RHI MARCH 2024

PROJECT ID: **1175-18-74**

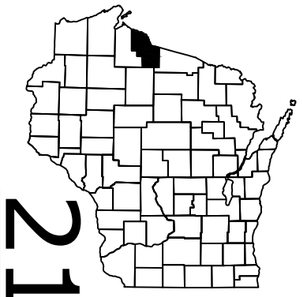
WITH: 1175-18-75 & 1175-19-72

COUNTY: **IRON**

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 = 156



21

N

DESIGN DESIGNATION

A.A.D.T.	2022	=	3,460
A.A.D.T.	2042	=	3,460
D.H.V.		=	XX.X
D.D.		=	XX/XX
T.		=	18.5%
DESIGN SPEED		=	55 MPH
ESALS		=	1,030,000

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'FB')
- 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

MANITOWISH - HURLEY

VILAS COUNTY LINE TO BEACHWAY DRIVE

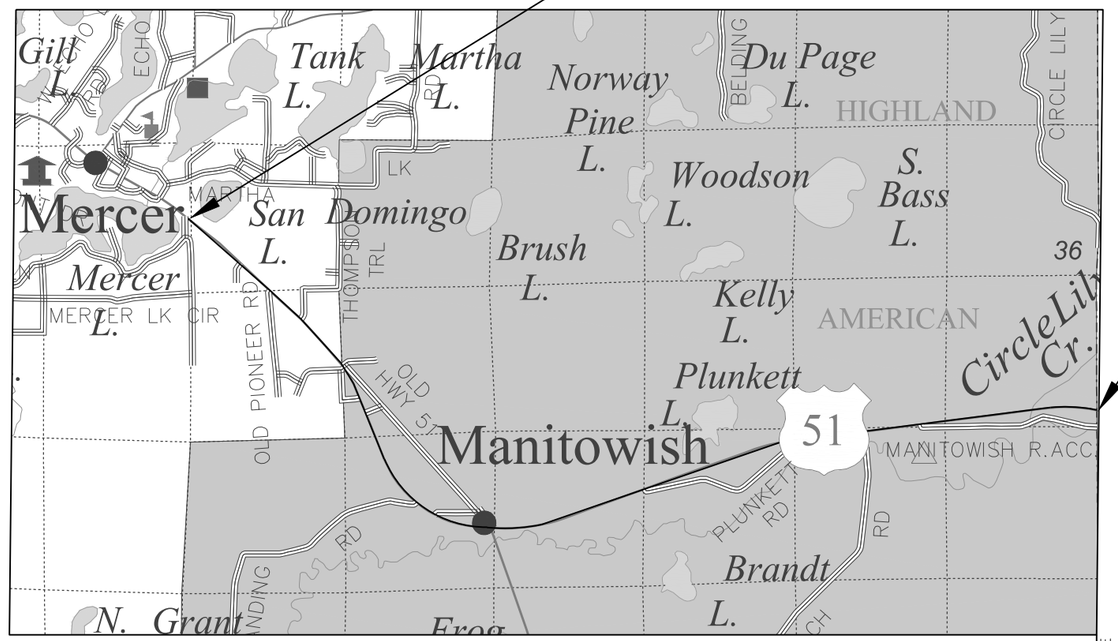
USH 51

IRON COUNTY

STATE PROJECT NUMBER
1175-18-74

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1175-18-74	WISC 2024288	1

END PROJECT
STA 484+90



BEGIN PROJECT
STA 121+00
VILAS COUNTY LINE
X = 807,827.864
Y = 259,058.742

IRON COUNTY LINE
VILAS COUNTY LINE

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 6.892 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), IRON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SURVEYOR
Designer	KYLE GETCHELL
Project Manager	NICHOLAS VOS
Regional Examiner	FRED SCHUNKE
Regional Supervisor	DANIEL ERVA

APPROVED FOR THE DEPARTMENT

DATE: 1/17/24 (Signature)

E

GENERAL NOTES

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

2. THE LOCATION OF EXISTING & PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLAN.

CONTACTS:

BRIGHTSPEED OF NORTHERN WI, LLC - COMMUNICATION LINE
1905 WARD AVE. S
LA CROSSE WI 54601
ROB LUICK
(980) 376-1572
relocations@brightspeed.com

MERCER SANITARY DISTRICT #1 - SEWER
5054 N HWY 51
MERCER, WI 54547
RICK GRASER
(715) 476-3574
rjgraser@hotmail.com

MERCER SANITARY DISTRICT #1 - WATER
5054 N HWY 51
MERCER, WI 54547
RICK GRASER
(715) 476-3574
rjgraser@hotmail.com

WE ENERGIES - GAS/PETROLEUM
500 S 116th STREET
WEST ALLIS, WI 53214
WE ENERGIES UTILITY COORDINATOR
(414) 944-5738
We-Utility-relocations@we-energies.com

XCELL ENERGY - ELECTRICITY
1414 W HAMILTON AVE
DAWN SCHULTZ
EAU CLAIRE, WI 54702-0008
(715) 737-2482
dawn.schultz@xcelenergy.com

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP- TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE: TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = X.XXX ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = X.XXX ACRES

ORDER OF DETAIL SHEETS:

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL

AS-BUILT PLANS USED:

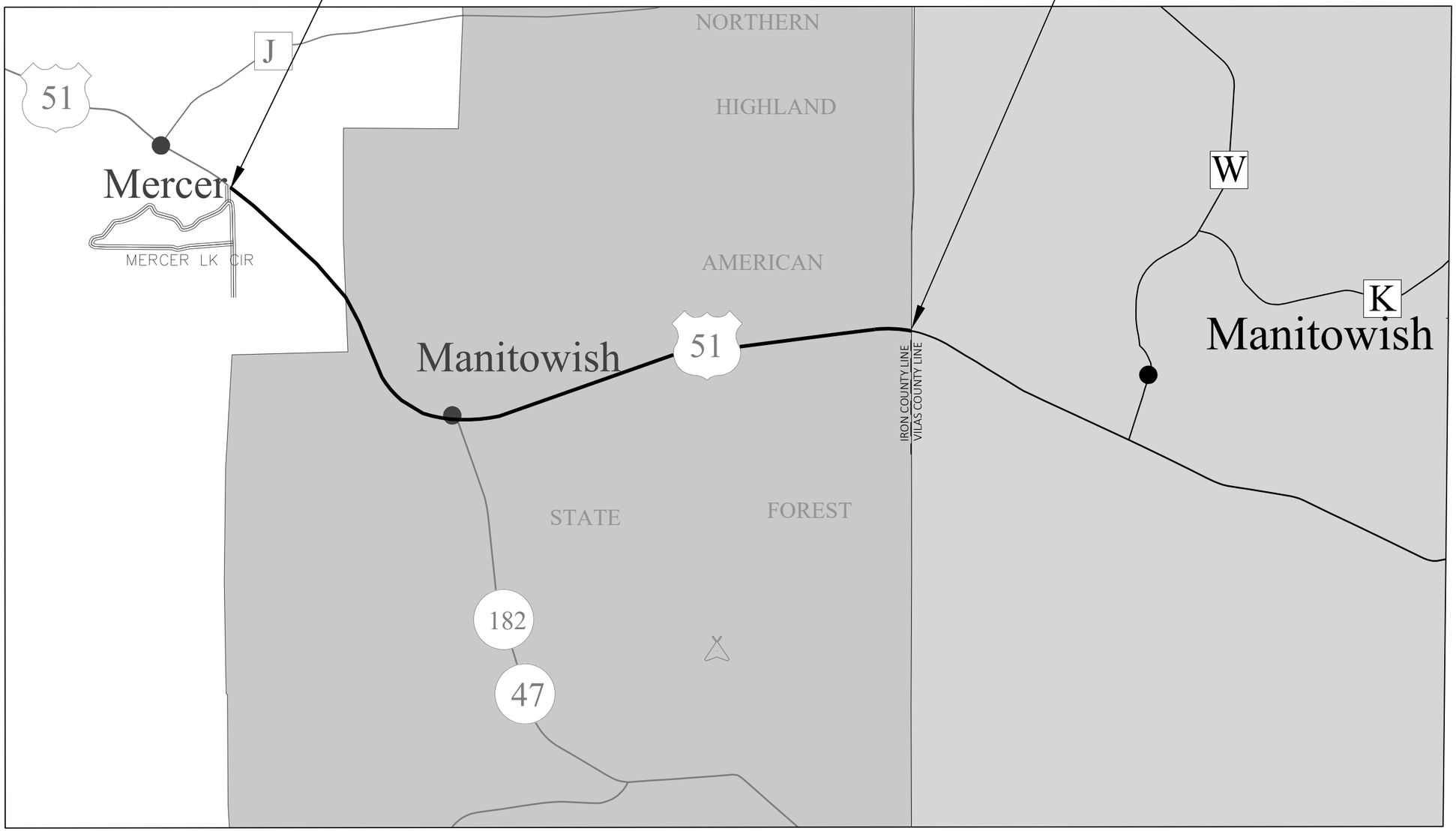
1172-08-74 (1981)
1175-16-70 (2006)
1175-18-70 (2013)
1175-19-70 (2017)

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

DNR CONTACT:

Jon Simonsen
107 Sutliff Ave
Rhinelander, Wi 54501
jonathon.simonsen@wisconsin.gov
715-367-1936

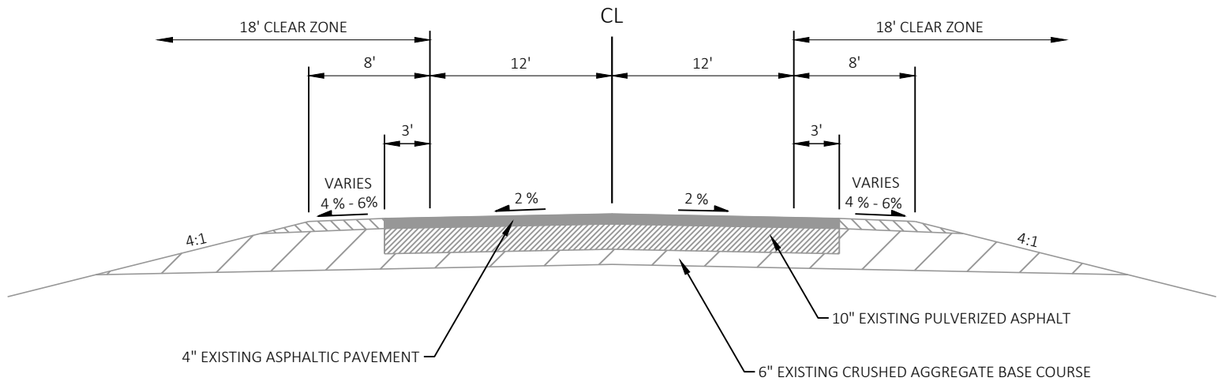
2



PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN: PROJECT OVERVIEW	SHEET 3	E

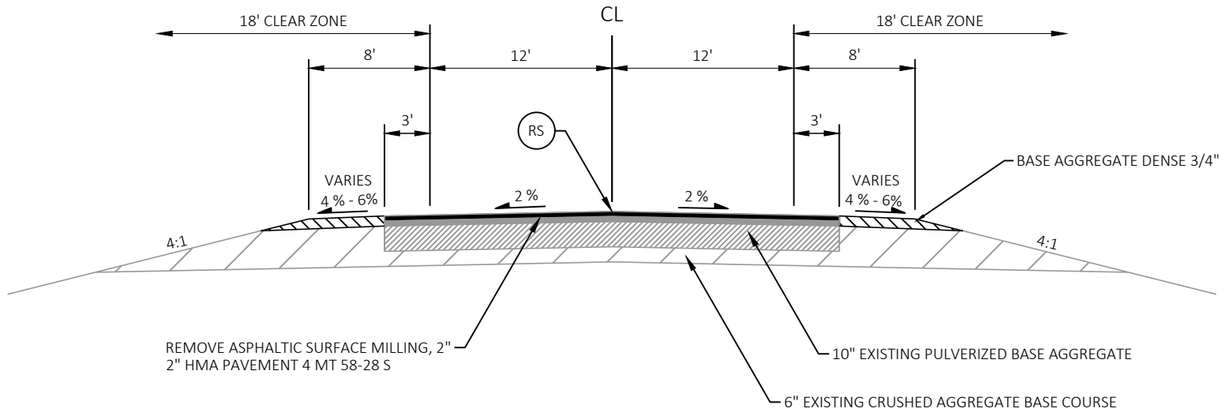
FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 01

PLOT DATE : 1/17/2024 2:10 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:1 MI



EXISTING TYPICAL SECTION

STA 121+00 - 484+90



FINISHED TYPICAL SECTION

STA 121+00 - 484+90

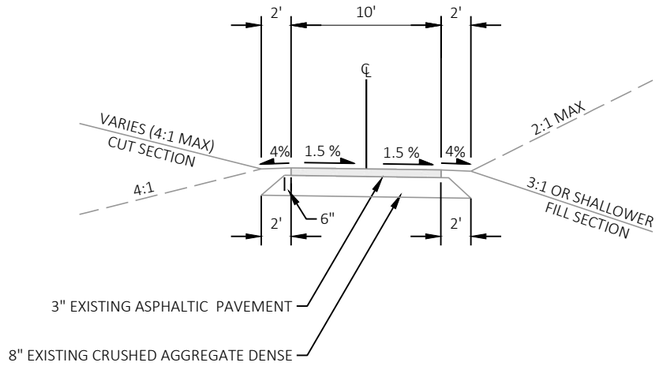
RS ASPHALTIC RUMBLE STRIPS, CENTERLINE

PROJECT NO: 1175-18-74	HWY: STH 51	COUNTY: IRON	TYPICAL SECTION	SHEET 4	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 01-10ft

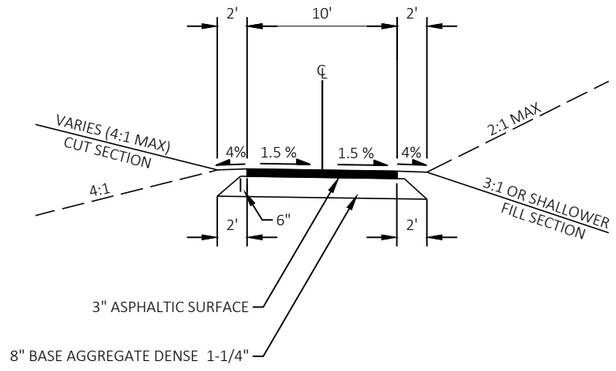
PLOT DATE : 1/17/2024 2:10 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:10 FT

2



EXISTING BIKE TRAIL TYPICAL SECTION

STA 450+50 - 452+50

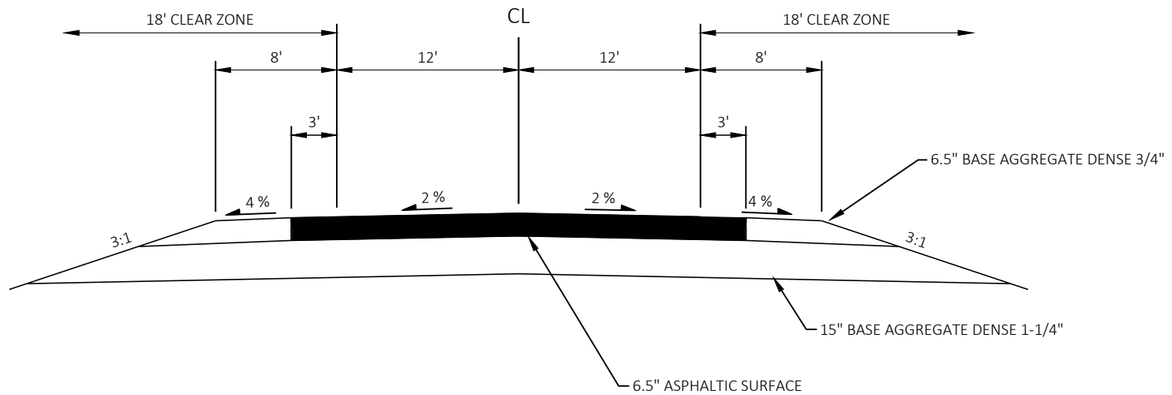


FINISHED BIKE TRAIL TYPICAL SECTION

STA 450+50 - 452+50

PROJECT NO: 1175-18-74	HWY: STH 51	COUNTY: IRON	TYPICAL SECTION	SHEET 5	E

2

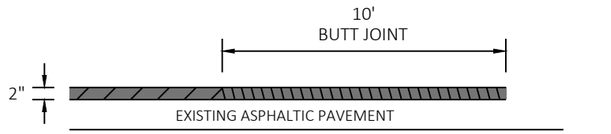


FINISHED TYPICAL SECTION

CULVERT REPLACEMENTS

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	TYPICAL SECTION	SHEET 6	E

2



HMA PAVEMENT

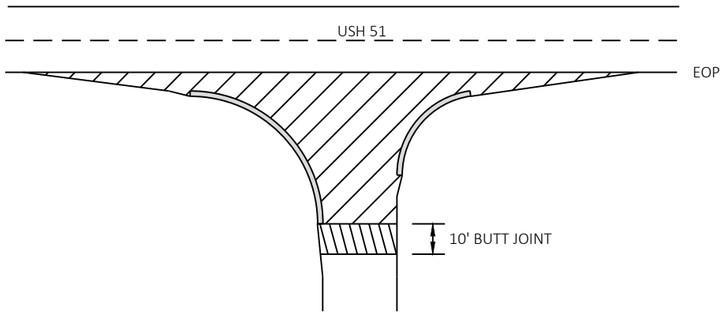
REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

BUTT JOINTS

STA 121+00 - STA 121+10
STA 484+90 - STA 485+00

2



REMOVING ASPHALTIC SURFACE MILLING

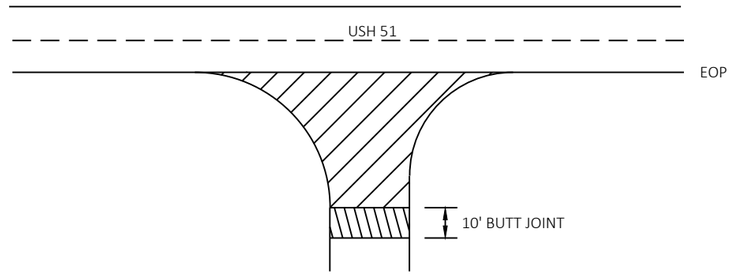
REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE
BUTT JOINT IS NOT REQUIRED

SIDE ROADS

WITH CURB AND GUTTER

MANITOWISH RIVER ACCESS RD
WAYSIDE PARK ENTRANCE
MURRAY LANDING RD
SAARNIO RD
SIMPSON RD
PARKWAY DR
MAPLE RIDGE RD
THOMPSON TRL
OLD PIONEER RD
TOWER RIDGE RD



REMOVING ASPHALTIC SURFACE MILLING

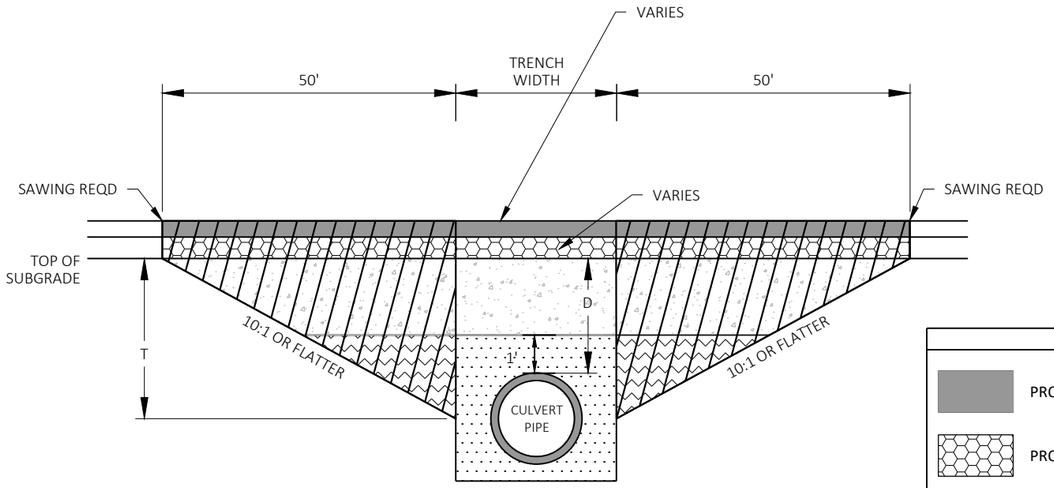
REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE
BUTT JOINT IS NOT REQUIRED

SIDE ROADS

WITHOUT CURB AND GUTTER

RANGE RD
PLUNKETT RD (South Ent)
PLUNKETT RD (North Ent)
MANITOWISH RD (South Ent)
MANITOWISH RD (North Ent)
OLD HWY 51

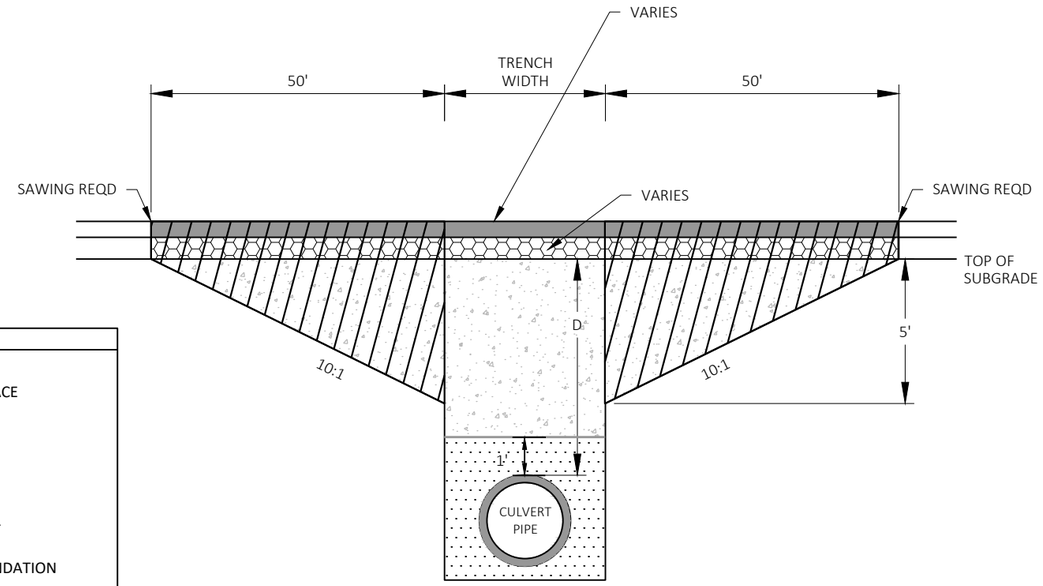


DEPTH D < 6 FT

TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5 FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.

KEY

- PROPOSED SURFACE
- PROPOSED BASE
- TRENCH BACKFILL
- TRENCH OR FOUNDATION BACKFILL
- FOUNDATION BACKFILL
- TRANSITION CUT



DEPTH D ≥ 6 FT

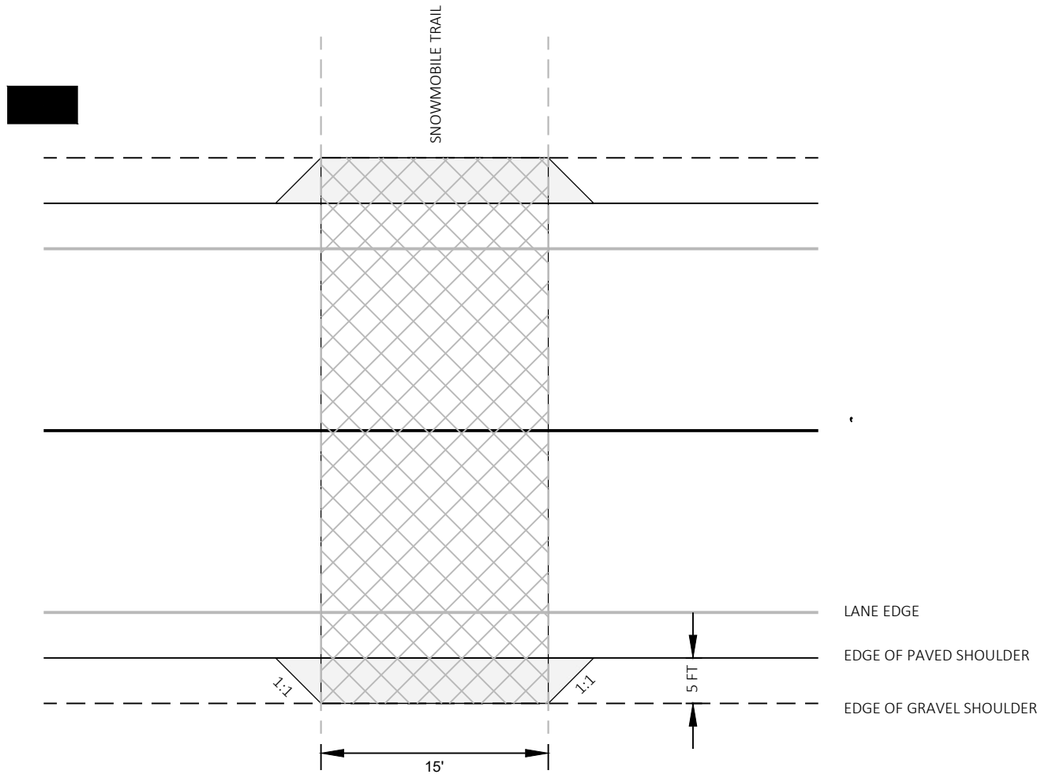
NOTES

TRANSITION CUT IS PAID AS EXCAVATION COMMON.
TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.
BACKFILL THE TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520.
PERFORM CULVERT PIPE INSTALLATION BEFORE *MILLING AND PAVING* .
PLACE ASPHALTIC SURFACE AFTER CULVERT PIPE INSTALLATION AND BEFORE MAINLINE REMOVING SURFACE MILLING.
SEE "CULVERT REPLACEMENT" FINISHED TYPICAL SECTION

CULVERT PIPE TRANSITION

ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)	REMARKS
USH 51	161+98	1.8	24"	26051000651
USH 51	355+12	1.9	66"	26051000665
USH 51	416+51	2.3	24"	26051000669
USH 51	451+46	15.9	24''	26051000670

2



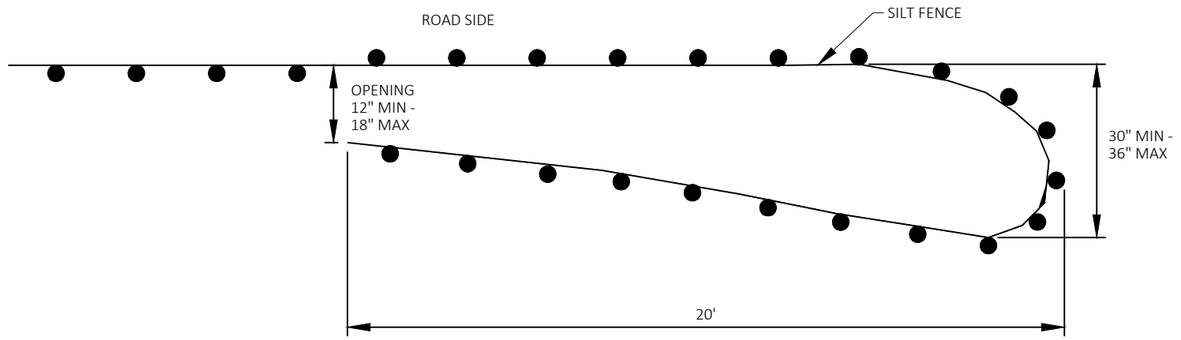
PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSING

HMA PAVEMENT 4-INCHES

NOTE: PREPARATION FOR PAVEMENT WIDENING FALLS UNDER
PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

SNOWMOBILE TRAIL CROSSING
WITH FULL WIDTH SHOULDERS AND PROTECTIVE COATING

STA 150+25
STA 175+35
STA 338+15
STA 366+25
STA 458+25



PLAN VIEW

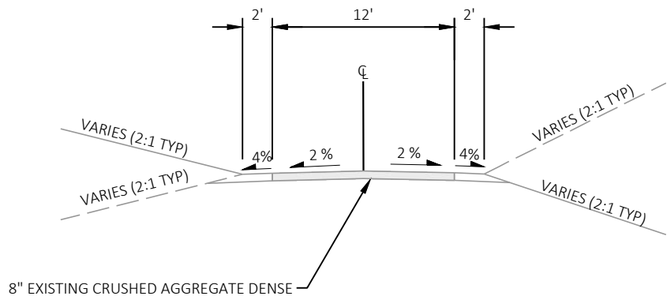
GENERAL NOTES:

FOR THE TURN-AROUND SILT FENCE AND POSTS
- PLACE POSTS ON THE OUTSIDE OF THE TURN-AROUND
- TRENCH SILT FENCE ACCORDING TO SILT FENCE REQUIREMENTS

TEMPORARY SMALL ANIMAL TURN-AROUND

STA 325+00 - 327+20

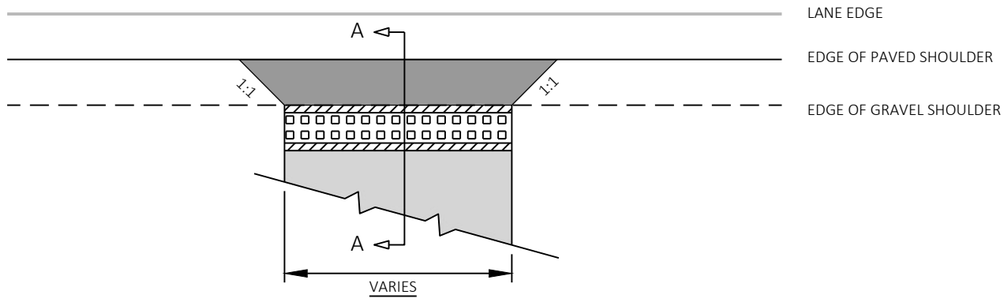
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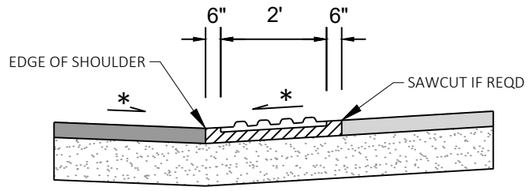


BIKE TRAIL DETOUR - CULVERT 670

STA 443+25 - 458+00

2





SECTION A-A

DETECTABLE WARNING FIELD IN CONCRETE DRIVEWAY HES 6-INCH

4" THICK ASPHALTIC SURFACE WIDENING

SHARED-USE PATH

BASE AGGREGATE DENSE

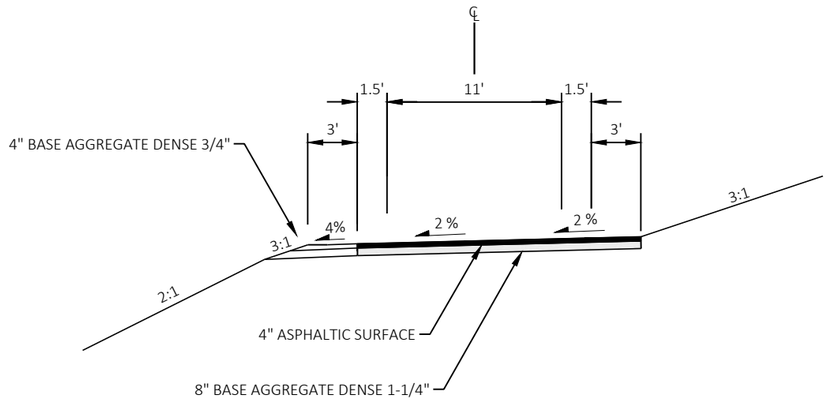
* ROLLOVER CANNOT EXCEED 11% BETWEEN SHARED-USE PATH AND PAVED SHOULER

NOTE: PREPARATION FOR PAVEMENT WIDENING FALLS UNDER PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

RURAL SIDEWALK / SHARED-USE PATH CROSSING WITH DETECTABLE WARNING FIELD

STA 287+40

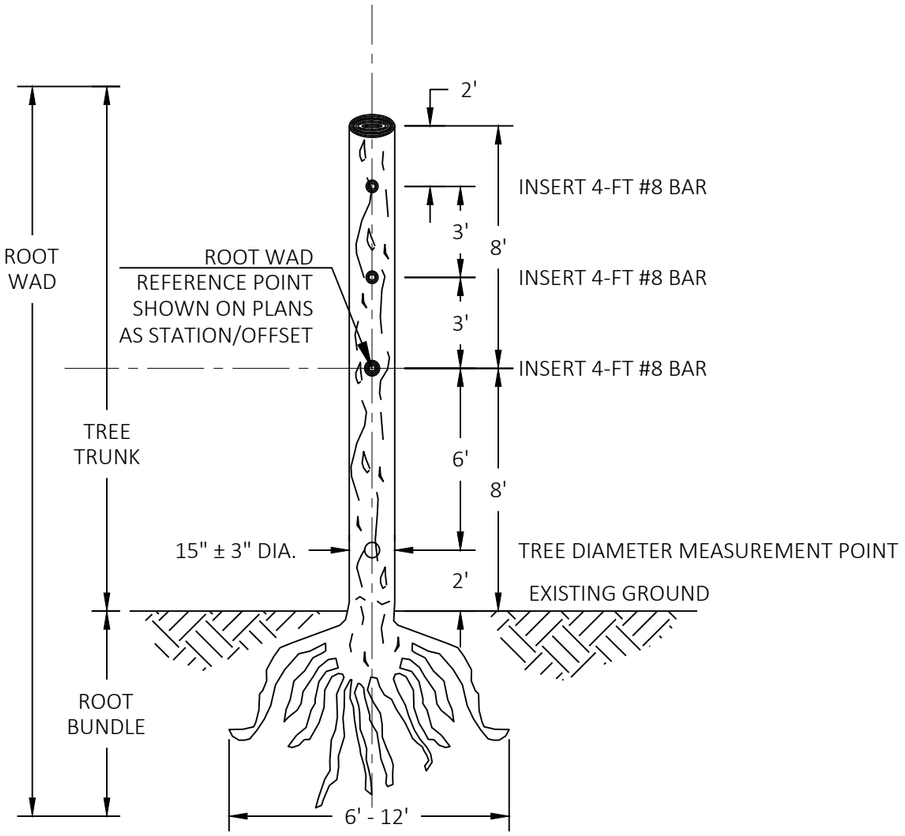
2



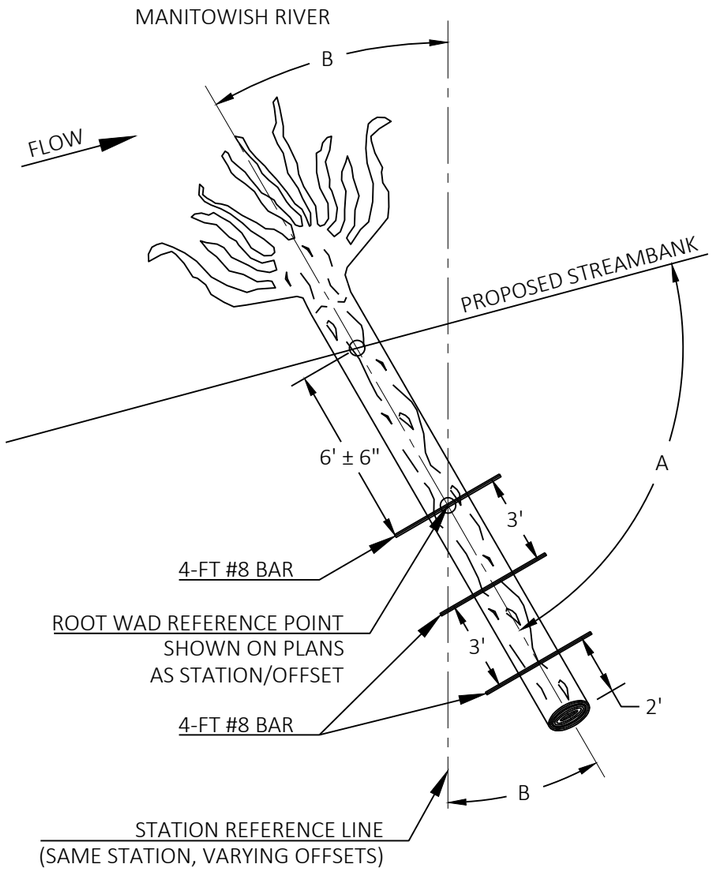
CULVERT 670 LANE SHIFT STAGE 2

STA 447+00 - STA 456+00

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CONSTRUCTION DETAIL: CULVERT 670	SHEET 14	E



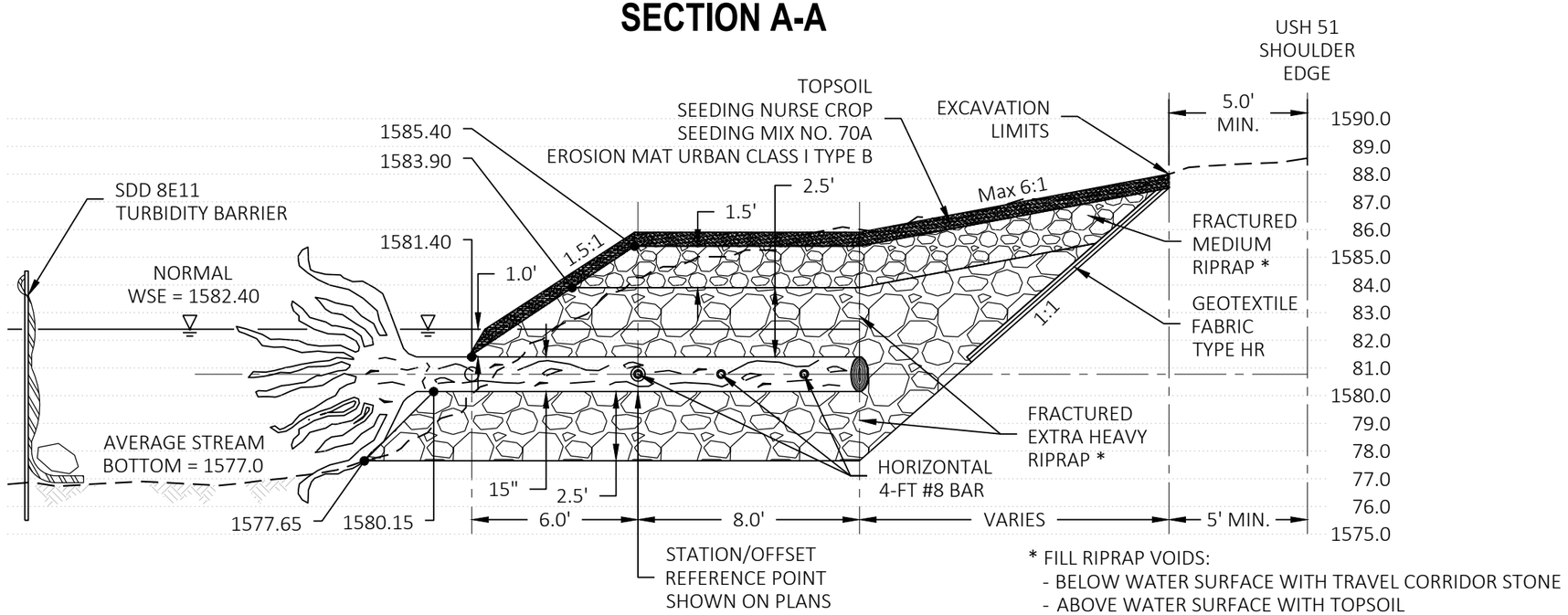
TYPICAL TREE FELLING DIMENSIONS



TYPICAL ROOT WAD LAYOUT AND ORIENTATION

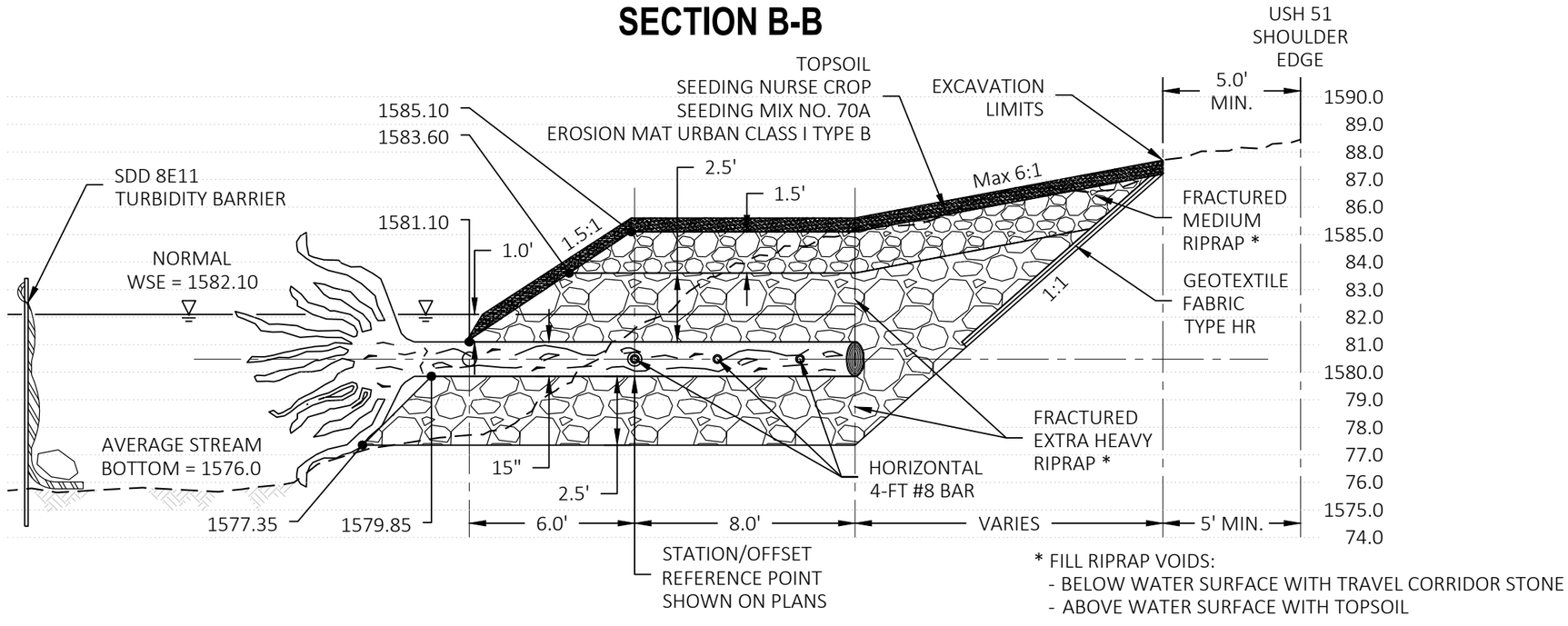
GROUP NUMBER	STATION TO STATION	NUMBER OF ROOT WADS	ANGLE FROM PROPOSED STREAMBANK (A)	ANGLE FROM STATION REFERENCE LINE (B)
1	325+10 to 325+60	6	45°	15°
2	325+70 to 326+20	6	75°	15°
3	326+30 to 326+60	4	75°	60°
4	326+70 to 326+90	3	75°	30°

SECTION A-A



* FILL RIPRAP VOIDS:
- BELOW WATER SURFACE WITH TRAVEL CORRIDOR STONE
- ABOVE WATER SURFACE WITH TOPSOIL

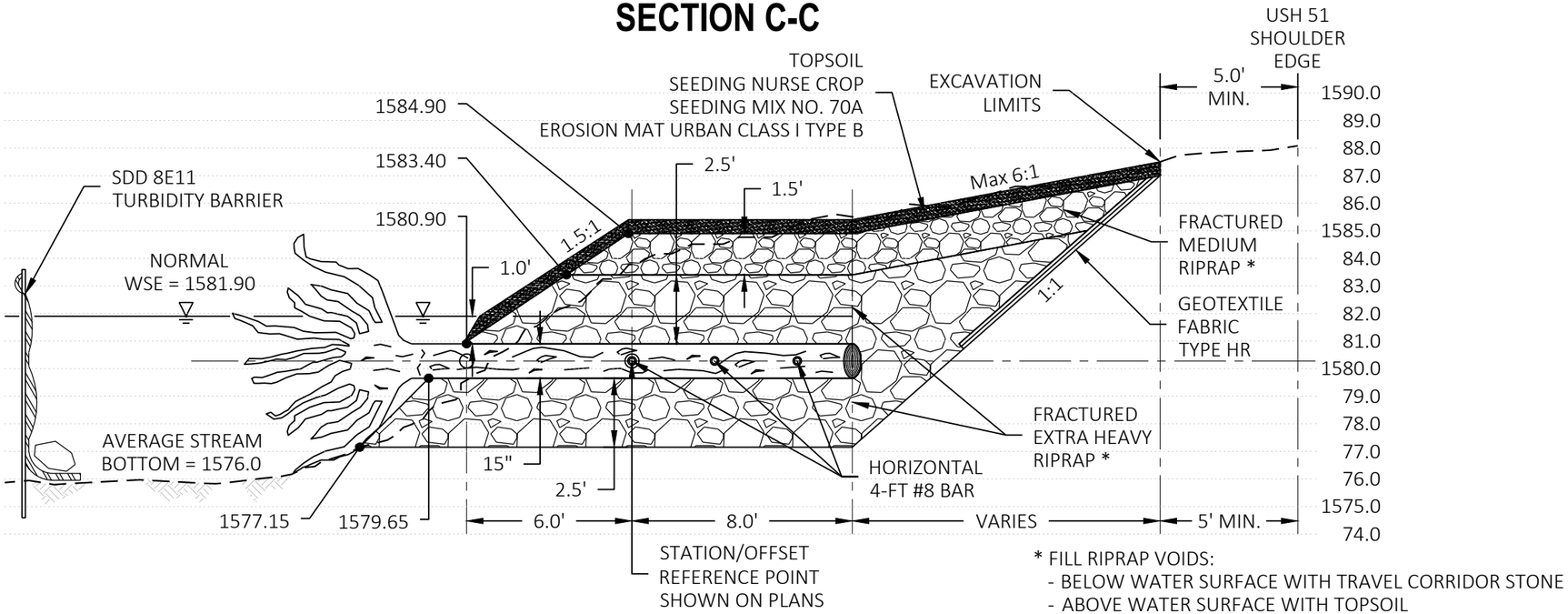
SECTION B-B



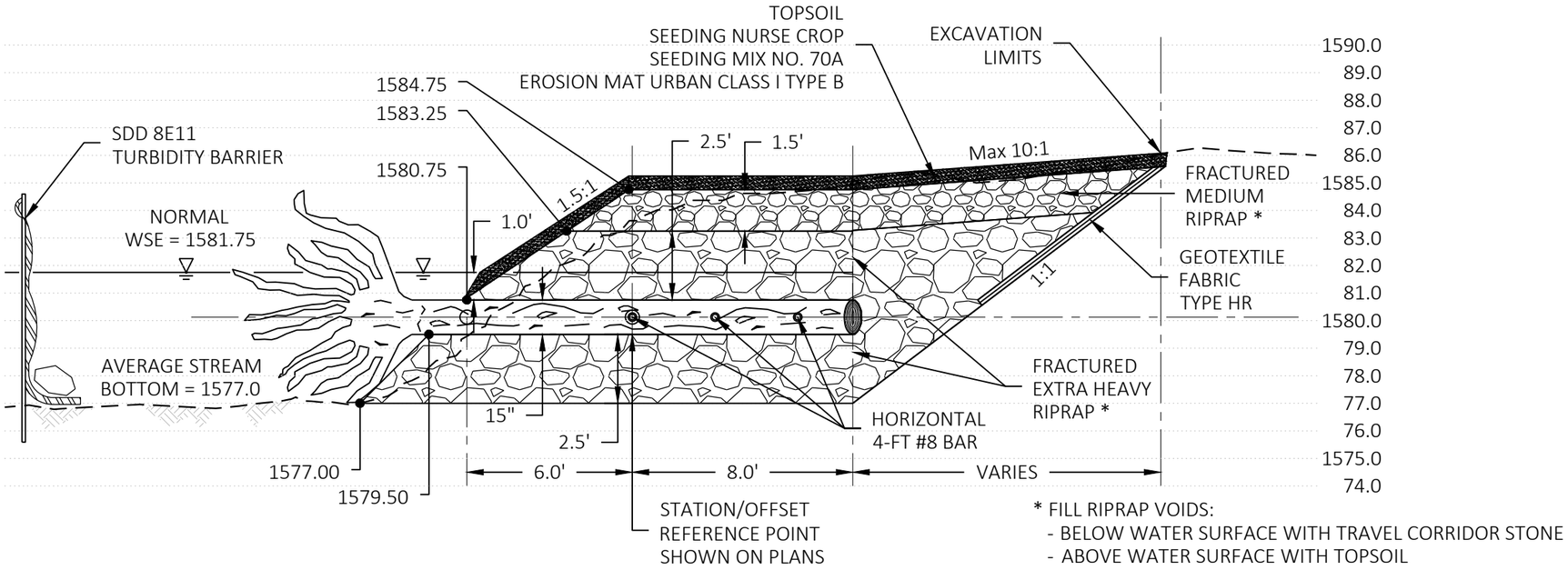
* FILL RIPRAP VOIDS:
- BELOW WATER SURFACE WITH TRAVEL CORRIDOR STONE
- ABOVE WATER SURFACE WITH TOPSOIL

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CONSTRUCTION DETAIL: STA 326+00 SLOPE PROTECTION	SHEET 16	E

SECTION C-C



SECTION D-D



PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CONSTRUCTION DETAIL: STA 326+00 SLOPE PROTECTION	SHEET 17	E

2

2

N

PI: 8+06.54

8+00

PI: 8+62.64

ASPHALTIC FLUME REQ'D

06

END CONSTRUCTION
STA 9+01
MATCH EXISTING
SAW CUT REQ'D

STA 338+66 LT
EXISTING CULVERT: CULVERT PIPE CORRUGATED STEEL
24-INCH @ 0.14% SLOPE
CLEANING CULVERT PIPES FOR LINER VERIFICATION REQ'D
CULVERT PIPE LINERS (SIZE) (01. 24-INCH) REQ'D
APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH REQ'D

02

PI: 9+17.94

1591.30

1591.51

01

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D REQ'D

R35.0'

R67.5'

1591.53

1591.66

1591.82

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D REQ'D

05

PT: 336+05.56

1592.07

1592.41

1592.08

1592.22

1592.35

SAWCUT REQ'D

EP: 10+00.00

336+00

337+00

338+00

339+00

340+00

341+00

07

STA 338+15
PROTECTIVE THERMOPLASTIC COATING
AT SNOWMOBILE CROSSING REQ'D
SEE CONSTRUCTION DETAIL

STATION & OFFSET TABLE									
POINT	ALIGNMENT	STATION	OFFSET	ALIGNMENT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
01	51	338+10.15	57.50 LT	47	9+07.93Z	51.25 RT	254853.835	786707.434	35.0
02	51	339+43.77	90.00 LT	47	9+40.47Z	82.50 LT	254828.304	786572.310	67.5

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
05	336+34, 38' LT	1590.147	0.75" IRON ROD
06	337+68, 98' LT	1590.410	HMOD
07	341+44, 52' RT	1593.040	0.75" IRON ROD

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	INTERSECTION DETAILS - 51 - 47	SHEET 18	E

2

2

PERMITTED WETLAND IMPACTS
693 SF/0.016 ACRES PERMANENT IMPACT
TYPE RPF
WETLAND ID: 1A

WETLAND BOUNDRY

SLOPE INTERCEPT

N

159+00 160+00 161+00 162+00 163+00 164+00 165+00

WETLAND BOUNDRY

SLOPE INTERCEPT

24-INCH CULVERT PIPE
#26051000651

EMAT CLASS i TYPE A / FERTILIZER TYPE B / SEEDING MIXTURE NO. 30

SILT FENCE

DELINEATED WETLAND AREAS, TEMPORARY IMPACT

FERTILIZER TYPE B / SEEDING MIXTURE NO. 30

CULVERT PIPE CHECKS

TEMPORARY DITCH CHECKS

PI: 9+17.94

9+00

N

PT: 336+05.56

336+00 337+00 338+00 339+00 340+00 341+00

EP: 10+00.00

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	EROSION CONTROL	SHEET 19	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 01

PLOT DATE : 1/17/2024 2:12 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

PERMITTED WETLAND IMPACTS
592 SF/0.014 ACRES PERMENANT IMPACT
TYPE SS
WETLAND ID:2A

SLOPE INTERCEPT

WETLAND BOUNDRY

SLOPE INTERCEPT

WETLAND BOUNDRY

66-INCH CULVERT PIPE
#26051000665
STA 355+12

N

352+00 353+00 354+00 355+00 356+00 357+00 358+00

SLOPE INTERCEPT

WETLAND BOUNDRY

PERMITTED WETLAND IMPACTS
682 SF/0.016 ACRES PERMENANT IMPACT
TYPE SS
WETLAND ID: 2B

SLOPE INTERCEPT

WETLAND BOUNDRY

EMAT CLASS i TYPE A / FERTILIZER TYPE B / SEEDING MIXTURE NO. 30

SILT FENCE

DELINEATED WETLAND AREAS, TEMPORARY IMPACT

FERTILIZER TYPE B / SEEDING MIXTURE NO. 30

CULVERT PIPE CHECKS

TEMPORARY DITCH CHECKS

EXISTING R/W

EXISTING R/W

24-INCH CULVERT PIPE
#26051000669
STA 416+51

SLOPE INTERCEPT

N

414+00 415+00 416+00 417+00 418+00 419+00

SLOPE INTERCEPT

WETLAND BOUNDRY

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	EROSION CONTROL	SHEET 20	E

2

2

SLOPE INTERCEPT

447+00 448+00 449+00 450+00 451+00 452+00

SLOPE INTERCEPT

24-INCH CULVERT PIPE
*26051000670
STA 451+46

N

EXISTING R/W

SLOPE INTERCEPT

EMAT CLASS i TYPE A / FERTILIZER TYPE B / SEEDING MIXTURE NO. 30

SILT FENCE

DELINEATED WETLAND AREAS, TEMPORARY IMPACT

FERTILIZER TYPE B / SEEDING MIXTURE NO. 30

CULVERT PIPE CHECKS

TEMPORARY DITCH CHECKS

452+00 453+00 454+00 455+00 456+00 457+00 458+00

SLOPE INTERCEPT

N

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	EROSION CONTROL	SHEET 21	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 03

PLOT DATE : 1/17/2024 2:12 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

PROPOSED CONTOURS

WATER SURFACE EDGE

STREAMBANK EDGE

EXCAVATION LIMITS

ROOT WAD

EMAT URBAN CLASS I TYPE B / SEEDING MIXTURE NO. 70A / SEEDING NURSE CROP

DELINEATED WETLAND AREAS, TEMPORARY IMPACT

TURBIDITY BARRIER

SILT FENCE

N

FLOW

FLOW

RW

RW

TIE-IN TO EXISTING BANK

TIE-IN TO EXISTING BANK

PERMITTED WETLAND IMPACTS
445 SF/0.011 ACRES PERMANENT IMPACT
TYPE: SS
WETLAND ID: 3A

MANITOWISH RIVER

PERMITTED WETLAND IMPACTS
1199 SF/0.028 ACRES PERMANENT IMPACT
TYPE: SS
WETLAND ID: 3C

EXISTING WATER SURFACE EDGE

EXISTING EDGE OF STREAMBANK

TURBIDITY BARRIER

PERMITTED WETLAND IMPACTS
6 SF/0.001 ACRES PERMANENT IMPACT
TYPE: SS
WETLAND ID: 3B

WETLAND BOUNDRY

EXISTING EDGE OF STREAMBANK

EXISTING WATER SURFACE EDGE

WETLAND BOUNDRY

SILT FENCE

LIMITS OF EXCAVATION

SHOULDER EDGE

PAVEMENT EDGE

1585 1586 1587 1588 1589 1583 1584

324+40 324+60 324+80 325+00 325+20 325+40 325+60 325+80 326+00 326+20 326+40 326+60 326+80 327+00 327+20

USH 51

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	EROSION CONTROL: STA 326+00 SLOPE PROTECTION PLAN	SHEET 22	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\022101-EC.DWG
LAYOUT NAME - 04

PLOT DATE : 1/17/2024 2:13 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

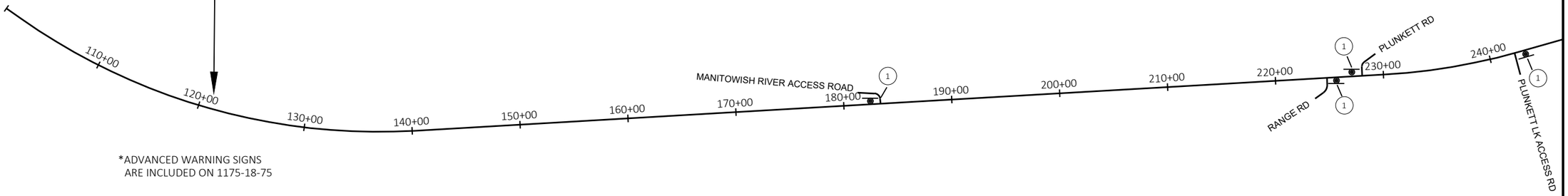


*VALUE SHOULD REFLECT THE ENTIRE LENGTH OF THE ROADWAY TO BE CONSTRUCTED DURING ALL WORK OPERATIONS

*HWY ROAD WORK BEGINS SIGN PLACED SEVEN (7) DAYS PRIOR TO CONSTRUCTION. SIGNS TO BE REMOVED WHEN CONSTRUCTION BEGINS

N

BEGIN PROJECT
STA 121+00



*ADVANCED WARNING SIGNS ARE INCLUDED ON 1175-18-75

LEGEND

SIGN ON PERMANENT SUPPORT

(X) DENOTES SIGN NUMBER

NOTES:

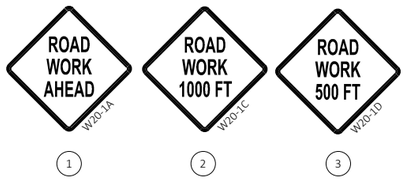
ALL SIGNS 48'X48" UNLESS OTHERWISE NOTED

REFER TO S.S.D. "TRAFFIC CONTROL ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" FOR ADDITIONAL IMFORATION

AT STH 47 PLACE W20-1A SIGNS AT A DISTANCE THAT WILL SATISFY SHOULDER WORK ACTIVITIES. SEE TRAFFIC CONTROL SHEETS AND S.S.D. "TRAFFIC CONTROL, WORK ON SHOULDER OR PASSING LANE, UNDIVIDED HIGHWAY"

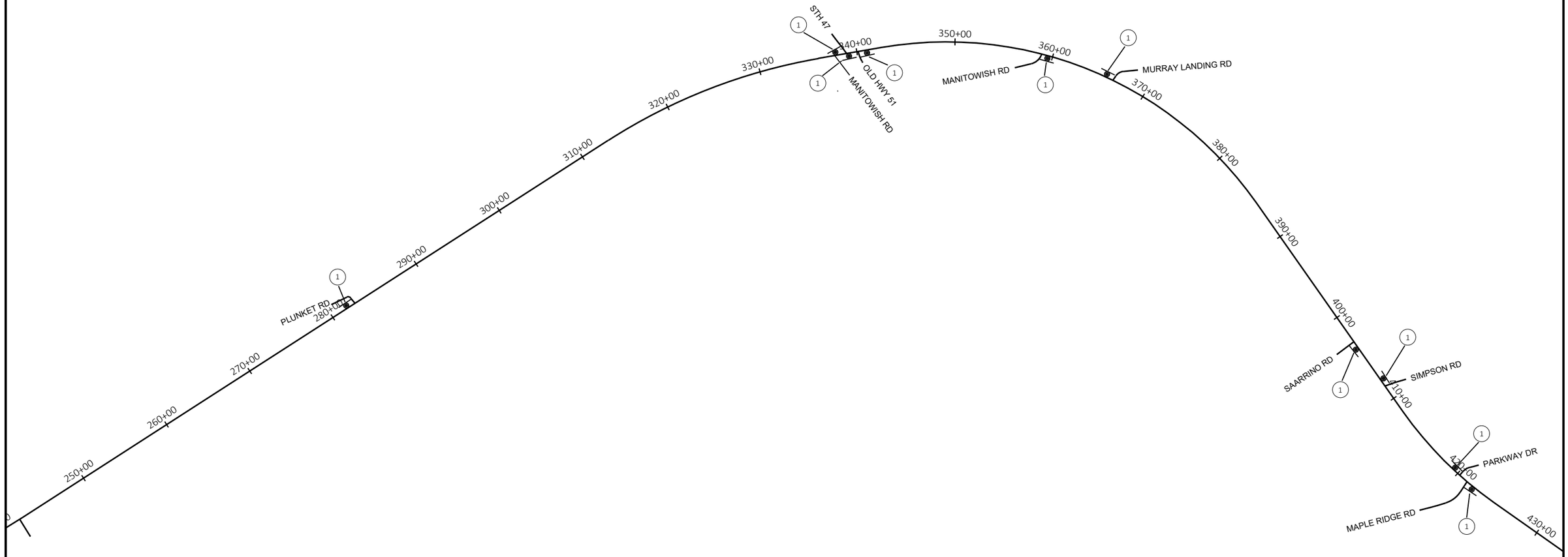
PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	ADVANCED WARNING SIGNING	SHEET 23	E

2



*HWY ROAD WORK BEGINS SIGN PLACED SEVEN (7) DAYS PRIOR TO CONSTRUCTION. SIGNS TO BE REMOVED WHEN CONSTRUCTION BEGINS





LEGEND

SIGN ON PERMANENT SUPPORT

(X) DENOTES SIGN NUMBER

NOTES:

ALL SIGNS 48'X48" UNLESS OTHERWISE NOTED

REFER TO S.S.D. "TRAFFIC CONTROL ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" FOR ADDITIONAL IMFORATION

AT STH 47 PLACE W20-1A SIGNS AT A DISTANCE THAT WILL SATISFY SHOULDER WORK ACTIVITIES. SEE TRAFFIC CONTROL SHEETS AND S.S.D. "TRAFFIC CONTROL, WORK ON SHOULDER OR PASSING LANE, UNDIVIDED HIGHWAY"

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	ADVANCED WARNING SIGNING	SHEET 24	E

2



1 2 3



G20-1
60"X24"

4

G20-2A
48"X24"

5

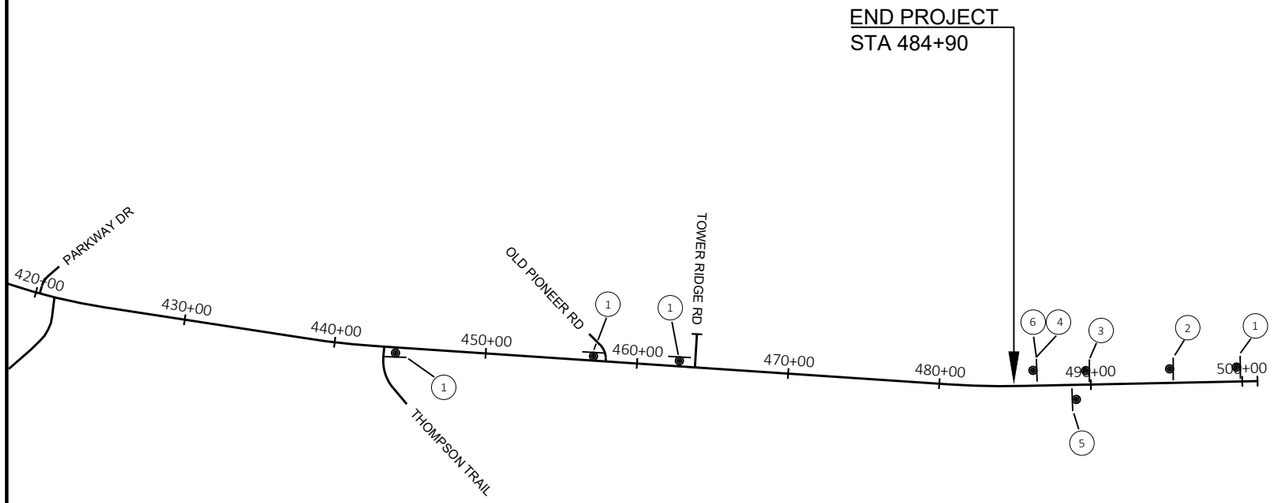


G20-57
72"X36"

6

*HWY ROAD WORK BEGINS SIGN PLACED SEVEN (7) DAYS PRIOR TO CONSTRUCTION. SIGNS TO BE REMOVED WHEN CONSTRUCTION BEGINS





LEGEND

SIGN ON PERMANENT SUPPORT

(X) DENOTES SIGN NUMBER

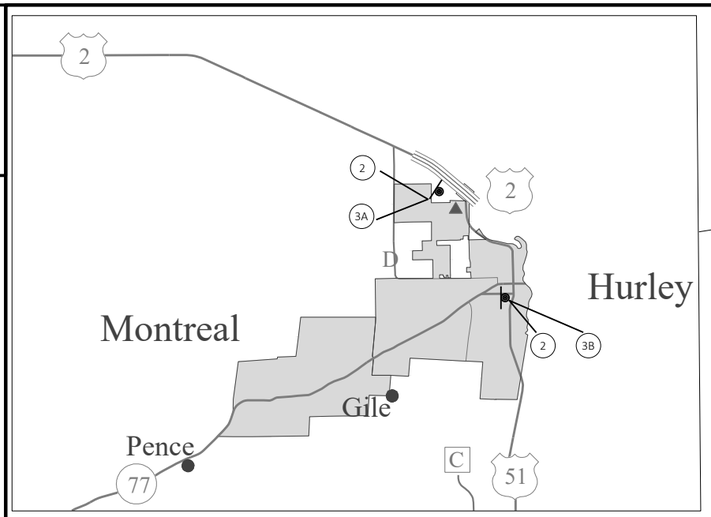
NOTES:

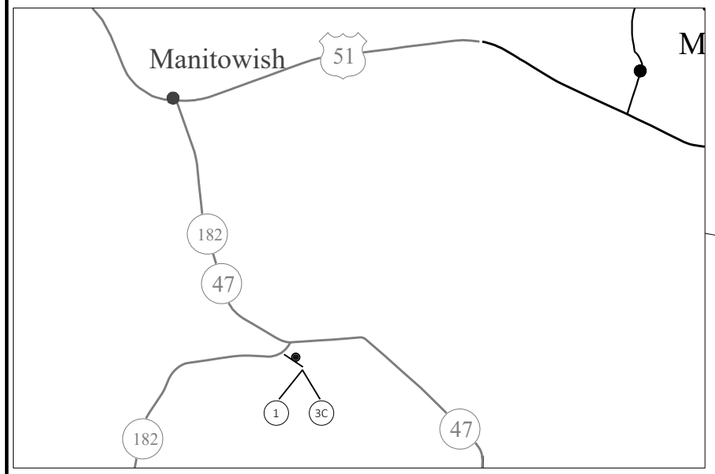
ALL SIGNS 48'X48" UNLESS OTHERWISE NOTED

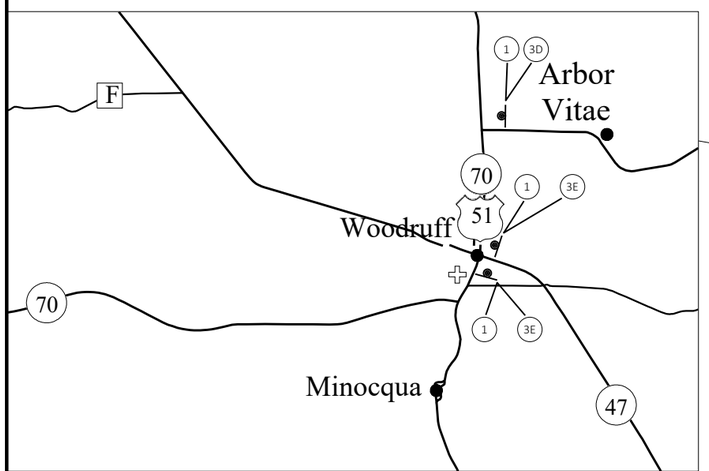
REFER TO S.S.D. "TRAFFIC CONTROL ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" FOR ADDITIONAL IMFORATION

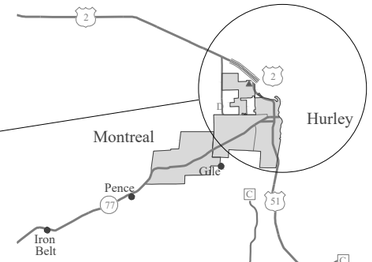
AT STH 47 PLACE W20-1A SIGNS AT A DISTANCE THAT WILL SATISFY SHOULDER WORK ACTIVITIES. SEE TRAFFIC CONTROL SHEETS AND S.S.D. "TRAFFIC CONTROL, WORK ON SHOULDER OR PASSING LANE, UNDIVIDED HIGHWAY"

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	ADVANCED WARNING SIGNING	SHEET 25	E









SIGN #	DISTANCE
3A	21 MILES AHEAD
3B	19 MILES AHEAD
3C	4 MILES AHEAD
3D	23 MILES AHEAD
3E	24 MILES AHEAD

LEGEND

- SIGN ON PERMANENT SUPPORT
- (X) DENOTES SIGN NUMBER

NORTH
M3-1
24"X12"

SOUTH
M3-3
24"X12"

51
M1-4
24"X24"
1

51
M1-4
24"X24"
2

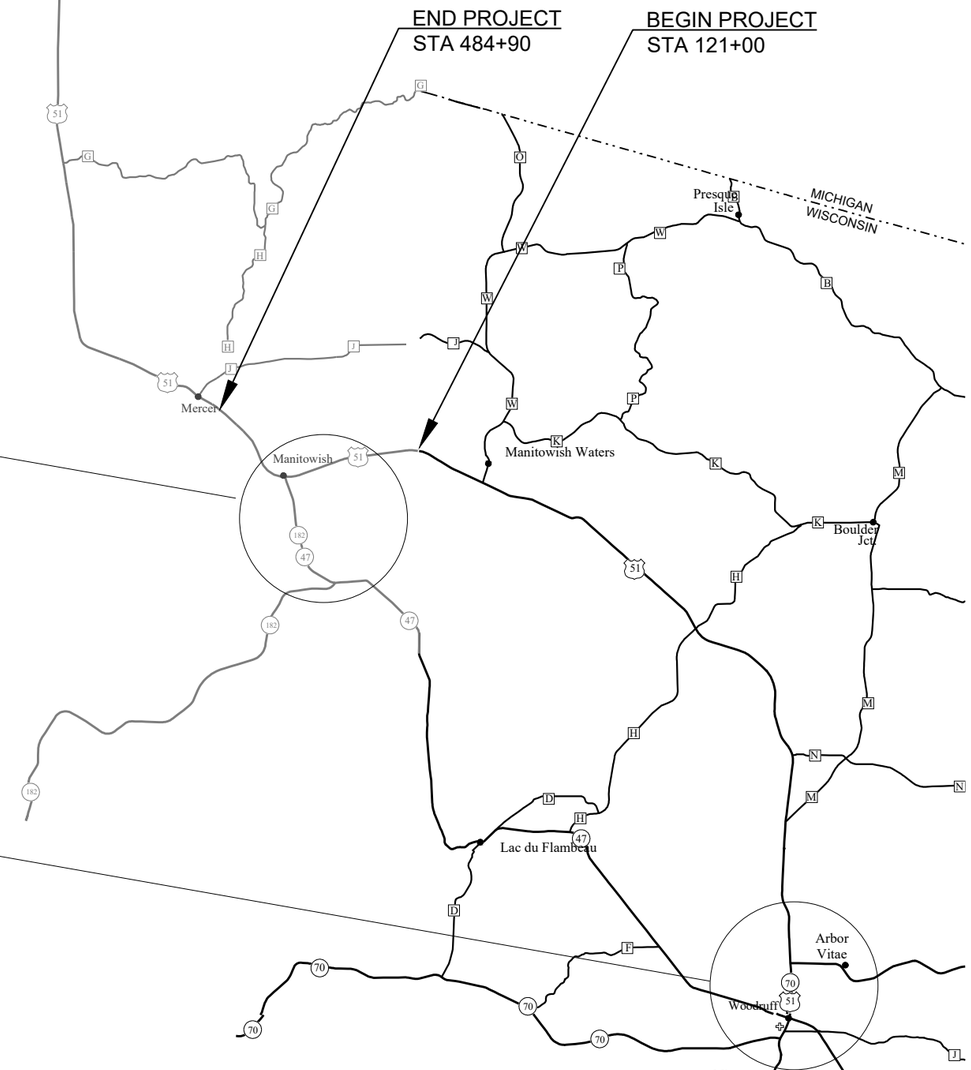
MAX. 11' WIDTH
W12-52
48"X48"

00 MILES AHEAD
WO57-52
48"X36"
3

N

END PROJECT
STA 484+90

BEGIN PROJECT
STA 121+00



PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	TRAFFIC CONTROL PROJECT OVERVIEW - MAX WIDTH SIGNING	SHEET 26	E

2

STAGE 1

Temporary Signal Timing # 1
6:00am to 8:00pm

INTERVAL	NB	SB	SECONDS
1	G	R	20
2	Y	R	5
3	R	R	23
4	R	G	20
5	R	Y	5
6	R	R	23

Temporary Signal Timing # 2
8:00pm to 6:00am

INTERVAL	NB	SB	SECONDS
1	G	R	16
2	Y	R	5
3	R	R	23
4	R	G	16
5	R	Y	5
6	R	R	23

STAGE 2

Temporary Signal Timing

	Ø1 NB USH 51	Ø2 EB Private Entrance	Ø3 SB USH 51	Ø4 EB Old Pioneer Rd
MINIMUM GREEN TIME	9 sec	5 sec	9 sec	5 sec
MAXIMUM PASSAGE TIME DURING GREEN PHASE	5 sec	5 sec	5 sec	5 sec
MINIMUM PASSAGE TIME DURING GREEN PHASE	3 sec	-	3 sec	-
START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHAS	15 sec	-	15 sec	-
TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE	0 sec	-	0 sec	-
MAXIMUM GREEN TIME	33 sec	7 sec	33 sec	7 sec
YELLOW	5 sec	3 sec	5 sec	3 sec
ALL-RED	6 sec	33 sec	6 sec	33 sec
RECALL MODE	MIN	MIN	MIN	MIN

PHASE 2 SHALL COME AFTER PHASE 1, PHASE 4 SHALL COME AFTER PHASE 3.

CONTRACTOR SHALL REVIEW SIGNALS AFTER PROGRAMMING TO ASSURE THERE ARE NOT CONFLICTING MOVEMENTS.

IF THERE ARE QUESTIONS REGARDING THE TIMINGS PLEASE CONTACT TRAFFIC ENGINEER

2

TEMPORARY MARKING LINE PAINT 6-INCH
DOUBLE YELLOW

REFER TO SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" FOR ADVANCE SIGNING AND MARKINGS

WO1-6
48" X 24"

TYPE III BARRICADE

CULVERT 670

447+00 448+00 449+00 450+00 451+00 452+00

10'

11'

TEMPORARY MARKING STOP LINE
REMOVABLE TAPE 18-INCH

STOP HERE ON RED
R10-6
24"X36"

MOVING SIGNS TYPE II REQ'D
MOVING SMALL SIGN SUPPORTS REQ'D

WO1-4R

WO1-4L

WO1-6
48" X 24"

TYPE III BARRICADE

STOP HERE ON RED
R10-6
24"X36"

TEMPORARY MARKING LINE PAINT 6-INCH
DOUBLE YELLOW

51+00 452+00 453+00 454+00 455+00 456+00 457+00

11'

25'

TEMPORARY MARKING LINE PAINT 6-INCH
WHITE

BASE AGGREGATE DENSE 1-1/4"

REFER TO SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" FOR ADVANCE SIGNING AND MARKINGS

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	TRAFFIC CONTROL - CULVERT 670 - STAGE 1	SHEET 28	E

2

2

PI: 441+13.84

PI: 441+85.01

PT: 442+44.06

PI: 444+45.56

439+00 440+00 441+00 442+00 443+00 444+00 445+00 446+00

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PEDESTRIAN BARRICADE

DETOUR AHEAD
M4-9AA
30"X24"

WO3-1

DETOUR AHEAD
M4-9AA
30"X24"

STOP
R1-1
30"X30"

DETOUR
M4-9AR
30"X24"

DETOUR
M4-9AL
30"X24"

15 MPH
WO13-1
36"X36"

R10-6
24"X36"
STOP HERE ON RED

NO TURN ON RED
R10-11B
24"X24"

VEHICLE DETECTION FIELD

ASPHALTIC SURFACE TEMPORARY

MOVING SIGNS TYPE II REQ'D
MOVING SMALL SIGN SUPPORTS REQ'D

TEMPORARY MARKING LINE PAINT 6-INCH
DOUBLE YELLOW

PI: 444+45.56

10'

11'

445+00 446+00 447+00 448+00 449+00 450+00 451+00

TEMPORARY MARKING STOP LINE
REMOVABLE TAPE 18-INCH

STOP HERE ON RED
R10-6
24"X36"

WO1-6
48" X 24"
TYPE III BARRICADE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

WO1-4L

SIDEWALK CLOSED
R9-9
24"X12"

REFER TO SDD "TRAFFIC CONTROL, ONE
LANE ROAD WITH TEMPORARY SIGNALS"
FOR ADVANCE SIGNING AND MARKINGS

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	TRAFFIC CONTROL - CULVERT 670 - STAGE 2	SHEET 29	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\025102-TC.DWG
LAYOUT NAME - 01

PLOT DATE : 1/17/2024 2:18 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

TEMPORARY MARKING LINE PAINT 6-INCH WHITE

OLD PIONEER RD

Pl: 456+99.71

25'

451+00 452+00 453+00 454+00 455+00 456+00 457+00 458+00

W01-4R

SIDEWALK CLOSED
R9-9
24"X12"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

W01-6
48" X 24"
TYPE III BARRICADE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PEDESTRIAN BARRICADE

VEHICLE DETECTION FIELD

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

Pl: 459+13.25

R10-6
24"X36"
STOP HERE ON RED
NO TURN ON RED
R10-11B
24"X24"

TEMPORARY MARKING LINE PAINT 6-INCH DOUBLE YELLOW

Pl: 463+07.59

Pl: 456+99.71

COVER

OLD PIONEER RD

25'

456+00 457+00 458+00 459+00 460+00 461+00 462+00 463+00

R10-6
24"X36"
STOP HERE ON RED
NO TURN ON RED
R10-11B
24"X24"

REFER TO SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" FOR ADVANCE SIGNING AND MARKINGS

15 M P H
W013-1
36"X36"

DETOUR
M4-9AL
30"X24"

DETOUR
M4-9AR
30"X24"

STOP
R1-1
30"X30"

W03-1

DETOUR AHEAD
M4-9AA
30"X24"

DETOUR AHEAD
M4-9AA
30"X24"

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	TRAFFIC CONTROL - CULVERT 670 - STAGE 2	SHEET 30	E

1175-18-74

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	12.000	12.000
0004	203.0100	Removing Small Pipe Culverts	EACH	4.000	4.000
0006	204.0110	Removing Asphaltic Surface	SY	9.000	9.000
0008	204.0115	Removing Asphaltic Surface Butt Joints	SY	490.000	490.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	126,700.000	126,700.000
0012	204.0150	Removing Curb & Gutter	LF	167.000	167.000
0014	204.0155	Removing Concrete Sidewalk	SY	16.000	16.000
0016	204.0180	Removing Delineators and Markers	EACH	10.000	10.000
0018	205.0100	Excavation Common	CY	5,964.000	5,964.000
0020	208.0100	Borrow	CY	1,405.000	1,405.000
0024	208.1500.S	Temporary Lane Shift During Culvert Work	EACH	6.000	6.000
0026	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1175-18-74	EACH	1.000	1.000
0032	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	9.000	9.000
0034	213.0100	Finishing Roadway (project) 01. 1175-18-74	EACH	1.000	1.000
0040	305.0110	Base Aggregate Dense 3/4-Inch	TON	5,640.000	5,640.000
0042	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,340.000	1,340.000
0046	450.4000	HMA Cold Weather Paving	TON	3,550.000	3,550.000
0048	455.0605	Tack Coat	GAL	8,534.000	8,534.000
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	1.000	1.000
0054	460.2005	Incentive Density PWL HMA Pavement	DOL	10,870.000	10,870.000
0056	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	18,195.000	18,195.000
0058	460.2010	Incentive Air Voids HMA Pavement	DOL	14,200.000	14,200.000
0062	460.6224	HMA Pavement 4 MT 58-28 S	TON	14,200.000	14,200.000
0064	465.0105	Asphaltic Surface	TON	330.000	330.000
0066	465.0125	Asphaltic Surface Temporary	TON	285.000	285.000
0068	465.0315	Asphaltic Flumes	SY	14.000	14.000
0070	465.0560	Asphaltic Rumble Strips, Centerline	LF	27,525.000	27,525.000
0072	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	4.000	4.000
0074	520.3424	Culvert Pipe Class III-A Non-metal 24-Inch	LF	136.000	136.000
0078	520.9700.S	Culvert Pipe Liners (size) 01. 24-Inch	LF	68.000	68.000
0080	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	1.000	1.000
0082	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	2.000	2.000
0084	522.0166	Culvert Pipe Reinforced Concrete Class III 66-Inch	LF	116.000	116.000
0086	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	178.000	178.000
0088	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	2.000	2.000
0090	522.1066	Apron Endwalls for Culvert Pipe Reinforced Concrete 66-Inch	EACH	2.000	2.000
0092	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	167.000	167.000
0094	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	44.000	44.000
0096	602.0860	Concrete Driveway HES 6-Inch	SY	9.000	9.000
0098	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1175-18-74	EACH	1.000	1.000
0104	619.1000	Mobilization	EACH	0.340	0.340
0106	624.0100	Water	MGAL	689.000	689.000
0108	625.0100	Topsoil	SY	7,770.000	7,770.000
0110	628.1504	Silt Fence	LF	2,770.000	2,770.000
0112	628.1520	Silt Fence Maintenance	LF	2,770.000	2,770.000
0114	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0116	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0118	628.2002	Erosion Mat Class I Type A	SY	7,420.000	7,420.000
0120	628.2008	Erosion Mat Urban Class I Type B	SY	525.000	525.000

1175-18-74

Line	Item	Item Description	Unit	Total	Qty
0122	628.6005	Turbidity Barriers	SY	207.000	207.000
0124	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0126	628.7555	Culvert Pipe Checks	EACH	16.000	16.000
0128	629.0210	Fertilizer Type B	CWT	5.000	5.000
0130	630.0130	Seeding Mixture No. 30	LB	134.000	134.000
0132	630.0171	Seeding Mixture No. 70A	LB	2.000	2.000
0134	630.0400	Seeding Nurse Crop	LB	4.000	4.000
0136	630.0500	Seed Water	MGAL	89.000	89.000
0138	633.5200	Markers Culvert End	EACH	10.000	10.000
0140	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	2.000	2.000
0142	638.2102	Moving Signs Type II	EACH	2.000	2.000
0144	638.4000	Moving Small Sign Supports	EACH	4.000	4.000
0146	642.5001	Field Office Type B	EACH	0.340	0.340
0148	643.0300	Traffic Control Drums	DAY	1,324.000	1,324.000
0150	643.0420	Traffic Control Barricades Type III	DAY	152.000	152.000
0152	643.0715	Traffic Control Warning Lights Type C	DAY	937.000	937.000
0154	643.0900	Traffic Control Signs	DAY	2,831.000	2,831.000
0158	643.1000	Traffic Control Signs Fixed Message	SF	18.000	18.000
0160	643.3165	Temporary Marking Line Paint 6-Inch	LF	32,190.000	32,190.000
0162	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	60.000	60.000
0164	643.5000	Traffic Control	EACH	0.400	0.400
0166	645.0120	Geotextile Type HR	SY	348.000	348.000
0170	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	101,918.000	101,918.000
0174	646.5420	Marking Aerial Enforcement Bar Epoxy	EACH	10.000	10.000
0176	646.6120	Marking Stop Line Epoxy 18-Inch	LF	26.000	26.000
0178	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	29,138.000	29,138.000
0180	646.9000	Marking Removal Line 4-Inch	LF	1,238.000	1,238.000
0186	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	167.000	167.000
0188	650.6000	Construction Staking Pipe Culverts	EACH	4.000	4.000
0190	650.8000	Construction Staking Resurfacing Reference	LF	36,390.000	36,390.000
0192	650.9911	Construction Staking Supplemental Control (project) 01. 1175-18-74	EACH	1.000	1.000
0198	661.0101	Temporary Traffic Signals for Bridges (structure) 01. STA. 451+46 Culvert Replacement	EACH	1.000	1.000
0202	690.0150	Sawing Asphalt	LF	570.000	570.000
0206	740.0440	Incentive IRI Ride	DOL	27,570.000	27,570.000
0208	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,400.000	2,400.000
0210	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,980.000	1,980.000
0212	SPV.0035	Special 01. Fractured Stone Extra Heavy Riprap	CY	781.000	781.000
0214	SPV.0035	Special 02. Fractured Stone Medium Riprap	CY	283.000	283.000
0216	SPV.0060	Special 01. Temporary Water Diversion, STA 355+10, 66-Inch Pipe	EACH	1.000	1.000
0222	SPV.0060	Special 04. Temporary Vehicle Detection STA 446+75/Home City Ice	EACH	1.000	1.000
0224	SPV.0060	Special 05. Temporary Vehicle Detection STA 457+75/Old Pioneer Road	EACH	1.000	1.000
0226	SPV.0060	Special 06. Root Wad, 15" Diameter Trunk	EACH	19.000	19.000
0228	SPV.0060	Special 07. Shuttle Service STA 287+40	EACH	1.000	1.000
0230	SPV.0180	Special 01. Protective Thermoplastic Coating at Snowmobile Trail Crossings	SY	378.000	378.000
0232	SPV.0195	Special 01. Travel Corridor Stone	TON	120.000	120.000

CATEGORY	STATION	TO	STATION	LOCATION	201.0205 GRUBBING STA	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	204.0180 REMOVING DELINEATORS AND MARKERS EACH	REMARKS
0010	161+98	-	161+98	CULVERT 651	-	1	-	-	-	-	-	2	EXISTING 24-INCH STEEL PIPE
0010	338+66	-	338+66	CULVERT 649	-	-	-	-	-	-	-	2	EXISTING 24-INCH STEEL PIPE
0010	355+10	-	355+10	CULVERT 665	1	1	-	-	-	-	-	2	EXISTING 30-INCH LINED STEEL PIPE
0010	416+50	-	416+50	CULVERT 669	-	1	-	-	-	-	-	2	EXISTING 24-INCH CONCRETE PIPE
0010	451+46	-	451+46	CULVERT 670	8	1	-	-	-	-	-	2	EXISTING 24-INCH CONCRETE PIPE
0010	325+00	-	328+00	SCOUR PROTECTION	3	-	-	-	-	-	-	-	-
0010	287+40	-	287+40	HEART OF VILAS COUNTY BIKE TRAIL CROSSING RT	-	-	5	-	-	-	9	-	-
0010	287+40	-	287+40	HEART OF VILAS COUNTY BIKE TRAIL CROSSING LT	-	-	4	-	-	-	7	-	-
0010	121+00	-	121+10	BOP	-	-	-	33	-	-	-	-	-
0010	484+80	-	484+90	EOP	-	-	-	33	-	-	-	-	-
0010	121+10	-	484+80	MAINLINE	-	-	-	-	121,233	-	-	-	-
0010	183+00	-	184+00	MANITOWISH RIVER ACCESS ROAD	-	-	-	28	327	-	-	-	-
0010	224+50	-	225+00	RANGE ROAD	-	-	-	28	162	-	-	-	-
0010	227+75	-	228+25	PLUNKETT ROAD (EAST)	-	-	-	28	121	-	-	-	-
0010	282+50	-	283+00	PLUNKETT ROAD (WEST)	-	-	-	28	129	-	-	-	-
0010	338+00	-	340+00	STH 47 INTERSECTION	-	-	-	28	616	167	-	-	-
0010	339+75	-	340+50	OLD US 51	-	-	-	28	156	-	-	-	-
0010	358+75	-	359+25	MANITOWISH ROAD (WEST)	-	-	-	28	182	-	-	-	-
0010	366+00	-	367+25	MURRAY LANDING ROAD	-	-	-	28	418	-	-	-	-
0010	402+50	-	403+50	SAARNIO ROAD	-	-	-	28	390	-	-	-	-
0010	408+00	-	409+25	SIMPSON ROAD	-	-	-	28	372	-	-	-	-
0010	419+75	-	421+25	PARKWAY DRIVE	-	-	-	28	1,146	-	-	-	-
0010	421+00	-	421+75	MAPLE RIDGE ROAD	-	-	-	28	351	-	-	-	-
0010	442+75	-	444+00	THOMPSON TRAIL	-	-	-	28	365	-	-	-	-
0010	457+25	-	458+50	OLD PIONEER ROAD	-	-	-	28	331	-	-	-	-
0010	463+25	-	464+50	TOWER RIDGE ROAD	-	-	-	28	355	-	-	-	-
				TOTAL 0010	12	4	9	490	126,700	167	16	10	

CATEGORY	STATION	TO	STATION	LOCATION	* 205.0100 EXCAVATION COMMON CY	* 208.0100 BORROW CY	208.1500.S TEMPORARY LANE SHIFT DURING CULVERT WORK EACH	211.0101.01 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (01. 1175-18-74) EACH	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	213.0100.01 FINISHING ROADWAY (PROJECT) (01. 1175-18-74) EACH	REMARKS
0010	161+98	-	161+98	CULVERT 651	473	-	2	-	-	-	TRANSITION CUT
0010	355+10	-	355+10	CULVERT 665	480	-	2	-	-	-	TRANSITION CUT
0010	416+50	-	416+50	CULVERT 669	617	-	2	-	-	-	TRANSITION CUT
0010	451+46	-	451+46	CULVERT 670	617	-	-	-	-	-	TRANSITION CUT
0010	325+10	-	326+90	SCOUR PROTECTION	1,062	-	-	-	-	-	SCOUR PROTECTION
0010	121+00	-	484+90	PROJECT	-	-	-	1	-	1	PROJECT
0010	287+40	-	287+40	RT	4	2	-	-	1	-	HEART OF VILAS COUNTY BIKE TRAIL CROSSING
0010	287+40	-	287+40	LT	4	2	-	-	1	-	HEART OF VILAS COUNTY BIKE TRAIL CROSSING
0010	150+25	-	150+25	RT & LT	-	-	-	-	2	-	SNOWMOBILE CROSSING
0010	175+35	-	175+35	RT & LT	-	-	-	-	2	-	SNOWMOBILE CROSSING
0010	338+15	-	338+15	LT	-	-	-	-	1	-	SNOWMOBILE CROSSING
0010	366+25	-	366+25	LT	-	-	-	-	1	-	SNOWMOBILE CROSSING
0010	458+25	-	458+25	RT	-	-	-	-	1	-	SNOWMOBILE CROSSING
				TOTAL 0010	3,260	4	6	1	9	1	

STAGE	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION * CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL	UNEXPANDED FILL	EXPANDED FILL FACTOR 1.20	MASS ORDINATE +/-	WASTE	208.0100 BORROW *
STAGE 1	450+29.88/452+68.19	RT	0	0	0	42	50	-50	0	50
STAGE 2	447+31.53/455+45.37	LT	541	0	541	1,576	1,891	-1,350	0	1,350
STAGE 3	447+60.00/455+60.00	RT	172	0	172	58	70	102	102	0
STAGE 4	447+60.00/455+60.00	LT	1,991	150	1,841	330	396	1,445	1,445	0
GRAND TOTAL			2,704	150	2,554	2,006	2,407	147	1,547	1,401

* ADDITIONAL QUANTITIES ARE SHOWN ELSEWHERE

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0315 ASPHALTIC FLUMES SY	465.0560 ASPHALTIC RUMBLE STRIPS, CENTERLINE LF	REMARKS
0010	121+00	-	484+90	PROJECT	5,635	-	-	-	-	-	-	-	-	SHOULDERS
0010	161+98	-	161+98	CULVERT 651	-	222	-	-	-	80	-	-	-	-
0010	355+10	-	355+10	CULVERT 665	-	229	-	-	-	82	-	-	-	-
0010	416+50	-	416+50	CULVERT 669	-	222	-	-	-	80	-	-	-	-
0010	451+46	-	451+46	CULVERT 670	-	222	-	-	-	80	-	-	-	-
0010	451+46		451+46	CULVERT 670	-	3	-	-	-	2	-	-	-	HEART OF VILAS COUNTY BIKE TRAIL
0010	451+46	-	451+46	CULVERT 670	-	54	-	-	-	-	-	-	-	LANE SHIFT STAGE 1
0010	451+46	-	451+46	CULVERT 670	-	370	-	-	-	-	285	-	-	LANE SHIFT STAGE 2
0010	287+40	-	287+40	BIKE TRAIL CROSSING RT	-	5	-	-	-	3	-	-	-	HEART OF VILAS COUNTY BIKE TRAIL
0010	287+40	-	287+40	BIKE TRAIL CROSSING LT	-	4	-	-	-	3	-	-	-	HEART OF VILAS COUNTY BIKE TRAIL
0010	121+00	-	484+90	PROJECT	-	-	3,550	8,534	-	-	-	-	27,525	-
0010	121+00	-	484+90	MAINLINE	-	-	-	-	13,593	-	-	-	-	-
0010	183+00	-	184+00	MANITOWISH RIVER ACCESS ROAD	-	-	-	-	37	-	-	-	-	-
0010	224+50	-	225+00	RANGE ROAD	-	-	-	-	18	-	-	-	-	-
0010	227+75	-	228+25	PLUNKETT ROAD (EAST)	-	-	-	-	14	-	-	-	-	-
0010	282+50	-	283+00	PLUNKETT ROAD (WEST)	-	-	-	-	14	-	-	-	-	-
0010	338+00	-	340+00	STH 47 INTERSECTION	-	-	-	-	69	-	-	4	-	-
0010	339+75	-	340+50	OLD US 51	-	-	-	-	17	-	-	-	-	-
0010	358+75	-	359+25	MANITOWISH ROAD (WEST)	-	-	-	-	20	-	-	-	-	-
0010	366+00	-	367+25	MURRAY LANDING ROAD	-	-	-	-	47	-	-	-	-	-
0010	402+50	-	403+50	SAARNIO ROAD	-	-	-	-	44	-	-	3	-	-
0010	408+00	-	409+25	SIMPSON ROAD	-	-	-	-	42	-	-	-	-	-
0010	419+75	-	421+25	PARKWAY DRIVE	-	-	-	-	128	-	-	-	-	-
0010	421+00	-	421+75	MAPLE RIDGE ROAD	-	-	-	-	39	-	-	-	-	-
0010	442+75	-	444+00	THOMPSON TRAIL	-	-	-	-	41	-	-	7	-	-
0010	457+25	-	458+50	OLD PIONEER ROAD	-	-	-	-	37	-	-	-	-	-
0010	463+25	-	464+50	TOWER RIDGE ROAD	-	-	-	-	40	-	-	-	-	-
				TOTAL 0010	5,640	1,340	3,550	8,534	14,200	330	285	14	27,525	

HMA PAVEMENT PWL QMP MIXTURE ACCEPTANCE TABLE

LOCATION	STATIONING	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRM TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 FOOT DRIVING LANE	121+00 - 484+90	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	10,875	2.00-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
3 FOOT SHOULDER	121+00 - 484+90	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	2,718	2.00-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
SIDEROAD INTERSECTIONS		UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	607	2.00-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
VARIOUS		CULVERT PATCHES	BASE AGGREGATE	ASPHALTIC SURFACE	322	6.50-INCHES	QMP AS PER SS 465.	ACCEPTANCE BY ORDINARY COMPACTION
MULTI-USE BIKE TRAIL	451+46	CULVERT 670 BIKE TRAIL	BASE AGGREGATE	ASPHALTIC SURFACE	2	3.00-INCHES	QMP AS PER SS 465.	ACCEPTANCE BY ORDINARY COMPACTION
MULTI-USE BIKE TRAIL	287+40	BIKE TRAIL/USH 51 CROSSING	BASE AGGREGATE	ASPHALTIC SURFACE	6	4.00-INCHES	QMP AS PER SS 465.	ACCEPTANCE BY ORDINARY COMPACTION

CATEGORY	STATION	TO	STATION	LOCATION	520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH EACH	520.3424 CULVERT PIPE CLASS III-A NON-METAL 24-INCH LF	520.9700.S.01 CULVERT PIPE LINERS (size) (01. 24-Inch) LF	520.9750.S CLEANING CULVERT PIPES FOR LINER VERIFICATION EACH	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH EACH	522.0166 CULVERT PIPE REINFORCED CONCRETE CLASS III 66-INCH LF	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1066 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 66-INCH EACH	REMARKS
0010	161+98	-	161+98	CULVERT 651	2	68	-	-	-	-	-	-	-	-
0010	338+66	-	338+66	CULVERT 649	-	-	68	1	2	-	-	-	-	STH 47 INTERSECTION
0010	355+10	-	355+10	CULVERT 665	-	-	-	-	-	116	-	-	2	-
0010	416+50	-	416+50	CULVERT 669	2	68	-	-	-	-	-	-	-	-
0010	451+46	-	451+46	CULVERT 670	-	-	-	-	-	-	178	2	-	-
				TOTAL 0010	4	136	68	1	2	116	178	2	2	

CATEGORY	STATION	TO	STATION	LOCATION	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF	602.0860 CONCRETE DRIVEWAY HES 6-INCH SY	690.0150 SAWING ASPHALT LF	REMARKS
0010	161+98	-	161+98	CULVERT 651	-	-	-	64	TRANSITION CUT
0010	338+66	-	338+66	CULVERT 649	-	-	-	64	TRANSITION CUT
0010	355+10	-	355+10	CULVERT 665	-	-	-	64	TRANSITION CUT
0010	416+50	-	416+50	CULVERT 669	-	-	-	64	TRANSITION CUT
0010	451+46	-	451+46	CULVERT 670	-	-	-	64	TRANSITION CUT
0010	339+00	-	339+00	STH 47 INTERSECTION	90	-	-	118	CURB AND GUTTER (SW QUADRANT)
0010	338+25	-	338+25	STH 47 INTERSECTION	77	-	-	104	CURB AND GUTTER (SE QUADRANT)
0010	287+40	-	287+40	RT	-	24	5	15	HEART OF VILAS COUNTY TRAIL CROSSING
0010	287+40	-	287+40	LT	-	20	4	12	HEART OF VILAS COUNTY TRAIL CROSSING
				TOTAL 0010	167	44	9	570	

CATEGORY	STATION	TO	STATION	LOCATION	624.0100 WATER MGAL	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.6005 TURBIDITY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	633.5200 MARKERS CULVERT END EACH	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
0010	121+00	-	484+90	PROJECT	689	-	-	5	3	-	-	-	-	-	-
0010	325+00	-	327+05	SCOUR PROTECTION	-	-	-	-	-	207	-	-	-	348	-
0010	9+50	-	9+50	CULVERT 649 RT / CURB & GUTTER	-	-	-	-	-	-	-	-	1	-	STH 47 ALIGNMENT
0010	9+50	-	9+50	CULVERT 649 LT / CURB & GUTTER	-	-	-	-	-	-	-	-	1	-	STH 47 ALIGNMENT
0010	161+98	-	161+98	CULVERT 651 RT	-	100	100	-	-	-	-	3	1	-	-
0010	161+98	-	161+98	CULVERT 651 LT	-	100	100	-	-	-	-	-	1	-	-
0010	355+10	-	355+10	CULVERT 665 RT	-	220	220	-	-	-	-	3	1	-	-
0010	355+10	-	355+10	CULVERT 665 LT	-	210	210	-	-	-	-	-	1	-	-
0010	416+50	-	416+50	CULVERT 669 RT	-	100	100	-	-	-	-	3	1	-	-
0010	416+50	-	416+50	CULVERT 669 LT	-	100	100	-	-	-	-	-	1	-	-
0010	451+46	-	451+46	CULVERT 670 RT	-	975	975	-	-	-	-	3	1	-	-
0010	451+46	-	451+46	CULVERT 670 LT	-	960	960	-	-	-	-	-	1	-	-
0010	121+00	-	484+90	PROJECT	-	-	-	-	-	-	50	4	-	-	UNDISTRIBUTED
				TOTAL 0010	689	2,770	2,770	5	3	207	50	16	10	348	

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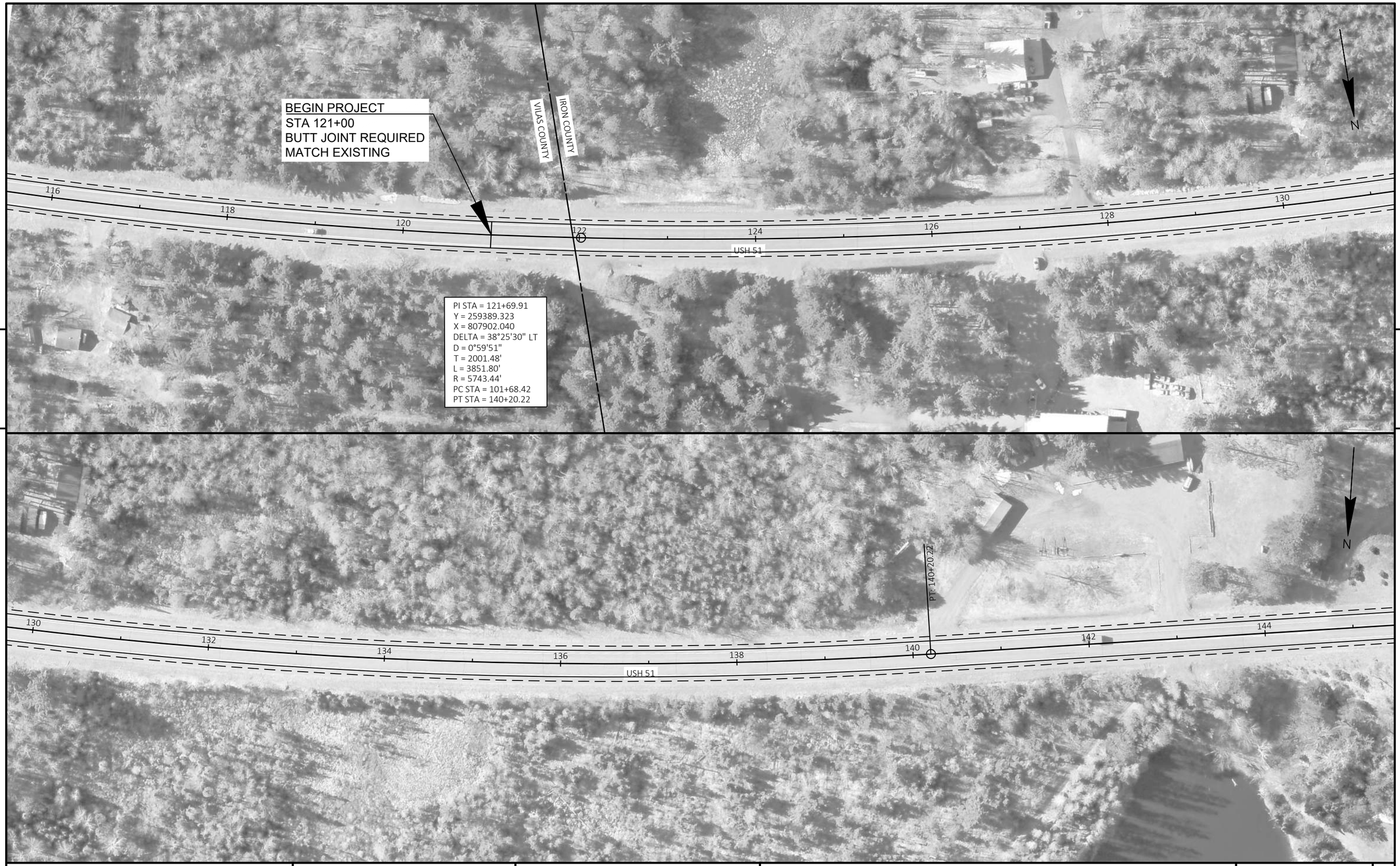
CATEGORY	STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	628.2002 EROSION MAT CLASS I TYPE A SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0171 SEEDING MIXTURE NO. 70A LB	630.0400 SEEDING NURSE CROP LB	630.0500 SEED WATER MGAL	634.0620 POSTS WOOD 4X6-INCH X 20-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	121+00	-	484+90	PROJECT	-	-	-	-	-	-	-	89	-	-	-	-
0010	325+00	-	327+05	SCOUR PROTECTION	350	-	525	-	-	2	4	-	-	-	-	-
0010	9+50	-	9+50	CULVERT 649 RT / CURB & GUTTER	40	40	-	0.02	0.7	-	-	-	-	-	-	STH 47 ALIGNMENT
0010	9+50	-	9+50	CULVERT 649 LT / CURB & GUTTER	47	47	-	0.03	0.8	-	-	-	-	-	-	STH 47 ALIGNMENT
0010	161+98	-	161+98	CULVERT 651 RT	59	59	-	0.04	1.1	-	-	-	-	-	-	-
0010	161+98	-	161+98	CULVERT 651 LT	91	91	-	0.06	1.6	-	-	-	-	-	-	-
0010	355+10	-	355+10	CULVERT 665 RT	356	356	-	0.22	6.4	-	-	-	-	-	-	-
0010	355+10	-	355+10	CULVERT 665 LT	324	324	-	0.20	5.8	-	-	-	-	-	-	-
0010	416+50	-	416+50	CULVERT 669 RT	95	95	-	0.06	1.7	-	-	-	-	-	-	-
0010	416+50	-	416+50	CULVERT 669 LT	74	74	-	0.05	1.3	-	-	-	-	-	-	-
0010	451+46	-	451+46	CULVERT 670 RT	1,522	1,522	-	0.96	27.4	-	-	-	-	-	-	-
0010	451+46	-	451+46	CULVERT 670 LT	4,811	4,811	-	3.03	86.6	-	-	-	-	-	-	-
0010	448+50	-	454+50	CULVERT 670	-	-	-	-	-	-	-	-	-	1	2	LANE SHIFT STAGE 1
0010	448+50	-	454+50	CULVERT 670	-	-	-	-	-	-	-	-	-	1	2	LANE SHIFT STAGE 2
0010	121+00	-	484+90	PROJECT	-	-	-	-	-	-	-	-	2	-	-	UNDISTRIBUTED
				TOTAL 0010	7,770	7,420	525	5	134	2	4	89	2	2	4	

CATEGORY	STATION	TO	STATION	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH LF	646.5420 MARKING AERIAL ENFORCEMENT BAR EPOXY EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.6466 COLD WEATHER MARKING EPOXY 6-INCH LF	646.9000 MARKING REMOVAL LINE 4-INCH LF	REMARKS
0010	121+00	-	484+90	PROJECT	-	-	-	-	-	29,138	-	YELLOW / CENTERLINE
0010	121+00	-	484+90	PROJECT	-	-	72,780	-	-	-	-	WHITE / LANE EDGE
0010	121+00	-	484+90	PROJECT	8,451	-	9,781	-	-	-	-	YELLOW / SOLID-DASH
0010	121+00	-	484+90	PROJECT	1,730	-	5,406	-	-	-	-	YELLOW / DASHED
0010	121+00	-	484+90	PROJECT	13,950	-	13,950	-	-	-	-	YELLOW / SOLID-SOLID
0010	448+50	-	454+50	CULVERT 670	3,280	24	-	-	-	-	619	LANE SHIFT STAGE 1
0010	448+50	-	454+50	CULVERT 670	4,779	36	-	-	-	-	619	LANE SHIFT STAGE 2
0010	338+75	-	338+75	STH 47 INTERSECTION	-	-	-	-	26	-	-	-
0010	243+25	-	269+65	PROJECT	-	-	-	10	-	-	-	-
				TOTAL 0010	32,190	60	101,918	10	26	29,138	1,238	

CATEGORY	STATION	TO	STATION	LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	661.0101.01 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (01. 1175-18-74) EACH	REMARKS
0010	121+00	-	484+90	PROJECT	-	-	-	-	18	-	BOP & EOP
0010	451+46	-	451+46	CULVERT 670	344	8	232	64	-	-	LANE SHIFT STAGE 1 - 4 DAYS
0010	451+46	-	451+46	CULVERT 670	860	130	620	235	-	-	LANE SHIFT STAGE 2 - 5 DAYS
0010	121+00	-	484+90	PROJECT	-	-	-	1,495	-	-	ADVANCE WARNING SIGNING PLAN - 65 DAYS
0010	121+00	-	484+90	PROJECT	-	-	-	780	-	-	MAXIMUM WIDTH TRAFFIC CONTROL OVERVIEW - 65 DAYS
0010	451+46		451+46	CULVERT 670	-	-	-	-	-	1	TRAILER MOUNTED TRAFFIC SIGNALS
0010	121+00	-	484+90	PROJECT	120	14	85	257	-	-	UNDISTRIBUTED
				TOTAL 0010	1,324	152	937	2,831	18	1	

CATEGORY	STATION	TO	STATION	LOCATION	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	REMARKS
0010	121+00	-	484+90	PROJECT	-	-	36,390	-
0010	161+98	-	161+98	CULVERT 651	-	1	-	-
0010	355+10	-	355+10	CULVERT 665	-	1	-	-
0010	416+50	-	416+50	CULVERT 669	-	1	-	-
0010	451+46	-	451+46	CULVERT 670	-	1	-	-
0010	339+00	-	339+00	STH 47 INTERSECTION	90	-	-	CURB AND GUTTER (SW QUADRANT)
0010	338+25	-	338+25	STH 47 INTERSECTION	77	-	-	CURB AND GUTTER (SE QUADRANT)
				TOTAL 0010	167	4	36,390	

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0035.01 SPECIAL (01. FRACTURED STONE EXTRA HEAVY RIPRAP) CY	SPV.0035.02 SPECIAL (02. FRACTURED STONE MEDIUM RIPRAP) CY	SPV.0060.06 SPECIAL (06. ROOT WAD, 15" DIAMETER TRUNK) EACH	SPV.0180.01 SPECIAL (01. PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSINGS) SY	SPV.0195.01 SPECIAL (01. TRAVEL CORRIDOR STONE) TON	REMARKS
0010	325+10	-	326+90	SCOUR PROTECTION	781	283	19	-	120	-
0010	150+25	-	150+25	PROJECT	-	-	-	67	-	SNOWMOBILE CROSSING
0010	175+35	-	175+35	PROJECT	-	-	-	67	-	SNOWMOBILE CROSSING
0010	338+15	-	338+15	STH 47 INTERSECTION	-	-	-	105	-	SNOWMOBILE CROSSING
0010	366+25	-	366+25	PROJECT	-	-	-	63	-	SNOWMOBILE CROSSING
0010	458+25	-	458+25	PROJECT	-	-	-	76	-	SNOWMOBILE CROSSING
				TOTAL 0010	781	283	19	378	120	



5 5

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 38	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 01

PLOT DATE : 1/17/2024 2:20 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STA 150+25
PROTECTIVE THERMOPLASTIC COATING
AT SNOWMOBILE CROSSING REQ'D
SEE CONSTRUCTION DETAIL

146 148 150 152 S82°28'27"W 154 156 158 160

USH 51

2662.25'

N

5

5

RW

PI: 166+82.47

160 162 164 166 168 170 172 174

USH 51

N

STA 161+98
REMOVING SMALL PIPE CULVERTS #26051000651
CULVERT PIPE CLASS III-B NON METAL 24-INCH REQ'D
APRON ENDWALLS FOR CULVERT PIPE 24-INCH REQ'D
LT INV = 1595.85
RT INV = 1596.10
LENGTH = 68 FT
SEE CULVERT TYPICAL AND CONSTRUCTION DETAIL

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 39	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 02

PLOT DATE : 1/17/2024 2:20 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT



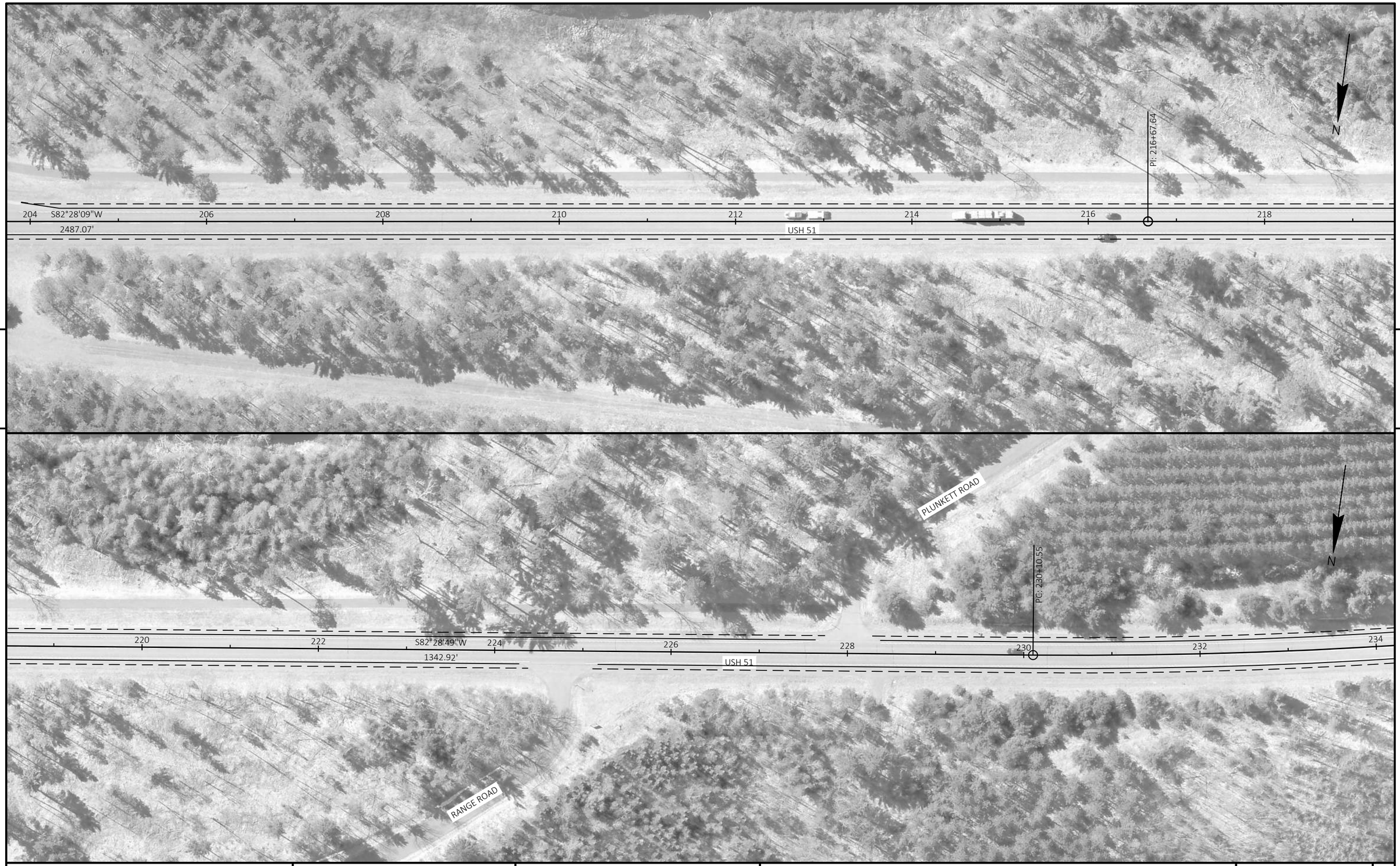
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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 40	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 03

PLOT DATE : 1/17/2024 2:20 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 41	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 04

PLOT DATE : 1/17/2024 2:20 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

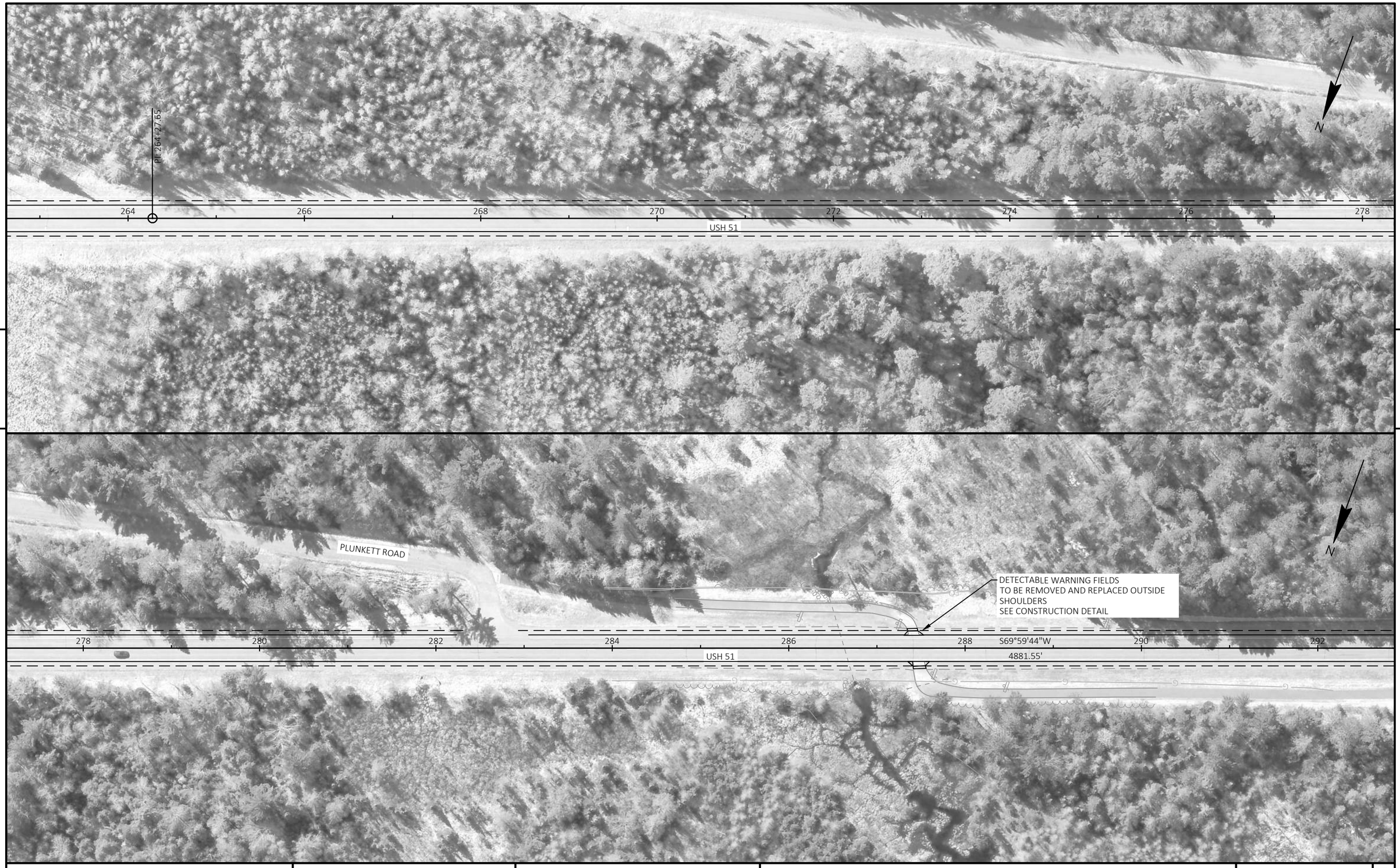
WISDOT/CADDS SHEET 44



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 42	E



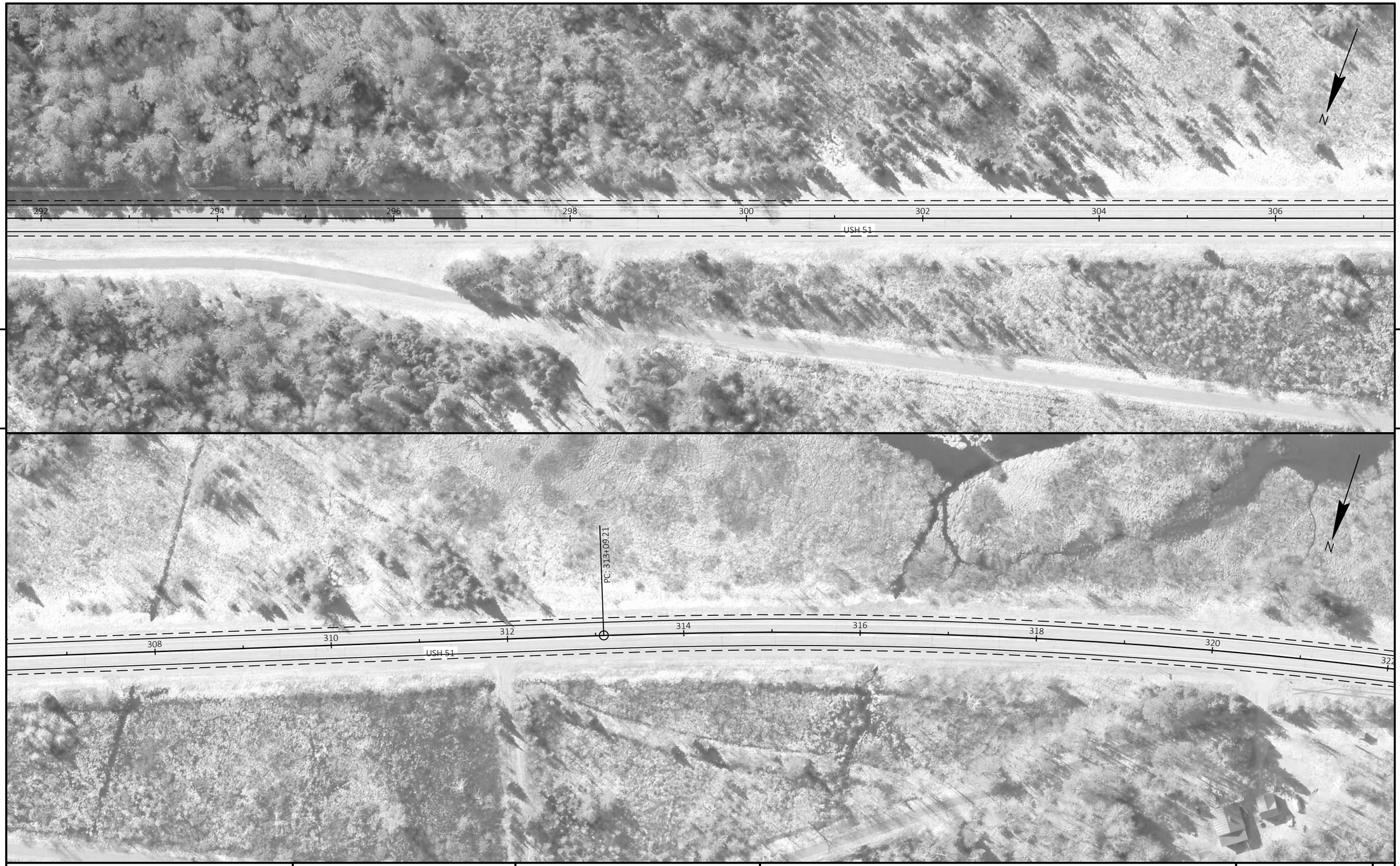
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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 43	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 06

PLOT DATE : 1/17/2024 2:21 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 44	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 07

PLOT DATE : 1/17/2024 2:21 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

MANITOWISH RIVER

RW

N

PT: 336+05.56

322 324 326 328 330 332 334 336

USH 51

BRIDGE

PI STA = 324+73.02
Y = 254840.334
X = 788076.980
DELTA = 22°58'31" RT
D = 1°00'02"
T = 1163.81'
L = 2296.36'
R = 5726.63'
PC STA = 313+09.21
PT STA = 336+05.56

5

5

STH 47

BP: 7+49.05

PI: 8+06.54

PI: 8+82.64

PI: 9+17.94

EP: 10+00.00

N87°01'45"W
656.01'

STA 338+66 LT
EXISTING CULVERT: CULVERT PIPE CORRUGATED STEEL
24-INCH @ 0.14% SLOPE
CLEANING CULVERT PIPES FOR LINER VERIFICATION REQ'D
CULVERT PIPE LINERS (SIZE) (01. 24-INCH) REQ'D
APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH REQ'D

PC: 342+61.57

PT: 336+05.56

336 338 340 342 344 346 348 350

USH 51

STA 338+15
PROTECTIVE THERMOPLASTIC
COATING AT SNOWMOBILE
CROSSING REQ'D
SEE CONSTRUCTION DETAIL

MANITOWISH RD

OLD HWY 51 RD

RW

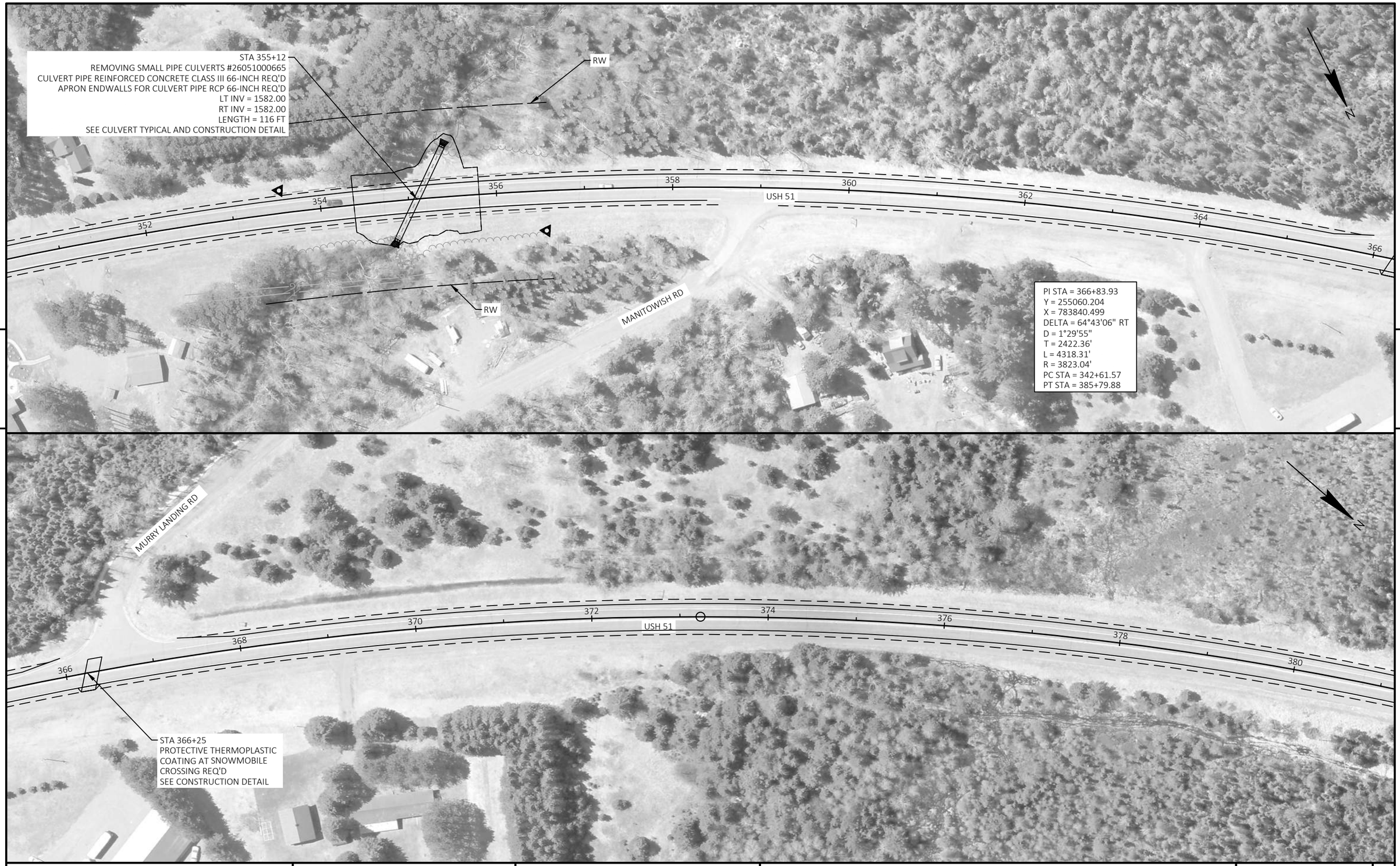
N

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 45	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 08

PLOT DATE : 1/17/2024 2:21 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 46	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 09

PLOT DATE : 1/17/2024 2:22 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 47	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 10

PLOT DATE : 1/17/2024 2:22 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

STA 416+51
REMOVING SMALL PIPE CULVERTS #26051000669
CULVERT PIPE CLASS III-B NON METAL 24-INCH REQ'D
APRON ENDWALLS FOR CULVERT PIPE 24-INCH REQ'D
LT INV = 1607.68
RT INV = 1607.07
LENGTH = 68 FT
SEE CULVERT TYPICAL AND CONSTRUCTION DETAIL

RW

PC: 411+63.50

PT: 424+64.54

PARKWAY DR

412 414 416 418 420 422 424 426

USH 51

OLD HWY 51 RD

MAPLE RIDGE RD

PI STA = 418+20.45
Y = 260299.193
X = 781690.693
DELTA = 19°36'56" LT
D = 1°30'28"
T = 656.95'
L = 1301.04'
R = 3800.22'
PC STA = 411+63.50
PT STA = 424+64.54

N

PC: 437+81.68

426 428 430 N42°00'06"W 432 434 436 438 440

1317.14'

USH 51

5

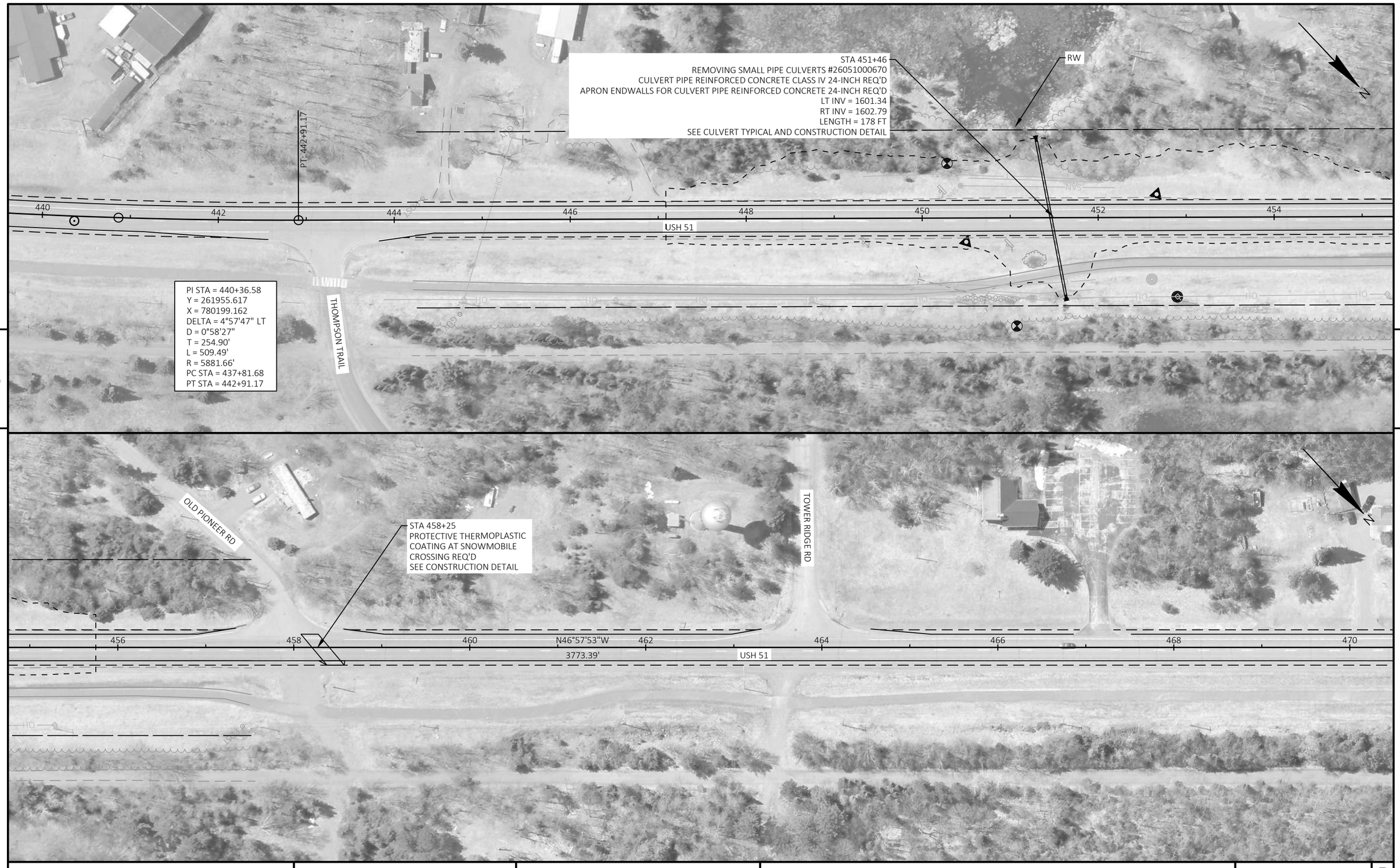
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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 48	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 11

PLOT DATE : 1/17/2024 2:22 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5

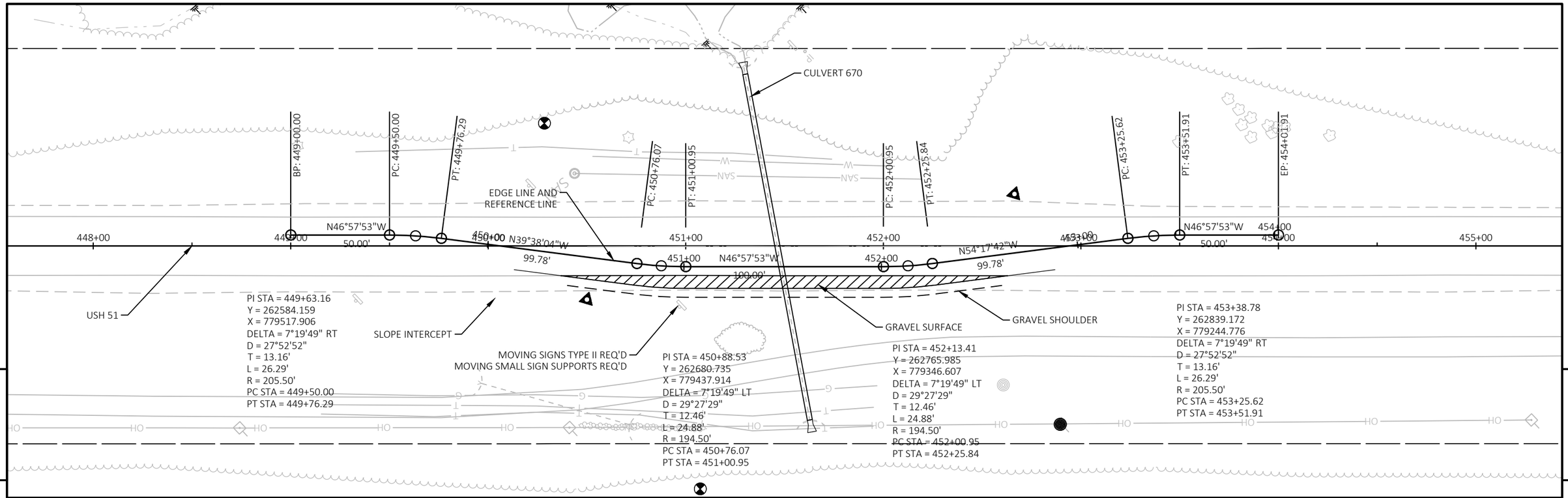
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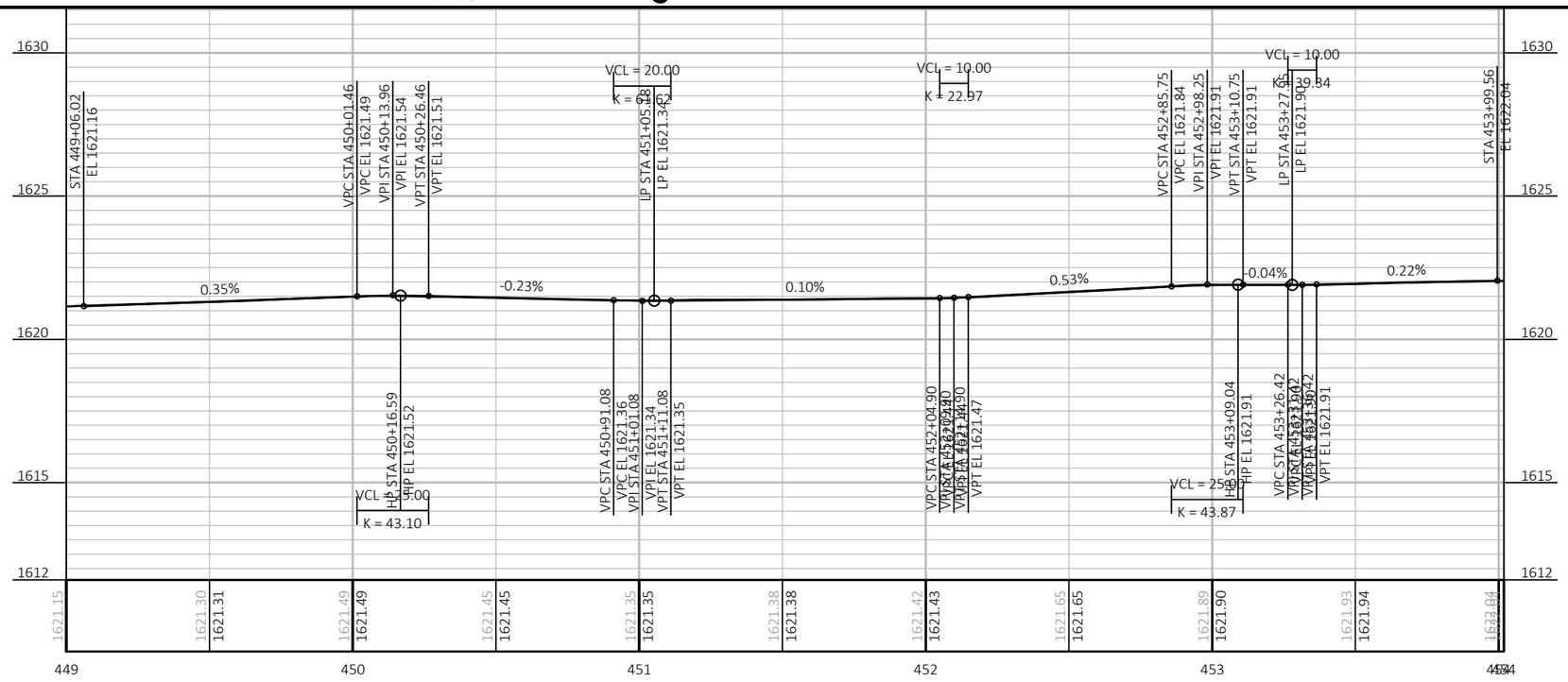
PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 49	E



5 5

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 50	E



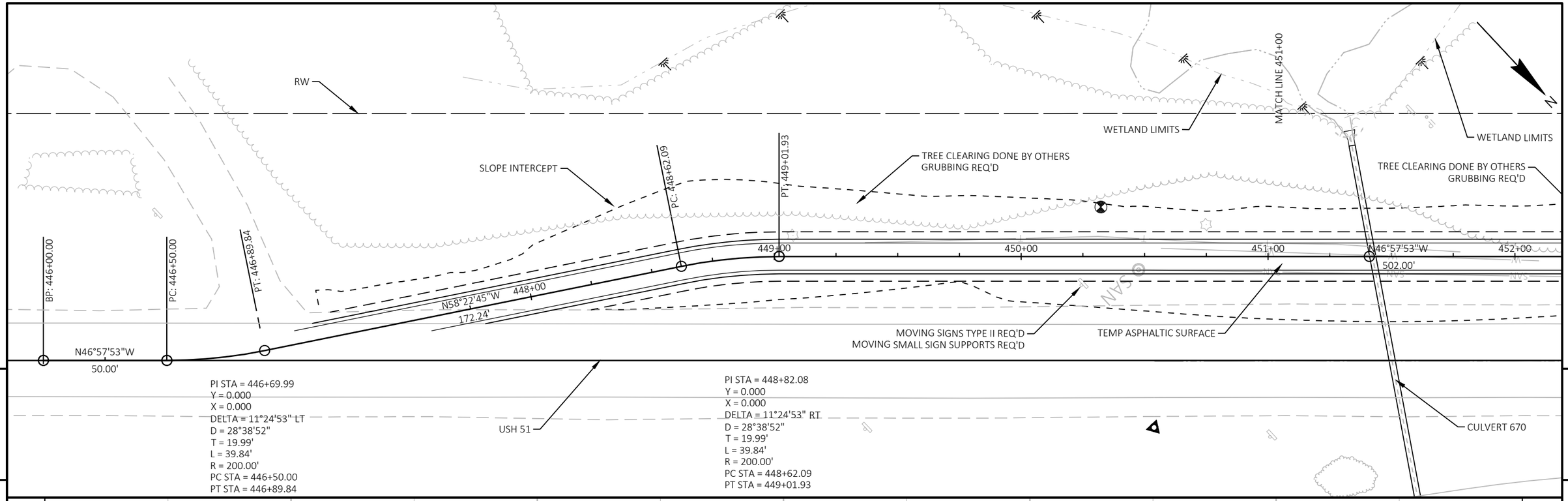


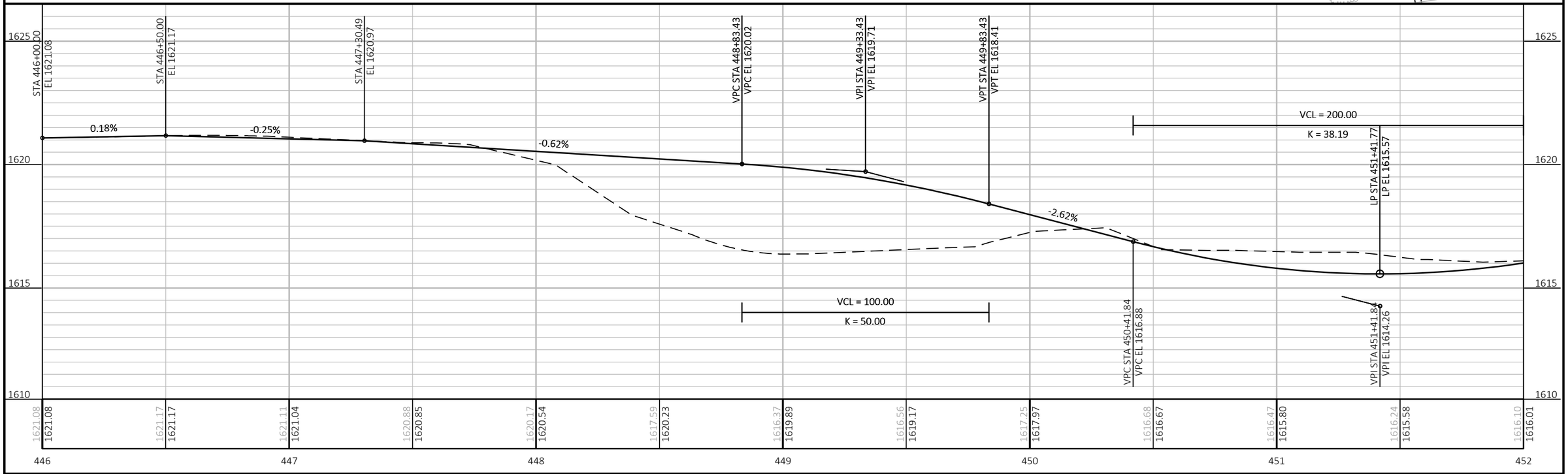
PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN AND PROFILE: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 1	SHEET 51	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 01

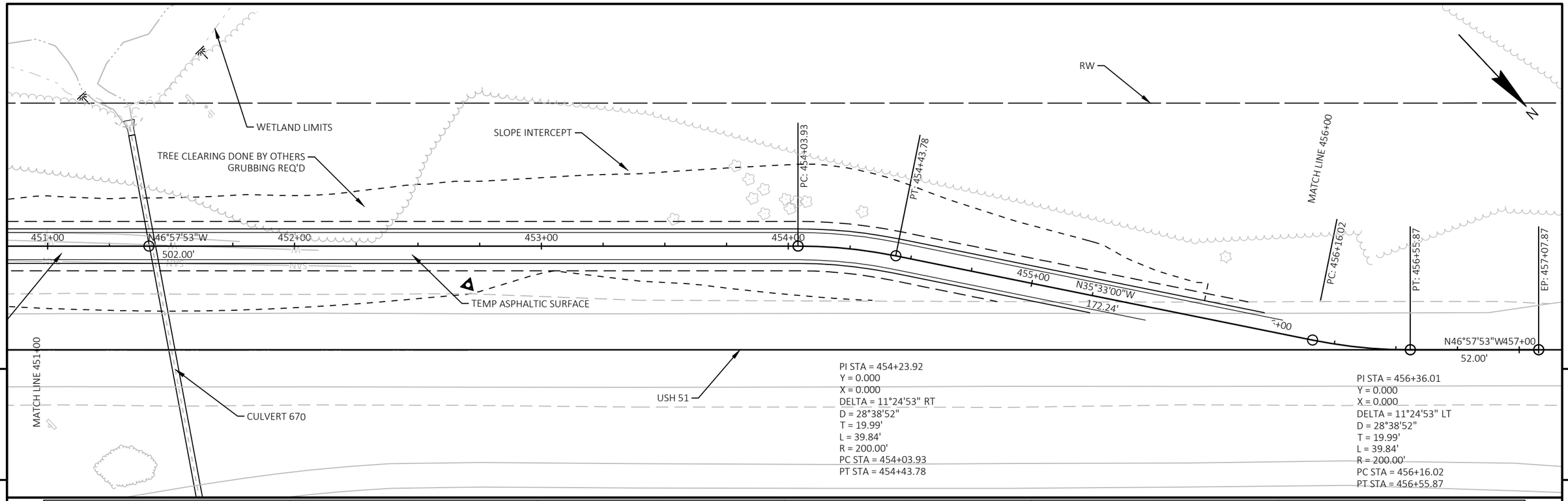
PLOT DATE : 1/17/2024 2:23 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:50 FT

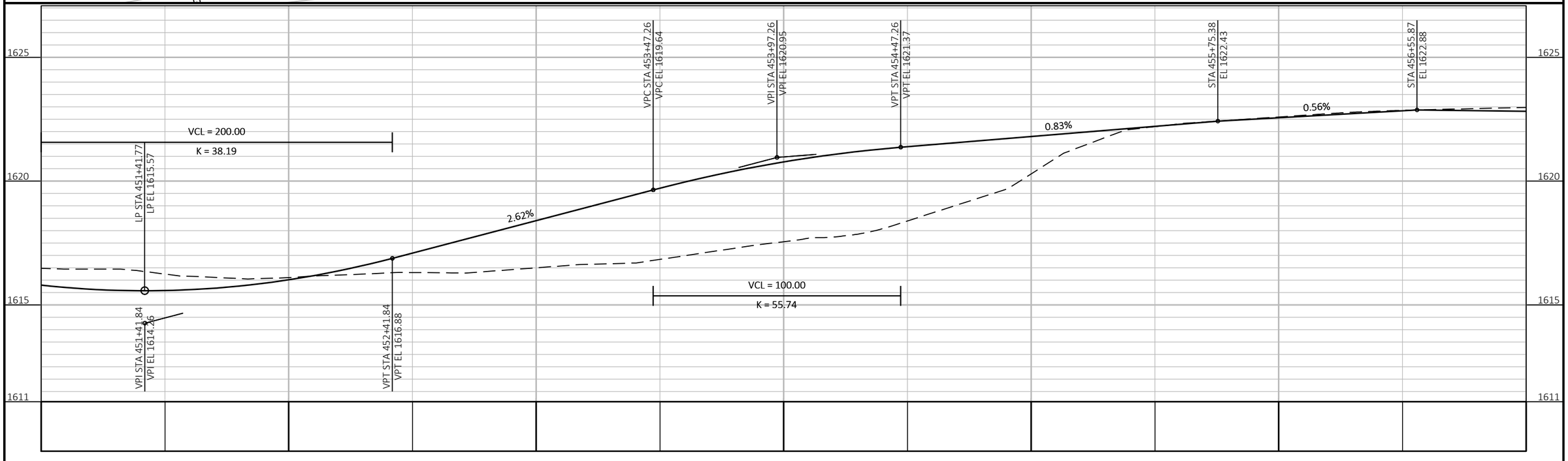
WISDOT/CADDS SHEET 44



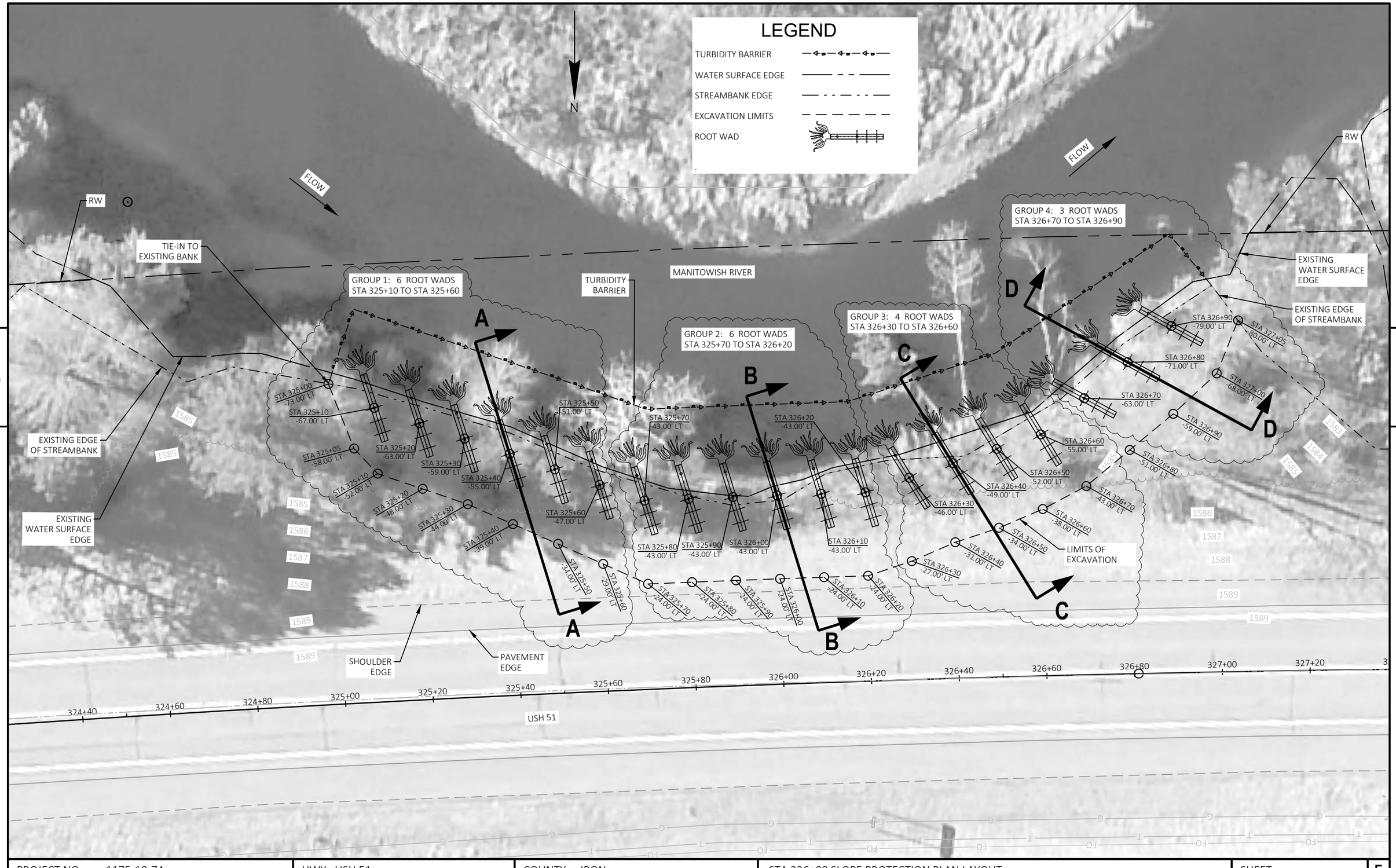


PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN AND PROFILE: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 2	SHEET 52	E





PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	PLAN AND PROFILE: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 2	SHEET 53	E



5

5

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	STA 326+00 SLOPE PROTECTION PLAN LAYOUT	SHEET 54	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 01

PLOT DATE : 1/17/2024 2:25 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : ############

WISDOT/CADDS SHEET 44



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	STA 326+00 SLOPE PROTECTION PLAN - FINAL GRADING	SHEET 55	E

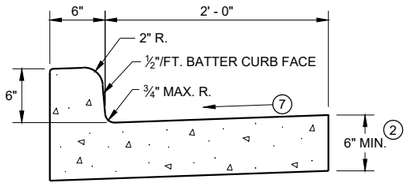
FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\050301-PN.DWG
LAYOUT NAME - 01

PLOT DATE : 1/17/2024 2:26 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : ##########

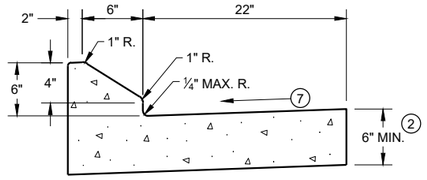
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

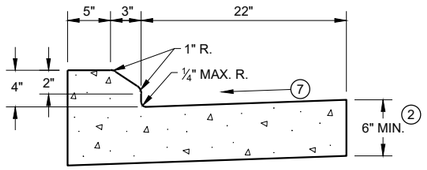
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-21E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-21G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09F	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
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C14-04	AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS
15C19-08A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-09A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D33-09	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D48-01	TRAFFIC CONTROL, LANE SHIFT IN FLAGGING OPERATION
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY



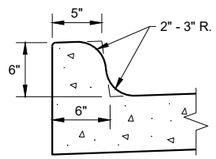
TYPES A (1) & D



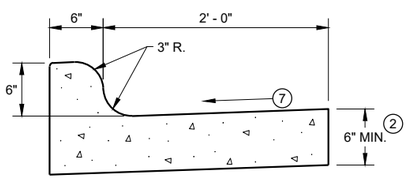
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

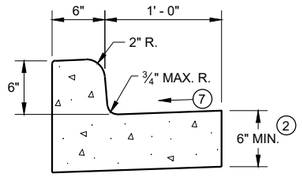


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



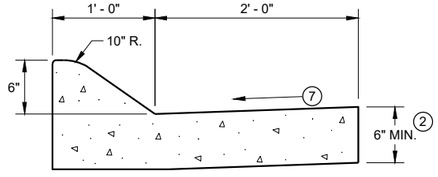
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

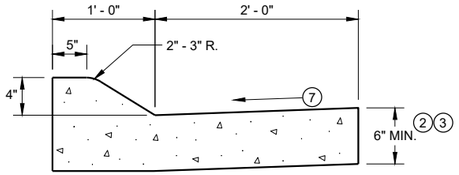


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

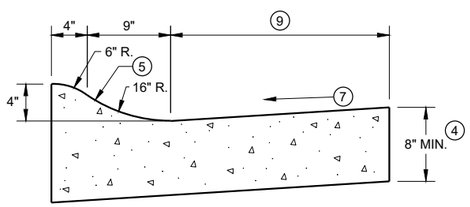


6" SLOPED CURB TYPES A (1) & D



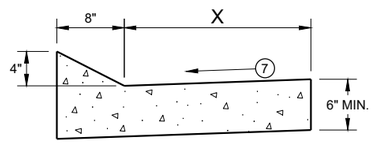
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

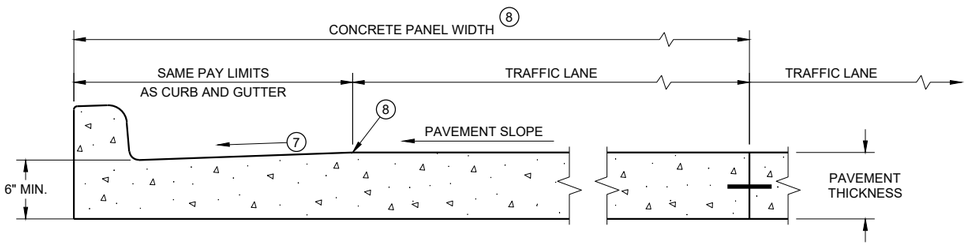


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

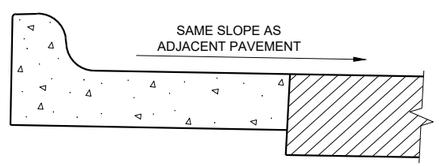
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



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) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES 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.

