RHI

APRIL 2020

PROJECT ID: 9050-03-70

COUNTY: ONEIDA

ORDER OF SHEETS

TOTAL SHEETS = 148

PROJECT LOCATION

27

N

DESIGN DESIGNATION			STH 47 DAVENPORT ST.-LARSEN DR.	STH 47 LARSEN DR.-KILDEER RD.
A.A.D.T.	2020	=	7,800	4,500
A.A.D.T.	2040	=	9,600	5,600
D.H.V.	2040	=	1,056	616
D.D.		=	50/50	50/50
T.		=	3.7%	3.7%
DESIGN SPEED		=	45 MPH	55 MPH
ESALS		=	500,000	500,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE			
SLOPE INTERCEPT		CULVERT (Profile View)	
REFERENCE LINE	300'EB'	UTILITIES	
EXISTING CULVERT		ELECTRIC	E
PROPOSED CULVERT (Box or Pipe)		FIBER OPTIC	FO
		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

RHINELANDER - WOODRUFF

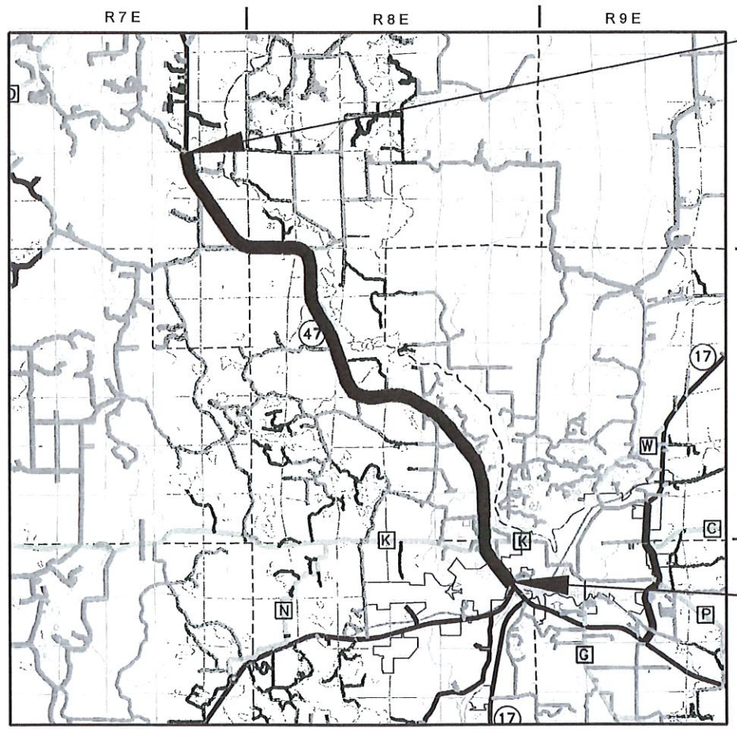
USH 8 TO KILDEER ROAD

STH 47

ONEIDA

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9050-03-70	WISC 2020153	1

STATE PROJECT NUMBER
9050-03-70



END PROJECT
STA 664+75

BEGIN PROJECT
STA. 10+50
Y=163013.110
X=256630.562

LAYOUT

SCALE 0 3 Mi.

TOTAL NET LENGTH OF CENTERLINE = 12.391 Mi.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), ONEIDA 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.

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES

WISCONSIN
ANDREW C. DANA
34172
OCONTO, WI
PROFESSIONAL ENGINEER

10/23/2019
(Date)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AYRES ASSOCIATES
Designer	AYRES ASSOCIATES
Project Manager	STACY HAGENBUCHER, P.E.
Regional Examiner	
Regional Supervisor	JED PETERS, P.E.

APPROVED FOR THE DEPARTMENT
DATE: 10/23/19
(Signature)

E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\010101 TI.DWG

PLOT DATE : 10/21/2019 9:00 AM

PLOT BY : SOUFAL, KEVIN

PLOT NAME :

GENERAL NOTES

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

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

RESHAPE AND SEEDING OF ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS OUTSIDE OF THE ENGINEER DETERMINED CONSTRUCTION LIMITS ARE INCIDENTAL TO THE CONTRACT.

CURB AND GUTTER ELEVATIONS ARE ALONG THE FLANGE LINE UNLESS OTHERWISE NOTED. RADIUS POINTS, UNLESS OTHERWISE NOTED, ARE TO THE FLANGE LINE OF THE CURB.

CURVE DATA IS BASED ON ARC DEFINITION.

BEARINGS SHOWN ON THIS PLAN ARE TRUE BEARINGS.

PROPERTY LINES SHOWN ARE APPROXIMATE.

ANY DOWEL BARS, TIE BARS, REINFORCEMENT, OR TERMINAL ANCHORS, FOUND IN EXISTING PAVEMENT WILL BE INCIDENTAL TO THE ITEM "REMOVING PAVEMENT".

PROJECT AND UTILITY CONTACTS

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
NORTH REGION HEADQUARTERS
ATTN: WENDY HENNIGES
107 SUTLIFF
RHINELANDER, WI 54501
PHONE: 715-365-8916
EMAIL: wendy.henniges@wisconsin.gov

RHINELANDER-ONEIDA COUNTY AIRPORT-AIRPORT FACILITY
ATTN: JOE BRAUER
3375 AIRPORT ROAD
RHINELANDER, WI 54501
PHONE 715-365-3416
EMAIL: jbrauer@fly-rhi.org

* ATC TRANSMISSION COMPANY
ATTN: CHRIS DAILEY
W234 N2000 RIDGEVIEW PARKWAY COURT
PO BOX 47
WAUKESHA, WI. 53187-0047
PHONE: 262-506-6884
EMAIL: cdailey@atcllc.com

* FRONTIER COMMUNICATIONS OF WI LLC
COMMUNICATION LINE
ATTN: CHRIS POLLACK
521 N. 4TH STREET
WAUSAU, WI 54403
PHONE: 715-847-1240
EMAIL: Christopher.Pollack@FTR.com

* CHARTER COMMUNICATIONS-COMMUNICATION LINE
ATTN: STEVE BROWN
821 LINCOLN STREET
RHINELANDER, WI 54501
PHONE: 715-420-0301:61163
EMAIL: steve.brown@charter.com

* RHINELANDER WATER DEPT.-WATER
ATTN: TOM ROESER
135 SOUTH STEVENS STREET
RHINELANDER, WI 54501
PHONE: 715-365-8624
E-MAIL: troeser@rhinelanderutilities.org

* RHINELANDER WATER DEPT.-SEWER
ATTN: TOM ROESER
135 SOUTH STEVENS STREET
RHINELANDER, WI 54501
PHONE: 715-365-8624
E-MAIL: troeser@rhinelanderutilities.org

* RHINELANDER WATER DEPT.-ROAD FACILITIES
ATTN: DAN HEKRDLE
135 SOUTH STEVENS STREET
RHINELANDER, WI 54501
PHONE: 715-369-2728
E-MAIL: dhekrdle@rhinelanderutilities.org

* WISCONSIN PUBLIC SERVICE CORPORATION-ELECTRICITY
ATTN: KEVIN TERMAAT
PO BOX 1166
WAUSAU, WI 54401
PHONE: 715-848-7353
EMAIL: kevin.termaat@wisconsinpublicservice.com

* WISCONSIN PUBLIC SERVICE CORPORATION - GAS/PETROLEUM
CHRIS GILMAN
2027 NAVAJO STREET
PO BOX 160
RHINELANDER, WI 54501
PHONE: 715-490-4153
EMAIL: chris.gilman@wisconsinpublicservice.com

* MEMBER OF DIGGERS HOTLINE

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

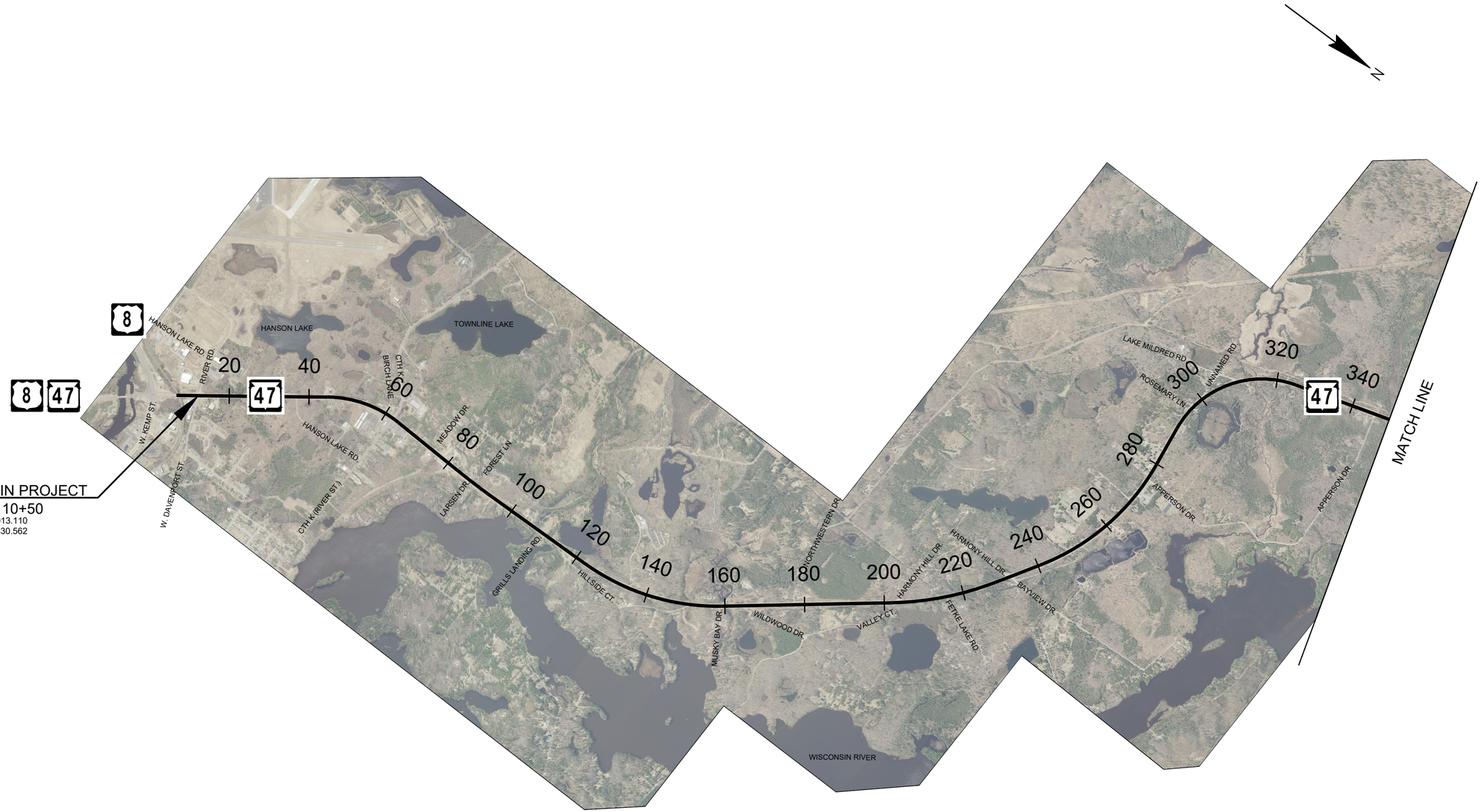
RUNOFF COEFFICIENT TABLE

	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 AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.00 ACRES
SOIL GROUP

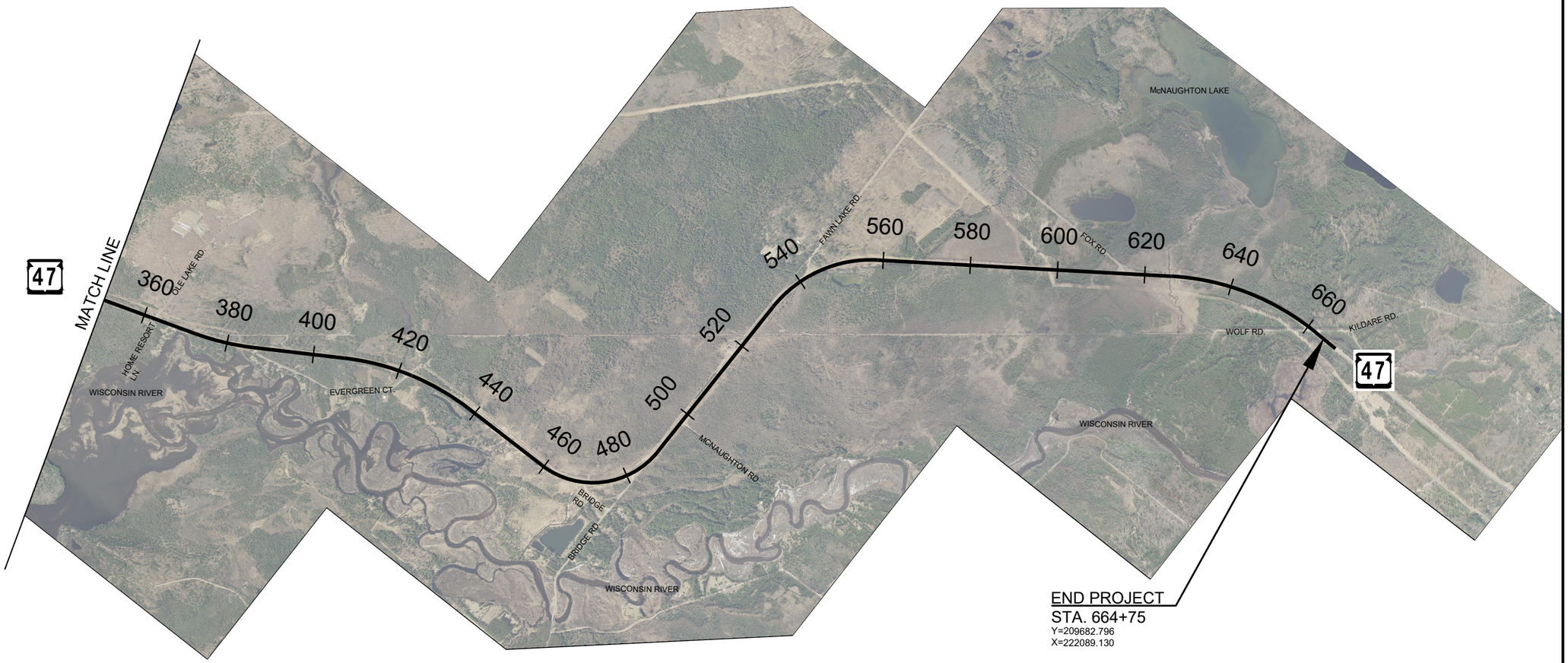
ORDER OF SECTION 2 SHEETS

2



PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PROJECT OVERVIEW	SHEET 3	E

2

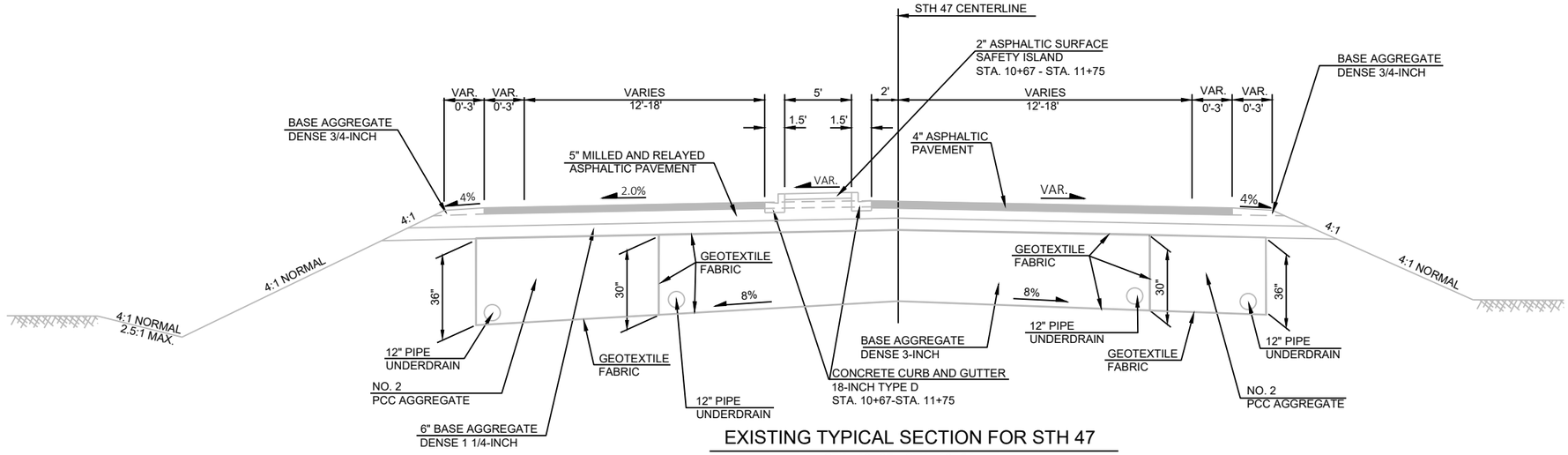


PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PROJECT OVERVIEW	SHEET 4	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\020202 PO.DWG
LAYOUT NAME - 020202 po

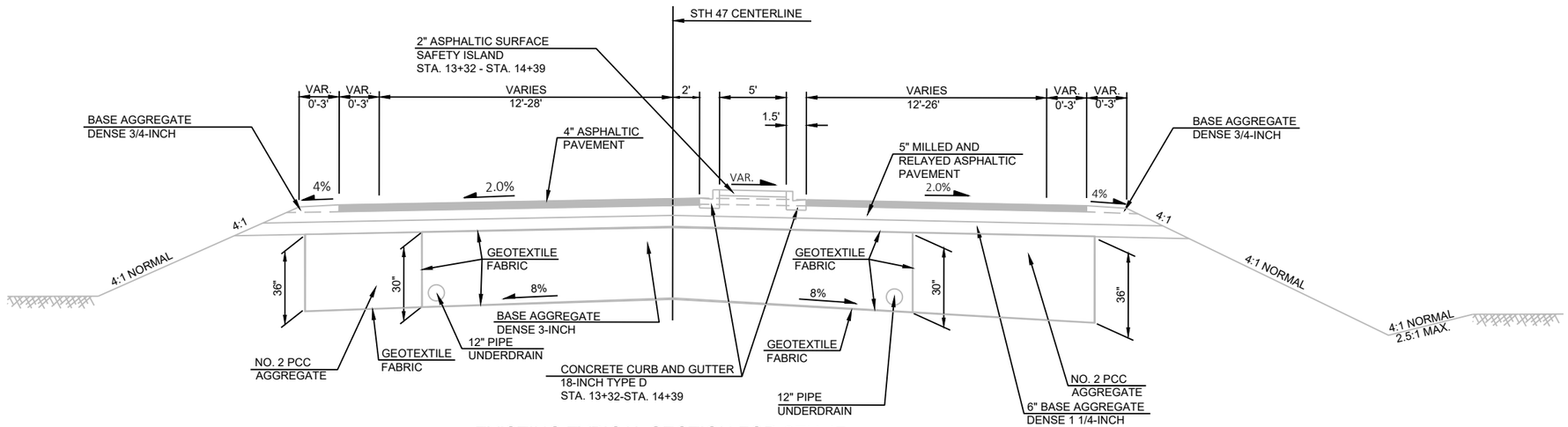
PLOT DATE : 10/21/2019 9:02 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : ##########

2



EXISTING TYPICAL SECTION FOR STH 47

STA. 10+67 - STA. 12+54



EXISTING TYPICAL SECTION FOR STH 47

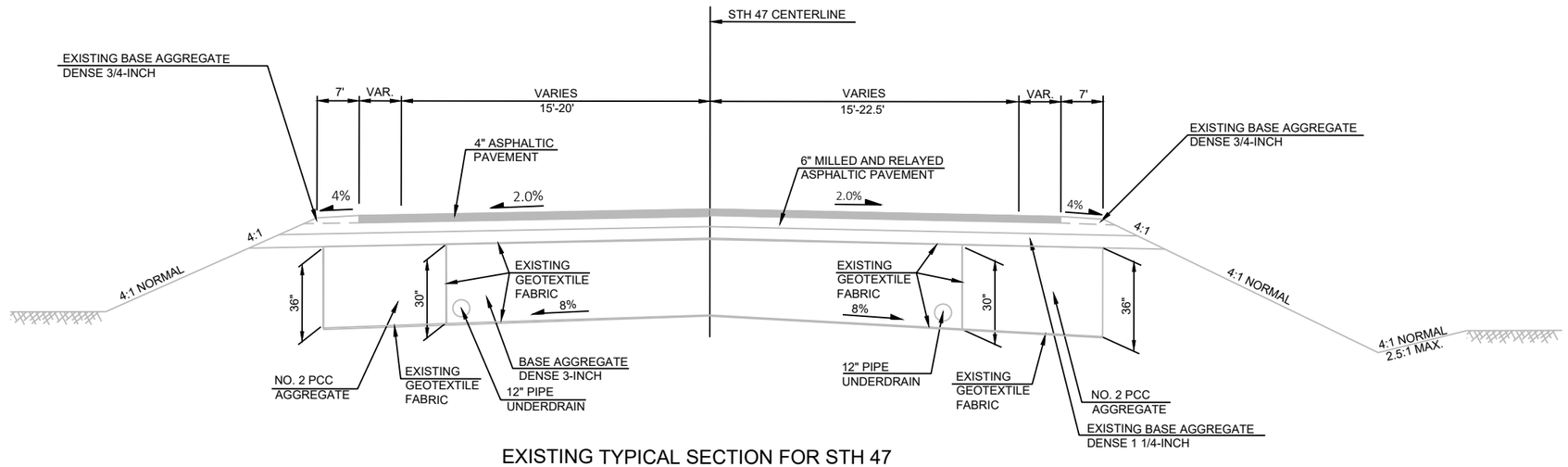
STA. 12+54 - STA. 14+39

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\020301 TS.DWG
LAYOUT NAME - 020301 ts

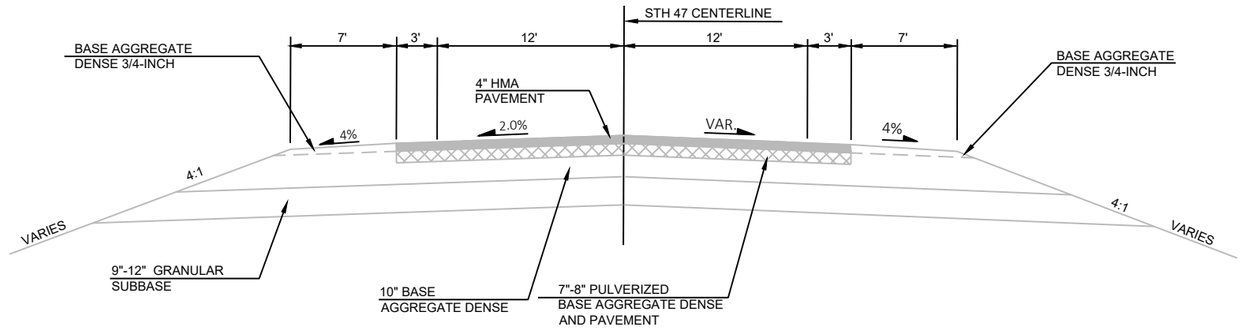
PLOT DATE : 10/21/2019 9:02 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



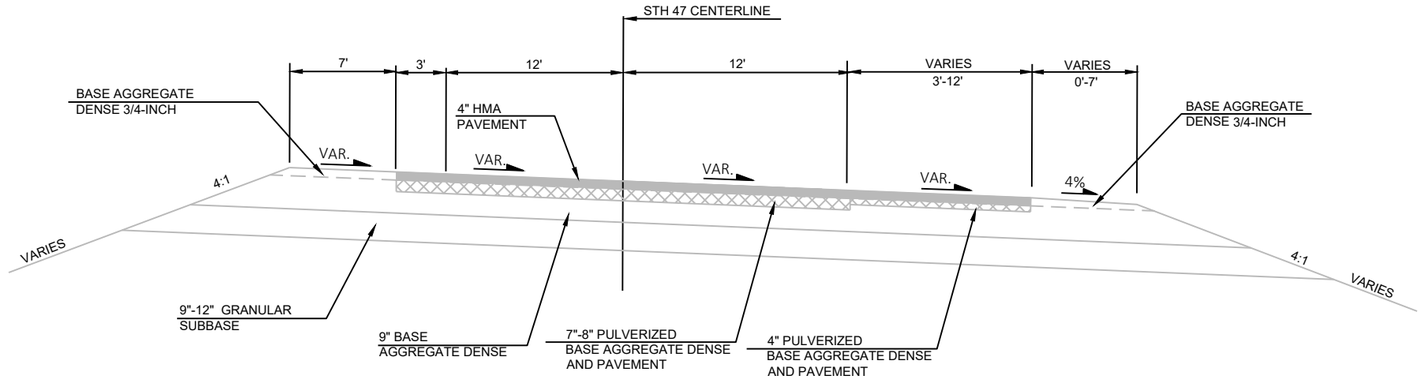
EXISTING TYPICAL SECTION FOR STH 47

STA. 14+39 - STA. 15+70



EXISTING TYPICAL SECTION FOR STH 47

STA. 15+70 - STA. 55+42
STA. 92+16 - STA. 664+75

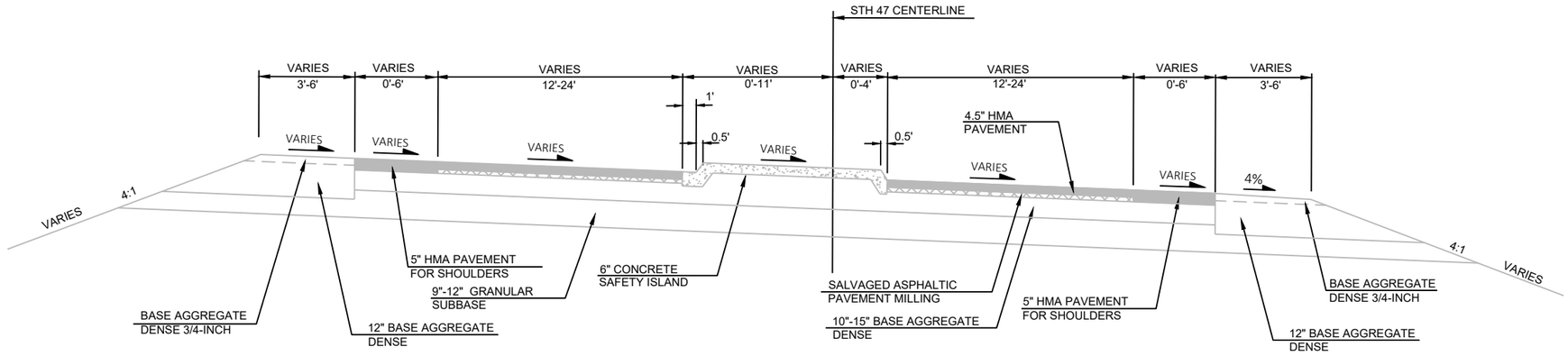


EXISTING TYPICAL SECTION FOR STH 47

STA. 55+42 - STA. 58+07

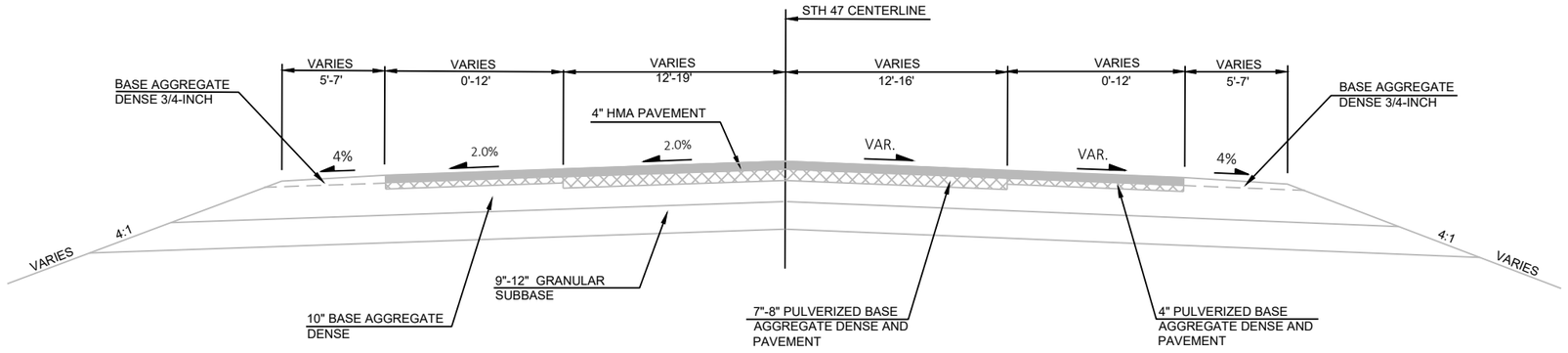
PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	TYPICAL SECTIONS	SHEET 6	E

2



EXISTING TYPICAL SECTION FOR STH 47

STA. 58+07 - STA. 68+05



EXISTING TYPICAL SECTION FOR STH 47

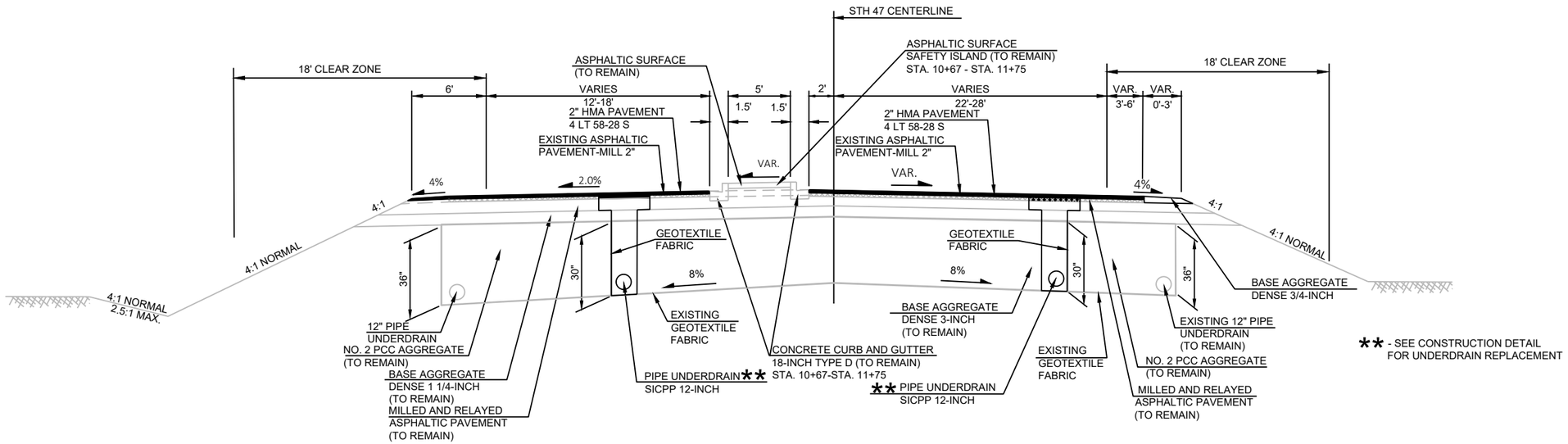
STA. 68+05 - STA. 92+16

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	TYPICAL SECTIONS	SHEET 7	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\020301 TS.DWG
LAYOUT NAME - 020303 ts

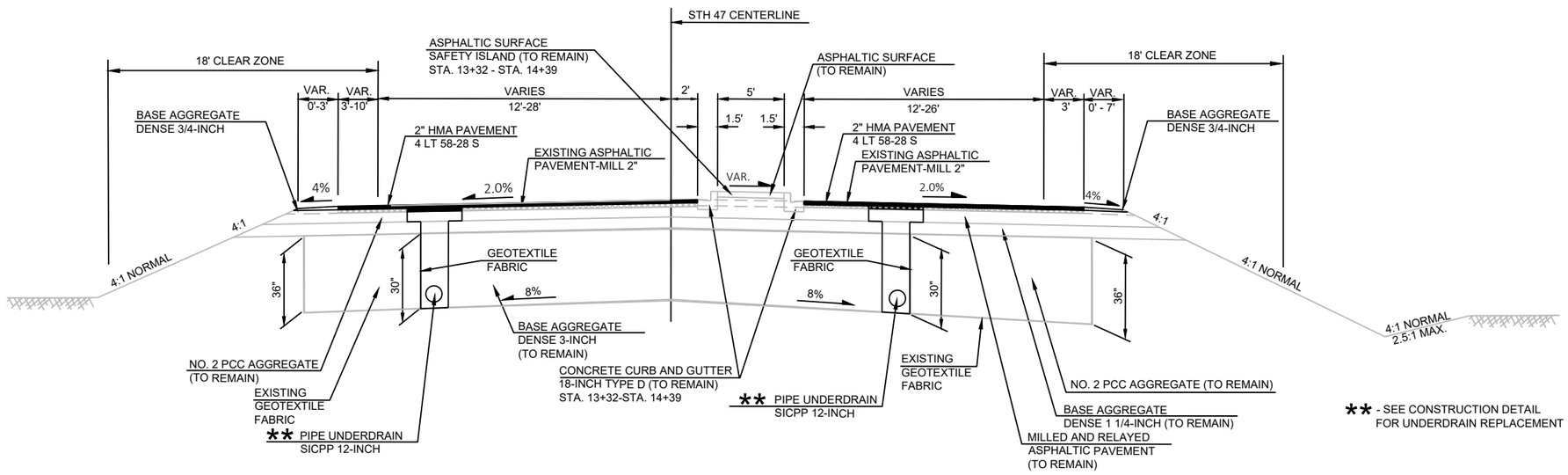
PLOT DATE : 10/21/2019 9:02 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



TYPICAL FINISHED SECTION FOR STH 47

STA. 10+50 - STA. 12+54



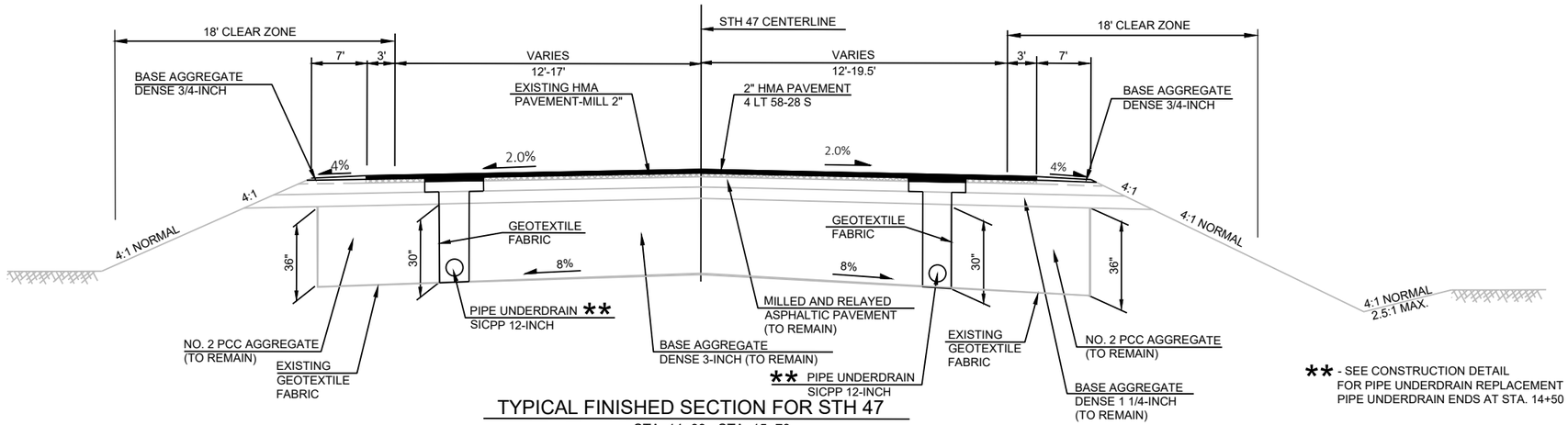
TYPICAL FINISHED SECTION FOR STH 47

STA. 12+54 - STA. 14+39

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	TYPICAL SECTIONS	SHEET 8	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\020301 TS.DWG
LAYOUT NAME - 020304 ts

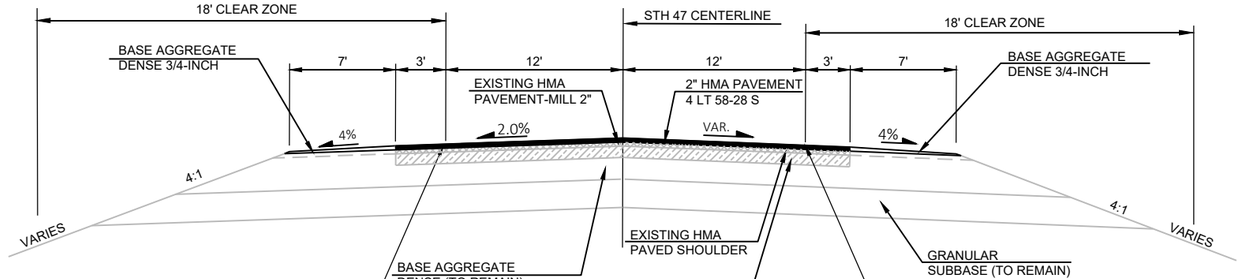
PLOT DATE : 1/31/2020 9:10 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:200 FT



TYPICAL FINISHED SECTION FOR STH 47

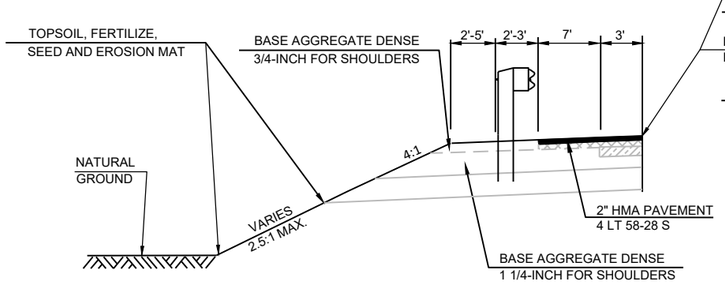
STA. 14+39 - STA. 15+70

** - SEE CONSTRUCTION DETAIL
FOR PIPE UNDERDRAIN REPLACEMENT
PIPE UNDERDRAIN ENDS AT STA. 14+50

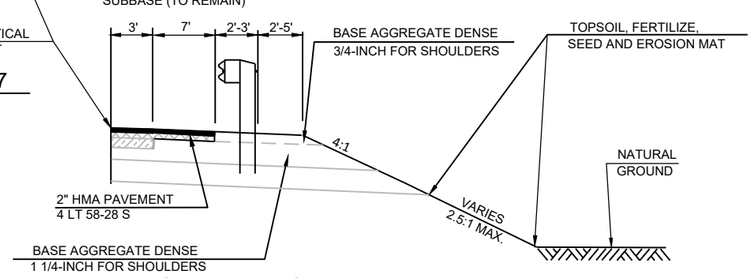


TYPICAL FINISHED SECTION FOR STH 47

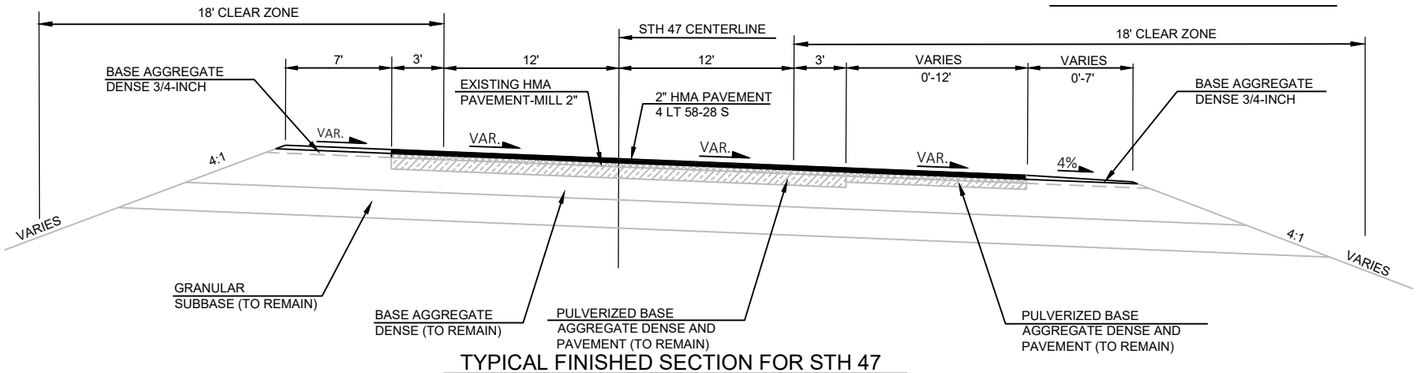
STA. 15+70 - STA. 55+42
STA. 86+50 - STA. 664+75



STA. 158+82.7-STA. 168+39.1 LT.



STA. 136+66.1-STA. 143+20.1 RT.
STA. 159+07.7-STA. 165+76.5 RT.

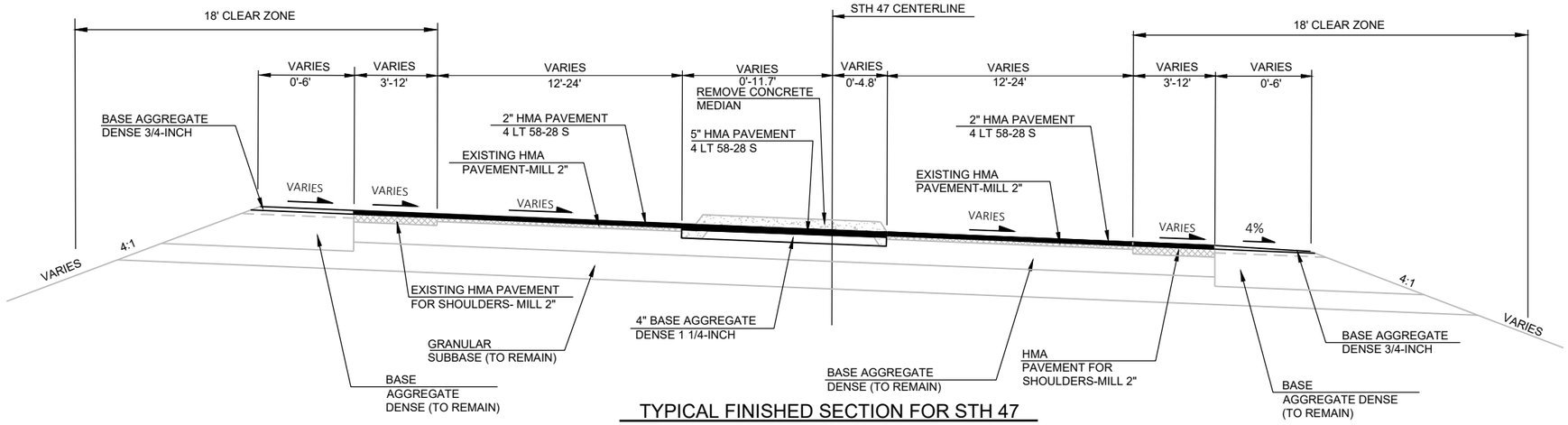


TYPICAL FINISHED SECTION FOR STH 47

STA. 55+42 - STA. 58+07

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	TYPICAL SECTIONS	SHEET 9	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\020301 TS.DWG
LAYOUT NAME - 020305 ts
PLOT DATE : 1/31/2020 9:14 AM
PLOT BY : SOUFAL, KEVIN
PLOT NAME :
PLOT SCALE : 1 IN:200 FT

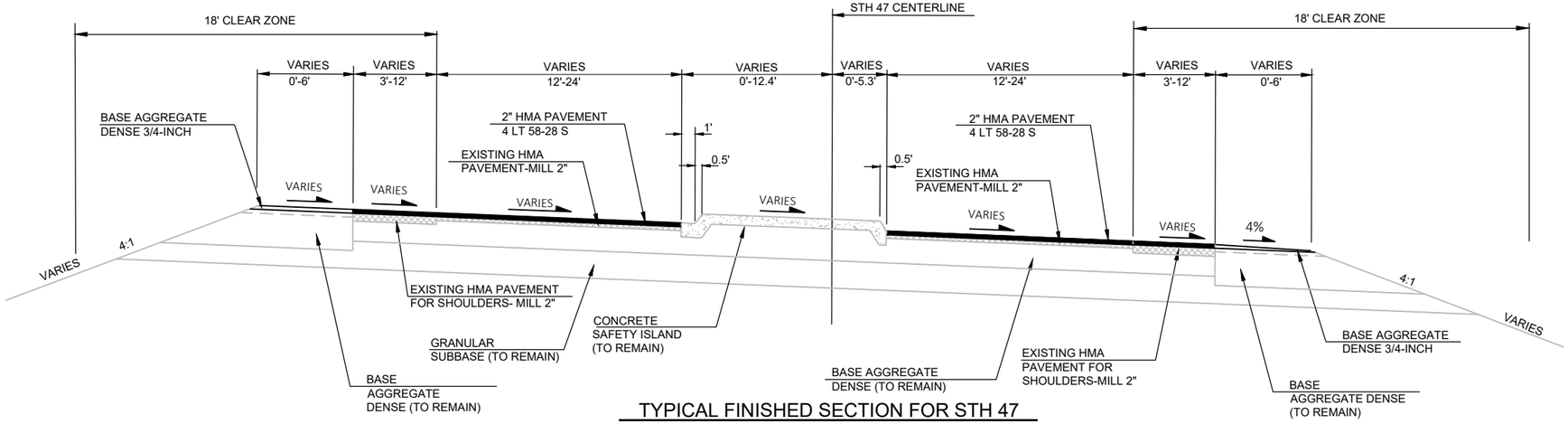


TYPICAL FINISHED SECTION FOR STH 47

STA. 58+07 - STA. 59+00+/-
STA. 65+60+/- - STA. 68+00+/-

NOTE:
DO NOT MILL AND PAVE EXISTING SHOULDERS BETWEEN CTH K AND LARSEN DRIVE (STA. 63+00-STA. 86+50).

MILLING LIMITS TO 1' OUTSIDE OF TRAVEL LANE.

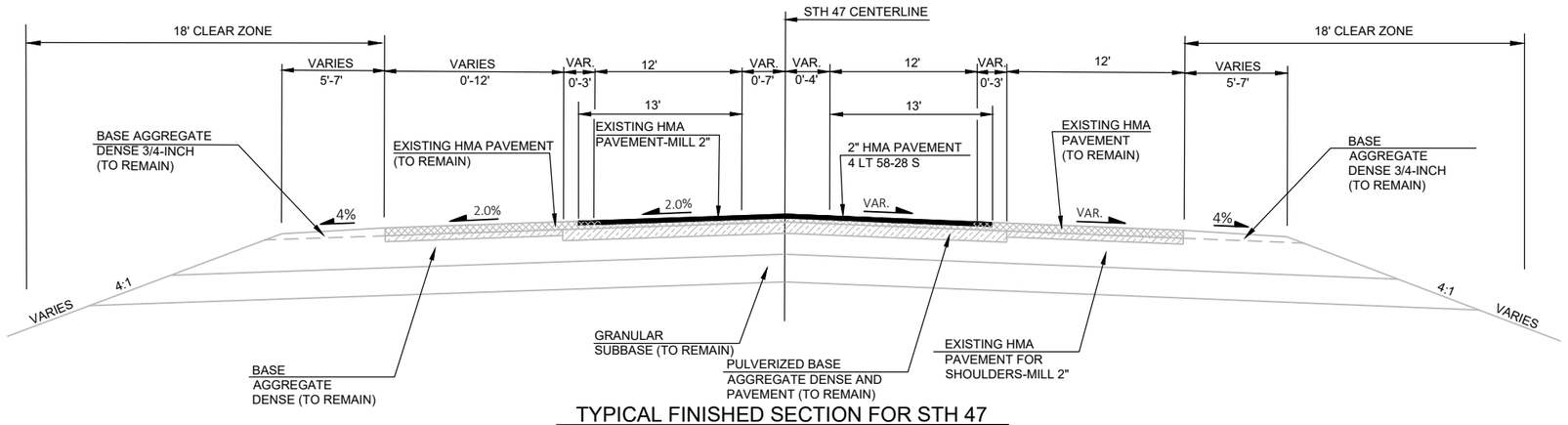


TYPICAL FINISHED SECTION FOR STH 47

STA. 59+00+/- - STA. 65+60+/-

NOTE:
DO NOT MILL AND PAVE EXISTING SHOULDERS BETWEEN CTH K AND LARSEN DRIVE (STA. 63+00-STA. 86+50).

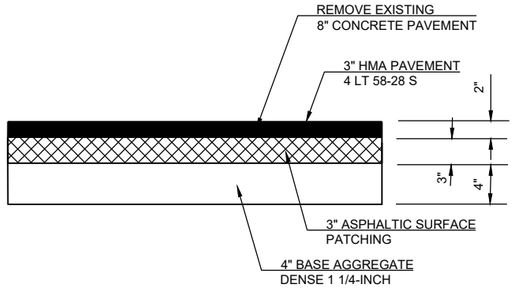
MILLING LIMITS TO 1' OUTSIDE OF TRAVEL LANE.



TYPICAL FINISHED SECTION FOR STH 47

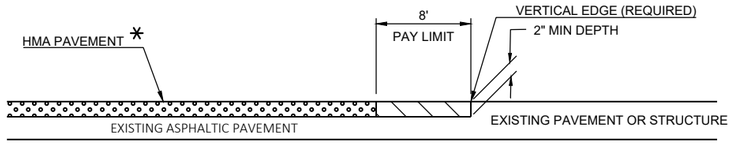
STA. 68+05 - STA. 86+50

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	TYPICAL SECTIONS	SHEET 10	E



DETAIL FOR REMOVING AND REPLACING CONCRETE MEDIAN

STA. 58+07-STA. 58+93
STA. 65+60-STA. 68+03

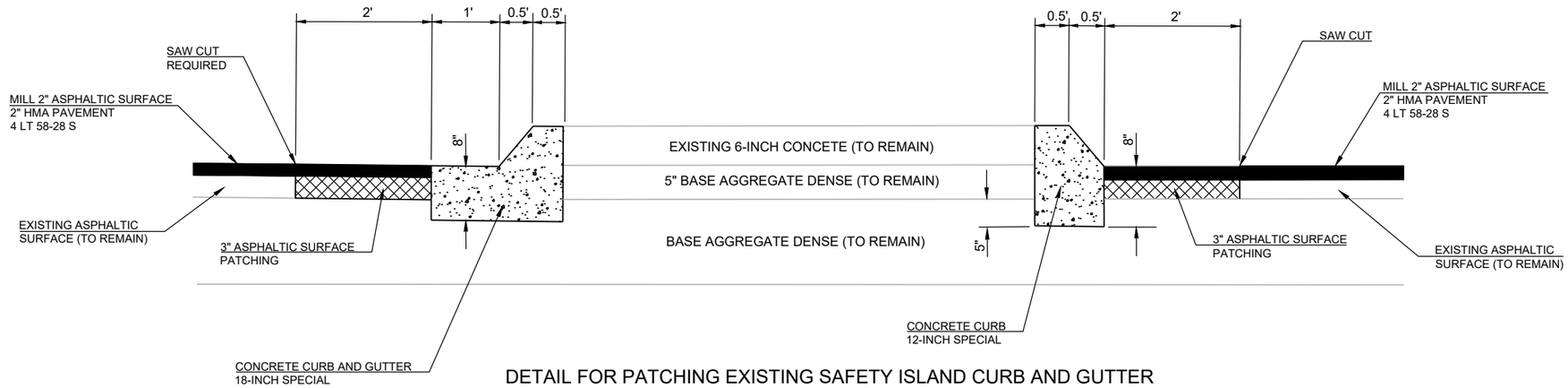


* SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

REMOVING ASPHALTIC SURFACE, MILLING

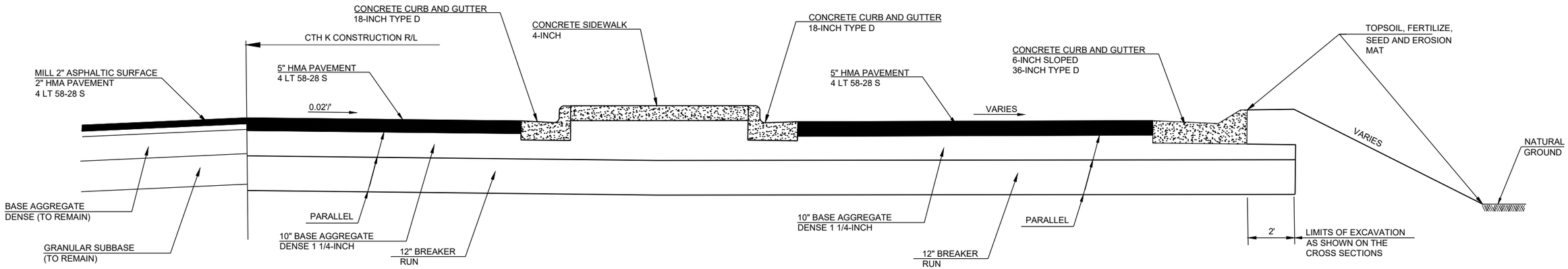
REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)



DETAIL FOR PATCHING EXISTING SAFETY ISLAND CURB AND GUTTER

STA. 59+45-STA. 61+80
STA. 62+80-STA. 65+60

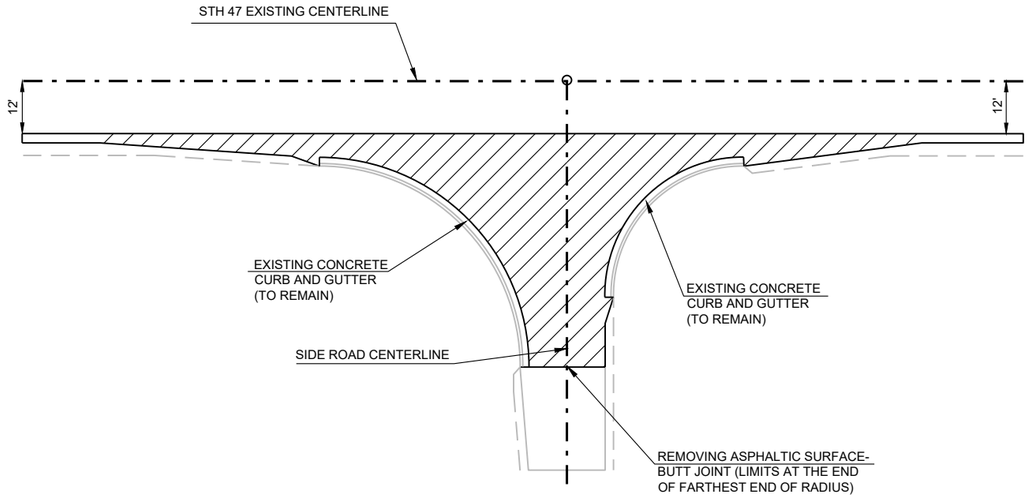


DETAIL FOR SUBGRADE IMPROVEMENTS

CTH K

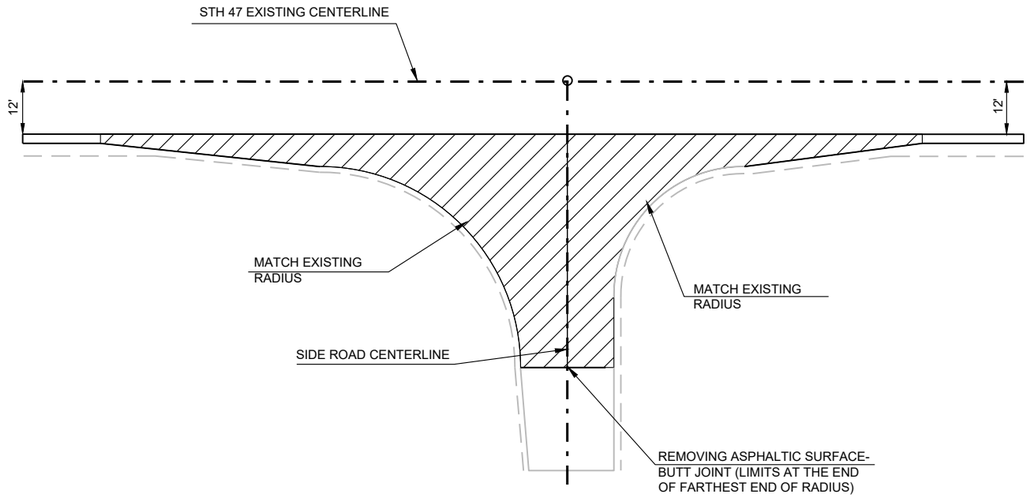
PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CONSTRUCTION DETAILS	SHEET 11	E

2



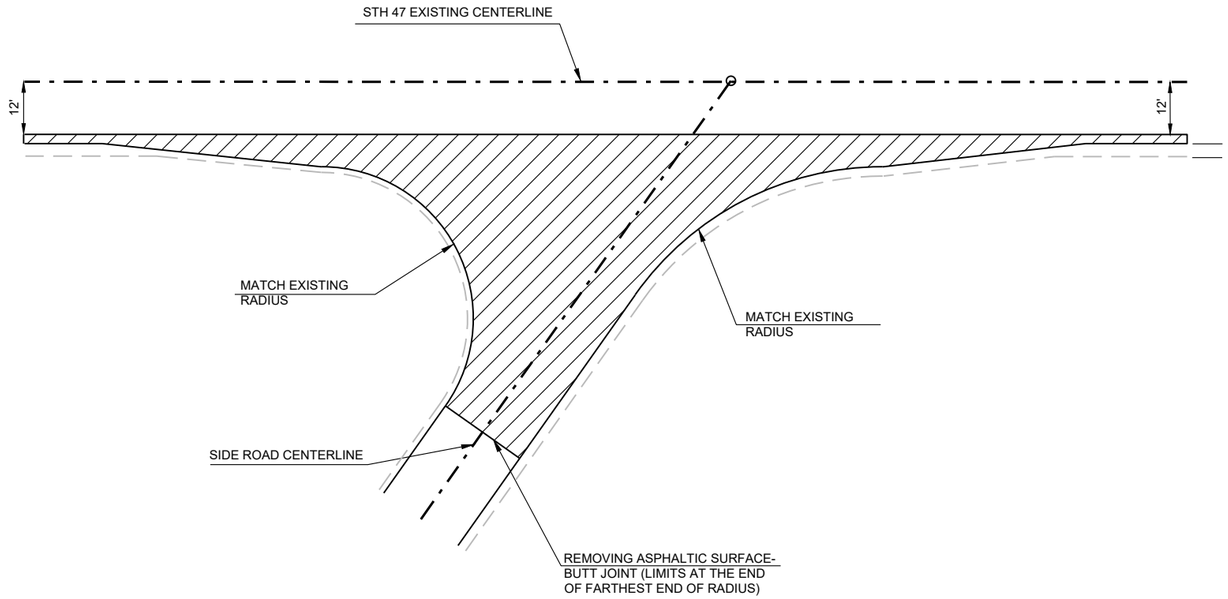
SIDE ROAD CONSTRUCTION LIMITS

INTERSECTION WITH CONCRETE CURB AND GUTTER



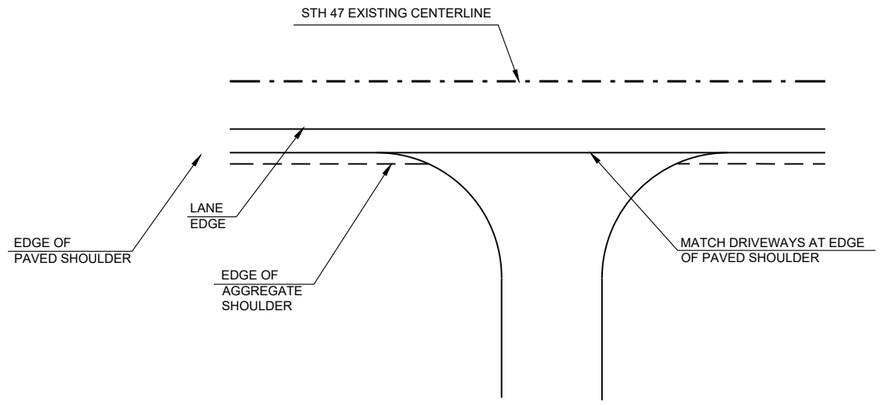
SIDE ROAD CONSTRUCTION LIMITS

INTERSECTION WITHOUT CONCRETE CURB AND GUTTER

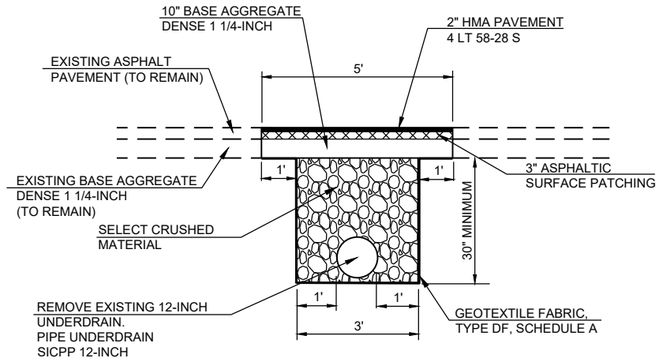


SIDE ROAD CONSTRUCTION LIMITS

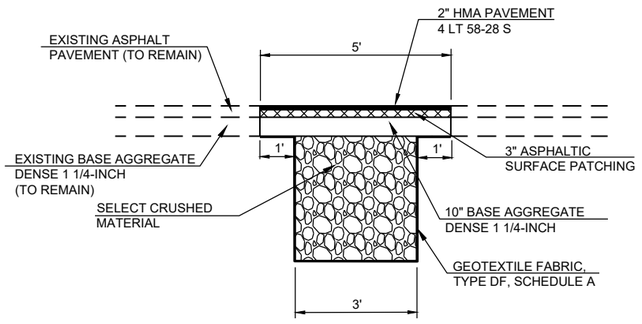
SKEWED SIDE ROAD LOCATIONS



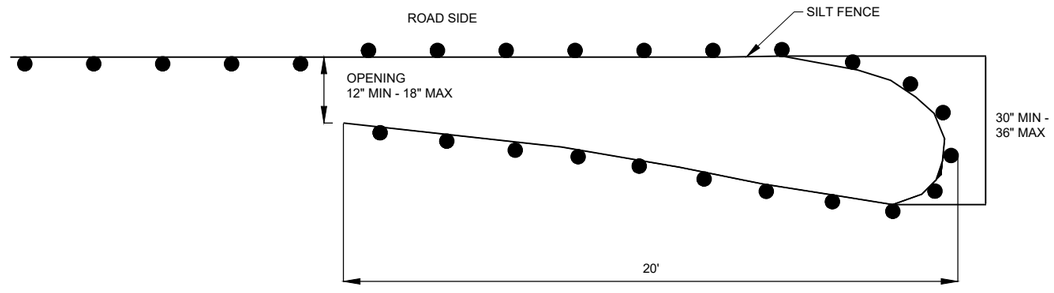
DETAIL FOR TYPICAL DRIVEWAY PAVING LIMITS



DETAIL FOR PIPE UNDERDRAIN



DETAIL FOR INFILTRATION TRENCH



PLAN VIEW

GENERAL NOTES:

SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND. AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.

TEMPORARY SMALL ANIMAL TURN-AROUND

LEGEND

. XXXX . SAW CUT REQ'D.

LIMITS OF HMA PAVEMENT

STA 166+16.53 STH 47=
STA. 30+00.00 WILDWOOD DR.
Y = 177293.895
X = 252165.488

WETLAND LIMITS

BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)

SLOPE INTERCEPTS

STH 47 163 164 N39° 09' 30"W 165 166 167 168 STH 47

24" CMCP (REMOVE)

BURIED GAS LINE (APPROXIMATE LOCATION)

CAUTION

STA 30+82
1-CPCS 24-INCH CLASS III, REQUIRED
SKEW 28.9° LHF
2 APRON ENDWALLS

SLOPE INTERCEPTS

WETLAND LIMITS

APPROXIMATE EXISTING R/W

RIPRAP MEDIUM REQUIRED

WETLAND LIMITS

BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)

CONSTRUCTION LIMITS
STA 31+08

WILDWOOD DR.

32

N8° 40' 07"E

33

VARIES

2" HMA PAVEMENT (4 LT 58-28 S)-UPPER
2" ASPHALTIC SURFACE PATCHING-LOWER

10" BASE AGGREGATE DENSE 1 1/4 INCH

CPRC 24-INCH CLASS III, REQUIRED

EXISTING 24" CMCP (REMOVE)

VARIES

VARIES 5'

SECTION A-A

RIPRAP MEDIUM

18"

6'

GEOTEXTILE TYPE HR

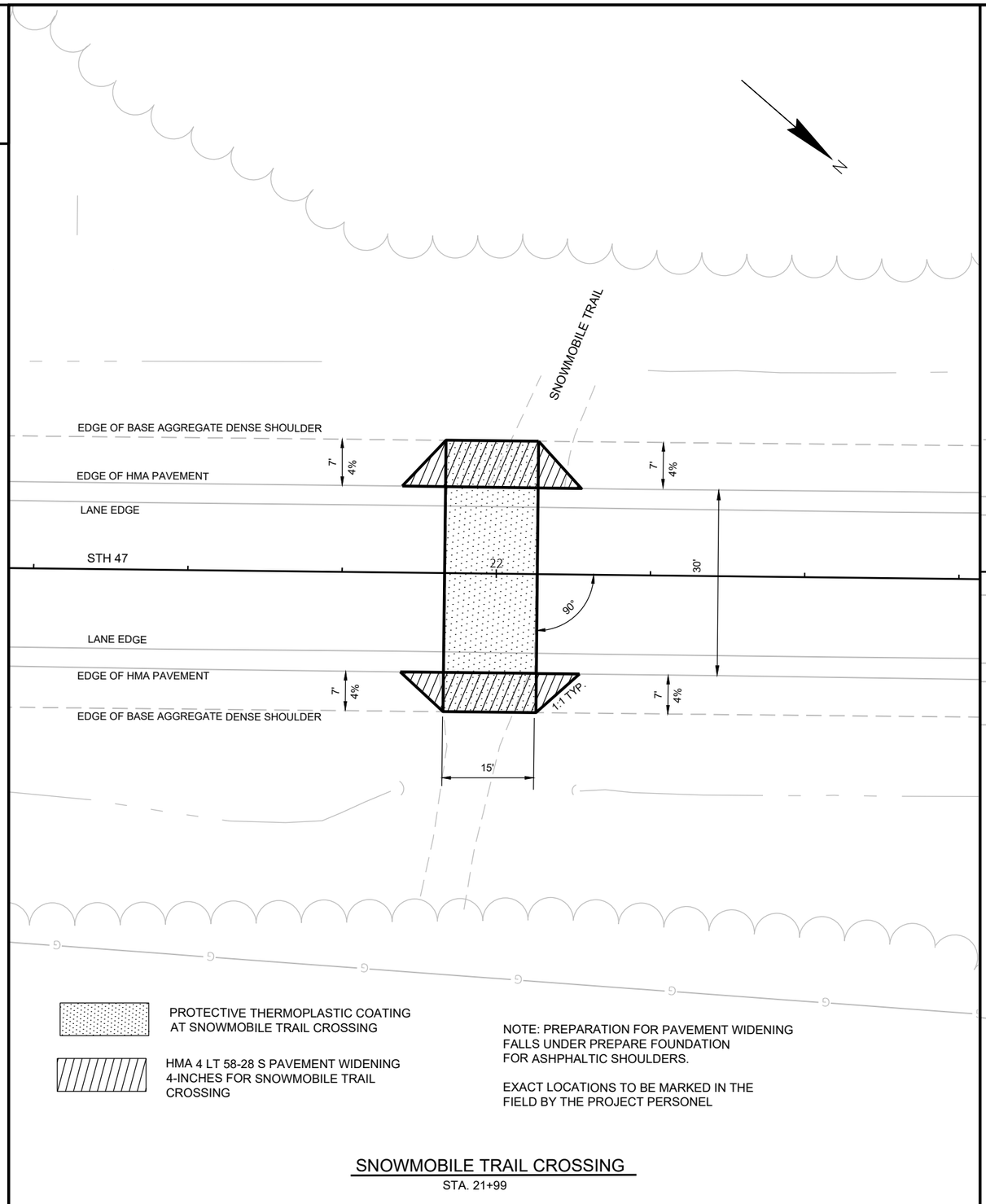
SECTION B-B

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CONSTRUCTION DETAIL FOR CULVERT PIPE REPLACEMENT	SHEET 14	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\021004 CD.DWG
LAYOUT NAME - 021004 cd

PLOT DATE : 1/31/2020 9:27 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42



PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSING

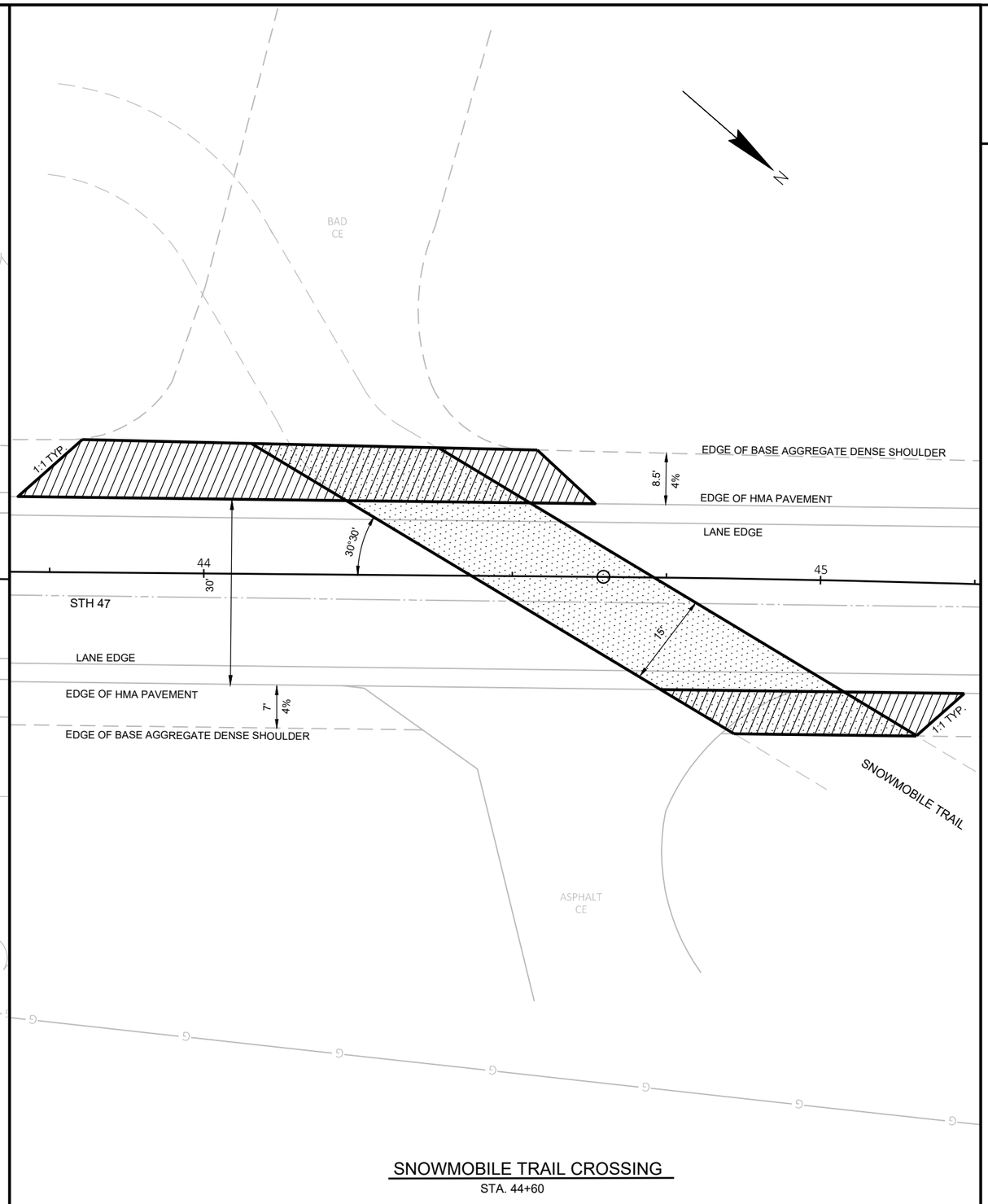
HMA 4 LT 58-28 S PAVEMENT WIDENING 4-INCHES FOR SNOWMOBILE TRAIL CROSSING

NOTE: PREPARATION FOR PAVEMENT WIDENING FALLS UNDER PREPARE FOUNDATION FOR ASHPHALTIC SHOULDERS.

EXACT LOCATIONS TO BE MARKED IN THE FIELD BY THE PROJECT PERSONEL

SNOWMOBILE TRAIL CROSSING

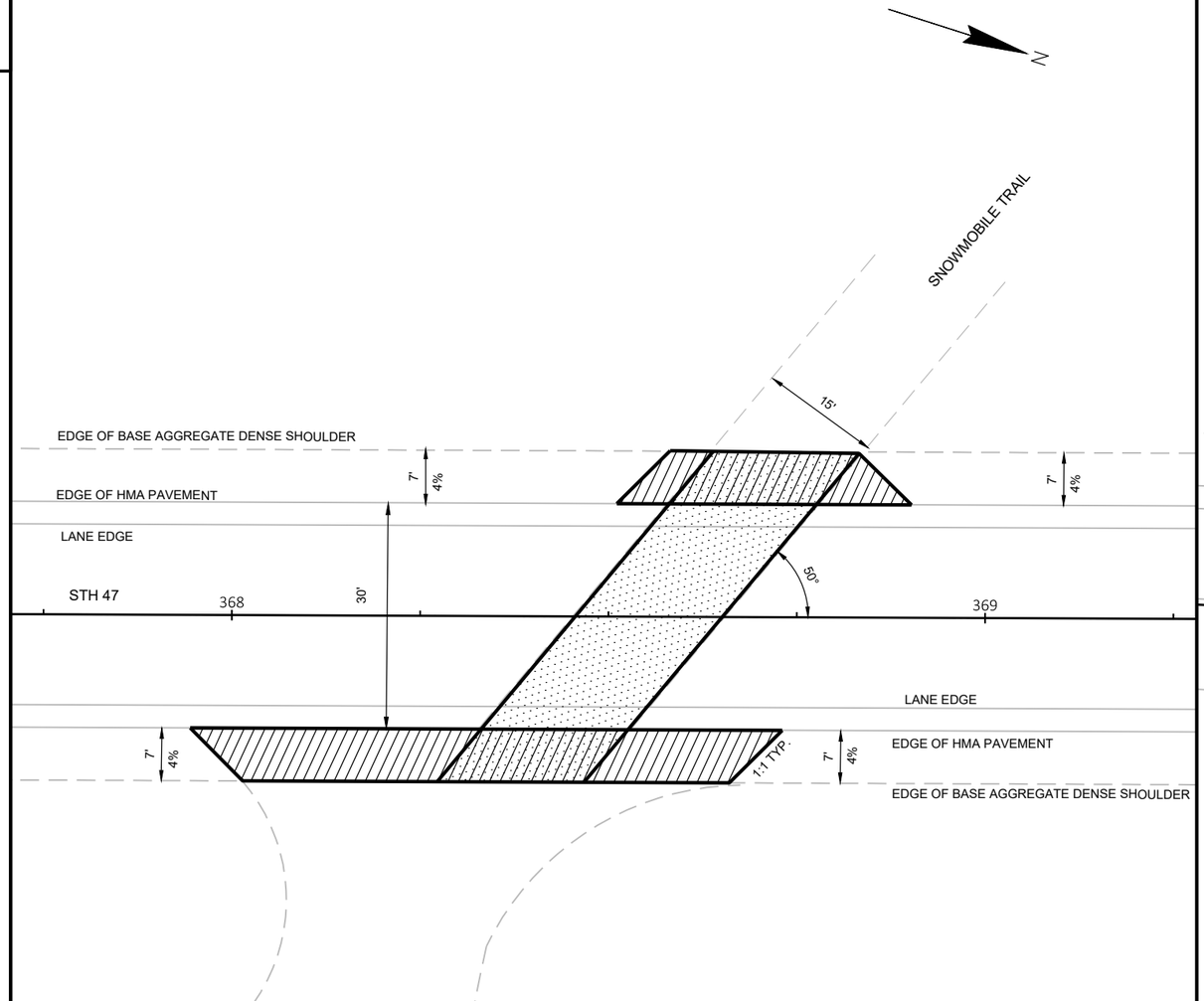
STA. 21+99



SNOWMOBILE TRAIL CROSSING

STA. 44+60

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CONSTRUCTION DETAILS-SNOWMOBILE TRAIL CROSSING	SHEET 15	E



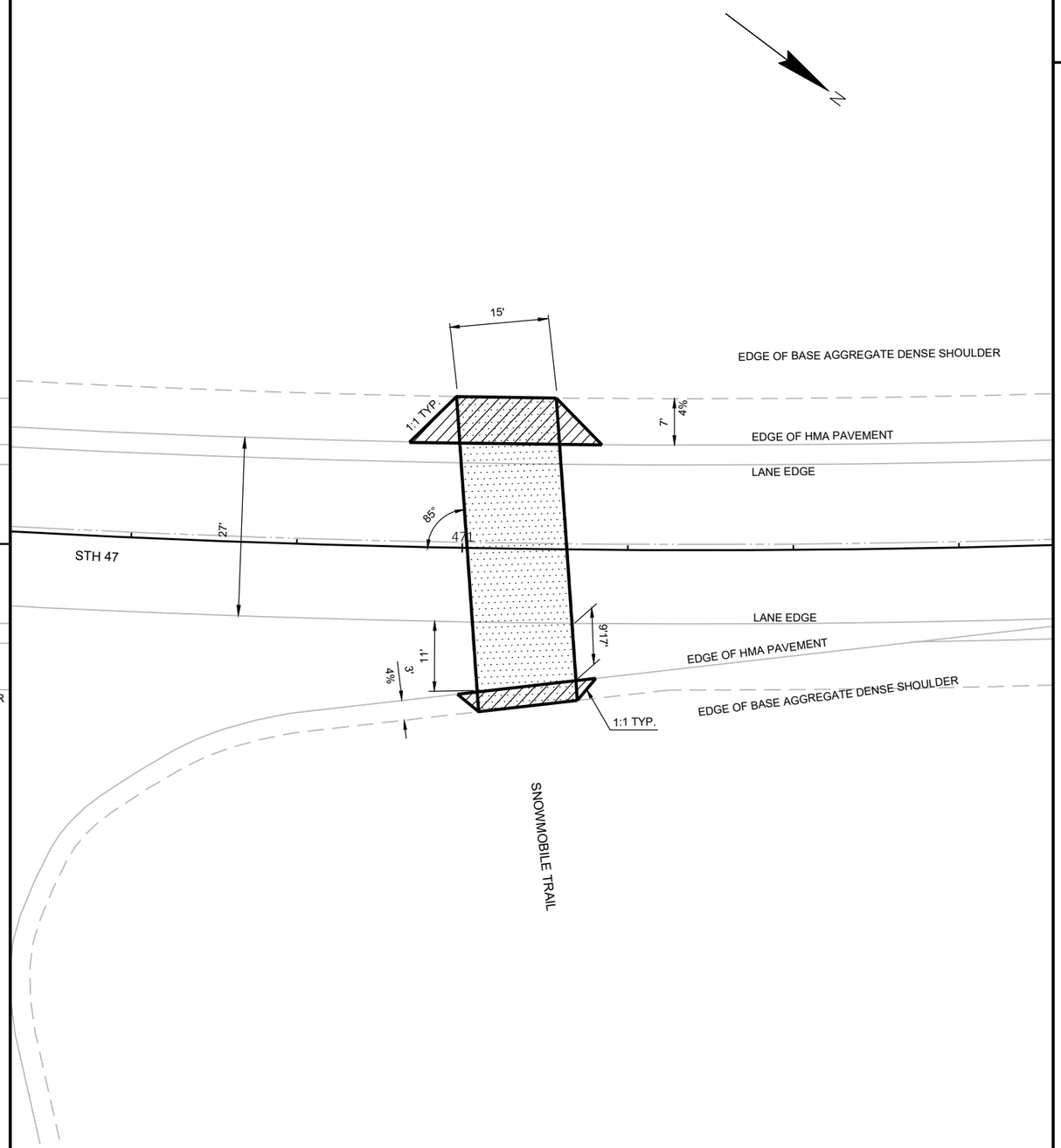
PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSING

HMA 4 LT 58-28 S PAVEMENT WIDENING 4-INCHES FOR SNOWMOBILE TRAIL CROSSING

NOTE: PREPARATION FOR PAVEMENT WIDENING FALLS UNDER PREPARE FOUNDATION FOR ASHPHALTIC SHOULDERS.

EXACT LOCATIONS TO BE MARKED IN THE FIELD BY THE PROJECT PERSONEL

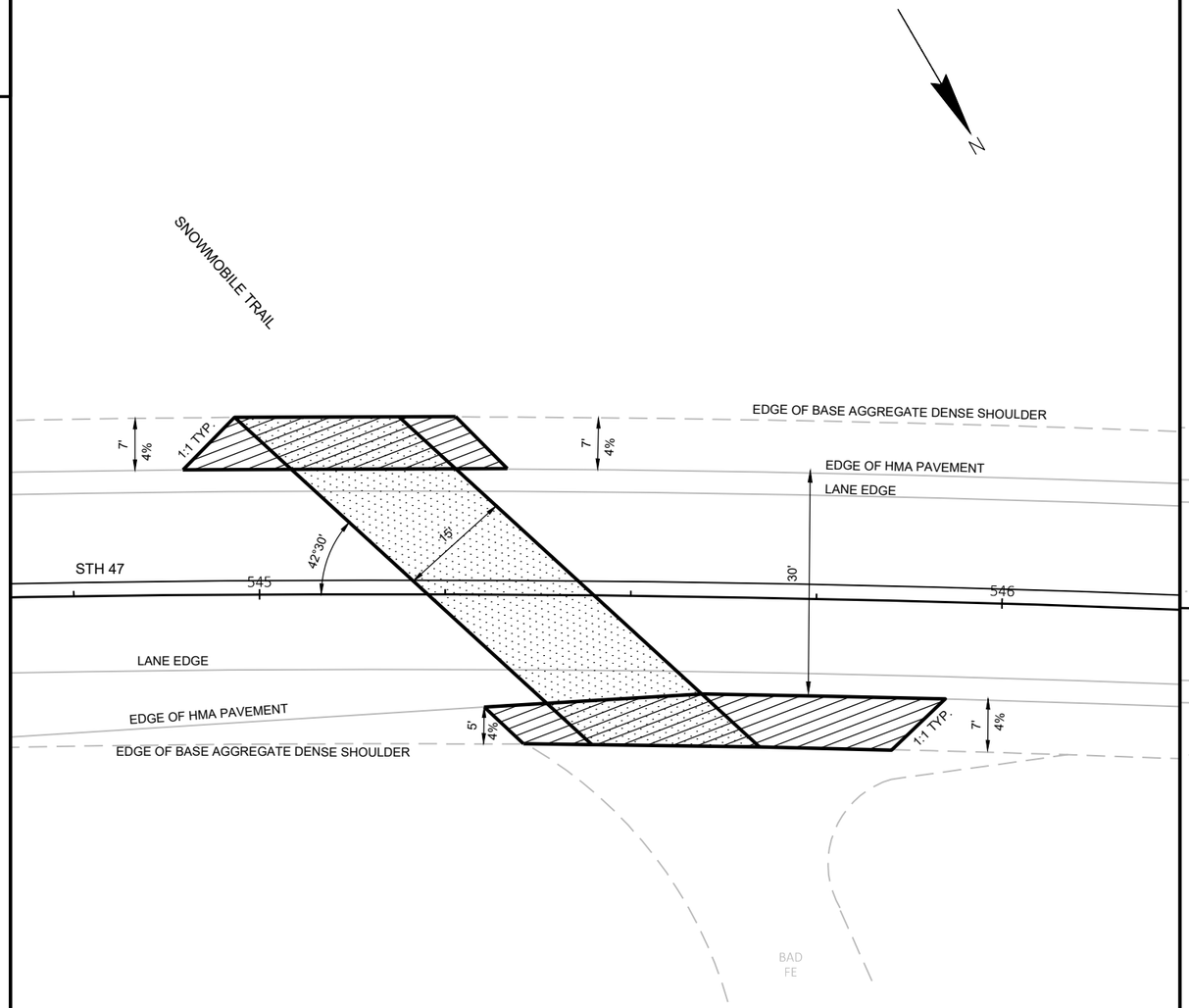
SNOWMOBILE TRAIL CROSSING
STA. 358+55



SNOWMOBILE TRAIL CROSSING
STA. 471+08

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CONSTRUCTION DETAILS-SNOWMOBILE TRAIL CROSSING	SHEET 16	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\021005 CD.DWG
LAYOUT NAME - 021006 cd
PLOT DATE : 1/31/2020 8:27 AM
PLOT BY : SOUFAL, KEVIN
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42



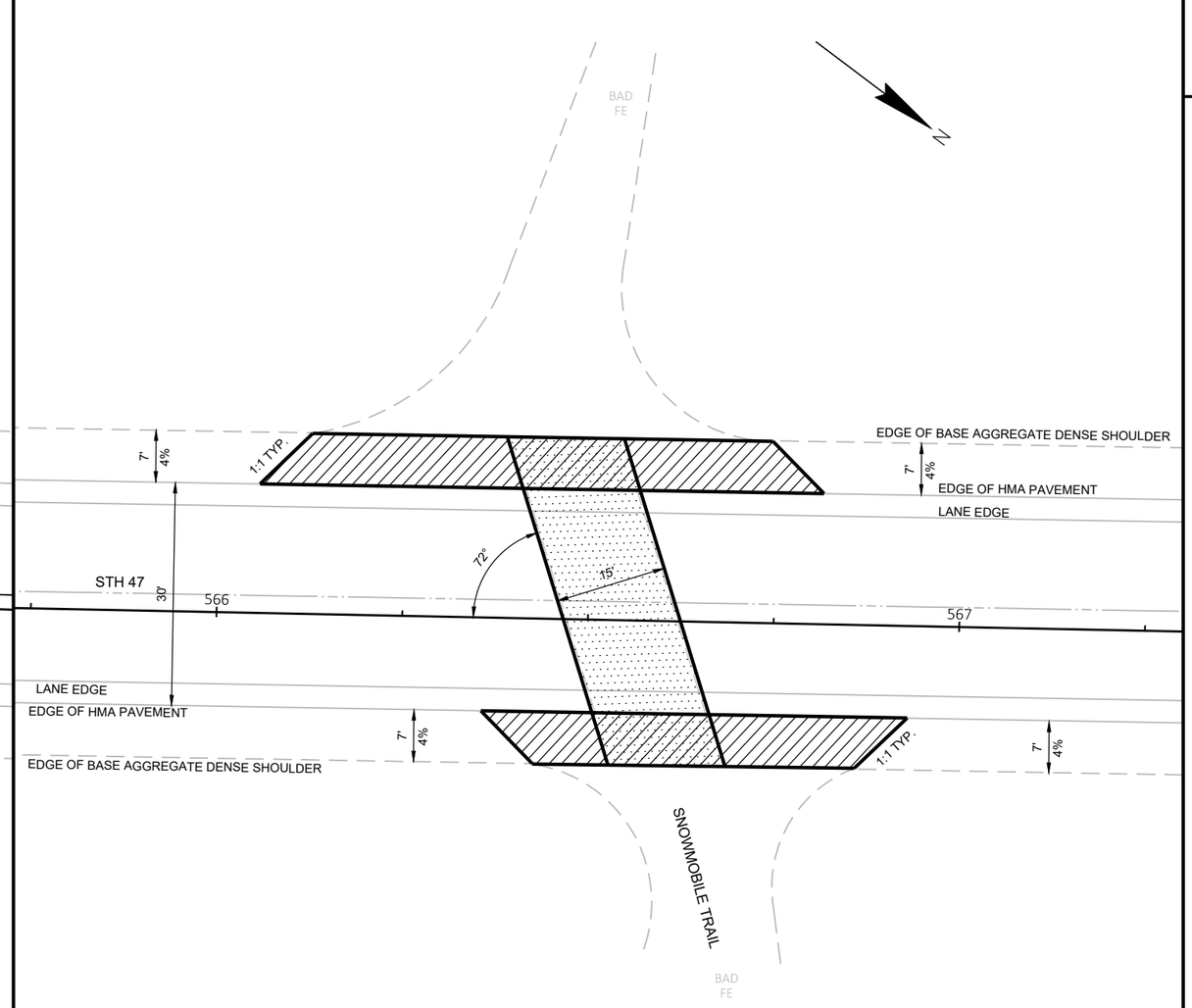
PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSING

HMA 4 LT 58-28 S PAVEMENT WIDENING 4-INCHES FOR SNOWMOBILE TRAIL CROSSING

NOTE: PREPARATION FOR PAVEMENT WIDENING FALLS UNDER PREPARE FOUNDATION FOR ASHPHALTIC SHOULDERS.

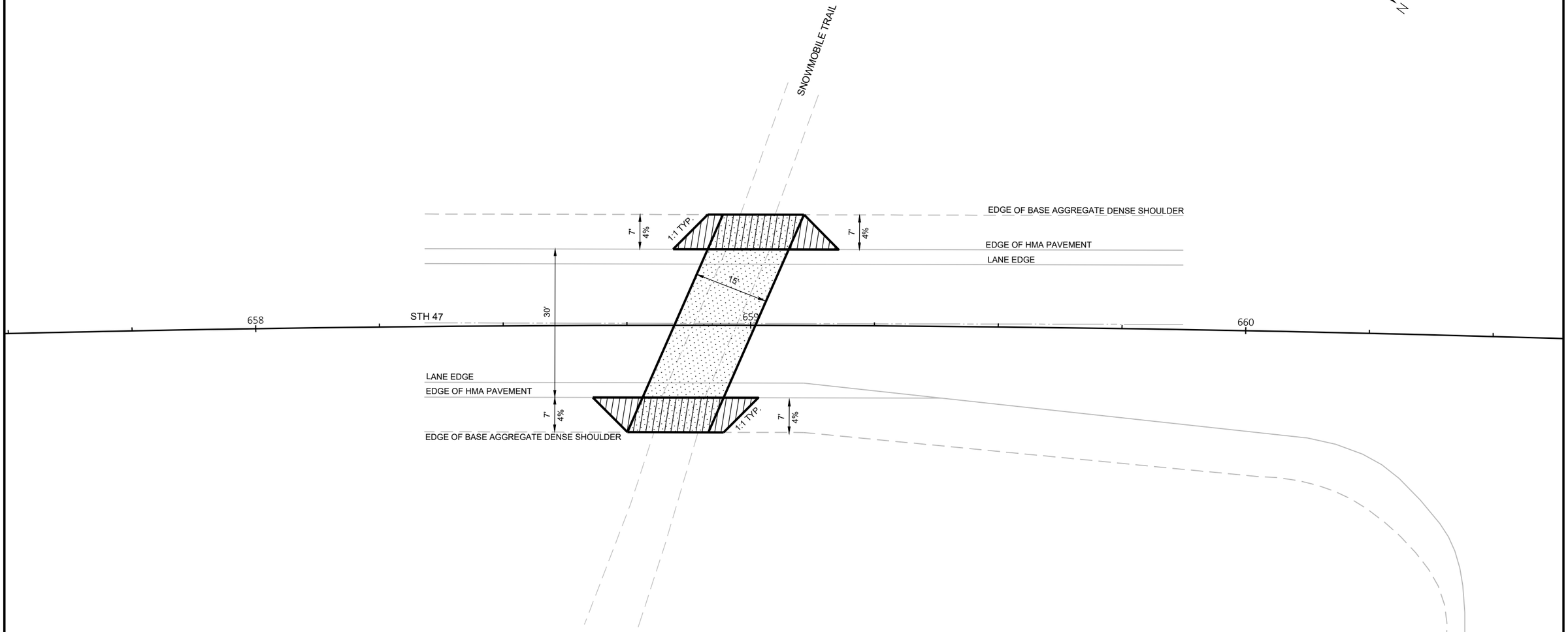
EXACT LOCATIONS TO BE MARKED IN THE FIELD BY THE PROJECT PERSONEL

SNOWMOBILE TRAIL CROSSING
STA. 545+34



SNOWMOBILE TRAIL CROSSING
STA. 566+54

2



PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSING

HMA 4 LT 58-28 S PAVEMENT WIDENING 4-INCHES FOR SNOWMOBILE TRAIL CROSSING

NOTE: PREPARATION FOR PAVEMENT WIDENING FALLS UNDER PREPARE FOUNDATION FOR ASHPHALTIC SHOULDERS.

EXACT LOCATIONS TO BE MARKED IN THE FIELD BY THE PROJECT PERSONEL

SNOWMOBILE TRAIL CROSSING

STA. 658+92

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CONSTRUCTION DETAILS-SNOWMOBILE TRAIL CROSSING	SHEET 18	E

2

2

LEGEND

. XXXX . SAW CUT REQ'D.

LIMITS OF HMA PAVEMENT

BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)

BURIED GAS LINE (APPROXIMATE LOCATION) CAUTION

WISCONSIN PUBLIC SERVICE CORP.

APPROXIMATE EXISTING R/W

FRONTIER

N. RIVER RD. N67° 37' 31"E

W. DAVENPORT ST. N67° 37' 31"E

CONNECT UNDERDRAIN TO EXISTING MANHOLE

ASPHALTIC FLUME REQUIRED

PI: 12+23.58
Y = 163151.475
X = 256525.749

PIPE UNDERDRAIN SICPP 12-INCH REQ'D.

EXISTING 12" PIPE UNDERDRAIN (REMOVE)

RHINELANDER WATER DEPARTMENT

INFILTRATION TRENCH REQUIRED (SEE CONSTRUCTION DETAIL)

10 N37° 08' 39"W 11 STH 47 12 13 14 N37° 20' 54"W 15 16

5' 18'

BEGIN PROJECT
STA 10+50

STA. 12+54.00 STH 47=
STA. 20+00.00 W. DAVENPORT ST./RIVER RD
Y = 163175.656
X = 256507.296

MH INL SIGN

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN DETAIL	SHEET 19	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\021201 PD.DWG
LAYOUT NAME - 020101 pd

PLOT DATE : 10/21/2019 9:03 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

CTH K
CURVE NOTES
PI STA = 15+94.60
Y = 167370.838
X = 253523.917
DELTA = 45°42'56"
D = 6°44'26"
T = 358.32'
L = 678.21'
R = 850.00'
PC STA = 12+36.28
Y = 167116.136
X = 253271.889
PT STA = 19+14.49
Y = 167368.252
X = 253882.225
BK = N44°41'51.8"E
AH = S89°35'11.8"E

N

LEGEND
LIMITS OF HMA PAVEMENT
CONCRETE REMOVAL

SAW CUT REQUIRED
BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)
PATCH SAFETY ISLAND CURB AND GUTTER (LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD)
CONCRETE ISLAND (TO REMAIN)
CONSTRUCTION LIMITS STA. 19+06
PT: 19+14.49
PT: 63+91.61
BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)
BURIED GAS LINE (APPROXIMATE LOCATION)
REMOVE CONCRETE MEDIAN
REMOVE CONCRETE MEDIAN
APPROXIMATE EXISTING R/W
FRONTIER
(TO REMAIN) 18" RCCP
(TO REMAIN) 18" CMP
(TO REMAIN) 24" CMP
(TO REMAIN) 18" CMP
WISCONSIN PUBLIC SERVICE CORP
(TO REMAIN)
(TO REMAIN)
(TO REMAIN)
(TO REMAIN)
(TO REMAIN)
(TO REMAIN)
(TO REMAIN)
(TO REMAIN)
N1° 02' 15"E
STH 47
APPROXIMATE EXISTING R/W
FRONTIER
WISCONSIN PUBLIC SERVICE CORP.
APPROXIMATE EXISTING R/W
PATCH SAFETY ISLAND CURB AND GUTTER (LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD)
BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)
WISCONSIN PUBLIC SERVICE CORP.
SAW CUT REQUIRED
SEE CONSTRUCTION DETAIL
BURIED GAS LINE (APPROXIMATE LOCATION)
CONSTRUCTION LIMITS STA. 20+75
STA. 62+36.53 STH 47=
STA. 20+00.00 CTH K (RIVER ST.)
Y = 167367.635
X = 253967.737
S89° 35' 12"E
CTH K (RIVER ST.)
FRONTIER
BUILDING
EP: 24+96.80

STH 47
CURVE NOTES
PI STA = 54+66.23
Y = 166521.399
X = 253948.216
DELTA = 38°32'12"
D = 2°00'00"
T = 1001.46'
L = 1926.83'
R = 2864.79'
PC STA = 44+64.78
Y = 165726.882
X = 254557.853
PT STA = 63+91.61
Y = 167522.691
X = 253966.347
BK = N37°29'57.1"W
AH = N01°02'14.7"E

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN DETAIL	SHEET 20	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\021202 PD.DWG
LAYOUT NAME - 021202 pd
PLOT DATE : 10/21/2019 9:03 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : ##########

STA. 62+36.53 STH 47=
STA. 20+00.00 CTH K (RIVER ST.)

STH 47

62

63

N

LEGEND

. XXXX . SAW CUT REQ'D.

LIMITS OF HMA PAVEMENT

20+18.30
0.00'
62+35.76
18.29'

CONCRETE CURB AND GUTTER
18-INCH TYPE D REQ'D.

MOVE SIGN FOR CONSTRUCTION
RE-INSTALL IN SAME LOCATION

1601.38

PROTECT ELECTRIC CONDUIT
FOR SIGNALS

1601.49

20+29.12
-27.01'
62+62.53
30.14'
3' R.

1601.51

PROTECT ELECTRIC CONDUIT
FOR SIGNALS

1601.28

MOVE SIGN FOR CONSTRUCTION
RE-INSTALL IN SAME LOCATION

1601.36

1601.00

1601.98

20+30.58
-18.93'
62+54.31
31.31'
3' R.

PROTECT ELECTRIC CONDUIT
FOR SIGNALS

(ADJUST)

TRAFFIC SIGNAL
(TO REMAIN)

1601.30

PROTECT ELECTRIC CONDUIT
FOR SIGNALS

1601.69

ASPHALTIC FLUME
REQUIRED

1601.60

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

CONCRETE SIDEWALK
4-INCH REQ'D.

(ADJUST)

20+59.24
-18.52'
3' R.

CONCRETE CURB AND GUTTER
(REVERSE SLOPE)
18-INCH TYPE D REQ'D.

GRADE AND
SHAPE DITCH

123' R

63+14.39
68.23'
20+65.91
-78.93'

1601.87

1601.83

1601.54

ASPHALTIC FLUME
REQUIRED

MOVE SIGN FOR CONSTRUCTION
RE-INSTALL IN SAME LOCATION

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

1601.78

20+75.00
0.00'

MATCH
EXISTING

20+58.19
-39.68'
40' R.

FRONTIER

BURIED TELEPHONE CABLE
(APPROXIMATE LOCATION)

SAW CUT
REQUIRED

BURIED TELEPHONE CABLE
(APPROXIMATE LOCATION)

CONSTRUCTION LIMITS
STA. 20+75

CTH K
(RIVER ST.)

WISCONSIN PUBLIC SERVICE CORP.

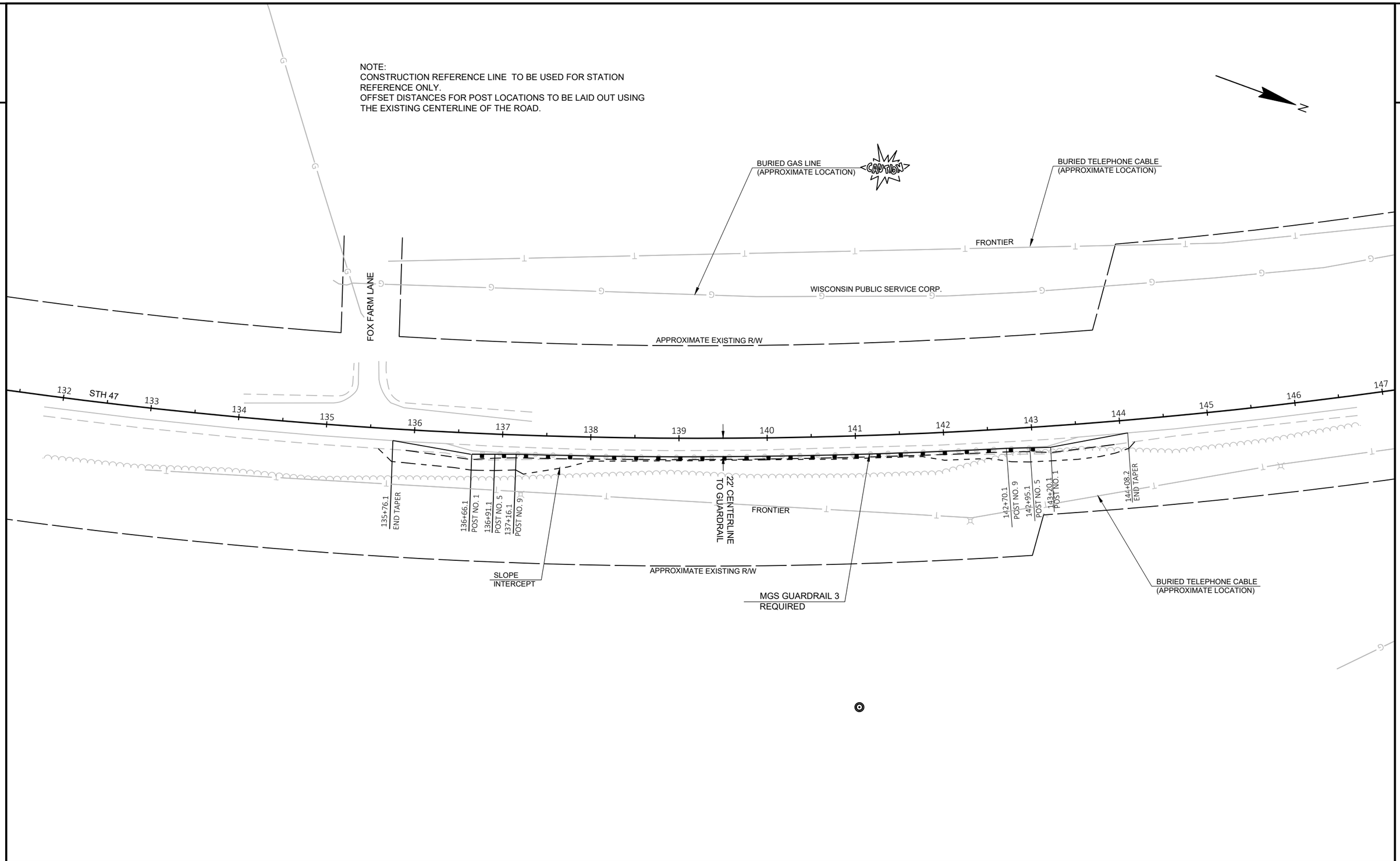
61+56.07
80.68'
20+85.08
74.57'
52.3' R.

FRONTIER

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN DETAIL	SHEET 21	E

2

NOTE:
CONSTRUCTION REFERENCE LINE TO BE USED FOR STATION REFERENCE ONLY.
OFFSET DISTANCES FOR POST LOCATIONS TO BE LAID OUT USING THE EXISTING CENTERLINE OF THE ROAD.



PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN DETAIL	SHEET 22	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\021204 PD.DWG
LAYOUT NAME - 021204 pd

PLOT DATE : 10/21/2019 9:04 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : ##########

2

NOTE:
CONSTRUCTION REFERENCE LINE TO BE USED FOR STATION REFERENCE ONLY.
OFFSET DISTANCES FOR POST LOCATIONS TO BE LAID OUT USING THE EXISTING CENTERLINE OF THE ROAD.

LEGEND

. XXXX . SAW CUT REQ'D.

LIMITS OF HMA PAVEMENT

N

STA 166+16.53 STH 47=
STA. 30+00.00 WILDWOOD DR.
Y = 177293.894
X = 252165.493

BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)

SLOPE INTERCEPT

157+92.7 END TAPER

158+82.7 POST NO. 1

159+07.7 POST NO. 5

159+32.7 POST NO. 9

LIMITS OF WETLANDS

APPROXIMATE EXISTING R/W

FRONTIER

22' CENTERLINE TO GUARDRAIL

MGS GUARDRAIL 3 REQUIRED

36" RCCP (TO REMAIN)

FRONTIER

SLOPE INTERCEPT

LIMITS OF WETLANDS

167+89.1 POST NO. 9

168+14.1 POST NO. 5

168+39.1 POST NO. 1

ASPHALT PE

BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)

APPROXIMATE EXISTING R/W

169+45.8 END TAPER

24" CMP (TO REMAIN)

156 157 STH 47 158 159 160 161 162 163 164 165 166 167 168 169 170 171

24" CMP (REMOVE)

WISCONSIN PUBLIC SERVICE CORP.

FRONTIER

WISCONSIN PUBLIC SERVICE CORP.

WISCONSIN PUBLIC SERVICE CORP.

MUSKY BAY DRIVE

APPROXIMATE EXISTING R/W LIMITS OF WETLANDS

159+07.8 POST NO. 1

159+32.8 POST NO. 5

159+57.8 POST NO. 9

22' CENTERLINE TO GUARDRAIL

LIMITS OF WETLANDS

MGS GUARDRAIL 3 REQUIRED

SLOPE INTERCEPT

165+26.5 POST NO. 9

165+51.5 POST NO. 5

165+76.5 POST NO. 1

RIPRAP MEDIUM REQUIRED

24" CMP (TO REMAIN)

PE

WILDWOOD DRIVE

32

33

WISCONSIN PUBLIC SERVICE CORP.

FRONTIER

WISCONSIN PUBLIC SERVICE CORP.

APPROXIMATE EXISTING R/W

EP: 33+05.37
Y = 177596.760
X = 252211.668

BURIED GAS LINE (APPROXIMATE LOCATION) CAUTION

BURIED GAS LINE (APPROXIMATE LOCATION) CAUTION

BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)

STA 30+82
1-CPCS 24-INCH CLASS III, REQUIRED
SKEW 28.9° LHF
2 APRON ENDWALLS

CONSTRUCTION LIMITS
STA 31+08

NOTE:
SEE CONSTRUCTION DETAIL FOR CULVERT PIPE REPLACEMENT

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN DETAIL	SHEET 23	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\021205 PD.DWG
LAYOUT NAME - 021205 pd

PLOT DATE : 1/31/2020 9:28 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : ##########

2

N

2

APPROXIMATE EXISTING R/W

WELL

18" RCCP

INLET

STH 47

60 61 62 63 64 65 66

CTH K

19 20 21 22

STA. 62+36.53 STH 47=
STA. 20+00.00 CTH K (RIVER ST.)

PT: 63+91.61

24" CMP

INLET

APPROXIMATE EXISTING R/W

18" CMP

ASPH

ASPH

MB

APPROXIMATE EXISTING R/W

ASPHALT CE

ASPHALT CE

APPROXIMATE EXISTING R/W

POST

POST

POST

ASPHALT CE

CTH K (RIVER ST.)

MB

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- EROSION MAT CLASS II, TYPE C
- SLOPE INTERCEPT
- INLET PROTECTION TYPE C
- SURFACE WATER FLOW
- ASPH — ASPHALTIC FLUME
- CULVERT PIPE CHECK
- TEMPORARY DITCH CHECK

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	EROSION CONTROL	SHEET 24	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\022001 EC.DWG
LAYOUT NAME - 022001 ec

PLOT DATE : 10/21/2019 9:05 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : ##########

2

2

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- EROSION MAT CLASS II, TYPE C
- SLOPE INTERCEPT
- INLET PROTECTION TYPE C
- SURFACE WATER FLOW
- ASPH — ASPHALTIC FLUME
- CULVERT PIPE CHECK

N

FOX FARM LANE

APPROXIMATE EXISTING R/W

STH 47

132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147

APPROXIMATE EXISTING R/W

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	EROSION CONTROL	SHEET 25	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\022002 EC.DWG
LAYOUT NAME - 022002 ec

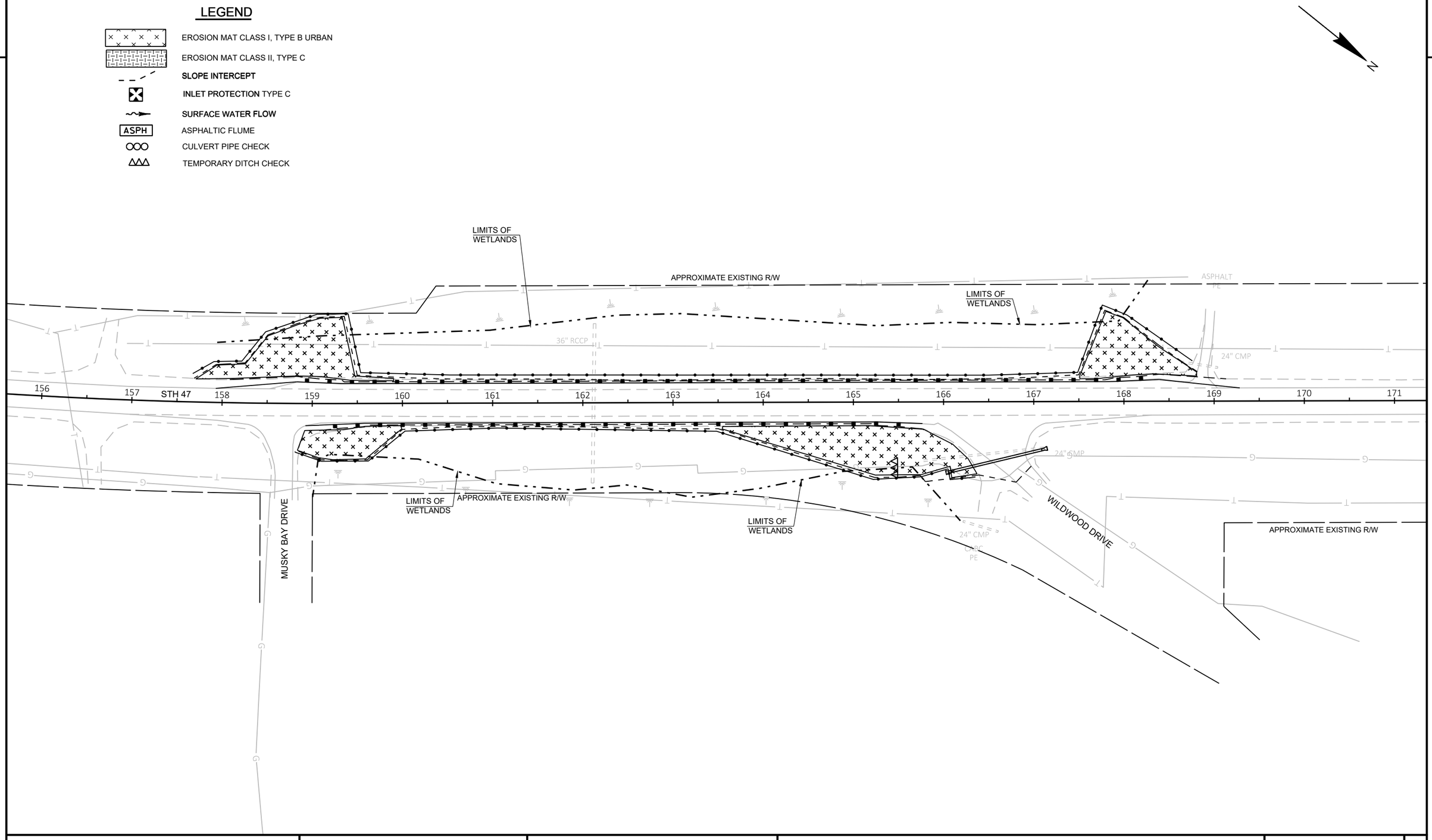
PLOT DATE : 10/21/2019 9:05 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : ##########

2

2

LEGEND

- EROSION MAT CLASS I, TYPE B URBAN
- EROSION MAT CLASS II, TYPE C
- SLOPE INTERCEPT
- INLET PROTECTION TYPE C
- SURFACE WATER FLOW
- ASPH — ASPHALTIC FLUME
- CULVERT PIPE CHECK
- TEMPORARY DITCH CHECK



PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	EROSION CONTROL	SHEET 26	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\022003 EC.DWG
LAYOUT NAME - 022003 ec

PLOT DATE : 10/21/2019 9:05 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : ##########

2

2

APPROXIMATE EXISTING R/W

APPROXIMATE EXISTING R/W

N. RIVER RD.

N67° 37' 31"E

PI: 12+23.58

10

N37° 08' 39"W

11

STH 47

12

13

N37° 20' 54"W

14

15

16

25'

BEGIN PROJECT
STA 10+50

STA. 12+54.00 STH 47=
STA. 20+00.00 W. DAVENPORT ST./RIVER RD.

W. DAVENPORT ST.

N67° 37' 31"E

WISCONSIN PUBLIC SERVICE CORP.

APPROXIMATE EXISTING R/W

APPROXIMATE EXISTING R/W

LEGEND

- (A) MARKING LINE EPOXY 4-INCH (YELLOW)
- (B) MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
- (C) MARKING LINE EPOXY 4-INCH (WHITE)
- (D) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (E) MARKING LINE EPOXY 8-INCH (WHITE)
- (F) MARKING ARROW EPOXY (WHITE)
- (G) MARKING WORD EPOXY (WHITE)
- (H) MARKING CURB EPOXY (YELLOW)
- (I) MARKING ISLAND NOSE EPOXY (YELLOW)
- (J) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (K) MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (L) MARKING LINE EPOXY 4-INCH (WHITE) 3' LINE 9' GAP

NOTE:
PLACE STOP BARS ACCORDING TO STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PAVEMENT MARKING	SHEET 27	E

2

2

N

APPROXIMATE EXISTING R/W

STH 47

53 54 55 56 57 58 59

25'

C C B B B J

ASPHALT

APPROXIMATE EXISTING R/W

LEGEND

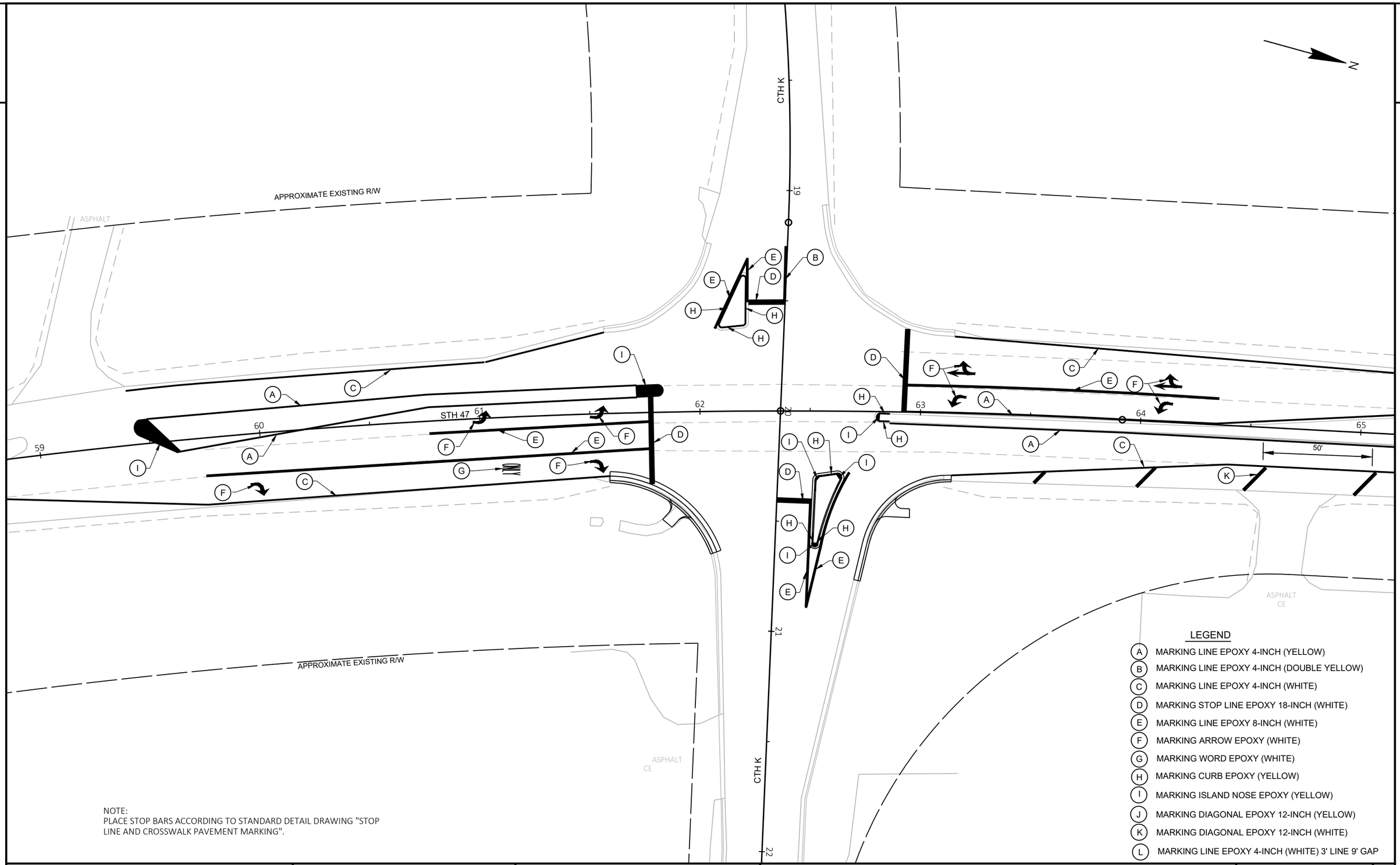
- (A) MARKING LINE EPOXY 4-INCH (YELLOW)
- (B) MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
- (C) MARKING LINE EPOXY 4-INCH (WHITE)
- (D) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (E) MARKING LINE EPOXY 8-INCH (WHITE)
- (F) MARKING ARROW EPOXY (WHITE)
- (G) MARKING WORD EPOXY (WHITE)
- (H) MARKING CURB EPOXY (YELLOW)
- (I) MARKING ISLAND NOSE EPOXY (YELLOW)
- (J) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (K) MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (L) MARKING LINE EPOXY 4-INCH (WHITE) 3' LINE 9' GAP

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PAVEMENT MARKING	SHEET 28	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\024502 PM.DWG
LAYOUT NAME - 024502 pm

PLOT DATE : 10/21/2019 9:06 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : ##########

2



NOTE:
PLACE STOP BARS ACCORDING TO STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PAVEMENT MARKING	SHEET 29	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\024503 PM.DWG
LAYOUT NAME - 024503 pm
PLOT DATE : 10/21/2019 9:06 AM
PLOT BY : SOUFAL, KEVIN
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

2

N

APPROXIMATE EXISTING R/W

CABC
PE

ASPHALT
PE

ASPHALT
PE

ASPHALT
PE

50'

25'

A

I

C

K

B

65

STH 47

66

67

68

69

70

71

N1° 02' 15"E

50'

ASPHALT
CE

ASPHALT
CE

APPROXIMATE EXISTING R/W

ASPHALT
PE

ASPHALT
PE

LEGEND

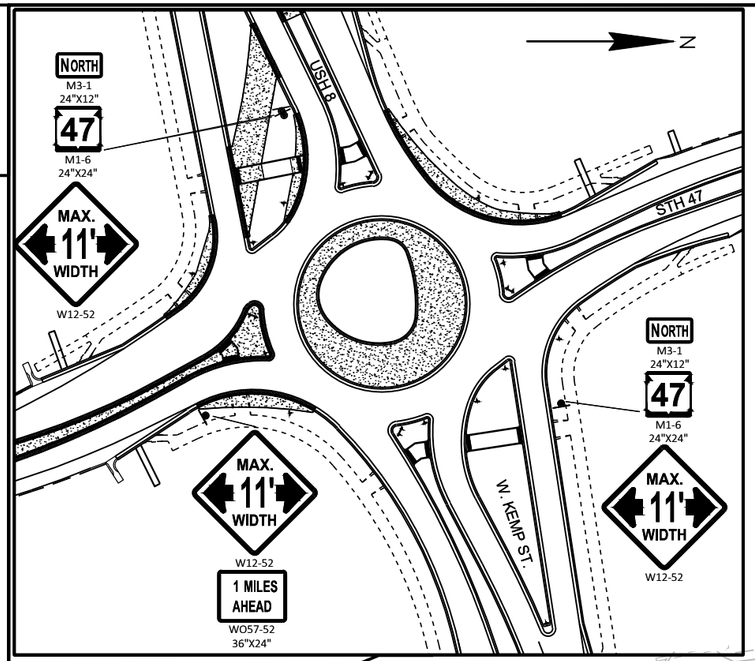
- (A) MARKING LINE EPOXY 4-INCH (YELLOW)
- (B) MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
- (C) MARKING LINE EPOXY 4-INCH (WHITE)
- (D) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (E) MARKING LINE EPOXY 8-INCH (WHITE)
- (F) MARKING ARROW EPOXY (WHITE)
- (G) MARKING WORD EPOXY (WHITE)
- (H) MARKING CURB EPOXY (YELLOW)
- (I) MARKING ISLAND NOSE EPOXY (YELLOW)
- (J) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (K) MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (L) MARKING LINE EPOXY 4-INCH (WHITE) 3' LINE 9' GAP

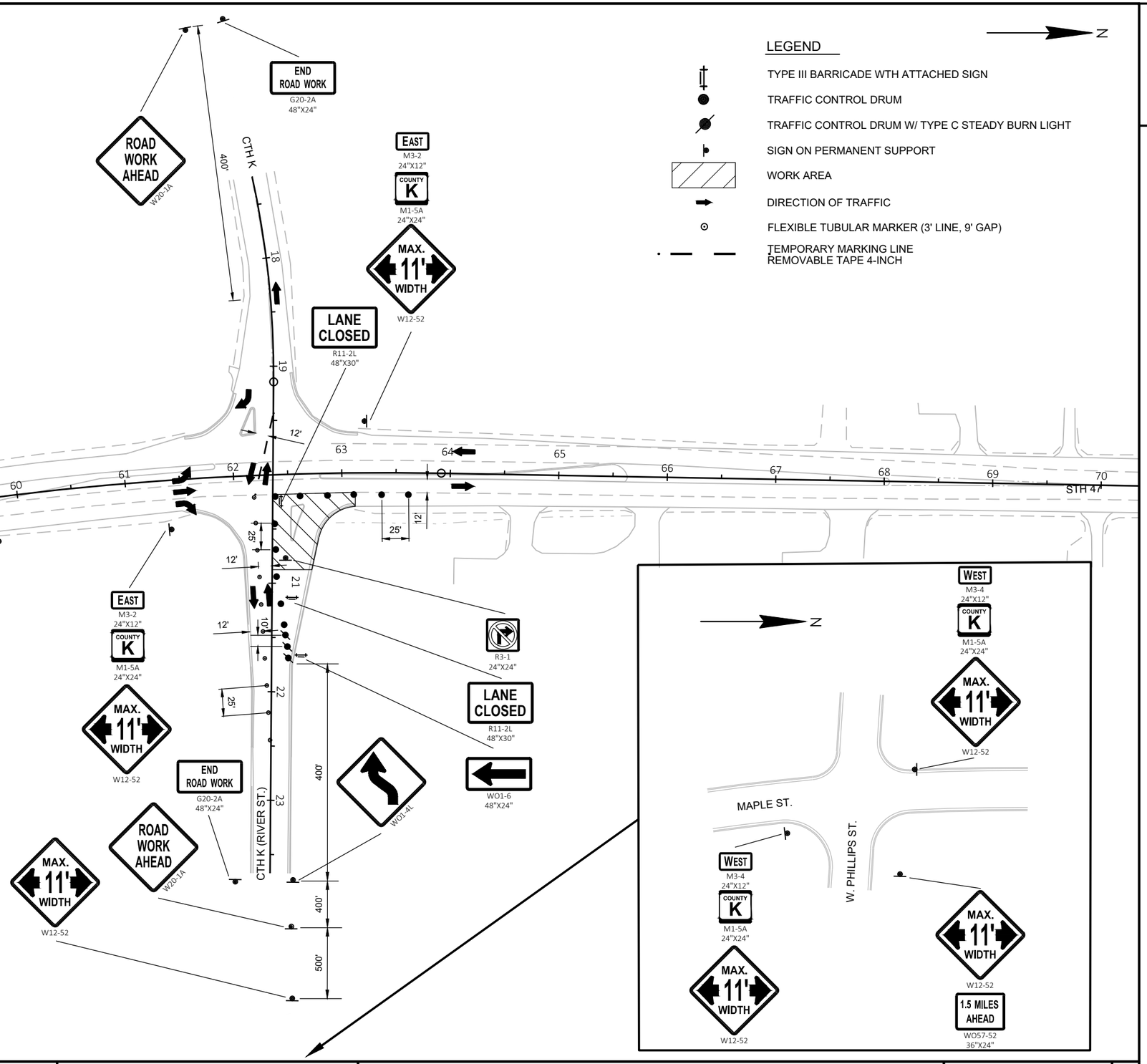
PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PAVEMENT MARKING	SHEET 30	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\024504 PM.DWG
LAYOUT NAME - 024504 pm

PLOT DATE : 10/21/2019 9:06 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42





LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM W/ TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- FLEXIBLE TUBULAR MARKER (3' LINE, 9' GAP)
- TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH

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.

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

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

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

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

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

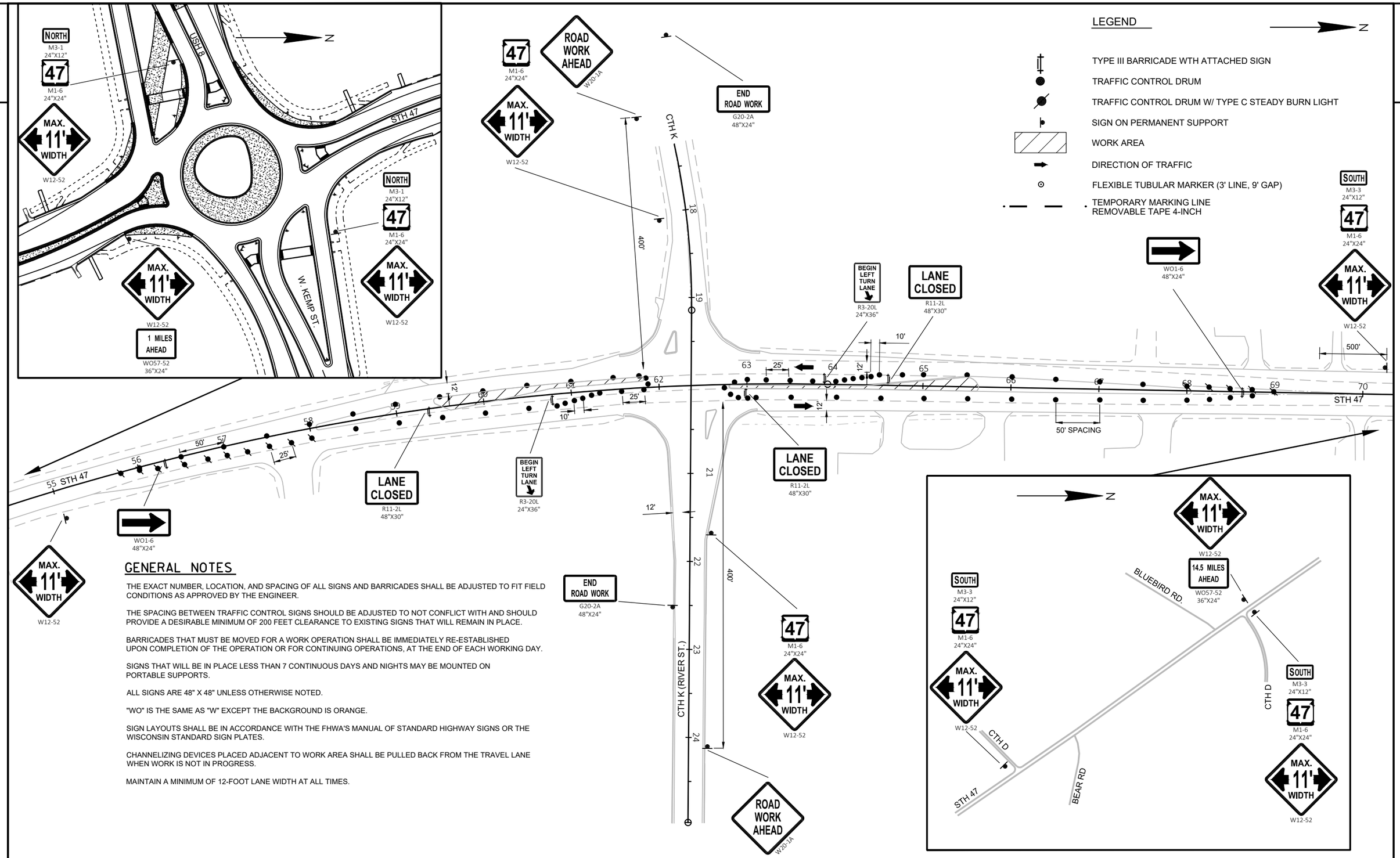
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

MAINTAIN A MINIMUM OF 12-FOOT LANE WIDTH AT ALL TIMES.

OPEN THE CTH K WESTBOUND THROUGH LANE ONCE THE SUBGRADE IMPROVEMENTS FOR THAT LANE ARE COMPLETED. THE CTH K WESTBOUND LANE CAN BE SHIFTED A MAXIMUM OF 2 CALENDAR DAYS. THE WESTBOUND RIGHT TURN LANE OF THE INTERSECTION CAN BE CLOSED A MAXIMUM OF 7 CALENDAR DAYS.

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	TRAFFIC CONTROL - CTH K	SHEET 31	E



GENERAL NOTES

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MAINTAIN A MINIMUM OF 12-FOOT LANE WIDTH AT ALL TIMES.

LEGEND

N

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM W/ TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- FLEXIBLE TUBULAR MARKER (3' LINE, 9' GAP)
- TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	TRAFFIC CONTROL - STH 47	SHEET 32	E

9050-03-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	9.000	9.000
0004	201.0205	Grubbing	STA	9.000	9.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	204.0100	Removing Pavement	SY	425.000	425.000
0010	204.0110	Removing Asphaltic Surface	SY	625.000	625.000
0012	204.0115	Removing Asphaltic Surface Butt Joints	SY	400.000	400.000
0014	204.0120	Removing Asphaltic Surface Milling	SY	240,580.000	240,580.000
0016	204.0130	Removing Curb	LF	86.000	86.000
0018	204.0150	Removing Curb & Gutter	LF	269.000	269.000
0020	204.0165	Removing Guardrail	LF	2,277.000	2,277.000
0022	205.9010.S	Grading and Shaping Intersection (location) 01. CTH K	LS	1.000	1.000
0024	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 9050-03-70	LS	1.000	1.000
0026	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	20.000	20.000
0028	213.0100	Finishing Roadway (project) 01. 9050-03-70	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	10,740.000	10,740.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	465.000	465.000
0034	311.0110	Breaker Run	TON	225.000	225.000
0036	455.0605	Tack Coat	GAL	17,015.000	17,015.000
0038	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0040	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0042	460.2000	Incentive Density HMA Pavement	DOL	1,650.000	1,650.000
0044	460.2005	Incentive Density PWL HMA Pavement	DOL	20,070.000	20,070.000
0046	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	25,780.000	25,780.000
0048	460.2010	Incentive Air Voids HMA Pavement	DOL	25,090.000	25,090.000
0050	460.5224	HMA Pavement 4 LT 58-28 S	TON	27,960.000	27,960.000
0052	465.0110	Asphaltic Surface Patching	TON	260.000	260.000
0054	465.0315	Asphaltic Flumes	SY	20.000	20.000
0056	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	49,050.000	49,050.000
0058	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	2.000	2.000
0060	521.3124	Culvert Pipe Corrugated Steel 24-Inch	LF	110.000	110.000
0062	601.0407	Concrete Curb & Gutter 18-Inch Type D	LF	86.000	86.000
0064	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	139.000	139.000
0066	602.0405	Concrete Sidewalk 4-Inch	SF	195.000	195.000
0068	606.0200	Riprap Medium	CY	33.000	33.000
0070	614.0010	Barrier System Grading Shaping Finishing	EACH	3.000	3.000
0072	614.2300	MGS Guardrail 3	LF	1,962.500	1,962.500
0074	614.2610	MGS Guardrail Terminal EAT	EACH	6.000	6.000
0076	618.0100	Maintenance And Repair of Haul Roads (project) 01. 9050-03-70	EACH	1.000	1.000

9050-03-70

Line	Item	Item Description	Unit	Total	Qty
0078	619.1000	Mobilization	EACH	1.000	1.000
0080	620.0300	Concrete Median Sloped Nose	SF	30.000	30.000
0082	624.0100	Water	MGAL	112.000	112.000
0084	625.0100	Topsoil	SY	680.000	680.000
0086	628.1504	Silt Fence	LF	3,770.000	3,770.000
0088	628.1520	Silt Fence Maintenance	LF	3,770.000	3,770.000
0090	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0092	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0094	628.2008	Erosion Mat Urban Class I Type B	SY	4,500.000	4,500.000
0096	628.2027	Erosion Mat Class II Type C	SY	350.000	350.000
0098	628.7015	Inlet Protection Type C	EACH	7.000	7.000
0100	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0102	628.7555	Culvert Pipe Checks	EACH	30.000	30.000
0104	629.0210	Fertilizer Type B	CWT	0.400	0.400
0106	630.0140	Seeding Mixture No. 40	LB	15.000	15.000
0108	630.0500	Seed Water	MGAL	15.000	15.000
0110	633.5200	Markers Culvert End	EACH	24.000	24.000
0112	638.2102	Moving Signs Type II	EACH	7.000	7.000
0114	638.4000	Moving Small Sign Supports	EACH	3.000	3.000
0116	642.5001	Field Office Type B	EACH	1.000	1.000
0118	643.0300	Traffic Control Drums	DAY	2,406.000	2,406.000
0120	643.0420	Traffic Control Barricades Type III	DAY	68.000	68.000
0122	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	10.000	10.000
0124	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	10.000	10.000
0126	643.0705	Traffic Control Warning Lights Type A	DAY	136.000	136.000
0128	643.0715	Traffic Control Warning Lights Type C	DAY	105.000	105.000
0130	643.0900	Traffic Control Signs	DAY	5,242.000	5,242.000
0132	643.5000	Traffic Control	EACH	1.000	1.000
0134	645.0120	Geotextile Type HR	SY	65.000	65.000
0136	646.1020	Marking Line Epoxy 4-Inch	LF	45,220.000	45,220.000
0138	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	61,840.000	61,840.000
0140	646.3020	Marking Line Epoxy 8-Inch	LF	910.000	910.000
0142	646.5020	Marking Arrow Epoxy	EACH	17.000	17.000
0144	646.5120	Marking Word Epoxy	EACH	9.000	9.000
0146	646.6120	Marking Stop Line Epoxy 18-Inch	LF	165.000	165.000
0148	646.7120	Marking Diagonal Epoxy 12-Inch	LF	490.000	490.000
0150	646.8120	Marking Curb Epoxy	LF	140.000	140.000
0152	646.8220	Marking Island Nose Epoxy	EACH	11.000	11.000
0154	648.0100	Locating No-Passing Zones	MI	12.400	12.400
0156	649.0105	Temporary Marking Line Paint 4-Inch	LF	35,680.000	35,680.000

9050-03-70

Line	Item	Item Description	Unit	Total	Qty
0158	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	5,209.000	5,209.000
0160	650.4500	Construction Staking Subgrade	LF	57.000	57.000
0162	650.5000	Construction Staking Base	LF	57.000	57.000
0164	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	206.000	206.000
0166	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0168	650.8000	Construction Staking Resurfacing Reference	LF	65,425.000	65,425.000
0170	650.9910	Construction Staking Supplemental Control (project) 01. 9050-03-70	LS	1.000	1.000
0172	653.0900	Adjusting Pull Boxes	EACH	2.000	2.000
0174	690.0150	Sawing Asphalt	LF	2,090.000	2,090.000
0176	690.0250	Sawing Concrete	LF	196.000	196.000
0178	740.0440	Incentive IRI Ride	DOL	49,570.000	49,570.000
0180	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000
0182	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,260.000	1,260.000
0184	SPV.0060	Special 01. Reestablish Section Corner Monuments	EACH	2.000	2.000
0186	SPV.0090	Special 01. Grading and Shaping Ditch	LF	145.000	145.000
0188	SPV.0090	Special 02. Pipe Underdrain SICPP 12-Inch	LF	780.000	780.000
0190	SPV.0090	Special 03. Infiltration Trench	LF	40.000	40.000
0192	SPV.0090	Special 04. Concrete Curb & Gutter 12-Inch Special	LF	65.000	65.000
0194	SPV.0090	Special 05. Concrete Curb & Gutter 18-Inch Special	LF	65.000	65.000
0196	SPV.0180	Special 01. Protective Thermalplastic Coating at Snowmobile Crossing	SY	665.000	665.000

3

CLEARING AND GRUBBING

STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA	REMARKS
142+50	-	144+00	STH 47, RT	2	2	GUARDRAIL GRADING
158+25	-	159+50	STH 47, LT	2	2	GUARDRAIL GRADING
159+50	-	159+75	STH 47, RT	1	1	GUARDRAIL GRADING
165+50	-	166+25	STH 47, RT	2	2	GUARDRAIL GRADING
167+50	-	168+50	STH 47, LT	2	2	GUARDRAIL GRADING
TOTALS				9	9	

REMOVING SMALL PIPE CULVERT

STATION	LOCATION	LENGTH	203.0100 EACH	DESCRIPTION
30+74	WILDWOOD DR	136'	1	24" CMP
TOTAL			1	

REMOVING ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	204.0110 SY	DESCRIPTION
10+59	-	14+50	STH 47	270	UNDERDRAIN & INFILTRATION TRENCH
59+45	-	65+60	STH 47	30	UNDISTRIBUTED - CURB PATCHES
61+57		63+11	STH 47	325	CTH K INTERSECTION - GRADING INTERSECTION & CURB REPLACEMENT
TOTALS				625	

REMOVING PAVEMENT

STATION	TO	STATION	LOCATION	204.0110 SY	DESCRIPTION
58+07	-	58+95	STH 47	90	CONCRETE MEDIAN REMOVAL
65+60	-	68+05	STH 47	335	CONCRETE MEDIAN REMOVAL
TOTALS				425	

REMOVING ASPHALTIC SURFACE MILLING ITEMS

STATION	TO	STATION	LOCATION	204.0115 BUTT JOINTS SY	204.0120 MILLING SY	DESCRIPTION
10+50	-	15+75	STH 47	15	2,575	
15+75	-	55+40	STH 47	-	13,220	
55+40	-	70+00	STH 47	-	6,905	
70+00	-	85+00	STH 47	-	4,000	
85+00	-	135+76	STH 47	-	17,220	
135+76	-	144+08	STH 47	-	3,320	GUARDRAIL RT
144+08	-	157+94	STH 47	-	4,620	
157+94	-	169+28	STH 47	-	5,175	GUARDRAIL LT & RT
169+28	-	664+75	STH 47	10	166,400	
			RIVER RD	10	655	
			DAVENPORT ST	10	435	
			HANSON LAKE RD (SOUTH)	10	470	
			HANSON LAKE RD (NORTH)	10	320	
			BIRCH LN	5	110	
			CTH K (WEST)	15	450	
			CTH K (EAST)	10	595	
			MEADOW DR	10	320	
			FOREST LN	10	765	
			LARSEN DR	10	480	
			GRILLS LANDING RD	10	170	
			HILLSIDE CT (SOUTH)	10	560	
			FOX FARM LN	10	335	
			HILLSIDE CT (NORTH)	10	440	
			MUSKY BAY DR	10	215	
			WILDWOOD DR	10	575	
			NORTHWESTERN DR	10	380	
			HARMONY HILL DR (SOUTH)	10	630	
			VALLEY CT	10	620	
			FETKE LAKE RD	10	440	
			HARMONY HILL DR (NORTH)	10	375	
			BAYVIEW DR	10	490	
			APPERSON DR (SOUTH)	10	460	
			ROSEMARY LN	5	65	
			UNNAMED RD	10	290	
			LAKE MILDRED RD	10	300	
			APPERSON DR (NORTH)	5	245	
			OLE LAKE RD	10	310	
			HOME RESORT LN	5	245	
			EVERGREEN CT (SOUTH)	10	295	
			EVERGREEN CT (NORTH)	10	455	
			EVERGREEN CT (WEST)	10	365	
			BRIDGE RD (SOUTH)	10	750	
			BRIDGE RD (NORTH)	10	575	
			MCNAUGHTON RD	10	285	
			FAWN LAKE RD	10	360	
			FOX RD	10	570	
			KILDEER RD	10	720	
			WOLF RD	10	765	
			UNDISTIBUTED	-	260	FULL DEPTH PATCHING
TOTALS				400	240,580	

REMOVING CURB & GUTTER

STATION	TO	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF	204.013 REMOVING CURB LF	DESCRIPTION
59+45	-	61+80	STH 47	70	-	CENTER MEDIAN PATCHING
61+57	-	62+08	CTH K	72	-	NE CORNER INT. OF CTH K
62+49	-	62+66	CTH K	-	86	ISLAND ON CTH K
62+70	-	63+11	CTH K	67	-	SE CORNER INT. OF CTH K
62+80	-	65+60	STH 47	60	-	CENTER MEDIAN PATCHING
TOTALS				269	86	

GRADING & SHAPING INTERSECTION CTH K

		FOR INFORMATION PURPOSES ONLY		
LOCATION	205.9010.S LS	EXCAVATION COMMON CY	FILL CY	BORROW CY
CTH K, WB	1	255	0	0
TOTAL	1			

BASE AGGREGATE DENSE

STATION	TO	STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	311.0110 BREAKER RUN TON	624.0100 WATER MGAL	DESCRIPTION
10+50	-	15+75	STH 47	30	-	-	-	
15+75	-	55+40	STH 47	685	-	-	7	
55+40	-	70+00	STH 47	110	100	-	2	
85+00	-	136+66	STH 47	900	-	-	9	
136+66	-	143+20	STH 47	100	15	-	1	GUARDRAIL RT
143+20	-	158+83	STH 47	270	-	-	3	
158+83	-	168+39	STH 47	65	10	-	1	GUARDRAIL LT & RT
168+39	-	664+75	STH 47	8,580	-	-	86	
10+67	-	11+70	STH 47	-	25	-	-	SHOULDER WIDENING
10+59	-	14+50	STH 47	-	90	-	1	UNDERDRAIN & INFILTRATION TRENCH
59+45	-	65+60	STH 47	-	10	-	-	CENTER MEDIAN PATCHING
			CTH K (EAST)	-	190	225	2	SUBGRADE IMPROVEMENTS
30+65	-	30+85	WILDWOOD DRIVE	-	25	-	-	CULVERT REPLACEMENT
TOTALS				10,740	465	225	112	

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

STATION	TO	STATION	LOCATION	211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (9050-03-70) LS	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	DESCRIPTION
PROJECT LIMITS			STH 47	1	-	
10+67	-	11+70	STH 47, LT	-	2	SHOULDER WIDENING
21+85	-	22+10	STH 47, LT & RT	-	2	SNOWMOBILE CROSSING
43+70	-	45+24	STH 47, LT & RT	-	2	SNOWMOBILE CROSSING
135+76	-	144+08	STH 47, RT	-	3	GUARDRAIL END TERMINALS
157+94	-	169+28	STH 47, LT	-	1	GUARDRAIL END TERMINALS
367+95	-	368+90	STH 47, LT & RT	-	2	SNOWMOBILE CROSSING
470+92	-	471+21	STH 47, LT & RT	-	2	SNOWMOBILE CROSSING
544+90	-	545+92	STH 47, LT & RT	-	2	SNOWMOBILE CROSSING
566+05	-	566+93	STH 47, LT & RT	-	2	SNOWMOBILE CROSSING
658+68	-	659+18	STH 47, LT & RT	-	2	SNOWMOBILE CROSSING
TOTALS				1	20	

ASPHALTIC FLUMES

STATION	LOCATION	465.0315 SY
11+50	STH 47, RT	5
11+70	STH 47, LT	5
61+80	STH 47, RT	5
62+90	STH 47, RT	5
TOTALS		20

ASPHALTIC CENTER LINE RUMBLE STRIP 2-LANE RURAL

STATION	TO	STATION	LOCATION	465.0475 LF
16+00	-	56+50	STH 47	2,850
88+75	-	664+75	STH 47	46,200
TOTAL				49,050

3

HMA PAVEMENT ITEMS

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0110 ASPHALTIC SURFACE PATCHING TON	DESCRIPTION
10+50	-	15+75	STH 47	190	300	25	
15+75	-	55+40	STH 47	925	1,520	-	
55+40	-	70+00	STH 47	520	800	80	
70+00	-	85+00	STH 47	305	500	-	
85+00	-	135+76	STH 47	1,205	1,980	-	
135+76	-	144+08	STH 47	235	385	15	GUARDRAIL RT
144+08	-	157+94	STH 47	325	535	-	
157+94	-	169+28	STH 47	365	595	10	GUARDRAIL LT & RT
169+28	-	664+75	STH 47	11,650	19,140	-	
10+59	-	14+50	STH 47	-	-	80	UNDERDRAIN & INFILTRATION TRENCH
59+45	-	65+60	STH 47	-	-	10	CURB & GUTTER PATCHING
			RIVER RD	50	80	-	
			DAVENPORT ST	35	55	-	
			HANSON LAKE RD (SOUTH)	35	55	-	
			HANSON LAKE RD (NORTH)	25	40	-	
			BIRCH LN	10	15	-	
			CTH K (WEST)	35	55	-	
			CTH K (EAST)	45	125	-	
			MEADOW DR	25	40	-	
			FOREST LN	55	90	-	
			LARSEN DR	35	60	-	
			GRILLS LANDING RD	15	20	-	
			HILLSIDE CT (SOUTH)	40	65	-	
			FOX FARM LN	25	40	-	
			HILLSIDE CT (NORTH)	35	55	-	
			MUSKY BAY DR	15	25	-	
			WILDWOOD DR	40	70	10	
			NORTHWESTERN DR	30	45	-	
			HARMONY HILL DR (SOUTH)	45	75	-	
			VALLEY CT	45	75	-	
			FETKE LAKE RD	35	55	-	
			HARMONY HILL DR (NORTH)	30	45	-	
			BAYVIEW DR	35	60	-	
			APPERSON DR (SOUTH)	35	55	-	
			ROSEMARY LN	5	10	-	
			UNNAMED RD	20	35	-	
			LAKE MILDRED RD	25	35	-	
			APPERSON DR (NORTH)	20	30	-	
			OLE LAKE RD	25	40	-	
			HOME RESORT LN	20	30	-	

HMA PAVEMENT ITEMS (CONTINUED)

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.6244 HMA PAVEMENT 4 LT 58-28 S TON	465.0110 ASPHALTIC SURFACE PATCHING TON	DESCRIPTION
			EVERGREEN CT (SOUTH)	25	35	-	
			EVERGREEN CT (NORTH)	35	55	-	
			EVERGREEN CT (WEST)	25	45	-	
			BRIDGE RD (SOUTH)	55	90	-	
			BRIDGE RD (NORTH)	40	70	-	
			MCNAUGHTON RD	20	35	-	
			FAWN LAKE RD	25	45	-	
			FOX RD	40	70	-	
			KILDEER RD	55	85	-	
			WOLF RD	55	90	-	
21+85	-	22+10	STH 47	2	8	-	WIDENING FOR SNOWMOBILE TRAIL CROSSING
43+70	-	45+24	STH 47	7	26	-	WIDENING FOR SNOWMOBILE TRAIL CROSSING
367+95	-	368+90	STH 47	6	20	-	WIDENING FOR SNOWMOBILE TRAIL CROSSING
470+92	-	471+21	STH 47	2	5	-	WIDENING FOR SNOWMOBILE TRAIL CROSSING
544+90	-	545+92	STH 47	5	16	-	WIDENING FOR SNOWMOBILE TRAIL CROSSING
566+05	-	566+93	STH 47	5	21	-	WIDENING FOR SNOWMOBILE TRAIL CROSSING
658+68	-	659+18	STH 47	3	9	-	WIDENING FOR SNOWMOBILE TRAIL CROSSING
			UNDISTRIBUTED	-	-	30	UNDISTRIBUTED AREAS FOR PATCHING STH 47 MAINLINE
TOTALS				17,015	27,960	260	

PWL MIXTURE USE TABLE

LOCATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	THICKNESS	TONS*	QUALITY MANAGEMENT PROGRAM TO BE USED:	
						MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 Foot Driving Lane	Upper Layer	Milled Existing HMA Surface	4 LT 58-28 S	2"	20,065	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavment 460.2005
3 Foot Paved Shoulder	Upper Layer	Milled Existing HMA Surface	4 LT 58-28 S	2"	5,020	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by the department; not eligible for incentive
Intersections, Bypass Lane, Turn Lane, Guardrail Tapers, Snow mobile Crossings	Upper Layer	Milled Existing HMA Surface	4 LT 58-28 S	2"	2,565	QMP as per SS 460	Incentive Density HMA Pavement 460.2000
Shoulder Widening, Underdrain, Median Patching, CTH K Subgrade Improvement	Low er Layer	Base Aggregate	Asphaltic Surface	3"	220	QMP as per SS 465	Acceptance by ordinary compaction.

*Quantities are approximate

3

CULVERT PIPE AND ENDWALLS

STATION	LOCATION	521.3124 CULVERT PIPE CORRUGATED STEEL 24-INCH LF	521.1024 APRON ENDWALLS CULVERT PIPE STEEL 24-INCH LF	THICKNESS STEEL INCH	ELEVATION INLET	ELEVATION OUTLET	END OF PIPE OFFSETS INLET	END OF PIPE OFFSETS OUTLET	DESCRIPTION
30+84	WILDWOOD DR	110	2	0.064	785.24	781.11	34' LT	66' RT	SKEW 28.9 DEGREES LHF
TOTAL		110	2						

MARKERS CULVER END

STATION	LOCATION	633.5200 EACH
30+84	WILDWOOD DR	-
61+53	STH 47	2
83+42	STH 47	2
178+36	STH 47	2
314+73	STH 47	2
411+93	STH 47	2
424+55	STH 47	2
463+86	STH 47	2
522+36	STH 47	2
524+12	STH 47	2
576+29	STH 47	2
584+56	STH 47	2
639+21	STH 47	2
TOTAL		24

BARRIER SYSTEM GRADING SHAPING FINISHING

STATION	TO	STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	FOR INFORMATIONAL PURPOSES ONLY EXCAVATION COMMON CY	FILL CY	BORROW CY	TOPSOIL SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 20 LB
135+50	-	144+10	STH 47, RT	1	240	10	-	760	0.5	20
157+60	-	168+85	STH 47, LT	1	200	760	560	1,770	1.1	50
158+90	-	166+25	STH 47, RT	1	60	400	340	1,770	1.1	50
TOTALS				3						

SIDEWALK

STATION	TO	STATION	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH SF	DESCRIPTION
62+49	-	62+66	CTH K	195	ISLAND PAVEMENT
TOTALS				195	

UNDERDRAIN ITEMS

STATION	TO	STATION	LOCATION	SPV.0090.02 PIPE UNDERDRAIN SICPP 12-INCH LF	SPV.0090.03 INFILTRATION TRENCH LF	DESCRIPTION
10+59	-	14+50	STH 47, LT & RT	780	-	UNDERDRAIN
14+50			STH 47	-	40	INFILTRATION TRENCH
TOTALS				780	40	

CONCRETE CURB & GUTTER

STATION	TO	STATION	LOCATION	601.0407 18-INCH TYPE D LF	601.0557 6-INCH SLOPED 36-INCH TYPE D LF	SPV.0090.04 12-INCH SPECIAL LF	SPV.0090.05 18-INCH SPECIAL LF	DESCRIPTION
59+45	-	61+80	STH 47	-	-	35	35	CENTER MEDIAN PATCHING
61+57	-	62+08			72	-	-	NE CORNER INT. OF CTH K
62+80	-	65+60	STH 47	-	-	30	30	CENTER MEDIAN PATCHING
62+70	-	63+11			67	-	-	SE CORNER INT. OF CTH K
62+49	-	62+66	CTH K	86	-	-	-	ISLAND ON CTH K
TOTALS				86	139	65	65	

3

GUARDRAIL ITEMS

STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
136+69.2	-	143+17	STH 47, RT	655	550	2
158+85.8	-	168+36	STH 47, LT	955	850	2
159+10.9	-	165+73.4	STH 47, RT	667	562.5	2
TOTALS				2,277	1,962.5	6

CONCRETE MEDIAN NOSE

STATION	LOCATION	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	DESCRIPTION
20+29	CTH K	8	ISLAND NOSE, TYPE 2
20+30	CTH K	10	ISLAND NOSE, TYPE 2
20+60	CTH K	12	ISLAND NOSE, TYPE 2
TOTAL		30	

LANDSCAPING ITEMS

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	628.2008 EROSION MAT CLASS I TYPE B URBAN SY	628.2027 EROSION MAT CLASS II TYPE C SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0500 SEED WATER MGAL	DESCRIPTION
62+60	-	64+50	STH 47, RT	500	70	300	0.3	10	-	
135+50	-	144+10	STH 47, RT	-	760	-	-	-	-	BARRIER SYSTEM GRADING SHAPING FINISHING AREAS
157+60	-	168+85	STH 47, LT	-	1770	-	-	-	-	BARRIER SYSTEM GRADING SHAPING FINISHING AREAS
158+90	-	166+25	STH 47, RT	-	1770	-	-	-	-	BARRIER SYSTEM GRADING SHAPING FINISHING AREAS
UNDISTRIBUTED				180	130	50	0.1	5	15	
TOTALS				680	4,500	350	0.4	15	15	

SILT FENCE

STATION	TO	STATION	LOCATION	628.1504 QUANTITY LF	628.1520 MAINTENANCE LF
135+50	-	144+10	STH 47, RT	880	880
157+60	-	168+85	STH 47, LT	1270	1270
158+90	-	166+25	STH 47, RT	870	870
UNDISTRIBUTED				750	750
TOTALS				3,770	3,770

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
STH 47	6	3
TOTALS	6	3

MOVING SIGNS & SUPPORTS

STATION	OFFSET	LOCATION	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH
20+33	-23.49	CTH K	4	1
20+39	-58.12	CTH K	1	1
20+56	-18.28	CTH K	2	1
TOTAL			7	3

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 EACH
63+75	STH 47, RT	15
165+50	STH 47, RT	15
	UNDISTRIBUTED	20
TOTAL		50

INLET PROTECTION

STATION	LOCATION	628.7015 TYPE C EACH
12+45	STH 47, LT	1
12+60	STH 47, RT	1
13+15	STH 47, LT	1
61+50	STH 47, MEDIAN	1
65+25	STH 47, MEDIAN	1
	UNDISTRIBUTED	2
TOTAL		7

RIPRAP AND GEOTEXTILE FABRIC

STATION	TO	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY	DESCRIPTION
30+05	-	30+50	WILDWOOD DR., RT	33	65	PIPE END
TOTALS				33	65	

CULVERT PIPE CHECKS

STATION	LOCATION	628.7555 EACH
13+10	STH 47, RT	5
13+70	STH 47, LT	5
61+50	STH 47, RT	5
64+50	STH 47, RT	5
	UNDISTRIBUTED	10
TOTAL		30

3

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TRAFFIC CONTROL SUMMARY

LOCATION	APPROXIMATE SERVICE DAYS	643.0300 DRUMS NO. IN SERVICE	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III NO. IN SERVICE	643.0420 BARRICADES TYPE III DAYS	643.0500 FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 FLEXIBLE TUBULAR MARKER POSTS EACH	643.0705 WARNING LIGHTS TYPE A NO. IN SERVICE	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C NO. IN SERVICE	643.0715 WARNING LIGHTS TYPE C DAYS	643.0900 SIGNS NO. IN SERVICE	643.0900 SIGNS DAYS	REMARKS
ADVANCE WARNING														
STH 47, SOUTH PROJECT LIMITS	7	3	21	-	-	-	-	-	-	-	-	1	7	PLACE 7 CALENDAR DAYS BEFORE WORK BEGINS
STH 47, NORTH PROJECT LIMITS	7	3	21	-	-	-	-	-	-	-	-	1	7	PLACE 7 CALENDAR DAYS BEFORE WORK BEGINS
STH 47, SOUTH PROJECT LIMITS	80	-	-	-	-	-	-	-	-	-	-	3	240	ADVANCE WARNING SIGNS, ROAD WORK NEXT 12 MILES
STH 47, NORTH PROJECT LIMITS	80	-	-	-	-	-	-	-	-	-	-	5	400	ADVANCE WARNING SIGNS, ROAD WORK NEXT 12 MILES
CTH K	80	-	-	-	-	-	-	-	-	-	-	4	320	ROAD WORK AHEAD, END ROAD WORK
SIDE ROADS	80	-	-	-	-	-	-	-	-	-	-	37	2,960	ROAD WORK AHEAD
SUBTOTALS			42		0	0	0		0		0		3,934	
UNDERDRAIN INSTALLATION														
STH 47	5	-	-	-	-	-	-	-	-	-	-	6	30	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
STH 47 / DAVENPORT STREET	5	-	-	-	-	-	-	-	-	-	-	4	20	LOOSE GRAVEL SIGN
DAVENPORT STREET	5	-	-	-	-	-	-	-	-	-	-	8	40	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
SUBTOTALS			0		0	0	0		0		0		90	
CONCRETE MEDIAN REMOVAL AND CURB & GUTTER PATCHING														
STH 47	7	50	350	4	28	-	-	8	56	10	70	6	42	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY
STH 47	7	-	-	-	-	-	-	-	-	-	-	6	42	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
STH 47 / CTH K	7	-	-	-	-	-	-	-	-	-	-	4	28	LOOSE GRAVEL SIGN
CTH K	7	-	-	-	-	-	-	-	-	-	-	8	56	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
SUBTOTALS			350		28	0	0		56		70		168	
CTH K INTERSECTION IMPROVEMENTS														
CTH K	2	-	-	-	-	10	10	-	-	-	-			SEE PLAN DETAILS
STH 47	7	86	602	-	-	-	-	-	-	-	-	11	77	SEE PLAN DETAILS
CTH K	7	16	112	1	7	-	-	2	14	5	35	7	49	SEE PLAN DETAILS
SUBTOTALS			714		7	10	10		14		35		126	
WILDWOOD DR INTERSECTION IMPROVEMENTS														
WILDWOOD DR	1	-	-	7	7	-	-	14	14	-	-	-	-	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
WILDWOOD DR AT VALLEY CT	1	-	-	1	1	-	-	2	2	-	-	1	1	ROAD CLOSED .3 MILES AHEAD
WILDWOOD DR AT STH 47	1	-	-	5	5	-	-	10	10	-	-	3	3	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
AFTER PIPE INSTALLATION	10	10	100	2	20	-	-	4	40	-	-	2	20	BARRELS FOR SHOULDERS - LOOSE GRAVEL SIGN
SUBTOTALS			100		33	0	0		66		0		24	
MILL AND OVERLAY														
STH 47	50	-	-	-	-	-	-	-	-	-	-	8	400	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
STH 47	50	-	-	-	-	-	-	-	-	-	-	10	500	LOW SHOULDER, UNEVEN LANES (EVERY MILE AS APPLICABLE)
GUARDRAIL REPLACEMENT	15	80	1200	-	-	-	-	-	-	-	-	-	-	
SUBTOTALS			1200		0	0	0		0		0		900	
TOTALS			2,406		68	10	10		136		105		5,242	

MARKING LINE

STATION	TO	STATION	LOCATION	646.1020 EPOXY 4-INCH YELLOW LF	646.1020 EPOXY 4-INCH WHITE LF	646.1040 GROOVED WET REFLECTIVE EPOXY 4-INCH WHITE LF	646.3020 EPOXY 8-INCH WHITE LF	646.5020 ARROW EPOXY EACH	646.5120 WORD EPOXY EACH	646.6120 STOP LINE EPOXY 18-INCH LF	646.7120 DIAGONAL EPOXY 12-INCH LF	646.8120 CURB EPOXY LF	646.8220 ISLAND NOSE EPOXY EACH	649.0105 TEMPORARY PAINT 4-INCH LF	649.0150 TEMPORARY REMOVABLE TAPE 4-INCH LF
10+50	-	15+75	STH 47	310	-	190	200	4	2	-	40	-	4	310	40
15+75	-	55+40	STH 47	2,940	-	3,770	-	-	-	-	-	-	-	2,360	316
55+40	-	70+00	STH 47	1,800	-	1,180	420	10	6	80	320	-	4	1,800	68
70+00	-	664+75	STH 47	39,700	-	56,700	230	1	1	-	130	-	-	31,030	4,760
			RIVER RD	120	-	-	60	2	-	35	-	-	-	-	-
			DAVENPORT ST	60	-	-	-	-	-	20	-	-	-	-	-
			CTH K (EAST)	80	60	-	-	-	-	15	-	70	3	80	-
			CTH K (WEST)	100	50	-	-	-	-	15	-	70	-	100	25
TOTALS				45,220		61,840	910	17	9	165	490	140	11	35,680	5,209

REESTABLISH SECTION CORNER MONUMENTS

STATION	LOCATION	SPV.0060.01 EACH
62+37	STH 47, RT	1
89+09	STH 47, RT	1
TOTAL		2

LOCATING NO-PASSING ZONES

STATION	TO	STATION	LOCATION	648.0100 MI
10+50	-	664+75	STH 47	12.4
TOTAL				12.4

PROTECTIVE THERMALPLASTIC COATING AT SNOWMOBILE CROSSINGS

STATION	LOCATION	SPV.0180.01 SY
21+99	STH 47	73
44+60	STH 47	151
368+55	STH 47	97
471+08	STH 47	78
545+34	STH 47	109
566+54	STH 47	77
658+92	STH 47	80
		665

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.5500 CURB GUTTER AND CURB & GUTTER LF	650.6000 PIPE CULVERTS EACH	650.8000 RESURFACING REFERENCE LF	650.9910 SUPPLEMENTAL CONTROL LS
10+50	-	135+76	STH 47	-	-	-	-	12,526	1
135+76	-	144+08	STH 47	-	-	-	-	832	-
144+08	-	157+94	STH 47	-	-	-	-	1,386	-
157+94	-	169+28	STH 47	-	-	-	-	1,134	-
169+28	-	664+75	STH 47	-	-	-	-	49,547	-
20+18	-	20+75	CTH K, LT	57	57	206	-	-	-
			WILDWOOD DR	-	-	-	1	-	-
TOTALS				57	57	206	1	65,425	1

SAWING

STATION	TO	STATION	LOCATION	690.0150 ASPHALT LF	650.0250 CONCRETE	REMARKS
10+59	-	14+50	STH 47, LT & RT	1600	-	UNDERDRAIN AREAS
59+45	-	61+80	STH 47	110	100	CENTER MEDIAN CURB PATCHES
62+80	-	65+60	STH 47	100	90	CENTER MEDIAN PATCHING
			CTH K	220	6	CURB REMOVALS
			WILDWOOD DR	60		PIPE INSTALLATION
TOTALS				2,090	196	

GRADING AND SHAPING DITCH

STATION	TO	STATION	LOCATION	SPV.0090.01 LF
63+05	-	64+50	STH 47, RT	145
TOTALS				145

ADJUSTING PULL BOXES

STATION	LOCATION	653.0900 EACH
20+38	CTH K	1
20+48	CTH K	1
TOTAL		2

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
1000	11+73	1560.28	BURY BOLT ON HYD.-193' RT.
1001	13+17	1577.21	NW BOLT ON HYD.-358' LT.
1002	62+71	1598.87	SPIKE IN PP-219' LT.
1003	62+42	1606.34	SPIKE IN PP-480' RT.

CONTROL POINTS					
NO.	STATION	OFFSET	DESCRIPTION	Y	X
927	12+29.99	218.24'RT	IRON BAR WITH CAP	163288.969	256695.355
928	13+07.84	298.86'LT	IRON BAR WITH CAP	163039.578	256240.227
929	61+88.12	421.21'RT	IRON BAR WITH CAP	167341.554	254390.510
930	62+57.67	238.24'LT	IRON BAR WITH CAP	167381.938	253728.911

CTH K
CURVE DATA

PI STA = 15+94.60
Y = 167370.838
X = 253523.917
DELTA = 45°42'56"
D = 6°44'26"
T = 358.32'
L = 678.21'
R = 850.00'
PC STA = 12+36.28
PT STA = 19+14.49

STA. 61+53
EXISTING 24" CSCP (TO REMAIN)
MARKERS CULVERT END REQ'D.

STA. 61+53
EXISTING 24" CSCP (TO REMAIN)
MARKERS CULVERT END REQ'D.

STH 47
CURVE DATA

PI STA = 54+66.23
Y = 166521.399
X = 253948.216
DELTA = 38°32'12"
D = 2°00'00"
T = 1001.46'
L = 1926.83'
R = 2864.79'
PC STA = 44+64.78
PT STA = 63+91.61

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	05-	SHEET 44	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\050101 PN.DWG
LAYOUT NAME - 050101 pn
PLOT DATE : 1/31/2020 9:34 AM
PLOT BY : SOUFAL, KEVIN
PLOT NAME :
PLOT SCALE : 1 IN:400 FT

N

STH 47
CURVE DATA
PI STA = 141+61.22
Y = 175287.865
X = 253799.147
DELTA = 36°51'55"
D = 1°00'25"
T = 1896.42'
L = 3661.07'
R = 5690.00'
PC STA = 122+64.80
PT STA = 159+25.87

STA. 83+42
EXISTING 24" CPRC (TO REMAIN)
MARKERS CULVERT END REQ'D.

STH 47
CURVE DATA
PI STA = 88+63.78
Y = 169994.458
X = 254011.107
DELTA = 3°19'50"
D = 0°26'27"
T = 377.93'
L = 755.65'
R = 13000.00'
PC STA = 84+85.85
PT STA = 92+41.50

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN	SHEET 45	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\050102 PN.DWG
LAYOUT NAME - 050102 pn
PLOT DATE : 10/21/2019 9:09 AM
PLOT BY : SOUFAL, KEVIN
PLOT NAME :
PLOT SCALE : 1 IN:400 FT

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
1004	166+85	1590.44	SPK. IN PP-118' RT.

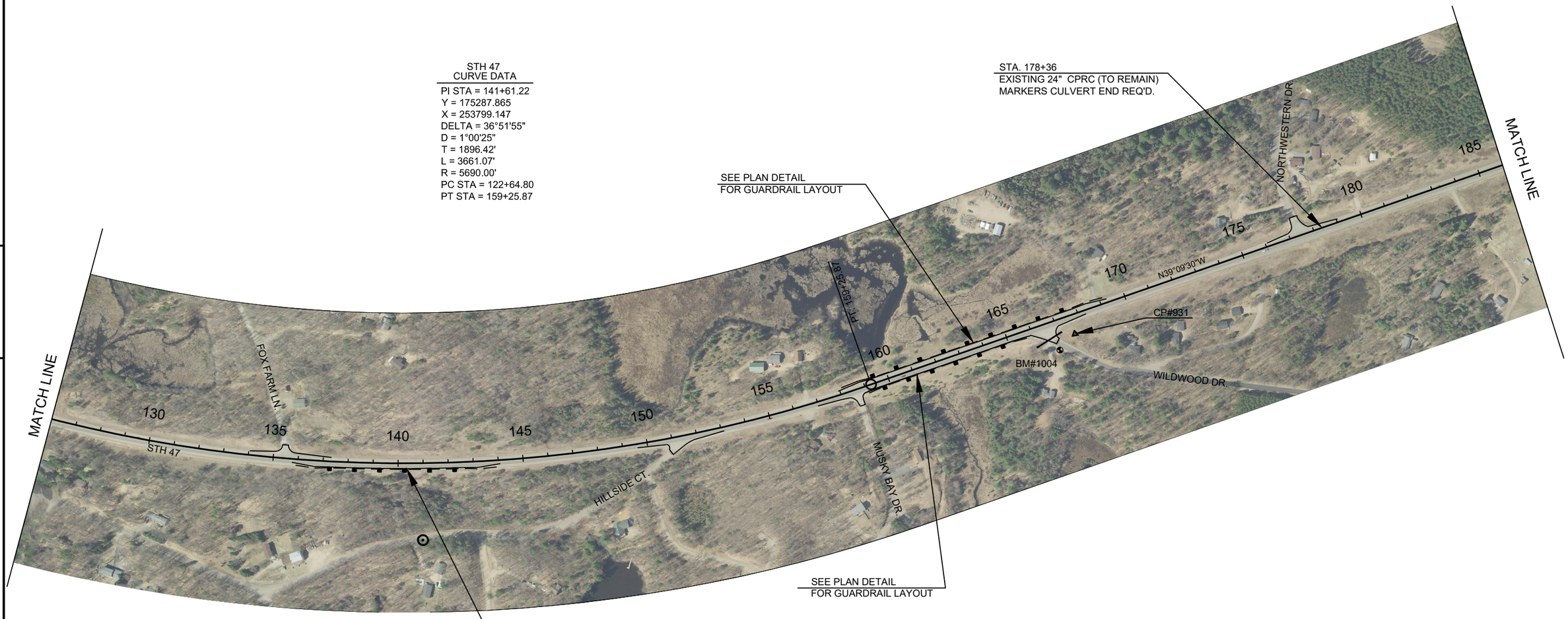
CONTROL POINTS					
NO.	STATION	OFFSET	DESCRIPTION	Y	X
931	167+63.14	76.40'RT	IRON BAR WITH CAP	177455.814	252132.159

STH 47
CURVE DATA

PI STA = 141+61.22
Y = 175287.865
X = 253799.147
DELTA = 36°51'55"
D = 1°00'25"
T = 1896.42'
L = 3661.07'
R = 5690.00'
PC STA = 122+64.80
PT STA = 159+25.87

STA. 178+36
EXISTING 24" CPRC (TO REMAIN)
MARKERS CULVERT END REQ'D.

SEE PLAN DETAIL
FOR GUARDRAIL LAYOUT



SEE PLAN DETAIL
FOR GUARDRAIL LAYOUT

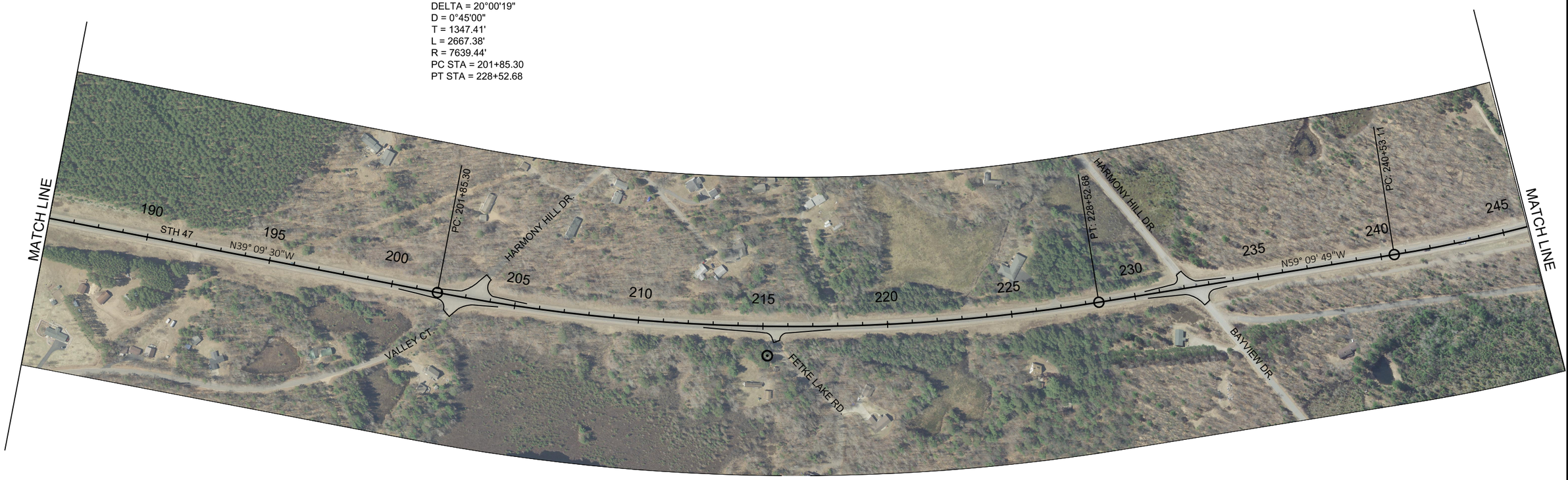
SEE PLAN DETAIL
FOR GUARDRAIL LAYOUT

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN	SHEET 46	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\050103 PN.DWG
LAYOUT NAME - 050103 pn
PLOT DATE : 1/31/2020 9:39 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:400 FT

STH 47
CURVE DATA

PI STA = 215+32.71
Y = 181105.910
X = 249061.094
DELTA = 20°00'19"
D = 0°45'00"
T = 1347.41'
L = 2667.38'
R = 7639.44'
PC STA = 201+85.30
PT STA = 228+52.68



STH 47
CURVE DATA

PI STA = 260+96.40
Y = 183459.260
X = 245118.987
DELTA = 39°15'17"
D = 1°00'00"
T = 2043.29'
L = 3925.47'
R = 5729.58'
PC STA = 240+53.11
PT STA = 279+78.58

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN	SHEET 47	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\050104 PN.DWG
LAYOUT NAME - 050104 pn
PLOT DATE : 10/21/2019 9:13 AM
PLOT BY : SOUFAL, KEVIN
PLOT NAME :
PLOT SCALE : 1 IN:400 FT

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
1005	275+91	1597.38	SPK. IN PP-95' RT.

CONTROL POINTS					
NO.	STATION	OFFSET	DESCRIPTION	Y	X
932	275+26.38	105.34'RT	IRON BAR WITH CAP	183314.100	243540.002

STH 47
CURVE DATA

PI STA = 260+96.40
Y = 183459.260
X = 245118.987
DELTA = 39°15'17"
D = 1°00'00"
T = 2043.29'
L = 3925.47'
R = 5729.58'
PC STA = 240+53.11
PT STA = 279+78.58

STH 47
CURVE DATA

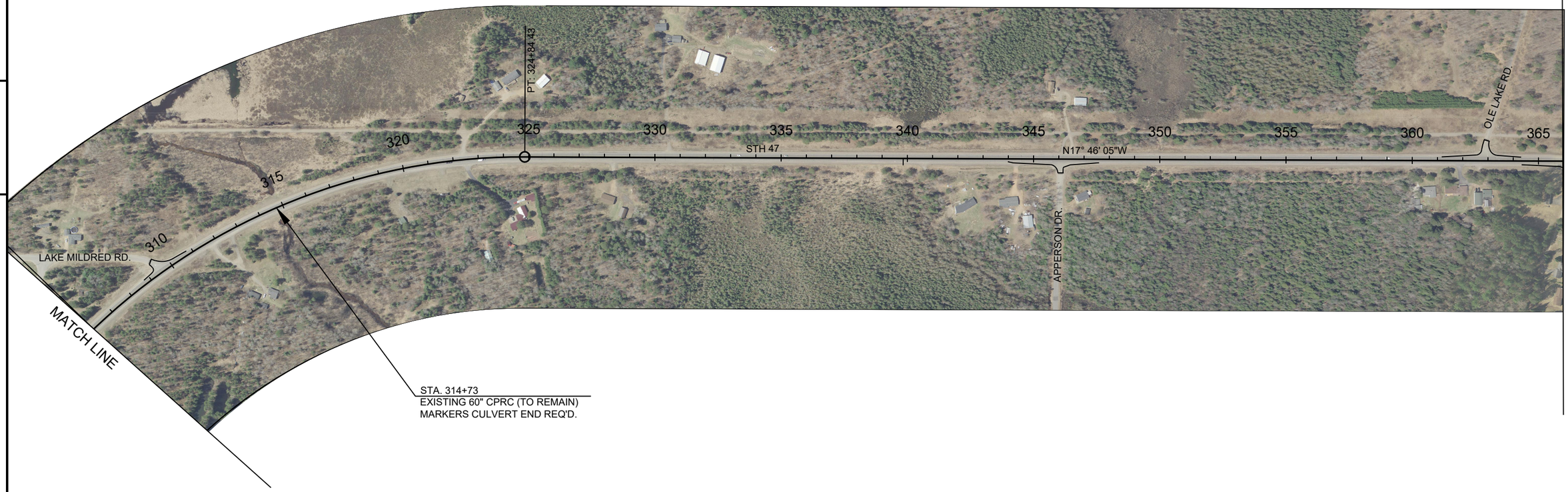
PI STA = 311+12.29
Y = 182701.340
X = 239997.764
DELTA = 80°39'01"
D = 2°20'00"
T = 2084.30'
L = 3456.44'
R = 2455.53'
PC STA = 290+27.99
PT STA = 324+84.43

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN	SHEET 48	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\050105 PN.DWG
LAYOUT NAME - 050105 pn
PLOT DATE : 10/21/2019 9:14 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:400 FT

STH 47
CURVE DATA

PI STA = 311+12.29
Y = 182701.340
X = 239997.764
DELTA = 80°39'01"
D = 2°20'00"
T = 2084.30'
L = 3456.44'
R = 2455.53'
PC STA = 290+27.99
PT STA = 324+84.43



5

5

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN	SHEET 49	E

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
1006	421+34	1566.67	SPK. IN PP-146' RT.

CONTROL POINTS					
NO.	STATION	OFFSET	DESCRIPTION	Y	X
934	422+61.33	66.83'RT	IRON BAR WITH CAP	193685.990	235692.803

STH 47
CURVE DATA

PI STA = 379+29.44
Y = 189871.490
X = 237700.082
DELTA = 13°35'53"
D = 1°00'00"
T = 683.11'
L = 1359.80'
R = 5729.58'
PC STA = 372+46.33
PT STA = 386+06.13

STH 47
CURVE DATA

PI STA = 415+14.68
Y = 192938.260
X = 235830.608
DELTA = 15°52'12"
D = 1°00'00"
T = 798.61'
L = 1586.99'
R = 5729.58'
PC STA = 407+16.07
PT STA = 423+03.06

STH 47
CURVE DATA

PI STA = 430+84.18
Y = 194460.559
X = 235408.546
DELTA = 15°13'52"
D = 1°00'00"
T = 766.07'
L = 1523.11'
R = 5729.58'
PC STA = 423+18.11
PT STA = 438+41.21

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN	SHEET 50	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\050107 PN.DWG
LAYOUT NAME - 050107 pn
PLOT DATE : 1/31/2020 9:41 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:400 FT

STH 47
CURVE DATA
PI STA = 430+84.18
Y = 194460.559
X = 235408.546
DELTA = 15°13'52"
D = 1°00'00"
T = 766.07'
L = 1523.11'
R = 5729.58'
PC STA = 423+18.11
PT STA = 438+41.21

STA. 463+86
EXISTING 30" CPRC (TO REMAIN)
MARKERS CULVERT END REQ'D.

STH 47
CURVE DATA
PI STA = 478+27.69
Y = 199213.053
X = 235386.553
DELTA = 89°11'37"
D = 3°00'00"
T = 1883.17'
L = 2973.12'
R = 1909.86'
PC STA = 459+44.52
PT STA = 489+17.64

5

5

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN	SHEET 51	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\050108 PN.DWG
LAYOUT NAME - 050108 pn
PLOT DATE : 1/31/2020 9:44 AM
PLOT BY : SOUFAL, KEVIN
PLOT NAME :
PLOT SCALE : 1 IN:400 FT

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
1007	523+79	1572.49	SPK. IN PP-56' LT.

CONTROL POINTS					
NO.	STATION	OFFSET	DESCRIPTION	Y	X
936	523+40.27	34.81'LT	IRON BAR WITH CAP	199228.358	230080.660

STA. 522+36
EXISTING 36" CPRC (TO REMAIN)
MARKERS CULVERT END REQ'D.

STA. 524+12
EXISTING 36" CPRC (TO REMAIN)
MARKERS CULVERT END REQ'D.

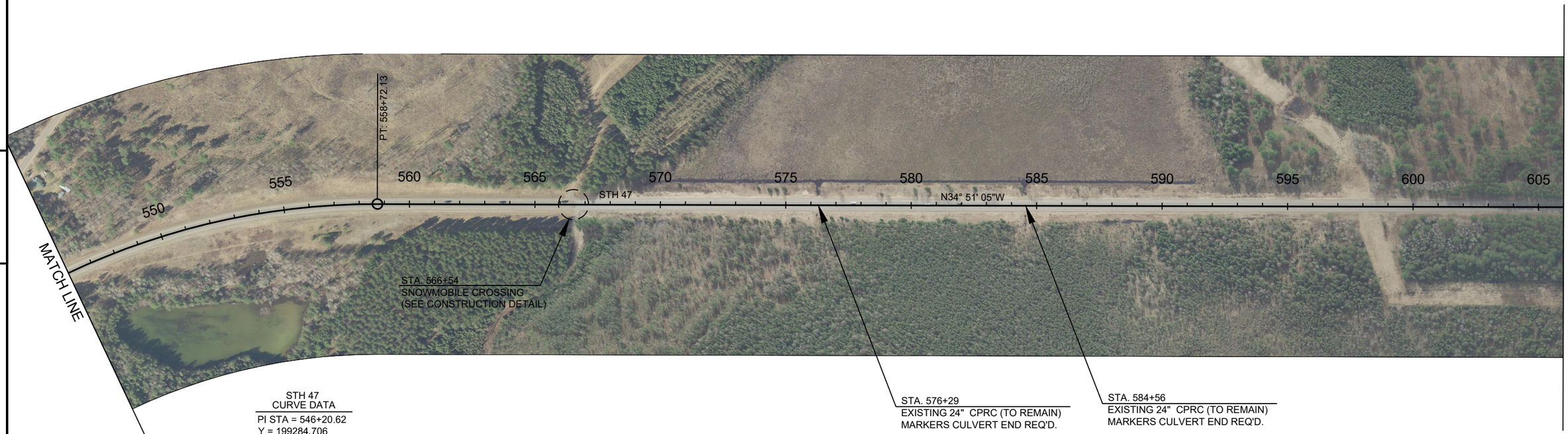
STA. 545+34
SNOWMOBILE CROSSING
(SEE CONSTRUCTION DETAIL)
.

STH 47
CURVE DATA
PI STA = 478+27.69
Y = 199213.053
X = 235386.553
DELTA = 89°11'37"
D = 3°00'00"
T = 1883.17'
L = 2973.12'
R = 1909.86'
PC STA = 459+44.52
PT STA = 489+17.64

STH 47
CURVE DATA
PI STA = 546+20.62
Y = 199284.706
X = 227800.740
DELTA = 54°36'27"
D = 2°00'00"
T = 1478.87'
L = 2730.38'
R = 2864.79'
PC STA = 531+41.76
PT STA = 558+72.13

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN	SHEET 52	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\050109 PN.DWG
LAYOUT NAME - 050109 pn
PLOT DATE : 1/31/2020 9:47 AM
PLOT BY : SOUFAL, KEVIN
PLOT NAME :
PLOT SCALE : 1 IN:400 FT



5

5

STH 47
CURVE DATA

PI STA = 546+20.62
Y = 199284.706
X = 227800.740
DELTA = 54°36'27"
D = 2°00'00"
T = 1478.87'
L = 2730.38'
R = 2864.79'
PC STA = 531+41.76
PT STA = 558+72.13

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN	SHEET 53	E

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
1008	659+44	1580.09	SPK. IN PP-129' RT.

CONTROL POINTS					
NO.	STATION	OFFSET	DESCRIPTION	Y	X
900	659+88.14	69.66'RT	IRON BAR WITH CAP	209197.245	222151.943

STH 47
CURVE DATA

PI STA = 644+78.73
Y = 207561.215
X = 222037.419
DELTA = 36°14'51"
D = 1°00'00"
T = 1875.35'
L = 3624.75'
R = 5729.58'
PC STA = 626+03.38
PT STA = 662+28.14

5

5

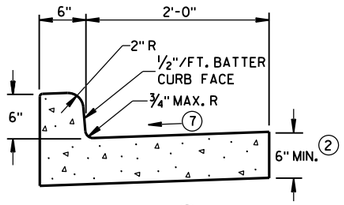
PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	PLAN	SHEET 54	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\050111 PN.DWG
LAYOUT NAME - 050111 pn
PLOT DATE : 1/31/2020 10:07 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:400 FT

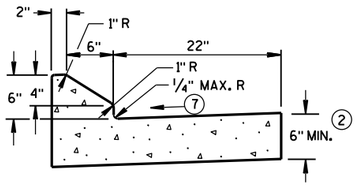
Standard Detail Drawing List

08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
11B02-02	CONCRETE MEDIAN NOSE
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13C19-01	HMA LONGITUDINAL JOINTS
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B29-01	SAFETY EDGE
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-07F	ADVANCED WIDTH RESTRICTION SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19B	PAVEMENT MARKING (TURN LANES)
15C08-19C	PAVEMENT MARKING (TURN LANES)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-04	MEDIAN ISLAND MARKING
15C19-05A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C27-03B	PAVEMENT MARKING (ISLANDS)
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-03A	PAVEMENT MARKING (INTERSECTIONS)
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-05	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D44-01	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

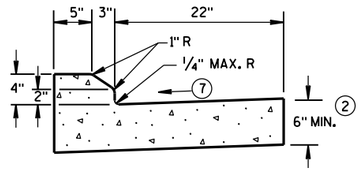
6



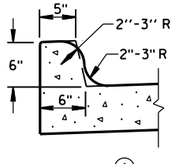
TYPES A (1) & D



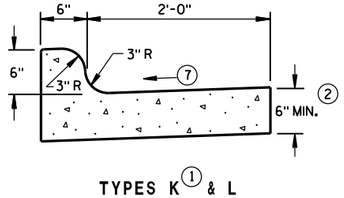
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

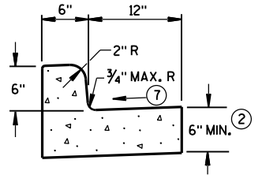


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



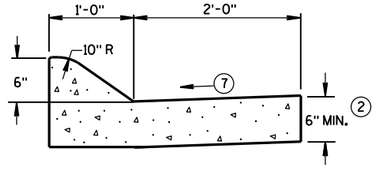
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

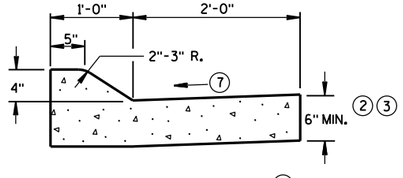


TYPES A (1) & D

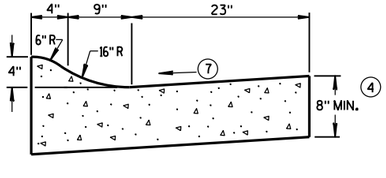
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

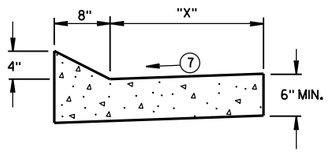


4" SLOPED CURB TYPES A (1) & D



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

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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

GENERAL NOTES

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

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

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

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

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

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

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

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

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

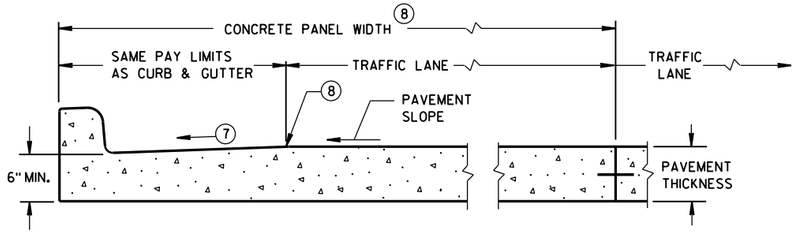
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(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.

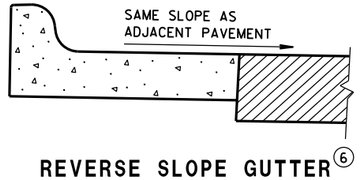
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB & GUTTER

* BIKE LANE IS NOT SHOWN.

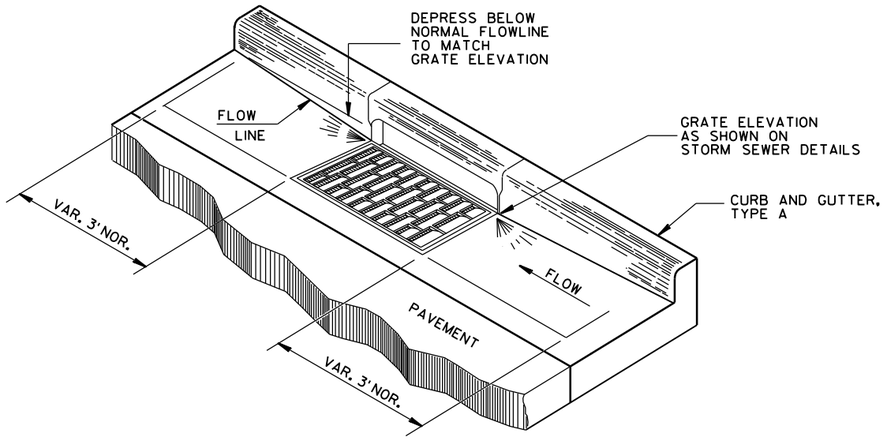


REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

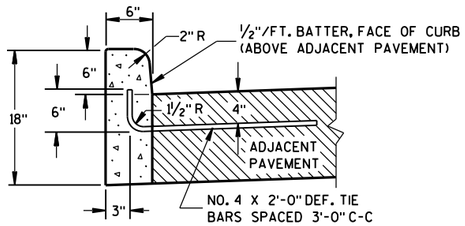
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

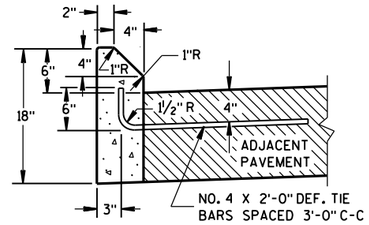
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

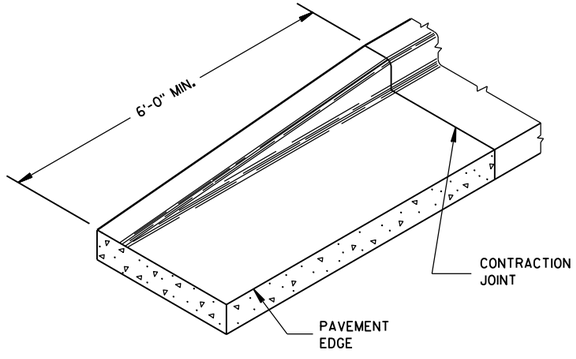


TYPES A (1) & D

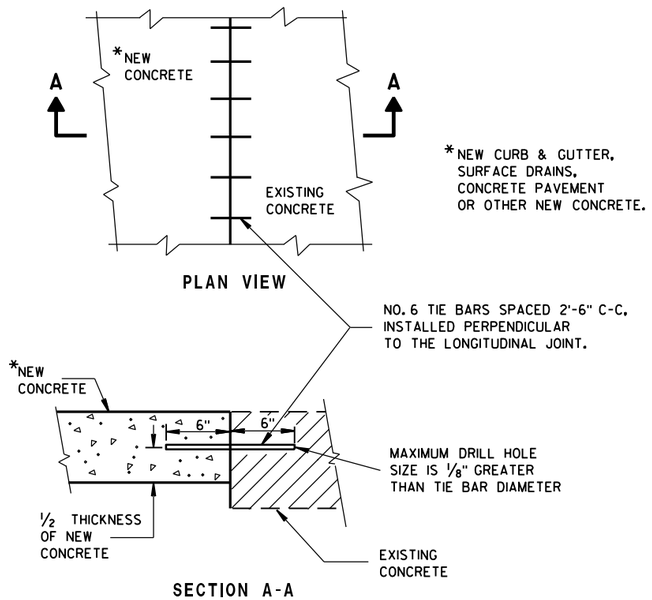


TYPES G (1) & J

CONCRETE CURB



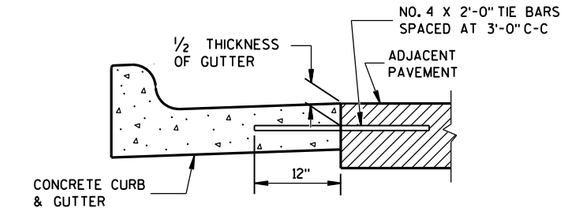
END SECTION CURB & GUTTER



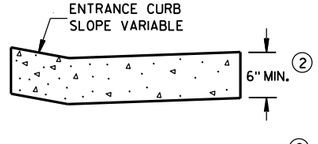
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
57 — ENT
FHWA

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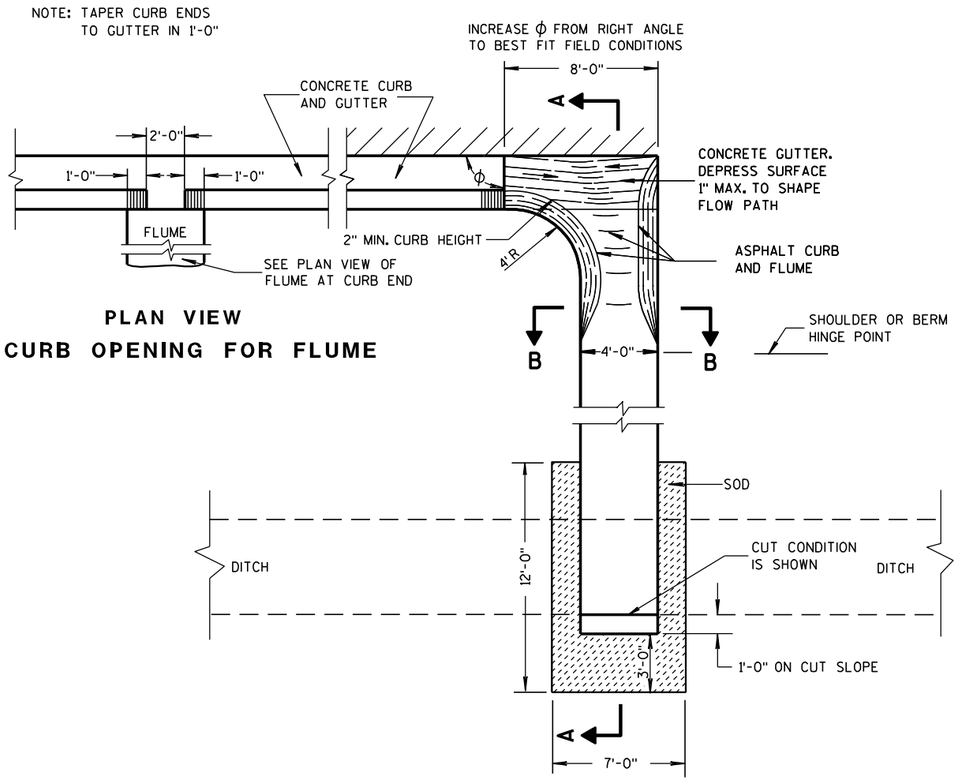
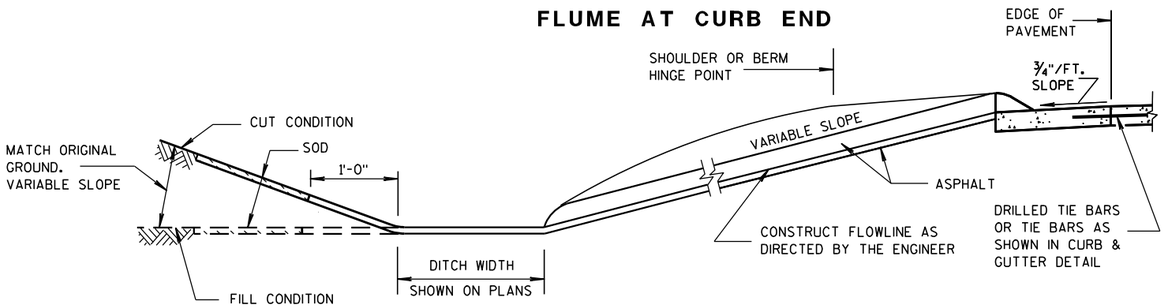
S.D.D. 8 D 1-20b

ASPHALTIC FLUME

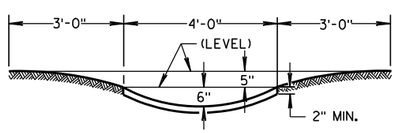


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

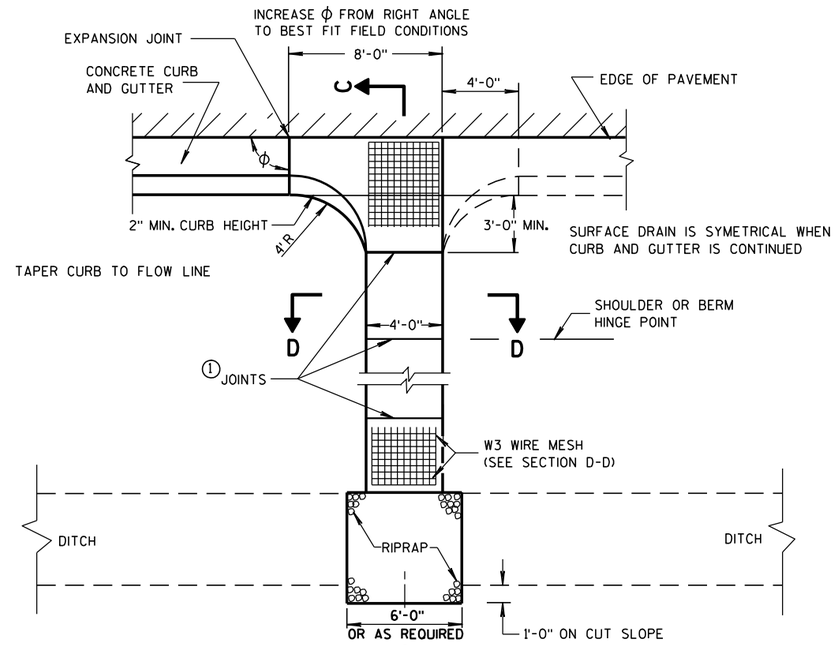
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

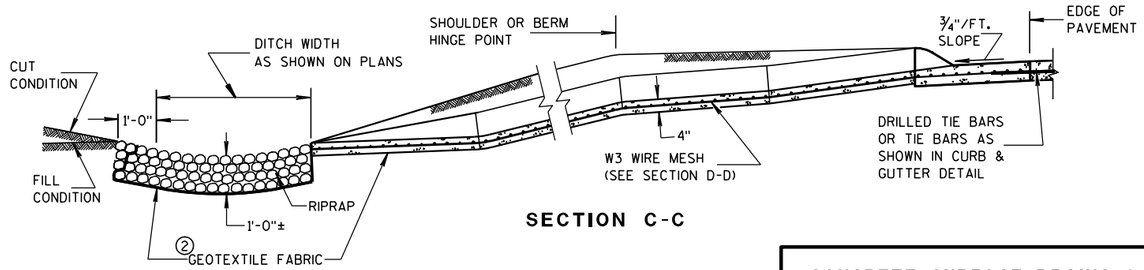
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

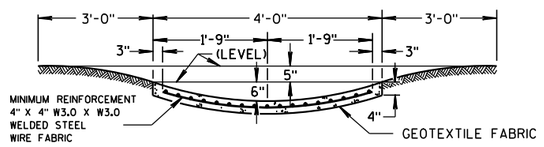
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
58
MENT
FHWA

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S.D.D. 8 D 4-5

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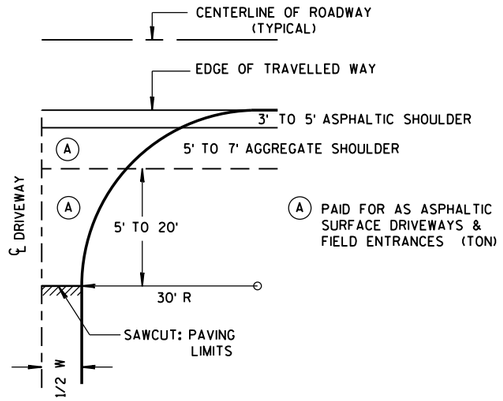
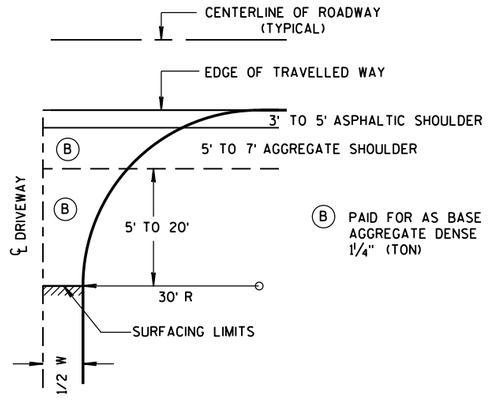
S.D.D. 8 D 4-5



PLAN VIEW
HALF SECTION

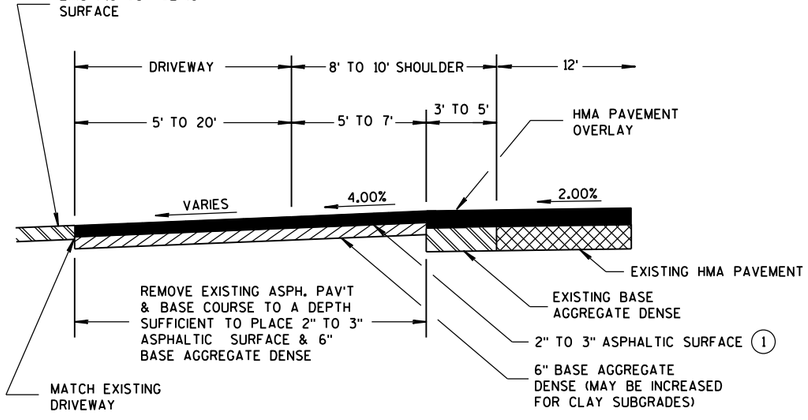
W MIN. = 16'
W MAX. = 24'



PLAN VIEW
HALF SECTION

GENERAL NOTES

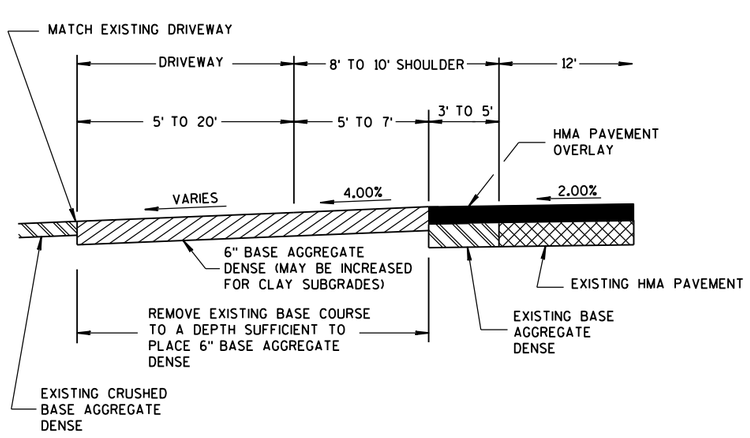
(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PROFILE VIEW

RURAL ENTRANCE WITH ASPHALTIC SURFACE

RESURFACING PROJECTS



PROFILE VIEW

RURAL ENTRANCE WITH AGGREGATE SURFACE

6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
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FHWA

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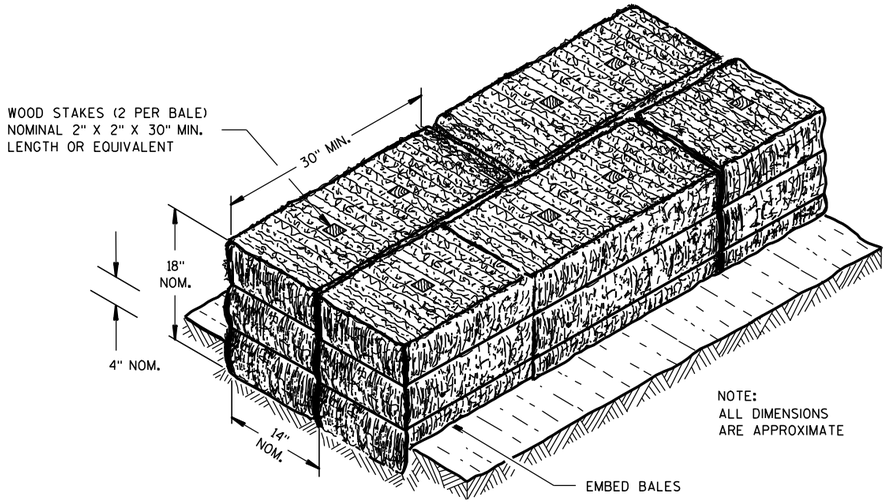
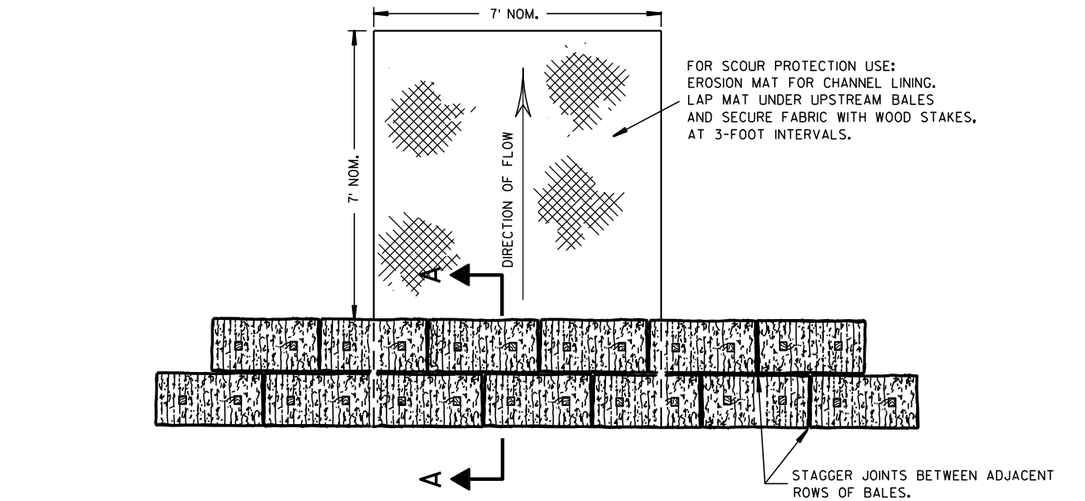
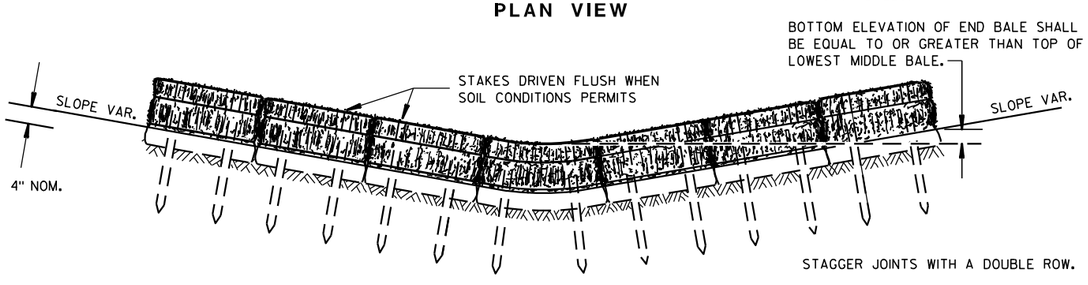
S.D.D. 8 D 22-1



SECTION A-A



PLAN VIEW



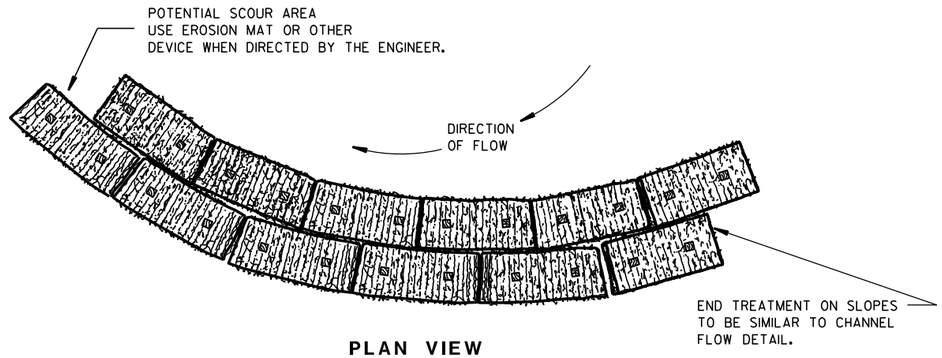
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

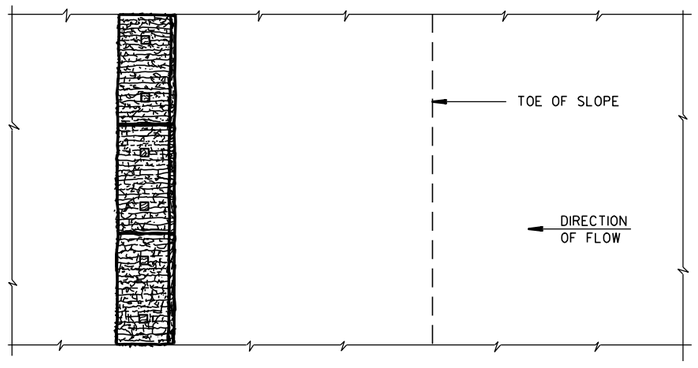
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

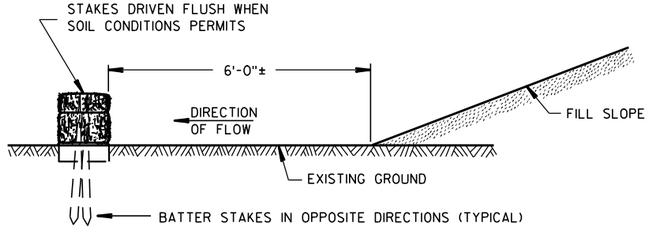


PLAN VIEW

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

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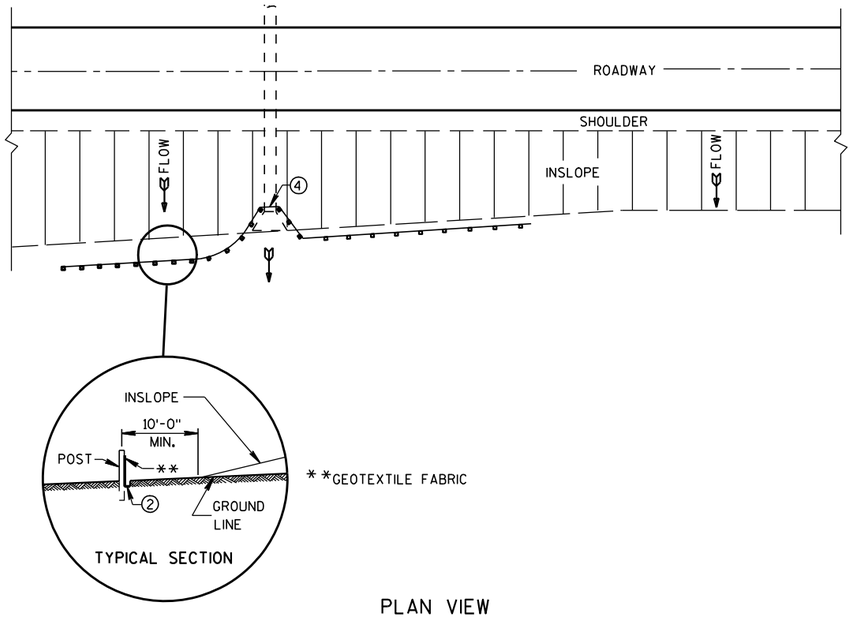
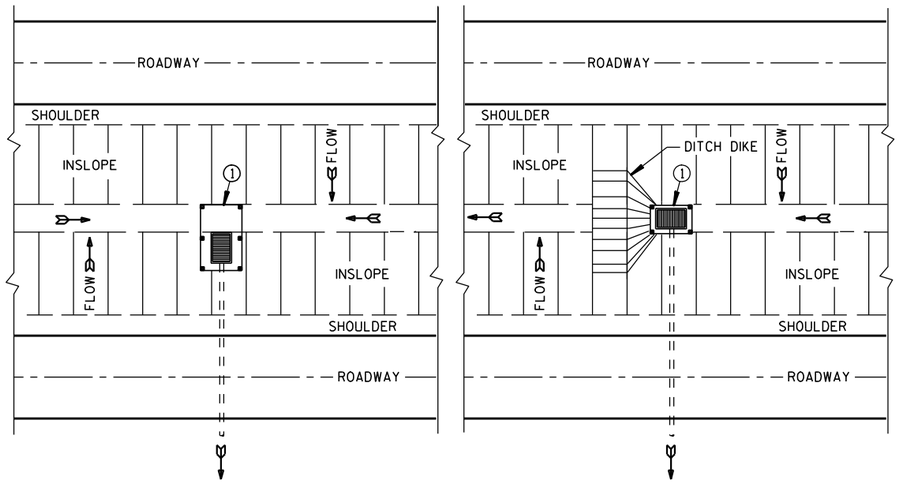
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



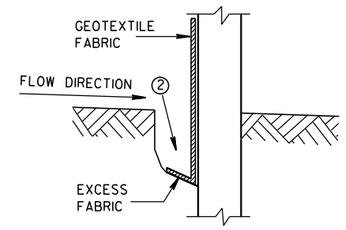
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

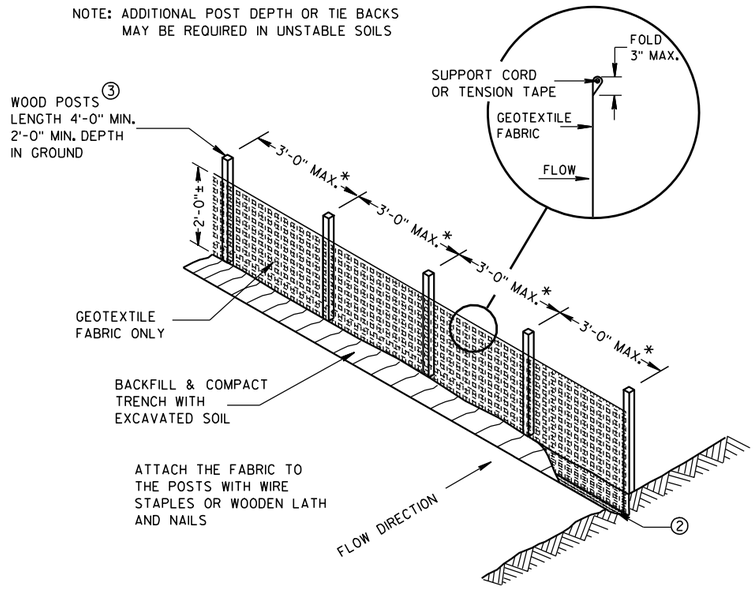
GENERAL NOTES

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.

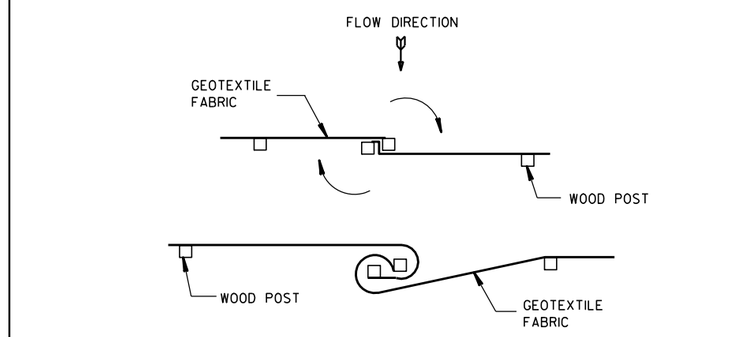


TRENCH DETAIL

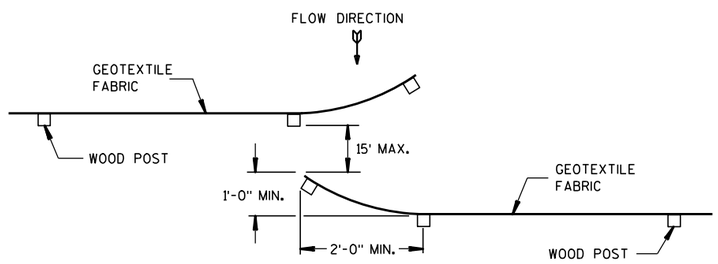


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

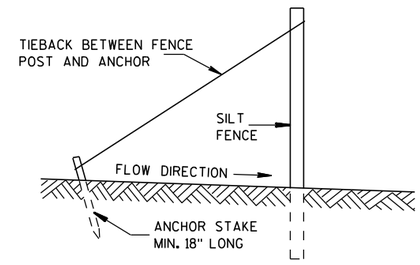


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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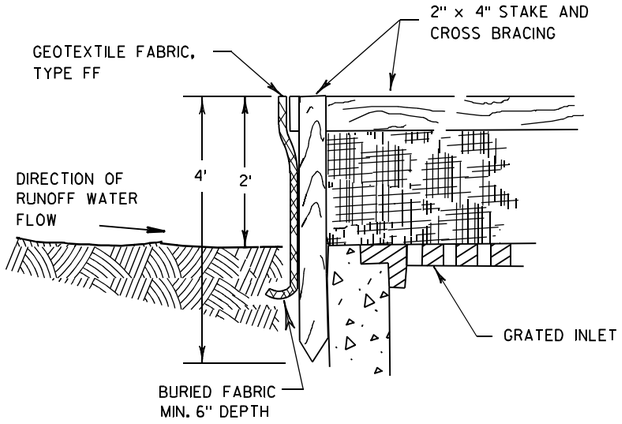
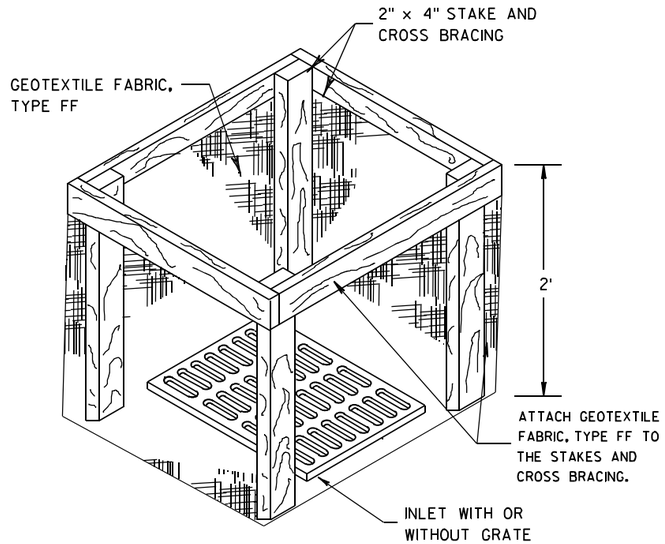
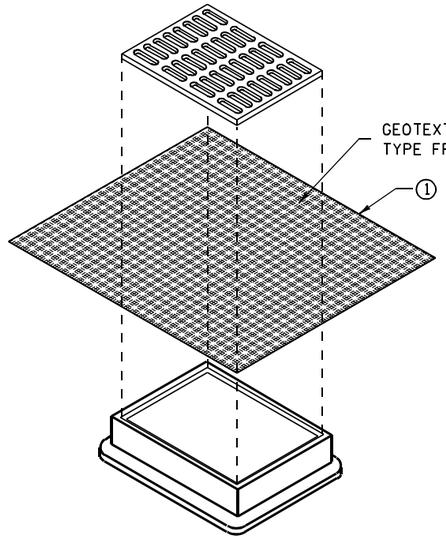
S.D.D. 8 E 9-6



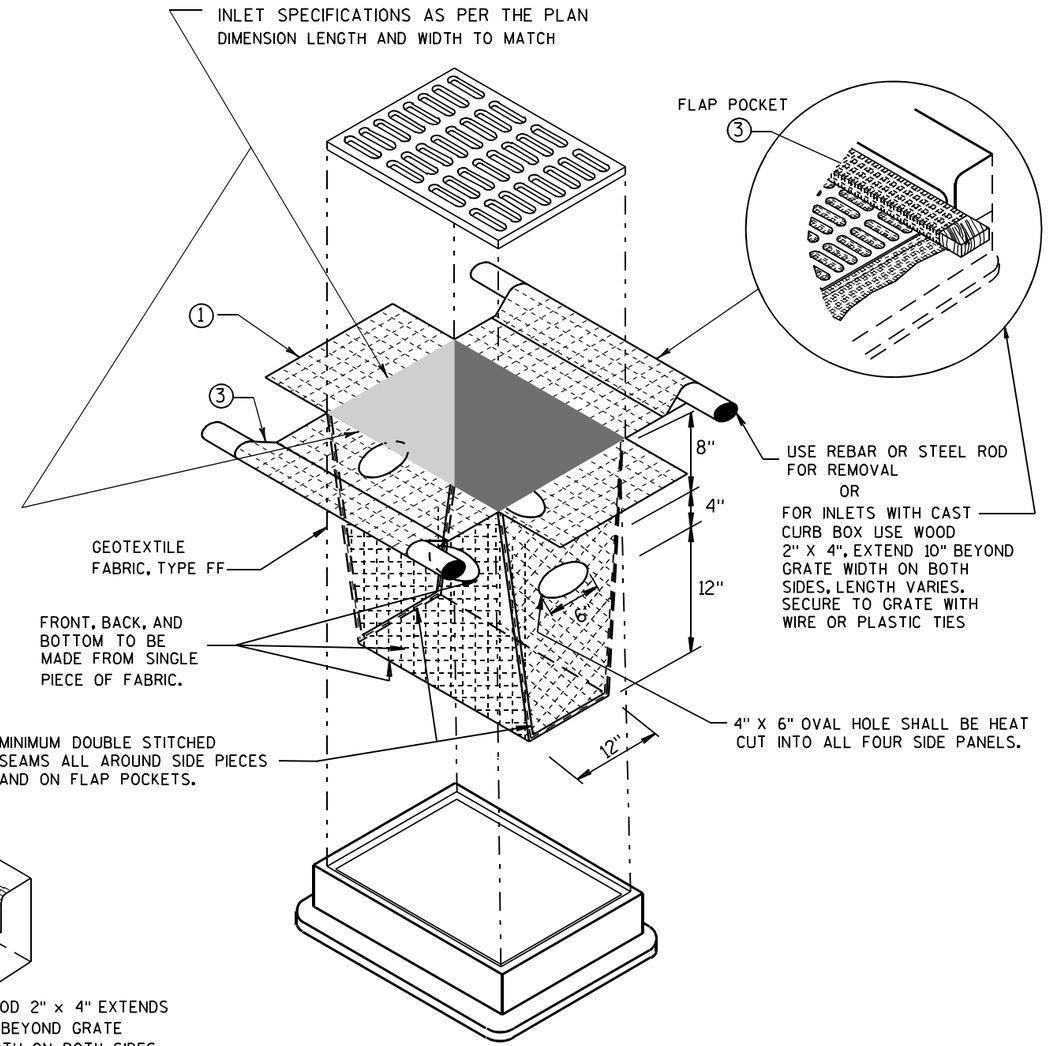


INLET PROTECTION, TYPE A



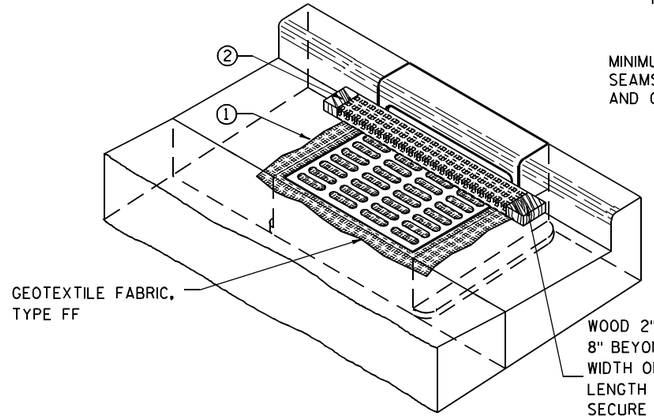
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

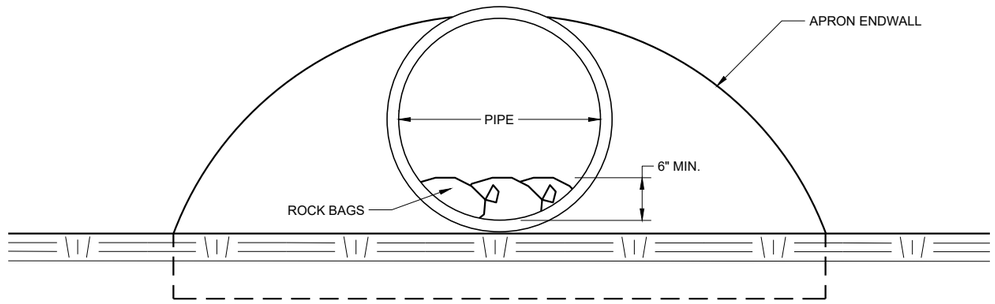
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

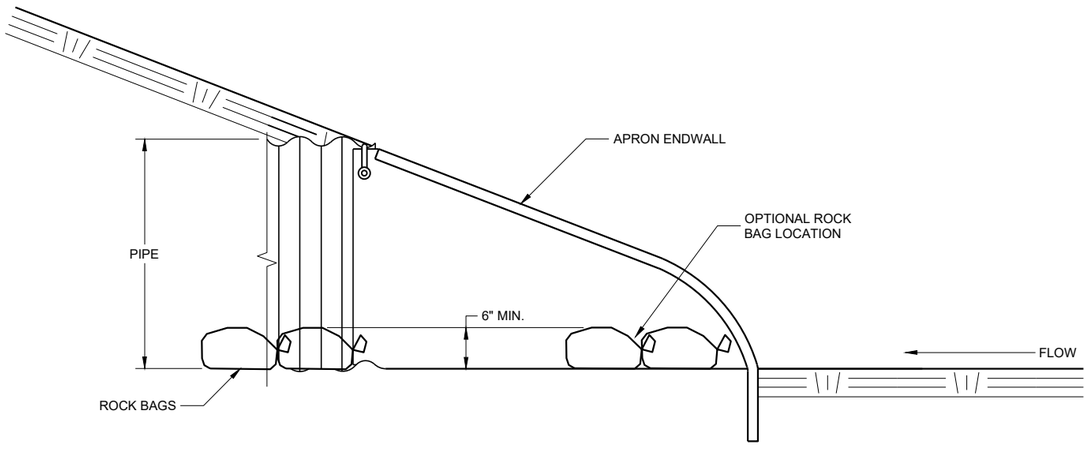
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



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

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SDD 08E15 - 01

METAL APRON ENDWALLS

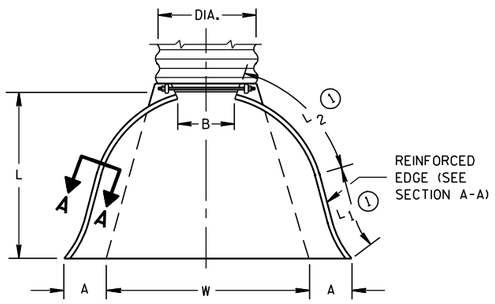
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 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

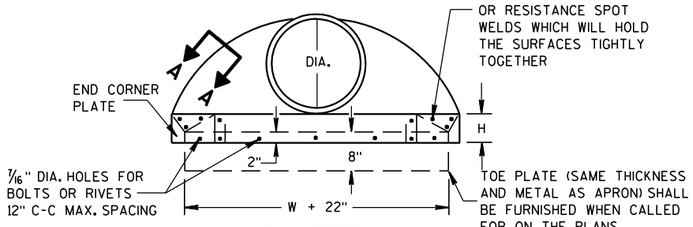
REINFORCED CONCRETE APRON ENDWALLS

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

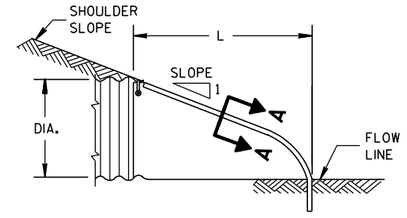
* MINIMUM
** MAXIMUM



PLAN VIEW

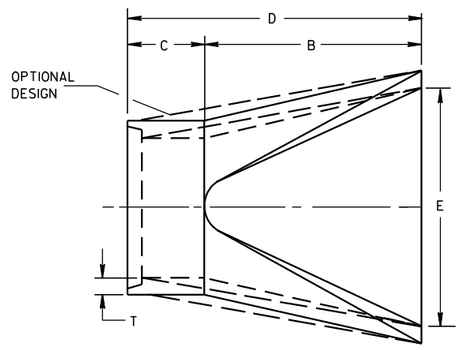


END VIEW

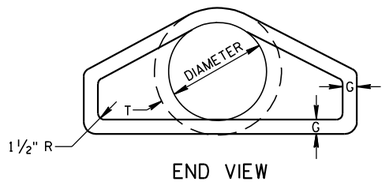


SIDE ELEVATION

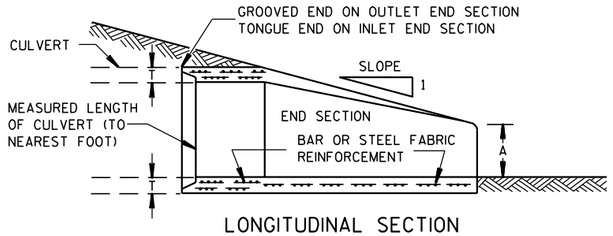
METAL ENDWALLS



PLAN

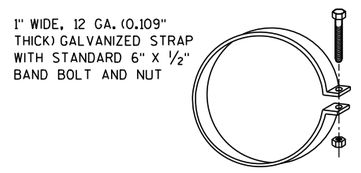


END VIEW



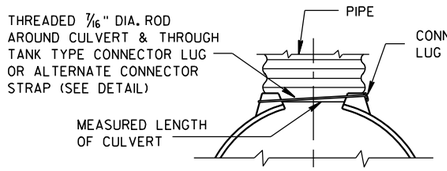
LONGITUDINAL SECTION

CONCRETE ENDWALLS

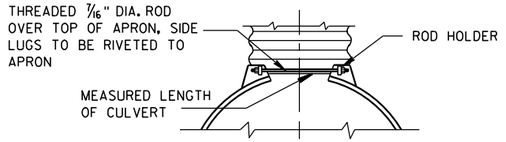


ALTERNATE FOR TYPE 1 CONNECTION

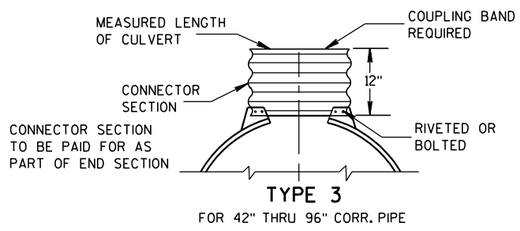
END SECTION CONNECTOR STRAP



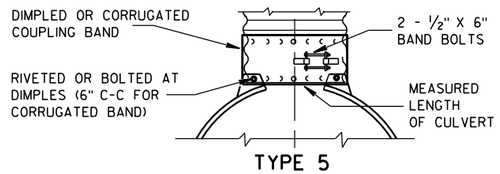
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

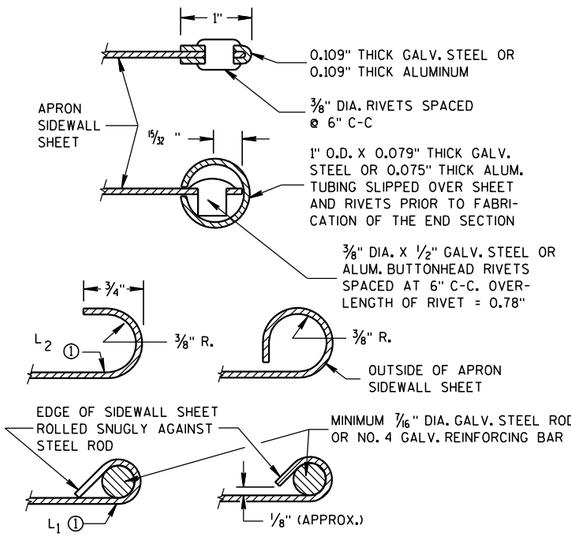
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

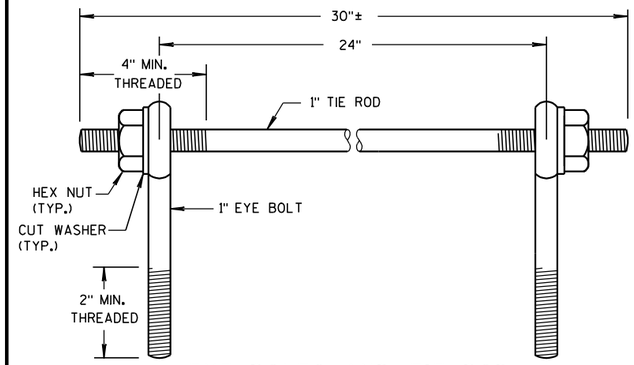
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

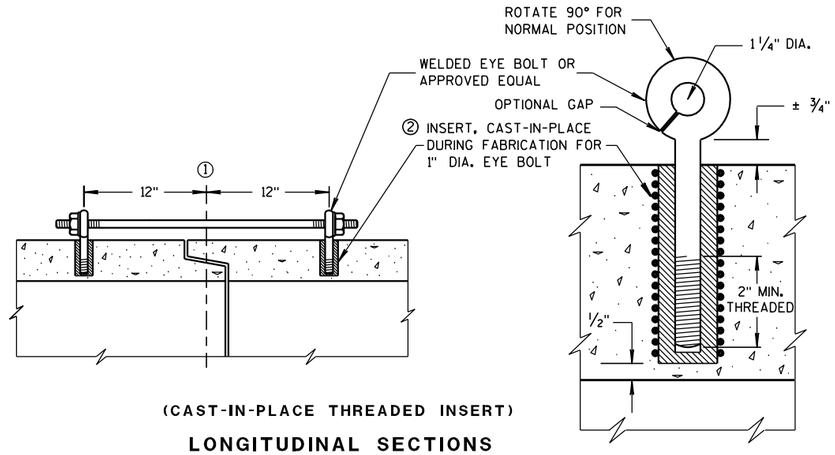
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

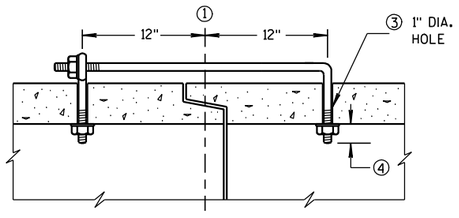
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

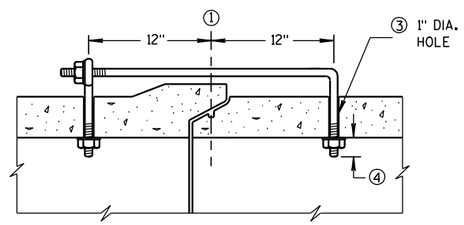
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

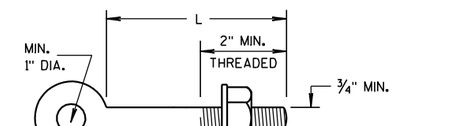


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

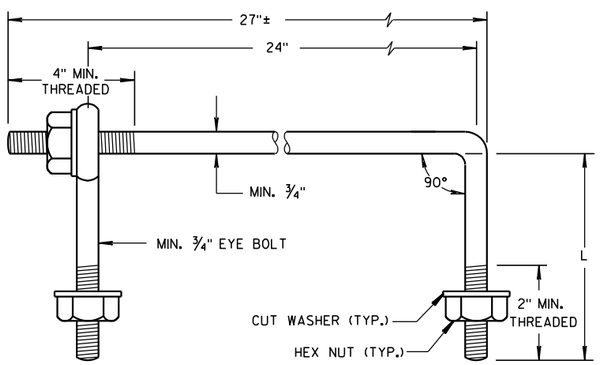
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

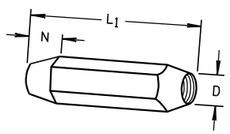
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



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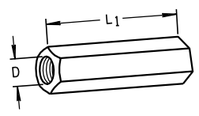
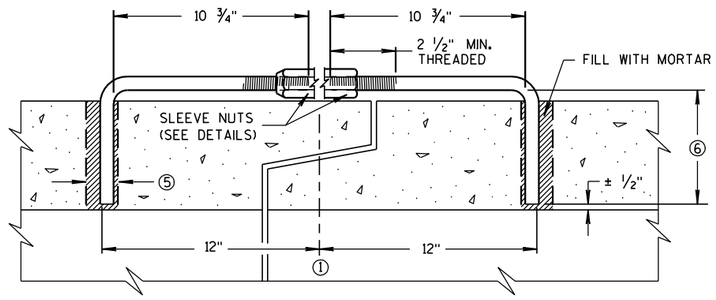


PLAIN

RIGHT AND LEFT THREADS

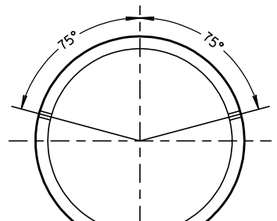
SLEEVE NUTS



LONGITUDINAL SECTION

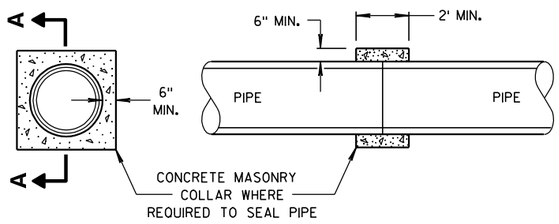
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

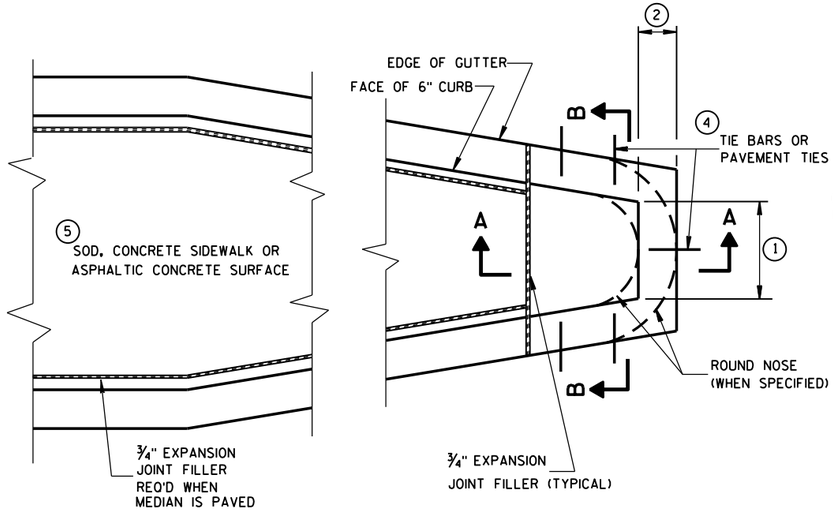
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
65
FHWA

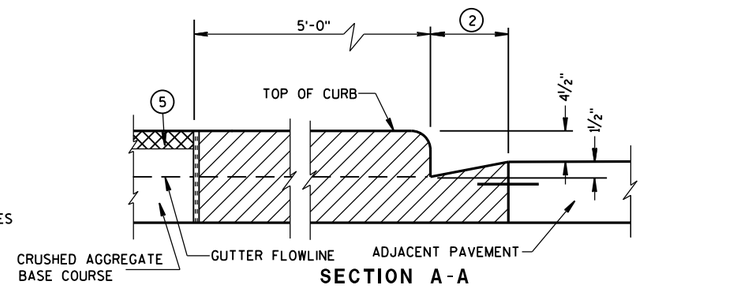
6

S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7





CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

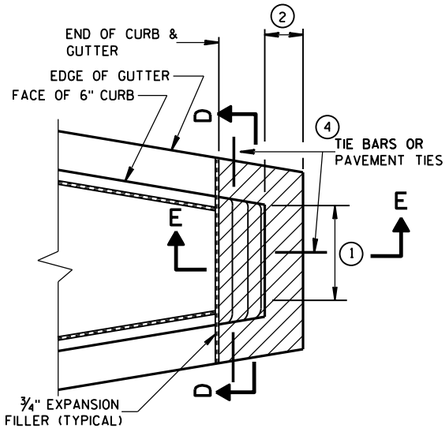
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

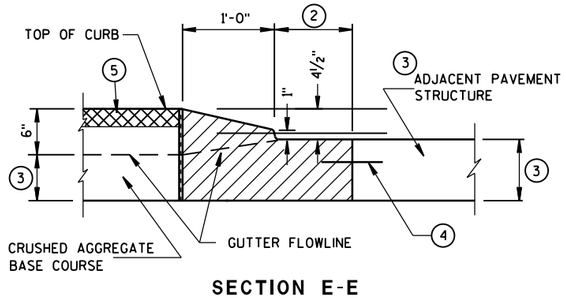
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

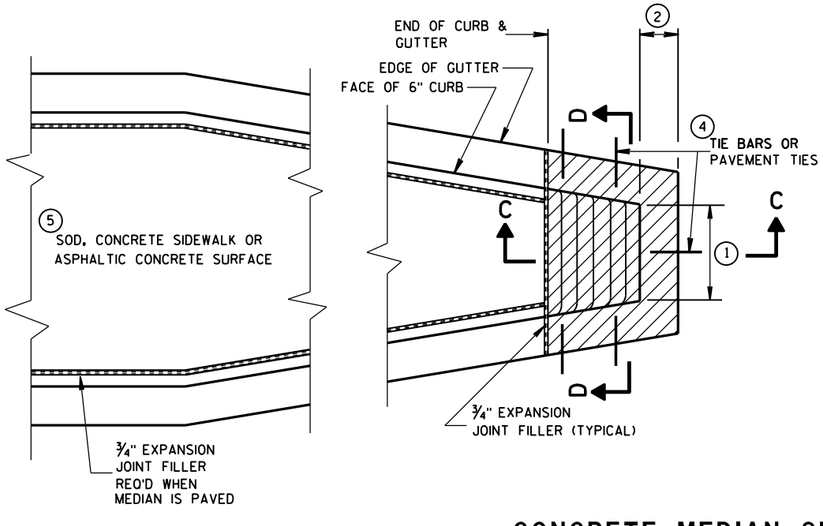
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

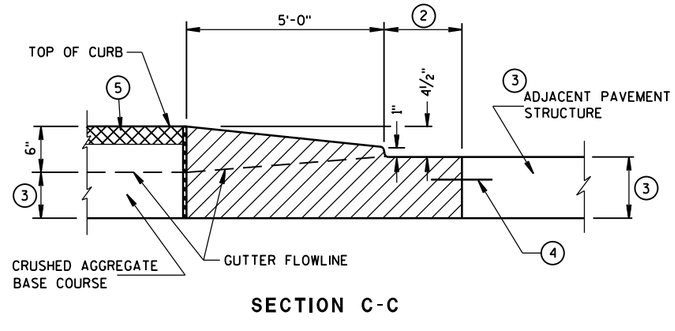




SECTION E-E

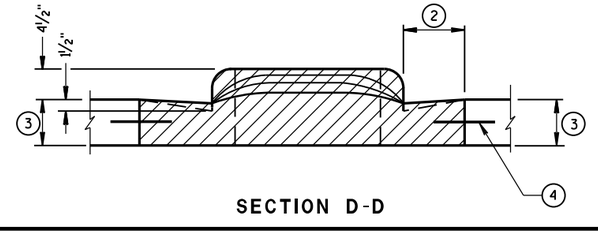
CONCRETE MEDIAN SLOPED NOSE TYPE 2





SECTION C-C

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

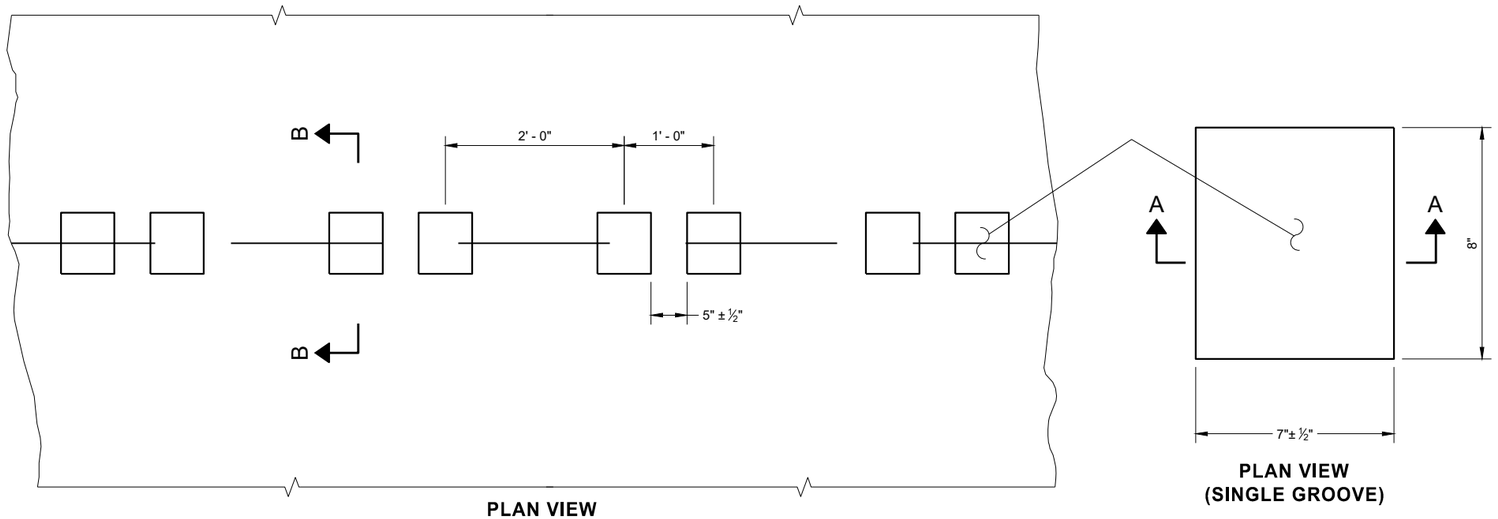
APPROVED
6/8/2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 11 B 2-2

6

S.D.D. 11 B 2-2



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

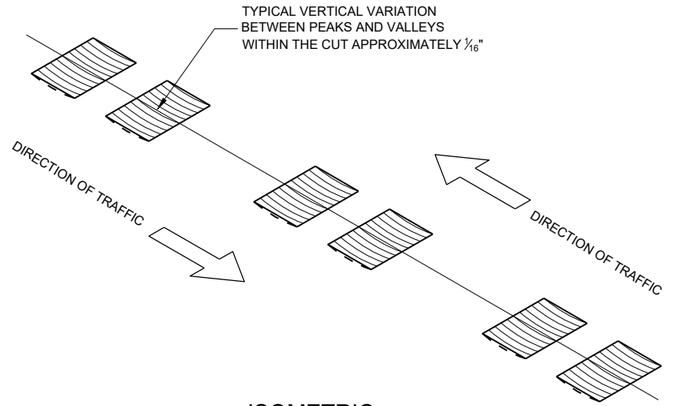
DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

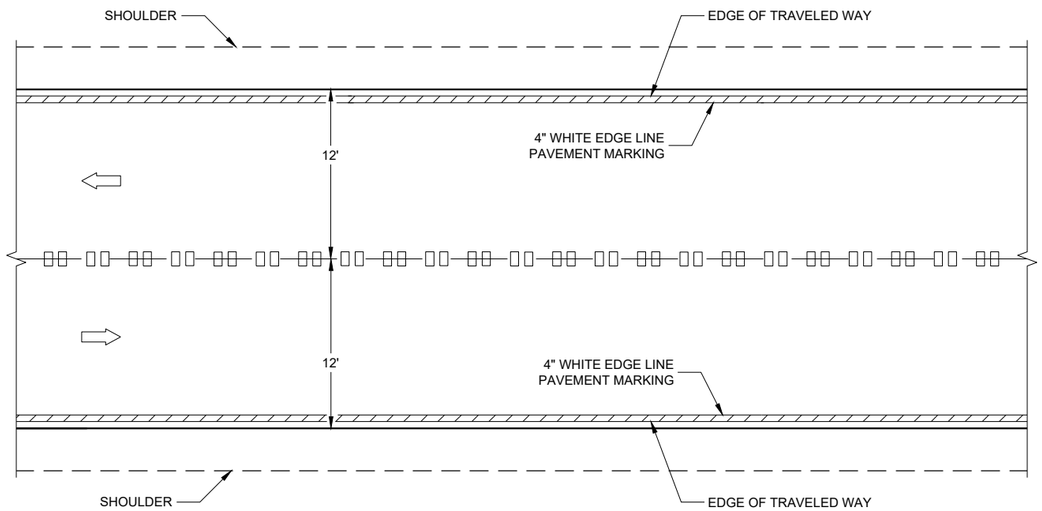
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

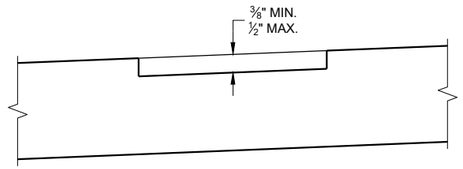
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



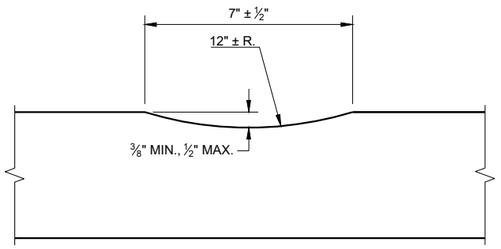
ISOMETRIC



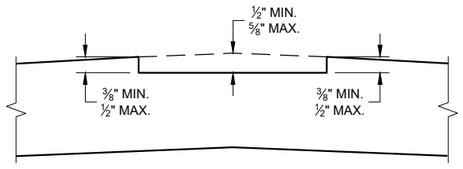
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B
SUPERELEVATED ROADWAY



SECTION A - A



SECTION B - B
CROWNED ROADWAY

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

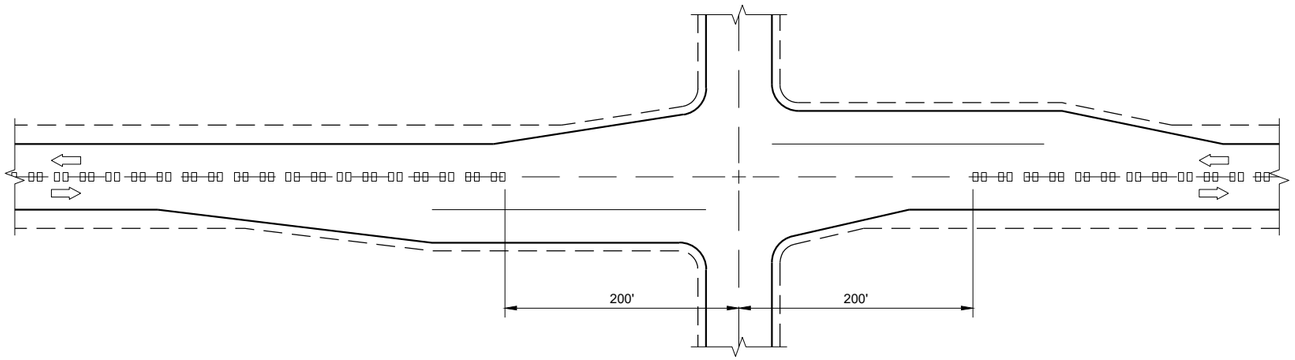
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

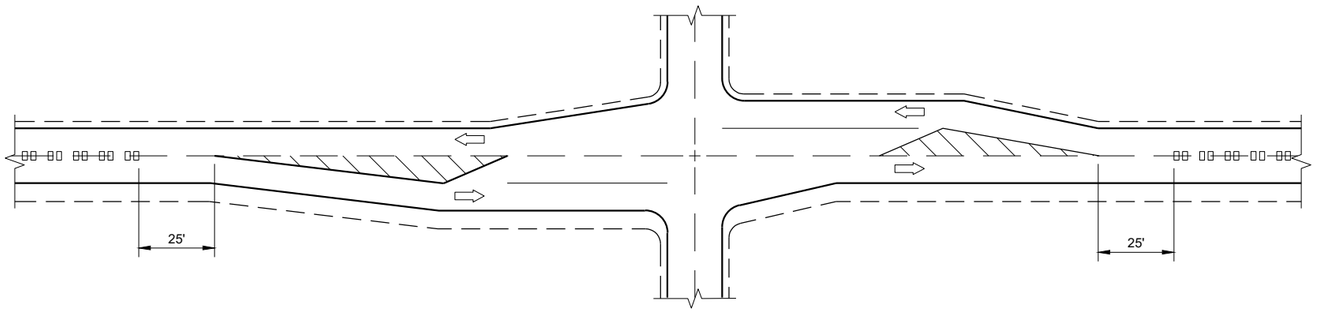
SDD 13A11 - 03a

6

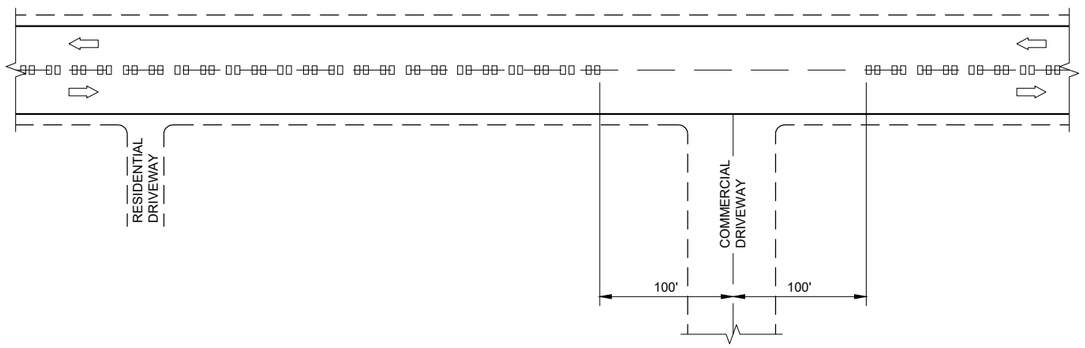
SDD 13A11 - 03a



CENTERLINE GROOVES AT INTERSECTIONS



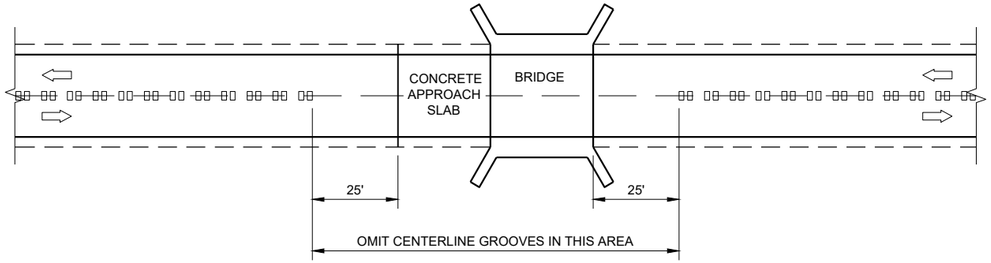
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



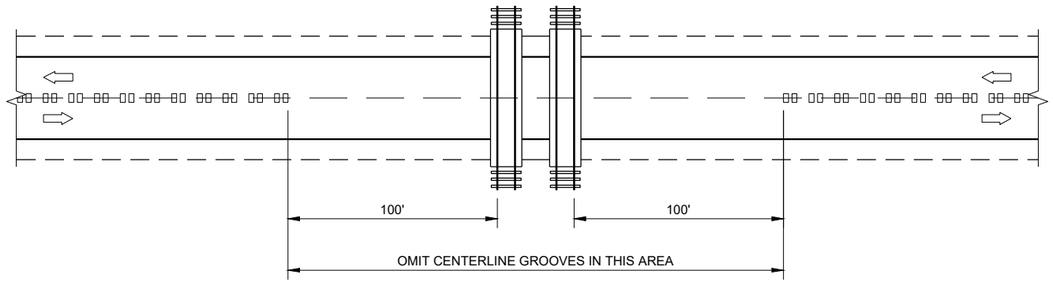
CENTERLINE GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

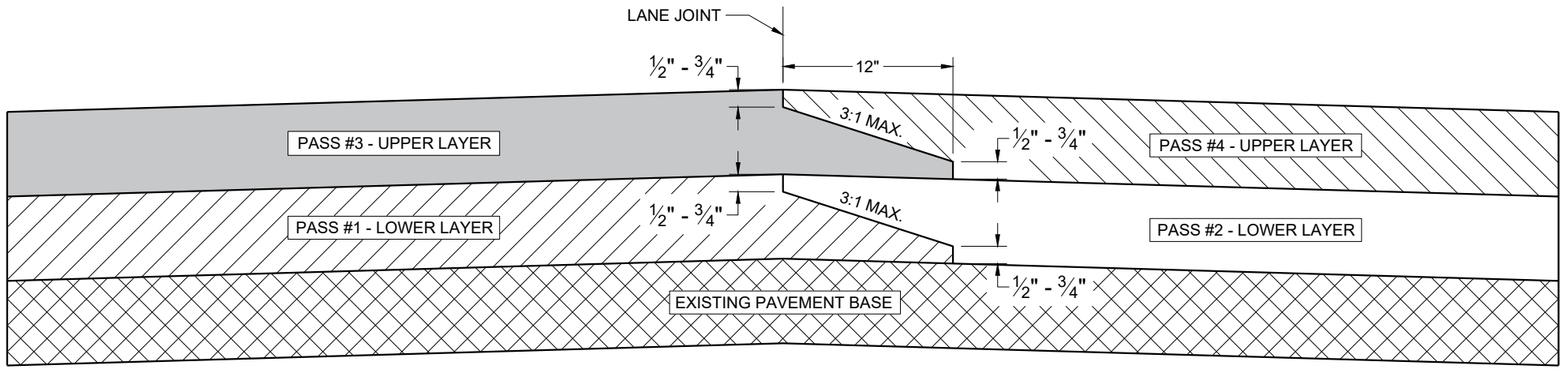
APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6
SDD 13A11 - 03b

GENERAL NOTES

CONFORM TO STANDARD SPECIFICATION 450.3.2.8



TYPICAL PAVEMENT CROSS SECTION
OF NOTCHED WEDGE LONGITUDINAL JOINTS

6

6

SDD 13C19 - 01

SDD 13C19 - 01

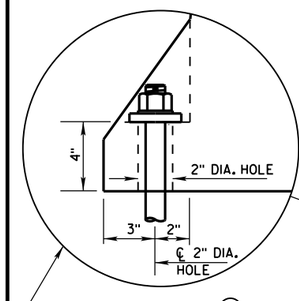
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

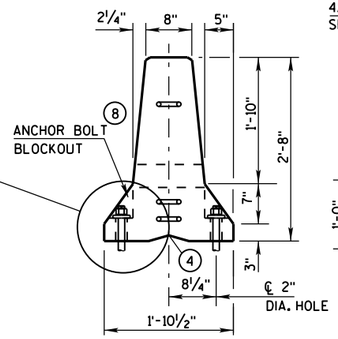
APPROVED
May 2019
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

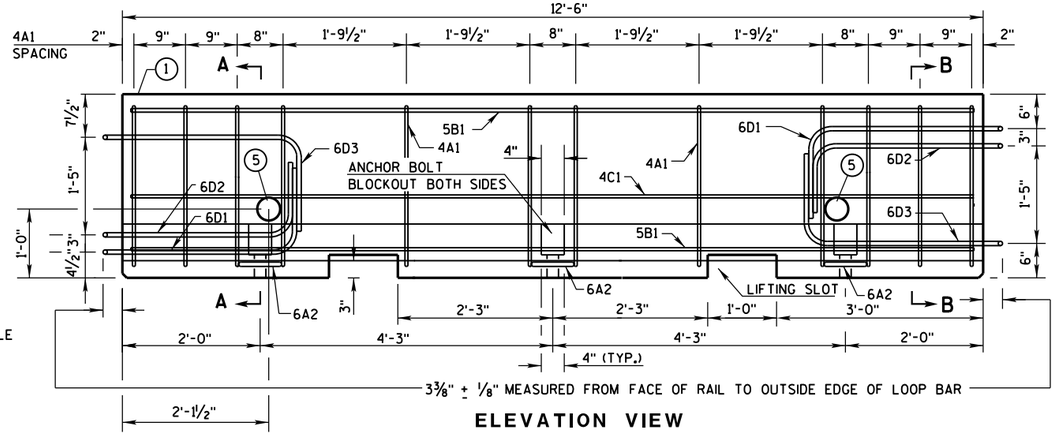
FHWA



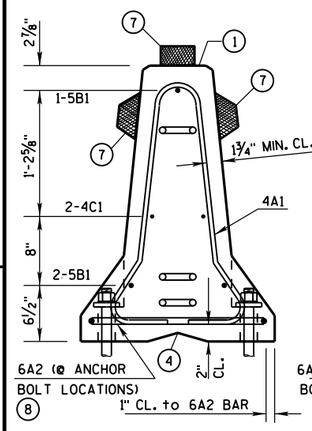
ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



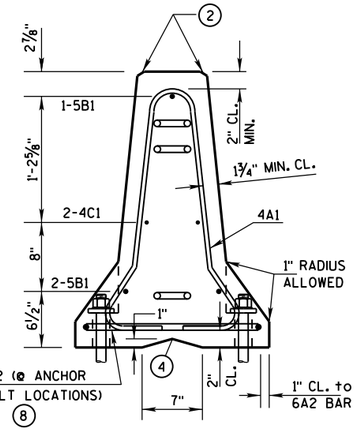
END VIEW



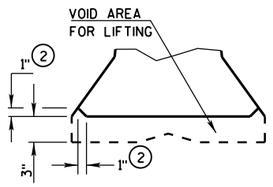
ELEVATION VIEW



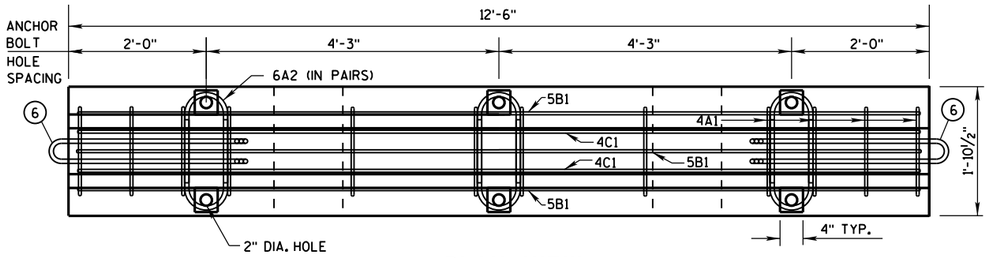
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

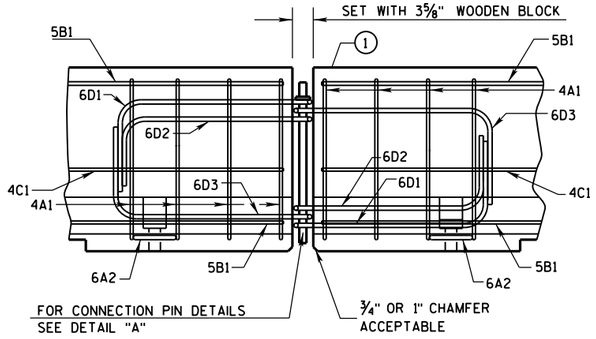


DETAIL "B"
LIFTING SLOT DETAIL

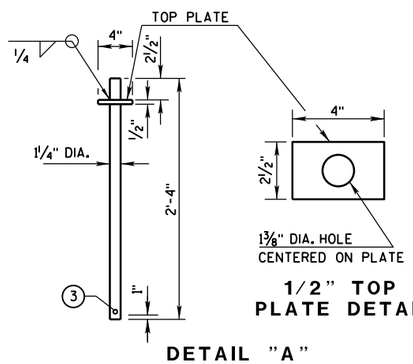


PLAN VIEW

DETAILS OF BARRIER SECTION

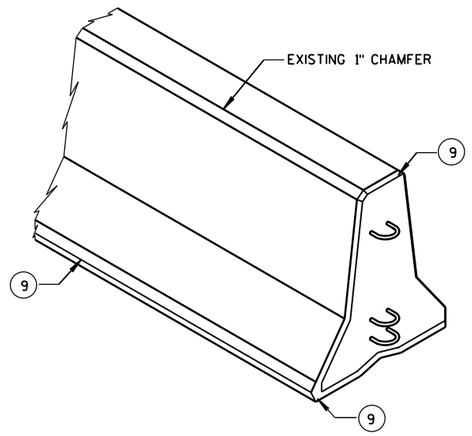


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

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

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

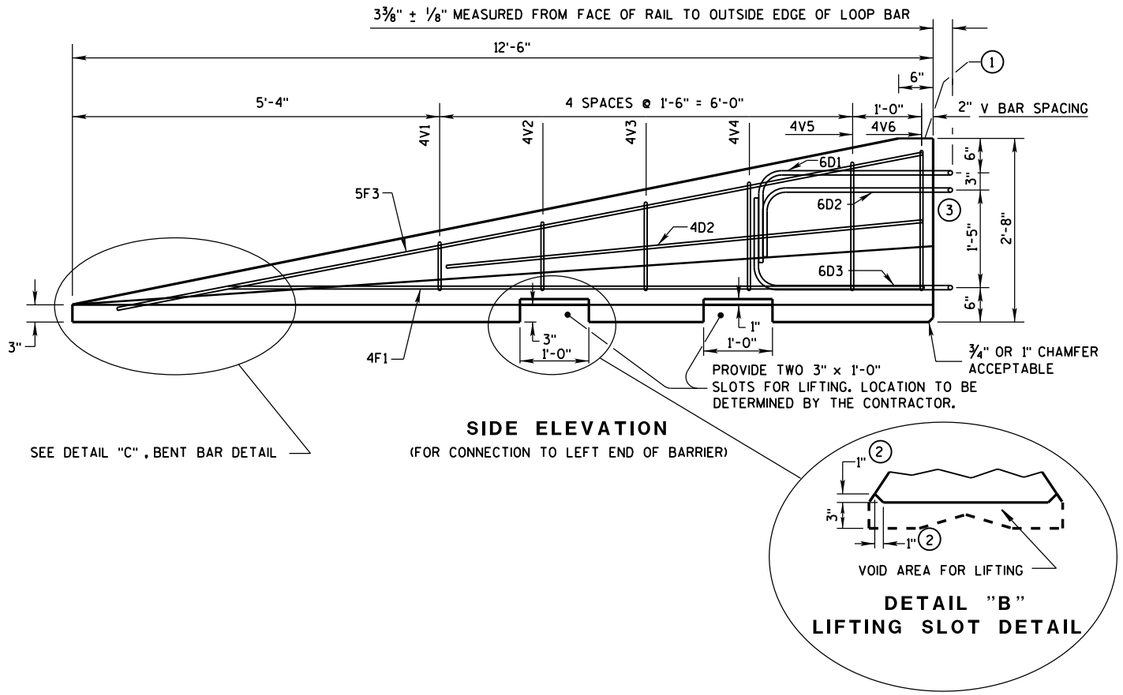
(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

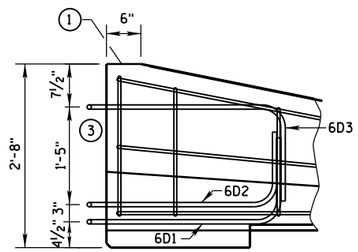
(9) 1" CHAMFER OPTIONAL.

f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

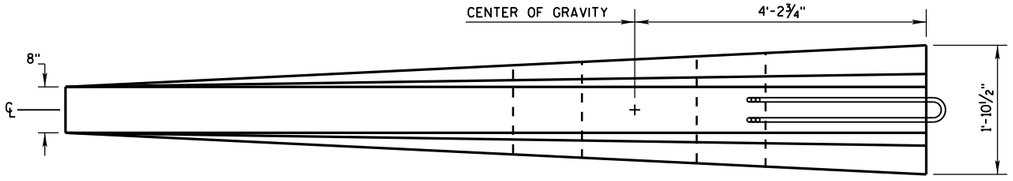
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 70

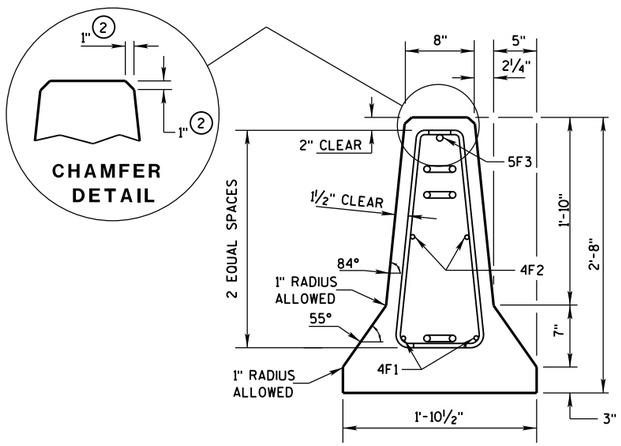


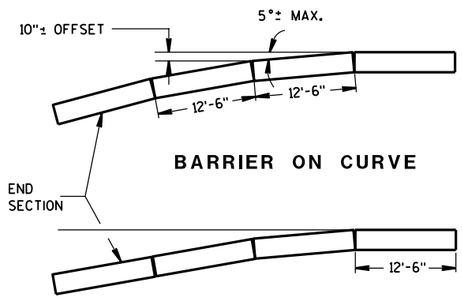


GENERAL NOTES

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







POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

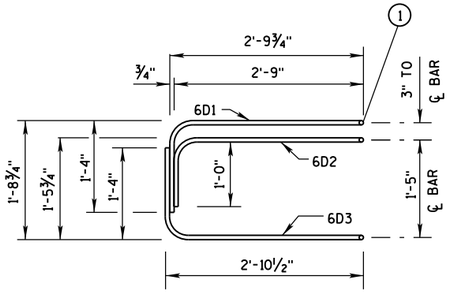
6

S.D.D. 14 B 7-15b

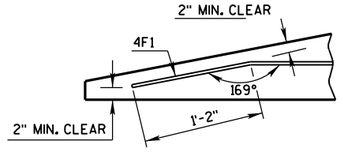
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

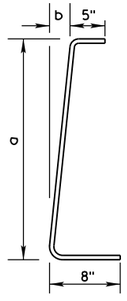
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

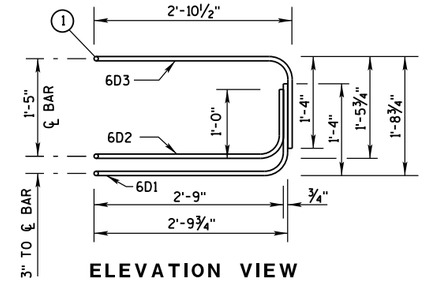
GENERAL NOTES

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

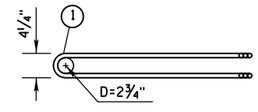
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

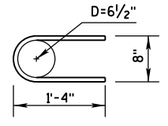
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



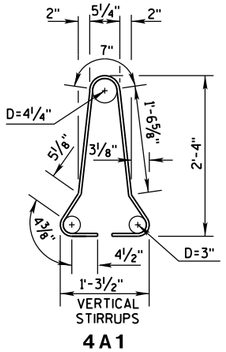
ELEVATION VIEW



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



6A2



4A1

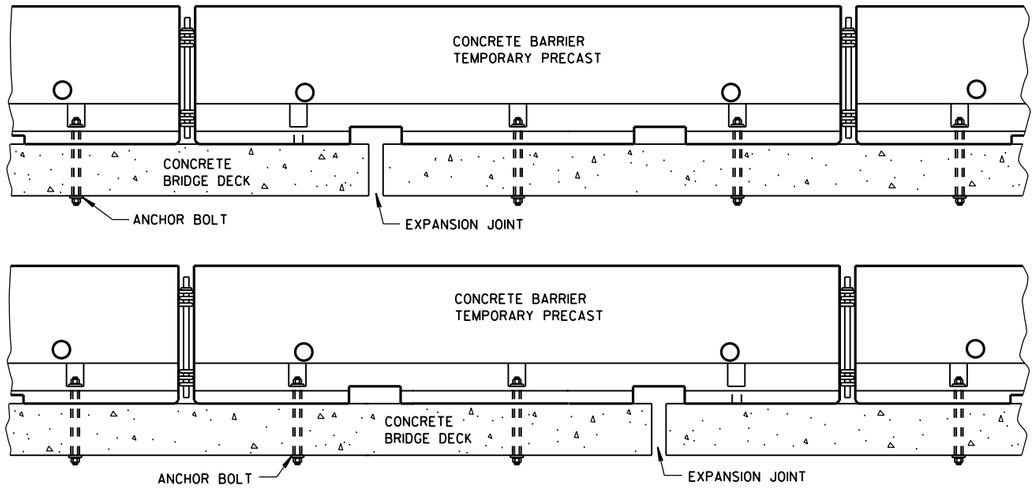
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15c



TREATMENT AT BRIDGE DECK EXPANSION JOINTS

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

GENERAL NOTES

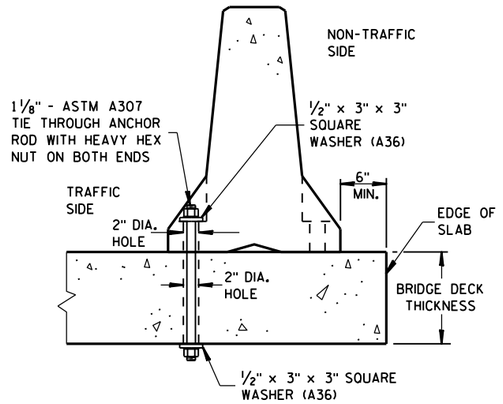
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(1) 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.

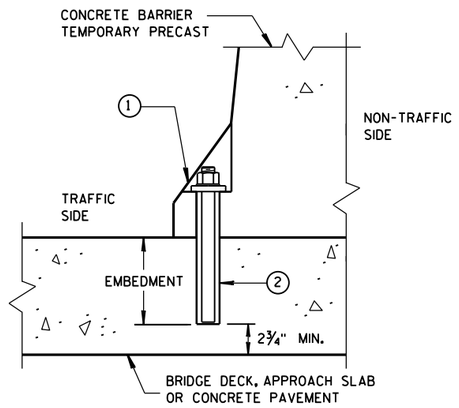
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



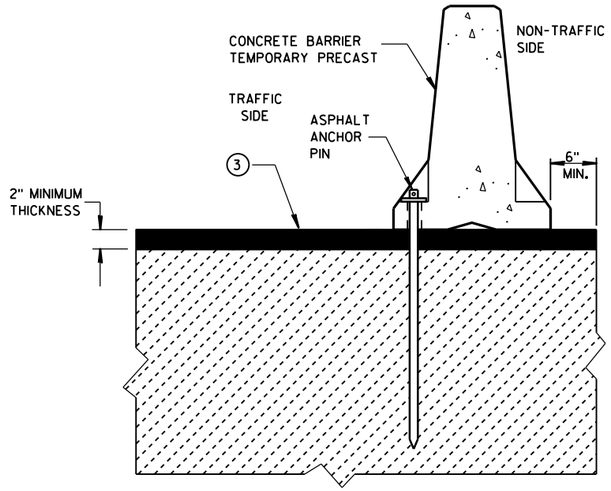
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

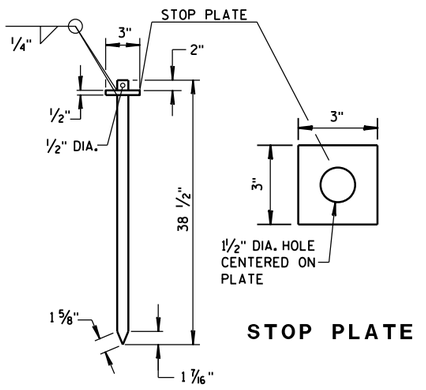


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



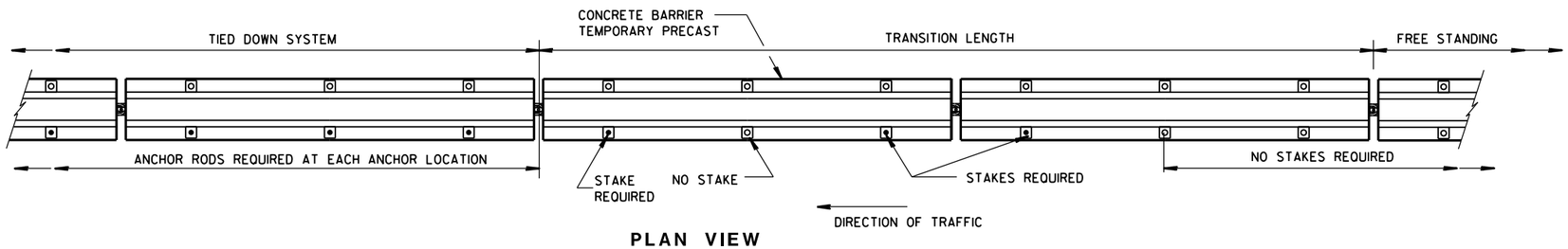
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

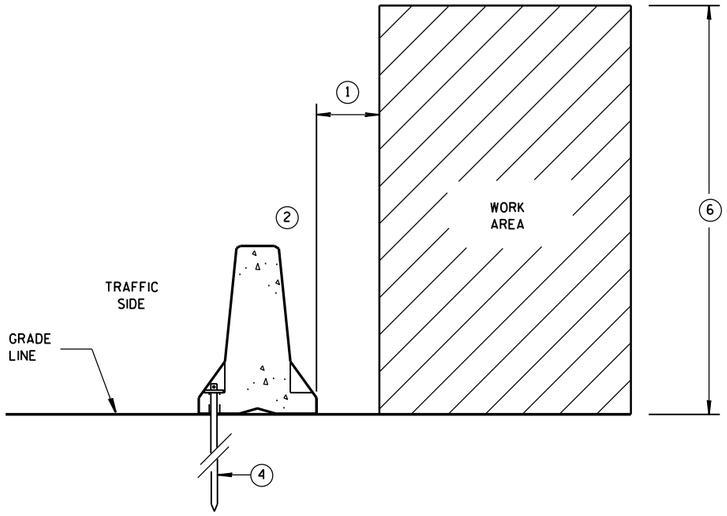
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

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

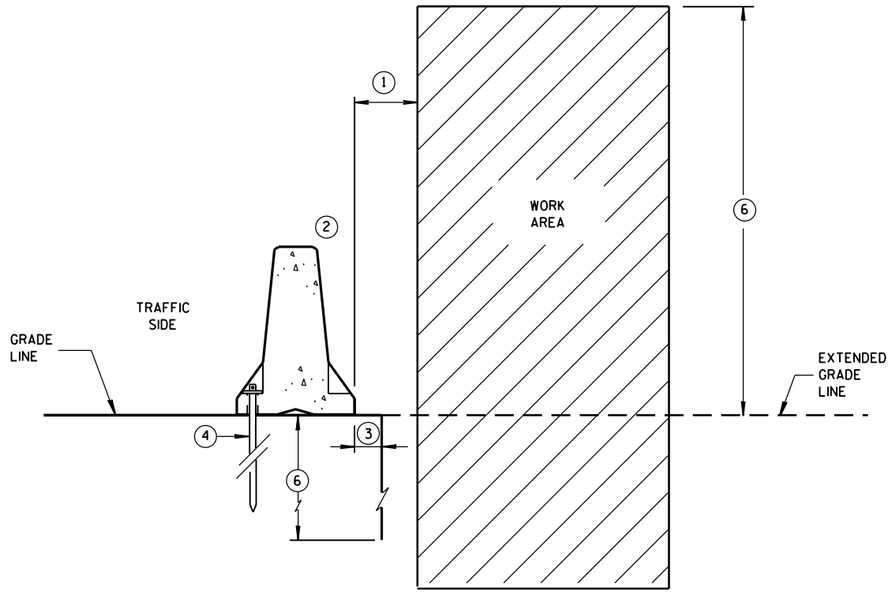
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

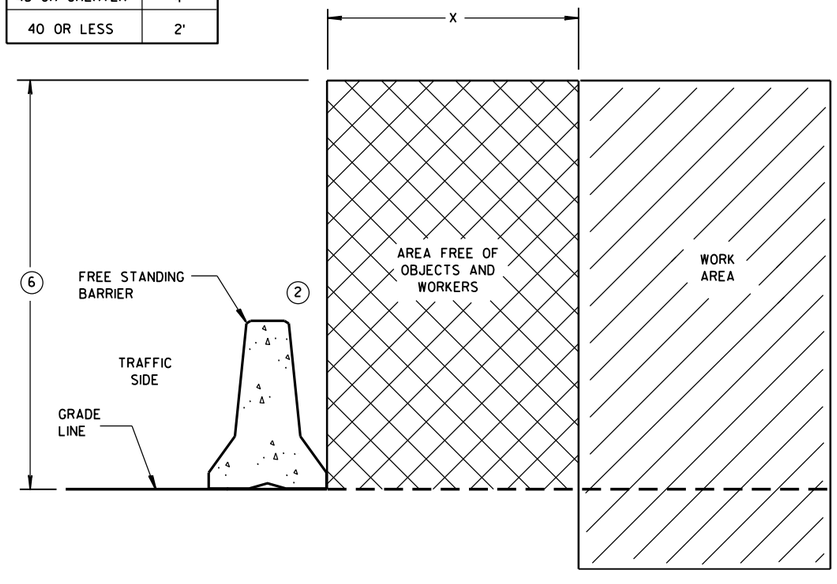


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

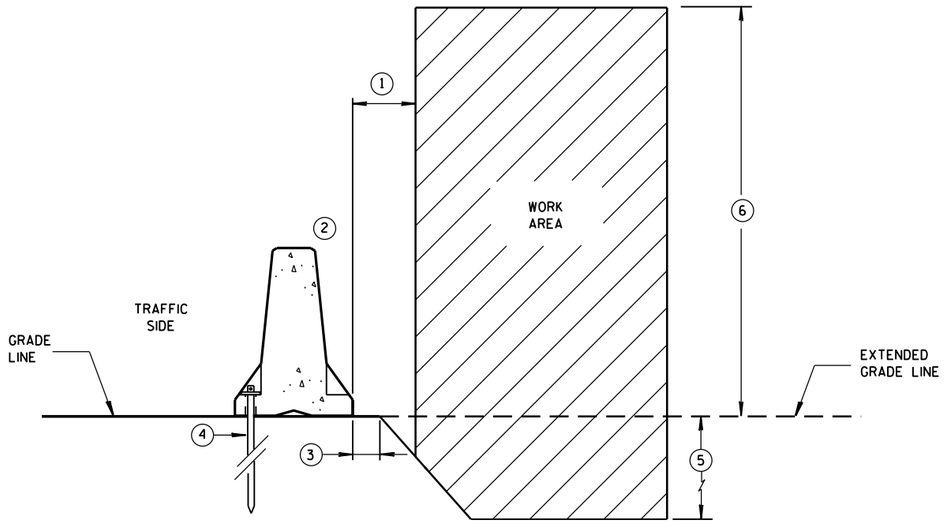
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



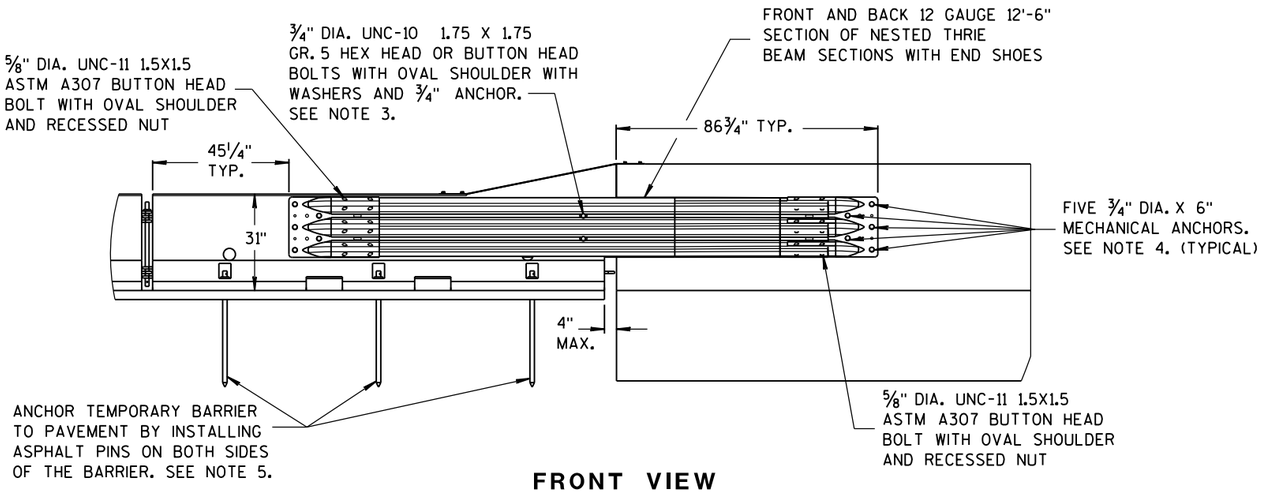
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

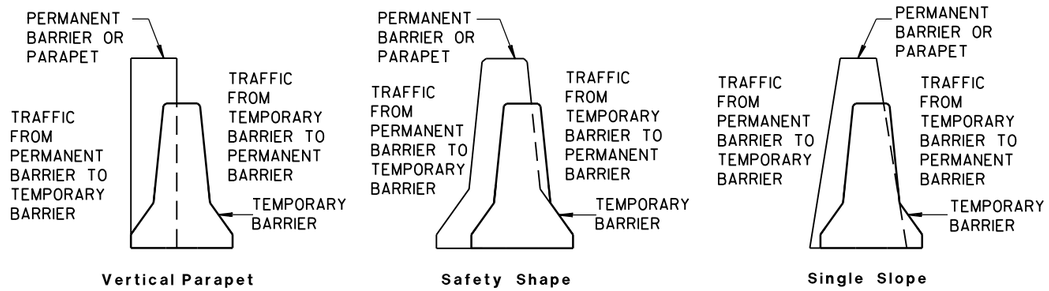
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15e



FRONT VIEW

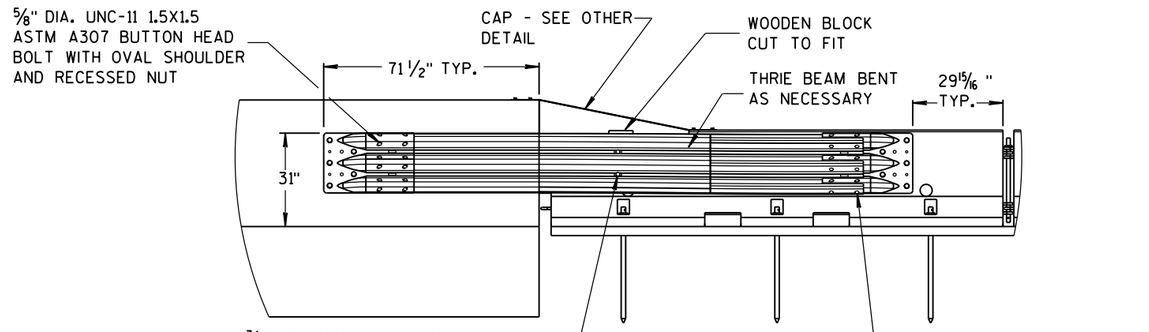


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

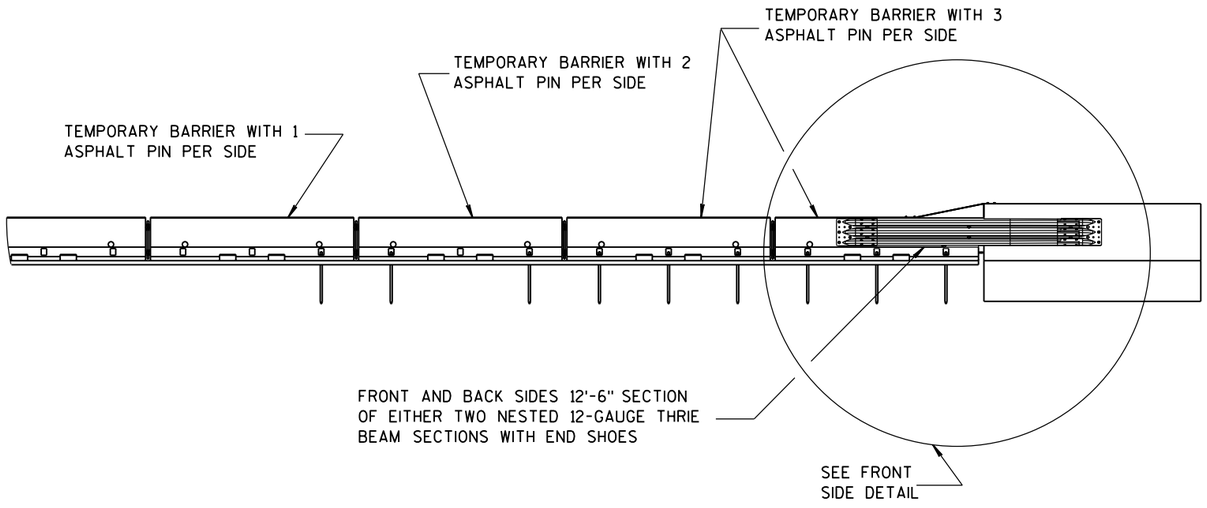
NOTES

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

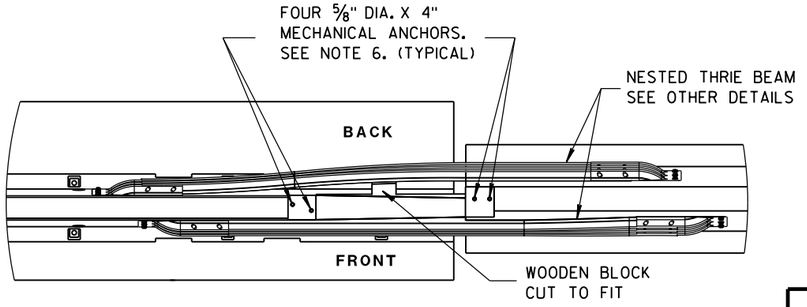
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BACK VIEW



FRONT VIEW



PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 14 B 7-15f

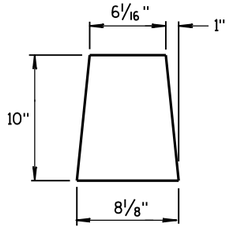
GUSSET 1

GUSSET 2

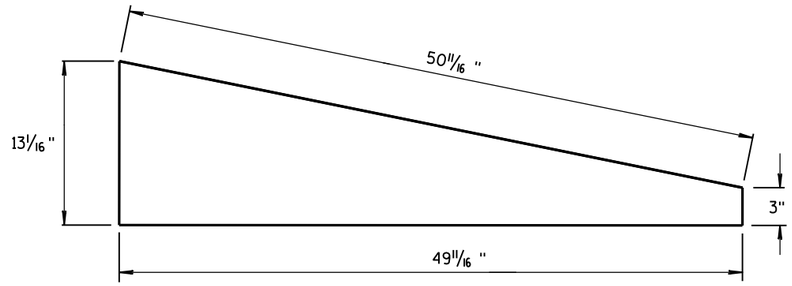
GUSSET 3

GUSSET 4

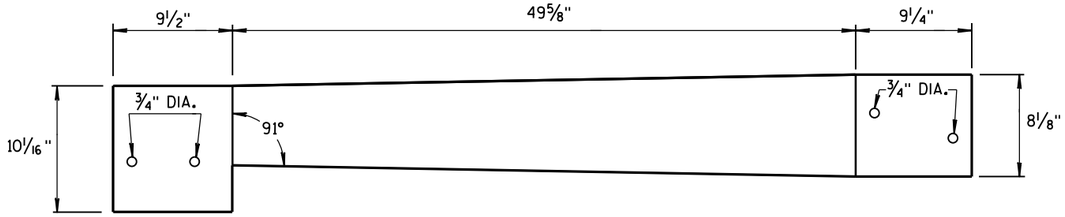
GUSSETS

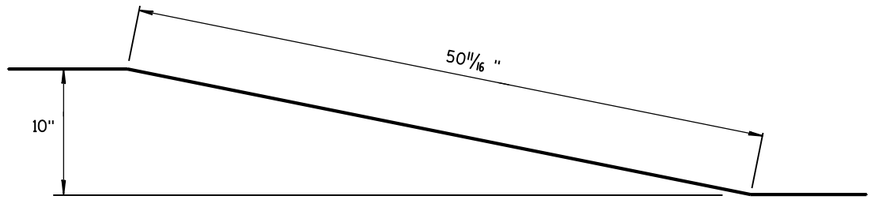


END PLATE

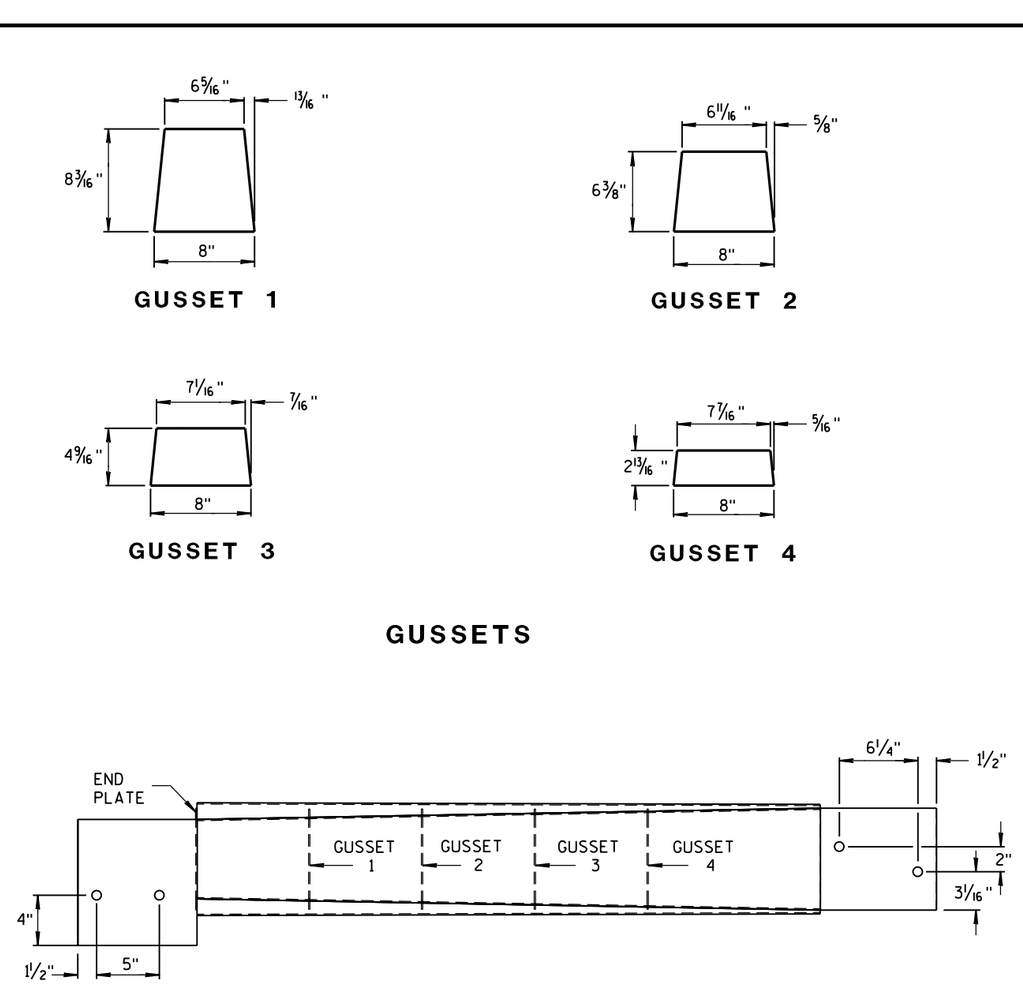


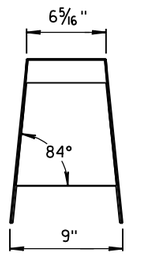
SIDE PLATE





TOP PLATE





SECTION C-C

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

NOTES

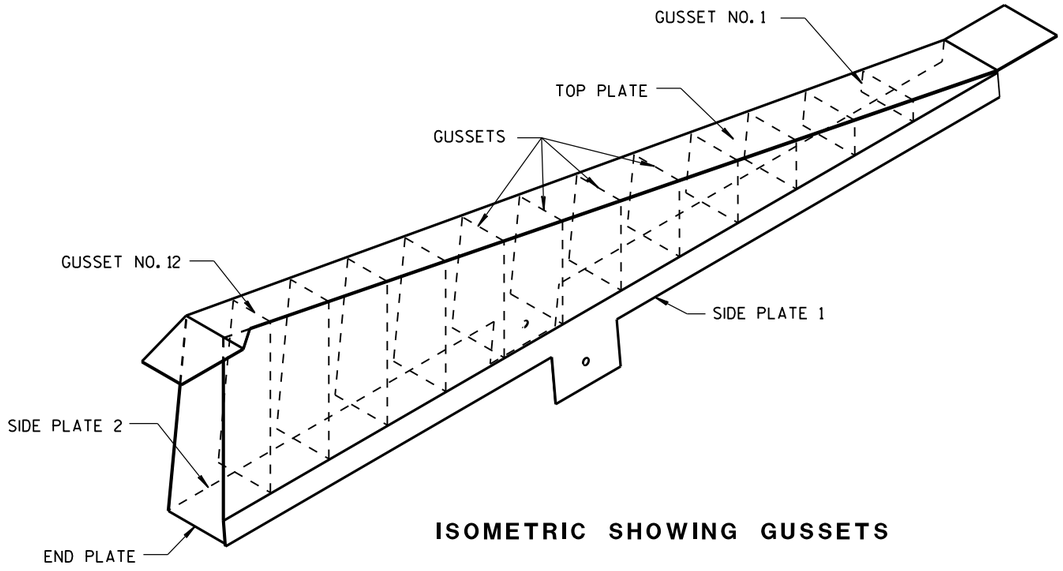
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

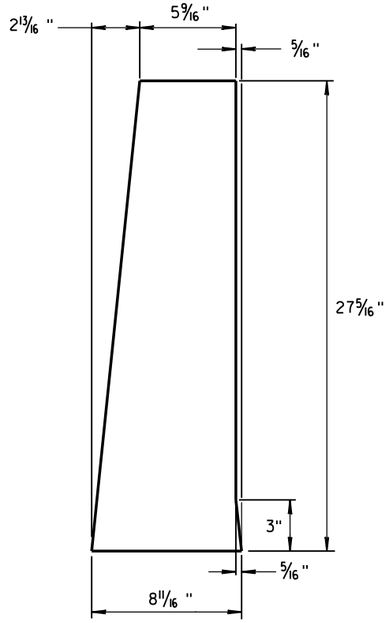
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15g

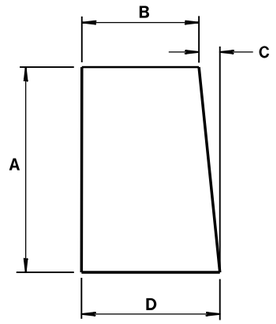


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



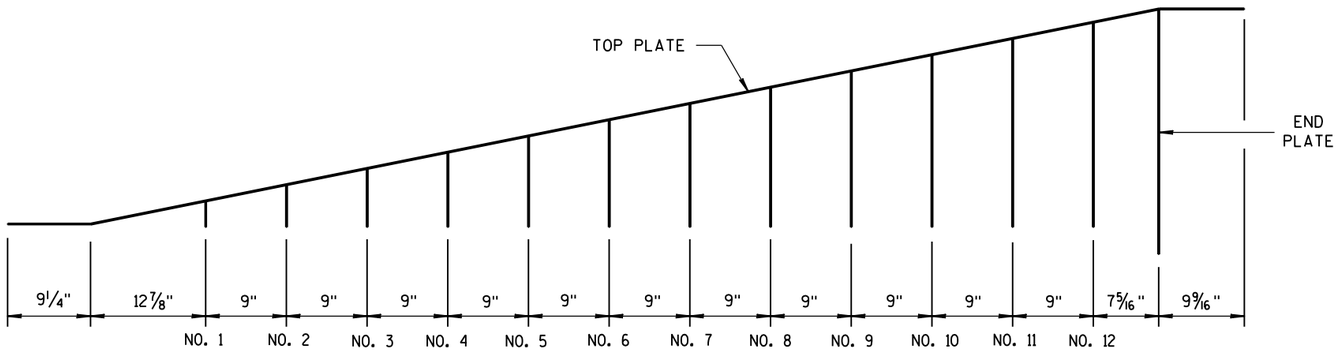
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

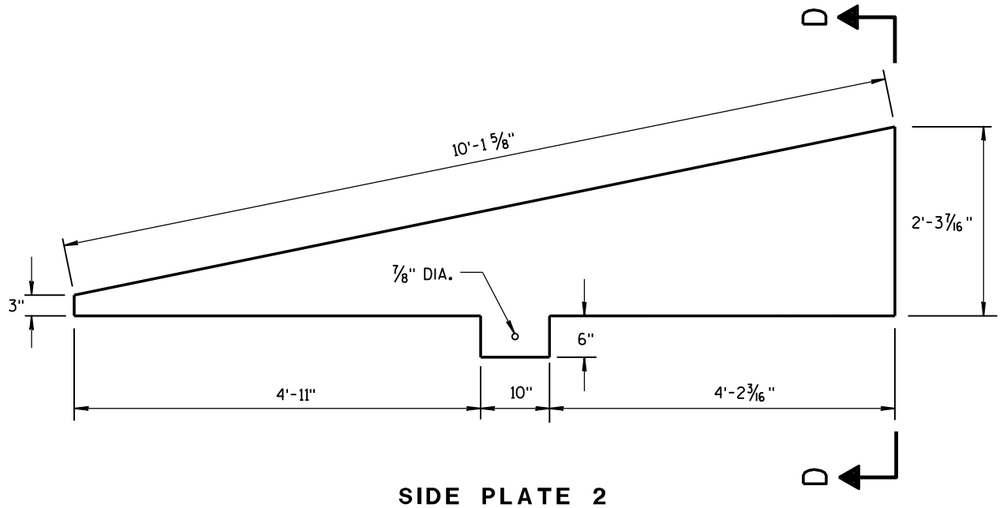
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

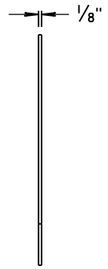
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

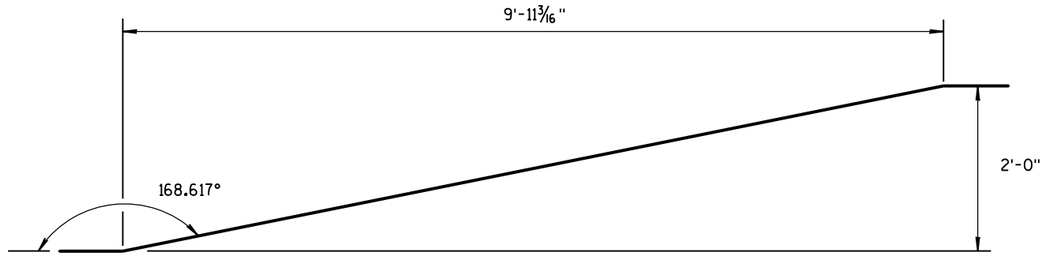
S.D.D. 14 B 7-15h



SIDE PLATE 2

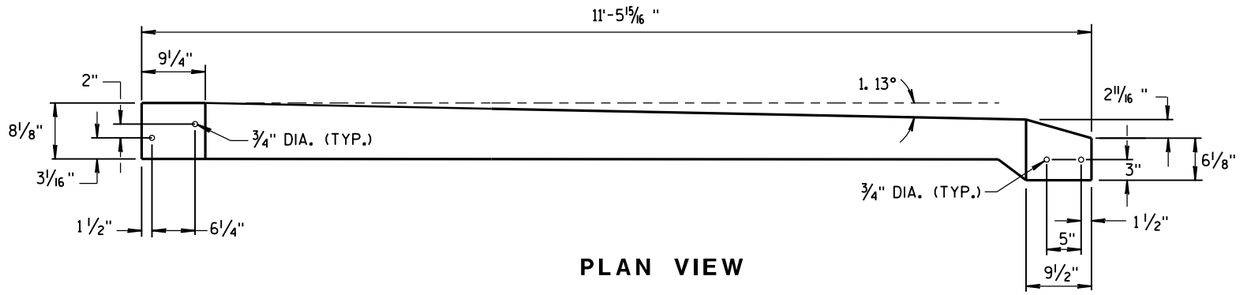


END VIEW



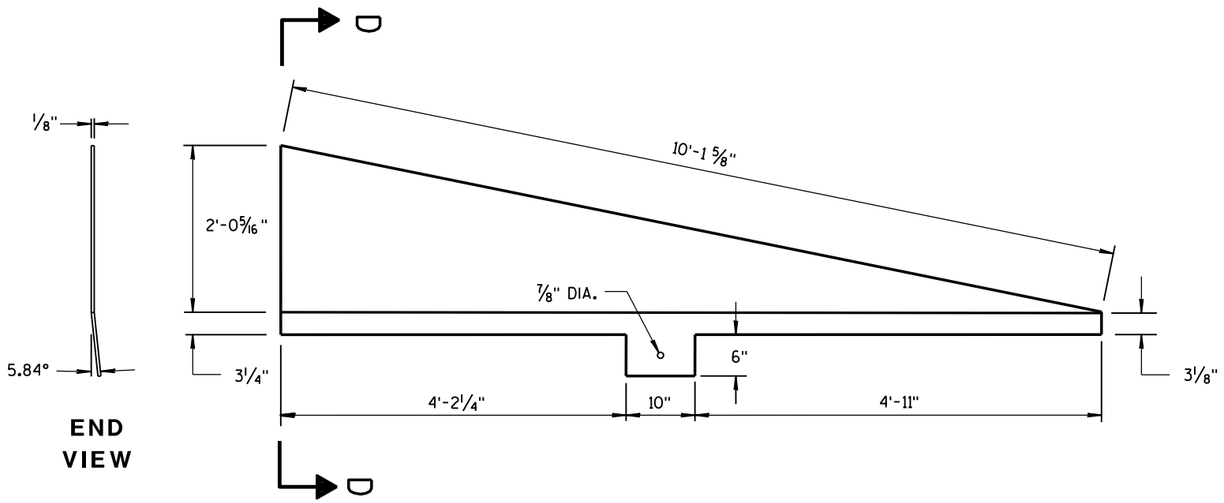
SIDE VIEW

TOP PLATE



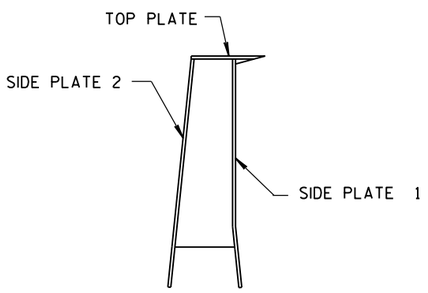
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

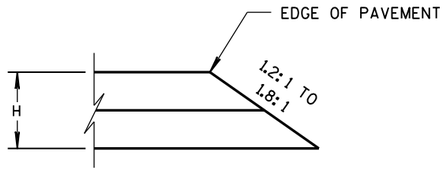
78

6

S.D.D. 14 B 7-15i

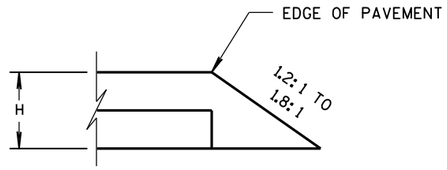
6

S.D.D. 14 B 7-15i



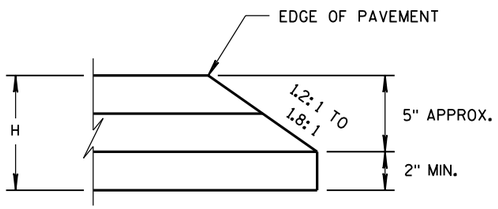
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



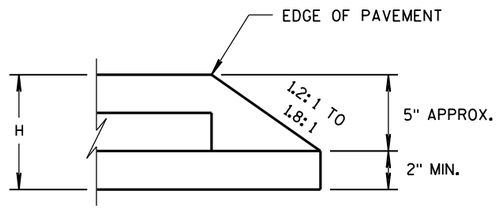
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

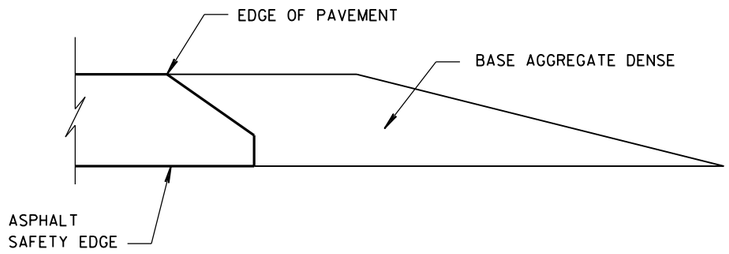
FOR H GREATER THAN 5"



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

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

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

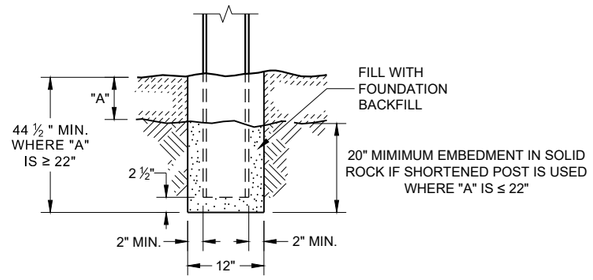
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

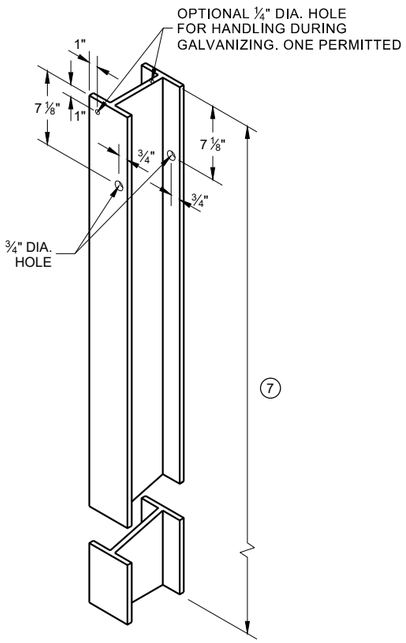
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

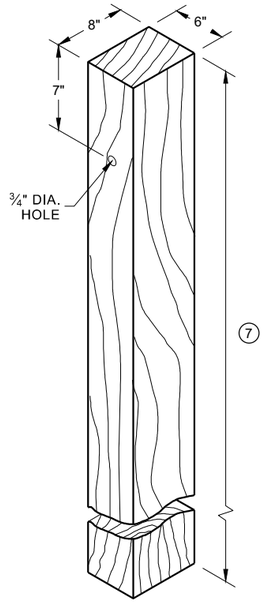
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



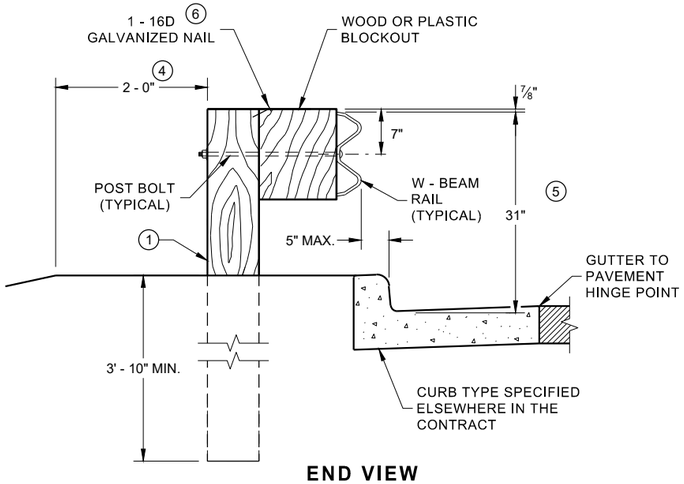
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



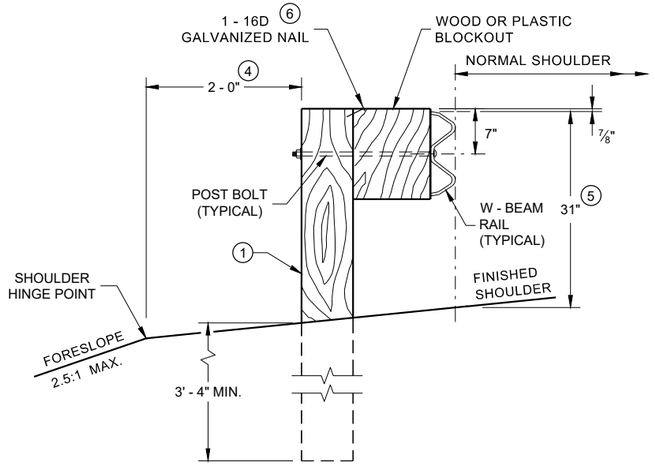
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



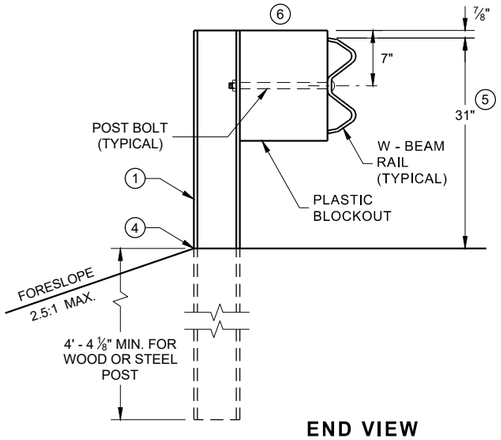
WOOD POST (6" X 8") NOMINAL (1)



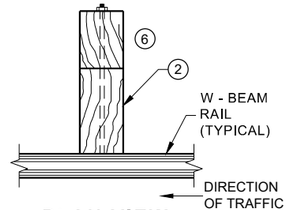
END VIEW
LOCATED ALONG A CURBED ROADWAY



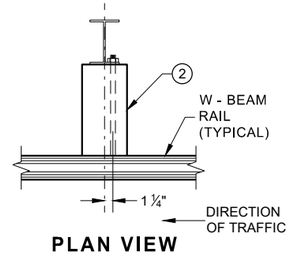
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



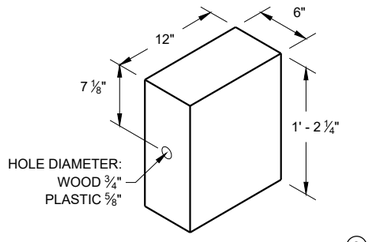
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



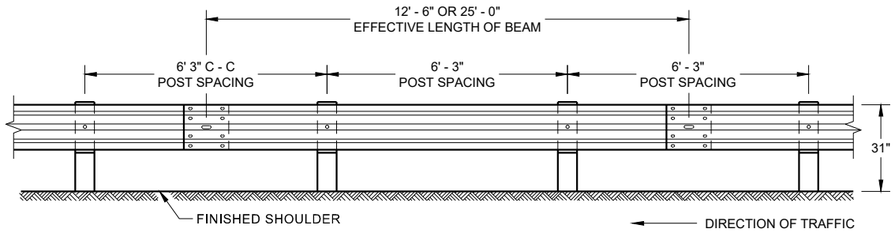
PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



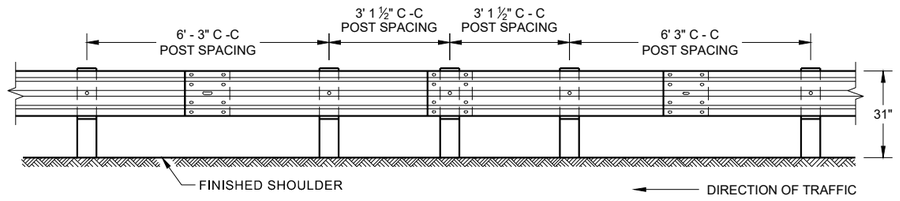
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

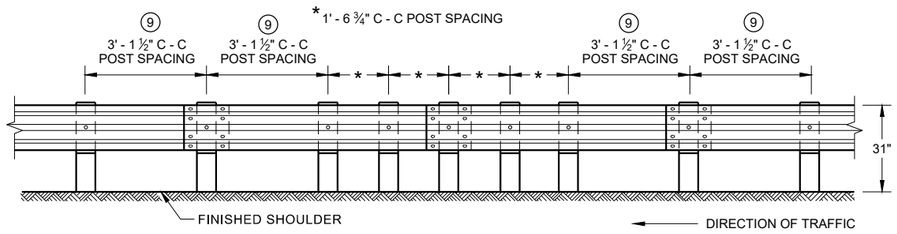
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



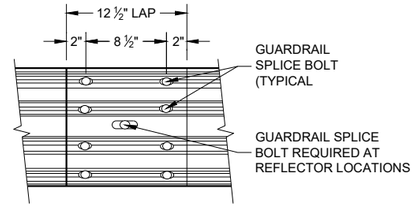
FRONT VIEW
POST SPACING STANDARD INSTALLATION



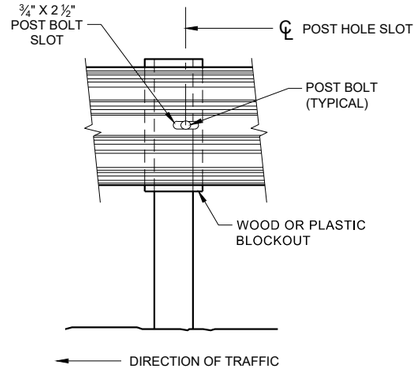
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



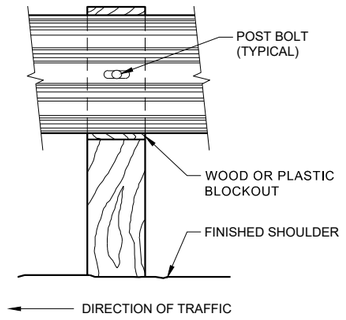
FRONT VIEW
QUARTER POST SPACING (QS)



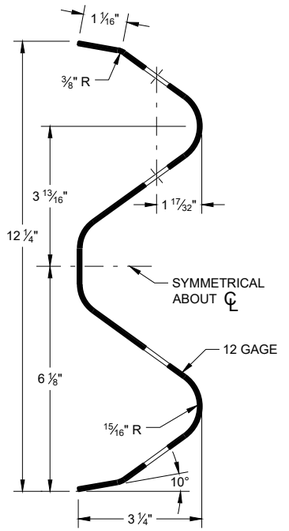
FRONT VIEW
MID-SPAN BEAM SPLICE



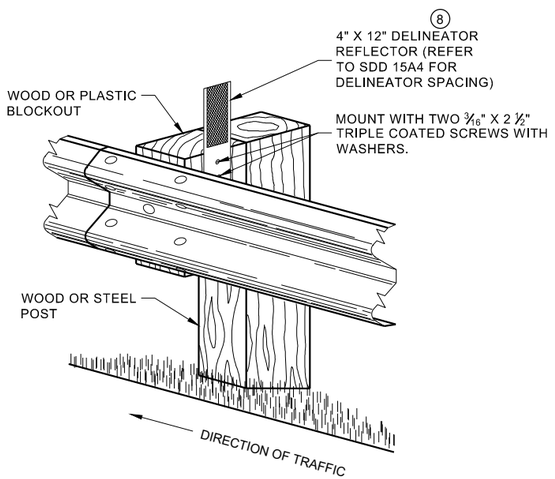
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

POST BOLTS ARE A ¾" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

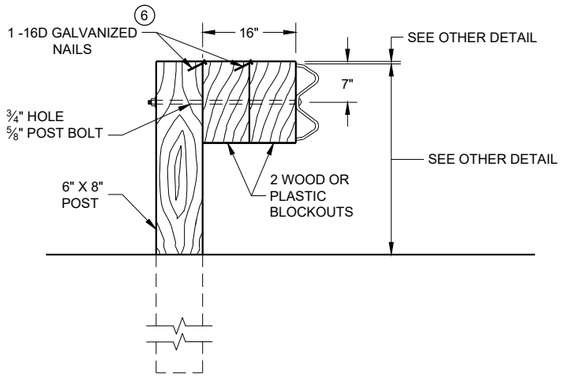
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 06b

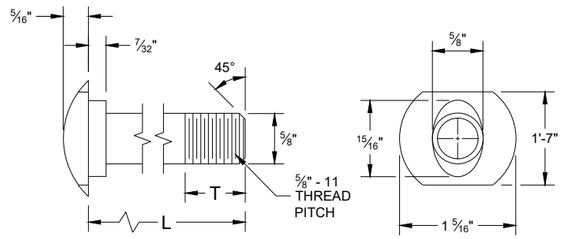


DETAIL FOR 16" BLOCKOUT DEPTH

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

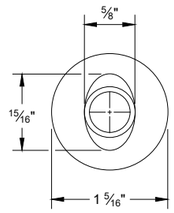
NOTE:

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

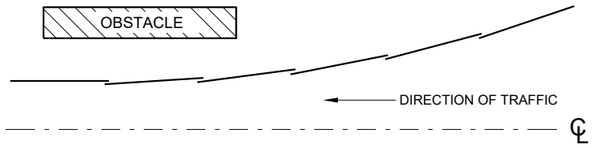


POST BOLT TABLE

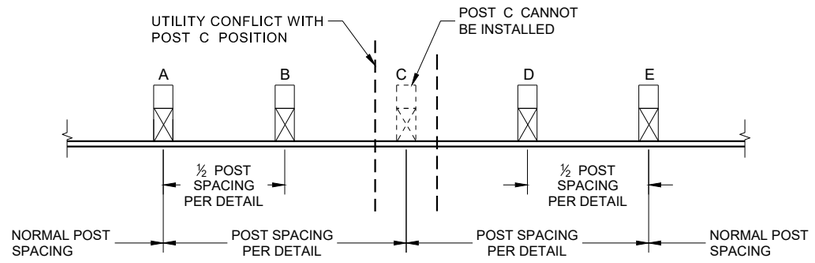
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



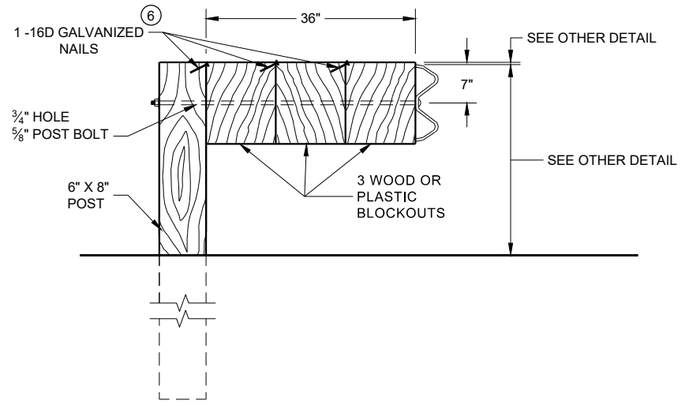
ALTERNATE BOLT HEAD



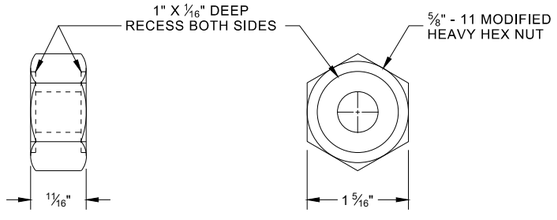
PLAN VIEW
BEAM LAPPING DETAIL



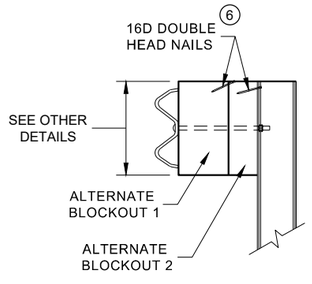
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



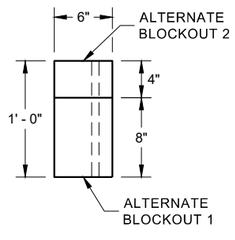
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

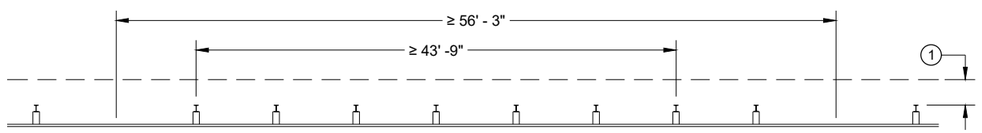
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

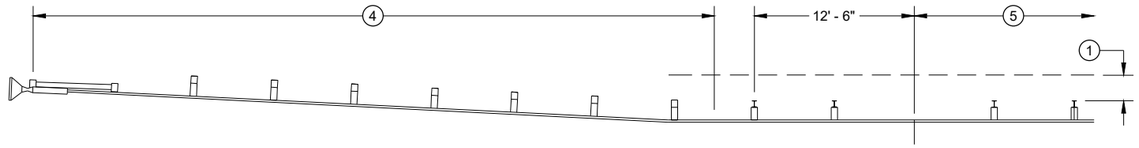
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

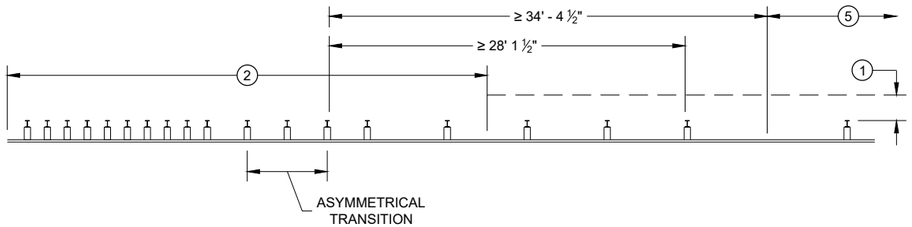
SDD 14B42 - 06c



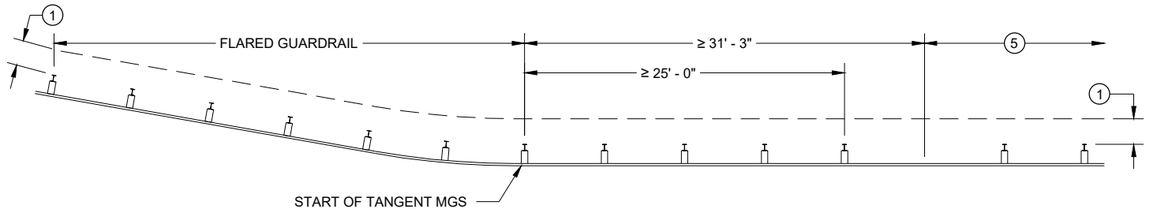
MISSING POST IN NORMAL BEAM GUARD RUN



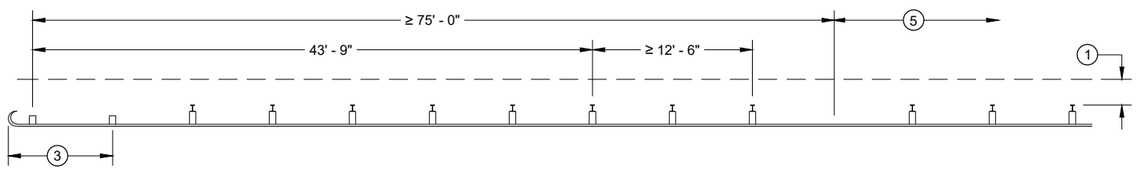
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



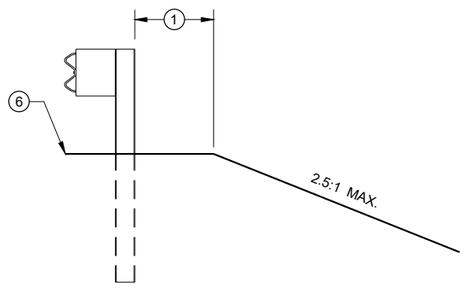
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

SDD 14B42 - 06d

SDD 14B42 - 06d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

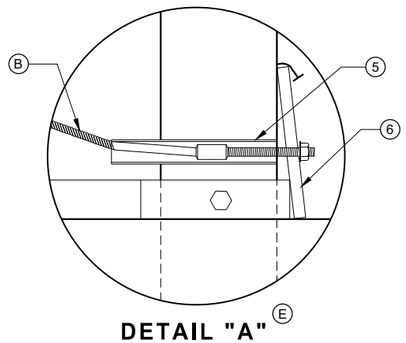
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

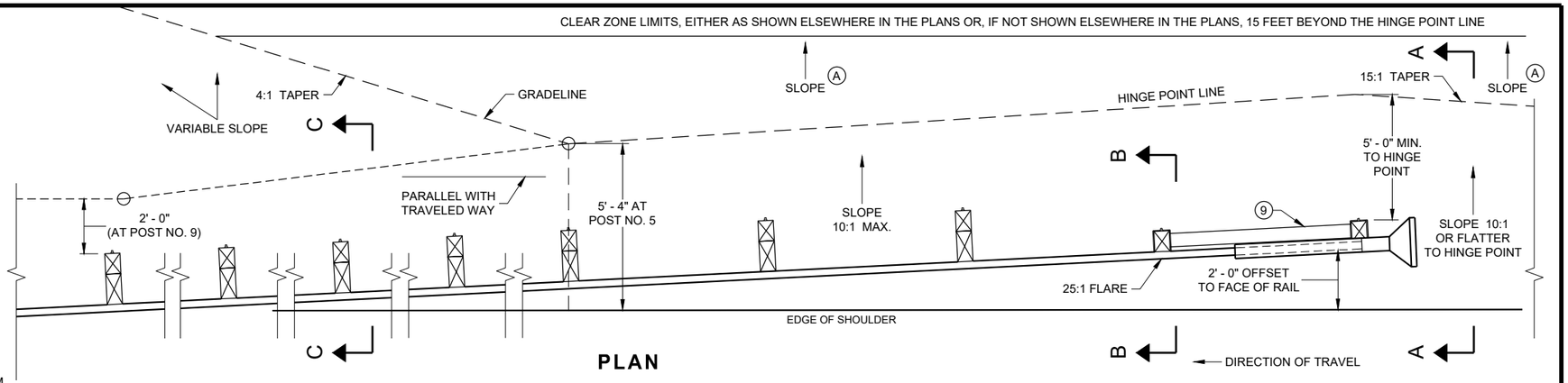
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

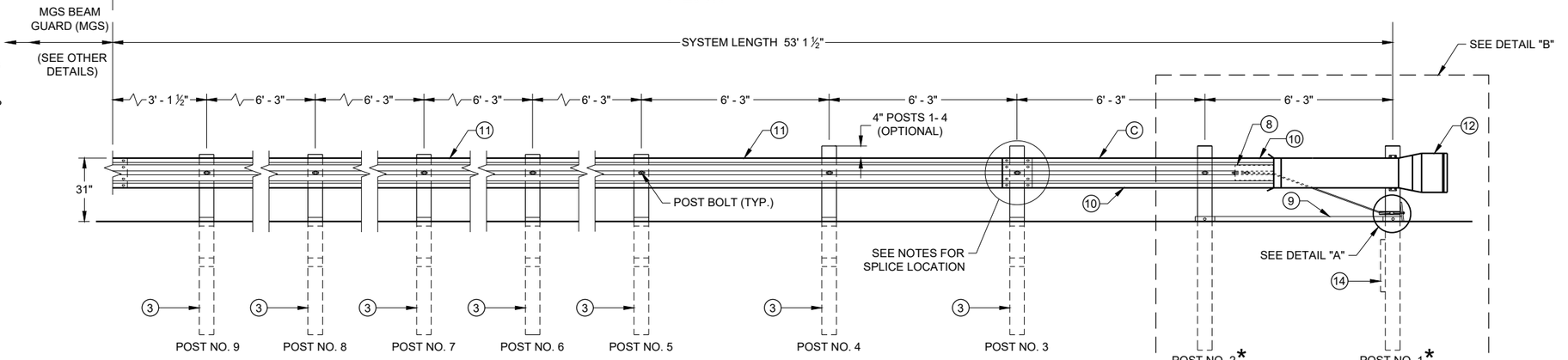
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



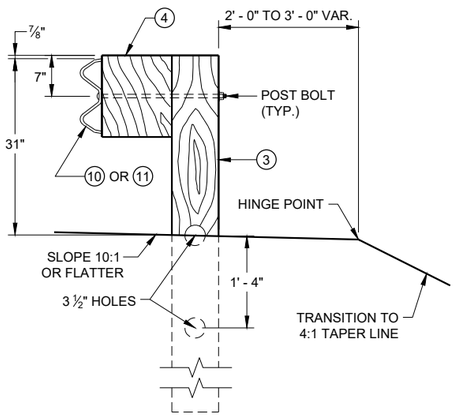
DETAIL "A" (E)



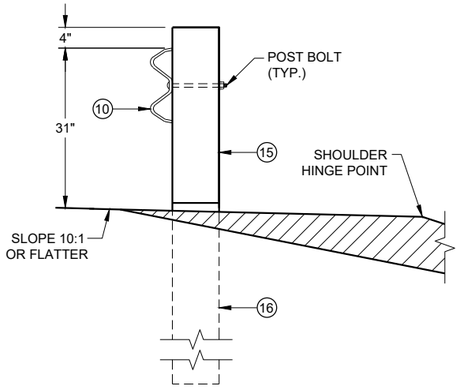
PLAN



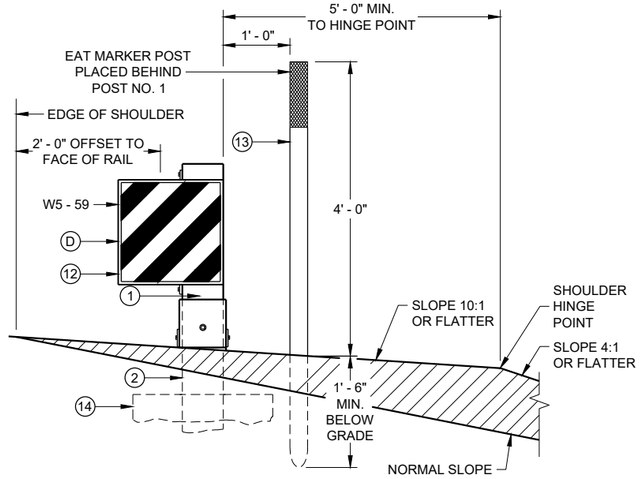
ELEVATION



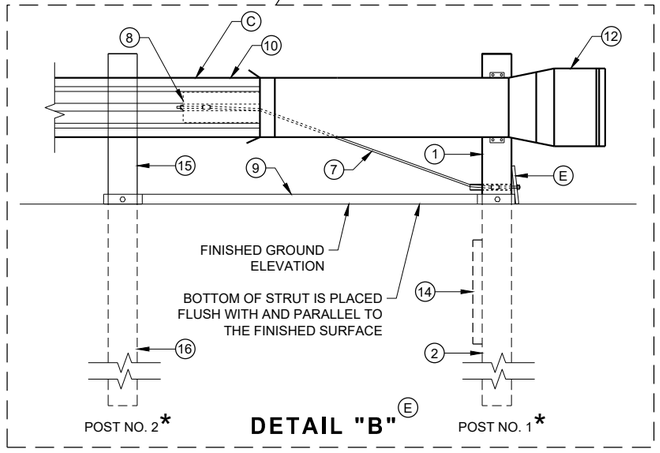
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



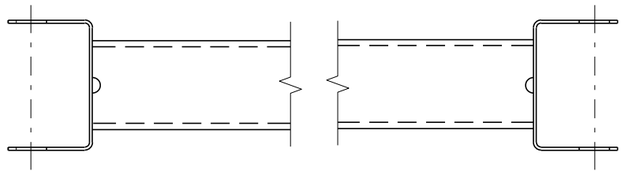
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

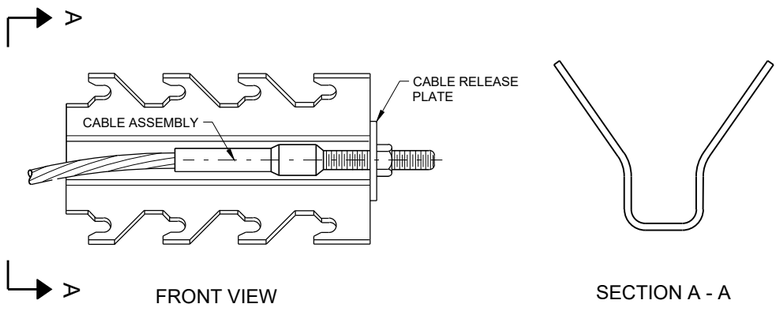
SDD 14B44 - 04a



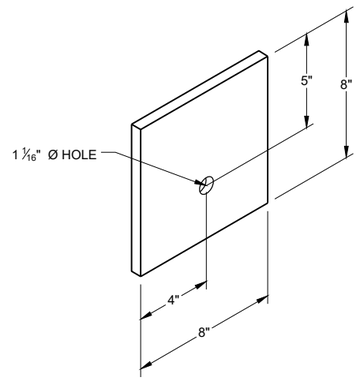
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

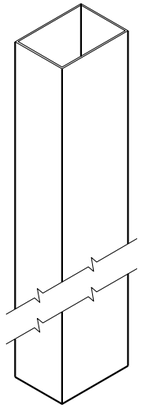
6

SDD 14B44 - 04b

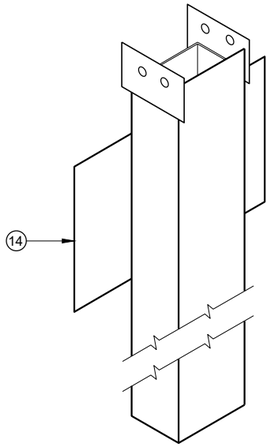
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

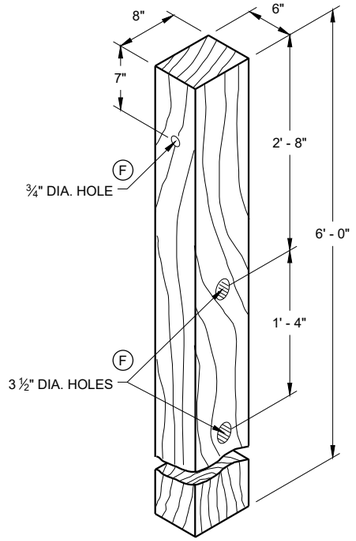
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



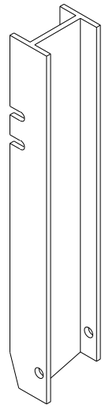
UPPER POST NO. 1 (1) (E)



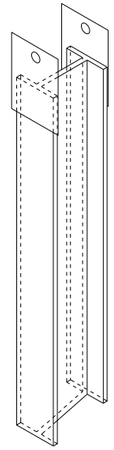
LOWER POST NO. 1 (2) (E)



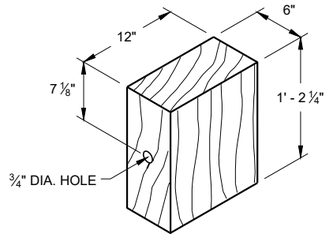
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



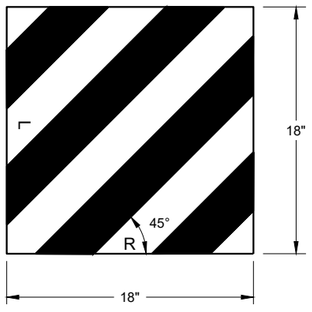
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

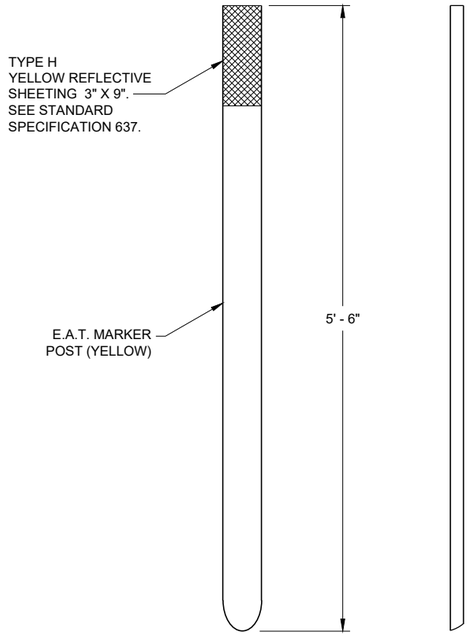


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



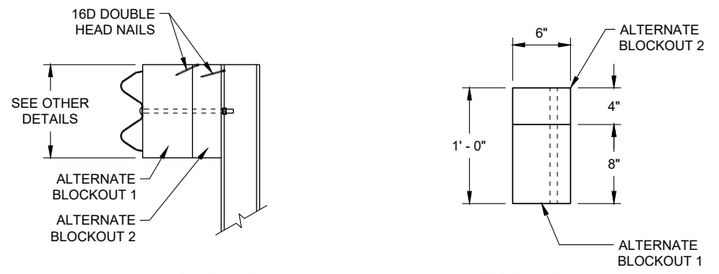
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

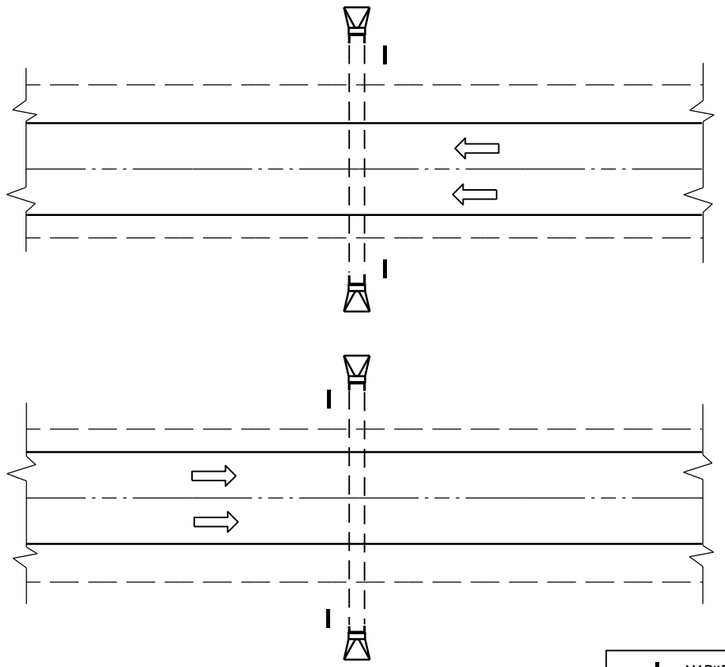
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

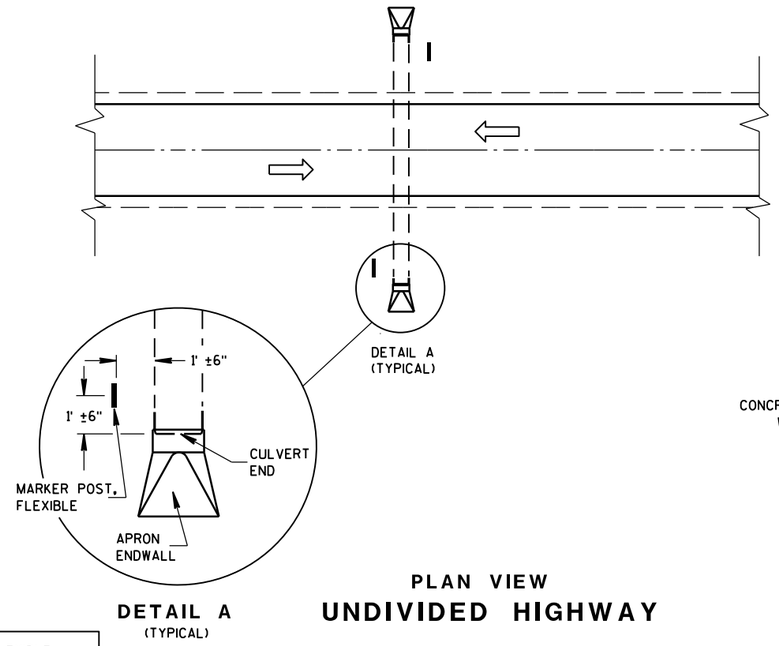
6

SDD 14B44 - 04c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

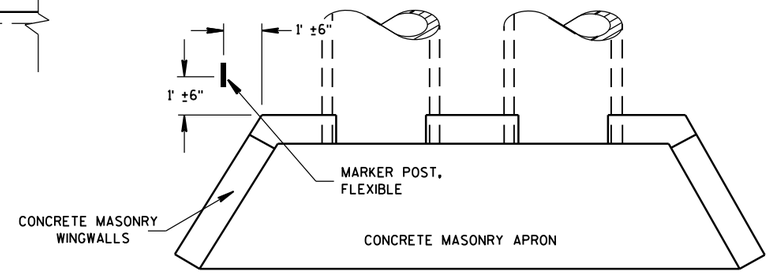
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

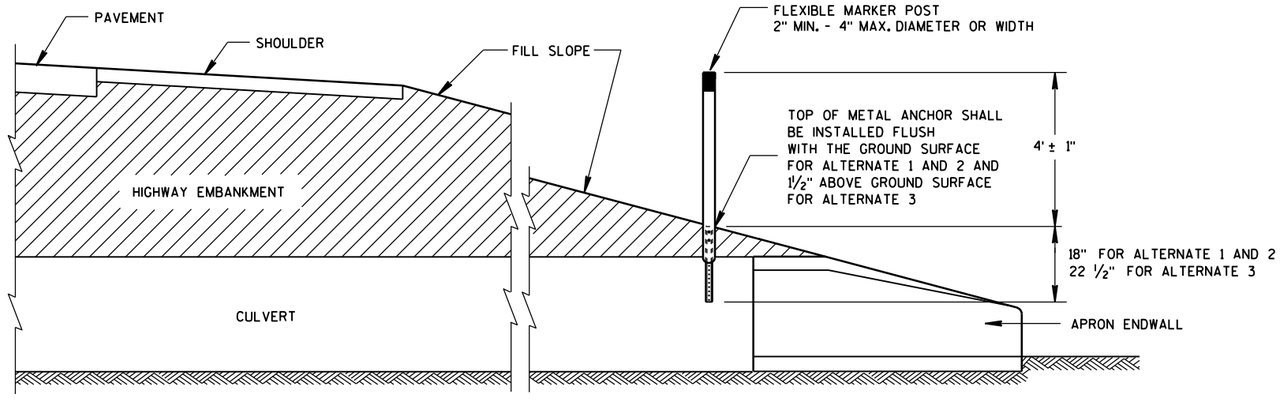
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

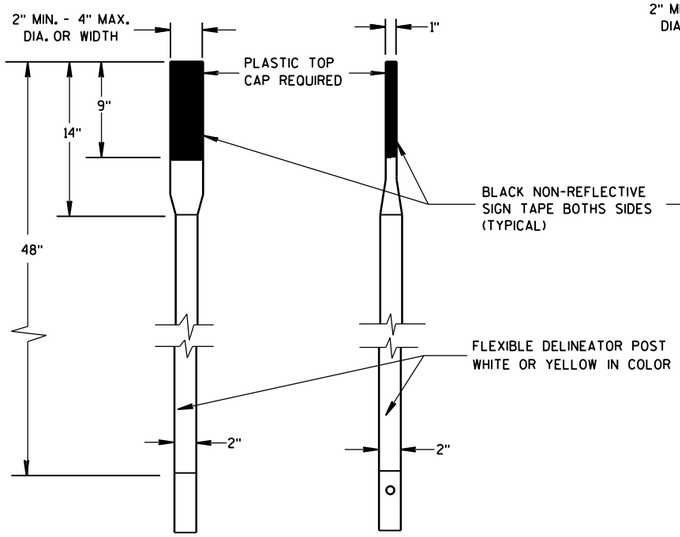
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

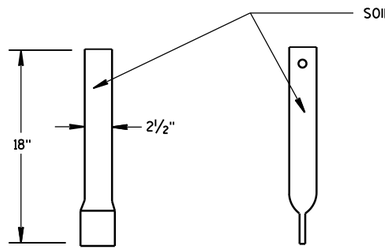
6

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

6

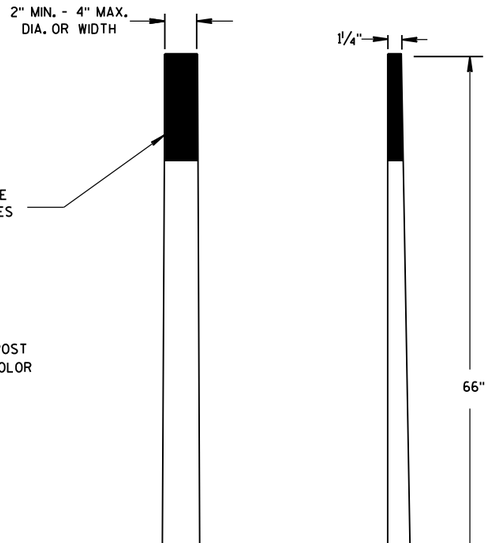
S.D.D. 15 A 3-2a





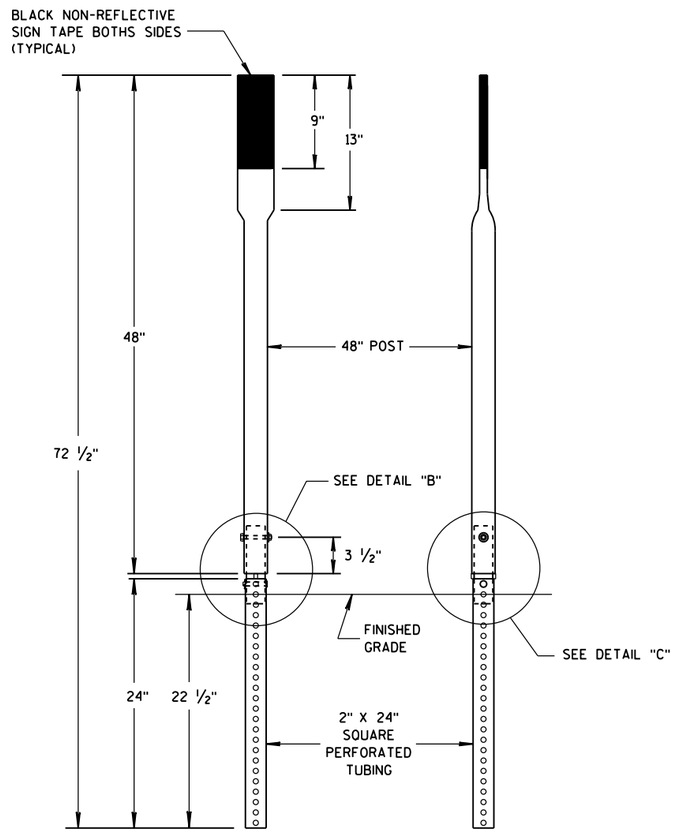
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

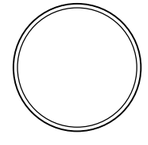
ALTERNATE 2



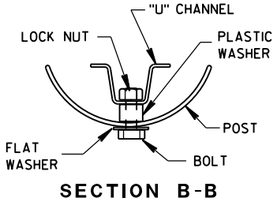
FRONT VIEW SIDE VIEW

ALTERNATE 3

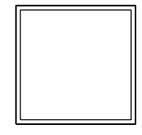
FLEXIBLE MARKER POSTS



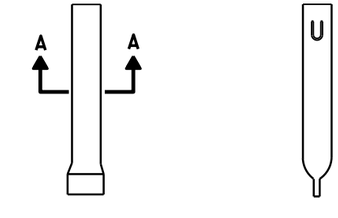
SECTION A-A



SECTION B-B

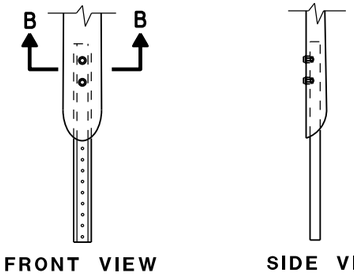


SECTION C-C



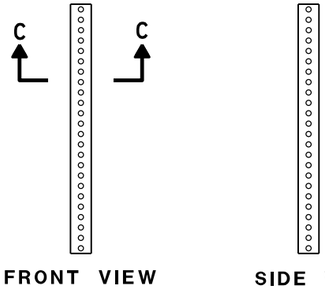
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

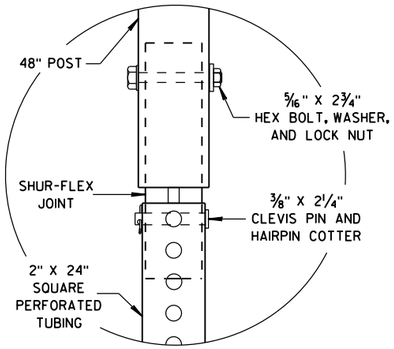
ALTERNATE 2



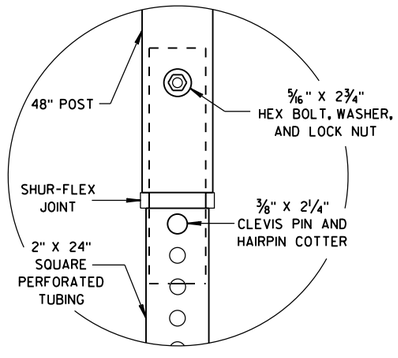
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



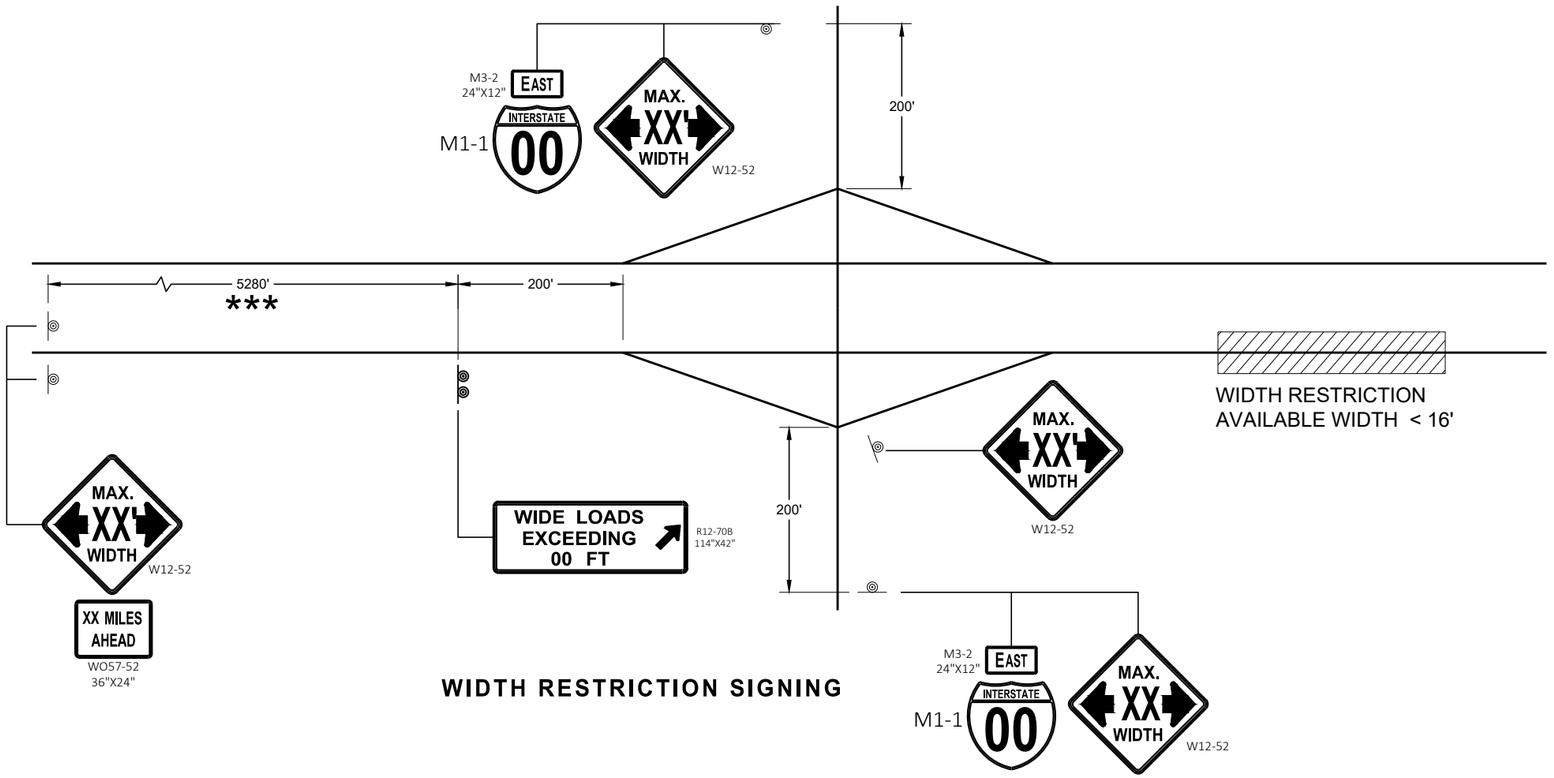
DETAIL C

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



WIDTH RESTRICTION SIGNING

LEGEND

SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

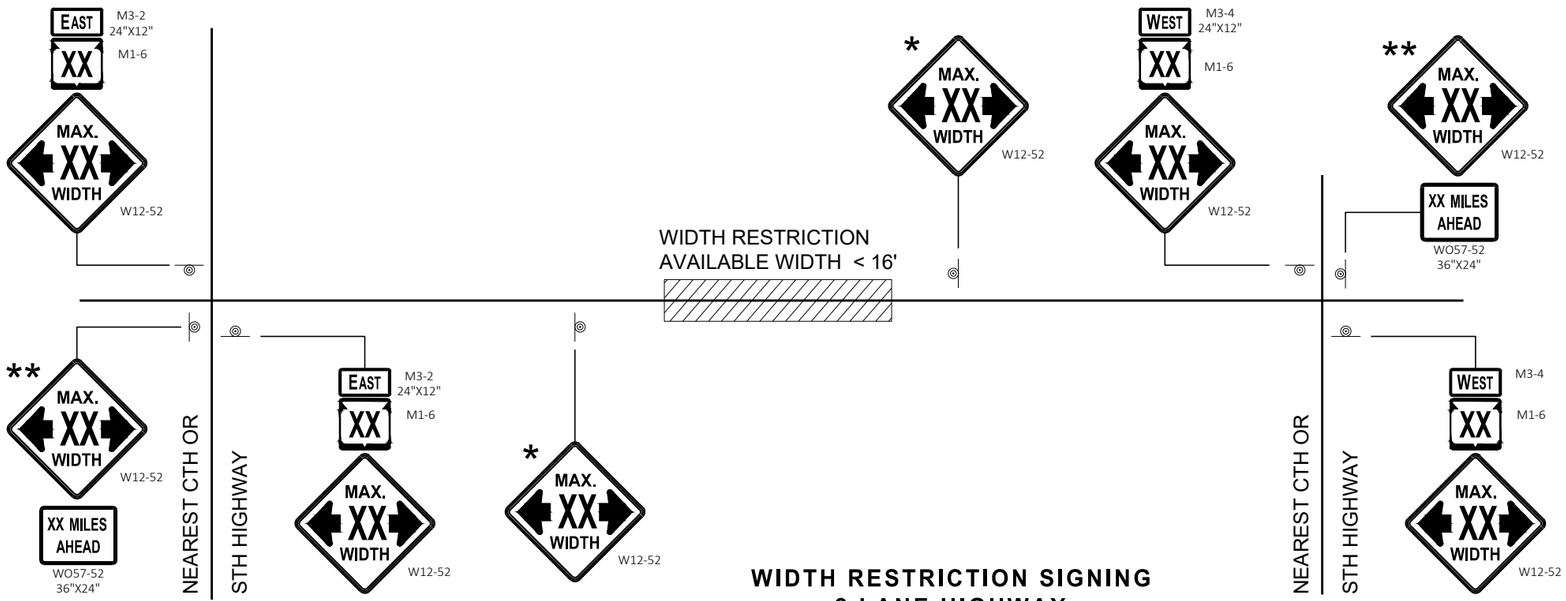
WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

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

** SIGN SHALL BE VISIBLE FROM ROADWAY.

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

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



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C02 - 07f

GENERAL NOTES

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

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

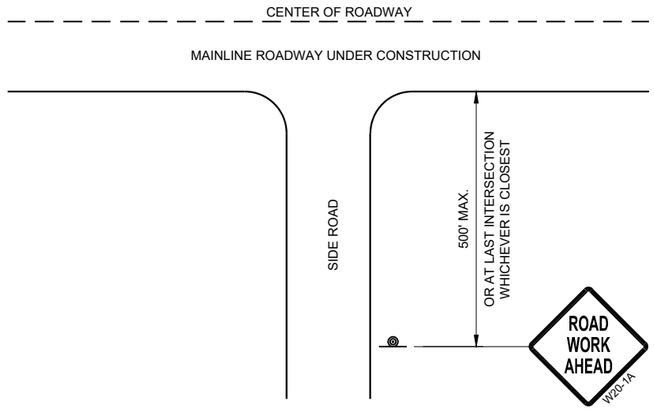
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

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



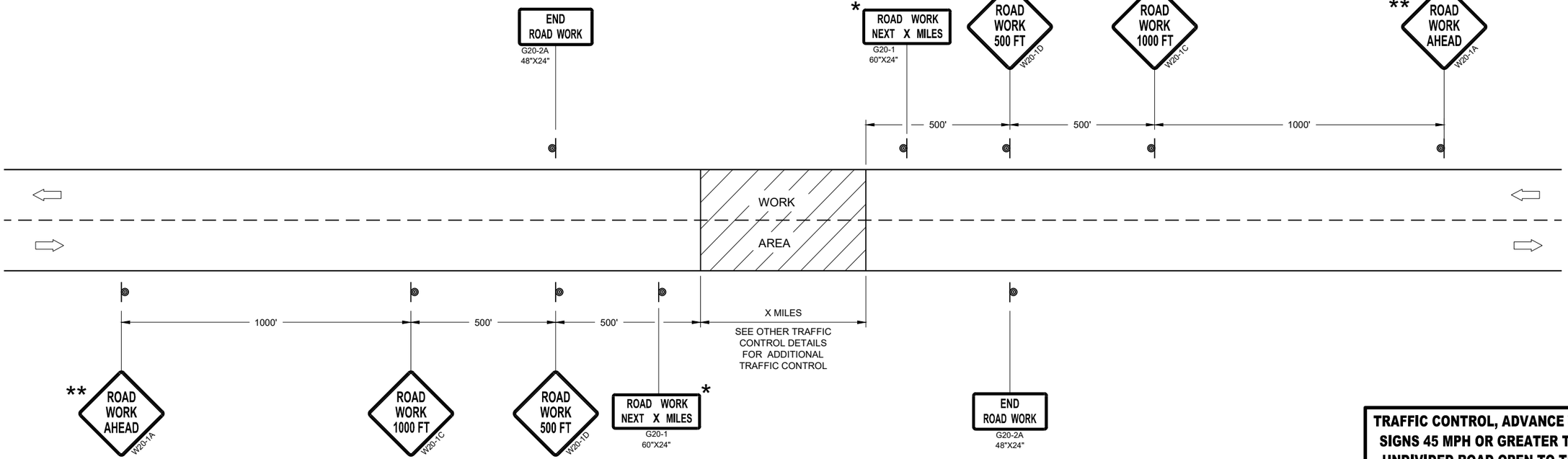
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

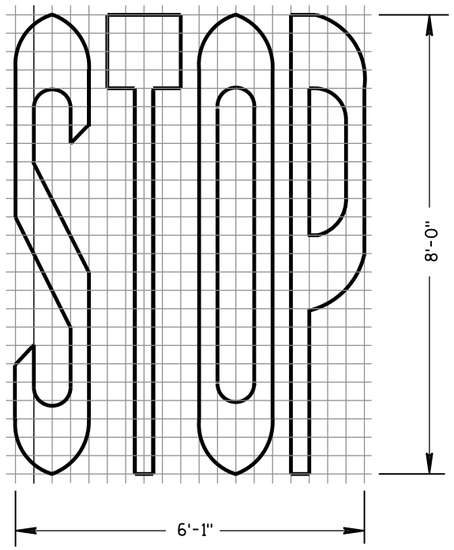
FHWA

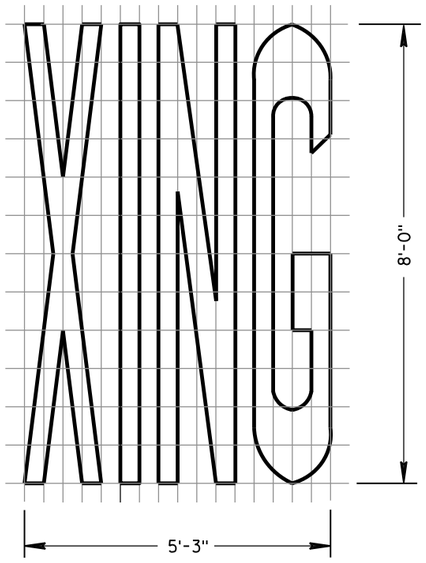
6

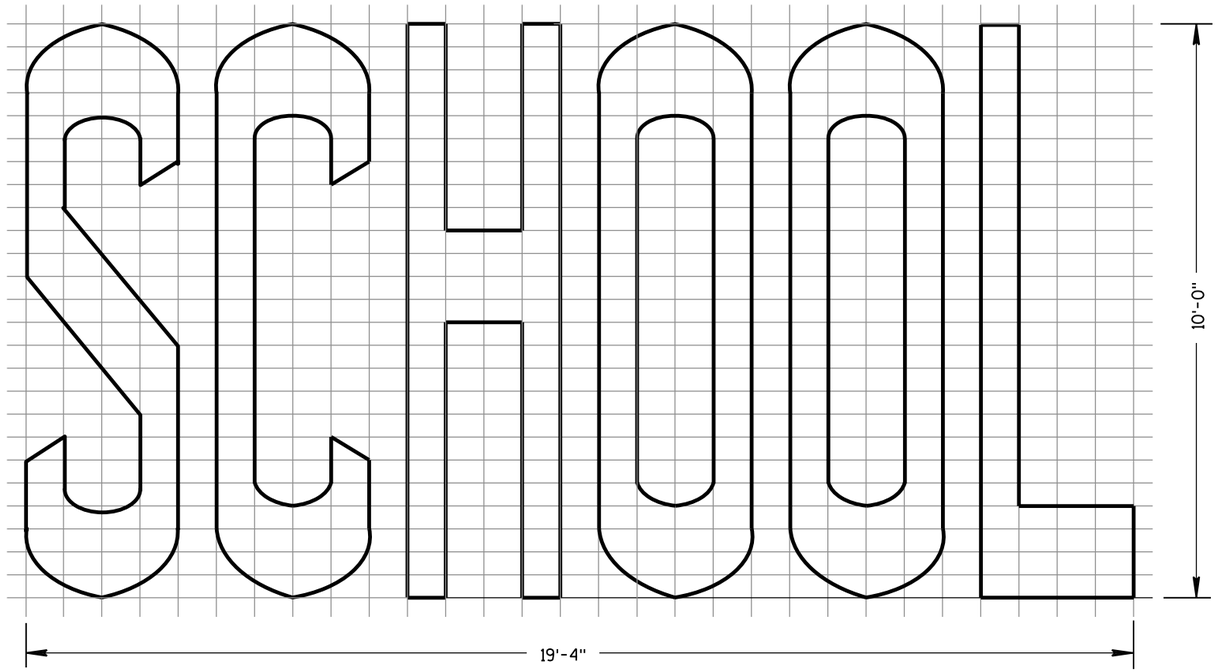
SDD 15C04 - 05

GENERAL NOTES

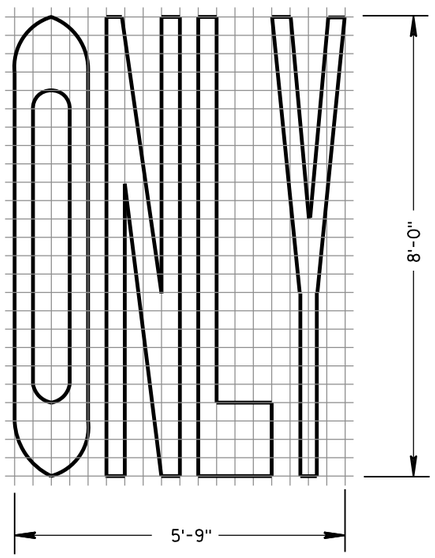
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

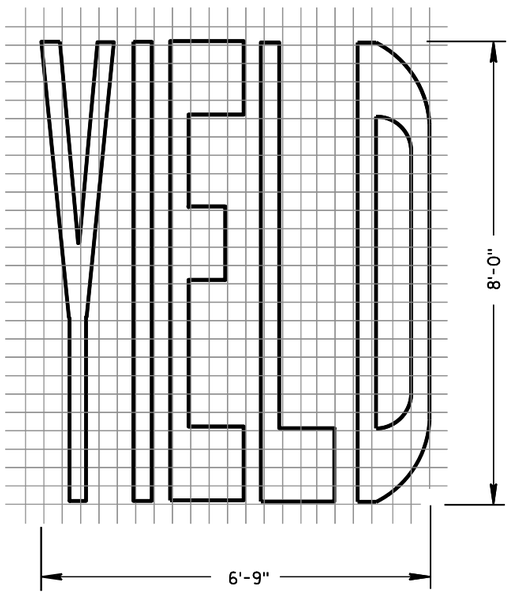


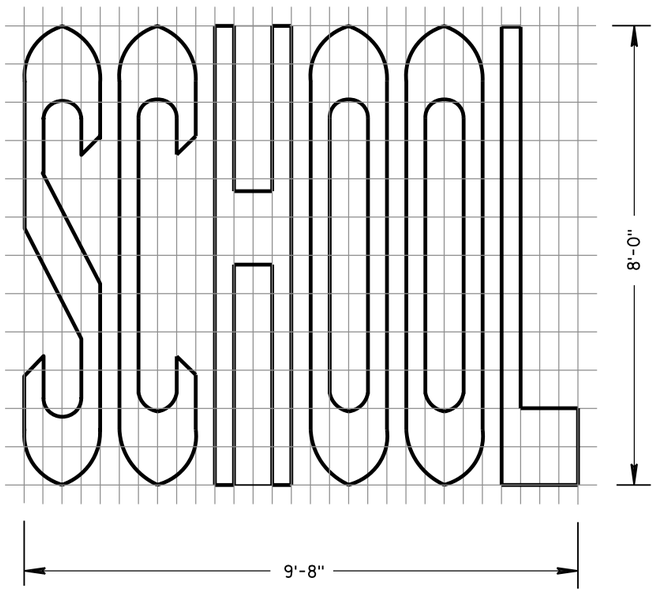




TWO-LANE







SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MARK

EER

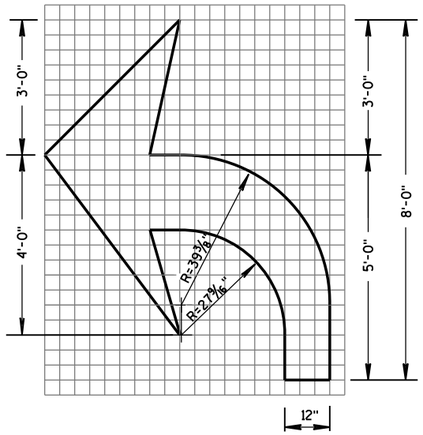
FHWA

6

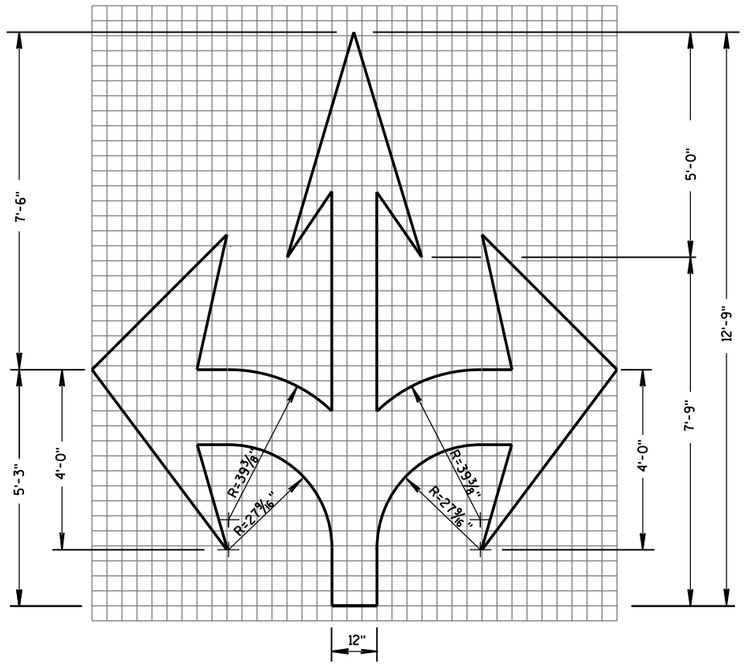
S.D.D. 15 C 7-14b

6

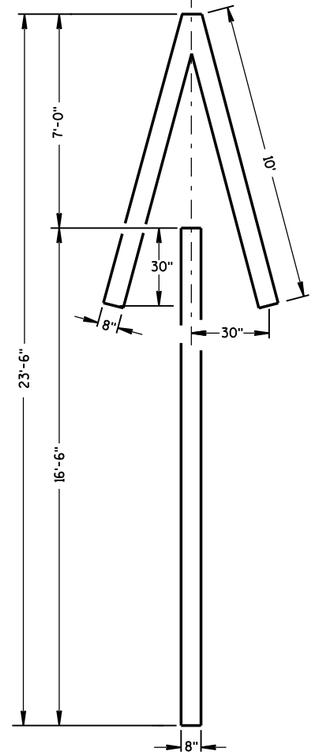
S.D.D. 15 C 7-14b



TYPE 2



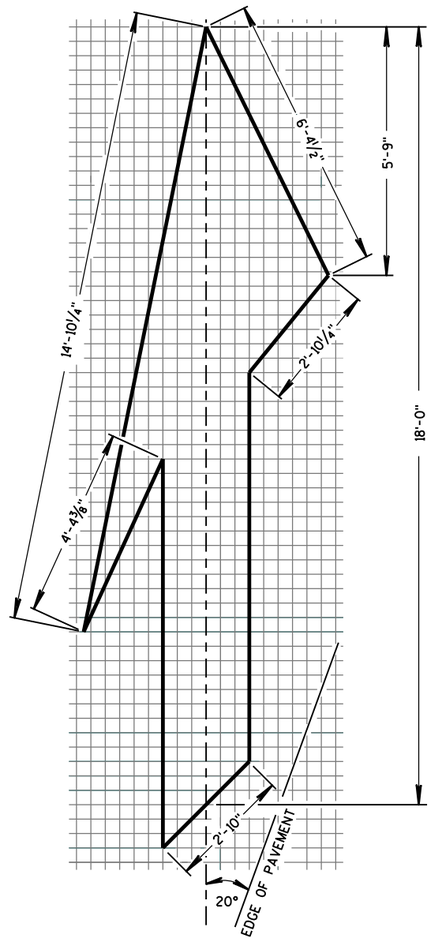
TYPE 6



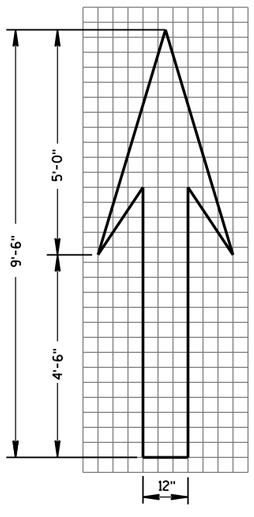
TYPE 4

GENERAL NOTES

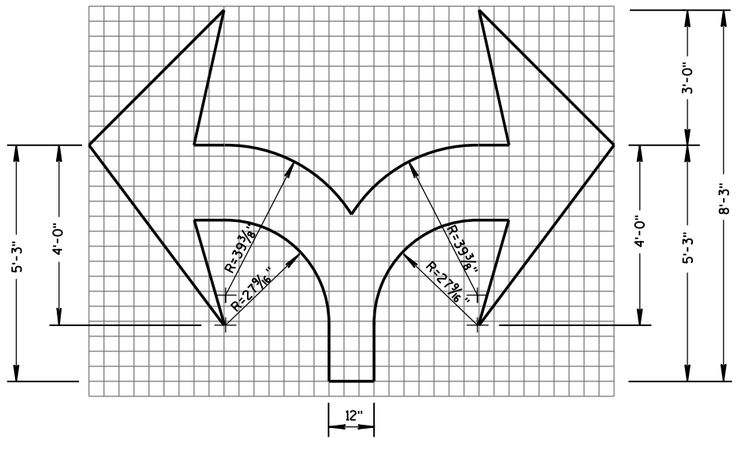
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



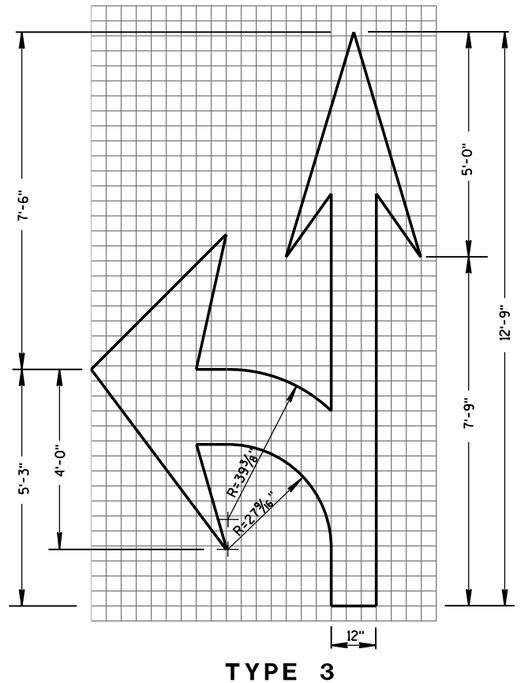
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

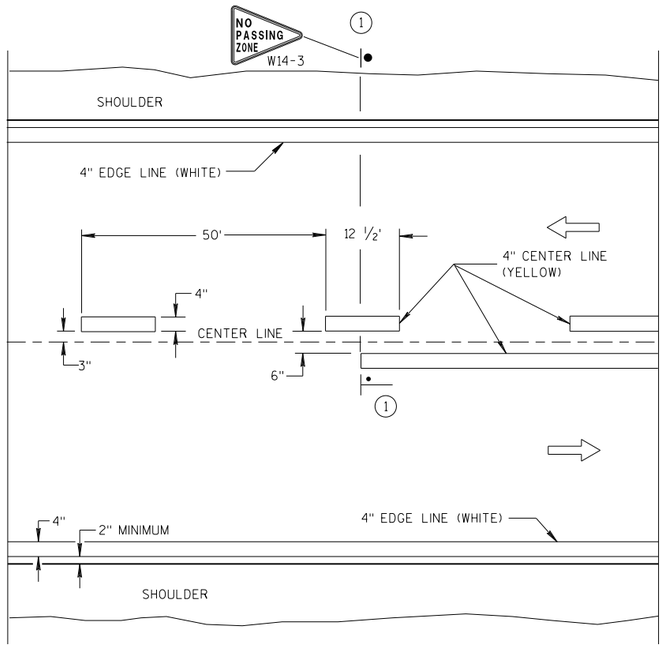
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

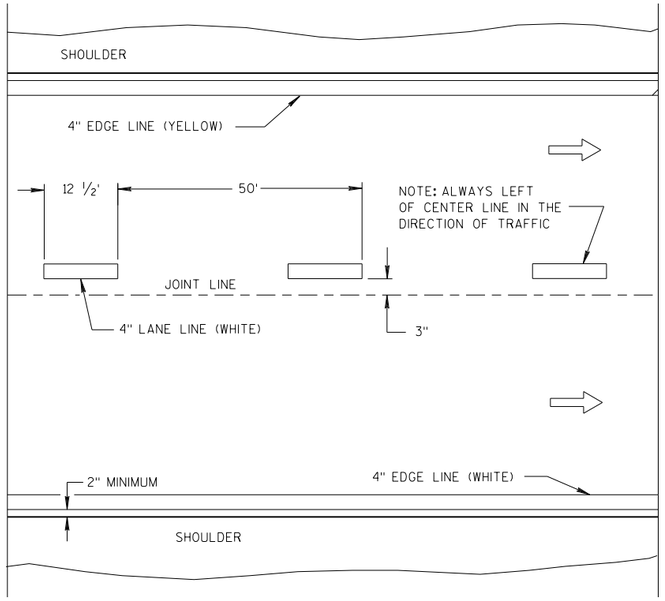
S.D.D. 15 C 7-14c

6

S.D.D. 15 C 7-14c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

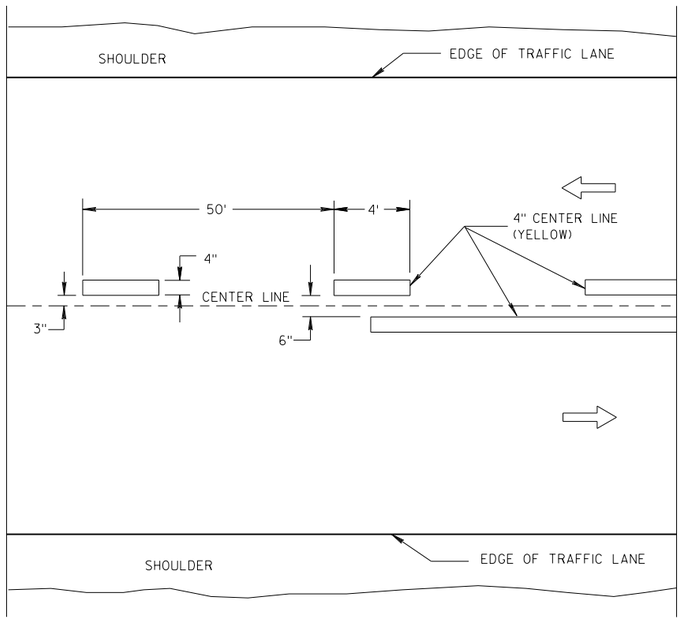
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

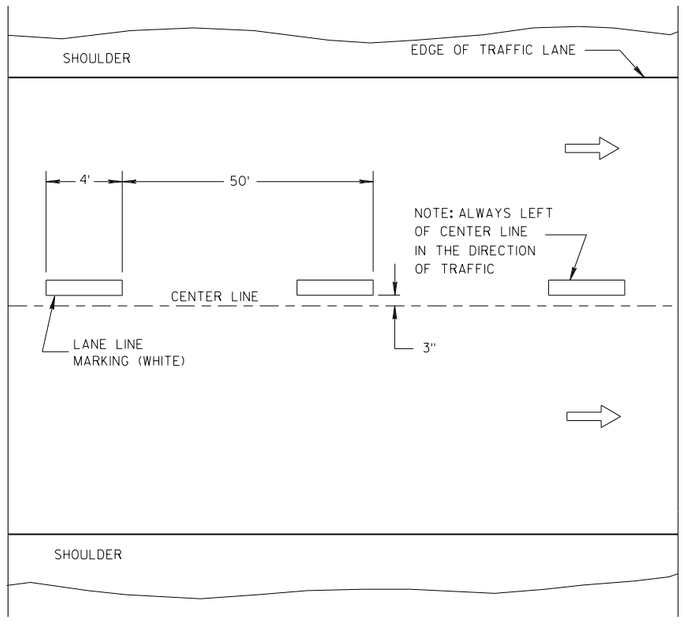
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 8-19a

6

S.D.D. 15 C 8-19a

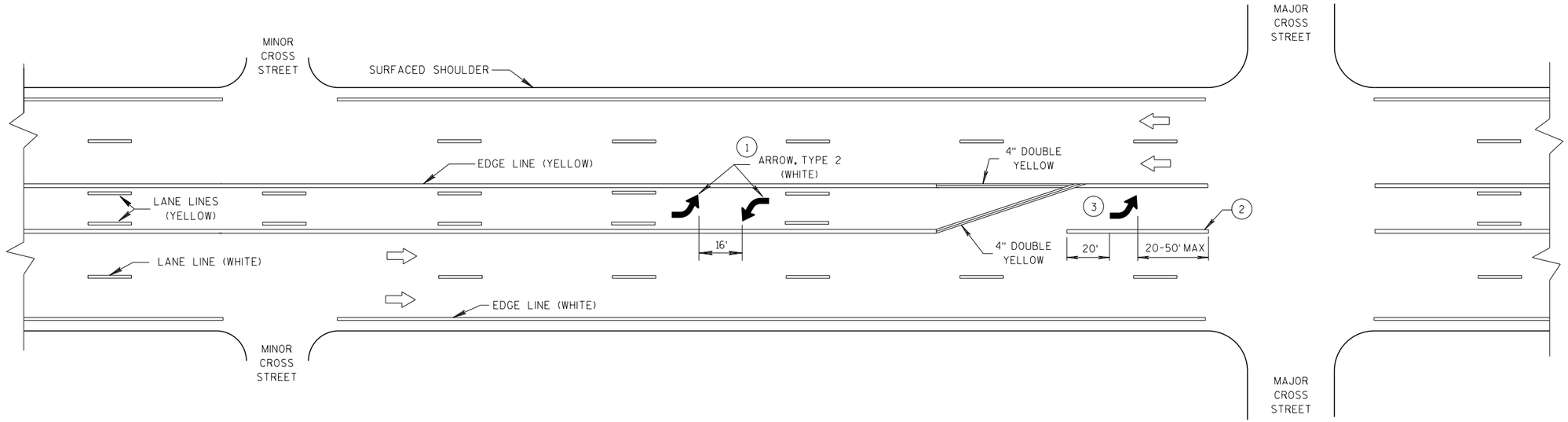
GENERAL NOTES

(1) A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

(2) 8" WHITE

(3) TURN BAY LENGTH OF LESS THAN 48'DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT

DIRECTION OF TRAFFIC



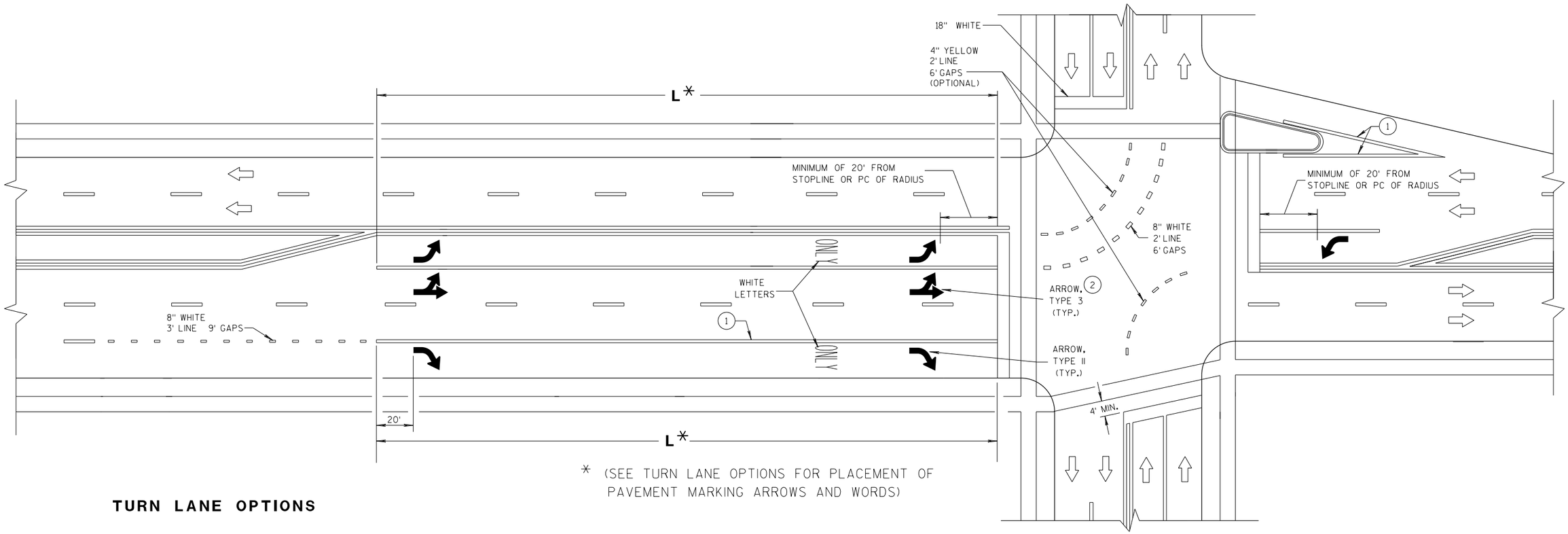
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

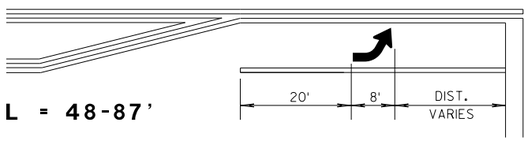
S.D.D. 15 C 8-19b



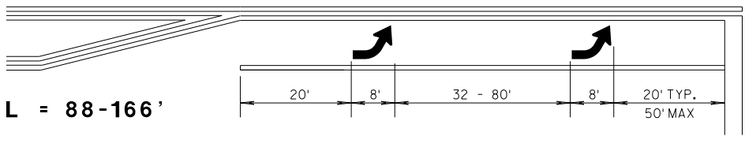
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

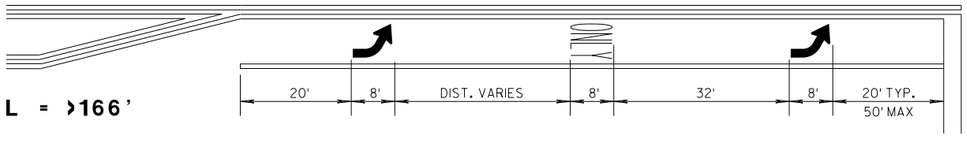
LENGTH OF TURN BAY (**L**) OF 0-47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48-87'



L = 88-166'



L = >166'

GENERAL NOTES

(1) 8" WHITE

(2) QUANTITY AND LOCATION OF TYPE 3 ARROW ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION, THE ARROWS AND ONLY MARKING ARE ELIMINATED.

⇨ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

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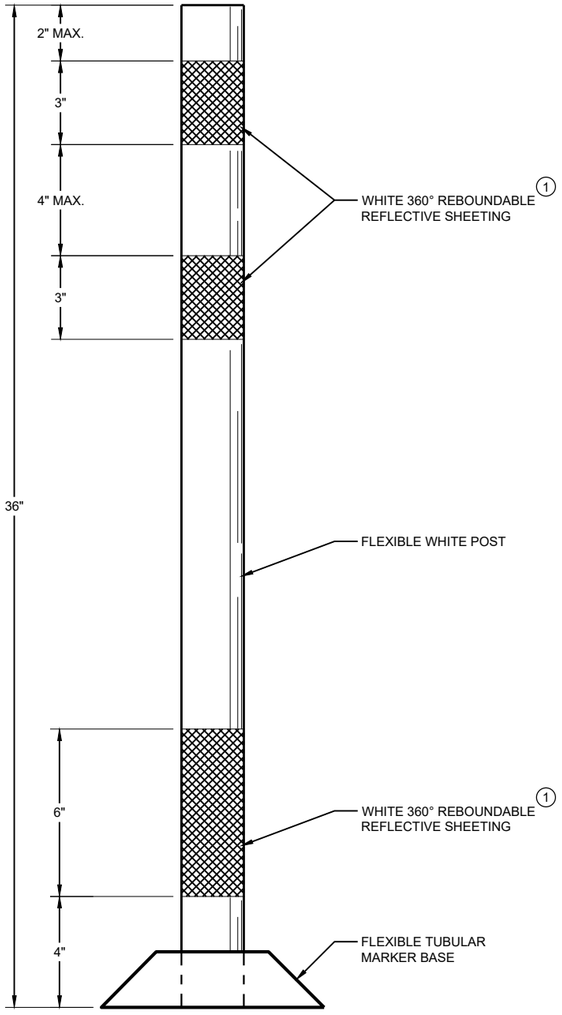
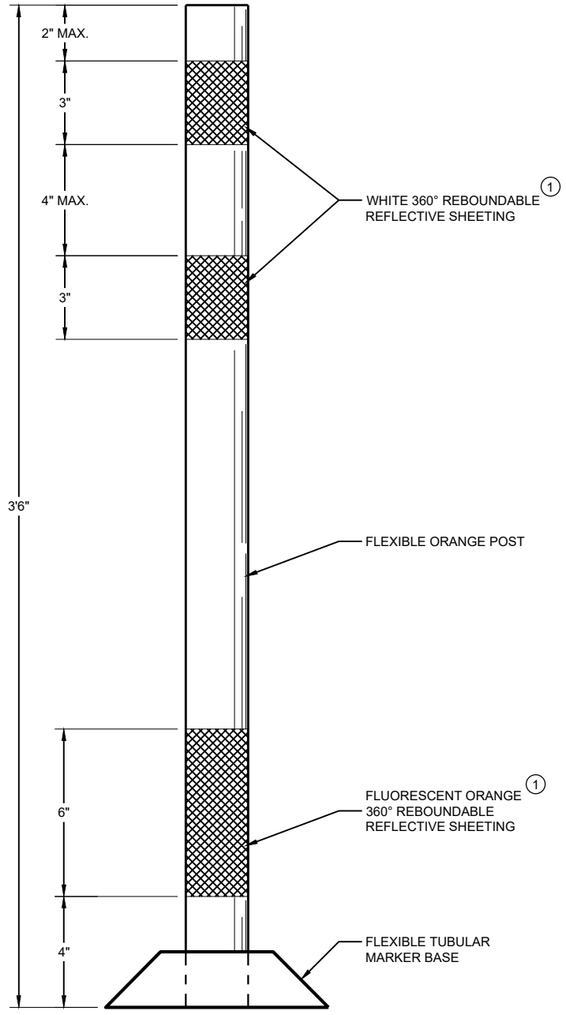


FLEXIBLE TUBULAR MARKER POST PERMANENT CROSSOVER



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

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

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SDD 15C11 - 07a

CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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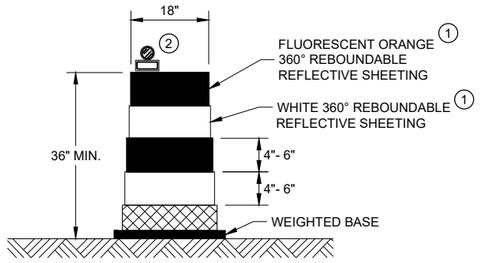
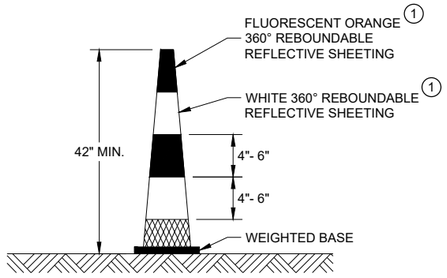
SDD 15C11 - 07a

GENERAL NOTES

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

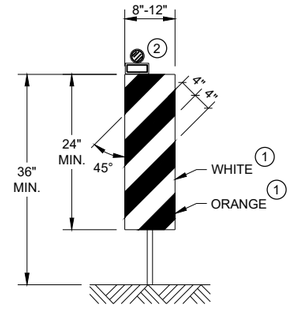


DRUM



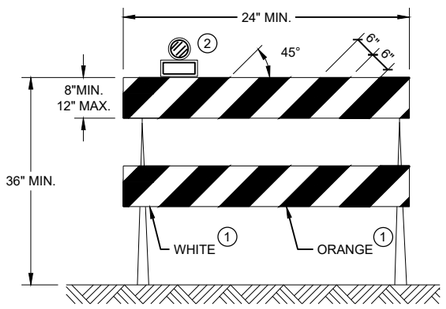
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



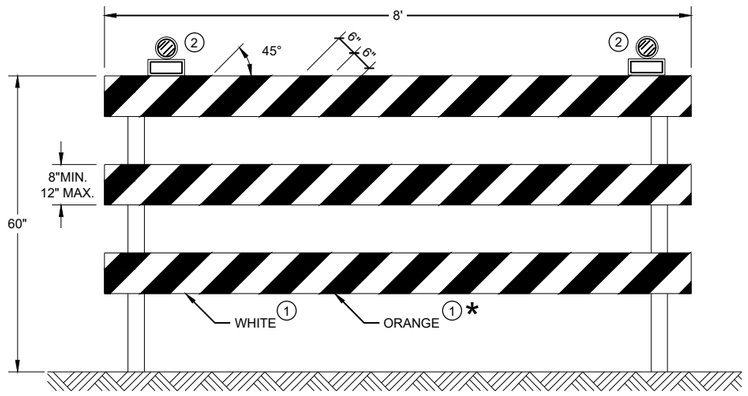
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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LEGEND

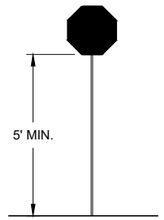
SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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



STOP/SLOW PADDLE ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

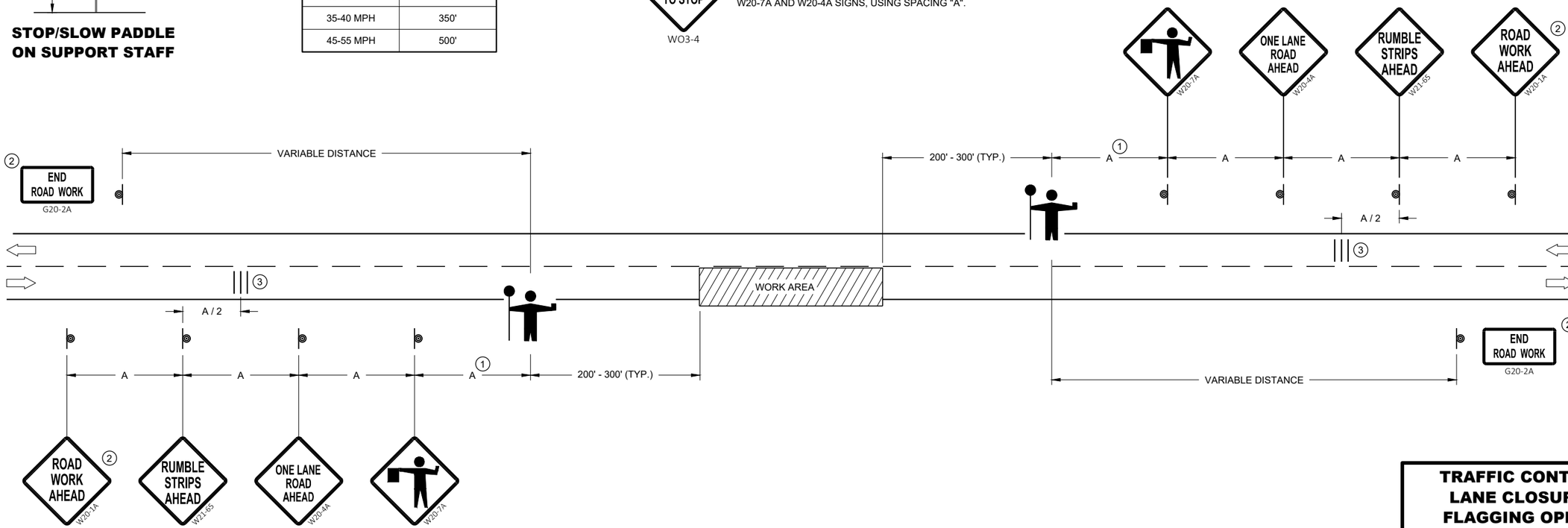
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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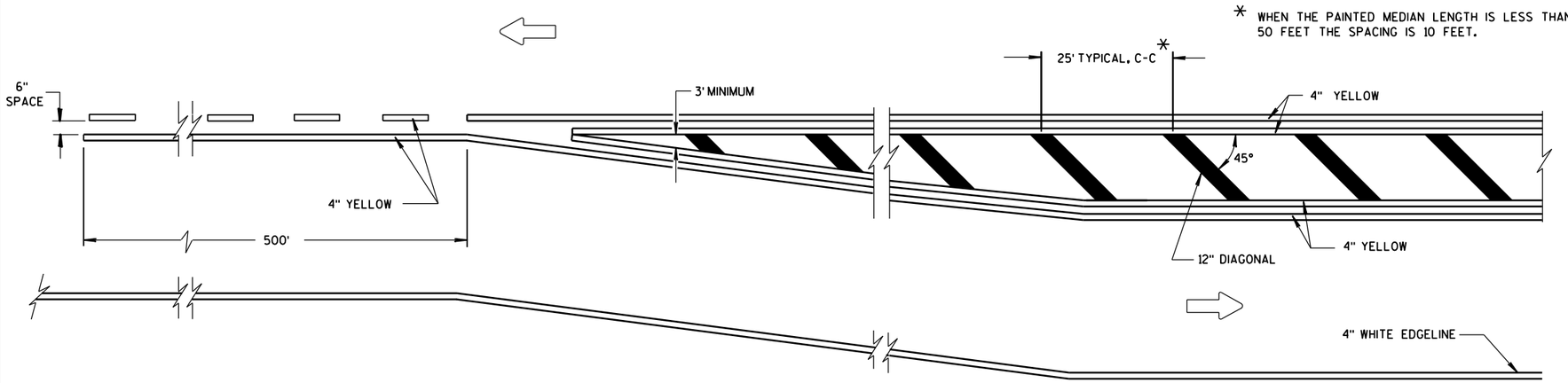
SDD 15C12 - 07

SDD 15C12 - 07

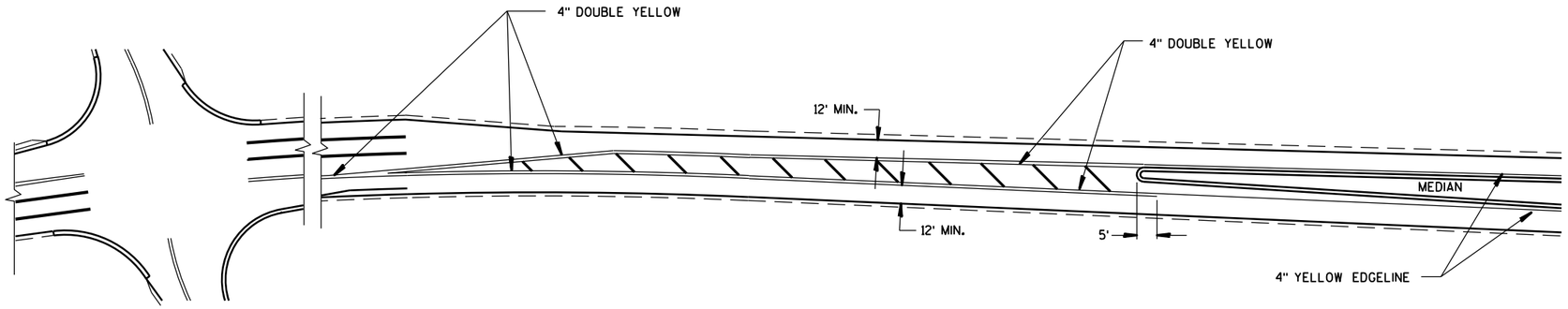


MEDIAN ISLAND DETAIL

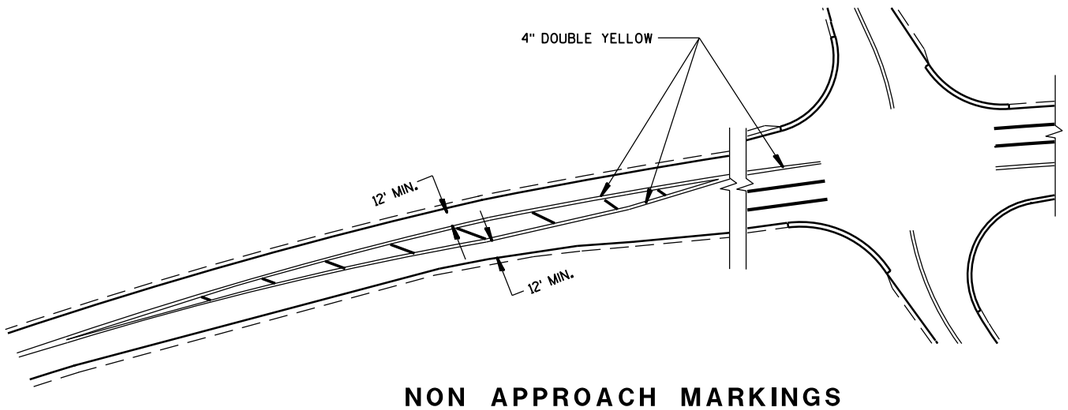
GENERAL NOTE

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

DIRECTION OF TRAVEL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE FHWA	/S/ Matthew Rauch STATE SIGNING AND MARK ENGINEER

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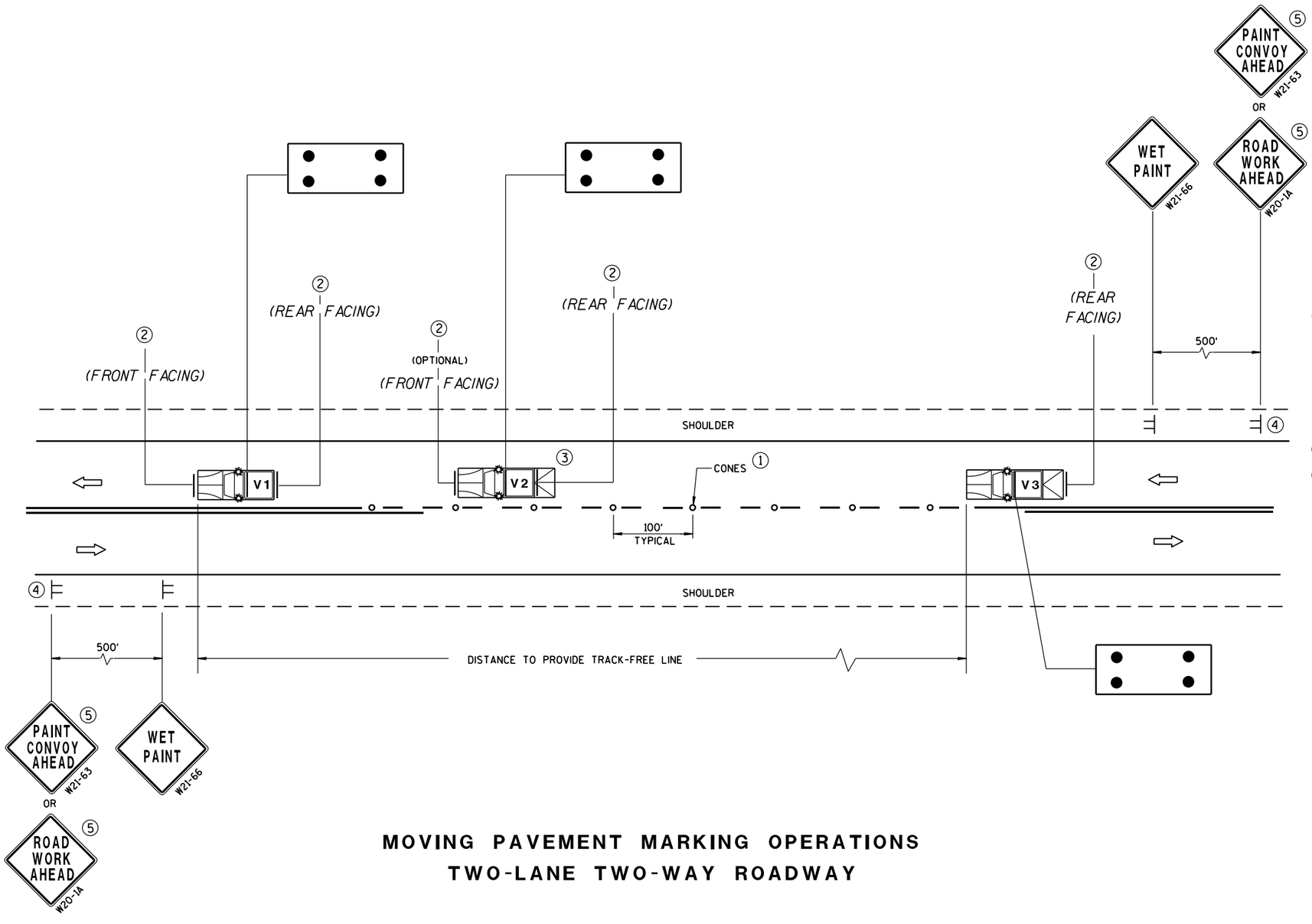
S.D.D. 15 C 18-4



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

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

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

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

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

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

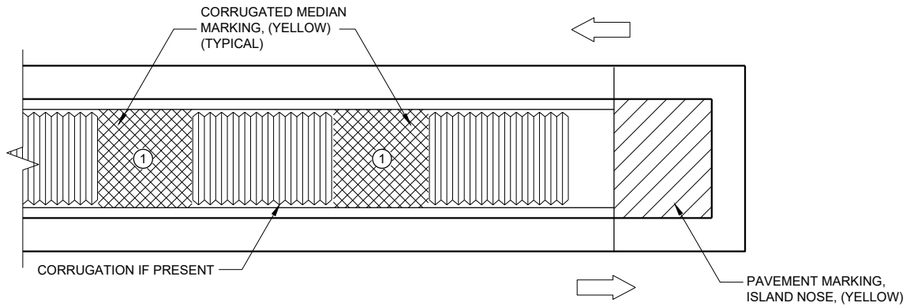
(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

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

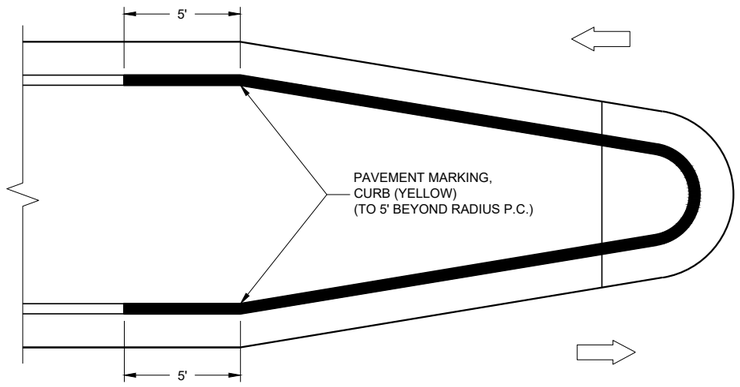
LEGEND

- **V1** LEAD VEHICLE
- **V2** SHADOW VEHICLE
- **V3** TRAIL VEHICLE WITH TMA
- **TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (CAUTION)

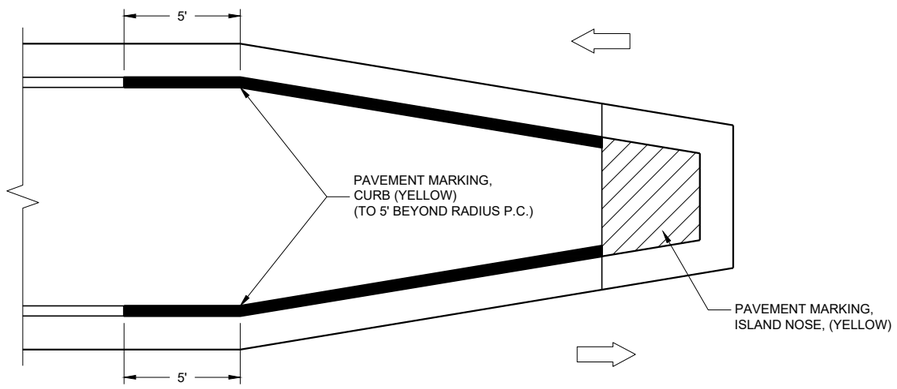
MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept., 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGR
FHWA	



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

**TYPICAL PLACEMENT OF
PAVEMENT MARKING ON MEDIAN ISLANDS**

GENERAL NOTES

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

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

**PAVEMENT MARKINGS
(ISLANDS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

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

FHWA

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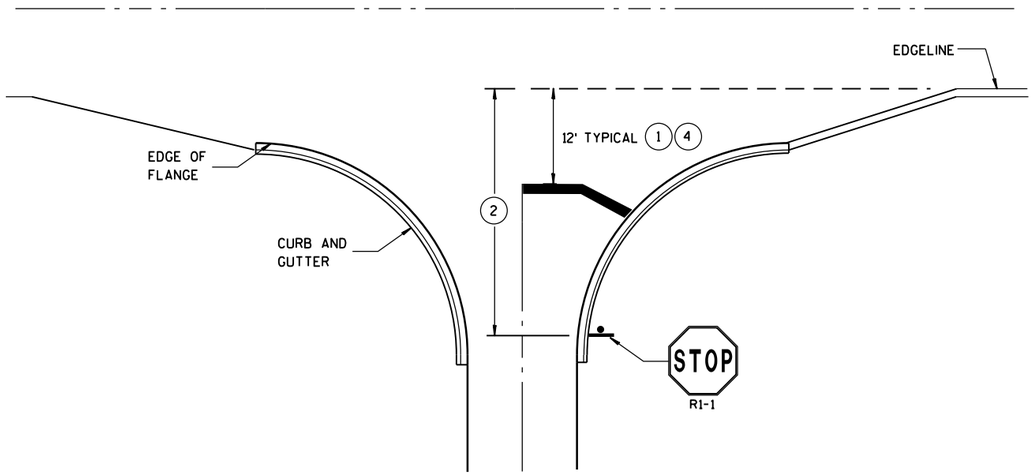
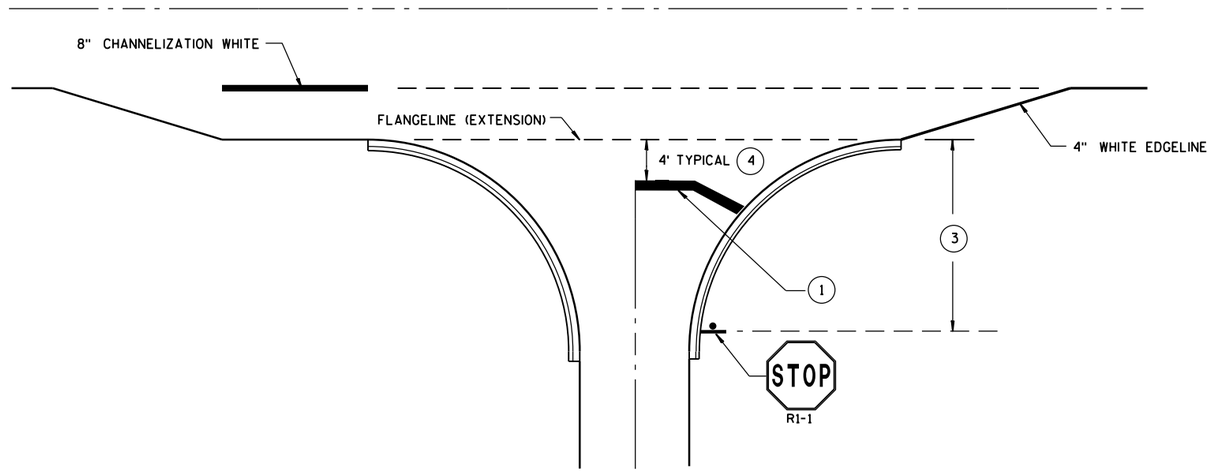
SDD 15C27 - 03b

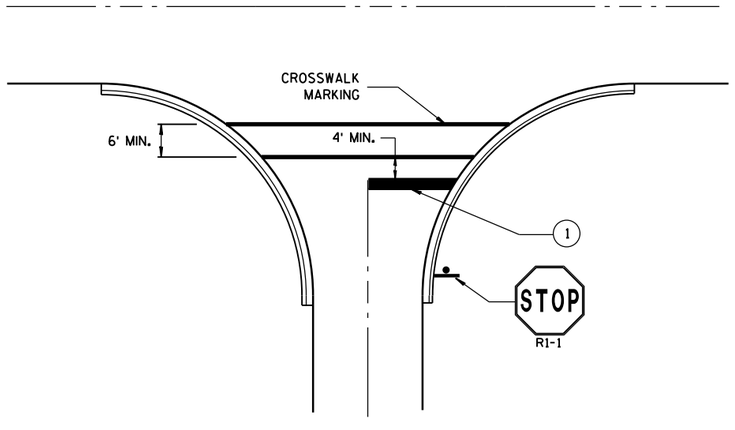
SDD15C27 - 03b



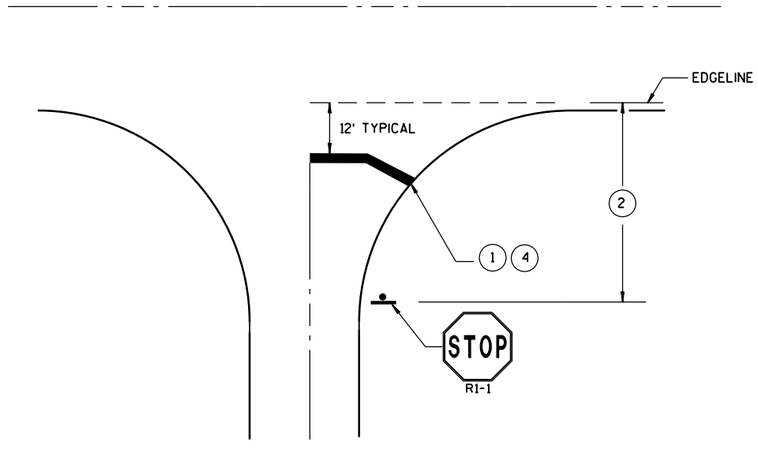
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

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 PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.

(2) IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.

(3) IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.

(4) MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible]NEER

FHWA

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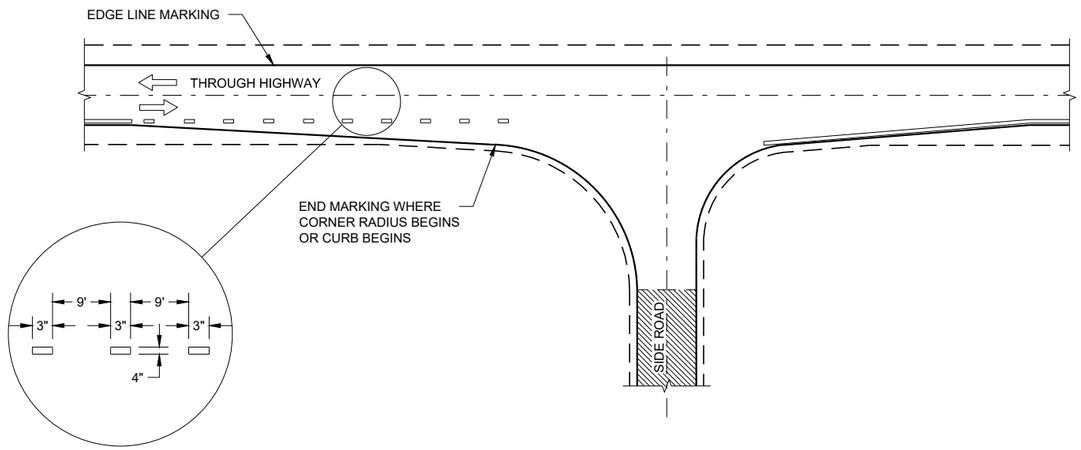


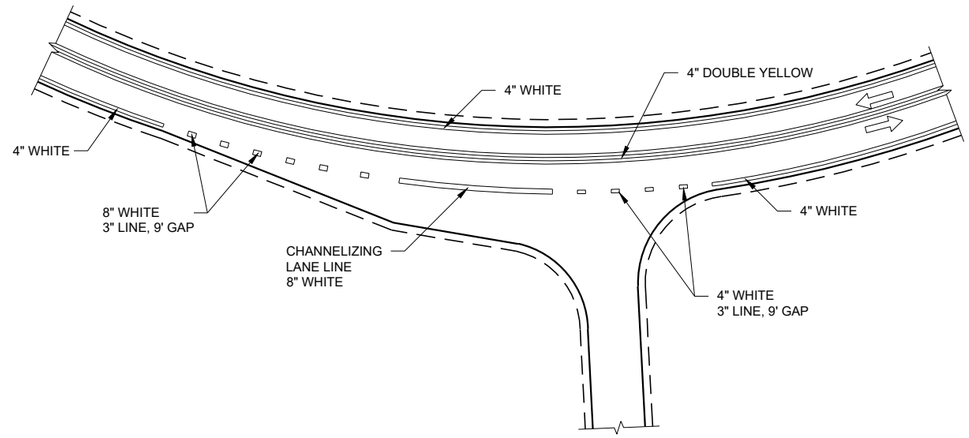
MINOR INTERSECTION

GENERAL NOTES

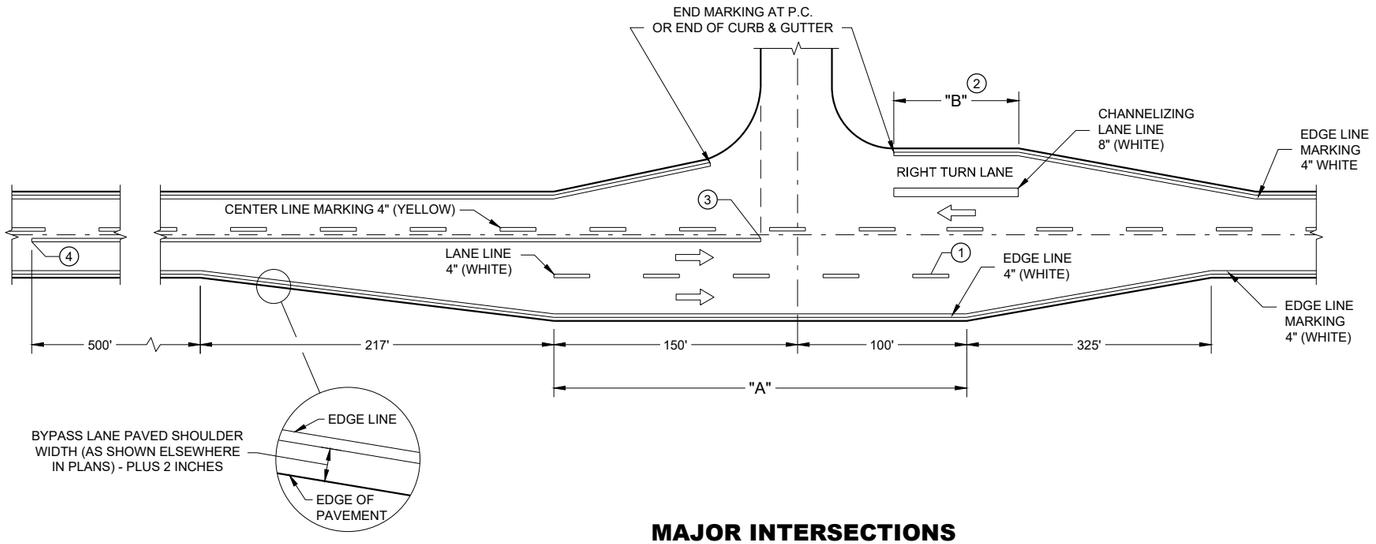
OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C35 - 03a

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SDD 15C35 - 03a

LEGEND

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

TABLE A

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

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

TAPER LENGTH

L= WS AT 45 MPH OR GREATER
L = WS² / 60 AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = 1/3L

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

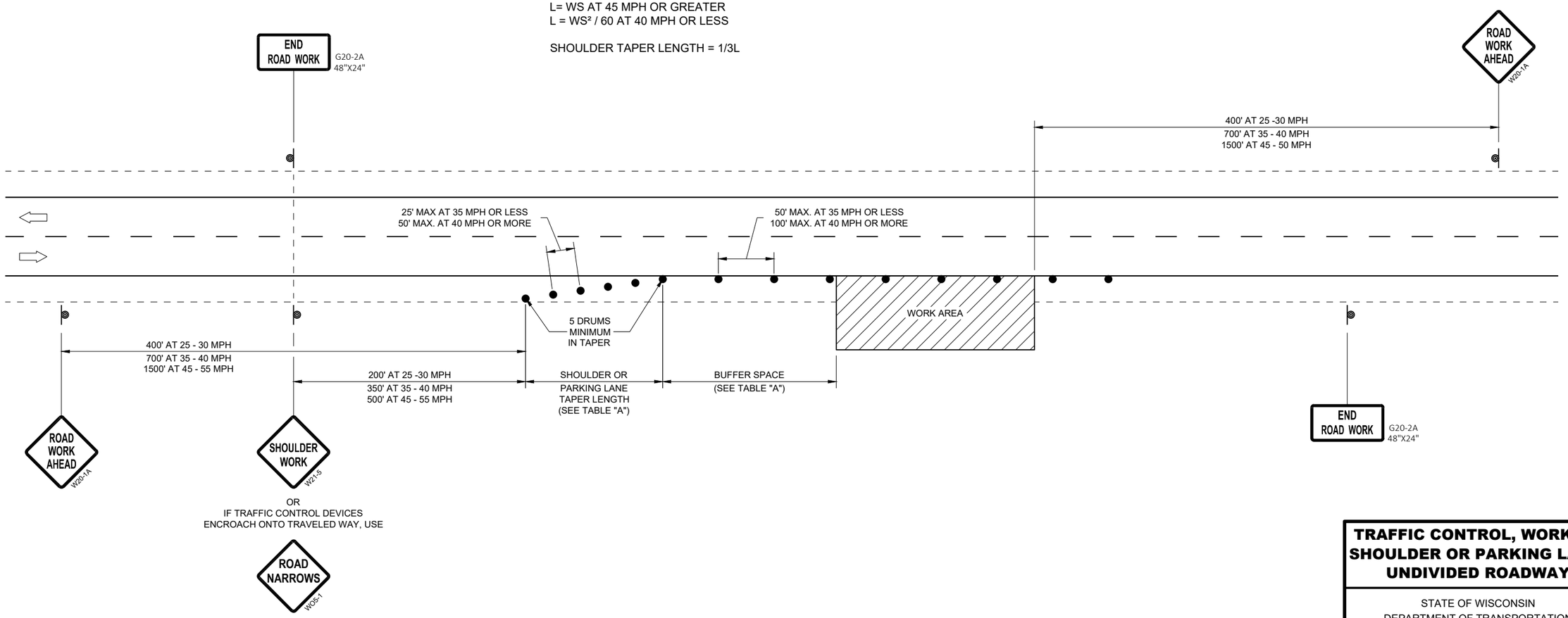
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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 WITHN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY RESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

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SDD 15D28 - 03

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SDD 15D28 - 03

LEGEND

SIGN ON TEMPORARY SUPPORT

SIGN ON PERMANENT SUPPORT

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

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

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

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

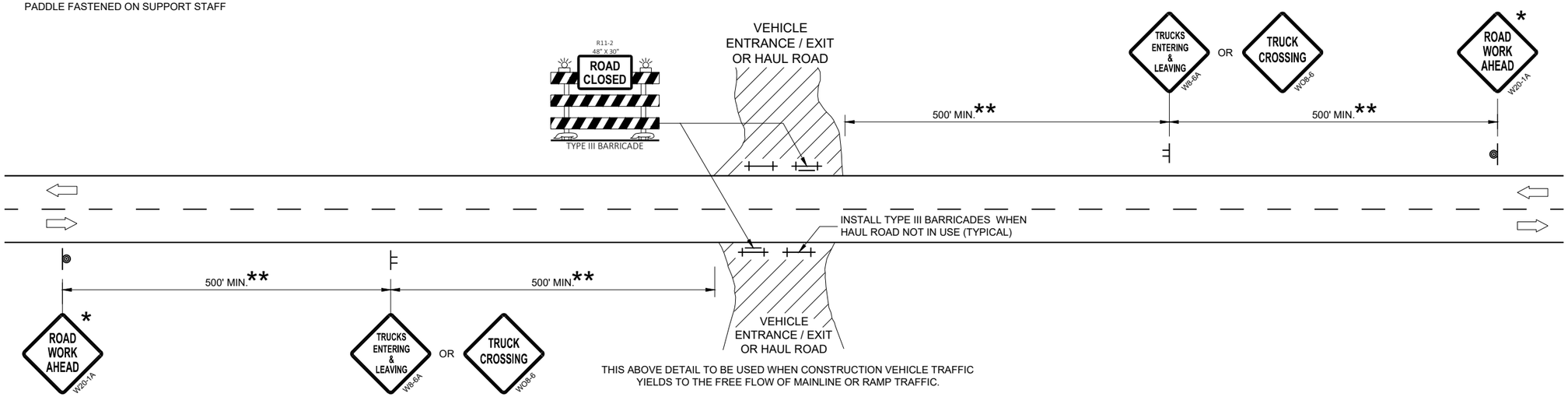
WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

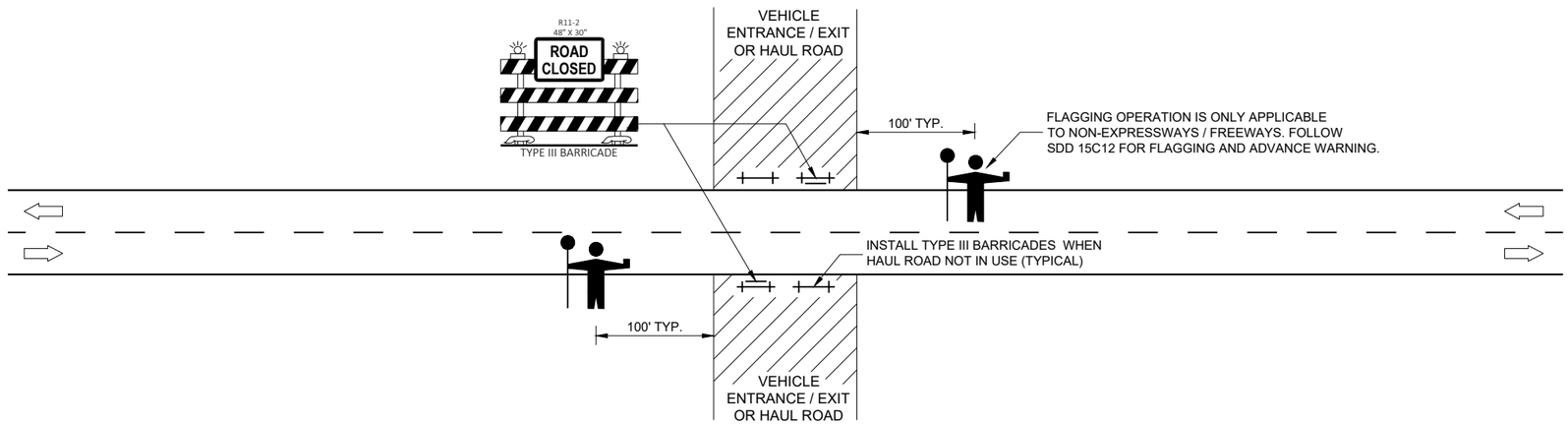
PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

* THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE / EXIT CONDITIONS ARE SEPARATED BY MORE THAN TWO MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

** 500 FEET SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 -40 MPH, USE 350 FEET. FOR 25-30 MPH, USE 200 FEET. USE 1000-1500 FEET FOR EXPRESSWAY / FREEWAY.



THIS ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC.



THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

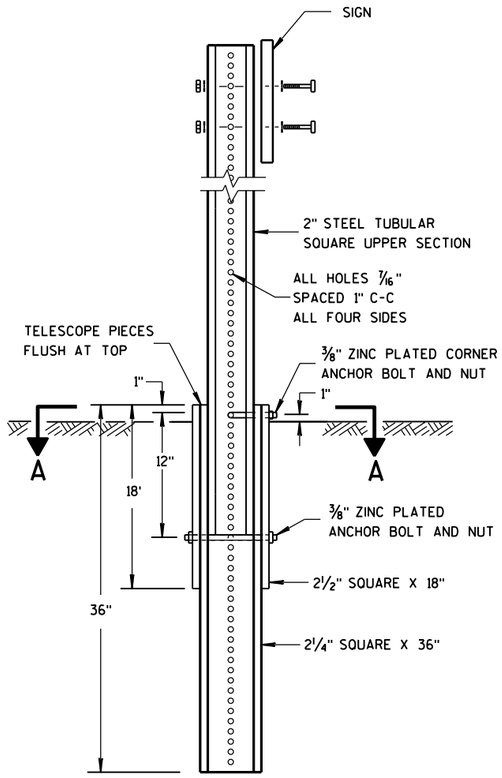
APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

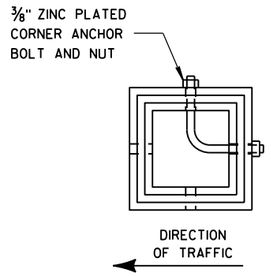
FHWA

SDD 15D29 - 05

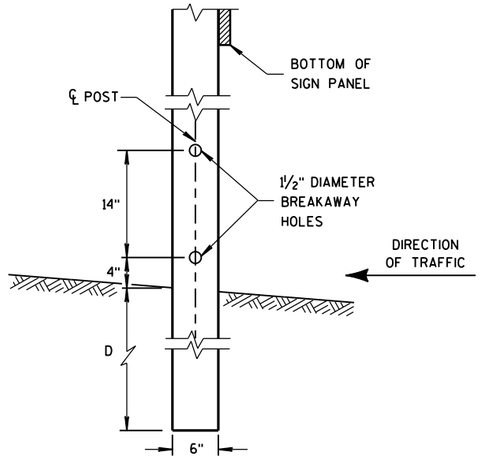
SDD 15D29 - 05



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



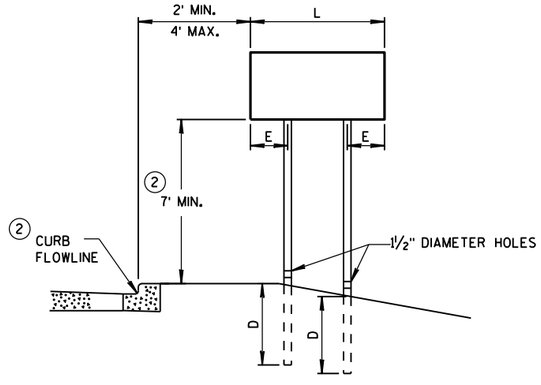
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

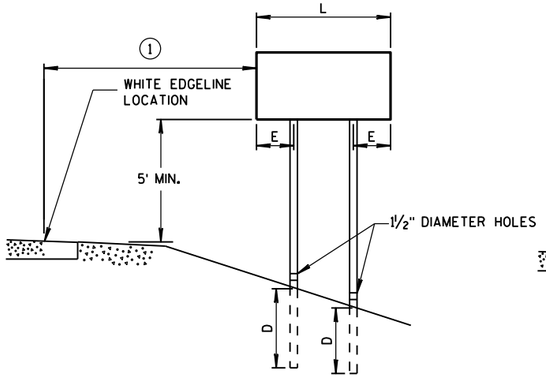
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

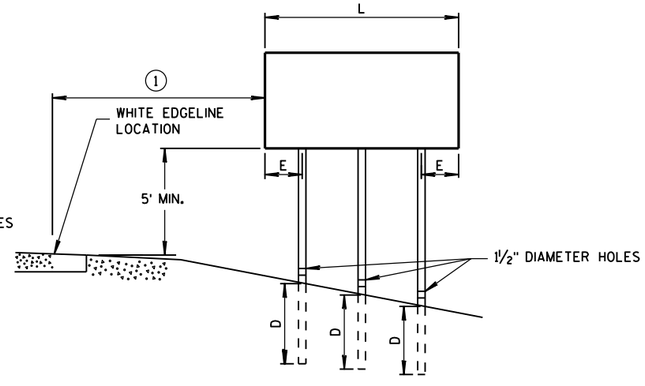
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

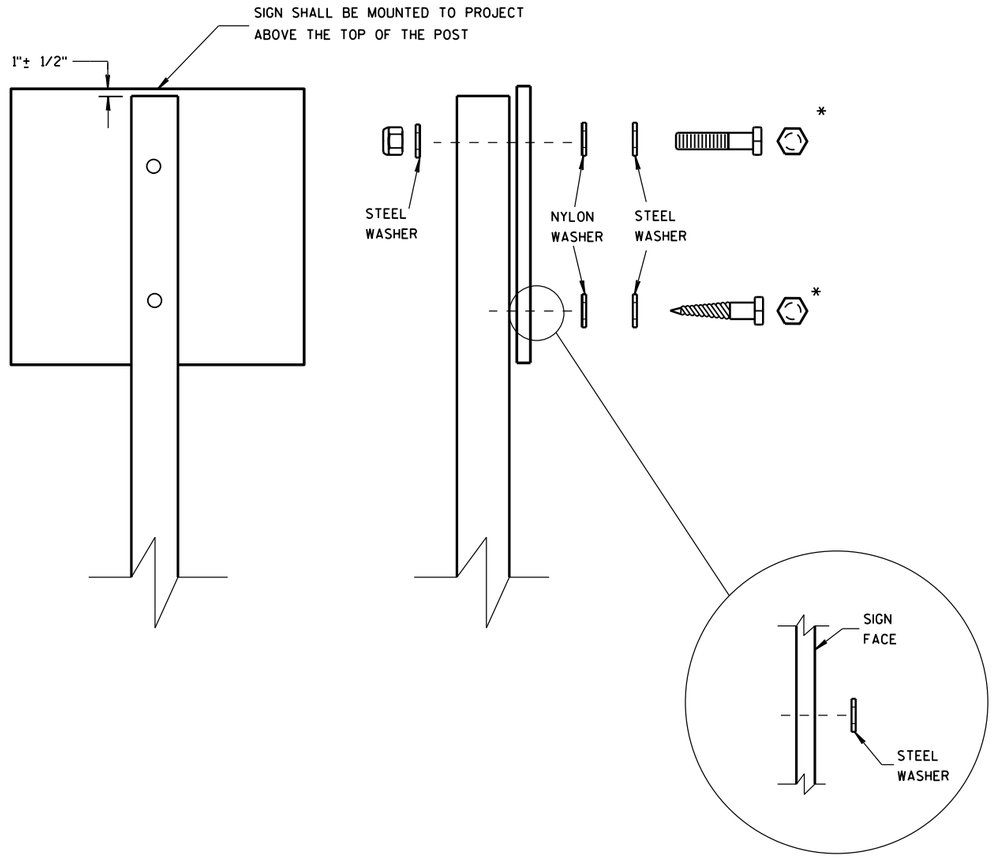
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



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

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

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

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

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

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

LAG SCREWS - 3/8" X 3"

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

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.

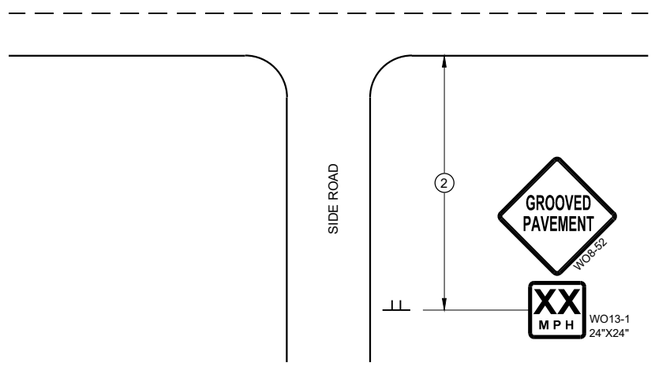
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

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

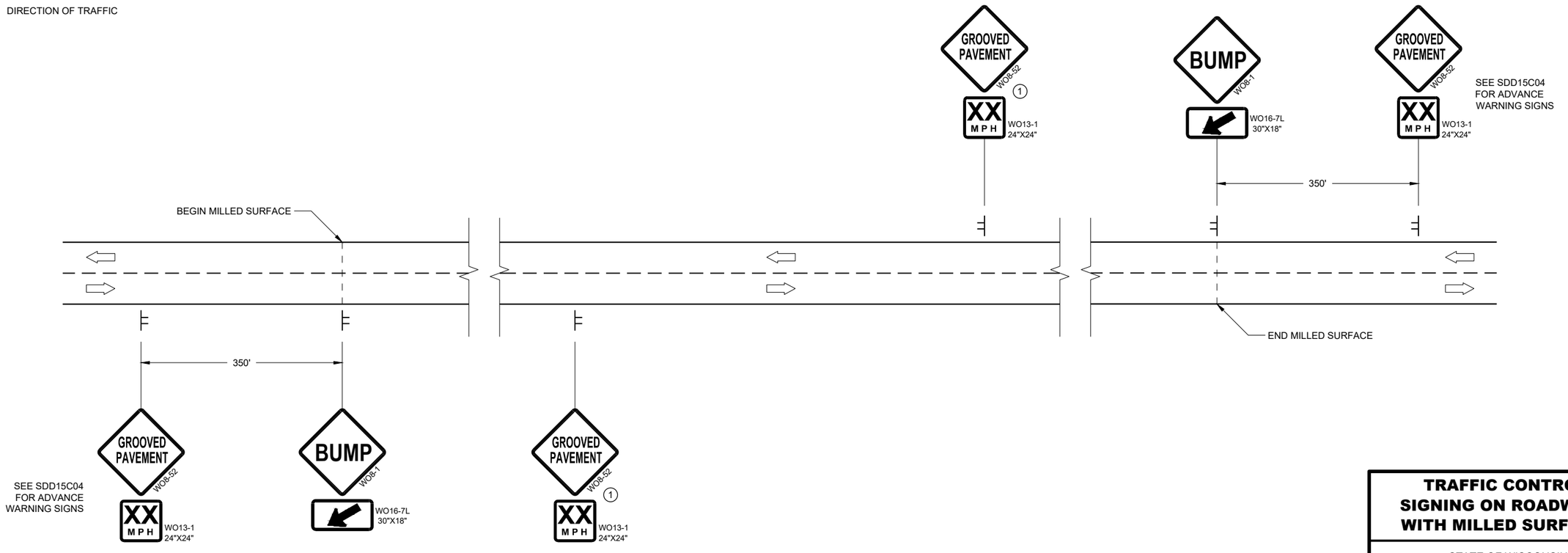
LEGEND

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
August 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

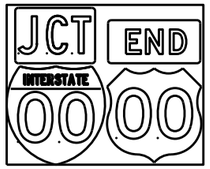
SDD 15D44 - 01

6

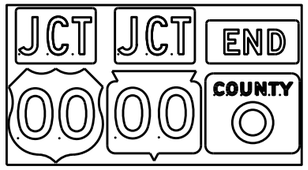
SDD 15D44 - 01

TYPICAL ASSEMBLIES

J1-1

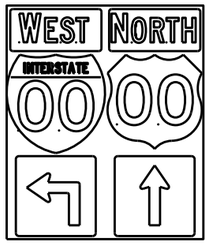


J1-2

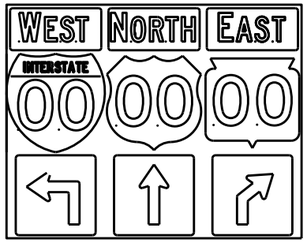


J1-3

J2-1



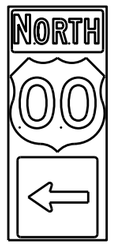
J2-2



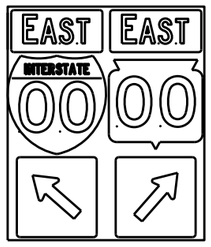
J2-3

JV

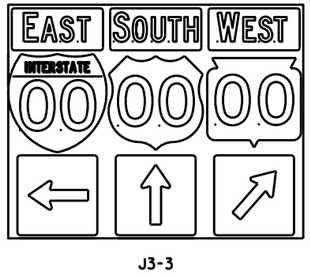
(Typical Vertical J-Assembly
See Note 10 and 11)



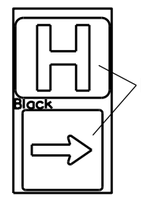
J3-1



J3-2



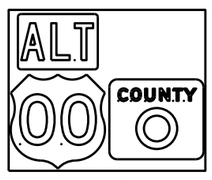
J3-3



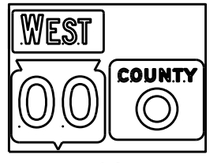
Blue Background

JH-1

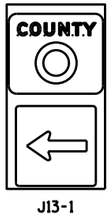
J4-1



J4-2



J4-2



J13-1

J12-1

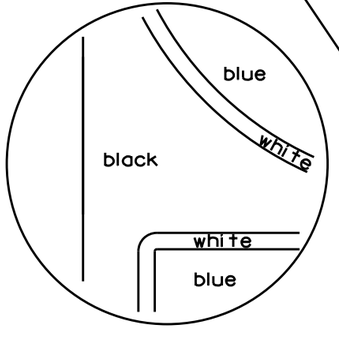
J32-1

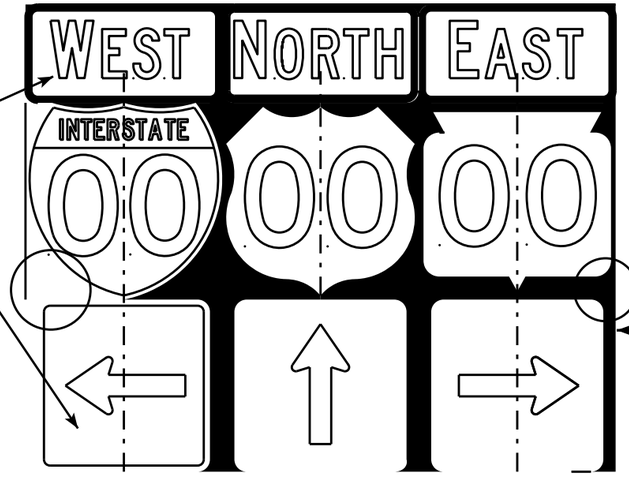
J33-1

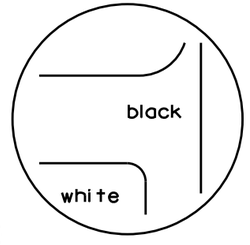
J23-1

J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

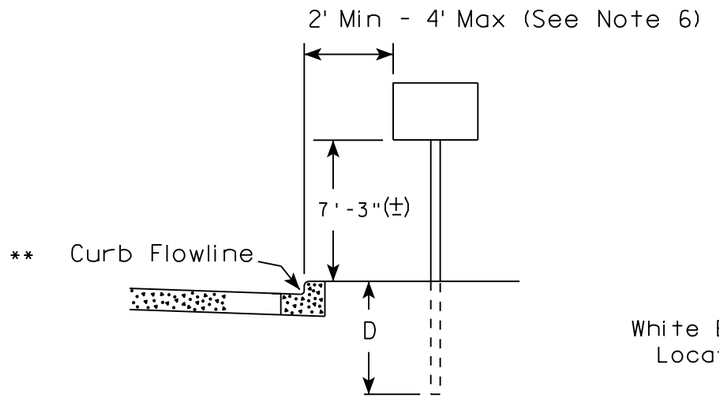
DATE 2/06/14 PL... A2-1S.8

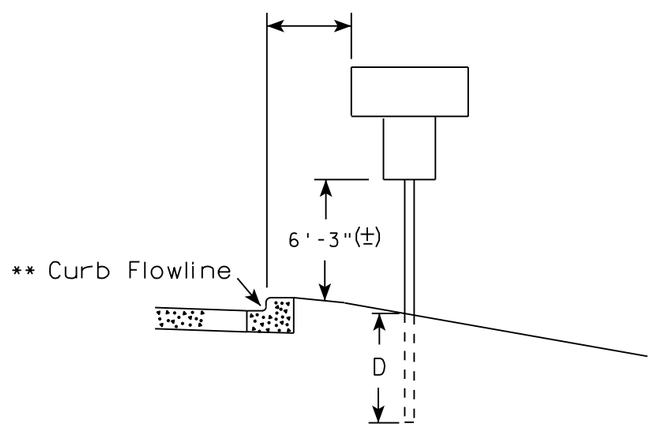
PROJECT NO:

SHEET NO: E

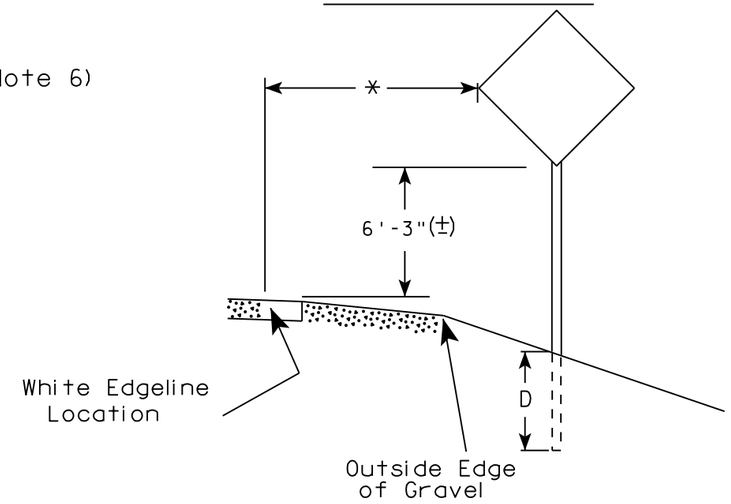
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

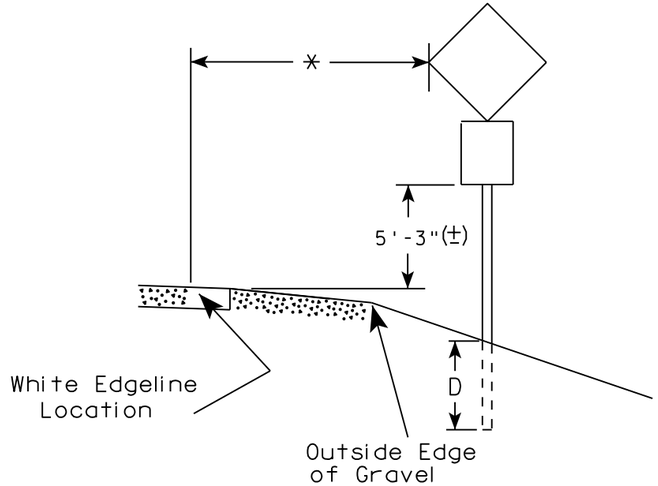
URBAN AREA





RURAL AREA (See Note 2)





GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

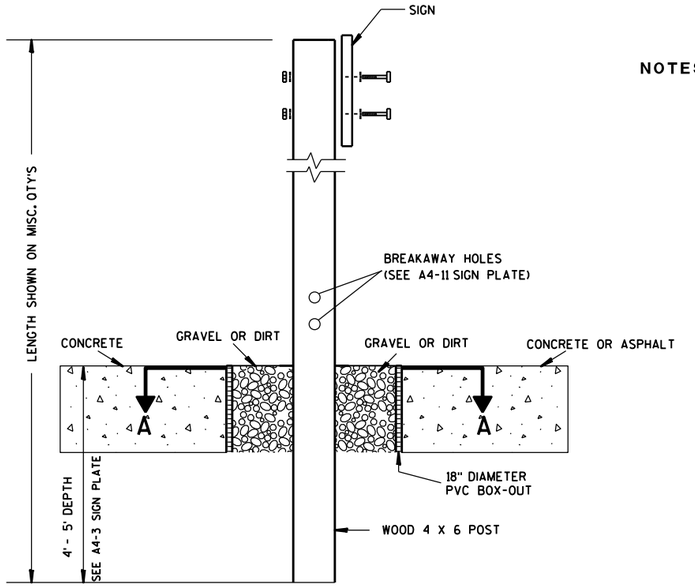
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

7

7

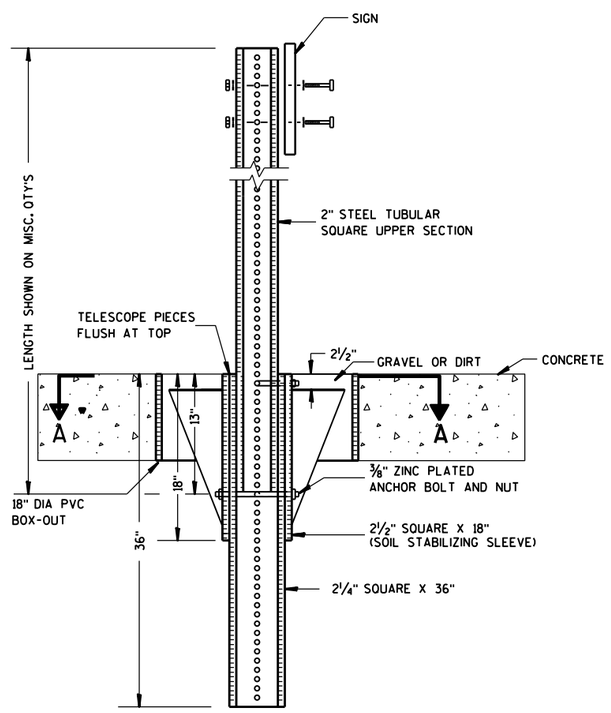
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 110	E



ELEVATION VIEW

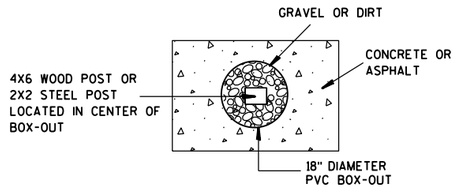
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

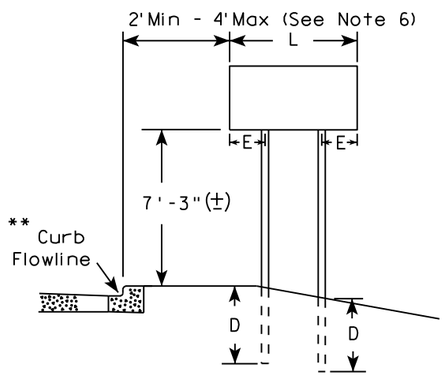
APPROVED Matthew R Rauch
for State Traffic Engineer

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

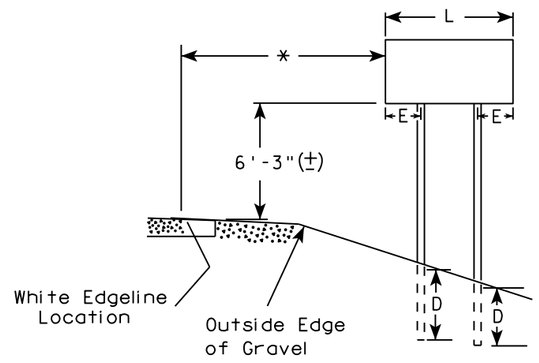
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

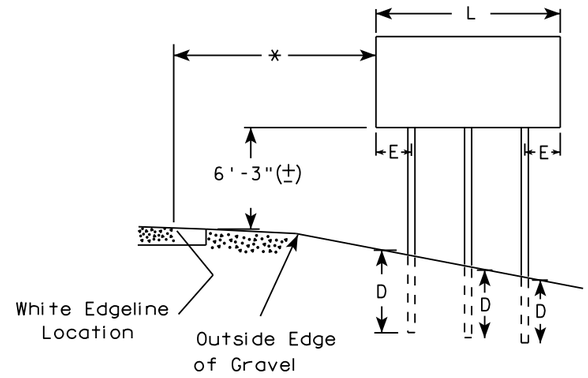
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

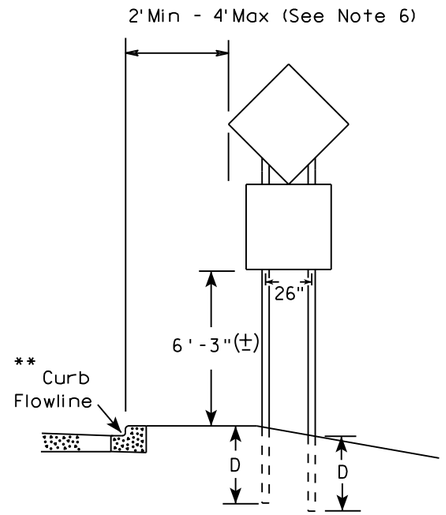
URBAN AREA



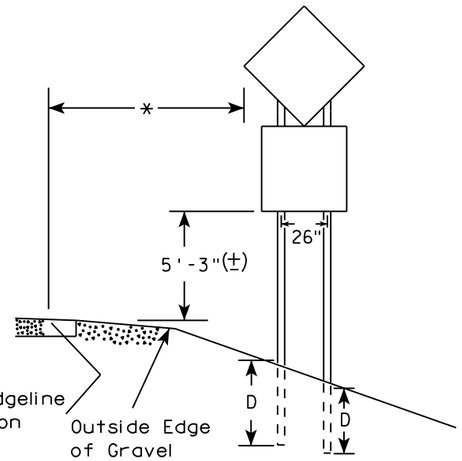
RURAL AREA (See Note 3)







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'

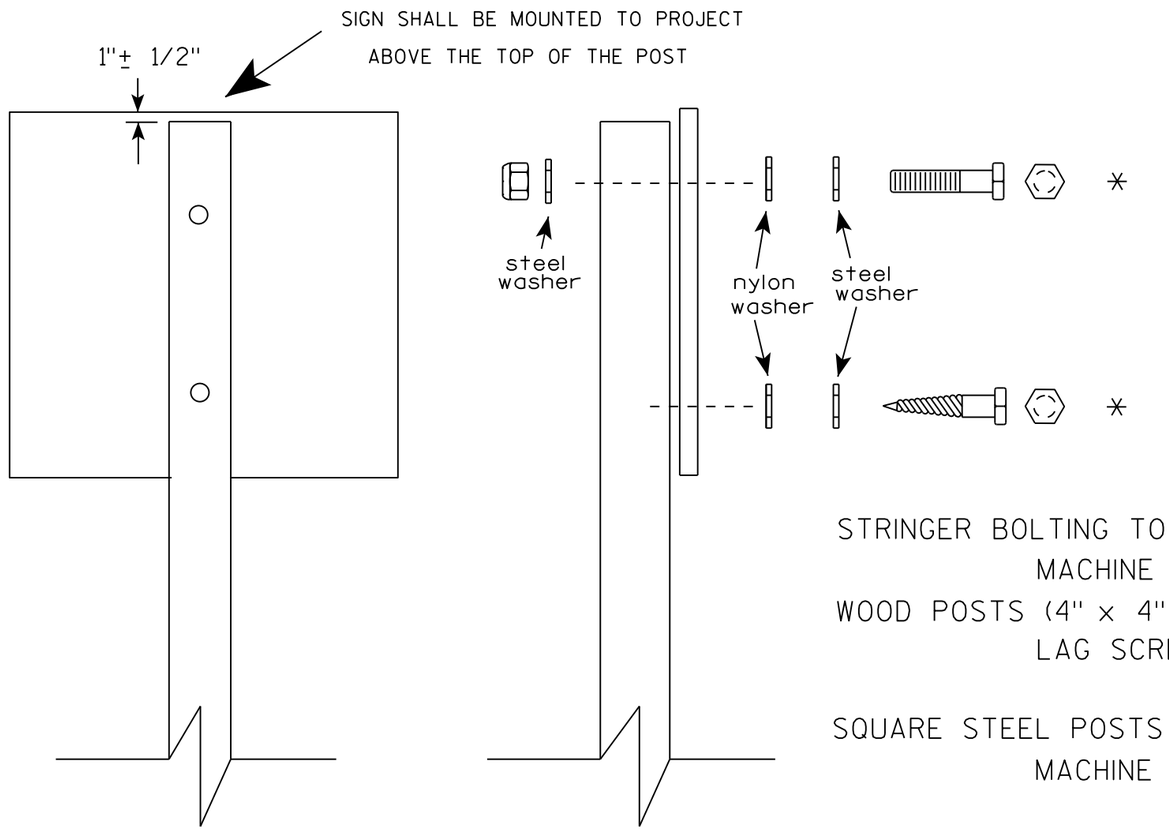
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 112	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)
SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

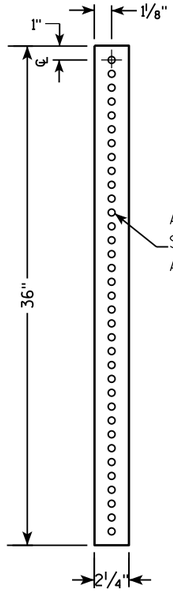
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

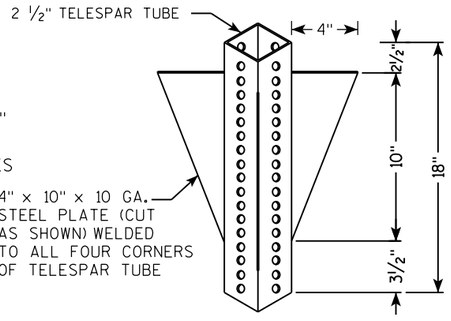
PROJECT NO: SHEET NO: E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

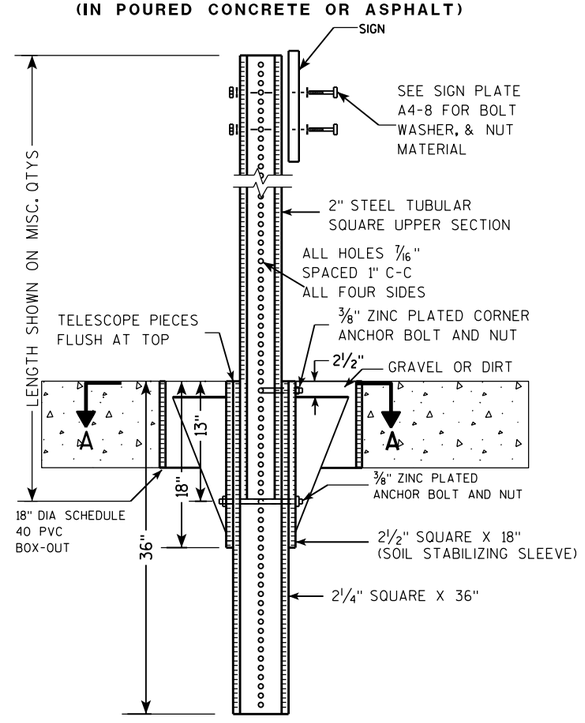
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



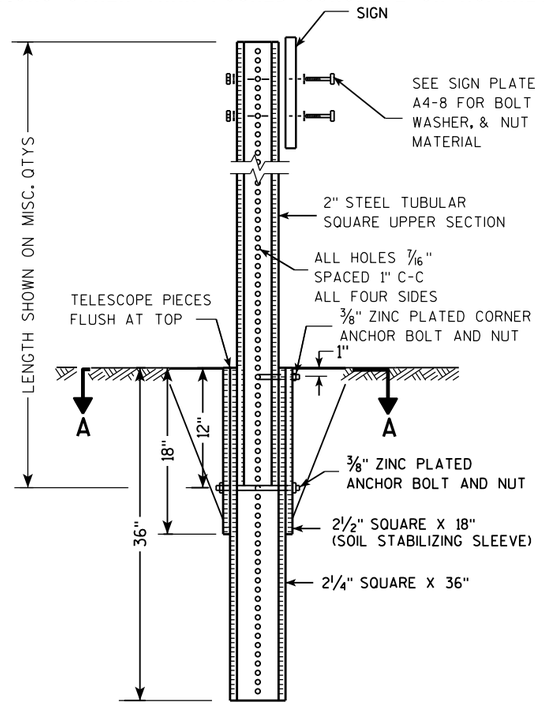
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

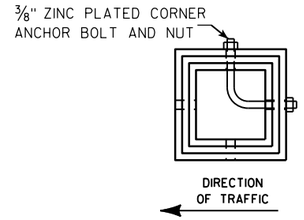


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

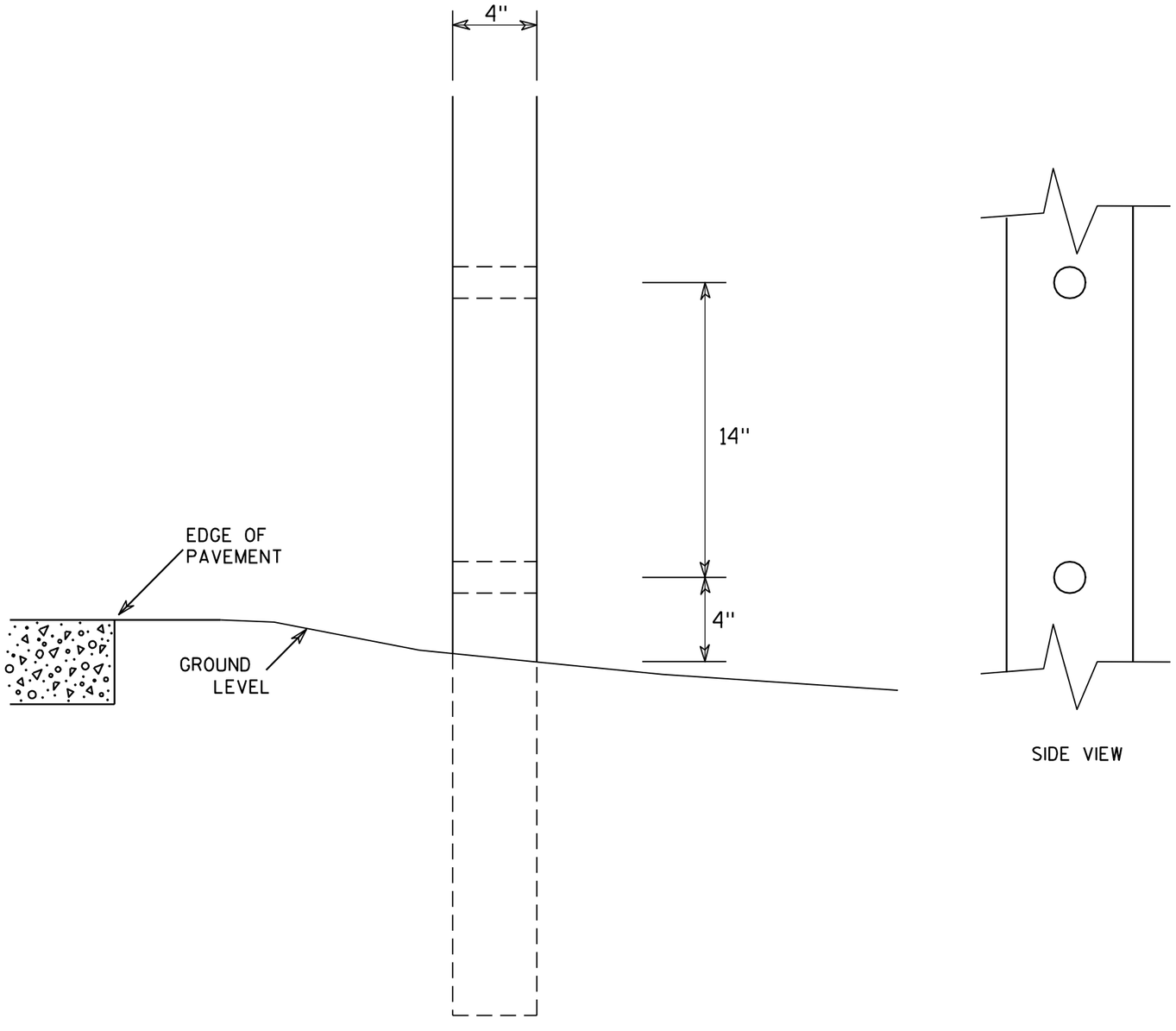
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 114 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

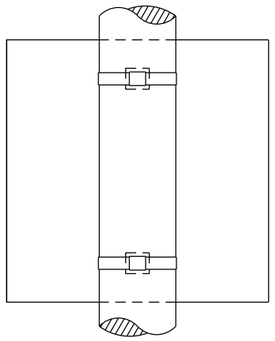
APPROVED Chester J Spang
for State Traffic Engineer

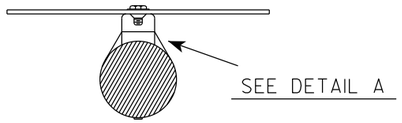
DATE 3/27/97 PLATE NO. A4-11.2

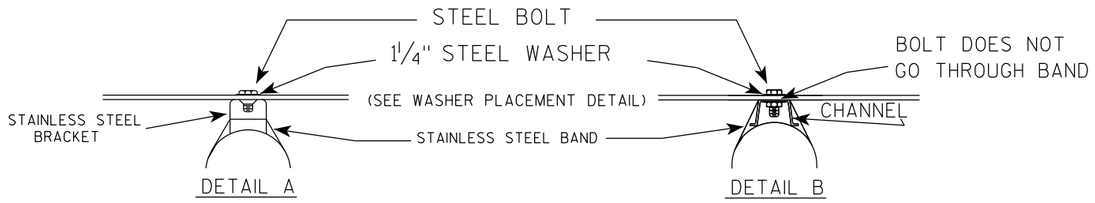
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 115	E

BANDING

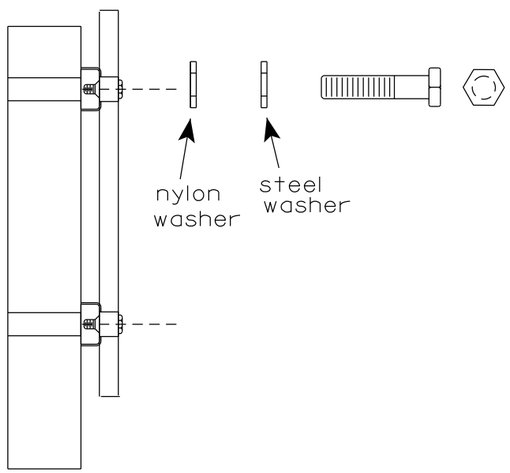
SINGLE SIGN







WASHER PLACEMENT

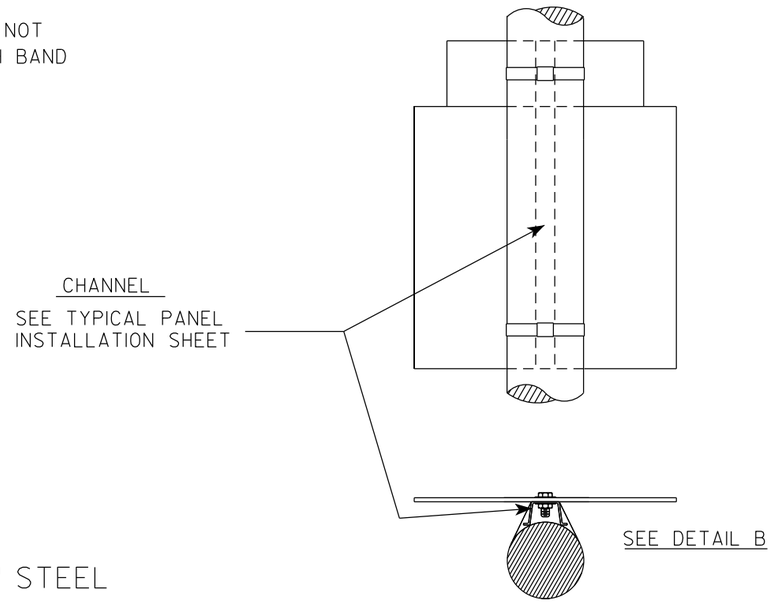


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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

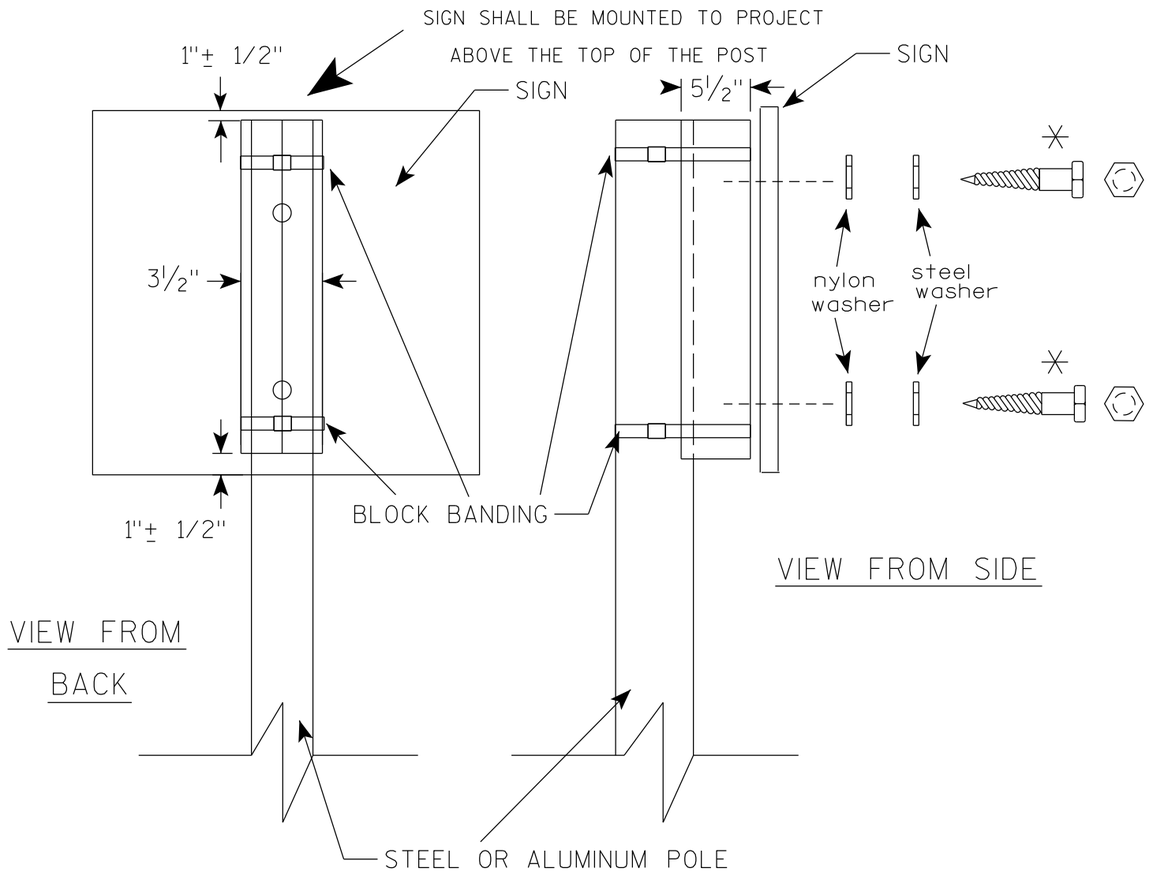
DATE 6/10/19 PLATE NO. A5-9.4

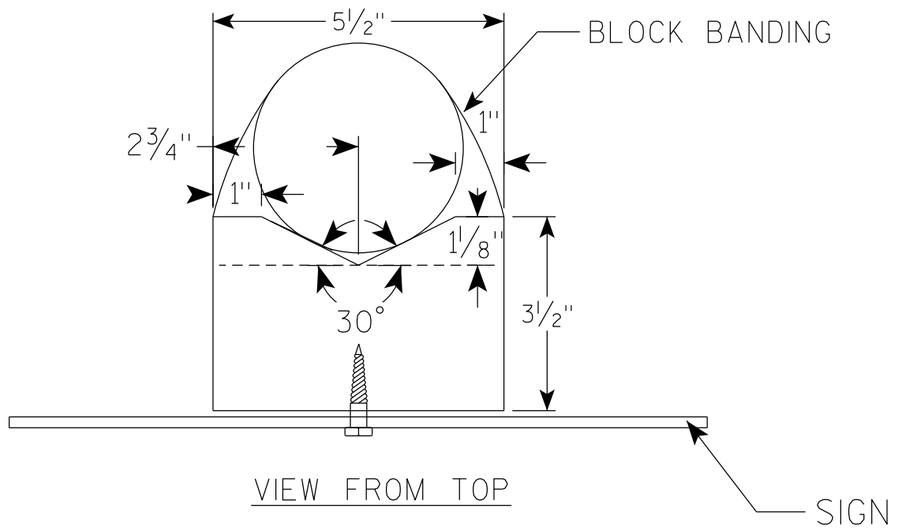
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 116	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

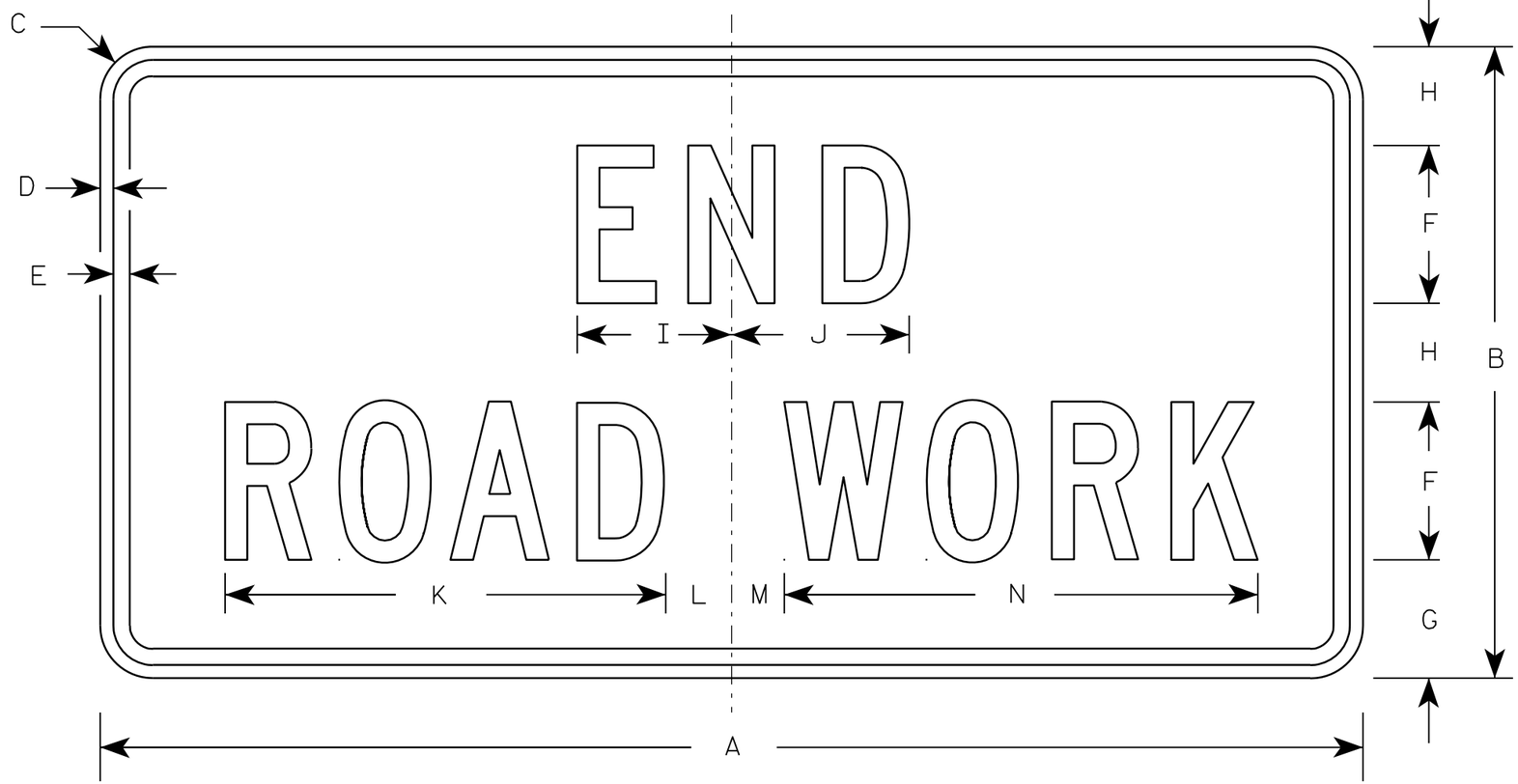
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO: | SHEET NO: 117 | 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

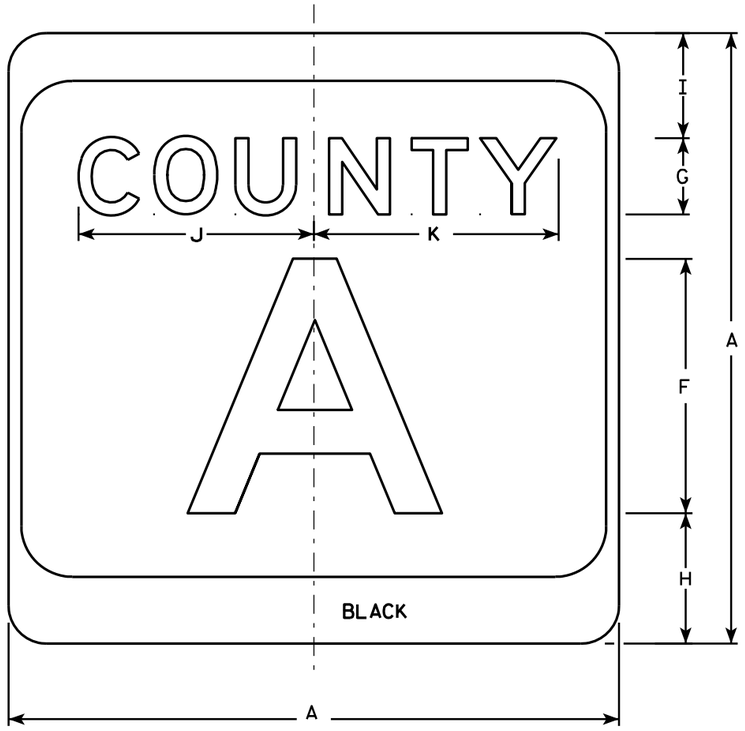
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

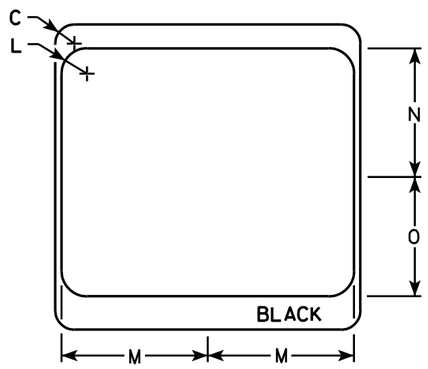
APPROVED Matthew R Rauch
for State Traffic Engineer

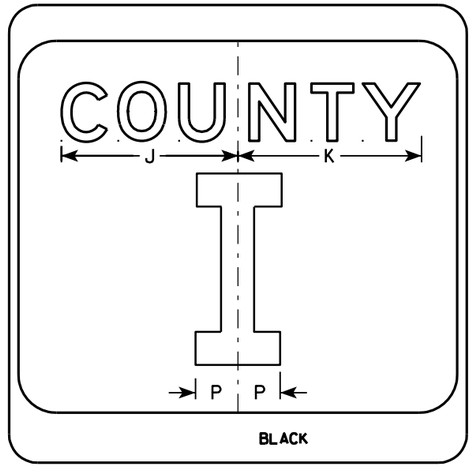
DATE 9/30/09 PLATE NO. G20-2A.8

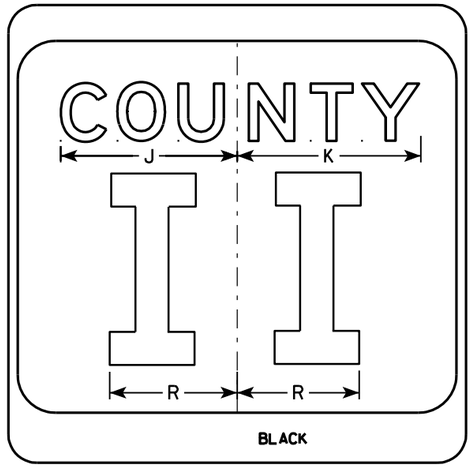
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 118	E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

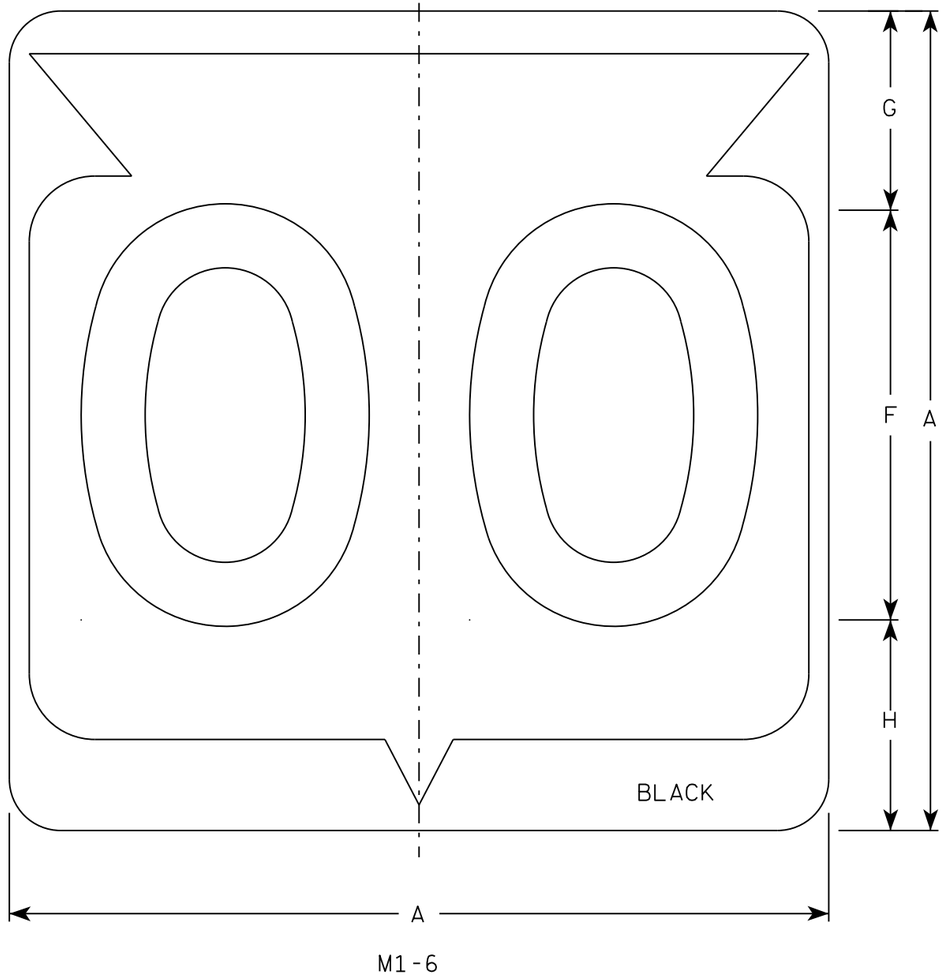
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

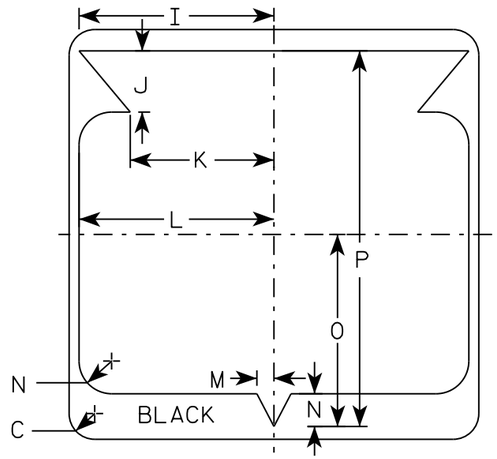
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 119	E



M1-6

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

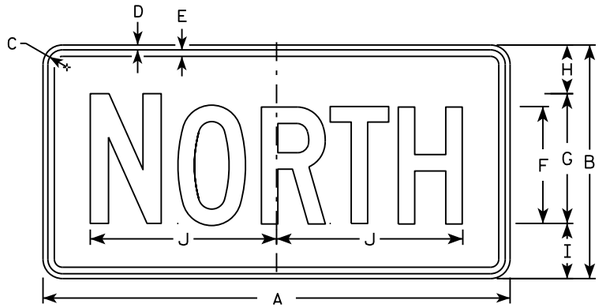
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

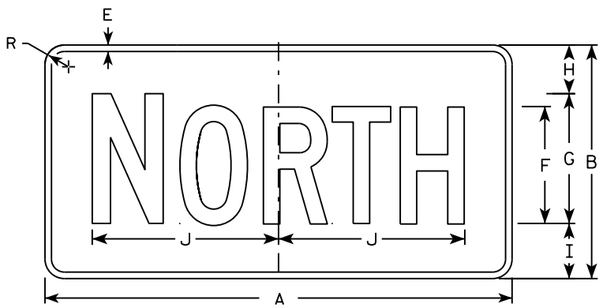
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

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



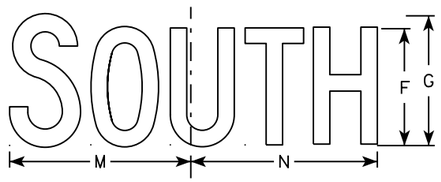
M3-1
MM3-1
MP3-1



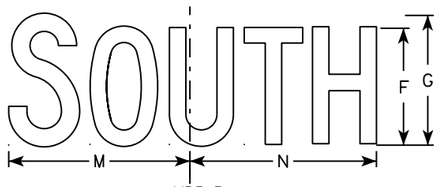
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

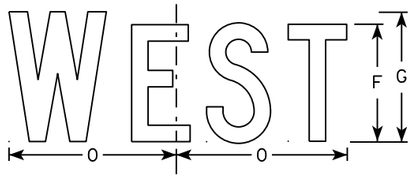
MB3-2
MK3-2
MN3-2



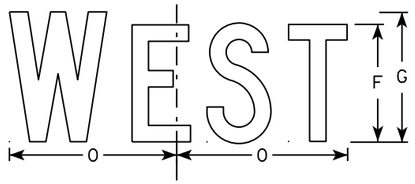
M3-3
MM3-3
MP3-3



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

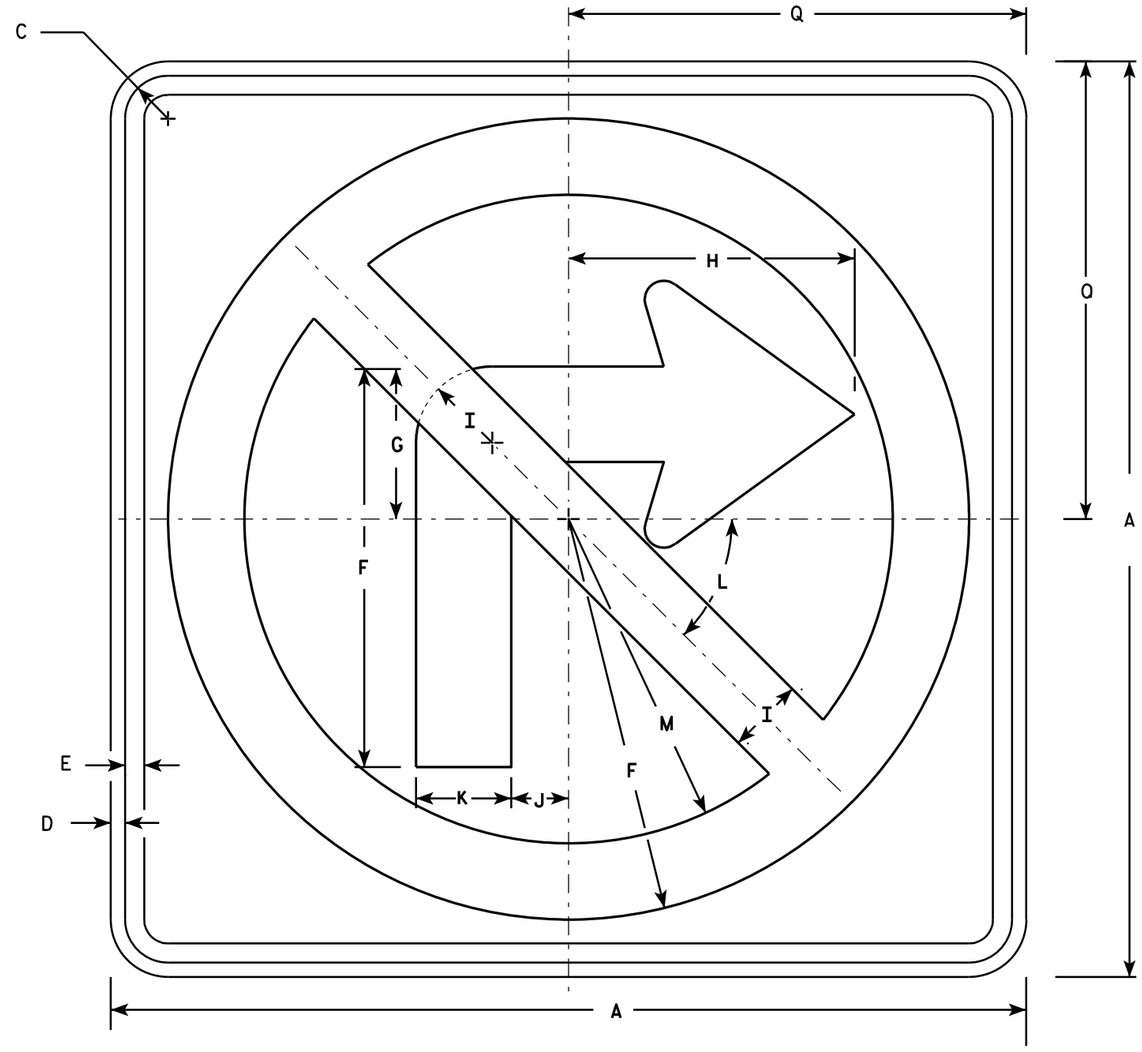
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

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

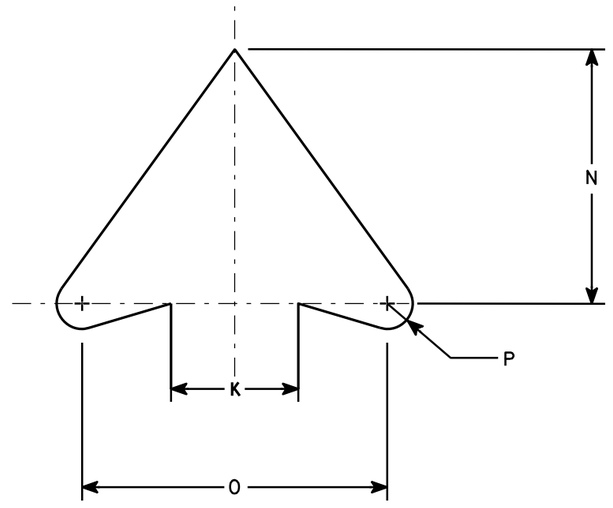
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



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

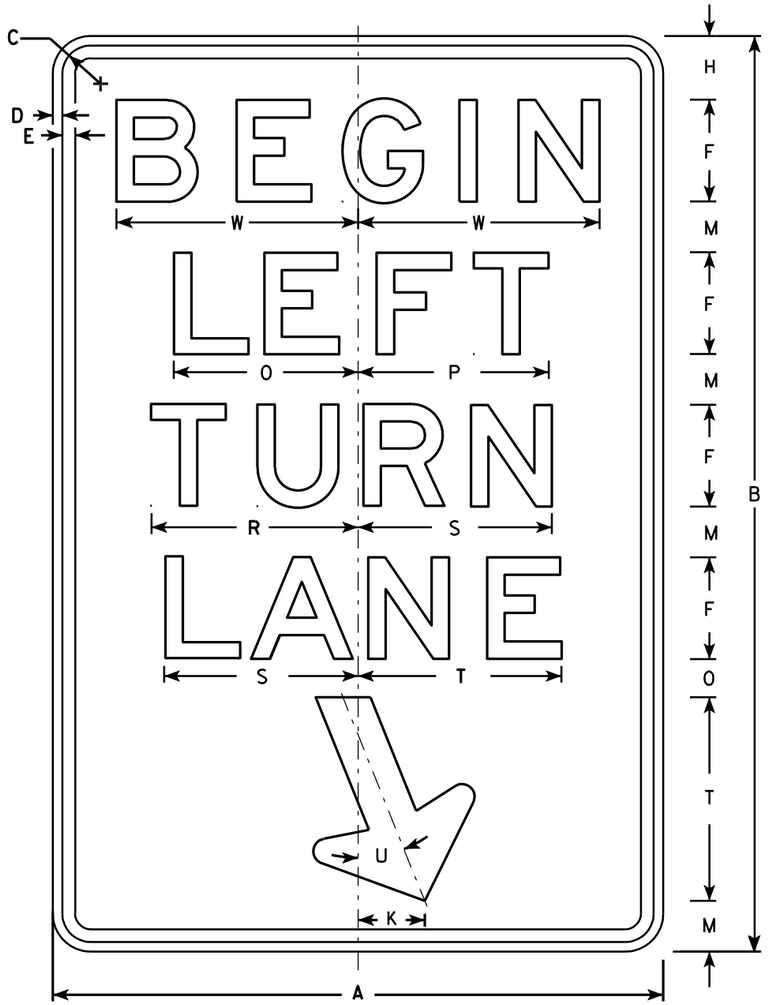
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

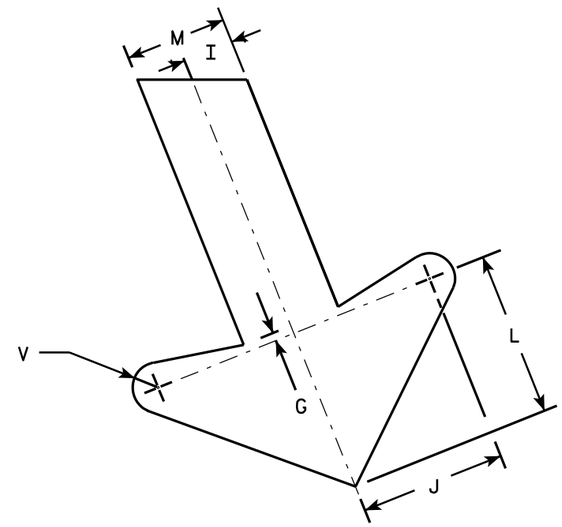
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 122	E



R3-20L

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

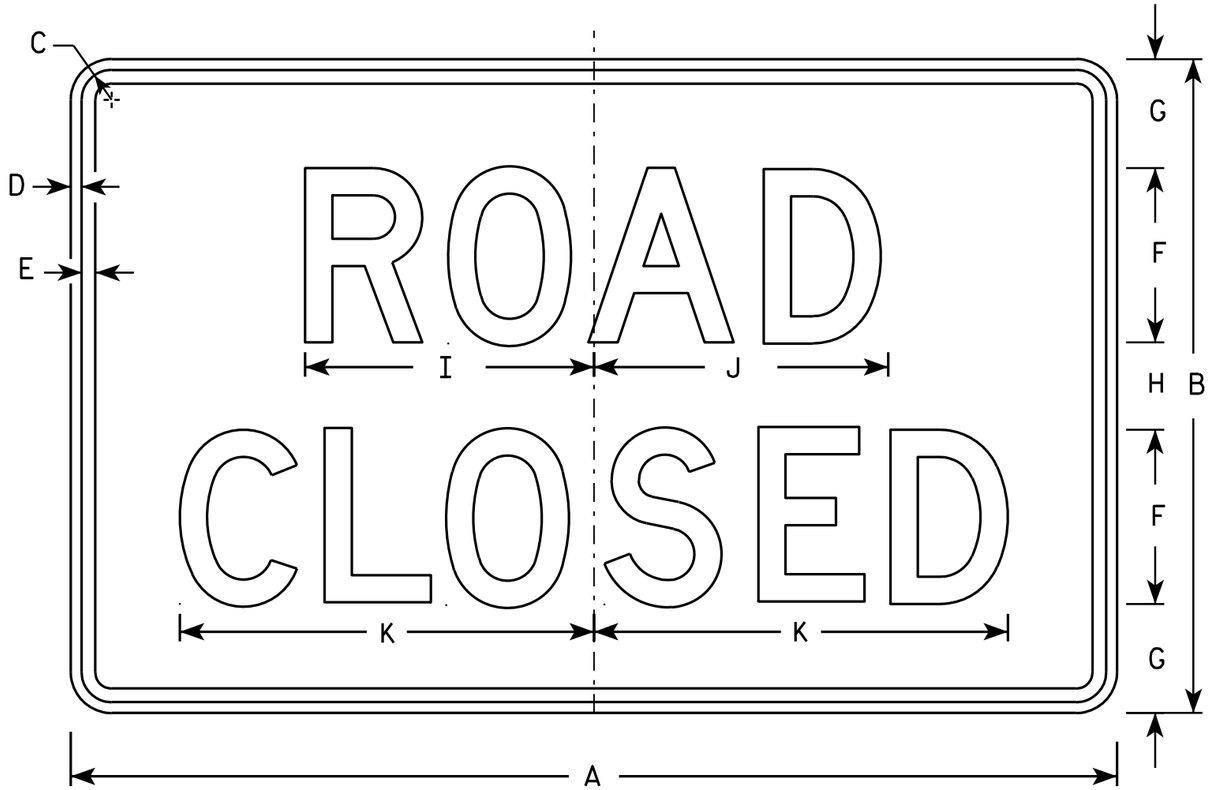
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

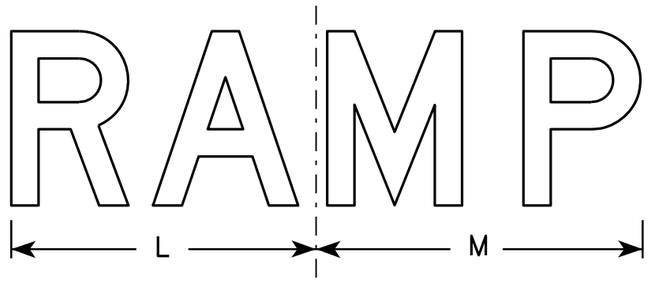
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 123 | E



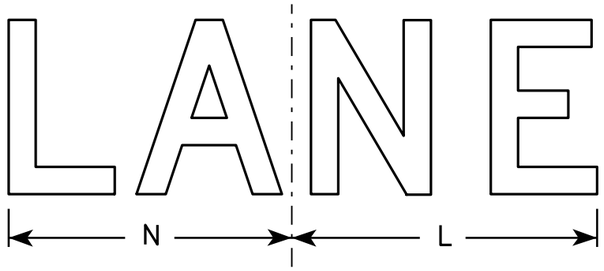
R11-2

NOTES

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



R11-2R



R11-2L

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

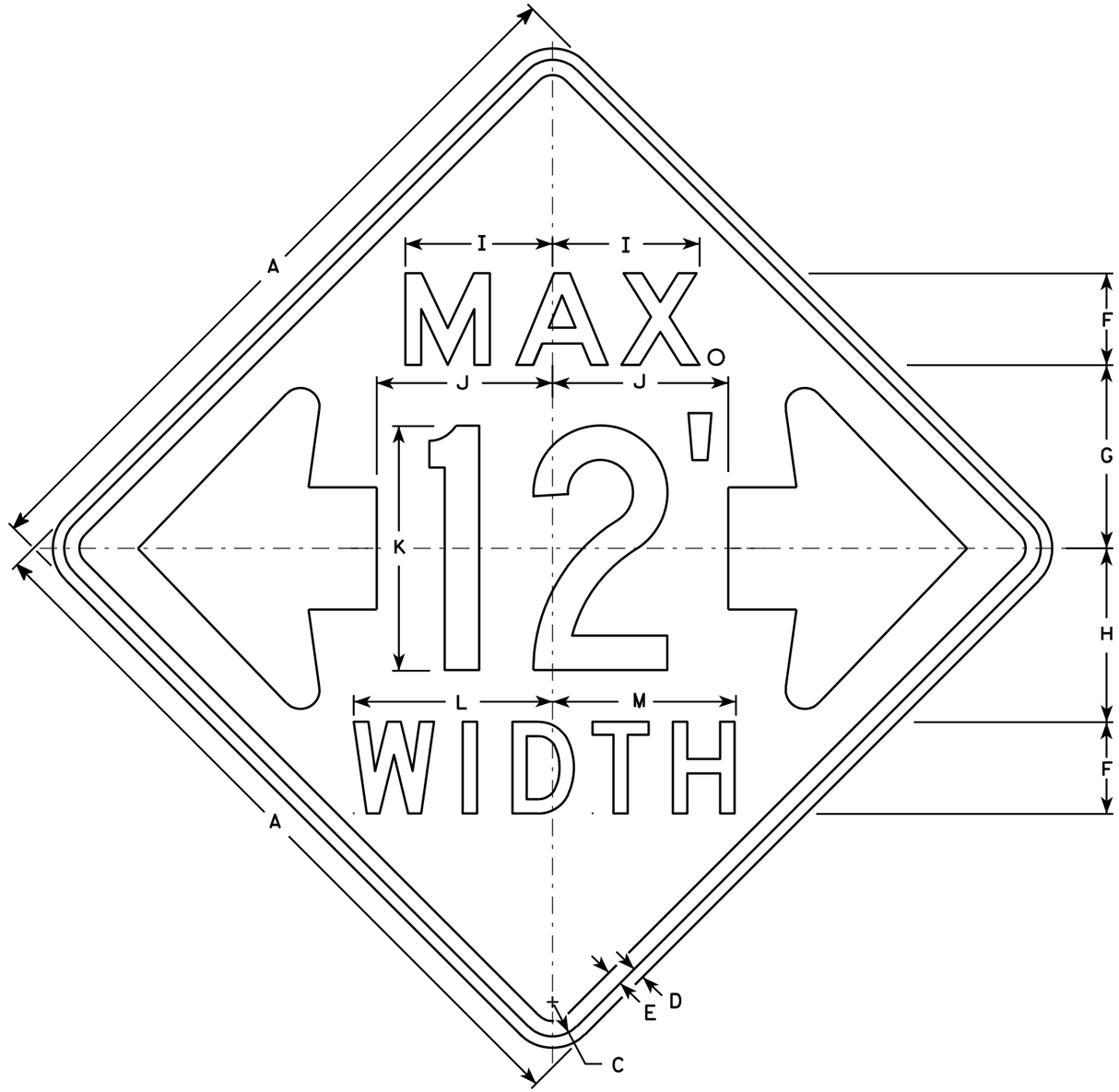
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

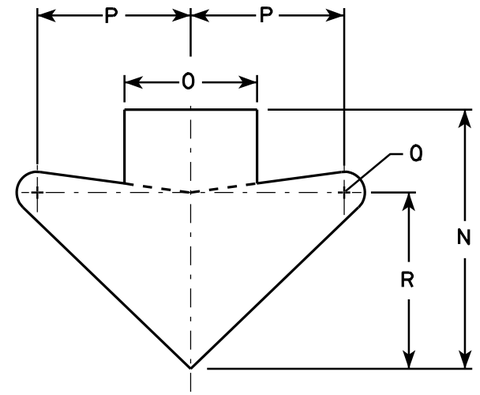
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 124 | E



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

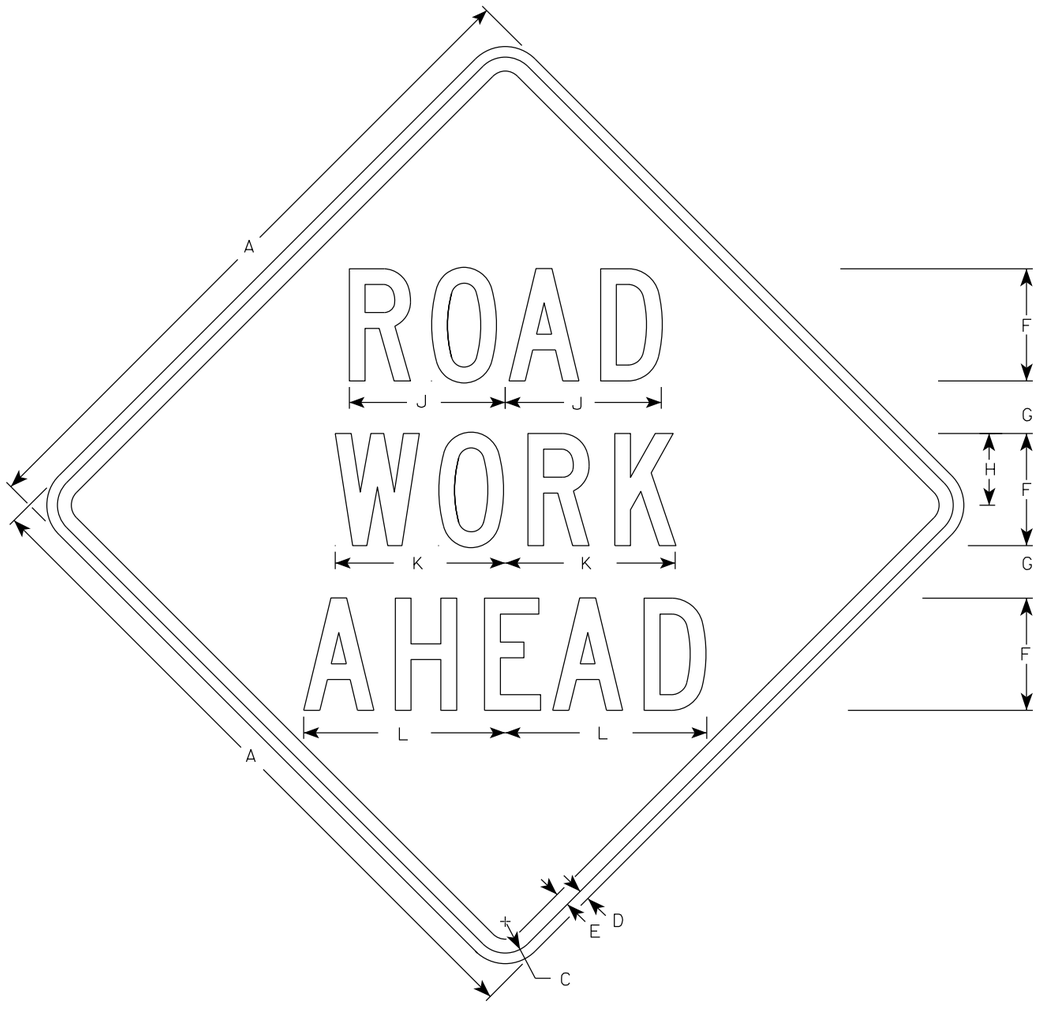
APPROVED Matthew R Rauch
for State Traffic Engineer

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

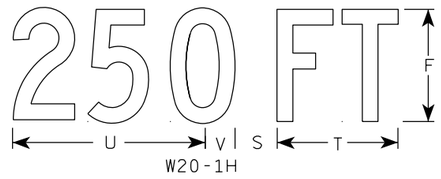
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 125 | E

7

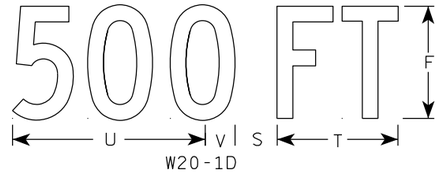
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000
WISDOT/CADDS SHEET 42



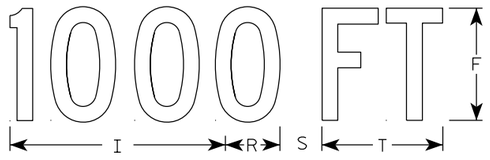
W20-1A



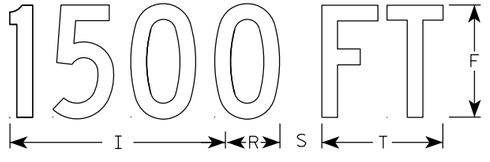
W20-1H



W20-1D



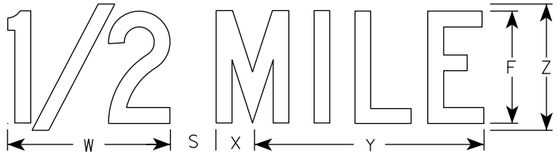
W20-1C



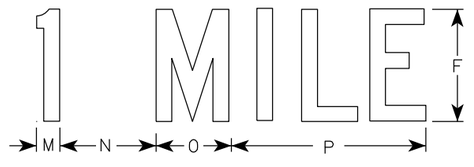
W20-1B

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 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

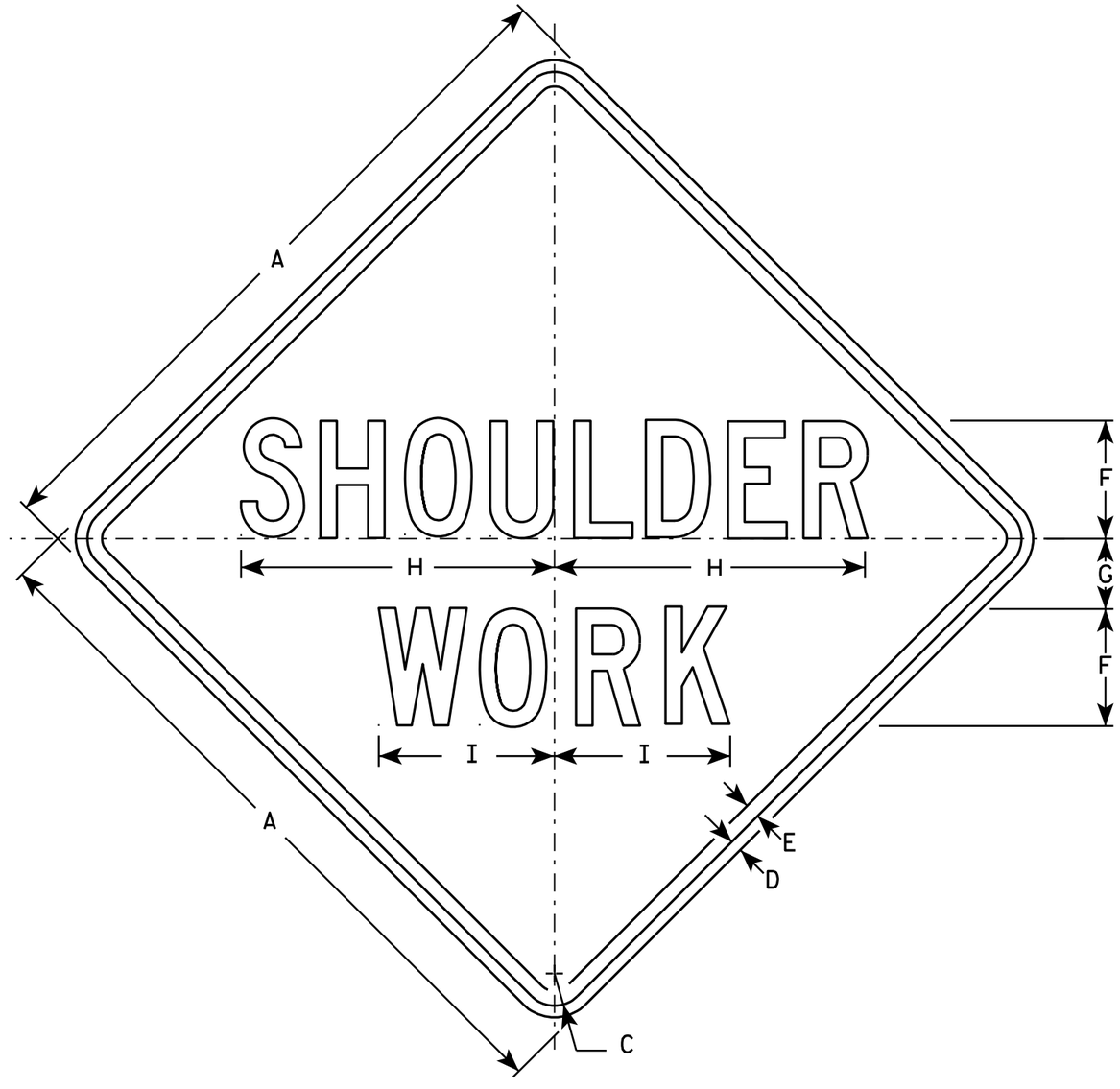
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/25/19 PLATE NO. W20-1.11

PROJECT NO:

SHEET NO: 126 E



W21-5

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

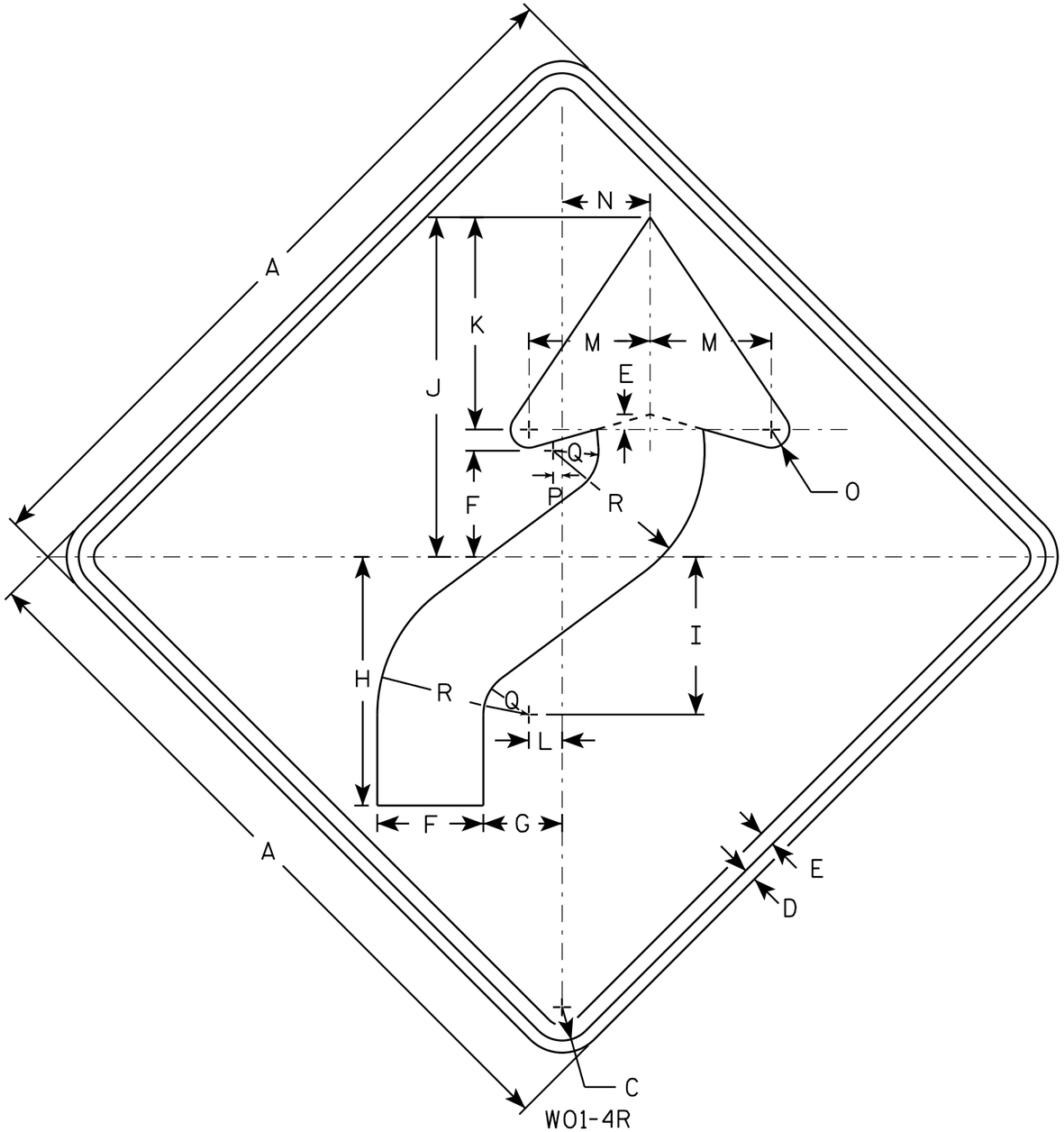
STANDARD SIGN
W21-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 127	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

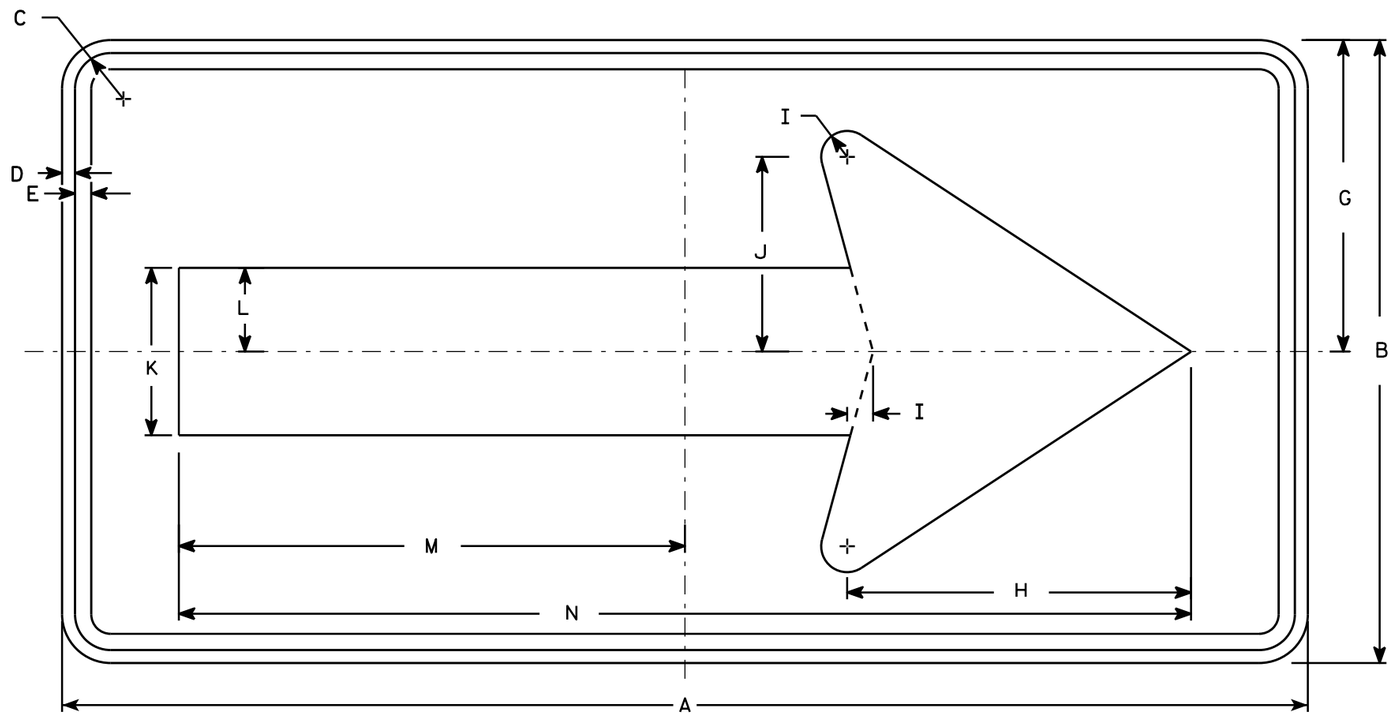
WISCONSIN DEPT OF TRANSPORTATION

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

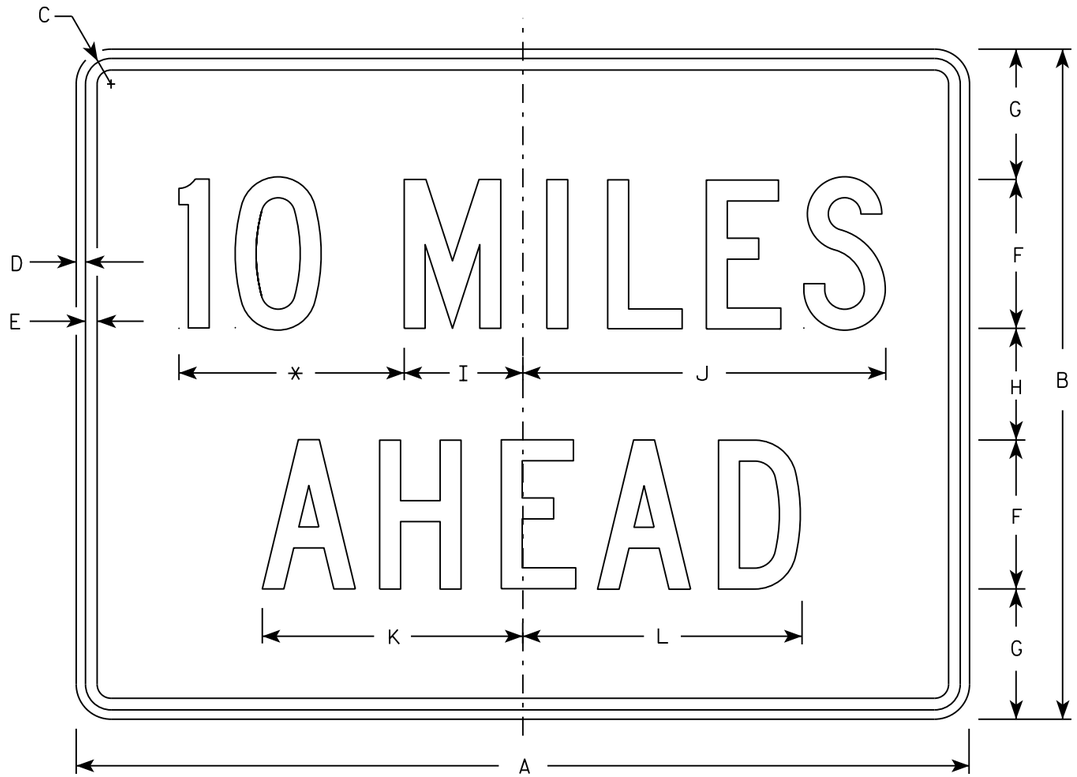
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

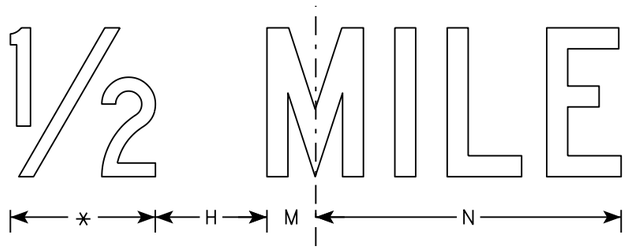
DATE 11/18/13 PLATE W01-6.1

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



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

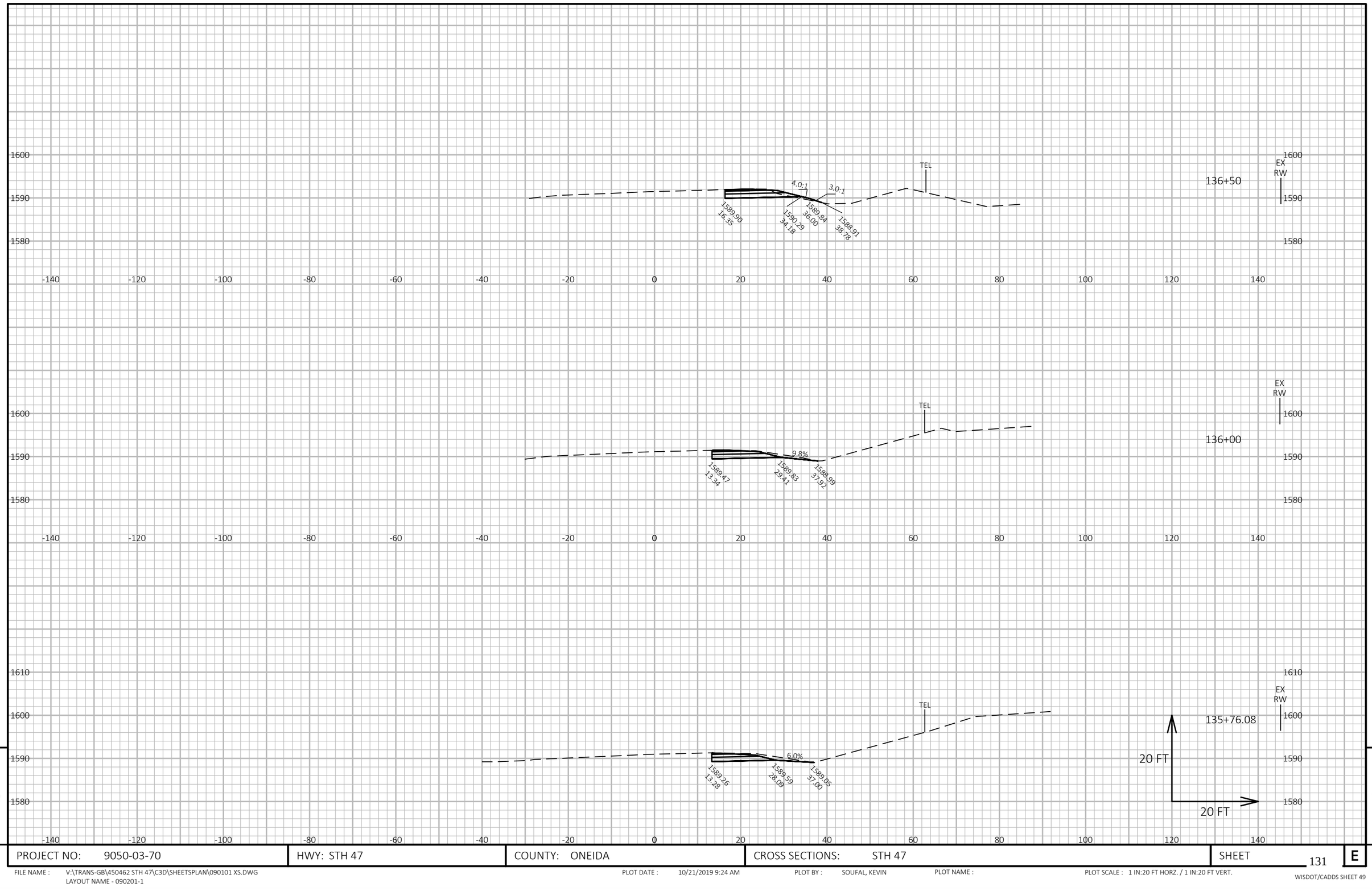
STANDARD SIGN
W057-52

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: 130	E



9

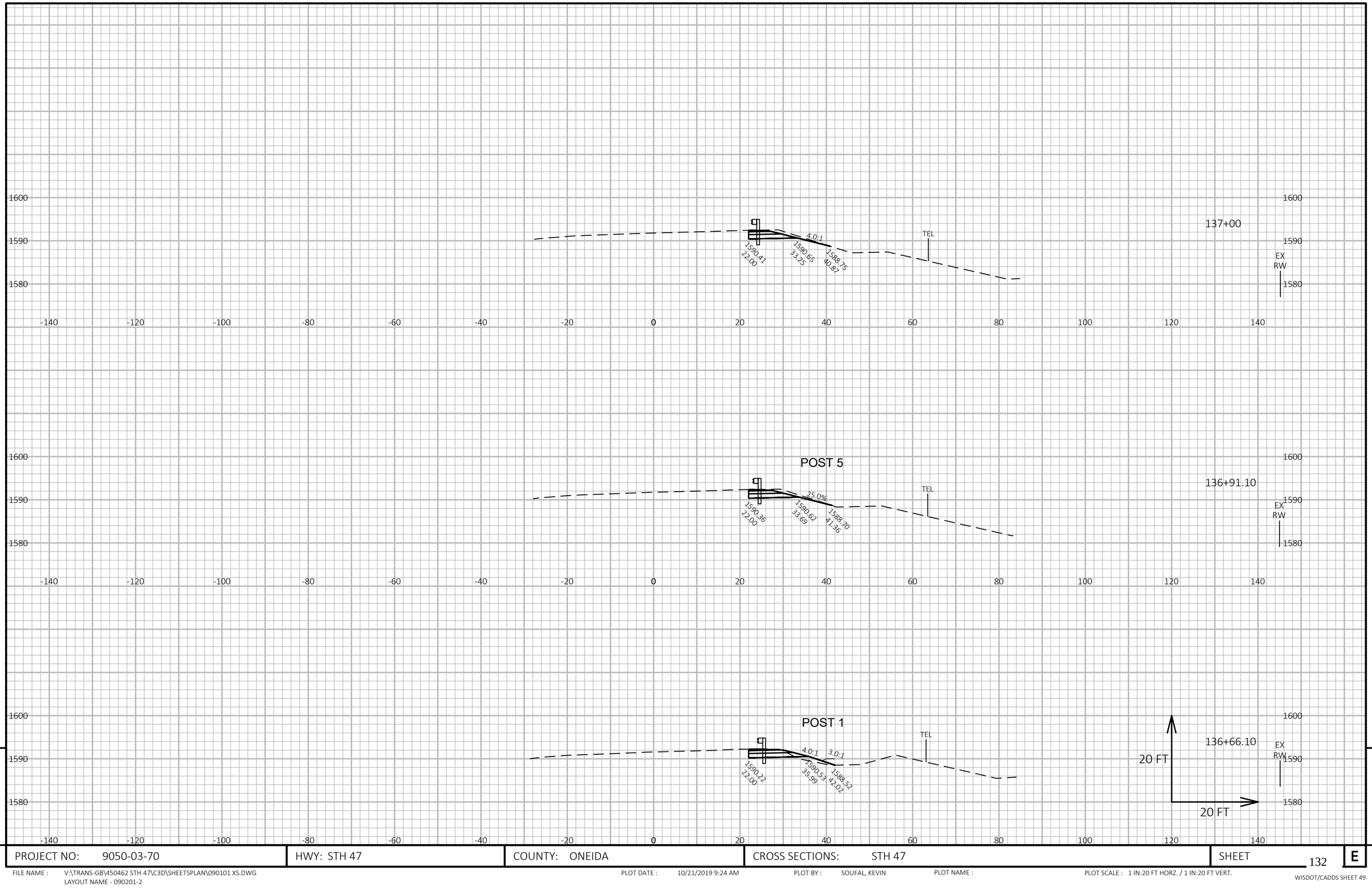
9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 131	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-1

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



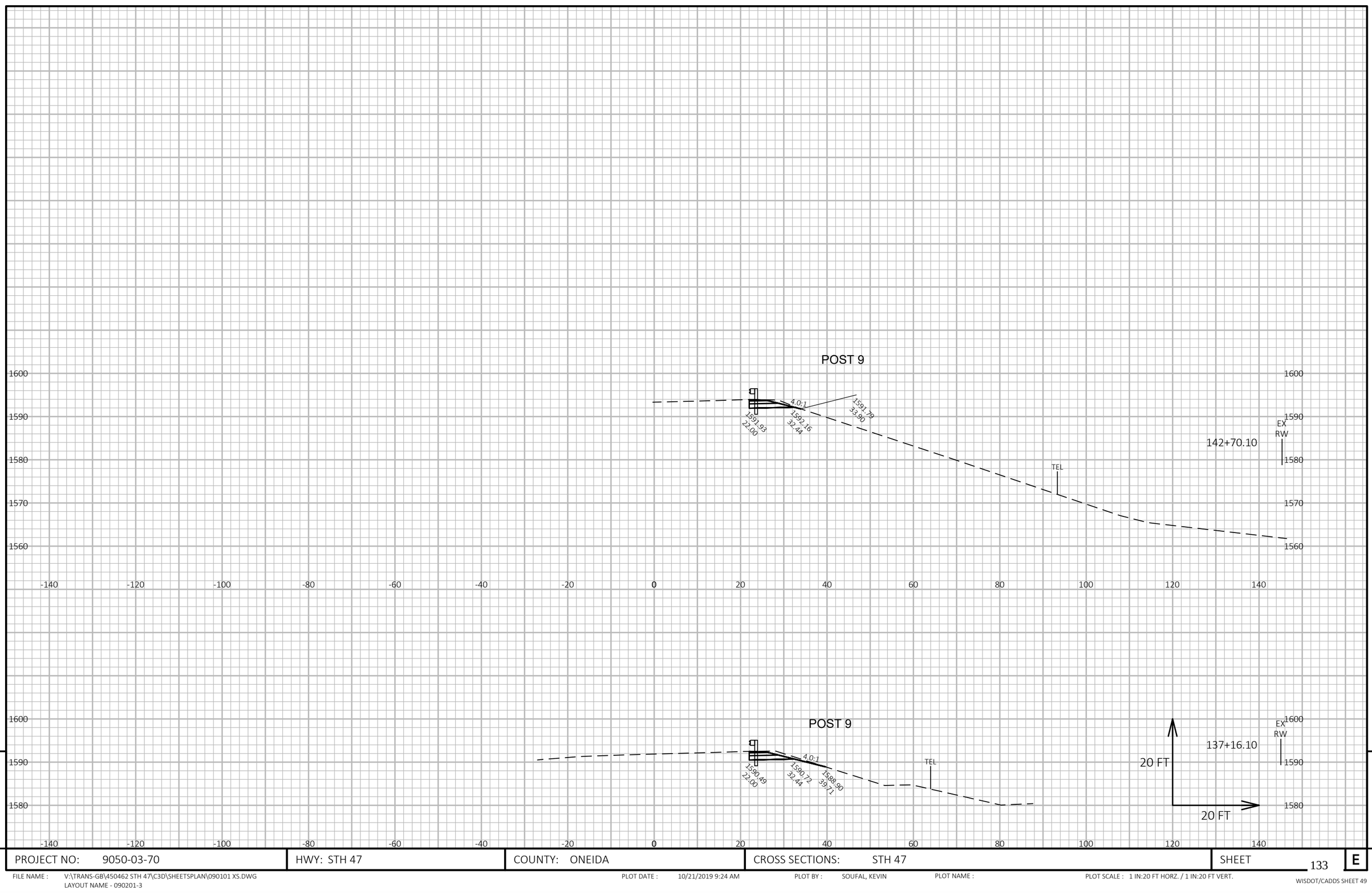
9

9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 132	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-2

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

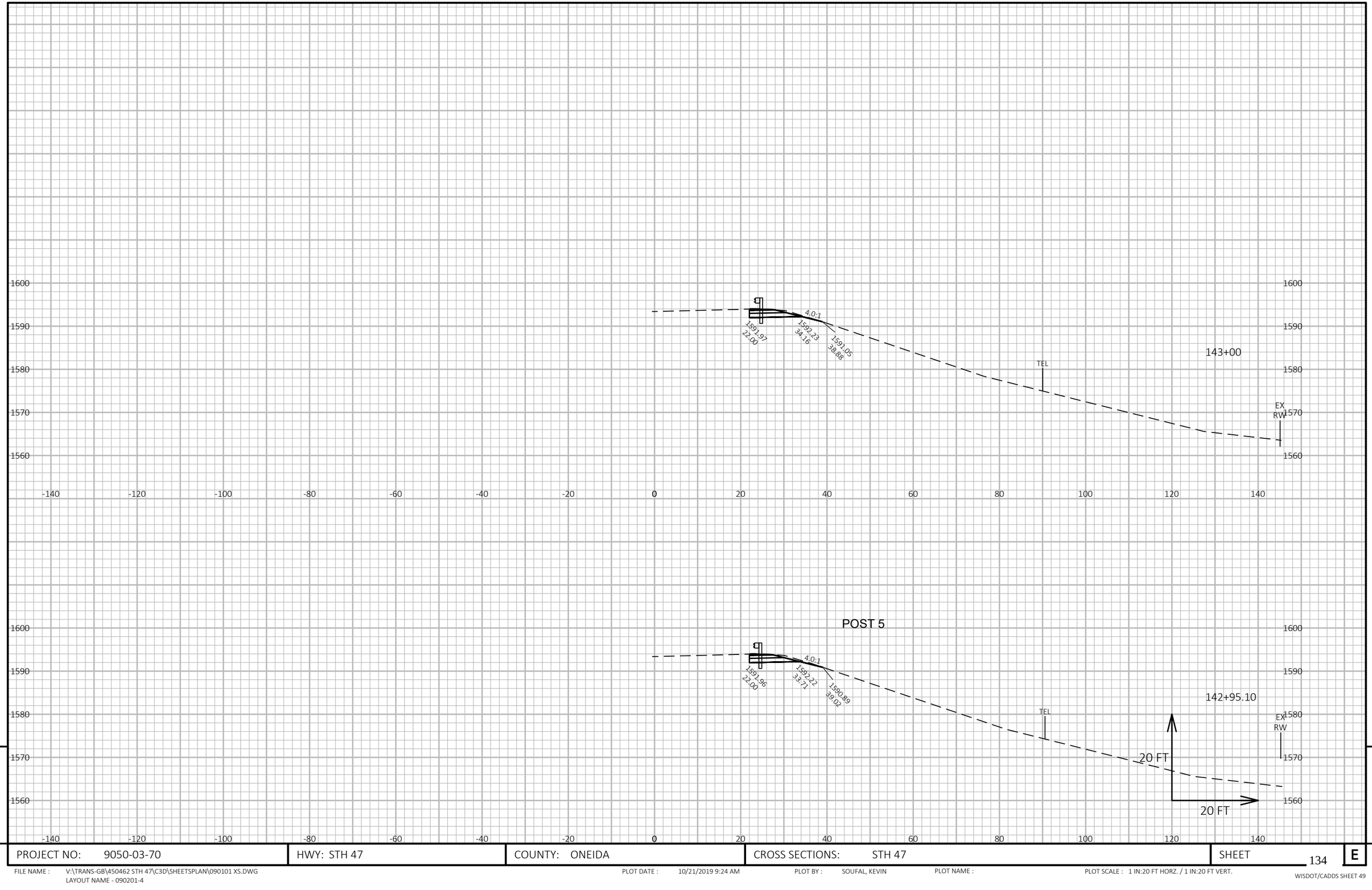
9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 133	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-3

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

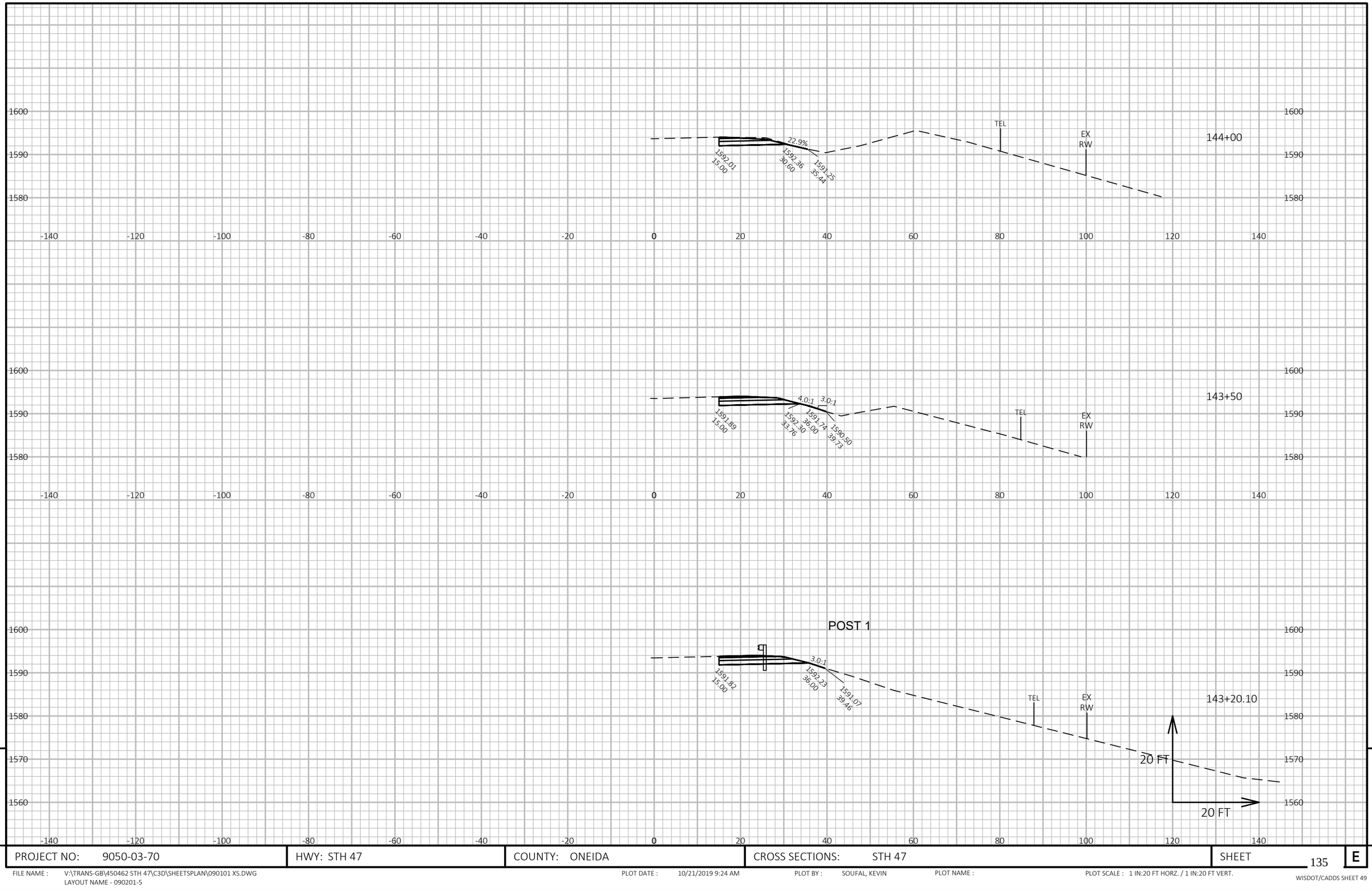
9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 134	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-4

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

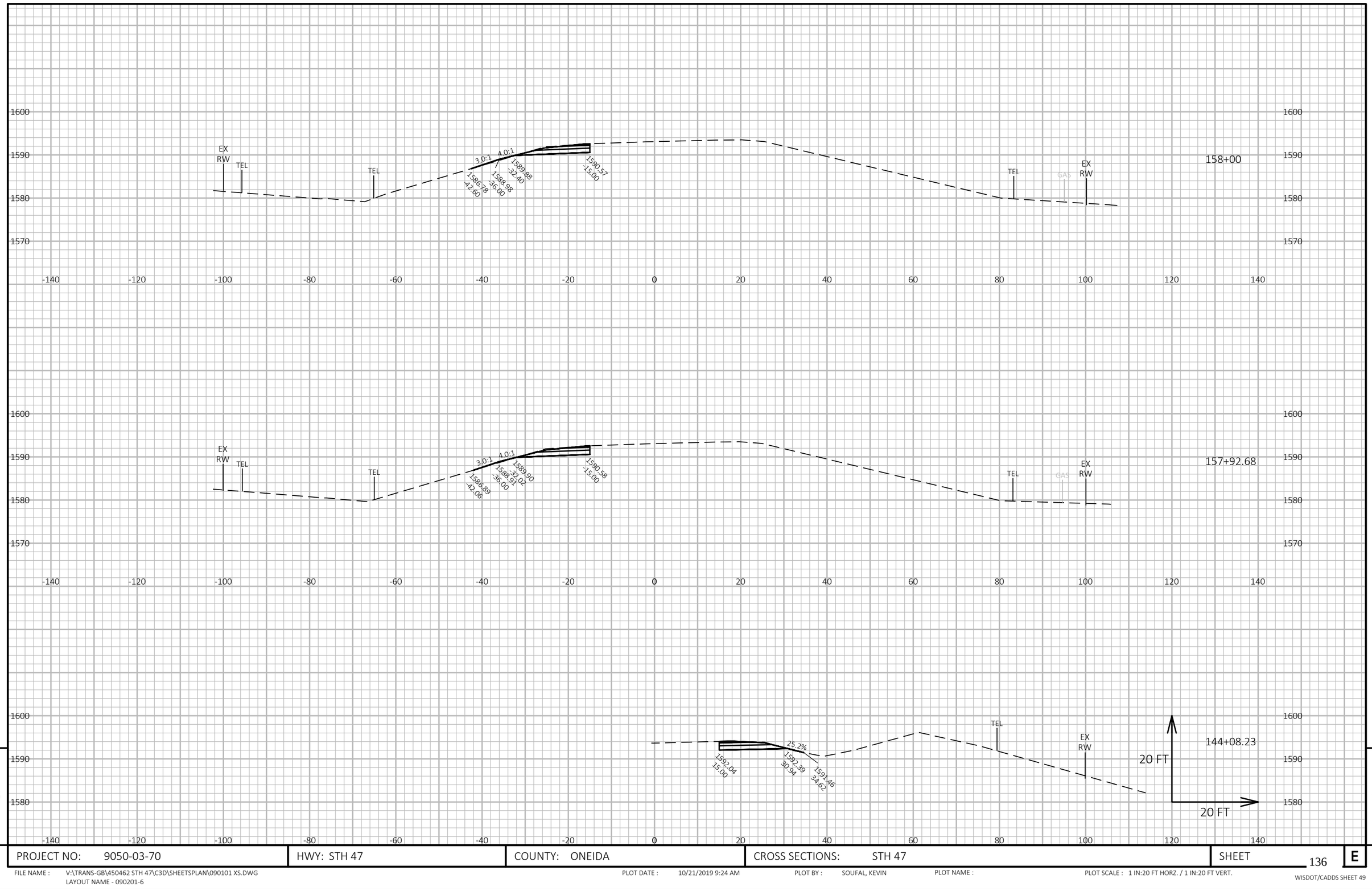


PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 135 E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-5

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

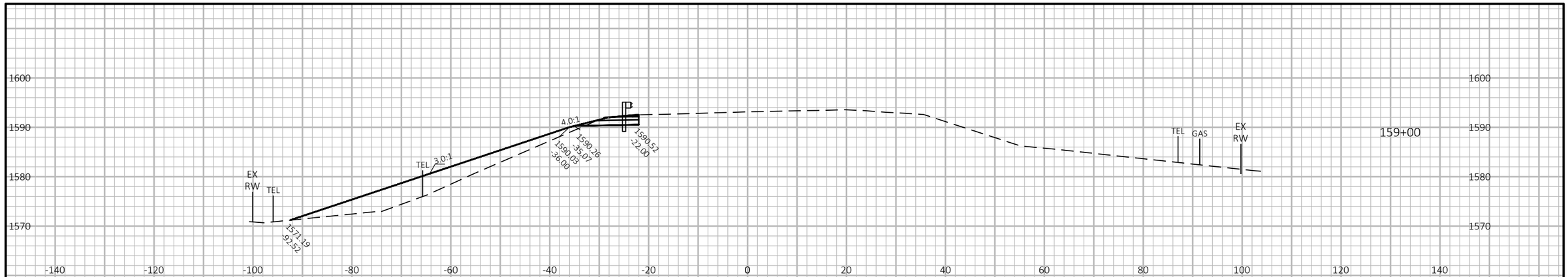
9

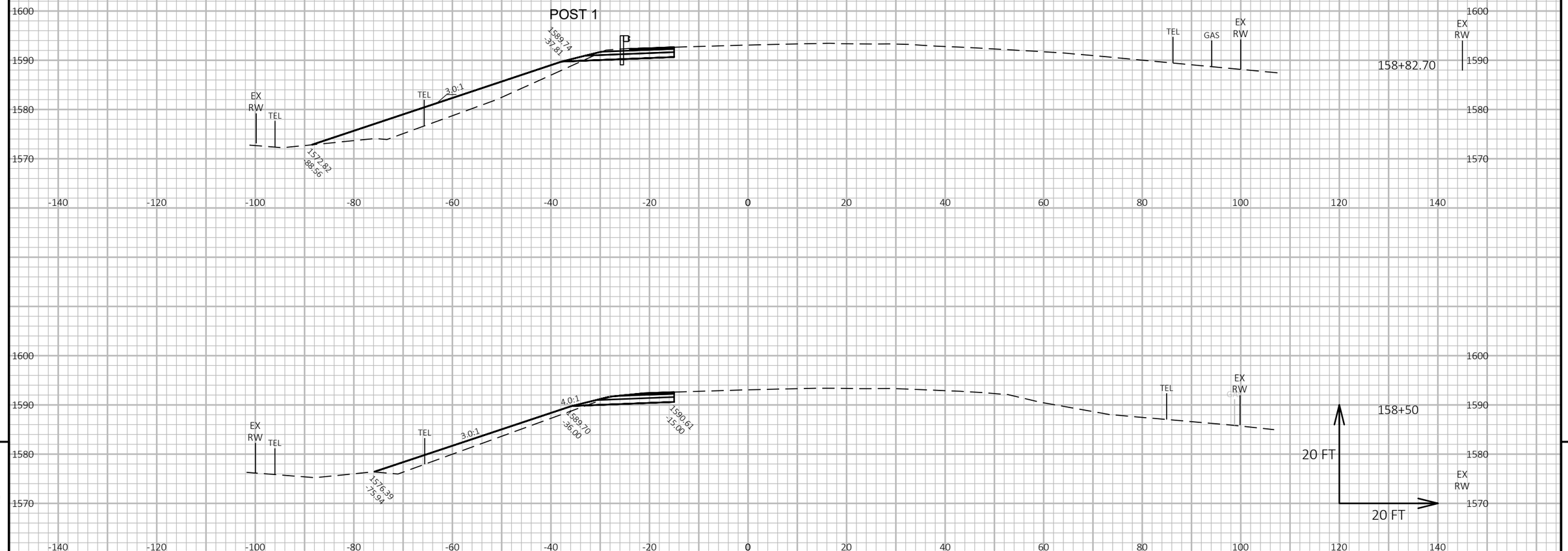
PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 136	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-6

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





9

9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 137	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-7

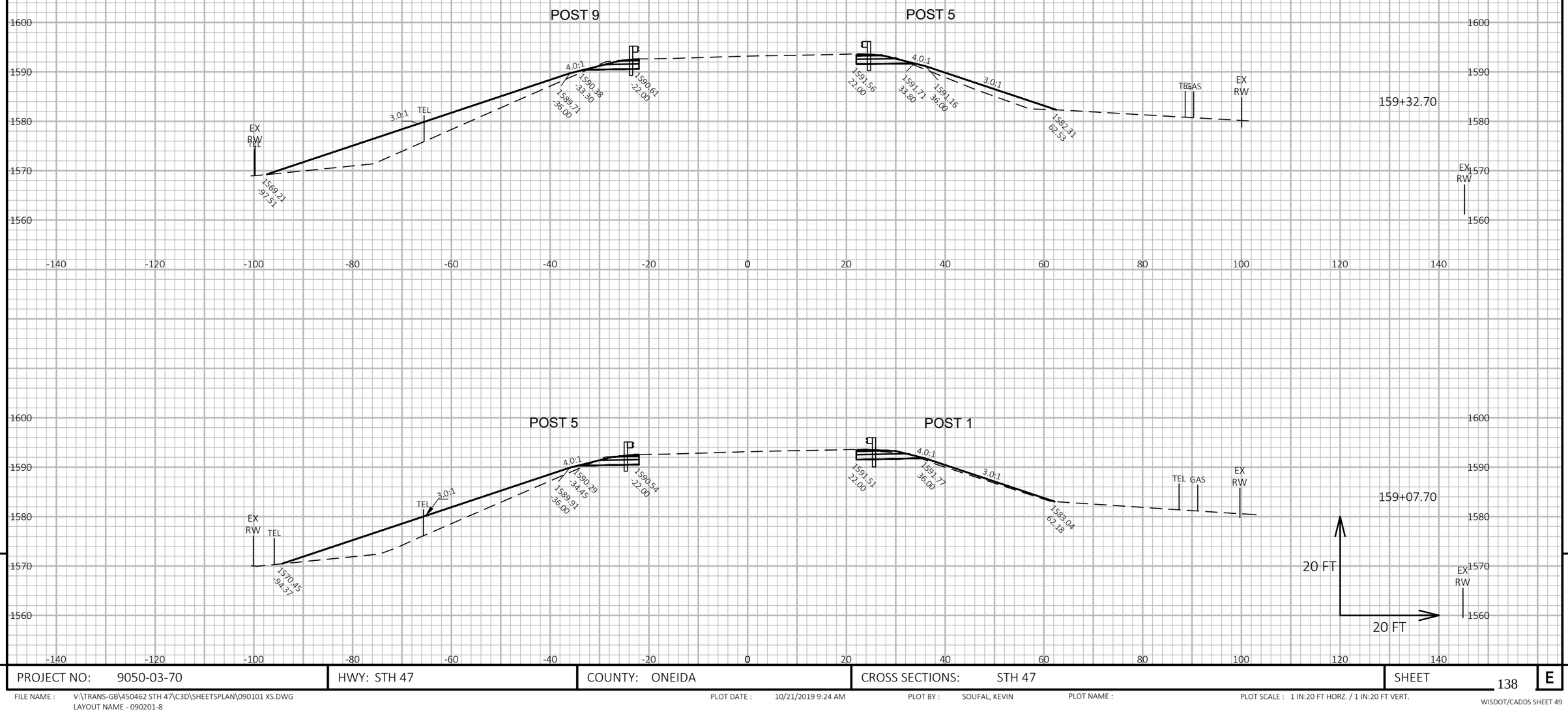
PLOT DATE : 10/21/2019 9:24 AM

PLOT BY : SOUFAL, KEVIN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



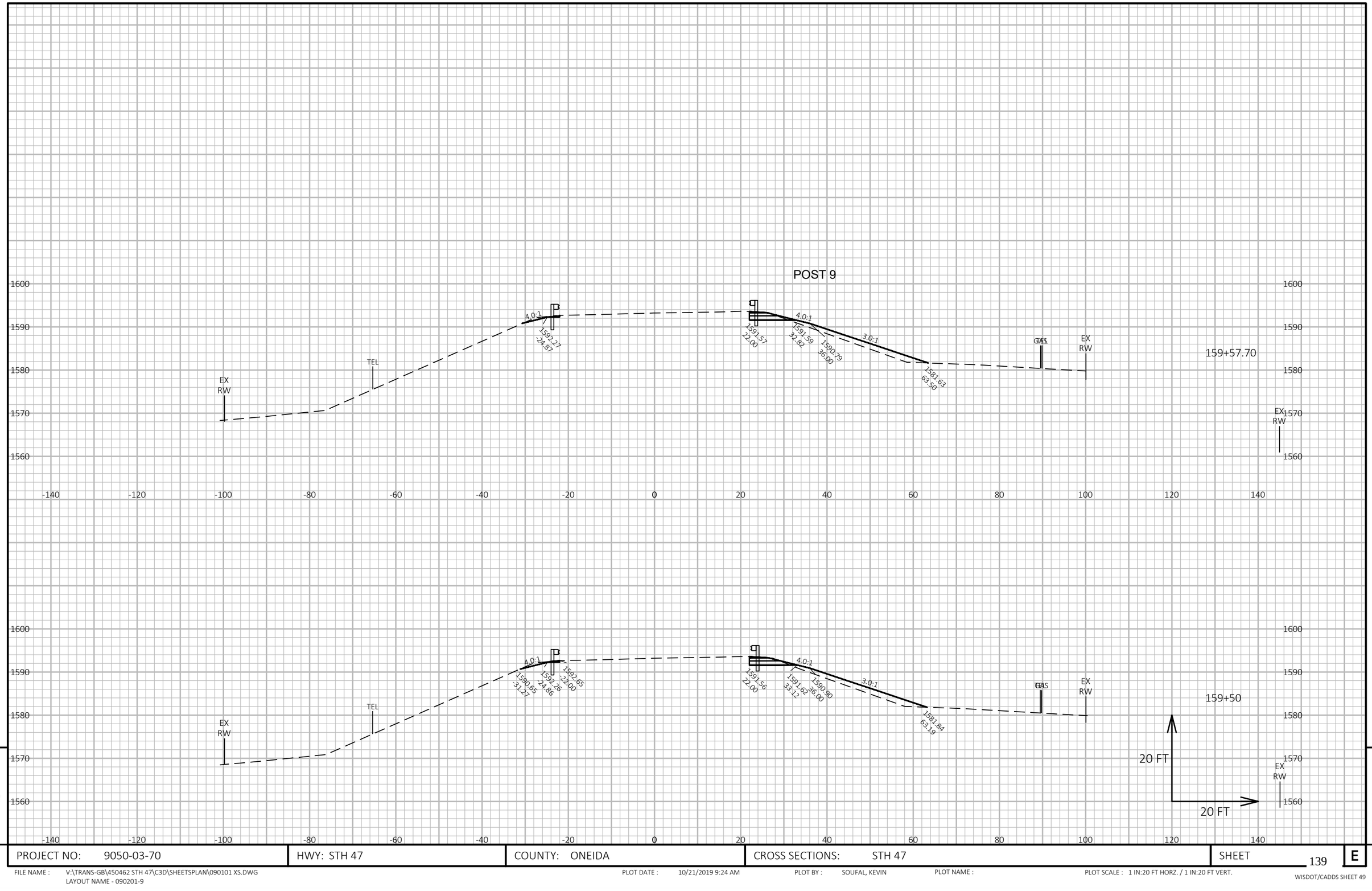
9

9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 138	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-8

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

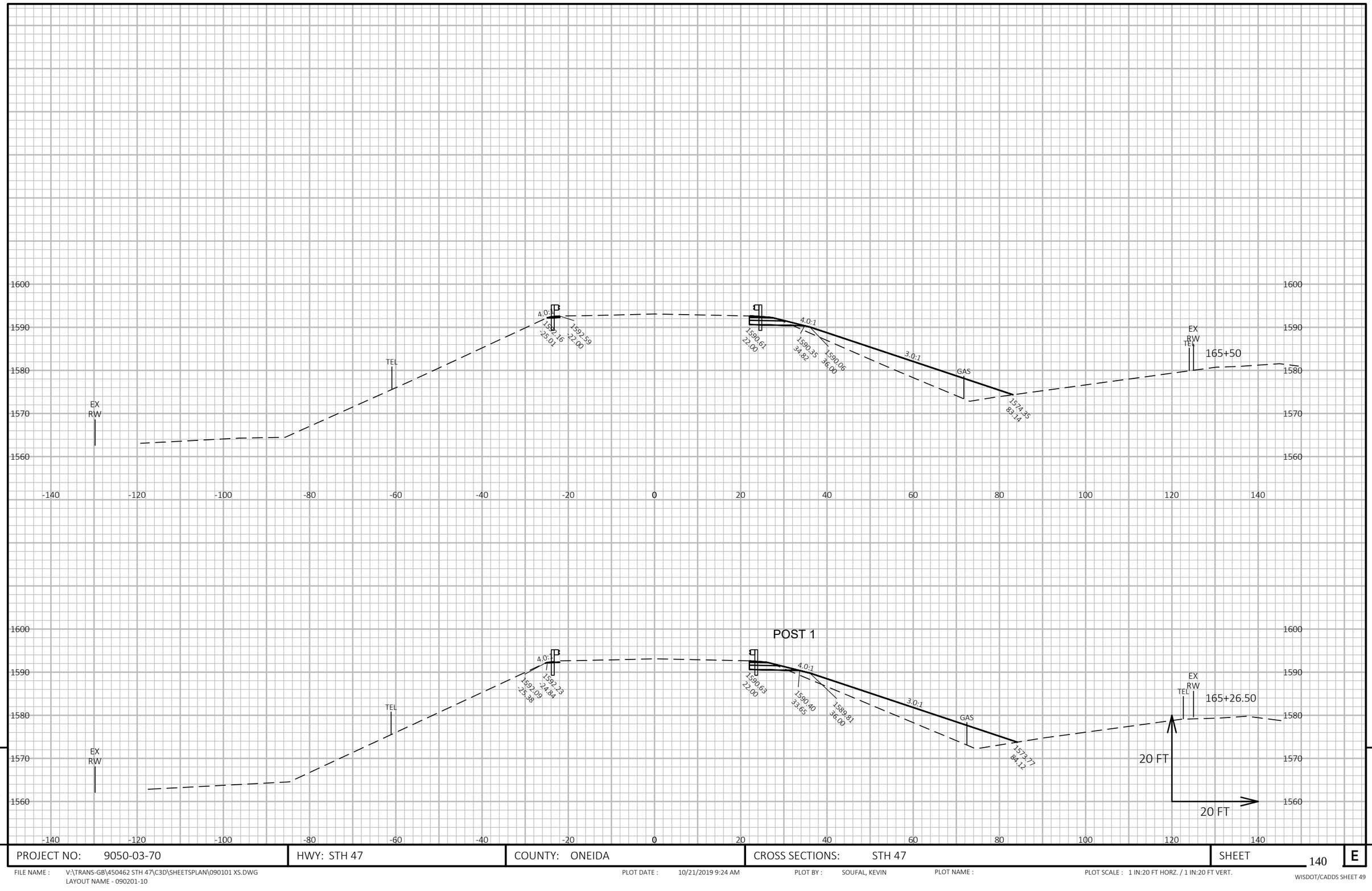
9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 139	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-9

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

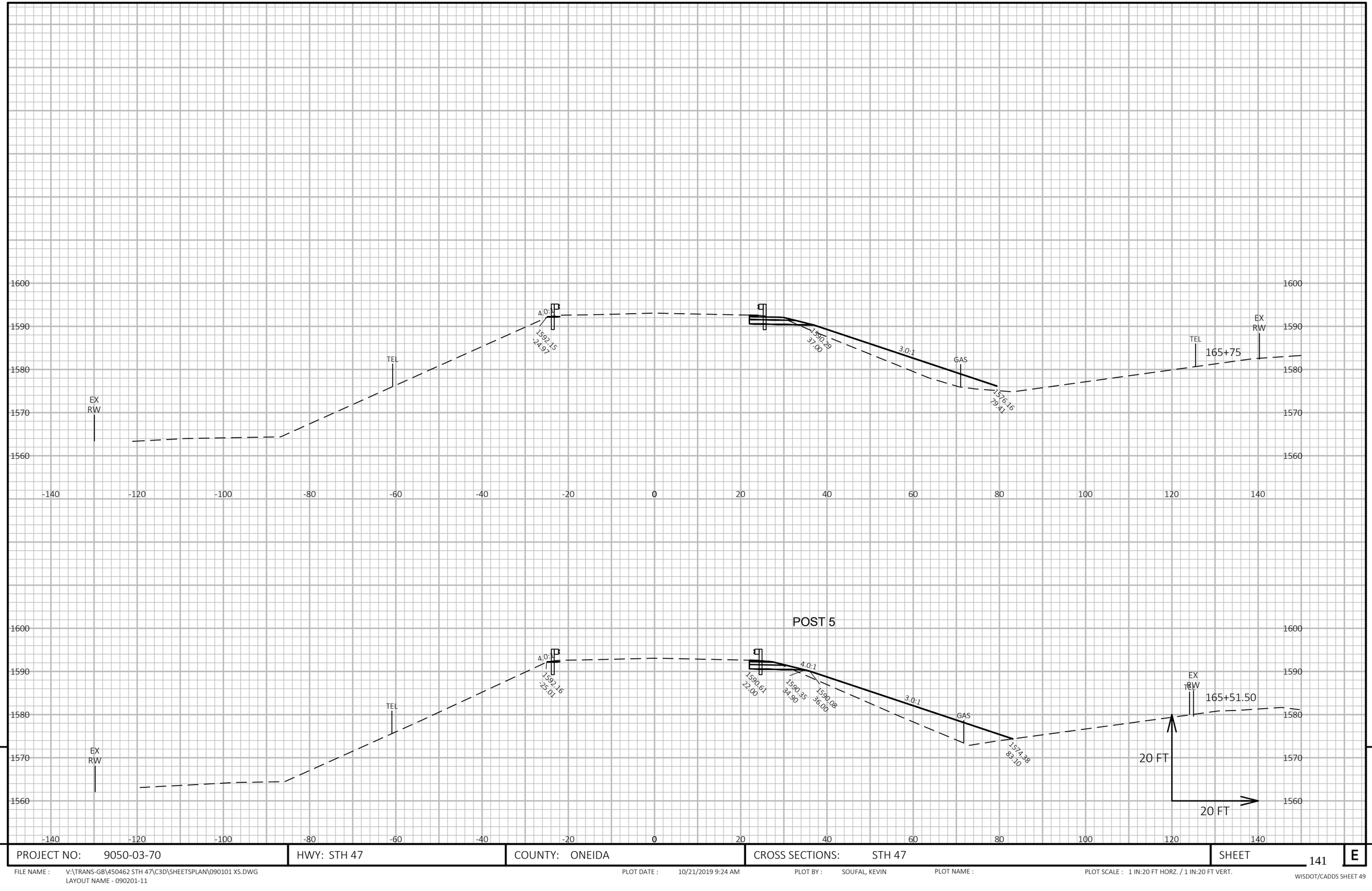
9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 140	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-10

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

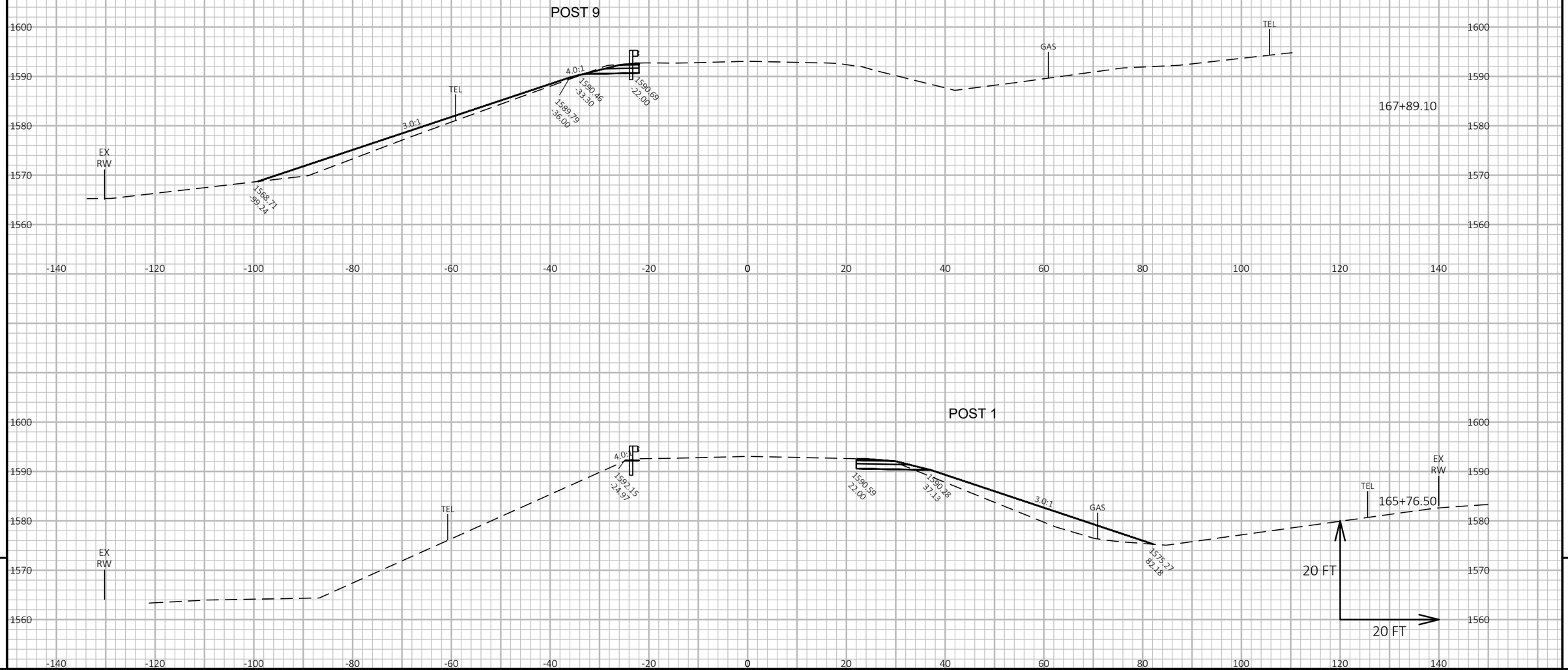
9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 141	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-11

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

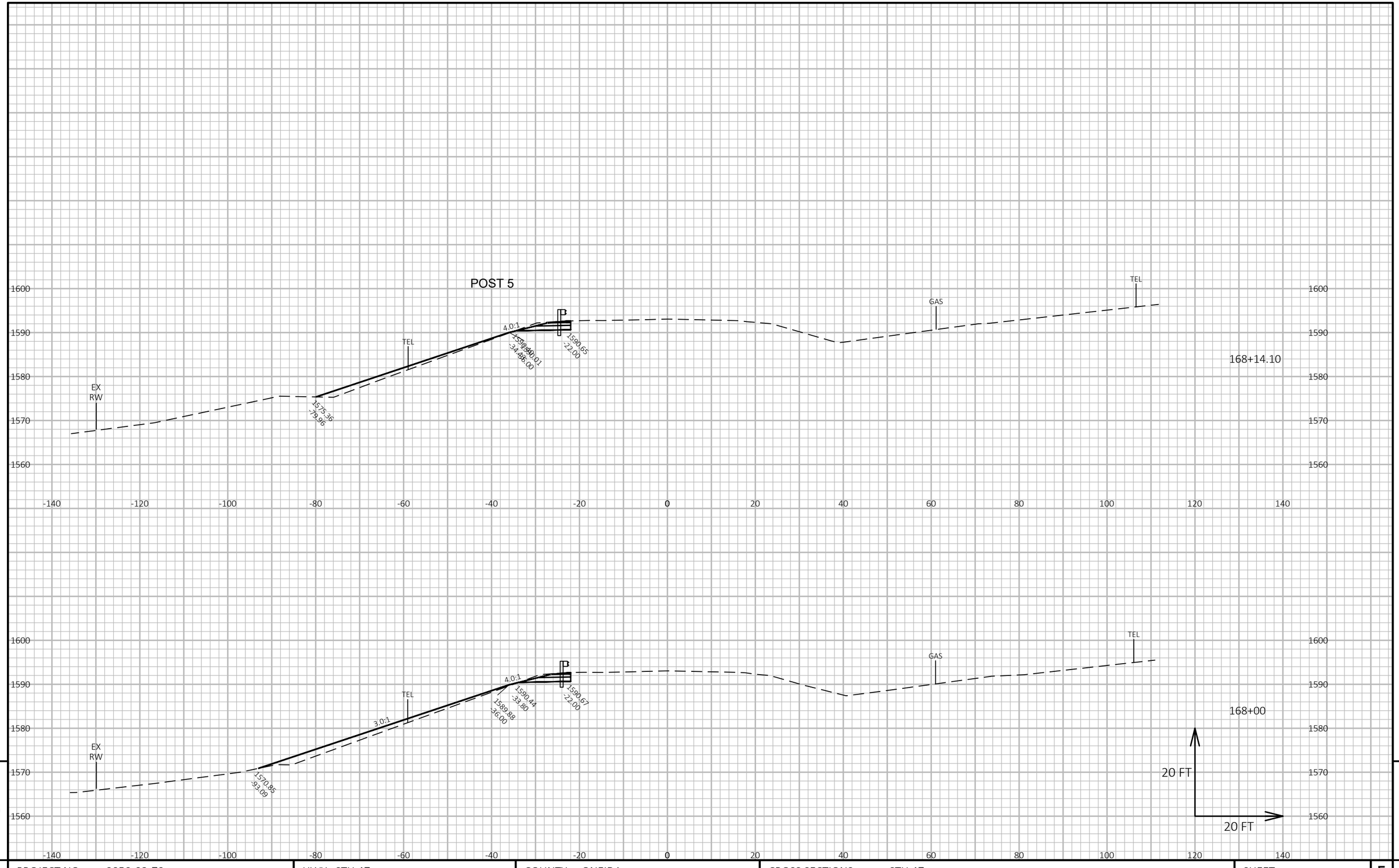
9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 142	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-12

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

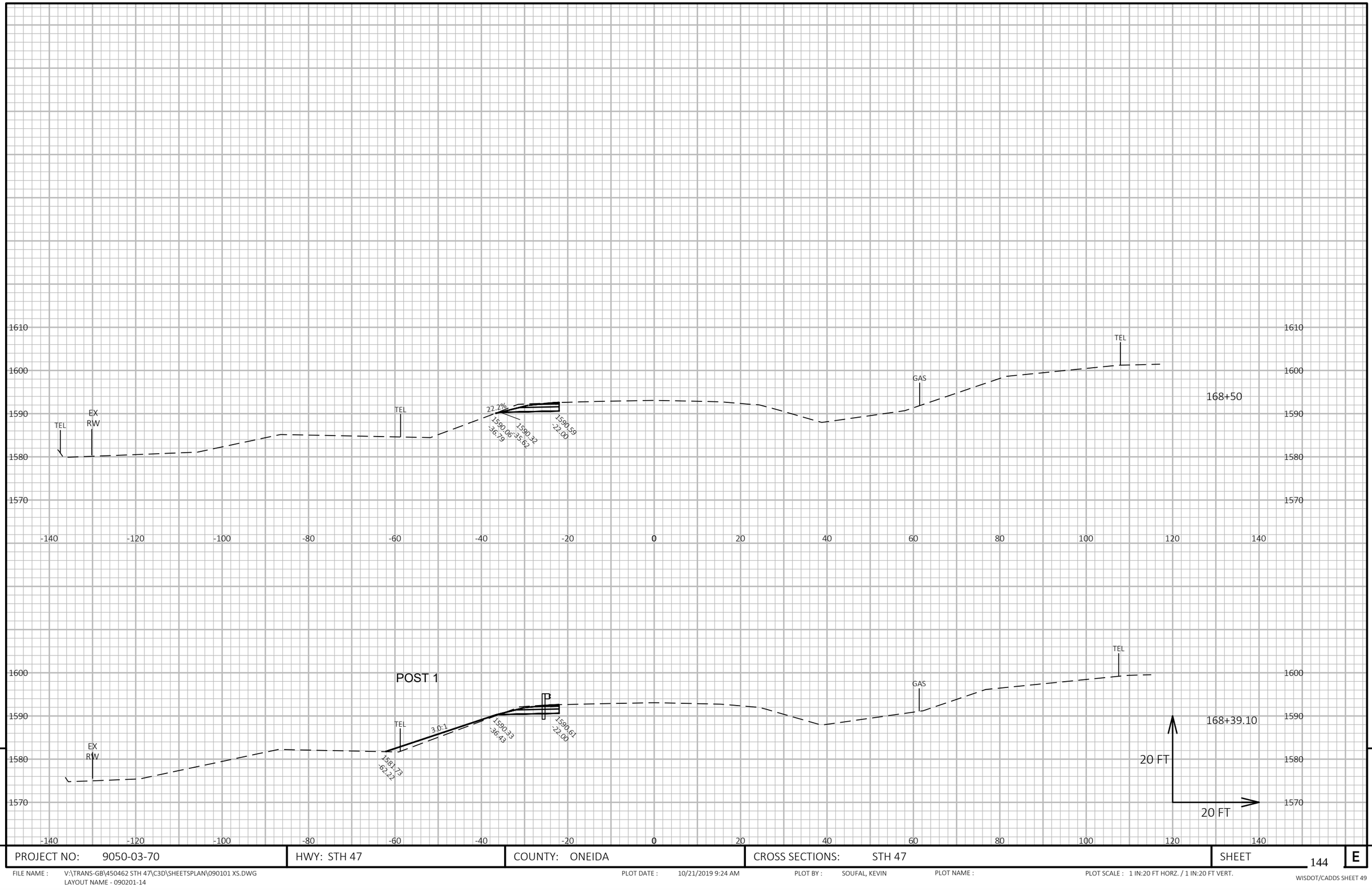
9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 143	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-13

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



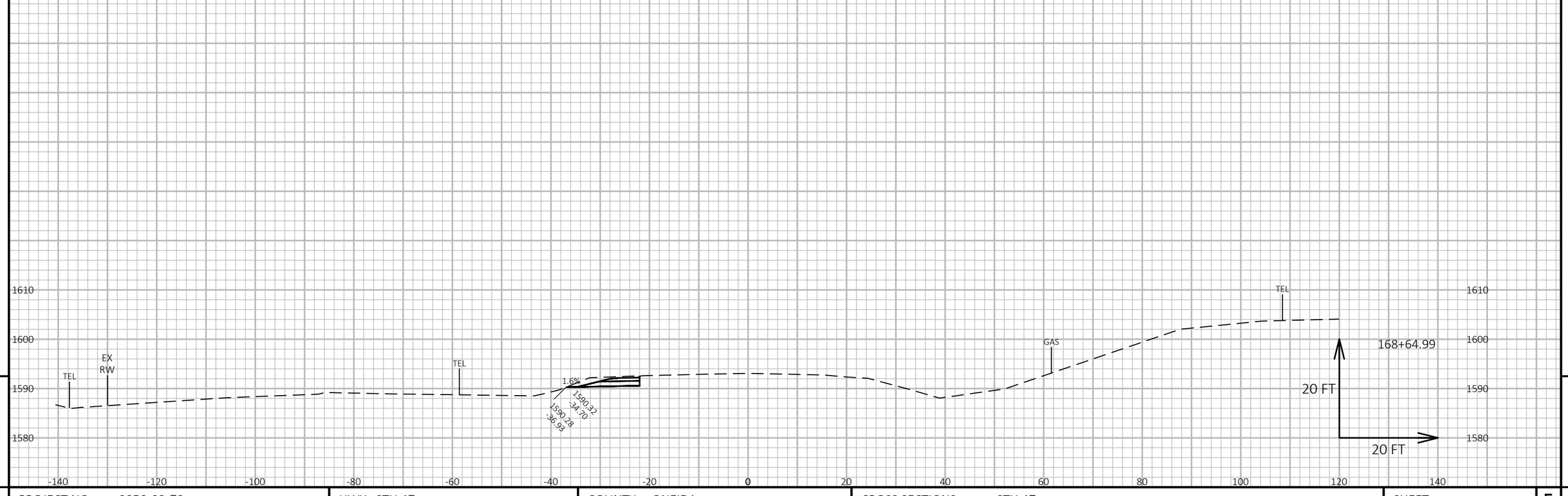
9

9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 144	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-14

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



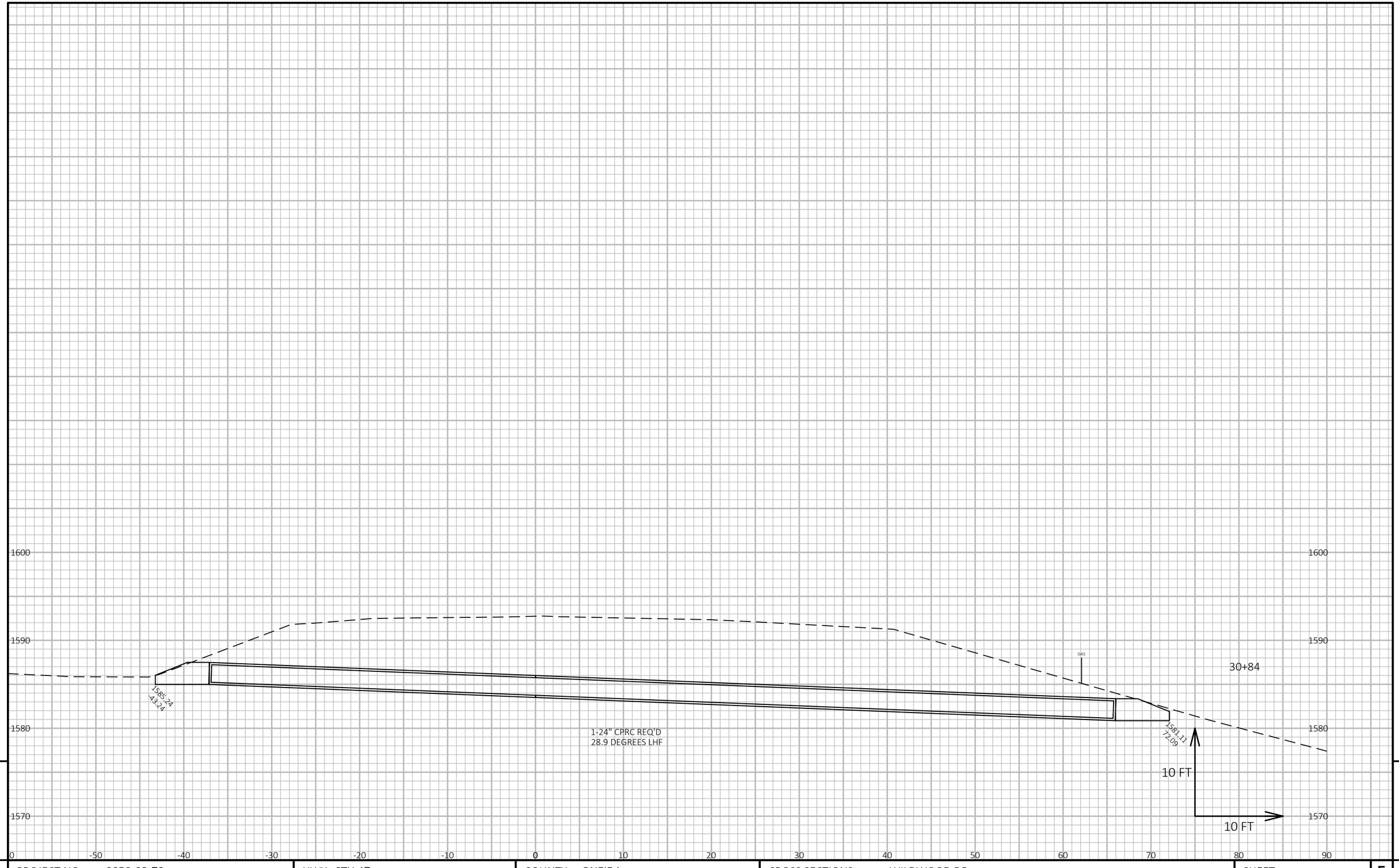
9

9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: STH 47	SHEET 145	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-15

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 9050-03-70	HWY: STH 47	COUNTY: ONEIDA	CROSS SECTIONS: WILDWOOD DR	SHEET 146	E

FILE NAME : V:\TRANS-GB\450462 STH 47\C3D\SHEETSPLAN\090101 XS.DWG
LAYOUT NAME - 090201-Wildwood

PLOT DATE : 10/21/2019 9:24 AM PLOT BY : SOUFAL, KEVIN PLOT NAME :

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

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov