MAD

JUNE 2021

PROJECT ID: 3576-01-71

WITH: N/A

COUNTY: JEFFERSON

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 = 226



02

N

DESIGN DESIGNATION

A.A.D.T.	(2022)	=	2,200
A.A.D.T.	(2042)	=	2,400
D.H.V.		=	9.9%
D.D.		=	61/39
T.		=	10.6%
DESIGN SPEED		=	VARIES, 60 MPH TYP.
ESALS		=	460,000

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 (300'FR')
- 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

ALBION - FORT ATKINSON

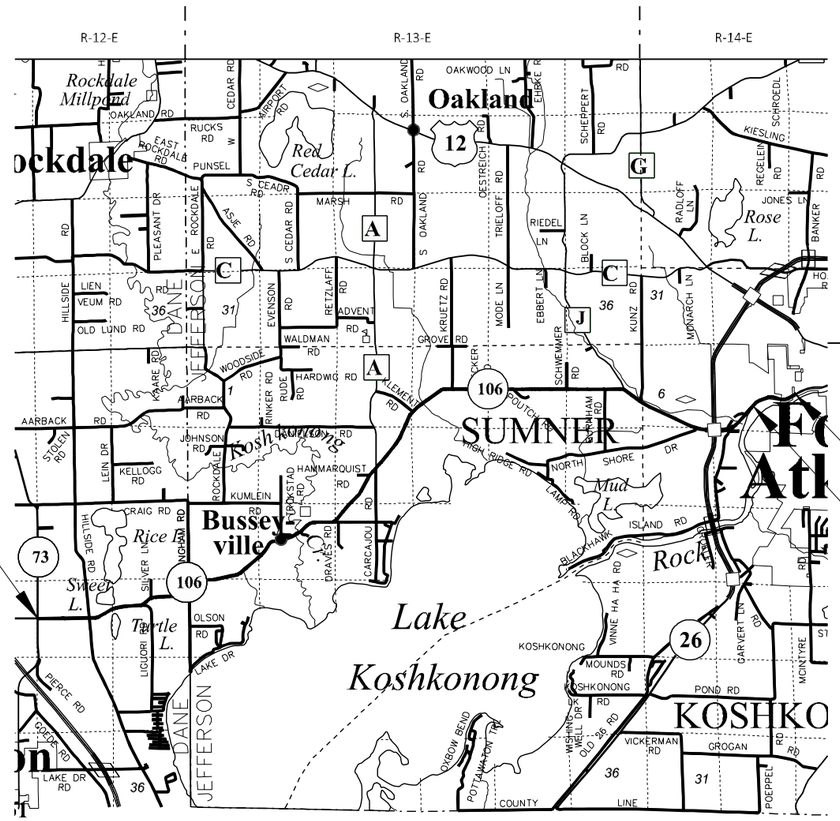
STH 73 - PARK DRIVE

STH 106

JEFFERSON COUNTY

STATE PROJECT NUMBER
3576-01-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3576-01-71	WISC 2021344	1



LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 11.337 MI

BEGIN PROJECT
STA. 7+50.00
Y=514,553.072
X=789,808.252

END PROJECT
STA. 606+10.00
Y=529,090.793
X=841,500.782

STRUCTURE
B-28-0195

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, JEFFERSON 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. THE VERTICAL DATUM IS REFERENCED TO NAVD88 (2012).

ORIGINAL PLANS PREPARED BY

MSA

1702 Pankratz St Madison, WI 53704
608-242-7779 1-800-446-0679 Fax: 608-242-5664

WISCONSIN CHASE C. KIESLER E-43621 MADISON WI PROFESSIONAL ENGINEER

DATE: 1/12/21 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA PROFFESIONAL SERVICES, INC.
Designer	MSA PROFFESIONAL SERVICES, INC.
Project Manager	DAVID SCHMIDT, PE
Regional Examiner	SW REGION
Regional Supervisor	KARLA KNORR, PE

APPROVED FOR THE DEPARTMENT

DATE: David Schmidt Digitally signed by David Schmidt Date: 2021.01.24 17:14:26-06'00' (Signature)

E

APPLY TACK COAT AT A MINIMUM RATE OF 0.07 GAL/SY TO MILLED SURFACES, AND 0.05 GAL/SY BETWEEN HMA LIFTS. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/INCH.

APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO MILLED SURFACE AND 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A TRAVEL OR TURN LANE.

THE LIMITS OF PAYMENT REMOVAL ON SIDE STREETS ARE APPROXIMATE AND WILL BE VERIFIED IN THE FIELD BY THE ENGINEER.

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. PAVEMENT SLOPES, BORDER SLOPES, ETC., MAY VARY WITHIN THE STATION LIMITS OF EACH SECTION.

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IN THE AREA OF GRADING ONLY, ARE APPROXIMATE. THERE ARE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

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

THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER WILL DETERMINE THE EXACT LOCATIONS OF EROSION CONTROL ITEMS. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY. REMOVE ITEMS AT THE ENGINEERS DISCRETION.

PLACE EROSION CONTROL DEVICES IN SEQUENCE WITH CONSTRUCTION OPERATIONS AND MAINTAINED AS DETERMINED BY THE ENGINEER.

ADJUST NUMBER, LOCATION, AND SPACING OF TRAFFIC CONTROL SIGNS AND DEVICES, AS SHOWN ON THE PLANS, TO FIT FIELD CONDITIONS.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SEEDED AND COVERED WITH EROSION MAT AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

RESTORE ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS, INCLUDING GRADING, TOPSOILING, SEEDING AND INSTALLING EROSION MAT.

DO NOT STORE BORROW OR WASTE DISPOSAL OR STAGE CONSTRUCTION EQUIPMENT AT THE ENVIRONMENTALLY SENSITIVE AREAS THAT ARE SHADED IN THE PLAN SHEETS.

EXISTING RIGHT OF WAY LINES ARE APPROXIMATE.

WETLANDS EXIST OUTSIDE THE TOE OF SLOPE IN ALL FOUR QUADRANTS OF ALL THREE BRIDGE STRUCTURES. DO NOT DISTURB AREAS OUTSIDE THE SLOPE INTERCEPTS IN THESE LOCATIONS.

STANDARD ABBREVIATIONS

AC	ACRES
AEW	APRON ENDWALL
AGG	AGGREGATE
AH	AHEAD
ALUM.	ALUMINUM
A.P.	ACCESS POINT
ASPH	ASPHALT
AVE	AVENUE
BAD	BASE AGGREGATE DENSE
BK	BACK
BLK	BLOCK
BOC	BACK OF CURB
BOW	BACK OF SIDEWALK
BM	BENCHMARK
CABC	CRUSHED AGGREGATE BASE COURSE
CL or ℄	CENTERLINE
Δ	CENTRAL ANGLE or DELTA
CMCP	CORRUGATED METAL CULVERT PIPE
CONC	CONCRETE
CP	CONTROL POINT
CPCS	CULVERT PIPE CORRUGATED STEEL
CSM	CERTIFIED SURVEY MAP
CTH	COUNTY TRUNK HIGHWAY
D	DEGREE OF CURVATURE
DES	DESIRABLE
E	EAST
EB	EASTBOUND
EBS	EXCAVATION BELOW SUBGRADE
EOP	EDGE OF PAVEMENT
ET AL	AND OTHERS
EW	ENDWALL
EXIST	EXISTING
FT	FOOT
FT2	SQUARE FEET
GN	GRID NORTH
GV	GAS VALVE
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HYD	HYDRANT
IN	INCH
INL	INLET
INV	INVERT
IP	IRON PIPE
L	LENGTH
L	LENGTH OF CURVE
LC	LONG CHORD
LCP	LONG CHORD BEARING
LF	LINEAR FEET
LT	LEFT
MH	MANHOLE
MON	MONUMENT
N	NORTH
NB	NORTHBOUND
N.C.	NORMAL CROWN
NO	NUMBER
PB	PULLBOX
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PLE	PERMANENT LIMITED EASEMENT
POB	POINT OF BEGINNING
PT	POINT OF TANGENCY
R	RADIUS
R	RANGE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REQ'D	REQUIRED
RL or R/L	REFERENCE LINE
RP	RADIUS POINT
RT	RIGHT
R/W	RIGHT OF WAY
S	SOUTH
SAN	SANITARY SEWER
SB	SOUTHBOUND
S.E.	SUPERELEVATION
SEC	SECTION
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
SSPRCHE	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
SQ	SQUARE
ST	STREET
STA	STATION
STD	STANDARD
STH	STATE TRUNK HIGHWAY
STM	STORM SEWER
STR	STRUCTURE
T	TANGENT
TAN	TANGENT
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T or TN	TOWN
TYP.	TYPICAL
WM	WATERMIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
X	EAST GRID COORDINATE
Y	NORTH GRID COORDINATE

BORING SUMMARY

BORING NUMBER	STATION	OFFSET	EXISTING ASPHALT DEPTH	BASE DEPTH	SUBGRADE TYPE
B-1	7+70	6' RT	9"	3"	SILT
B-2	20+39	8' LT	9"	3"	SILT
B-3	34+13	4' RT	9"	3"	SAND/GRAVEL
B-4	47+15	10' LT	9"	3"	SILT
B-5	60+03	8' RT	4"	16"	SAND/GRAVEL
B-6	70+34	6' LT	9"	3"	SILT
B-7	83+75	10' RT	4"	4" RAP/3" BAD	SILT
B-8	96+70	4' LT	4"	3" RAP/5" BAD	SILT
B-9	110+52	6' RT	9"	0"	SILT
B-10	126+90	8' LT	6"	10" RAP	SILT
B-11	140+68	4' RT	12"	0"	SAND/GRAVEL
B-12	155+33	10' LT	6"	6" RAP	SILT
B-13	167+73	8' RT	4"	12" RAP	SAND
B-14	180+38	6' LT	4"	13" BAD	SAND
B-15	193+53	10' RT	6"	10" RAP	SAND
B-16	220+93	4' LT	6"	10" RAP	SAND
B-17	246+13	6' RT	5"	11" RAP	SAND
B-18	275+63	8' LT	5"	15" RAP	SILT
B-19	300+25	4' RT	6"	8" RAP	SILT
B-20	323+63	8' RT	9"	11" RAP	SILT
B-21	354+03	10' LT	5"	12" RAP	SILT
B-22	381+45	8' RT	8"	13" RAP	SILT
B-23	408+85	6' LT	5"	5" RAP	SAND/GRAVEL
B-24	435+25	10' RT	4"	11" RAP	SILT
B-25	461+75	4' LT	5"	9" RAP	SILT
B-26	488+15	6' RT	5"	6" RAP/5" BAD	SILT
B-27	514+07	8' LT	4"	12" RAP	SILT
B-28	541+05	4' RT	4"	10" RAP	SAND
B-29	557+65	10' LT	3"	10" BAD	SAND
B-30	564+45	8' RT	4'	9" RAP	SAND
B-31	571+65	6' LT	7"	3" RAP/5" BAD	SAND/SILT
B-32	577+15	10' RT	7"	10" RAP	SILT
B-33	584+05	10' LT	8"	5" RAP/5" BAD	SILT
B-34	590+65	6' RT	8"	8" RAP/5" BAD	SAND
B-35	598+25	6' LT	3"	5" BAD/10" RAP	SAND
B-36	605+60	10' LT	5"	6" BAD/4" RAP	SILT

INDEX OF TYPICAL SECTIONS & DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
PAVEMENT MARKINGS
TRAFFIC CONTROL
DETOUR

UTILITIES

CAROL ANASON (PRIMARY CONTACT)
AT&T WISCONSIN - COMMUNICATION LINE
316 W WASHINGTON AVE
MADISON, WI 53701
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CA2624@ATT.COM

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MADISON, WI 53718
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ANDY SELLE (PRIMARY CONTACT)
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101 N. MAIN STREET
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ASELLE@FORTATKINSONWI.NET

KELLY DALY (PRIMARY CONTACT)
ENBRIDGE ENERGY - GAS/PETROLEUM
1600 2ND AVE SW, SUITE 16
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DICK HAMMETTER (PRIMARY CONTACT)
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DICK.HAMMETTER@WINTECHNOLOGY.COM

TRANS 220 MAILBOX (PRIMARY CONTACT)
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DE PERE, WI 54115
(920) 338-6582
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MARY MONTGOMERY (PRIMARY CONTACT)
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200 FIRST ST
CEDAR RAPIDS, IA 52401
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ANDY SELLE (PRIMARY CONTACT)
CITY OF FORT ATKINSON - AIRPORT FACILITY
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RUSS RYAN (PRIMARY CONTACT)
FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
118 DIVISION STREET
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RUSSELL.W.RYAN@FTR.COM

WE ENERGIES UTILITY COORDINATOR (PRIMARY CONTACT)
WE ENERGIES - ELECTRICITY/GAS/PETROLEUM
500 S 116TH STREET
WEST ALLIS, WI 53214
(414) 221-2738
WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

DESIGN CONTACTS

WISCONSIN DEPARTMENT OF TRANSPORTATION
SOUTHWEST REGION
ATTN: DAVID SCHMIDT
2101 WRIGHT STREET
MADISON, WI 53704
PHONE: (608) 246-3867
EMAIL: David2.Schmidt@dot.wi.gov

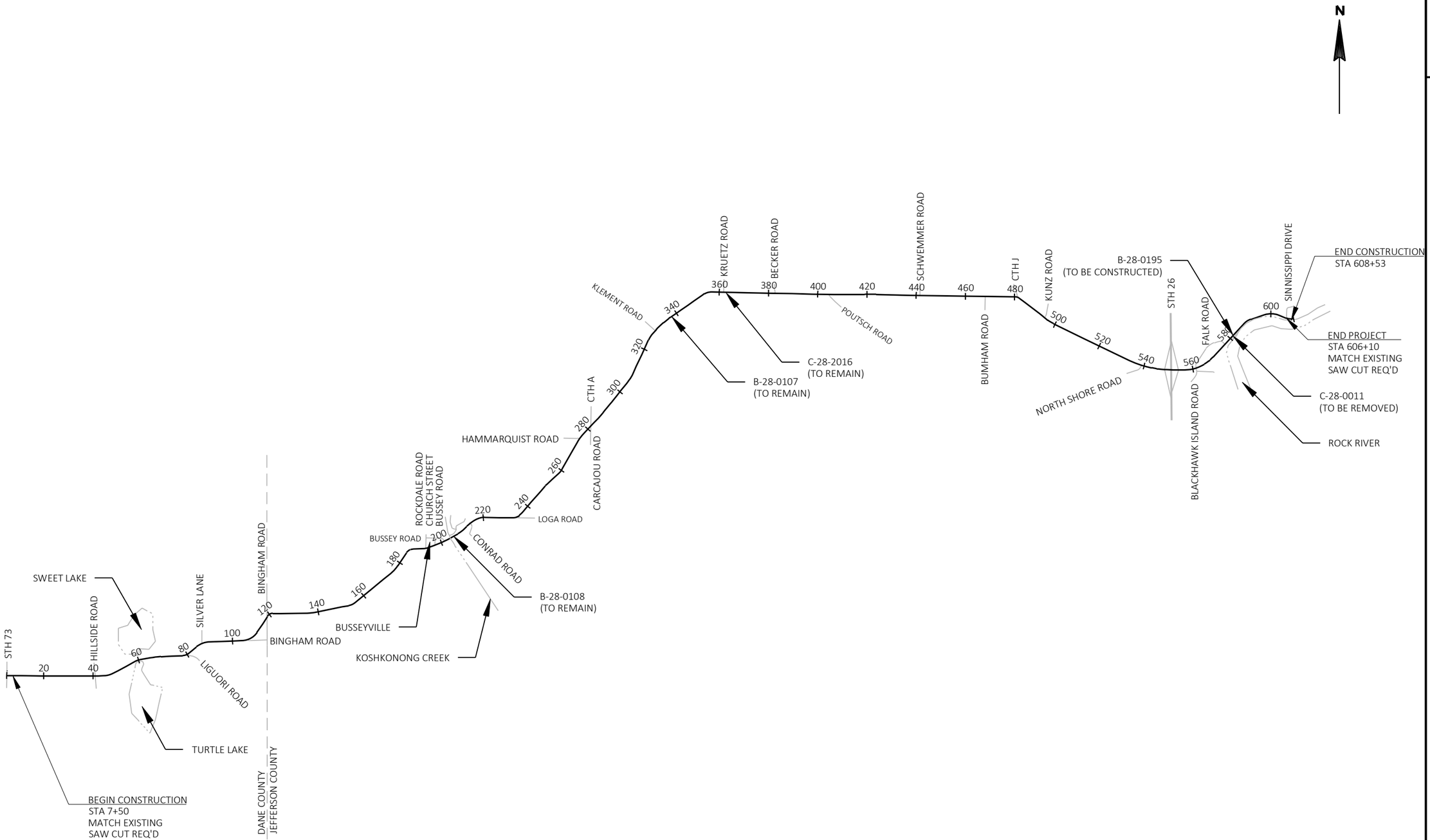
MSA PROFESSIONAL SERVICES, INC.
ATTN: CHASE KIELER
1702 PANKRATZ ST
MADISON, WI 53704
PHONE: (608) 242-6641
EMAIL: ckieler@msa-ps.com

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: SHELLEY NELSON
DNR SOUTH CENTRAL REGION HG
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PHONE: (608) 444-2835
EMAIL: shelley.nelson@wisconsin.gov

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

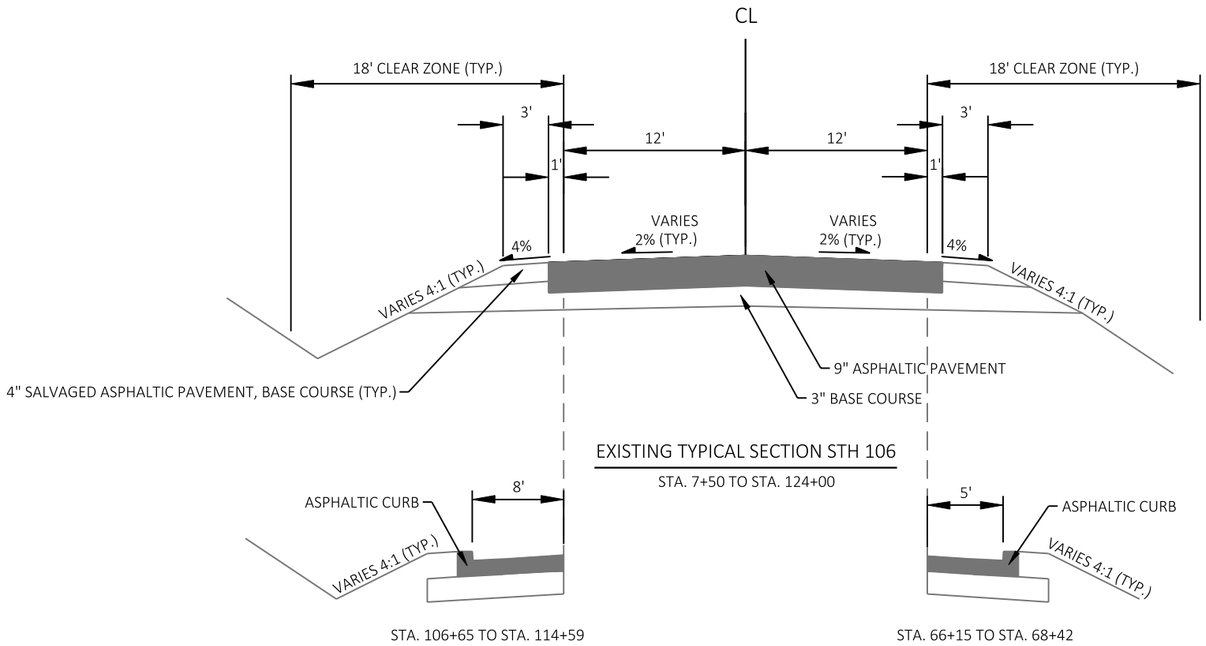
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PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 020201-po

PLOT DATE : 5/27/2020 4:45 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN: 0.75 MI

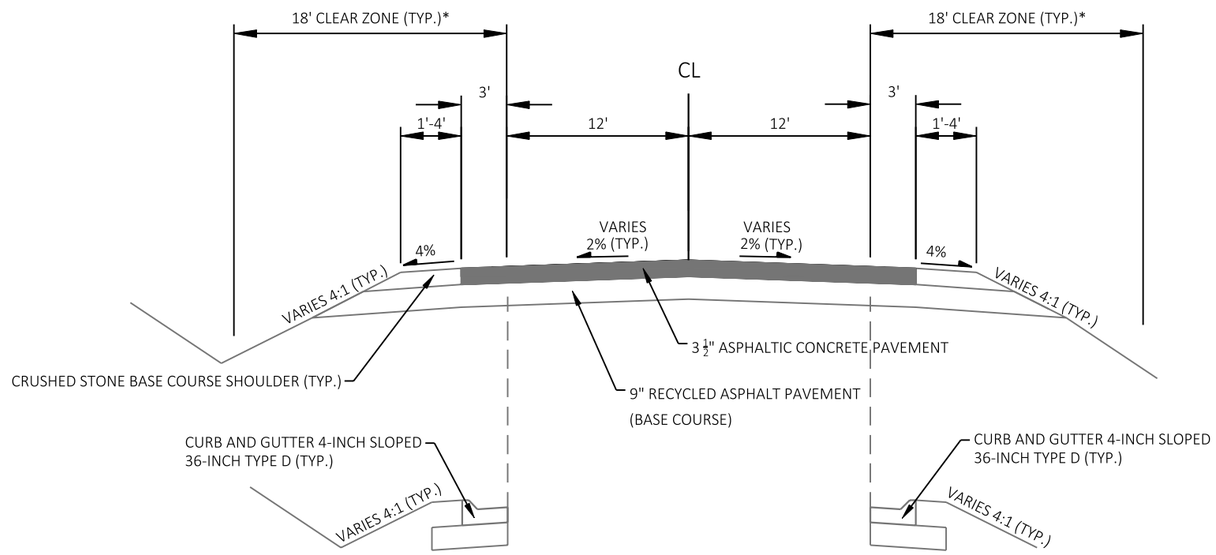


EXISTING TYPICAL SECTION STH 106

STA. 7+50 TO STA. 124+00

STA. 106+65 TO STA. 114+59

STA. 66+15 TO STA. 68+42



STA. 197+49 TO STA. 200+99

EXISTING TYPICAL SECTION STH 106

STA. 124+00 TO STA. 543+00

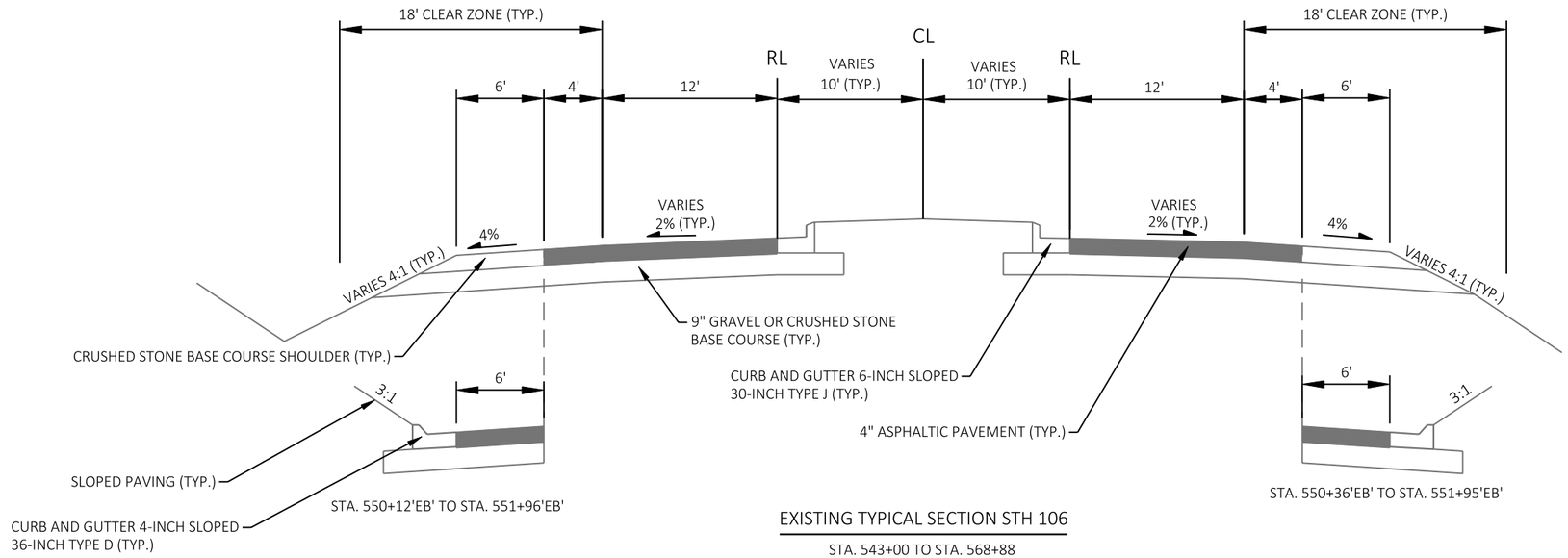
STA. 324+12 TO STA. 324+91

NOTES:

* CLEAR ZONE IS 14' FROM STA 186+00 - STA 220+00 BASED ON THE POSTED SPEED LIMIT OF 35 MPH

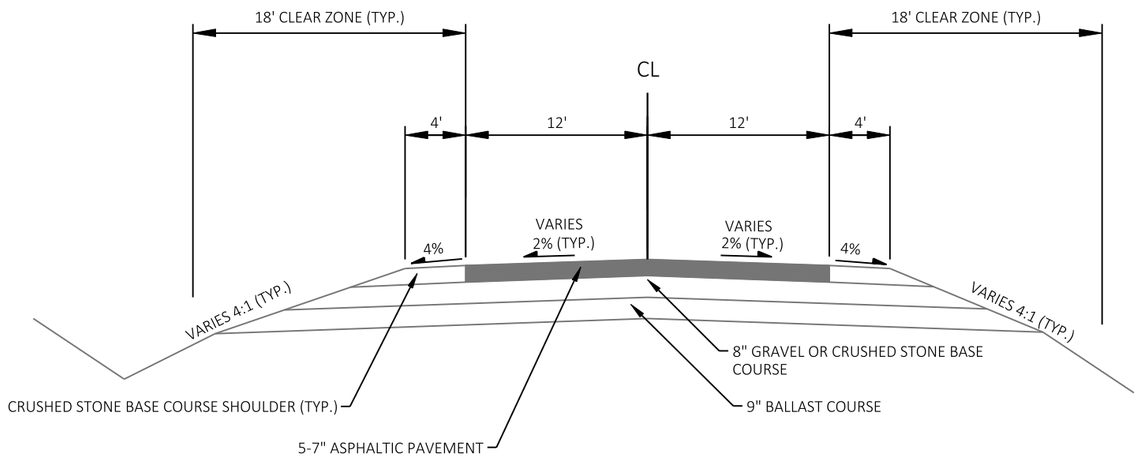
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EXISTING TYPICAL SECTIONS	SHEET 4	E

2



EXISTING TYPICAL SECTION STH 106

STA. 543+00 TO STA. 568+88

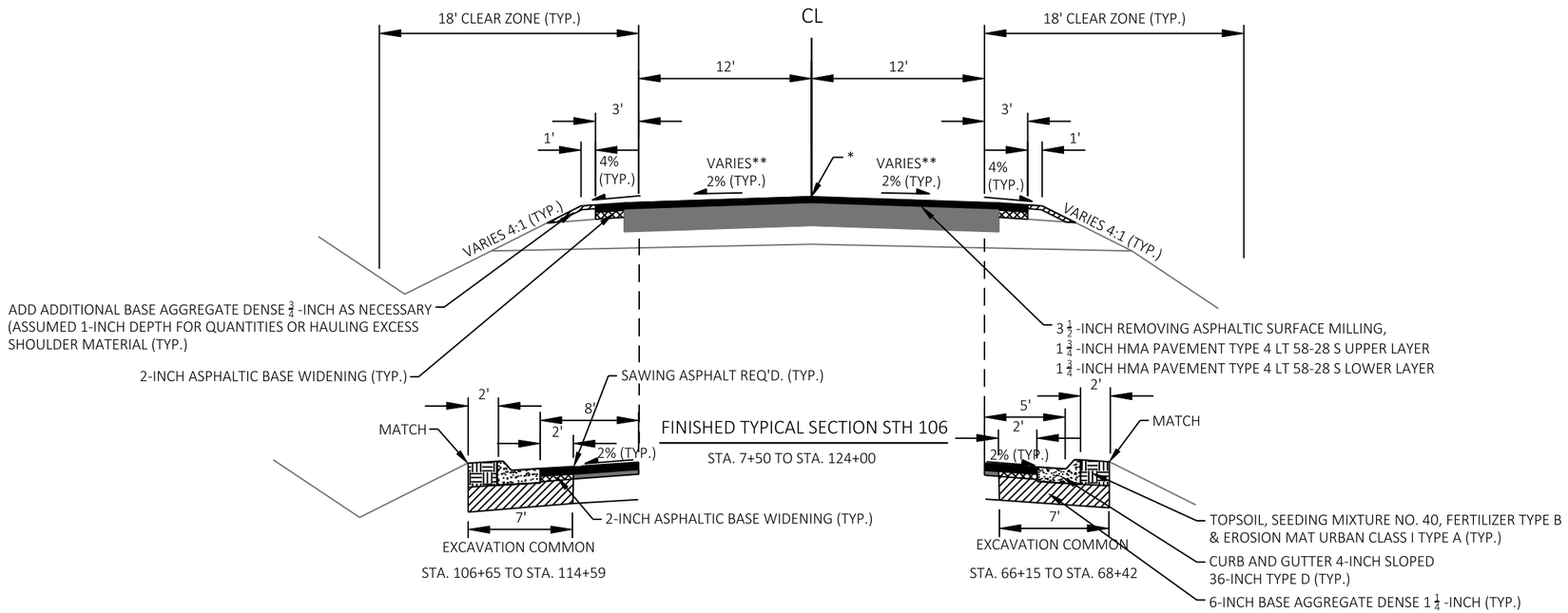


EXISTING TYPICAL SECTION STH 106

STA. 568+88 TO STA. 606+10

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EXISTING TYPICAL SECTIONS	SHEET 5	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020302-ts
PLOT DATE : 10/20/2020 3:18 PM
PLOT BY : CHASE KIELER
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



NOTES:

* ASPHALTIC CENTER LINE RUMBLE STRIP 2-LANE RURAL

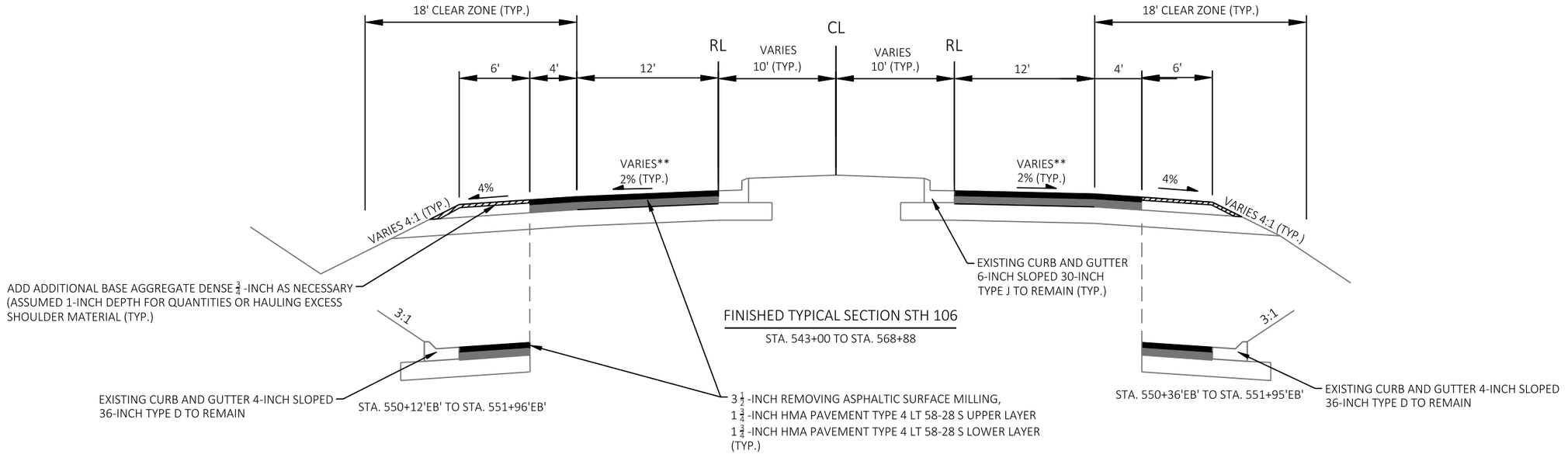
** MATCH EXISTING CROSS SLOPE, INCLUDING SUPERELEVATIONS

***CLEAR ZONE IS 14' FROM STA. 186+00 - STA. 220+00 BASED ON THE POSTED SPEED LIMIT OF 35 MPH

INCLUDE ASPHALT SAFETY EDGE ON ALL HMA SHOULDERS.

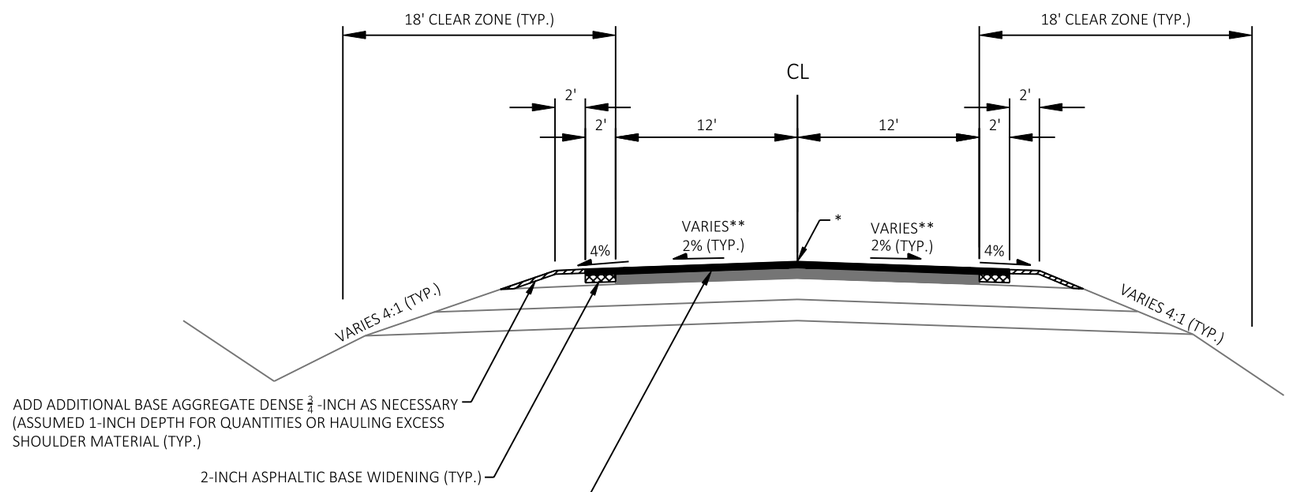
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	FINISHED TYPICAL SECTIONS	SHEET 6	E

2



FINISHED TYPICAL SECTION STH 106

STA. 543+00 TO STA. 568+88



FINISHED TYPICAL SECTION STH 106

STA. 568+88 TO STA. 578+73

NOTES:

* ASPHALTIC CENTER LINE RUMBLE STRIP 2-LANE RURAL

** MATCH EXISTING CROSS SLOPE, INCLUDING SUPERELEVATIONS INCLUDE ASPHALT SAFETY EDGE ON ALL HMA SHOULDERS.

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	FINISHED TYPICAL SECTIONS	SHEET 7	E

NOTES:

* ASPHALTIC CENTER LINE RUMBLE STRIP 2-LANE RURAL

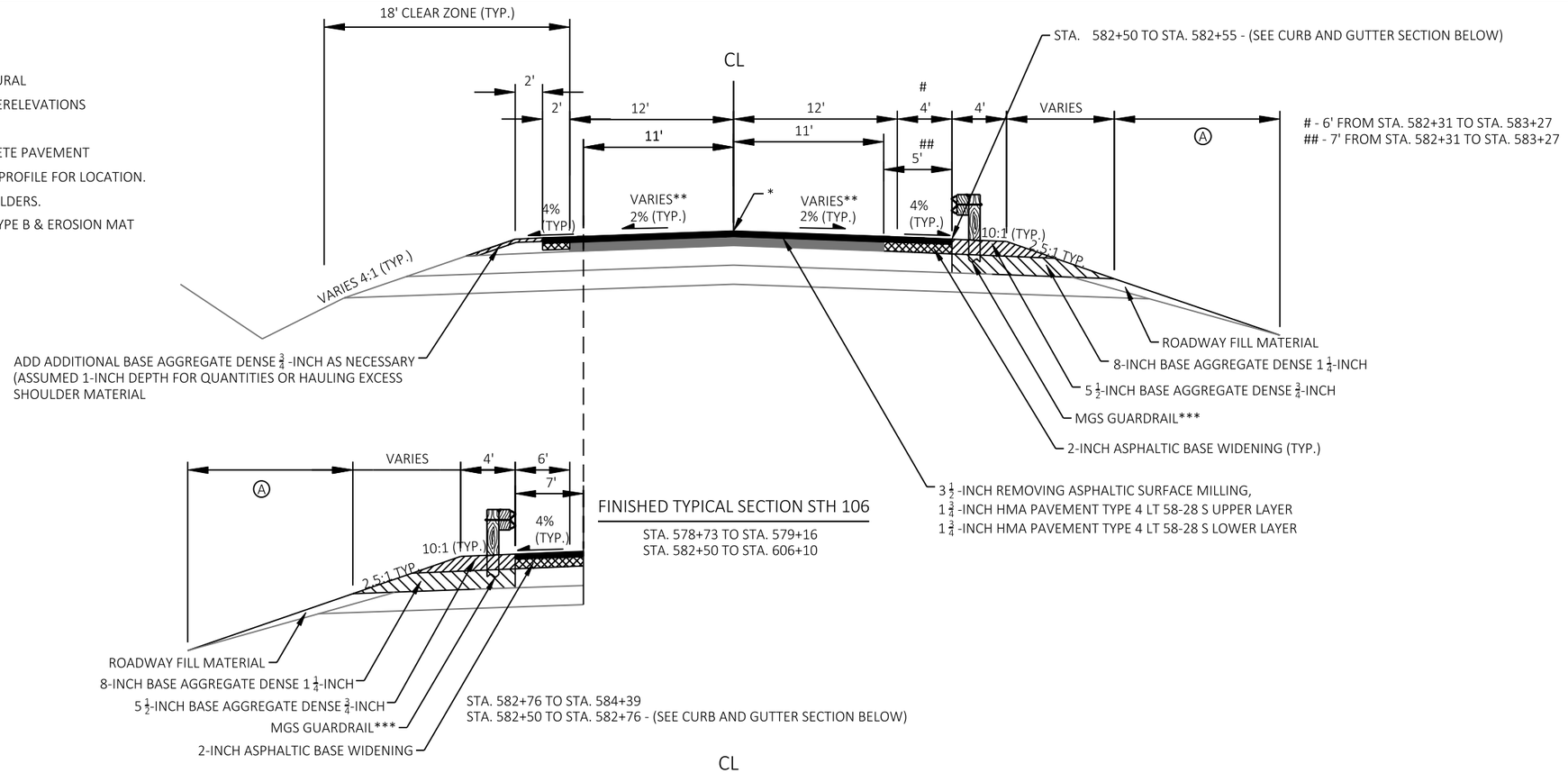
** MATCH EXISTING CROSS SLOPE, INCLUDING SUPERELEVATIONS

*** SEE PLAN SHEETS FOR GUARDRAIL LOCATION

**** SEE STANDARD DETAIL DRAWING FOR CONCRETE PAVEMENT APPROACH SLAB INFORMATION. SEE PLAN & PROFILE FOR LOCATION.

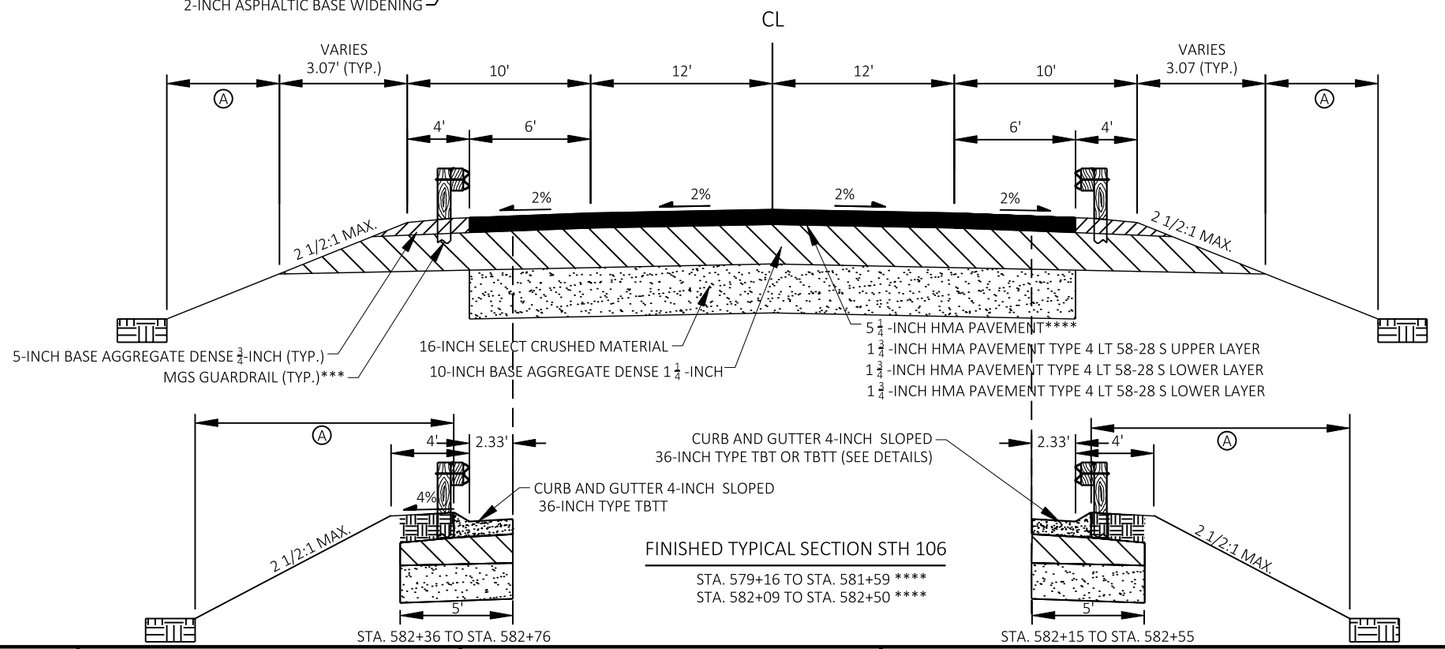
INCLUDE ASPHALT SAFETY EDGE ON ALL HMA SHOULDERS.

Ⓐ SALVAGED TOPSOIL, SEEDING, FERTILIZER TYPE B & EROSION MAT



FINISHED TYPICAL SECTION STH 106

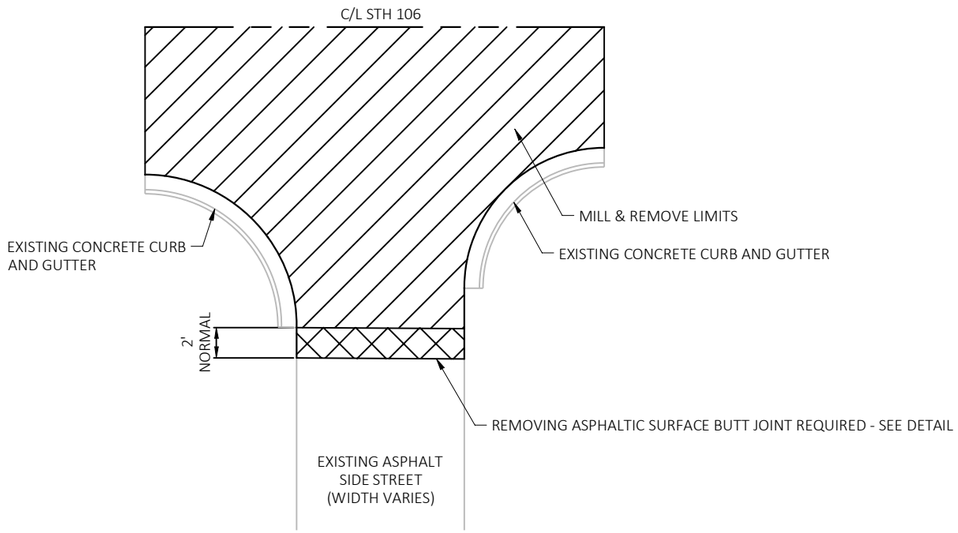
STA. 578+73 TO STA. 579+16
STA. 582+50 TO STA. 606+10



FINISHED TYPICAL SECTION STH 106

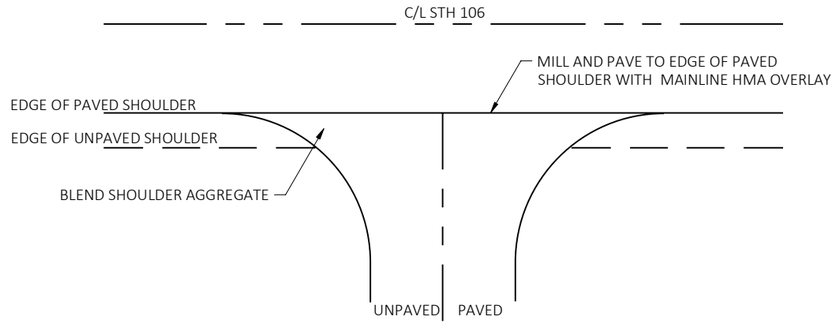
STA. 579+16 TO STA. 581+59 ****
STA. 582+09 TO STA. 582+50 ****

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	FINISHED TYPICAL SECTIONS	SHEET 8	E



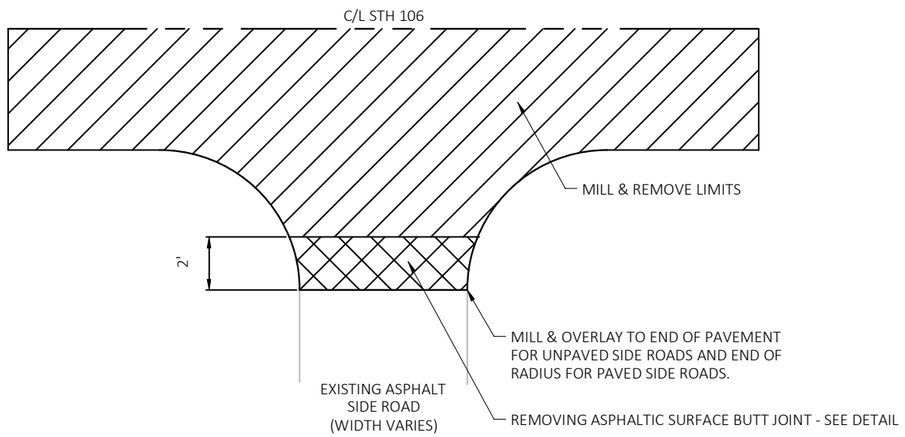
RURAL ASPHALTIC SURFACE SIDE ROAD DETAIL

SIDE ROAD WITH CURB AND GUTTER



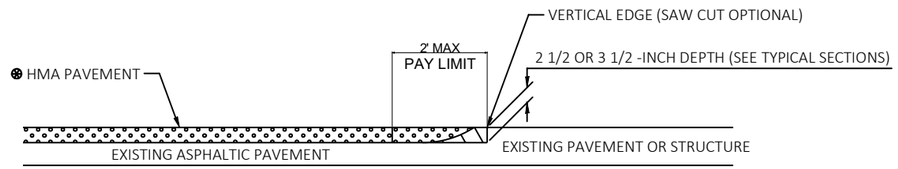
DRIVEWAY DETAIL

CE, PE, AND FE



RURAL ASPHALTIC SURFACE SIDE ROAD DETAIL

SIDE ROAD WITH NO CURB AND GUTTER



⊛ SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

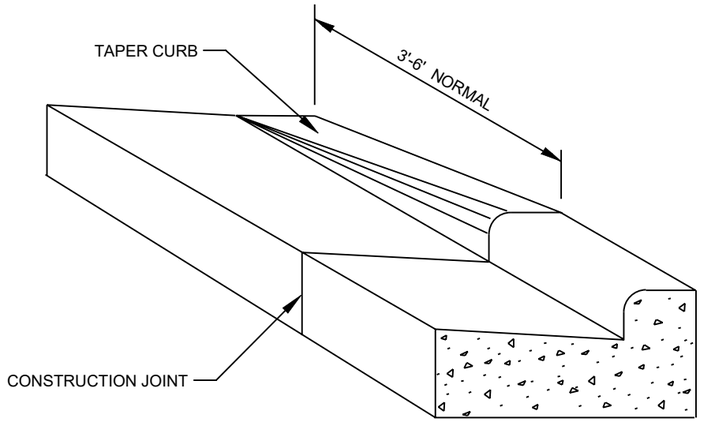
REMOVING ASPHALTIC SURFACE, MILLING

REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

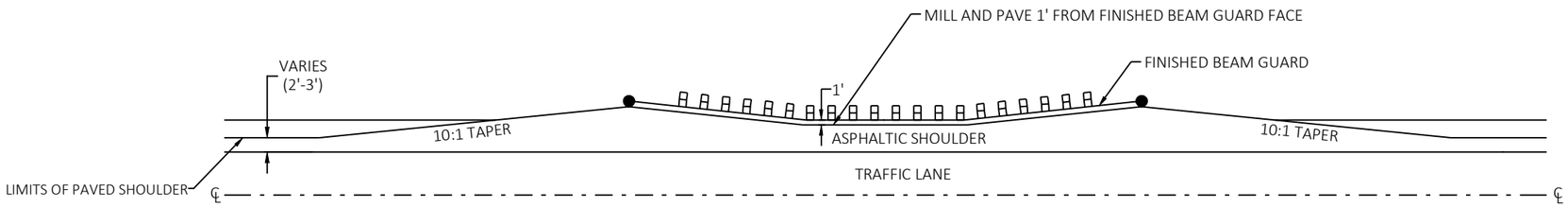
BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)

STA. 7+50 - STA. 579+16
STA. 582+50 - STA. 606+10

2



DETAIL OF CURB & GUTTER TERMINI

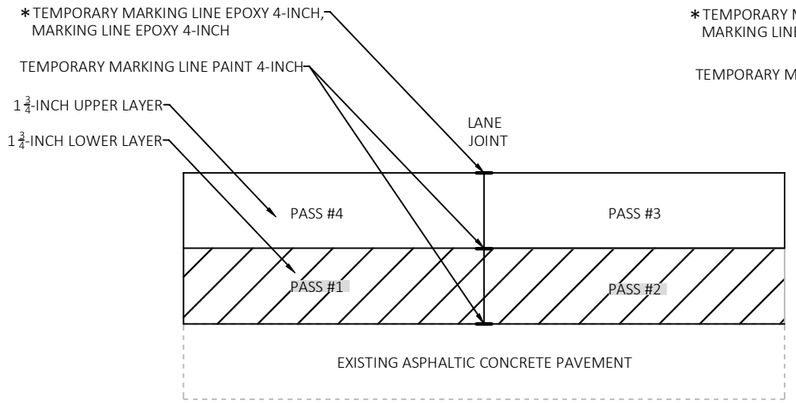


DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

STA. 201+90 - STA. 203+67, RT.
STA. 202+56 - STA. 203+67, LT.
STA. 204+91 - STA. 206+13, RT.
STA. 204+91 - STA. 206+42, LT.

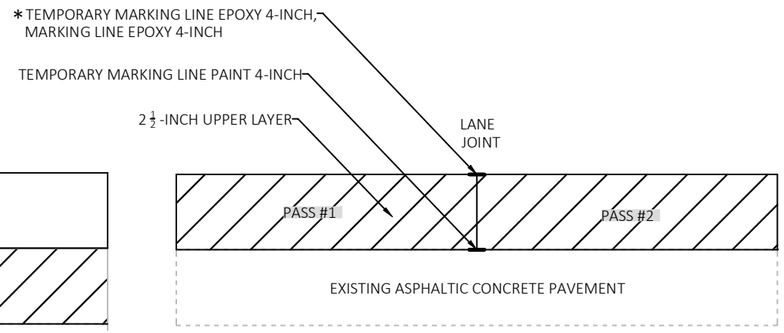
2

*TEMPORARY MARKING LINE EPOXY 4-INCH TO BE APPLIED BEFORE CENTERLINE RUMBLE STRIPS ARE INSTALLED.
MARKING LINE EPOXY 4-INCH TO BE APPLIED AFTER CENTERLINE RUMBLE STRIPS ARE INSTALLED.



3 1/2 - INCH PAVING SECTION

STA. 7+50 - STA. 124+00
STA. 543+00 - STA. 579+16
STA. 582+29 - STA. 606+10



2 1/2 - INCH PAVING SECTION

STA. 124+00 - STA. 543+00

LONGITUDINAL JOINTS DETAIL

SCALE: NONE

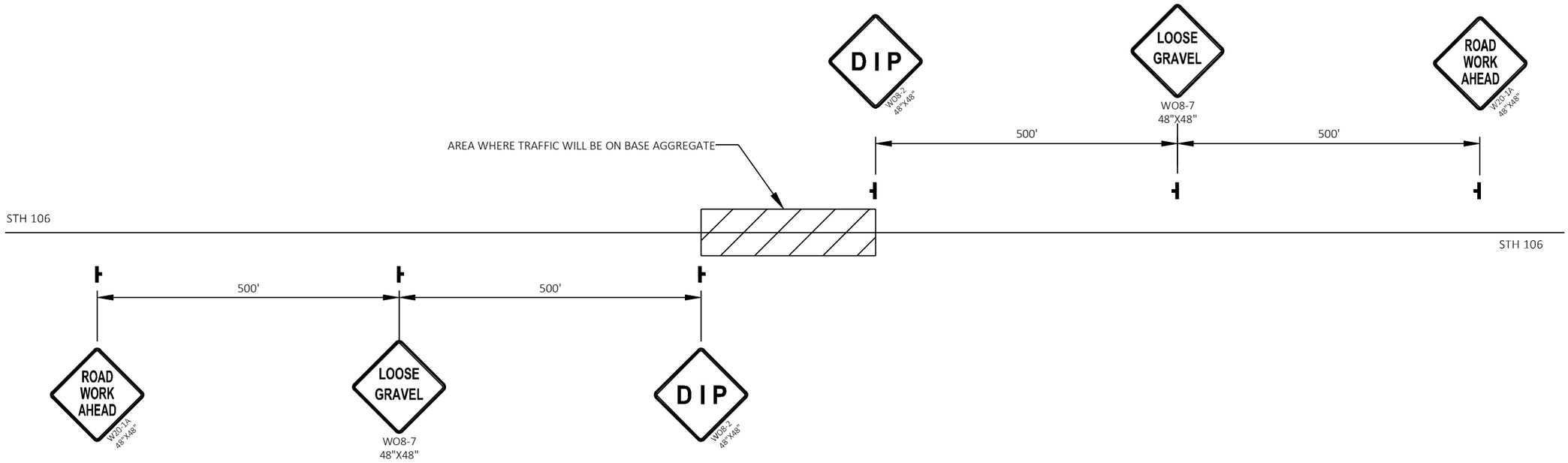


W8-11
48" X 48"

NOTES:

1. TO BE UTILIZED FOR TEMPORARY INSTALLATIONS IN WORK AREAS INVOLVING PAVING LONGITUDINAL JOINTS.
2. UNEVEN LANE SIGNS SHALL BE PLACED AT THE BEGINNING OF JOINT AND AT 1/2 MILE INCREMENTS.
3. SIGNS WILL BE PAID AS TRAFFIC CONTROL SIGNS.
4. REFER TO S.D.D. "TRAFFIC CONTROL, DROP-OFF SIGNING" FOR ADDITIONAL INFORMATION.
5. FOR REQUIRED LONGITUDINAL WEDGE AT DROP OFF, SEE "SAFETY EDGE" S.D.D.

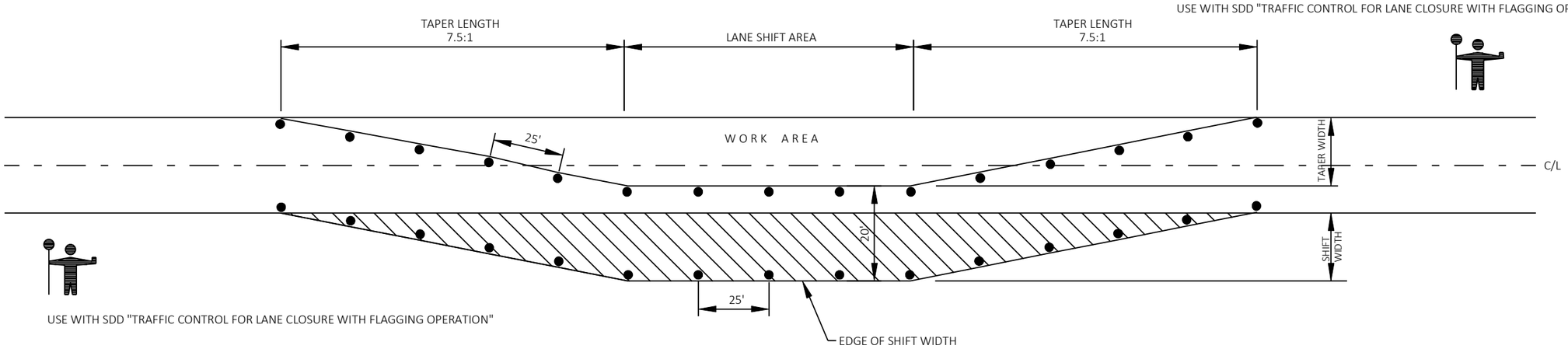
2



TEMPORARY SIGNING AT CULVERT PIPE REPLACEMENT

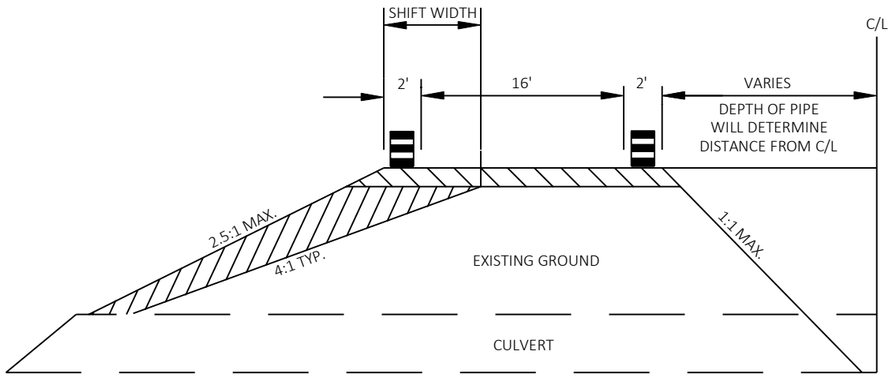
USE AT CULVERT PIPE REPLACEMENT WHEN ASPHALTIC SURFACE IS NOT IN PLACE

2



USE WITH SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"

USE WITH SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"



LANE SHIFT DETAIL

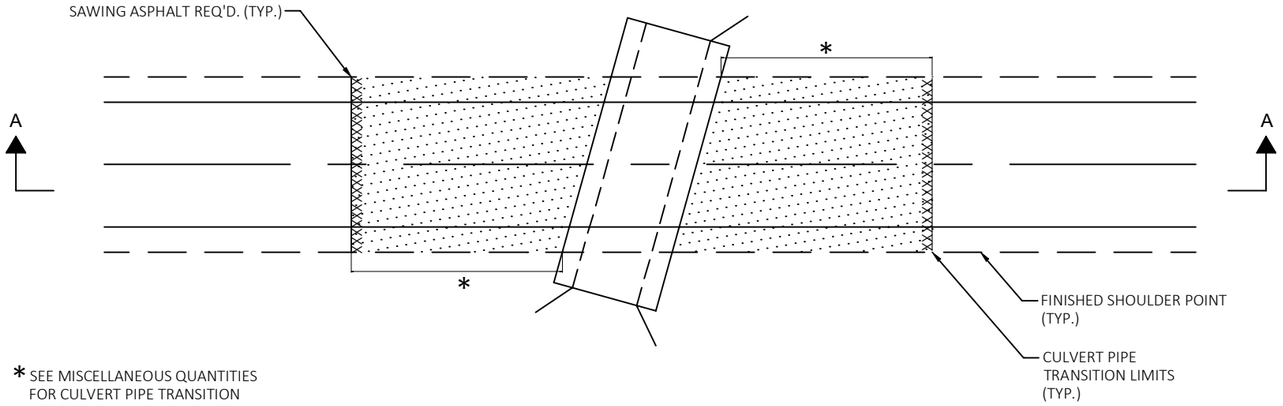
STA. 351+35

NOTES

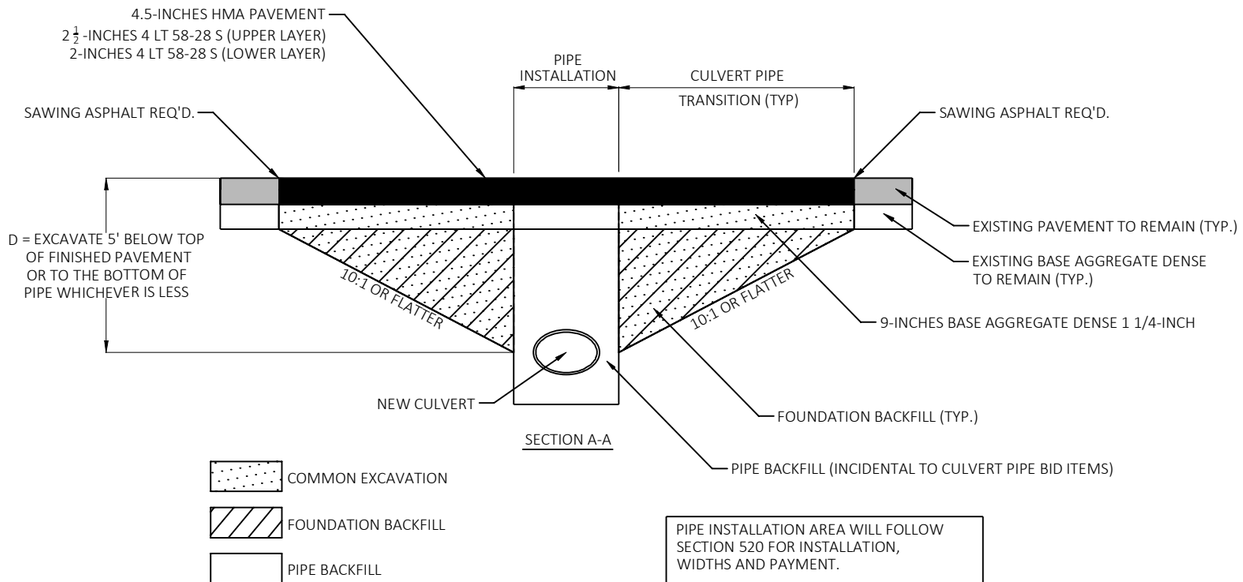
1. THE TAPER SHOULD EXTEND ACROSS THE SHOULDER UNLESS DOING SO WOULD GREATLY CONFLICT THE WORK OPERATION.
2. ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.
3. CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.
4. USE WITH STANDARD DETAIL DRAWING, "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION."
5. FLAGGERS ARE SPECIFIC TO THIS OPERATION.
6. LANE SHIFTS SHALL ONLY BE USED DURING DAYLIGHT HOURS.

KEY

- TRAFFIC CONTROL DRUM
- 6" BASE AGGREGATE DENSE 1 1/4-INCH (INCIDENTAL TO LANE SHIFT ITEM)
- FILL (INCIDENTAL TO LANE SHIFT ITEM)



* SEE MISCELLANEOUS QUANTITIES FOR CULVERT PIPE TRANSITION LIMITS.



NEW CULVERT PIPES WITH TRANSITION

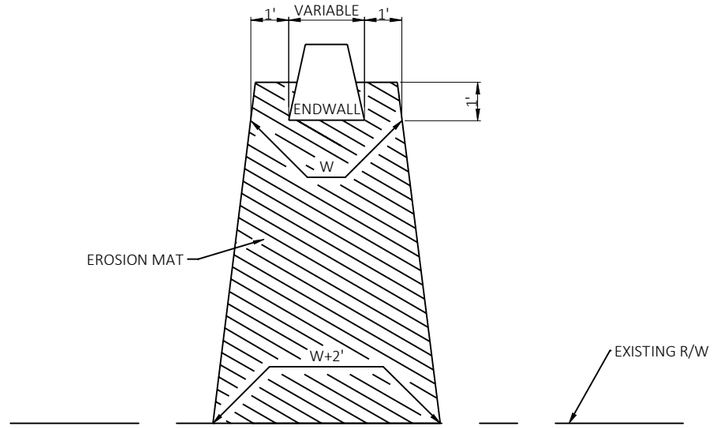
STA. 351+01 - STA. 351+71

PIPE INSTALLATION AREA WILL FOLLOW SECTION 520 FOR INSTALLATION, WIDTHS AND PAYMENT.

CONSTRUCT TRANSITION PERPENDICULAR TO CULVERT PIPE.

CULVERT PIPE TRANSITION AREAS WILL BE PAID BY EXCAVATION COMMON & SPV. FOUNDATION BACKFILL.

PAVEMENT SAW CUT TO BE PERPENDICULAR TO ROADWAY ALIGNMENT.



EROSION MAT TREATMENT AT CULVERTS

2

2

REMOVE EXISTING STEEL PLATE BEAM GUARD (ENERGY ABSORBING TERMINAL ONLY):
STA. 202+11 TO STA. 202+61 RT
STA. 202+85 TO STA. 203+35 LT
STA. 205+23 TO STA. 205+73 RT
STA. 205+61 TO STA. 206+11 LT

CLEARING & GRUBBING AS NECESSARY WITHIN SLOPE INTERCEPTS

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
POST 1 STA. 202+81
POST 5 STA. 203+06
POST 9 STA. 203+31

REMOVING GUARDRAIL

WE ENERGIES (GAS)

BUSSEY RD

KOSHKONONG CREEK

EXISTING GUARDRAIL TO REMAIN

WETLANDS

WETLANDS

EXISTING R/W

PT: 202+90.24

PI: 205+48.95

REMOVING GUARDRAIL

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
POST 1 STA. 206+12
POST 5 STA. 205+87
POST 9 STA. 205+62

CAUTION

CAUTION

202+00

203+00

204+00

205+00

206+00

207+00

STH 106

OH

GUY

REMOVING GUARDRAIL

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
POST 1 STA. 202+11
POST 5 STA. 202+36
POST 9 STA. 202+61

ALLIANT ENERGY (OVERHEAD-ELEC)

WETLANDS

STRUCTURE B-28-0108
STA 204+15
(TO REMAIN)

EXISTING R/W

WETLANDS

SLOPE INTERCEPTS (TYP.)

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
POST 1 STA. 205+74
POST 5 STA. 205+49
POST 9 STA. 205+24

REMOVING GUARDRAIL

CLEARING & GRUBBING AS NECESSARY WITHIN SLOPE INTERCEPTS

KOSHKONONG CREEK

SEE PLAN SHEETS FOR BENCHMARK AND CONTROL POINT INFORMATION

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CONSTRUCTION DETAILS - BEAM GUARD PLAN	SHEET 15	E

2

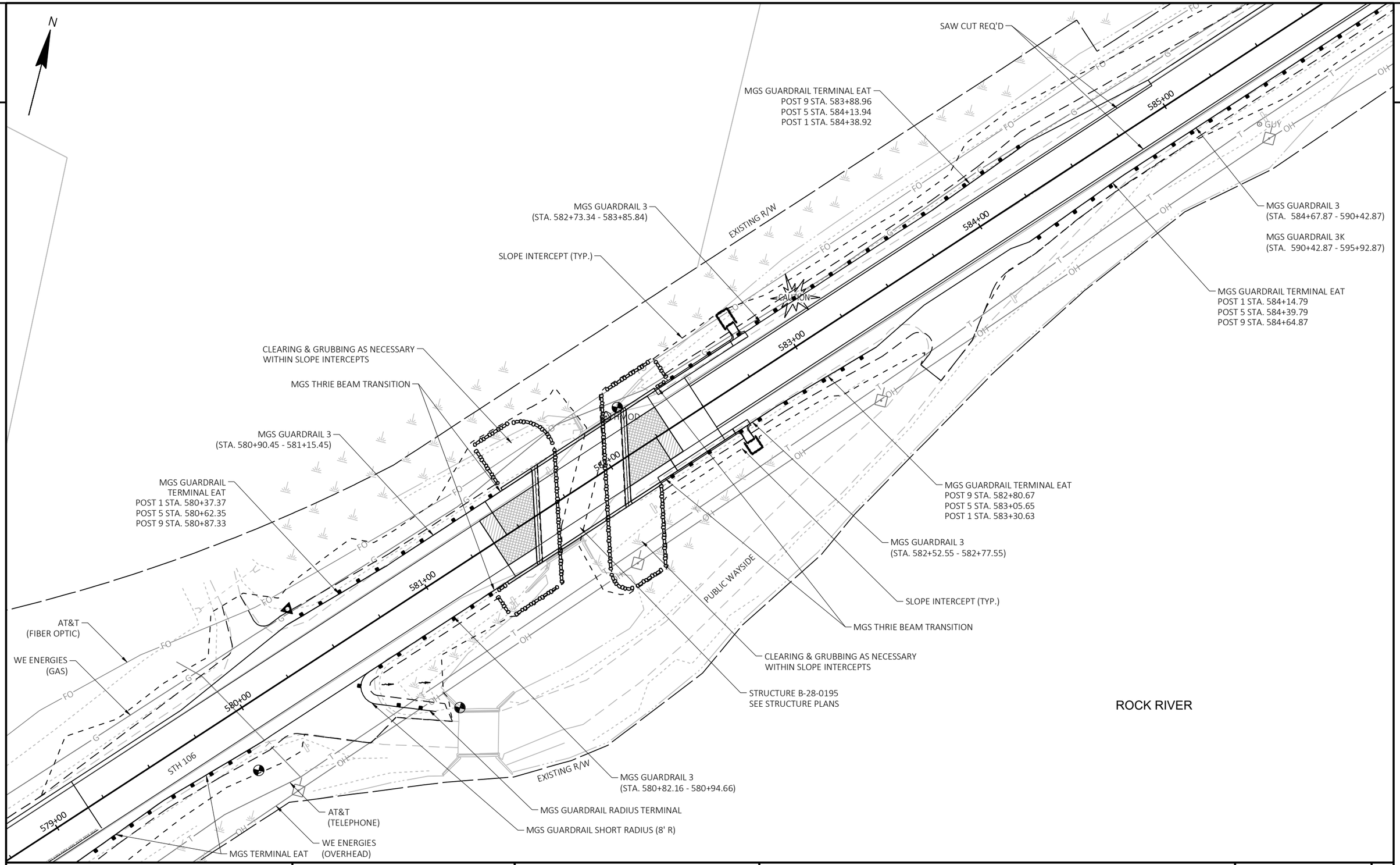
2

REMOVE EXISTING STEEL PLATE BEAM GUARD (ENERGY ABSORBING TERMINAL ONLY):
STA. 335+70 TO STA. 336+20 RT
STA. 336+31 TO STA. 336+81 LT
STA. 338+62 TO STA. 339+12 RT
STA. 339+01 TO STA. 339+51 LT

CLEARING & GRUBBING AS NECESSARY WITHIN SLOPE INTERCEPTS
REMOVING GUARDRAIL
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
POST 1 STA. 336+29
POST 5 STA. 336+54
POST 9 STA. 336+79
WETLANDS
UNNAMED CREEK
WETLANDS
EXISTING GUARDRAIL TO REMAIN
WE ENERGIES (OVERHEAD-ELEC)
EXISTING R/W
CLEARING & GRUBBING AS NECESSARY WITHIN SLOPE INTERCEPTS
REMOVING GUARDRAIL
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
POST 1 STA. 339+51
POST 5 STA. 339+26
POST 9 STA. 339+01
WE ENERGIES (GAS)
Pc: 336+22.98
Pt: 336+91.35
Pt: 339+45.88
OH
G
GUY
CAUTION
335+00
336+00
337+00
338+00
339+00
340+00
341
STH 106
FO
CLEARING & GRUBBING AS NECESSARY WITHIN SLOPE INTERCEPTS
REMOVING GUARDRAIL
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
POST 1 STA. 335+72
POST 5 STA. 335+97
POST 9 STA. 336+22
WETLANDS
UNNAMED CREEK
WETLANDS
EXISTING R/W
AT&T (TELEPHONE)
SLOPE INTERCEPTS (TYP.)
CLEARING & GRUBBING AS NECESSARY WITHIN SLOPE INTERCEPTS
STRUCTURE B-28-0107
STA 337+61
(TO REMAIN)
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
POST 1 STA. 339+12
POST 5 STA. 338+87
POST 9 STA. 338+62
REMOVING GUARDRAIL

SEE PLAN SHEETS FOR BENCHMARK AND CONTROL POINT INFORMATION

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CONSTRUCTION DETAILS - BEAM GUARD PLAN	SHEET 16	E



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CONSTRUCTION DETAILS - BEAM GUARD PLAN	SHEET 17	E

2

N

AT&T
(FIBER OPTIC)

PARK DRIVE
(SINNISSIPPI DR)

604+00

605+00

606+00

607+00

608+00

609+00

PC: 606+47.32

EP: 609+53.31

WE ENERGIES
(OVERHEAD-ELEC)

WE ENERGIES
(GAS)

EXISTING R/W

MGS GUARDRAIL 3
(STA. 595+92.87 - 607+20.27)

SLOPE INTERCEPTS (TYP.)

SAW CUT REQ'D

AT&T
(TELEPHONE)

STH 106

STH 106

ROCK RIVER

CLEARING & GRUBBING AS NECESSARY
WITHIN SLOPE INTERCEPTS

EXISTING R/W

MGS GUARDRAIL
TERMINAL EAT
POST 1 STA. 607+72
POST 5 STA. 607+48
POST 9 STA. 607+23

END CONSTRUCTION
STA. 608+53 RT

SEE PLAN SHEETS FOR BENCHMARK
AND CONTROL POINT INFORMATION

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CONSTRUCTION DETAILS - BEAM GUARD PLAN	SHEET 18	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\021002-CD.DWG
LAYOUT NAME - 021012-cd
PLOT DATE : 12/1/2020 11:22 AM PLOT BY : KEVIN KLOCKZIEM PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

N

580+70

580+60

STH 106 CENTERLINE ALIGNMENT

STH 106

MGS GUARDRAIL 3

+82.16
18.00'RT

END OF SHORT RADIUS BEAM GUARD

FINISHED LANE EDGE

25.0000'

10:1

FINISHED GRAVEL SHOULDER

SLOPE INTERCEPT (TYP.)

VARIES (2.5:1 MAX)

WATER EDGE

784.00

+57.16
18.00'RT

10:1

REFER TO
STANDARD DETAIL
INSTALLATION
DETAILS

FINISHED PAVED
SHOULDER

VARIES (2.5:1 MAX)

SHORT RADIUS BEAM GUARD AND TERMINAL
(MGS) (8' RADIUS, 18.8' ARC LENGTH

DITCH FLOW LINE

778.45

783.00

+57.16
26.00'RT
(RADIUS CENTER)

VARIES (2.5:1 MAX)

778.41

TOP
780.04

EXISTING TOP OF
WING WALL ELEVATION

4.4%

VARIES (2.5:1 MAX)

10:1

10:1

782.00

EXISTING WINGWALL

783.17

+51.50
31.65'RT

28.1250'

782.39

5.6%

+66.12
43.94'RT

9.0'

10:1

+62.83
41.18'RT

1.2%

782.40

782.32

2.82%

+73.03
49.75'RT

4%

3%

6%

WE ENERGIES
(OVERHEAD)

AT&T
(TELEPHONE)

782.43

EXISTING BRIDGE

782.65

EXISTING GRAVEL DRIVEWAY

MGS GUARDRAIL
RADIUS TERMINAL

782.83

LEGEND

XXX.XX = FINISHED ELEVATION

XXX.XX = EXISTING ELEVATION

0 2.5 5 FEET

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CONSTRUCTION DETAILS - SHORT RADIUS TERMINAL	SHEET 19	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\021002-CD.DWG
LAYOUT NAME - 021011-cd

PLOT DATE : 12/1/2020 11:22 AM PLOT BY : KEVIN KLOCKZIEM PLOT NAME : PLOT SCALE : 1 IN:5 FT

2

N

2

ALLIANT ENERGY
(OVERHEAD-ELEC)

GUY

PI: 64+84.93

PC: 66+00.74

PT: 69+25.61

EXISTING R/W

OH

65+00

66+00

67+00

68+00

69+00

70+00

STH 106

EXISTING R/W

RIPRAP LIGHT OVER
GEOTEXTILE FABRIC TYPE R

EROSION MAT URBAN
CLASS I TYPE A (TYP.)

SLOPE INTERCEPTS (TYP.)

GUY

PRIVATE
ENTRANCE

ALLIANT ENERGY
(OVERHEAD-ELEC)

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 20	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022001-ec

PLOT DATE : 1/19/2021 1:46 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

5.34

OH

OH

OH

OH

ALLIANT ENERGY
(OVERHEAD - ELEC)

EROSION MAT URBAN
CLASS I TYPE A (TYP.)

SLOPE INTERCEPTS (TYP.)

EXISTING R/W

105+00

106+00

107+00

108+00

109+00

110+00

STH 106

EXISTING R/W

BINGHAM RD

EXISTING R/W

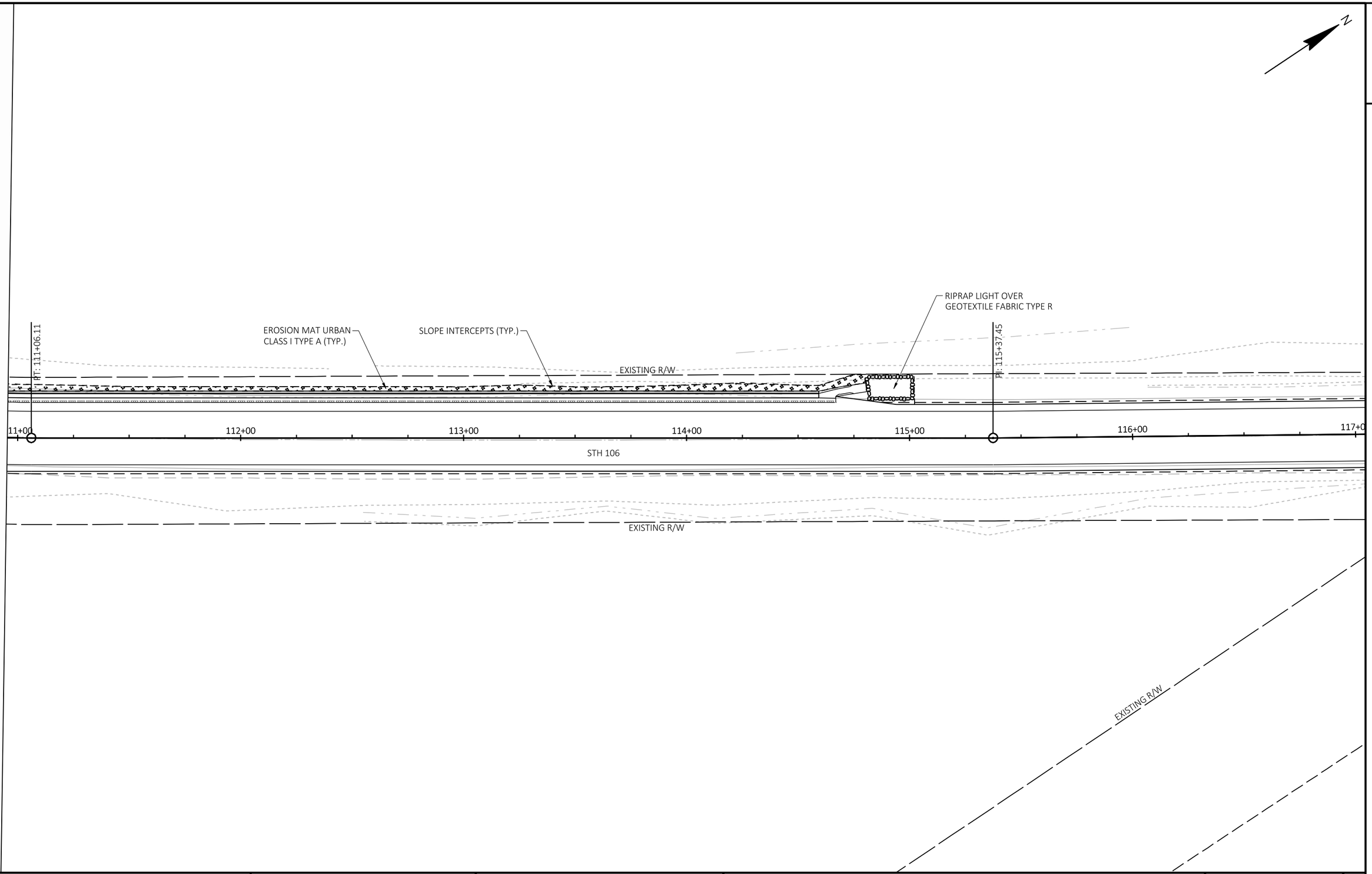
EXISTING R/W

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 21	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022002-ec

PLOT DATE : 1/19/2021 1:46 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 22	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022003-ec

PLOT DATE : 1/19/2021 1:47 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

BUSSEY RD

SILT FENCE HEAVY DUTY (TYP.)

KOSHKONONG CREEK

EXISTING GUARDRAIL TO REMAIN

WETLANDS

WE ENERGIES
(GAS)

WETLANDS

EXISTING R/W

PI: 202+90.24

PI: 205+48.95

CAUTION

CAUTION

201+00

202+00

203+00

204+00

205+00

206+00

207+00

STH 106

OH

GUY

EXISTING R/W

SLOPE INTERCEPTS (TYP.)

WETLANDS

WETLANDS

EROSION MAT URBAN
CLASS I TYPE A (TYP.)

ALLIANT ENERGY
(OVERHEAD-ELEC)

STRUCTURE B-28-0108
STA 204+15
(TO REMAIN)

KOSHKONONG CREEK

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 23	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022004-ec

PLOT DATE : 1/19/2021 1:47 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

N

PC: 250+98.85

PT: 251+69.40

EXISTING R/W

248+00

249+00

250+00

251+00

252+00

253+00

254+00

STH 106

EXISTING R/W

EROSION MAT URBAN CLASS I TYPE A (TYP.)

SLOPE INTERCEPTS (TYP.)

RIPRAP LIGHT OVER GEOTEXTILE FABRIC TYPE R

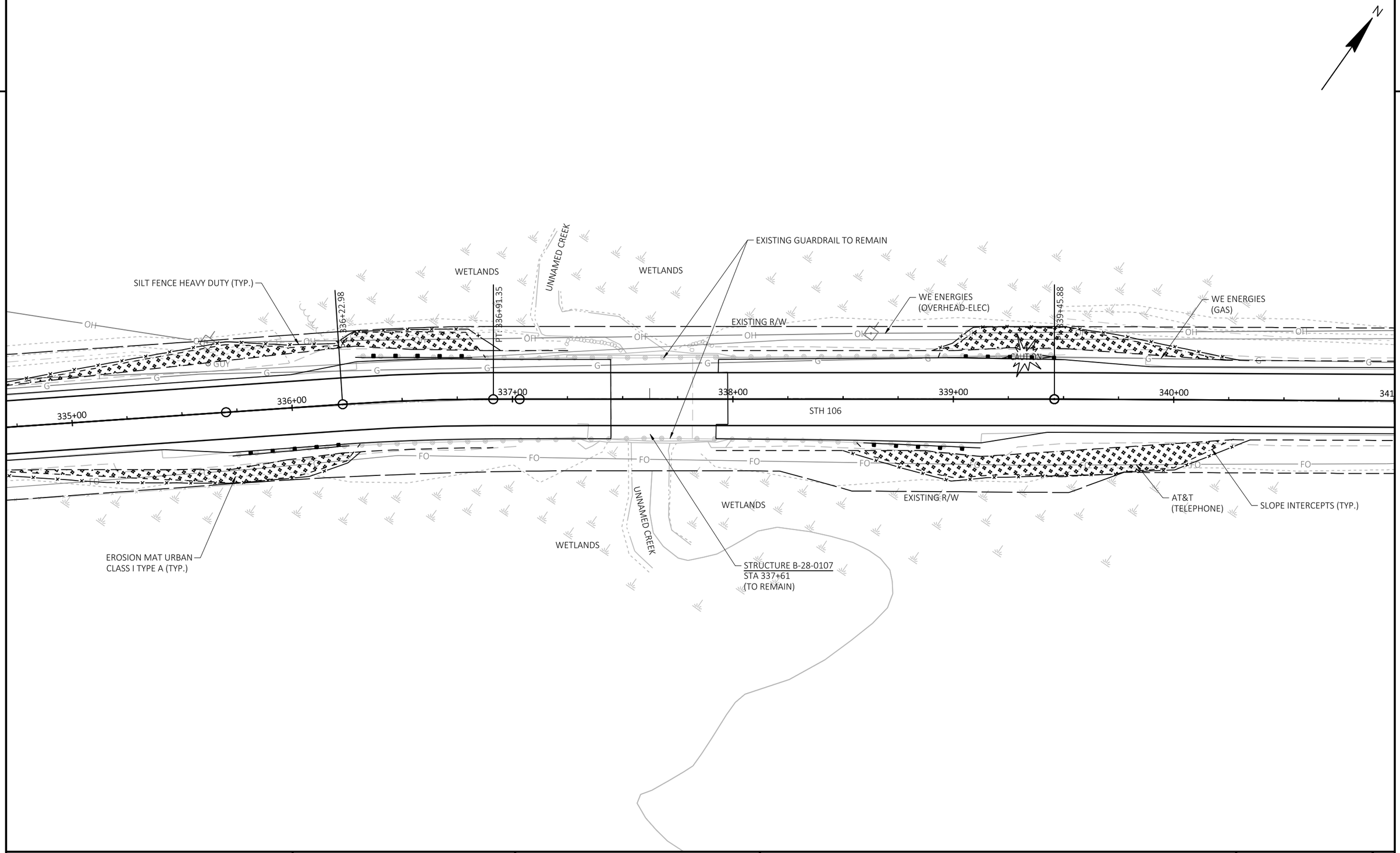
RIPRAP LIGHT OVER GEOTEXTILE FABRIC TYPE R

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 24	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022005-ec

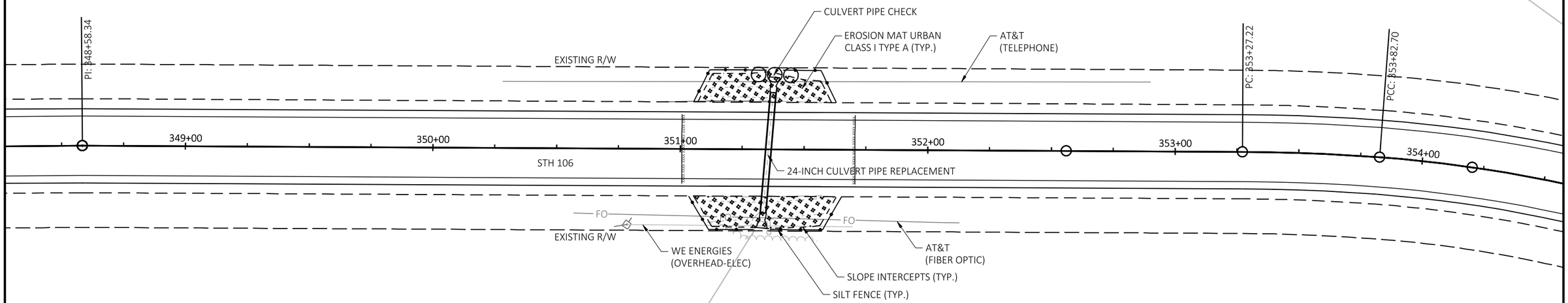
PLOT DATE : 1/19/2021 1:47 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 25	E

2



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 26	E

2

INLET PROTECTION TYPE D (TYP.)

PI: 545+21.68

PC: 545+87.22

STH 26 SB OFF RAMP

PT: 549+07.45

PT: 549+10.92

544+00

545+00

546+00

STH 106

547+00

548+00

549+00

550+00

EXISTING R/W

STH 26 SB ON RAMP

N

GUY

PI: 551+88.48

551+00

552+00

553+00

554+00

555+00

556+00

STH 26 NB ON RAMP

INLET PROTECTION TYPE D

STH 26 NB OFF RAMP

EXISTING R/W

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 27	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022008-ec

PLOT DATE : 1/19/2021 1:48 PM

PLOT BY : CHASE KIELER

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

2

EXISTING R/W

GUY

PCC: 559+46.27

PC: 559+45.02

PT: 558+80.92

PI: 556+25.12

PC: 556+52.02

PC: 556+67.16

STH 106

555+00

556+00

557+00

558+00

559+00

560+00

561+00

INLET PROTECTION TYPE D (TYP.)

EXISTING R/W

GUY

N

FALK ROAD

EXISTING R/W

PCC: 563+57.81

PT: 564+45.09

PC: 565+04.46

PCC: 565+44.62

561+00

562+00

563+00

564+00

565+00

566+00

567+00

STH 106

INLET PROTECTION TYPE D (TYP.)

GUY

GUY

EXISTING R/W

BLACKHAWK ISLAND ROAD

N

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 28	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022009-ec

PLOT DATE : 1/19/2021 1:48 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

N

NOTE: REMOVAL AND DISPOSAL OF INVASIVE PLANT SPECIES - IN AREAS NEAR NEW BRIDGE. CONTACT WDNR ENVIRONMENTAL SPECIALIST AS NOTED IN SPECIAL PROVISIONS

SLOPE INTERCEPTS (TYP.)

SILT FENCE (TYP.)

AT&T (FIBER OPTIC)

WE ENERGIES (GAS)

HEAVY DUTY SILT FENCE (TYP.)

EROSION MAT URBAN CLASS I TYPE A (TYP.)

AT&T (TELEPHONE)

WE ENERGIES (OVERHEAD)

WETLANDS

ROCK RIVER

EXISTING R/W

EXISTING R/W

FALK RD

STH 106

STH 106

580+00

579+00

578+00

577+00

576+00

575+00

574+00

FO

G

T

OH

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 29	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022010-ec

PLOT DATE : 1/19/2021 1:48 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

NOTE: REMOVAL AND DISPOSAL OF INVASIVE PLANT SPECIES - IN AREAS NEAR NEW BRIDGE. CONTACT WDNR ENVIRONMENTAL SPECIALIST AS NOTED IN SPECIAL PROVISIONS

RIPRAP MEDIUM (2' DEPTH) OVER GEOTEXTILE TYPE R

TURBIDITY BARRIER (TYP.)

EXISTING R/W

CAUTION

SLOPE INTERCEPTS (TYP.)

HEAVY DUTY SILT FENCE (TYP.)

EROSION MAT URBAN CLASS I TYPE A (TYP.)

SILT FENCE (TYP.)

AT&T (FIBER OPTIC)

WE ENERGIES (GAS)

WETLANDS

585+00

584+00

583+00

582+00

581+00

580+00

579+00

578+00

WE ENERGIES (OVERHEAD)

AT&T (TELEPHONE)

ROCK RIVER

PUBLIC WAYSIDE

STRUCTURE B-28-0195
SEE STRUCTURE PLANS

STH 106

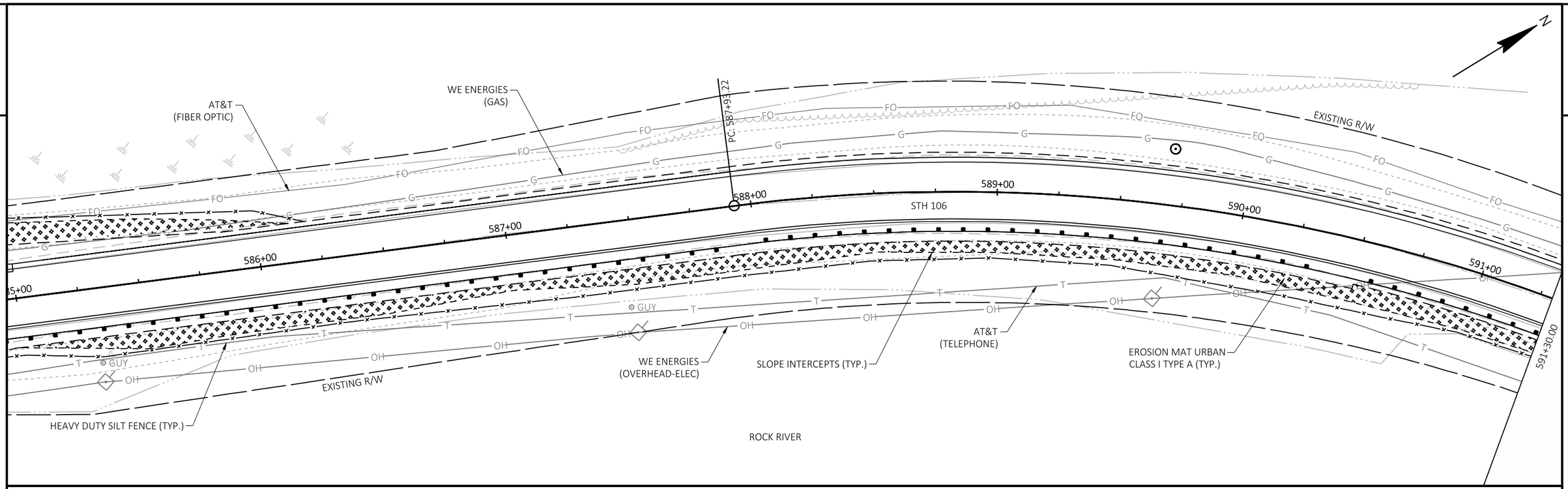
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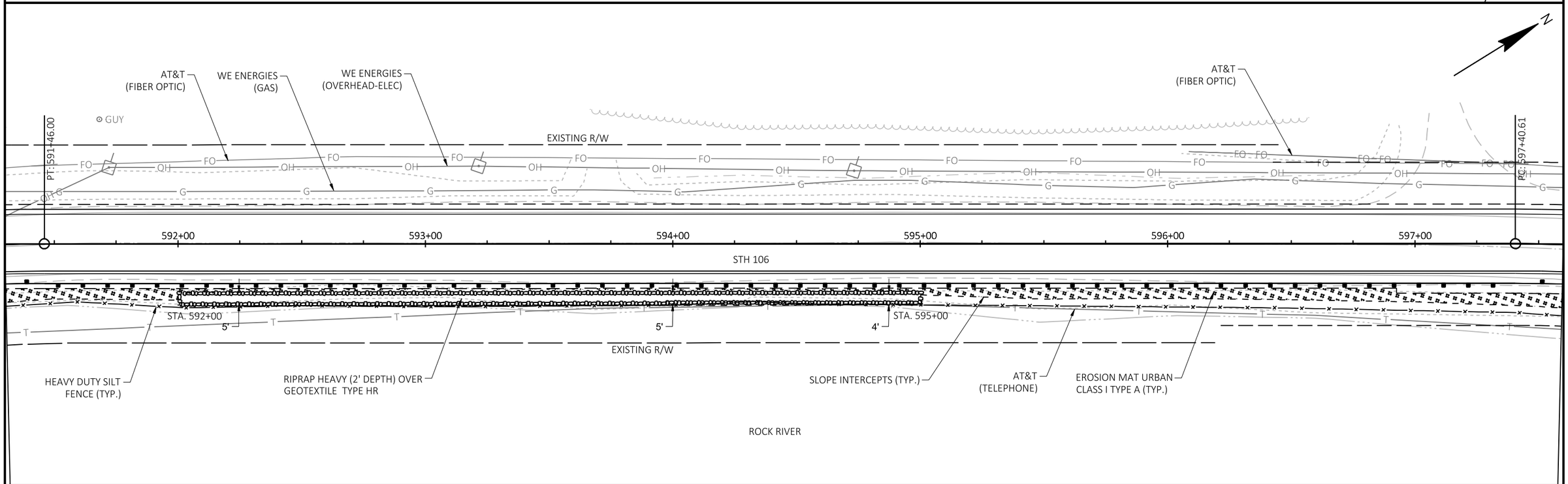
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OH

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 30	E





PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 31	E

2

WE ENERGIES (GAS)

WE ENERGIES (OVERHEAD-ELEC)

AT&T (FIBER OPTIC)

EXISTING R/W

PT: 603+09.81

598+00

599+00

600+00

601+00

602+00

603+00

STH 106

EXISTING R/W

AT&T (TELEPHONE)

HEAVY DUTY SILT FENCE (TYP.)

EROSION MAT URBAN CLASS I TYPE A (TYP.)

SLOPE INTERCEPTS (TYP.)

ROCK RIVER

597+60

AT&T (FIBER OPTIC)

PARK DRIVE (SINNISSIPPI DR)

PC: 606+47.32

EP: 609+53.33

WE ENERGIES (OVERHEAD-ELEC)

WE ENERGIES (GAS)

604+00

605+00

606+00

607+00

608+00

609+00

STH 106

EXISTING R/W

SLOPE INTERCEPTS (TYP.)

AT&T (TELEPHONE)

ROCK RIVER

HEAVY DUTY SILT FENCE (TYP.)

EXISTING SIGN (TO REMAIN)

EROSION MAT URBAN CLASS I TYPE A (TYP.)

END CONSTRUCTION STA. 608+53 RT

603+90.00

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	EROSION CONTROL	SHEET 32	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022013-ec

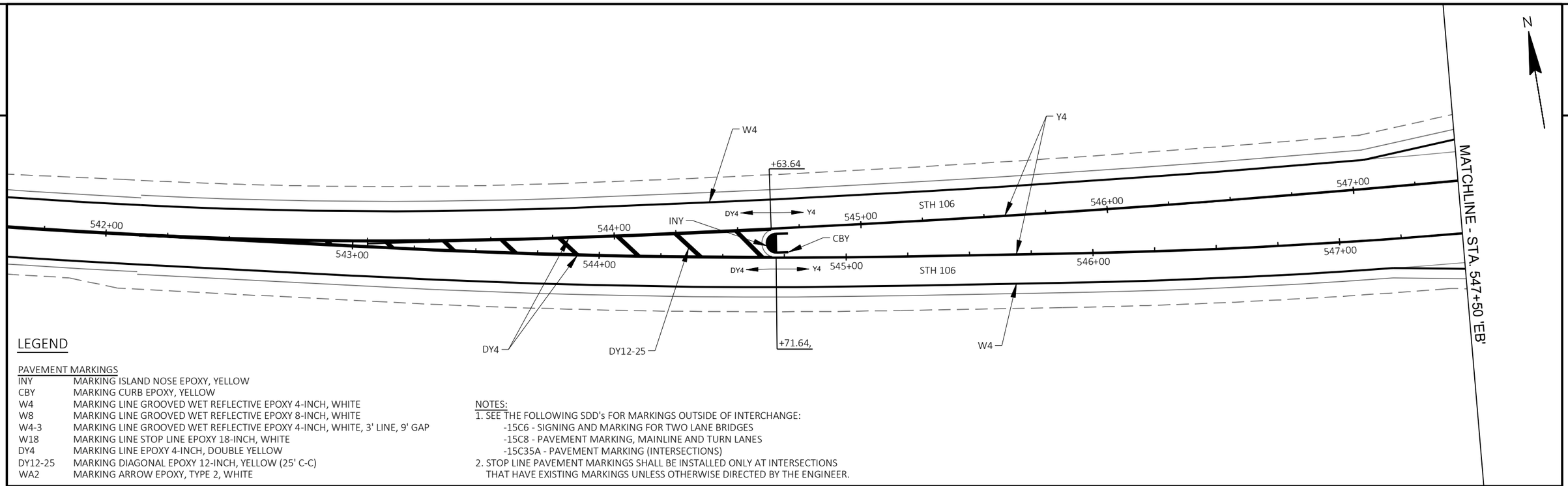
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PLOT BY : CHASE KIELER

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



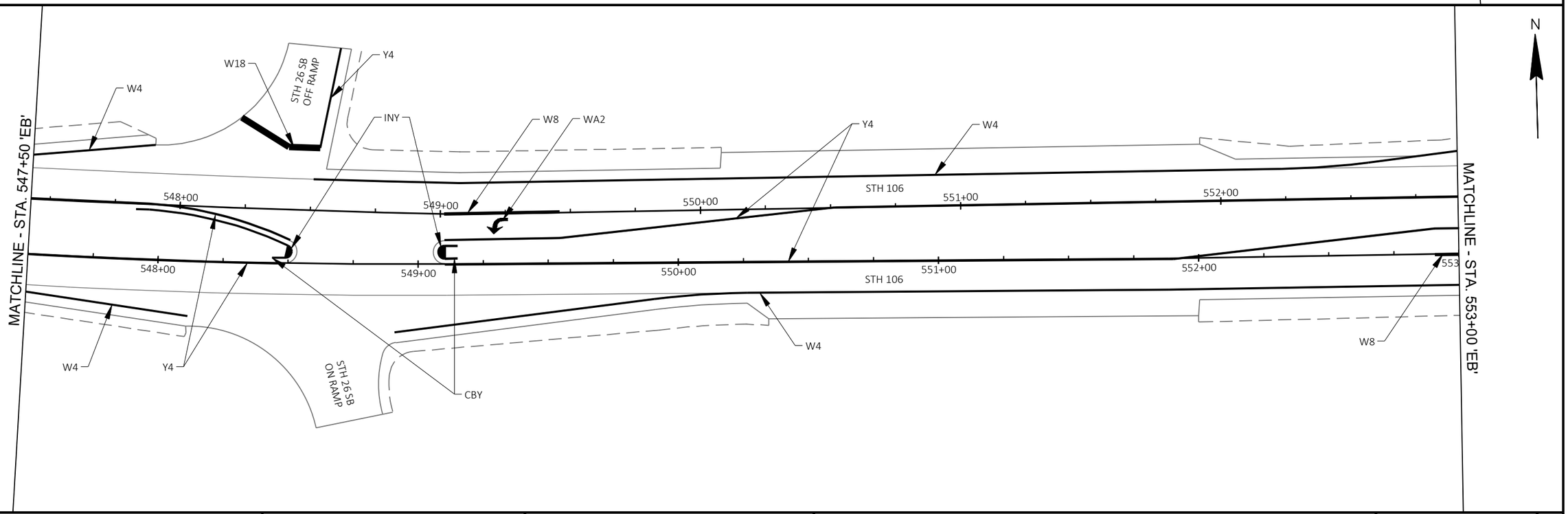
LEGEND

PAVEMENT MARKINGS

INY	MARKING ISLAND NOSE EPOXY, YELLOW
CBY	MARKING CURB EPOXY, YELLOW
W4	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE
W8	MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH, WHITE
W4-3	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
W18	MARKING LINE STOP LINE EPOXY 18-INCH, WHITE
DY4	MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
DY12-25	MARKING DIAGONAL EPOXY 12-INCH, YELLOW (25' C-C)
WA2	MARKING ARROW EPOXY, TYPE 2, WHITE

NOTES:

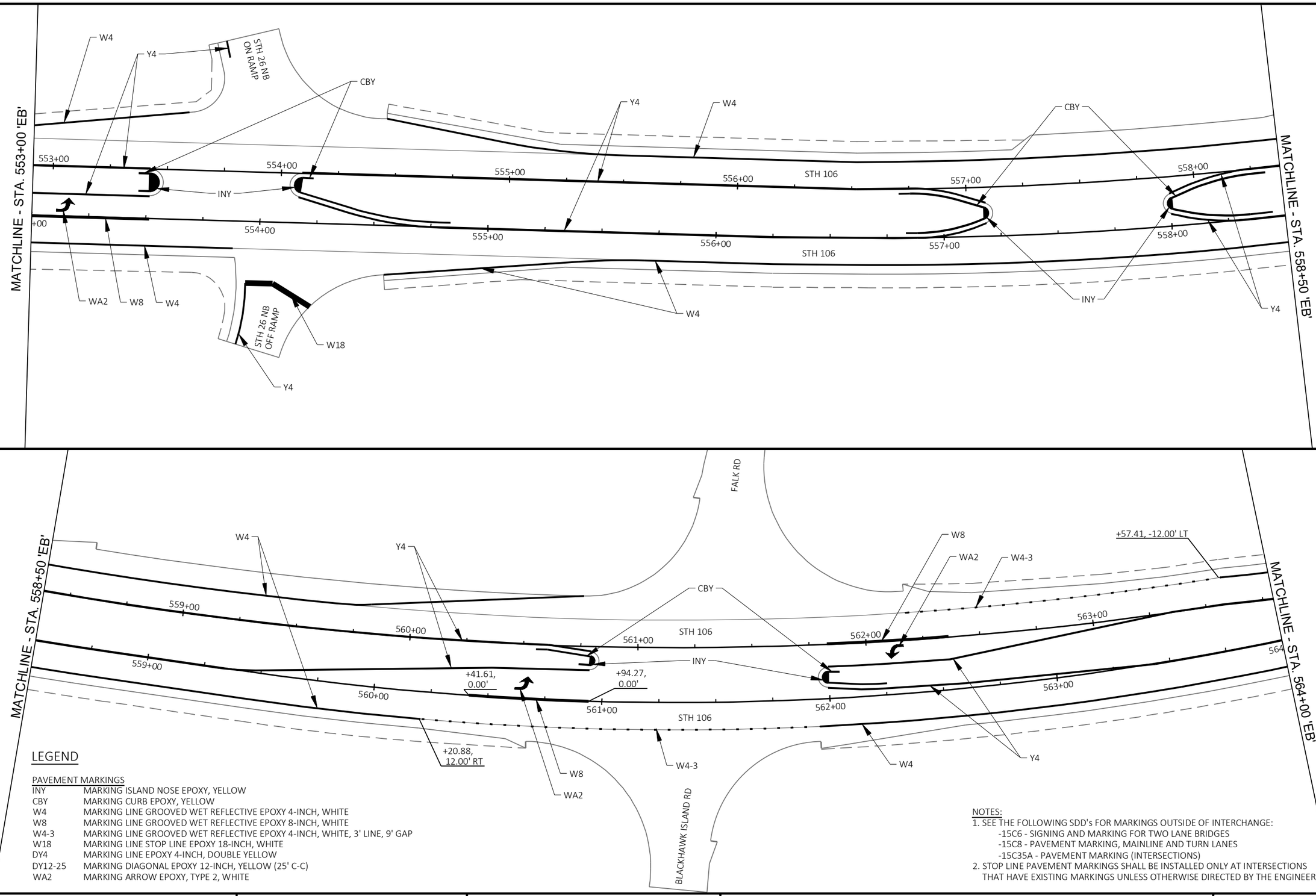
1. SEE THE FOLLOWING SDD's FOR MARKINGS OUTSIDE OF INTERCHANGE:
   - -15C6 - SIGNING AND MARKING FOR TWO LANE BRIDGES
   - -15C8 - PAVEMENT MARKING, MAINLINE AND TURN LANES
   - -15C35A - PAVEMENT MARKING (INTERSECTIONS)
2. STOP LINE PAVEMENT MARKINGS SHALL BE INSTALLED ONLY AT INTERSECTIONS THAT HAVE EXISTING MARKINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PAVEMENT MARKINGS - STH 26 INTERCHANGE	SHEET 33 E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-pm

PLOT DATE : 10/13/2020 8:05 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT



LEGEND

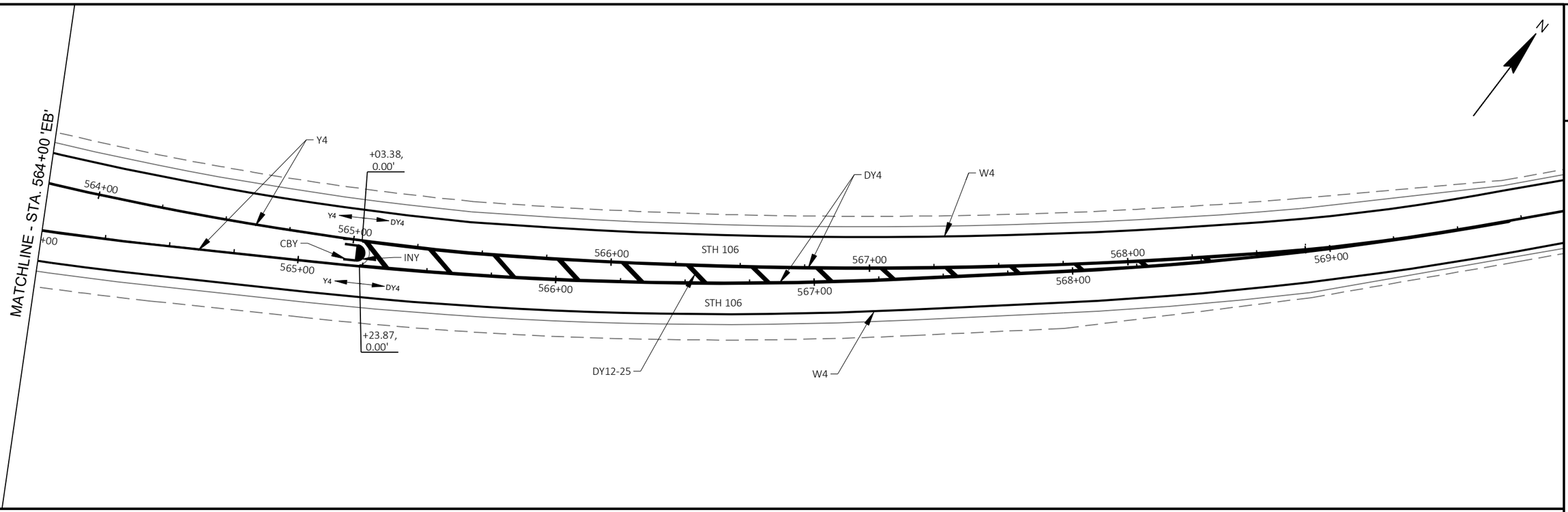
PAVEMENT MARKINGS

INY	MARKING ISLAND NOSE EPOXY, YELLOW
CBY	MARKING CURB EPOXY, YELLOW
W4	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE
W8	MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH, WHITE
W4-3	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
W18	MARKING LINE STOP LINE EPOXY 18-INCH, WHITE
DY4	MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
DY12-25	MARKING DIAGONAL EPOXY 12-INCH, YELLOW (25' C-C)
WA2	MARKING ARROW EPOXY, TYPE 2, WHITE

NOTES:
1. SEE THE FOLLOWING SDD's FOR MARKINGS OUTSIDE OF INTERCHANGE:
   -15C6 - SIGNING AND MARKING FOR TWO LANE BRIDGES
   -15C8 - PAVEMENT MARKING, MAINLINE AND TURN LANES
   -15C35A - PAVEMENT MARKING (INTERSECTIONS)
2. STOP LINE PAVEMENT MARKINGS SHALL BE INSTALLED ONLY AT INTERSECTIONS THAT HAVE EXISTING MARKINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PAVEMENT MARKINGS - STH 26 INTERCHANGE	SHEET 34	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024502-pm
PLOT DATE : 10/13/2020 8:06 AM
PLOT BY : JASON DOLENS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



LEGEND

PAVEMENT MARKINGS

INY	MARKING ISLAND NOSE EPOXY, YELLOW
CBY	MARKING CURB EPOXY, YELLOW
W4	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE
W8	MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH, WHITE
W4-3	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
W18	MARKING LINE STOP LINE EPOXY 18-INCH, WHITE
DY4	MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
DY12-25	MARKING DIAGONAL EPOXY 12-INCH, YELLOW (25' C-C)
WA2	MARKING ARROW EPOXY, TYPE 2, WHITE

NOTES:
1. SEE THE FOLLOWING SDD's FOR MARKINGS OUTSIDE OF INTERCHANGE:
   -15C6 - SIGNING AND MARKING FOR TWO LANE BRIDGES
   -15C8 - PAVEMENT MARKING, MAINLINE AND TURN LANES
   -15C35A - PAVEMENT MARKING (INTERSECTIONS)
2. STOP LINE PAVEMENT MARKINGS SHALL BE INSTALLED ONLY AT INTERSECTIONS THAT HAVE EXISTING MARKINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PAVEMENT MARKINGS - STH 26 INTERCHANGE	SHEET 35	E



1



2



3



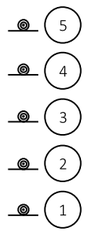
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5



6 G20-2A
48"X24"



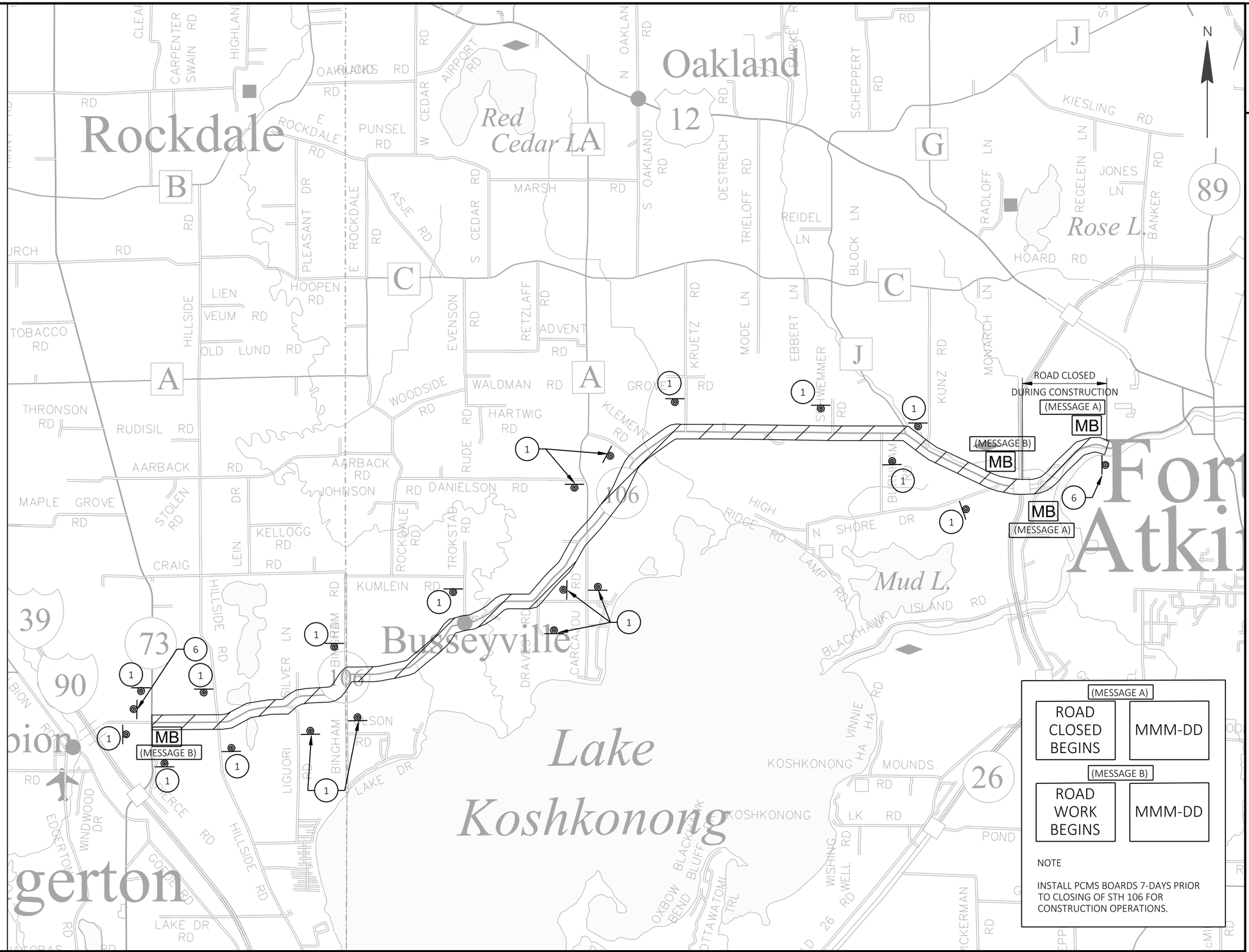
SIGNS TO BE PLACED DURING FLAGGING OPERATIONS ON BOTH ENDS OF THE ACTIVE WORK ZONE PER SDD 15C12

GENERAL NOTES:

- TRAFFIC CONTROL FOR ALL MILLING, PAVING, AGGREGATE SHOULDER AND RUMBLE STRIP WORK SHALL FOLLOW S.D.D. "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION". (TRAFFIC CONTROL SHOWN AT THIS LOCATION FOR PLAN SHEET PURPOSES ONLY)
- TRAFFIC CONTROL FOR ALL PAVEMENT MARKING WORK SHALL FOLLOW S.D.D. "MOVING PAVEMENT MARKING OPERATION-TWO LANE TWO-WAY ROADWAY."
- TRAFFIC CONTROL FOR ANY WORK REQUIRING A SHOULDER CLOSURE SHALL FOLLOW S.D.D. "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY."
- MAINTAIN ACCESS TO DRIVEWAYS AND DEAD END SIDE ROADS AT ALL TIMES.
- FLAGGERS ARE REQUIRED WHEN WORK IS BEING COMPLETED AT INTERSECTIONS TO MAINTAIN VEHICULAR ACCESS.
- SIGN FACES SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS, UNLESS OTHERWISE NOTED.
- TRAFFIC CONTROL PLANS ARE NOT TO SCALE.
- WO SIGNS ARE THE SAME AS W SIGNS EXCEPT THE BACKGROUND IS ORANGE.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	TRAFFIC CONTROL - OVERVIEW	SHEET 36	E

GENERAL NOTES

1. REFER TO SDD "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR SIGN SIZE AND COLOR SPECIFICATIONS.
2. ALL W AND WO SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED.
3. DRAWINGS SHOW TRAFFIC CONTROL DETOUR FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON SITE CONDITIONS AS DIRECTED BY THE ENGINEER. ALL CHANGES TO THE TRAFFIC CONTROL DETOUR PLAN SHALL BE REVIEWED WITH THE PROJECT ENGINEER.
4. SIGN FACE LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS, UNLESS OTHERWISE NOTED.
5. TRAFFIC CONTROL PLANS ARE NOT TO SCALE.
6. COVER, REMOVE, OR ALTER ANY EXISTING OR PROPOSED SIGNS THAT DISPLAY A CONFLICTING MESSAGE WITH THE PROPOSED DETOUR ROUTE FOR THE PHASE THAT IS ACTIVE.
7. MAINTAIN ACCESS TO DRIVEWAYS AND DEAD END SIDE ROADS AT ALL TIMES.
8. WO SIGNS ARE THE SAME AS W SIGNS EXCEPT THE BACKGROUND IS ORANGE.