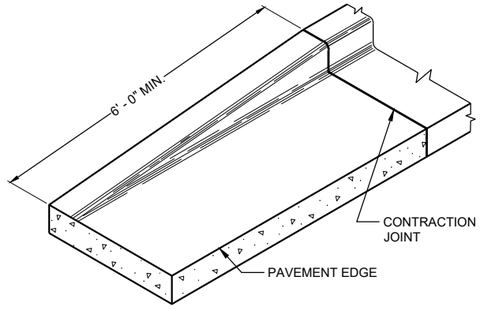
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

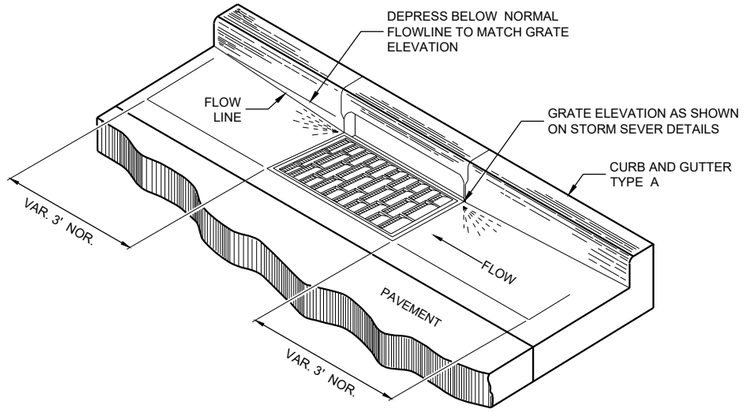
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 23a



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.

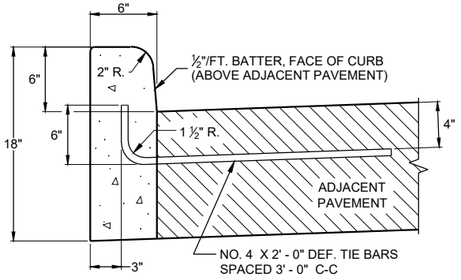
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

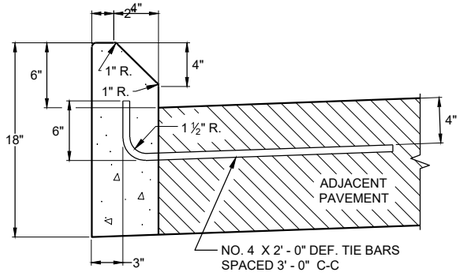
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

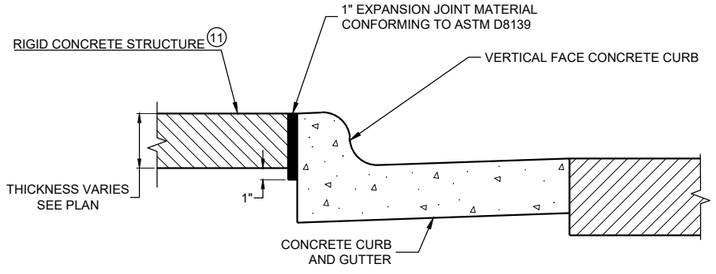


TYPES A (1) & D

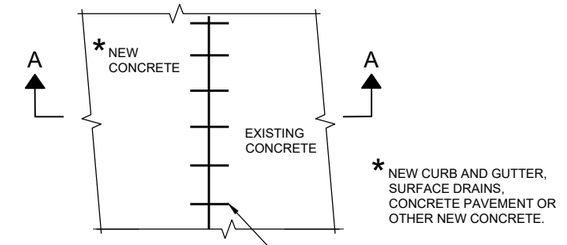


TYPES G (1) & J

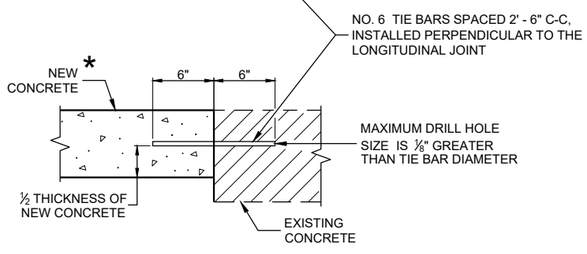
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)

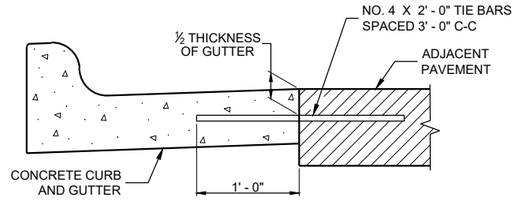


PLAN VIEW

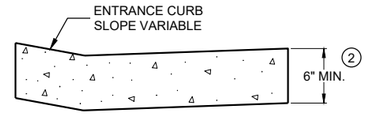


SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

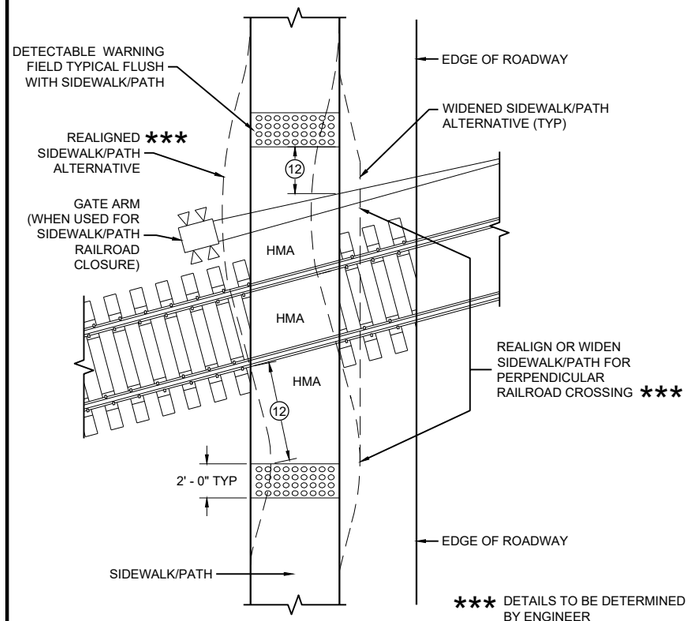
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

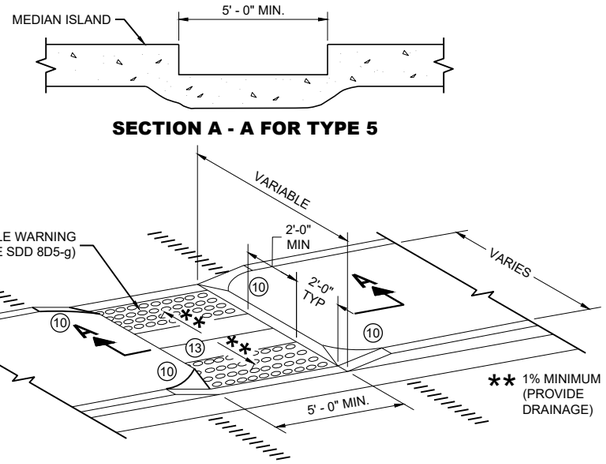
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SDD08D01 - 23b



CURB RAMP TYPE 8

DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS



SECTION A - A FOR TYPE 5

CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

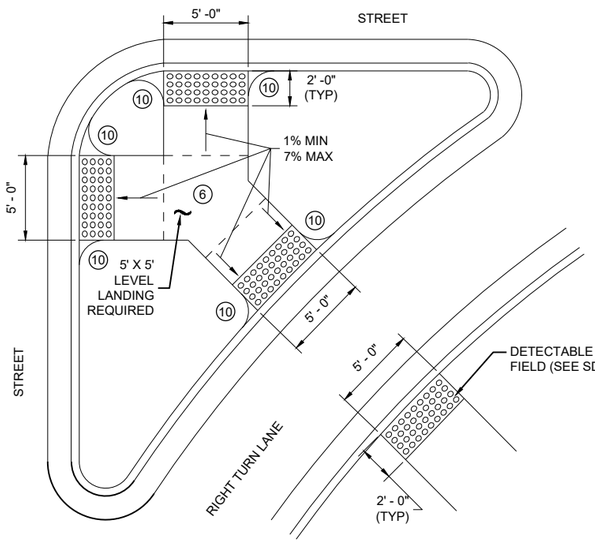
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

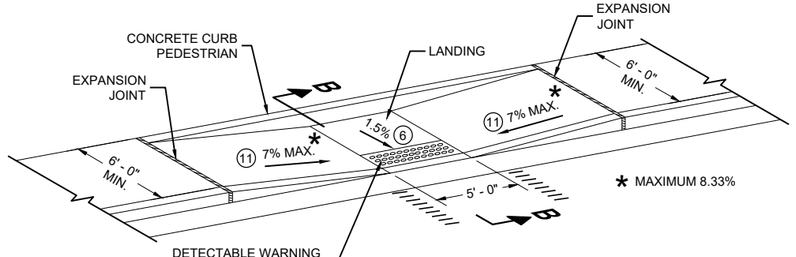
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

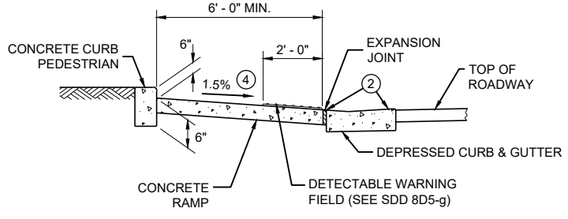
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS

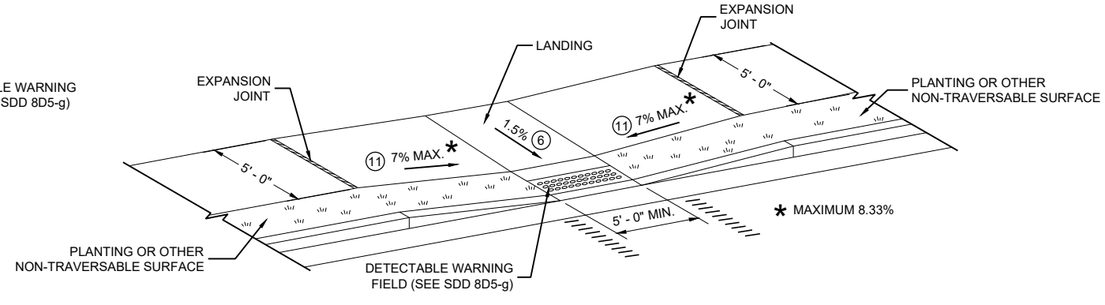


CURB RAMP TYPE 7A

FOR INTERSECTIONS AND MID BLOCK CROSSINGS



SECTION B - B FOR TYPE 7A



CURB RAMP TYPE 7B

FOR INTERSECTIONS AND MID BLOCK CROSSINGS

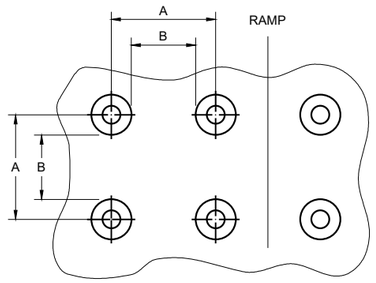
CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

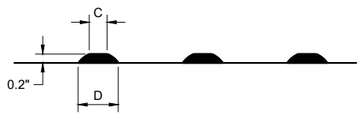
SDD 08D05-21e

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

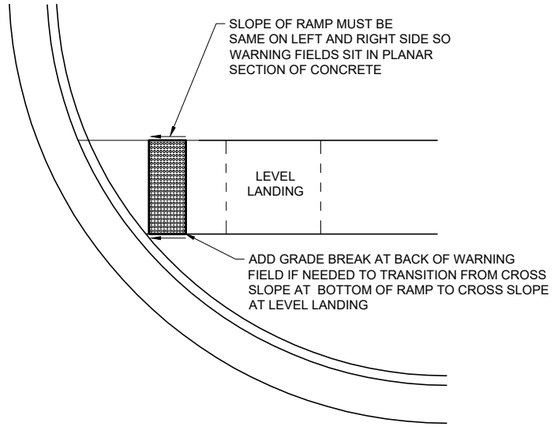
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW



ELEVATION VIEW



DETECTABLE WARNING FIELD
PLANAR INSTALLATION

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

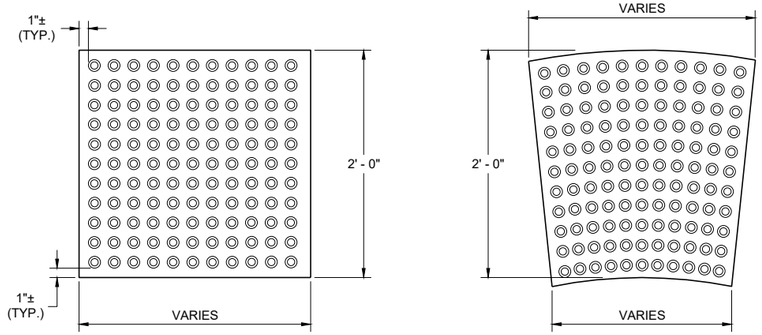
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

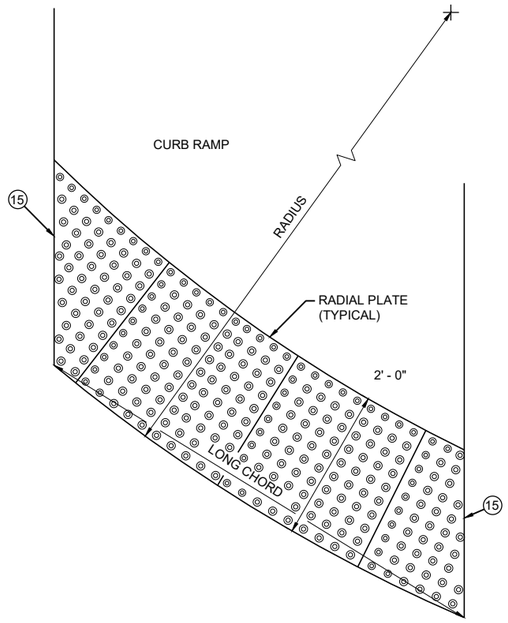
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



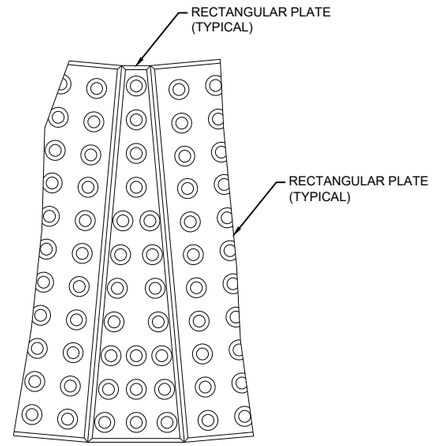
RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

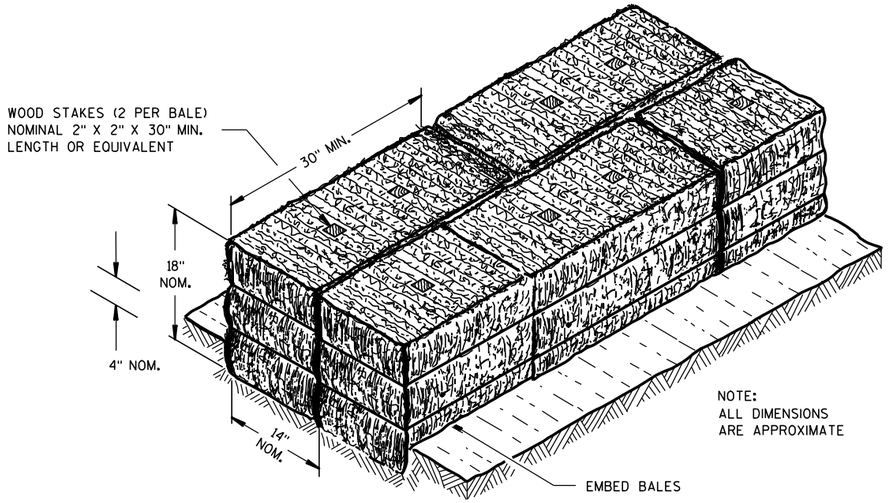
APPROVED

July 2023 — DATE

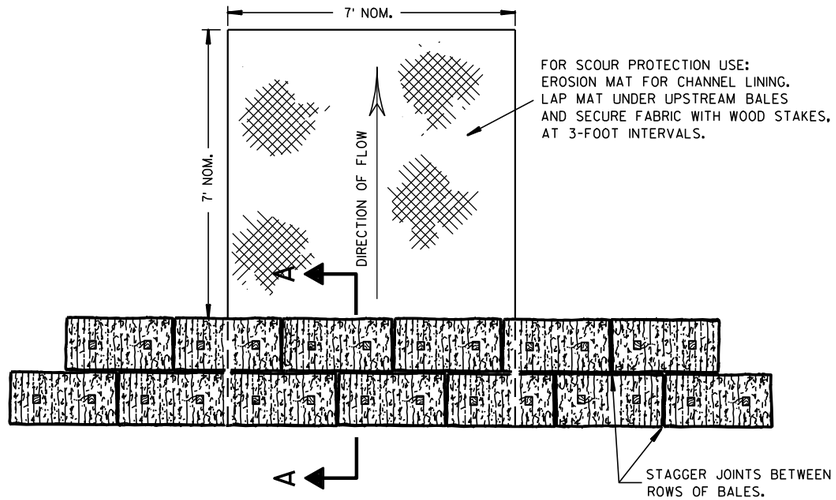
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

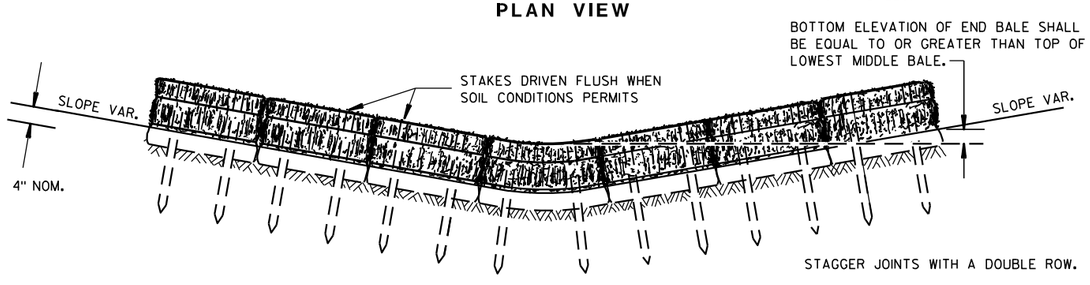
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SDD 08D05-21g



SECTION A-A



PLAN VIEW



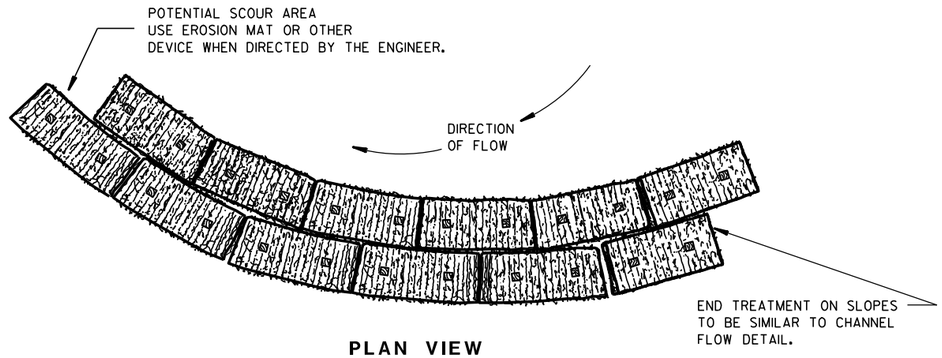
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

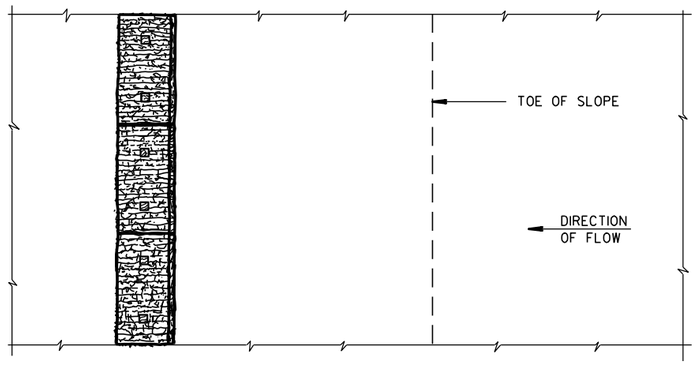
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

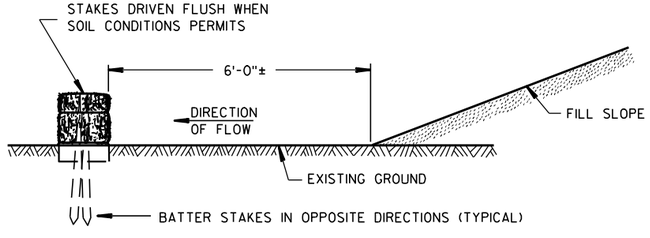


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

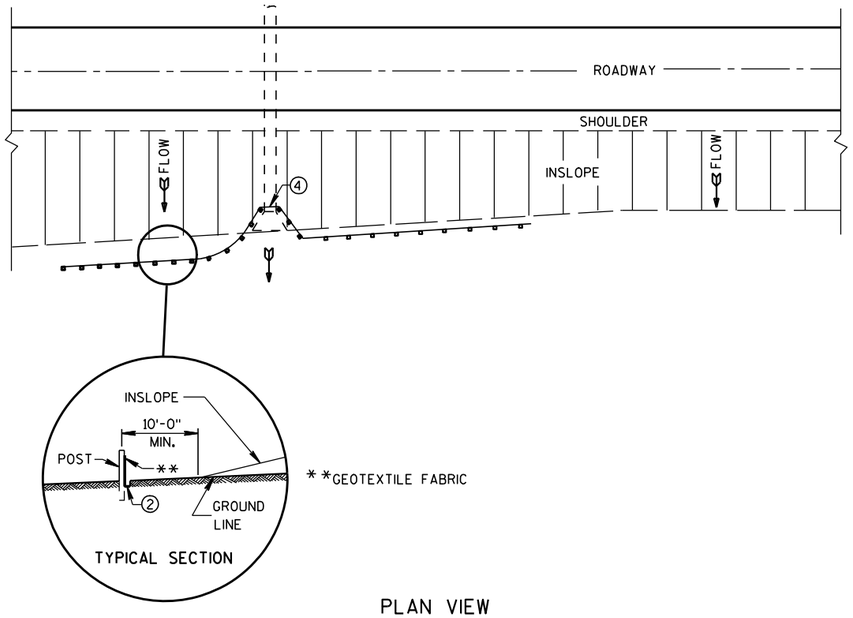
APPROVED

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

FHWA

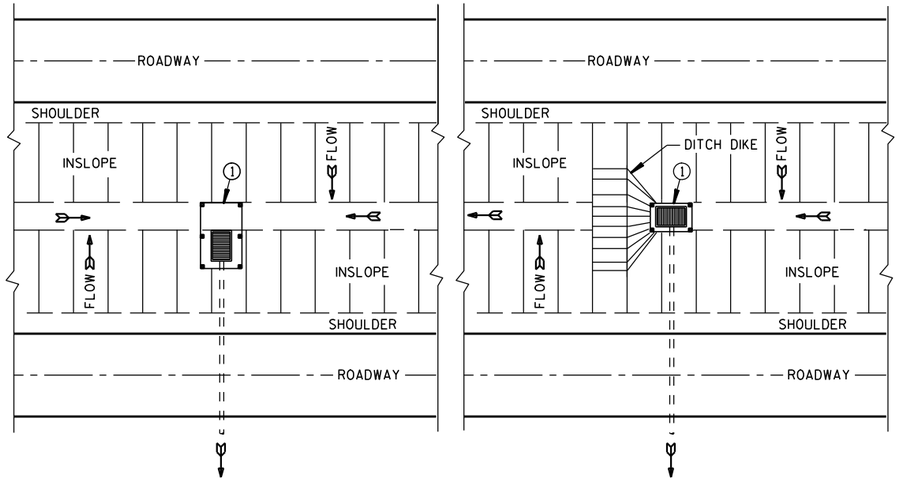
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

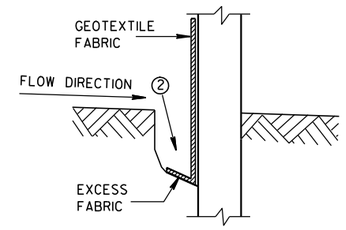
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

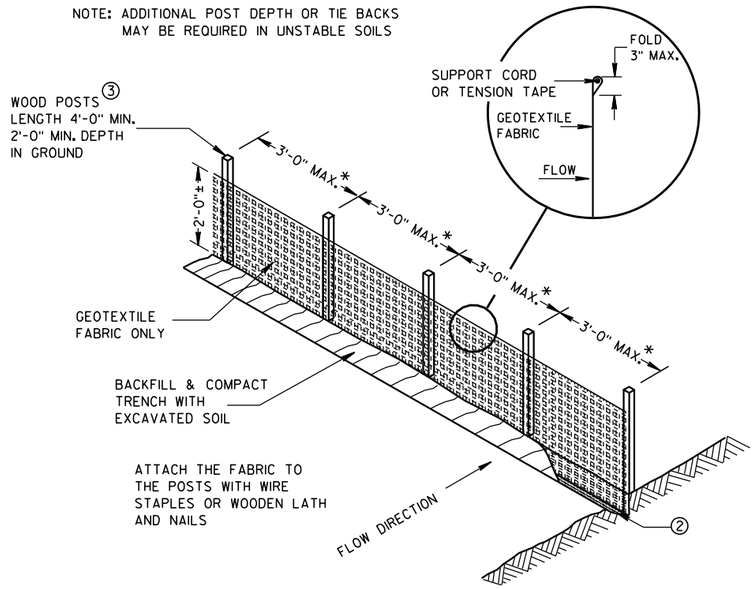
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

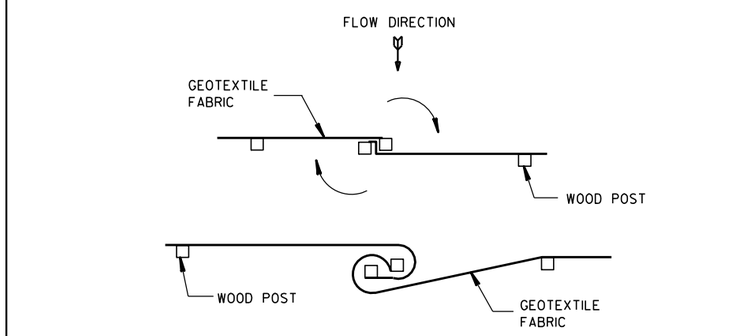
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



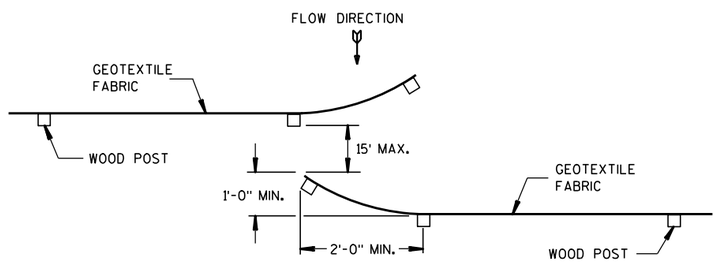
TRENCH DETAIL



SILT FENCE

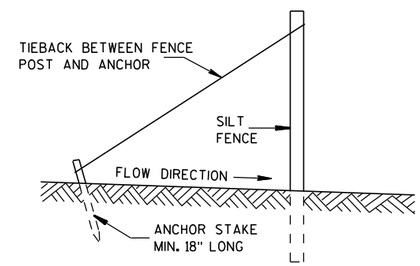


TWIST METHOD



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

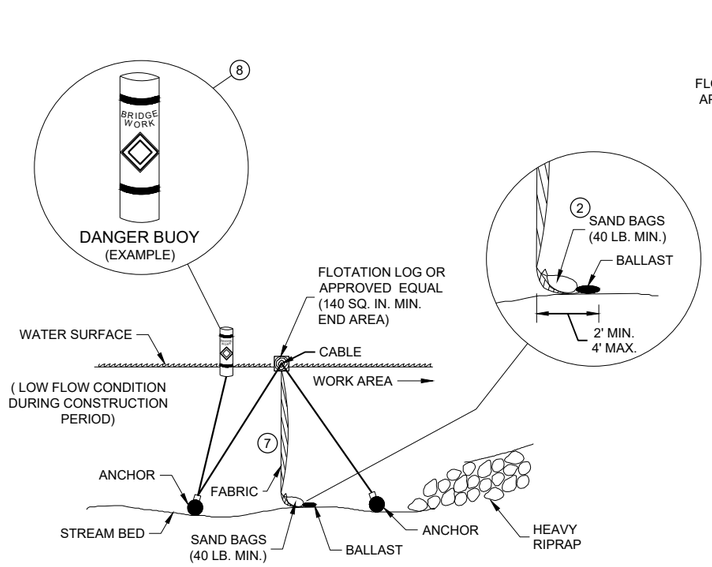
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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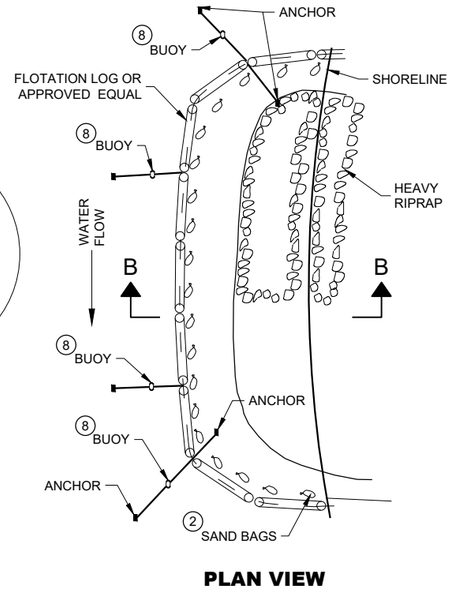
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

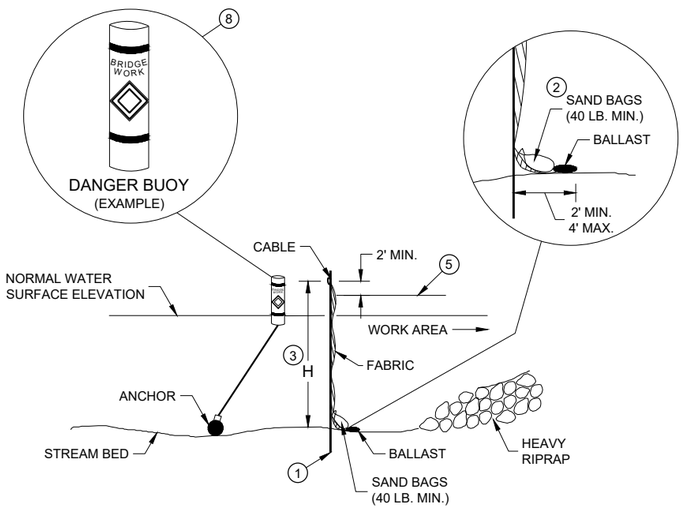


SECTION B - B

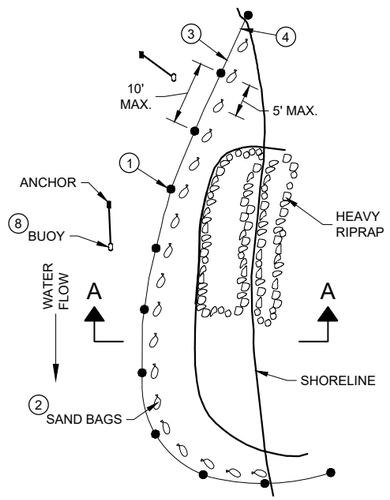


PLAN VIEW

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) SAND BAGS 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 FEET, POST SPACING MAY NEED TO BE DECREASED.

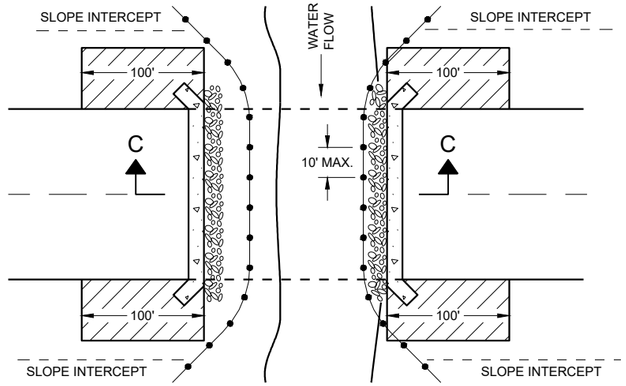
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

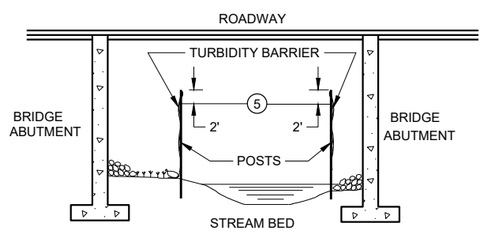
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(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

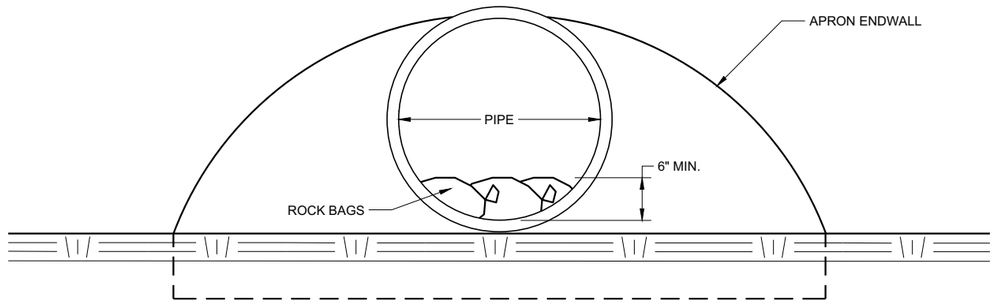
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/4/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOI
ENGINEER

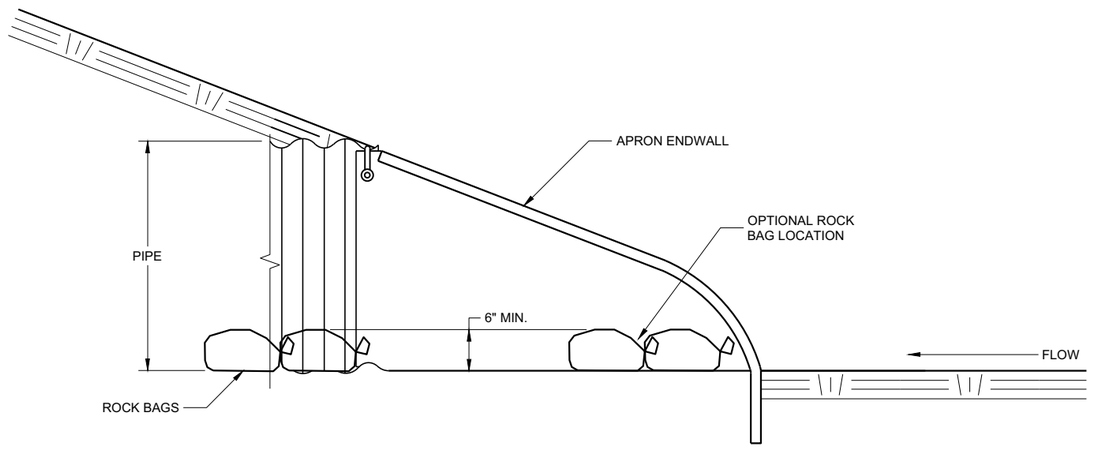
FHWA

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SDD 08E11 - 02
SDD 08E11 - 02



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

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SDD 08E15 - 01

6

SDD 08E15 - 01

METAL APRON ENDWALLS

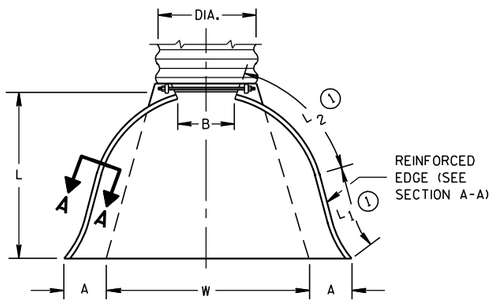
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

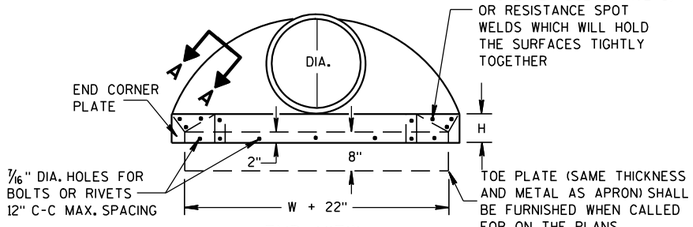
REINFORCED CONCRETE APRON ENDWALLS

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

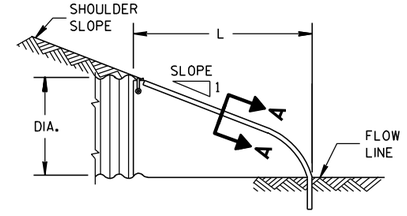
*MINIMUM
**MAXIMUM



PLAN VIEW

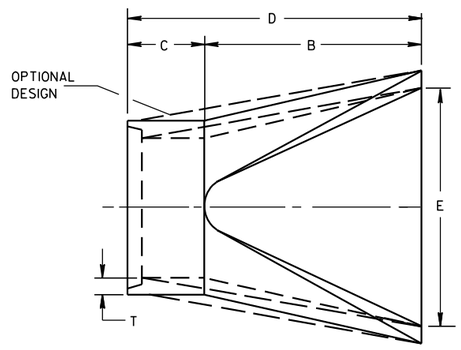


END VIEW

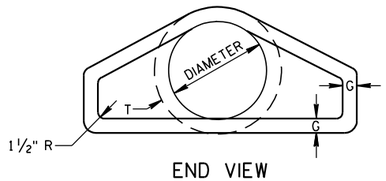


SIDE ELEVATION

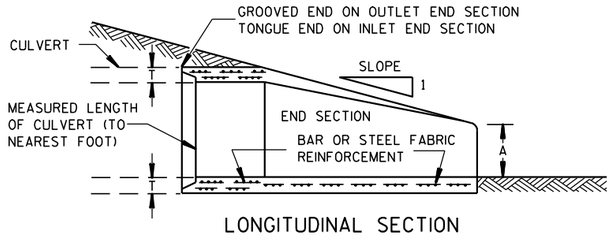
METAL ENDWALLS



PLAN

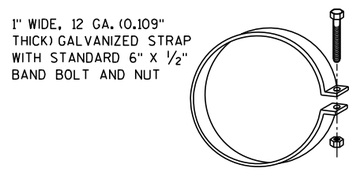


END VIEW



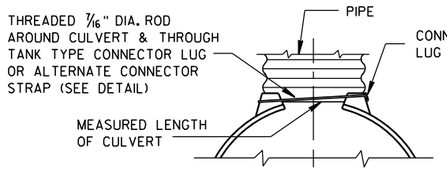
LONGITUDINAL SECTION

CONCRETE ENDWALLS

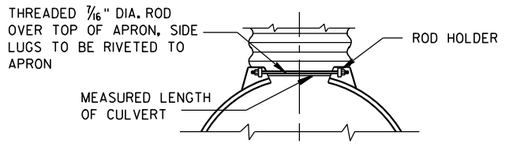


ALTERNATE FOR TYPE 1 CONNECTION

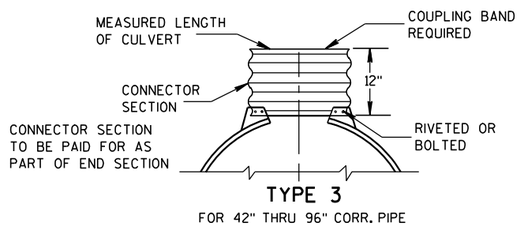
END SECTION CONNECTOR STRAP



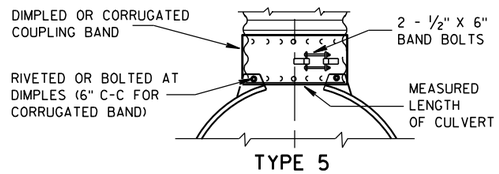
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

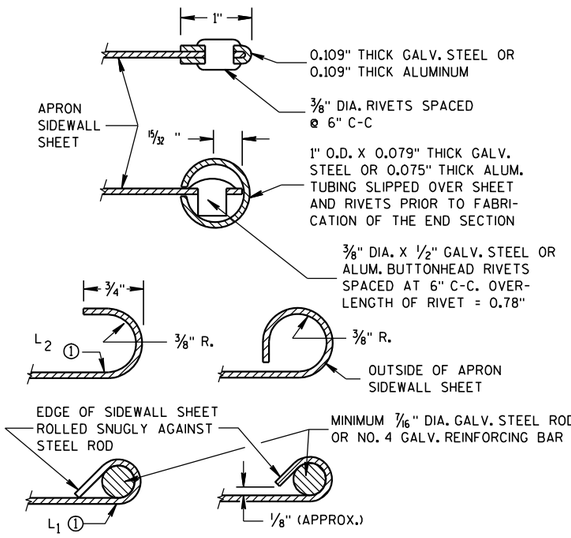
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

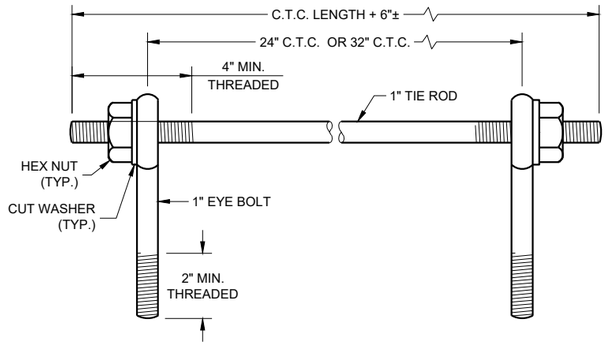
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

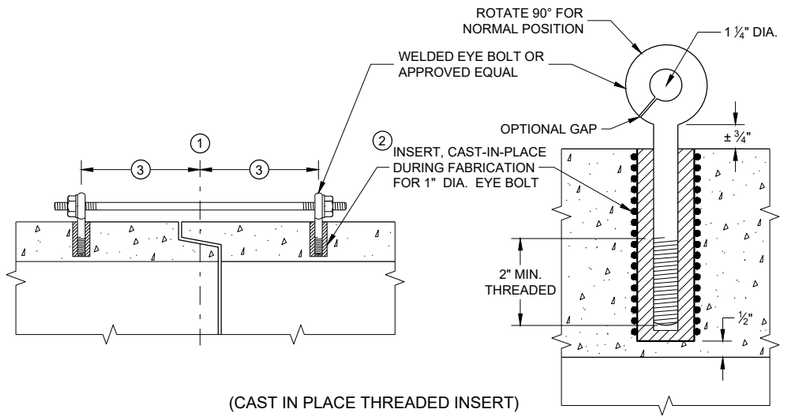
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 65 NEER
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) CENTER LINE 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.

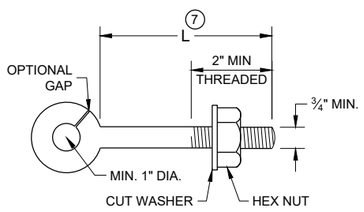
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

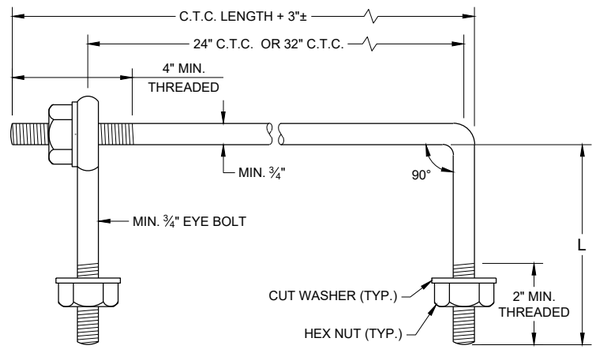
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

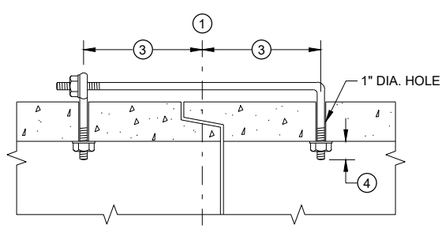


EYE BOLT (7)

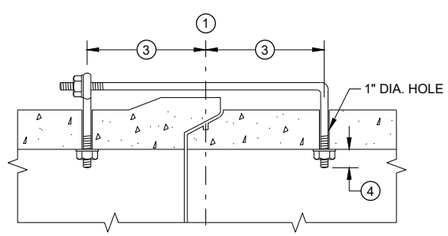
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

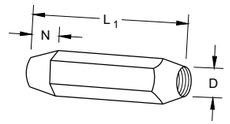
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

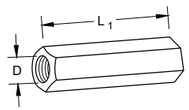
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



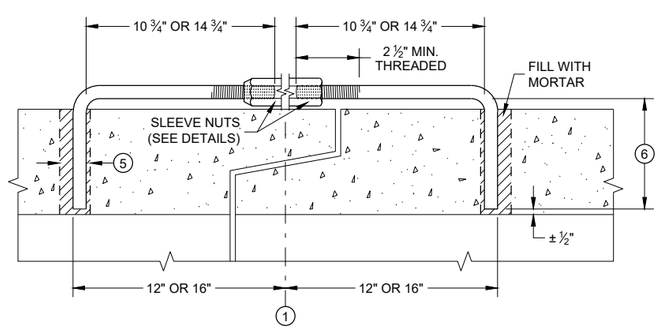
TAPERED



PLAIN

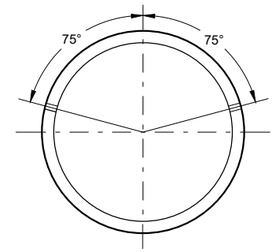
RIGHT AND LEFT THREADS

SLEEVE NUTS



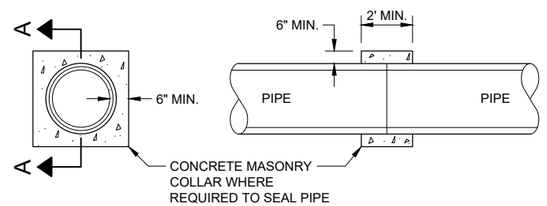
LONGITUDINAL SECTION

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

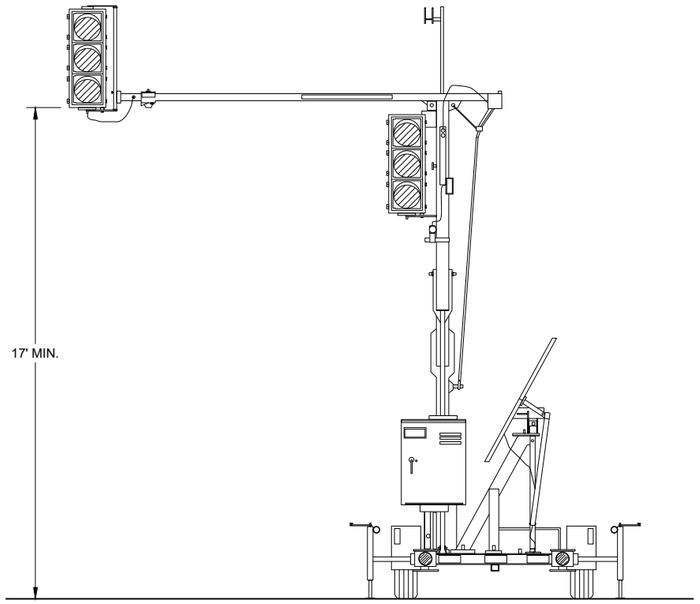
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

SDD 08F04 - 08

SDD 08F04 - 08

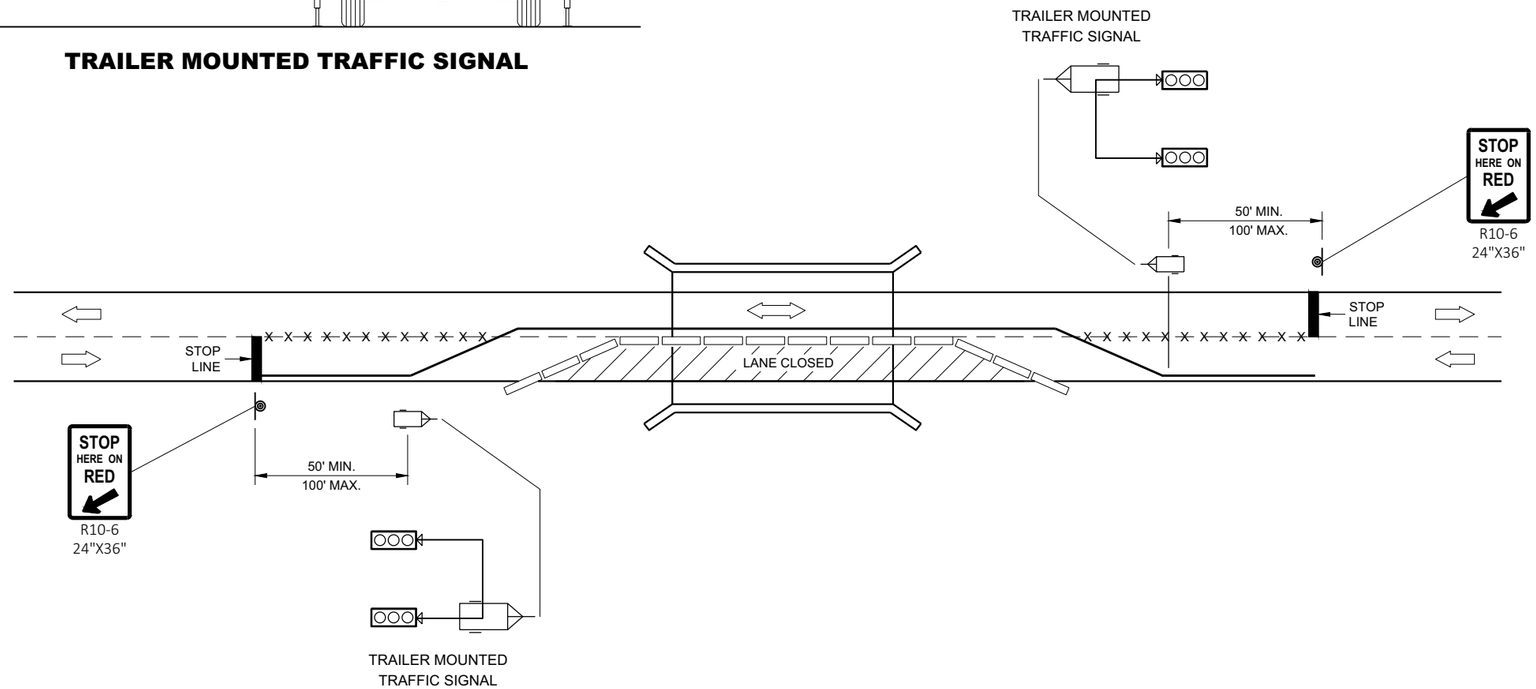


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD09G02 - 05c

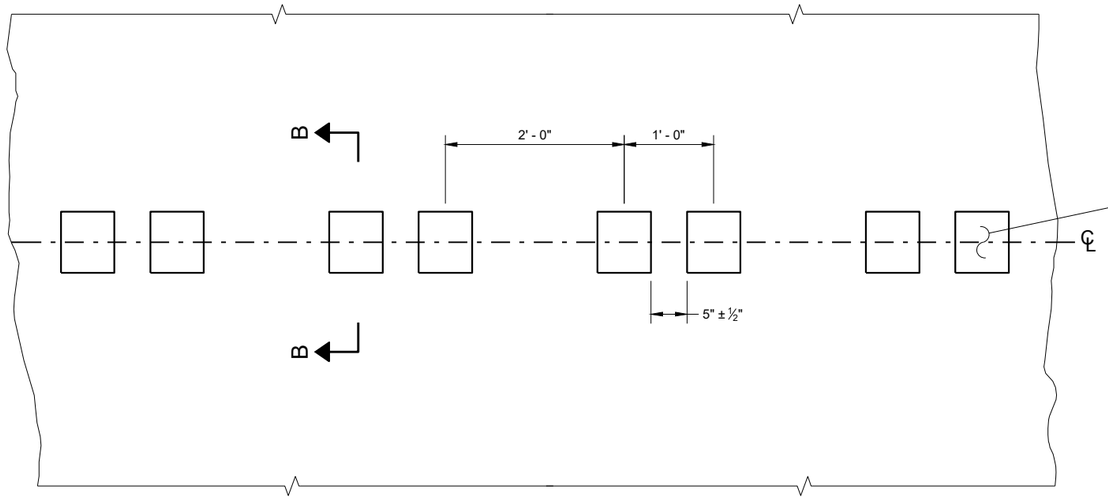
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SDD09G02 - 05c

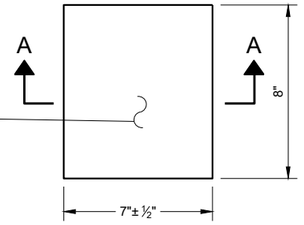
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A11 SHEETS "d" AND "e".

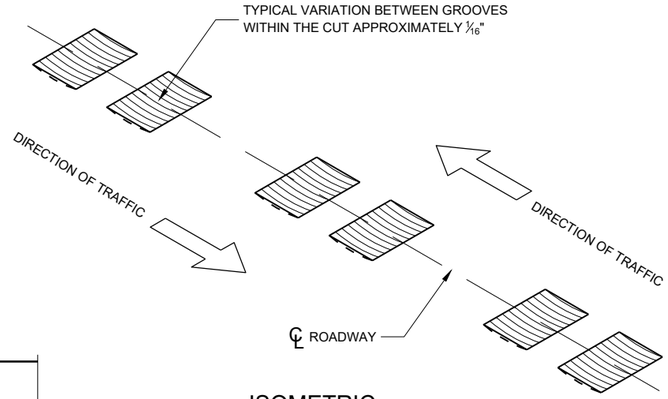
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



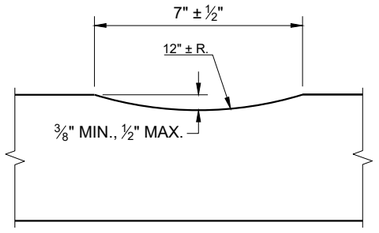
PLAN DETAIL VIEW



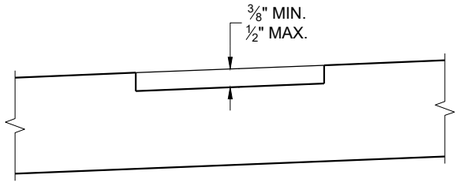
PLAN VIEW
(SINGLE GROOVE)



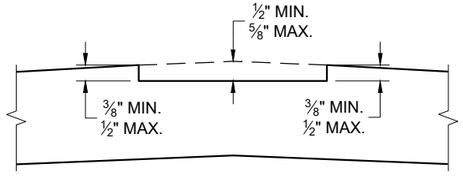
ISOMETRIC



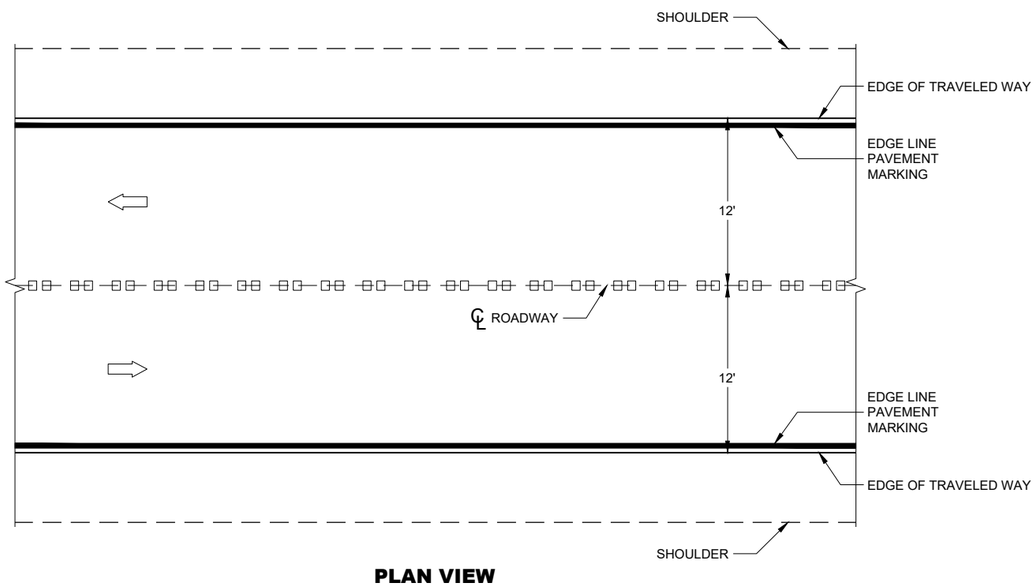
SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



PLAN VIEW

CENTERLINE RUMBLE STRIPS - ASPHALT

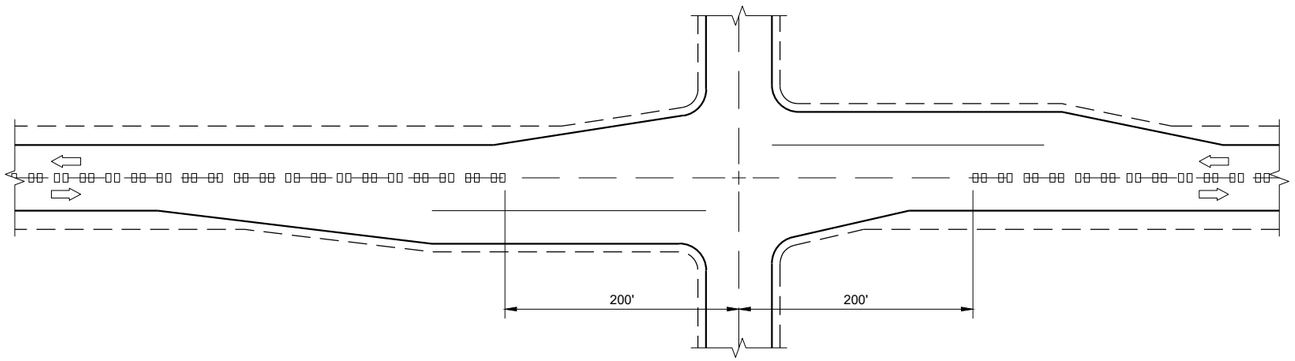
CENTERLINE RUMBLE STRIPS - ASPHALT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTA	68

6

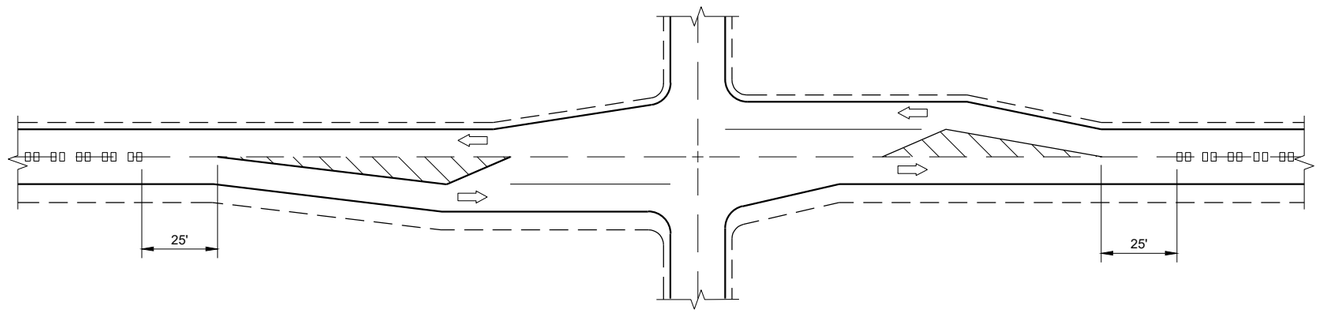
SDD 13A11 - 04a

6

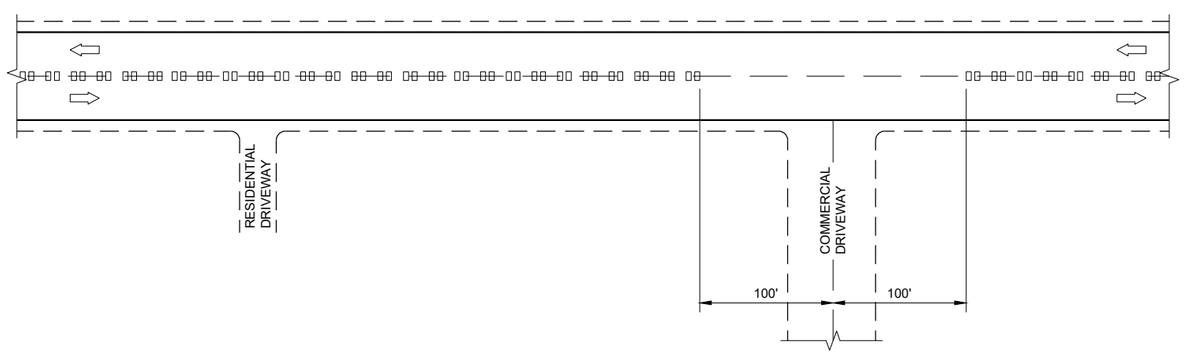
SDD 13A11 - 04a



CENTERLINE GROOVES AT INTERSECTIONS



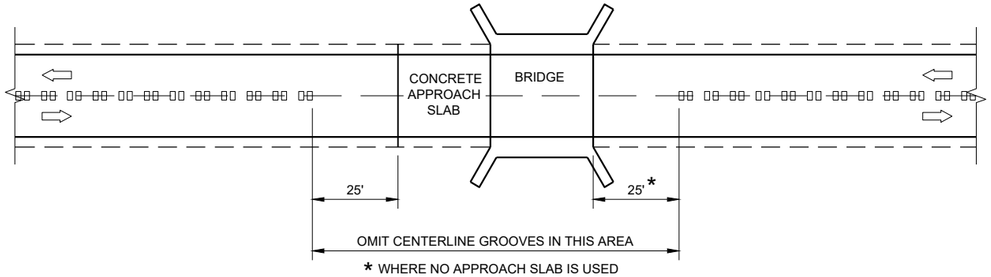
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



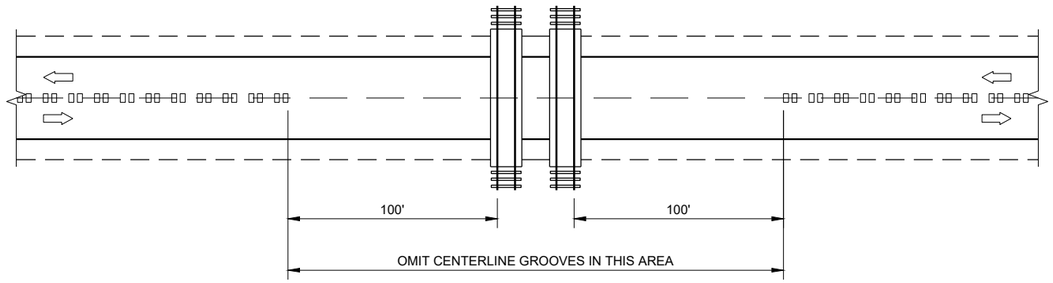
CENTERLINE GROOVES AT DRIVEWAYS (1)

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

CENTER LINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAIL ROADS

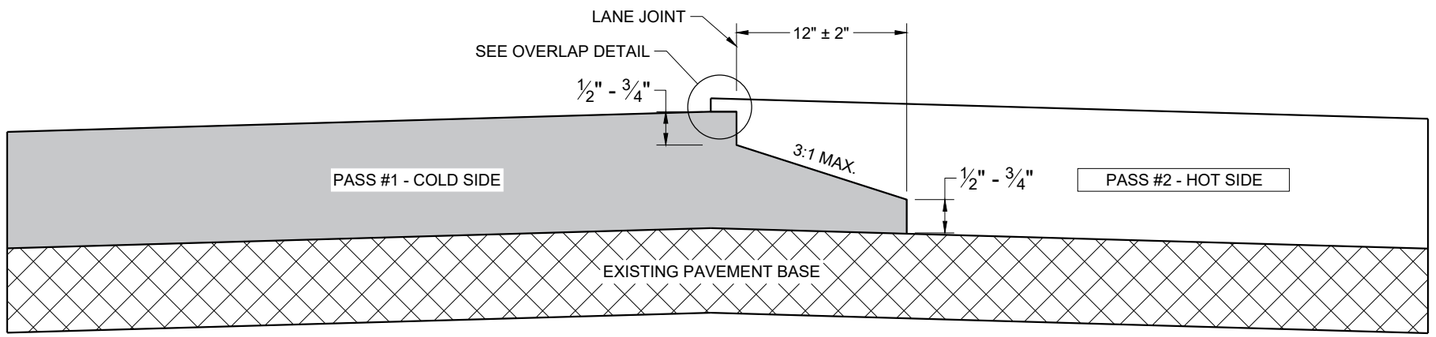
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ John Jenkins — ROADWAY STANDARDS DEVE ENGINEER

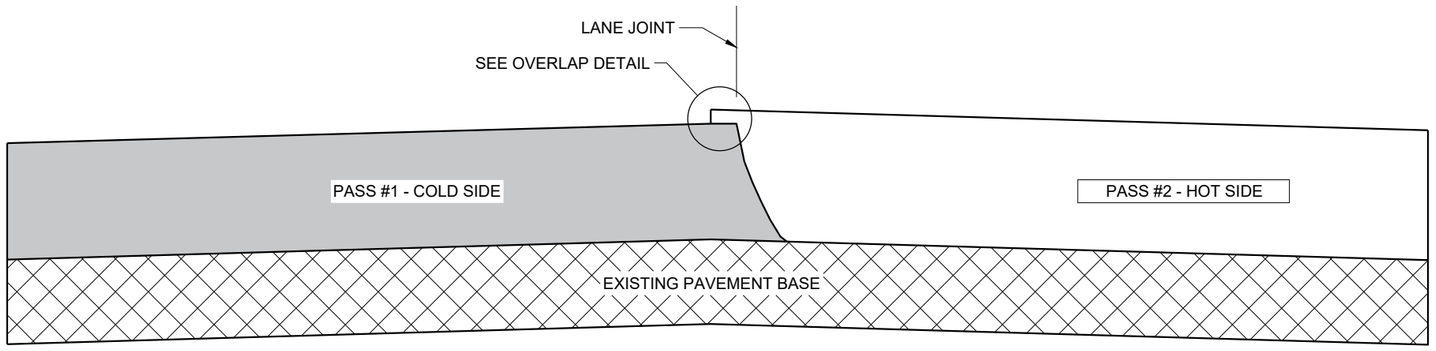
FHWA

6

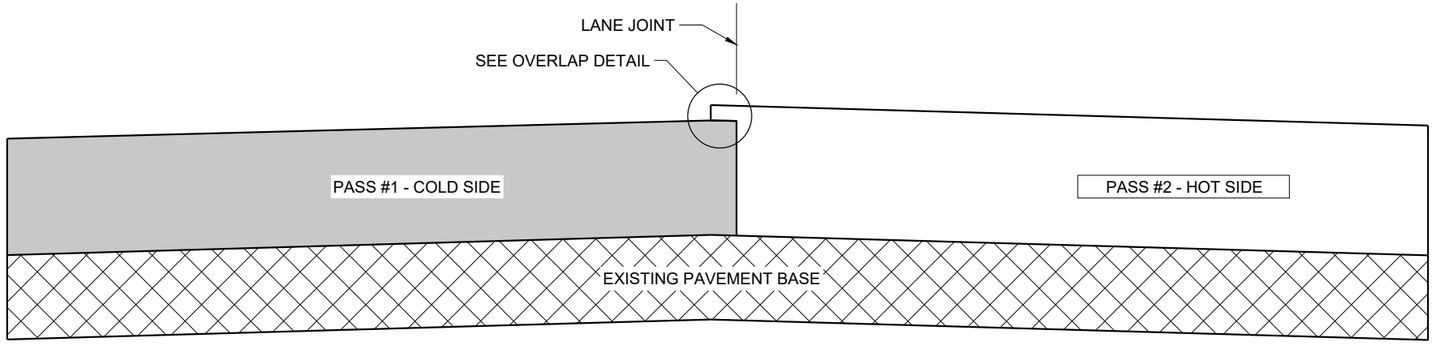
SDD 13A11 - 04d
SDD 13A11 - 04d



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

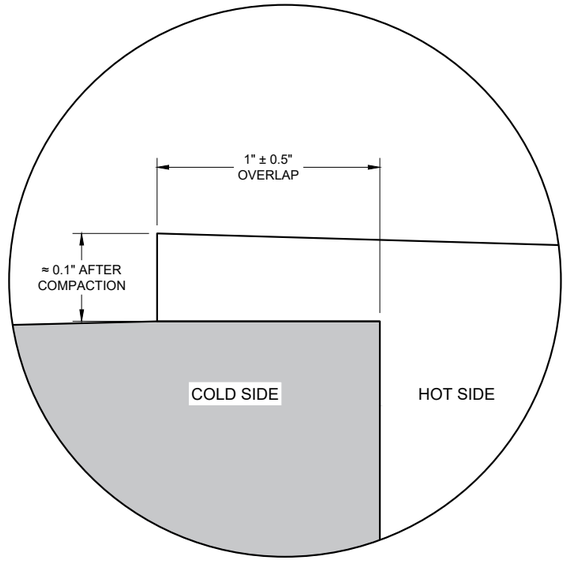
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

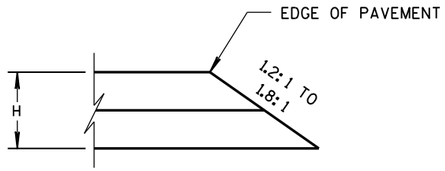
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

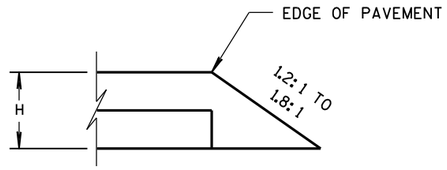
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



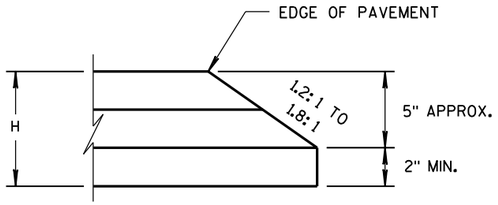
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



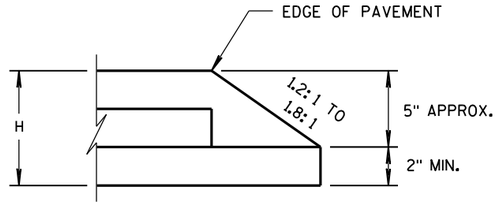
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

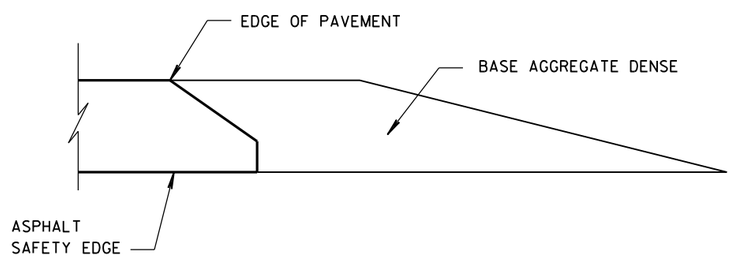
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

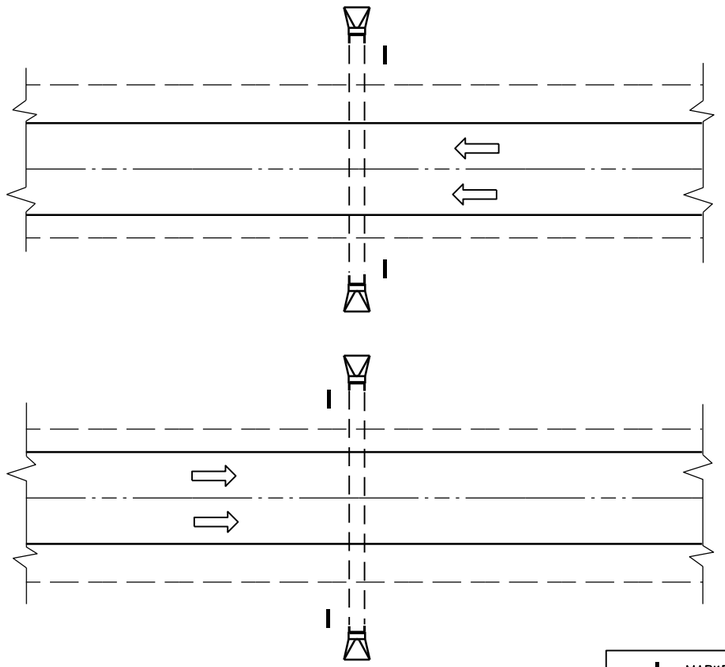
APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

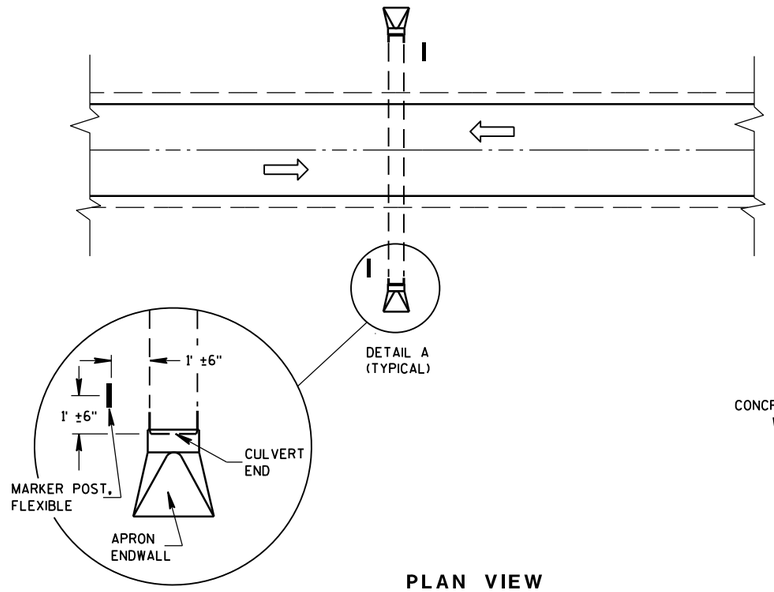
FHWA

S.D.D. 14 B 29-1



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

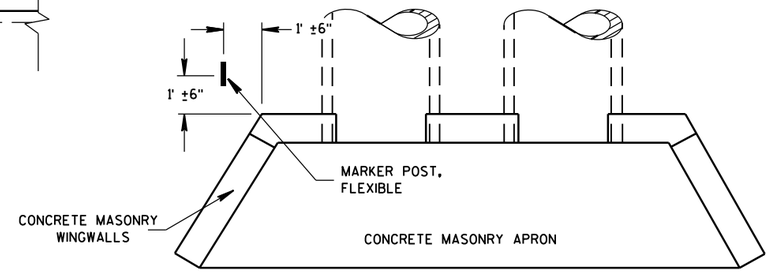
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

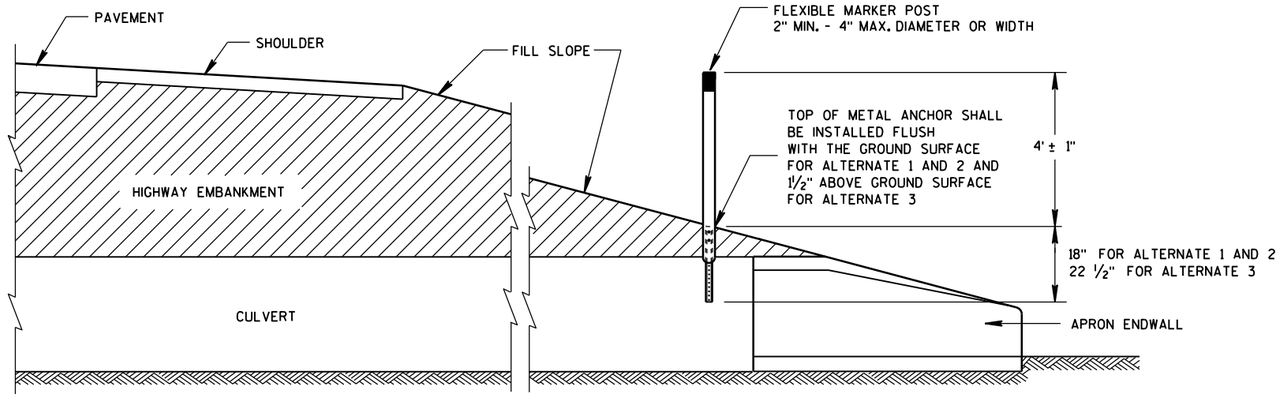
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

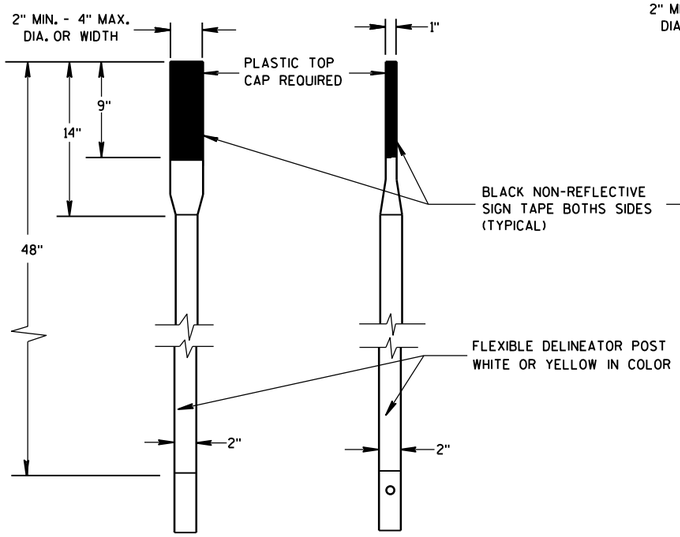
FLEXIBLE MARKER POST

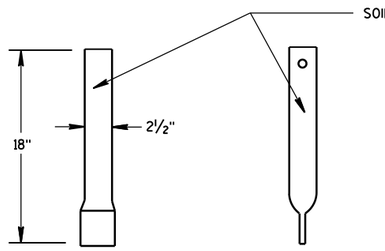
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

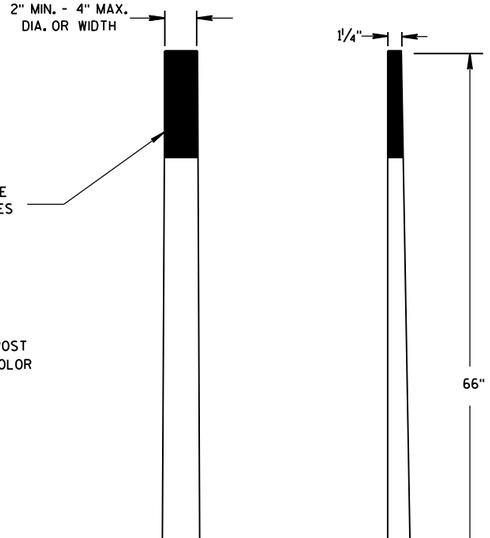
S.D.D. 15 A 3-2a





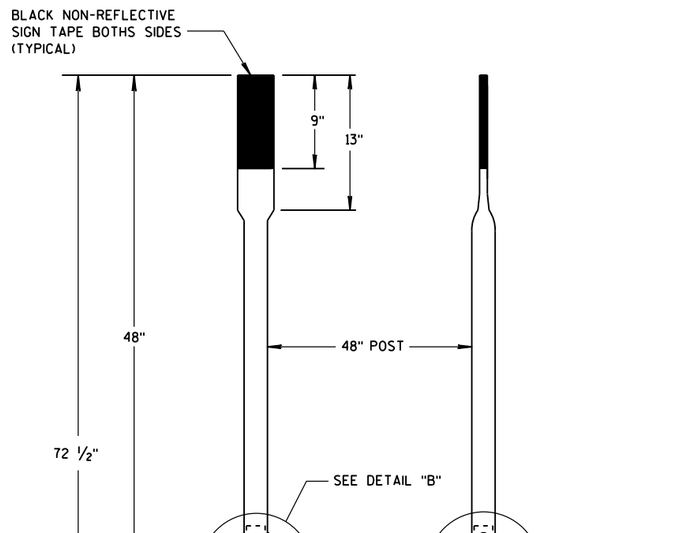
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

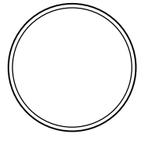
ALTERNATE 2



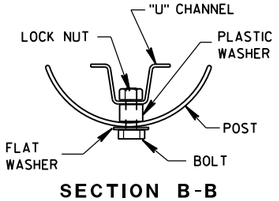
FRONT VIEW SIDE VIEW

ALTERNATE 3

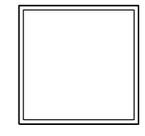
FLEXIBLE MARKER POSTS



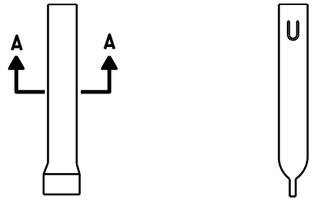
SECTION A-A



SECTION B-B

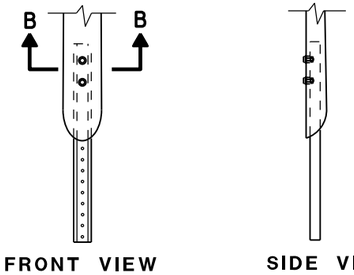


SECTION C-C



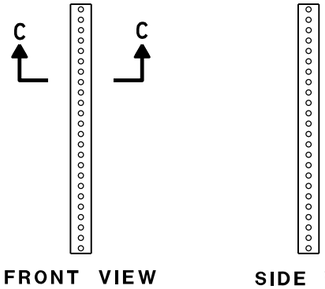
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

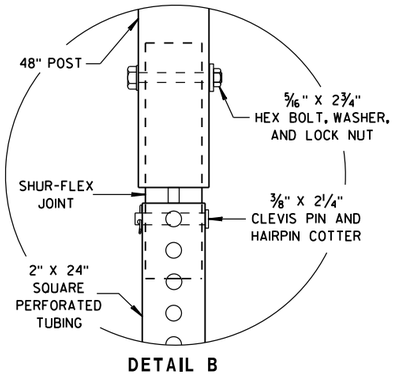
ALTERNATE 2



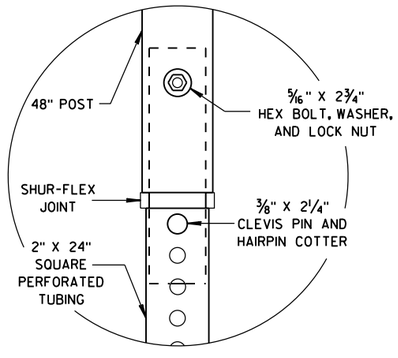
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

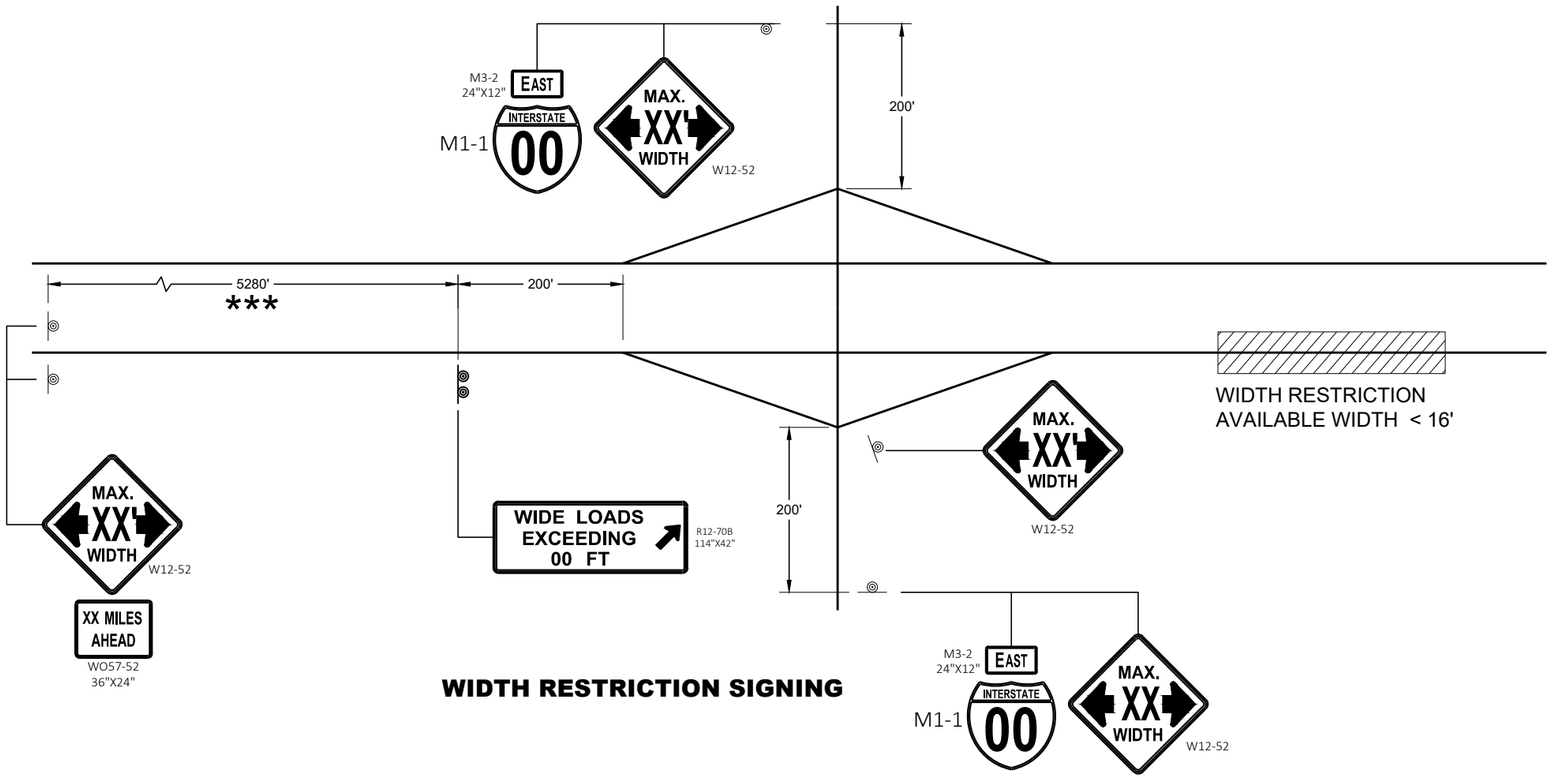
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
IGN
FHWA

6

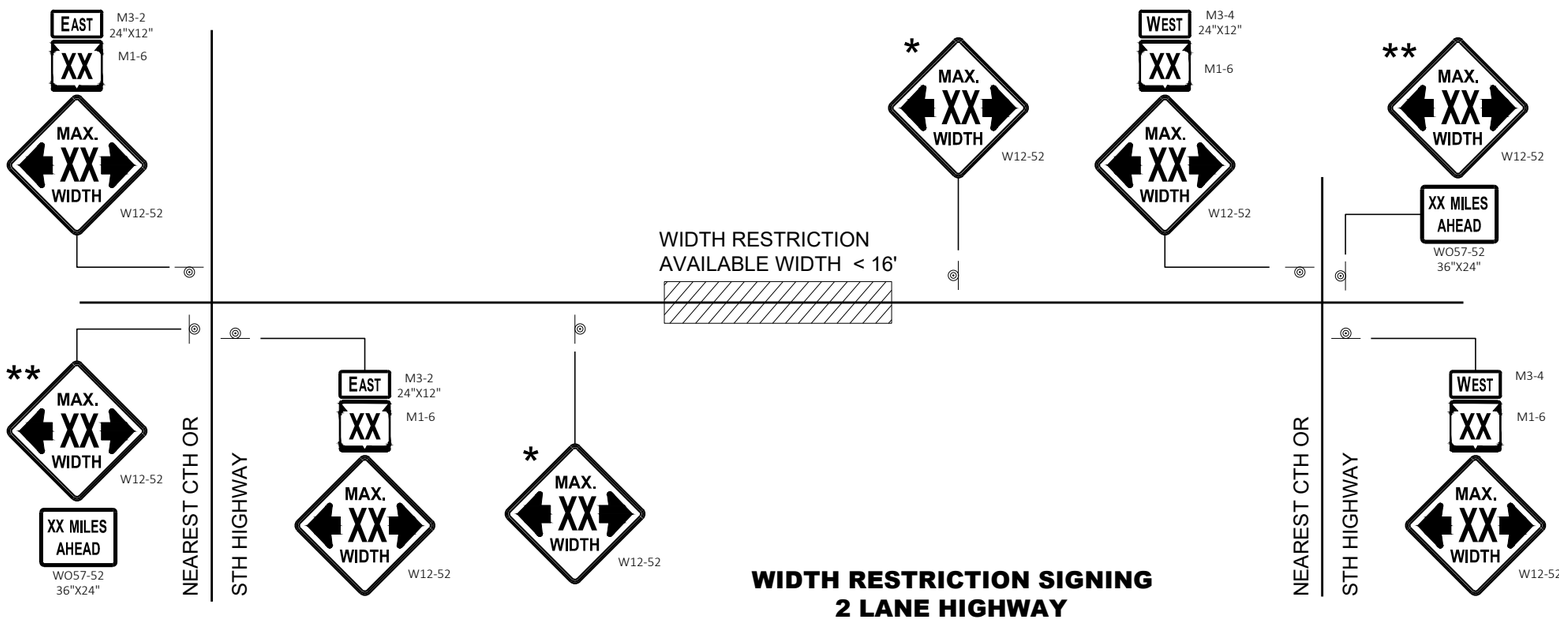
S.D.D. 15 A 3-2b

6

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



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

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

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

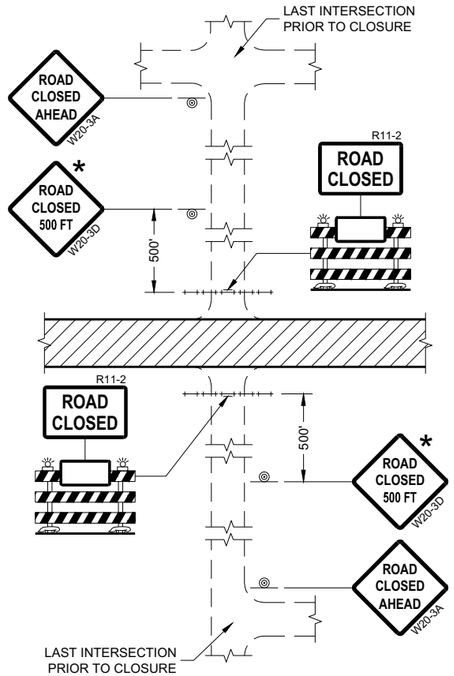
FHWA

6

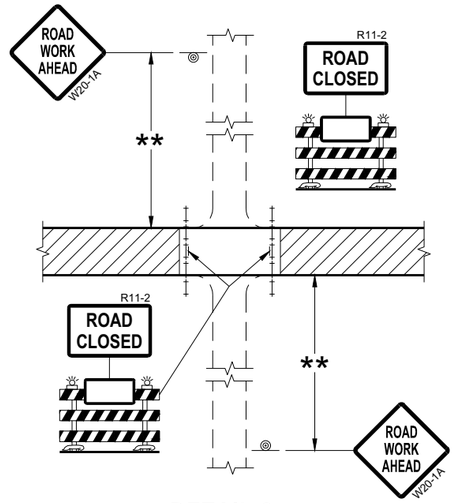
SDD 15C02 - 09f

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SDD 15C02 - 09f



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.

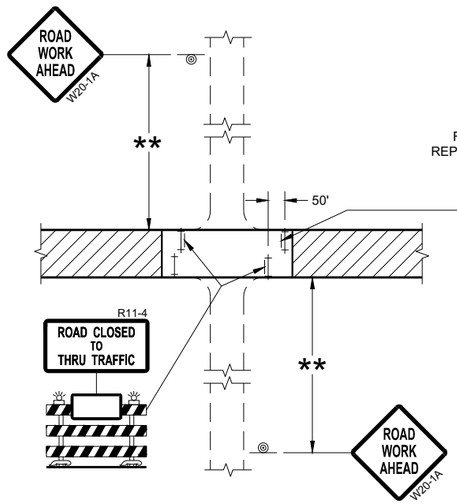
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

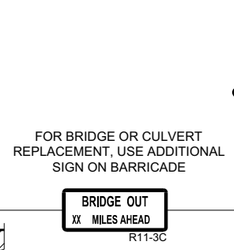
THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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".

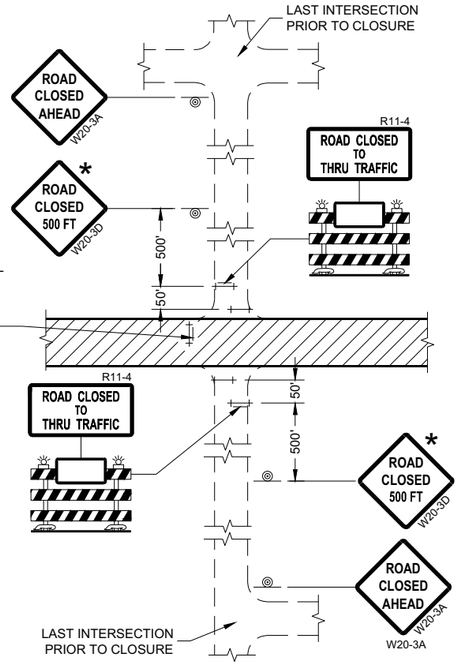
* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

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





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



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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
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.

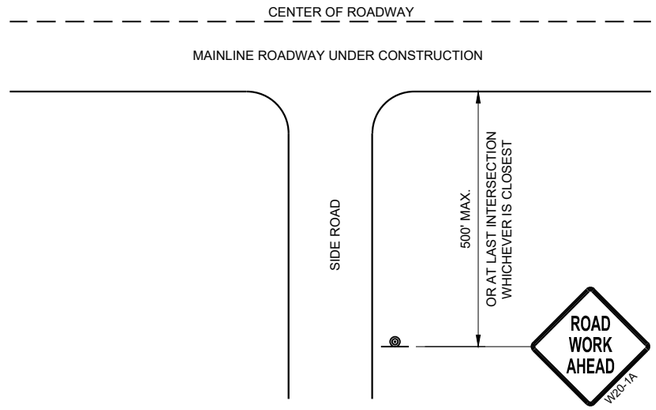
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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.



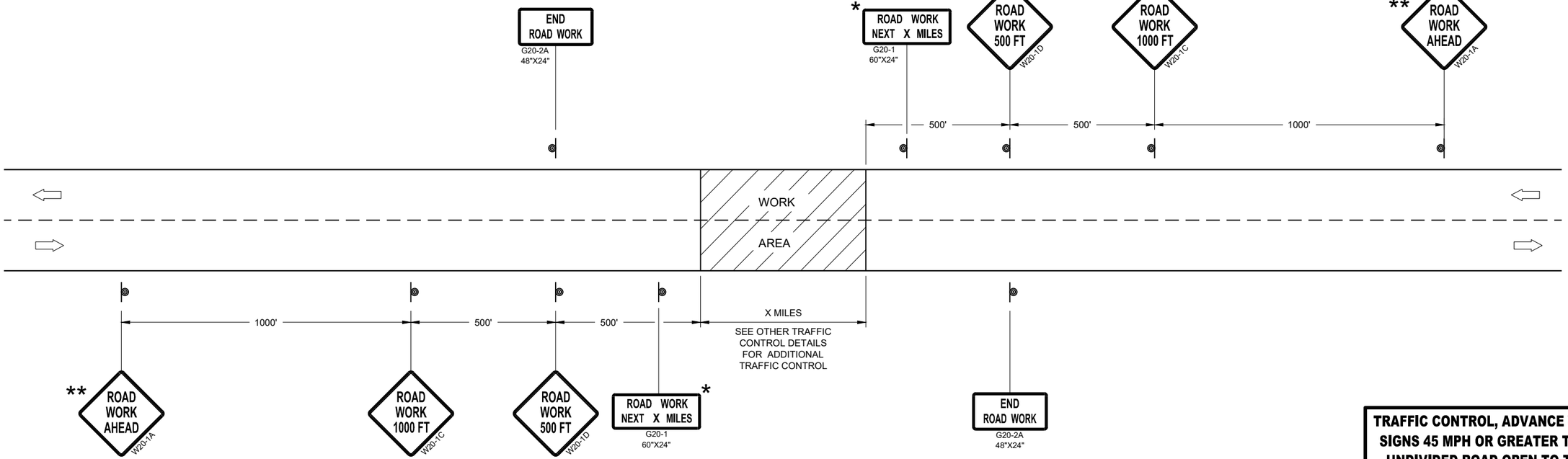
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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 TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

GENERAL NOTES

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

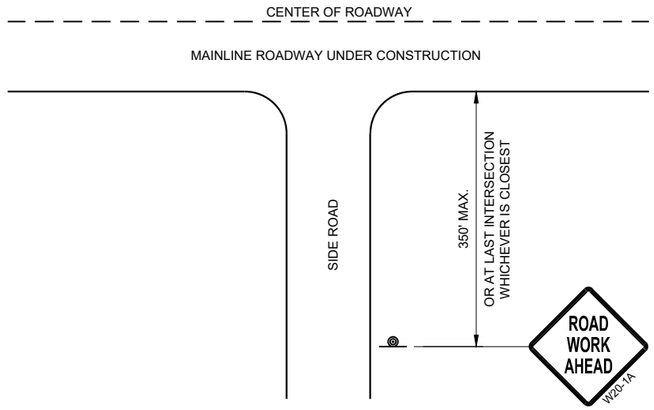
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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.

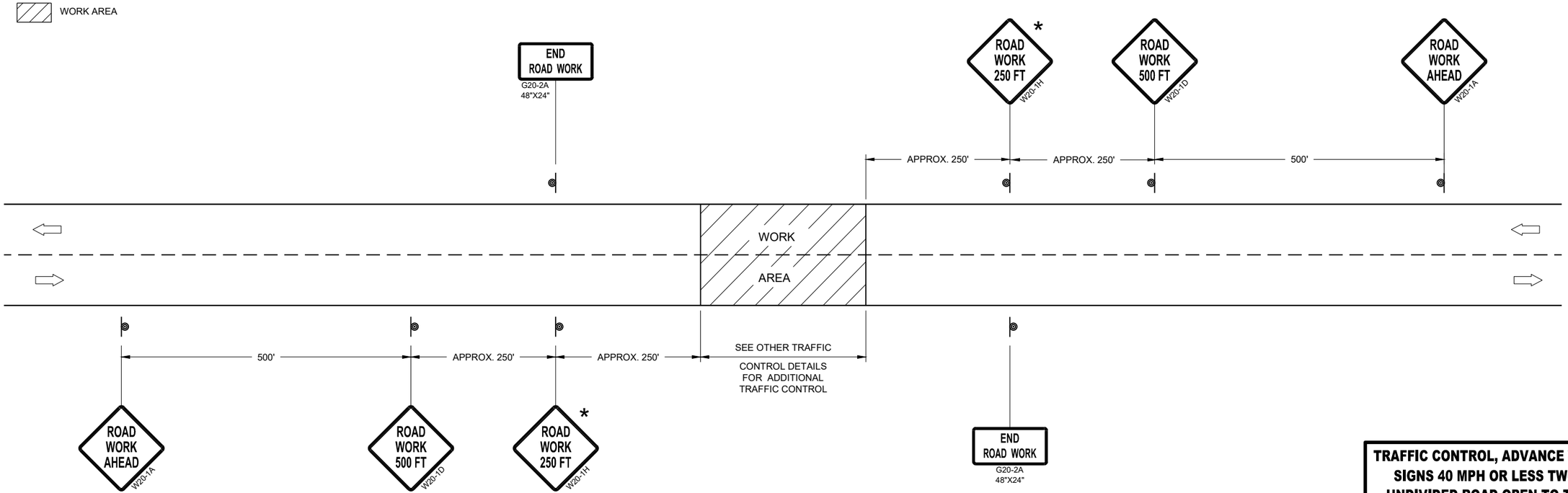
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C05 - 05

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

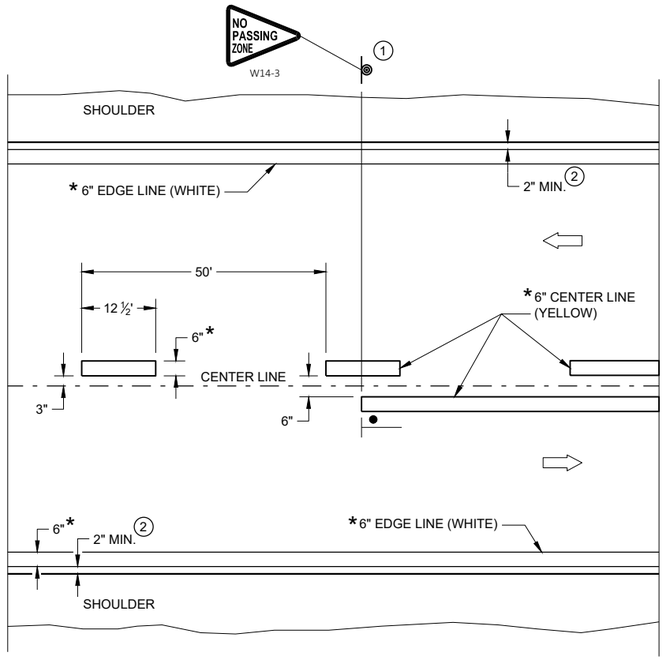
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

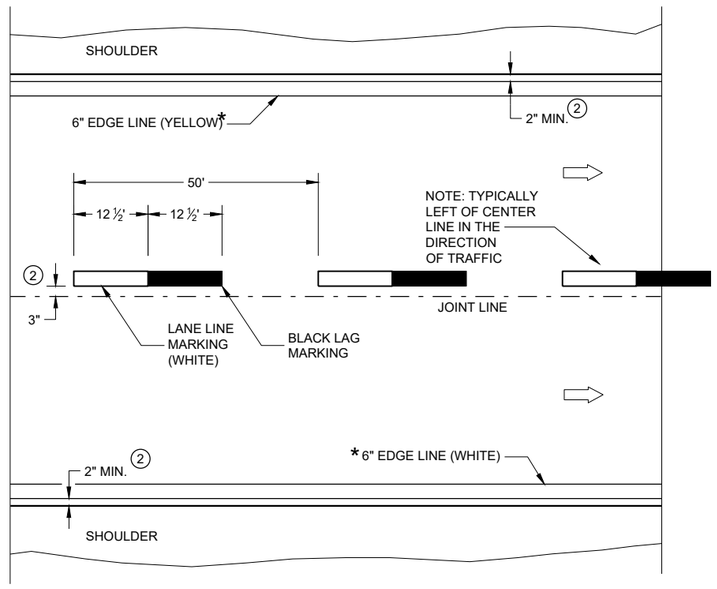
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

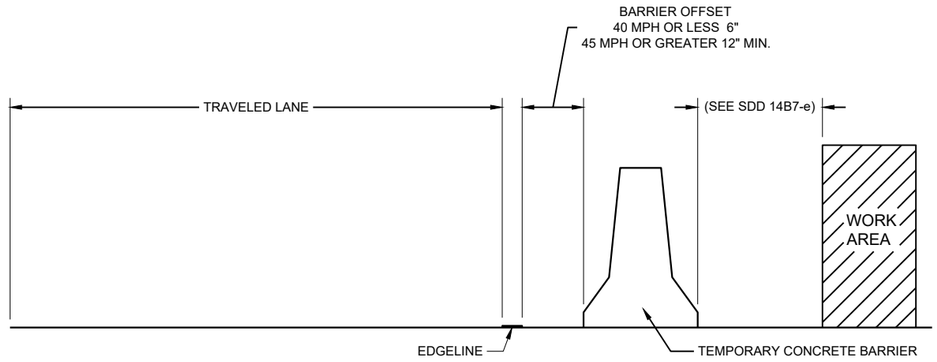
PERMANENT LONGITUDINAL PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
May 2023 DATE	/S/ Jeannie Silver STATEWIDE SIGNING AND M ENGINEER
FHWA	

6

SDD 15C08-23a

6

SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

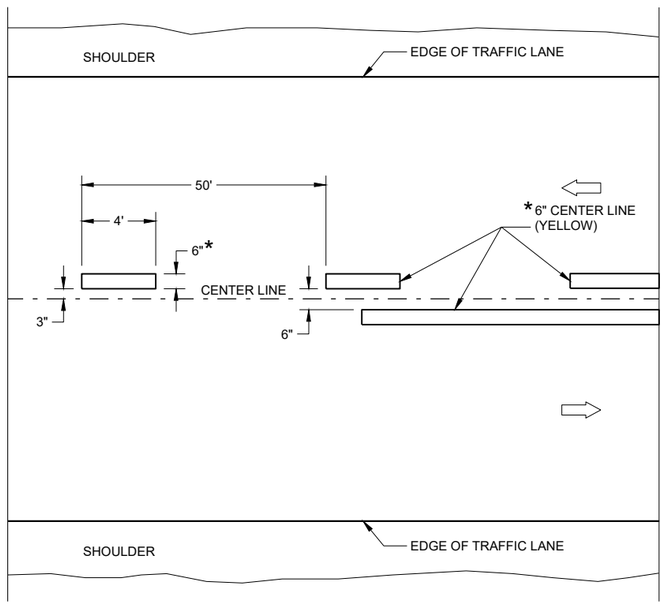
GENERAL NOTES

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

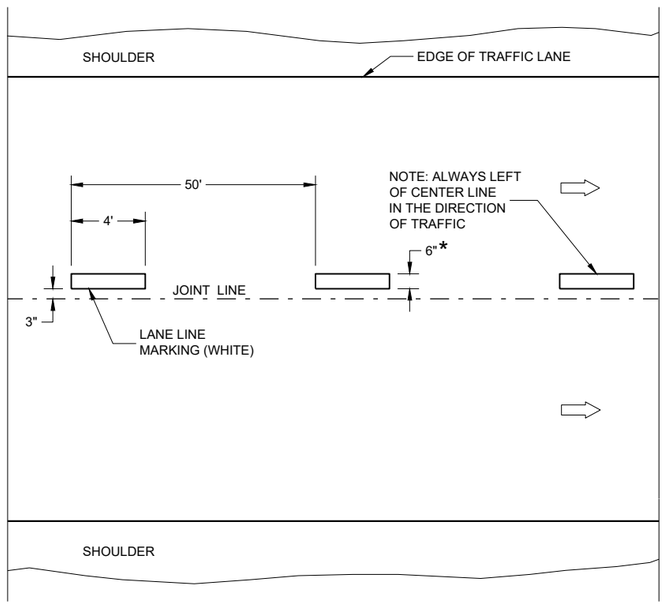
LEGEND

⇨ DIRECTION OF TRAFFIC

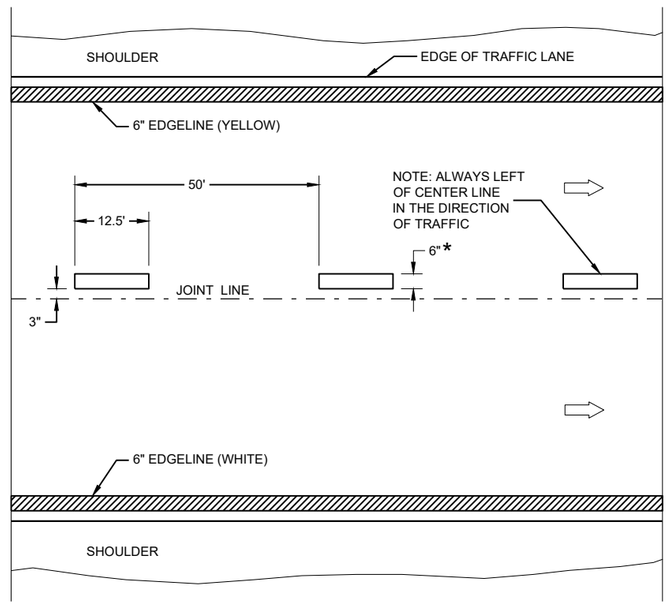
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

6

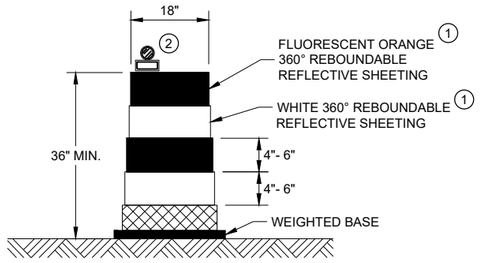
SDD 15C08-23b

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SDD 15C08-23b

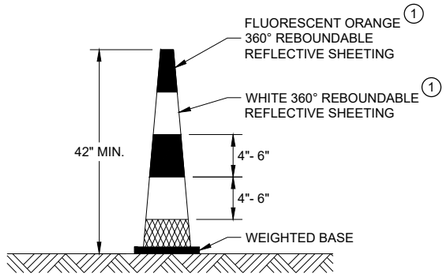
GENERAL NOTES

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

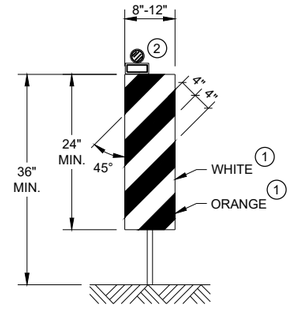
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

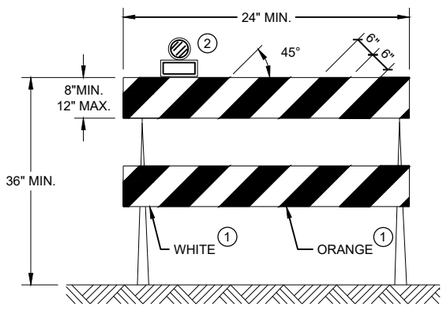
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



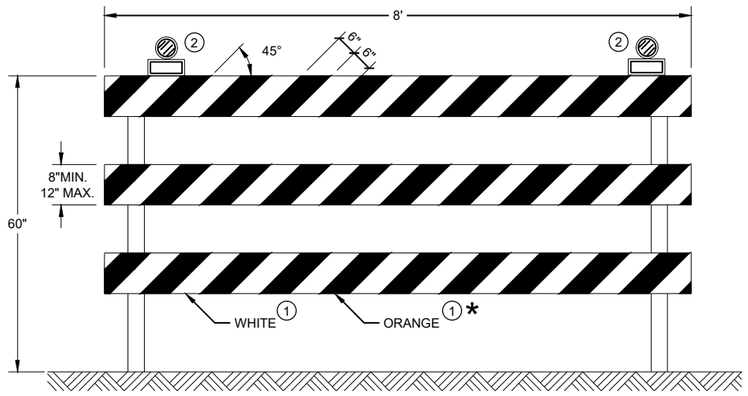
VERTICAL PANEL

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 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 10b

6

SDD 15C11 - 10b

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.

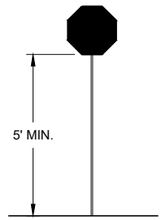
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM 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

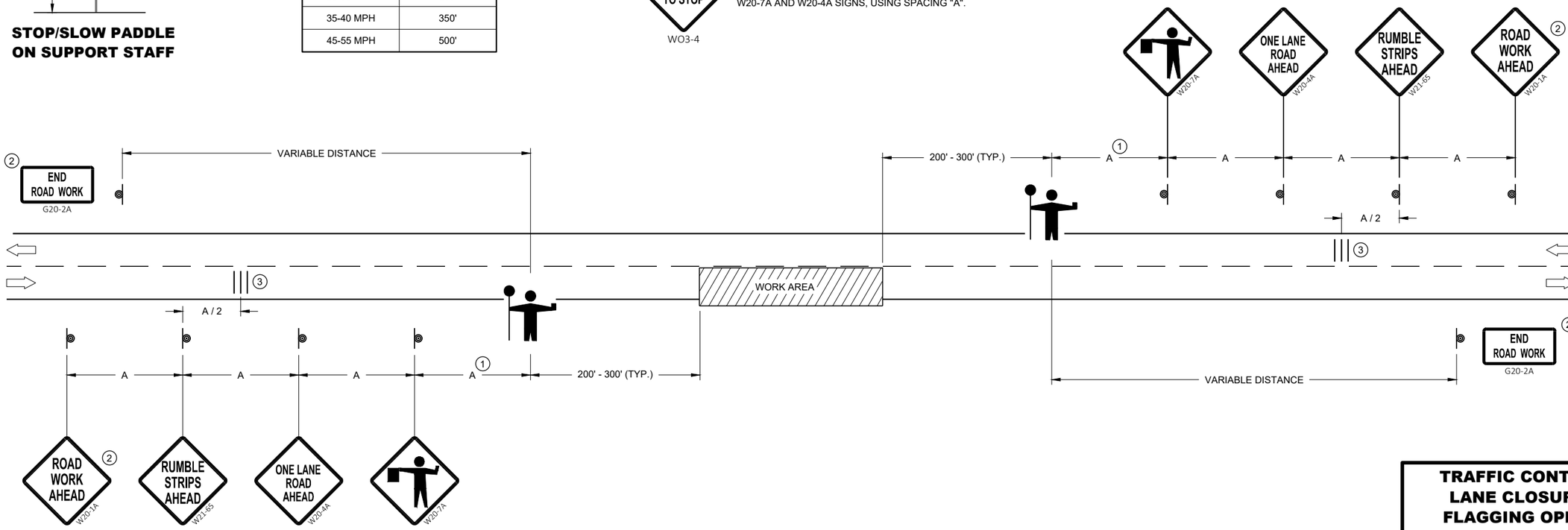
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C12 - 09a

6

SDD 15C12 - 09a

GENERAL NOTES

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL CONE 42-INCH

TRAFFIC CONTROL DRUM

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

AFAD — AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

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

IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, 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.

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.

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

(2) IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

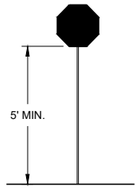
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

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.

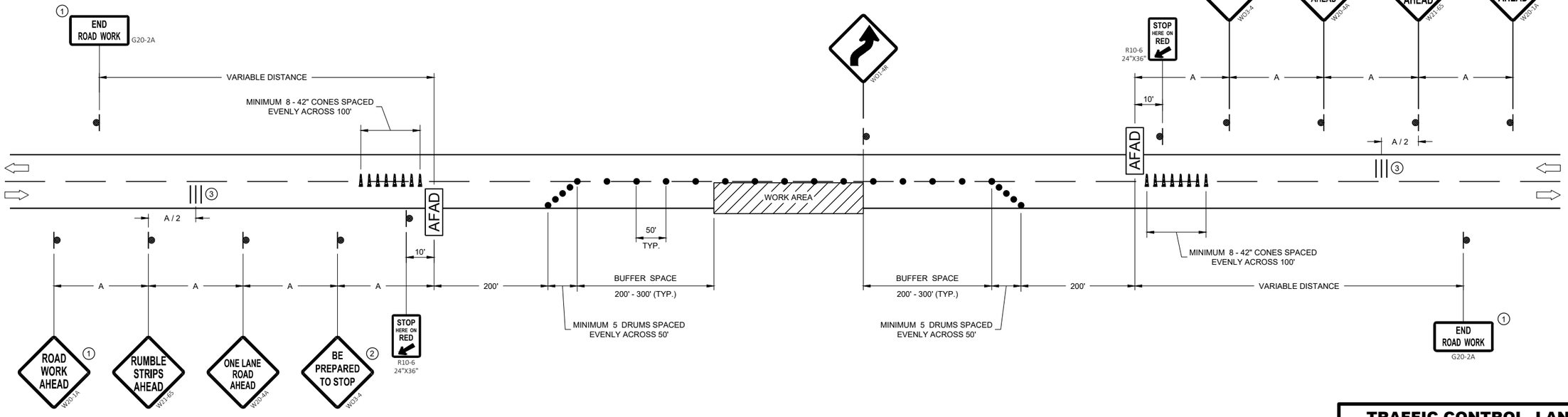
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSELY AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER.



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'



TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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SDD 15C12 - 09b

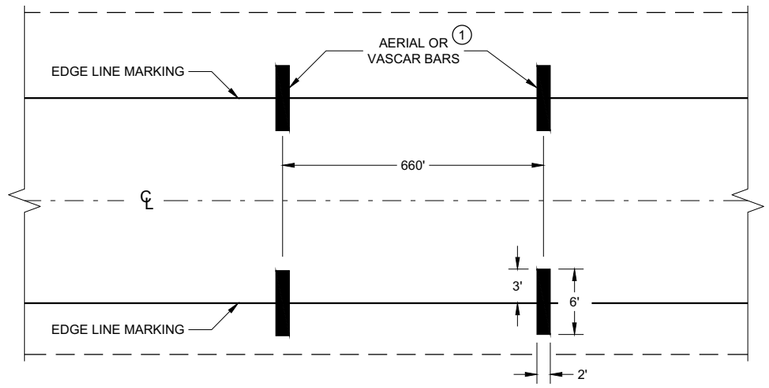
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SDD 15C12 - 09b

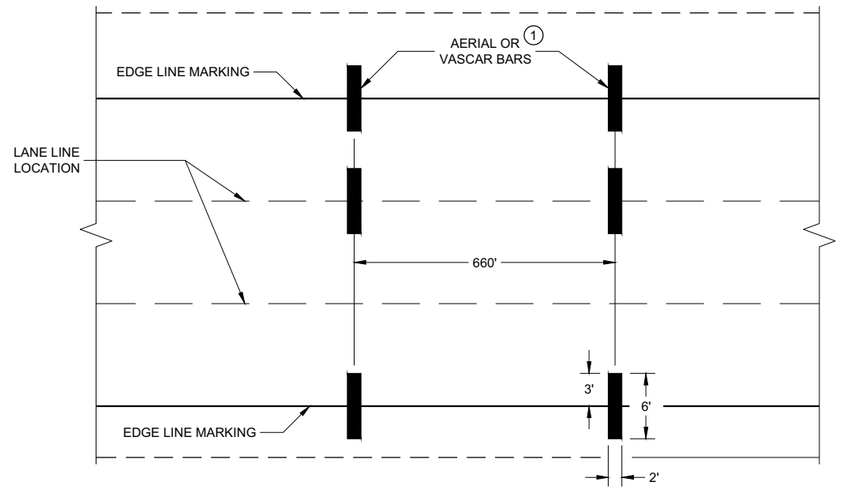
GENERAL NOTES

(1) PLACE TWO TO FIVE AERIAL OR VASCAR BARS AT 660 FOOT SPACING.

A CAR CAN BE PROVIDED BY THE WISCONSIN STATE PATROL FOR TRAFFIC CONTROL.



TYPICAL FOR TWO WAY OR ONE WAY TRAFFIC



TYPICAL FOR MULTILANE TRAFFIC

SPEED ENFORCEMENT ZONE WITH AERIAL OR VASCAR BARS

6

SDD 15C14 - 04

AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2021
DATE

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

FHWA

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SDD 15C14 - 04

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.

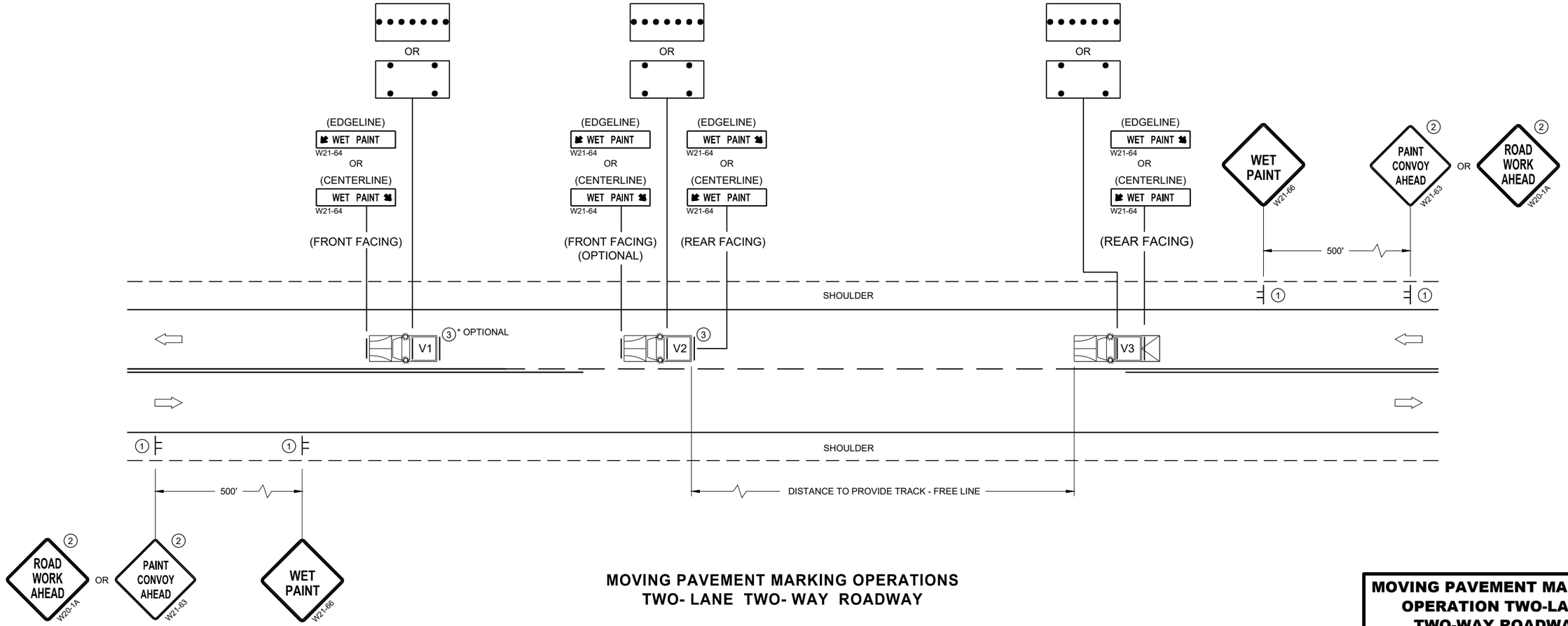
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" 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.

(3) V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.



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
February 2023
DATE

/S/ Andrew I
WORK ZONE EN

FHWA

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SDD 15C19-08a

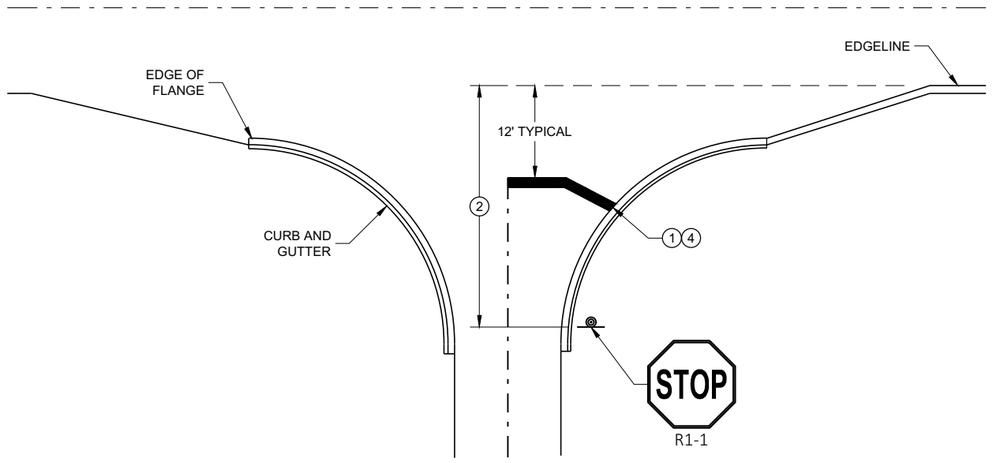
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SDD 15C19-08a

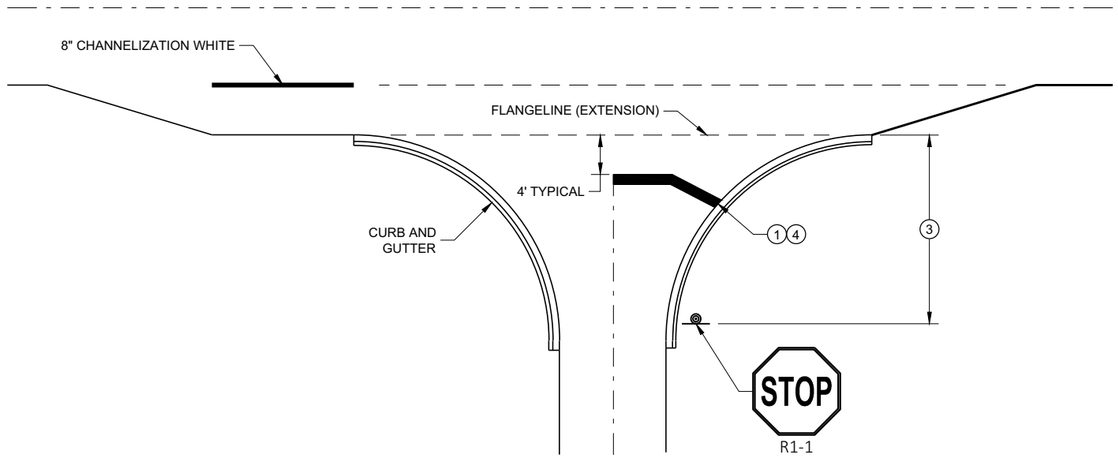
GENERAL NOTES

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

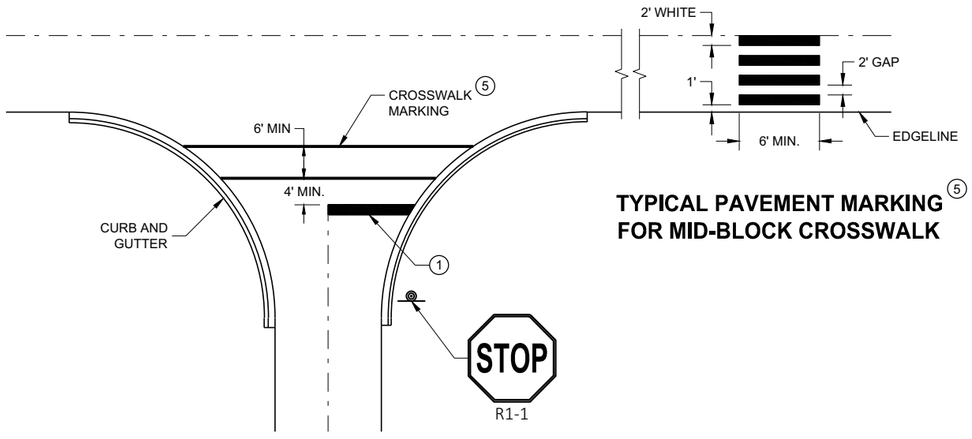
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE 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

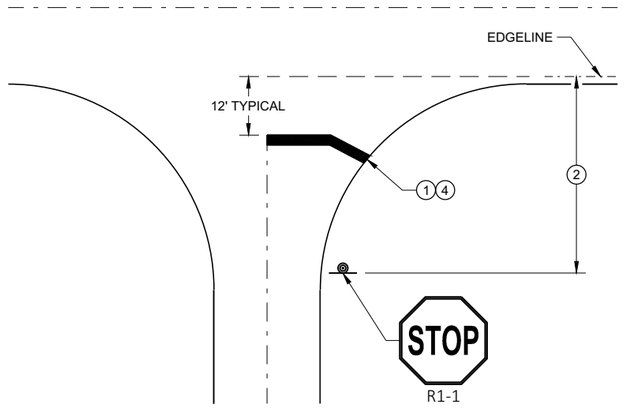


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



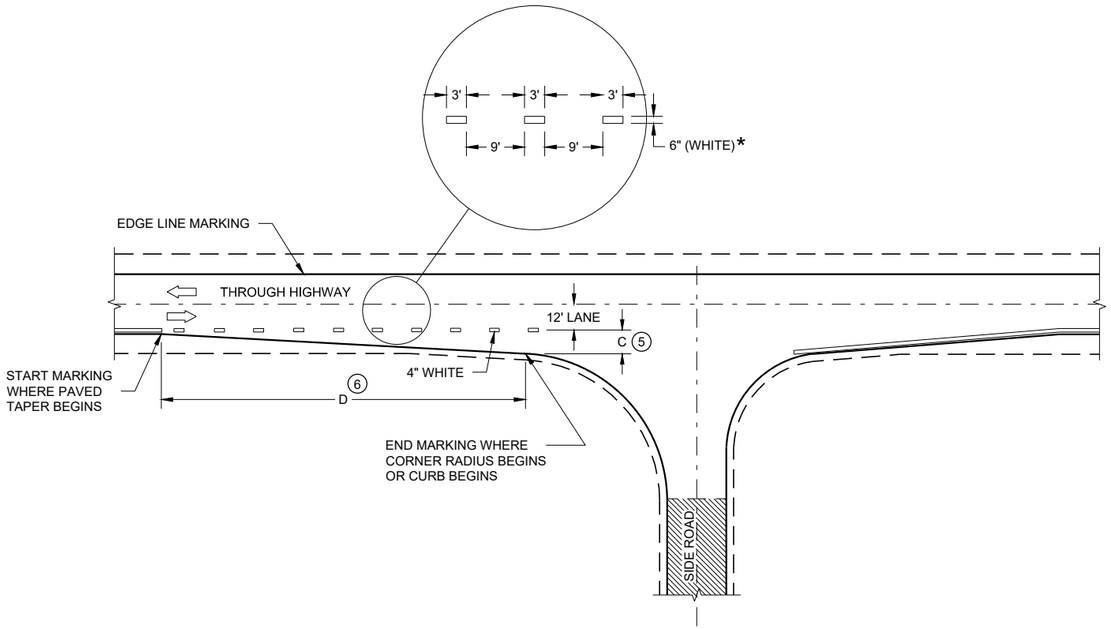
TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

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SDD 15C33 - 04



MINOR INTERSECTION

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

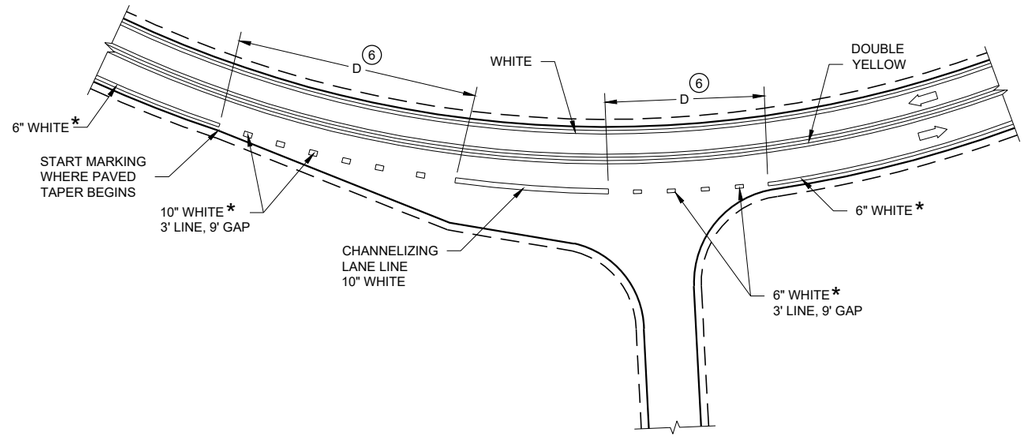
GENERAL NOTES

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

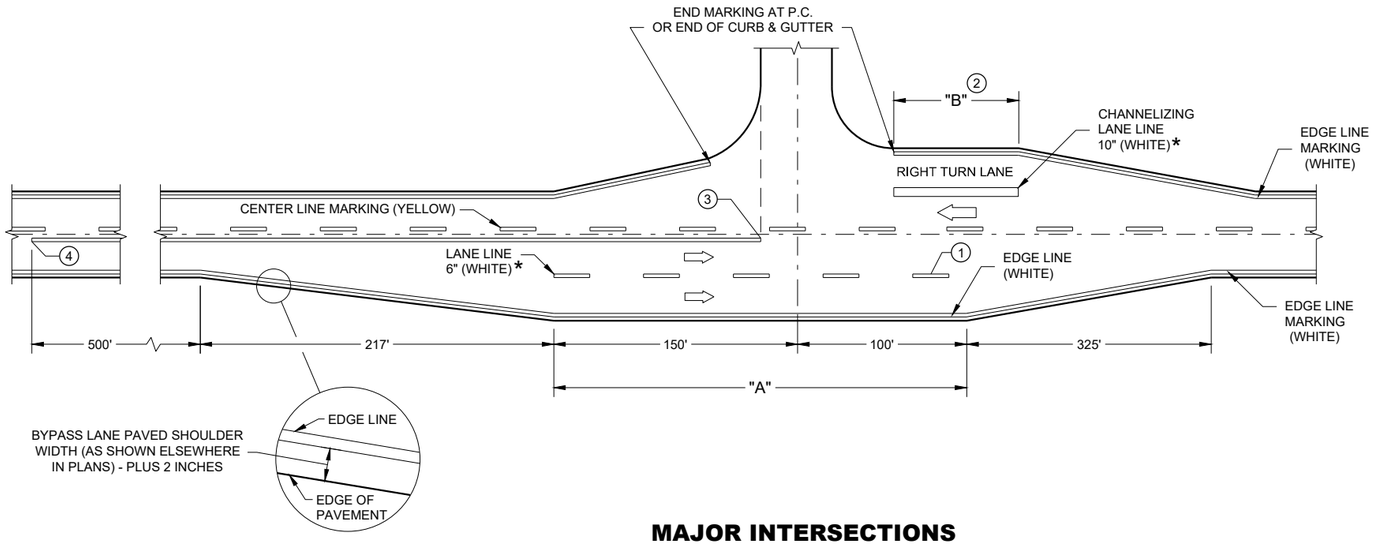
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

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.

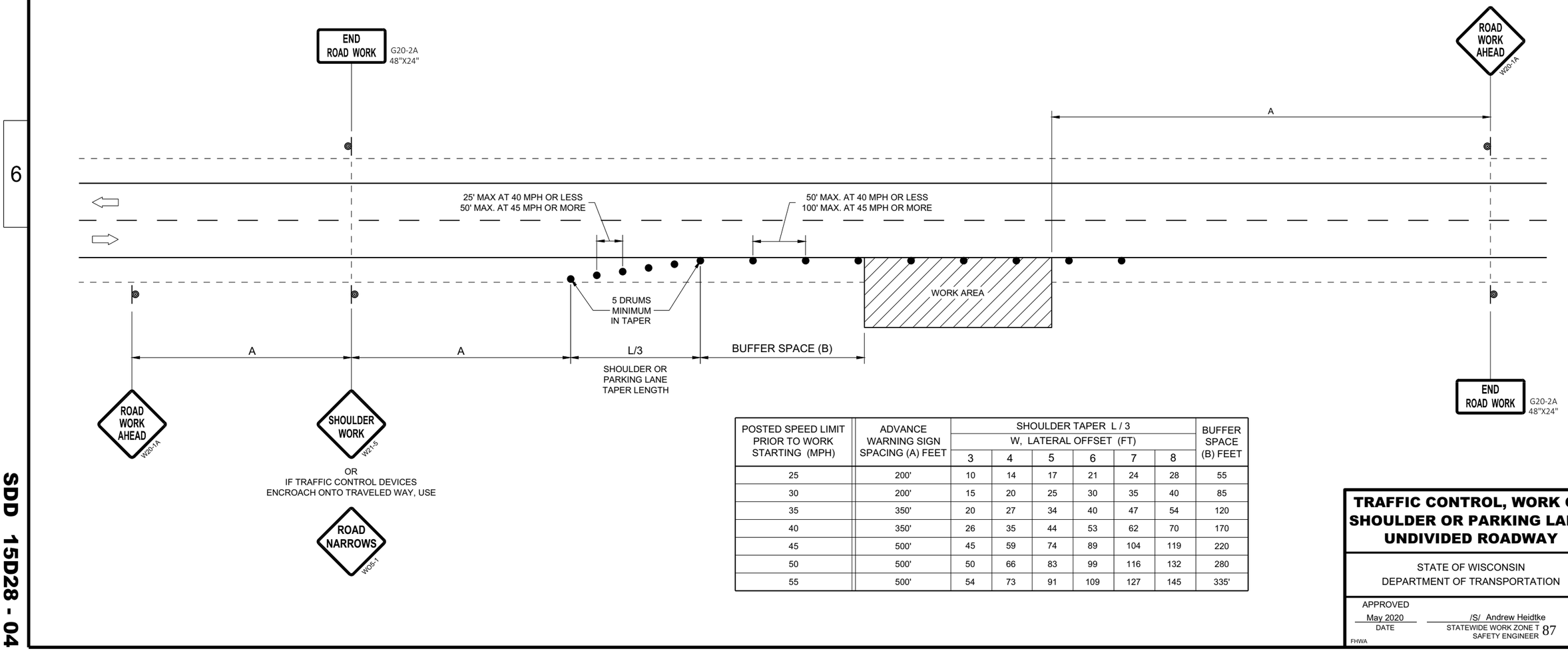
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

GENERAL NOTES

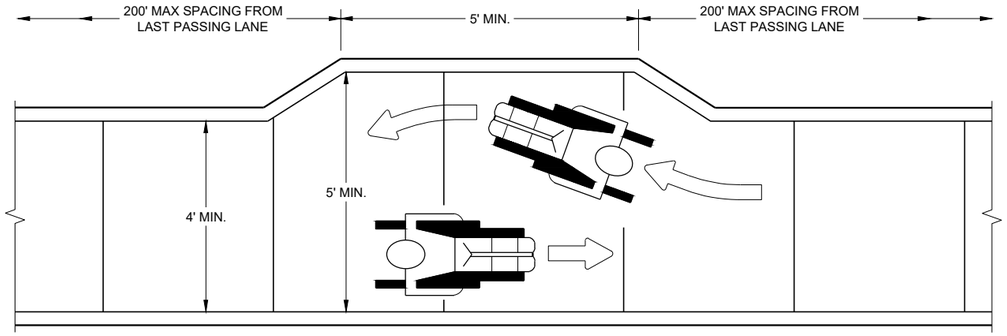
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

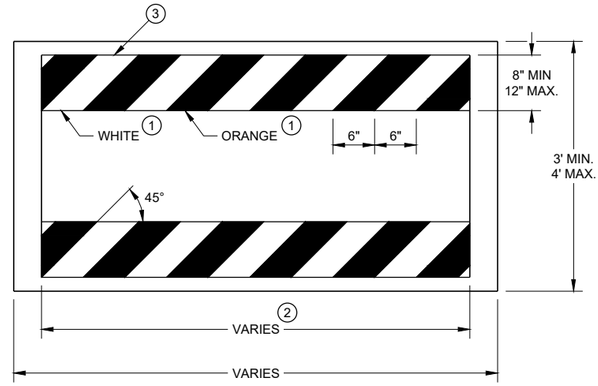
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

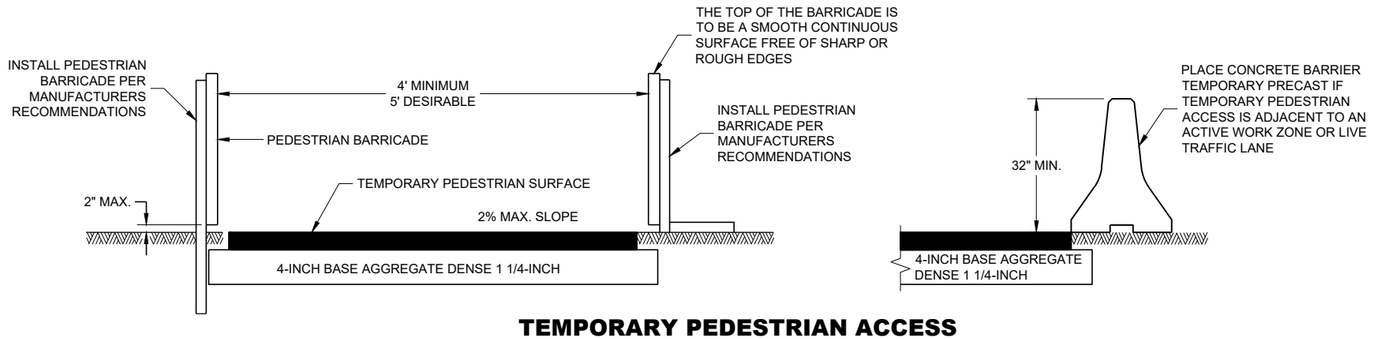
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN BARRICADE*



TEMPORARY PEDESTRIAN ACCESS

6

6

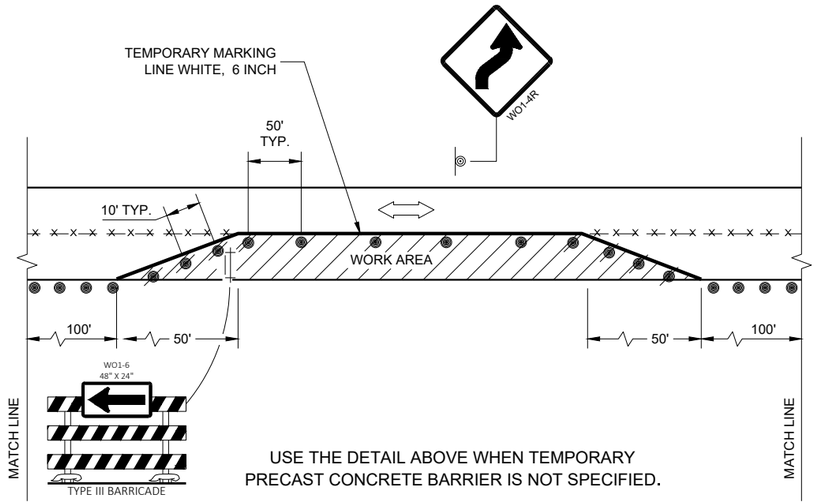
SDD 15D30 - 09a

SDD 15D30 - 09a

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT



USE THE DETAIL ABOVE WHEN TEMPORARY PRECAST CONCRETE BARRIER IS NOT SPECIFIED.

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

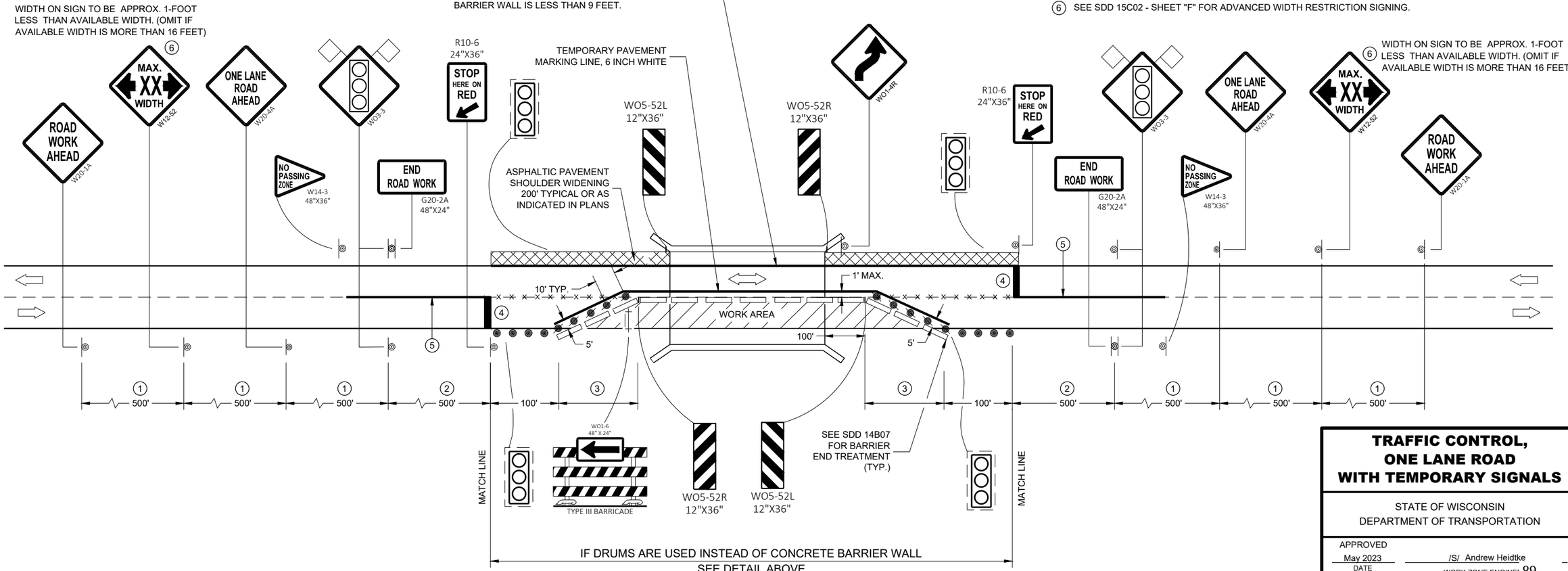
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

REMOVE PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT MARKING LINES IF THE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

INSTALL OVERHEAD TEMPORARY SIGNAL HEADS ABOVE THE MIDDLE OF THE TRAVEL LANE THEY ARE CONTROLLING.

1. 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
2. USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
3. DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
4. TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
5. 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
6. SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

SDD 15D33-09

SDD 15D33-09

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.

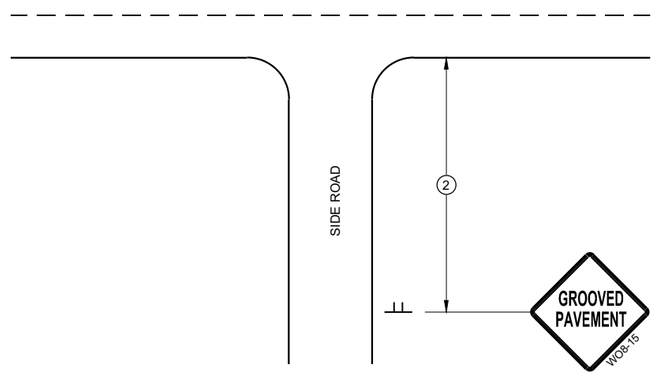
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

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

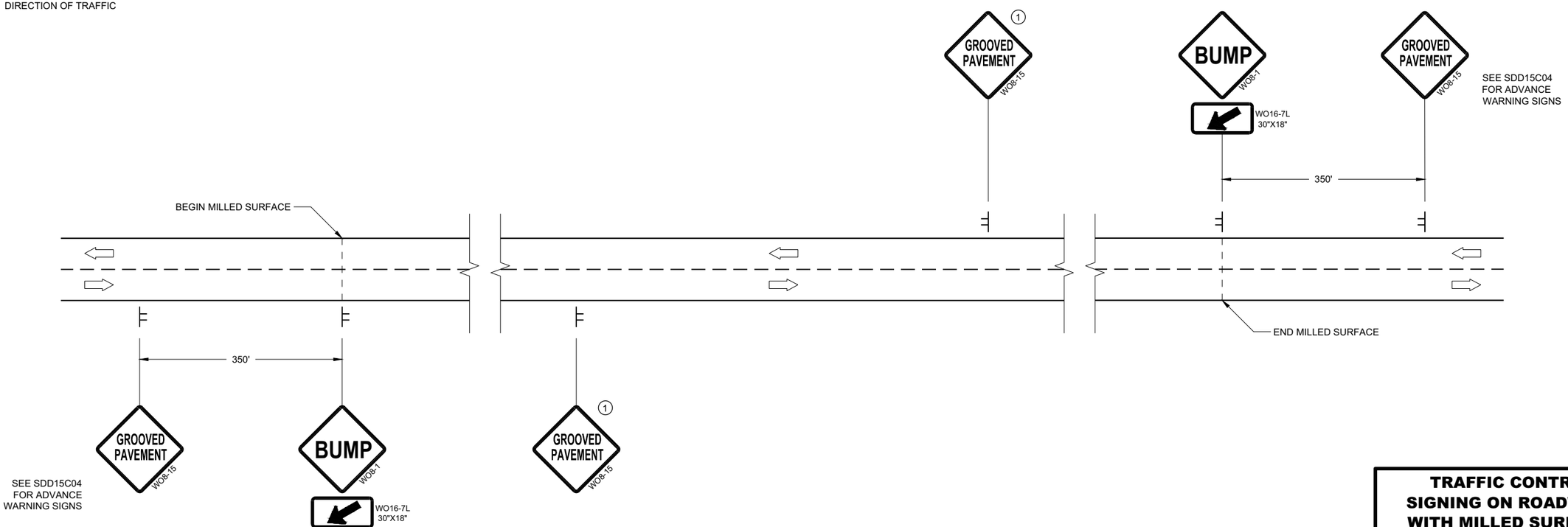
LEGEND

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 ENGINEER

FHWA

SDD 15D44 - 02

SDD 15D44 - 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 CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

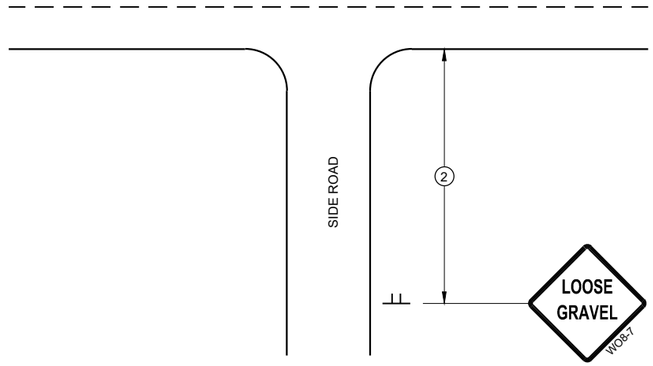
(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

(3) ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

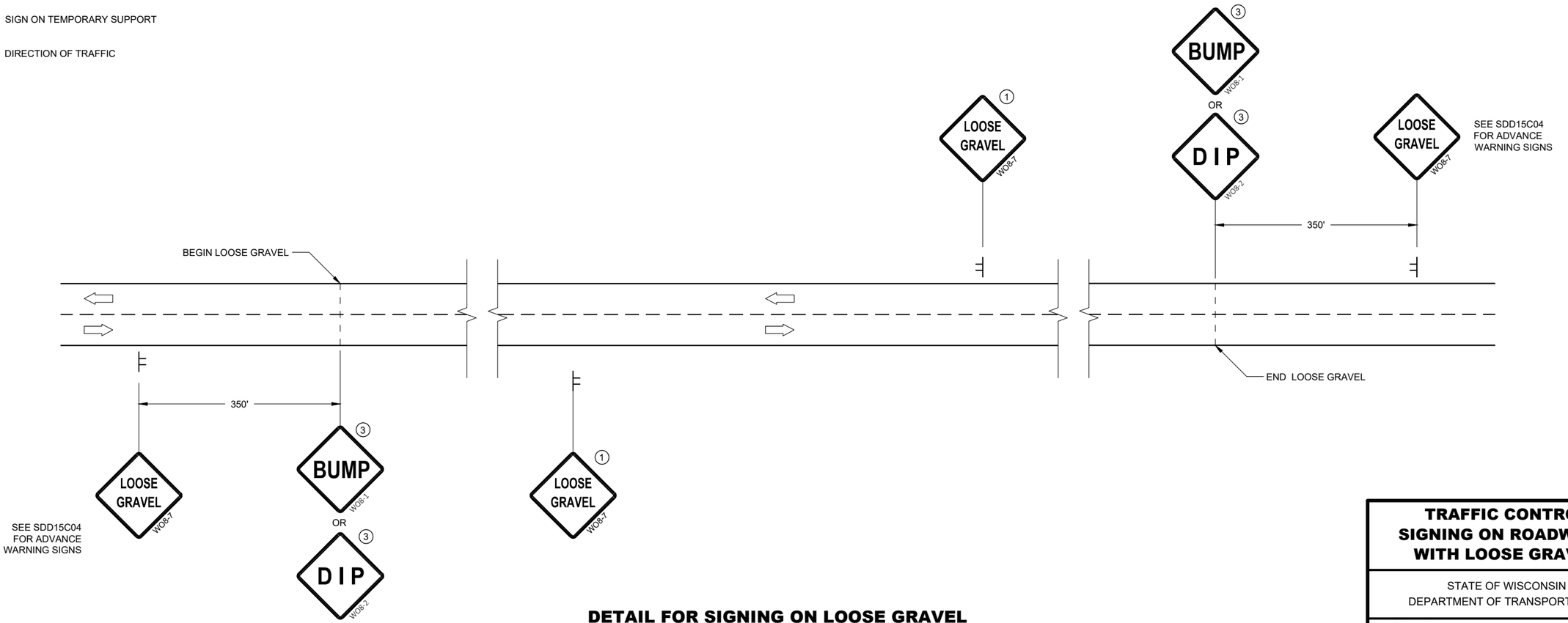
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

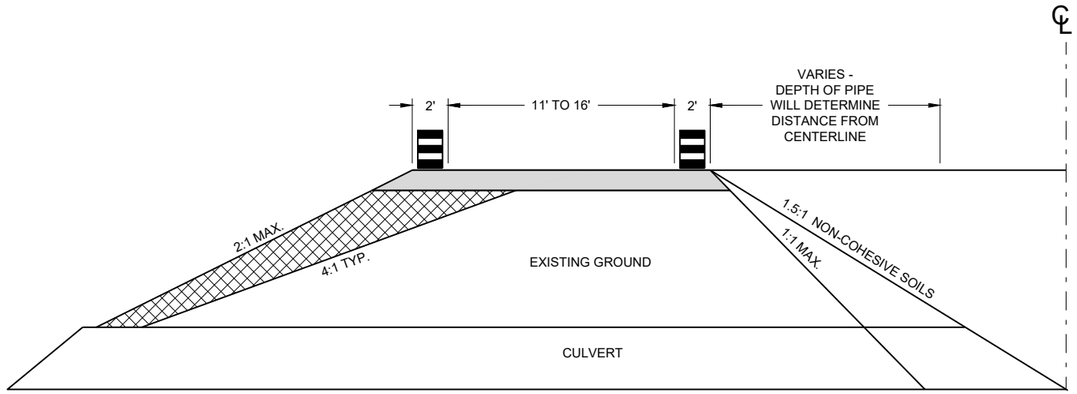
APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D45 - 03



CROSS SECTION

GENERAL NOTES

USE 1:1 FOR COHESIVE CLAYS AND SILTS, LOAMS, SANDY CLAYS AND ANGULAR GRAVEL SOILS.
USE 1.5:1 FOR NON-COHESIVE SOILS.

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.

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.

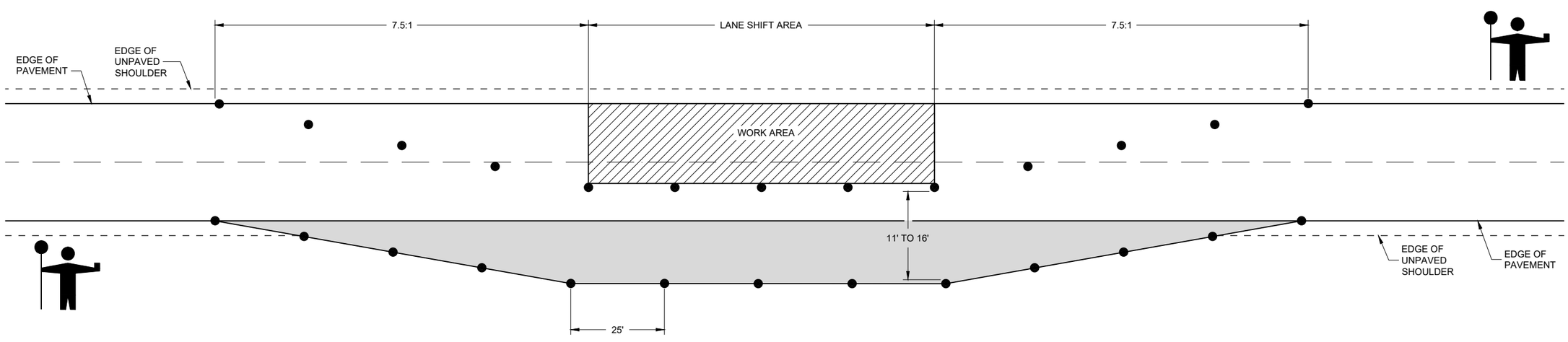
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

USE WITH SDD 15C12 "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS"

USE WITH SDD 15D45 "SIGNING ON ROADWAYS WITH LOOSE GRAVEL"

LEGEND

- DRUM WITHOUT WARNING LIGHT
- 6" BASE AGGREGATE DENSE 1 ¼" -INCIDENTAL TO LANE SHIFT ITEM
- FILL - INCIDENTAL TO LANE SHIFT ITEM
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



LANE SHIFT IN FLAGGING OPERATION

TRAFFIC CONTROL, TEMPORARY LANE SHIFT DURING CULVERT WORK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D48 - 01

6

SDD 15D48 - 01

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

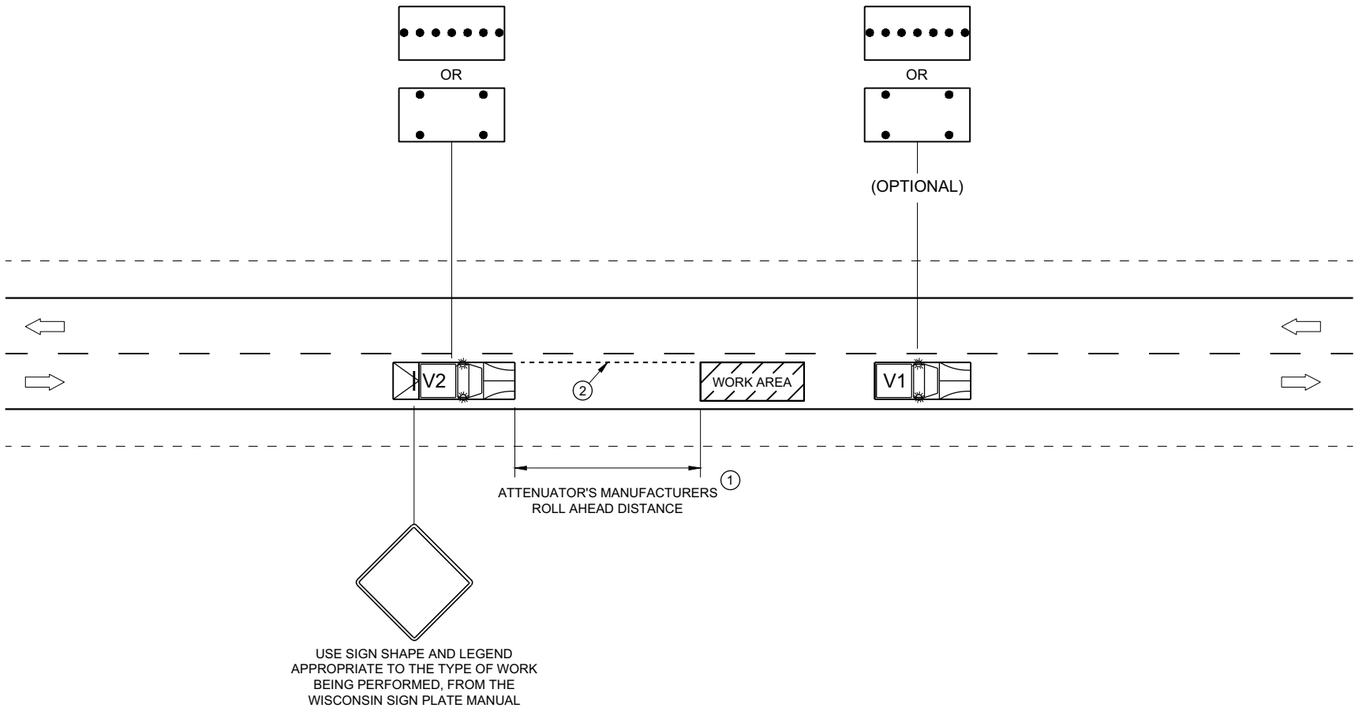
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

(1) DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



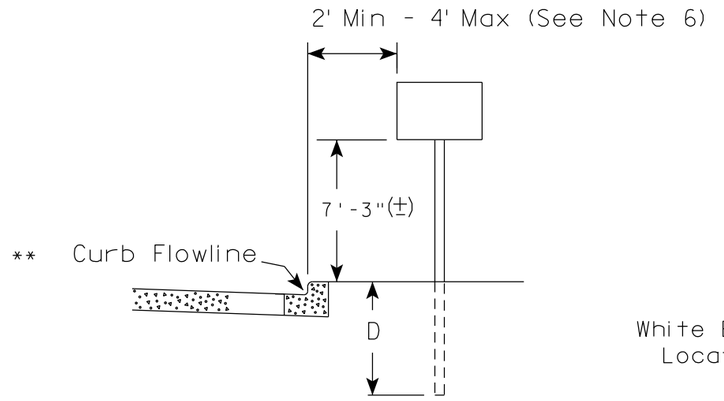
TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

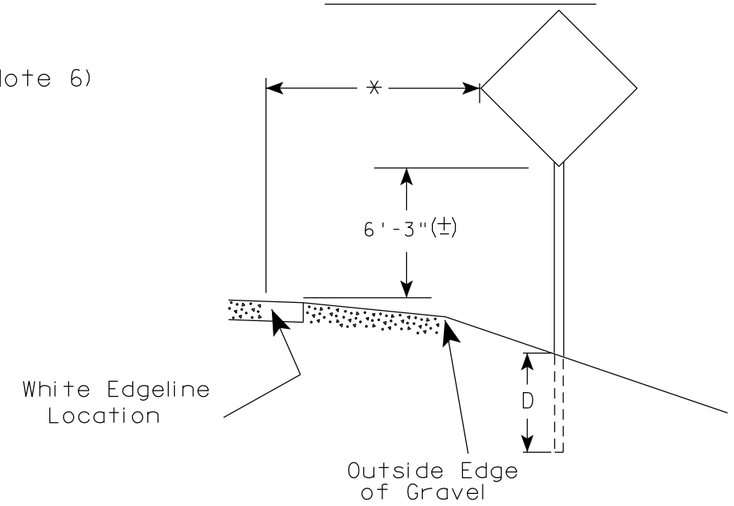
APPROVED
February 2021 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE T SAFETY ENGINEER
FHWA

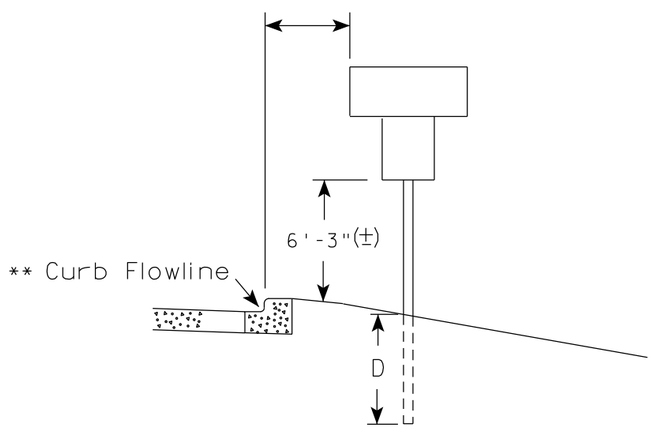
6
SDD 15D51 - 01

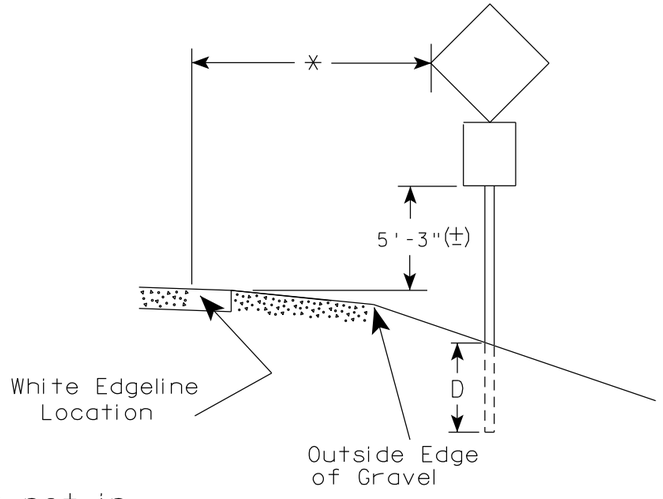
URBAN AREA



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.

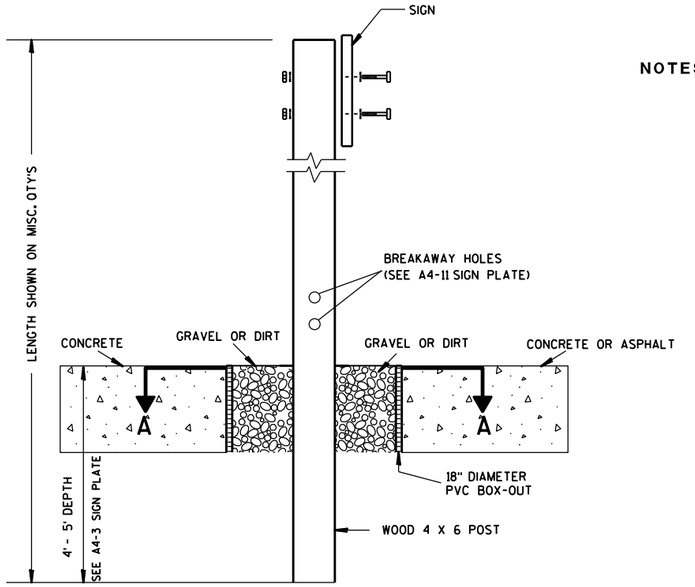
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

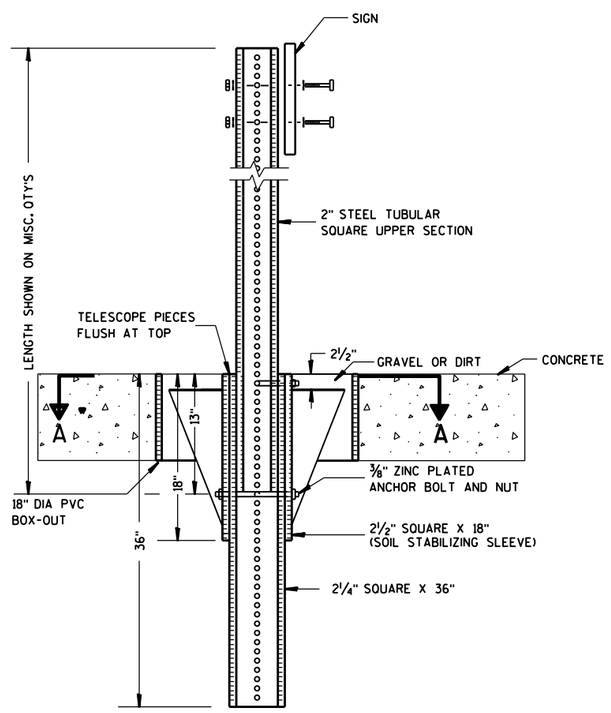
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 94	E



ELEVATION VIEW

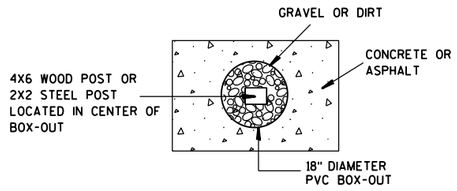
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

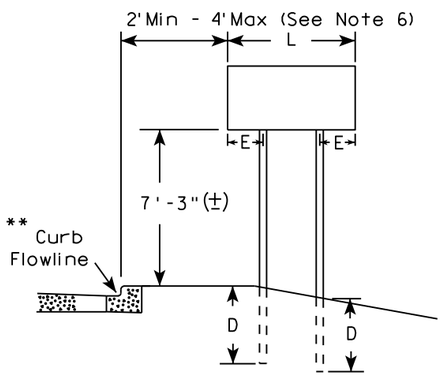
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

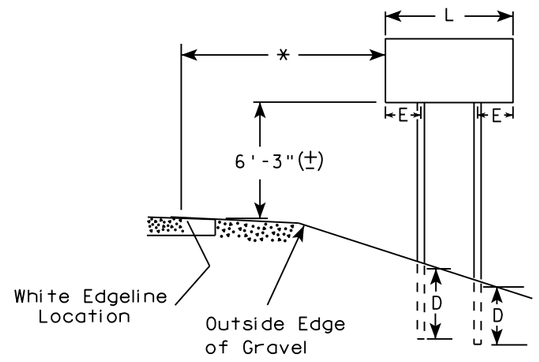
DATE 1/27/14 PLATE NO. A4-3B.1

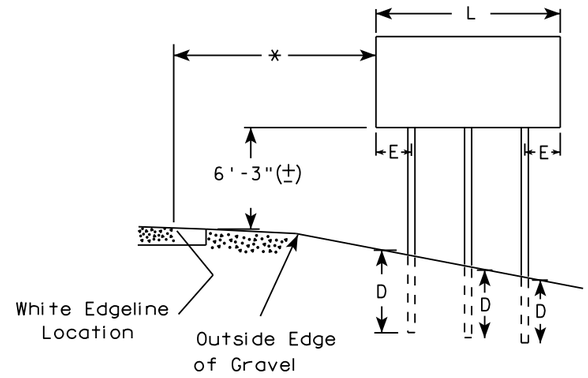
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

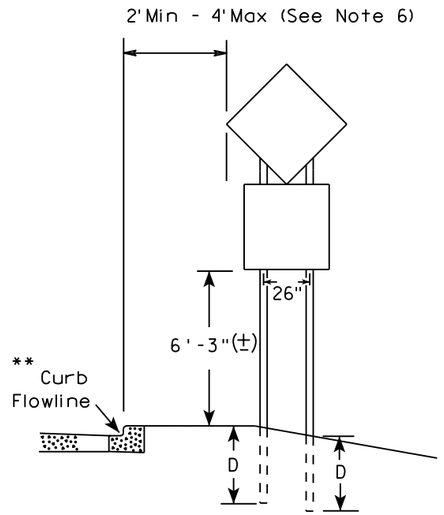
URBAN AREA



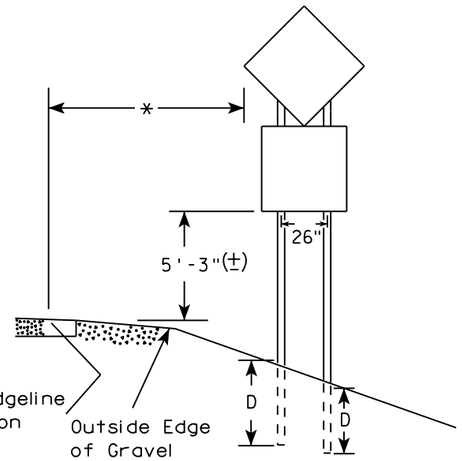
RURAL AREA (See Note 3)







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'

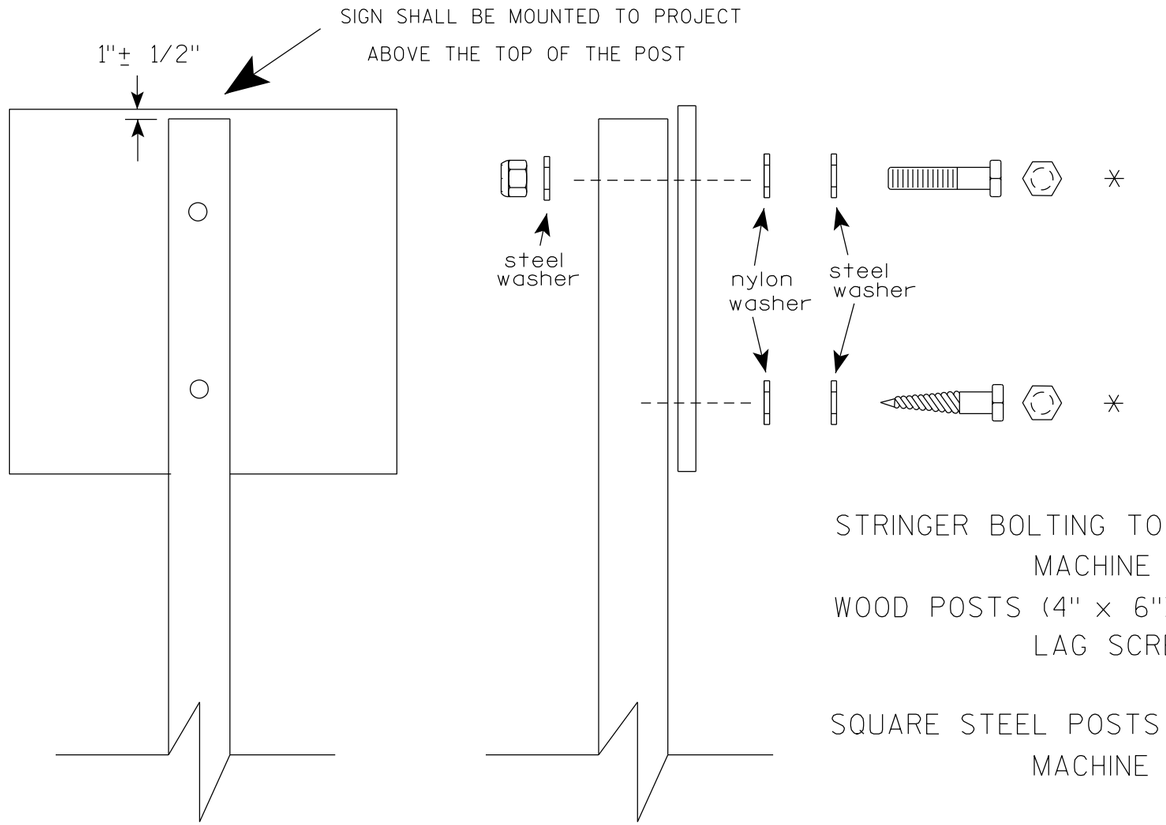
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 96	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

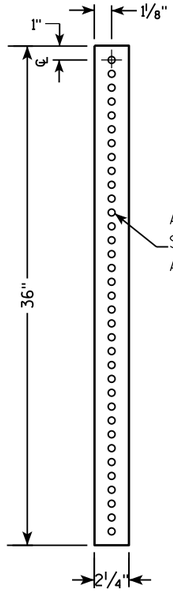
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

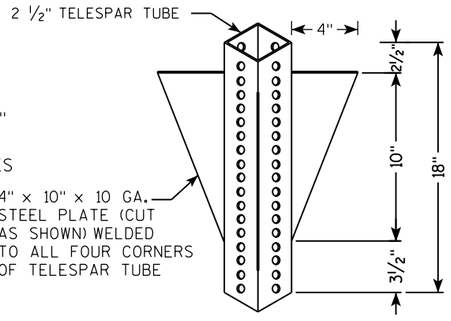
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

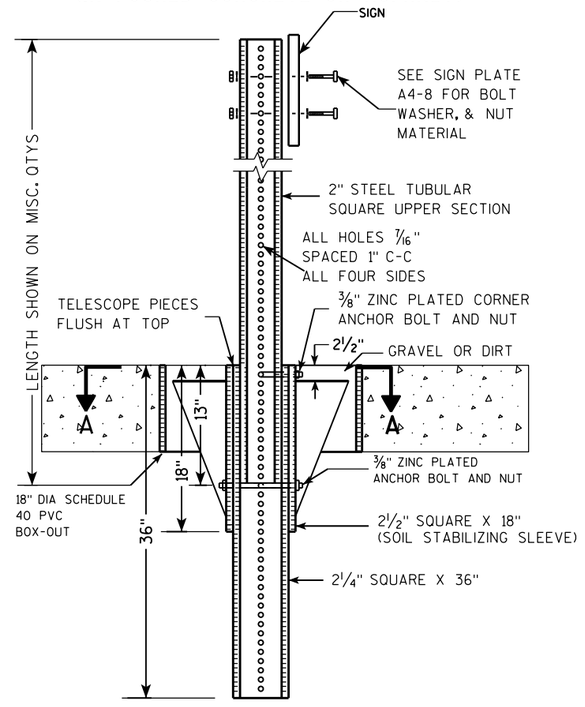
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



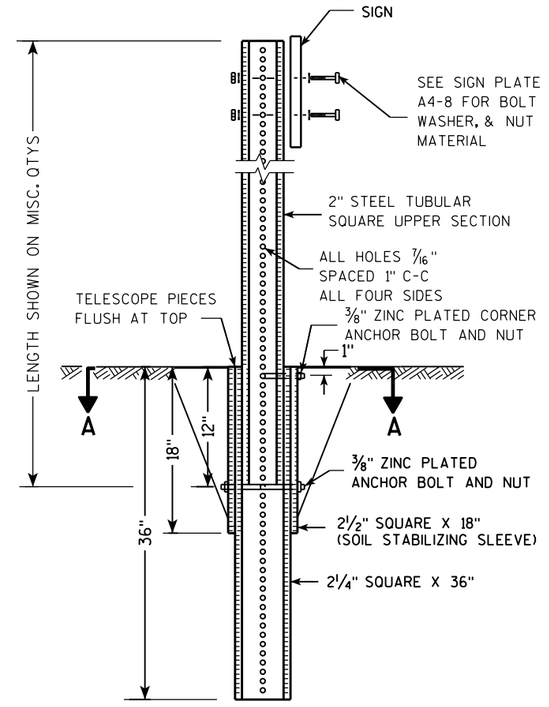
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

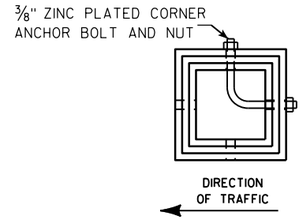


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

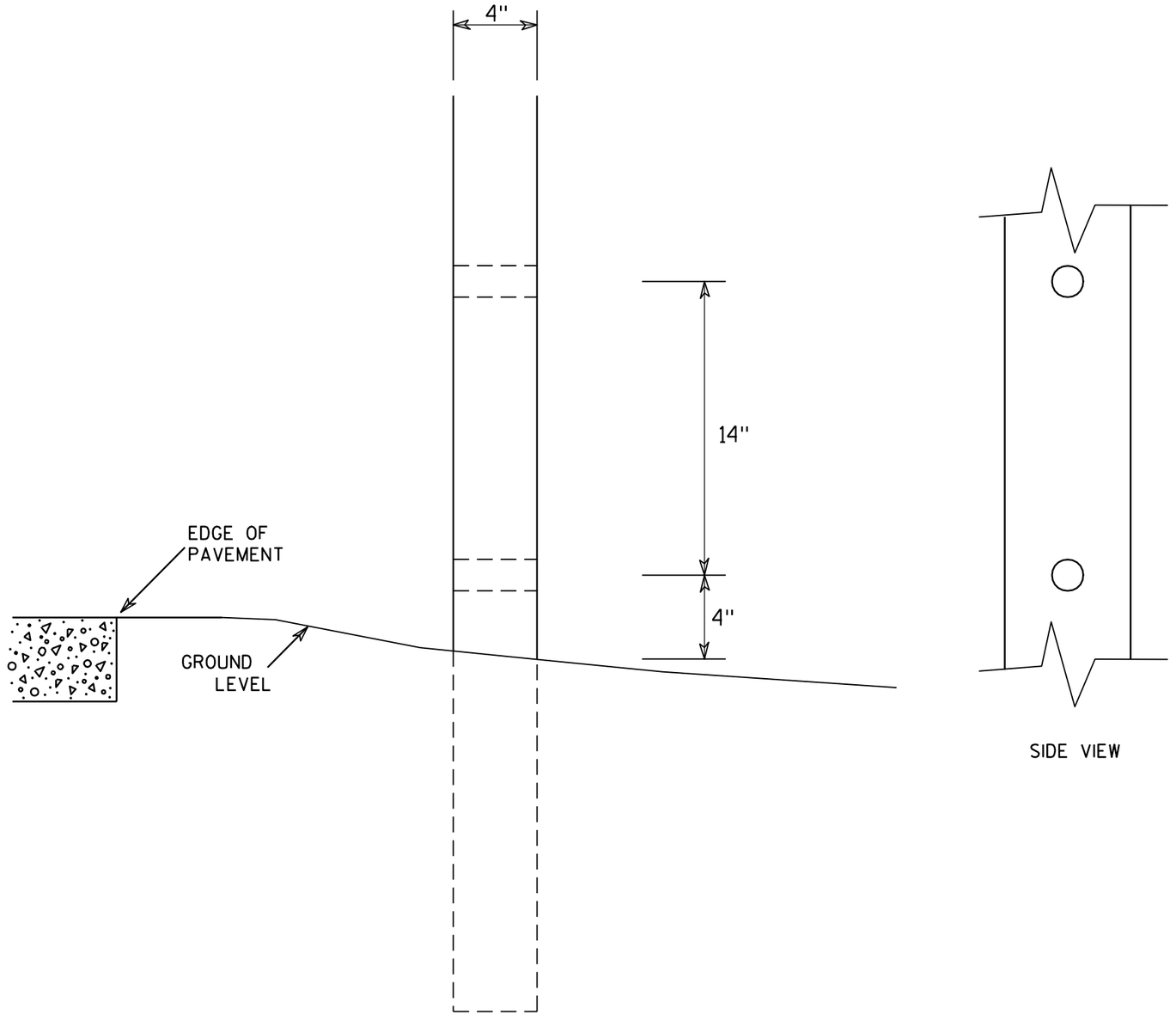
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 98 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

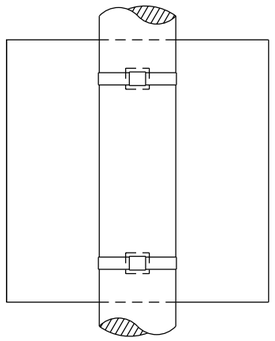
APPROVED Chester J Spang for State Traffic Engineer

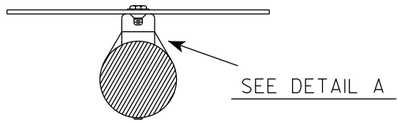
DATE 3/27/97 PLATE NO. A4-11.2

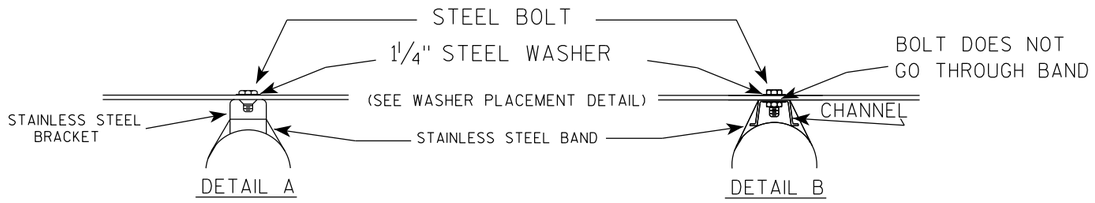
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 99	E

BANDING

SINGLE SIGN



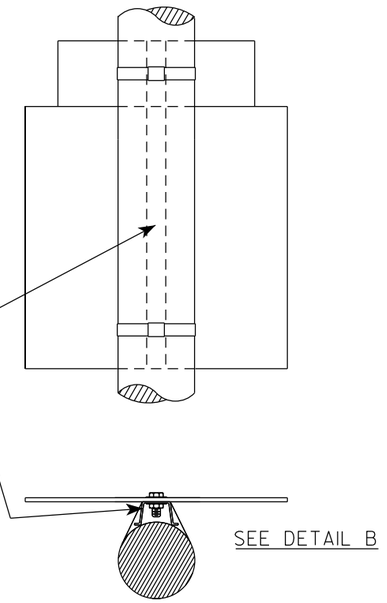




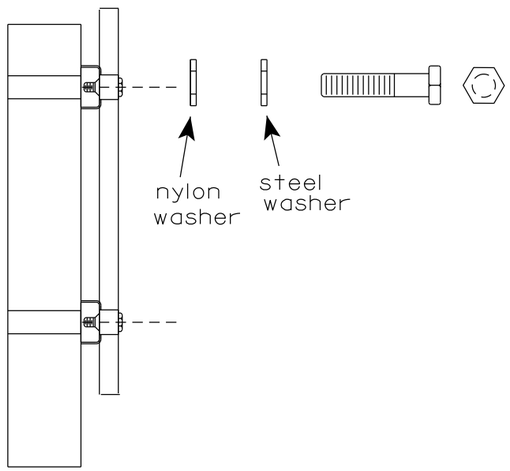
GENERAL NOTES

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

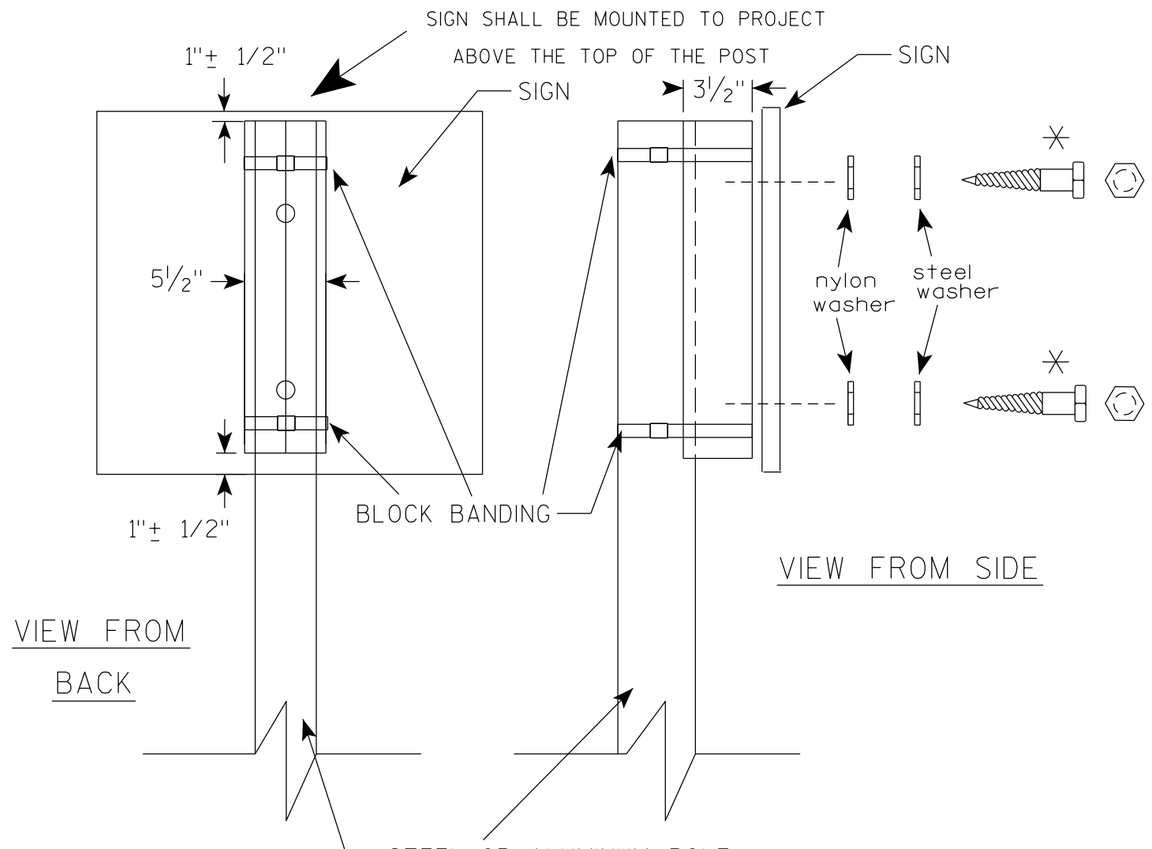
WISCONSIN DEPT OF TRANSPORTATION

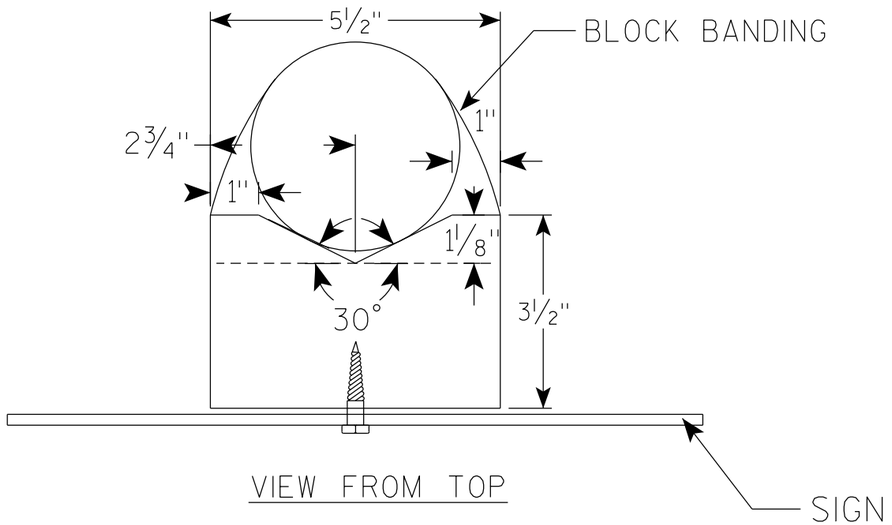
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 100	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$





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)

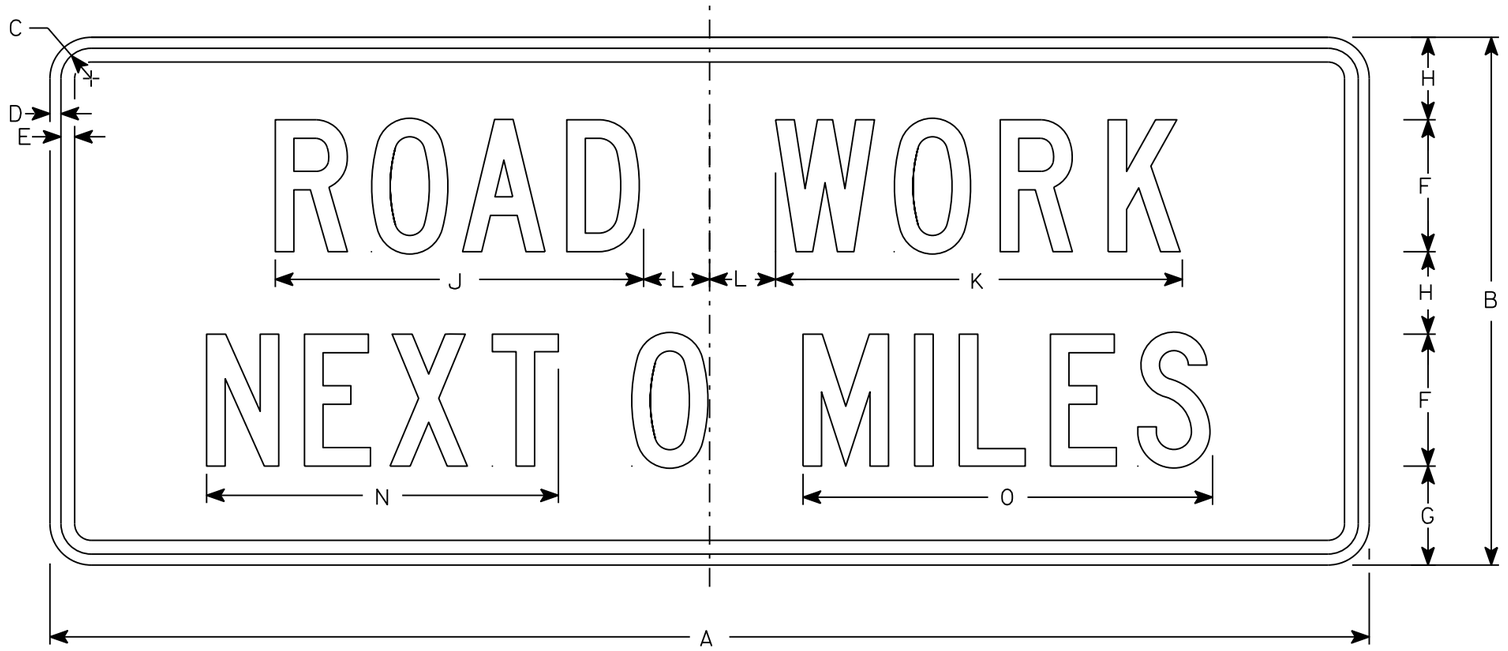
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 101 E



G20-1

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.
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 3/4	18 1/2	3		16	18 5/8												10
3																											
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10
5																											

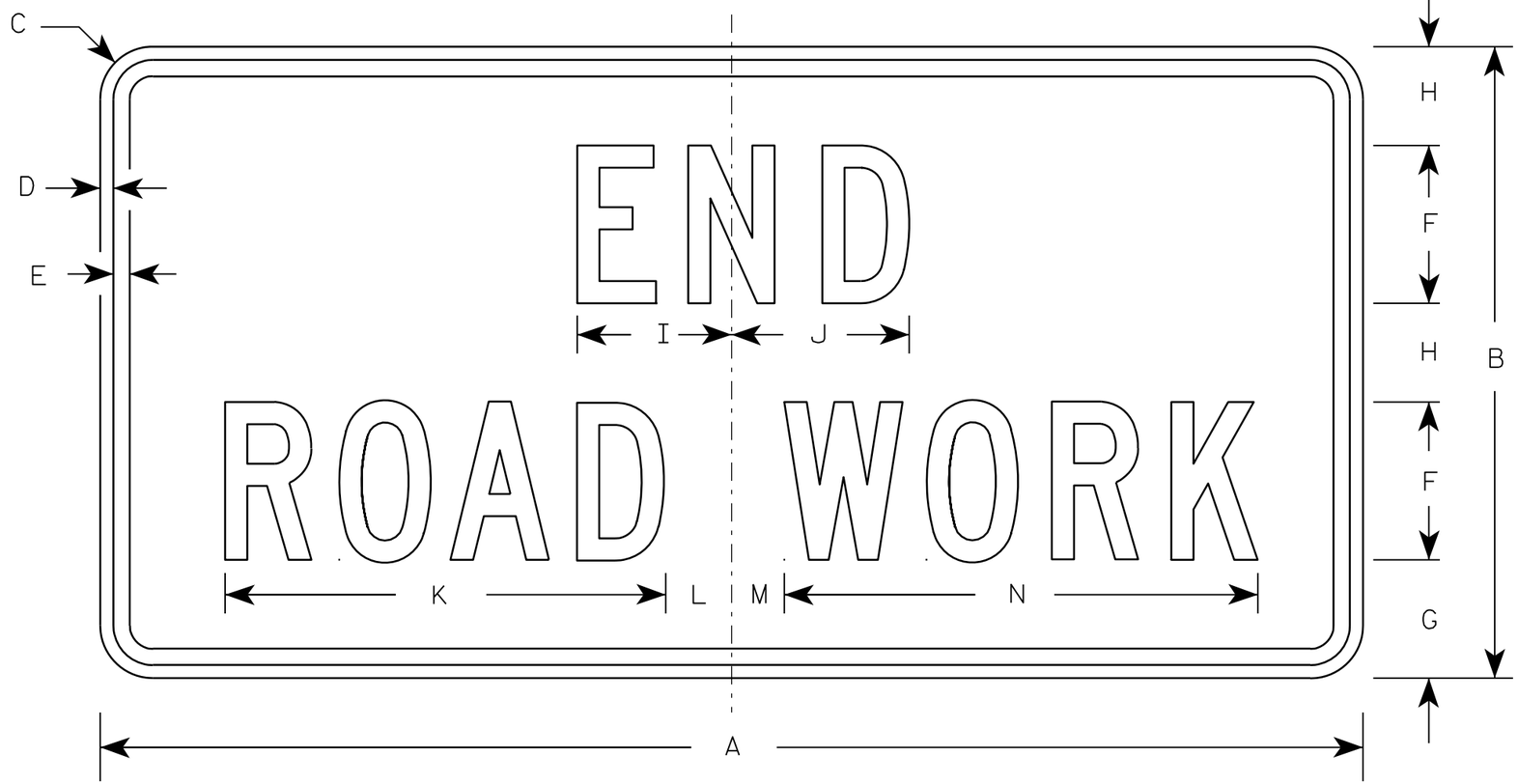
STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 102 | 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

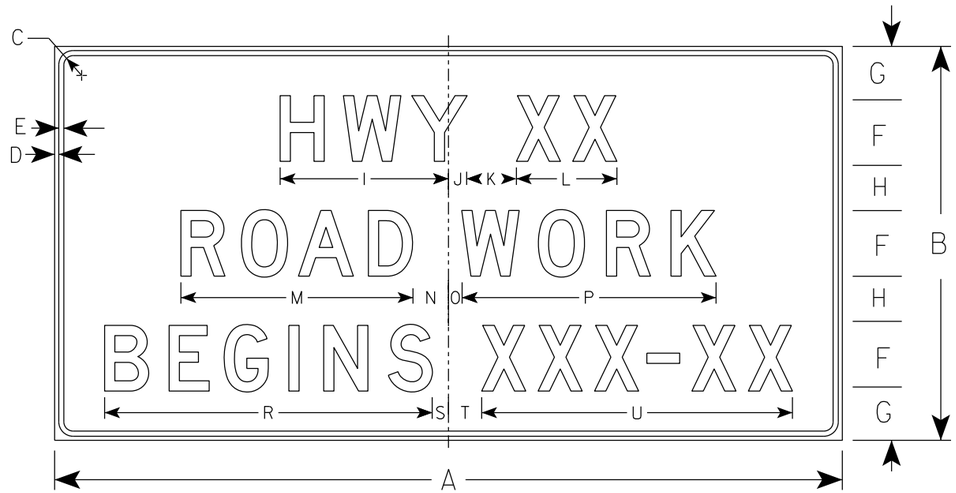
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 103	E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/4	3 1/2	1 1/2	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	4 3/8	1 5/8	31		39 1/4	2	4	37 7/8						32.0
5																											

STANDARD SIGN
G20-57

WISCONSIN DEPT OF TRANSPORTATION

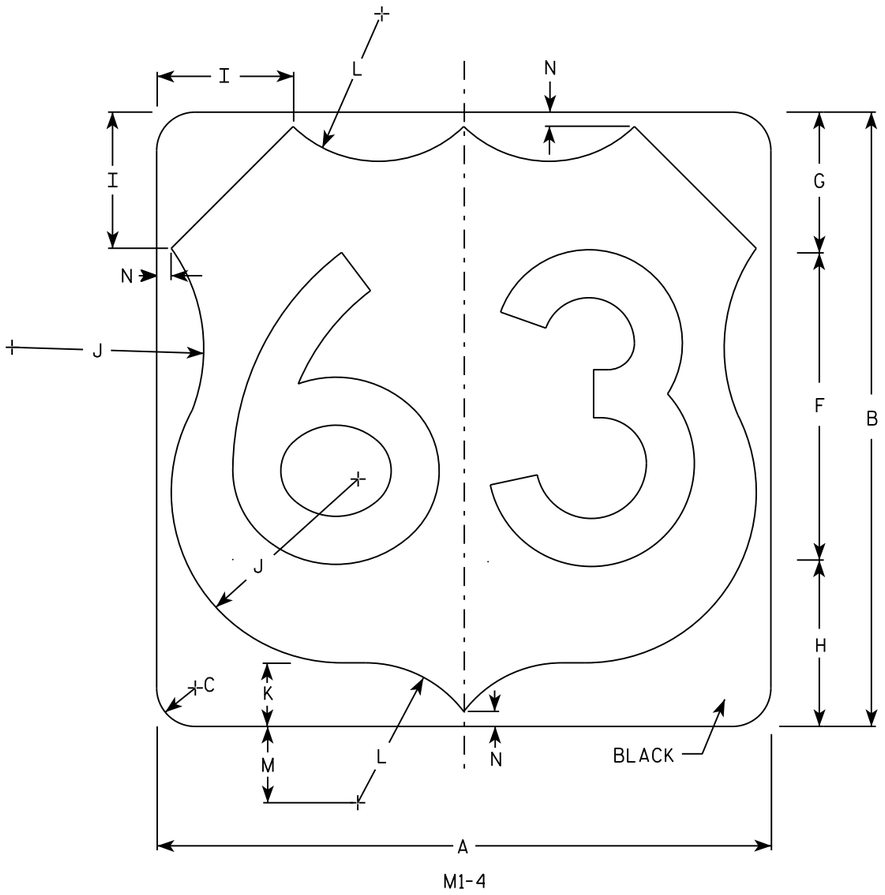
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57.3

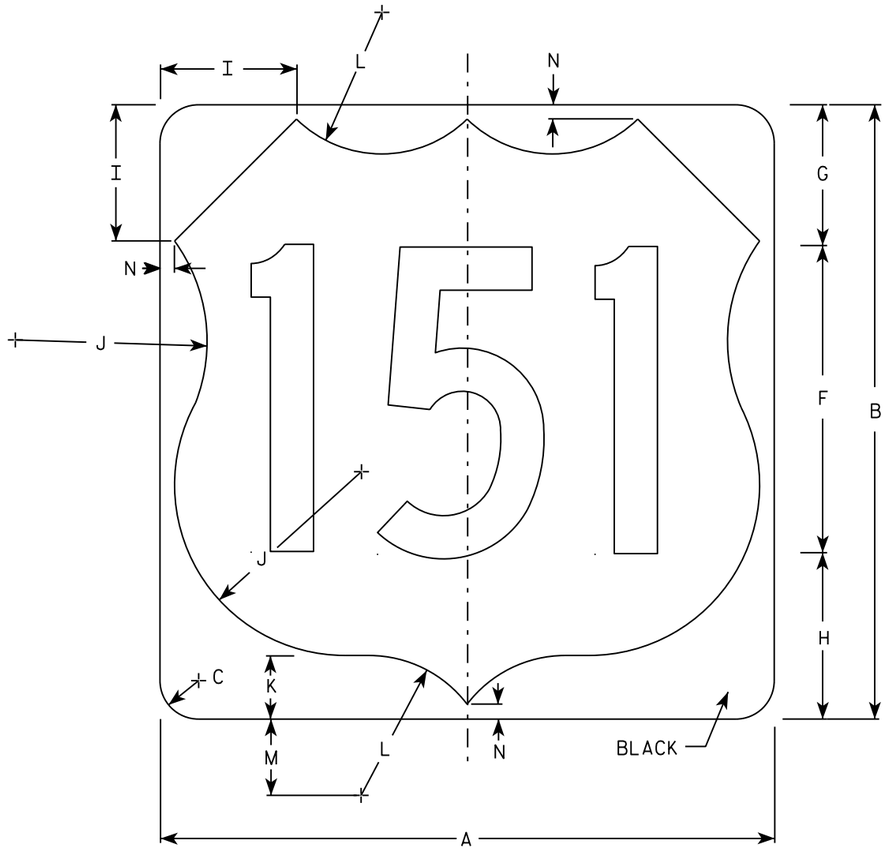
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 104 | E

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.



M1-4



M1-4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area Sq. ft.
1																											
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

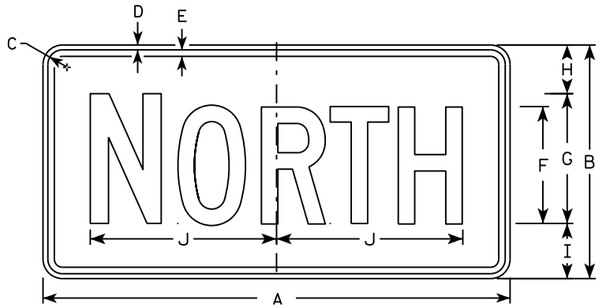
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

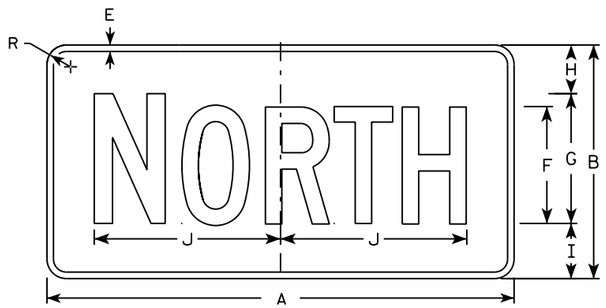
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-4.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 105	E



M3-1
MM3-1
MP3-1



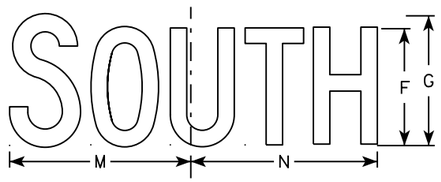
MB3-1
MK3-1
MN3-1



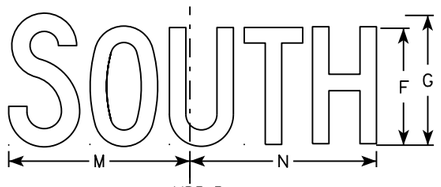
M3-2
MM3-2
MP3-2



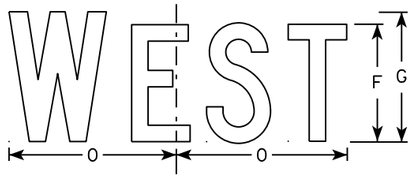
MB3-2
MK3-2
MN3-2



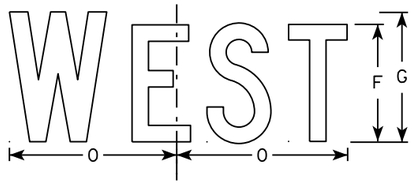
M3-3
MM3-3
MP3-3



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

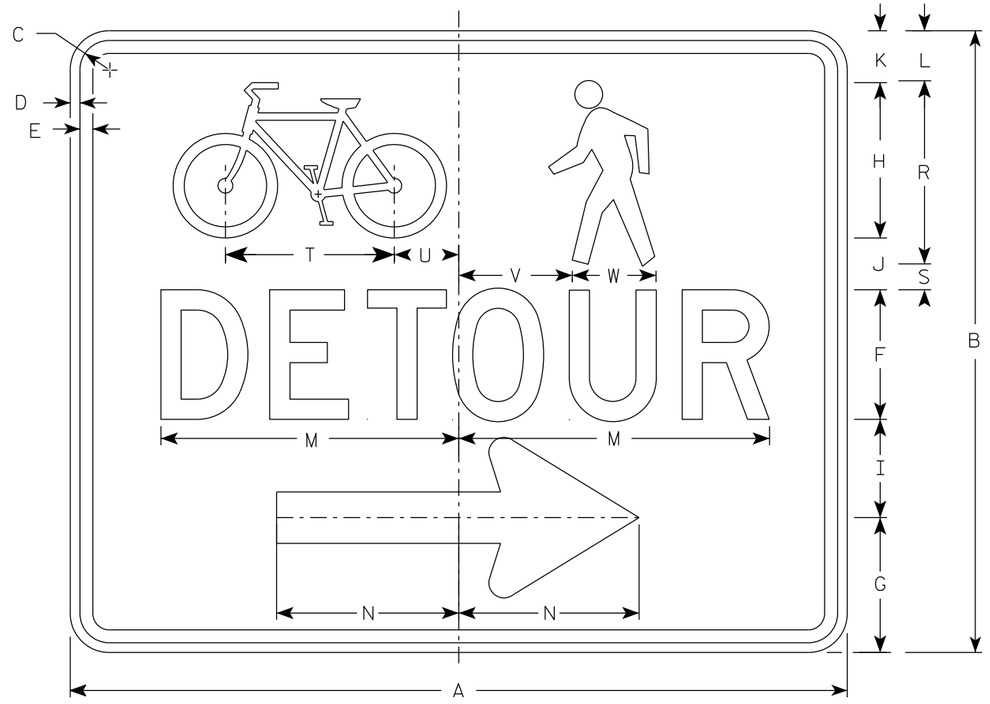
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

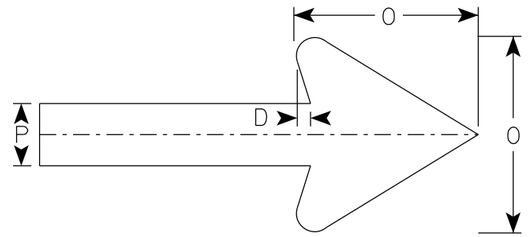
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-9AR

NOTES

1. Sign is Type II-Type F Reflective
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. M4-9AL is the same as M4-9AR except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	5 1/4	6	3 3/4	2	2	1 7/8	11 3/4	7	6	2		7 1/8	1	6 1/2	2 1/2	4 3/8	3 1/4				5.00
3																											
4																											
5																											

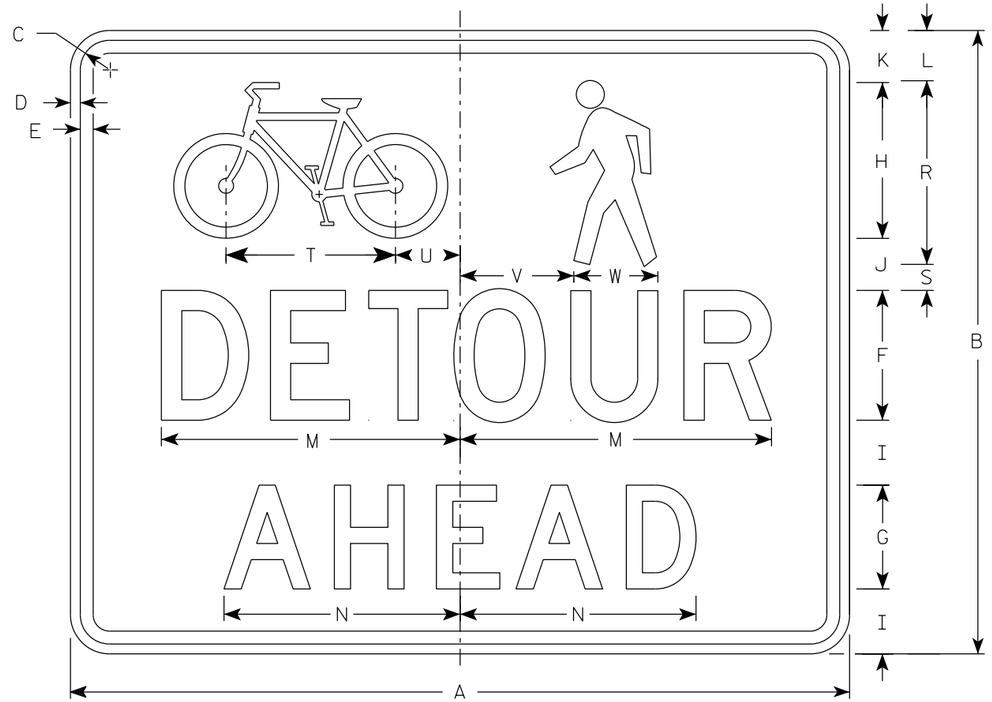
STANDARD SIGN
M4-9A L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/2/19 PLATE NO. M4-9A.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 107 | E



M4-9AA

NOTES

1. Sign is Type II - Type F Reflective
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.

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	6	2 1/2	2	2	1 7/8	11 3/4	9 1/8				7 1/8	1	6 1/2	2 1/2	4 3/8	3 1/4				5.00
3																											
4																											
5																											

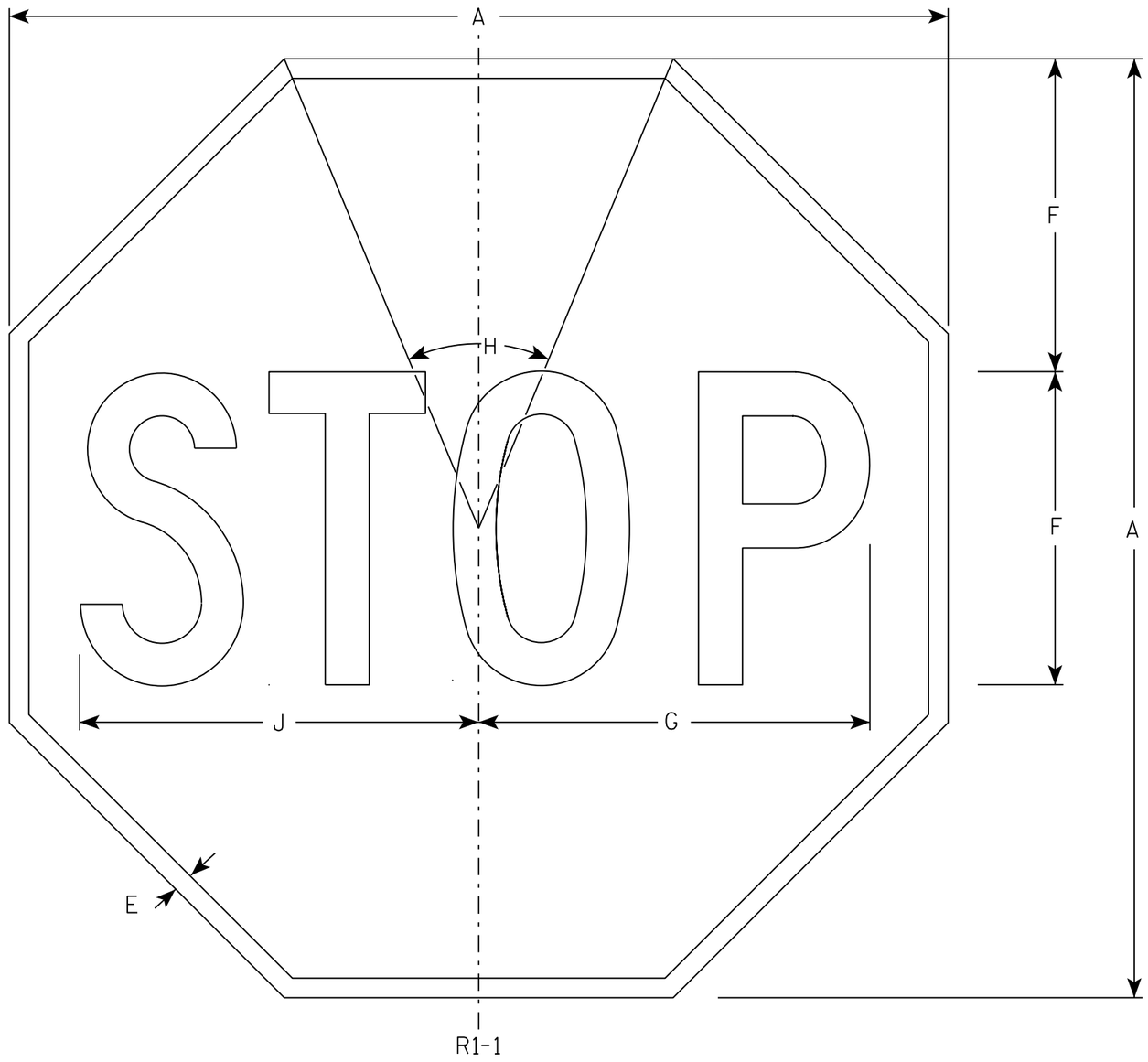
STANDARD SIGN
M4-9AA

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/7/2020 PLATE NO. M4-9AA.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 108	E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN

R1-1

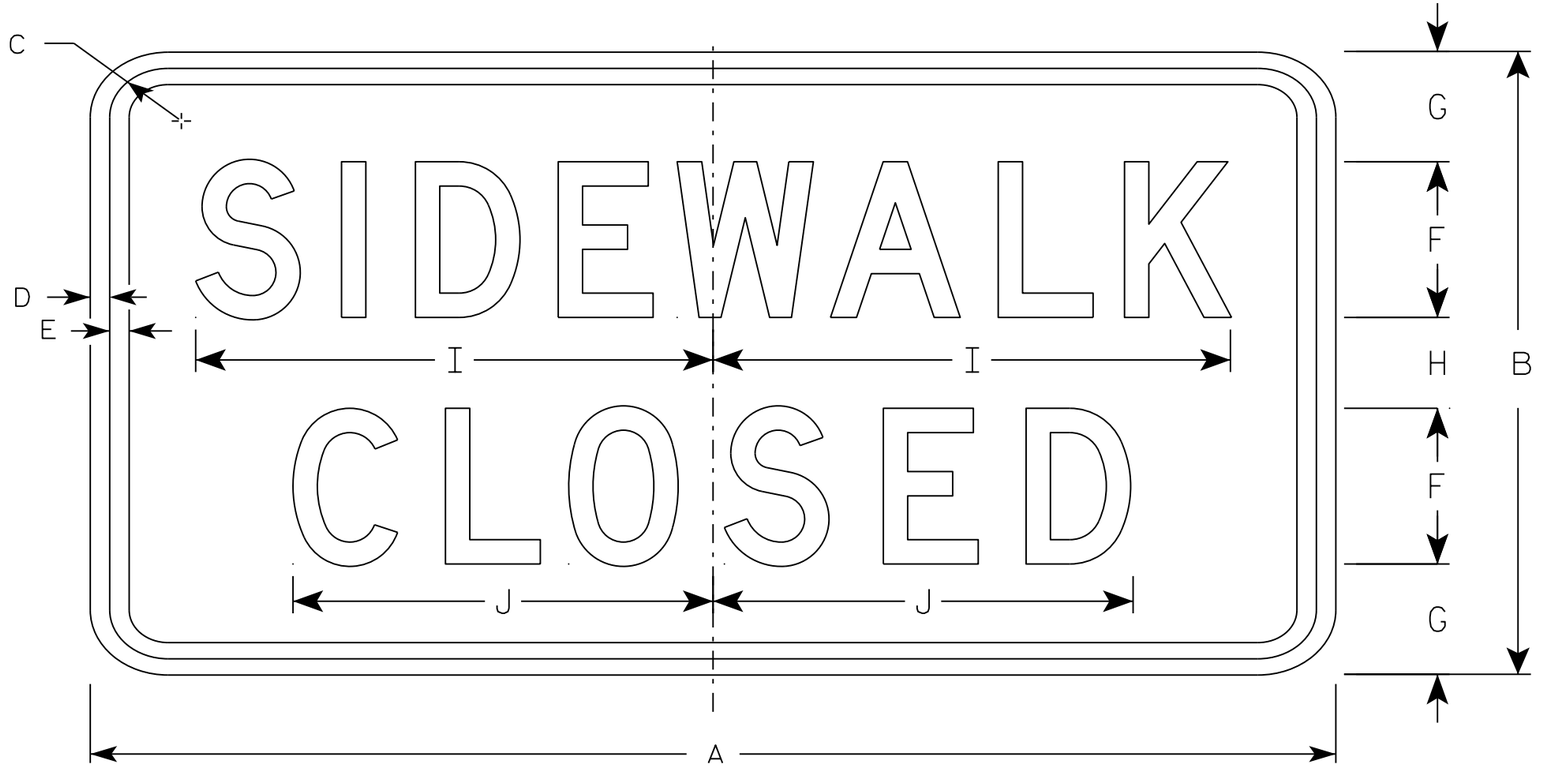
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 109	E



R9-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN
R9-9

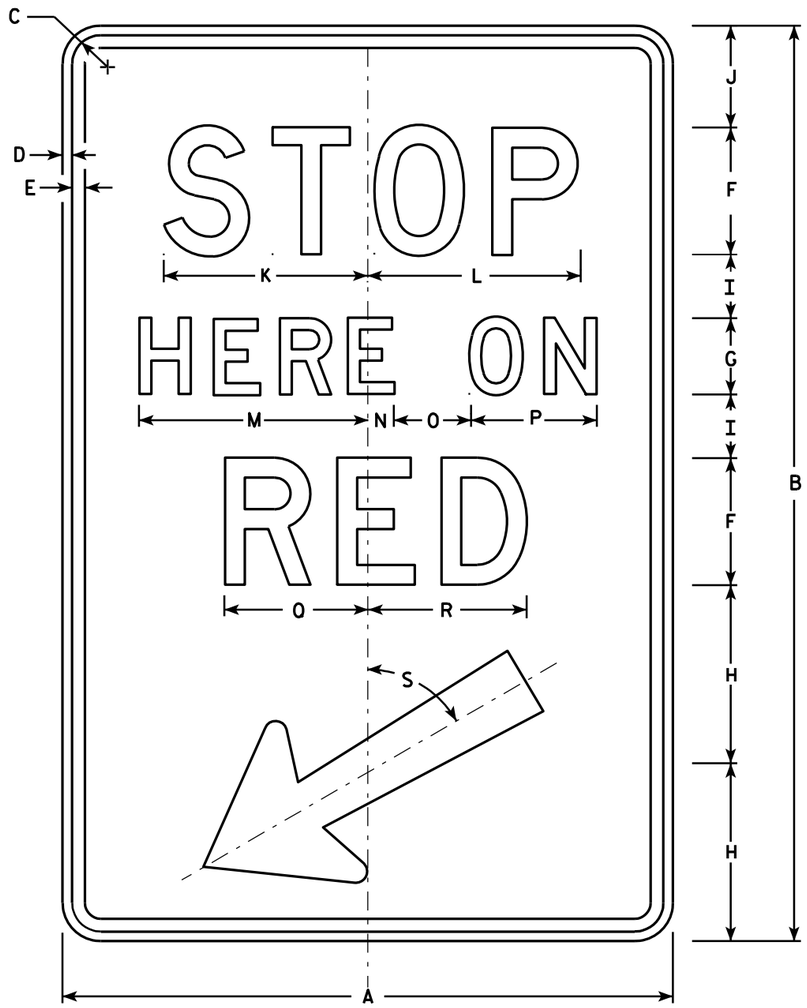
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE 110 R9-9.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

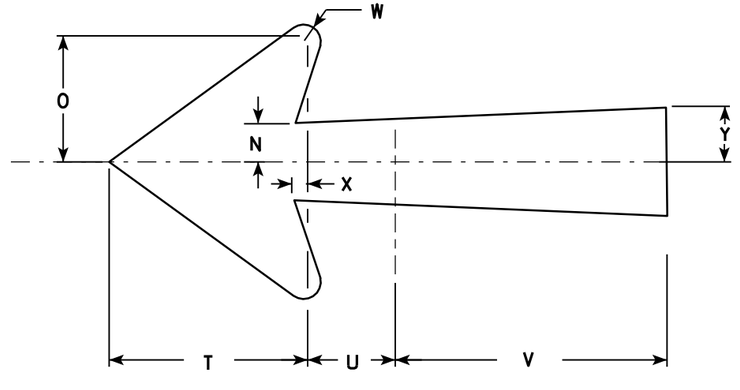
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R99.DGN PLOT DATE : 11-AUG-2016 11:33 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 2.918761:1.000000



R10-6

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

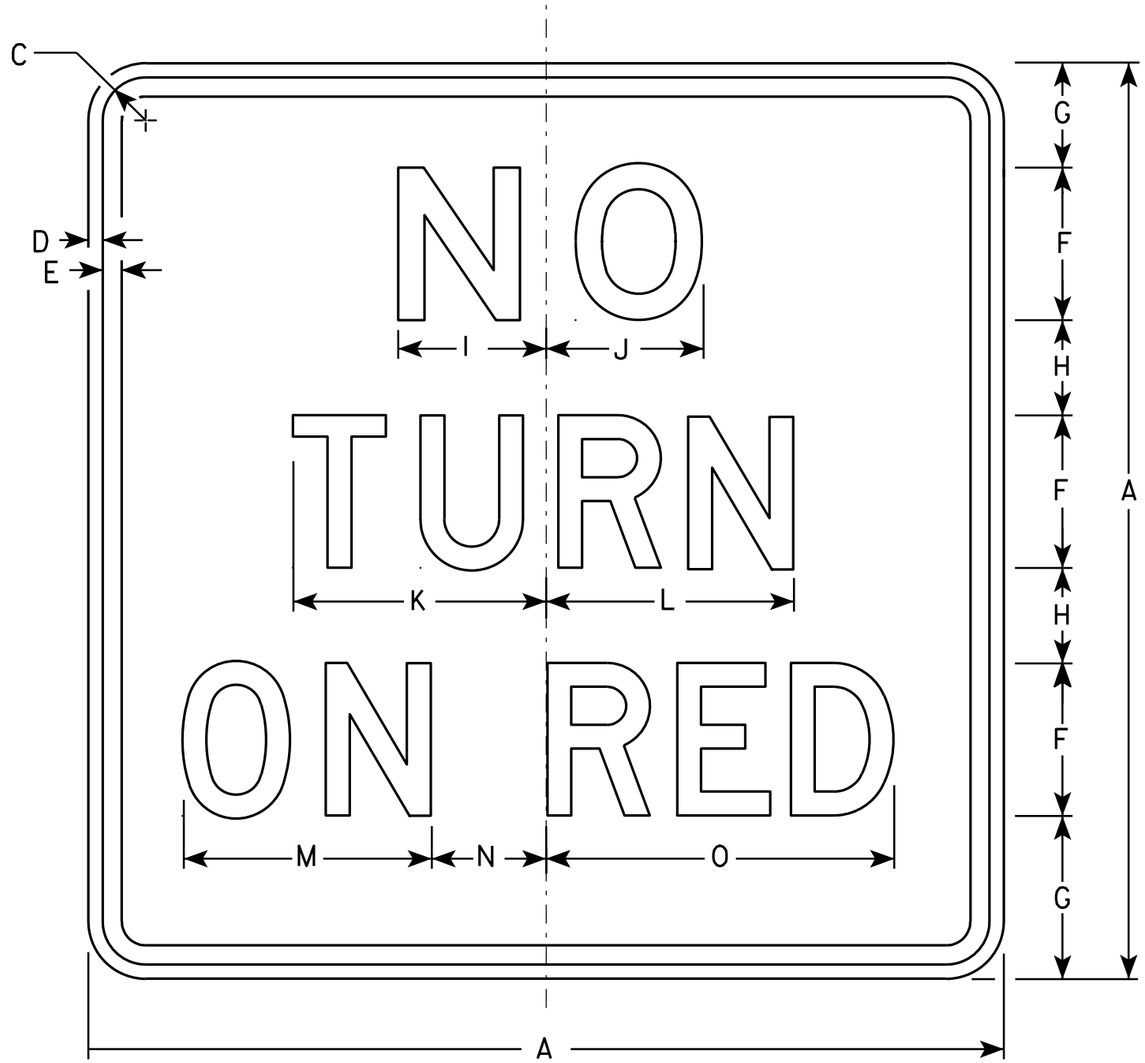
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 111	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R106.DGN PLOT DATE : 05-APR-2011 09:50 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

7



R10-11B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - See Note 5.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series E.
   Lines 2 and 3 are Series D.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8	3/8	3/8	3	2 3/4	1 3/4	3	3 1/8	5	4 7/8	5 1/4	1 7/8	7 1/8												2.25
2S	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
2M	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
3	30		1 3/8	1/2	5/8	5	4 1/2	3	4 7/8	5 1/4	8 1/4	8 1/8	7 3/4	4 1/8	11 7/8												6.25
4																											
5																											

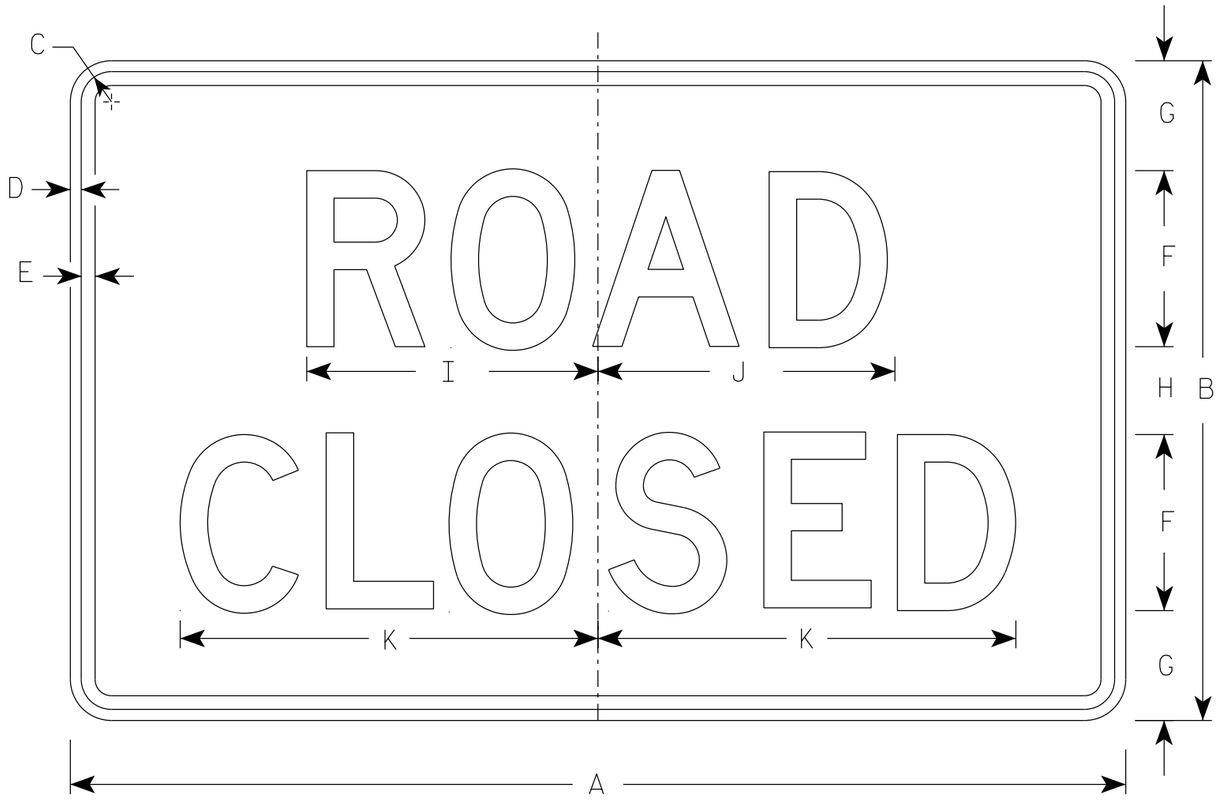
STANDARD SIGN
R10-11B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-11B.4

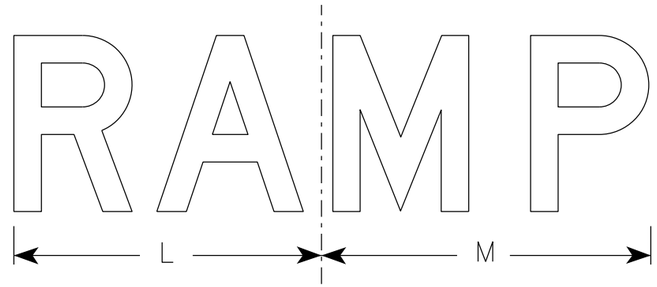
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 112 | E



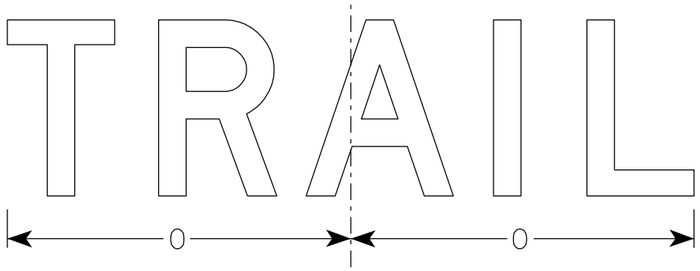
R11-2

NOTES

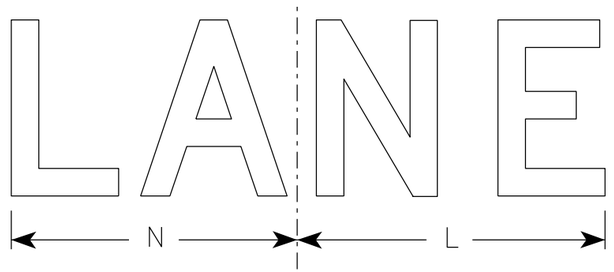
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2T



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

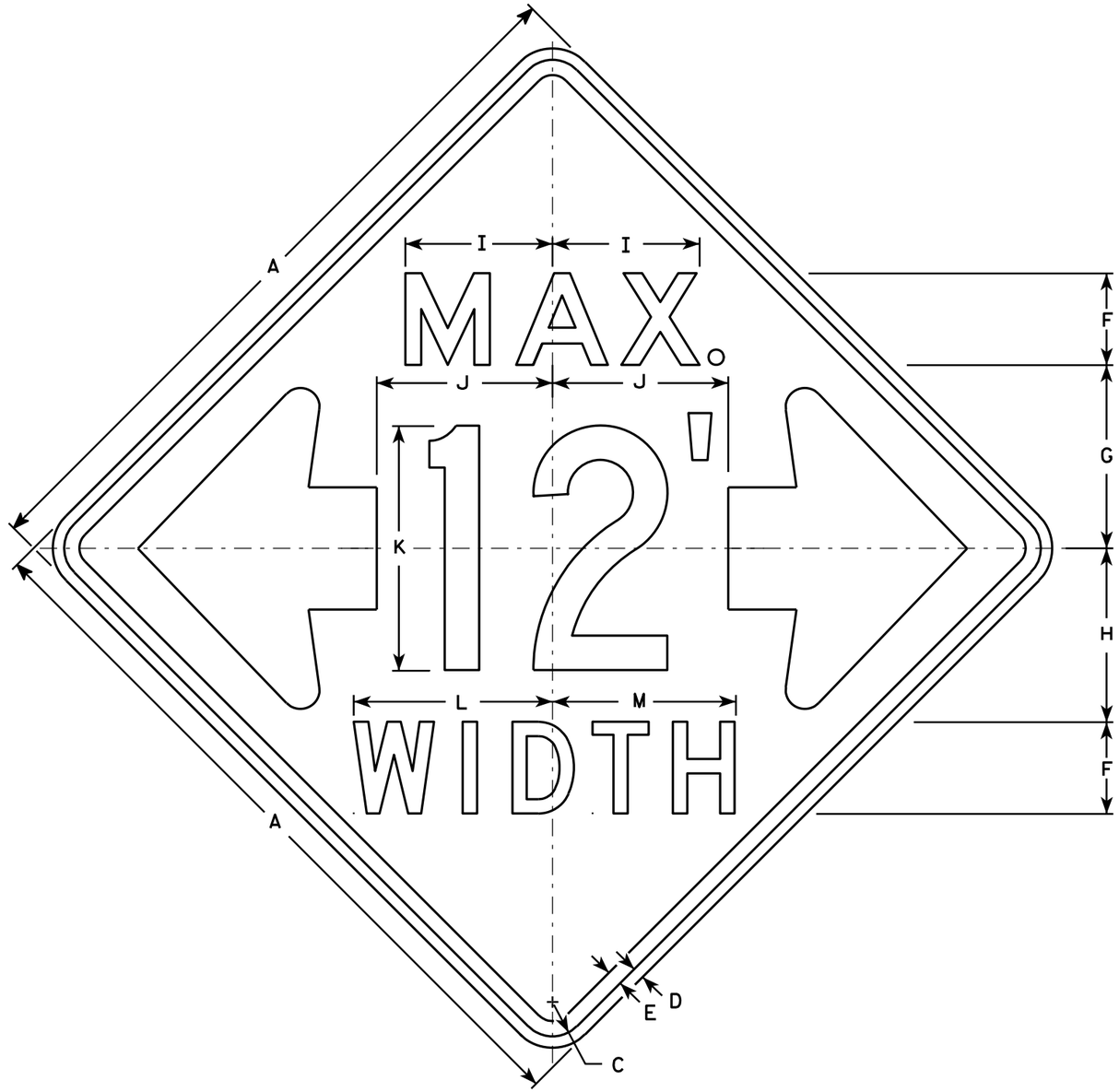
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

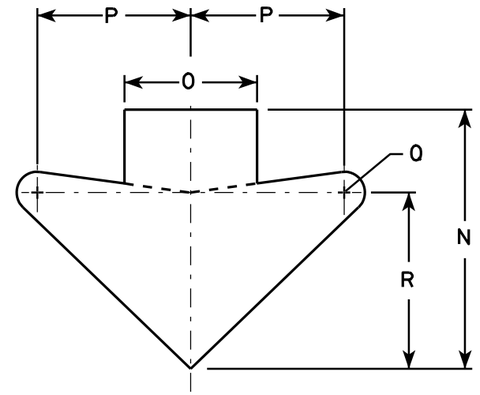
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 113	E



W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

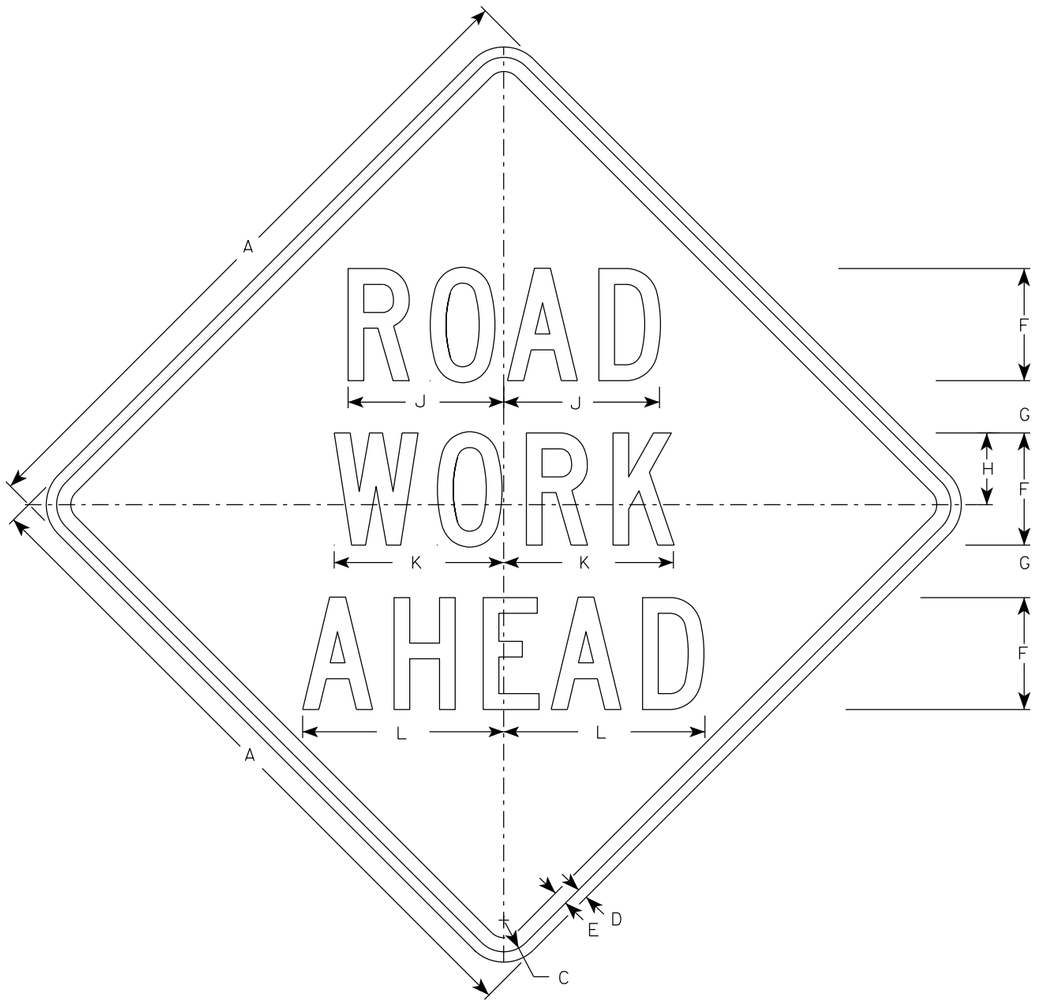
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 114	E

7

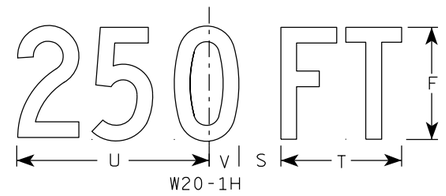
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000

NOTES

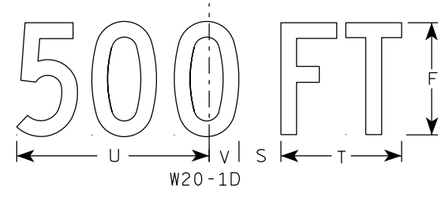
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A



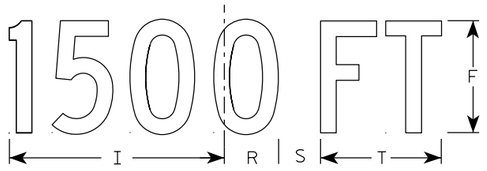
W20-1H



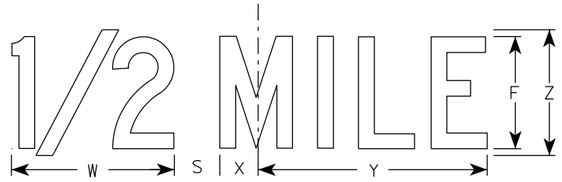
W20-1D



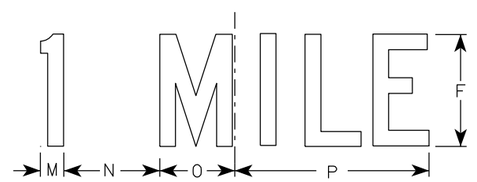
W20-1C



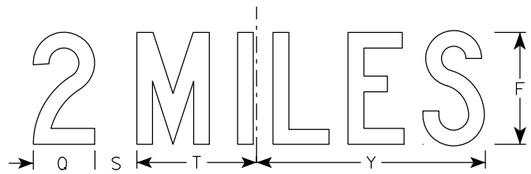
W20-1B



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

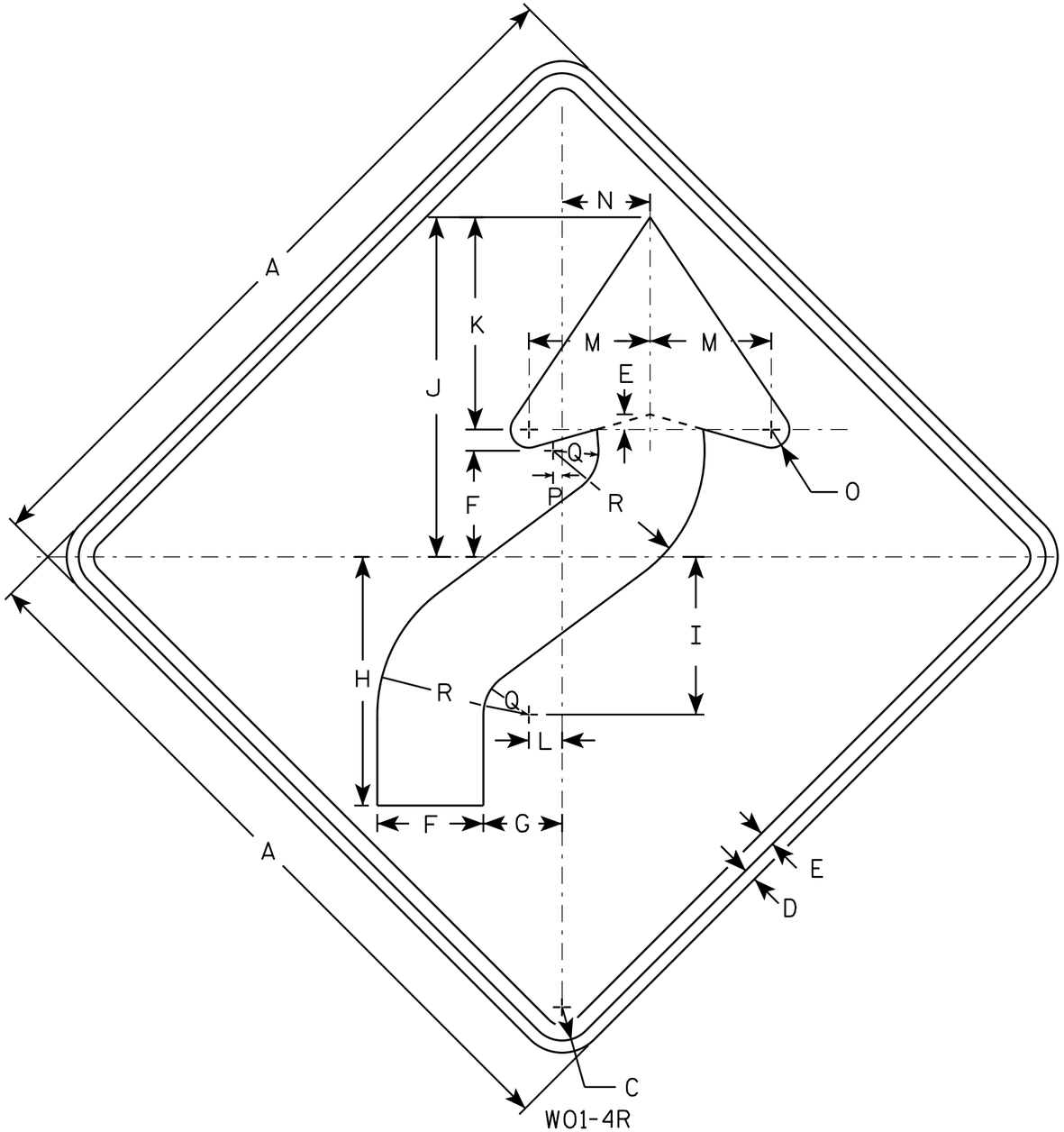
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

SHEET NO: E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

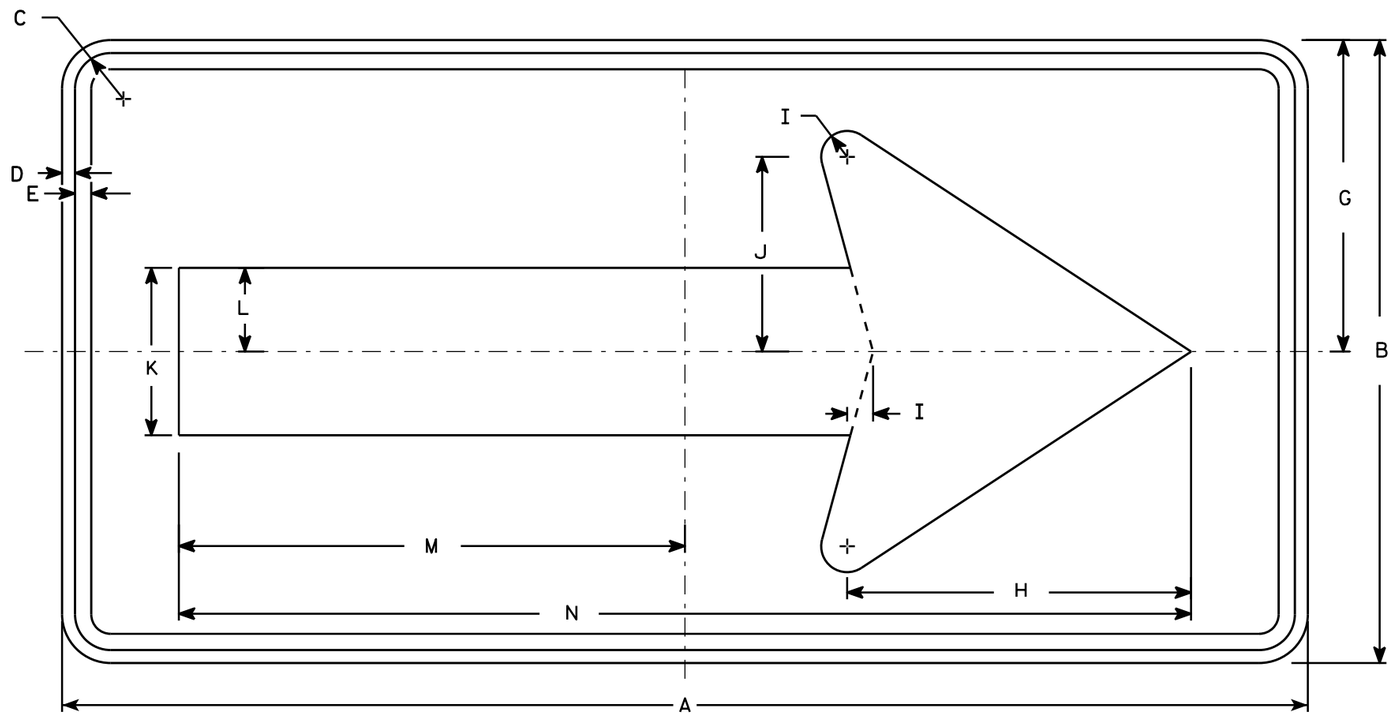
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000 WISDOT/CADDS SHEET 42



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

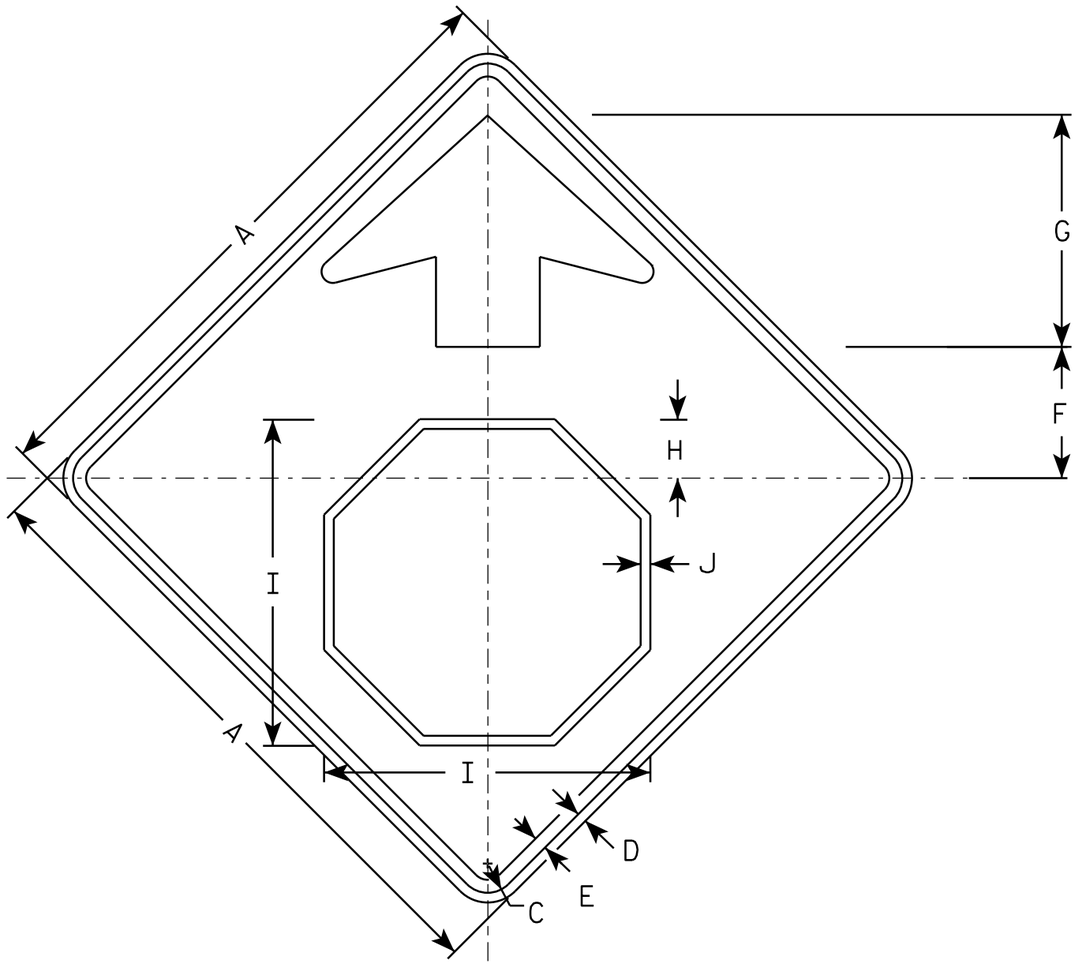
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

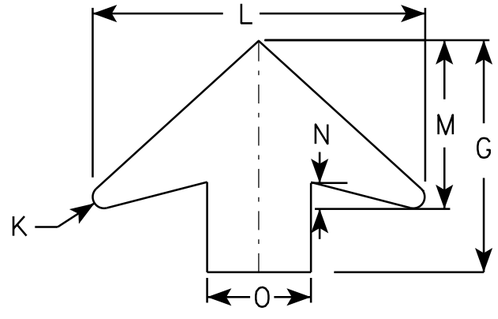
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W03-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2S	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
2M	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
3	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W03-1

WISCONSIN DEPT OF TRANSPORTATION

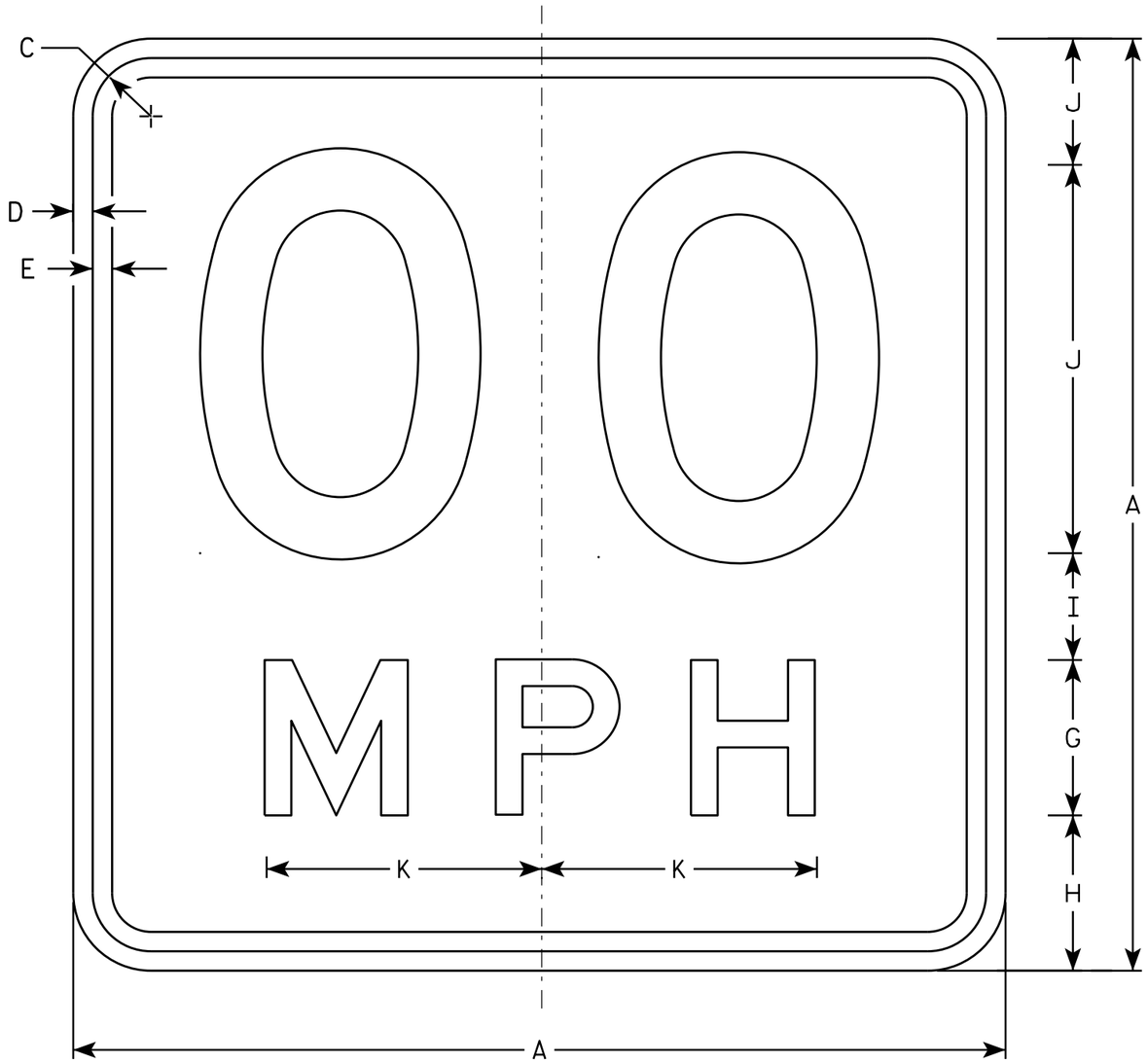
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 118 03-1.1

PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W031.DGN PLOT DATE : 20-NOV-2013 10:54 PLOT BY : mscsja

WISDOT/CADDS SHEET 42



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

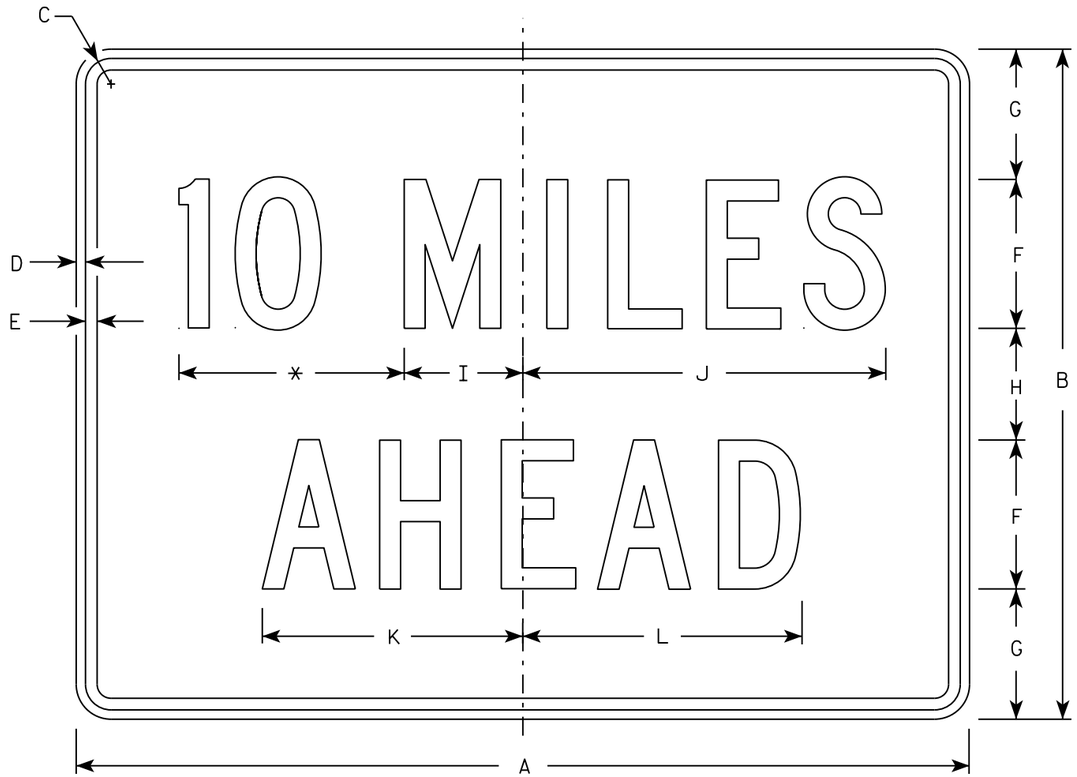
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

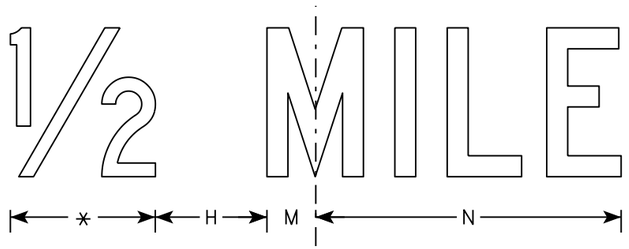
DATE 11/21/13 PLATE 119 W013-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W0131.DGN PLOT DATE : 02-DEC-2013 13:55 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.794391:1.000000
WISDOT/CADDS SHEET 42



W057-52



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.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.

* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W057-52.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 120	E

CULVERT 670 STAGE 1 EARTHWORK											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
450+29.88	45029.88	0.00	0.21	0.00	1.16	0	0	0	0	0	0
450+70.21	45070.21	40.33	0.00	0.00	2.95	0	0	3	0	4	-4
451+04.22	45104.22	34.01	0.05	0.00	6.16	0	0	6	0	11	-11
451+49.05	45149.05	44.83	0.02	0.00	7.35	0	0	11	0	24	-24
451+99.05	45199.05	50.00	0.00	0.00	6.92	0	0	13	0	40	-40
452+37.95	45237.95	38.90	0.00	0.00	2.11	0	0	7	0	48	-48
452+68.19	45268.19	30.24	0.11	0.00	0.81	0	0	2	0	50	-50

CULVERT 670 STAGE 2 EARTHWORK											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
447+31.53	44731.53	0.00	22.26	0.00	0.07	0	0	0	0	0	0
447+51.75	44751.75	20.22	20.39	0.00	0.04	16	0	0	16	0	16
448+02.76	44802.76	51.01	10.32	0.00	15.23	29	0	14	45	17	28
448+53.77	44853.77	51.01	0.00	0.00	97.57	10	0	107	55	145	-90
449+00.00	44900.00	46.23	0.00	0.00	116.64	0	0	183	55	365	-310
449+50.00	44950.00	50.00	0.58	0.00	70.49	1	0	173	56	572	-516
450+00.00	45000.00	50.00	23.67	0.00	32.15	22	0	95	78	686	-608
450+50.00	45050.00	50.00	35.28	0.00	14.09	55	0	43	133	738	-605
451+00.00	45100.00	50.00	58.86	0.00	9.05	87	0	21	220	763	-543
451+50.00	45150.00	50.00	59.31	0.00	10.23	109	0	18	329	785	-456
452+00.00	45200.00	50.00	46.17	0.00	15.34	98	0	24	427	814	-387
452+50.00	45250.00	50.00	22.11	0.00	37.14	63	0	49	490	872	-382
453+00.00	45300.00	50.00	2.72	0.00	66.39	23	0	96	513	988	-475
453+50.00	45350.00	50.00	0.00	0.00	101.38	3	0	155	516	1,174	-658
454+00.00	45400.00	50.00	0.00	0.00	132.69	0	0	217	516	1,434	-918
454+43.35	45443.35	43.35	0.00	0.00	107.54	0	0	193	516	1,666	-1,150
454+94.36	45494.36	51.01	5.26	0.00	44.67	5	0	144	521	1,838	-1,317
455+45.37	45545.37	51.01	15.88	0.00	2.04	20	0	44	541	1,891	-1,350

9

9

PROJECT NO: 1175-18-74 | HWY: USH 51 | COUNTY: IRON | EARTHWORK DATA - CULVERT 670 | SHEET 121 | E

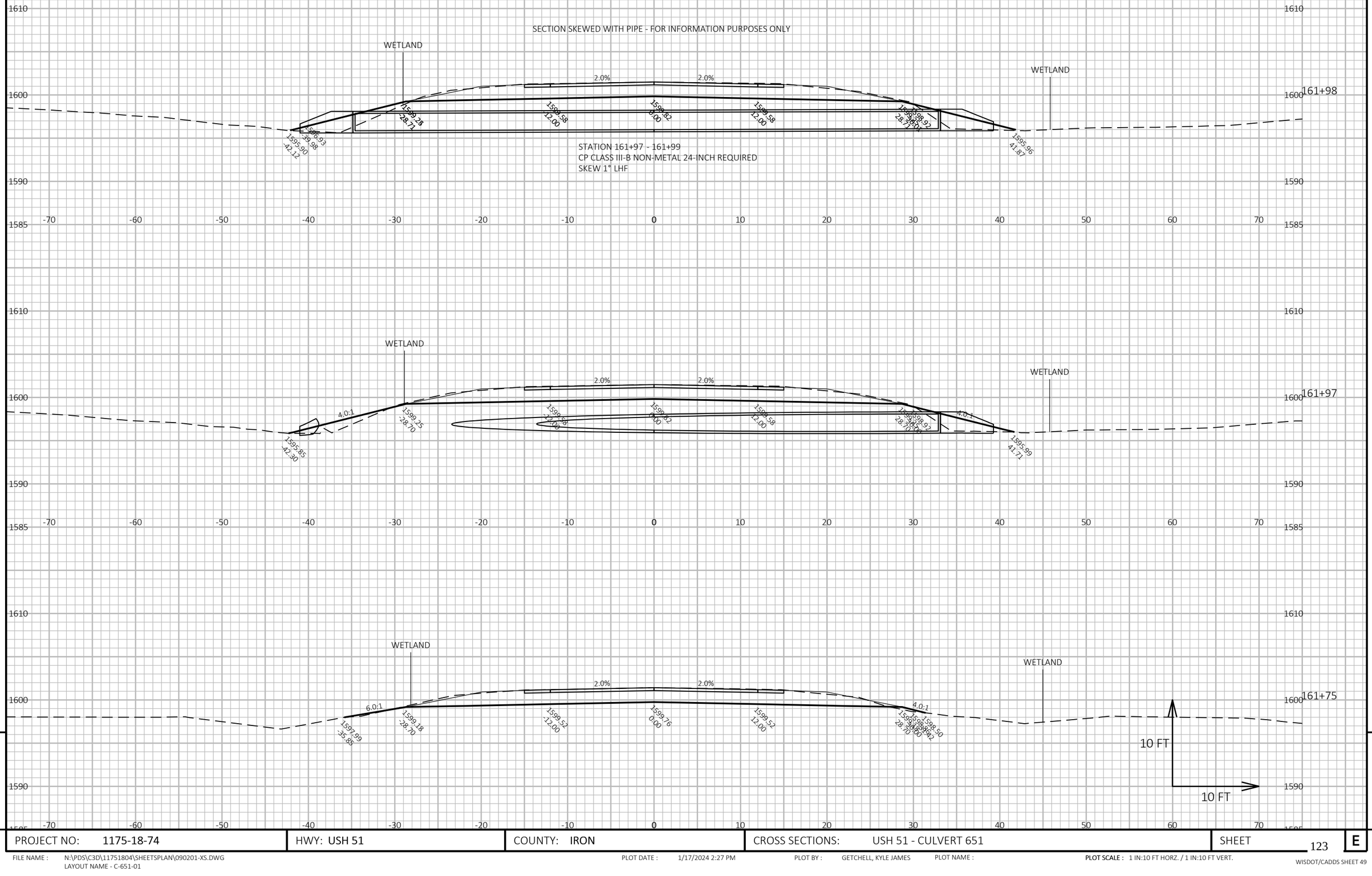
CULVERT 670 STAGE 3 EARTHWORK

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
447+60.00	44760.00	0.00	2.80	0.00	0.48	0	0	0	0	0	0
448+10.00	44810.00	50.00	1.87	0.00	0.70	4	0	1	4	1	3
448+60.00	44860.00	50.00	2.14	0.00	1.01	4	0	2	8	4	4
449+10.00	44910.00	50.00	3.77	0.00	0.70	5	0	2	13	6	7
449+60.00	44960.00	50.00	6.59	0.00	0.65	10	0	1	23	7	16
450+10.00	45010.00	50.00	5.47	0.00	0.07	11	0	1	34	8	26
450+60.00	45060.00	50.00	8.51	0.00	0.53	13	0	1	47	10	37
451+10.00	45110.00	50.00	11.19	0.00	9.62	18	0	9	65	20	45
451+30.26	45130.26	20.26	15.73	0.00	2.84	10	0	5	75	26	49
451+60.00	45160.00	29.74	12.63	0.00	13.05	16	0	9	91	37	54
451+62.79	45162.79	2.79	12.94	0.00	10.48	1	0	1	92	38	54
452+10.00	45210.00	47.21	20.24	0.00	0.02	29	0	9	121	49	72
452+60.00	45260.00	50.00	0.78	0.00	1.72	19	0	2	140	52	88
453+10.00	45310.00	50.00	3.42	0.00	0.88	4	0	2	144	54	90
453+60.00	45360.00	50.00	3.20	0.00	3.79	6	0	4	150	59	91
454+10.00	45410.00	50.00	1.20	0.00	2.66	4	0	6	154	66	88
454+60.00	45460.00	50.00	2.44	0.00	0.38	3	0	3	157	70	87
455+10.00	45510.00	50.00	3.79	0.00	0.12	6	0	0	163	70	93
455+60.00	45560.00	50.00	5.83	0.00	0.18	9	0	0	172	70	102

CULVERT 670 STAGE 4 EARTHWORK

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
447+60.00	44760.00	0.00	2.87	0.00	0.94	0	0	0	0	0	0
448+10.00	44810.00	50.00	38.18	5.67	0.15	38	5	1	38	1	32
448+60.00	44860.00	50.00	129.33	5.67	0.00	155	10	0	193	1	177
449+10.00	44910.00	50.00	129.17	5.67	0.00	239	10	0	432	1	406
449+60.00	44960.00	50.00	81.01	5.67	0.01	195	10	0	627	1	591
450+10.00	45010.00	50.00	36.51	5.67	21.43	109	10	20	736	25	666
450+60.00	45060.00	50.00	18.72	5.67	27.51	51	10	45	787	79	653
451+10.00	45110.00	50.00	13.11	5.67	45.23	29	10	67	816	160	591
451+60.00	45160.00	50.00	18.41	5.67	43.17	29	10	82	845	258	512
452+10.00	45210.00	50.00	26.98	5.67	30.95	42	10	69	887	341	461
452+60.00	45260.00	50.00	58.19	5.67	9.31	79	10	37	966	385	486
453+10.00	45310.00	50.00	92.22	5.67	0.10	139	10	9	1,105	396	604
453+60.00	45360.00	50.00	129.77	5.67	0.00	206	10	0	1,311	396	800
454+10.00	45410.00	50.00	156.34	5.67	0.00	265	10	0	1,576	396	1,055
454+60.00	45460.00	50.00	104.38	5.67	0.00	241	10	0	1,817	396	1,286
455+10.00	45510.00	50.00	40.20	5.67	0.18	134	10	0	1,951	396	1,410
455+60.00	45560.00	50.00	3.51	0.00	0.04	40	5	0	1,991	396	1,445

SECTION SKEWED WITH PIPE - FOR INFORMATION PURPOSES ONLY

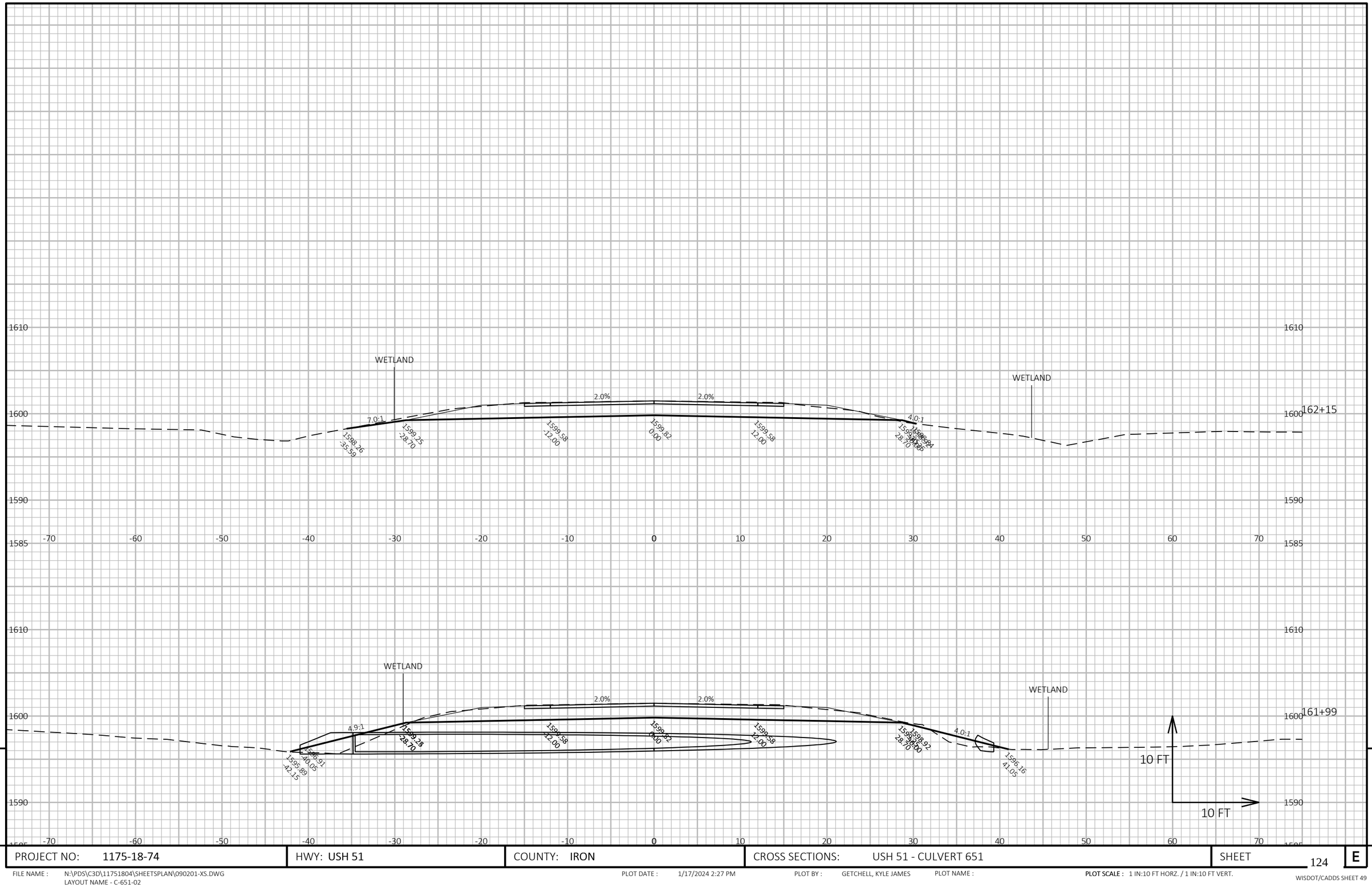


PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 651	SHEET 123 E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - C-651-01

PLOT DATE : 1/17/2024 2:27 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 651	SHEET 124	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - C-651-02

PLOT DATE : 1/17/2024 2:27 PM

PLOT BY : GETCHELL, KYLE JAMES

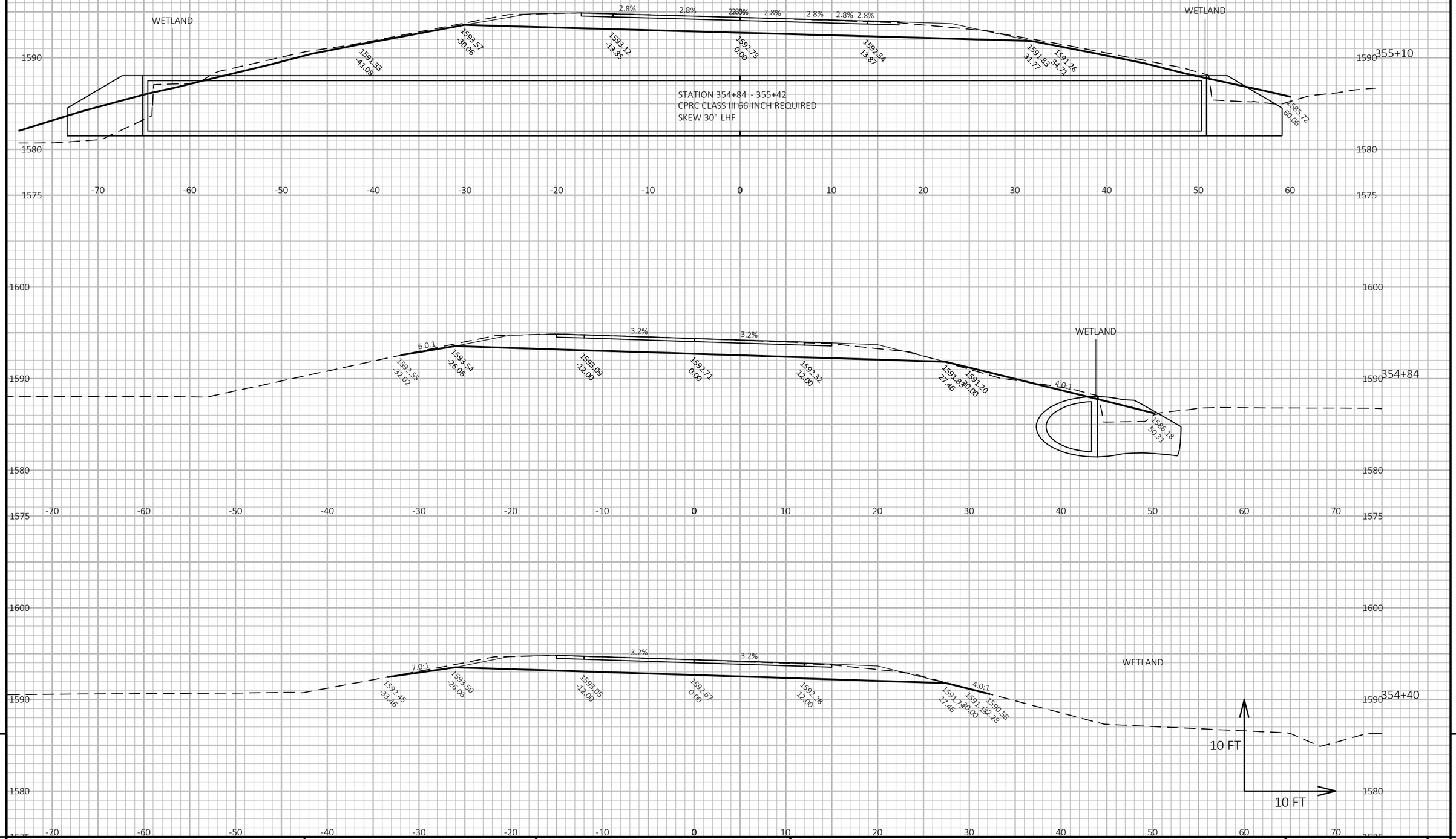
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RIGHT OF WAY IS OFFSET 100 FEET FROM CENTERLINE ALIGNMENT AT THIS CULVERT LOCATION

SECTION SKEWED WITH PIPE - FOR INFORMATION PURPOSES ONLY



PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 665	SHEET 125	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - C-665-01

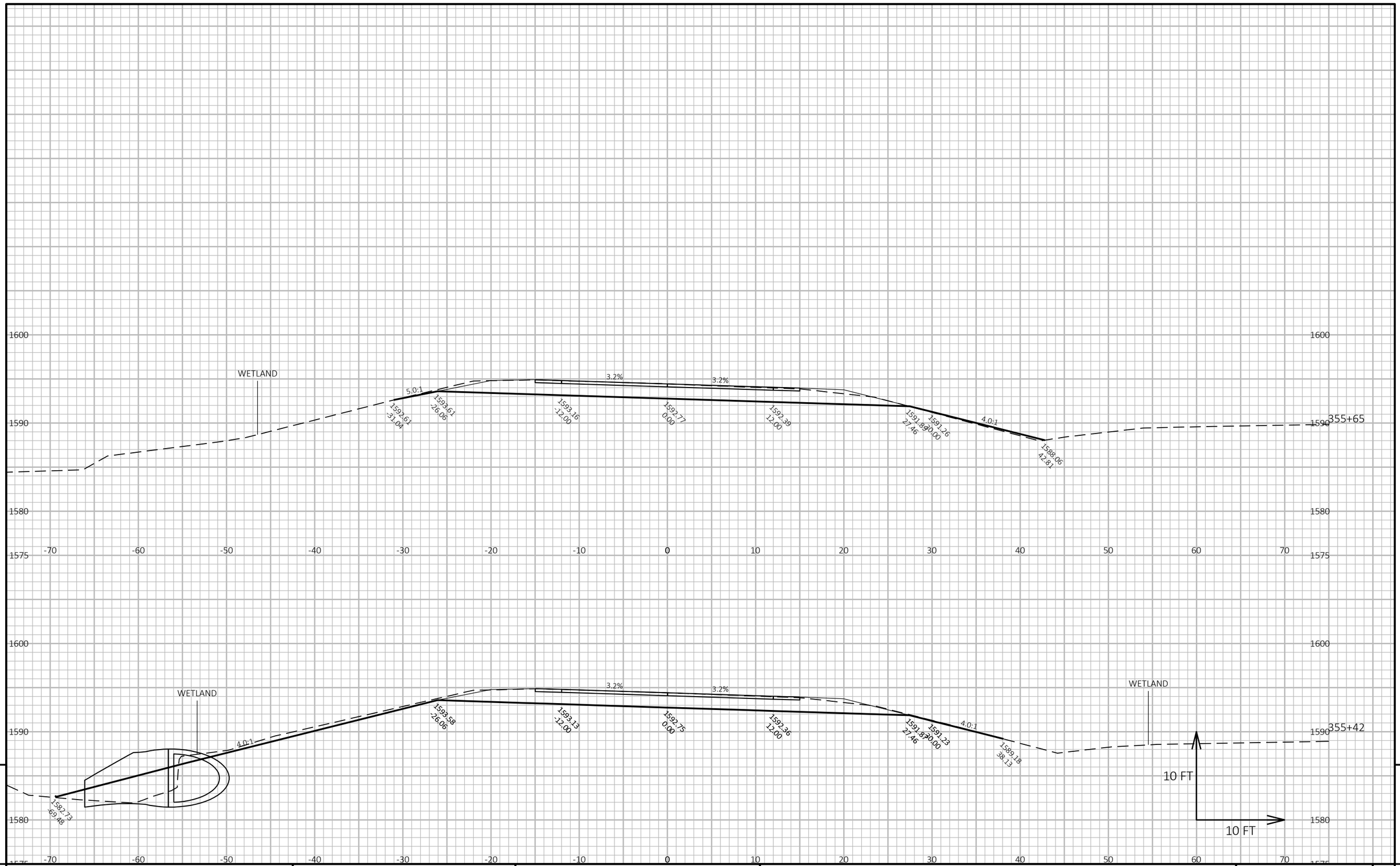
PLOT DATE : 1/17/2024 2:28 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 665	SHEET 126	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - C-665-02

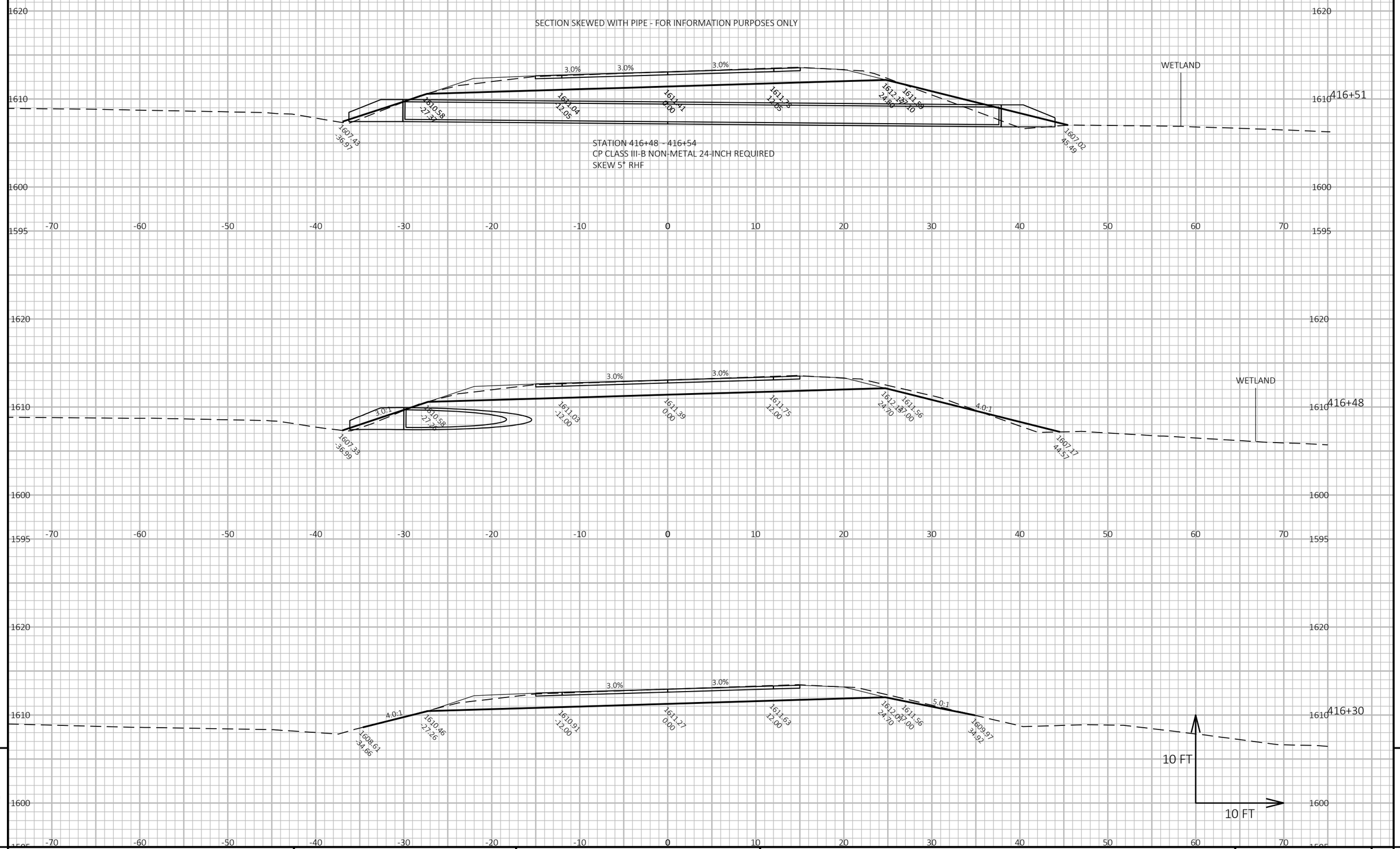
PLOT DATE : 1/17/2024 2:28 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

SECTION SKEWED WITH PIPE - FOR INFORMATION PURPOSES ONLY



STATION 416+48 - 416+54
CP CLASS III-B NON-METAL 24-INCH REQUIRED
SKEW 5° RHF

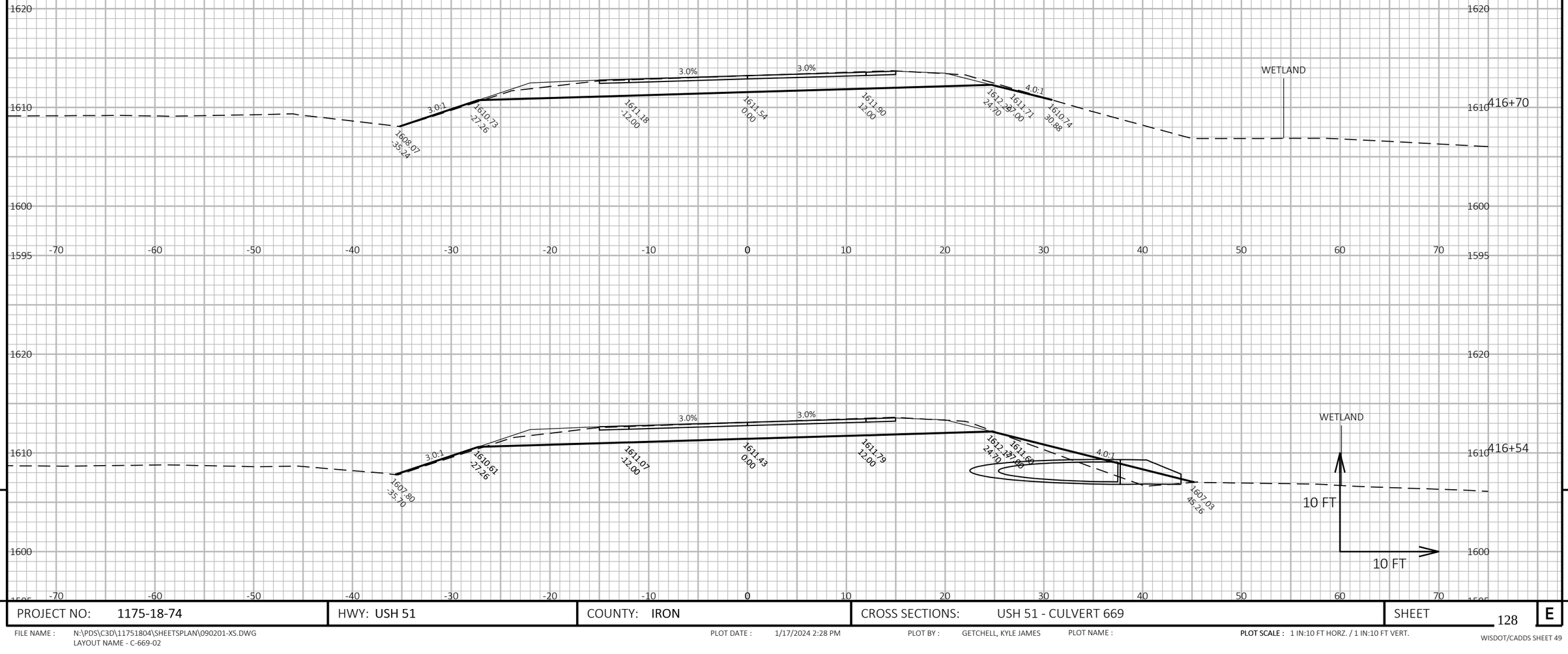
PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 669	SHEET 127	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - C-669-01

PLOT DATE : 1/17/2024 2:28 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 669	SHEET 128	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - C-669-02

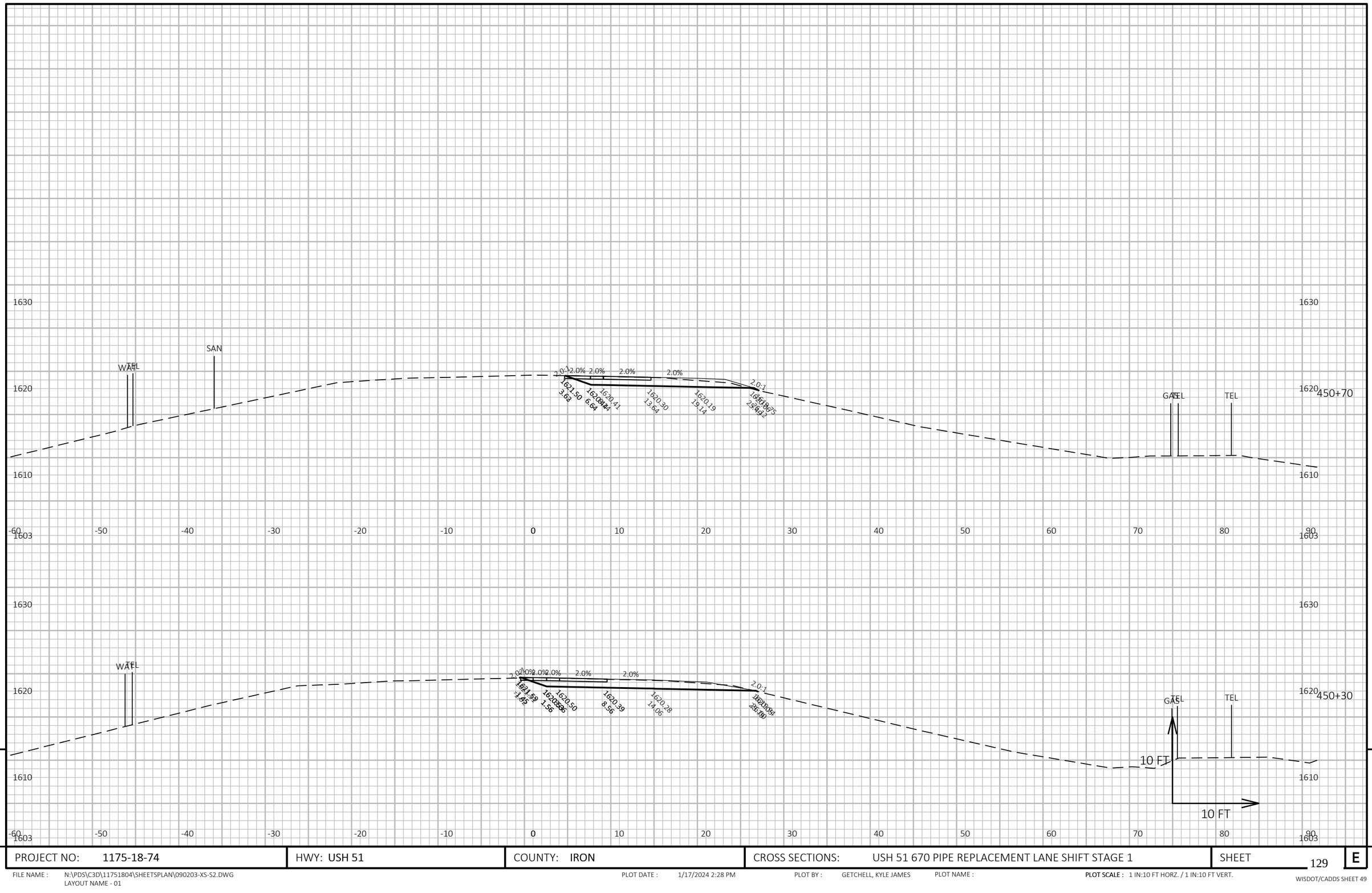
PLOT DATE : 1/17/2024 2:28 PM

PLOT BY : GETCHELL, KYLE JAMES

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: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 1	SHEET 129	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090203-XS-S2.DWG
LAYOUT NAME - 01

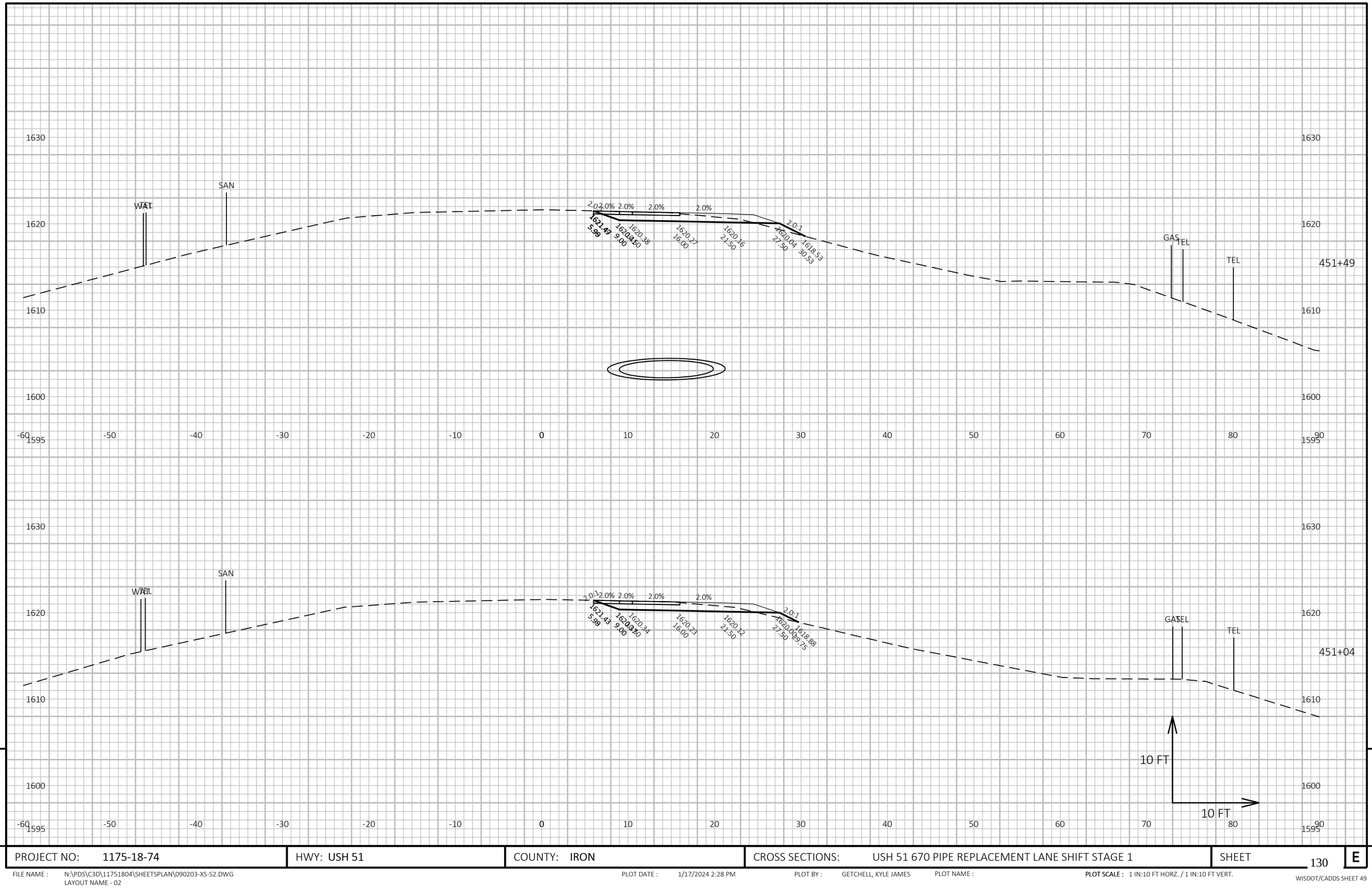
PLOT DATE : 1/17/2024 2:28 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 1	SHEET 130	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090203-XS-S2.DWG
LAYOUT NAME - 02

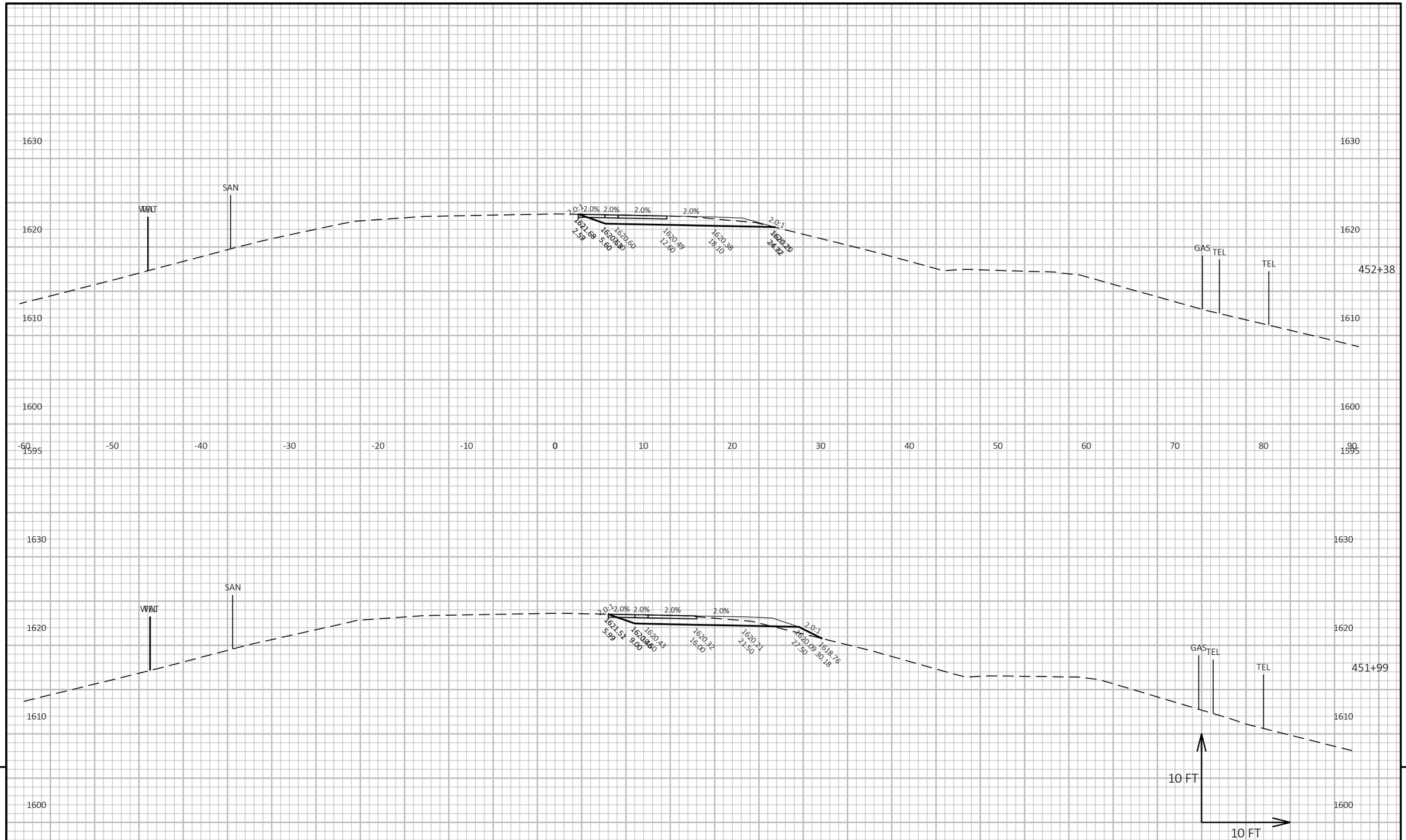
PLOT DATE : 1/17/2024 2:28 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 1	SHEET 131	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090203-XS-S2.DWG
LAYOUT NAME - 03

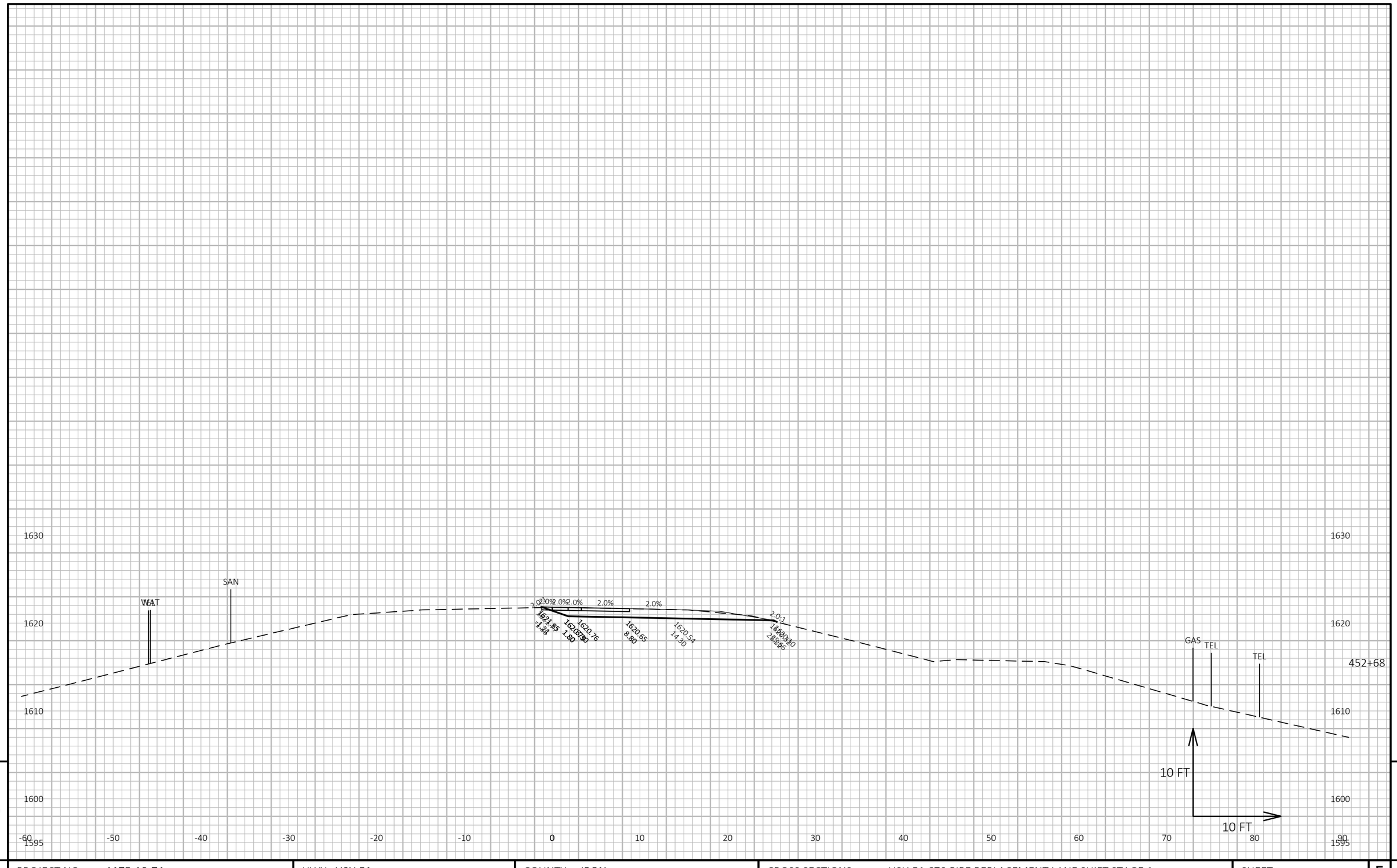
PLOT DATE : 1/17/2024 2:28 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

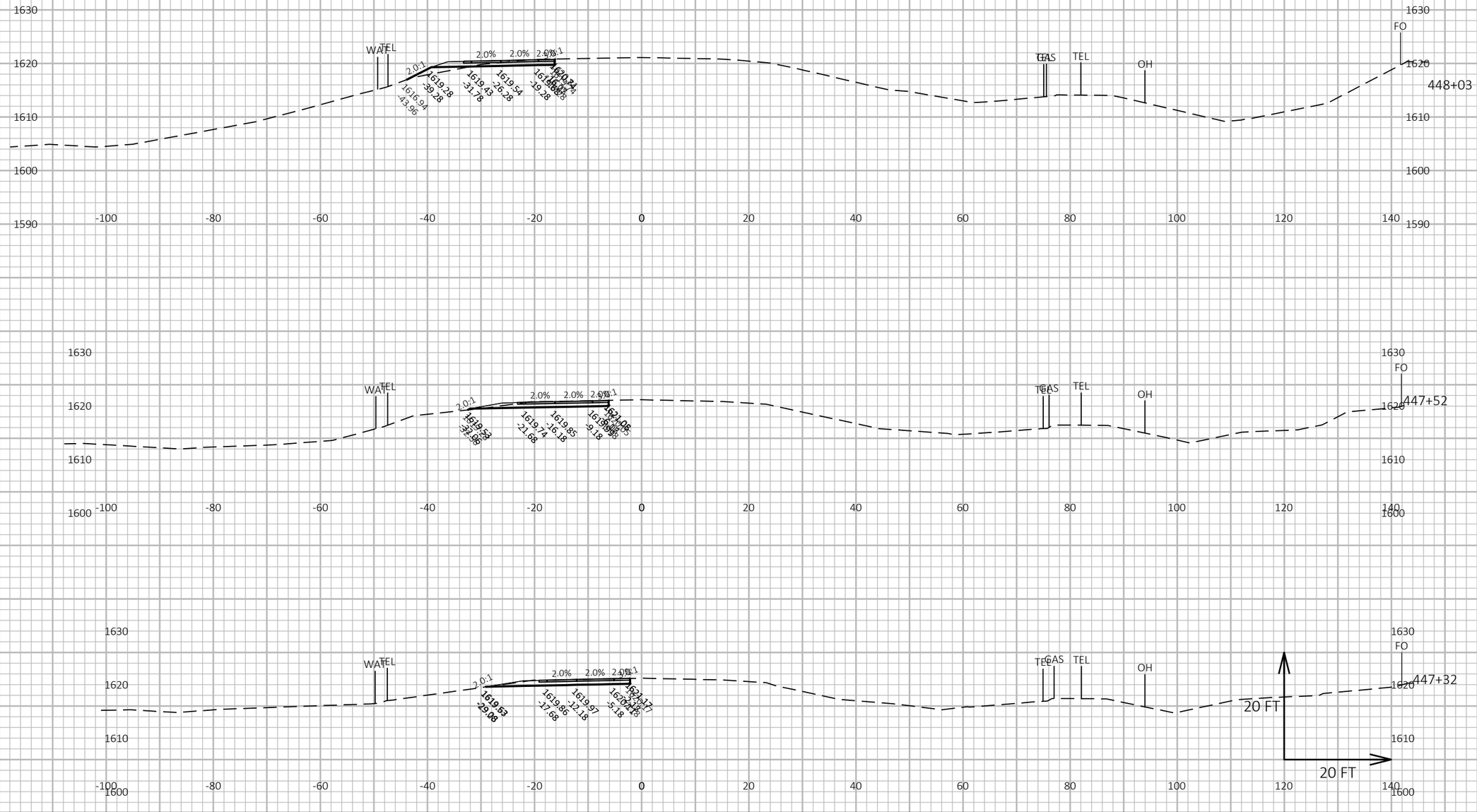


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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 1	SHEET 132	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090203-XS-S2.DWG
LAYOUT NAME - 04
PLOT DATE : 1/17/2024 2:28 PM
PLOT BY : GETCHELL, KYLE JAMES
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 2	SHEET 133	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090202-XS-S1.DWG
LAYOUT NAME - 01

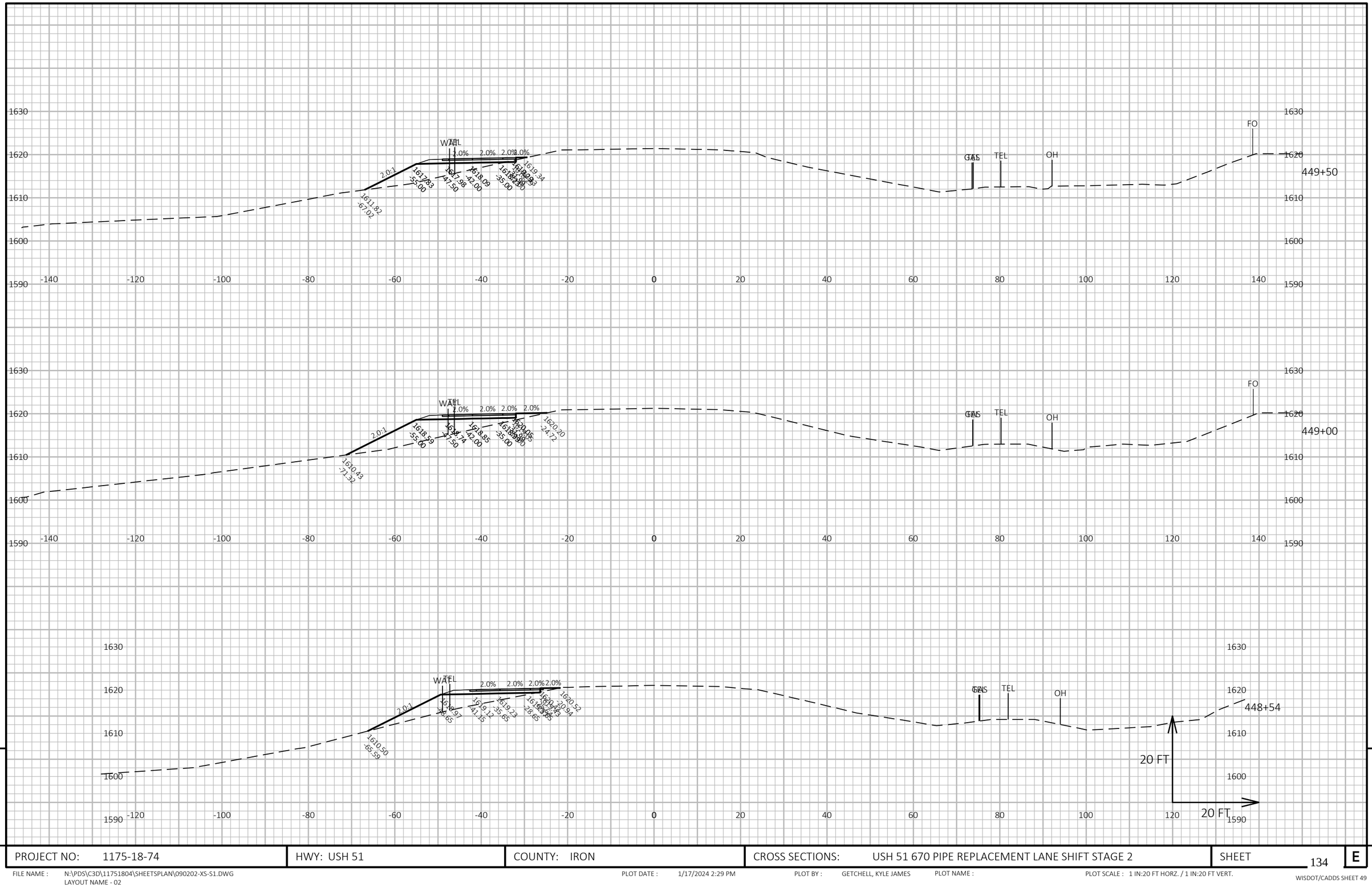
PLOT DATE : 1/17/2024 2:29 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 2	SHEET 134	E

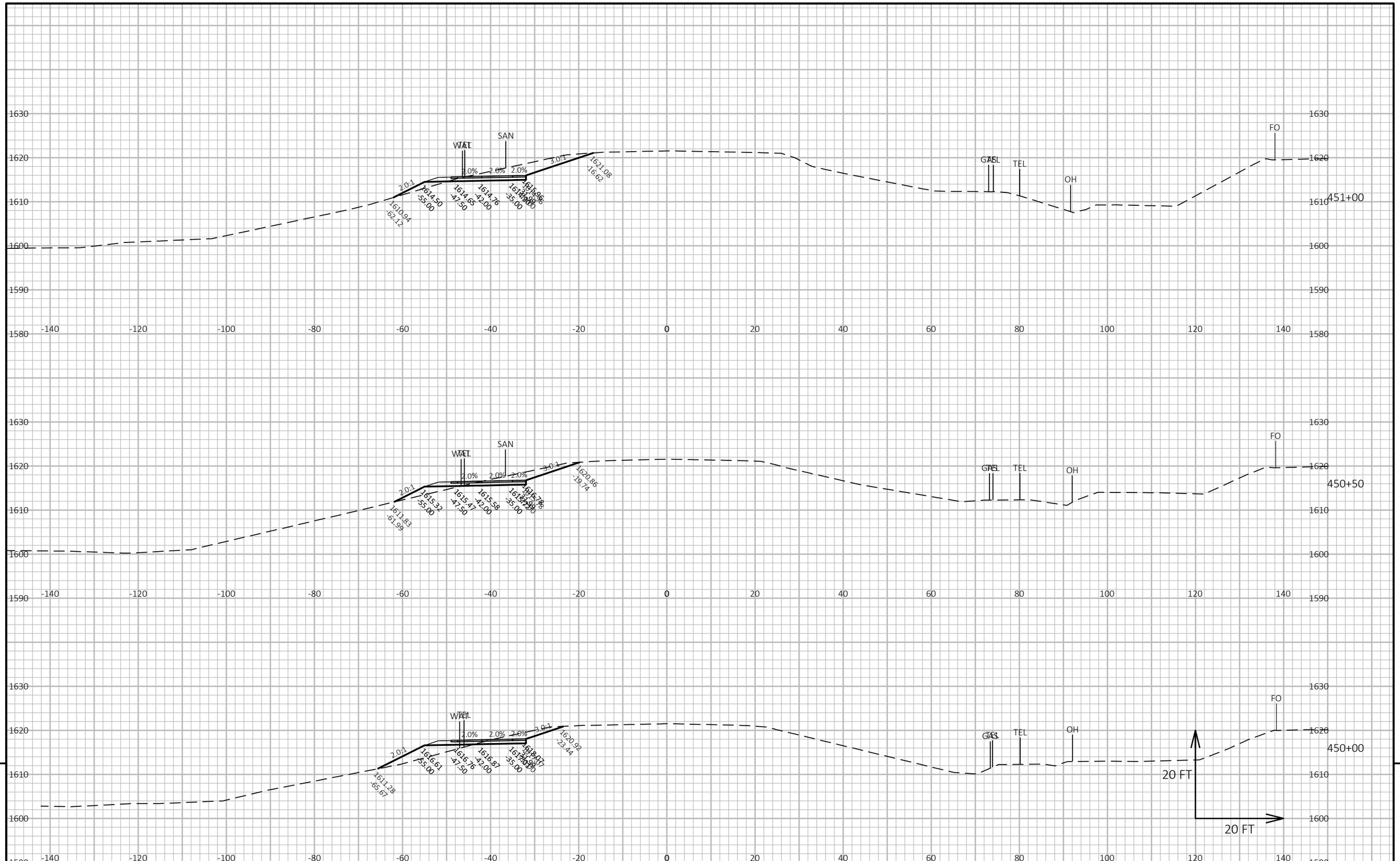
FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090202-XS-S1.DWG
LAYOUT NAME - 02

PLOT DATE : 1/17/2024 2:29 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 2	SHEET 135	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090202-XS-S1.DWG
LAYOUT NAME - 03

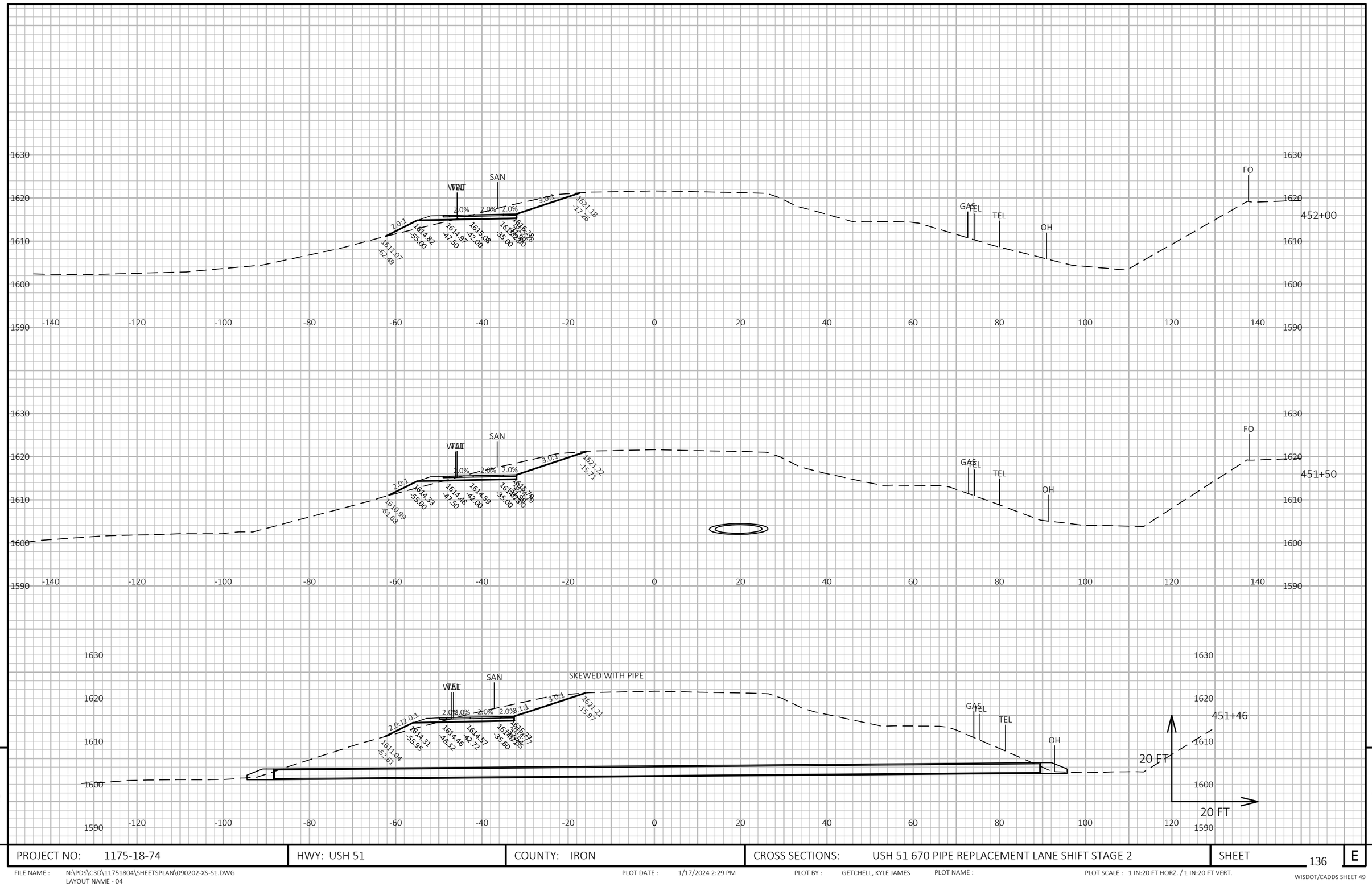
PLOT DATE : 1/17/2024 2:29 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 2	SHEET 136	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090202-XS-S1.DWG
LAYOUT NAME - 04

PLOT DATE : 1/17/2024 2:29 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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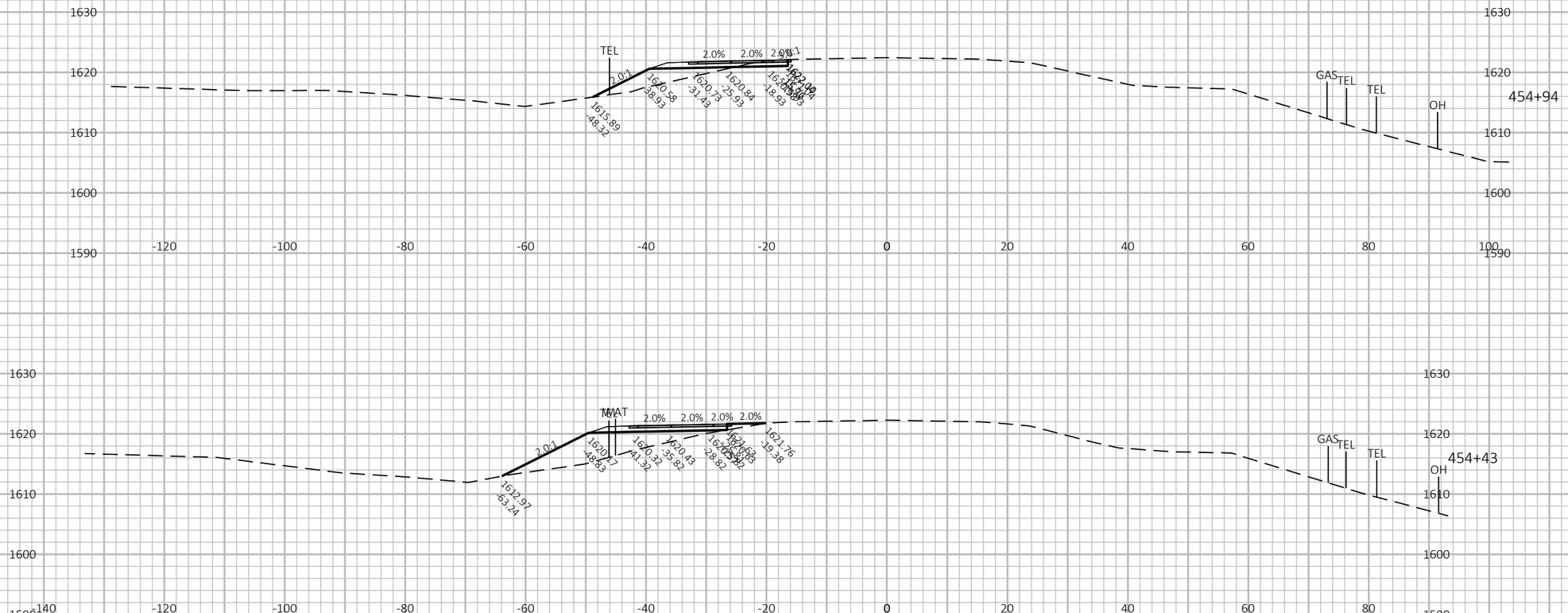
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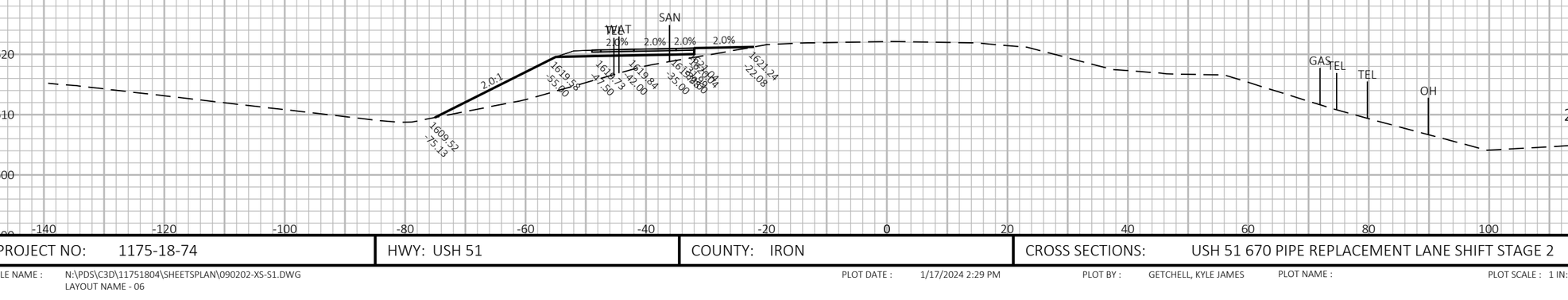
PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 2	SHEET 137	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090202-XS-S1.DWG
LAYOUT NAME - 05

PLOT DATE : 1/17/2024 2:29 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 2	SHEET 138	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090202-XS-S1.DWG
LAYOUT NAME - 06

PLOT DATE : 1/17/2024 2:29 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 2	SHEET 139	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090202-XS-S1.DWG
LAYOUT NAME - 07

PLOT DATE : 1/17/2024 2:29 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9

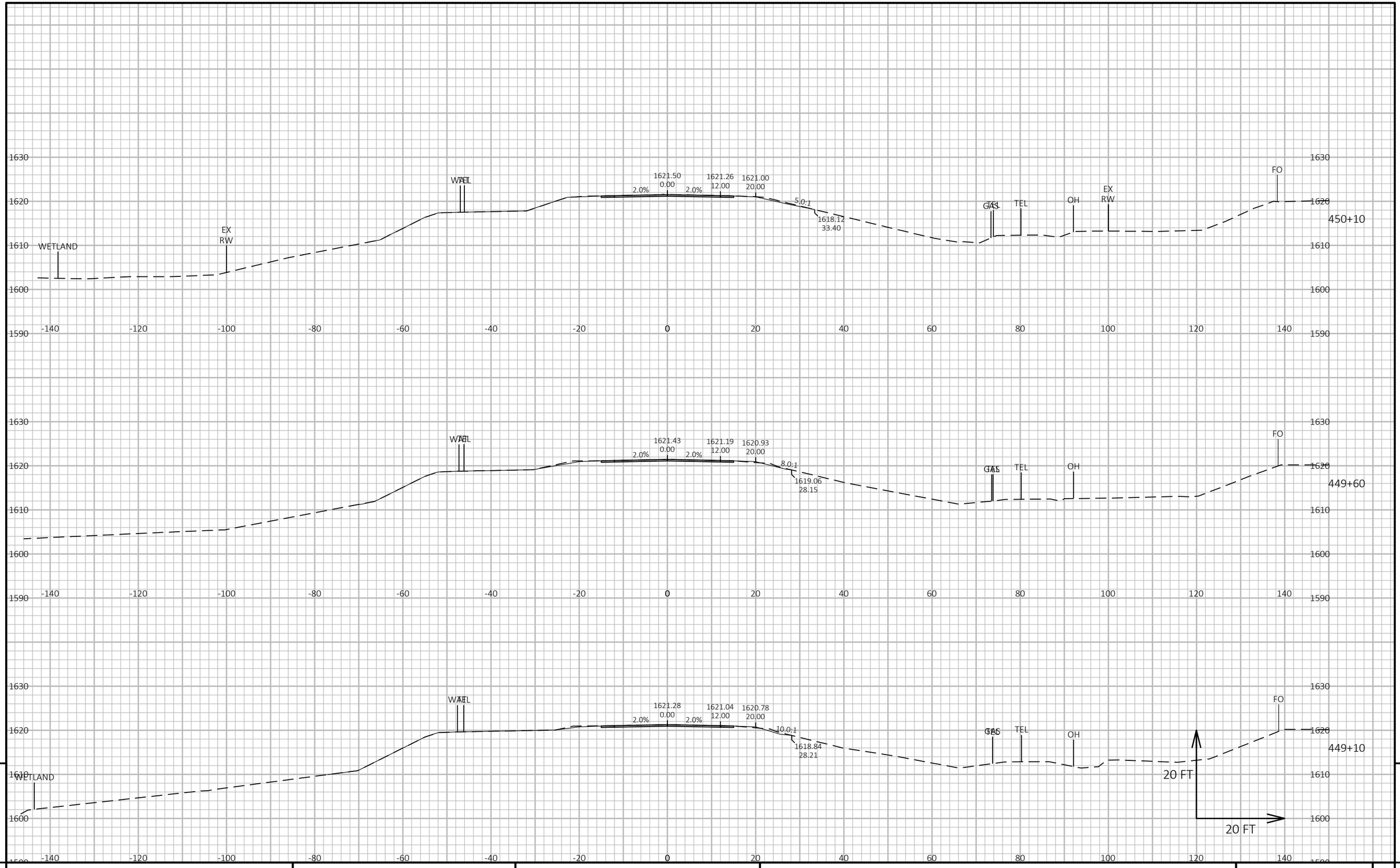
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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 3	SHEET 140	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090204-XS-S3.DWG
LAYOUT NAME - C-670-01

PLOT DATE : 1/17/2024 2:30 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

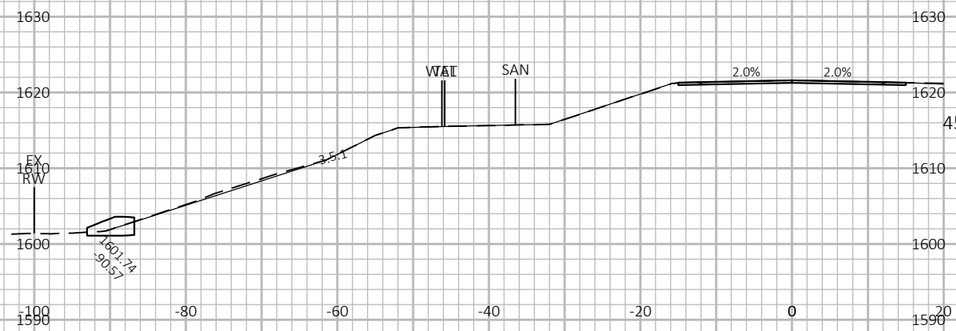
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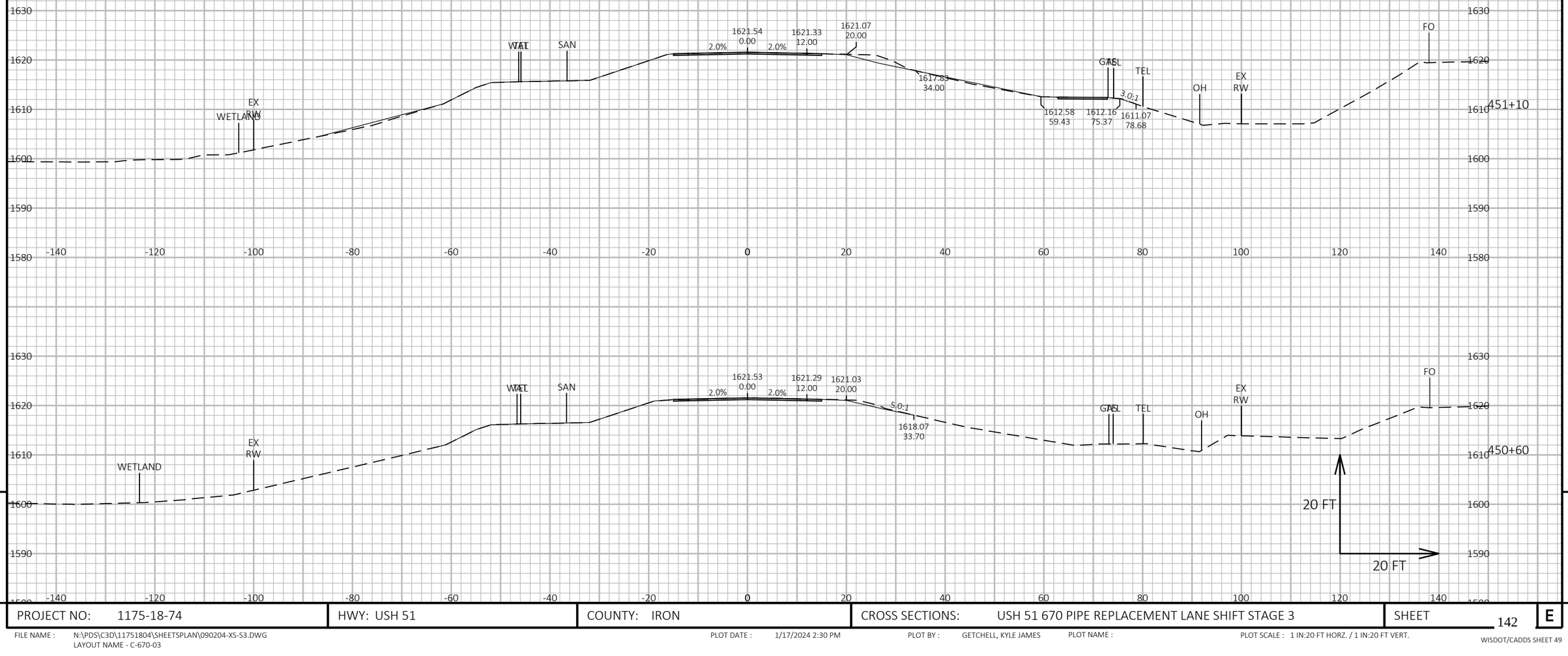
PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 3	SHEET 141	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090204-XS-S3.DWG
LAYOUT NAME - C-670-02

PLOT DATE : 1/17/2024 2:30 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



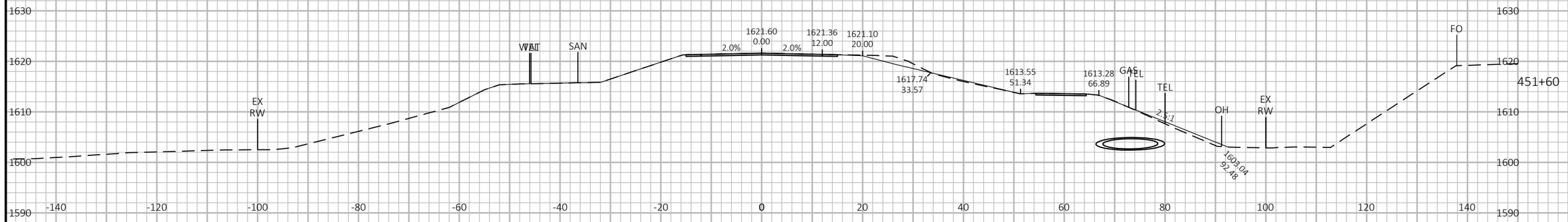


PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 3	SHEET 142	E

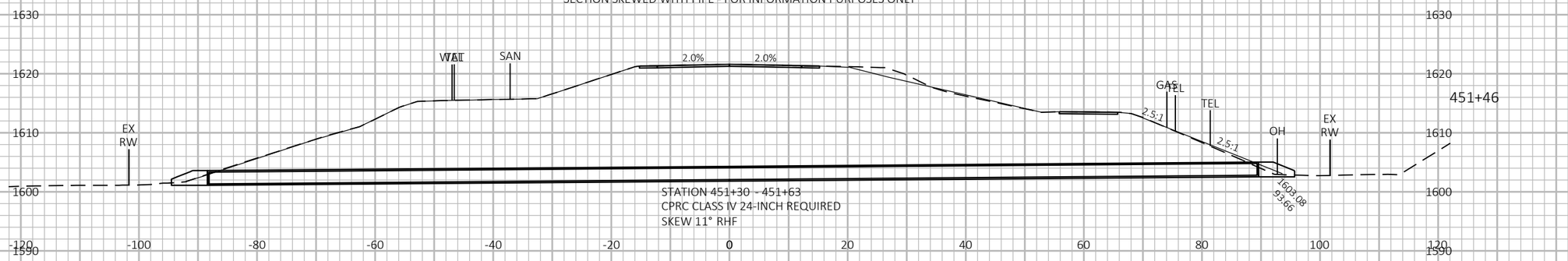
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LAYOUT NAME - C-670-03

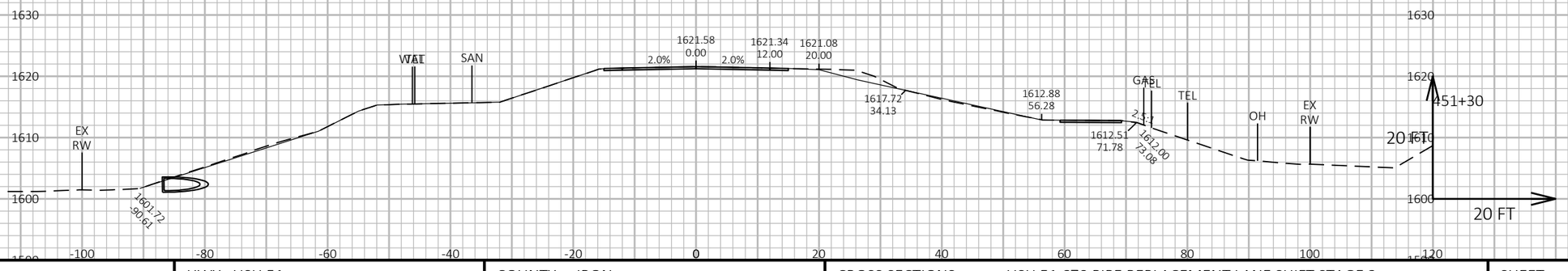
PLOT DATE : 1/17/2024 2:30 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



SECTION SKEWED WITH PIPE - FOR INFORMATION PURPOSES ONLY





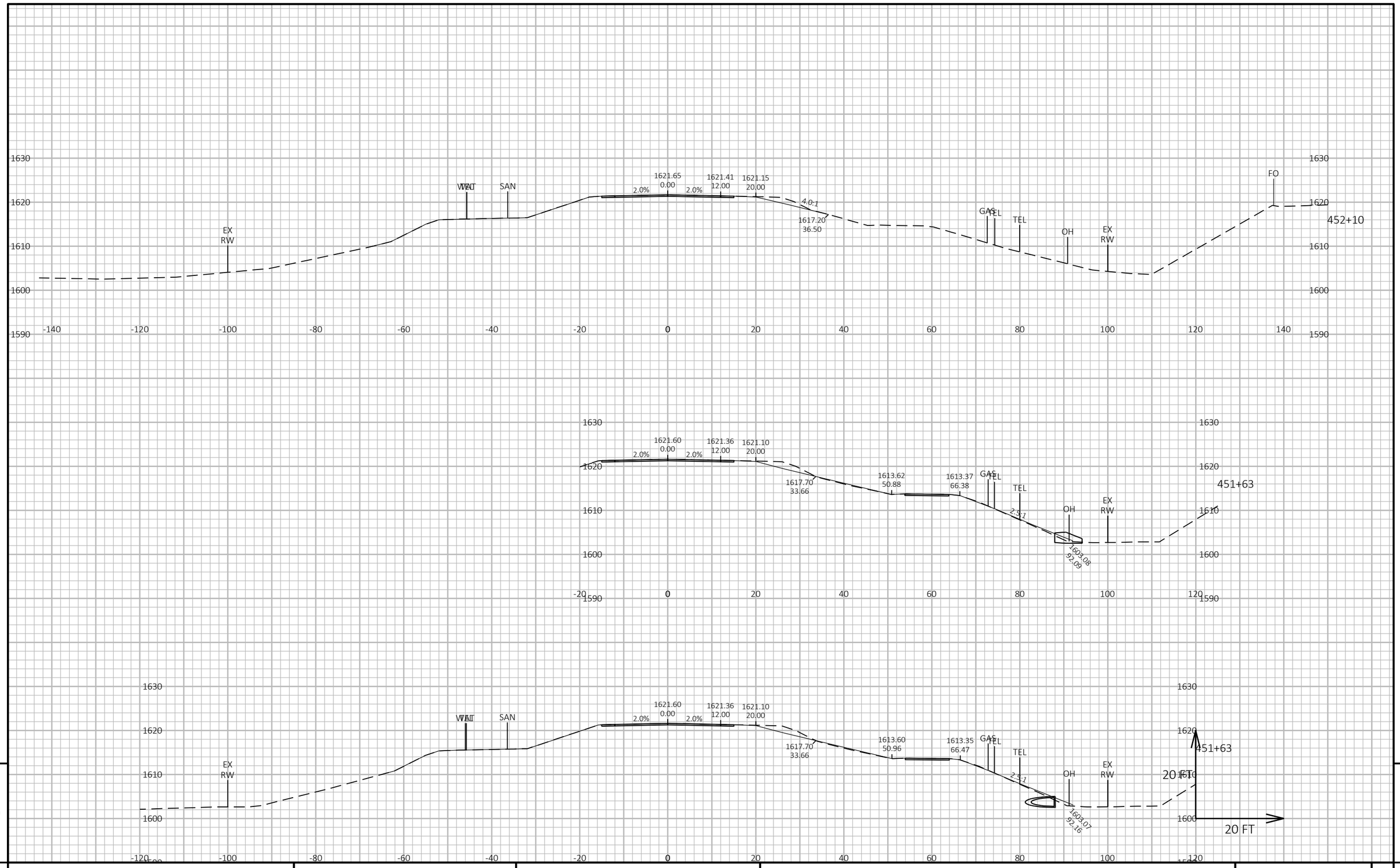
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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 3	SHEET 143	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090204-XS-S3.DWG
LAYOUT NAME - C-670-04

PLOT DATE : 1/17/2024 2:30 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 3	SHEET 144	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090204-XS-S3.DWG
LAYOUT NAME - C-670-05

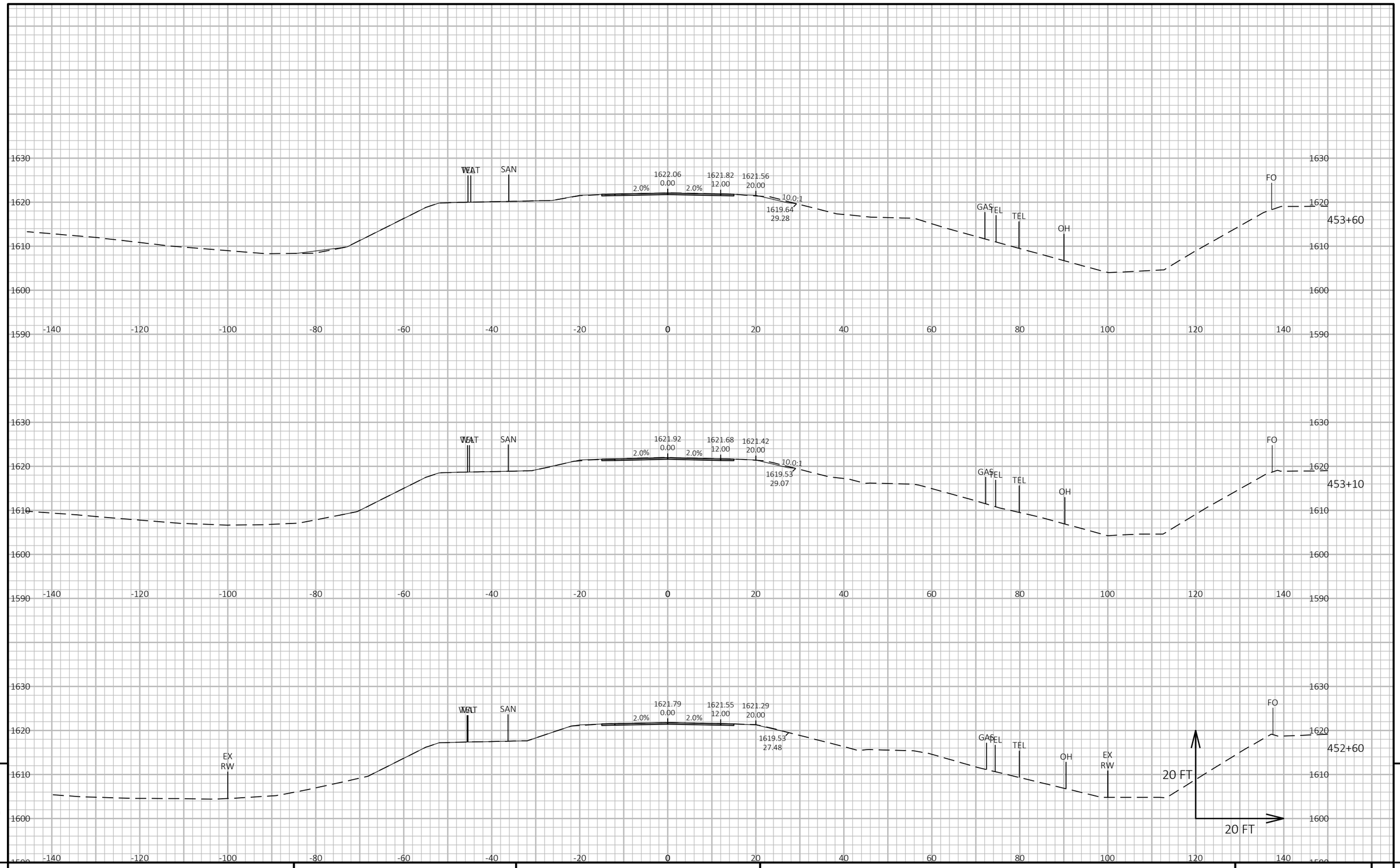
PLOT DATE : 1/17/2024 2:30 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

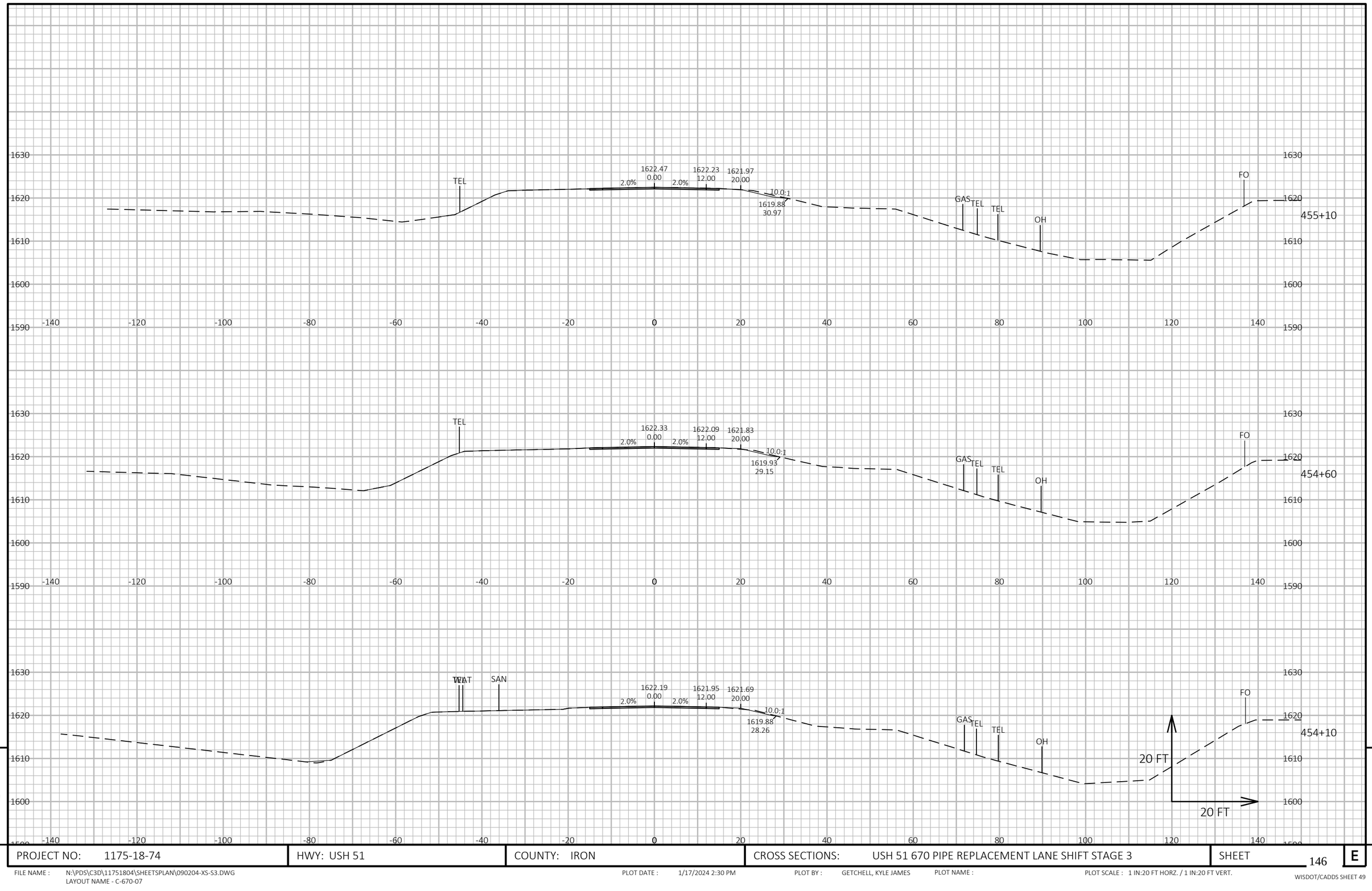
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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 3	SHEET 145	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090204-XS-S3.DWG
LAYOUT NAME - C-670-06

PLOT DATE : 1/17/2024 2:30 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

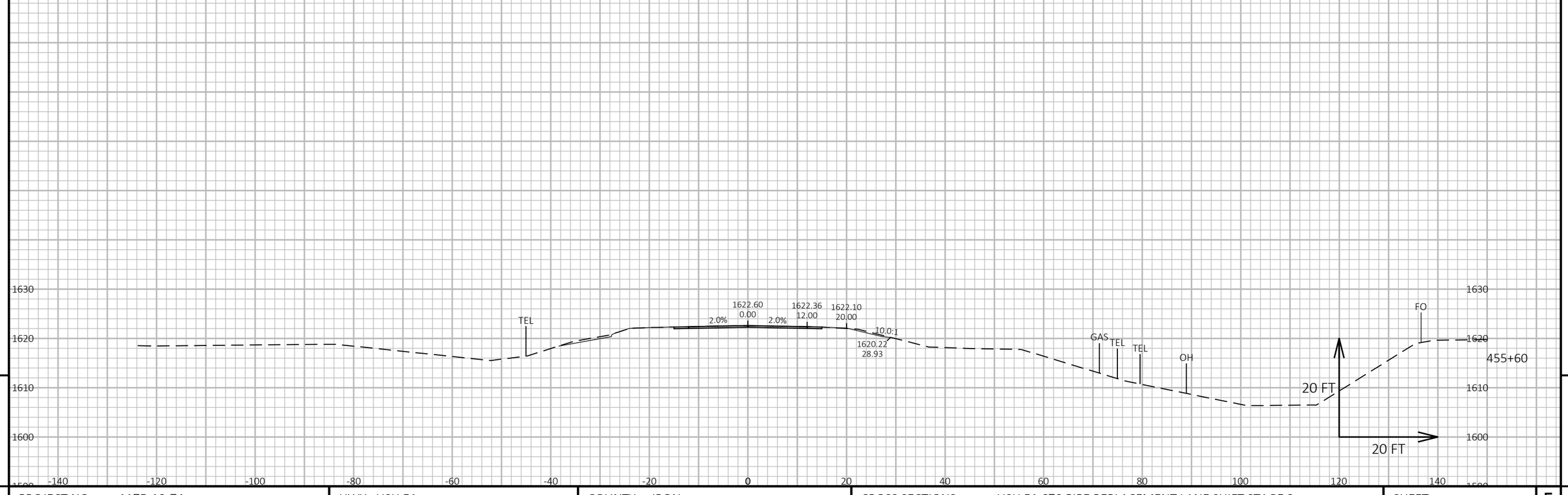
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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 3	SHEET 146	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090204-XS-S3.DWG
LAYOUT NAME - C-670-07

PLOT DATE : 1/17/2024 2:30 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



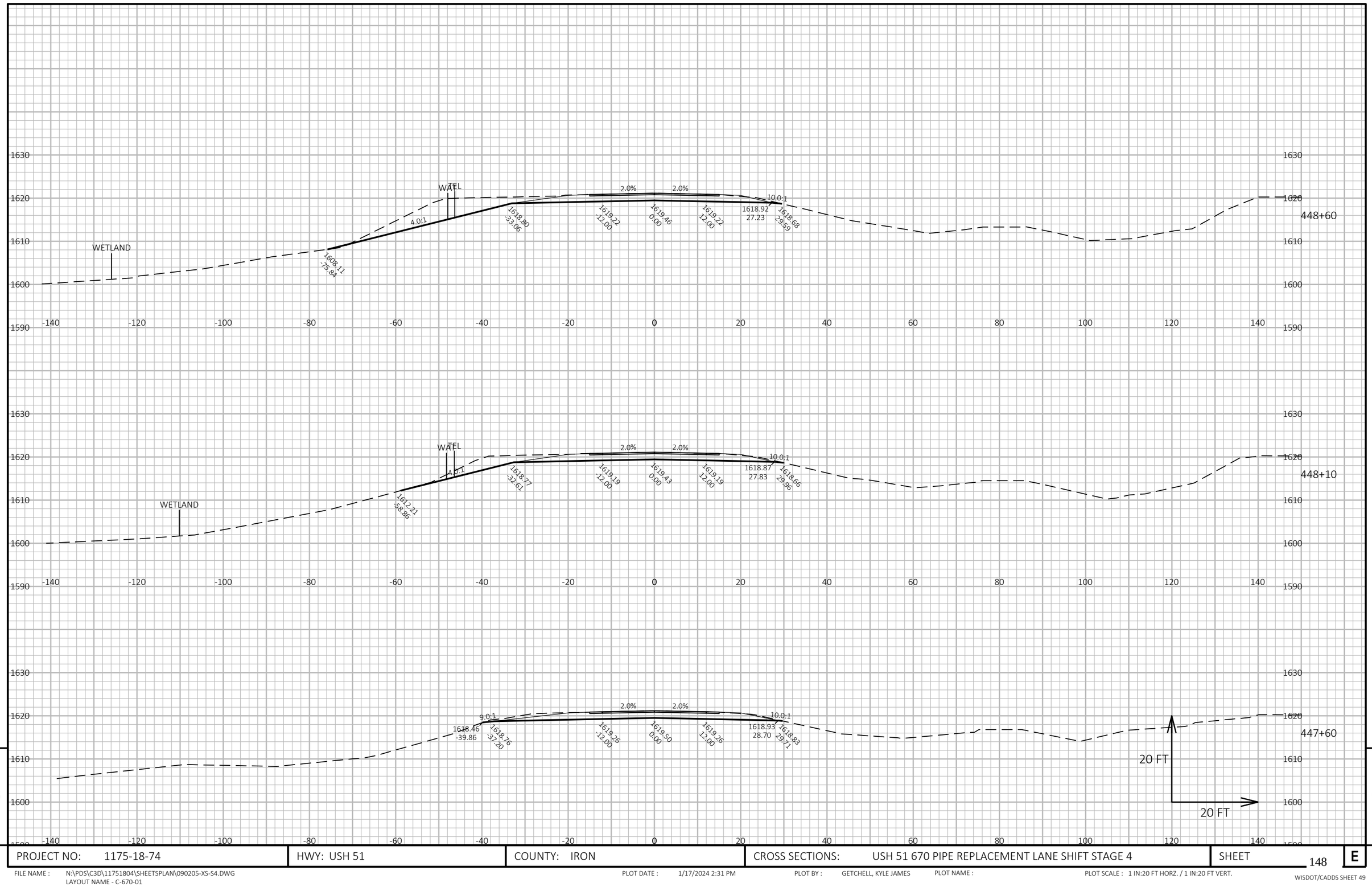
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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 3	SHEET 147	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090204-XS-S3.DWG
LAYOUT NAME - C-670-08

PLOT DATE : 1/17/2024 2:30 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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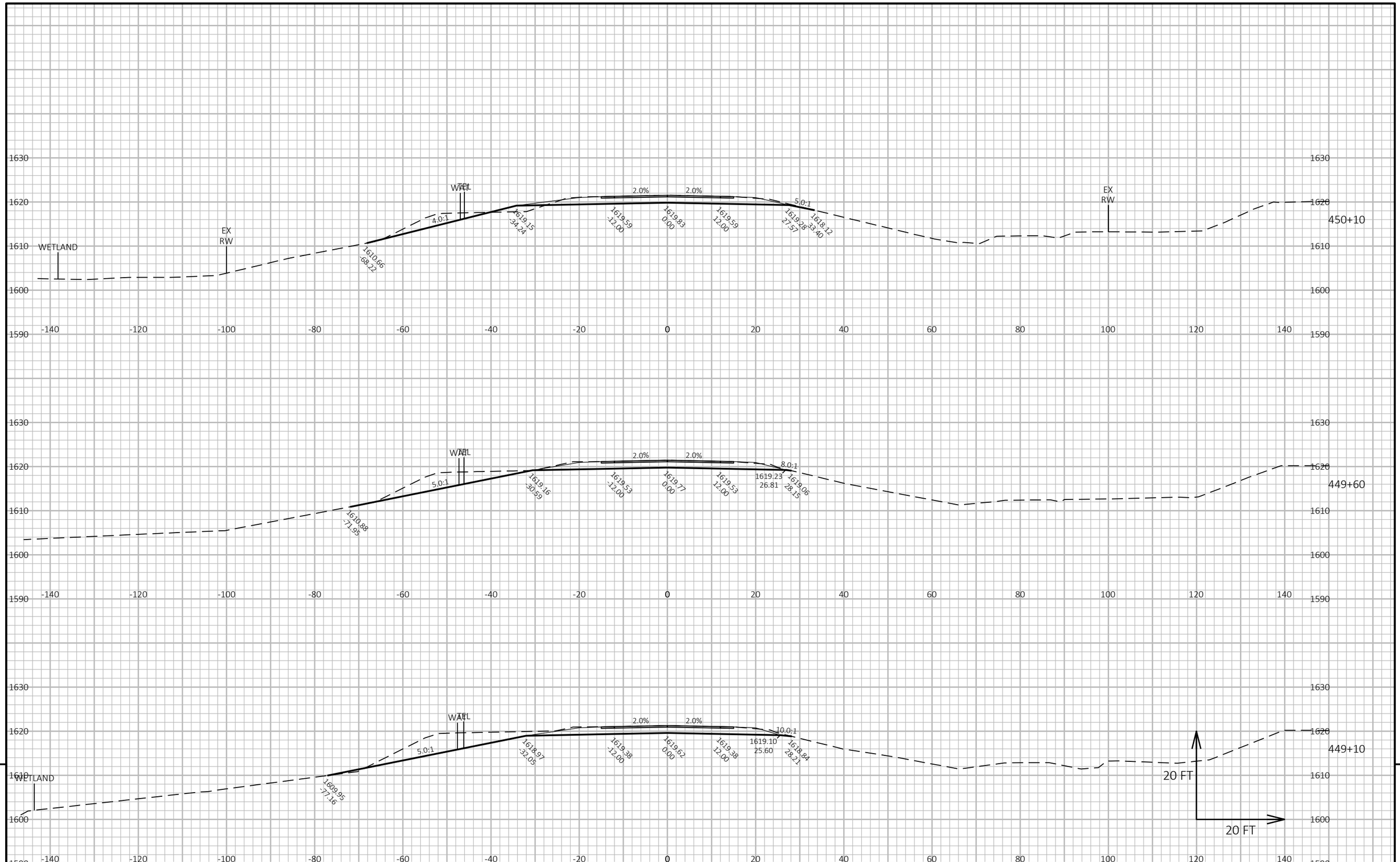
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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 4	SHEET 148	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090205-XS-S4.DWG
LAYOUT NAME - C-670-01

PLOT DATE : 1/17/2024 2:31 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

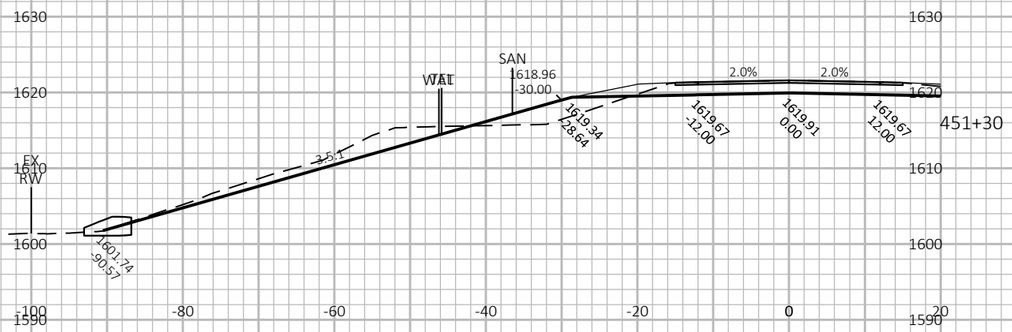
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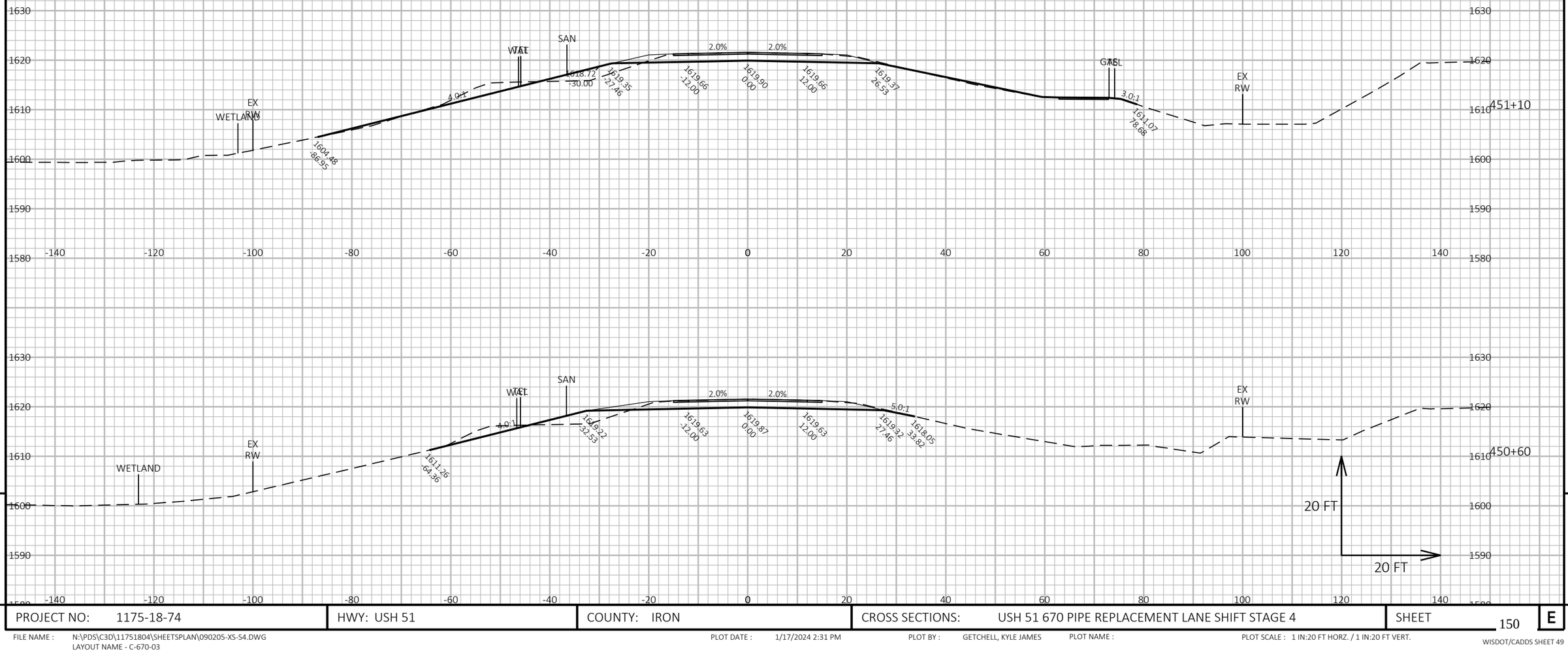
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FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090205-XS-S4.DWG
LAYOUT NAME - C-670-02

PLOT DATE : 1/17/2024 2:31 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



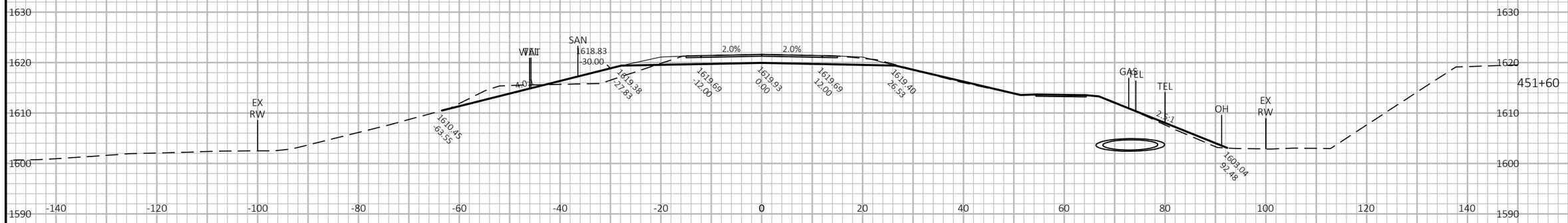


PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 4	SHEET 150	E

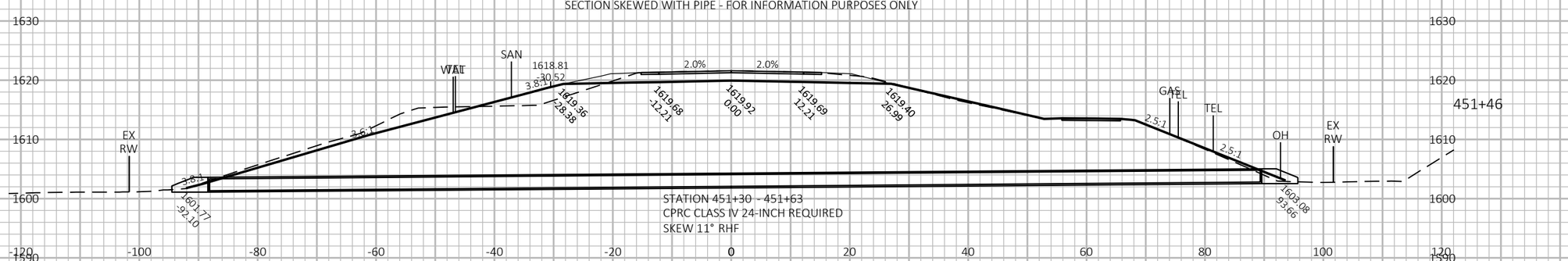
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LAYOUT NAME - C-670-03

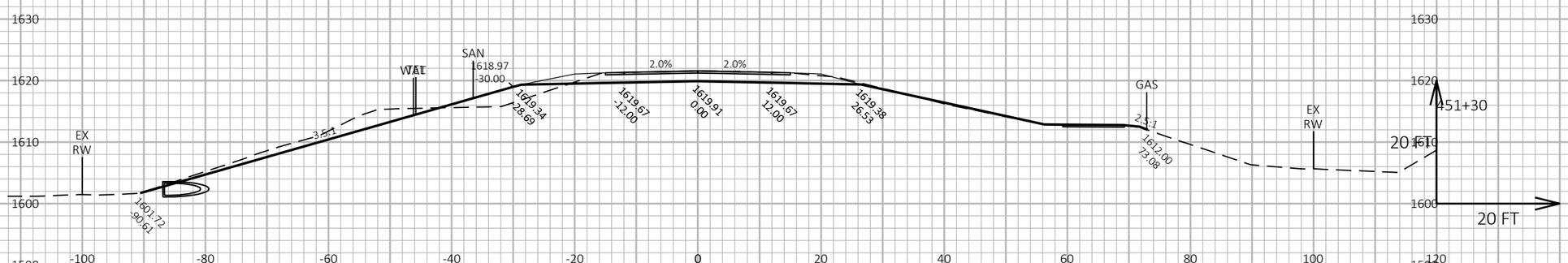
PLOT DATE : 1/17/2024 2:31 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



SECTION SKEWED WITH PIPE - FOR INFORMATION PURPOSES ONLY





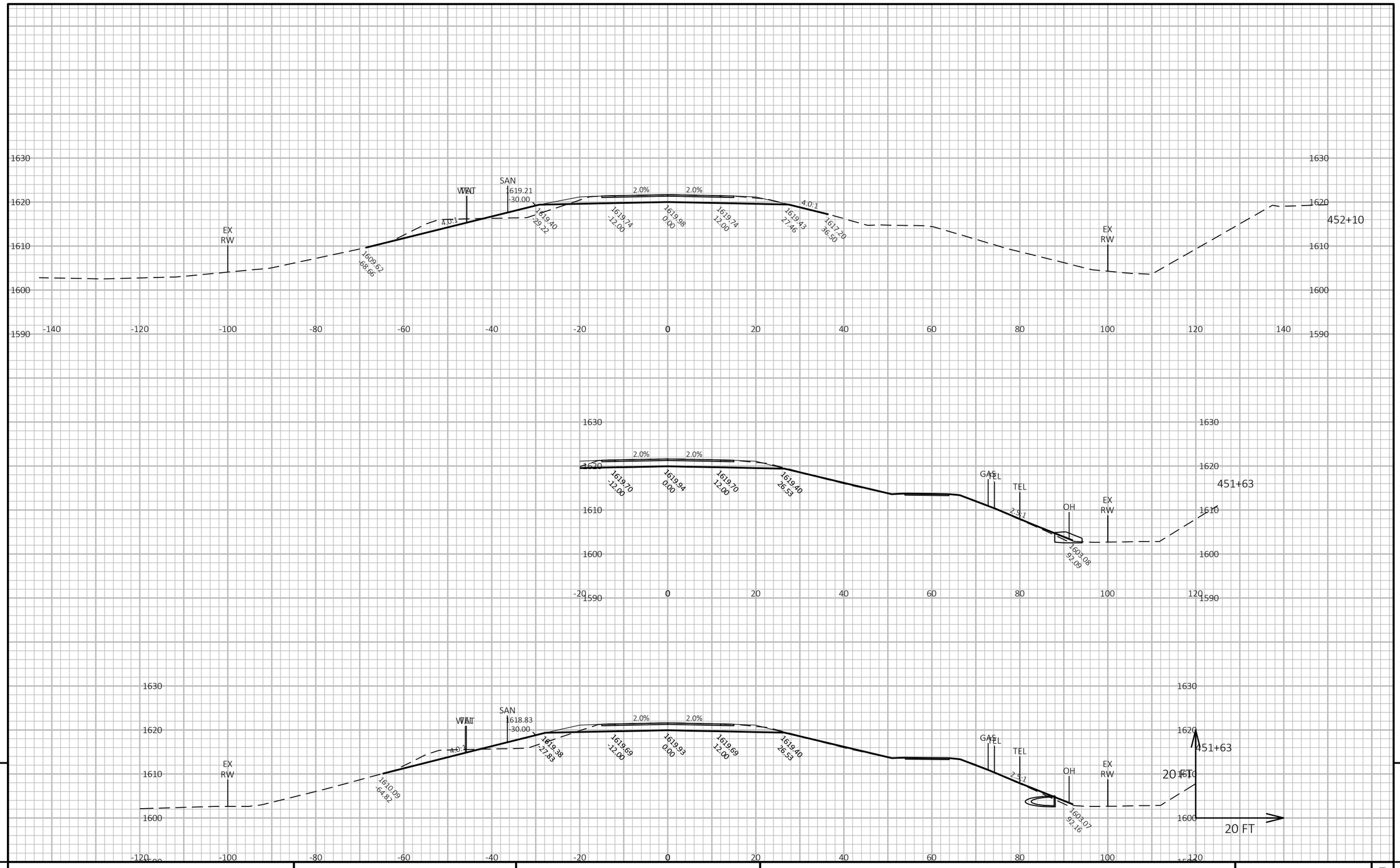
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PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 4	SHEET 151	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090205-XS-S4.DWG
LAYOUT NAME - C-670-04

PLOT DATE : 1/17/2024 2:31 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 4	SHEET 152	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090205-XS-S4.DWG
LAYOUT NAME - C-670-05

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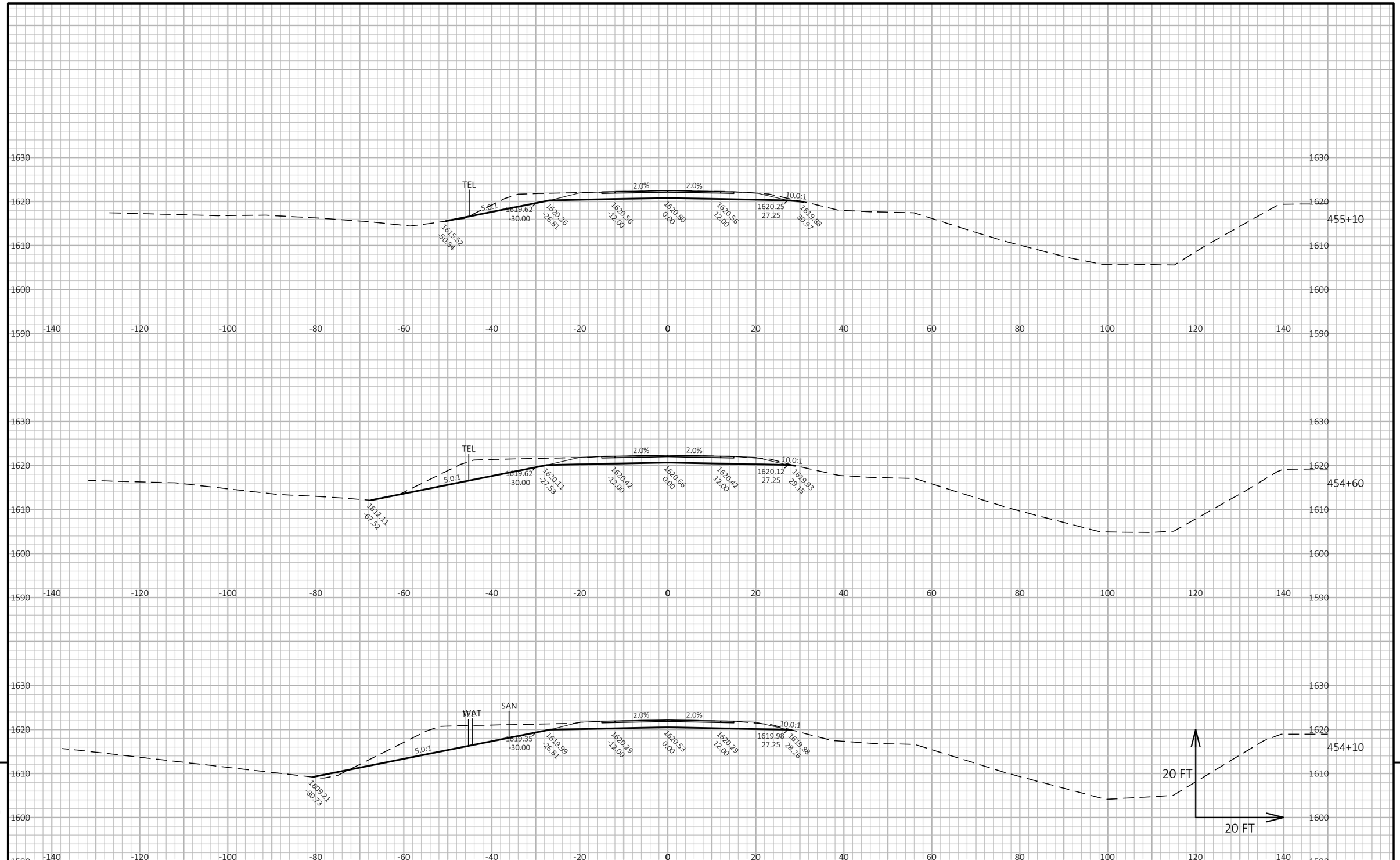
WISDOT/CADDS SHEET 49

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 4	SHEET 153	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090205-XS-S4.DWG
LAYOUT NAME - C-670-06

PLOT DATE : 1/17/2024 2:31 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

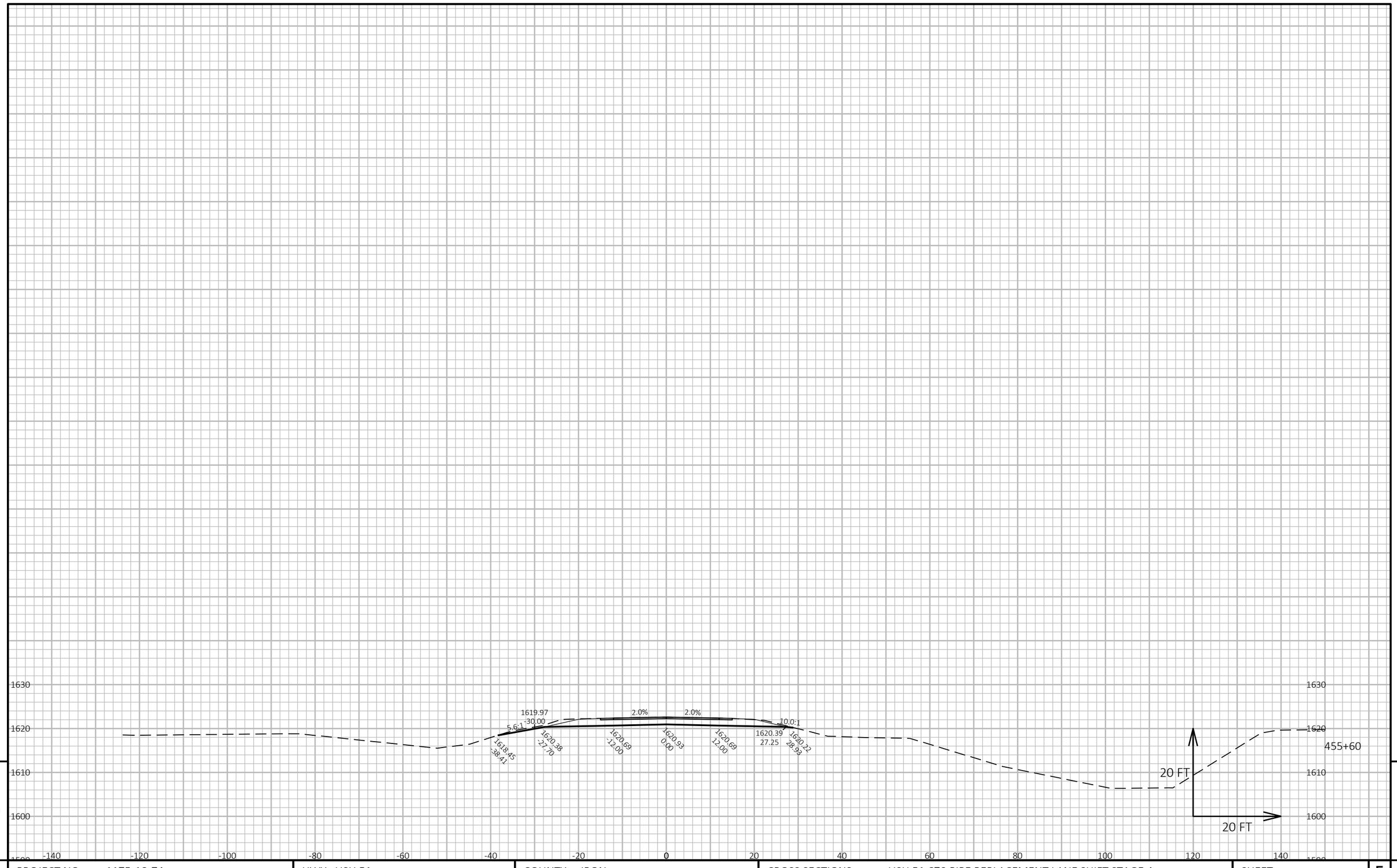
9

PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 4	SHEET 154	E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090205-XS-S4.DWG
LAYOUT NAME - C-670-07

PLOT DATE : 1/17/2024 2:31 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1175-18-74	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 670 PIPE REPLACEMENT LANE SHIFT STAGE 4	SHEET 155 E

FILE NAME : N:\PDS\C3D\11751804\SHEETSPLAN\090205-XS-S4.DWG
LAYOUT NAME - C-670-08

PLOT DATE : 1/17/2024 2:31 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

RHI

MARCH 2024

PROJECT ID: **1175-18-75**

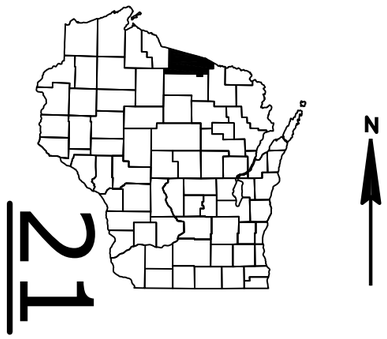
WITH: 1175-18-74 & 1175-19-72

COUNTY: **VILAS**

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 = 48



N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MANITOWISH - HURLEY

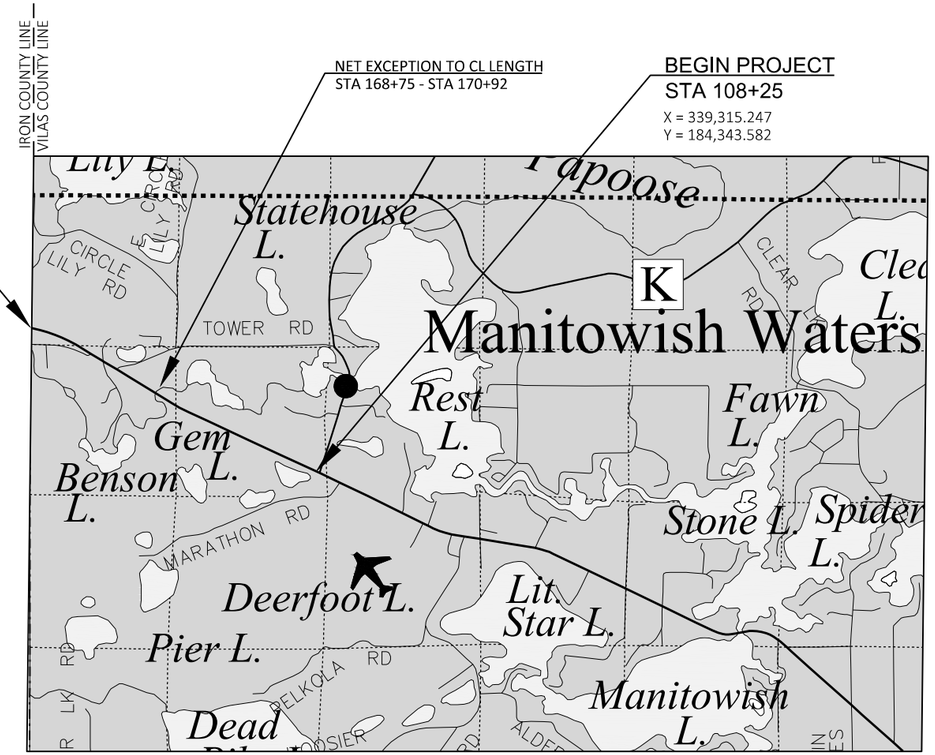
CTH W TO IRON COUNTY LINE

USH 51

VILAS COUNTY

STATE PROJECT NUMBER
1175-18-75

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1175-18-75	WISC 2024289	1



DESIGN DESIGNATION

A.A.D.T.	2024	=	3460
A.A.D.T.	2044	=	3460
D.H.V.		=	XX.X
D.D.		=	XX/XX
T.		=	18.5%
DESIGN SPEED		=	55 MPH
ESALS		=	1,030,000

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'ER')
- 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

LAYOUT

SCALE 0 — 1 MI

TOTAL NET LENGTH OF CENTERLINE = 2.052 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), VILAS COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SURVEYOR
Designer	KYLE GETCHELL
Project Manager	NICHOLAS VOS
Regional Examiner	FRED SCHUNKE
Regional Supervisor	DANIEL ERVA

APPROVED FOR THE DEPARTMENT

DATE 1/17/24 (Signature)

E

FILE NAME : N:\PDS\C3D\11751805\SHEETSPLAN\010101-TI.DWG PLOT DATE : 1/17/2024 1:59 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME :

GENERAL NOTES

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

2. THE LOCATION OF EXISTING & PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLAN.

CONTACTS:

BRIGHTSPEED OF NORTHERN WI, LLC - COMMUNICATION LINE
1905 WARD AVE. S
LA CROSSE WI 54601
ROB LUICK
(980)376-1572 (CELL)
PHONE (OFFICE)
relocations@brightspeed.com

WE ENERGIES - GAS/PETROLEUM
500 S 116th STREET
WEST ALLIS, WI 53214
WE ENERGIES UTILITY COORDINATOR
(414) 944-5738
We-Utility-relocations@we-energies.com

XCELL ENERGY - ELECTRICITY
1414 W HAMILTON AVE
DAWN SCHULTZ
EAU CIAIRE, WI 54702-0008
(715) 737-2482
dawn.schultz@xcelenergy.com

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE: TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = X.XXX ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.00 ACRES

ORDER OF DETAIL SHEETS:

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL

AS-BUILT PLANS USED:

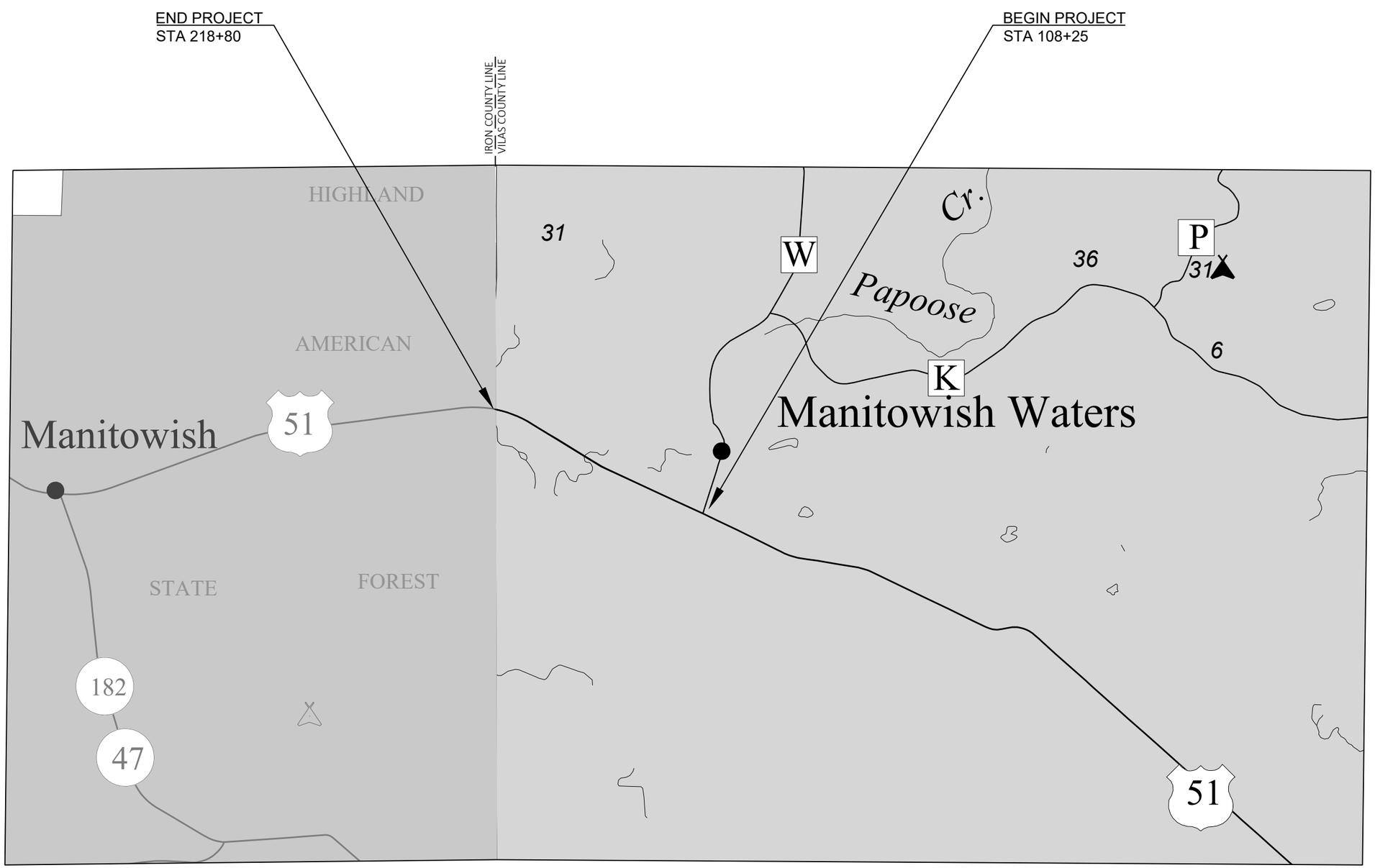
1172-08-74 (1981)
1175-16-70 (2006)
1175-18-70 (2013)
1175-19-70 (2017)

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

DNR CONTACT:

Jon Simonsen
107 Sutliff Ave
Rhinelander, Wi 54501
jonathon.simonsen@wisconsin.gov
715-367-1936

2

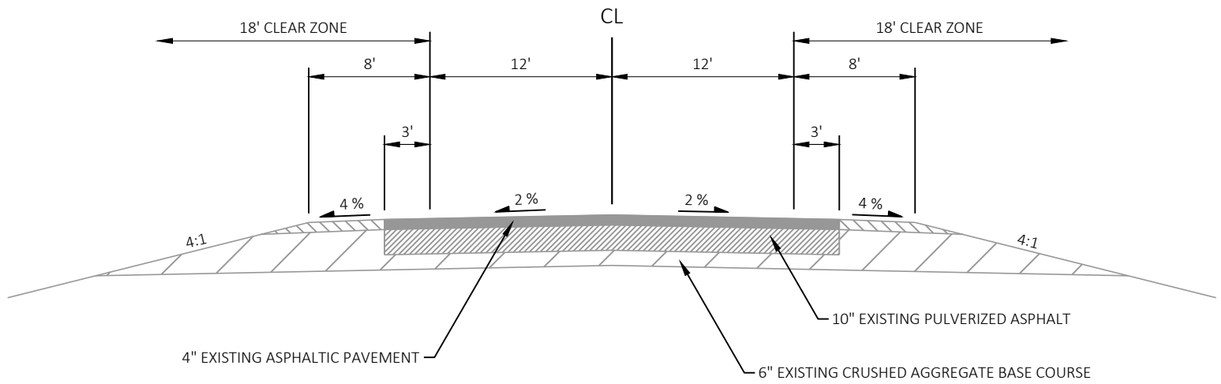


PROJECT NO: 1175-18-75	HWY: USH 51	COUNTY: VILAS	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : N:\PDS\C3D\11751805\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 01

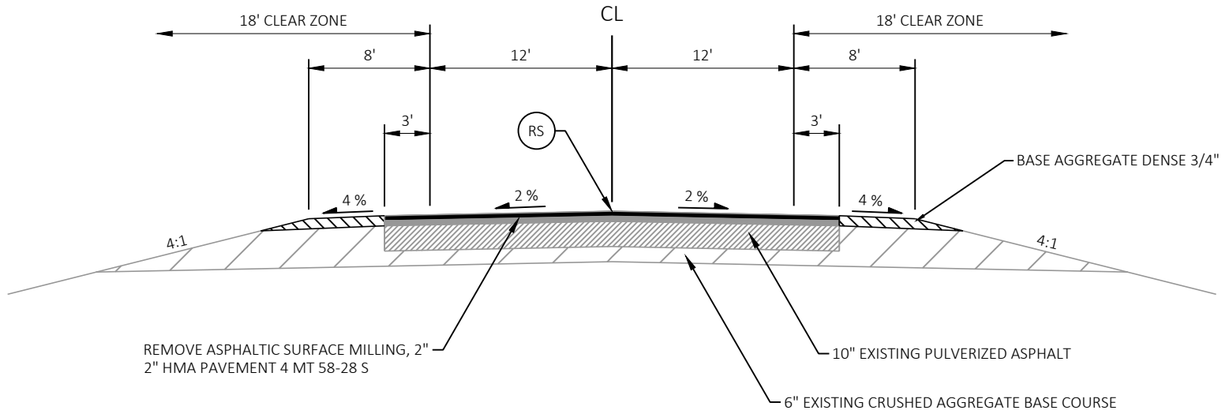
PLOT DATE : 1/17/2024 1:59 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:1 MI

2



EXISTING TYPICAL SECTION

STA 108+25 - 218+80



FINISHED TYPICAL SECTION

STA 108+25 - 218+80

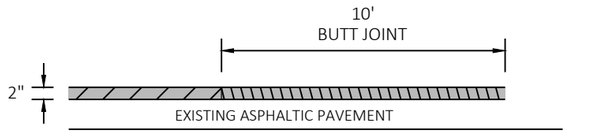
RS ASPHALTIC CENTERLINE RUMBLE STRIPS
2-LANE RURAL

PROJECT NO: 1175-18-75	HWY: USH 51	COUNTY: VILAS	TYPICAL SECTION	SHEET 4	E

FILE NAME : N:\PDS\C3D\11751805\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 01-10ft

PLOT DATE : 1/17/2024 2:00 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:10 FT

2



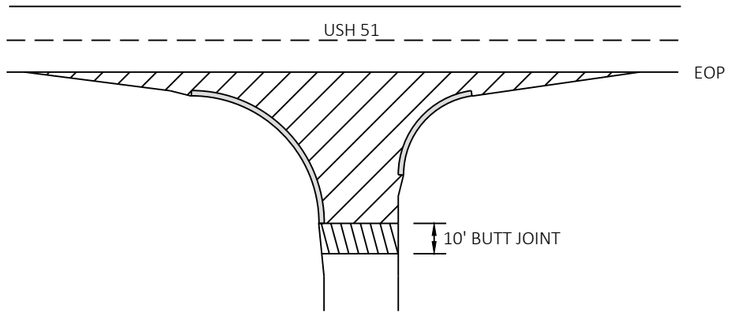
HMA PAVEMENT

REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

MAINLINE BUTT JOINT

STA 108+25 - STA 108+35
STA 168+65 - STA 168+75
STA 170+92 - STA 171+02



REMOVING ASPHALTIC SURFACE MILLING

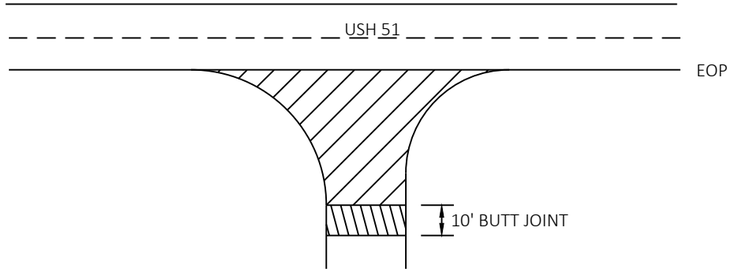
REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE
BUTT JOINT IS NOT REQUIRED

SIDE ROADS

WITH CURB AND GUTTER

TOWER RD
MANITOWISH RIVER ACCESS RD



REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

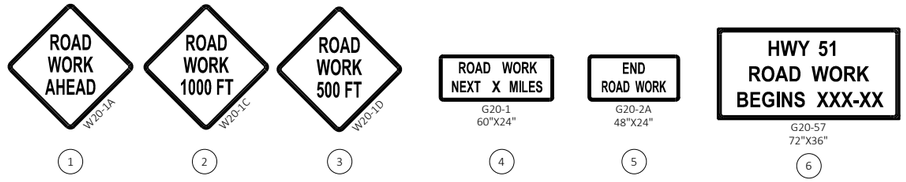
NOTE: WHEN MATCHING TO AN UNPAVED SURFACE
BUTT JOINT IS NOT REQUIRED

SIDE ROADS

WITHOUT CURB AND GUTTER

LOCKED HORN LN
BENSON LAKE RD

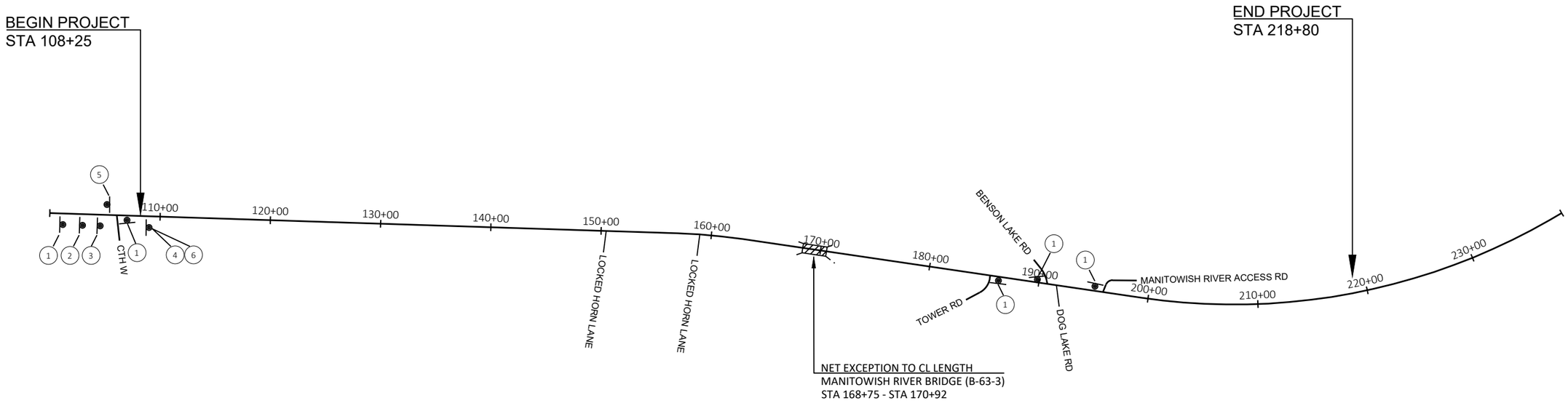
2



*VALUE SHOULD REFLECT THE ENTIRE LENGTH OF THE ROADWAY TO BE CONSTRUCTED DURING ALL WORK OPERATIONS

*HWY ROAD WORK BEGINS SIGN PLACED SEVEN (7) DAYS PRIOR TO CONSTRUCTION. SIGNS TO BE REMOVED WHEN CONSTRUCTION BEGINS





LEGEND

- SIGN ON PERMANENT SUPPORT
- (X) DENOTES SIGN NUMBER

NOTES:

ALL SIGNS 48'X48" UNLESS OTHERWISE NOTED

REFER TO S.S.D. "TRAFFIC CONTROL ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" FOR ADDITIONAL IMFORATION

ADVANCED WARNING SIGNS ON THIS PROJECT ALSO COVERS 1175-18-74

PROJECT NO: 1175-18-75	HWY: USH 51	COUNTY: VILAS	ADVANCED WARNING SIGNING	SHEET 7	E

1175-18-75

Line	Item	Item Description	Unit	Total	Qty
0008	204.0115	Removing Asphaltic Surface Butt Joints	SY	180.000	180.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	37,900.000	37,900.000
0028	211.0101	Prepare Foundation for Asphaltic Paving (project) 02. 1175-18-75	EACH	1.000	1.000
0036	213.0100	Finishing Roadway (project) 02. 1175-18-75	EACH	1.000	1.000
0040	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,160.000	2,160.000
0046	450.4000	HMA Cold Weather Paving	TON	1,070.000	1,070.000
0048	455.0605	Tack Coat	GAL	2,655.000	2,655.000
0054	460.2005	Incentive Density PWL HMA Pavement	DOL	3,301.760	3,301.760
0056	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	5,530.000	5,530.000
0058	460.2010	Incentive Air Voids HMA Pavement	DOL	4,250.000	4,250.000
0062	460.6224	HMA Pavement 4 MT 58-28 S	TON	4,250.000	4,250.000
0070	465.0560	Asphaltic Rumble Strips, Centerline	LF	9,085.000	9,085.000
0100	618.0100	Maintenance and Repair of Haul Roads (project) 02. 1175-18-75	EACH	1.000	1.000
0104	619.1000	Mobilization	EACH	0.330	0.330
0106	624.0100	Water	MGAL	205.000	205.000
0146	642.5001	Field Office Type B	EACH	0.330	0.330
0154	643.0900	Traffic Control Signs	DAY	650.000	650.000
0158	643.1000	Traffic Control Signs Fixed Message	SF	18.000	18.000
0160	643.3165	Temporary Marking Line Paint 6-Inch	LF	5,572.000	5,572.000
0164	643.5000	Traffic Control	EACH	0.200	0.200
0170	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	28,920.000	28,920.000
0178	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	7,244.000	7,244.000
0190	650.8000	Construction Staking Resurfacing Reference	LF	10,838.000	10,838.000
0194	650.9911	Construction Staking Supplemental Control (project) 02. 1175-18-75	EACH	1.000	1.000
0206	740.0440	Incentive IRI Ride	DOL	8,375.000	8,375.000

CATEGORY	STATION	TO	STATION	LOCATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	211.0101.02 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (02. 1175-18-75) EACH	213.0100.02 FINISHING ROADWAY (PROJECT) (02. 1175-18-75) EACH	REMARKS
0010	108+25	-	108+35	BOP	33	-	-	-	-
0010	218+70	-	218+80	EOP	33	-	-	-	-
0010	108+35	-	218+70	PROJECT	-	36,783	1	1	MAINLINE
0010	159+00	-	159+50	RT	28	168	-	-	LOCKED HORN LANE
0010	185+00	-	186+25	RT	28	419	-	-	TOWER ROAD
0010	190+00	-	191+15	LT	28	124	-	-	BENSON LAKE ROAD
0010	195+00	-	196+75	LT	28	390	-	-	MANITOWISH RIVER ACCESS ROAD
				TOTAL 0010	180	37,900	1	1	

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0560 ASPHALTIC RUMBLE STRIPS, CENTERLINE LF	REMARKS
0010	108+25	-	218+80	PROJECT	2,154	1,062	2,655	-	9,085	-
0010	108+25	-	218+80	MAINLINE	-	-	-	4,129	-	-
0010	158+90	-	159+50	RT	-	-	-	19	-	LOCKED HORN LANE
0010	184+90	-	186+75	RT	-	-	-	46	-	TOWER ROAD
0010	190+00	-	191+10	LT	-	-	-	14	-	BENSON LAKE ROAD
0010	194+60	-	197+00	LT	-	-	-	42	-	MANITOWISH RIVER ACCESS ROAD
				TOTAL 0010	2,160	1,070	2,655	4,250	9,085	

HMA PAVEMENT PWL QMP MIXTURE ACCEPTANCE TABLE

LOCATION	STATIONING	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRM TO BE USED FOR: MIXTURE ACCEPTANCE	QUALITY MANAGEMENT PROGRM TO BE USED FOR: DENSITY ACCEPTANCE
12 FOOT DRIVING LANE	108+25 - 218+80	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	3,304	2.00-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
3 FOOT SHOULDER	108+25 - 218+80	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	825	2.00-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
SIDEROAD INTERSECTIONS		UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	121	2.00-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE

CATEGORY	STATION	TO	STATION	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH LF	646.6466 COLD WEATHER MARKING EPOXY 6-INCH LF	REMARKS
0010	108+25	-	218+80	PROJECT	-	-	7,244	YELLOW / CENTERLINE
0010	108+25	-	218+80	PROJECT	-	21,676	-	WHITE / LANE EDGE
0010	108+25	-	218+80	PROJECT	2,144	2,481	-	YELLOW / SOLID-DASHED
0010	108+25	-	218+80	PROJECT	628	1,963	-	YELLOW / DASHED
0010	108+25	-	218+80	PROJECT	2,800	2,800	-	YELLOW / SOLID-SOLID
				TOTAL 0010	5,572	28,920	7,244	

CATEGORY	STATION	TO	STATION	LOCATION	624.0100 WATER MGAL	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	REMARKS
0010	108+25	-	218+80	PROJECT	205	-	18	-
0010	108+25	-	218+80	PROJECT	-	650	-	ADVANCE WARNING SIGNING - 65 DAYS
				TOTAL 0010	205	650	18	

CATEGORY	STATION	TO	STATION	LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	REMARKS
0010	108+25	-	218+80	PROJECT	10,838	-
				TOTAL 0010	10,838	

PROJECT NO: 1175-18-75	HWY: USH 51	COUNTY: VILAS	MISCELLANEOUS QUANTITIES	SHEET 10	E

FILE NAME : N:\PDS\C3D\11751805\DESIGN\QUANTITIES\MQ\030201-MQ.DWG
LAYOUT NAME - 02

PLOT DATE : 1/17/2024 2:01 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 42



5

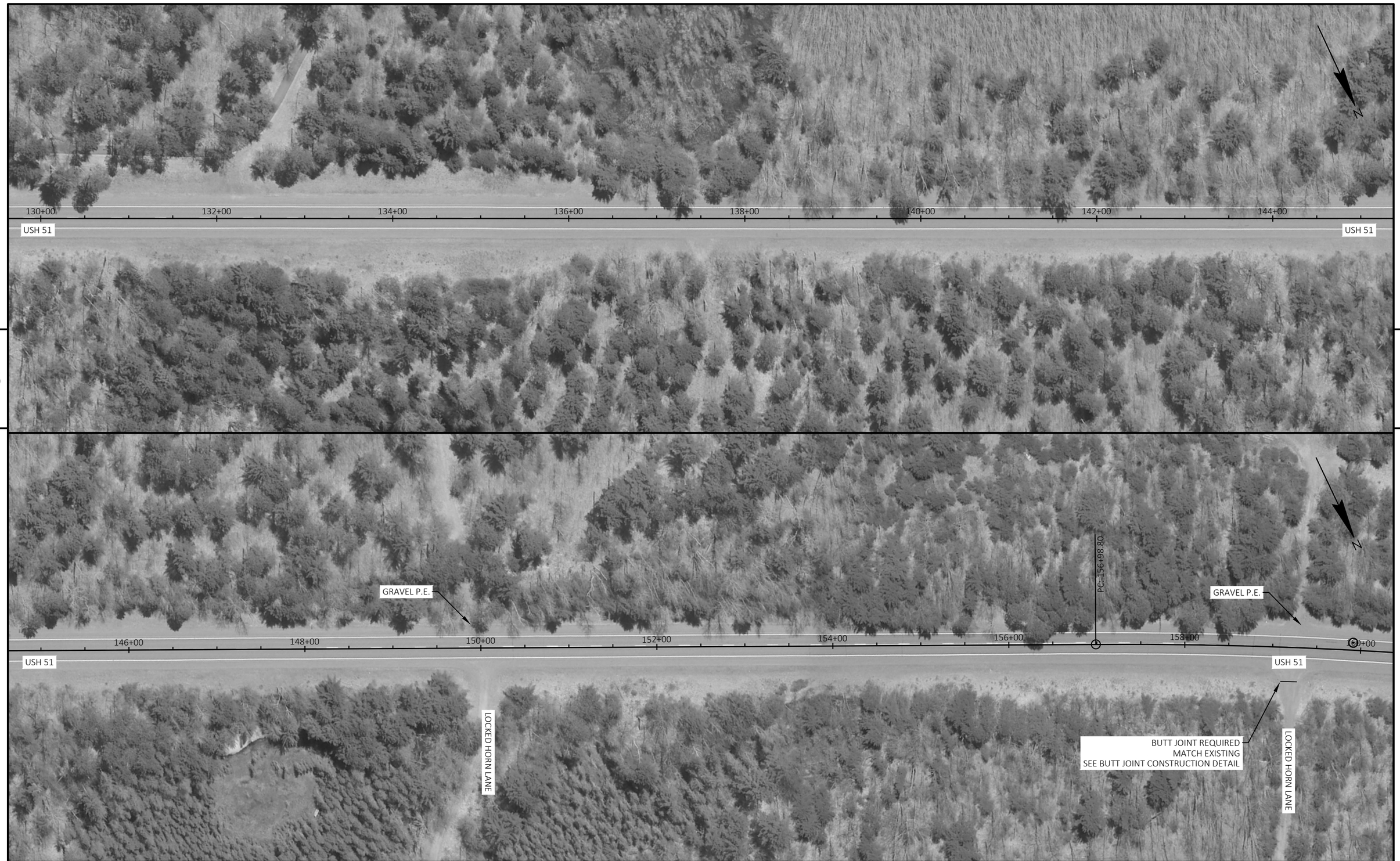
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PROJECT NO: 1175-18-75	HWY: USH 51	COUNTY: VILAS	PLAN	SHEET 11	E

FILE NAME : N:\PDS\C3D\11751805\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 01

PLOT DATE : 1/17/2024 2:01 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5

5

PROJECT NO: 1175-18-75	HWY: USH 51	COUNTY: VILAS	PLAN SHEETS	SHEET 12	E

FILE NAME : N:\PDS\C3D\11751805\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 02

PLOT DATE : 1/17/2024 2:01 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5

5

PROJECT NO: 1175-18-75	HWY: USH 51	COUNTY: VILAS	PLAN	SHEET 13	E

FILE NAME : N:\PDS\C3D\11751805\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 03

PLOT DATE : 1/17/2024 2:01 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT



5 5

PROJECT NO: 1175-18-75	HWY: USH 51	COUNTY: VILAS	PLAN	SHEET 14	E

FILE NAME : N:\PDS\C3D\11751805\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 04

PLOT DATE : 1/17/2024 2:02 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

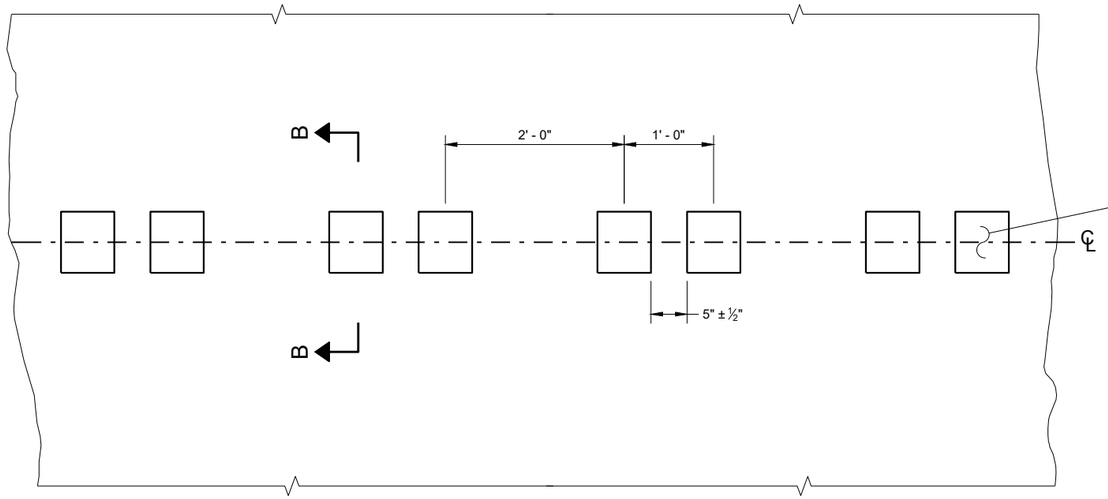
Standard Detail Drawing List

13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
15C02-09F	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
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C19-08A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

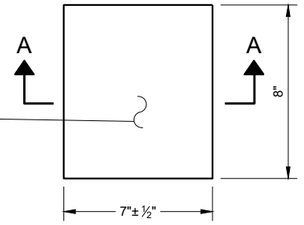
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A11 SHEETS "d" AND "e".

