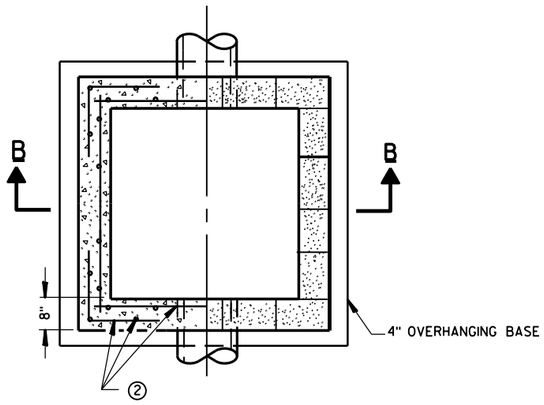
APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

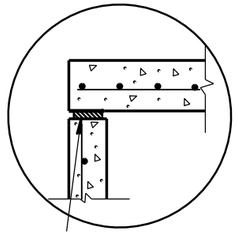
S.D.D. 8 A 5-19d



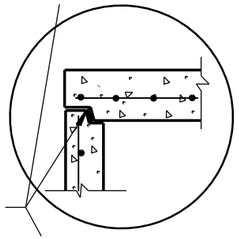
PLAN VIEW
CIRCULAR OPENING



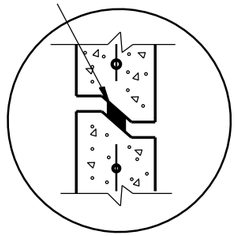
SECTION A-A
PLAN VIEW



TOP WITH PLAIN END JOINT

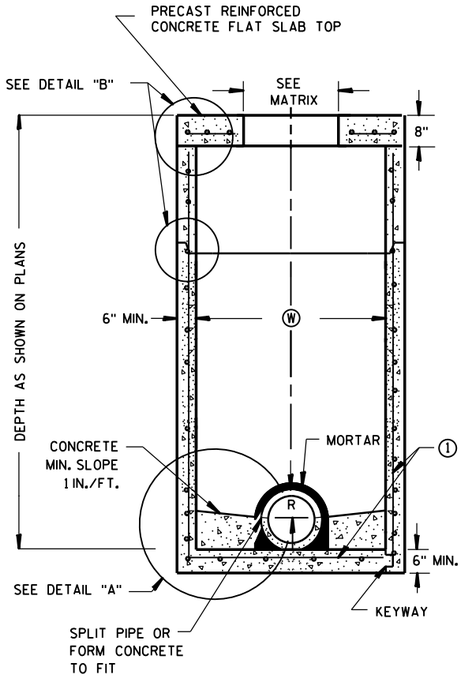


TOP WITH TONGUE AND GROOVE JOINT

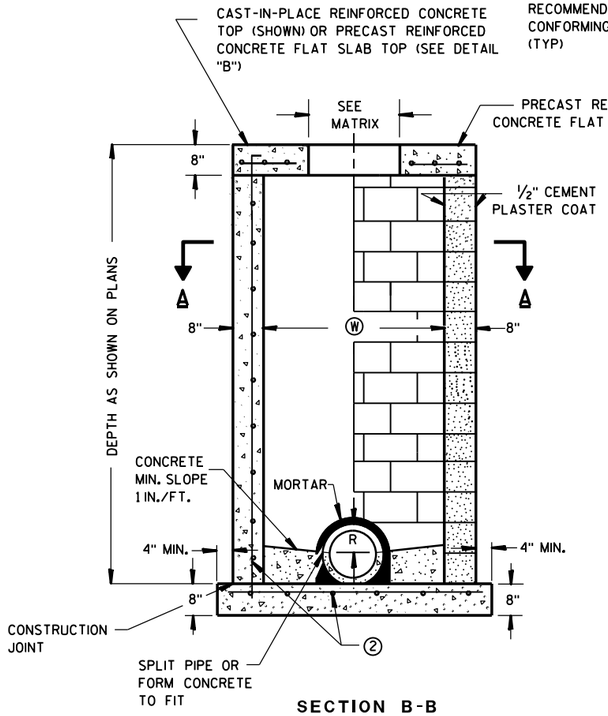


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

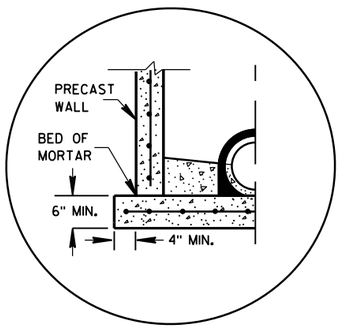


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

CAST-IN-PLACE REINFORCED CONCRETE

SECTION B-B

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 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 FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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 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.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN WIDTH.

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 ASTM C 913.

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.

MAXIMUM PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "C". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

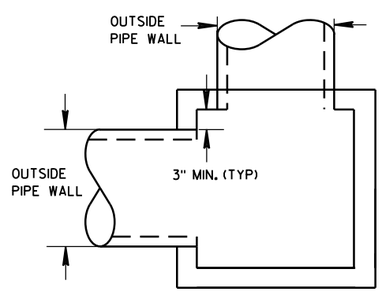
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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	
	WIDTH (W) (IN)	LENGTH (L) (IN)
3X3-FT	24	24
4X4-FT	30	30
5X5-FT	42	42
6X6-FT	54	54



DETAIL "C"

SQUARE MANHOLES W/ FLAT TOP

MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT

MANHOLES 3X3-FT, 4X4-FT 5X5-FT AND 6X6-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 8 B 10-1

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) UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

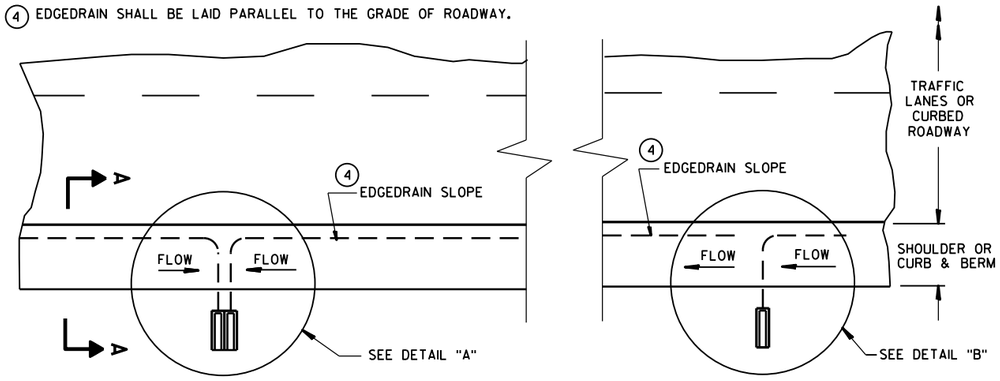
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.

(2) MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.

(3) EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.

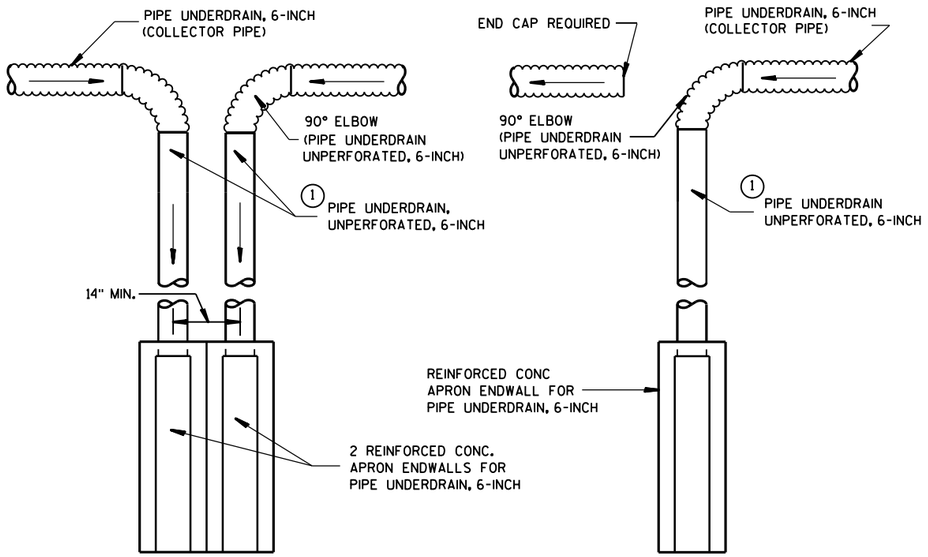
(4) EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



PLAN VIEW

ROADWAY WITH SHOULDERS OR CURBS

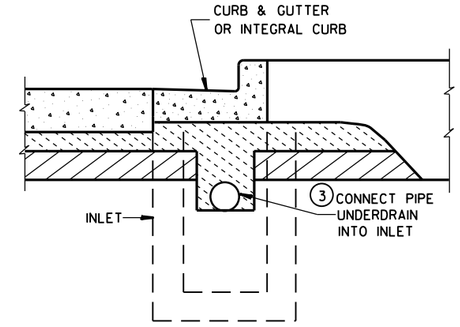
(EDGEDRAIN OUTLETS TO ROADSIDE) (2)



DETAIL "A"
TO BE USED AT LOW POINT LOCATIONS

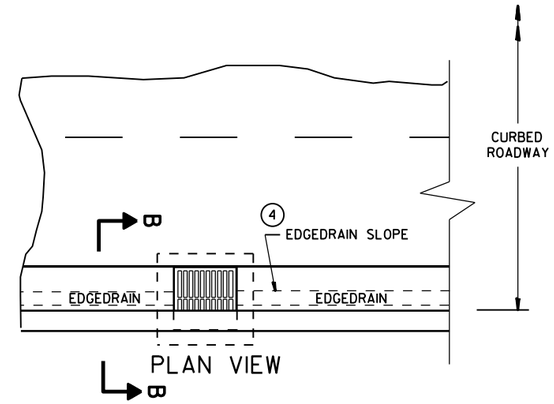
DETAIL "B"
TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



SECTION B-B

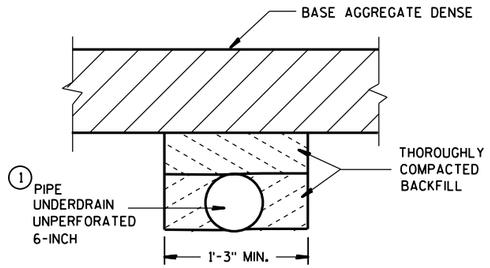
URBAN CROSS SECTION



PLAN VIEW

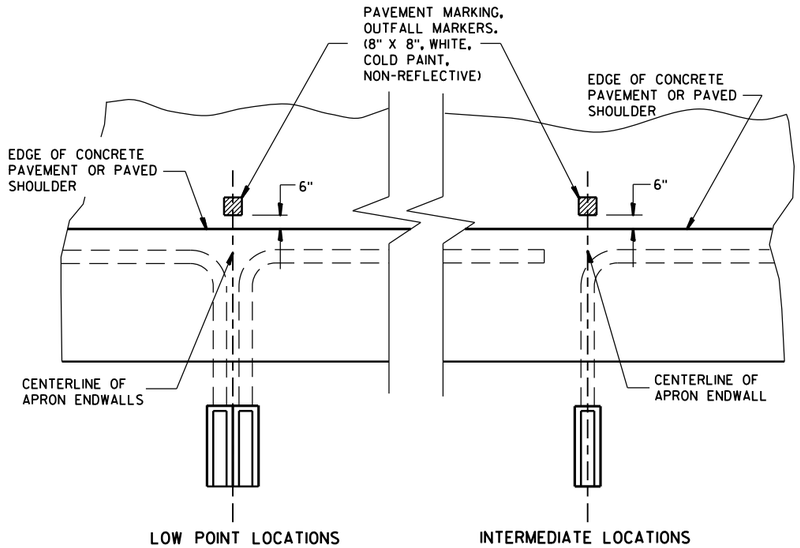
ROADWAY WITH CURBS

(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)



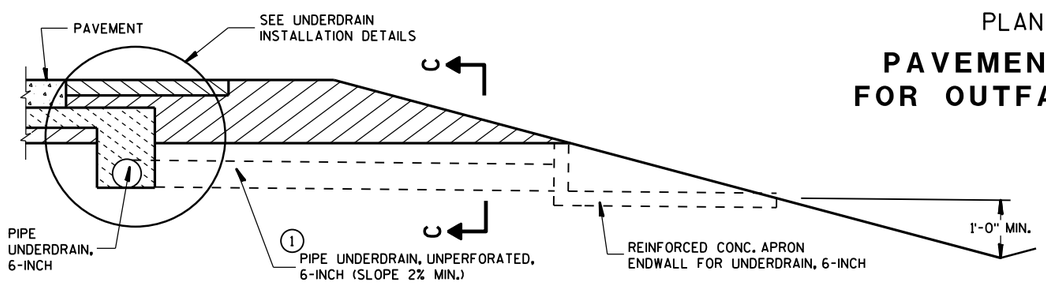
SECTION C-C

(TRENCH FOR OUTFALL PIPE)



PLAN VIEW

PAVEMENT MARKING FOR OUTFALL MARKERS



SECTION A-A

RURAL CROSS SECTION

EDGEDRAIN OUTLET AND OUTFALL MARKERS

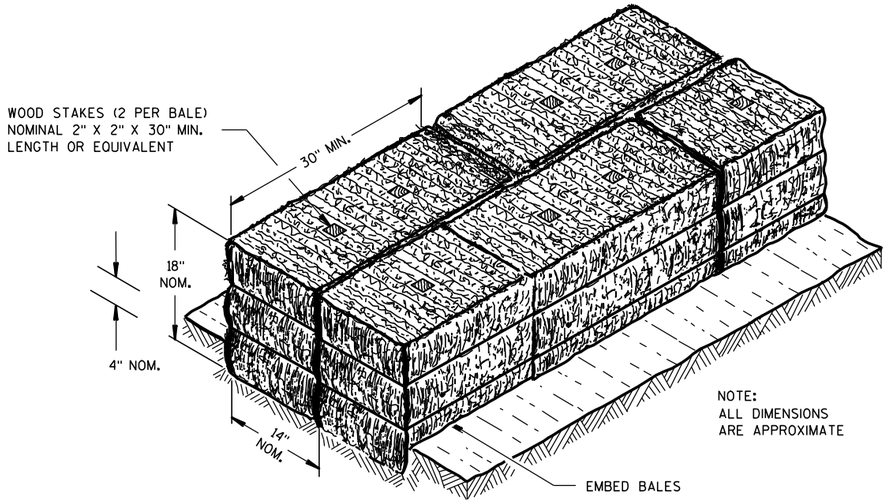
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

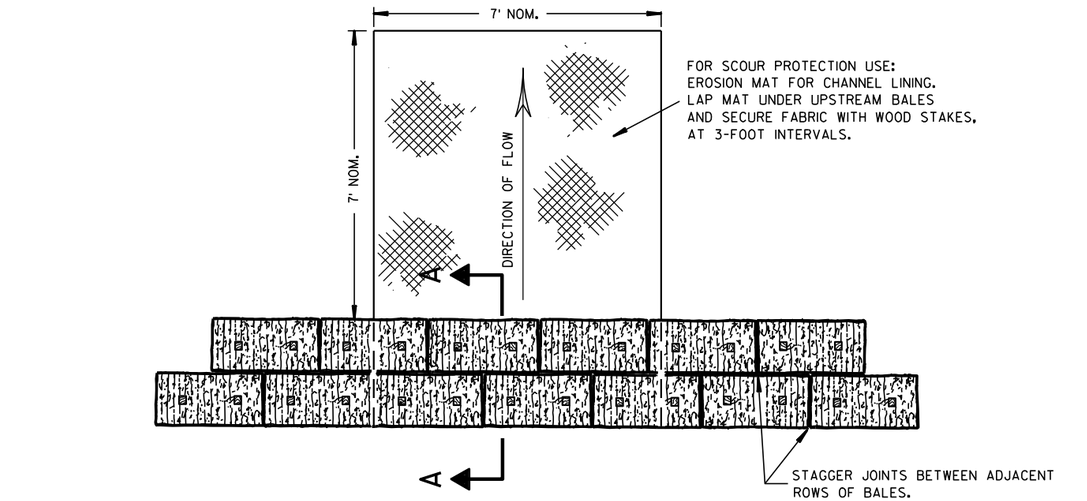
S.D.D. 8 D 15-5a

6

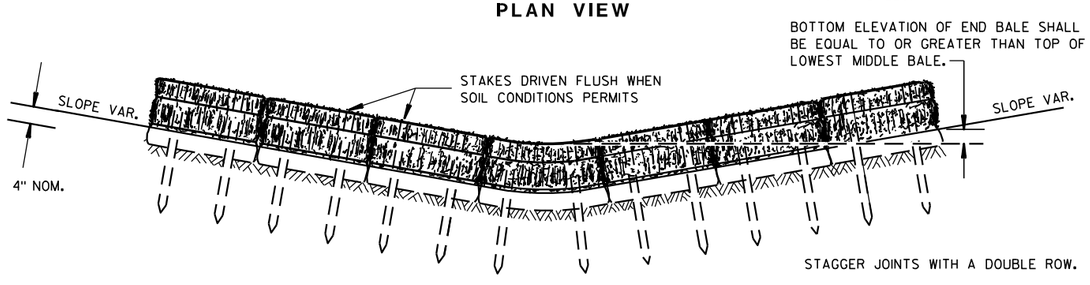
S.D.D. 8 D 15-5a



SECTION A-A



PLAN VIEW



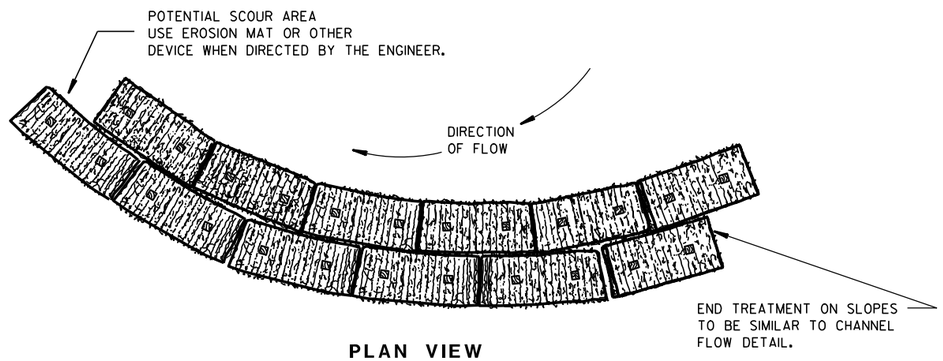
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

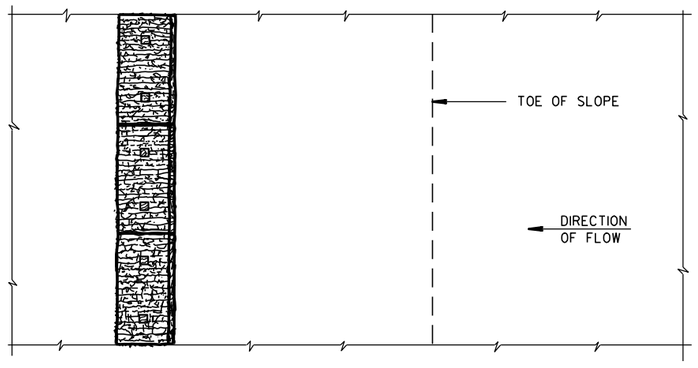
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

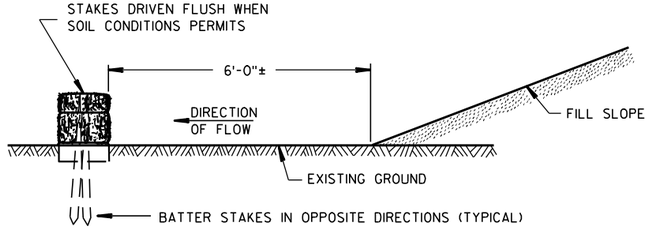


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

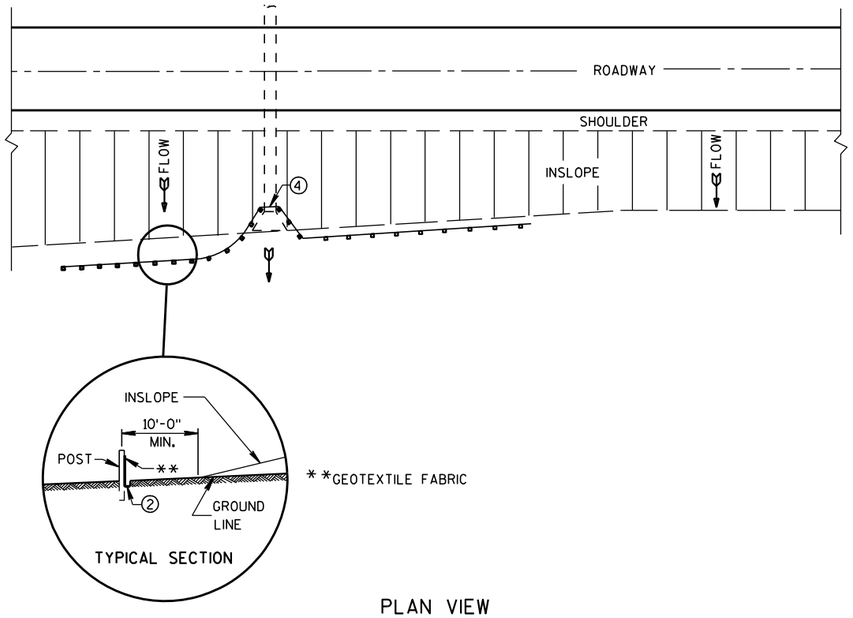
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

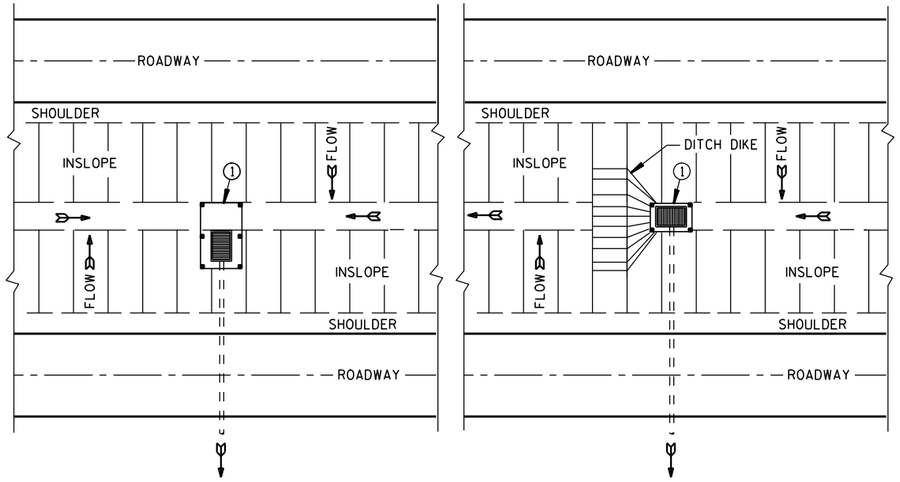
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

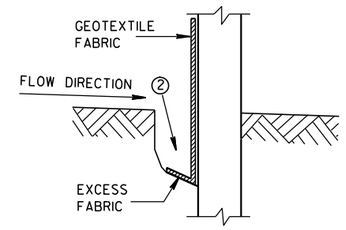
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

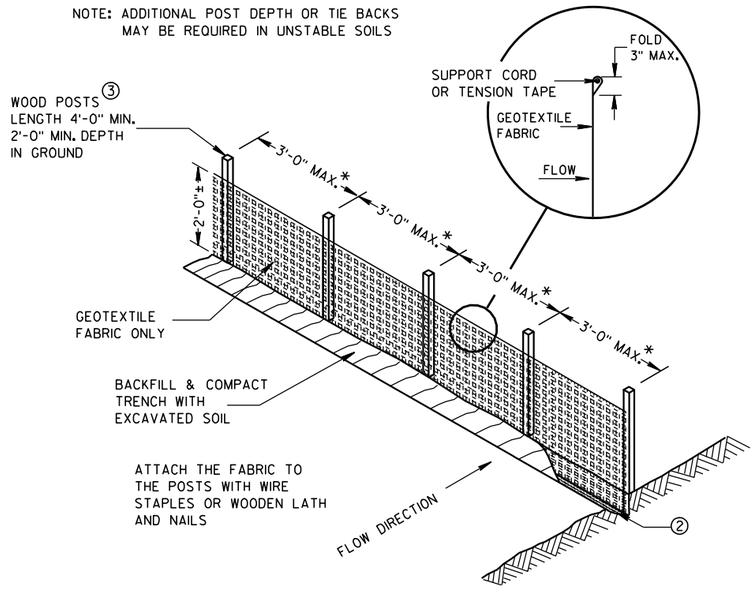
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

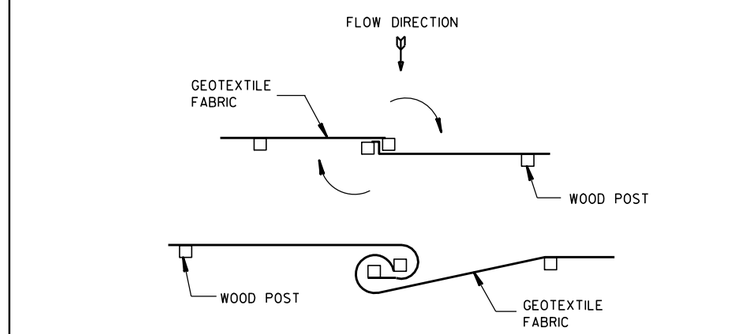
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



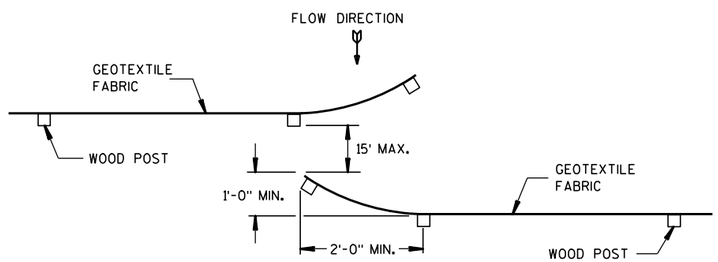
TRENCH DETAIL



SILT FENCE

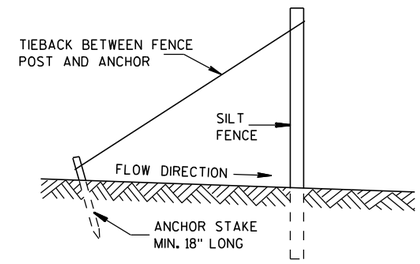


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 E 9-6

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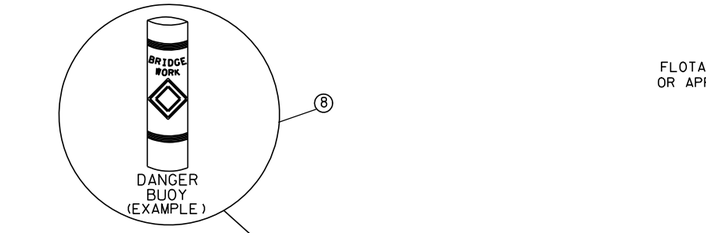
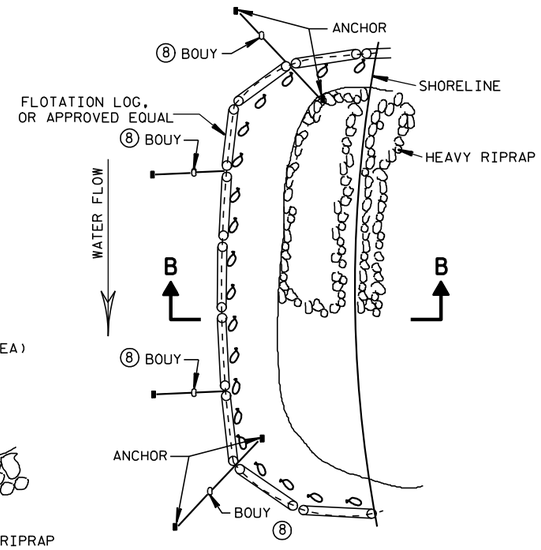
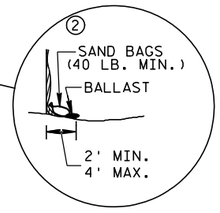
S.D.D. 8 E 9-6

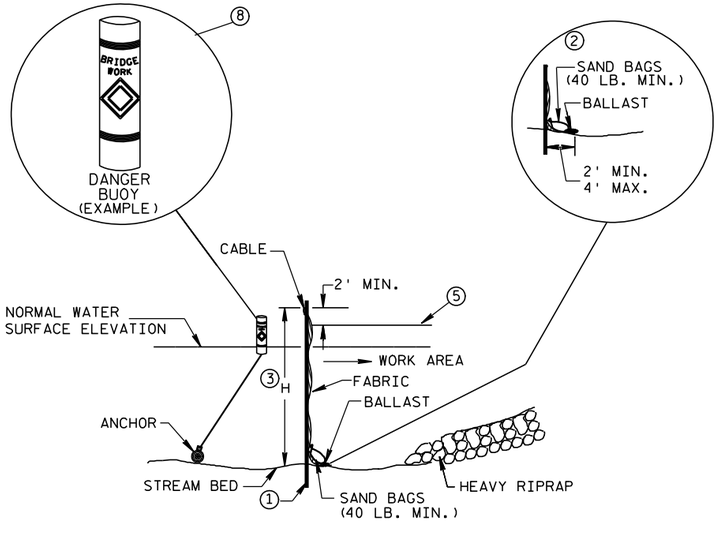


SECTION B-B

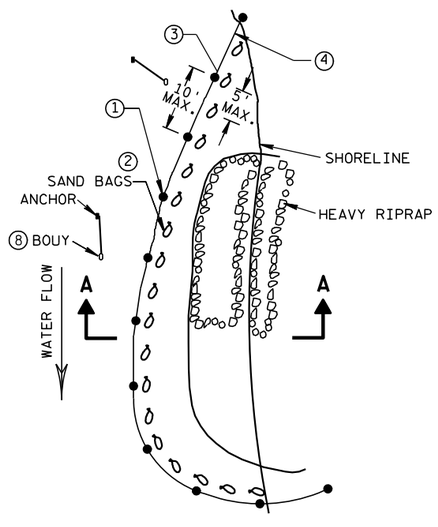




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

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.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

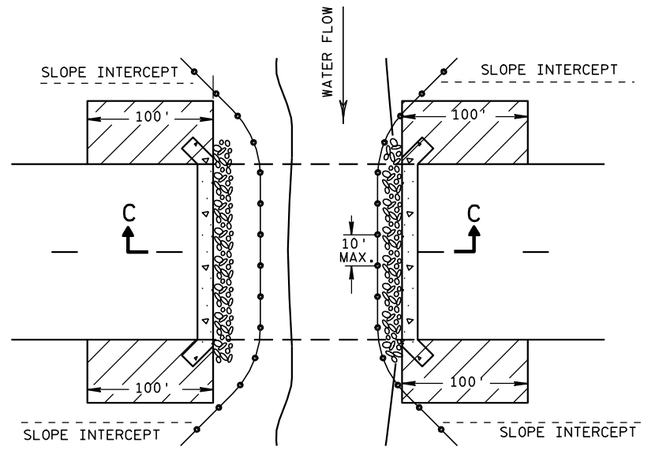
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

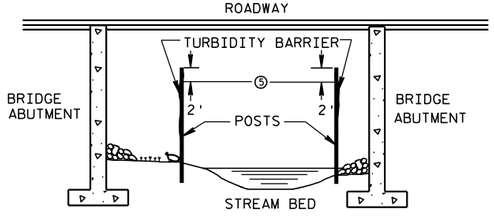
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
6/04/02 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

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S.D.D. 8 E 11-2

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S.D.D. 8 E 11-2

METAL APRON ENDWALLS

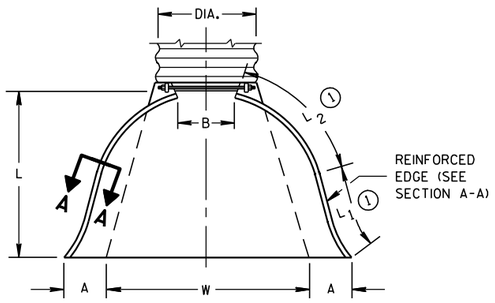
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

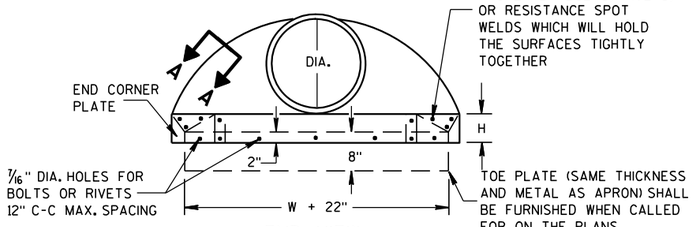
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

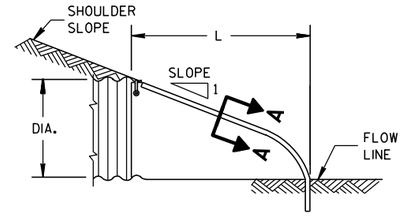
*MINIMUM
**MAXIMUM



PLAN VIEW

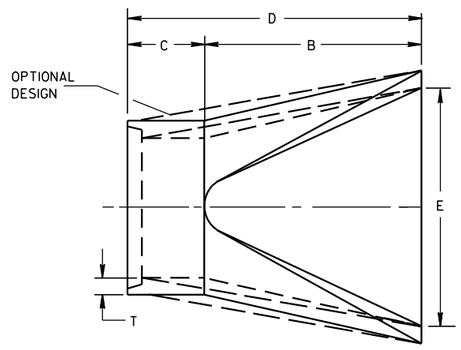


END VIEW

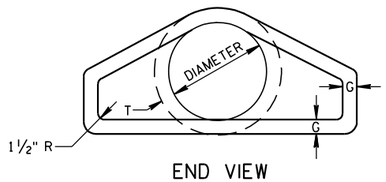


SIDE ELEVATION

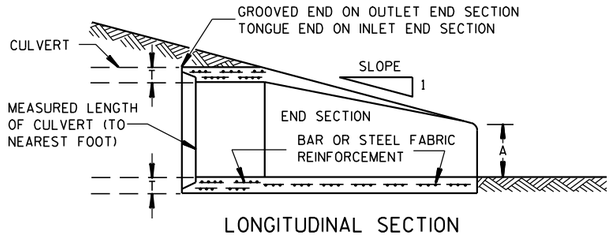
METAL ENDWALLS



PLAN

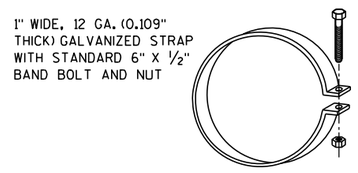


END VIEW



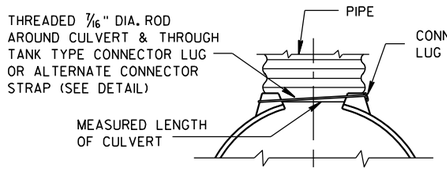
LONGITUDINAL SECTION

CONCRETE ENDWALLS

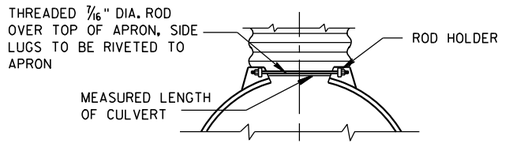


ALTERNATE FOR TYPE 1 CONNECTION

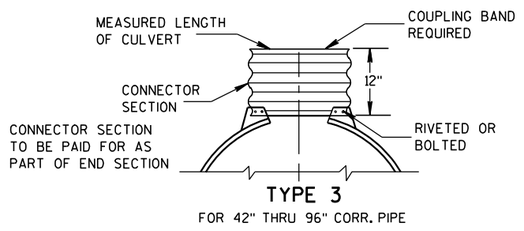
END SECTION CONNECTOR STRAP



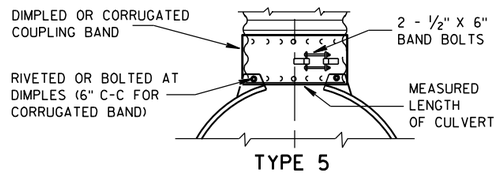
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

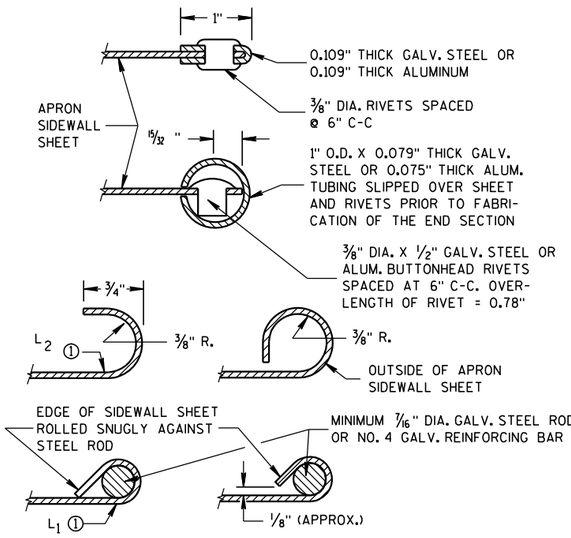
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

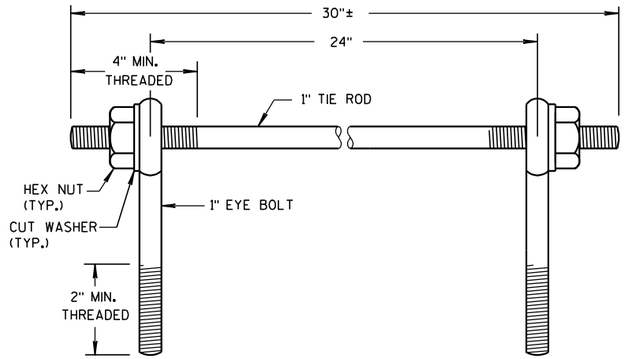
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

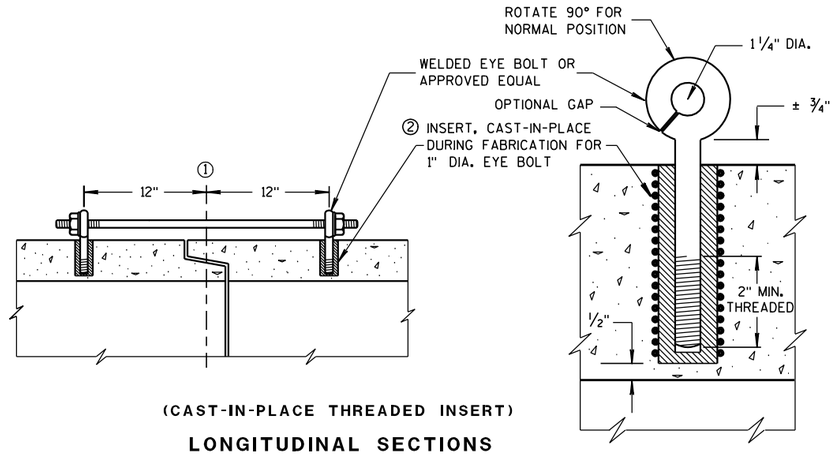
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

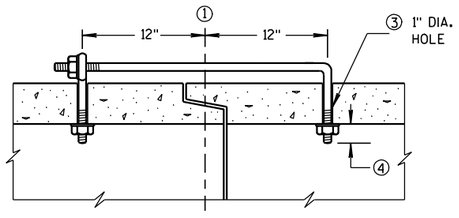
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

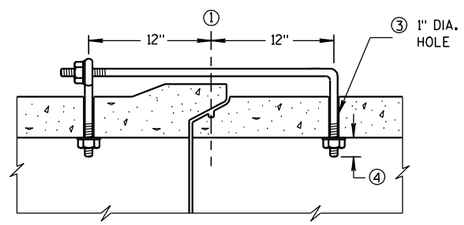
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

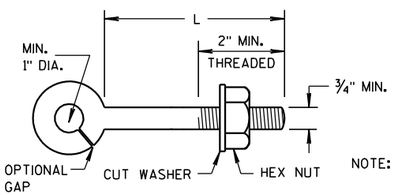


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

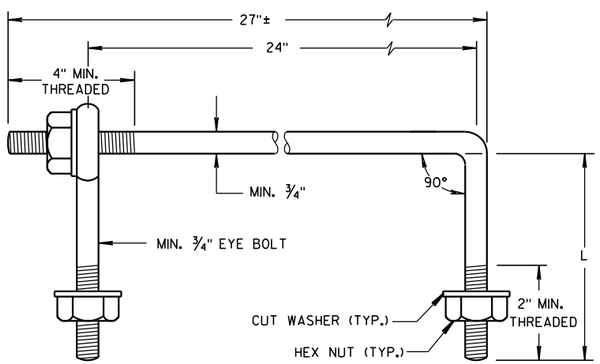
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

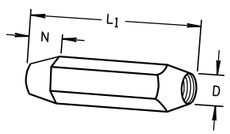
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



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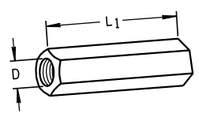
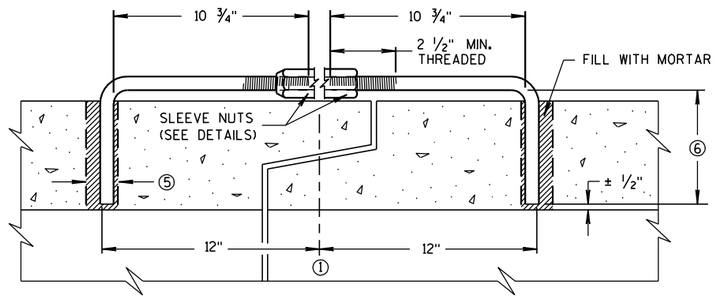


PLAIN

RIGHT AND LEFT THREADS

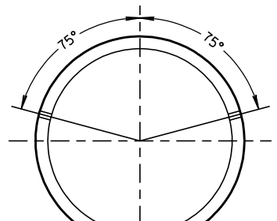
SLEEVE NUTS



LONGITUDINAL SECTION

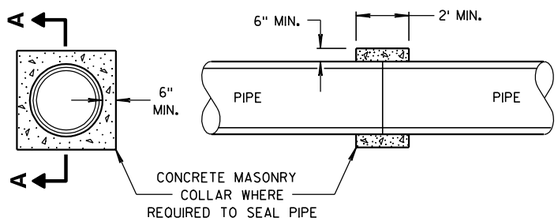
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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
FHWA

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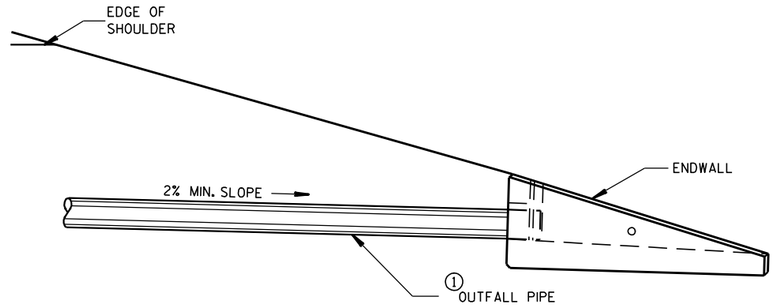
S.D.D. 8 F 4-7

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

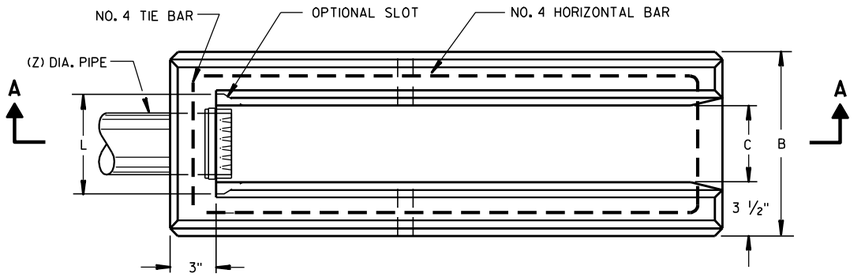
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

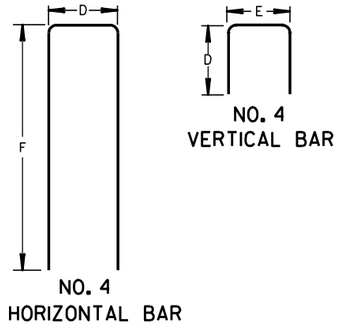
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

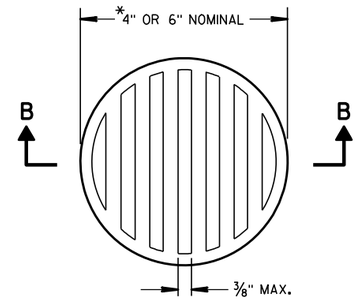
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



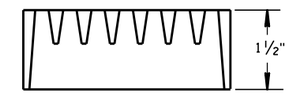
PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS



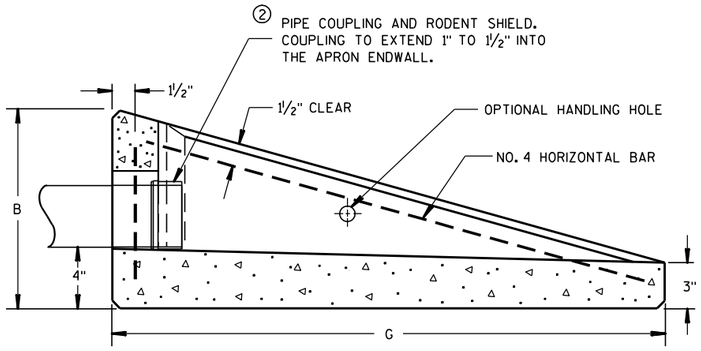
NOTE: ORIENT SHIELD SO SLOTS ARE VERTICAL.



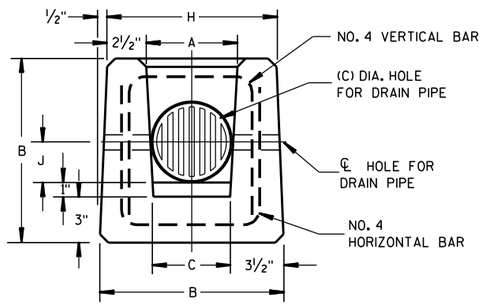
SECTION B-B

② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION A-A



END VIEW

CONCRETE APRON ENDWALL FOR UNDERDRAIN

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/10/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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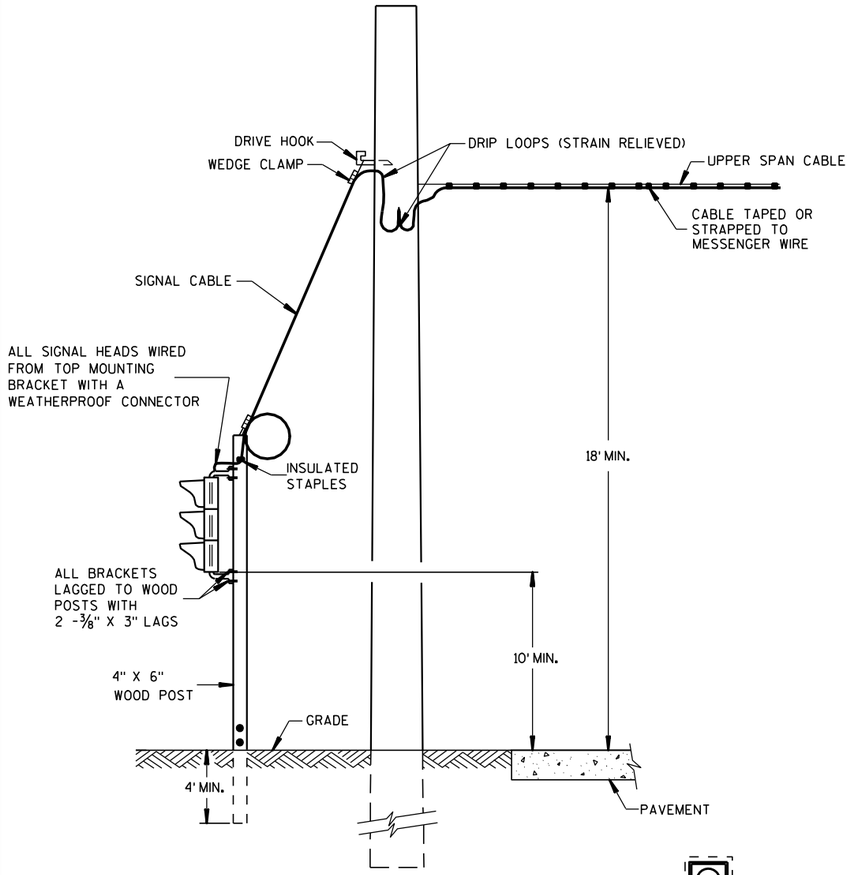
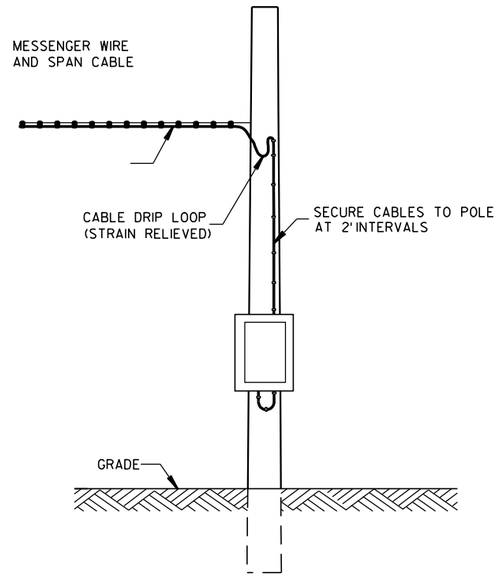


TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAYBE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY PLOLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

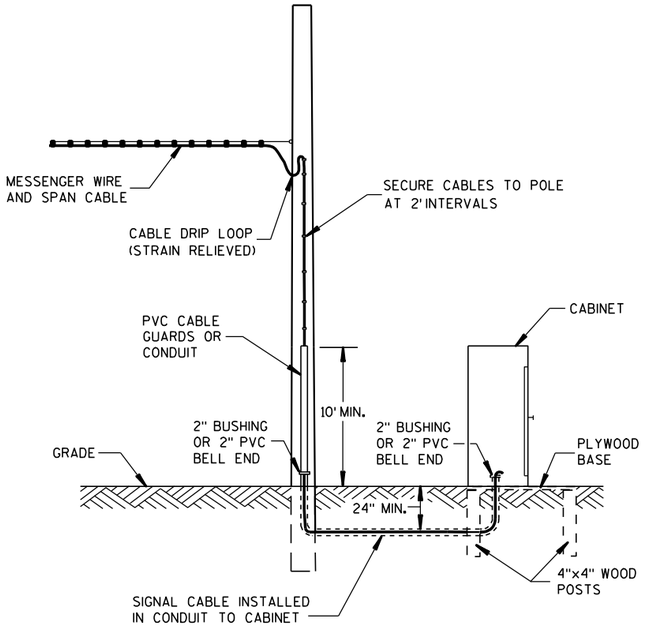
WOOD POLES (NONBREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAMGUARD, ETC.).

WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

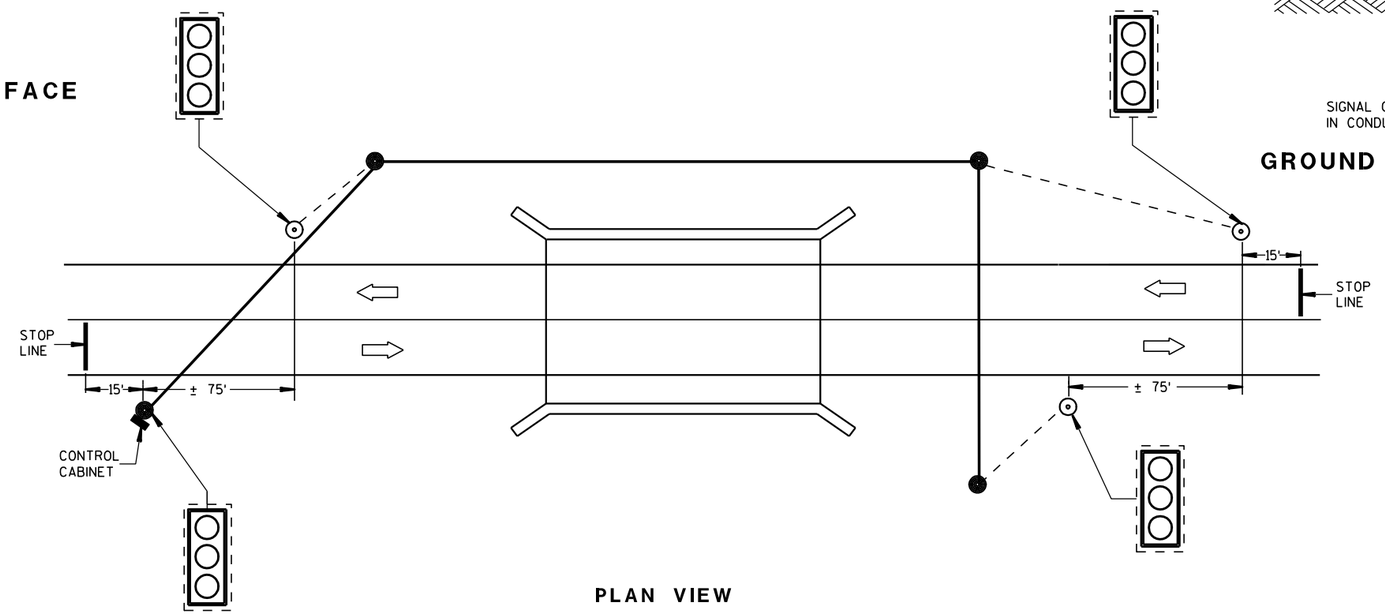
EACH TRAFFIC SIGNAL FACE SHALL HAVE A BACKPLATE.



GROUND MOUNT CABINET INSTALLATION

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE**
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/ CURBS	2 FT

**NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.



PLAN VIEW

TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NONBREAKAWAY)
- WOOD POST (BREAKAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- LED TRAFFIC SIGNAL FACE WITH BACKPLATE (3-12")
- DIRECTION OF TRAFFIC

MINIMUM POLE LENGHTS	CLASS	MINIMUM BURIAL DEPTHS
25 FEET	V	5 FEET
30 FEET	V	6 FEET
35 FEET	IV	7 FEET
40 FEET	IV	8 FEET
45 FEET	IV	9 FEET

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 DATE

/S/ Thomas J. Gosling STATE ELECTRICAL ENGI

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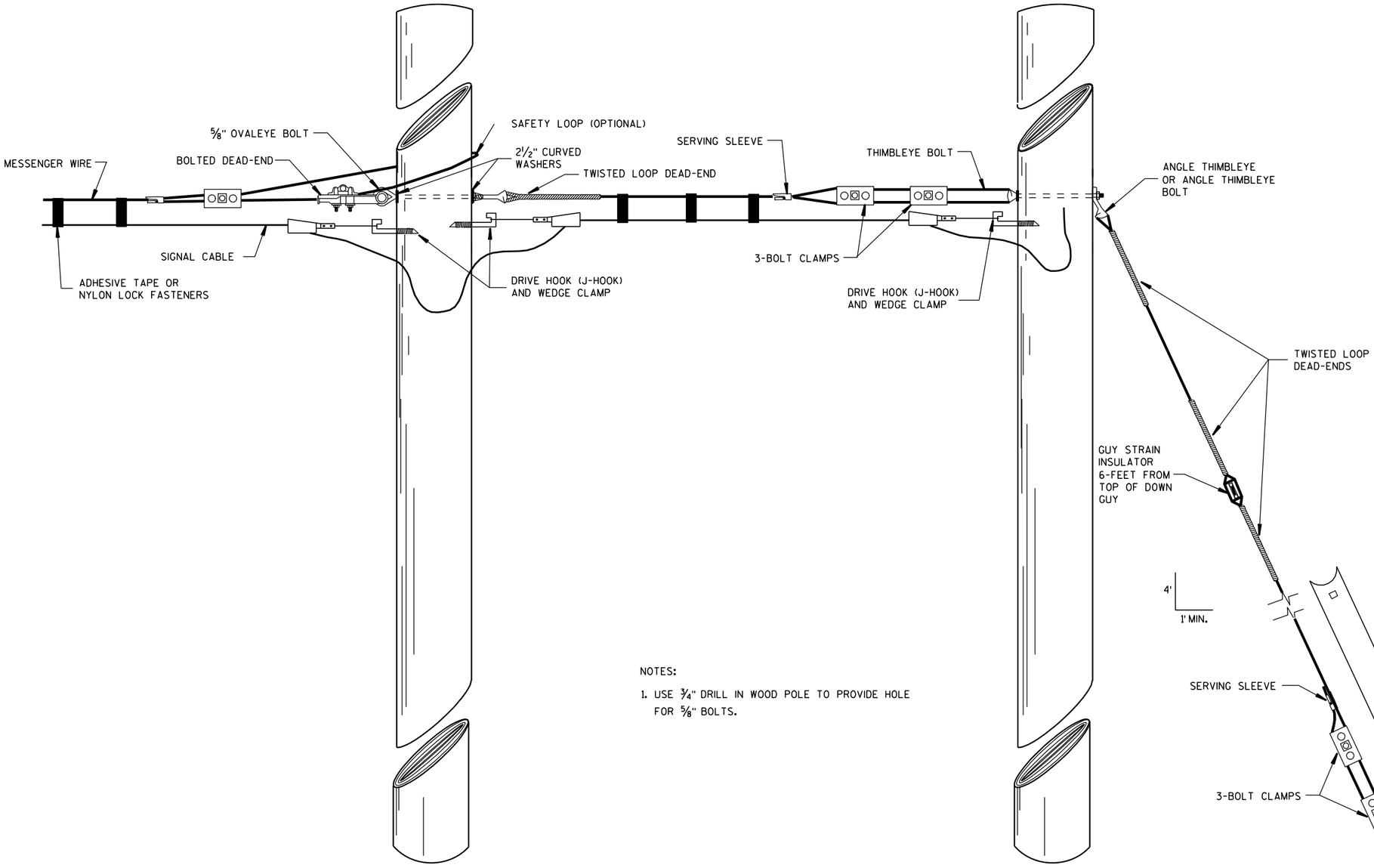

SPAN WIRE POLE

GUY POLE

NOTES:

1. USE 3/4" DRILL IN WOOD POLE TO PROVIDE HOLE FOR 5/8" BOLTS.

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 DATE

/S/ Thomas J. G... STATE ELECTRICAL ENGI

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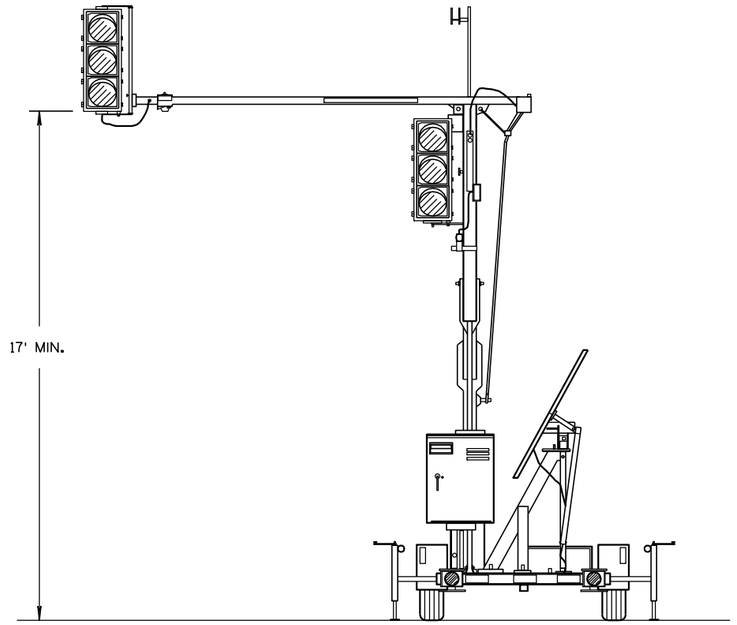
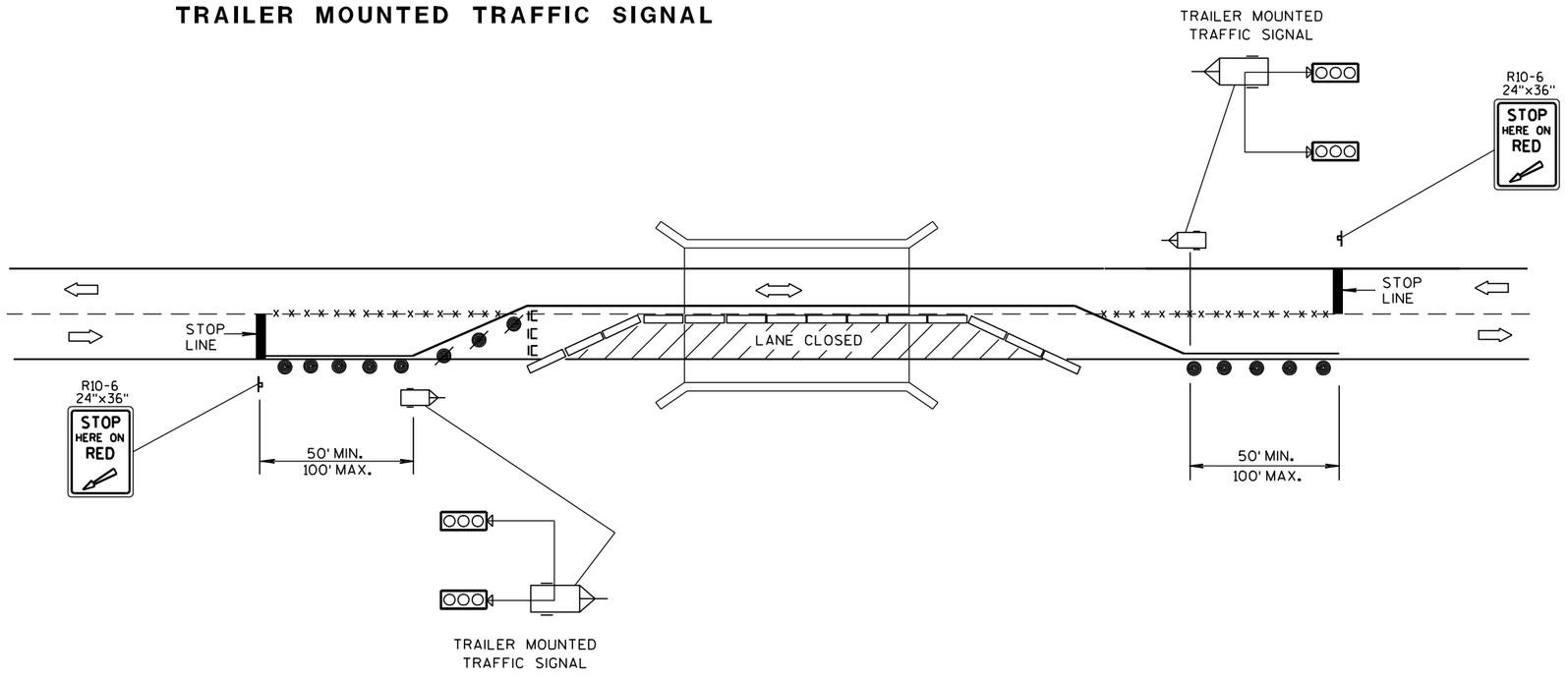


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- REMOVING PAVEMENT MARKING
- TYPE III BARRICADE WITH SIGN
- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 — DATE

/S/ Thomas J. Gosling — STATE ELECTRICAL ENGI

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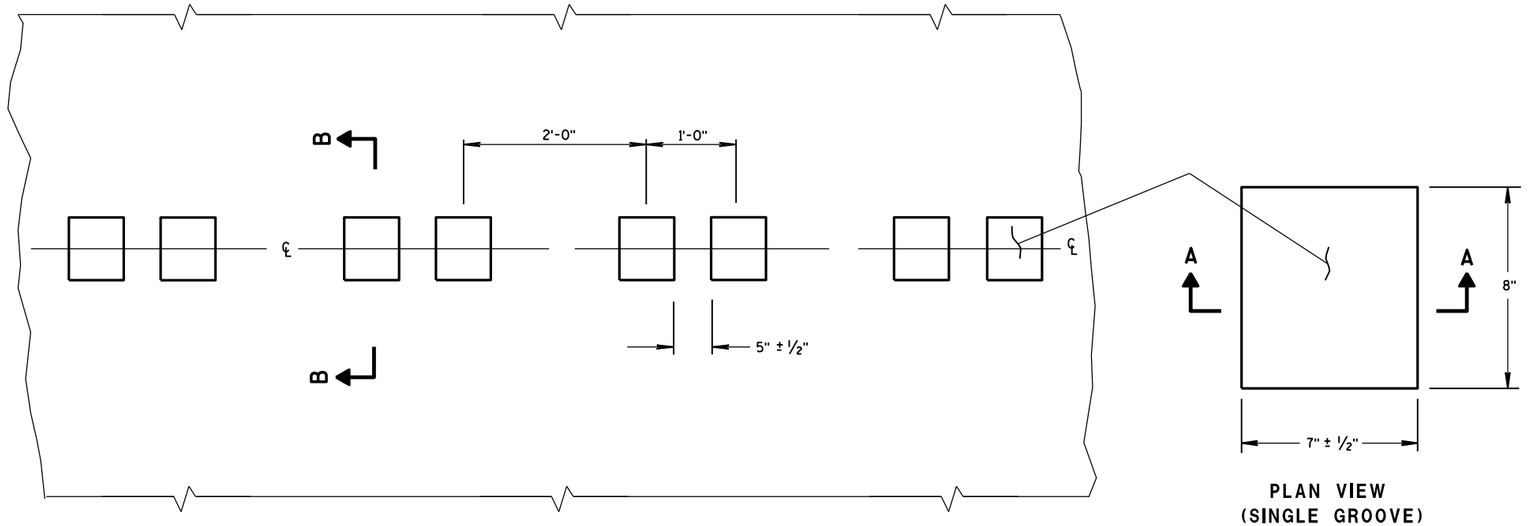


PLAN VIEW
CENTER LINE WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

GENERAL NOTES

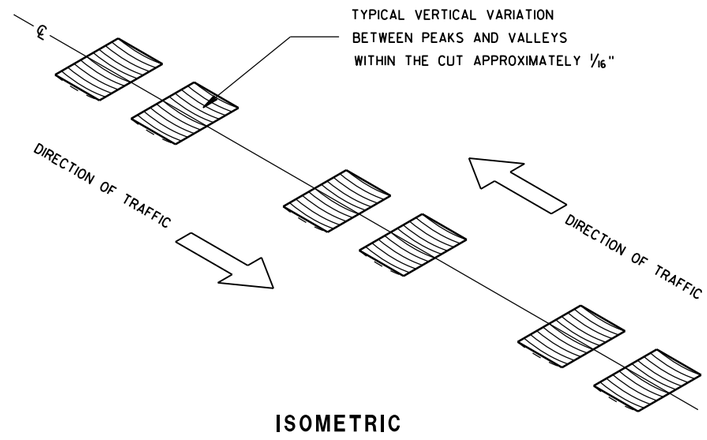
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTER LINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

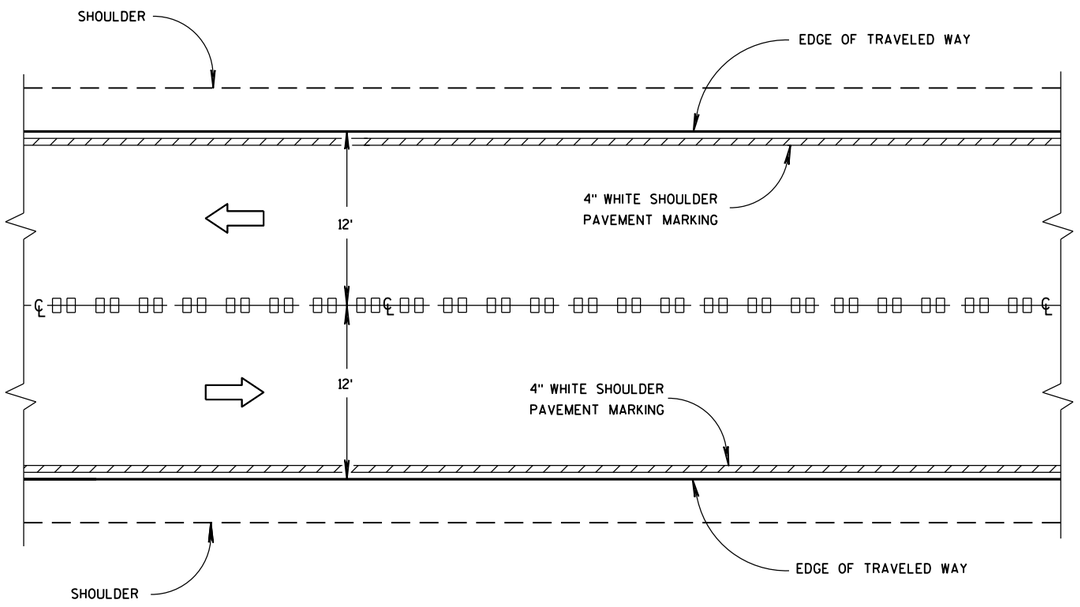
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

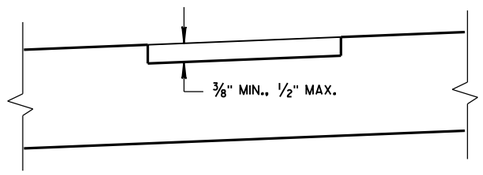
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



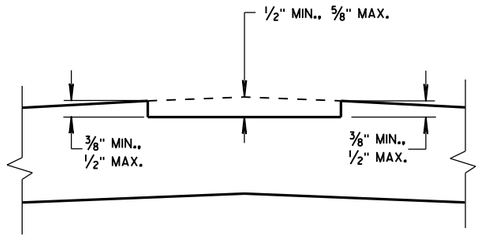
ISOMETRIC



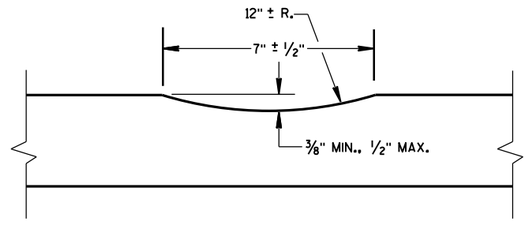
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



SECTION B-B
CROWNED ROADWAY



SECTION A-A

6

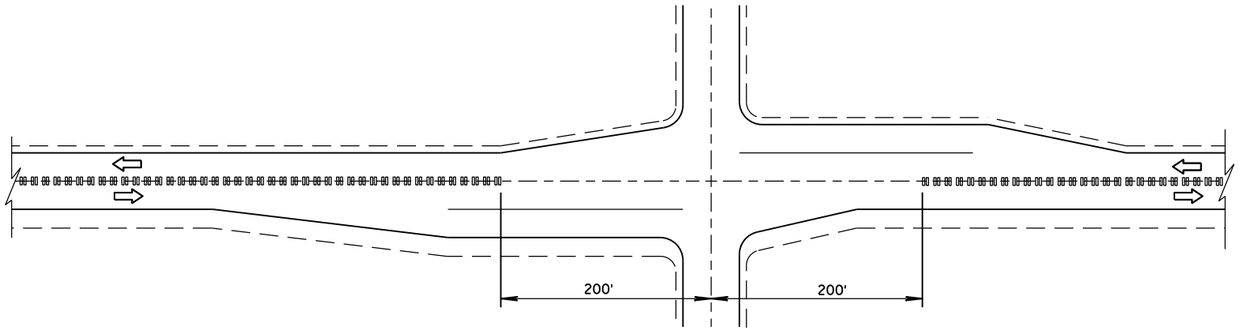
S.D.D. 13 A 11-2a

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

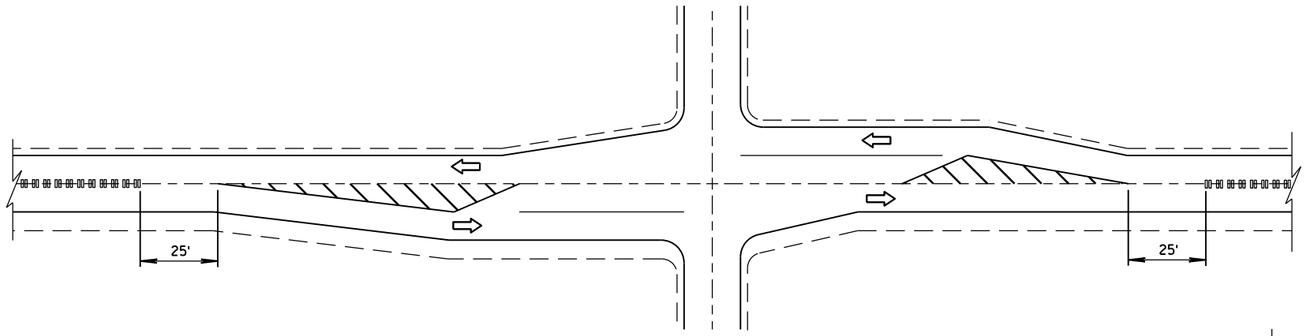
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

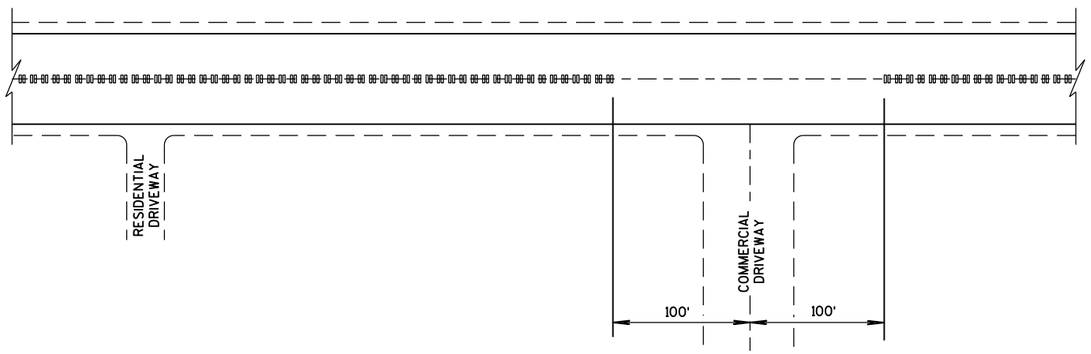
S.D.D. 13 A 11-2a



CENTER LINE GROOVES AT INTERSECTIONS

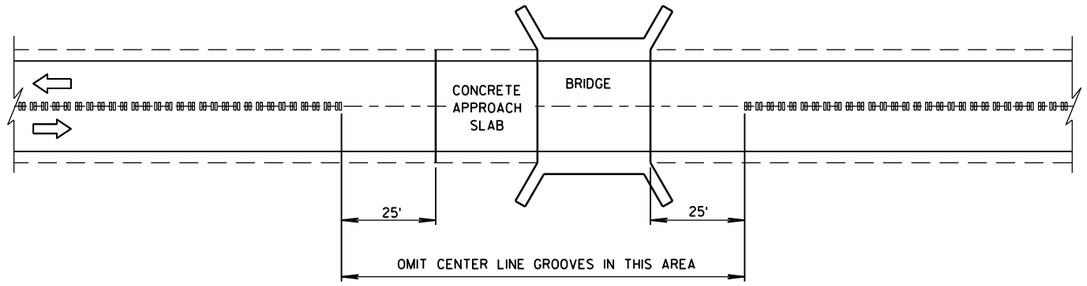


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

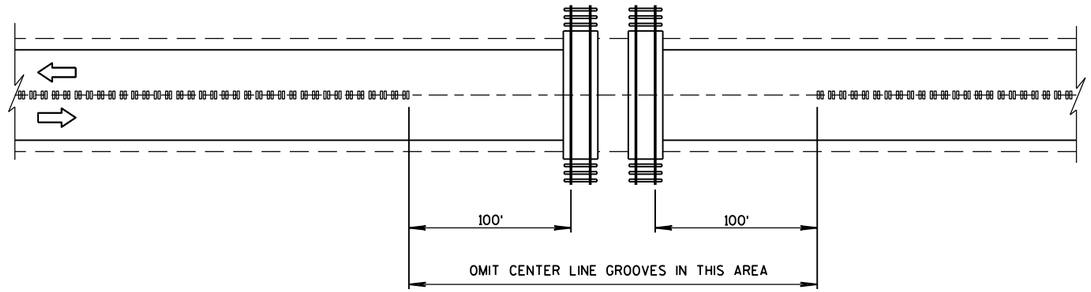


CENTER LINE GROOVES AT DRIVEWAYS (1)

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT RAILROADS

6

S.D.D. 13 A 11-2b

6

S.D.D. 13 A 11-2b

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

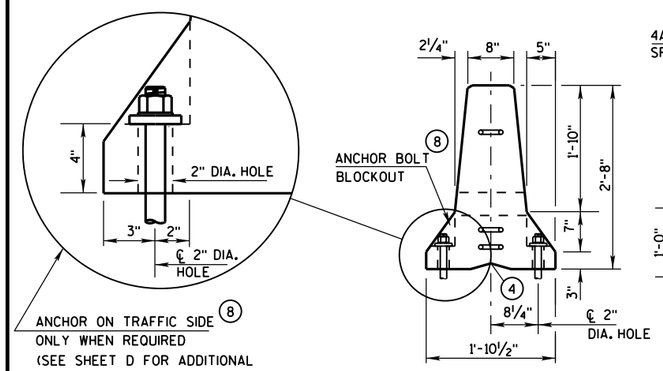
APPROVED

5/15/2013
DATE

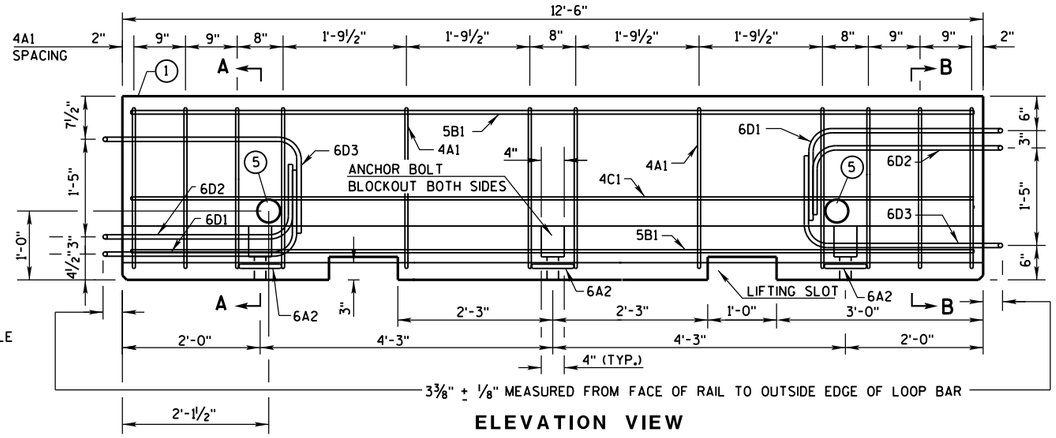
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

NT

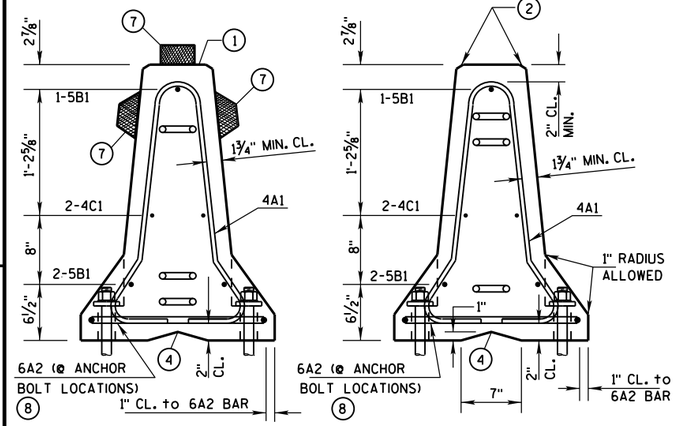
FHWA



END VIEW

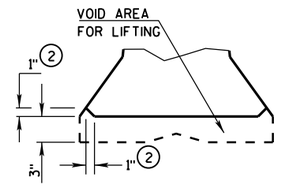


ELEVATION VIEW

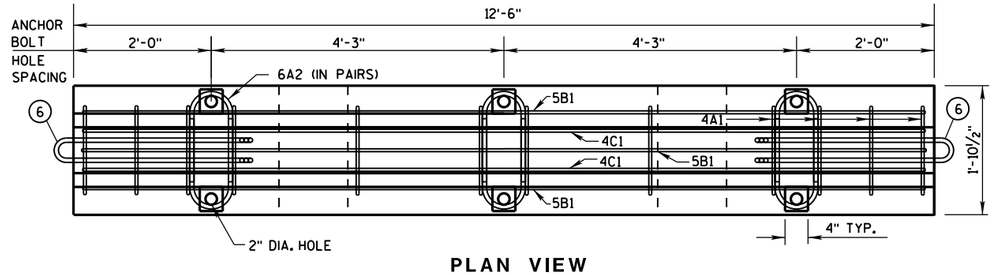


SECTION A-A
(STIRRUP PLACEMENT)

SECTION B-B
(STIRRUP PLACEMENT)

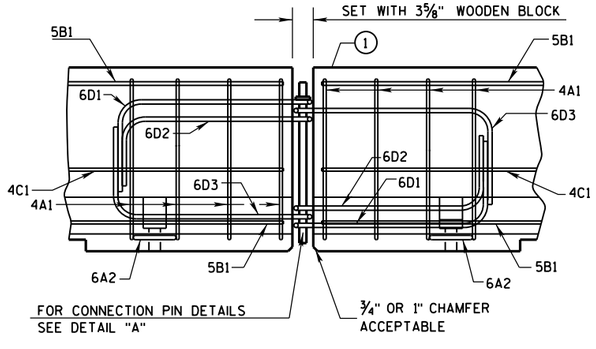


DETAIL "B"
LIFTING SLOT DETAIL

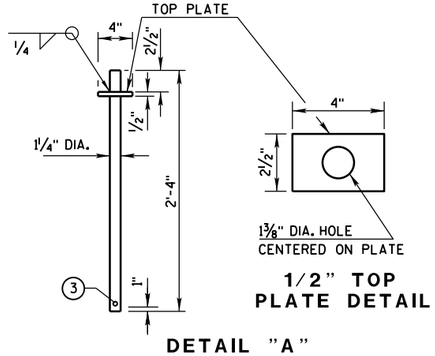


PLAN VIEW

DETAILS OF BARRIER SECTION

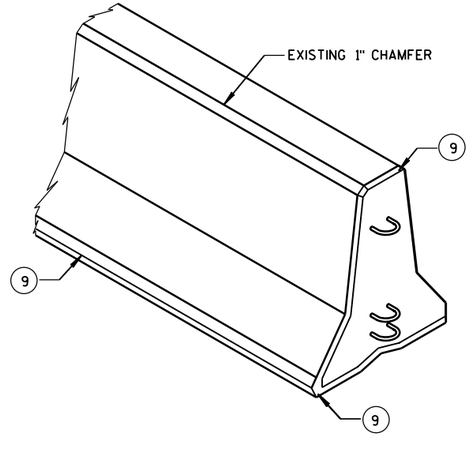


DETAILS OF BARRIER CONNECTION



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.

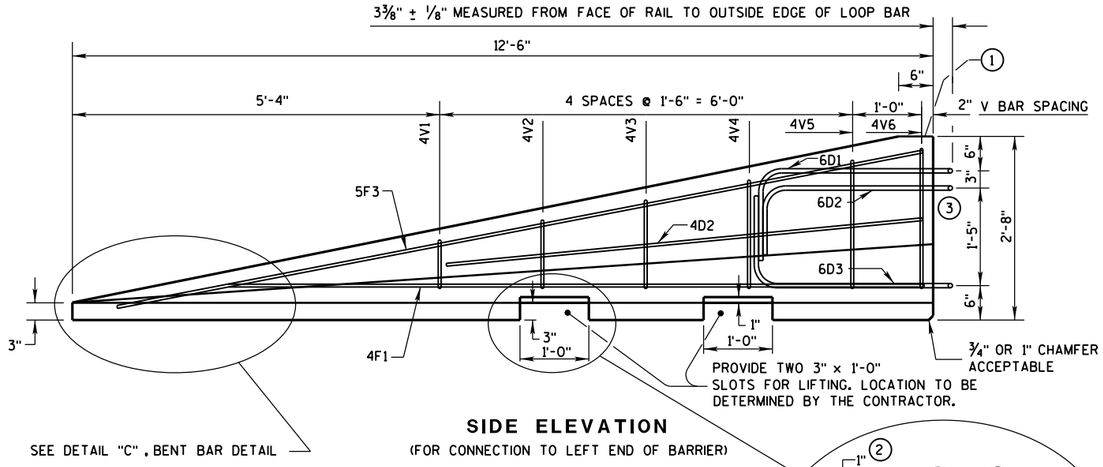
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

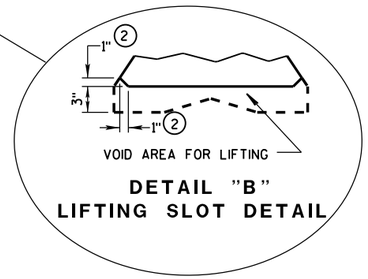
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

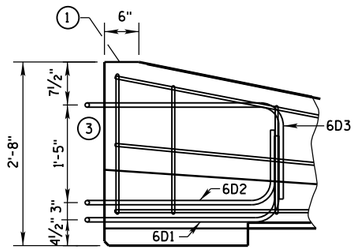
S.D.D. 14 B 7-14a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



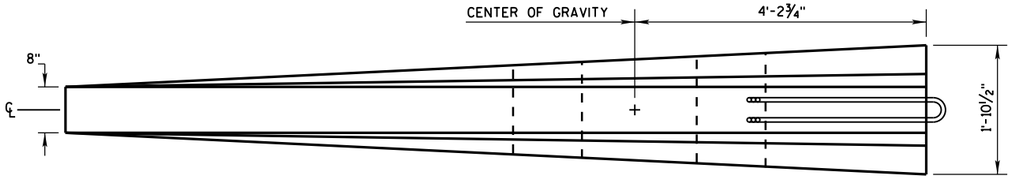
DETAIL "B"
LIFTING SLOT DETAIL



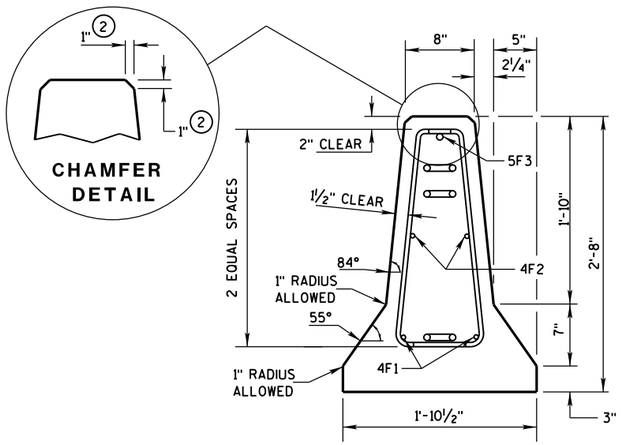
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

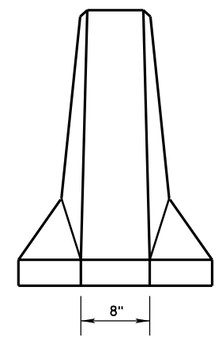
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



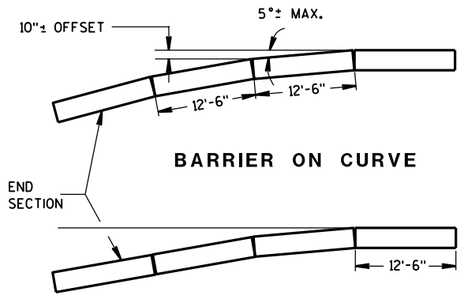
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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

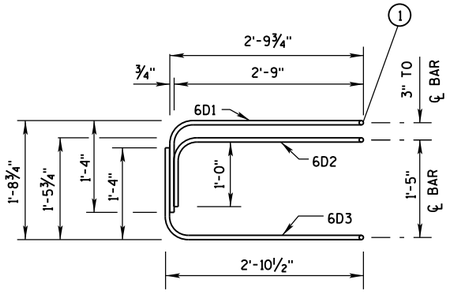
6

S.D.D. 14 B 7-14b

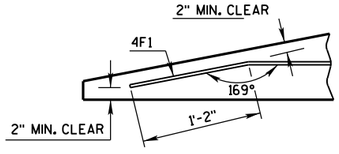
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

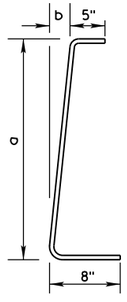
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

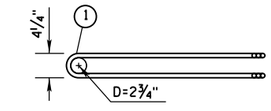
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

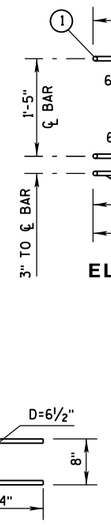
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

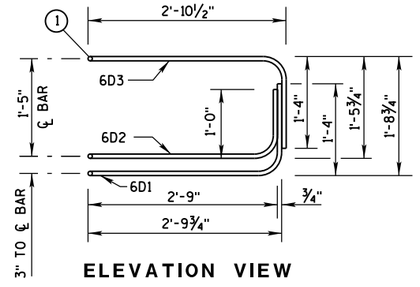
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



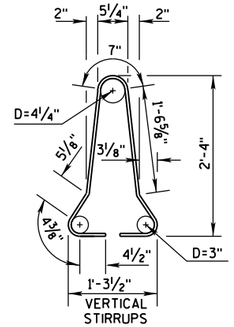
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



4A1

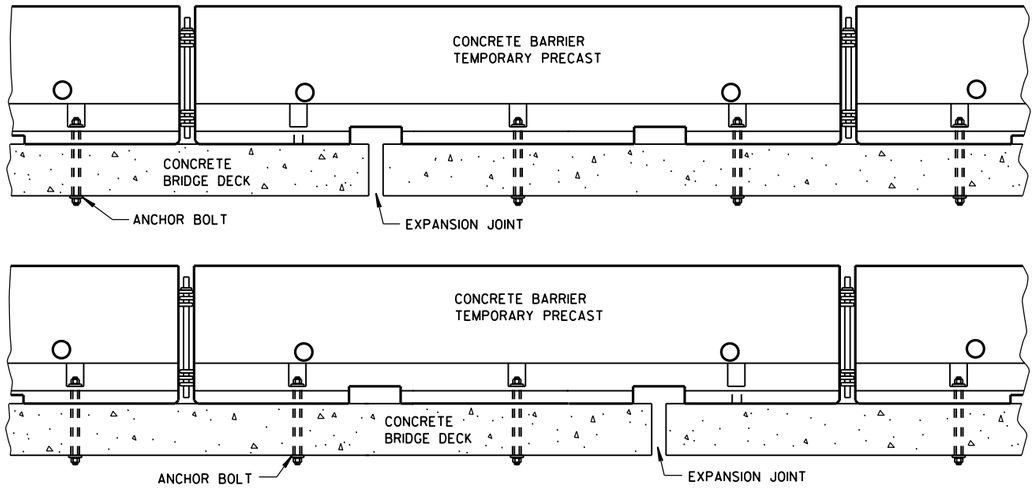
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

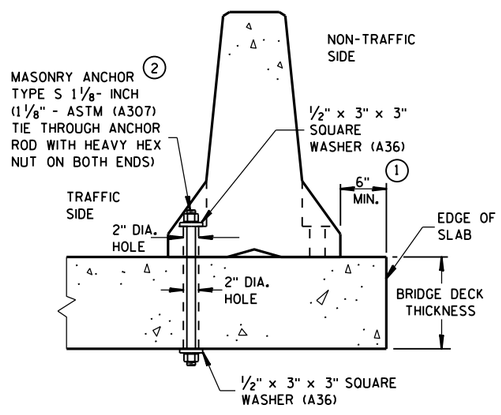
6

S.D.D. 14 B 7-14c



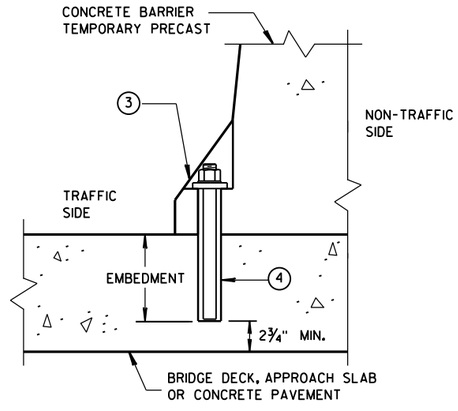
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT ②

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

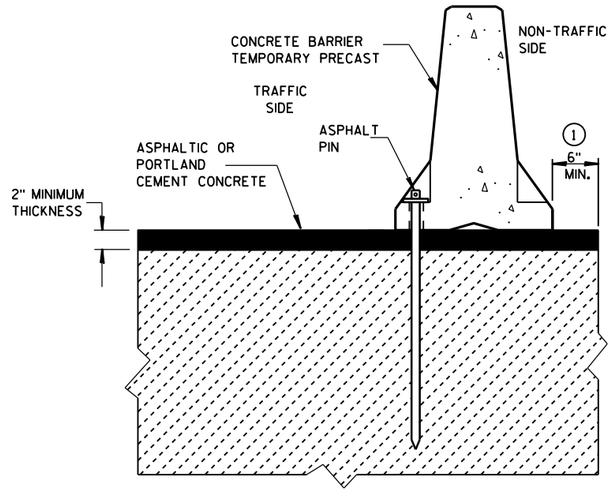
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

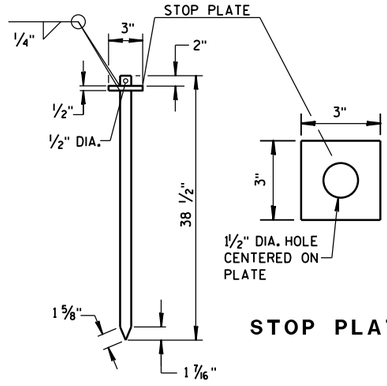
③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

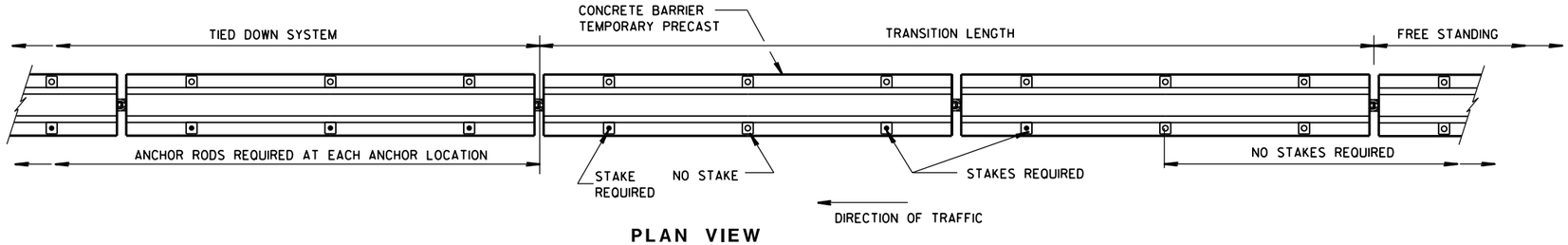
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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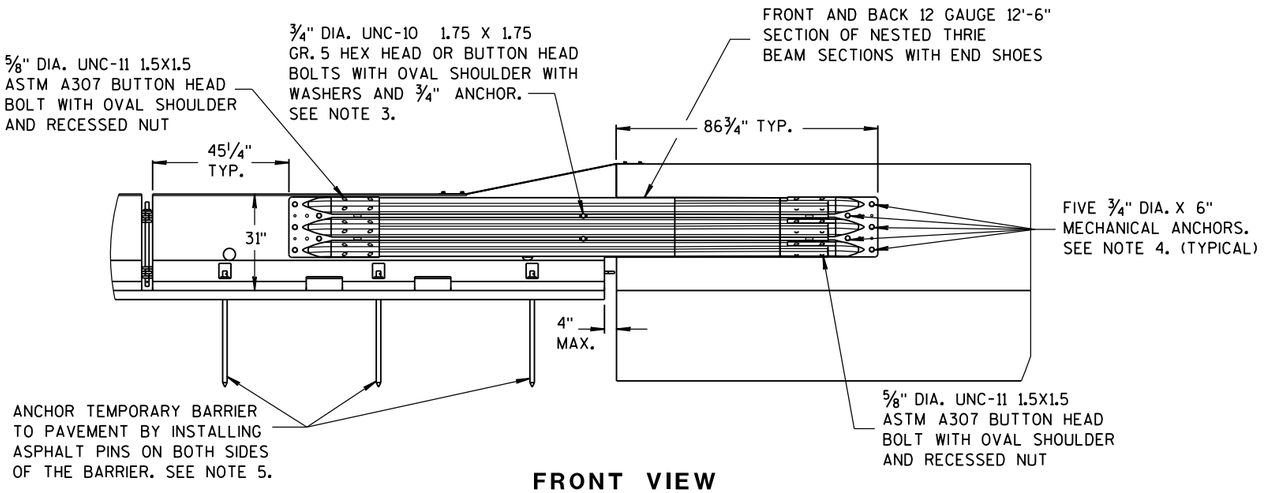
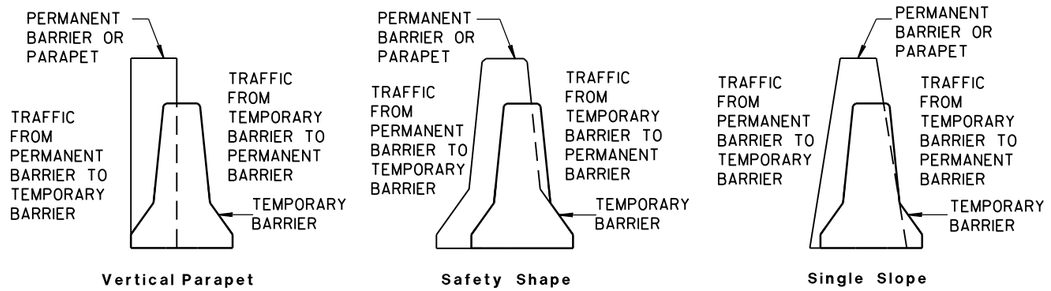
S.D.D. 14 B 7-14d



FRONT VIEW

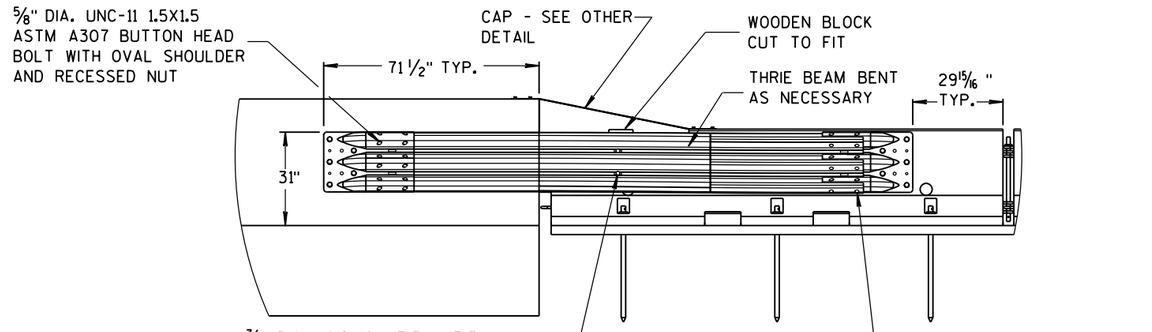


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

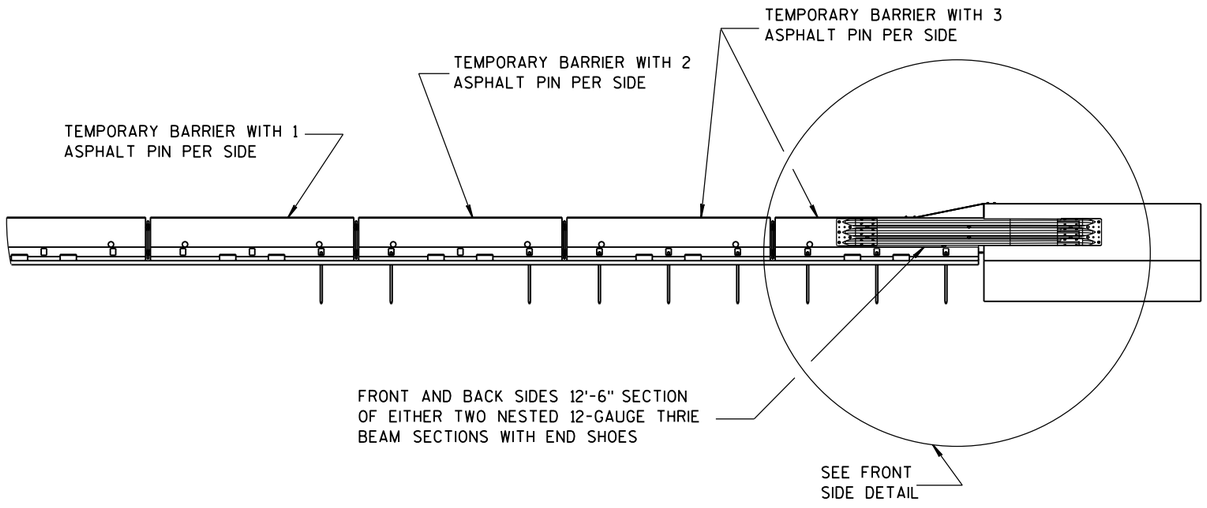
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

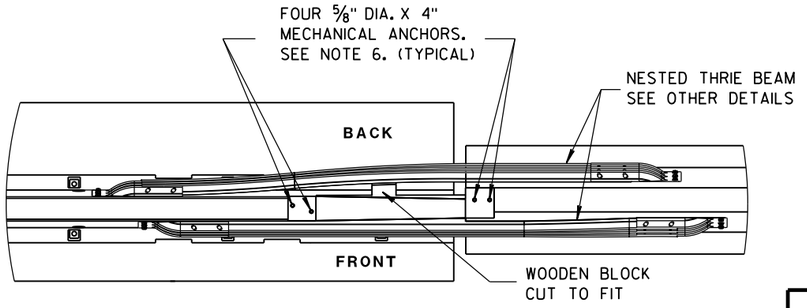
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 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

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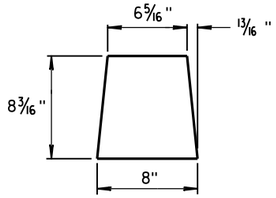
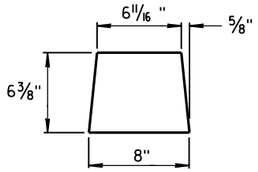
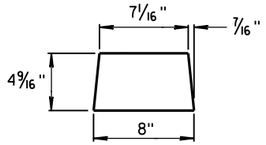
S.D.D. 14 B 7-14e



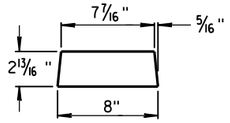
GUSSET 1



GUSSET 2

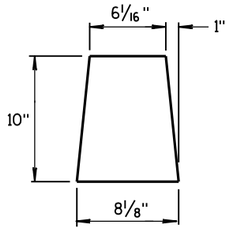


GUSSET 3

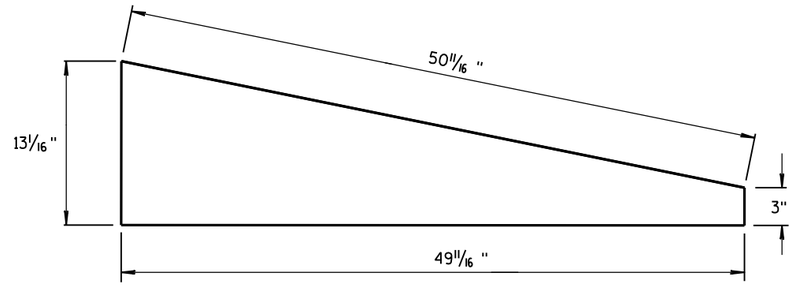


GUSSET 4

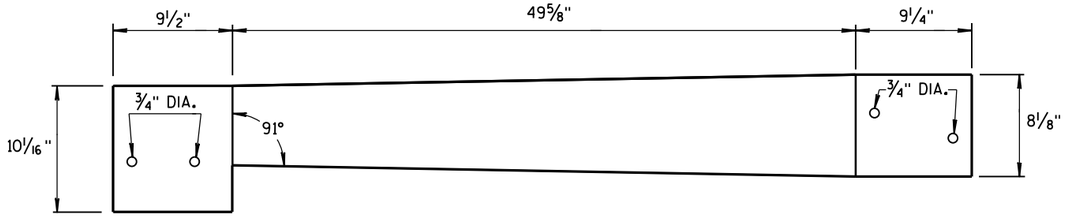
GUSSETS

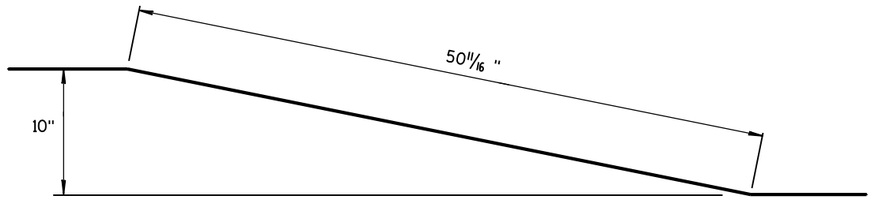


END PLATE



SIDE PLATE

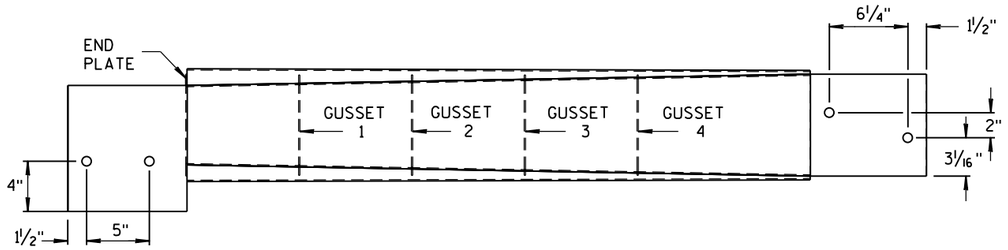


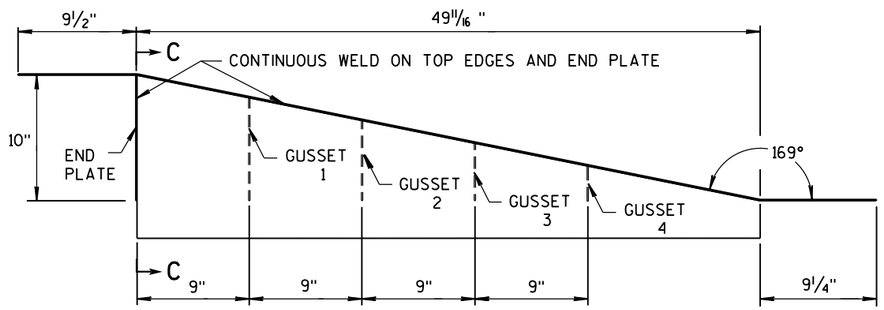


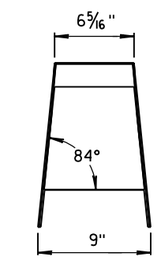
TOP PLATE

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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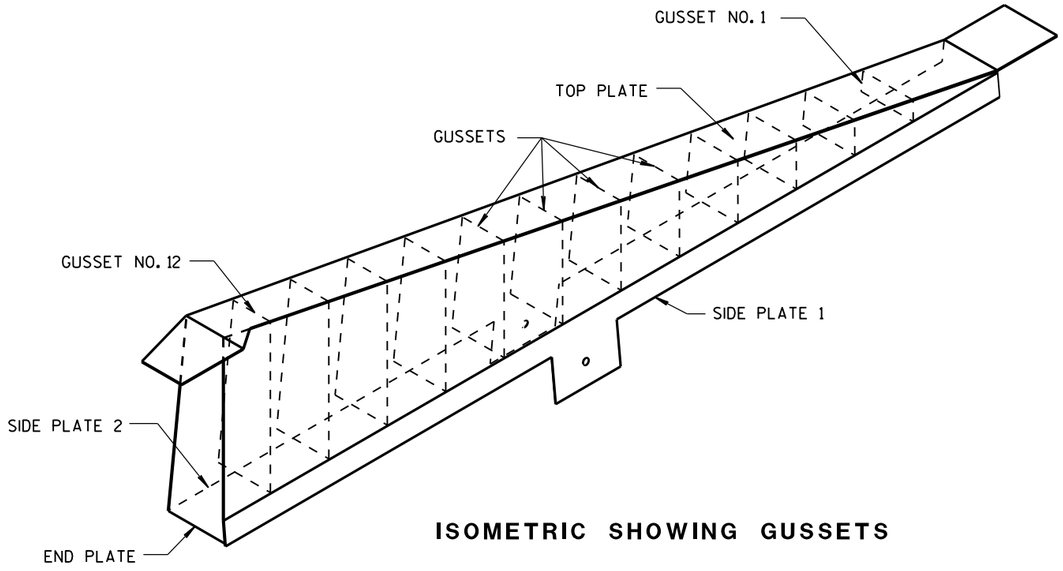
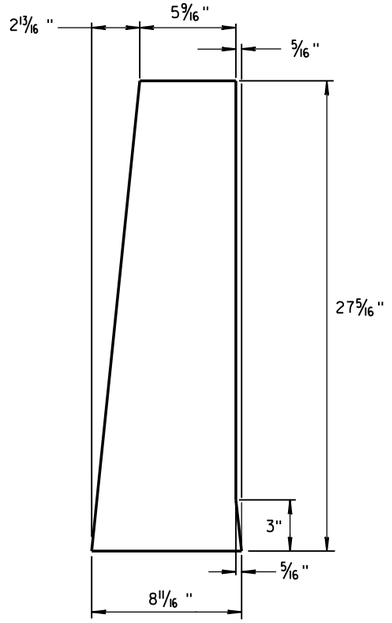
S.D.D. 14 B 7-14f

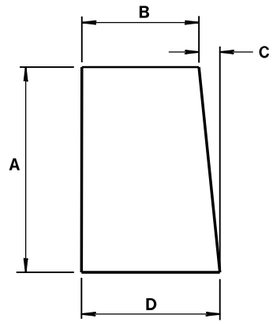


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



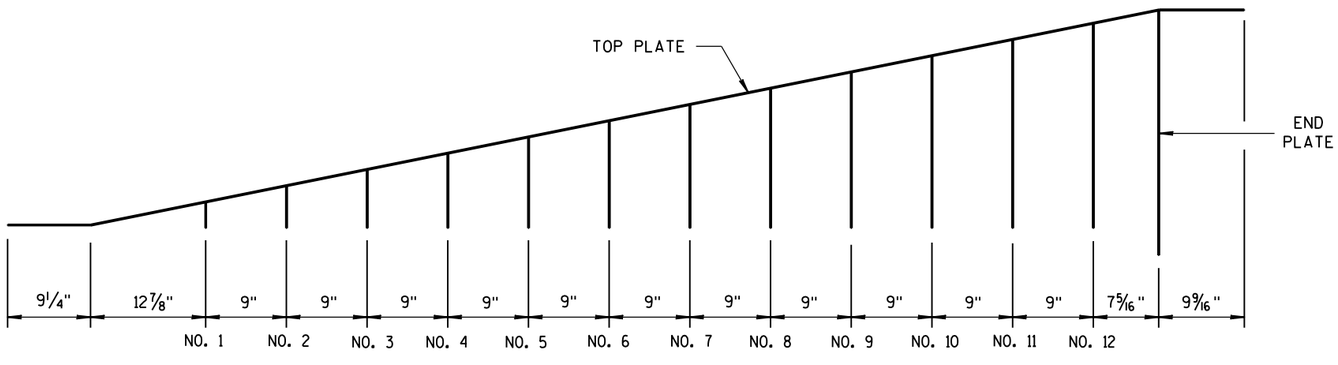
GUSSETS 1 - 12

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
DEPARTMENT OF TRANSPOI

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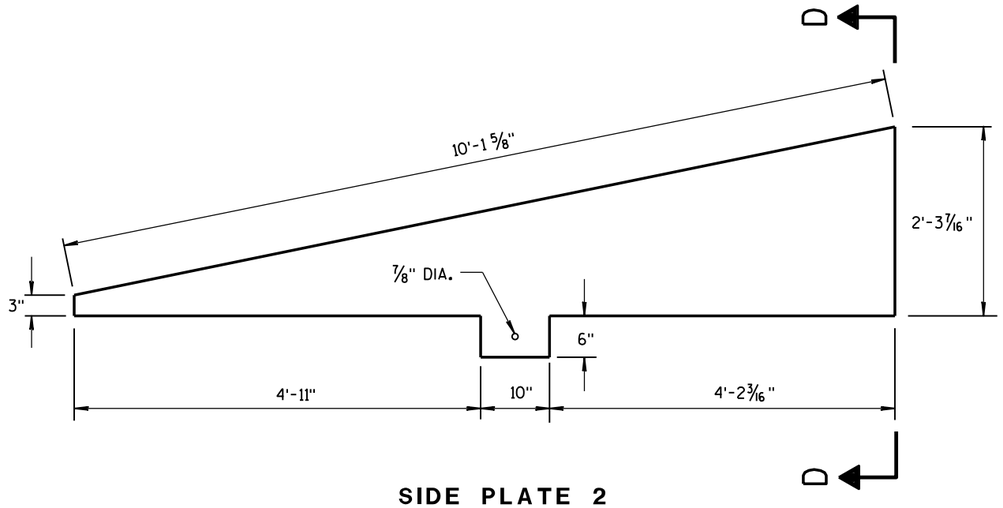
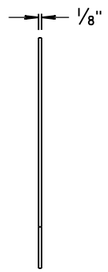
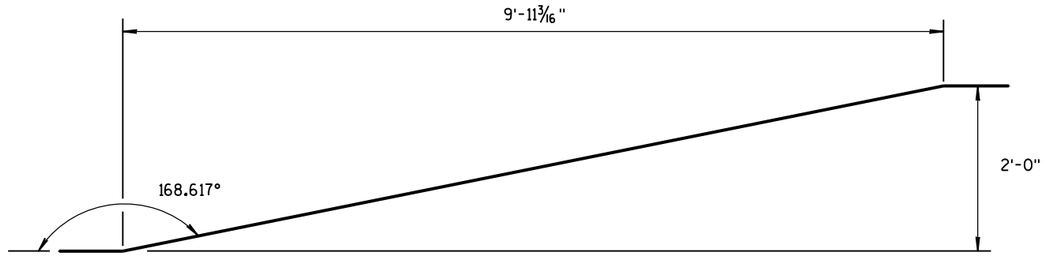
S.D.D. 14 B 7-14g



SIDE PLATE 2

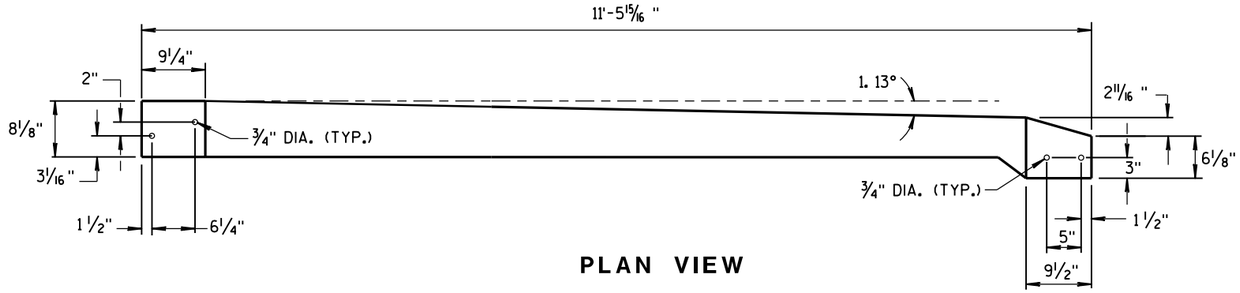


END VIEW



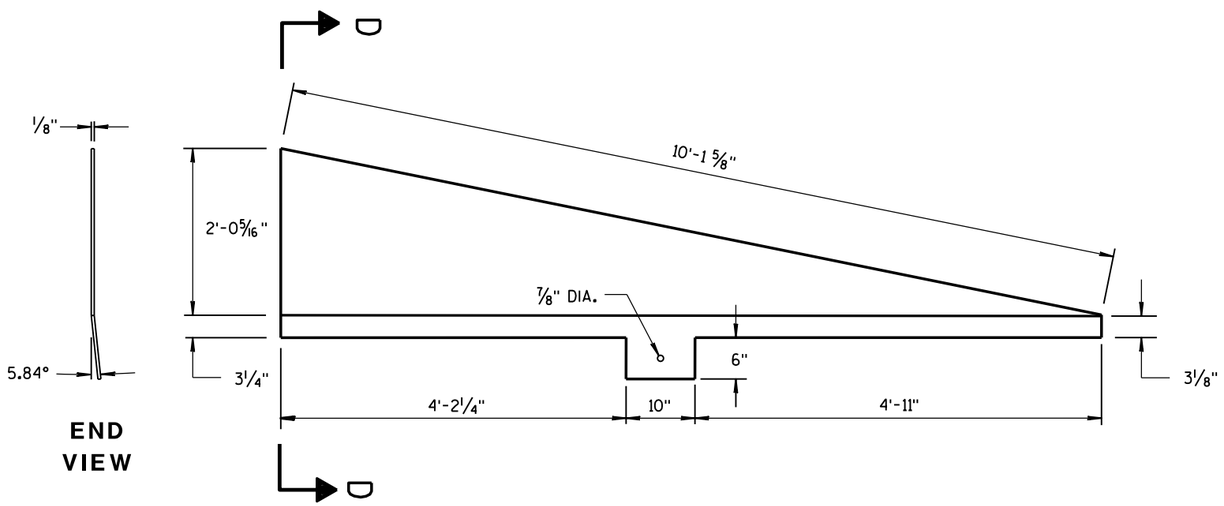
SIDE VIEW

TOP PLATE



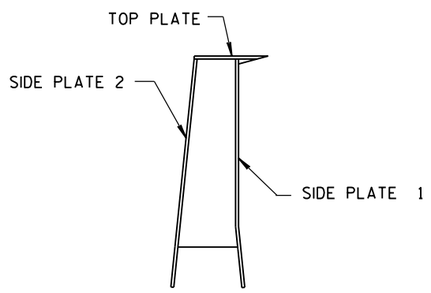
PLAN VIEW

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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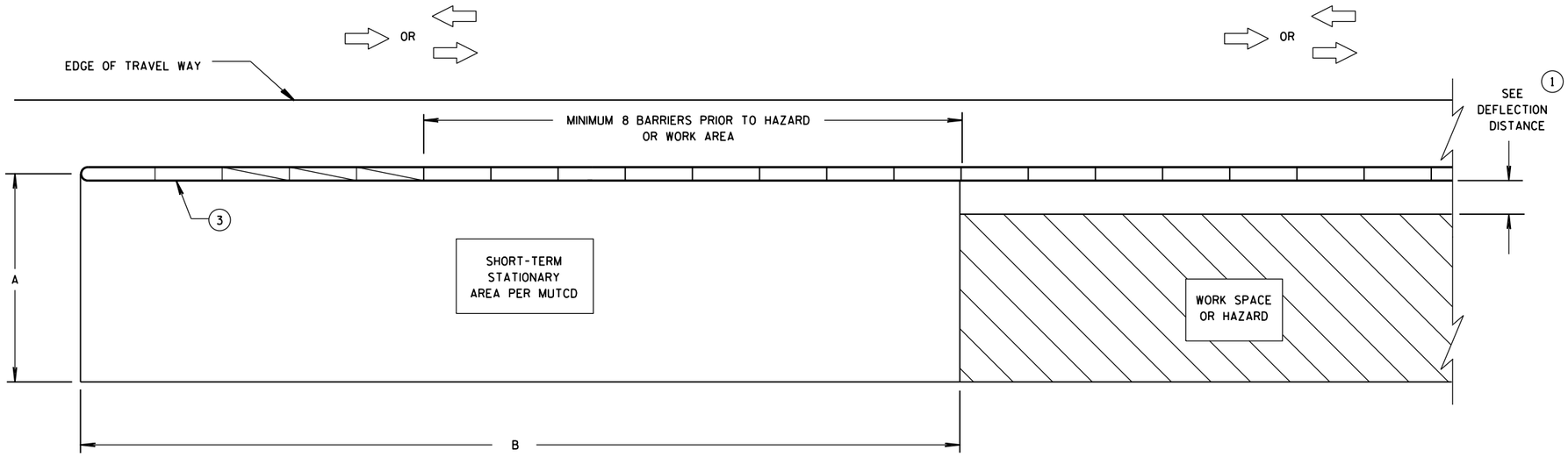
S.D.D. 14 B 7-14h



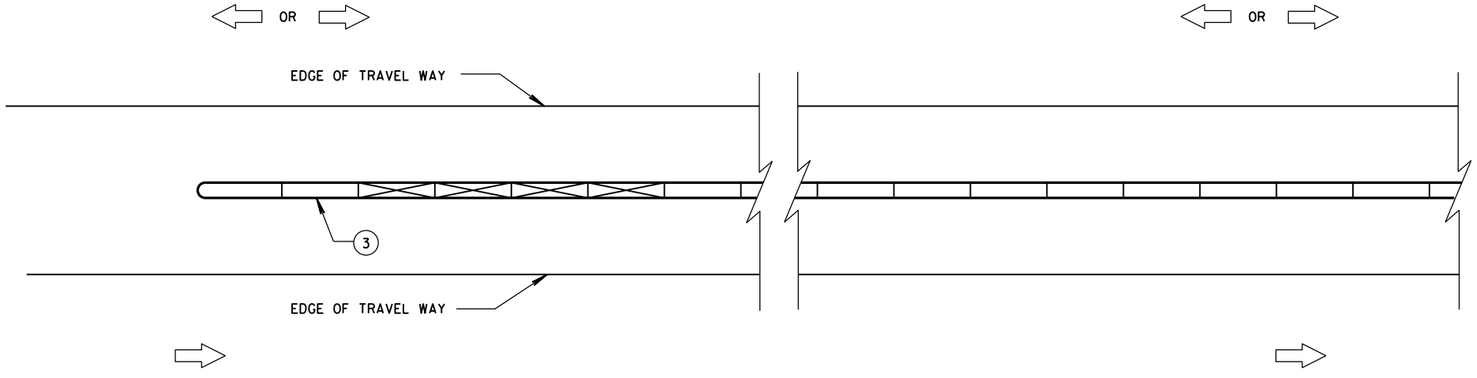
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

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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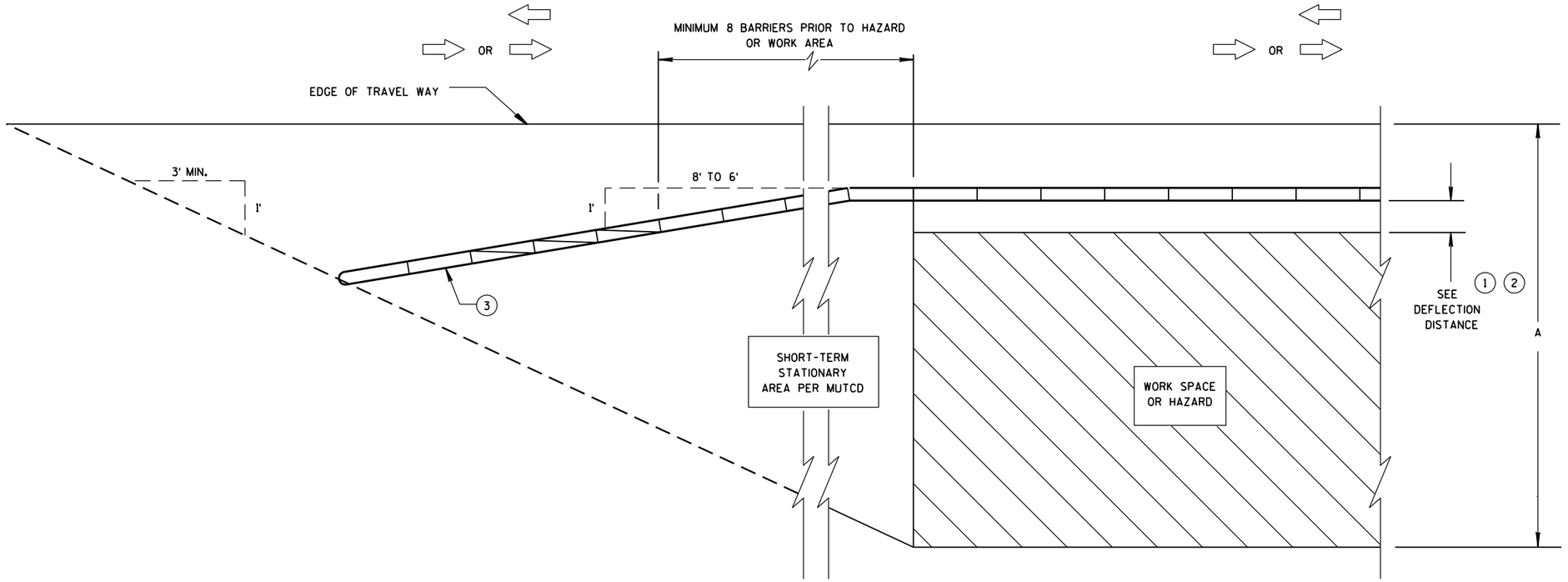
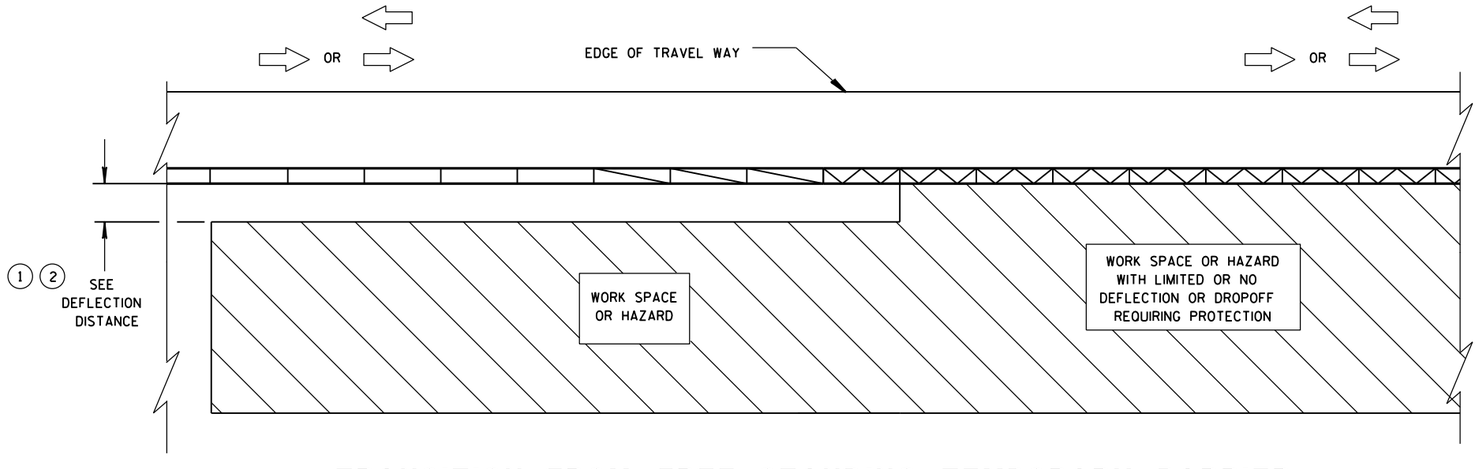


CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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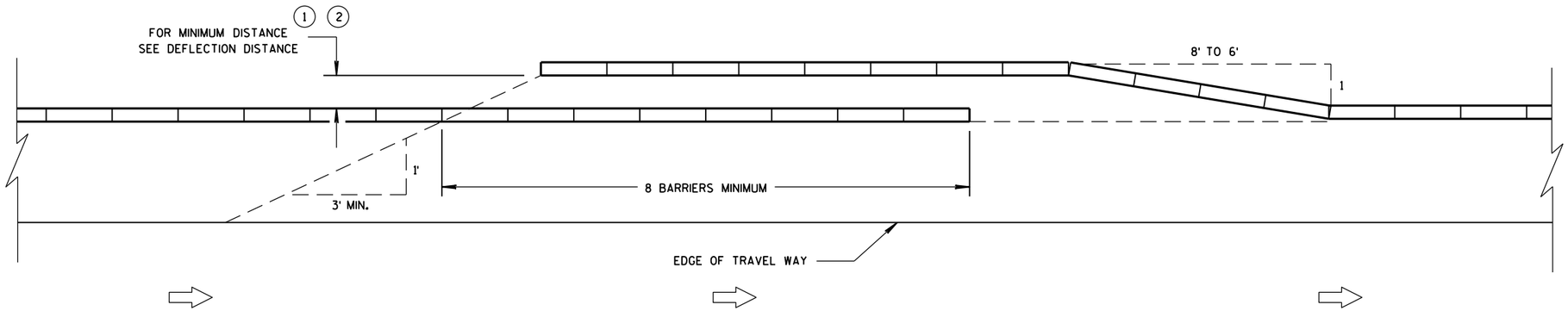
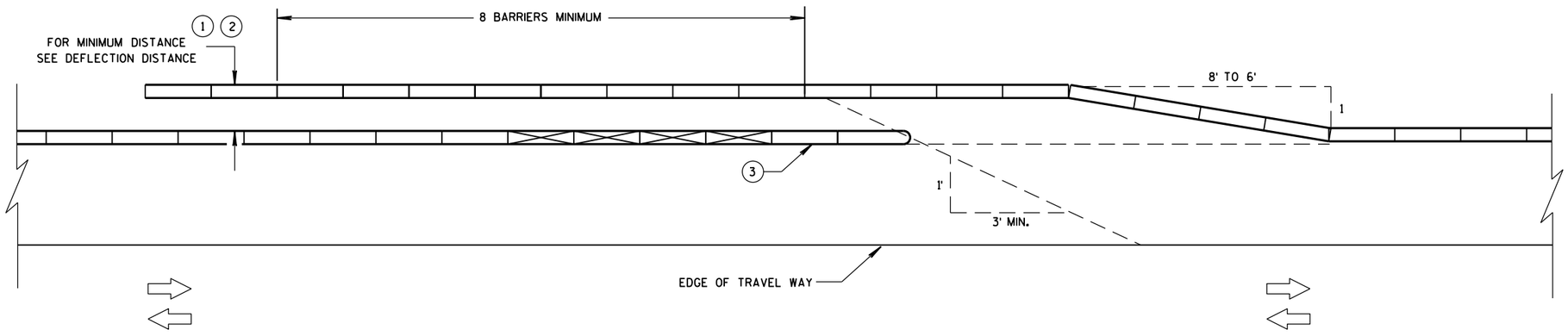
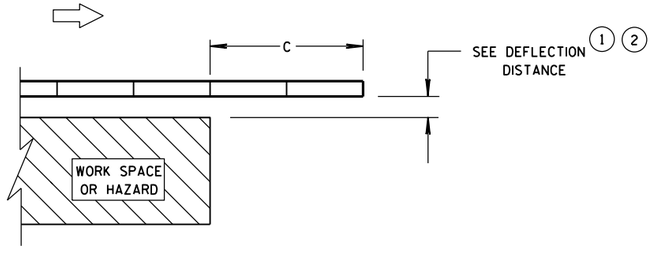
S.D.D. 14 B 8-2b



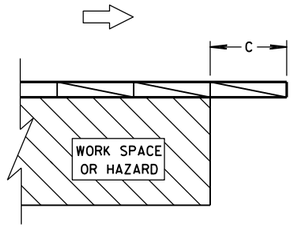
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

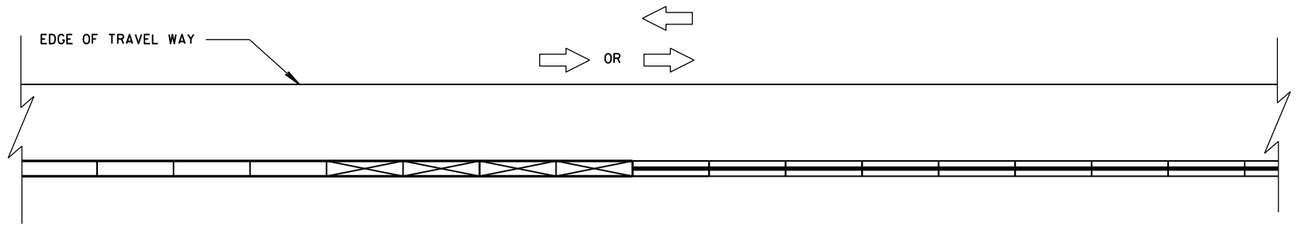
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

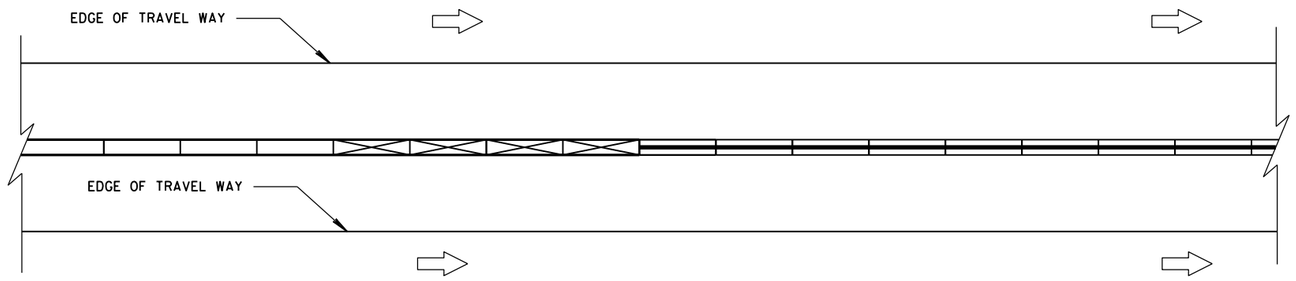
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2c



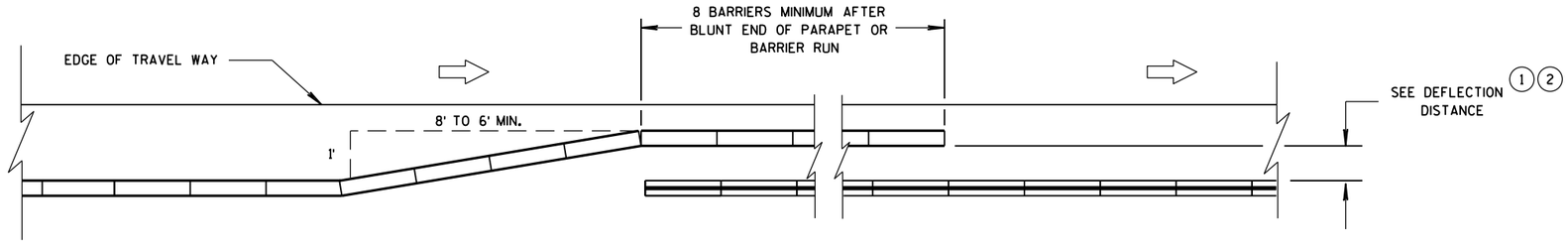
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



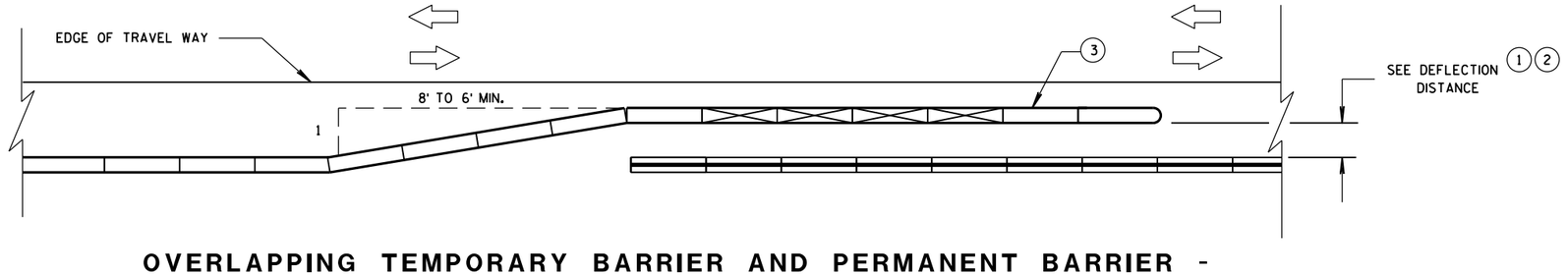
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

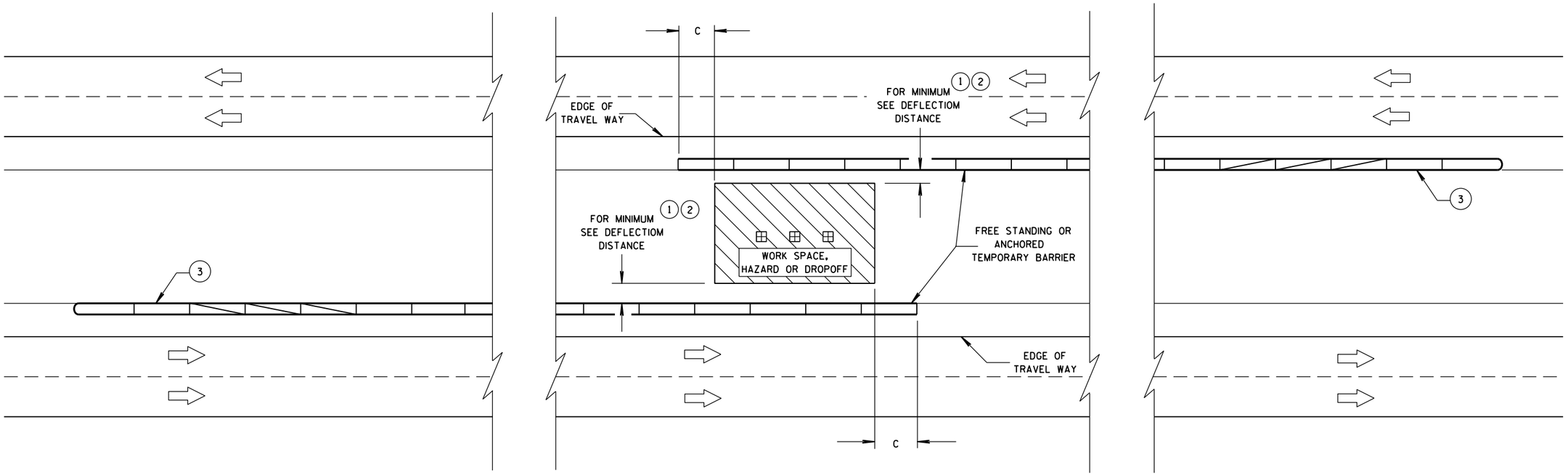
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



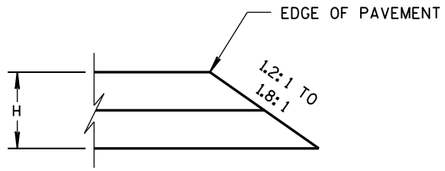
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

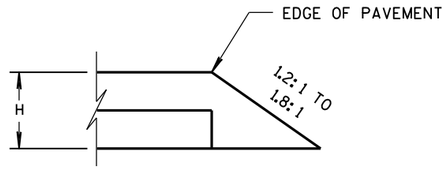
6

S.D.D. 14 B 8-2e



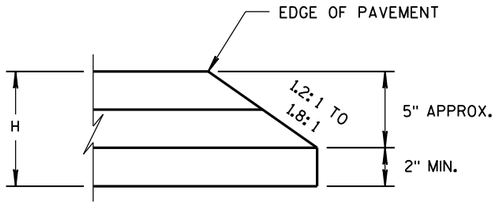
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



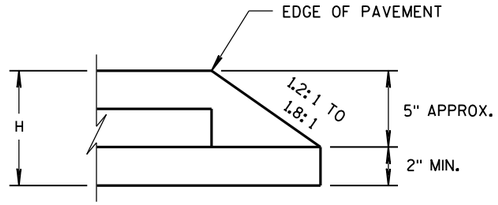
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

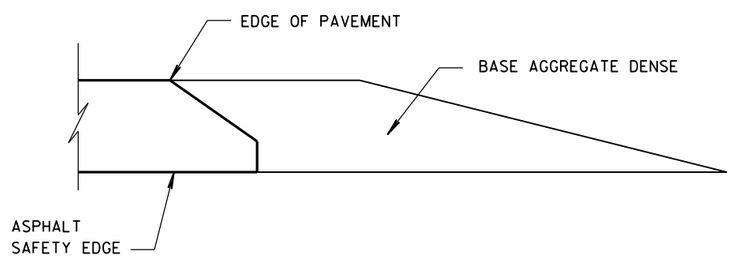
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

SAFETY EDGE SM

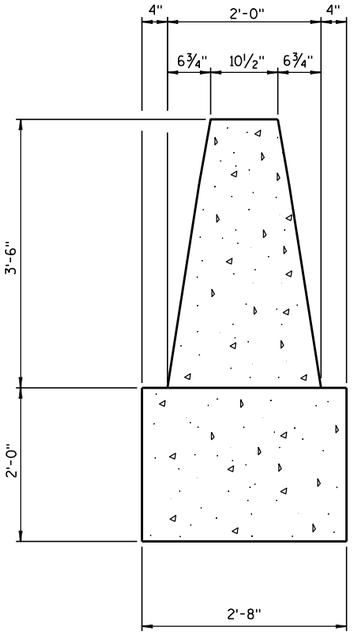
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/2012
DATE

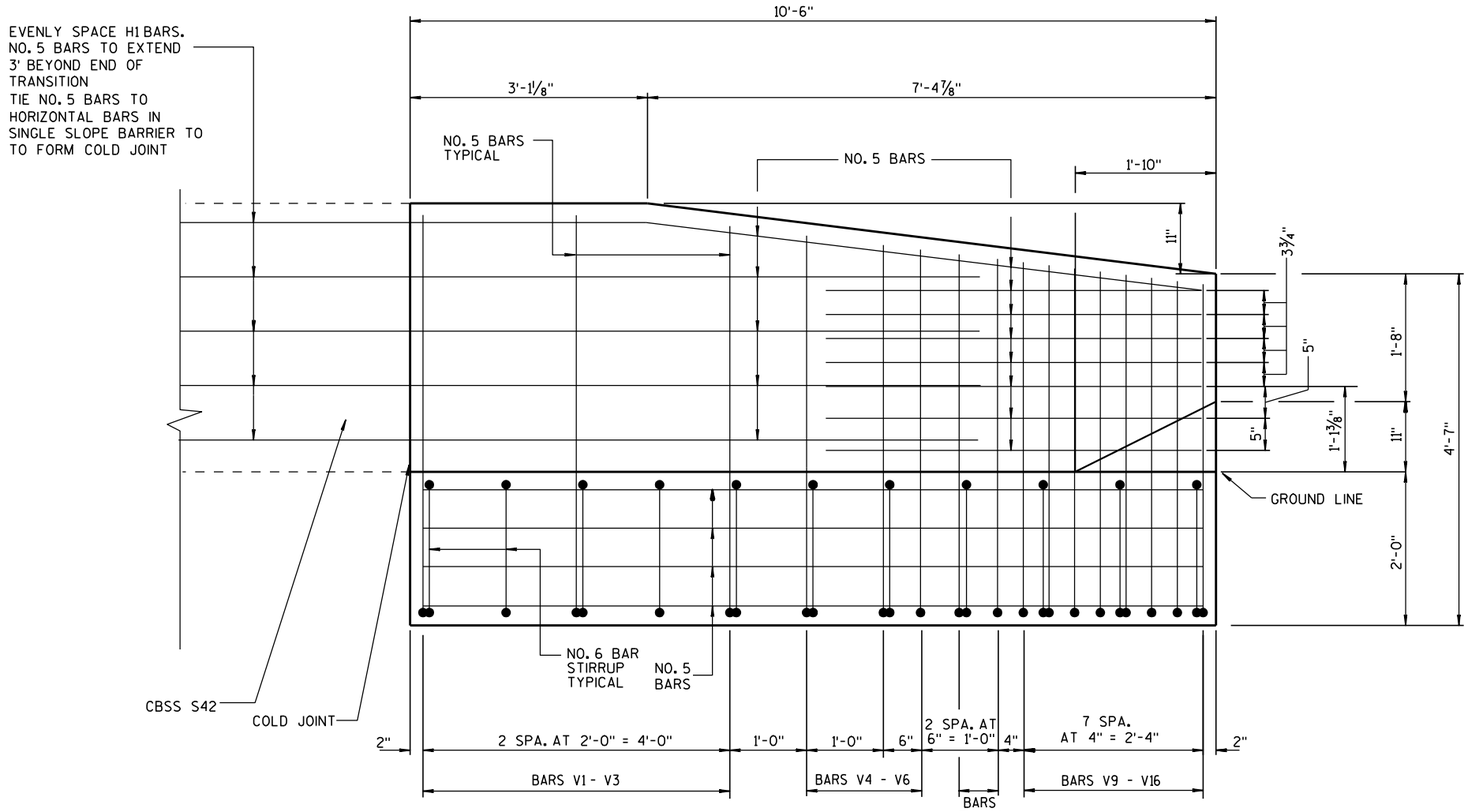
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

S.D.D. 14 B 29-1

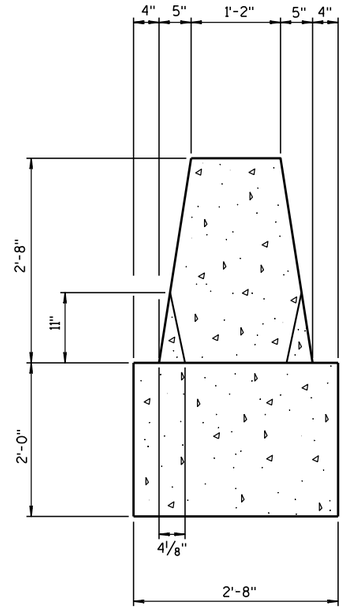


SECTION A-A

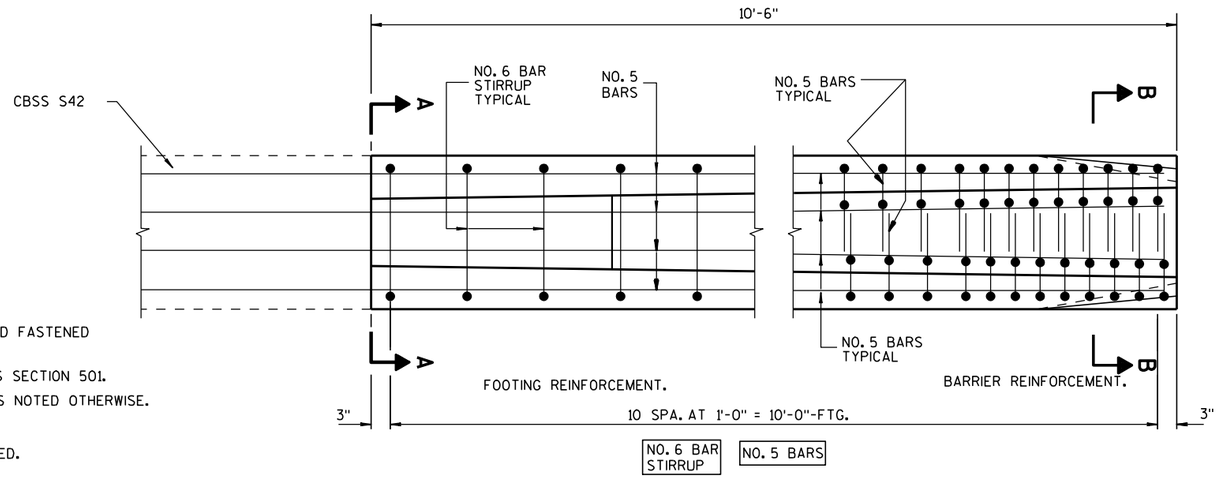


SEE SECTIONS ① THRU ⑯

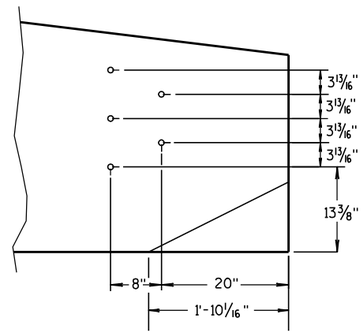
ELEVATION VIEW



SECTION B-B



PLAN VIEW



PVC PIPE LOCATIONS

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE of BARRIER.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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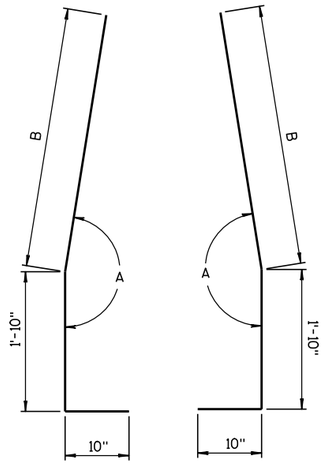
S.D.D. 14 B 33-1g

BAR CHART
SECTIONS V1 - V11

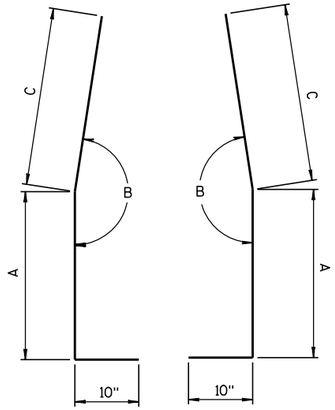
BAR	A	B
V1	170°-50'	3'-4½"
V2	171°-20'	3'-4½"
V3	171°-30'	3'-2½"
V4	171°-25'	3'-1½"
V5	171°-15'	3'-0"
V6	171°-15'	2'-11"
V7	171°-20'	2'-10½"
V8	171°-10'	2'-9½"
V9	171°-10'	2'-9"
V10	171°-05'	2'-8½"
V11	171°-10'	2'-8"



BAR BENDING DETAIL
FOR BARS V1 - V11

BAR CHART
SECTIONS V12 - V13

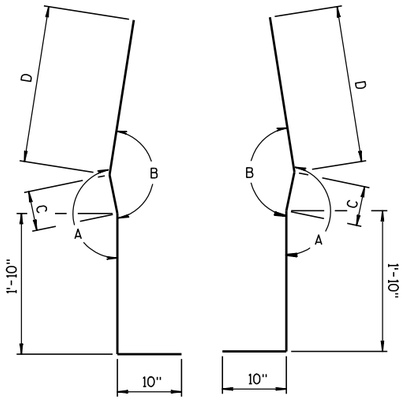
BAR	A	B	C
V12	2'-2"	171°-15'	2'-3½"
V13	2'-7"	171°-05'	1'-10"



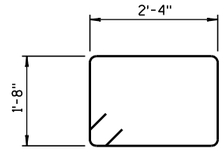
BAR BENDING DETAIL
FOR BARS V12 - V13

BAR CHART
SECTIONS V14 - V16

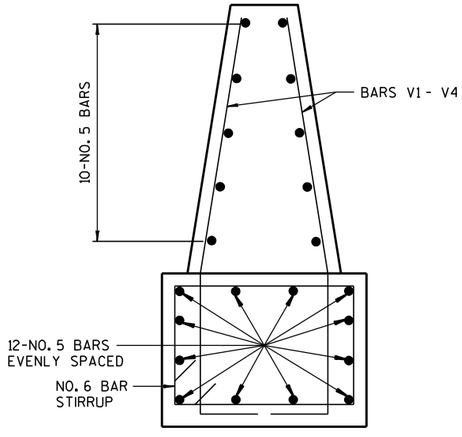
BAR	A	B	C	D
V14	168°-15'	159°-15'	6"	2'-0"
V15	169°-20'	161°-00'	8"	1'-10"
V16	168°-40'	160°-10'	10"	1'-8"



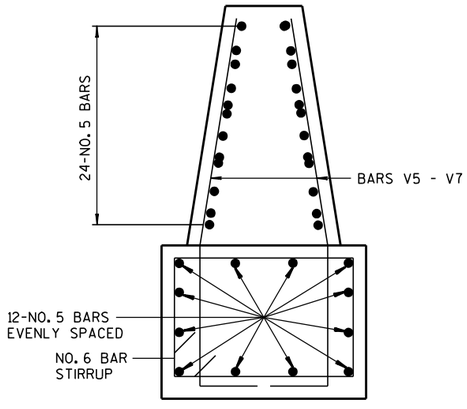
BAR BENDING DETAIL
FOR BARS V14 - V16



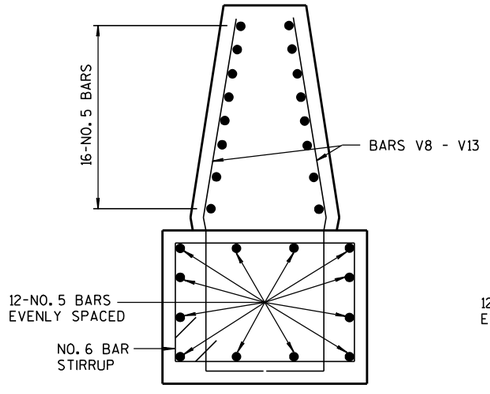
STIRRUP BAR
BENDING DETAIL



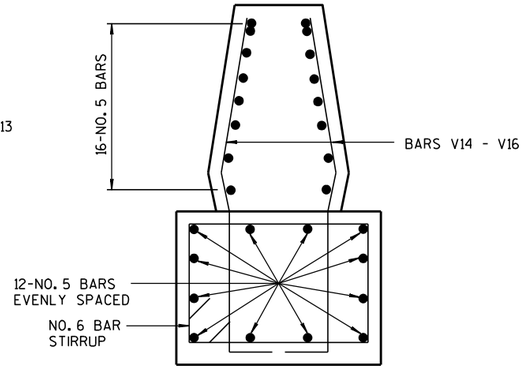
BAR DETAIL
SECTIONS V1 - V4



BAR DETAIL
SECTIONS V5 - V7



BAR DETAIL
SECTIONS V8 - V13



BAR DETAIL
SECTIONS V14 - V16

CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

/S/ Jerry H. Z---
ROADWAY STANDARDS ENGINEER

FHWA

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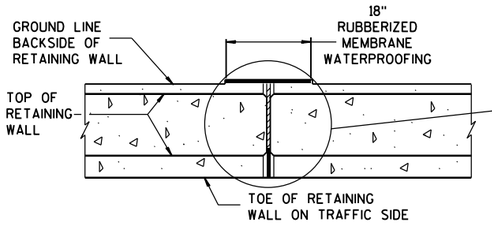
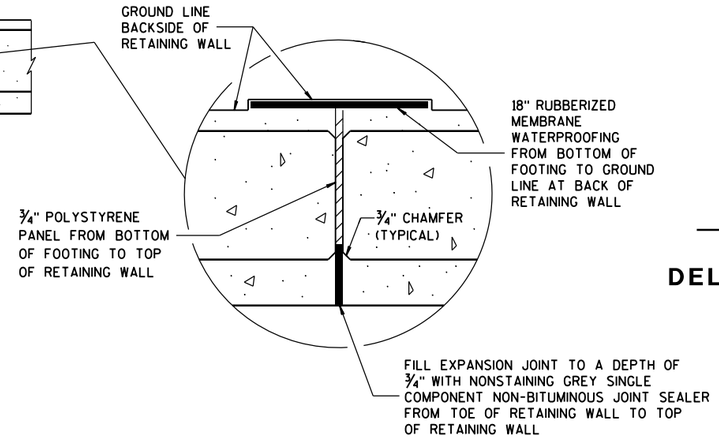
S.D.D. 14 B 33-1h

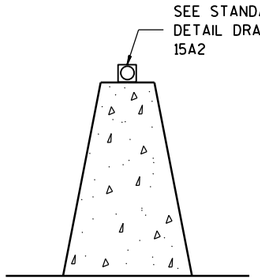
6

S.D.D. 14 B 33-1h



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.

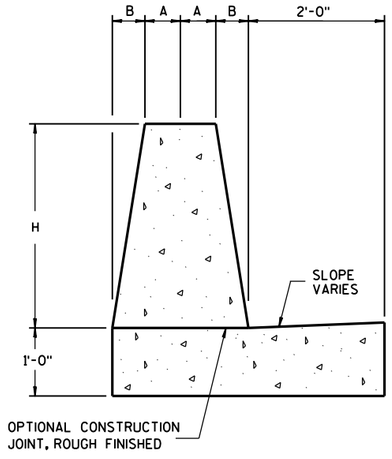
NO HORIZONTAL STEEL CROSSES EXPANSION JOINTS.

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.

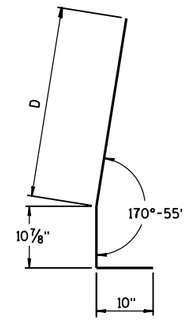
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR.



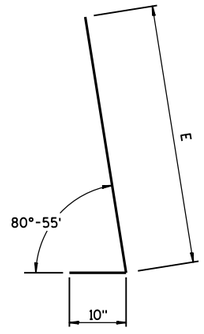
ROADSIDE RETAINING WALL

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



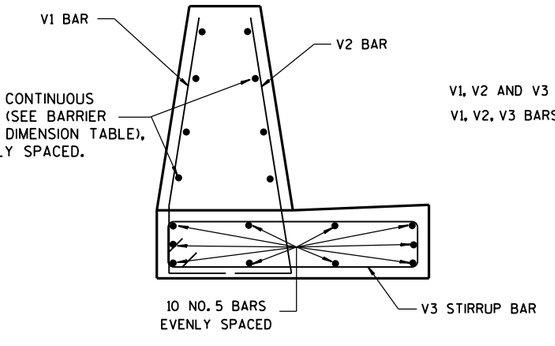
V2 BAR BENDING DETAIL

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

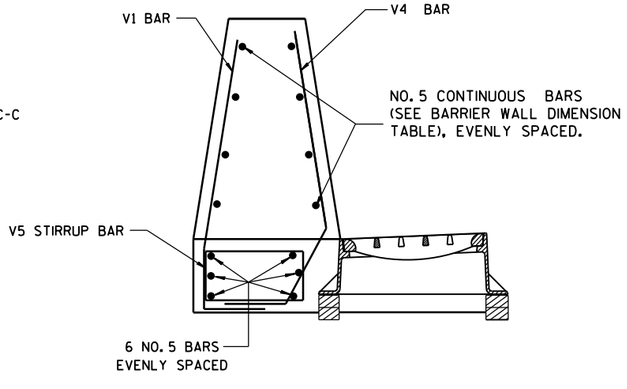
BAR CHART ROADSIDE RETAINING WALL

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"

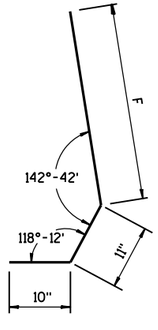


V1, V2 AND V3 ARE SPACED 18" C-C
V1, V2, V3 BARS ARE NO. 5 BARS

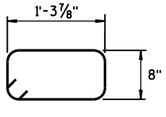
ROADSIDE RETAINING WALL NORMAL BAR PLACEMENT



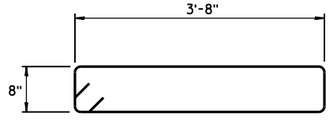
ROADSIDE RETAINING WALL BAR PLACEMENT NEAR INLET



V4 BAR BENDING DETAIL



V5 STIRRUP BAR BENDING DETAIL

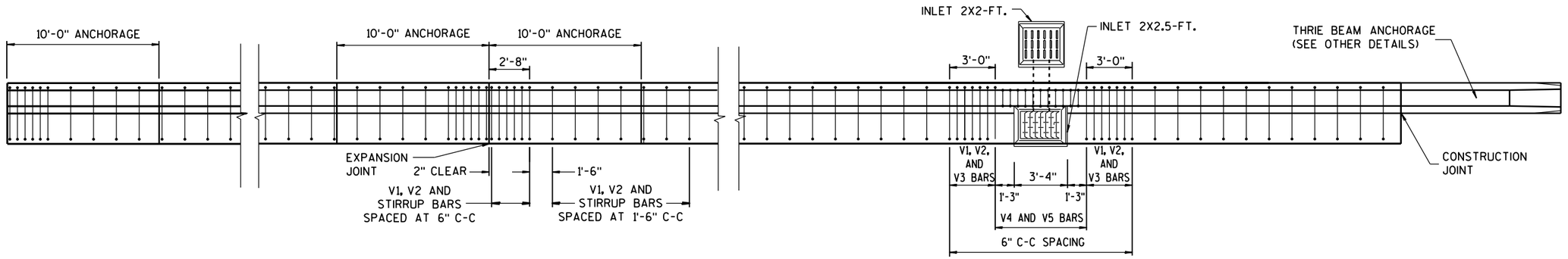


V3 STIRRUP BAR BENDING DETAIL

SINGLE SLOPE ROADSIDE RETAINING WALL

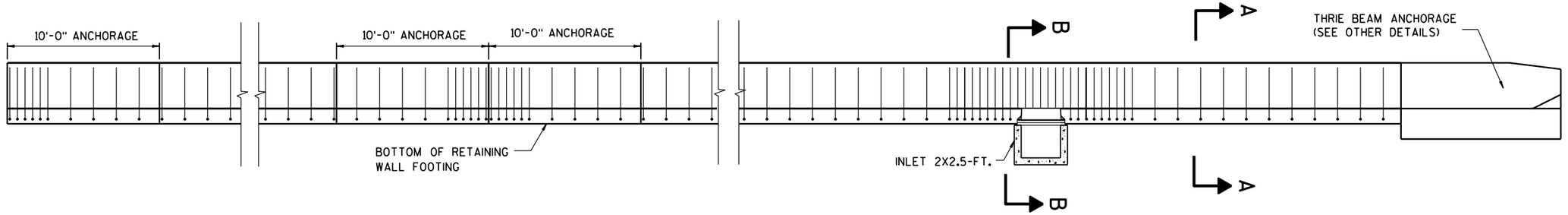
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 41-2a



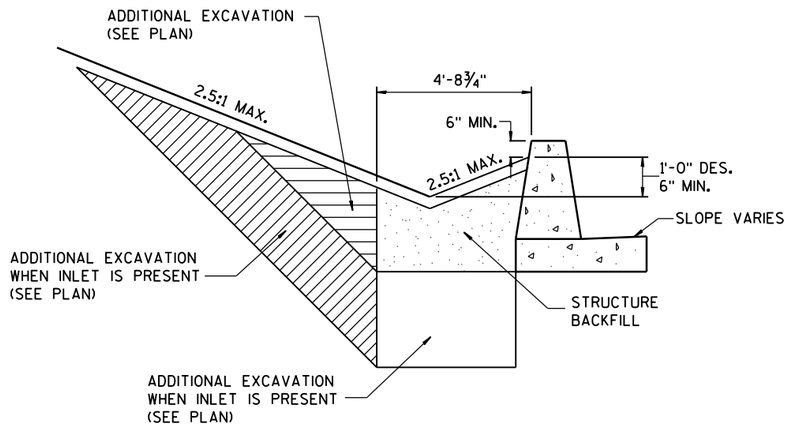
PLAN VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

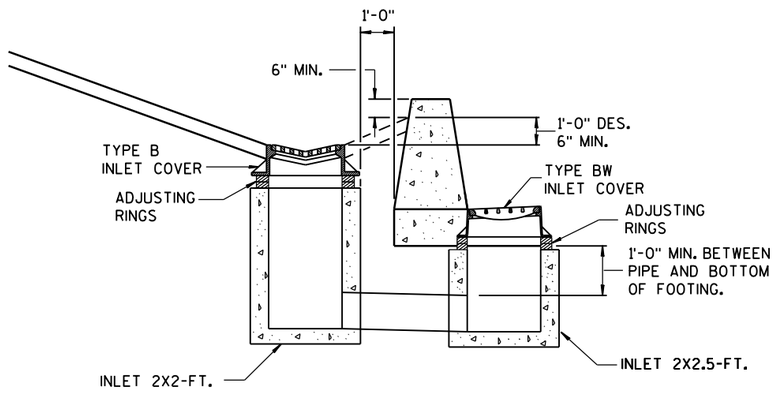


ELEVATION VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

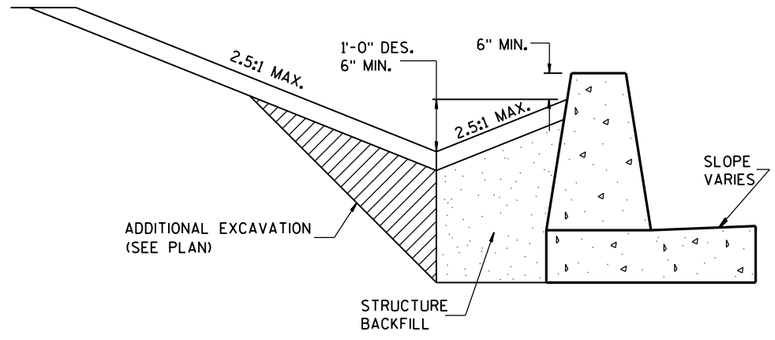


SECTION A-A



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

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① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

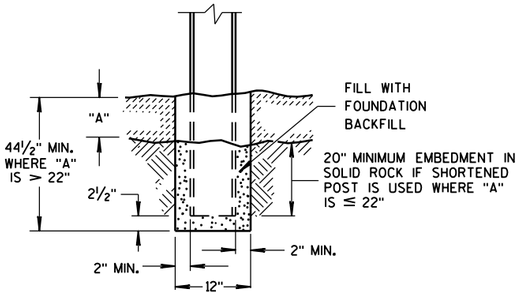
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

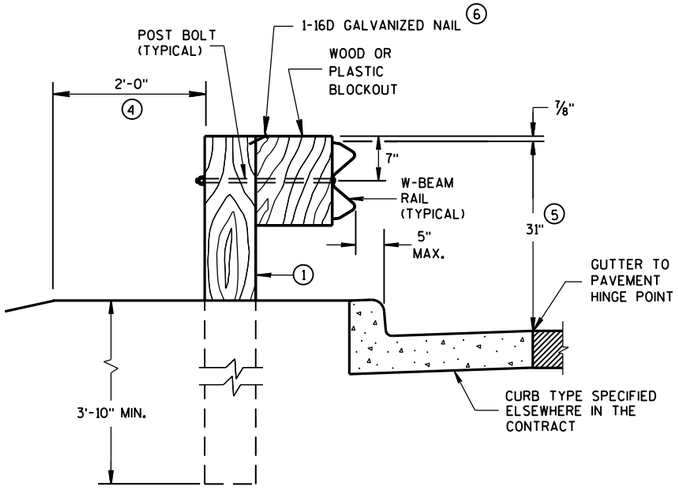
④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

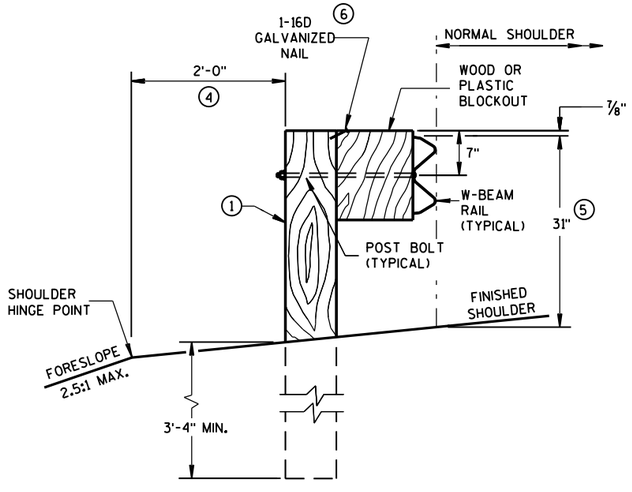
⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



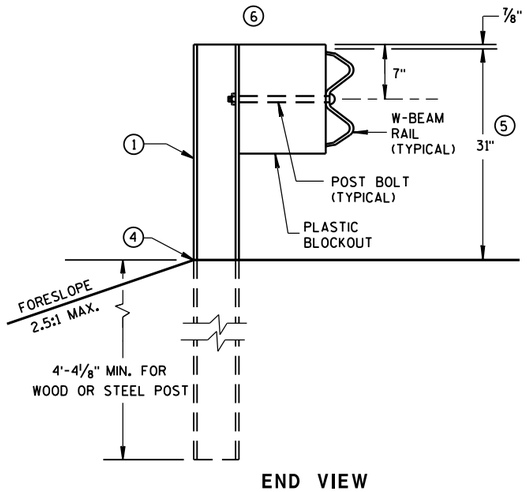
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



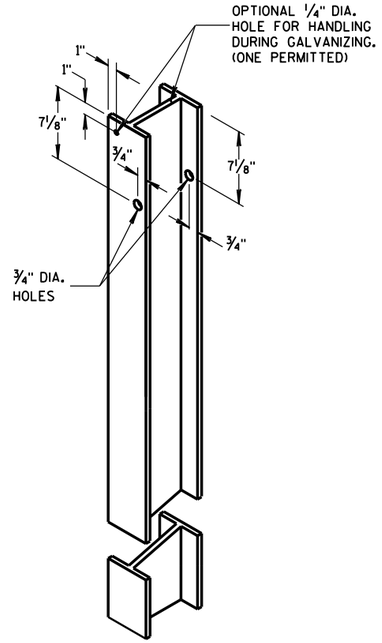
END VIEW
LOCATED ALONG A CURBED ROADWAY



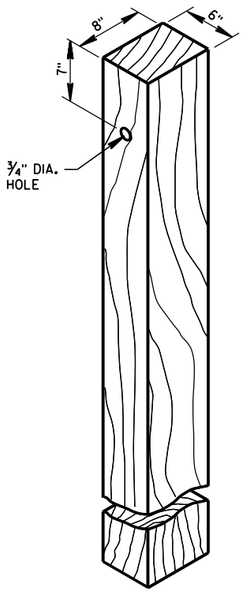
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



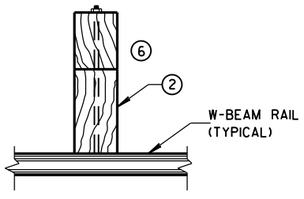
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



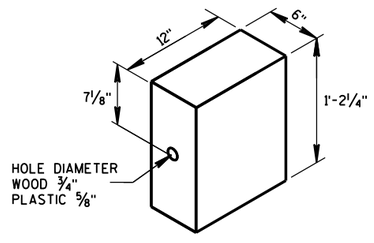
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



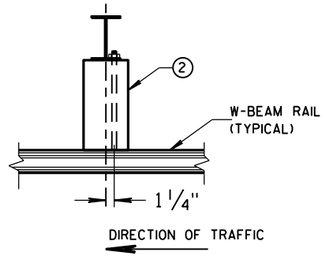
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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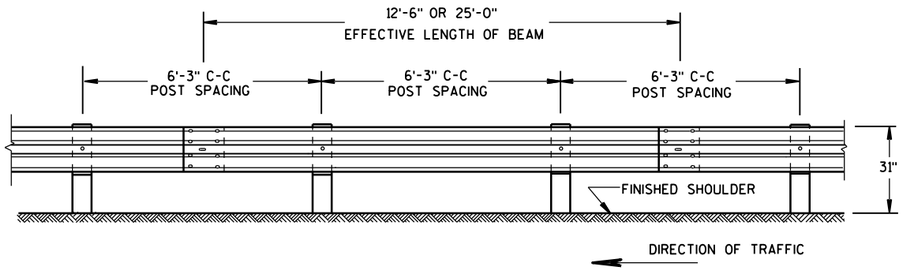
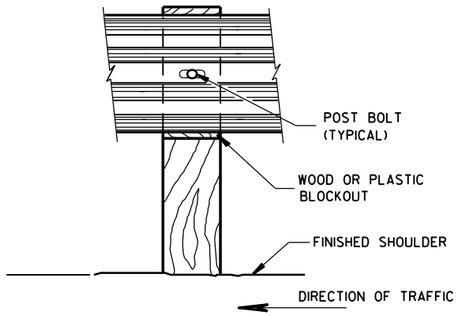


FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

7. PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

8. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

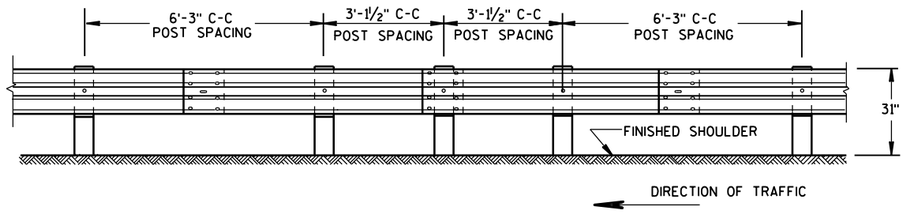
9. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

10. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

11. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

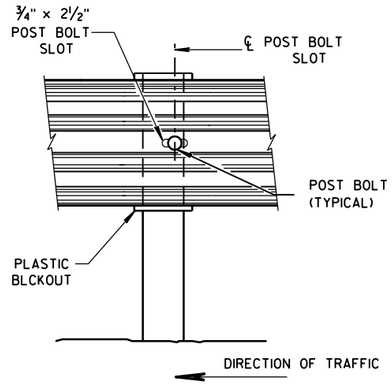
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

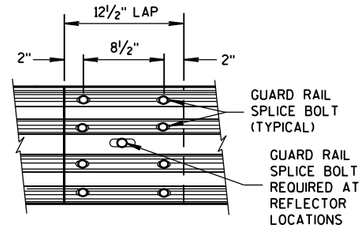


FRONT VIEW

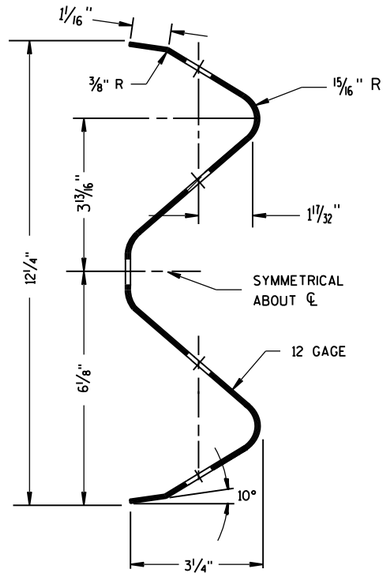
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



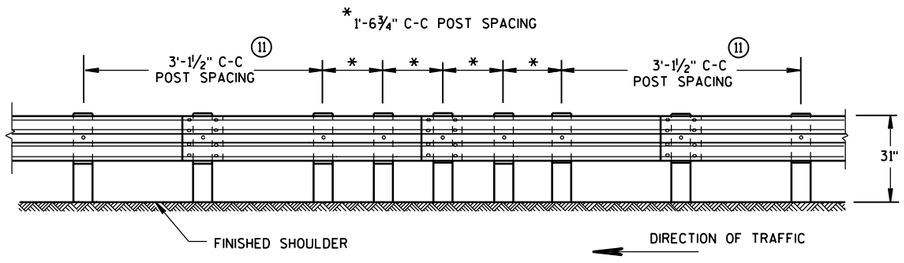
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

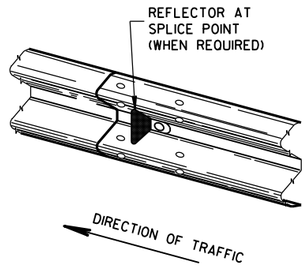


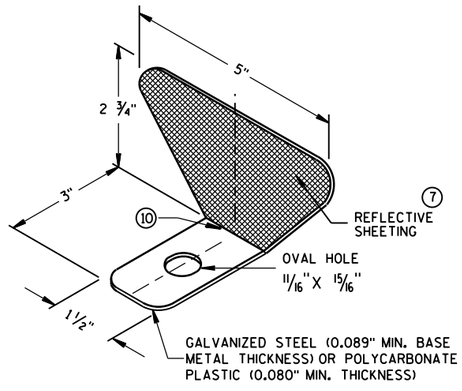
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





REFLECTOR SPACING 8

	BEAM GUARD LENGTH	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 9	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 10	

ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION 7

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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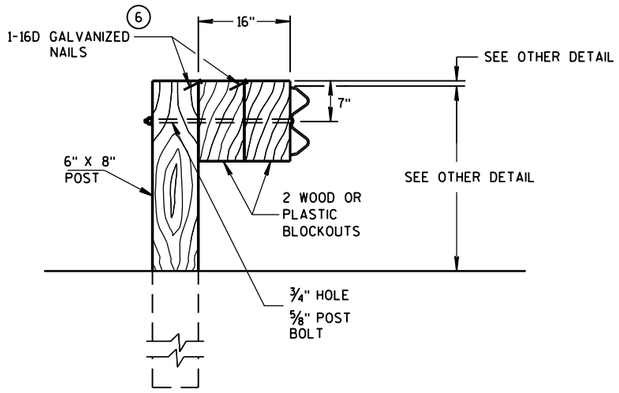
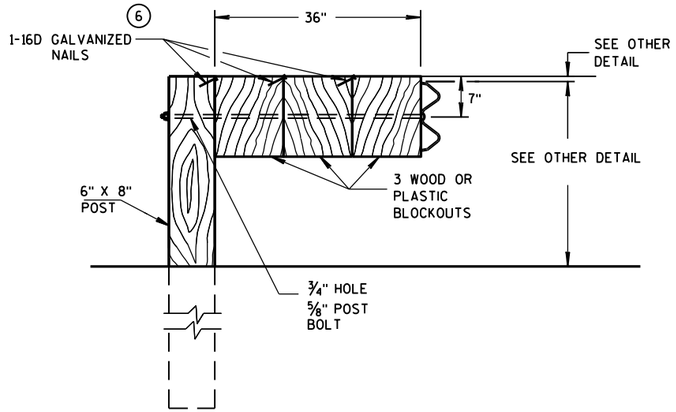
S.D.D. 14 B 42-4b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

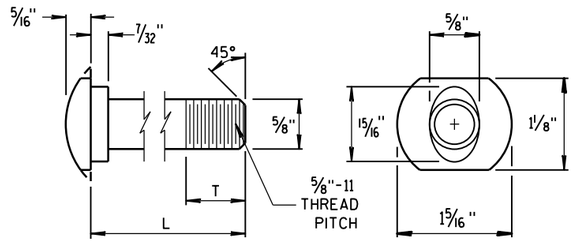


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

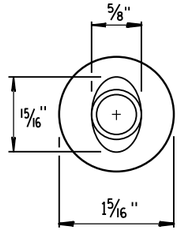
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

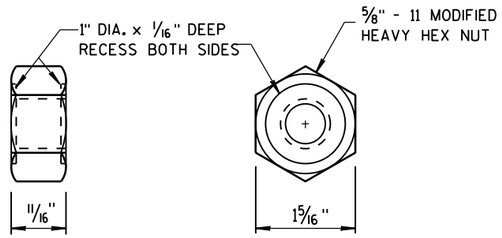


POST BOLT TABLE

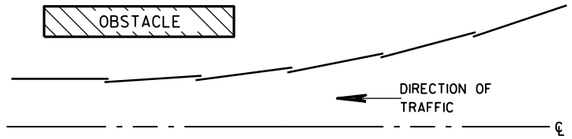
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

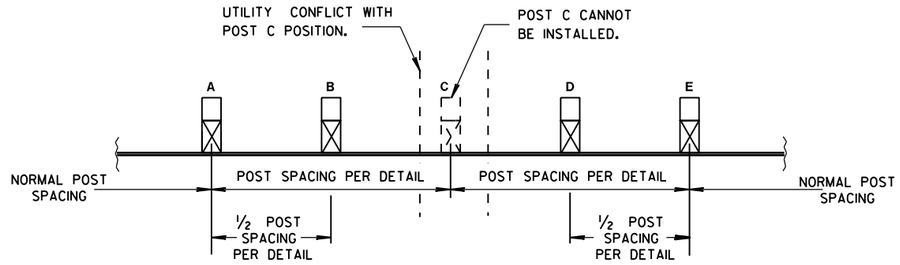


POST BOLT, SPLICE BOLT AND RECESS NUT

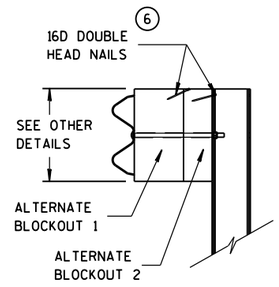


PLAN VIEW

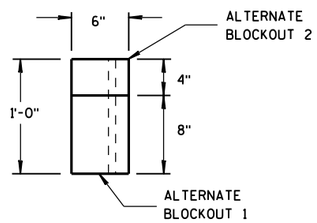
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 42-4c

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.

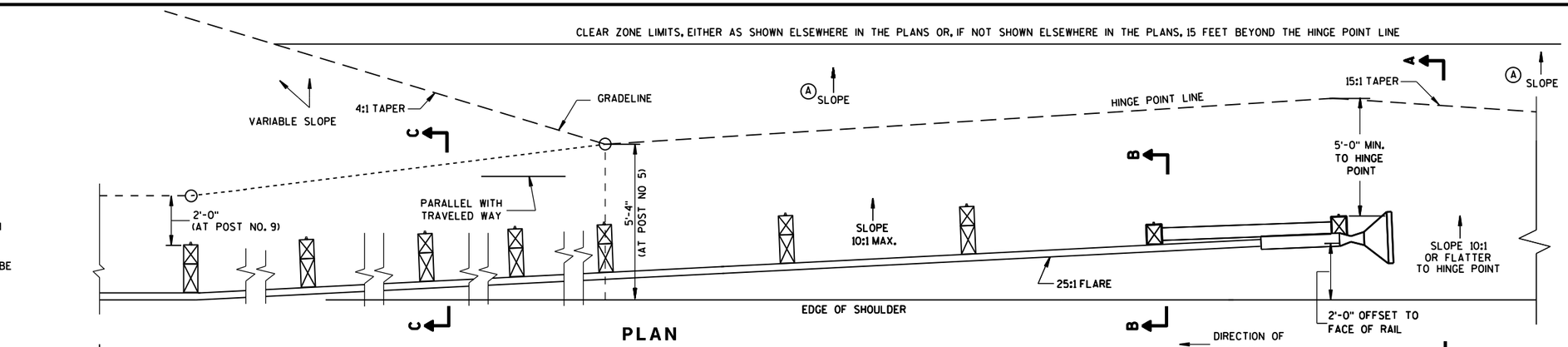
SEE SDD 14B42 FOR MORE INFORMATION.

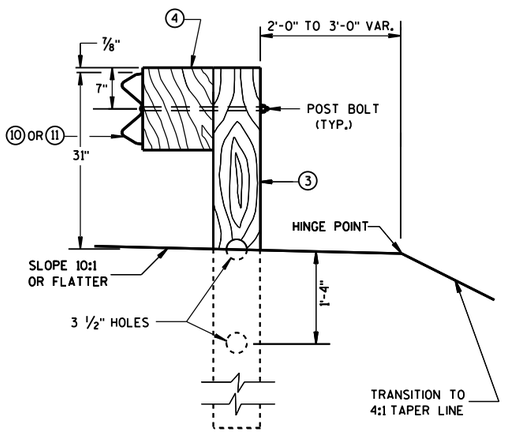
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

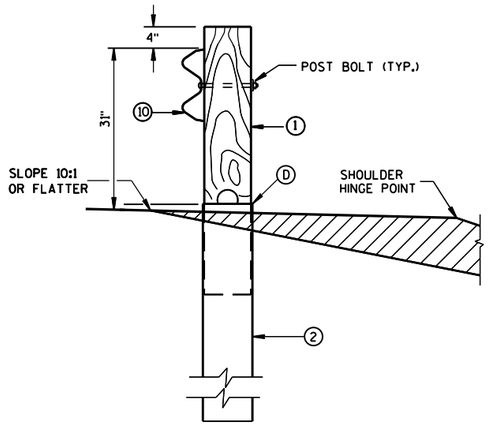
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

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.

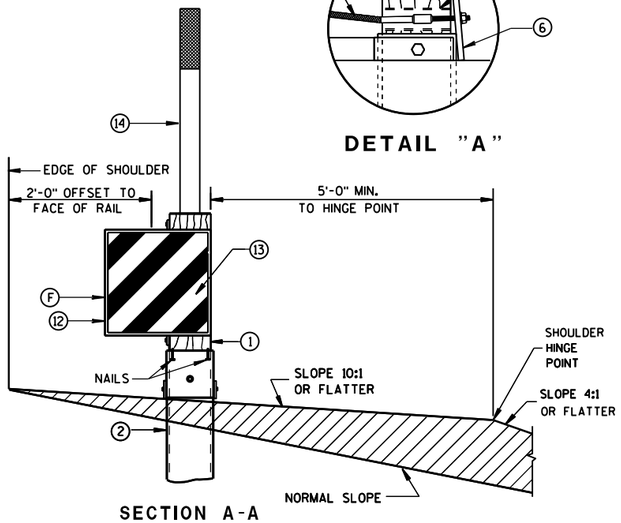




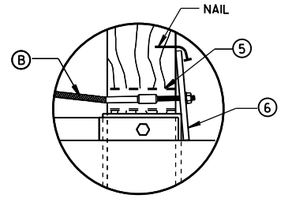
SECTION C-C
TYPICAL AT POST NOS. 3-9



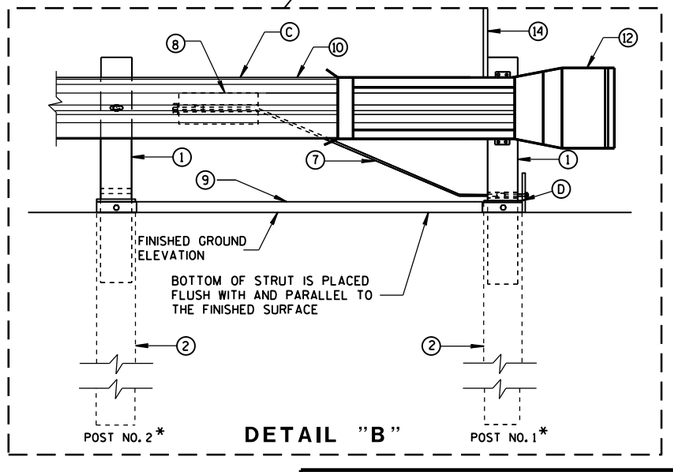
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



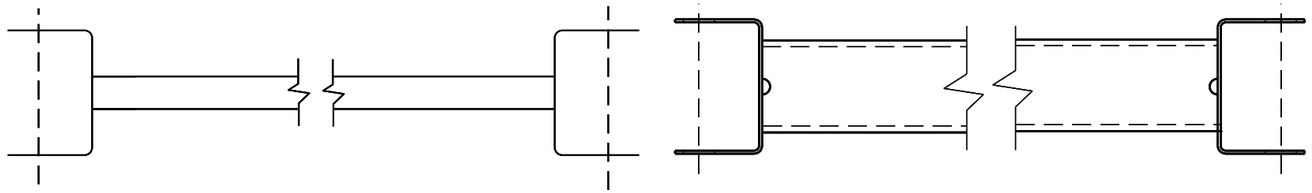
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

S.D.D. 14 B 44-2a

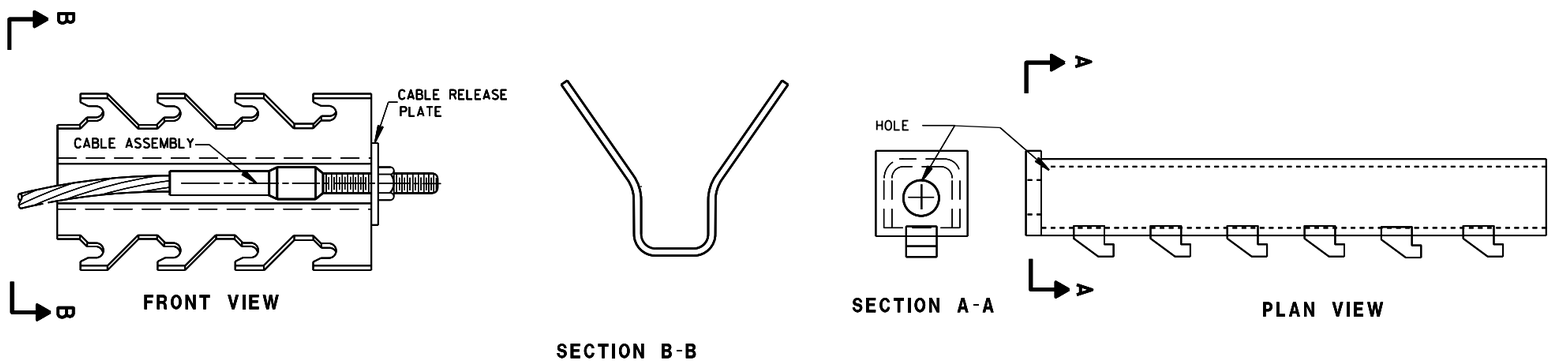
S.D.D. 14 B 44-2a



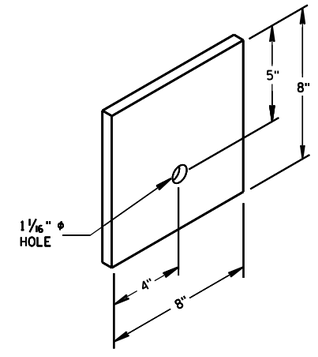
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX (8) (H)

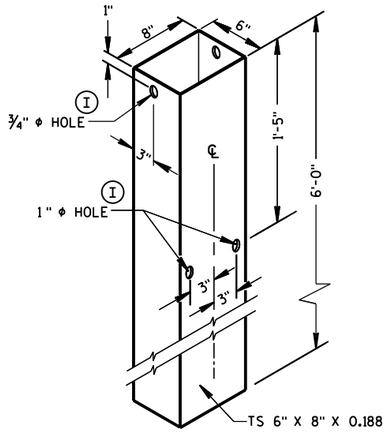


BEARING PLATE (6)

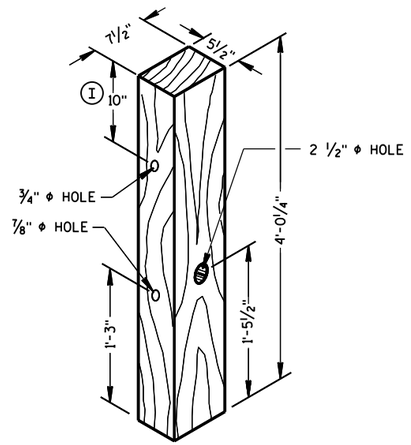
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 44-2b

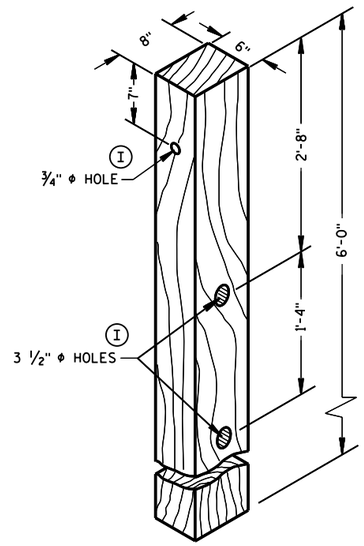


FOUNDATION TUBE (2)



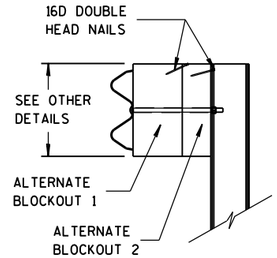
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

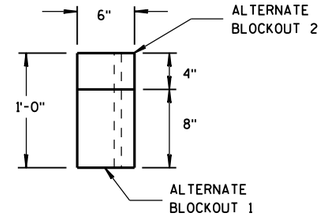


POSTS NUMBER 3-9

WOOD CRT POST (3)

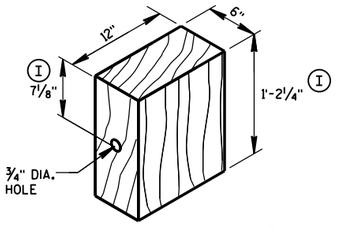


SIDE VIEW



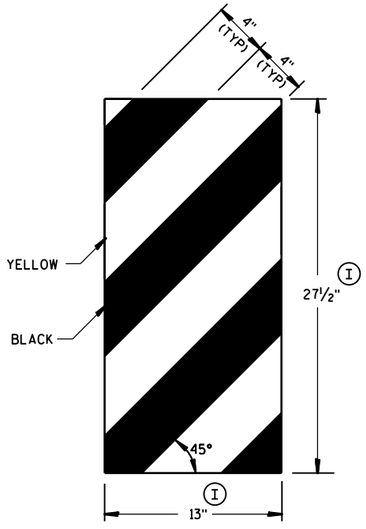
TOP VIEW

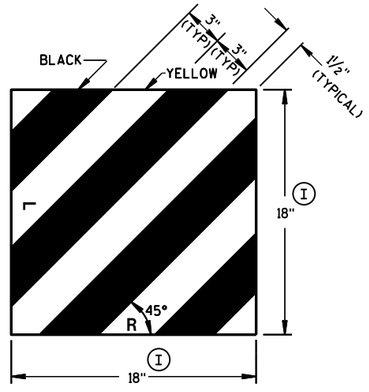
ALTERNATE WOOD BLOCKOUT DETAIL



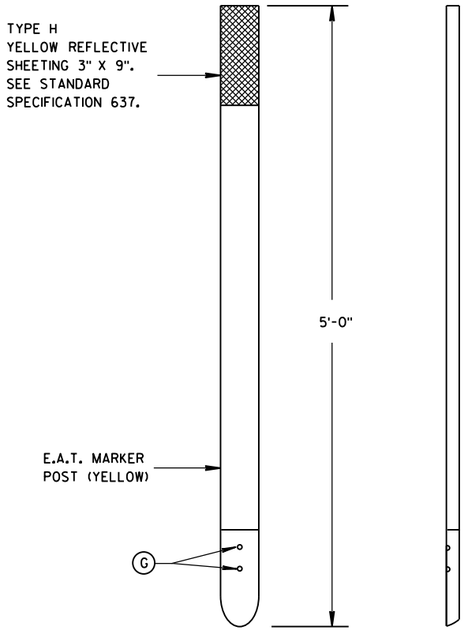
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





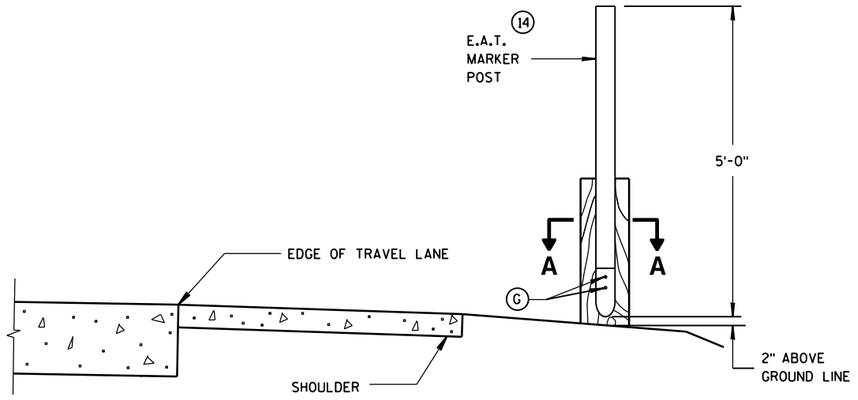
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

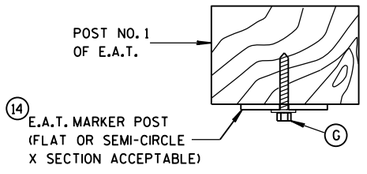
SIDE VIEW

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

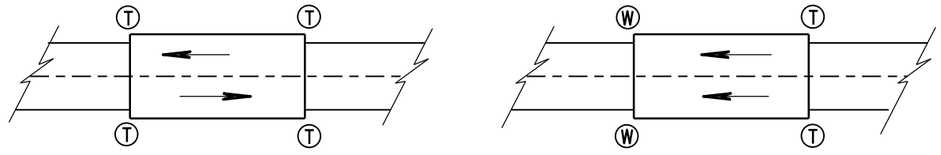
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-2c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

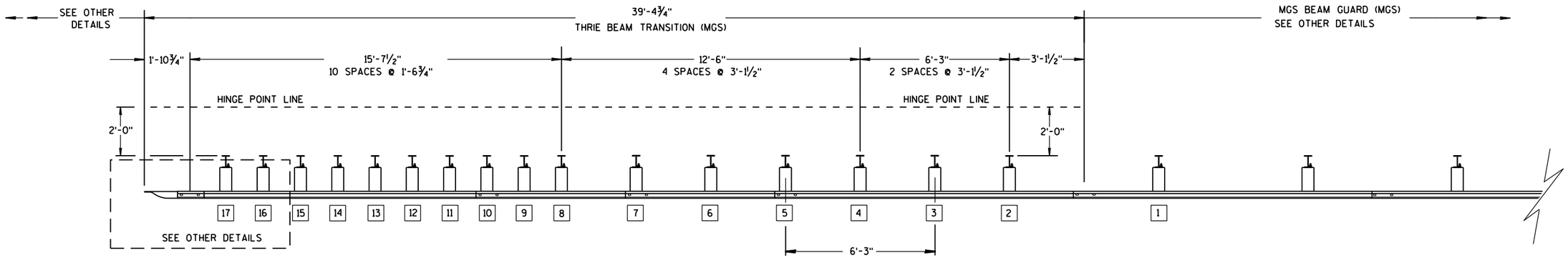
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

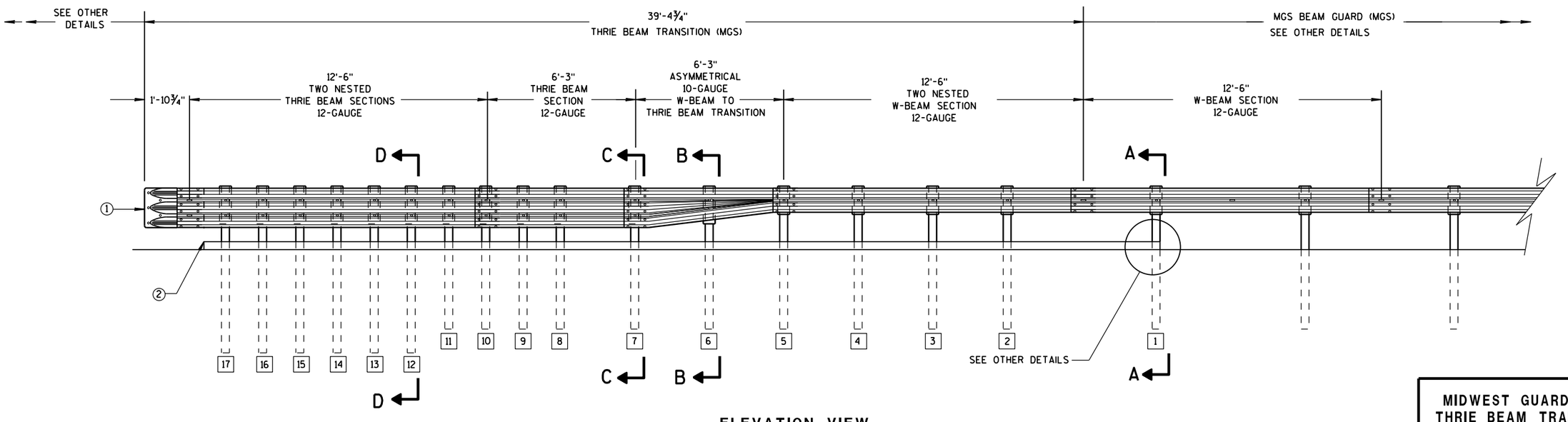
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-4a

6

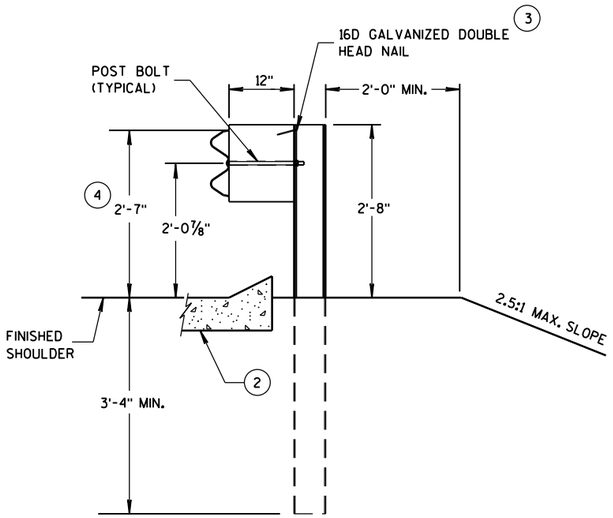
S.D.D. 14 B 45-4a

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

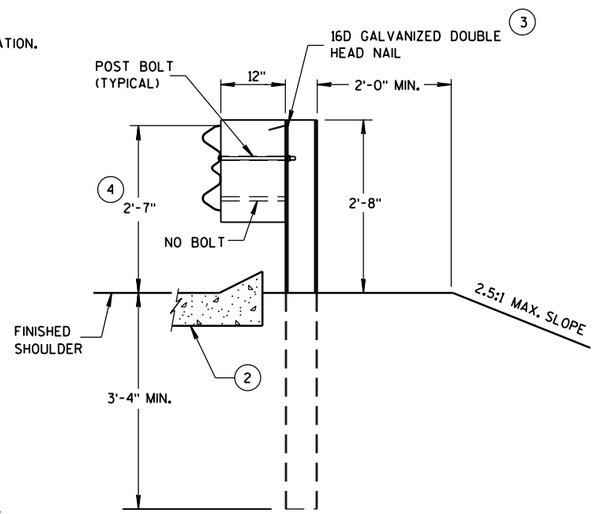
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



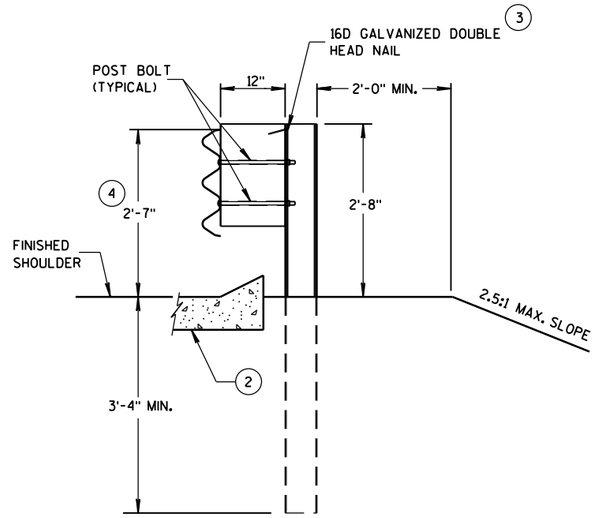
SECTION A-A

POSTS 1-5



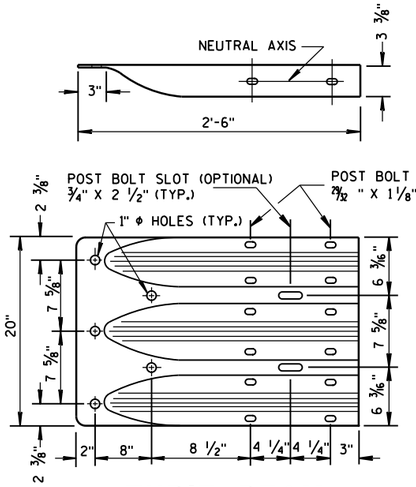
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

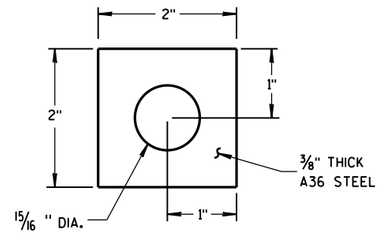
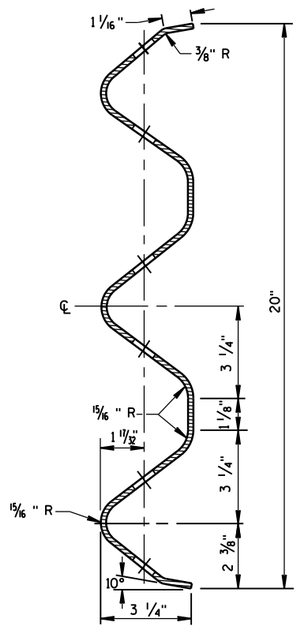
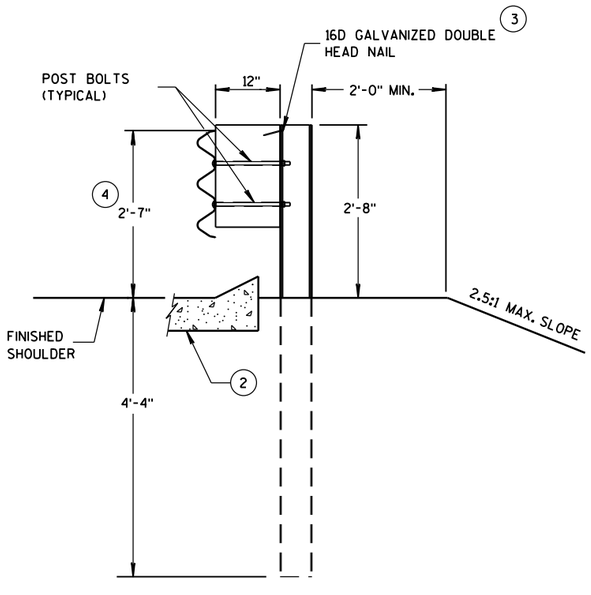


PLATE WASHER DETAIL

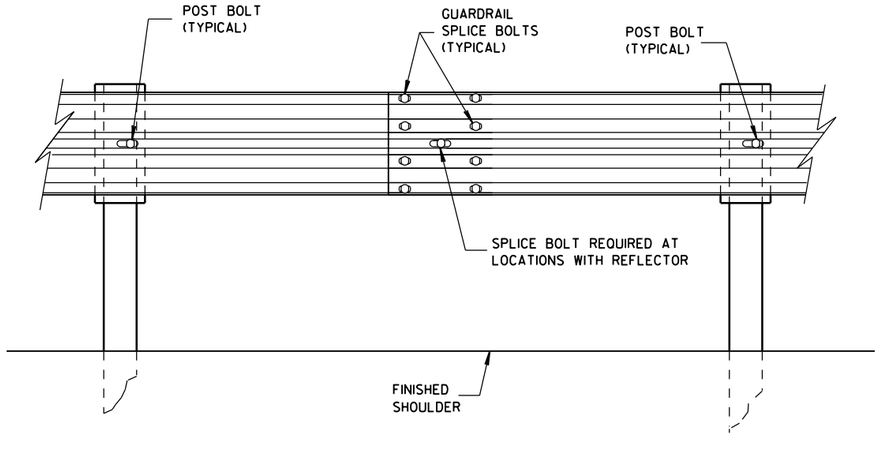


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



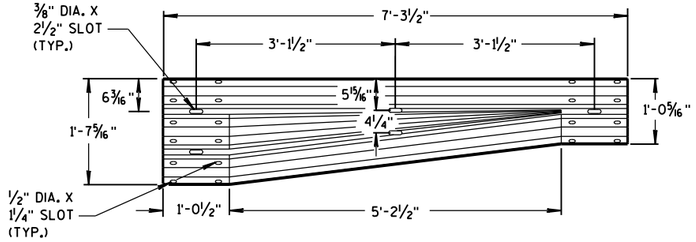
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

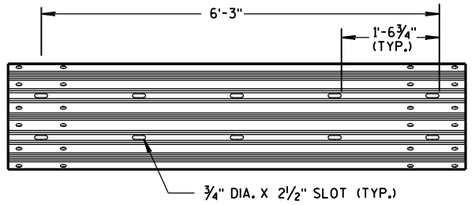
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

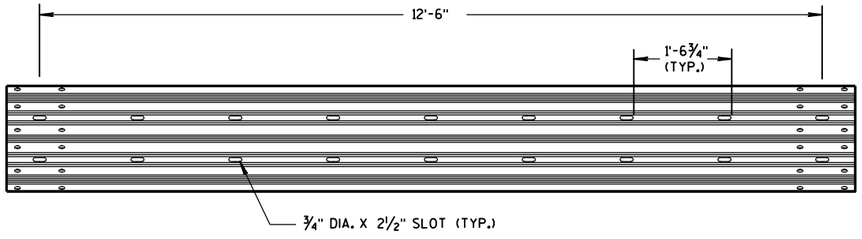
S.D.D. 14 B 45-4b



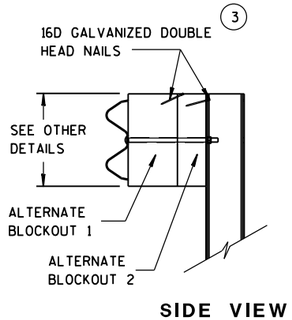
W-BEAM TO THRIE BEAM TRANSITION SECTION



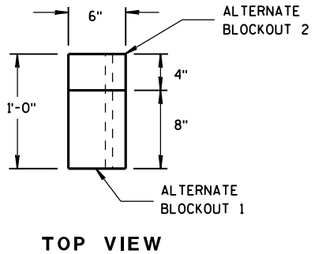
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

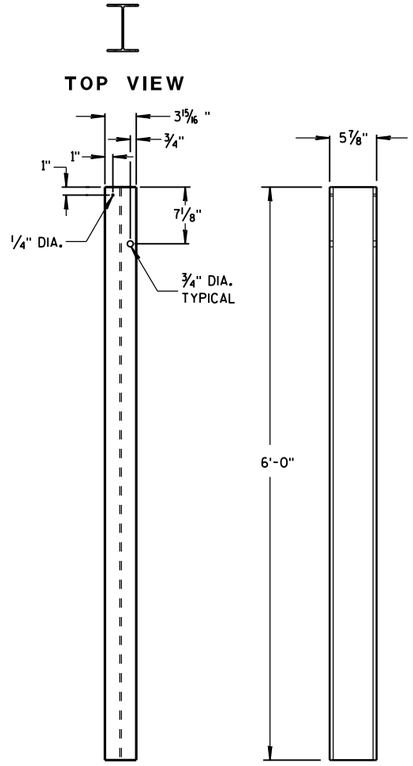


SIDE VIEW

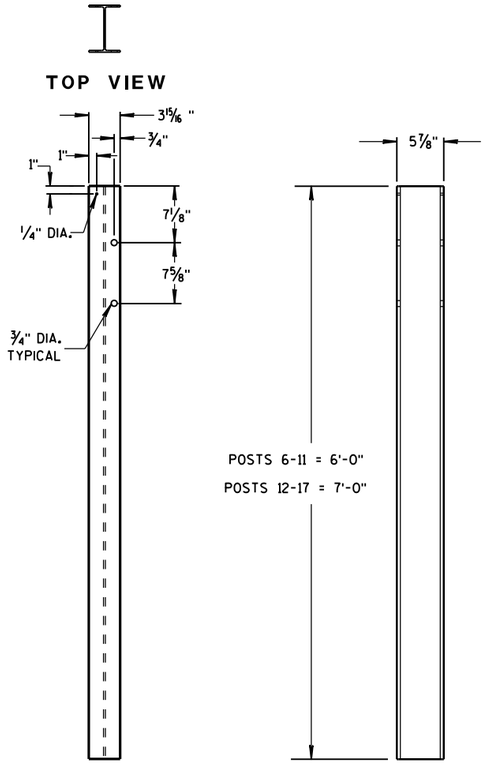


TOP VIEW

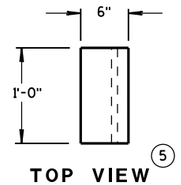
ALTERNATE WOOD BLOCKOUT DETAIL



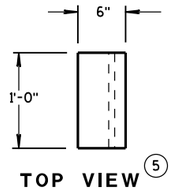
STEEL POSTS 1-5



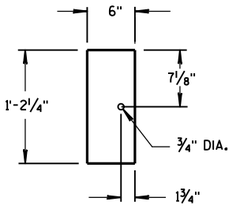
STEEL POSTS 6-17



TOP VIEW (5)

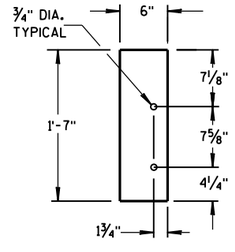


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

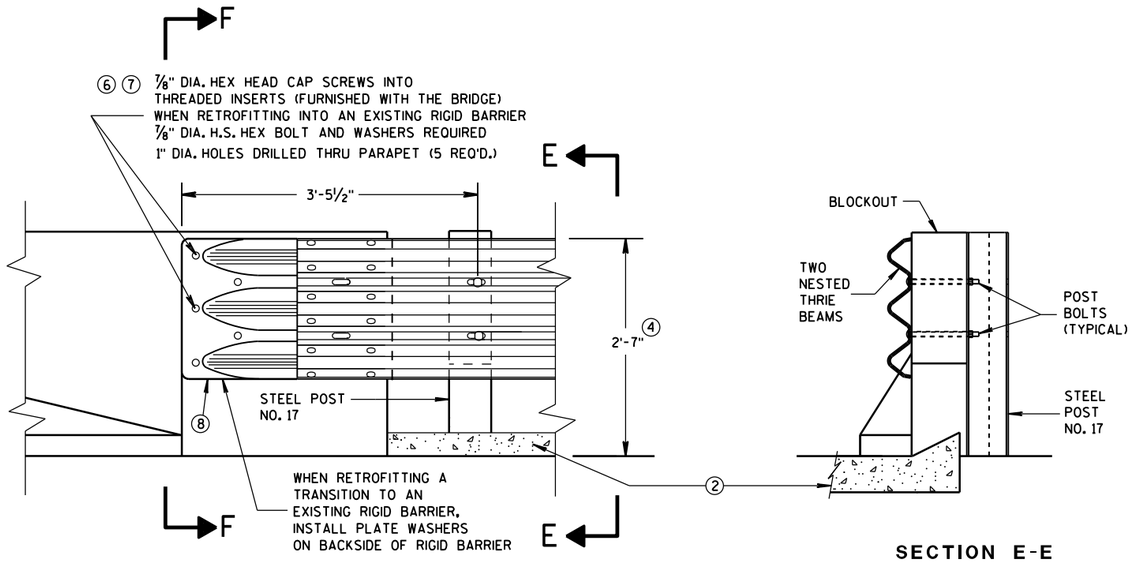
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-4c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

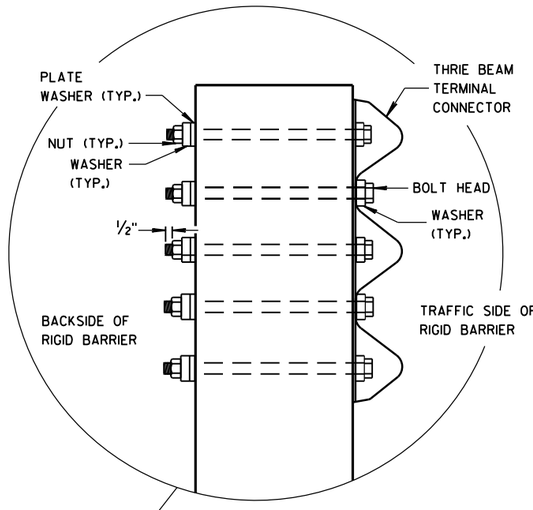
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

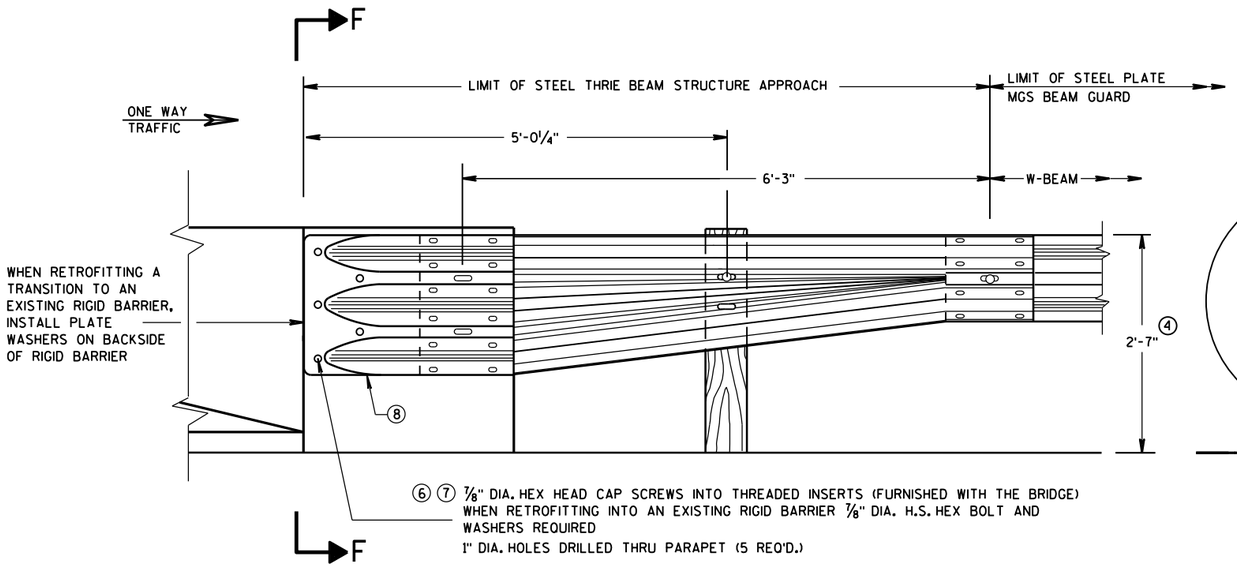
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

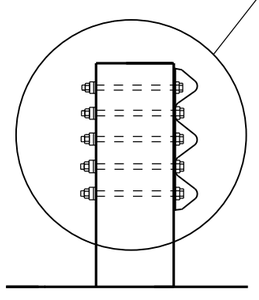
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

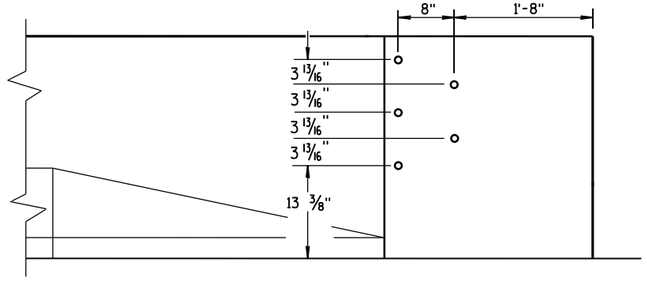




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 45-4d

6

S.D.D. 14 B 45-4d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

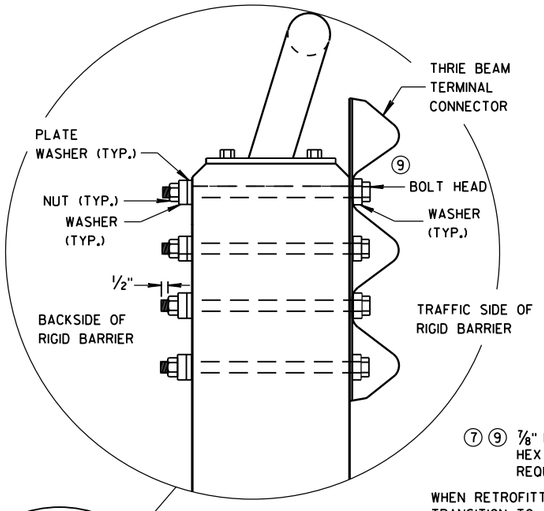
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

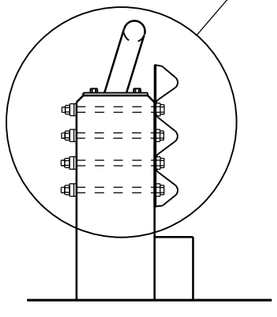
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

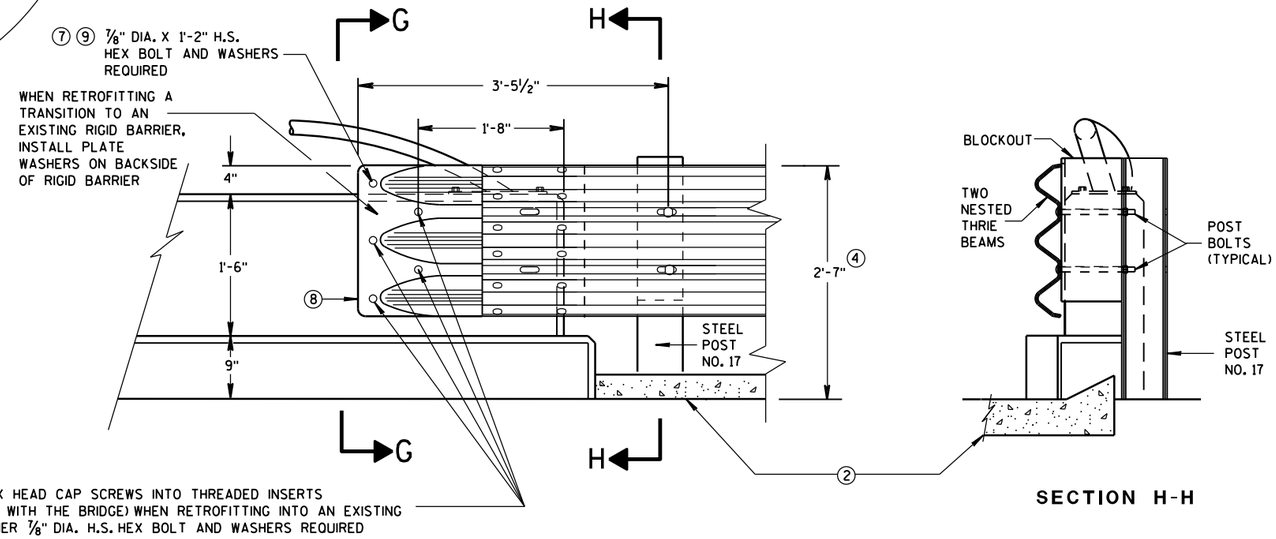
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





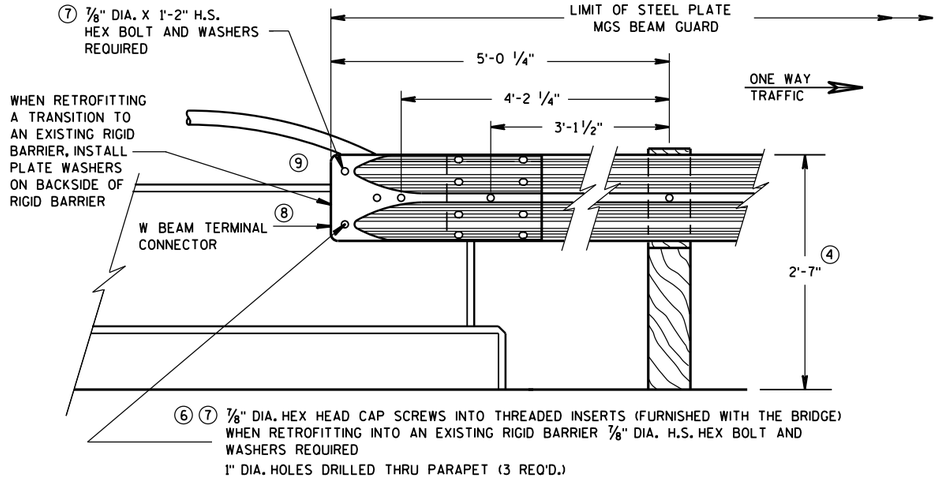
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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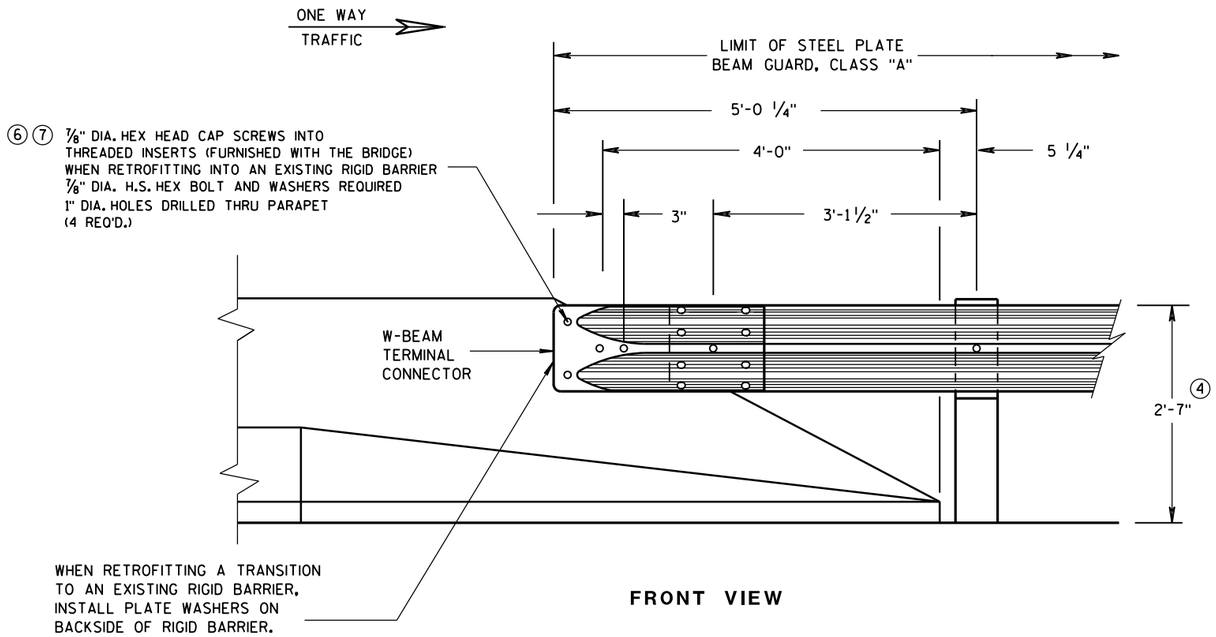


FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

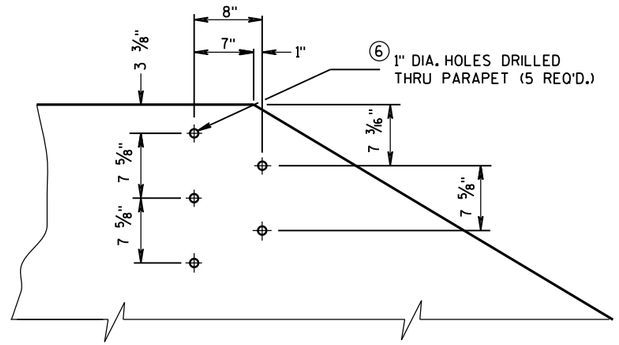
GENERAL NOTES

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

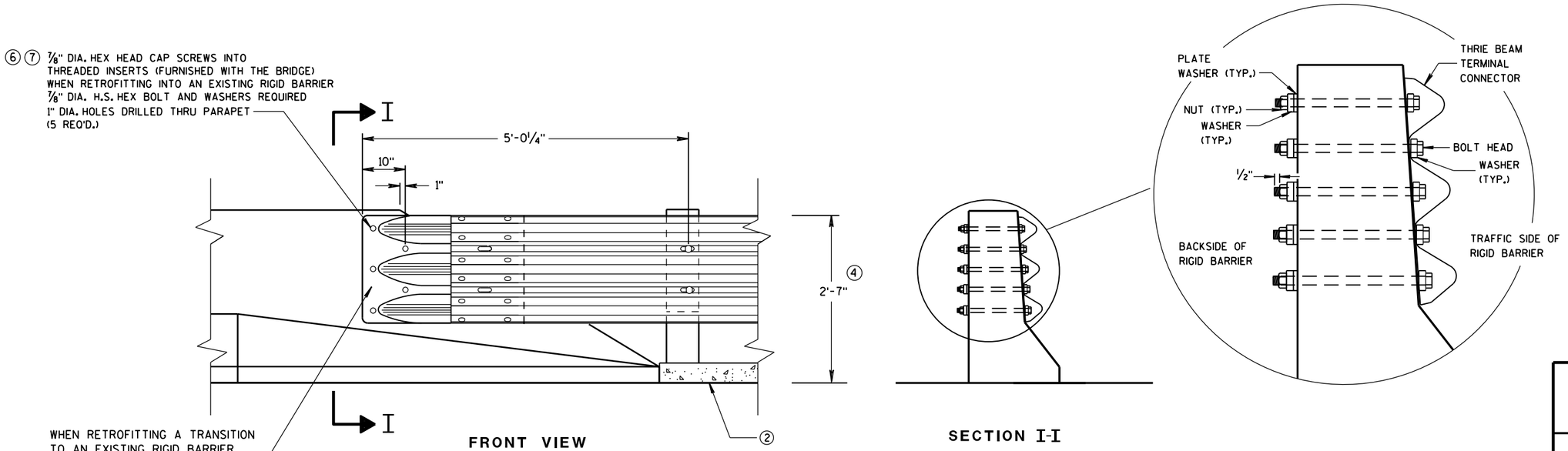
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW

SECTION I-I

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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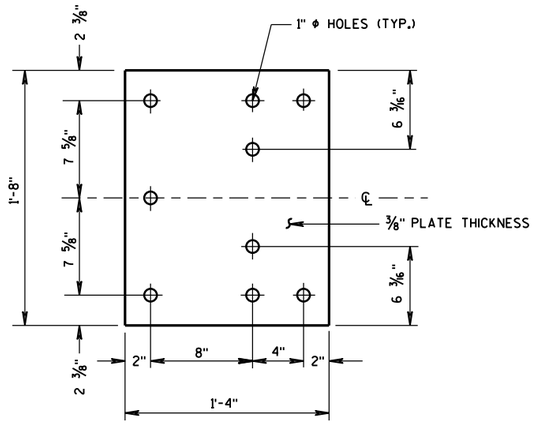
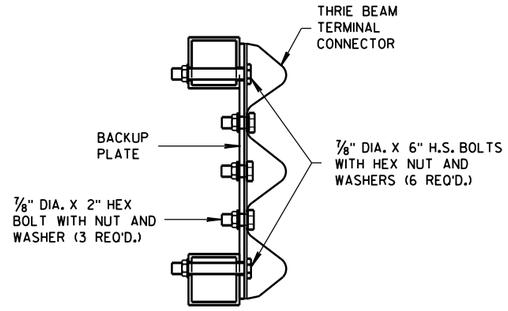
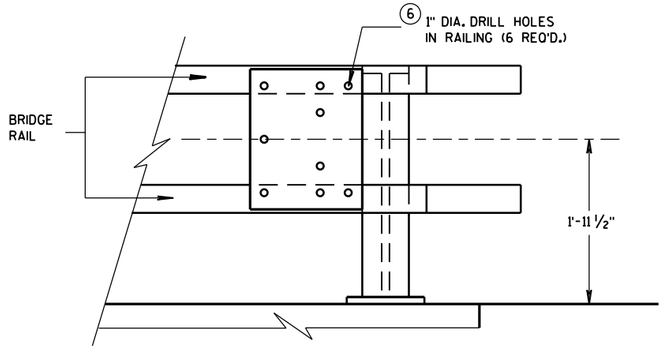


BACK-UP PLATE DETAIL



SECTION J-J

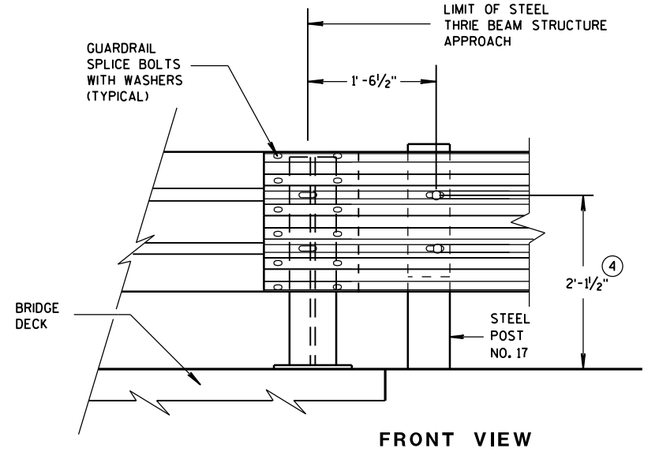


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

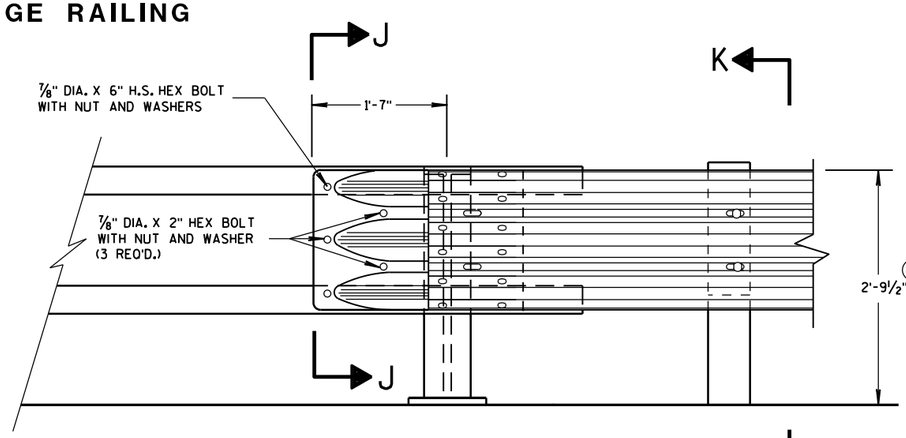
4 TOLERANCE FOR TOP OF BEAM IS ± 1".