N

2

2

DETAIL 1

DETAIL 2

DETAIL 3

DETAIL 4

DETAIL 5

12

26

106

89

BUSINESS 26

CAMPUS DR

BANKER RD

COMMONWEALTH DR

LEXINGTON BLVD

SHAH AVE

REENA AVE

MONTCLAIR PL

OLD MADISON ST

CLOUTE ST

CASWELL ST

NELSON ST

ROBERT ST

MADISON AVE

ADAMS ST

WASHINGTON ST

MECHANIC ST

LINCOLN ST

N FOURTH ST

N 3RD ST

SHERMAN AVE E

BARRIE ELEMENTARY SCHOOL

CHARLES ST

WILSON AVE

ROSEVELT ST

COUNCIL ST

JACKSON ST

MONROE ST

LINCOLN ST

JANETTE ST

SHERMAN AVE W

VAN BUREN ST

LILLIAN ST

MISSISSIPPI DR

ROCK RIVER PARK

RIVERSIDE DR

ROCK RIVER

FALK RD

MAIN ST

EDWARD ST

CLARENCE ST

JEFFERSON ST

SEE SDD "BARRICADES AND SIGN FOR VARIOUS CLOSURES", DETAIL E

STRUCTURE B-28-0195 (REPLACEMENT)

SEE SDD "BARRICADES AND SIGN FOR VARIOUS CLOSURES", DETAIL E

SEE SDD "BARRICADES AND SIGN FOR VARIOUS CLOSURES", DETAIL D

1 DETOUR M4-8 24"X12" / WEST M3-4 24"X12" / 106 M1-6 24"X24"

2 DETOUR M4-8 24"X12" / EAST M3-2 24"X12" / 106 M1-6 24"X24"

3 ROAD CLOSED 500 FT W20-3D

4 ROAD CLOSED 1000 FT W20-3C

LEGEND

- WORK AREA
- DETOUR ROUTE
- POST MOUNTED SIGN
- TYPE III BARRICADE/BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- EXISTING SIGN (COUNTY C)
- EXISTING SIGN TO BE COVERED

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	DETOUR - OVERVIEW	SHEET 37	E

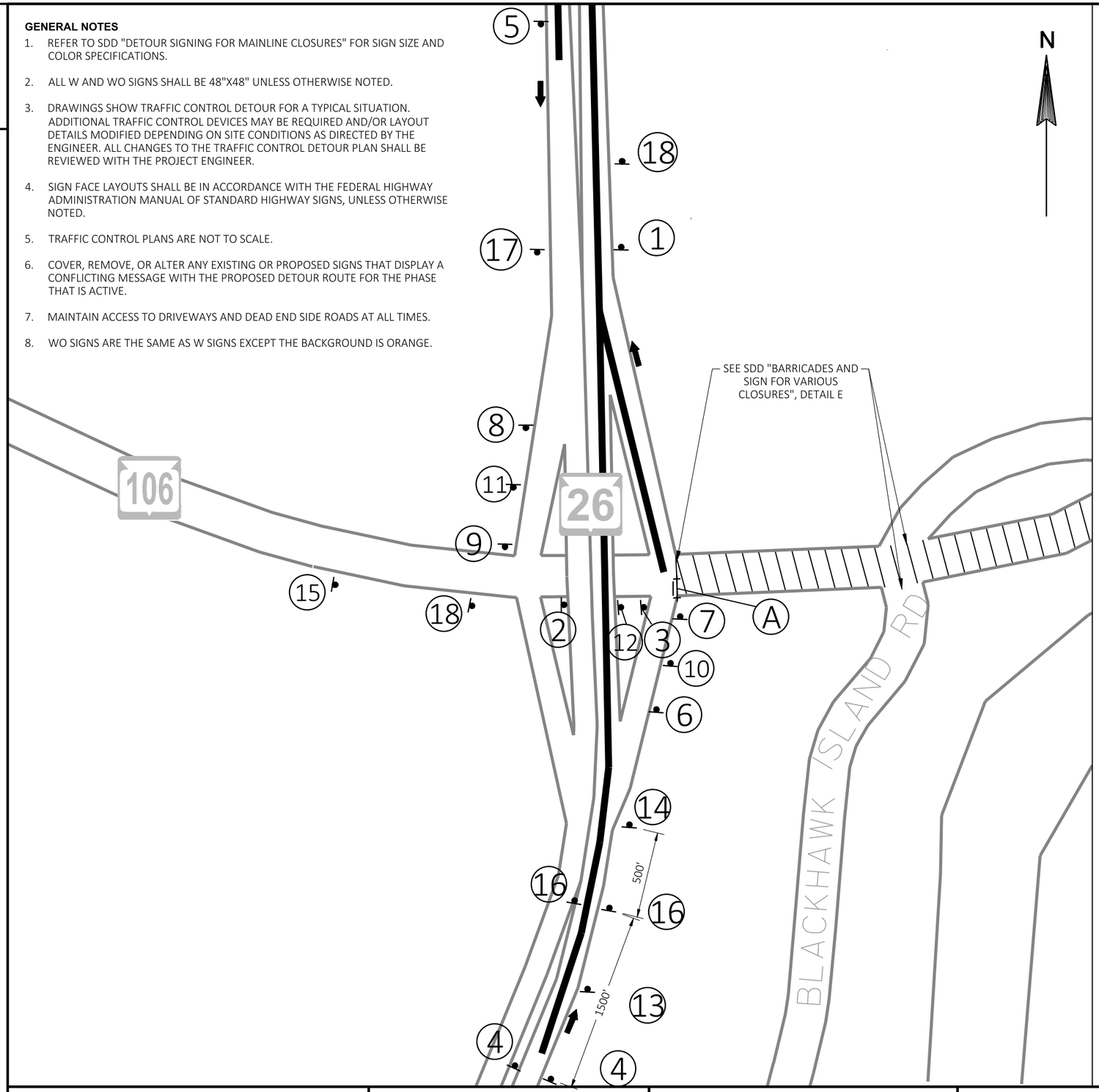
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LAYOUT NAME - 027001-dt

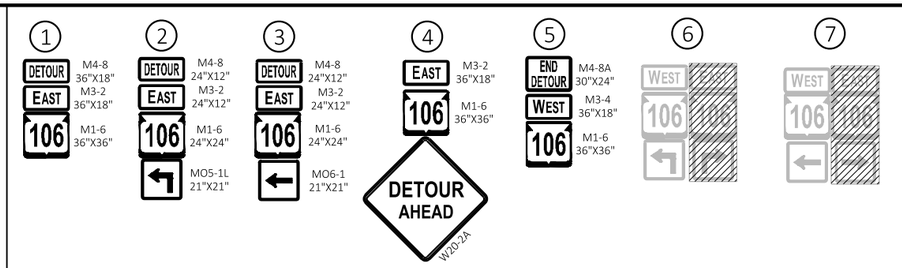
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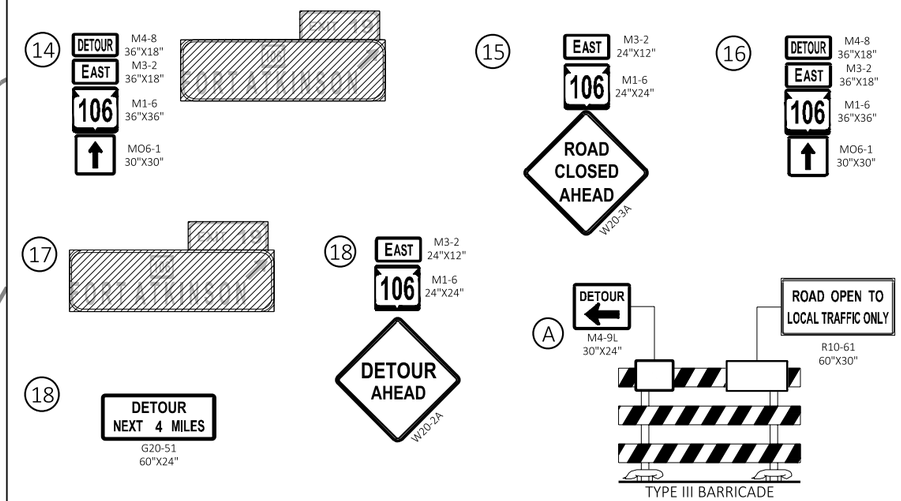
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GENERAL NOTES

1. REFER TO SDD "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR SIGN SIZE AND COLOR SPECIFICATIONS.
2. ALL W AND WO SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED.
3. DRAWINGS SHOW TRAFFIC CONTROL DETOUR FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON SITE CONDITIONS AS DIRECTED BY THE ENGINEER. ALL CHANGES TO THE TRAFFIC CONTROL DETOUR PLAN SHALL BE REVIEWED WITH THE PROJECT ENGINEER.
4. SIGN FACE LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS, UNLESS OTHERWISE NOTED.
5. TRAFFIC CONTROL PLANS ARE NOT TO SCALE.
6. COVER, REMOVE, OR ALTER ANY EXISTING OR PROPOSED SIGNS THAT DISPLAY A CONFLICTING MESSAGE WITH THE PROPOSED DETOUR ROUTE FOR THE PHASE THAT IS ACTIVE.
7. MAINTAIN ACCESS TO DRIVEWAYS AND DEAD END SIDE ROADS AT ALL TIMES.
8. WO SIGNS ARE THE SAME AS W SIGNS EXCEPT THE BACKGROUND IS ORANGE.



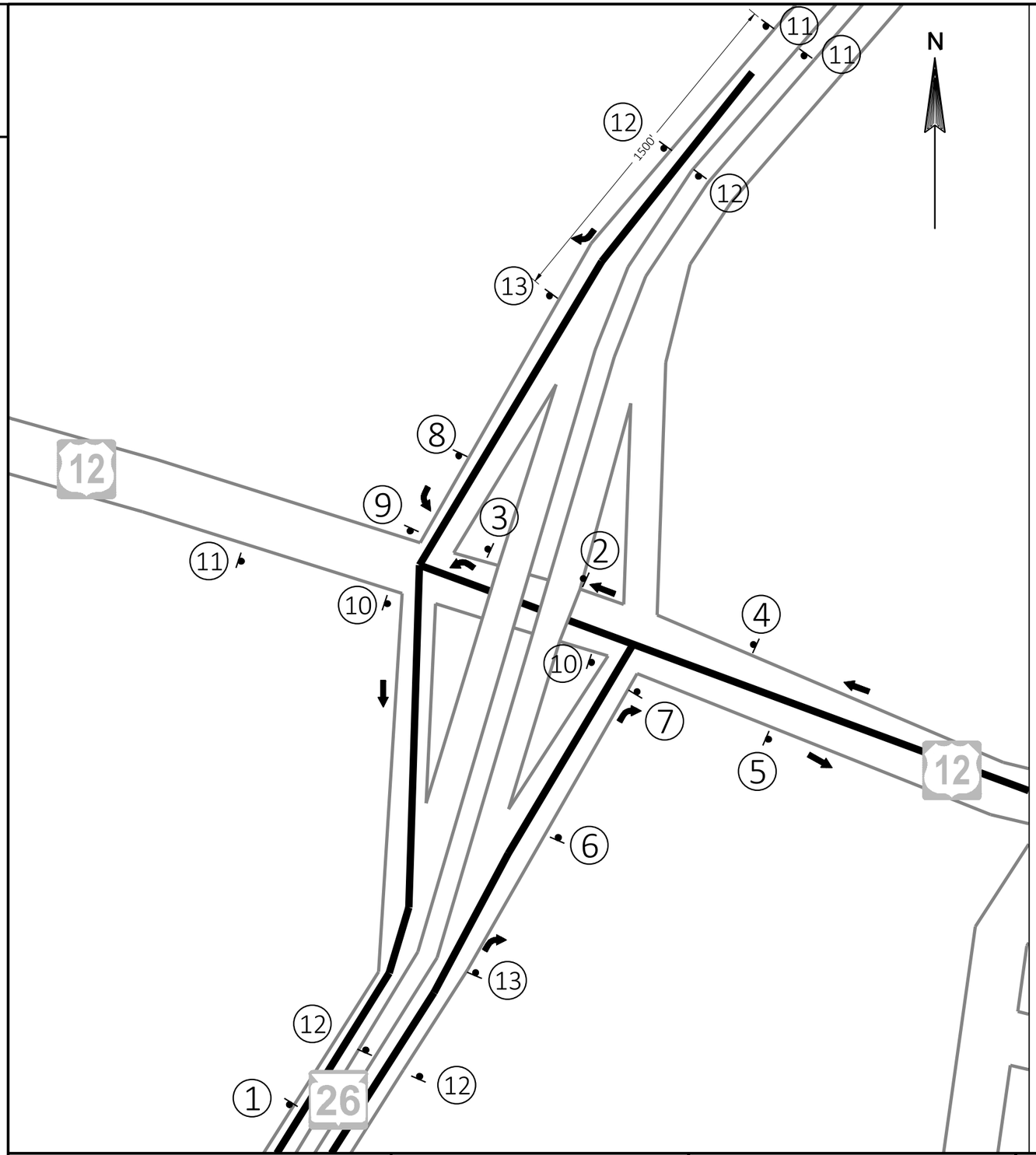




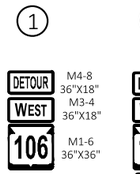
LEGEND

- WORK AREA
- DETOUR ROUTE
- POST MOUNTED SIGN
- TYPE III BARRICADE/BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- COUNTY C — EXISTING SIGN
- EXISTING SIGN TO BE COVERED

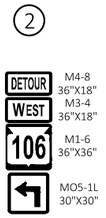
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	DETOUR - DETAIL 1	SHEET 38	E



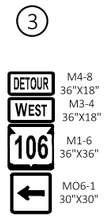
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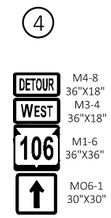
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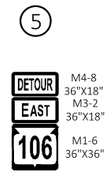
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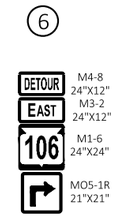
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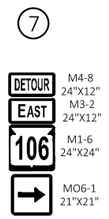
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6



7



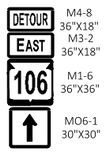
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9



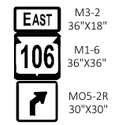
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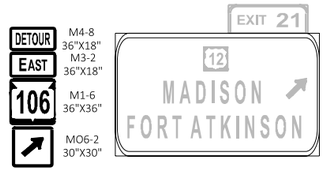
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12



13

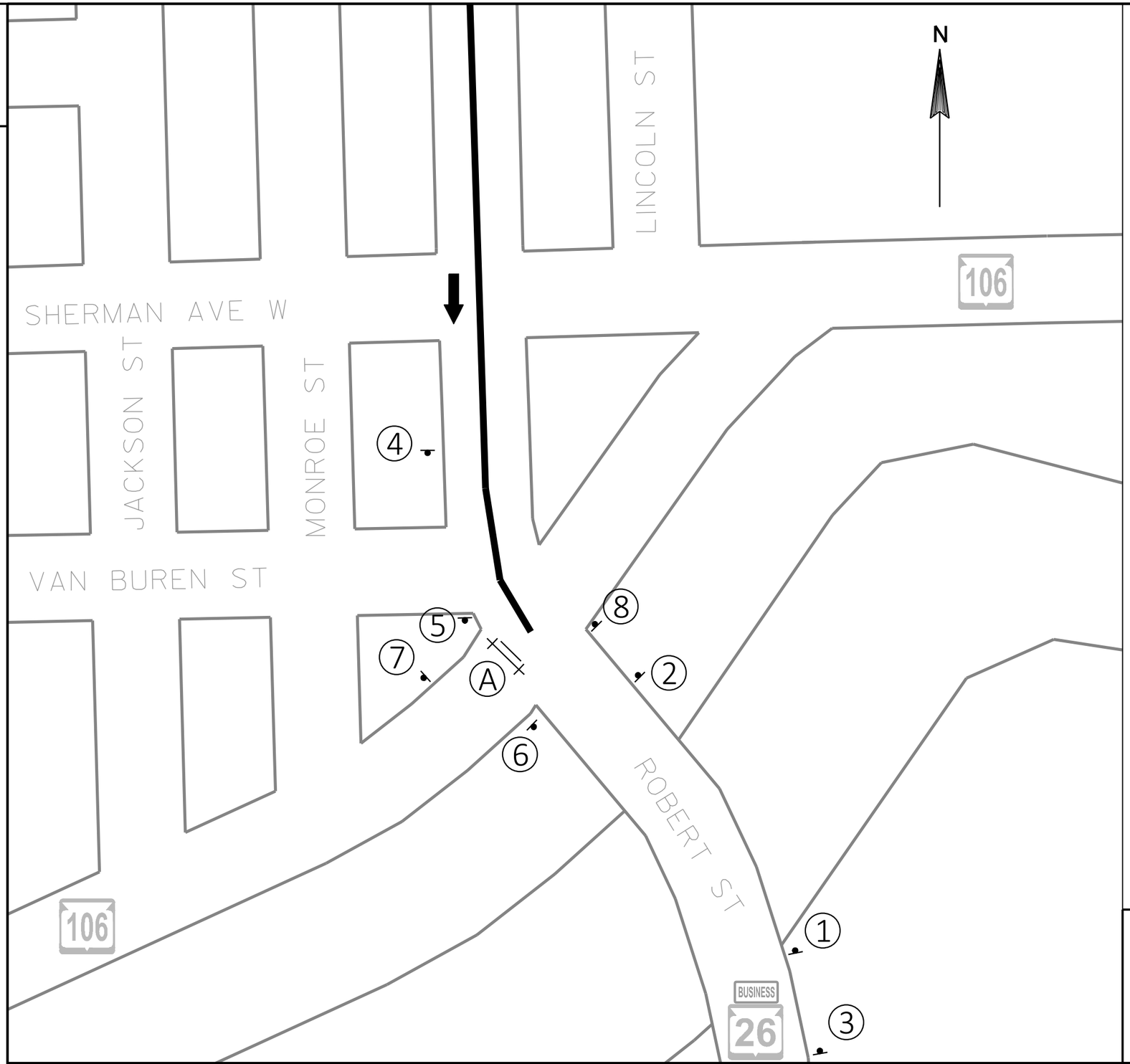


GENERAL NOTES

1. REFER TO SDD "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR SIGN SIZE AND COLOR SPECIFICATIONS.
2. ALL W AND WO SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED.
3. DRAWINGS SHOW TRAFFIC CONTROL DETOUR FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON SITE CONDITIONS AS DIRECTED BY THE ENGINEER. ALL CHANGES TO THE TRAFFIC CONTROL DETOUR PLAN SHALL BE REVIEWED WITH THE PROJECT ENGINEER.
4. SIGN FACE LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS, UNLESS OTHERWISE NOTED.
5. TRAFFIC CONTROL PLANS ARE NOT TO SCALE.
6. COVER, REMOVE, OR ALTER ANY EXISTING OR PROPOSED SIGNS THAT DISPLAY A CONFLICTING MESSAGE WITH THE PROPOSED DETOUR ROUTE FOR THE PHASE THAT IS ACTIVE.
7. MAINTAIN ACCESS TO DRIVEWAYS AND DEAD END SIDE ROADS AT ALL TIMES.
8. WO SIGNS ARE THE SAME AS W SIGNS EXCEPT THE BACKGROUND IS ORANGE.

LEGEND

- WORK AREA
- DETOUR ROUTE
- POST MOUNTED SIGN
- TYPE III BARRICADE/BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- EXISTING SIGN (COUNTY C)
- EXISTING SIGN TO BE COVERED



1 — DETOUR / WEST 106 — M4-8 24"X12", M3-4 24"X12", M1-6 24"X24", MO5-1R 21"X21"

2 — DETOUR / WEST 106 — M4-8 24"X12", M3-4 24"X12", M1-6 24"X24", MO6-1 21"X21"

3 — WEST 106 — M3-4 24"X12", M1-6 24"X24"; DETOUR AHEAD (W20-2A)

4 — END DETOUR / EAST 106 — M4-8A 24"X18", M3-2 24"X12", M1-6 24"X24"

5 — EAST 106

6 — EAST 106

7

8 — 106; COVER WITH MO6-1 21"X21"

A — R11-3 60" X 30" ROAD CLOSED 1 MILES AHEAD LOCAL TRAFFIC ONLY

TYPE III BARRICADE

GENERAL NOTES

1. REFER TO SDD "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR SIGN SIZE AND COLOR SPECIFICATIONS.
2. ALL W AND WO SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED.
3. DRAWINGS SHOW TRAFFIC CONTROL DETOUR FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON SITE CONDITIONS AS DIRECTED BY THE ENGINEER. ALL CHANGES TO THE TRAFFIC CONTROL DETOUR PLAN SHALL BE REVIEWED WITH THE PROJECT ENGINEER.
4. SIGN FACE LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS, UNLESS OTHERWISE NOTED.
5. TRAFFIC CONTROL PLANS ARE NOT TO SCALE.
6. COVER, REMOVE, OR ALTER ANY EXISTING OR PROPOSED SIGNS THAT DISPLAY A CONFLICTING MESSAGE WITH THE PROPOSED DETOUR ROUTE FOR THE PHASE THAT IS ACTIVE.
7. MAINTAIN ACCESS TO DRIVEWAYS AND DEAD END SIDE ROADS AT ALL TIMES.
8. WO SIGNS ARE THE SAME AS W SIGNS EXCEPT THE BACKGROUND IS ORANGE.

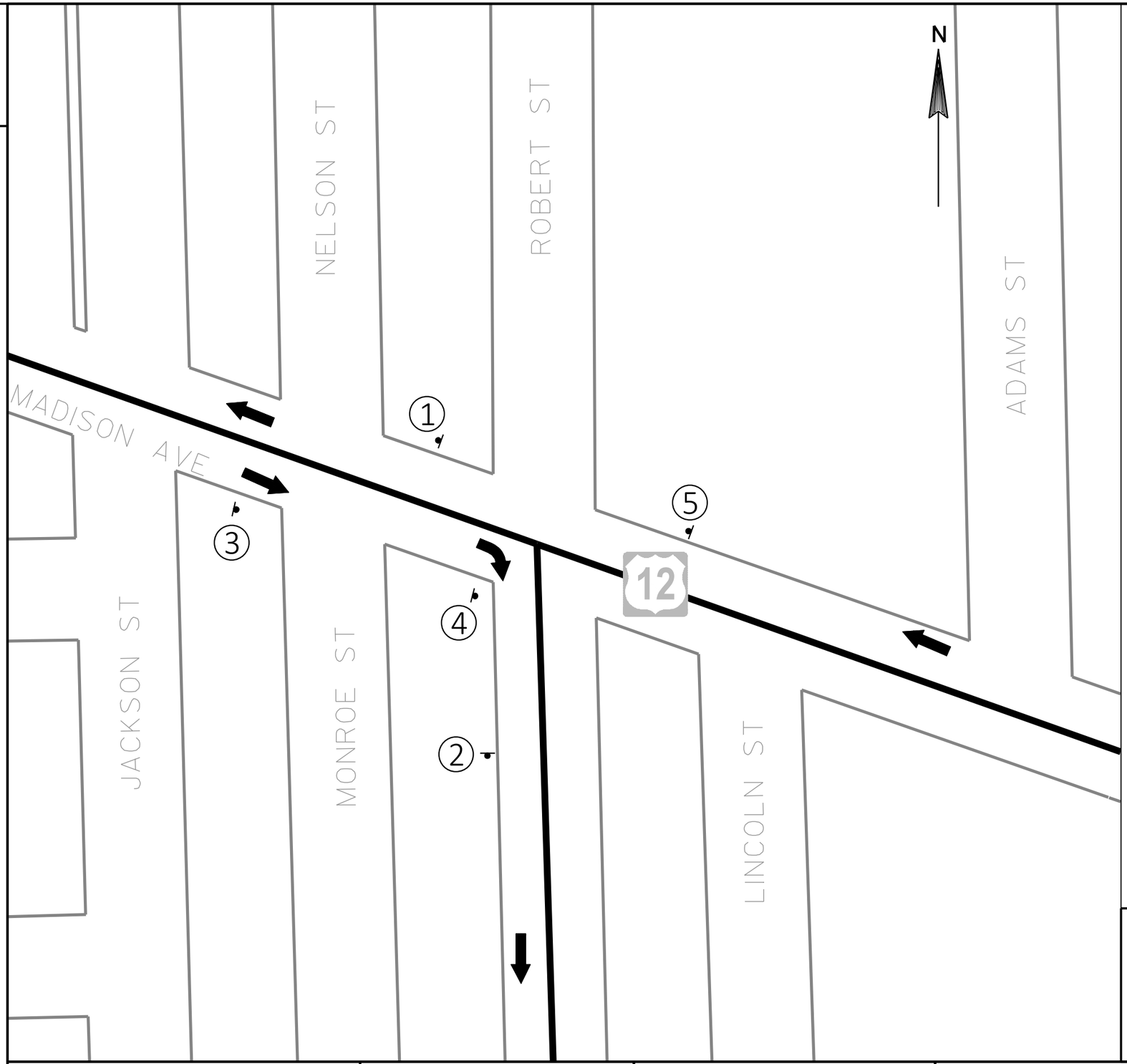
LEGEND

- WORK AREA
- DETOUR ROUTE
- POST MOUNTED SIGN
- TYPE III BARRICADE/BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- EXISTING SIGN (COUNTY C)
- EXISTING SIGN TO BE COVERED

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	DETOUR - DETAIL 3	SHEET 40	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027004-dt

PLOT DATE : 1/25/2021 5:11 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : Custom



1	2	3	4	5
DETOUR M4-8 24"X12"	DETOUR M4-8 24"X12"	DETOUR M4-8 24"X12"	DETOUR M4-8 24"X12"	DETOUR M4-8 24"X12"
WEST M3-4 24"X12"	EAST M3-2 24"X12"	EAST M3-2 24"X12"	EAST M3-2 24"X12"	WEST M3-4 24"X12"
106 M1-6 24"X24"	106 M1-6 24"X24"	106 M1-6 24"X24"	106 M1-6 24"X24"	106 M1-6 24"X24"
		MO5-1R 21"X21"	MO6-1 21"X21"	MO6-1 21"X21"

GENERAL NOTES

1. REFER TO SDD "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR SIGN SIZE AND COLOR SPECIFICATIONS.
2. ALL W AND WO SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED.
3. DRAWINGS SHOW TRAFFIC CONTROL DETOUR FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON SITE CONDITIONS AS DIRECTED BY THE ENGINEER. ALL CHANGES TO THE TRAFFIC CONTROL DETOUR PLAN SHALL BE REVIEWED WITH THE PROJECT ENGINEER.
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6. COVER, REMOVE, OR ALTER ANY EXISTING OR PROPOSED SIGNS THAT DISPLAY A CONFLICTING MESSAGE WITH THE PROPOSED DETOUR ROUTE FOR THE PHASE THAT IS ACTIVE.
7. MAINTAIN ACCESS TO DRIVEWAYS AND DEAD END SIDE ROADS AT ALL TIMES.
8. WO SIGNS ARE THE SAME AS W SIGNS EXCEPT THE BACKGROUND IS ORANGE.

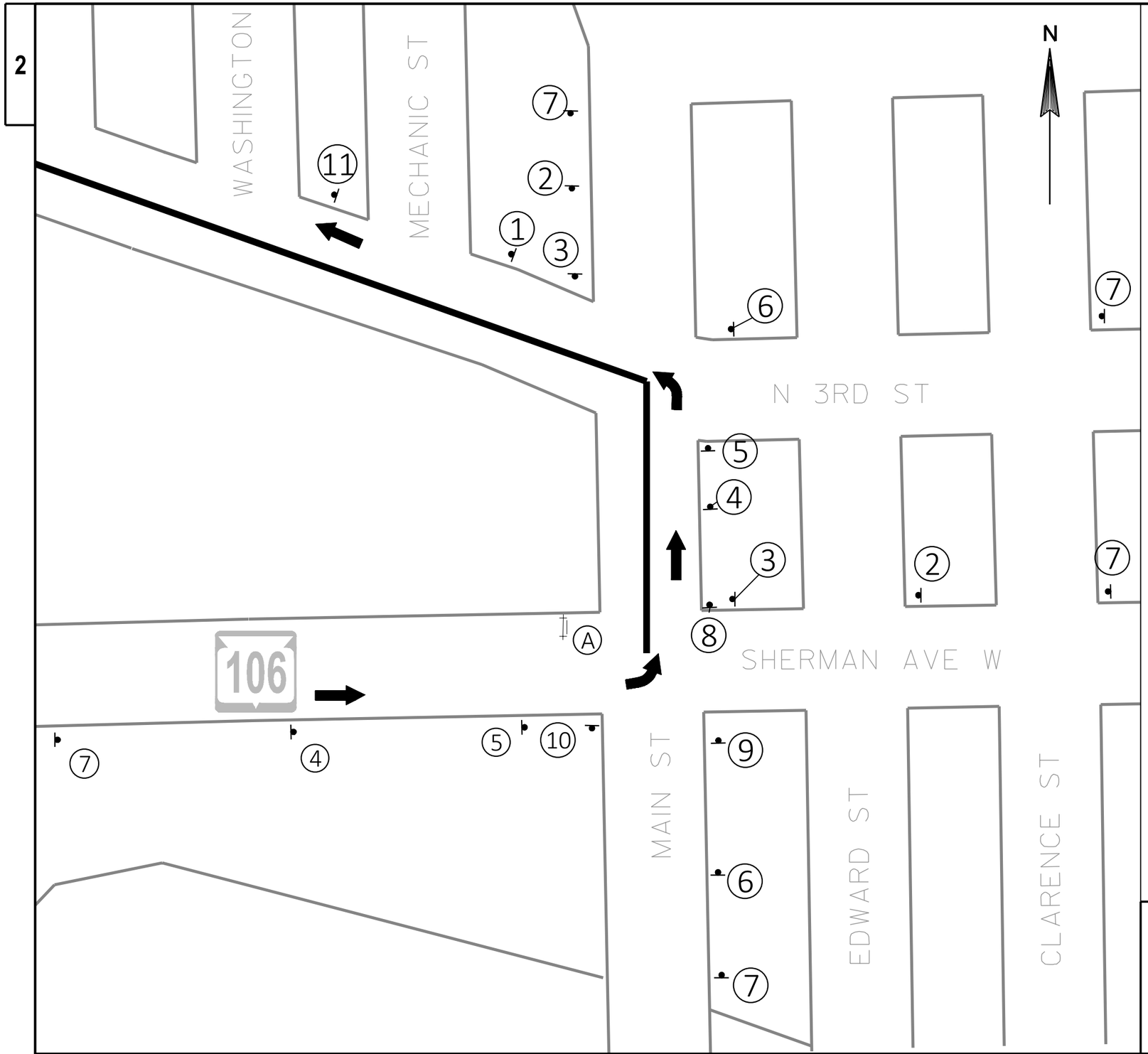
LEGEND

- WORK AREA
- DETOUR ROUTE
- POST MOUNTED SIGN
- TYPE III BARRICADE/BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- EXISTING SIGN (COUNTY C)
- EXISTING SIGN TO BE COVERED

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	DETOUR - DETAIL 4	SHEET 41	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027005-dt

PLOT DATE : 1/25/2021 5:11 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : Custom



1

DETOUR M4-8 24"X12"
WEST M3-4 24"X12"
106 M1-6 24"X24"

2

DETOUR M4-8 24"X12"
WEST M3-4 24"X12"
106 M1-6 24"X24"
MO5-1R 21"X21"

3

DETOUR M4-8 24"X12"
WEST M3-4 24"X12"
106 M1-6 24"X24"
MO6-1 21"X21"

4

DETOUR M4-8 24"X12"
WEST M3-4 24"X12"
106 M1-6 24"X24"
MO5-1L 21"X21"

5

DETOUR M4-8 24"X12"
WEST M3-4 24"X12"
106 M1-6 24"X24"
MO6-1 21"X21"

6

DETOUR M4-8 24"X12"
WEST M3-4 24"X12"
106 M1-6 24"X24"
MO6-1 21"X21"

7

WEST M3-4 24"X12"
106 M1-6 24"X24"
DETOUR AHEAD W20-2A

8

DETOUR M4-8 24"X12"
WEST EAST
106 106
COVER WITH
MO6-1 21"X21"

9

JCT 106
DETOUR M4-8 24"X12"
WEST M3-4 24"X12"
106 M1-6 24"X24"
MO6-1 21"X21"

10

EAST 106

11

DETOUR
NEXT 4 MILES
G20-S1
60"X24"

A

R11-3
60" X 30"
ROAD CLOSED
2 MILES AHEAD
LOCAL TRAFFIC ONLY
TYPE III BARRICADE

GENERAL NOTES

1. REFER TO SDD "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR SIGN SIZE AND COLOR SPECIFICATIONS.
2. ALL W AND WO SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED.
3. DRAWINGS SHOW TRAFFIC CONTROL DETOUR FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON SITE CONDITIONS AS DIRECTED BY THE ENGINEER. ALL CHANGES TO THE TRAFFIC CONTROL DETOUR PLAN SHALL BE REVIEWED WITH THE PROJECT ENGINEER.
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7. MAINTAIN ACCESS TO DRIVEWAYS AND DEAD END SIDE ROADS AT ALL TIMES.
8. WO SIGNS ARE THE SAME AS W SIGNS EXCEPT THE BACKGROUND IS ORANGE.

LEGEND

- WORK AREA
- DETOUR ROUTE
- POST MOUNTED SIGN
- TYPE III BARRICADE/BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- EXISTING SIGN
- EXISTING SIGN TO BE COVERED

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	DETOUR - DETAIL 5	SHEET 42	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027006-dt
PLOT DATE : 1/25/2021 5:11 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : Custom

3576-01-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	8.000	8.000
0004	201.0205	Grubbing	STA	8.000	8.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 581+84	LS	1.000	1.000
0010	204.0110	Removing Asphaltic Surface	SY	560.000	560.000
0012	204.0115	Removing Asphaltic Surface Butt Joints	SY	190.000	190.000
0014	204.0120	Removing Asphaltic Surface Milling	SY	202,135.000	202,135.000
0016	204.0165	Removing Guardrail	LF	400.000	400.000
0018	205.0100	Excavation Common	CY	1,900.000	1,900.000
0020	206.1000	Excavation for Structures Bridges (structure) 01. B-28-195	LS	1.000	1.000
0022	208.1500.S	Temporary Lane Shift During Culvert Work	EACH	1.000	1.000
0024	210.1500	Backfill Structure Type A	TON	350.000	350.000
0026	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 3576-01-71	LS	1.000	1.000
0028	213.0100	Finishing Roadway (project) 01. 3576-01-71	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	7,756.000	7,756.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,615.000	2,615.000
0034	305.0504.S	Hauling Excess Shoulder Material	CY	150.000	150.000
0036	312.0115	Select Crushed Material	CY	684.000	684.000
0038	315.0200	Asphaltic Base Widening	TON	928.000	928.000
0040	415.0080	Concrete Pavement 8-Inch	SY	48.000	48.000
0042	415.0410	Concrete Pavement Approach Slab	SY	116.000	116.000
0044	416.1010	Concrete Surface Drains	CY	2.000	2.000
0046	450.4000	HMA Cold Weather Paving	TON	2,896.000	2,896.000
0048	455.0605	Tack Coat	GAL	18,111.000	18,111.000
0050	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0052	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0054	460.2005	Incentive Density PWL HMA Pavement	DOL	26,028.000	26,028.000
0056	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	30,383.000	30,383.000
0058	460.2010	Incentive Air Voids HMA Pavement	DOL	34,267.000	34,267.000
0060	460.5224	HMA Pavement 4 LT 58-28 S	TON	34,267.000	34,267.000
0062	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	15.000	15.000
0064	465.0315	Asphaltic Flumes	SY	35.000	35.000
0066	465.0450	Asphaltic Intersection Rumble Strips	SY	78.000	78.000
0068	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	47,050.000	47,050.000
0070	502.0100	Concrete Masonry Bridges	CY	275.000	275.000
0072	502.3200	Protective Surface Treatment	SY	205.000	205.000
0074	502.3210	Pigmented Surface Sealer	SY	83.000	83.000

Line	Item	Item Description	Unit	Total	Qty
0076	505.0400	Bar Steel Reinforcement HS Structures	LB	5,380.000	5,380.000
0078	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	37,490.000	37,490.000
0080	516.0500	Rubberized Membrane Waterproofing	SY	24.000	24.000
0082	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	49.000	49.000
0084	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	2.000	2.000
0086	550.0500	Pile Points	EACH	18.000	18.000
0088	550.2126	Piling CIP Concrete 12 3/4 X 0.375-Inch	LF	990.000	990.000
0090	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	1,410.000	1,410.000
0092	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	70.000	70.000
0094	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	10.000	10.000
0096	606.0100	Riprap Light	CY	21.000	21.000
0098	606.0200	Riprap Medium	CY	4.000	4.000
0100	606.0300	Riprap Heavy	CY	356.000	356.000
0102	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	226.000	226.000
0104	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0106	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	8.000	8.000
0108	614.2300	MGS Guardrail 3	LF	1,877.000	1,877.000
0110	614.2330	MGS Guardrail 3 K	LF	550.000	550.000
0112	614.2350	MGS Guardrail Short Radius	LF	63.000	63.000
0114	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0116	614.2610	MGS Guardrail Terminal EAT	EACH	7.000	7.000
0118	614.2630	MGS Guardrail Short Radius Terminal	EACH	1.000	1.000
0120	618.0100	Maintenance And Repair of Haul Roads (project) 01. 3576-01-71	EACH	1.000	1.000
0122	619.1000	Mobilization	EACH	1.000	1.000
0124	624.0100	Water	MGAL	37.000	37.000
0126	625.0100	Topsoil	SY	450.000	450.000
0128	625.0500	Salvaged Topsoil	SY	5,000.000	5,000.000
0130	628.1504	Silt Fence	LF	3,505.000	3,505.000
0132	628.1520	Silt Fence Maintenance	LF	5,705.000	5,705.000
0134	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0136	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0138	628.2006	Erosion Mat Urban Class I Type A	SY	5,000.000	5,000.000
0140	628.6005	Turbidity Barriers	SY	202.000	202.000
0142	628.7020	Inlet Protection Type D	EACH	7.000	7.000
0144	628.7555	Culvert Pipe Checks	EACH	3.000	3.000
0146	629.0210	Fertilizer Type B	CWT	3.180	3.180
0148	630.0140	Seeding Mixture No. 40	LB	91.000	91.000

3576-01-71

Line	Item	Item Description	Unit	Total	Qty
0150	630.0500	Seed Water	MGAL	282.000	282.000
0152	633.5200	Markers Culvert End	EACH	2.000	2.000
0154	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0156	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0158	638.2102	Moving Signs Type II	EACH	8.000	8.000
0160	638.2602	Removing Signs Type II	EACH	4.000	4.000
0162	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0164	638.4000	Moving Small Sign Supports	EACH	5.000	5.000
0166	642.5401	Field Office Type D	EACH	1.000	1.000
0168	643.0300	Traffic Control Drums	DAY	300.000	300.000
0170	643.0420	Traffic Control Barricades Type III	DAY	2,879.000	2,879.000
0172	643.0705	Traffic Control Warning Lights Type A	DAY	4,800.000	4,800.000
0174	643.0900	Traffic Control Signs	DAY	28,381.000	28,381.000
0176	643.0920	Traffic Control Covering Signs Type II	EACH	13.000	13.000
0178	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0180	643.5000	Traffic Control	EACH	1.000	1.000
0182	645.0111	Geotextile Type DF Schedule A	SY	86.000	86.000
0184	645.0120	Geotextile Type HR	SY	743.000	743.000
0186	645.0130	Geotextile Type R	SY	75.000	75.000
0188	646.1020	Marking Line Epoxy 4-Inch	LF	87,198.000	87,198.000
0190	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	103,071.000	103,071.000
0192	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	210.000	210.000
0194	646.5020	Marking Arrow Epoxy	EACH	4.000	4.000
0196	646.6120	Marking Stop Line Epoxy 18-Inch	LF	115.000	115.000
0198	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	71,742.000	71,742.000
0200	646.7120	Marking Diagonal Epoxy 12-Inch	LF	67.000	67.000
0202	646.8120	Marking Curb Epoxy	LF	400.000	400.000
0204	646.8220	Marking Island Nose Epoxy	EACH	10.000	10.000
0206	648.0100	Locating No-Passing Zones	MI	11.350	11.350
0208	649.0105	Temporary Marking Line Paint 4-Inch	LF	96,311.000	96,311.000
0210	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	87,197.000	87,197.000
0212	650.4500	Construction Staking Subgrade	LF	353.000	353.000
0214	650.5000	Construction Staking Base	LF	353.000	353.000
0216	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,490.000	1,490.000
0218	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0220	650.6500	Construction Staking Structure Layout (structure) 01. B-28-195	LS	1.000	1.000
0222	650.8000	Construction Staking Resurfacing Reference	LF	59,596.000	59,596.000
0224	650.9910	Construction Staking Supplemental Control (project) 01. 3576-01-71	LS	1.000	1.000

Line	Item	Item Description	Unit	Total	Qty
0226	650.9920	Construction Staking Slope Stakes	LF	5,380.000	5,380.000
0228	690.0150	Sawing Asphalt	LF	4,451.000	4,451.000
0230	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0232	715.0502	Incentive Strength Concrete Structures	DOL	1,656.000	1,656.000
0234	740.0440	Incentive IRI Ride	DOL	45,140.000	45,140.000
0236	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,400.000	2,400.000
0238	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,160.000	2,160.000
0240	SPV.0035	Special 01. Foundation Backfill	CY	135.000	135.000
0242	SPV.0060	Special 01. Landmark Reference Monuments Special	EACH	4.000	4.000
0244	SPV.0060	Special 02. Verify Landmark Reference Monuments	EACH	7.000	7.000
0246	SPV.0090	Special 01. Heavy Duty Silt Fence	LF	2,200.000	2,200.000
0248	SPV.0170	Special 01. Removal and Disposal of Invasive Plant Species	STA	3.000	3.000
0250	SPV.0180	Special 01. World Dairy Wetland Seed Mix A	SY	450.000	450.000
0252	SPV.0180	Special 02. Removing Distressed Pavement Milling	SY	8,100.000	8,100.000

3

CLEARING AND GRUBBING

CATEGORY	STATION	TO STATION	LOCATION	(201.0105) CLEARING STA	(201.0205) GRUBBING STA
0010	201+00	202+00	RT	1	1
	335+00	336+00	RT	1	1
	336+00	337+00	LT	1	1
	339+00	340+00	RT	1	1
	339+00	340+00	LT	1	1
	581+00	582+00	LT	1	1
	581+50	582+50	RT	1	1
	607+00	608+00	RT	1	1
			TOTALS	**8**	**8**

REMOVAL AND DISPOSAL OF INVASIVE PLANT SPECIES

CATEGORY	STATION	TO STATION	LOCATION	(SPV.0170.01) STA
0010	581+00	584+00	LT	3
			TOTAL	**3**

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	LOCATION	(203.0100) REMOVING SMALL PIPE CULVERTS EACH	PIPE LENGTH	PIPE DIAMETER	PIPE MATERIAL
0010	351+36	LT & RT	1	48	24"	RCP
		TOTAL	**1**			

NOTE: INCLUDES REMOVING APRON ENDWALLS CONNECTED TO CULVERT PIPE

REMOVING ASPHALTIC SURFACE

CATEGORY	STATION	TO STATION	LOCATION	(204.0110) REMOVING ASPHALTIC SURFACE SY	* (690.0150) SAWING ASPHALT LF
0010	65+86	68+44	RT	139	247
	106+55	114+67	LT	421	807
			TOTALS	**560**	**1,054**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

NOTE: THIS BID ITEM IS FOR REMOVING ASPHALTIC FLUMES AND ASPHALTIC CURB TO ROADWAY SAWING ASPHALT LIMITS.

REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	STATION	TO STATION	LOCATION	(204.0115) REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	NOTES
0010	7+50	7+52	LT & RT	6	STH 106, BEGIN PROJECT
	40+75	40+99	LT	5	HILLSIDE ROAD
	40+88	41+13	RT	5	HILLSIDE ROAD
	80+13	80+25	RT	4	LIGUORI ROAD
	87+64	87+81	LT	4	SILVER LANE
	106+63	106+73	RT	5	BINGHAM ROAD
	117+97	118+10	RT	5	BINGHAM ROAD
	118+90	119+02	LT	5	BINGHAM ROAD
	120+09	120+19	LT	4	BINGHAM ROAD
	193+15	193+43	LT	6	ROCKDALE ROAD
	197+17	197+37	LT	4	CHURCH STREET
	201+19	201+43	LT	5	BUSSEY ROAD
	214+09	214+30	RT	4	CONRAD ROAD
	233+80	233+90	RT	4	LOGA ROAD
	234+29	234+53	RT	6	LOGA ROAD
	274+54	274+67	LT	3	HAMMARQUIST ROAD
	280+92	281+07	RT	4	CARCAJOU ROAD
	282+60	282+77	LT	5	CTH A
	328+68	328+86	LT	4	KLEMENT ROAD
	337+43	337+45	LT & RT	8	STH 106, STRUCTURE B-28-0107
	337+98	338+00	LT & RT	8	STH 106, STRUCTURE B-28-0107
	361+64	361+88	LT	5	KREUTZ ROAD
	382+48	382+68	LT	4	BECKER ROAD
	404+79	404+96	RT	4	POUTSCH ROAD
	428+07	428+25	RT	4	POUTSCH ROAD
	441+46	441+61	LT	3	SCHWEMMER ROAD
	468+00	468+22	RT	5	BURNHAM ROAD
	480+79	480+93	LT	4	CTH J
	494+83	495+02	LT	4	KUNZ ROAD
	538+66	538+89	RT	5	N. SHORE ROAD
	548+48	548+74	LT	5	STH 26 SB OFF RAMP
	548+61	548+86	RT	6	STH 26 SB ON RAMP
	553+79	554+07	LT	6	STH 26 NB ON RAMP
	553+87	554+11	RT	5	STH 26 NB OFF RAMP
	561+21	561+45	RT	6	BLACKHAWK ISLAND ROAD
	561+53	561+79	LT	5	FALK ROAD
	576+75	576+95	LT	4	FALK ROAD
	606+08	606+10	LT & RT	6	STH 106, END PROJECT
			TOTAL	**190**	

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STATION	TO STATION	LOCATION	(204.0120) REMOVING ASPHALTIC SURFACE MILLING SY	(SPV.0180.02) REMOVING DISTRESSED PAVEMENT MILLING SY
0010	7+50	124+00	LT & RT	36,030	-
	124+00	203+68	LT & RT	26,890	-
	204+91	337+45	LT & RT	45,760	-
	337+92	351+01	LT & RT	4,470	-
	351+71	543+00	LT & RT	65,870	-
	543+00	568+88	LT & RT	13,930	-
	568+88	579+16	LT & RT	2,885	-
	582+50	606+10	LT & RT	6,300	-
	UNDISTRIBUTED		LT & RT	-	8100
			TOTAL	**202,135**	**8,100**

3

REMOVING GUARDRAIL

CATEGORY	STATION	TO STATION	LOCATION	(204.0165) REMOVING GUARDRAIL LF
0010	202+11	202+61	RT	50
	202+85	203+35	LT	50
	205+23	205+73	RT	50
	205+61	206+11	LT	50
	335+72	336+22	RT	50
	336+30	336+80	LT	50
	338+62	339+12	RT	50
	339+01	339+51	LT	50
			TOTAL	**400**

LANDMARK REFERENCE MONUMENTS

CATEGORY	STATION	LOCATION	NUMBER	TOWNSHIP	RANGE	(SPV.0060.01) LANDMARK REFERENCE MONUMENTS SPECIAL EACH	(SPV.0060.02) VERIFY LANDMARK REFERENCE MONUMENTS EACH
0010	119+67.7	100.0' RT	9713	T5N	R12E/13E	-	1
	143+09.7	163.8' RT	9513	T5N	R13E	-	1
	283+27.0	131.9' LT	8719	T5N	R13E	-	1
	388+53.2	1.1' LT	8123	T5N	R13E	1	1
	415+03.0	19.0' LT	7923	T5N	R13E	1	1
	441+66.0	5.4' LT	7723	T5N	R13E	1	1
	550+35.4	3.2' RT	6921	T5N	R14E	1	1
					TOTALS	**4**	**7**

EARTHWORK PROJECT I.D. 3576-01-71

Division	**From/To Station**	**Location**	**Excavation Common (1)** (item # 205.0100) **Cut (2)**	**EBS Excavation (3)**	**Salvaged/ Unusable Pavement Material (4)**	**Available Material (5)**	**Unexpanded Fill**	**Expanded Fill (13)** **Factor 1.25**	**Mass Ordinate +/- (14)**	**Waste**	**Borrow** (item #208.0100)	**Comment:**
1	66+15 to 68+42	Curb and Gutter Location 1	50	0	21	29	2	2	27	27		
2	106+65 to 114+59	Curb and Gutter Location 2	171	0	74	98	15	19	79	79		
3	202+11 to 203+34	B-28-0108 - West	3	0	0	3	73	91	-88	-88		
4	205+24 to 206+12	B-28-0108 - East	1	0	0	1	39	49	-48	-48		
5	249+00 to 253+00	Curb and Gutter Location 3	90	0	22	68	28	35	33	33		
6	335+72 to 336+79	B-28-0107 - West	7	0	0	7	22	28	-20	-20		
7	338+82 to 339+50	B-28-0107 - East	2	0	0	2	24	30	-28	-28		
8	351+01 to 351+71	*Culvert Pipe (Transition areas only)	240	0	0	240	0	0	240	240		
9	578+94 to 581+48	B-28-0195 - West	730	0	107	622	29	36	587	587		
10	582+20 to 607+72	B-28-0195 - East and beam guard	427	0	7	420	230	287	133	133		
	Undistributed (EBS)		0	180								
	Project Totals		1,721	180	231	1,490	461	576	914	914	0	
	Overall Project Total		**1,900**									

*See culvert pipe table and construction detail for more information.

1) Excavation Common is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Select Crushed Material
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
13) Expanded Fill. Factor = 1.25
Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * 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.

3

AGGREGATE SHOULDERS

CATEGORY	STATION	TO STATION	LOCATION	(305.0110) BASE AGGREGATE DENSE 3/4-INCH TON	(305.0504.S) HAULING EXCESS SHOULDER MATERIAL CY
0010	7+50	40+42	LT	122	-
	7+50	40+43	RT	122	-
	41+32	87+40	LT	170	-
	41+32	66+05	RT	91	-
	69+95	78+88	RT	33	-
	80+28	105+29	RT	92	-
	87+91	106+65	LT	69	-
	106+69	117+99	RT	42	-
	114+67	118+47	LT	14	-
	118+57	203+68	RT	536	-
	118+98	120+14	LT	5	-
	120+74	192+89	LT	453	-
	193+55	197+09	LT	13	-
	201+43	203+68	LT	21	-
	204+91	274+46	LT	459	-
	204+97	213+97	RT	72	-
	214+43	233+60	RT	139	-
	234+64	248+90	RT	103	-
	253+12	280+91	RT	171	-
	274+99	281+22	LT	38	-
	281+65	324+12	RT	262	-
	282+99	328+57	LT	281	-
	324+91	336+91	RT	81	-
	329+25	337+25	LT	59	-
	337+92	351+01	RT	99	-
	337+93	351+01	LT	95	-
	351+01	351+71	LT	12	-
	351+01	351+71	RT	12	-
	351+71	361+48	LT	73	-
	351+71	404+45	RT	384	-
	362+03	382+26	LT	149	-
	382+91	441+37	LT	432	-
	405+04	427+98	RT	169	-
	428+37	467+84	RT	291	-
	441+73	480+56	LT	287	-
	468+48	538+22	RT	516	-
	481+76	494+71	LT	95	-
	495+62	547+95	LT	402	-
	539+61	548+11	RT	77	-
	548+64	550+16	LT	22	-
	548+85	550+35	RT	17	-
	552+00	553+90	RT	25	-
	552+01	553+83	LT	17	-
	554+54	557+40	LT	23	-
	554+55	560+68	RT	58	-
	561+95	578+73	RT	116	-
	562+36	576+64	LT	86	-
	577+07	579+16	LT	10	-
	578+73	581+48	RT	85	-
	579+16	581+69	LT	53	-
	581+99	582+50	RT	10	-
	582+20	582+50	LT	5	-
	582+50	585+00	LT	58	-
	582+50	608+53	RT	519	-
	585+00	606+10	LT	108	-
	UNDISTRIBUTED			-	150
	TOTALS			**7,756**	**150**

NOTE: ASPHALTIC BASE WIDENING BID ITEM INCLUDES MOVING THE EXISTING AGGREGATE OUTSIDE OF THE WIDENED ASPHALT SHOULDER TO ACCOMMODATE PAVING OPERATIONS.

SELECT CRUSHED MATERIAL

CATEGORY	LOCATION	* (312.0115) SELECT CRUSHED MATERIAL CY
0010	UNDISTRIBUTED (EBS)	180
	TOTAL	**180**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

WATER

CATEGORY	DESCRIPTION	(624.0100) WATER MGAL
0010	PROJECT 3576-01-71	37
	TOTAL	**37**

NOTE: WATER BID ITEM IS FOR BASE AGGREGATE DENSE DUST CONTROL AND COMPACTION.

ASPHALTIC SHOULDER WIDENING

CATEGORY	STATION	TO STATION	LOCATION	* (305.0120) BASE AGGREGATE DENSE 1 1/4-INCH TON	(315.0200) ASPHALTIC BASE WIDENING TON	LOWER LAYER HMA PAVEMENT 4 LT 58-28 S (460.5224) * TON	LOWER LAYER HMA PAVEMENT 4 LT 58-28 S SHOULDER ## TON	UPPER LAYER HMA PAVEMENT 4 LT 58-28 S (460.5224) * TON	UPPER LAYER HMA PAVEMENT 4 LT 58-28 S SHOULDER ## TON	* (455.0605) TACK COAT GAL	* (690.0150) SAWING ASPHALT LF
0010	7+50	40+35	RT	-	82	72	72	72	72	37	-
	7+50	40+35	LT	-	88	72	72	72	72	37	-
	41+38	78+67	RT	-	104	85	85	85	85	43	-
	41+38	87+35	LT	-	123	100	100	100	100	51	-
	80+33	105+15	RT	-	66	54	54	54	54	28	-
	87+96	118+42	LT	-	81	66	66	66	66	34	-
	106+72	117+96	RT	-	30	25	25	25	25	13	-
	118+66	124+00	RT	-	14	11	11	11	11	6	-
	118+98	120+12	LT	-	3	3	3	3	3	1	-
	120+81	124+00	LT	-	9	7	7	7	7	4	-
	248+90	253+25	RT	-	12	-	-	14	14	5	-
	568+88	579+16	RT	22	30	24	24	24	24	12	44
	568+88	576+60	LT	-	22	18	18	18	18	9	-
	577+10	579+16	LT	-	6	4	4	4	4	2	-
	582+50	608+10	RT	1,111	177	144	144	144	144	73	2,552
	582+50	606+10	LT	122	82	67	67	67	67	34	253
		TOTALS		**1,255**	**928**	**751**	**751**	**765**	**765**	**388**	**2,849**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

Tonnage is eligible for Incentive Air Voids HMA Pavement (460.2010) and density is tested for acceptance in those areas.

ROADWAY RECONSTRUCTION AREA

CATEGORY	STATION	TO STATION	LOCATION	* (305.0120) BASE AGGREGATE DENSE 1 1/4-INCH TON	* (312.0115) SELECT CRUSHED MATERIAL CY	UPPER LAYER HMA PAVEMENT 4 LT 58-28 S (460.5224) * TON	UPPER LAYER HMA PAVEMENT 4 LT 58-28 S TRAVEL LANE # TON	UPPER LAYER HMA PAVEMENT 4 LT 58-28 S SHOULDER ## TON	LOWER LAYER HMA PAVEMENT 4 LT 58-28 S (460.5224) * TON	LOWER LAYER HMA PAVEMENT 4 LT 58-28 S TRAVEL LANE # TON	LOWER LAYER HMA PAVEMENT 4 LT 58-28 S SHOULDER ## TON	* (455.0605) TACK COAT GAL	* (690.0150) SAWING ASPHALT LF
0010	579+16	581+69	LT & RT	712	414	83	57	26	166	115	51	85	24
	581+99	582+84	LT & RT	147	90	8	5	3	16	10	6	8	24
		TOTALS		**859**	**504**	**91**	**62**	**28**	**182**	**125**	**57**	**93**	**48**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

Tonnage is eligible for Incentive Density PWL HMA Pavement (460.2005) and Incentive Air Voids HMA Pavement (460.2010).
Tonnage is eligible for Incentive Air Voids HMA Pavement (460.2010) and density is tested for acceptance in those areas.

HMA PAVEMENT

CATEGORY	STATION	TO STATION	LOCATION	(450.4000) COLD WEATHER PAVING TON	UPPER LAYER HMA PAVEMENT 4 LT 58-28 S (460.5224) * TON	UPPER LAYER HMA PAVEMENT 4 LT 58-28 S TRAVEL LANE # TON	UPPER LAYER HMA PAVEMENT 4 LT 58-28 S SHOULDER ## TON	LOWER LAYER HMA PAVEMENT 4 LT 58-28 S (460.5224) * TON	LOWER LAYER HMA PAVEMENT 4 LT 58-28 S TRAVEL LANE # TON	LOWER LAYER HMA PAVEMENT 4 LT 58-28 S SHOULDER ## TON	* (455.0605) TACK COAT GAL
0010	7+50	124+00	LT & RT	-	3,515	3,045	470	3,515	3,045	470	4,305
	124+00	203+68	LT & RT	-	3,764	2,974	790	-	-	-	1,882
	204+91	337+45	LT & RT	-	6,406	4,981	1,425	-	-	-	3,203
	337+93	543+00	LT & RT	1,779	9,881	7,655	2,226	-	-	-	4,940
	543+00	568+88	LT & RT	682	1,364	840	524	1,364	840	524	1,670
	568+88	579+16	LT & RT	140	279	269	10	279	269	10	341
	582+50	606+10	LT & RT	295	589	589	-	589	589	-	721
	**UNDISTRIBUTED		LT & RT	-	-	-	-	907	726	181	567
		TOTALS		**2,896**	**25,798**	**20,352**	**5,446**	**6,654**	**5,468**	**1,185**	**17,630**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE
**ASSOCIATED WITH SPV.0180.02 - REMOVING DISTRESSED PAVEMENT MILLING
Tonnage is eligible for Incentive Density PWL HMA Pavement (460.2005) and Incentive Air Voids HMA Pavement (460.2010).

3

3

CULVERT REPLACEMENT REPAIR AREA

CATEGORY	STATION	TO STATION	LOCATION	(205.0100)** EXCAVATION COMMON CY	(305.0120)* BASE AGGREGATE DENSE 1 1/4-INCH TON	(SPV.0035.01)* FOUNDATION BACKFILL CY	LOWER LAYER HMA PAVEMENT 4 LT 58-28 S (460.5224)* TON	TRAVEL LANE # TON	SHOULDER ## TON	(690.0150)* SAWING ASPHALT LF
0010	351+01	351+71	LT & RT	240	117	135	26	21	5	60
			TOTALS	**240**	**117**	**135**	**26**	**21**	**5**	**60**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

**FOR INFORMATIONAL PURPOSES ONLY; QUANTITY IS INCLUDED IN EARTHWORK SUMMARY TABLE

NOTE: UPPER LAYER OF HMA PAVEMENT IS INCLUDED ON HMA PAVEMENT MISCELLANEOUS QUANTITY TABLE

Tonnage is eligible for Incentive Density PWL HMA Pavement (460.2005) and Incentive Air Voids HMA Pavement (460.2010).
Tonnage is eligible for Incentive Air Voids HMA Pavement (460.2010) and density is tested for acceptance in those areas.

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

CATEGORY	DESCRIPTION	(465.0120) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
0010	UNDISTRIBUTED	15
	TOTAL	**15**

ASPHALTIC FLUMES

CATEGORY	STATION	LOCATION	(465.0315) ASPHALTIC FLUMES SY
0010	66+15	RT	7
	114+59	LT	10
	249+00	RT	9
	253+02	RT	9
		TOTAL	**35**

ASPHALTIC INTERSECTION RUMBLE STRIPS

CATEGORY	STATION	TO STATION	LOCATION	(465.0450) ASPHALTIC INTERSECTION RUMBLE STRIPS SY
0010	9+17	9+42	LT	26
	11+42	11+67	LT	26
	14+92	15+17	LT	26
			TOTAL	**78**

ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL

CATEGORY	STATION	TO STATION	LOCATION	(465.0475) ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL LF
0010	7+50	38+93	CENTERLINE	3,143
	42+93	77+75	CENTERLINE	3,482
	81+75	85+60	CENTERLINE	385
	89+60	104+00	CENTERLINE	1,440
	108+00	116+50	CENTERLINE	850
	122+50	191+20	CENTERLINE	6,870
	205+21	212+20	CENTERLINE	699
	216+20	231+50	CENTERLINE	1,530
	236+50	272+75	CENTERLINE	3,625
	276+75	279+75	CENTERLINE	300
	283+75	326+80	CENTERLINE	4,305
	330+80	337+20	CENTERLINE	640
	338+23	359+75	CENTERLINE	2,152
	363+75	380+58	CENTERLINE	1,683
	384+58	402+74	CENTERLINE	1,816
	406+74	426+16	CENTERLINE	1,942
	430+16	439+53	CENTERLINE	937
	443+53	466+10	CENTERLINE	2,257
	470+10	479+25	CENTERLINE	915
	483+25	493+20	CENTERLINE	995
	497+20	536+92	CENTERLINE	3,972
	569+55	574+85	CENTERLINE	530
	578+85	581+12	CENTERLINE	227
	582+55	606+10	CENTERLINE	2,355
			TOTAL	**47,050**

CULVERT PIPES

CATEGORY	STATION	(522.0424) CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	(522.1024) APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	(633.5200) MARKERS CULVERT END EACH	(650.6000) CONSTRUCTION STAKING PIPE CULVERTS EACH	**JOINT TIES FOR CONCRETE PIPE EACH
0010	351+35	49	2	2	1	12
	TOTALS	**49**	**2**	**2**	**1**	**12**

**FOR INFORMATIONAL PURPOSES ONLY; NOT A PAY ITEM
NOTE: JOINT TIES ARE REQUIRED FOR THE APRON ENDWALL AND THE LAST 2 SECTIONS OF CULVERT PIPE INSTALLATIONS.

3

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STATION	TO STATION	LOCATION	(415.0080) CONCRETE PAVEMENT 8-INCH SY	(415.0410) CONCRETE PAVEMENT APPROACH SLAB SY
0010	581+37	581+69	LT & RT	25	58
	581+99	582+31	LT & RT	23	58
			TOTALS	**48**	**116**

NOTE: THE PAY LIMITS FOR THE WIDTH OF CONCRETE PAVEMENT APPROACH SLAB IS 24 FEET.

CONCRETE SURFACE DRAINS

CATEGORY	STATION	TO STATION	LOCATION	(416.1010) CONCRETE SURFACE DRAINS CY
0010	582+55	582+63	RT	1
	582+76	582+84	LT	1
			TOTAL	**2**

CONCRETE CURB & GUTTER

CATEGORY	STATION	TO STATION	LOCATION	* (305.0120) BASE AGGREGATE DENSE 1 1/4-INCH TON	(601.0553) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D LF	(601.0588) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT LF	(601.0590) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT LF	(650.5500) CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	* (690.0150) SAWING ASPHALT LF
0010	66+15	68+42	RT	64	226	-	-	226	-
	106+65	114+59	LT	207	782	-	-	782	-
	249+00	253+02	RT	113	402	-	-	402	440
	582+15	582+55	RT	-	-	30	10	40	-
	582+36	582+76	LT	-	-	40	-	40	-
			TOTALS	**384**	**1,410**	**70**	**10**	**1,490**	**440**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

BEAM GUARD

CATEGORY	STATION	TO STATION	LOCATION	(614.0370) STEEL PLATE BEAM GUARD ENGERY ABSORBING TERMINAL EACH	(614.2300) MGS GUARDRAIL 3 LF	(614.2330) MGS GUARDRAIL 3 K LF	(614.2350) MGS GUARDRAIL SHORT RADIUS LF	(614.2500) MGS THRIE BEAM TRANSITION LF	(614.2610) MGS GUARDRAIL TERMINAL EAT EACH	(614.2630) MGS GUARDRAIL SHORT RADIUS TERMINAL EACH
0010	202+11	202+61	RT	1	-	-	-	-	-	-
	202+81	203+31	LT	1	-	-	-	-	-	-
	205+24	205+74	RT	1	-	-	-	-	-	-
	205+62	206+12	LT	1	-	-	-	-	-	-
	335+72	336+22	RT	1	-	-	-	-	-	-
	336+29	336+79	LT	1	-	-	-	-	-	-
	338+62	339+12	RT	1	-	-	-	-	-	-
	339+51	339+01	LT	1	-	-	-	-	-	-
	578+94	579+47	RT	-	-	-	-	-	1	-
	579+47	580+00	RT	-	-	-	-	-	1	-
	580+37	580+90	LT	-	-	-	-	-	1	-
	580+90	581+15	LT	-	25	-	-	-	-	-
	581+15	581+55	LT	-	-	-	-	39.4	-	-
	580+66	580+82	RT	-	-	-	63	-	-	-
	580+66	580+73	RT	-	-	-	-	-	-	1
	580+82	580+95	RT	-	13	-	-	-	-	-
	580+95	581+34	RT	-	-	-	-	39.4	-	-
	582+13	582+53	RT	-	-	-	-	39.4	-	-
	582+53	582+78	RT	-	25	-	-	-	-	-
	582+78	583+31	RT	-	-	-	-	-	1	-
	582+34	582+73	LT	-	-	-	-	39.4	-	-
	582+73	583+86	LT	-	113	-	-	-	-	-
	583+86	584+39	LT	-	-	-	-	-	1	-
	584+15	584+68	RT	-	-	-	-	-	1	-
	584+68	590+43	RT	-	575	-	-	-	-	-
	590+43	595+93	RT	-	-	550	-	-	-	-
	595+93	607+20	RT	-	1,127	-	-	-	-	-
	607+20	607+72	RT	-	-	-	-	-	1	-
			TOTALS	**8**	**1,877**	**550**	**63**	**157.6**	**7**	**1**

3

FINISHING ITEMS

CATEGORY	STATION	TO STATION	LOCATION	(625.0100) TOPSOIL SY	(625.0500) SALVAGED TOPSOIL SY	(628.2006) EROSION MAT URBAN CLASS I TYPE A SY	(629.0210) FERTILIZER TYPE B CWT	(630.0140) SEEDING MIXTURE NO. 40 LB	(SPV.0180.01) WORLD DAIRY SEED MIX A SY	(630.0500) SEED WATER MGAL
0010	65+87	68+44	RT	-	86	86	0.05	2	-	5
	106+55	114+85	LT	-	227	227	0.14	4	-	13
	200+76	202+70	RT	-	139	139	0.09	3	-	8
	201+77	203+41	LT	-	145	145	0.09	3	-	8
	205+17	207+00	RT	-	132	132	0.08	2	-	7
	205+58	207+23	LT	-	103	103	0.07	2	-	6
	248+78	253+30	RT	-	196	196	0.12	4	-	11
	334+51	336+27	RT	-	80	80	0.05	1	-	5
	334+66	336+85	LT	-	113	113	0.07	2	-	6
	338+60	340+27	RT	-	165	165	0.10	3	-	9
	338+94	340+24	LT	-	90	90	0.06	2	-	5
	351+06	351+63	RT	-	70	70	0.04	1	-	4
	351+07	351+61	LT	-	59	59	0.04	1	-	3
	578+27	580+17	RT	-	147	147	0.09	3	-	8
	579+02	580+18	LT	-	111	111	0.07	2	-	6
	580+27	581+53	LT	250	163	163	0.10	3	250	9
	580+53	581+25	RT	-	102	102	0.06	2	-	6
	582+11	583+53	RT	-	93	93	0.06	2	-	5
	582+43	586+13	LT	200	303	303	0.19	5	200	17
	583+82	608+53	RT	-	1,113	1,113	0.70	20	-	63
	UNDISTRIBUTED (LANE SHIFT RESTORATION)			-	500	500	0.32	9	-	28
	UNDISTRIBUTED (ADDITIONAL DISTURBED AREAS)			-	861	861	0.57	15	-	48
			TOTALS	**450**	**5,000**	**5,000**	**3.18**	**91**	**450**	**282**

SILT FENCE

CATEGORY	STATION	TO STATION	LOCATION	(628.1504) SILT FENCE LF	(SPV.0090.01) HEAVY DUTY SLT FENCE LF	(628.1520) SILT FENCE MAINTENANCE LF
0010	200+14	202+69	RT	-	160	160
	202+36	203+50	LT	-	120	120
	205+10	207+00	RT	-	190	190
	205+50	206+76	LT	-	130	130
	334+40	336+30	RT	-	195	195
	334+50	336+95	LT	-	250	250
	338+50	340+35	RT	-	190	190
	338+90	340+30	LT	-	145	145
	351+05	351+65	RT	70	-	70
	351+05	351+65	LT	70	-	70
	578+20	580+20	RT	-	205	205
	578+91	580+10	LT	-	125	125
	580+36	581+97	LT	-	160	160
	580+81	580+25	RT	-	50	50
	581+75	582+25	RT	-	60	60
	582+25	583+41	RT	120	-	120
	582+10	586+20	LT	415	-	415
	583+75	608+60	RT	2,480	-	2480
	UNDISTRIBUTED			350	220	570
			TOTALS	**3,505**	**2,200**	**5,705**

RIPRAP

CATEGORY	STATION	TO STATION	LOCATION	(606.0100) RIPRAP LIGHT CY	(606.0200) RIPRAP MEDIUM CY	(606.0300)* RIPRAP HEAVY CY	(645.0120)* GEOTEXTILE TYPE HR SY	(645.0130) GEOTEXTILE TYPE R SY
0010	65+86	66+05	RT	4	-	-	-	13
	114+82	115+00	LT	7	-	-	-	20
	248+60	248+80	RT	5	-	-	-	14
	253+20	253+45	RT	5	-	-	-	14
	582+57	582+63	RT	-	2	-	-	6
	582+77	582+83	LT	-	2	-	-	7
	592+00	595+00	RT	-	-	105	295	-
			TOTALS	**21**	**4**	**105**	**295**	**75**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

TURBIDITY BARRIERS

CATEGORY	STATION	TO STATION	LOCATION	(628.6005) TURBIDITY BARRIERS SY
0010	581+20	582+00	RT & LT	97
	581+79	582+42	RT & LT	105
			TOTAL	**202**

CULVERT PIPE CHECKS

CATEGORY	STATION	LOCATION	(628.7555) CULVERT PIPE CHECKS EACH
0010	351+37	LT	3
		TOTAL	**3**

MOBILIZATIONS EROSION CONTROL

CATEGORY	DESCRIPTION	(628.1905) EACH	(628.1910) EMERGENCY EACH
0010	PROJECT 3576-01-71	6	3
	TOTALS	**6**	**3**

INLET PROTECTION TYPE D

CATEGORY	STATION	LOCATION	(628.7020) INLET PROTECTION TYPE D EACH
0010	544+75	LT	1
	549+11	LT	1
	549+14	LT	1
	554+56	LT	1
	557+16	LT	1
	562+06	LT	1
	565+20	LT	1
		TOTAL	**7**

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	DESCRIPTION	(618.0100) EACH
0010	PROJECT 3576-01-71	1
	TOTAL	**1**

REMOVING SIGNS

CATEGORY	STATION	LOCATION	(638.2602) REMOVING SIGNS TYPE II EACH	(638.3000) REMOVING SMALL SIGN SUPPORTS EACH	NOTES
0010	581+52	RT	1	1	BRIDGE HASH MARKS
	581+72	RT	1	1	BRIDGE HASH MARKS
	581+96	LT	1	1	BRIDGE HASH MARKS
	582+16	LT	1	1	BRIDGE HASH MARKS
		TOTALS	**4**	**4**	

MOVING SIGNS

CATEGORY	STATION	TO STATION	LOCATION	(638.2102) MOVING SIGNS TYPE II EACH	(638.4000) MOVING SMALL SIGN SUPPORTS EACH	NOTES
0010	578+74	578+74	RT	1	1	NO PASSING ZONE SIGN
	579+62	579+62	RT	1	1	45 MPH SPEED LIMIT AHEAD SIGN
	599+52	599+52	RT	4	2	FORT ATKINSON SIGNS ON DUAL POSTS
	601+80	601+80	RT	2	1	45 MPH/ALTERNATE SIDE PARKING SIGNS
			TOTALS	**8**	**5**	

PERMANENT SIGNING

CATEGORY	STATION	LOCATION	SIGN CODE	SIZE WIDTH X HEIGHT IN. X IN.	(634.0612) POSTS WOOD 4x6-INCH X 12 FT EACH	(637.2230) SIGNS TYPE II REFLECTIVE F SF
0010	581+32	RT	W5-52R	12" X 36"	1	3.0
	581+53	LT	W5-52L	12" X 36"	1	3.0
	582+15	RT	W5-52L	12" X 36"	1	3.0
	582+36	LT	W5-52R	12" X 36"	1	3.0
				TOTALS	**4**	**12.0**

TRAFFIC CONTROL

CATEGORY	DESCRIPTION	(643.5000) TRAFFIC CONTROL EACH	DRUMS NO. DEVICES	(643.0300) TRAFFIC CONTROL DRUMS DAY	BARRICADES TYPE III NO. DEVICES	(643.0420) TRAFFIC CONTROL BARRICADES TYPE III DAY	WARNING LIGHTS TYPE A NO. DEVICES	(643.0705) TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	SIGNS NO. DEVICES	* (643.0900) TRAFFIC CONTROL SIGNS DAY	DURATION	
0010	ADVANCE WARNING SIGNS (MAINLINE & SIDEROAD)	-	-	-	-	-	-	-	39	4,290	110	DAYS
	LANE CLOSURE WITH FLAGGING OPERATION	-	-	-	-	-	-	-	8	880	110	DAYS
	MOVING PAVEMENT MARKING OPERATION	-	-	-	-	-	-	-	8	880	110	DAYS
	UNEVEN LANES	-	-	-	-	-	-	-	4	440	110	DAYS
	ROAD CLOSURE (STRUCTURE B-28-0195)	-	-	-	24	2,640	40	4,400	12	1,320	110	DAYS
	CULVERT PIPE REPLACEMENT (LANE SHIFT)	-	40	200	-	-	-	-	8	40	5	DAYS
	TEMPORARY SIGNING AT CULVERT PIPE REPLACEMENT	-	-	-	-	-	-	-	6	30	5	DAYS
	UNDISTRIBUTED	-	-	100	-	239	-	400	-	701		
	PROJECT 3576-01-71	1	-	-	-	-	-	-	-	-		
	TOTALS	**1**		**300**		**2,879**		**4,800**		**8,581**		

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

NOTES:
ADVANCE WARNING SIGNS (MAINLINE & SIDEROAD) - SEE S.D.D. "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC"
LANE CLOSURE WITH FLAGGING OPERATION - SEE S.D.D. "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"
MOVING PAVEMENT MARKING OPERATION - SEE S.D.D. "MOVING PAVEMENT MARKING OPERATION - TWO-LANE TWO-WAY ROADWAY"
CULVERT REPLACEMENT (LANE SHIFT) - SEE S.D.D. "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"

DETOUR

CATEGORY	LOCATION	SHEET SHOWN IN PLAN SET	DURATION		SIGNS NO. DEVICES	* (643.0900) TRAFFIC CONTROL SIGNS DAY	NO. OF CYCLES	(643.0920) TRAFFIC CONTROL COVERING SIGNS TYPE II EACH
0010	USH 12 (MADISON AVENUE) WESTBOUND AT OLD MADISON STREET	DETOUR - OVERVIEW	99	DAYS	3	297	-	-
	USH 12 (MADISON AVENUE) EASTBOUND AT OLD MADISON STREET	DETOUR - OVERVIEW	99	DAYS	3	297	-	-
	STH 106 EASTBOUND AT STH 26	DETOUR - DETAIL 1	99	DAYS	15	1,485	1	1
	STH 26 NORTHBOUND AT STH 106	DETOUR - DETAIL 1	99	DAYS	13	1,287	1	3
	STH 26 SOUTHBOUND AT STH 106	DETOUR - DETAIL 1	99	DAYS	3	297	1	3
	USH 12 EASTBOUND AT STH 26	DETOUR - DETAIL 2	99	DAYS	14	1,386	-	-
	USH 12 WESTBOUND AT STH 26	DETOUR - DETAIL 2	99	DAYS	12	1,188	-	-
	STH 26 NORTHBOUND AT USH 12	DETOUR - DETAIL 2	99	DAYS	16	1,584	-	-
	STH 26 SOUTHBOUND AT USH 12	DETOUR - DETAIL 2	99	DAYS	25	2,475	-	-
	STH 106 EASTBOUND (RIVERSIDE DRIVE) AT ROBERT STREET	DETOUR - DETAIL 3	99	DAYS	3	297	-	-
	STH 106 WESTBOUND (RIVERSIDE DRIVE) AT ROBERT STREET	DETOUR - DETAIL 3	99	DAYS	-	-	1	1
	ROBERT STREET NORTHBOUND AT STH 106 (RIVERSIDE DRIVE)	DETOUR - DETAIL 3	99	DAYS	11	1,089	1	1
	ROBERT STREET SOUTHBOUND AT STH 106 (RIVERSIDE DRIVE)	DETOUR - DETAIL 3	99	DAYS	8	792	1	1
	USH 12 (MADISON AVENUE) WESTBOUND AT ROBERT STREET	DETOUR - DETAIL 4	99	DAYS	7	693	-	-
	USH 12 (MADISON AVENUE) EASTBOUND AT ROBERT STREET	DETOUR - DETAIL 4	99	DAYS	8	792	-	-
	ROBERT STREET SOUTHBOUND AT USH 12	DETOUR - DETAIL 4	99	DAYS	3	297	-	-
	STH 89 (MAIN STREET) NORTHBOUND AT STH 106 (SHERMAN AVENUE W./N. 3RD STREET)	DETOUR - DETAIL 5	99	DAYS	20	1,980	1	2
	STH 106 (SHERMAN AVENUE) WESTBOUND AT STH 89 (MAIN STREET)	DETOUR - DETAIL 5	99	DAYS	11	1,089	-	-
	N. 3RD STREET WESTBOUND AT STH 89 (MAIN STREET)	DETOUR - DETAIL 5	99	DAYS	14	1,386	-	-
	STH 89 (MAIN STREET) SOUTHBOUND AT N.3RD STREET/SHERMAN AVENUE W.)	DETOUR - DETAIL 5	99	DAYS	11	1,089	1	1
	TOTALS					**19,800**		**13**

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

NOTE: ROAD CLOSURE TRAFFIC CONTROL DEVICES SHOWN ON DETOUR PLAN ARE INCLUDED IN THE TRAFFIC CONTROL MISCELLANEOUS QUANTITY TABLE.

TRAFFIC CONTROL SIGNS PCMS

CATEGORY	LOCATION	DESCRIPTION	(643.1050) DAY
0010	STH 106 EASTBOUND, EAST OF STH 26	ADVANCE PROJECT NOTIFICATION	7
	STH 106 EASTBOUND, WEST OF PORJECT LIMITS	ADVANCE PROJECT NOTIFICATION	7
	STH 106 WESTBOUND, EAST OF PROJECT LIMITS	ADVANCE PROJECT NOTIFICATION	7
	STH 106 WESTBOUND, WEST OF STH 26	ADVANCE PROJECT NOTIFICATION	7
		TOTAL	**28**

TEMPORARY LANE SHIFT DURING CULVERT WORK

(208.1500.S)

CATEGORY	STATION	EACH
0010	351+35	1
	TOTAL	**1**

PAVEMENT MARKING

CATEGORY	STATION	TO STATION	(646.1020) MARKING LINE EPOXY 4-INCH (YELLOW) LF	(646.1040) MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE) LF	(646.3040) MARKING LINE GROOVED WET REF EPOXY 8-INCH (WHITE) LF	(646.5020) MARKING ARROW EPOXY (WHITE, TYPE 2) EACH	(646.6120) MARKING STOP LINE EPOXY 18-INCH LF	(646.6464) COLD WEATHER MARKING EPOXY 4-INCH LF	(646.7120) MARKING DIAGONAL EPOXY 12-INCH (YELLOW) LF	(646.8120) MARKING CURB EPOXY LF	(646.8220) MARKING ISLAND NOSE EPOXY EACH	(648.0100) LOCATING NO-PASSING ZONES MI	(649.0105) TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW) LF	(649.0120) TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) LF
0010	6+50	124+00	18,708	20,016	-	-	12	18,686	-	-	-	-	31,444	18,708
	124+00	543+00	58,231	72,353	-	-	38	42,930	2	-	-	-	47,869	58,231
	543+00	579+16	6,186	5,736	210	4	65	6,044	65	400	10	-	10,372	6,186
	579+16	581+36	241	385	-	-	-	243	-	-	-	-	356	241
	581+36	582+31	105	166	-	-	-	80	-	-	-	-	78	105
	582+31	582+50	22	35	-	-	-	22	-	-	-	-	34	22
	582+50	608+50	3,706	4,379	-	-	-	3,737	-	-	-	-	6,158	3,705
	PROJECT 3576-01-71		-	-	-	-	-	-	-	-	-	11.35		
	UNDISTIBUTED		-	-	-	-	-		-	-	-	-		
	TOTALS		**87,198**	**103,071**	**210**	**4**	**115**	**71,742**	**67**	**400**	**10**	**11.35**	**96,311**	**87,197**

NOTE: TEMPORARY MARKING LINE EPOXY 4-INCH TO BE APPLIED BEFORE CENTERLINE RUMBLE STRIPS ARE INSTALLED

CONSTRUCTION STAKING

CATEGORY	STATION	TO STATION	LOCATION	(650.4500) SUBGRADE LF	(650.5000) BASE LF	(650.8000) RESURFACING REFERENCE LF	(650.9920) CONSTRUCTION STAKING SLOPE STAKES LF	(650.9910.01) SUPPLEMENTAL CONTROL (PROJECT) LS
0010	7+50	203+68	LT & RT	-	-	19,618	1,410	-
	204+91	337+45	LT & RT	-	-	13,254	900	-
	337+92	581+37	LT & RT	-	-	24,345	470	-
	582+31	606+10	LT & RT	-	-	2,379	2,600	-
	351+01	351+71	LT & RT	70	70	-	-	-
	579+16	581+58	LT & RT	242	242	-	-	-
	582+09	582+50	LT & RT	41	41	-	-	-
		PROJECT 3576-01-71		-	-	-	-	1
			TOTALS	**353**	**353**	**59,596**	**5,380**	**1**

3

PWL MIXTURE USE TABLE

LOCATION	STATION	TO STATION	LOCATION	MIXTURE USE	UNDERLDAYING SURFACE	BID ITEM	TONS	THICKNESS (IN)	QUALITY MANAGEMENT PROGRAM TO BE USED FOR	
									MIXTURE ACCEPTANCES	DENSITY ACCEPTANCES
ASPHALTIC SHOULDER WIDENING	7+50	606+10	LT & RT	LOWER LAYER	BASE AGGREGATE DENSE	HMA PAVEMENT 4 LT 58-28 S	751	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
ASPHALTIC SHOULDER WIDENING	7+50	606+10	LT & RT	UPPER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	765	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
DRIVING LANES, 2 - 12 FOOT LANES	7+50	124+00	LT & RT	LOWER LAYER	MILLED SURFACE	HMA PAVEMENT 4 LT 58-28 S	3,045	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
MAINLINE 3-FOOT SHOULDER	7+50	124+00	LT & RT	LOWER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	470	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
DRIVING LANES, 2 - 12 FOOT LANES	7+50	124+00	LT & RT	UPPER LAYER	MILLED SURFACE	HMA PAVEMENT 4 LT 58-28 S	3,045	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
MAINLINE 3-FOOT SHOULDER	7+50	124+00	LT & RT	UPPER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	470	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
DRIVING LANES, 2 - 12 FOOT LANES	124+00	543+00	LT & RT	UPPER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	15,610	2.50	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
MAINLINE 3-FOOT SHOULDER	124+00	543+00	LT & RT	UPPER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	4,441	2.50	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
DRIVING LANES, 2 - 12 FOOT LANES	351+01	351+71	LT & RT	LOWER LAYER	BASE AGGREGATE DENSE	HMA PAVEMENT 4 LT 58-28 S	21	2.00	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
MAINLINE 3-FOOT SHOULDER	351+01	351+71	LT & RT	LOWER LAYER	BASE AGGREGATE DENSE	HMA PAVEMENT 4 LT 58-28 S	5	2.00	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
DRIVING LANES, 2 - 12 FOOT LANES	543+00	579+16	LT & RT	LOWER LAYER	MILLED SURFACE	HMA PAVEMENT 4 LT 58-28 S	1,109	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
MAINLINE 3-FOOT SHOULDER	543+00	579+16	LT & RT	LOWER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	534	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
DRIVING LANES, 2 - 12 FOOT LANES	543+00	579+16	LT & RT	UPPER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	1,109	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2006
MAINLINE 3-FOOT SHOULDER	543+00	579+16	LT & RT	UPPER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	534	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
DRIVING LANES, 2 - 12 FOOT LANES	579+16	582+50	LT & RT	LOWER LAYER	BASE AGGREGATE DENSE	HMA PAVEMENT 4 LT 58-28 S	125	3.5	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
DRIVING LANES, 2 - 12 FOOT LANES	579+16	582+50	LT & RT	UPPER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	62	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
MAINLINE 6-FOOT SHOULDER	579+16	582+50	LT & RT	LOWER LAYER	BASE AGGREGATE DENSE	HMA PAVEMENT 4 LT 58-28 S	57	3.5	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
MAINLINE 6-FOOT SHOULDER	579+16	582+50	LT & RT	UPPER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	28	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
DRIVING LANES, 2 - 12 FOOT LANES	582+50	606+10	LT & RT	LOWER LAYER	MILLED SURFACE	HMA PAVEMENT 4 LT 58-28 S	589	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
DRIVING LANES, 2 - 12 FOOT LANES	582+50	606+10	LT & RT	UPPER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	589	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2006
UNDISTRIBUTED, SHOULDERS	-	-	LT & RT	LOWER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	181	2.00	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
UNDISTRIBUTED, TRAVEL LANES	-	-	LT & RT	LOWER LAYER	HMA PAVEMENT 4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	726	2.00	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2006

CONTROL POINTS

NO.	STATION	LOCATION	DESCRIPTION	NORTHING	EASTING	ELEV.
CP#204	580+41.73	26.06' LT.	24" LONG IRON ROD ¾"	528,298.168	839,323.431	782.463

REMOVE EXISTING BRIDGE C-28-0011 STA. 581+84
SINGLE SPAN CONCRETE FLAT SLAB BRIDGE
17.5' OVERALL LENGTH
47 DEGREE SKEW LHF

LEGEND
- CONCRETE PAVEMENT APPROACH SLAB (REINFORCED)
- CONCRETE PAVEMENT APPROACH SLAB (NON-REINFORCED)

N

ENVIRONMENTALLY SENSITIVE AREA
AT&T (FIBER OPTIC)
AT&T (FIBER OPTIC)
WE ENERGIES (GAS)
STA. 580+22 12' BAD DRIVEWAY REQ'D.
CP #204
SEE CONSTRUCTION DETAIL FOR GUARDRAIL INSTALLATIONS NEAR B-28-0195
EXISTING STRUCTURE C-28-0011
EXISTING R/W
CONCRETE PAVEMENT 8-INCH (TYP.)
CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
BM #11917
CONCRETE SURFACE DRAINS (TYP.)
SLOPE INTERCEPTS (TYP.)
ADD ADDITIONAL BASE AGGREGATE DENSE 3/4-INCH AS NECESSARY TO MATCH INTO NEW ROADWAY PROFILE
11' 47"E
MILL AND OVERLAY
580
582
STH 106
SAWING ASPHALT REQ'D.
584
MILL AND OVERLAY
1' (TYP.)
BM #50050
SEE CONSTRUCTION DETAIL FOR MGS GUARDRAIL SHORT RADIUS INSTALLATION
STA. 580+35 20' BAD DRIVEWAY REQ'D.
CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
STA. 583+68 12' BAD DRIVEWAY REQ'D.
AT&T (TELEPHONE)
WE ENERGIES (OVERHEAD)
APPROACH RECONSTRUCTION LIMITS
BM #50051
STRUCTURE B-28-0195
STA 581+84
SEE STRUCTURE PLANS
EXISTING R/W
MGS GUARDRAIL 3 (STA 584+68 TO 590+50)
EXISTING STRUCTURE TO REMAIN
APPROACH RECONSTRUCTION LIMITS

BENCHMARKS

NO.	STATION	ELEV.	DESCRIPTION
11917	582+17.09	783.867	DISK 1J47
50050	579+90.84	781.885	IR 3/4 X24IN
50051	580+82.87	783.690	CHISLED SQUARE

HW 100 EL. 782.10
OBSERVED WATER EL. 778.95'
(12-13-2019)
STREAMBED EL. 774.72

STA. 581+84 STRUCTURE B-28-195
SINGLE-SPAN
FLAT CONCRETE SLAB
50.9' FOOT OVERALL LENGTH
36' CLEAR ROADWAY WIDTH
30° LHF SKEW

STA 579+16.79 EL 784.05
VPC STA 579+58.22 VPC EL 784.26
VPI STA 580+48.22 VPI EL 784.71
VPT STA 581+38.22 VPT EL 784.26
STA 582+19.00 EL 783.85
STA 582+50.00 EL 783.67

FINISHED PROFILE
EXISTING PROFILE
0.50%
-0.50%
-0.57%
VCL = 180.00
K = 180.00

790
780
777

FINISHED GROUND ELEV.
EXISTING GROUND ELEV.

579	580	581	582	583	584	585
784.04 / 784.07	784.21 / 784.02	784.42 / 783.91	784.48 / 783.91	784.41 / 783.96	784.20 / 783.96	783.95 / 783.68
783.67 / 783.41	783.22 / 783.09	782.98				

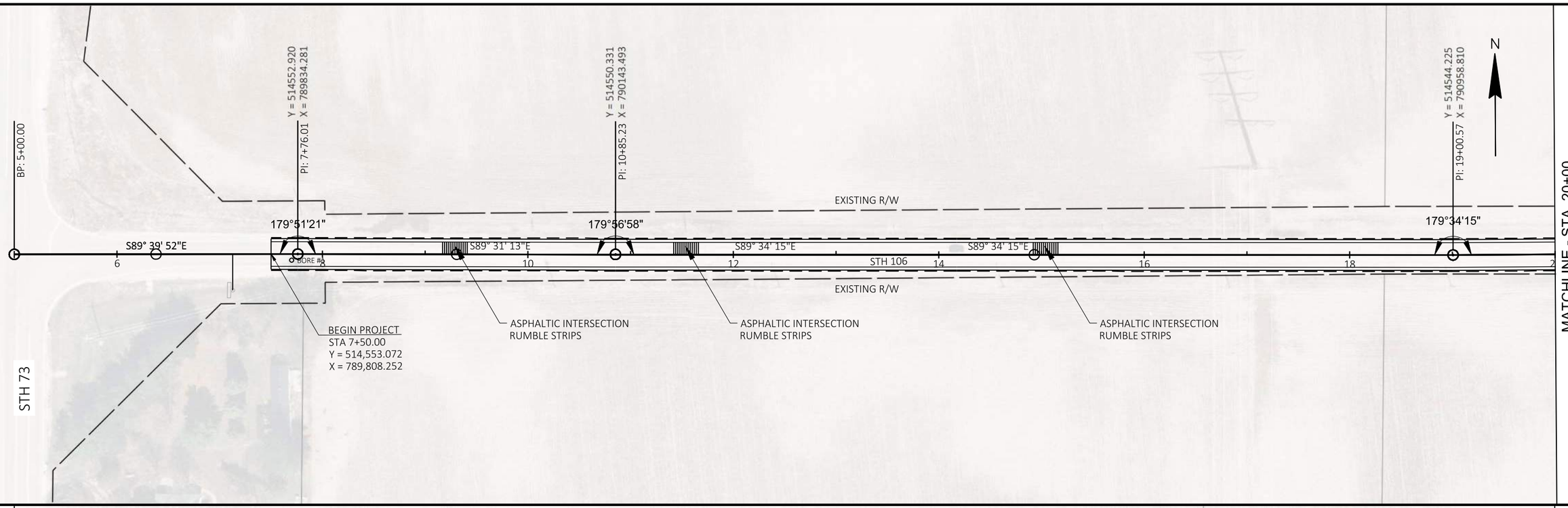
579+00 580+00 581+00 582+00 583+00 584+00

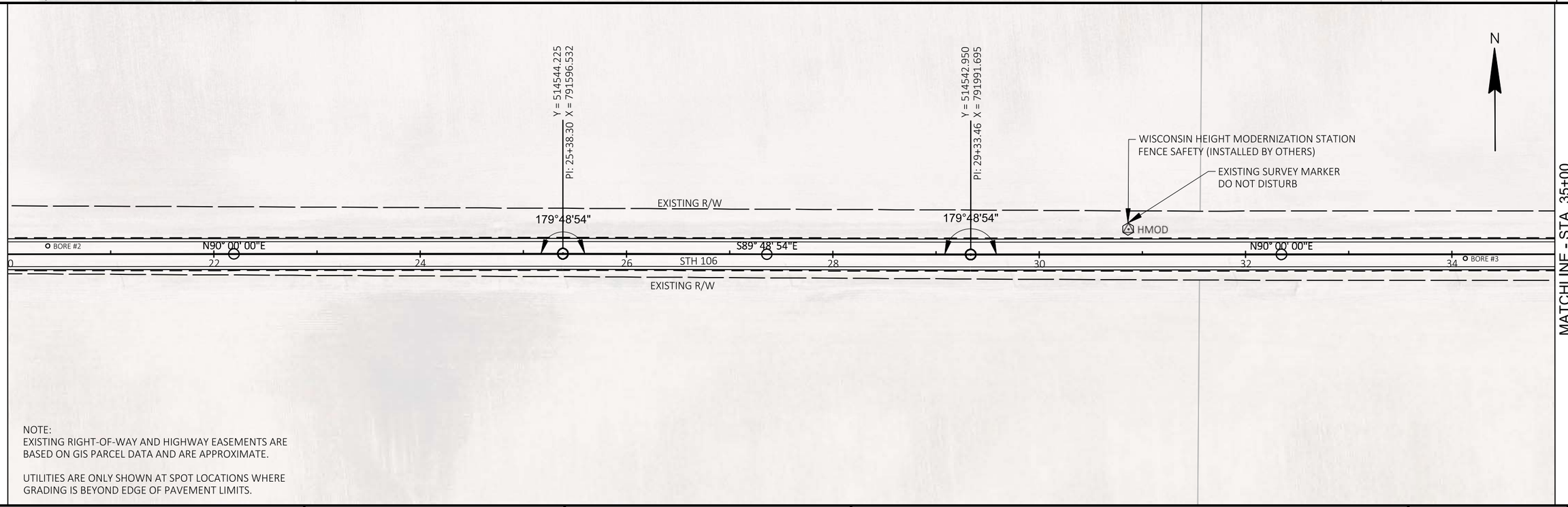
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN AND PROFILE: STH 106	SHEET 58	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050101_pp
PLOT DATE : 11/23/2020 3:48 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

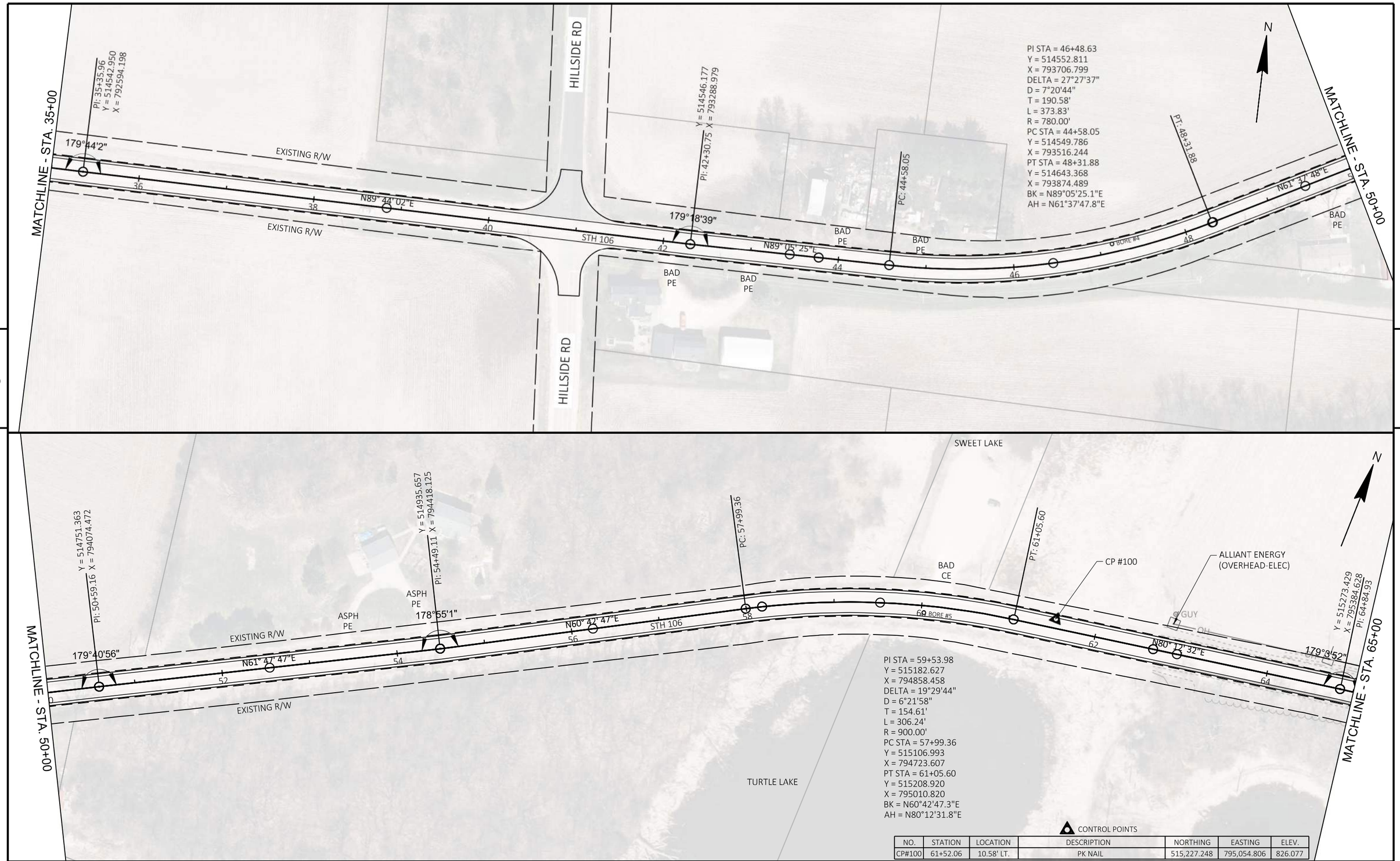
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PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 59	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050201-pn
PLOT DATE : 1/25/2021 3:25 PM
PLOT BY : CHASE KIELER
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



CONTROL POINTS

NO.	STATION	LOCATION	DESCRIPTION	NORTHING	EASTING	ELEV.
CP#100	61+52.06	10.58' LT.	PK NAIL	515,227.248	795,054.806	826.077

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 60 E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050202-pn

PLOT DATE : 1/25/2021 3:26 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:100 FT

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
536870913	68+59.00	860.946	RAIL ROAD SPIKE IN POWER POLE, TOP FLAT EDGE OF HEAD SHOT

MATCHLINE - STA. 65+00

PC: 66+00.74

ALLIANT ENERGY (OVERHEAD-ELEC)

GUY

OHL

N81° 08' 40"E

PT: 69+25.61

BORE #6

N87° 20' 56"E

Y = 515342.548
X = 796226.866

PI: 73+30.78

179°56'24"

EXISTING R/W

STH 106

N87° 17' 20"E

PC: 78+14.77

BAD PE

MATCHLINE - STA. 80+00

N

REMOVING ASPHALTIC SURFACE

ASPHALTIC FLUME

PI STA = 67+63.34
Y = 515316.288
X = 795659.711
DELTA = 6°12'16"
D = 1°54'35"
T = 162.59'
L = 324.87'
R = 3000.00'
PC STA = 66+00.74
Y = 515291.257
X = 795499.056
PT STA = 69+25.61
Y = 515323.808
X = 795822.131
BK = N81°08'39.8"E
AH = N87°20'56.2"E

CP #101

ASPH PE

BM #536870913

SAWING ASPHALT REQ'D.

SLOPE INTERCEPTS (TYP.)

REMOVE EXISTING ASPHALTIC CURB (REMOVING ASPHALTIC SURFACE)

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

ALLIANT ENERGY (ELECTRIC)

ALLIANT ENERGY (OVERHEAD-ELEC)

CP #102

PI STA = 79+56.02
Y = 515372.123
X = 796851.405
DELTA = 37°35'31"
D = 13°48'22"
T = 141.25'
L = 272.28'
R = 415.00'
PC STA = 78+14.77
Y = 515365.442
X = 796710.318
PT STA = 80+87.06
Y = 515463.485
X = 796959.123
BK = N87°17'19.8"E
AH = N49°41'48.6"E

CONTROL POINTS

NO.	STATION	LOCATION	DESCRIPTION	NORTHING	EASTING	ELEV.
CP#101	68+03.55	45.67' RT.	24" LONG IRON ROD ¾"	515,270.182	795,704.317	858.604
CP#102	75+60.14	20.06' RT.	24" LONG IRON ROD ¾"	515,333.360	796,456.923	860.013

SILVER LN

PC: 84+84.76

PT: 90+72.36

N

PT: 80+87.06

EXISTING R/W

N49° 41' 49"E

BORE #8

STH 106

N88° 10' 27"E

MATCHLINE - STA. 80+00

MATCHLINE - STA. 95+00

LIGUORI RD

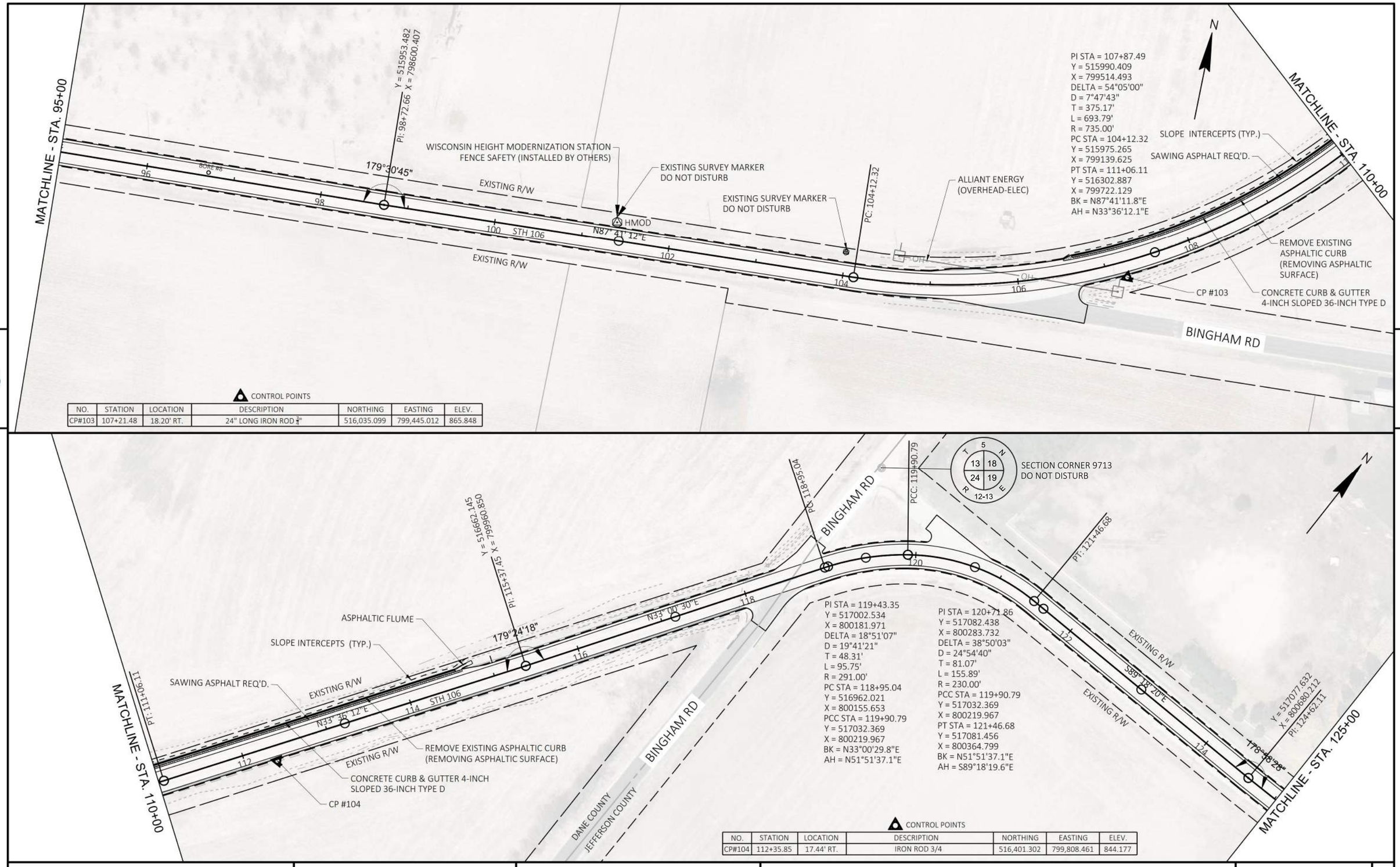
PI STA = 87+90.12
Y = 515918.251
X = 797495.305
DELTA = 38°28'38"
D = 6°32'53"
T = 305.37'
L = 587.61'
R = 875.00'
PC STA = 84+84.76
Y = 515720.729
X = 797262.421
PT STA = 90+72.36
Y = 515927.981
X = 797800.518
BK = N49°41'48.6"E
AH = N88°10'26.5"E

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 61	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050203-pn

PLOT DATE : 1/25/2021 3:26 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5

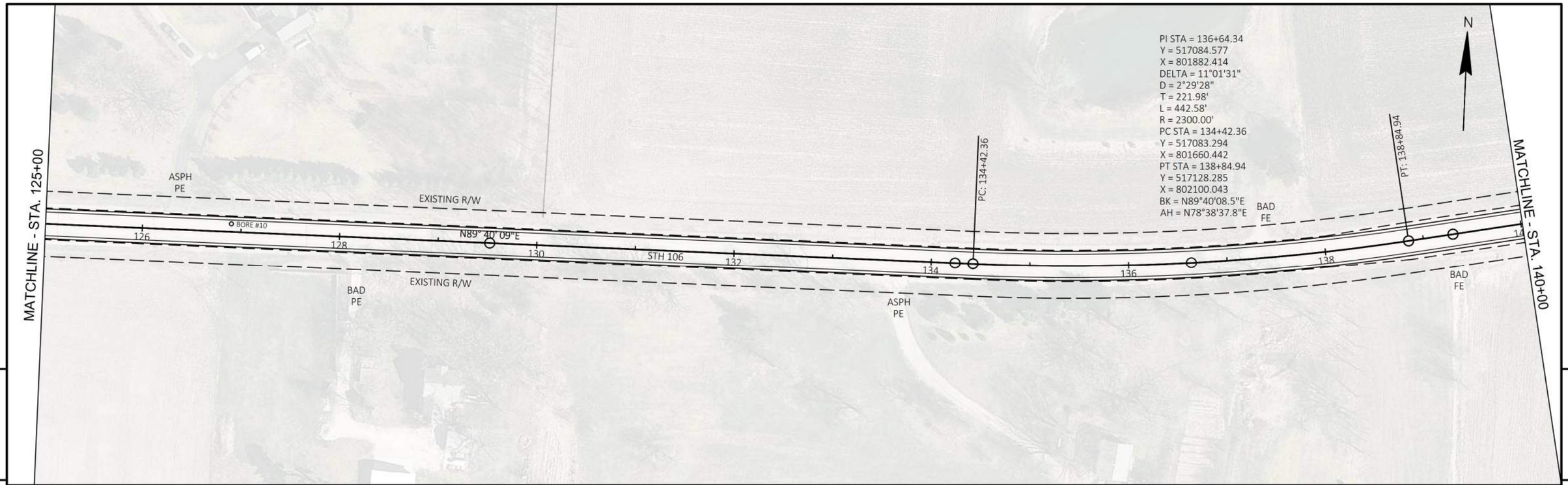
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PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 62	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050204-pn

PLOT DATE : 1/25/2021 3:27 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44





PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 63	E

ENVIRONMENTALLY SENSITIVE AREA
47JE92

MATCHLINE - STA. 155+00

PT: 155+79.77

BORE #12

BAD FE

EXISTING R/W

N50° 00' 00"E

156 158 160 STH 106 162 164 166 168 170

Y = 518013.446
X = 804308.096
PI: 163+28.69

179°21'25"

ASPH PE

BAD PE

N50° 38' 35"E

BORE #13

EXISTING R/W

BAD PE

BAD PE

ASPH PE

BAD FE

MATCHLINE - STA. 170+00

5

5

ENVIRONMENTALLY SENSITIVE AREA
47JE92

Y = 518457.023
X = 804848.945
PI: 170+28.17

MATCHLINE - STA. 170+00

179°23'17"

EXISTING R/W

N51° 43' 24"E

172 174 176 178 STH 106 180 182 184

EXISTING R/W

PI STA = 174+69.70
Y = 518730.529
X = 805195.555
DELTA = 4°35'27"
D = 6°05'58"
T = 37.65'
L = 75.27'
R = 939.38'
PC STA = 174+32.04
Y = 518707.204
X = 805165.995
PCC STA = 175+07.31
Y = 518756.146
X = 805223.153
BK = N51°43'24.3"E
AH = N47°07'57.1"E

PC: 174+32.04

PCC: 175+07.31

HMOD

PI STA = 176+79.63
Y = 518873.374
X = 805349.450
DELTA = 13°06'24"
D = 3°49'11"
T = 172.32'
L = 343.13'
R = 1500.00'
PCC STA = 175+07.31
Y = 518756.146
X = 805223.153
PT STA = 178+50.44
Y = 519016.189
X = 805445.874
BK = N47°07'57.1"E
AH = N34°01'33.1"E

PT: 178+50.44

BORE #14

N34° 01' 33"E

PC: 184+93.46

BAD FE

BAD PE

MATCHLINE - STA. 185+00

EXISTING SURVEY MARKER
DO NOT DISTURB

WISCONSIN HEIGHT MODERNIZATION STATION
FENCE SAFETY (INSTALLED BY OTHERS)

ENVIRONMENTALLY SENSITIVE AREA
47JE825

ENVIRONMENTALLY SENSITIVE AREA
47JE92

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 64	E

PI STA = 185+92.74
Y = 519631.396
X = 805861.240
DELTA = 33°58'54"
D = 17°37'59"
T = 99.28'
L = 192.71'
R = 324.93'
PC STA = 184+93.46
Y = 519549.110
X = 805805.684
PCC STA = 186+86.17
Y = 519668.577
X = 805953.300
BK = N34°01'33.1"E
AH = N68°00'26.8"E

PC: 186+86.17

PT: 188+68.96

PI STA = 193+19.54
Y = 519713.112
X = 806581.912
DELTA = 19°21'30"
D = 7°09'43"
T = 136.45'
L = 270.29'
R = 800.00'
PC STA = 191+83.09
Y = 519710.618
X = 806445.487
PT STA = 194+53.39
Y = 519760.687
X = 806709.797
BK = N88°57'10.0"E
AH = N69°35'39.5"E

PC: 191+83.09

ROCKDALE RD

PT: 194+53.39

Y = 519831.942
X = 806901.339

PI: 196+57.75

178°55'59"

CHURCH ST

WE ENERGIES (GAS)

EXISTING CURB AND GUTTER TO REMAIN

MATCHLINE - STA. 185+00

MATCHLINE - STA. 200+00

N88° 57' 10"E

N69° 35' 40"E

N68° 31' 39"E

STH 106

BAD PE

BAD FE

CONC PE

ASPH PE

EXISTING R/W

BORE #15

186 188 190 192 194 196 198

PI STA = 187+78.60
Y = 519703.188
X = 806038.998
DELTA = 20°56'43"
D = 11°27'33"
T = 92.42'
L = 182.78'
R = 500.00'
PCC STA = 186+86.17
Y = 519668.577
X = 805953.300
PT STA = 188+68.96
Y = 519704.877
X = 806131.405
BK = N68°00'26.8"E
AH = N88°57'10.0"E

ENVIRONMENTALLY SENSITIVE AREA
47JE1111

ENVIRONMENTALLY SENSITIVE AREA
47JE88 - BJE 0158

5

5

BENCHMARKS

NO.	STATION	ELEV.	DESCRIPTION
50005	204+90.76	787.776	CUT X NE CORNER ABUT
50006	203+67.95	787.829	NE BOLT ON NW ABUT
50008	203+78.59	787.811	DOT CAP IN BRIDGE

PI STA = 209+20.25
Y = 520399.462
X = 808025.737
DELTA = 12°37'13"
D = 3°49'11"
T = 165.87'
L = 330.40'
R = 1500.00'
PC STA = 207+54.38
Y = 520314.627
X = 807883.204
PT STA = 210+84.78
Y = 520513.389
X = 808146.292
BK = N59°14'21.0"E
AH = N46°37'08.1"E

PC: 200+06.01

CP #105

BUSSEY RD

WE ENERGIES (GAS)

ALLIANT ENERGY (OVERHEAD-ELEC)

BM #50006

WETLANDS

EXISTING GUARDRAIL TO REMAIN

Y = 520214.669
X = 807715.261

PI: 205+58.95

SLOPE INTERCEPTS (TYP.)

BM #50005

178°51'16"

PC: 207+54.38

WE ENERGIES (GAS)

PT: 210+84.78

PC: 212+26.03

PCC: 214+20.49

CONRAD RD

MATCHLINE - STA. 200+00

MATCHLINE - STA. 215+00

N60° 23' 05"E

N59° 14' 21"E

N46° 37' 08"E

STH 106

EXISTING R/W

BAD PE

ASPH PE

CAUTION

202 204 206 208 210 212 214

PI STA = 201+48.36
Y = 520011.533
X = 807357.899
DELTA = 8°08'34"
D = 2°51'53"
T = 142.36'
L = 284.23'
R = 2000.00'
PC STA = 200+06.01
Y = 519959.422
X = 807225.422
PT STA = 202+90.24
Y = 520081.882
X = 807481.659
BK = N68°31'39.0"E
AH = N60°23'05.2"E

EXISTING CURB AND GUTTER TO REMAIN

EXISTING R/W

PT: 202+90.24

MILLING LIMITS

WETLANDS

BM #50008

KOSHKONONG CREEK

STRUCTURE B-28-0108
STA 204+15
(TO REMAIN)

SEE CONSTRUCTION DETAILS FOR BEAM GUARD INFORMATION

MILLING LIMITS

ALLIANT ENERGY (OVERHEAD-ELEC)

CP #106

ENVIRONMENTALLY SENSITIVE AREA
BJE0003

PI STA = 213+23.28
Y = 520677.201
X = 808319.632
DELTA = 2°47'07"
D = 1°25'57"
T = 97.24'
L = 194.45'
R = 4000.00'
PC STA = 212+26.03
Y = 520610.408
X = 808248.954
PCC STA = 214+20.49
Y = 520740.479
X = 808393.472
BK = N46°37'08.1"E
AH = N49°24'15.2"E

CONTROL POINTS

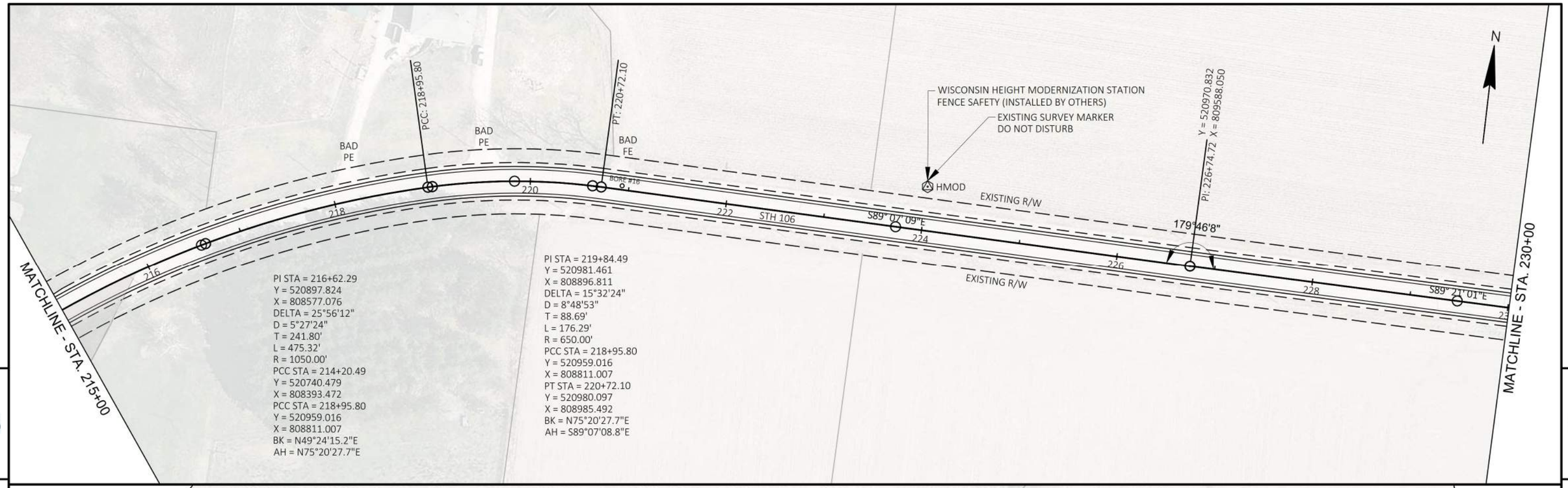
NO.	STATION	LOCATION	DESCRIPTION	NORTHING	EASTING	ELEV.
CP#105	200+59.54	32.48' LT.	24" LONG IRON ROD ⅝"	520,009.582	807,262.276	786.267
CP#106	208+43.86	32.71' RT.	24" LONG IRON ROD ⅝"	520,335.601	807,977.058	788.672

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 65	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050207-pn

PLOT DATE : 1/25/2021 3:29 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 66 E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050208-pn

PLOT DATE : 1/25/2021 3:30 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

CONTROL POINTS

NO.	STATION	LOCATION	DESCRIPTION	NORTHING	EASTING	ELEV.
CP#211	245+22.02	32.89' RT.	24" LONG IRON ROD ¾"	521,809.461	811,086.478	807.474
CP#212	251+87.24	30.07' LT.	24" LONG IRON ROD ¾"	522,348.927	811,483.975	834.538

MATCHLINE - STA. 245+00

Y = 521998.529
X = 811207.115
PI: 247+43.87
179°24'56"

PC: 250+98.85
PT: 251+69.40
CP #212
BAD FE

Y = 522539.684
X = 811729.543
PI: 254+96.74
179°48'14"

PI STA = 259+72.51
Y = 522865.335
X = 812076.403
DELTA = 17°01'33"
D = 8°11'06"
T = 104.78'
L = 208.01'
R = 700.00'
PC STA = 258+67.73
Y = 522793.619
X = 812000.016
PT STA = 260+75.74
Y = 522956.275
X = 812128.444
BK = N46°48'23.1"E
AH = N29°46'49.9"E

MATCHLINE - STA. 260+00

EXISTING R/W
EXISTING R/W
ASPH
PE
BAD
PE
BAD
PE
BAD
PE
BORE #17
CP #211
ASPHALTIC FLUME
SLOPE INTERCEPTS (TYP.)
STH 106
N41° 33' 28"E
N46° 36' 37"E
N46° 48' 23"E
246
248
250
252
254
256
258
260

PI STA = 251+34.15
Y = 522290.568
X = 811466.015
DELTA = 5°03'10"
D = 7°09'43"
T = 35.30'
L = 70.55'
R = 800.00'
PC STA = 250+98.85
Y = 522264.156
X = 811442.599
PT STA = 251+69.40
Y = 522314.816
X = 811491.665
BK = N41°33'27.7"E
AH = N46°36'37.3"E

ASPHALTIC FLUME
CONCRETE CURB & GUTTER
4-INCH SLOPED 36-INCH TYPE D
SAWING ASPHALT REQ'D.
PC: 258+67.73

MATCHLINE - STA. 260+00

PT: 260+75.74

EXISTING R/W
EXISTING R/W
ASPH
PE
BAD
PE
BAD
FE
STH 106
N29° 46' 50"E
N29° 27' 09"E
262
264
266
268
270
272
274

Y = 523695.394
X = 812551.408
PI: 269+27.33
179°40'19"

PC: 273+26.28

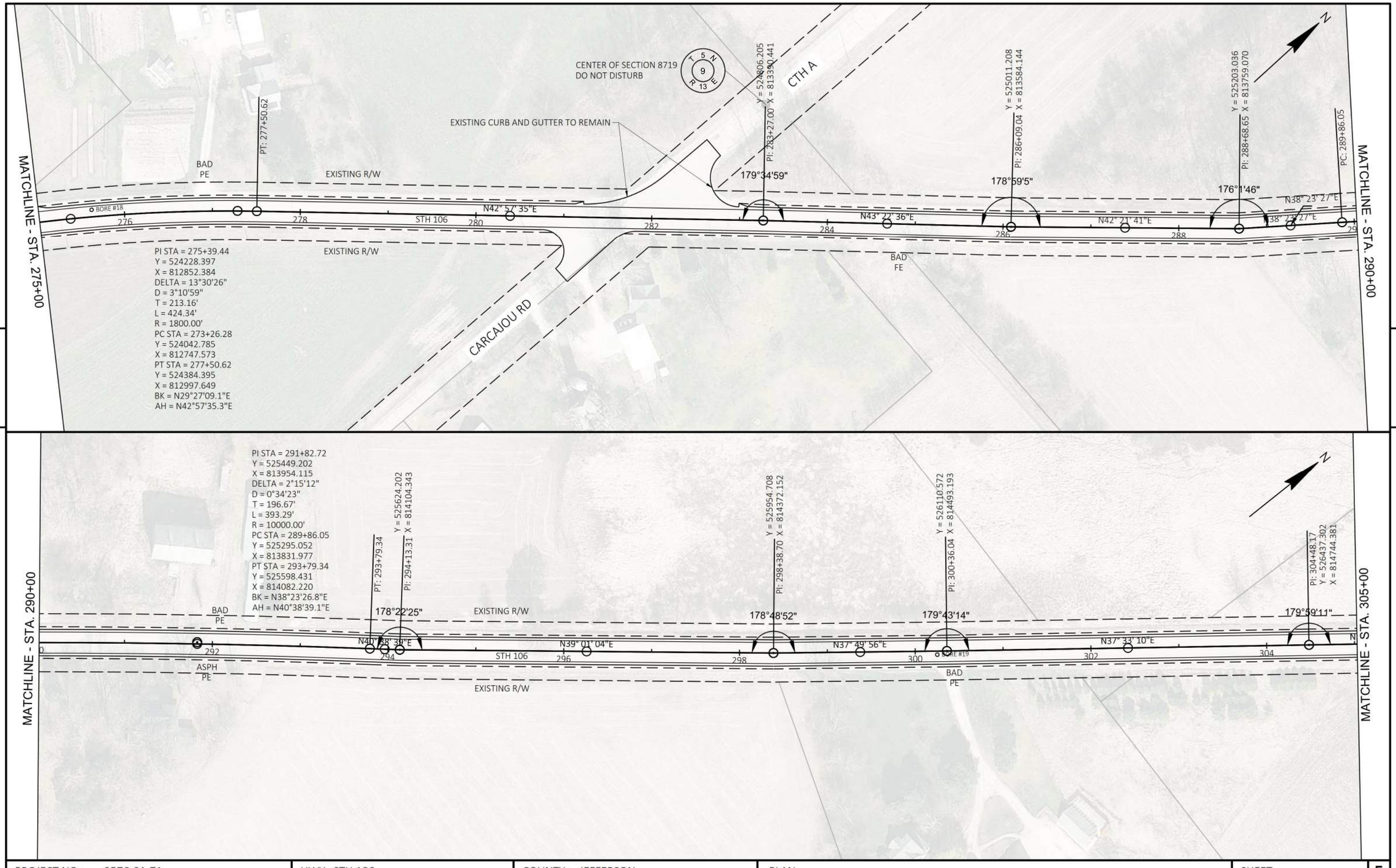
N
HAMMARQUIST RD

MATCHLINE - STA. 275+00

5
5

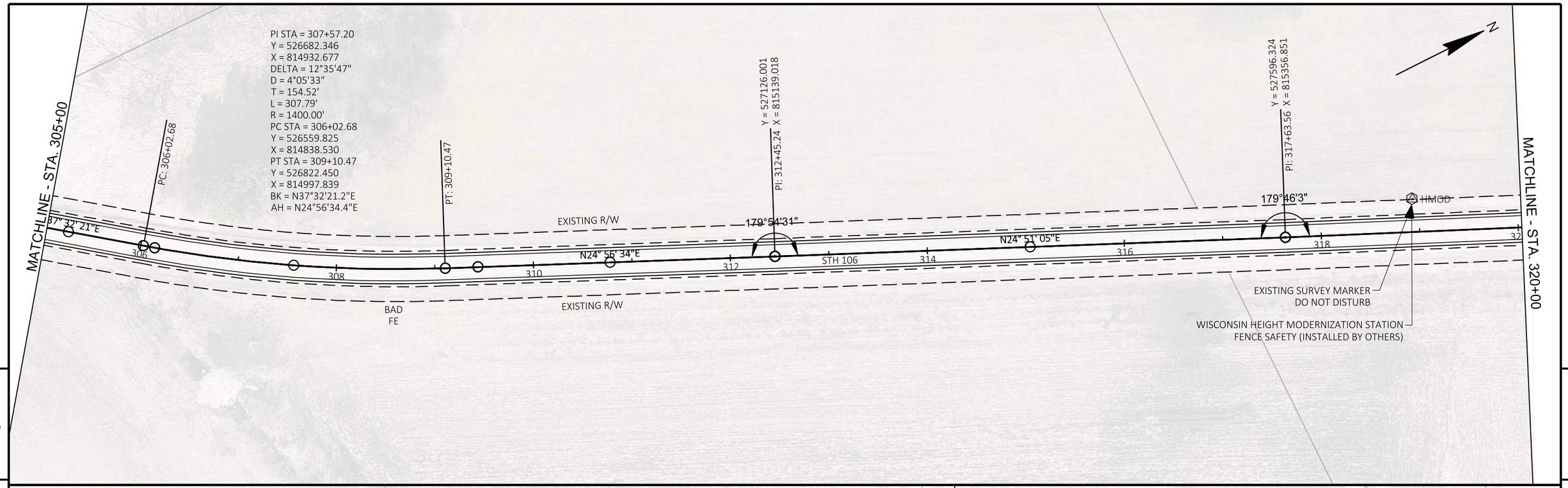
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 67	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050209-pn
PLOT DATE : 1/25/2021 3:30 PM
PLOT BY : CHASE KIELER
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 68 E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050210-pn
PLOT DATE : 1/25/2021 3:31 PM
PLOT BY : CHASE KIELER
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

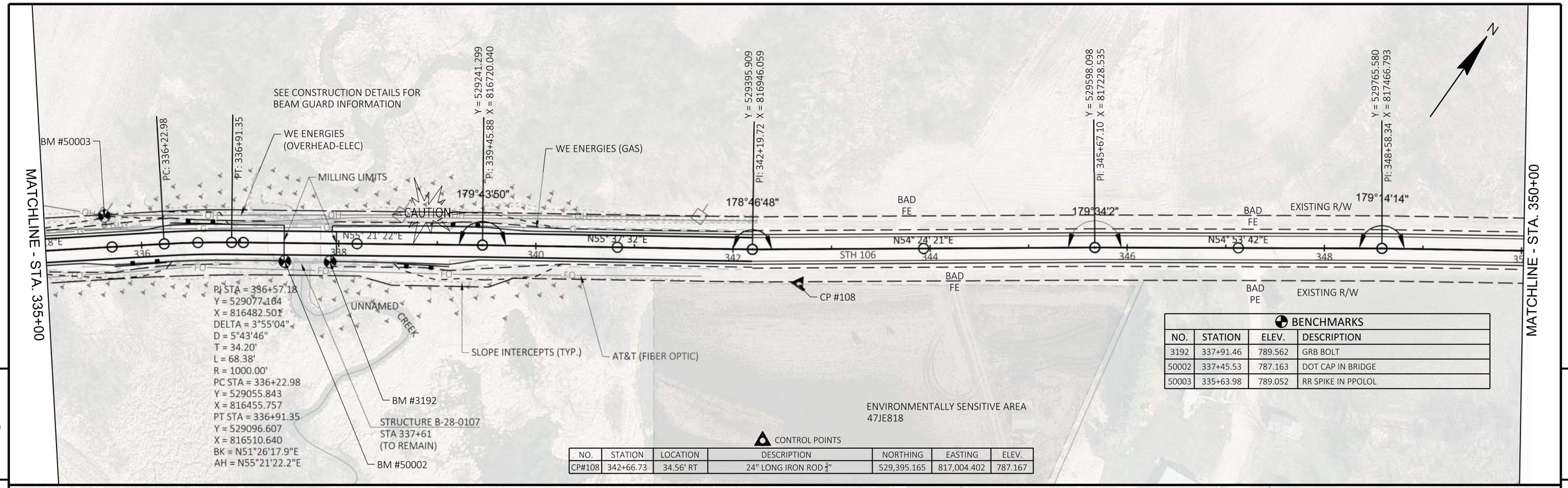


CONTROL POINTS

NO.	STATION	LOCATION	DESCRIPTION	NORTHING	EASTING	ELEV.
CP#107	333+06.17	34.78' LT.	24" LONG IRON ROD 1"	528,884.707	816,186.133	797.179

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 69 E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050211-pn
PLOT DATE : 1/25/2021 3:32 PM
PLOT BY : CHASE KIELER
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 70	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050212-pn
PLOT DATE : 1/25/2021 3:33 PM
PLOT BY : CHASE KIELER
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

MATCHLINE - STA. 365+00

MATCHLINE - STA. 380+00

Y = 530113.129
X = 819333.489
PI: 368+29.07

179°51'34"

EXISTING R/W

S89° 00' 22"E

S88° 51' 56"E

366 368 370 372 STH 106 374 376 378 38

EXISTING R/W

BAD FE

BAD PE

STRUCTURE C-28-2016
STA 367+13
(TO REMAIN)

ENVIRONMENTALLY SENSITIVE AREA
47JE886

5

5

N

CONTROL POINTS

NO.	STATION	LOCATION	DESCRIPTION	NORTHING	EASTING	ELEV.
CP#209	393+26.37	28.94' LT.	24" LONG IRON ROD ¾"	530,092.776	821,830.880	836.307
CP#210	385+09.62	36.12' RT.	24" LONG IRON ROD ¾"	530,043.834	821,013.008	811.693

MATCHLINE - STA. 380+00

Y = 530089.609
X = 820521.288
PI: 380+17.10

BECKER RD

WE ENERGIES (GAS)

EXISTING R/W

179°59'22"

S88° 52' 35"E

BORE #22

0 382 384 STH 106 386 388

EXISTING R/W

BAD PE

CP #210

Y = 530071.327
X = 821453.313
PI: 389+49.30

179°59'11"

BAD PE

390 392

CP #209

S88° 51' 45"E

394

BAD PE

BAD PE

SECTION CORNER 8123
DO NOT DISTURB

MATCHLINE - STA. 395+00

ENVIRONMENTALLY SENSITIVE AREA
47JE886

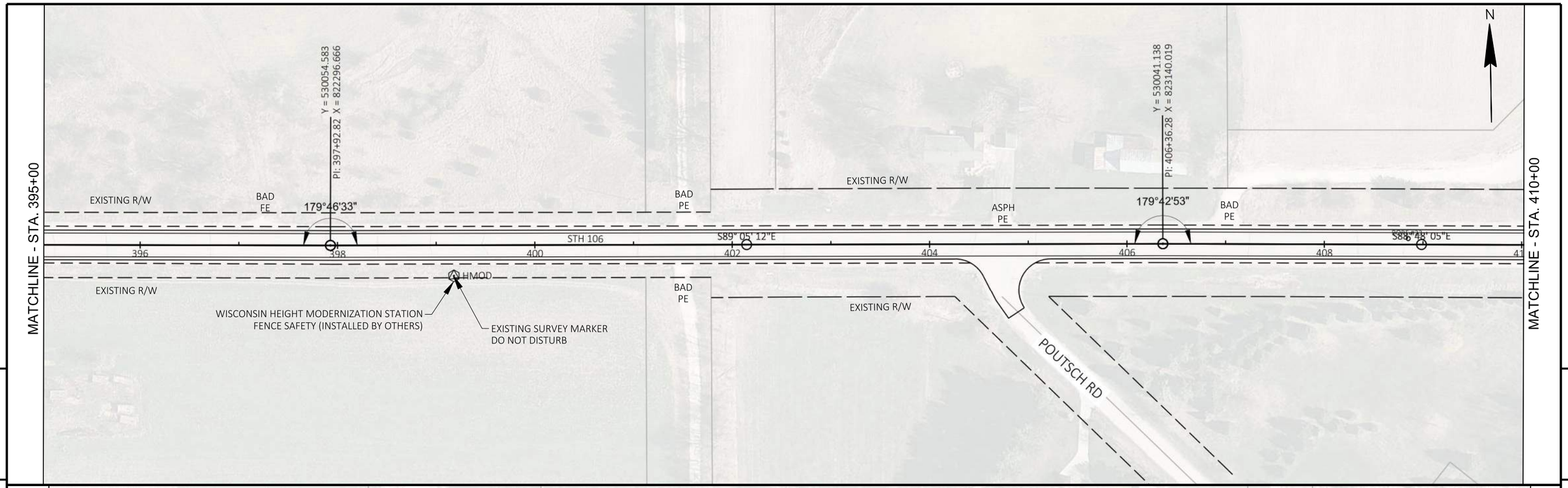
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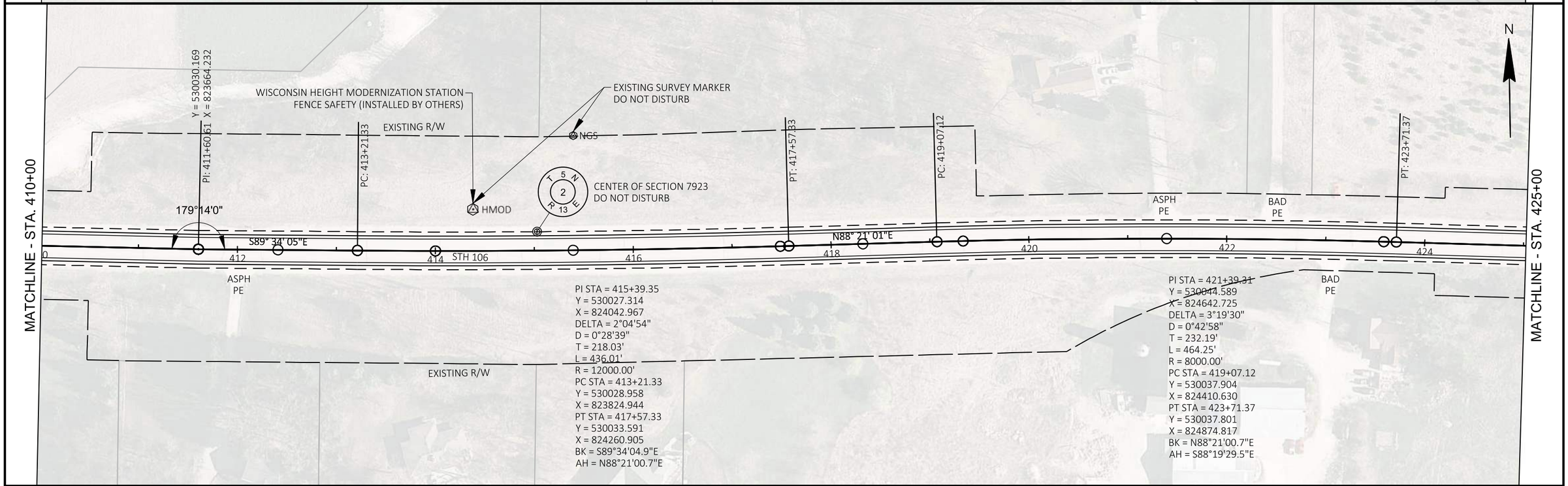
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 71	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050213-pn

PLOT DATE : 1/25/2021 3:33 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44





PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 72 E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050214-pn
PLOT DATE : 1/25/2021 3:34 PM
PLOT BY : CHASE KIELER
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

MATCHLINE - STA. 425+00

EXISTING R/W

Y = 530021.770
X = 825422.964
PI: 429+19.75

179°16'43"

EXISTING R/W

Y = 530013.348
X = 825928.944
PI: 434+25.81

179°50'4"

S88° 19' 29"E

S89° 02' 47"E

S88° 52' 51"E

426 428 430 432 STH 106 434 BORE #24 436 438 44

EXISTING R/W

ASPH
PE

BAD
FE

EXISTING R/W

POUTSCH RD

MATCHLINE - STA. 440+00

N

5

5

SCHWEMMER RD

MATCHLINE - STA. 440+00

PI: 441+66.99
Y = 529998.870
X = 826669.992

179°52'14"

EXISTING R/W

Y = 529981.975
X = 827647.986
PI: 451+45.13

179°54'22"

BAD
PE

S89° 00' 37"E

0 442 444 STH 106 446 448 450 452 454

EXISTING R/W

N

MATCHLINE - STA. 455+00

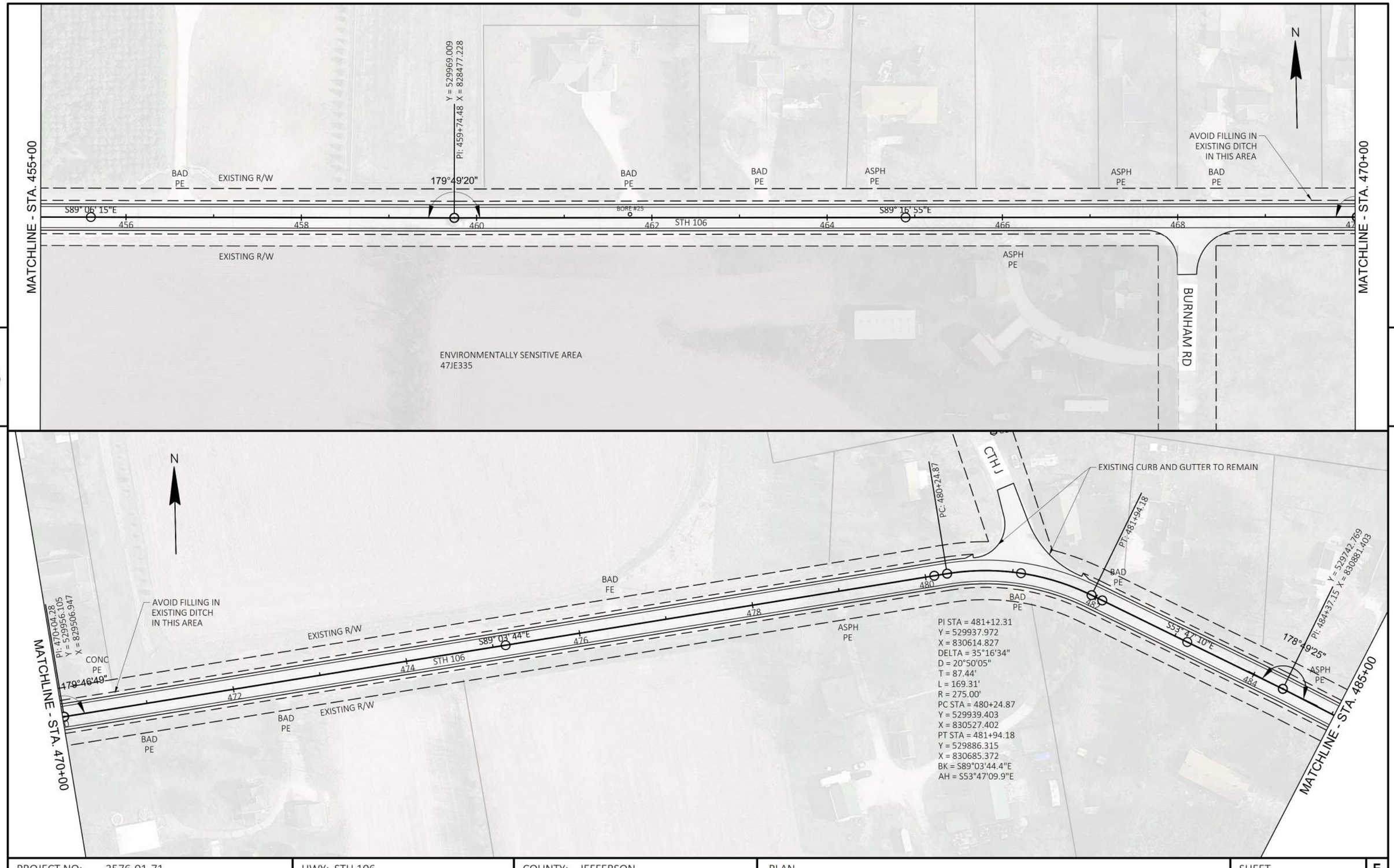
T 5 N
2 1
R 13 E

SECTION CORNER 7723
DO NOT DISTURB

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050215-pn

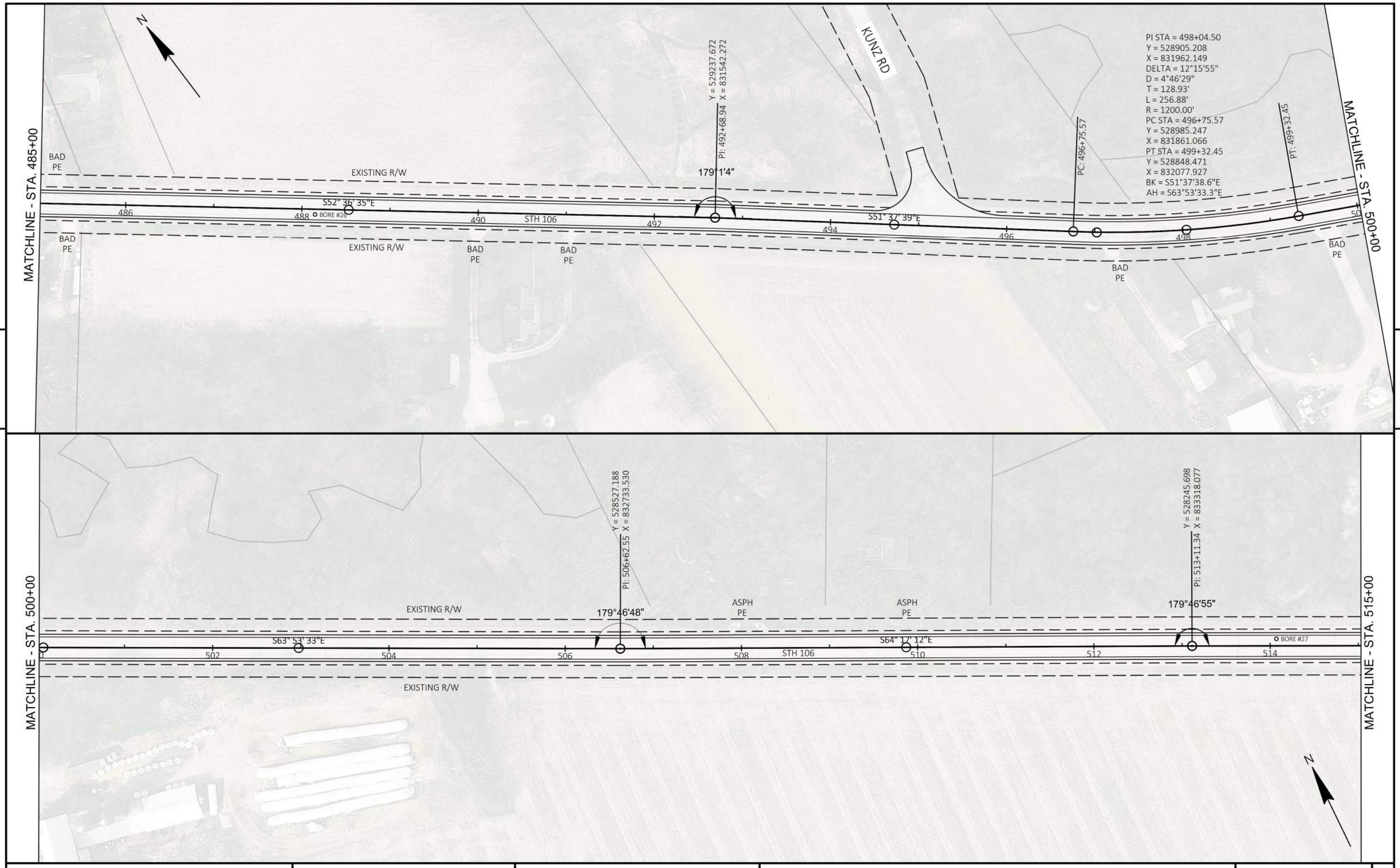
PLOT DATE : 1/25/2021 3:34 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 74	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050216-pn

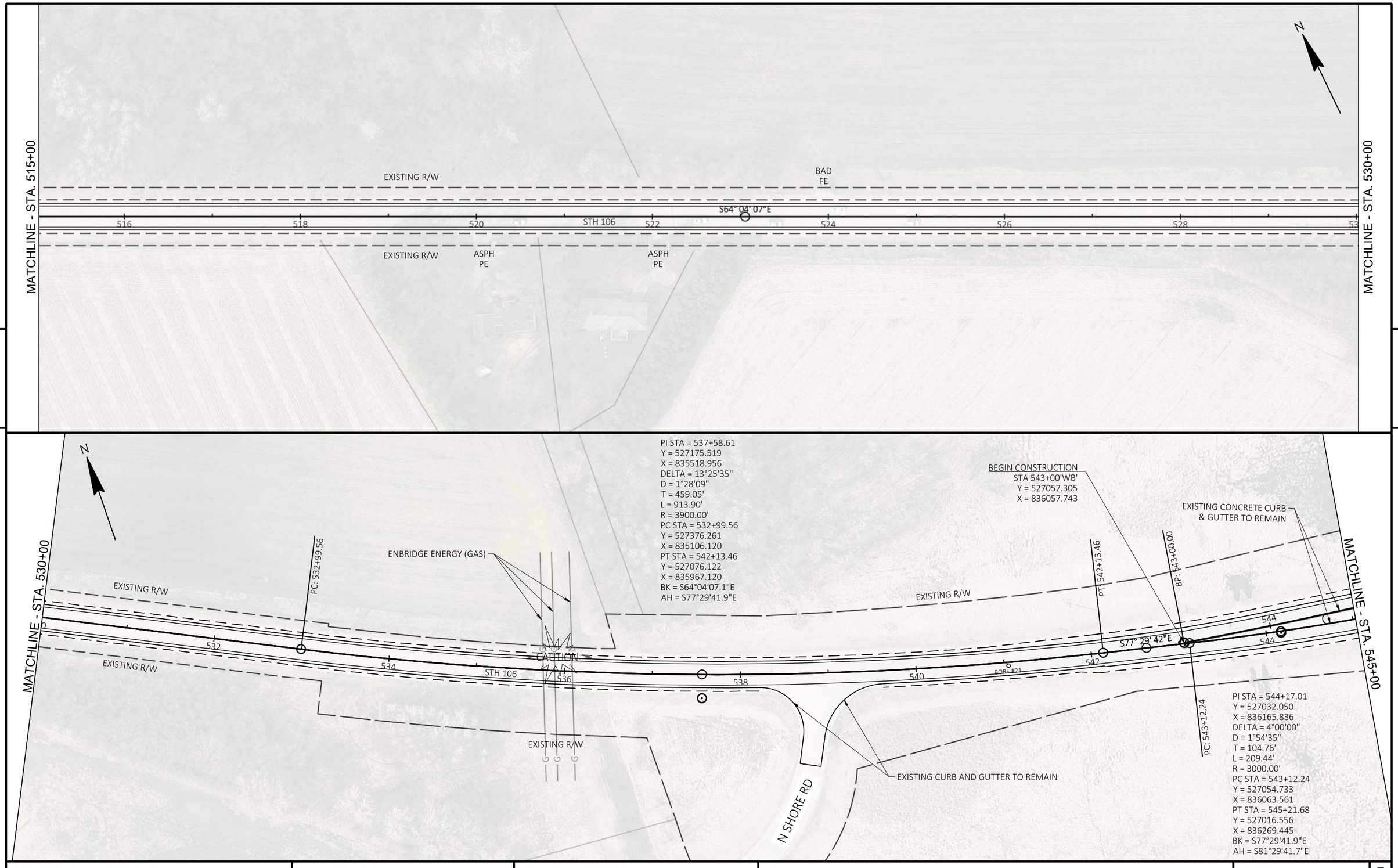
PLOT DATE : 1/25/2021 3:35 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 75 E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050217-pn

PLOT DATE : 1/25/2021 3:35 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:100 FT

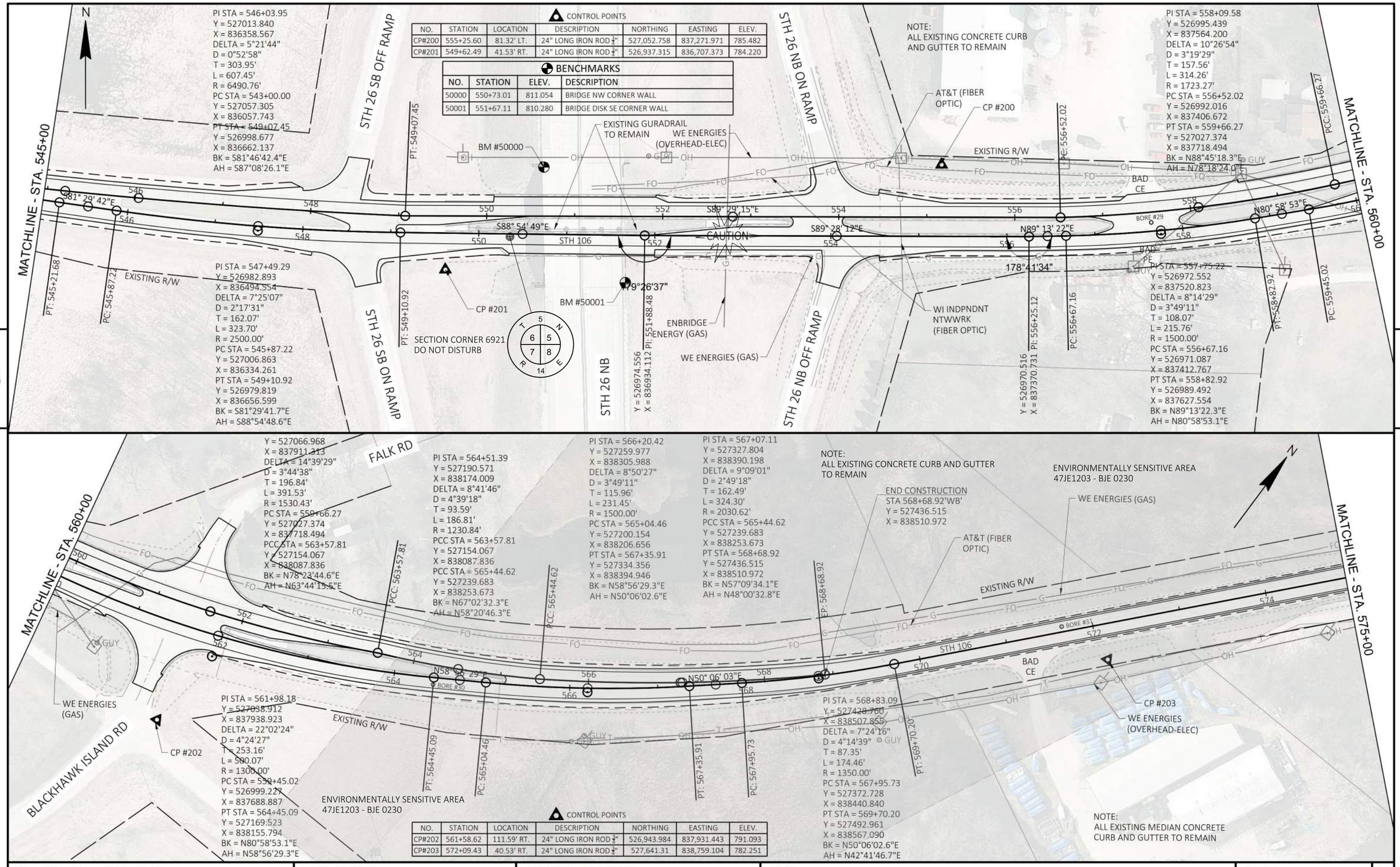


PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 76	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050218-pn

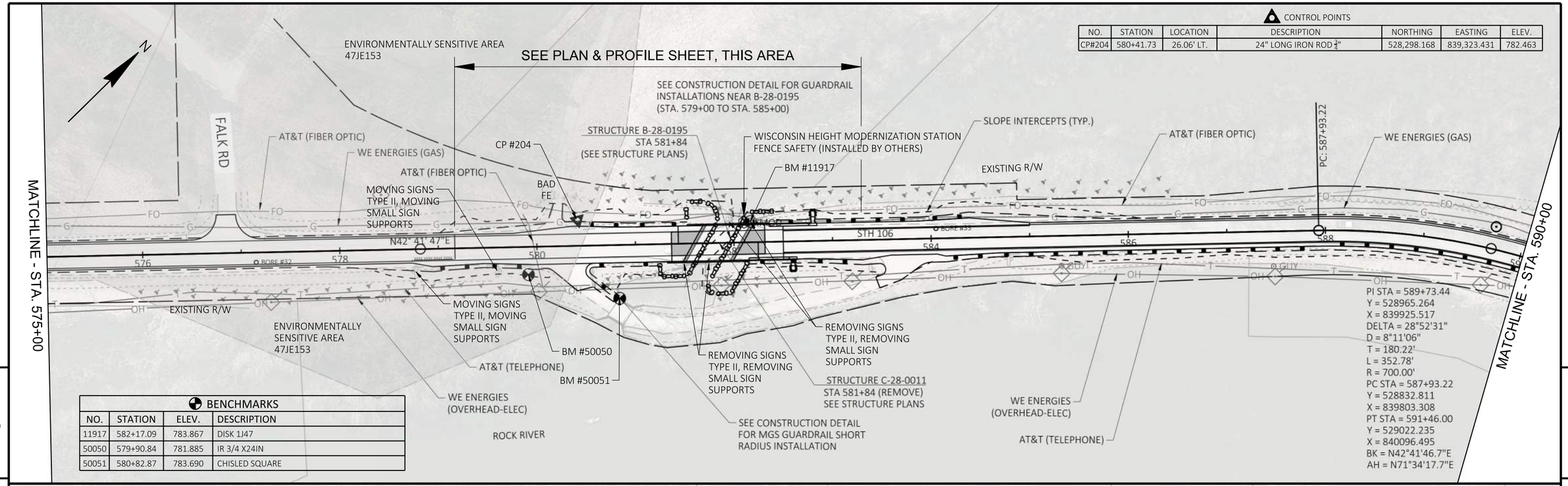
PLOT DATE : 1/25/2021 3:36 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 77 E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050219-pn
PLOT DATE : 1/25/2021 3:37 PM
PLOT BY : CHASE KIELER
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



BENCHMARKS

NO.	STATION	ELEV.	DESCRIPTION
11917	582+17.09	783.867	DISK 1J47
50050	579+90.84	781.885	IR 3/4 X24IN
50051	580+82.87	783.690	CHISLED SQUARE

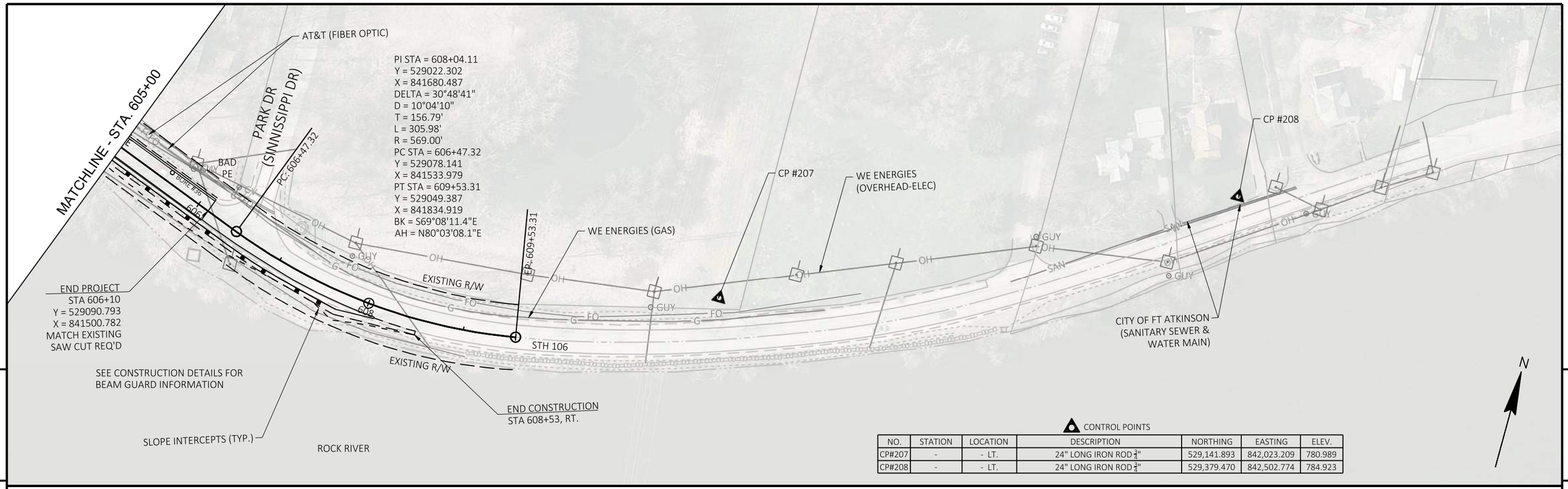
CONTROL POINTS

NO.	STATION	LOCATION	DESCRIPTION	NORTHING	EASTING	ELEV.
CP#204	580+41.73	26.06' LT.	24" LONG IRON ROD ¾"	528,298.168	839,323.431	782.463

CONTROL POINTS

NO.	STATION	LOCATION	DESCRIPTION	NORTHING	EASTING	ELEV.
CP#206	601+13.36	41.82' LT.	24" LONG IRON ROD ¾"	529,287.519	841,033.809	782.291
CP#205	590+54.58	18.52' LT.	24" LONG IRON ROD ¾"	529,004.414	840,003.797	783.323

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 78	E



5

5

CONTROL POINTS

NO.	STATION	LOCATION	DESCRIPTION	NORTHING	EASTING	ELEV.
CP#207	-	- LT.	24" LONG IRON ROD $\frac{3}{4}$"	529,141.893	842,023.209	780.989
CP#208	-	- LT.	24" LONG IRON ROD $\frac{3}{4}$"	529,379.470	842,502.774	784.923

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	PLAN	SHEET 79	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050221-pn

PLOT DATE : 1/25/2021 3:38 PM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

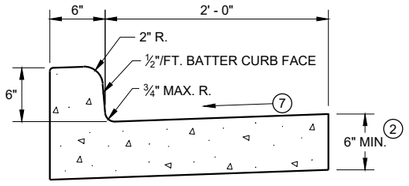
Standard Detail Drawing List

08D01-21A	CONCRETE CURB & GUTTER
08D01-21B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-07A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
12A03-10	NAME PLATE (STRUCTURES)
13A08-01	ASPHALTIC RUMBLE STRIPS AT INTERSECTION
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C19-03	HMA LONGITUDINAL JOINTS
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B24-09A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B29-01	SAFETY EDGE
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B53-01A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-08F	ADVANCED WIDTH RESTRICTION SIGNING
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-08B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

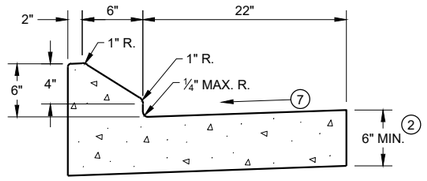
6

Standard Detail Drawing List

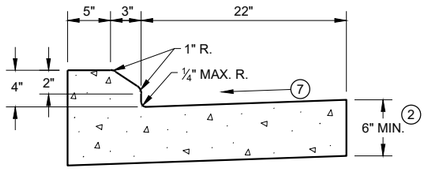
15C18-04	MEDIAN ISLAND MARKING
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C27-03B	PAVEMENT MARKING (ISLANDS)
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS



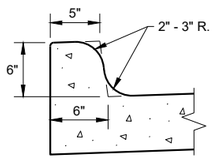
TYPES A (1) & D



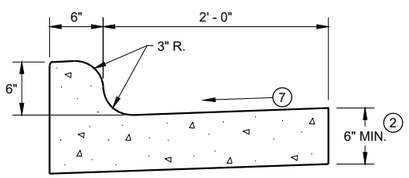
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

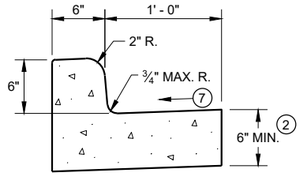


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



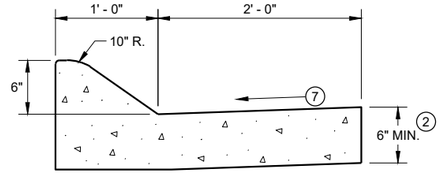
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

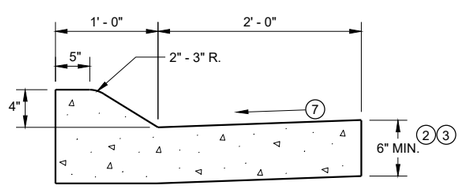


TYPES A (1) & D

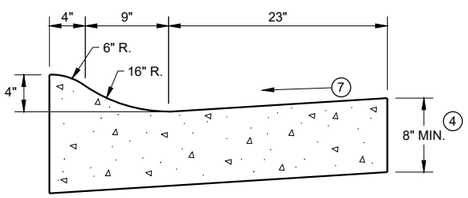
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A (1) & D



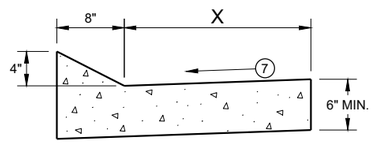
4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB AND GUTTER 36"

TBT & TBTT	X
30"	22"
36"	28"

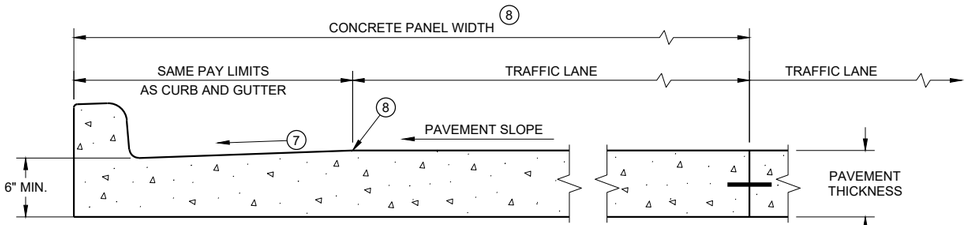


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

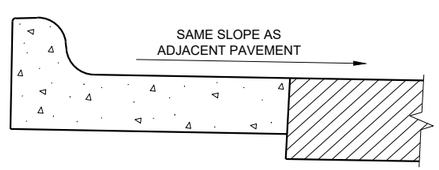
PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'

PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

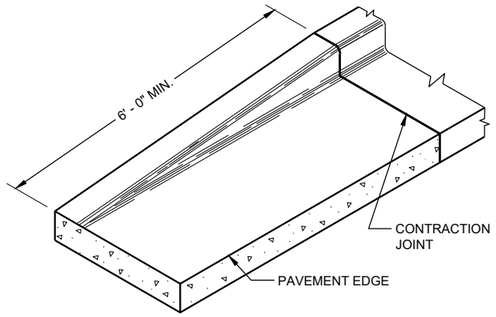
(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

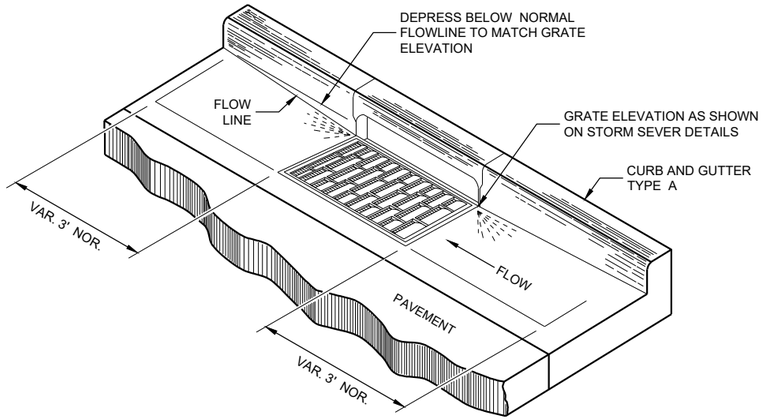
CONCRETE CURB AND GUTTER

SDD 08D01 - 21a

6



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS
(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

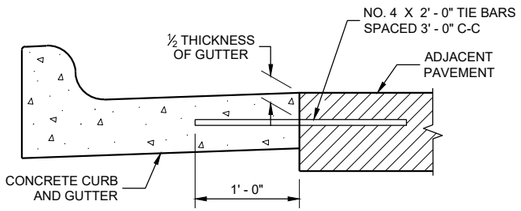
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

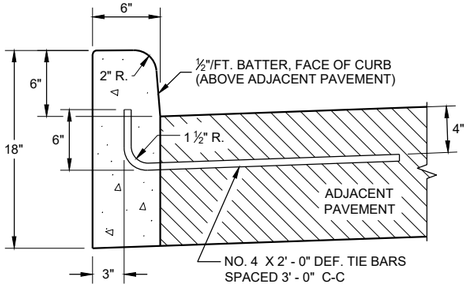
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

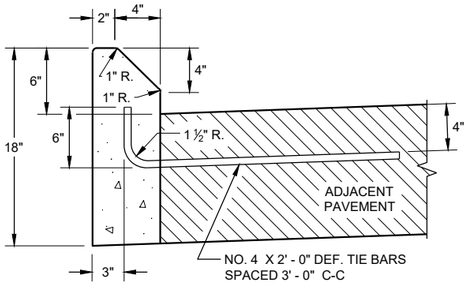
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

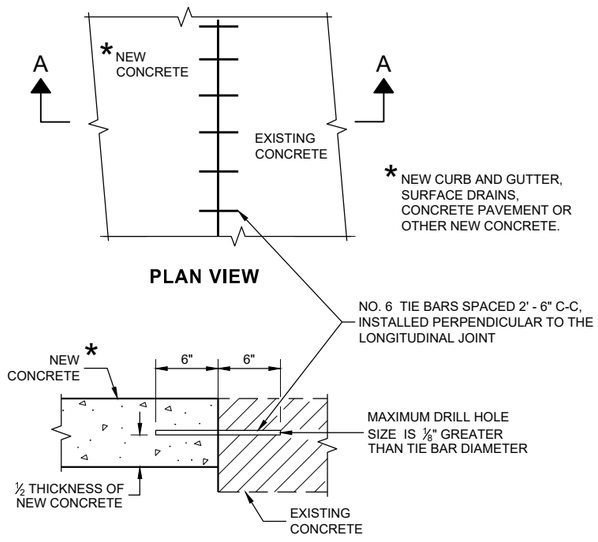


TYPES A (1) & D



TYPES G (1) & J

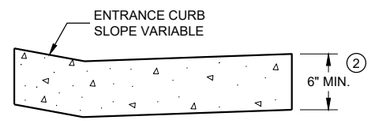
CONCRETE CURB



PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD08D01 - 21b

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.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

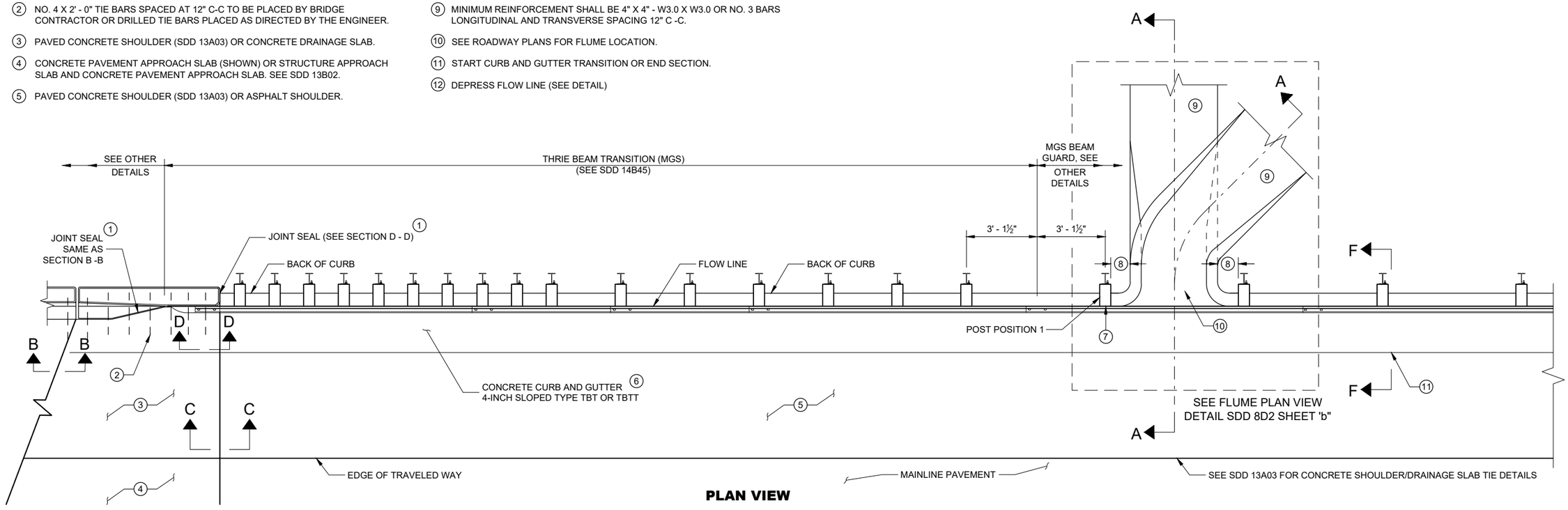
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

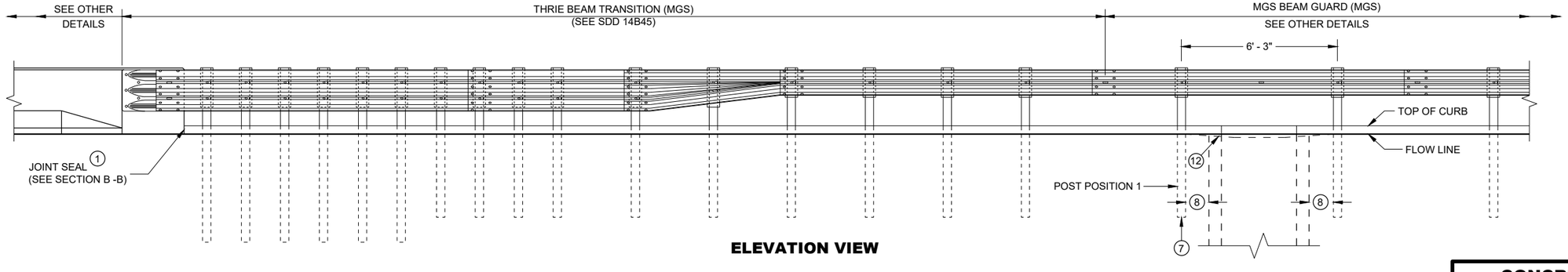
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



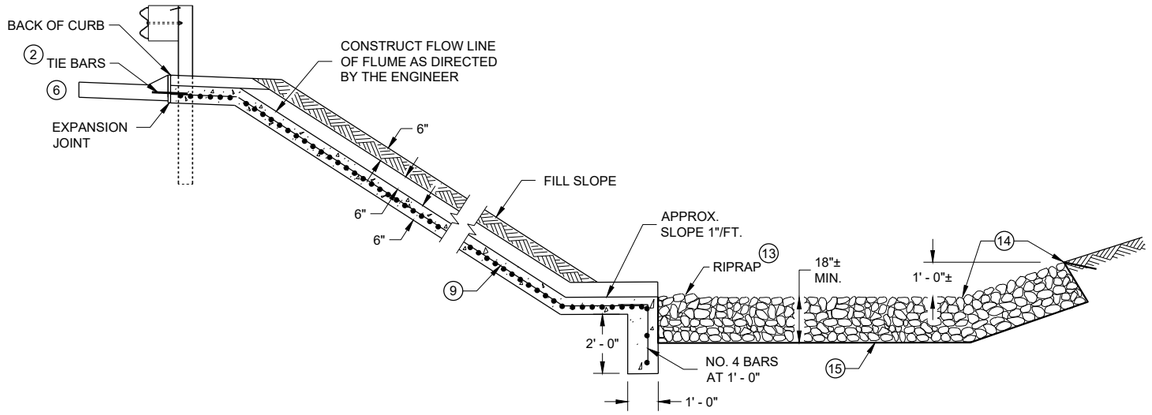
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

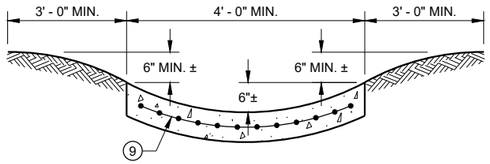
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

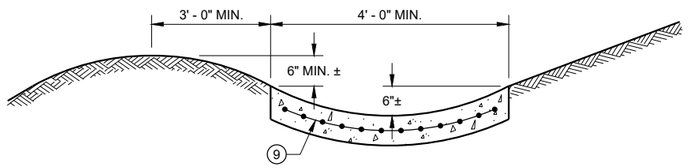
SDD 08D02 - 07a



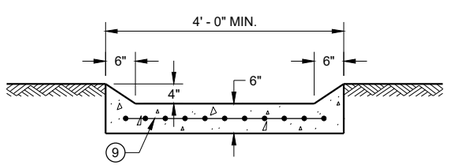
SECTION A - A



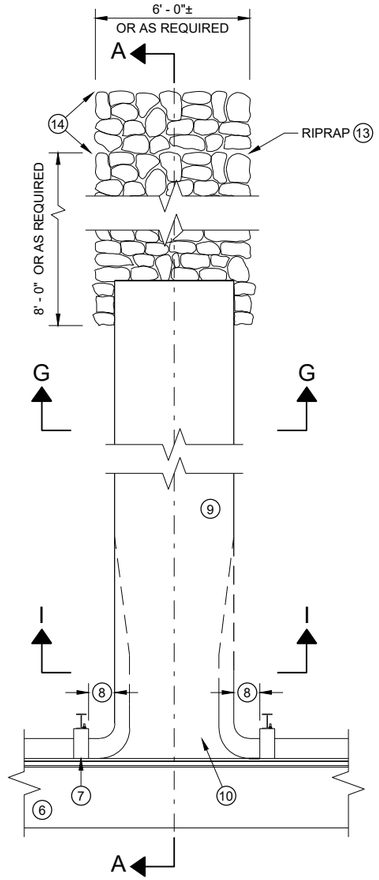
SECTION G - G



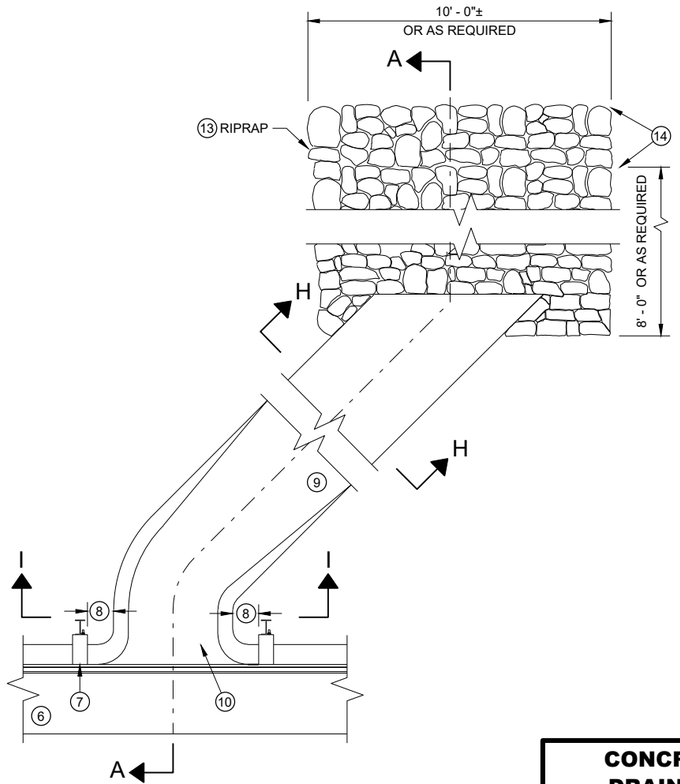
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

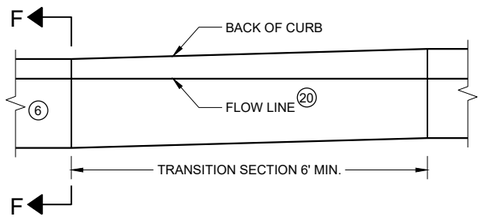
GENERAL NOTES

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.

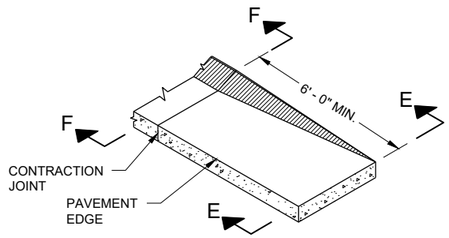
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
5. PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
6. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
7. PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
9. MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
10. SEE ROADWAY PLANS FOR FLUME LOCATION.
11. START CURB AND GUTTER TRANSITION OR END SECTION.
12. DEPRESS FLOW LINE (SEE DETAIL)
13. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
14. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
15. GEOTEXTILE FABRIC TYPE HR.

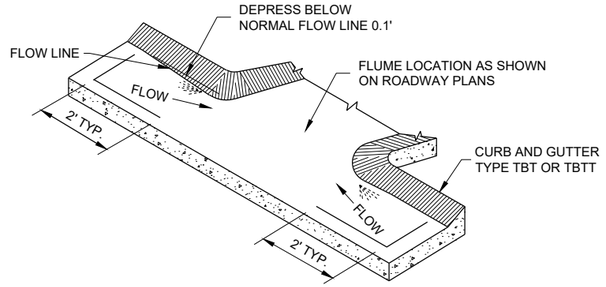
CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES



CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT

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.

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(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(14) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(15) GEOTEXTILE FABRIC TYPE HR.

(16) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.

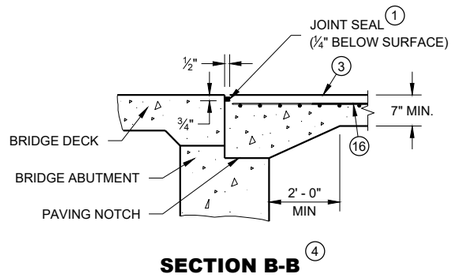
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(18) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

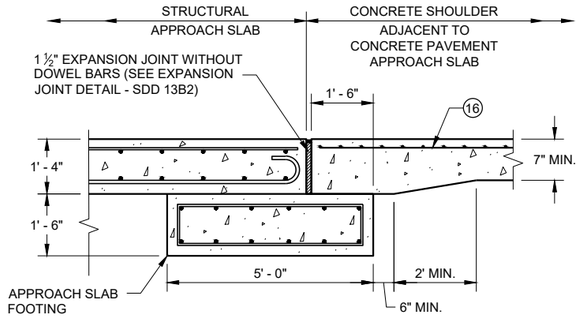
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

(20) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

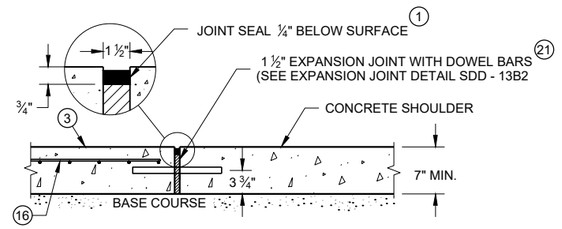
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



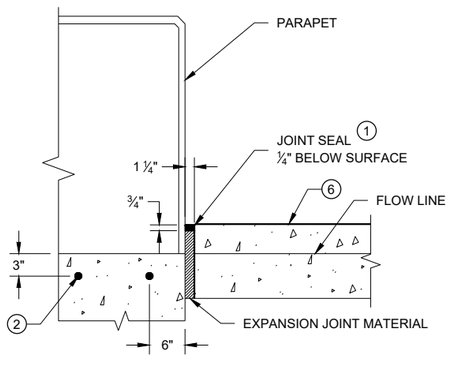
SECTION B-B



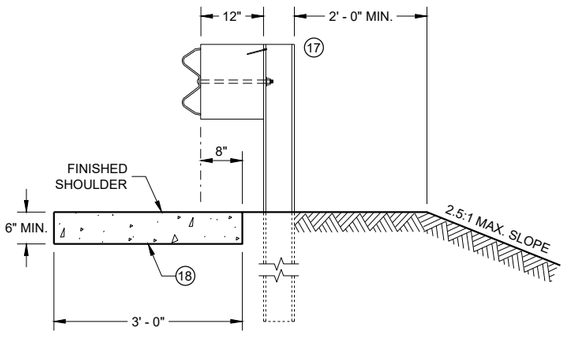
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



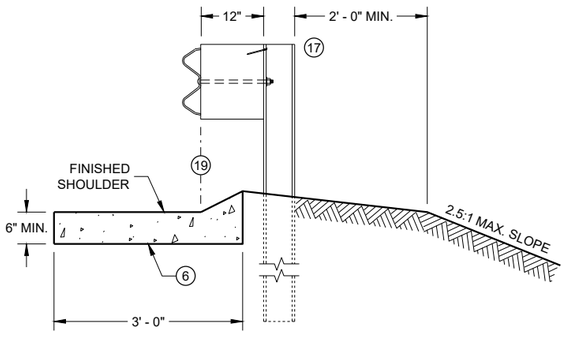
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

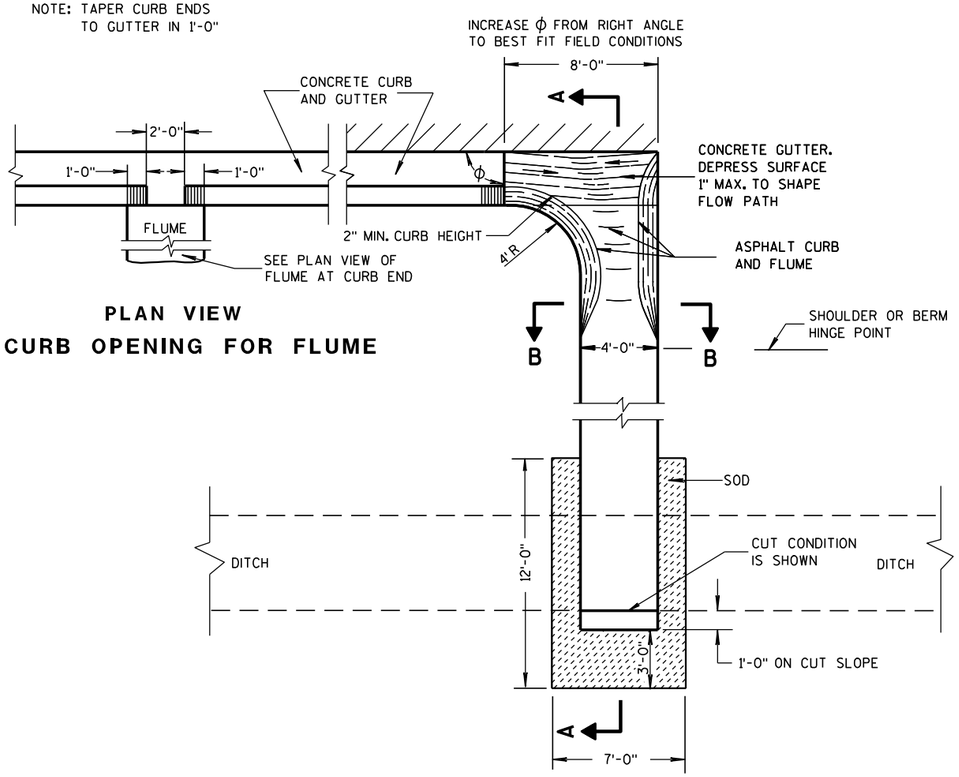
APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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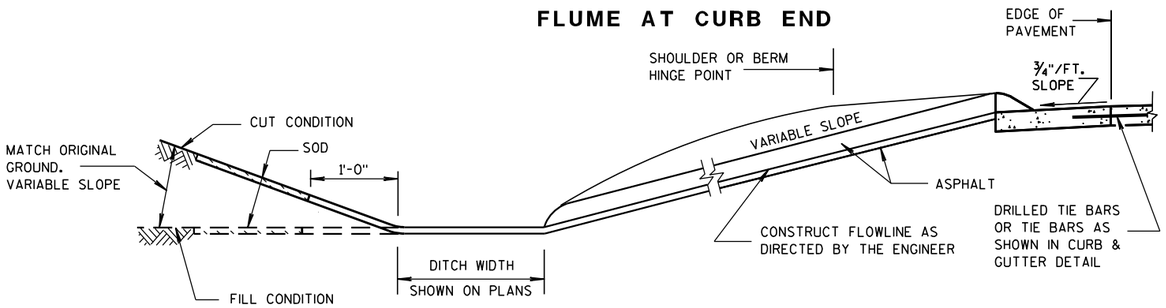
SDD 08D02 - 07c

ASPHALTIC FLUME

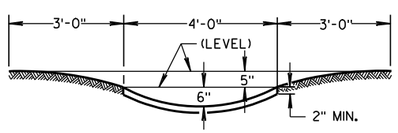


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

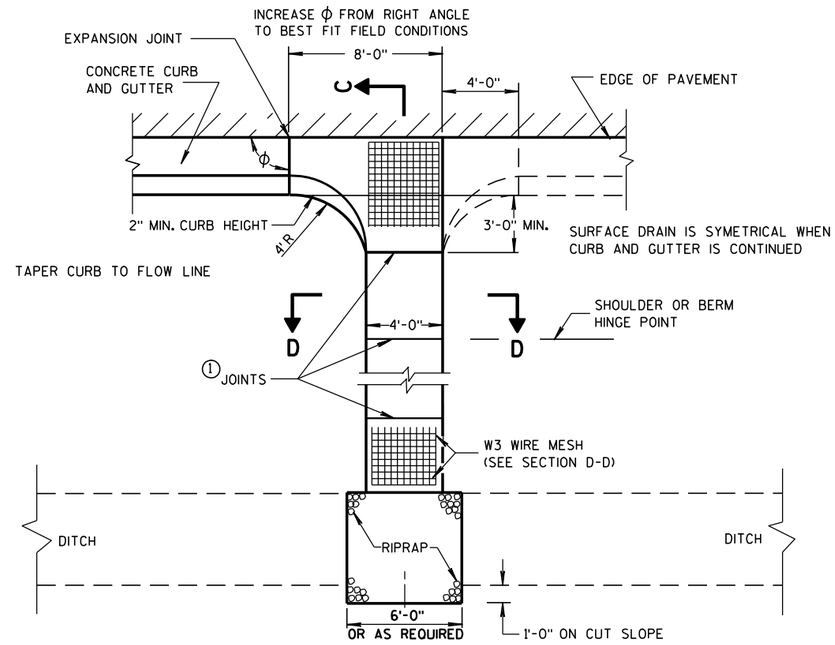
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

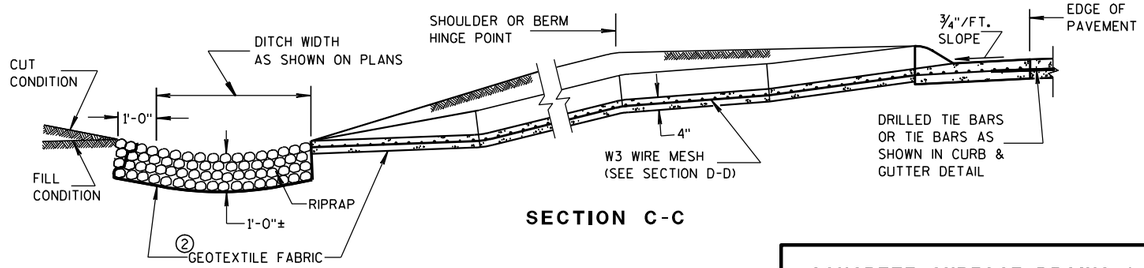
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

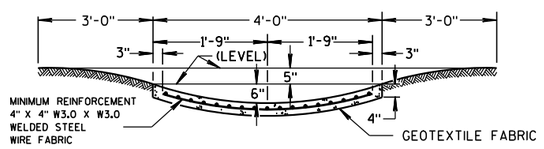
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

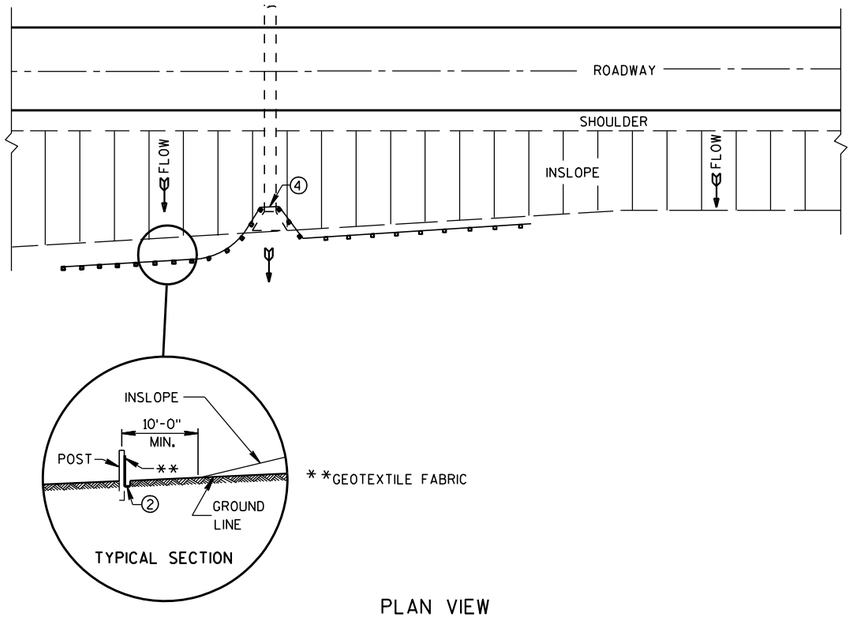
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
87
MENT
FHWA

6

S.D.D. 8 D 4-5

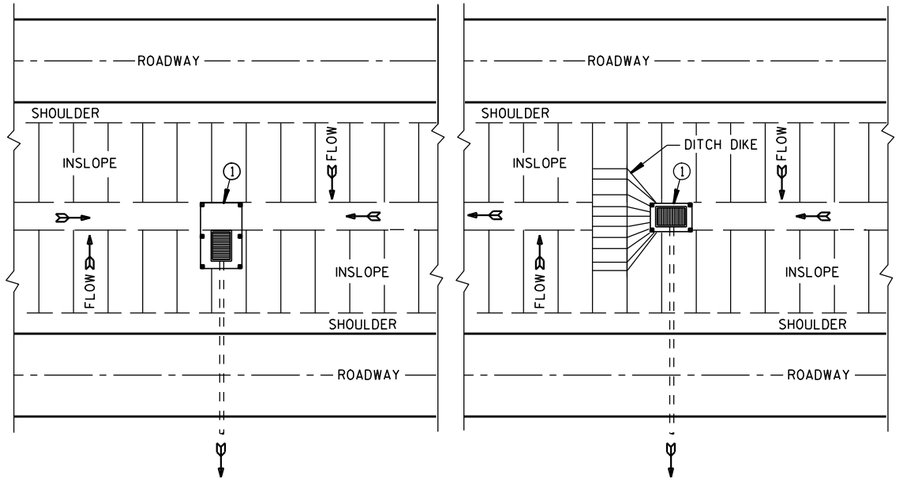
6

S.D.D. 8 D 4-5



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

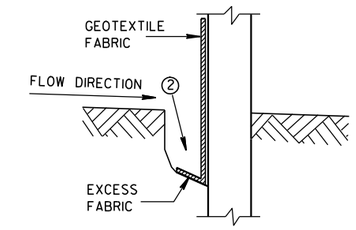
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

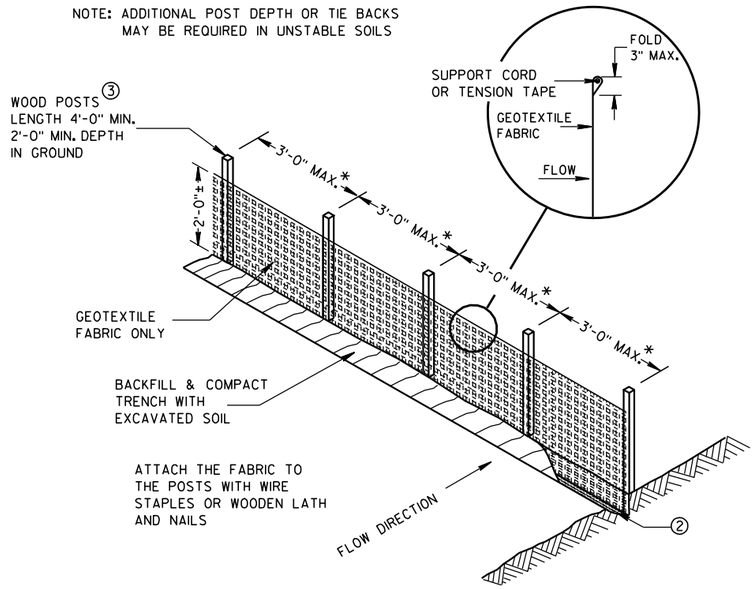
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

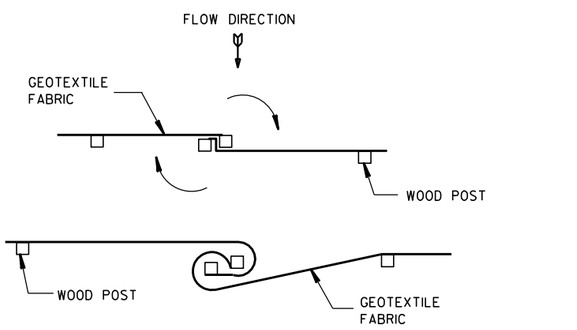
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



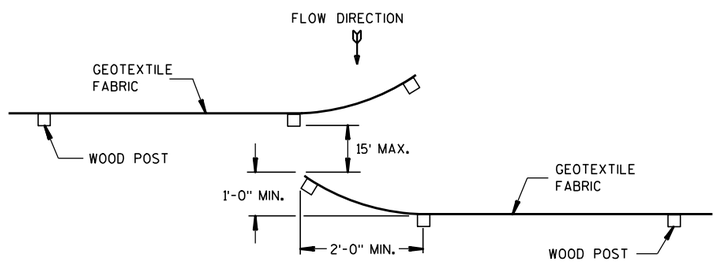
TRENCH DETAIL



SILT FENCE

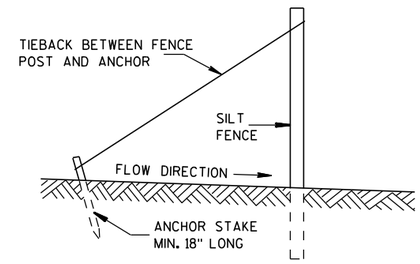


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

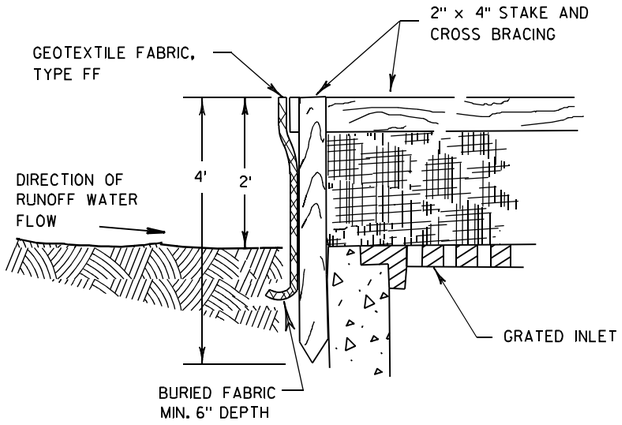
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

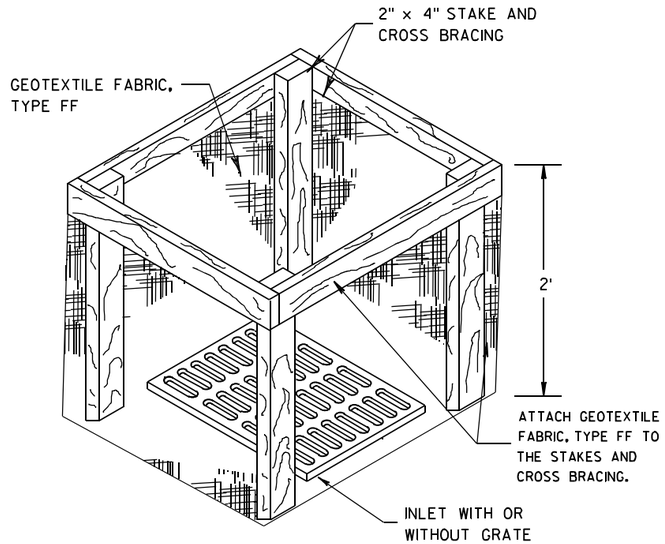
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S.D.D. 8 E 9-6

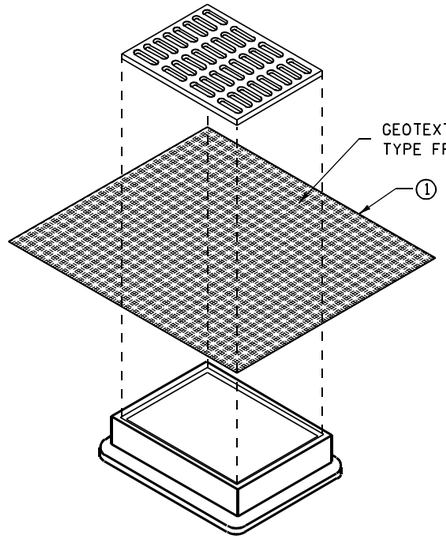
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S.D.D. 8 E 9-6



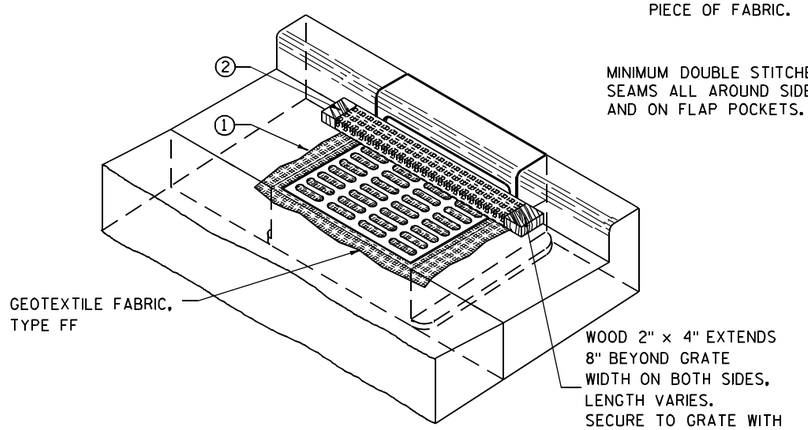


INLET PROTECTION, TYPE A

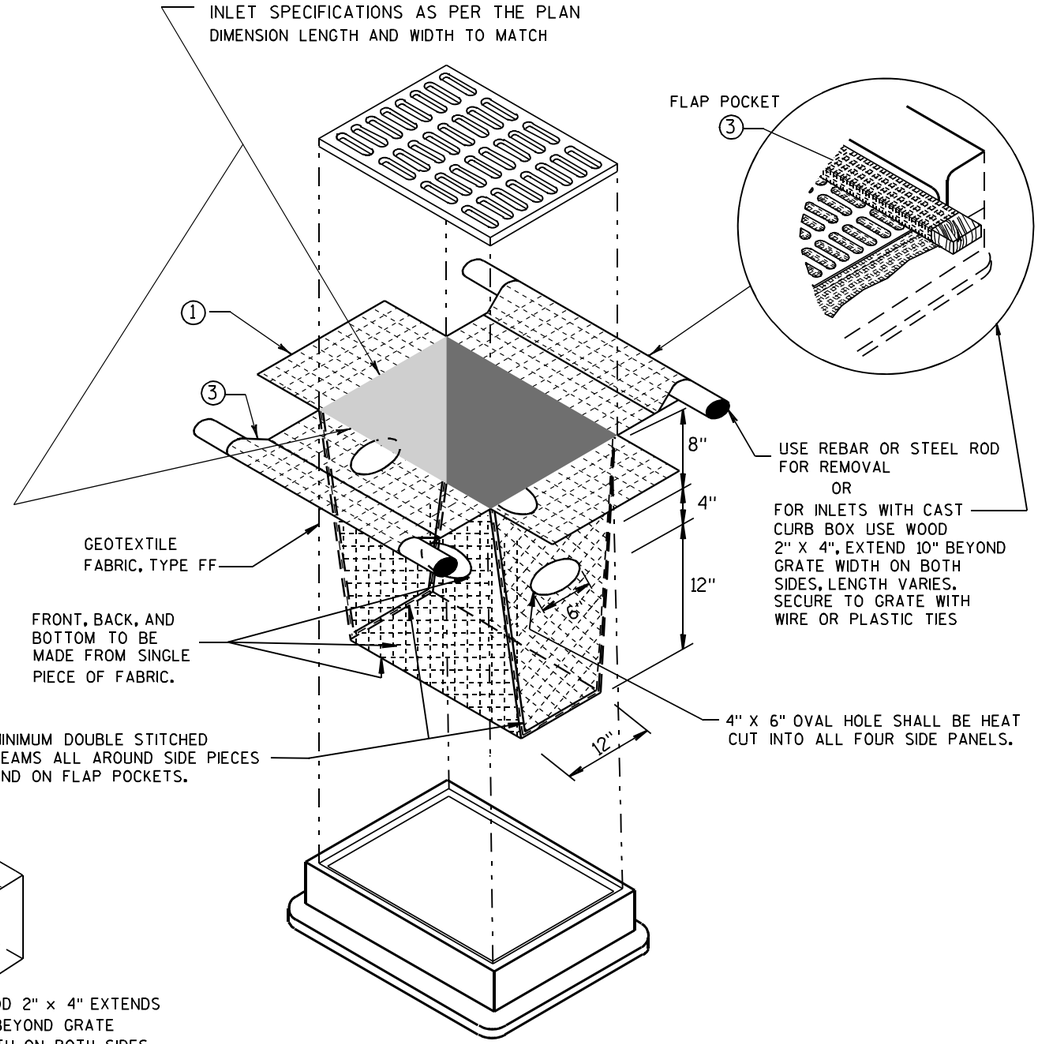


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

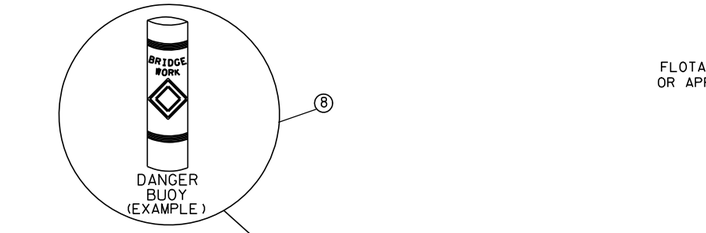
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

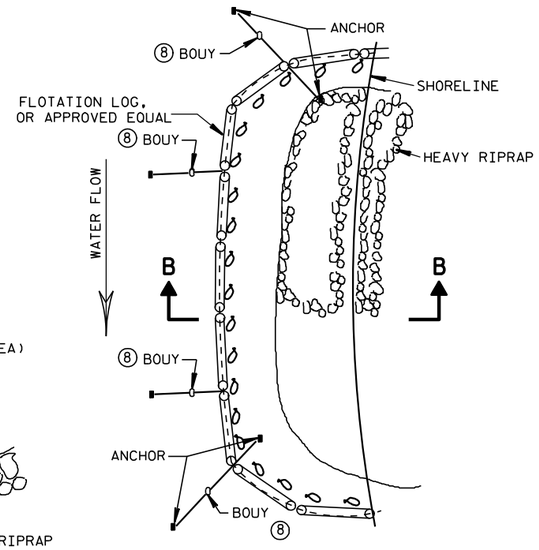
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

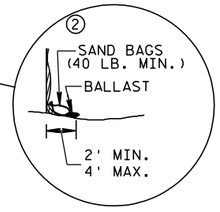
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2

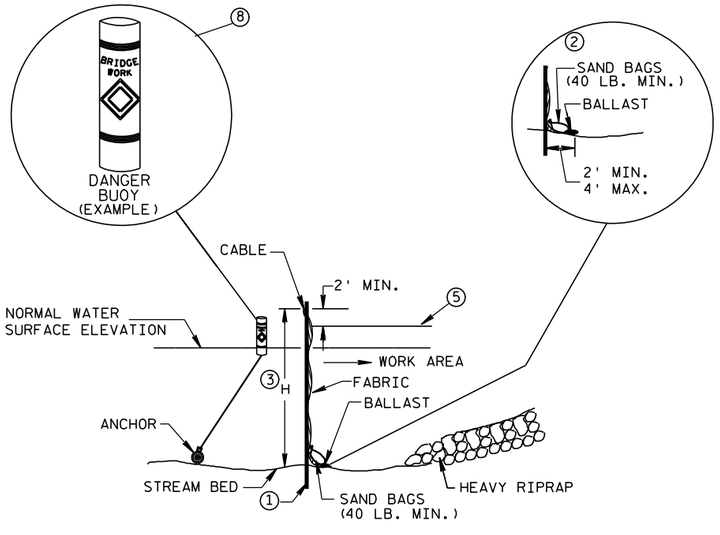


SECTION B-B

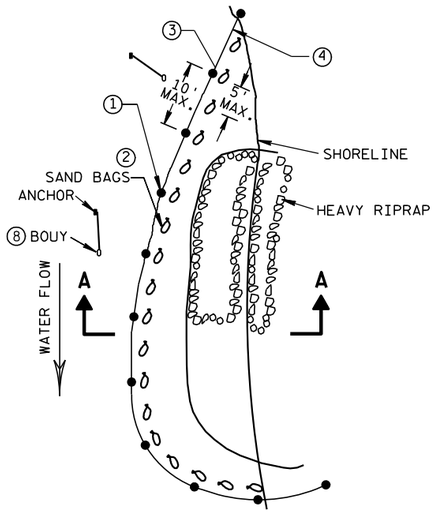




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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.

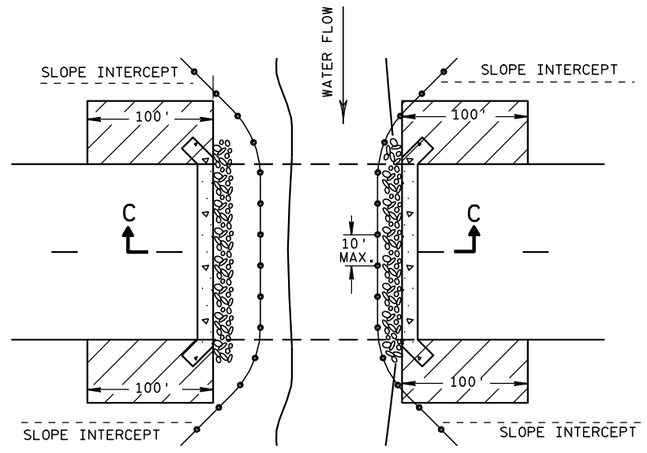
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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.

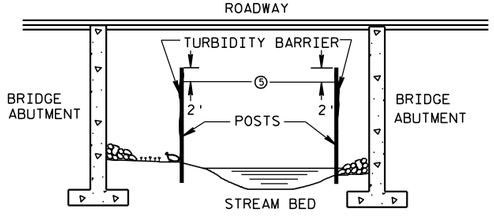
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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



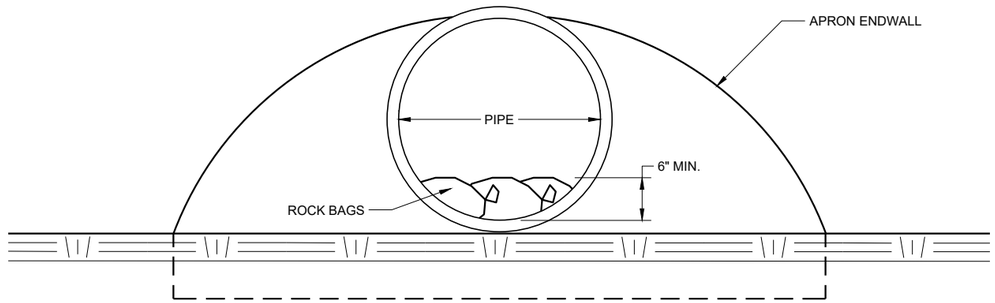
SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

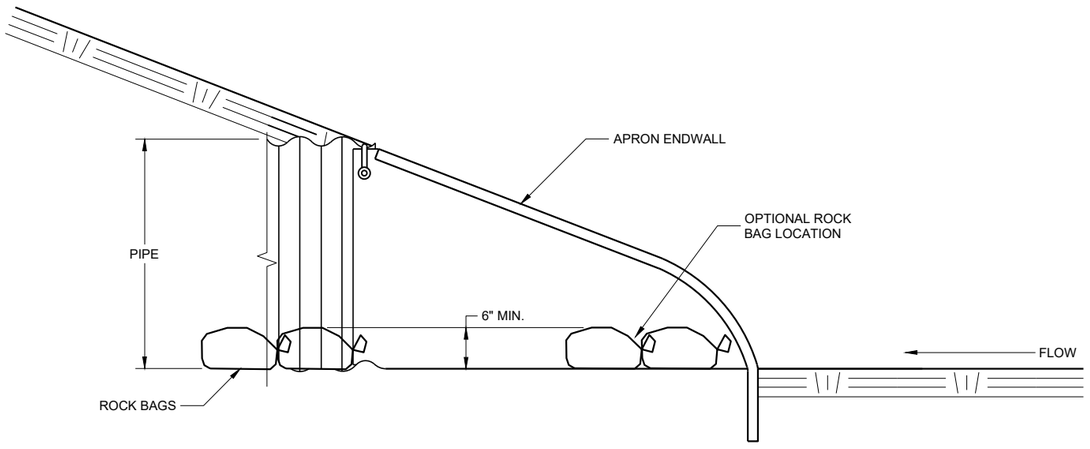
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

6

SDD 08E15 - 01

6

SDD 08E15 - 01

METAL APRON ENDWALLS

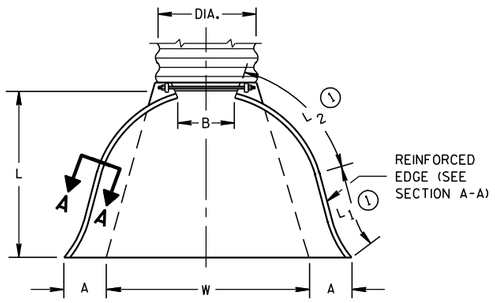
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

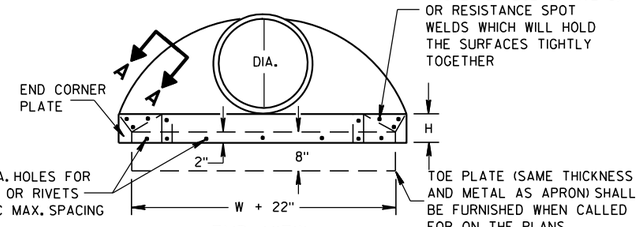
REINFORCED CONCRETE APRON ENDWALLS

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

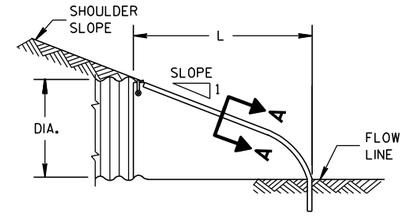
*MINIMUM
**MAXIMUM



PLAN VIEW

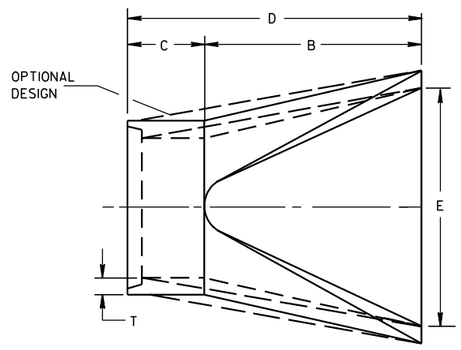


END VIEW

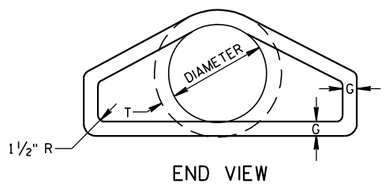


SIDE ELEVATION

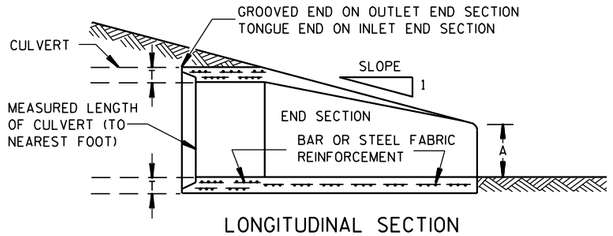
METAL ENDWALLS



PLAN

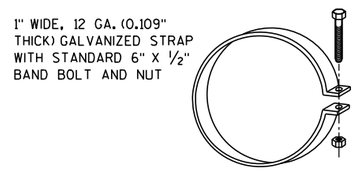


END VIEW



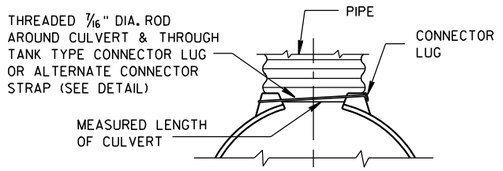
LONGITUDINAL SECTION

CONCRETE ENDWALLS

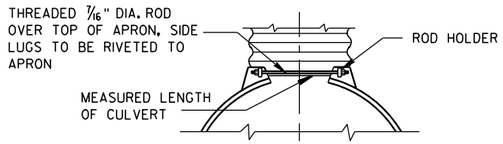


ALTERNATE FOR TYPE 1 CONNECTION

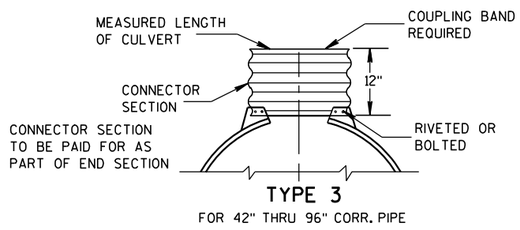
END SECTION CONNECTOR STRAP



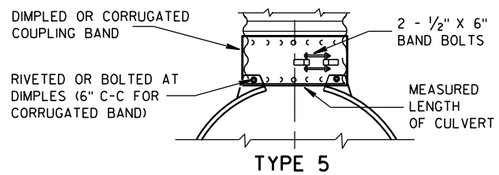
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

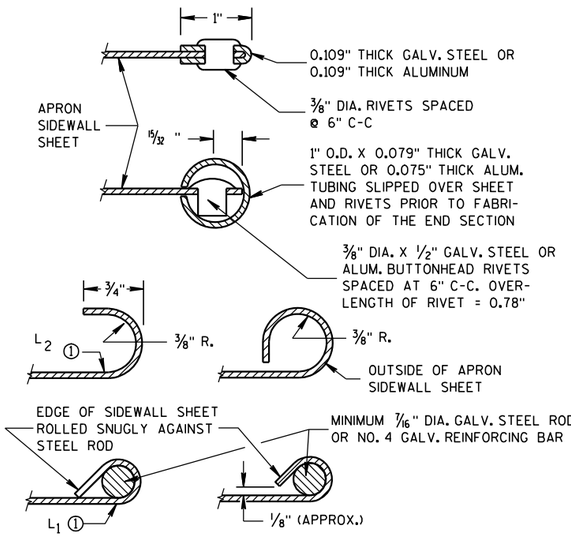
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

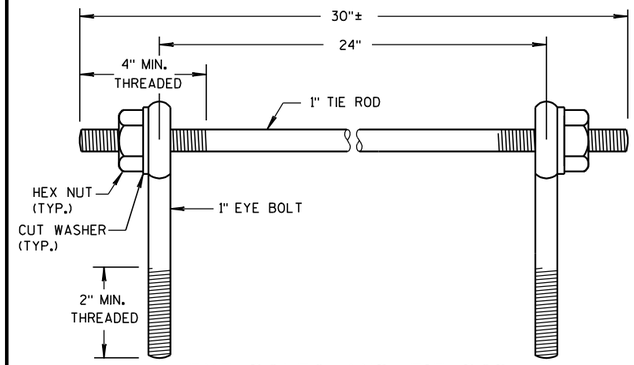
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

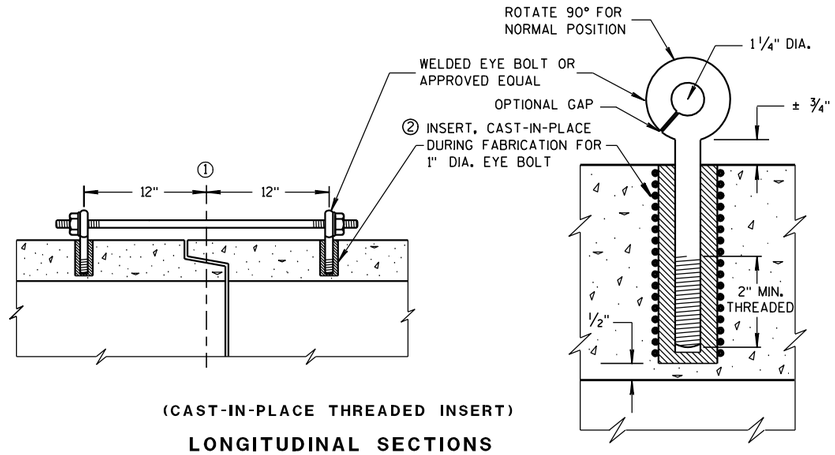
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

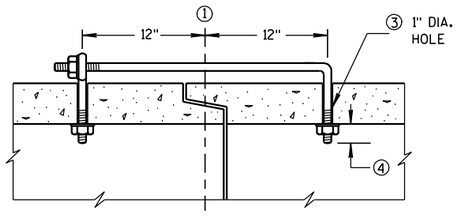
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

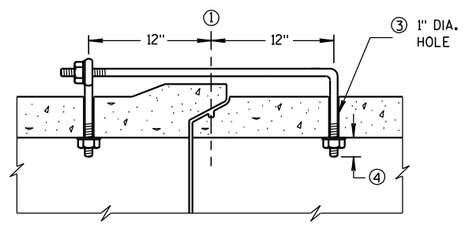
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

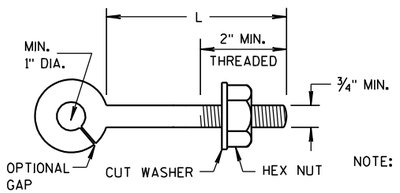


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

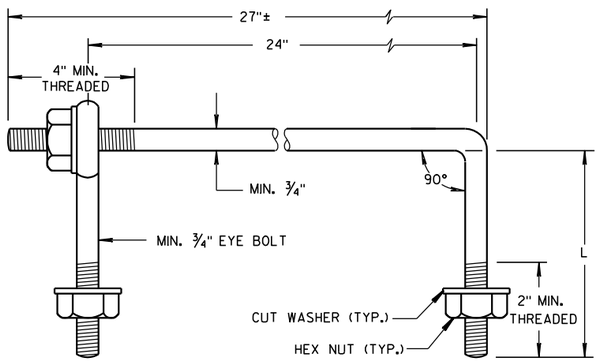
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

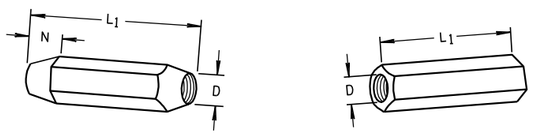
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

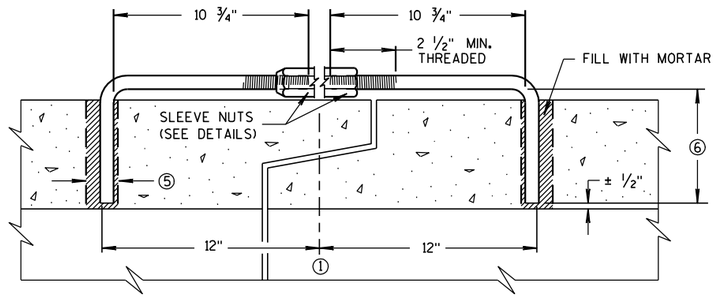
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

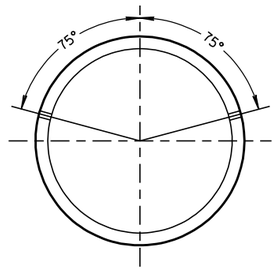
SLEEVE NUTS



LONGITUDINAL SECTION

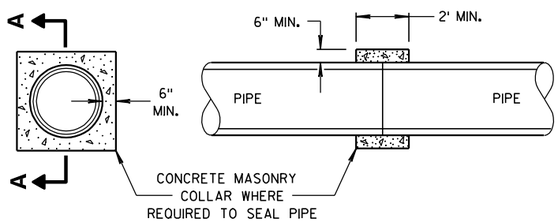
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

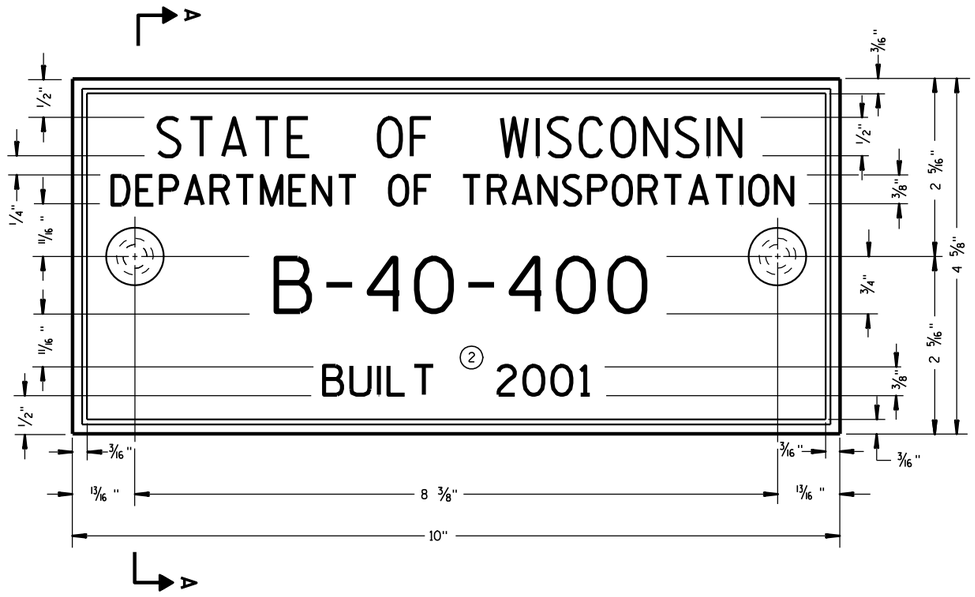
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
93
FHWA

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S.D.D. 8 F 4-7



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

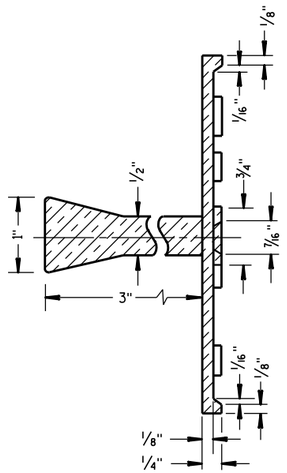
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

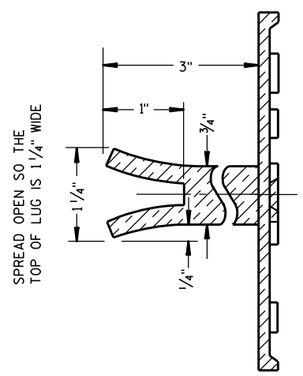
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

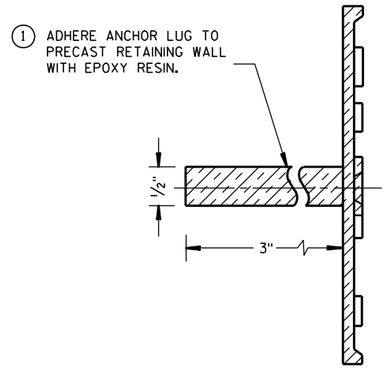
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

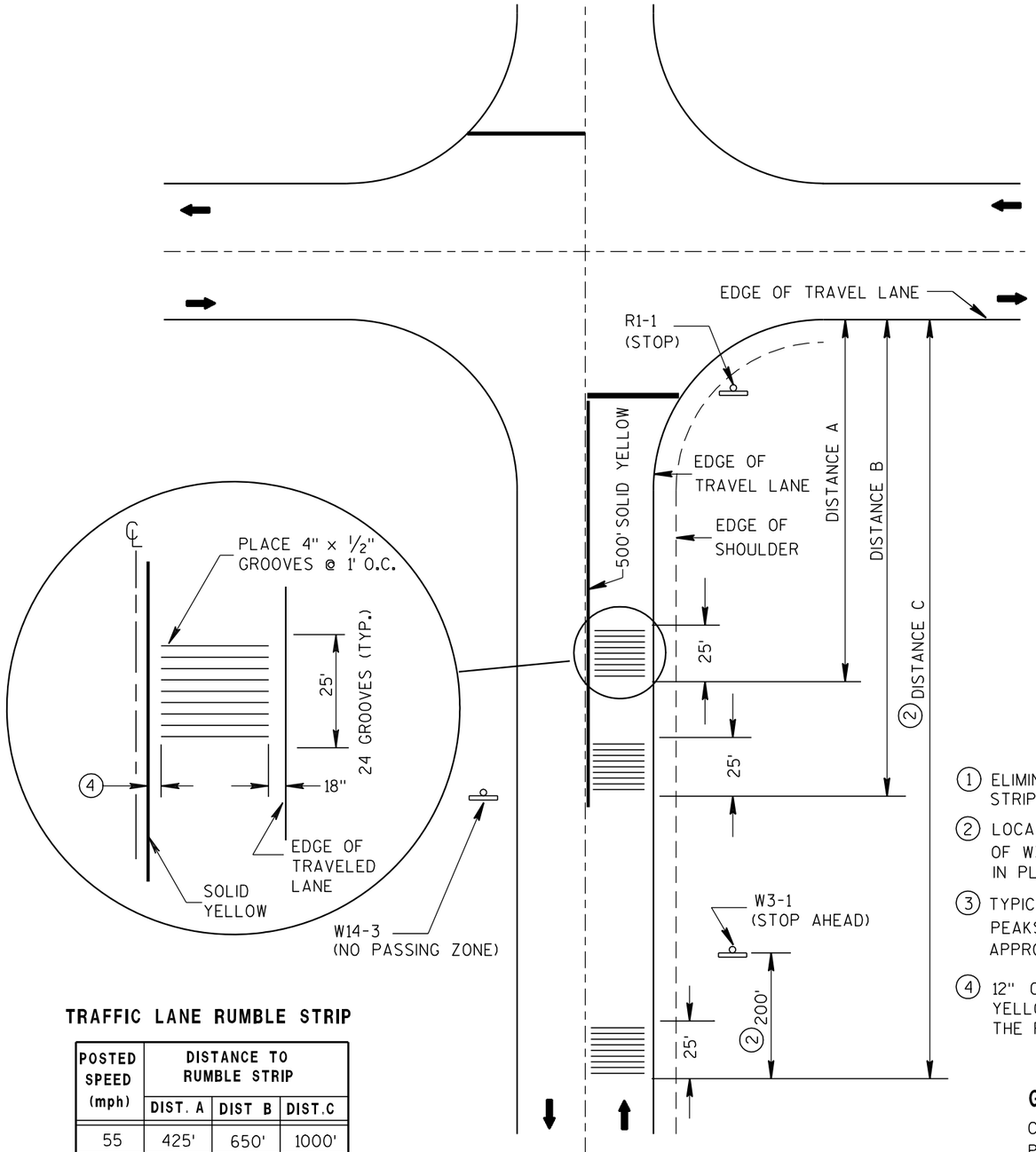
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

6

S.D.D. 12 A 3-10



ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

PLAN VIEW

RUMBLE STRIP LOCATION

TRAFFIC LANE RUMBLE STRIP

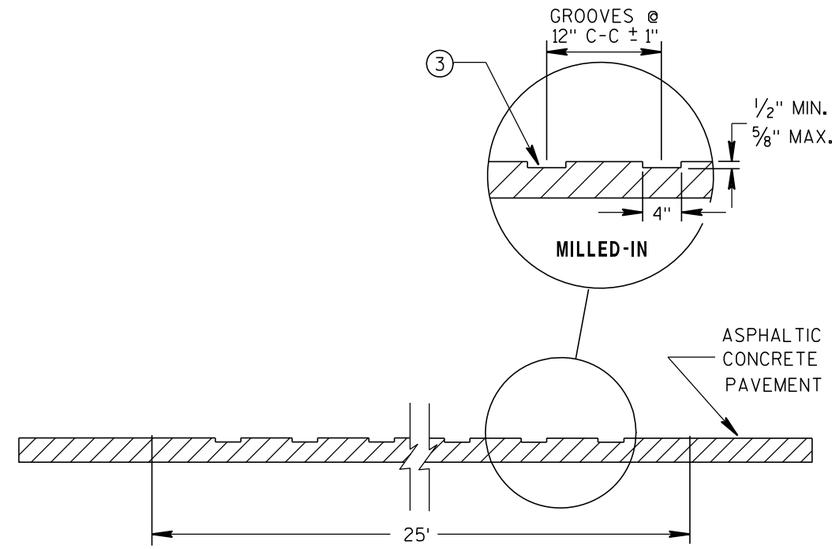
POSTED SPEED (mph)	DISTANCE TO RUMBLE STRIP		
	DIST. A	DIST B	DIST.C
55	425'	650'	1000'
50	325'	450'	800'
45	275'	400'	650'
40	225'	(1)	550'
35	175'	(1)	475'
≤ 30	125'	(1)	425'

(1) ELIMINATE THE MIDDLE SET OF RUMBLE STRIPS.

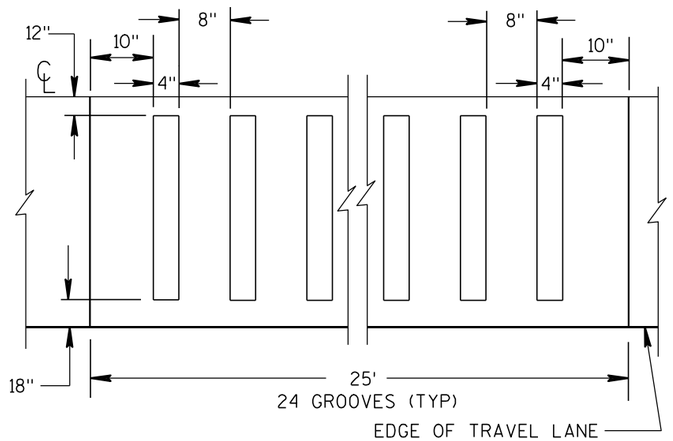
(2) LOCATE RUMBLE STRIP 200' IN ADVANCE OF W3-1 SIGN AS SHOWN. IF W3-1 IS NOT IN PLACE, USE DISTANCE C.

(3) TYPICAL VERTICAL VARIATION BETWEEN PEAKS AND VALLEYS WITHIN THE CUT APPROXIMATELY 1/16"

(4) 12" CLEAR BETWEEN THE SOLID YELLOW LINE AND THE EDGE OF THE RUMBLE.



ELEVATION VIEW



PLAN VIEW

ASPHALTIC PAVEMENT MILLED-IN

GENERAL NOTES

CONTRACTOR SHALL CONFIRM RUMBLE STRIP LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. THE ENGINEER MAY MODIFY THE RUMBLE STRIP LOCATION AS FIELD CONDITIONS DICTATE.

WHEN ASPHALTIC PAVEMENT IS NEW IN THE RUMBLE AREA THE CONTRACTOR SHALL ALLOW THE PAVEMENT TO CURE A MINIMUM OF 7 DAYS PRIOR TO RUMBLE INSTALLATION.

PAVEMENT MARKING AND SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

ASPHALTIC RUMBLE STRIPS AT INTERSECTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/17/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS I 95
ENGINEER

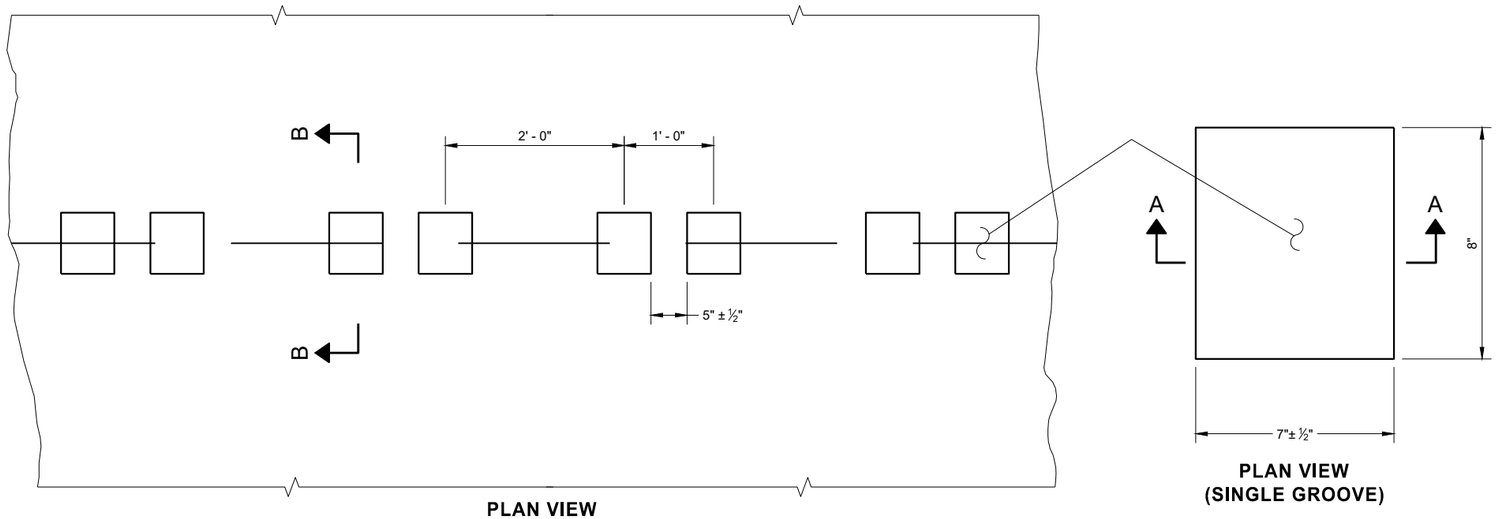
FHWA

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S.D.D. 13 A 8-1

6

S.D.D. 13 A 8-1



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

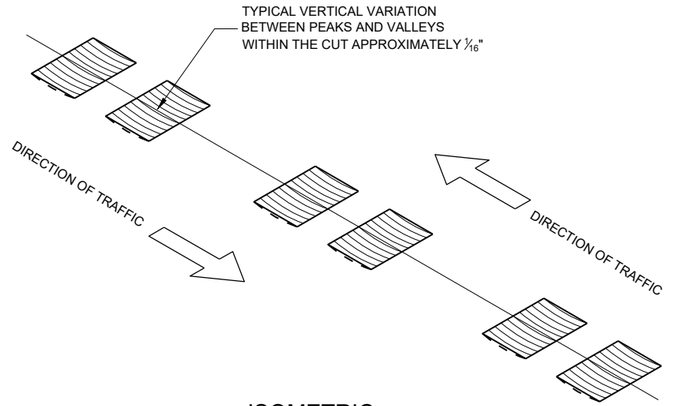
DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

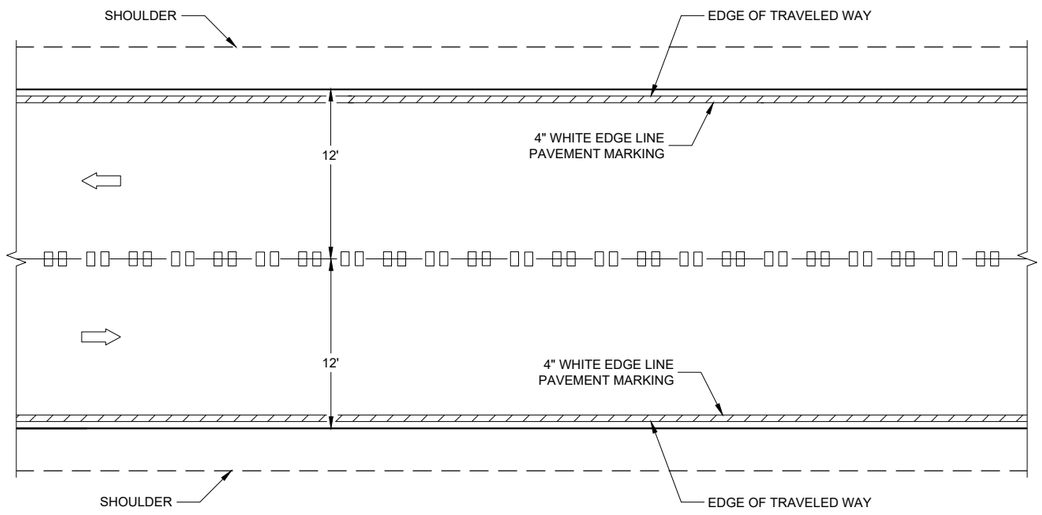
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

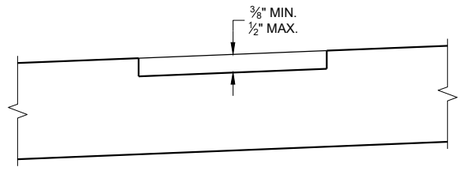
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



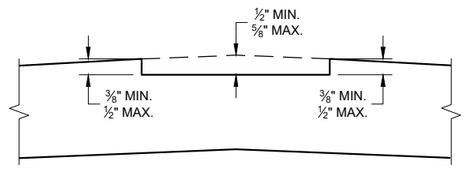
ISOMETRIC



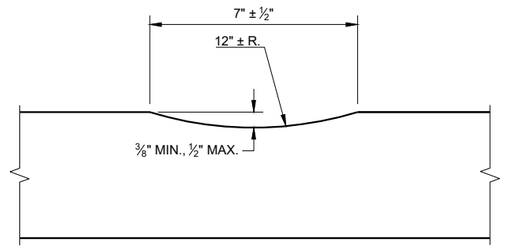
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



SECTION A - A

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

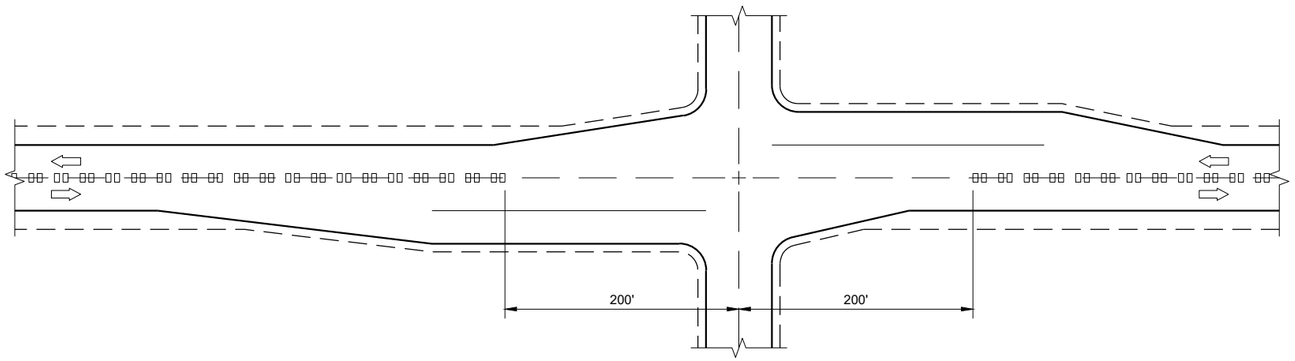
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

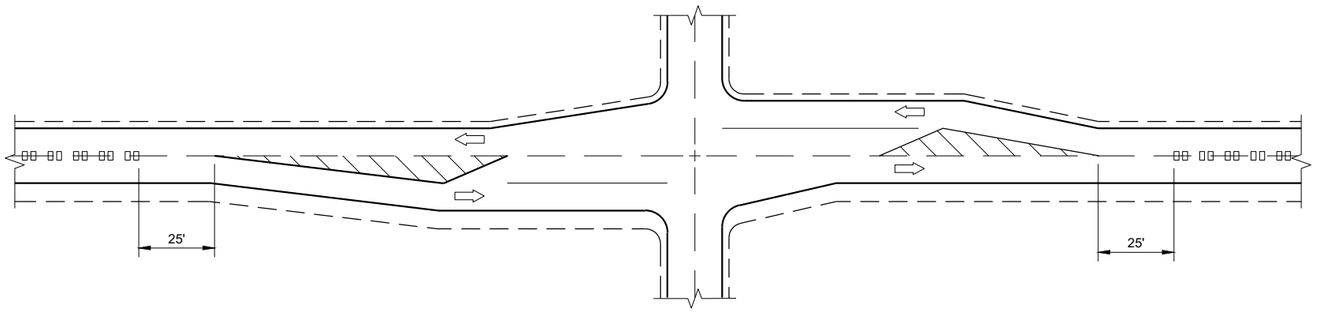
SDD 13A11 - 03a

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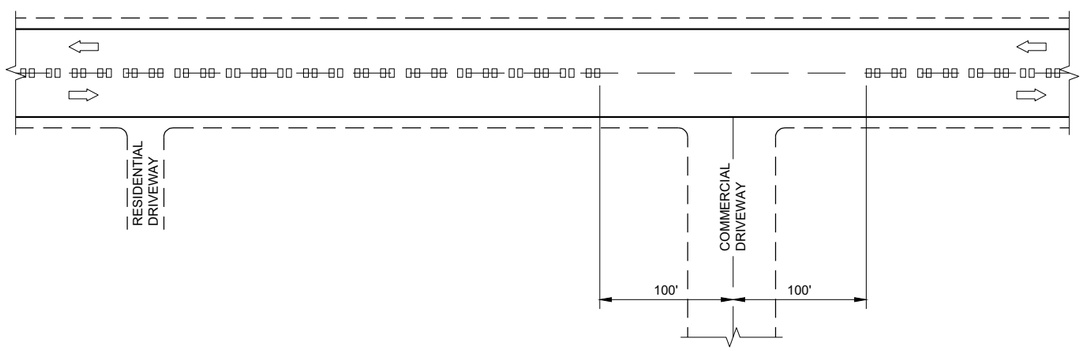
SDD 13A11 - 03a



CENTERLINE GROOVES AT INTERSECTIONS



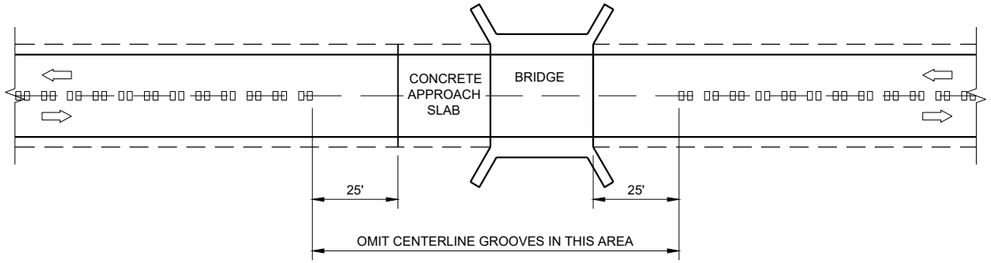
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



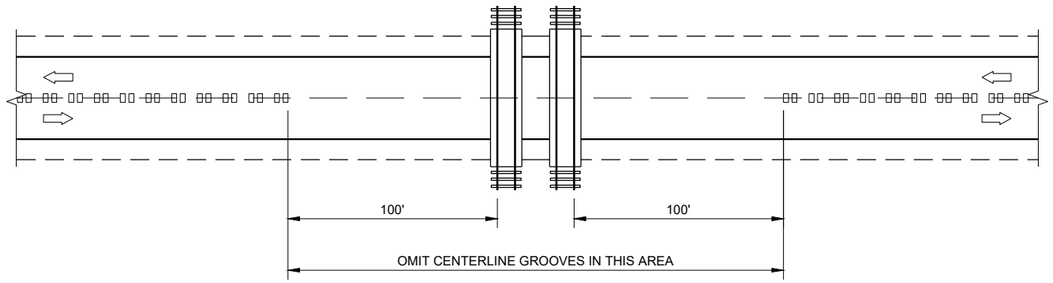
CENTERLINE GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

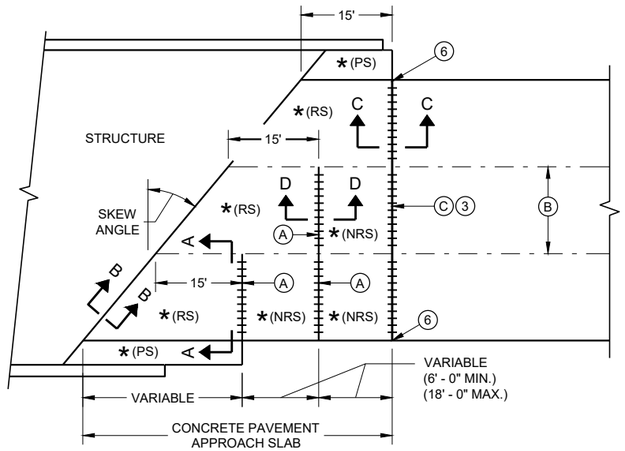
FHWA

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SDD 13A11 - 03b

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SDD 13A11 - 03b



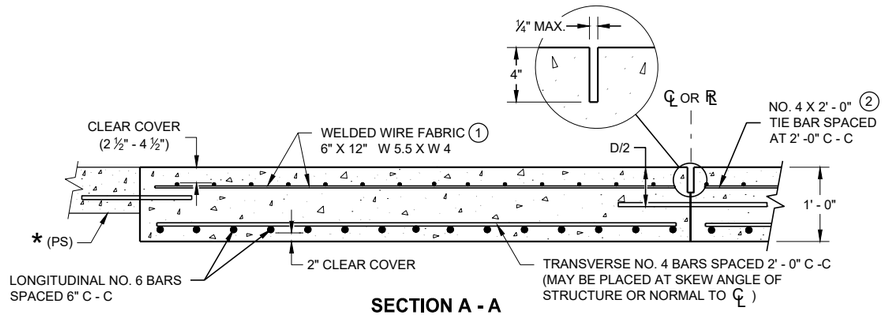
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

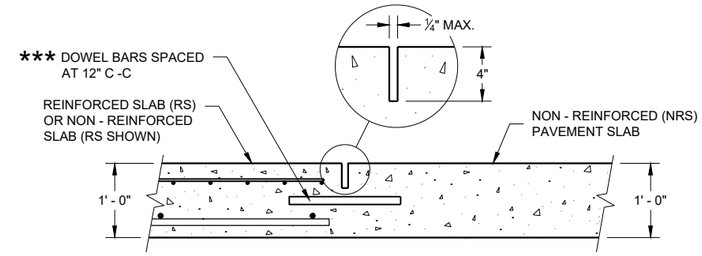
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

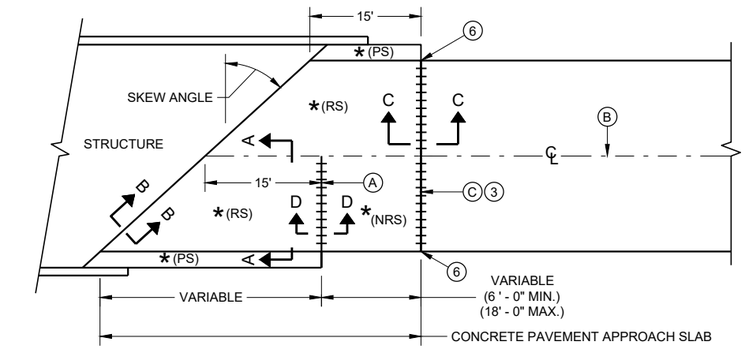
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .

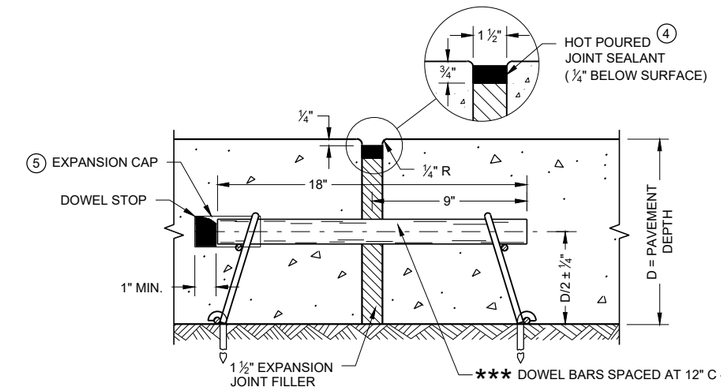


SECTION D - D
CONTRACTION JOINT

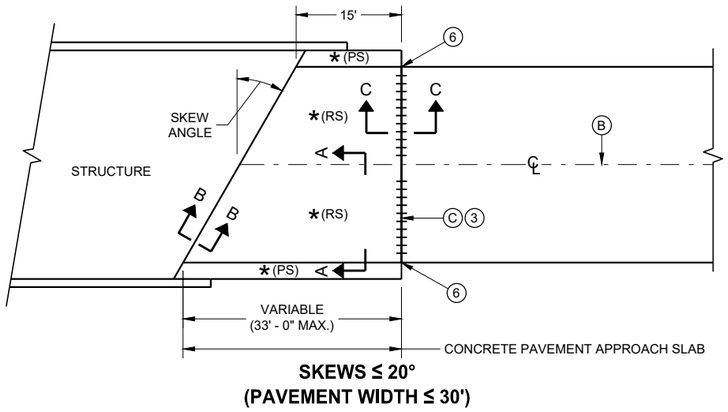


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

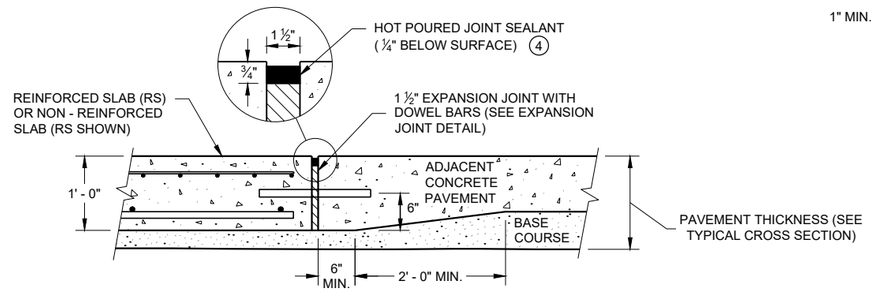


EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

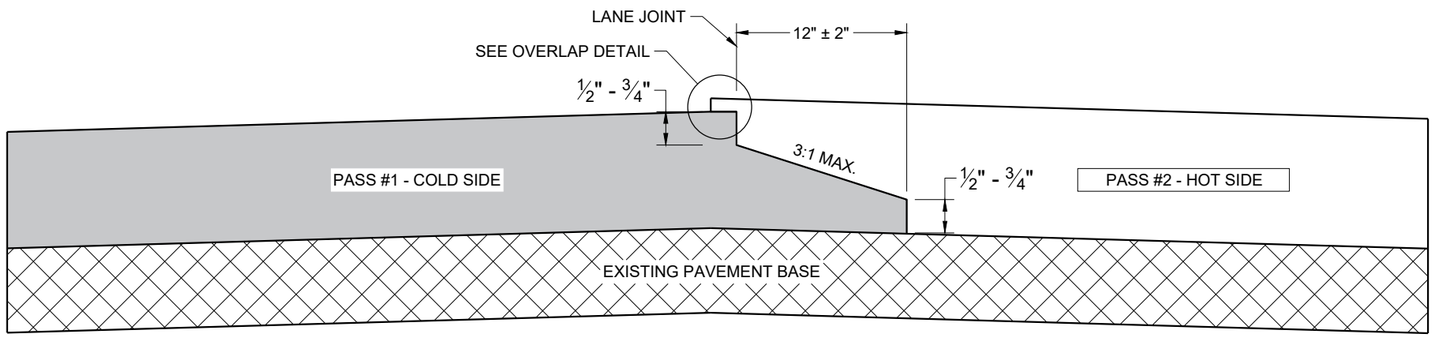
APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

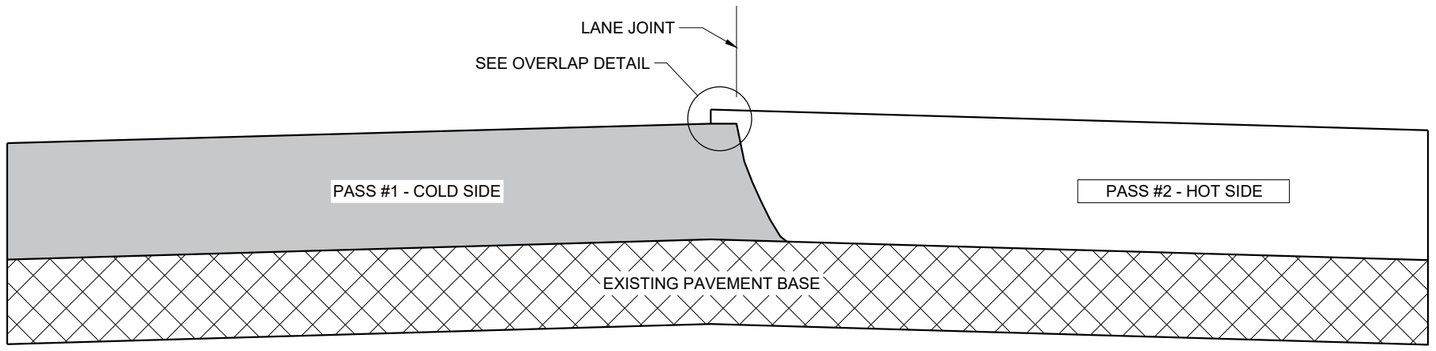
FHWA

6

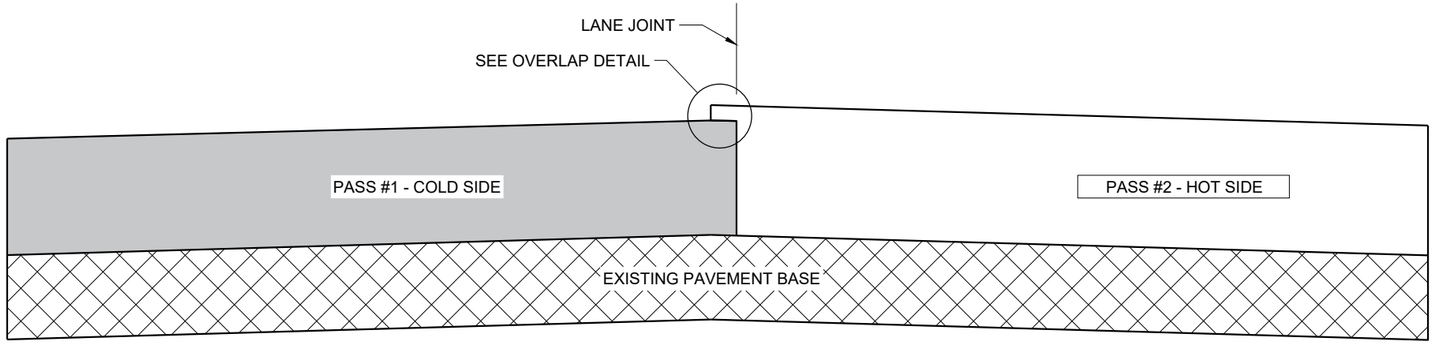
SDD 13B02 - 09a



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

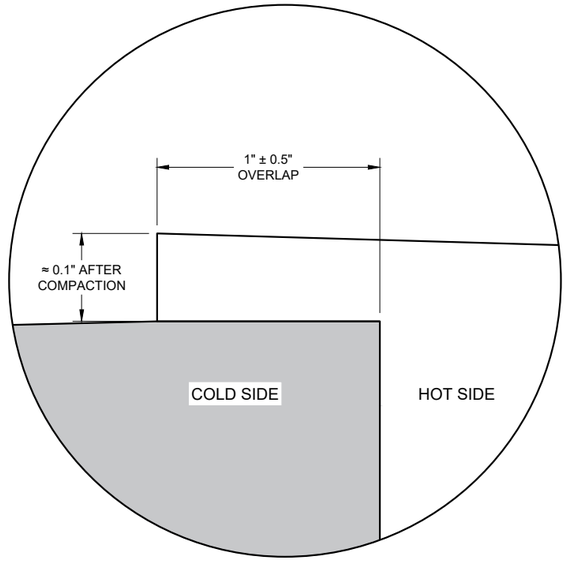
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

6

SDD 13C19 - 03

6

SDD 13C19 - 03

GENERAL NOTES

(1) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

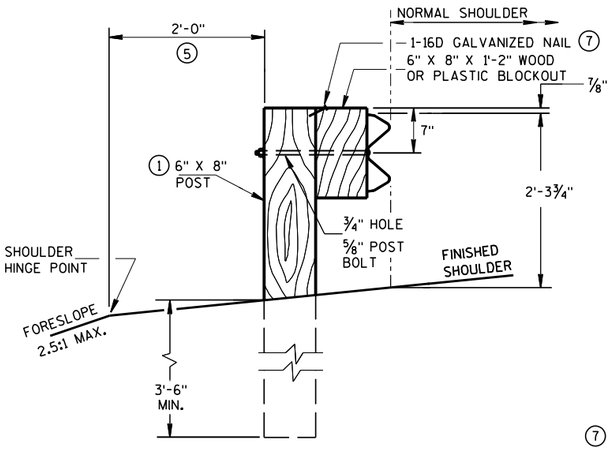
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

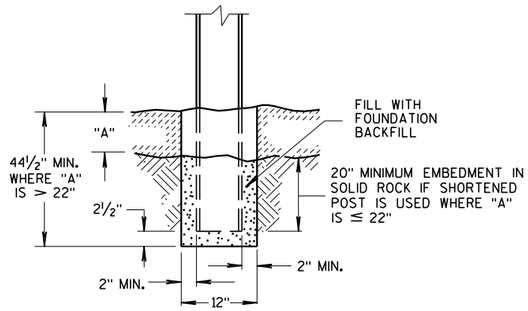
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

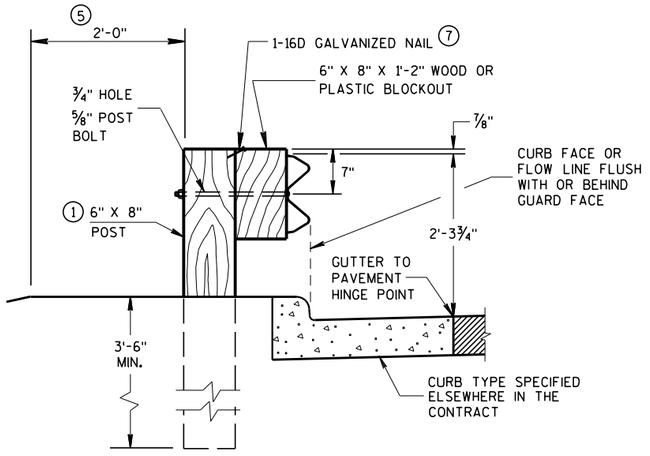
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



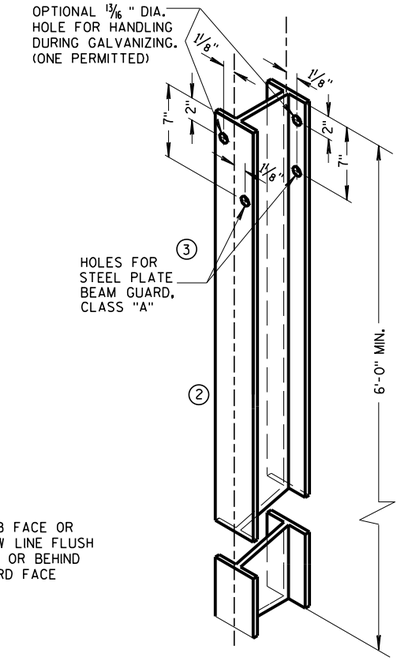
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)

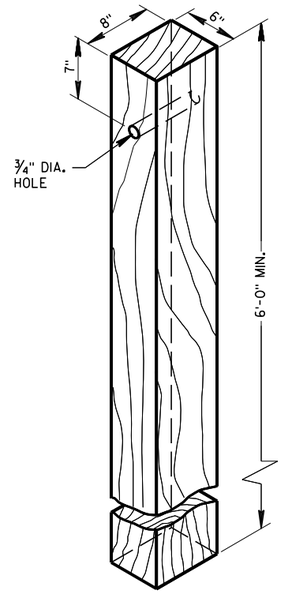


END VIEW
LOCATED ALONG A CURBED ROADWAY

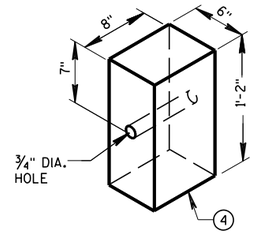


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

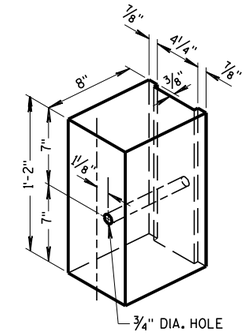
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



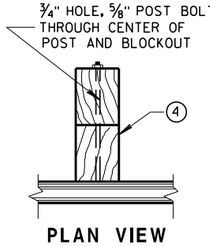
WOOD POST
(6"X8") NOMINAL



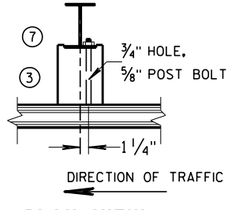
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



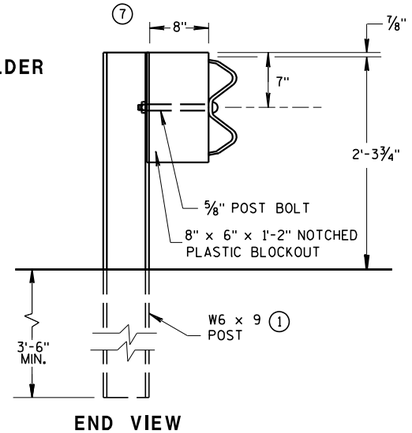
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



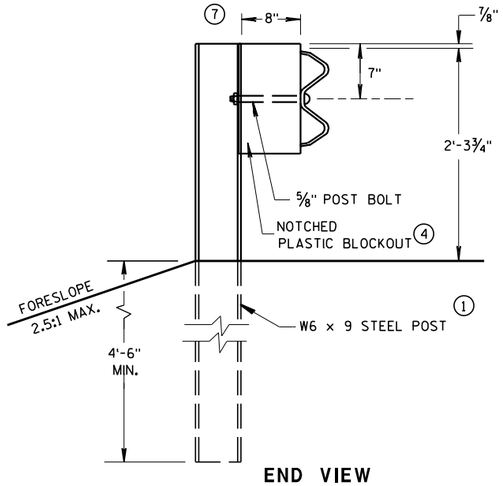
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



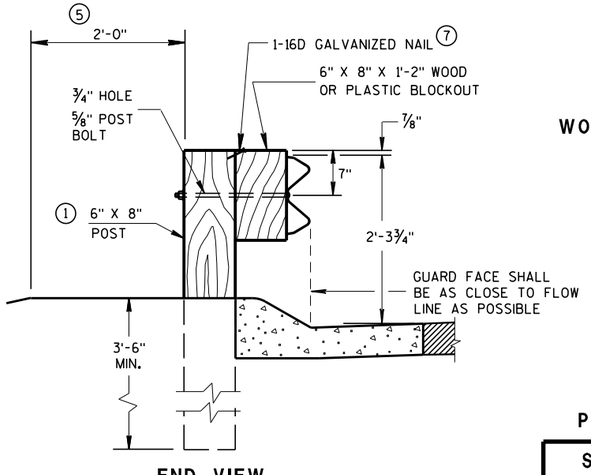
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



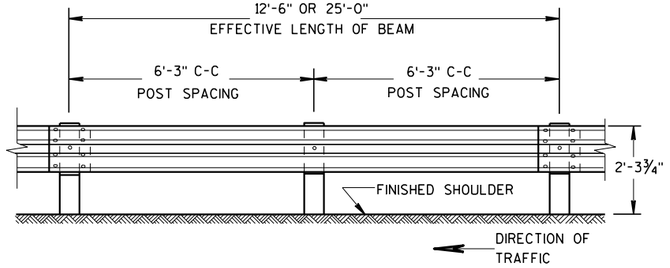
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

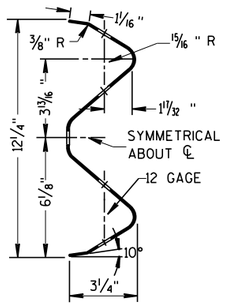
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-11a

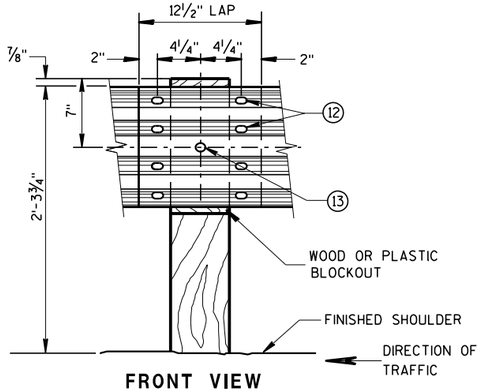


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

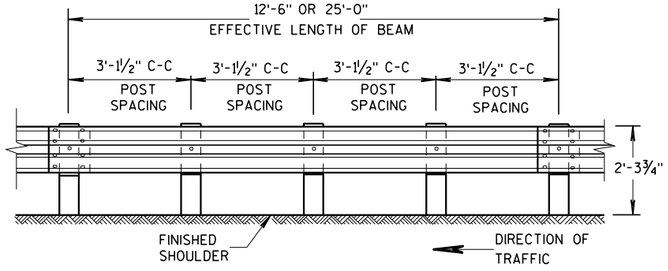
GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

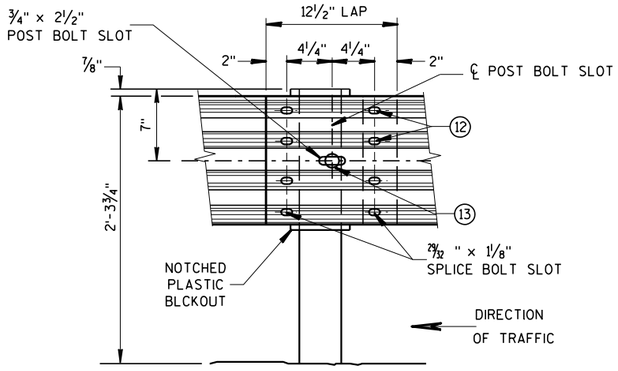
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



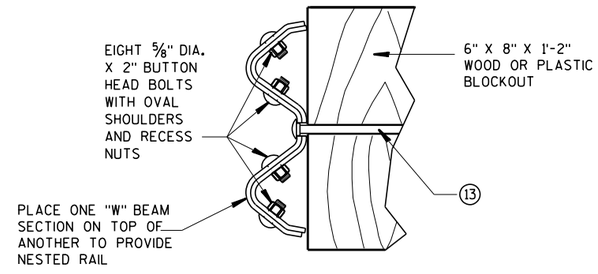
FRONT VIEW

POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

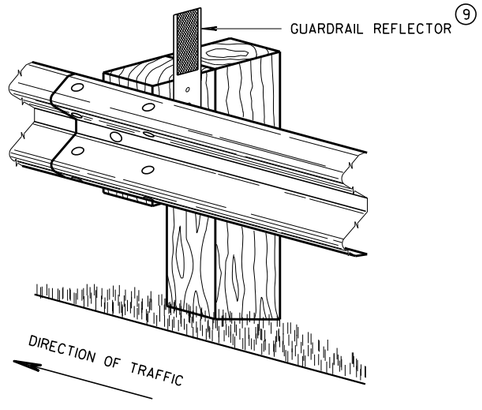


NESTED W BEAM (NW)

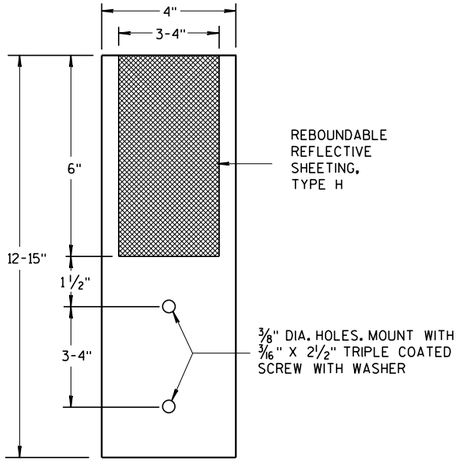
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

* USE DOUBLE SIDED WHITE GUADRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



4" X 12" GUARDRAIL REFLECTOR DETAIL AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

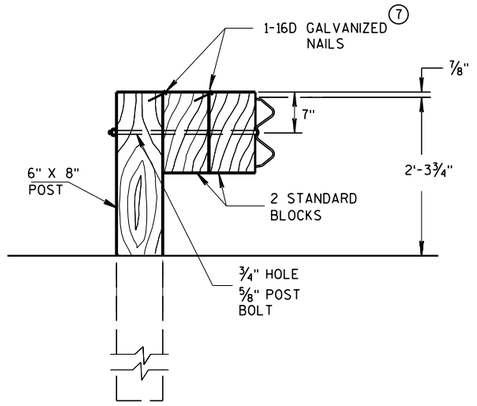
STATE OF WISCO 101
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 15-11b

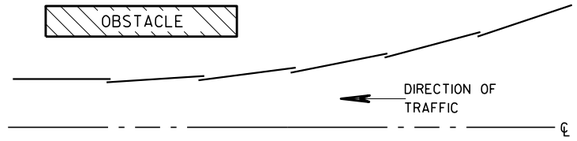
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S.D.D. 14 B 15-11b

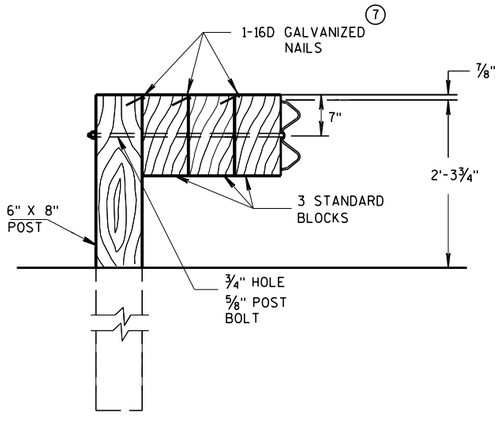


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

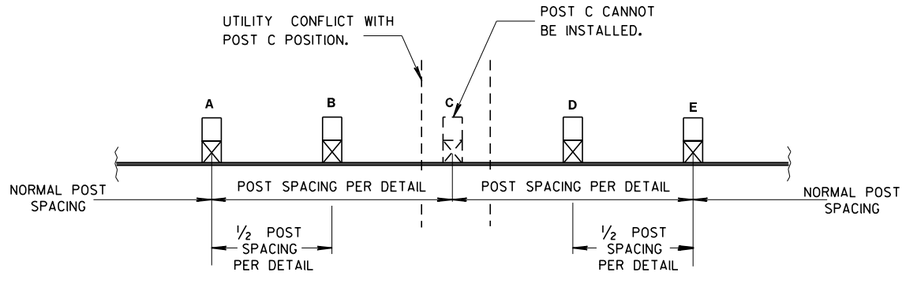


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	STEEL TUBE TS 8" X 6" X 0.188", 6'-0"
④	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	BEARING PLATE
⑧	BCT CABLE ASSEMBLY
⑨	CABLE ANCHOR BOX
⑩	STRUT & YOKE
⑪	STEEL PLATE BEAM, END PANEL 12 GA.
⑫	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

(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.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

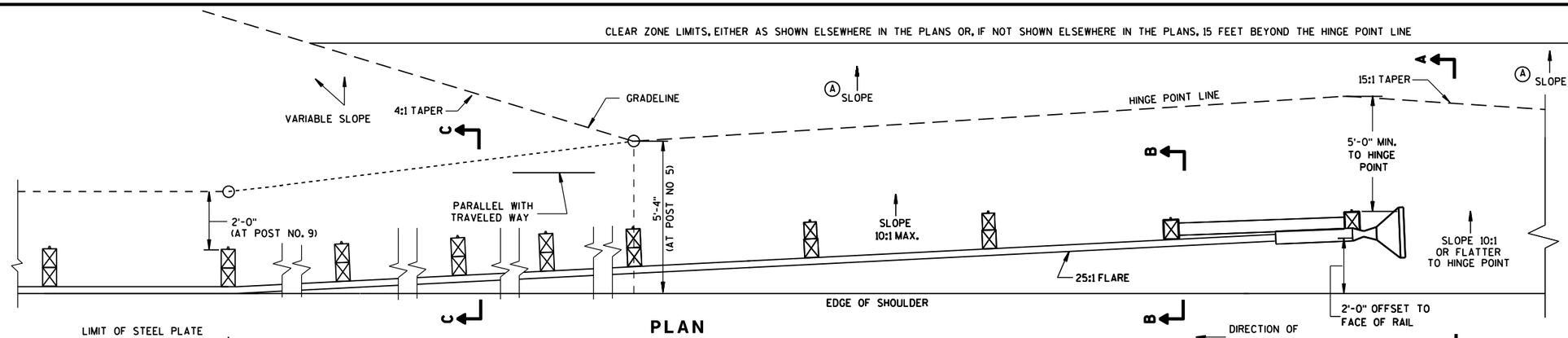
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

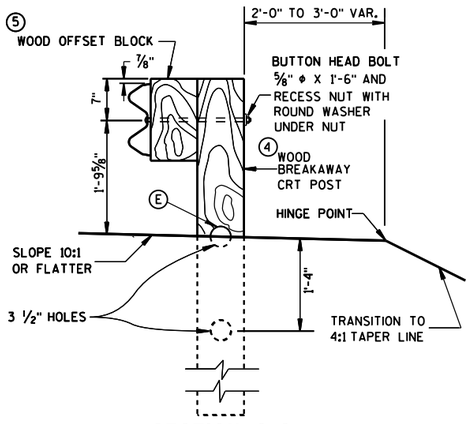
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

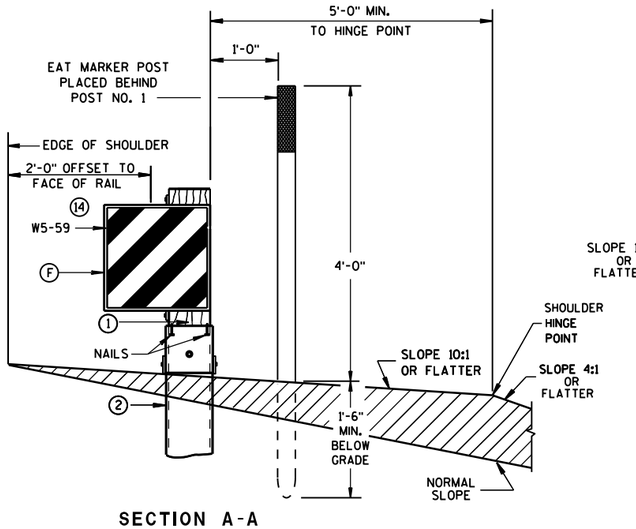
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

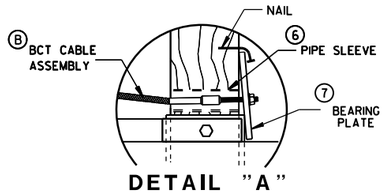




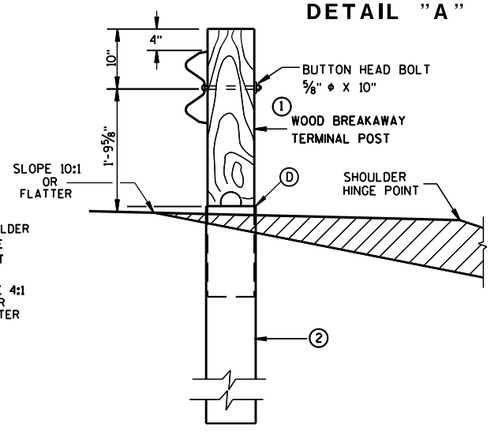
SECTION C-C
TYPICAL AT POST NOS. 6, 8



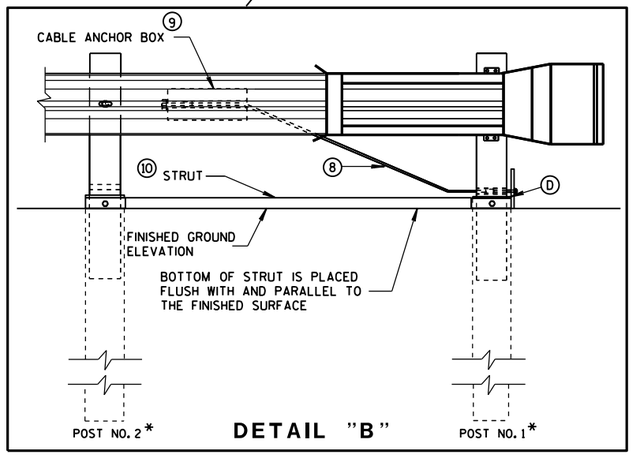
SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



SECTION B-B
TYPICAL AT POST NO. 2*

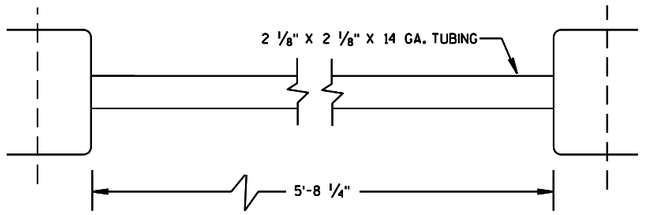


DETAIL "B"

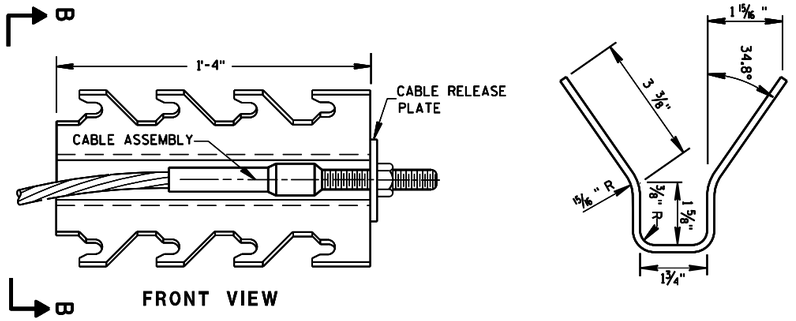
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

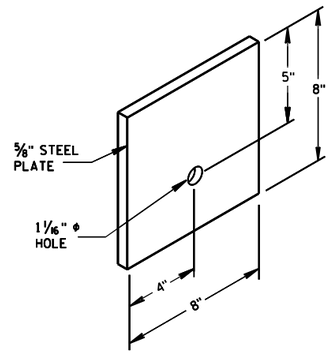
6
S.D.D. 14 B 24-9a



⑩ STRUT DETAIL



⑨ CABLE ANCHOR BOX



⑦ STEEL BEARING PLATE

6

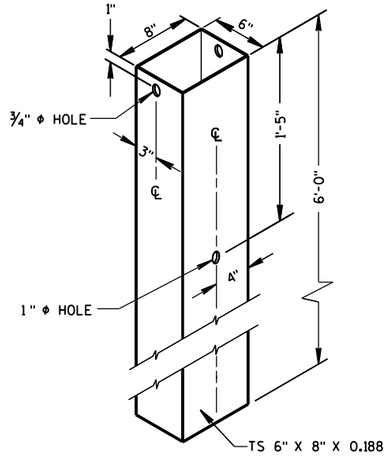
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S.D.D. 14 B 24-9b

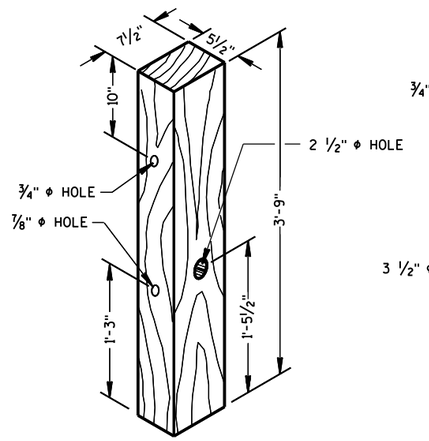
S.D.D. 14 B 24-9b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

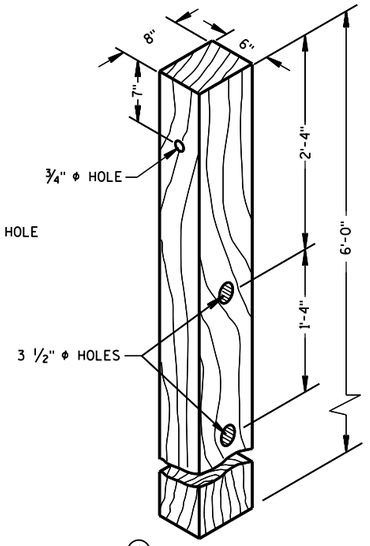
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



② 72" STEEL TUBE
(POSTS NO. 1-2



① TERMINAL POST

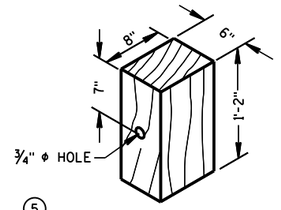


④ CRT POST
(POSTS NO'S 5-8)

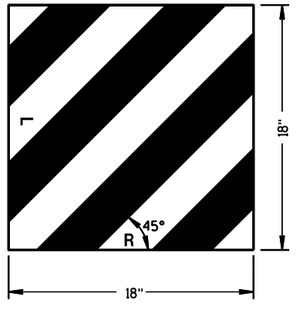
WOOD BREAKAWAY POSTS

GENERAL NOTES

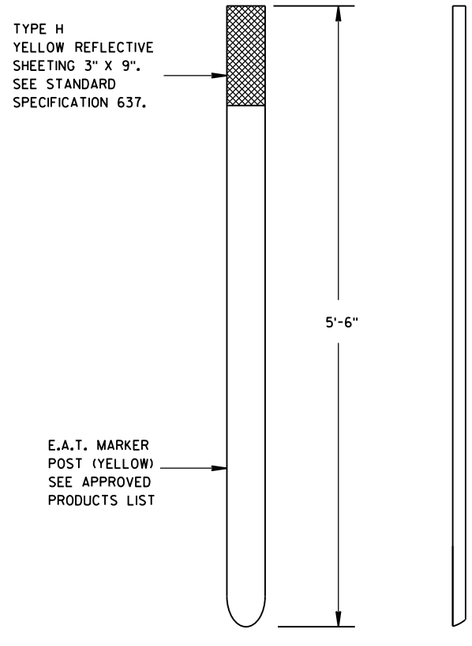
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ REFLECTIVE SHEETING DETAILS



E.A.T. MARKER POST

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERV...

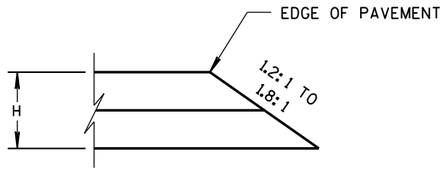
ENT

6

S.D.D. 14 B 24-9c

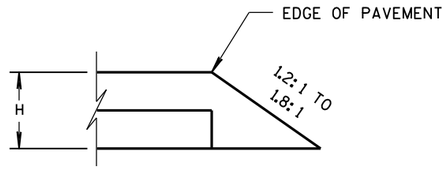
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S.D.D. 14 B 24-9c



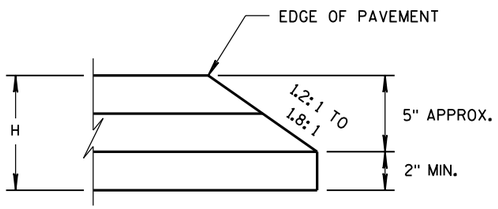
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



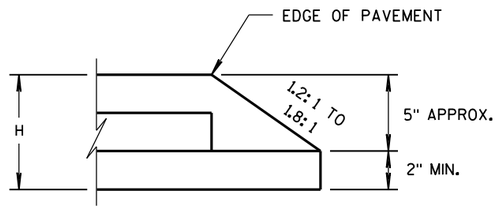
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

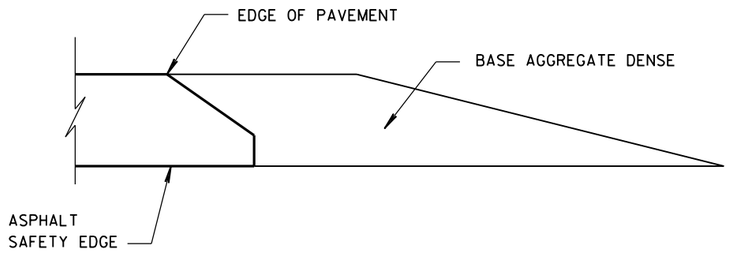
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

(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.

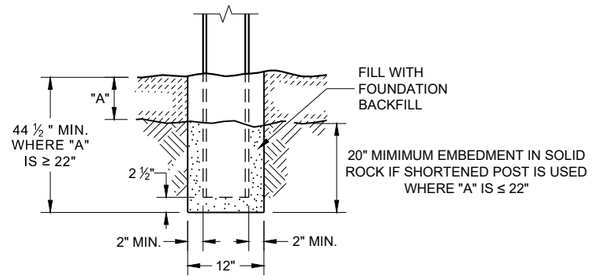
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL 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).

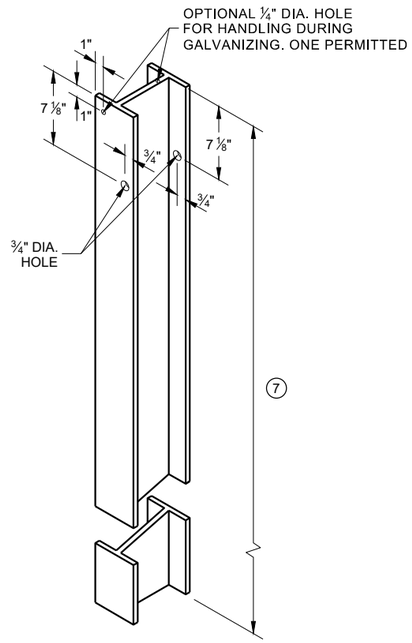
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

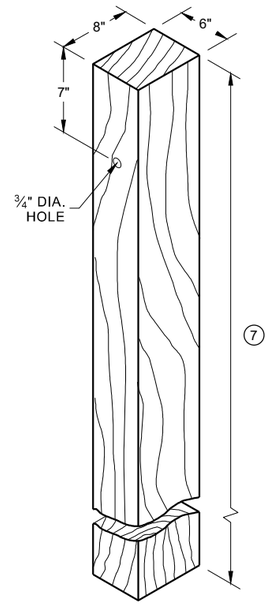
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



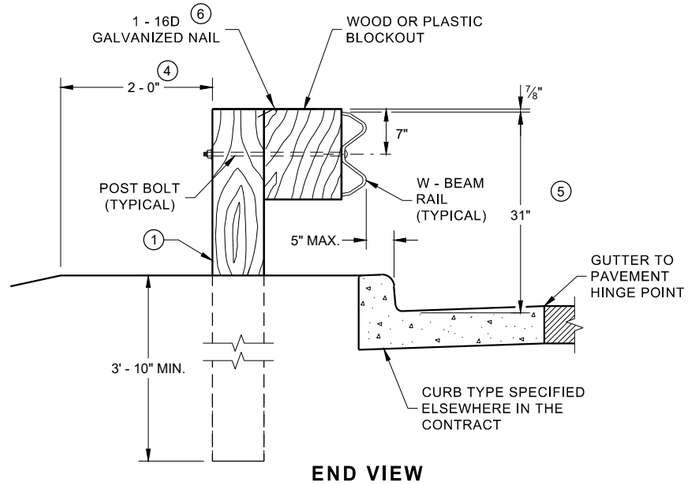
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



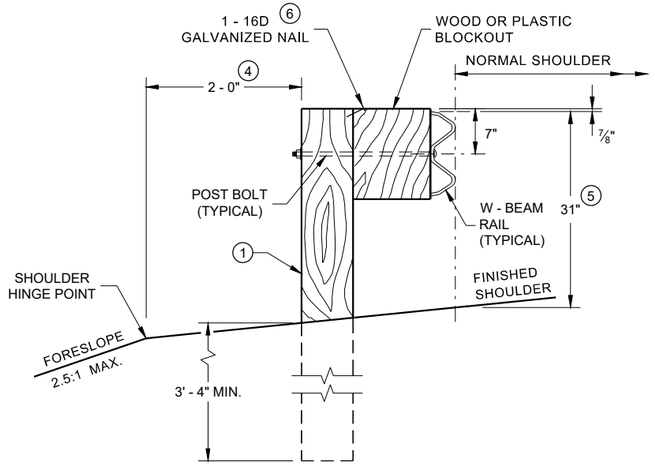
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



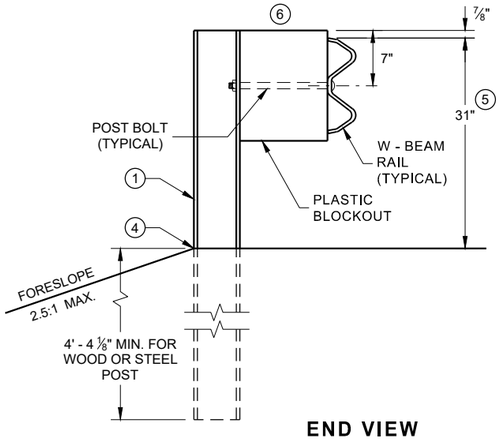
WOOD POST (6" X 8") NOMINAL (1)



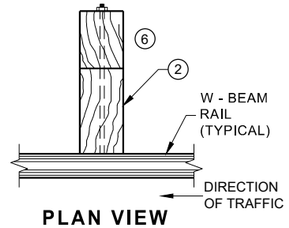
END VIEW
LOCATED ALONG A CURBED ROADWAY



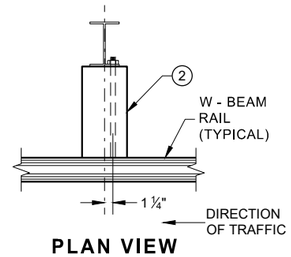
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



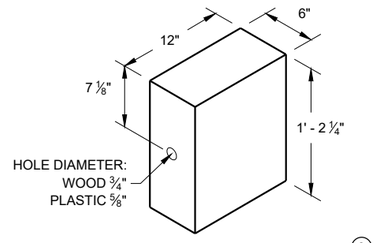
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

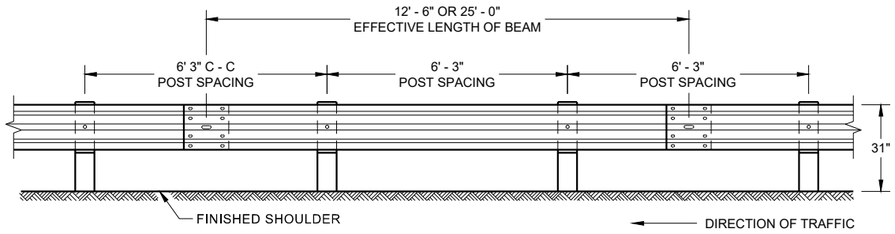
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

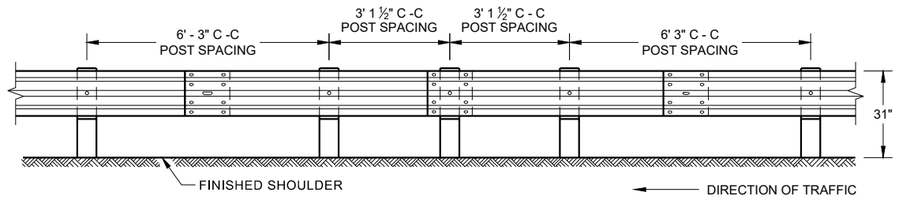
SDD 14B42 - 06a

6

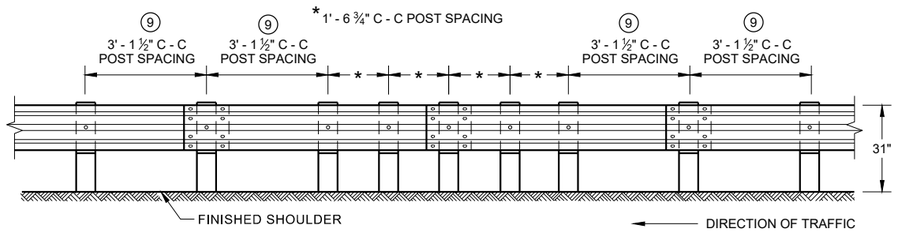
SDD 14B42 - 06a



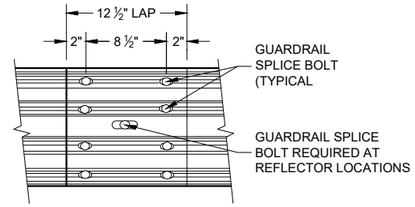
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

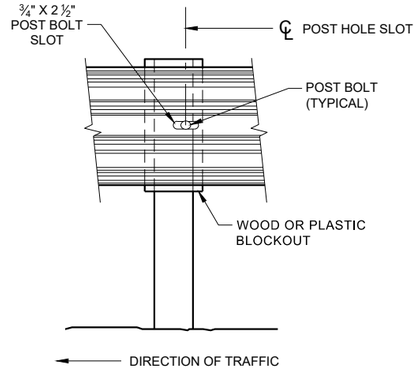
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

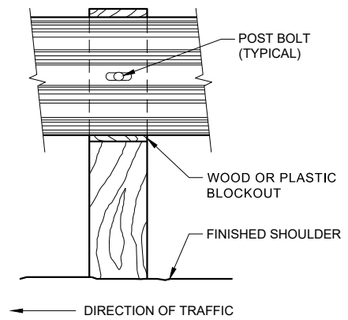
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

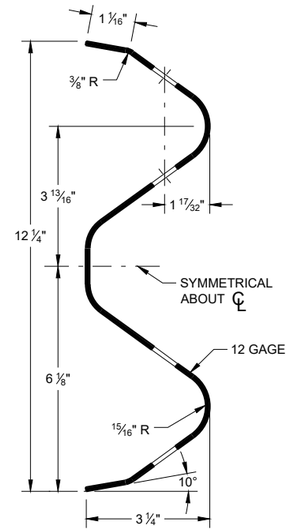
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



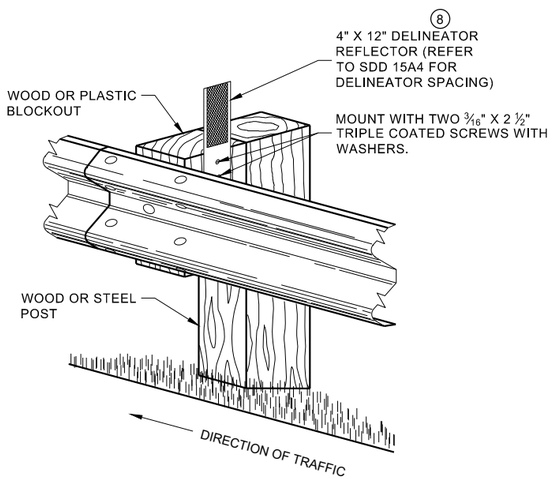
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



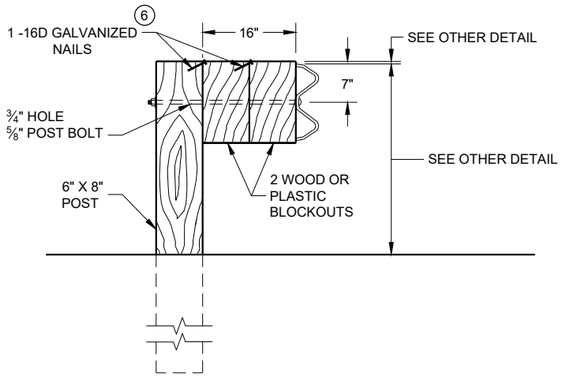
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 06b

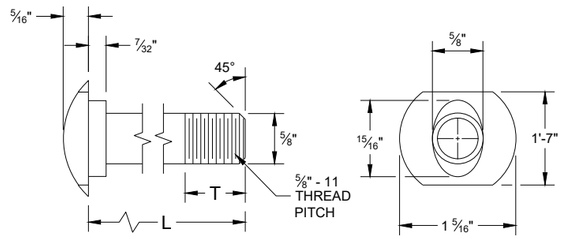


DETAIL FOR 16" BLOCKOUT DEPTH

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.

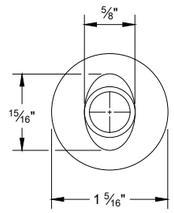
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

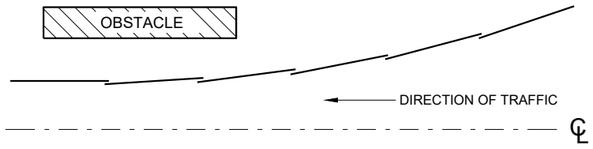


POST BOLT TABLE

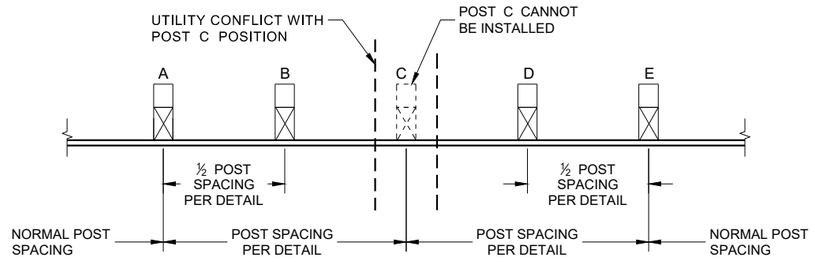
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



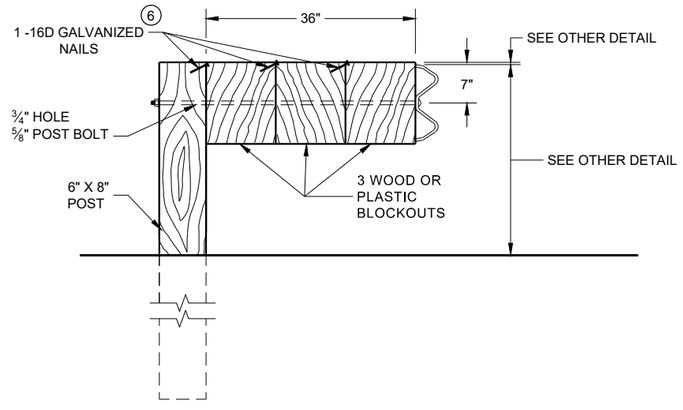
ALTERNATE BOLT HEAD



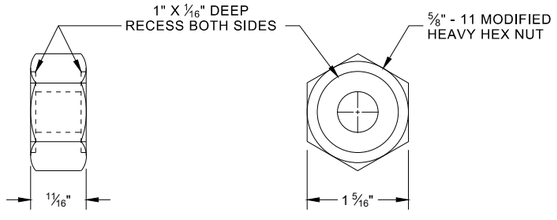
PLAN VIEW
BEAM LAPPING DETAIL



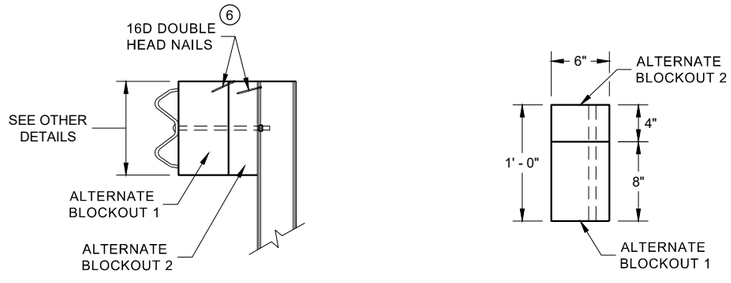
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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.

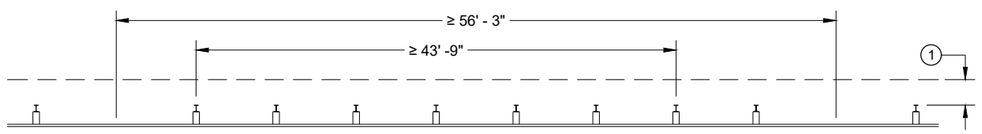
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(6) WHEN USING STEEL POST AD 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.

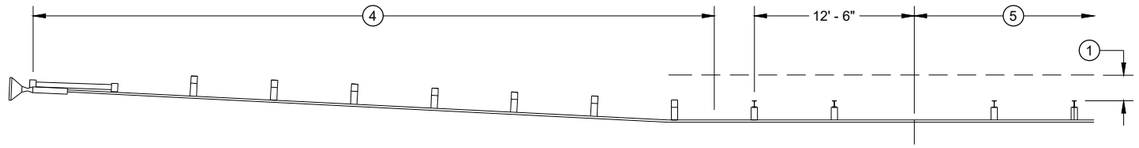
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

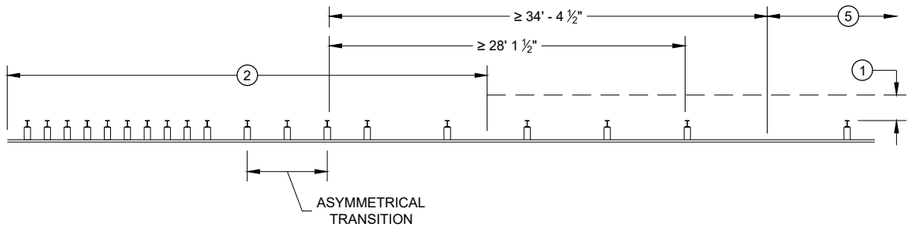
SDD 14B42 - 06c



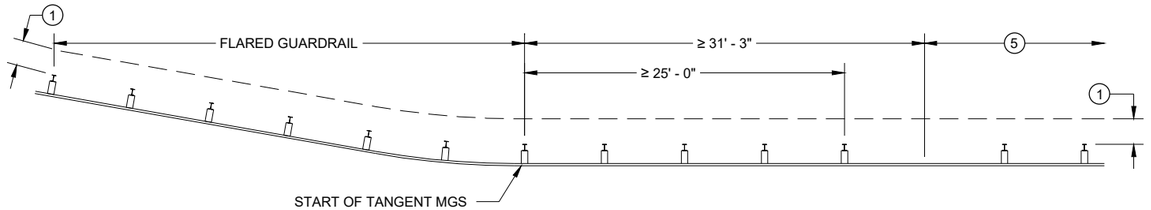
MISSING POST IN NORMAL BEAM GUARD RUN



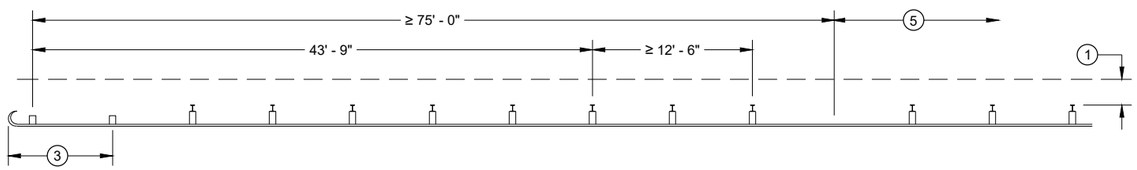
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



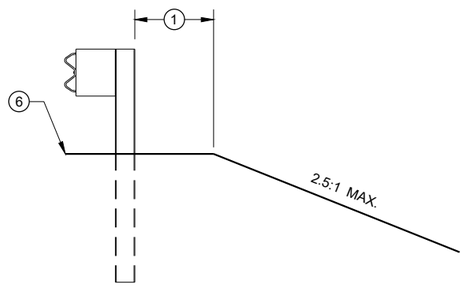
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

SDD 14B42 - 06d

SDD 14B42 - 06d

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 MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

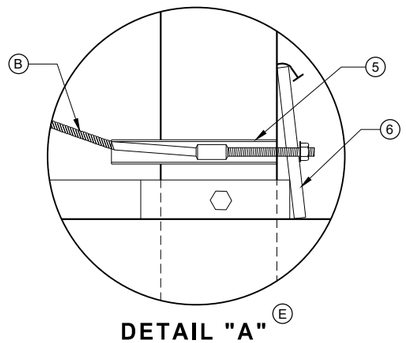
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

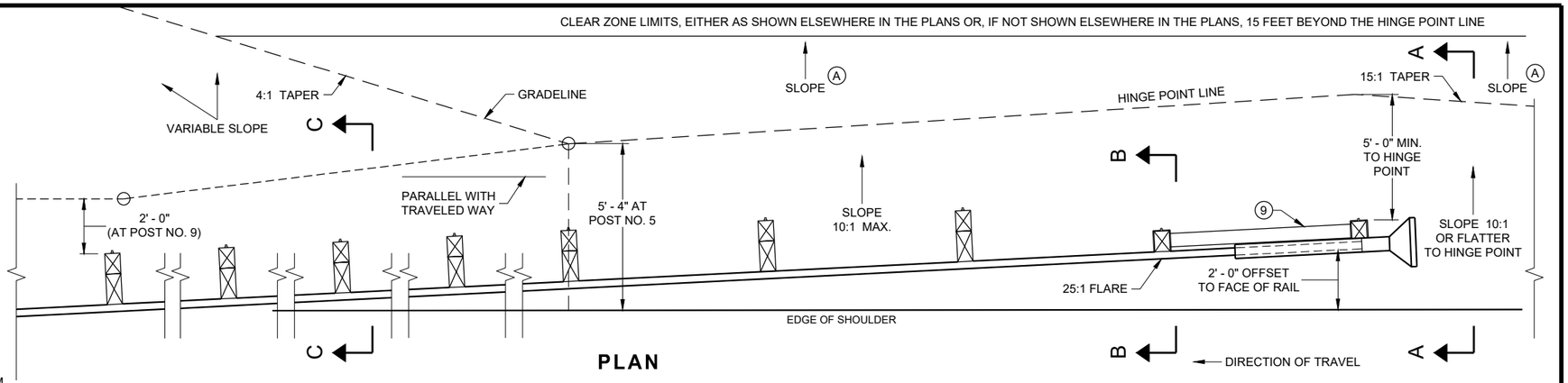
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

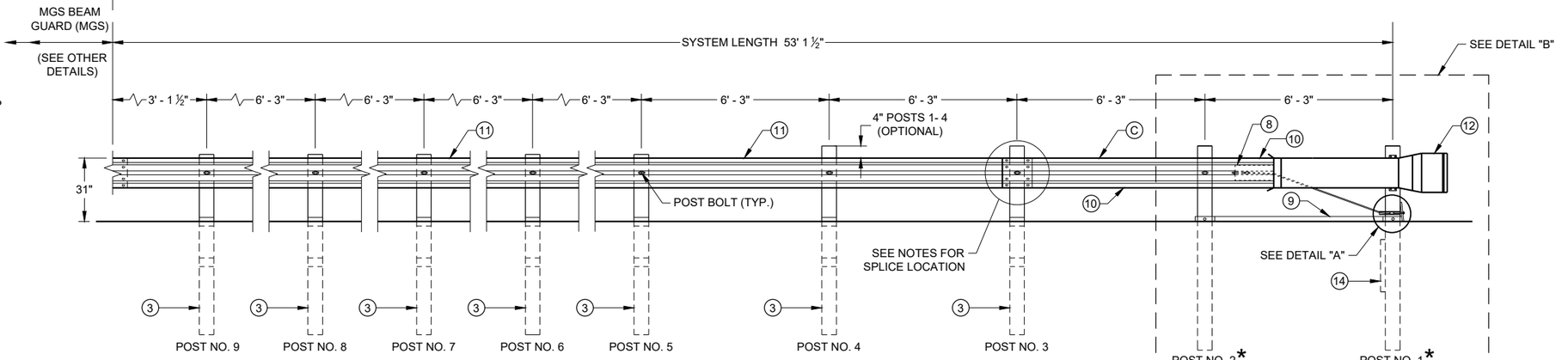
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



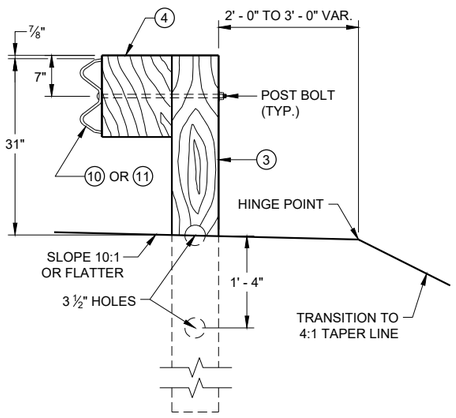
DETAIL "A" (E)



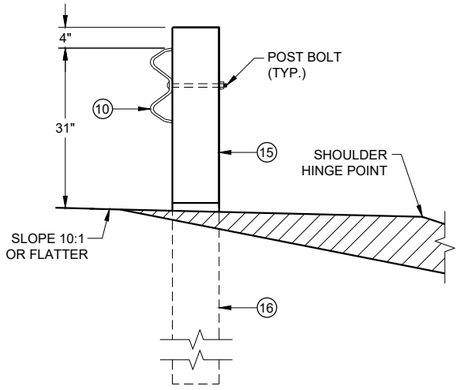
PLAN



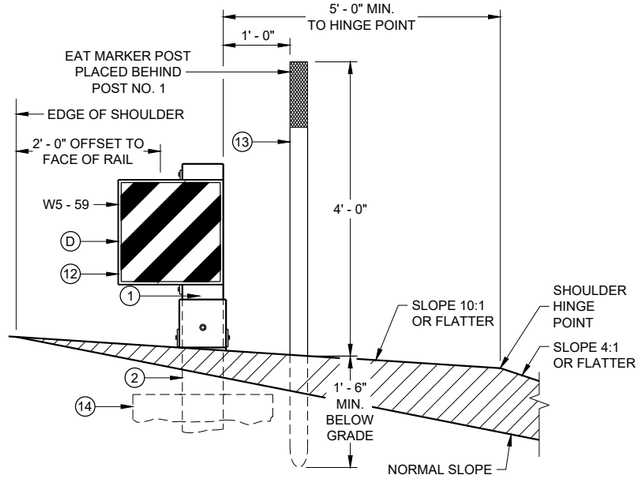
ELEVATION



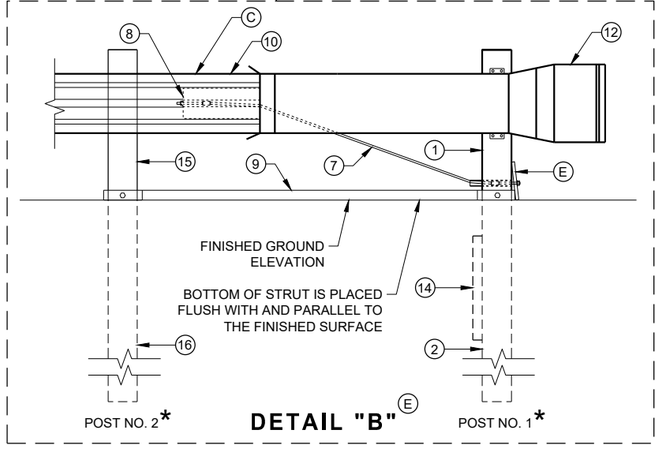
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



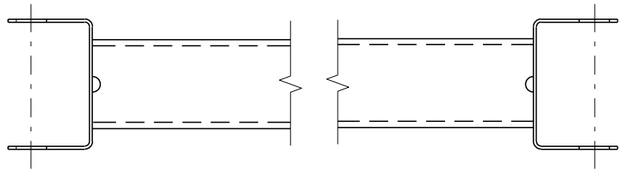
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

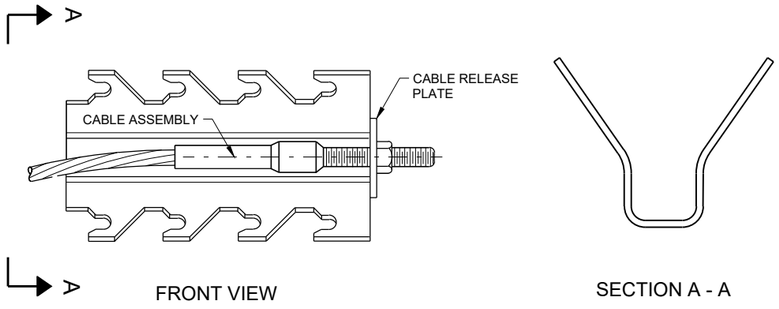
SDD 14B44 - 04a



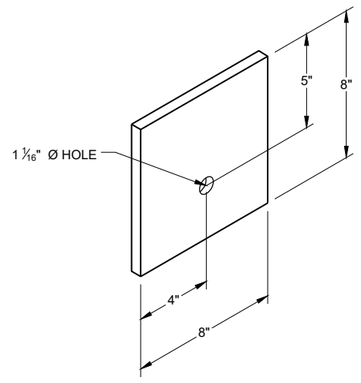
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
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	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

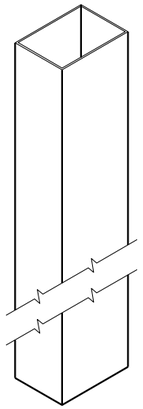
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SDD 14B44 - 04b

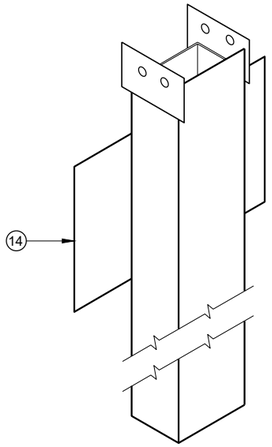
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

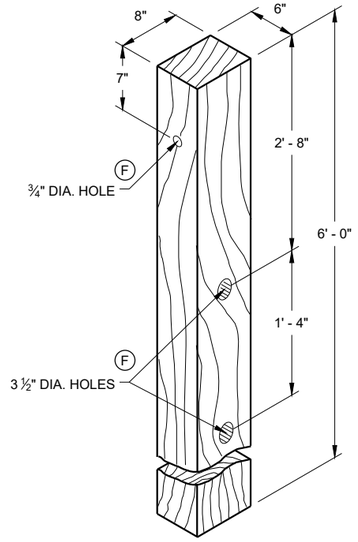
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA



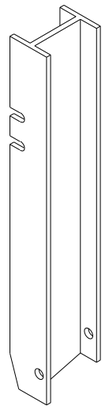
UPPER POST NO. 1 (1) (E)



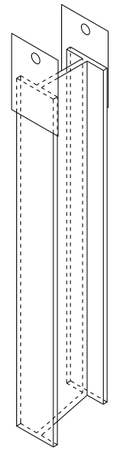
LOWER POST NO. 1 (2) (E)



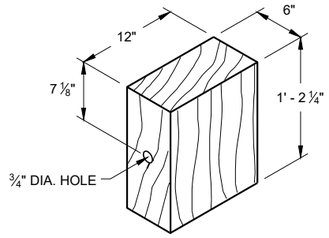
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



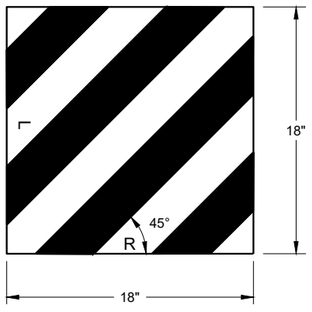
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

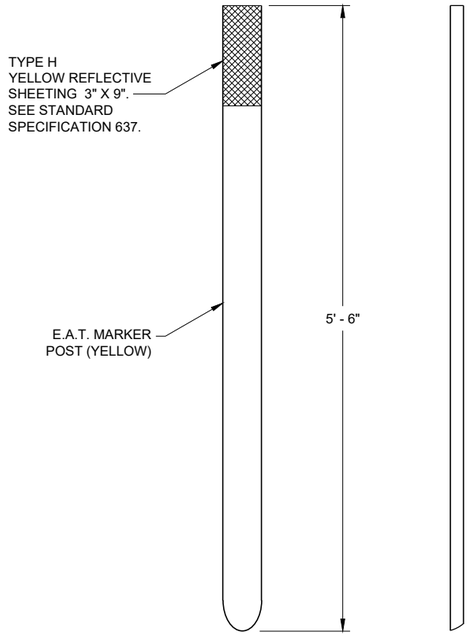


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



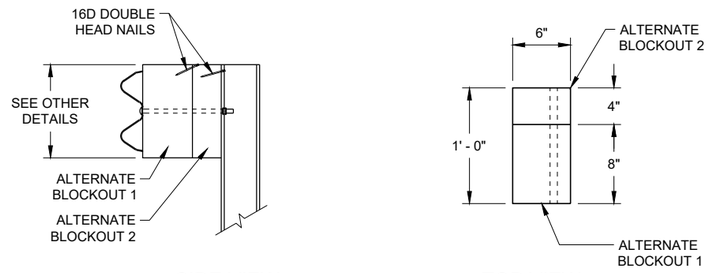
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

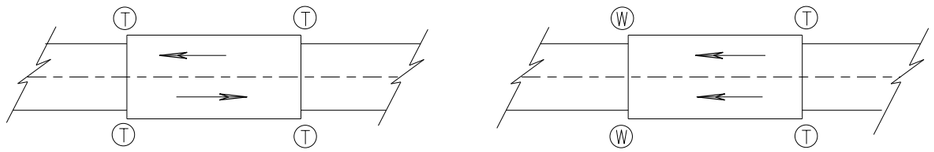
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

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SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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.

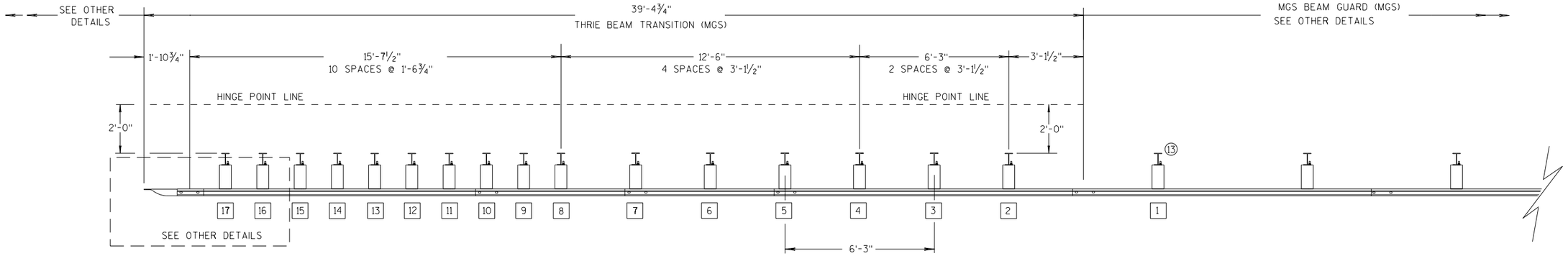
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

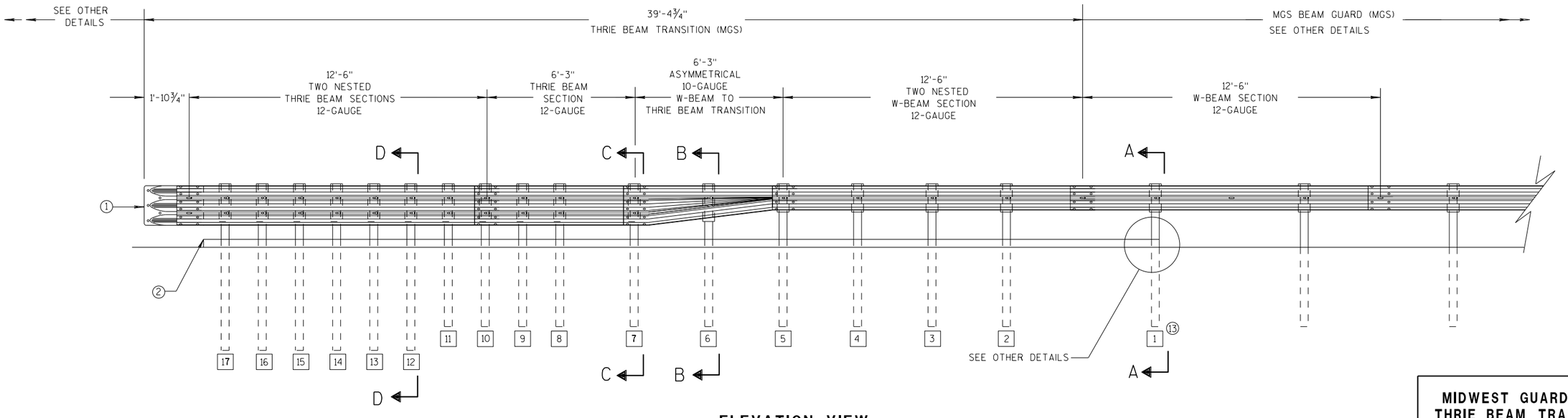
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 14 B 45-5a

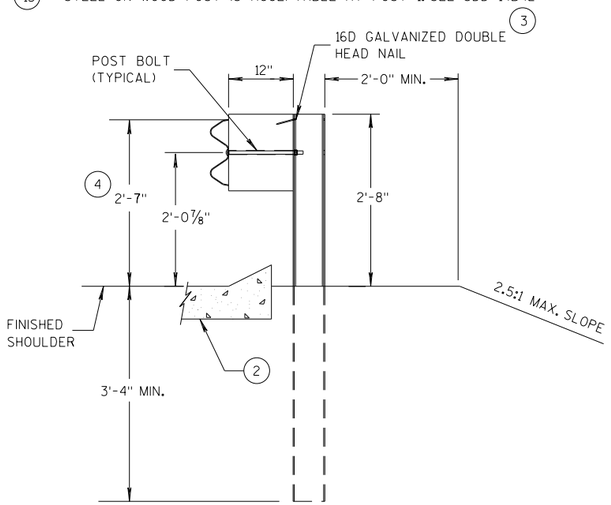
GENERAL NOTES

(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.

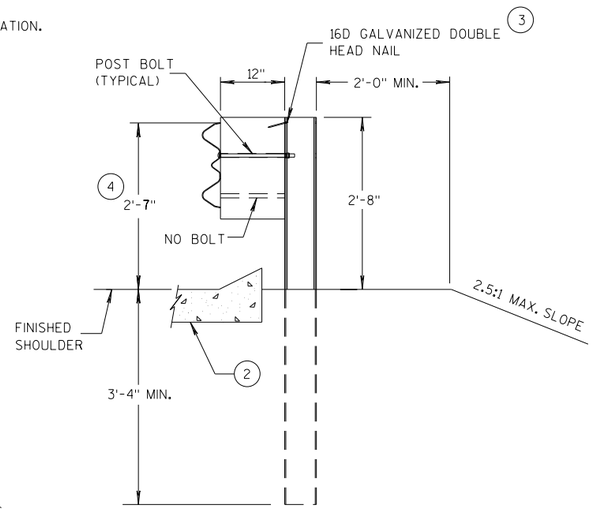
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



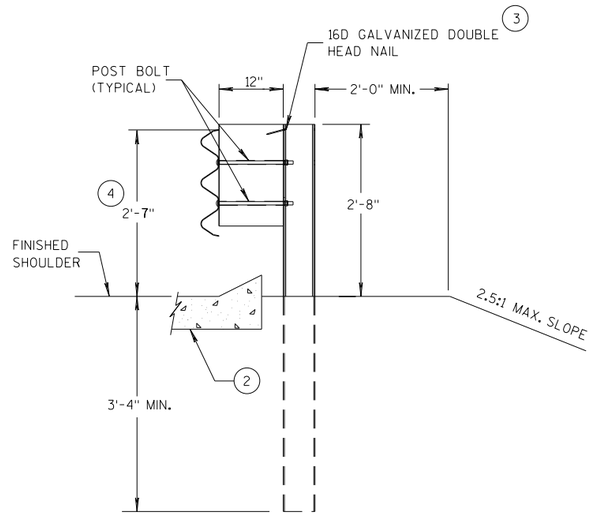
SECTION A-A (13)

POSTS 1-5



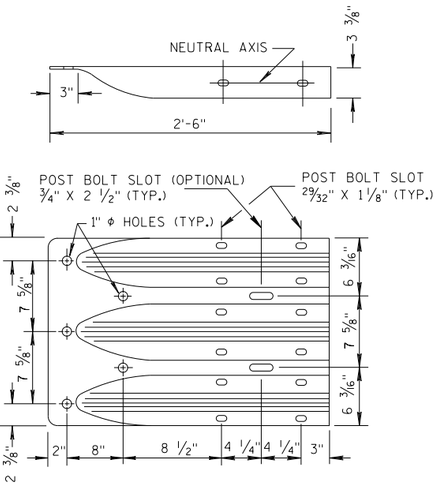
SECTION B-B

POST 6

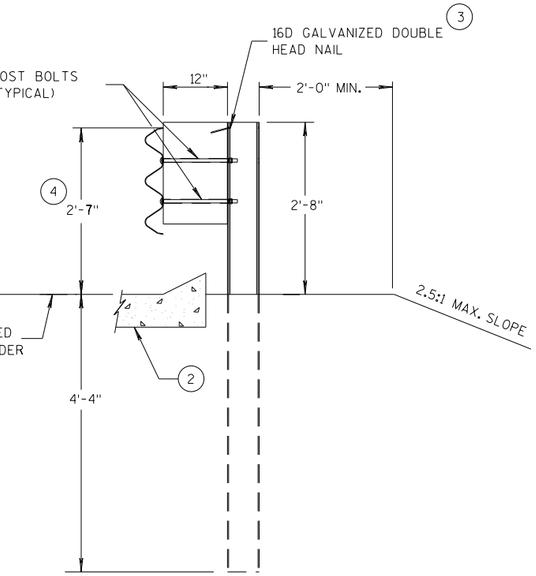


SECTION C-C

POSTS 7-11

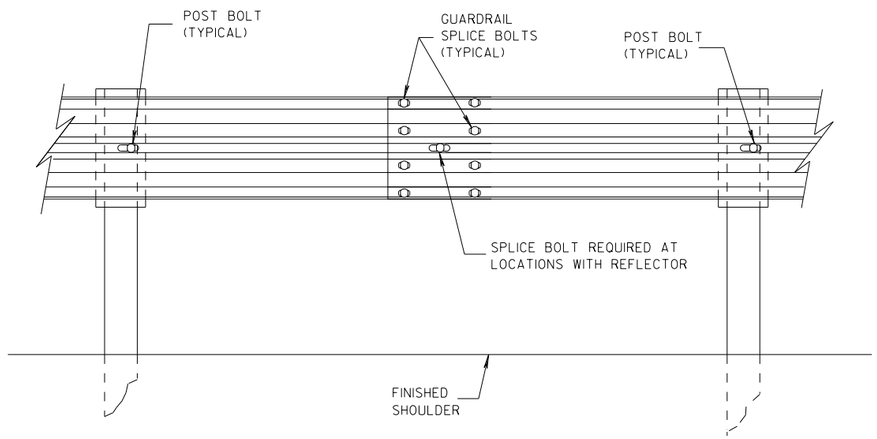


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

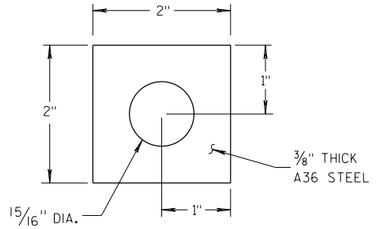
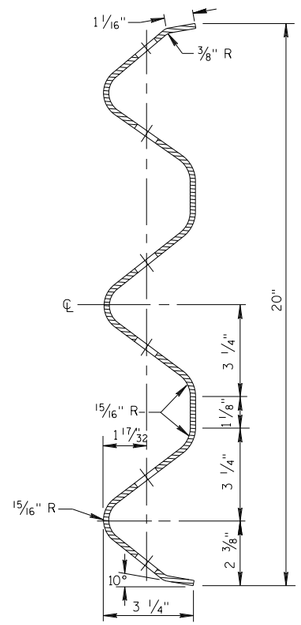


PLATE WASHER DETAIL



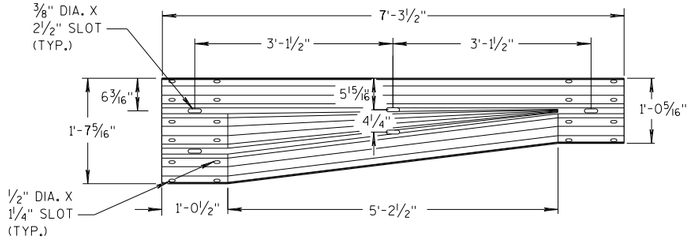
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

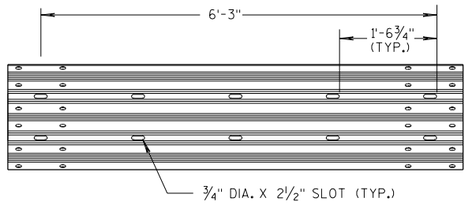
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

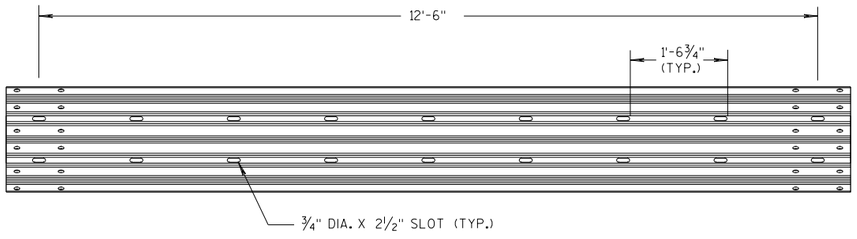
S.D.D. 14 B 45-5b



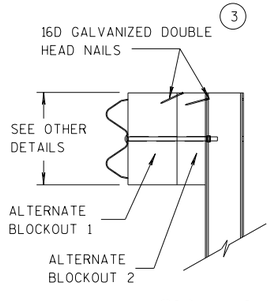
W-BEAM TO THRIE BEAM TRANSITION SECTION



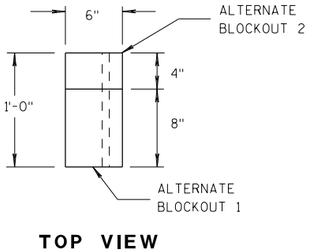
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

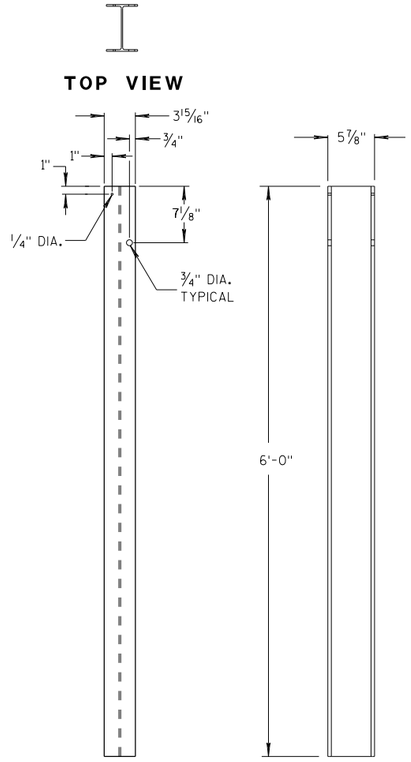


SIDE VIEW



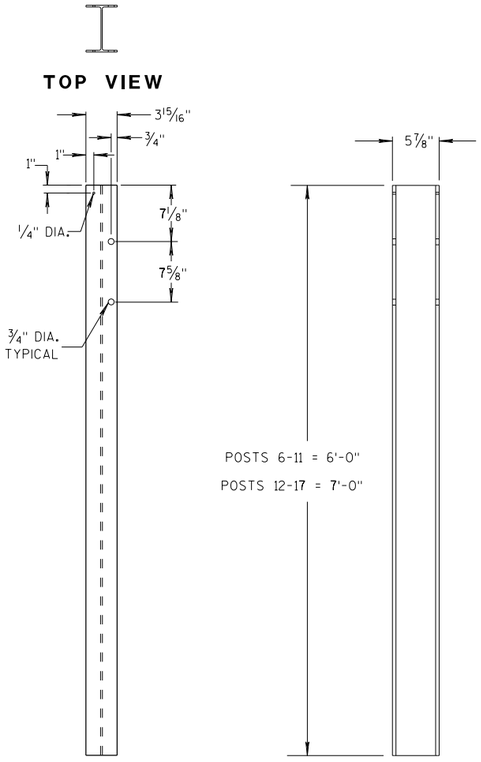
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



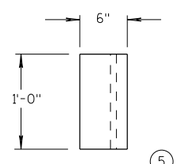
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

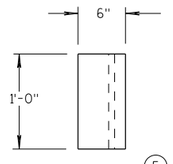


FRONT VIEW SIDE VIEW

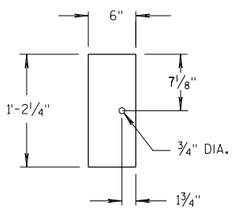
STEEL POSTS 6-17



TOP VIEW (5)

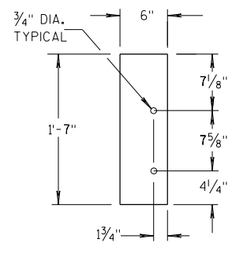


TOP VIEW (5)



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.

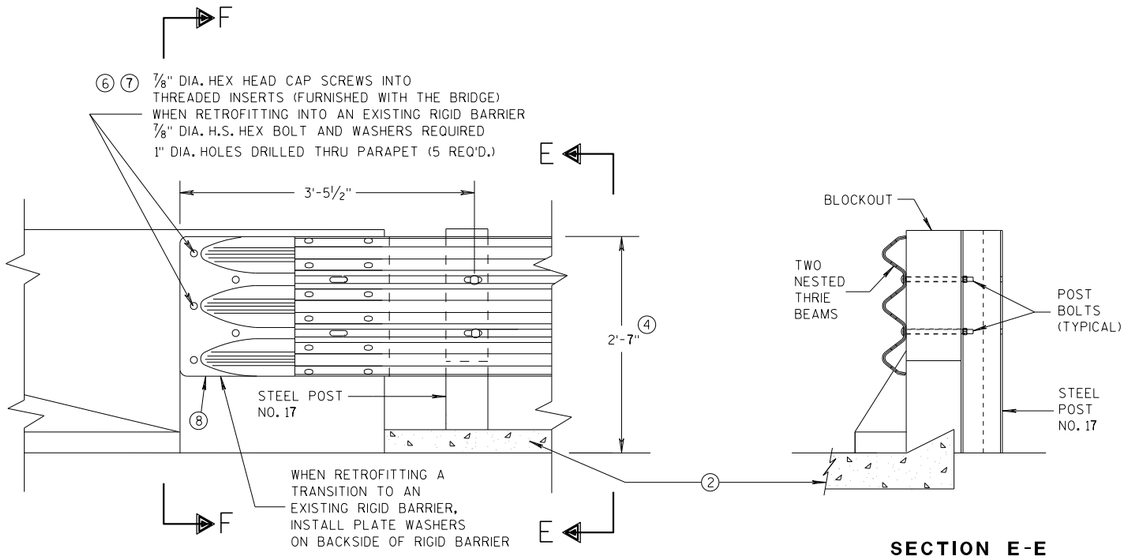
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

S.D.D. 14 B 45-5c



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.

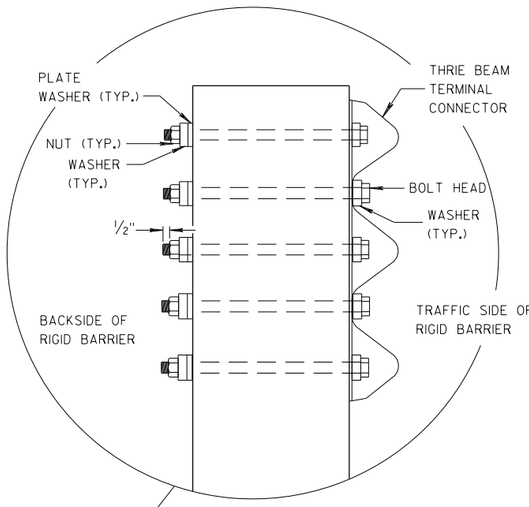
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

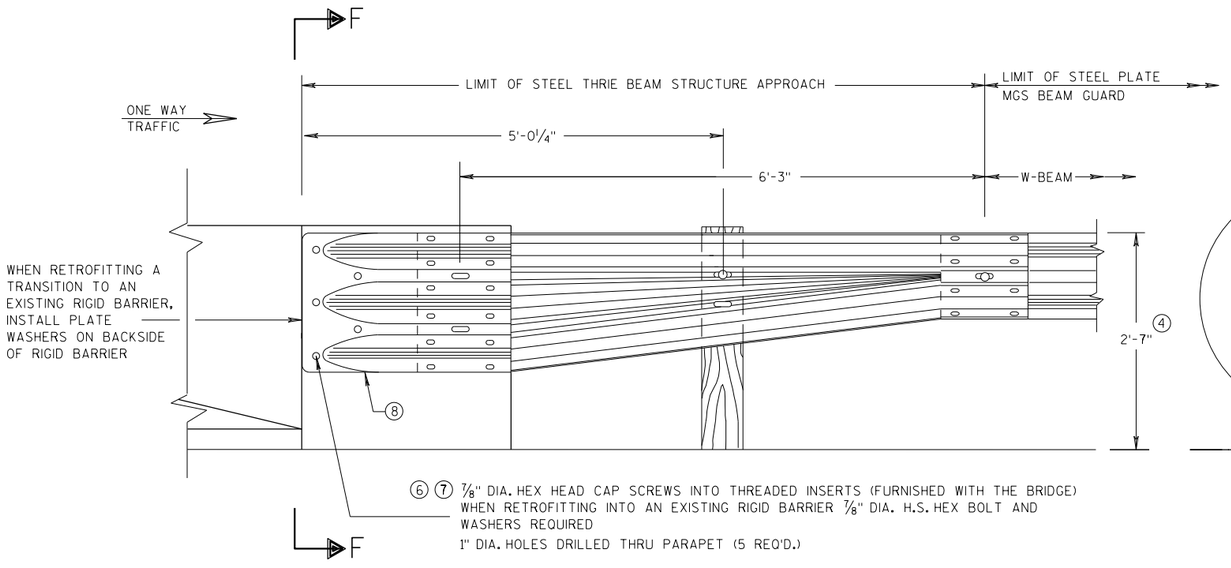
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

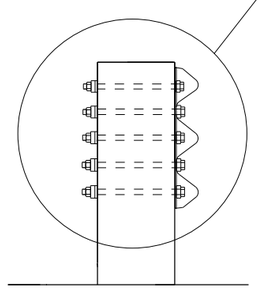
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" 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".

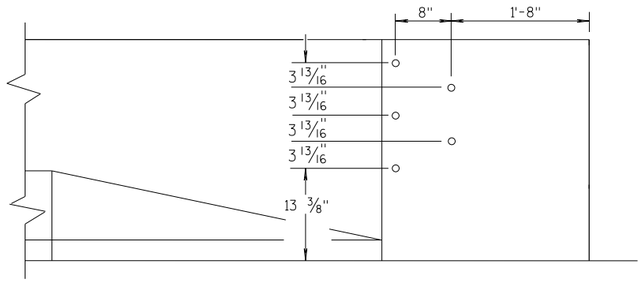




FRONT VIEW



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
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVI NT
FHWA

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S.D.D. 14 B 45-5d

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S.D.D. 14 B 45-5d

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.

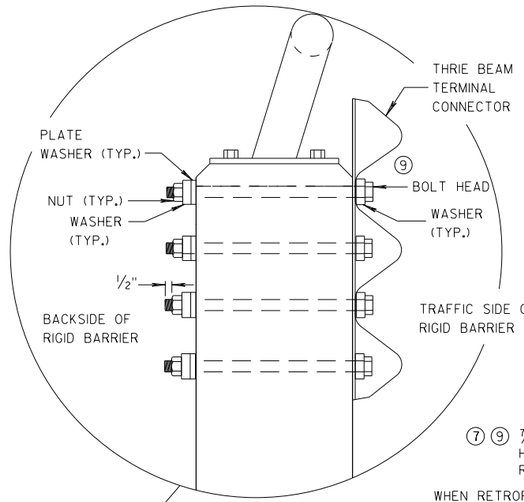
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

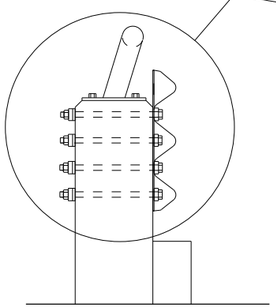
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

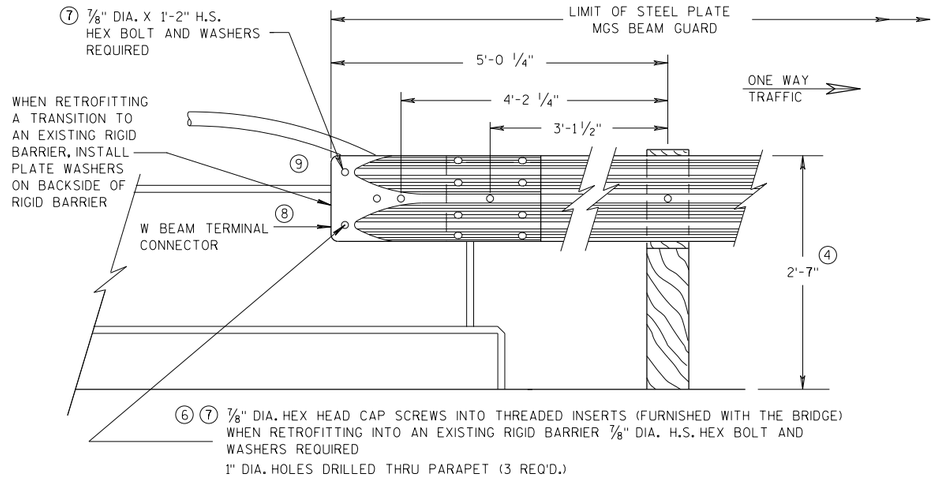
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(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.