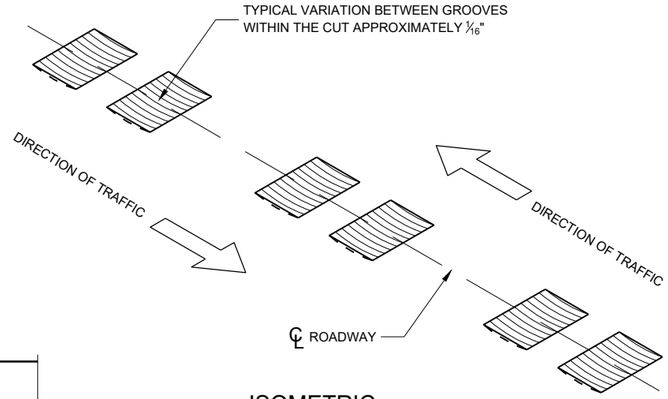
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



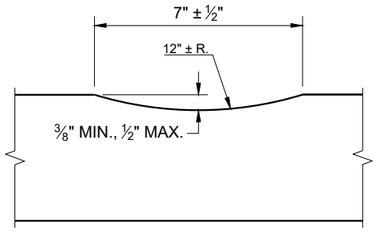
PLAN DETAIL VIEW



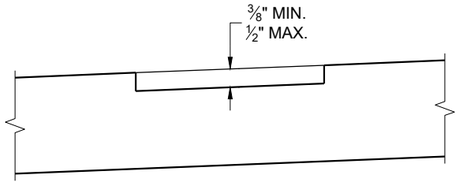
PLAN VIEW
(SINGLE GROOVE)



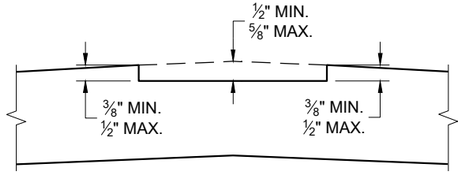
ISOMETRIC



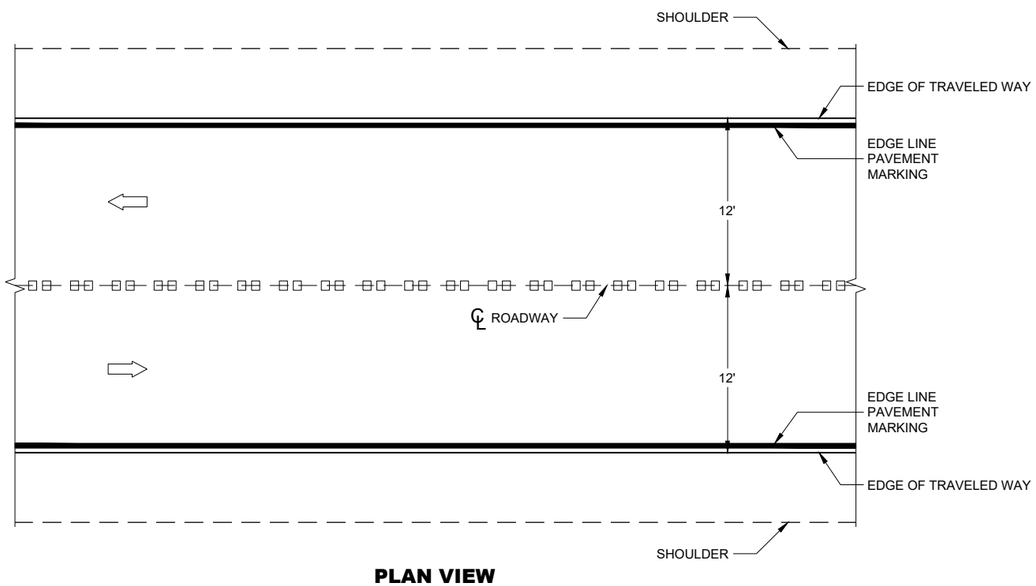
SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



PLAN VIEW

CENTERLINE RUMBLE STRIPS - ASPHALT

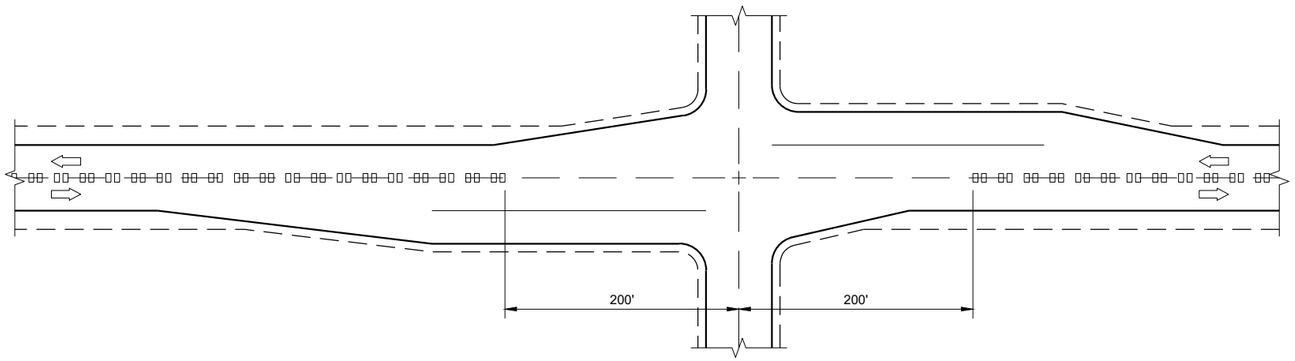
CENTERLINE RUMBLE STRIPS - ASPHALT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTA	16

6

SDD 13A11 - 04a

6

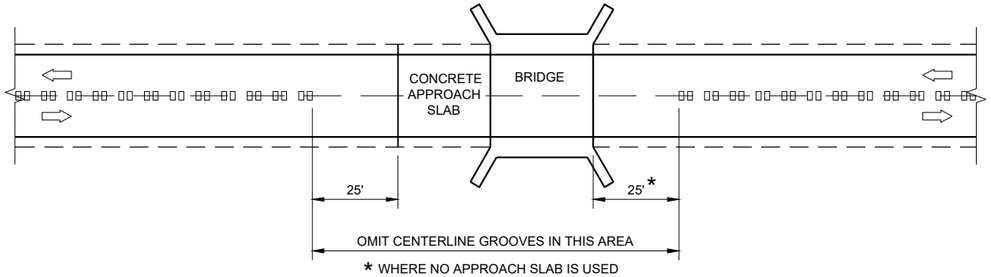
SDD 13A11 - 04a



CENTERLINE GROOVES AT INTERSECTIONS

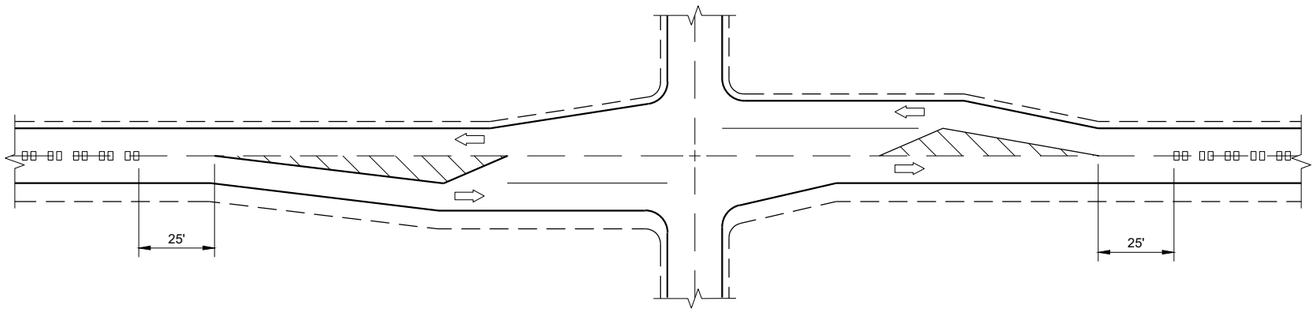
GENERAL NOTES

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

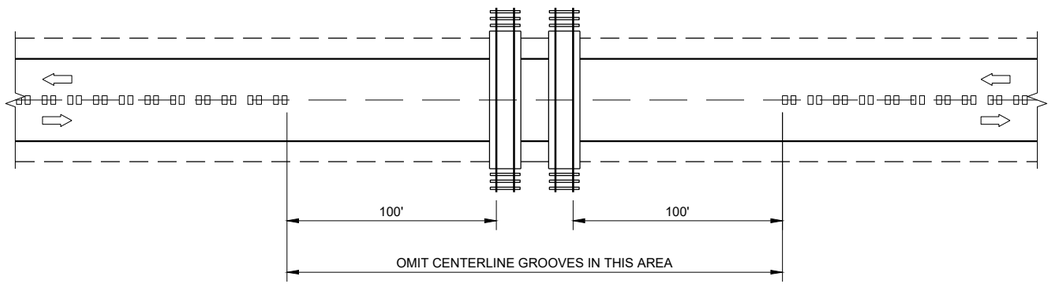


* WHERE NO APPROACH SLAB IS USED

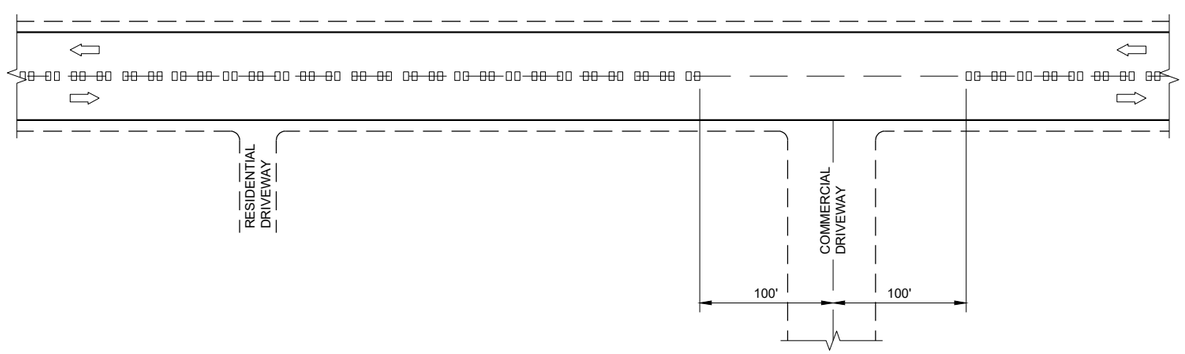
CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



CENTERLINE GROOVES AT RAILROADS



CENTERLINE GROOVES AT DRIVEWAYS (1)

CENTER LINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAIL ROADS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ John Jenkins — ROADWAY STANDARDS DEVE ENGINEER

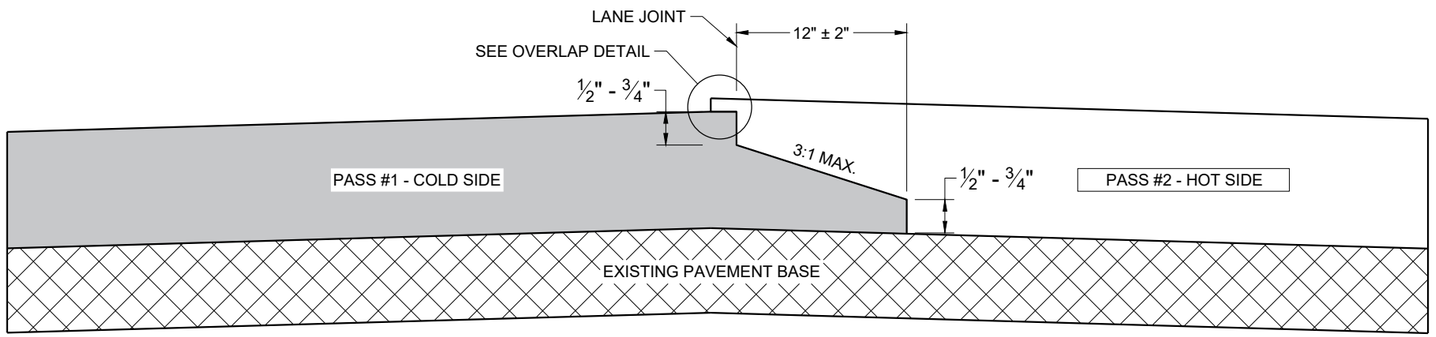
FHWA

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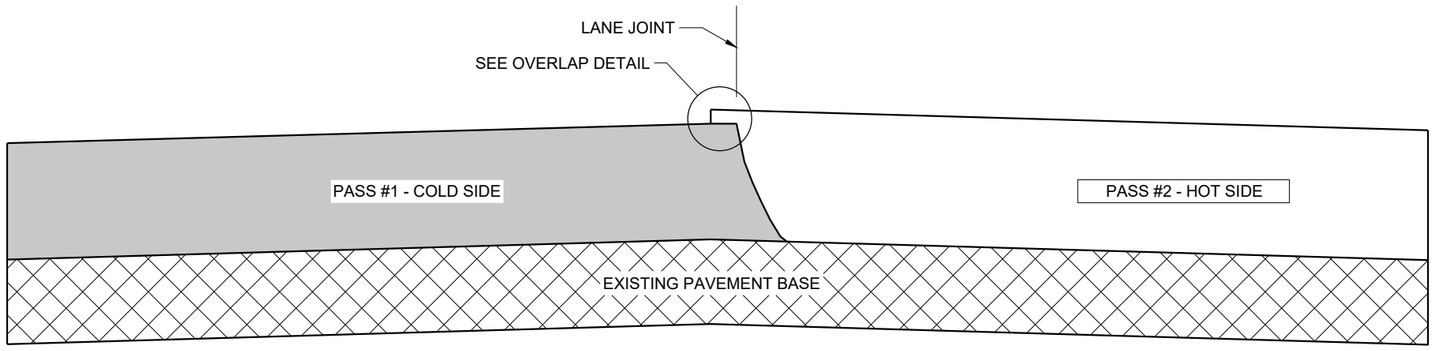
SDD 13A11 - 04d

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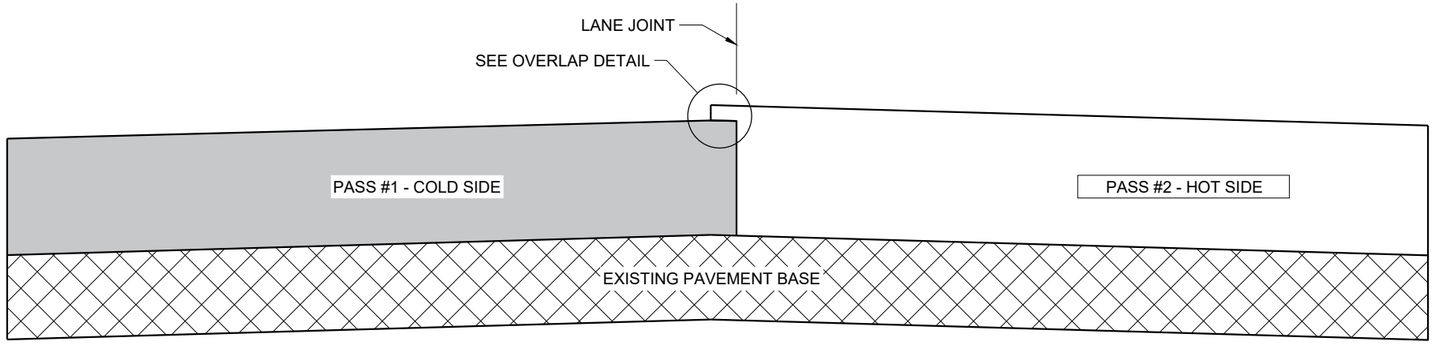
SDD 13A11 - 04d



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

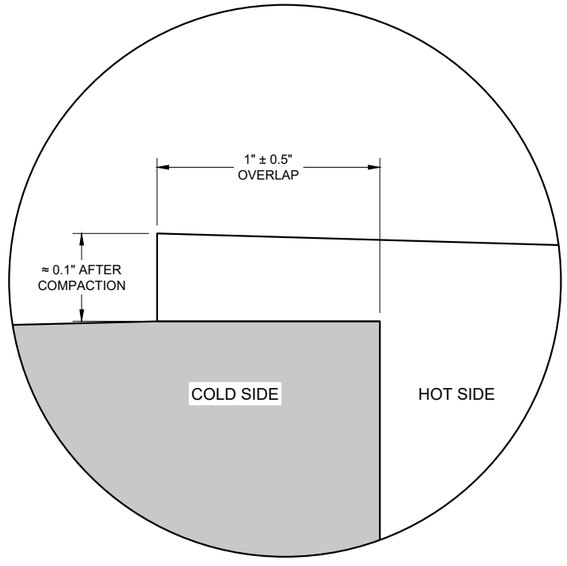
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)

6

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SDD 13C19 - 03

SDD 13C19 - 03

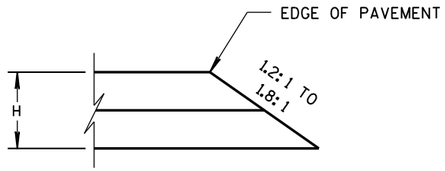
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

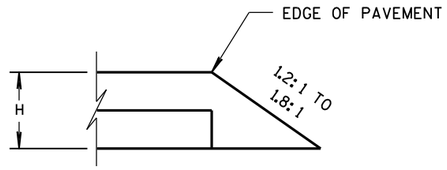
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



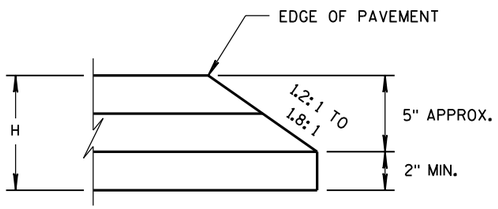
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



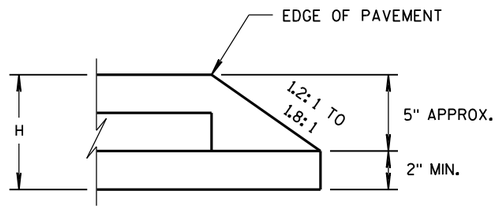
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

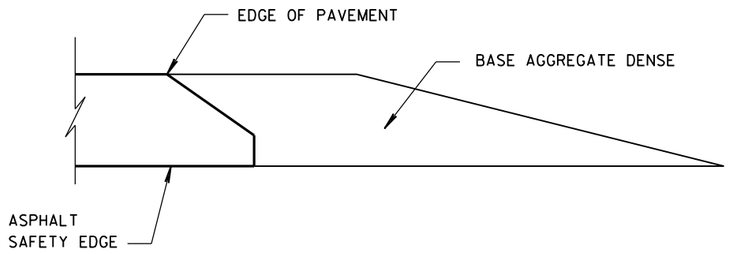
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

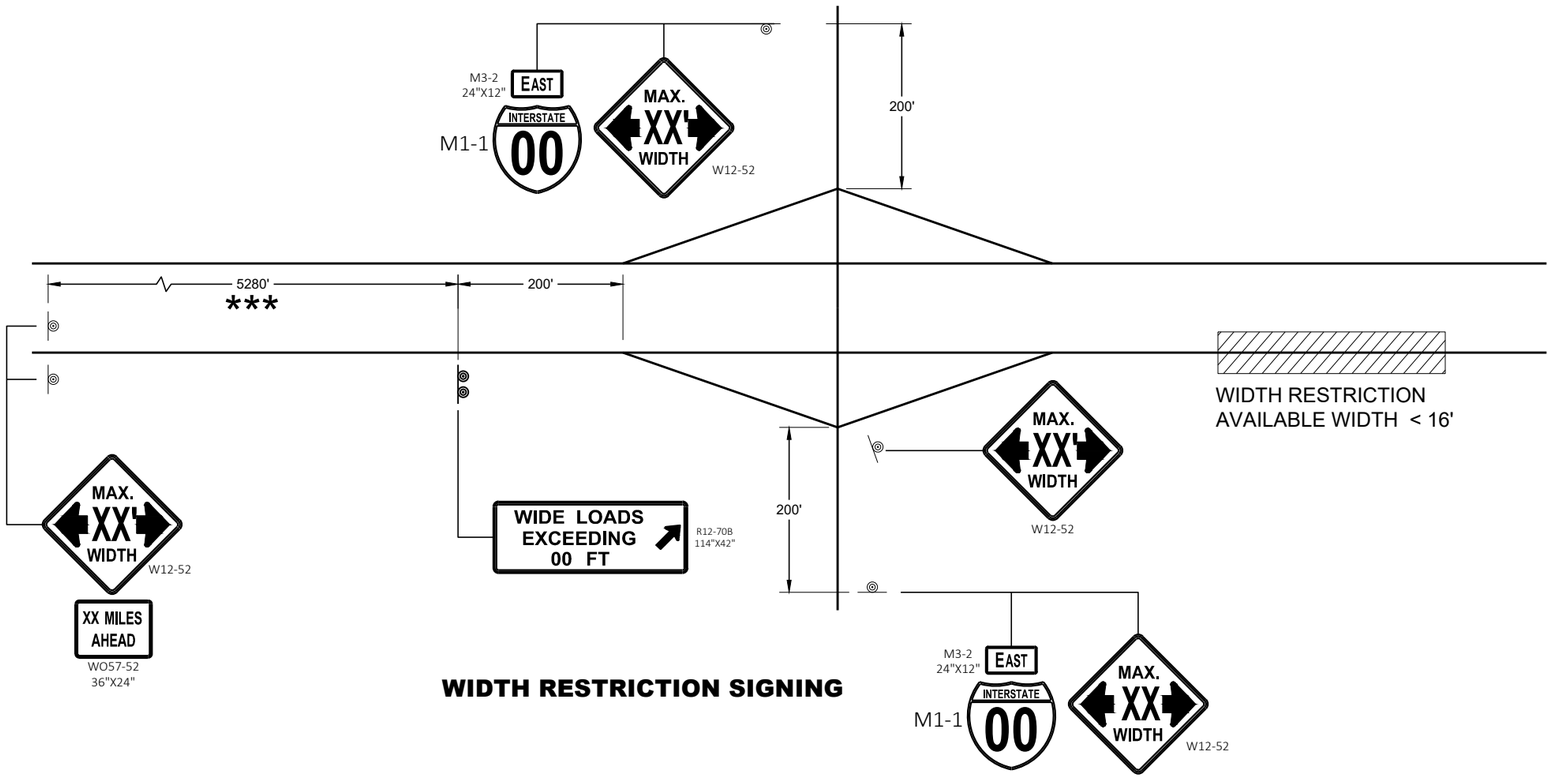
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

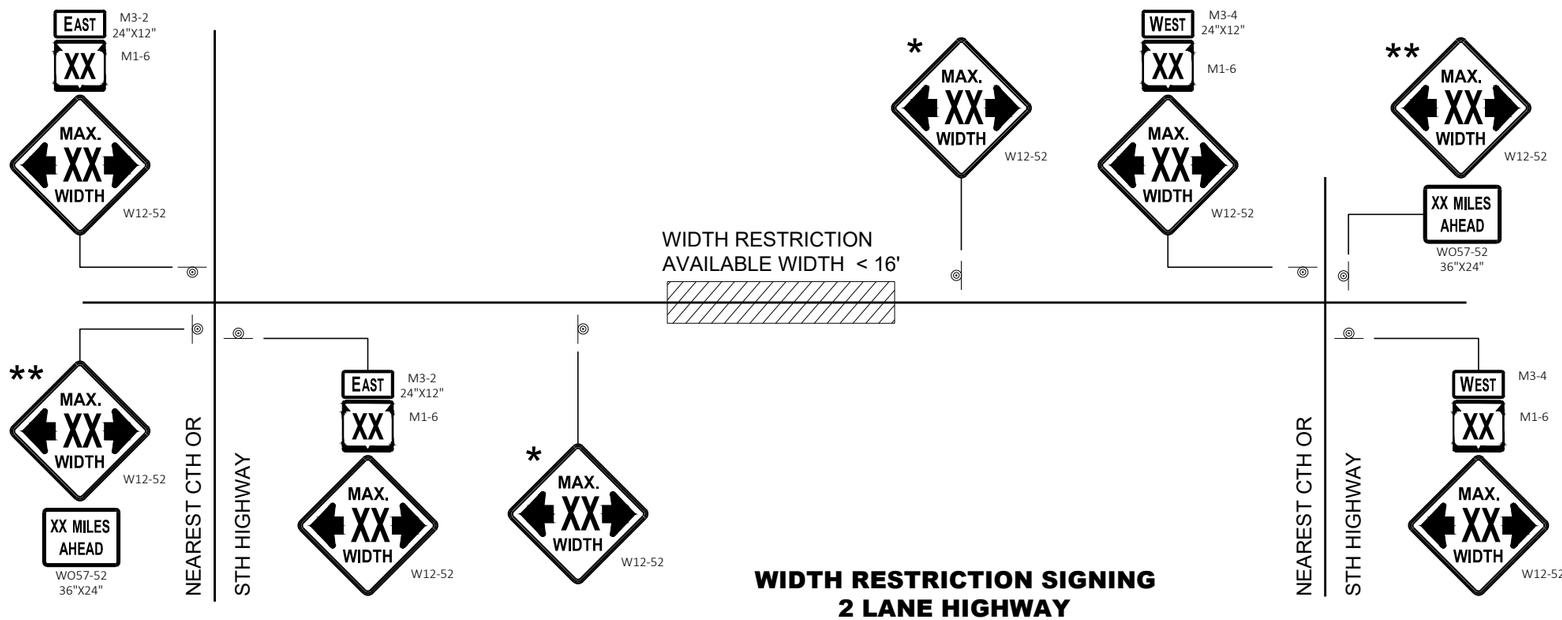
11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

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

ADVANCED WIDTH RESTRICTION SIGNING

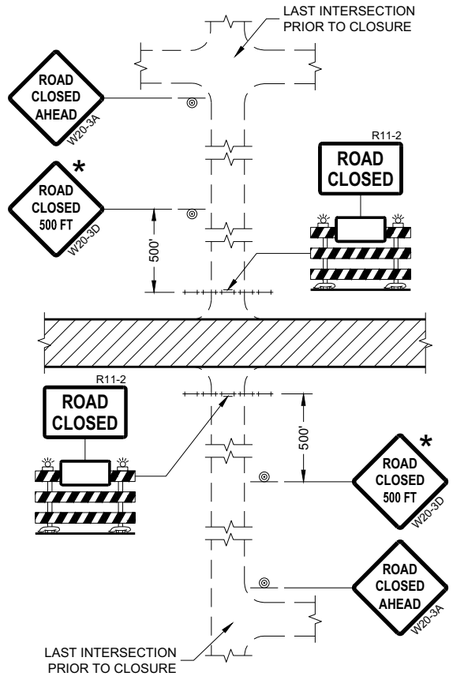
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

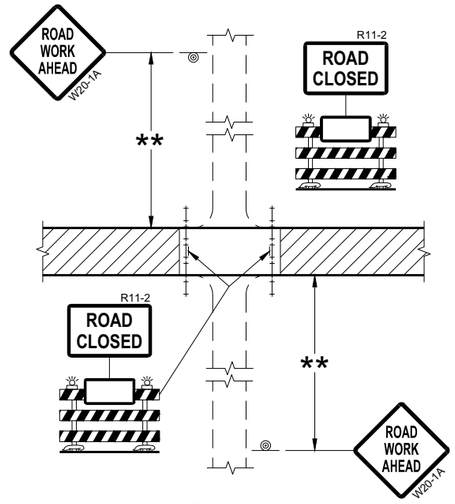
FHWA

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SDD 15C02 - 09f



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.

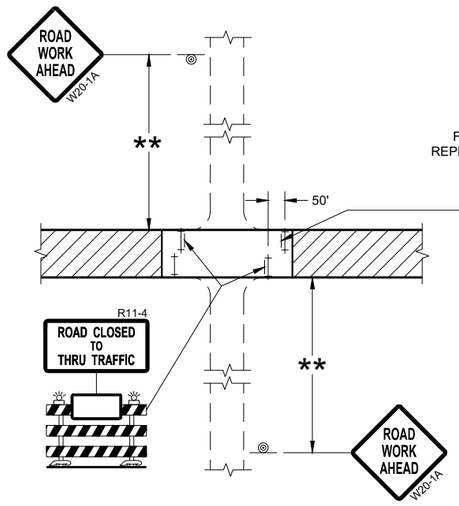
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

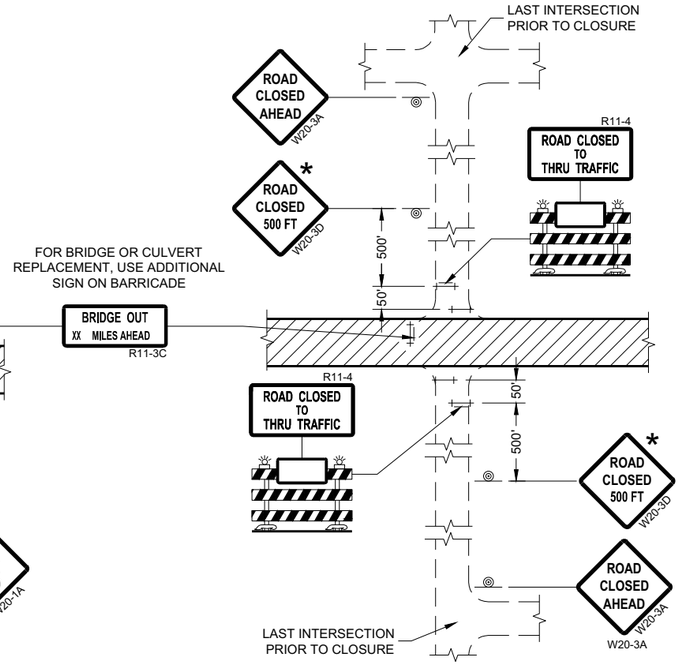
THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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.





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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
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.

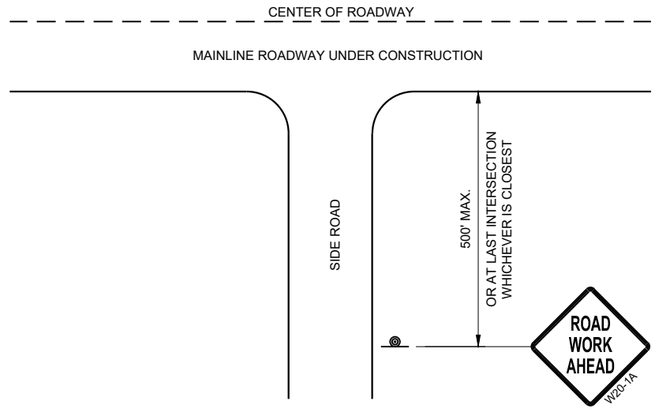
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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.



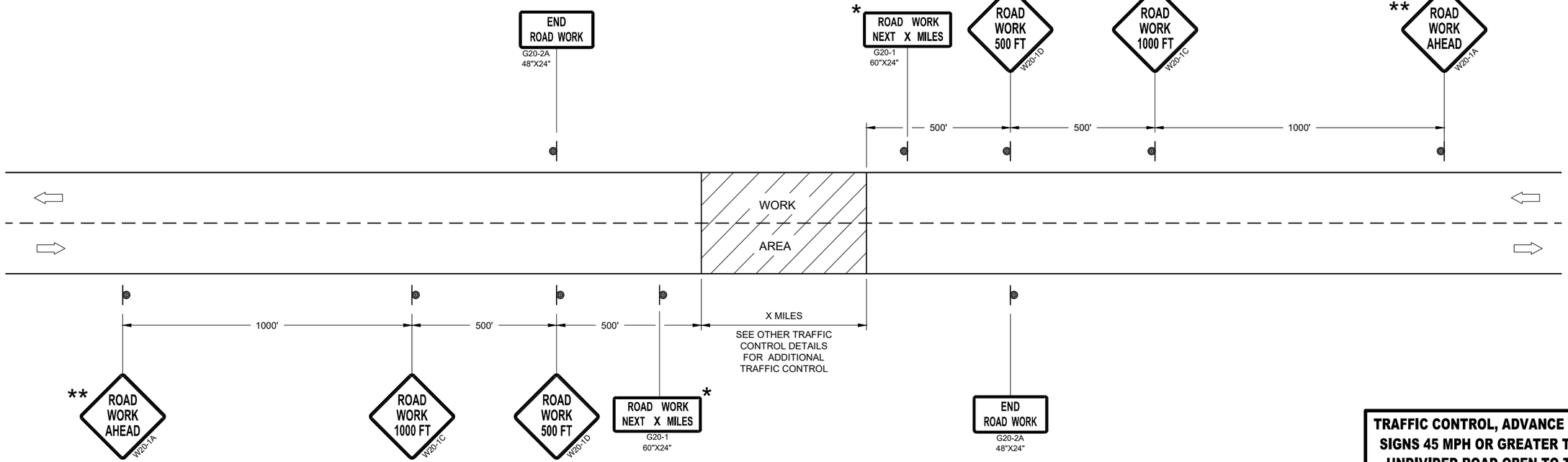
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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 TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

GENERAL NOTES

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

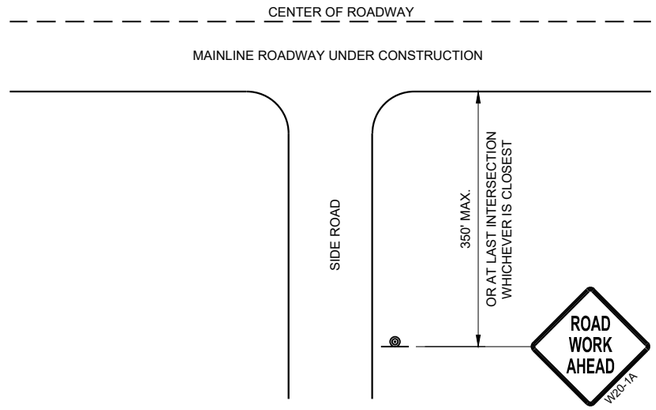
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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.

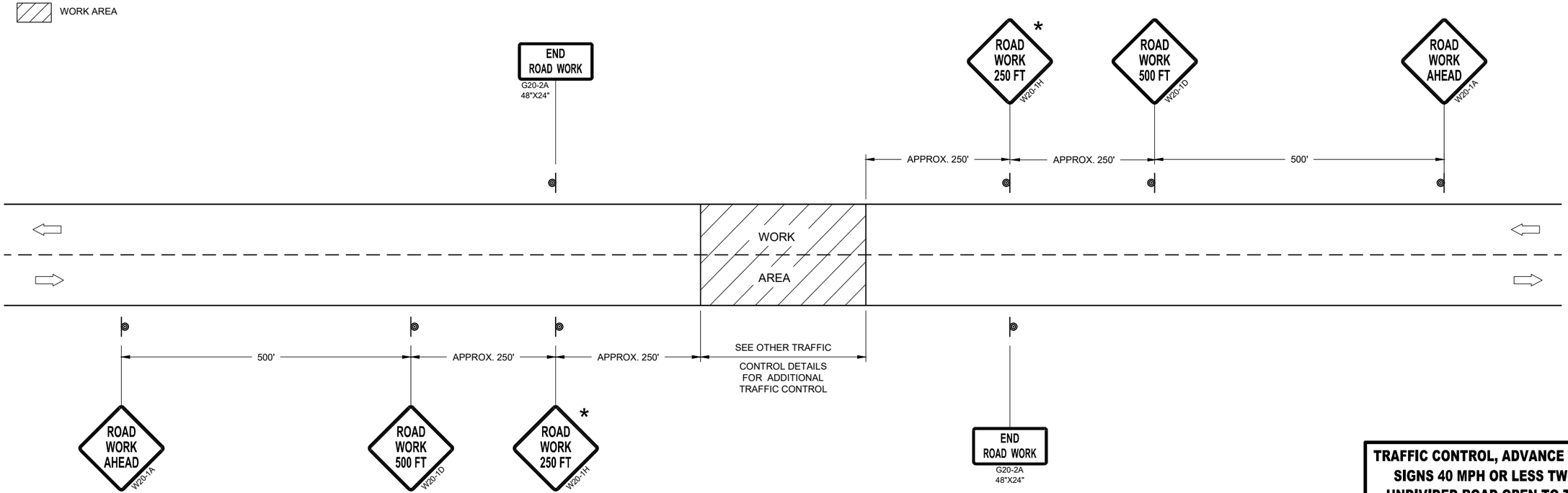
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C05 - 05

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

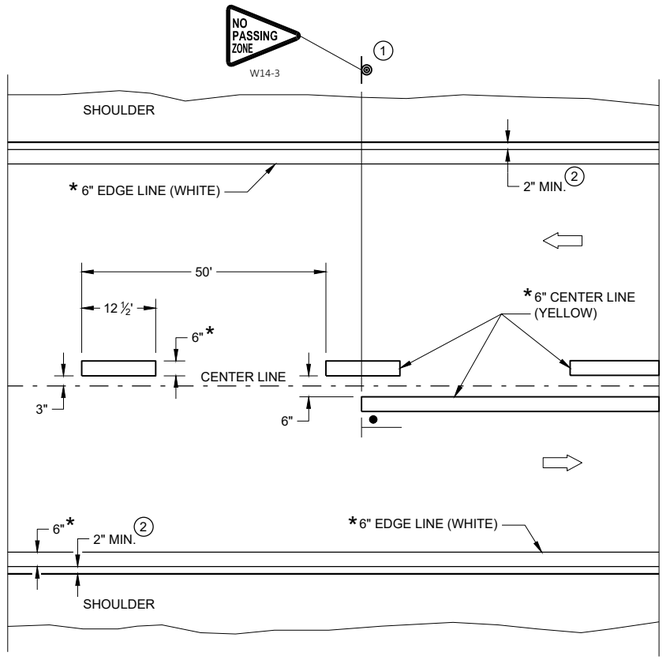
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

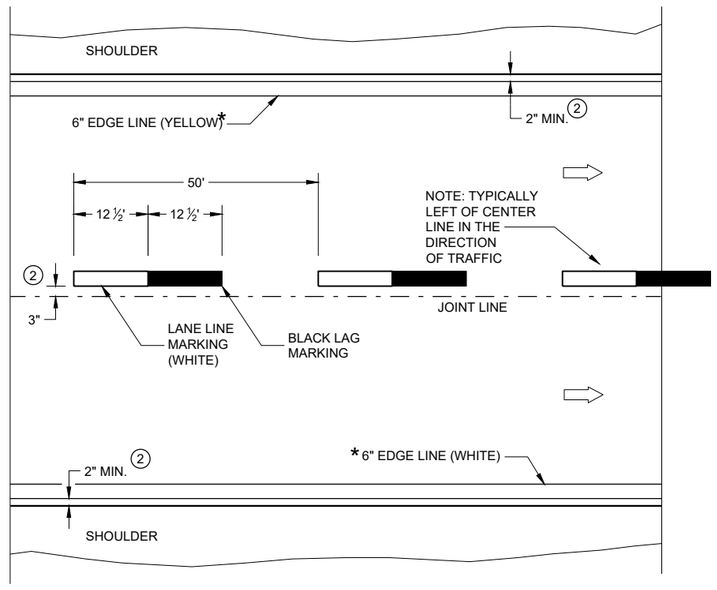
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023 — DATE

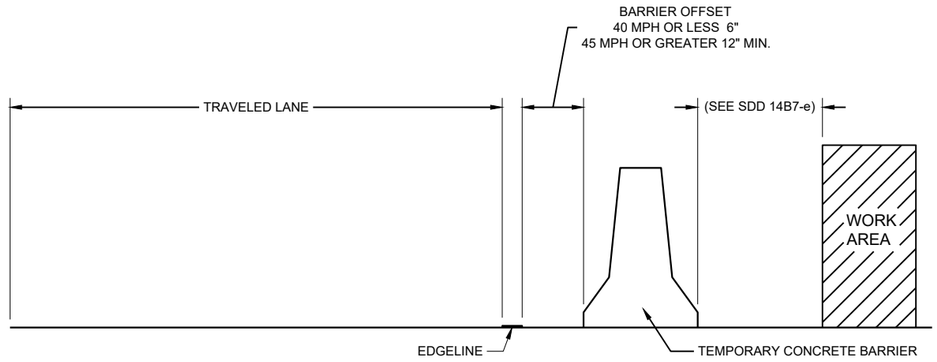
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

6

SDD 15C08-23a

SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

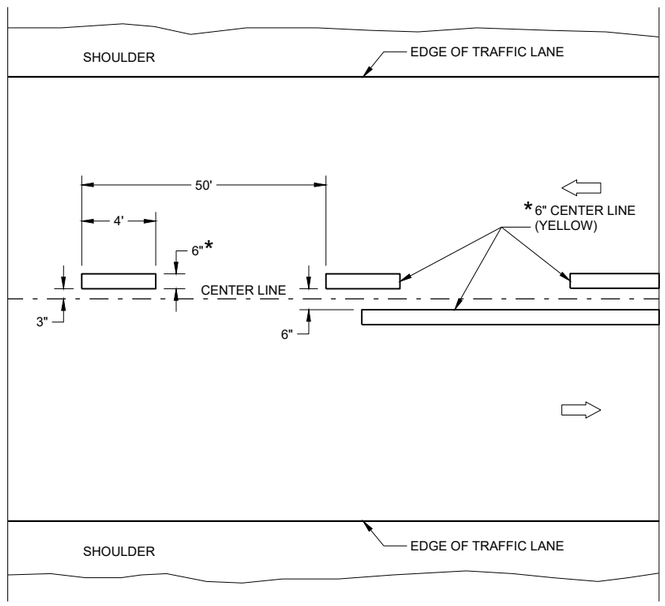
GENERAL NOTES

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

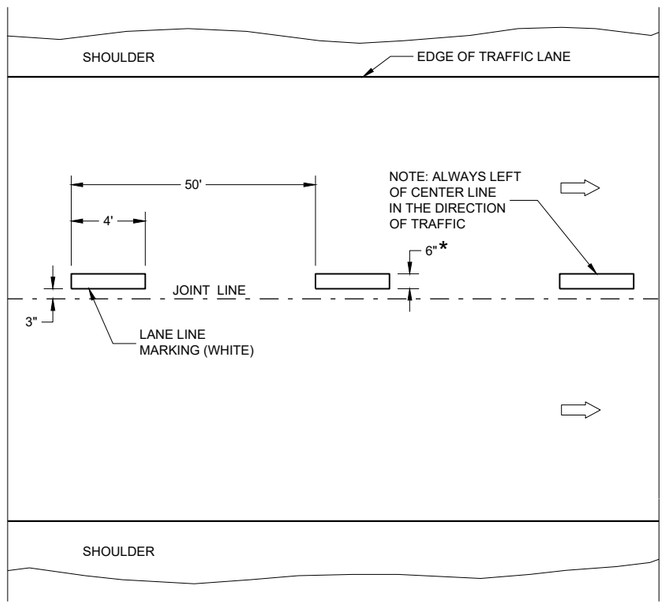
LEGEND

⇨ DIRECTION OF TRAFFIC

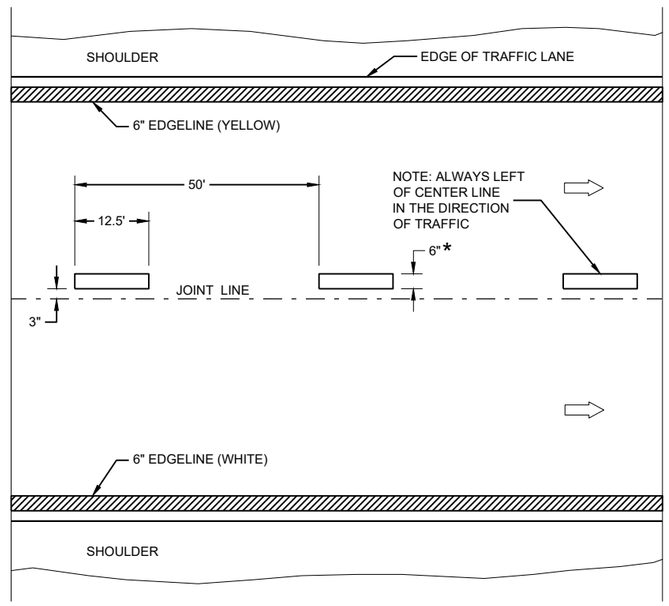
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

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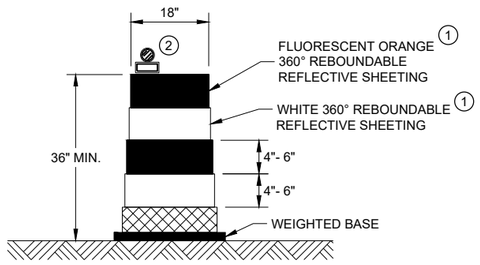
SDD 15C08-23b

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SDD 15C08-23b

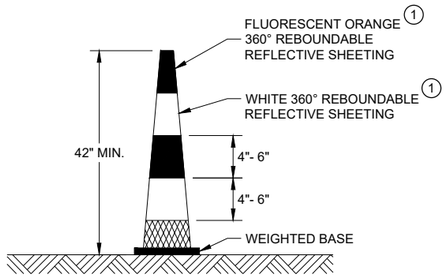
GENERAL NOTES

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

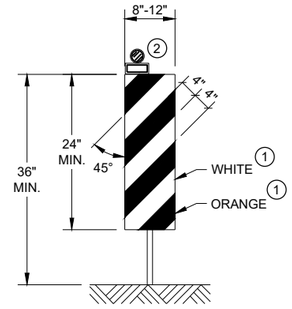
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

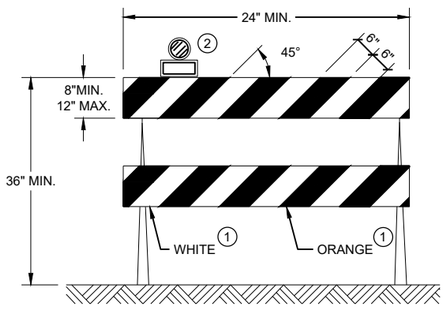
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



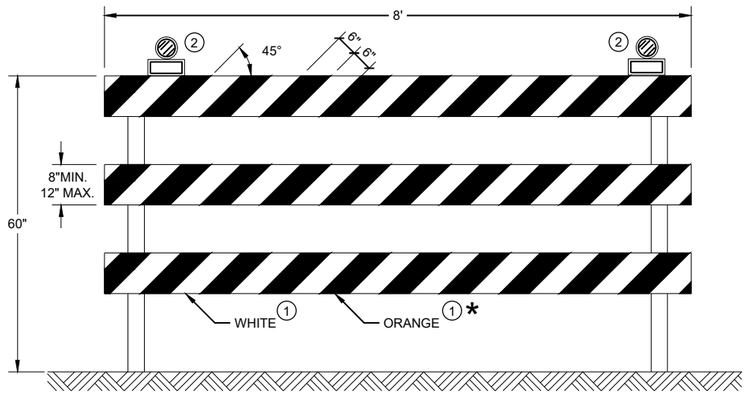
VERTICAL PANEL

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 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 10b
SDD 15C11 - 10b

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.

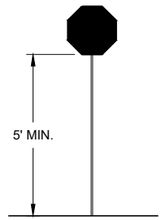
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM 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

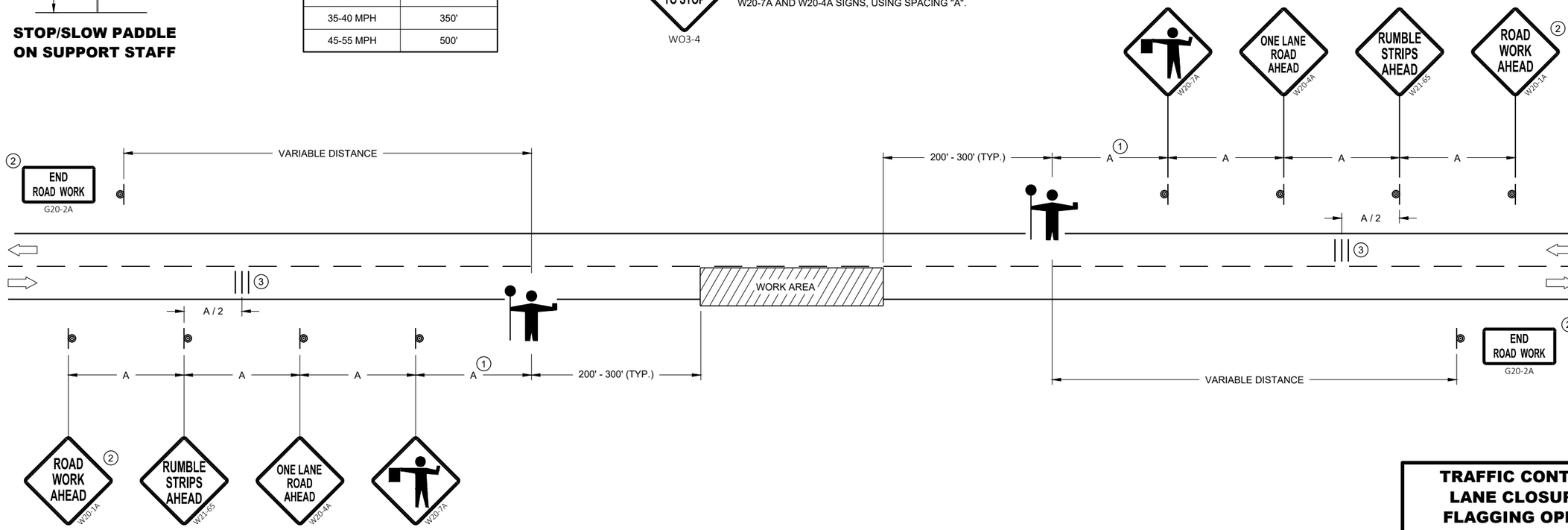
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
SDD 15C12 - 09a

GENERAL NOTES

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL CONE 42-INCH

TRAFFIC CONTROL DRUM

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

AFAD — AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

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

IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, 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.

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.

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

(2) IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

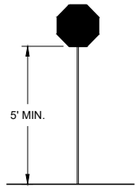
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

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.

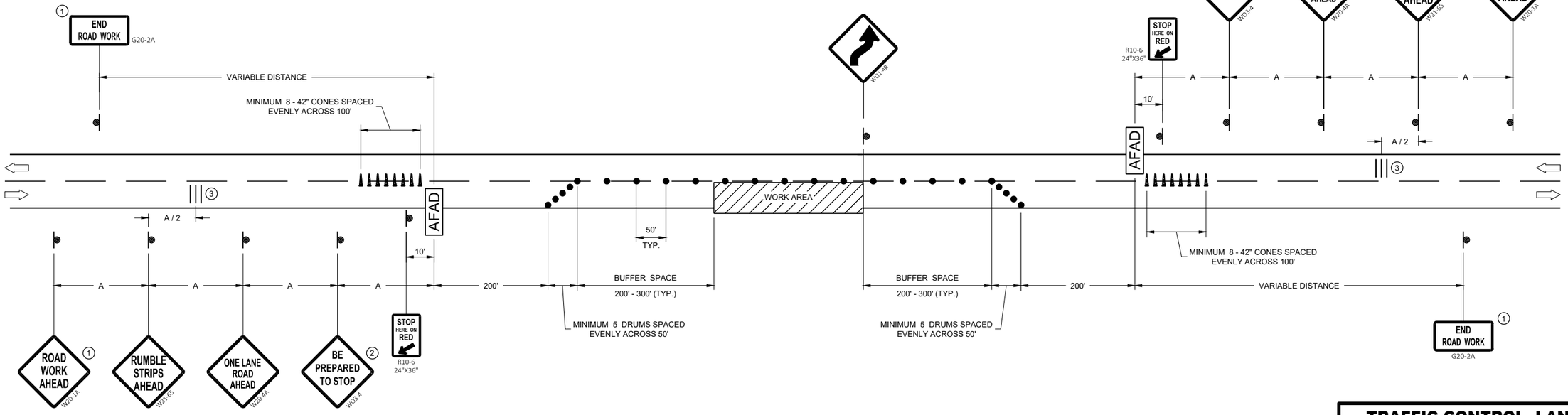
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSELY AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER.



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'



TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C12 - 09b

6

SDD 15C12 - 09b

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.

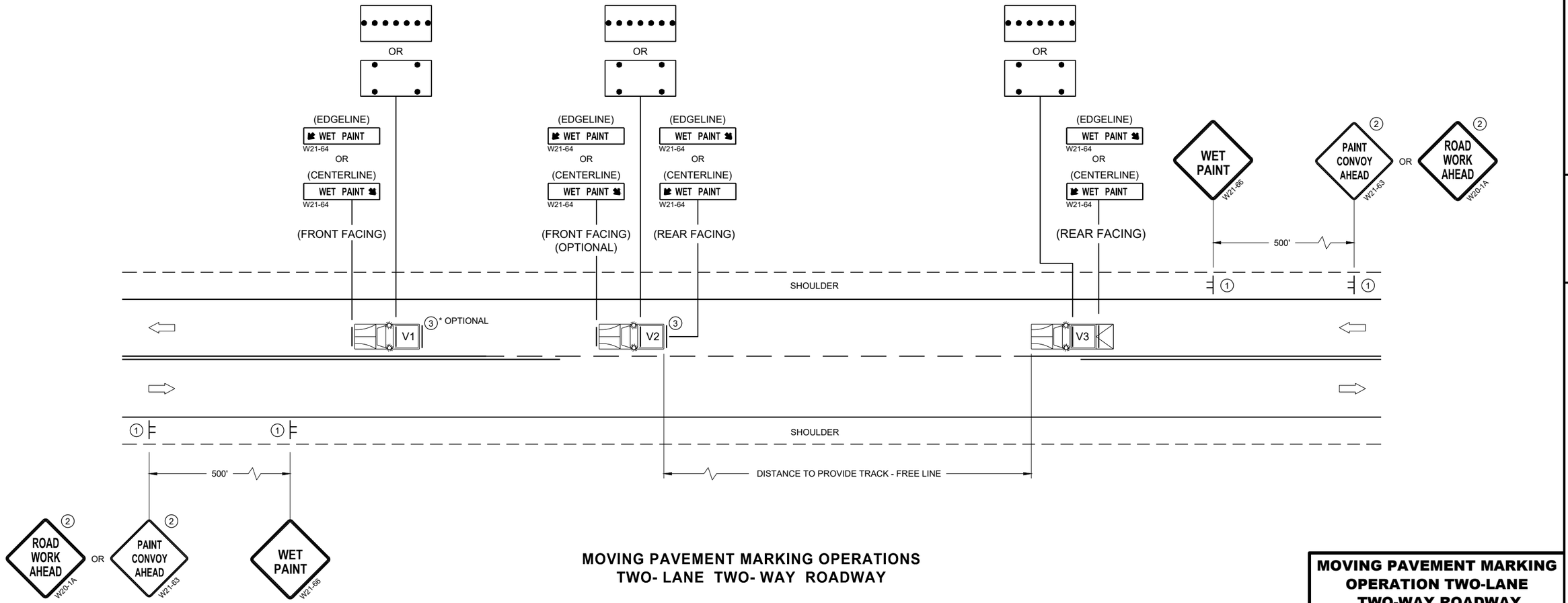
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

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 28" 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.
3. V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.



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
February 2023
DATE

/S/ Andrew I...
WORK ZONE EN

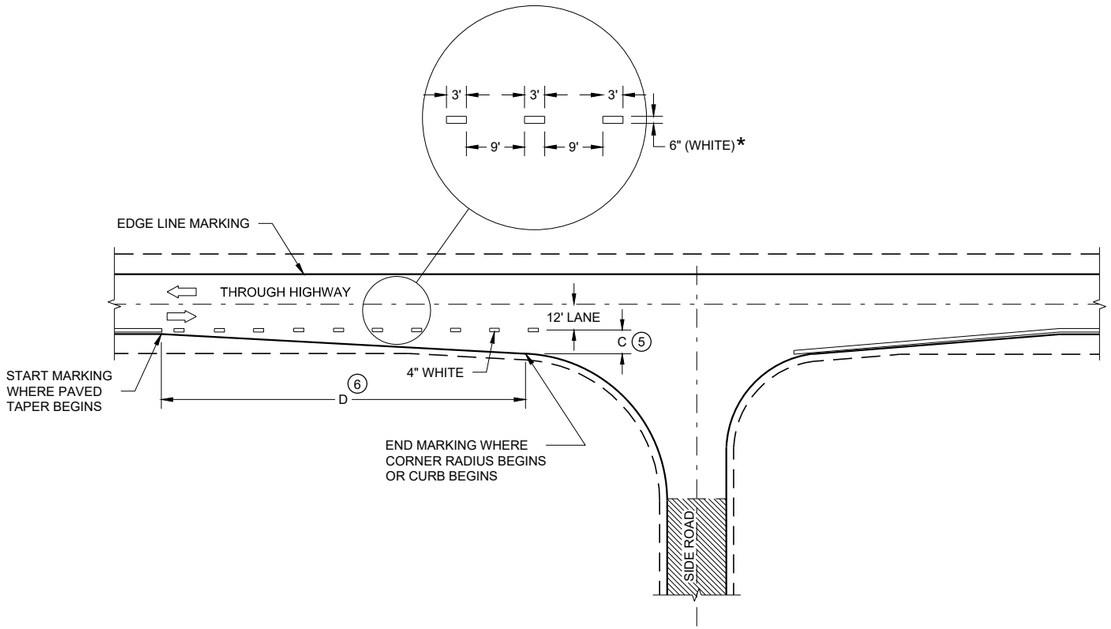
FHWA

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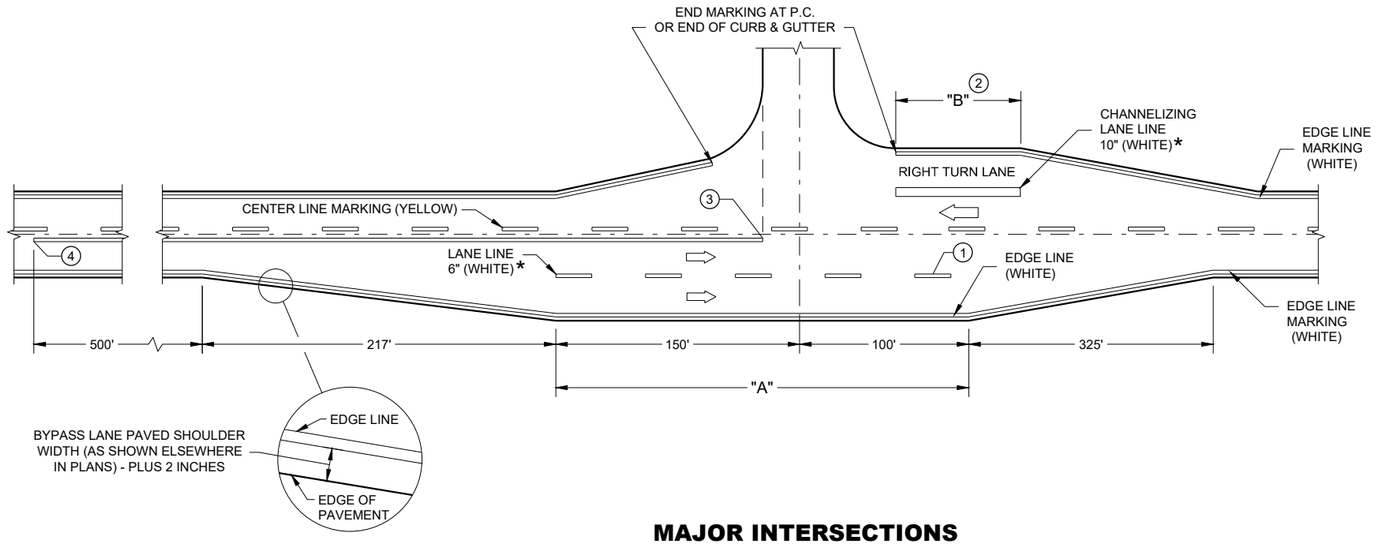
SDD 15C19-08a

6

SDD 15C19-08a



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

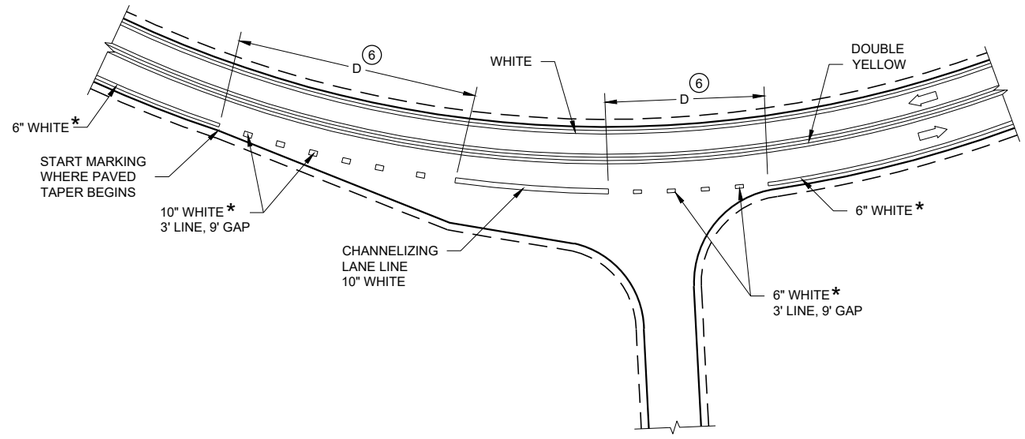
GENERAL NOTES

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.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

SDD 15C35-06a

6

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.

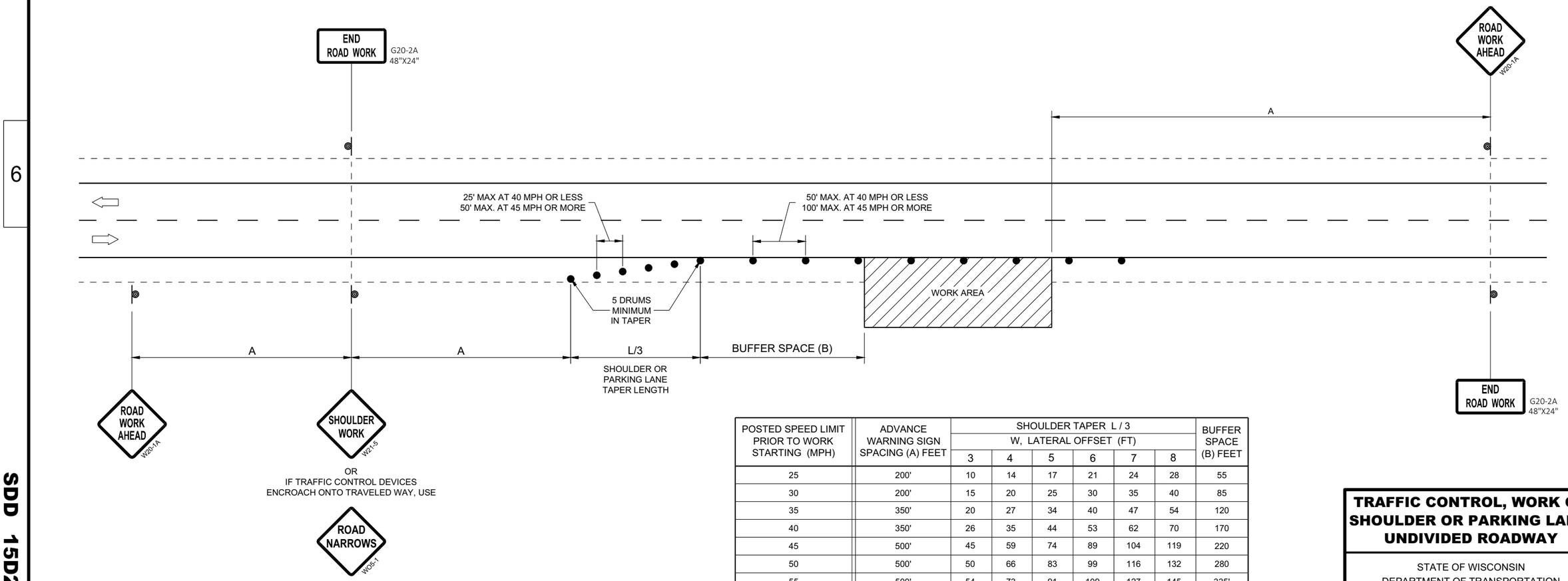
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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.

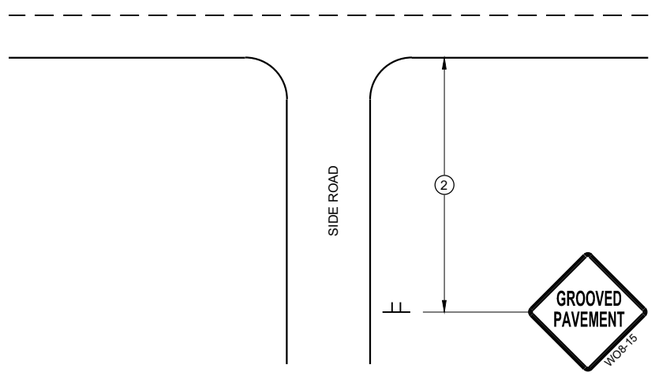
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

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

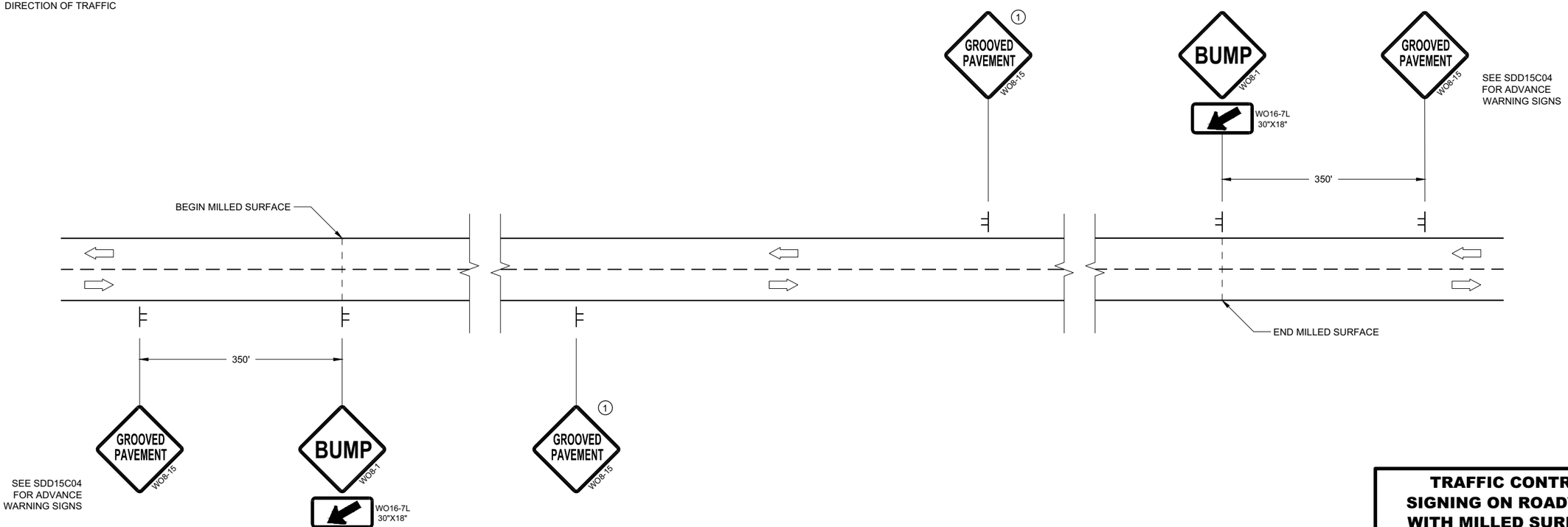
LEGEND

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 ENGINEER

FHWA

SDD 15D44 - 02

SDD 15D44 - 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 CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

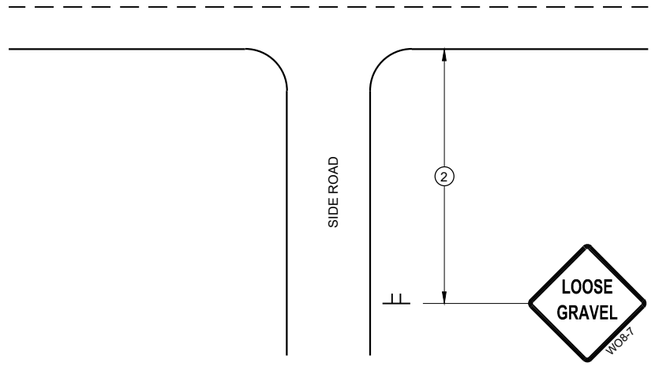
(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

(3) ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

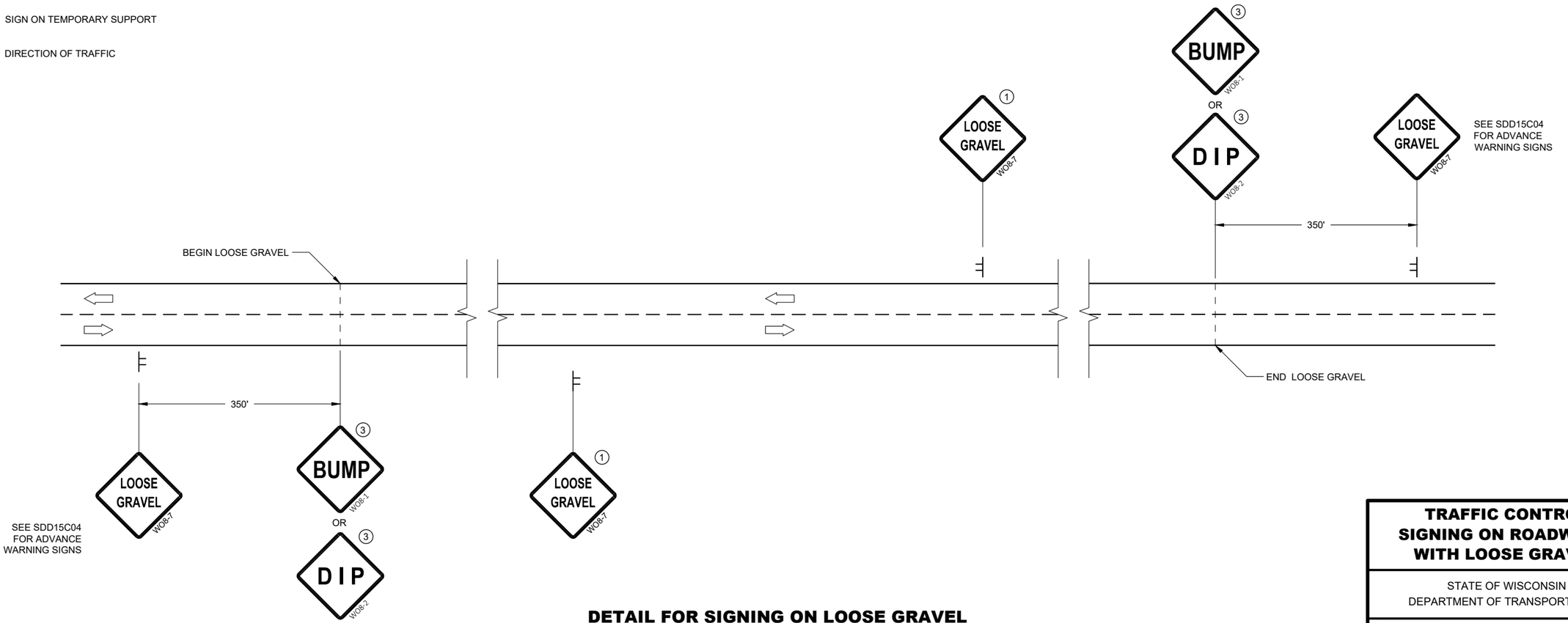
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D45 - 03

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

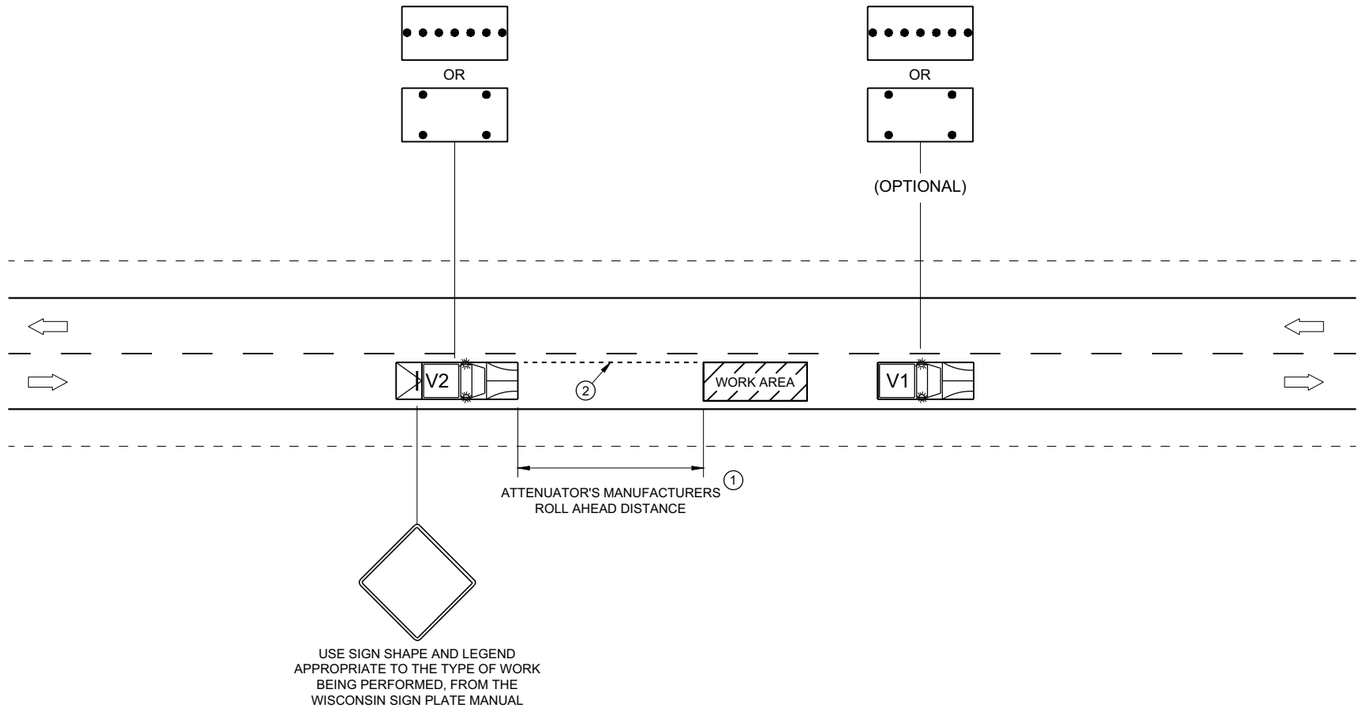
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

(1) DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



6

SDD 15D51 - 01

TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2021
DATE

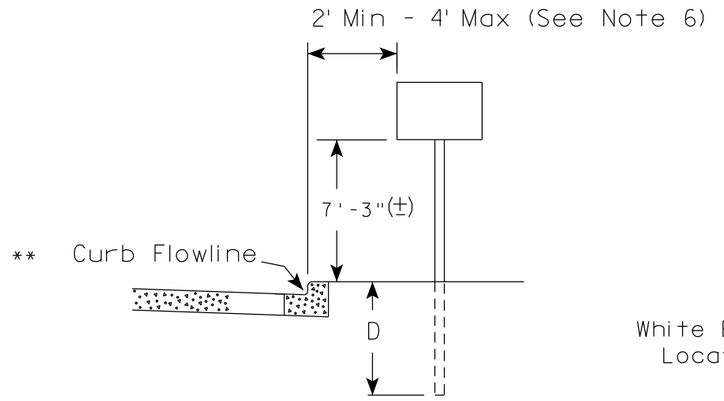
/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

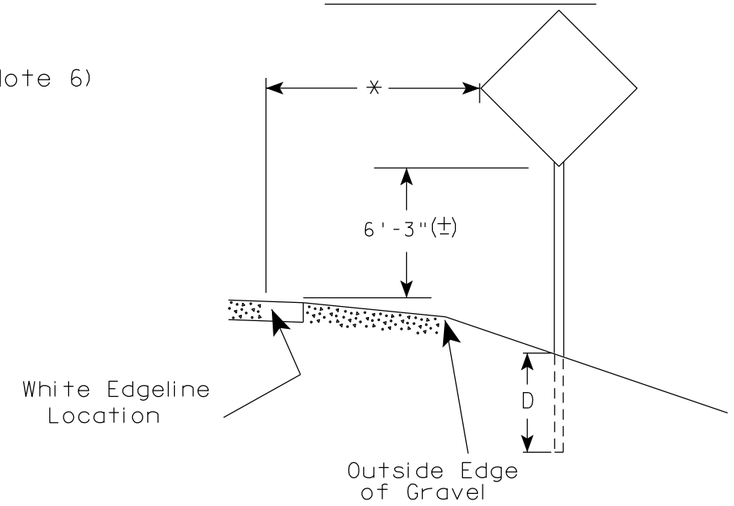
6

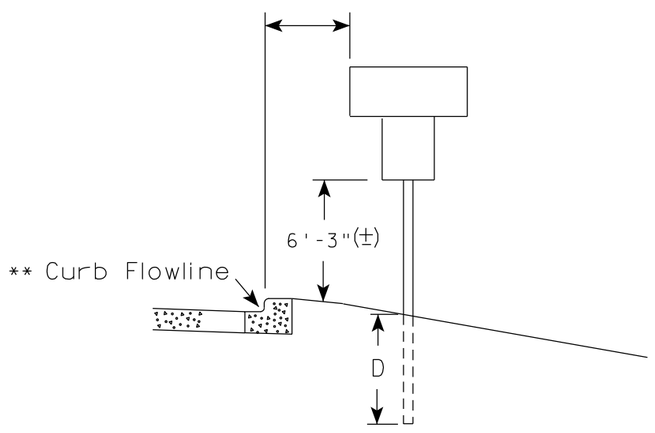
SDD 15D51 - 01

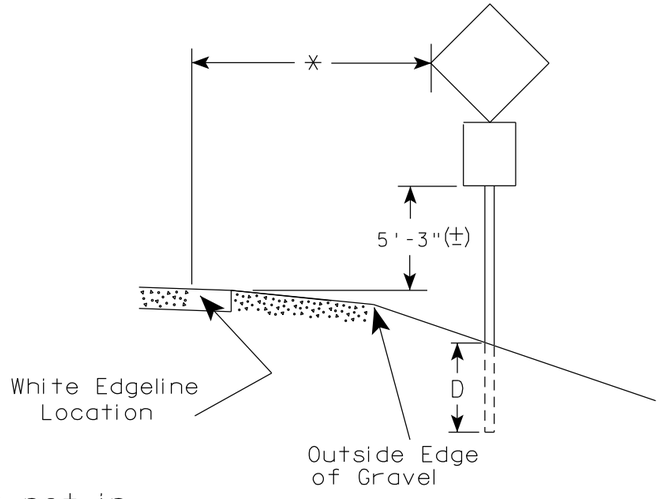
URBAN AREA



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.

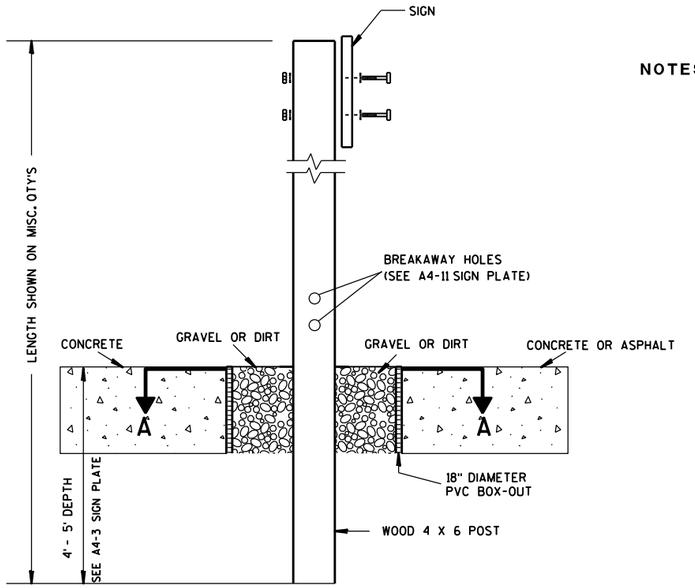
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

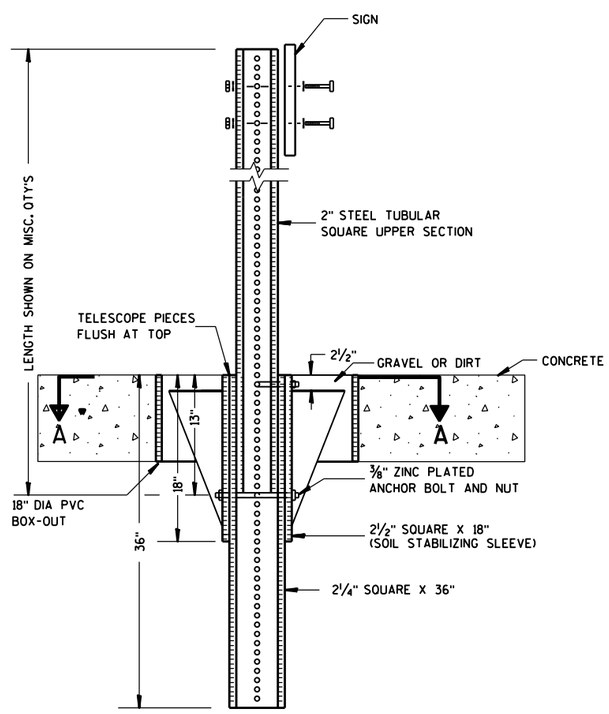
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 35	E



ELEVATION VIEW

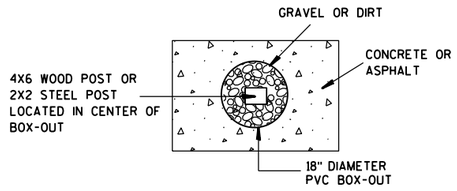
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

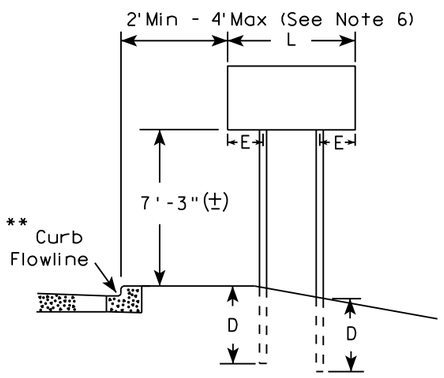
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

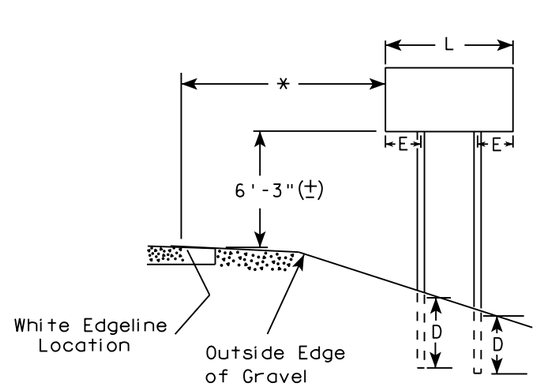
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

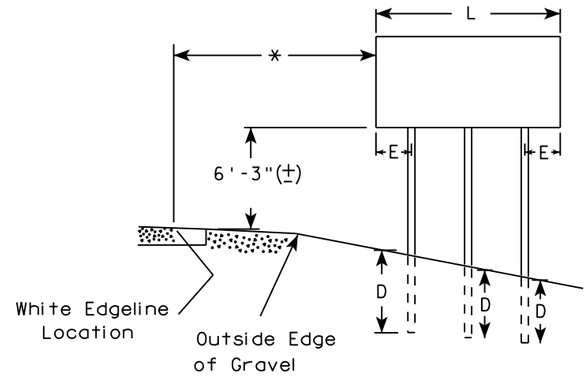
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

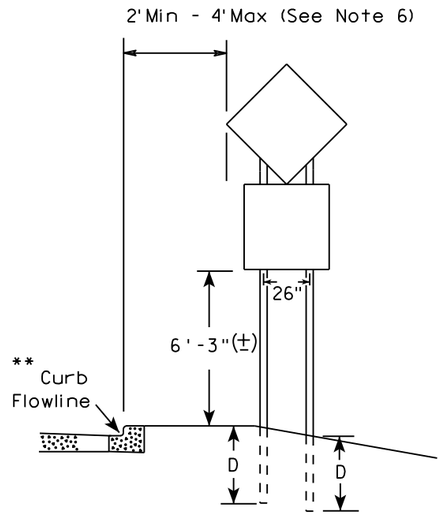
URBAN AREA



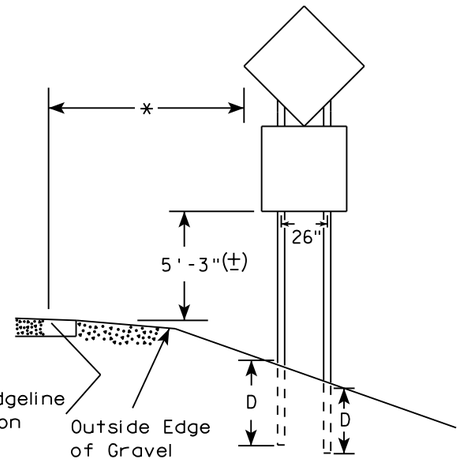
RURAL AREA (See Note 3)







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'

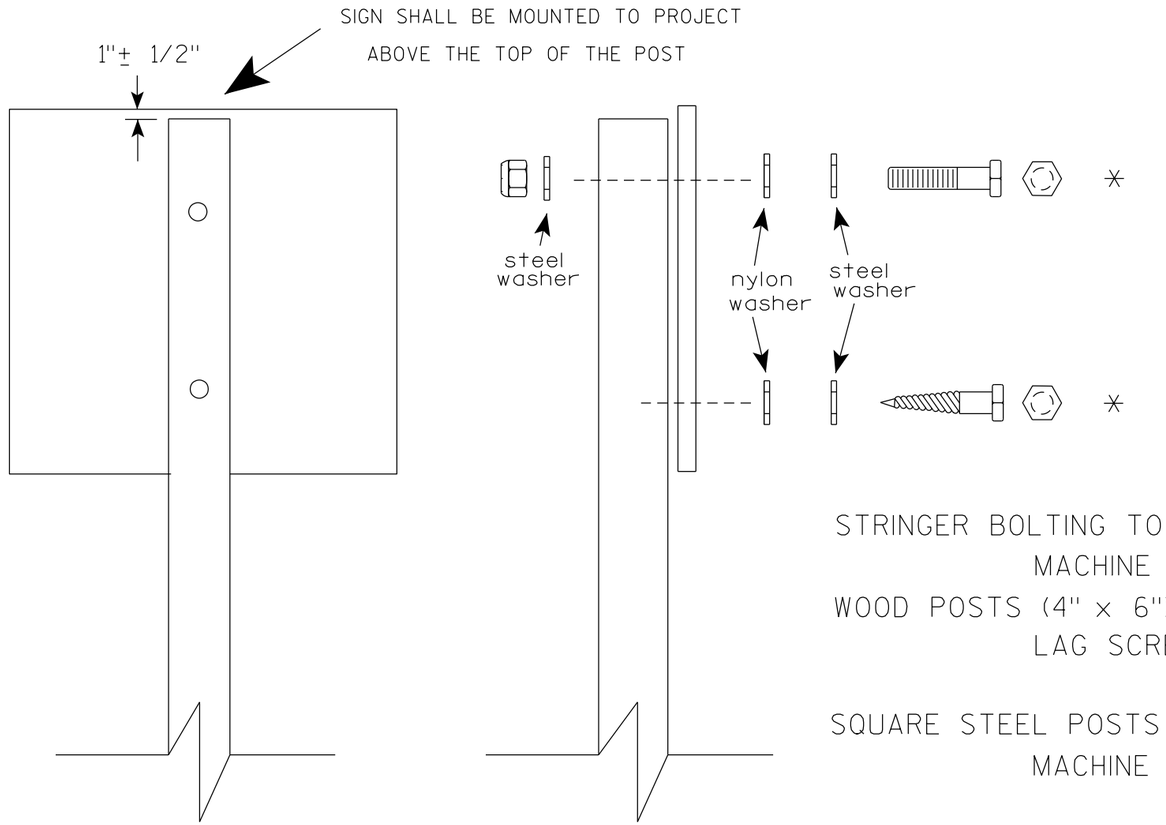
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 37	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

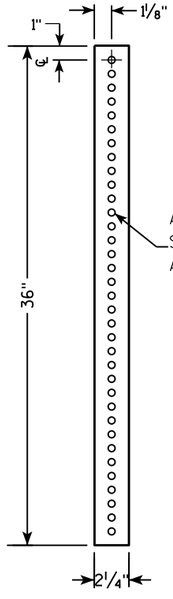
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

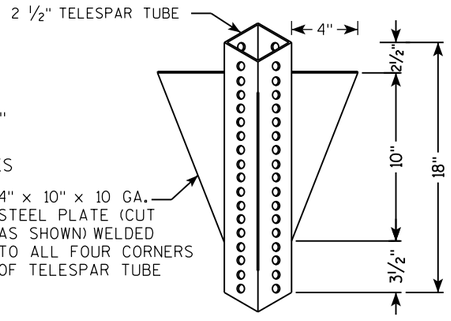
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

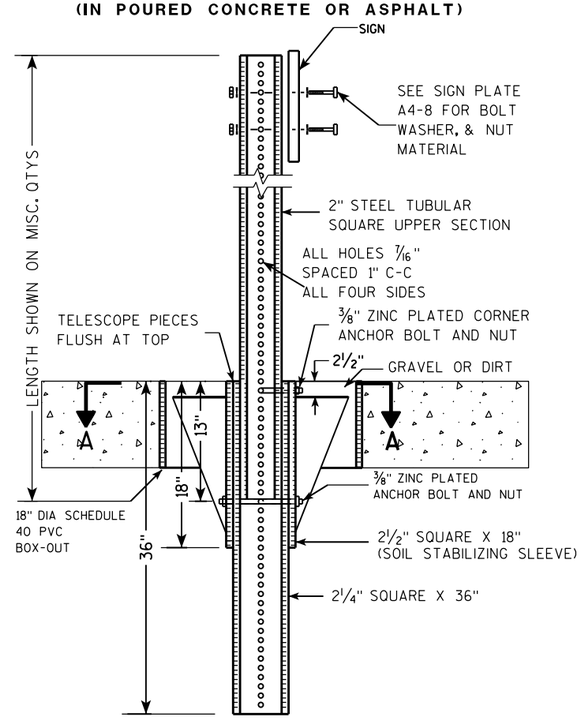
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



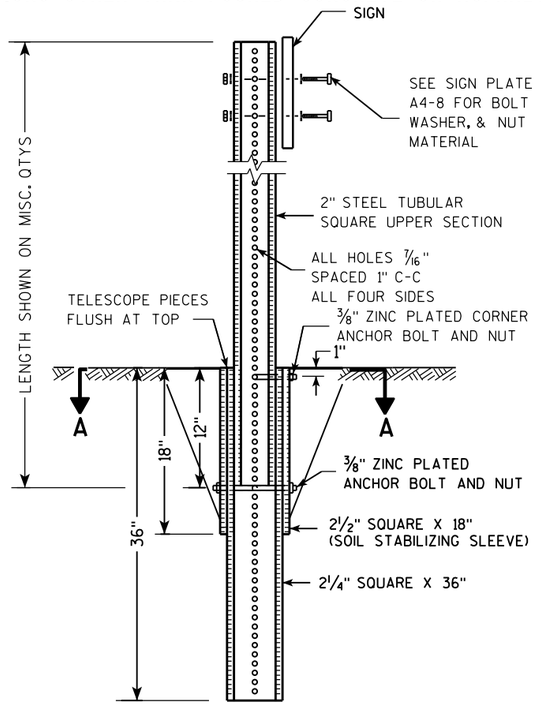
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

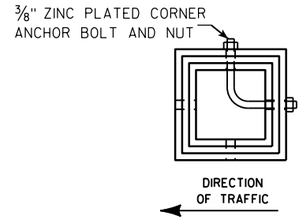


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

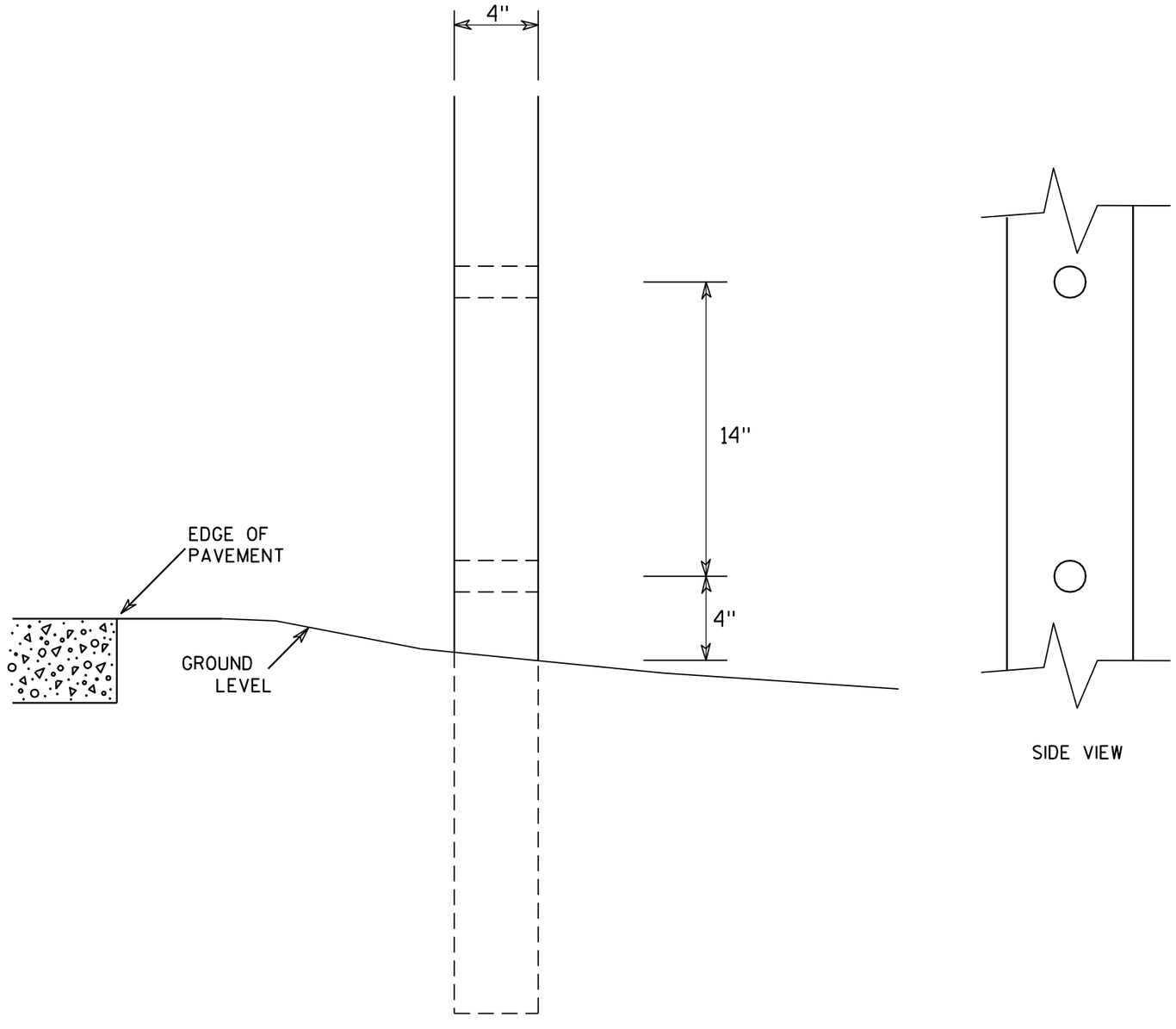
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 39 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

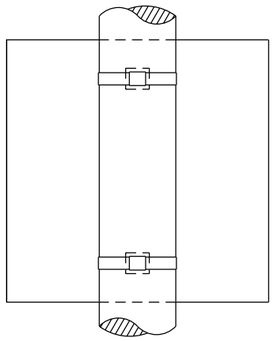
APPROVED Chester J Spang
for State Traffic Engineer

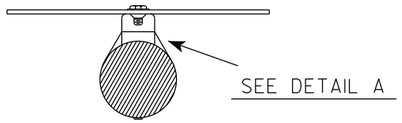
DATE 3/27/97 PLATE NO. A4-11.2

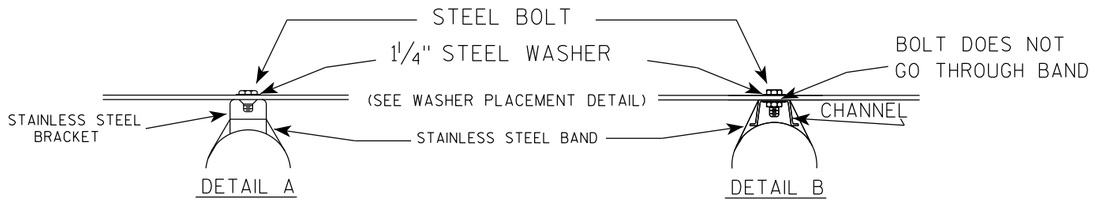
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 40	E

BANDING

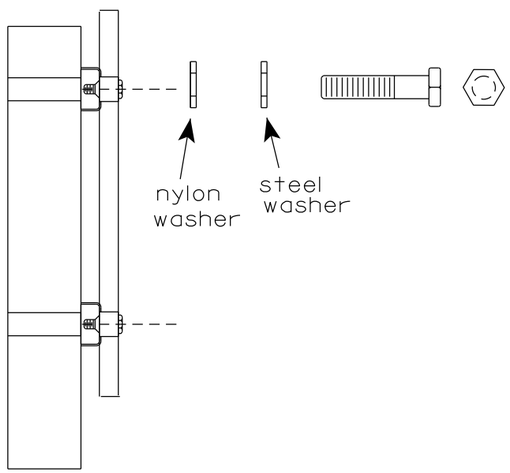
SINGLE SIGN







WASHER PLACEMENT

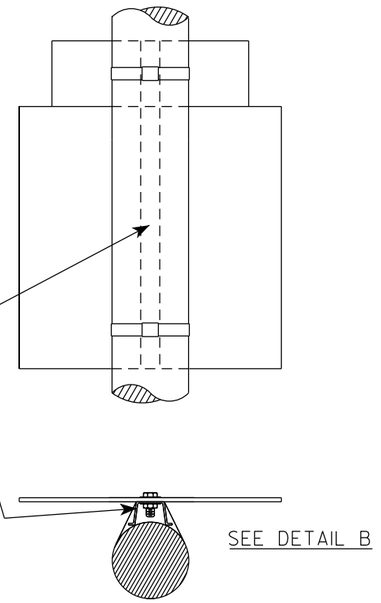


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
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



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

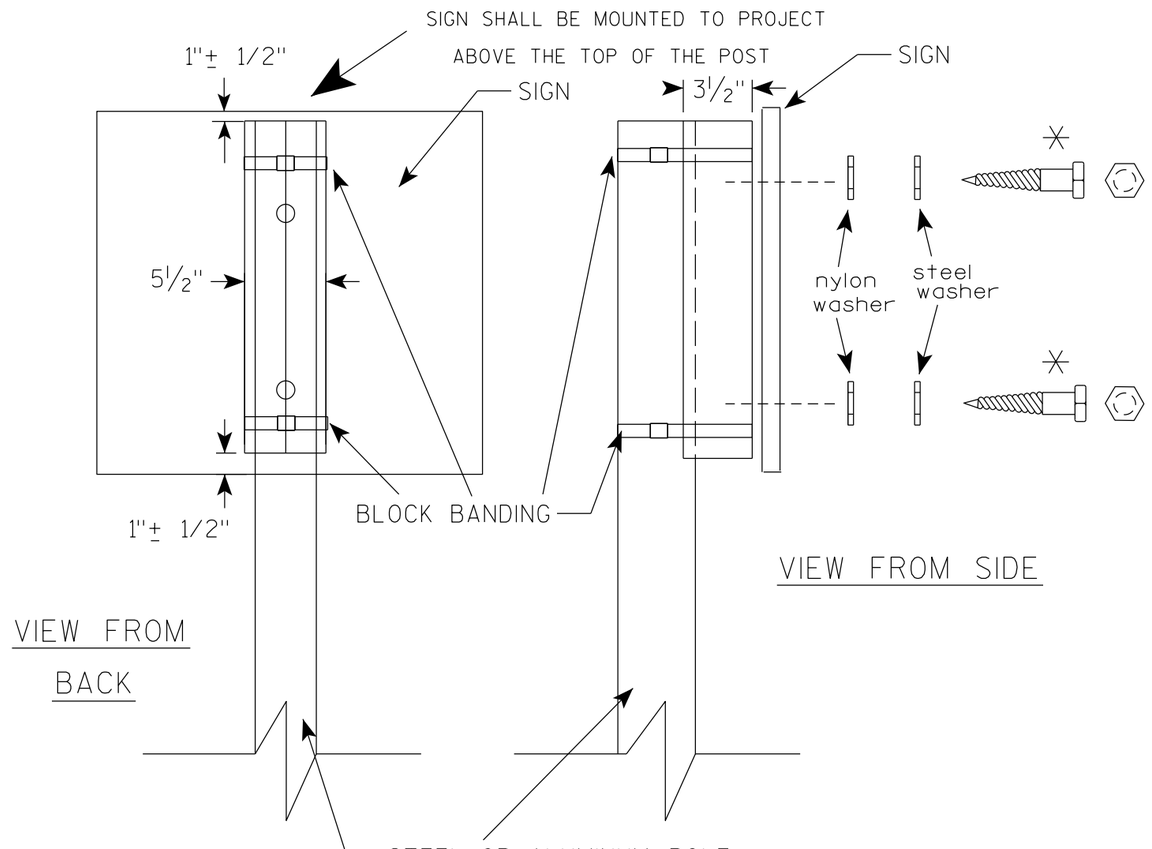
DATE 6/10/19 PLATE NO. A5-9.4

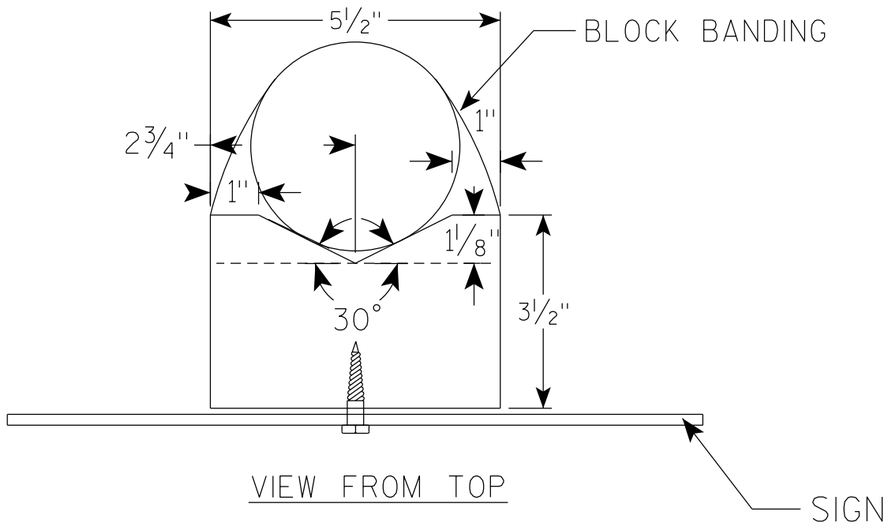
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 41	E

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)

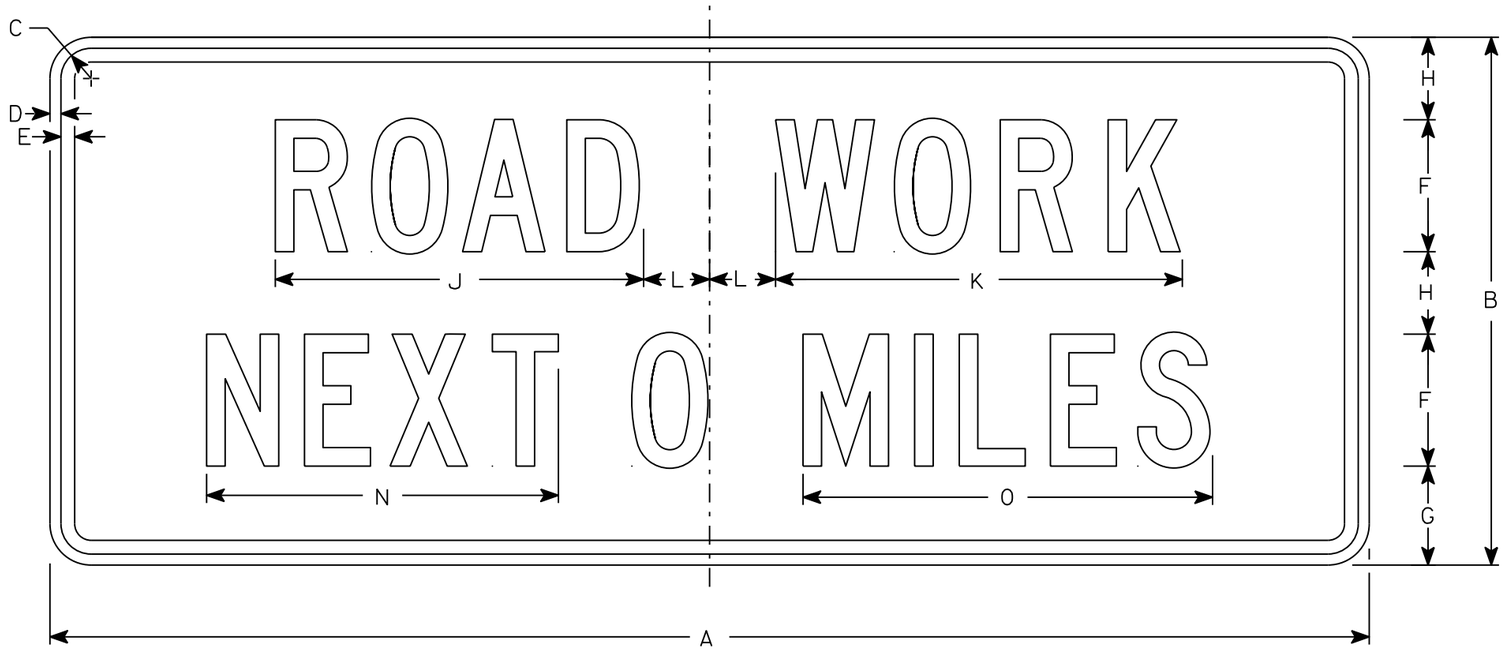
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 42 E



G20-1

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.
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 3/4	18 1/2	3		16	18 5/8												10
3																											
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10
5																											

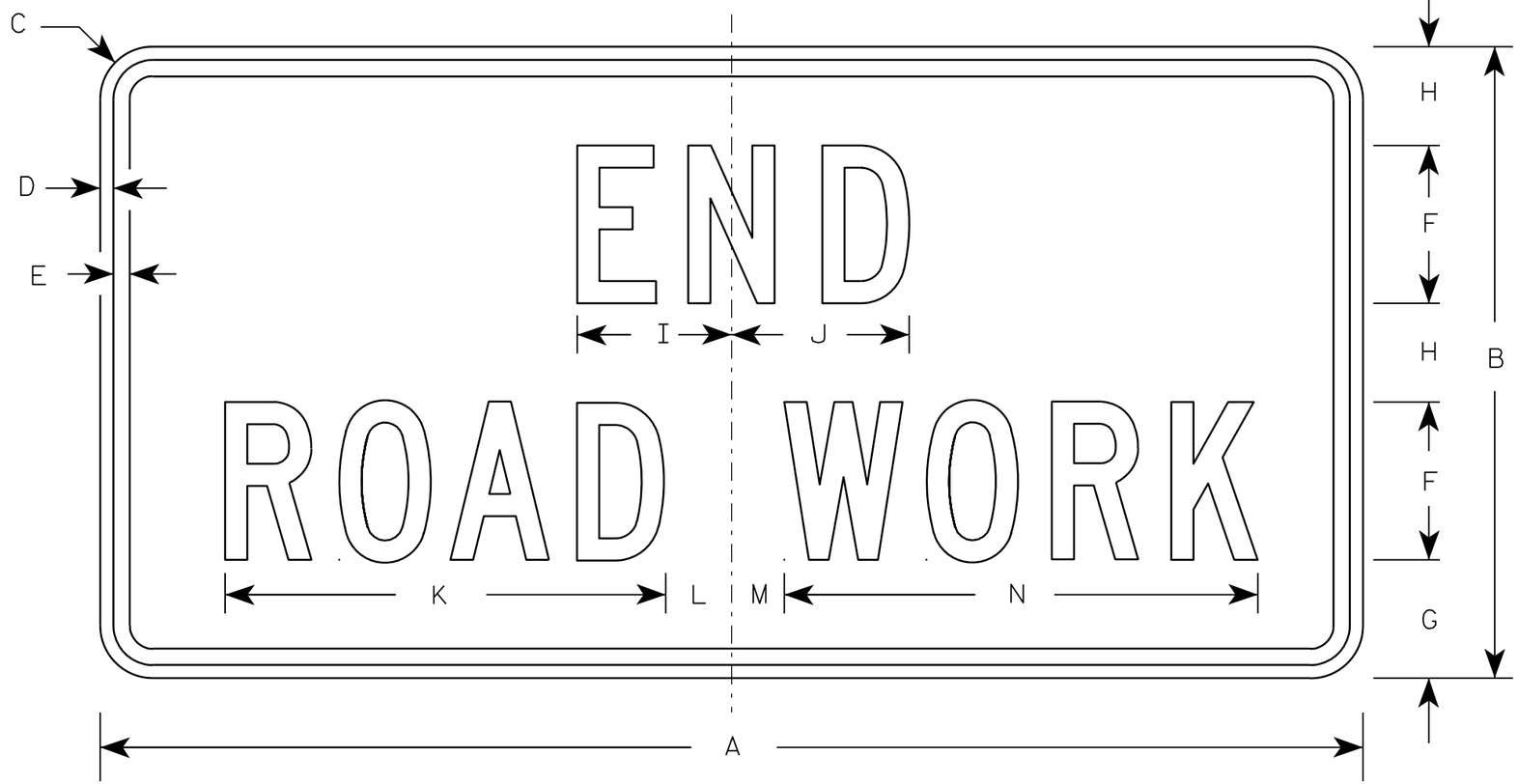
STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 43 | 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

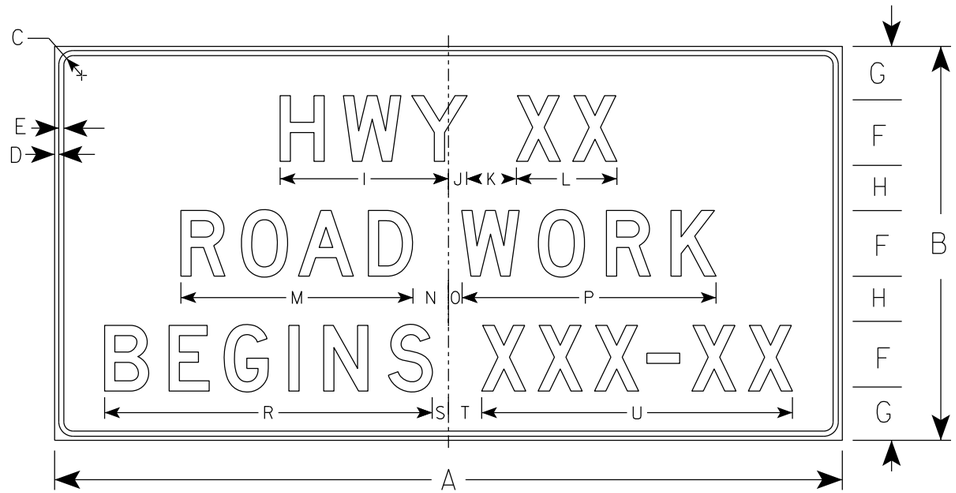
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 44	E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/4	3 1/2	1 1/2	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	4 3/8	1 5/8	31		39 1/4	2	4	37 7/8						32.0
5																											

STANDARD SIGN
G20-57

WISCONSIN DEPT OF TRANSPORTATION

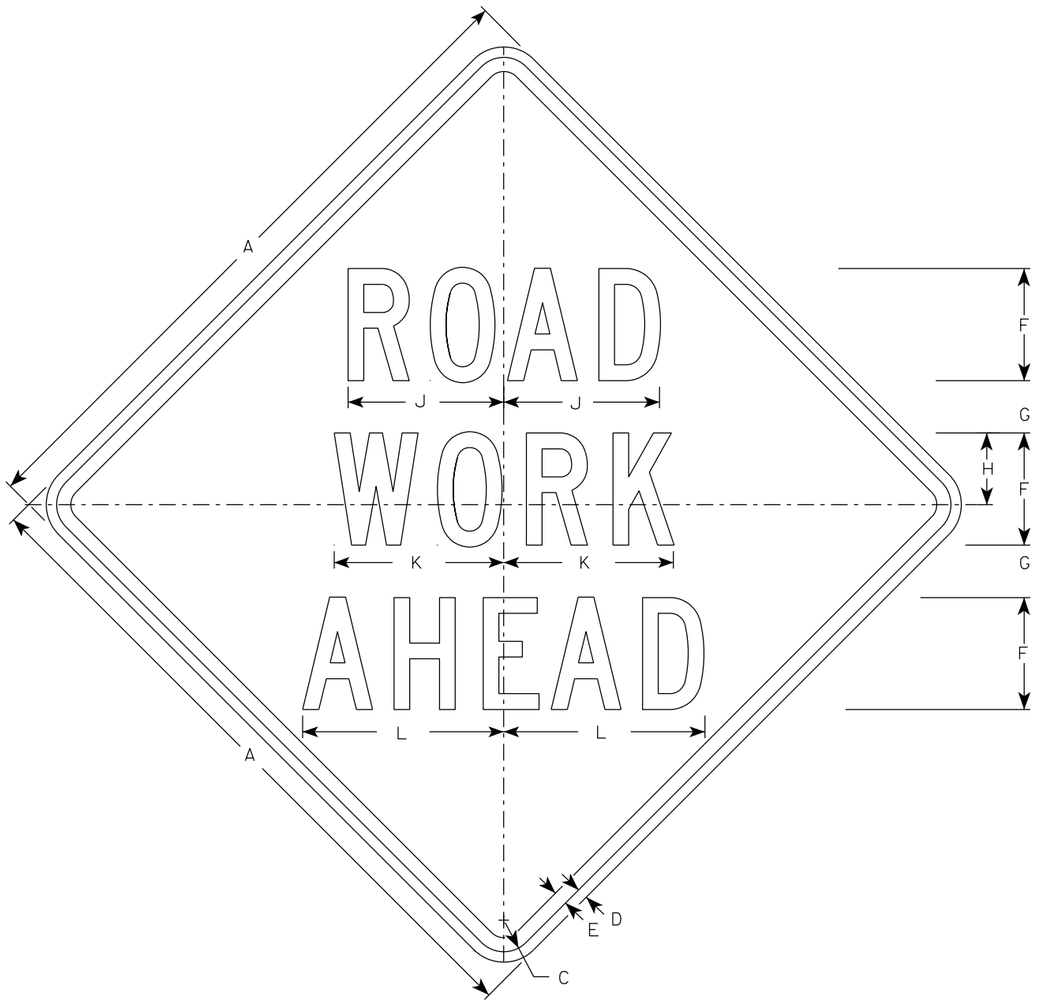
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57.3

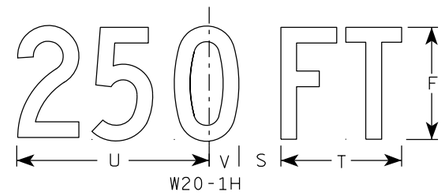
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 45	E

NOTES

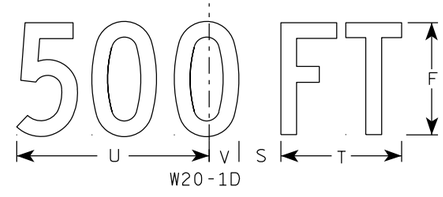
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A



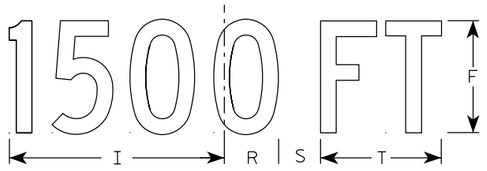
W20-1H



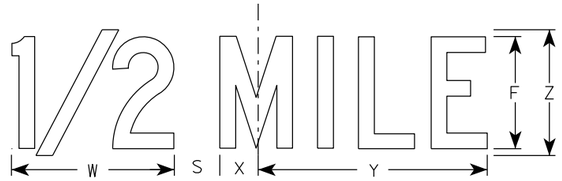
W20-1D



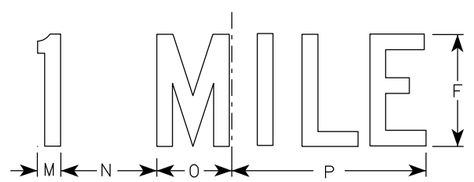
W20-1C



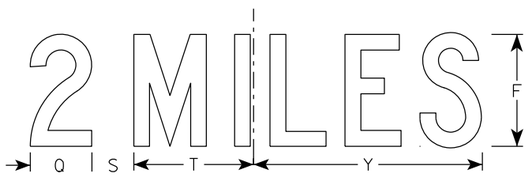
W20-1B



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

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

RHI

MARCH 2024

PROJECT ID: **1175-19-72**

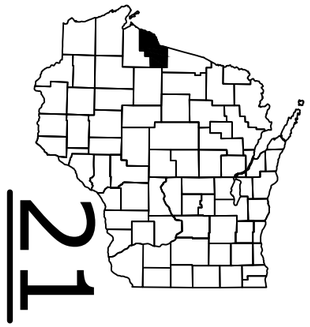
WITH: 1175-18-74 & 1175-18-75

COUNTY: **IRON**

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 = 124



N

DESIGN DESIGNATION

A.A.D.T.	2024	=	4540
A.A.D.T.	2044	=	5170
D.H.V.		=	XX.X
D.D.		=	XX/XX
T.		=	14.4%
DESIGN SPEED		=	55 MPH
ESALS		=	1,340,000

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'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1175-19-72	WISC 2024290	1

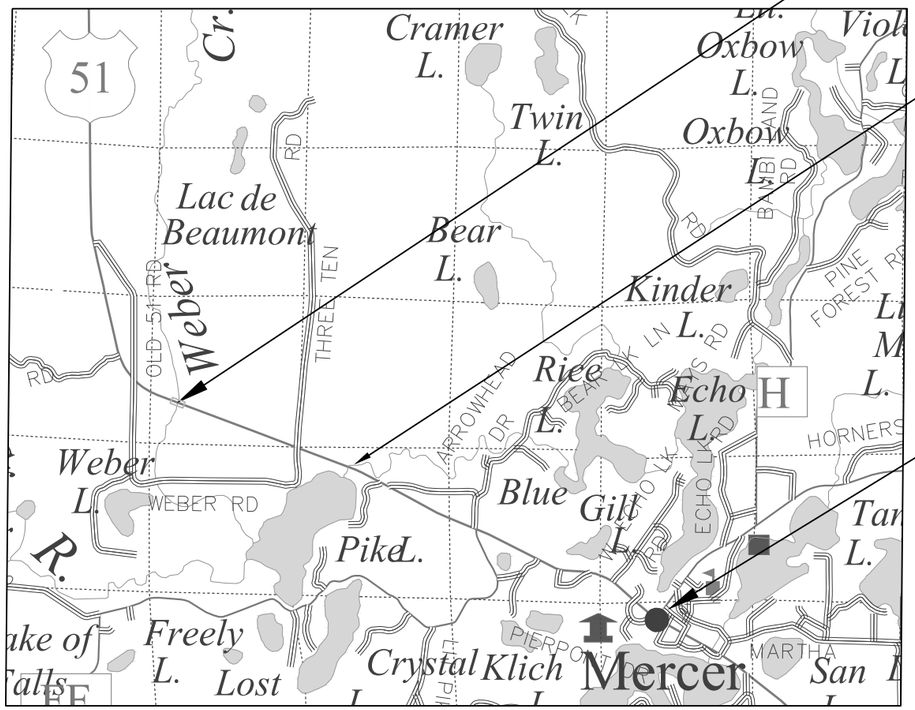
MANITOWISH - HURLEY

CTH J TO WEBER CREEK BRIDGE

USH 51

IRON COUNTY

STATE PROJECT NUMBER
1175-19-72



END PROJECT
STA 285+77

NET EXCEPTION TO CL LENGTH
STA 220+50 - STA 223+41
B-26-16

BEGIN PROJECT
STA 105+50
X = 772,531.167
Y = 267,852.541

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 3.49 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), IRON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SURVEYOR
Designer	KYLE GETCHELL
Project Manager	NICHOLAS VOS
Regional Examiner	FRED SCHUNKE
Regional Supervisor	DANIEL ERVA

APPROVED FOR THE DEPARTMENT

DATE: 1/17/24 (Signature)

E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\010101-TI.DWG PLOT DATE : 1/17/2024 3:30 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME :

GENERAL NOTES

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

2. THE LOCATION OF EXISTING & PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLAN.

CONTACTS:

BRIGHTSPEED OF NORTHERN WI, LLC - COMMUNICATION LINE
1905 WARD AVE. S
LA CROSSE WI 54601
ROB LUICK
(980) 376-1572
relocations@brightspeed.com

WE ENERGIES - GAS/PETROLEUM
500 S 116th STREET
WEST ALLIS, WI 53214
WE ENERGIES UTILITY COORDINATOR
(414) 944-5738
We-Utility-relocations@we-energies.com

XCELL ENERGY - ELECTRICITY-TRANSMISSION
1414 W HAMILTON AVE
DAWN SCHULTZ
EAU CLAIRE, WI 54702-0008
(715) 737-2482
dawn.schultz@xcelenergy.com

XCELL ENERGY - ELECTRICITY
1414 W HAMILTON AVE
DAWN SCHULTZ
EAU CLAIRE, WI 54702-0008
(715) 737-2482
dawn.schultz@xcelenergy.com

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP- TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE: TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = X.XXX ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = X.XXX ACRES

ORDER OF DETAIL SHEETS:

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL

AS-BUILT PLANS USED:

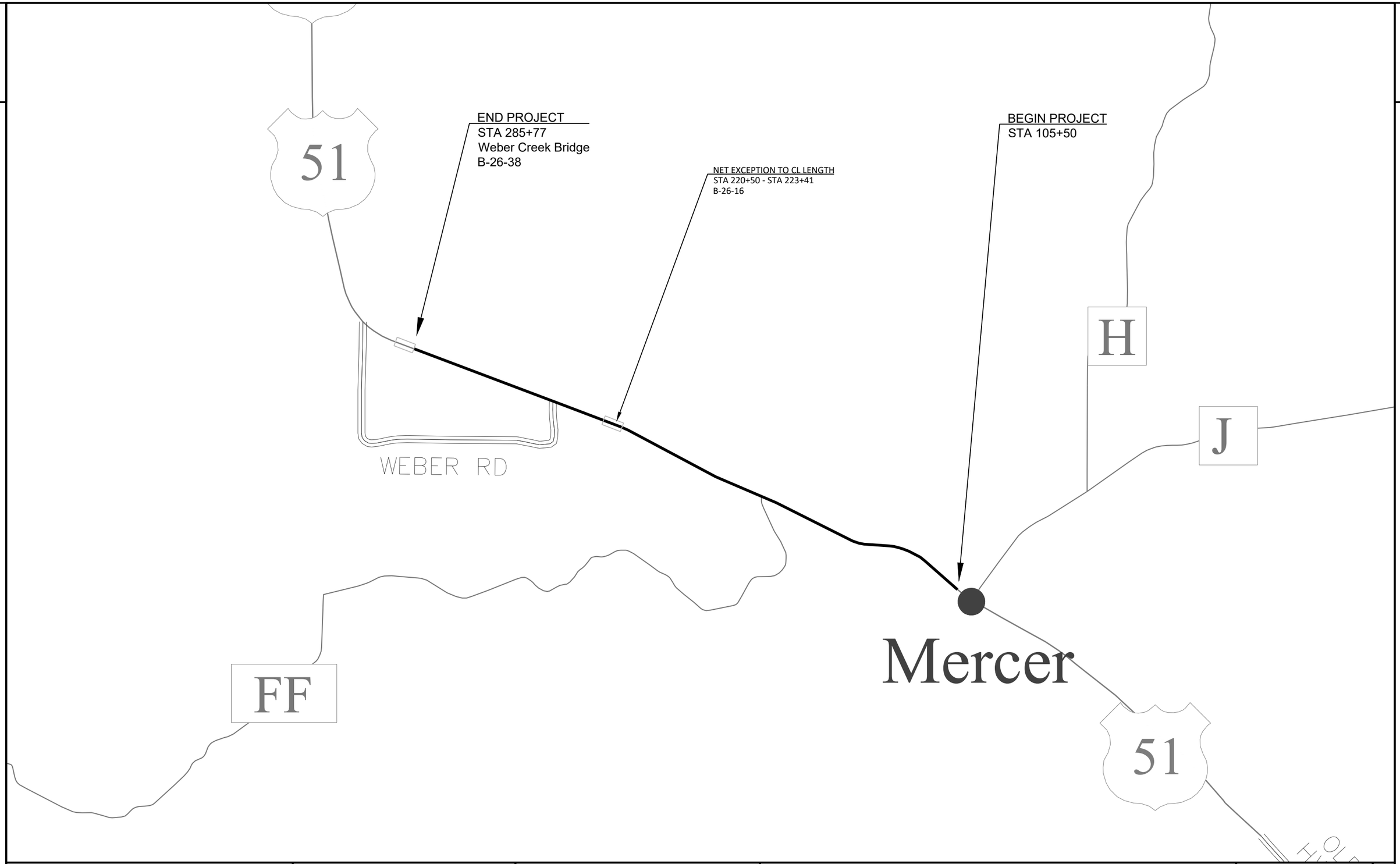
1172-08-74 (1981)
1175-16-70 (2006)
1175-18-70 (2013)
1175-19-70 (2017)

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

DNR CONTACT:

Jon Simonsen
107 Sutliff Ave
Rhinelander, Wi 54501
jonathon.simonsen@wisconsin.gov
715-367-1936

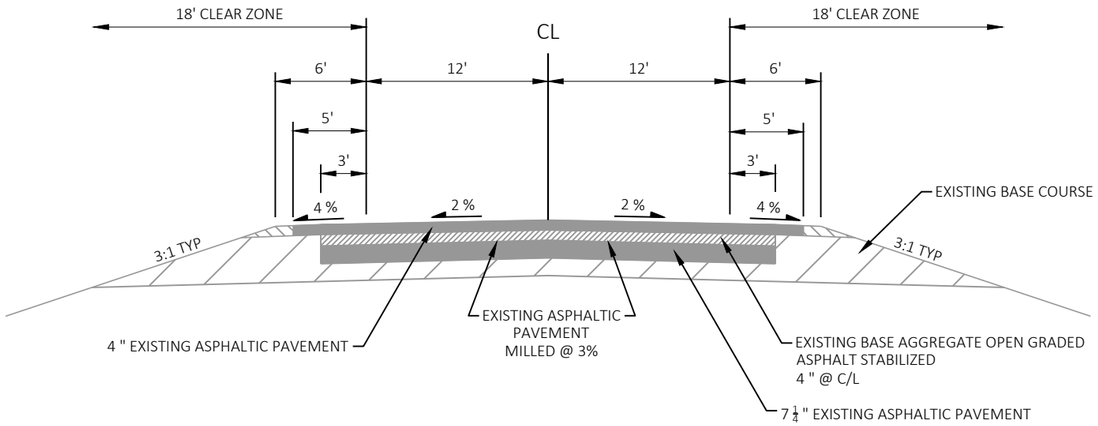
2



PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	PROJECT OVERVIEW	SHEET 3	E

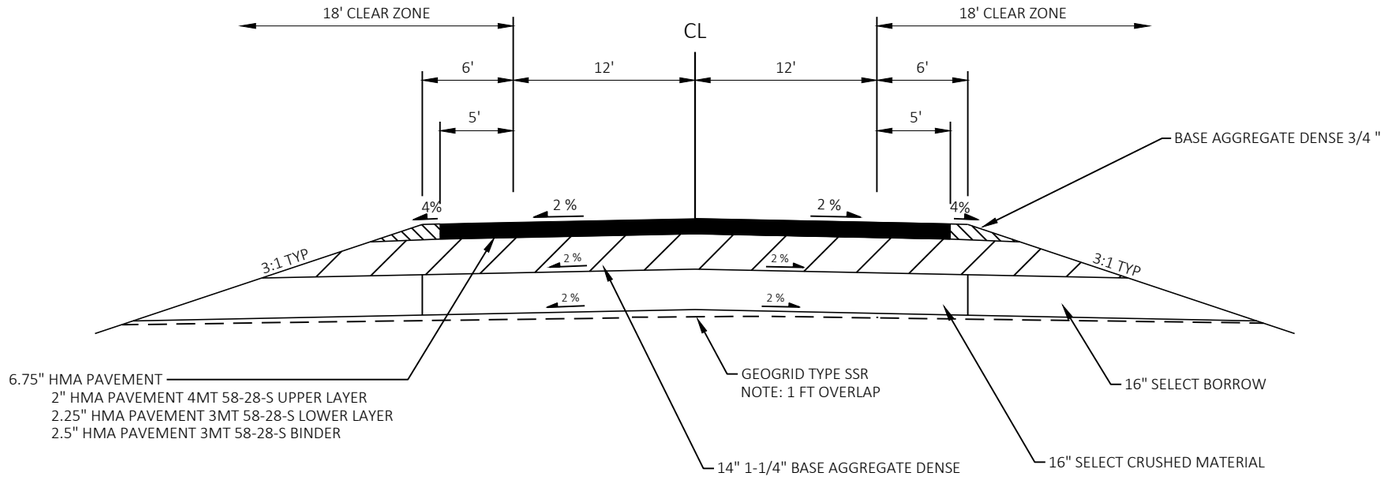
FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 01

PLOT DATE : 1/17/2024 3:30 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:0.5 MI



EXISTING TYPICAL SECTION

STA 105+84 - 111+00

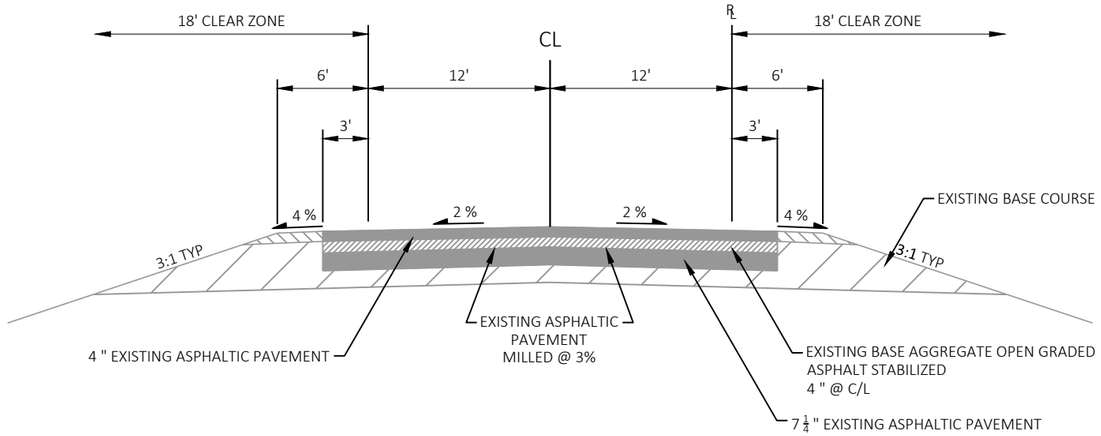


NOTE: SEE RELIEF TRENCH CONSTRUCTION DETAIL FOR ADDITIONAL INFO

FINISHED TYPICAL SECTION

STA 105+84 - 111+00

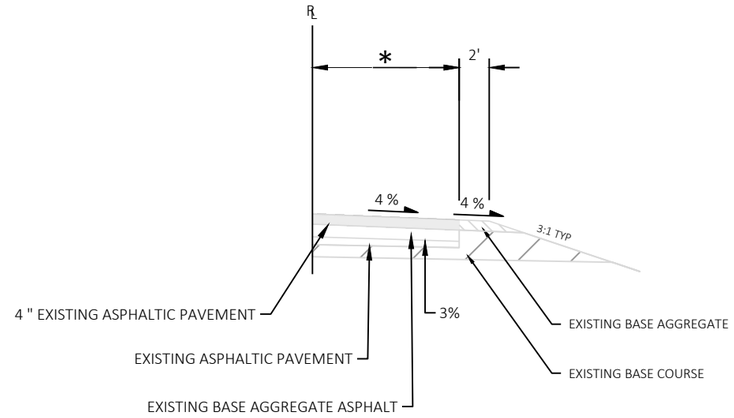
PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	TYPICAL SECTION	SHEET 4	E



EXISTING TYPICAL SECTION

STA 111+00 - 222+49
STA 223+41 - 263+25
STA 264+75 - 285+77

EXCEPTION TO NET C/L LENGTH
B-26-016
STA 222+49 TO 223+41

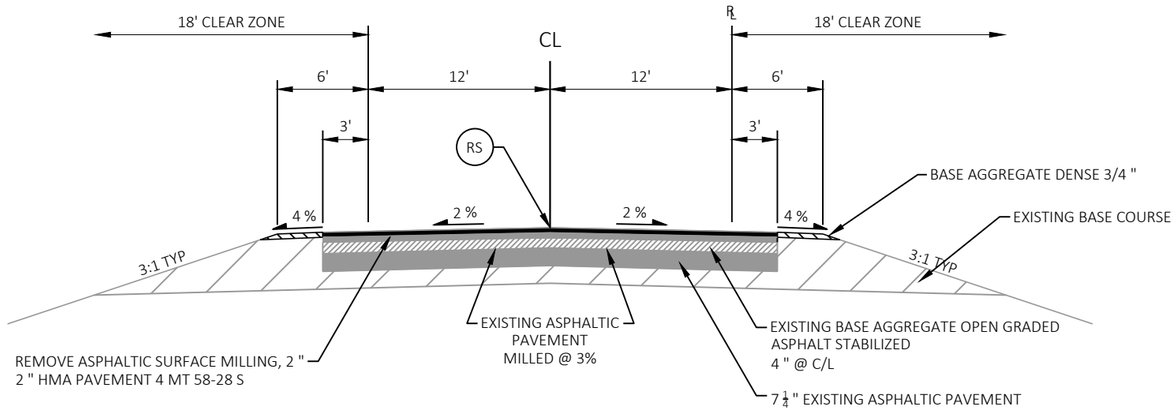


EXISTING TYPICAL SECTION

STA 170+00 - 176+30 RT
STA 171+70 - 175+50 LT

KEY

* VARIES 0' - 12' TURN LANE

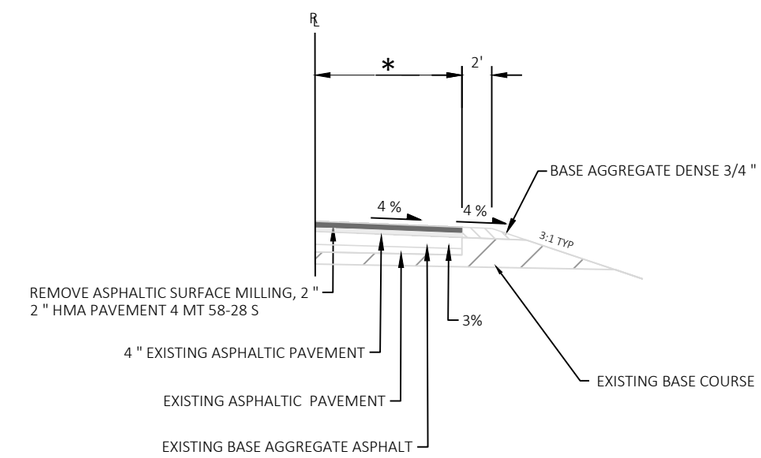


FINISHED TYPICAL SECTION

STA 111+00 - 222+49
STA 223+41 - 263+25
STA 264+75 - 285+77

RS ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL

EXCEPTION TO NET C/L LENGTH
B-26-016
STA 222+49 TO 223+41



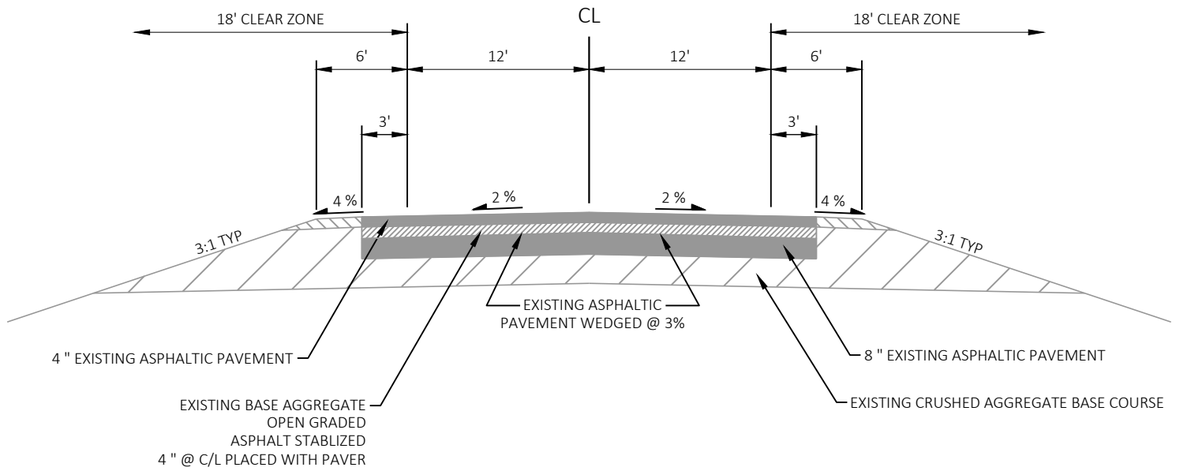
FINISHED TYPICAL SECTION

STA 170+00 - 176+30 RT
STA 171+70 - 175+50 LT

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	TYPICAL SECTION	SHEET 5	E

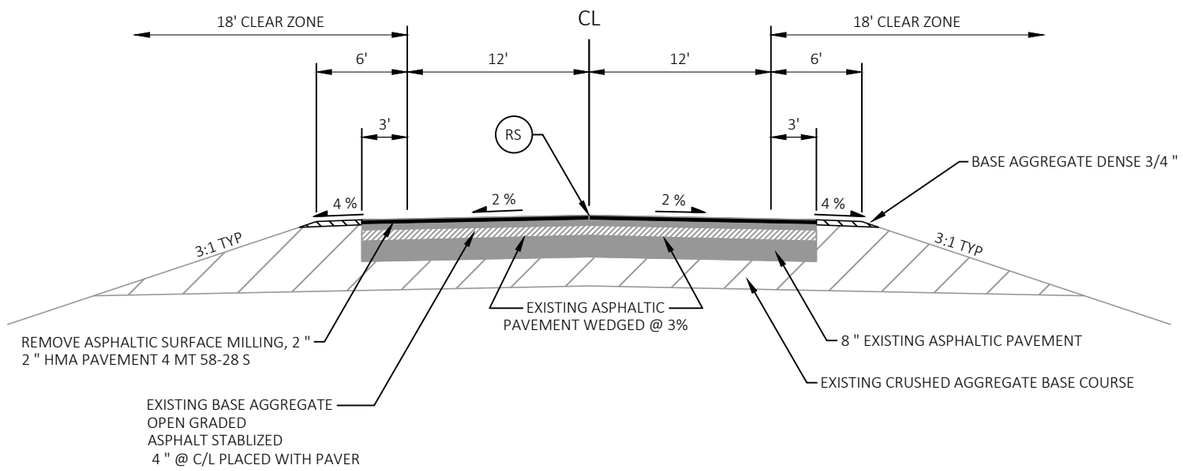
FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 02-10ft
PLOT DATE : 1/17/2024 3:31 PM
PLOT BY : GETCHELL, KYLE JAMES
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



EXISTING TYPICAL SECTION

STA 263+25 - 264+75



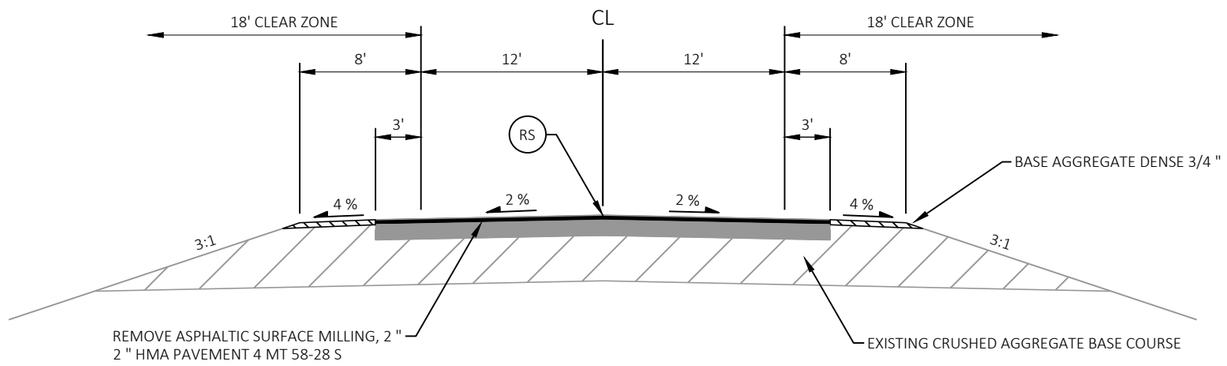
FINISHED TYPICAL SECTION

STA 263+25 - 264+75

RS ASPHALTIC CENTERLINE RUMBLE STRIPS
2-LANE RURAL

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	TYPICAL SECTION	SHEET 6	E

2



RS ASPHALTIC CENTERLINE RUMBLE STRIPS
2-LANE RURAL

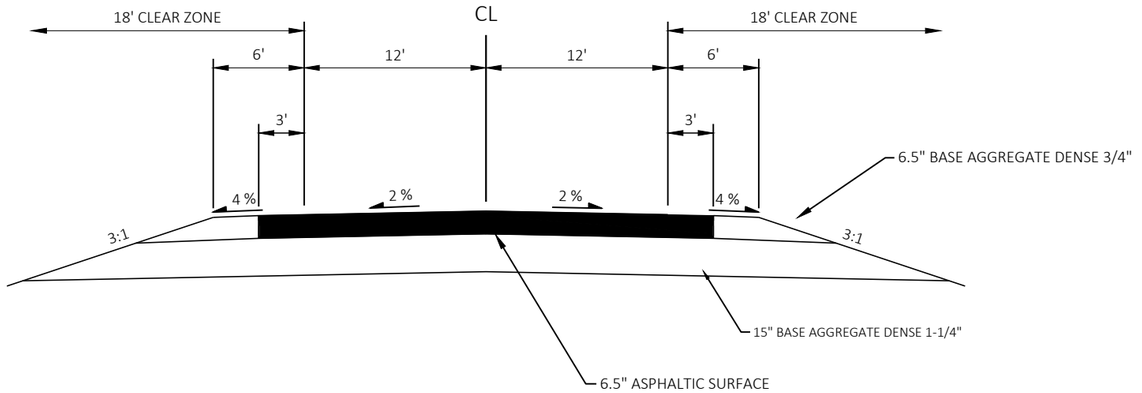
FINISHED TYPICAL SECTION

STA 170+00 - 175+00
STA 210+40 - 213+50
STA 221+00 - 224+15

EXCEPTION TO NET C/L LENGTH
B-26-016
STA 222+49 TO 223+41

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	TYPICAL SECTION	SHEET 7	E

2

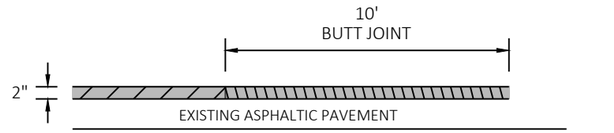


FINISHED TYPICAL SECTION

CULVERT REPLACEMENTS

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	TYPICAL SECTION	SHEET 8	E

2



HMA PAVEMENT

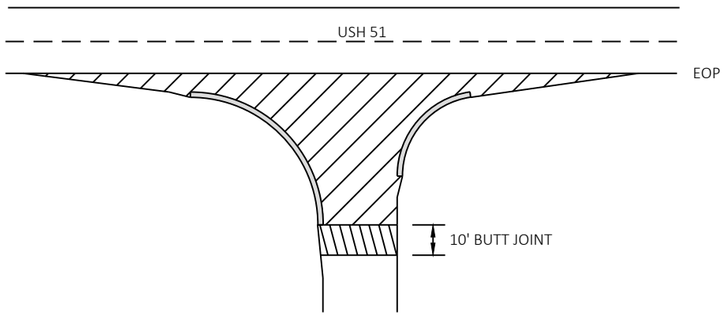
REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

BUTT JOINTS

STA 105+50 - STA 105+60
STA 220+40 - STA 220+50
STA 223+31 - STA 223+41
STA 283+67 - STA 285+77

2



REMOVING ASPHALTIC SURFACE MILLING

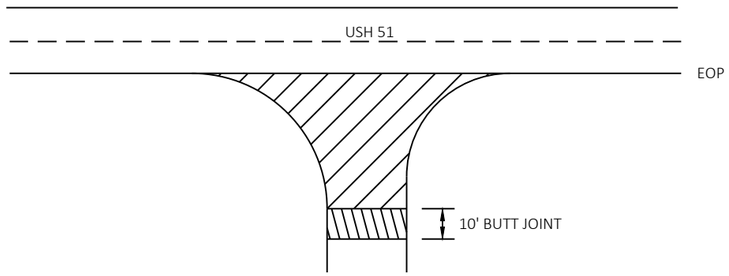
REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE BUTT JOINT IS NOT REQUIRED

SIDE ROADS

WITH CURB AND GUTTER

STATE HOUSE CIRCLE
LAKEVIEW RD
PIERPONT DR
COUNTY HIGHWAY FF
ARROW DR



REMOVING ASPHALTIC SURFACE MILLING

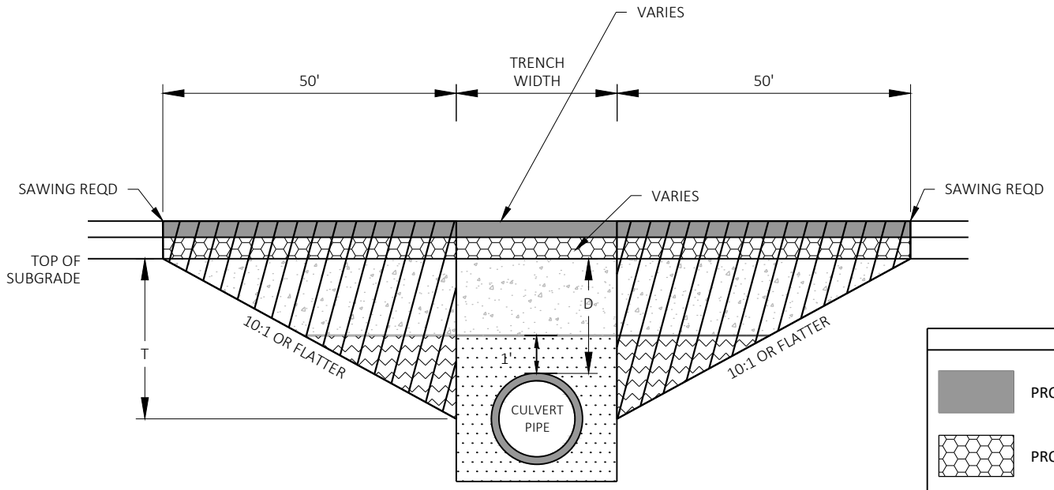
REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE BUTT JOINT IS NOT REQUIRED

SIDE ROADS

WITHOUT CURB AND GUTTER

WEST ECHO LAKE RD
KLICK DR
POPLAR DR
GADE RD
WEST TURTLE RAPIDS LN
THREE TEN RD
ROBIN DR

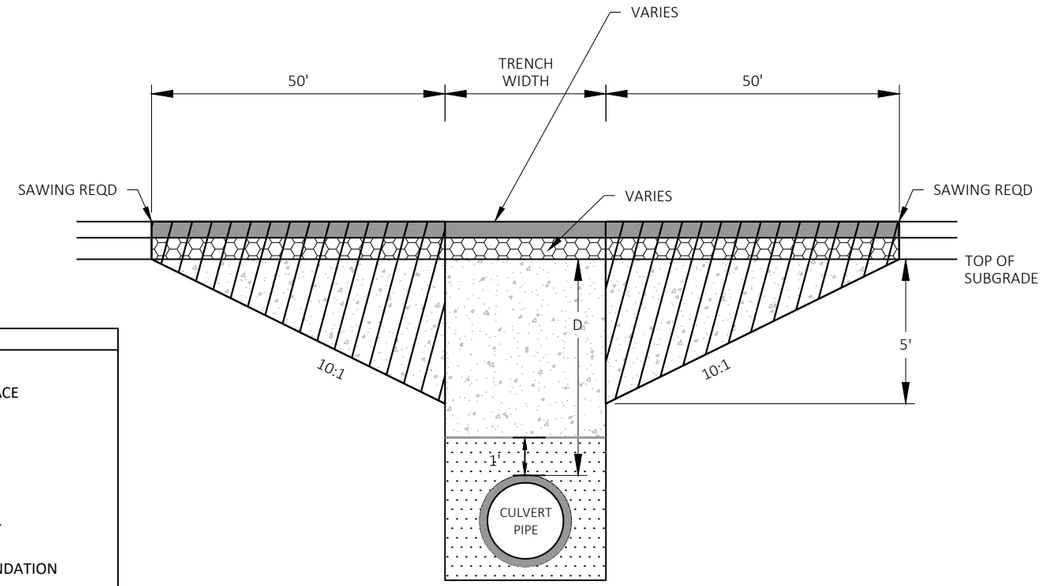


DEPTH D < 6 FT

TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5 FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.

KEY

- PROPOSED SURFACE
- PROPOSED BASE
- TRENCH BACKFILL
- TRENCH OR FOUNDATION BACKFILL
- FOUNDATION BACKFILL
- TRANSITION CUT



DEPTH D ≥ 6 FT

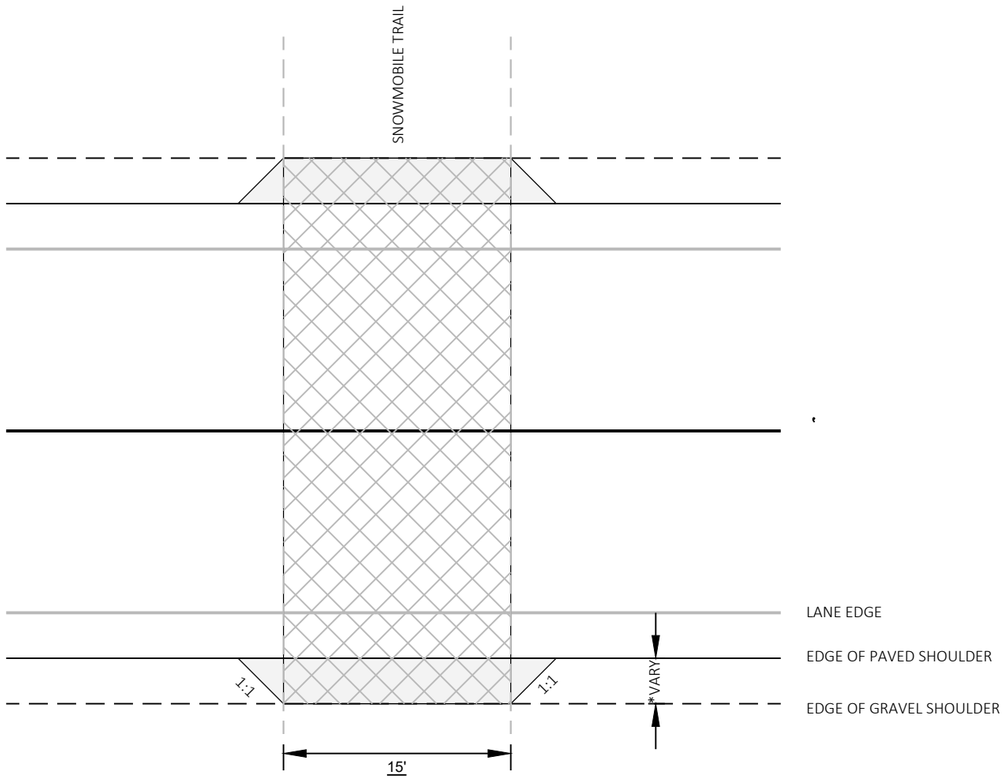
NOTES

TRANSITION CUT IS PAID AS EXCAVATION COMMON.
TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.
BACKFILL THE TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520.
PERFORM CULVERT PIPE INSTALLATION BEFORE *MILLING AND PAVING* .
PLACE ASPHALTIC SURFACE AFTER CULVERT PIPE INSTALLATION AND BEFORE MAINLINE REMOVING SURFACE MILLING.

CULVERT PIPE TRANSITION

ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)	REMARKS
USH 51	110+89	5.3	24"	26051000672
USH 51	123+27	4.9	24"	26051000673
USH 51	133+88	4.1	24"	26051000674
USH 51	148+22	4.6	24"	26051000675
USH 51	151+75	3.4	24''	26051000676
USH 51	157+53	9.2	24"	26051000677
USH 51	186+04	10.5	24"	26051000678
USH 51	238+82	4.5	24"	26051000679
USH 51	253+05	4.7	24"	26051000680
USH 51	269+37	7.5	24''	26051000681

2



PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSING

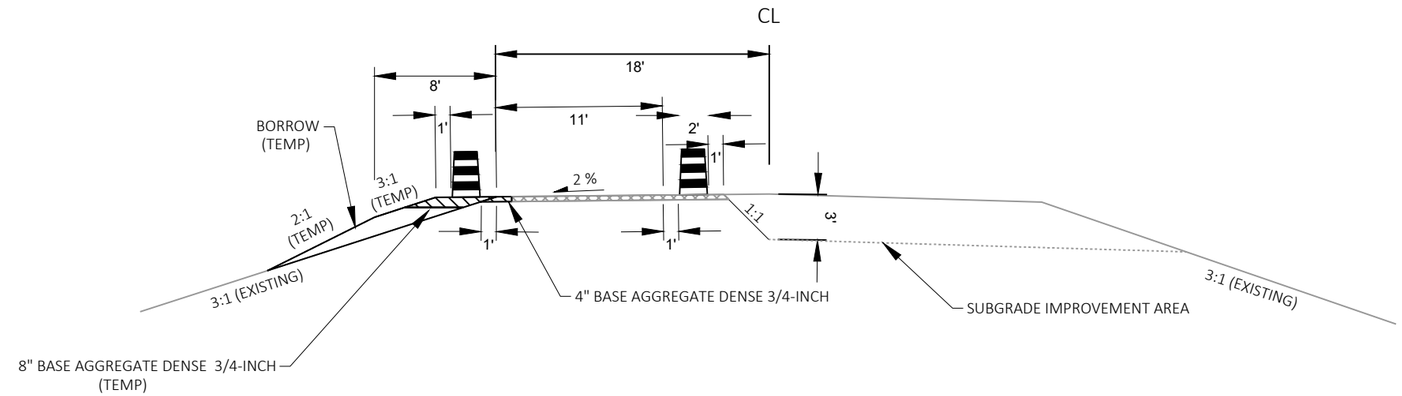
HMA PAVEMENT 4-INCHES

NOTE: PREPARATION FOR PAVEMENT WIDENING FALLS UNDER PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

SNOWMOBILE TRAIL CROSSING WITH FULL WIDTH SHOULDERS AND PROTECTIVE COATING

STA 173+00

2

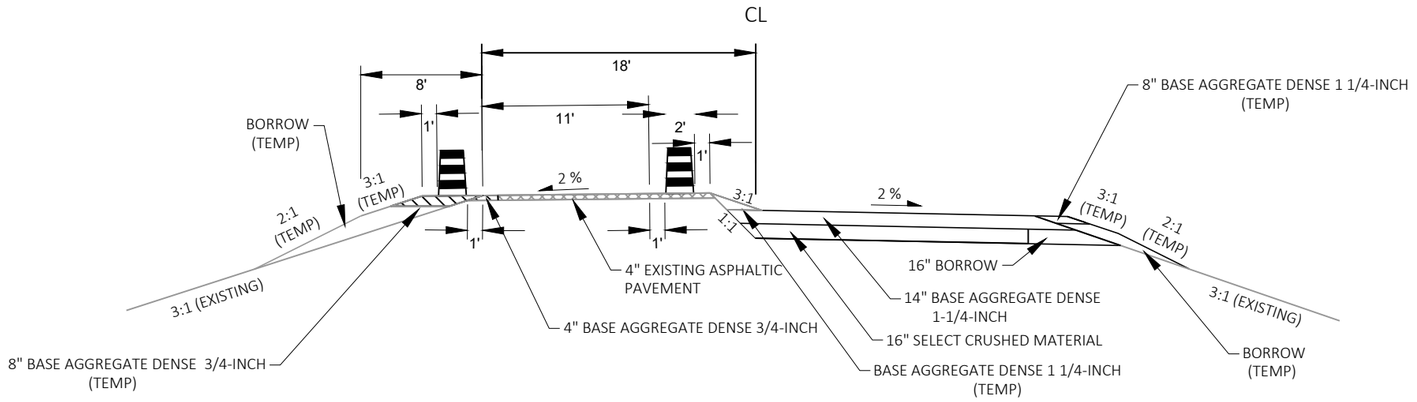


MARSH AREA LANE SHIFT DETAIL STAGE 1

STA 105+84 - STA 111+00

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	TRAFFIC CONTROL CROSS SECTIONS	SHEET 13	E

2

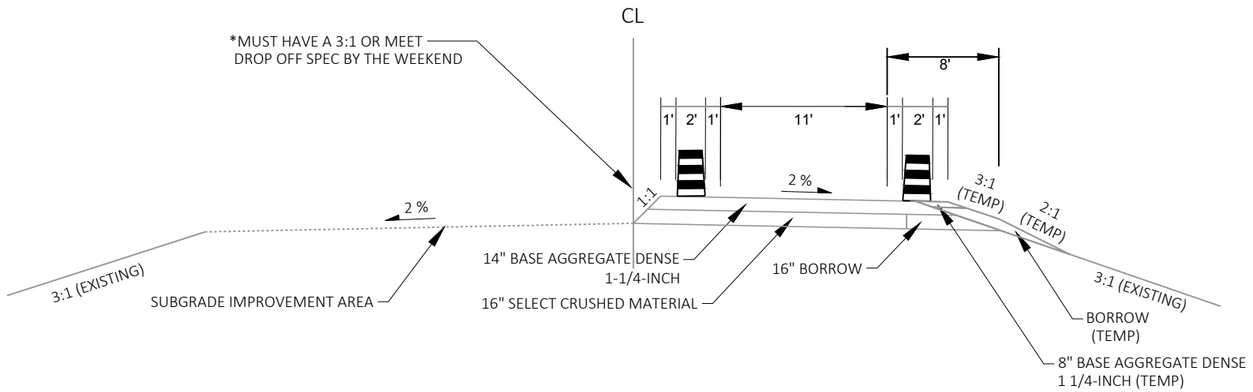


MARSH AREA LANE SHIFT DETAIL STAGE 1 WEEKEND STAGING

STA 105+84 - STA 111+00

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	TRAFFIC CONTROL CROSS SECTIONS	SHEET 14	E

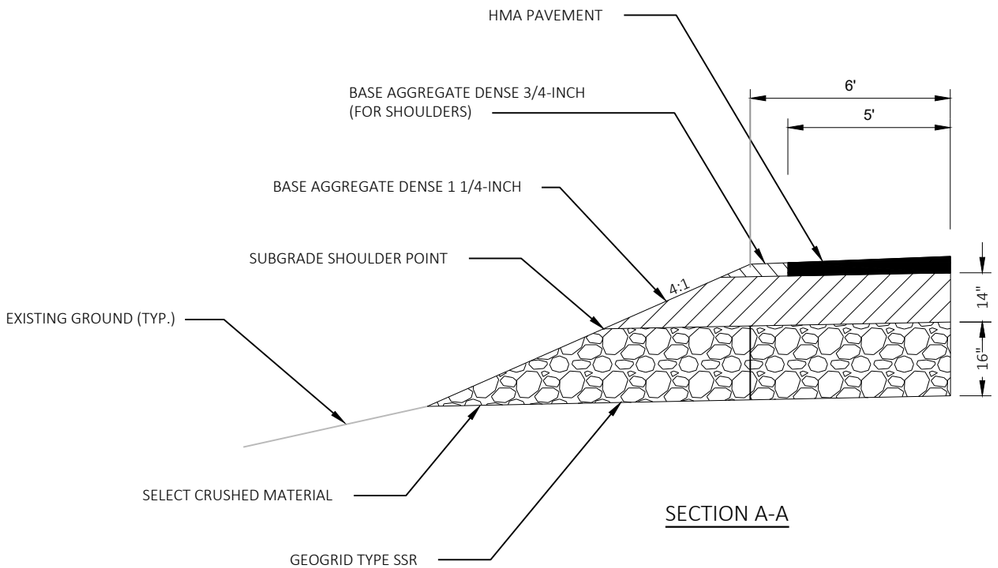
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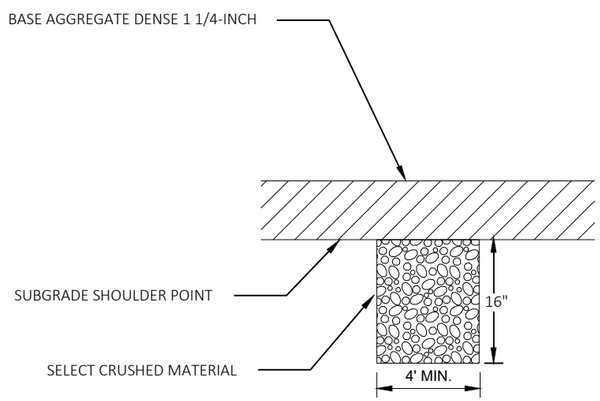
MARSH AREA LANE SHIFT DETAIL STAGE 2

STA 105+84 - STA 111+00

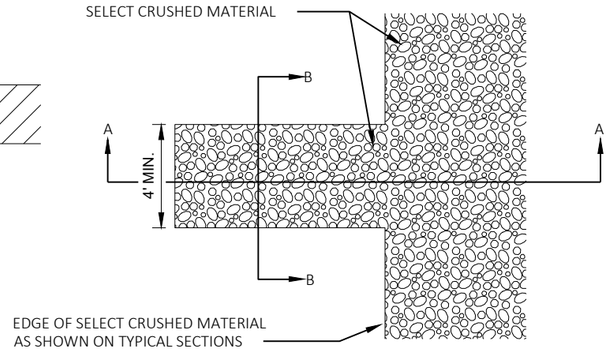
2



SECTION A-A



SECTION B-B



NOTES:
CONSTRUCT RELIEF TRENCHES AT LEAST EVERY 250', AT EACH SAG VERTICAL CURVE IN THE PROFILE AND AT LEAST ONE PER REPAIR LOCATION.

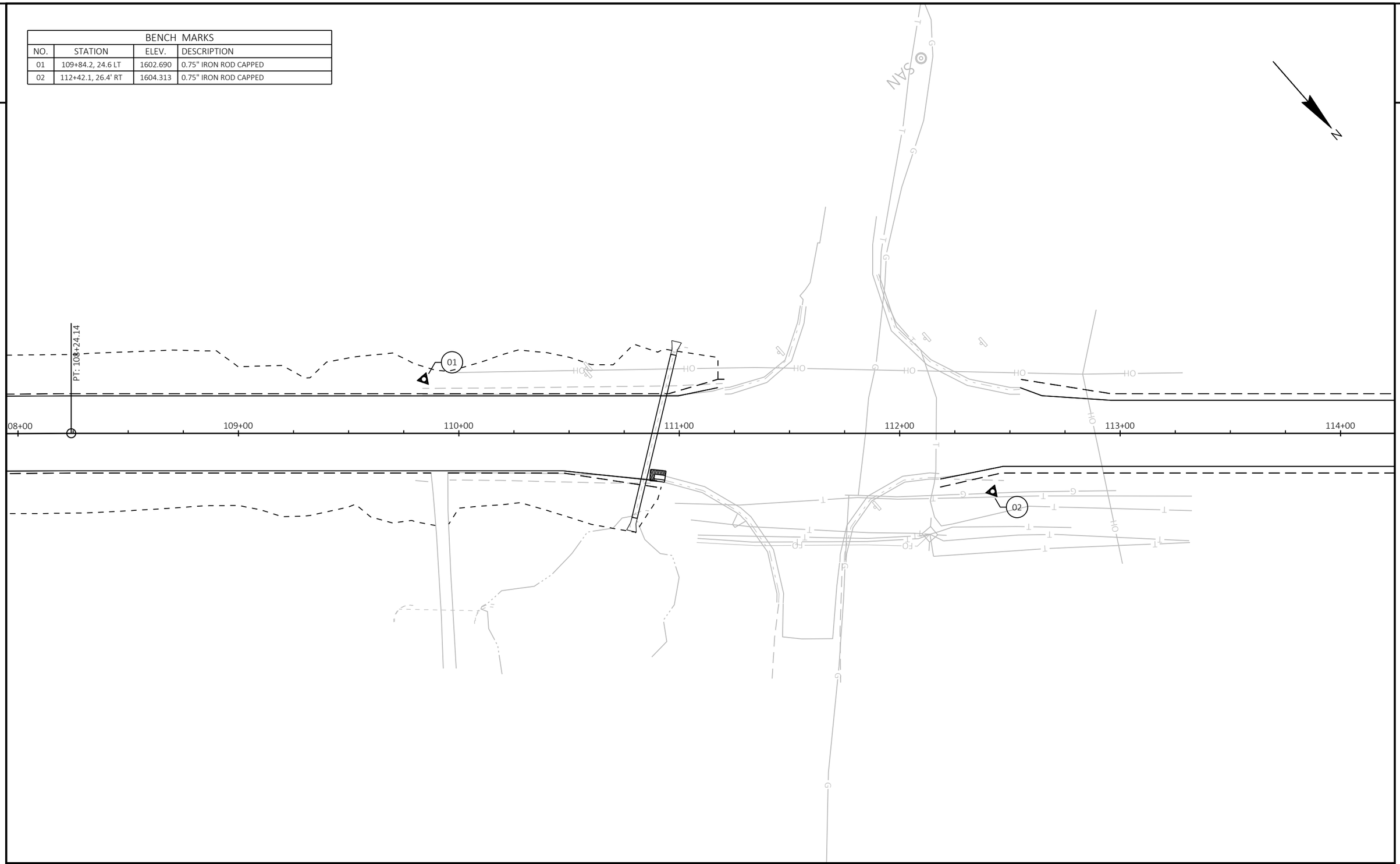
(LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER)

RELIEF TRENCH DETAIL

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	RELIEF TRENCH CONSTRUCTION DETAIL	SHEET 16	E

2

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
01	109+84.2, 24.6 LT	1602.690	0.75" IRON ROD CAPPED
02	112+42.1, 26.4' RT	1604.313	0.75" IRON ROD CAPPED



2

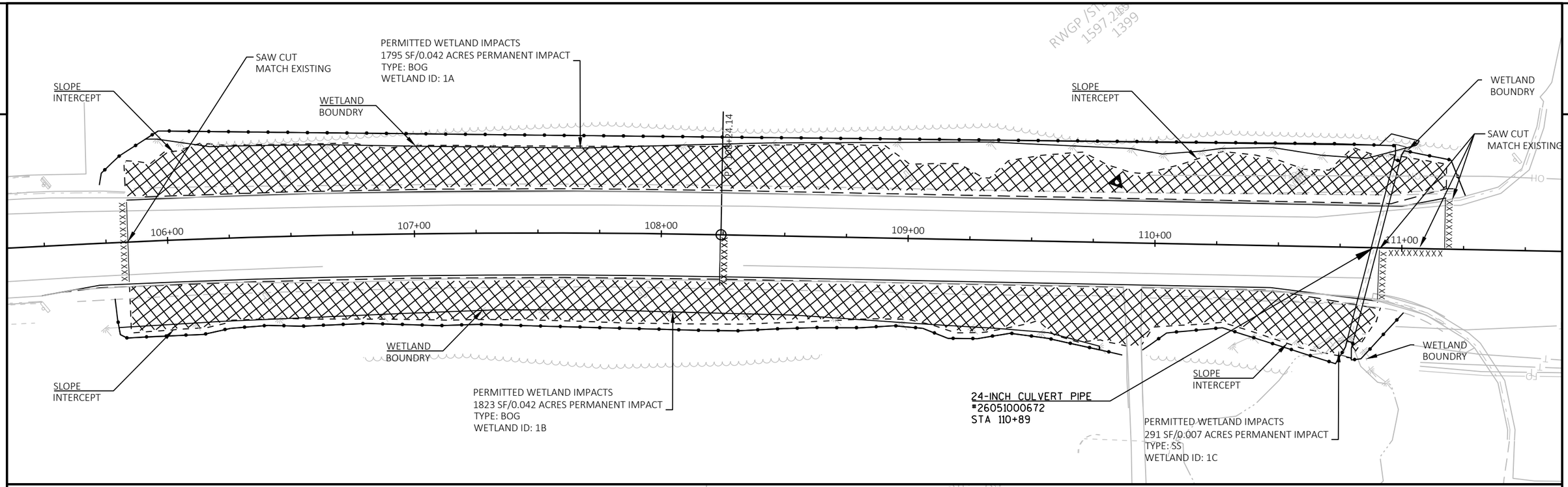
PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	INTERSECTION DETAILS - 51 - STATE HOUSE CIRCLE - LAKEVIEW ROAD	SHEET 17	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 01

PLOT DATE : 1/17/2024 3:31 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:40 FT

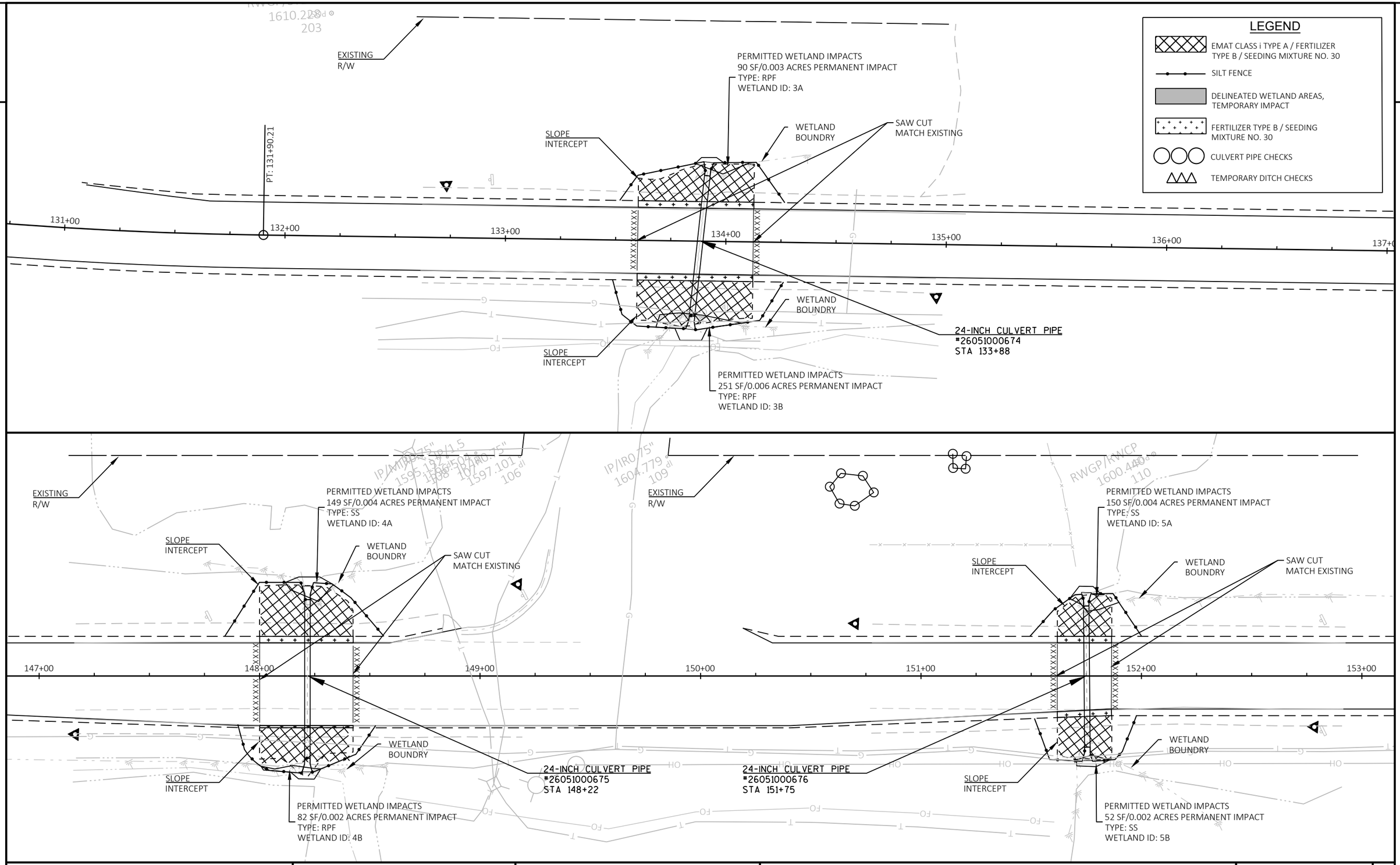
WISDOT/CADDS SHEET 42

2



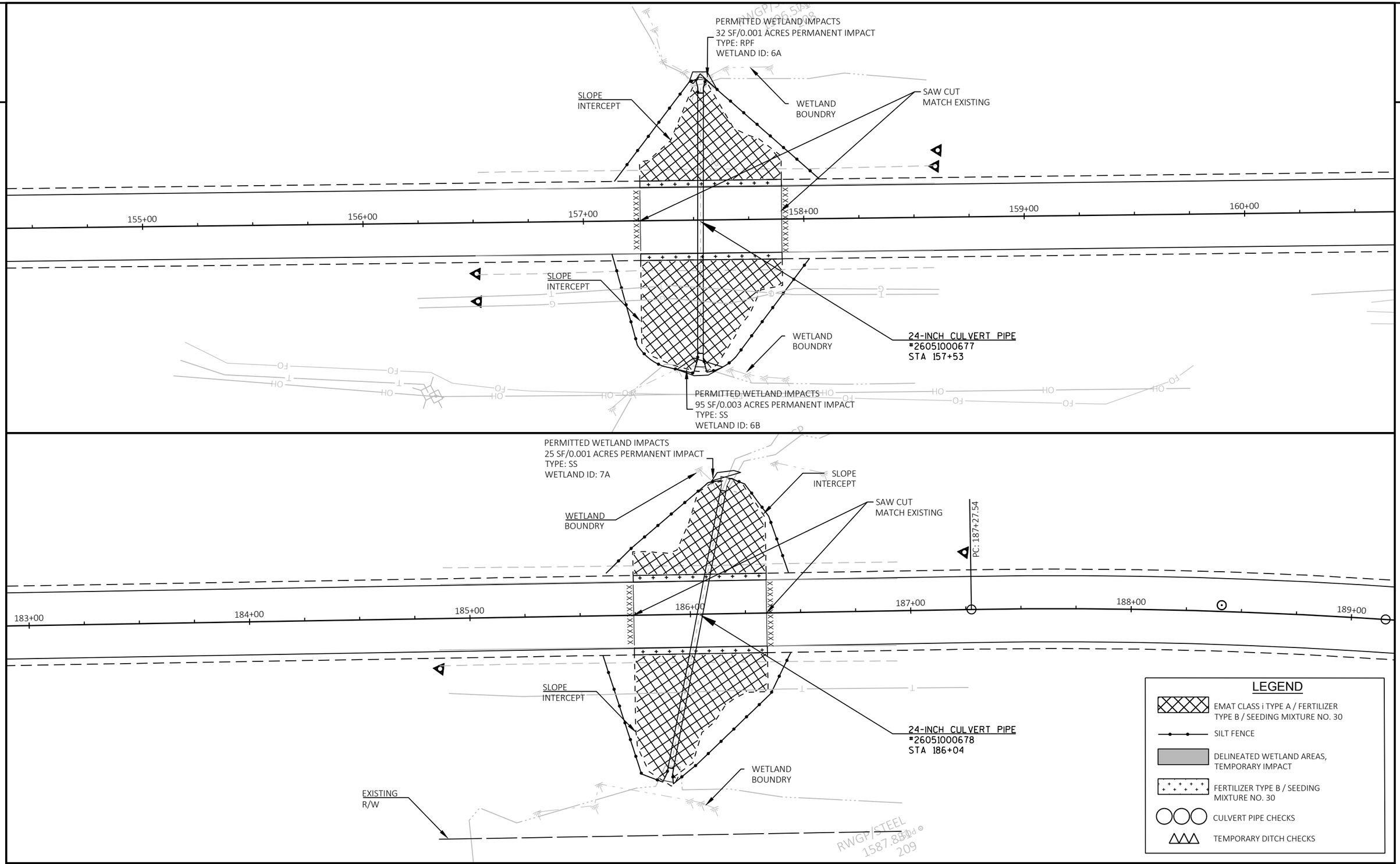
PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	EROSION CONTROL	SHEET 18	E

2



PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	EROSION CONTROL	SHEET 19	E

2



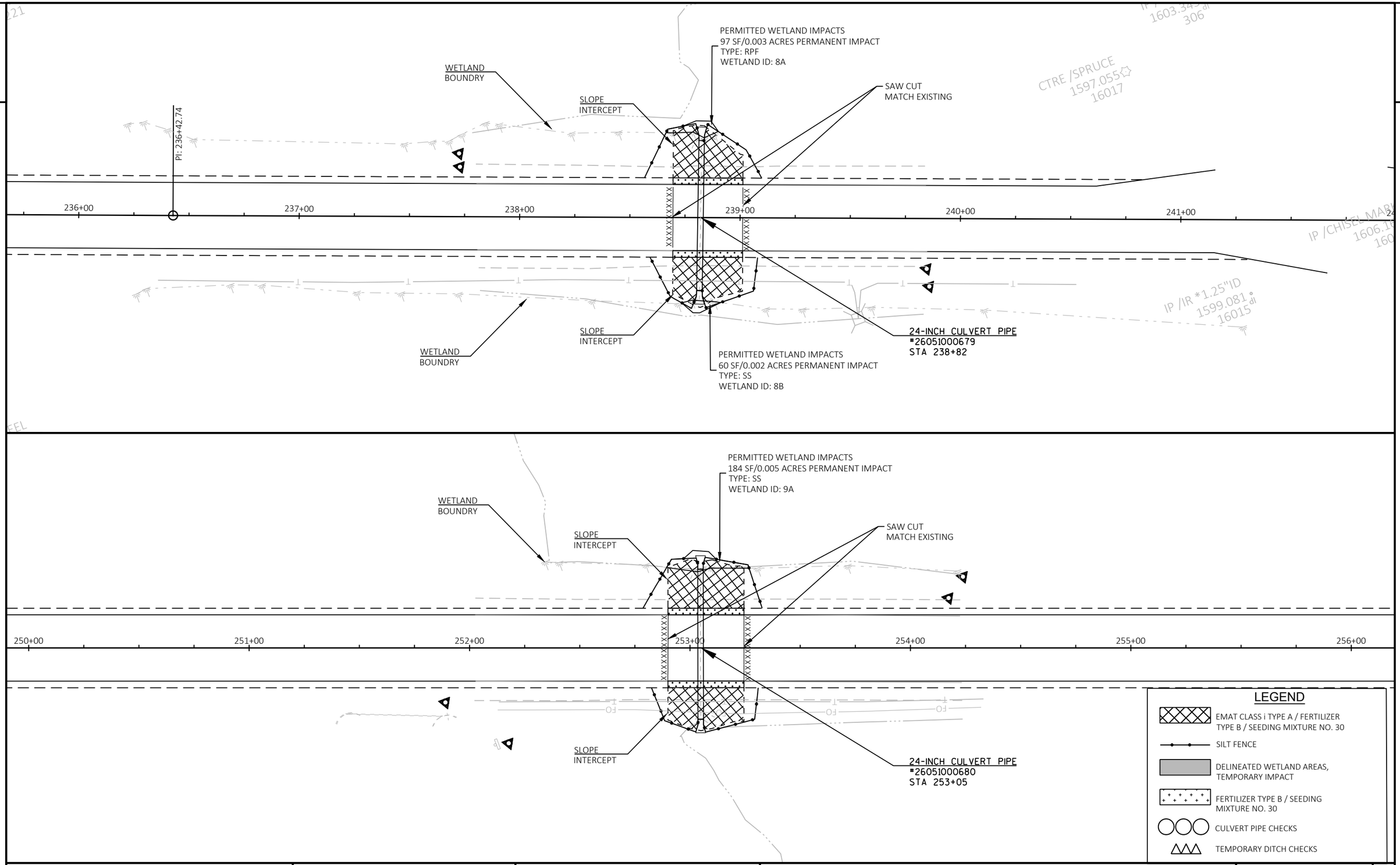
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PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	EROSION CONTROL	SHEET 20	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 03

PLOT DATE : 1/17/2024 3:32 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

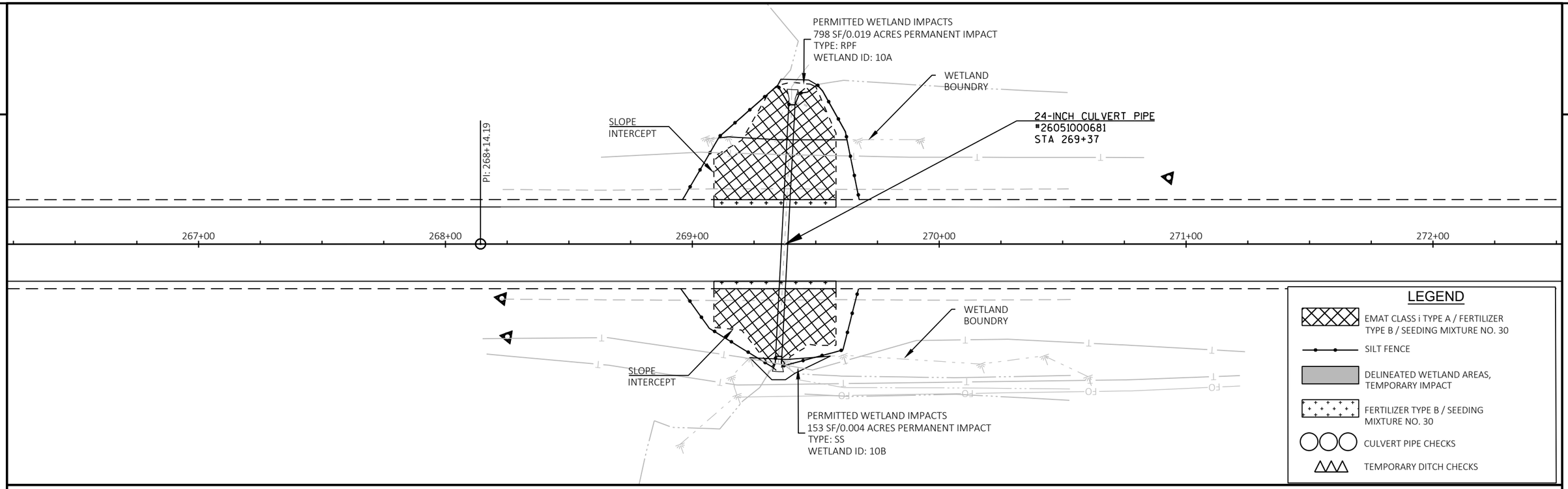


PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	EROSION CONTROL	SHEET 21	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 04

PLOT DATE : 1/17/2024 3:32 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:40 FT

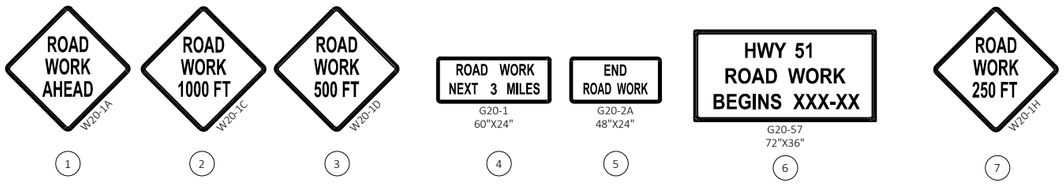
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THIS FRAME WAS INTENSIONALLY LEFT BLANK

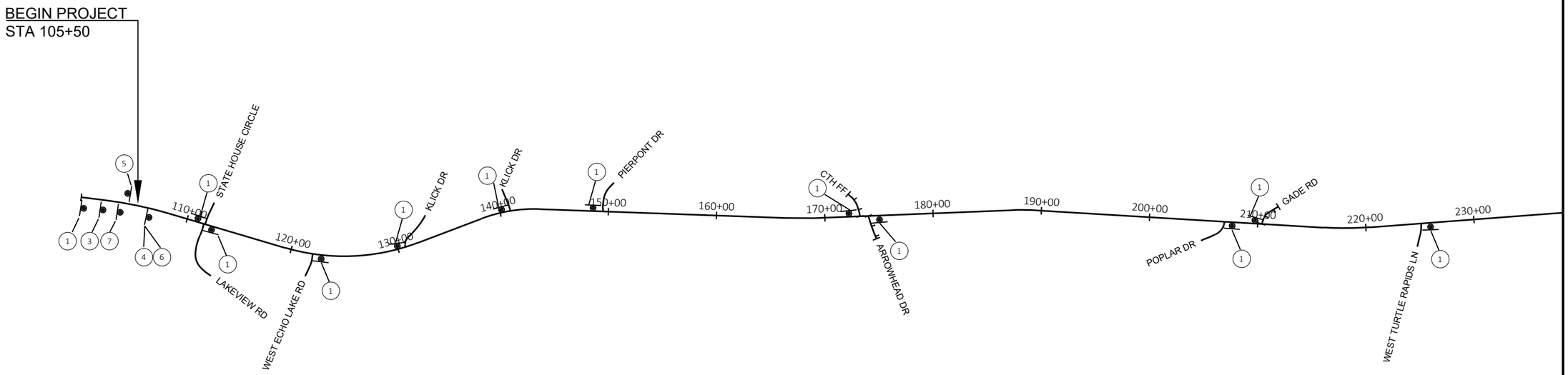
PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	EROSION CONTROL	SHEET 22	E

2



*HWY ROAD WORK BEGINS SIGN PLACED SEVEN (7) DAYS PRIOR TO CONSTRUCTION. SIGNS TO BE REMOVED WHEN CONSTRUCTION BEGINS





LEGEND

- SIGN ON PERMANENT SUPPORT
- (X) DENOTES SIGN NUMBER

NOTES:

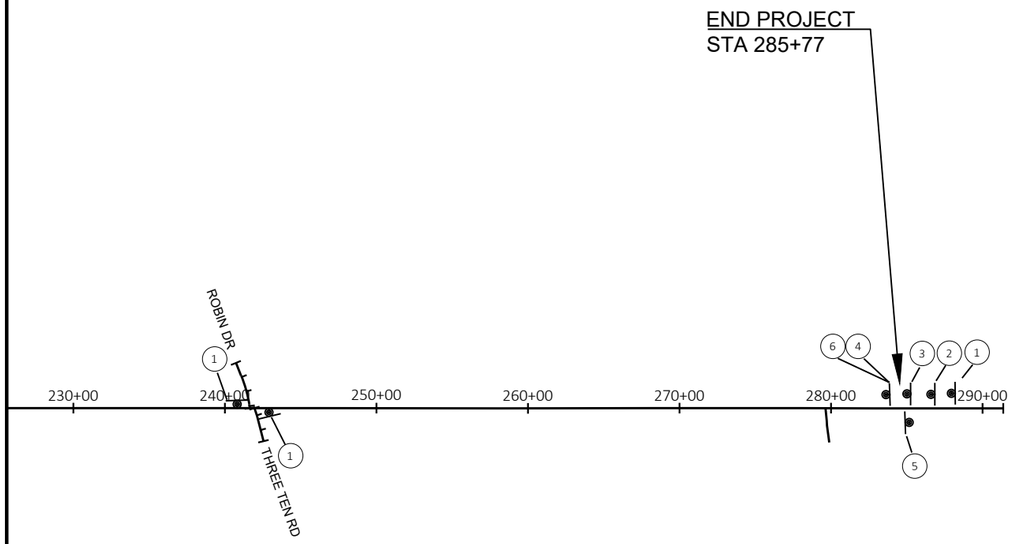
ALL SIGNS 48'X48" UNLESS OTHERWISE NOTED

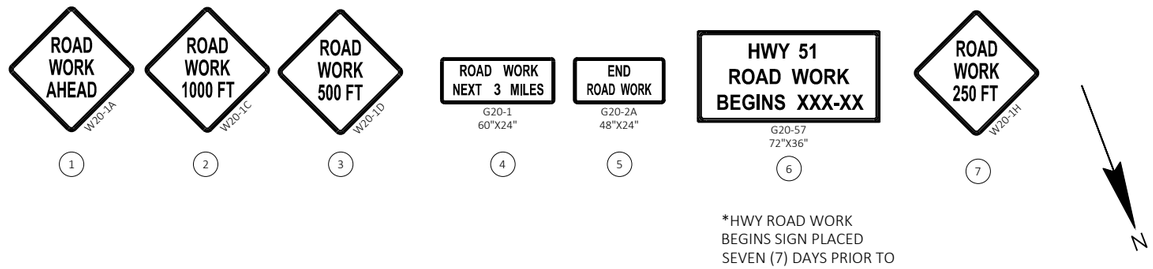
REFER TO S.S.D. "TRAFFIC CONTROL ADVANCED WARNING SIGNS 40 M.P.H. OR LESS AND 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" FOR ADDITIONAL IMFORMATION

AT STATE HOUSE CIRCLE, LAKEVIEW RD, CTH FF AND ARROWHEAD DRIVE PLACE W20-1A SIGNS AT A DISTANCE THAT WILL SATISFY SHOULDER WORK ACTIVITIES. SEE TRAFFIC CONTROL SHEETS AND S.S.D. "TRAFFIC CONTROL, WORK ON SHOULDER OR PASSING LANE, UNDIVIDED HIGHWAY

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	ADVANCED WARNING SIGNING	SHEET 23	E

2





*HWY ROAD WORK BEGINS SIGN PLACED SEVEN (7) DAYS PRIOR TO CONSTRUCTION. SIGNS TO BE REMOVED WHEN CONSTRUCTION BEGINS

LEGEND

- SIGN ON PERMANENT SUPPORT
- (X) DENOTES SIGN NUMBER

NOTES:

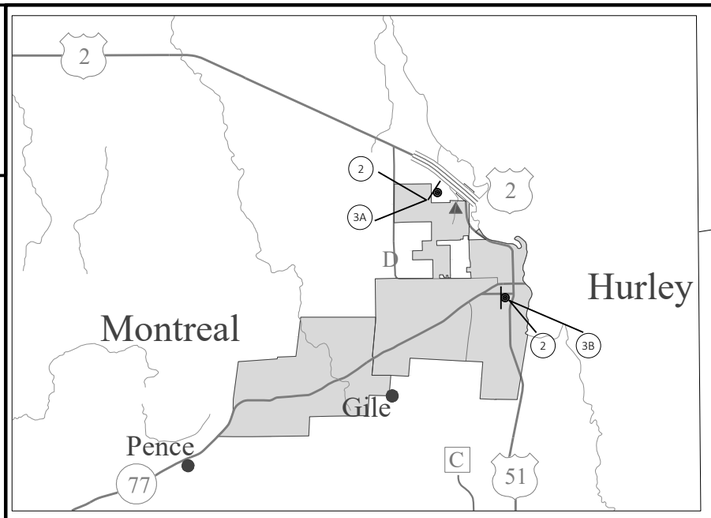
ALL SIGNS 48'X48" UNLESS OTHERWISE NOTED

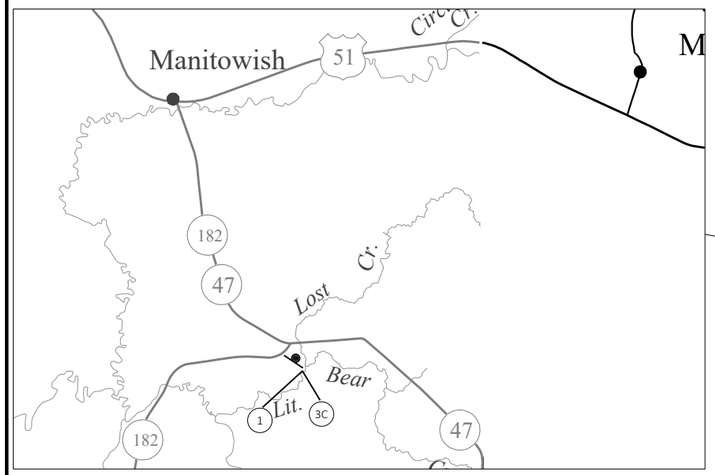
REFER TO S.S.D. "TRAFFIC CONTROL ADVANCED WARNING SIGNS 40 M.P.H. OR LESS AND 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" FOR ADDITIONAL IMFORMATION

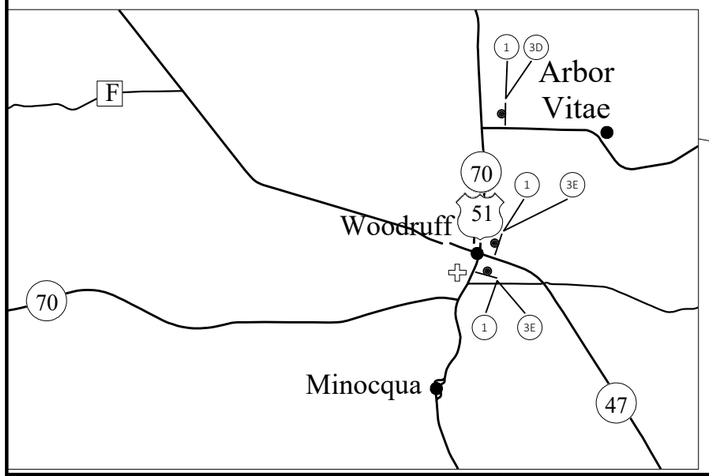
AT STATE HOUSE CIRCLE, LAKEVIEW RD, CTH FF AND ARROWHEAD DRIVE PLACE W20-1A SIGNS AT A DISTANCE THAT WILL SATISFY SHOULDER WORK ACTIVITIES. SEE TRAFFIC CONTROL SHEETS AND S.S.D. "TRAFFIC CONTROL, WORK ON SHOULDER OR PASSING LANE, UNDIVIDED HIGHWAY

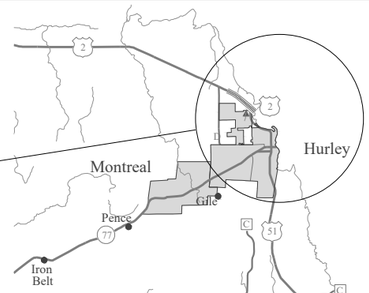
PROJECT NO: 1175-19-02	HWY: USH 51	COUNTY: IRON	ADVANCED WARNING SIGNING	SHEET 24	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\025001-AW.DWG
LAYOUT NAME - 02 (2)
PLOT DATE : 1/17/2024 3:33 PM
PLOT BY : GETCHELL, KYLE JAMES
PLOT NAME :
PLOT SCALE : 1 IN:1000 FT
WISDOT/CADDS SHEET 42









SIGN #	DISTANCE
3A	21 MILES AHEAD
3B	19 MILES AHEAD
3C	4 MILES AHEAD
3D	23 MILES AHEAD
3E	24 MILES AHEAD

LEGEND

- SIGN ON PERMANENT SUPPORT
- (X) DENOTES SIGN NUMBER

NORTH M3-1 24"X12"

SOUTH M3-3 24"X12"

51 M1-4 24"X24" (1)

51 M1-4 24"X24" (2)

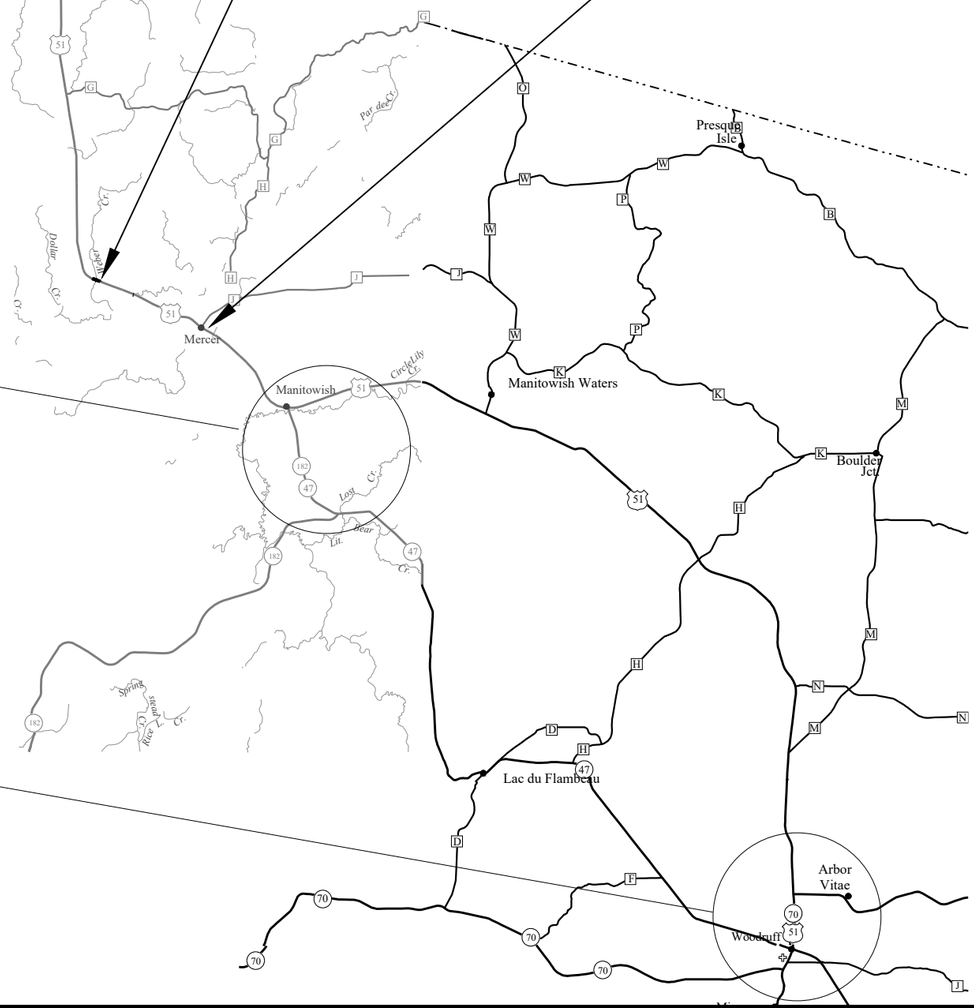
MAX. 11' WIDTH W12-52 48"X48"

00 MILES AHEAD WO57-52 48"X36" (3)

N

END PROJECT
STA 285+77
B-26-38

BEGIN PROJECT
STA 105+50



PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	ADVANCED WARNING SIGNING - MAX WIDTH SIGNING	SHEET 25	E

Temporary Signal Timing

	Ø1 NB USH 51	Ø2 EB Malone Plumbing	Ø3 SB USH 51	Ø4 WB Lakeview Rd
MINIMUM GREEN TIME	9 sec	5 sec	9 sec	5 sec
MAXIMUM PASSAGE TIME DURING GREEN PHASE	5 sec	5 sec	5 sec	5 sec
MINIMUM PASSAGE TIME DURING GREEN PHASE	3 sec	-	3 sec	-
START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE	15 sec	-	15 sec	-
TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE	0 sec	-	0 sec	-
MAXIMUM GREEN TIME	25 sec	7 sec	25 sec	7 sec
YELLOW	5 sec	3 sec	3 sec	3 sec
ALL-RED	5 sec	25 sec	6 sec	24 sec
RECALL MODE	MIN	MIN	MIN	MIN

PHASE 2 SHALL COME AFTER PHASE 1, PHASE 4 SHALL COME AFTER PHASE 3.

CONTRACTOR SHALL REVIEW SIGNALS AFTER PROGRAMMING TO ASSURE THERE ARE NOT CONFLICTING MOVEMENTS.

IF THERE ARE QUESTIONS REGARDING THE TIMINGS PLEASE CONTACT TRAFFIC ENGINEER

2

2

N

BP: 100+00.00

PC: 102+17.27

101+00

102+00

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PEDESTRIAN BARRICADE

WO3-3

N

R10-6
24"X36"
STOP HERE ON RED

R10-11B
24"X24"
NO TURN ON RED

SIDEWALK CLOSED
R9-9
24"X12"

Malone Plumbing

VEHICLE DETECTION FIELD

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

WO1-4L

25'

BASE AGGREGATE DENSE 3/4"

TEMPORARY MARKING LINE PAINT 6-INCH WHITE

REFER TO SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" FOR ADVANCE SIGNING

15'

6'

11'

14'

10'

PC: 102+17.27

102+00

103+00

104+00

105+00

106+00

107+00

108+00

TEMPORARY MARKING LINE PAINT 6-INCH WHITE

SUBGRADE IMPROVEMENT AREA STA 105+84 TO STA 111+00

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

R10-6
24"X36"
STOP HERE ON RED

SIDEWALK CLOSED
R9-9
24"X12"

WO1-6
48" X 24"

TYPE III BARRICADE

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	TRAFFIC CONTROL - STAGE 1	SHEET 27	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\025102-TC.DWG
LAYOUT NAME - 01

PLOT DATE : 1/17/2024 3:34 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

2

BASE AGGREGATE DENSE 3/4"

TEMPORARY MARKING LINE PAINT 6-INCH WHITE

WO1-4R

R3-2
24"X24"

25'

PT: 108+24.14

REFER TO SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" FOR ADVANCE SIGNING ON STATE HOUSE CIRCLE

STATE HOUSE CIRCLE

R11-2
48" X 30"

ROAD CLOSED

TYPE III BARRICADE

TEMPORARY MARKING LINE PAINT 6-INCH WHITE

STOP HERE ON RED
R10-6
24"X36"

R3-1
24"X24"

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

15'

15'

12'

108+00 109+00 110+00 111+00 112+00 113+00 114+00

WO16
48" X 24"

TYPE III BARRICADE

SUBGRADE IMPROVEMENT AREA STA 105+84 TO STA 111+00

SIDEWALK CLOSED
R9-9
24"X12"

VEHICLE DETECTION FIELD

LAKEVIEW RD

COVER

STOP HERE ON RED
R10-6
24"X36"

NO TURN ON RED
R10-11B
24"X24"

TEMPORARY MARKING LINE PAINT 6-INCH 3' LINE 9' GAP WHITE

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

REFER TO SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" FOR ADVANCE SIGNING

WO3-3

PC: 119+43.33

114+00 115+00 116+00 117+00 118+00 119+00 120+00

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PEDESTRIAN BARRICADE

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	TRAFFIC CONTROL - STAGE 1	SHEET 28	E

2

N

BP: 100+00.00

PC: 102+17.27

101+00

102+00

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PEDESTRIAN BARRICADE

W03-3

WO1-6
48" X 24"

TYPE III BARRICADE

STOP HERE ON RED
R10-6
24"X36"

NO TURN ON RED
R10-11a
24"X24"

SIDEWALK CLOSED
R9-9
24"X12"

VEHICLE DETECTION FIELD

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

SUBGRADE IMPROVEMENT AREA
STA 105+84 TO STA 111+00

REFER TO SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" FOR ADVANCE SIGNING

CENTERLINE MARKING REMOVAL DURING STAGE 1 WORK

PC: 102+17.27

102+00

103+00

104+00

105+00

106+00

107+00

108+00

10'

15'

11'

TEMPORARY MARKING LINE PAINT 6-INCH WHITE

BASE AGGREGATE DENSE 1-1/4"

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

W01-4R

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	TRAFFIC CONTROL: STAGE 2	SHEET 29	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\025103-TC.DWG
LAYOUT NAME - 01

PLOT DATE : 1/17/2024 3:35 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

2

2

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

REFER TO SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" FOR ADVANCE SIGNING ON STATE HOUSE CIRCLE

WO1-6
48" X 24"
TYPE III BARRICADE

STOP HERE ON RED
R10-6
24"X36"
R3-1
24"X24"

SUBGRADE IMPROVEMENT AREA
STA 105+84 TO STA 111+00

PI: 108+24.14

1604.798

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

108+00 109+00 110+00 111+00 112+00 113+00 114+00

15'

11'

10

12'

REFER TO SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" FOR ADVANCE SIGNING

BASE AGGREGATE DENSE 1-1/4"

TEMPORARY MARKING LINE PAINT 6-INCH
WHITE

SIDEWALK CLOSED
R9-9
24"X12"

WO1-4L

R3-2
24"X24"

TEMPORARY MARKING LINE PAINT 6-INCH
3' LINE 9' GAP
WHITE

TEMPORARY MARKING STOP LINE
REMOVABLE TAPE 18-INCH

VEHICLE DETECTION FIELD

STOP HERE ON RED
R10-6
24"X36"

NO TURN ON RED
R10-11B
24"X24"

COVER

CENTERLINE MARKING REMOVAL
DURING STAGE 1 WORK

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- PEDESTRIAN BARRICADE

WO1-3

PC: 119+43.33

114+00 115+00 116+00 117+00 118+00 119+00 120+00

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	TRAFFIC CONTROL: STAGE 2	SHEET 30	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\025103-TC.DWG
LAYOUT NAME - 02

PLOT DATE : 1/17/2024 3:35 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

1175-19-72

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	4.000	4.000
0004	203.0100	Removing Small Pipe Culverts	EACH	10.000	10.000
0008	204.0115	Removing Asphaltic Surface Butt Joints	SY	430.000	430.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	64,900.000	64,900.000
0012	204.0150	Removing Curb & Gutter	LF	6.000	6.000
0016	204.0180	Removing Delineators and Markers	EACH	20.000	20.000
0018	205.0100	Excavation Common	CY	8,900.000	8,900.000
0020	208.0100	Borrow	CY	780.000	780.000
0022	208.1100	Select Borrow	CY	450.000	450.000
0024	208.1500.S	Temporary Lane Shift During Culvert Work	EACH	20.000	20.000
0030	211.0101	Prepare Foundation for Asphaltic Paving (project) 03. 1175-19-72	EACH	1.000	1.000
0032	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	2.000	2.000
0038	213.0100	Finishing Roadway (project) 03. 1175-19-72	EACH	1.000	1.000
0040	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,660.000	1,660.000
0042	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	4,410.000	4,410.000
0044	312.0110	Select Crushed Material	TON	1,750.000	1,750.000
0046	450.4000	HMA Cold Weather Paving	TON	1,860.000	1,860.000
0048	455.0605	Tack Coat	GAL	4,505.000	4,505.000
0054	460.2005	Incentive Density PWL HMA Pavement	DOL	5,330.000	5,330.000
0056	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	8,916.500	8,916.500
0058	460.2010	Incentive Air Voids HMA Pavement	DOL	7,290.000	7,290.000
0060	460.6223	HMA Pavement 3 MT 58-28 S	TON	520.000	520.000
0062	460.6224	HMA Pavement 4 MT 58-28 S	TON	7,430.000	7,430.000
0064	465.0105	Asphaltic Surface	TON	800.000	800.000
0068	465.0315	Asphaltic Flumes	SY	12.000	12.000
0070	465.0560	Asphaltic Rumble Strips, Centerline	LF	10,308.000	10,308.000
0072	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	20.000	20.000
0074	520.3424	Culvert Pipe Class III-A Non-metal 24-Inch	LF	480.000	480.000
0076	520.3624	Culvert Pipe Class III-B Non-metal 24-Inch	LF	348.000	348.000
0092	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	6.000	6.000
0102	618.0100	Maintenance and Repair of Haul Roads (project) 03. 1175-19-72	EACH	1.000	1.000
0104	619.1000	Mobilization	EACH	0.330	0.330
0106	624.0100	Water	MGAL	349.000	349.000
0108	625.0100	Topsoil	SY	3,820.000	3,820.000
0110	628.1504	Silt Fence	LF	3,130.000	3,130.000
0112	628.1520	Silt Fence Maintenance	LF	3,130.000	3,130.000
0114	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0116	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0118	628.2002	Erosion Mat Class I Type A	SY	3,815.000	3,815.000
0124	628.7504	Temporary Ditch Checks	LF	75.000	75.000
0126	628.7555	Culvert Pipe Checks	EACH	30.000	30.000
0128	629.0210	Fertilizer Type B	CWT	2.000	2.000
0130	630.0130	Seeding Mixture No. 30	LB	69.000	69.000
0136	630.0500	Seed Water	MGAL	43.000	43.000
0138	633.5200	Markers Culvert End	EACH	20.000	20.000
0140	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	3.000	3.000
0142	638.2102	Moving Signs Type II	EACH	6.000	6.000
0144	638.4000	Moving Small Sign Supports	EACH	7.000	7.000
0146	642.5001	Field Office Type B	EACH	0.330	0.330
0148	643.0300	Traffic Control Drums	DAY	749.000	749.000

1175-19-72

Line	Item	Item Description	Unit	Total	Qty
0150	643.0420	Traffic Control Barricades Type III	DAY	154.000	154.000
0152	643.0715	Traffic Control Warning Lights Type C	DAY	202.000	202.000
0154	643.0900	Traffic Control Signs	DAY	1,863.000	1,863.000
0156	643.0920	Traffic Control Covering Signs Type II	EACH	1.000	1.000
0158	643.1000	Traffic Control Signs Fixed Message	SF	36.000	36.000
0160	643.3165	Temporary Marking Line Paint 6-Inch	LF	21,244.000	21,244.000
0162	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	48.000	48.000
0164	643.5000	Traffic Control	EACH	0.400	0.400
0168	645.0260	Geogrid Type SSR	SY	3,080.000	3,080.000
0170	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	55,520.000	55,520.000
0172	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	171.000	171.000
0178	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	20,436.000	20,436.000
0180	646.9000	Marking Removal Line 4-Inch	LF	1,000.000	1,000.000
0182	650.4500	Construction Staking Subgrade	LF	516.000	516.000
0184	650.5000	Construction Staking Base	LF	516.000	516.000
0188	650.6000	Construction Staking Pipe Culverts	EACH	10.000	10.000
0190	650.8000	Construction Staking Resurfacing Reference	LF	17,542.000	17,542.000
0196	650.9911	Construction Staking Supplemental Control (project) 03. 1175-19-72	EACH	1.000	1.000
0200	661.0101	Temporary Traffic Signals for Bridges (structure) 02. Subgrade Improvement Area	EACH	1.000	1.000
0202	690.0150	Sawing Asphalt	LF	615.000	615.000
0204	690.0250	Sawing Concrete	LF	3.000	3.000
0206	740.0440	Incentive IRI Ride	DOL	6,980.000	6,980.000
0218	SPV.0060	Special 02. Temporary Vehicle Detection STA 105+05/Malone Plumbing	EACH	1.000	1.000
0220	SPV.0060	Special 03. Temporary Vehicle Detection STA 111+70/Lakeview Road	EACH	1.000	1.000
0230	SPV.0180	Special 01. Protective Thermoplastic Coating at Snowmobile Trail Crossings	SY	109.000	109.000

CATEGORY	STATION	TO	STATION	LOCATION	201.0205 GRUBBING STA	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0150 REMOVING CURB & GUTTER LF	204.0180 REMOVING DELINEATORS AND MARKERS EACH	REMARKS
0010	110+89	-	110+89	CULVERT 672	-	1	-	-	6	2	EXISTING 24-INCH CONCRETE PIPE
0010	123+27	-	123+27	CULVERT 673	-	1	-	-	-	2	EXISTING 24-INCH CONCRETE PIPE
0010	133+88	-	133+88	CULVERT 674	-	1	-	-	-	2	EXISTING 24-INCH CONCRETE PIPE
0010	148+22	-	148+22	CULVERT 675	-	1	-	-	-	2	EXISTING 24-INCH CONCRETE PIPE
0010	151+75	-	151+75	CULVERT 676	-	1	-	-	-	2	EXISTING 24-INCH CONCRETE PIPE
0010	157+53	-	157+53	CULVERT 677	1	1	-	-	-	2	GRUBBING - STA 157+00 TO STA 158+00, EXISTING 24-INCH CONCRETE PIPE
0010	186+04	-	186+04	CULVERT 678	2	1	-	-	-	2	GRUBBING - STA 185+00 TO STA 187+00, EXISTING 24-INCH CONCRETE PIPE
0010	238+82	-	238+82	CULVERT 679	-	1	-	-	-	2	EXISTING 24-INCH CONCRETE PIPE
0010	253+05	-	253+05	CULVERT 680	-	1	-	-	-	2	EXISTING 24-INCH CONCRETE PIPE
0010	269+37	-	269+37	CULVERT 681	1	1	-	-	-	2	GRUBBING - STA 269+00 TO STA 270+00, EXISTING 24-INCH CONCRETE PIPE
0010	105+50	-	105+60	BOP	-	-	33	-	-	-	-
0010	285+67	-	285+77	EOP	-	-	33	-	-	-	-
0010	105+60	-	285+77	MAINLINE	-	-	-	60,057	-	-	-
0010	111+25	-	112+25	LAKEVIEW ROAD	-	-	28	298	-	-	-
0010	111+25	-	112+25	STATE HOUSE CIRCLE	-	-	28	387	-	-	-
0010	121+50	-	122+50	WEST ECHO LAKE ROAD	-	-	28	348	-	-	-
0010	130+00	-	131+50	KLICK DRIVE (EAST)	-	-	28	291	-	-	-
0010	140+50	-	141+50	KLICK DRIVE (WEST)	-	-	28	201	-	-	-
0010	149+00	-	150+00	PIERPONT DRIVE INTERSECTION	-	-	-	345	-	-	FULL WIDTH SHOULDER
0010	149+00	-	150+00	PIERPONT DRIVE	-	-	28	361	-	-	-
0010	172+00	-	174+50	CTH FF	-	-	28	600	-	-	-
0010	173+00	-	175+00	ARROWHEAD DRIVE	-	-	28	699	-	-	-
0010	206+25	-	207+75	POPLAR DRIVE	-	-	28	251	-	-	-
0010	209+75	-	211+25	GADE ROAD	-	-	28	257	-	-	-
0010	224+50	-	226+00	WEST TURTLE RAPIDS LANE	-	-	28	309	-	-	-
0010	241+00	-	242+50	ROBIN DRIVE	-	-	28	257	-	-	-
0010	241+25	-	242+75	3 10 ROAD	-	-	28	228	-	-	-
				TOTAL 0010	4	10	430	64,900	6	20	

CATEGORY	STATION	TO	STATION	LOCATION	205.0100 EXCAVATION COMMON CY	208.0100 BORROW CY	208.1100 SELECT BORROW CY	208.1500.S TEMPORARY LANE SHIFT DURING CULVERT WORK EACH	211.0101.03 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (03. 1175-19-72) EACH	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	213.0100.03 FINISHING ROADWAY (PROJECT) (03. 1175-19-72) EACH	REMARKS
0010	110+89	-	110+89	CULVERT 672	568	-	-	2	-	-	-	TRANSITION CUT
0010	123+27	-	123+27	CULVERT 673	568	-	-	2	-	-	-	TRANSITION CUT
0010	133+88	-	133+88	CULVERT 674	568	-	-	2	-	-	-	TRANSITION CUT
0010	148+22	-	148+22	CULVERT 675	568	-	-	2	-	-	-	TRANSITION CUT
0010	151+75	-	151+75	CULVERT 676	536	-	-	2	-	-	-	TRANSITION CUT
0010	157+53	-	157+53	CULVERT 677	568	-	-	2	-	-	-	TRANSITION CUT
0010	186+04	-	186+04	CULVERT 678	568	-	-	2	-	-	-	TRANSITION CUT
0010	238+82	-	238+82	CULVERT 679	568	-	-	2	-	-	-	TRANSITION CUT
0010	253+05	-	253+05	CULVERT 680	568	-	-	2	-	-	-	TRANSITION CUT
0010	269+37	-	269+37	CULVERT 681	568	-	-	2	-	-	-	TRANSITION CUT
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	2,599	-	446	-	-	-	-	-
0010	105+84		111+00	SUBGRADE IMPROVEMENT AREA	497	596	-	-	-	-	-	LANE SHIFT STAGE 1
0010	105+84		111+00	SUBGRADE IMPROVEMENT AREA	153	183	-	-	-	-	-	LANE SHIFT STAGE 2
0010	105+50	-	285+77	PROJECT	-	-	-	-	1	-	1	-
0010	173+00	-	173+00	RT & LT	-	-	-	-	-	2	-	SNOWMOBILE CROSSING
				TOTAL 0010	8,900	780	450	20	1	2	1	

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0105 ASPHALTIC SURFACE TON	465.0315 ASPHALTIC FLUMES SY	465.0560 ASPHALTIC RUMBLE STRIPS, CENTERLINE LF	REMARKS
0010	105+50	-	285+77	PROJECT	1,516	-	-	1,858	4,504	-	-	-	12	10,308	-
0010	110+89	-	110+89	CULVERT 672	-	222	-	-	-	-	-	80	-	-	-
0010	123+27	-	123+27	CULVERT 673	-	222	-	-	-	-	-	80	-	-	-
0010	133+88	-	133+88	CULVERT 674	-	222	-	-	-	-	-	80	-	-	-
0010	148+22	-	148+22	CULVERT 675	-	222	-	-	-	-	-	80	-	-	-
0010	151+75	-	151+75	CULVERT 676	-	222	-	-	-	-	-	80	-	-	-
0010	157+53	-	157+53	CULVERT 677	-	222	-	-	-	-	-	80	-	-	-
0010	186+04	-	186+04	CULVERT 678	-	222	-	-	-	-	-	80	-	-	-
0010	238+82	-	238+82	CULVERT 679	-	222	-	-	-	-	-	80	-	-	-
0010	253+05	-	253+05	CULVERT 680	-	222	-	-	-	-	-	80	-	-	-
0010	269+37	-	269+37	CULVERT 681	-	222	-	-	-	-	-	80	-	-	-
0010	111+00	-	285+77	MAINLINE	-	-	-	-	-	-	6,661	-	-	-	-
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	140	-	-	-	-	-	-	-	-	-	LANE SHIFT STAGE 1
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	-	50	-	-	-	-	-	-	-	-	LANE SHIFT STAGE 1 WEEKEND DROP OFF
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	-	42	-	-	-	-	-	-	-	-	LANE SHIFT STAGE 2
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	-	2,093	1,743	-	-	519	218	-	-	-	SUBGRADE IMPROVEMENT
0010	111+25	-	112+25	LAKEVIEW ROAD	-	-	-	-	-	-	42	-	-	-	-
0010	111+25	-	112+25	STATE HOUSE CIRCLE	-	-	-	-	-	-	43	-	-	-	-
0010	121+50	-	122+50	WEST ECHO LAKE ROAD	-	-	-	-	-	-	39	-	-	-	-
0010	130+00	-	131+50	KLICK DRIVE (EAST)	-	-	-	-	-	-	33	-	-	-	-
0010	140+50	-	141+50	KLICK DRIVE (WEST)	-	-	-	-	-	-	23	-	-	-	-
0010	149+00	-	150+00	PIERPONT DRIVE INTERSECTION	-	-	-	-	-	-	39	-	-	-	FULL WIDTH SHOULDER
0010	149+00	-	150+00	PIERPONT DRIVE	-	-	-	-	-	-	40	-	-	-	-
0010	172+00	-	174+50	CTH FF	-	-	-	-	-	-	67	-	-	-	-
0010	173+00	-	175+00	ARROWHEAD DRIVE	-	-	-	-	-	-	78	-	-	-	-
0010	206+25	-	207+75	POPLAR DRIVE	-	-	-	-	-	-	28	-	-	-	-
0010	209+75	-	211+25	GADE ROAD	-	-	-	-	-	-	29	-	-	-	-
0010	224+50	-	226+00	WEST TURTLE RAPIDS LANE	-	-	-	-	-	-	35	-	-	-	-
0010	241+00	-	242+50	ROBIN DRIVE	-	-	-	-	-	-	29	-	-	-	-
0010	241+25	-	242+75	3 10 ROAD	-	-	-	-	-	-	26	-	-	-	-
				TOTAL 0010	1,660	4,410	1,750	1,860	4,505	520	7,430	800	12	10,308	

HMA PAVEMENT PWL QMP MIXTURE ACCEPTANCE TABLE

LOCATION	STATIONING	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRM TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 FOOT DRIVING LANE	105+84 - 111+00	UPPER LAYER	3 MT 58-28 S	4 MT 58-28 S	154	2.00-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12 FOOT DRIVING LANE	105+84 - 111+00	LOWER LAYER	3 MT 58-28 S	3 MT 58-28 S	175	2.25-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
12 FOOT DRIVING LANE	105+84 - 111+00	BINDER LAYER	BASE AGGREGATE	3 MT 58-28 S	193	2.50-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
5 FOOT SHOULDER	105+84 - 111+00	UPPER LAYER	3 MT 58-28 S	4 MT 58-28 S	64	2.00-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
5 FOOT SHOULDER	105+84 - 111+00	LOWER LAYER	3 MT 58-28 S	3 MT 58-28 S	72	2.25-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
5 FOOT SHOULDER	105+84 - 111+00	BINDER LAYER	BASE AGGREGATE	3 MT 58-28 S	80	2.50-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
12 FOOT DRIVING LANE	111+00 - 285+77	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	5,329	2.00-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
3 FOOT SHOULDER	111+00 - 285+77	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	1,332	2.00-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
SIDEROAD INTERSECTIONS		UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	551	2.00-INCHES	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
VARIOUS		CULVERT PATCHES	BASE AGGREGATE	ASPHALTIC SURFACE	800	6.50-INCHES	QMP AS PER SS 465.	ACCEPTANCE BY ORDINARY COMPACTION

CATEGORY	STATION	TO	STATION	LOCATION	520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH EACH	520.3424 CULVERT PIPE CLASS III-A NON-METAL 24-INCH LF	520.3624 CULVERT PIPE CLASS III-B NON-METAL 24-INCH LF	REMARKS
0010	110+89	-	110+89	CULVERT 672	2	76	-	-
0010	123+27	-	123+27	CULVERT 673	2	68	-	-
0010	133+88	-	133+88	CULVERT 674	2	64	-	-
0010	148+22	-	148+22	CULVERT 675	2	72	-	-
0010	151+75	-	151+75	CULVERT 676	2	64	-	-
0010	157+53	-	157+53	CULVERT 677	2	-	118	-
0010	186+04	-	186+04	CULVERT 678	2	-	128	-
0010	238+82	-	238+82	CULVERT 679	2	68	-	-
0010	253+05	-	253+05	CULVERT 680	2	68	-	-
0010	269+37	-	269+37	CULVERT 681	2	-	102	-
				TOTAL 0010	20	480	348	

CATEGORY	STATION	TO	STATION	LOCATION	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
0010	110+89	-	110+89	CULVERT 672	6	75	3	CULVERT AND CURB & GUTTER REMOVAL
0010	123+27	-	123+27	CULVERT 673	-	60	-	-
0010	133+88	-	133+88	CULVERT 674	-	60	-	-
0010	148+22	-	148+22	CULVERT 675	-	60	-	-
0010	151+75	-	151+75	CULVERT 676	-	60	-	-
0010	157+53	-	157+53	CULVERT 677	-	60	-	-
0010	186+04	-	186+04	CULVERT 678	-	60	-	-
0010	238+82	-	238+82	CULVERT 679	-	60	-	-
0010	253+05	-	253+05	CULVERT 680	-	60	-	-
0010	269+37	-	269+37	CULVERT 681	-	60	-	-
				TOTAL 0010	6	615	3	

CATEGORY	STATION	TO	STATION	LOCATION	624.0100 WATER MGAL	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	633.5200 MARKERS CULVERT END EACH	645.0260 GEOGRID TYPE SSR SY	REMARKS
0010	105+50	-	285+77	PROJECT	349	-	-	5	3	-	-	-	-	-
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	-	975	975	-	-	-	-	-	3,079	-
0010	110+89	-	110+89	CULVERT 672	-	135	135	-	-	-	3	2	-	-
0010	123+27	-	123+27	CULVERT 673	-	220	220	-	-	-	3	2	-	-
0010	133+88	-	133+88	CULVERT 674	-	220	220	-	-	-	3	2	-	-
0010	148+22	-	148+22	CULVERT 675	-	205	205	-	-	-	3	2	-	-
0010	151+75	-	151+75	CULVERT 676	-	165	165	-	-	-	3	2	-	-
0010	157+53	-	157+53	CULVERT 677	-	310	310	-	-	-	3	2	-	-
0010	186+04	-	186+04	CULVERT 678	-	285	285	-	-	-	3	2	-	-
0010	238+82	-	238+82	CULVERT 679	-	181	181	-	-	-	3	2	-	-
0010	253+05	-	253+05	CULVERT 680	-	176	176	-	-	-	3	2	-	-
0010	269+37	-	269+37	CULVERT 681	-	255	255	-	-	-	3	2	-	-
0010	105+50	-	285+77	PROJECT	-	-	-	-	-	75	-	-	-	UNDISTRIBUTED
				TOTAL 0010	349	3,130	3,130	5	3	75	30	20	3,080	

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	MISCELLANEOUS QUANTITIES	SHEET 35	E

FILE NAME : N:\PDS\C3D\11751902\DESIGN\QUANTITIES\MQ\030201-MQ.DWG
LAYOUT NAME - 03

PLOT DATE : 1/17/2024 3:35 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 42

CATEGORY	STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	628.2002 EROSION MAT CLASS I TYPE A SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0500 SEED WATER MGAL	634.0620 POSTS WOOD 4X6-INCH X 20-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA AND CULVERT 672	1,788	1,788	1.13	32	-	-	-	-	-
0010	123+27	-	123+27	CULVERT 673	201	201	0.13	4	-	-	-	-	-
0010	133+88	-	133+88	CULVERT 674	183	183	0.12	3	-	-	-	-	-
0010	148+22	-	148+22	CULVERT 675	164	164	0.10	3	-	-	-	-	-
0010	151+75	-	151+75	CULVERT 676	91	91	0.06	2	-	-	-	-	-
0010	157+53	-	157+53	CULVERT 677	414	414	0.26	7	-	-	-	-	-
0010	186+04	-	186+04	CULVERT 678	400	400	0.25	7	-	-	-	-	-
0010	238+82	-	238+82	CULVERT 679	125	125	0.08	2	-	-	-	-	-
0010	253+05	-	253+05	CULVERT 680	138	138	0.09	2	-	-	-	-	-
0010	269+37	-	269+37	CULVERT 681	312	312	0.20	6	-	-	-	-	-
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	-	-	-	-	-	-	6	7	-
0010	105+50	-	285+77	PROJECT	-	-	-	-	43	-	-	-	-
0010	105+50	-	285+77	PROJECT	-	-	-	-	-	3	-	-	UNDISTRIBUTED
				TOTAL 0010	3,820	3,815	2	69	43	3	6	7	

CATEGORY	STATION	TO	STATION	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH LF	646.3040 MARKING LINE GROOVED WET REF EPOXY 8-INCH LF	646.6466 COLD WEATHER MARKING EPOXY 6-INCH LF	646.9000 MARKING REMOVAL LINE 4-INCH LF	REMARKS
0010	105+50	-	285+77	PROJECT	17,922	48	-	-	-	-	PROJECT
0010	105+50	-	285+77	PROJECT	-	-	-	-	20,436	-	YELLOW / CENTERLINE
0010	105+50	-	285+77	PROJECT	-	-	35,084	-	-	-	WHITE / LANE EDGE
0010	105+50	-	285+77	PROJECT	-	-	11,156	-	-	-	YELLOW / SOLID-DASHED
0010	105+50	-	285+77	PROJECT	-	-	1,465	-	-	-	YELLOW / DASHED
0010	105+50	-	285+77	PROJECT	-	-	7,814	-	-	-	YELLOW / SOLID-SOLID
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	1,645	-	-	-	-	1,000	STAGE 1
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	1,677	-	-	-	-	-	STAGE 2
0010	171+74	-	173+45	ARROWHEAD DRIVE	-	-	-	171	-	-	RIGHT TURN LANE
				TOTAL 0010	21,244	48	55,520	171	20,436	1,000	

CATEGORY	STATION	TO	STATION	LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	661.0101.01 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES 02. SUBGRADE IMPROVEMENT AREA EACH	REMARKS
0010	105+50	-	285+77	PROJECT	-	-	-	-	-	36	-	BOP & EOP
0010	105+50	-	285+77	PROJECT	-	-	-	1,495	-	-	-	ADVANCE WARNING SIGNING - 65 DAYS
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	384	80	112	112	-	-	-	STAGE 1 - 4 DAYS
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	297	60	72	87	-	-	-	STAGE 2 - 3 DAYS
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	-	-	-	-	-	-	1	TRAILER MOUNTED TRAFFIC SIGNALS
0010	111+25	-	112+25	LAKEVIEW ROAD	-	-	-	-	1	-	-	STOP SIGN
0010	105+50	-	285+77	PROJECT	68	14	18	169	-	-	-	UNDISTRIBUTED
				TOTAL 0010	749	154	202	1,863	1	36	1	

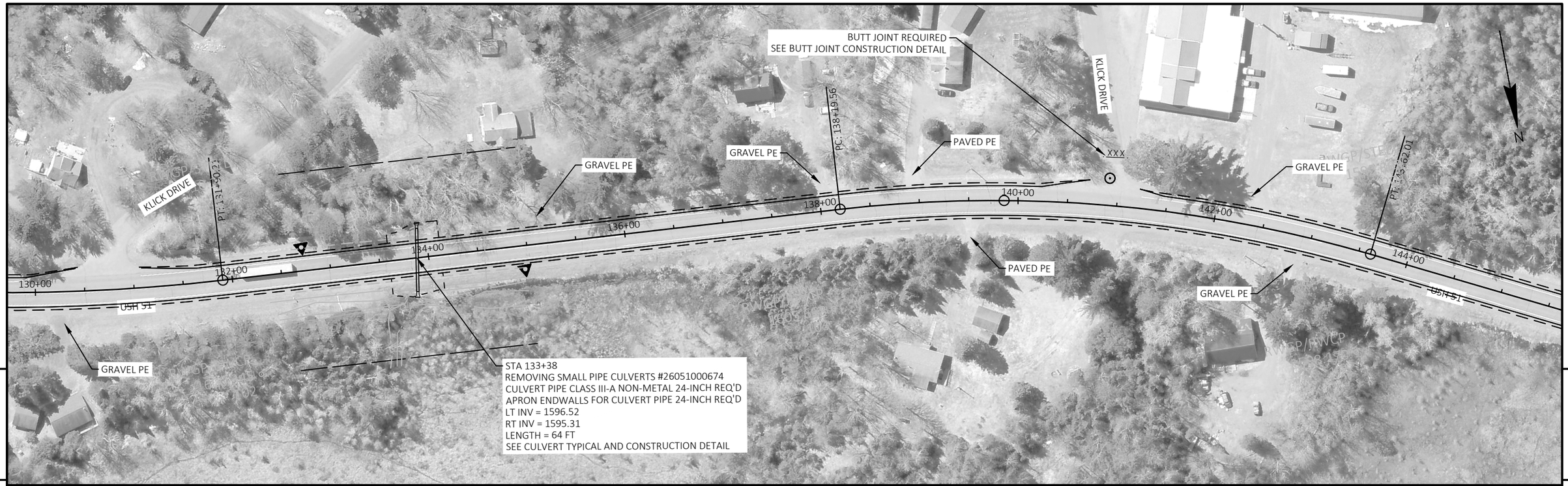
CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	REMARKS
0010	105+50	-	285+77	PROJECT	-	-	-	17,542	-
0010	110+89	-	110+89	CULVERT 672	-	-	1	-	-
0010	123+27	-	123+27	CULVERT 673	-	-	1	-	-
0010	133+88	-	133+88	CULVERT 674	-	-	1	-	-
0010	148+22	-	148+22	CULVERT 675	-	-	1	-	-
0010	151+75	-	151+75	CULVERT 676	-	-	1	-	-
0010	157+53	-	157+53	CULVERT 677	-	-	1	-	-
0010	186+04	-	186+04	CULVERT 678	-	-	1	-	-
0010	238+82	-	238+82	CULVERT 679	-	-	1	-	-
0010	253+05	-	253+05	CULVERT 680	-	-	1	-	-
0010	269+37	-	269+37	CULVERT 681	-	-	1	-	-
0010	105+84	-	111+00	SUBGRADE IMPROVEMENT AREA	516	516	-	-	-
				TOTAL 0010	516	516	10	17,542	

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0180.01 SPECIAL (10. PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSING) SY	REMARKS
0010	173+00	-	173+00	PROJECT	108	SNOWMOBILE CROSSING
				TOTAL 0010	109	



PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 38	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 01
PLOT DATE : 1/17/2024 3:36 PM
PLOT BY : GETCHELL, KYLE JAMES
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 39	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 02

PLOT DATE : 1/17/2024 3:36 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5

5

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 40	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 03

PLOT DATE : 1/17/2024 3:37 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5

5

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 41	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 04

PLOT DATE : 1/17/2024 3:37 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

PT: 220+39.78

NET EXCEPTION TO CL LENGTH
TURTLE CREEK BRIDGE (B-26-16)
STA 220+50 TO STA 223+41

PAVED PE

GRAVEL PE

220+00 222+00 224+00 226+00 228+00 230+00 232+00 234+00

USH 51

USH 51

BUTT JOINT REQUIRED
SEE BUTT JOINT CONSTRUCTION DETAIL

XXXX

WEST TURTLE RAPIDS LANE

N

5

5

BUTT JOINT REQUIRED
SEE BUTT JOINT CONSTRUCTION DETAIL

ROBIN DRIVE

XXXX

PI: 236+42.74

PI: 246+27.25

236+00 238+00 240+00 242+00 244+00 246+00 248+00 250+00

USH 51

USH 51

GRAVEL PE

STA 238+82
REMOVING SMALL PIPE CULVERTS #26051000679
CULVERT PIPE CLASS III-A NON-METAL 24-INCH REQ'D
APRON ENDWALLS FOR CULVERT PIPE 24-INCH REQ'D
LT INV = 1593.60
RT INV = 1594.74
LENGTH = 68 FT
SEE CULVERT TYPICAL AND CONSTRUCTION DETAIL

XXXX

BUTT JOINT REQUIRED
SEE BUTT JOINT CONSTRUCTION DETAIL

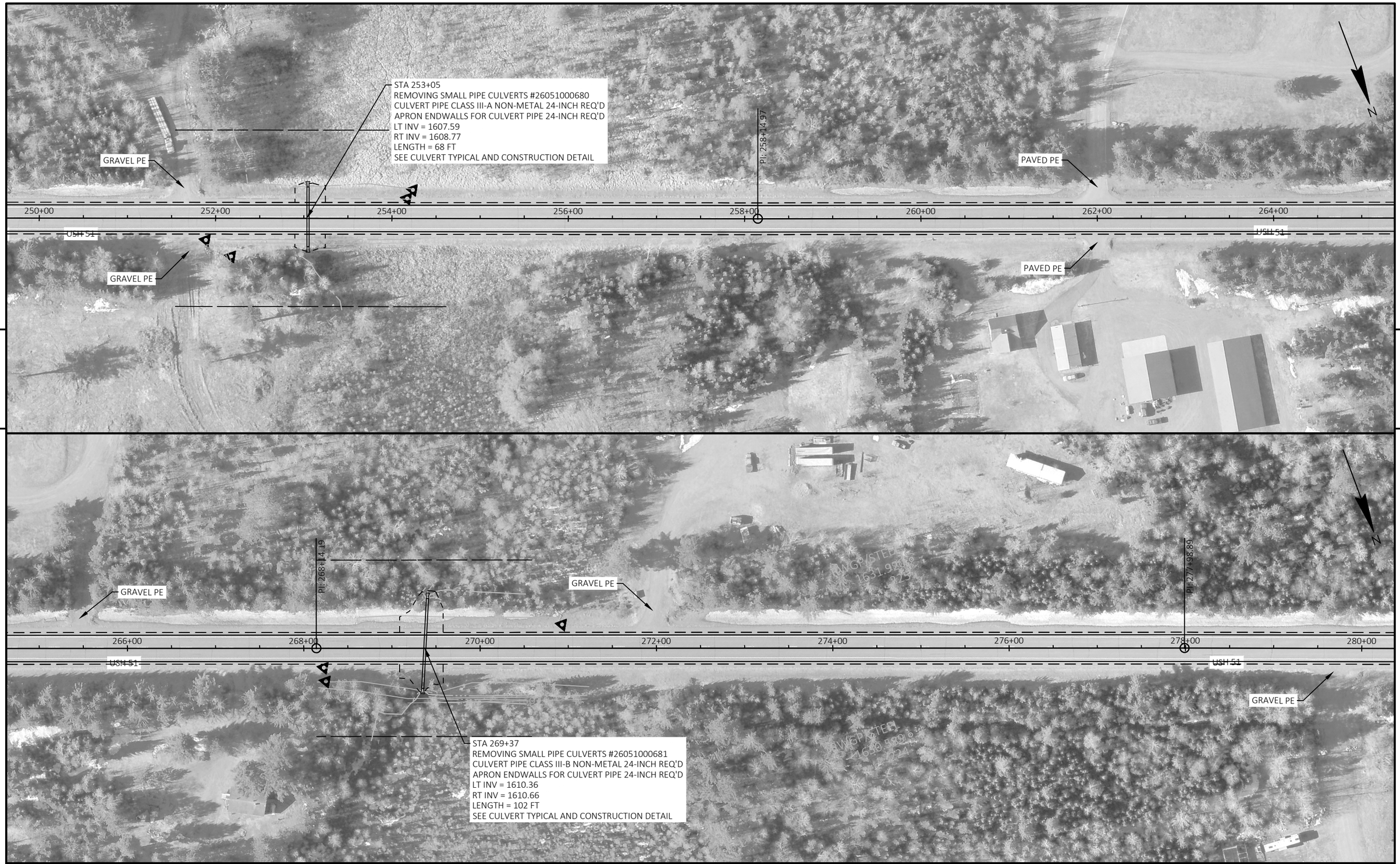
THREE TEN ROAD

N

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 42	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 05

PLOT DATE : 1/17/2024 3:38 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT



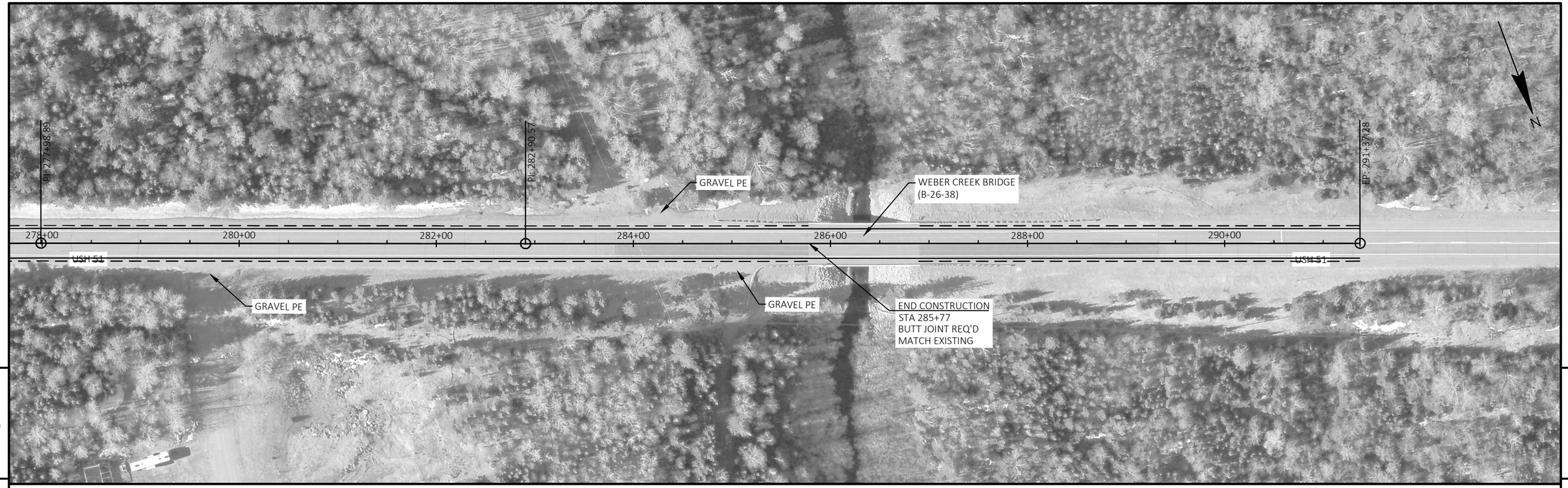
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PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 43	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 06

PLOT DATE : 1/17/2024 3:38 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT



5

5

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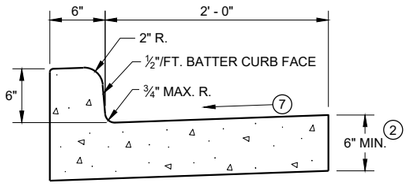
PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	PLAN	SHEET 44	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\050101-PN.DWG
LAYOUT NAME - 07

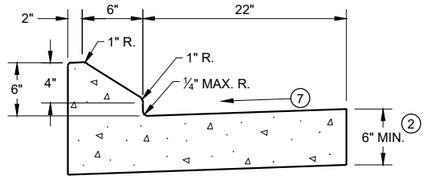
PLOT DATE : 1/17/2024 3:38 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:100 FT

Standard Detail Drawing List

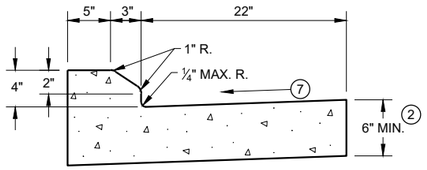
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09F	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
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C19-08A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D33-09	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D48-01	TRAFFIC CONTROL, LANE SHIFT IN FLAGGING OPERATION



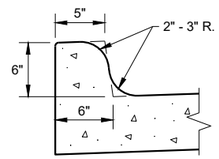
TYPES A (1) & D



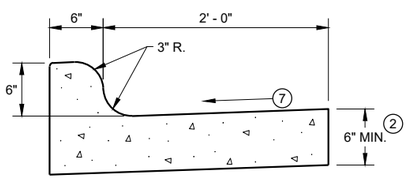
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

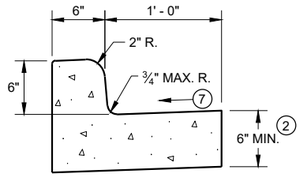


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



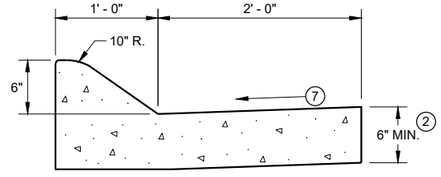
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

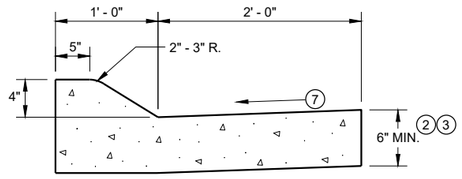


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

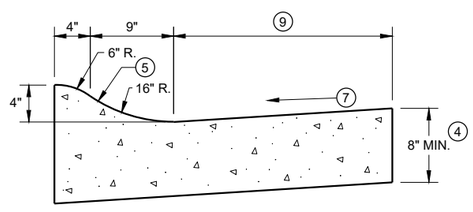


6" SLOPED CURB TYPES A (1) & D



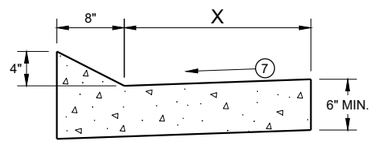
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

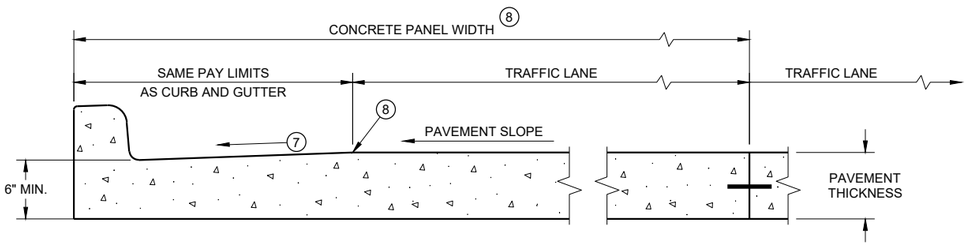


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

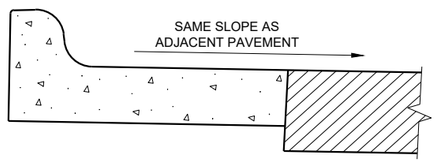
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



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) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES 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.

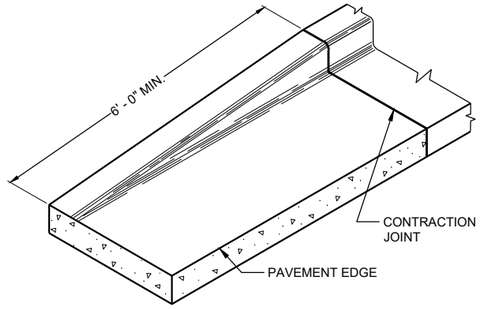
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

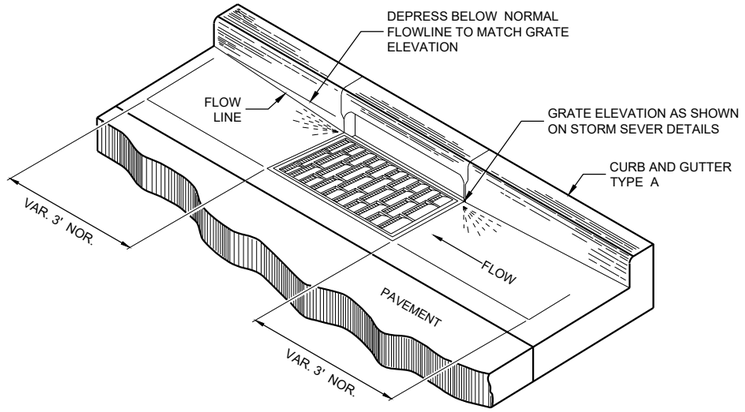
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 23a



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.

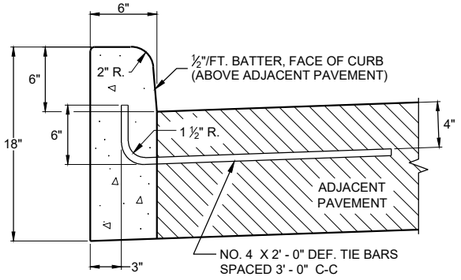
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

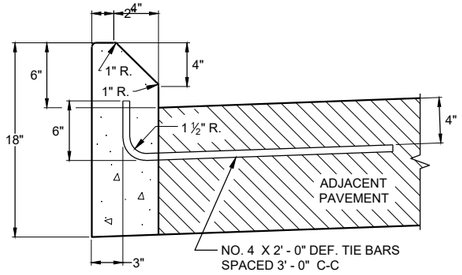
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

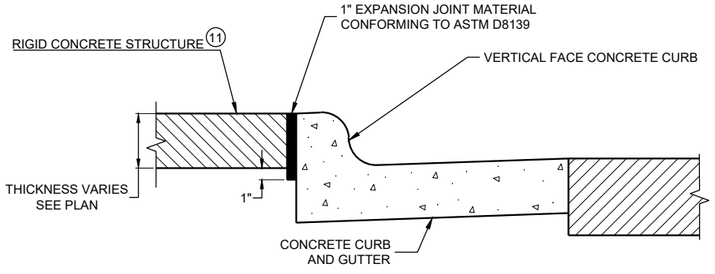


TYPES A (1) & D

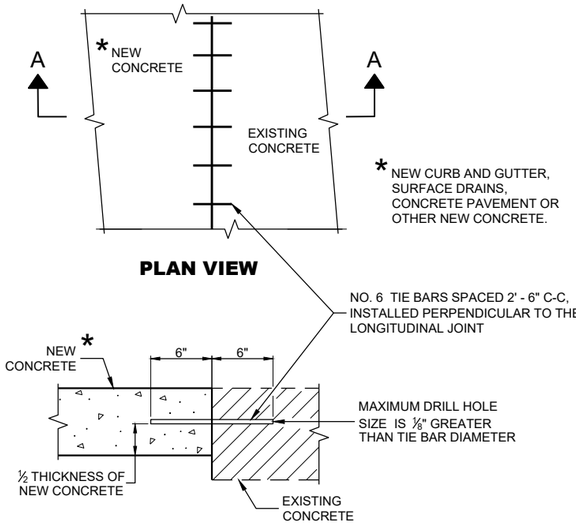


TYPES G (1) & J

CONCRETE CURB



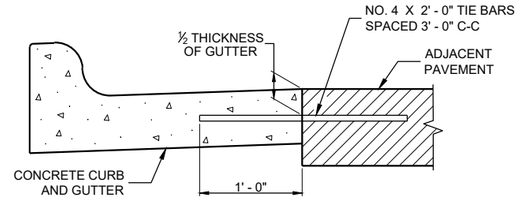
EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



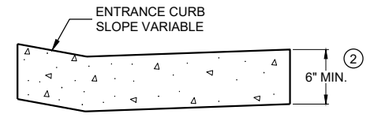
PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

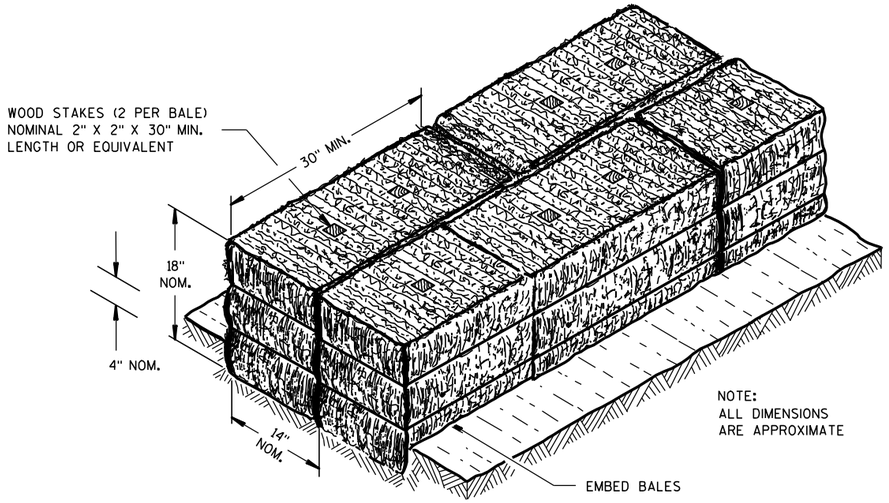
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

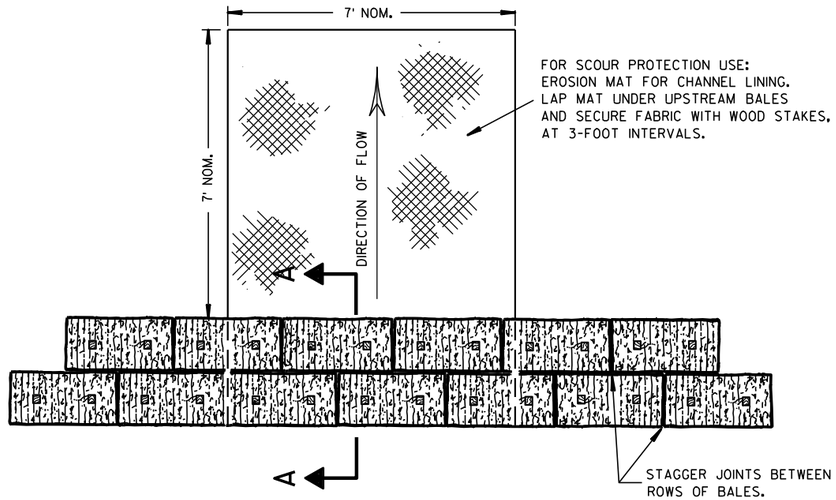
FHWA

6

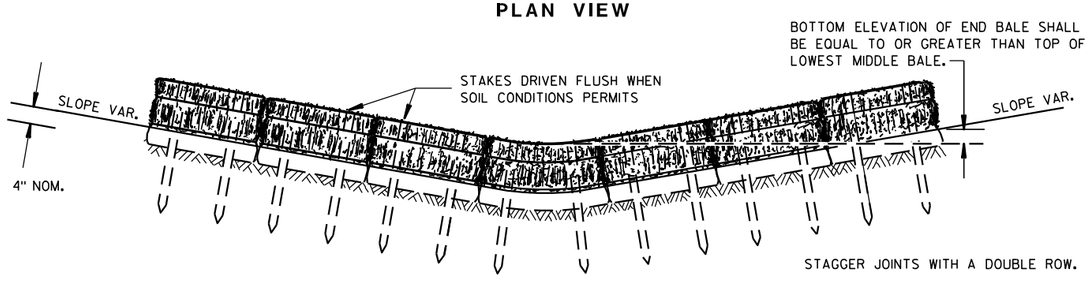
SDD08D01 - 23b



SECTION A-A



PLAN VIEW



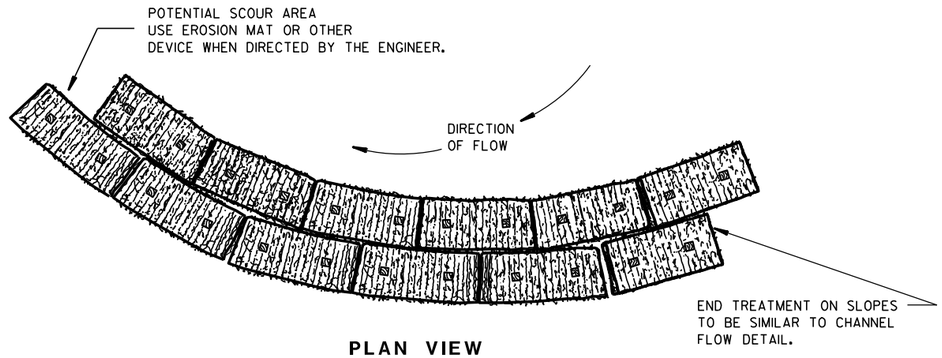
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

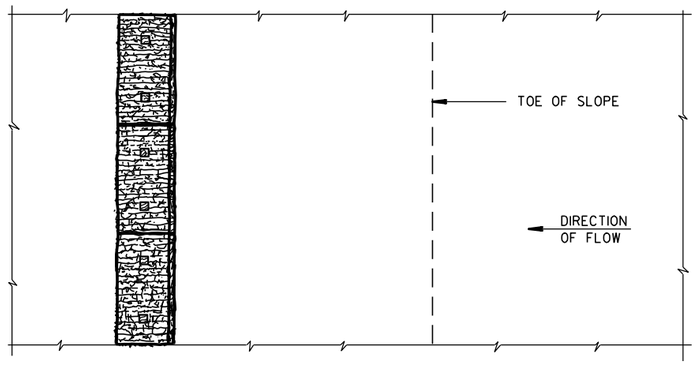
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

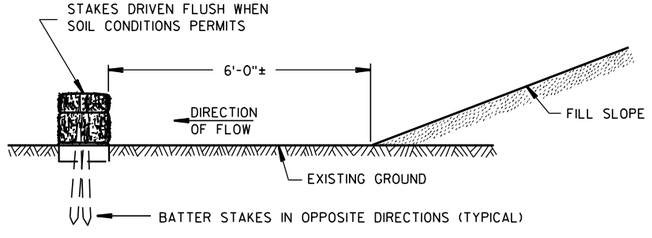


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

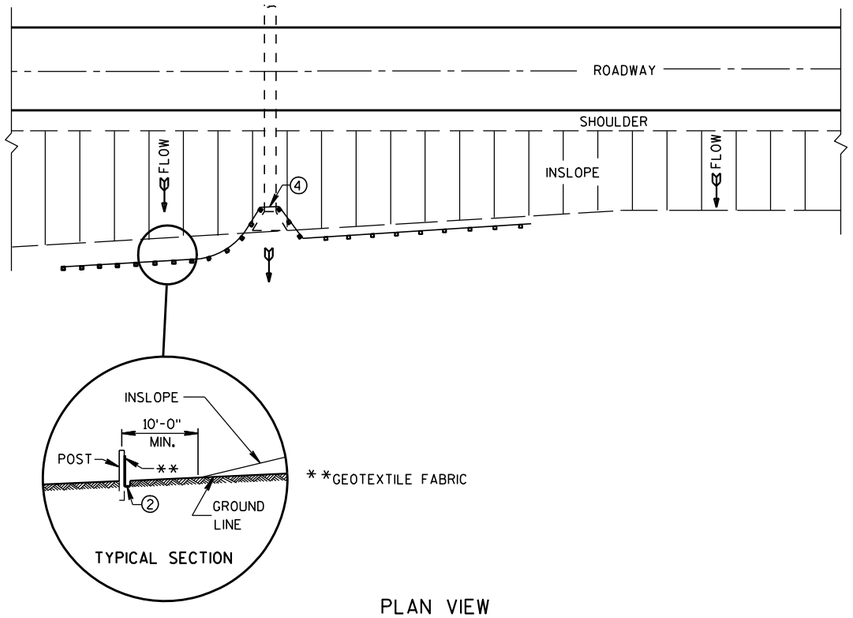
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

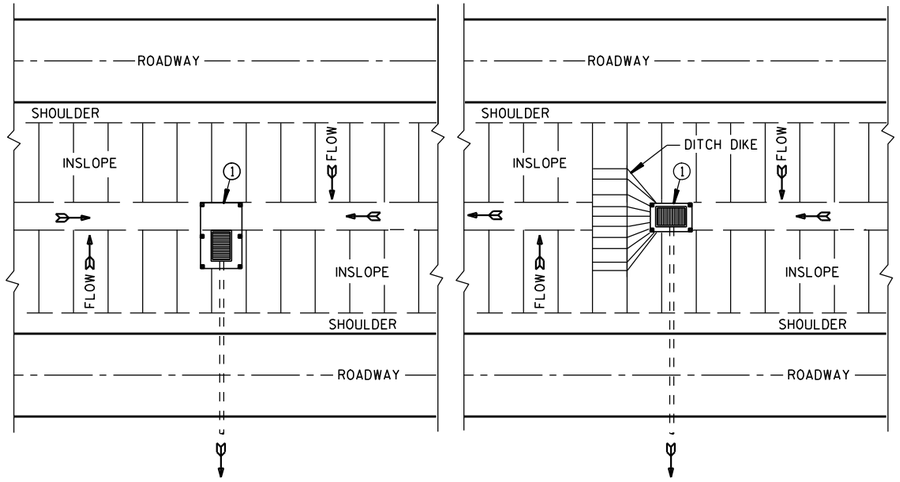
6/04/02 DATE — /S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

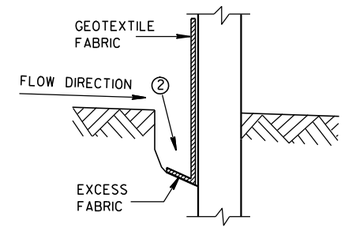
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

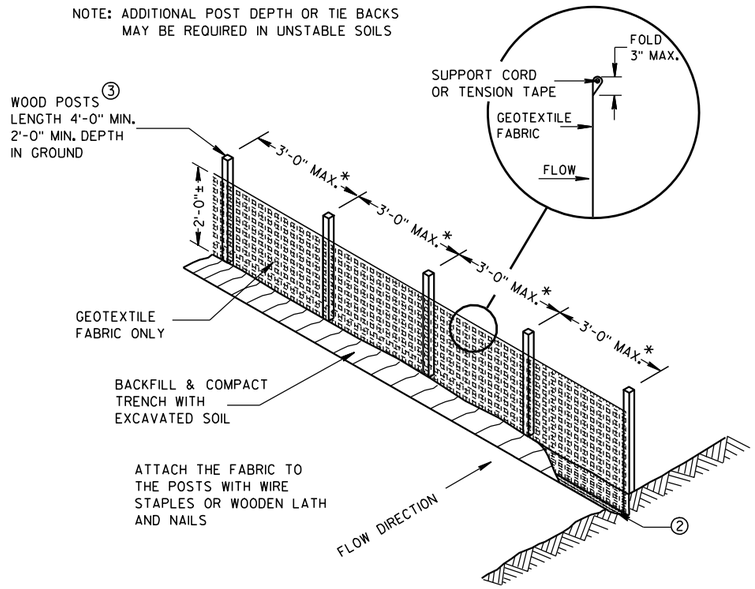
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

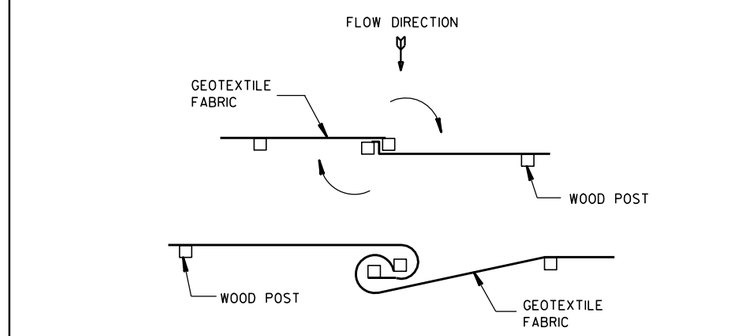
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



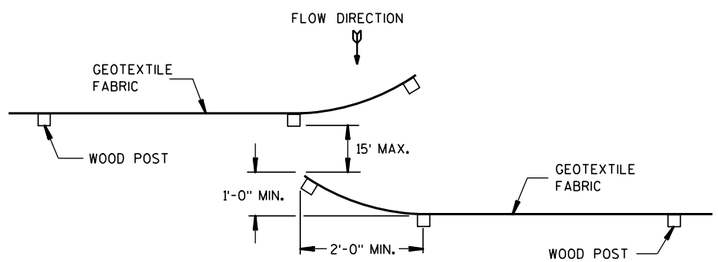
TRENCH DETAIL



SILT FENCE

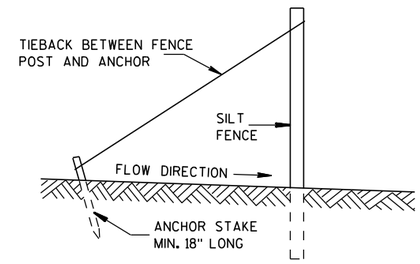


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

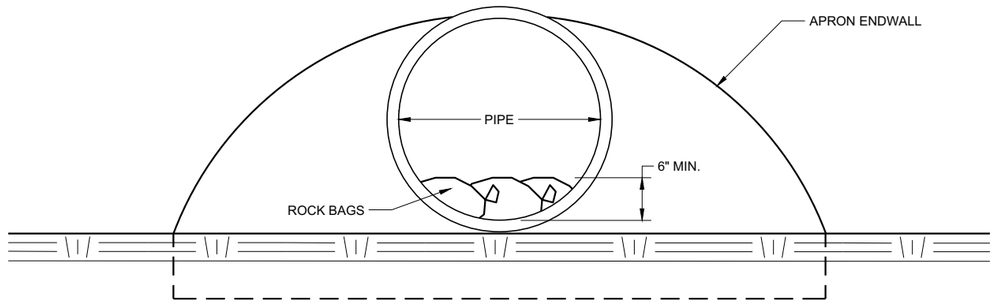
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

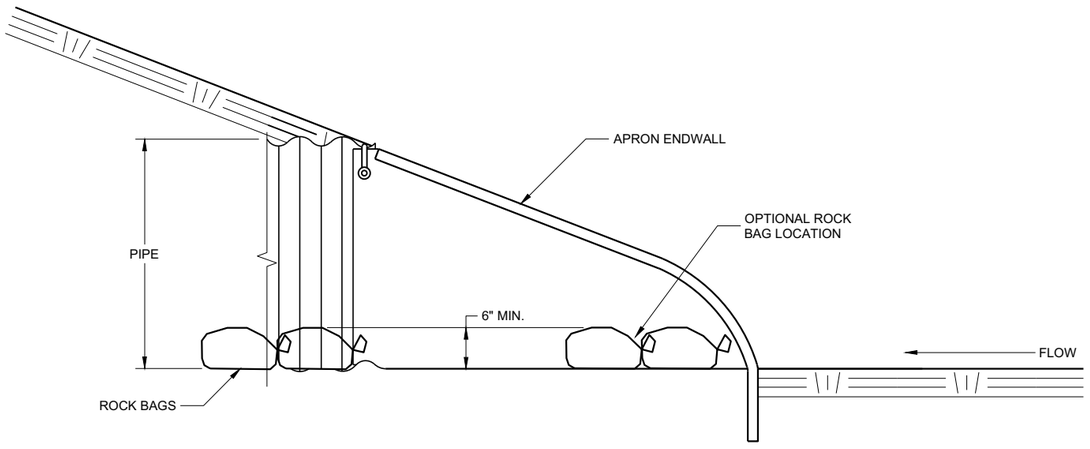
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



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

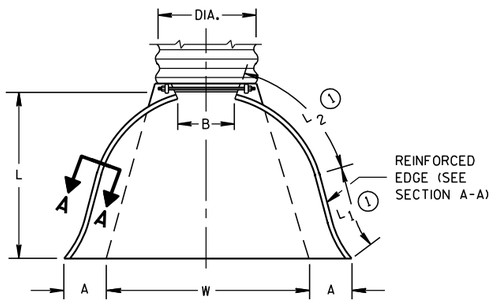
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

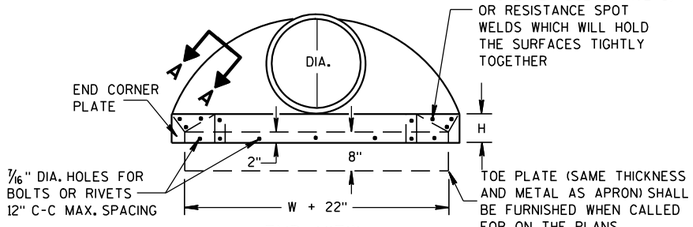
REINFORCED CONCRETE APRON ENDWALLS

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

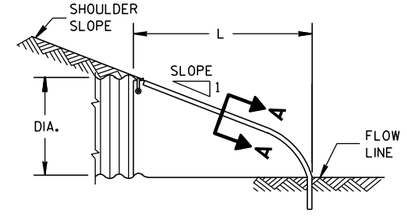
*MINIMUM
**MAXIMUM



PLAN VIEW

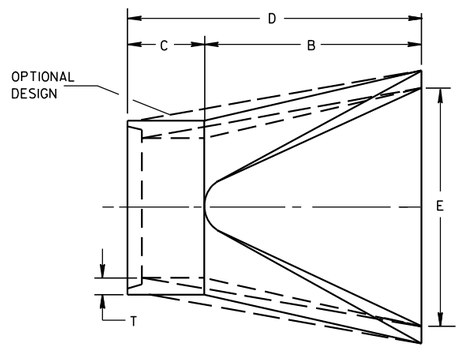


END VIEW

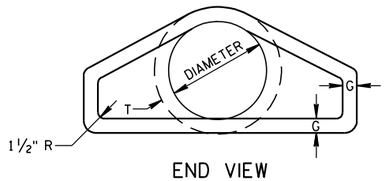


SIDE ELEVATION

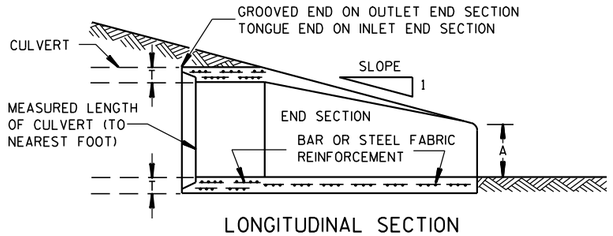
METAL ENDWALLS



PLAN

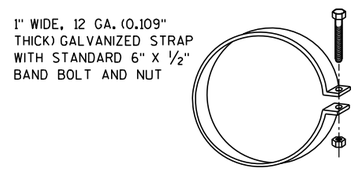


END VIEW



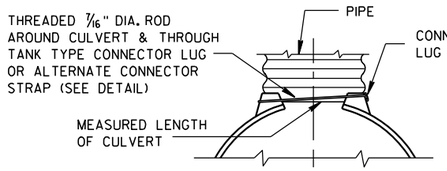
LONGITUDINAL SECTION

CONCRETE ENDWALLS

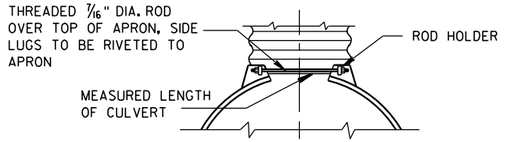


ALTERNATE FOR TYPE 1 CONNECTION

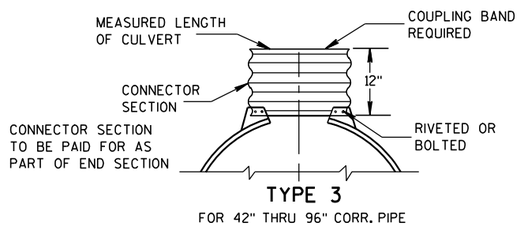
END SECTION CONNECTOR STRAP



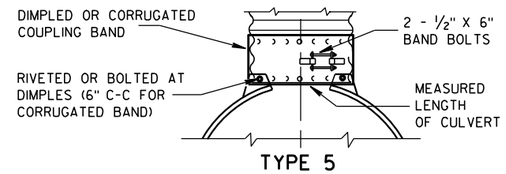
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

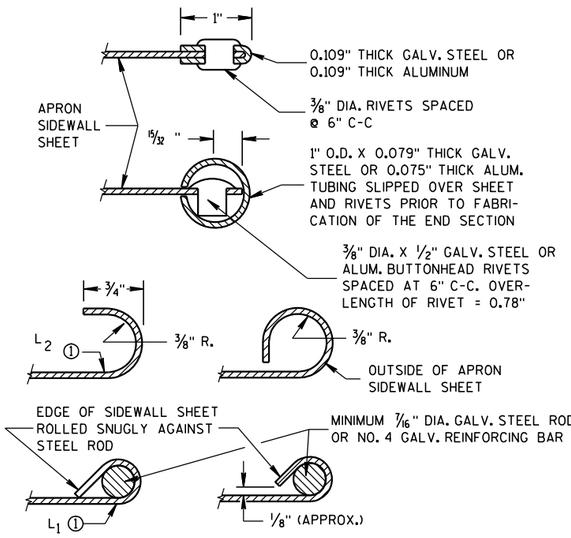
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

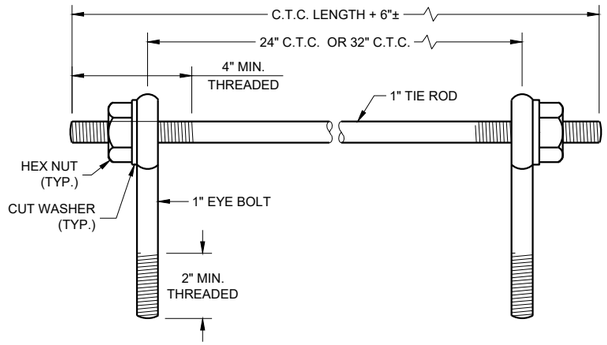
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

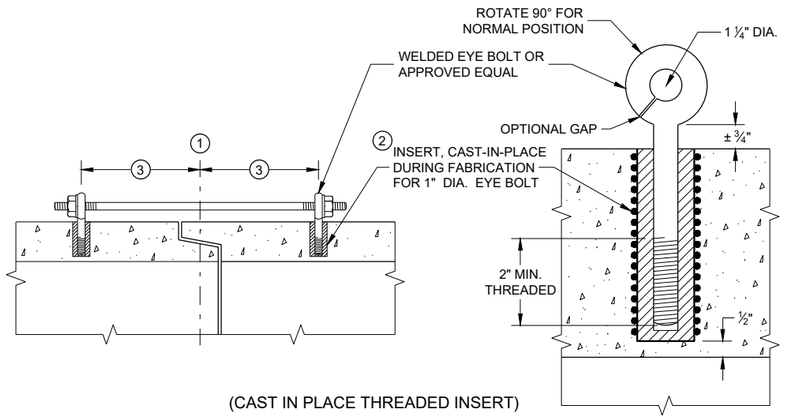
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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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) CENTER LINE 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.

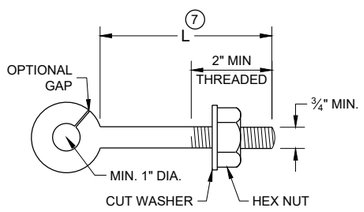
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

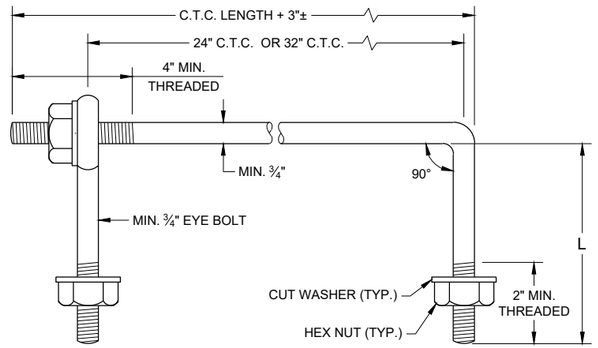
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

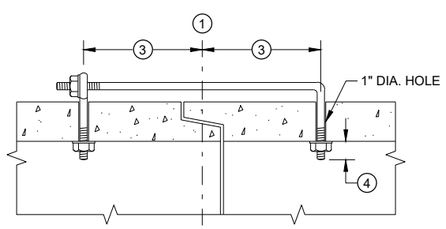


EYE BOLT (7)

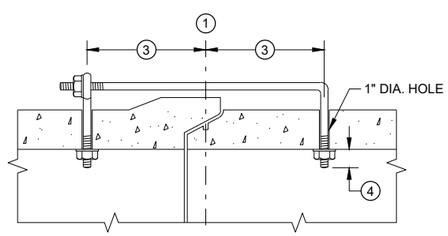
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

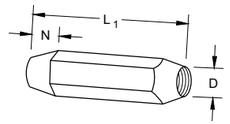
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

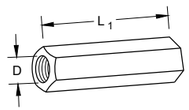
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



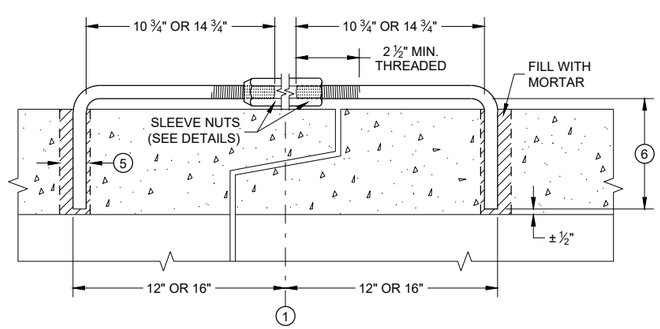
TAPERED



PLAIN

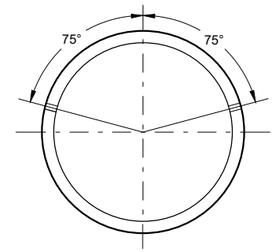
RIGHT AND LEFT THREADS

SLEEVE NUTS



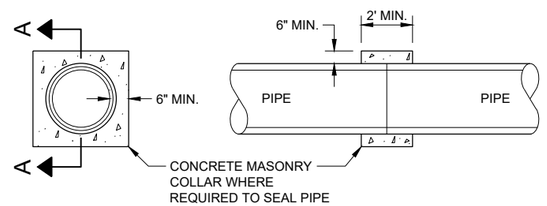
LONGITUDINAL SECTION

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

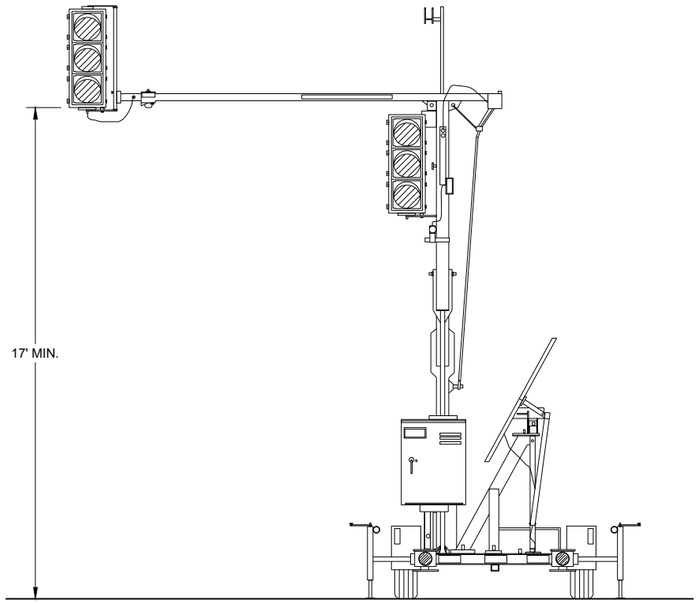
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD 08F04 - 08

SDD 08F04 - 08

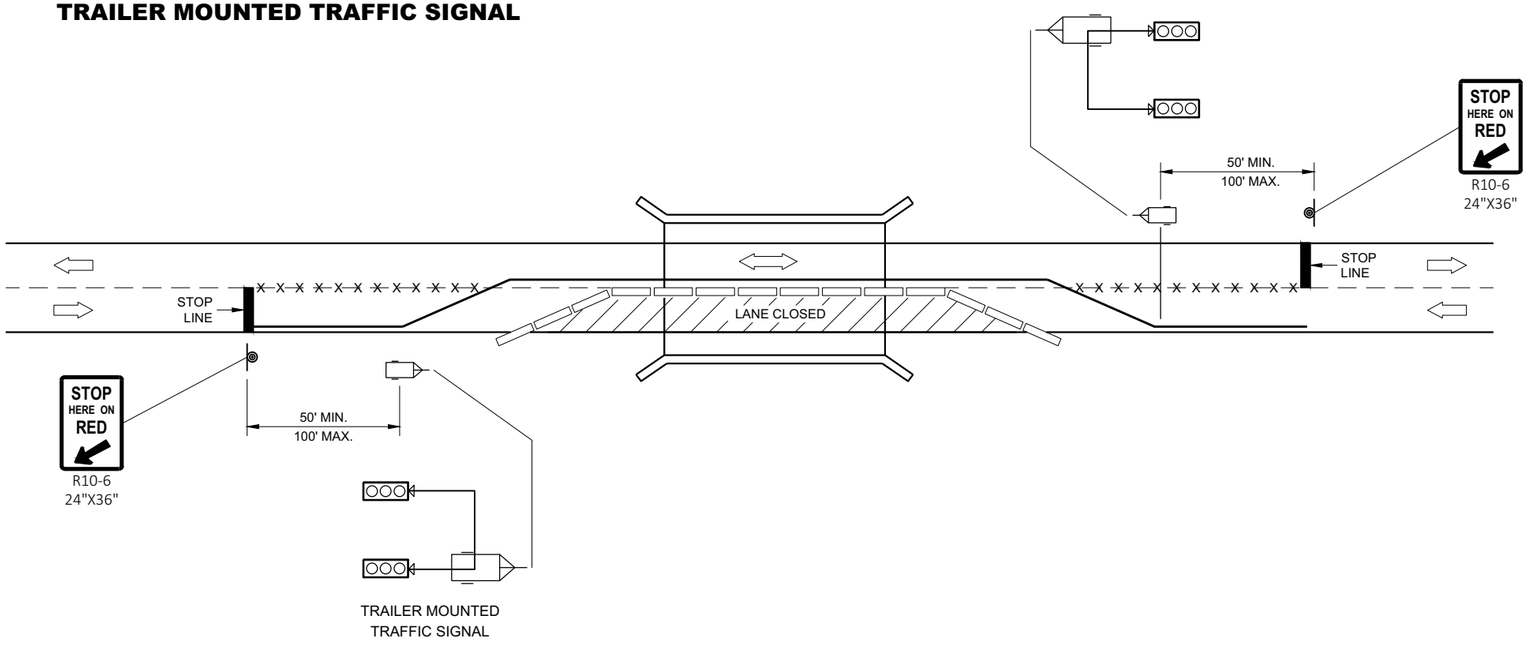


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD09G02 - 05c

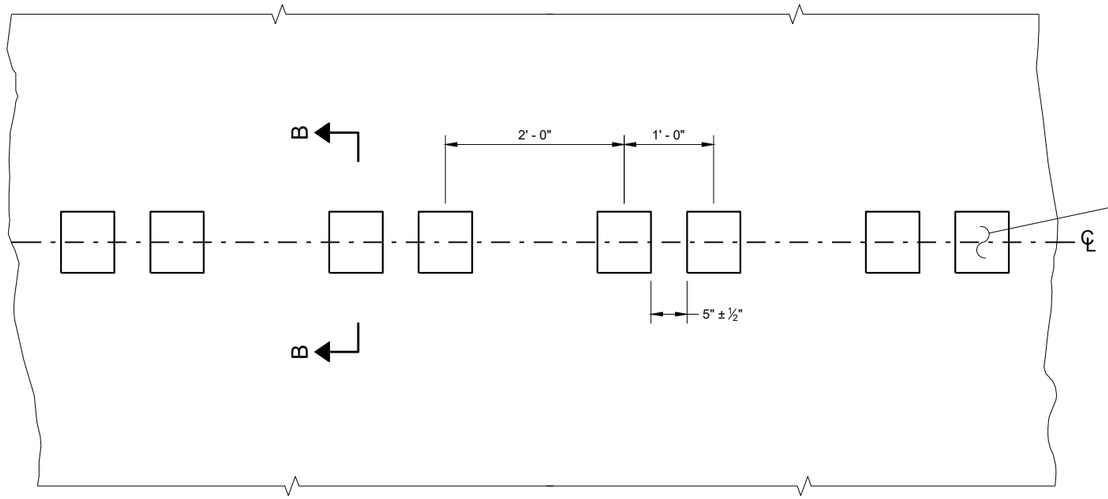
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SDD09G02 - 05c

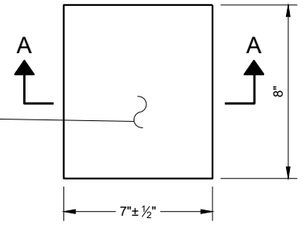
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A11 SHEETS "d" AND "e".

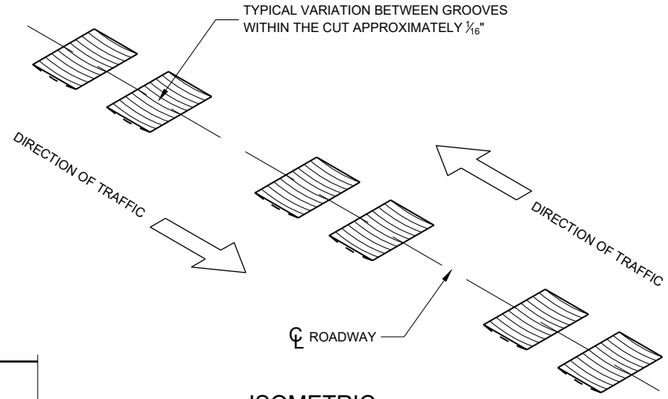
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



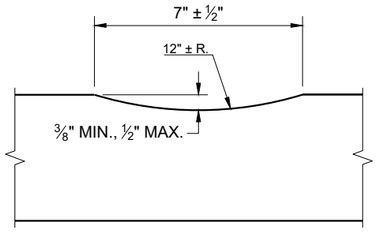
PLAN DETAIL VIEW



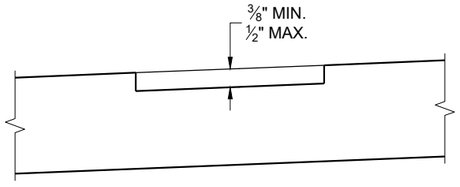
PLAN VIEW
(SINGLE GROOVE)



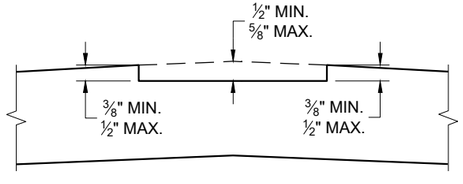
ISOMETRIC



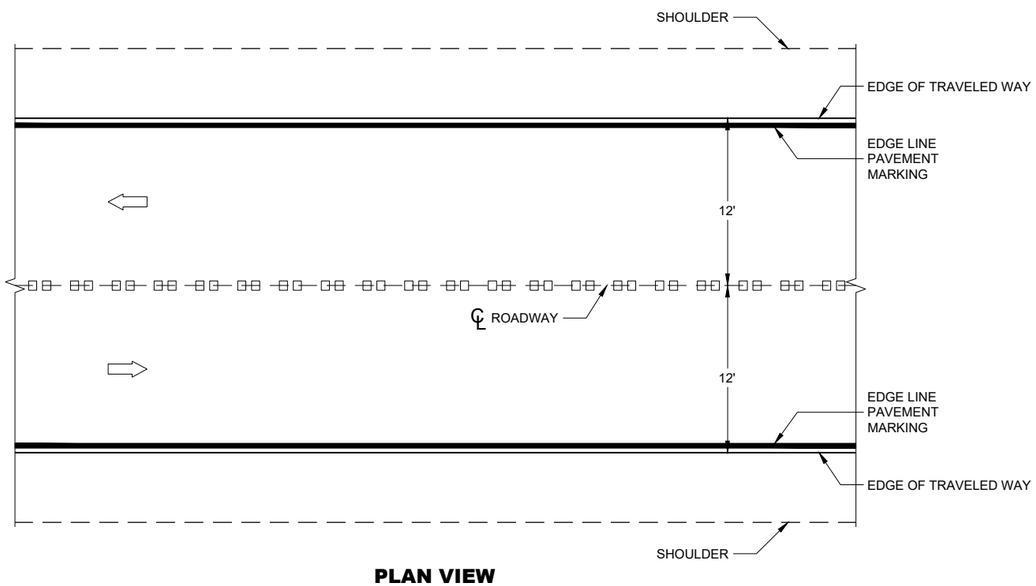
SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



PLAN VIEW

CENTERLINE RUMBLE STRIPS - ASPHALT

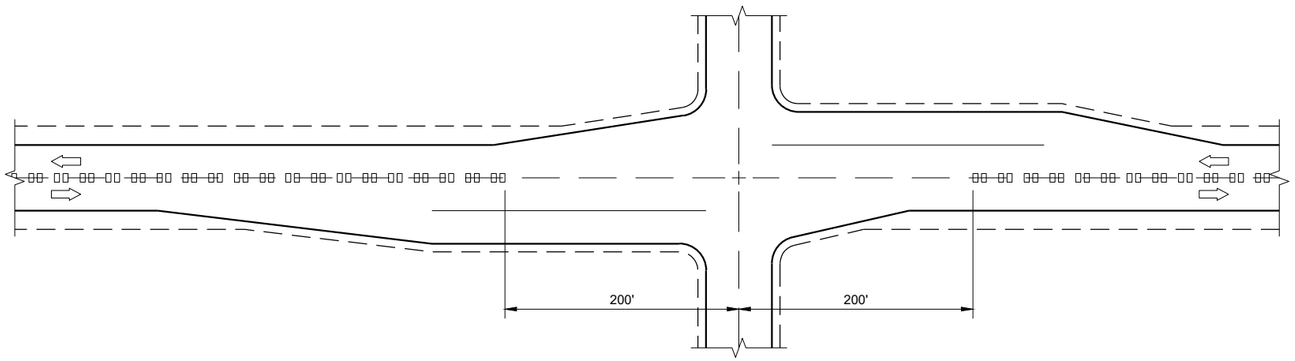
CENTERLINE RUMBLE STRIPS - ASPHALT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	54

6

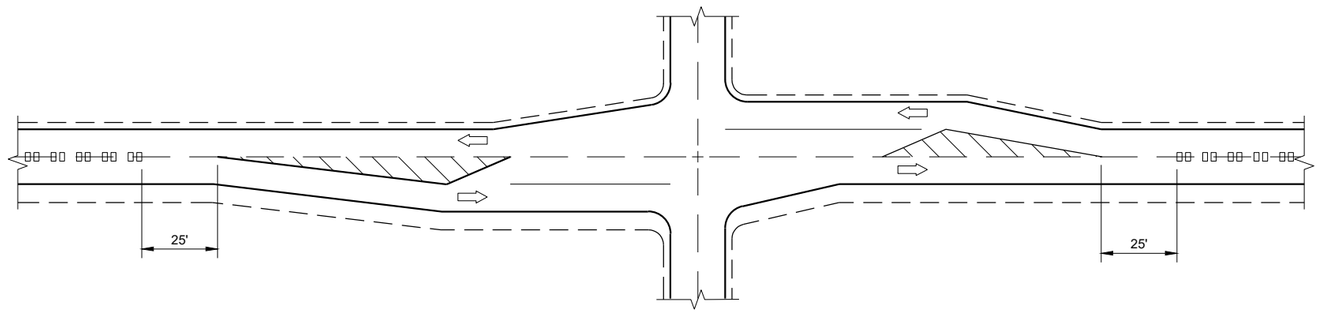
SDD 13A11 - 04a

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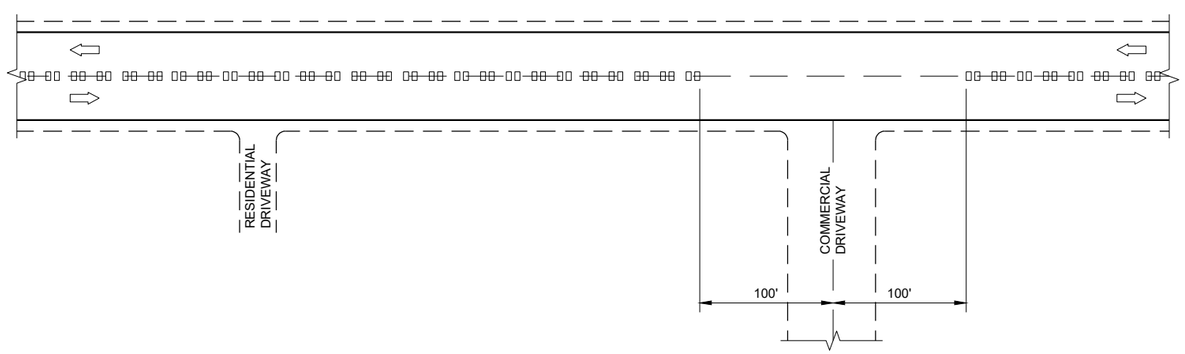
SDD 13A11 - 04a



CENTERLINE GROOVES AT INTERSECTIONS



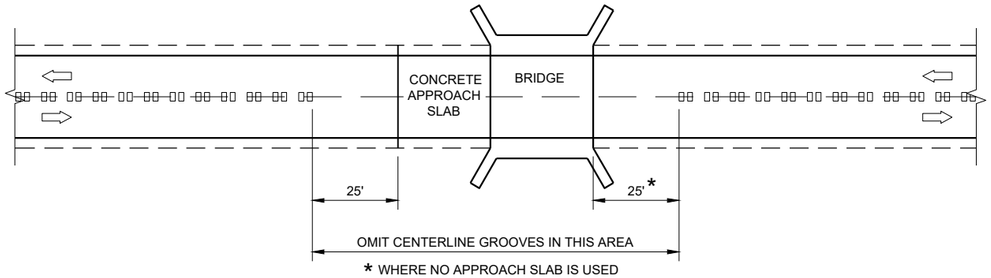
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



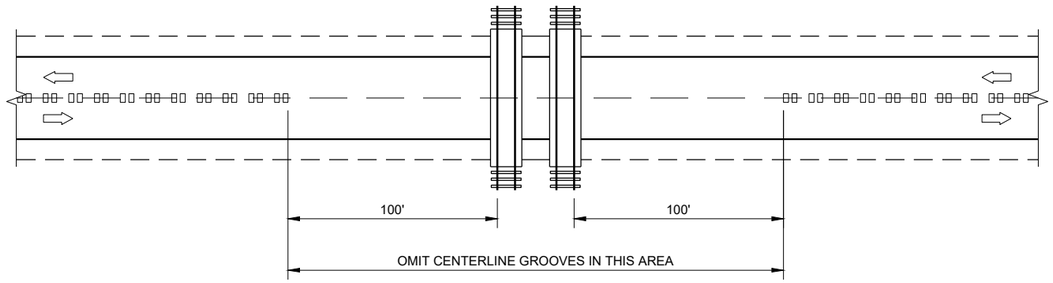
CENTERLINE GROOVES AT DRIVEWAYS (1)

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

CENTER LINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAIL ROADS

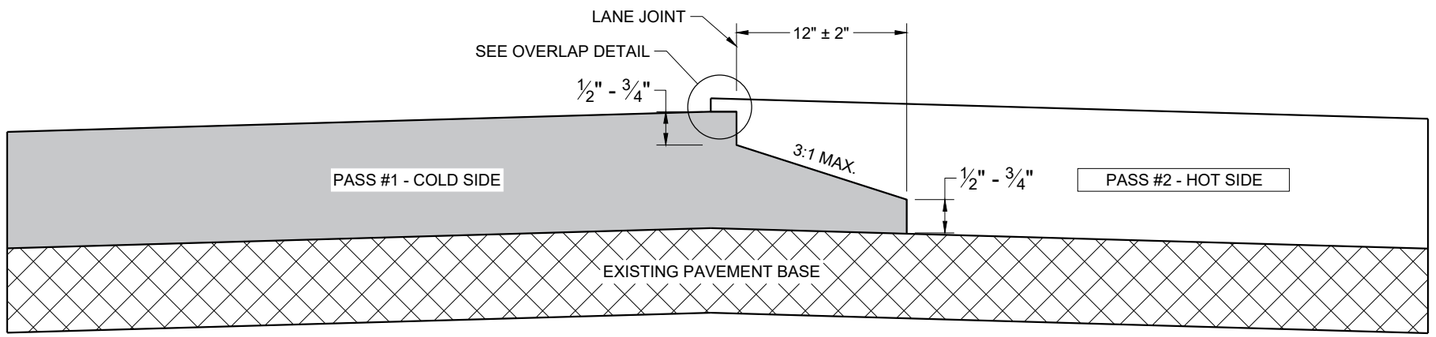
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ John Jenkins — ROADWAY STANDARDS DEVE ENGINEER

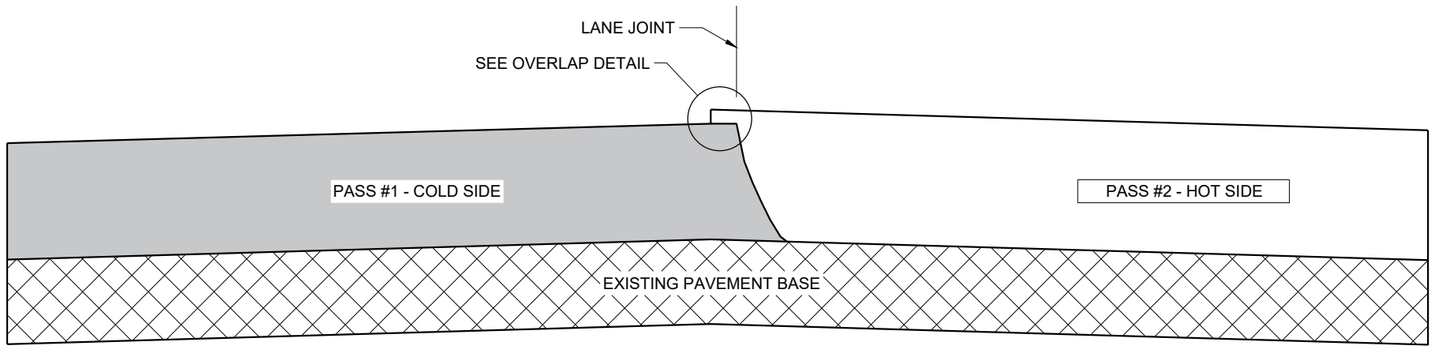
FHWA

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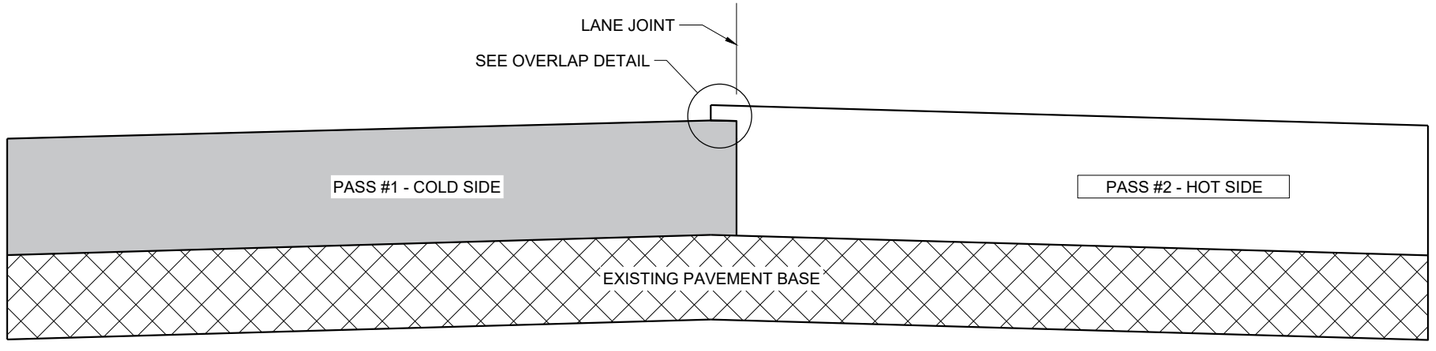
SDD 13A11 - 04d



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

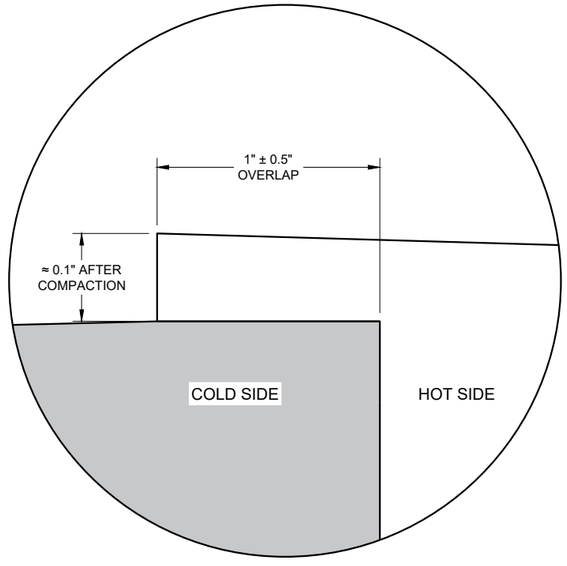
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

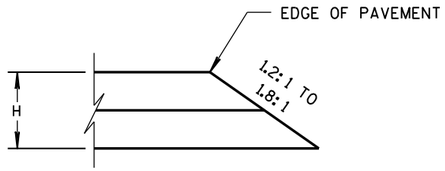
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

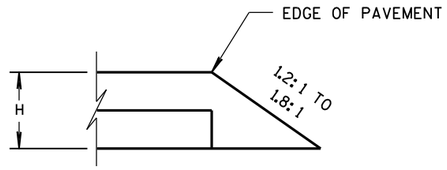
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



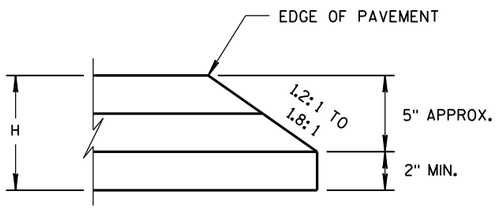
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



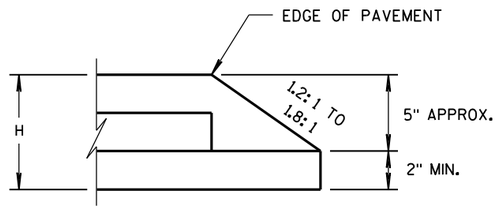
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

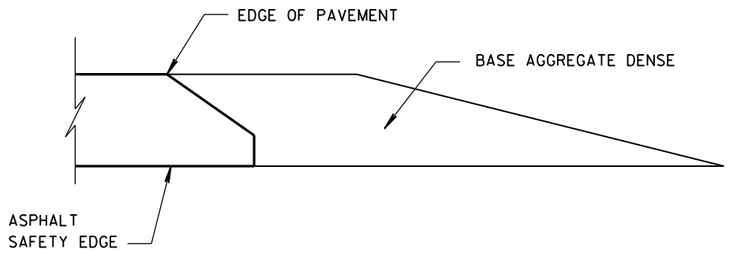
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

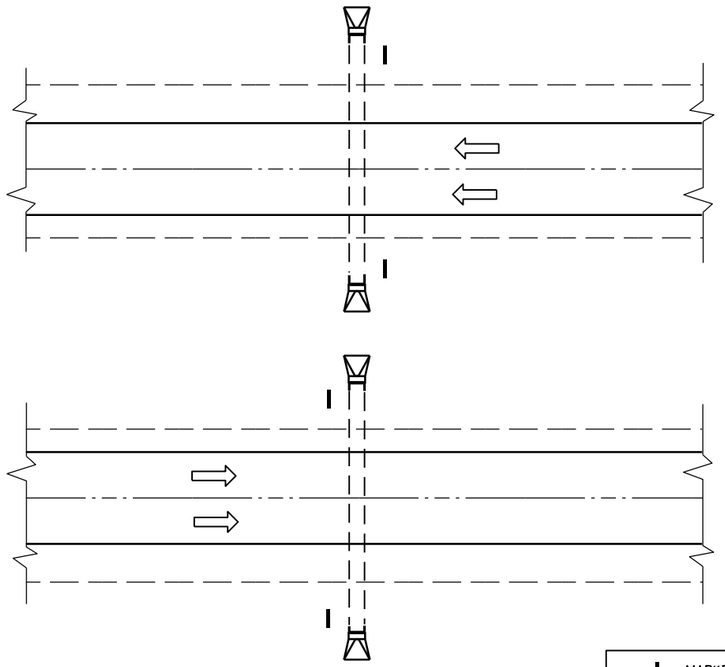
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

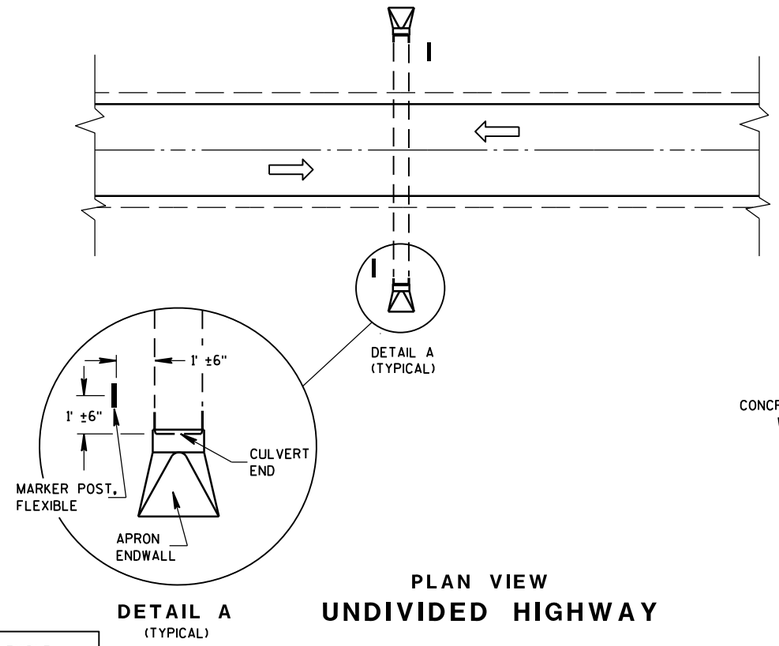
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

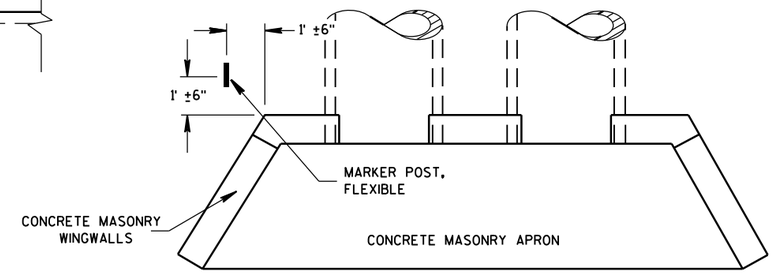
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

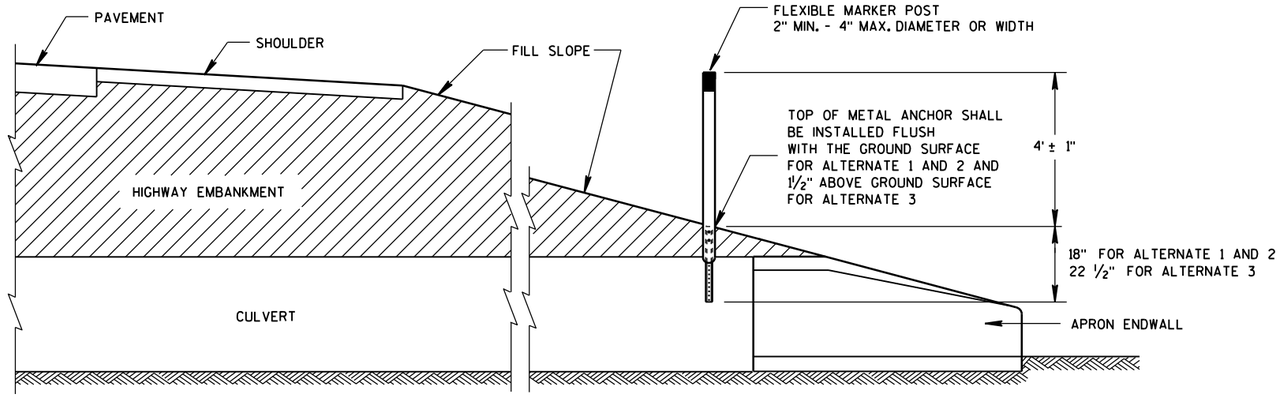
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

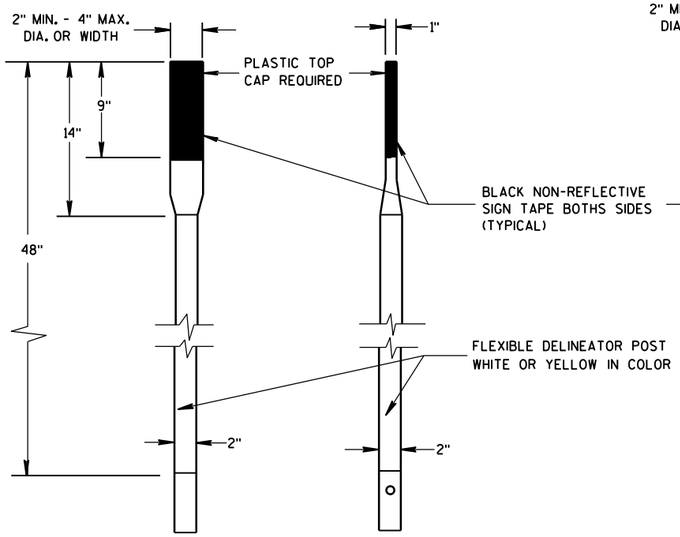
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

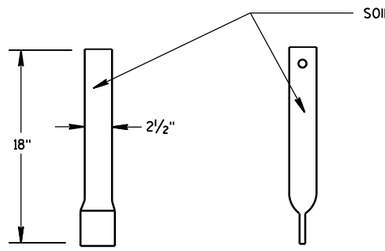
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S.D.D. 15 A 3-2a

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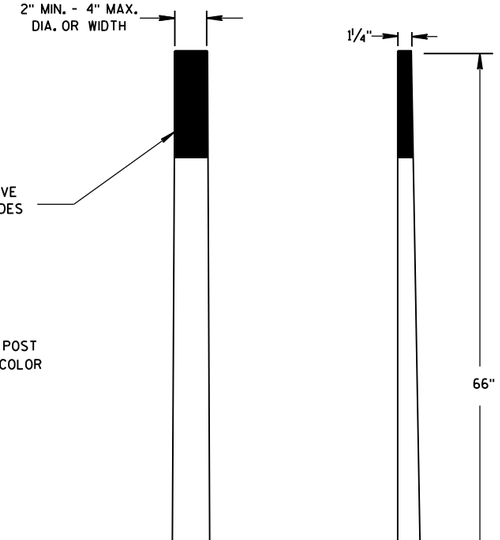
S.D.D. 15 A 3-2a





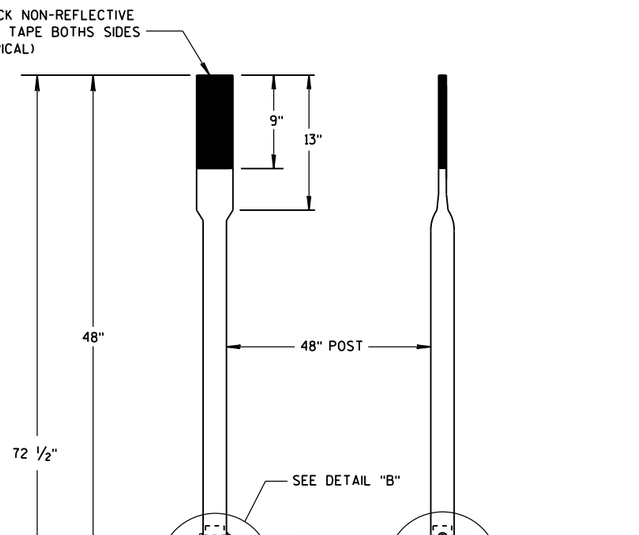
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

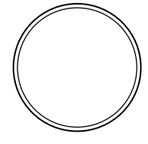
ALTERNATE 2



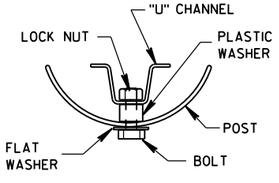
FRONT VIEW SIDE VIEW

ALTERNATE 3

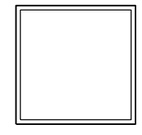
FLEXIBLE MARKER POSTS



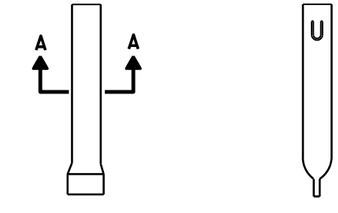
SECTION A-A



SECTION B-B

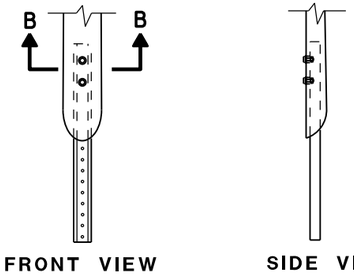


SECTION C-C



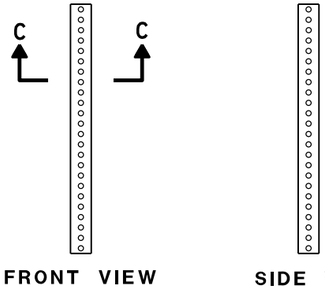
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

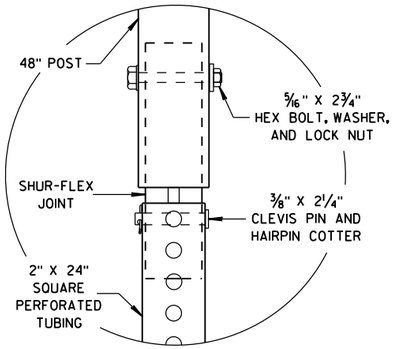
ALTERNATE 2



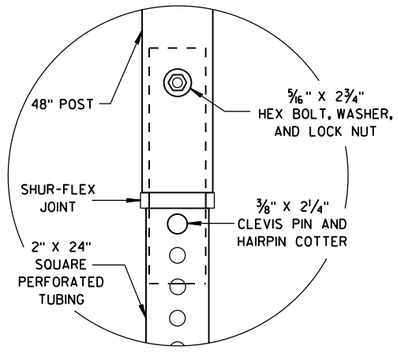
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



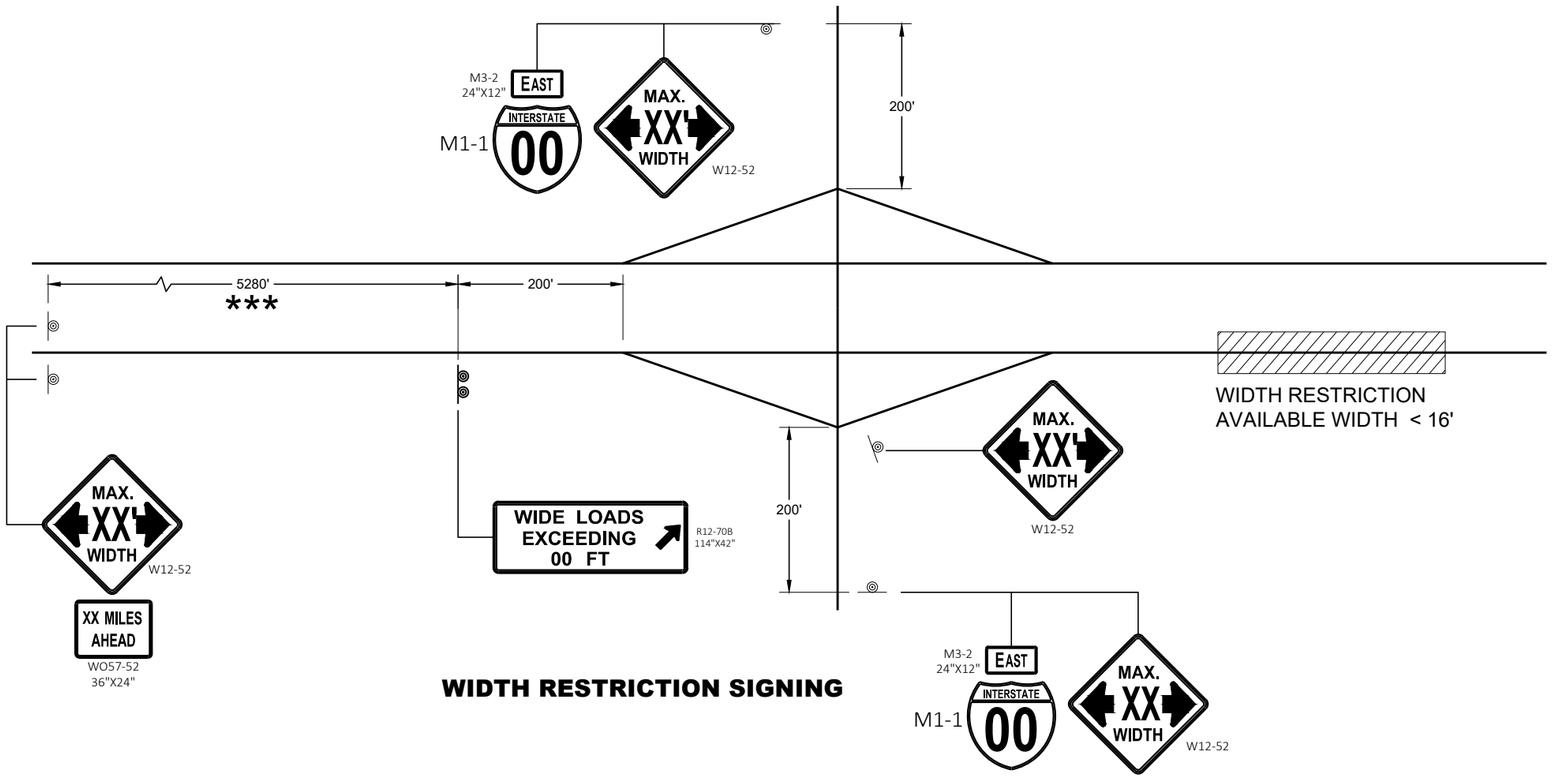
DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

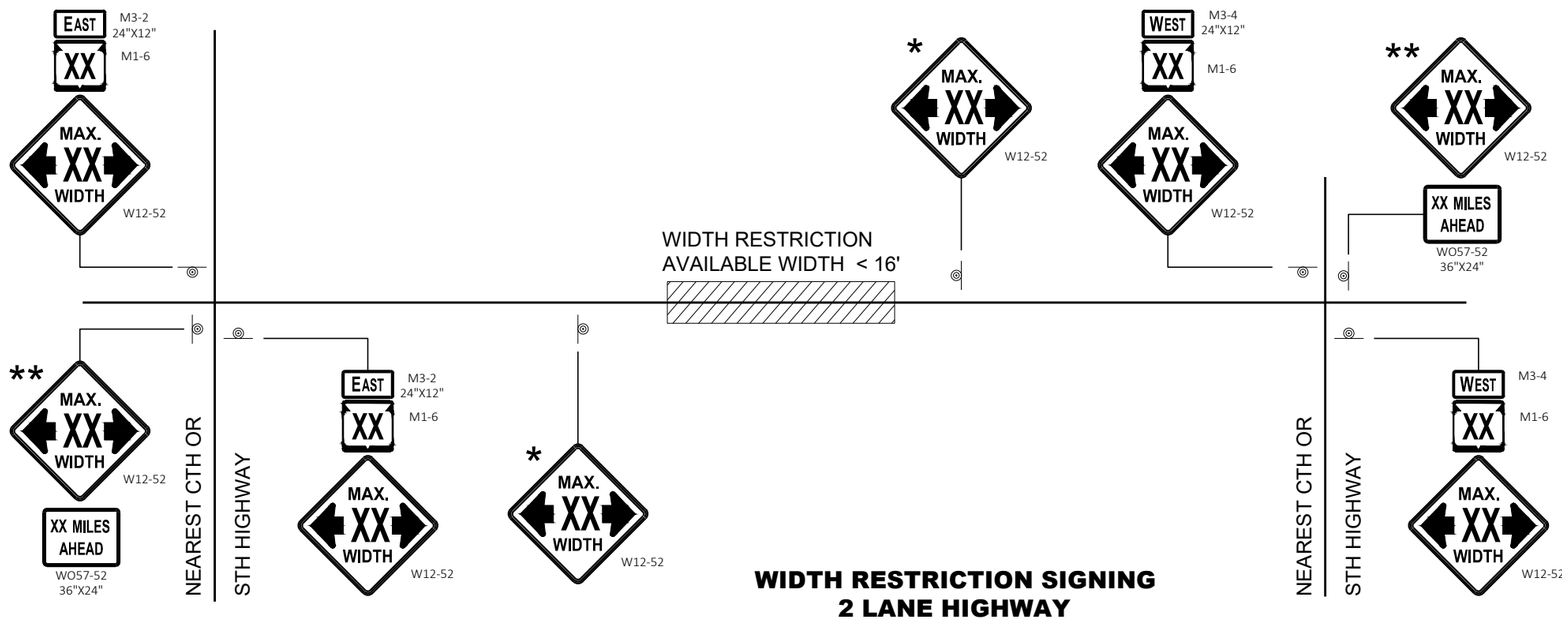
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

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

ADVANCED WIDTH RESTRICTION SIGNING

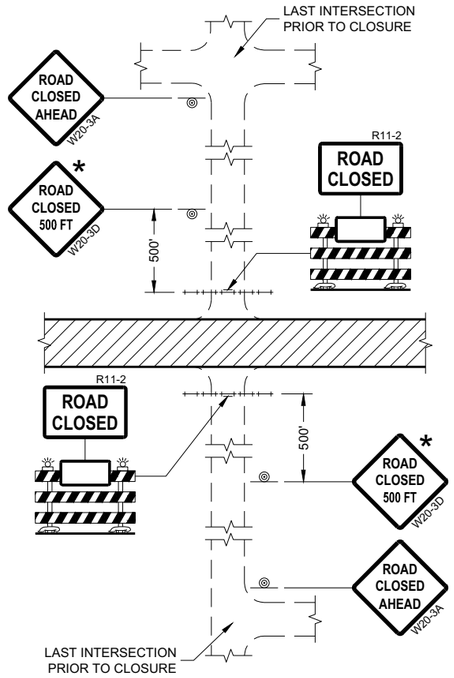
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

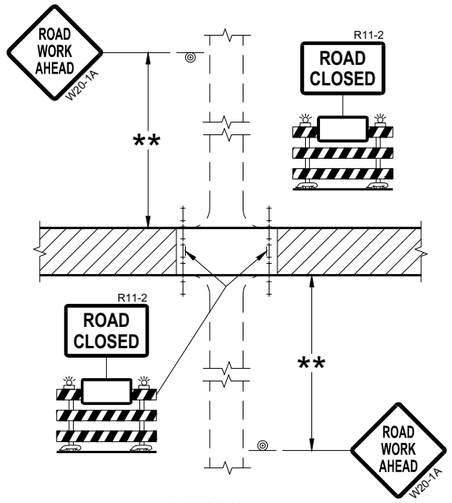
FHWA

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SDD 15C02 - 09f



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.

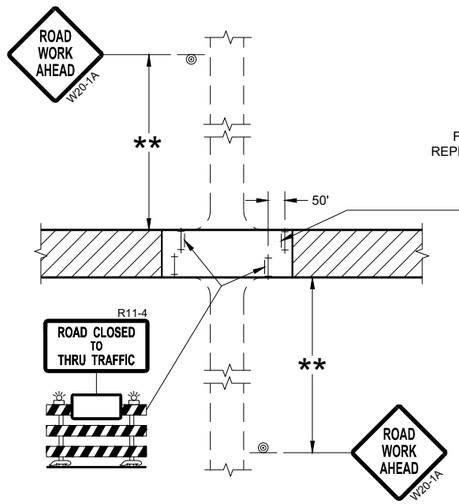
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

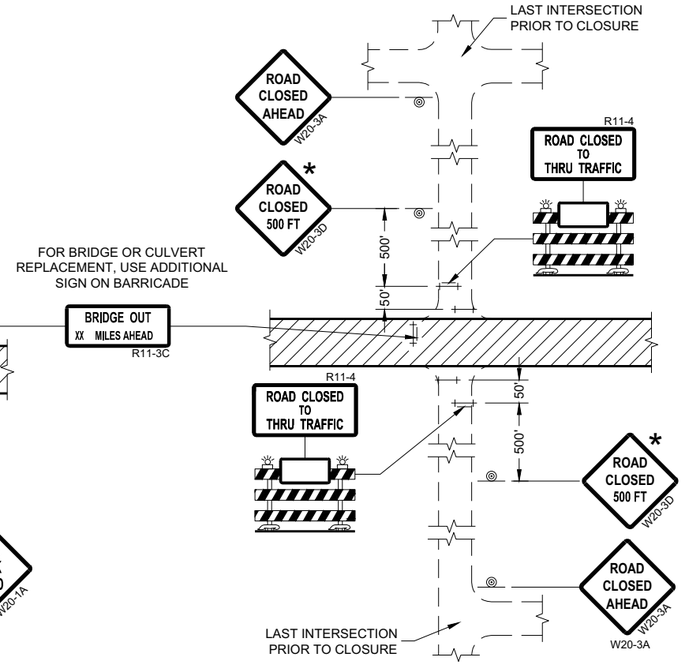
THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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.





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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

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.

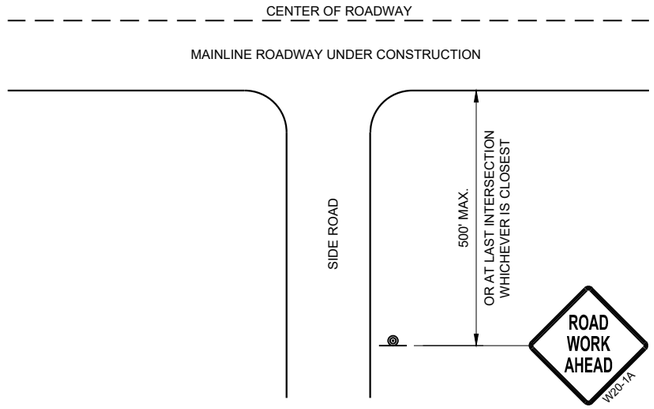
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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.



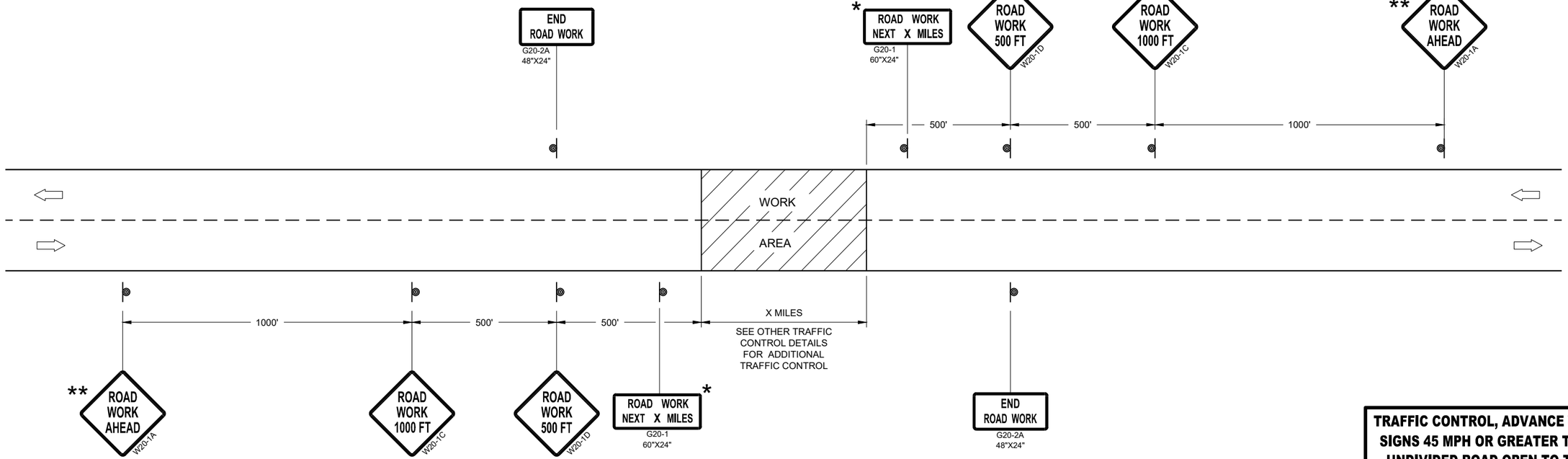
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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 TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

GENERAL NOTES

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

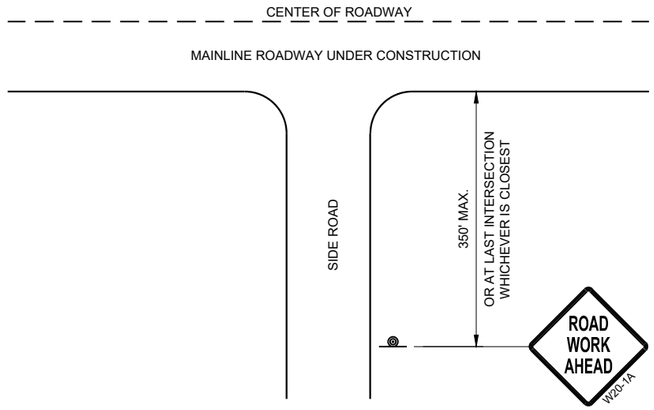
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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.

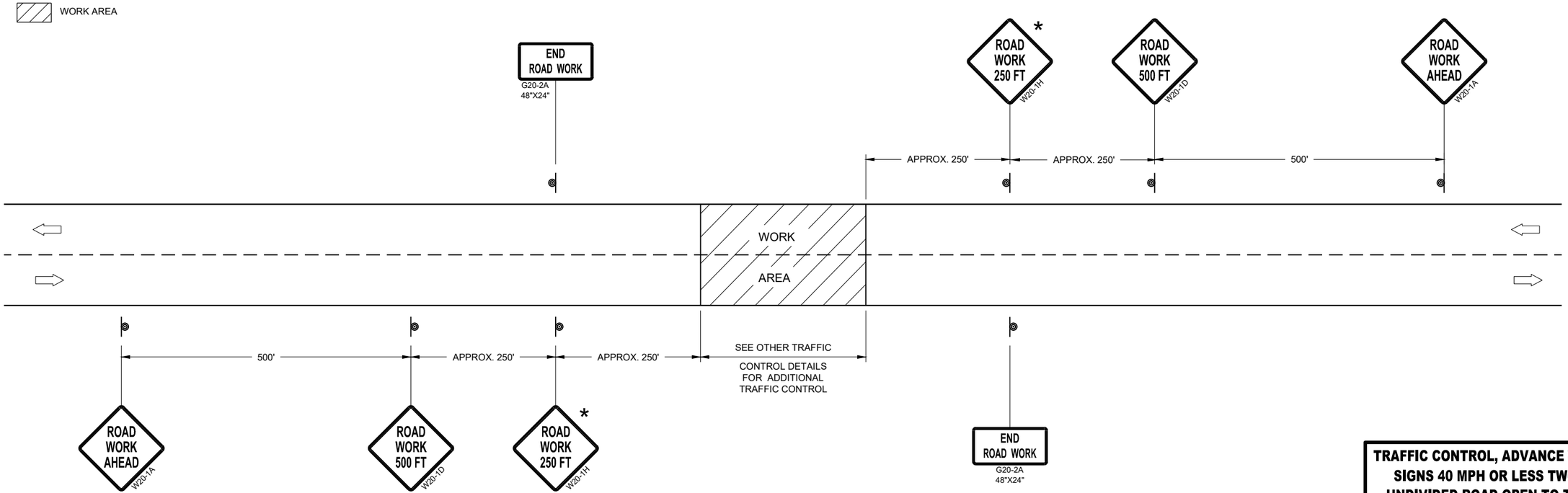
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C05 - 05

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

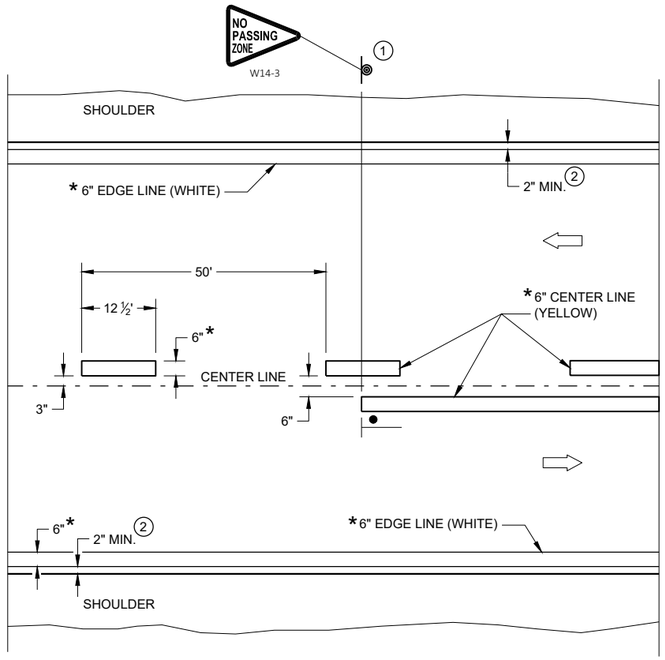
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

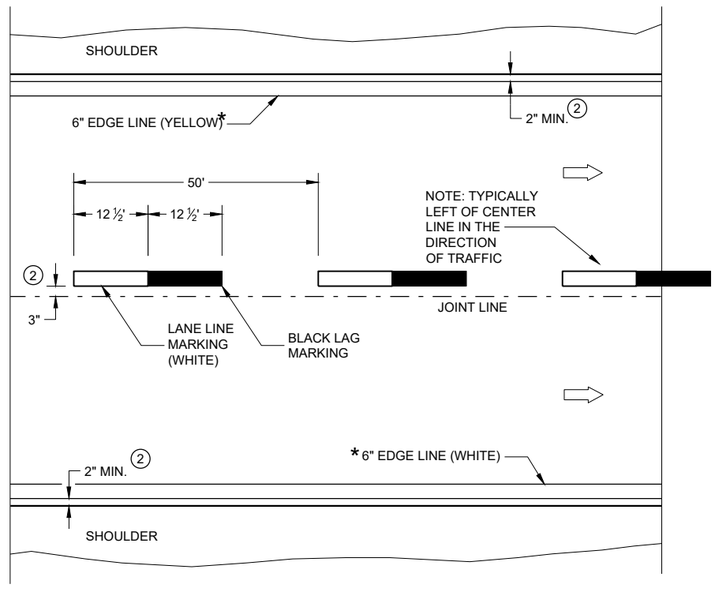
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

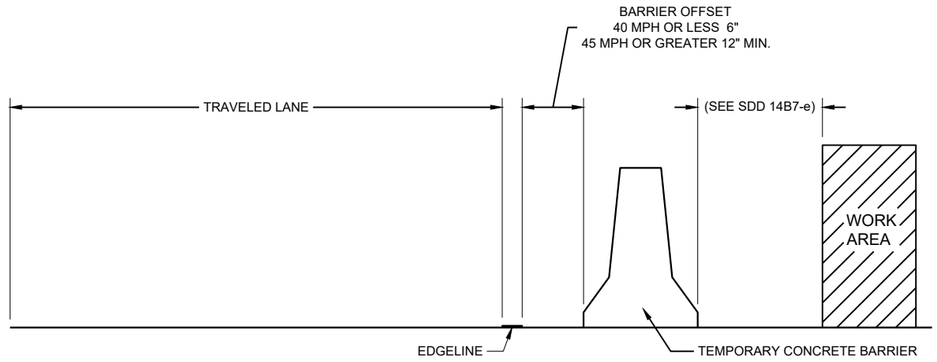
May 2023 — DATE

/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

6

SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

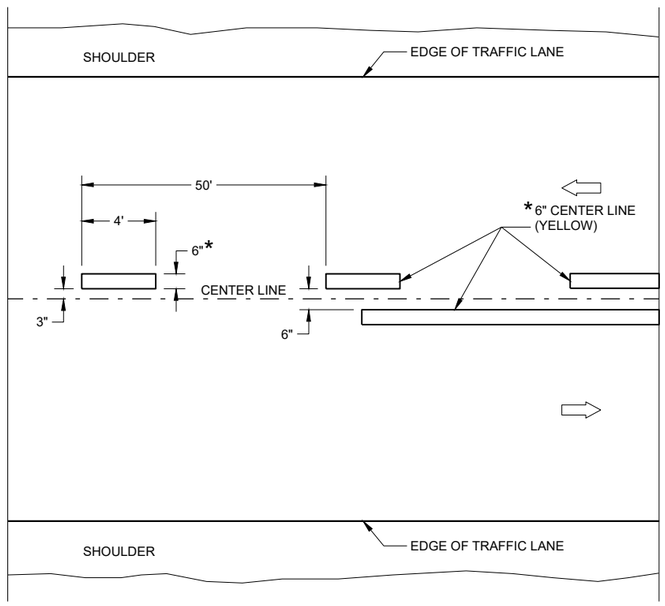
GENERAL NOTES

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

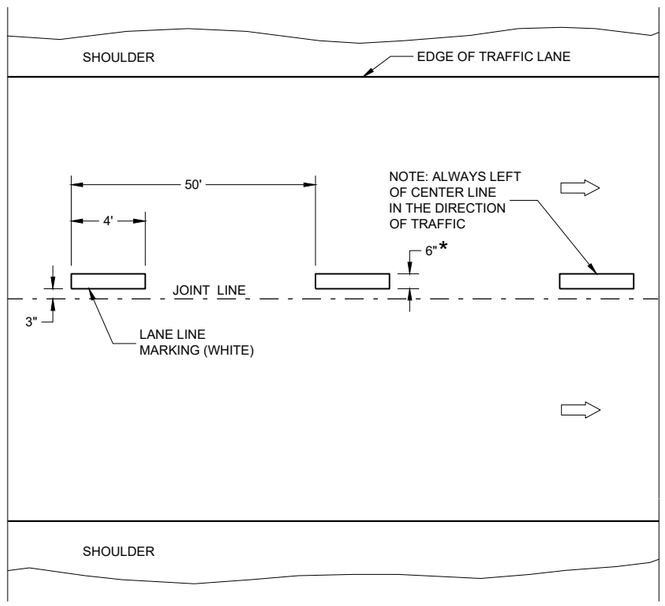
LEGEND

⇨ DIRECTION OF TRAFFIC

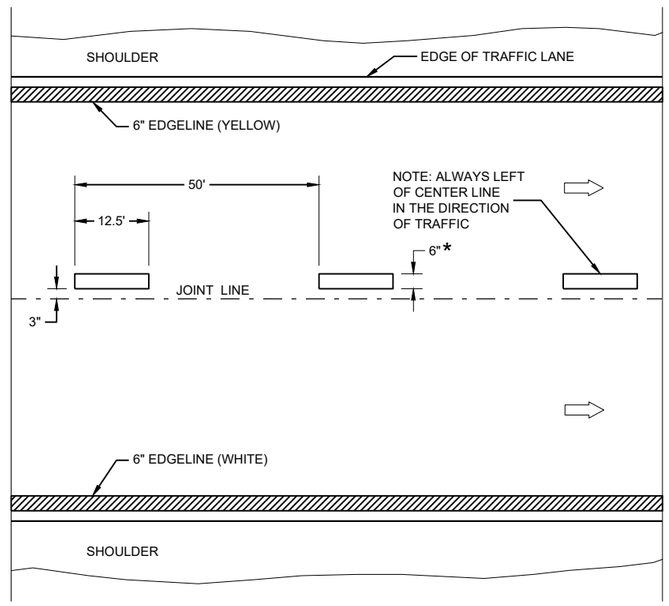
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

6

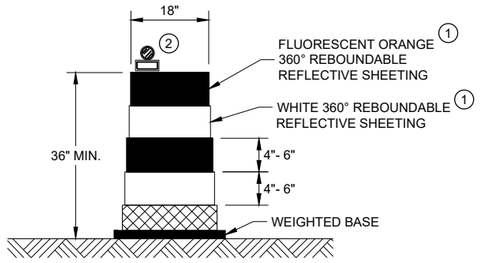
SDD 15C08-23b

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SDD 15C08-23b

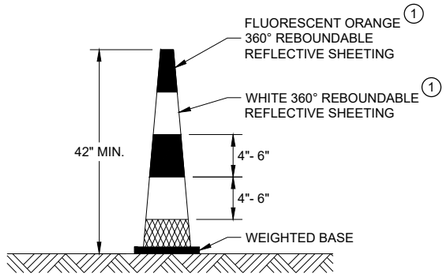
GENERAL NOTES

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

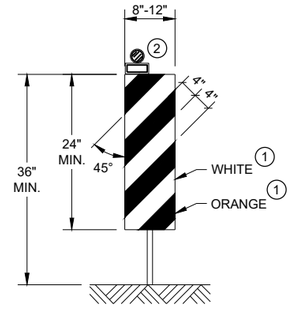
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

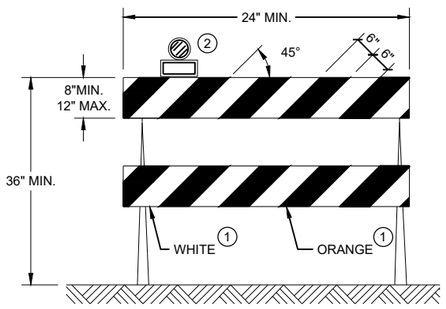
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



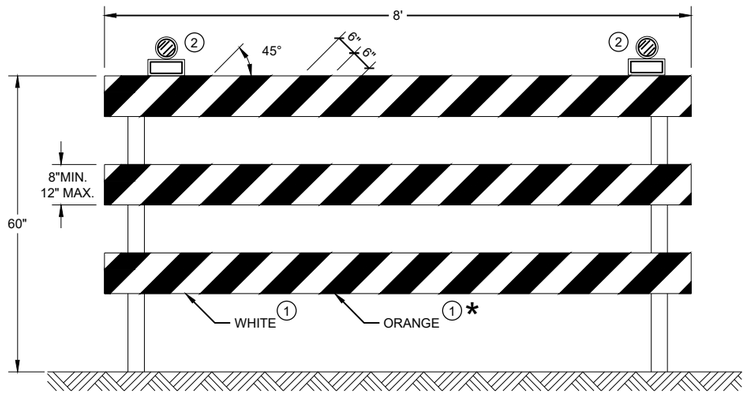
VERTICAL PANEL

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 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 10b
SDD 15C11 - 10b

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.

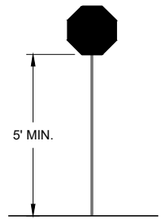
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM 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

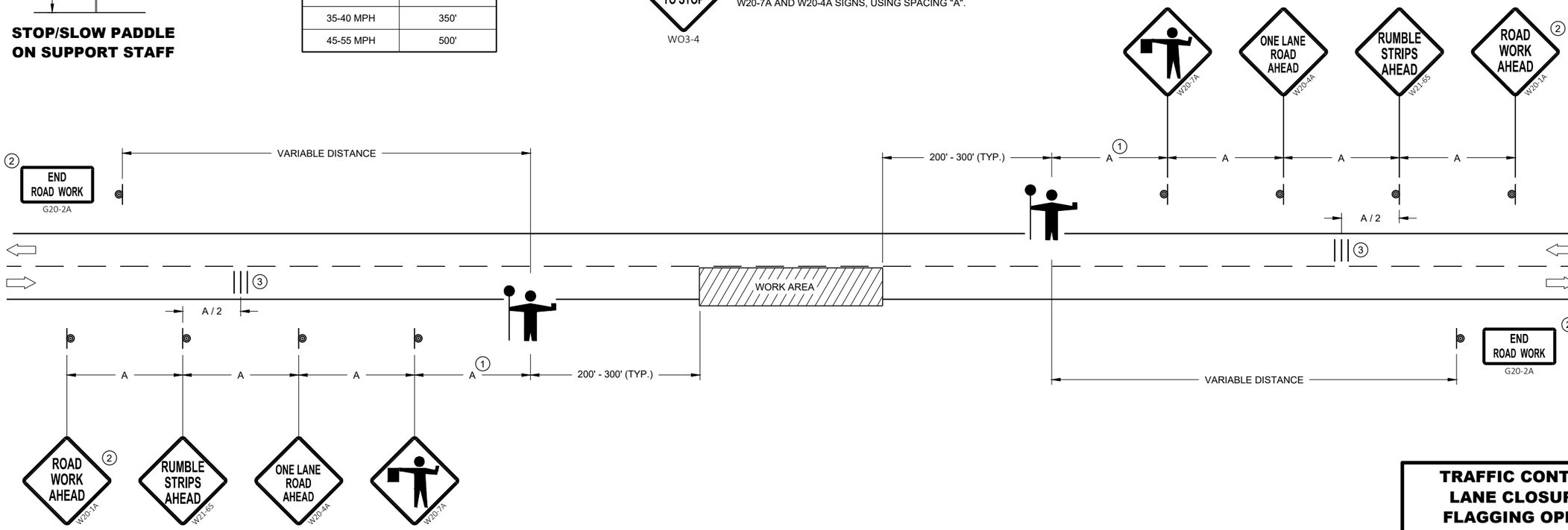
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C12 - 09a

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SDD 15C12 - 09a

GENERAL NOTES

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL CONE 42-INCH

TRAFFIC CONTROL DRUM

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

AFAD — AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

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

IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, 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.

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.

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

(2) IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

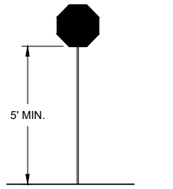
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

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.

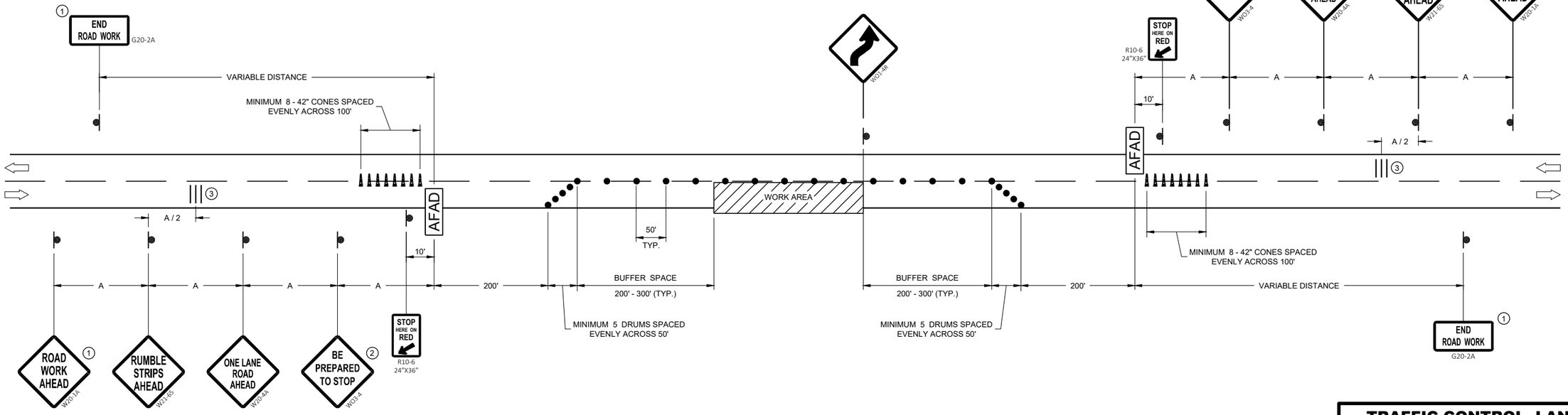
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSELY AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER.



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'



TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

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SDD 15C12 - 09b

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SDD 15C12 - 09b

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.

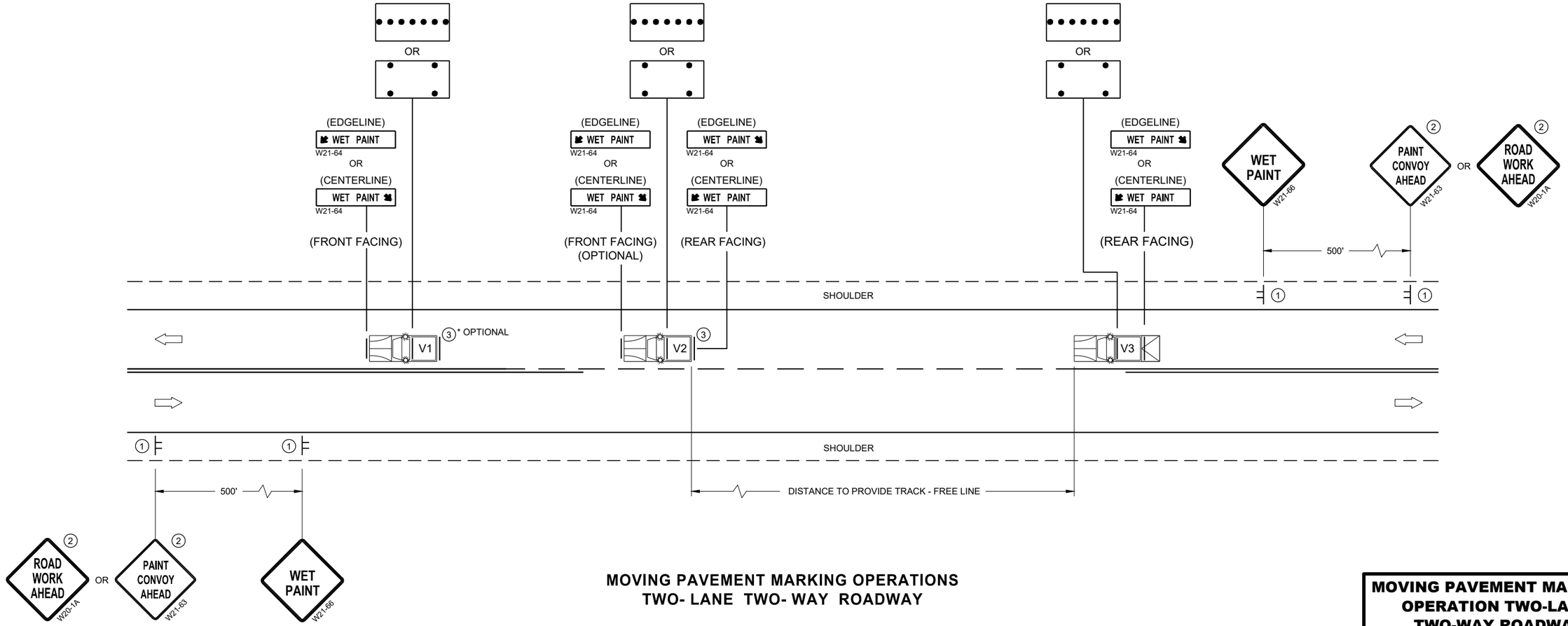
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" 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.

(3) V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.



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
February 2023
DATE

/S/ Andrew I
WORK ZONE EN

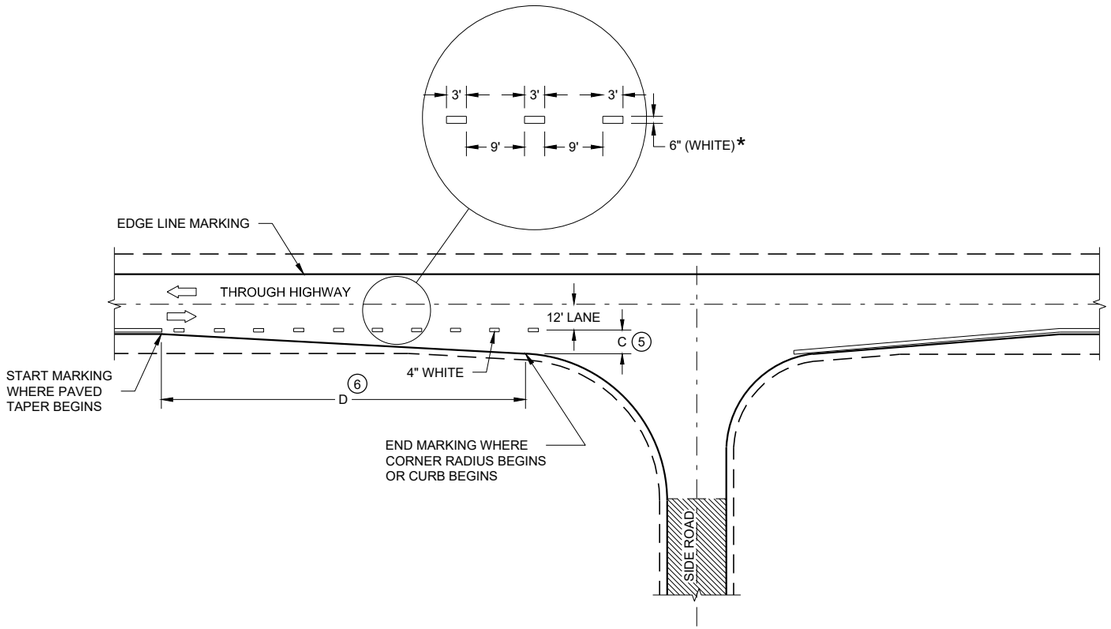
FHWA

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SDD 15C19-08a

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SDD 15C19-08a



MINOR INTERSECTION

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

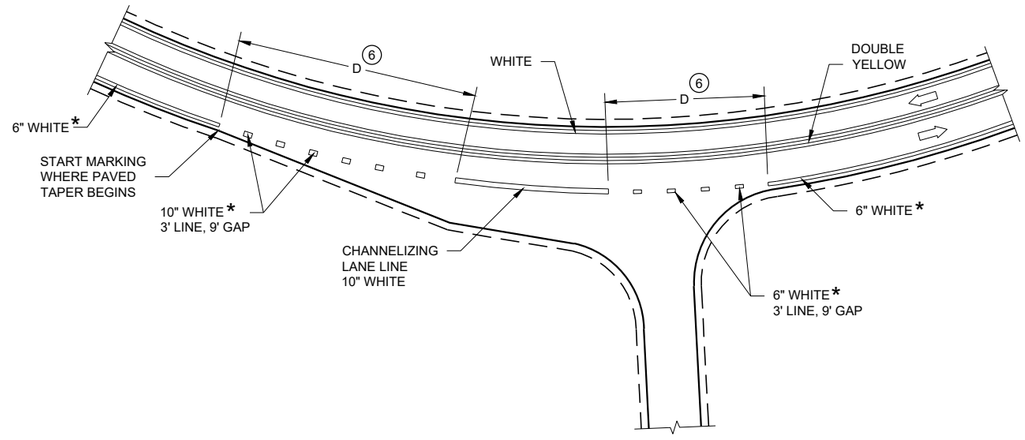
GENERAL NOTES

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

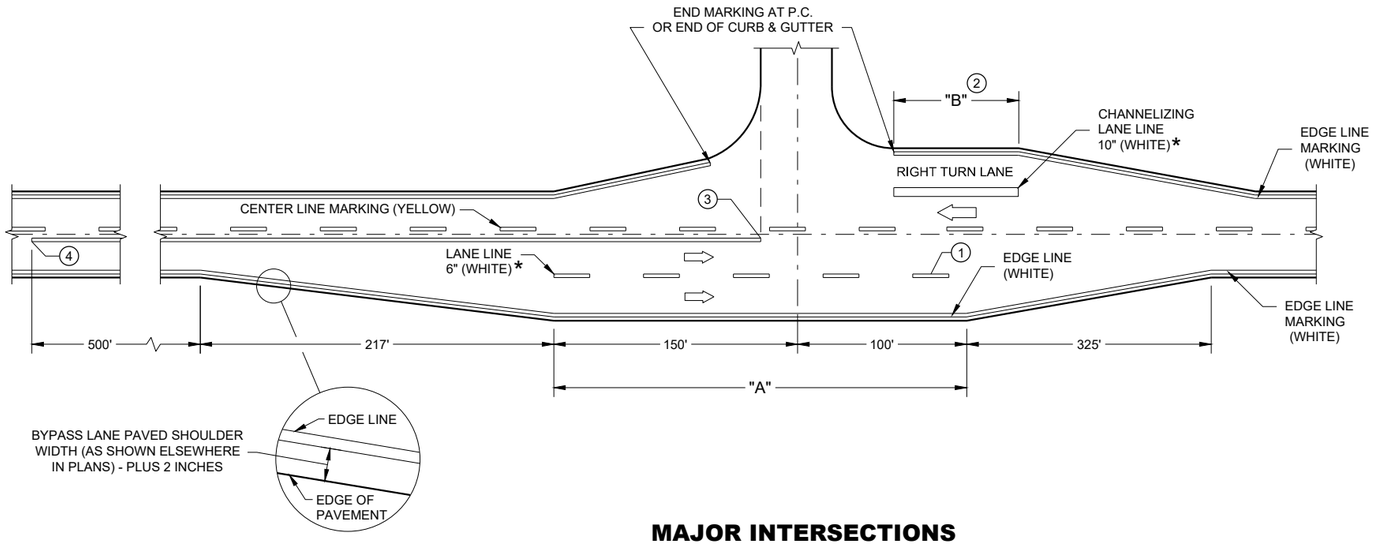
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

SDD 15C35-06a

6

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.

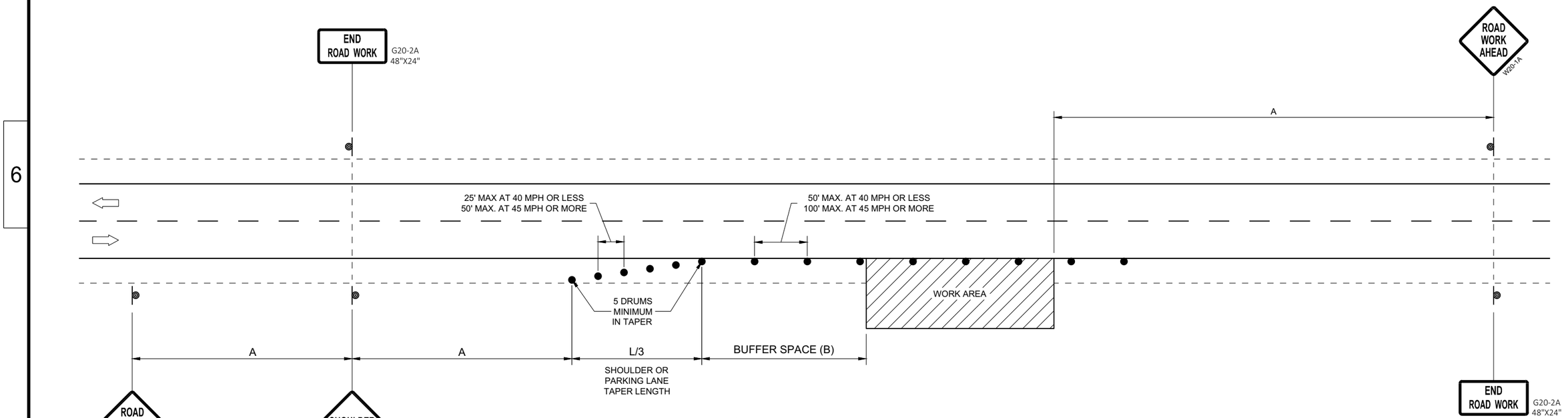
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

TRAFFIC CONTROL DRUM

FLAGS, 16" X 16" MIN. (ORANGE)

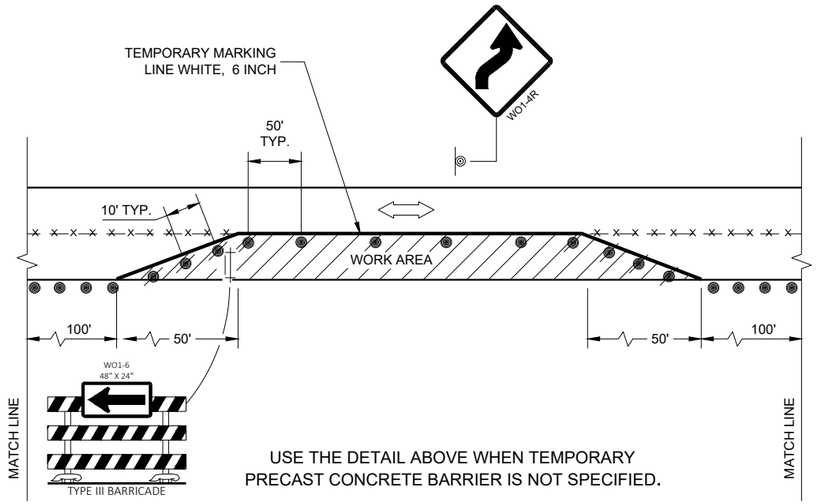
REMOVING PAVEMENT MARKING

DIRECTION OF TRAFFIC

ASPHALTIC PAVEMENT WIDENING

CONCRETE BARRIER TEMPORARY PRECAST

TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT



USE THE DETAIL ABOVE WHEN TEMPORARY PRECAST CONCRETE BARRIER IS NOT SPECIFIED.

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

REMOVE PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT MARKING LINES IF THE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

INSTALL OVERHEAD TEMPORARY SIGNAL HEADS ABOVE THE MIDDLE OF THE TRAVEL LANE THEY ARE CONTROLLING.

(1) 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.

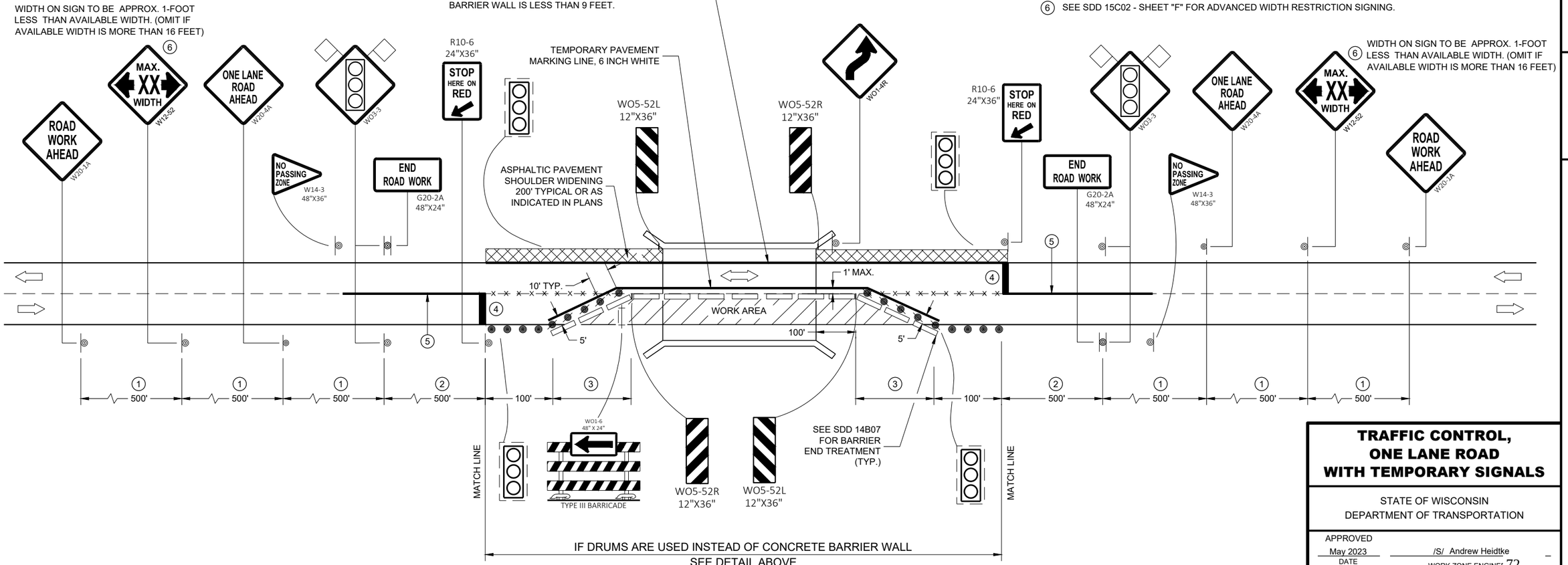
(2) USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.

(3) DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.

(4) TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.

(5) 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

(6) SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
SDD 15D33-09

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.

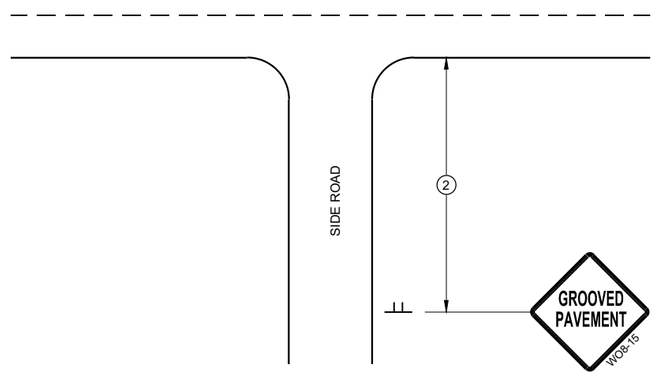
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

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

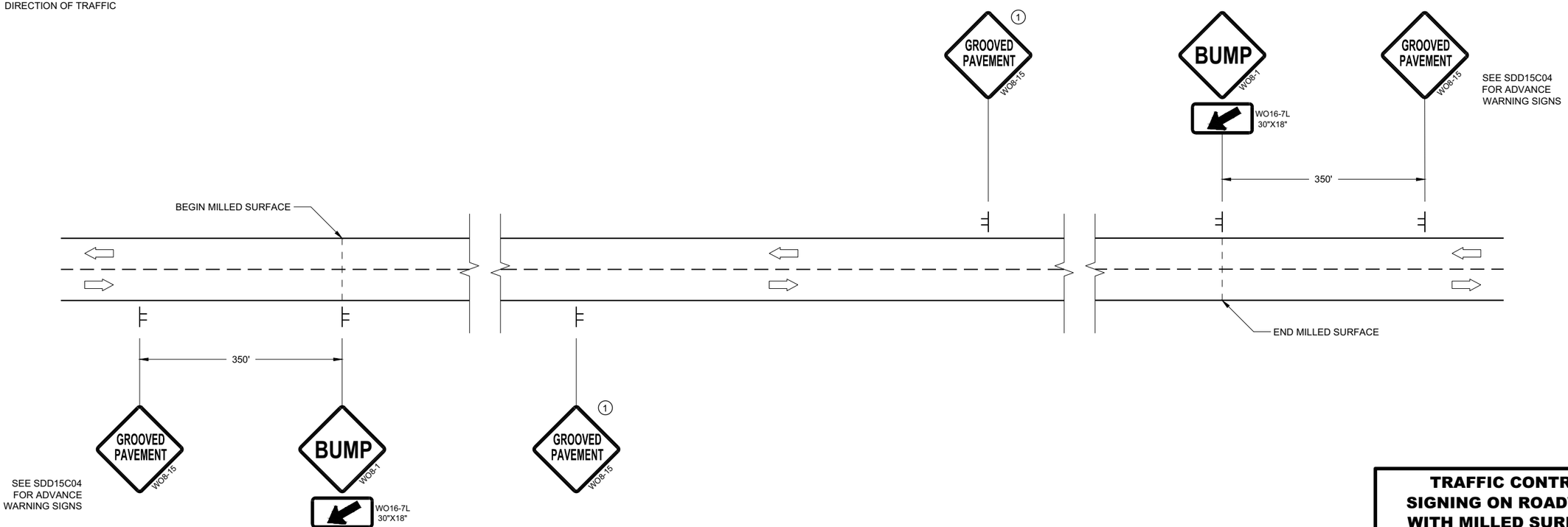
LEGEND

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 ENGINEER

FHWA

6
SDD 15D44 - 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 CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

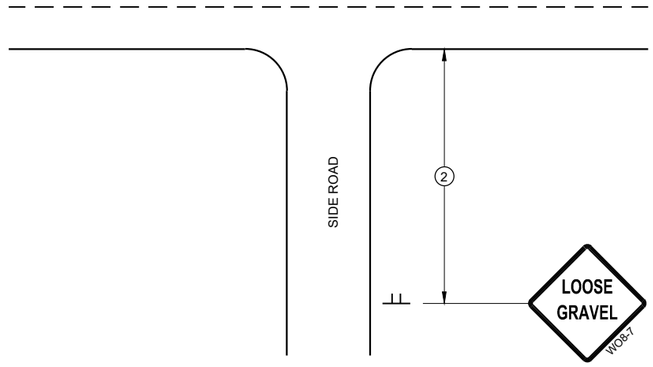
(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

(3) ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

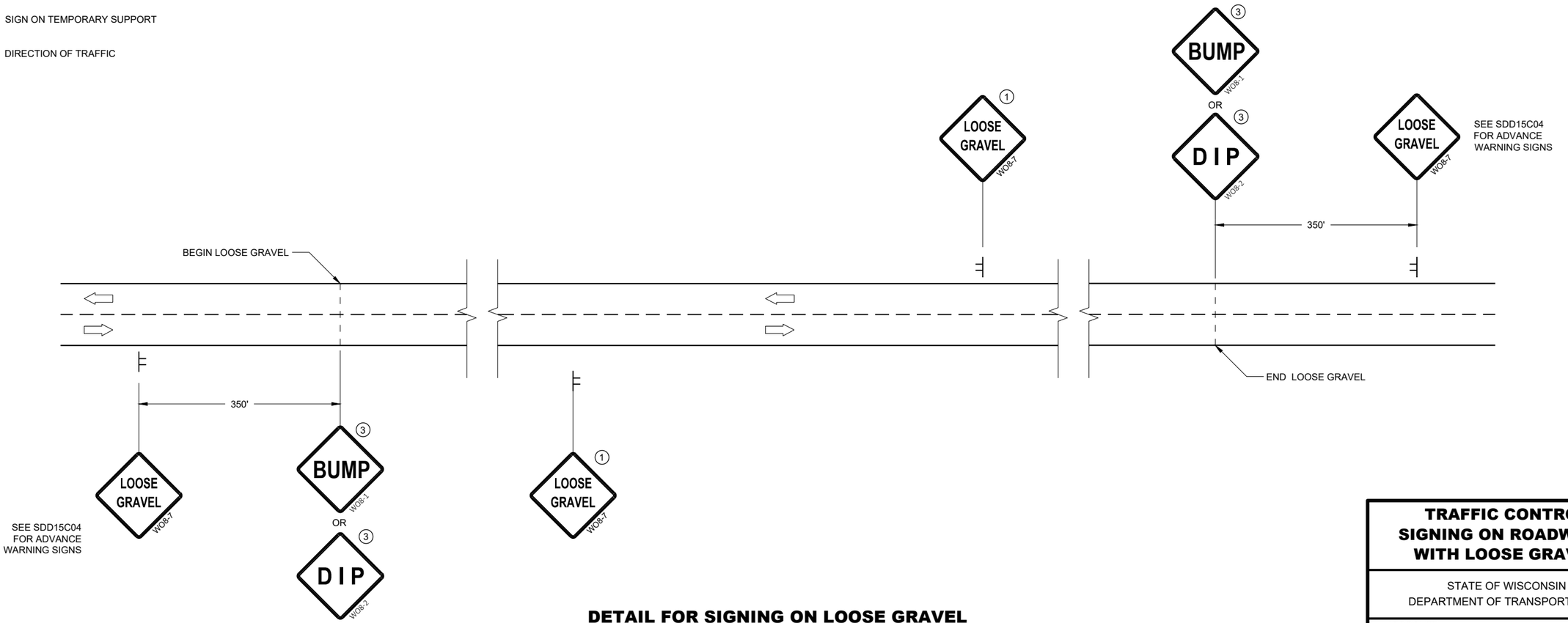
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

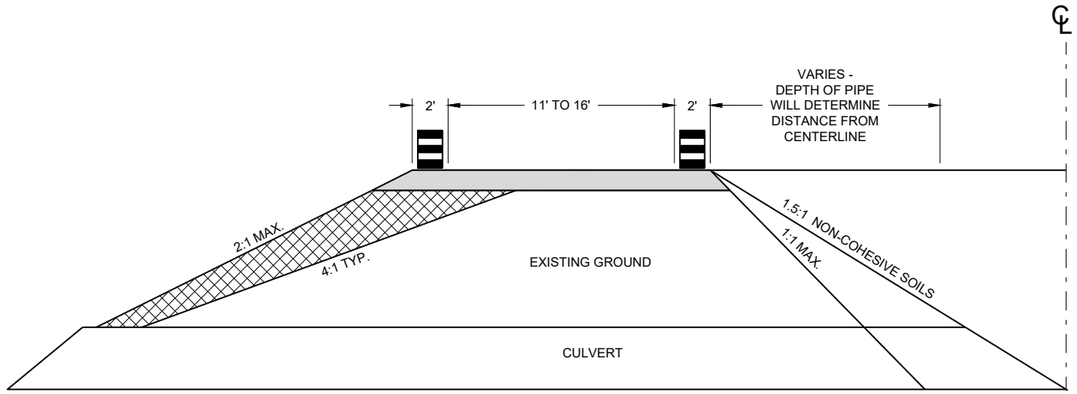
FHWA

6

SDD 15D45 - 03

6

SDD 15D45 - 03



CROSS SECTION

GENERAL NOTES

USE 1:1 FOR COHESIVE CLAYS AND SILTS, LOAMS, SANDY CLAYS AND ANGULAR GRAVEL SOILS.
USE 1.5:1 FOR NON-COHESIVE SOILS.

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.

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.

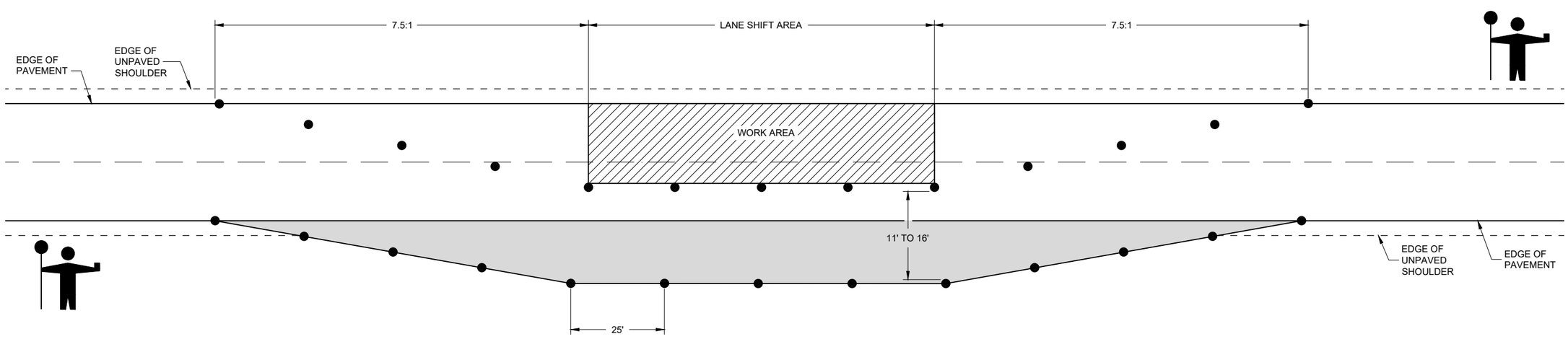
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

USE WITH SDD 15C12 "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS"

USE WITH SDD 15D45 "SIGNING ON ROADWAYS WITH LOOSE GRAVEL"

LEGEND

- DRUM WITHOUT WARNING LIGHT
- 6" BASE AGGREGATE DENSE 1 ¼" -INCIDENTAL TO LANE SHIFT ITEM
- FILL - INCIDENTAL TO LANE SHIFT ITEM
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



LANE SHIFT IN FLAGGING OPERATION

TRAFFIC CONTROL, TEMPORARY LANE SHIFT DURING CULVERT WORK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

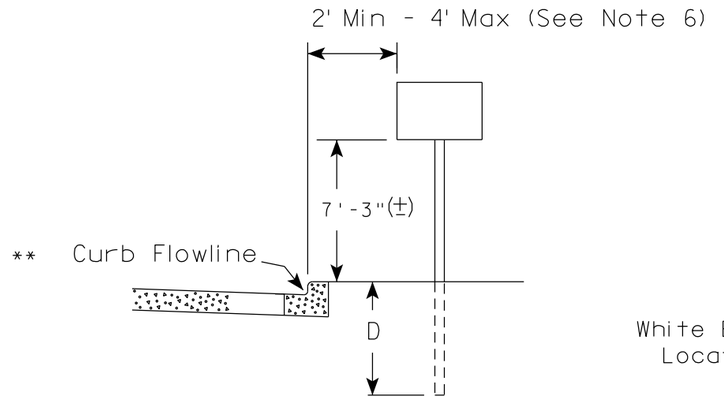
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SDD 15D48 - 01

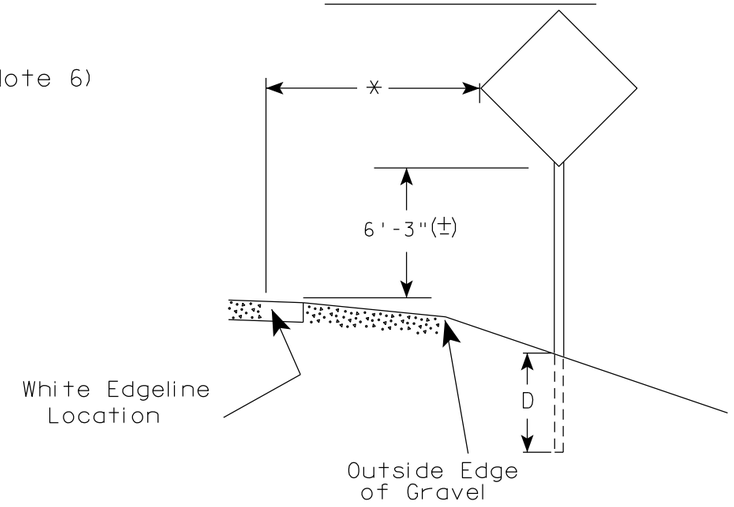
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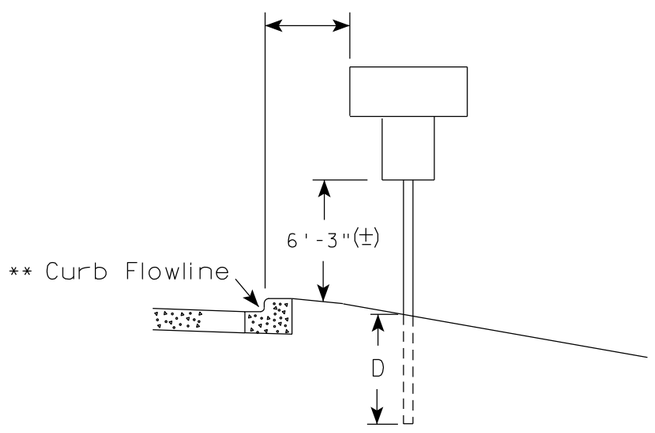
SDD 15D48 - 01

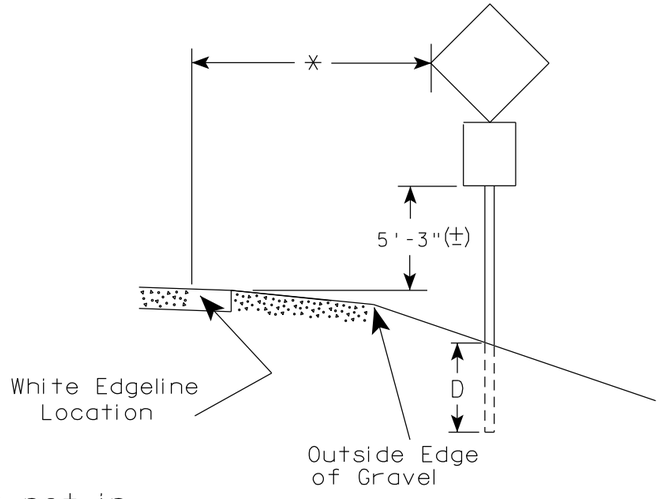
URBAN AREA



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.

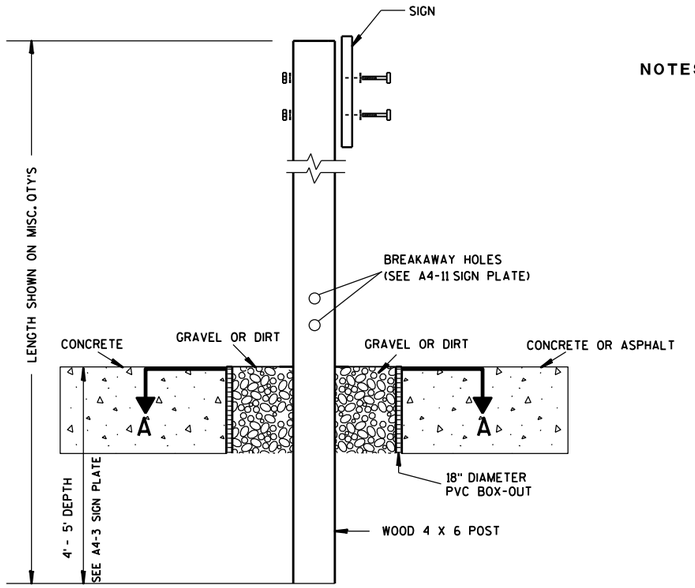
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

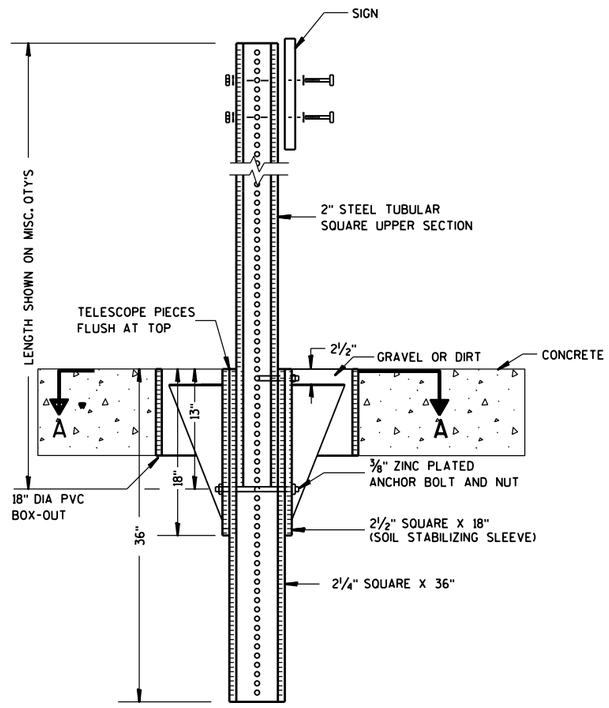
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 76	E



ELEVATION VIEW

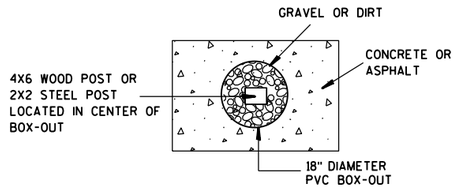
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

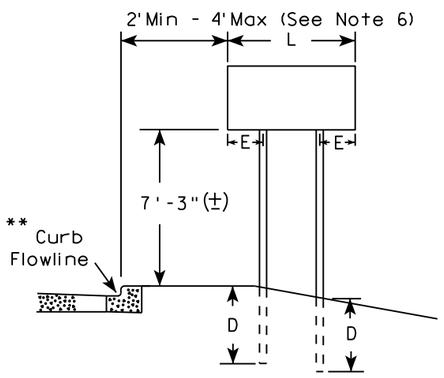
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

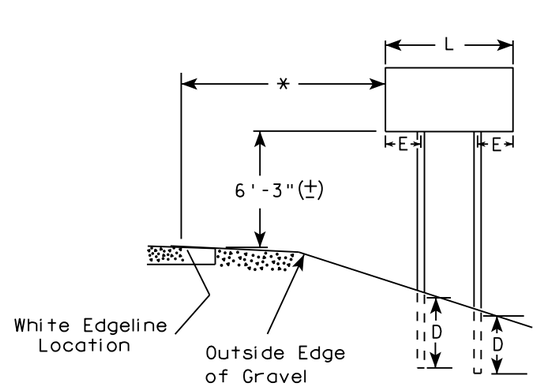
DATE 1/27/14 PLATE NO. A4-3B.1

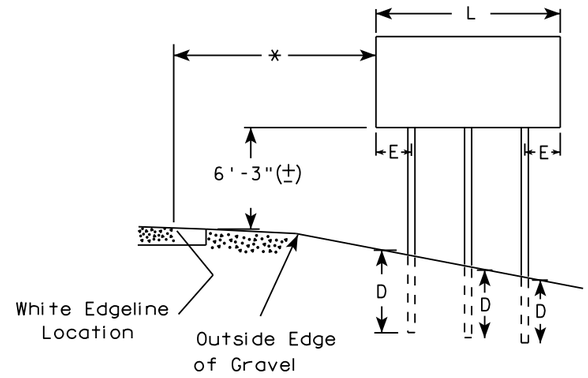
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

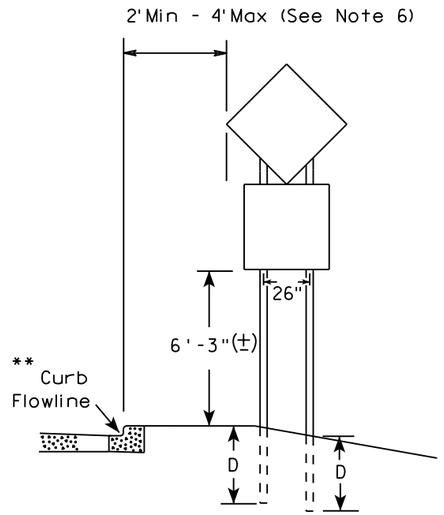
URBAN AREA



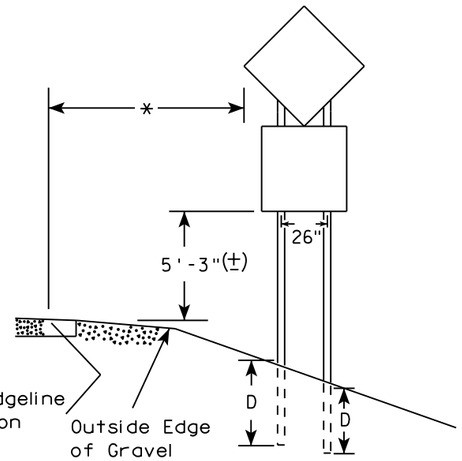
RURAL AREA (See Note 3)







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'

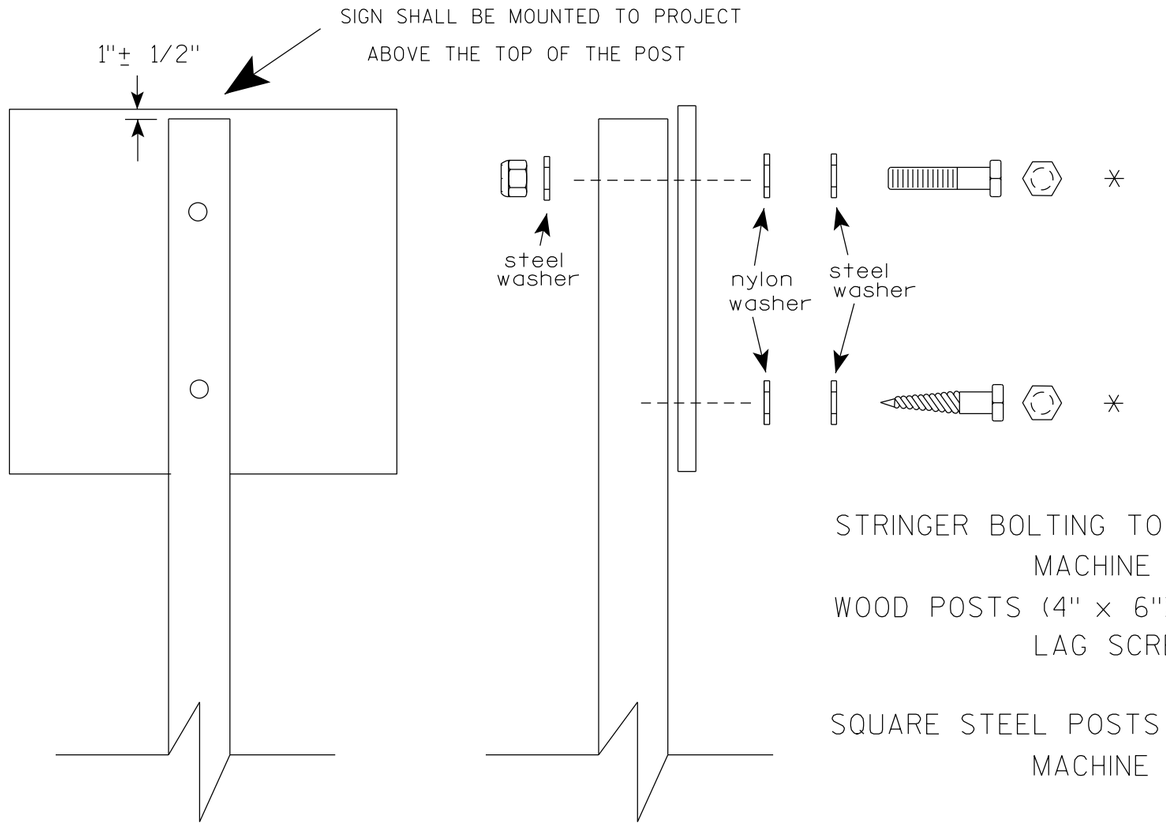
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 78	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

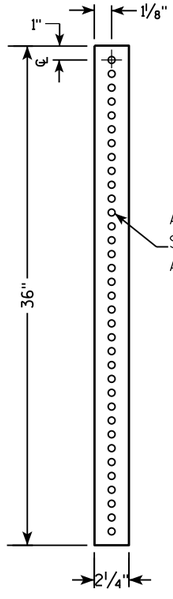
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

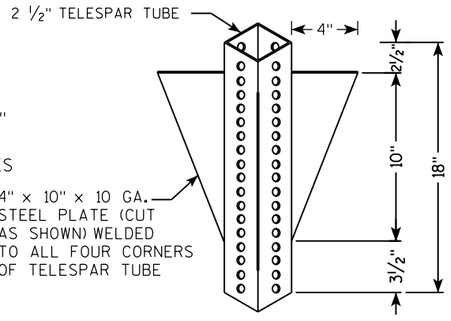
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

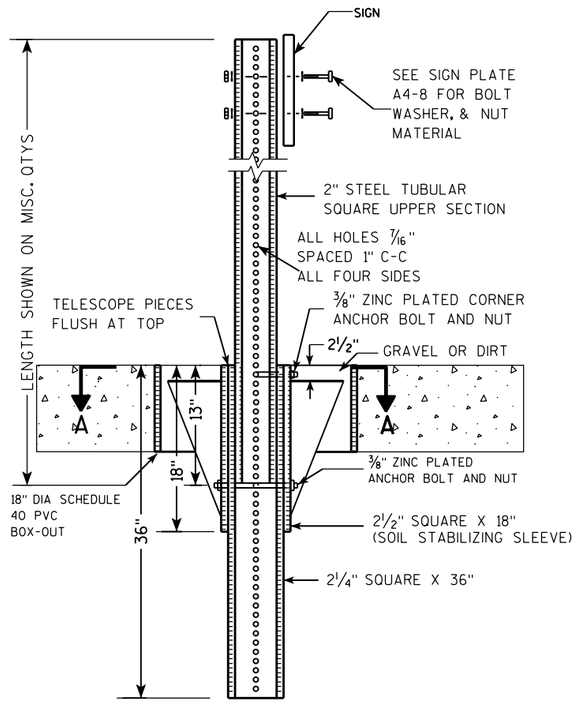
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



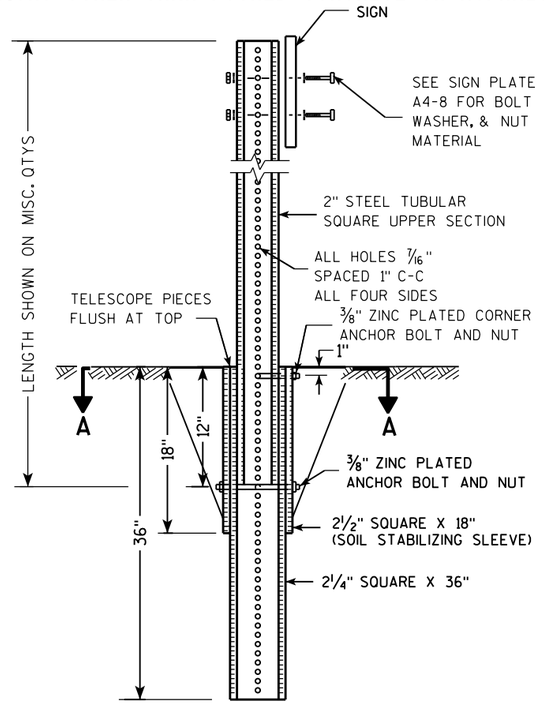
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

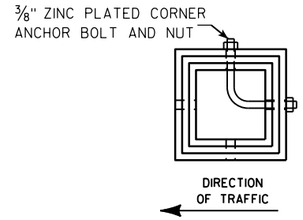


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

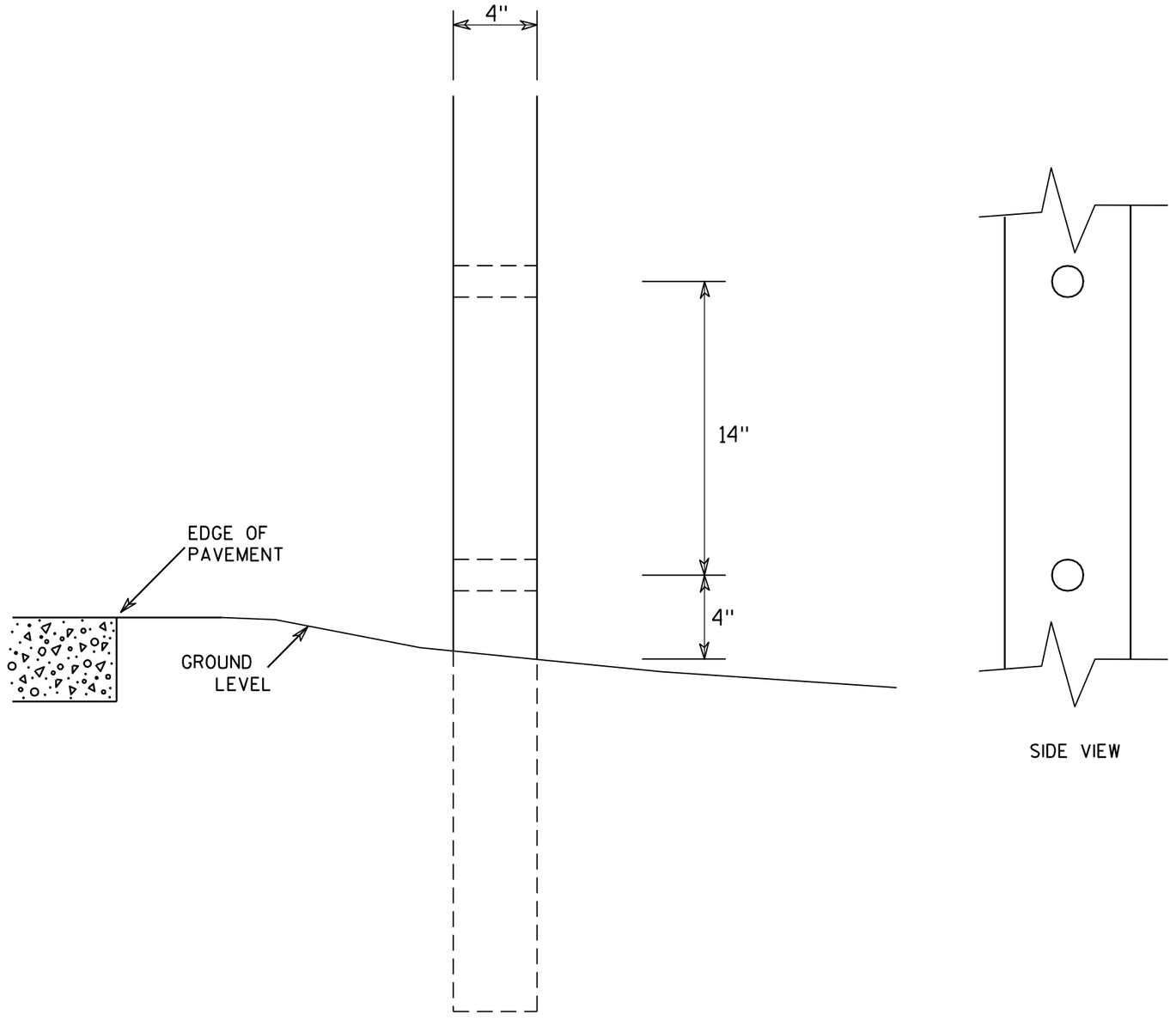
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 80 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

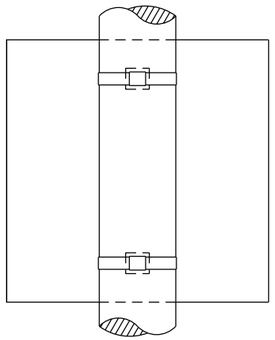
APPROVED Chester J Spang
for State Traffic Engineer

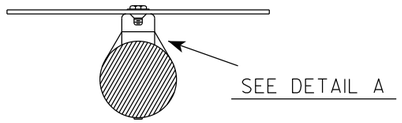
DATE 3/27/97 PLATE NO. A4-11.2

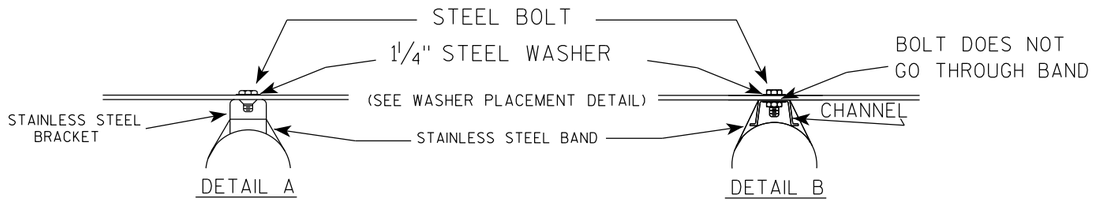
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 81	E

BANDING

SINGLE SIGN



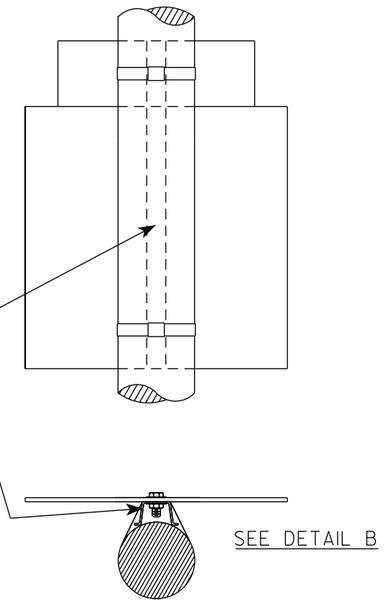




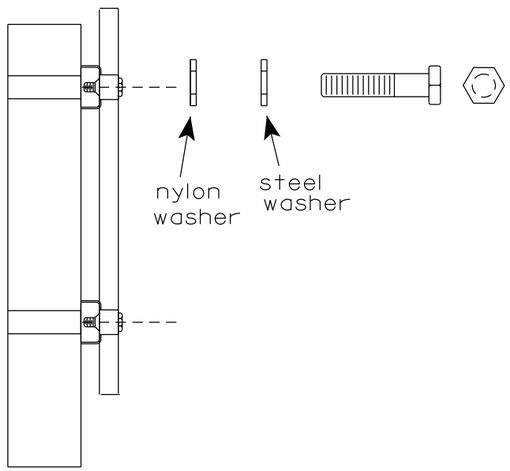
GENERAL NOTES

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

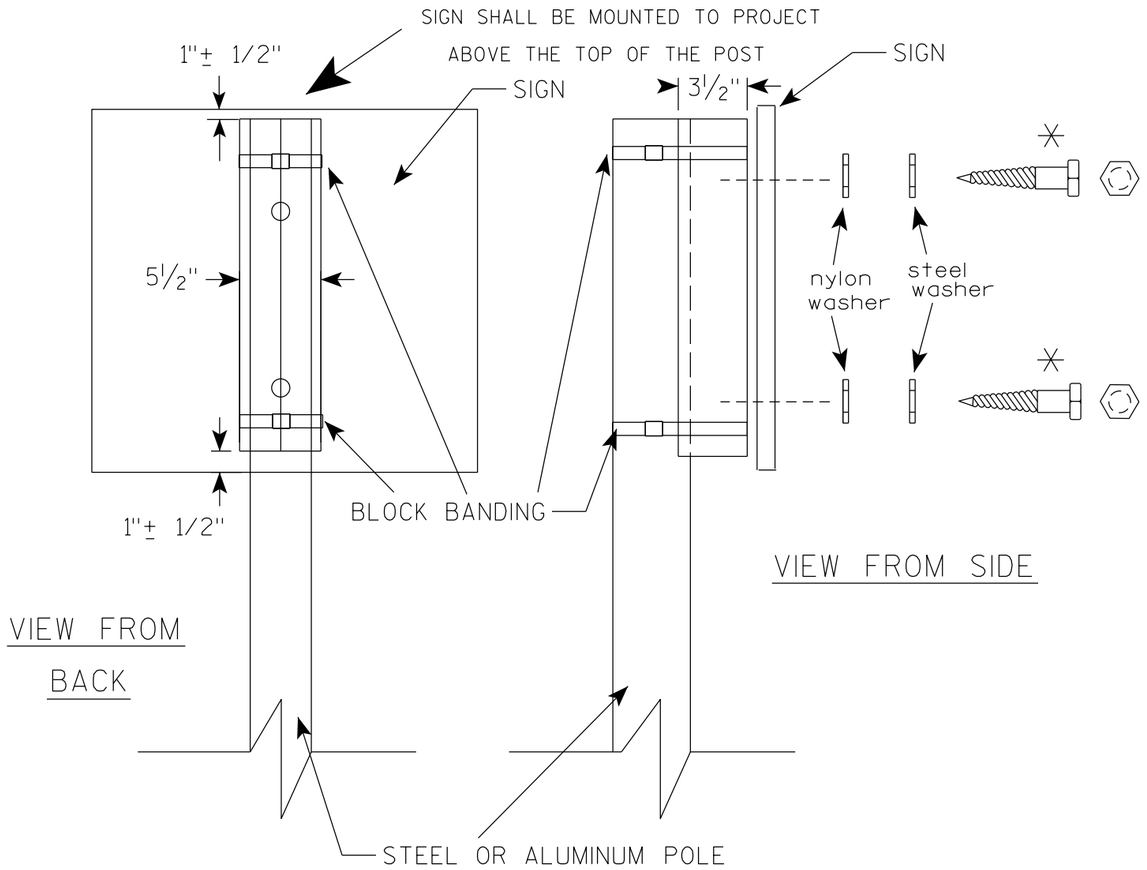
WISCONSIN DEPT OF TRANSPORTATION

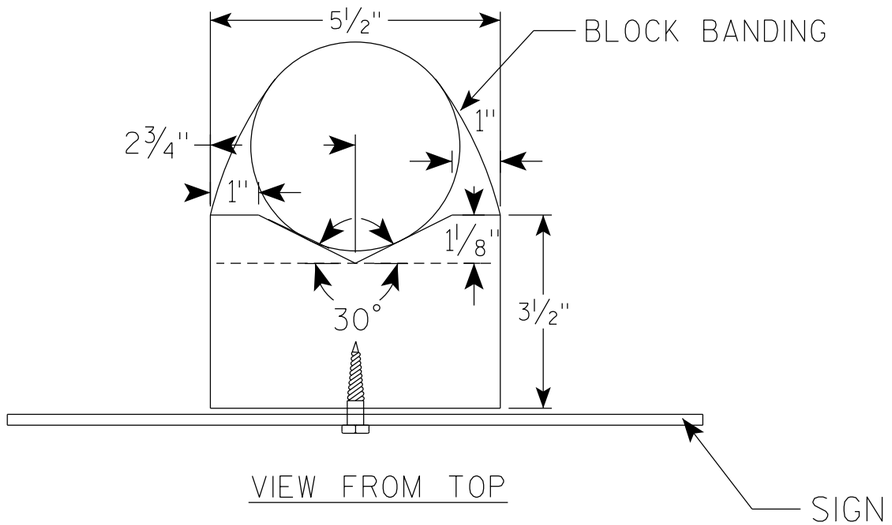
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 82	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$





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)

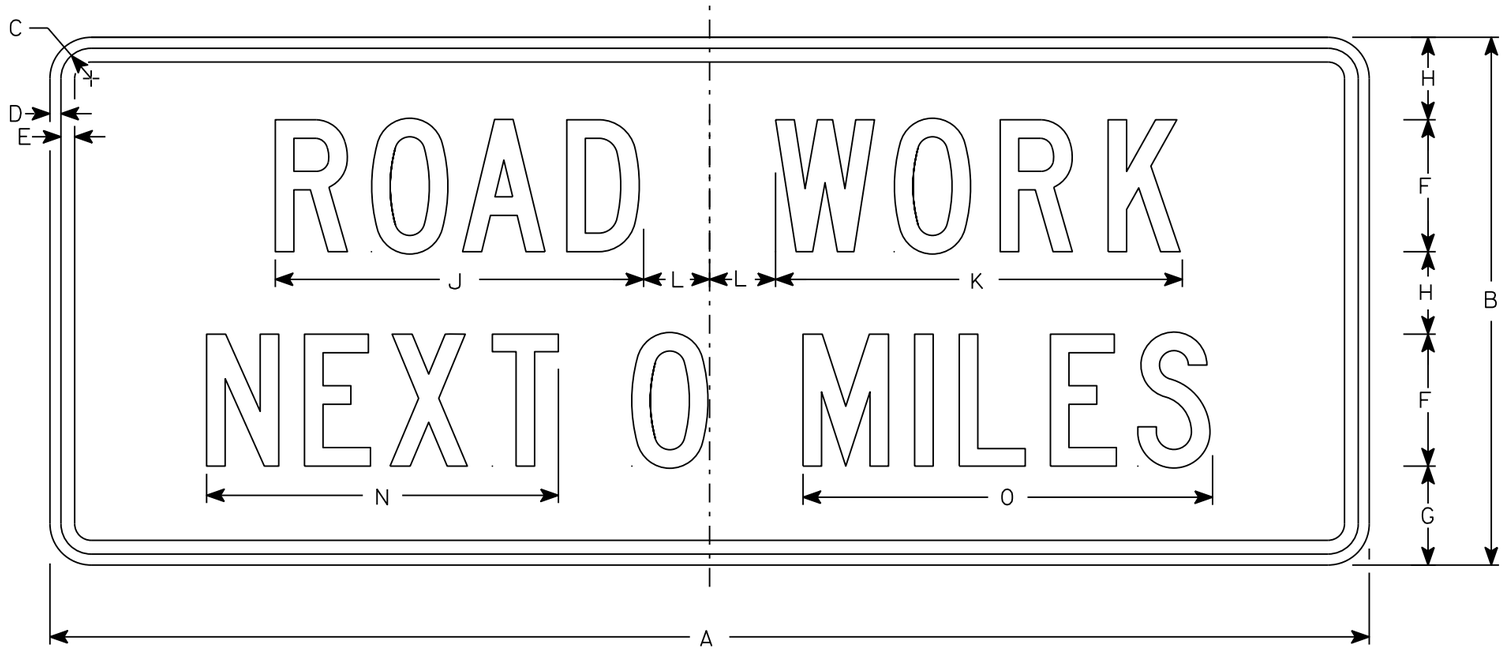
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 83 E



G20-1

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.
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 3/4	18 1/2	3		16	18 5/8												10
3																											
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10
5																											

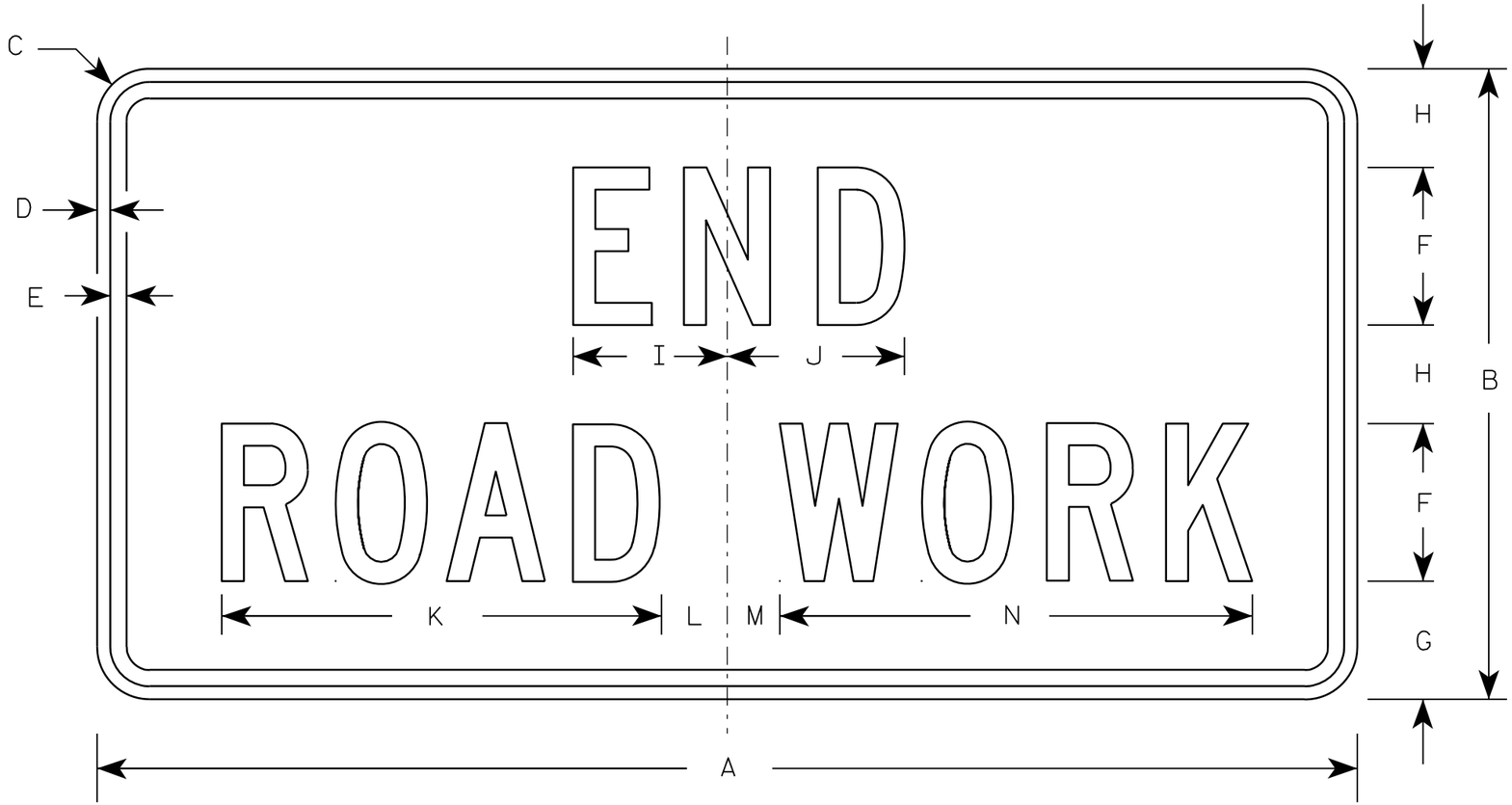
STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 84 | 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

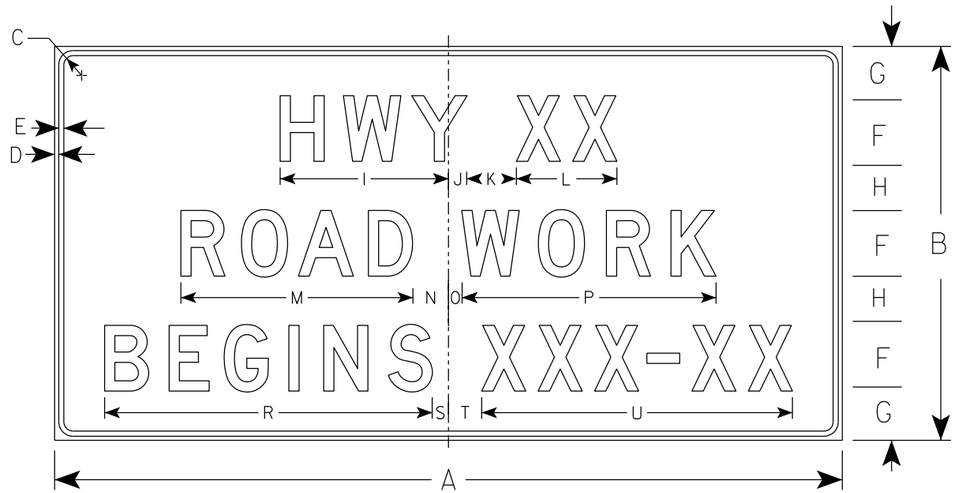
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 85	E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/4	3 1/2	1 1/2	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	4 3/8	1 5/8	31		39 1/4	2	4	37 7/8						32.0
5																											

STANDARD SIGN
G20-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57.3

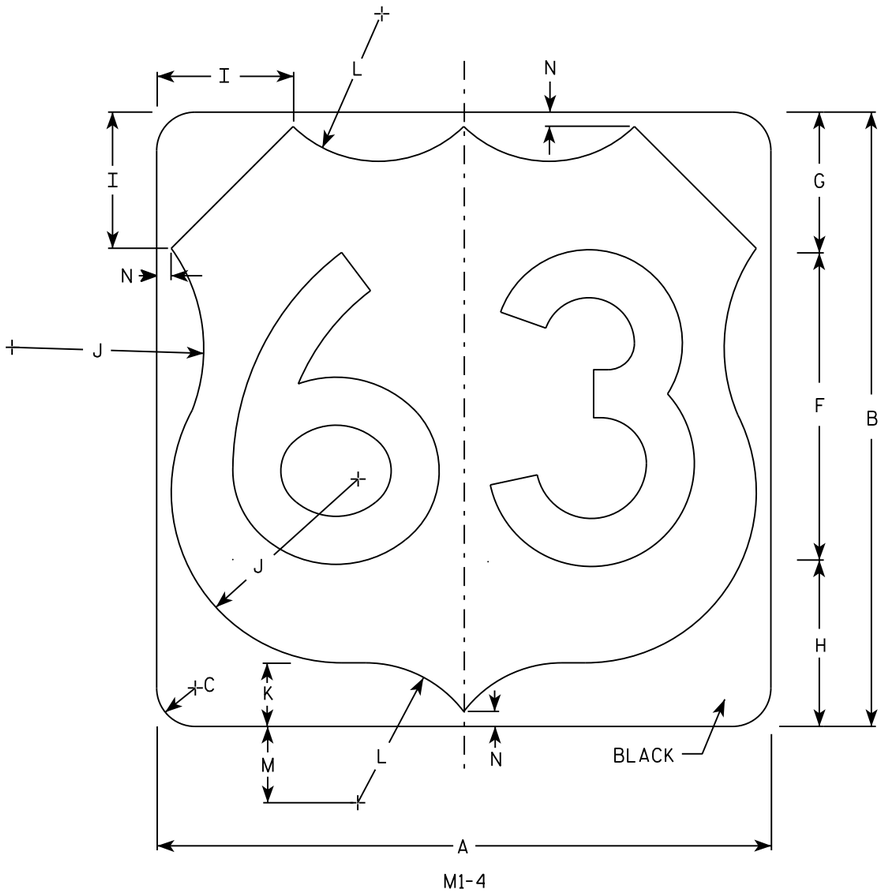
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 86 | E

7

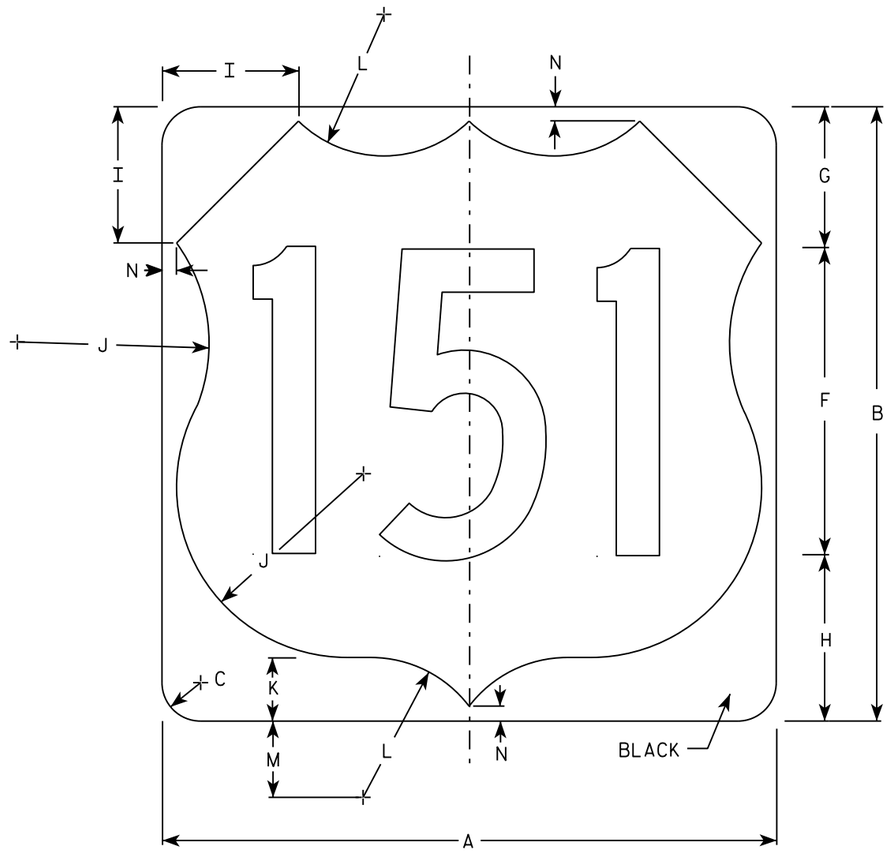
7

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.



M1-4



M1-4

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area Sq. ft.
1																											
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

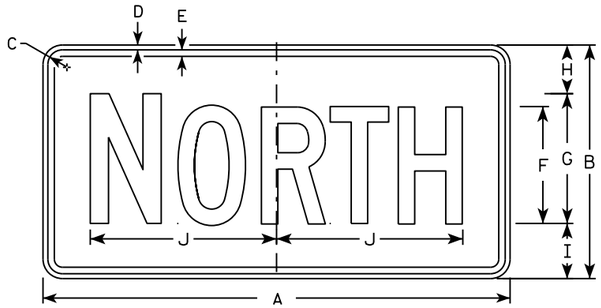
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

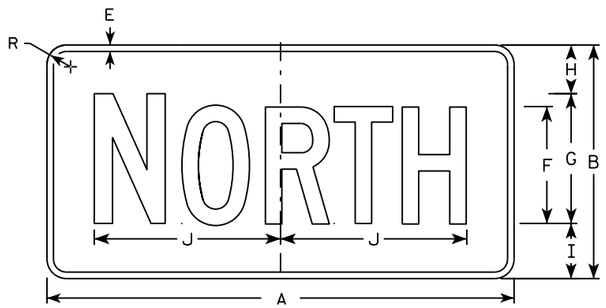
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-4.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 87	E



M3-1
MM3-1
MP3-1



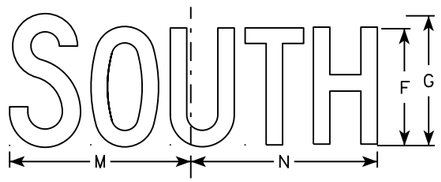
MB3-1
MK3-1
MN3-1



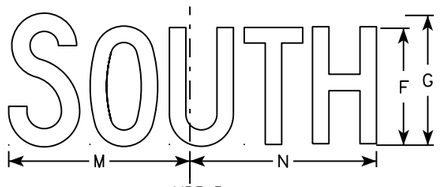
M3-2
MM3-2
MP3-2



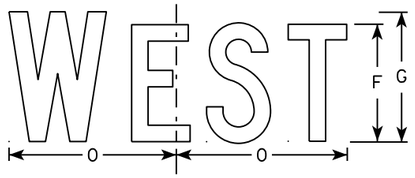
MB3-2
MK3-2
MN3-2



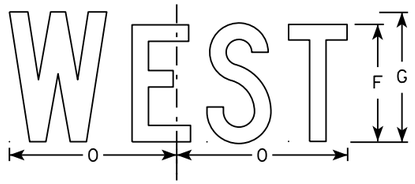
M3-3
MM3-3
MP3-3



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

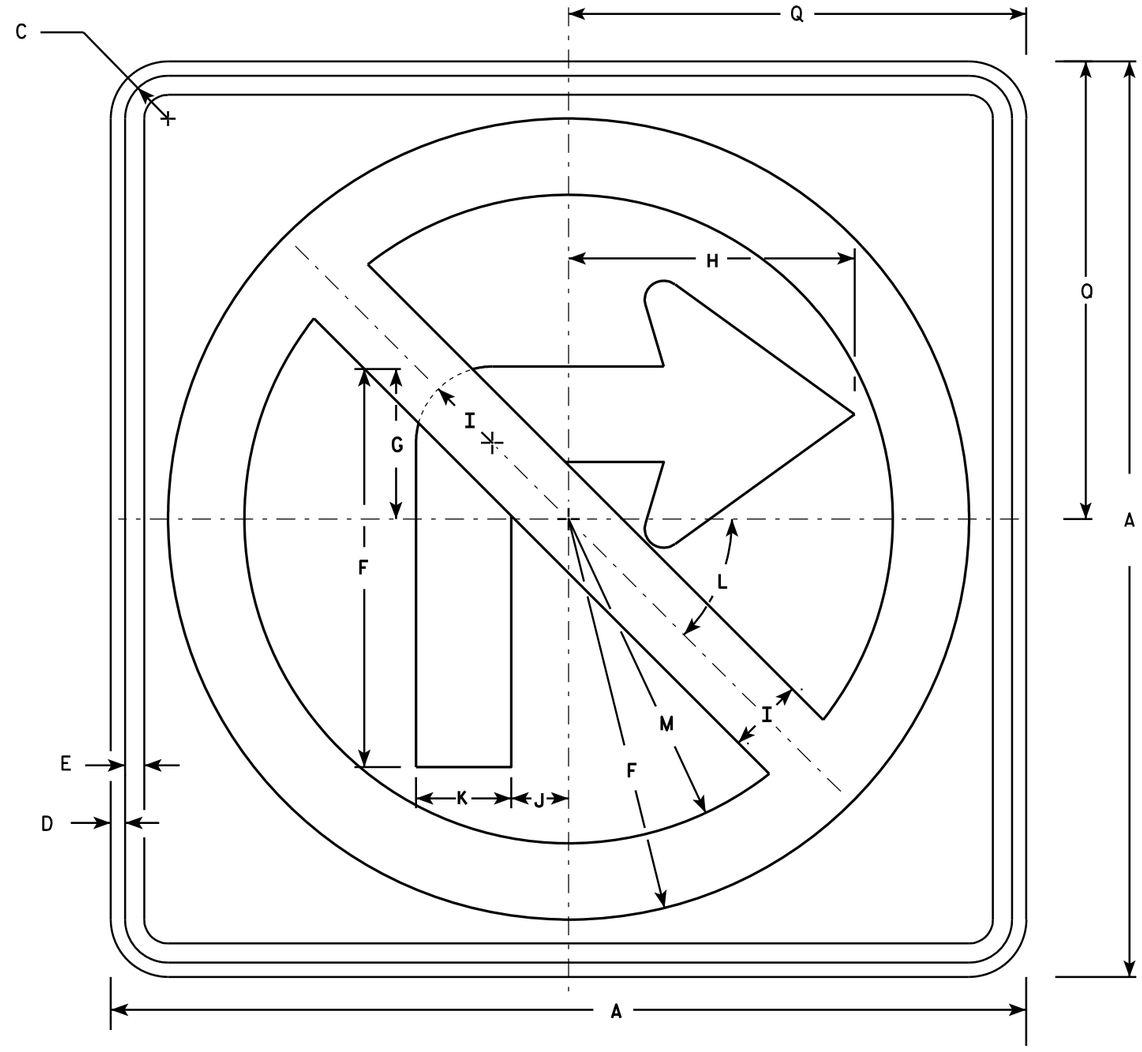
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

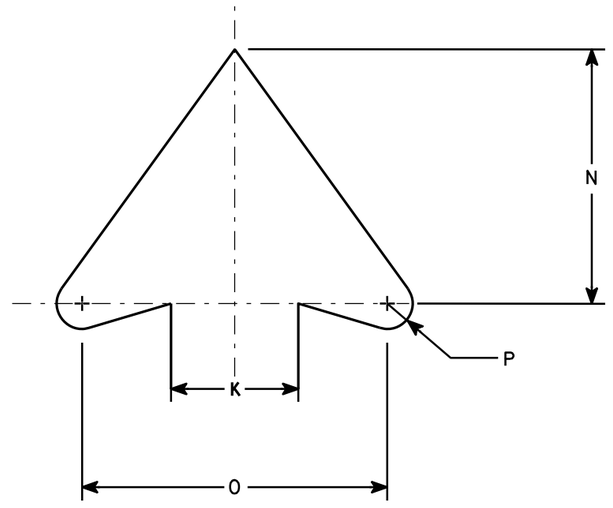
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



R3-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

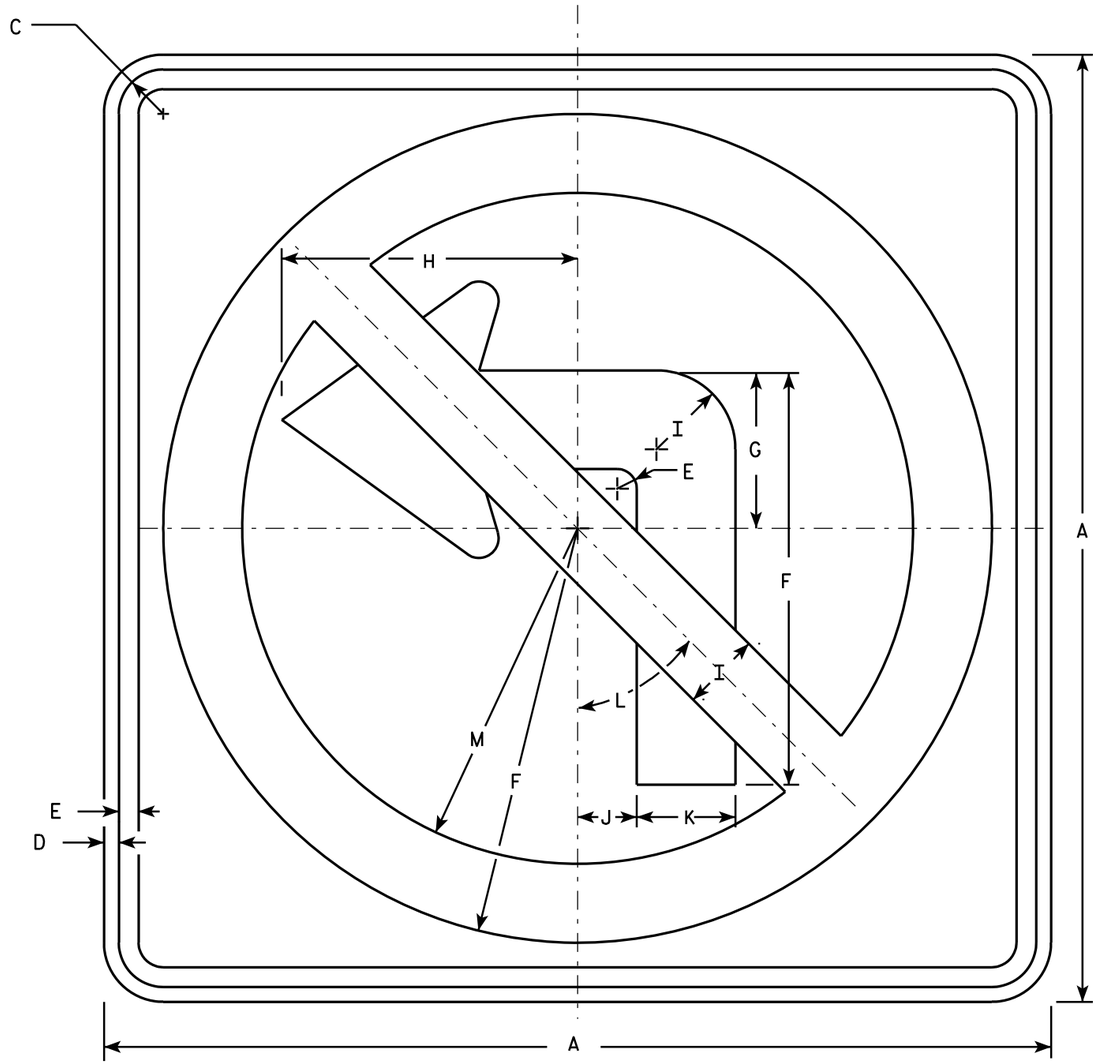
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

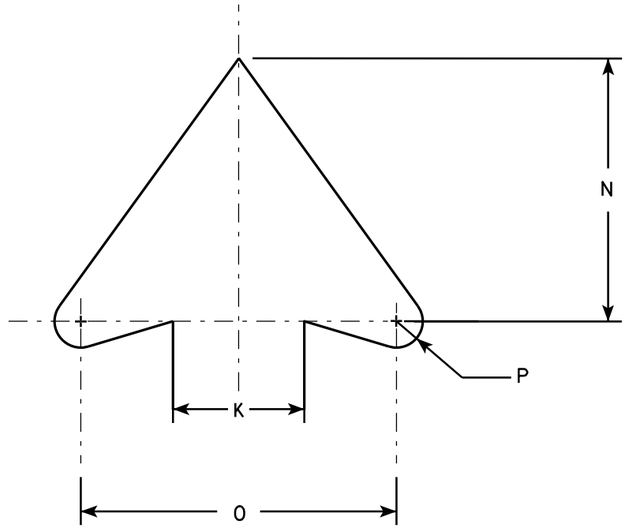
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 89	E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

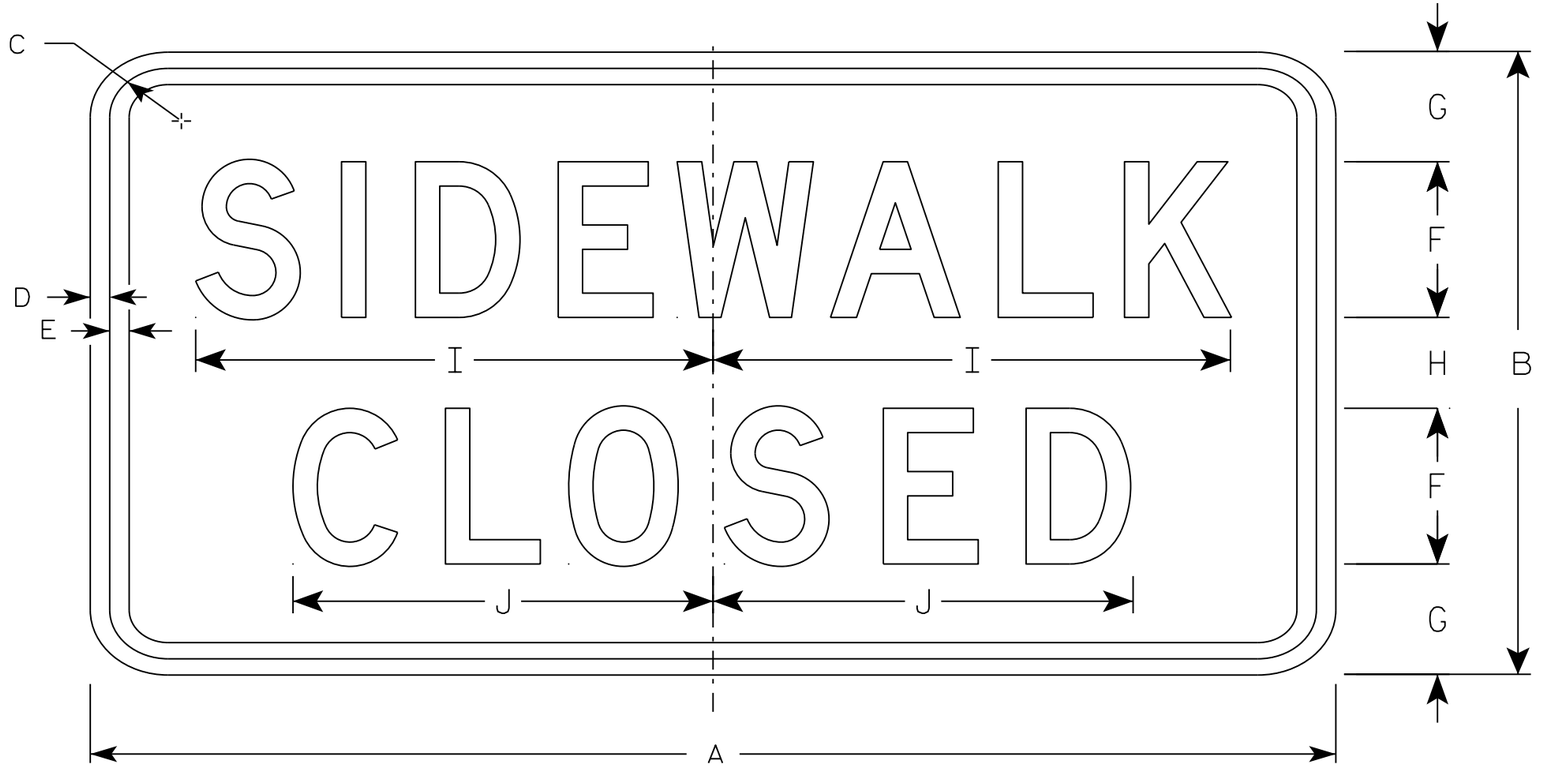
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 90 | E



R9-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN
R9-9

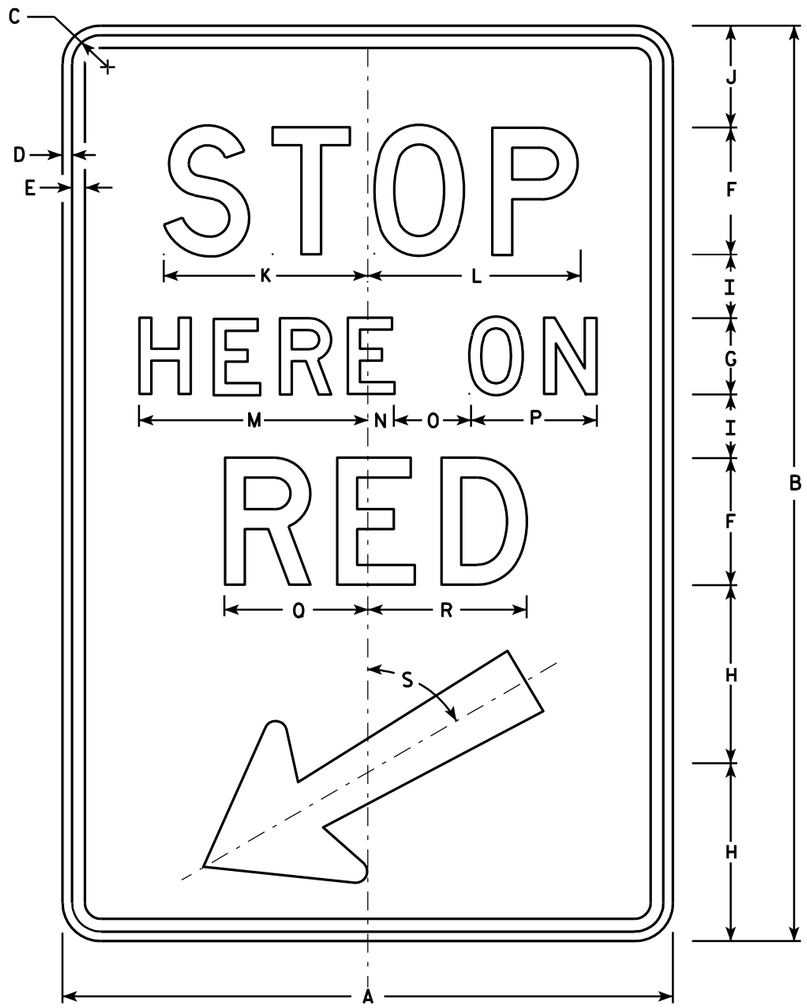
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE 91 R9-9.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

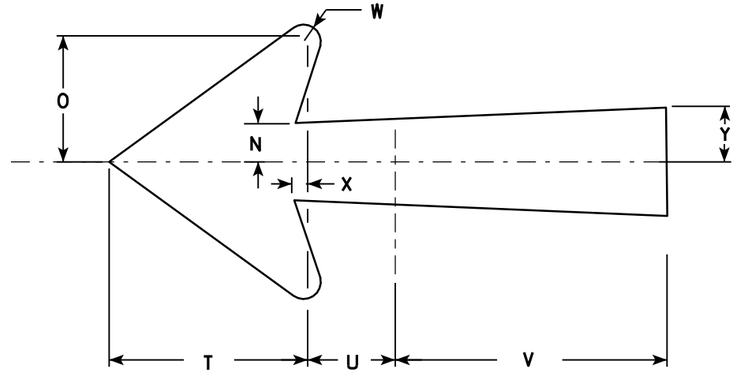
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R99.DGN PLOT DATE : 11-AUG-2016 11:33 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 2.918761:1.000000



R10-6

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

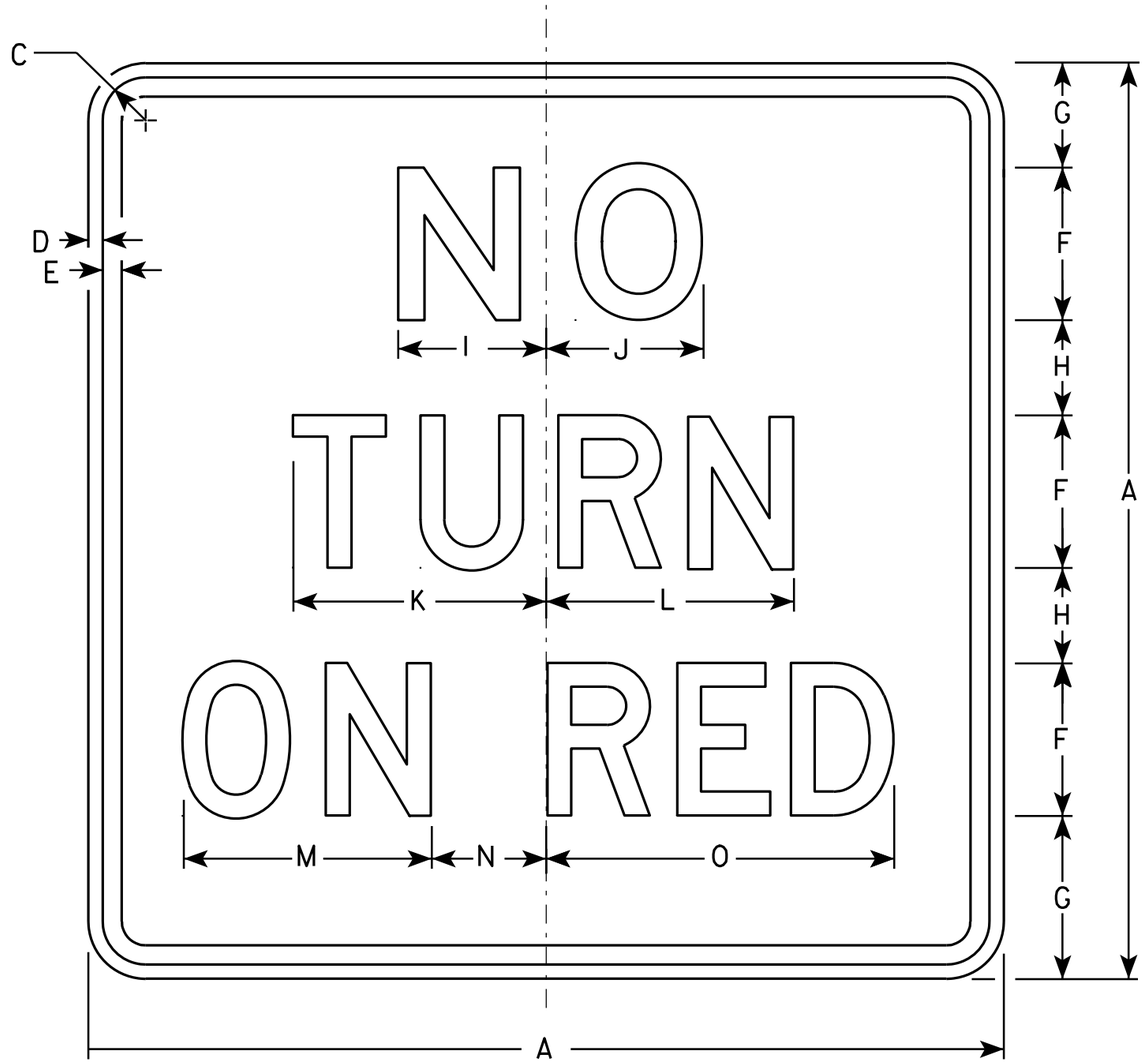
STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 92	E



R10-11B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - See Note 5.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series E.
   Lines 2 and 3 are Series D.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8	3/8	3/8	3	2 3/4	1 3/4	3	3 1/8	5	4 7/8	5 1/4	1 7/8	7 1/8												2.25
2S	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
2M	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
3	30		1 3/8	1/2	5/8	5	4 1/2	3	4 7/8	5 1/4	8 1/4	8 1/8	7 3/4	4 1/8	11 7/8												6.25
4																											
5																											

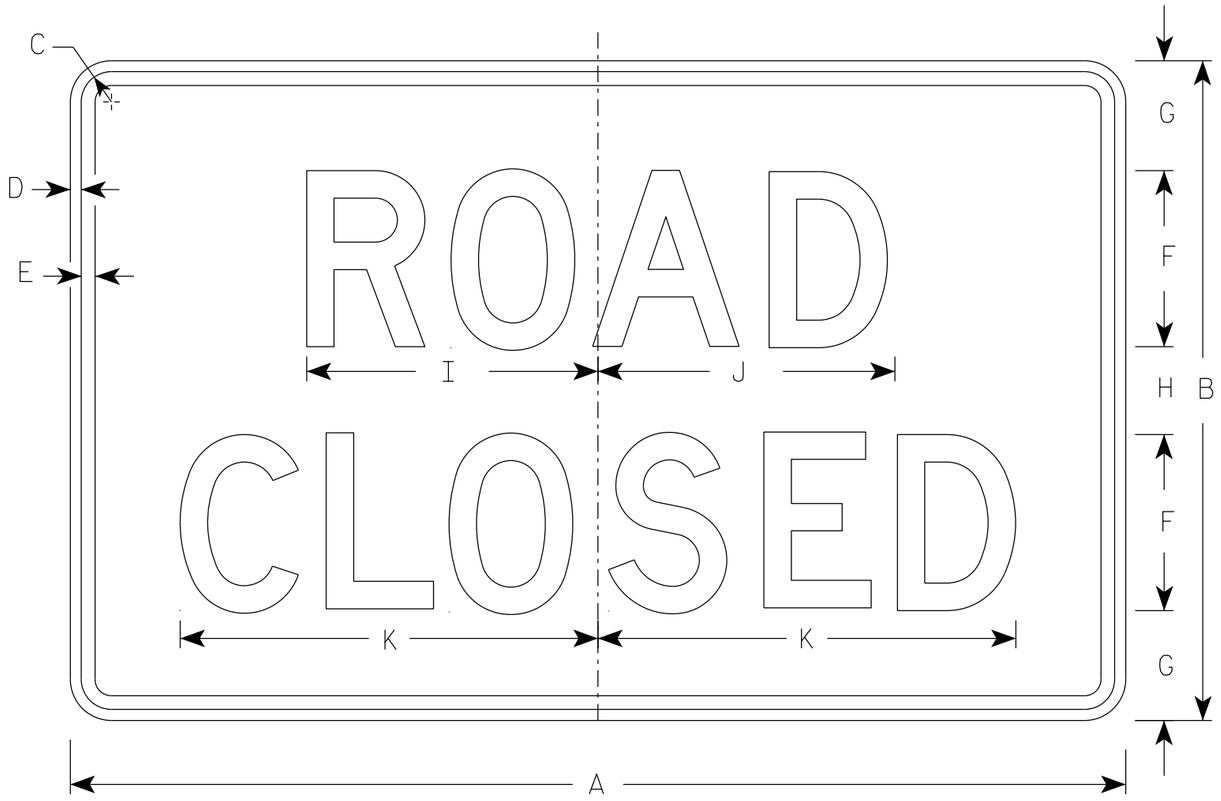
STANDARD SIGN
R10-11B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-11B.4

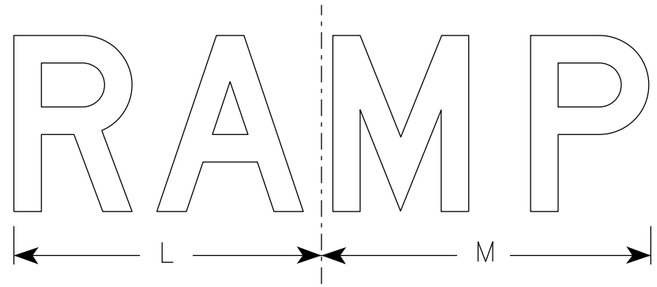
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 93 | E



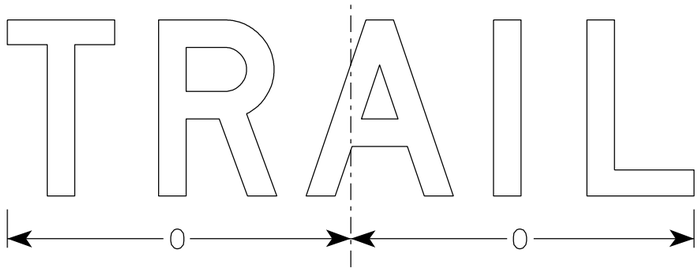
R11-2

NOTES

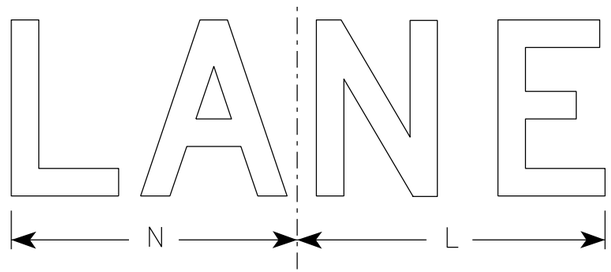
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2T



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

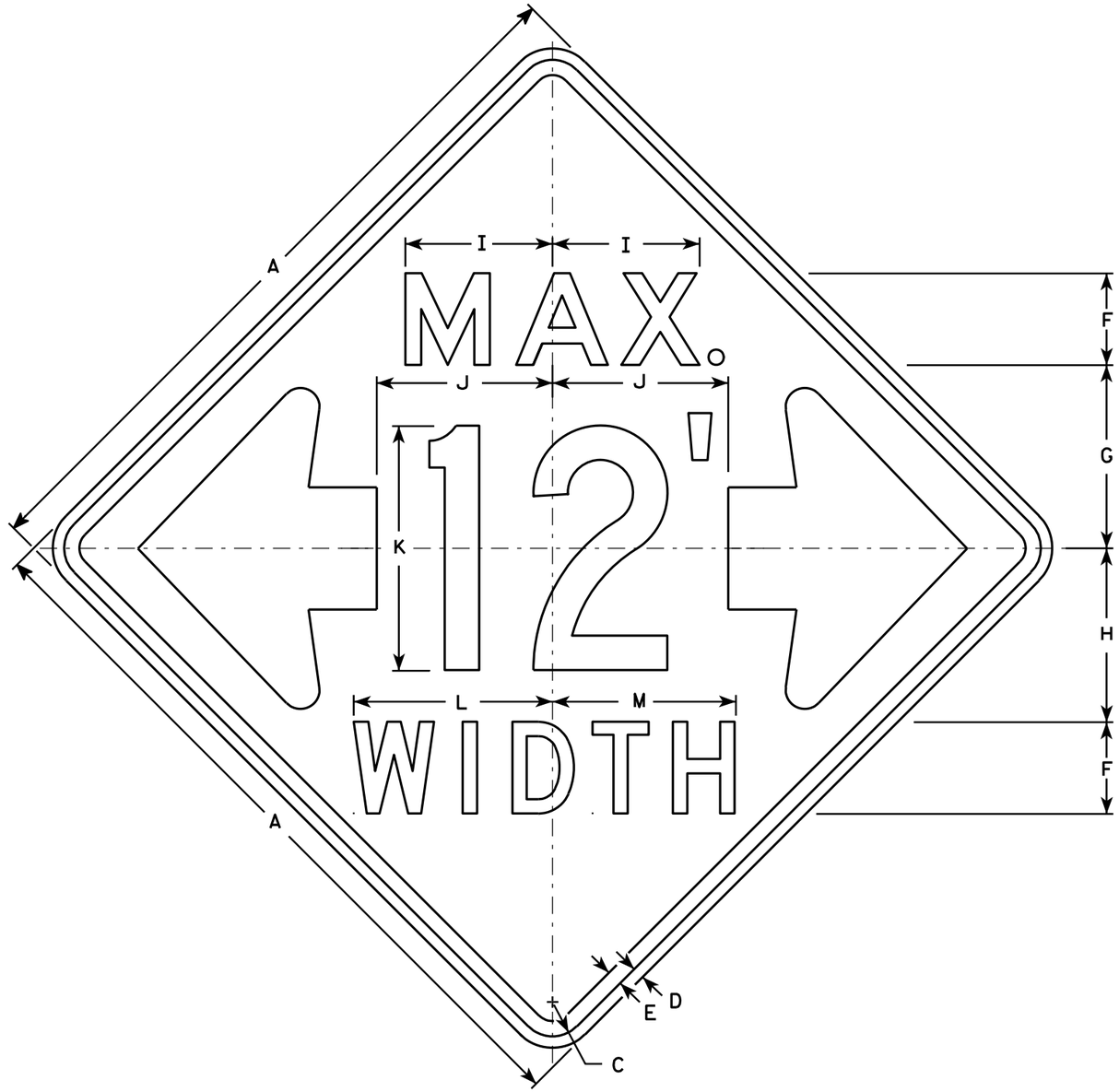
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

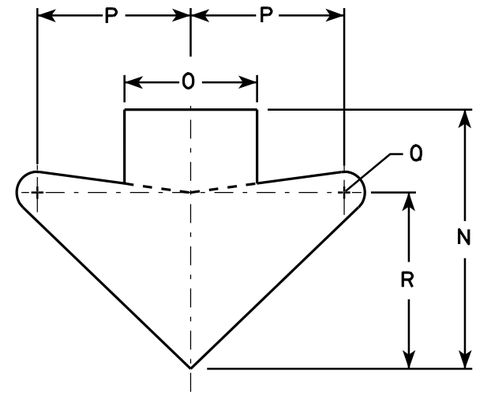
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 94	E



W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

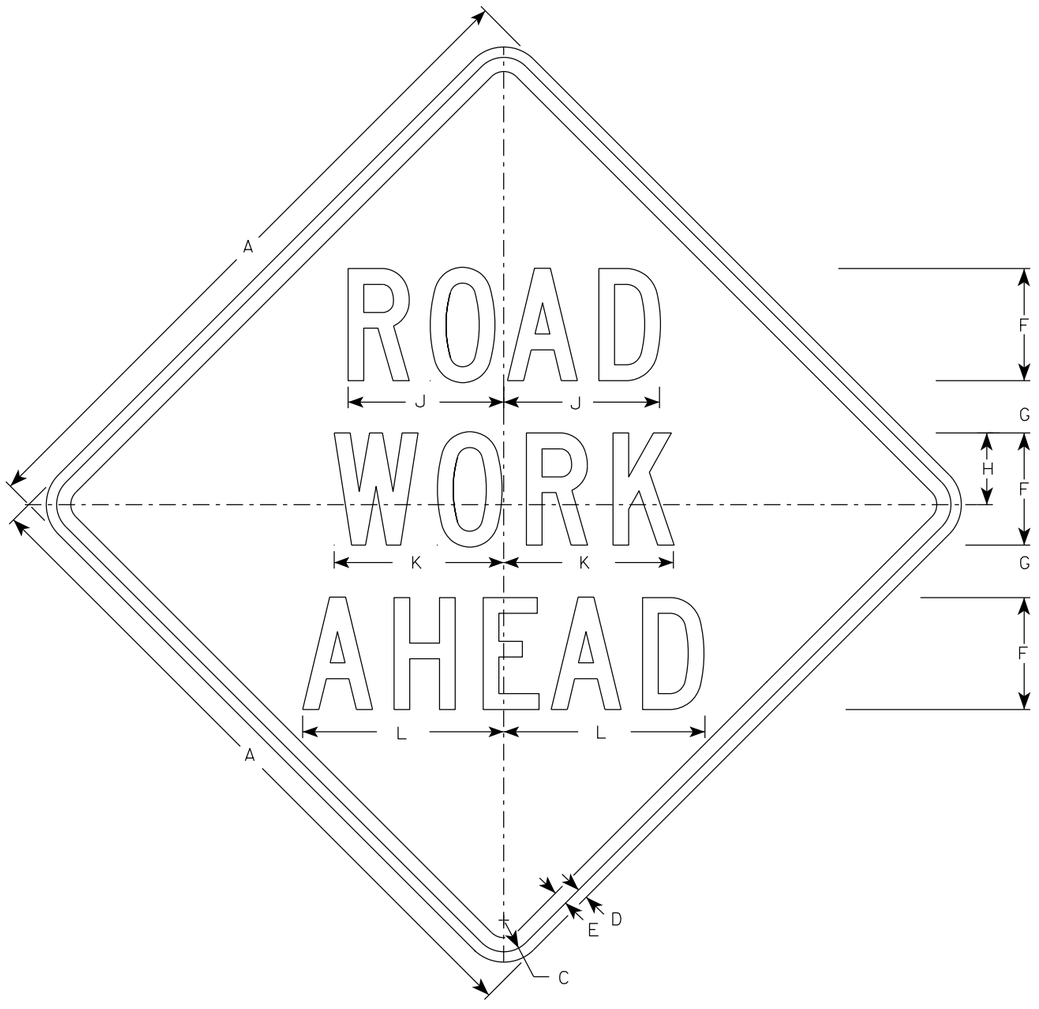
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

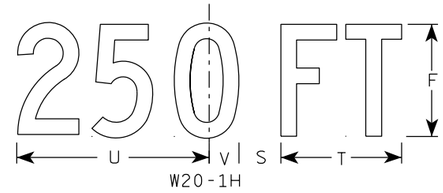
DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 95 | E

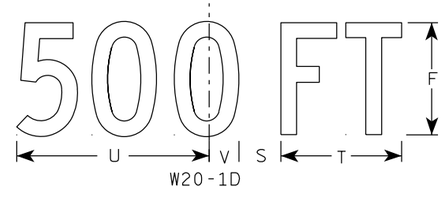
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000
WISDOT/CADDS SHEET 42



W20-1A



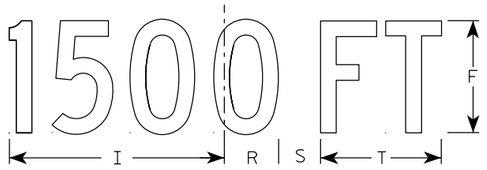
W20-1H



W20-1D



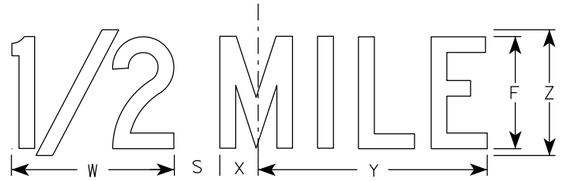
W20-1C



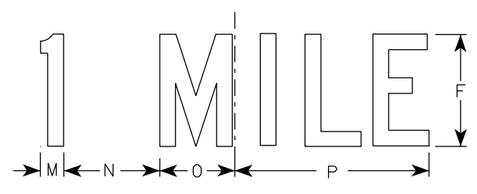
W20-1B

NOTES

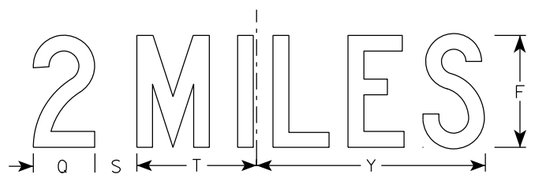
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



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

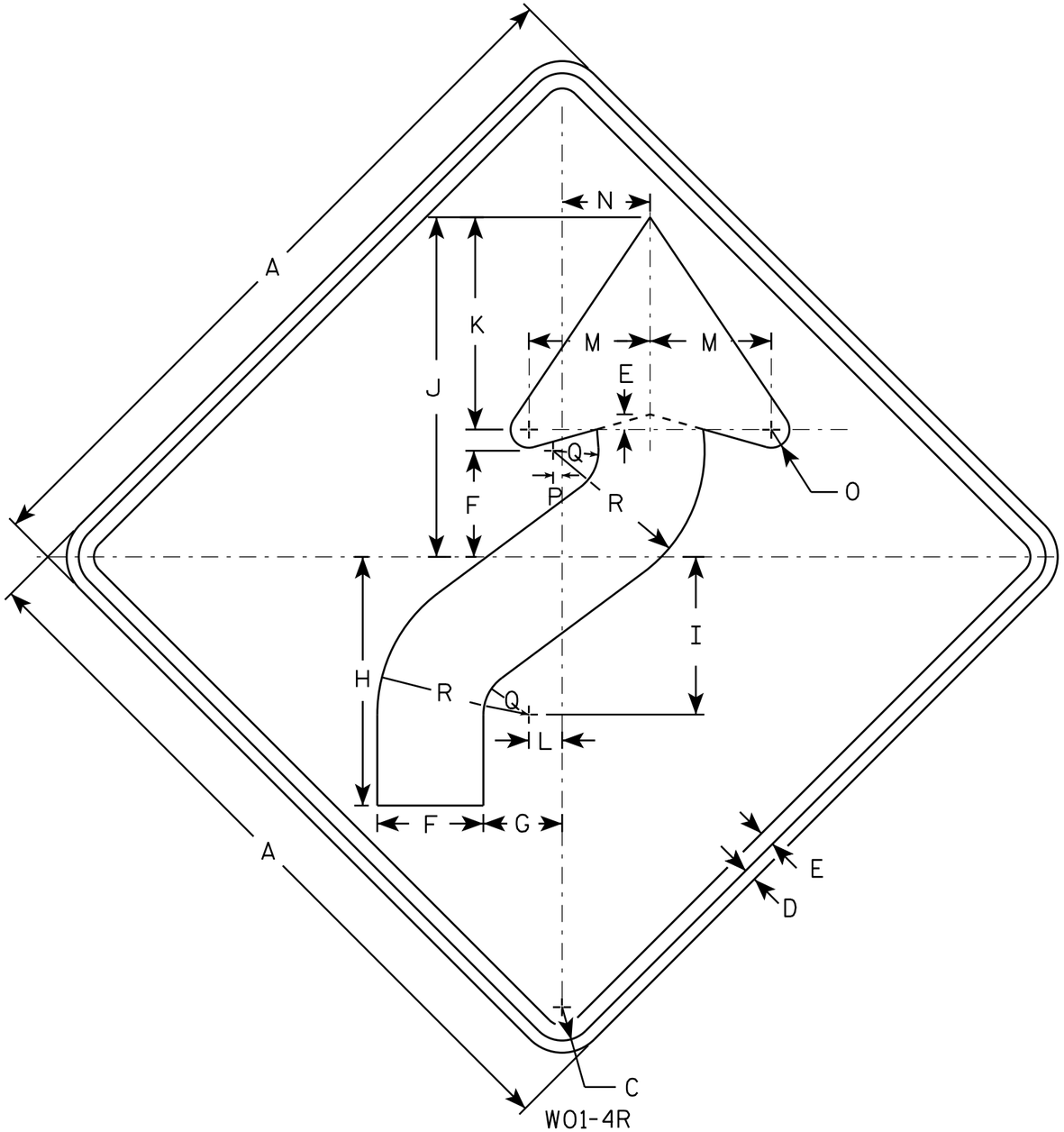
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

SHEET NO: 96 E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

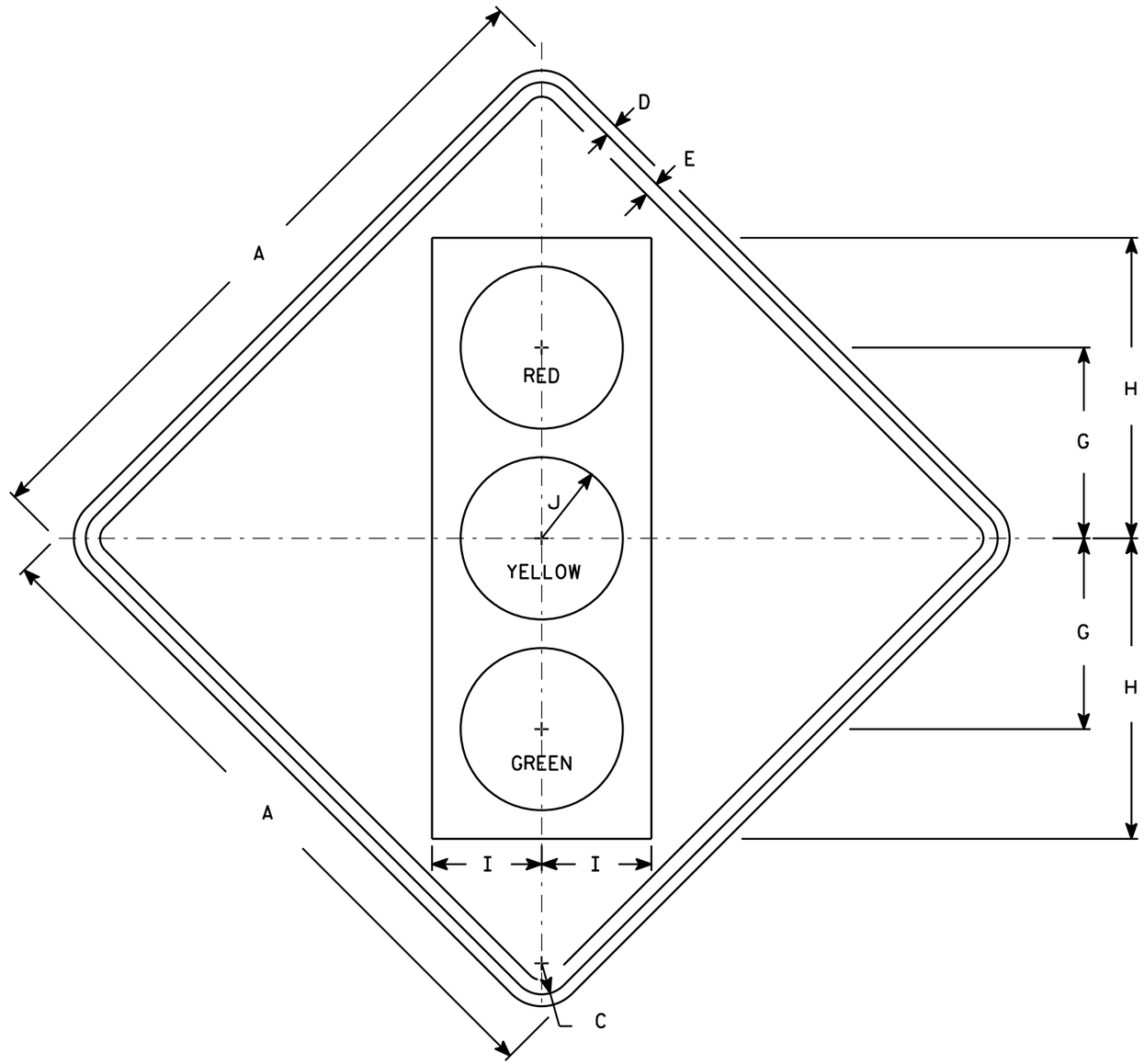
STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



W03-3

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2S	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
2M	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
3	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W03-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 98 W03-3.1

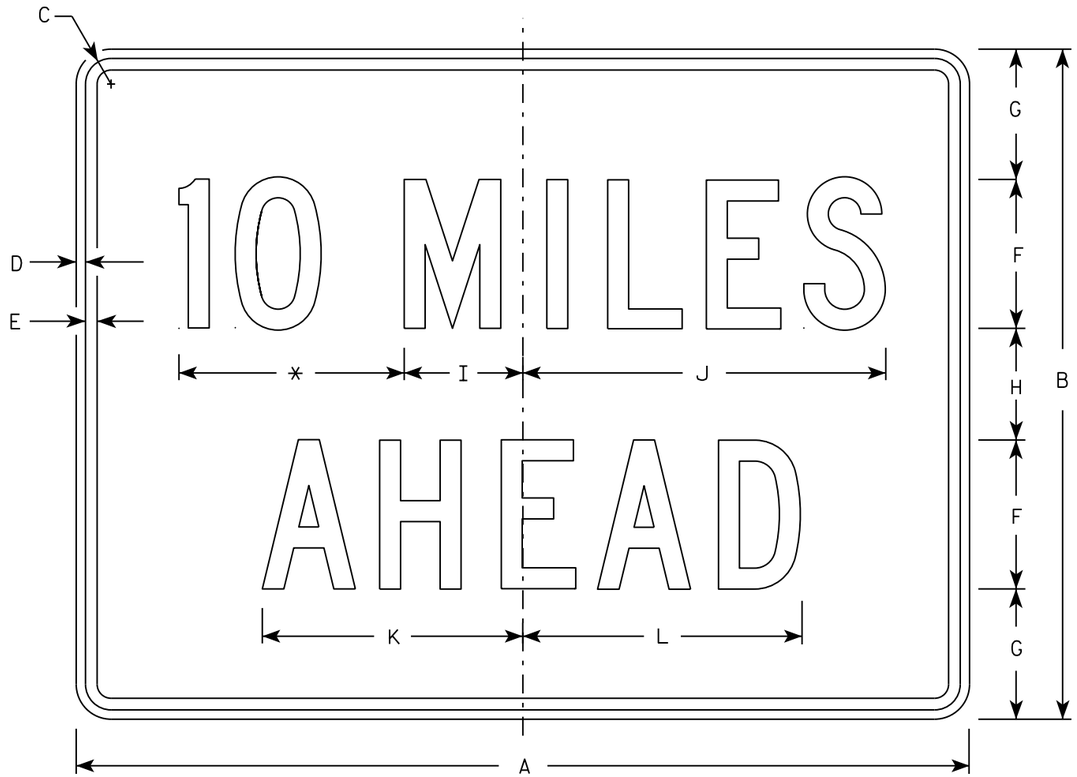
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W033.DGN PLOT DATE : 20-NOV-2013 11:26 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.296908:1.000000

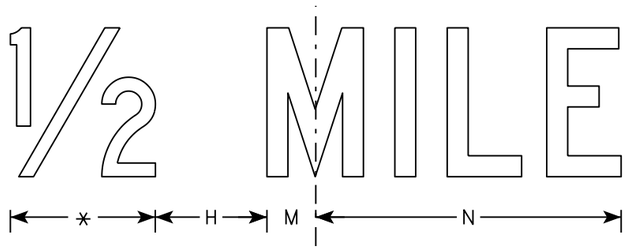
WISDOT/CADDS SHEET 42

7

7



W057-52



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.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.

* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

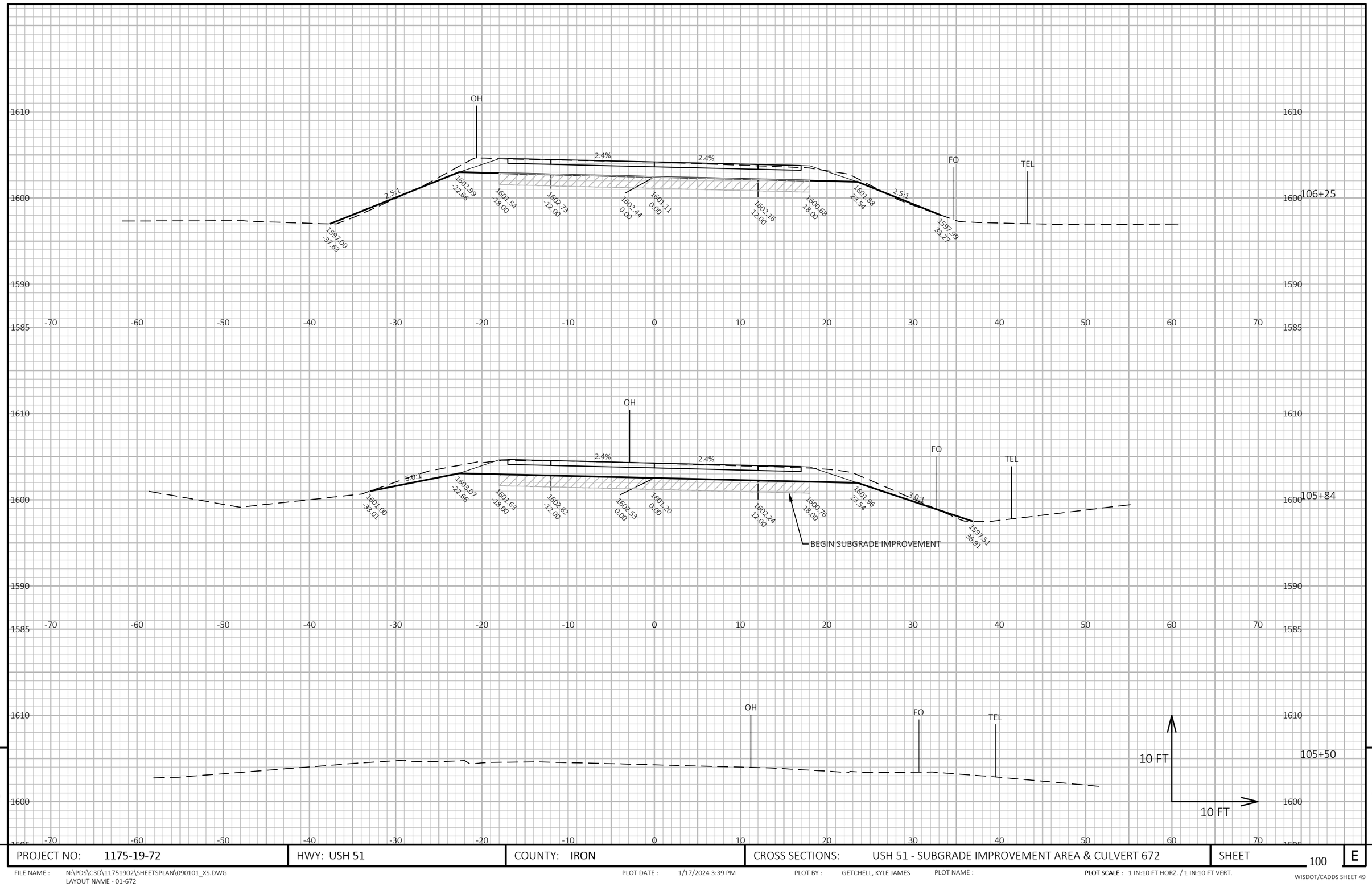
STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W057-52.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 99	E



PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - SUBGRADE IMPROVEMENT AREA & CULVERT 672	SHEET 100 E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 01-672

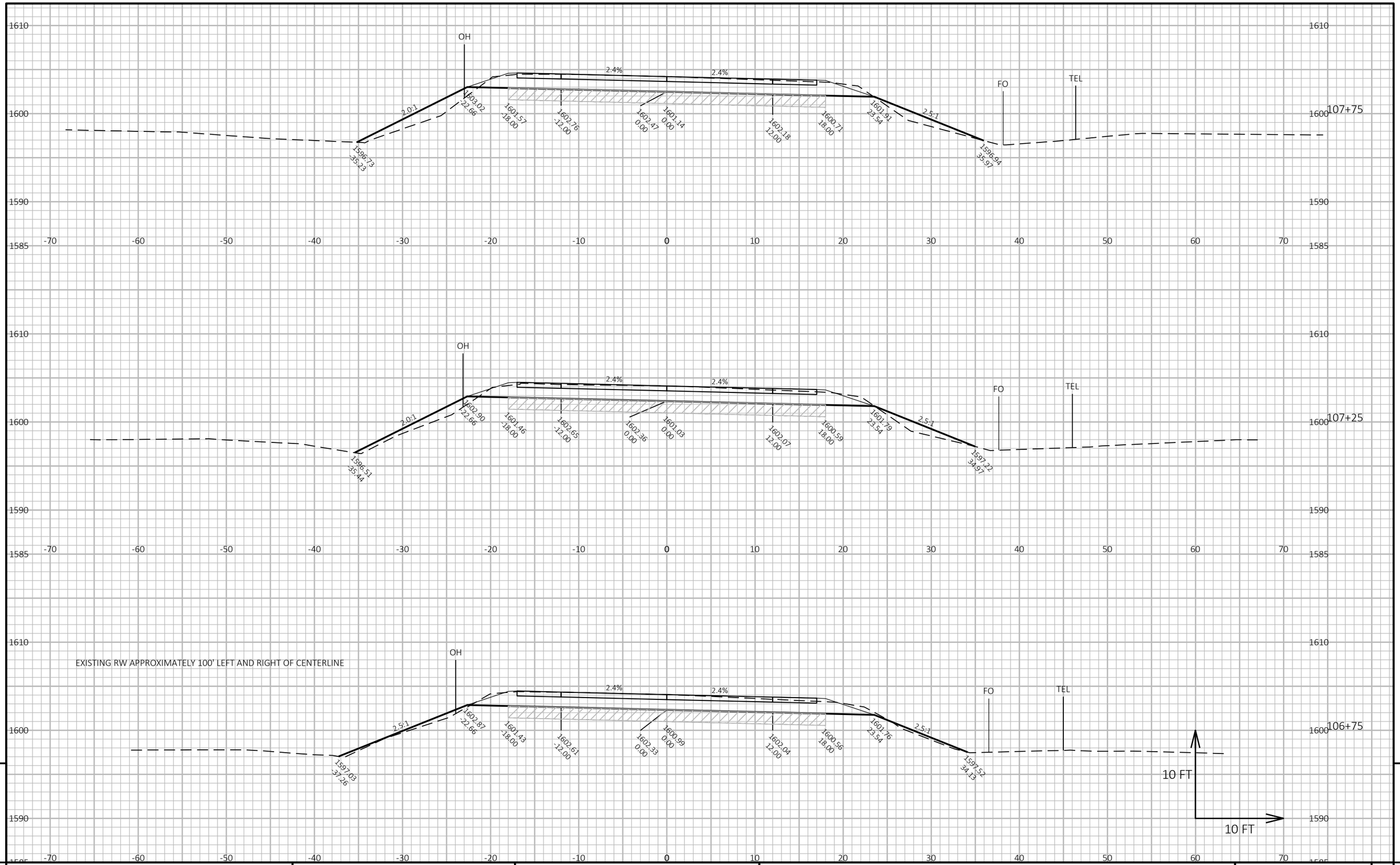
PLOT DATE : 1/17/2024 3:39 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

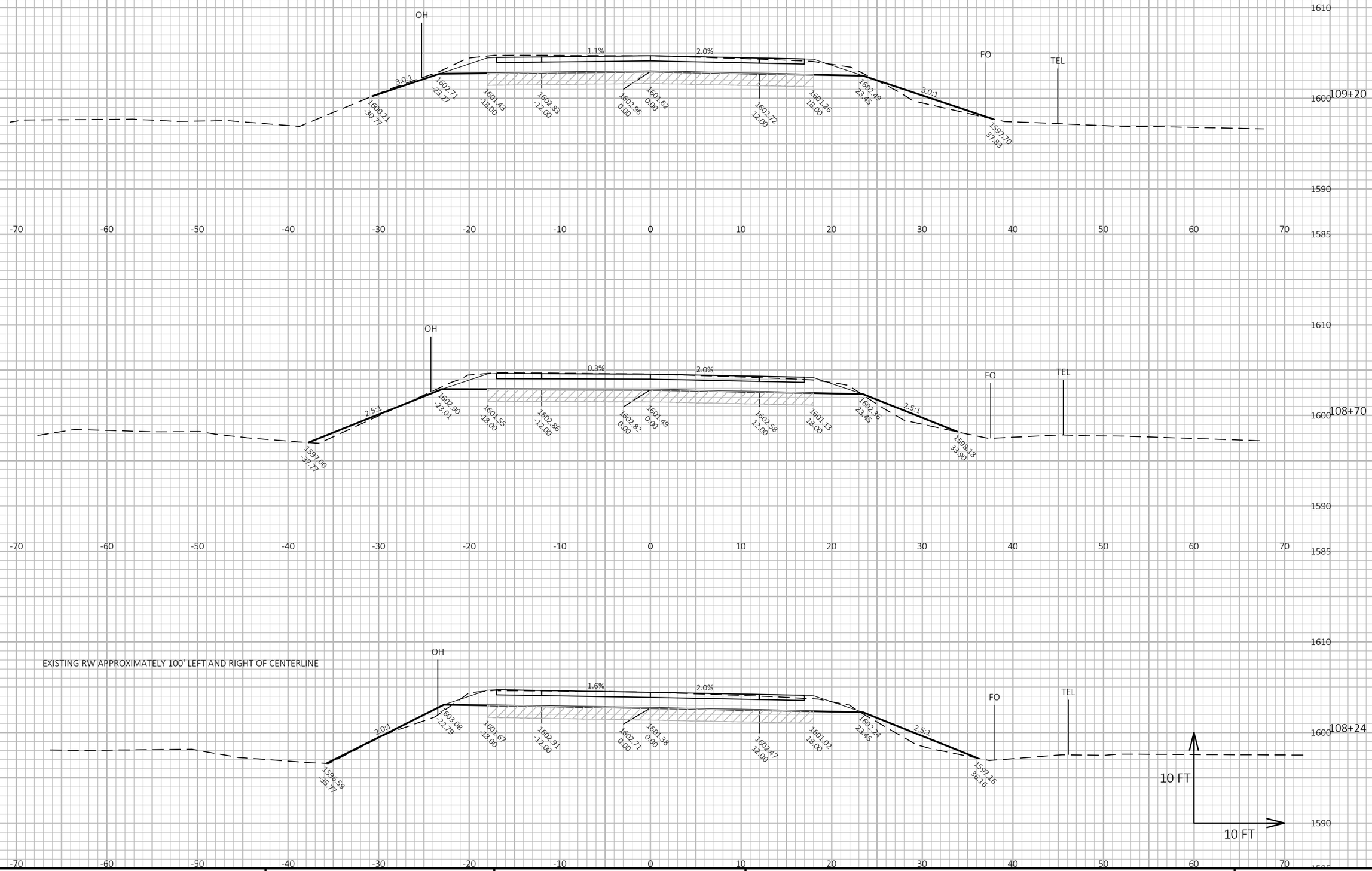
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PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - SUBGRADE IMPROVEMENT AREA & CULVERT 672	SHEET 101	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 02-672

PLOT DATE : 1/17/2024 3:39 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - SUBGRADE IMPROVEMENT AREA & CULVERT 672	SHEET 102	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 03-672

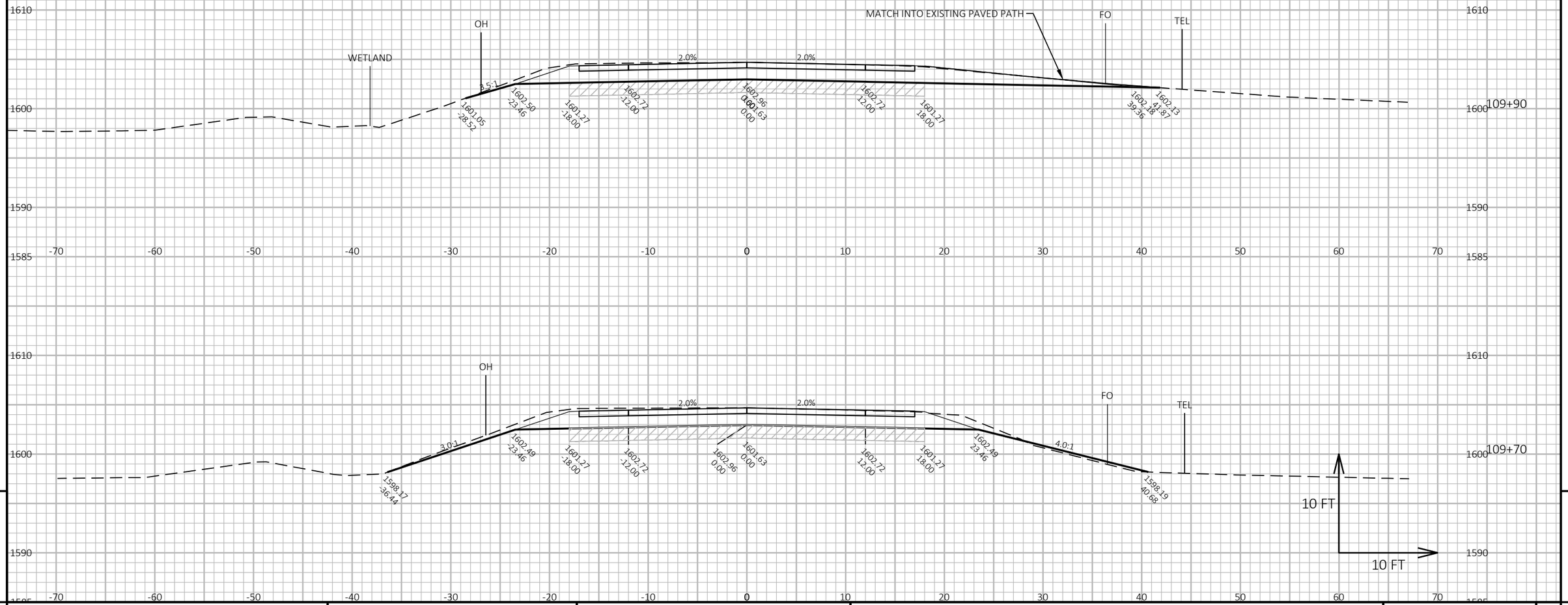
PLOT DATE : 1/17/2024 3:39 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - SUBGRADE IMPROVEMENT AREA & CULVERT 672	SHEET 103	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 04-672

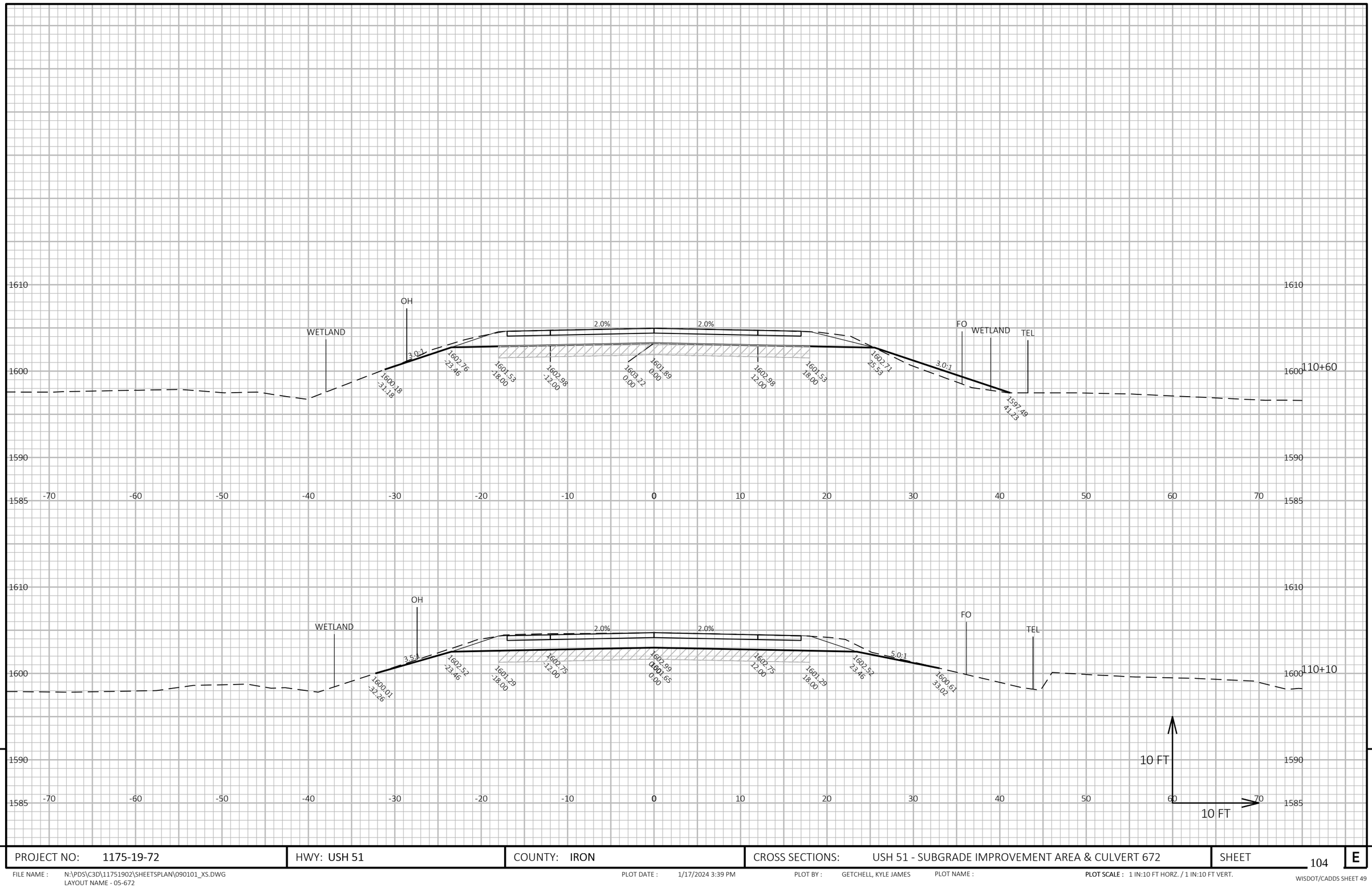
PLOT DATE : 1/17/2024 3:39 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - SUBGRADE IMPROVEMENT AREA & CULVERT 672	SHEET 104	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 05-672

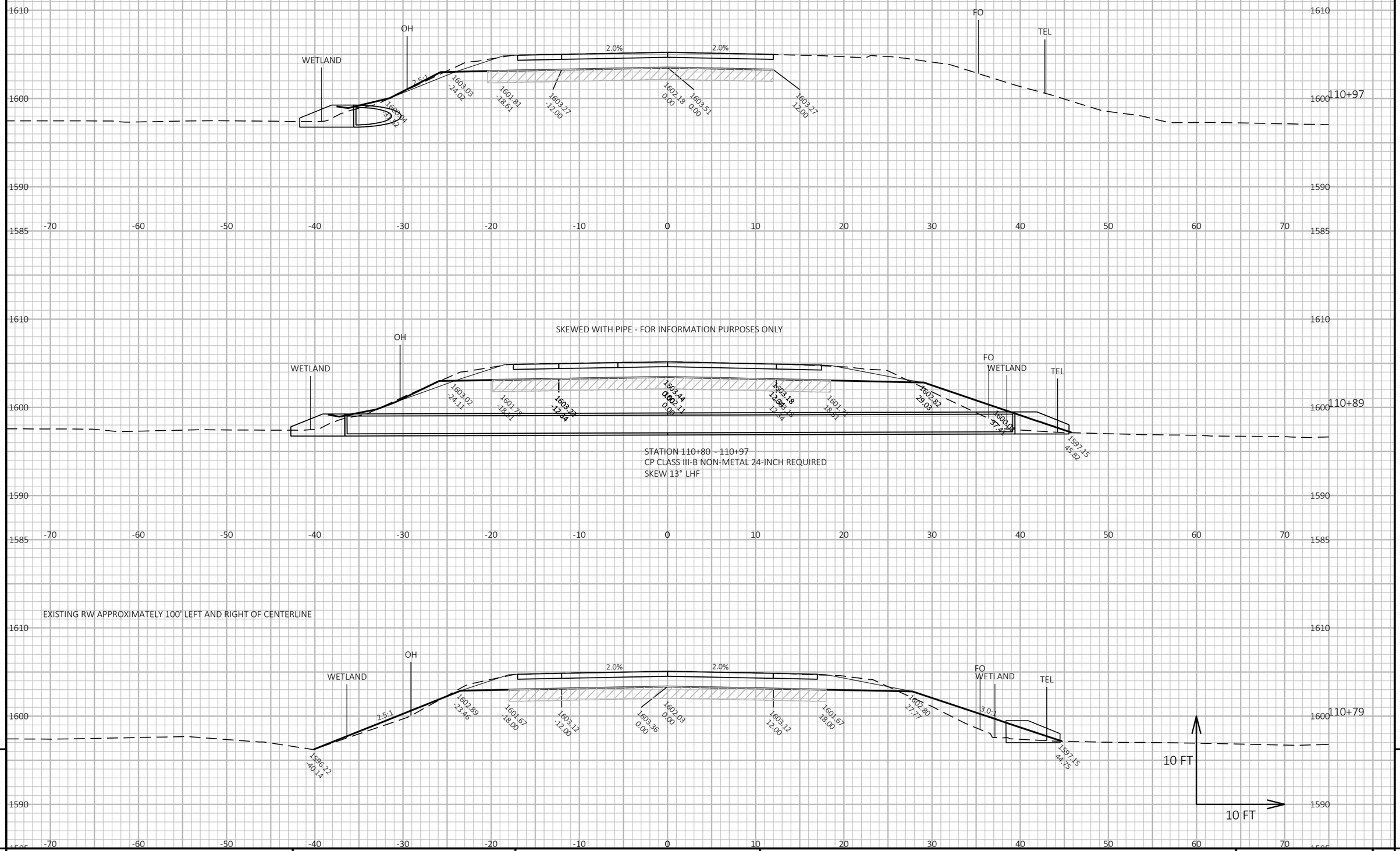
PLOT DATE : 1/17/2024 3:39 PM

PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



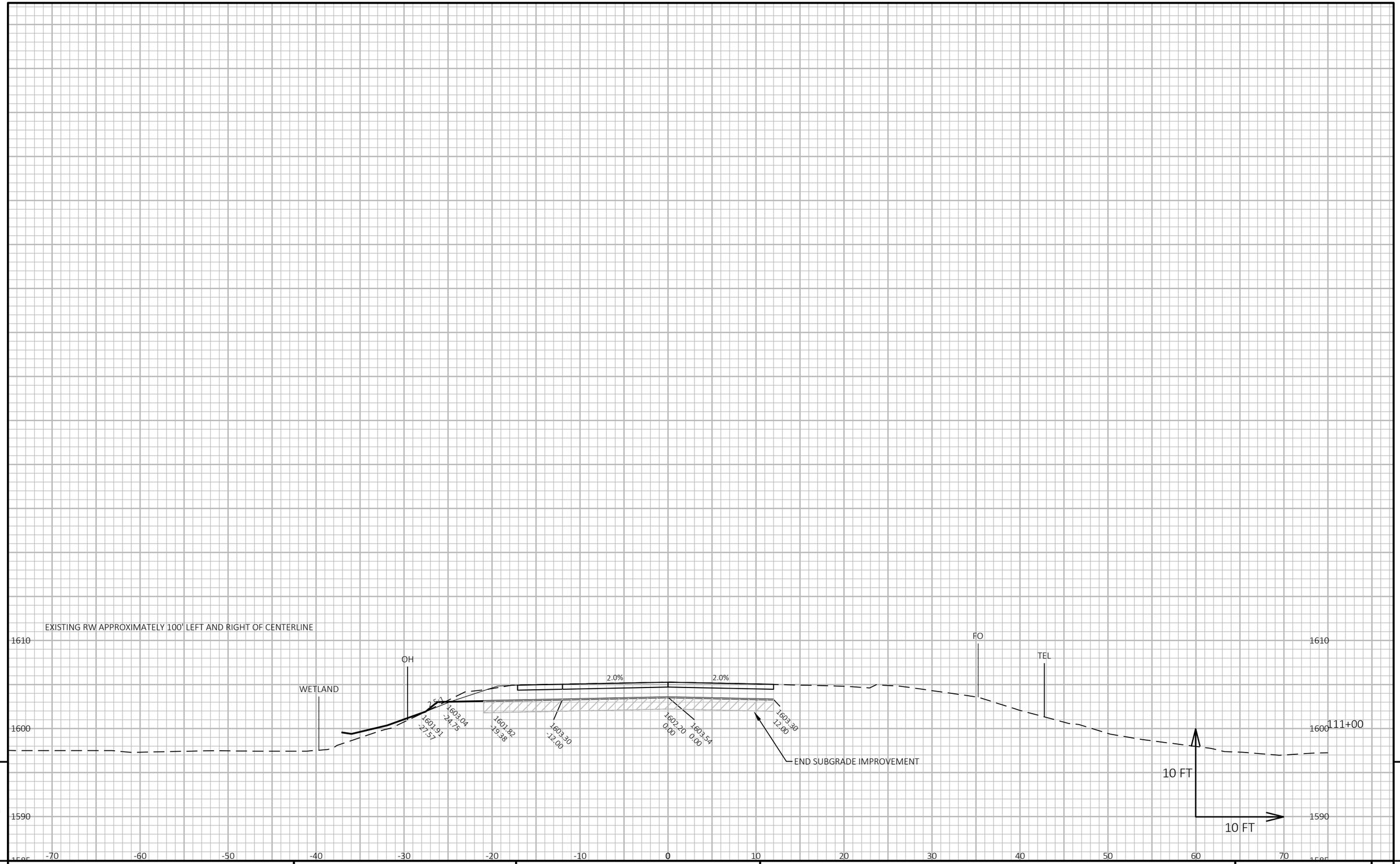
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9

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - SUBGRADE IMPROVEMENT AREA & CULVERT 672	SHEET 105	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 06-672

PLOT DATE : 1/17/2024 3:39 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - SUBGRADE IMPROVEMENT AREA & CULVERT 672	SHEET 106	E

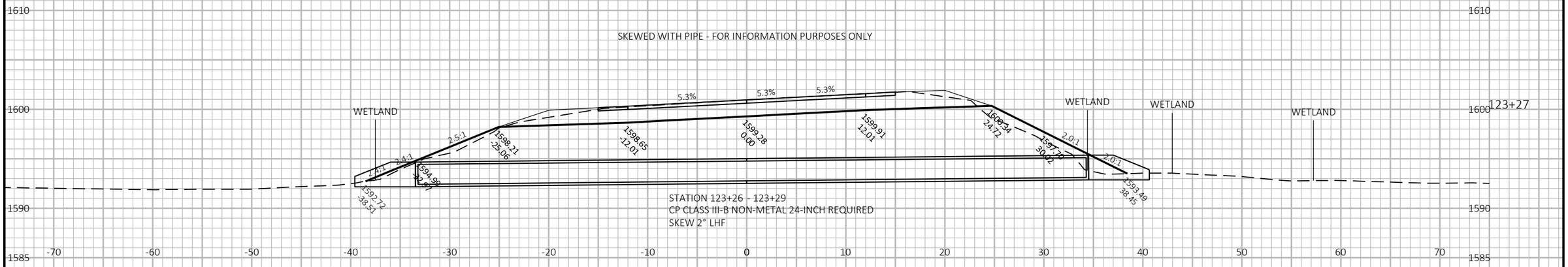
FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 07-672

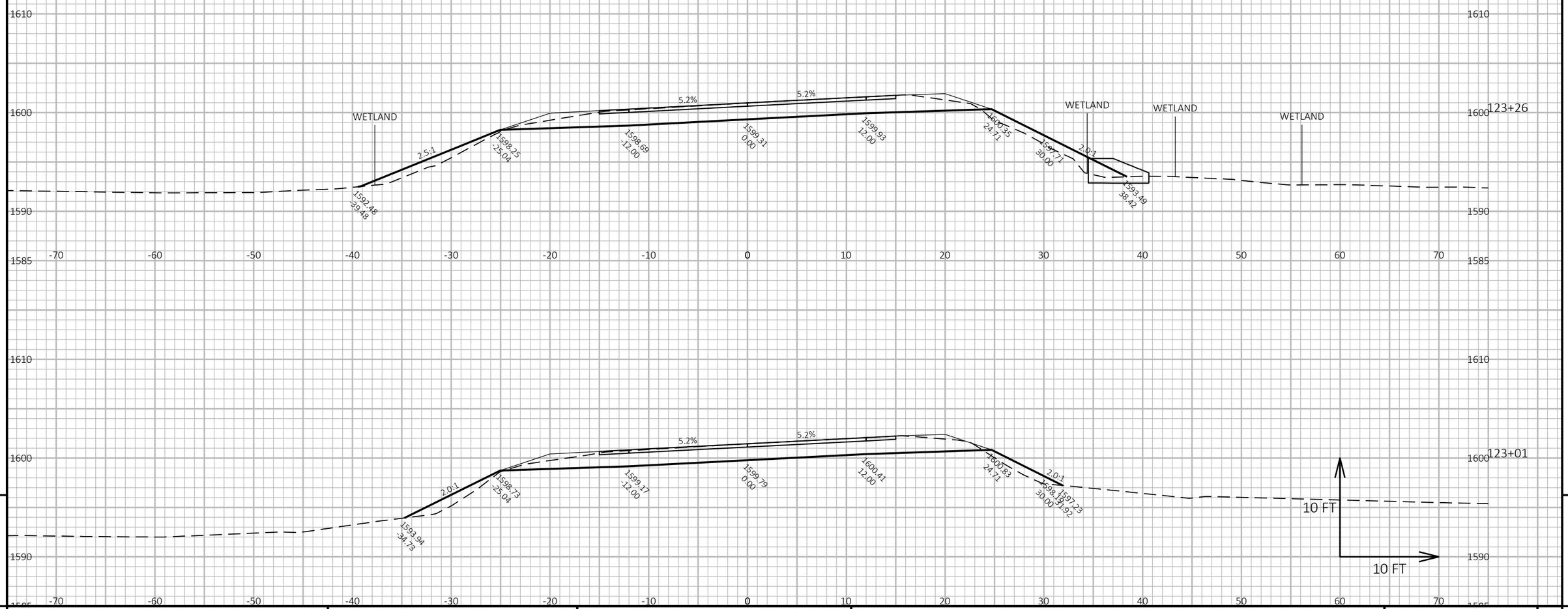
PLOT DATE : 1/17/2024 3:39 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE

SKEWED WITH PIPE - FOR INFORMATION PURPOSES ONLY





9

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PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 673	SHEET 107	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 08-673

PLOT DATE : 1/17/2024 3:39 PM

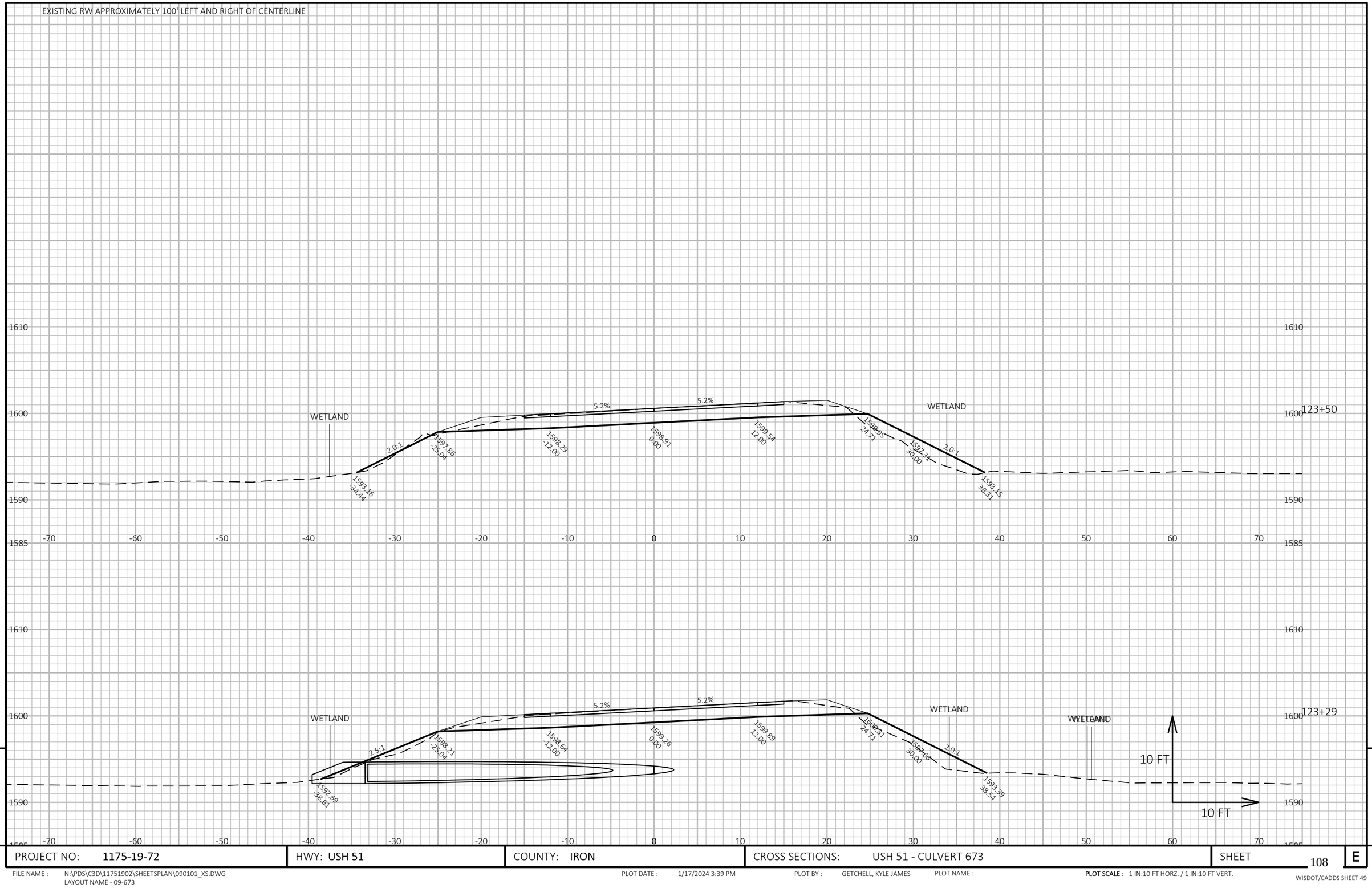
PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



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PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 673	SHEET 108	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 09-673

PLOT DATE : 1/17/2024 3:39 PM

PLOT BY : GETCHELL, KYLE JAMES

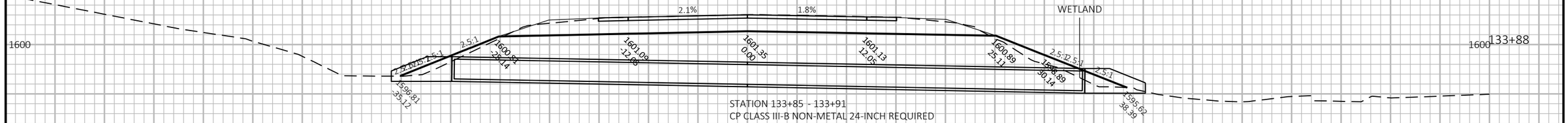
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

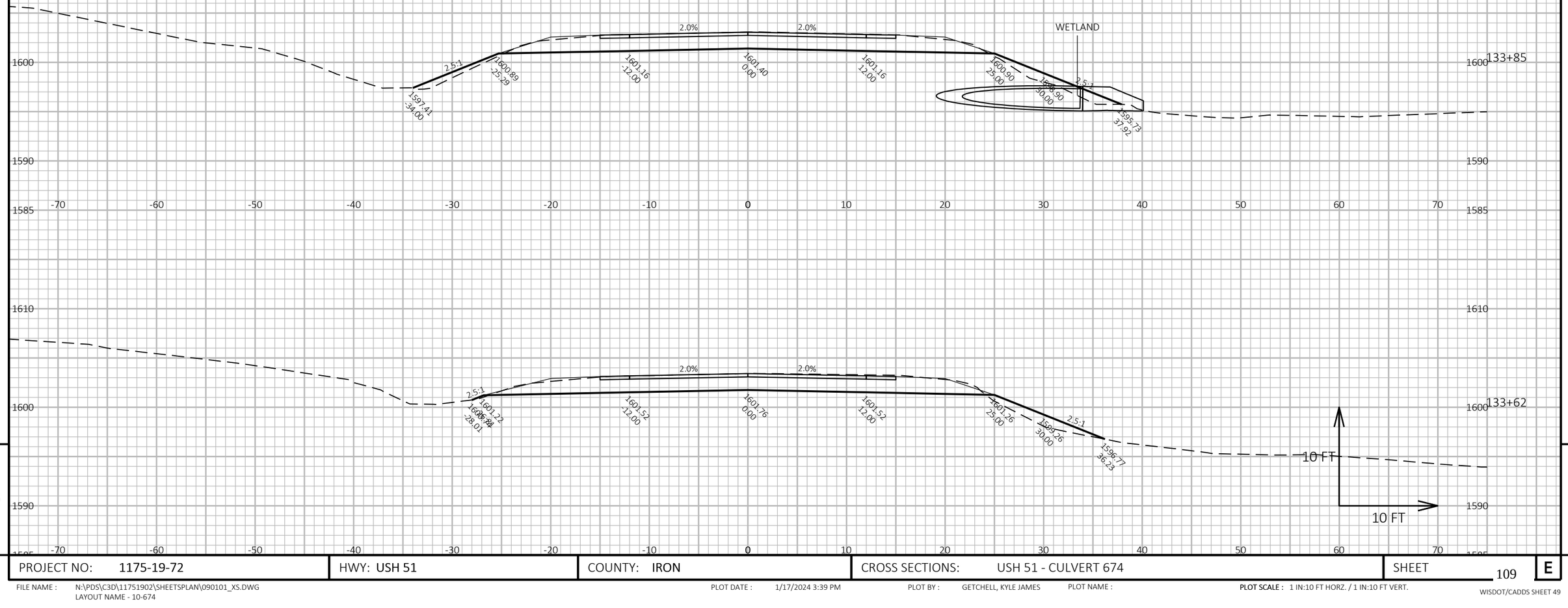
WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE

SKEWED WITH PIPE - FOR INFORMATION PURPOSES ONLY



STATION 133+85 - 133+91
CP CLASS III-B NON-METAL 24-INCH REQUIRED
SKEW 5° LHF



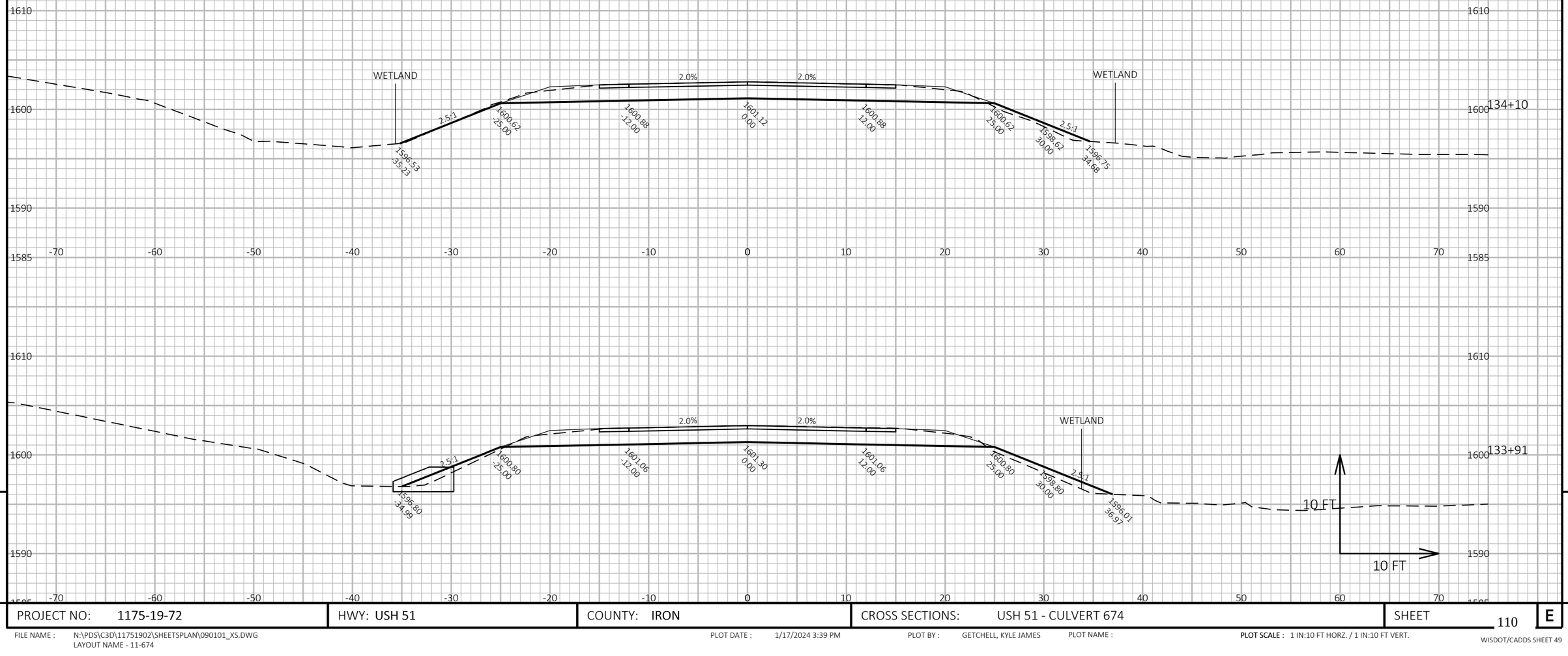
PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 674	SHEET 109	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 10-674

PLOT DATE : 1/17/2024 3:39 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



9 9

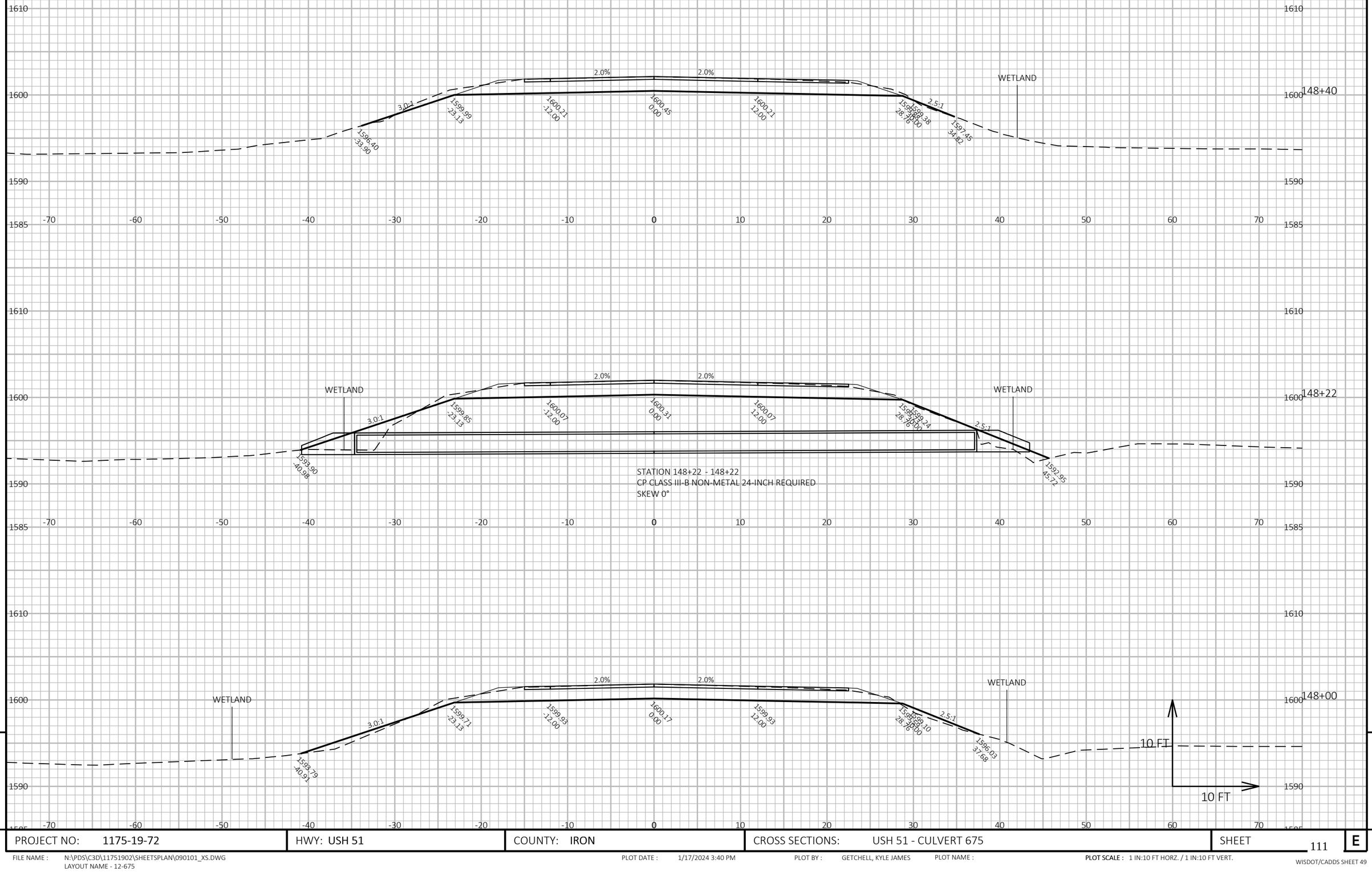
PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 674	SHEET 110	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 11-674

PLOT DATE : 1/17/2024 3:39 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 675	SHEET 111 E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 12-675

PLOT DATE : 1/17/2024 3:40 PM

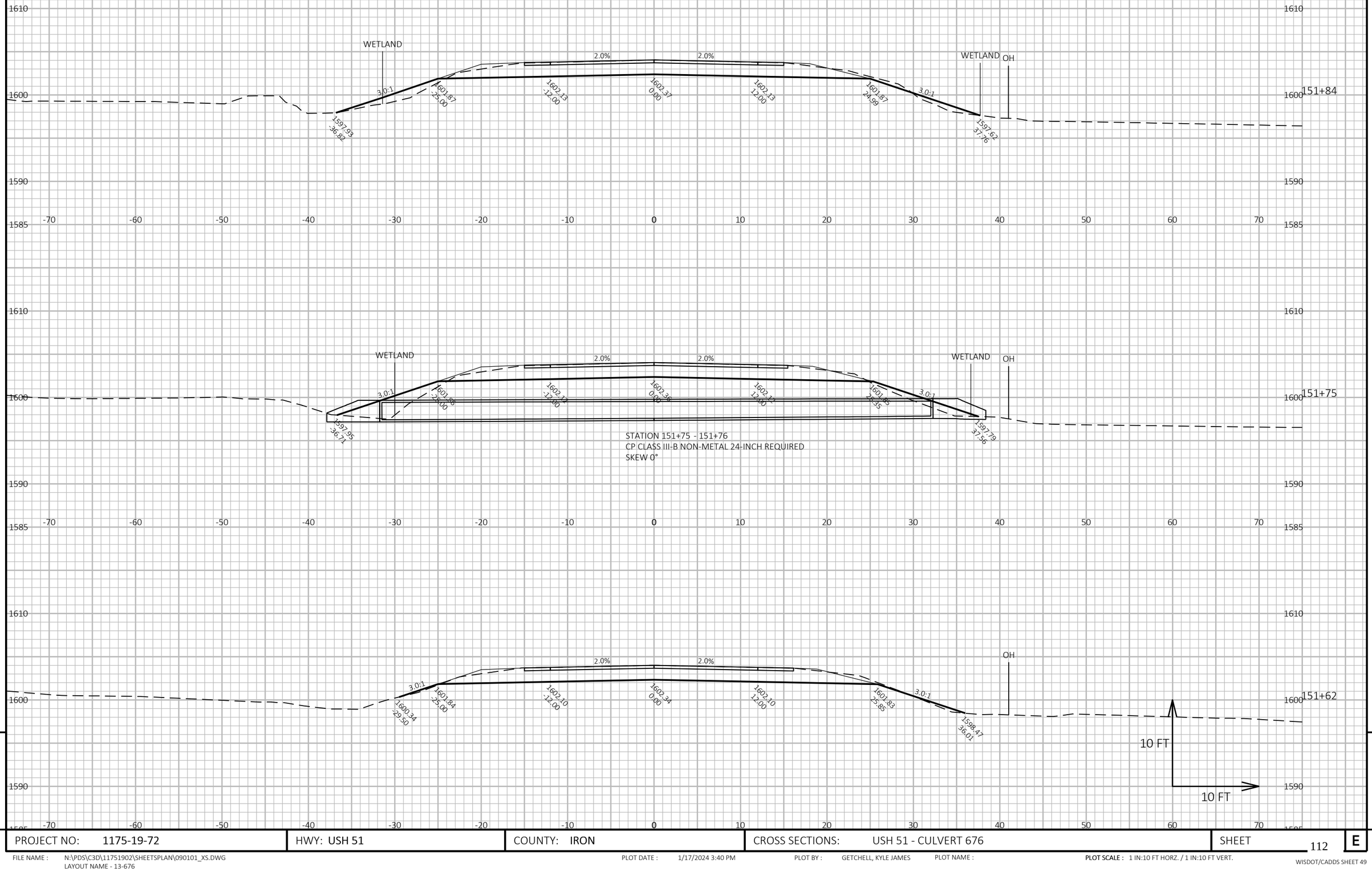
PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE

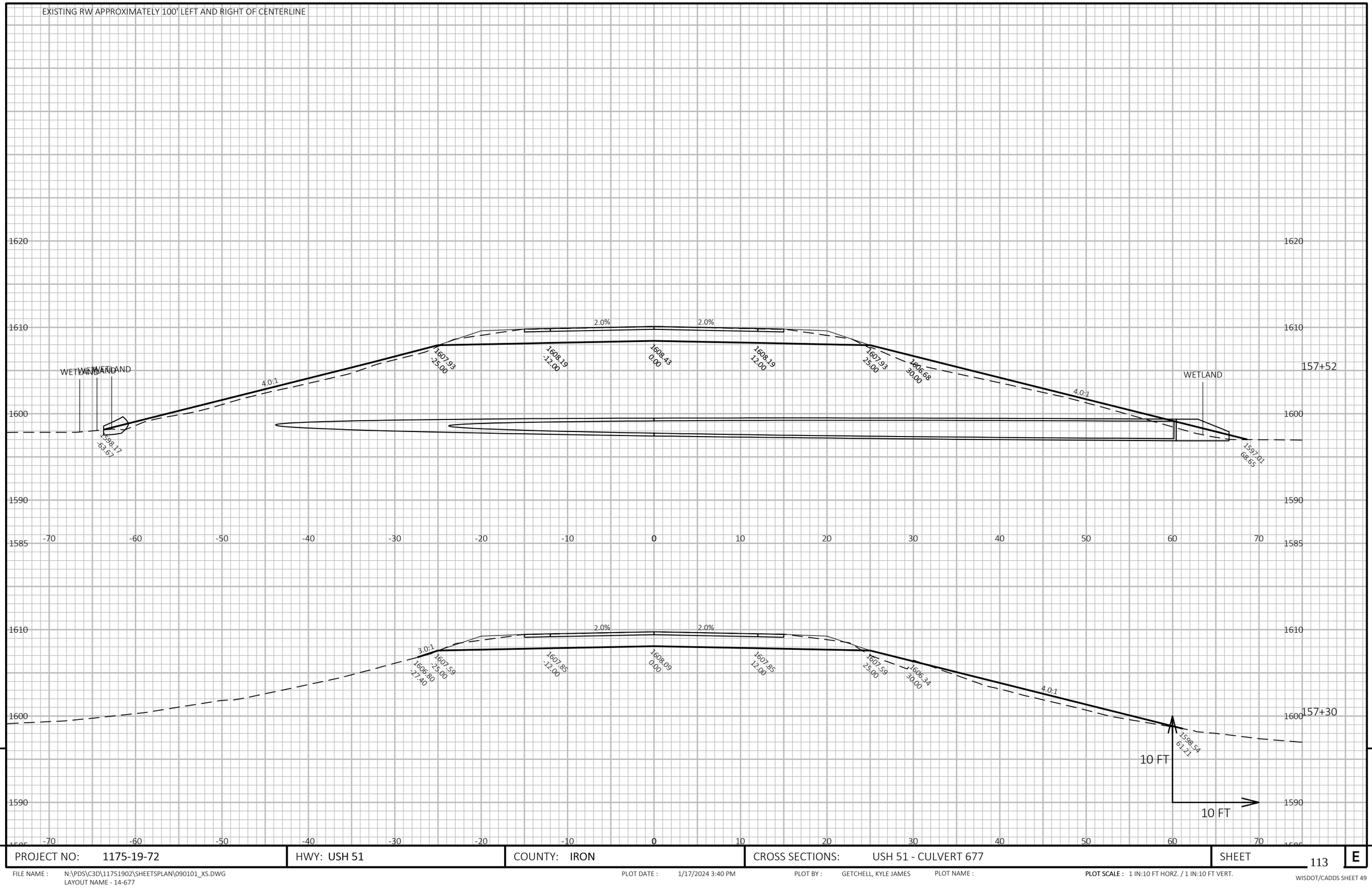


9 9

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 676	SHEET 112	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 13-676
PLOT DATE : 1/17/2024 3:40 PM
PLOT BY : GETCHELL, KYLE JAMES
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 677	SHEET 113	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 14-677

PLOT DATE : 1/17/2024 3:40 PM

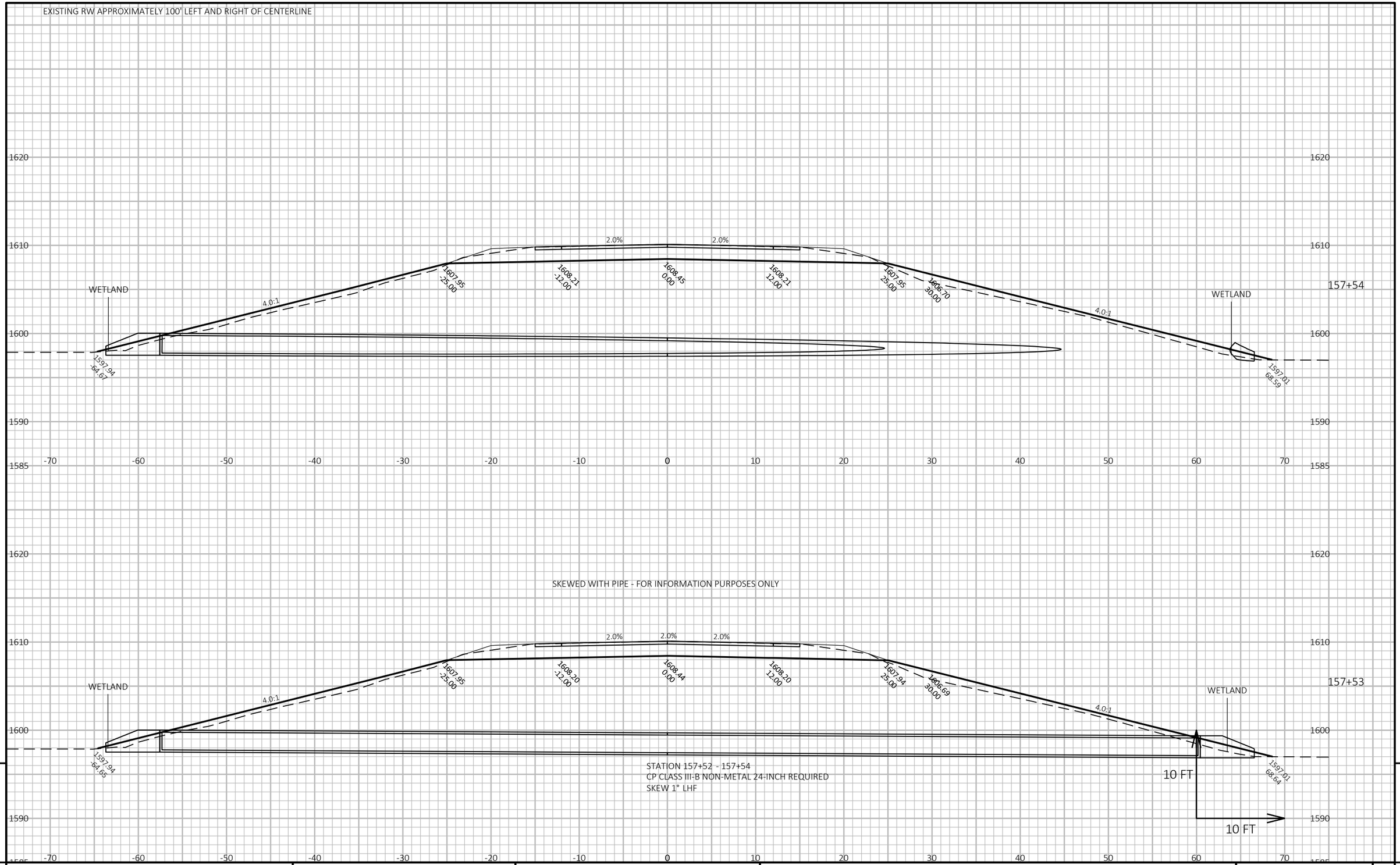
PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



SKEWED WITH PIPE - FOR INFORMATION PURPOSES ONLY

STATION 157+52 - 157+54
CP CLASS III-B NON-METAL 24-INCH REQUIRED
SKEW 1° LHF

9

9

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 677	SHEET 114	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 15-677

PLOT DATE : 1/17/2024 3:40 PM

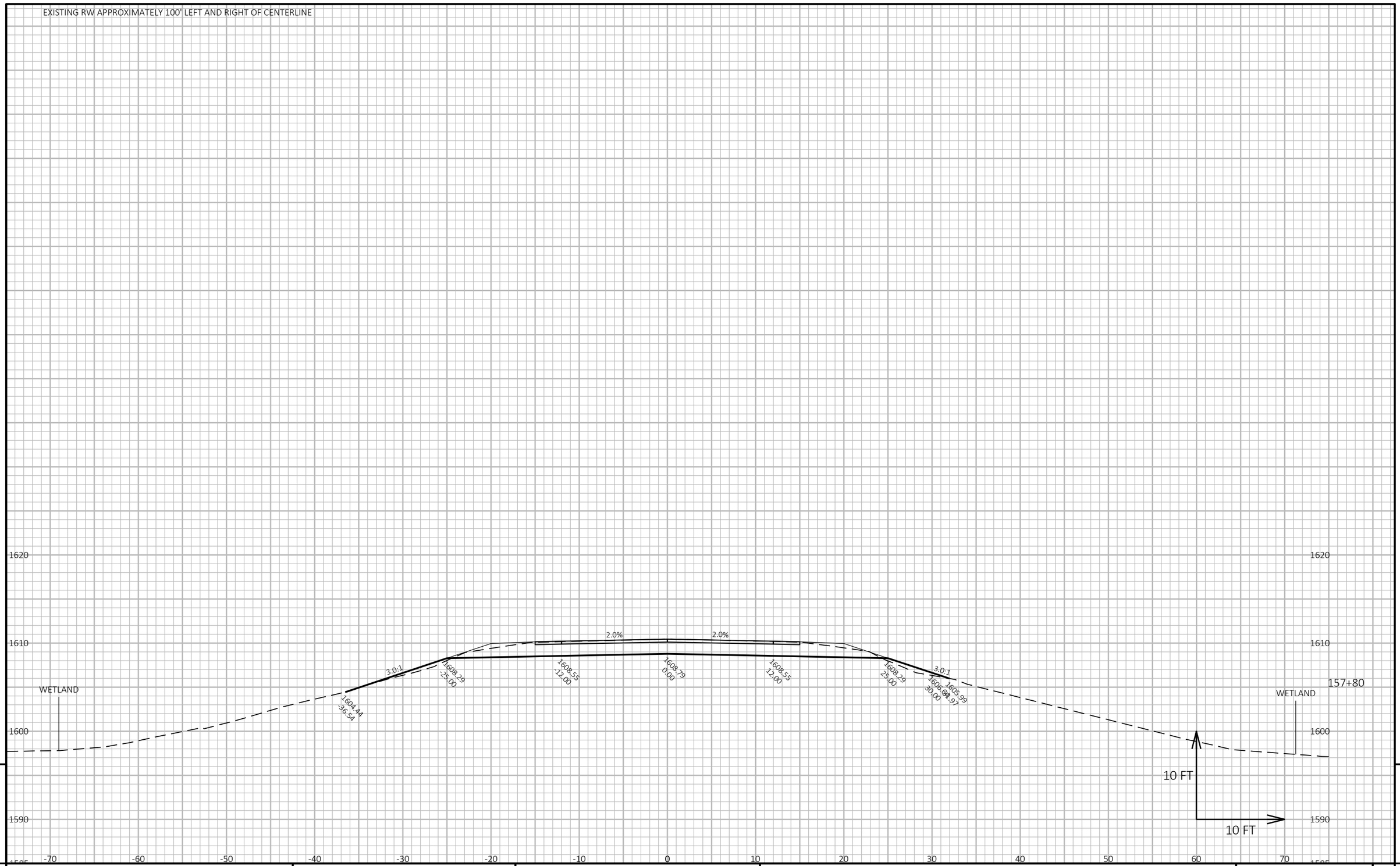
PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



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PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 677	SHEET 115	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 16-677

PLOT DATE : 1/17/2024 3:40 PM

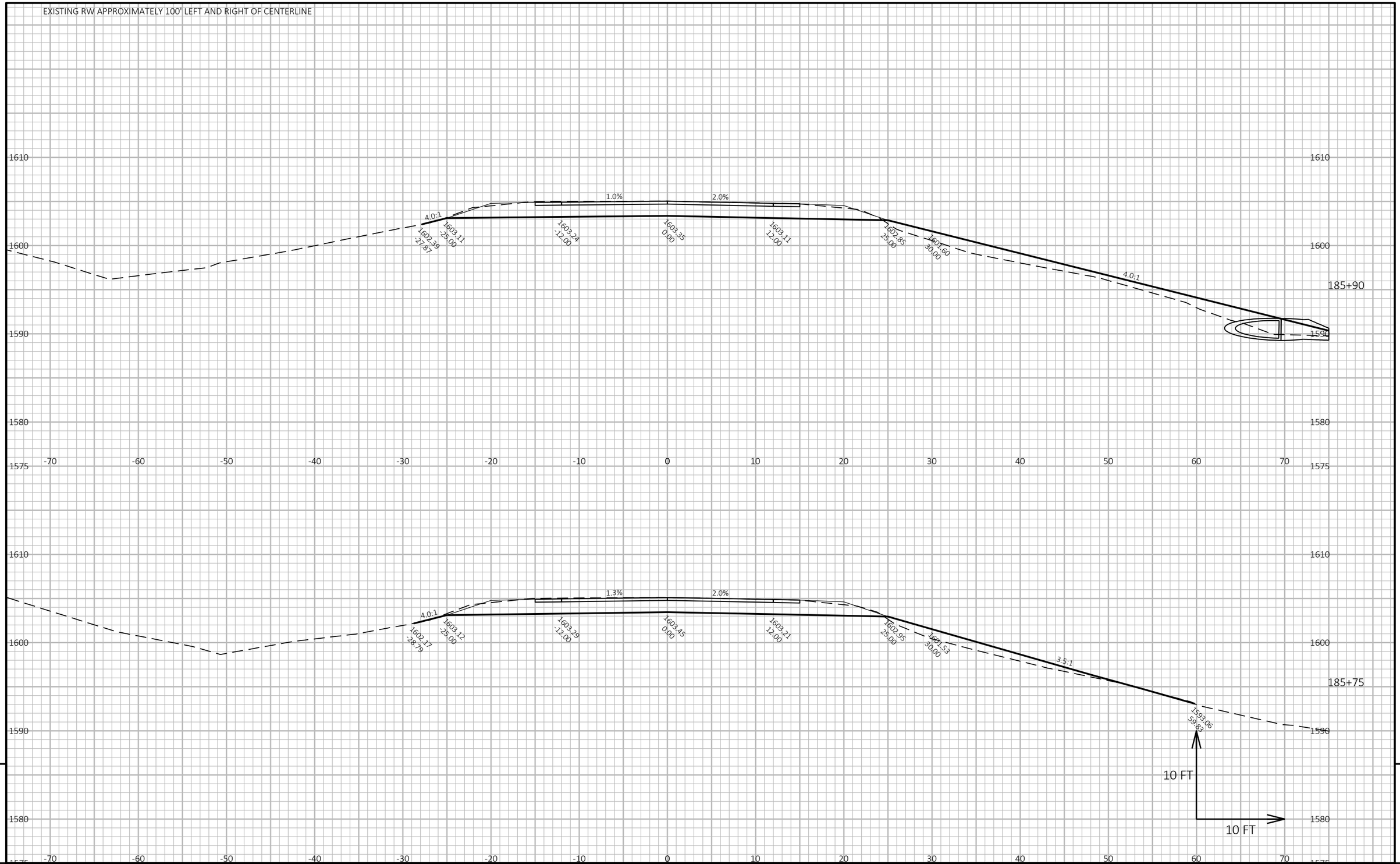
PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



9

9

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 678	SHEET 116	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 17-678

PLOT DATE : 1/17/2024 3:40 PM

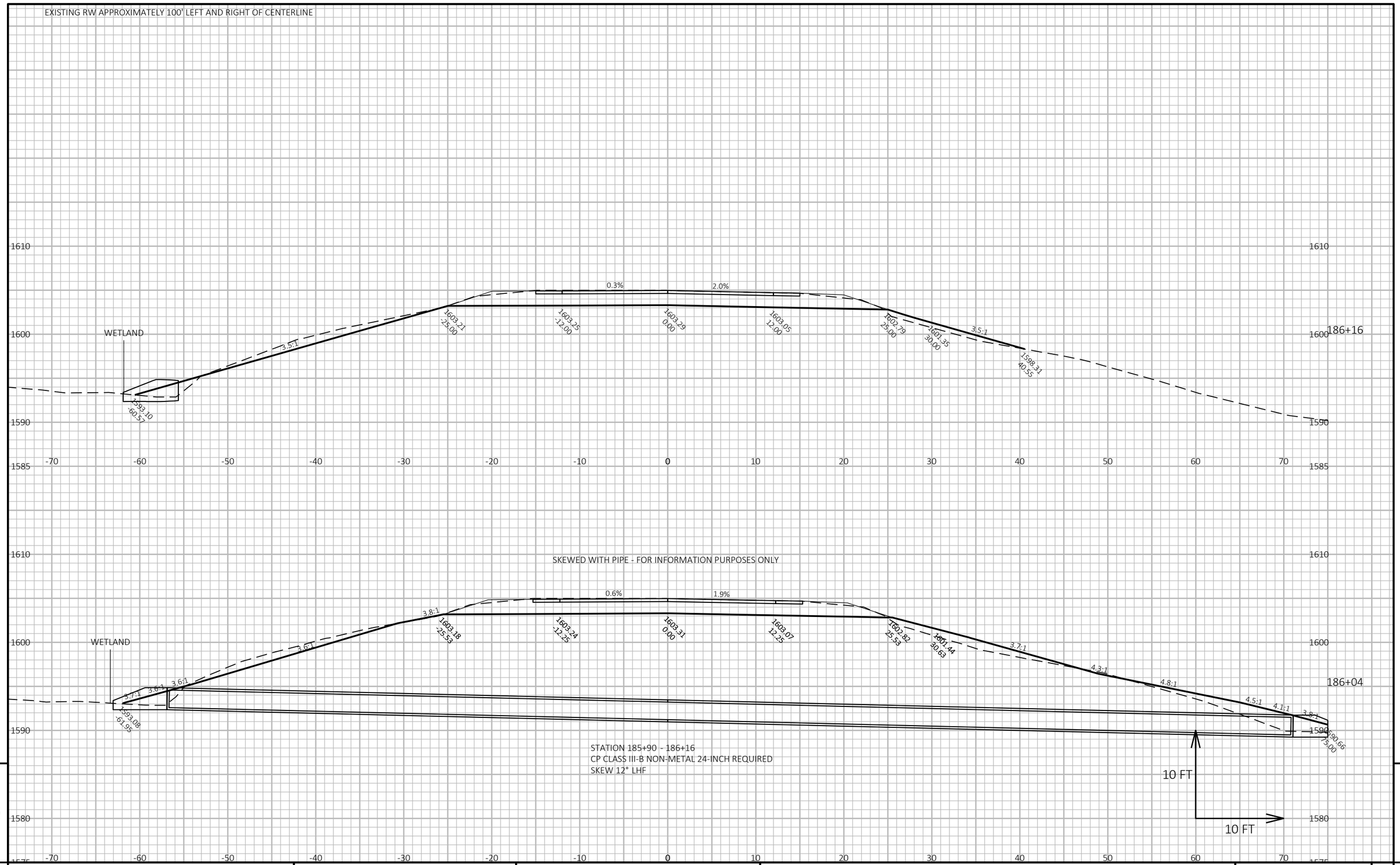
PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



9

9

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 678	SHEET 117	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 18-678

PLOT DATE : 1/17/2024 3:40 PM

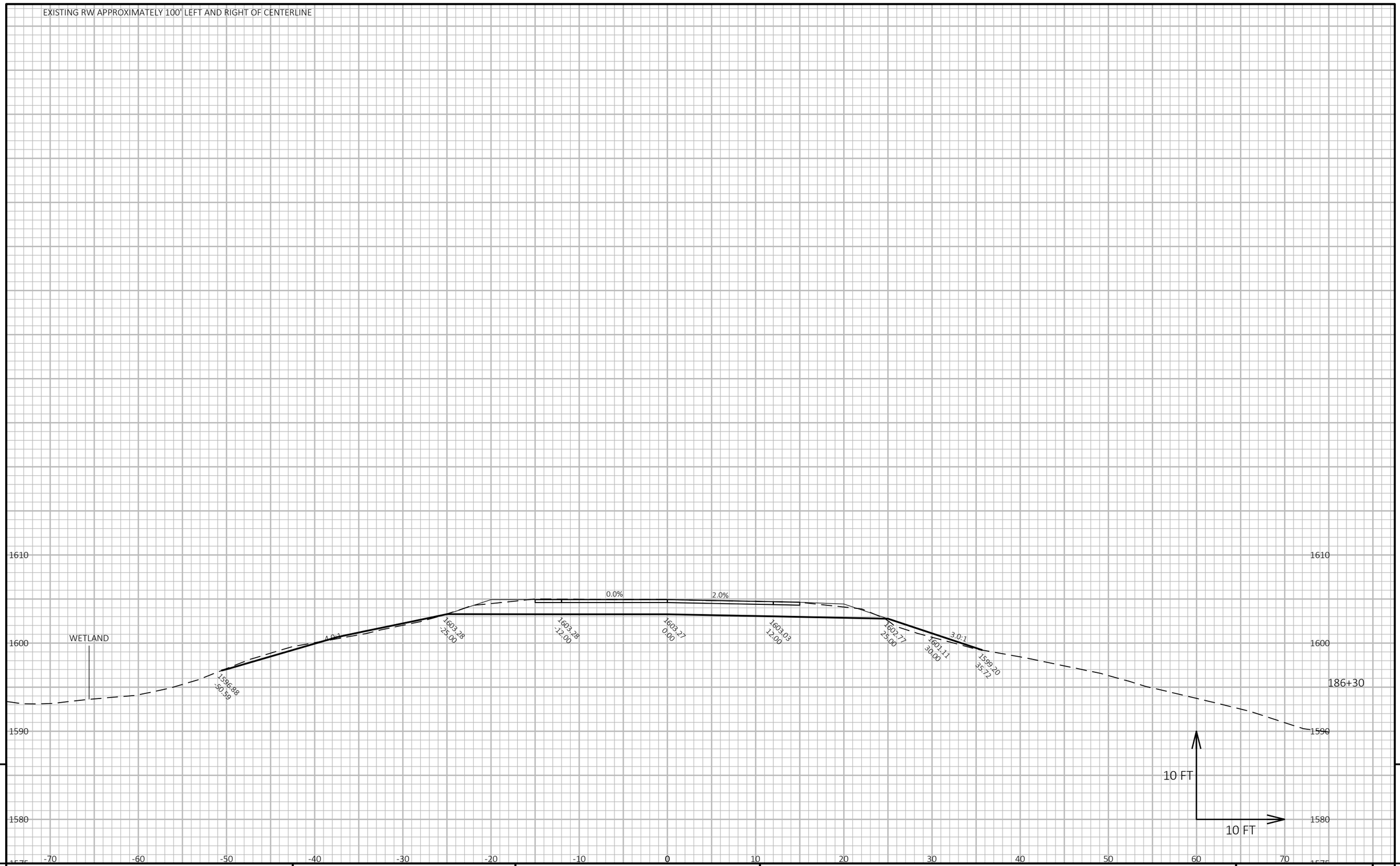
PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



9

9

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 678	SHEET 118	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 19-678

PLOT DATE : 1/17/2024 3:40 PM

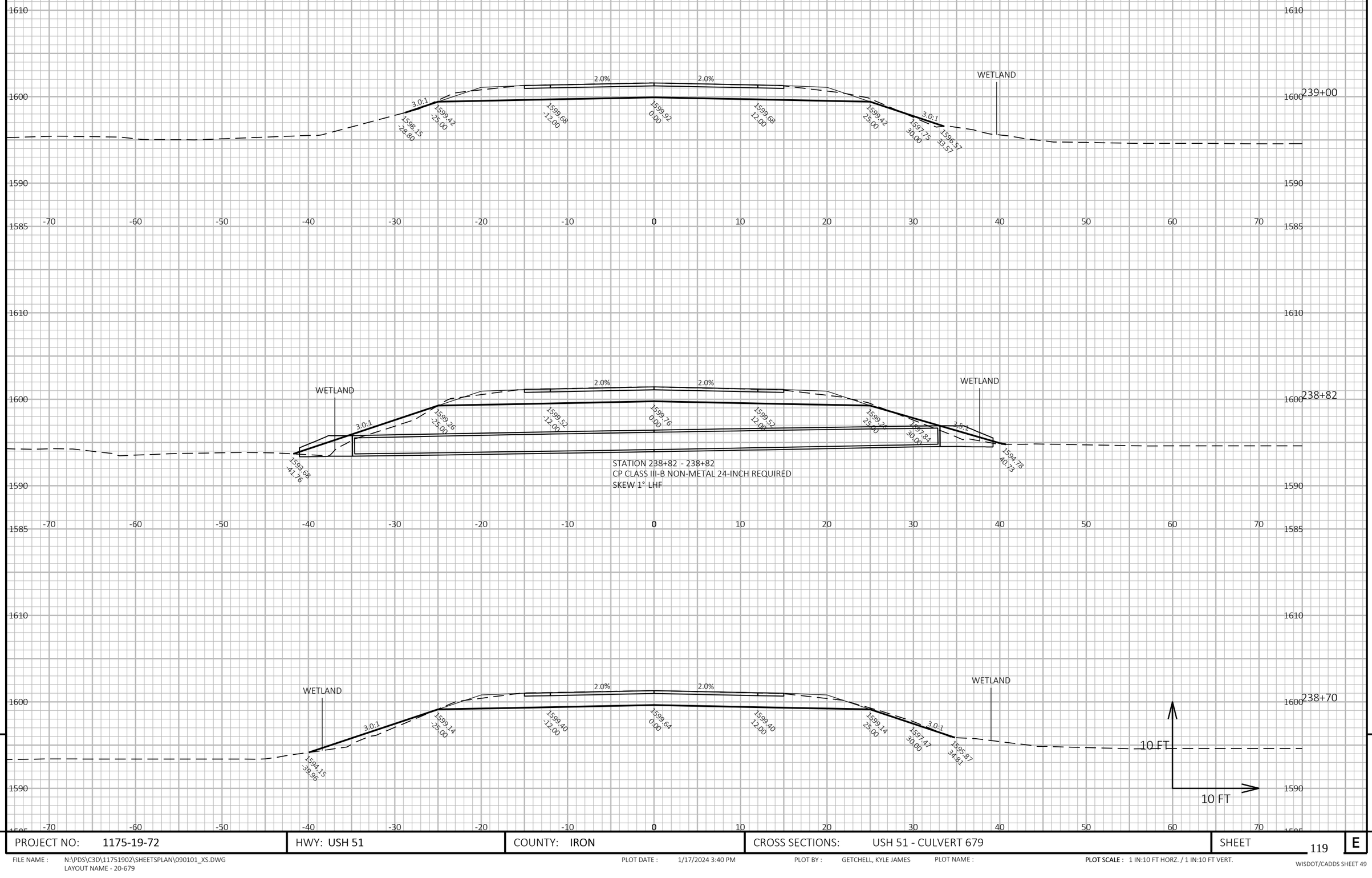
PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



9

9

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 679	SHEET 119	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 20-679

PLOT DATE : 1/17/2024 3:40 PM

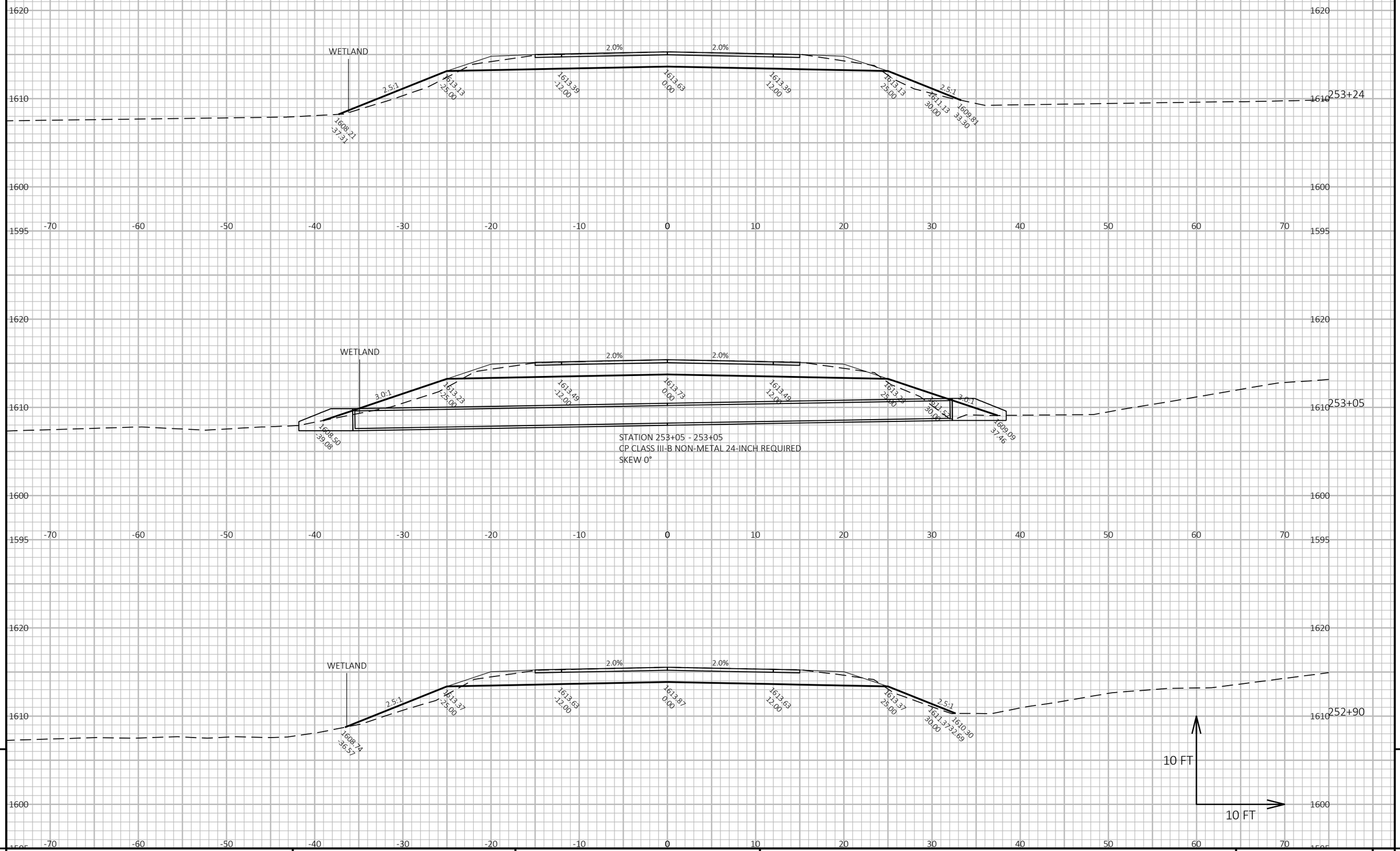
PLOT BY : GETCHELL, KYLE JAMES

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



9 9

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 680	SHEET 120	E

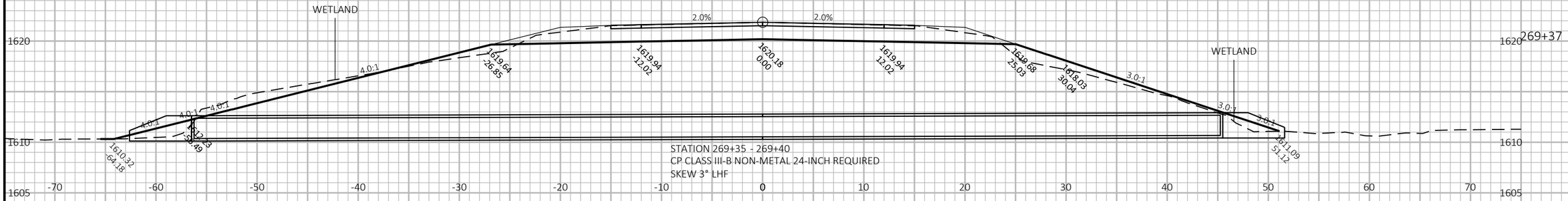
FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 21-680

PLOT DATE : 1/17/2024 3:40 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

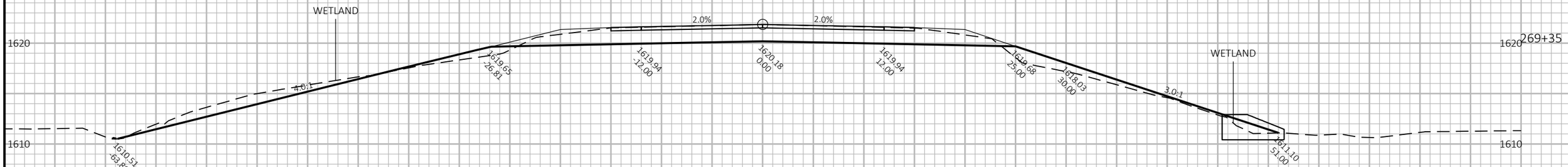
WISDOT/CADDS SHEET 49

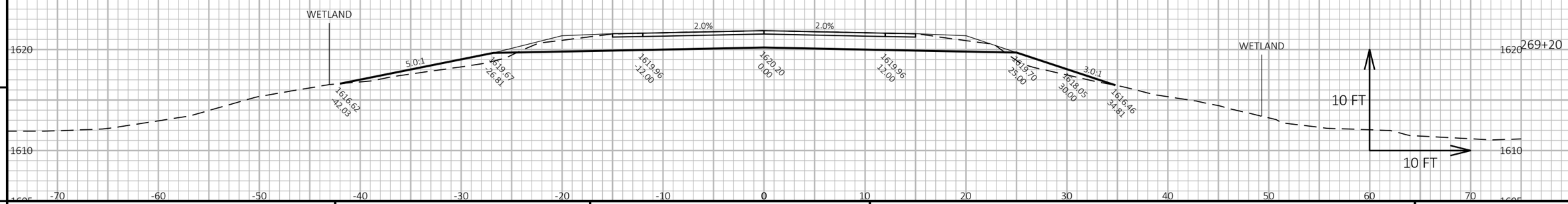
EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE

SKEWED WITH PIPE - FOR INFORMATION PURPOSES ONLY



STATION 269+35 - 269+40
CP CLASS III-B NON-METAL 24-INCH REQUIRED
SKEW 3° LHF





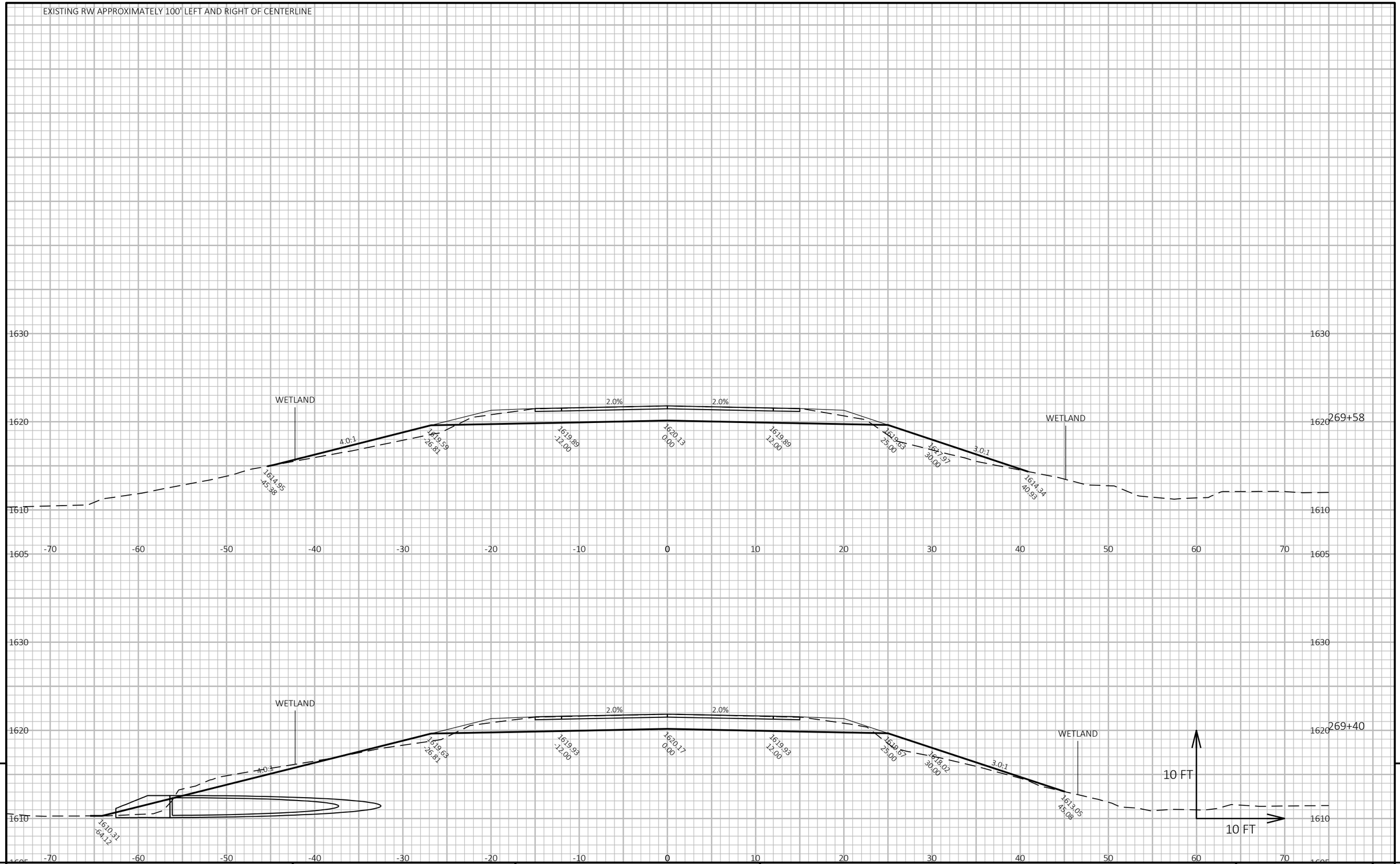
9 9

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 681	SHEET 121	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 22-681

PLOT DATE : 1/17/2024 3:40 PM PLOT BY : GETCHELL, KYLE JAMES PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

EXISTING RW APPROXIMATELY 100' LEFT AND RIGHT OF CENTERLINE



9 9

PROJECT NO: 1175-19-72	HWY: USH 51	COUNTY: IRON	CROSS SECTIONS: USH 51 - CULVERT 681	SHEET 122	E

FILE NAME : N:\PDS\C3D\11751902\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 23-681

PLOT DATE : 1/17/2024 3:41 PM PLOT BY : GETCHELL, KYLE JAMES 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