6 DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

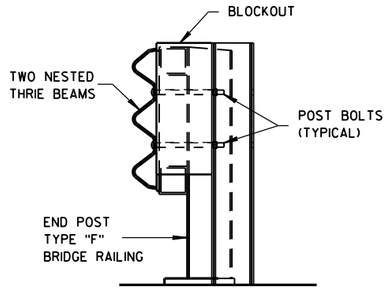


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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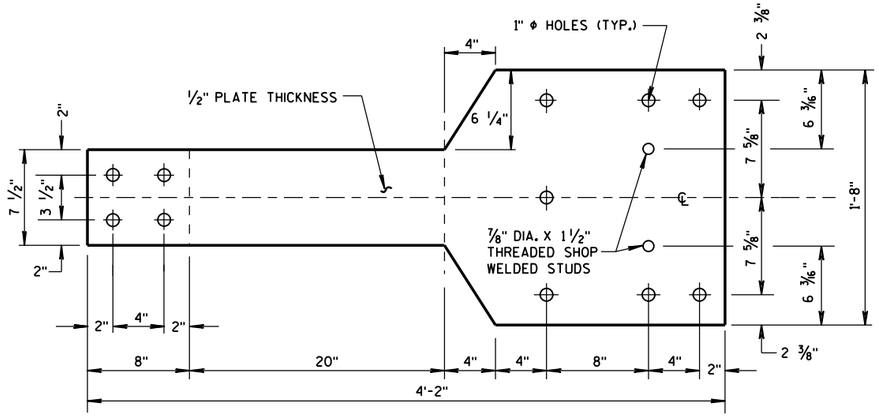
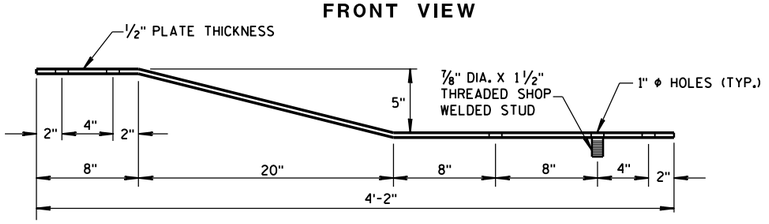
GENERAL NOTES

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

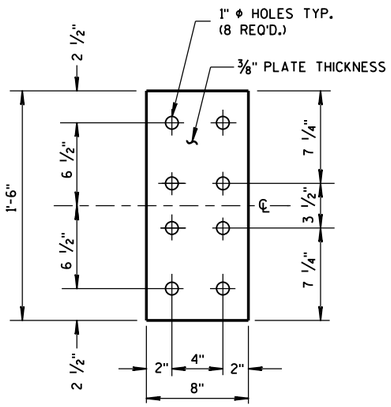


FRONT VIEW



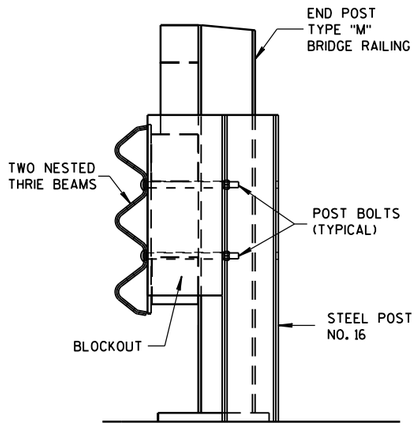
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

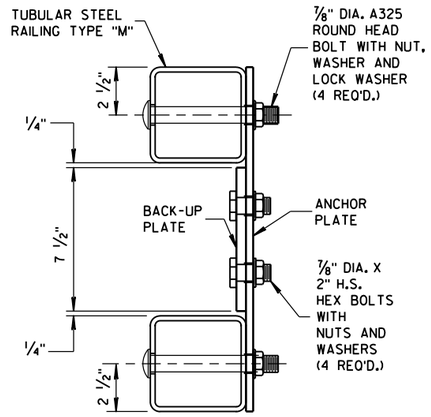


FRONT VIEW

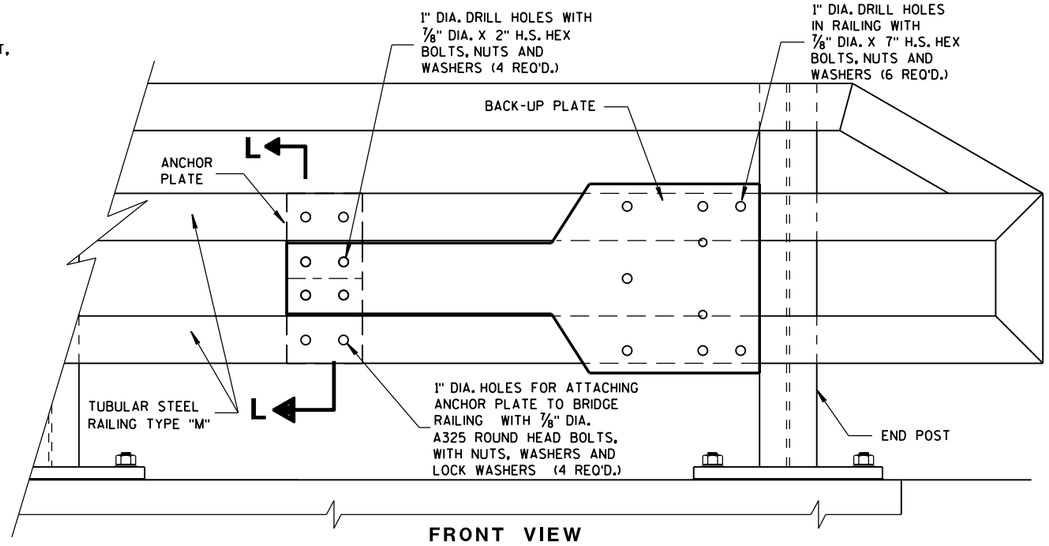
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

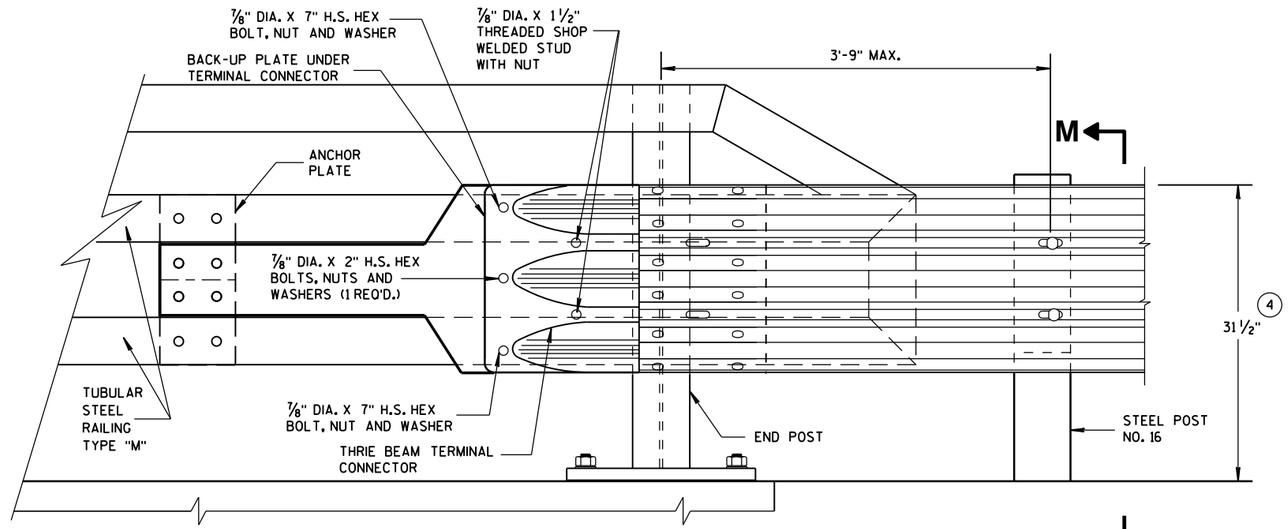


SECTION L-L

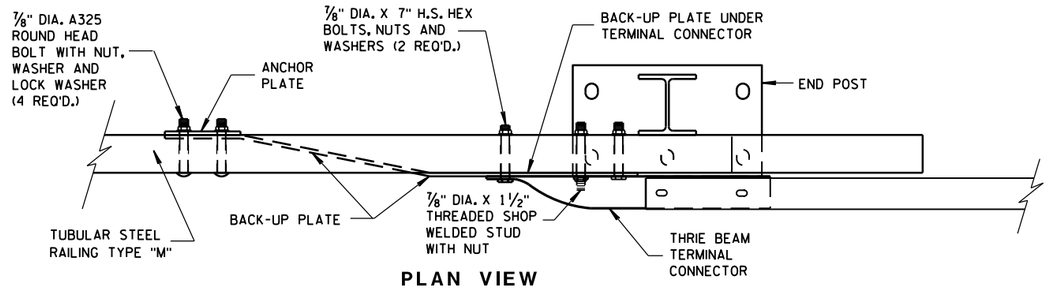


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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June, 2015 — DATE
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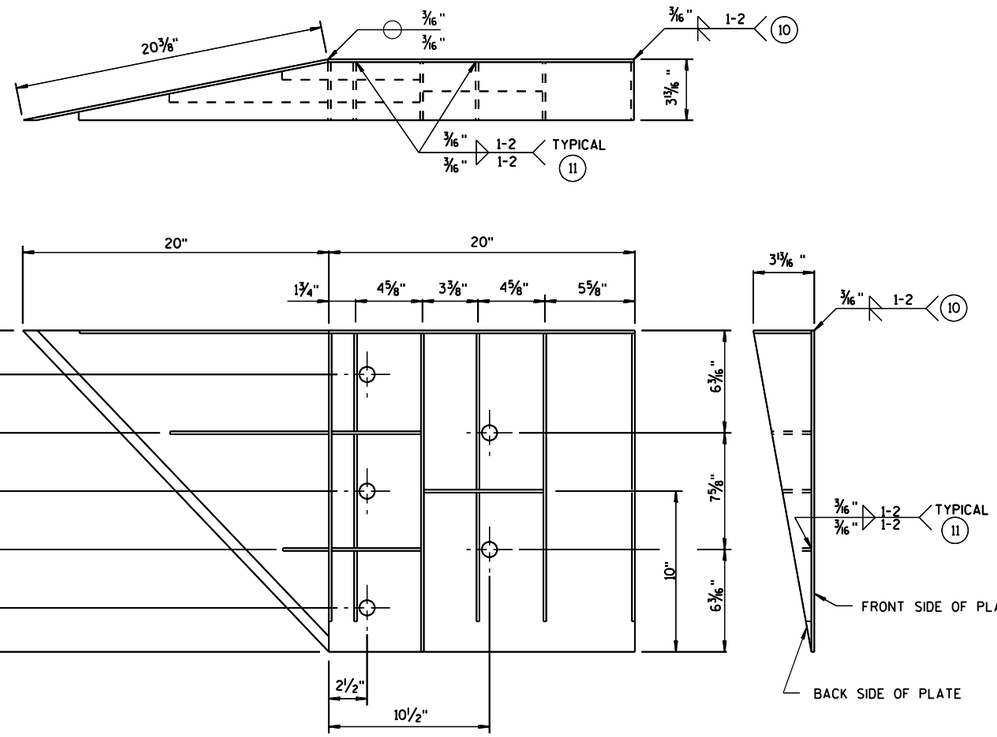

WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

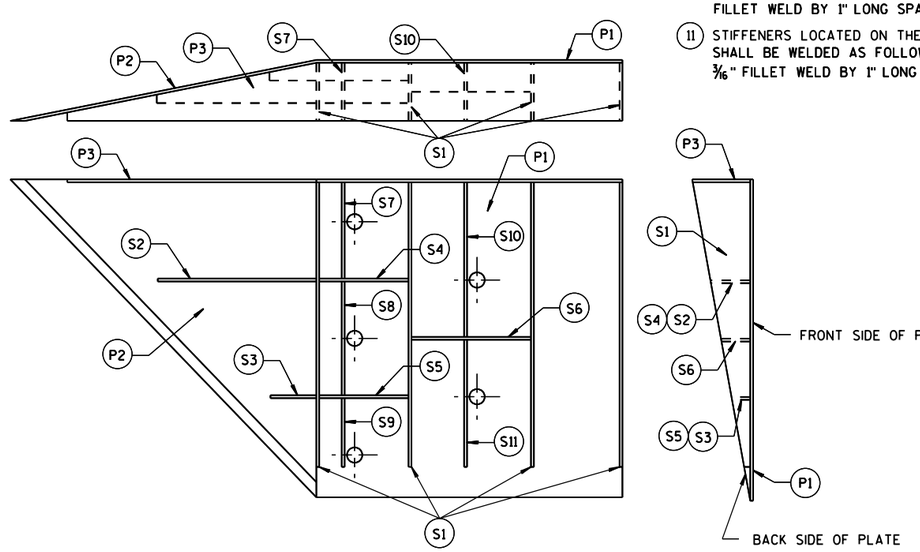

PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) 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.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 3/8" 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 1/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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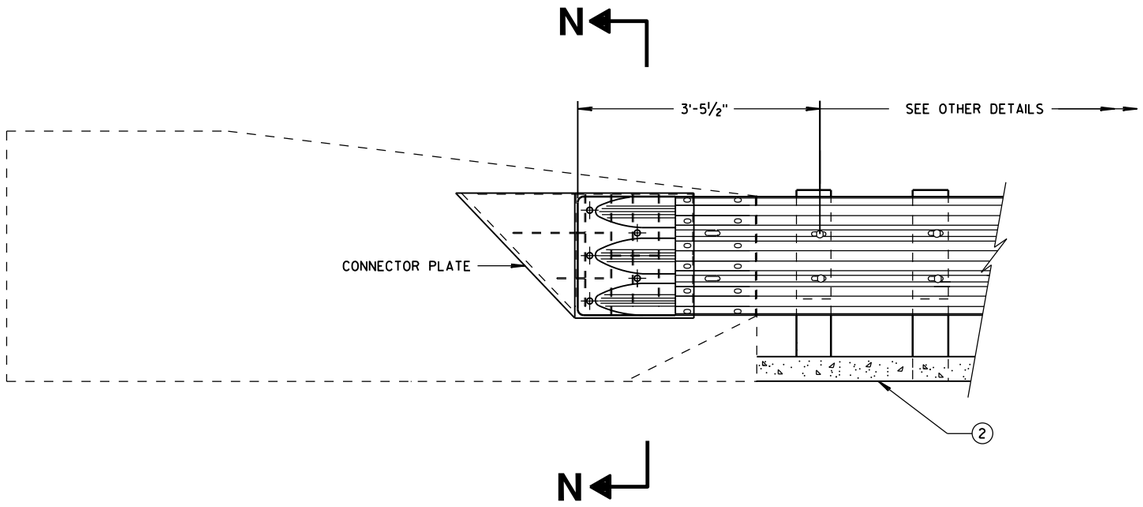
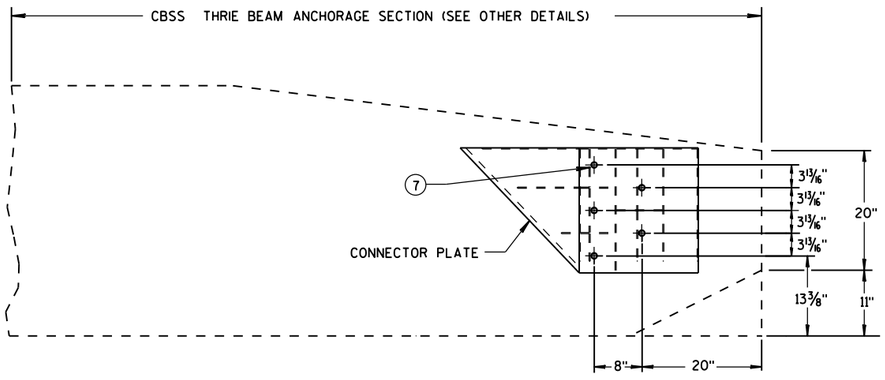


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



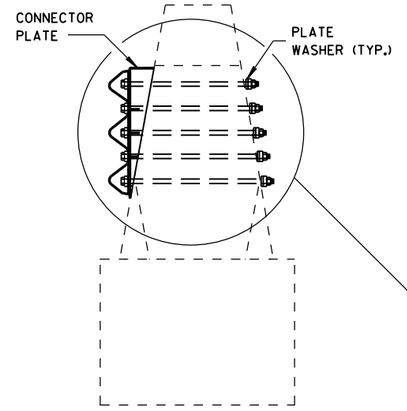
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

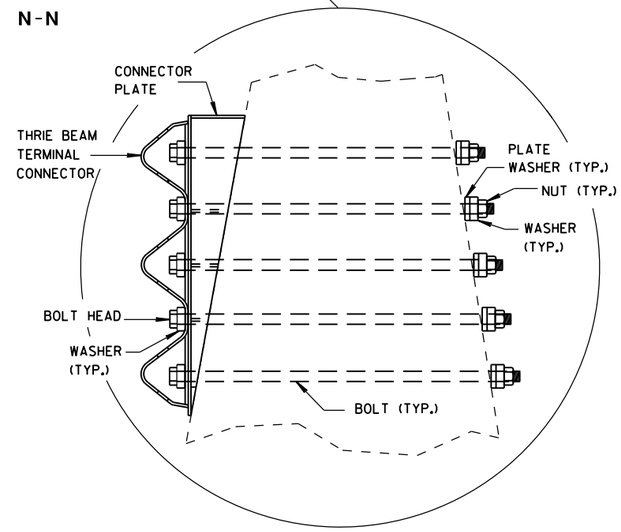
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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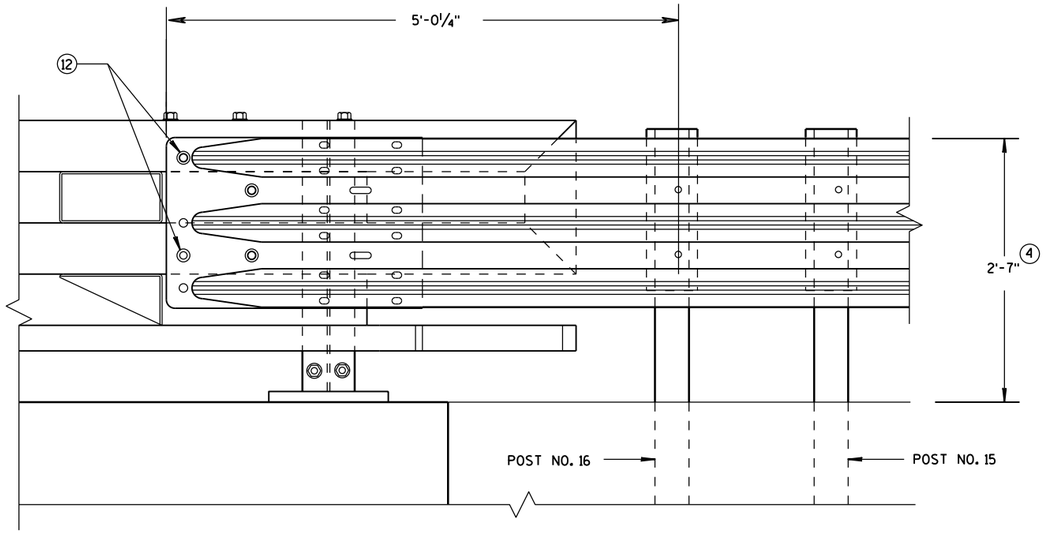
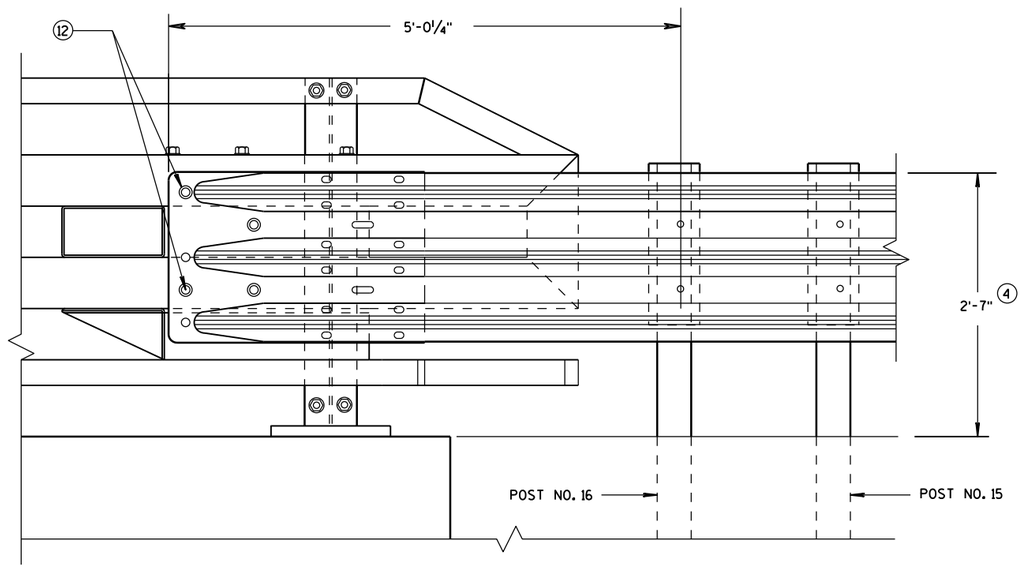


ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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June, 2015
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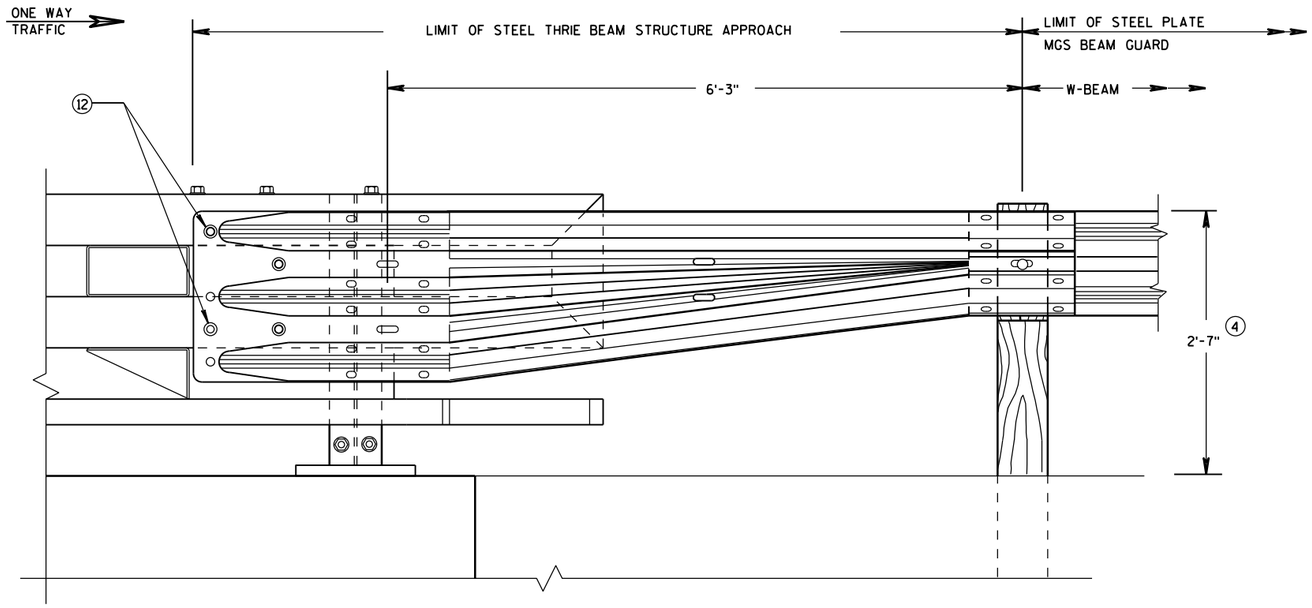
S.D.D. 14 B 45-4k



FRONT VIEW

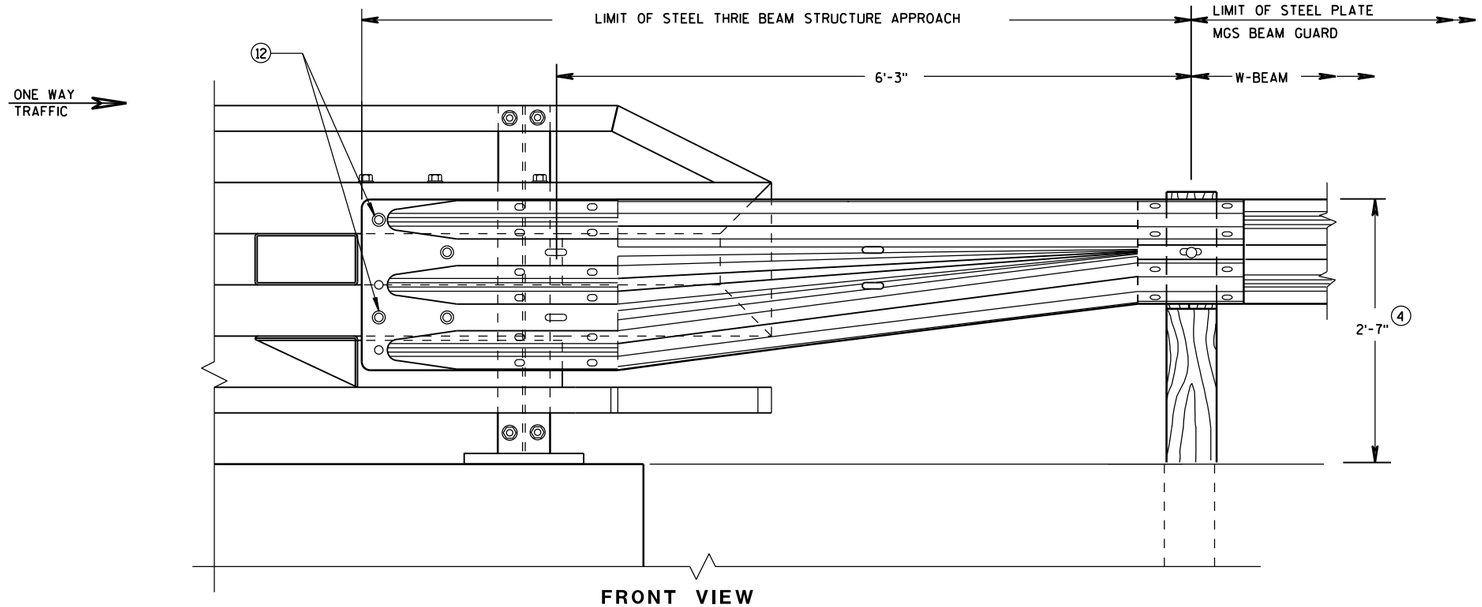
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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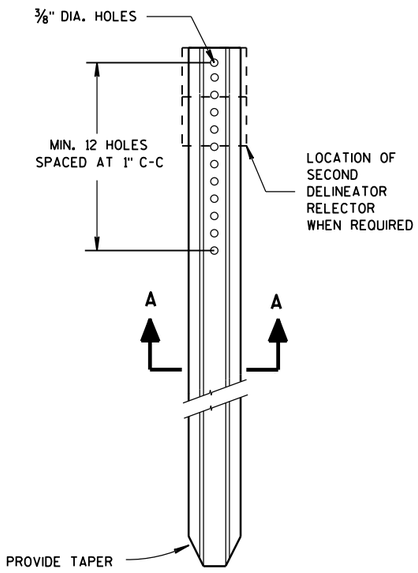
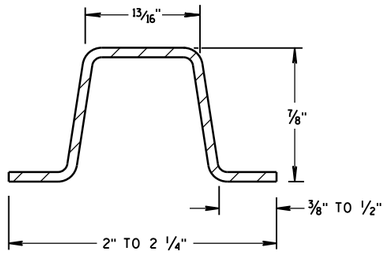
S.D.D. 14 B 45-4L

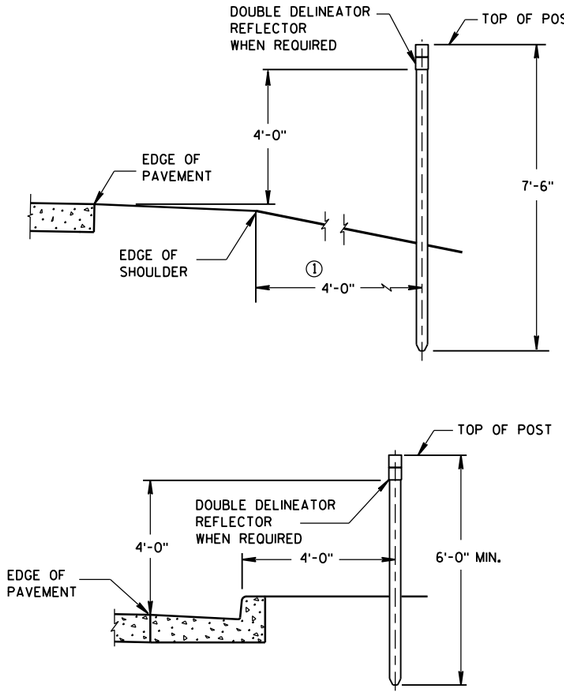


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

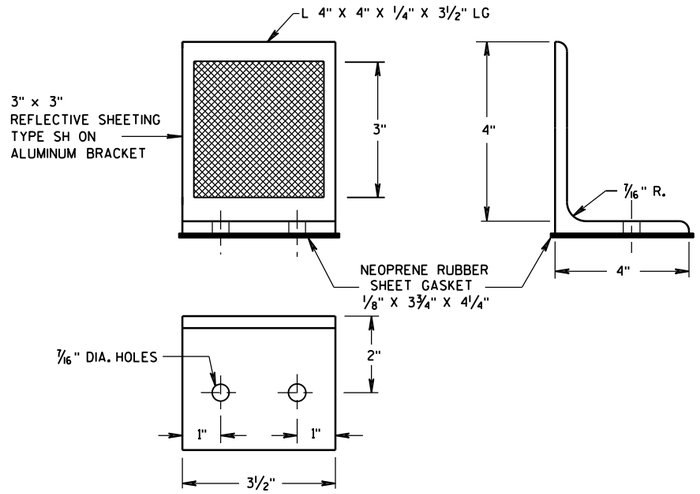


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

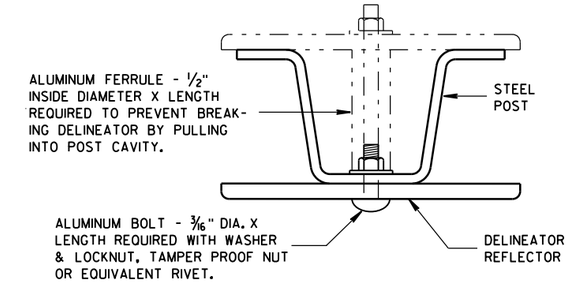
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

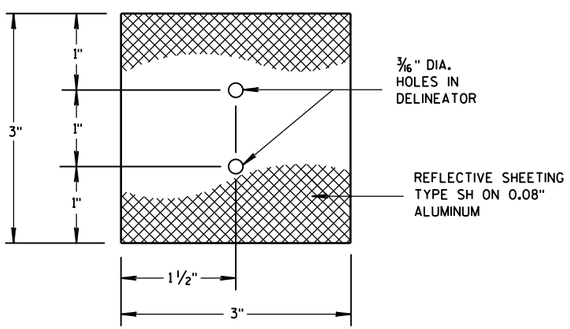
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



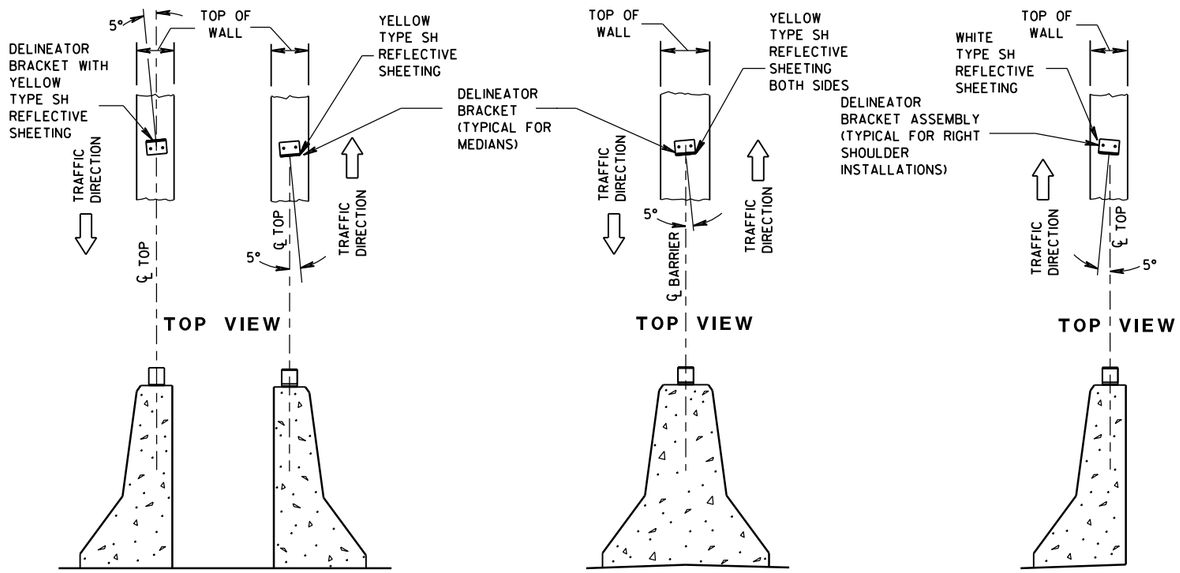
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR REFLECTOR

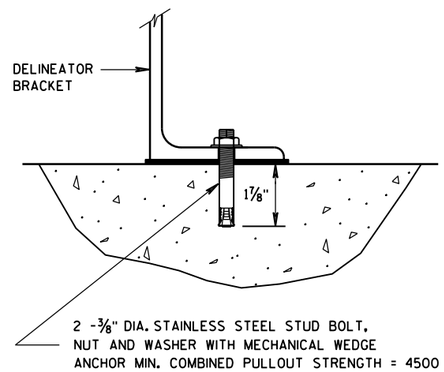


3"x 3" DELINEATOR REFLECTOR



DOUBLE BARRIERS IN MEDIAN | MEDIAN BARRIER | BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible] 150 [illegible]GINEER
FHWA

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S.D.D. 15 A 2-9

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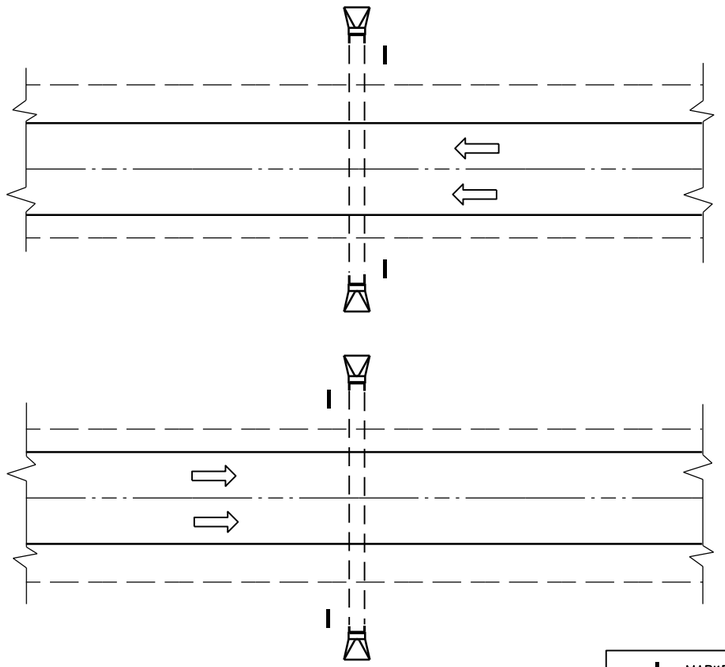
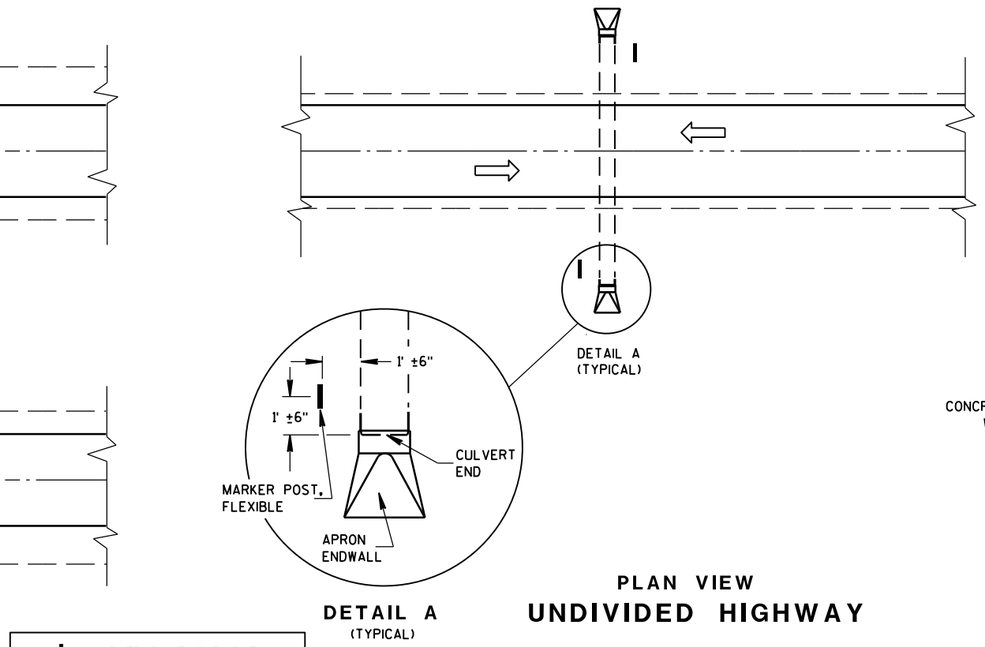
S.D.D. 15 A 2-9



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

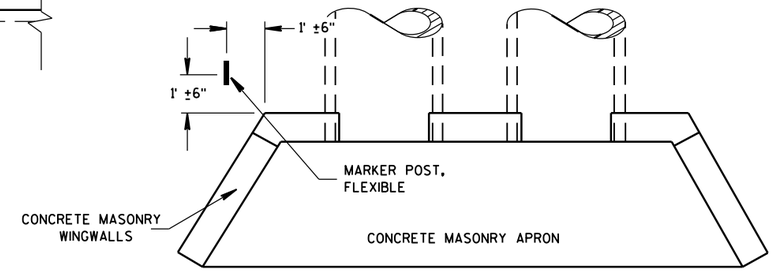
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

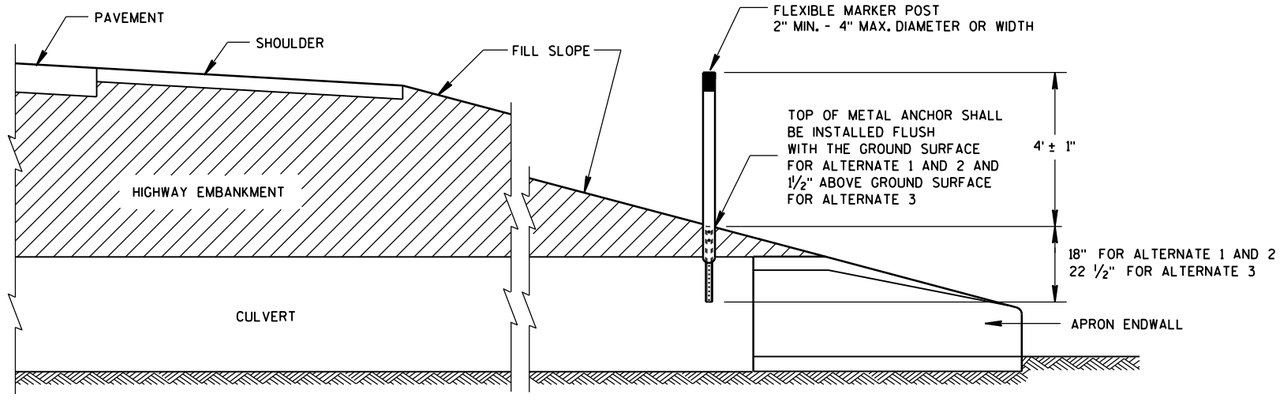
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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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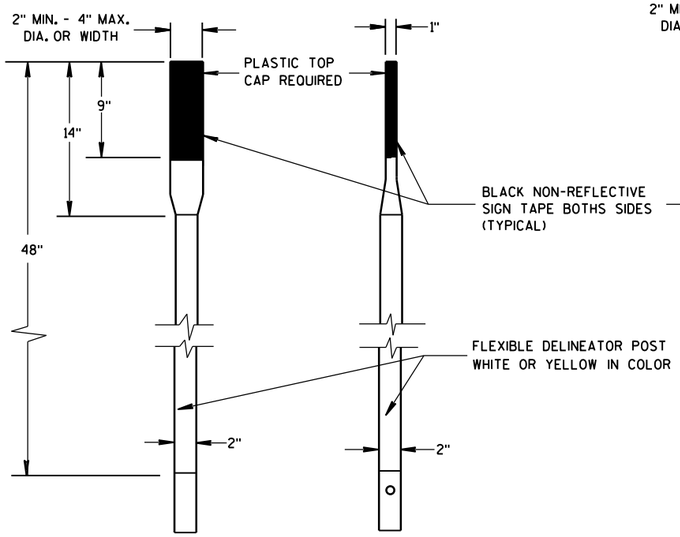
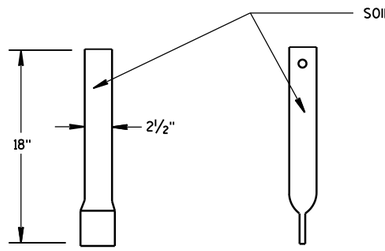
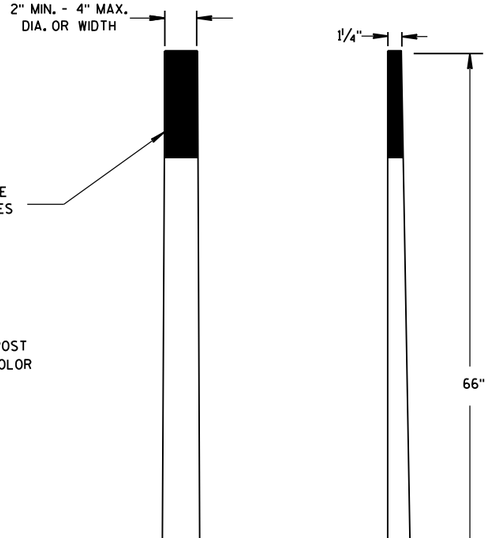
S.D.D. 15 A 3-2a





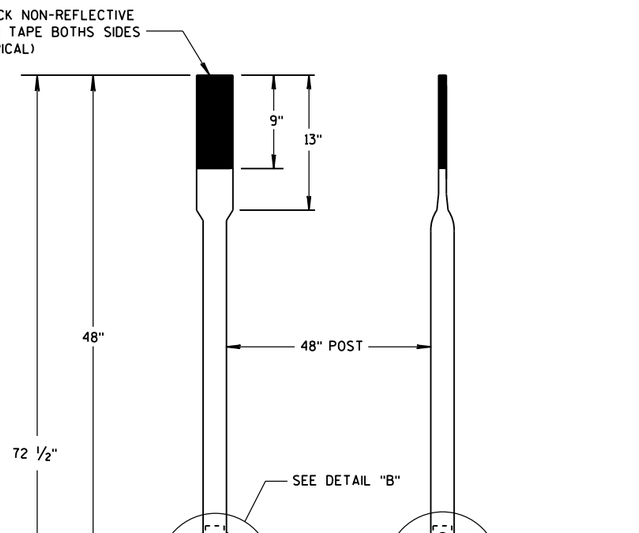
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

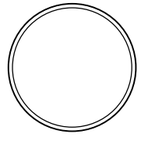
ALTERNATE 2



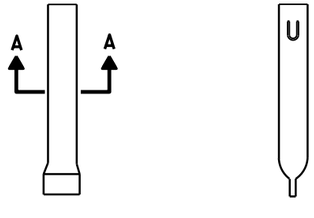
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

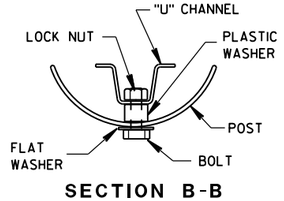


SECTION A-A

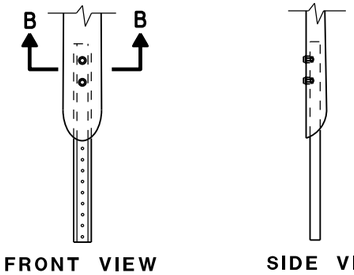


FRONT VIEW SIDE VIEW

ALTERNATE 1

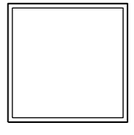


SECTION B-B

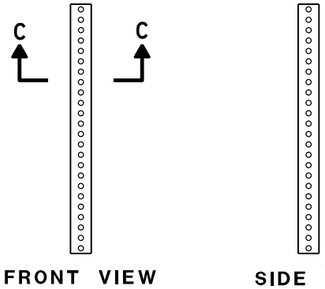


FRONT VIEW SIDE VIEW

ALTERNATE 2



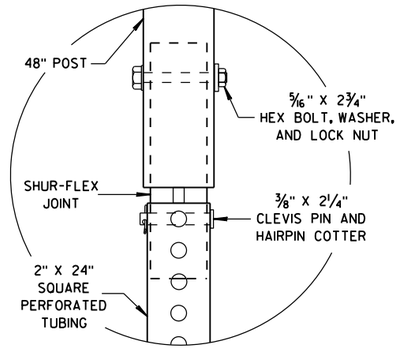
SECTION C-C



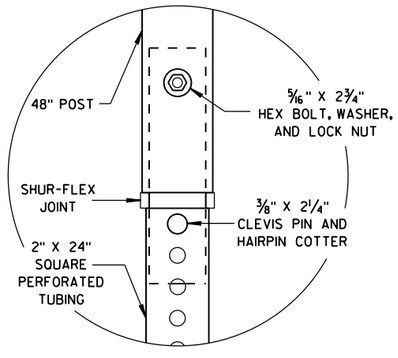
FRONT VIEW SIDE VIEW

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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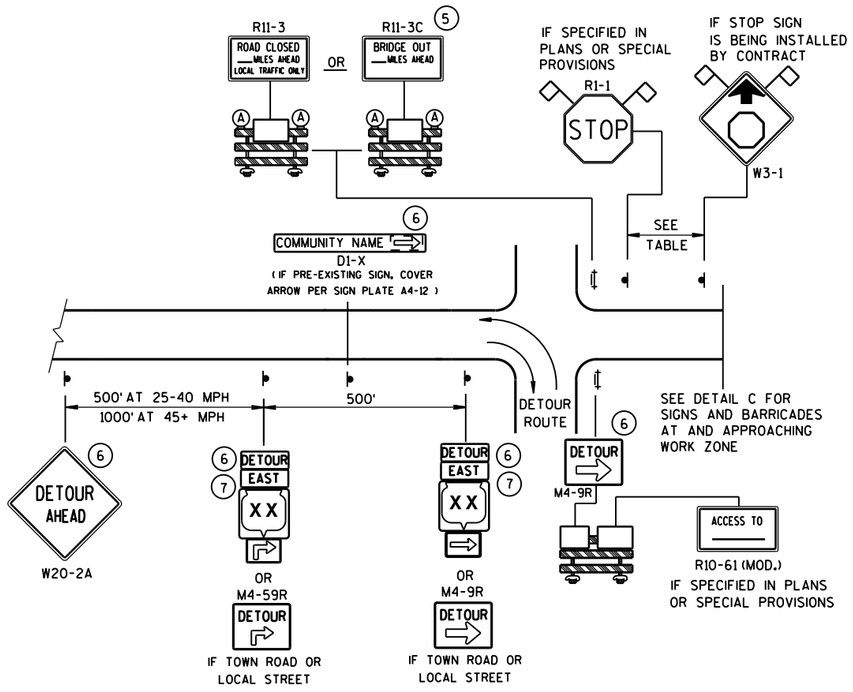
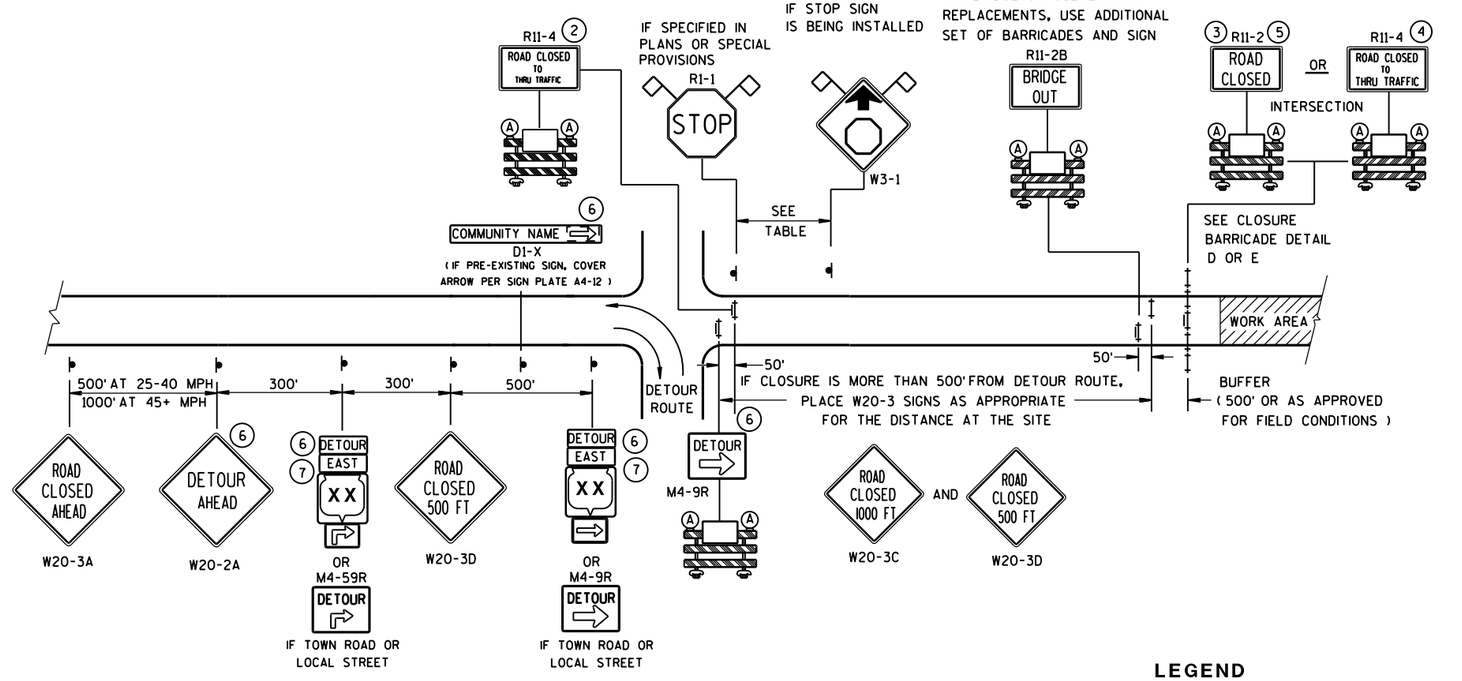
S.D.D. 15 A 3-2b



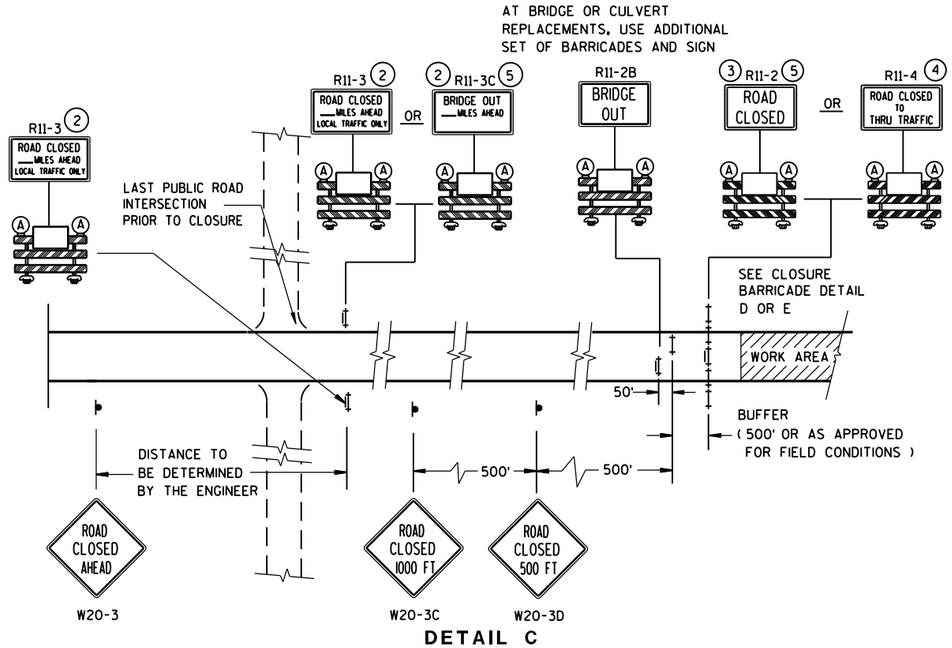
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

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)

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

S.D.D. 15 C 2-6a

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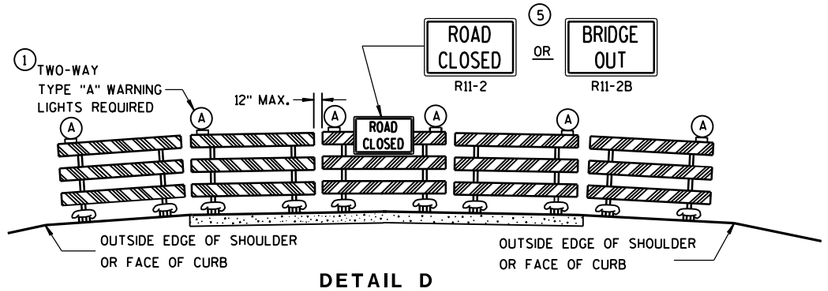
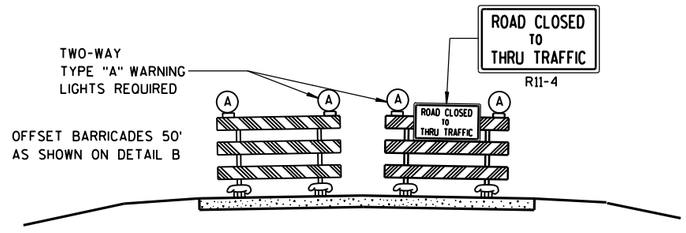


DETAIL D

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

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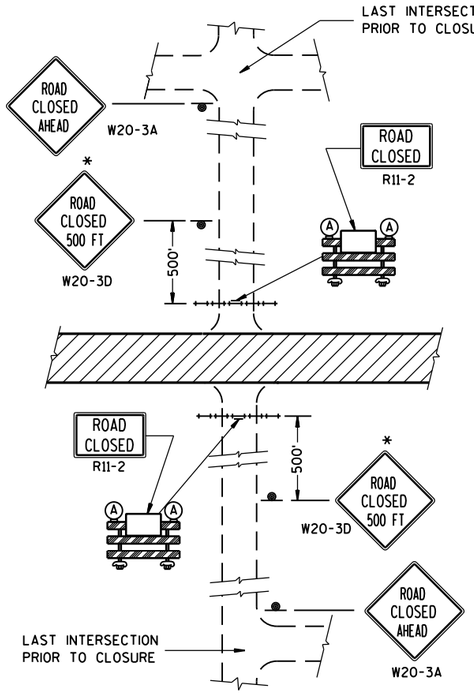
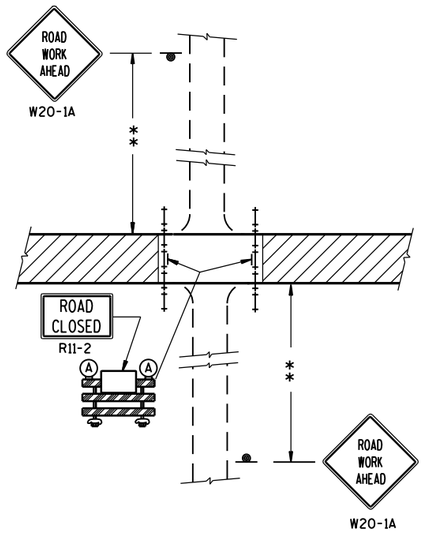
S.D.D. 15 C 2-6b



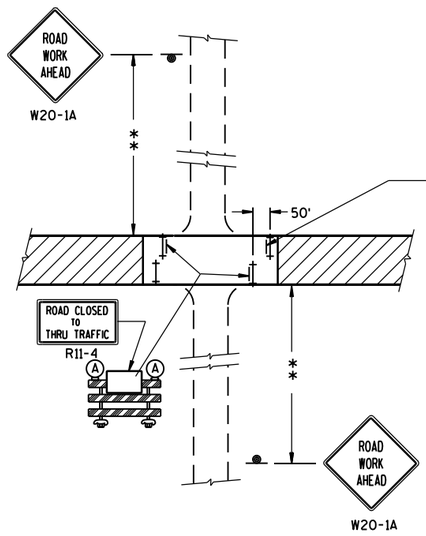
DETAIL 1

(NO ACCESS TO PROJECT)



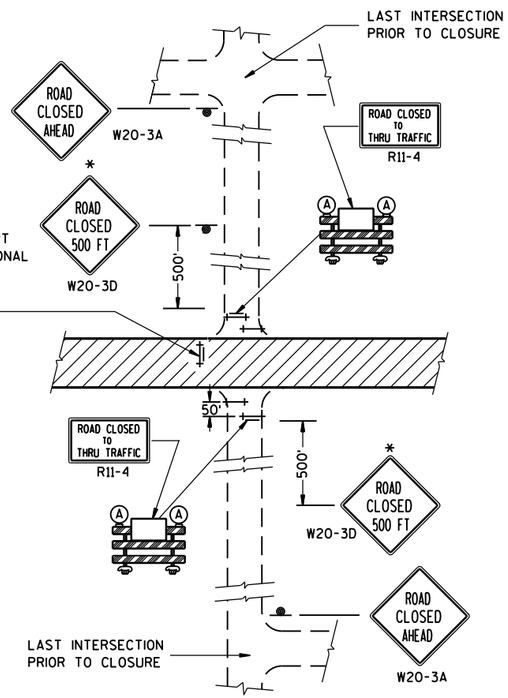
DETAIL 2

(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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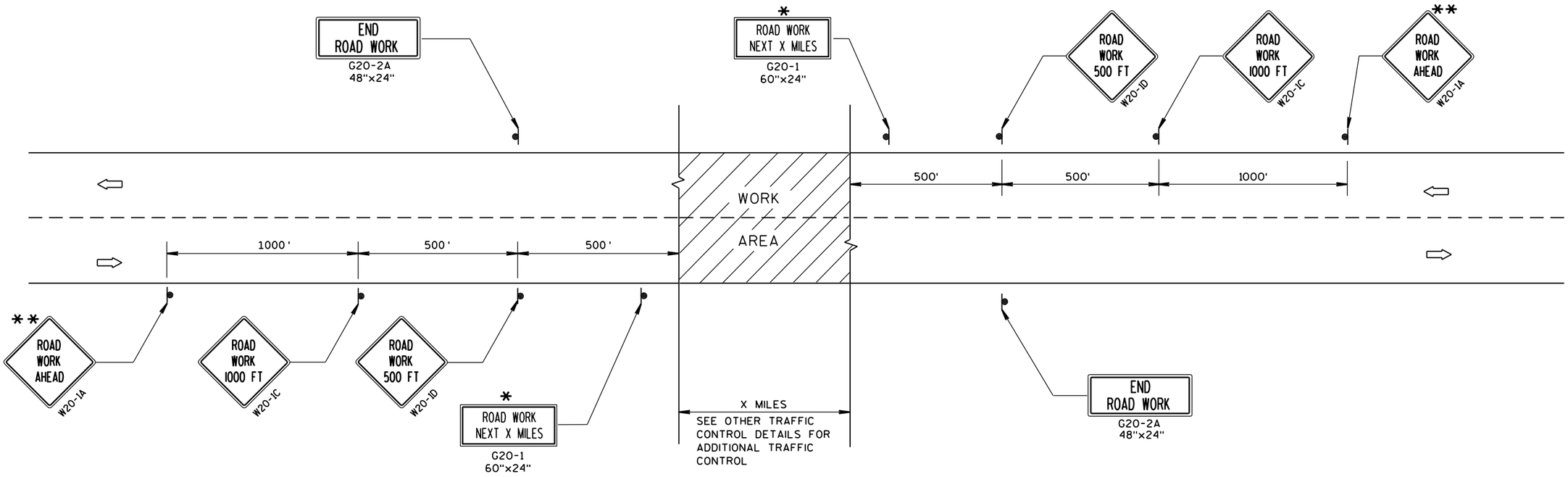
S.D.D. 15 C 3-3

6

S.D.D. 15 C 3-3



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

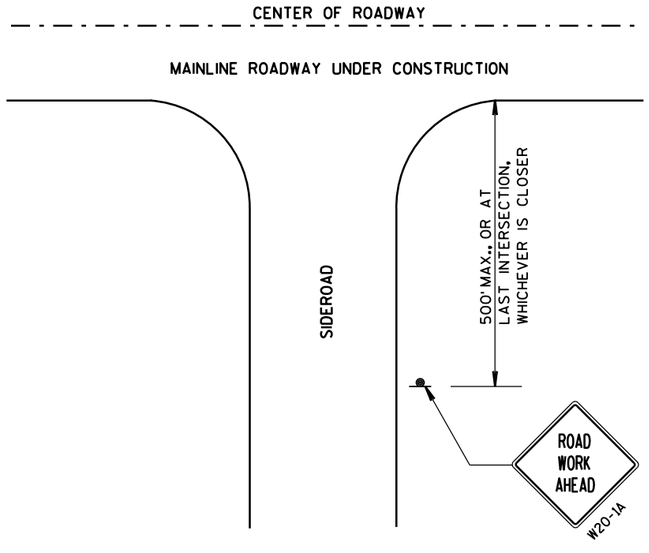
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER

FHWA

6

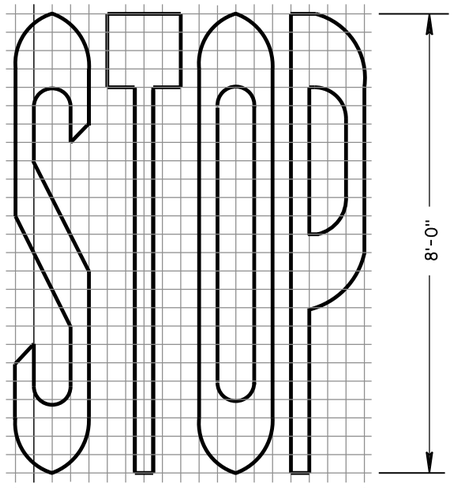
S.D.D. 15 C 4-3

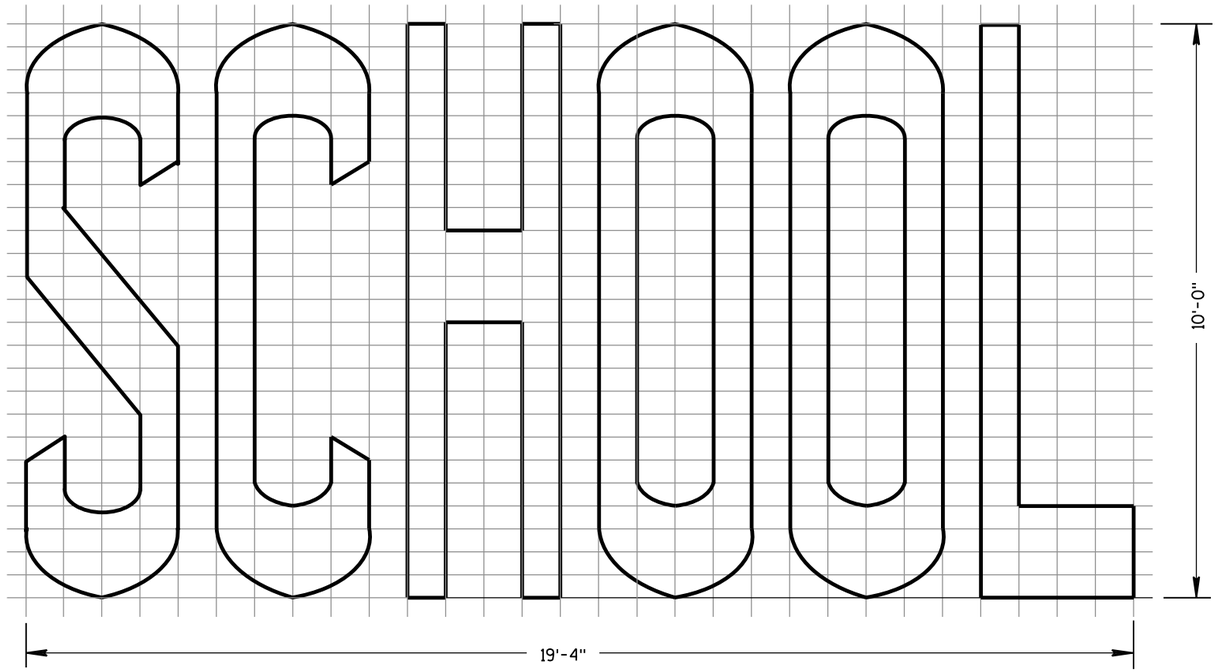
6

S.D.D. 15 C 4-3

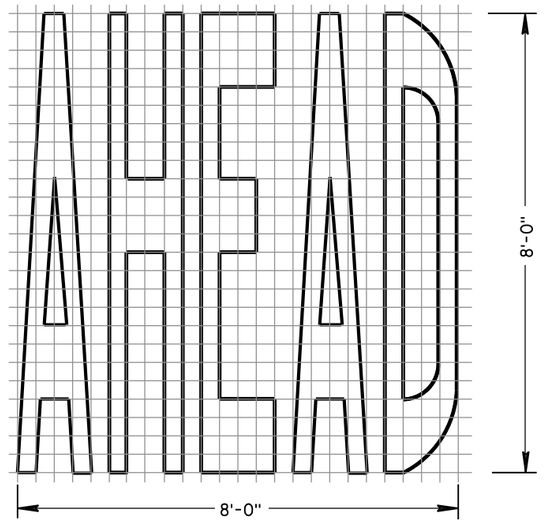
GENERAL NOTES

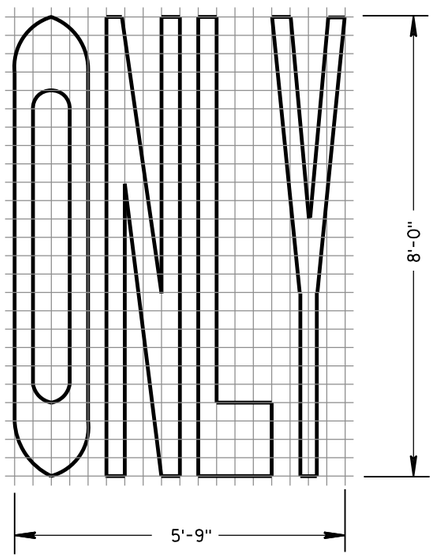
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

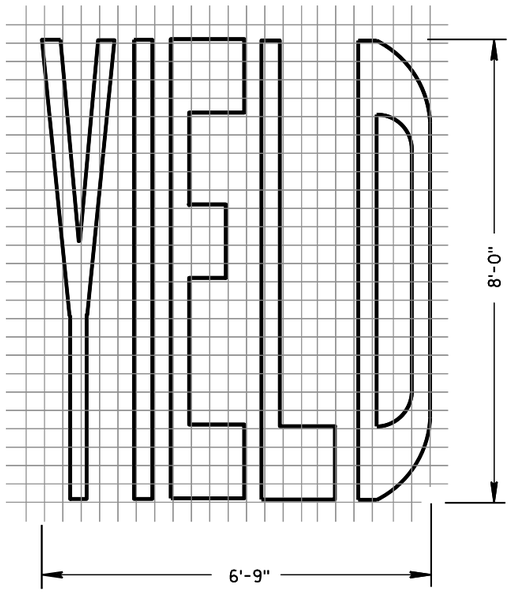


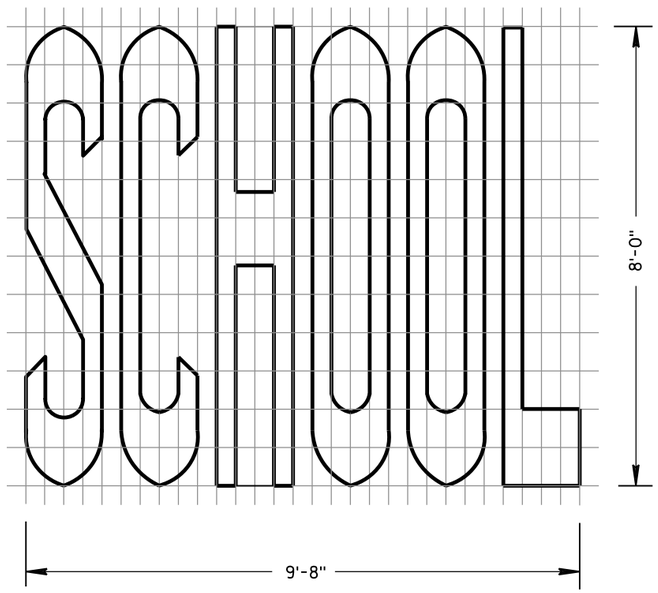


TWO-LANE









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

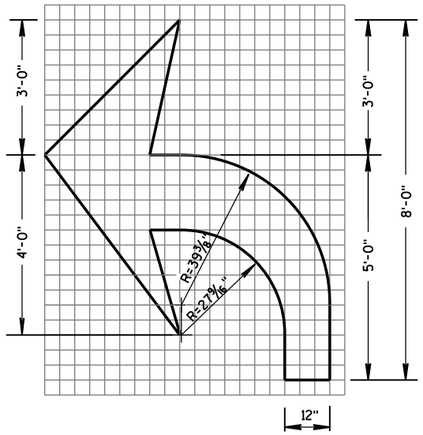
S.D.D. 15 C 7-13b

6

S.D.D. 15 C 7-13b

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.



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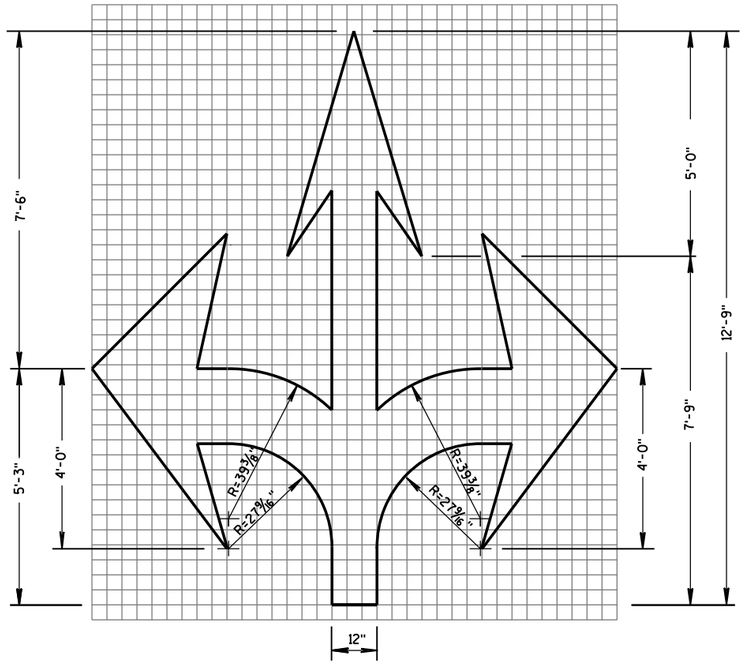
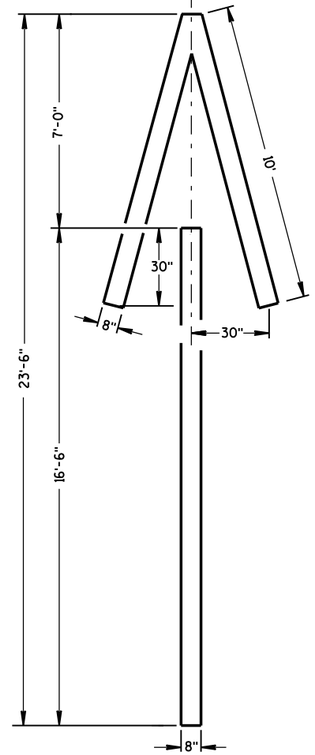


TYPE 6



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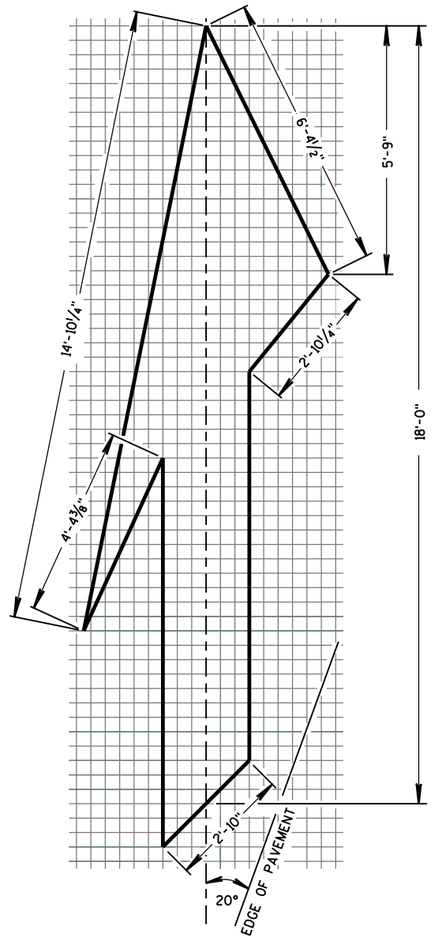
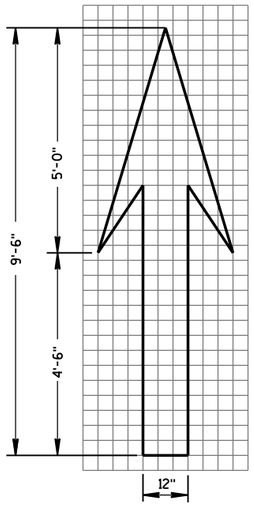
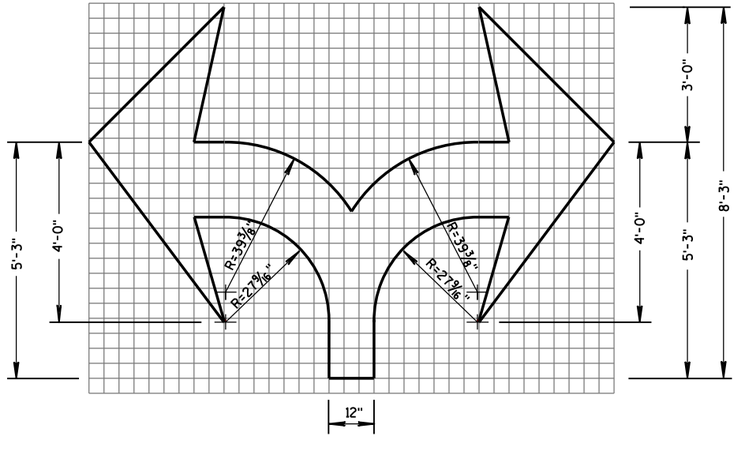


TYPE 5 LANE DROP ARROW



TYPE 1



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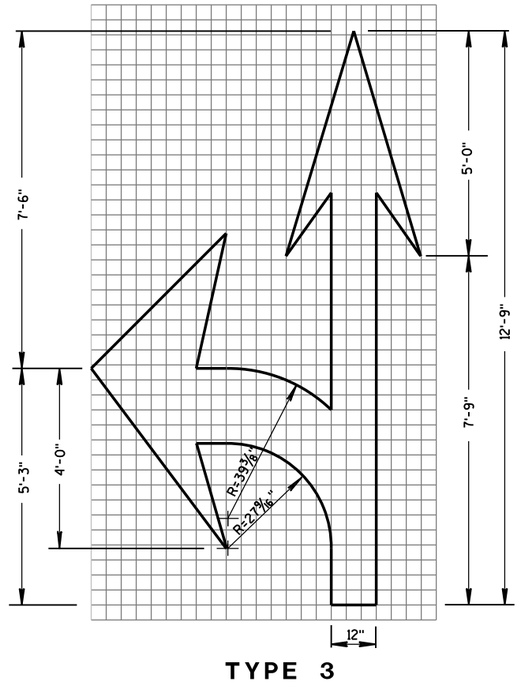

TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16
DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR
ENGINEER
FHWA

6

S.D.D. 15 C 7-13c

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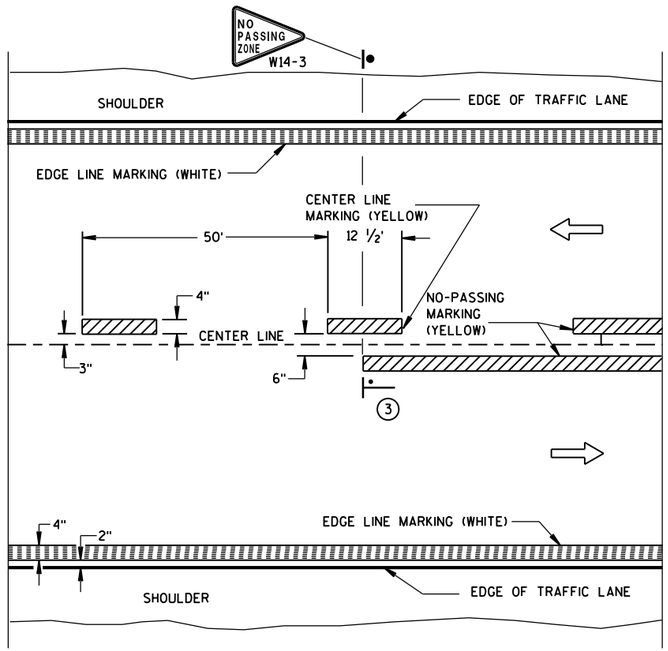
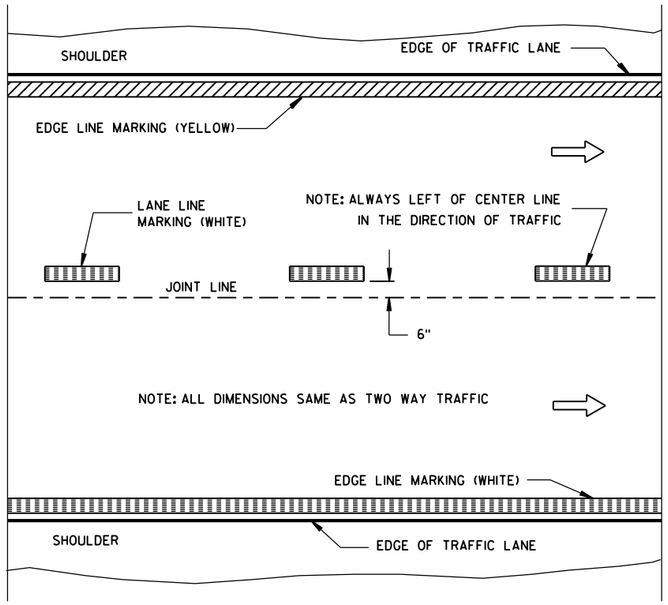
S.D.D. 15 C 7-13c

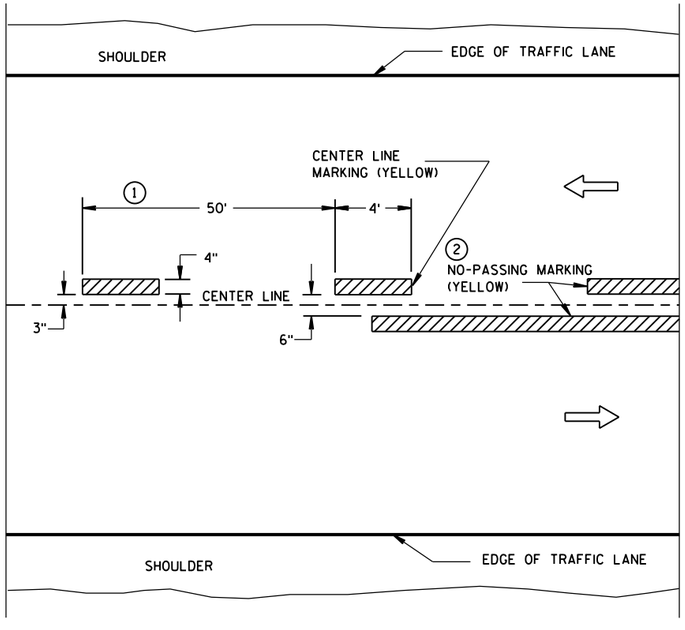


TWO WAY TRAFFIC

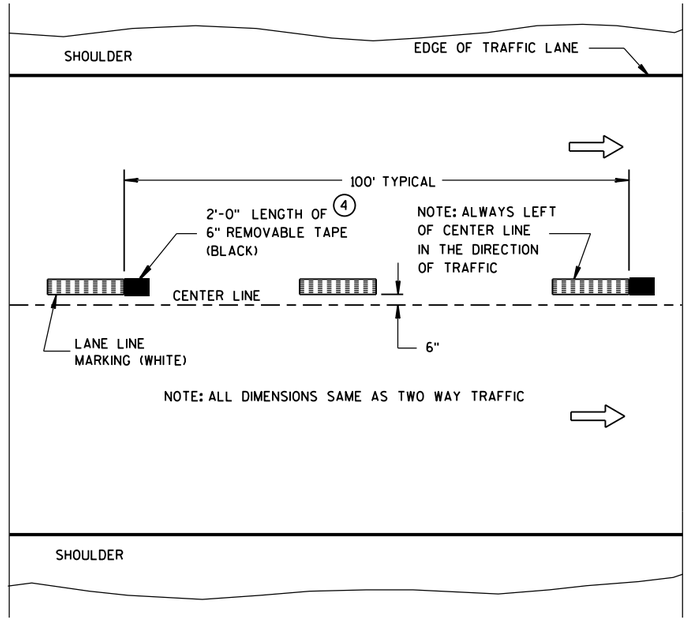


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

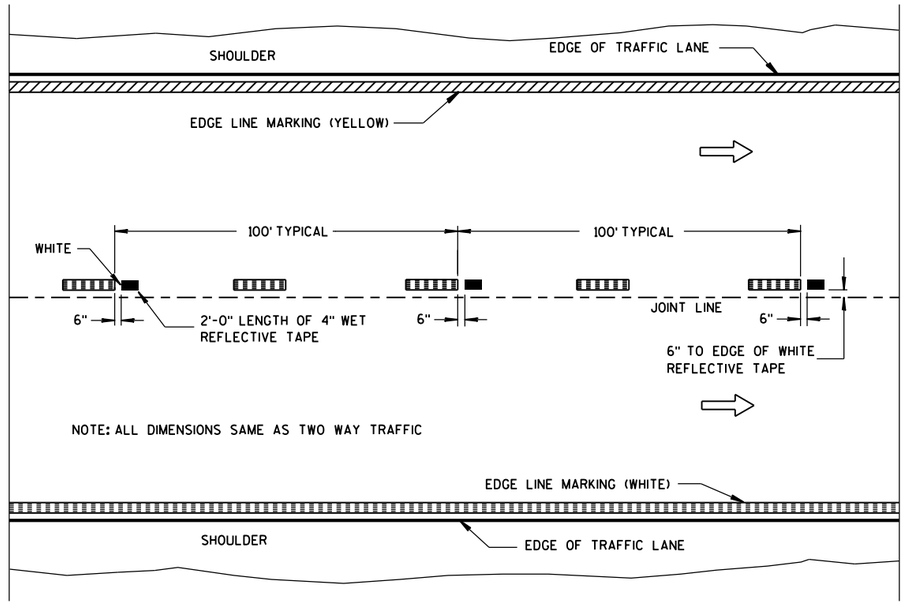
GENERAL NOTES

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

6

S.D.D. 15 C 8-16a

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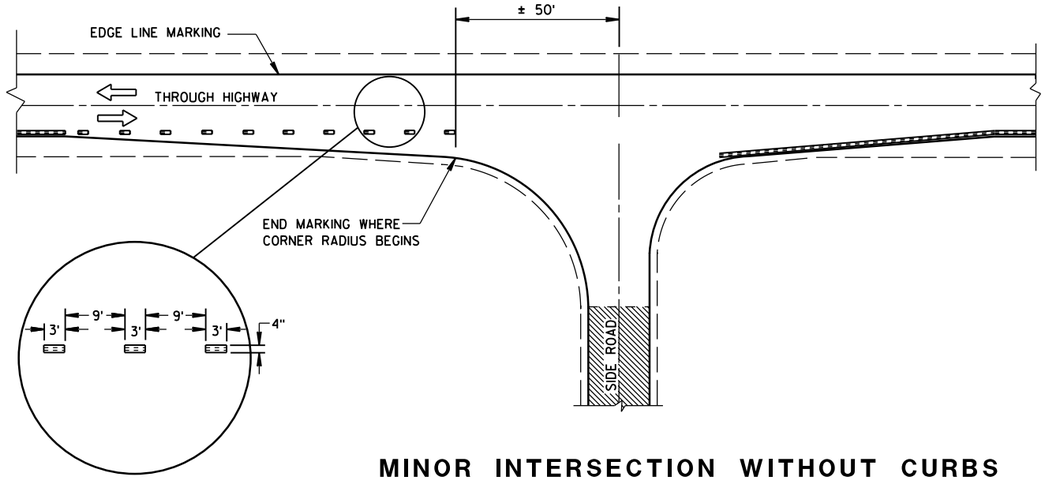
S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

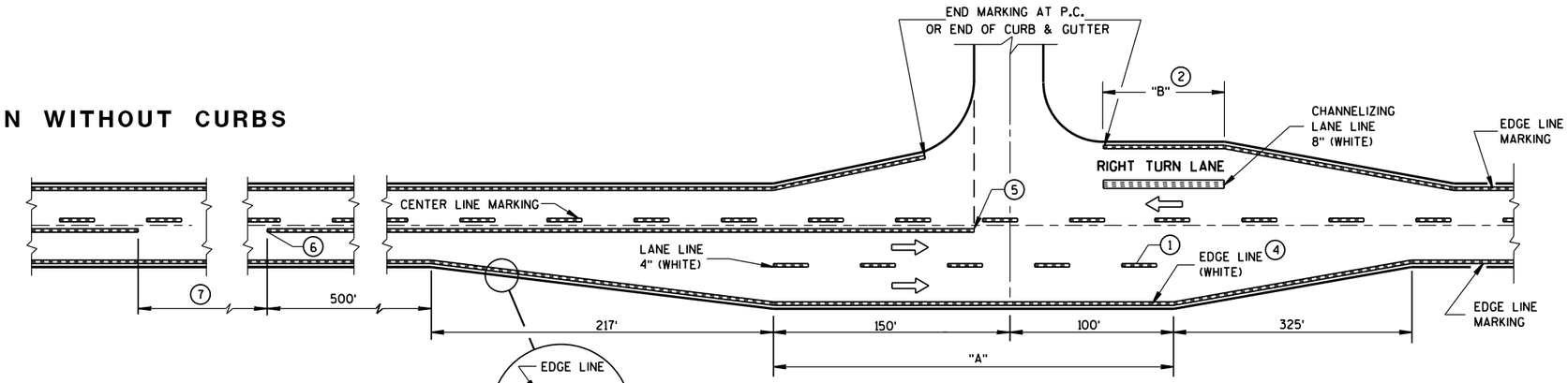
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

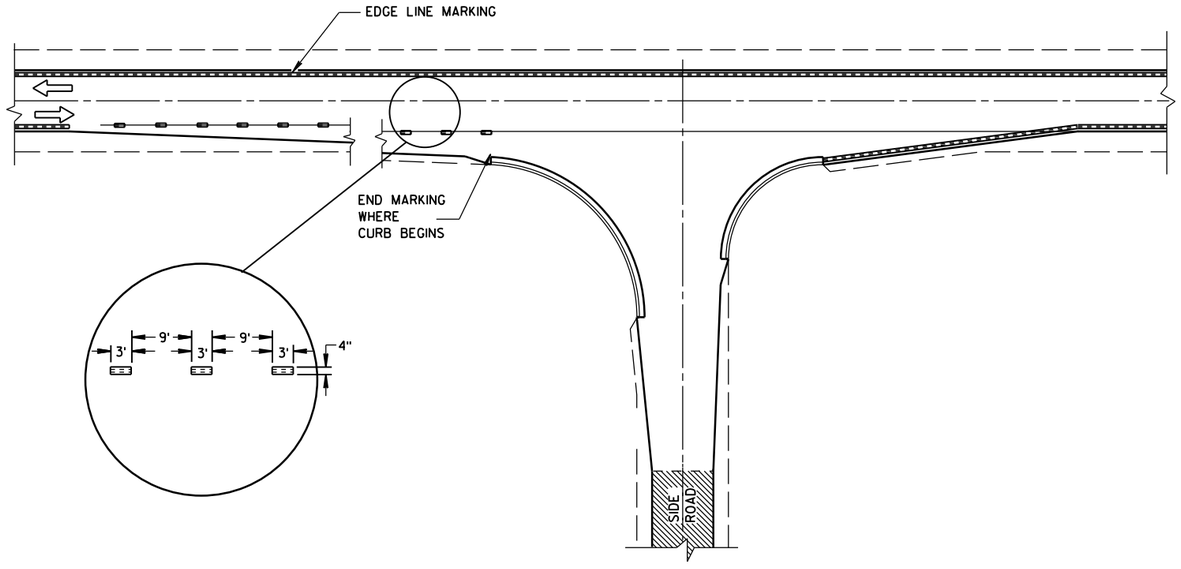
(7)

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



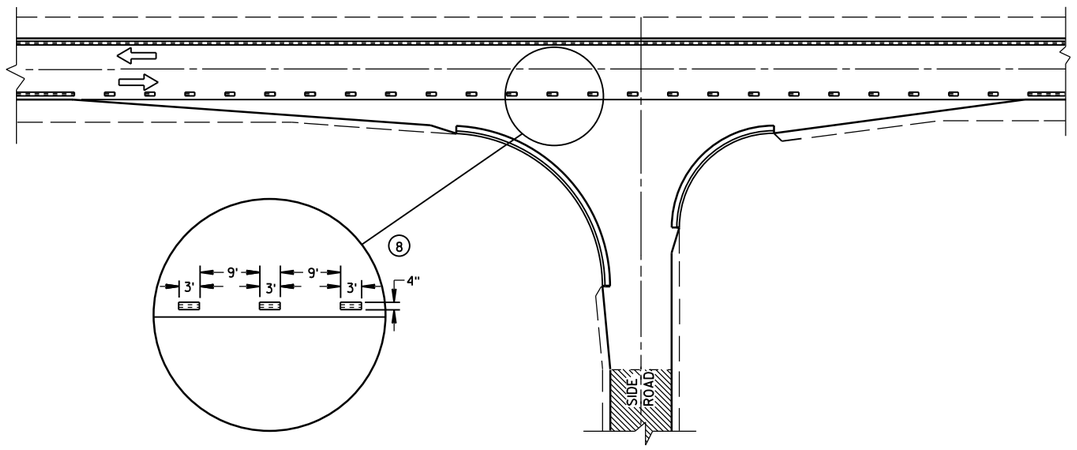
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 C 8-16b

6

S.D.D. 15 C 8-16b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

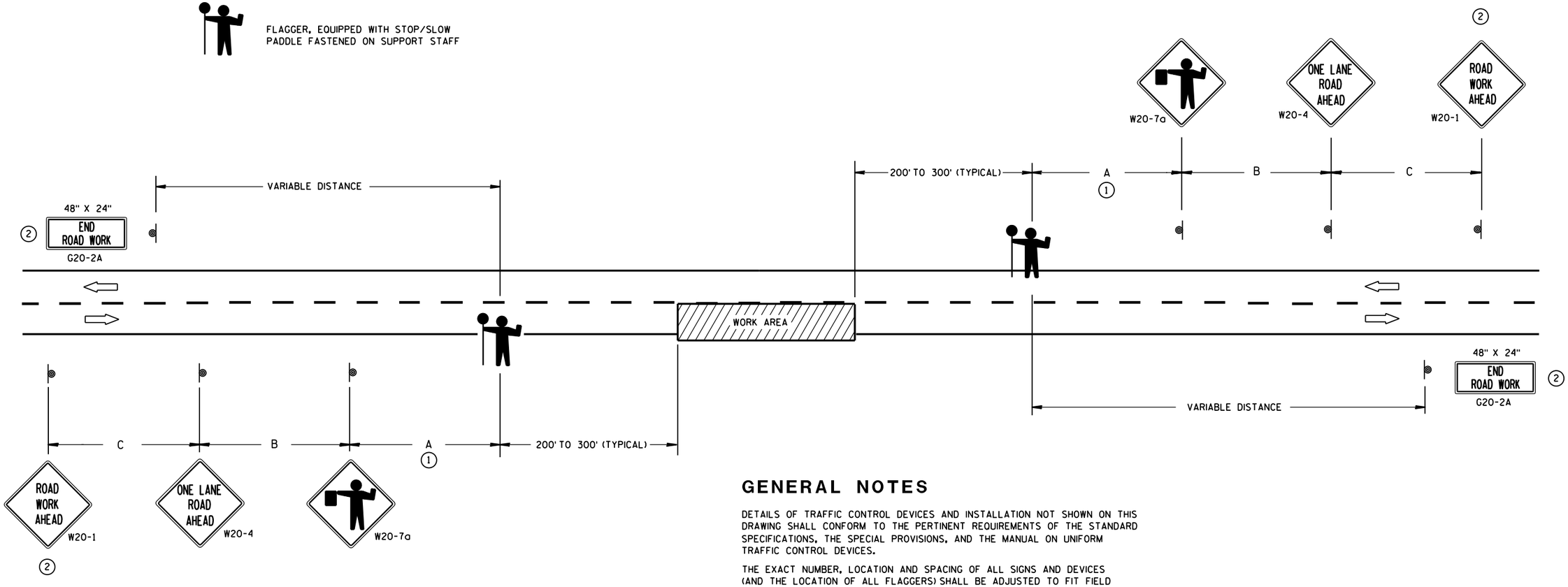
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR 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.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

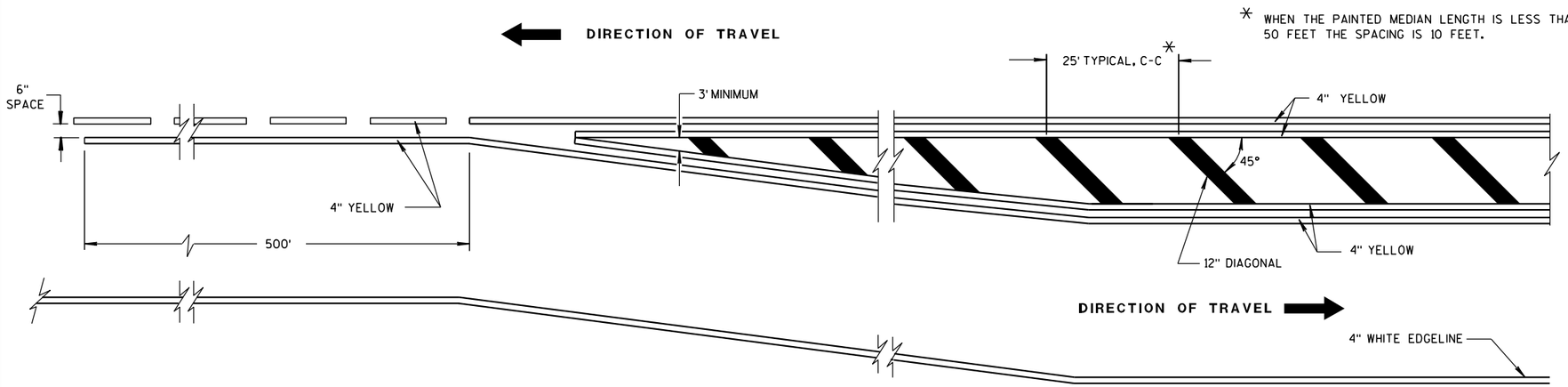
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 12-4

6

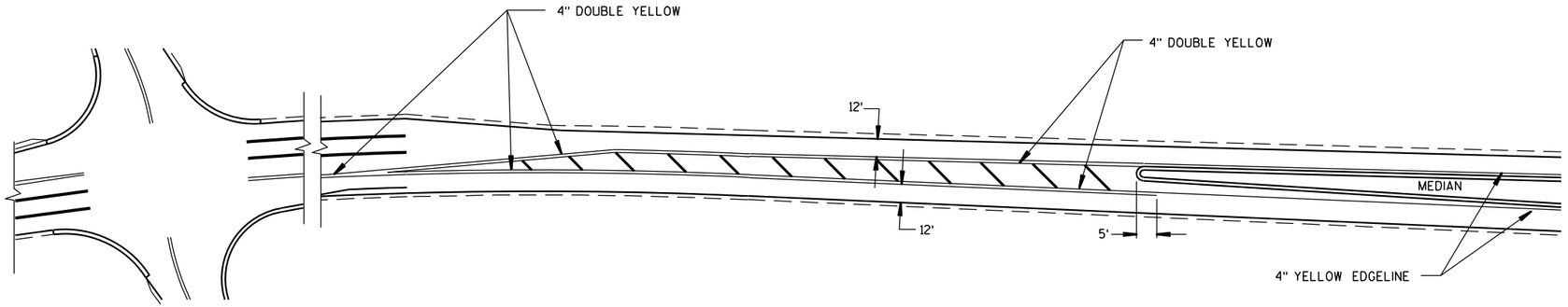
S.D.D. 15 C 12-4



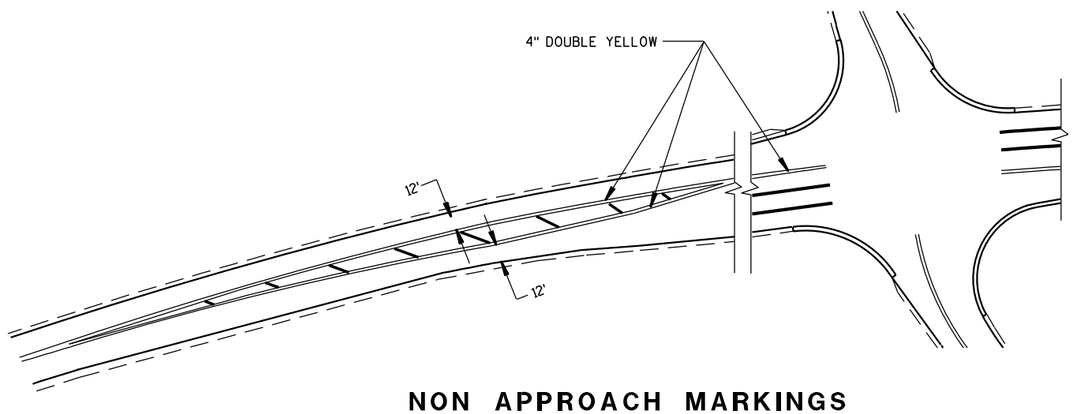
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

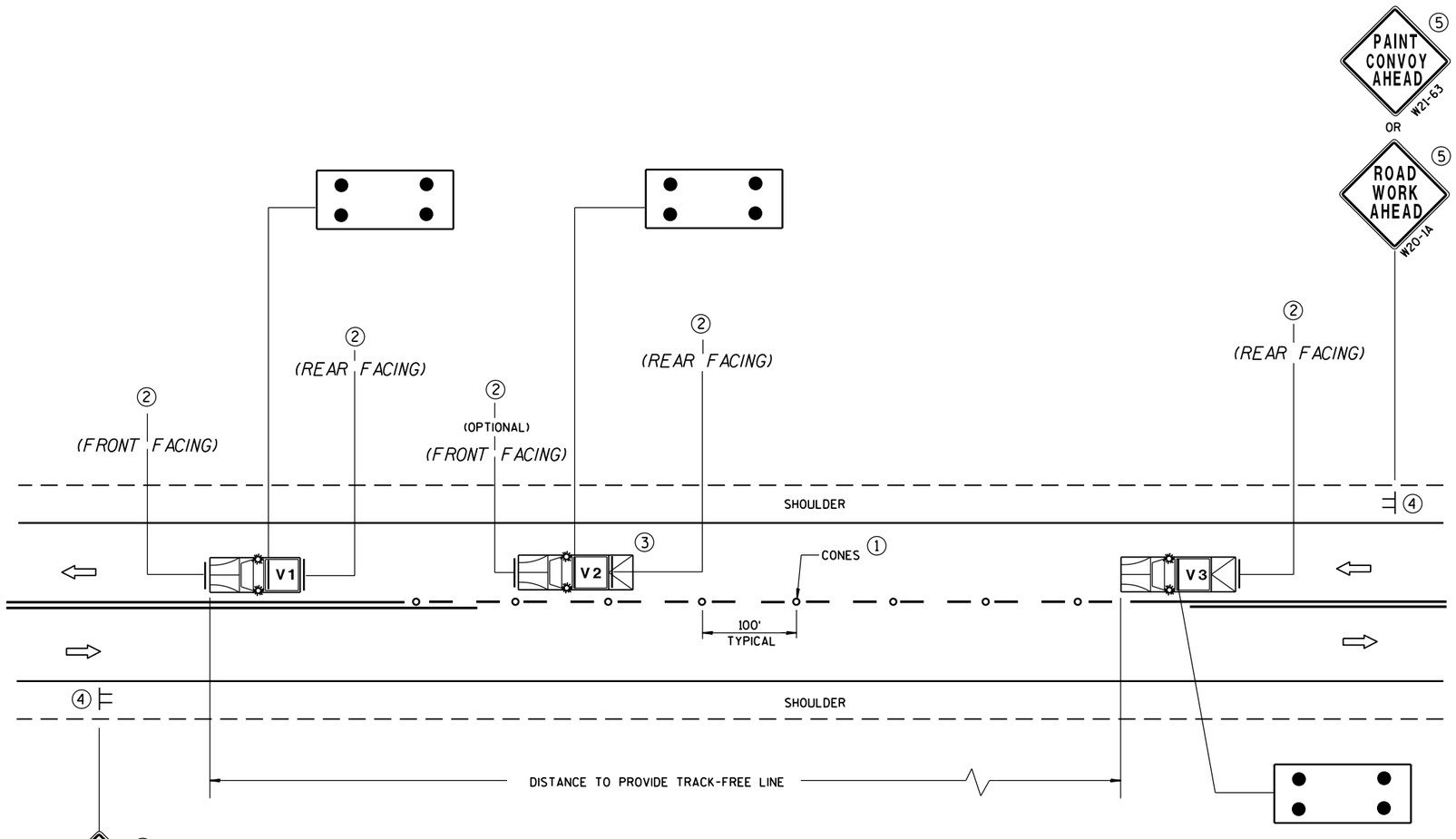
MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER
FHWA	

6

S.D.D. 15 C 18-3

6

S.D.D. 15 C 18-3



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY 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.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. 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.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(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) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) 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 (CAUTION)

MOVING PAVEMENT MARKING OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZON SAFETY ENGINE
FHWA

6

S.D.D. 15 C 19-4a

6

S.D.D. 15 C 19-4a

GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

(1) WRONG WAY PREVENTION SIGNS ARE DISCUSSED IN T G M 2-15-12

(2) USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

SYMBOLS

* SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT

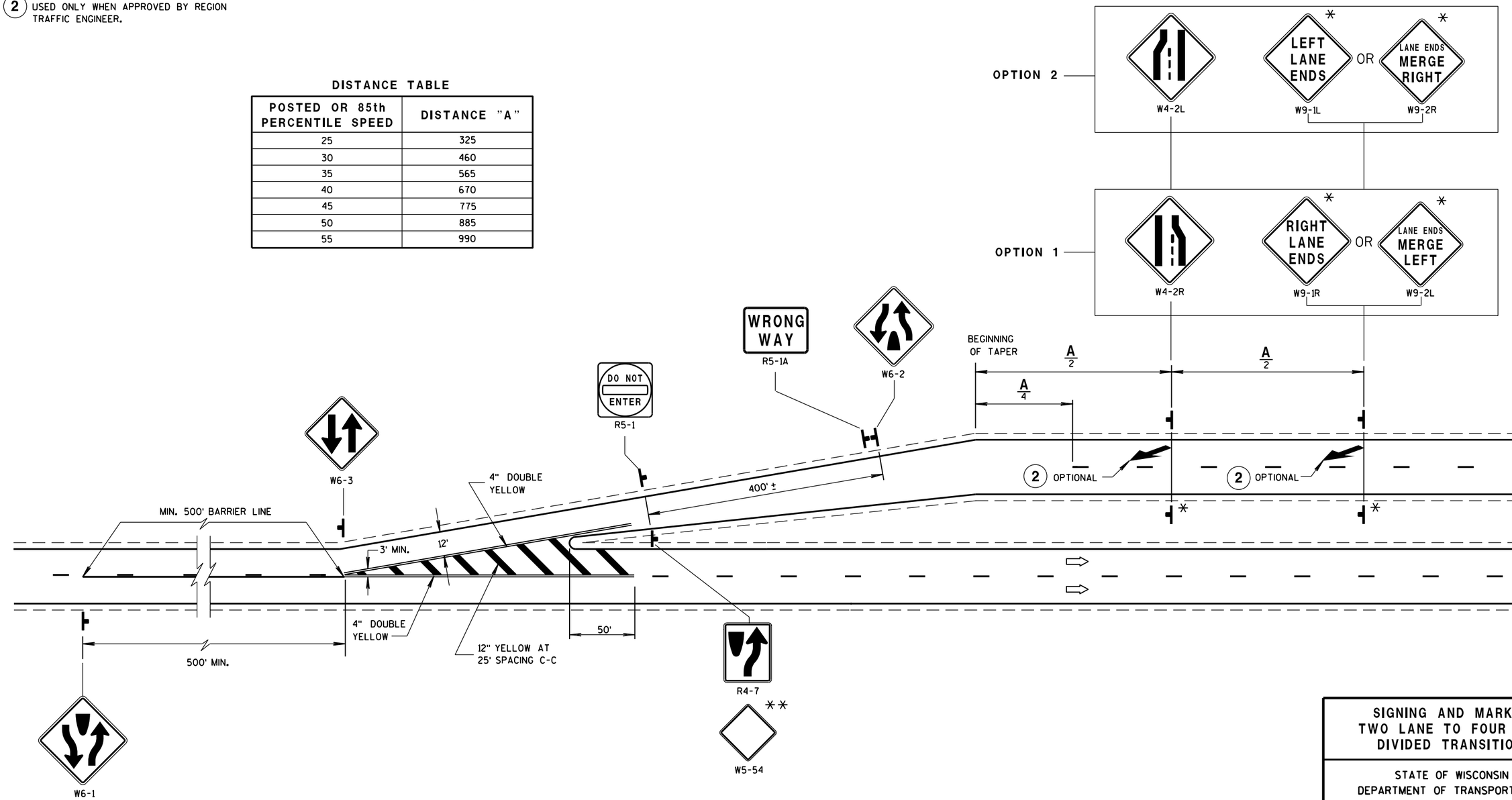
** IF POSTED SPEED 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN)

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	325
30	460
35	565
40	670
45	775
50	885
55	990



SIGNING AND MARKING TWO LANE TO FOUR LANE DIVIDED TRANSITIONS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4-18-2016 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARI IEER
FHWA	

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

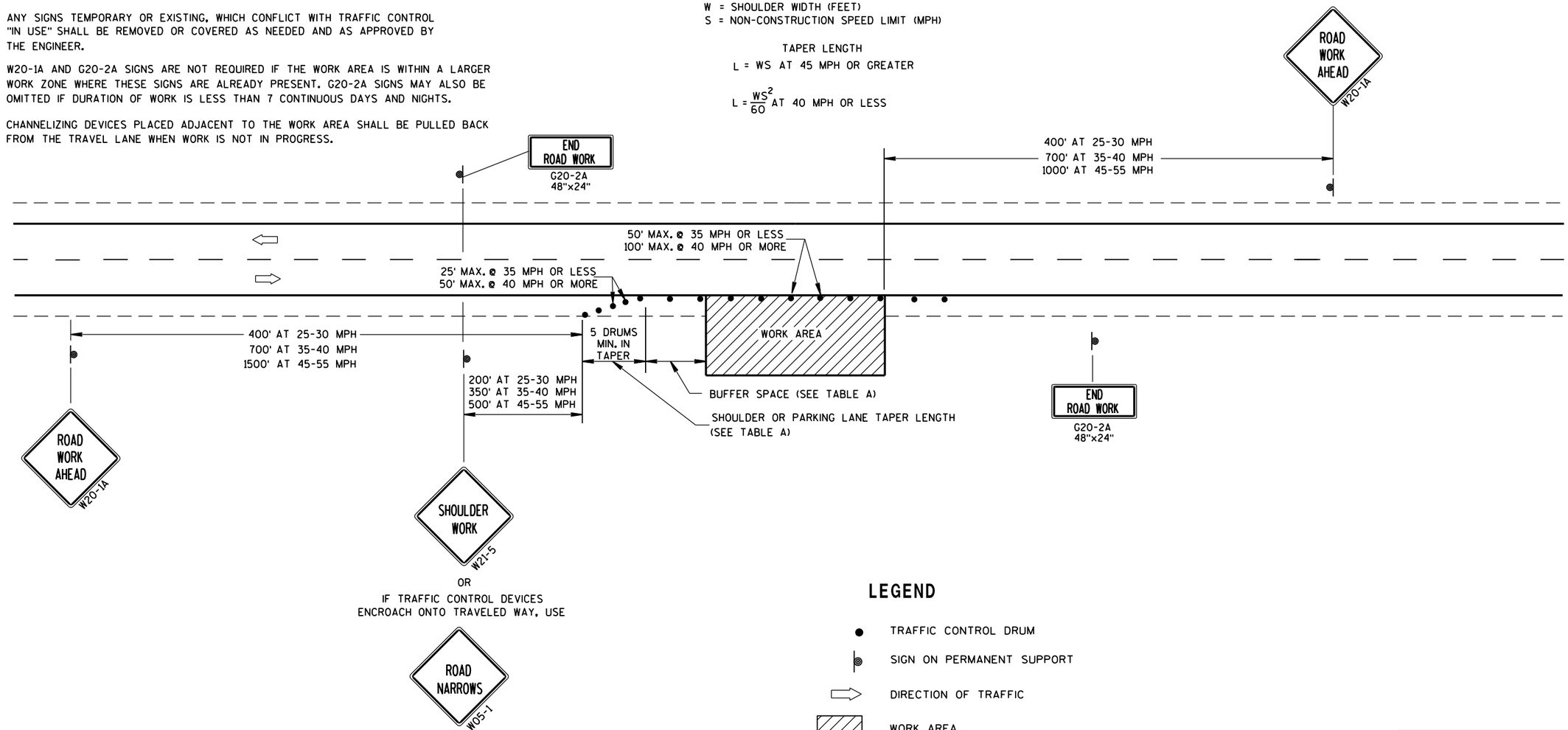
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 14, 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

6

S.D.D. 15 D 28-3

LEGEND

- SIGN ON PERMANENT SUPPORT
- REMOVING PAVEMENT MARKING
- TYPE III BARRICADE WITH ATTACHED SIGN
- CONCRETE BARRIER TEMPORARY PRECAST
- FLAGS, 16" x 16" MIN., (ORANGE)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ASPHALTIC PAVEMENT WIDENING
- DIRECTION OF TRAFFIC
- 4" X 6" WOOD POST
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE

INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET.)

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

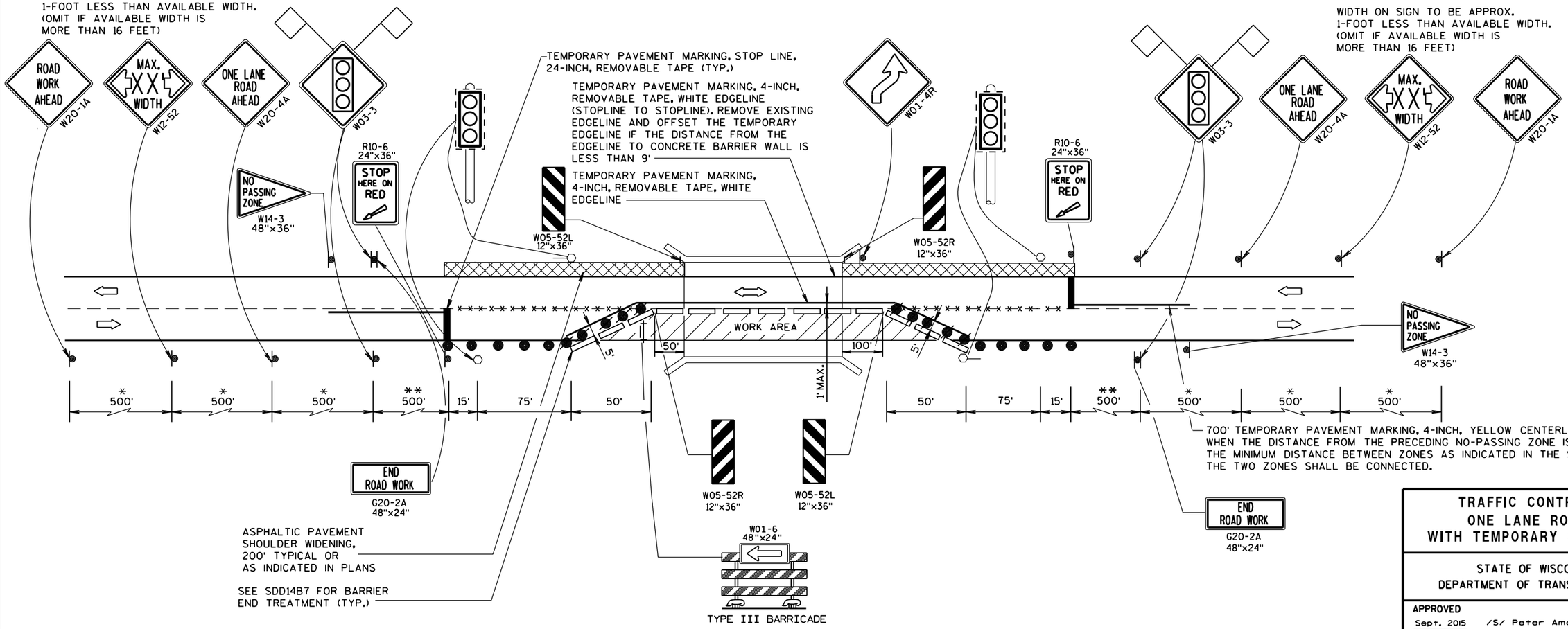
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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 EDGELINE AND CENTERLINE, AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

* 500-FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350-FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200-FOOT TYPICAL SPACING.

** USE 300' SPACING IF PRE-CONSTRUCTION REGULATORY SPEED LIMIT IS 35 MPH OR LESS.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI

FHWA

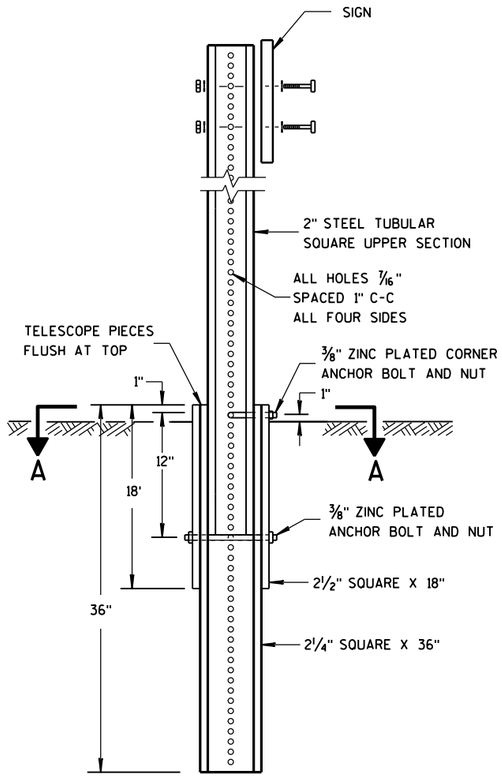
C

6

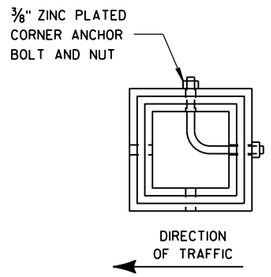
S.D.D. 15 D 33-4

6

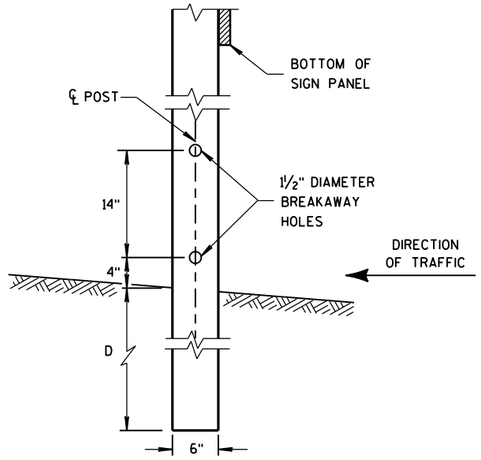
S.D.D. 15 D 33-4



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



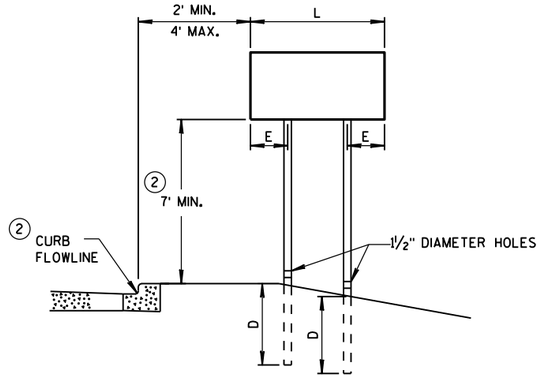
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

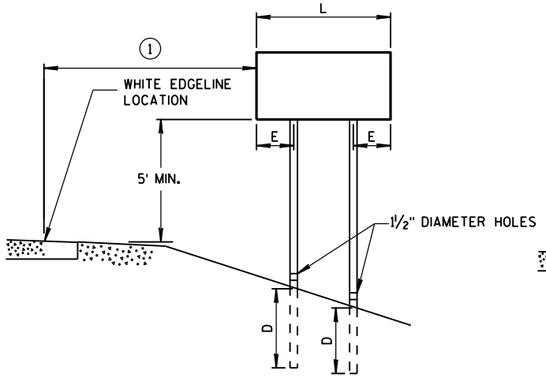
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

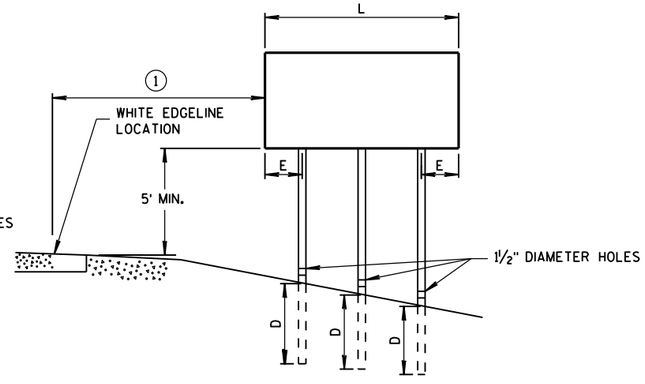
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

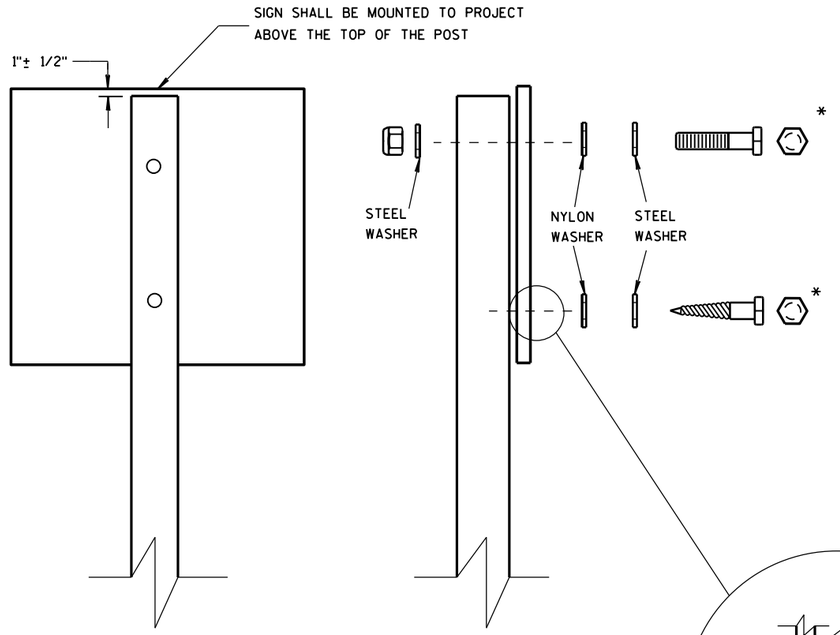
POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

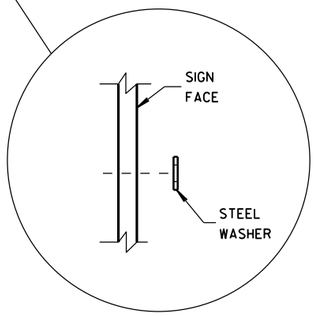
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN DEPARTMENT OF TRANSPOR

6
S.D.D. 15 D 38-1a





WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-1b

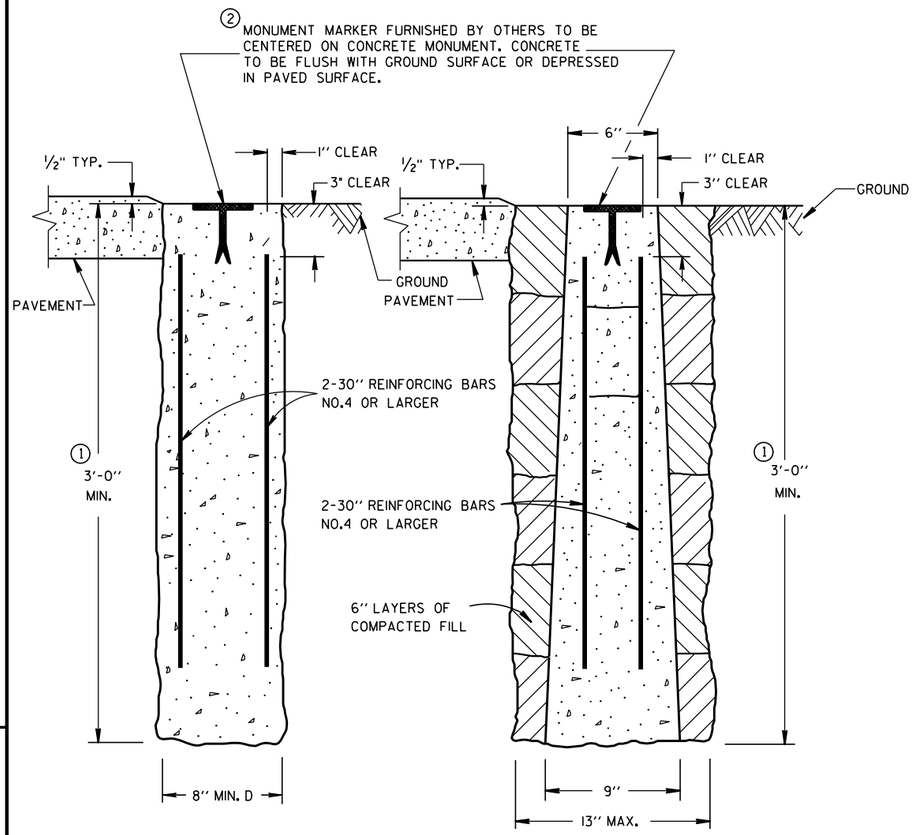
S.D.D. 15 D 38-1b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

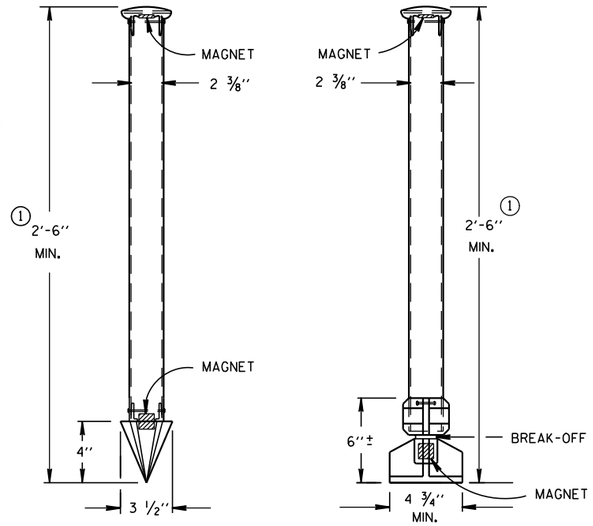
SIGN



CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS

TYPE A



TYPE C DRIVE-IN MONUMENT

TYPE D BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

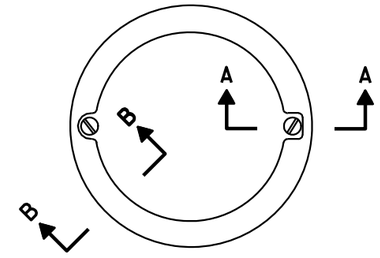
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

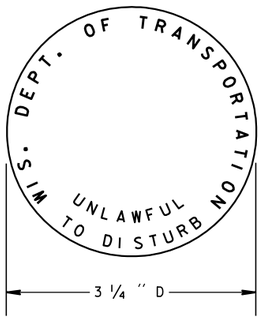
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

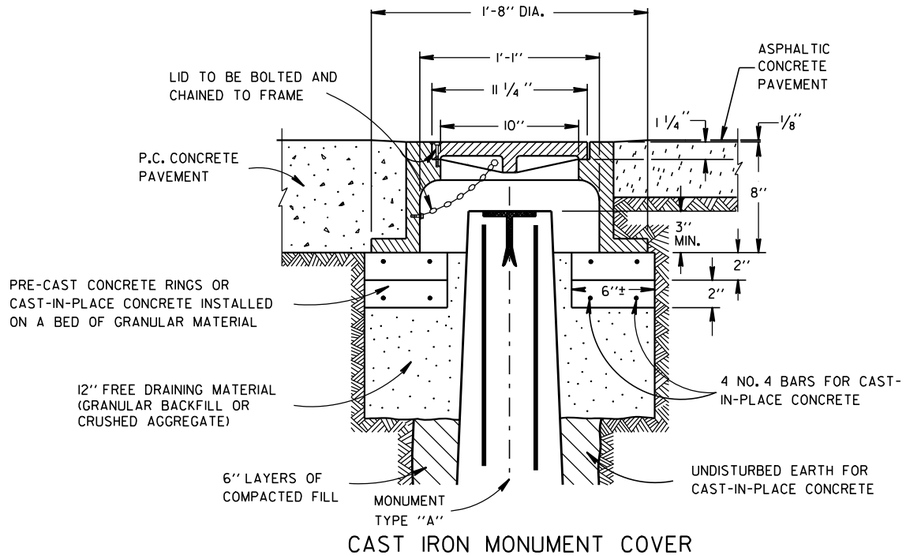
② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW

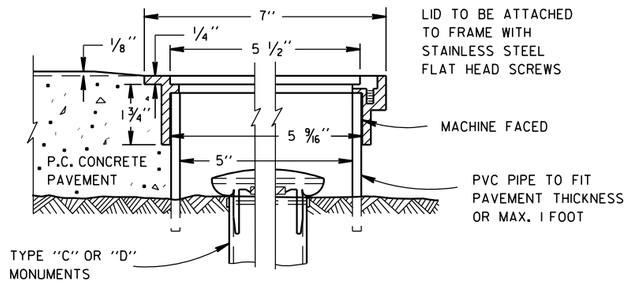


② WIS DOT MONUMENT MARKER LOGO FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)

(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MOUNMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

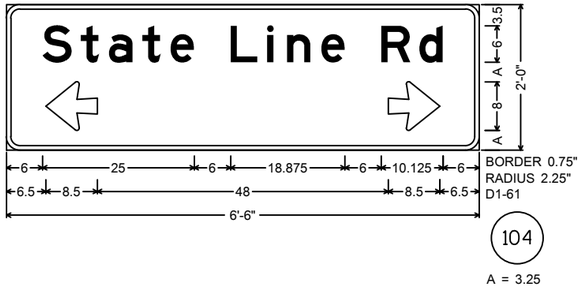
9/22/1999 DATE

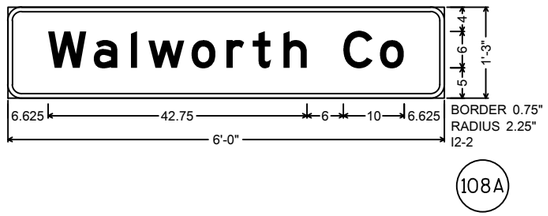
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

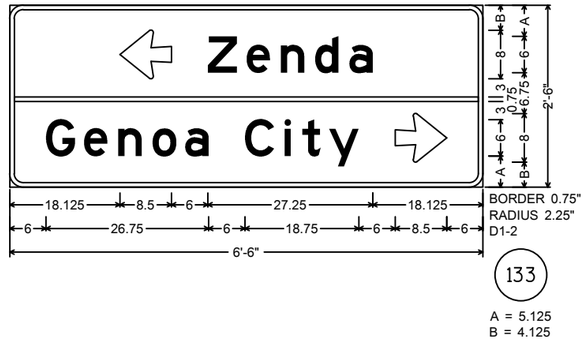
FHWA

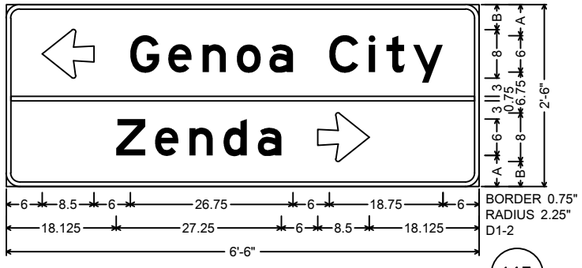
6

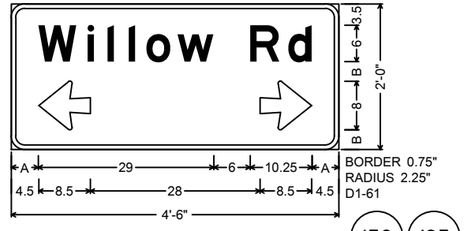
S.D.D. 16 A 1-6









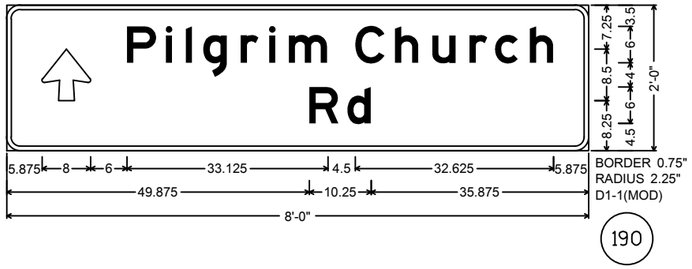


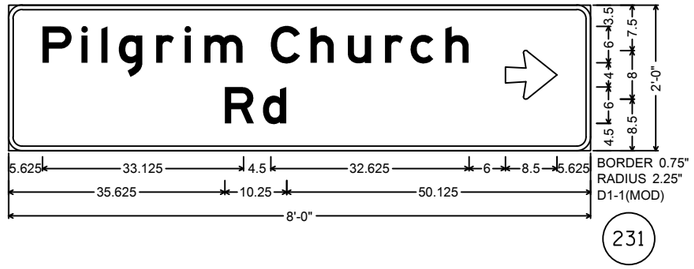
GENERAL NOTES:

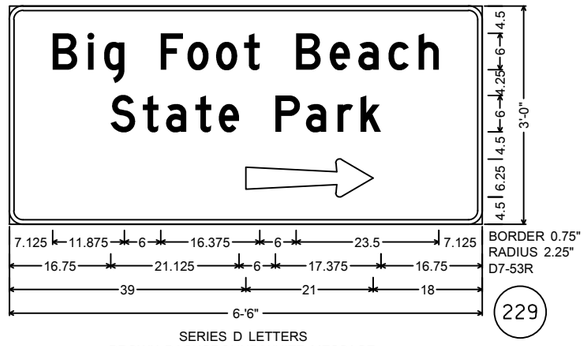
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE "TYPE SH REFLECTIVE SHEETING".
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E MODIFIED". ALL CAP WORDS ARE "SERIES E".
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	SIGN DETAIL - TYPE II SIGNS	SHEET 170	E

FILE NAME : N:\PDS\C3D\CAD\31800760\SIGN\070101_MS.DWG
LAYOUT NAME - 070101_MS
PLOT DATE : 9/8/2016 10:23 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME :
WISDOT/CADDS SHEET







SERIES D LETTERS
BROWN BACKGROUND/WHITE MESSAGE

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE "TYPE SH REFLECTIVE SHEETING".
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6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E MODIFIED". ALL CAP WORDS ARE "SERIES E".
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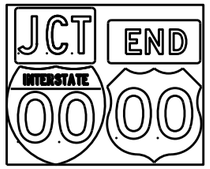
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	SIGN DETAIL - TYPE II SIGNS	SHEET 171	E

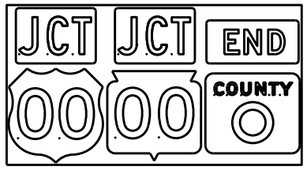
FILE NAME : N:\PDS\C3D\CAD\31800760\SIGN\070101_MS.DWG
LAYOUT NAME - 070101_MS (2)
PLOT DATE : 9/8/2016 10:24 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME :
WISDOT/CADDS SHEET

TYPICAL ASSEMBLIES

J1-1

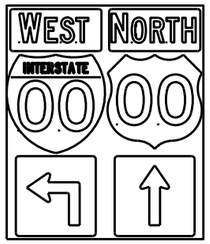


J1-2



J1-3

J2-1



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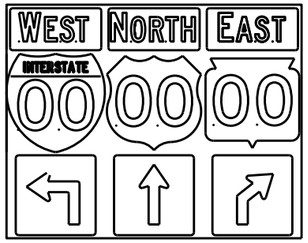
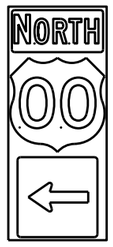


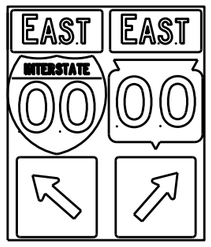
J2-3

JV

(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1



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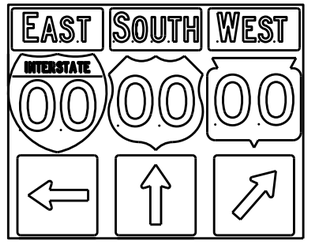

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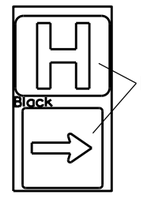
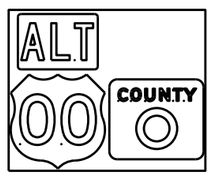


JH-1

J4-1



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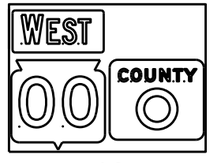
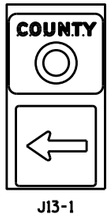


J4-2



J13-1

J12-1

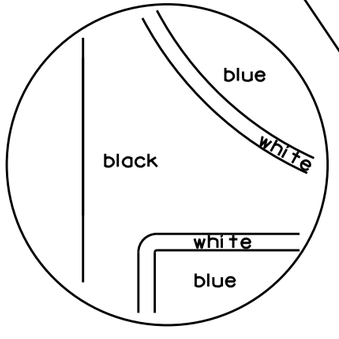
J32-1

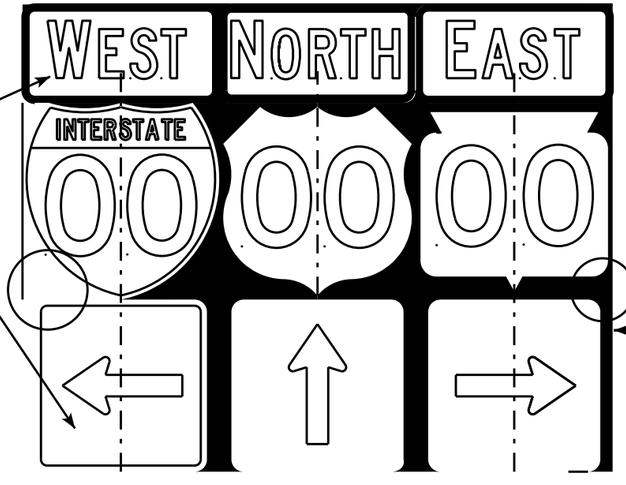
J33-1

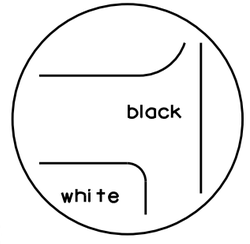
J23-1

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

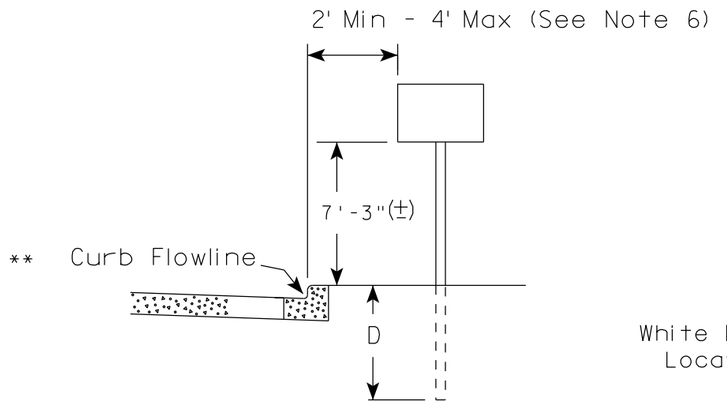
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

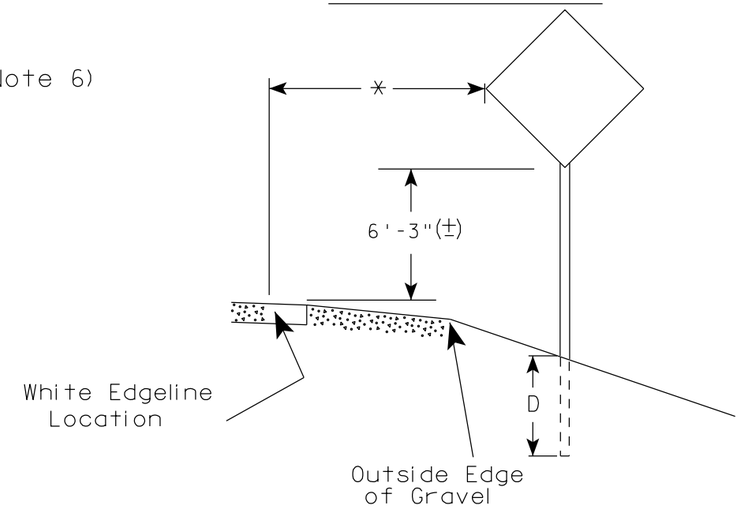
PROJECT NO: | SHEET NO: E

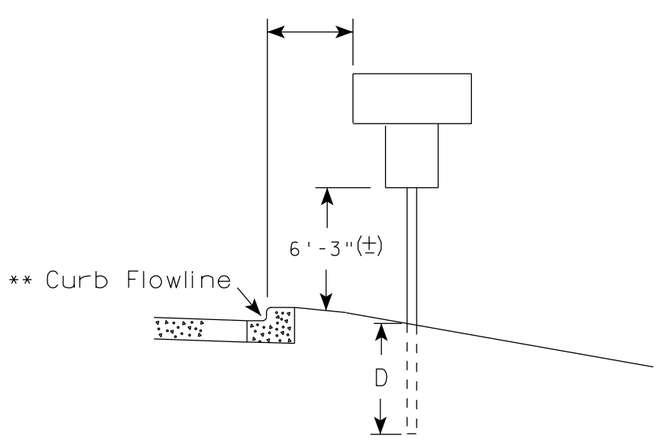
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

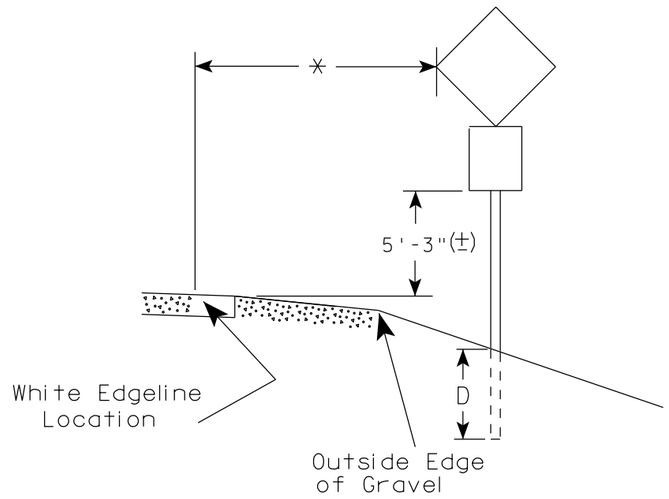
URBAN AREA



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.

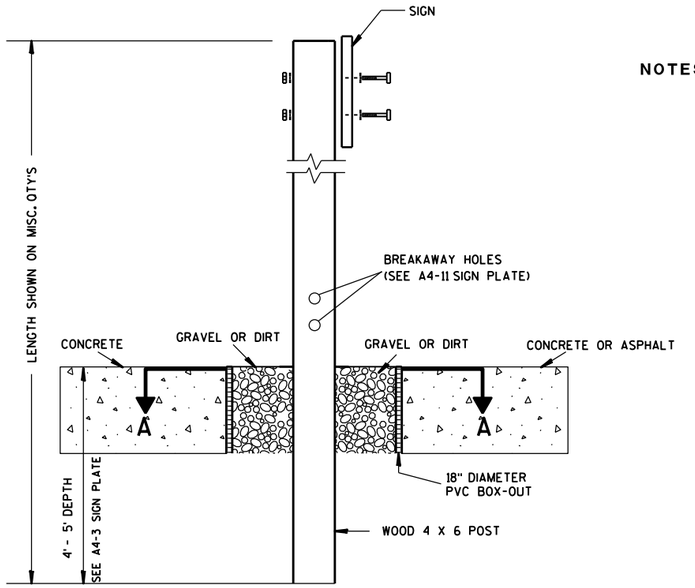
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

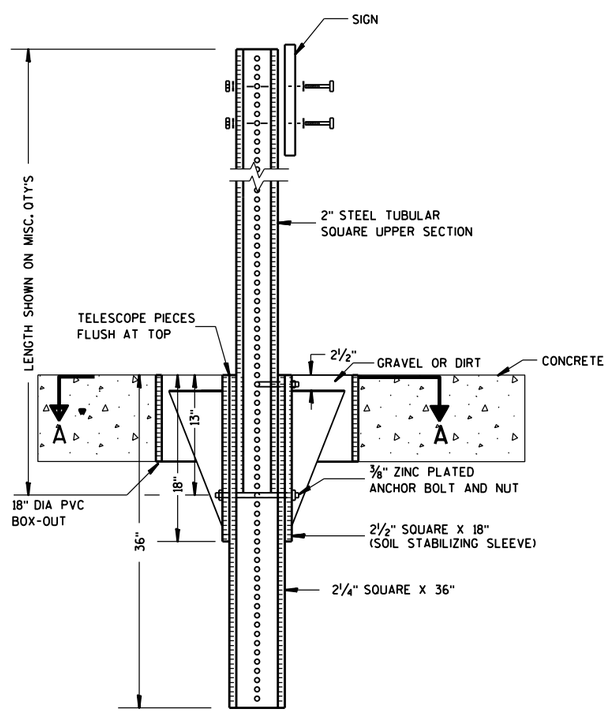
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

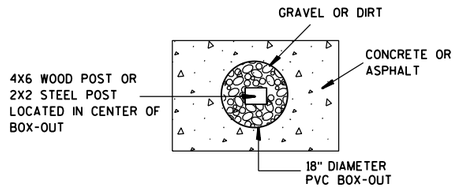
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

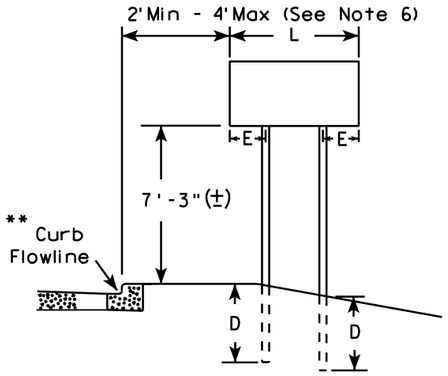
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

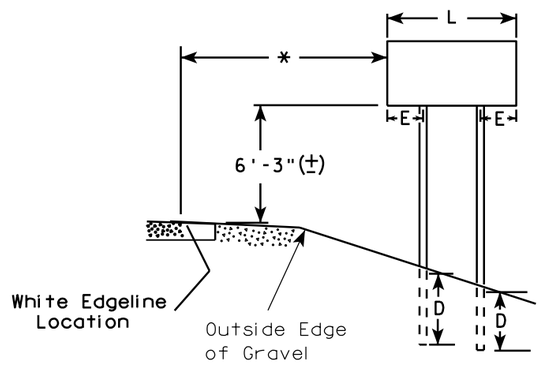
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

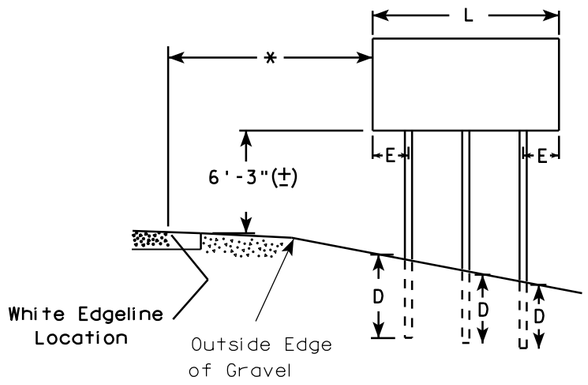
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

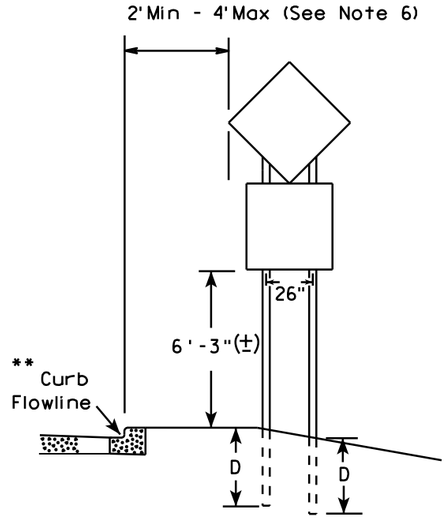
URBAN AREA



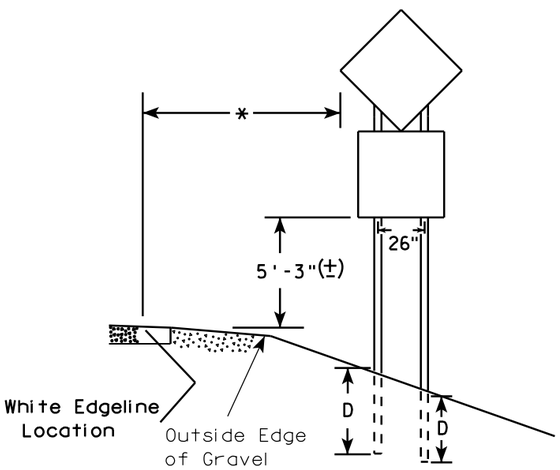
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

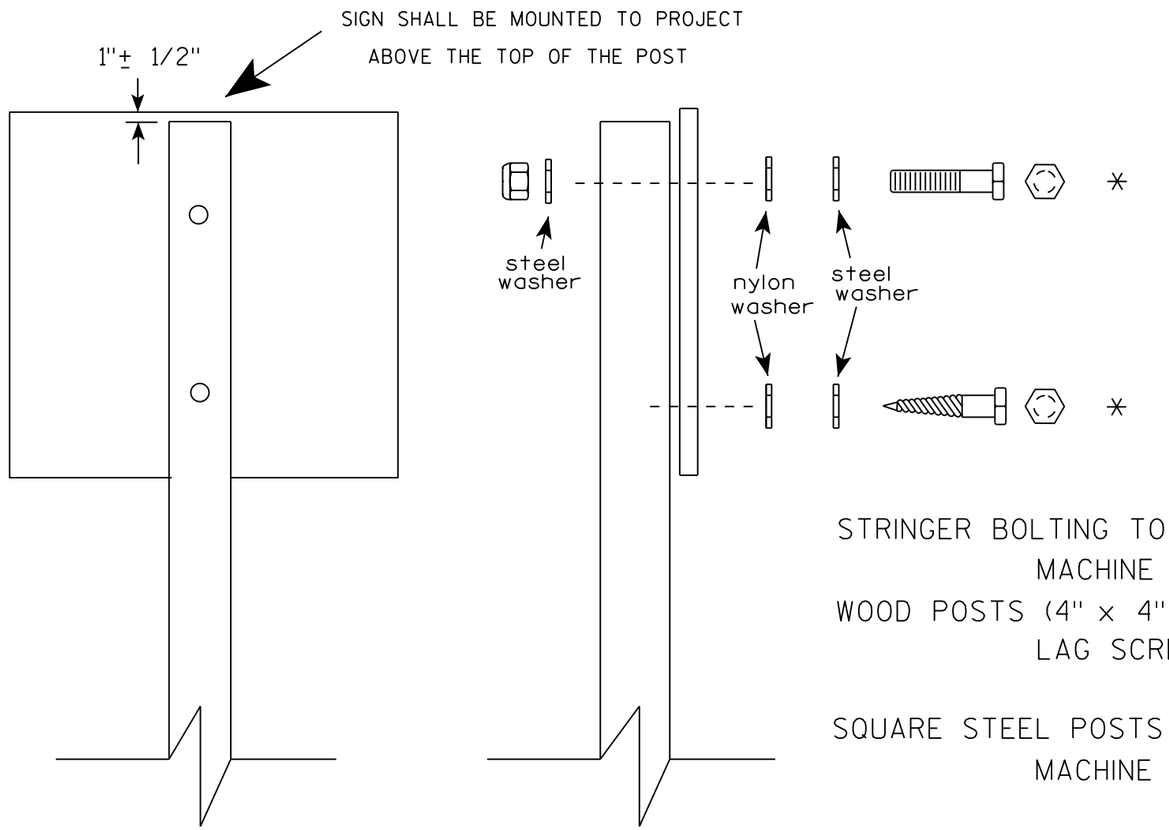
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 175 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

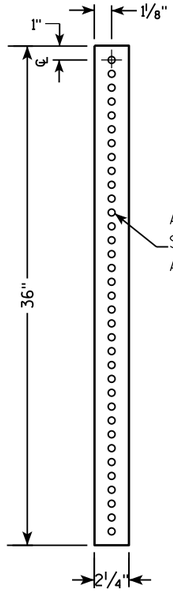
PROJECT NO:

SHEET NO: E

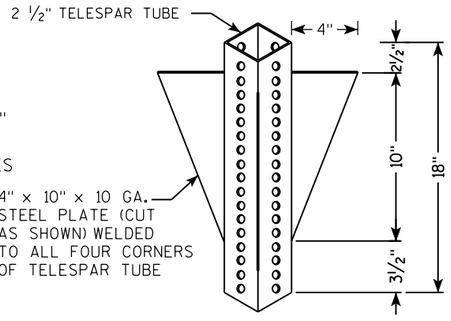
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

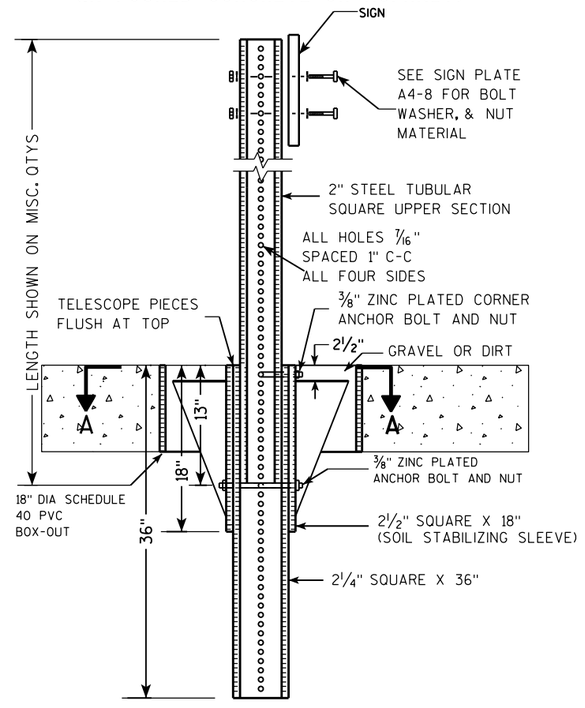
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



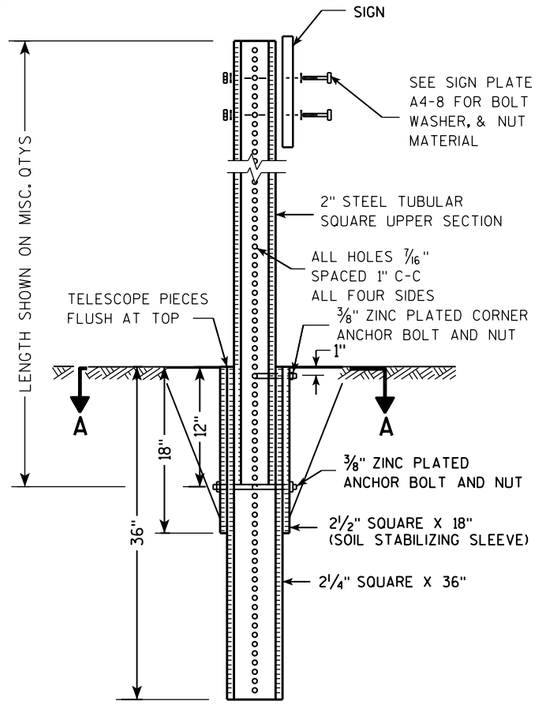
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

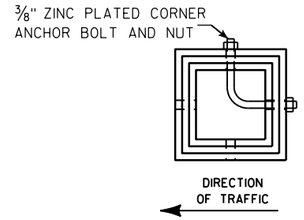


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

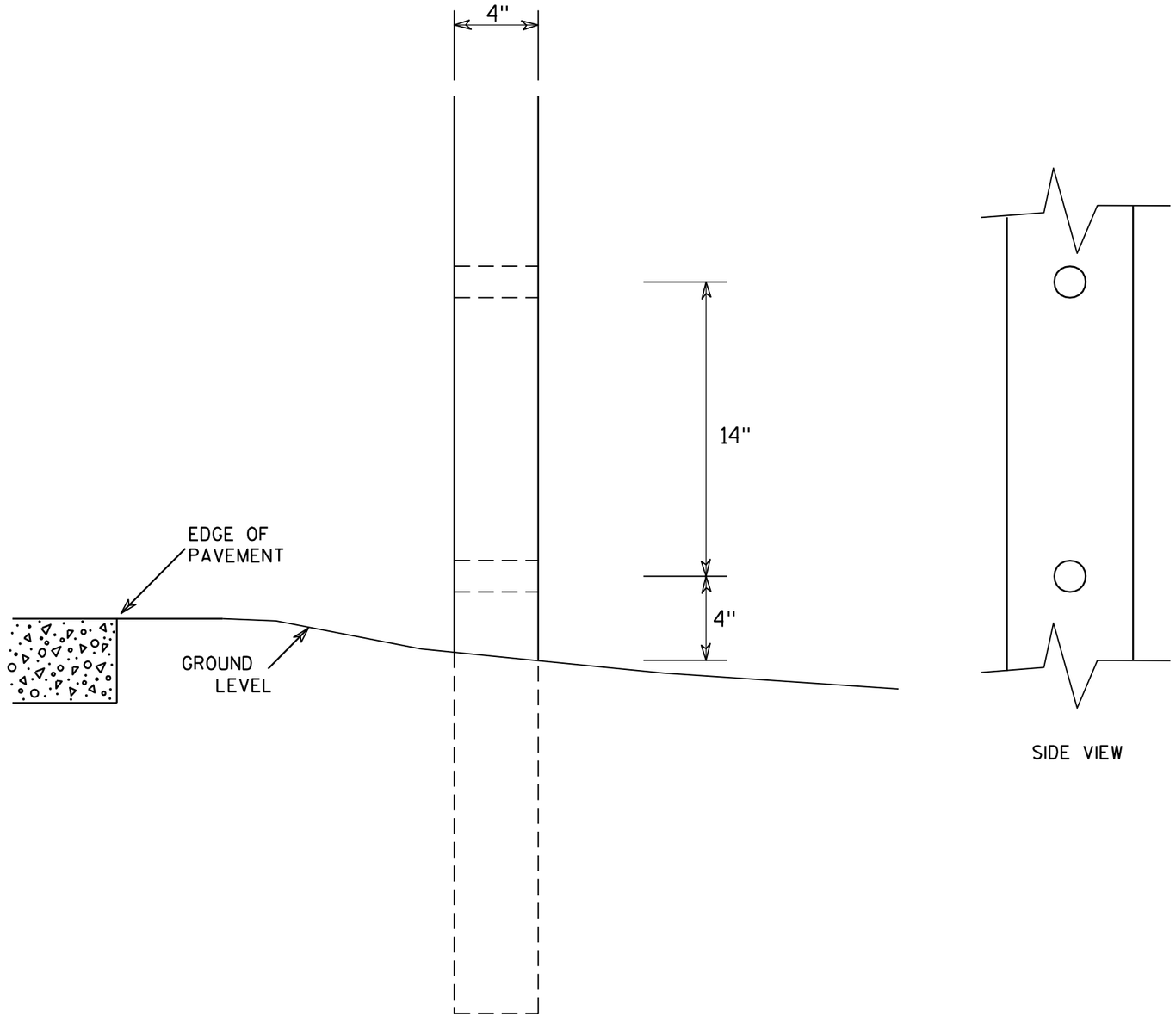
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 177 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

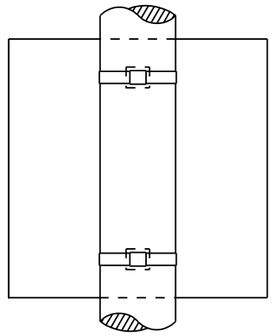
APPROVED Chester J Spang for State Traffic Engineer

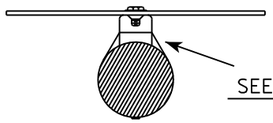
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 178	E

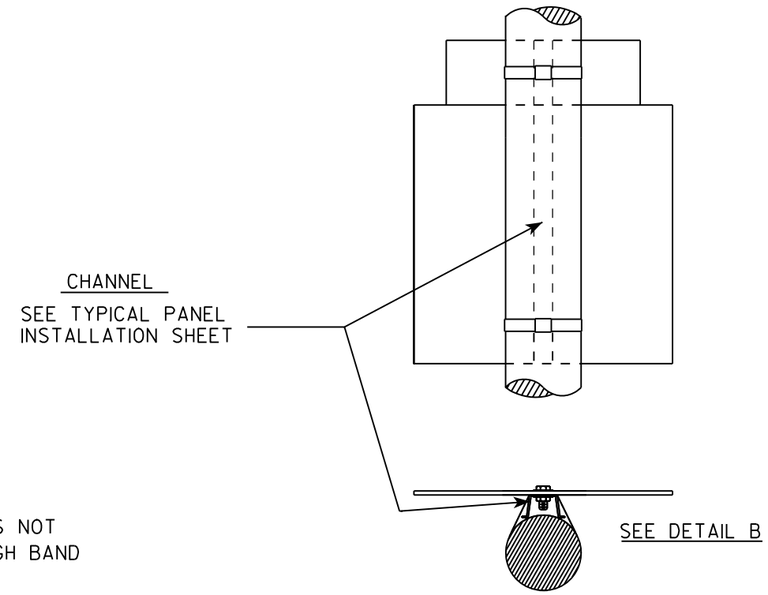
BANDING

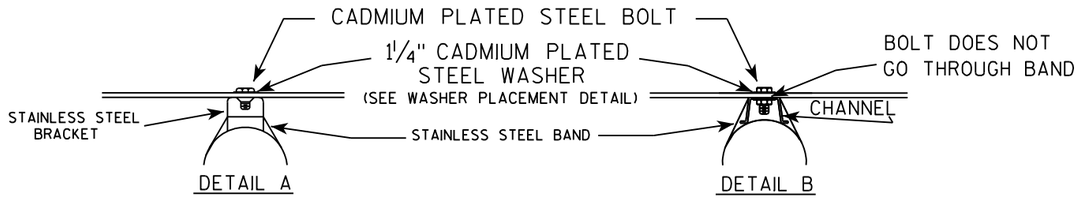
SINGLE SIGN



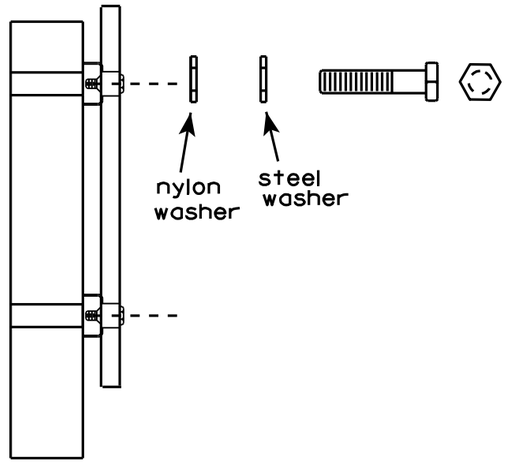


"J" ASSEMBLY





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.

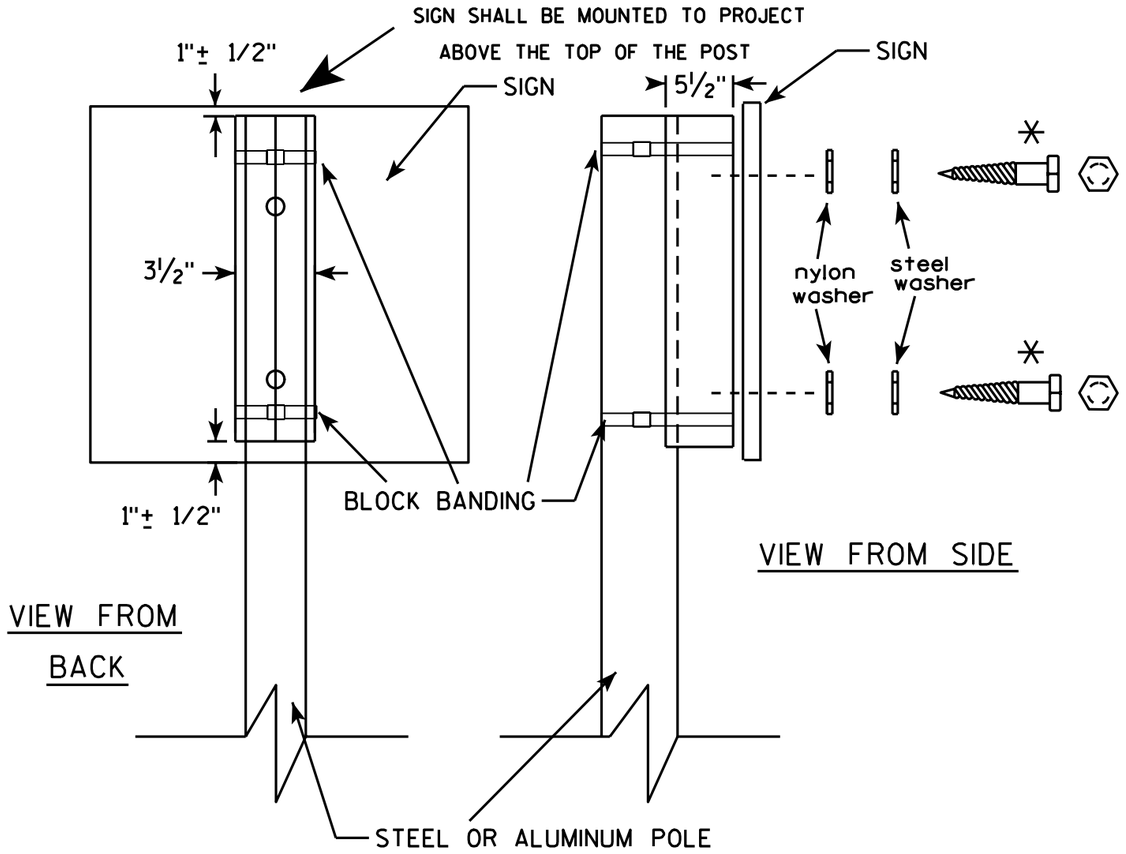
STANDARD SIGN
SIGN BANDING DETAILS

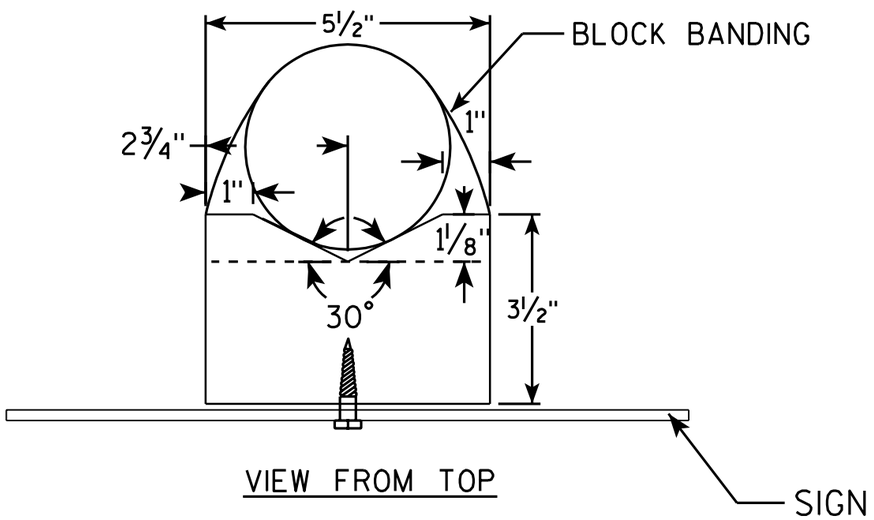
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 179	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)

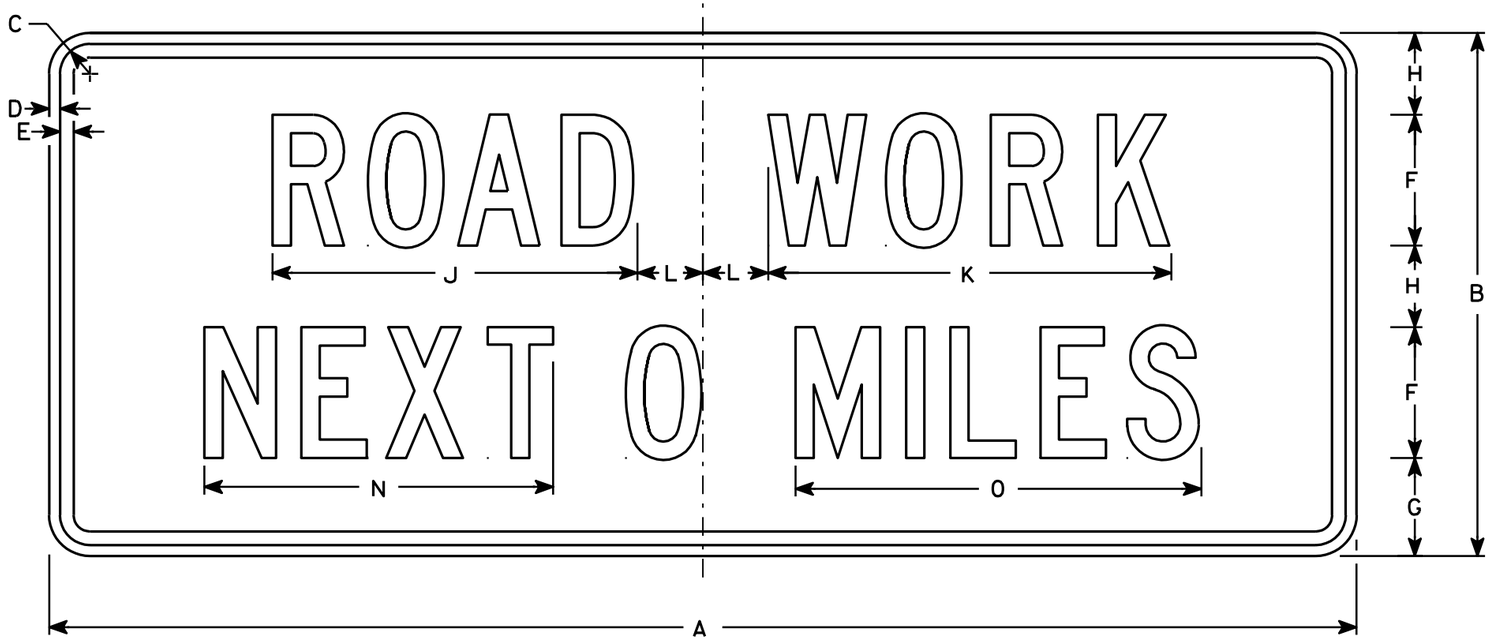
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 180 E



G20-1

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 - 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 and optically adjust spacing to achieve proper balance

Metric equivalent for this sign is:

SIZE	
1	
2	1500 mm X 600 mm
3	
4	1500 mm X 600 mm
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10	.90
3																												
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10	.90
5																												

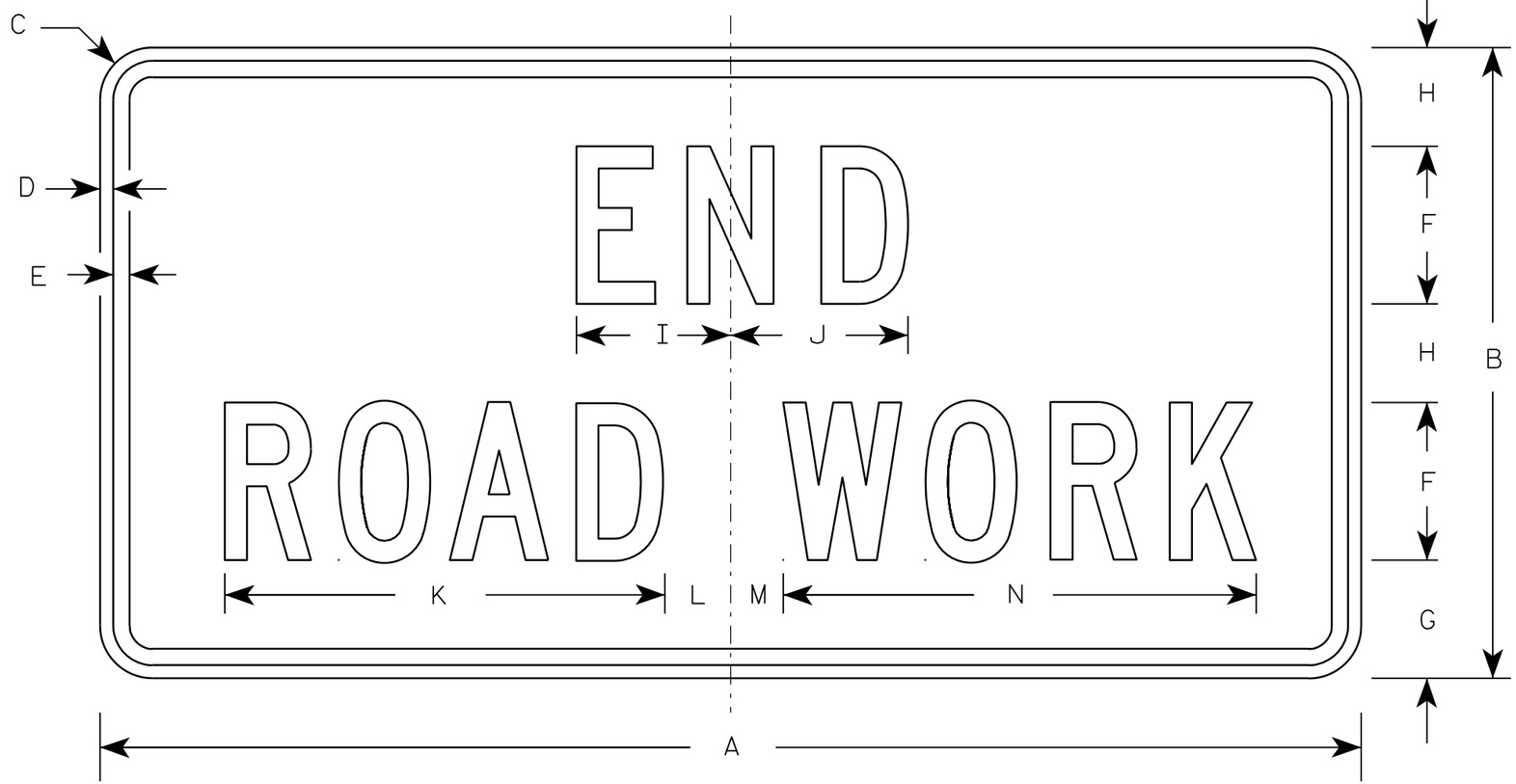
STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spray for State Traffic Engineer

DATE 4/8/97 PLATE NO. G20-1.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 181	E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

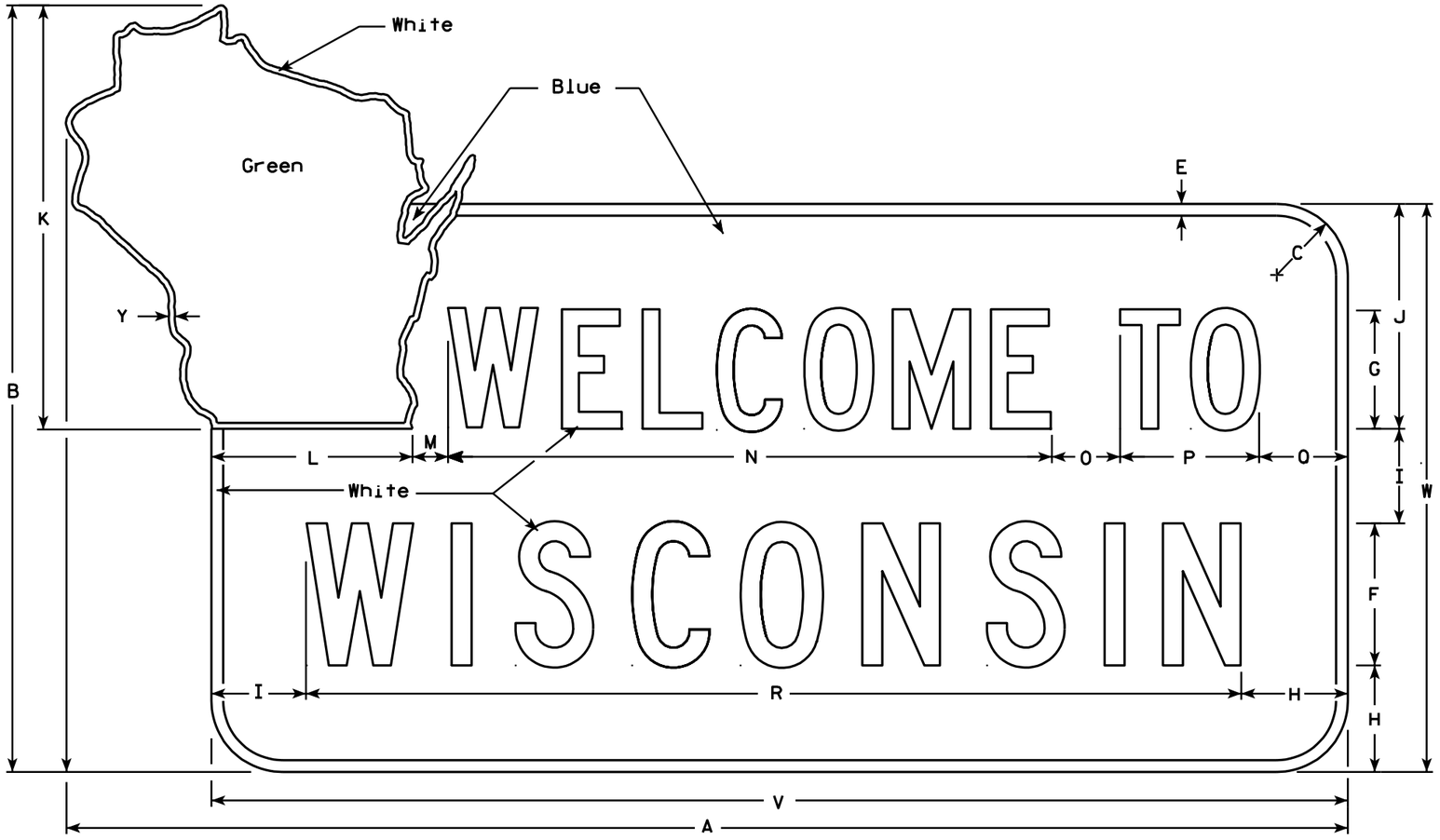
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 182	E



I2-1B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - As Noted
   Message - As Noted - Type H Reflective
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The State Cutout is a scaled reproduction of State Outline.

Metric equivalent for this sign is:

SIZE	
1	
2	2750 mm X 1650 mm
3	
4	
5	

*Combination of state cutout and main sign board.

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.	Area sq. m.
1																												
2	108 ½	65	6		1	12	10	9	8	19	36	17	3	51	5 ¾	11 ¾	7 ½	79				96	48		½		41.0*	3.81
3																												
4																												
5																												

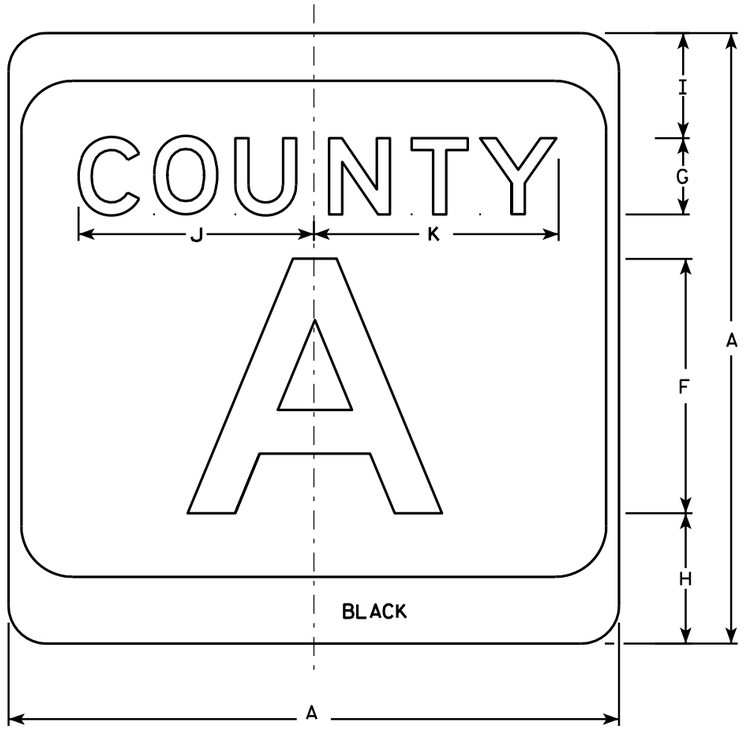
STANDARD SIGN
I2-1B

WISCONSIN DEPT OF TRANSPORTATION

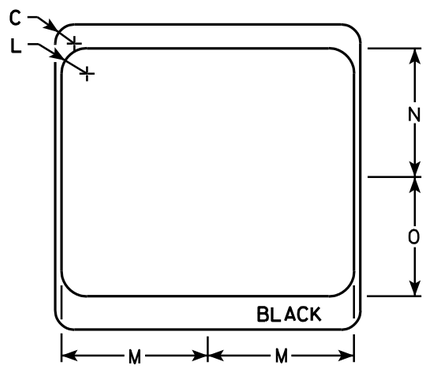
APPROVED Chester J Spang for State Traffic Engineer

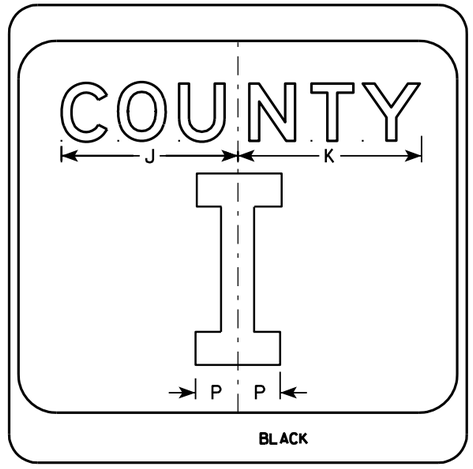
DATE 1/24/02 PLATE NO. I2-1B.4

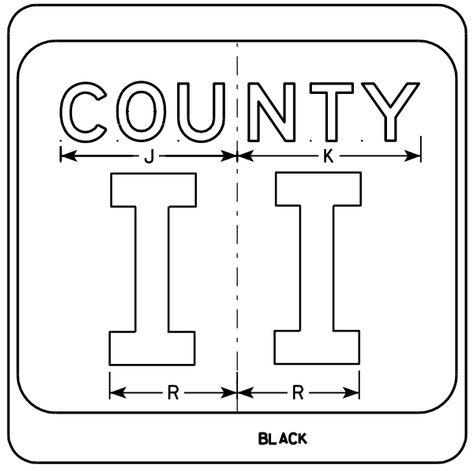
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 183	E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   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. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

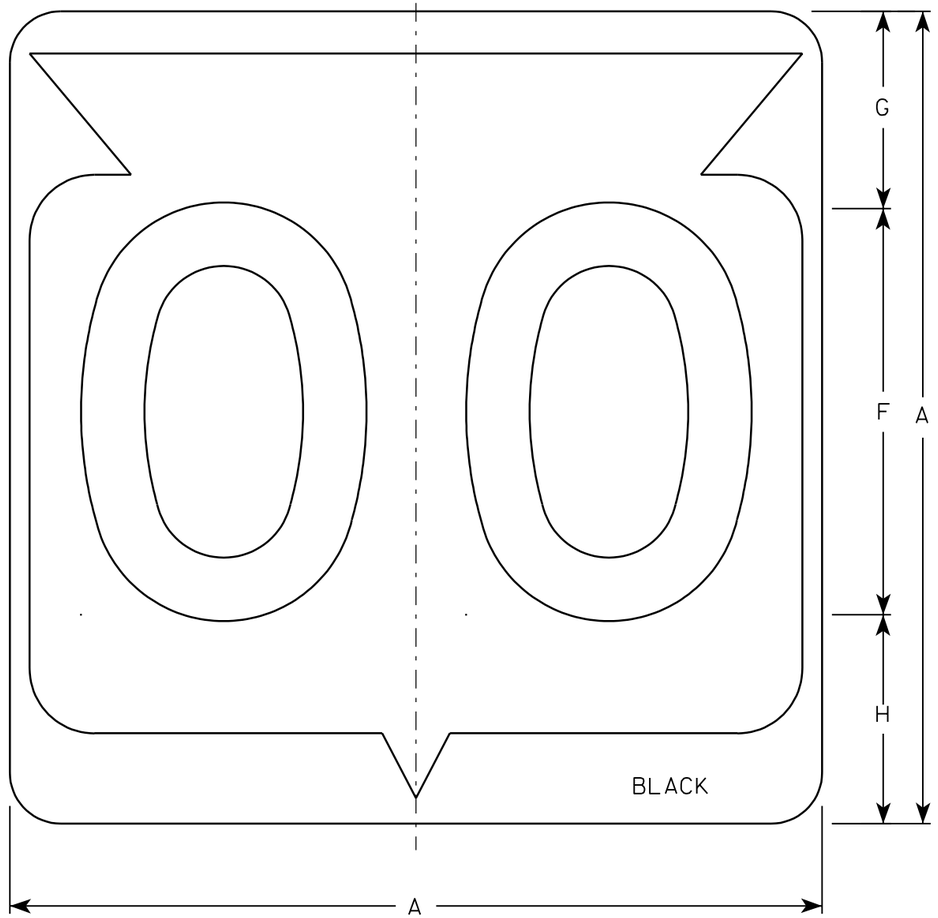
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

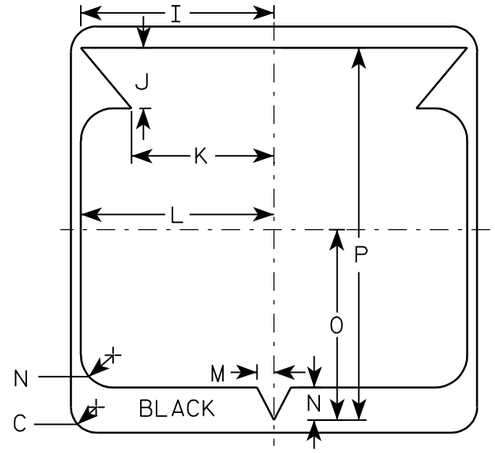
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 184 | E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

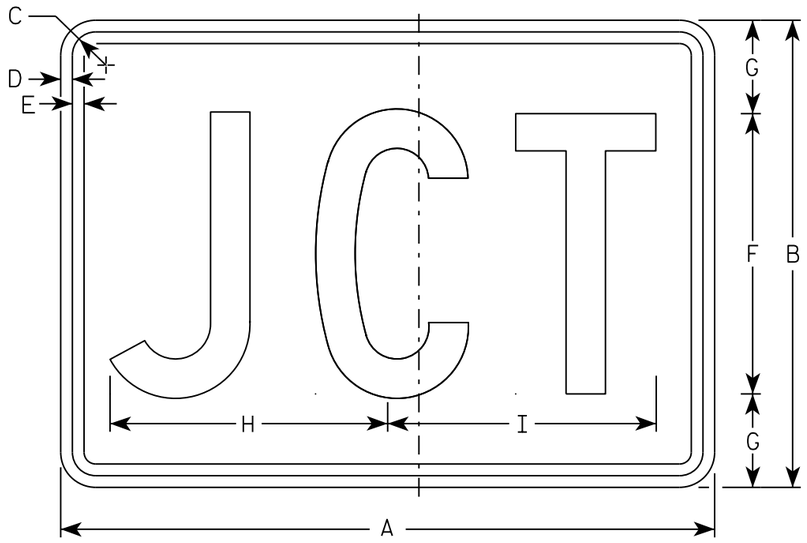
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

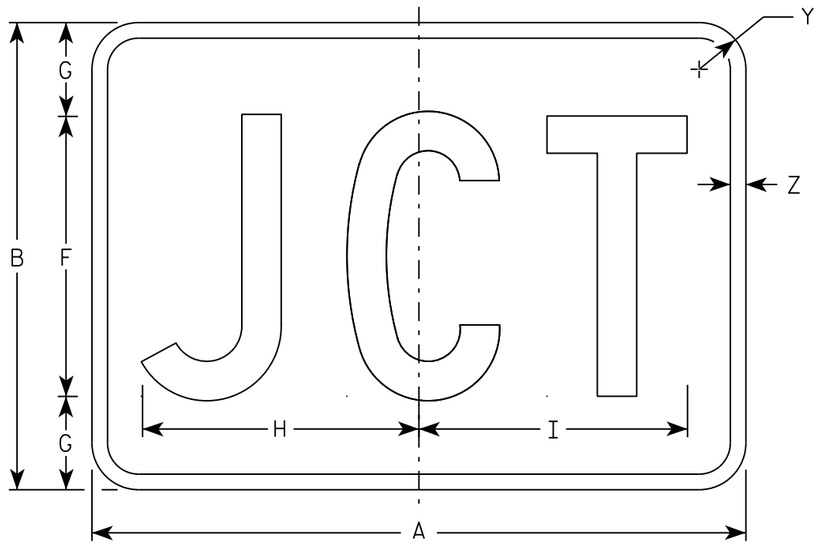
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 185	E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is 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. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN
M2-1

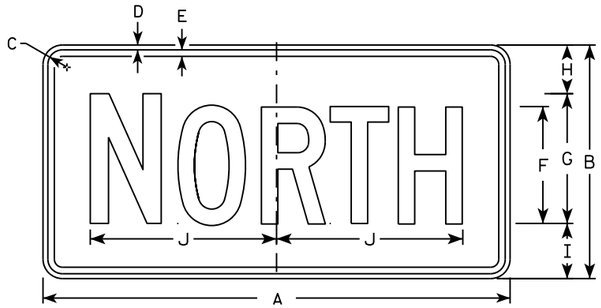
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

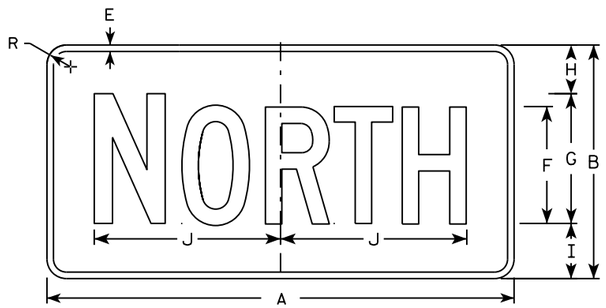
DATE 10/15/15 PLATE 186 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M21.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.864603:1.000000



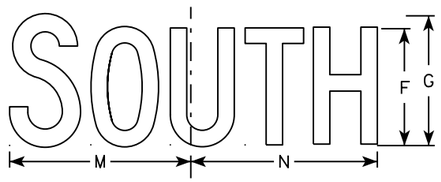
M3-1
MM3-1
MP3-1



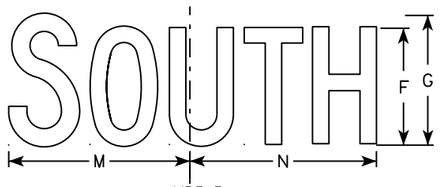
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

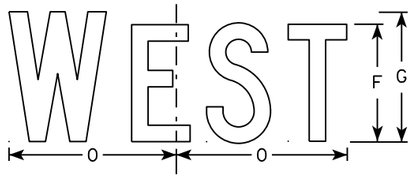
MB3-2
MK3-2
MN3-2



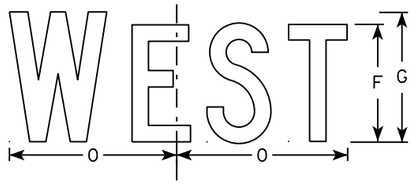
M3-3
MM3-3
MP3-3



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

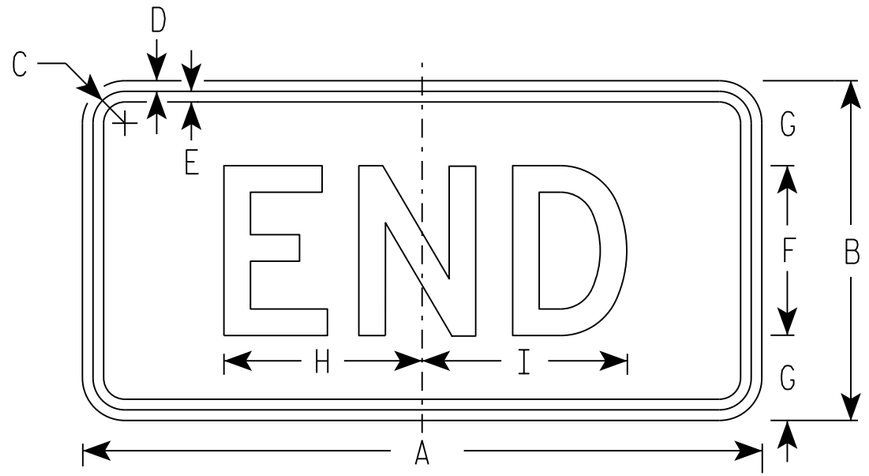
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

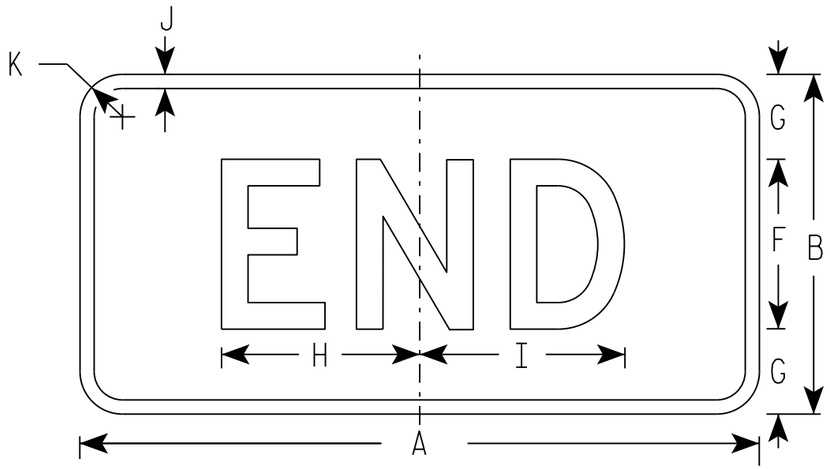
DATE 10/15/15 PLATE NO M3-1.14

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



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-6 Background - White
   Message - Black

   MB4-6 Background - Blue
   Message - White

   MK4-6 Background - Green
   Message - White

   MM4-6 Background - White
   Message - Green

   MN4-6 Background - Brown
   Message - White

   MP4-6 Background - White
   Message - Blue

   MR4-6 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-6

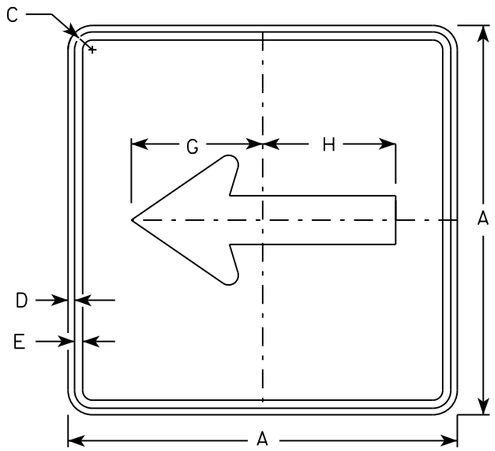
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

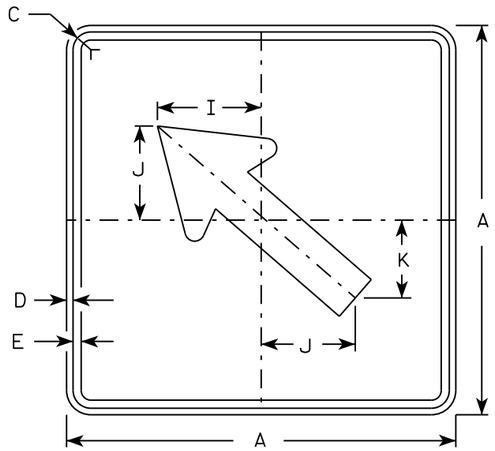
DATE 10/15/15 PLATE 188 '14-7.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M46.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



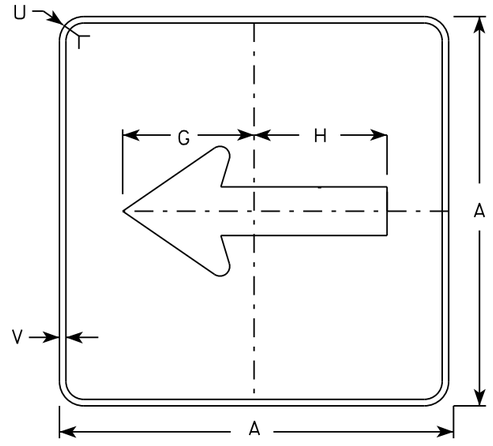
M6-1
MM6-1
MO6-1
MP6-1



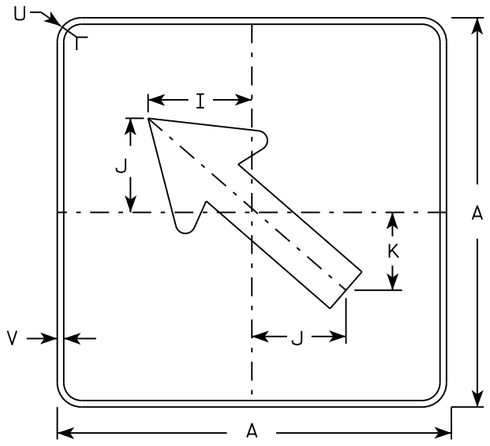
M6-2
MM6-2
MO6-2
MP6-2

NOTES

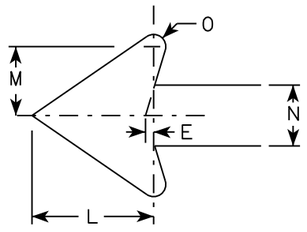
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

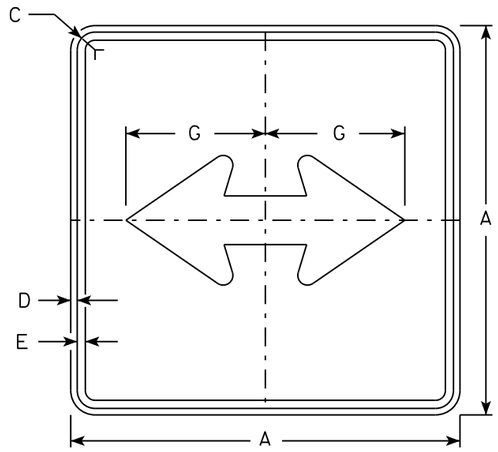
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

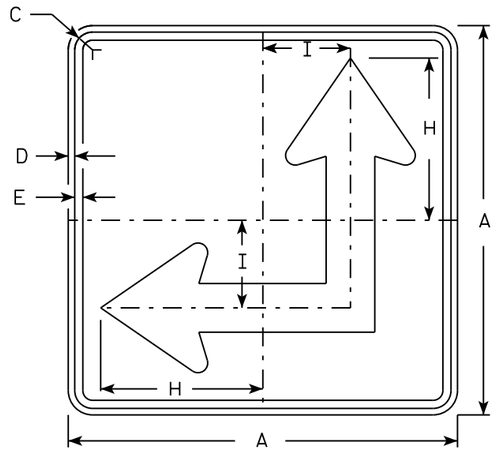
DATE 10/15/15 PLATE 189 M6-1.15

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



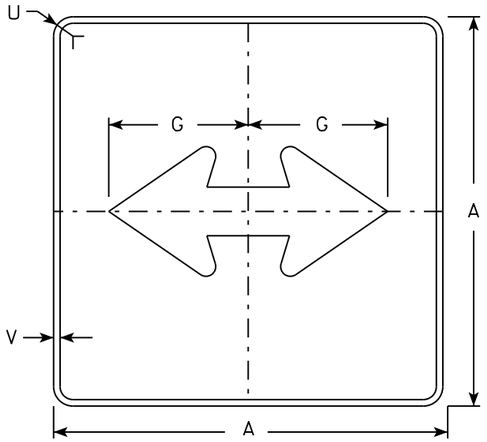
M6-4
MM6-4
MO6-4
MP6-4



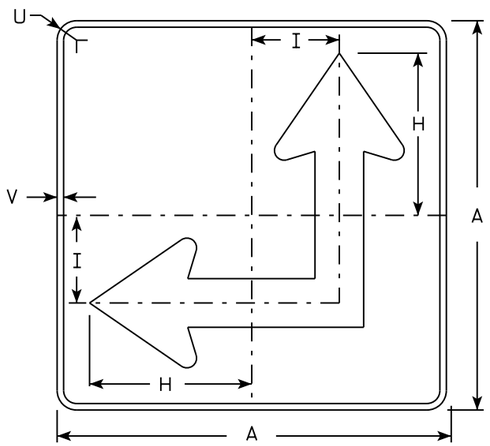
M6-6
MM6-6
MO6-6
MP6-6

NOTES

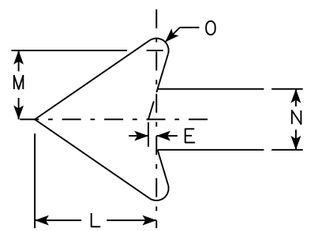
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6



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	8 3/4	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	12 1/2	6 3/4			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	12 1/2	6 3/4			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	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-4 & M6-6
SERIES

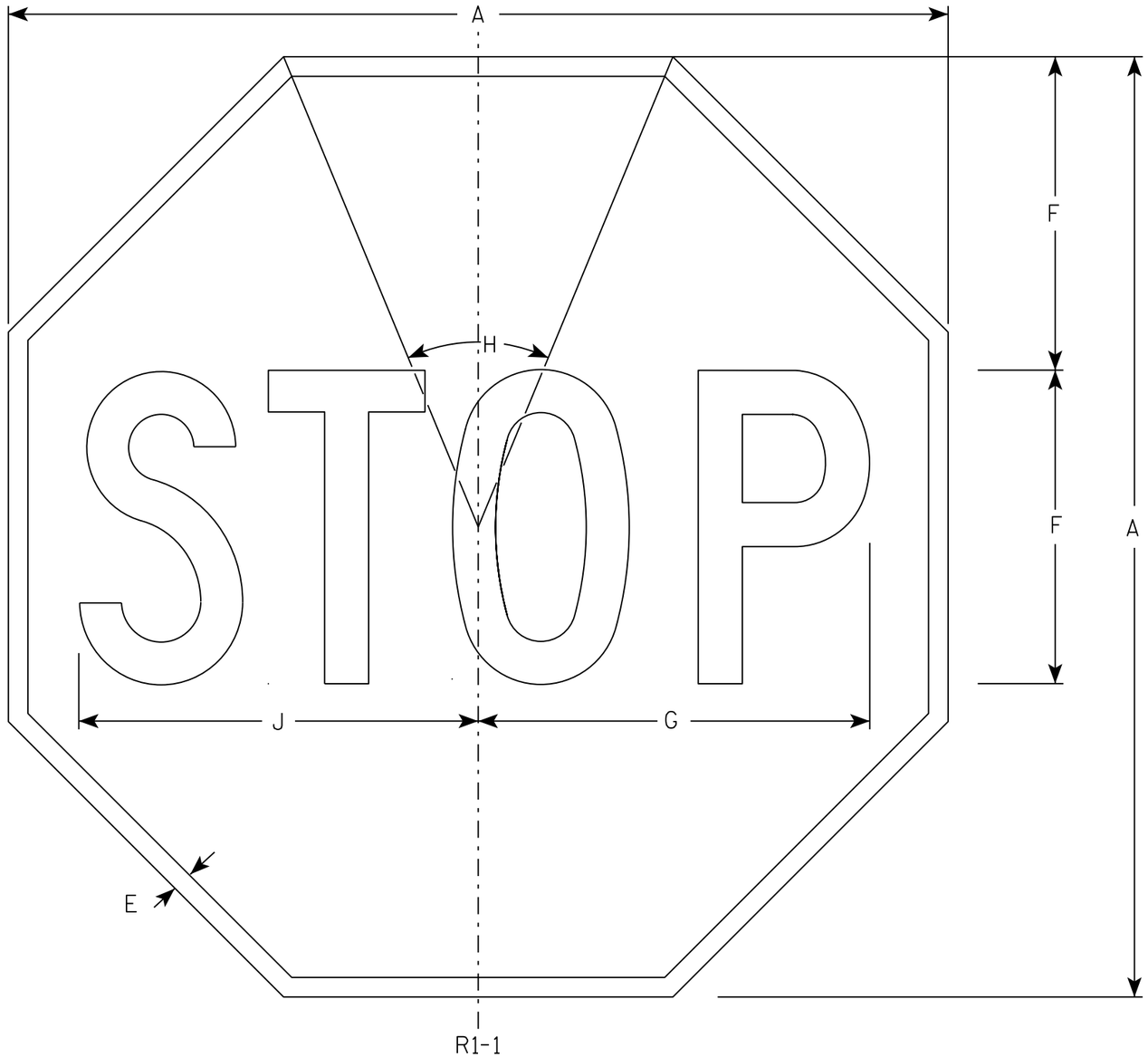
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 190 M6-4.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 01-DEC-2015 17:58 PLOT BY : $$ platuser $$ 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

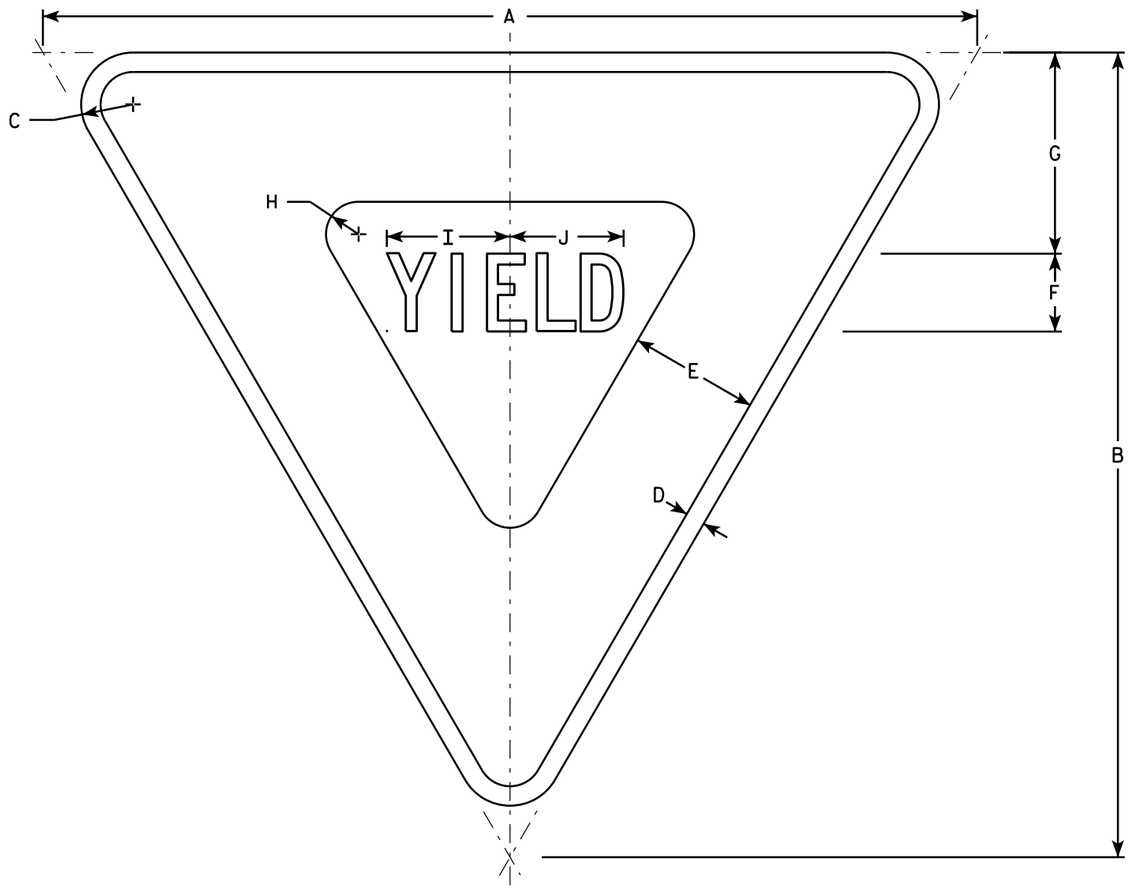
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE 191 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



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

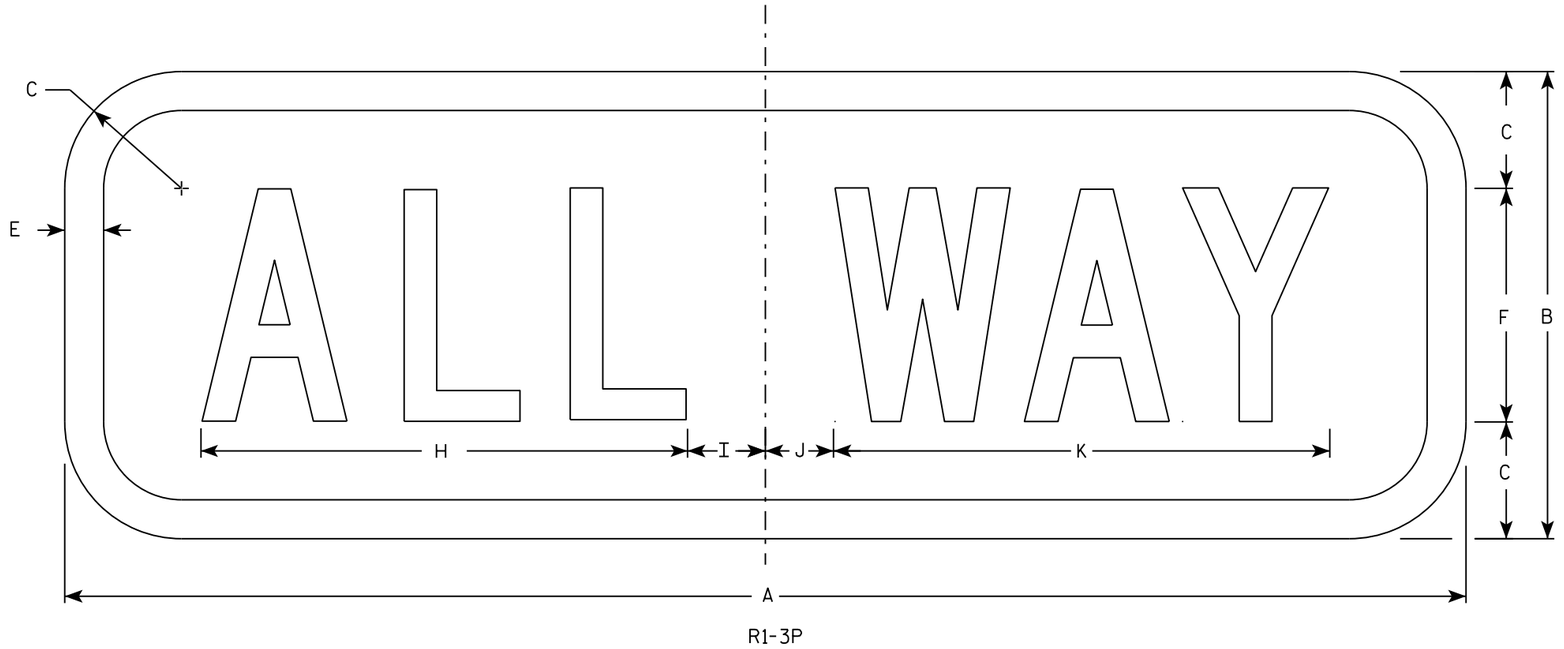
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



R1-3P

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	6	1 ½		½	3		6 ¼	1 ¼	⅞	6 ⅜																0.75
2S	18	6	1 ½		½	3		6 ¼	1 ¼	⅞	6 ⅜																1.5
2M	24	9	1 ½		½	5		9 ¼	1 ¼	¾	9 ¾																1.5
3	24	9	1 ½		½	5		9 ¼	1 ¼	¾	9 ¾																1.5
4	30	12	2 ¼		⅝	6		11	2 ¼	1 ½	11 ¾																2.5
5	30	12	2 ¼		⅝	6		11	2 ¼	1 ½	11 ¾																2.5

STANDARD SIGN
R1-3P

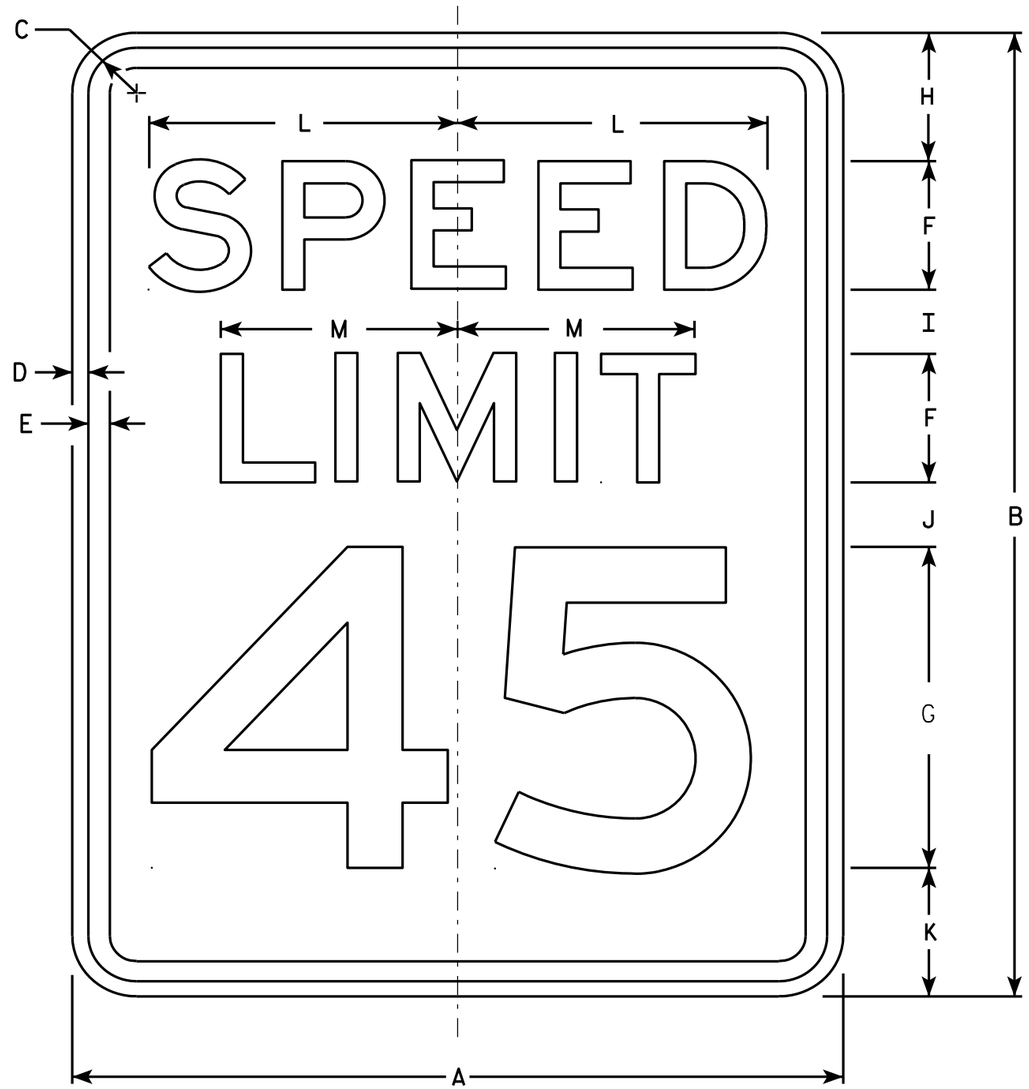
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/24/15 PLATE No. R1-3P.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R13P.DGN PLOT DATE : 01-DEC-2015 18:08 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 1.945842:1.000000



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

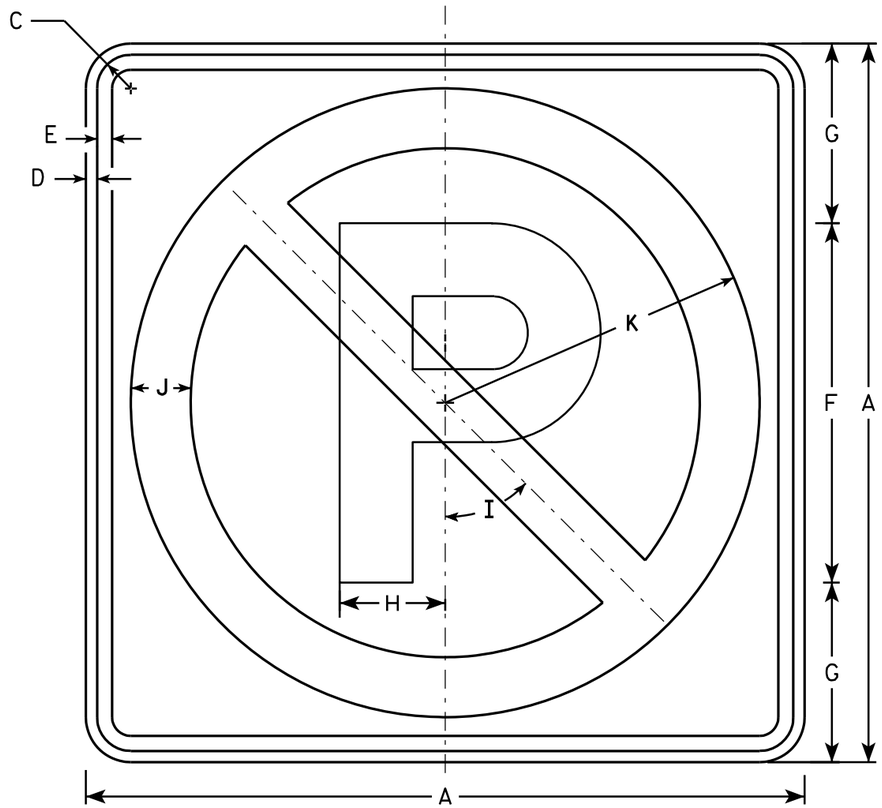
STANDARD SIGN
R2-1

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: 194 | E



R3-8A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Letter P are non reflective black, the circle with diagonal bar is reflective red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2	12	6	3 1/2	45°	2	10 1/2																4.0
2M	24		1 1/8	3/8	1/2	12	6	3 1/2	45°	2	10 1/2																4.0
3																											
4																											
5																											

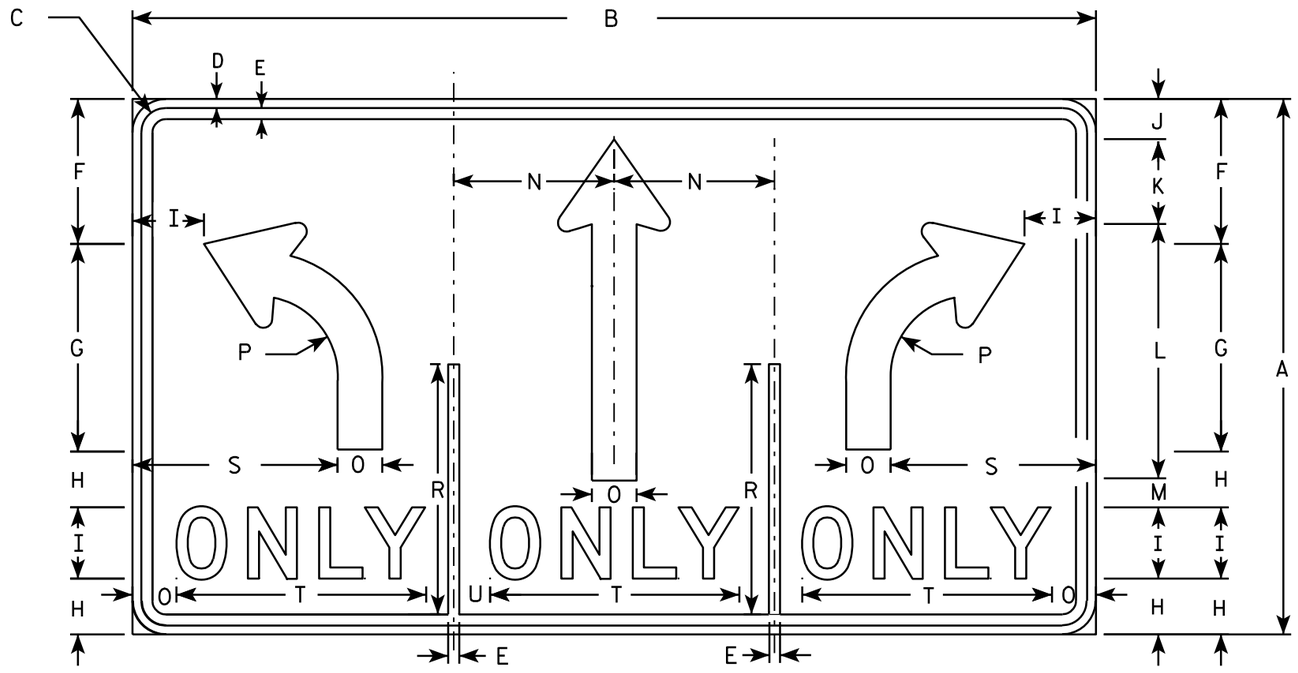
STANDARD SIGN
R3-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/01/12 PLATE NO. R3-8A.1

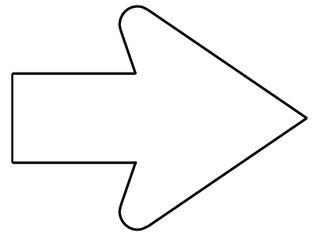
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 195 | E



R3-8W

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.



SEE R3-8 FOR ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	9	2 1/2	4 1/2		14	11 1/2	14	2						11.25
2M	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	9	2 1/2	4 1/2		14	11 1/2	14	2						11.25
3																											
4	48	84	2 1/4	3/4	1	13	18 1/2	5 1/4	6	3 3/4	7	29 1/8	2 3/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 1/2	3 1/4						28.0
5	48	84	2 1/4	3/4	1	13	18 1/2	5 1/4	6	3 3/4	7	29 1/8	2 7/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 1/2	3 1/4						28.0

STANDARD SIGN
R3-8W

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-8W.4

PROJECT NO:

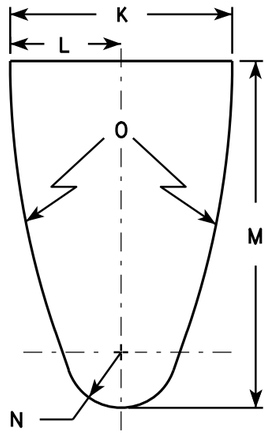
SHEET NO: 196 E

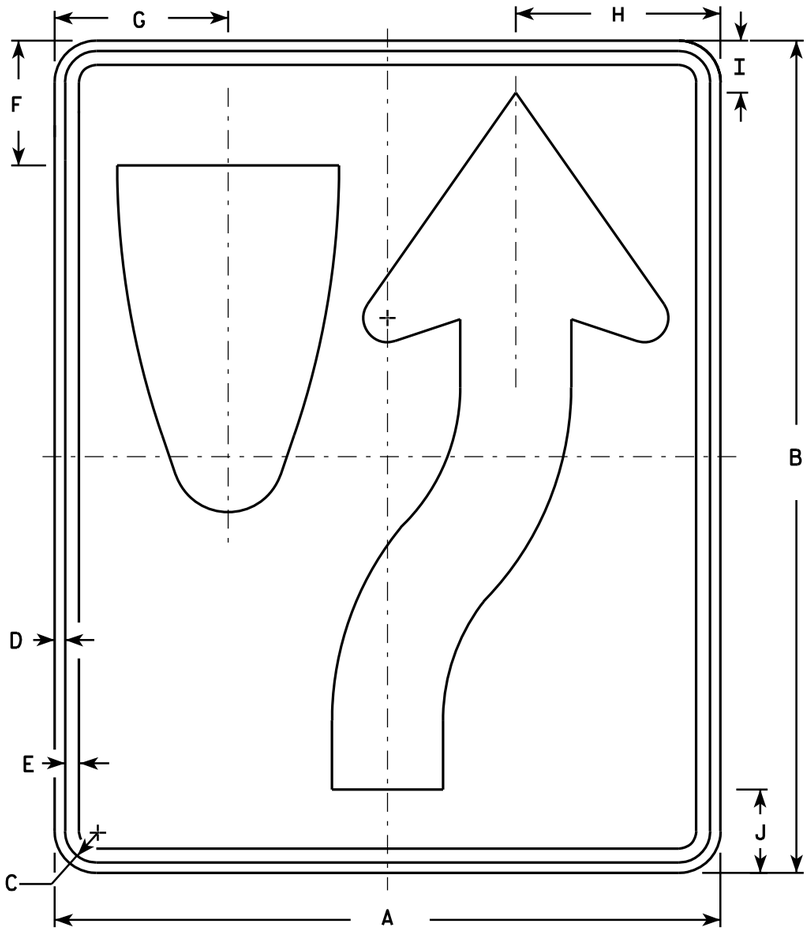
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R38W.DGN PLOT DATE : 24-MAR-2011 10:19 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42

7

7

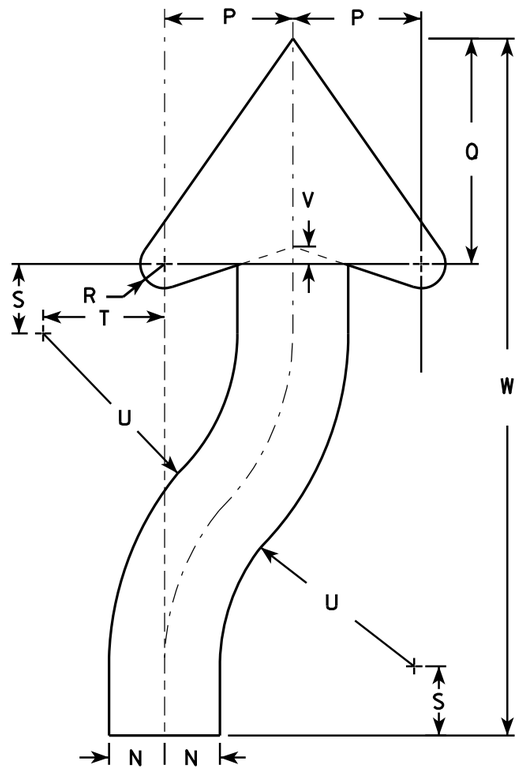




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

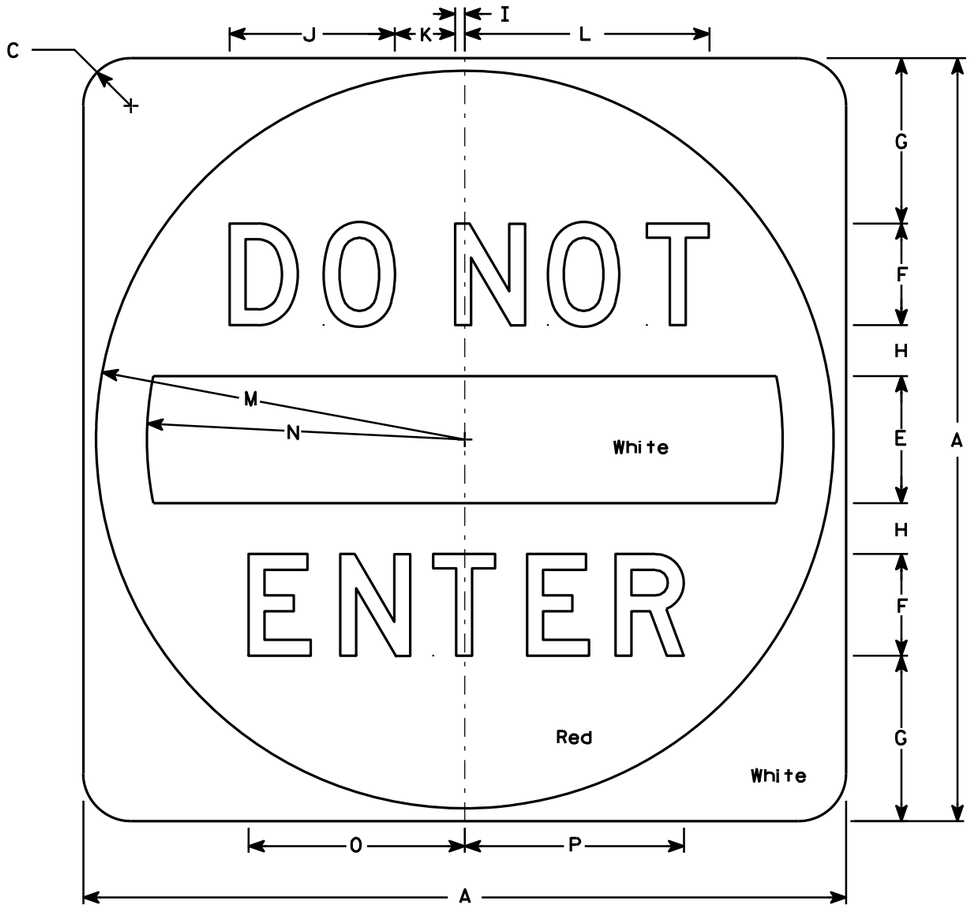
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 197	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

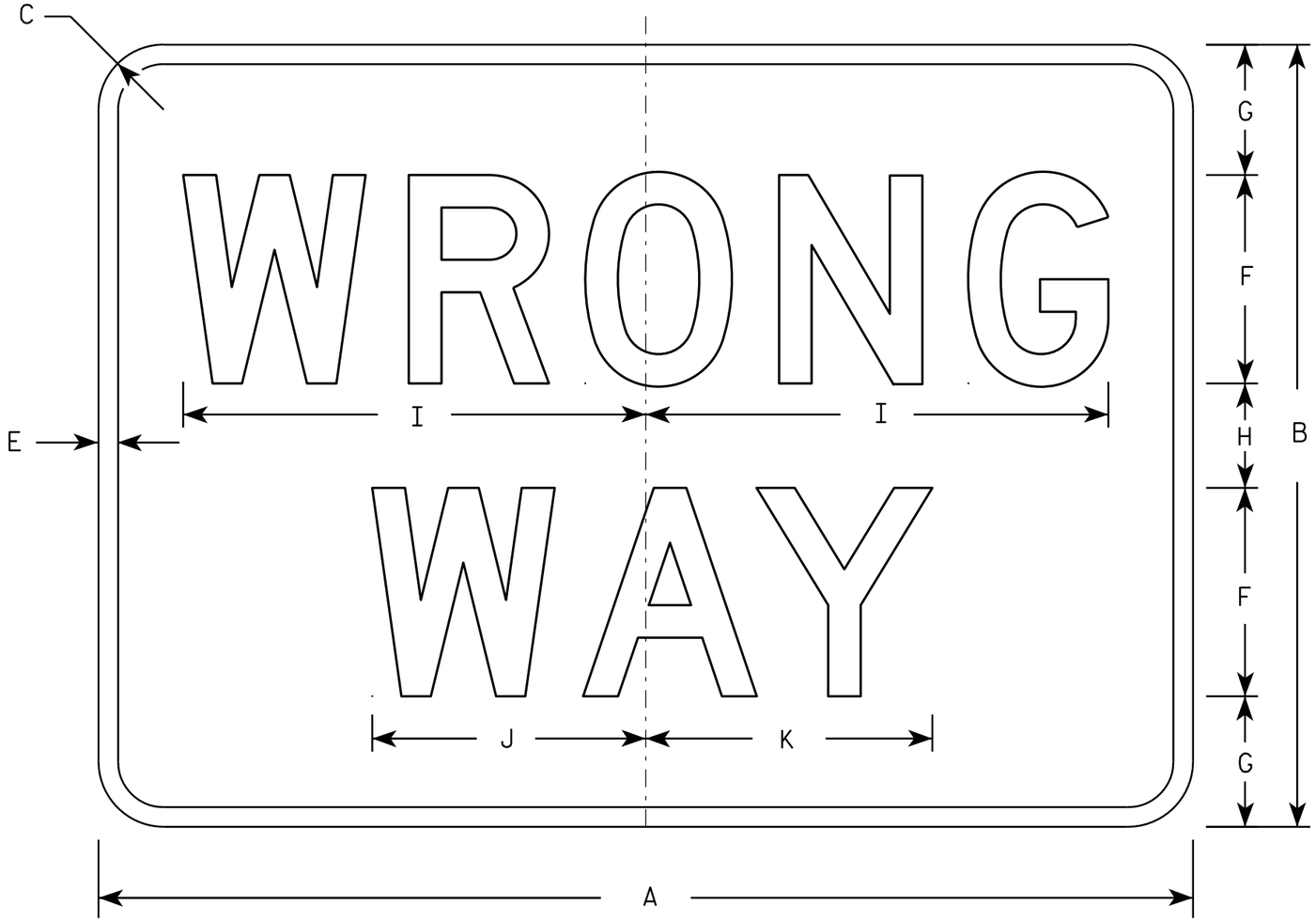
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 198 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

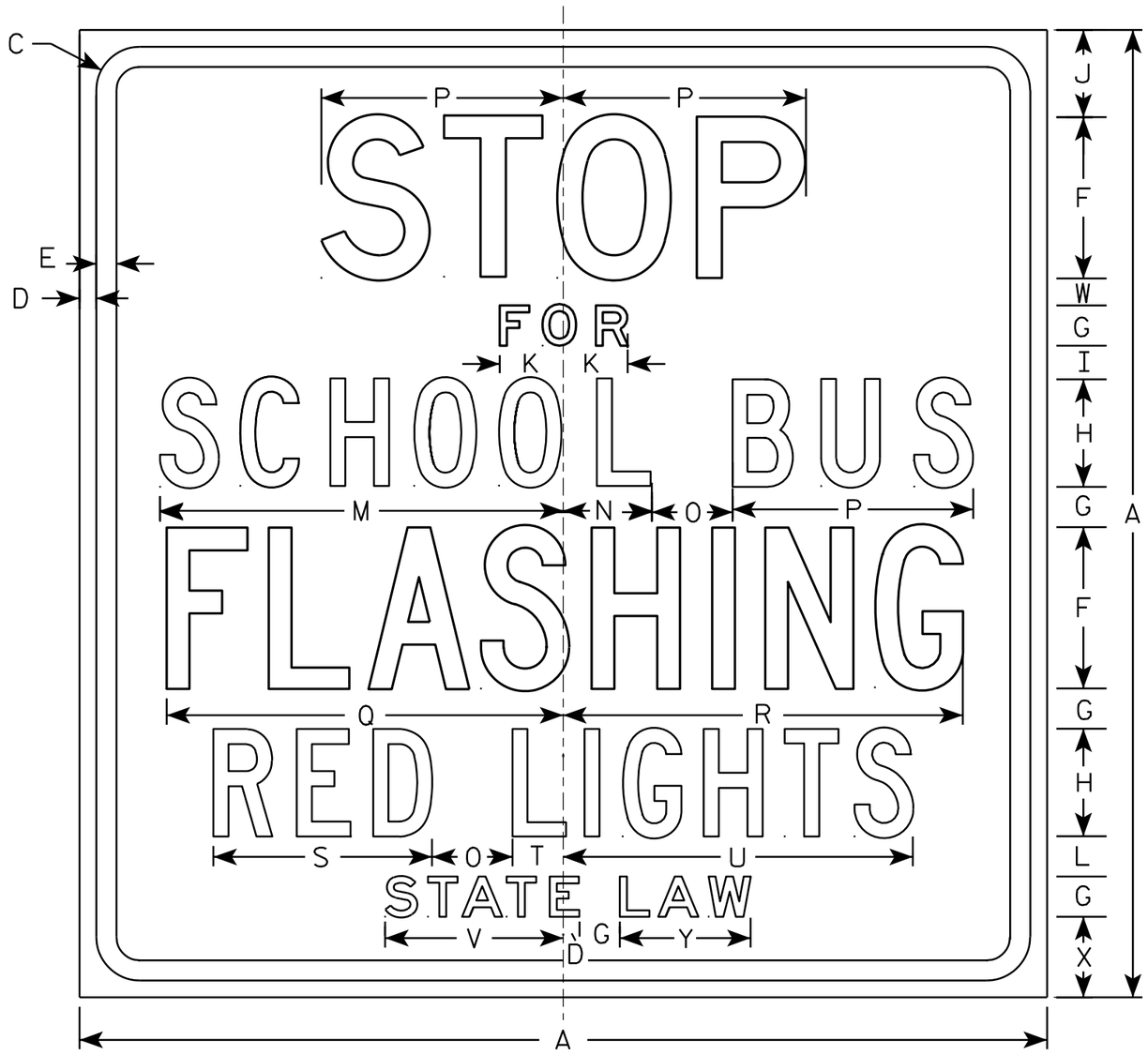
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 199 | E



R59-51

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D
   Lines 2 & 6 are Series E
   Line 3, 4 & 5 are Series C

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	36		1 5/8	5/8	3/4	6	1 1/2	4	1 1/4	3 1/4	2 3/8	1 1/2	15	3 1/4	3	9	14 3/4	14 7/8	8 1/8	1 7/8	13	6 5/8	1	3	4 7/8		9.0
2M	36		1 5/8	5/8	3/4	6	1 1/2	4	1 1/4	3 1/4	2 3/8	1 1/2	15	3 1/4	3	9	14 3/4	14 7/8	8 1/8	1 7/8	13	6 5/8	1	3	4 7/8		9.0
3	48		2 1/4	3/4	1	8	2	6	1 1/4	4 3/4	3 1/4	1 1/2	20 1/4	5	3 5/8	12	19 1/2	20	11 5/8	3 3/4	19	9 1/2	1	3 1/2	6 3/4		16.0
4	48		2 1/4	3/4	1	8	2	6	1 1/4	4 3/4	3 1/4	1 1/2	20 1/4	5	3 5/8	12	19 1/2	20	11 5/8	3 3/4	19	9 1/2	1	3 1/2	6 3/4		16.0
5																											

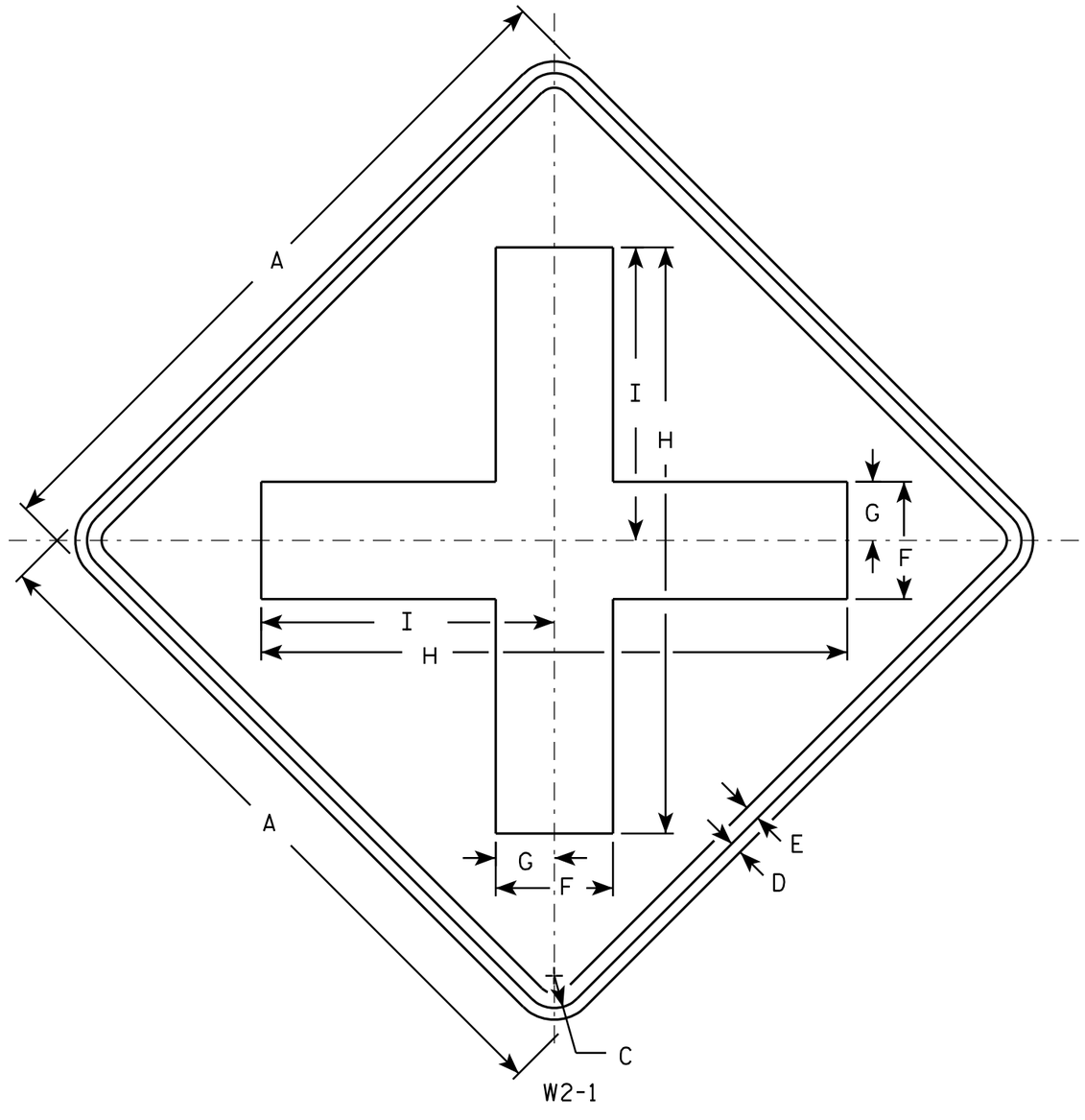
STANDARD SIGN
R59-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/30/11 PLATE NO. R59-51.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 200 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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	20	10																		4.0
2S	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3	30	15																		9.0
4	48		2 1/4	3/4	1	8	4	40	20																		16.0
5																											

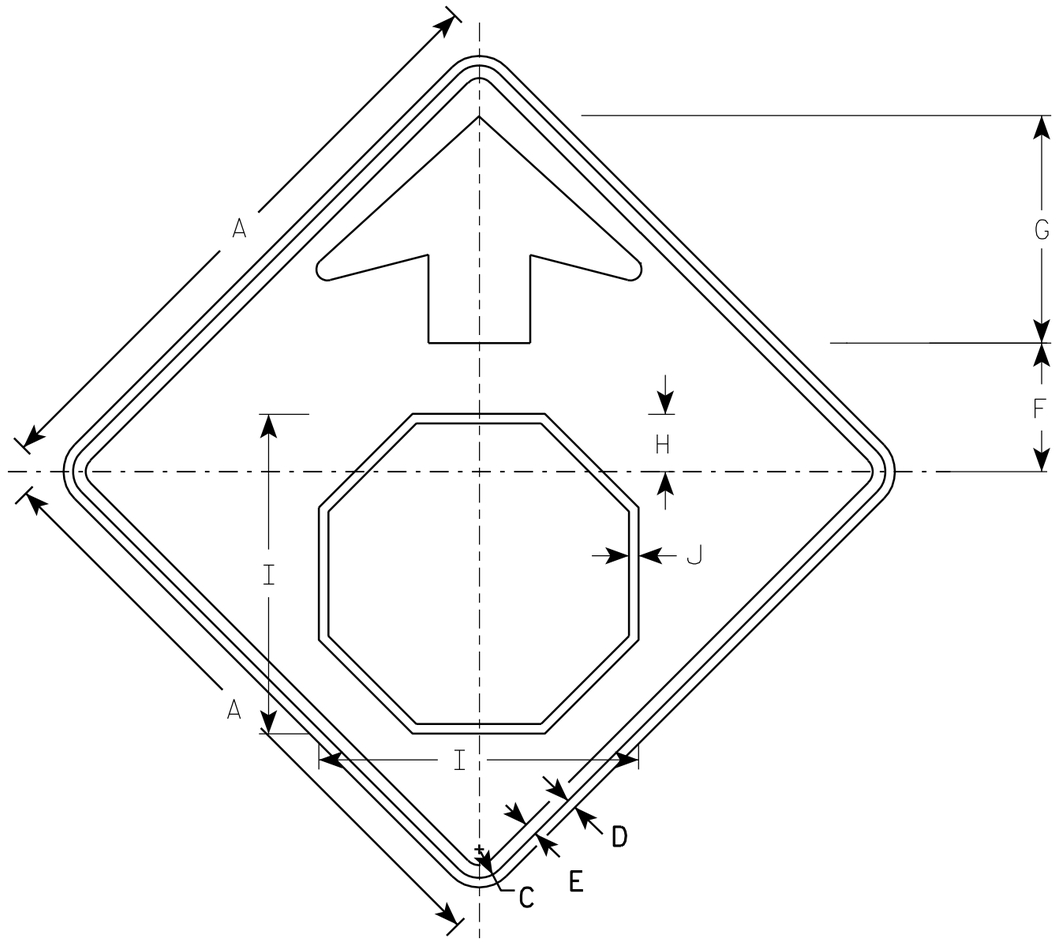
STANDARD SIGN
W2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-1.9

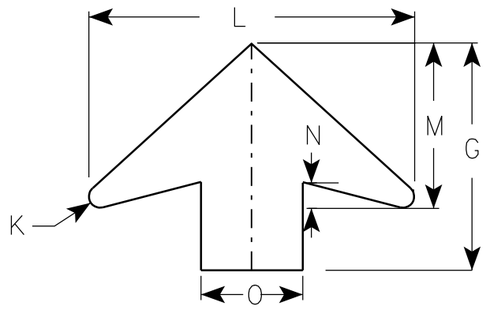
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 201	E



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED 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	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

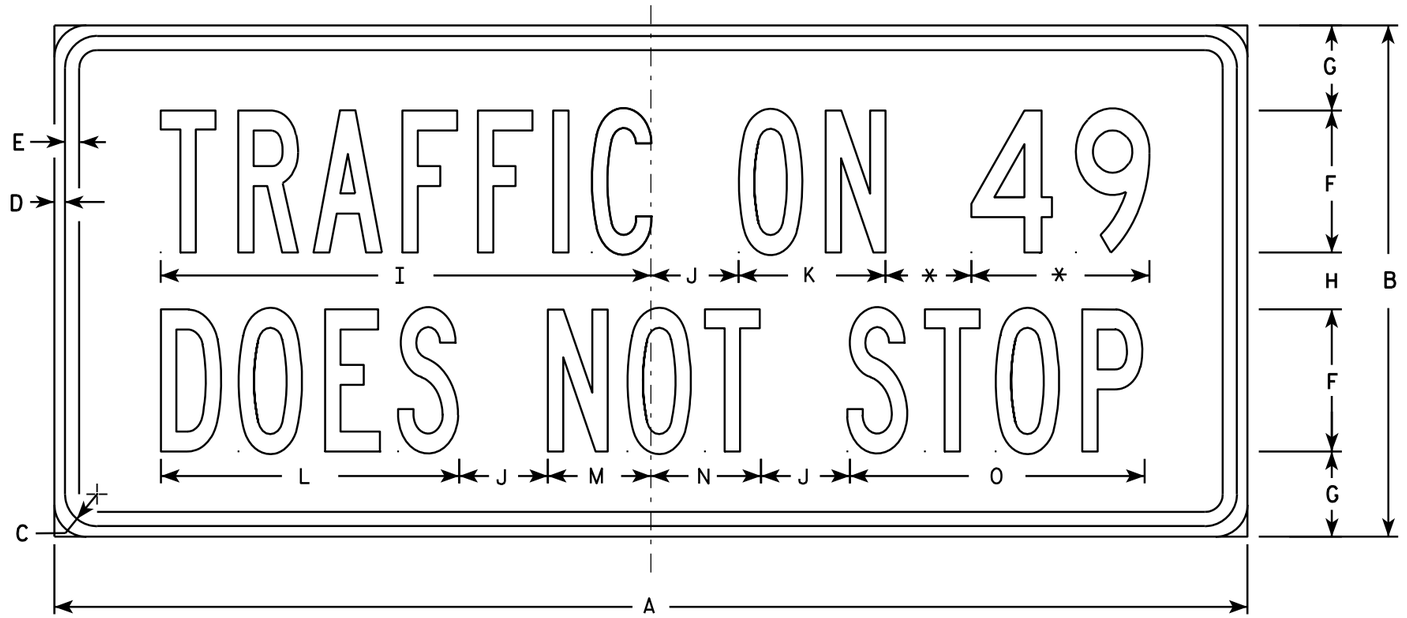
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 202 E



W4-4C

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - B (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. Highway Number usually Series D. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

* VARIES

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	10 3/8	1 1/2	3 1/8	6 1/4	2 1/4	2 1/4	6 1/4												2.0
2M	24	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	10 3/8	1 1/2	3 1/8	6 1/4	2 1/4	2 1/4	6 1/4												2.0
3	36	15	1 1/8	3/8	1/2	4	2 5/8	1 3/4	13 7/8	2 3/8	4 1/4	8 3/8	3 1/8	3 1/8	8 3/8												3.75
4	42	18	1 1/8	3/8	1/2	5	3	2	17 1/4	3 1/8	5 1/8	10 1/2	3 7/8	3 7/8	10 3/8												5.25
5																											

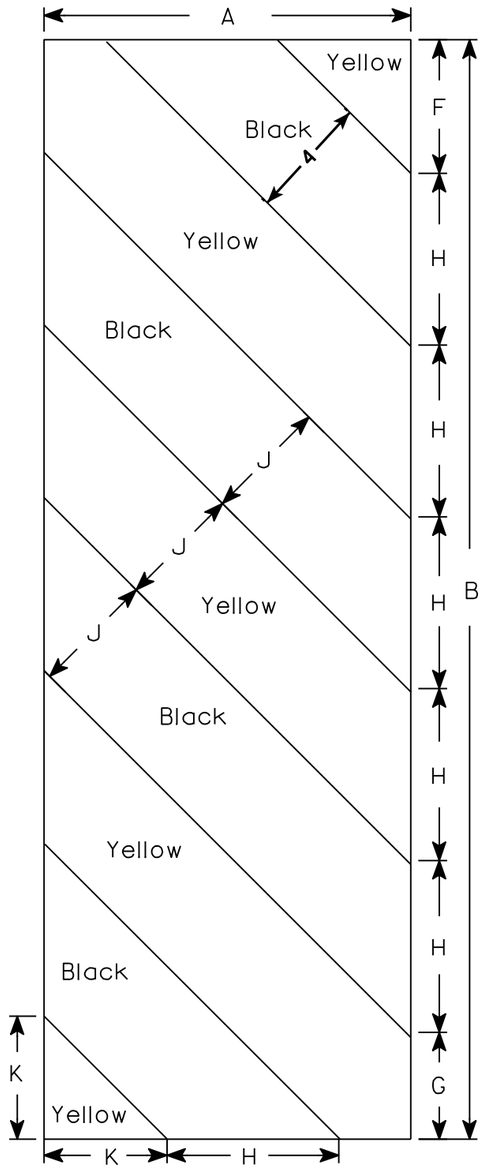
STANDARD SIGN
W4-4C

WISCONSIN DEPT OF TRANSPORTATION

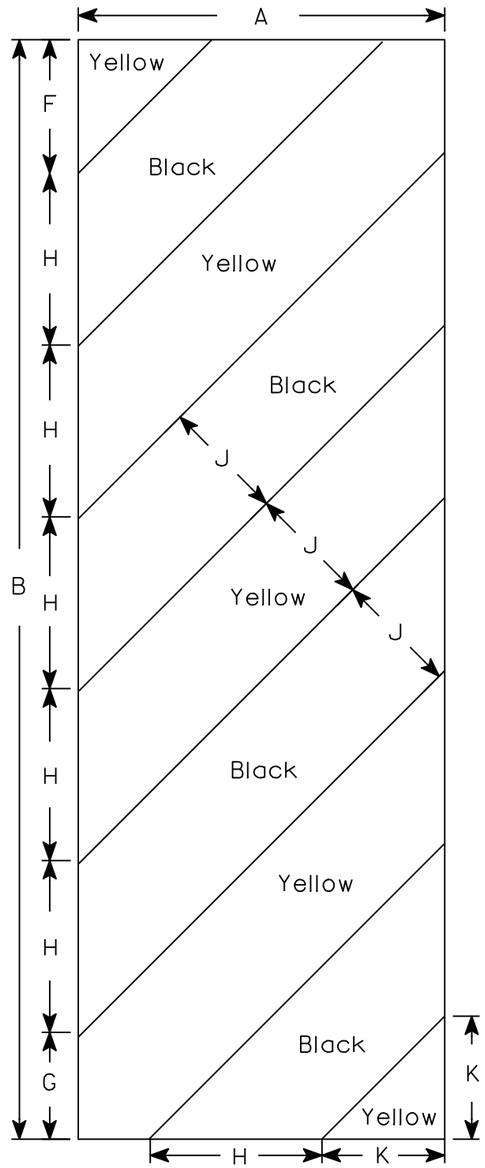
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-4.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 203	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

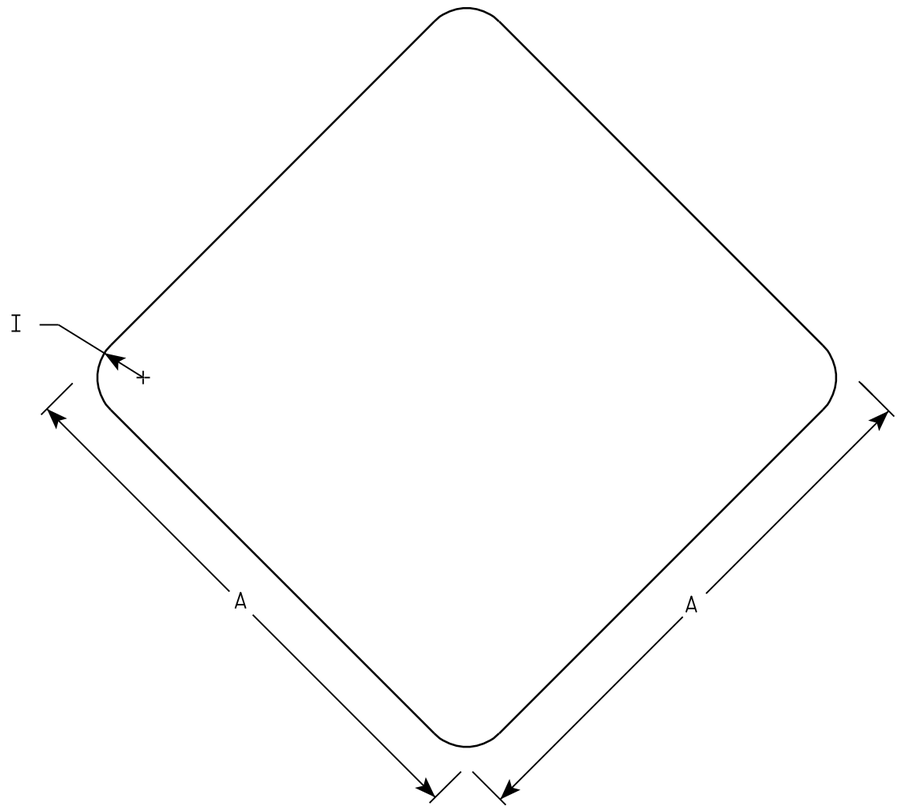
W5-52L & W5-52R

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: 204	E



W5-54

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
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

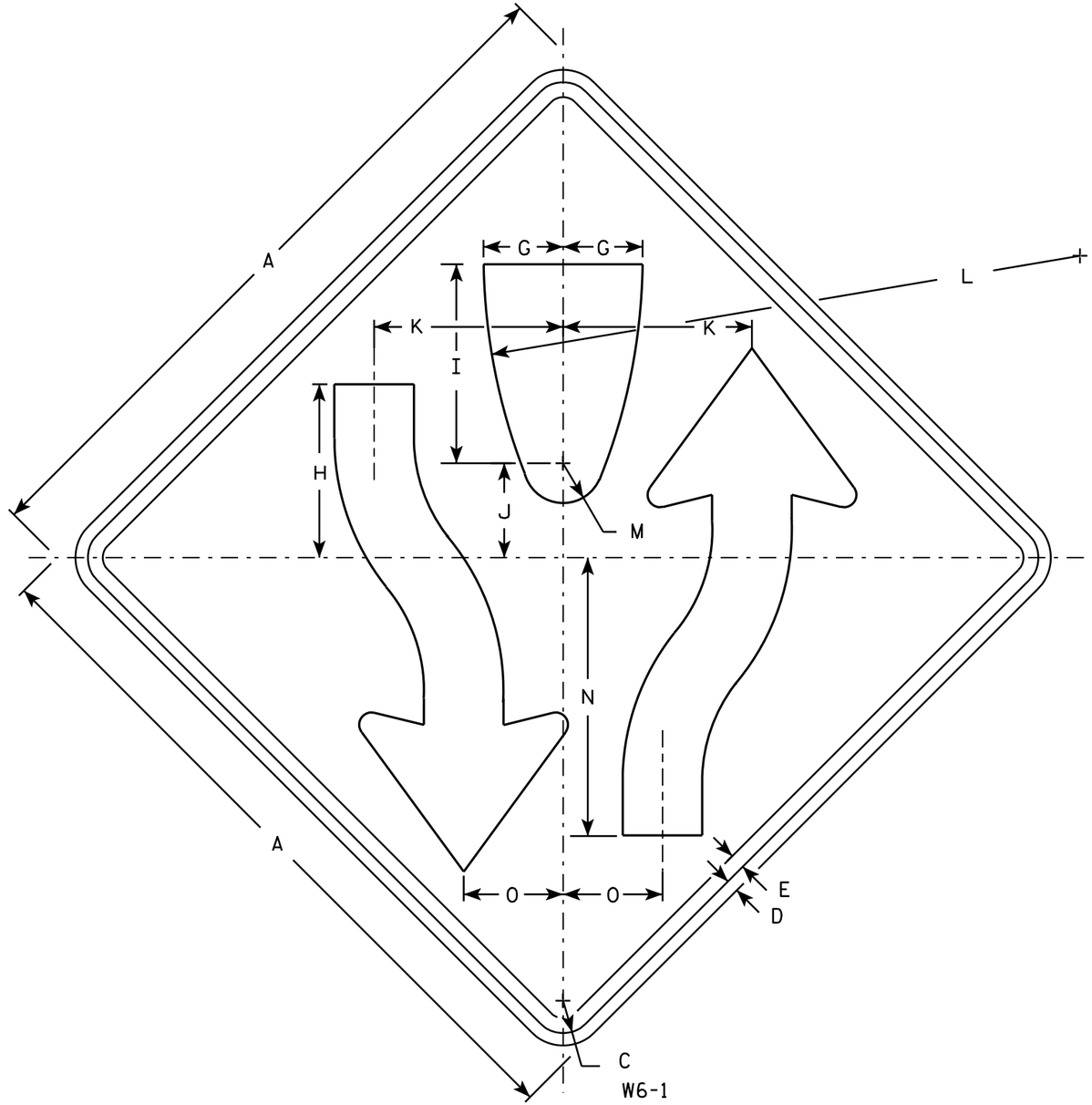
STANDARD SIGN
W5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

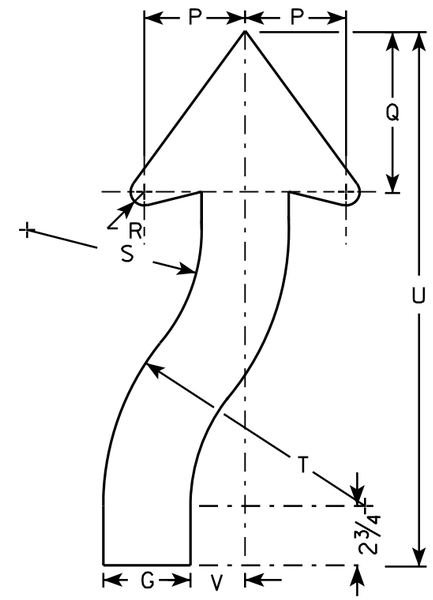
DATE 11/3/10 PLATE NO. W5-54.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 205 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W6-2 same as W6-1 but is rotated 180° when mounted.



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	30		1 3/8	1/2	5/8		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2					6.25
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

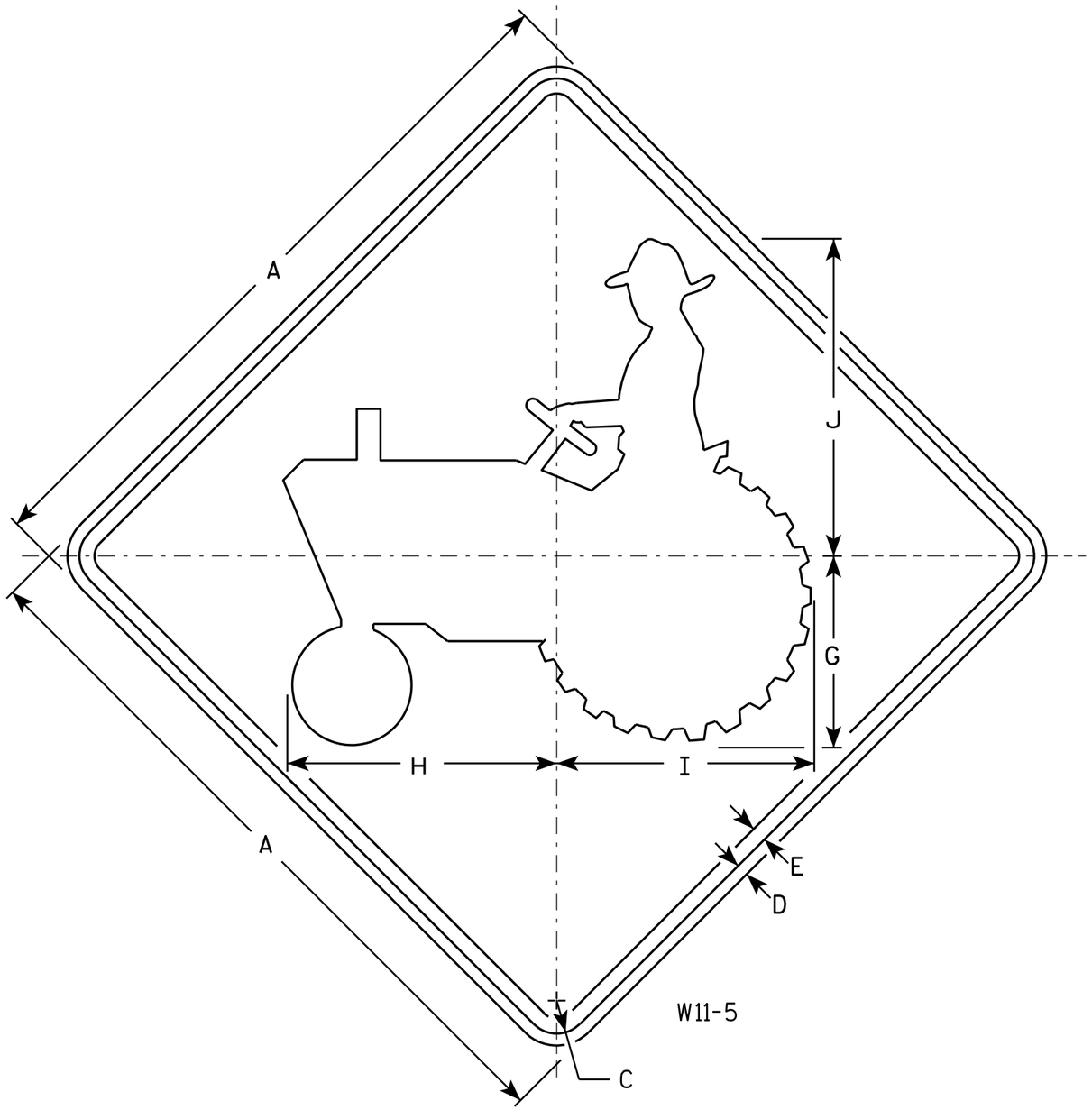
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 206	E

7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W61.DGN PLOT DATE : 12-MAR-2013 14:02 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.946657:1.000000
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. 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		6 3/8	9	8 5/8	10 5/8																	4.0
2S	30		1 3/8	1/2	5/8		8	11 1/4	10 3/4	13 1/4																	6.25
2M	30		1 3/8	1/2	5/8		8	11 1/4	10 3/4	13 1/4																	6.25
3																											
4	36		1 5/8	5/8	3/4		9 5/8	13 1/2	12 7/8	16																	9.0
5	48		2 1/4	3/4	1		12 3/4	18	17 1/4	21 1/8																	16.0

STANDARD SIGN
W11-5

WISCONSIN DEPT OF TRANSPORTATION

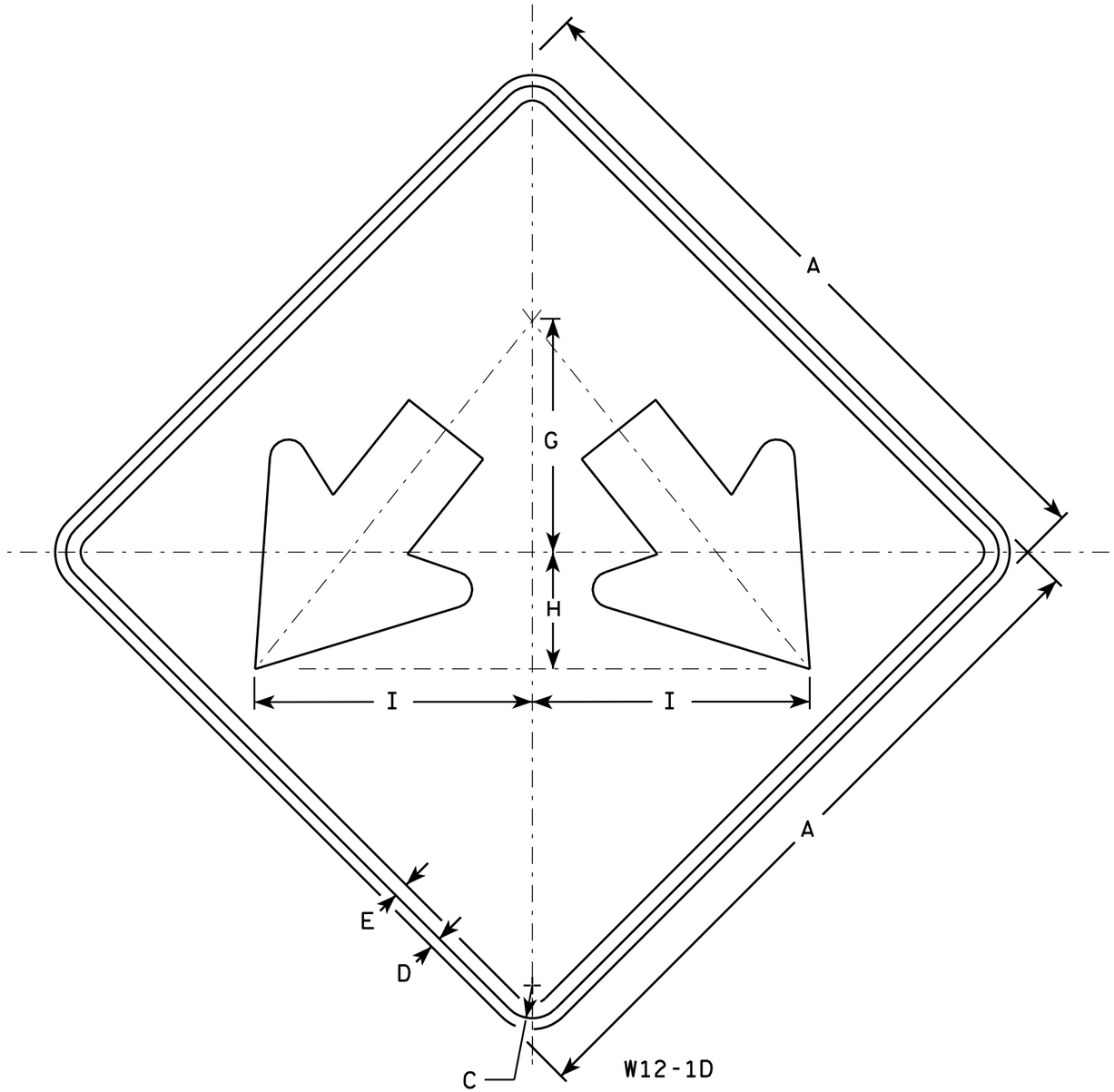
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/13/15 PLATE NO. W11-5.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 207 | E

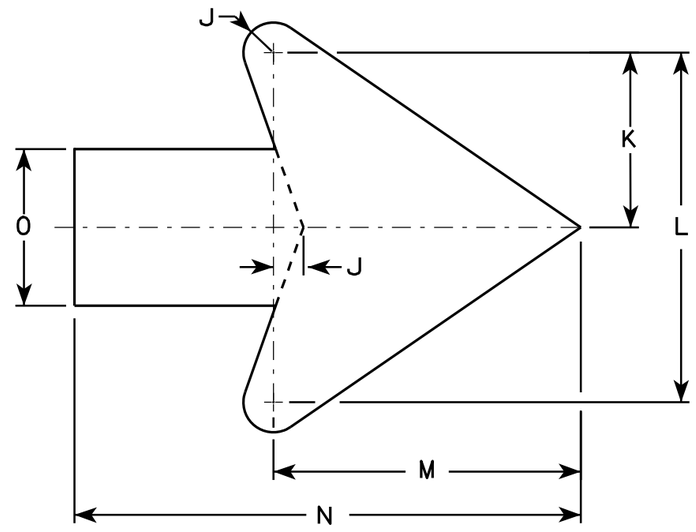
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W115.DGN PLOT DATE : 13-MAR-2013 12:53 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.706180:1.000000

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. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

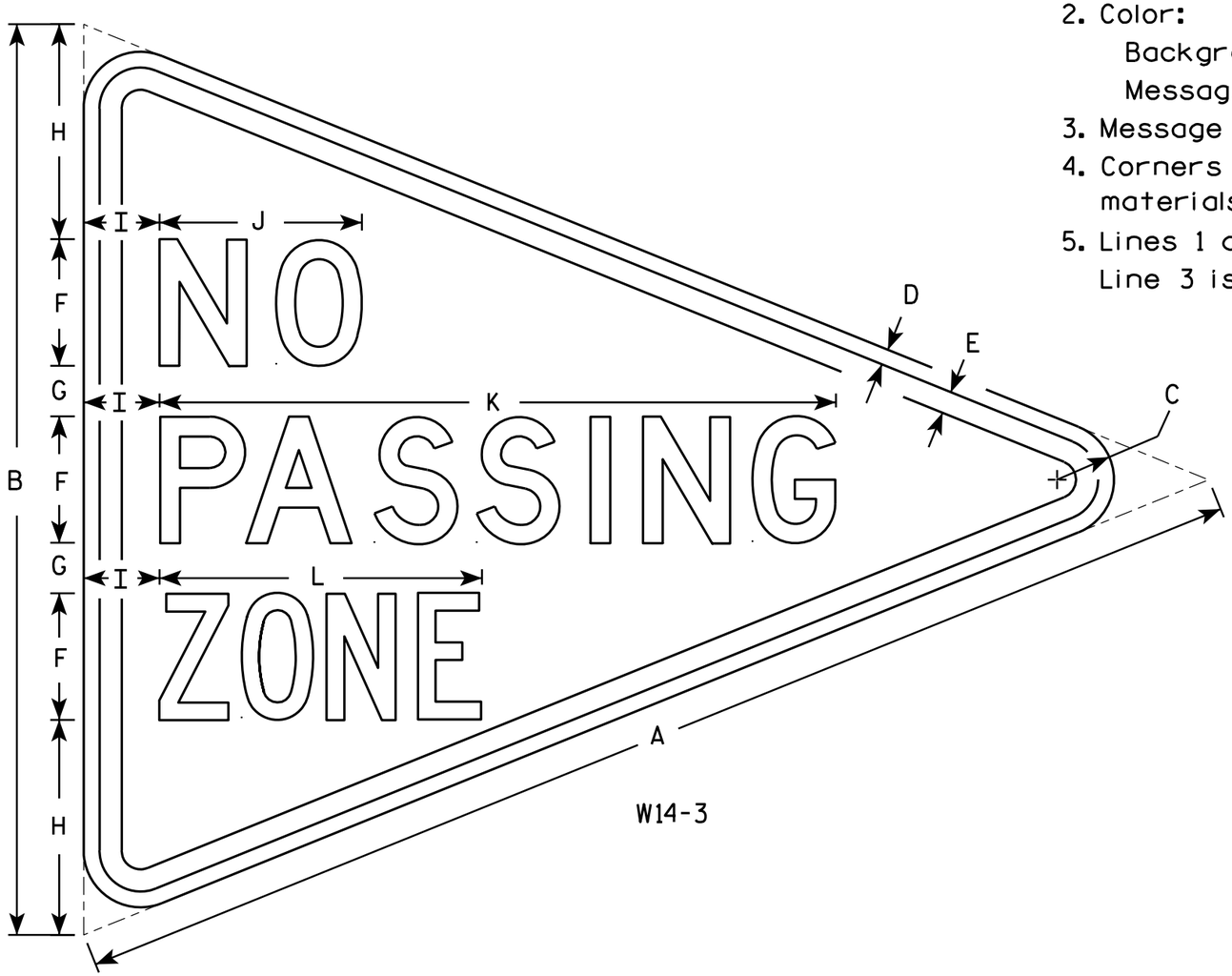
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 208	E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See note 5
4. Corners and borders shall be rounded on all base materials for this sign.
5. Lines 1 and 2 are Series D.
   Line 3 is series C.



W14-3

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	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

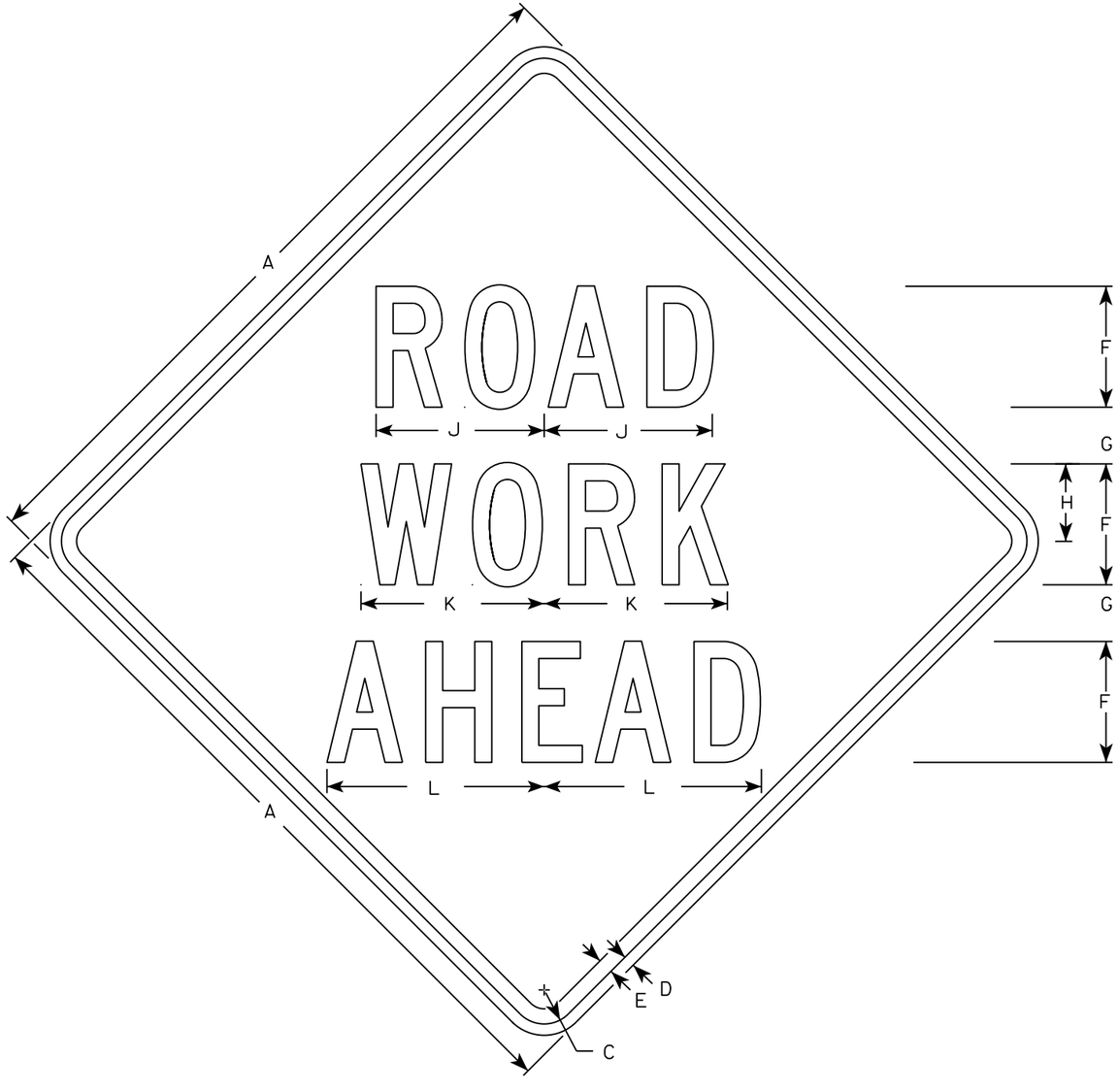
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

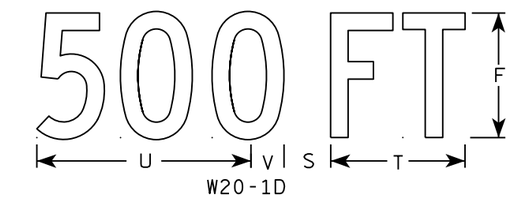
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

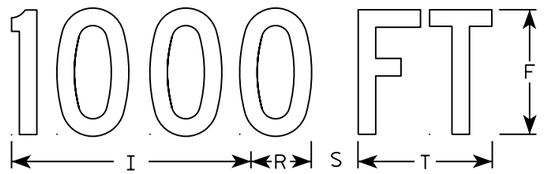
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 209	E



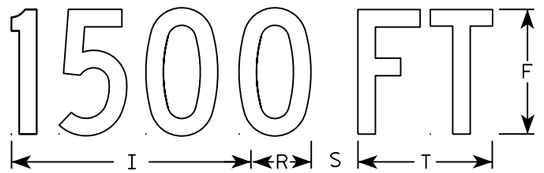
W20-1A



W20-1D

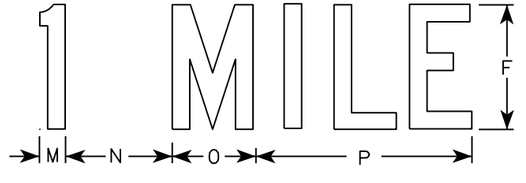


W20-1C

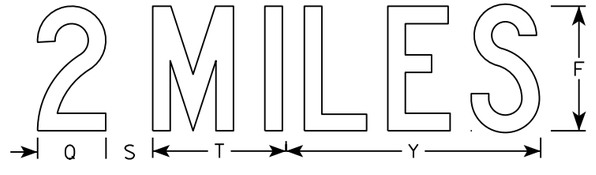


W20-1B

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

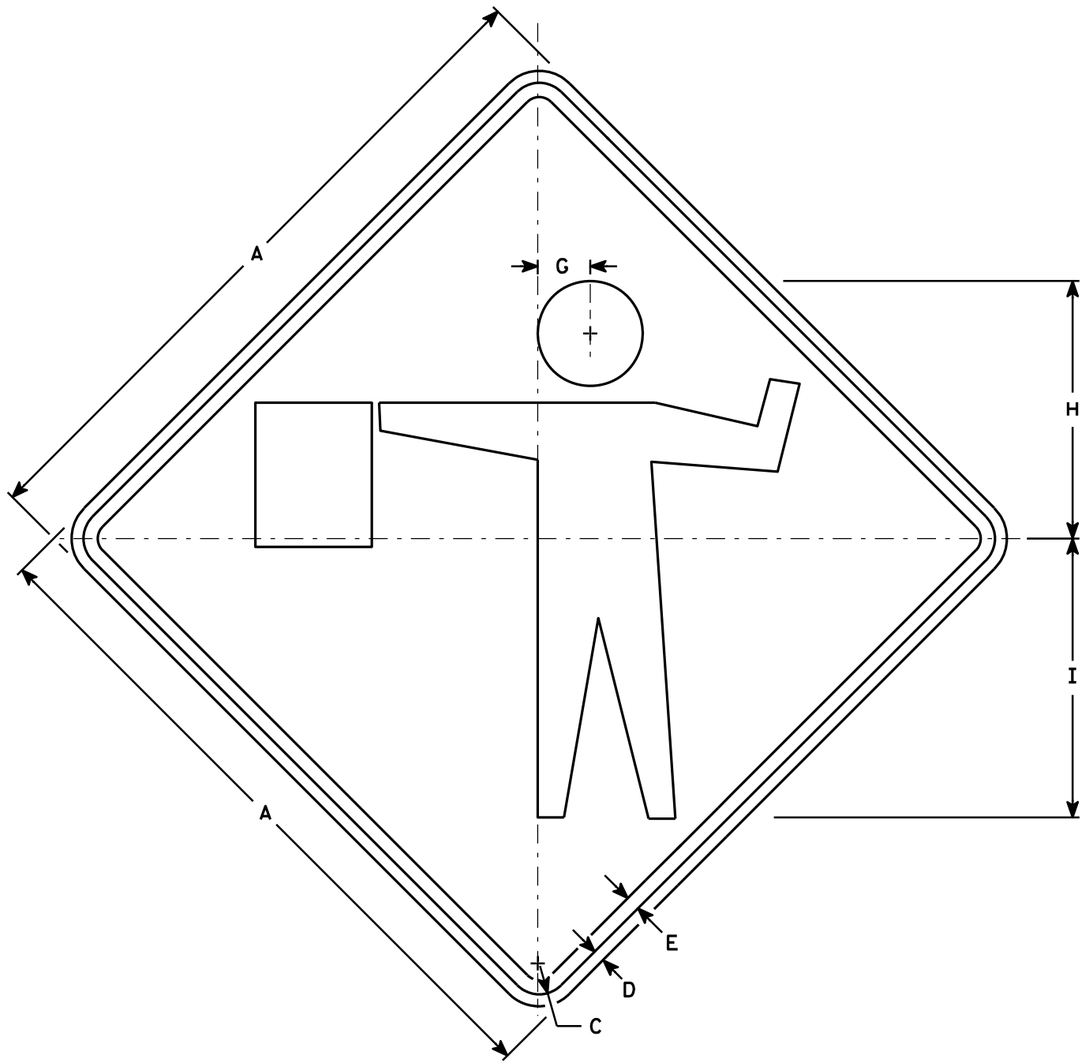
APPROVED Matthew R Rauch
for State Traffic Engineer

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 : $$ plotuser $$



W20-7A

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		2 3/4	13 1/2	14 5/8																		9.00
2S	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
2M	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
3	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
4	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
5	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00

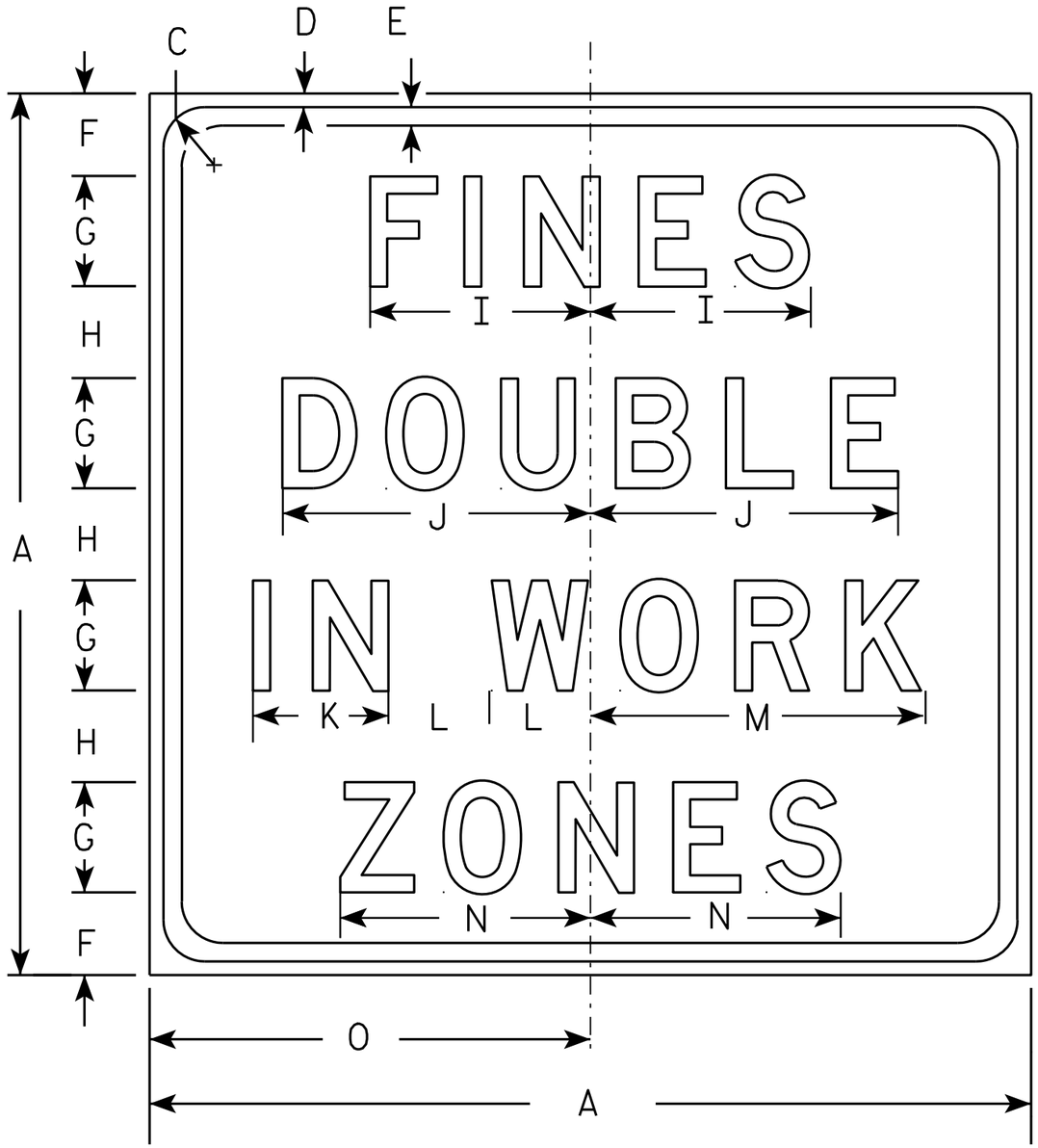
STANDARD SIGN
W20-7A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-7A.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 211 | E



W21-61

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	24		1 1/8	3/8	1/2	2 1/4	3	2 1/2	6	8 3/8	3 3/4	2 3/4	9 1/8	6 7/8	12												4.0
2S	36		1 5/8	5/8	3/4	3 3/8	4 1/2	3 3/4	9	12 5/8	5 1/2	4 1/8	13 3/4	10 1/4	18												9.0
2M	36		1 5/8	5/8	3/4	3 3/8	4 1/2	3 3/4	9	12 5/8	5 1/2	4 1/8	13 3/4	10 1/4	18												9.0
3	48		2 1/4	3/4	1	4 1/2	6	5	12	16 3/4	7 3/8	5 1/2	18 1/4	13 5/8	24												16.0
4																											
5																											

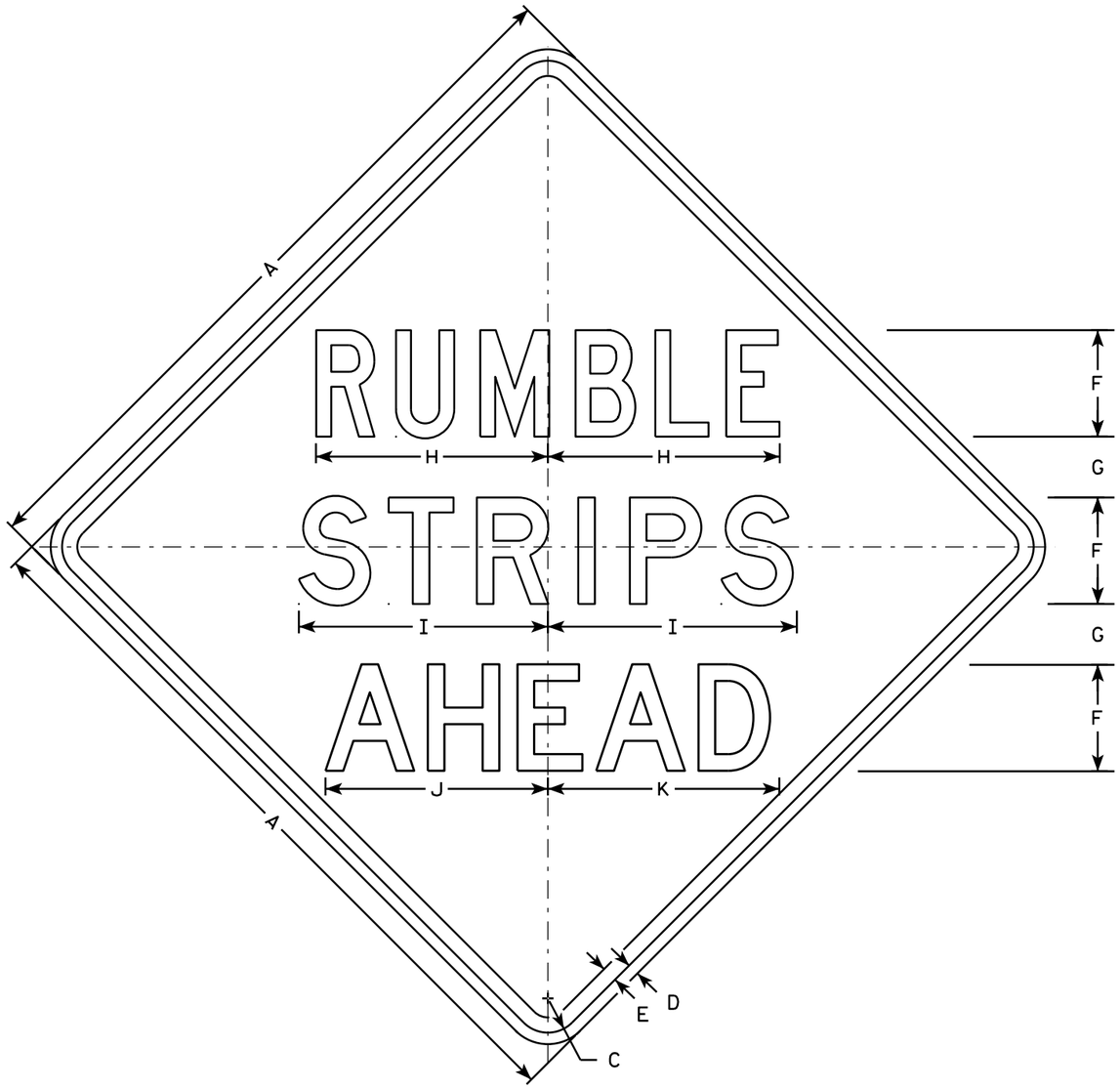
STANDARD SIGN
W21-61

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-61.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 212	E



W21-65

NOTES

1. Sign is Type II - Type F Reflective
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 C
   Lines 2 and 3 are Series D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 1/4	10 7/8	11 5/8	11	11 5/8																9.0
2S	48		2 1/4	3/4	1	7	4	15 1/4	16 3/8	14 5/8	15 1/4																16.0
2M	48		2 1/4	3/4	1	7	4	15 1/4	16 3/8	14 5/8	15 1/4																16.0
3	48		2 1/4	3/4	1	7	4	15 1/4	16 3/8	14 5/8	15 1/4																16.0
4	48		2 1/4	3/4	1	7	4	15 1/4	16 3/8	14 5/8	15 1/4																16.0
5	48		2 1/4	3/4	1	7	4	15 1/4	16 3/8	14 5/8	15 1/4																16.0

STANDARD SIGN

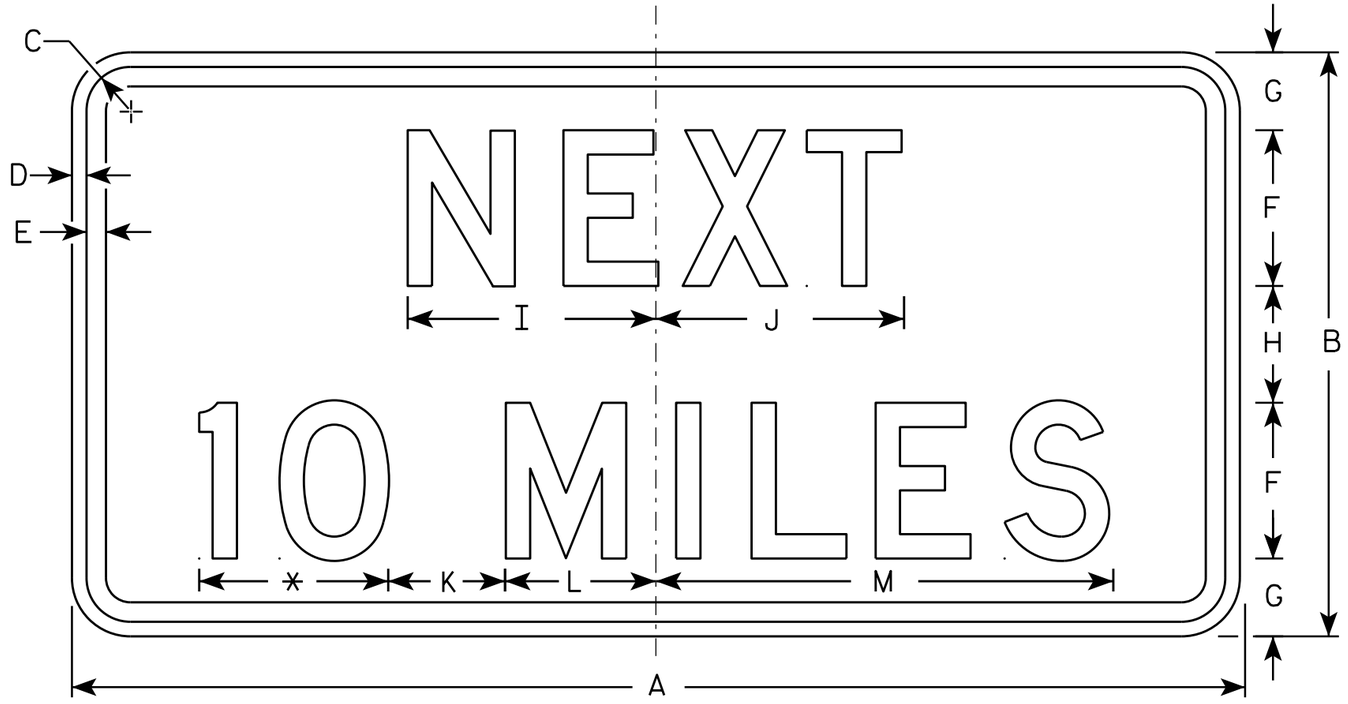
W21-65

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/28/14 PLATE W21-65.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W057-51

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

* 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 1/8	3/8	1/2	5	2 5/8	2 3/4	7 7/8	8	5	4 1/8	15 3/8														4.5
2S	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0
2M	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0
3	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0
4	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0
5	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0

STANDARD SIGN
W057-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew L Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W057-51.1

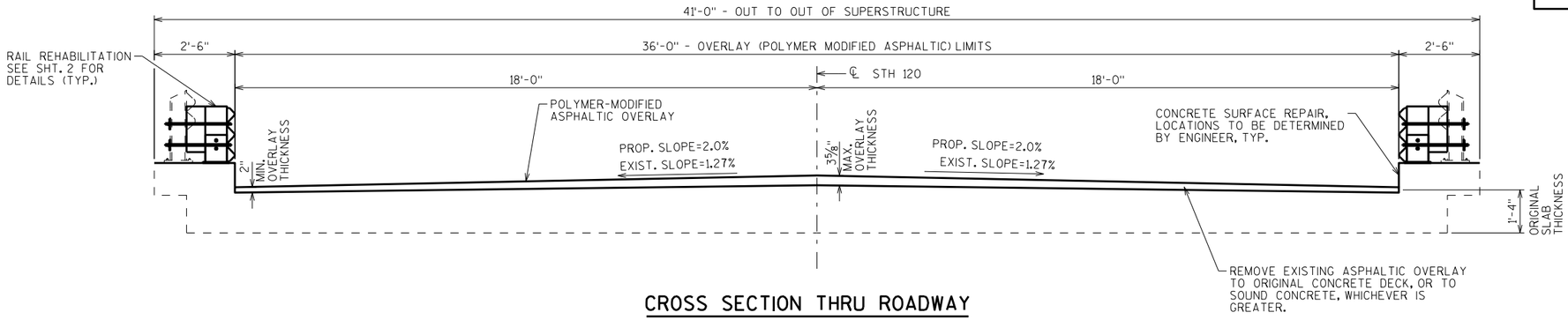
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W05751.DGN PLOT DATE : 28-FEB-2014 11:42 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 3.891684:1.000000
WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER

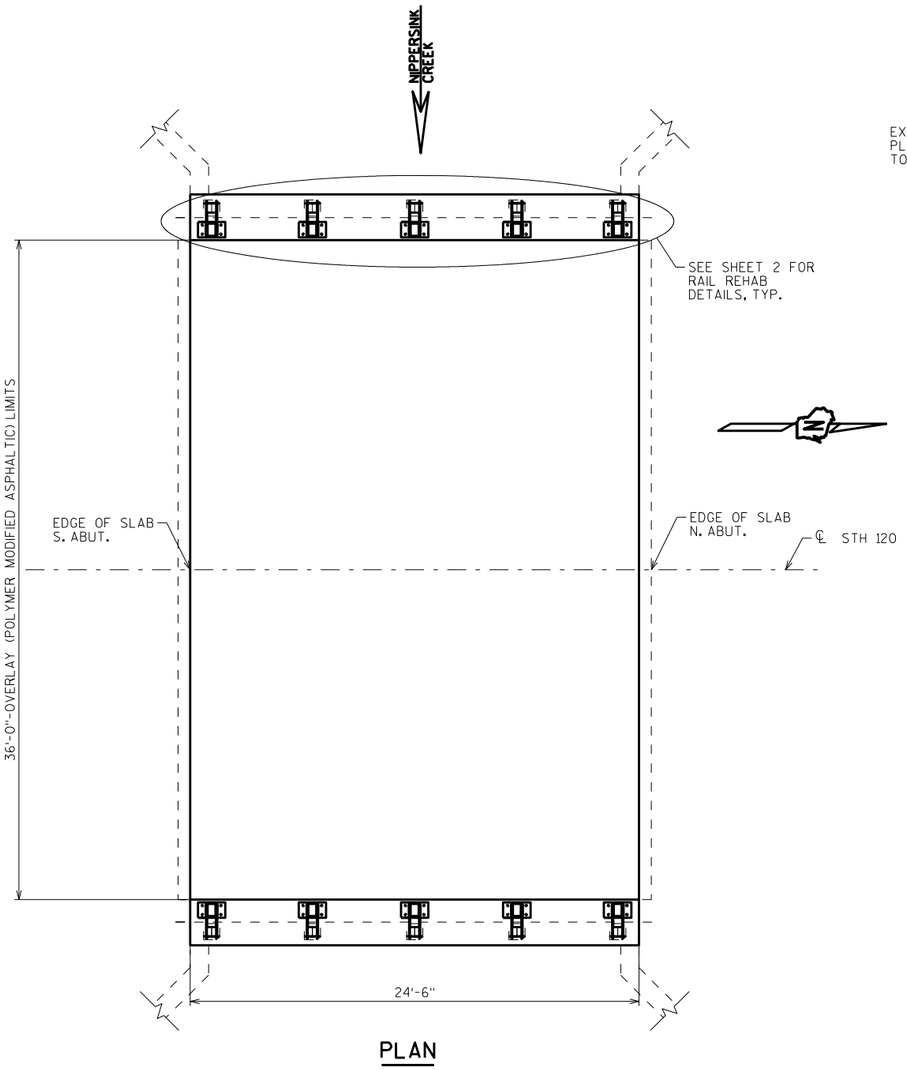
3180-07-60

2⅞" AVERAGE POLYMER-MODIFIED ASPHALTIC OVERALY

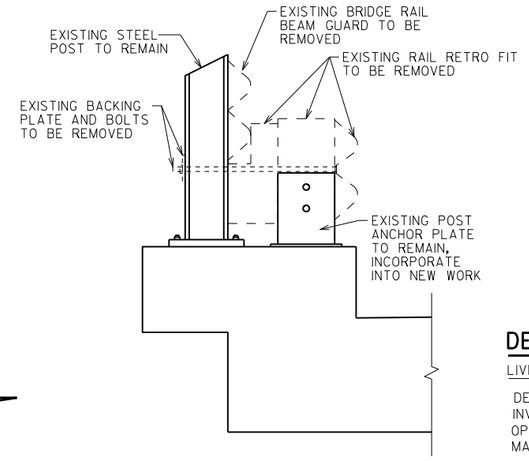


CROSS SECTION THRU ROADWAY

LOOKING NORTH



PLAN



RAIL REMOVAL DETAIL

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
509.0301	PREPARATION DECKS TYPE 1	SY	10
509.0302	PREPARATION DECKS TYPE 2	SY	10
509.1500	CONCRETE SURFACE REPAIR	SF	67
509.3500.S	HMA OVERLAY POLYMER-MODIFIED	TON	17
509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY B-64-07	SY	98
606.0200	RIPRAP MEDIUM	CY	29
SPV.0035	CONCRETE MASONRY DECK PATCHING	CY	1
SPV.0090.01	SAWING PAVEMENT DECK PREPARATION AREAS	LF	20
SPV.0090.02	STEEL THRIE BEAM RETRO FIT	LF	49

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-15
OPERATING RATING: HS-26
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 135 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY — ALL — f'c = 4,000 P.S.I.
STRUCTURAL CARBON STEEL ASTM A709 GRADE 36 — PLATES — fy = 36,000 P.S.I.
BOLTS ASTM A307 — ALL
NUTS ASTM A563 — ALL
WASHERS ASTM F436 GRADE 1 — ALL

TRAFFIC VOLUME

STH 120
A.D.T.=3,700 - 5,800 (2017)
R.D.S.=55 M.P.H.

LIST OF DRAWINGS

1. OVERLAY & QUANTITIES
2. RAIL REHAB DETAILS

STRUCTURE DESIGN CONTACTS:

MAXWELL KULICK (608) 261-6108
AARON BONK (608) 261-0261

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

AREAS OF "PREPARTION DECKS TYPE 1" SHALL BE DEFINED BY A SAW CUT.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2 AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLAN AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY DECK PATCHING."

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "HMA OVERLAY POLYMER-MODIFIED".

THE PLAN QUANTITY FOR THE BID ITEM "HMA OVERALY POLYMER-MODIFIED" IS BASED ON THE AVERAGE OVERLAY THICKNESS.

THE QUANTITY FOR THE BID ITEM "CONCRETE SURFACE REPAIR" IS AN ESTIMATE BASED ON INFORMATION PROVIDED BY THE REGION BRIDGE MAINTENANCE ENGINEER. ACTUAL CONCRETE SURFACE REPAIR LOCATIONS AND QUANTITIES ARE TO BE DETERMINED BY THE ENGINEER.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 2" PLACED ABOVE THE DECK SURFACE. EXPECTED AVERAGE OVERLAY THICKNESS IS 2⅞". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN A ½", CONTACT THE STRUCTURES DESIGN SECTION.

PAYMENT FOR REMOVAL OF EXISTING BRIDGE RAIL RETRO FIT COMPONENTS IS COVERED UNDER "STEEL THRIE BEAM RETRO FIT."

PLACE "RIP RAP MEDIUM" AT FRONT FACE OF ABUTMENTS TO THE ELEVATION OF THE EXISTING WEEPHOLES.

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 7/21/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-64-07

STH 120 OVER NIPPERSINK CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
WALWORTH	LINN

DESIGN SPEC.	
REHABILITATION	N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MJK	SAD	MJK	SAD

OVERLAY & QUANTITIES

SHEET 1 OF 2

215

I.D. 3180-07-30A

DATE: JAN. 2016

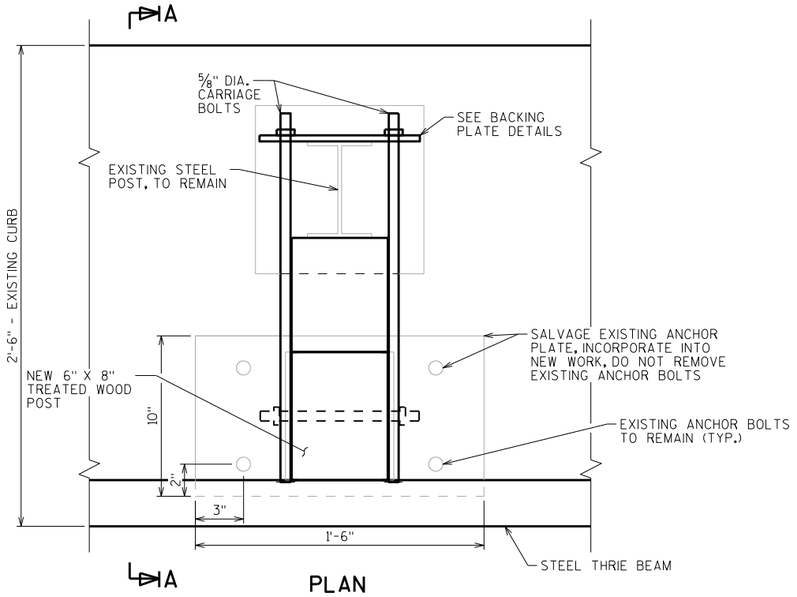
SCALE = 3.0

8

8

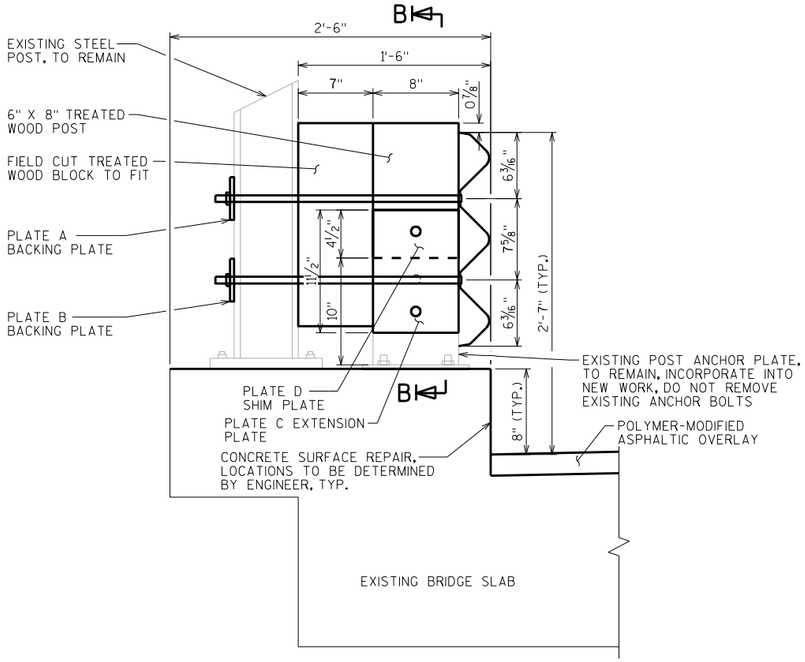
STATE PROJECT NUMBER

3180-07-60



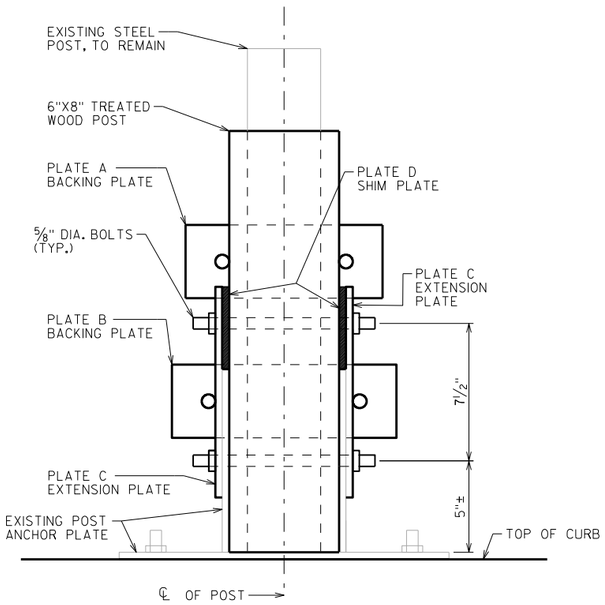
PLAN

TYPICAL AT EACH POST



SECTION A-A

THRU PROPOSED CURB



SECTION B-B

STEEL THRIE BEAM
NOT SHOWN FOR CLARITY

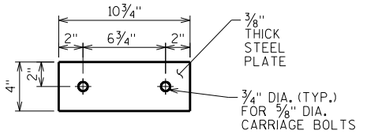


PLATE A - BACKING PLATE DETAIL

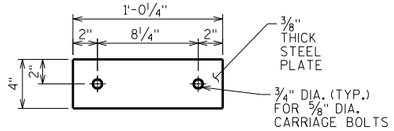


PLATE B-BACKING PLATE DETAIL

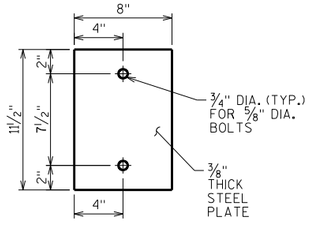


PLATE C-ANCHOR PLATE EXTENSION DETAIL

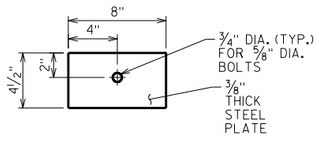
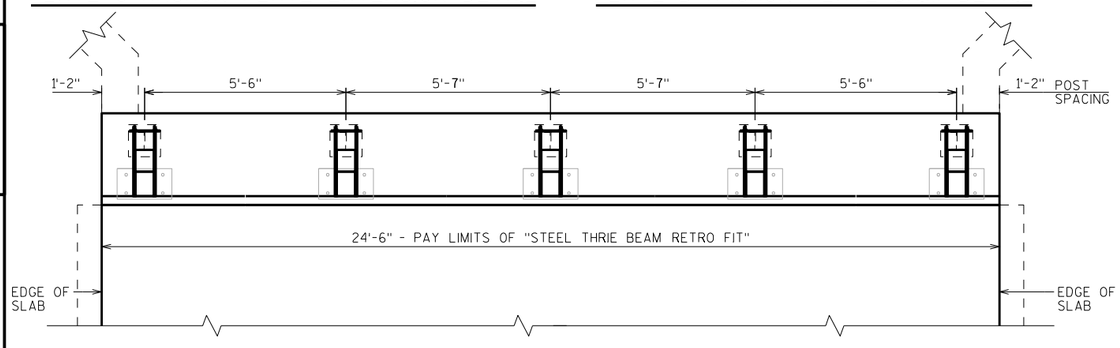
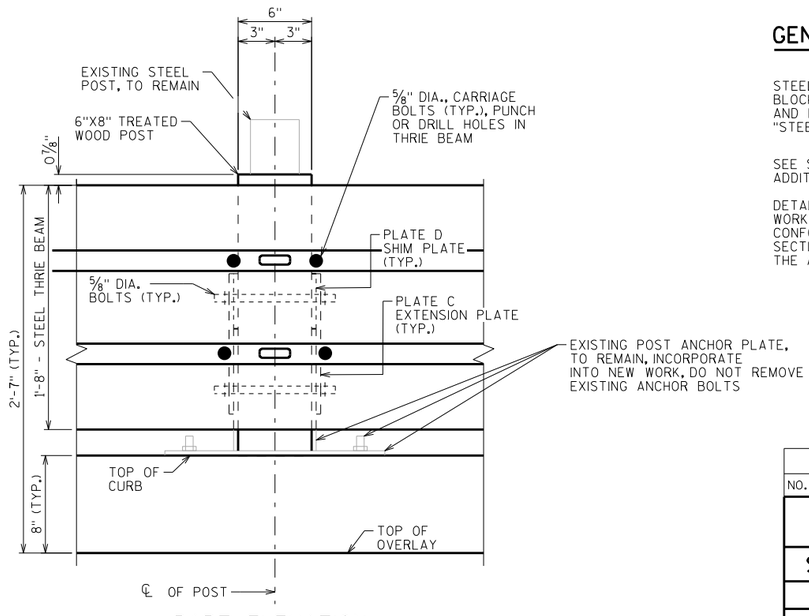


PLATE D-ANCHOR PLATE SHIM DETAIL



POST LAYOUT

SYMMETRICAL ABOUT ℄ STH 120



PART ELEVATION

TYPICAL AT EACH POST

GENERAL NOTES

STEEL THRIE BEAM, TREATED WOOD POSTS AND BLOCKS, STEEL PLATES, WASHERS, NUTS, BOLTS AND DRILLING TO BE INCLUDED IN THE BID ITEM "STEEL THRIE BEAM RETROFIT."

SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL STEEL THRIE BEAM DETAILS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKSMANSHIP NOT SHOWN ON THIS PLAN SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF SECTION 614 OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-64-07

DRAWN BY MJK | PLANS CK'D. SAD

RAIL REHAB DETAILS

SHEET 2

216

SCALE = 1.0

8

8

STH 120 Railroad - Left

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
		Cut	Salvaged / Unusable Pavement Material	Fill	Cut Note 1	Salvaged / Unusable Pavement Material Note 2	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.20	Mass Ordinate Note 8
157+55	0.00	9.59	4.13	0.00	0	0	0	0	0	0.00
157+60	5.00	9.67	4.13	0.00	2	1	0	2	0	1.02
157+64.04	4.04	9.68	4.13	0.00	1	1	0	3	0	1.85
157+67.3	3.26	9.71	4.13	0.00	1	0	0	4	0	2.52
157+70	2.70	9.74	4.13	0.00	1	0	0	5	0	3.08
157+70.83	0.83	9.75	4.13	0.00	0	0	0	6	0	3.26
157+71.22	0.39	9.75	4.13	0.00	0	0	0	6	0	3.34
157+75.07	3.85	9.81	4.13	0.00	1	1	0	7	0	4.14
157+80	4.93	9.91	4.13	0.00	2	1	0	9	0	5.19
157+88.75	8.75	10.13	4.13	0.00	3	1	0	12	0	7.10
157+90	1.25	18.17	4.13	0.00	1	0	0	13	0	7.56
157+92.5	2.50	21.28	4.13	0.00	2	0	0	15	0	9.01
157+95	2.50	23.40	4.13	0.00	2	0	0	17	0	10.69
157+99	4.00	25.79	4.13	0.00	4	1	0	20	0	13.73
158+00	1.00	25.92	4.13	0.00	1	0	0	21	0	14.53
158+01.03	1.03	26.00	4.13	0.00	1	0	0	22	0	15.36
158+09.27	8.24	25.64	4.13	0.00	8	1	0	30	0	21.98
158+10	0.73	25.56	4.13	0.00	1	0	0	31	0	22.57
158+15	5.00	23.95	4.13	0.00	5	1	0	36	0	26.39
158+17.04	2.04	21.40	4.13	0.00	2	0	0	37	0	27.79
158+19.27	2.22	18.71	4.13	0.00	2	0	0	39	0	29.10
158+20	0.73	17.84	4.13	0.00	0	0	0	39	0	29.49
158+23.19	3.19	14.16	4.13	0.00	2	0	0	41	0	30.89
158+30	6.81	25.22	4.13	0.00	5	1	0	46	0	34.81
158+32.56	2.56	25.24	4.13	0.00	2	0	0	49	0	36.82
158+35	2.44	26.09	4.13	0.00	2	0	0	51	0	38.76
158+40	5.00	28.57	4.13	0.00	5	1	0	56	0	43.06
158+49	9.00	16.39	4.13	0.00	7	1	0	64	0	49.18
158+60	11.00	10.01	4.13	0.00	5	2	0	69	0	52.87
158+70	10.00	9.73	4.13	0.00	4	2	0	73	0	55.00
158+74.96	4.96	9.65	4.13	0.00	2	1	0	74	0	56.02
158+80	5.04	9.35	4.13	0.00	2	1	0	76	0	57.03
158+85	5.00	9.05	4.13	0.00	2	1	0	78	0	57.97
					78	20	0			

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
8 - Mass Ordinate	Cut - Unusable Pavement Exc - (Fill * Fill Factor)

STH 120 Railroad - Right

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
		Cut	Salvaged / Unusable Pavement Material	Fill	Cut Note 1	Salvaged / Unusable Pavement Material Note 2	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.20	Mass Ordinate Note 8
157+67.3	0.00	10.09	4.13	0.00	0	0	0	0	0	0.00
157+70	2.70	9.98	4.13	0.00	1	0	0	1	0	0.59
157+70.83	0.83	9.95	4.13	0.00	0	0	0	1	0	0.77
157+71.22	0.39	14.65	4.13	0.00	0	0	0	1	0	0.89
157+75.07	3.85	18.80	4.13	0.00	2	1	0	4	0	2.68
157+80	4.93	23.63	4.13	0.00	4	1	0	8	0	5.81
157+88.75	8.75	28.72	4.13	0.00	8	1	0	16	0	12.95
157+90	1.25	29.39	4.13	0.00	1	0	0	18	0	14.10
157+92.5	2.50	30.89	4.13	0.00	3	0	0	20	0	16.51
157+95	2.50	32.43	4.13	0.00	3	0	0	23	0	19.06
157+99	4.00	32.89	4.13	0.00	5	1	0	28	0	23.29
158+00	1.00	18.43	4.13	0.00	1	0	0	29	0	24.09
158+01.03	1.03	18.05	4.13	0.00	1	0	0	30	0	24.62
158+09.27	8.24	26.47	4.13	0.00	7	1	0	37	0	30.16
158+10	0.73	27.22	4.13	0.00	1	0	0	37	0	30.78
158+15	5.00	29.07	4.13	0.00	5	1	0	43	0	35.22
158+17.04	2.04	29.44	4.13	0.00	2	0	0	45	0	37.12
158+19.27	2.22	30.03	4.13	0.00	2	0	0	47	0	39.23
158+20	0.73	30.12	4.13	0.00	1	0	0	48	0	39.94
158+23.19	3.19	29.72	4.13	0.00	4	0	0	52	0	42.98
158+30	6.81	26.14	4.13	0.00	7	1	0	59	0	48.99
158+32.56	2.56	23.97	4.13	0.00	2	0	0	61	0	50.98
158+35	2.44	21.92	4.13	0.00	2	0	0	63	0	52.68
158+40	5.00	11.15	4.13	0.00	3	1	0	66	0	54.97
					66	11	0			

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
8 - Mass Ordinate	Cut - Unusable Pavement Exc - (Fill * Fill Factor)

9

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PROJECT NO: 3180-07-60 | HWY: STH 120 | COUNTY: WALWORTH | EARTHWORK | SHEET: 218 | E

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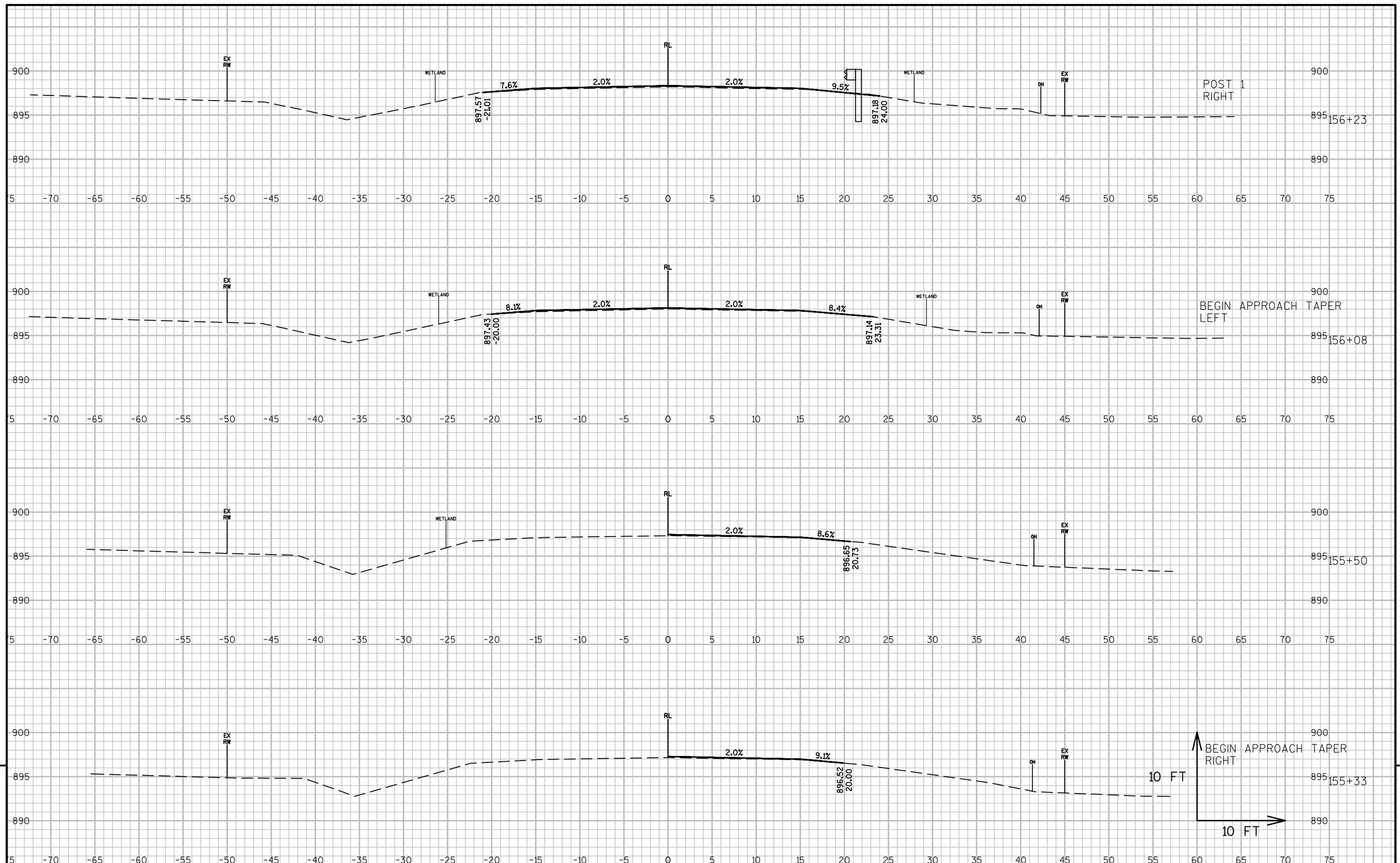

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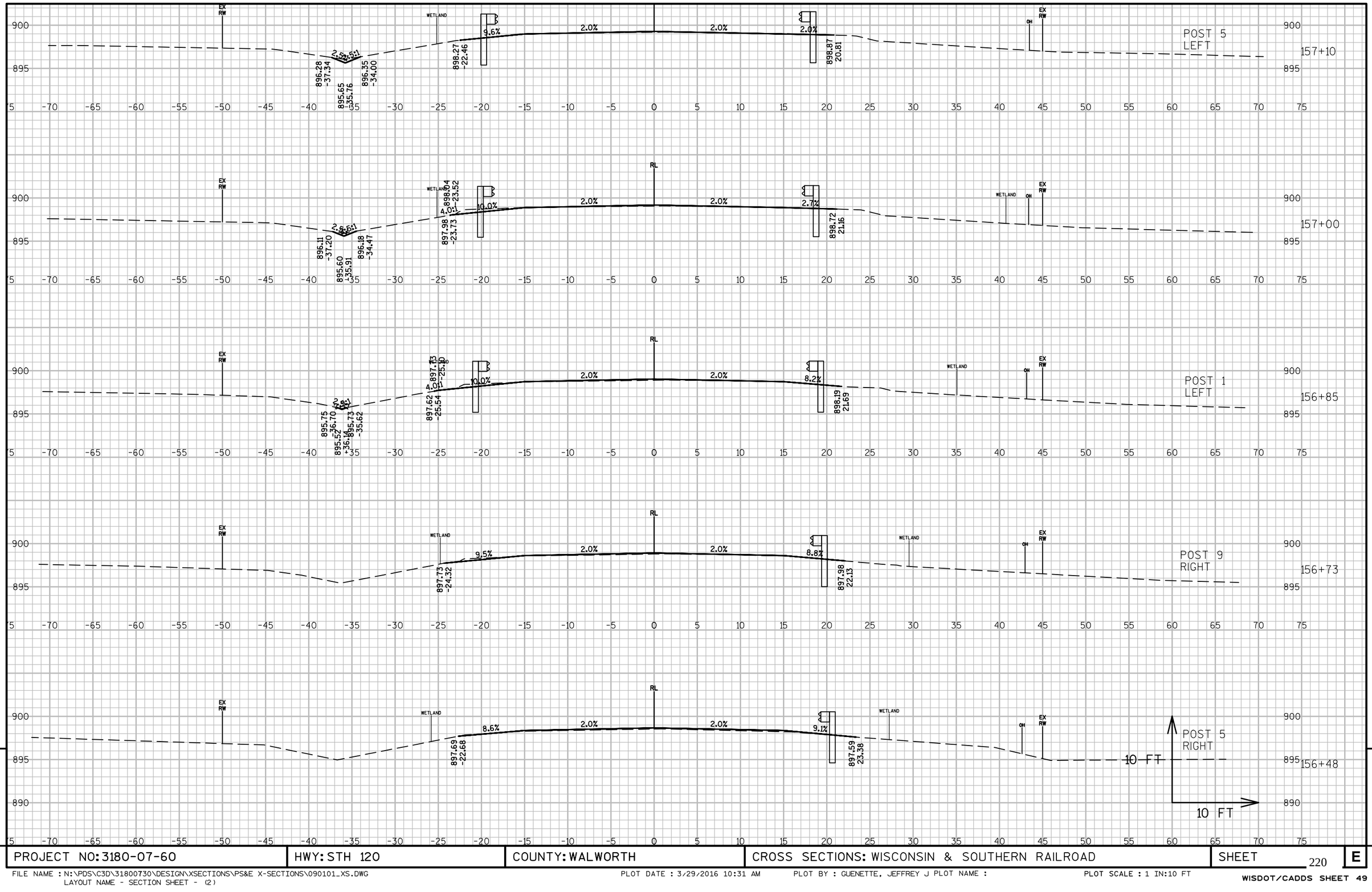
PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: WISCONSIN & SOUTHERN RAILROAD	SHEET 219 E



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PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: WISCONSIN & SOUTHERN RAILROAD	SHEET 220	E

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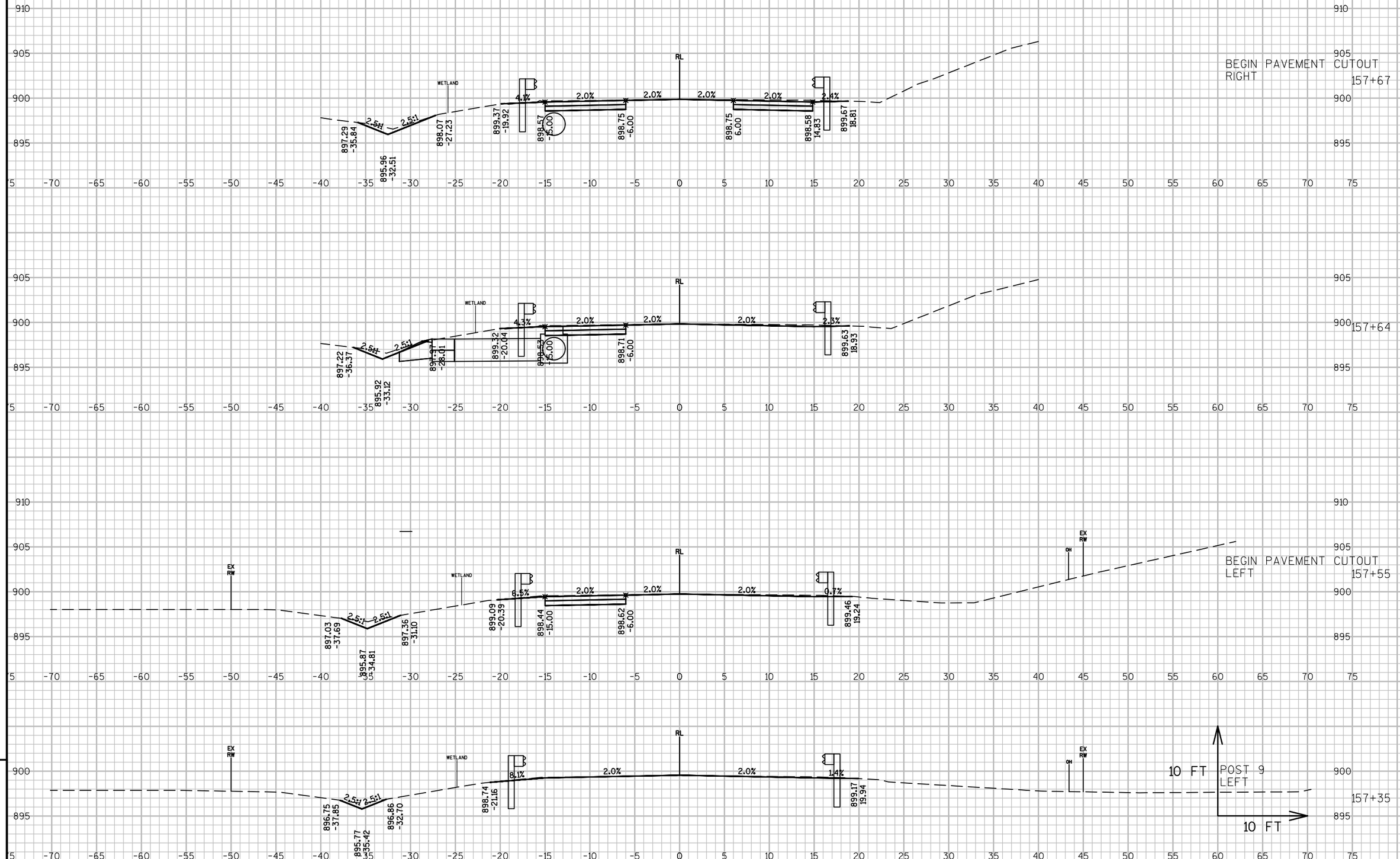
LAYOUT NAME - SECTION SHEET - (2)
PLOT DATE : 3/29/2016 10:31 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



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PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: WISCONSIN & SOUTHERN RAILROAD	SHEET 221	E

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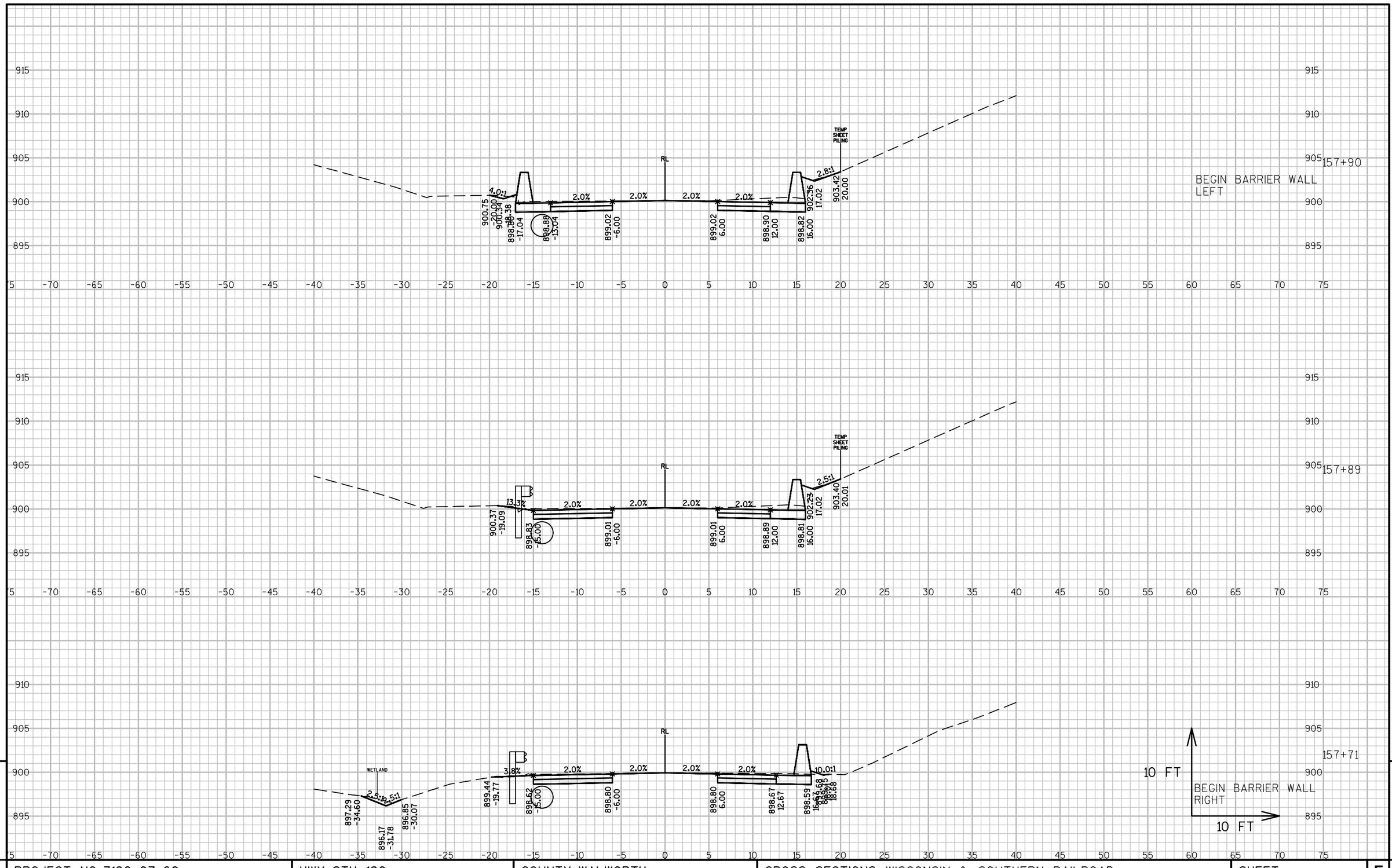
WISDOT/CADDS SHEET 49



PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: WISCONSIN & SOUTHERN RAILROAD	SHEET 222	E

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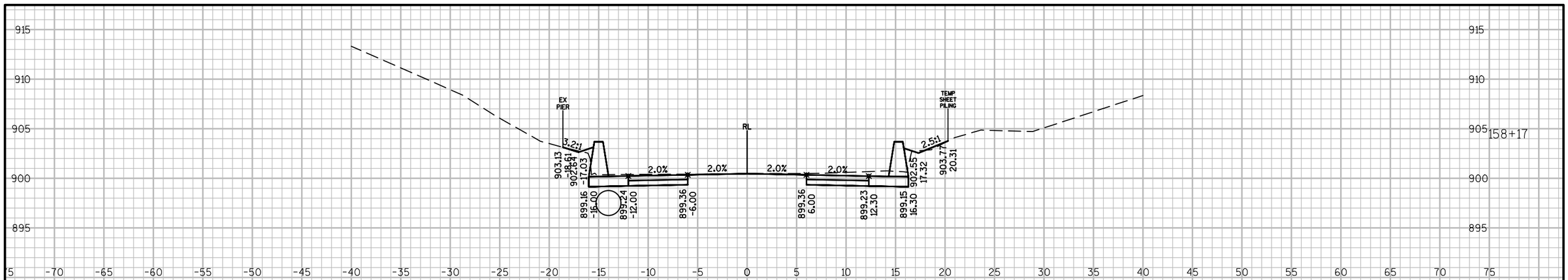
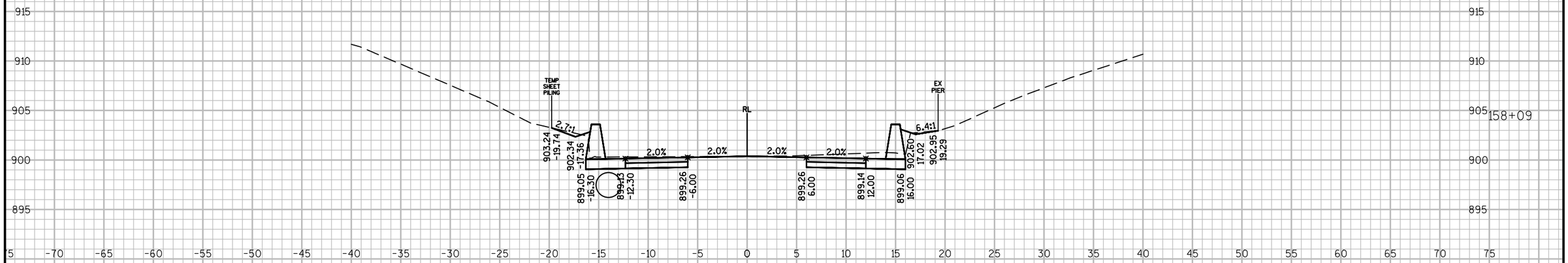
WISDOT/CADDS SHEET 49





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PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: WISCONSIN & SOUTHERN RAILROAD	SHEET 223	E

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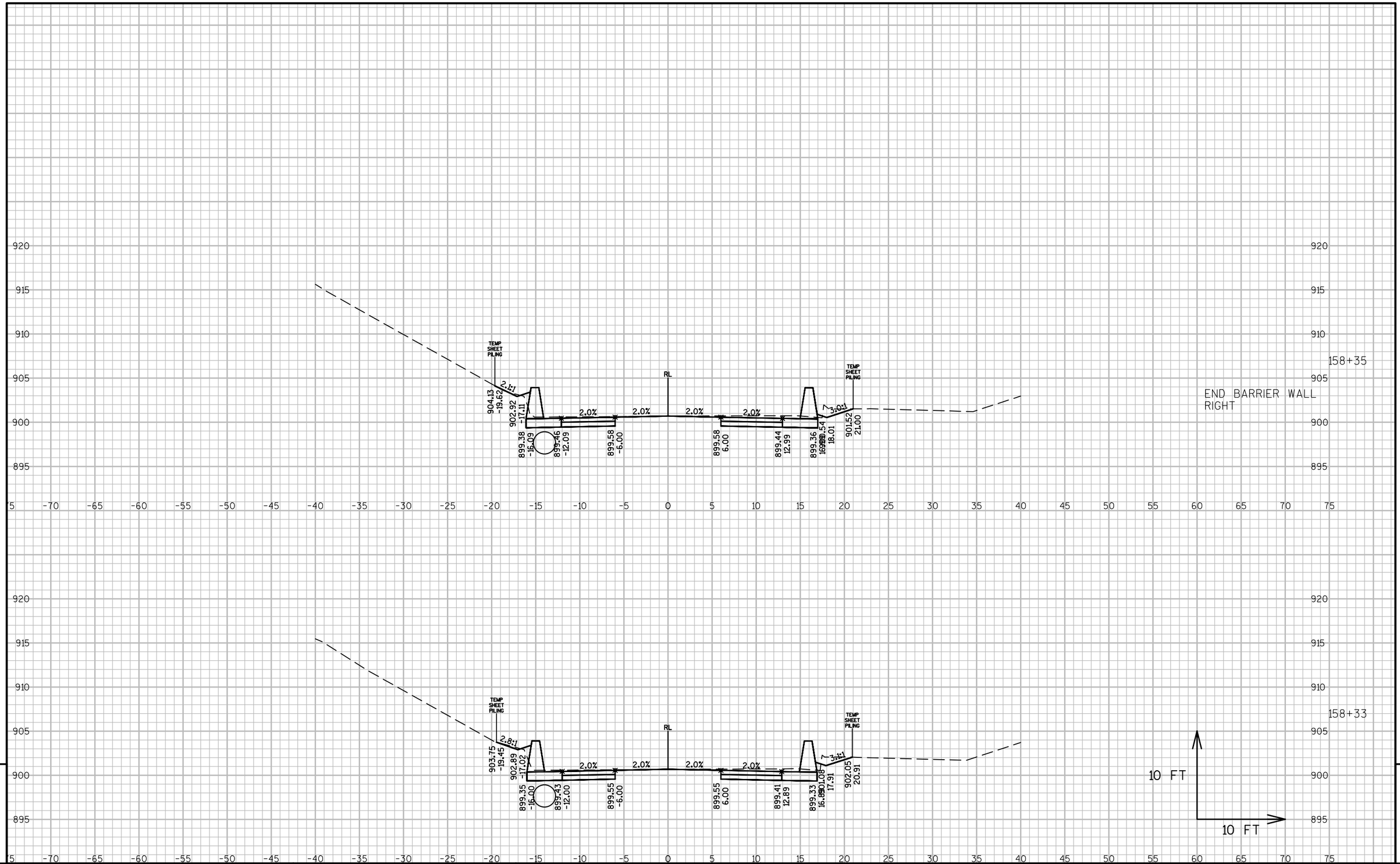
WISDOT/CADDS SHEET 49



PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: WISCONSIN & SOUTHERN RAILROAD	SHEET 224	E

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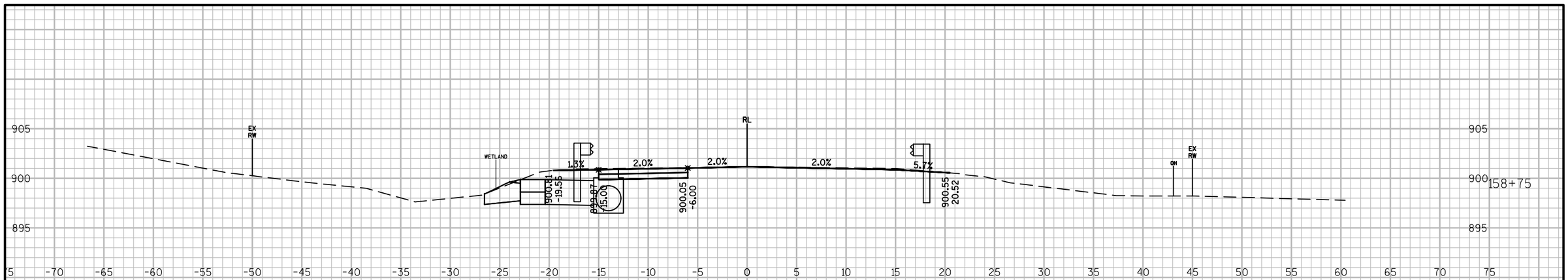
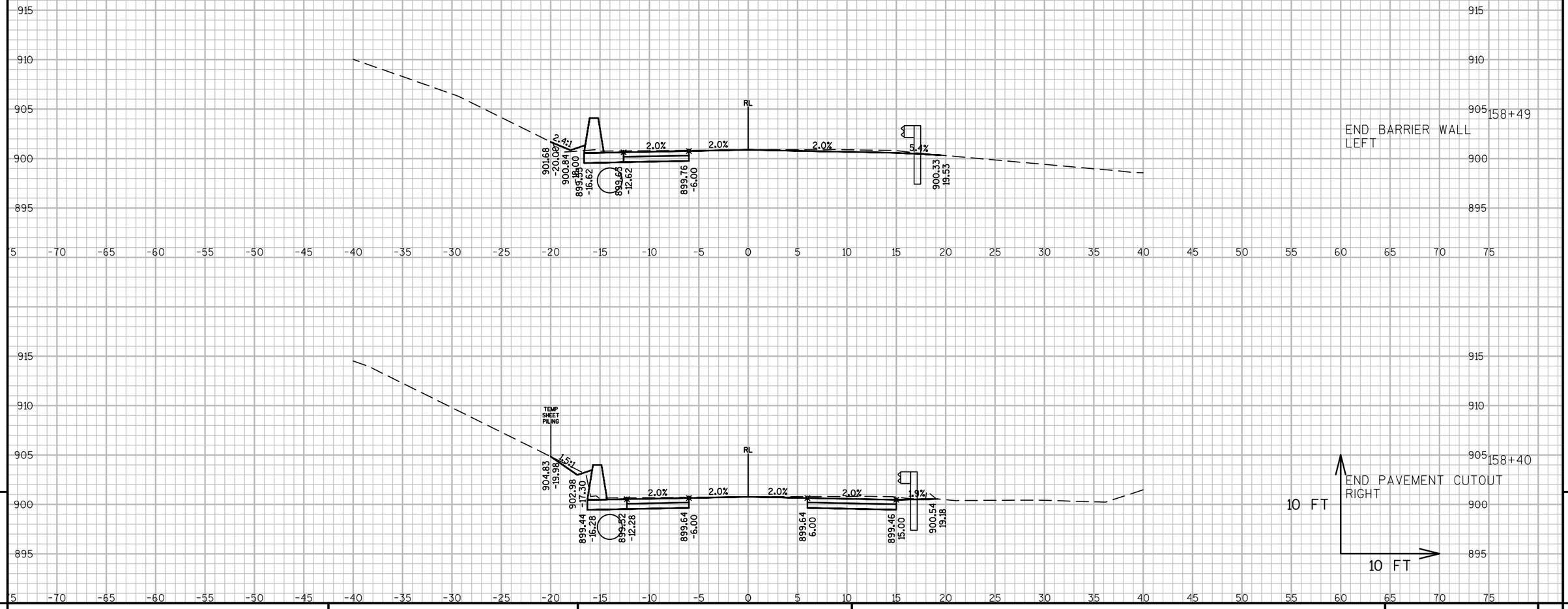
WISDOT/CADDS SHEET 49





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PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: WISCONSIN & SOUTHERN RAILROAD	SHEET 225	E

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
LAYOUT NAME - SECTION SHEET - (7)

PLOT DATE : 3/29/2016 10:31 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

9

9

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: WISCONSIN & SOUTHERN RAILROAD	SHEET 226	E

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
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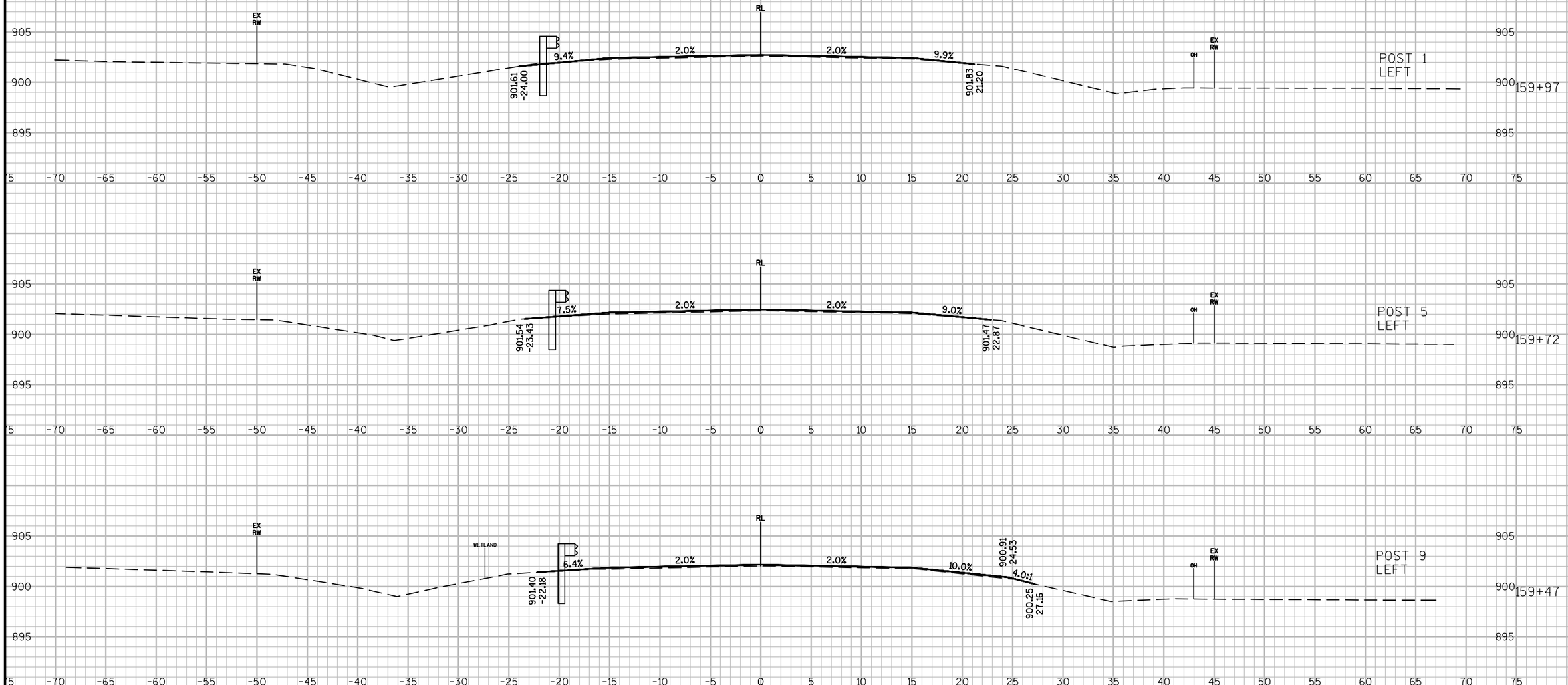

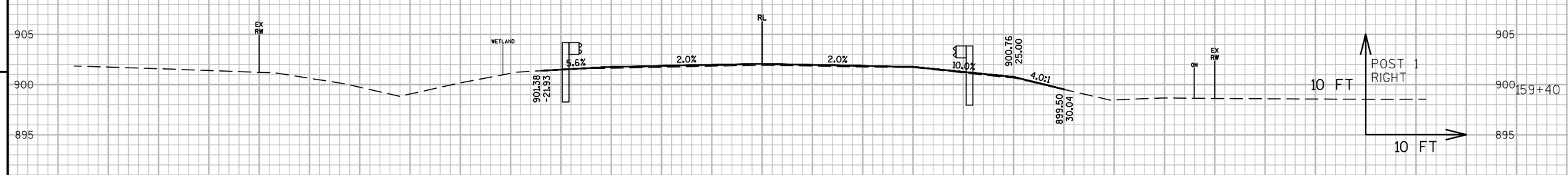

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PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: WISCONSIN & SOUTHERN RAILROAD	SHEET 227 E

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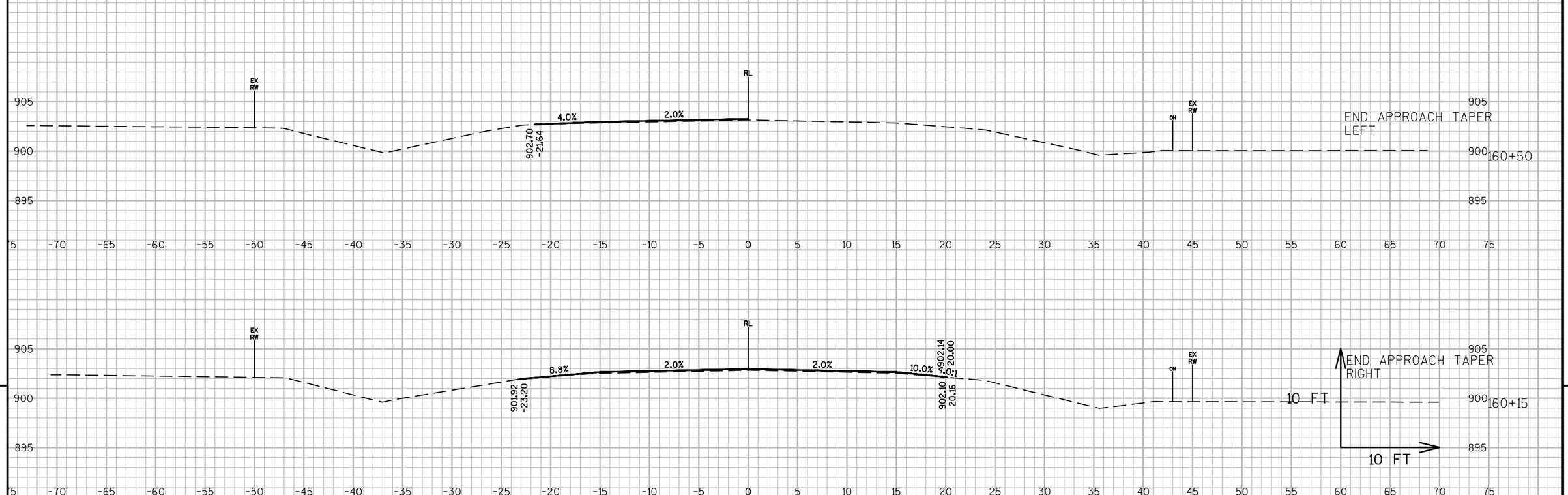
WISDOT/CADDS SHEET 49



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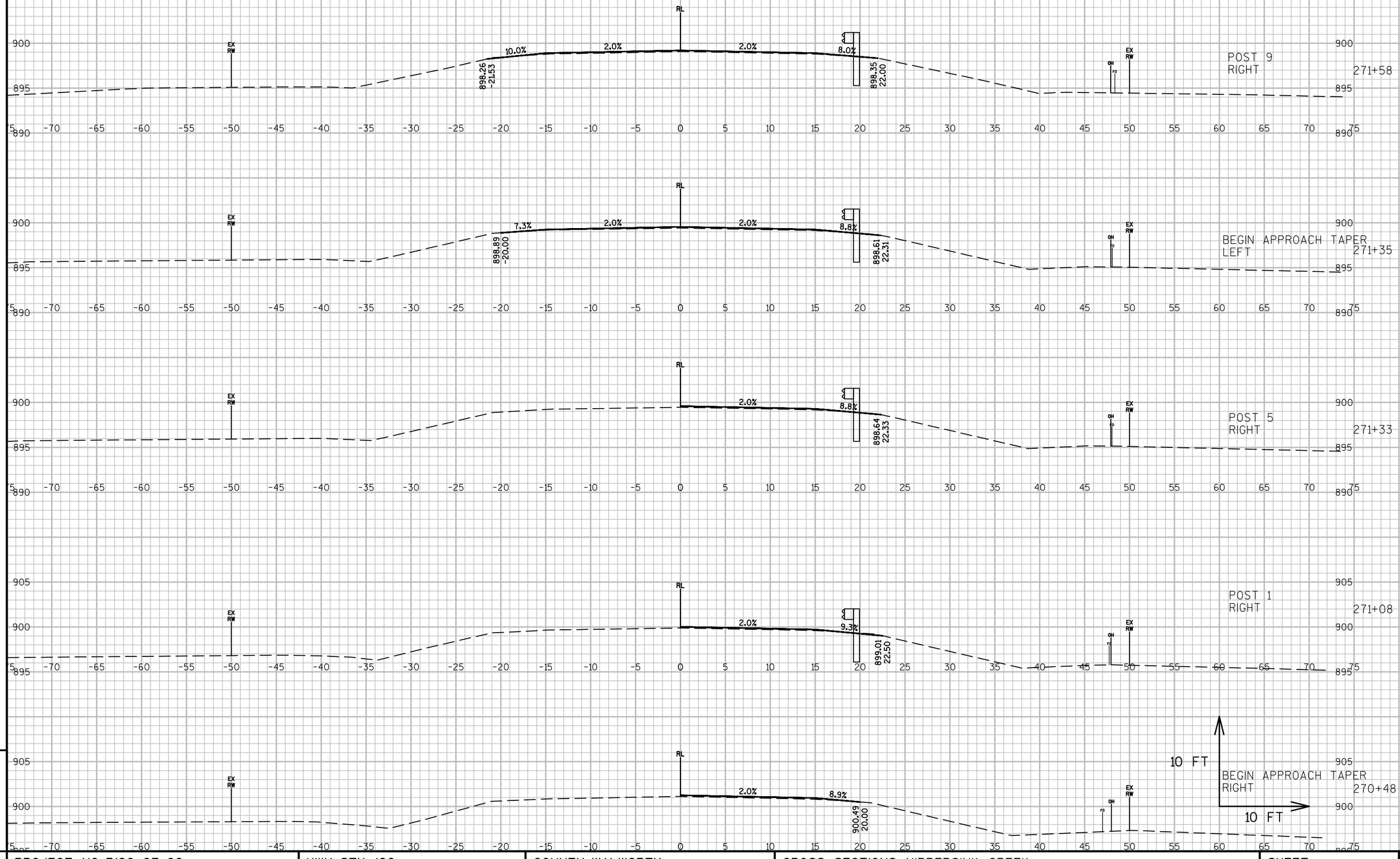
9

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: WISCONSIN & SOUTHERN RAILROAD	SHEET 228	E

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
LAYOUT NAME - SECTION SHEET - (10)

PLOT DATE : 3/29/2016 10:31 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: NIPPERSINK CREEK	SHEET 229	E

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
LAYOUT NAME - SECTION SHEET - (11)
PLOT DATE : 3/29/2016 10:31 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49

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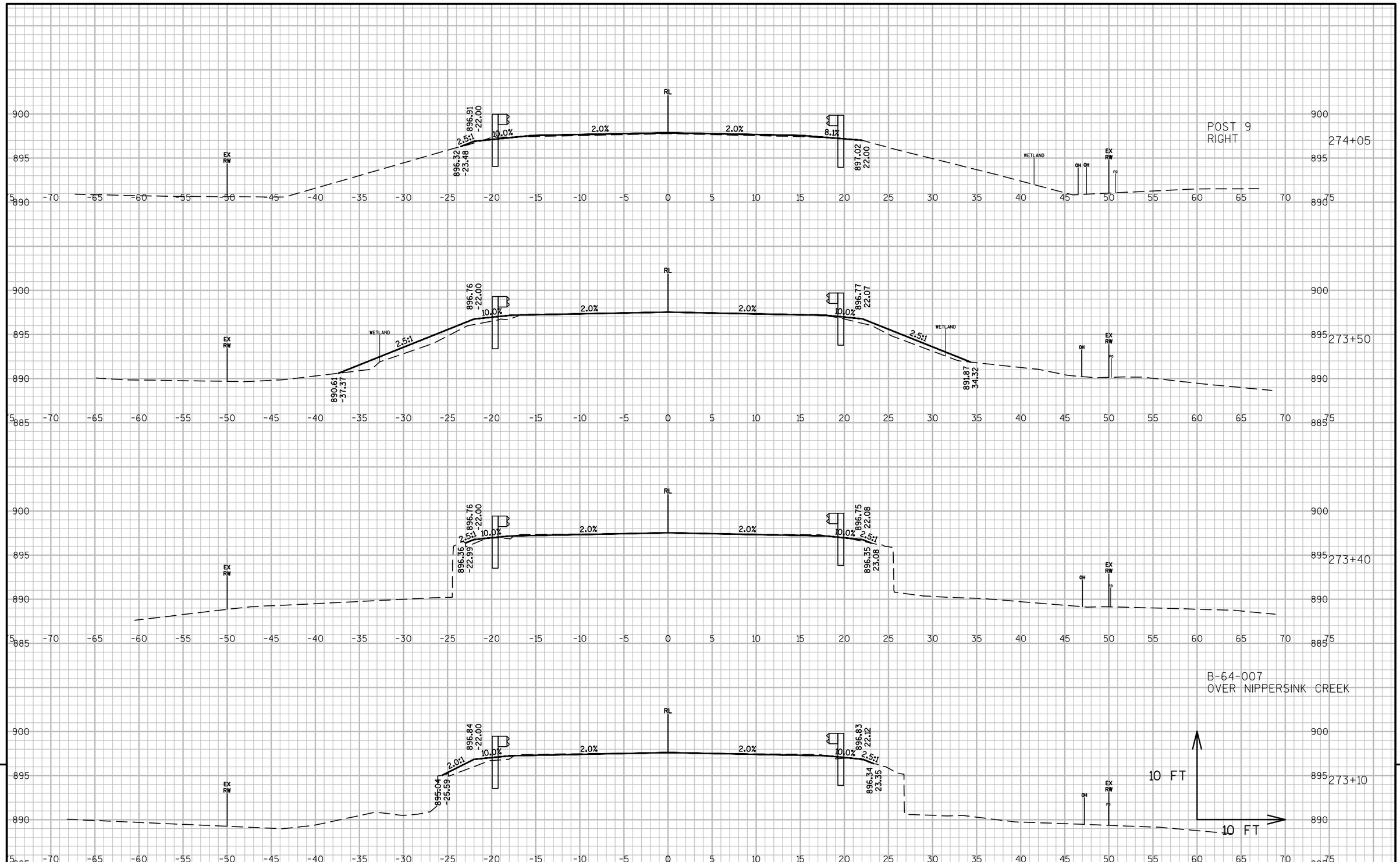
9

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: NIPPERSINK CREEK	SHEET 230	E

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
LAYOUT NAME - SECTION SHEET - (12)

PLOT DATE : 3/29/2016 10:31 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

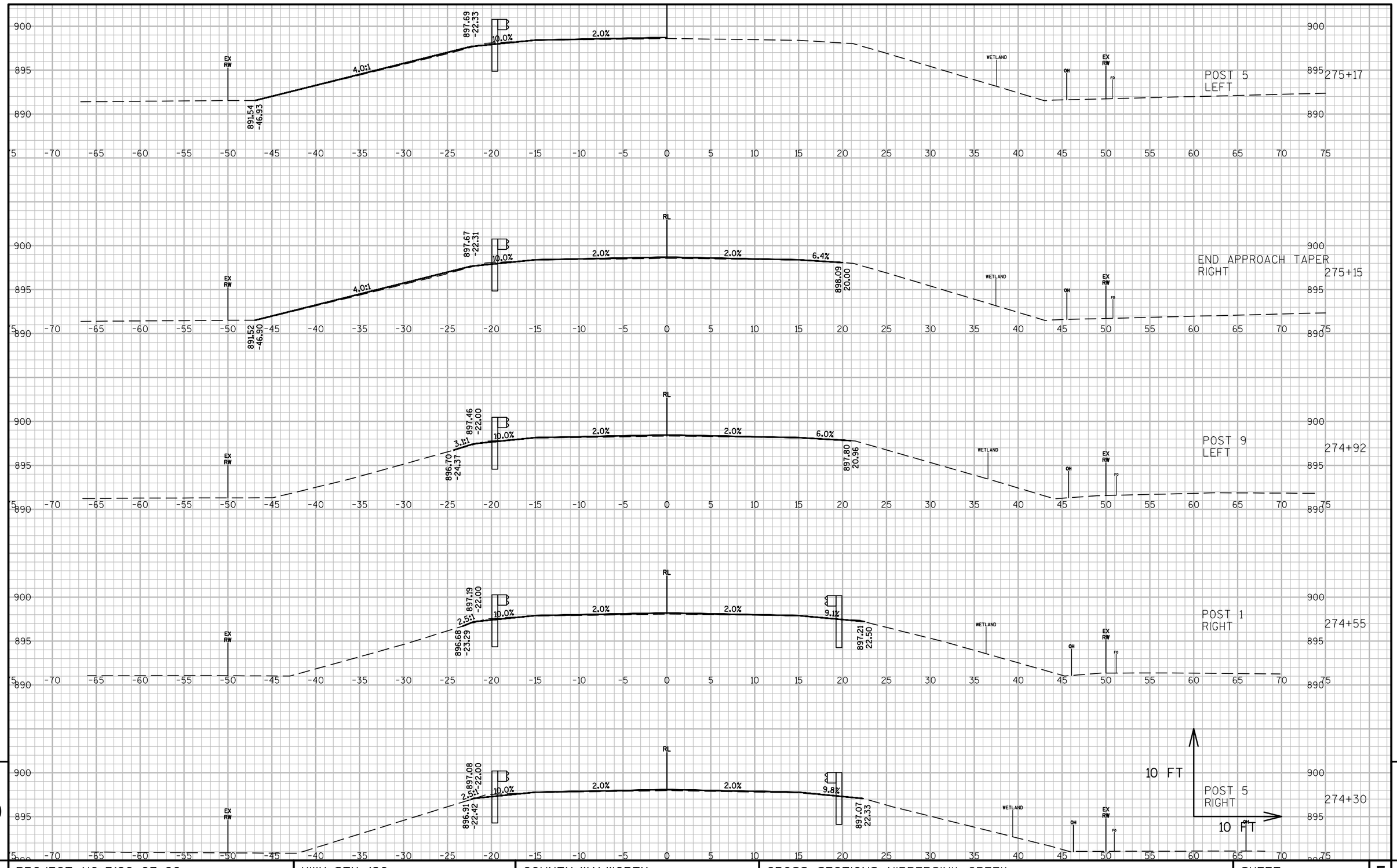


PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: NIPPERSINK CREEK	SHEET 231 E

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
LAYOUT NAME - SECTION SHEET - (13)

PLOT DATE : 3/29/2016 10:31 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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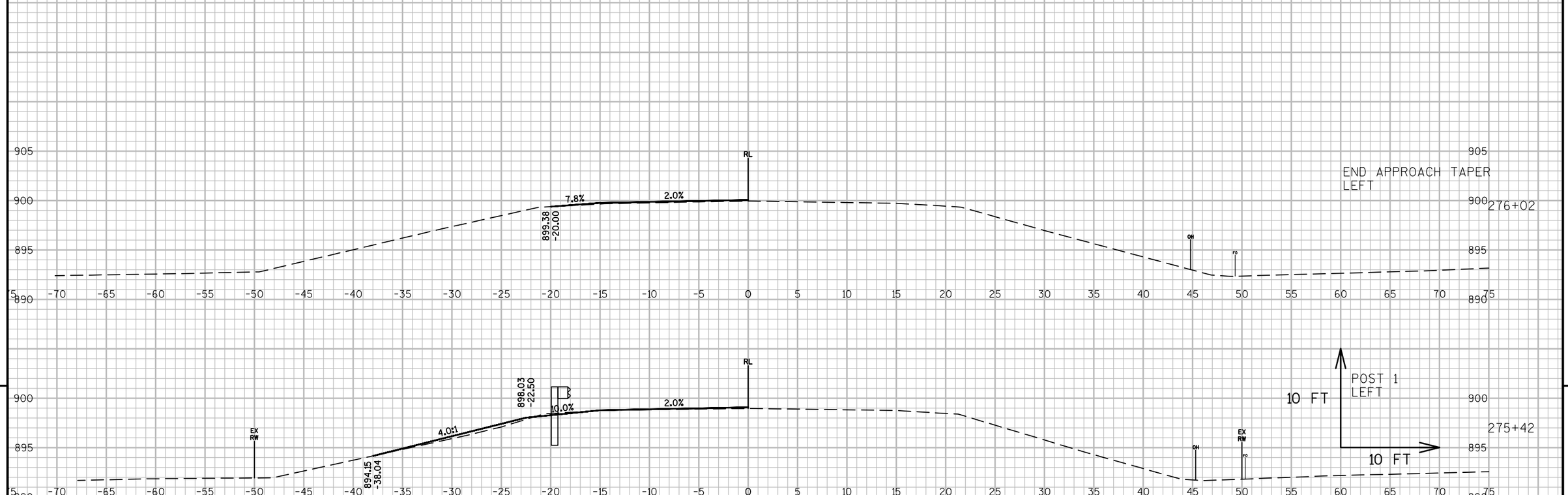
PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: NIPPERSINK CREEK	SHEET 232	E

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
LAYOUT NAME - SECTION SHEET - (14)
PLOT DATE : 3/29/2016 10:31 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



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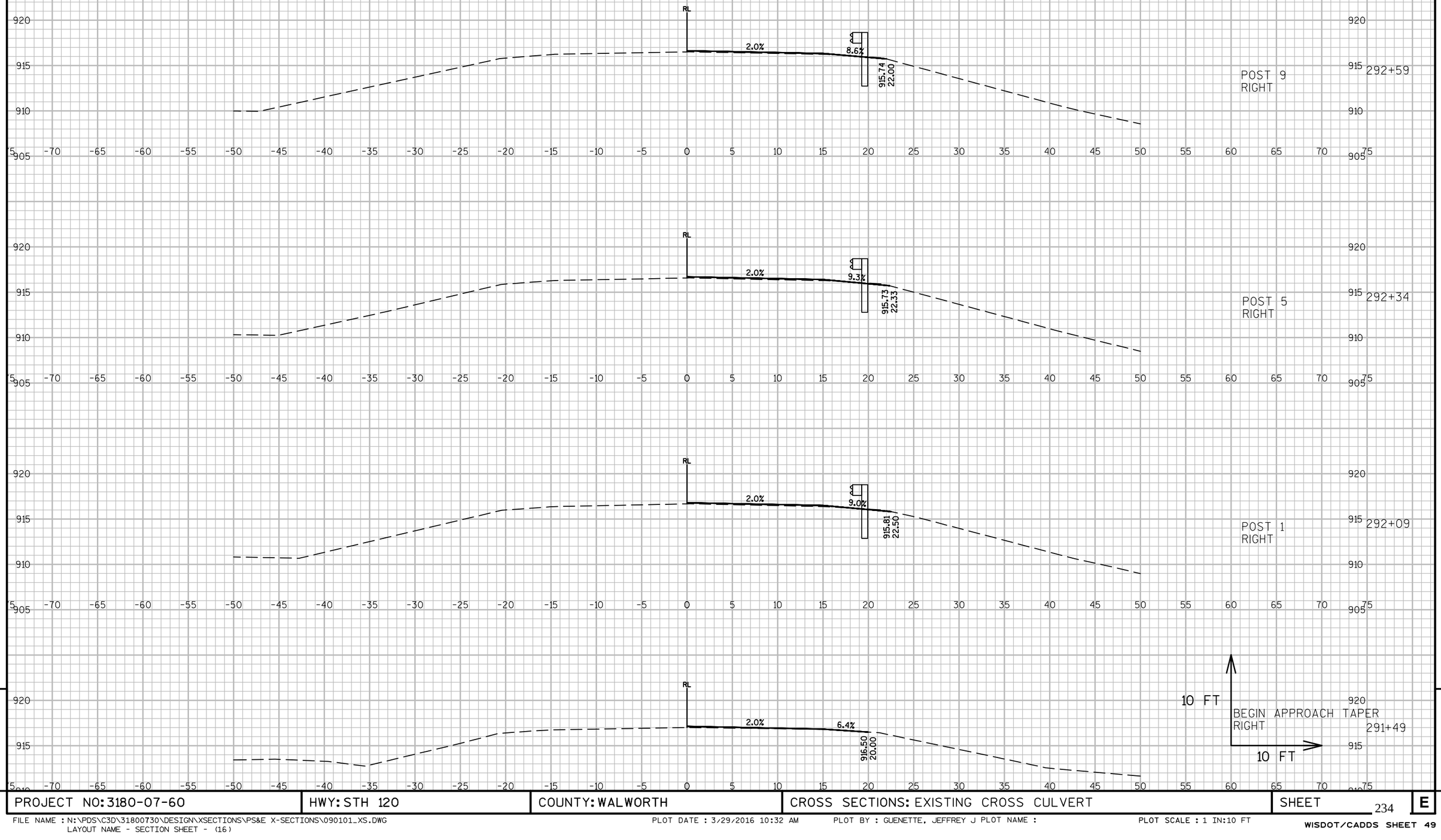
PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: NIPPERSINK CREEK	SHEET 233	E

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
LAYOUT NAME - SECTION SHEET - (15)

PLOT DATE : 3/29/2016 10:32 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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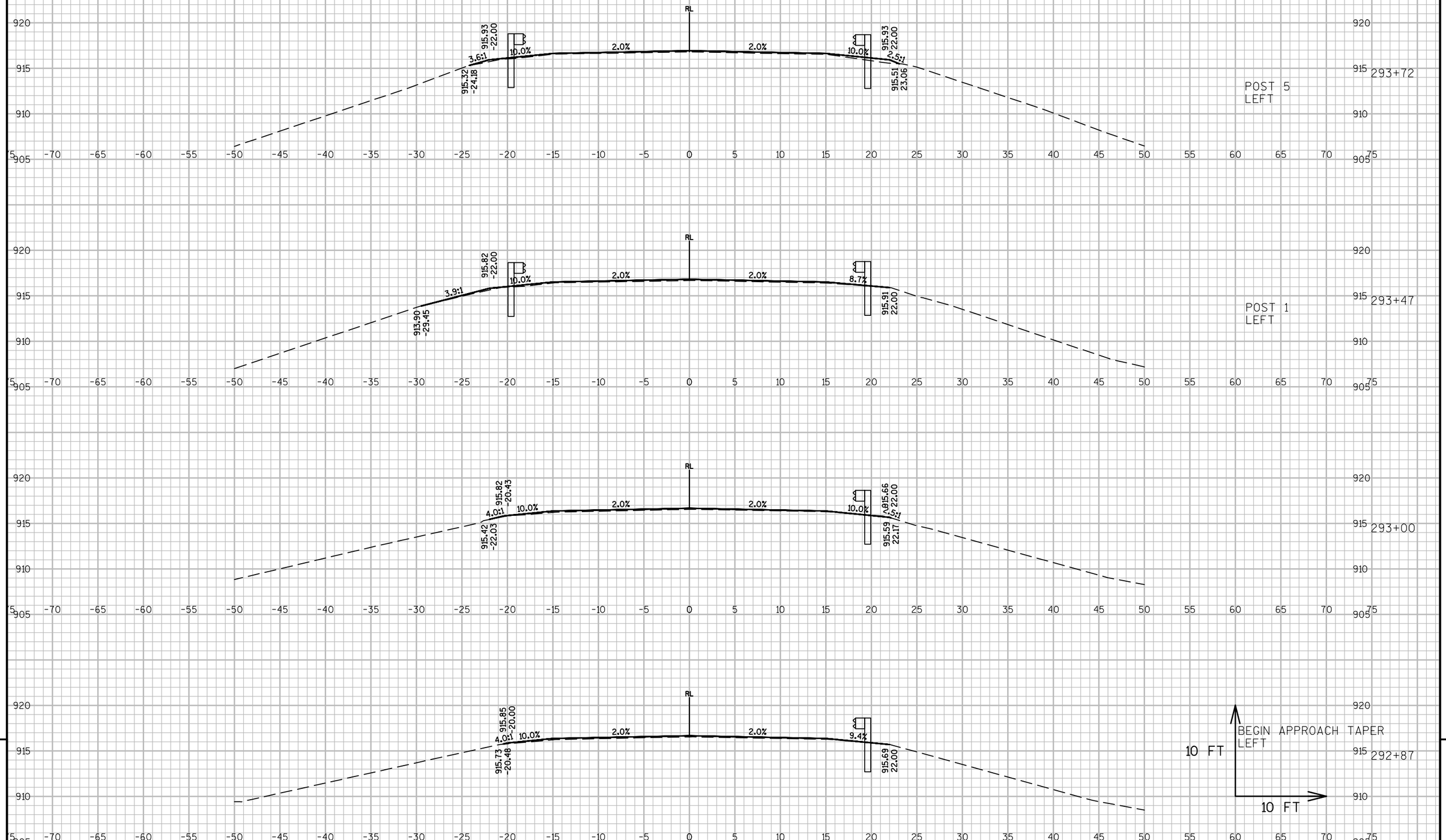
PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: EXISTING CROSS CULVERT	SHEET 234	E

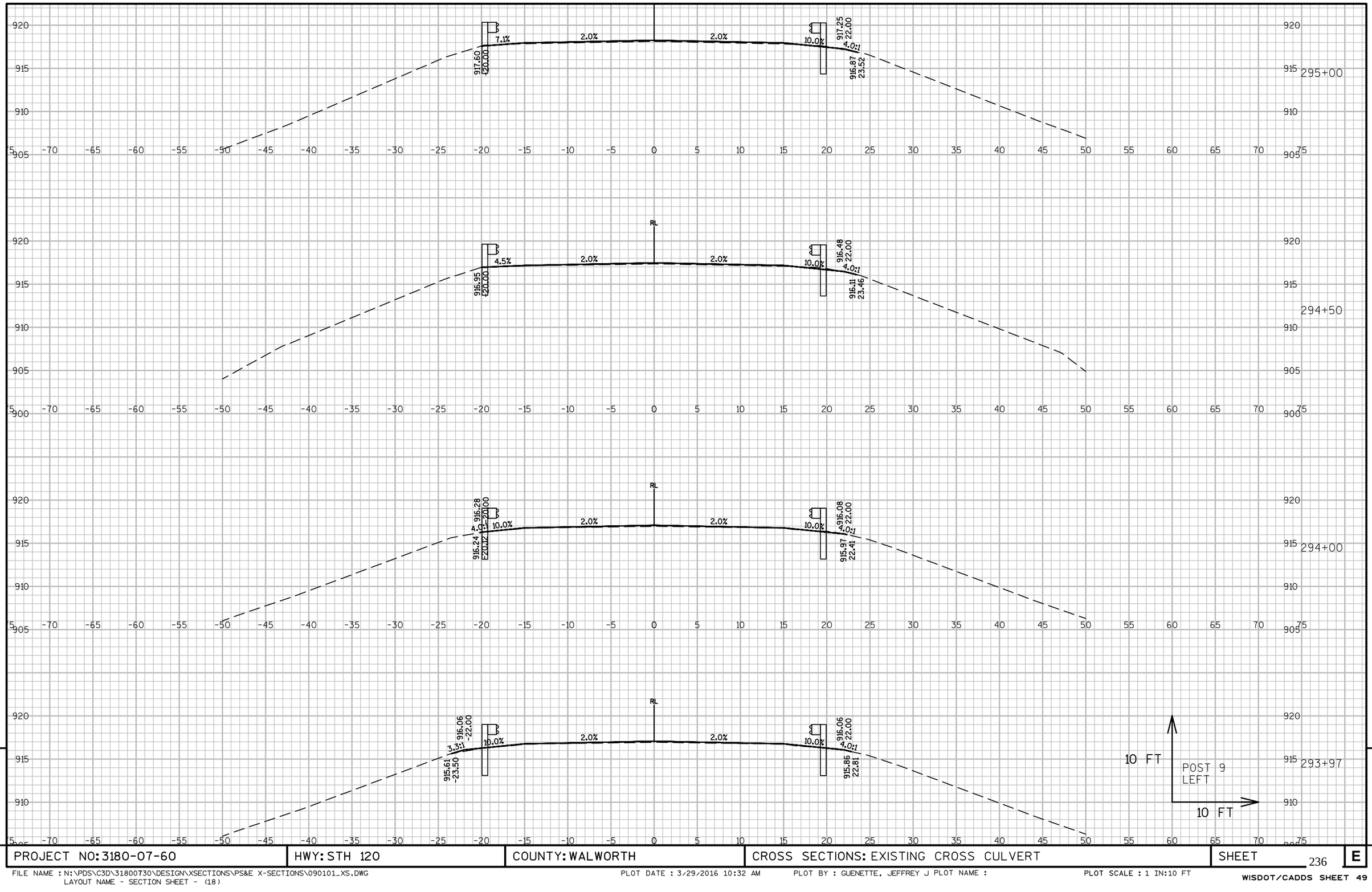


9	PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: EXISTING CROSS CULVERT	SHEET 235 E

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
LAYOUT NAME - SECTION SHEET - (17)

PLOT DATE : 3/29/2016 10:32 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

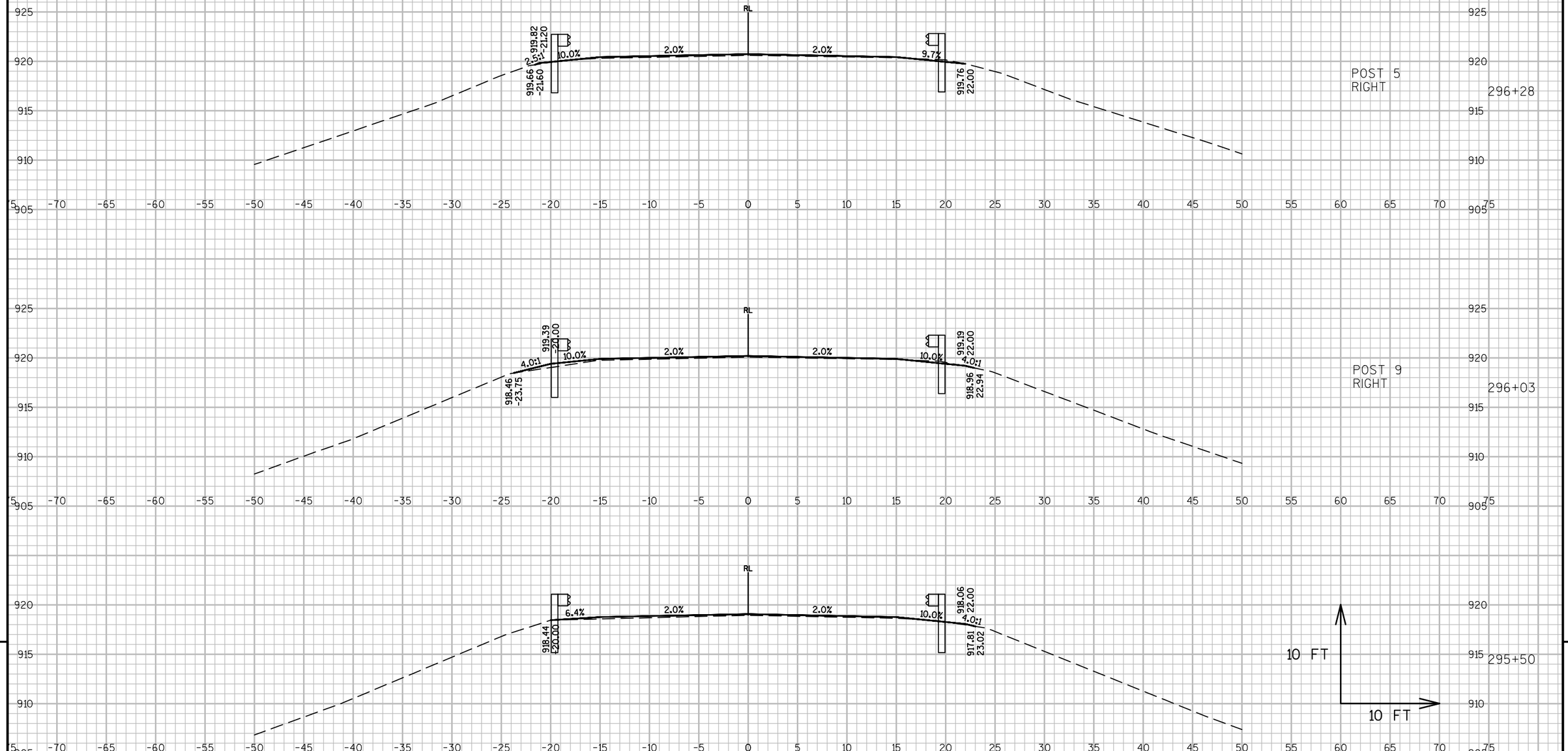


PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: EXISTING CROSS CULVERT	SHEET 236	E

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
LAYOUT NAME - SECTION SHEET - (18)

PLOT DATE : 3/29/2016 10:32 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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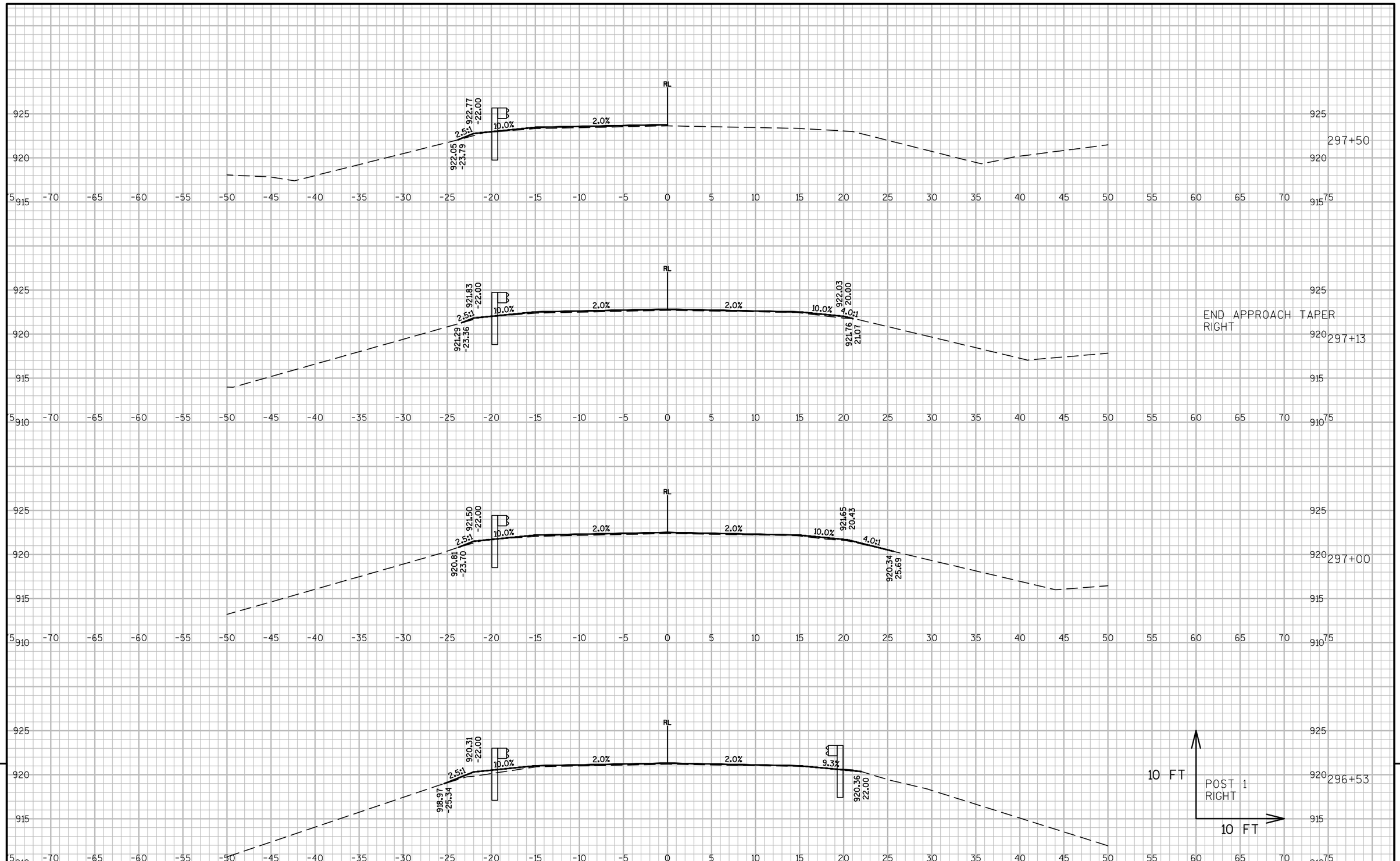
PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: EXISTING CROSS CULVERT	SHEET 237	E

9

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
LAYOUT NAME - SECTION SHEET - (19)

PLOT DATE : 3/29/2016 10:32 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT



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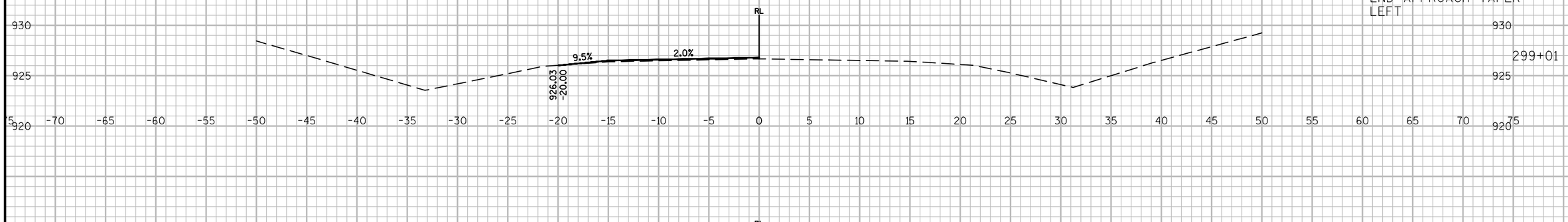
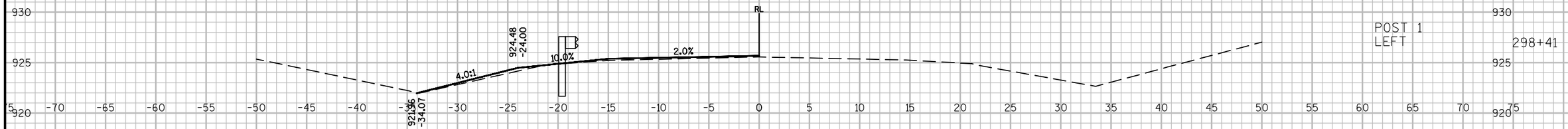
PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: EXISTING CROSS CULVERT	SHEET 238	E

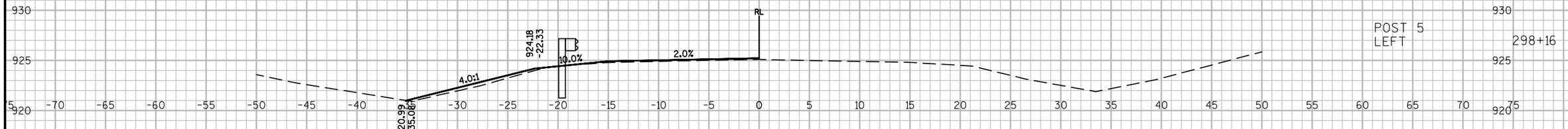
END APPROACH TAPER
LEFT



POST 1
LEFT



POST 5
LEFT



POST 9
LEFT

9

9

PROJECT NO: 3180-07-60	HWY: STH 120	COUNTY: WALWORTH	CROSS SECTIONS: EXISTING CROSS CULVERT	SHEET 239	E

FILE NAME : N:\PDS\C3D\31800730\DESIGN\XSECTIONS\PS&E X-SECTIONS\090101_XS.DWG
LAYOUT NAME - SECTION SHEET - (21)

PLOT DATE : 3/29/2016 10:32 AM PLOT BY : GUENETTE, JEFFREY J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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