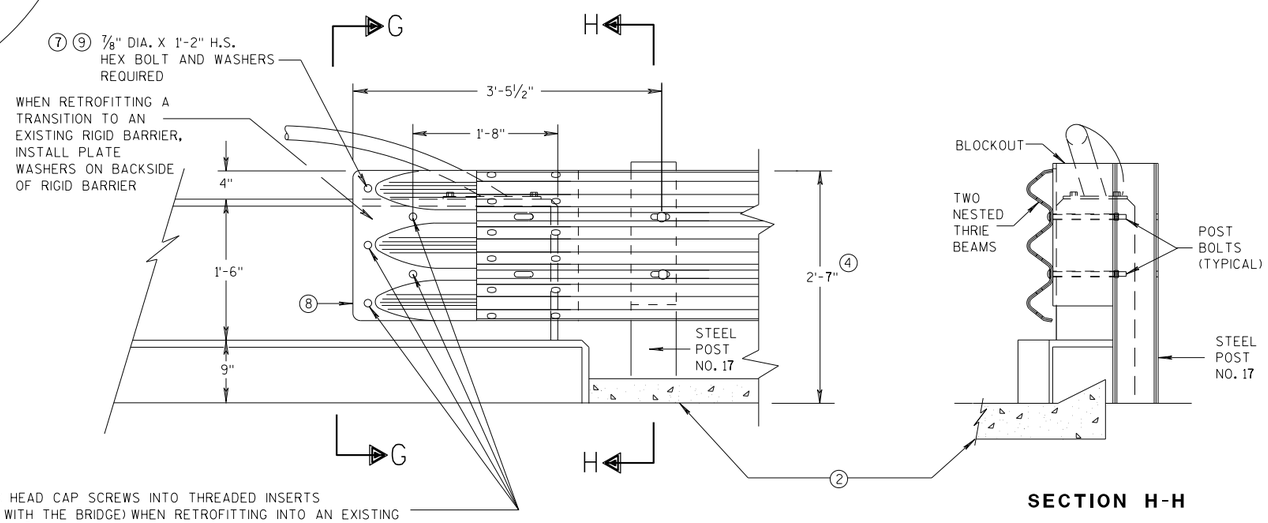
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

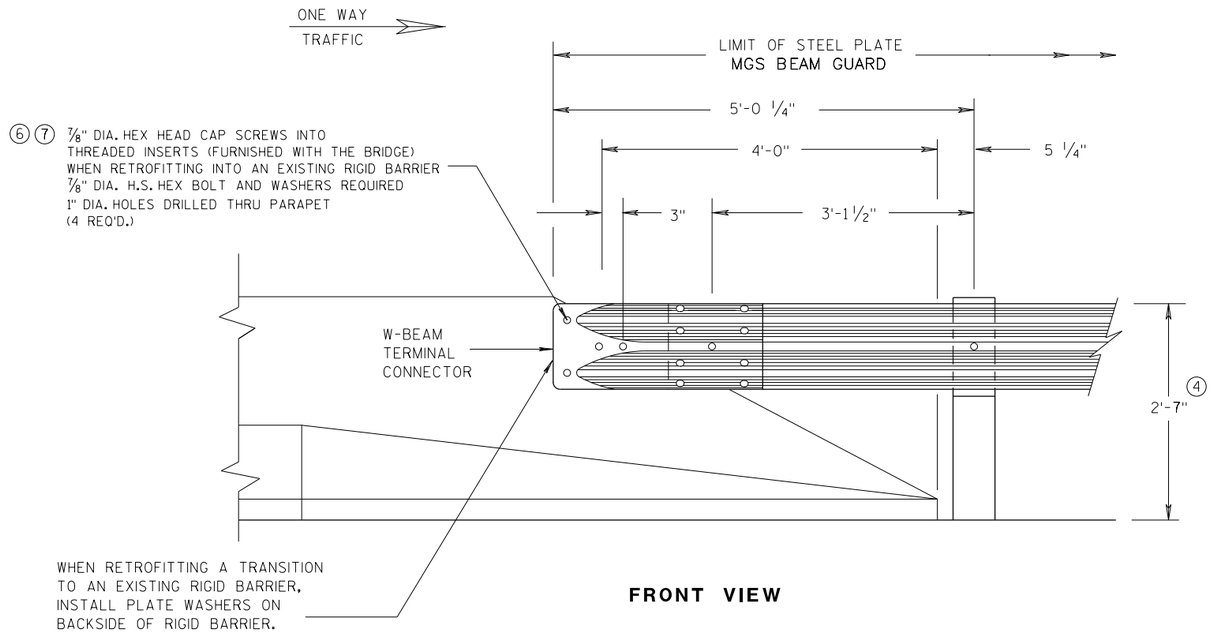
APPROVED
07/2018 — DATE
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FHWA

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S.D.D. 14 B 45-5e

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S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

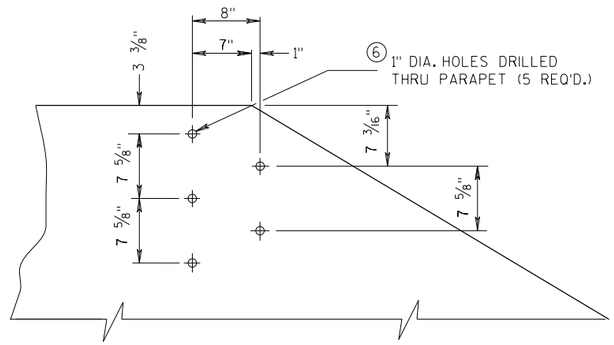
GENERAL NOTES

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

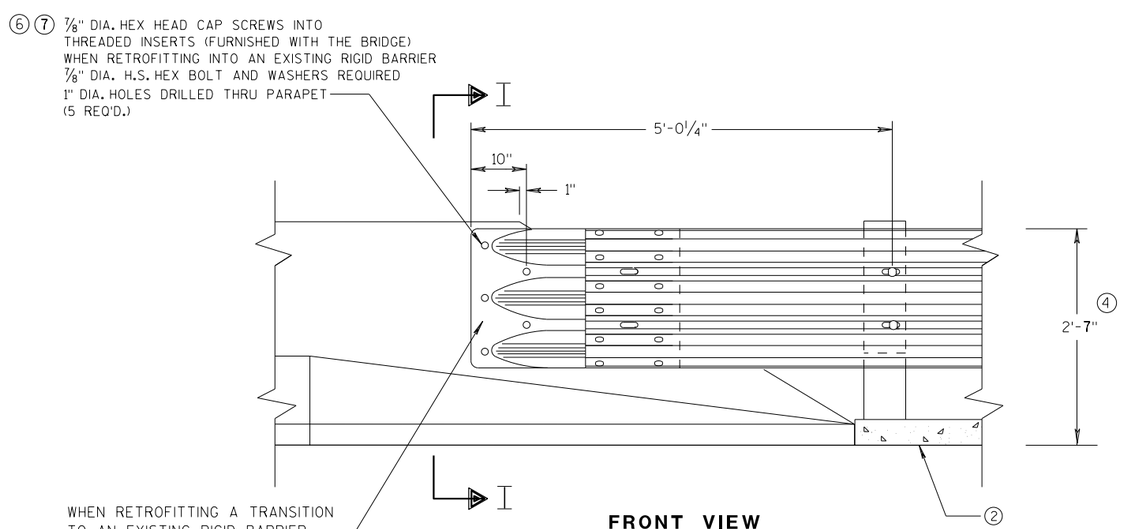
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

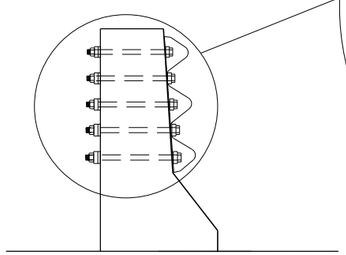
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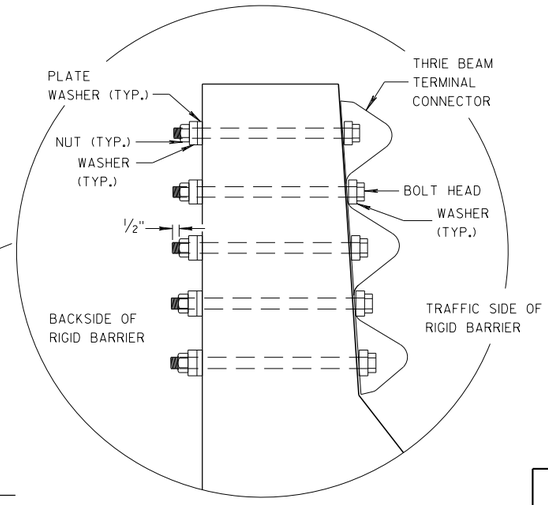
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

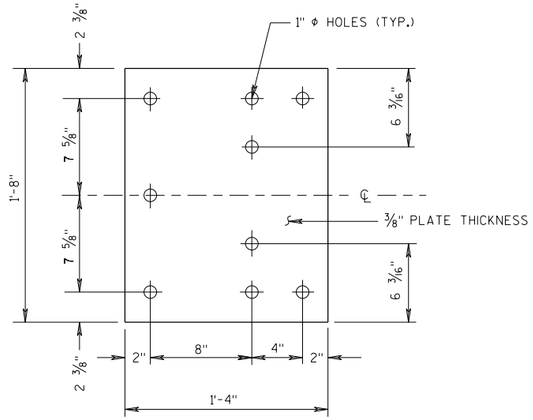
APPROVED
07/2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

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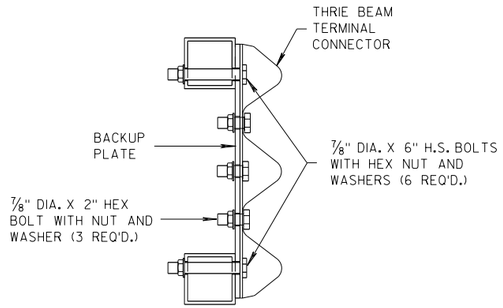
S.D.D. 14 B 45-5f

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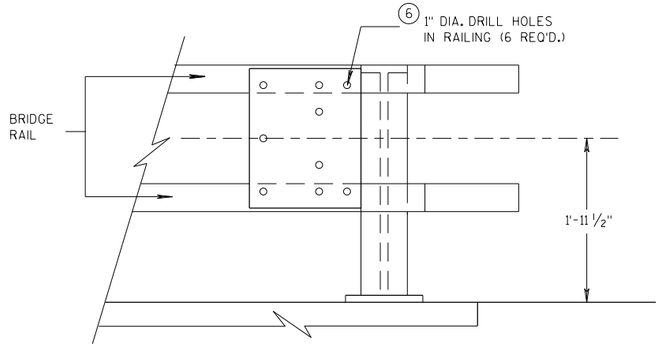
S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL



SECTION J-J

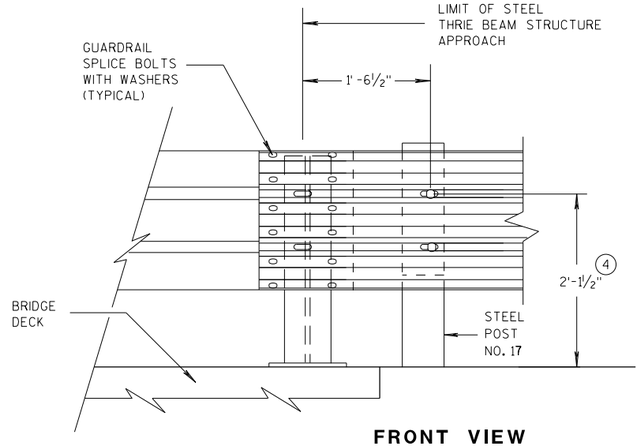


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

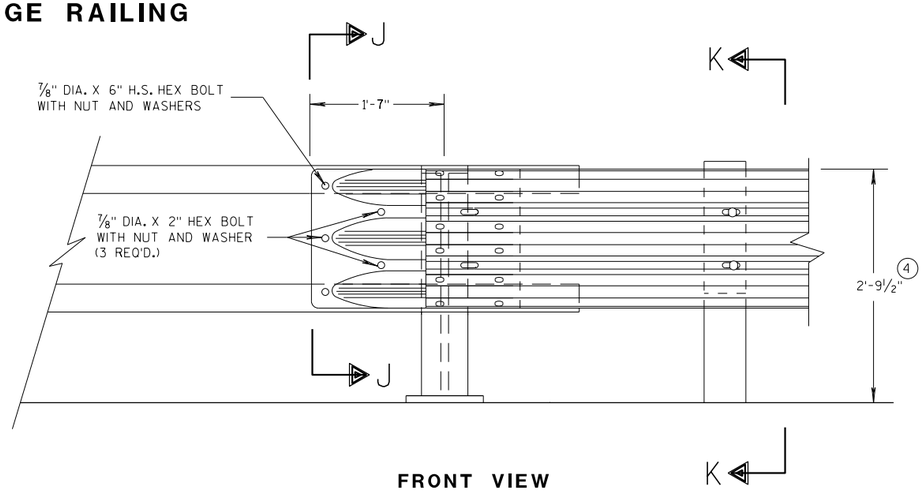
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

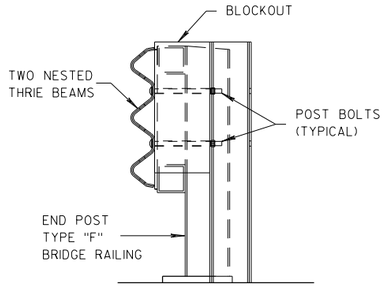


FRONT VIEW

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)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE — FHWA

/S/ Rodney Taylor 120
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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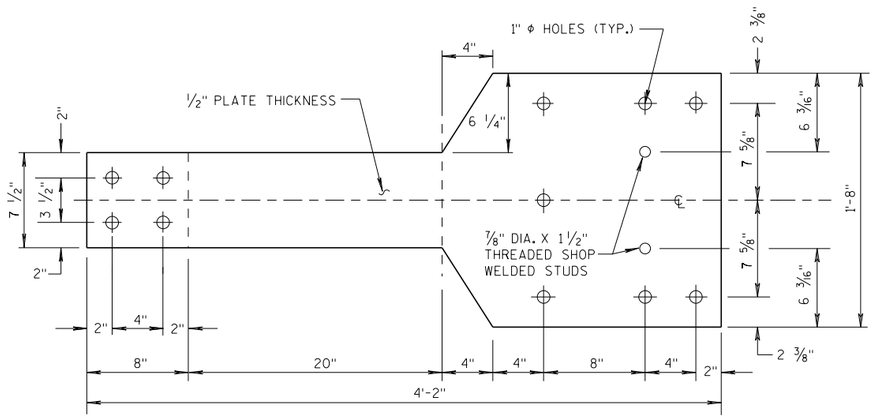
S.D.D. 14 B 45-5g

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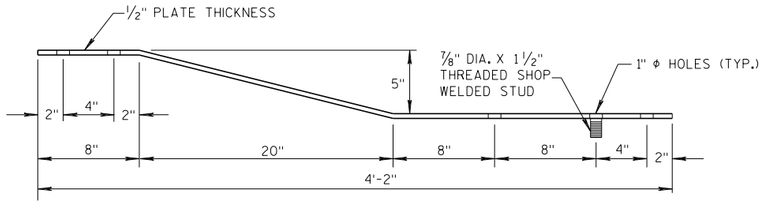
S.D.D. 14 B 45-5g

GENERAL NOTES

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

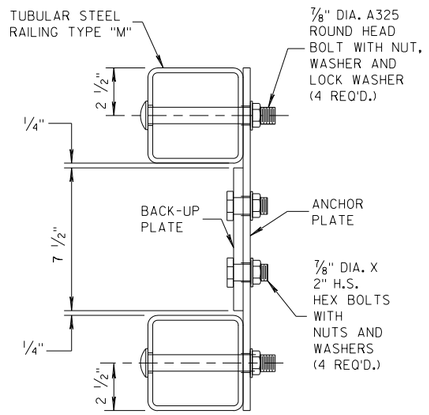


FRONT VIEW

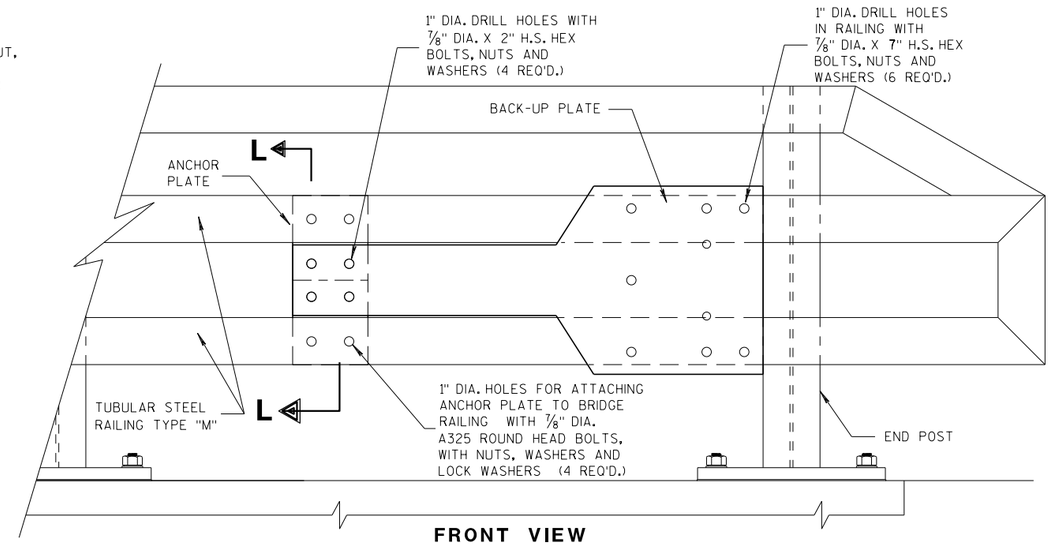


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

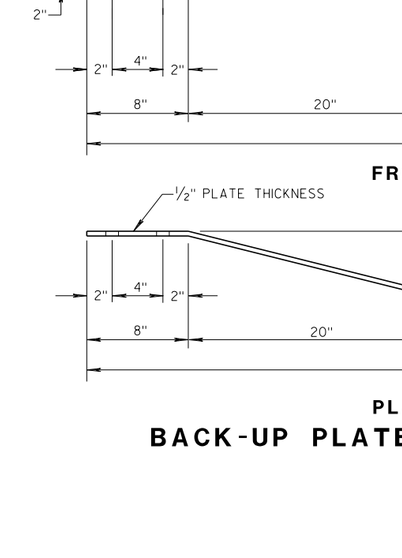


SECTION L-L



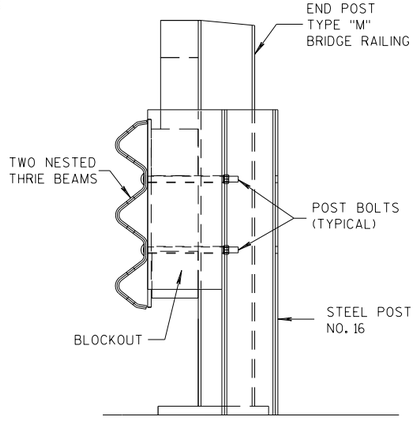
FRONT VIEW

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

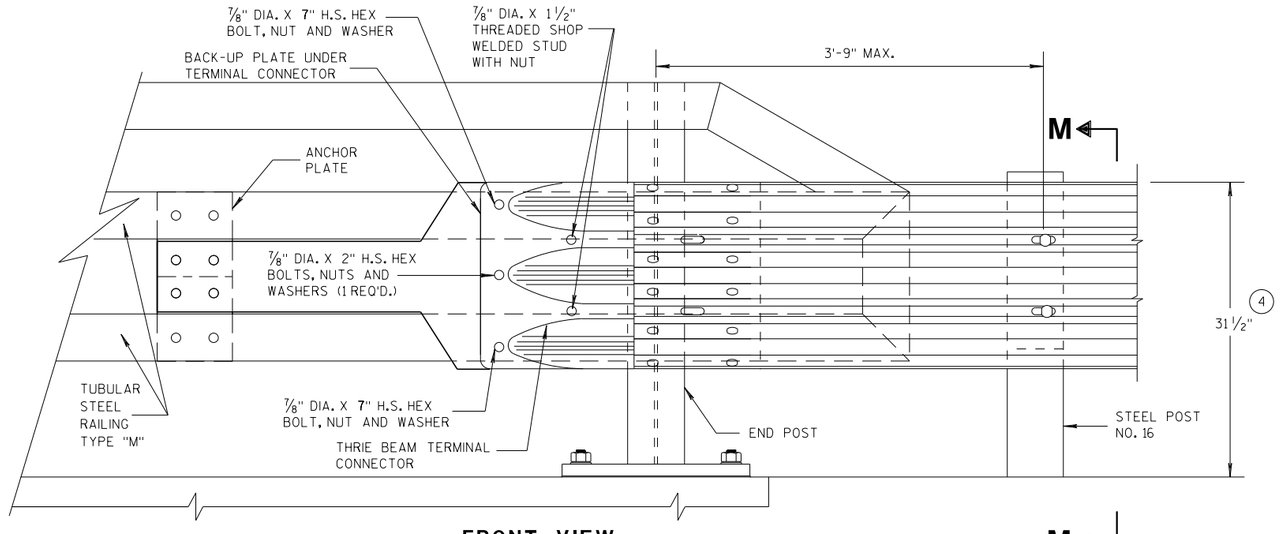


FRONT VIEW

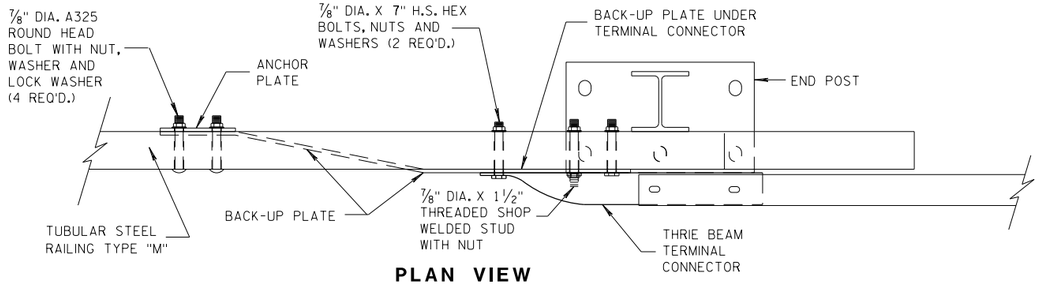
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

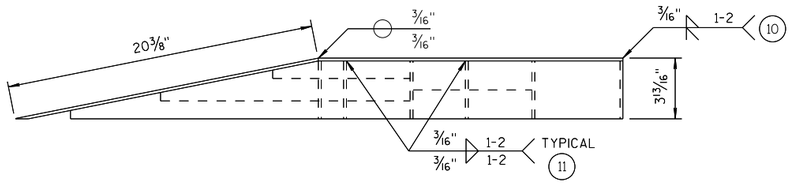
APPROVED
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/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

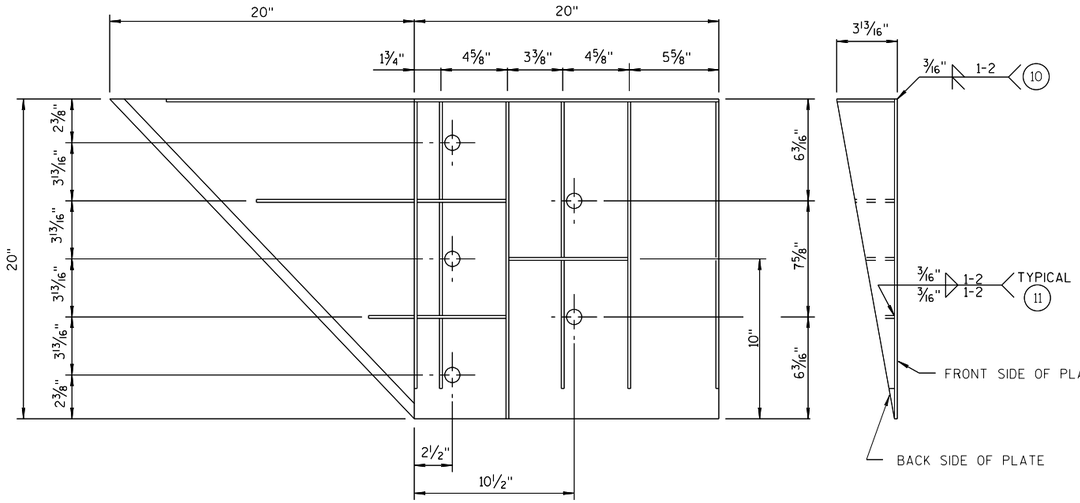
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S.D.D. 14 B 45-5h

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S.D.D. 14 B 45-5h





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

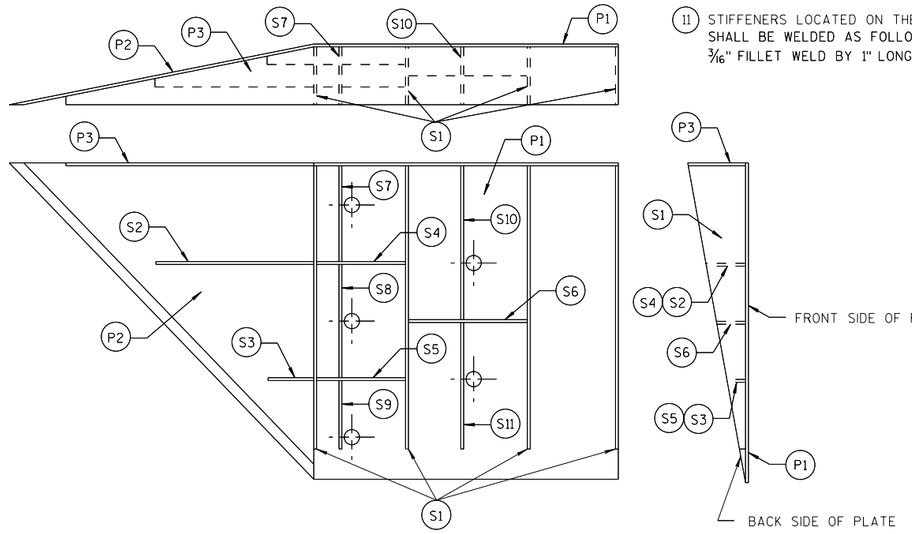


PLATE AND STIFFENER IDENTIFICATION

(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 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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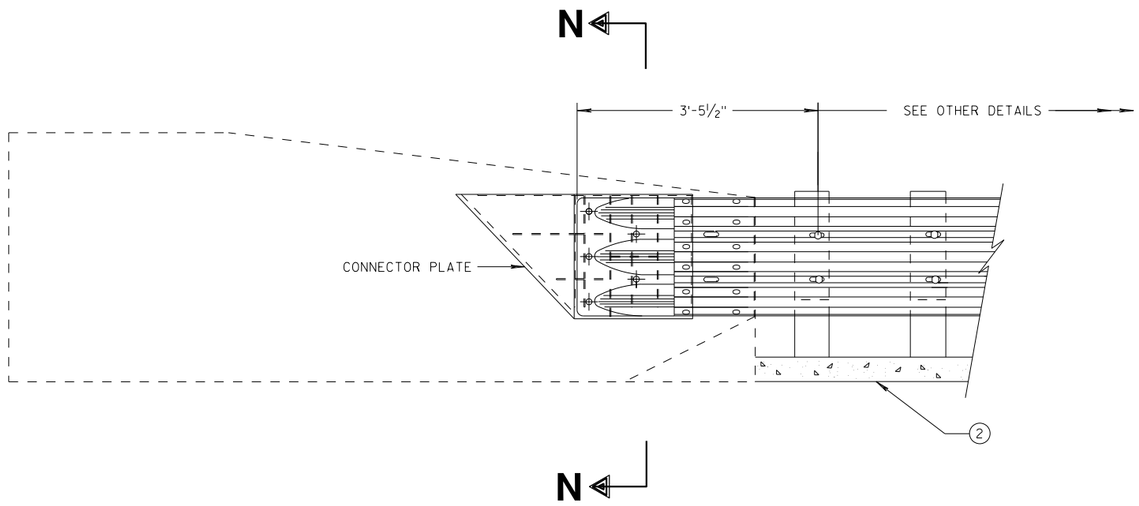
/S/ Rodney Taylor
ROADWAY STANDARDS I
UNIT SUPERVI

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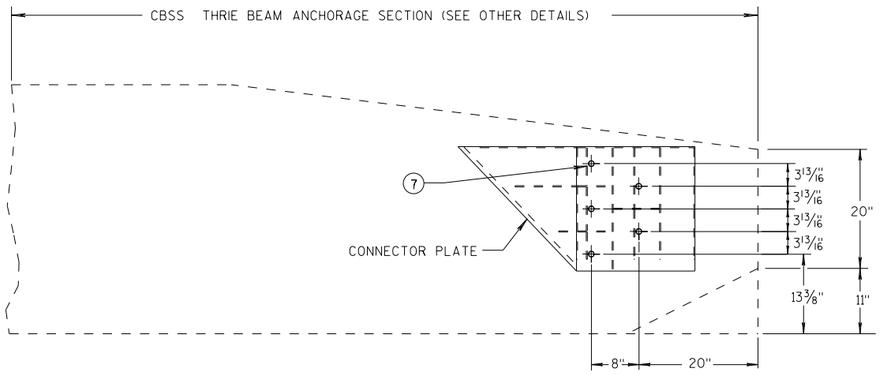
S.D.D. 14 B 45-5i

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S.D.D. 14 B 45-5i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



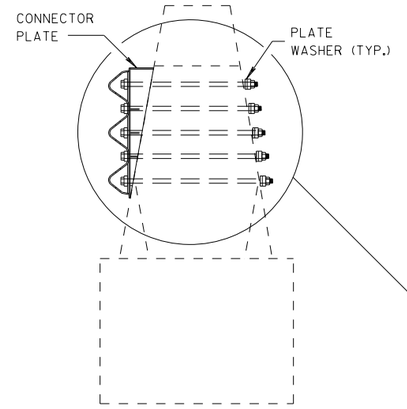
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

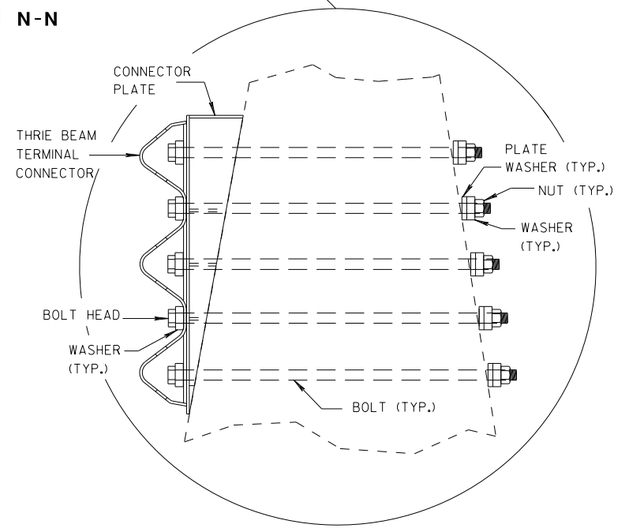
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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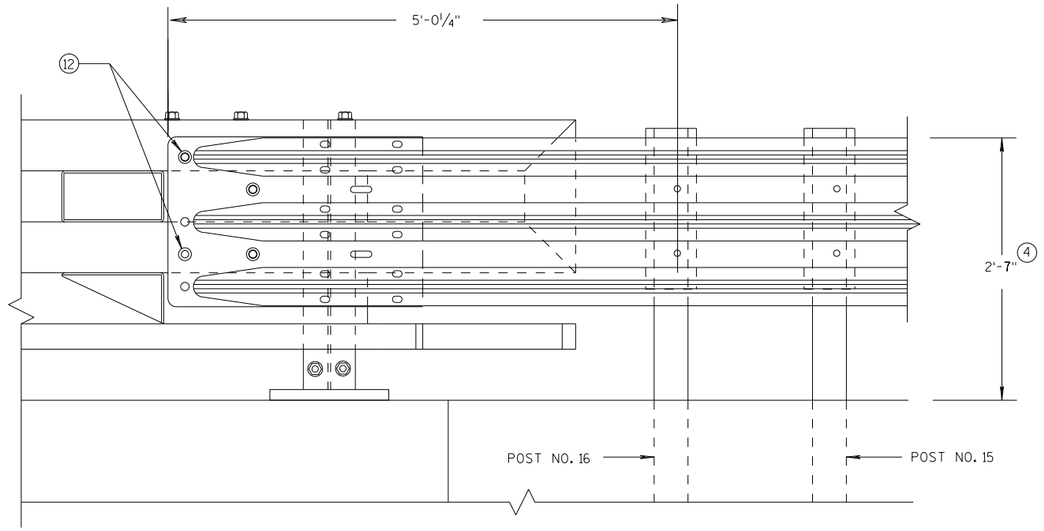
/S/ Rodney Taylor
ROADWAY STANDARDS DI
UNIT SUPERVIS

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S.D.D. 14 B 45-5j

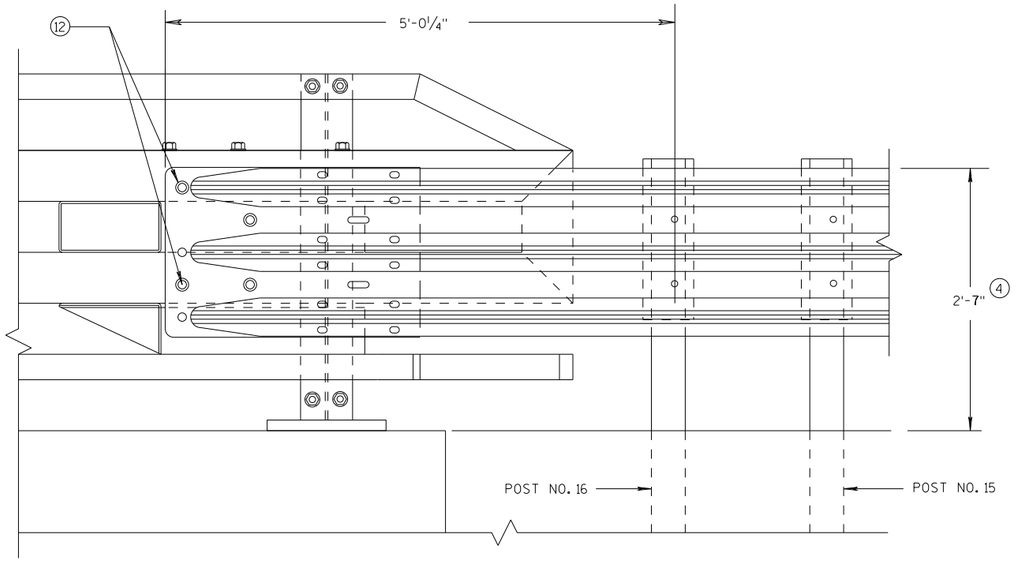
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S.D.D. 14 B 45-5j



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 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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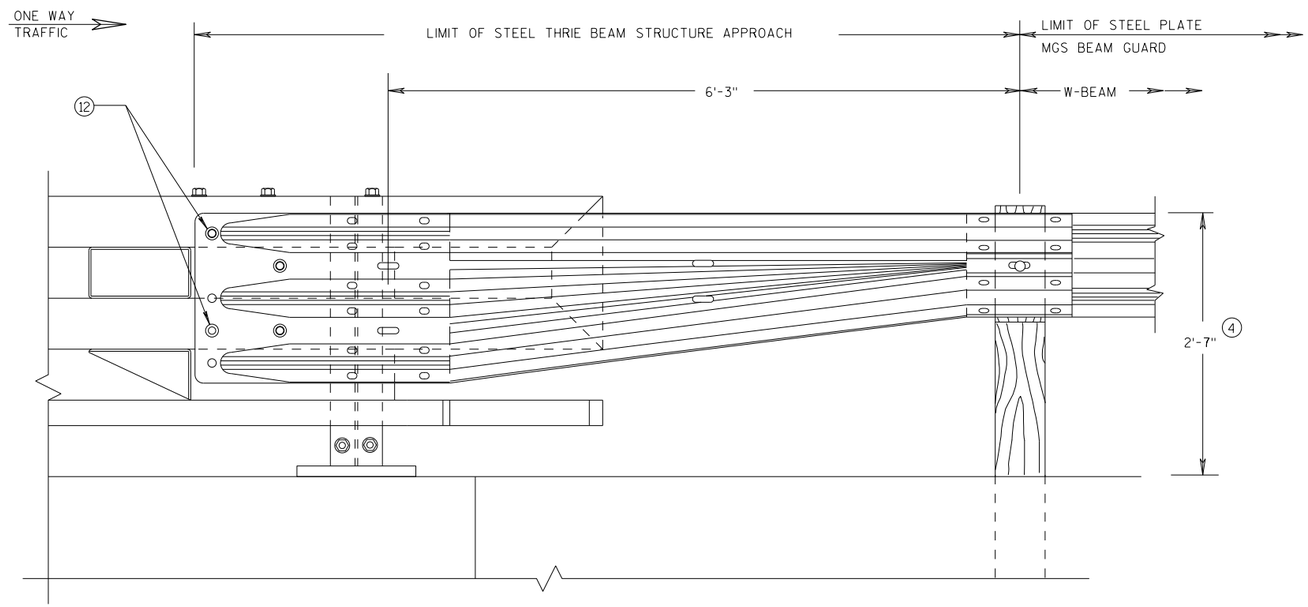
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S.D.D. 14 B 45-5k

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S.D.D. 14 B 45-5k



FRONT VIEW

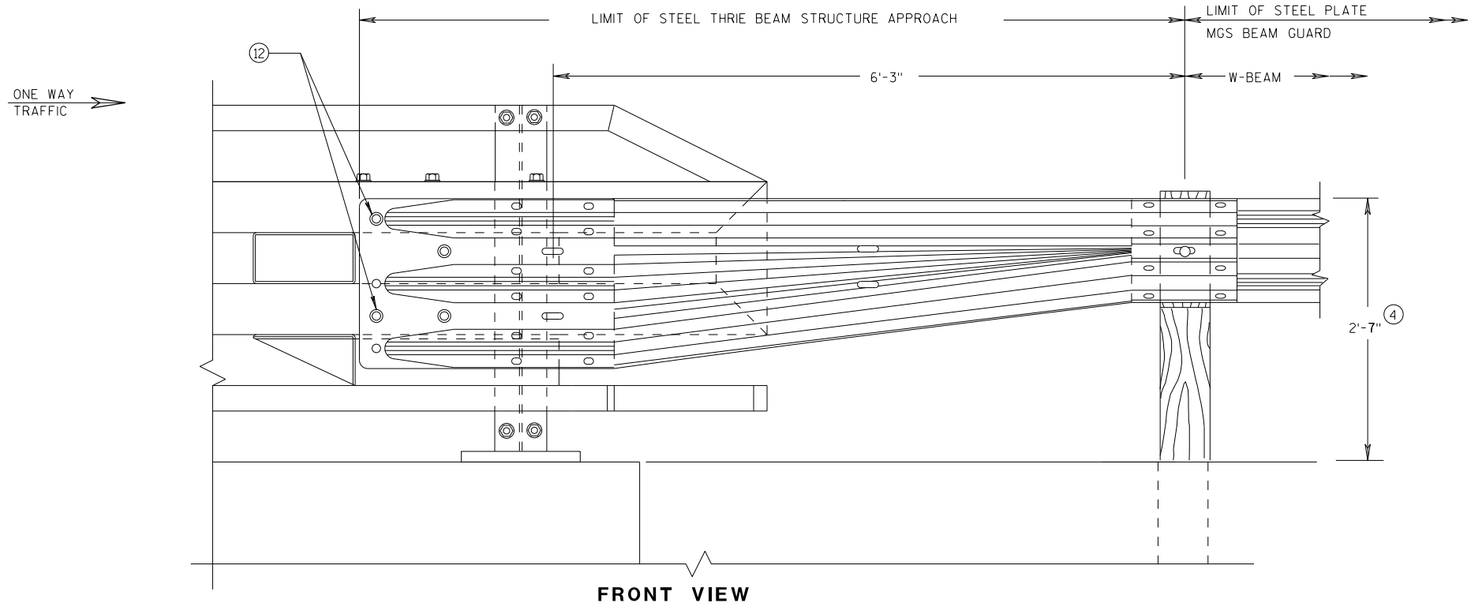
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(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 1/2-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)

STATE OF WISCONSIN
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APPROVED
7/2018 DATE
/S/ Rodney Taylor
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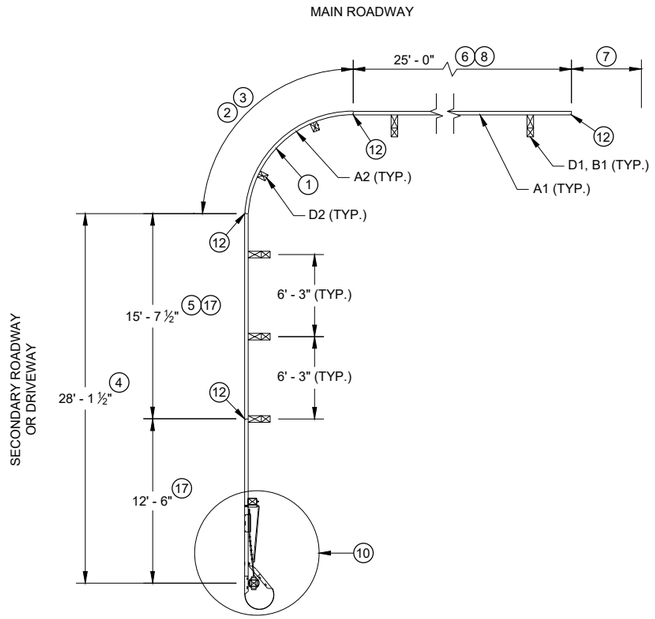
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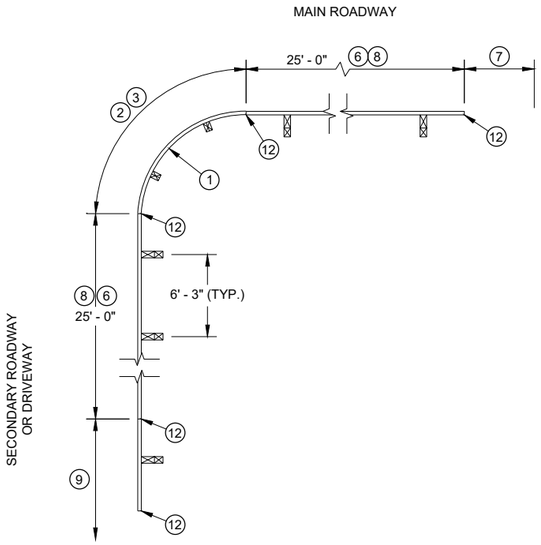
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S.D.D. 14 B 45-5L



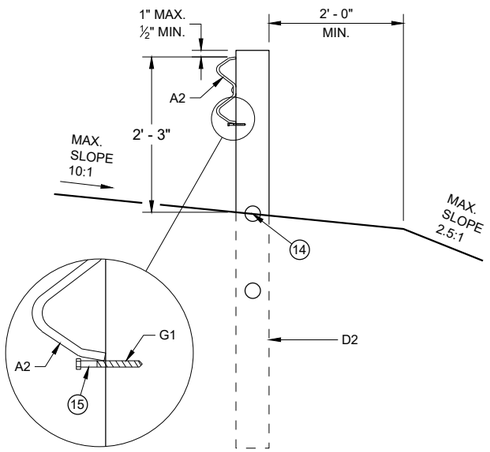
PLAN VIEW

SHORT RADIUS BEAM GUARD WITH SHORT RADIUS TERMINAL ON SECONDARY ROAD OR DRIVEWAY

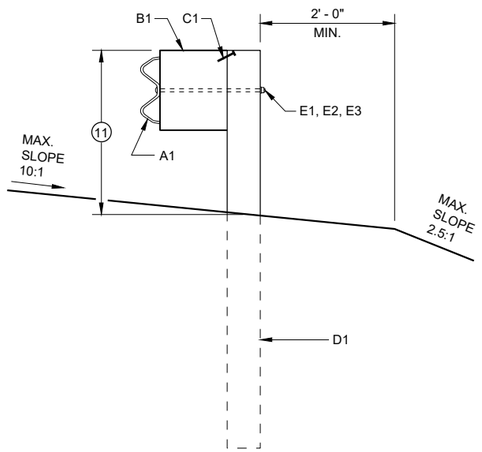


PLAN VIEW

SHORT RADIUS BEAM GUARD WITH EAT, ADDITIONAL BEAM GUARD OR TRANSITION TO RIGID BARRIER ON SECONDARY ROAD OR DRIVEWAY



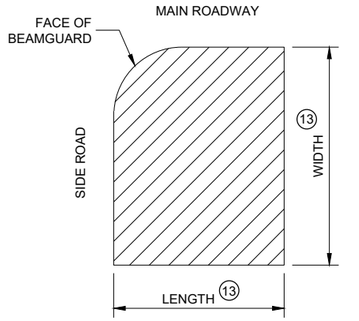
CONTROLLED RELEASE TERMINAL POST (CRT) IN RADIUS



BEAM GUARD POSTS IN HEIGHT TRANSITION

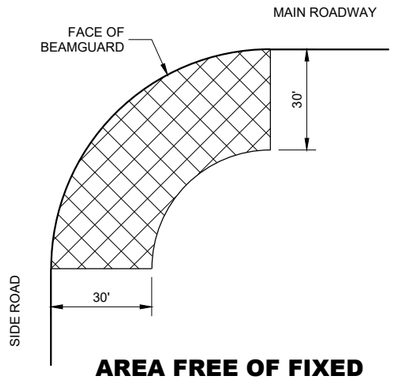
TABLE FOR RADIUS OF 32' AND LESS

RADIUS (FT)	LENGTH (FT)	WIDTH (FT)
8	25	15
16	30	15
24	40	20
32	50	30

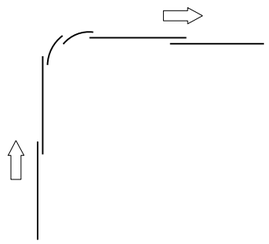


AREA FREE OF FIXED OBJECTS FOR RADIUS 32' AND LESS

16



AREA FREE OF FIXED OBJECTS FOR RADIUS GREATER THAN 32'



LAP SPLICE DETAIL

GENERAL NOTES

SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.

SEE SDD 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.

GALVANIZE PARTS AFTER FABRICATION.

WELDING TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI / AWS D1.1.

UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.

UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERTICAL.

ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUT.

UNLESS NOTED OTHERWISE, CUT OR PROVIDE BOLTS THAT ARE ¼" TO ½" BEYOND THE NUT.

DRAWINGS ARE NOT TO SCALE.

(1) RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.

(2) CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6' - 3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE (CRT) POSTS.

(3) WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAIL IS RESTED ON TOP OF LAG SCREW.

(4) MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID WITH BEAM GUARD ITEM.

(5) ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.

(6) MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TO TRANSITION TO RIGID BARRIER. ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.

(7) BEAM GUARD, EAT, OR TRANSITION TO RIGID BARRIER. SEE PLAN.

(8) TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.

(9) ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.

(10) SHORT RADIUS TERMINAL (SEE OTHER DETAILS).

(11) HEIGHT VARIES. SEE NOTE (8) AND (8).

(12) BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRES PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.

(13) SEE TABLE FOR VALUES.

(14) MAXIMUM HEIGHT FOR CENTER OF HOLE IS ¾" ABOVE FINISHED GROUND ±1".

(15) DRILL POST $^{15}/_{64}$" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.

(16) SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.

(17) TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL (CRT).

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

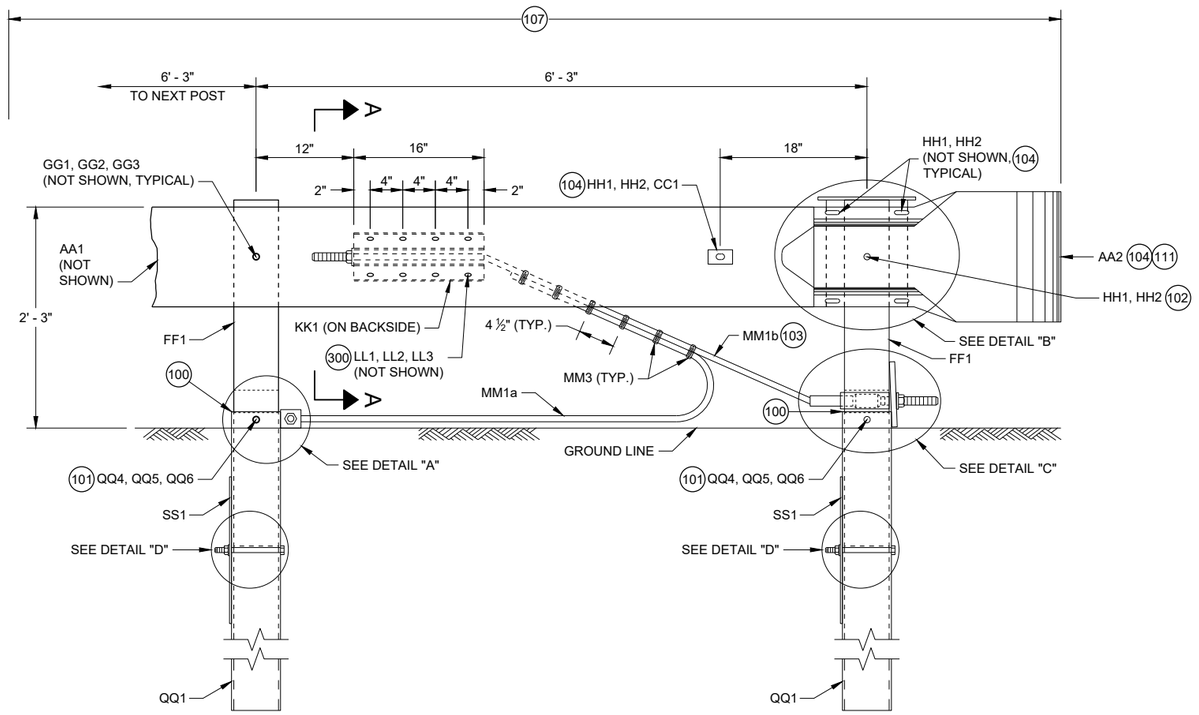
STATE OF WISCONSIN
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SDD 14B53 - 01a

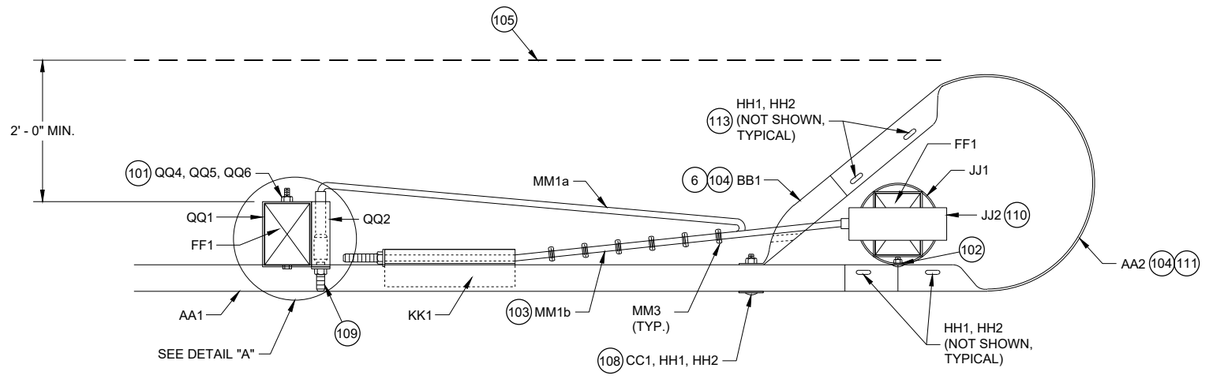
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SDD 14B53 - 01a



PROFILE VIEW

SHORT RADIUS TERMINAL



TOP VIEW

SHORT RADIUS TERMINAL

GENERAL NOTES

100 TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.

101 WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

102 SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL "B".

103 CABLE IS TAUT.

104 ADJUST AA2 AND BB1 TO FIT.

105 BREAK POINT OF SHOULDER.

106 TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL "A" PROFILE VIEW.

107 PAY LIMIT FOR BEAM GUARD.

108 SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.

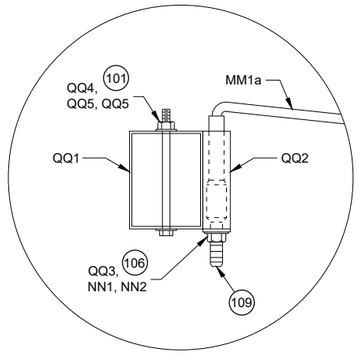
109 CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS ½" TOLERANCE). DEBURR AFTER CUTTING.

110 SEE STEEL PIPE ASSEMBLY DETAILS.

111 ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.

112 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.

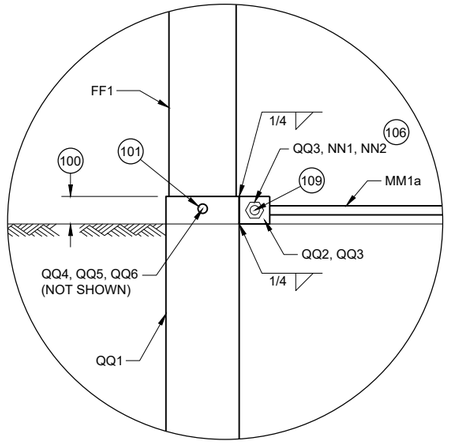
113 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.



TOP VIEW

DETAIL "A"

(WOOD BREAKAWAY AND BEAM GUARD RAIL POSTS NOT SHOWN)



PROFILE VIEW

DETAIL "A"

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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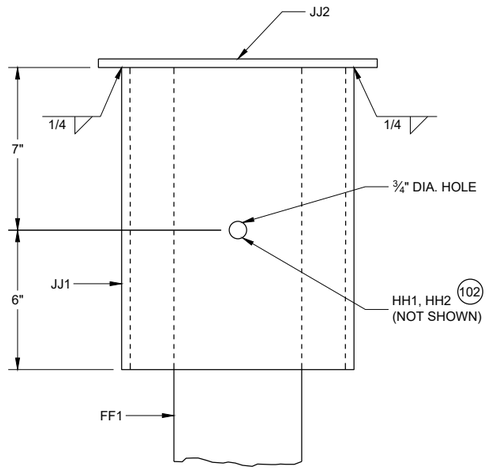
SDD 14B53 - 01b

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SDD 14B53 - 01b

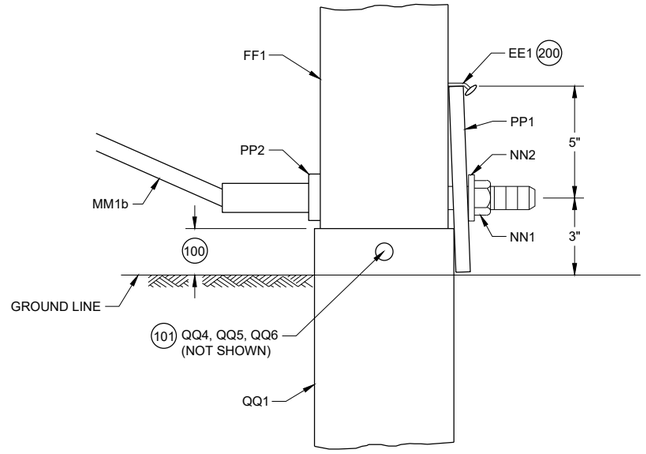
GENERAL NOTES

(200) TWO (2) NAILS SPACED 4 INCHES CENTER TO CENTER.



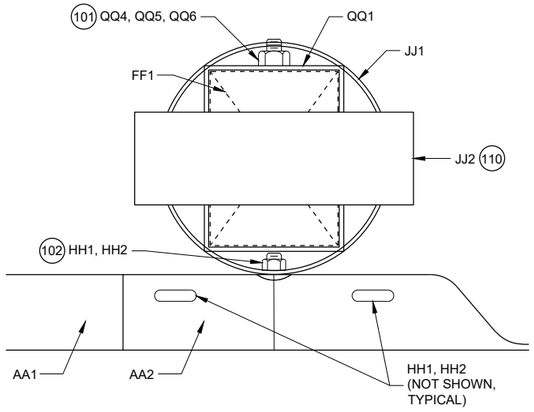
PROFILE VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY
(BEAM GUARD AND W BEAM END SECTION NOT SHOWN)



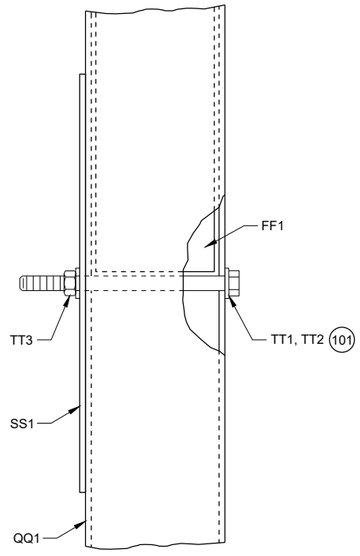
PROFILE VIEW

DETAIL "C"



PLAN VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY



PROFILE VIEW

DETAIL "D"

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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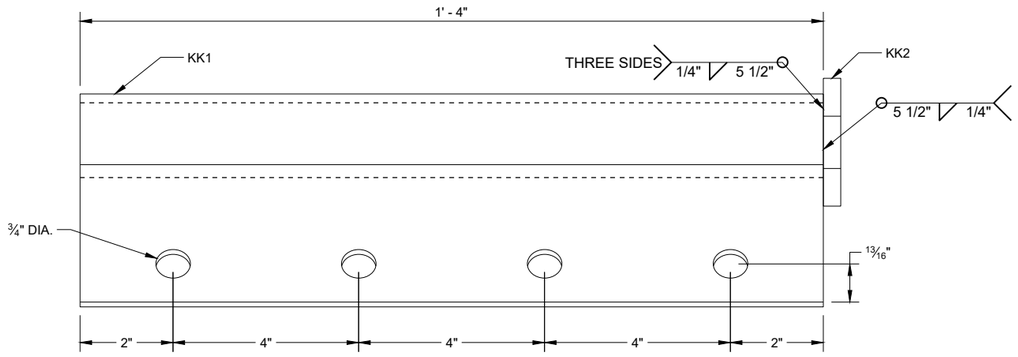
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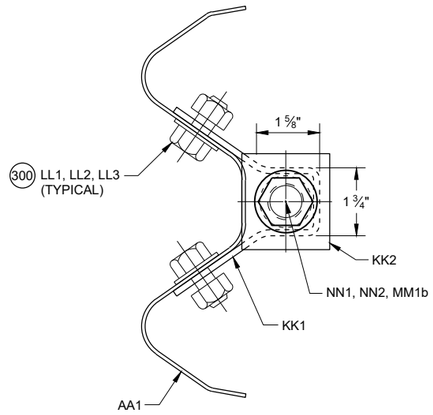
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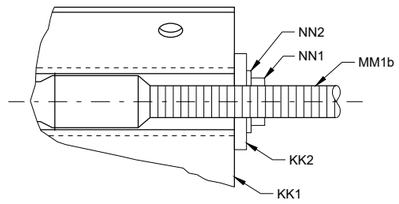
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GENERAL NOTES

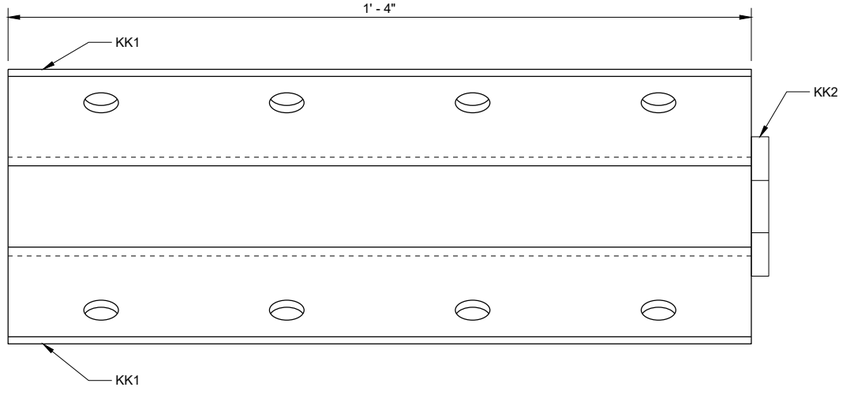
(300) WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT (8) LL1 AND LL3 REQUIRED. SIXTEEN (16) LL2 REQUIRED.

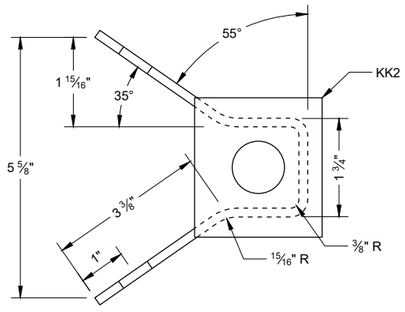




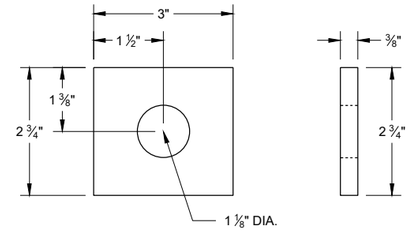


SECTION A - A





ANCHOR BRACKET (KK1, KK2)



ANCHOR BRACKET BEARING PLATE (KK2)

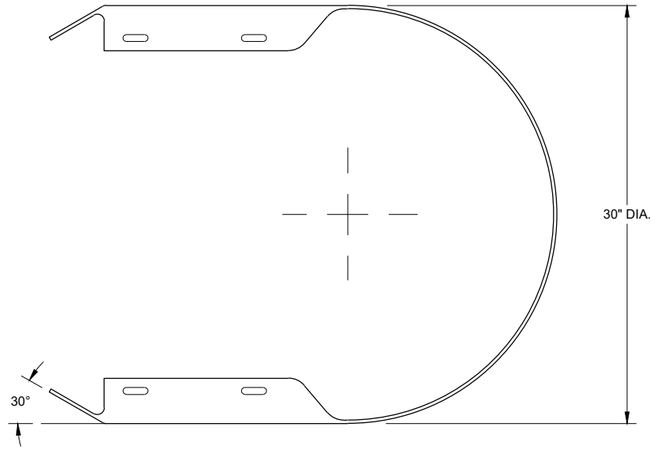
SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

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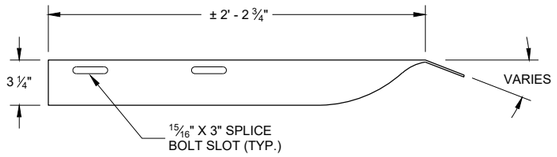
GENERAL NOTES

(400) CROSS SECTION OF PART IS TO FIT OVER AA1 .

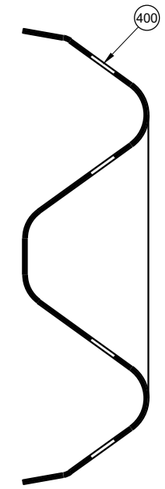
(401) CROSS SECTION OF PART IS TO FIT OVER OR UNDER AA1 .



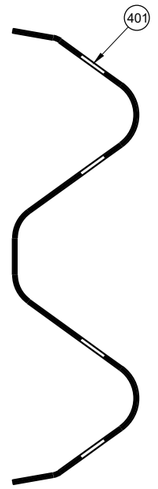
TOP VIEW



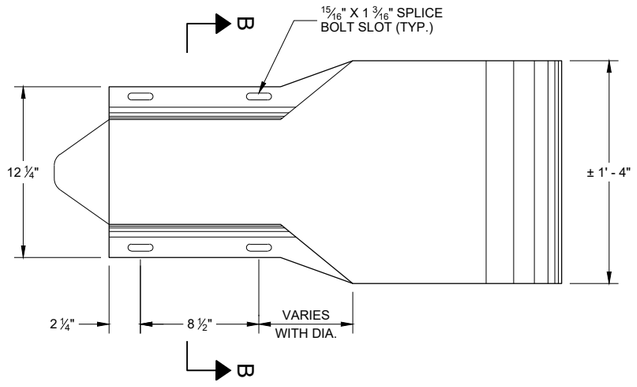
TOP VIEW



SECTION B -B

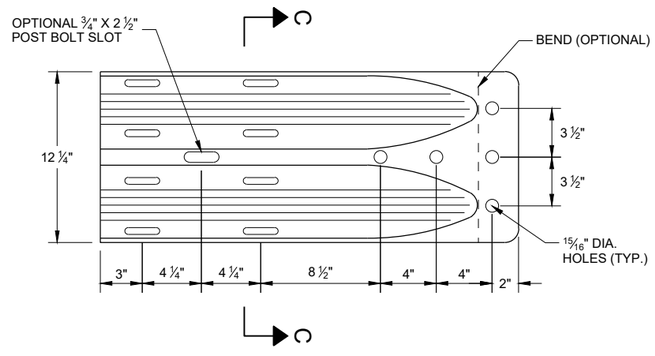


SECTION C -C



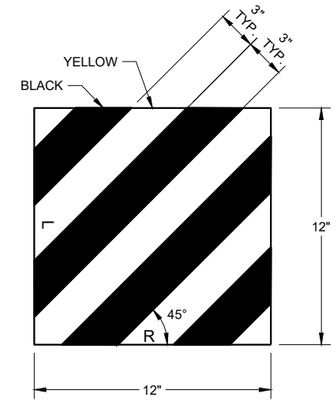
PROFILE VIEW

W BEAM
END SECTION BUFFER (AA2)



PROFILE VIEW

W BEAM
TERMINAL CONNECTOR (BB1)



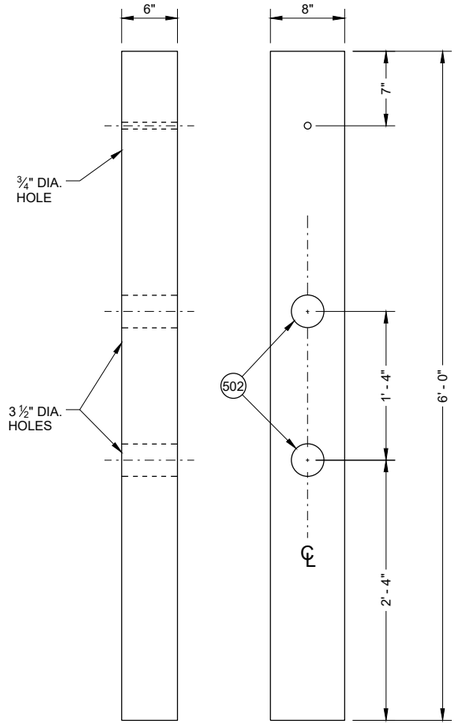
REFLECTIVE SHEETING (UU1, UU2)

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
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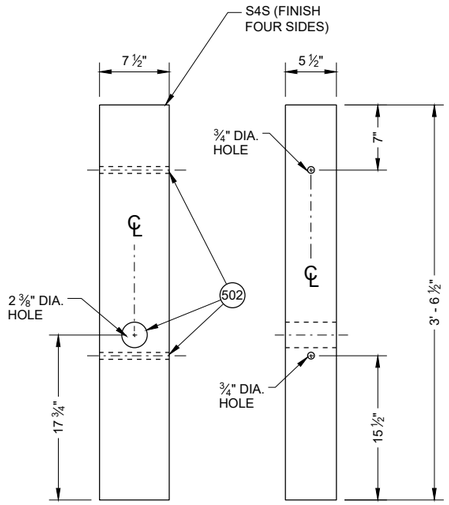
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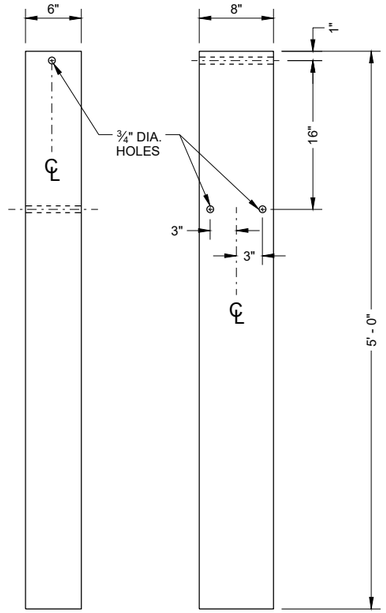
FRONT VIEW SIDE VIEW

CONTROLLED RELEASE POST (CRT) (DD2)



FRONT VIEW SIDE VIEW

WOOD BREAKAWAY POST (FF1)



FRONT VIEW SIDE VIEW

FOUNDATION TUBE (QQ1) (500)

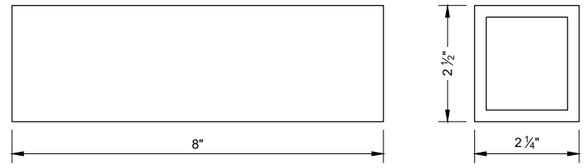
GENERAL NOTES

(500) SEE DETAIL "D" FOR LOCATION AND ATTACHMENT OF SS1.

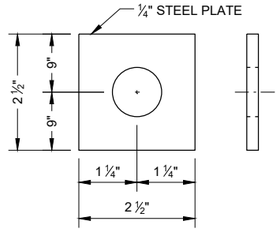
(501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.

(502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.

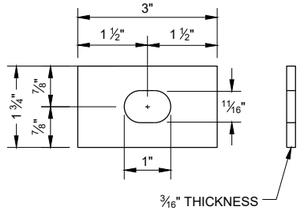
(503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).



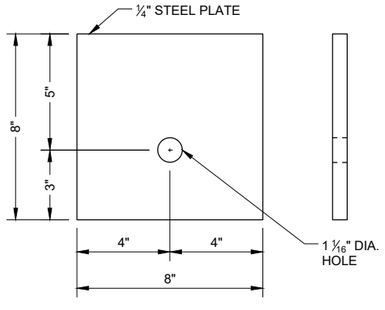
FOUNDATION TUBE - ANCHOR CABLE TUBE (QQ2)



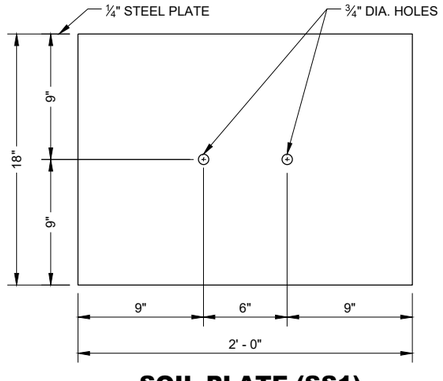
ANCHOR CABLE TUBE END PLATE (QQ3)



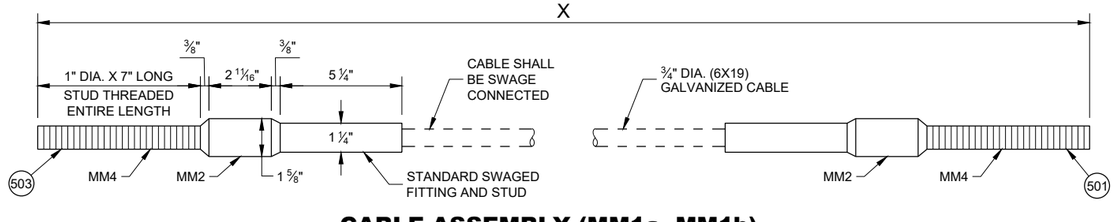
RECTANGULAR PLATE WASHER (CC1)



BEARING PLATE (PP1)



SOIL PLATE (SS1)



CABLE ASSEMBLY (MM1a, MM1b)

"X" LENGTH

MM1b	9' - 0"
MM1b	6' - 8"

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	BEAM GUARD RAIL	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
A2	BEAM GUARD RAIL - SHOP BENT	INDICATE ON BACK OF RAIL THE RADIUS THAT RAIL WAS BENT TO. SHOP BEND RADIUS IS TO THE NEAREST FOOT. FOLLOW AASHTO M180 ON HOW TO MARK RADIUS INFORMATION.	
		AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
B1	BLOCK - WOOD	WISDOT SPEC. 614	SEE SDD 14B42
C1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEAD)	
D1	POST-STRONG POST-WOOD	WISDOT SPEC. 614	SEE SDD 14B42
D2	POST-CRT-WOOD	WISDOT SPEC. 614	
E1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
E2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
E3	POST BOLT - NUT	AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
F1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
F2	SPLICE BOLT - NUT	ASTM A563 GRADE A	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
G1	LAG SCREW	ASTM A308 GRADE A ASTM A153 CLASS D	1/2" DIA. 6" LONG
H1	DELINEATOR - BEAM GUARD		SEE SDD 14B42 FOR MORE INFORMATION
H2	DELINEATION - SHEETING	YELLOW OR WHITE	
		WISDOT SPEC 637 TYPE SH	
		APPROVED PRODUCT LIST	
J1	FOUNDATION BACKFILL	STANDARD SPEC. 614	
AA1	BEAM GUARD RAIL - PUNCHED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
AA2	BEAM GUARD RAIL - END SECTION BUFFER	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
BB1	BEAM GUARD RAIL - TERMINAL CONNECTOR MODIFIED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
CC1	SHORT RADIUS - SQUARE WASHER	AASHTO M180	
		GALV. AASHTO M111 / ASTM A123	
EE1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)	
FF1	POST - BCT - WOOD	S4S FINISH ON 4 SIDES	
		WISDOT SPEC. 614	
GG1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	3/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
GG2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	3/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B53 - 01g

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS ⅜" X 4" X 1' - 0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
KK2	ANCHOR BRACKET - BEARING PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
LL2	ANCHOR BRACKET - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	⅝" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
LL3	ANCHOR BRACKET - NUT	ASTM A563 GRADE A	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
MM1a	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM1b	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM2	ANCHOR CABLE - SWAGE FITTING	ASTM A576 GRADE 1035	
		SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. WITH A BREAKING STRENGTH 40,000 LBS.	
		GALV. AASHTO M111 / ASTM A123	
		ASME B30.26 FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING INTO CONNECTION: NAME OF MANUFACTURER OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE.	
MM3	WIRE ROPE CABLE CLAMPS	FF-C-450D TYPE 1 CLASS 1	¾"
		ASTM A153 HOT DIP CLASS D	
MM4	ANCHOR CABLE - SWAGE FITTING - STUD	ASTM F3125 GRADE A325 TYPE 1 OR SAE GRADE 5 OR ASTM A449 TYPE 1 HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
NN1	ANCHOR CABLE - NUT	ASTM A563 GRADE A	1" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
NN2	ANCHOR CABLE - NUT - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	1" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

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SDD 14B53 - 01h

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
PP1	BEARING PLATE AT POST	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X 3/16"
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 1/2" X 2 1/4" X 1/4" X 8"
		GALV. AASHTO M111 / ASTM A123	
QQ3	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS 2 1/2" X 2 1/2" X 1/4"
		GALV. AASHTO M111 / ASTM A123	
QQ4	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
QQ5	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
QQ6	GROUND STRUT AND YOKE - NUT	HEAVY HEX	5/8 DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
SS1	SOIL PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	5/8 DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING. SHEETING TYPE FOR MARKER.
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

6

6

SDD 14B53 - 01i

SDD 14B53 - 01i

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

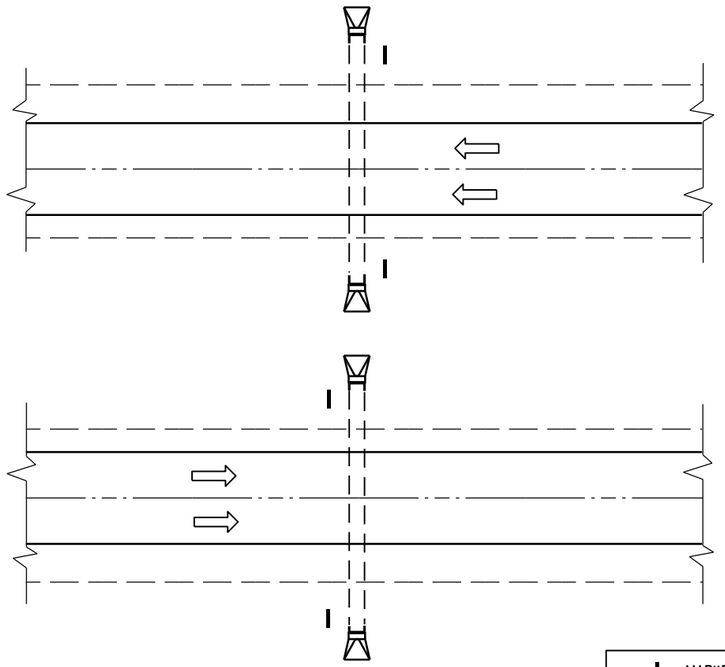
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

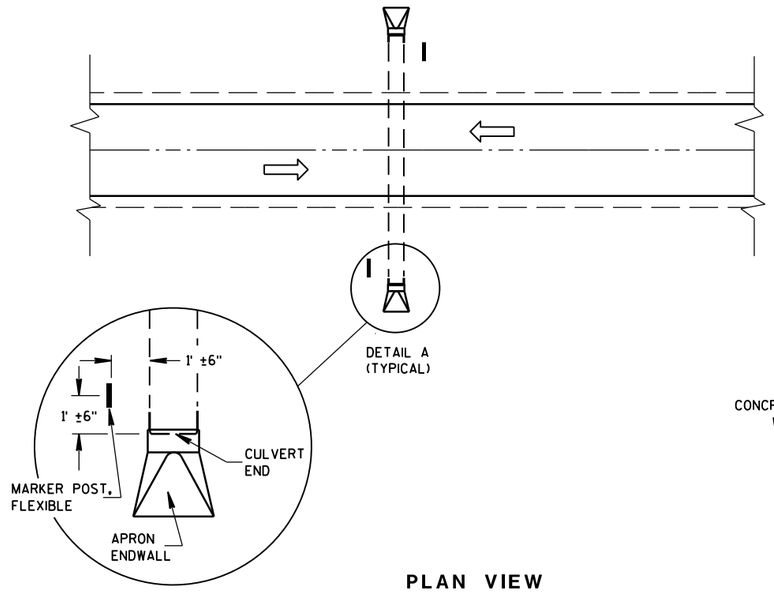
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

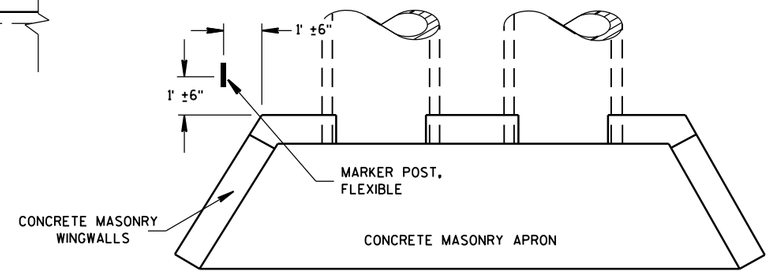
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

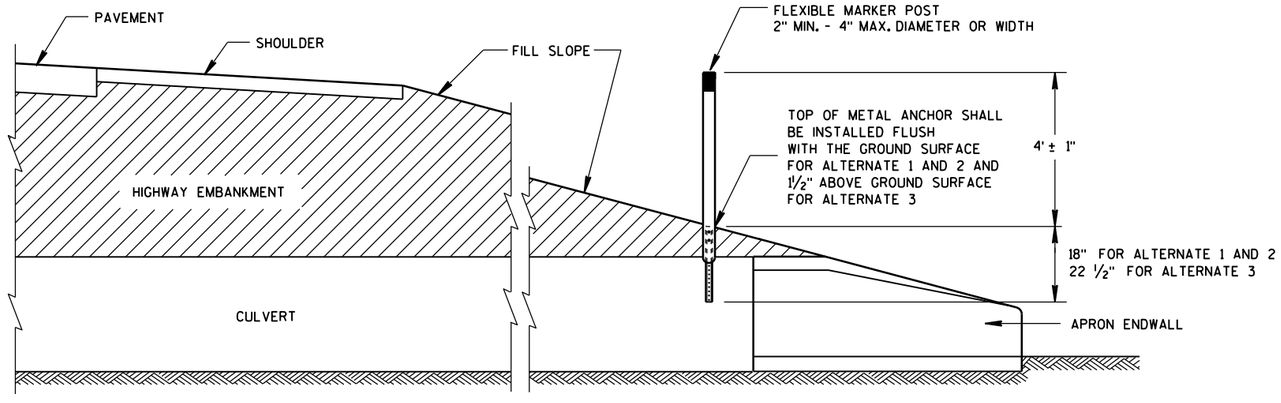
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

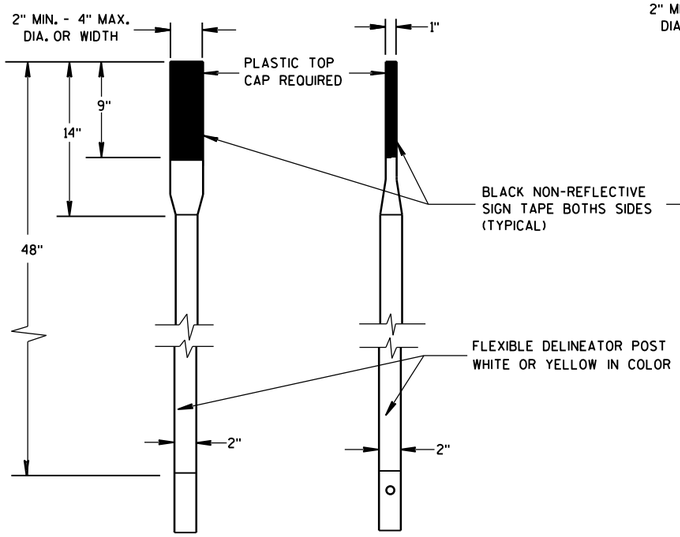
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

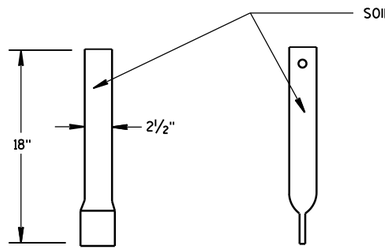
6

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

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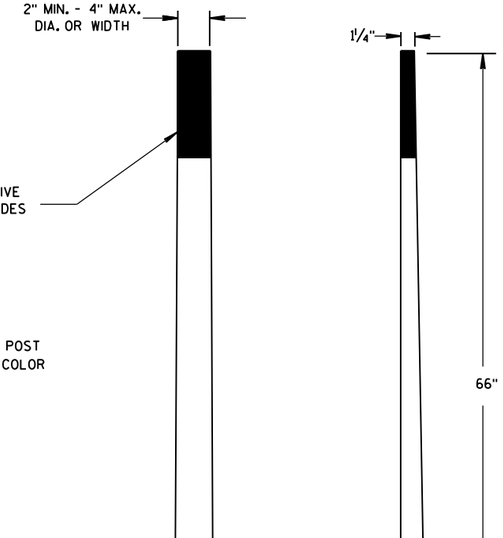
S.D.D. 15 A 3-2a





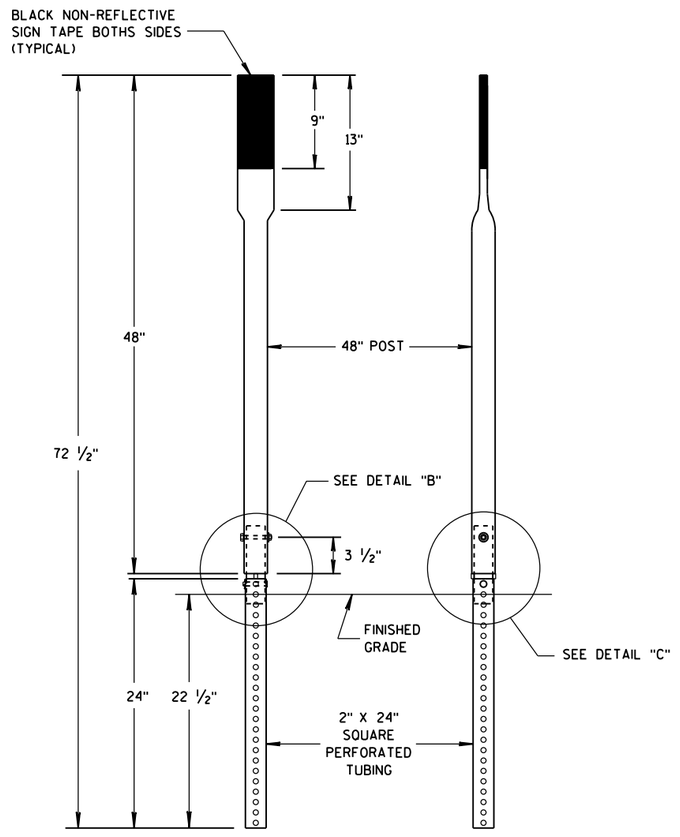
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

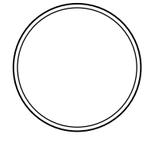
ALTERNATE 2



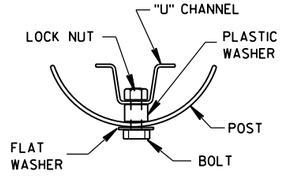
FRONT VIEW SIDE VIEW

ALTERNATE 3

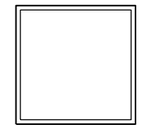
FLEXIBLE MARKER POSTS



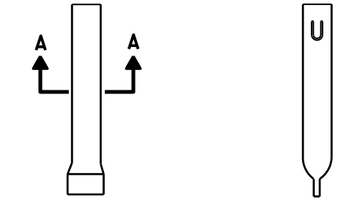
SECTION A-A



SECTION B-B

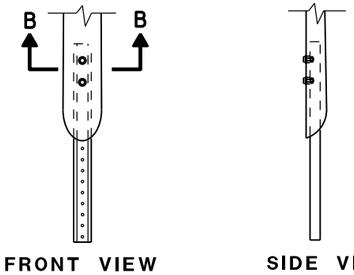


SECTION C-C



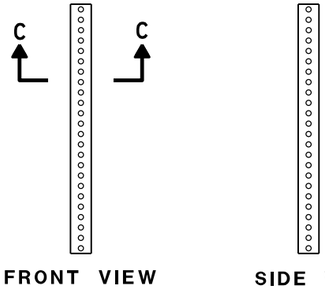
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

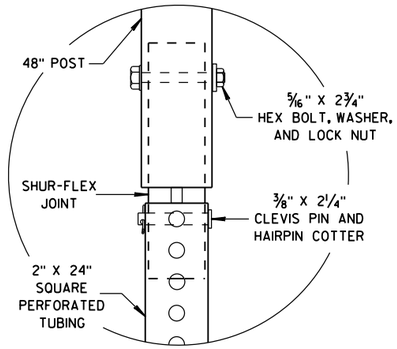
ALTERNATE 2



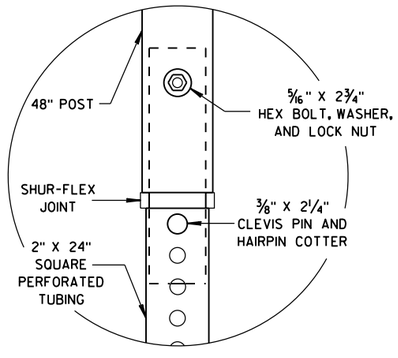
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



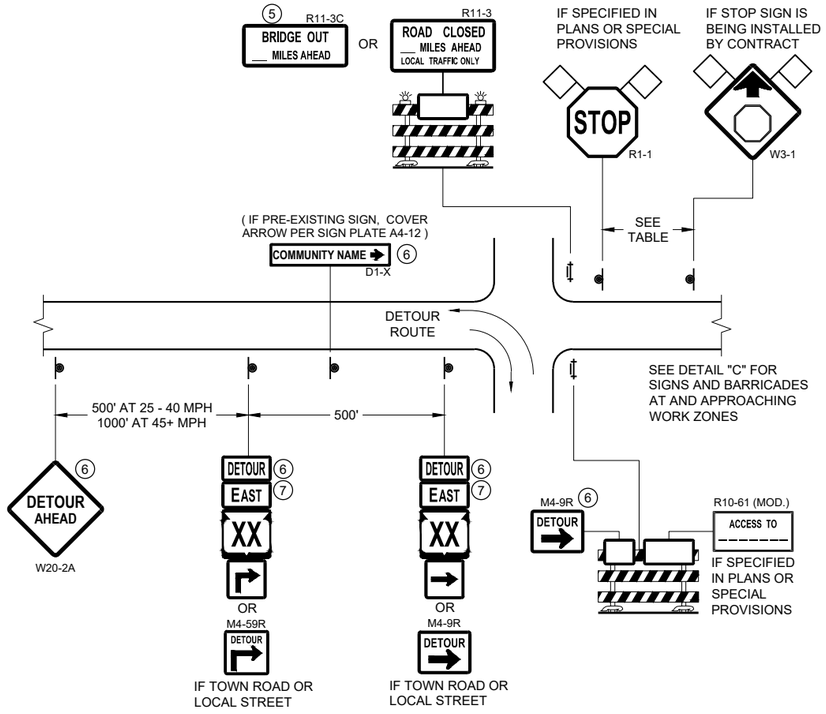
DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

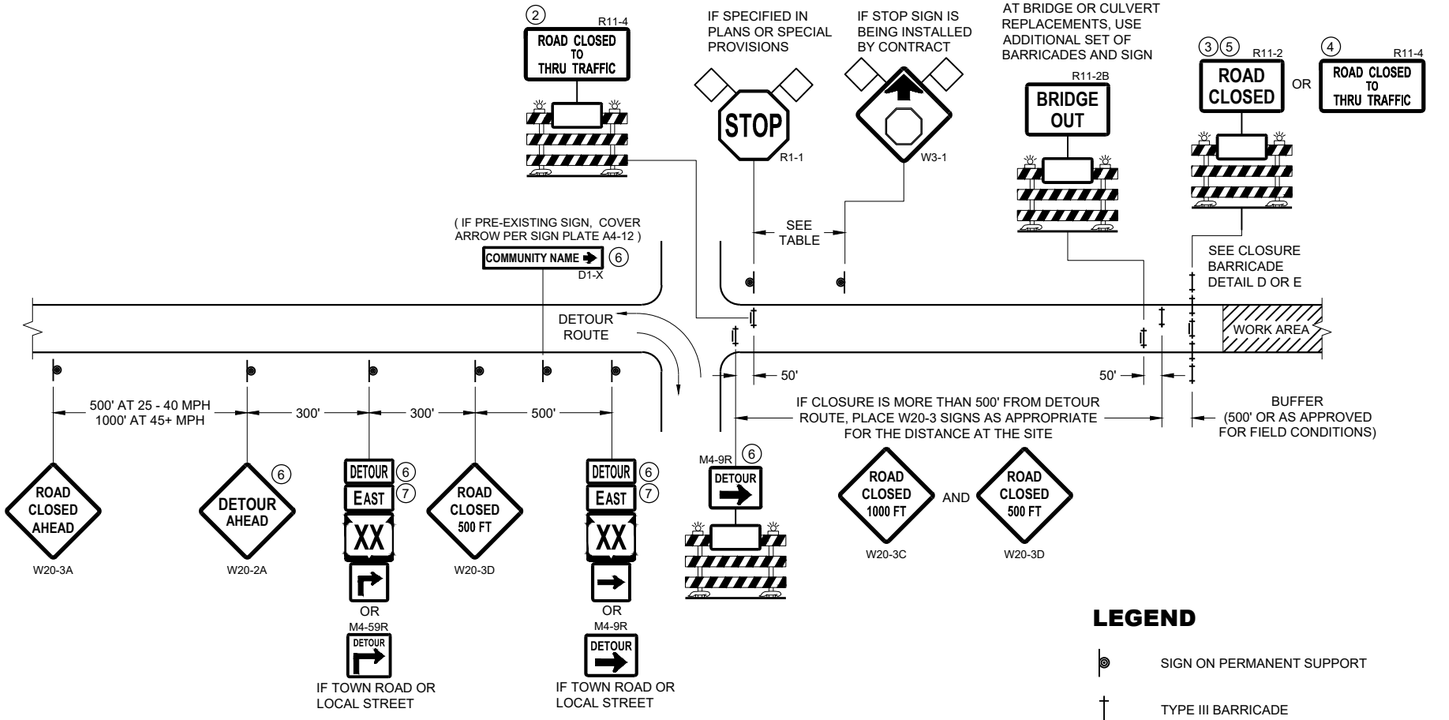
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6
S.D.D. 15 A 3-2b



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



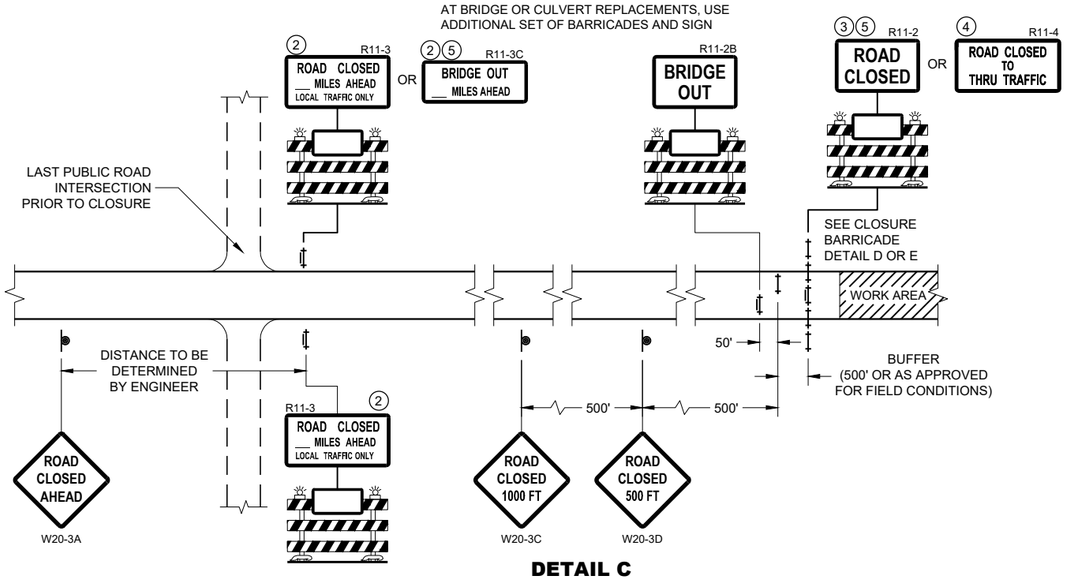
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

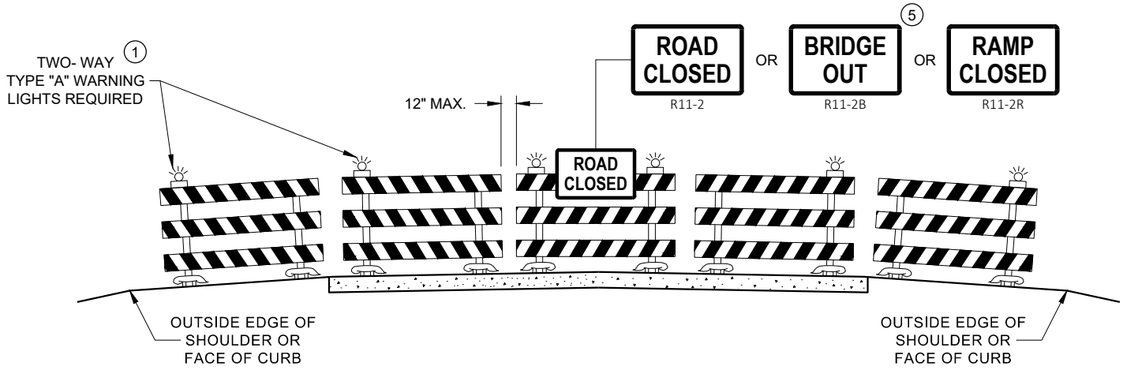
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

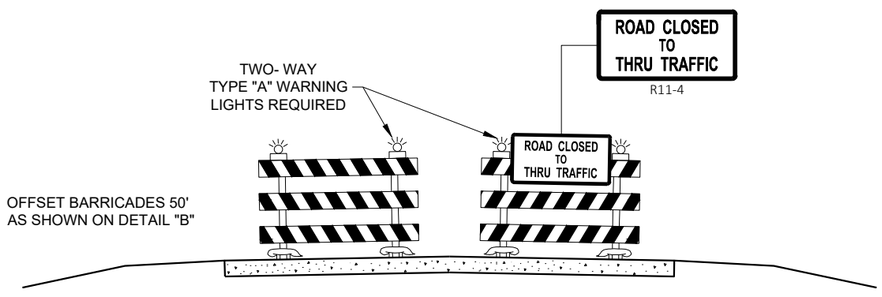
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SDD 15C02 - 08a

SDD 15C02 - 08a



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 THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL 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 SHALL, 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" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- 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 AN 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 ROAD 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 VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 08b

6

SDD 15C02 - 08b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

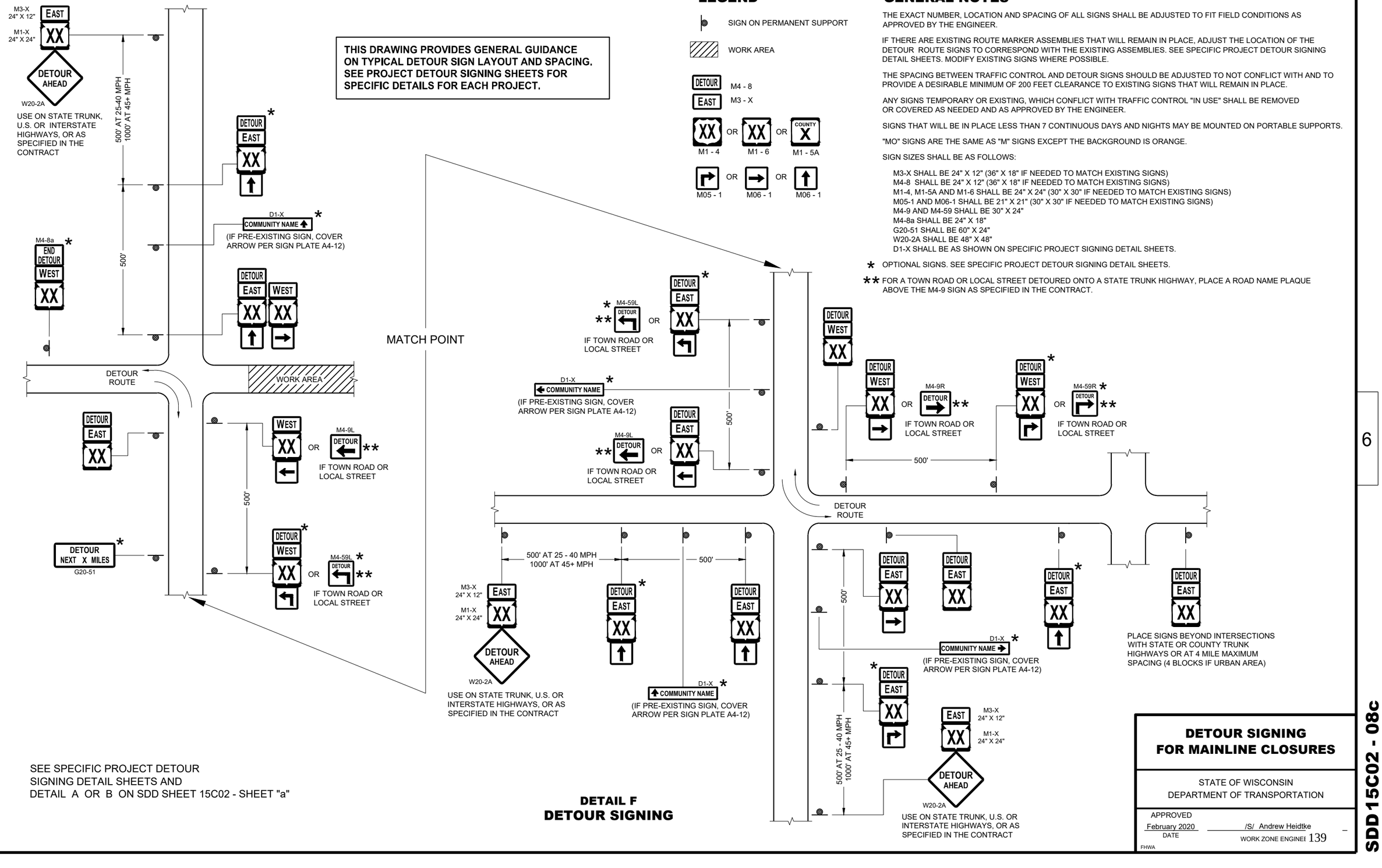
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

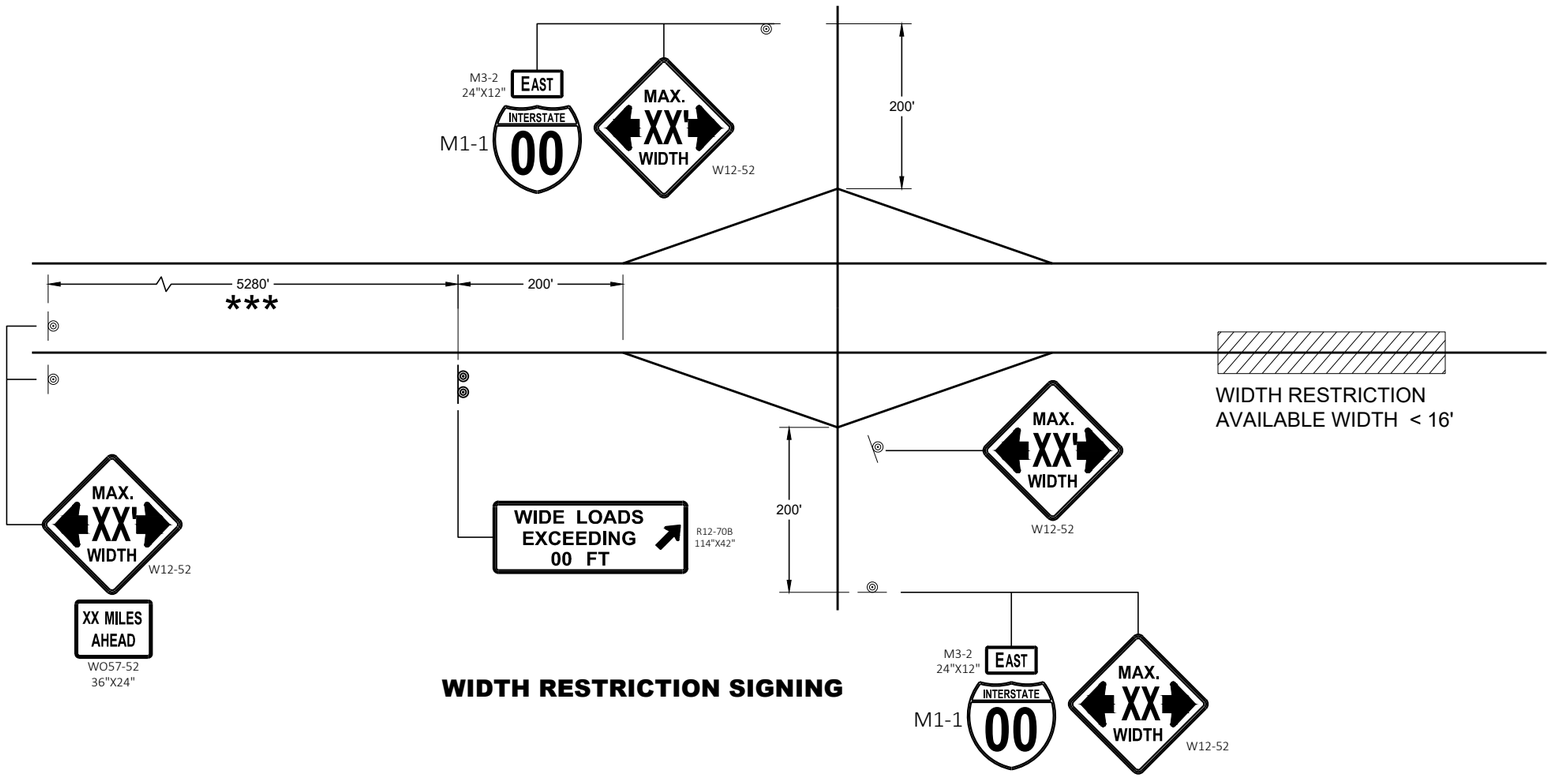
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 08c



WIDTH RESTRICTION SIGNING

LEGEND

SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

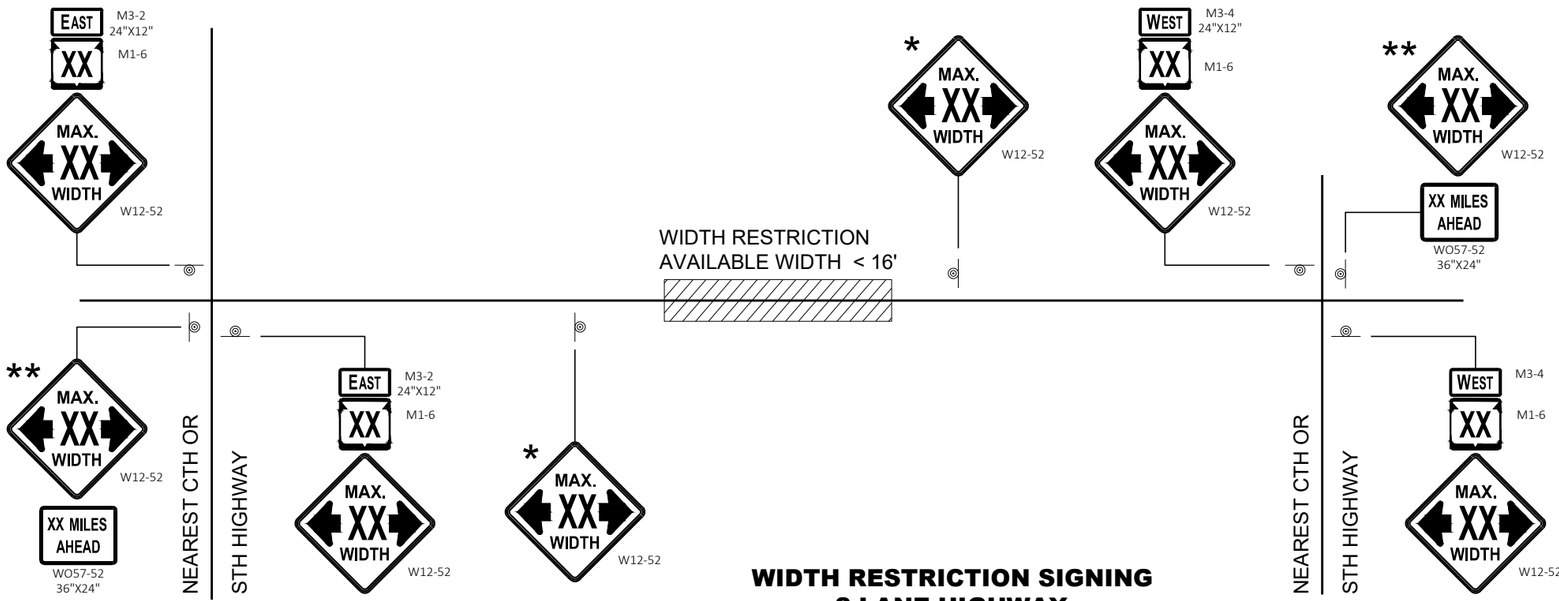
* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.



WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

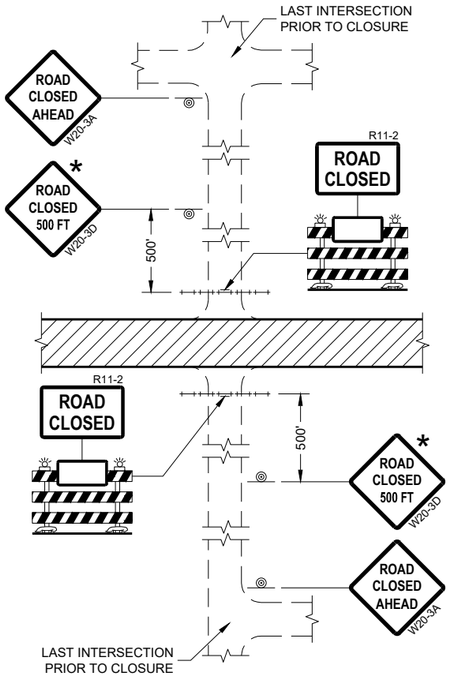
APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

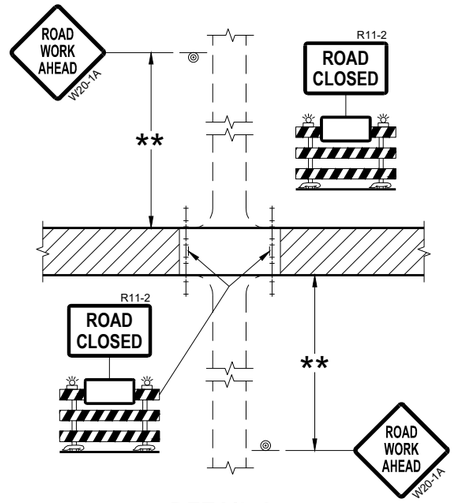
FHWA

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SDD 15C02 - 08f



DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO 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 (500 FEET DESIRABLE) 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 REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN 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.

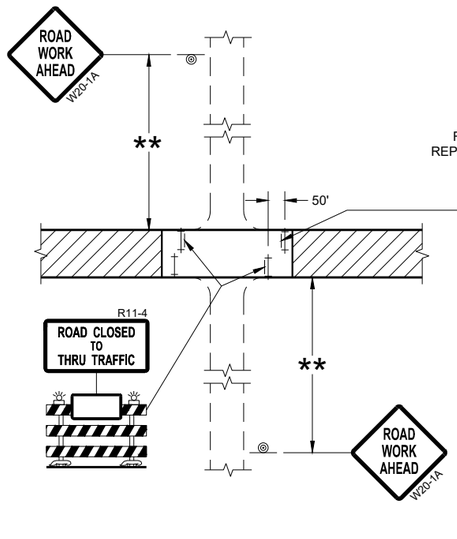
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

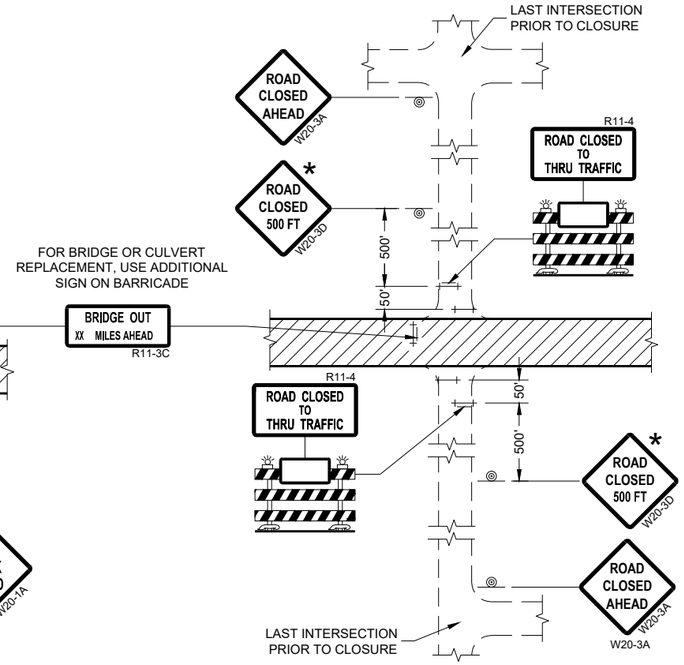
** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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SDD 15C03 - 05

SDD 15C03 - 05

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.

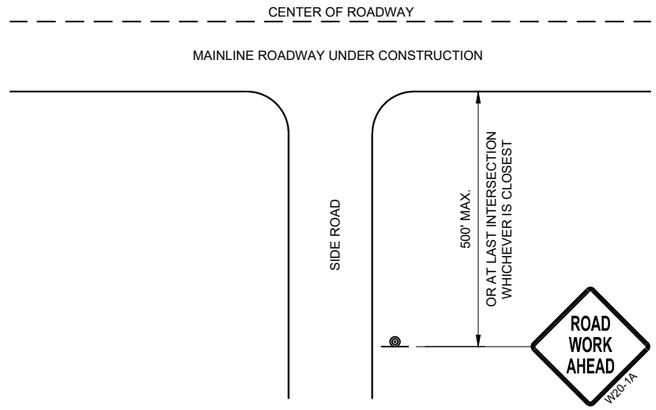
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN 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 REESTABLISHED.

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

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



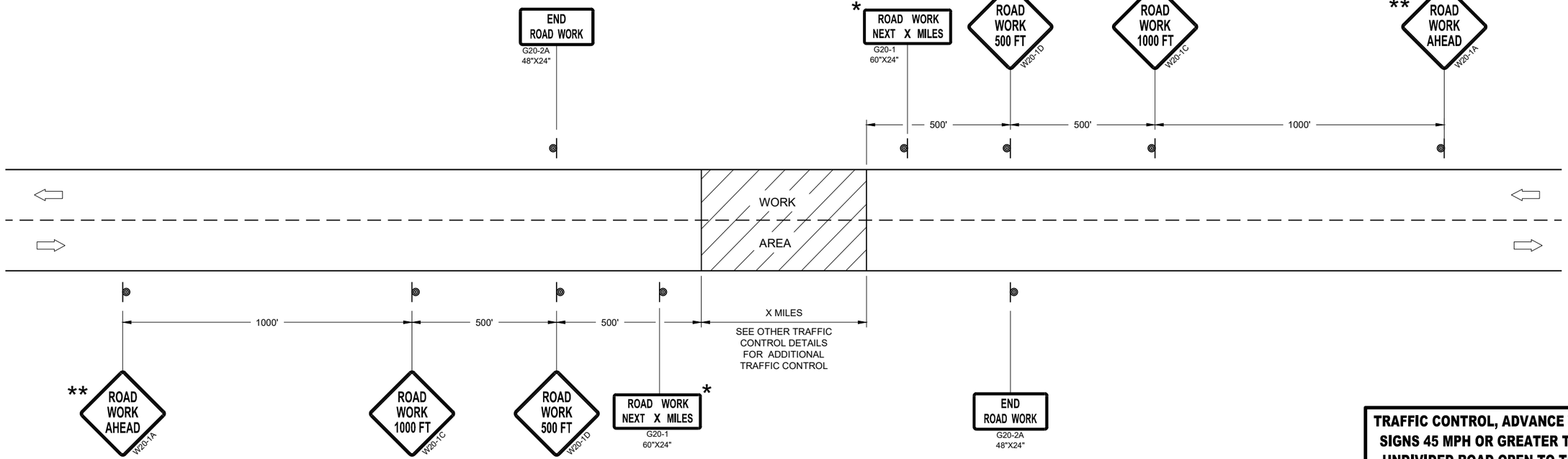
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

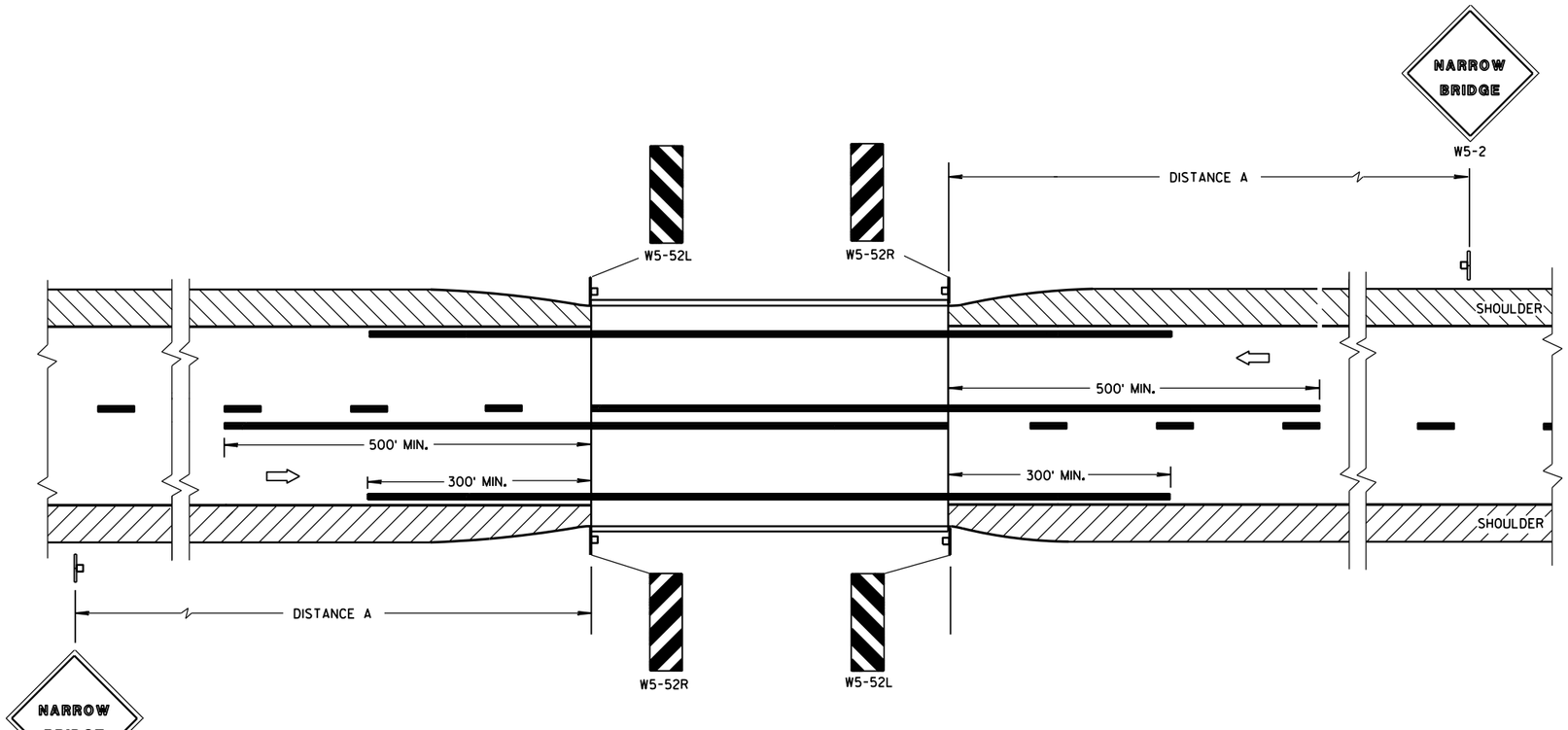
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C04 - 05



SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

GENERAL NOTES

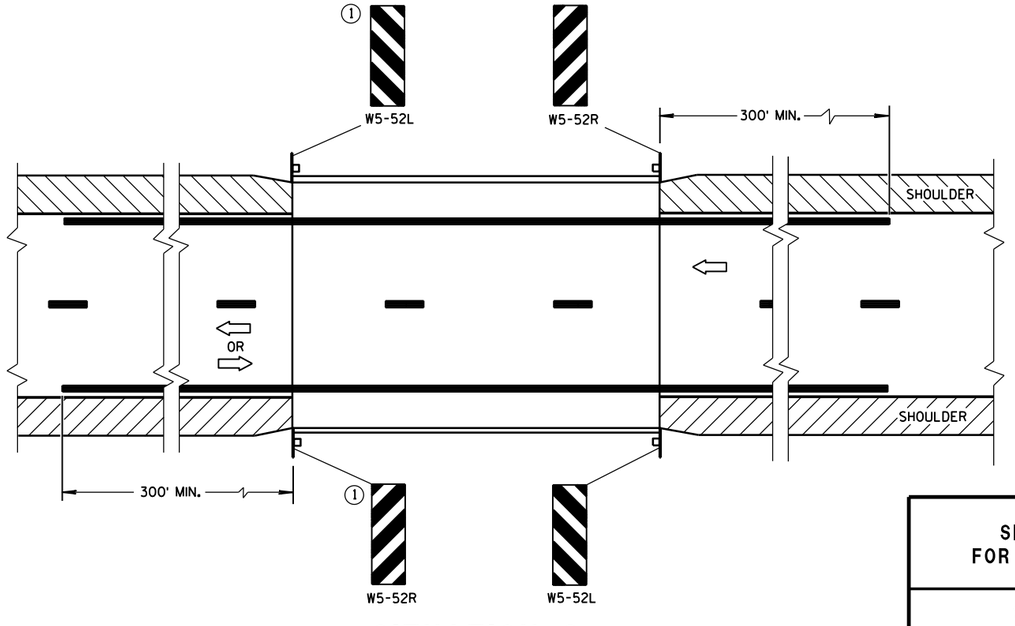
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

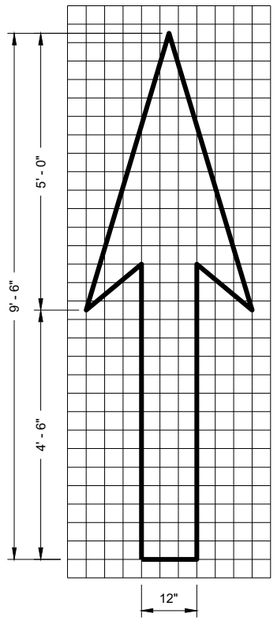
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR ...IEER
FHWA

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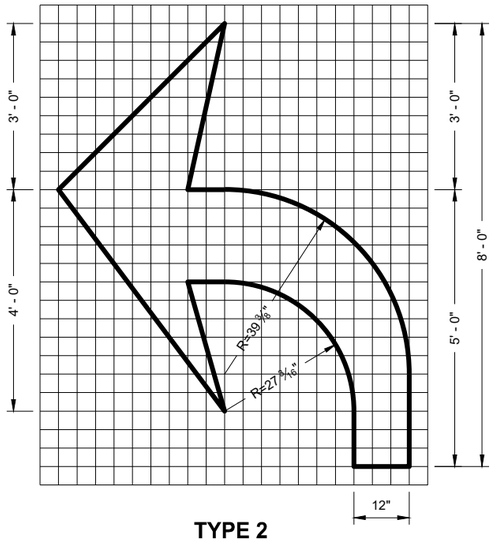
S.D.D. 15 C 6-9

6

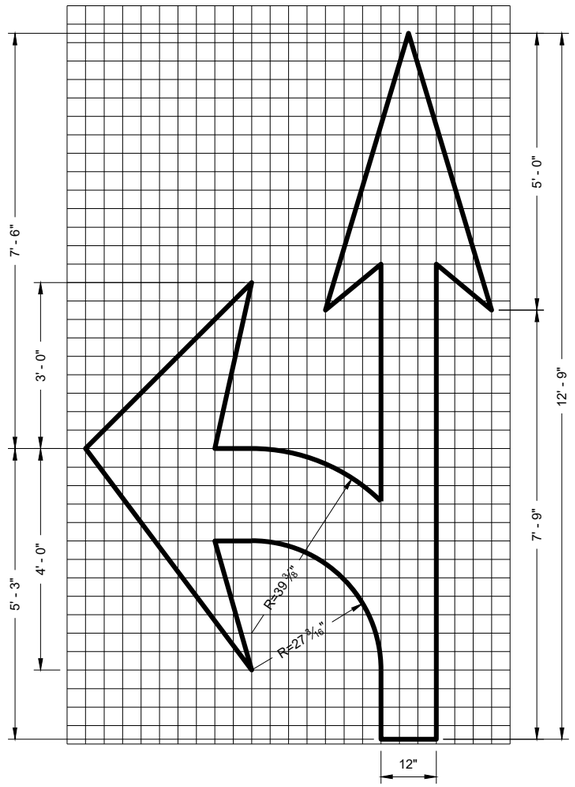
S.D.D. 15 C 6-9



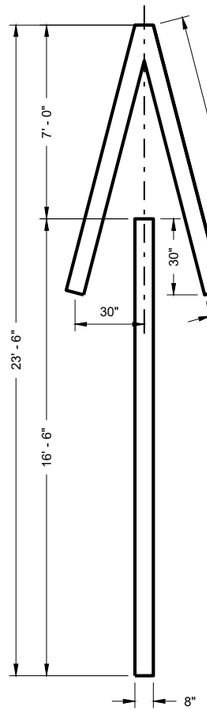
TYPE 1



TYPE 2



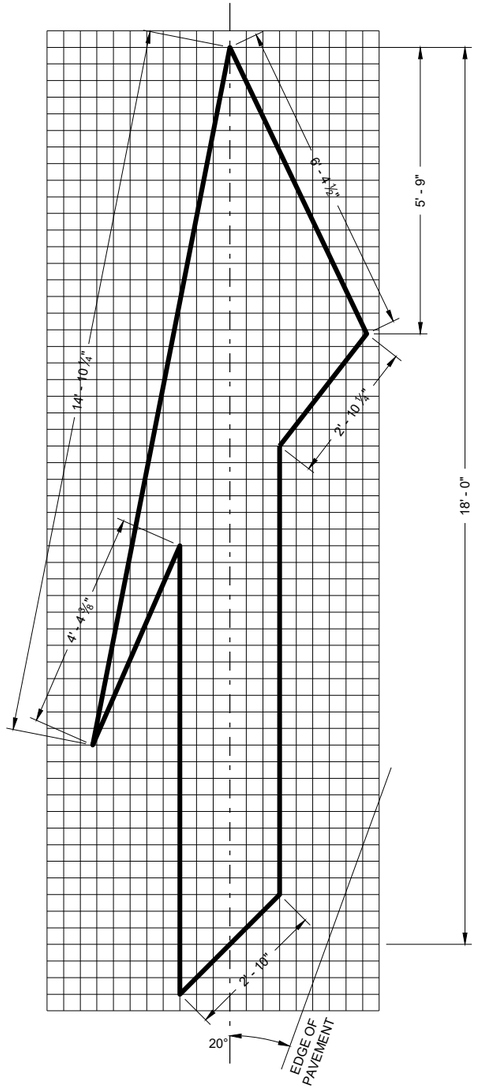
TYPE 3



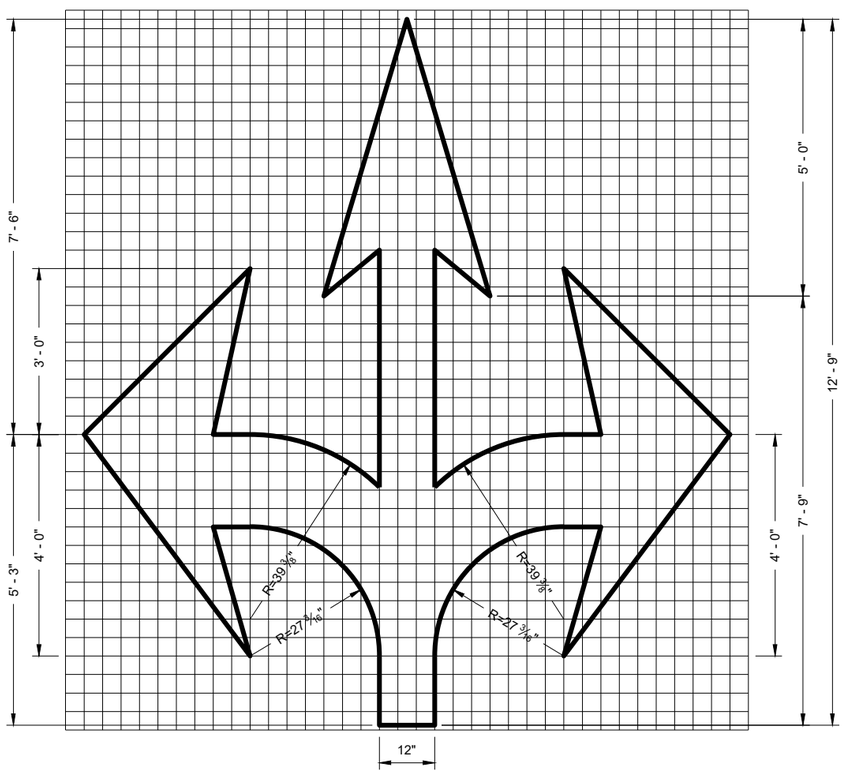
TYPE 4

GENERAL NOTES

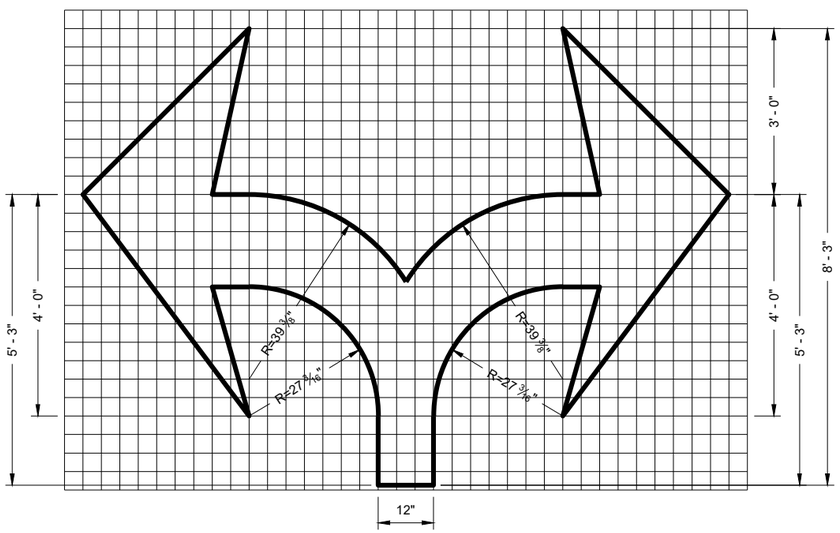
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

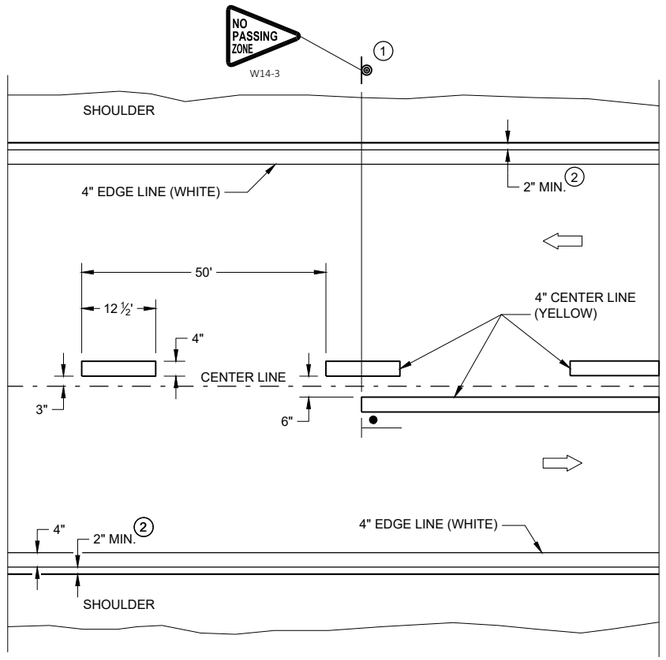
FHWA

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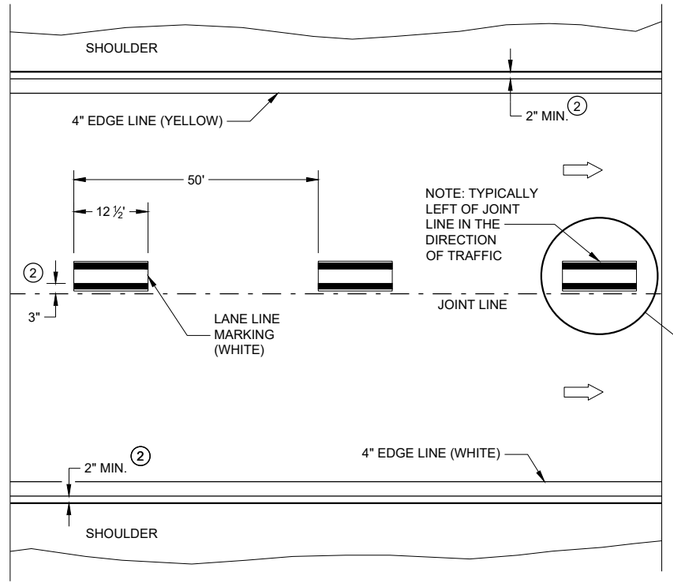
SDD 15C07 - 15c

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SDD 15C07 - 15c

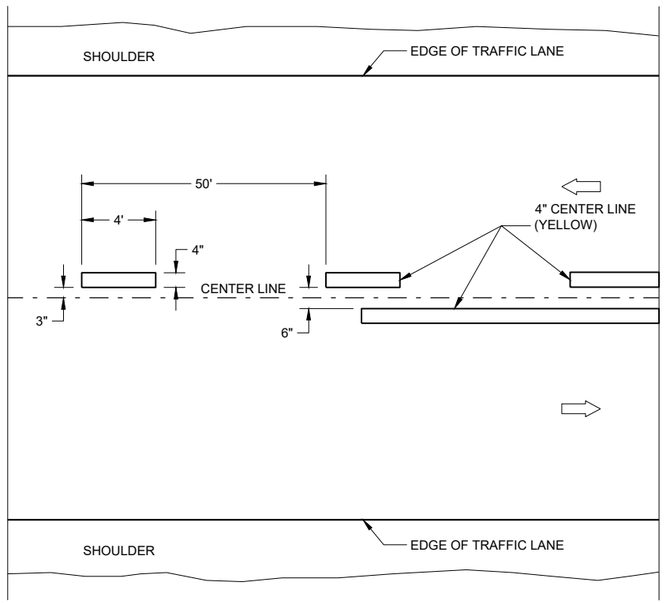


TWO WAY TRAFFIC

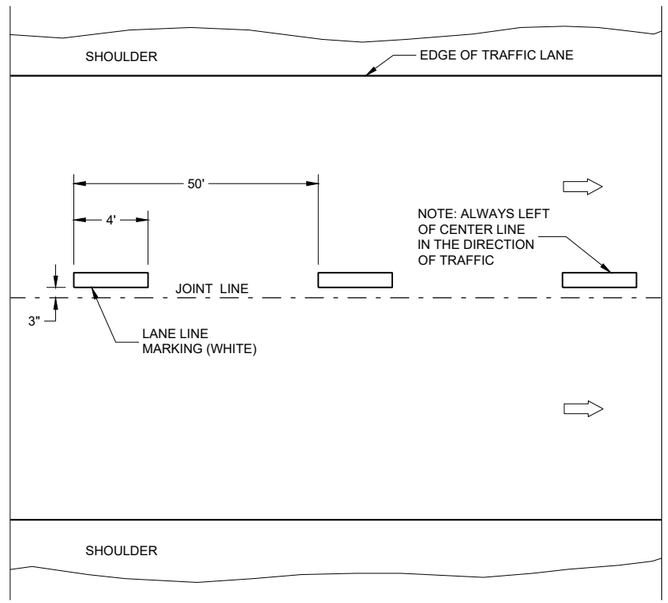


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

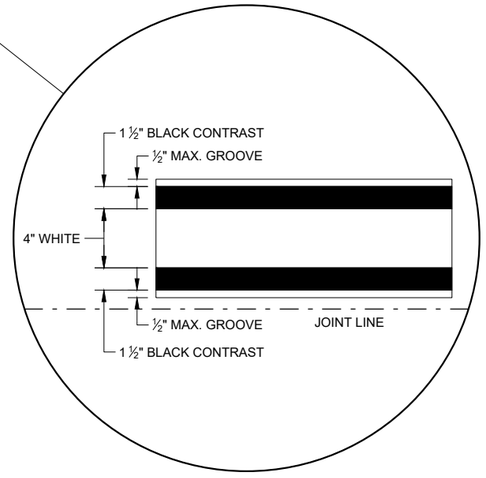
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

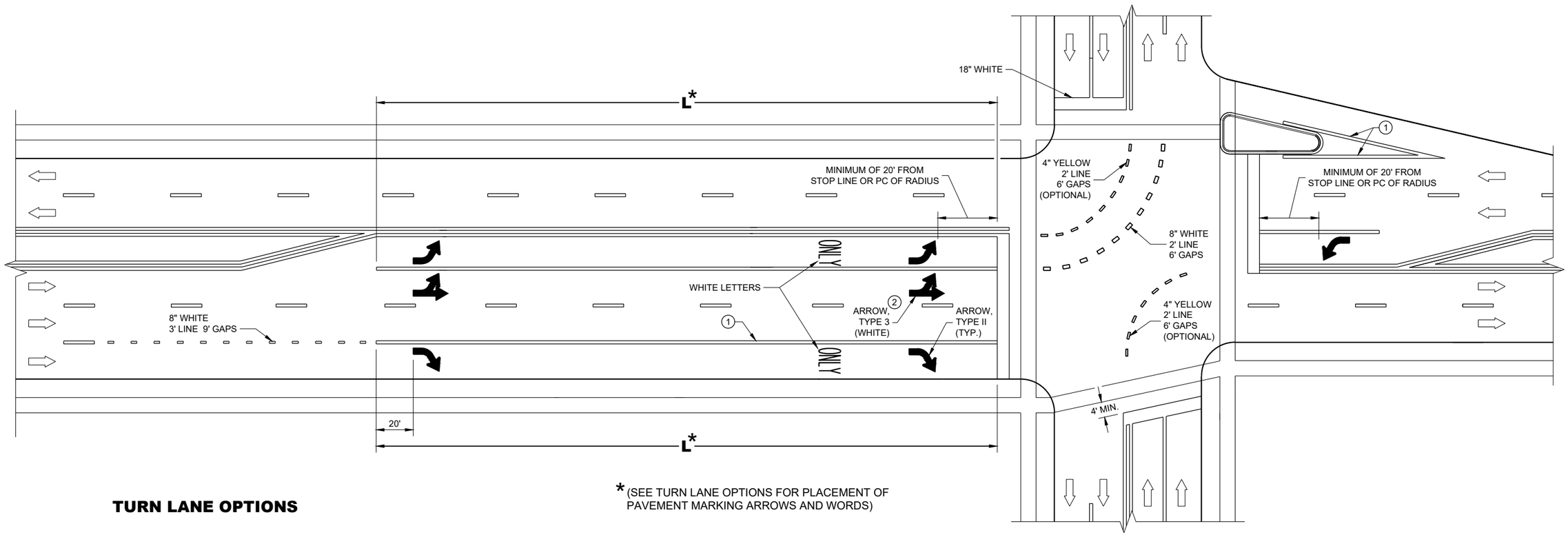
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Matthew Rauch
STATEWIDE SIGNING AND M ENGINEER

FHWA

SDD 15C08 - 20a

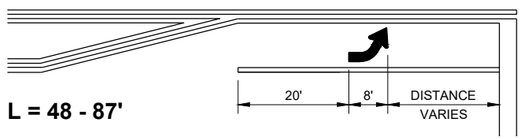
SDD 15C08 - 20a



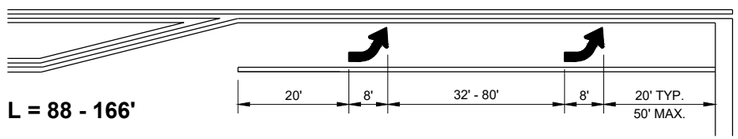
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

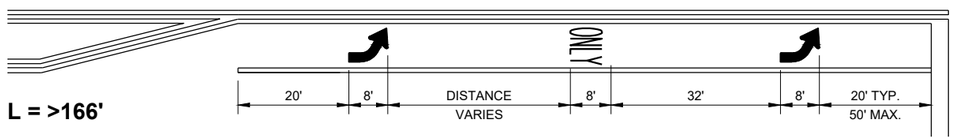
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

1. 8" WHITE
2. QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

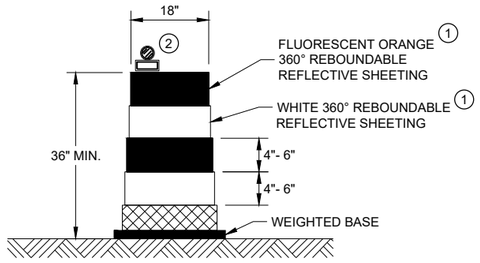
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

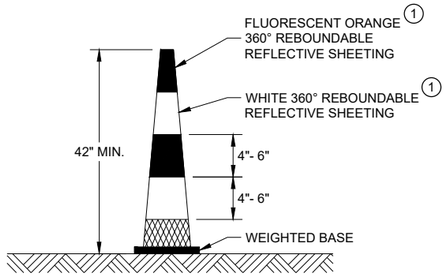
SDD 15C08 - 20c

GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

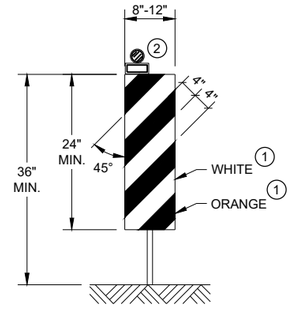


DRUM



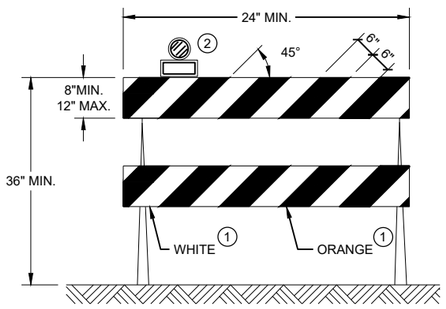
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



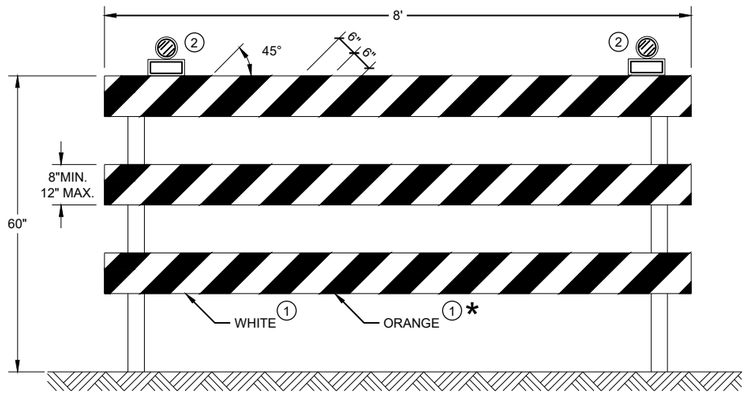
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD15C11 - 08b

6

SDD15C11 - 08b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

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.

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

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

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

FLAGGING

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 PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' 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.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

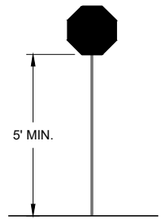
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



STOP/SLOW PADDLE ON SUPPORT STAFF

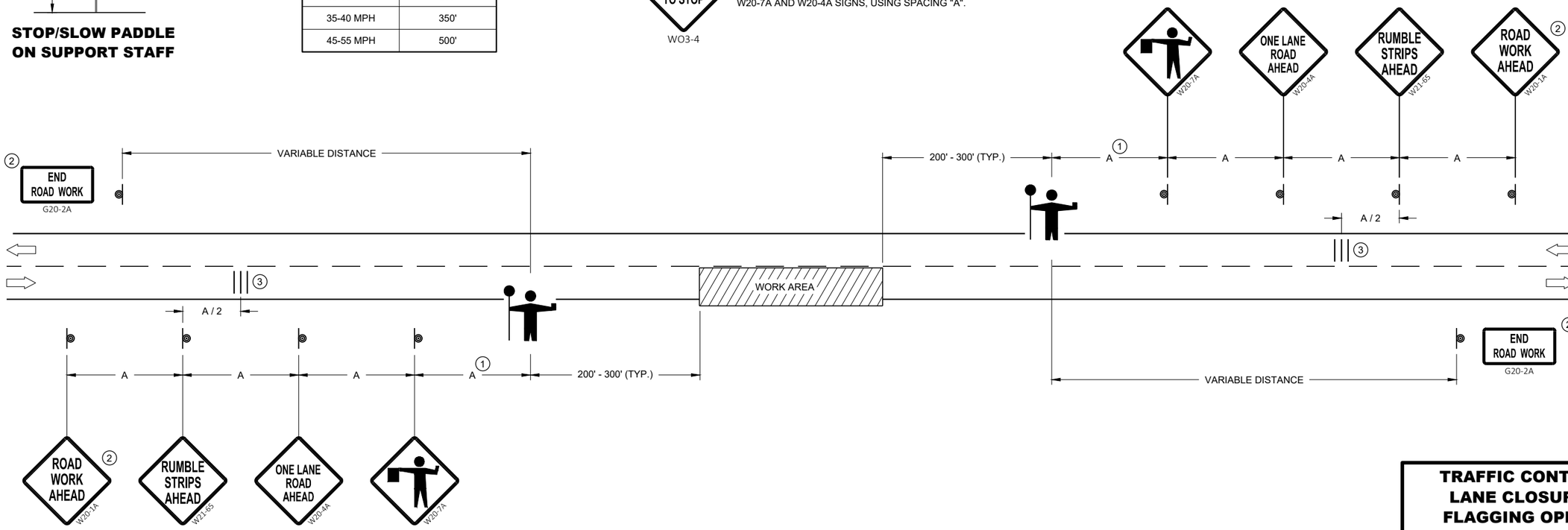
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



WO3-4

USE OF WO3-4 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 CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

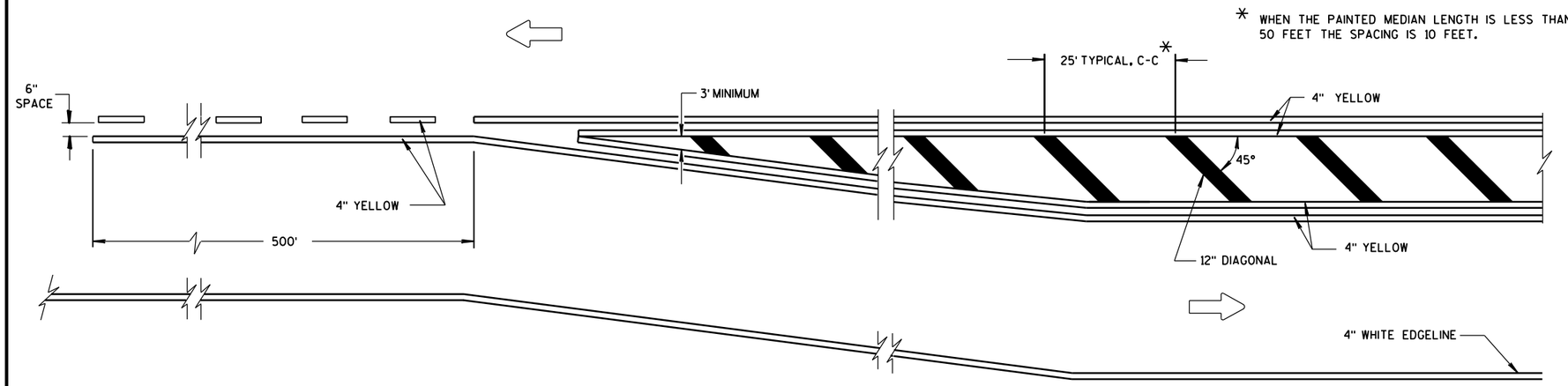
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C12 - 07

SDD 15C12 - 07

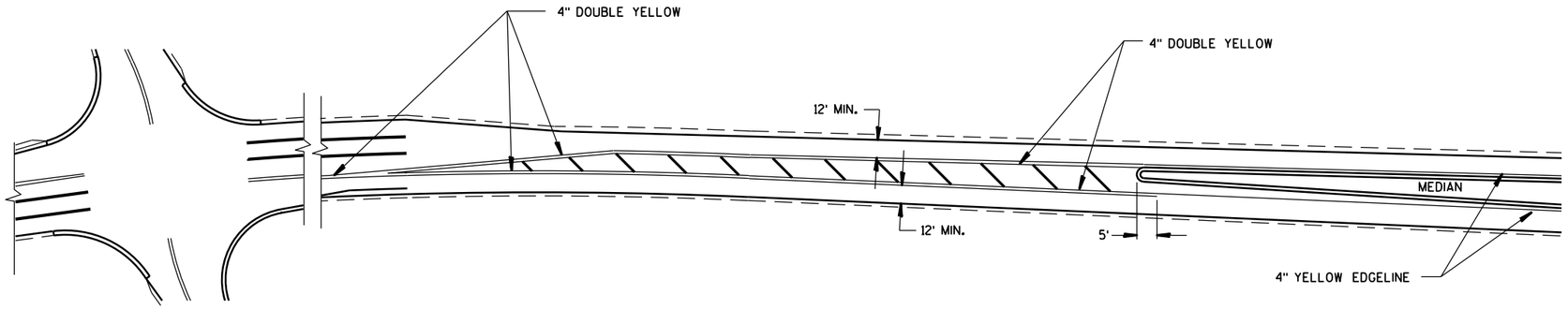


MEDIAN ISLAND DETAIL

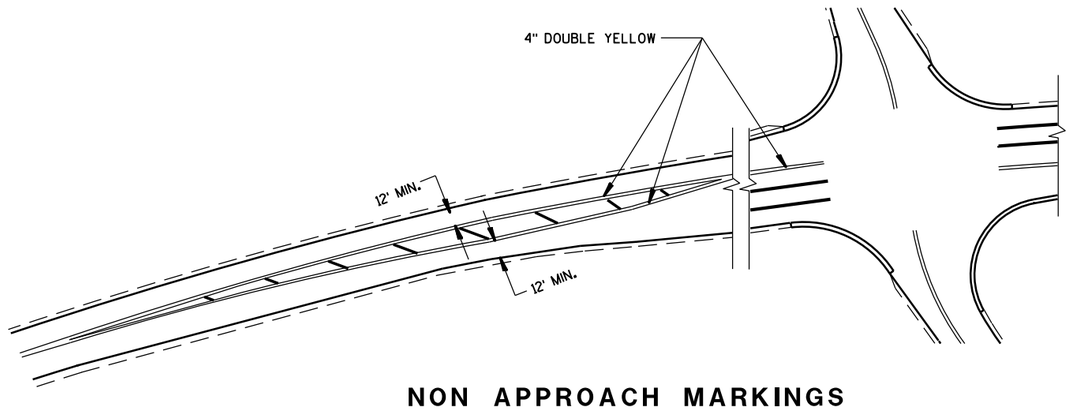
GENERAL NOTE

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

DIRECTION OF TRAVEL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

6

6

S.D.D. 15 C 18-4

S.D.D. 15 C 18-4

MEDIAN ISLAND MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARK EER

FHWA

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

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 AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

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

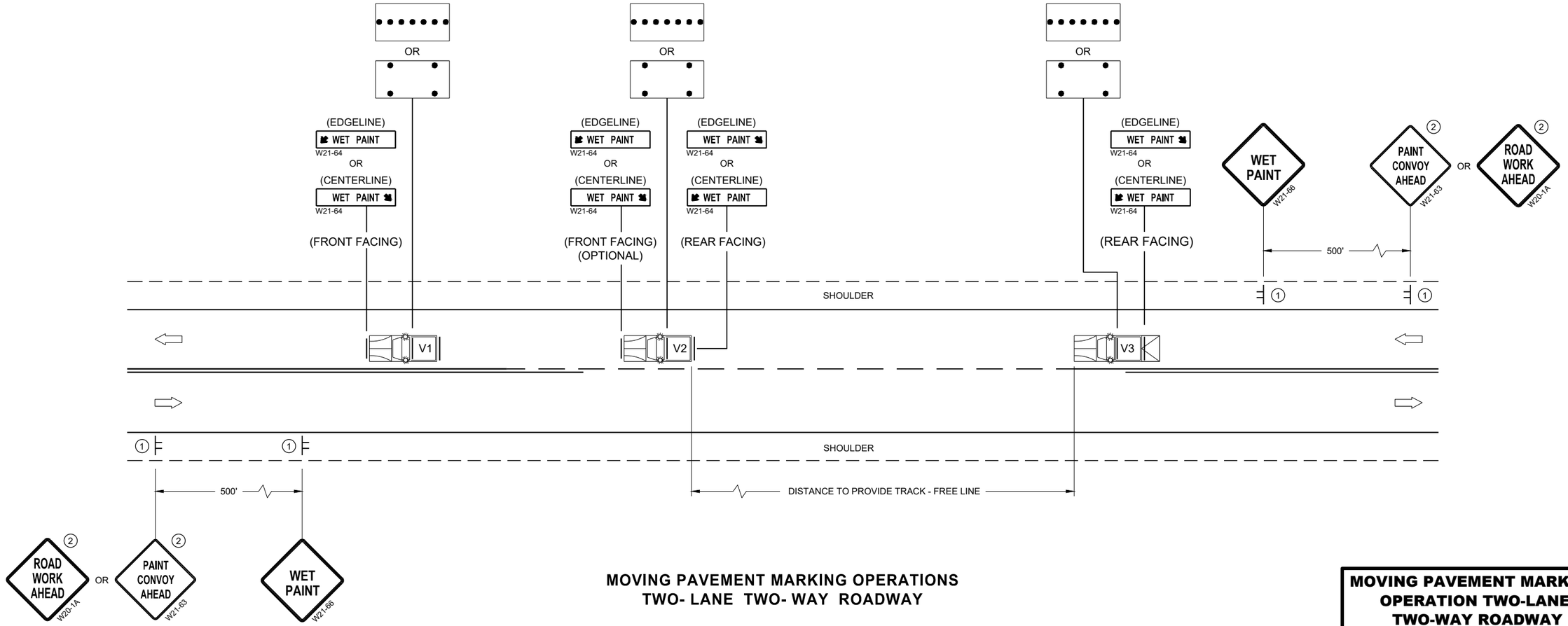
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 18" FOR WET PAVEMENT MARKING .

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

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

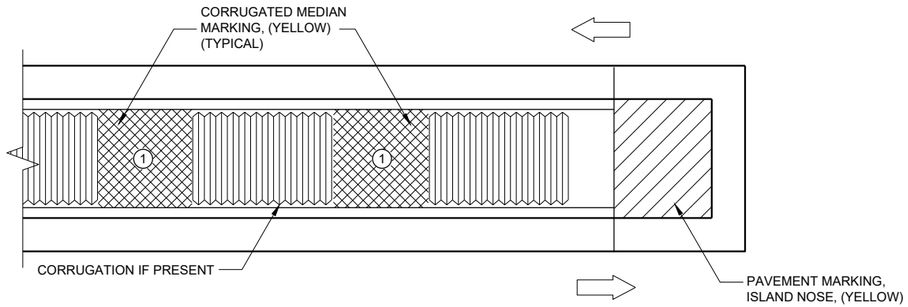
APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

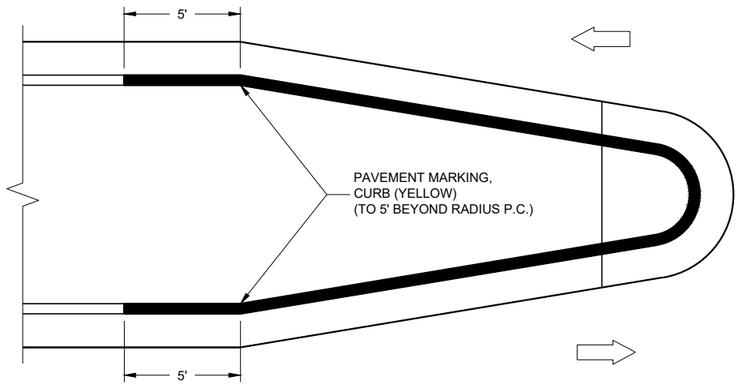
FHWA

SDD 15C19 - 06a

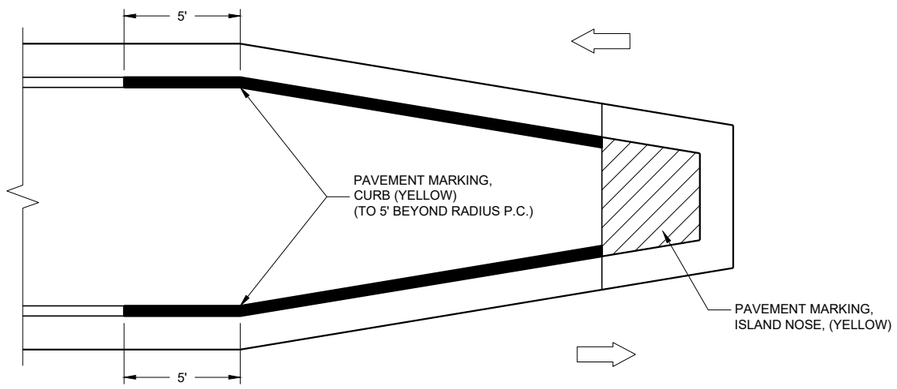
SDD 15C19 - 06a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE

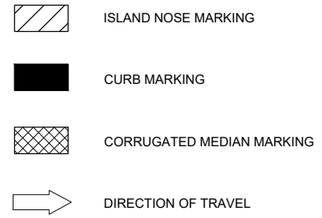


MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF
PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



PAVEMENT MARKINGS
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

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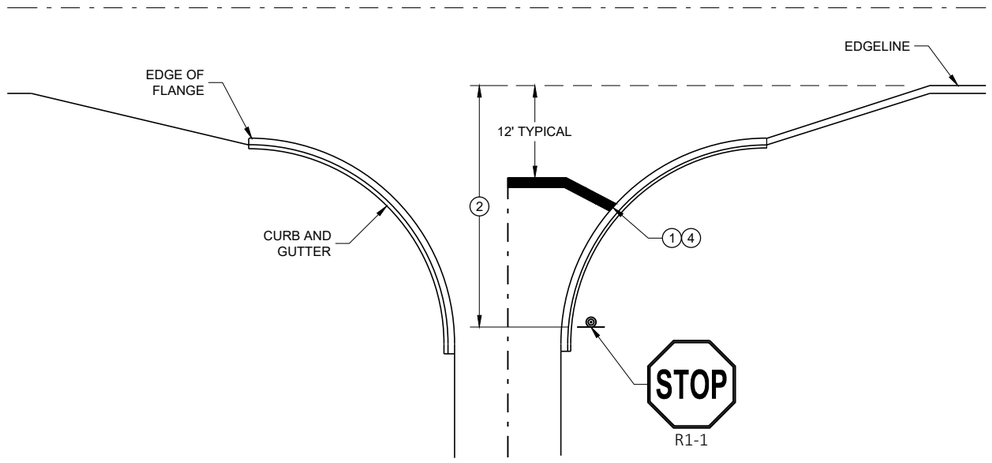
SDD 15C27 - 03b

SDD15C27 - 03b

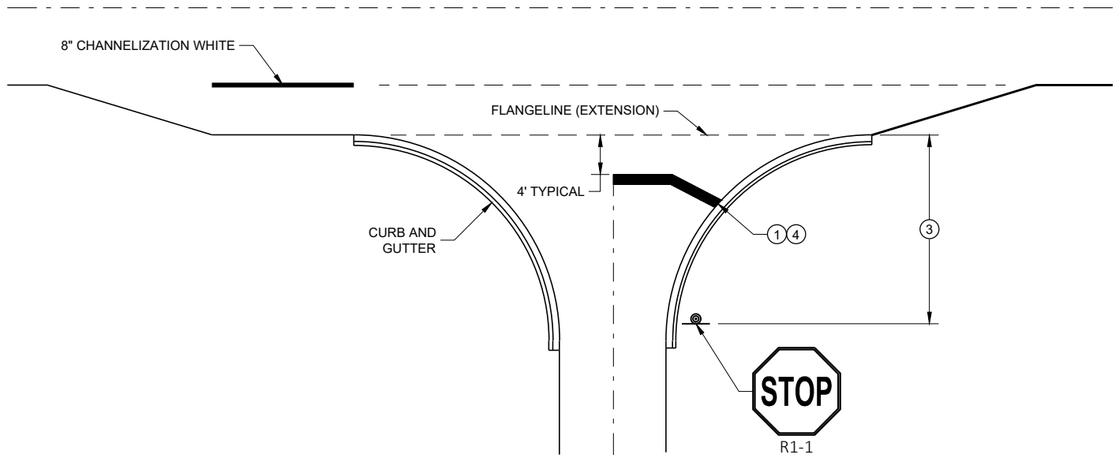
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

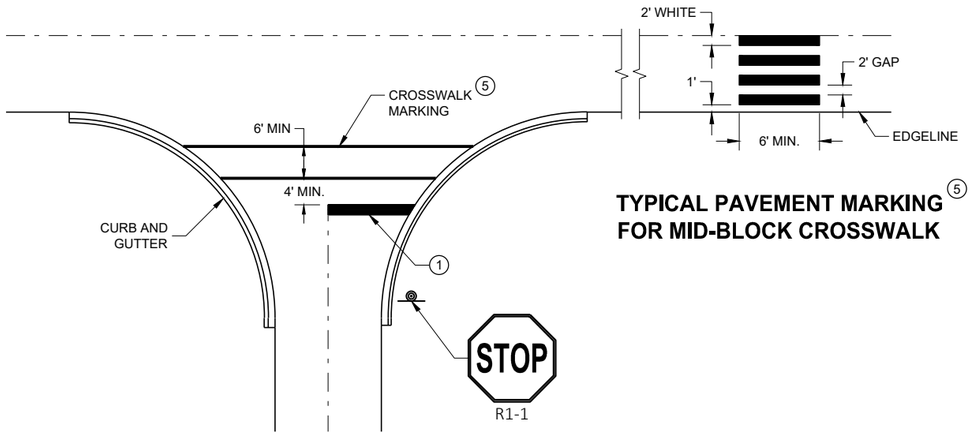
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

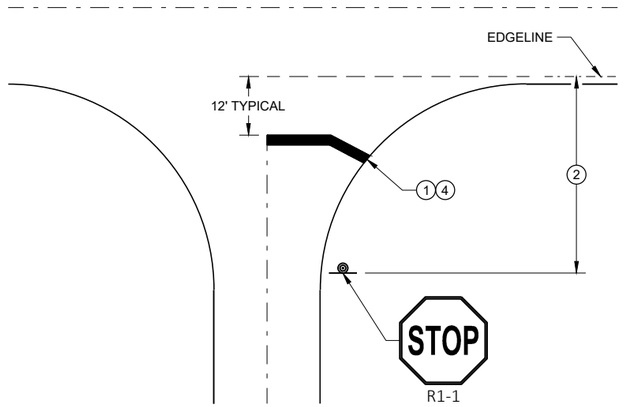


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

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SDD 15C33 - 04

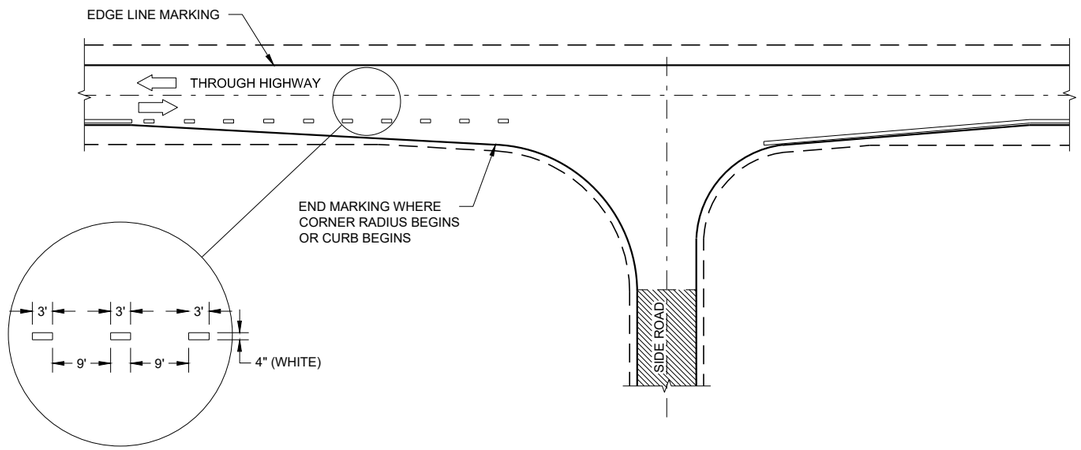
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

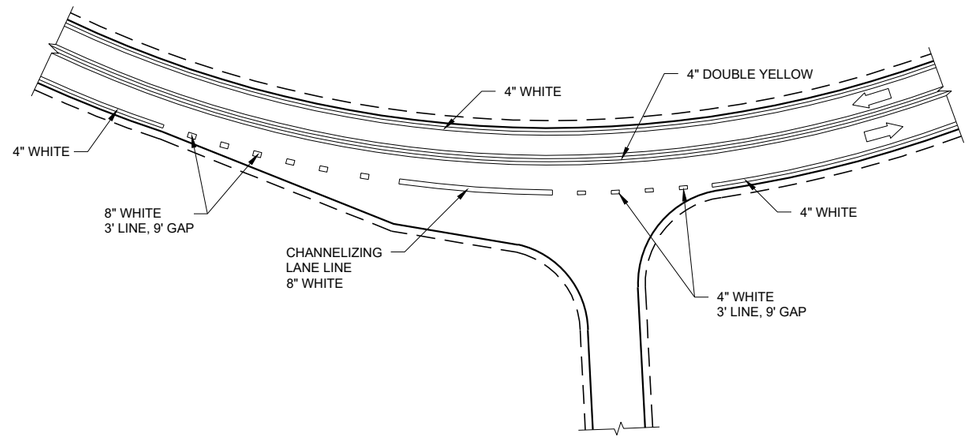
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

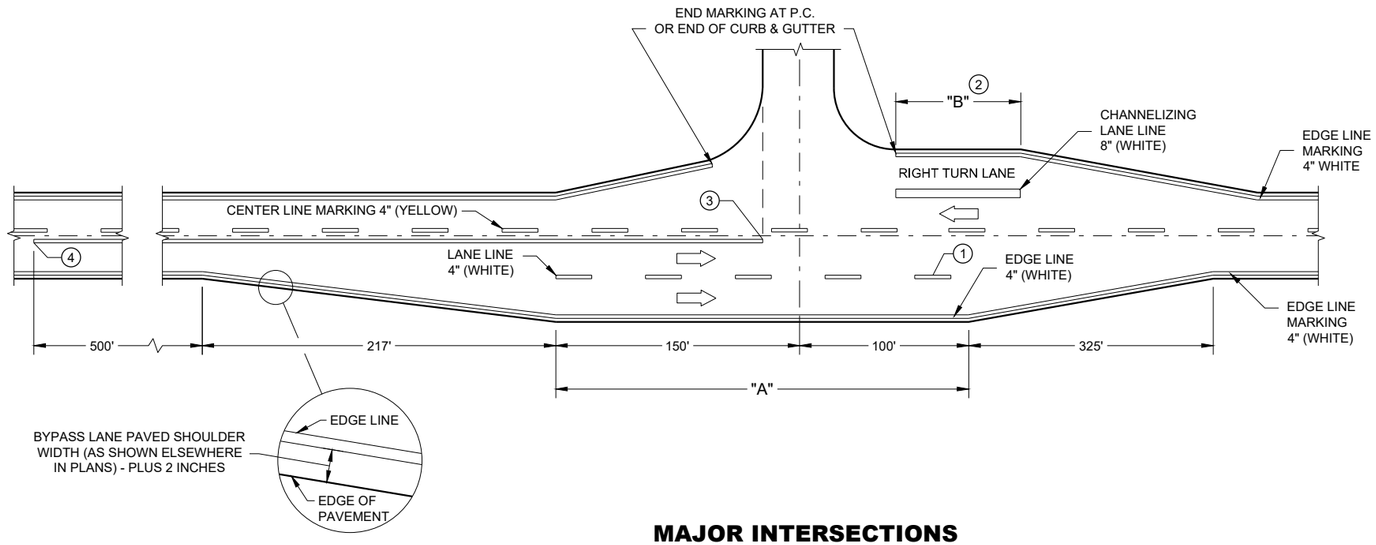
DIRECTION OF TRAVEL



MINOR INTERSECTION



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C35 - 04a

6

SDD 15C35 - 04a

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

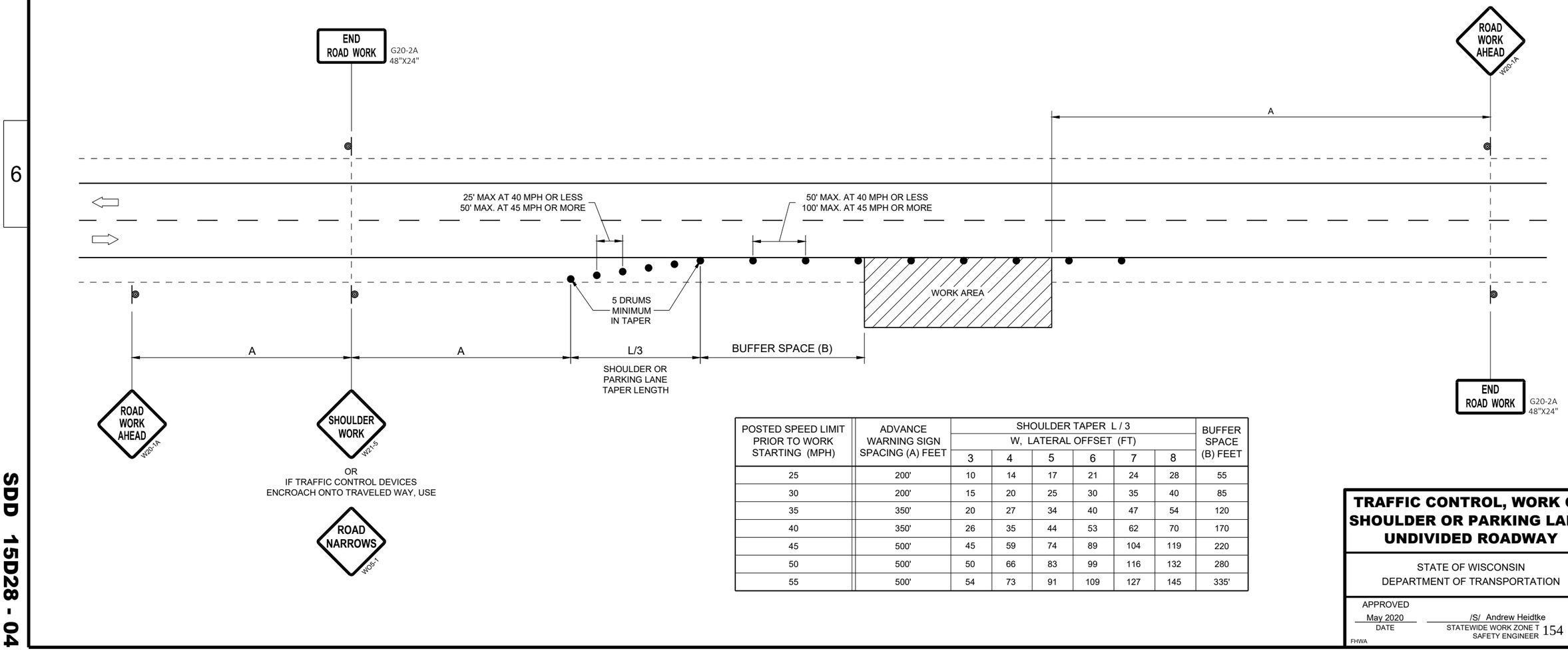
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

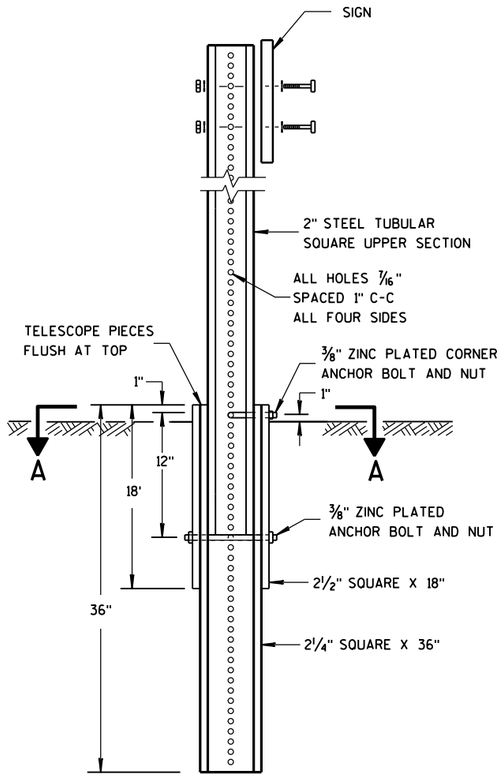
APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

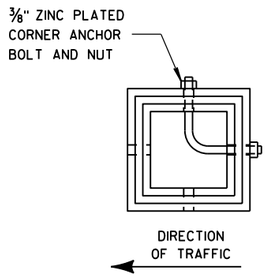
FHWA

SDD 15D28 - 04

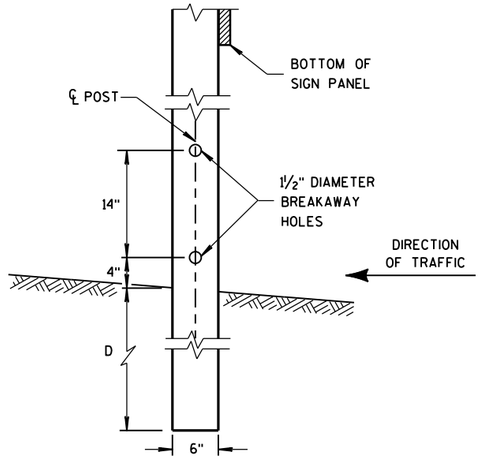
SDD 15D28 - 04



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



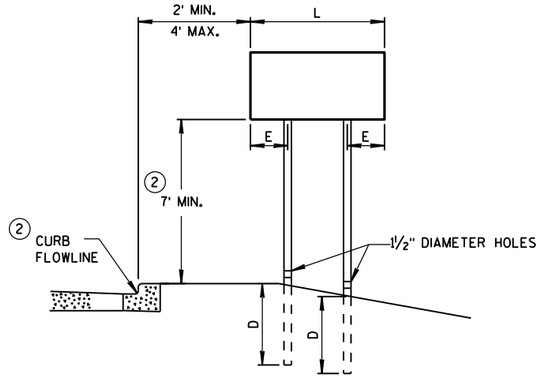
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

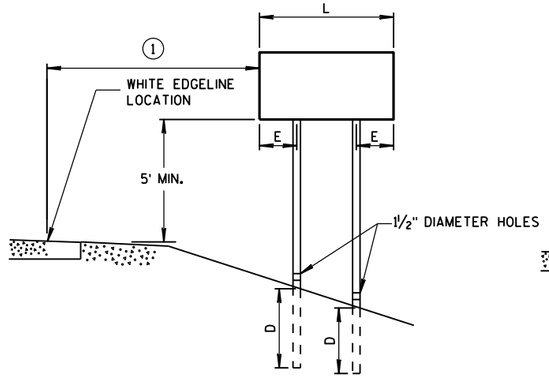
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

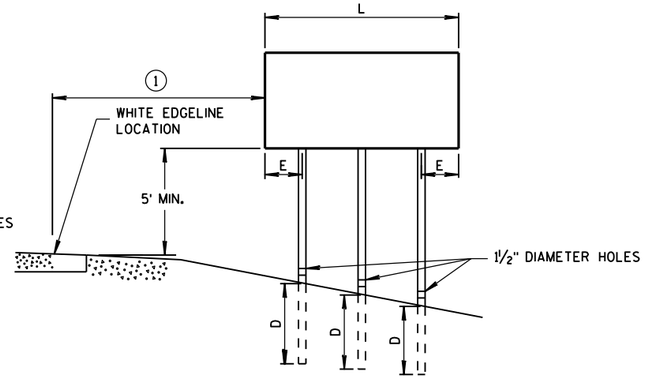
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

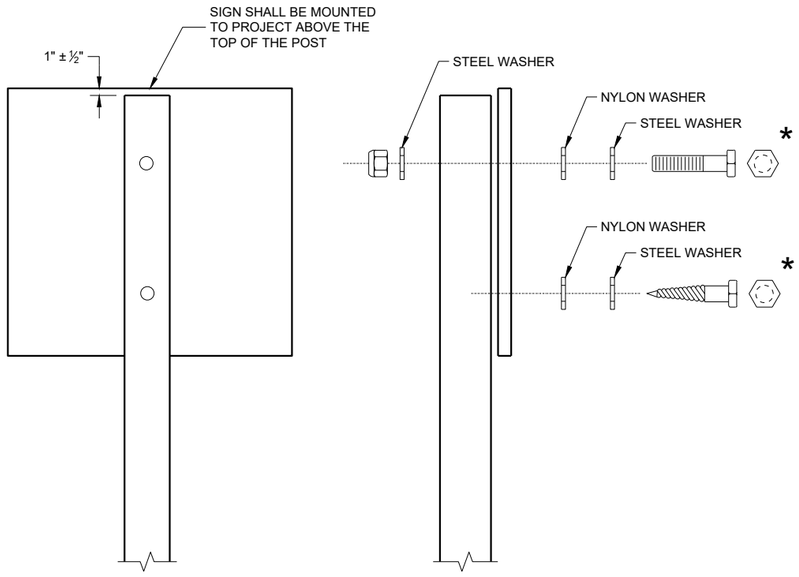
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 D 38-2a



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 POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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SDD 15D38 - 02b

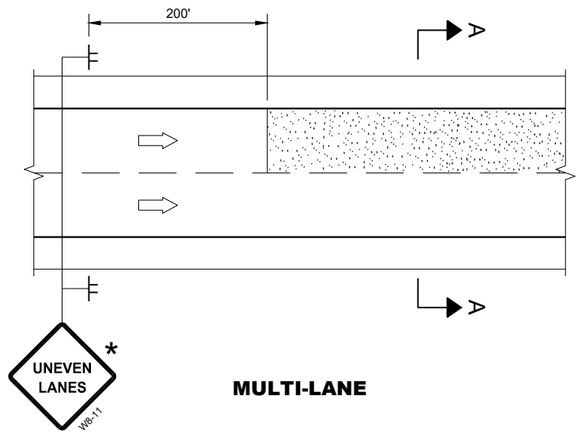
SDD15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

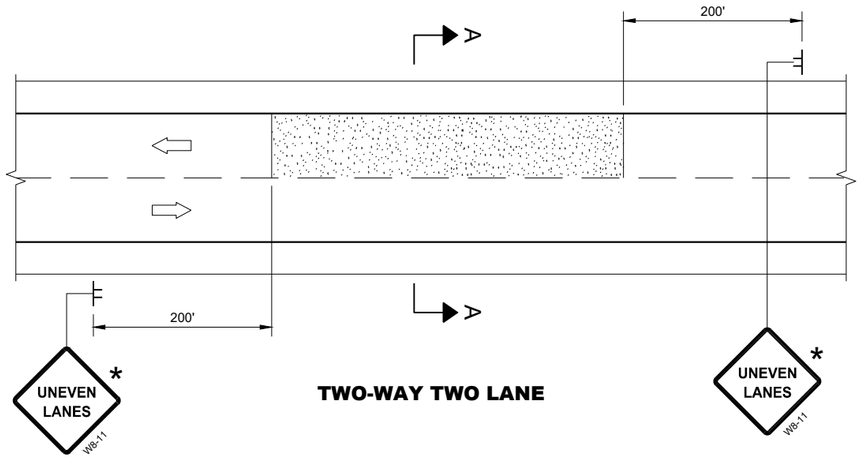
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA



MULTI-LANE



TWO-WAY TWO LANE

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

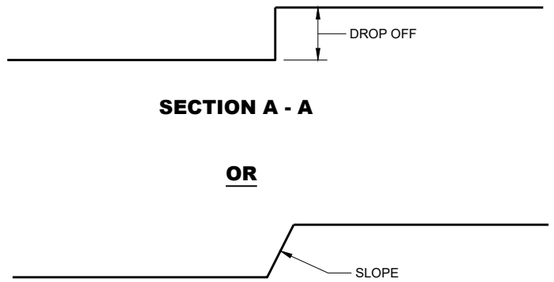
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

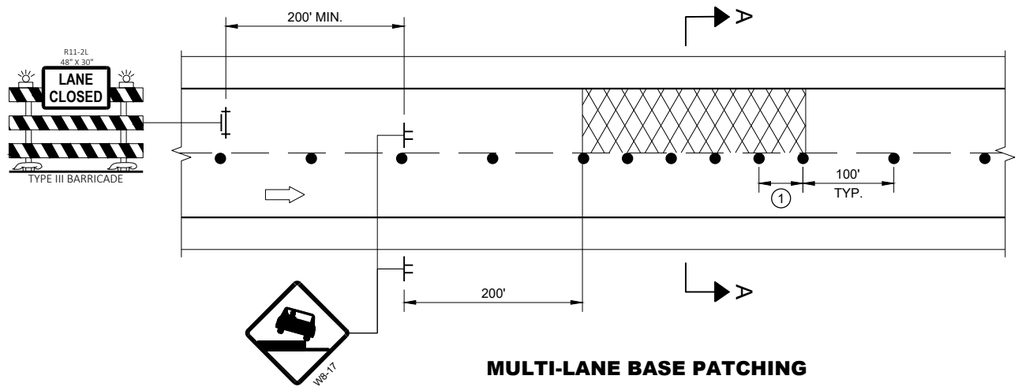
LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE



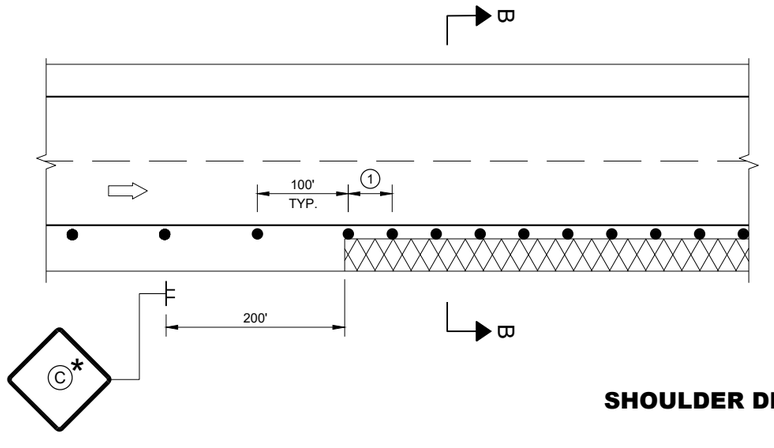
SECTION A - A

SECTION A - A

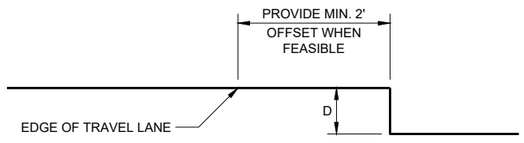


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15D39 - 02

6

SDD 15D39 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

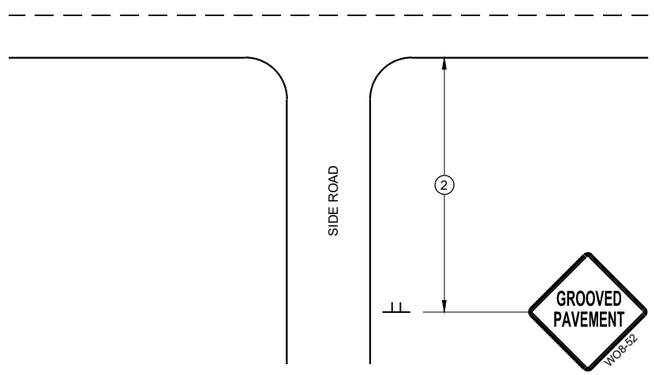
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

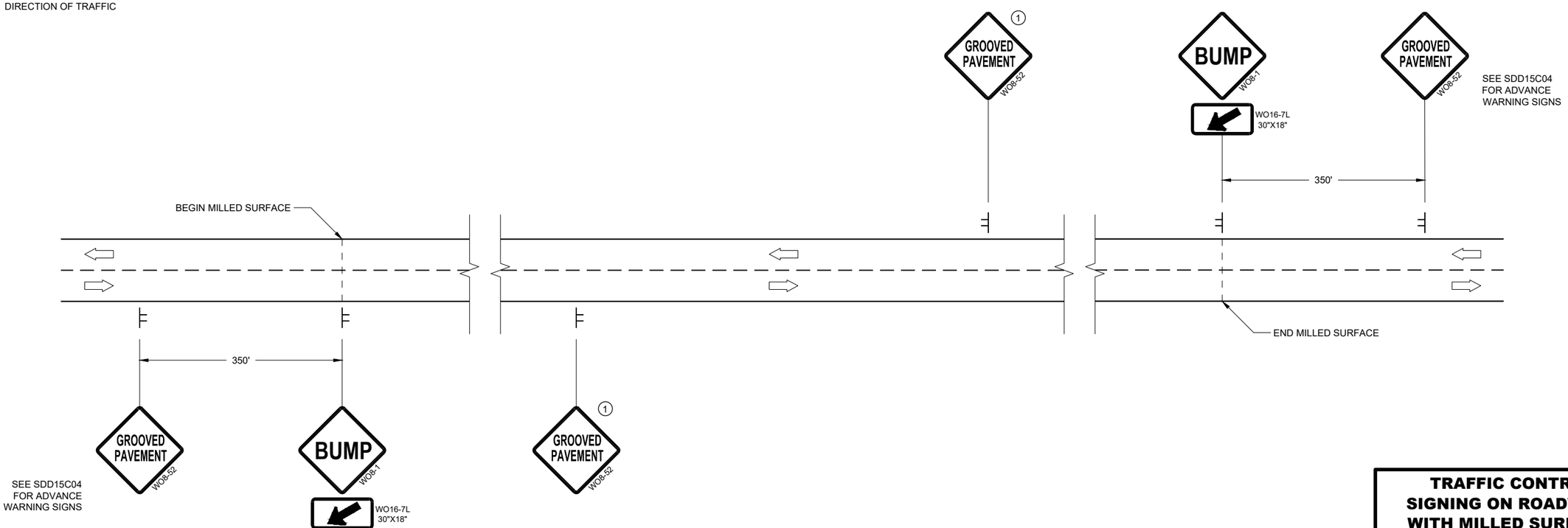
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

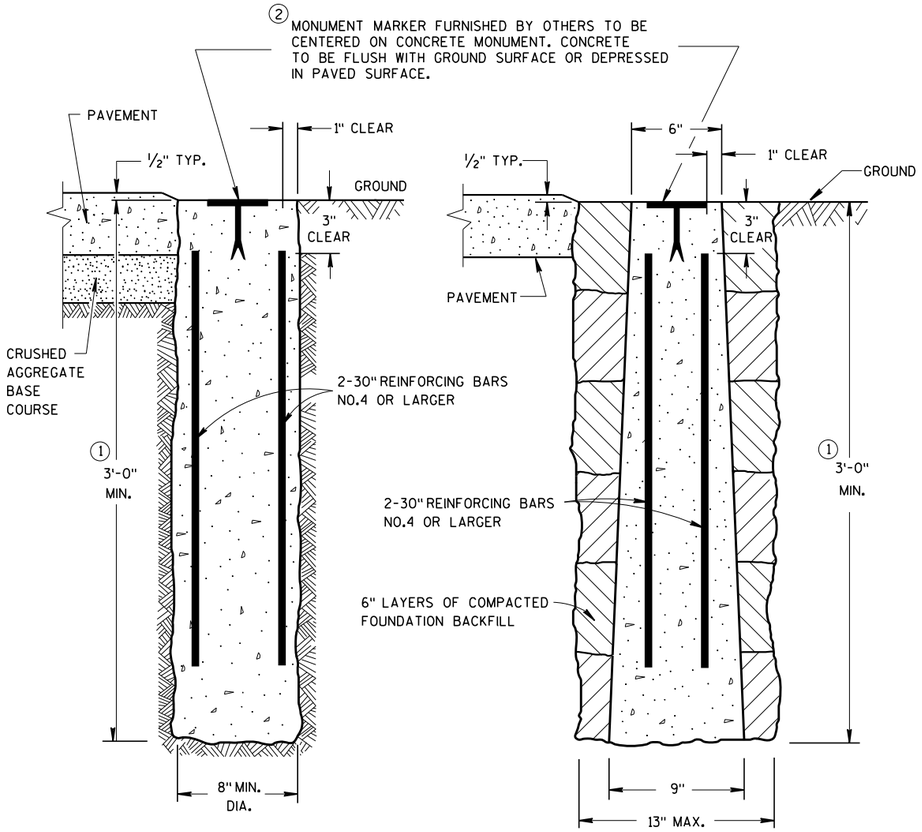
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
SDD 15D44 - 02

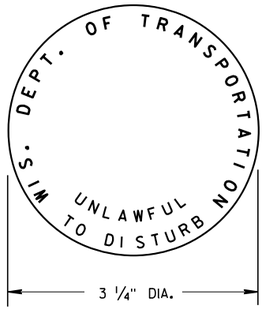


CAST-IN-PLACE

PRECAST

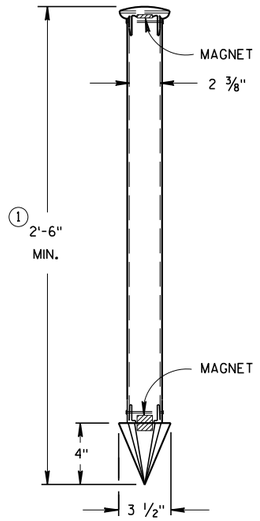
CONCRETE MONUMENTS

TYPE A



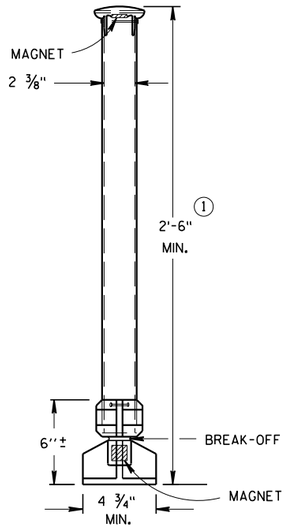
② **WIS DOT MONUMENT MARKER LOGO**

FOR TYPES "A", "C", & "D"



TYPE C

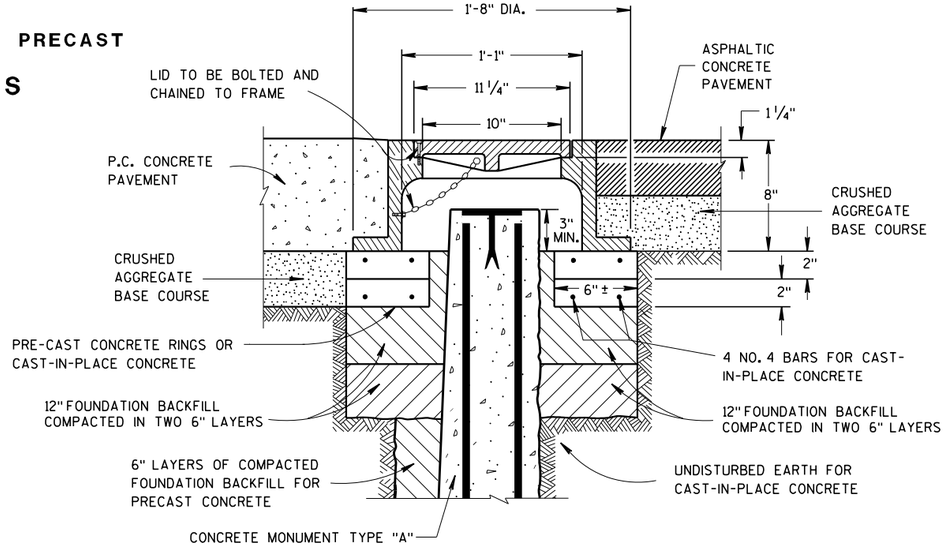
DRIVE-IN MONUMENT



TYPE D
NON-DRIVEN
BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT 95 LBS)

GENERAL NOTES

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

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

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

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.

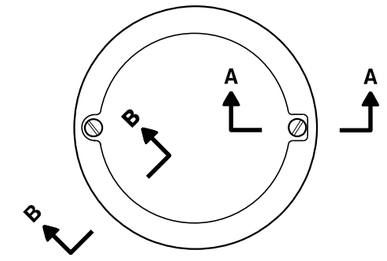
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

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.

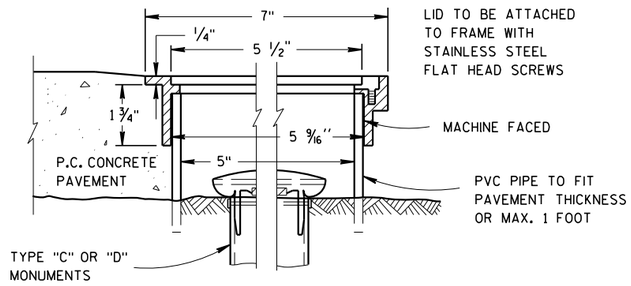
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER

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



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MONUMENTS AND COVERS

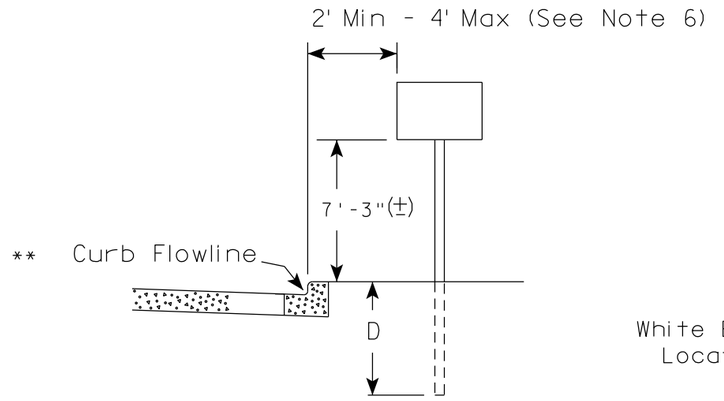
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Raymond A. Kumagai — CHIEF SURVEYING AND MAPPING ENGINEER
FHWA

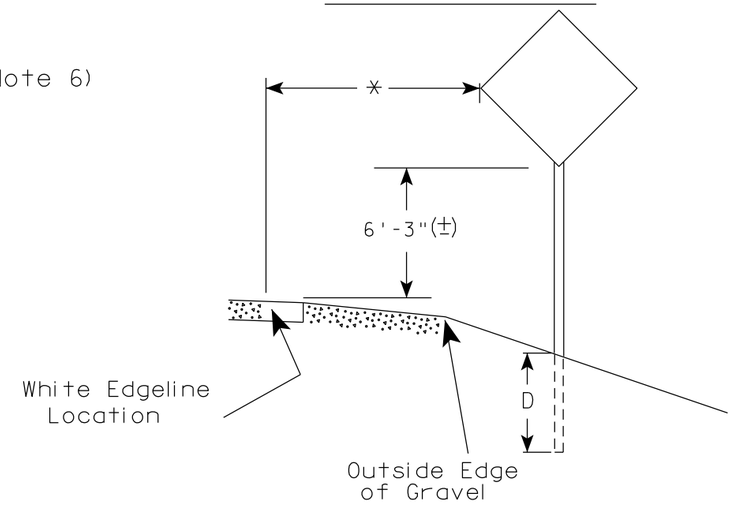
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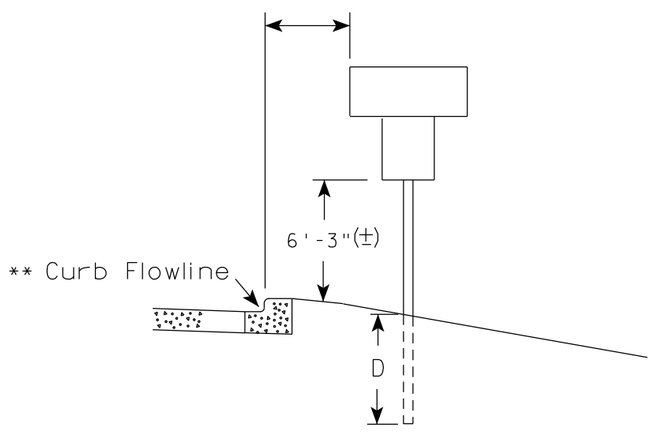
S.D.D. 16 A 1-7

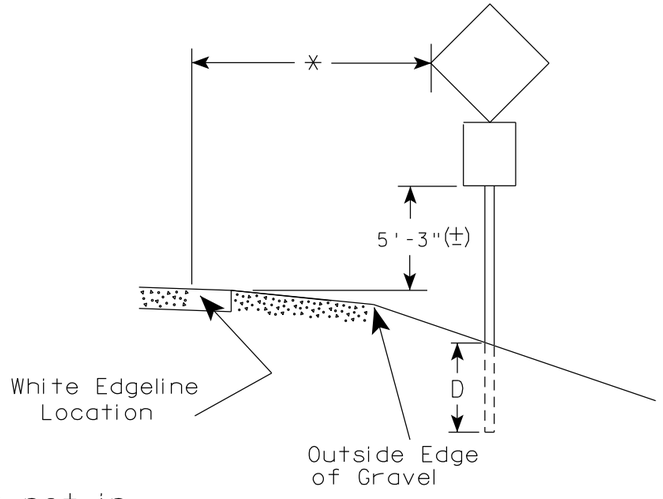
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) 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" (±).
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 signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

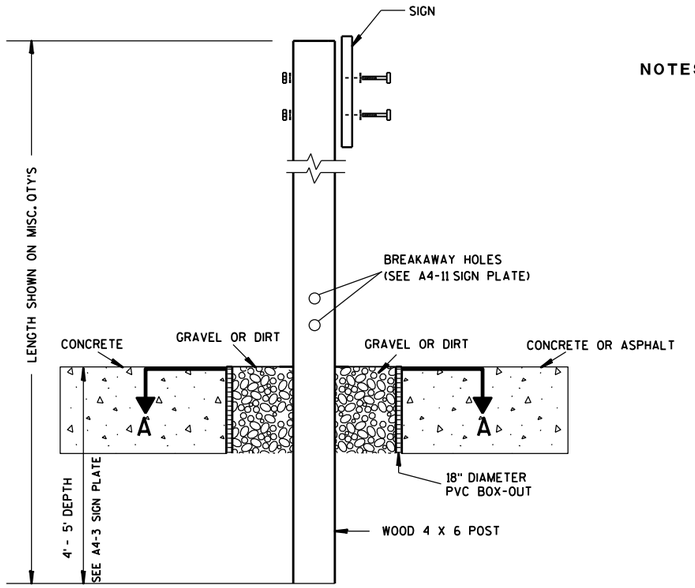
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

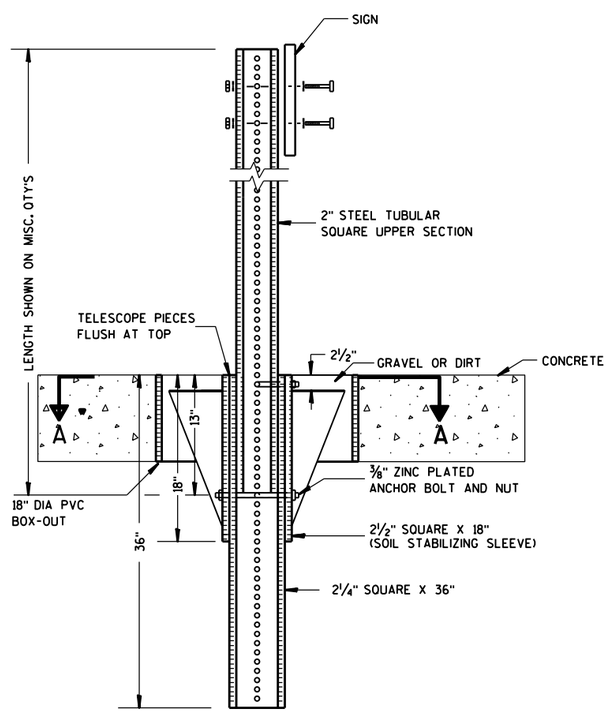
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 160	E



ELEVATION VIEW

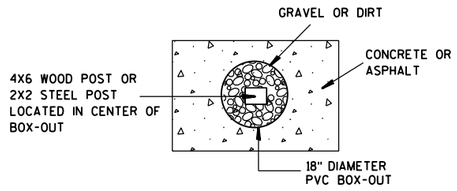
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

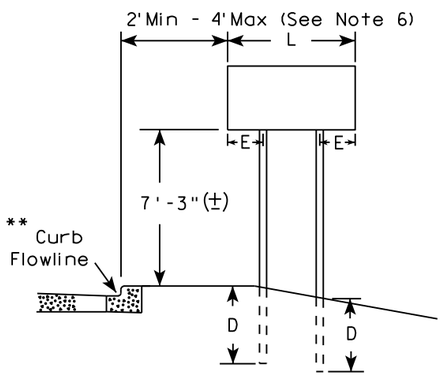
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

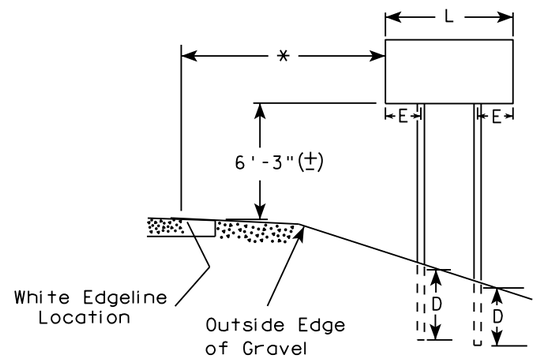
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

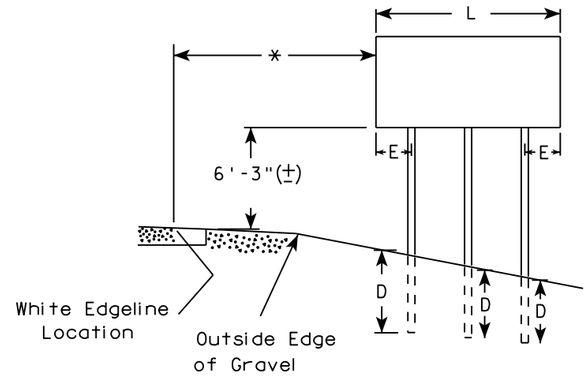
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

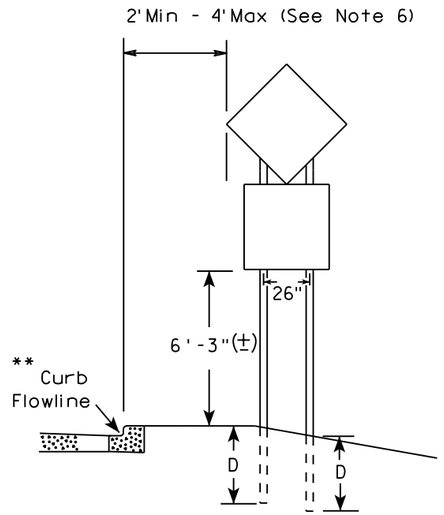
URBAN AREA



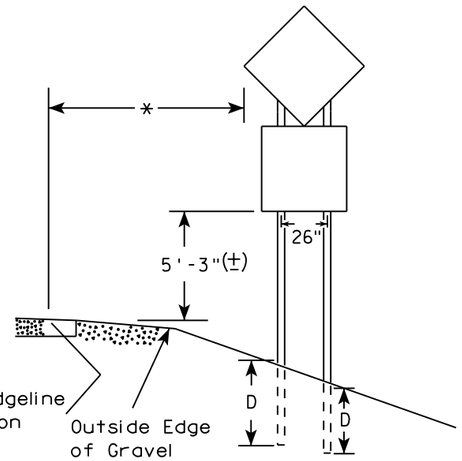
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)		
	L	E
***	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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. J-Assemblies are considered to be one sign for mounting height.
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.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

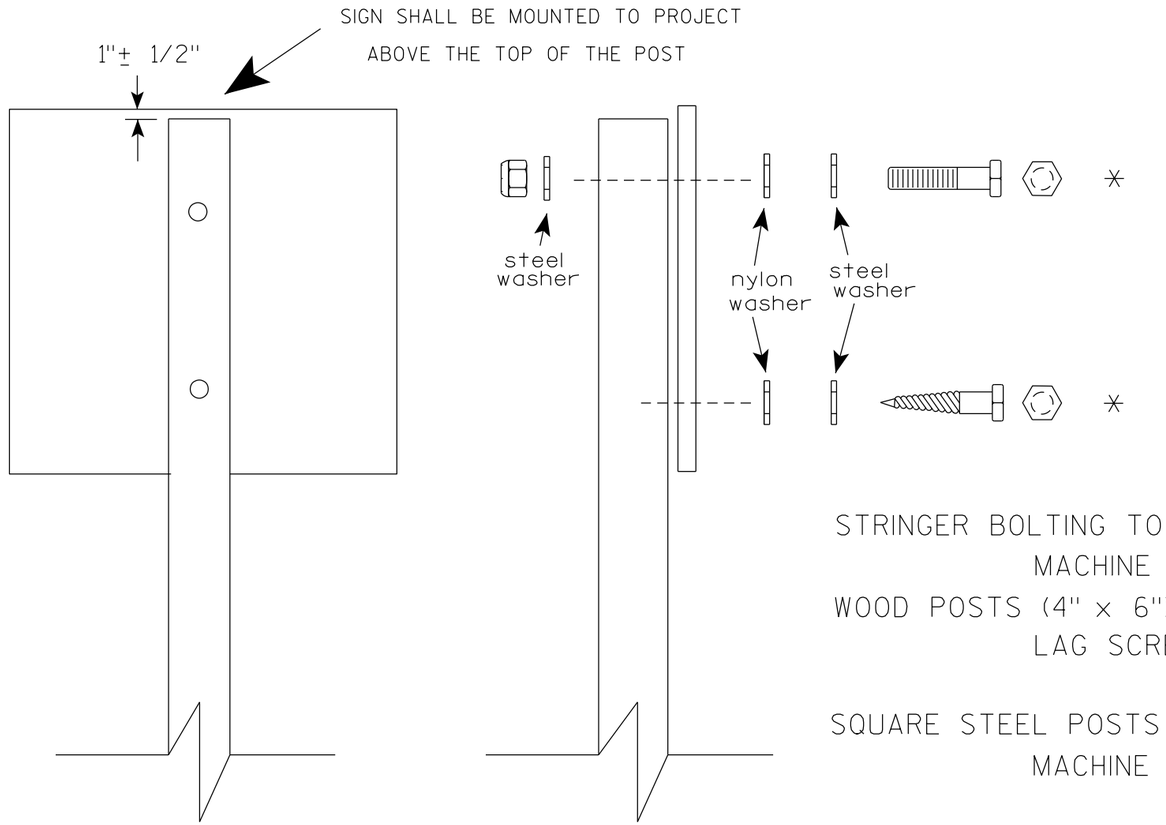
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 162	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 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 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

SHEET NO: 163 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 01-APRIL-2020 PLOT BY : dotc4c

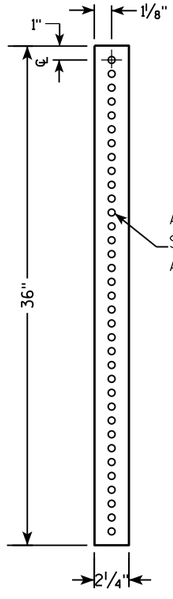
WISDOT/CADDS SHEET 42

7

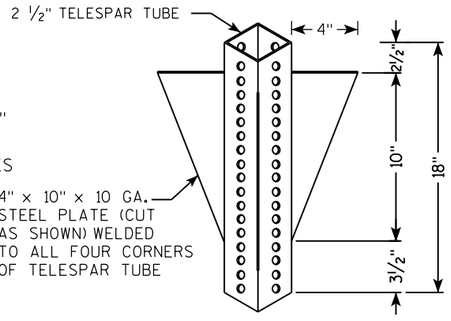
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TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

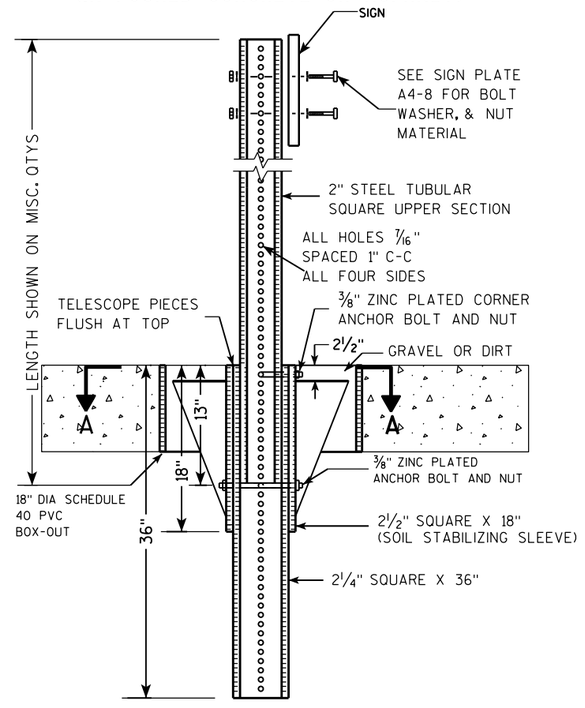
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



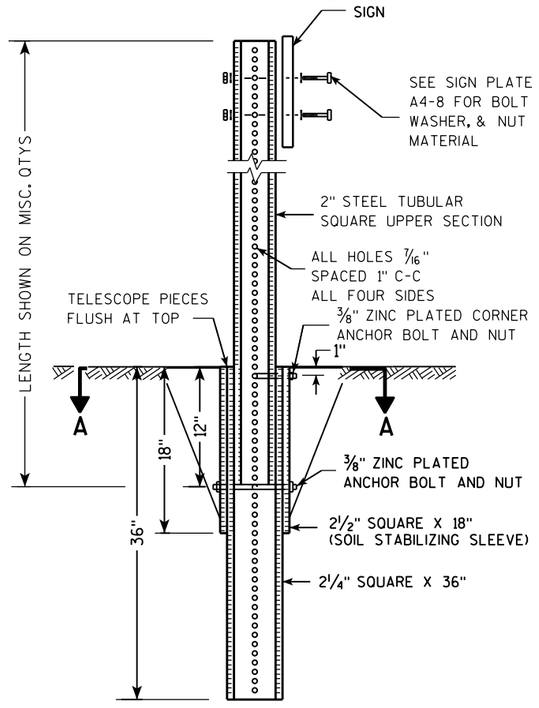
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

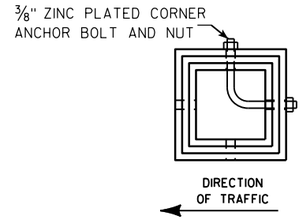


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

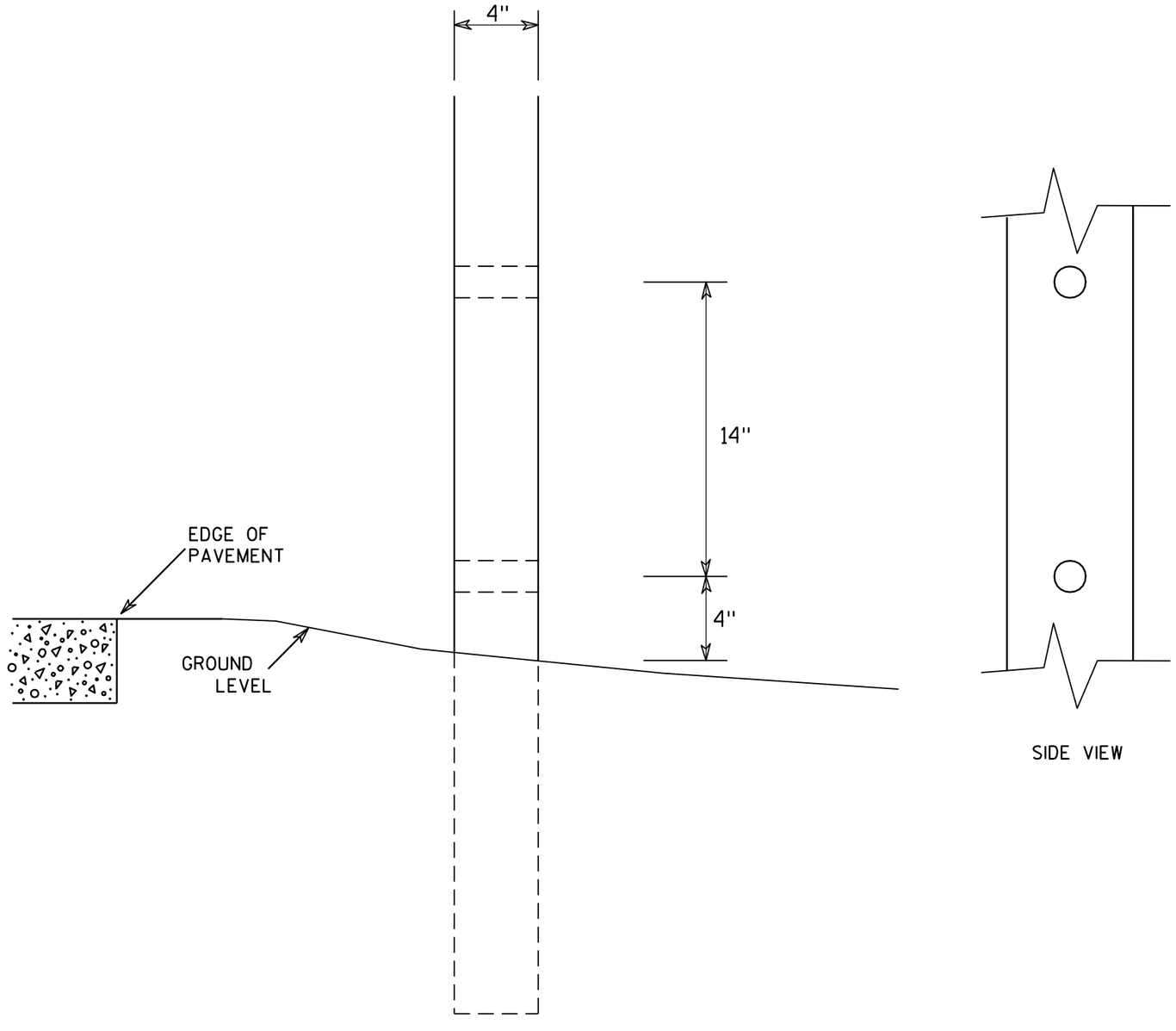
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



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

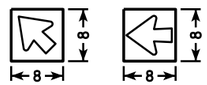
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

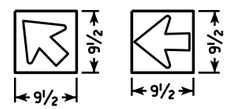
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 165	E

SIGN LAYOUT WITH VARIOUS SIZED MESSAGES

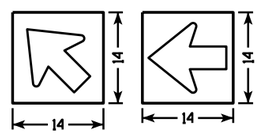




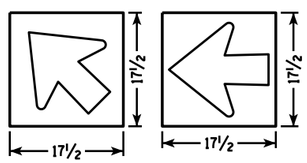










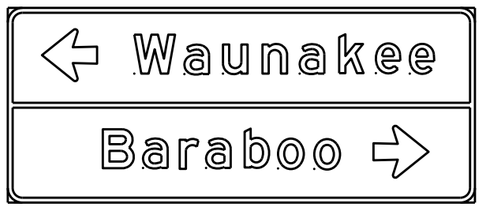


GENERAL NOTES

1. Materials shall conform to Standard Specification Section 637.
   Base - Sheet Aluminum 0.040" Thickness
   Sheeting - Orange Type F Reflective
   Arrow - Black Non-Reflective
2. Arrow signs shall be fastened to permanent sign by either aluminum rivets or aluminum self-tapping sheet metal screws. There shall be a minmum of 2 fasteners used per arrow sign.
3. There shall be a spacer consisting of a 0.08" nylon washer between the back of the arrow sign and the face of the permanent sign.
4. Arrows are per standard plate A1-2
5. Use separate arrow sign for each destination
6. Tilt arrow is always at 45 degrees
7. Arrow is centered on arrow sign

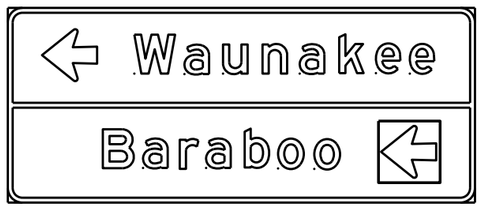
Lower Case Copy Size	Standard Width (Single Arrow)	2 Line Tilt Arrow Cover Width	3 Line Tilt Arrow Cover Width	Height
3¾" Series C	8	9 ½	14 ½	8
4½" Series D & E	9 ½	10	15	9 ½
6" Series D & E	14	16	20 ½	14
8" Series E	17 ½	20 ½	25	17 ½

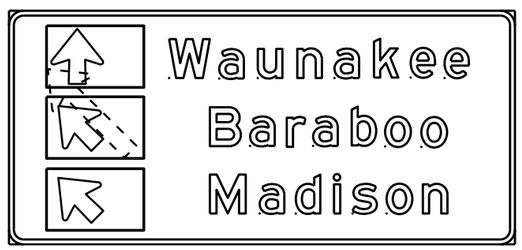
BEFORE





AFTER





DESTINATION DIRECTIONAL ARROW FOR DETOUR SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/08/14

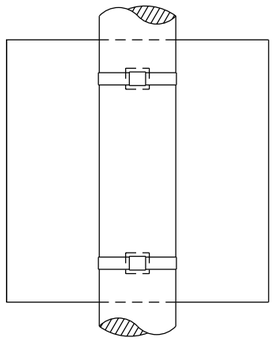
A4-12.2

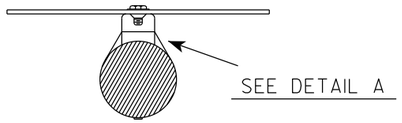
PROJECT NO:

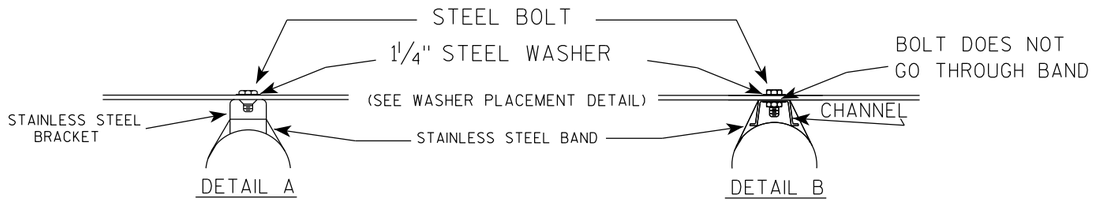
SHEET NO: E

BANDING

SINGLE SIGN



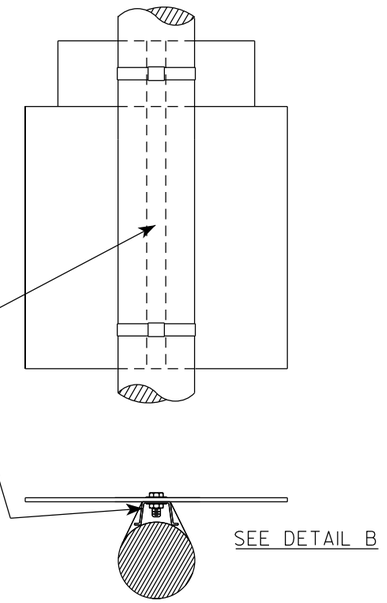




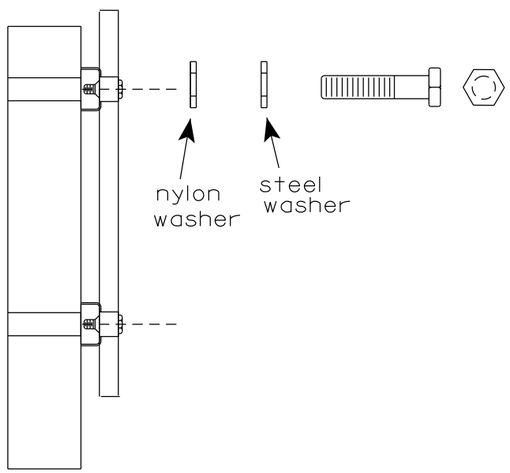
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

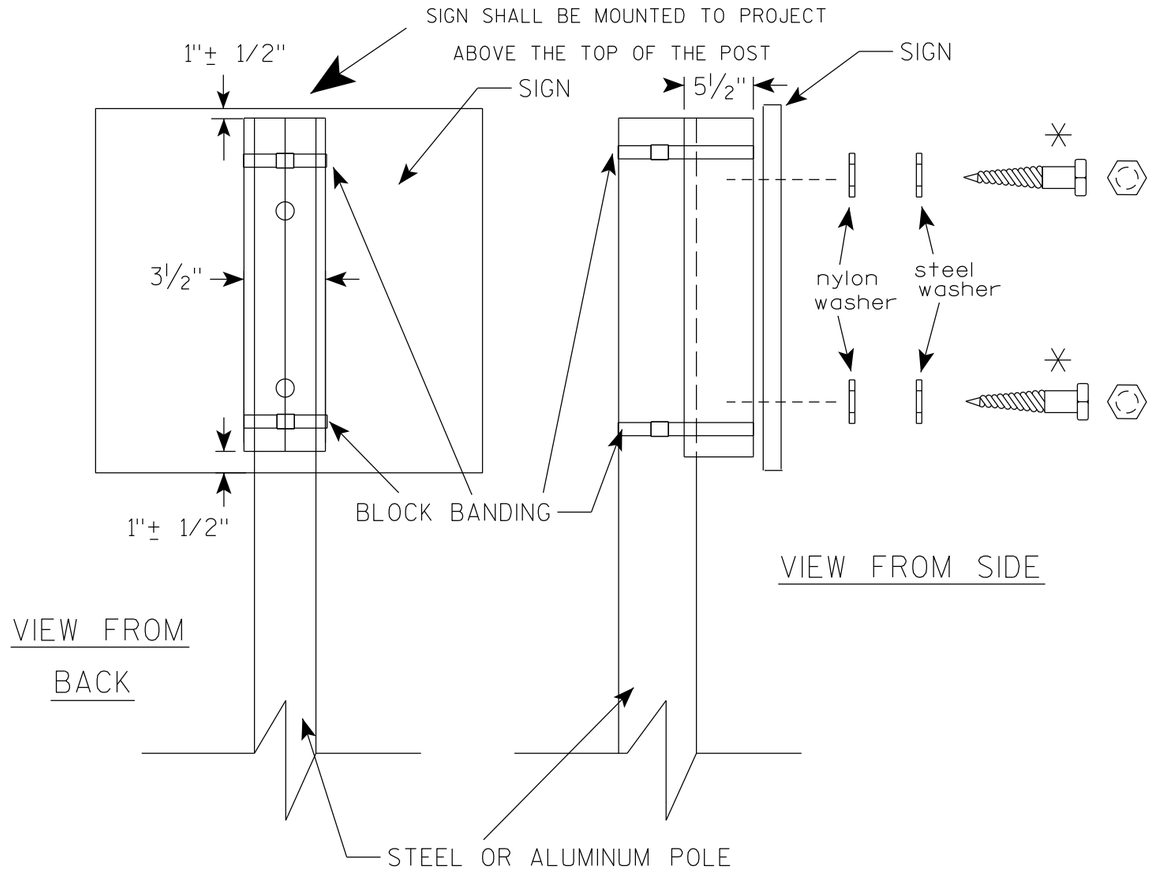
DATE 6/10/19 PLATE NO. A5-9.4

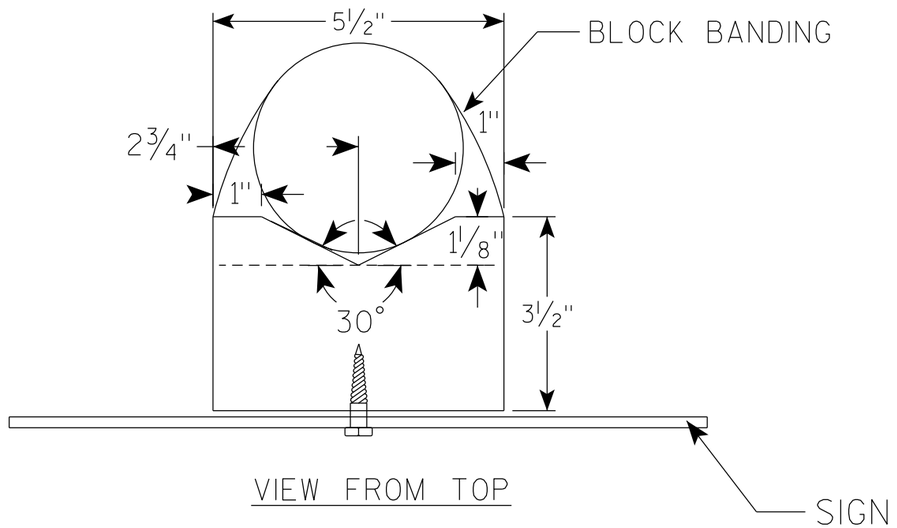
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 167	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





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
   b. 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"

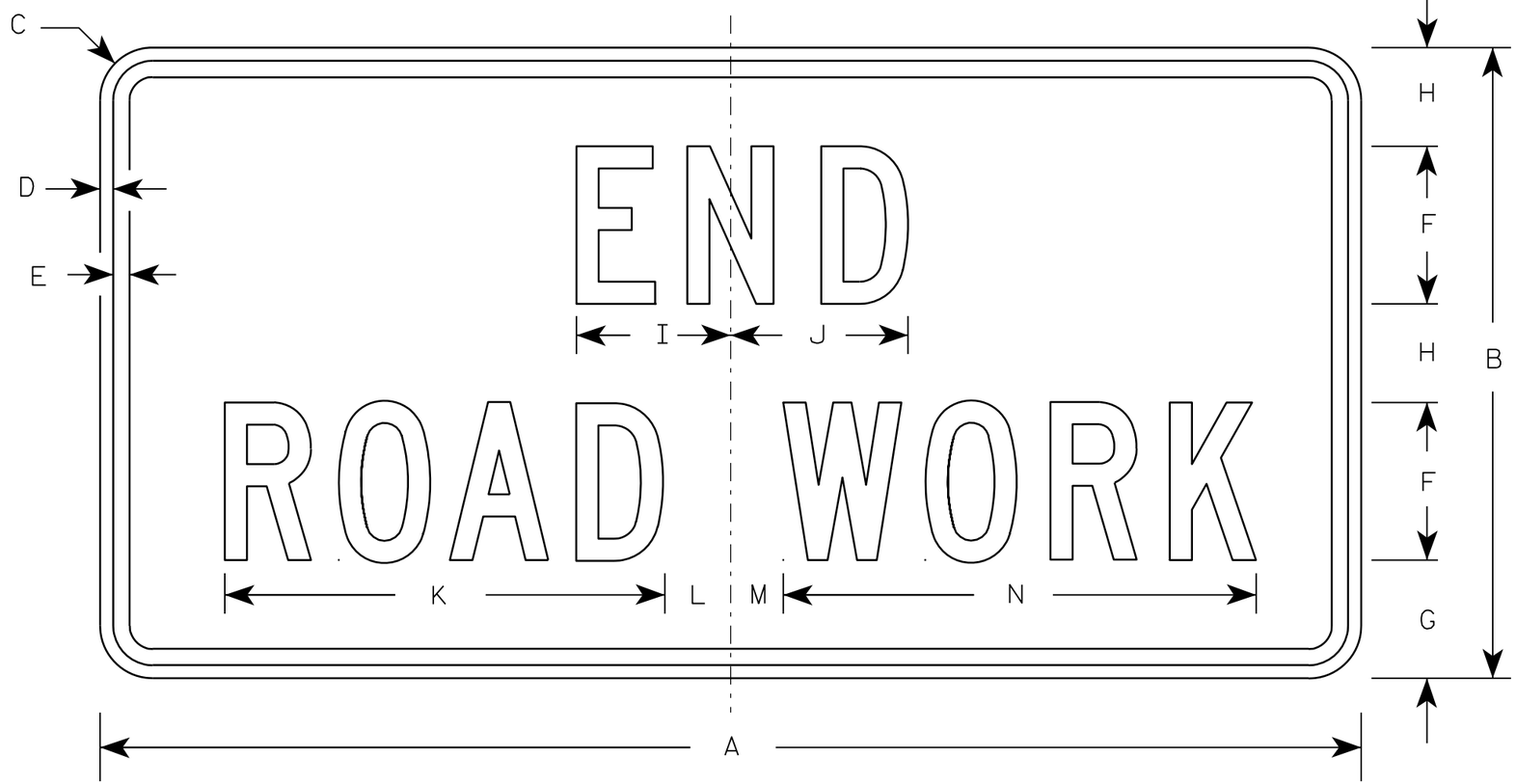
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO: | SHEET NO: 168 | 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

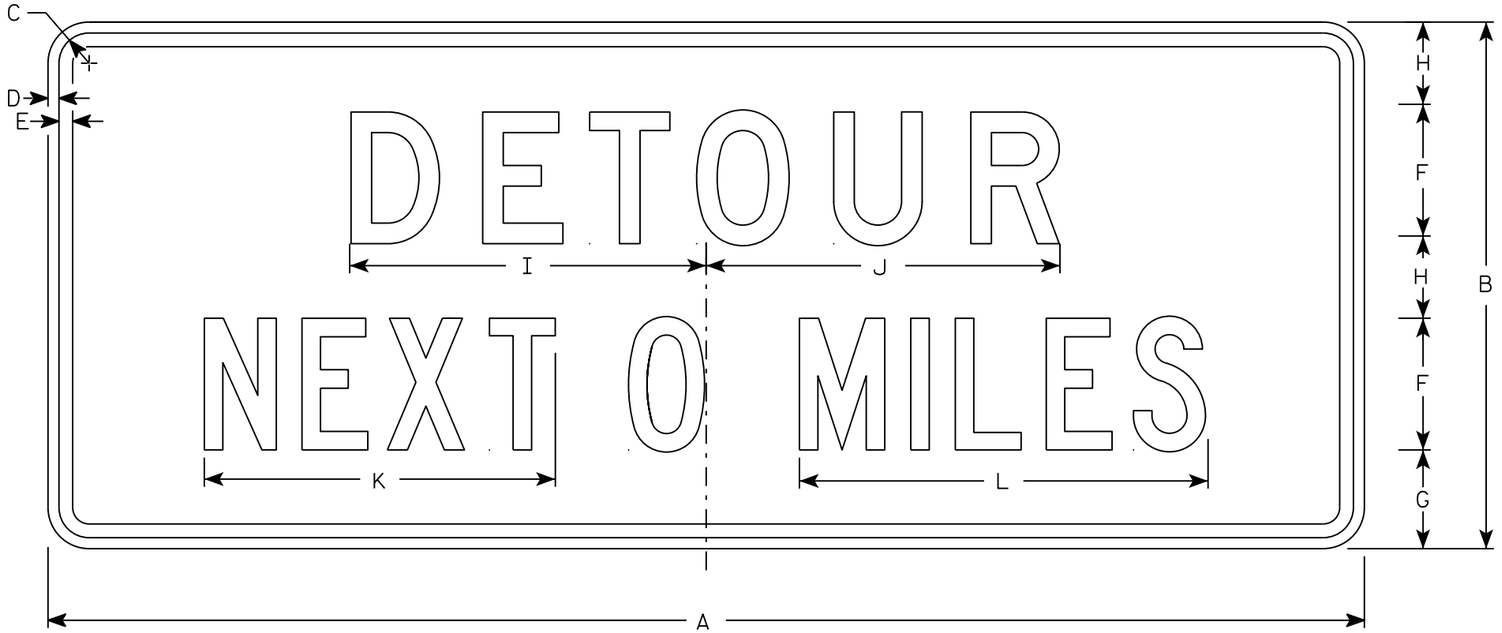
STANDARD SIGN
G20-2A

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: 169	E



G20-51

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - Line 1 is D and Line 2 is 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. Round distance to nearest whole Mile and 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																											
2	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4	16 1/4	16 1/8	16	18 5/8															10
3																											
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4	16 1/4	16 1/8	16	18 5/8															10
5																											

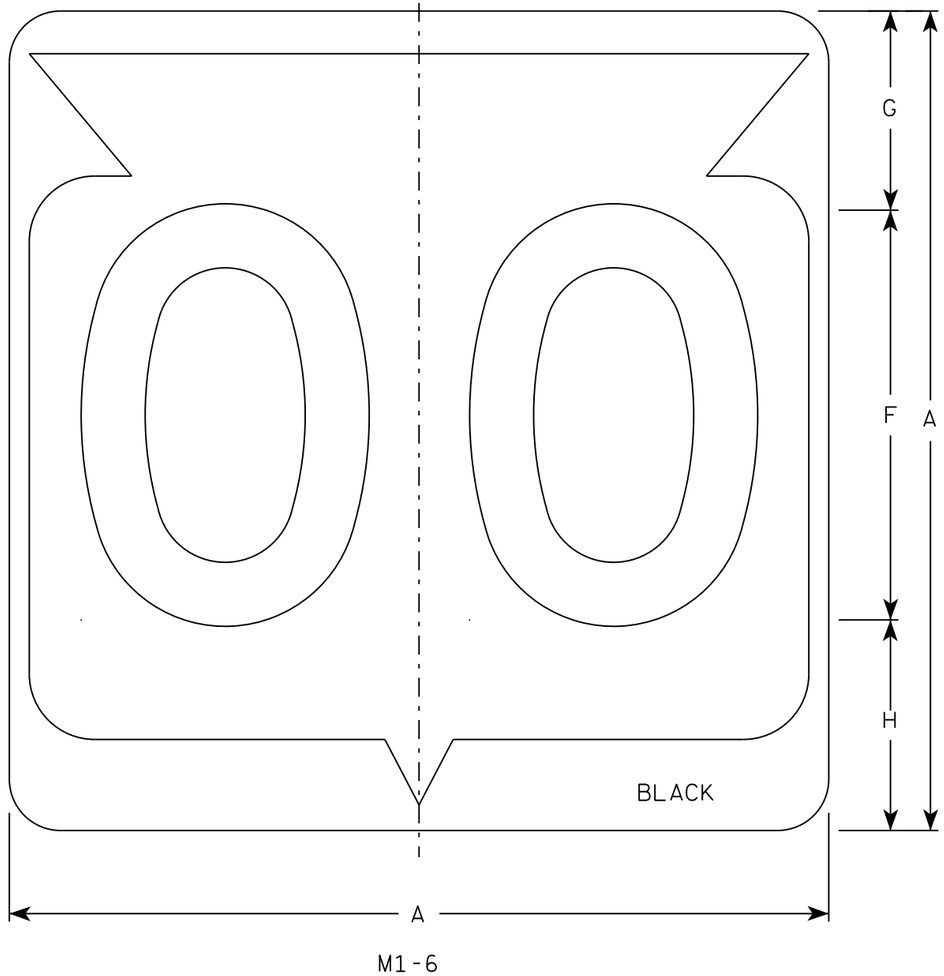
STANDARD SIGN
G20-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-51.2

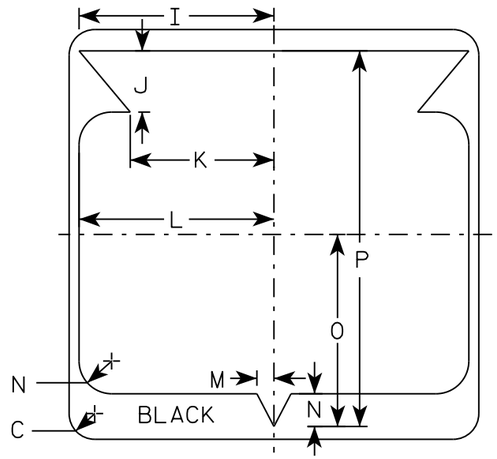
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 170	E



M1-6

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	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
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
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
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

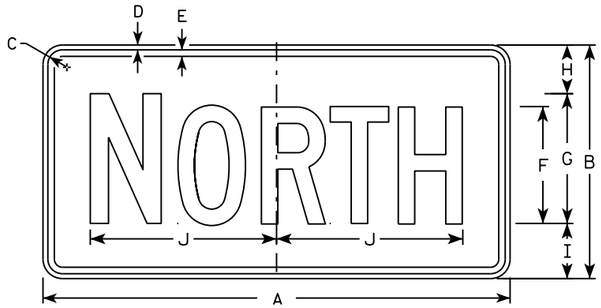
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

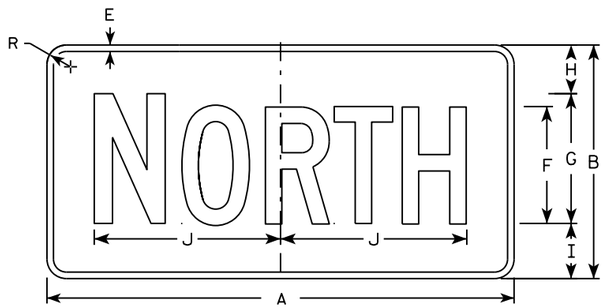
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 171	E



M3-1
MM3-1
MP3-1



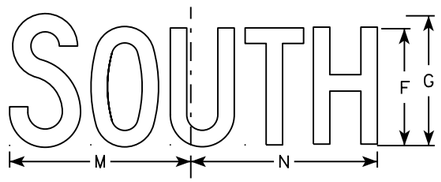
MB3-1
MK3-1
MN3-1



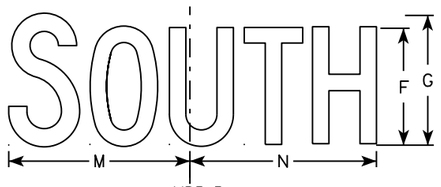
M3-2
MM3-2
MP3-2



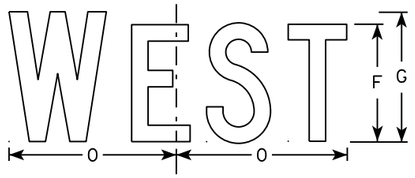
MB3-2
MK3-2
MN3-2



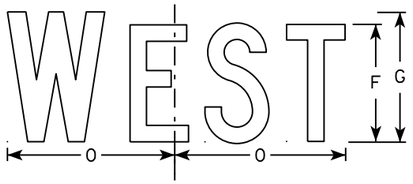
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

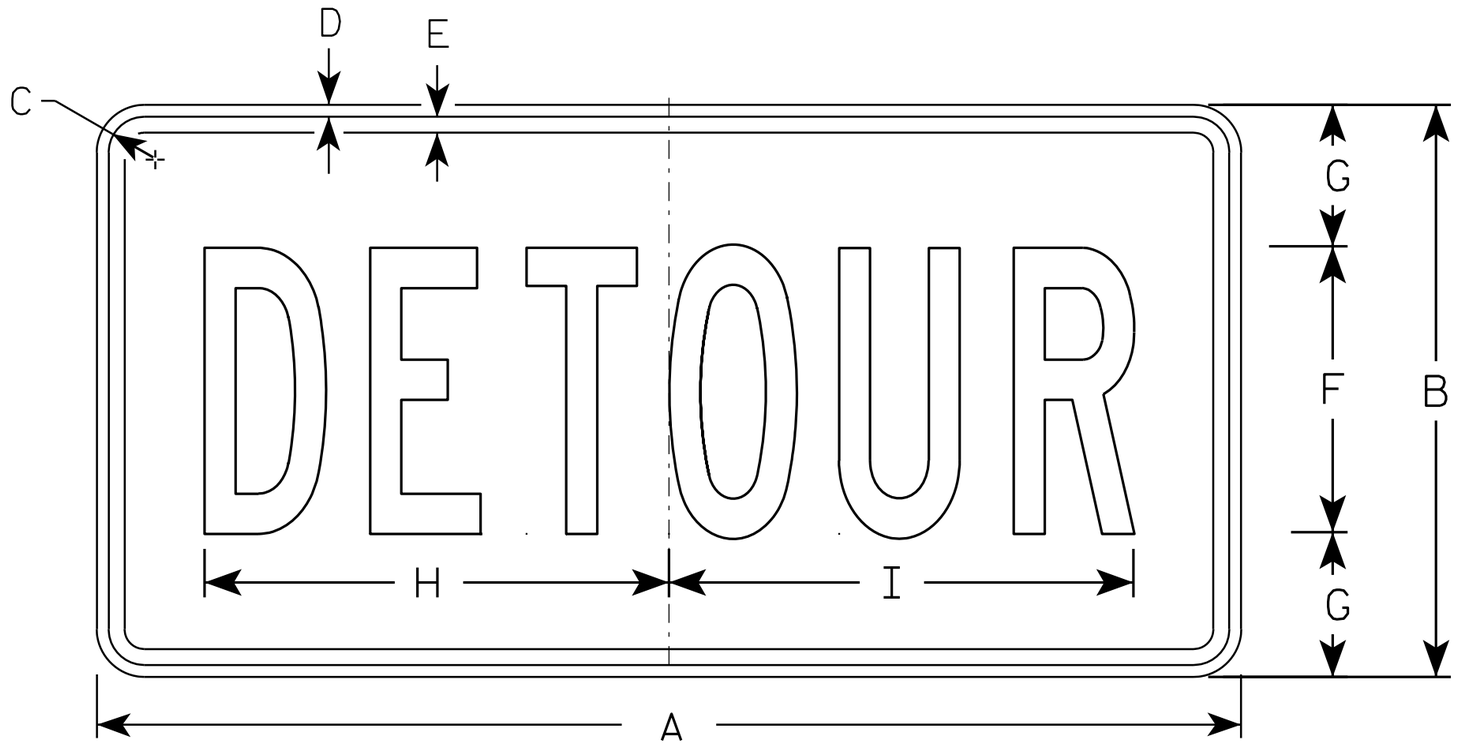
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

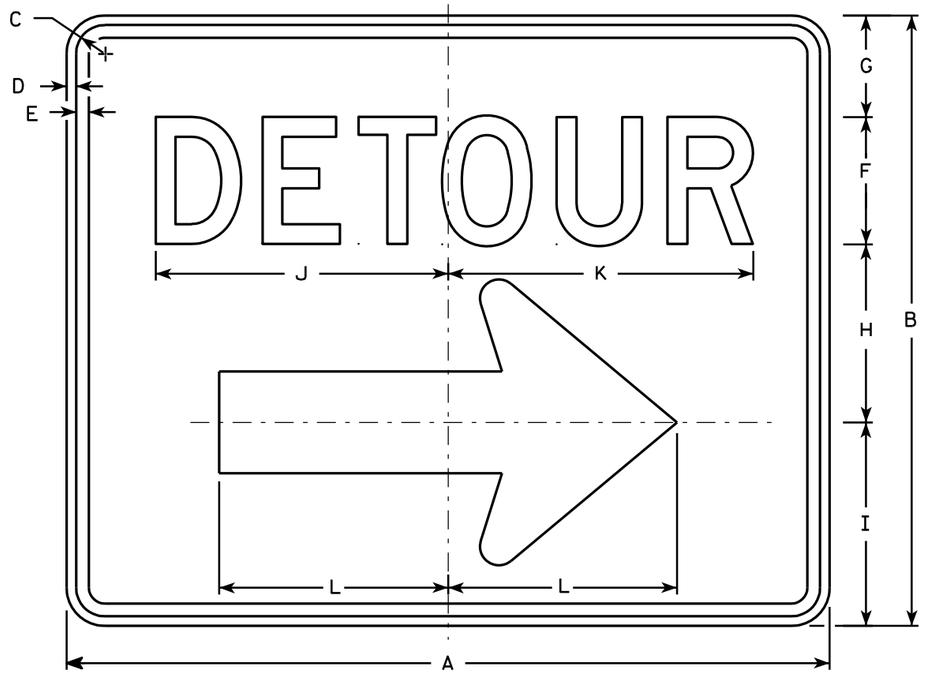
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

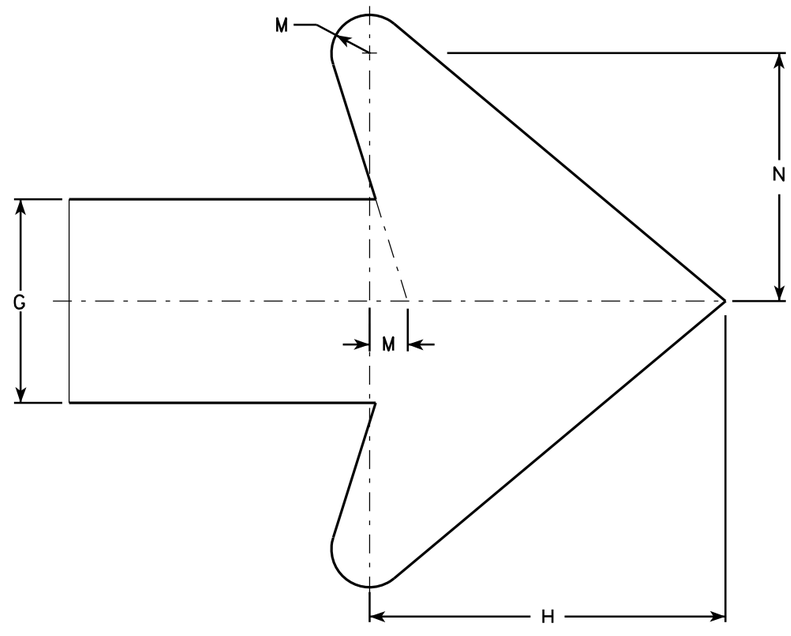
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 173	E



M4-9R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

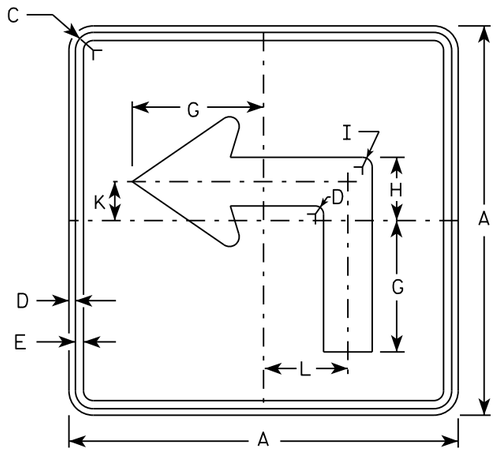
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

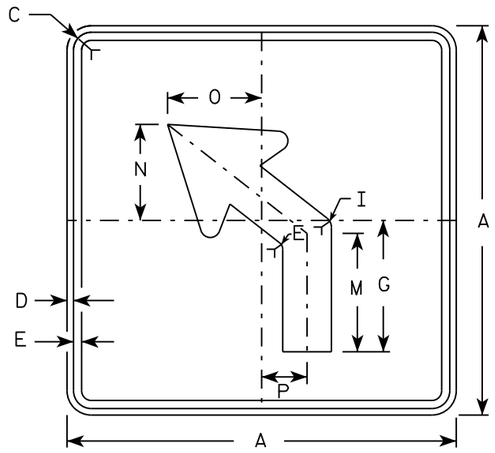
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

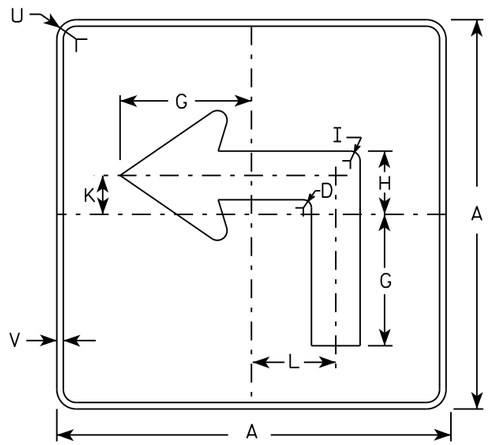
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 174 | E



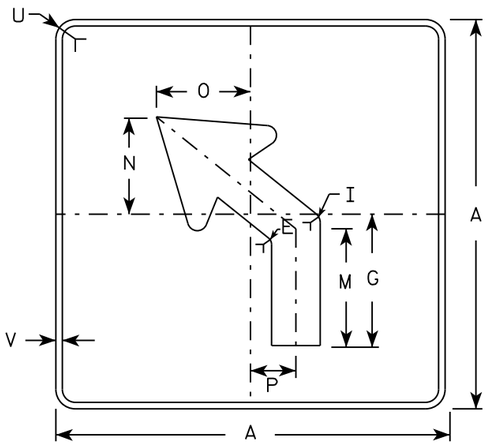
M5-1L
MM5-1L
MO5-1L
MP5-1L



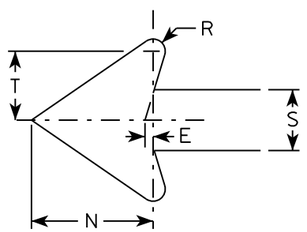
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

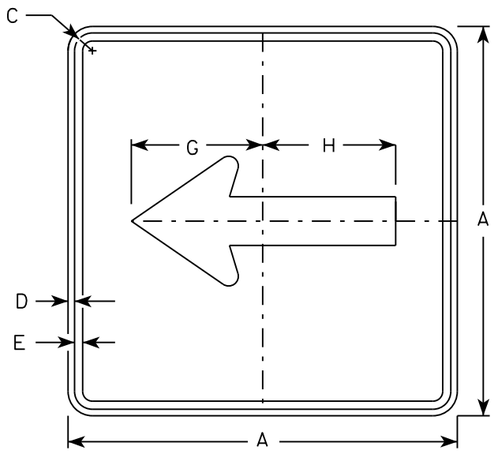
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

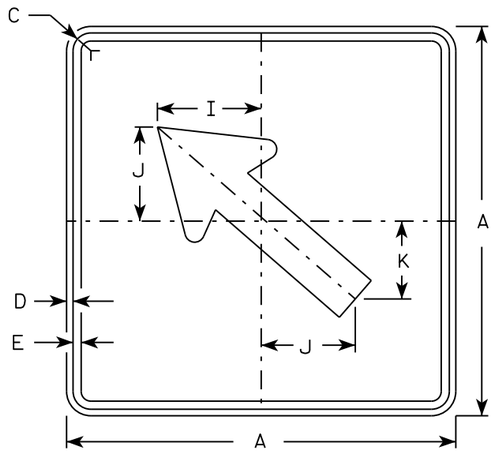
DATE 10/15/15 PLATE NO. M5-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



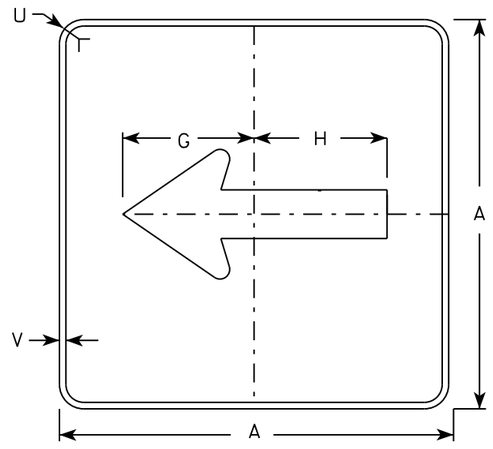
M6-1
MM6-1
MO6-1
MP6-1



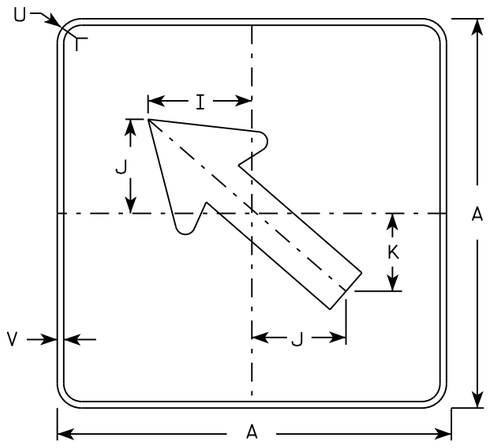
M6-2
MM6-2
MO6-2
MP6-2

NOTES

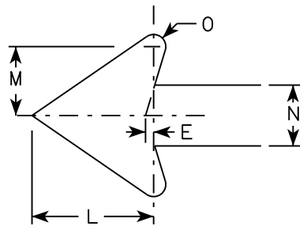
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

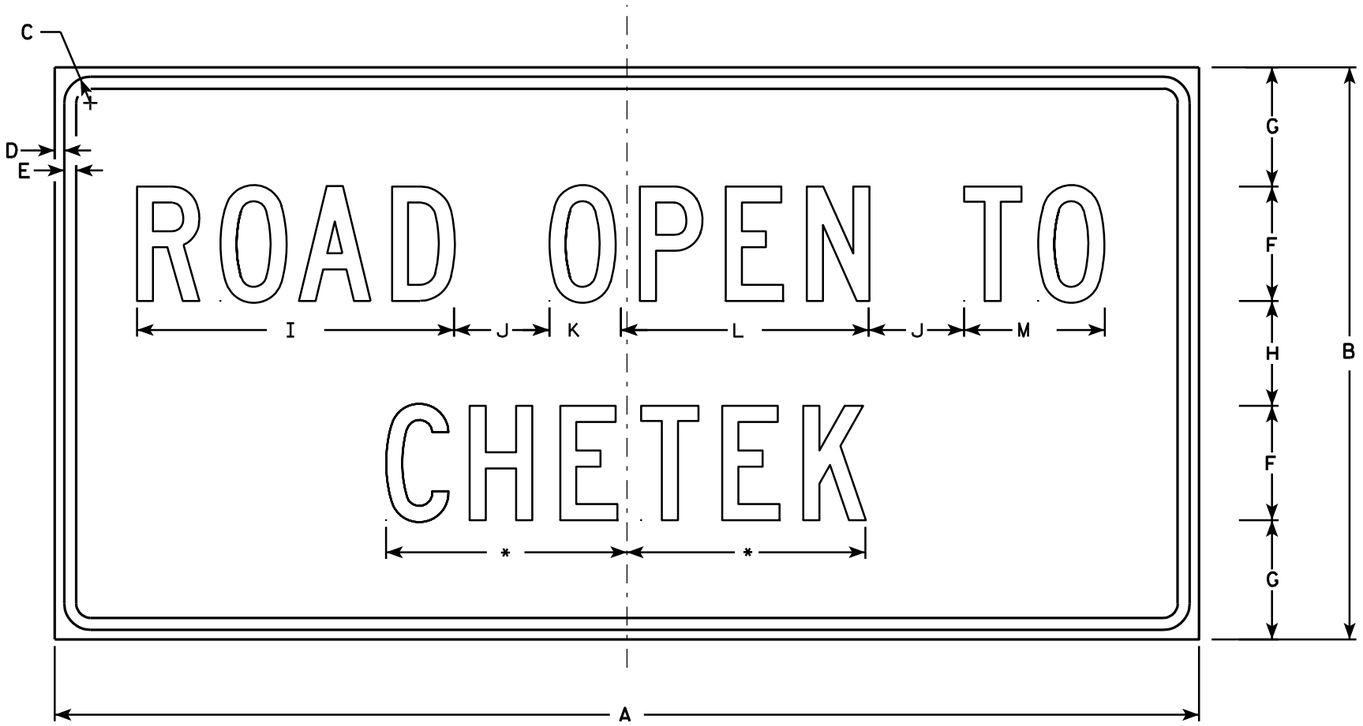
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 176 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



R10-61

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 - 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 message and optically 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	24	1 3/8	1/2	5/8	4	5 1/2	5	10 3/4	2	2 1/8	8 3/8	4 5/8														6.0
2S	60	30	1 3/8	1/2	5/8	6	6 1/4	5 1/2	16 5/8	5	3 3/4	13	7 3/8														12.5
2M	60	30	1 3/8	1/2	5/8	6	6 1/4	5 1/2	16 5/8	5	3 3/4	13	7 3/8														12.5
3																											
4																											
5																											

STANDARD SIGN
R10-61

WISCONSIN DEPT OF TRANSPORTATION

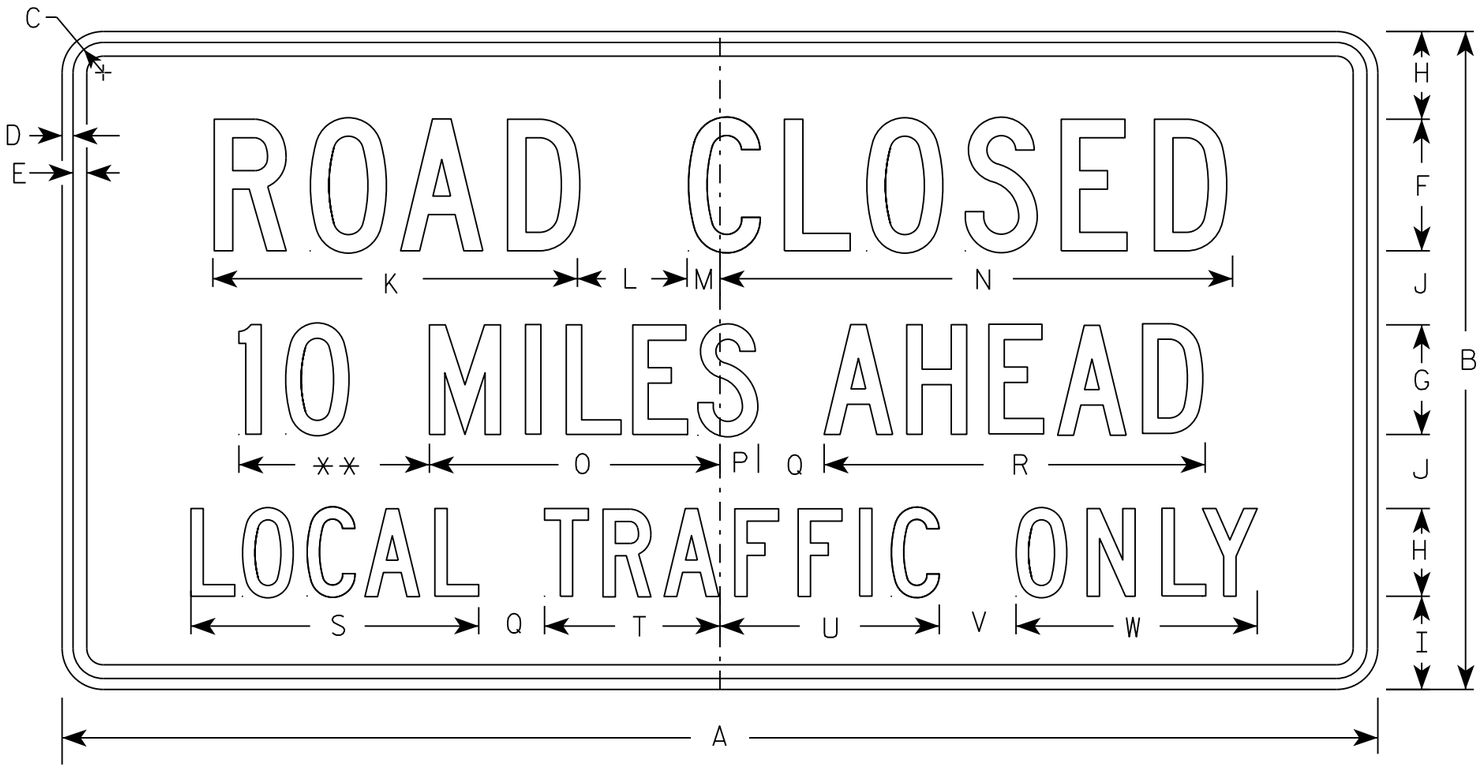
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-61.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 177	E

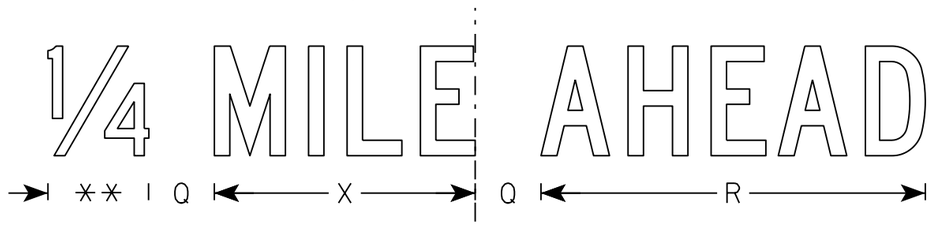
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

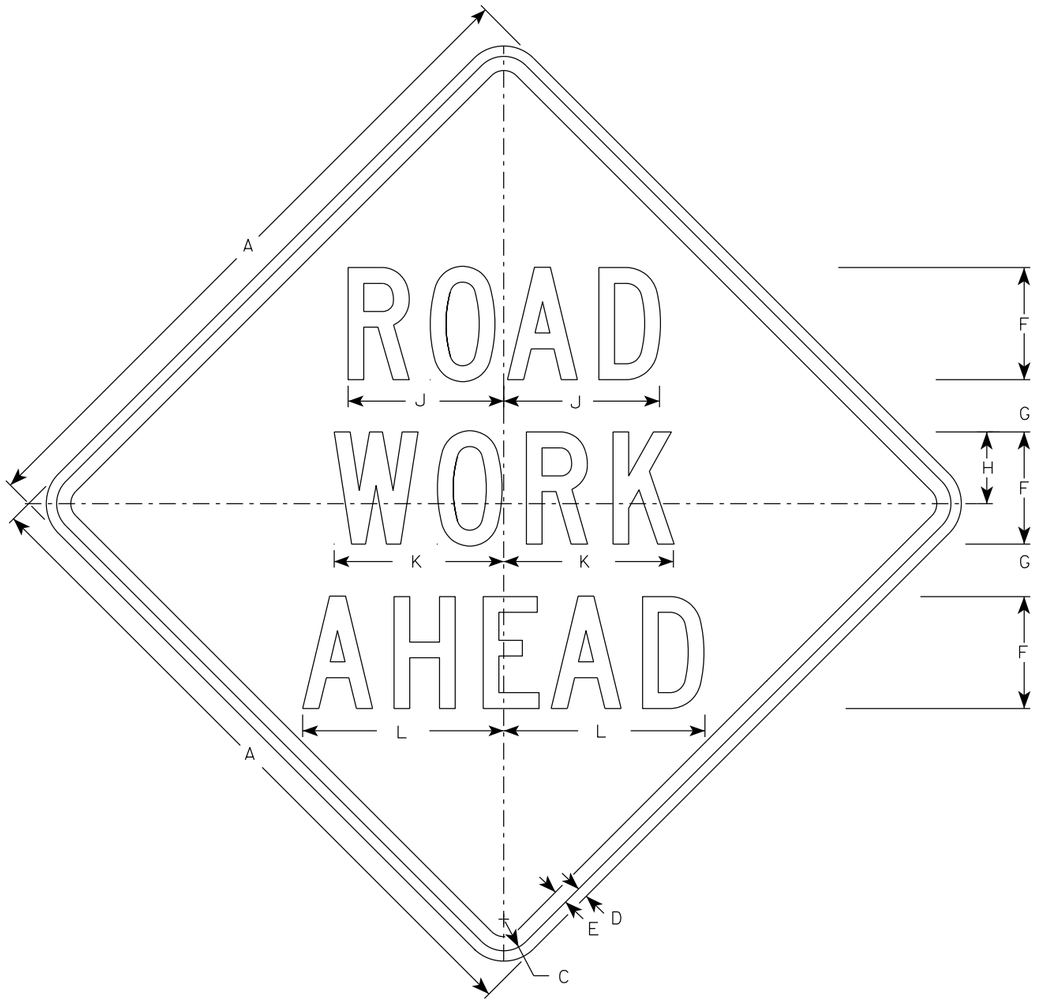
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

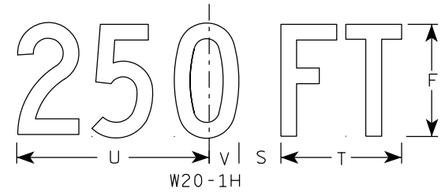
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/17 PLATE NO. R11-3.8

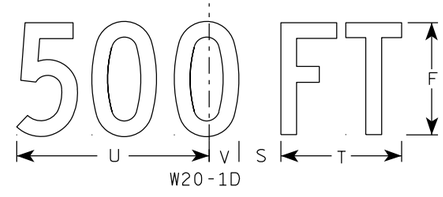
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 178	E



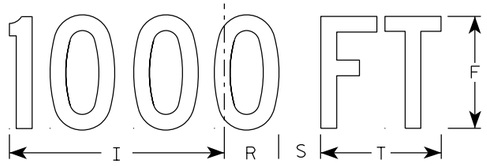
W20-1A



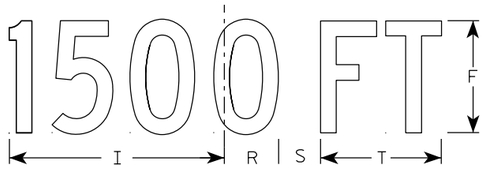
W20-1H



W20-1D



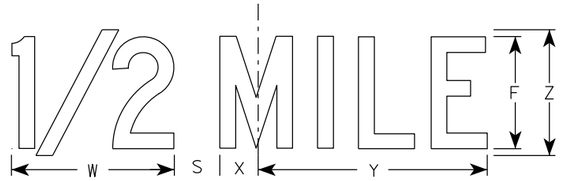
W20-1C



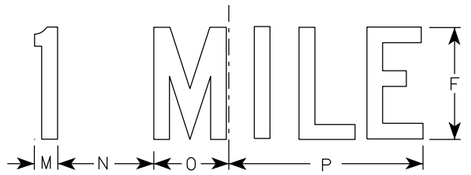
W20-1B

NOTES

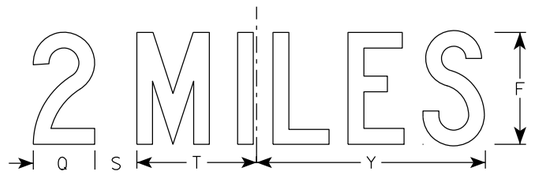
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

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	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	3 1/4	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, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

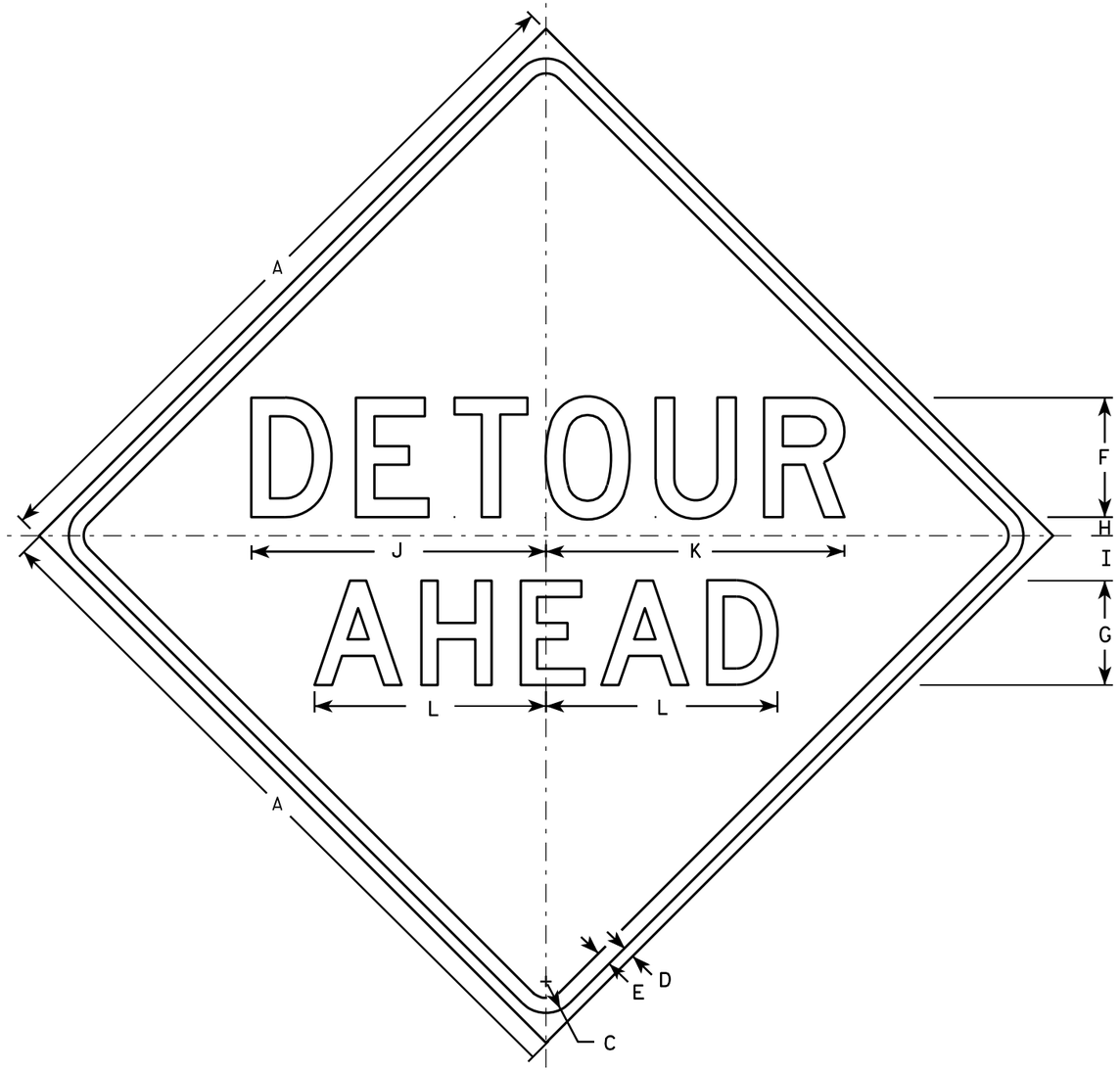
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

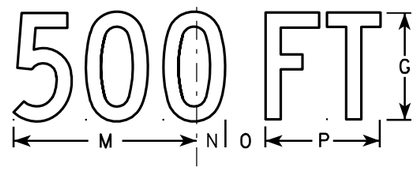
WISDOT/CADDS SHEET 42

7

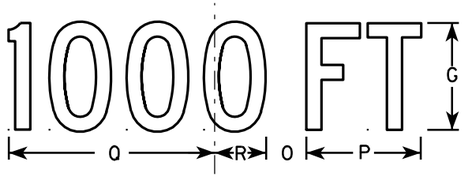
7



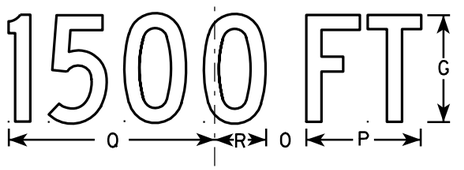
W20-2A



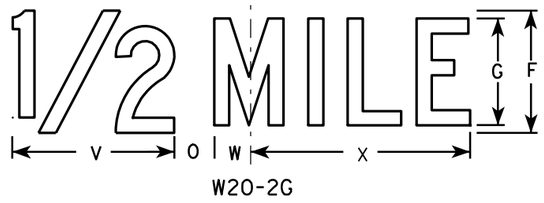
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

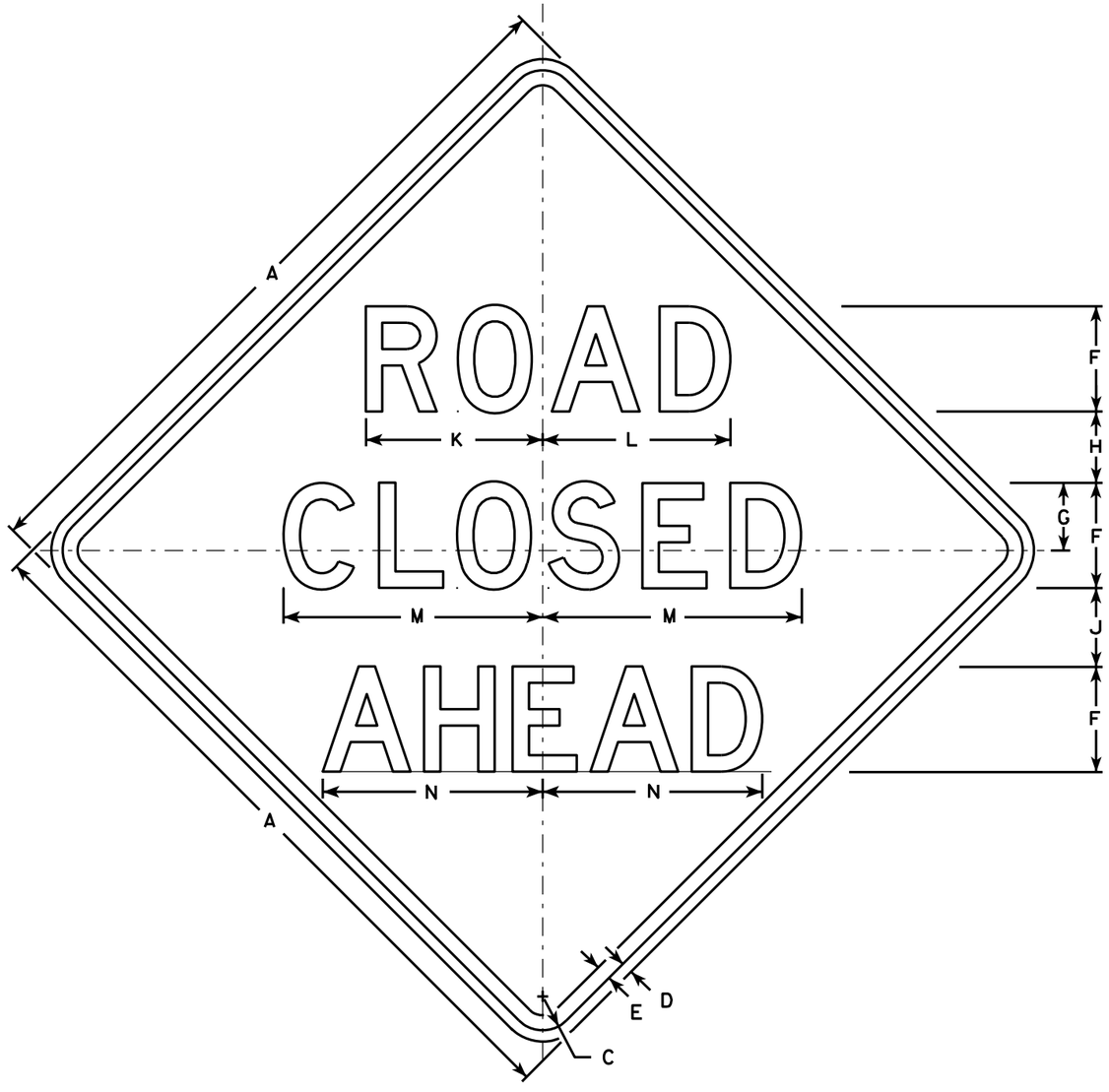
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

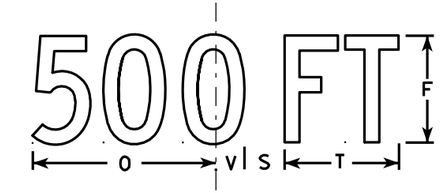
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 180 | E

7

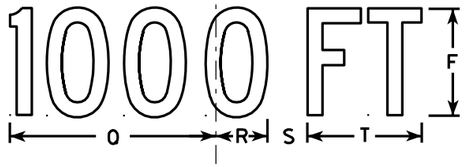
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W202.DGN PLOT DATE : 18-MAR-2011 10:00 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



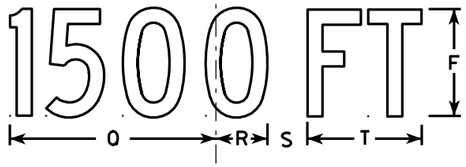
W20-3A



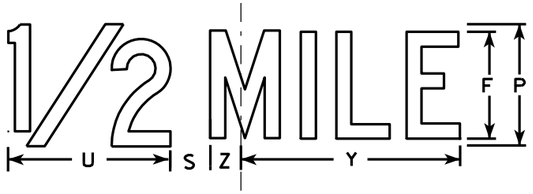
W20-3D



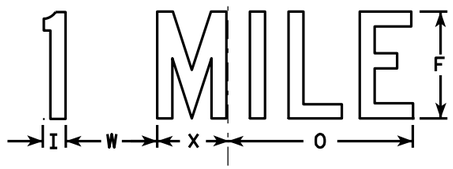
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

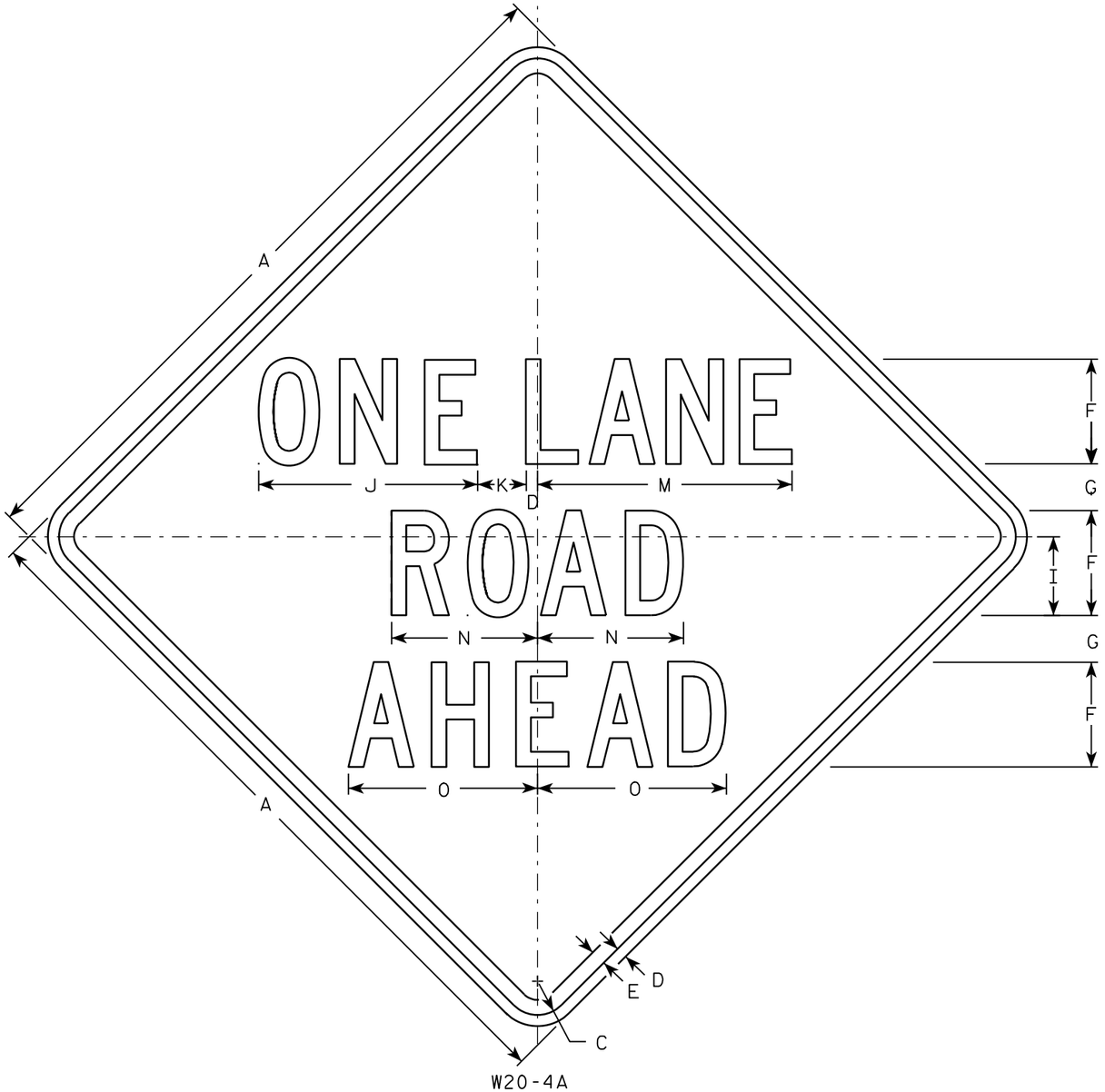
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

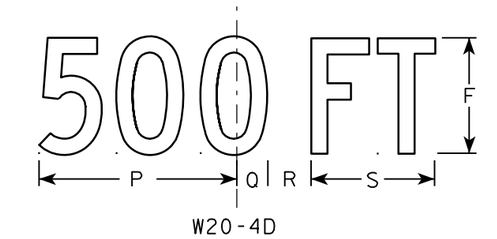
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 181 | E

7

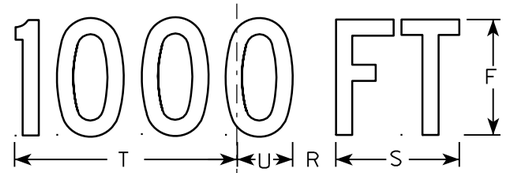
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WISDOT/CADDS SHEET 42



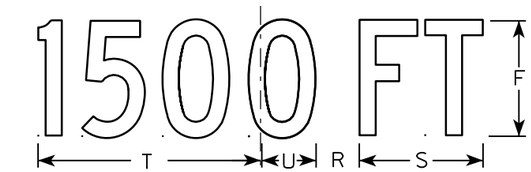
W20-4A



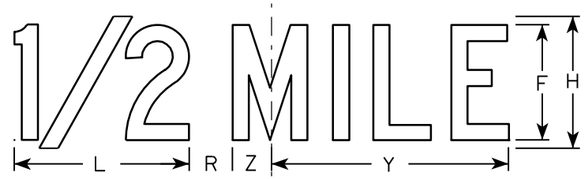
W20-4D



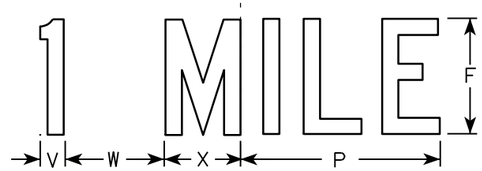
W20-4C



W20-4B



W20-4G



W20-4F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 3/8	6	3 3/4	10 3/8	2 3/8	8	13 1/2	7	8 7/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-4A, B, C, D, F & G

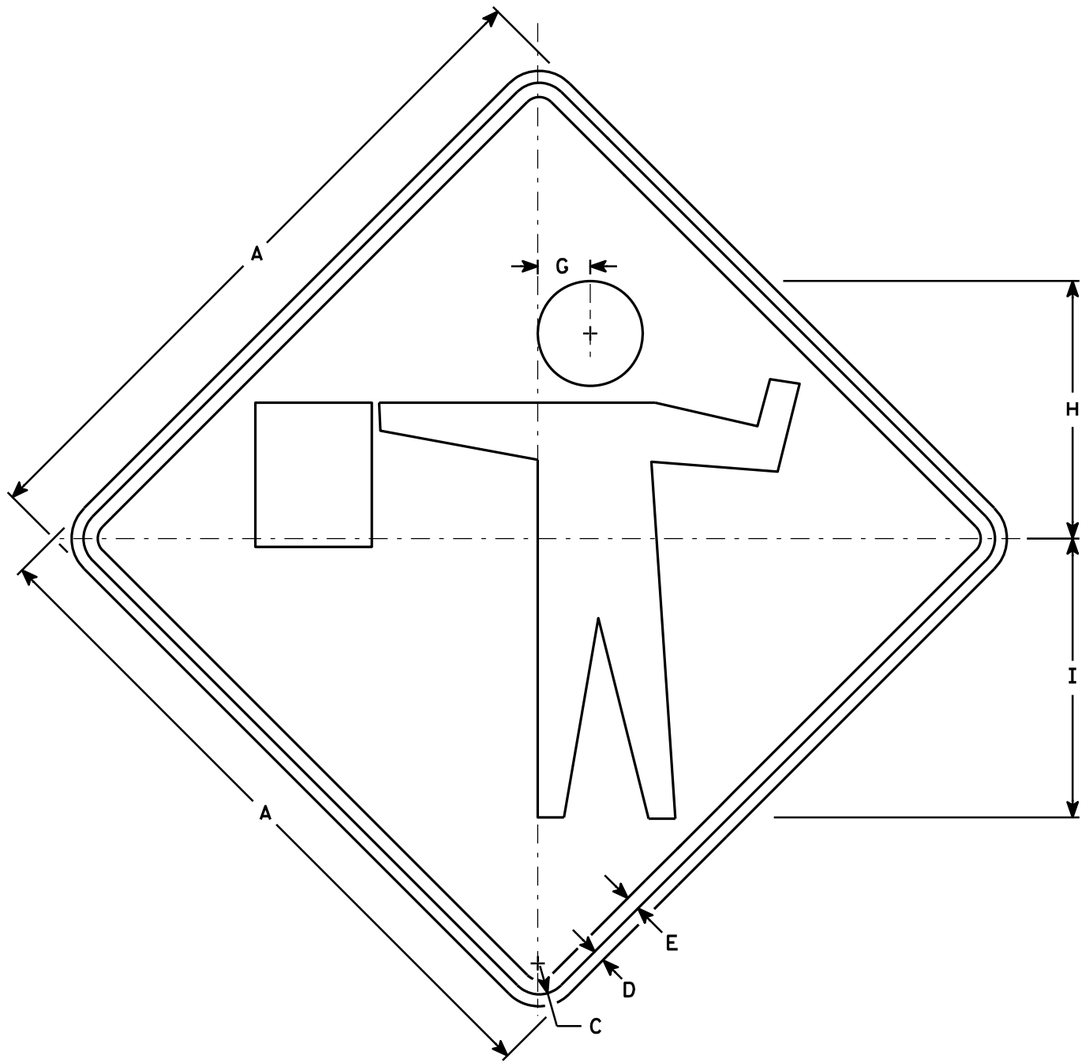
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-4.9

PROJECT NO:

SHEET NO: 182 E



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

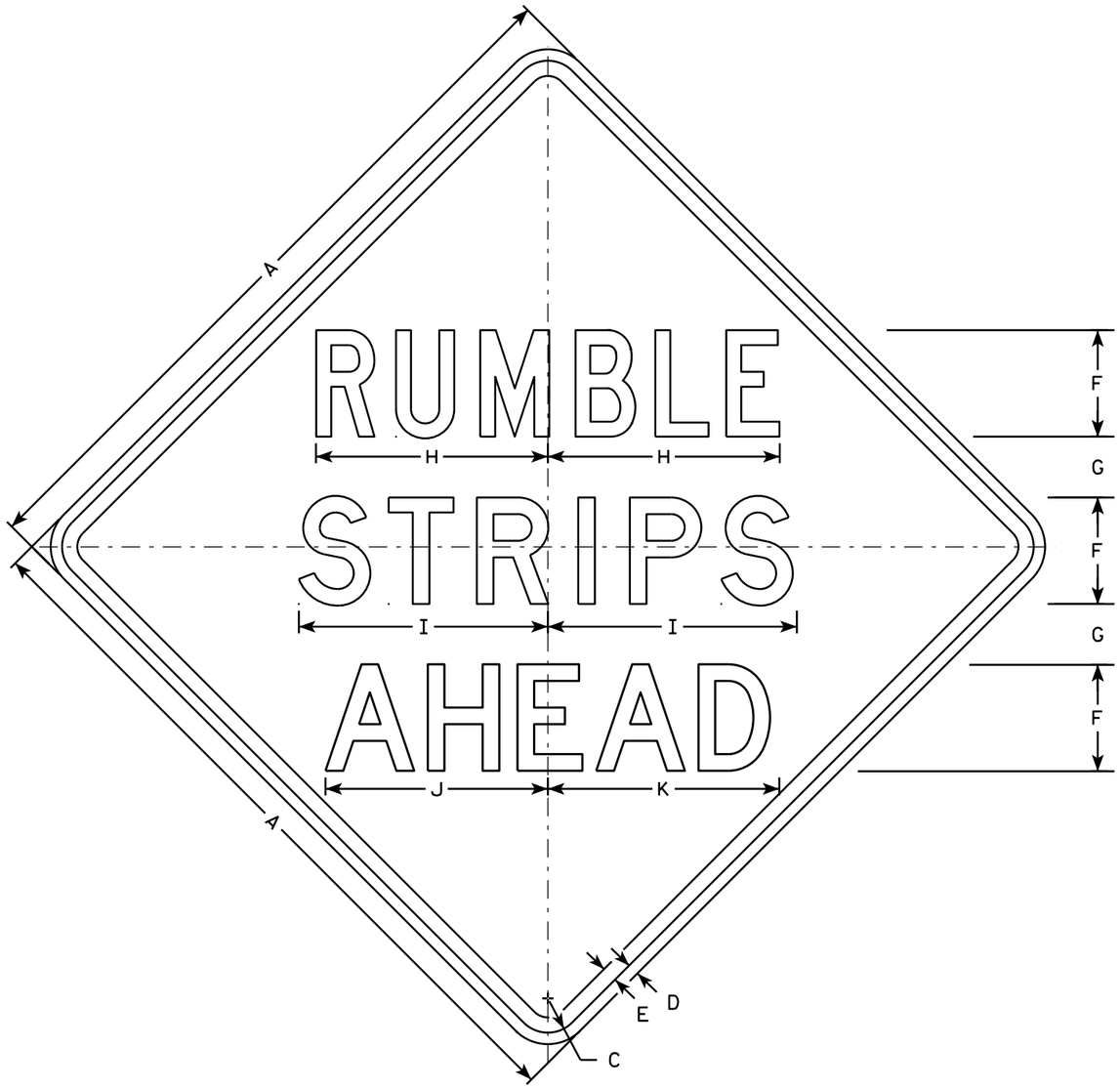
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-7A.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 183 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W207A.DGN PLOT DATE : 18-MAR-2011 13:14 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 7.945391:1.000000 WISDOT/CADDS SHEET 42



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

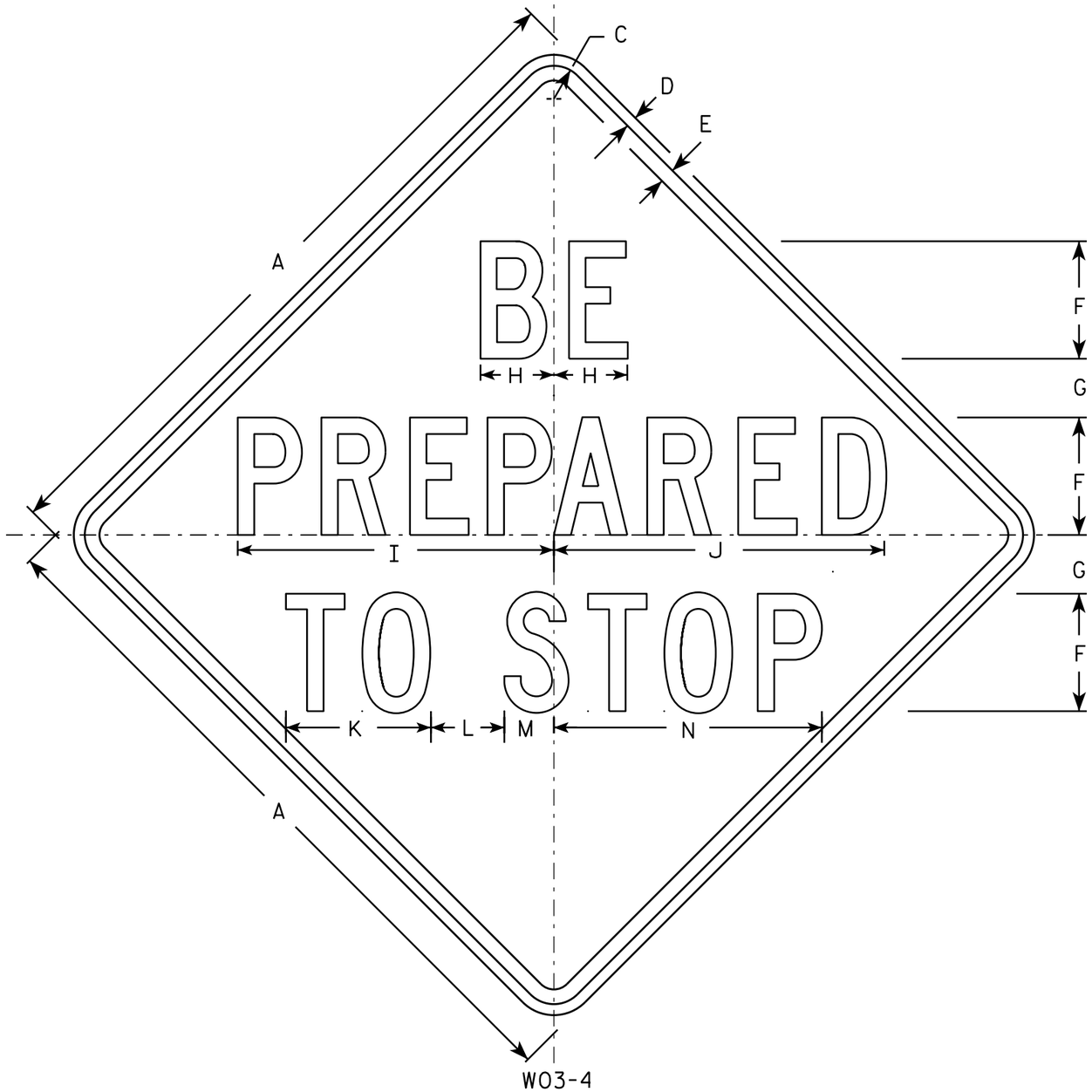
W21-65

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/28/14 PLATE 184 W21-65.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	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 - 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	6	2 1/2	3 3/4	15 7/8	16 7/8	7 3/8	4	2 3/8	13 3/4													9.0
2S	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0
2M	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0
3	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0
4	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0
5	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0

STANDARD SIGN
W03-4

WISCONSIN DEPT OF TRANSPORTATION

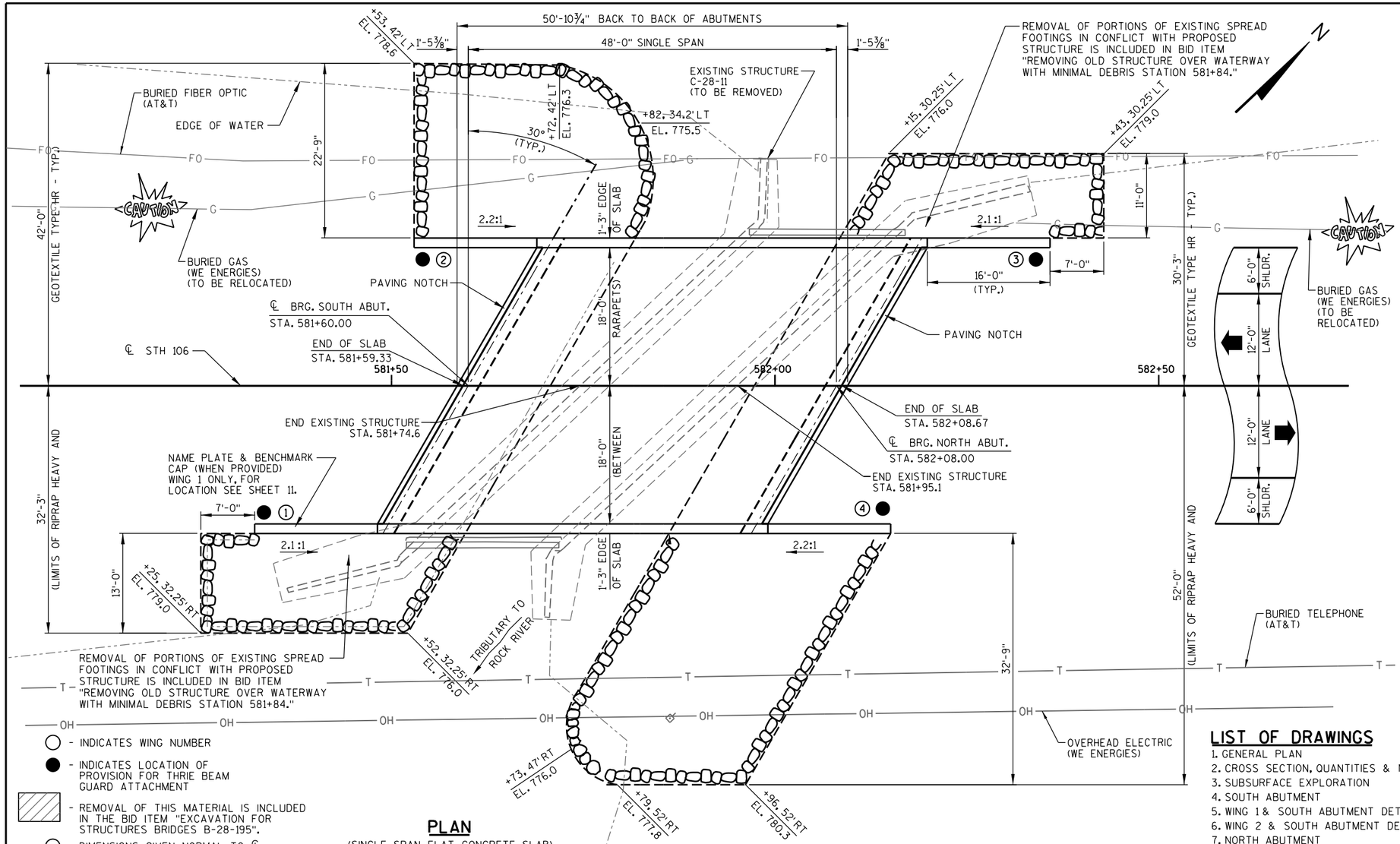
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/02/13 PLATE NO. W03-4.1

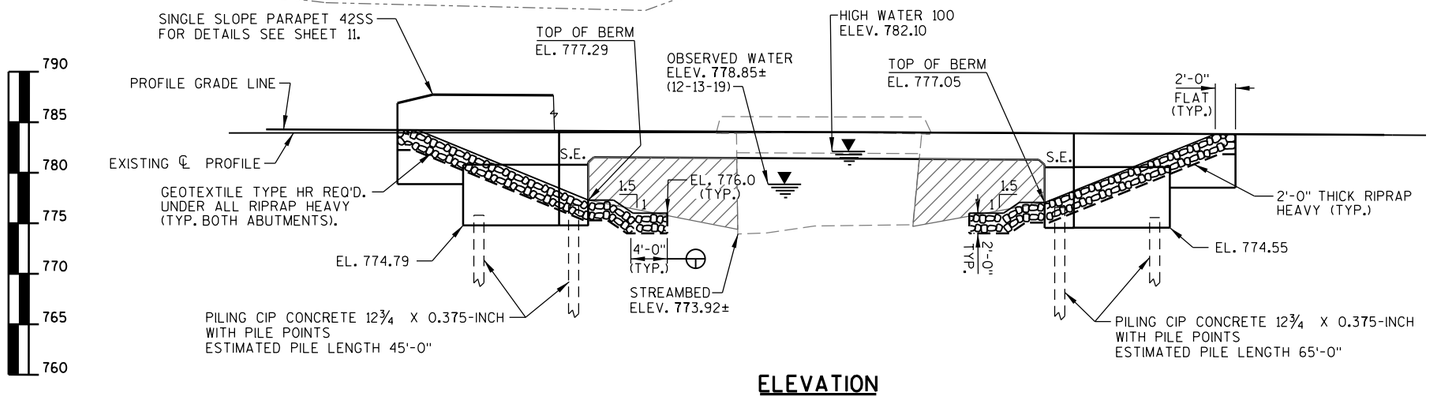
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

STATE PROJECT NUMBER
3576-01-71

BENCHMARKS			NAVD 88
NO.	STATION/OFFSET	ELEV.	DESCRIPTION
11917	582+17.09, 21' LT	783.867	DISK 1J47
50050	579+90.84, 28.2' RT	781.885	IR 3/4 X24 IN
50051	580+82.87, 54.2' RT	783.690	CHISELED SQUARE



PLAN
(SINGLE SPAN FLAT CONCRETE SLAB)



ELEVATION
(LOOKING NORTHWEST)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING : HL-93
INVENTORY RATING FACTOR : 1.21
OPERATIONAL RATING FACTOR : 1.56

TRAFFIC DATA:

A.A.D.T. (2022) = 2,200
A.A.D.T. (2042) = 2,400
R.D.S. = 60 MPH

WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB AND PARAPETS —— $f'c$ = 4,000 P.S.I.
ALL OTHER —— $f'c$ = 3,500 P.S.I.

HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 —— fy = 60,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 12¾ X 0.375-INCH WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 160 TONS ✳ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 45'-0" AT THE SOUTH ABUTMENT AND 65'-0" AT THE NORTH ABUTMENT.

✳ THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA:

100 YEAR FREQUENCY

DRAINAGE AREA	4.2 SQ. MI.
Q_{100}	170 C.F.S.
VELOCITY	0.75 FT./SEC.
WATERWAY AREA	227 SQ. FT.
SCOUR CRITICAL CODE	5
HIGH WATER $_{100}$ ELEVATION	782.10
Q_2	80 C.F.S.
Q_2 VELOCITY	0.62 FT./SEC.
Q_2 ELEVATION	778.90

ROADWAY OVERFLOW DESIGN FREQUENCY

STRUCTURE IS LOCATED IN THE BACKWATER OF THE ROCK RIVER. HW100 ON THE ROCK RIVER IS 785.35. SOURCE: ROCK COUNTY FIS DATED 2/4/2015.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION, QUANTITIES & NOTES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. WING 1 & SOUTH ABUTMENT DETAILS
6. WING 2 & SOUTH ABUTMENT DETAILS
7. NORTH ABUTMENT
8. WING 3 & NORTH ABUTMENT DETAILS
9. WING 4 & NORTH ABUTMENT DETAILS
10. SUPERSTRUCTURE
11. SINGLE SLOPE PARAPET 42SS

CONSULTANT DESIGN CONTACT:
KYLE BUSCH
(608) 216-2063

BRIDGE OFFICE CONTACT:
AARON BONK
(608) 261-0261

WISCONSIN
KYLE H. BUSCH
E-46187
MADISON
WI
PROFESSIONAL ENGINEER
1/27/2021

NO.	DATE	REVISION	BY

MSA
ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
1702 PANKRATZ STREET, MADISON WI 53704
(608) 242-7779
www.msa-ps.com

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/11/21
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-28-195

STH 106 OVER TRIBUTARY TO ROCK RIVER

COUNTY	TOWN ~~CITY/VILLAGE~~
JEFFERSON	KOSHKONONG

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	JFM	DESIGN CK'D.	KHB	DRAWN BY	CAR	PLANS CK'D.	KHB

GENERAL PLAN

SHEET 1 OF 11
186

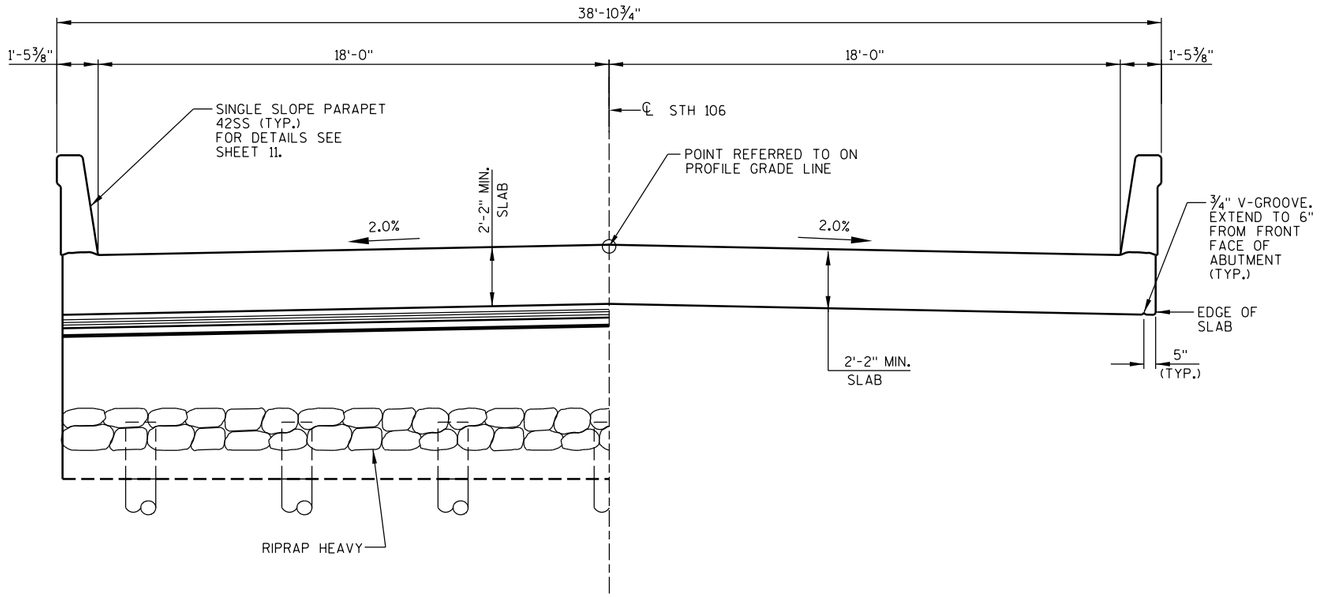
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STATE PROJECT NUMBER
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GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE LIMITS SHOWN ON SHEET 1 AND ON THE ABUTMENT SHEETS OR AS DIRECTED BY THE ENGINEER.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-28-195" FOR THE ABUTMENTS.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

◈ THIS STRUCTURE WILL REPLACE EXISTING STRUCTURE C-28-11, A 20.5 FT. LONG CONCRETE FLAT SLAB BRIDGE WITH A 40.0 FT. CLEAR ROAD WIDTH, SUPPORTED ON FULL RETAINING CONCRETE ABUTMENTS WITH SPREAD FOOTINGS. REMOVAL OF PORTIONS OF EXISTING SPREAD FOOTINGS IN CONFLICT WITH PROPOSED STRUCTURE IS INCLUDED IN BID ITEM "REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 581+84."

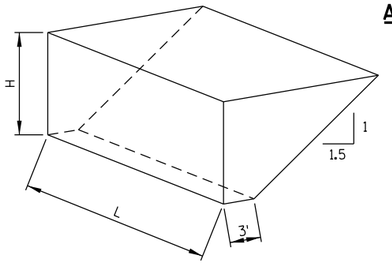
Ⓑ - BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF SLAB.

PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE FACES, THE TOP FACES, AND THE VERTICAL ENDS OF THE PARAPETS.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.



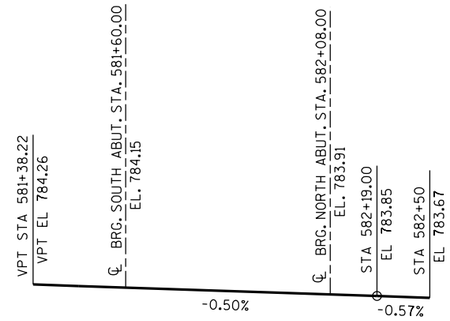
ABUTMENT BACKFILL DIAGRAM

L = OUT-TO-OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
V_{CF} = (L)(3.0')(H)+(L)(0.5)(1.5H)(H)
V_{TON} = V_{CF} (2.0)/27

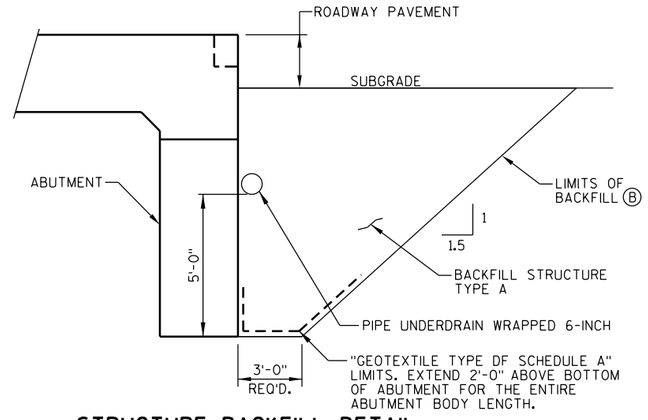
AT ABUTMENTS IN SPAN

CROSS SECTION THRU BRIDGE

(LOOKING NORTH)



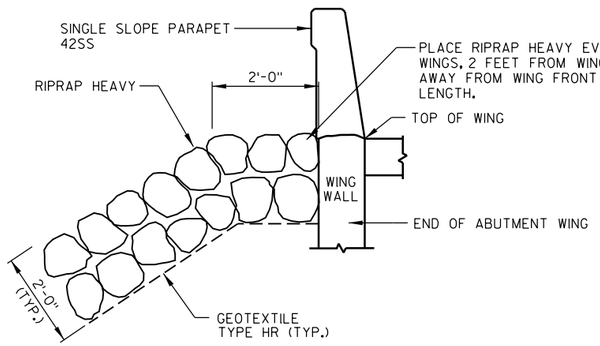
PROFILE GRADE LINE - STH 106



STRUCTURE BACKFILL DETAIL

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPER	TOTAL
◈ 203.0600.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 581+84	LS	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-28-195	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	175	175	-	350
502.0100	CONCRETE MASONRY BRIDGES	CY	45	45	185	275
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	205	205
502.3210	PIGMENTED SURFACE SEALER	SY	-	-	83	83
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2690	2690	-	5380
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2135	2135	33220	37490
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	12	12	-	24
550.0500	PILE POINTS	EACH	9	9	-	18
550.2126	PILING CIP CONCRETE 12 3/4 X 0.375-INCH	LF	405	585	-	990
606.0300	RIPRAP HEAVY	CY	117	134	-	251
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	113	113	-	226
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	4	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	43	43	-	86
645.0120	GEOTEXTILE TYPE HR	SY	211	237	-	448
	NON-BID ITEMS					
	PREFORMED FILLER	SIZE				½" & ¾"



TYPICAL FILL SECTION AT WING TIPS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-195

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CROSS SECTION, QUANTITIES & NOTES

SHEET 7 OF 11
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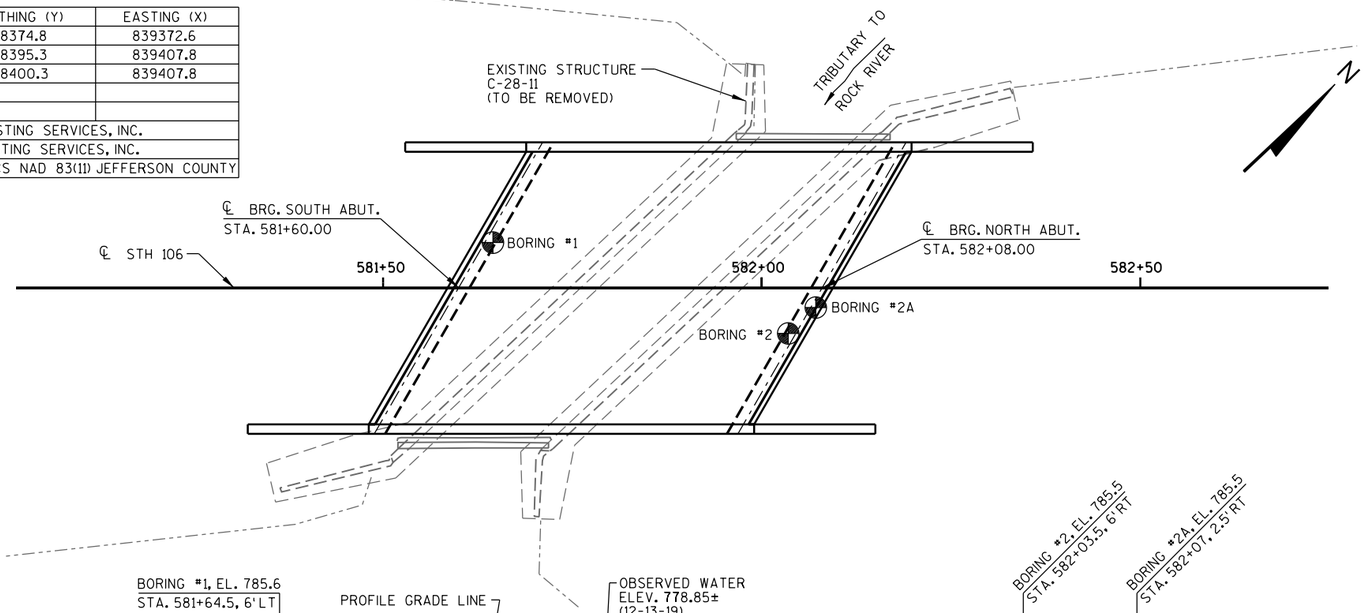
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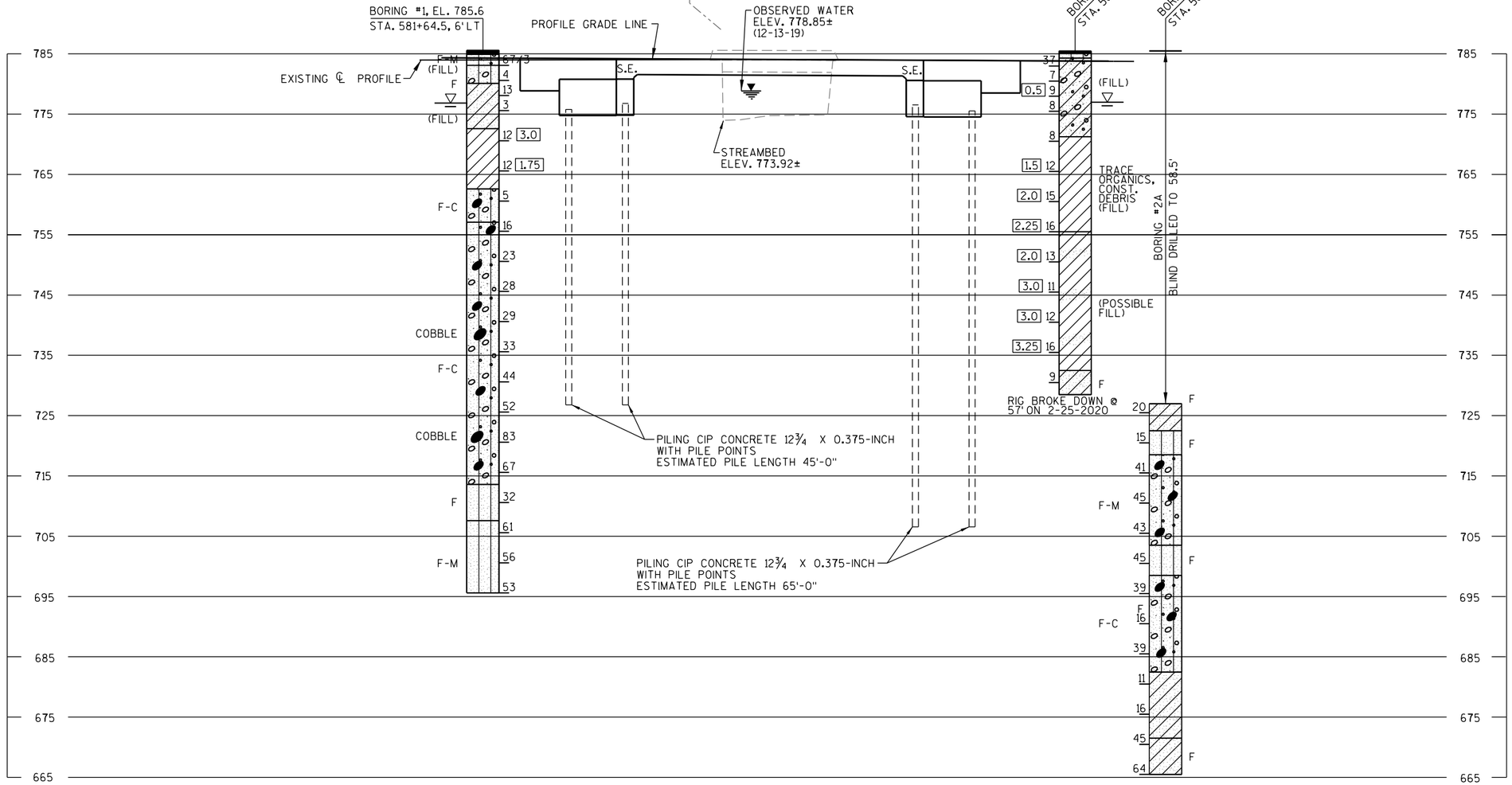
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	3-4-2020	528374.8	839372.6
2	2-25-2020	528395.3	839407.8
2A	3-3-2020	528400.3	839407.8
BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(11) JEFFERSON COUNTY			





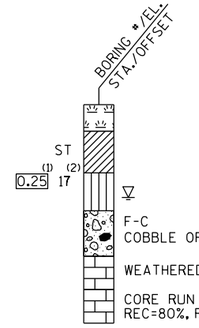
STATE PROJECT NUMBER

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MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-195

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SUBSURFACE EXPLORATION

SHEET 3 OF 11
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8

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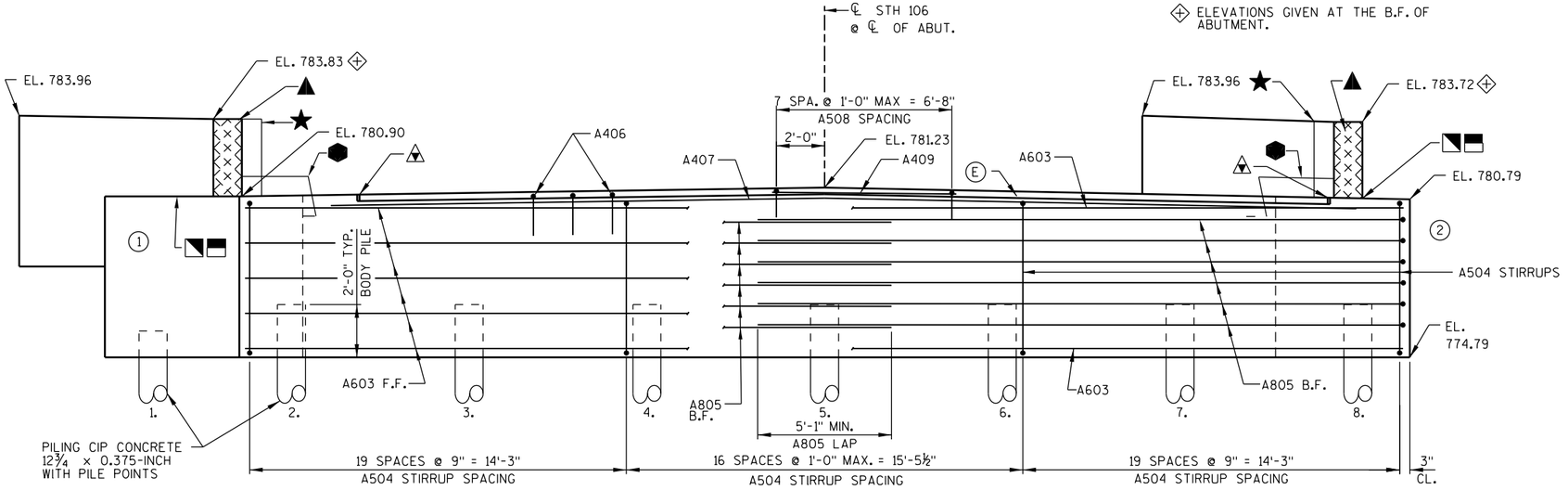
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STATE PROJECT NUMBER
3576-01-71

NOTE:
FOR WING DETAILS SEE SHEETS 5 & 6.

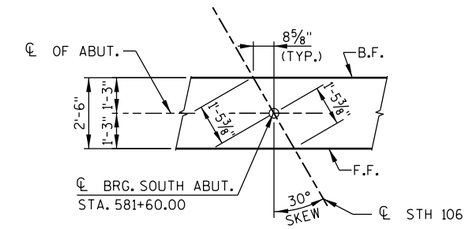
⊕ ELEVATIONS GIVEN AT THE B.F. OF ABUTMENT.



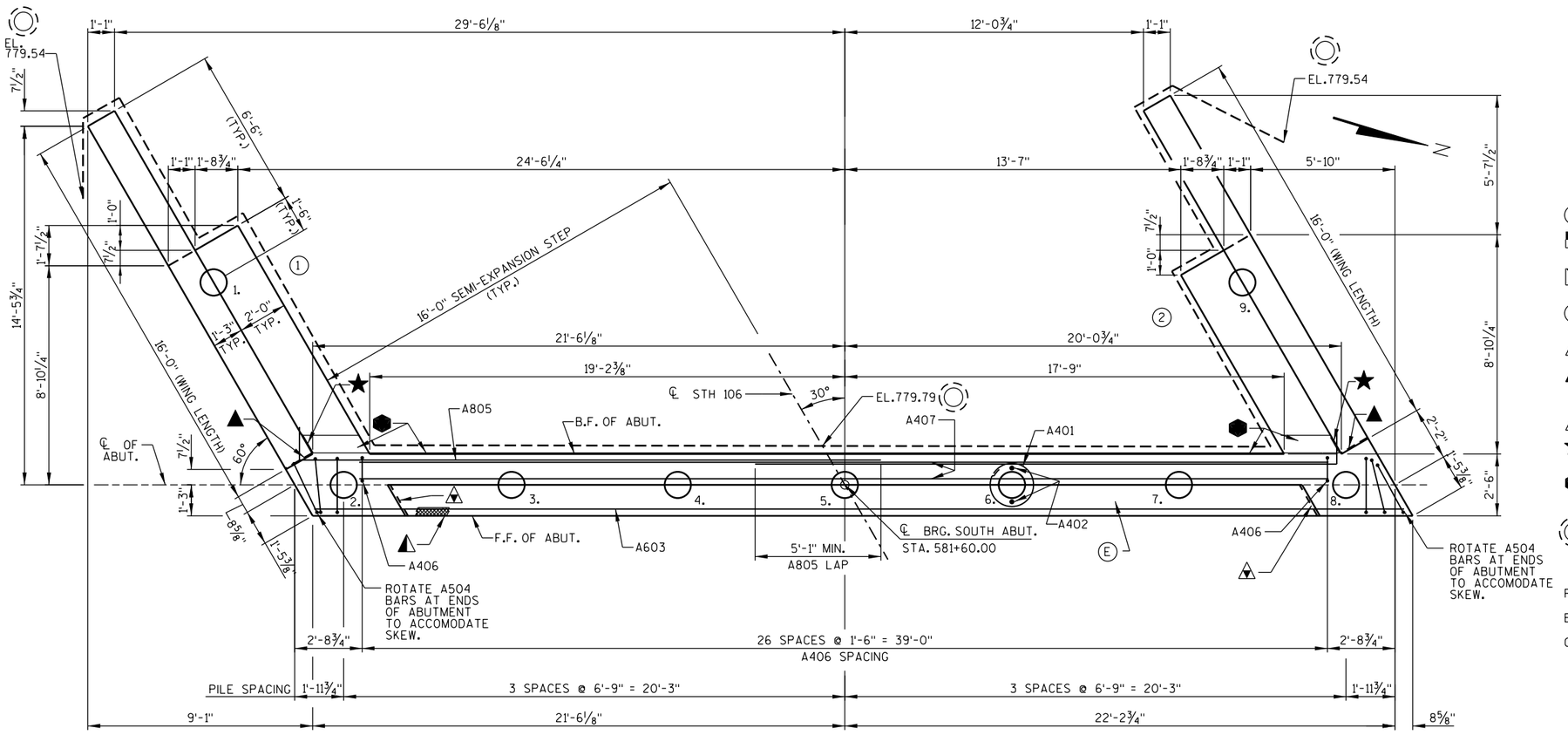
FRONT FACE BARSTEEL REINF.

ELEVATION
(LOOKING SOUTH)

BACK FACE BARSTEEL REINF.



LAYOUT PLAN



PLAN

LEGEND

- ◯ – INDICATES WING NUMBER.
- ▬ – OPTIONAL KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ⬢ ON B.F. OF WING.
- ◥ – ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
- Ⓔ – SEMI-EXPANSION STEP. CONSTRUCT 3" DEEPER THAN ABUTMENT BACKWALL.
- ▽ – ¾" CORK FILLER (SIDE VERTICAL FACES ONLY).
- ▲ – ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◭ – 4"× ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT.
- ★ – VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
- ⬢ – HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS AT CONSTRUCTION JOINT.
- ◯ – PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AND RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. SEE RODENT SHIELD DETAIL, SHEET 8.

F.F.– FRONT FACE
B.F.– BACK FACE
CL. – CLEAR

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-195

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SOUTH ABUTMENT

SHEET 4 OF 11
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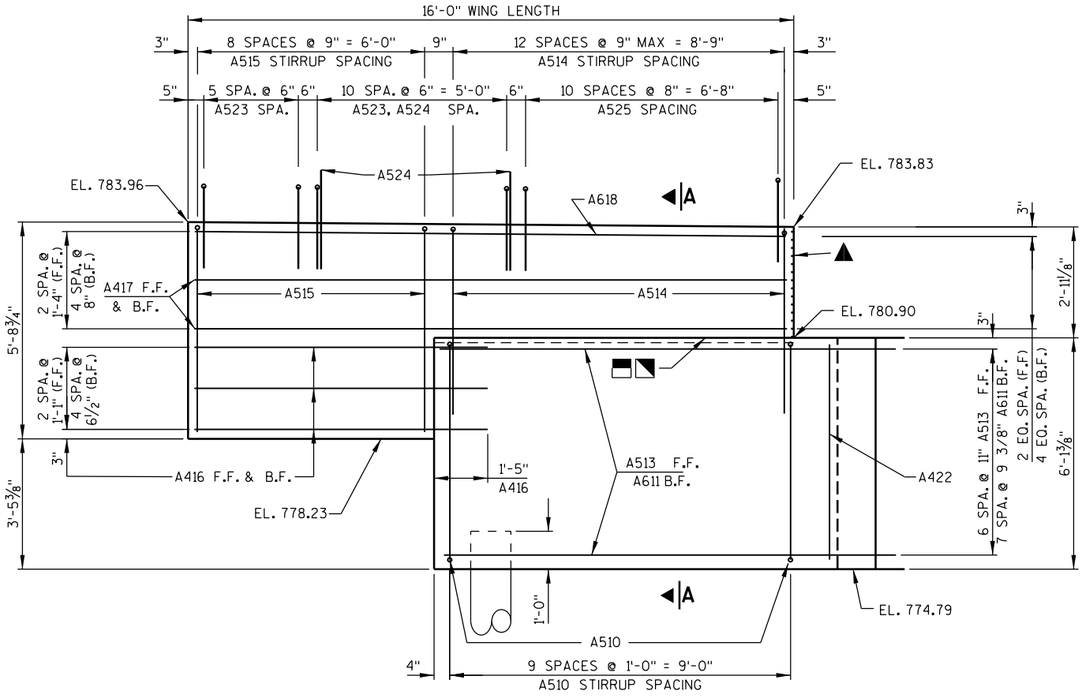
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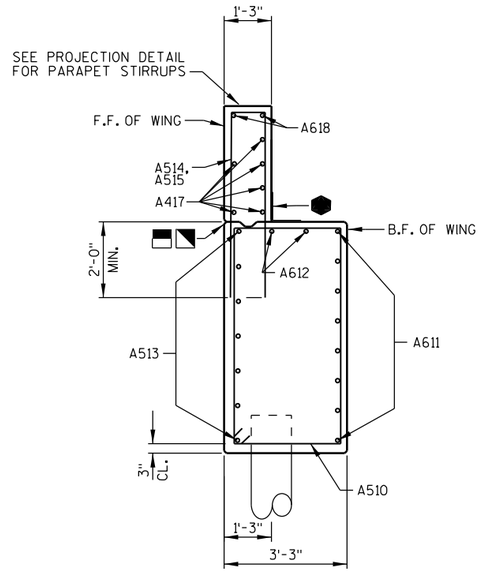
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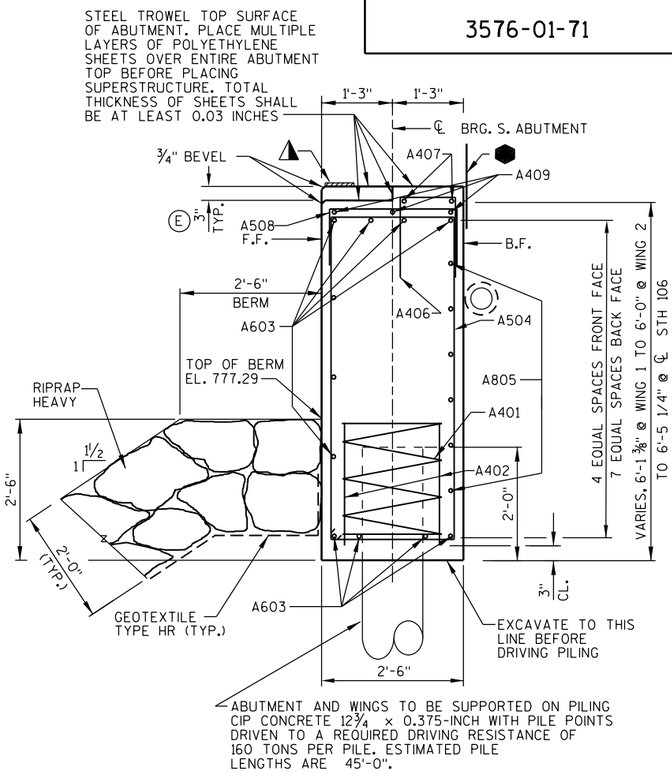
3576-01-71



ELEVATION - WING 1

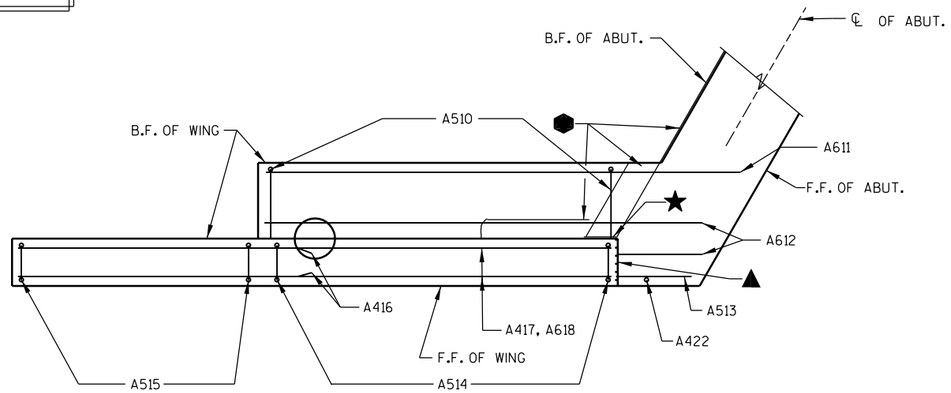


SECTION A-A THRU WING 1

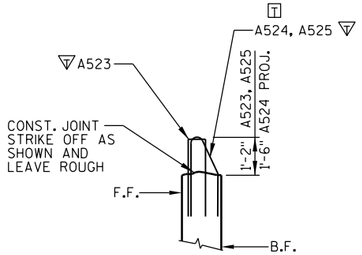


TYPICAL SECTION THRU SOUTH ABUTMENT

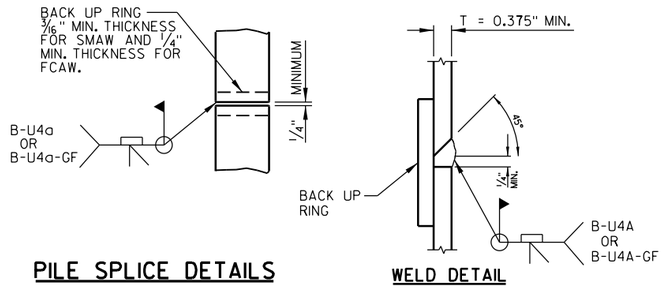
SEE SHEET 4 LEGEND FOR DESCRIPTION OF ⬢ ⬒ ◹ ★ ▲ Ⓔ



PLAN - WING 1



PARAPET STIRRUP PROJECTION DETAIL



PILE SPLICE DETAILS

WELD DETAIL

T A524 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE A524 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ A523 AND A525 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

SEE SHEET 11 FOR PLACEMENT DETAILS OF A523, A524 AND A525 BARS.

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STATE OF WISCONSIN
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STRUCTURE B-28-195

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WING 1 & SOUTH ABUTMENT DETAILS

SHEET 5 OF 11
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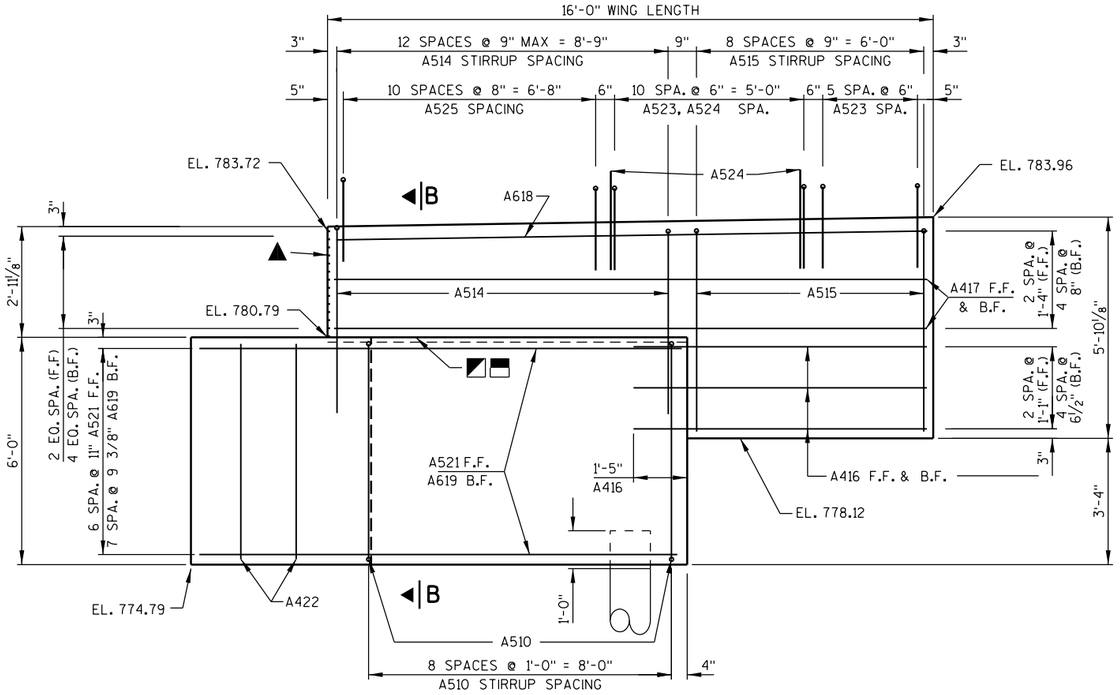
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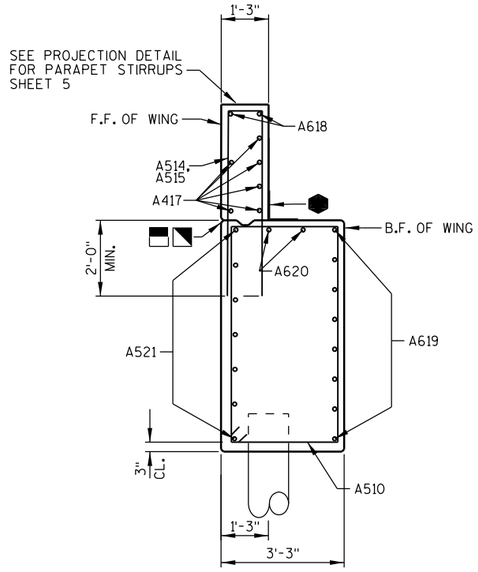
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3576-01-71



ELEVATION - WING 2



SECTION B-B THRU WING 2

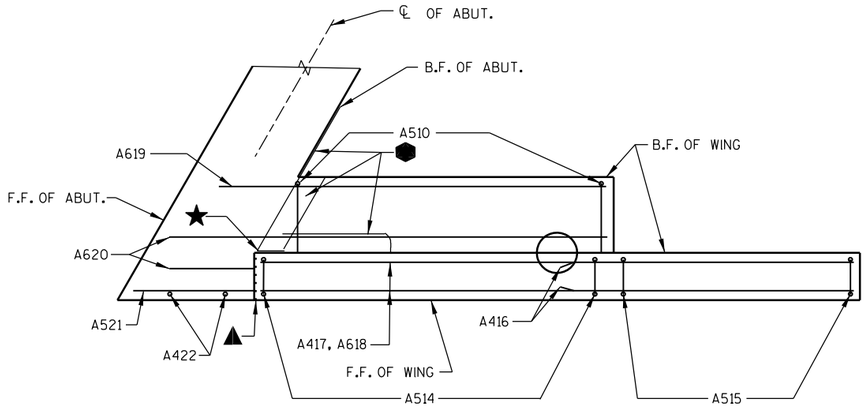
BILL OF BARS (SOUTH ABUTMENT)

UNCOATED 2,690 LBS.
COATED 2,135 LBS.

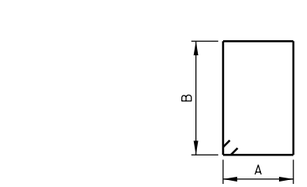
MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
A401	-	7	28'-0"	X	ABUT. BODY - 1 SPIRAL WRAP @ EACH PILE
A402	-	14	2'-3"		ABUT. BODY - 2 PER PILE - VERT.
A603	-	11	44'-0"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
A504	-	55	15'-8"	X	ABUT. BODY - STIRRUP - VERT.
A805	-	12	24'-9"	X	ABUT. BODY - B.F. - HORIZ.
A406	-	27	3'-9"	X	ABUT. BODY - S.E. BACKWALL STIRRUP - VERT.
A407	-	2	39'-2"		ABUT. BODY - S.E. BACKWALL - HORIZ.
A508	8	-	4'-5"	X	ABUT. BODY - TOP - STIRRUP
A409	3	-	7'-0"		ABUT. BODY - TOP - HORIZ.
A510	19	-	17'-8"	X	WING 1 & 2 - BASE - STIRRUP - VERT.
A611	8	-	12'-6"		WING 1 - BASE - B.F. - HORIZ.
A612	2	-	11'-7"		WING 1 - BASE - TOP CENTER - HORIZ.
A513	7	-	11'-2"		WING 1 - BASE - F.F. - HORIZ.
A514	26	-	10'-8"	X	WING 1 & 2 - TOP - STIRRUP - VERT.
A515	18	-	11'-4"	X	WING 1 & 2 - TOP - END - STIRRUP - VERT.
A416	16	-	7'-9"		WING 1 & 2 - TOP - END - HORIZ.
A417	12	-	15'-8"		WING 1 & 2 - TOP - F.F. & B.F. - HORIZ.
A618	4	-	15'-8"		WING 1 & 2 - TOP - F.F. & B.F. - HORIZ.
A619	8	-	10'-3"		WING 2 - BASE - B.F. - HORIZ.
A620	2	-	11'-5"		WING 2 - BASE - TOP CENTER - HORIZ.
A521	7	-	12'-8"		WING 2 - BASE - F.F. - HORIZ.
A422	3	-	5'-7"		ABUT. BODY - WING 1 & 2 - END - VERT.
A523	34	-	5'-7"	X	WING 1 & 2 - TOP - PARAPET STIRRUP - VERT.
A524	22	-	3'-0"	X	WING 1 & 2 - TOP - PARAPET STIRRUP - VERT.
A525	22	-	5'-10"	X	WING 1 & 2 - TOP - PARAPET STIRRUP - VERT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

SEE SHEET 4 LEGEND FOR DESCRIPTION OF

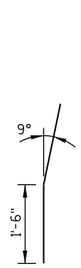


PLAN - WING 2

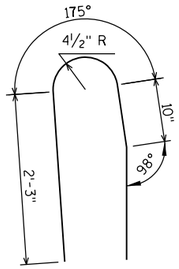


MARK	A	B
A504	2'-2"	5'-4"
A510	2'-11"	5'-7"

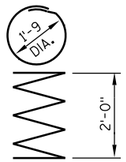
MARK	C	D
A406	11"	1'-6"
A508	2'-2"	1'-3"
A514	11"	5'-0"
A515	11"	5'-4"
A523	6"	2'-8"



A524



A525



A401



A805
STD. 90° HOOK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-195

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WING 2 & SOUTH ABUTMENT DETAILS

SHEET 6 OF 11
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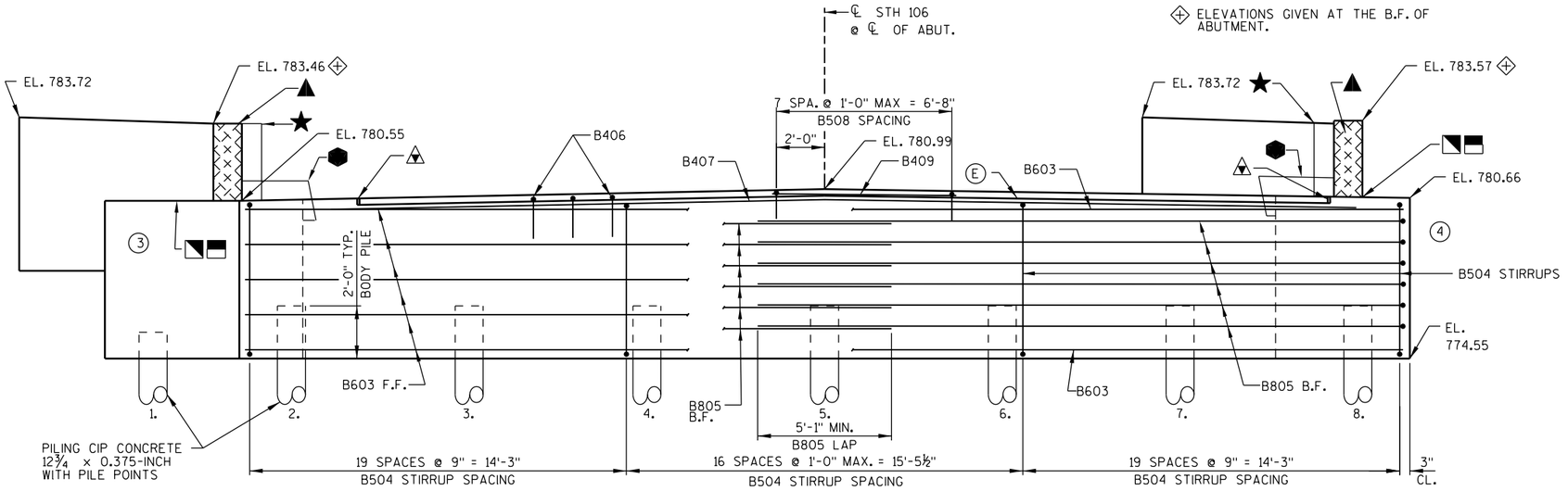
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STATE PROJECT NUMBER
3576-01-71

NOTE:
FOR WING DETAILS SEE SHEETS 8 & 9.

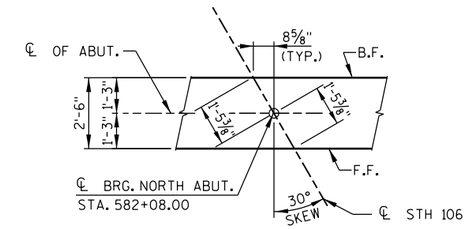
⊕ ELEVATIONS GIVEN AT THE B.F. OF ABUTMENT.



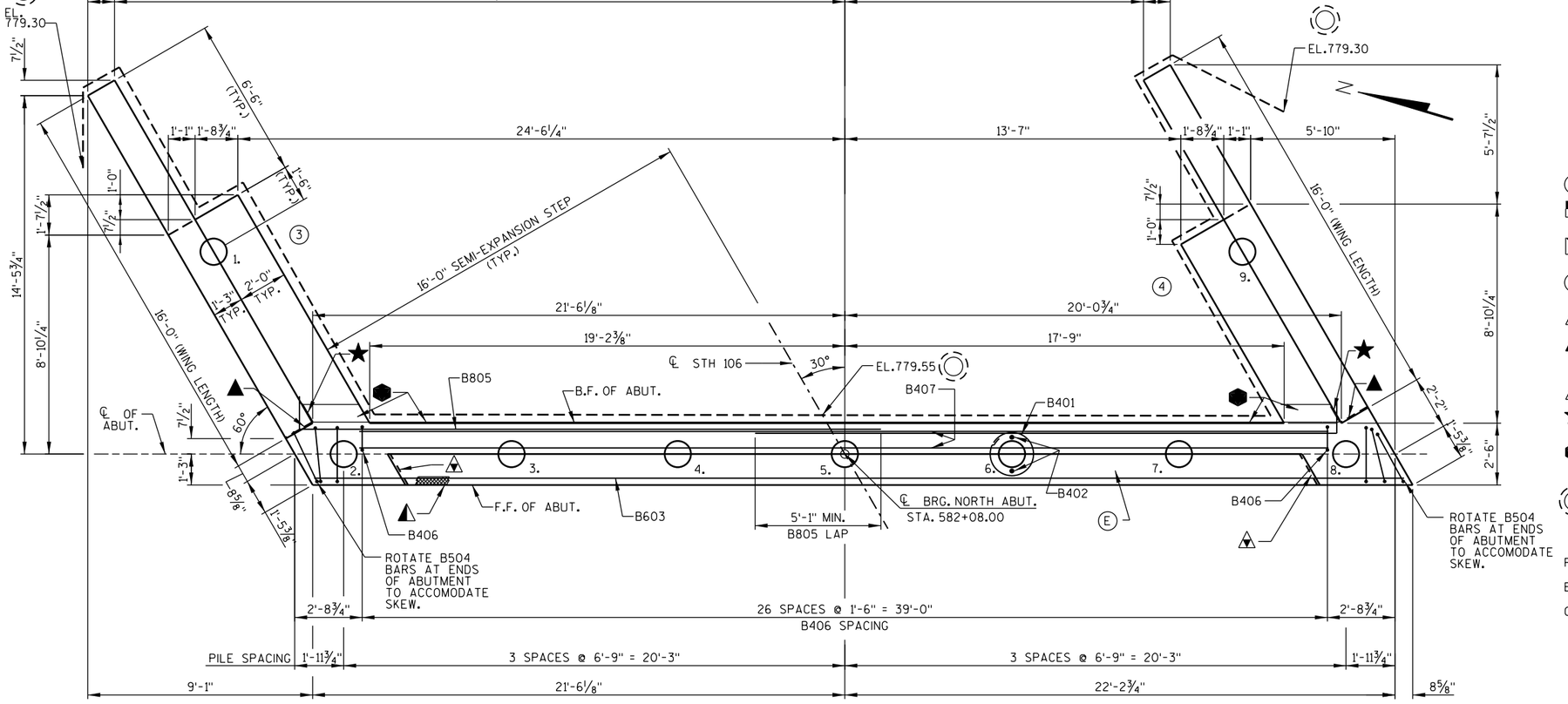
FRONT FACE BARSTEEL REINF.

ELEVATION
(LOOKING NORTH)

BACK FACE BARSTEEL REINF.



LAYOUT PLAN



PLAN

LEGEND

- ◯ – INDICATES WING NUMBER.
- ▬ – OPTIONAL KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ⬢ ON B.F. OF WING.
- ◥ – ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
- Ⓔ – SEMI-EXPANSION STEP. CONSTRUCT 3" DEEPER THAN ABUTMENT BACKWALL.
- ⧋ – ¾" CORK FILLER (SIDE VERTICAL FACES ONLY).
- ▲ – ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◭ – 4"× ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT.
- ★ – VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
- ⬢ – HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS AT CONSTRUCTION JOINT.
- ◯ – PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AND RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. SEE RODENT SHIELD DETAIL, SHEET 8.

F.F.– FRONT FACE
B.F.– BACK FACE
CL. – CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-195

DRAWN BY CAR | PLANS CK'D. KHB

NORTH ABUTMENT

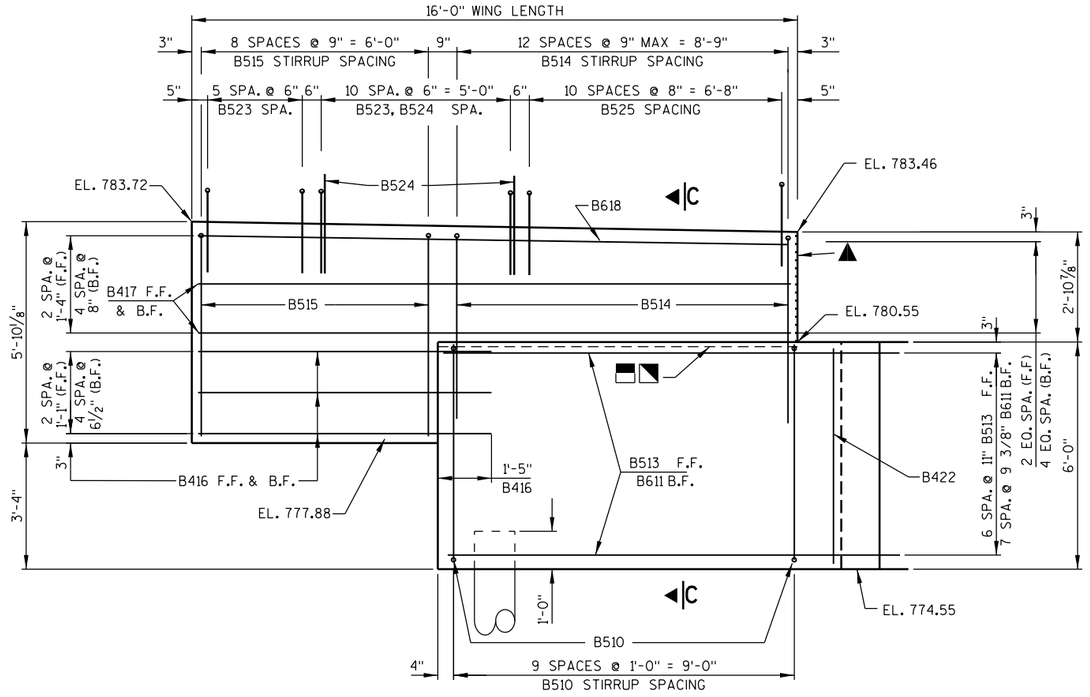
SHEET 7 OF 11
192

8

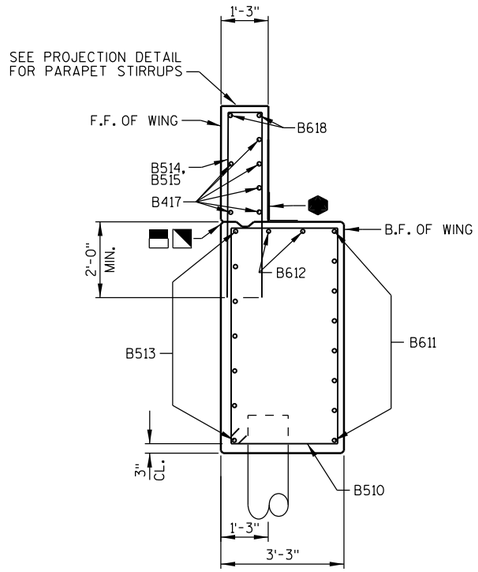
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DATE= 11/24/2020

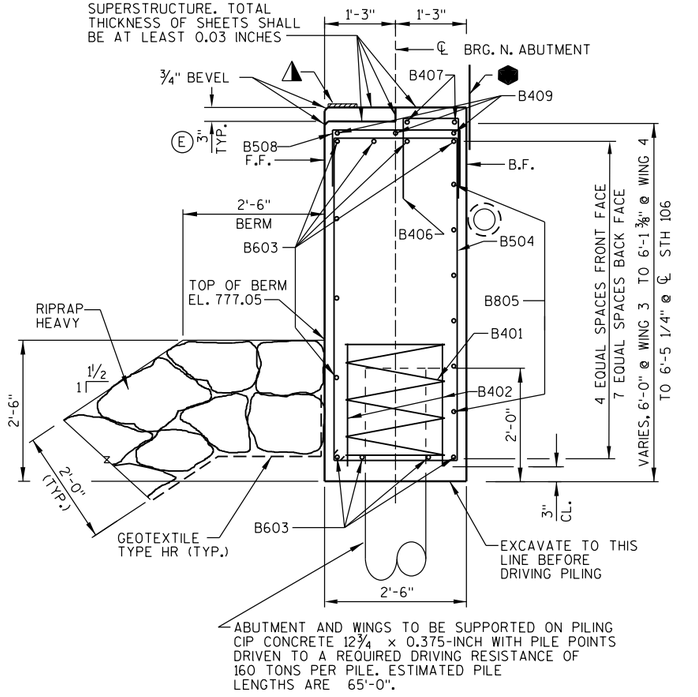
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ELEVATION - WING 3

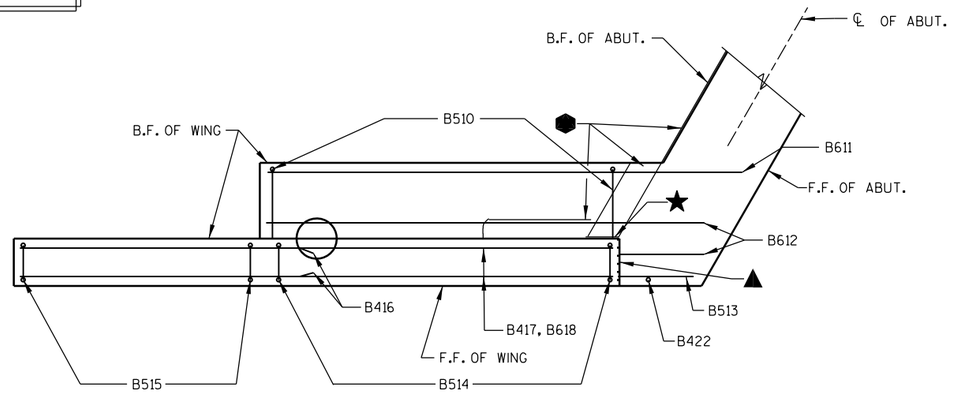


SECTION C-C THRU WING 3

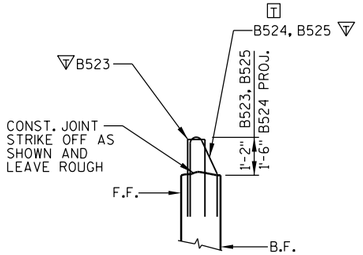


TYPICAL SECTION THRU NORTH ABUTMENT

SEE SHEET 7 LEGEND FOR DESCRIPTION OF



PLAN - WING 3



PARAPET STIRRUP PROJECTION DETAIL

T B524 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE B524 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

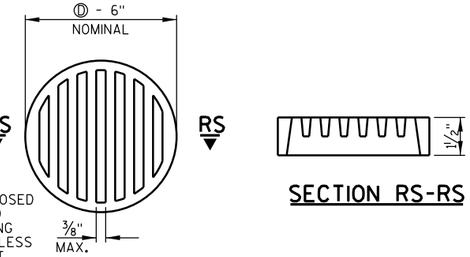
▽ B523 AND B525 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

SEE SHEET 11 FOR PLACEMENT DETAILS OF B523, B524 AND B525 BARS.

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER.
A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH STAINLESS STEEL SHEET METAL SCREWS. THE RODENT SHIELD, PIPE COUPLING AND SCREWS, SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



SECTION RS-RS

RODENT SHIELD

D - DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-195

DRAWN BY CAR | PLANS CK'D. KHB

WING 3 & NORTH ABUTMENT DETAILS

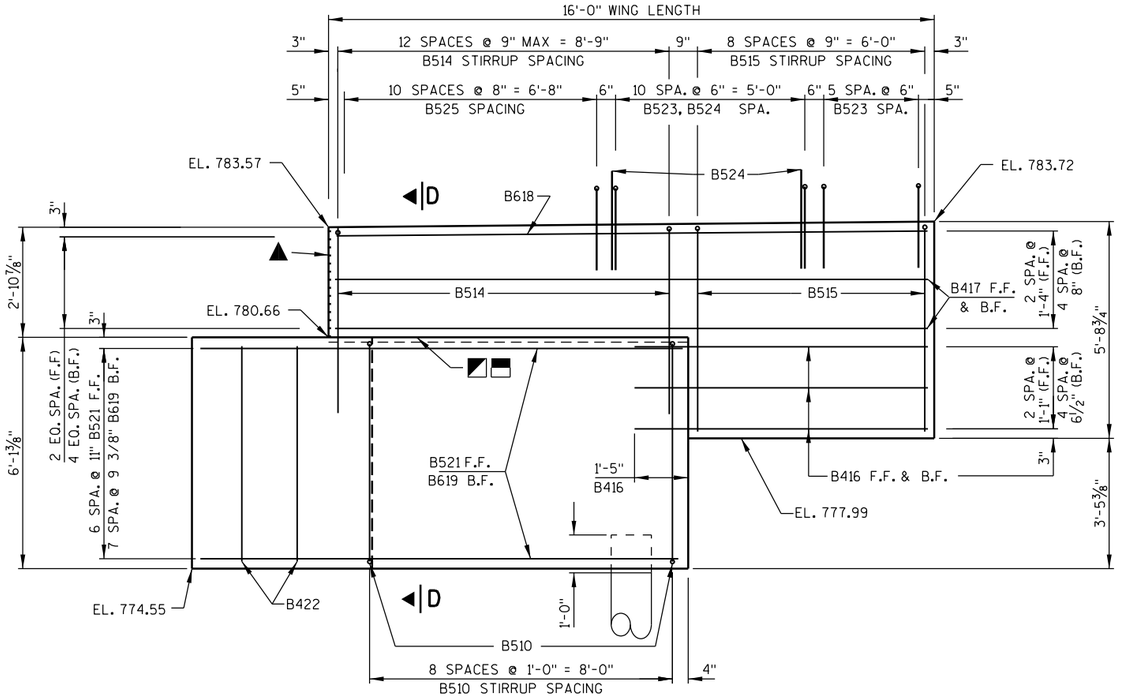
SHEET R OF 11
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DATE= 11/24/2020

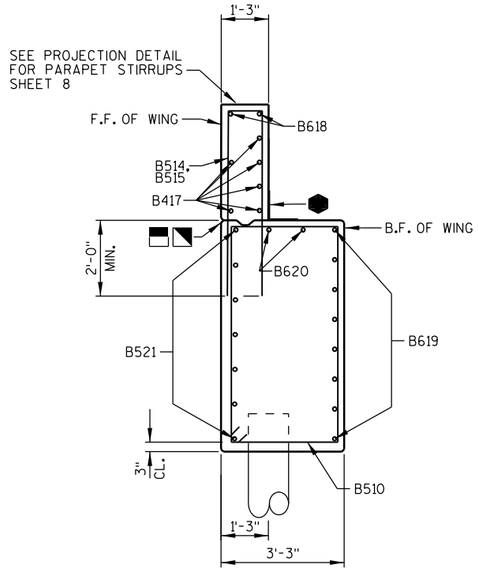
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STATE PROJECT NUMBER
3576-01-71



ELEVATION - WING 4



SECTION D-D THRU WING 4

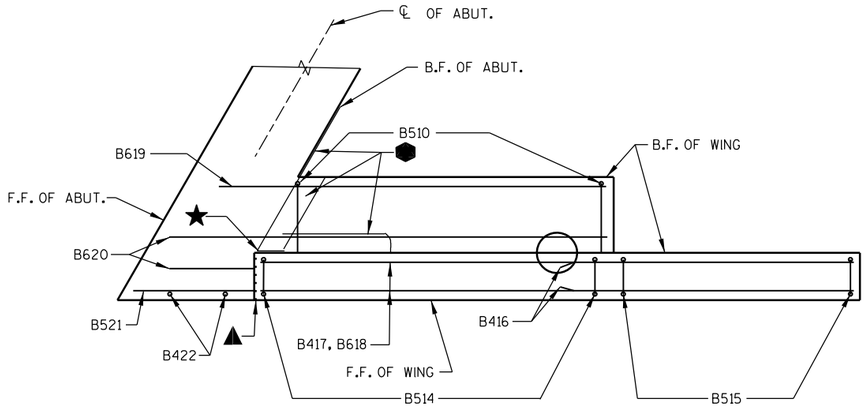
BILL OF BARS (NORTH ABUTMENT)

UNCOATED 2,690 LBS.
COATED 2,135 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
B401	-	7	28'-0"	X	ABUT. BODY - 1 SPIRAL WRAP @ EACH PILE
B402	-	14	2'-3"		ABUT. BODY - 2 PER PILE - VERT.
B603	-	11	44'-0"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
B504	-	55	15'-8"	X	ABUT. BODY - STIRRUP - VERT.
B805	-	12	24'-9"	X	ABUT. BODY - B.F. - HORIZ.
B406	-	27	3'-9"	X	ABUT. BODY - S.E. BACKWALL STIRRUP - VERT.
B407	-	2	39'-2"		ABUT. BODY - S.E. BACKWALL - HORIZ.
B508	8	-	4'-5"	X	ABUT. BODY - TOP - STIRRUP
B409	3	-	7'-0"		ABUT. BODY - TOP - HORIZ.
B510	19	-	17'-8"	X	WING 3 & 4 - BASE - STIRRUP - VERT.
B611	8	-	12'-6"		WING 3 - BASE - B.F. - HORIZ.
B612	2	-	11'-7"		WING 3 - BASE - TOP CENTER - HORIZ.
B513	7	-	11'-2"		WING 3 - BASE - F.F. - HORIZ.
B514	26	-	10'-8"	X	WING 3 & 4 - TOP - STIRRUP - VERT.
B515	18	-	11'-4"	X	WING 3 & 4 - TOP - END - STIRRUP - VERT.
B416	16	-	7'-9"		WING 3 & 4 - TOP - END - HORIZ.
B417	12	-	15'-8"		WING 3 & 4 - TOP - F.F. & B.F. - HORIZ.
B618	4	-	15'-8"		WING 3 & 4 - TOP - F.F. & B.F. - HORIZ.
B619	8	-	10'-3"		WING 4 - BASE - B.F. - HORIZ.
B620	2	-	11'-5"		WING 4 - BASE - TOP CENTER - HORIZ.
B521	7	-	12'-8"		WING 4 - BASE - F.F. - HORIZ.
B422	3	-	5'-7"		ABUT. BODY - WING 3 & 4 - END - VERT.
B523	34	-	5'-7"	X	WING 3 & 4 - TOP - PARAPET STIRRUP - VERT.
B524	22	-	3'-0"	X	WING 3 & 4 - TOP - PARAPET STIRRUP - VERT.
B525	22	-	5'-10"	X	WING 3 & 4 - TOP - PARAPET STIRRUP - VERT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

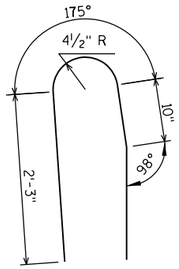
SEE SHEET 7 LEGEND FOR DESCRIPTION OF



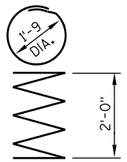
PLAN - WING 4



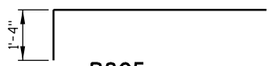
B524



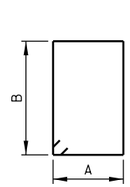
B525



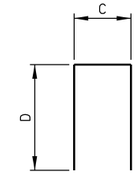
B401



B805
STD. 90° HOOK



MARK	A	B
B504	2'-2"	5'-4"
B510	2'-11"	5'-7"



MARK	C	D
B406	11"	1'-6"
B508	2'-2"	1'-3"
B514	11"	5'-0"
B515	11"	5'-4"
B523	6"	2'-8"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-195

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WING 4 & NORTH ABUTMENT DETAILS

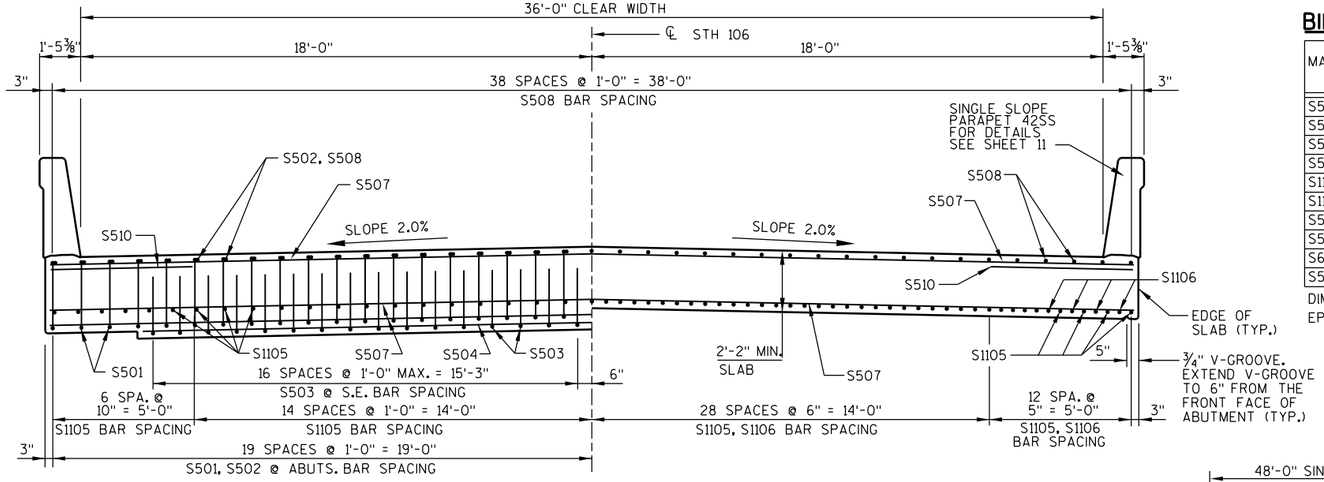
SHEET 9 OF 11
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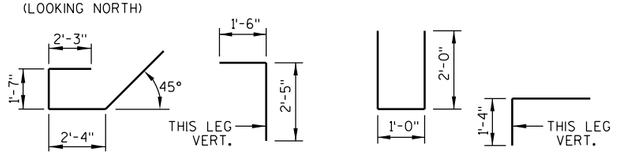
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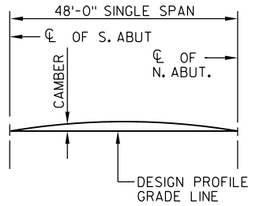
AT ABUTMENTS IN SPAN

CROSS SECTION THRU BRIDGE

(LOOKING NORTH)



S501 S502 S503 S609



CAMBER DIAGRAM

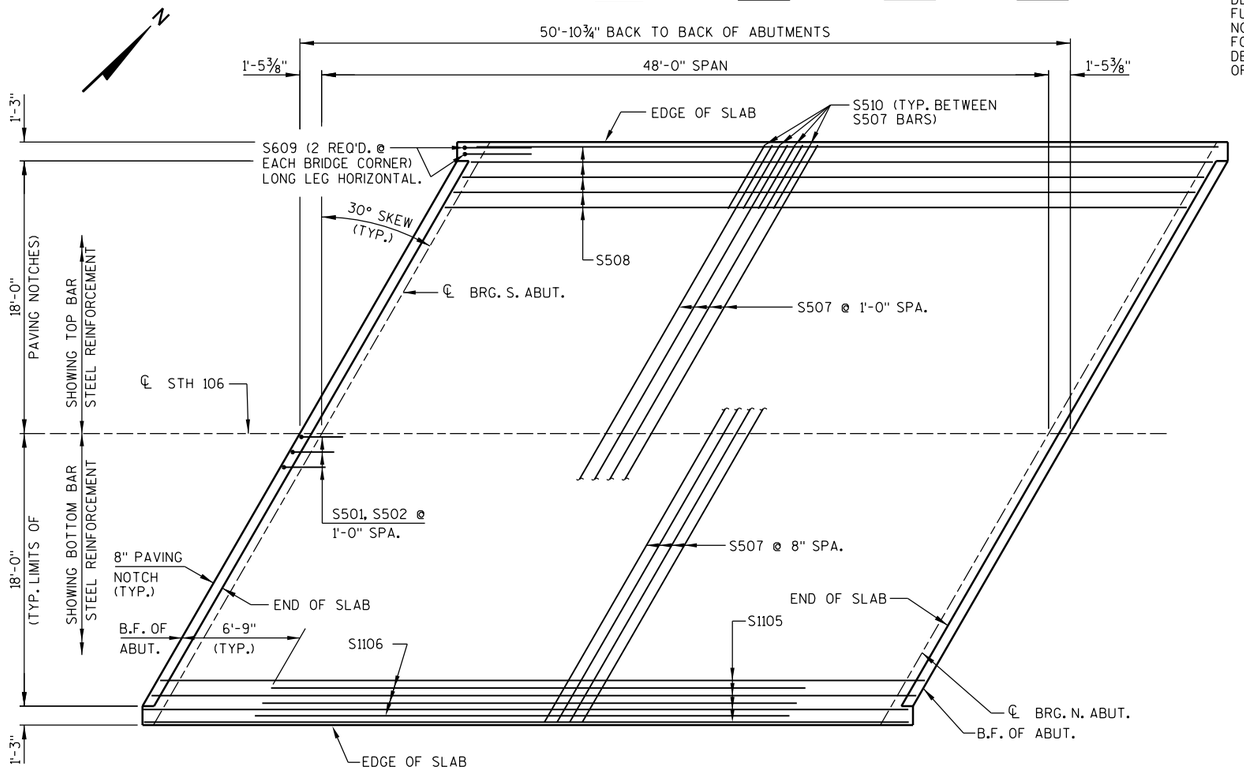
CAMBER SPANS AS SHOWN ABOVE AND IN THE TABLE OF VALUES TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION APPROXIMATES 1/3 OF CAMBER VALUES SHOWN.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE, FOLLOW THIS PROCEDURE:

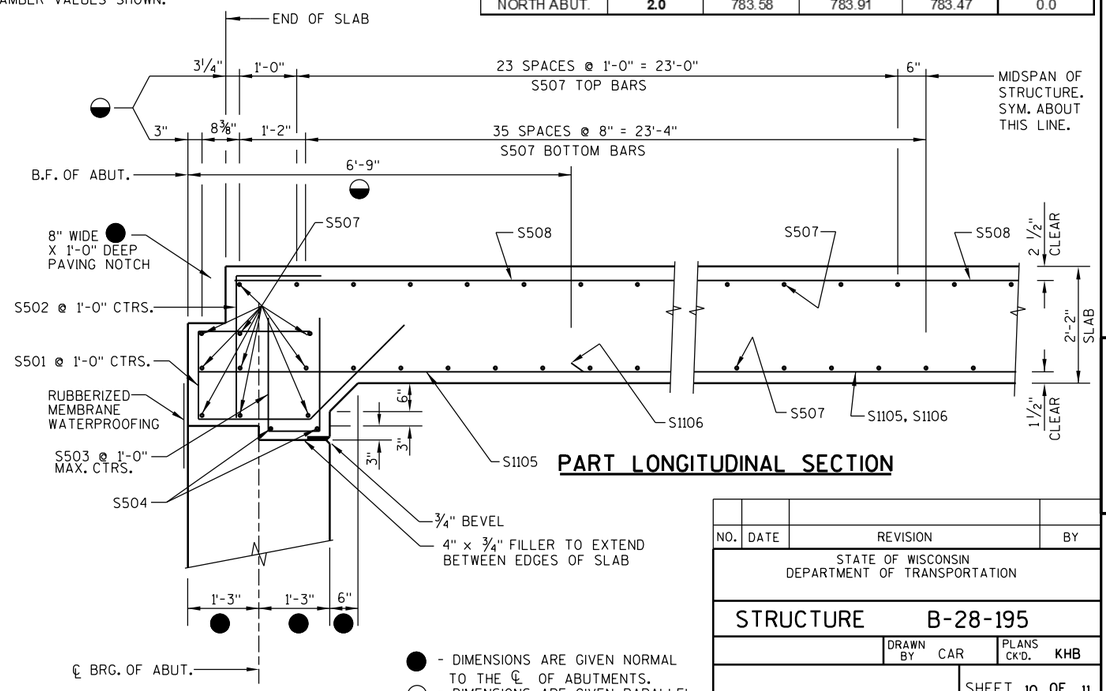
TOP OF SLAB ELEVATION AT FINAL GRADE

- SLAB THICKNESS
+ CAMBER
+ FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)

= TOP OF SLAB FALSEWORK ELEVATION



PLAN



● - DIMENSIONS ARE GIVEN NORMAL TO THE ℄ OF ABUTMENTS.
◒ - DIMENSIONS ARE GIVEN PARALLEL TO THE ℄ STH 106.

BILL OF BARS (COATED) 29,280 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	78	8'-1"	X	DIAPHRAGM @ ABUTS. - VERT.
S502	78	3'-10"	X	DIAPHRAGM @ ABUTS. - VERT.
S503	68	4'-9"	X	DIAPHRAGM @ ABUTS. - S.E. POCKET - VERT.
S504	4	36'-5"		DIAPHRAGM @ ABUTS. - S.E. POCKET - HORIZ.
S1105	41	50'-6"		SLAB BOTTOM - LONGIT.
S1106	40	37'-5"		SLAB BOTTOM - LONGIT.
S507	137	44'-1"		SLAB TOP & BOTTOM - TRANS.
S508	39	48'-10"		SLAB TOP - LONGIT.
S609	8	6'-0"	X	SLAB TOP @ CORNERS
S510	98	5'-0"		SLAB TOP - TRANS. AT PARAPETS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT.

STATE PROJECT NUMBER

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GENERAL NOTES

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE PLACED ON THE SKEW.

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	SPAN POINT	East SLAB EDGE	C/L STH 106	West SLAB EDGE
SOUTH ABUT.	1.0			
	1.5			
NORTH ABUT.	2.0			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT THE 0.5 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ℄. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

TOP OF SLAB ELEVATIONS AND CAMBER VALUES

LOCATION	SPAN POINT	East SLAB EDGE	C/L STH 106	West SLAB EDGE	CAMBER VALUE (INCHES)
SOUTH ABUT.	1.0	783.82	784.15	783.71	0.0
	1.1	783.80	784.13	783.69	0.6
	1.2	783.77	784.10	783.66	1.2
	1.3	783.75	784.08	783.64	1.6
	1.4	783.72	784.05	783.61	1.9
	1.5	783.70	784.03	783.59	2.0
	1.6	783.68	784.01	783.57	1.9
	1.7	783.65	783.98	783.54	1.6
	1.8	783.63	783.96	783.52	1.2
	1.9	783.60	783.93	783.49	0.6
NORTH ABUT.	2.0	783.58	783.91	783.47	0.0

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-195

DRAWN BY CAR | PLANS CK'D. KHB

SUPERSTRUCTURE

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FILE= 00093483_10.DGN
DATE=1/27/2021

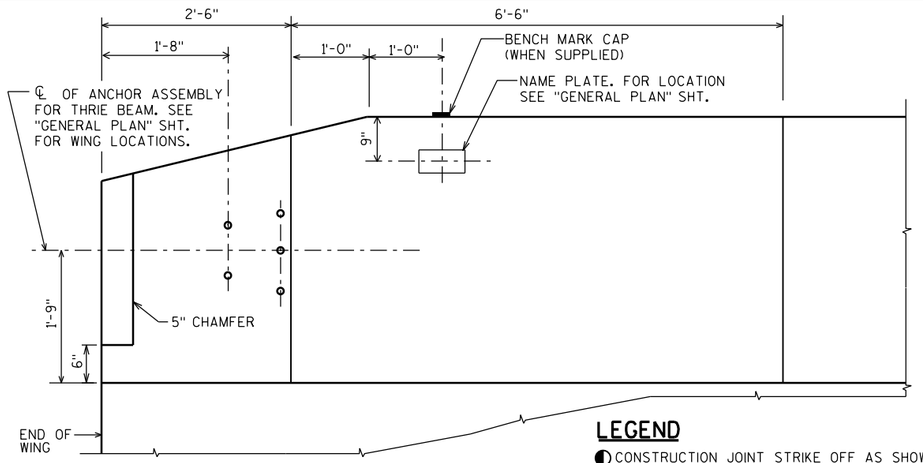
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STATE PROJECT NUMBER

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INSIDE ELEVATION

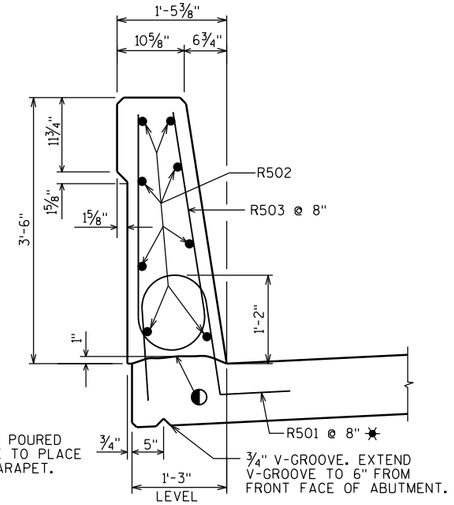
LEGEND

◐ CONSTRUCTION JOINT STRIKE OFF AS SHOWN.

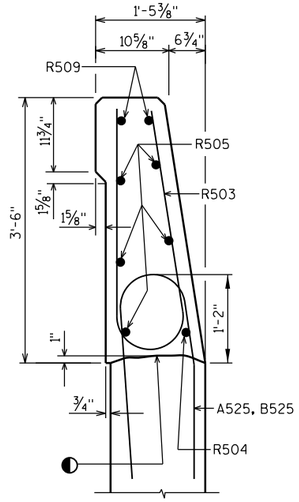
T A524, B524 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE A524, B524 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ A523, B523 AND A525, B525 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

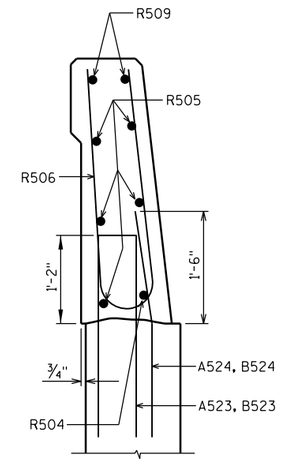
✶ R501, R510 BARS TO BE TIED TO SLAB STEEL BEFORE SLAB IS POURED.



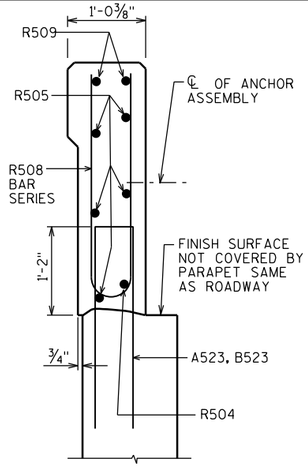
SECTION S4-S4
ON SLAB



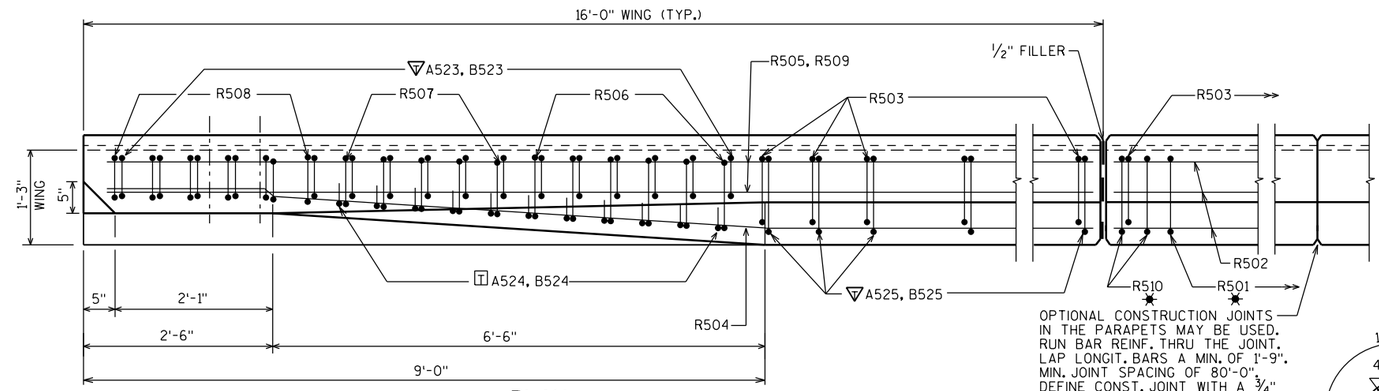
SECTION S3-S3
ON WING



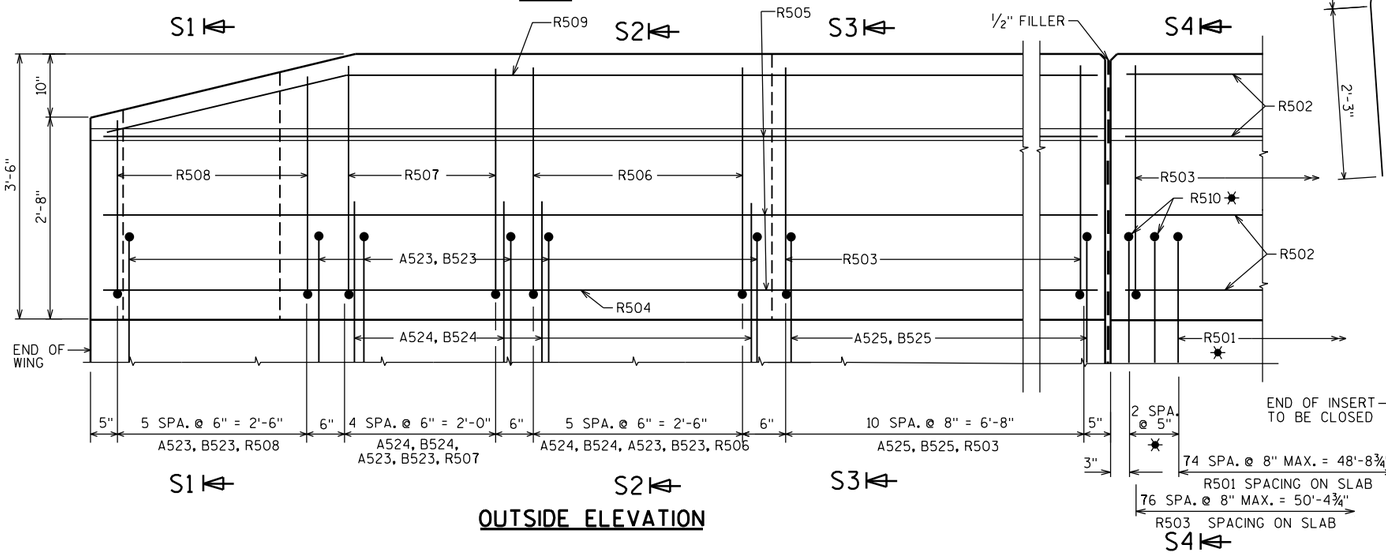
SECTION S2-S2
ON WING



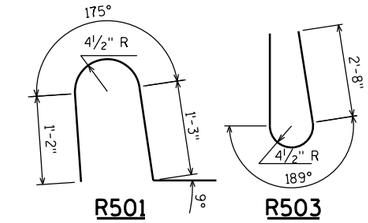
SECTION S1-S1
AT END OF WING



PLAN

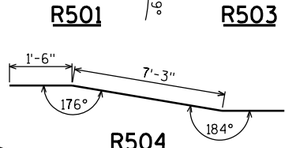


OUTSIDE ELEVATION

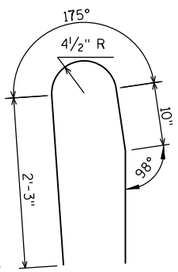


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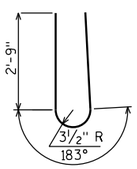
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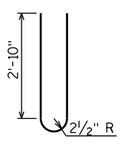
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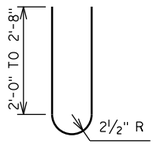
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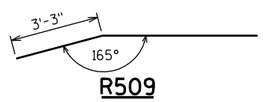
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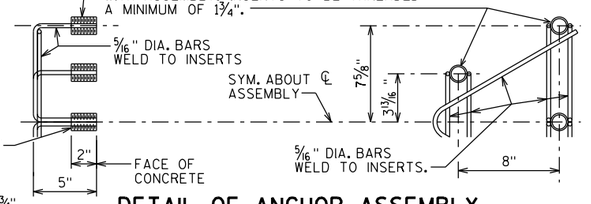


R508



R509

THREADED INSERTS FOR ⅞" DIA. X 2" LONG GALVANIZED HEX HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MIN. OF 1⅞" AND SHALL BE SUPPLIED, INCLUDING WASHERS, WITH ASSEMBLY. INSERTS TO BE THREADED A MINIMUM OF 1¾".



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY BID ITEM SHALL BE "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

BILL OF BARS (COATED) 3,940 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
R501	150	4'-5"	X		PARAPET ON DECK - STIRRUP - VERT.
R502	32	26'-2"			PARAPET ON DECK - LONGIT.
R503	198	6'-8"	X		PARAPET - STIRRUP - VERT.
R504	4	15'-7"	X		PARAPET ON WING - BOTTOM - LONGIT.
R505	20	15'-7"			PARAPET ON WING - LONGIT.
R506	24	6'-6"	X		PARAPET ON WING - STIRRUP - VERT.
R507	20	6'-5"	X		PARAPET ON WING - STIRRUP - VERT.
R508	24	5'-5"	X	Ⓢ	PARAPET ON WING - END - STIRRUP - VERT.
R509	8	15'-8"	X		PARAPET ON WING - TOP - LONGIT.
R510	8	5'-10"	X		PARAPET AT DECK CORNERS - STIRRUP - VERT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT.

Ⓢ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BEND BAR AFTER CUTTING.

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
R508	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-195

DRAWN BY CAR | PLANS CK'D. KHB

SINGLE SLOPE PARAPET 42SS

SHEET 11 OF 11
196

FILE= 0009348_11.DGN
DATE= 1/27/2021

8

8

STATION Division 1	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
66+15	6615	0	5.92	2.50	0.51	0	0	0	0	0	0
66+50	6650	35	5.87	2.50	0.11	8	3	0	8	1	4
67+00	6700	50	6	2.50	0.13	11	5	0	19	1	10
67+50	6750	50	6.16	2.50	0.05	11	5	0	30	1	16
68+00	6800	50	5.91	2.50	0.05	11	5	0	41	1	23
68+42	6842	42	5.18	2.50	0.98	9	4	1	50	2	27
						50	21	2			

STATION Division 2	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
106+65	10665	0	5.01	2.50	0.45	0	0	0	0	0	0
107+00	10700	35	5.43	2.50	0.25	7	3	0	7	1	3
107+50	10750	50	5.67	2.50	0.25	10	5	0	17	1	8
108+00	10800	50	5.55	2.50	1.4	10	5	2	27	3	12
108+50	10850	50	5.45	2.50	1.1	10	5	2	38	6	15
109+00	10900	50	5.92	2.50	0.65	11	5	2	48	8	18
109+50	10950	50	6.19	2.50	0	11	5	1	59	9	24
110+00	11000	50	6.79	2.50	0.34	12	5	0	71	9	31
110+50	11050	50	6.32	2.50	0.32	12	5	1	84	10	38
111+00	11100	50	6.35	2.50	1.7	12	5	2	95	12	43
111+50	11150	50	5.77	2.50	1.1	11	5	3	106	15	46
112+00	11200	50	5.83	2.50	0	11	5	1	117	17	51
112+50	11250	50	5.52	2.50	0.12	11	5	0	128	17	57
113+00	11300	50	5.43	2.50	0.05	10	5	0	138	17	62
113+50	11350	50	5.76	2.50	0.08	10	5	0	148	17	68
114+00	11400	50	5.83	2.50	0.09	11	5	0	159	17	73
114+50	11450	50	5.53	2.50	0.65	11	5	1	169	18	79
114+59	11459	9	5.43	2.50	0.48	2	1	0	171	19	79
						171	74	15			

STATION Division 3	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
202+11	20211	0	0.94	0.00	1.27	0	0	0	0	0	0
202+36	20236	25	2	0.00	10.98	1	0	6	1	7	-6
202+61	20261	25	1.04	0.00	19.52	1	0	14	3	25	-22
202+81	20281	20	0	0.00	24.97	0	0	16	3	45	-42
203+06	20306	25	0	0.00	18.26	0	0	20	3	70	-67
203+34	20334	28	0	0.00	13.63	0	0	17	3	91	-88
						3	0	73			

STATION Division 4	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
205+24	20524	0	0.11	0.00	11.79	0	0	0	0	0	0
205+49	20549	25	0.2	0.00	6.38	0	0	8	0	11	-10
205+62	20562	13	0.43	0.00	9.14	0	0	4	0	15	-15
205+73	20573	11	0.43	0.00	14.54	0	0	5	0	21	-21
205+87	20587	14	0.29	0.00	12.59	0	0	7	1	30	-29
206+12	20612	25	0.2	0.00	19.38	0	0	15	1	49	-48
						1	0	39			

STATION Division 5	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
249+00	24900	0	5.49	1.50	5.1	0	0	0	0	0	0
249+50	24950	50	6.11	1.50	3.66	11	3	8	11	10	-2
250+00	25000	50	5.73	1.50	2.72	11	3	6	22	18	-1
250+50	25050	50	6.54	1.50	2.62	11	3	5	33	24	1
251+00	25100	50	5.78	1.50	1.36	11	3	4	44	28	5
251+50	25150	50	7.17	1.50	0.08	12	3	1	56	30	13
252+00	25200	50	6.23	1.50	0.18	12	3	0	69	30	22
252+50	25250	50	5.61	1.50	0.93	11	3	1	80	32	29
253+00	25300	50	5.25	1.50	1.95	10	3	3	90	35	33
						90	22	28			

STATION Division 6	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
335+72	33572	0	1.59	0.00	11.85	0	0	0	0	0	0
335+97	33597	25	1.94	0.00	7.41	2	0	9	2	11	-10
336+22	33622	25	2.17	0.00	1.88	2	0	4	4	17	-13
336+30	33630	8	2.54	0.00	5.26	1	0	1	4	18	-14
336+54	33654	24	1.64	0.00	2.4	2	0	3	6	22	-16
336+79	33679	25	0.79	0.00	6.99	1	0	4	7	28	-20
						7	0	22			

STATION Division 7	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
338+62	33862	0	0.45	0.00	1.15	0	0	0	0	0	0
338+87	33887	25	0.55	0.00	1.52	0	0	1	0	2	-1
339+01	33901	14	0.86	0.00	4.74	0	0	2	1	4	-3
339+12	33912	11	0.76	0.00	8.82	0	0	3	1	7	-6
339+26	33926	14	0.26	0.00	12.29	0	0	5	1	14	-12
339+50	33950	24	1.19	0.00	17.19	1	0	13	2	30	-28
						2	0	24			

STATION Division 9	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
578+94	57894	0	4.7	0.00	4.3	0	0	0	0	0	0
579+19	57919	25	93.5	12.00	0	45	6	2	45	2	37
579+44	57944	25	86.74	12.00	0.1	83	11	0	129	3	110
579+50	57950	6	85.39	12.00	0.18	19	3	0	148	3	126
579+75	57975	25	81.08	12.00	0.81	77	11	0	225	3	191
580+00	58000	25	81.6	12.00	0.12	75	11	0	300	4	255
580+37	58037	37	85.05	12.00	0.06	114	16	0	415	4	353
580+62	58062	25	75.7	12.00	9.92	74	11	5	489	10	410
580+87	58087	25	73.98	12.00	5.84	69	11	7	558	19	459
581+48	58148	61	77.5	12.00	6.15	172	27	14	730	36	587
						730	107	29			

STATION Division 10	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
582+20	58220	0	85.5	12.00	0.24	0	0	0	0	0	0
582+81	58281	61	4.5	2.00	3.71	10	5	8	10	10	-5
583+06	58306	25	7.1	0.00	2.74	5	1	3	16	14	-3
583+31	58331	25	8.2	0.00	2.78	7	0	3	23	17	1
583+89	58389	58	2.5	0.00	1.67	11	0	5	34	23	1
584+14	58414	25	2.8	0.00	2.94	2	0	2	37	26	1
584+15	58415	1	5.9	0.00	7.02	0	0	0	37	26	1
584+35	58435	20	4.9	0.00	12.36	4	0	4	41	31	0
584+40	58440	5	4.7	0.00	13.04	1	0	2	42	34	-2
584+65	58465	25	5.2	0.00	6.68	5	0	9	46	45	-9
585+00	58500	35	5.5	0.00	2.7	7	0	6	53	53	-9
586+00	58600	100	9.3	0.00	0.03	27	0	5	81	59	19
587+00	58700	100	7	0.00	1.16	30	1	18	111	81	22
588+00	58800	100	3.1	0.00	4.85	19	0	11	129	95	20
589+00	58900	100	4.2	0.00	2.1	14	0	13	143	111	19
590+00	59000	100	5.2	0.00	1.03	17	0	6	160	118	31
591+00	59100	100	3.5	0.00	0	16	0	2	176	120	42
592+00	59200	100	4	0.00	0	14	0	15	190	139	38
593+00	59300	100	2.7	0.00	4.2	12	0	14	203	157	30
594+00	59400	100	3.9	0.00	0	12	0	8	215	167	35
595+00	59500	100	3.1	0.00	0	13	0	3	228	170	43
596+00	59600	100	3.9	0.00	0	13	0	5	241	176	51
597+00	59700	100	5.2	0.00	0.29	17	0	12	258	191	56
598+00	59800	100	5.5	0.00	0.24	20	0	1	278	192	75
599+00	59900	100	5.2	0.00	0.23	20	0	1	297	193	93
600+00	60000	100	2.2	0.00	3.18	14	0	6	311	201	93
601+00	60100	100	2.4	0.00	1.97	9	0	10	320	213	90
602+00	60200	100	4.8	0.00	2.69	13	0	9	333	224	97
603+00	60300	100	4	0.00	2.71	16	0	11	349	237	99
604+00	60400	100	1.3	0.00	7.63	10	0	11	359	251	89
605+00	60500	100	3.6	0.00	2.22	9	0	18	368	274	80
606+00	60600	100	6	0.00	0	18	0	4	386	279	97
607+00	60700	100	5.9	0.00	0	22	0	0	408	279	119
607+23	60723	23	6.4	0.00	0	5	0	2	413	282	121
607+48	60748	25	7.2	0.00	0	6	0	2	419	285	125
607+72	60772	24	9.1	0.00	3.68	7	0	2	427	287	131
						427	7	230			

9

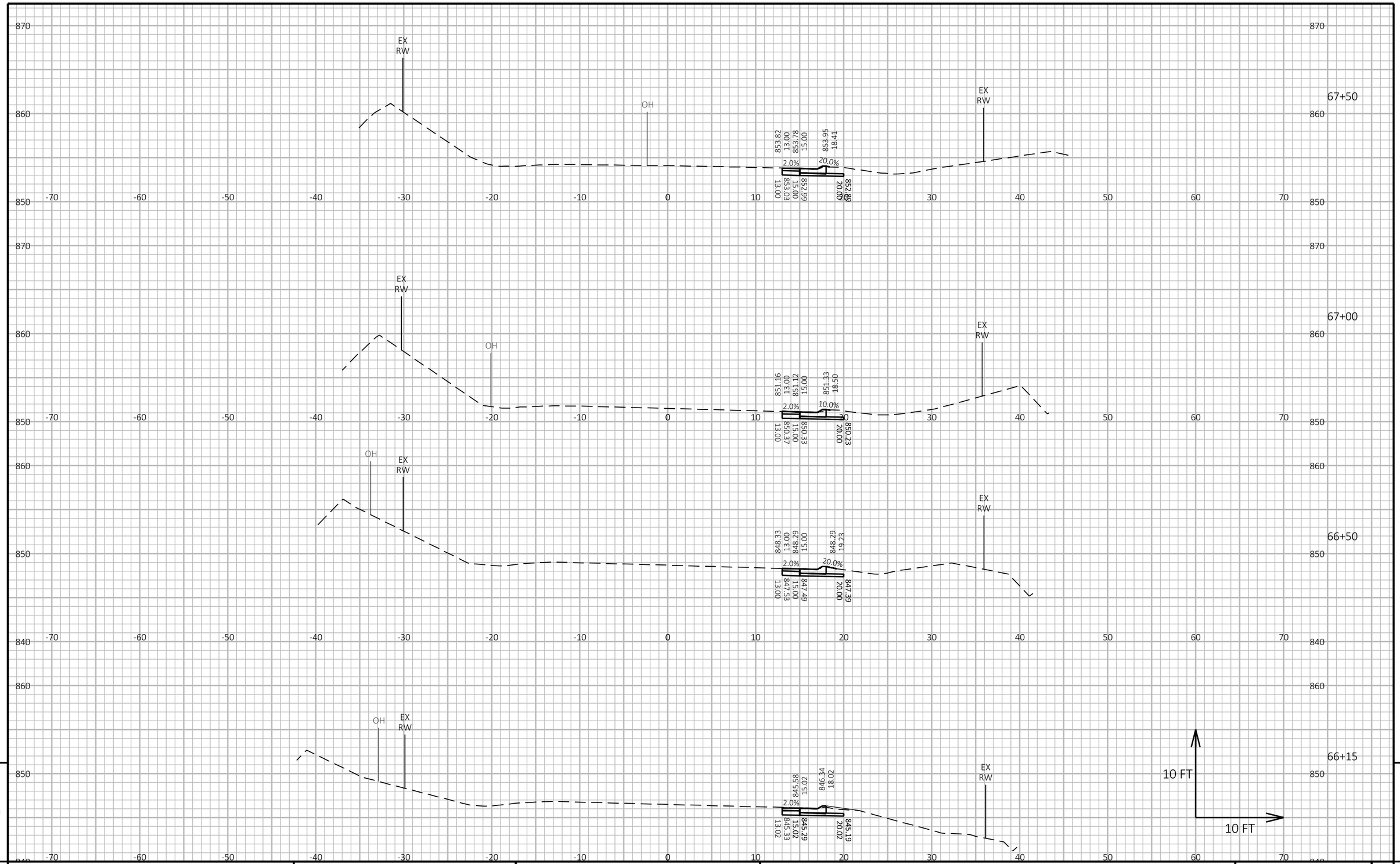
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WISDOT/CADDS SHEET 49



9

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 200	E

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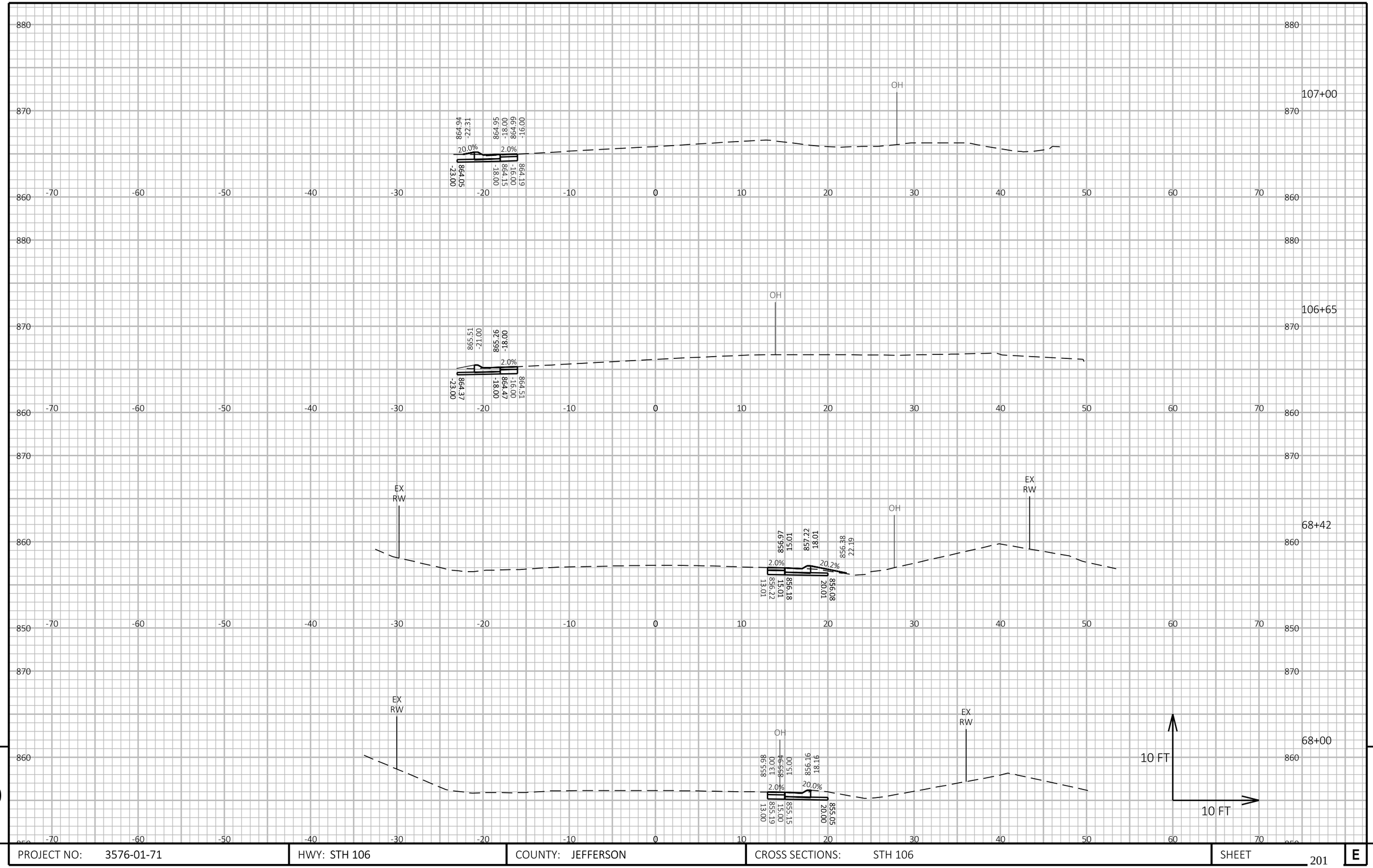
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PLOT BY : CHASE KIELER

PLOT NAME :

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WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 201	E

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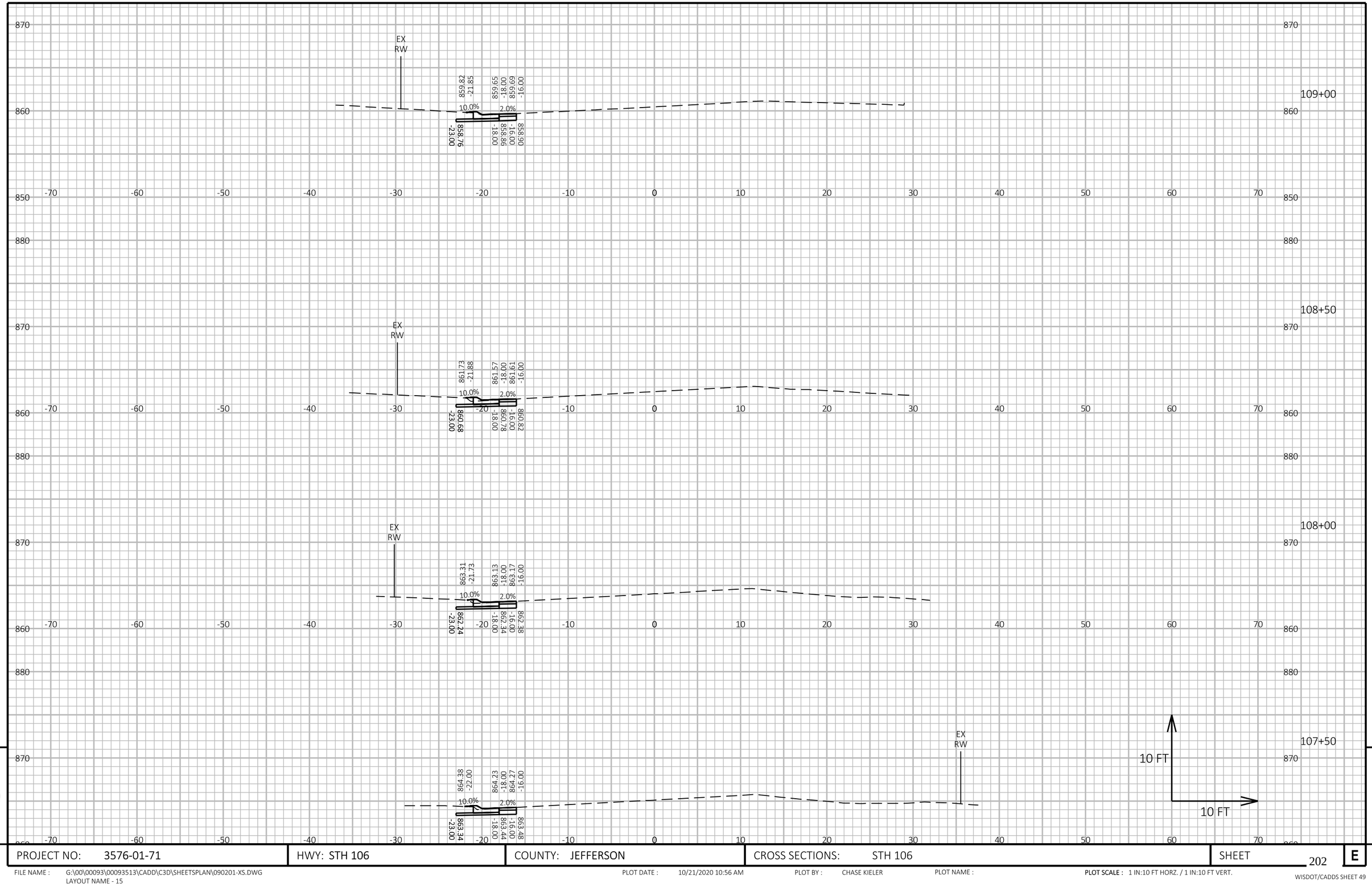
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PLOT BY : CHASE KIELER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 202	E

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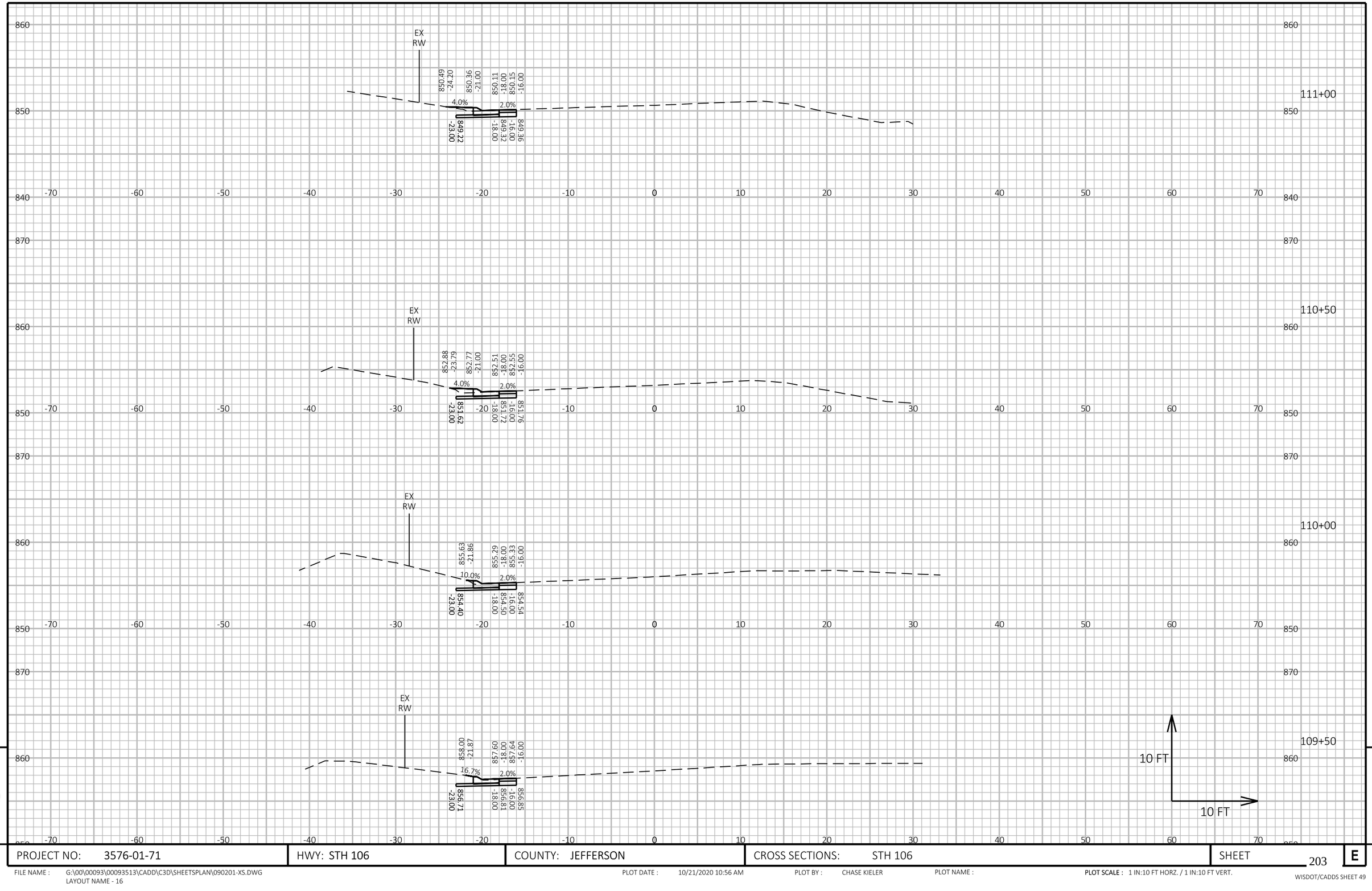
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PLOT BY : CHASE KIELER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



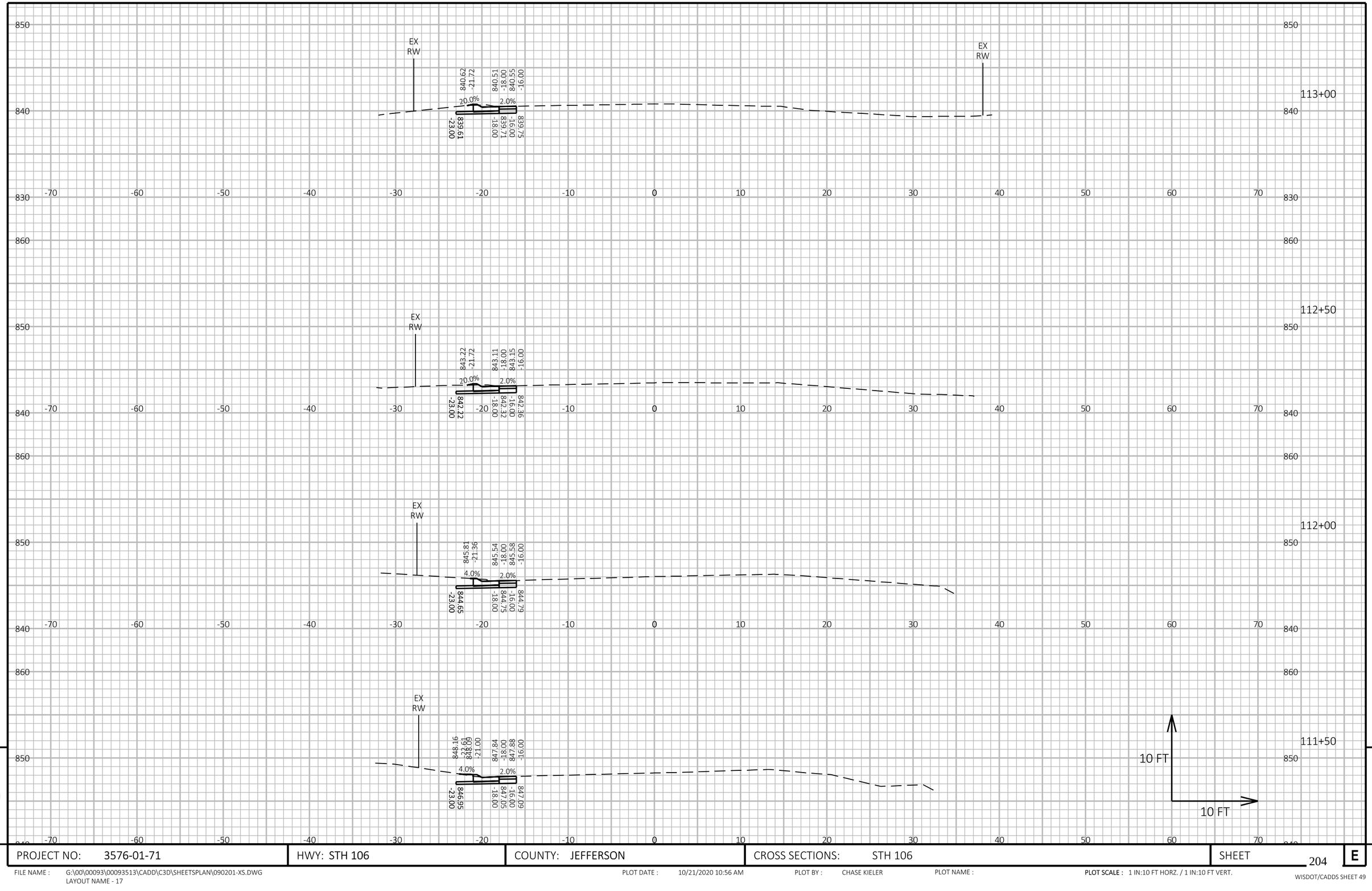
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WISDOT/CADDS SHEET 49



9

9

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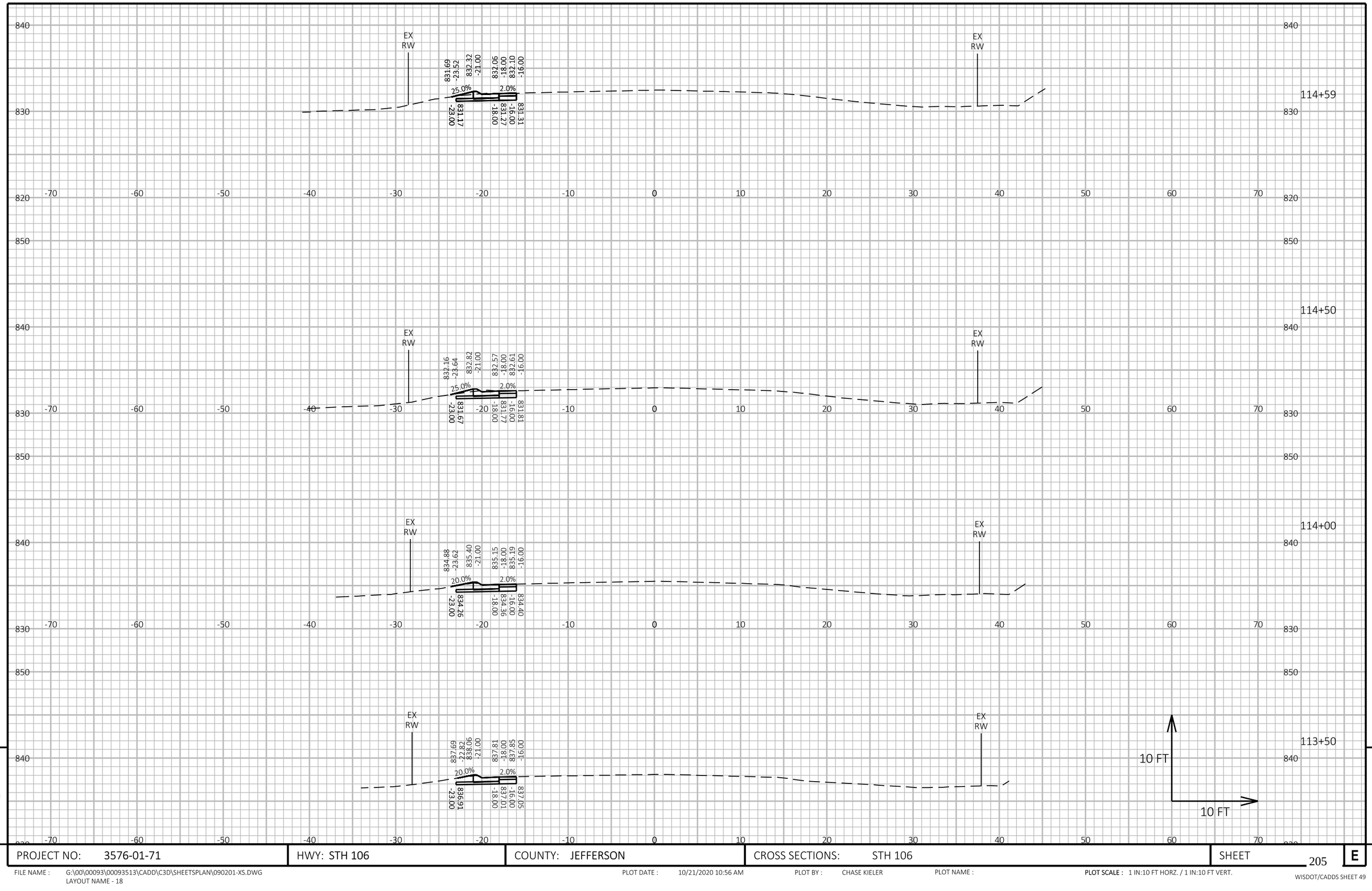
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PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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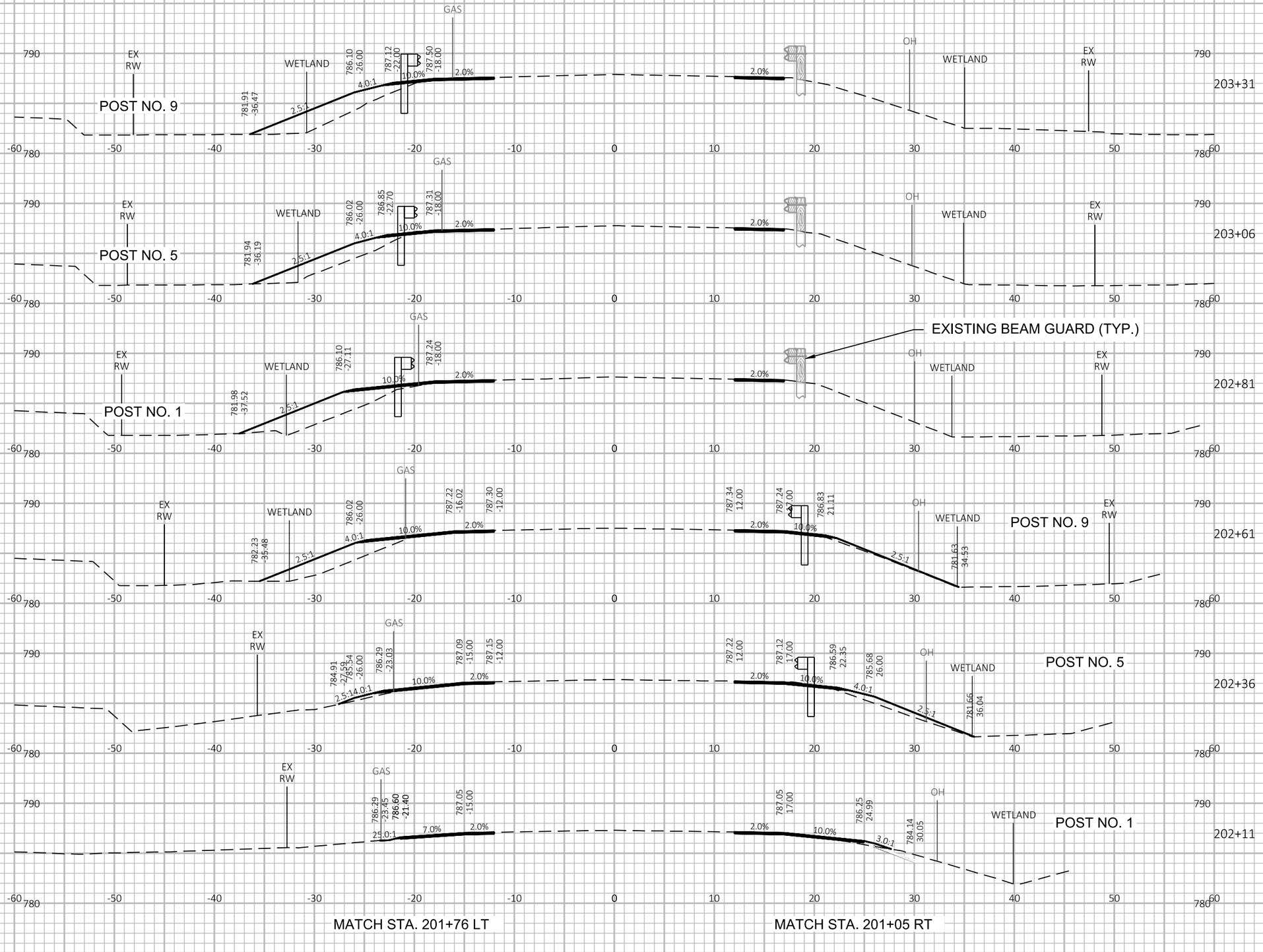
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LAYOUT NAME - 18

PLOT DATE : 10/21/2020 10:56 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

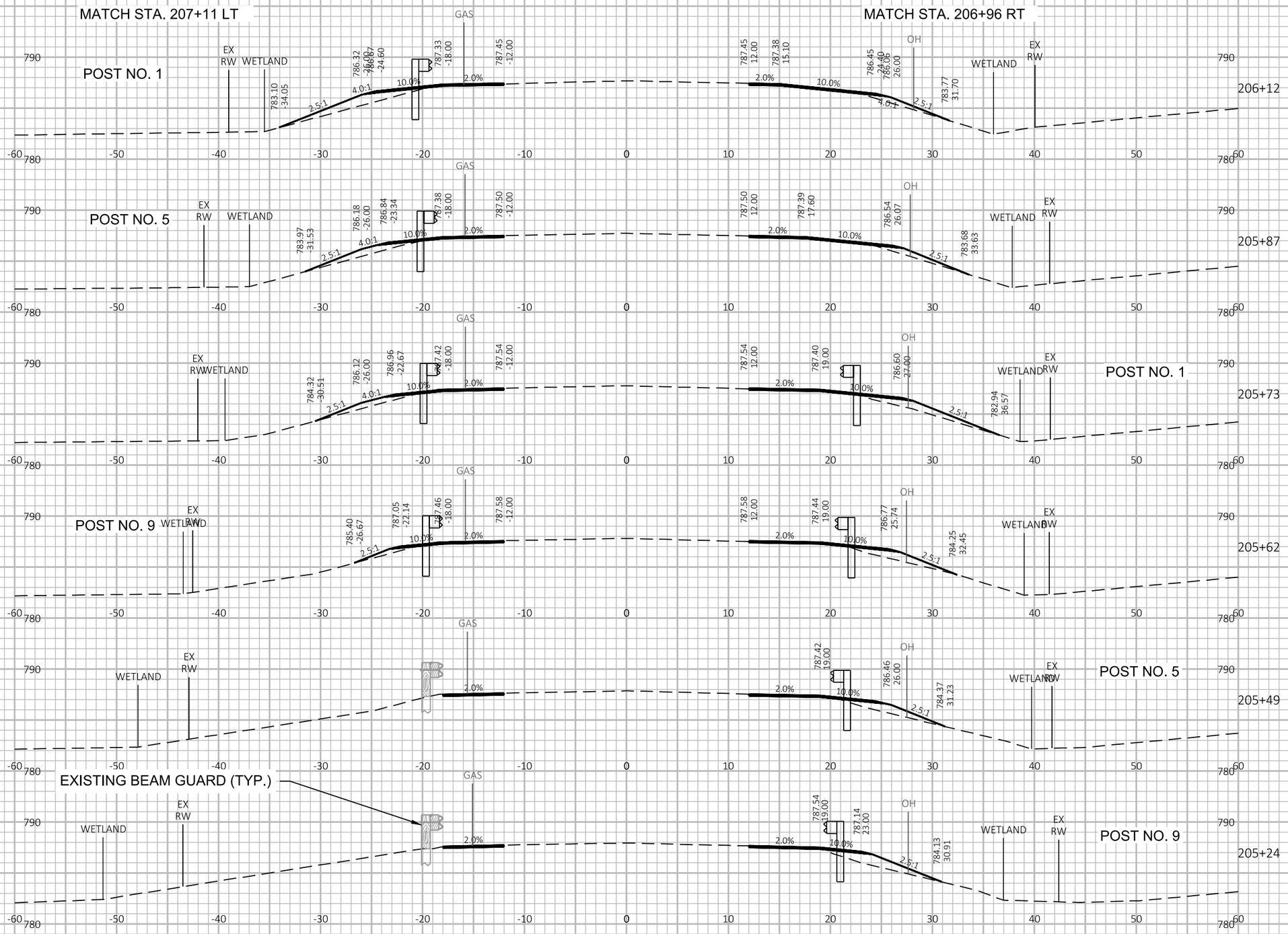
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PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 206	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-xs

PLOT DATE : 10/21/2020 10:57 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

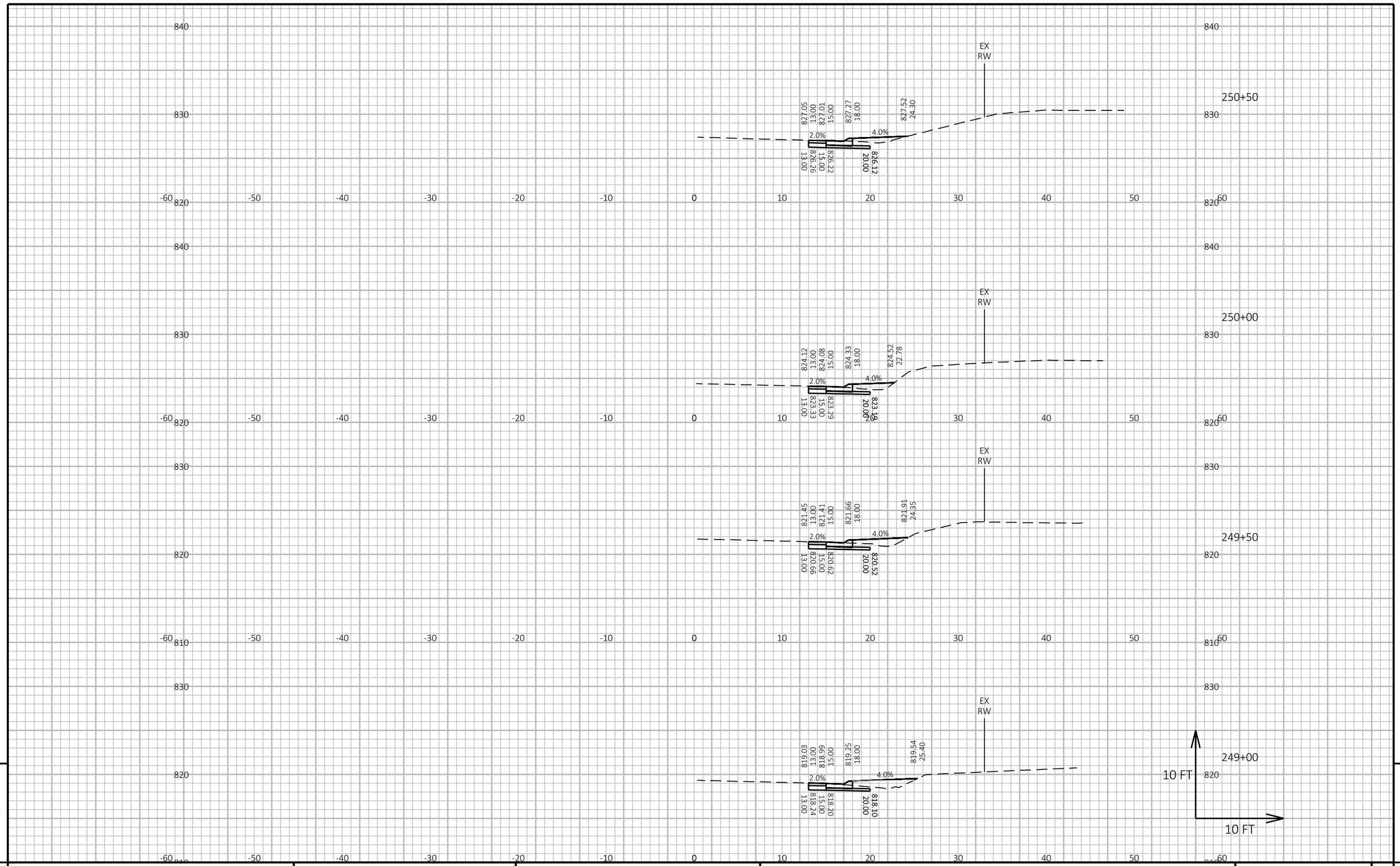


PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 207	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090202-xs

PLOT DATE : 10/21/2020 10:57 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



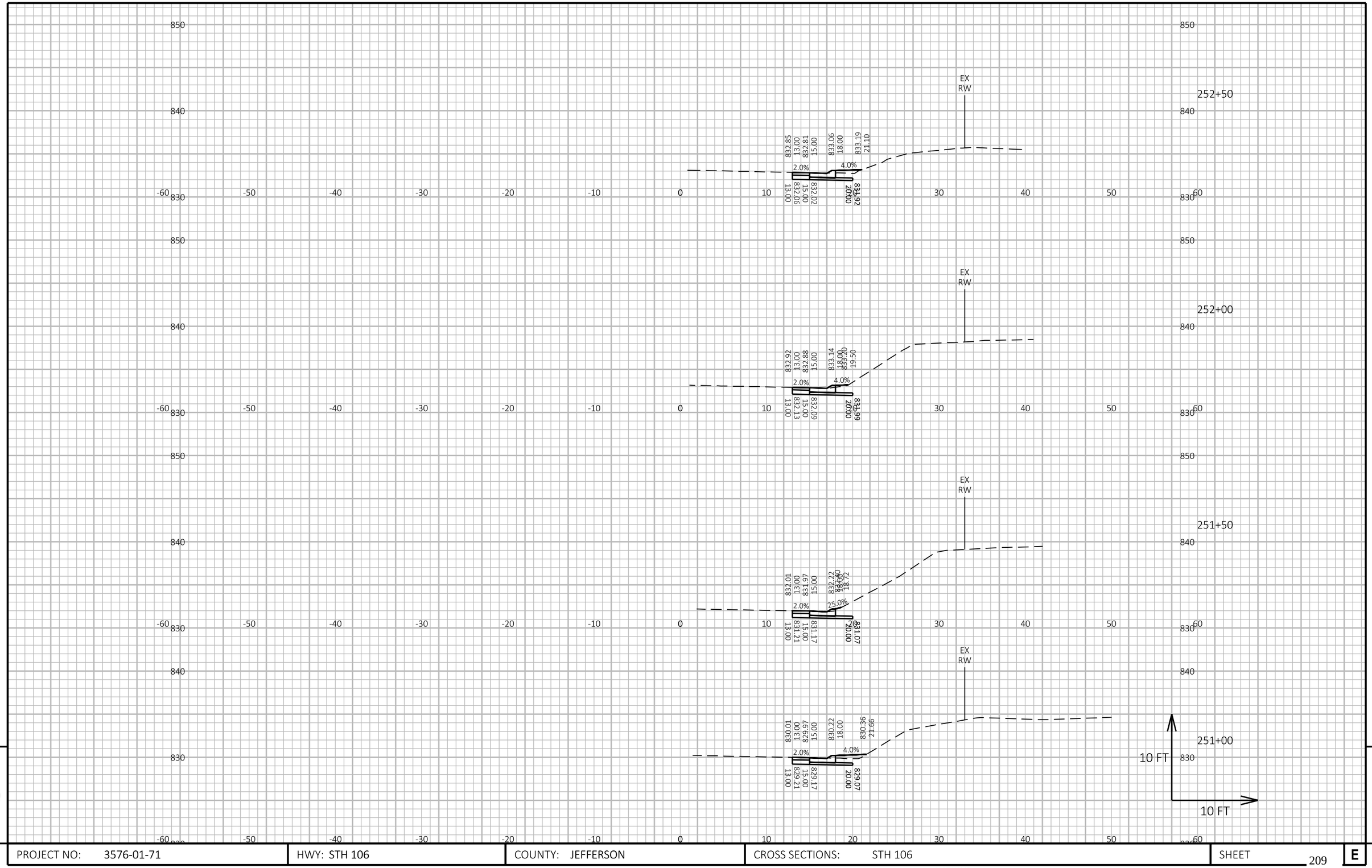
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PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 208	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090217-xs

PLOT DATE : 10/21/2020 10:57 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 209	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090218-xs

PLOT DATE : 10/21/2020 10:57 AM

PLOT BY : CHASE KIELER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

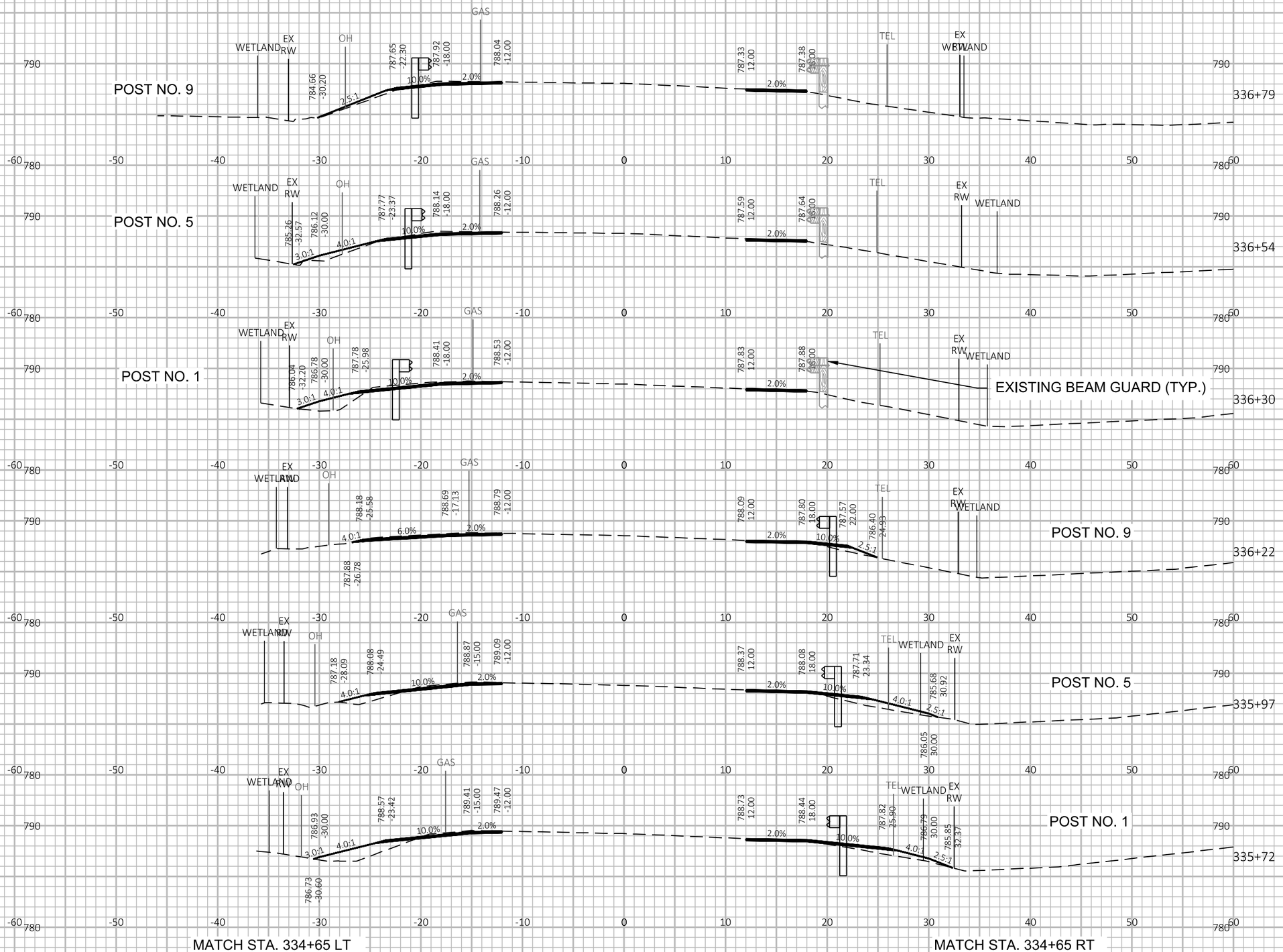
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PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 210	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090219-xs

PLOT DATE : 10/21/2020 10:57 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

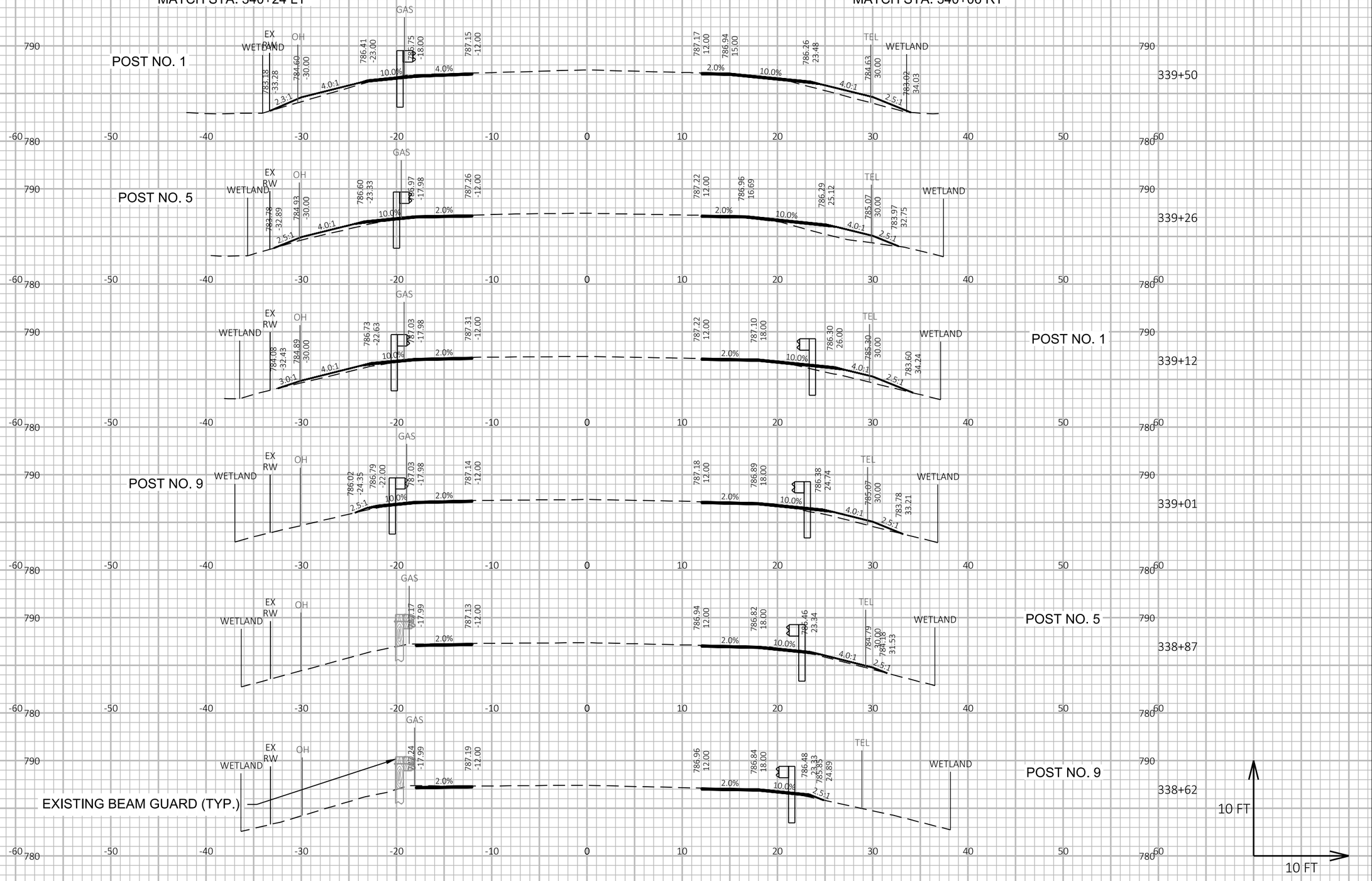


PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 211	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090203-xs

PLOT DATE : 10/21/2020 10:57 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

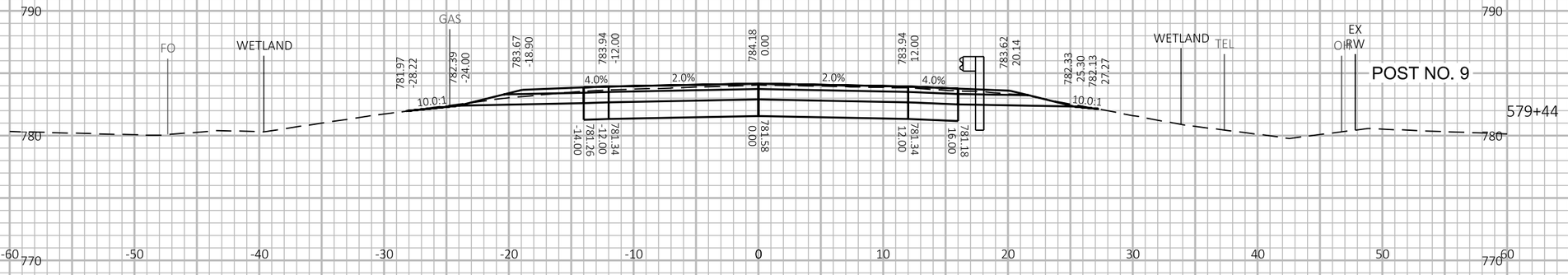


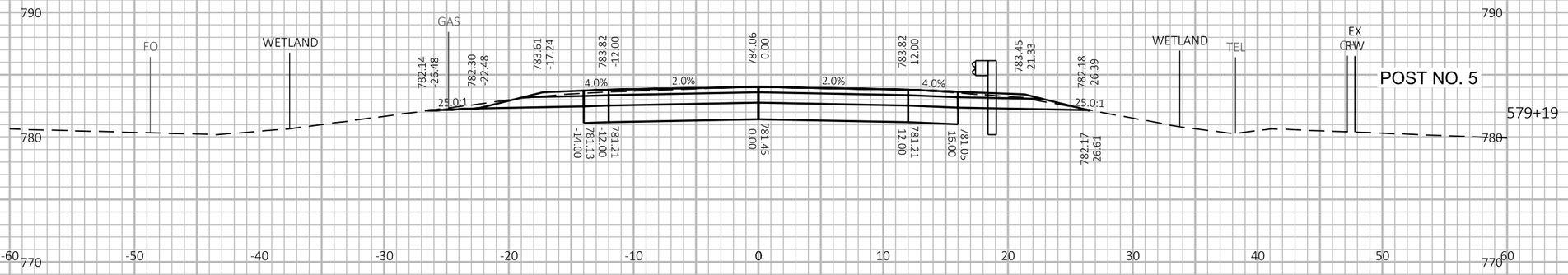
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 212	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090204-xs

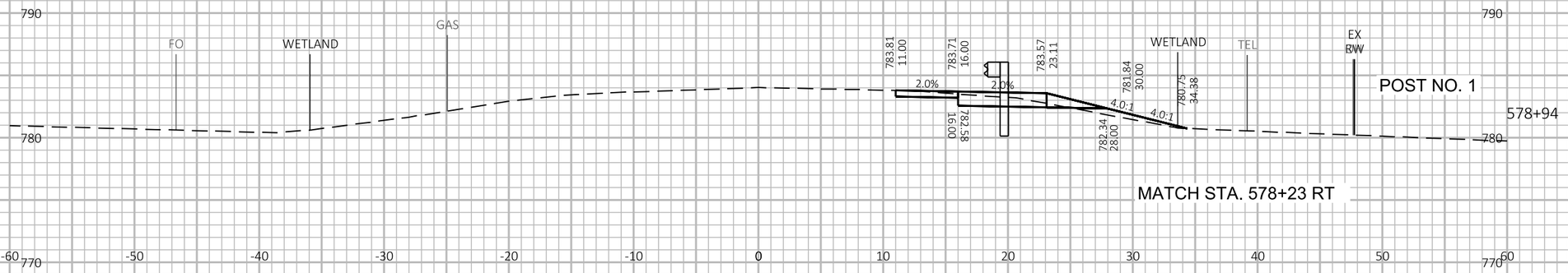
PLOT DATE : 10/21/2020 10:58 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

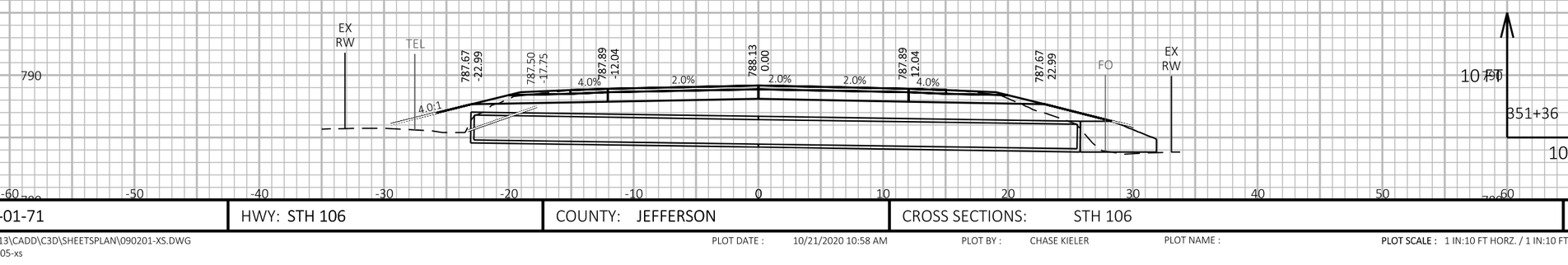




MATCH STA. 579+00 LT



MATCH STA. 578+23 RT



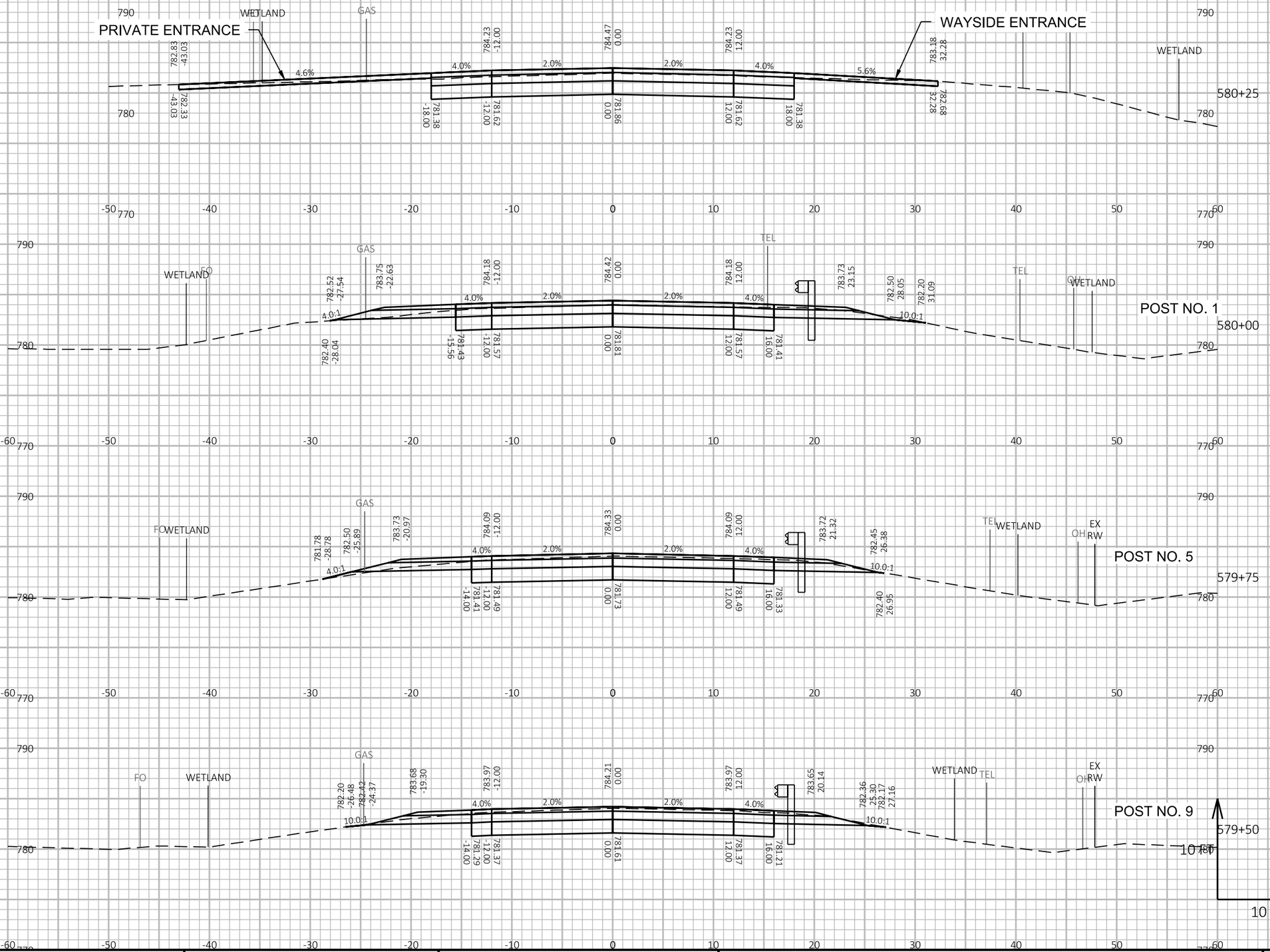
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 213	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090205-xs

PLOT DATE : 10/21/2020 10:58 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9 9



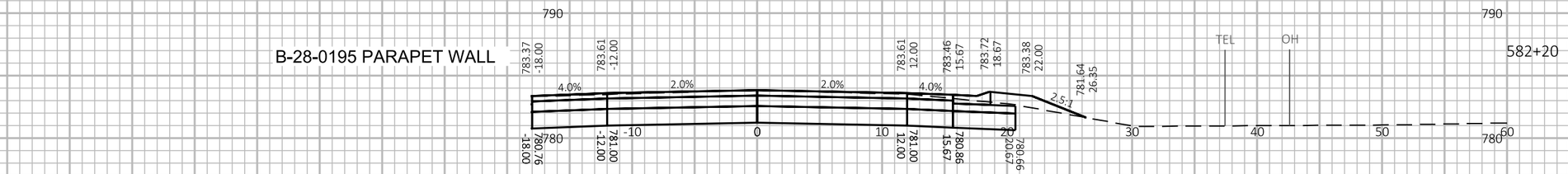
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 214 E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090206-xs

PLOT DATE : 10/21/2020 10:58 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

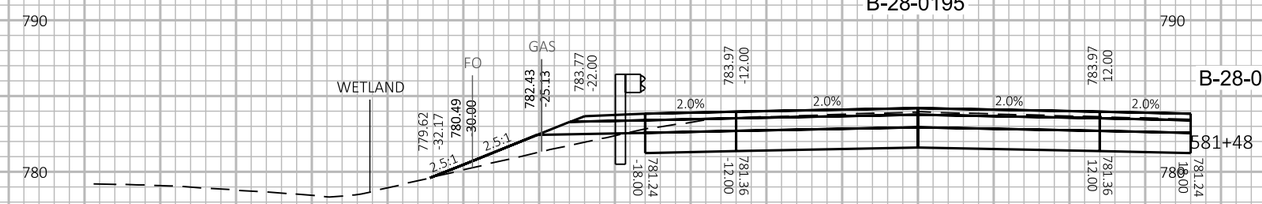
WISDOT/CADDS SHEET 49

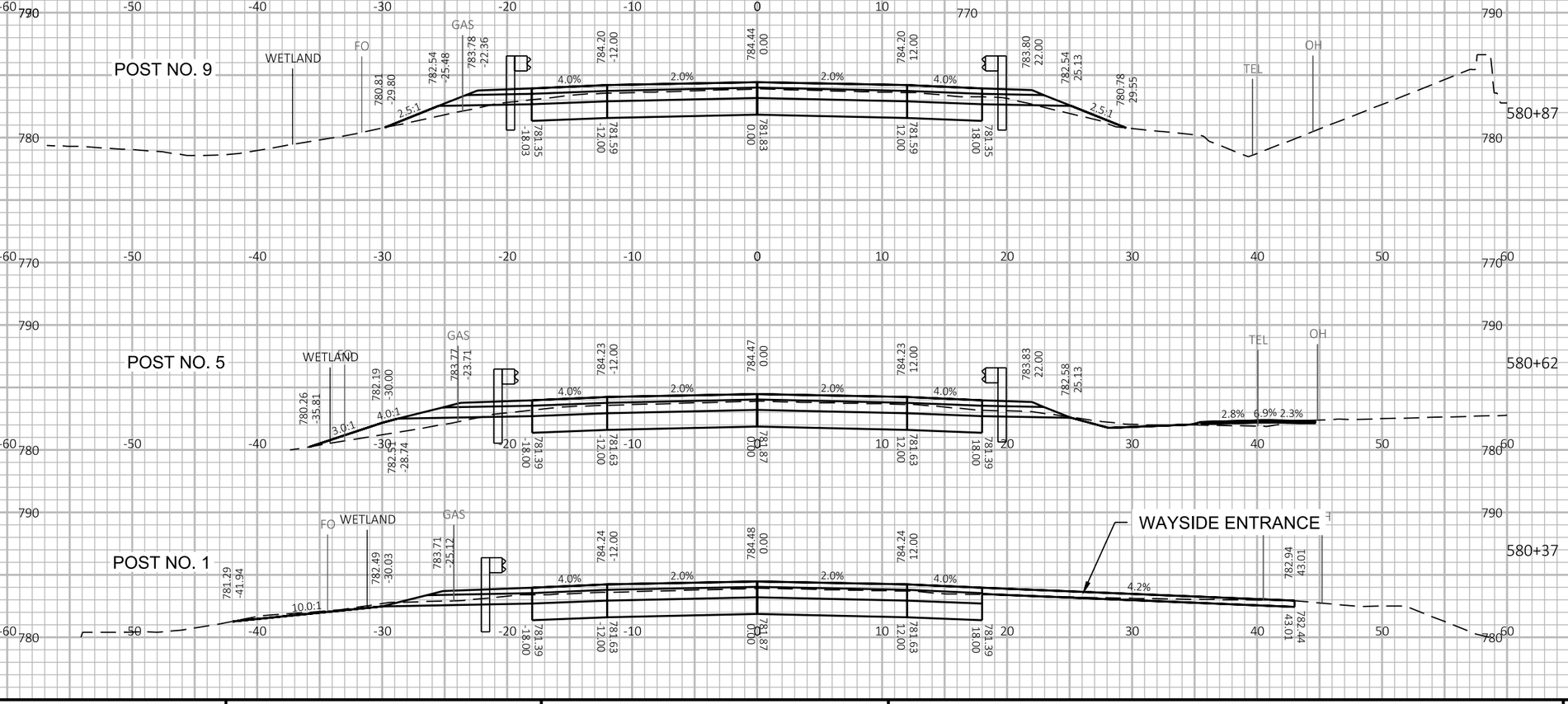
B-28-0195 PARAPET WALL



B-28-0195

B-28-0195 PARAPET WALL





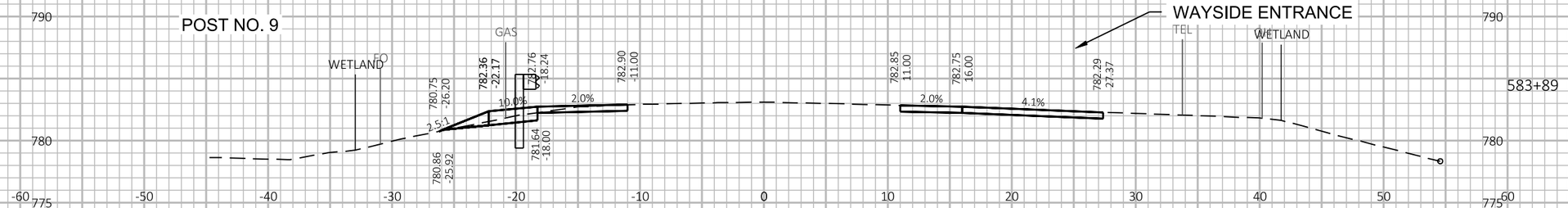
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 215	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090207-xs

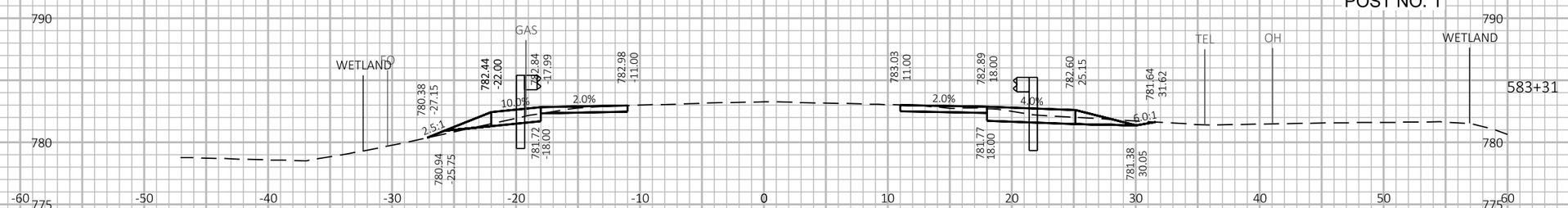
PLOT DATE : 10/21/2020 10:58 AM PLOT BY : CHASE KIELER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

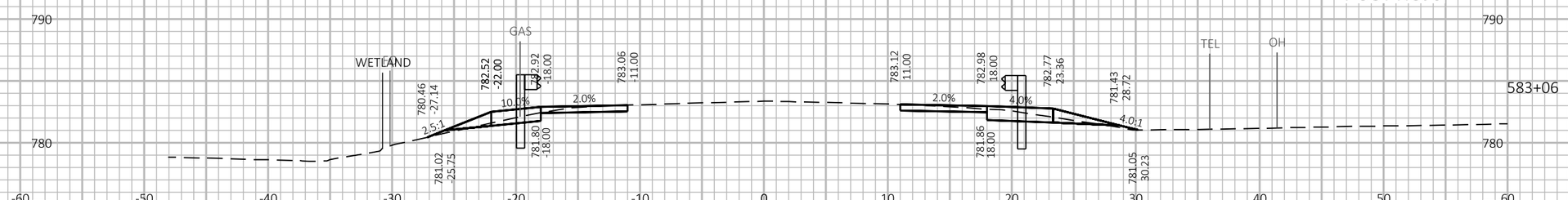
POST NO. 9



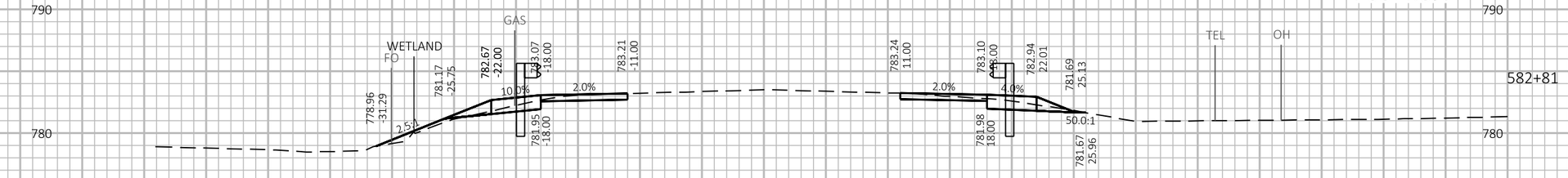
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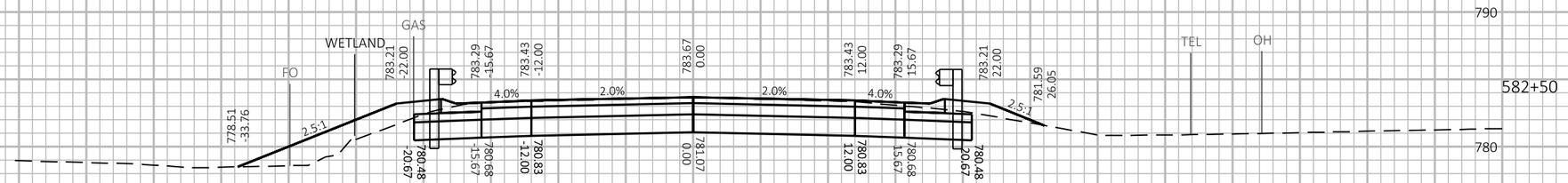


POST NO. 5



POST NO. 9





9

9

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 216	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090208-xs

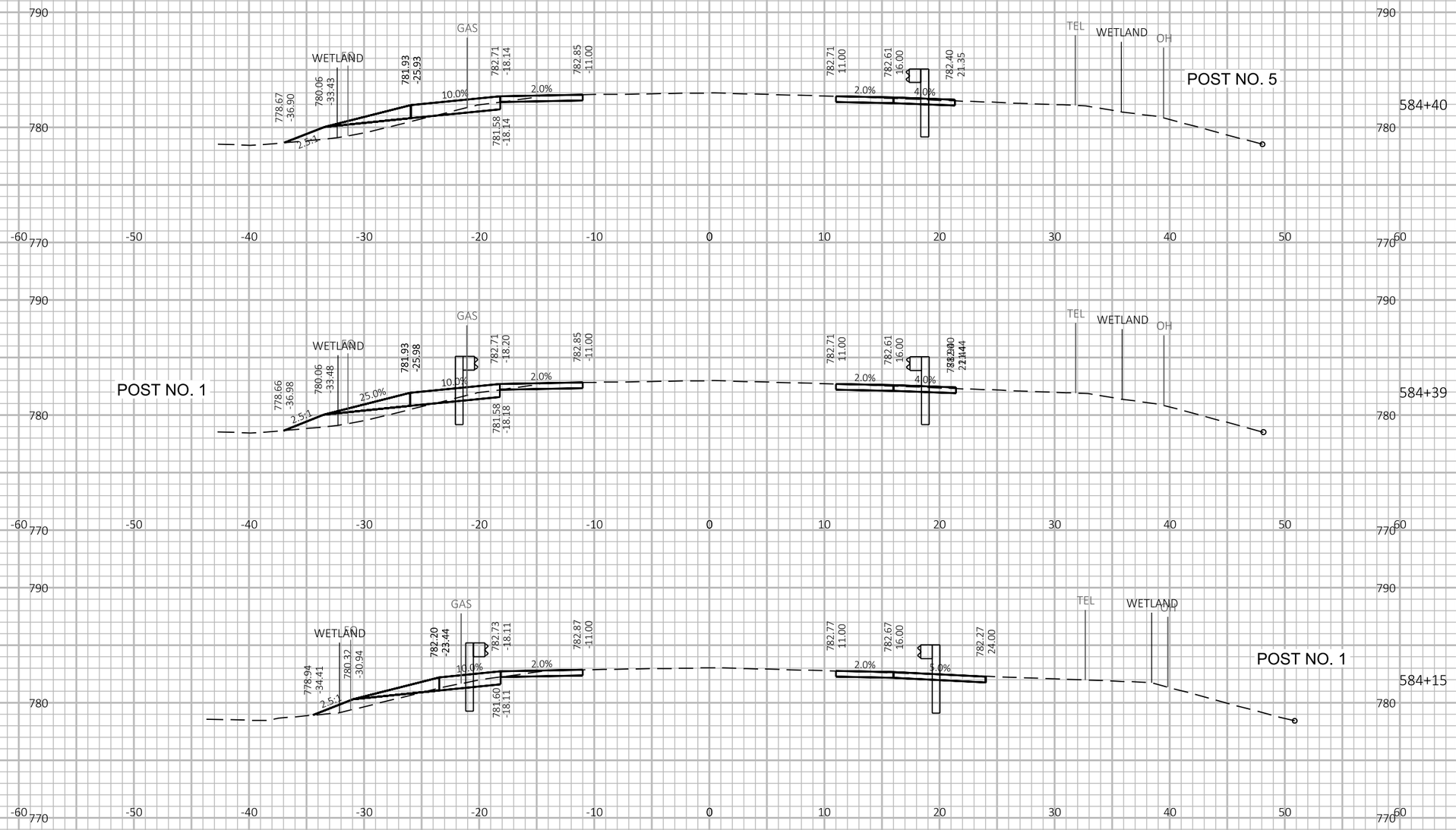
PLOT DATE : 10/21/2020 10:58 AM

PLOT BY : CHASE KIELER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

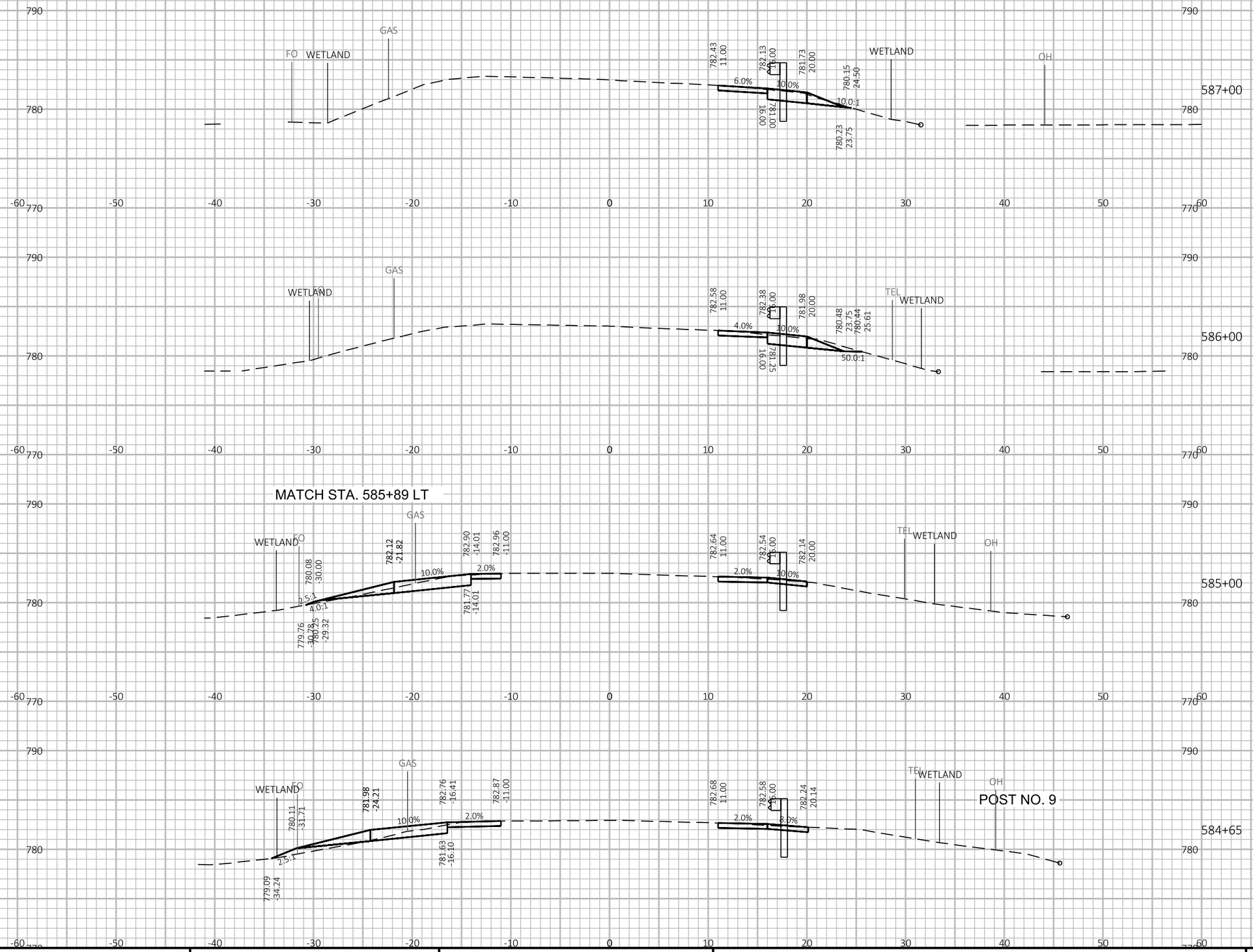
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PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 217	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090209-xs

PLOT DATE : 10/21/2020 10:59 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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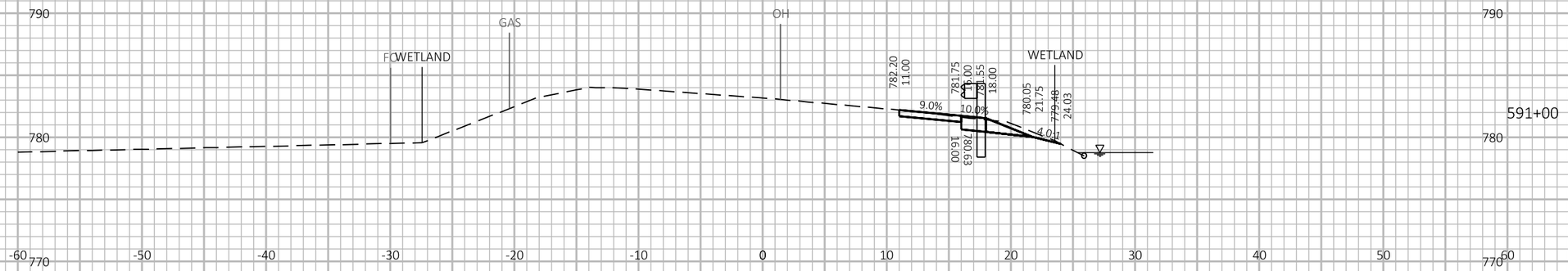
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 218	E

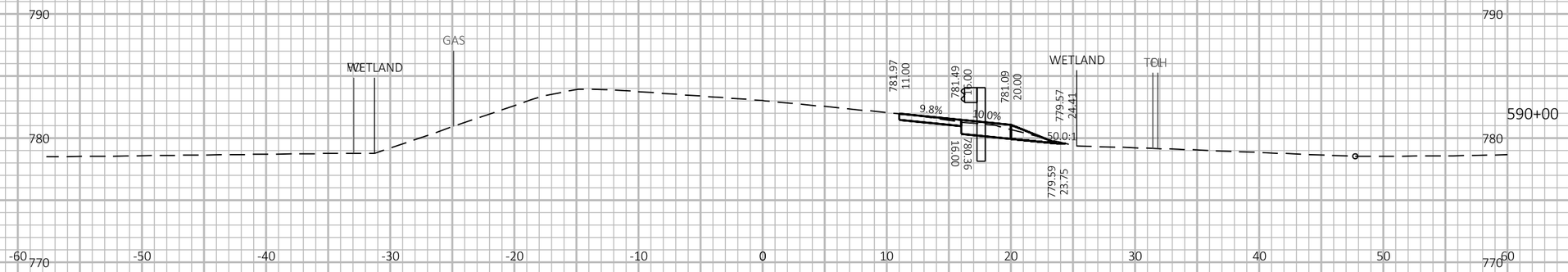
FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090210-xs

PLOT DATE : 10/21/2020 10:59 AM PLOT BY : CHASE KIELER PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49









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PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 219	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090211-xs

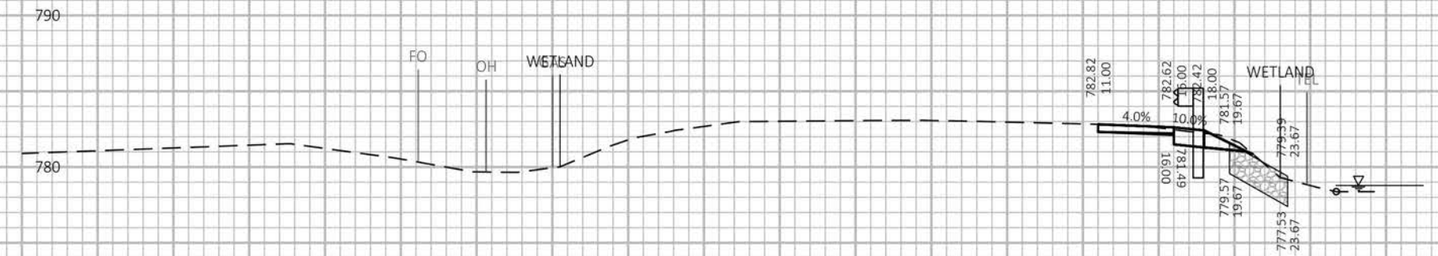
PLOT DATE : 10/21/2020 10:59 AM

PLOT BY : CHASE KIELER

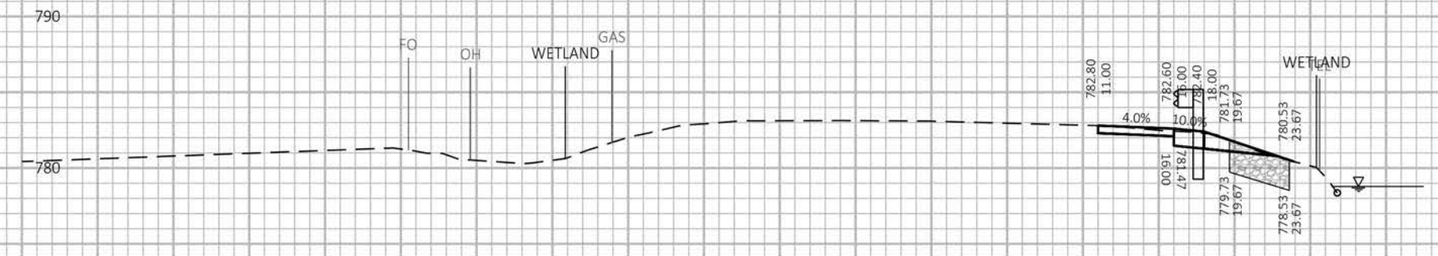
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

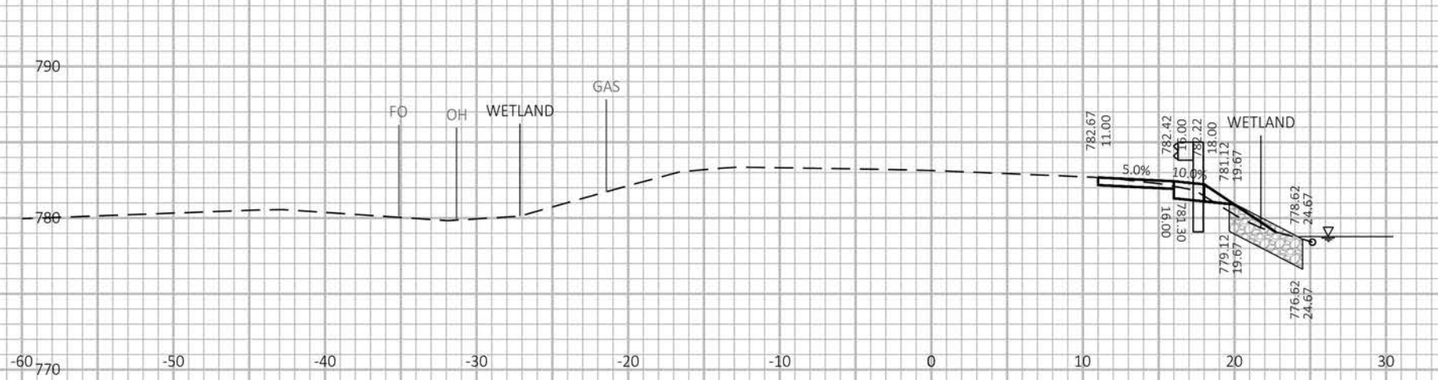
WISDOT/CADDS SHEET 49



595+00



594+00



593+00



592+00

10 FT

10 FT

9

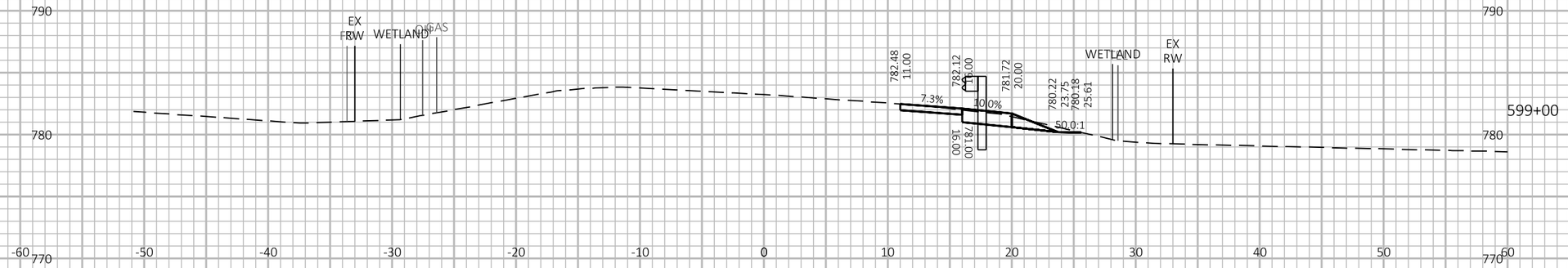
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PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 0902012-xs

PLOT DATE : 10/21/2020 10:59 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







10 FT

10 FT

9

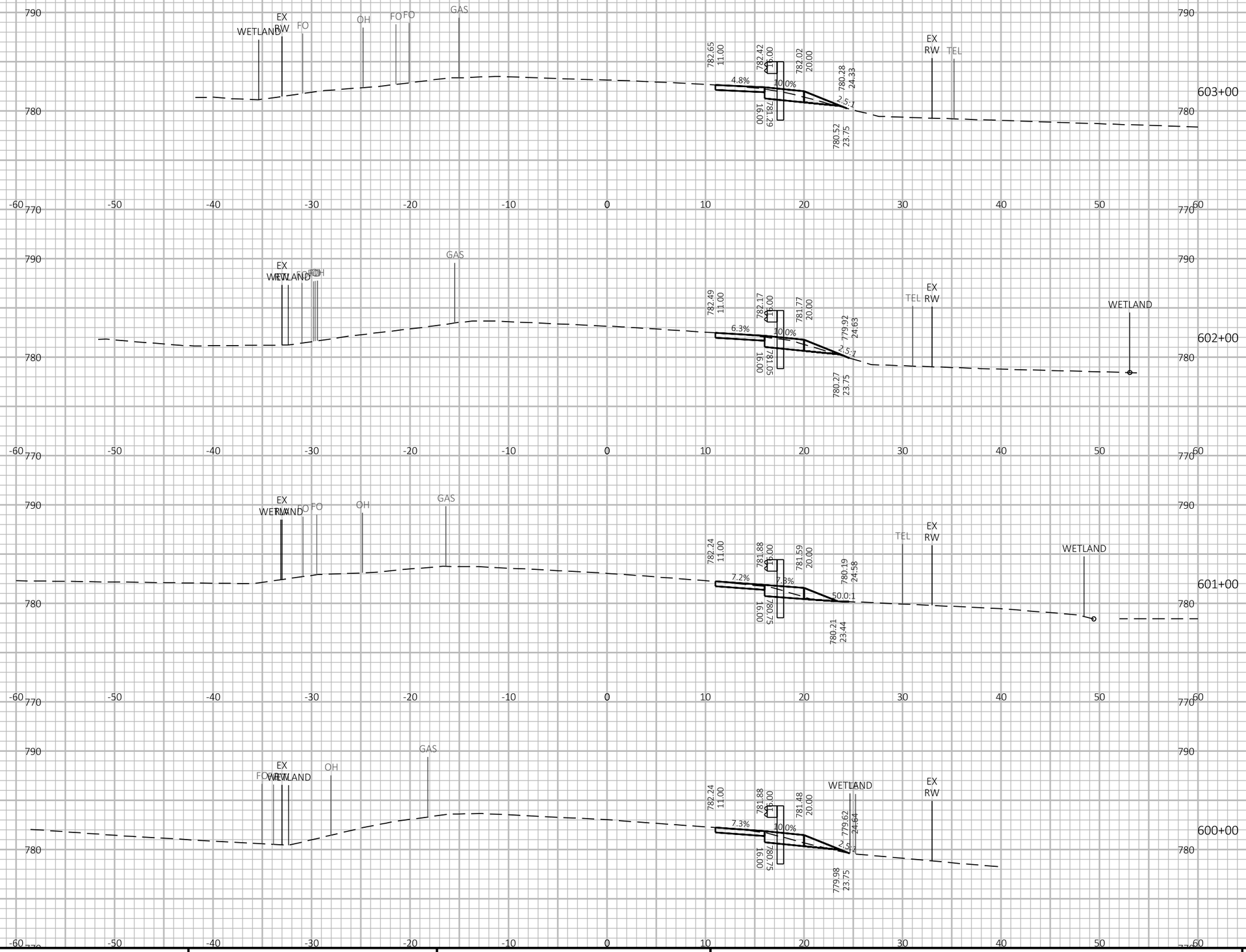
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PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 221	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 0902013-xs

PLOT DATE : 10/21/2020 10:59 AM PLOT BY : CHASE KIELER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

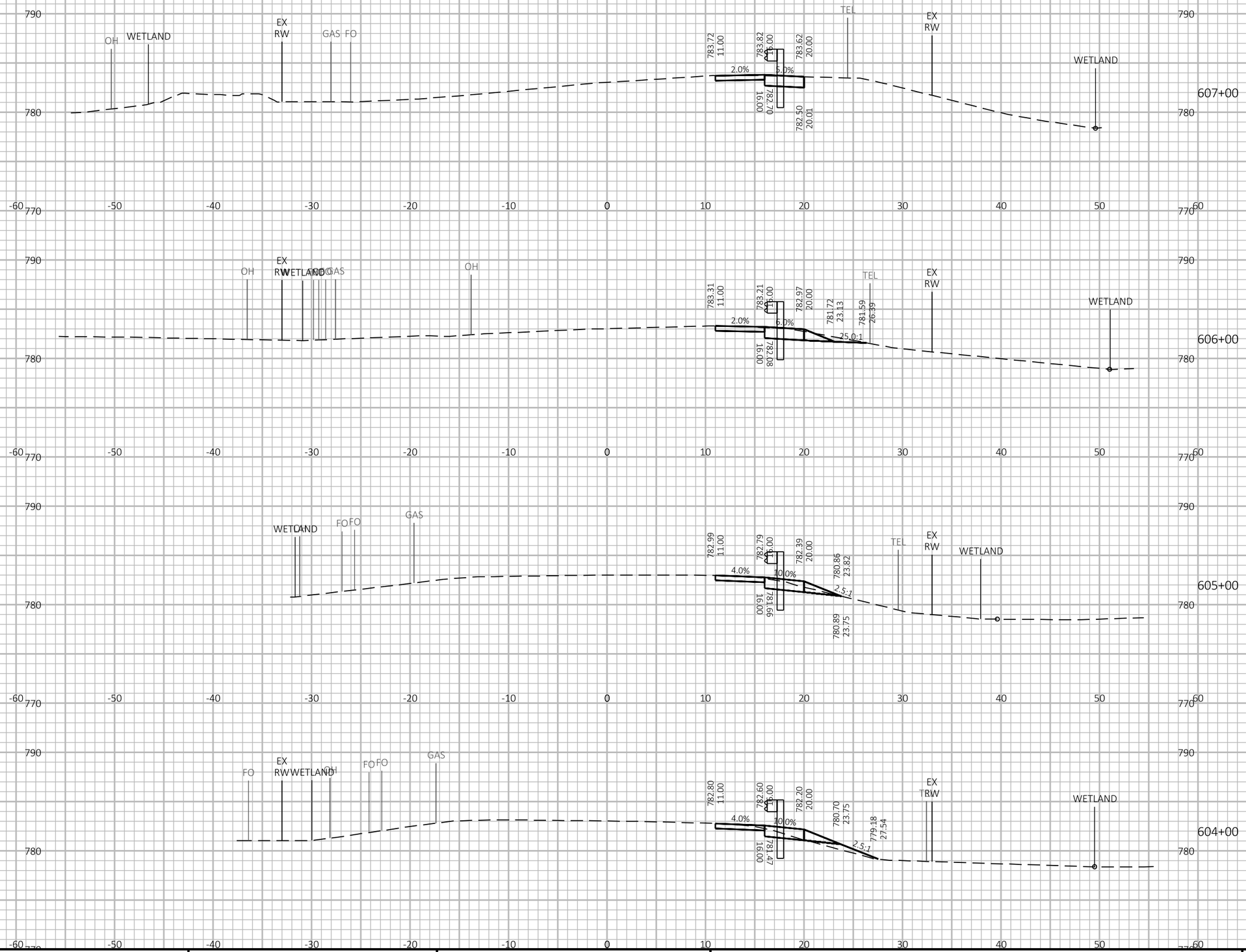
PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 222	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 0902014-xs

PLOT DATE : 10/21/2020 10:59 AM PLOT BY : CHASE KIELER PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 223	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 0902015-xs

PLOT DATE : 10/21/2020 11:00 AM

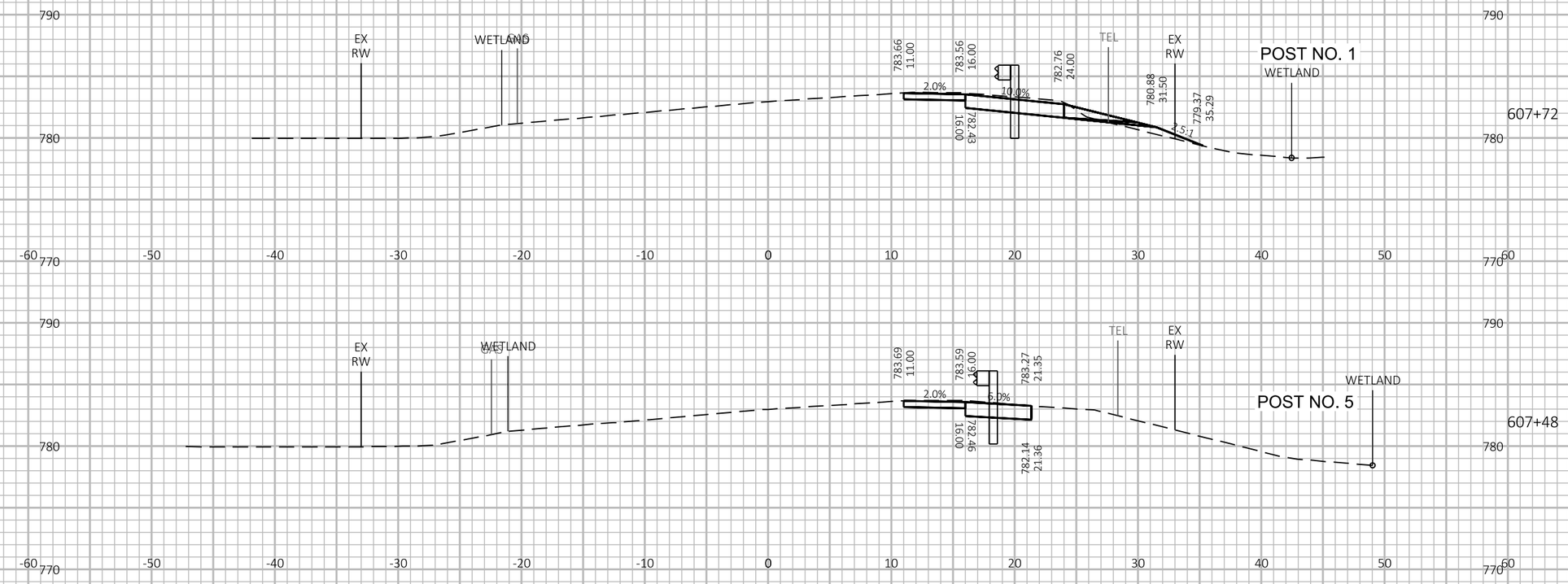
PLOT BY : CHASE KIELER

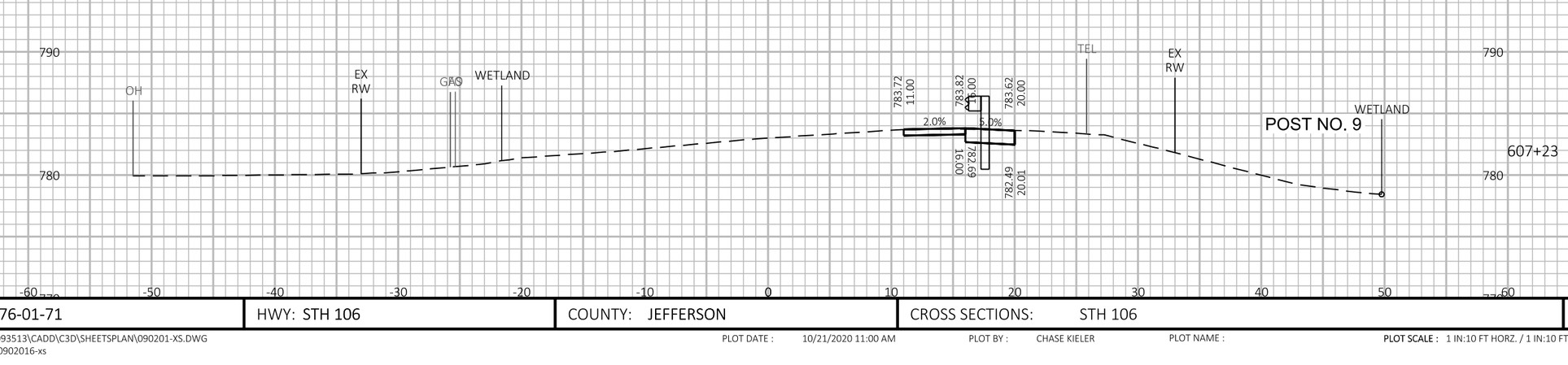
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

MATCH STA. 608+53 RT





9

9

PROJECT NO: 3576-01-71	HWY: STH 106	COUNTY: JEFFERSON	CROSS SECTIONS: STH 106	SHEET 224	E

FILE NAME : G:\00\00093\00093513\CADD\C3D\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 0902016-xs

PLOT DATE : 10/21/2020 11:00 AM

PLOT BY : CHASE KIELER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov