SUP DECEMBER 2018

PROJECT ID: 8140-00-70/73/74/75,8140-25-71 COUNTY: SAWYER

32

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 310

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

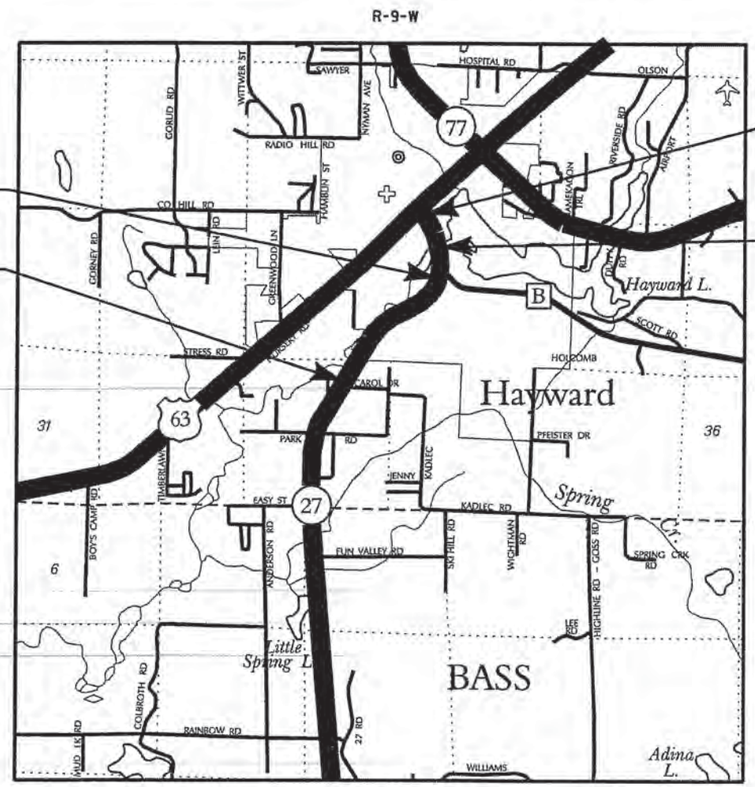
C HAYWARD, SOUTH DAKOTA AVENUE

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8140-00-70	WISC 2019019	1
8140-00-73	WISC 2019020	1
8140-00-74	WISC 2019021	1
8140-00-75	WISC 2019022	1
8140-25-71	WISC 2019023	1

MICHIGAN AVE - USH 63	NAMEKAGON RIVER - RAILROAD STREET	RAILROAD STREET INTERSECTION	WEST CAROL DRIVE - MICHIGAN AVE	NAMEKAGON RIVER BRIDGE B-57-0058
STH 27	STH 27	STH 27	STH 27	STH 27
SAWYER COUNTY	SAWYER COUNTY	SAWYER COUNTY	SAWYER COUNTY	SAWYER COUNTY
STATE PROJECT NUMBER 8140-00-70	STATE PROJECT NUMBER 8140-00-73	STATE PROJECT NUMBER 8140-00-74	STATE PROJECT NUMBER 8140-00-75	STATE PROJECT NUMBER 8140-25-71



N



DESIGN DESIGNATION

A.A.D.T. (2018)	=	14500
A.A.D.T. (2038)	=	17400
D.H.V.	=	1667
D.D.	=	61/39
T.	=	17.9%
DESIGN SPEED	=	30 MPH
ESALS	=	4,100,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT-OF-WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (955.36)
- CULVERT (Profile View)

UTILITIES

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

LAYOUT

SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE (8140-00-70) = 0.543 MI.
TOTAL NET LENGTH OF CENTERLINE (8140-00-73) = 0.000 MI.
TOTAL NET LENGTH OF CENTERLINE (8140-00-74) = 0.000 MI.
TOTAL NET LENGTH OF CENTERLINE (8140-00-75) = 0.883 MI.
TOTAL NET LENGTH OF CENTERLINE (8140-25-71) = 0.000 MI.

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

ACCEPTED FOR CITY of HAYWARD

7-30-18 (Date) Jon McCue (Signature)

ORIGINAL PLANS PREPARED BY

AYRES ASSOCIATES

WISCONSIN JEFFREY A. ABRAMSON 32337 Eau Claire WI PROFESSIONAL ENGINEER

DATE: 7-26-18

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NWBE, INC
Designer	AYRES ASOCIATES INC
Project Manager	MATTHEW DICKENSON
Regional Examiner	
Regional Supervisor	DAVID OSTROWSKI

APPROVED FOR THE DEPARTMENT

DATE: 7/31/2018 Matthew J Dickenson (Signature)

E

FILE NAME : V:\Trans-EC\410696 STH 27 Hayward\C3D\Microstation\0696_010101_ti.dgn PLOT DATE : 7/26/2018 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 10

2

GENERAL NOTES

REMOVALS
1.) NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

DRAINAGE
2.) PRIOR TO ORDERING DRAINAGE PIPES, THE CONTRACTOR SHALL FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

3.) CROSS DRAIN PIPE LOCATIONS AND ELEVATIONS AS SHOWN ON THE CROSS SECTIONS SHEETS ARE APPROXIMATE AND SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

4.) EXISTING PIPE CULVERT SIZES SHOWN ARE APPROXIMATE AND THE CONTRACTOR WILL BASE ITS BID ON THE ACTUAL FIELD CONDITIONS.

GRADING/EROSION CONTROL
5.) EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE EARTHWORK. EBS IS MEASURED AND PAID FOR AS EXCAVATION COMMON. EXACT LOCATIONS OF EBS WILL BE DETERMINED BY THE ENGINEER.

6.) SEED, INSTALL EROSION MAT, MULCH AND FERTILIZE ALL SALVAGED TOPSOILED AREAS WITHIN 7 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

7.) SEED MIXTURE NO.40 SHALL BE USED THROUGHOUT THE PROJECT.

8.) DISTURBED AREAS SHALL BE FERTILIZED, SEEDED AND MULCHED OR FERTILIZED AND SODDED AS DIRECTED BY THE ENGINEER.

9.) THE LOCATIONS OF ROCK AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE ADDITIONAL AREAS OF ROCK THAT ARE NOT SHOWN.

MISCELLANEOUS
10.) A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

11.) EXACT LOCATION OF ALL DRIVEWAY ENTRANCES TO BE REVIEWED AND APPROVED BY THE ENGINEER.

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

13.) STATIONING, DISTANCES, AND OFFSETS FOR SIGNS SHOWN IN THE PLANS ARE APPROXIMATE AND THE FINAL LOCATION OF SIGNS ARE TO BE DETERMINED BY THE ENGINEER.

14.) TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

15.) TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION RATE OF 0.07 GAL./S.Y. AND SHALL BE PLACED BETWEEN THE LAYERS OF ASPHALTIC PAVEMENT.

16.) HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 110 LB/SY/IN.

17.) CURVE DATA IS BASED ON THE RADIUS DEFINITION.

18.) ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, 1991 ADJUSTMENT - NAVD88 (1991).

ORDER OF SECTION 2 SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
PAVING DETAILS
EROSION CONTROL
STORM SEWER & UTILITY PLAN
PERMANENT SIGNING AND PAVEMENT MARKING
TRAFFIC SIGNAL PLAN
TRAFFIC CONTROL
DETOUR ROUTE

DESIGN CONTACT

AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: JEFF ABRAMSON, PE
abramsonj@ayresassociates.com
(715) 834-3161

DNR CONTACT

DNR NORTHERN REGION HQ
810 WEST MAPLE STREET
SPOONER, WI 54801
ATTN: SHAWN HASELEU
shawn.haseleu@wisconsin.gov
(715) 635-4228

2

UTILITIES

SPECTRUM (FORMERLY CHARTER COMMUNICATIONS) - COMMUNICATION LINE
2304 SOUTH MAIN STREET
RICE LAKE, WI 54868
ATTN: TOM HAASE
tom.haase@charter.com
(715) 719-0564

CENTURYLINK - COMMUNICATION LINE
425 ELLINGSON AVENUE
PO BOX 78
HAWKINS, WI 54530
ATTN: BRIAN HUHN
brian.huhn@centurylink.com
(715) 563-8294

NORVADO - COMMUNICATION LINE
43705 USH 63
PO BOX 67
CABLE, WI 54821
ATTN: GUY FOLSOM
gfolsom@norvado.com
(715) 798-7123

WE ENERGIES - GAS
1921 8TH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
ATTN: RYAN MIENTKE
ryan.mientke@we-energies.com
(715) 421-7249
WE ENERGIES 24 HOUR EMERGENCY (GAS)
800-261-5325

CITY OF HAYWARD PUBLIC WORKS - SEWER & WATER
15889 WEST 3RD STREET
PO BOX 969
HAYWARD, WI 54843
ATTN: JOHN MCCUE
pw3@centurytel.net
(715) 634-4612

XCEL ENERGY - ELECTRICITY
2400 FARM ROAD
ASHLAND, WI 54806
ATTN: SCOTT FROEMMING
scott.s.froemming@xcelenergy.com
(715) 682-6927

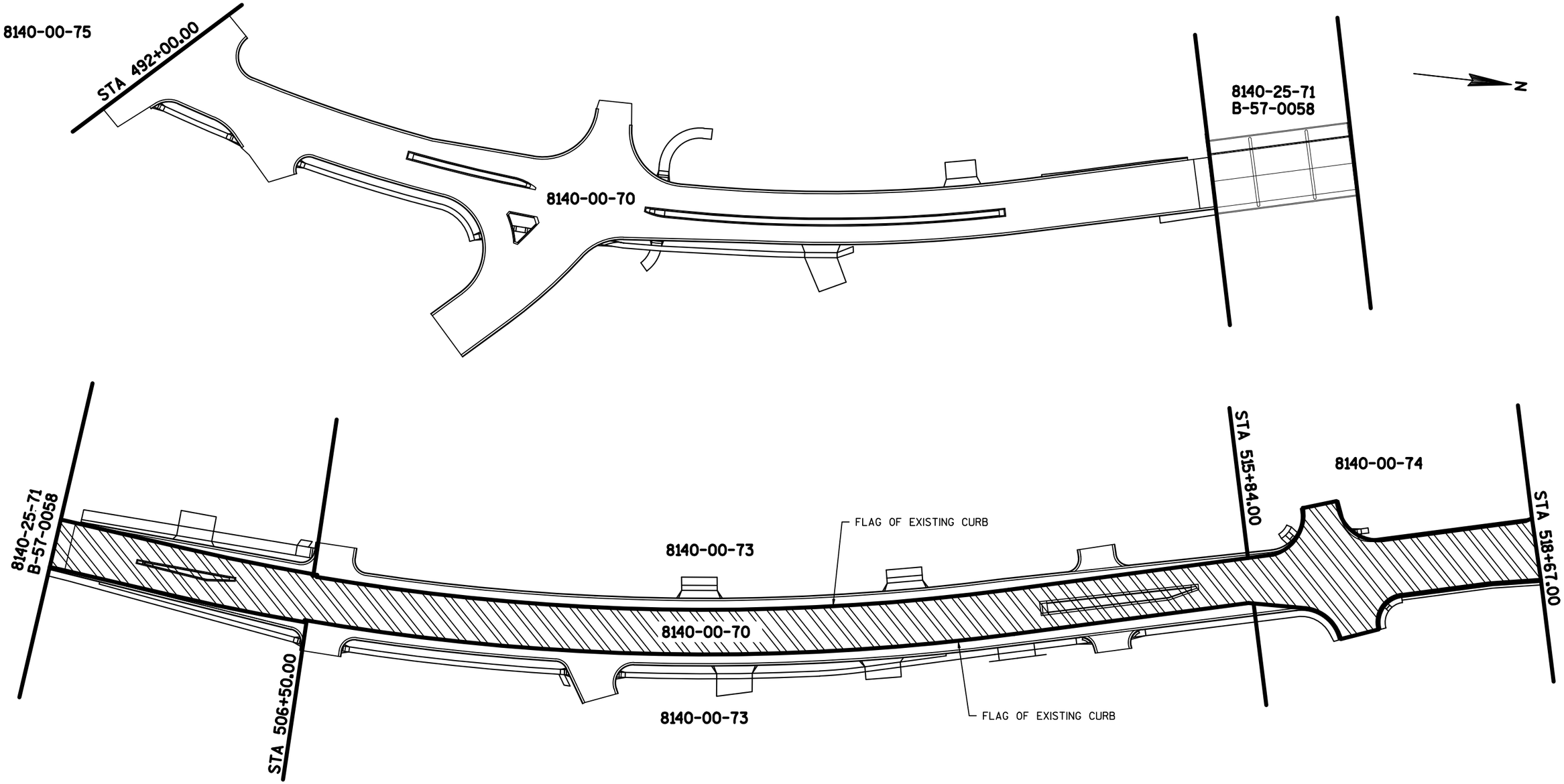
XCEL ENERGY - TRANSMISSION
414 NICOLLET MALL, 5TH FLOOR
MINNEAPOLIS, MN 55401
ATTN: BRUCE M. ZEMKE
bruce.m.zemke@xcelenergy.com
(612) 330-7815

*DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

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

PROJECT NO: 8140-00-70/73/74/75	HWY: STH 27	COUNTY: SAWYER	GENERAL NOTES	SHEET 2	E

2

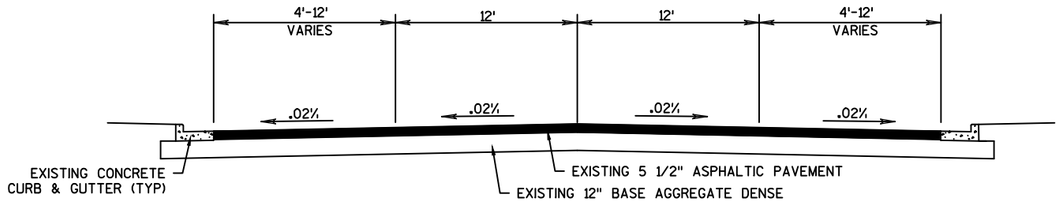


TYPICAL FINISHED SECTION - STH 27

NORTH OF THE RIVER

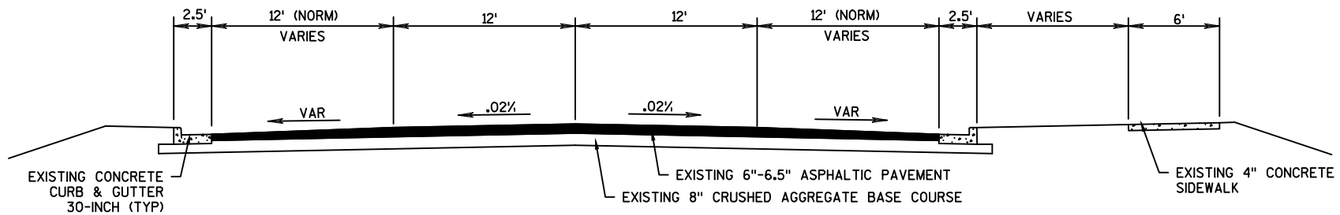
PROJECT NO: 8140-00-70/73/74/75	HWY: STH 27	COUNTY: SAWYER	PROJECT LIMITS	SHEET 3	E

2



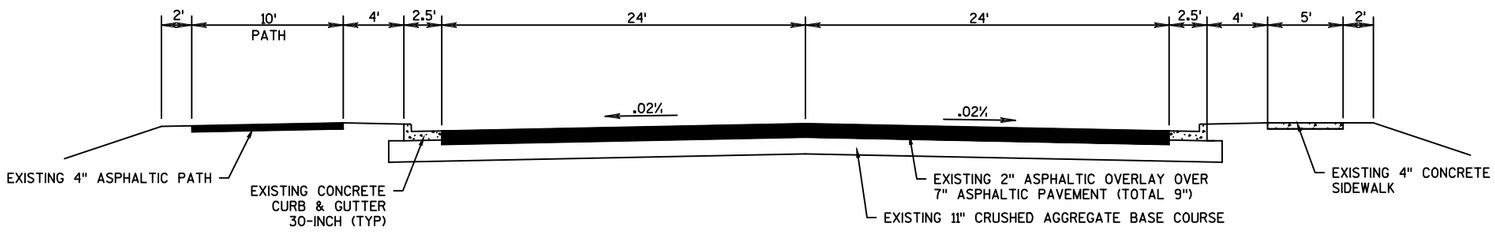
EXISTING TYPICAL SECTION - STH 27

STA 445+40.00 - STA 449+04.00



EXISTING TYPICAL SECTION - STH 27

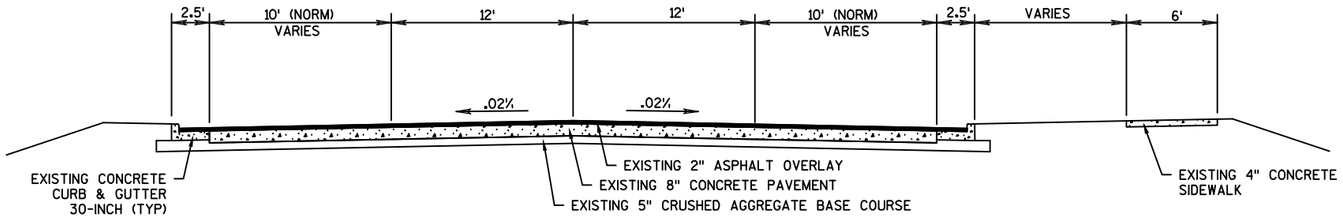
STA 449+04.00 - STA 498+00.00



EXISTING TYPICAL SECTION - STH 27

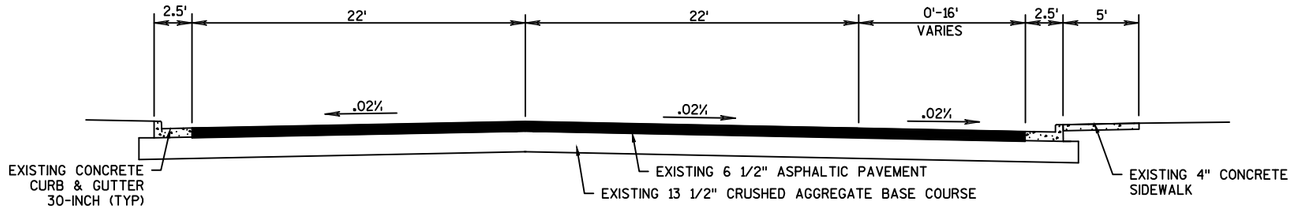
STA 498+00.00 - STA 506+50.00

2



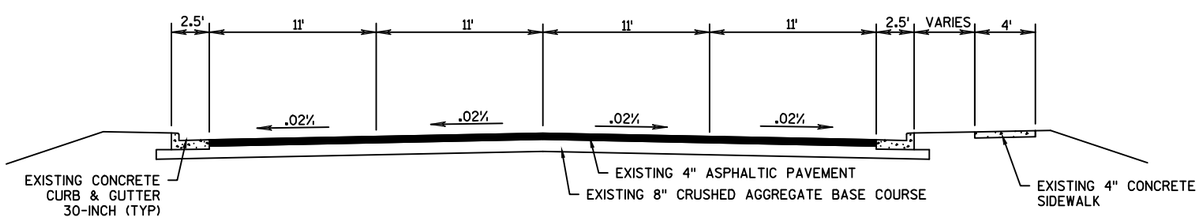
EXISTING TYPICAL SECTION - STH 27

STA 506+50.00 - STA 515+84.00



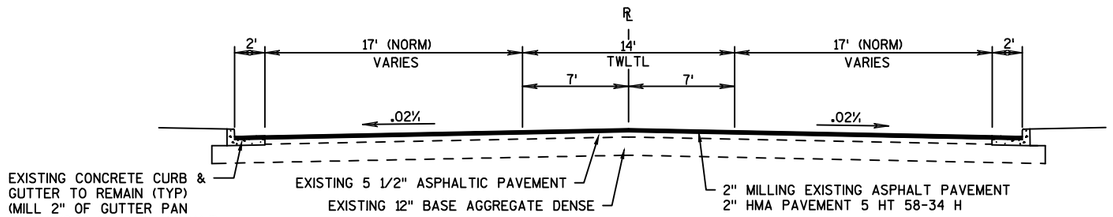
EXISTING TYPICAL SECTION - STH 27

STA 515+84.00 - STA 518+67.00



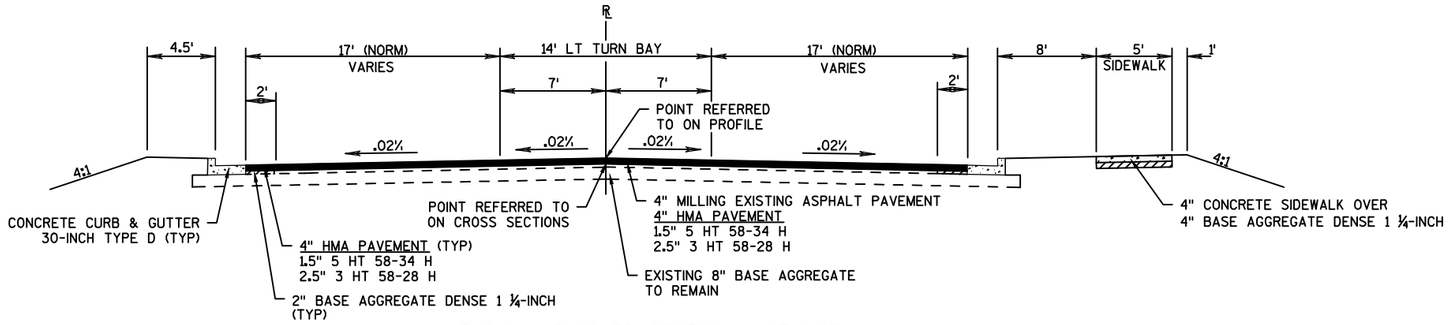
EXISTING TYPICAL SECTION - CTH B

PROJECT NO: 8140-00-70/73/74/75	HWY: STH 27	COUNTY: SAWYER	TYPICAL SECTIONS	SHEET 5	E



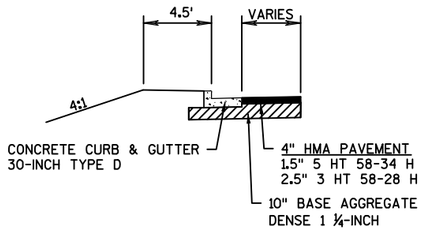
FINISHED TYPICAL SECTION - STH 27

STA 445+40.00 - STA 492+00.00



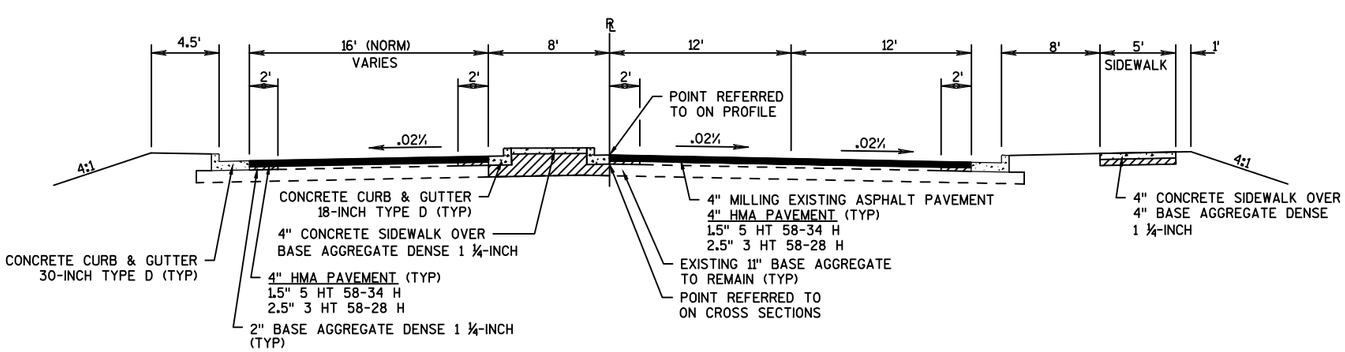
TYPICAL FINISHED SECTION - STH 27

STA 492+00.00 - STA 494+55.00



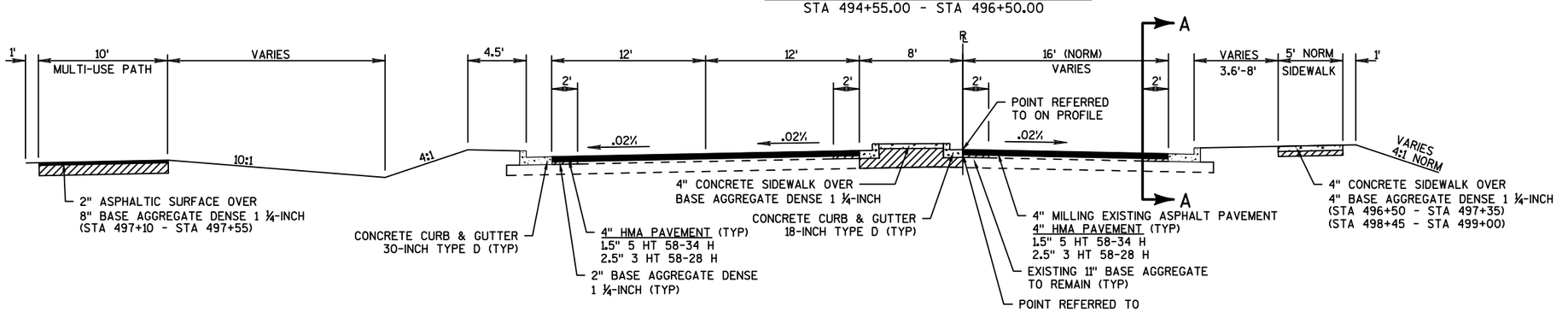
INTERSECTION WIDENING

STA 494+75.00 - STA 496+25.00



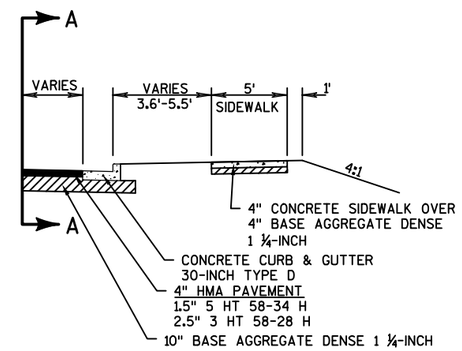
TYPICAL FINISHED SECTION - STH 27

STA 494+55.00 - STA 496+50.00



TYPICAL FINISHED SECTION - STH 27

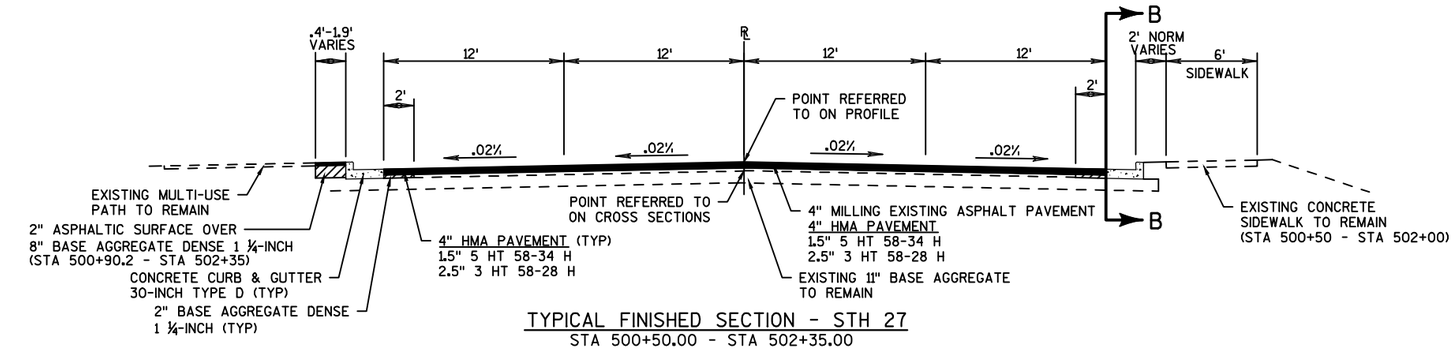
STA 496+50.00 - STA 500+50.00



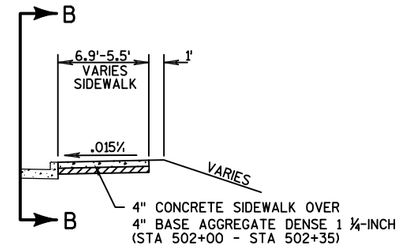
SECTION A-A INTERSECTION WIDENING

STA 496+50.00 - STA 498+00.00

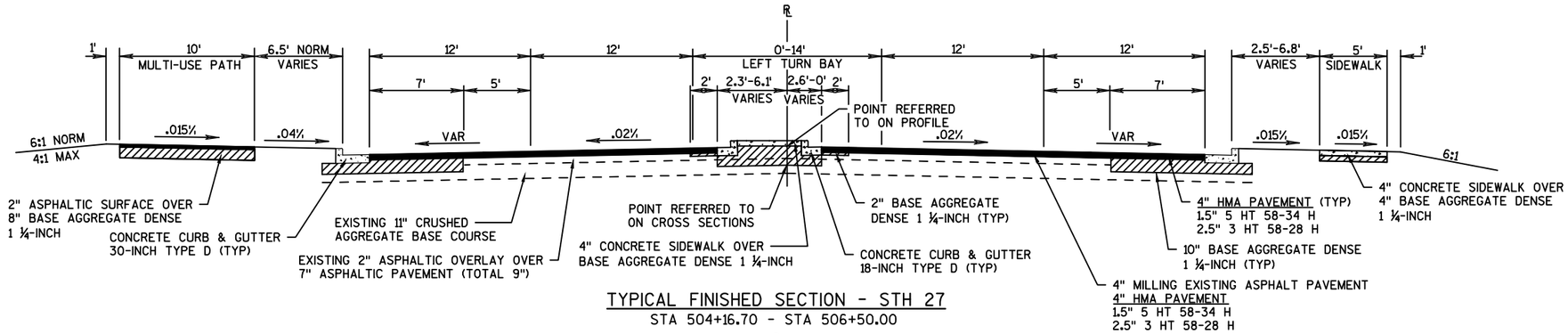
PROJECT NO: 8140-00-70/73/74/75	HWY: STH 27	COUNTY: SAWYER	TYPICAL SECTIONS	SHEET 6	E



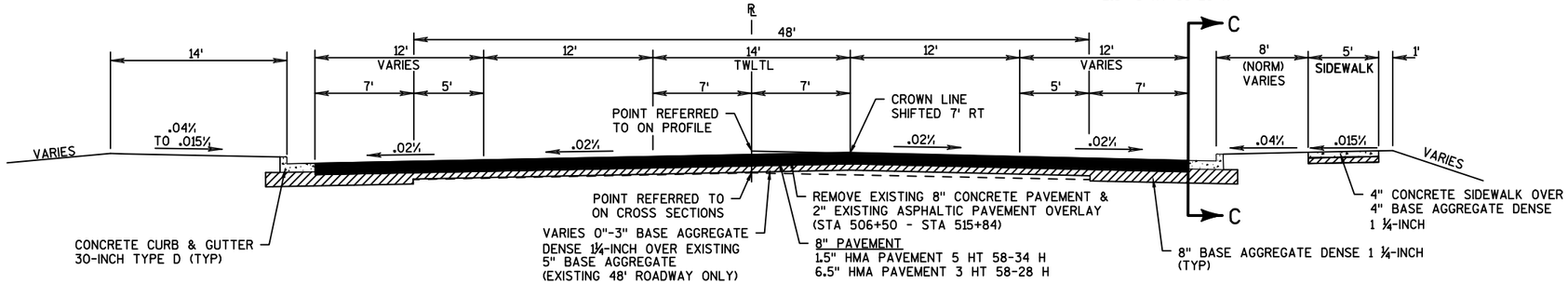
TYPICAL FINISHED SECTION - STH 27
STA 500+50.00 - STA 502+35.00



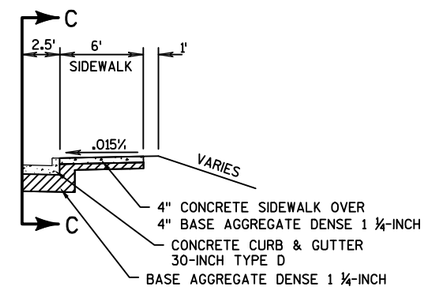
SECTION B-B
STA 502+00 - STA 502+35



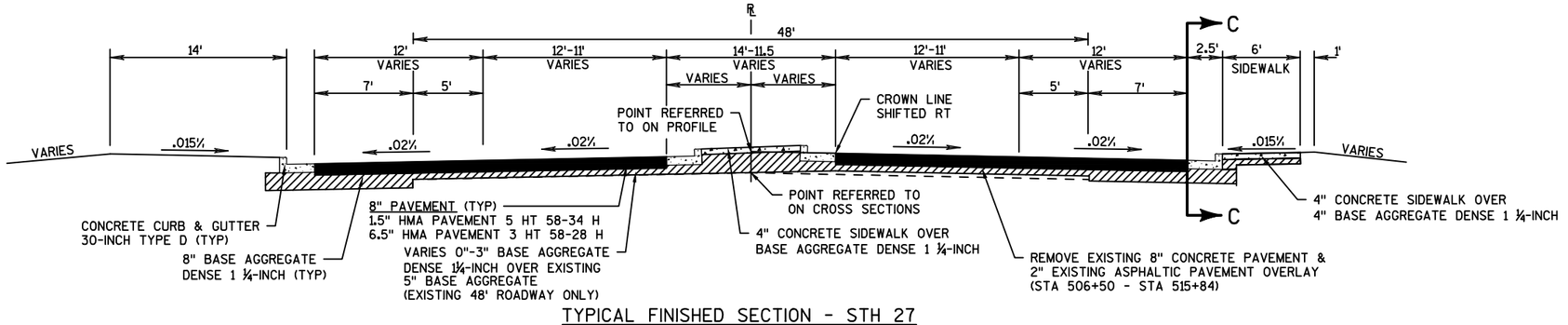
TYPICAL FINISHED SECTION - STH 27
STA 504+16.70 - STA 506+50.00



TYPICAL FINISHED SECTION - STH 27
STA 506+50.00 - STA 514+00.00

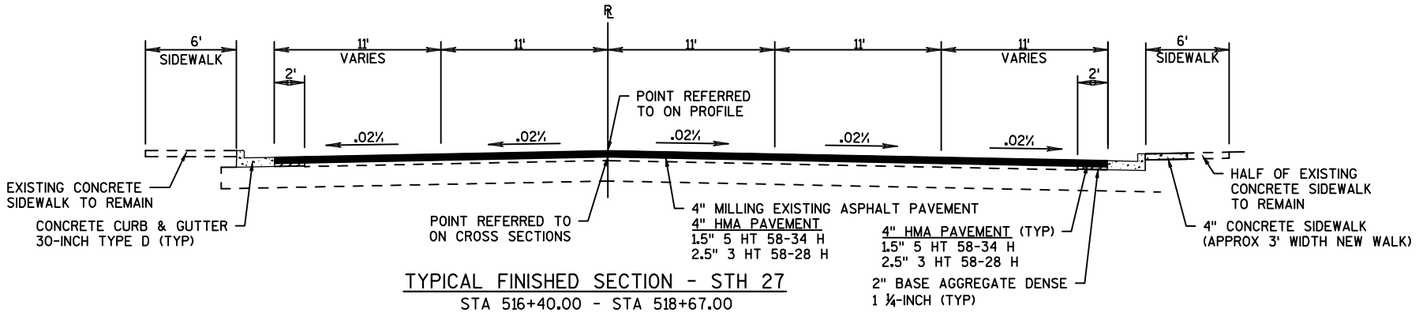


SECTION C-C
STA 512+78.00 - STA 516+40.00



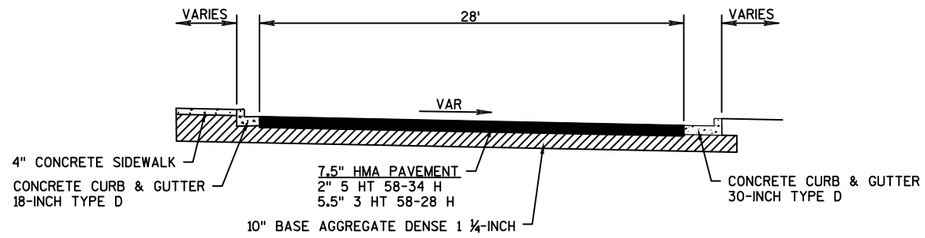
TYPICAL FINISHED SECTION - STH 27
STA 514+00.00 - STA 516+40.00

PROJECT NO: 8140-00-70/73/74/75	HWY: STH 27	COUNTY: SAWYER	TYPICAL SECTIONS	SHEET 7	E

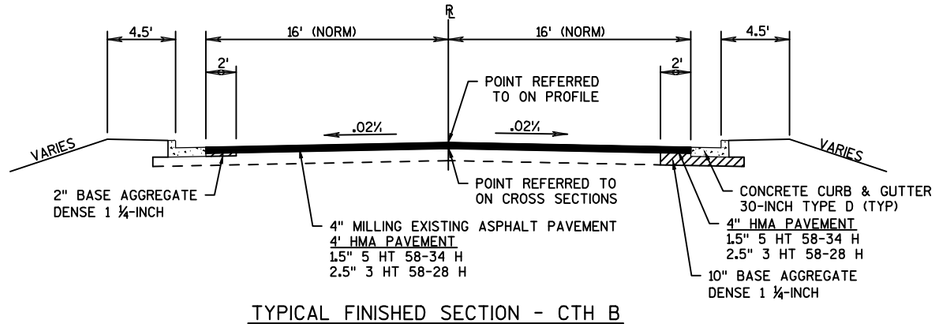


TYPICAL FINISHED SECTION - STH 27

STA 516+40.00 - STA 518+67.00

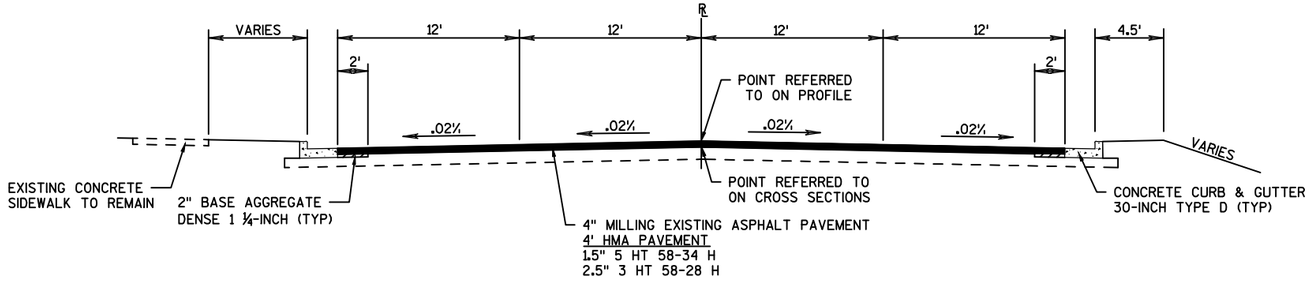


TYPICAL FINISHED SECTION - STH 27 NB RT TURN BAY TO CTH B



TYPICAL FINISHED SECTION - CTH B

STA 24+00.00 - STA 24+60.00



TYPICAL FINISHED SECTION - CTH B

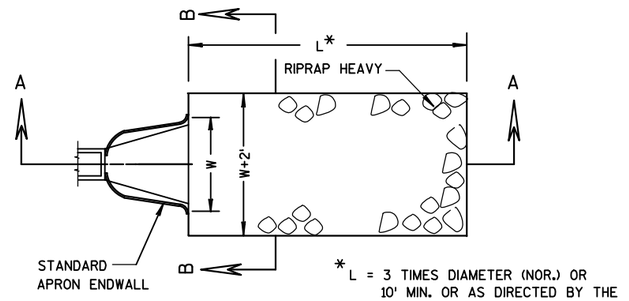
STA 25+30.00 - STA 26+96.40

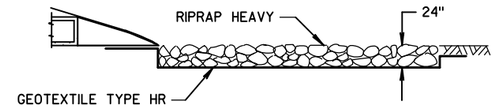
PROJECT NO: 8140-00-70/73/74/75	HWY: STH 27	COUNTY: SAWYER	TYPICAL SECTIONS	SHEET 8	E

RUNOFF COEFFICIENT TABLE

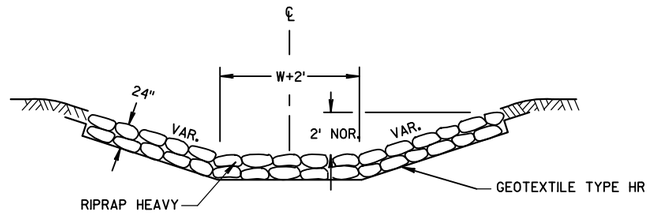
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL PROJECT AREA = ___10___ ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = ___6.5___ACRES



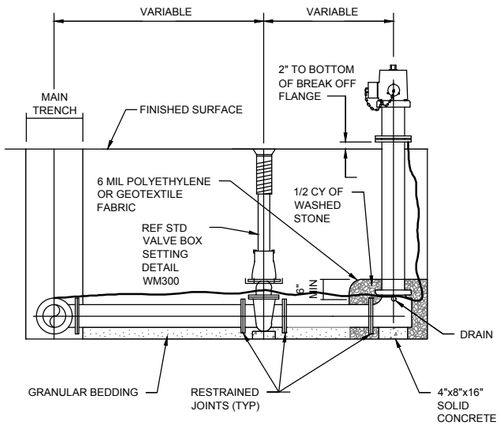


SECTION A-A

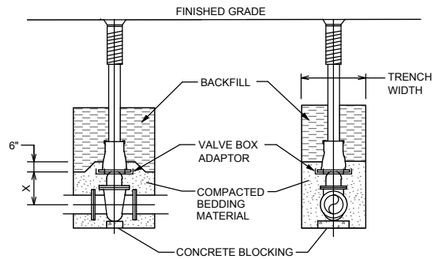


SECTION B-B

RIPRAP HEAVY AND GEOTEXTILE TYPE HR DETAIL
AT APRON ENDWALLS



WM 100 **STANDARD HYDRANT SETTING**
NOT TO SCALE



SIDE VIEW

PIPE DIA (INCHES)	X=SETTING (INCHES)
2	6
3	7
4	8
6	12
8	13

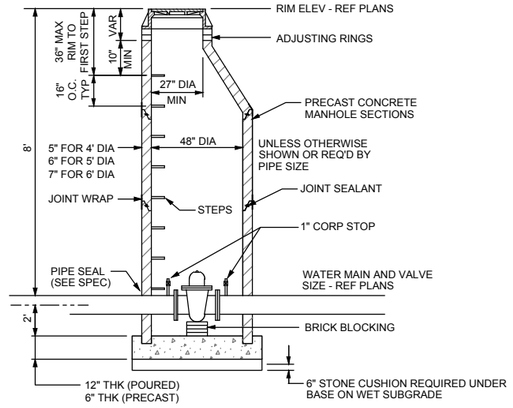
FRONT VIEW

PIPE DIA (INCHES)	X=SETTING (INCHES)
10	17
12	21
14	25
16	30

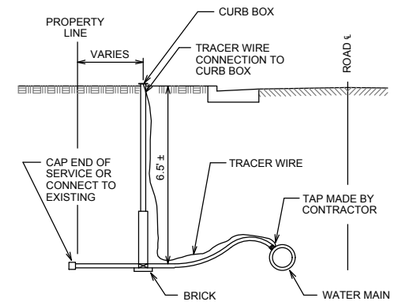
WM 300 **STANDARD VALVE BOX SETTING**
NOT TO SCALE

CASTING TYPE: J-S

ADJUST FRAME TO GRADE WITH A MINIMUM OF TWO ADJUSTING RINGS TOTALING 6" TO 12" MAX.



WM 301 **WATER VALVE MANHOLE**
NOT TO SCALE



NOTE:

1. TAP WATER MAIN ON 45° WITH PIPE. MINIMUM HORIZONTAL DISTANCE BETWEEN CORP STOPS SHALL BE 3-FEET.
2. WATER SERVICES SHALL BE POLYETHYLENE UNLESS SHOWN OTHERWISE.

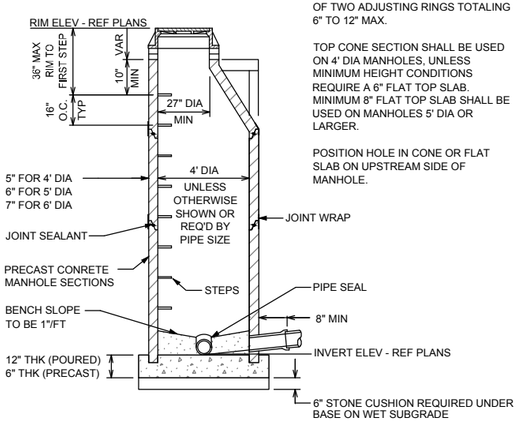
WM 501 **WATER SERVICE INSTALLATION**
NOT TO SCALE

CASTING: TYPE J-S.

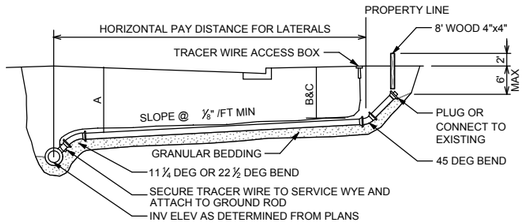
ADJUST FRAME TO GRADE WITH A MINIMUM OF TWO ADJUSTING RINGS TOTALING 6" TO 12" MAX.

TOP CONE SECTION SHALL BE USED ON 4' DIA MANHOLES, UNLESS MINIMUM HEIGHT CONDITIONS REQUIRE A 6" FLAT TOP SLAB. MINIMUM 8" FLAT TOP SLAB SHALL BE USED ON MANHOLES 5' DIA OR LARGER.

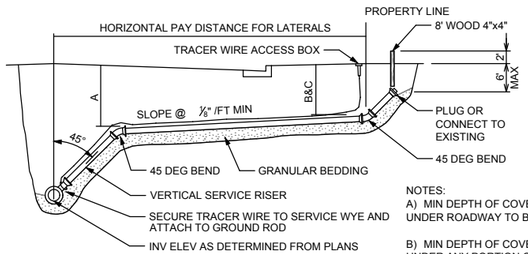
POSITION HOLE IN CONE OR FLAT SLAB ON UPSTREAM SIDE OF MANHOLE.



SA 100 **STANDARD SANITARY MANHOLE**
NOT TO SCALE



STANDARD INSTALLATION W/OUT RISER



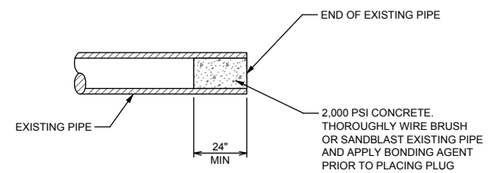
STANDARD INSTALLATION W/ RISER

NOTES:
A) MIN DEPTH OF COVER UNDER ROADWAY TO BE 7'-0"

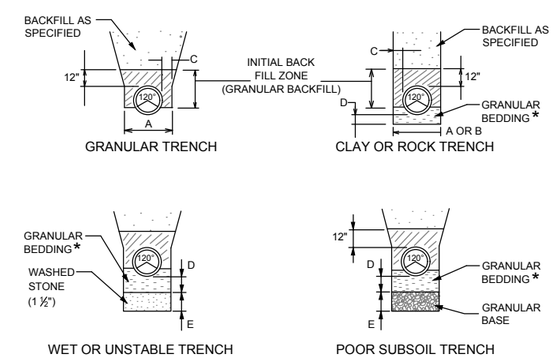
B) MIN DEPTH OF COVER UNDER ANY PORTION OF GRASS AREAS TO 5'-0"

C) MIN DEPTH OF COVER AT PROPERTY LINE TO 9'-0" (12' DESIRABLE) OR AS REQUIRED TO SERVE EXISTING DEVELOPMENT.

SA 200 **SANITARY SEWER LATERAL**
NOT TO SCALE



SA 702 **PIPE PLUG**
NOT TO SCALE

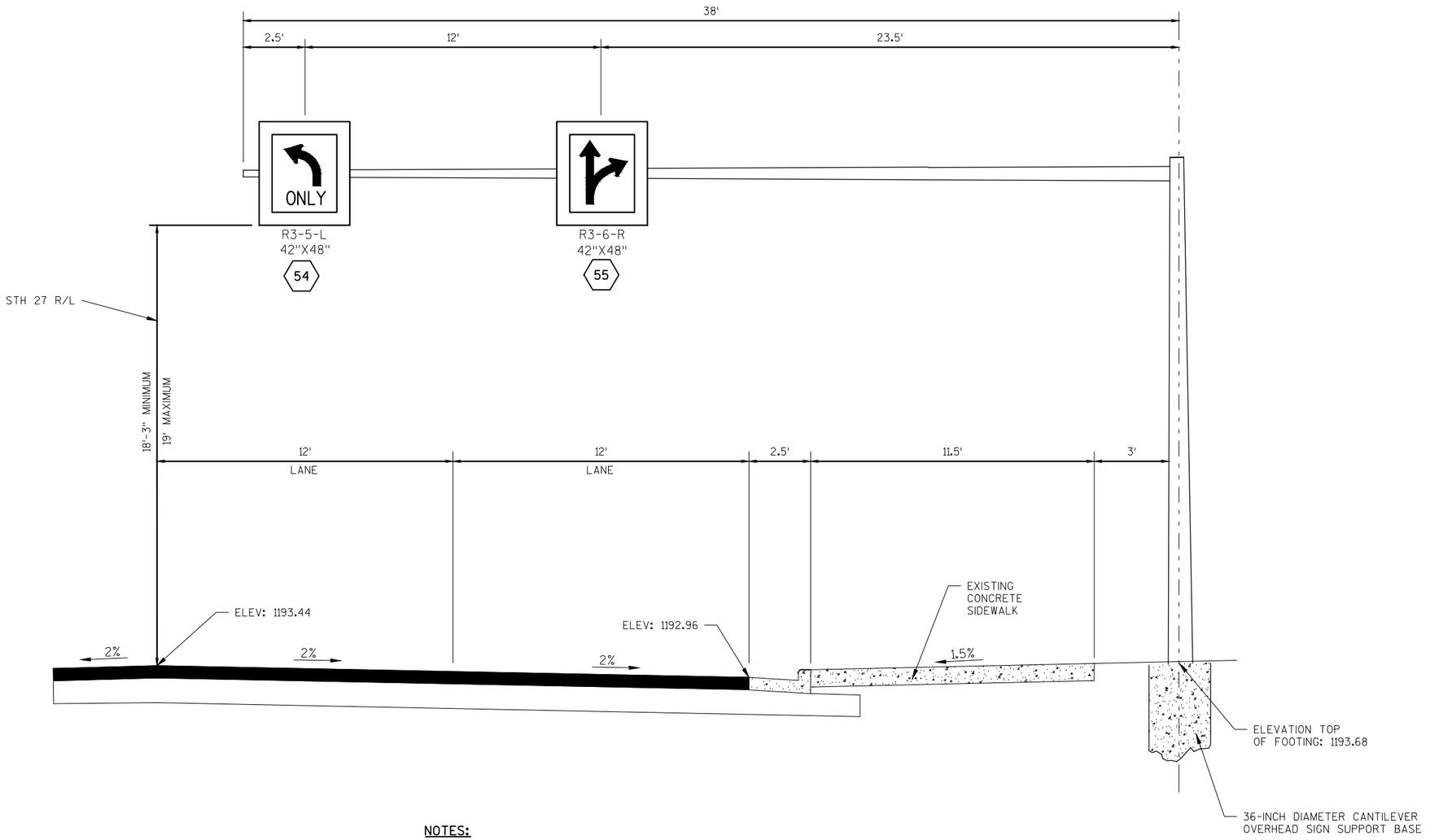


* FOR FLEXIBLE PIPE, BEDDING MATERIAL SHALL EXTEND TO SPRING LINE (MID HEIGHT) OF PIPE.

A=O.D. PIPE + 24"(MAX)
B=O.D. PIPE + 18"(MAX) FOR ROCK
C=6" MIN.

D=4" BELOW BARREL FOR CLAY
3" BELOW BELL FOR CLAY
6" BELOW BARREL FOR ROCK
E=DETERMINED BY A/E

GN 100 **TRENCH SECTIONS**
NOT TO SCALE



XX LEGEND
DENOTES SIGN NUMBER

GENERAL NOTES:

DRAWINGS ARE NOT TO BE SCALED

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SIGN SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS".

WIND VOLCITY PER WISDOT STANDARD SPECIFICATIONS.

FOOTING SHALL BE PER STANDARD DETAIL DRAWING, "36-INCH DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE".

SIGN SUPPORT BEAMS ARE REQUIRED PER SPECIFICATIONS AND ARE INCIDENTAL TO THE SIGN.

NOTES:

CONTRACTOR SHALL:

- SUBMIT SHOP DRAWING OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
- PROVIDE DESIGN CALCULATIONS.
- SHOW SIGNS ON SHOP DRAWINGS.
- PROVIDE I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT.
- PROVIDE 6 ANCHOR RODS PER STANDARD DETAIL DRAWING.

OVERHEAD SIGN SUPPORT STRUCTURE (S-57-001) - 38' SPAN

STA 501+50, LT

POINT	STH 27 STATION	OFFSET	CTH B STATION	OFFSET	Y COORDS	X COORDS	RADIUS
101	492+27.32	49.0 RT	27+93.95	329.3 RT	434959.99	618296.24	25'
102	492+84.55	49.0 LT	26+80.49	329.4 RT	435043.84	618219.79	25'
103	492+63.99	74.0 RT	27+96.59	283.8 RT	434988.70	618331.67	50'
104	493+68.02	39.0 RT	27+09.05	211.8 RT	435101.95	618326.01	15'
105	494+55.00	8.0 LT	26+08.28	167.9 RT	435197.41	618297.52	
106	494+55.05	0.0 LT	26+18.33	163.3 RT	435196.08	618305.40	
107	494+75.00	24.0 LT	25+71.56	159.6 RT	435219.57	618285.01	
108	494+99.02	79.0 RT	26+59.17	79.1 RT	435228.18	618390.52	55'
108A	494+99.02	79.0 RT	26+59.17	79.1 RT	435228.18	618390.52	83'
109	495+62.52	42.0 RT	25+81.96	49.9 RT	435298.23	618361.92	50'
110	495+63.17	29.2 RT	25+69.63	56.6 RT	435300.20	618349.27	
111	495+64.84	26.0 RT	25+65.52	56.9 RT	435302.21	618346.24	
112	495+75.29	55.6 RT	25+85.72	31.3 RT	435310.02	618376.71	
113	495+78.90	56.2 RT	25+83.94	27.9 RT	435313.68	618377.68	

POINT	STH 27 STATION	OFFSET	CTH B STATION	OFFSET	Y COORDS	X COORDS	RADIUS
114	495+95.29	31.2 RT	25+51.84	28.0 RT	435332.63	618354.22	
115	495+92.51	26.0 RT	25+48.39	33.1 RT	435330.23	618348.82	
116	495+85.65	0.0 RT	25+23.21	51.3 RT	435325.54	618322.32	
117	495+85.96	2.0 LT	25+20.57	51.8 RT	435326.03	618320.36	
118	495+76.41	85.0 LT	24+08.62	71.0 RT	435324.26	618236.86	55'
119	496+83.32	87.0 RT	25+48.29	79.0 LT	435421.03	618414.69	55'
121	496+95.04	4.5 RT	24+88.46	53.0 LT	435434.70	618332.45	
122	496+95.31	0.0 RT	24+84.98	51.9 LT	435435.04	618327.95	
123	497+15.53	52.0 LT	24+42.13	61.3 LT	435455.37	618276.12	60'
124	497+26.99	79.0 LT	24+21.25	71.0 LT	435466.29	618249.10	55'
125	497+45.51	43.0 LT	24+46.20	91.2 LT	435484.48	618284.92	30'

POINT	STH 27 STATION	OFFSET	Y COORDS	X COORDS
201	497+99.98	24.00 RT	435540.94	618349.94
202	500+50.02	8.00 RT	435788.88	618300.19
203	500+50.00	0.00	435787.14	618292.38

N

STA 500+08
CONSTRUCT CE
30' DRIVEWAY TYPE Z
SAWCUT REQD

83.14' LT

500+90.18, -28.41' LT

500+76.09

CONCRETE CURB & GUTTER
30-INCH TYPE D (TYP)

125

STH 27 SB

203

501+00

CONCRETE MEDIAN
SLOPED NOSE TYPE 1

24'

500+00

202

CONCRETE CURB & GUTTER
18-INCH TYPE D (TYP)

499+00

498+00

8'

16'

STH 27 NB

CONCRETE SIDEWALK 4-INCH

201

499+00.00, 28.03' RT

SIDEWALK TO REMAIN

CONCRETE CURB & GUTTER
30-INCH TYPE D (TYP)

497+35.32, 32.89' RT

SIDEWALK TO REMAIN

498+45.30, 33.68' RT

-05.02, 36.39' RT

37.80' RT

STA 498+70
CONSTRUCT CE
32' DRIVEWAY TYPE Z
SAWCUT REQD

1ST ST

502+00

503+00

STRUCTURE B-57-58
(PROJECT ID 8140-25-71)

504+16.42, -2

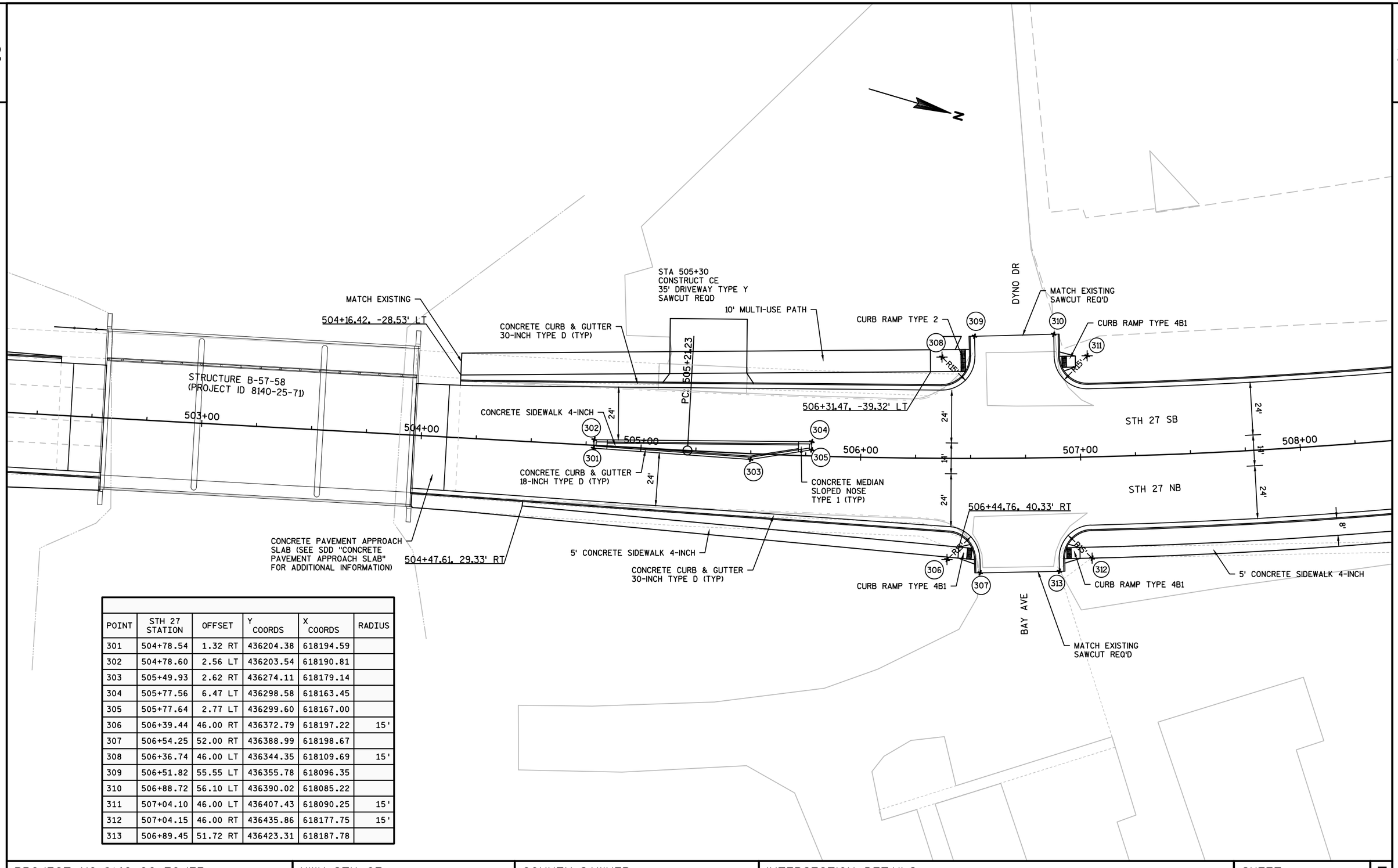
501+99.82, 34.06' RT

CONCRETE PAVEMENT APPROACH
SLAB (SEE SDD "CONCRETE
PAVEMENT APPROACH SLAB"
FOR ADDITIONAL INFORMATION)

CONCRETE SIDEWALK 4-INCH

POINT	STH 27 STATION	OFFSET	Y COORDS
301	504+78.54	1.32 RT	436204.38
302	504+78.60	2.56 LT	436203.54
303	505+49.93	2.62 RT	436274.11
304	505+77.56	6.47 LT	436298.58
305	505+77.64	2.77 LT	436299.60
306	506+39.44	46.00 RT	436372.79
307	506+54.25	52.00 RT	436388.99
308	506+36.74	46.00 LT	436344.35
309	506+51.82	55.55 LT	436355.78
310	506+88.72	56.10 LT	436390.02
311	507+04.10	46.00 LT	436407.43
312	507+04.15	46.00 RT	436435.86
313	506+89.45	51.72 RT	436423.31

2

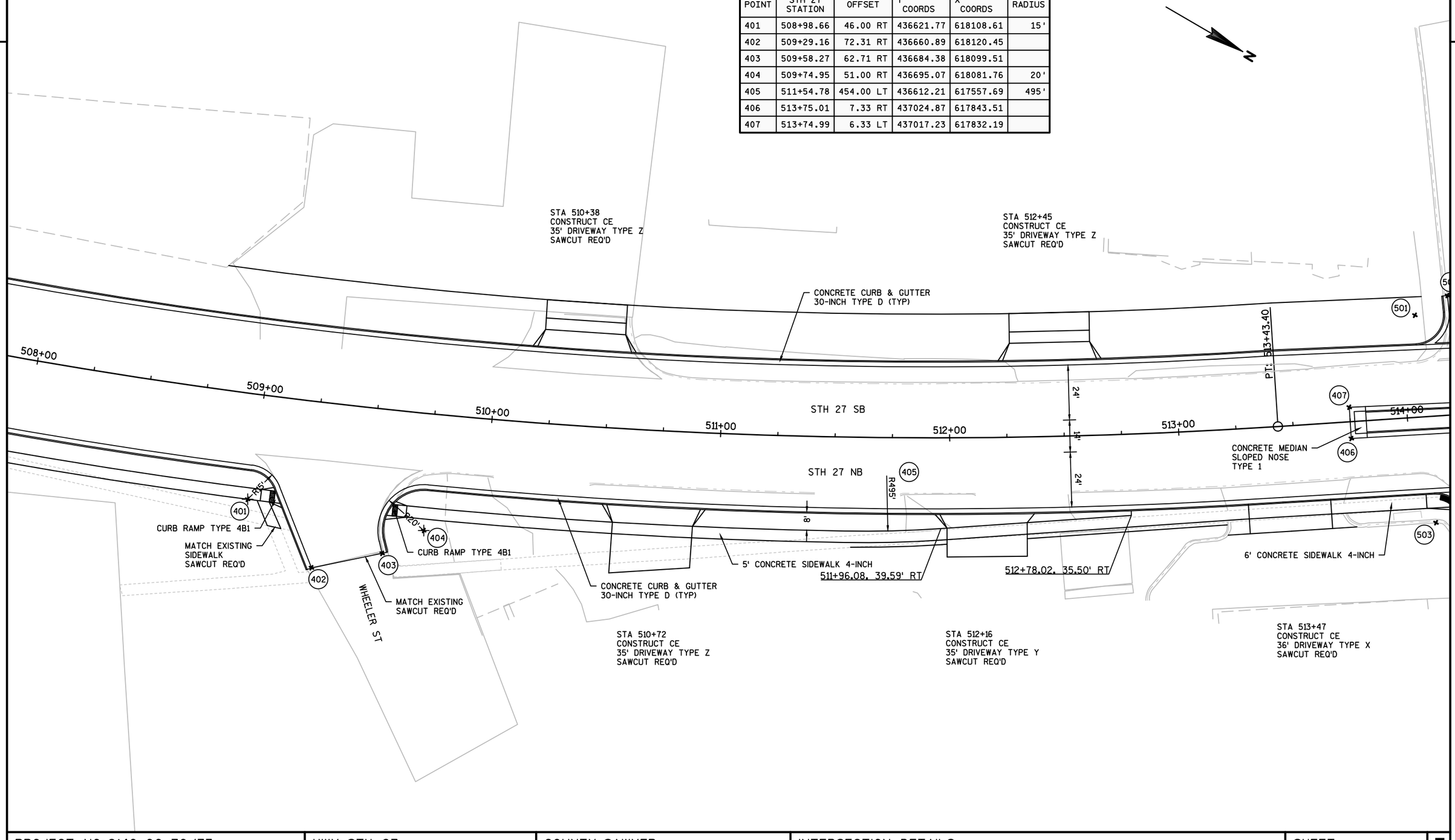


POINT	STH 27 STATION	OFFSET	Y COORDS	X COORDS	RADIUS
301	504+78.54	1.32 RT	436204.38	618194.59	
302	504+78.60	2.56 LT	436203.54	618190.81	
303	505+49.93	2.62 RT	436274.11	618179.14	
304	505+77.56	6.47 LT	436298.58	618163.45	
305	505+77.64	2.77 LT	436299.60	618167.00	
306	506+39.44	46.00 RT	436372.79	618197.22	15'
307	506+54.25	52.00 RT	436388.99	618198.67	
308	506+36.74	46.00 LT	436344.35	618109.69	15'
309	506+51.82	55.55 LT	436355.78	618096.35	
310	506+88.72	56.10 LT	436390.02	618085.22	
311	507+04.10	46.00 LT	436407.43	618090.25	15'
312	507+04.15	46.00 RT	436435.86	618177.75	15'
313	506+89.45	51.72 RT	436423.31	618187.78	

PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	INTERSECTION DETAILS	SHEET 14	E

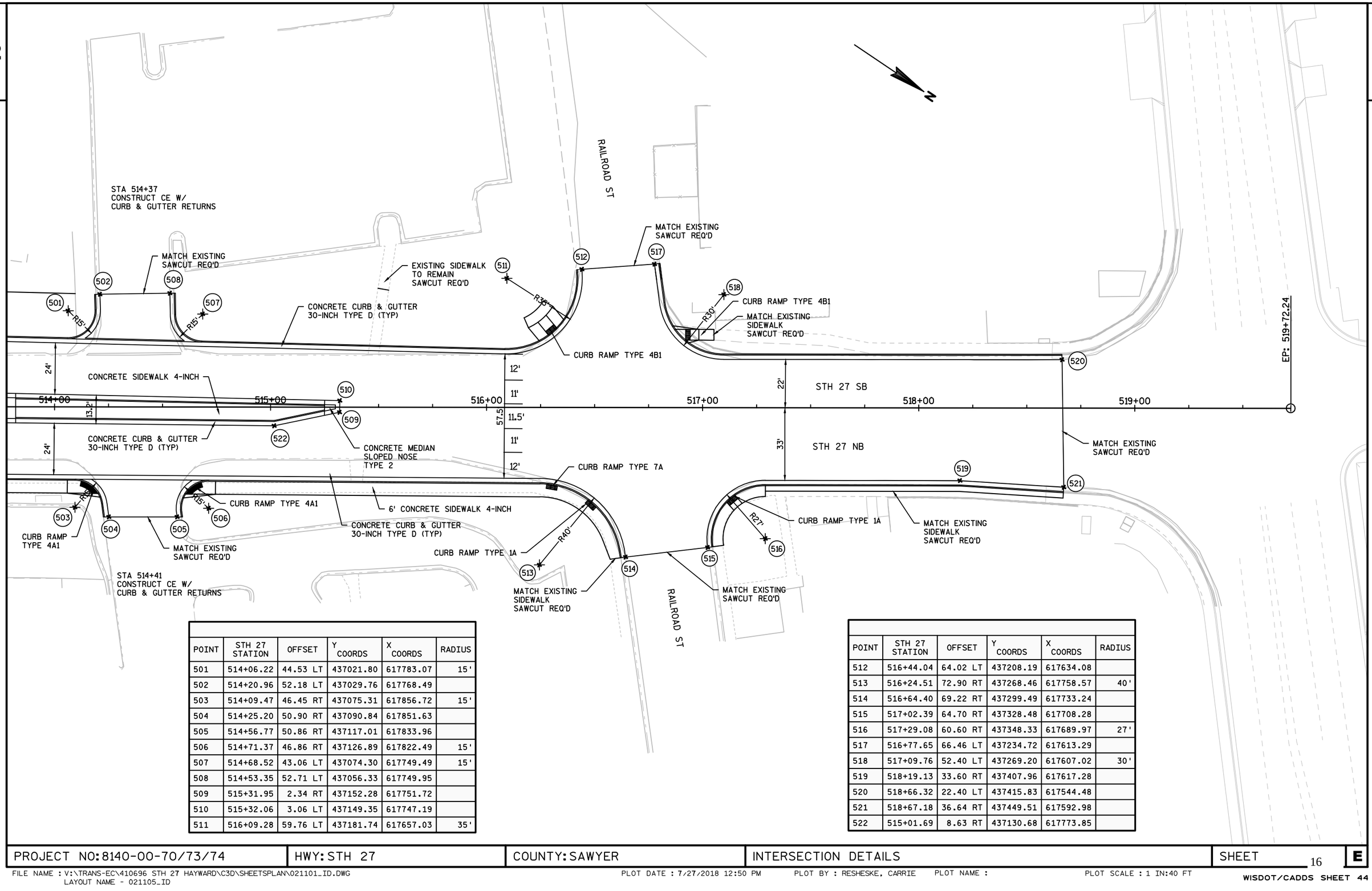
2

POINT	STH 27 STATION	OFFSET	Y COORDS	X COORDS	RADIUS
401	508+98.66	46.00 RT	436621.77	618108.61	15'
402	509+29.16	72.31 RT	436660.89	618120.45	
403	509+58.27	62.71 RT	436684.38	618099.51	
404	509+74.95	51.00 RT	436695.07	618081.76	20'
405	511+54.78	454.00 LT	436612.21	617557.69	495'
406	513+75.01	7.33 RT	437024.87	617843.51	
407	513+74.99	6.33 LT	437017.23	617832.19	



PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	INTERSECTION DETAILS	SHEET 15	E

2



POINT	STH 27 STATION	OFFSET	Y COORDS	X COORDS	RADIUS
501	514+06.22	44.53 LT	437021.80	617783.07	15'
502	514+20.96	52.18 LT	437029.76	617768.49	
503	514+09.47	46.45 RT	437075.31	617856.72	15'
504	514+25.20	50.90 RT	437090.84	617851.63	
505	514+56.77	50.86 RT	437117.01	617833.96	
506	514+71.37	46.86 RT	437126.89	617822.49	15'
507	514+68.52	43.06 LT	437074.30	617749.49	15'
508	514+53.35	52.71 LT	437056.33	617749.95	
509	515+31.95	2.34 RT	437152.28	617751.72	
510	515+32.06	3.06 LT	437149.35	617747.19	
511	516+09.28	59.76 LT	437181.74	617657.03	35'

POINT	STH 27 STATION	OFFSET	Y COORDS	X COORDS	RADIUS
512	516+44.04	64.02 LT	437208.19	617634.08	
513	516+24.51	72.90 RT	437268.46	617758.57	40'
514	516+64.40	69.22 RT	437299.49	617733.24	
515	517+02.39	64.70 RT	437328.48	617708.28	
516	517+29.08	60.60 RT	437348.33	617689.97	27'
517	516+77.65	66.46 LT	437234.72	617613.29	
518	517+09.76	52.40 LT	437269.20	617607.02	30'
519	518+19.13	33.60 RT	437407.96	617617.28	
520	518+66.32	22.40 LT	437415.83	617544.48	
521	518+67.18	36.64 RT	437449.51	617592.98	
522	515+01.69	8.63 RT	437130.68	617773.85	

PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	INTERSECTION DETAILS	SHEET 16	E

2

N

MICHIGAN AVE

BP: 23+06.87

24+00.00

PC: 24+22.07

10' MULTI-USE PATH
100% WISDOT

STH 27 SB

494

496

498

500

502

504

506

508

510

512

514

516

518

520

522

524

526

528

530

532

534

536

538

540

542

544

546

548

550

552

554

556

558

560

562

564

566

568

570

572

2

N

EXISTING MULTI-USE PATH TO REMAIN

STH 27 SB

STH 27 NB

502

500

498

STRUCTURE B-57-58 8140-25-71

CONCRETE SIDEWALK 4-INCH
100% WISDOT

EXISTING CONCRETE SIDEWALK TO REMAIN

CONCRETE SIDEWALK 4-INCH
100% WISDOT

EXISTING CONCRETE SIDEWALK TO REMAIN

1ST ST

4" HMA PAVEMENT OVER
10" BASE AGGREGATE DENSE

4" MILLING EXISTING ASPHALT
4" HMA PAVEMENT

7.5" HMA PAVEMENT OVER
10" BASE AGGREGATE DENSE

4" HMA PAVEMENT OVER
2" BASE AGGREGATE DENSE

CONCRETE PAVEMENT
APPROACH SLAB

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	PAVEMENT DETAILS	SHEET	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\021002_CD.DWG
LAYOUT NAME - 021005_CD

PLOT DATE : 7/27/2018 12:18 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : *********

2

2

N

10' MULTI-USE PATH
100% WISDOT

DYNO DR

CURB RAMP
100% WISDOT

504

506

STH 27 SB

508

STH 27 NB

STRUCTURE B-57-58 8140-25-71

CONCRETE SIDEWALK 4-INCH
100% WISDOT

BAY AVE

CONCRETE SIDEWALK 4-INCH
100% WISDOT

4" HMA PAVEMENT OVER
10" BASE AGGREGATE DENSE

4" MILLING EXISTING ASPHALT
4" HMA PAVEMENT

8" HMA PAVEMENT OVER
3" BASE AGGREGATE DENSE

8" HMA PAVEMENT OVER
8" BASE AGGREGATE DENSE

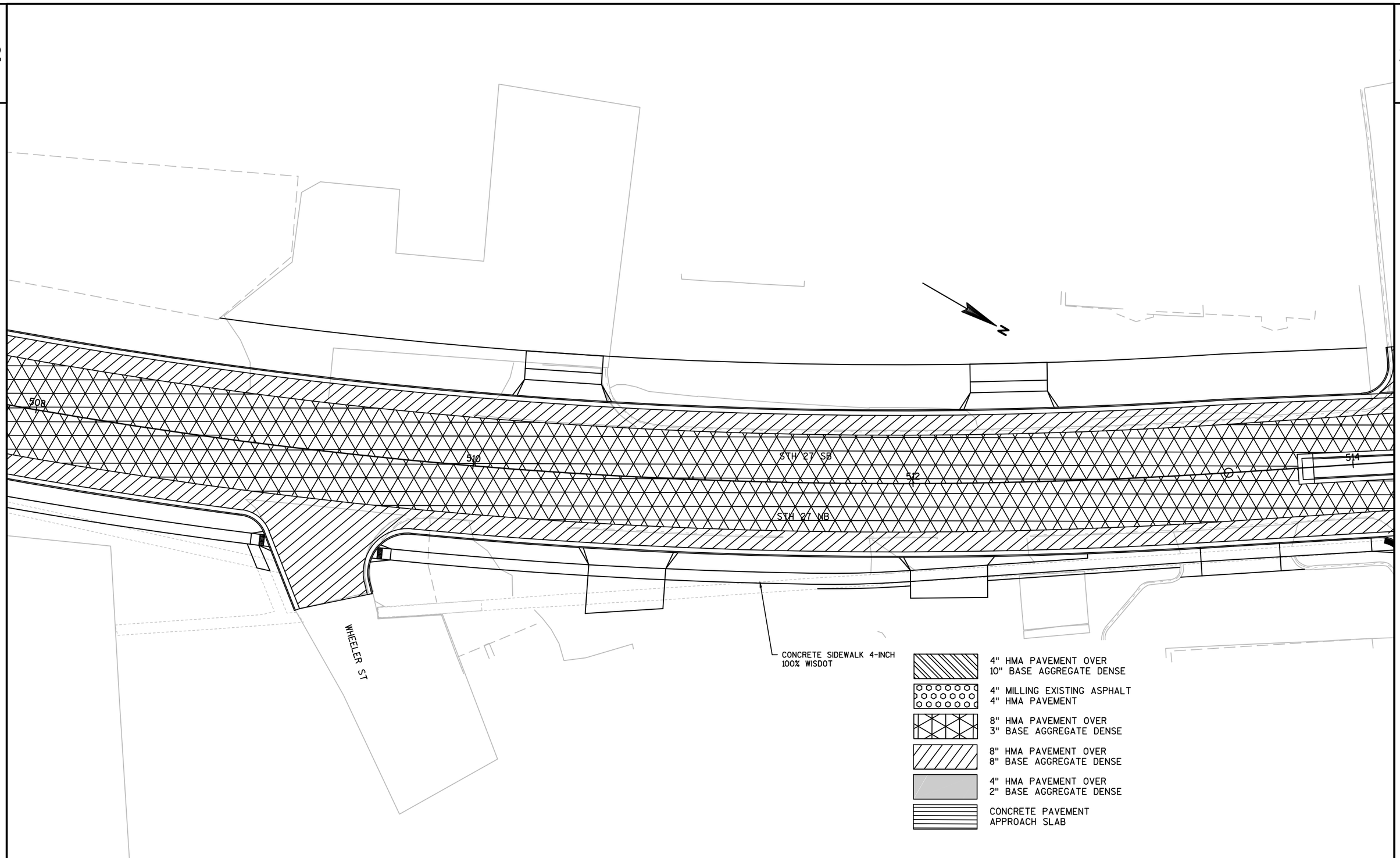
4" HMA PAVEMENT OVER
2" BASE AGGREGATE DENSE

CONCRETE PAVEMENT
APPROACH SLAB

PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	PAVEMENT DETAILS	SHEET 19	E

2

2



PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	PAVEMENT DETAILS	SHEET 20	E

2

N

RAILROAD ST

CONCRETE SIDEWALK 4-INCH
100% WISDOT

CONCRETE SIDEWALK 4-INCH
100% WISDOT

USH 63

STH 27 SB

STH 27 NB

514

516

518

CONCRETE SIDEWALK 4-INCH
100% WISDOT

CONCRETE SIDEWALK 4-INCH
100% WISDOT

RAILROAD ST

4" HMA PAVEMENT OVER
10" BASE AGGREGATE DENSE

4" MILLING EXISTING ASPHALT
4" HMA PAVEMENT

8" HMA PAVEMENT OVER
3" BASE AGGREGATE DENSE

8" HMA PAVEMENT OVER
8" BASE AGGREGATE DENSE

4" HMA PAVEMENT OVER
2" BASE AGGREGATE DENSE

CONCRETE PAVEMENT
APPROACH SLAB

PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	PAVEMENT DETAILS	SHEET 21	E

2

N

MICHIGAN AVE

492+00

493+00

494+00

495+00

496+00

497+00

BP: 23+06.87

PC: 24+22.07

24+00

25+00

25+52.48

26+00

26+39.46

27+00

STH 27 SB

STH 27 NB

CTH B

0.02

0.01

1192.15 1192.38 1192.97 1192.98 1192.96 1192.89 1192.81 1192.73 1192.65 1192.57 1192.45 1192.32 1192.21 1192.10 1192.00 1191.86 1191.76 1191.41 1192.16 1192.16 1191.70 1191.37 1191.64 1191.68 1191.60 1191.52

1192.25 1192.76 1192.88 1192.93 1192.92 1192.67

1192.83 1192.77 1192.69 1192.61 1192.53 1192.89 1193.03 1193.03 1192.97 1192.89 1192.81 1192.73 1192.65 1192.61

1192.83 1192.81 1192.73 1192.65 1192.57 1192.49 1192.41 1192.70 1192.14 1191.62 1191.72 1191.88 1191.81 1191.72 1191.73

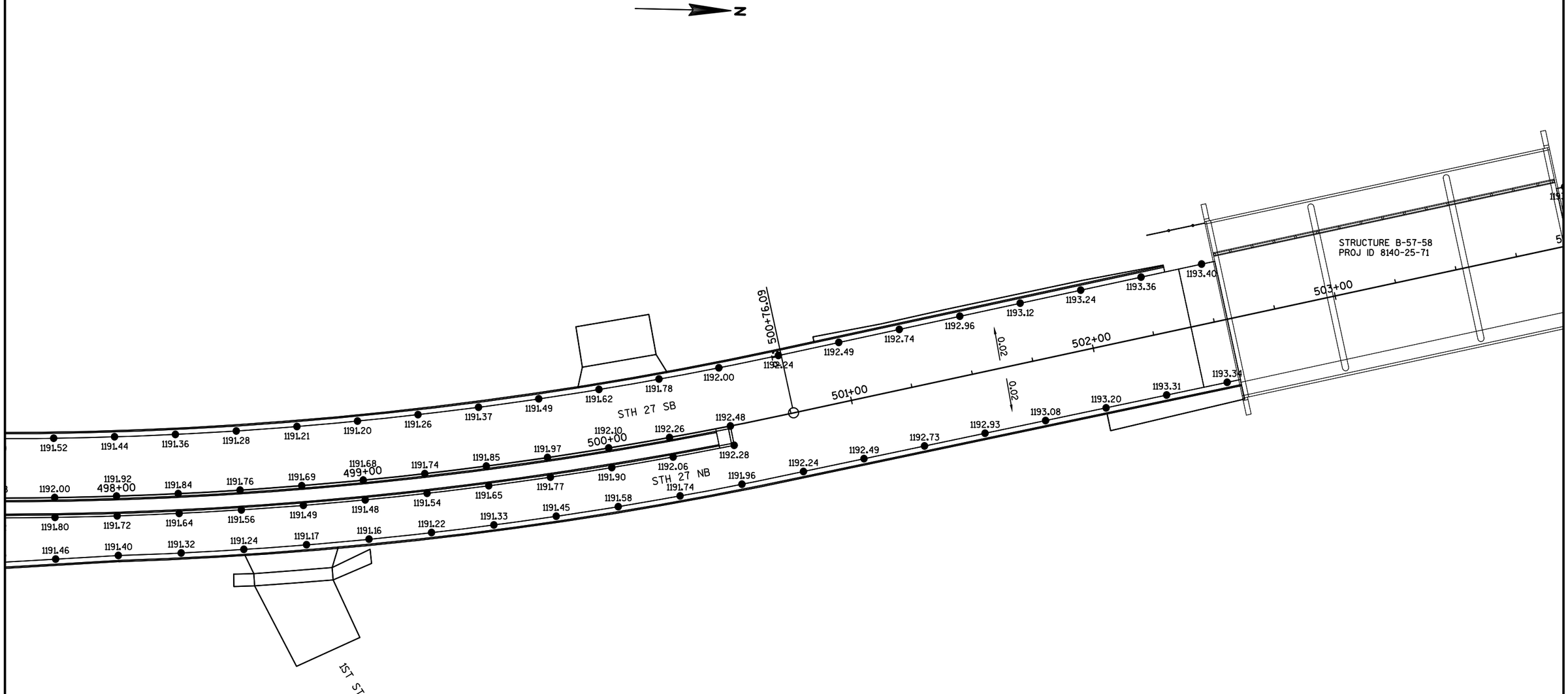
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1192.16 1192.13 1192.07 1192.10 1191.43 1191.82 1191.47 1191.53 1191.59

1191.67 1191.64 1191.60 1191.56 1191.40 1191.51 1191.59 1191.79 1191.92 1191.90 1191.81

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	PAVING DETAILS	SHEET 22	E

2



PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	PAVING DETAILS	SHEET 23	E

2

N

DYNO DR

1193.36 1193.40 1193.44 1193.41 1193.28 1193.13 1192.89 PC: 505+21.23 1192.56 1192.20 1191.86 1191.59 1191.42 1191.37 1191.68 1191.23 1190.86 1190.78 1190.70 1190.61 1190.52 1190.46

503+00 504+00 505+00 506+00 507+00 508+00

0.02 0.02 0.02

24' 24' 24'

STH 27 SB

1193.58 1193.36 1193.04 1192.68 1192.31 1193.61 1193.40 1193.09 1192.75 1192.38

1193.31 1193.34

STRUCTURE B-57-58
PROJ ID 8140-25-71

1193.43 1193.40 1193.29 1193.15 1192.93 1192.61 1192.26 1191.92 1191.64 1191.44 1191.36

1191.63 1191.54 1191.46 1191.37 1191.28 1191.22

CROWN LINE 7' RT

STH 27 NB

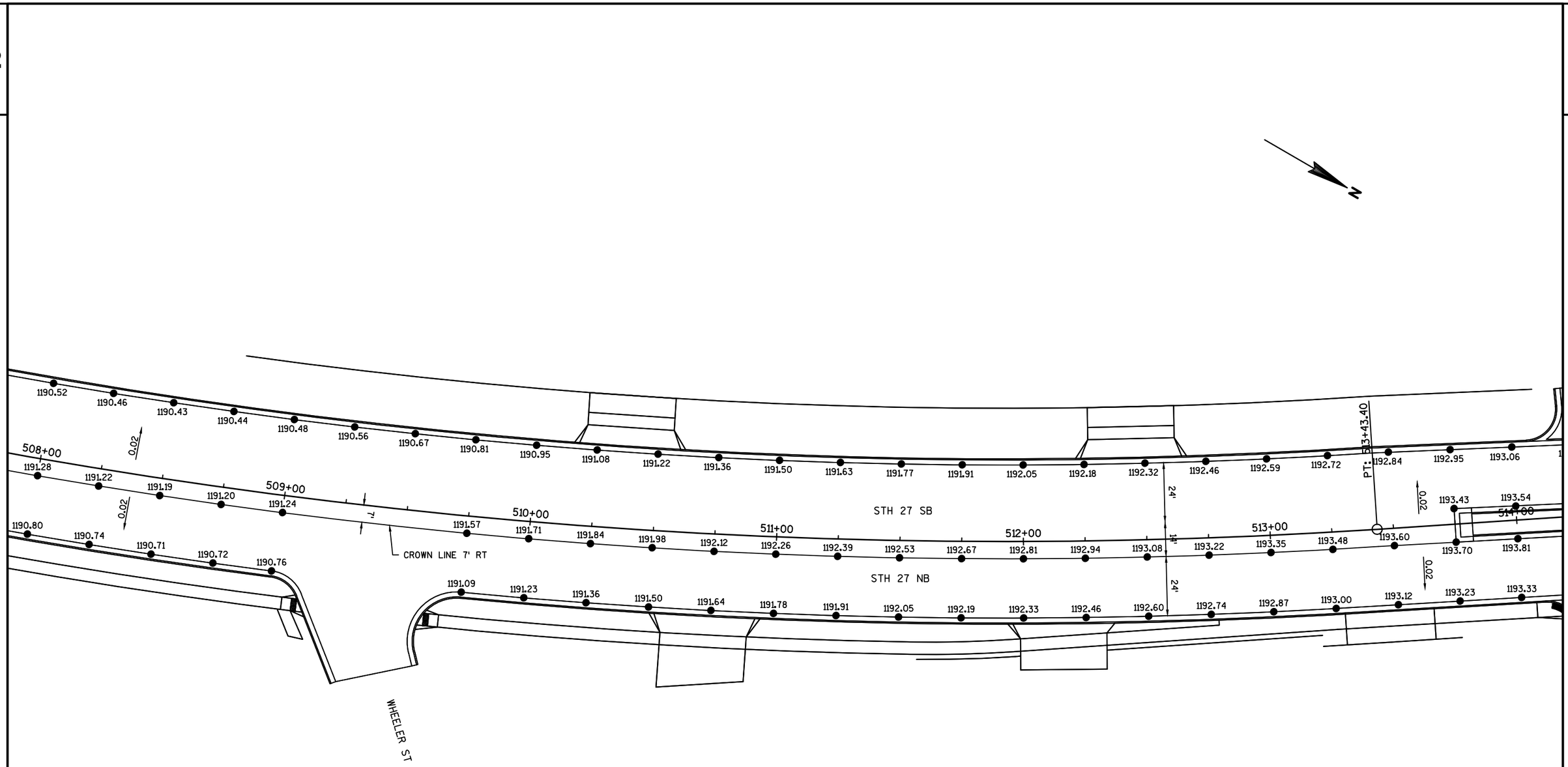
1191.14 1191.06 1190.98 1190.89 1190.80 1190.74

1191.59 1191.39

BAY AVE

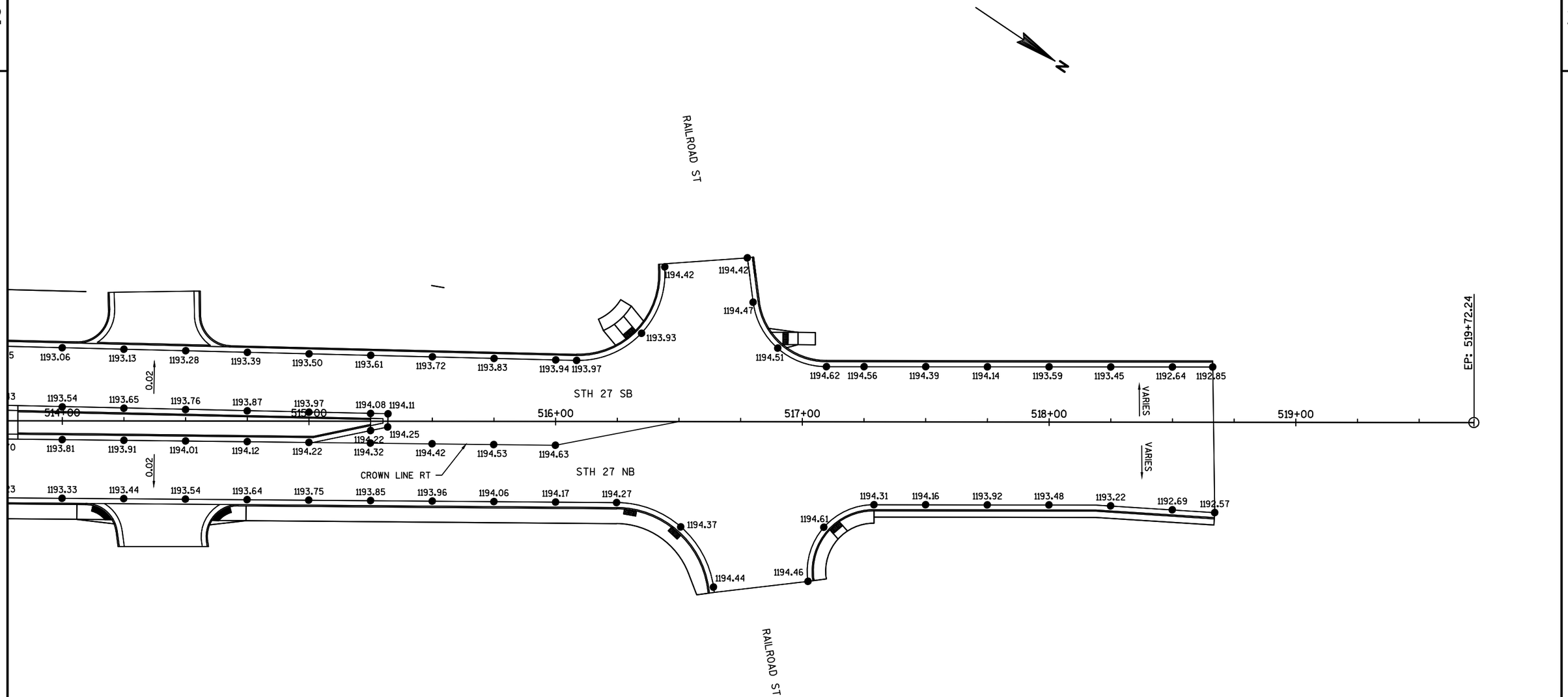
PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	PAVING DETAILS	SHEET 24	E

2



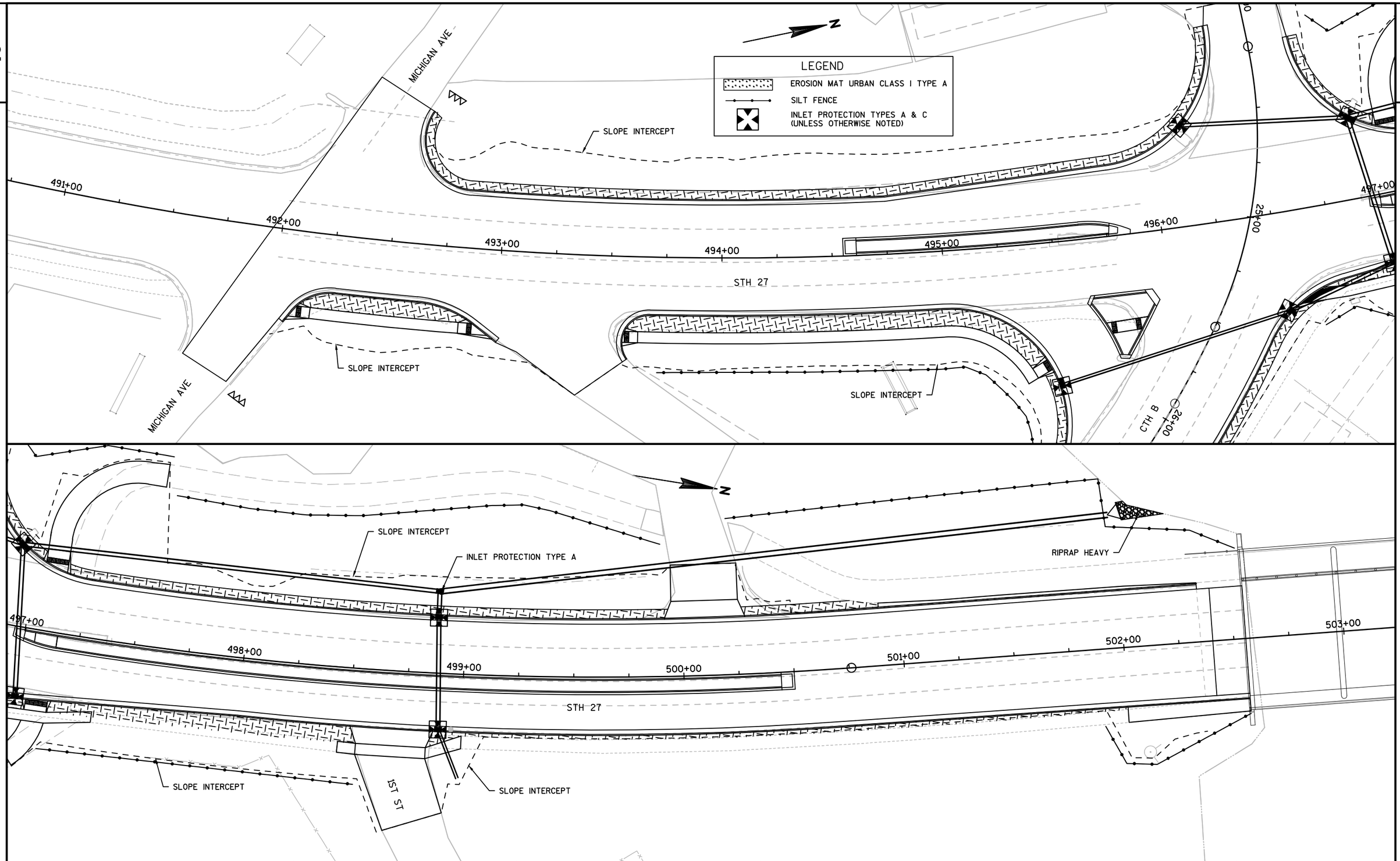
PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	PAVING DETAILS	SHEET 25	E

2



PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	PAVING DETAILS	SHEET 26	E

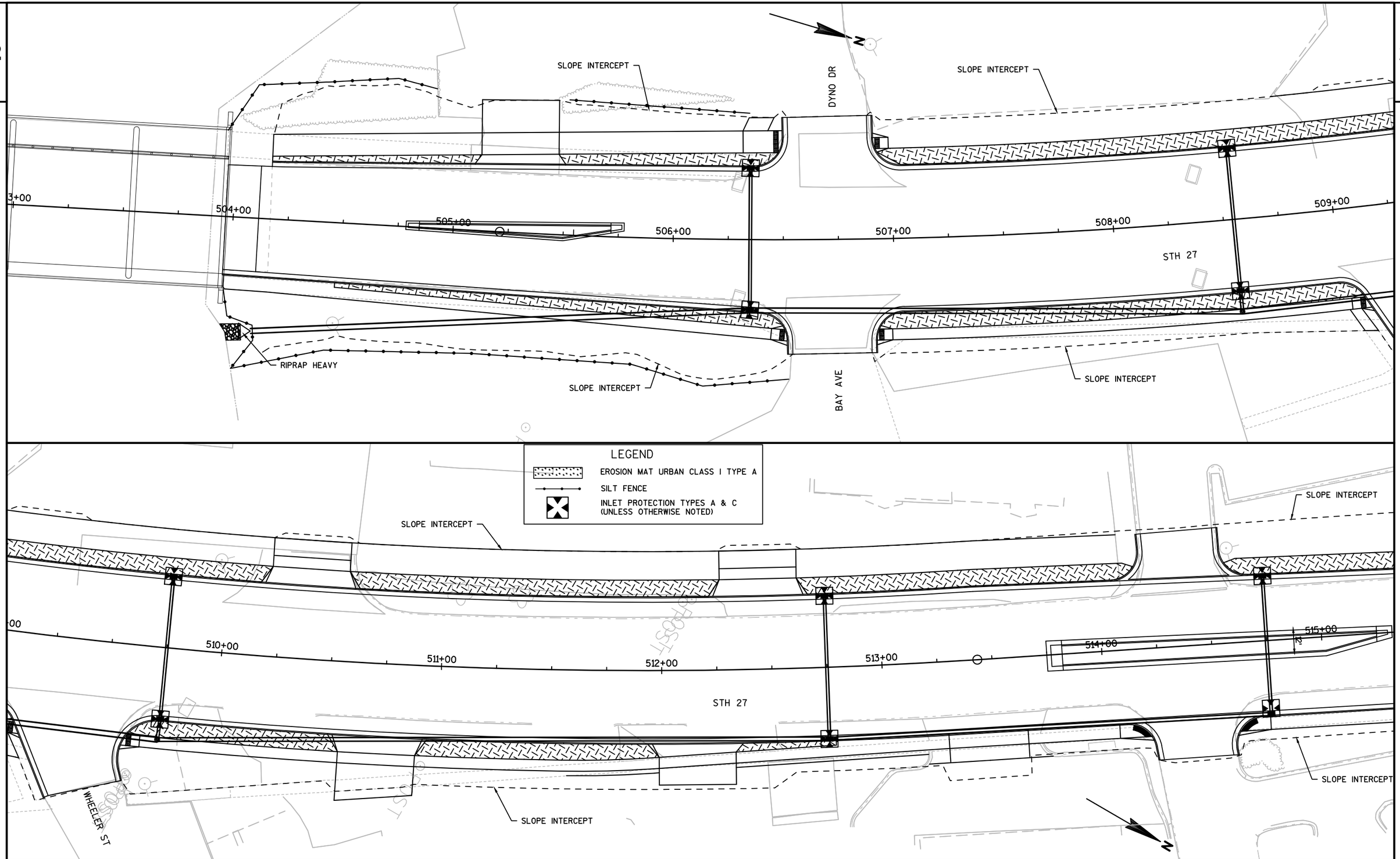
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PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	EROSION CONTROL	SHEET 27	E

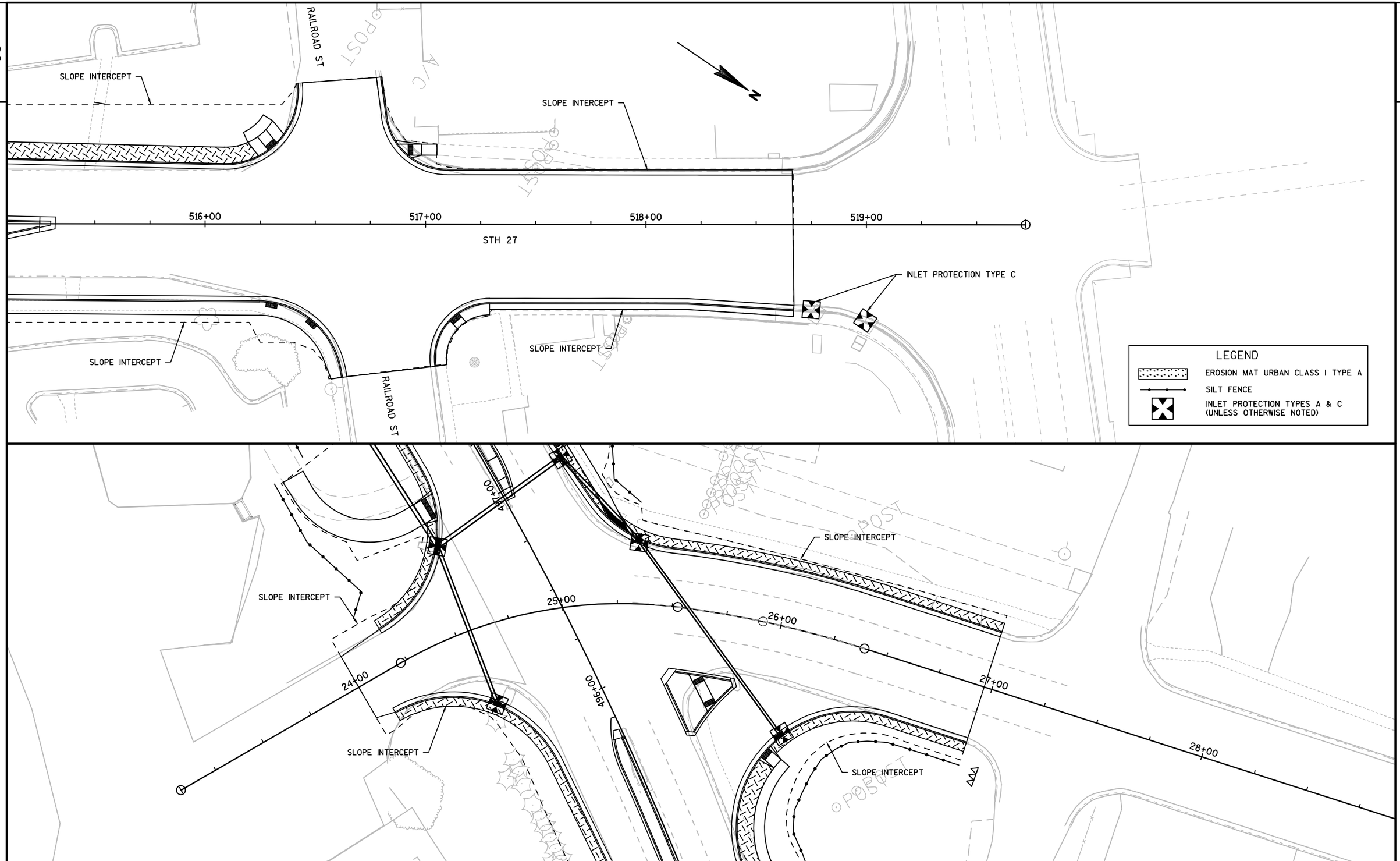
FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC
PLOT DATE : 7/27/2018 1:00 PM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2



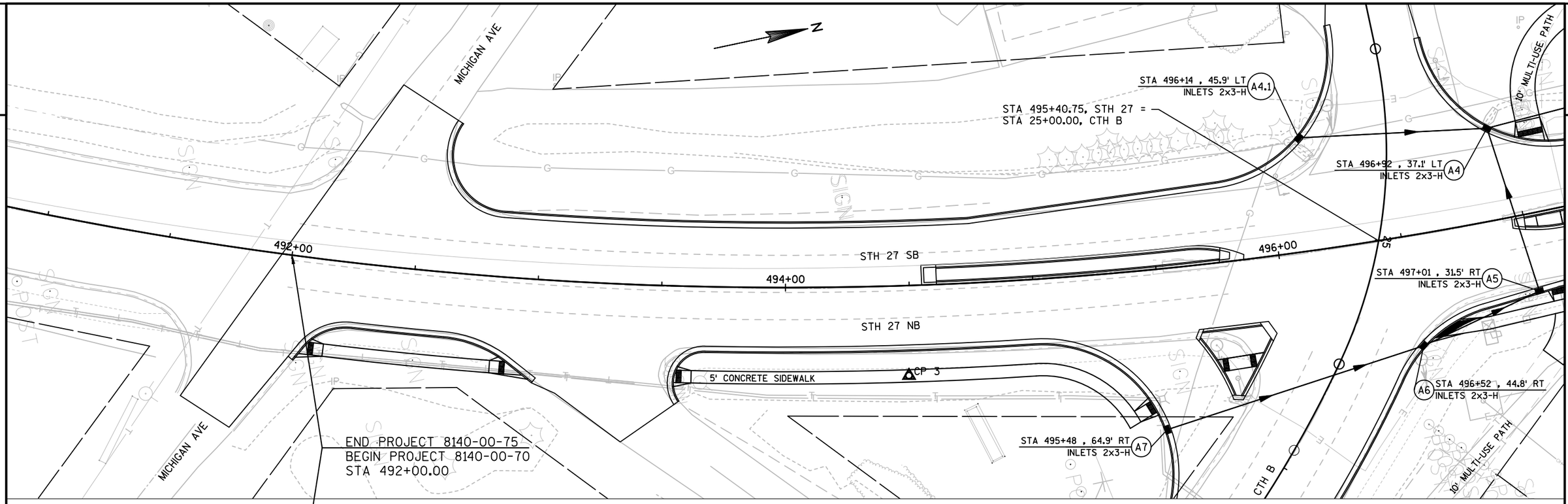
PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	EROSION CONTROL	SHEET 28	E

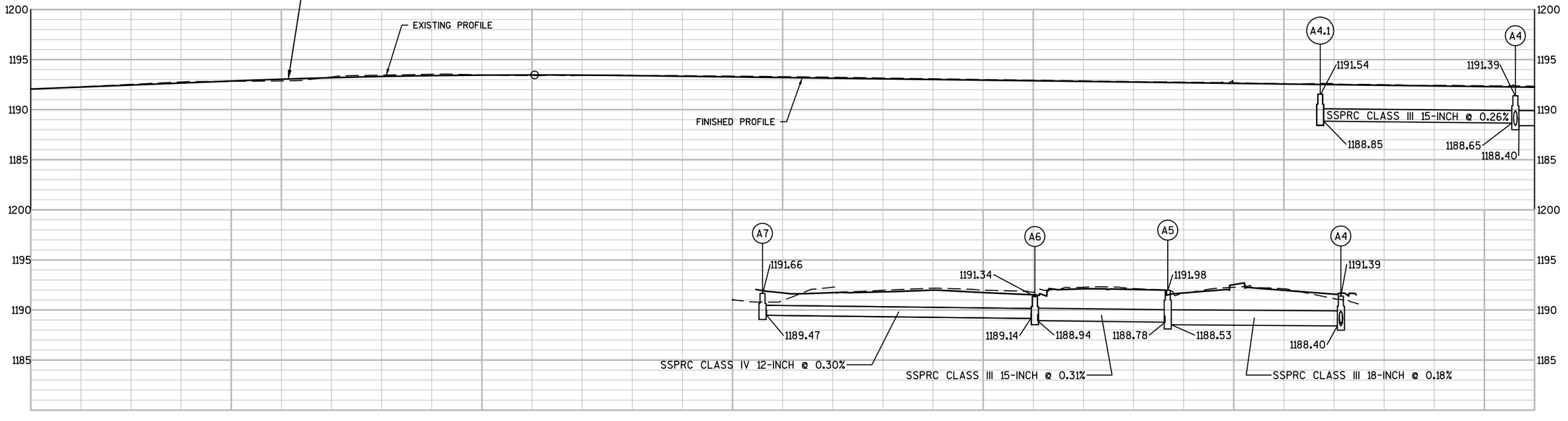
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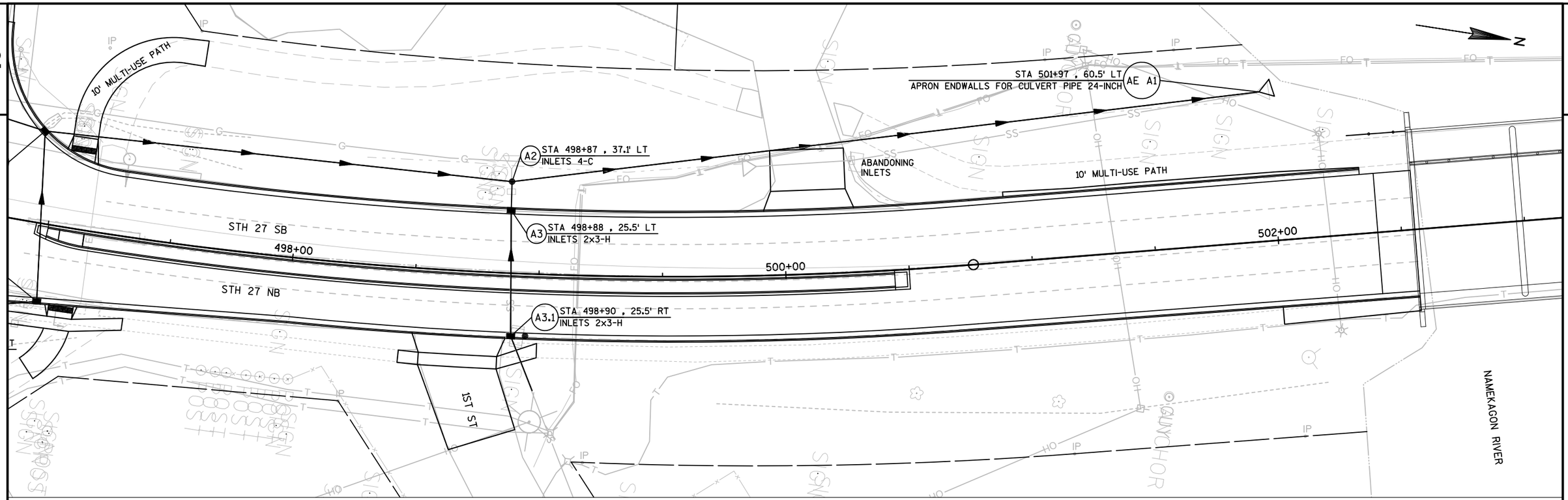
PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	EROSION CONTROL	SHEET 29 E

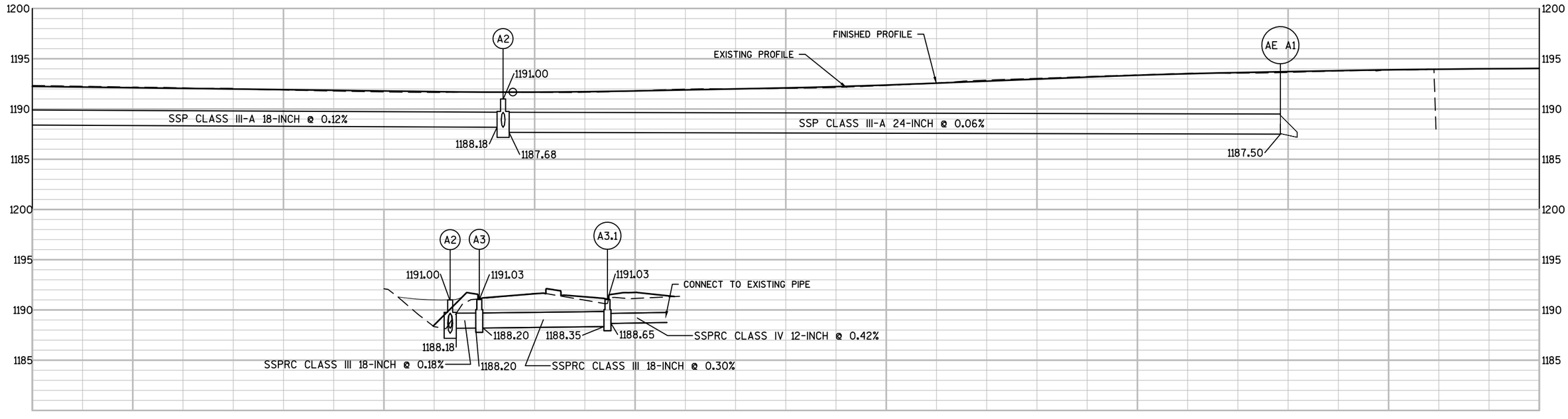
2





PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	STORM SEWER DETAILS: STH 27	SHEET 30	E





PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	STORM SEWER DETAILS: STH 27	SHEET 31	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\022500_SS.DWG
LAYOUT NAME - 022502_SS
PLOT DATE : 9/20/2018 4:10 PM PLOT BY : AYRES ASSOCIATES PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 41

2

CP 127

10' MULTI-USE PATH

STA 506+35 , 32.5' LT
INLETS 2x3-H
B2.1

ABANDONING INLETS

ABANDONING SEWER

504+00

506+00

ABANDONING SEWER

ABANDONING MANHOLES

ABANDONING SEWER

CP 2750

ABANDONING INLETS

5' CONCRETE SIDEWALK

STA 506+35 , 32.2' RT
INLETS 2x3-H
B2

AE B1
STA 504+11 , 51.3' RT
APRON ENDWALL FOR CULVERT PIPE 24-INCH

NAMEKAGON RIVER

DYNO DR

BAY AVE

STA 508+55 , 32.5' LT
INLETS 2x3-H
B3.2

ABANDONING INLETS

ABANDONING SEWER

STH 27 SB

508+00

ABANDONING MANHOLES

ABANDONING SEWER

ABANDONING INLETS

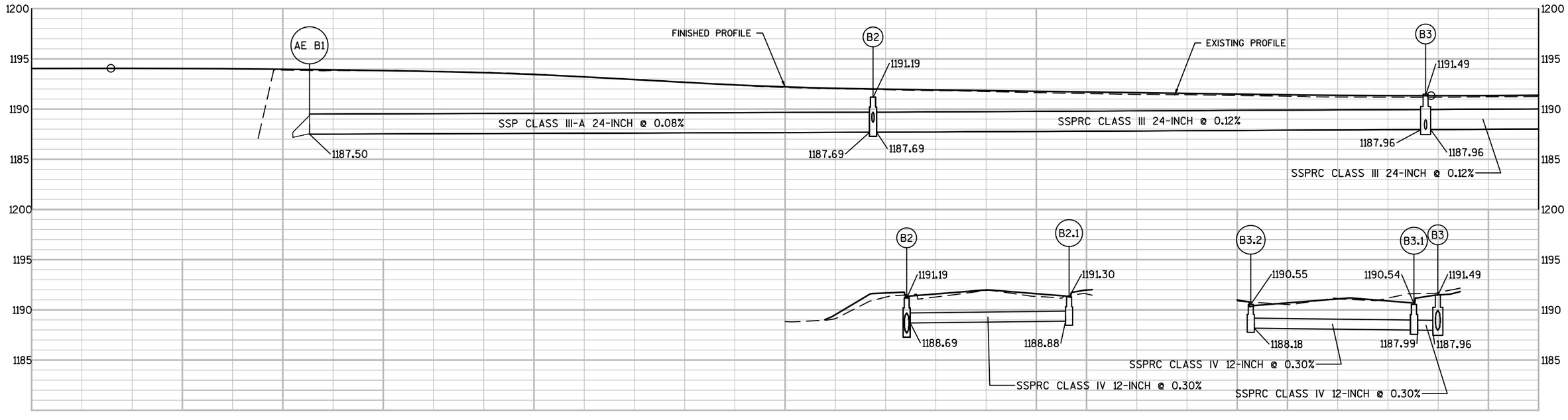
STH 27 NB

B3.1
STA 508+55 , 32.5' RT
INLETS 2x3-H

5' CONCRETE SIDEWALK

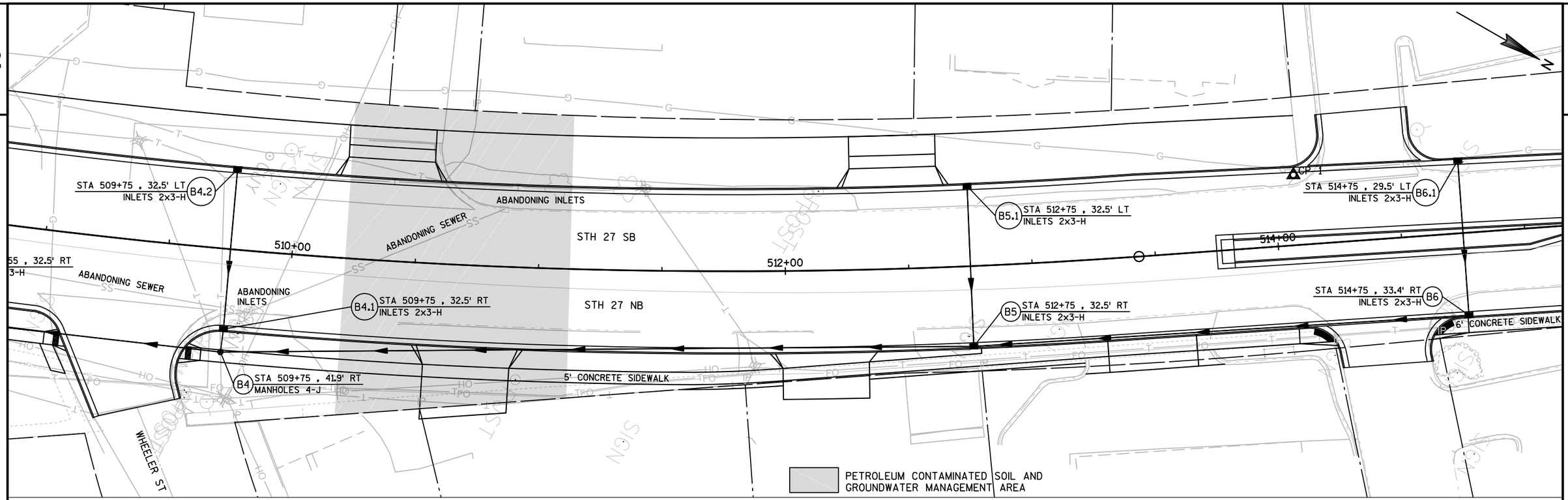
STA 508+55 , 42.0' RT
MANHOLES 4-J
B3

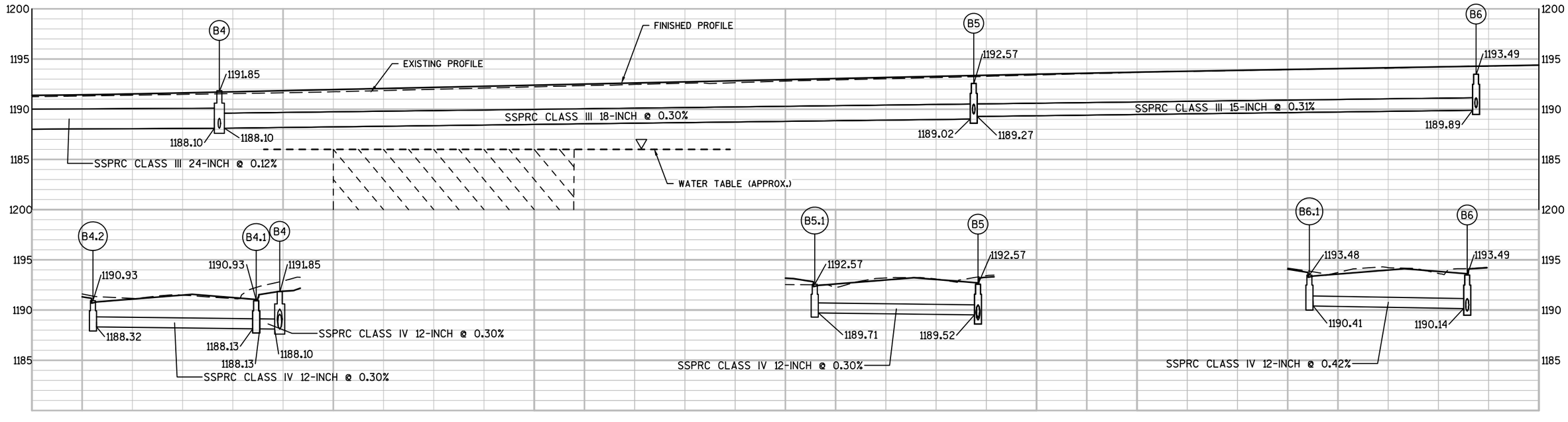
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PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	STORM SEWER DETAILS: STH 27	SHEET 32	E

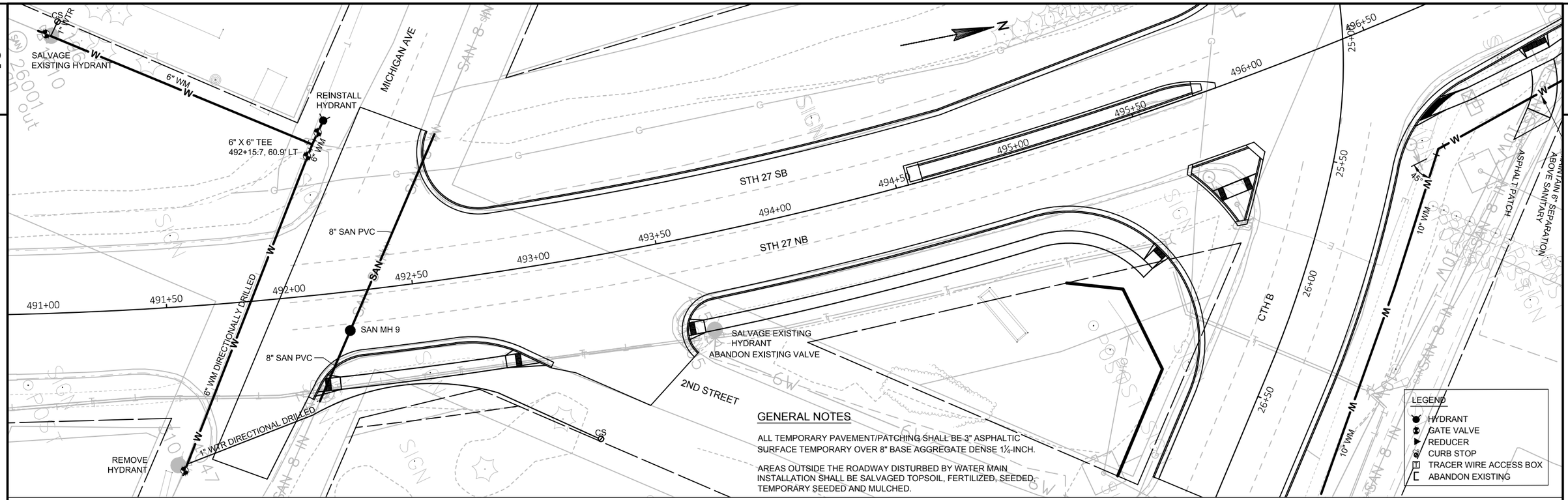
FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\022500_SS.DWG
LAYOUT NAME - 022503_SS
PLOT DATE : 9/20/2018 4:10 PM PLOT BY : AYRES ASSOCIATES PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 41





PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	STORM SEWER DETAILS: STH 27	SHEET 33	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\022500_SS.DWG
LAYOUT NAME - 022504_SS
PLOT DATE : 9/20/2018 4:10 PM PLOT BY : AYRES ASSOCIATES PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 41

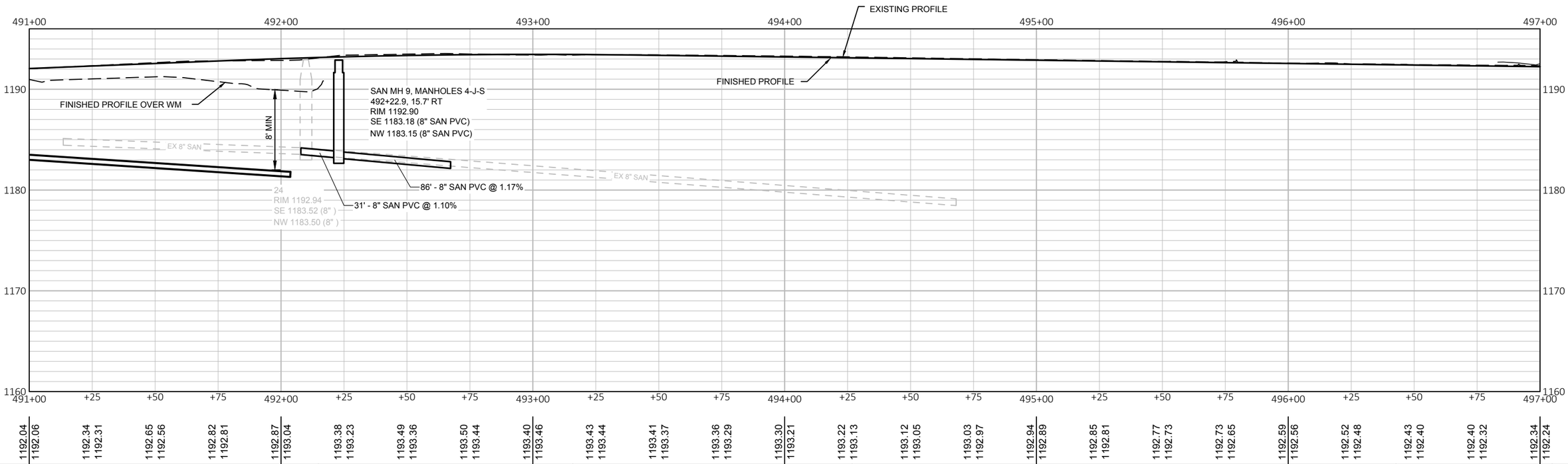


GENERAL NOTES

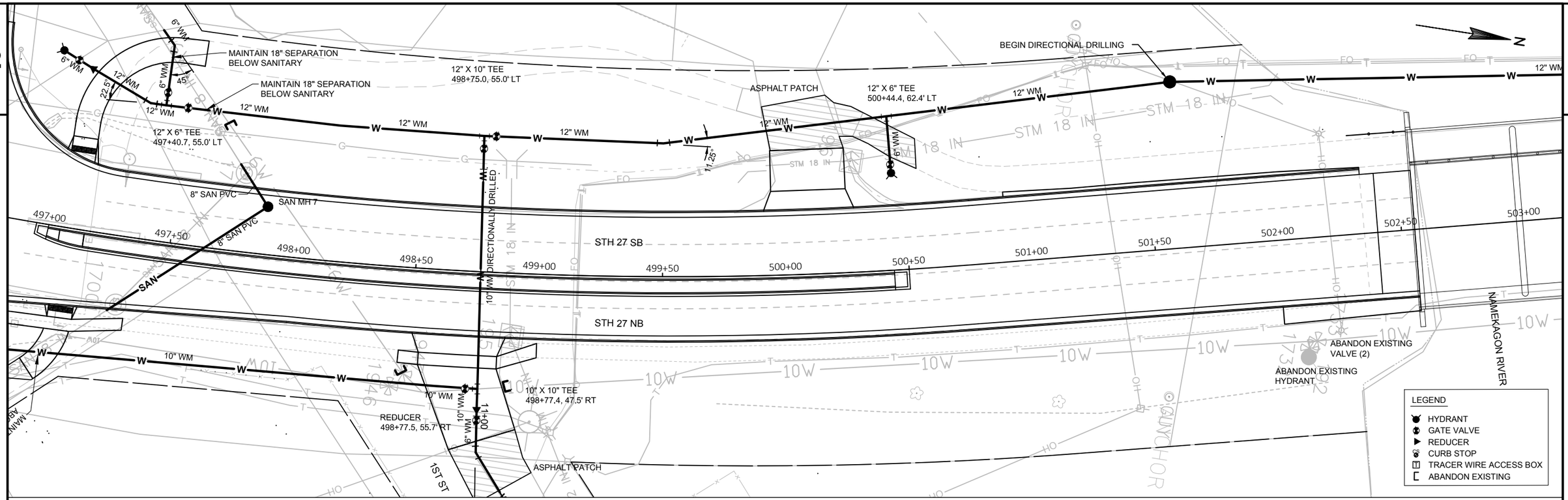
ALL TEMPORARY PAVEMENT/PATCHING SHALL BE 3" ASPHALTIC SURFACE TEMPORARY OVER 8" BASE AGGREGATE DENSE 1¼-INCH.

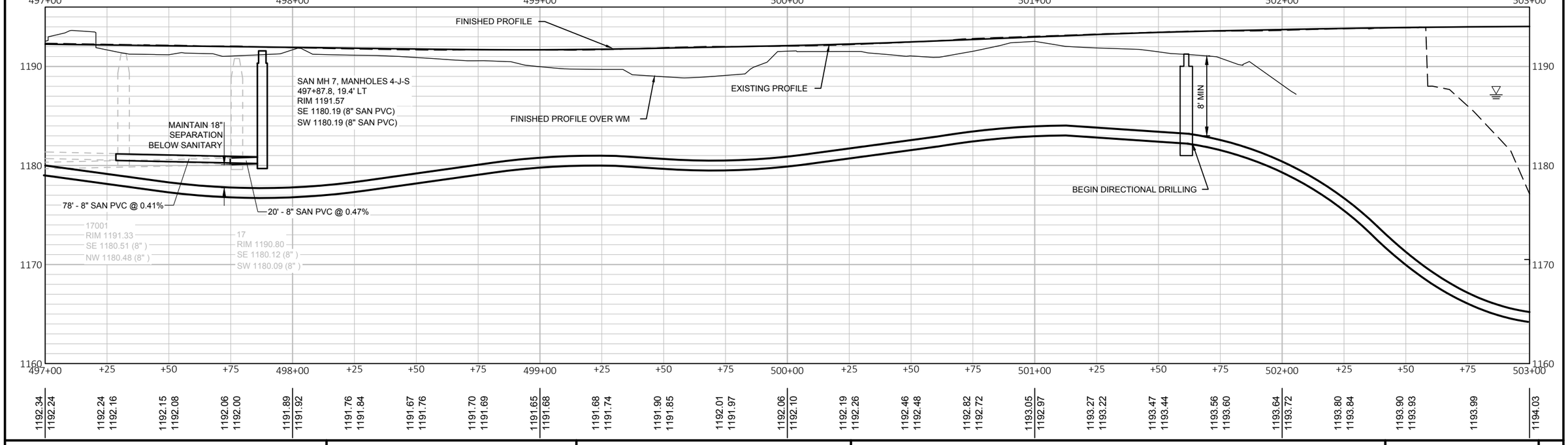
AREAS OUTSIDE THE ROADWAY DISTURBED BY WATER MAIN INSTALLATION SHALL BE SALVAGED TOPSOIL, FERTILIZED, SEEDED, TEMPORARY SEEDED AND MULCHED.

LEGEND
- HYDRANT
- GATE VALVE
- REDUCER
- CURB STOP
- TRACER WIRE ACCESS BOX
- ABANDON EXISTING



PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	SANITARY AND WATER DETAILS: STH 27	SHEET 34	E





PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	SANITARY AND WATER DETAILS: STH 27	SHEET 35	E

2

MAINTAIN 6" SEPARATION ABOVE SANITARY

ASPHALT PATCH

10" WM

45°

SECOND ST

ABANDON EXISTING VALVE

8" WM

ASPHALT PATCH

10" WM

12" X 6" TEE
495+47.3, 202.7' RT

ABANDON EXISTING VALVE

22.5°

22.5°

ASPHALT PATCH

MAINTAIN 18" SEPARATION BELOW SANITARY

10" WM

ABANDONED 6" WTR

ASPHALT PATCH

10" X 6" TEE
493+67.9, 488.9' RT

MAINTAIN 18" SEPARATION BELOW SANITARY

6" X 6" TEE
493+56.5, 478.9' RT

ASPHALT PATCH

CTH B

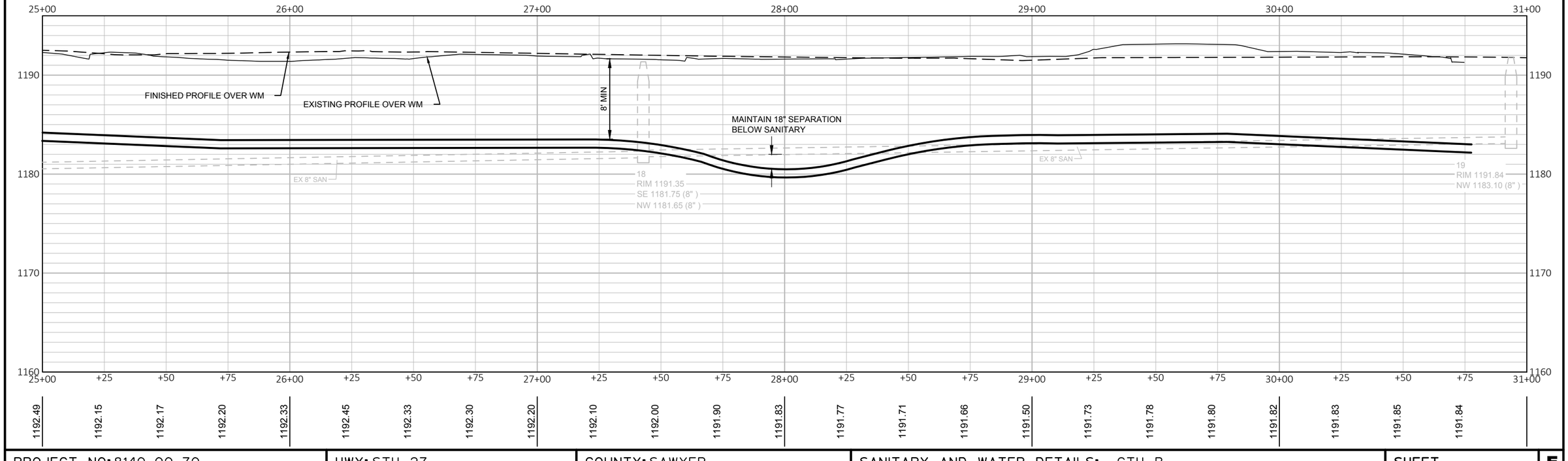
STH 27 SB

STH 27 NB

STM 24 IN

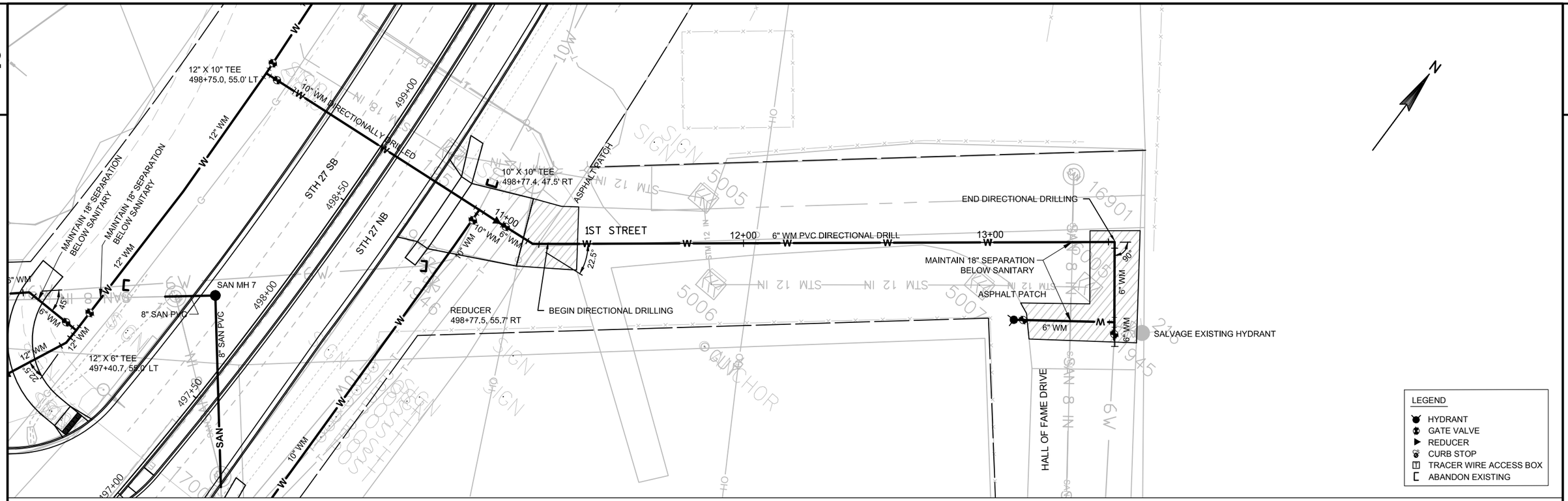
LEGEND

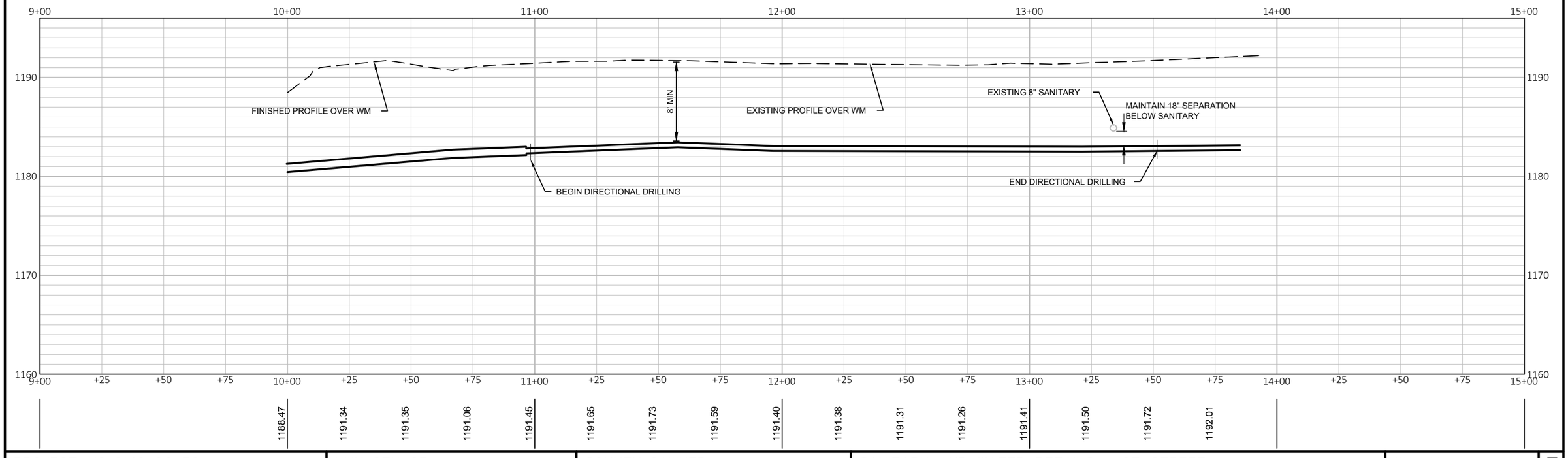
- HYDRANT
- GATE VALVE
- REDUCER
- CURB STOP
- TRACER WIRE ACCESS BOX
- ABANDON EXISTING



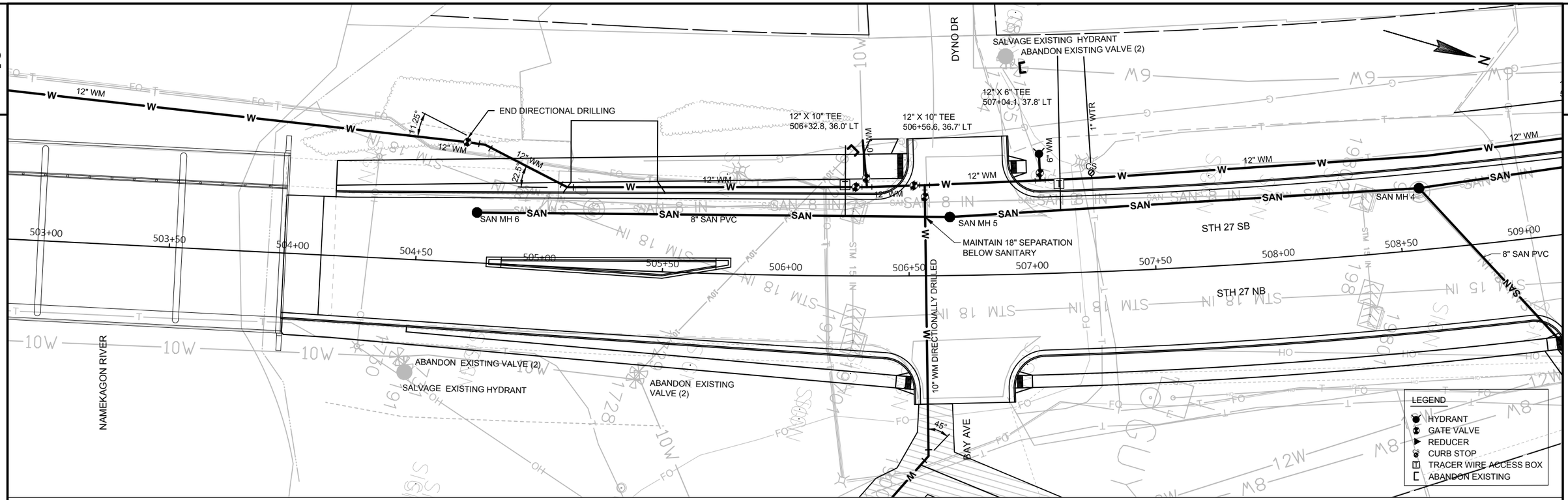
PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	SANITARY AND WATER DETAILS: CTH B	SHEET 36	E

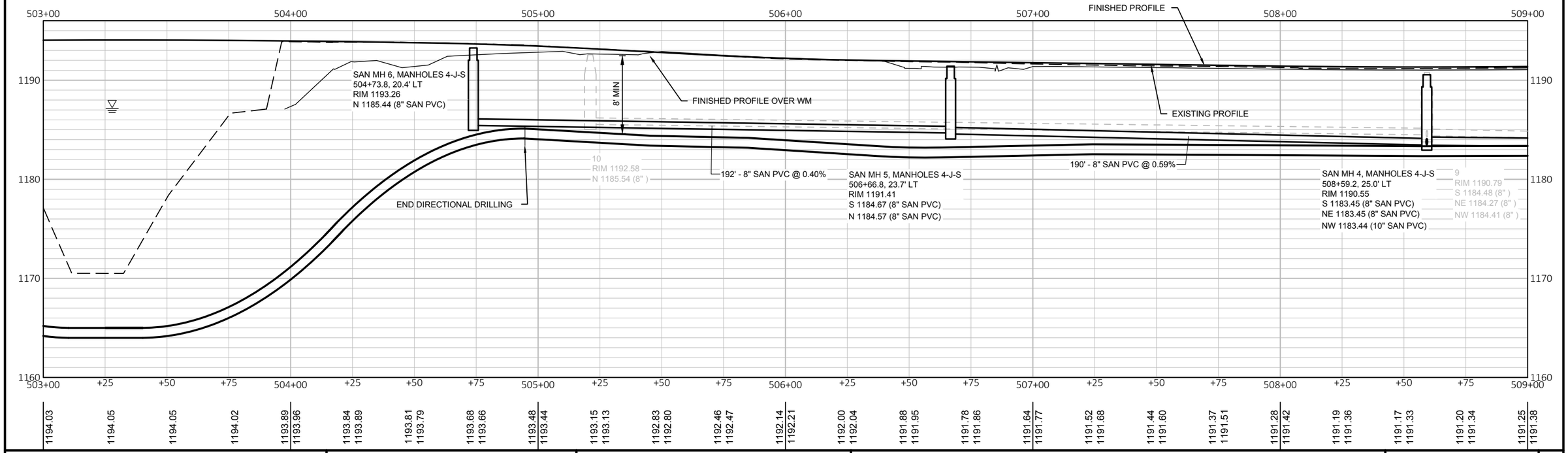
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PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	SANITARY AND WATER DETAILS: 1ST STREET	SHEET 37	E





PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	SANITARY AND WATER DETAILS: STH 27	SHEET 38	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\023100_UP.DWG
LAYOUT NAME - 023105_UP

PLOT DATE : 7/31/2018 10:35 AM PLOT BY : AYRES ASSOCIATES PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 41

2

12" X 6" TEE
509+45.5, 38.6' LT

SALVAGE EXISTING HYDRANT
ABANDON EXISTING VALVE

12" X 6" TEE
510+71.1, 36.3' LT

ABANDON EXISTING VALVE

12" X 6" TEE
514+31.3, 34.5' LT

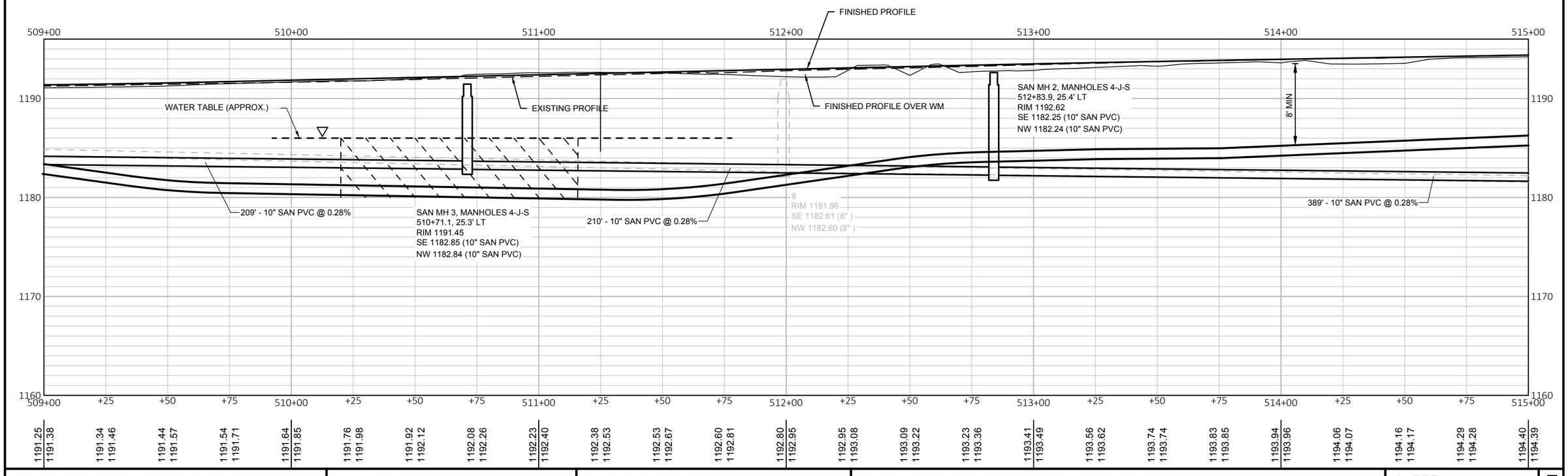
ASPHALT PATCH

SALVAGE EXISTING HYDRANT
ABANDON EXISTING VALVE

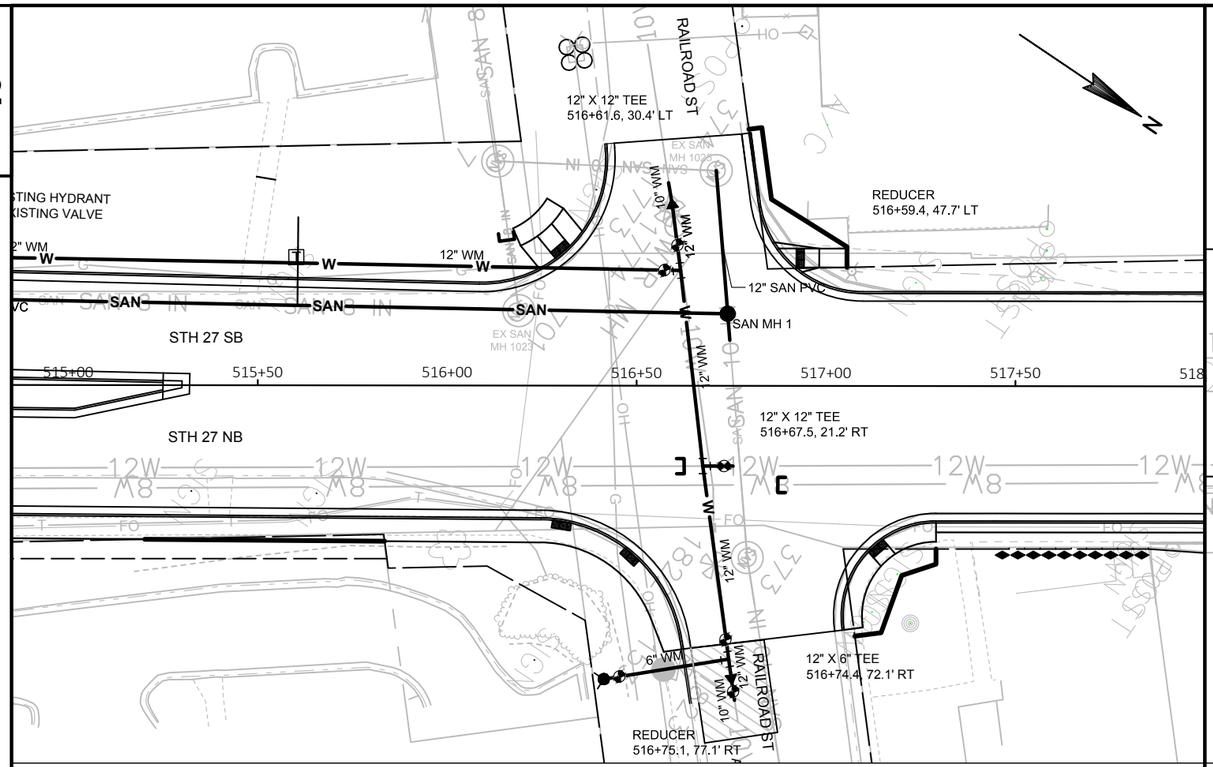
12" WM
10" SAN PVC
8" SAN PVC
1" WTR
6" WM
SAN MH 3
SAN MH 2
MAINTAIN 18" SEPARATION BELOW SANITARY
6" WM DIRECTIONALLY DRILLED
1" WTR DIRECTIONALLY DRILLED
2" WTR DIRECTIONALLY DRILLED
PIPE BURSTING
STH 27 SB
STH 27 NB
509+00
509+50
510+00
510+50
511+00
511+50
512+00
512+50
513+00
513+50
514+00
514+50
515+00
SALVAGE EXISTING HYDRANT
ABANDON EXISTING VALVE
22.5°
WHEELER ST
ASPHALT PATCH

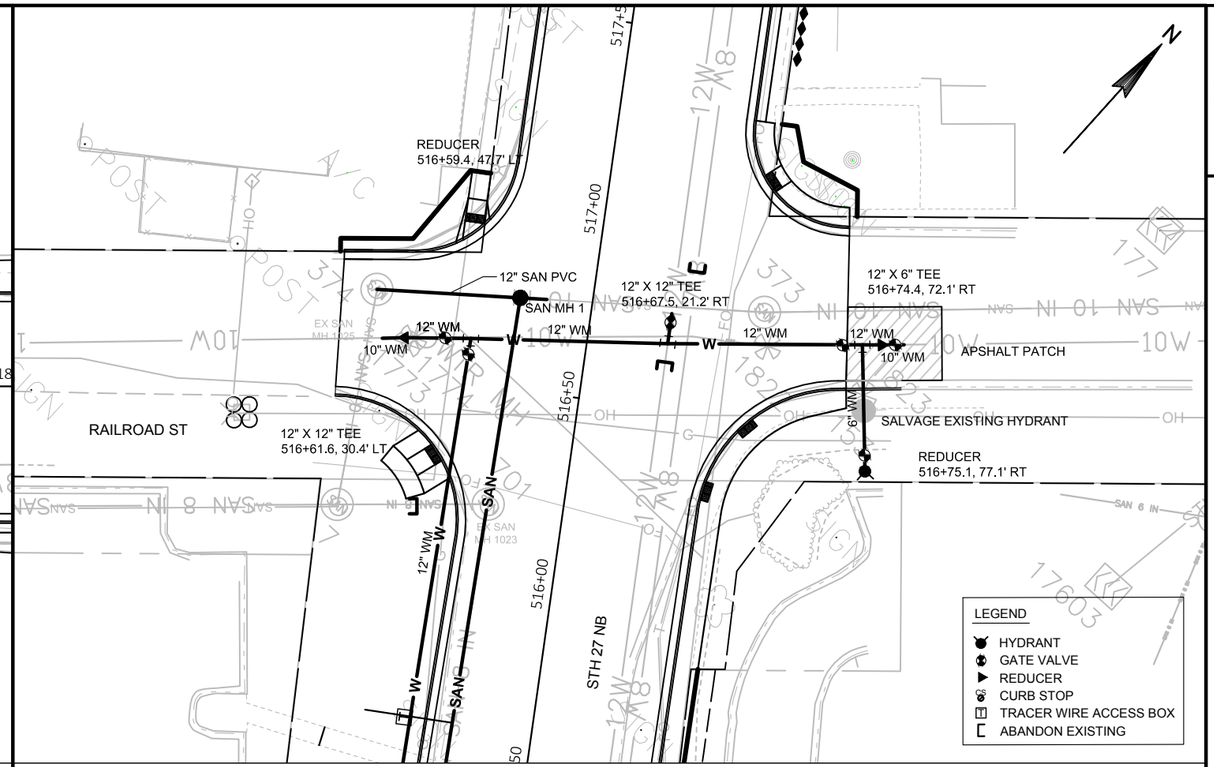
LEGEND
- HYDRANT
- GATE VALVE
- REDUCER
- CURB STOP
- TRACER WIRE ACCESS BOX
- ABANDON EXISTING

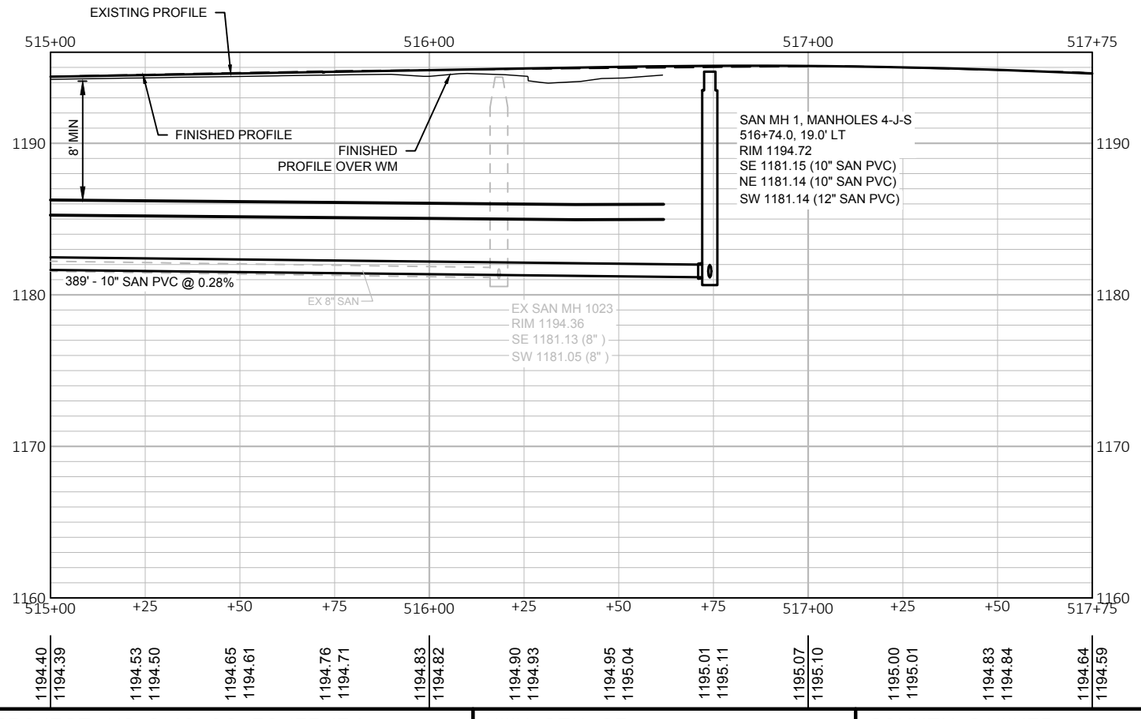
PETROLEUM CONTAMINATED SOIL AND GROUNDWATER MANAGEMENT AREA

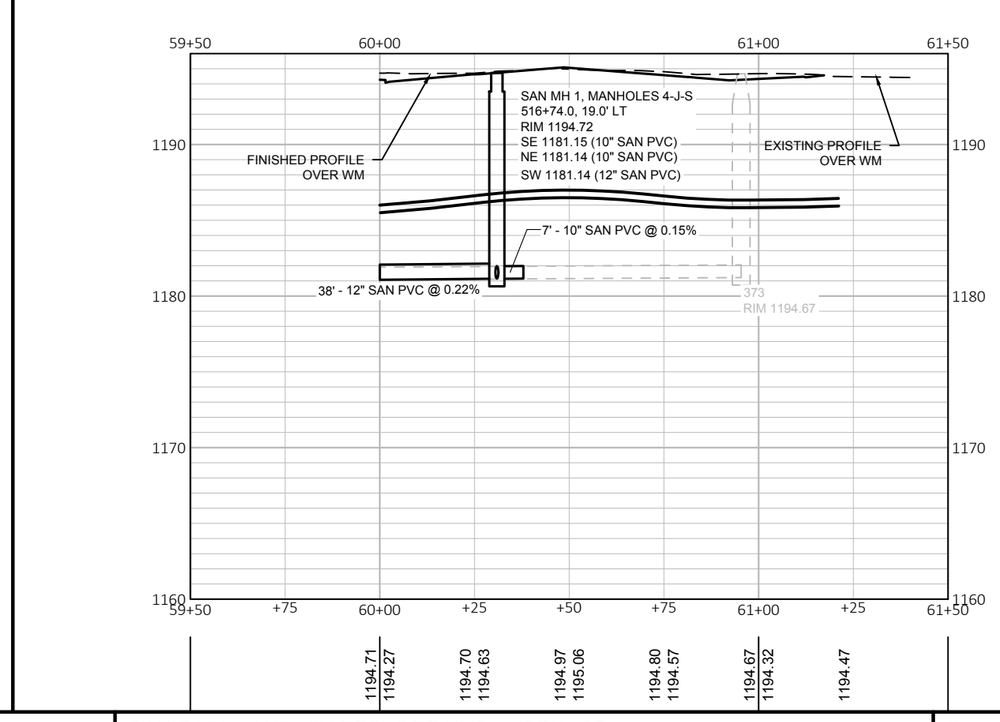


PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	SANITARY AND WATER DETAILS: STH 27	SHEET 39	E

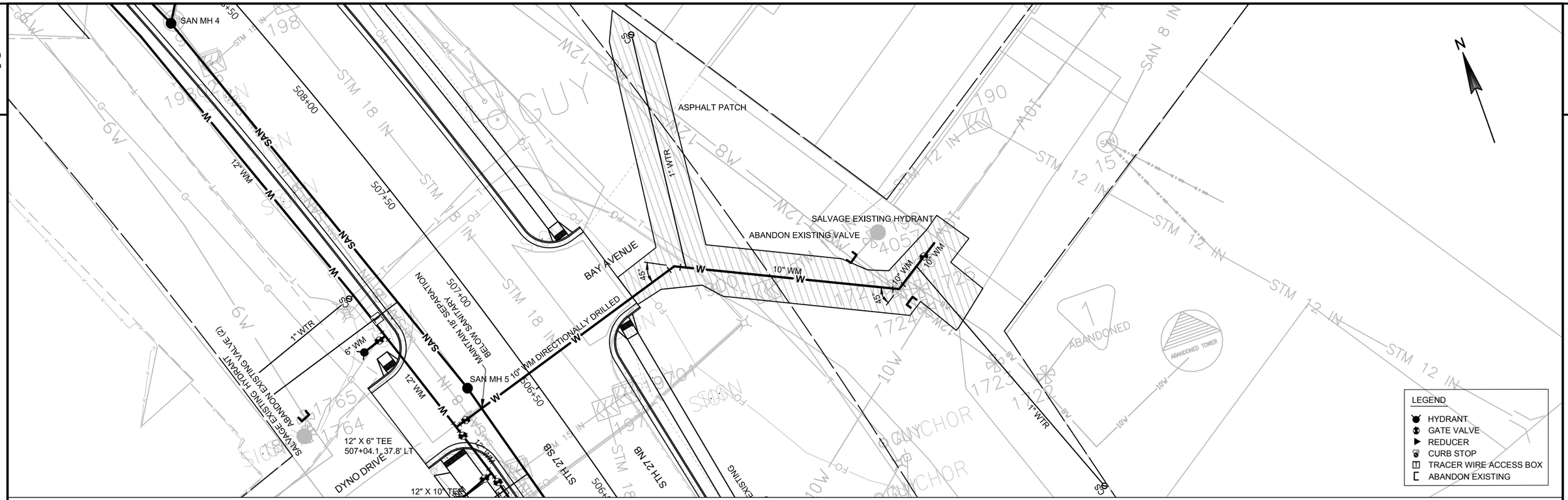


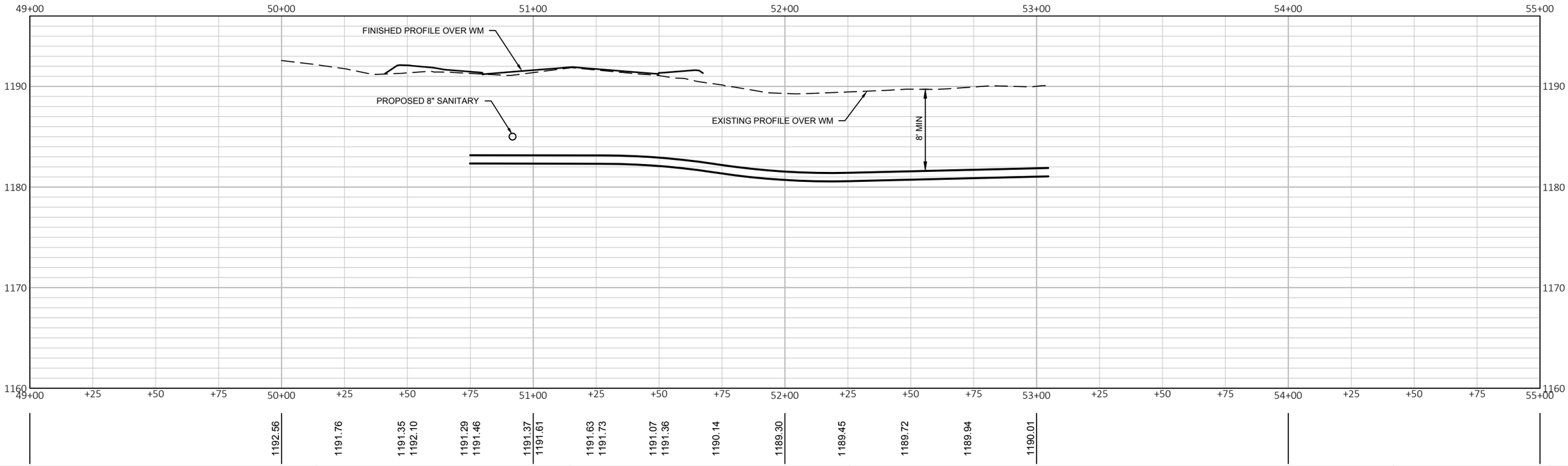






PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	SANITARY AND WATER DETAILS: STH 27	SHEET 40	E





PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	SANITARY AND WATER DETAILS: BAY AVE	SHEET 41	E

NOTES:

* TOURIST ORIENTED DIRECTIONAL SIGNS (TODS) SHALL BE REMOVED BY COUNTY FORCES PRIOR TO CONSTRUCTION. THE COUNTY MAY REINSTALL ACCORDING TO OWNERS PERMIT REQUIREMENTS.

INSTALL ADDITIONAL R3-9B SIGNS ON STH 27 AT SOUTHBOUND LOCATIONS OF STATION 481+30, 472+00, 459+00, & 447+00 WITH R3-9D OVER THE LATTER. INSTALL R3-9B SIGNS AT NORTHBOUND LOCATIONS OF STATION 446+00, 457+50, 465+30, & 479+50 WITH R3-9C OVER THE FIRST LOCATION.

REMOVE ADDITIONAL EXISTING SB STH 27 SIGNS AS FOLLOWS: APPROXIMATE STATION 457+50 (RIGHT LANE ENDS) AND APPROXIMATE STATION 452+75 (LANE ENDS MERGE SYMBOL).

SIGN LEGEND

- EXISTING SIGN ON WOOD POST(S)
- PROPOSED SIGN ON WOOD POST(S)
- EXISTING SIGN ON LIGHT/SIGNAL POLE
- PROPOSED SIGN ON SIGNAL POLE
- SIGN NO. - REMOVE AND REPLACE
- SIGN NO. - REMOVE EXISTING
- SIGN NO. - INSTALL NEW
- SIGN NO. - MOVE SIGN ONLY

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	PERMANENT SIGNING	SHEET 42 E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1502_STH_27_DAKOTA_AVE\C3D_2014\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - STH 27_ps-1
PLOT DATE : 9/24/2018 4:27 PM PLOT BY : USER PLOT NAME : PLOT SCALE : ########## WISDOT/CADDS SHEET 44

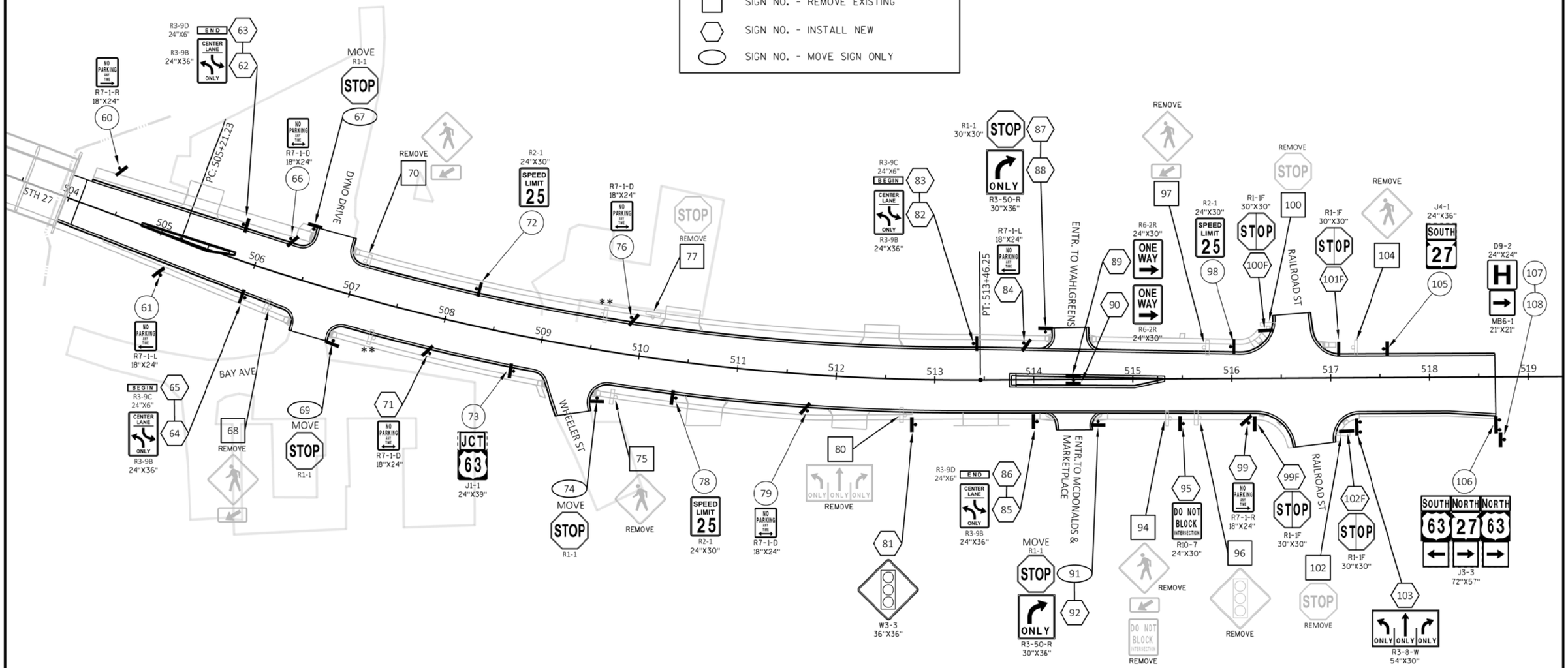
NOTES:

** FOLDED WARNING SIGNS AT NORTHBOUND STATION 507+35 & SOUTHBOUND STATION 509+57 SHALL BE REMOVED AND REINSTALLED BY COUNTY HIGHWAY DEPARTMENT.

RAILROAD STREET WILL BECOME A SIGNALIZED INTERSECTION AS SHOWN IN TRAFFIC SIGNAL PLAN.

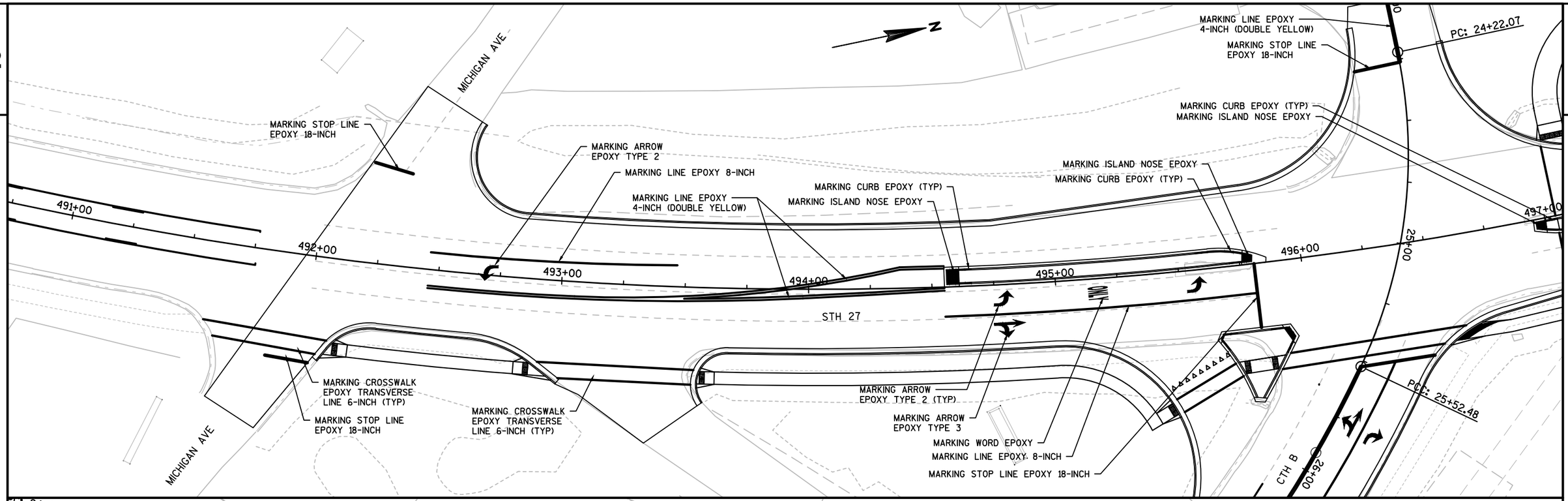
SIGN LEGEND

- EXISTING SIGN ON WOOD POST(S)
- PROPOSED SIGN ON WOOD POST(S)
- EXISTING SIGN ON LIGHT/SIGNAL POLE
- PROPOSED SIGN ON SIGNAL POLE
- SIGN NO. - REMOVE AND REPLACE
- SIGN NO. - REMOVE EXISTING
- SIGN NO. - INSTALL NEW
- SIGN NO. - MOVE SIGN ONLY



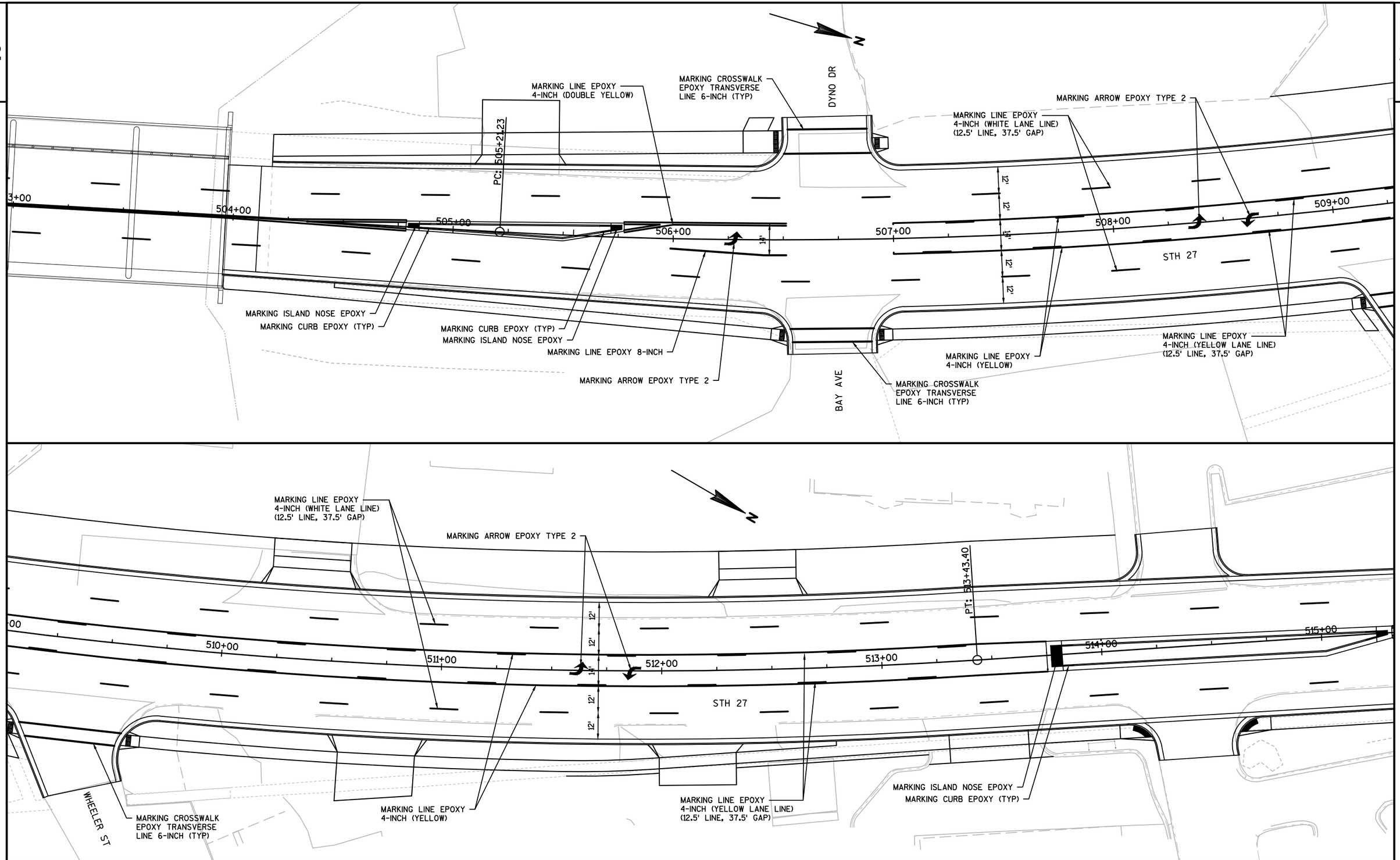
PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	PERMANENT SIGNING	SHEET 43	E

FILE NAME : W:\NWBE_PROJECTS\DESIGN\1502_STH_27_DAKOTA_AVE\C3D_2014\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - STH 27_ps-2
PLOT DATE : 9/24/2018 4:29 PM PLOT BY : USER PLOT NAME : PLOT SCALE : ##########



PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	PAVEMENT MARKING	SHEET 44	E

2



PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	PAVEMENT MARKING	SHEET 45	E

2

MARKING LINE EPOXY 4-INCH (WHITE LANE LINE) (12.5' LINE, 37.5' GAP)

MARKING STOP LINE EPOXY 18-INCH

MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (TYP)

RAILROAD ST

MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)

MARKING ARROW EPOXY TYPE 2 (TYP)

MARKING LINE EPOXY 8-INCH

MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)

MARKING ARROW EPOXY TYPE 2 (TYP)

MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)

MARKING ARROW EPOXY TYPE 1 (TYP)

MARKING DIAGONAL EPOXY 12-INCH (YELLOW) (45° @ 10' SPACING)

EP: 519+72.24

516+00

517+00

518+00

519+00

STH 27

MARKING ARROW EPOXY TYPE 2

MARKING STOP LINE EPOXY 18-INCH

MARKING ISLAND NOSE EPOXY

MARKING CURB EPOXY (TYP)

MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)

RAILROAD ST

MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (TYP)

MARKING STOP LINE EPOXY 18-INCH

MARKING LINE EPOXY 8-INCH

MARKING WORD EPOXY (TYP)

MARKING LINE EPOXY 8-INCH

MARKING STOP LINE EPOXY 18-INCH

N

MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (TYP)

MARKING STOP LINE EPOXY 18-INCH

MARKING ARROW EPOXY TYPE 2 (TYP)

MARKING LINE EPOXY 8-INCH

MARKING WORD EPOXY (TYP)

PC: 25+52.48

PT: 26+39.46

MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)

MARKING ARROW EPOXY TYPE 3 (TYP)

497+00

PC: 24+22.07

25+00

26+00

27+00

28+00

MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)

24+00

BP: 23+06.87

496+00

MARKING STOP LINE EPOXY 18-INCH

MARKING ISLAND NOSE EPOXY

MARKING CURB EPOXY (TYP)

MARKING CURB EPOXY (TYP)

MARKING ISLAND NOSE EPOXY

MARKING LINE EPOXY 4-INCH (WHITE LANE LINE) (12.5' LINE, 37.5' GAP)

MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (TYP)

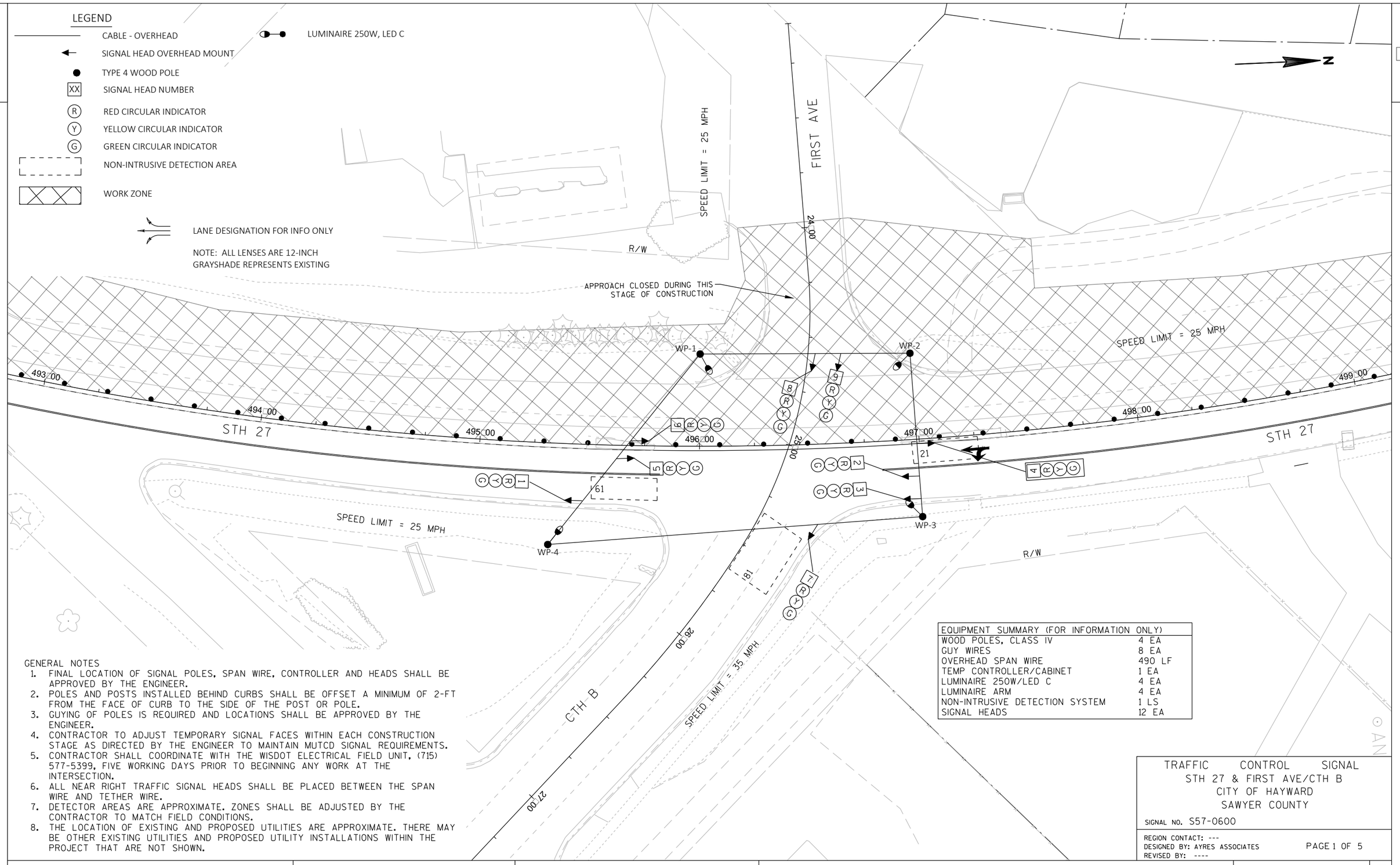
MARKING YIELD LINE EPOXY 18-INCH

PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	PAVEMENT MARKING	SHEET 46	E

LEGEND

- CABLE - OVERHEAD
- SIGNAL HEAD OVERHEAD MOUNT
- TYPE 4 WOOD POLE
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- NON-INTRUSIVE DETECTION AREA
- WORK ZONE
- LUMINAIRE 250W, LED C
- LANE DESIGNATION FOR INFO ONLY

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



GENERAL NOTES

1. FINAL LOCATION OF SIGNAL POLES, SPAN WIRE, CONTROLLER AND HEADS SHALL BE APPROVED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2-FT FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNAL FACES WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (715) 577-5399, FIVE WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
6. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
7. DETECTOR AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
8. THE LOCATION OF EXISTING AND PROPOSED UTILITIES ARE APPROXIMATE. THERE MAY BE OTHER EXISTING UTILITIES AND PROPOSED UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.

EQUIPMENT SUMMARY (FOR INFORMATION ONLY)	
WOOD POLES, CLASS IV	4 EA
GUY WIRES	8 EA
OVERHEAD SPAN WIRE	490 LF
TEMP CONTROLLER/CABINET	1 EA
LUMINAIRE 250W/LED C	4 EA
LUMINAIRE ARM	4 EA
NON-INTRUSIVE DETECTION SYSTEM	1 LS
SIGNAL HEADS	12 EA

TRAFFIC CONTROL SIGNAL
STH 27 & FIRST AVE/CTH B
CITY OF HAYWARD
SAWYER COUNTY

SIGNAL NO. S57-0600

REGION CONTACT: ---
DESIGNED BY: AYRES ASSOCIATES
REVISED BY: ----

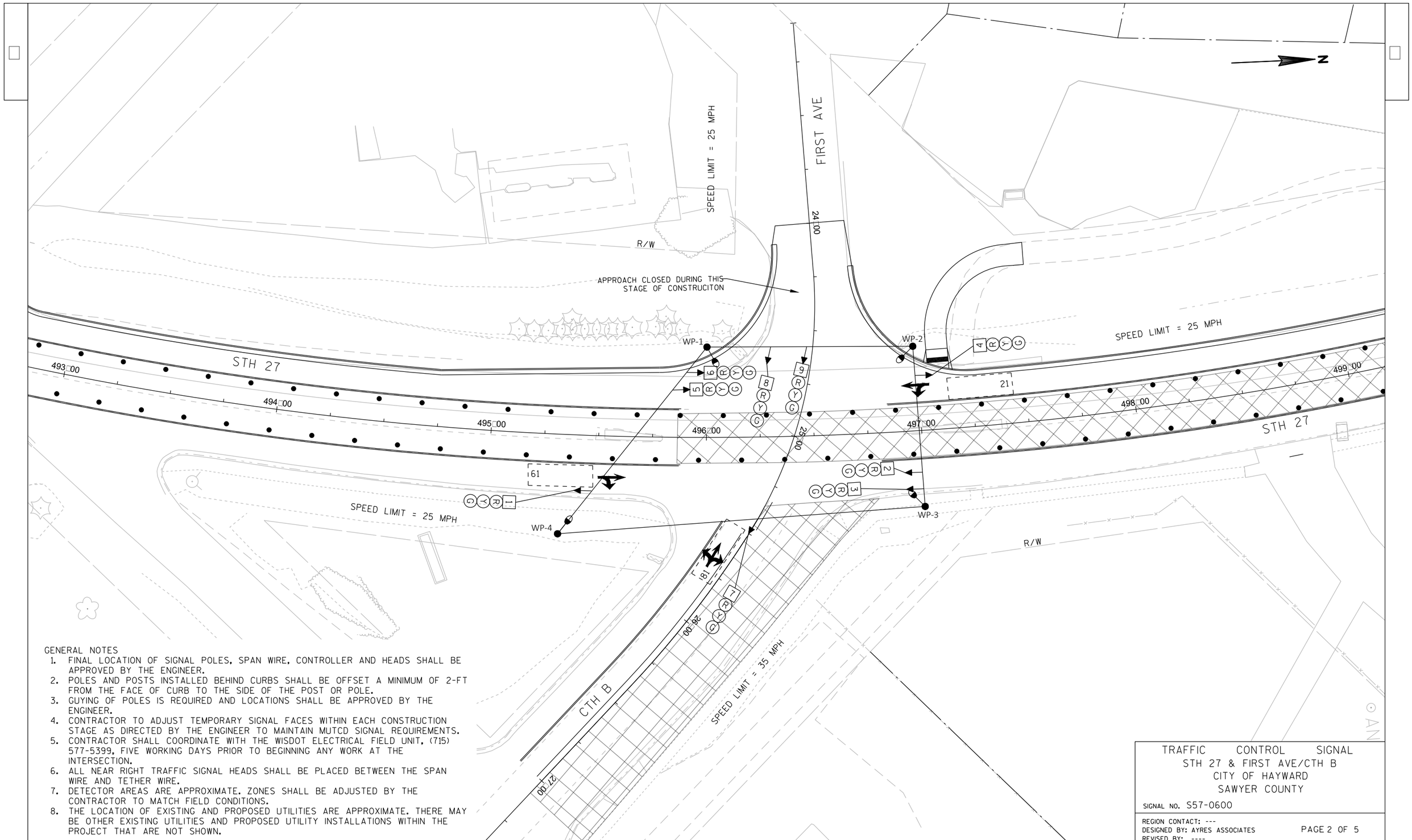
PAGE 1 OF 5

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 7	SHEET 47	E

FILE NAME : V:\TRAFFIC\WK\41069600 HAYWARD STH 27\SIGNAL PLANS\024301-S7.DWG
LAYOUT NAME - 024301-S7 - 024301-S7

PLOT DATE : 9/19/2018 2:17 PM PLOT BY : HICKMAN, TRISTAN PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42



GENERAL NOTES

1. FINAL LOCATION OF SIGNAL POLES, SPAN WIRE, CONTROLLER AND HEADS SHALL BE APPROVED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2-FT FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNAL FACES WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (715) 577-5399, FIVE WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
6. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
7. DETECTOR AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
8. THE LOCATION OF EXISTING AND PROPOSED UTILITIES ARE APPROXIMATE. THERE MAY BE OTHER EXISTING UTILITIES AND PROPOSED UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.

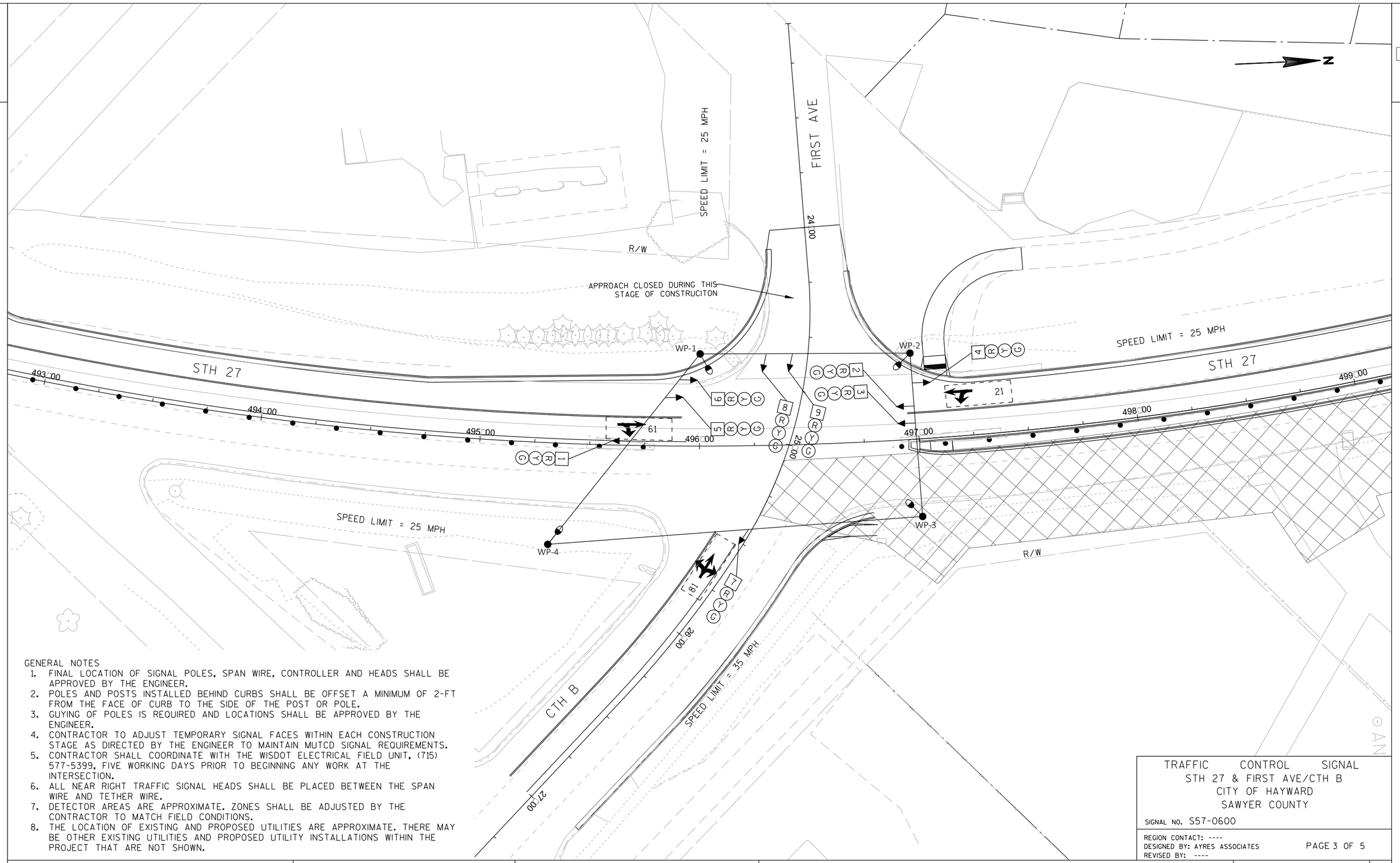
TRAFFIC CONTROL SIGNAL
STH 27 & FIRST AVE/CTH B
CITY OF HAYWARD
SAWYER COUNTY

SIGNAL NO. S57-0600

REGION CONTACT: ---
DESIGNED BY: AYRES ASSOCIATES
REVISED BY: ----

PAGE 2 OF 5

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 8	SHEET 48	E



GENERAL NOTES

1. FINAL LOCATION OF SIGNAL POLES, SPAN WIRE, CONTROLLER AND HEADS SHALL BE APPROVED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2-FT FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNAL FACES WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (715) 577-5399, FIVE WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
6. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
7. DETECTOR AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
8. THE LOCATION OF EXISTING AND PROPOSED UTILITIES ARE APPROXIMATE. THERE MAY BE OTHER EXISTING UTILITIES AND PROPOSED UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.

TRAFFIC CONTROL SIGNAL
STH 27 & FIRST AVE/CTH B
CITY OF HAYWARD
SAWYER COUNTY

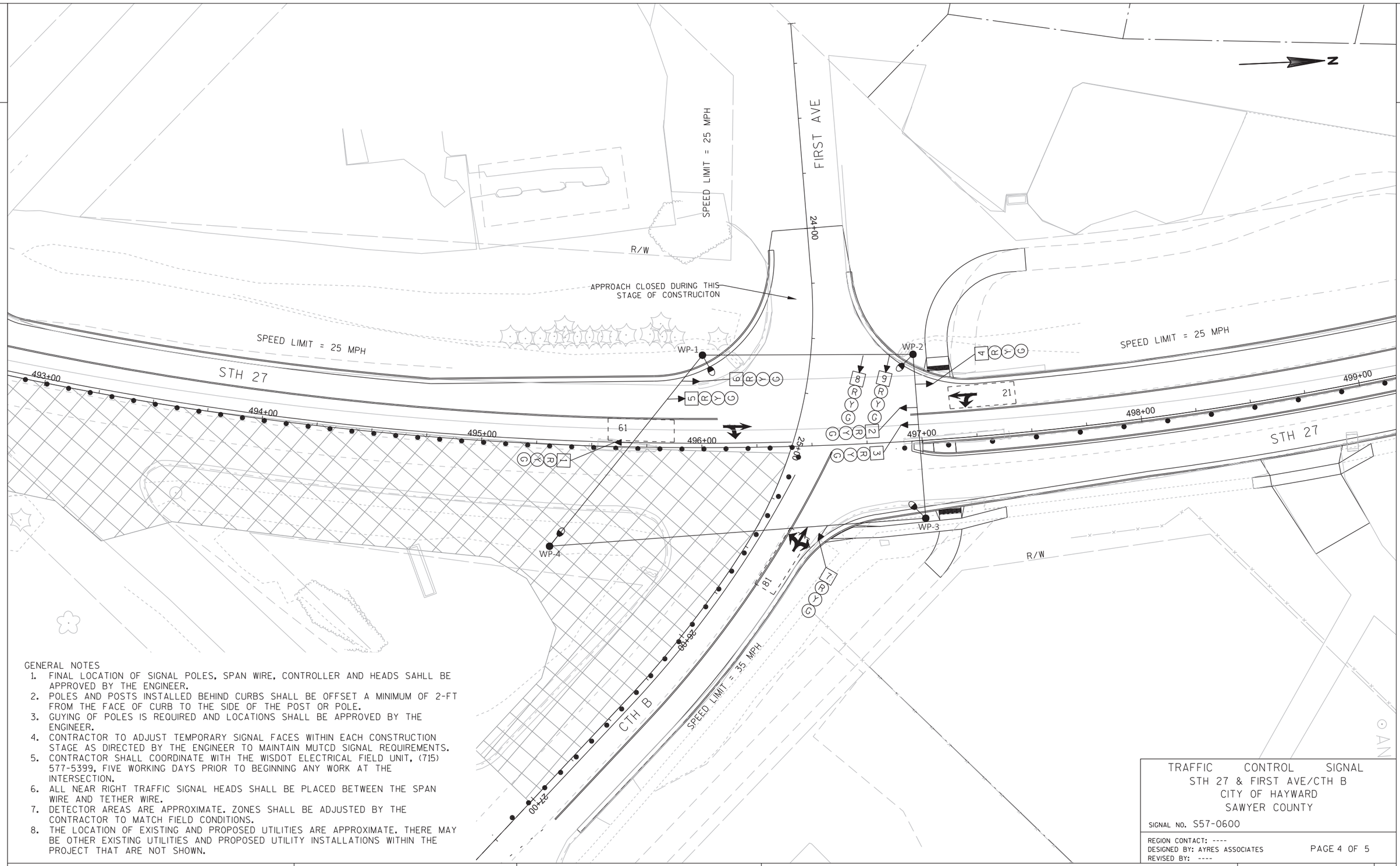
SIGNAL NO. S57-0600

REGION CONTACT: ----
DESIGNED BY: AYRES ASSOCIATES
REVISED BY: ----

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 9A	SHEET	E

FILE NAME : V:\TRAFFIC\WK\41069600 HAYWARD STH 27\SIGNAL PLANS\024301-S9A.DWG
LAYOUT NAME - 024301-S9A - 024301-S7

PLOT DATE : 9/19/2018 2:23 PM PLOT BY : HICKMAN, TRISTAN PLOT NAME : PLOT SCALE : **********



GENERAL NOTES

1. FINAL LOCATION OF SIGNAL POLES, SPAN WIRE, CONTROLLER AND HEADS SAHLL BE APPROVED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2-FT FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNAL FACES WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (715) 577-5399, FIVE WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
6. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
7. DETECTOR AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
8. THE LOCATION OF EXISTING AND PROPOSED UTILITIES ARE APPROXIMATE. THERE MAY BE OTHER EXISTING UTILITIES AND PROPOSED UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.

TRAFFIC CONTROL SIGNAL
STH 27 & FIRST AVE/CTH B
CITY OF HAYWARD
SAWYER COUNTY

SIGNAL NO. S57-0600

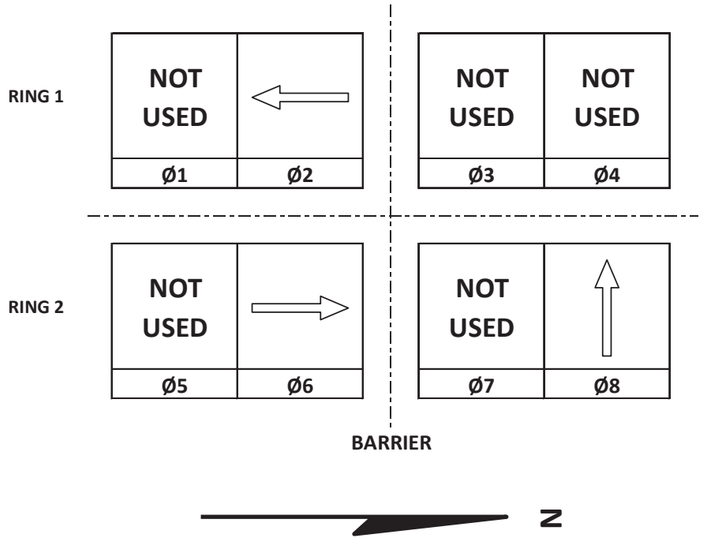
REGION CONTACT: ----
DESIGNED BY: AYRES ASSOCIATES
REVISED BY: ----

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 9B	SHEET 50	E

FILE NAME : V:\TRAFFIC\WK\41069600 HAYWARD STH 27\SIGNAL PLANS\024301-S9B.DWG
LAYOUT NAME - 024301-S9B - 024301-S7

PLOT DATE : 9/19/2018 2:27 PM PLOT BY : HICKMAN, TRISTAN PLOT NAME : PLOT SCALE : **********

	HEAD NUMBERS	FLASH
Ø1		
Ø2	6,7,8	R
Ø3		
Ø4		
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	7,8,9	R
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLE		
OLF		
OLG		
OLH		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN.	X
3				
4				
5				
6	X	2	MIN.	X
7				
8				X

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

TYPE OF COORDINATION		
NONE		X
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM NO:	SS-	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	21	61	81														PLAN LOOP DETECTOR*(S)
CALLED PHASE	2	6	8														CALLED PHASE
CALL OPTION	X	X	X														CALL OPTION
DELAY TIME																	DELAY TIME
EXTENTION OPTION	X	X	X														EXTENTION OPTION
EXTEND TIME																	EXTEND TIME
USE ADDED INITIAL	X	X	X														USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)																	PLAN LOOP DETECTOR*(S)
CALLED PHASE																	CALLED PHASE
CALL OPTION																	CALL OPTION
DELAY TIME																	DELAY TIME
EXTENTION OPTION																	EXTENTION OPTION
EXTEND TIME																	EXTEND TIME
USE ADDED INITIAL																	USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

GENERAL NOTES:

1. TEMPORARY SIGNALS IN PLACE DURING STAGES 7, 8, 9A AND 9B.

STH 27 & RAILROAD ST
CITY OF HAYWARD
SAWYER COUNTY

SIGNAL NO: S57-0001 CABINET TYPE: TEMP
CONTROLLER TYPE: ECONOLITE
DATE: 7/2018 PAGE NO. 5 OF 5

FILE NAME : V:\Traffic\WK\41069600 Hayward STH 27\Sequence of Operations PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

2

STH 27 and CTH B/First Street

Temporary Signal Timings - Stages 1A - 5

Parameter	Phases							
		SBT		EBT	SBL	NBT		WBT
	1	2	3	4	5	6	7	8
Min Green		15.0		10.0	8.0	15.0		10.0
Passage		0.0		0.0	0.0	0.0		0.0
Yellow		4.5		4.5	4.5	4.5		4.5
All Red		2.0		2.0	1.0	2.0		2.0
Max 1		80		40	25	55		40
Added Init								
Max Initial								
TBR		0.0		0.0	0.0	0.0		0.0
TTR		0.0		0.0	0.0	0.0		0.0
Min Gap		0.0		0.0	0.0	0.0		0.0
Walk								
Don't Walk								
Recall		Min.				Min.		
All Times Run Semi-Actuated-Uncoordinated								

STH 27 and CTH B/First Street

Temporary Signal Timings - Stage 6A

Parameter	Phases							
		SBT		EBT	SBL	NBT		WBT
	1	2	3	4	5	6	7	8
Min Green		15.0		10.0		15.0		10.0
Passage		0.0		0.0		0.0		0.0
Yellow		4.5		4.5		4.5		4.5
All Red		2.0		2.0		2.0		2.0
Max 1		80		40		80		40
Added Init								
Max Initial								
TBR		0.0		0.0		0.0		0.0
TTR		0.0		0.0		0.0		0.0
Min Gap		0.0		0.0		0.0		0.0
Walk								
Don't Walk								
Recall		Min.				Min.		
All Times Run Semi-Actuated-Uncoordinated								

STH 27 and CTH B/First Street

Temporary Signal Timings - Stage 7

Parameter	Phases							
		SBT		EBT	SBL	NBT		WBT
	1	2	3	4	5	6	7	8
Min Green		15.0				15.0		10.0
Passage		0.0				0.0		0.0
Yellow		4.5				4.5		4.5
All Red		2.0				2.0		2.0
Max 1		80				80		40
Added Init								
Max Initial								
TBR		0.0				0.0		0.0
TTR		0.0				0.0		0.0
Min Gap		0.0				0.0		0.0
Walk								
Don't Walk								
Recall		Min.				Min.		
All Times Run Semi-Actuated-Uncoordinated								

STH 27 and CTH B/First Street

Temporary Signal Timings - Stages 8 - 9B

Parameter	Phases							
		SBT		EBT	SBL	NBT		WBT
	1	2	3	4	5	6	7	8
Min Green		15.0				15.0		10.0
Passage		0.0				0.0		0.0
Yellow		4.5				4.5		4.5
All Red		2.0				2.0		2.0
Max 1		80				80		40
Added Init								
Max Initial								
TBR		0.0				0.0		0.0
TTR		0.0				0.0		0.0
Min Gap		0.0				0.0		0.0
Walk								
Don't Walk								
Recall		Min.				Min.		
Cycle 1 - 6:00AM - 9:00AM: M - F								
Cycle length (s)	120							
Splits		88				32		88
Offset	0 (Reference to Phases 2 & 6) ---							
All Other Times Run Semi-Actuated-Uncoordinated								

2

DATE: 8-31-2018

PROJECT NUMBER: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TEMPORARY SIGNAL TIMINGS – STH 27 & CTH B/FIRST STREET	SHEET NO: 1

E

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX

- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- DON'T WALK INDICATOR 16" / WALK INDICATOR 16"
- LANE DESIGNATION FOR INFO ONLY
- NOTE: ALL LENSES ARE 12-INCH

N

FIRST AVE

STH 27

CTH B

494+00 495+00 496+00 497+00 498+00 499+00

24+00 25+00 26+00 27+00

PB1 PB2 PB3 PB4 PB5 PB6 PB7 PB8

SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8

CB1

ABANDON

CONSTRUCTION NOTES

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN CONDUIT.
2. ABANDONED LOOP DETECTOR TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
3. CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.
4. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEM TO BE REMOVED.

TRAFFIC CONTROL SIGNAL
STH 27 & FIRST AVE/CTH B
CITY OF HAYWARD
SAWYER COUNTY

SIGNAL NO. S57-0231

REGION CONTACT: ---
DESIGNED BY: AYRES ASSOCIATES INC
REVISED BY: ----

PAGE 1 OF 1

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRAFFIC SIGNAL REMOVAL PLAN - CTH B	SHEET 53	E

FILE NAME : V:\TRAFFIC\WK\41069600 HAYWARD STH 27\SIGNAL PLANS\024001_RP.DWG
LAYOUT NAME - 024001_rp

PLOT DATE : 9/19/2018 2:27 PM PLOT BY : HICKMAN, TRISTAN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- (XX) B MONOTUBE BASE, POLE, 35'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE, LED C UNLESS OTHERWISE NOTED
- * * LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"

- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- R Y G RETROREFLECTIVE SIGNAL BACKPLATES
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16"
- LANE DESIGNATION FOR INFO ONLY

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

STH 27
FIRST AVE
CTH B
R/W
SPEED LIMIT = 25 MPH
SPEED LIMIT = 35 MPH
Ø1 Ø2 Ø4 Ø5 Ø6 Ø8
LOOP 11 & 12 6'X20' 4 TURNS
LOOP 21 6'X6' 4 TURNS
LOOP 41 9'X25' 3 TURNS
LOOP 51 & 52 6'X20' 4 TURNS
LOOP 61 6'X6' 4 TURNS
LOOP 81 6'X25' 4 TURNS
LOOP 82 & 83 6'X20' 3 TURNS
OL'E'
OL'G'
180' TO STOP BAR
180' FROM STOP BAR
LED A
SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8
PB1 PB2 PB3 PB4 PB5 PB6 PB7 PB8 PB9 PB10 PB11 PB12 PB13 PB14
LB1 LB2 LB3
CAB.
494+00 495+00 496+00 497+00 498+00 499+00
24+00 25+00 26+00 27+00

MONOTUBE STRUCTURES
SB4 = S-57-0600-02
SB8 = S-57-0600-01

CONSTRUCTION NOTES

1. * IS THE FRONT CENTER OF THE LOOP DETECTOR.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED FIVE DAYS PRIOR TO PLACING SIGNAL CABLE INTO THE SYSTEM. CONTACT THE STATE ELECTRICIAN AT 715-577-5399.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICTS WITH EXISTING UTILITY FACILITIES.
4. WISDOT TO INSTALL TRAFFIC SIGNAL CABINET AND CONTROLLER.

TRAFFIC CONTROL SIGNAL
STH 27 & FIRST AVE/CTH B
CITY OF HAYWARD
SAWYER COUNTY

SIGNAL NO. S57-0600
CABINET TYPE: TS1
CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE _____ REGION TRAFFIC ENGINEER
APPROVED
DATE _____ STATE TRAFFIC ENGINEER

REGION CONTACT: DAVE FENSKE
DESIGNED BY: AYRES ASSOCIATES
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRAFFIC SIGNAL PLAN - CTH B	SHEET 54	E

FILE NAME : V:\TRAFFIC\WK\41069600 HAYWARD STH 27\SIGNAL PLANS\024201_SP.DWG
LAYOUT NAME - CTH B
PLOT DATE : 9/19/2018 2:29 PM PLOT BY : HICKMAN, TRISTAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

N

SEQUENCE OF OPERATION



NOT USED



RING 1		HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **				Ø1 R/W	Ø1 CLEAR TO **				Ø3 R/W	Ø3 CLEAR TO **				Ø4 R/W	Ø4 CLEAR TO **				FLASH
	Ø1	4, 5	G	Y	-			-	-	-								R	R	R			R
	Ø2	6, 7, 8	R	R	R			G	Y	R								R	R	R			R
	Ø4	14, 15, 16	R	R	R			R	R	R								G	Y	R			-
	Ø5	9, 10	R	R	R			R	R	R								R	R	R			R
	Ø6	1, 2, 3	R	R	R			R	R	R								R	R	R			-
	Ø8	11, 12, 13	R	R	R			R	R	R								R	R	R			-
	OLE	4, 5	-	-	-			FY	Y	R								-	-	-			
	OLG	9, 10	-	-	-			-	-	-								-	-	-			
	Ø6P	61, 62	D	D	D			D	D	D								D	D	D			
	Ø8P	81, 82	D	D	D			D	D	D								D	D	D			



NOT USED



RING 2		HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **				Ø6 R/W	Ø6 CLEAR TO **				Ø7 R/W	Ø7 CLEAR TO **				Ø8 R/W	Ø8 CLEAR TO **			
	Ø1	18, 19, 20	R	R	R			R	R	R								R	R	R		
	Ø2	1, 2, 3, 4	R	R	R			R	R	R								R	R	R		
	Ø4	12, 13, 14	R	R	R			R	R	R								R	R	R		
	Ø5	15, 16, 17	G,G	Y,Y	-			-	-	-								R	R	R		
	Ø6	5, 6, 7, 8	R	R	R			G	Y	R								R	R	R		
	Ø8	9, 10, 11	R	R	R			R	R	R								G	Y	R		
	OLE	18, 19, 20	-	-	-			-	-	-								-	-	-		
	OLG	15, 16, 17	-	-	-			FY	Y	R								-	-	-		
	Ø6P	41, 42	D	D	D			*	D	D								D	D	D		
	Ø8P	81, 82	D	D	D			D	D	D								*	D	D		

BARRIER

* WHEN CALLED TIMED STEADY "WALK" FOLLOWED BY FLASHING "DON'T WALK", WITH PED COUNTDOWN TIMER ACTIVATED, THEN STEADY "DON'T WALK".

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1 BELOW)

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5 OR 6	2, 4, 8
2	5 OR 6	1, 4, 8
4	8	1, 2, 5, 6
5	1 OR 2	4, 6, 8
6	1 OR 2	4, 5, 8
8	4	1, 2, 5, 6

DETECTOR LOGIC

LOOP NUMBER	DETECTOR NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	LOOP SIZE	NUMBER OF TURNS
11	1	X			1	1				6' X 20'	4
12	2	X			1	1				6' X 20'	4
21	3	X			2	2				6' X 6'	4
41	4	X			4	4				9' X 25'	3
51	5	X			5	5				6' X 20'	4
52	6	X			5	5				6' X 20'	4
61	7	X			6	6				6' X 6'	4
81	8	X			8	8		10"		6' X 25'	4
82	9	X			8	8				6' X 20'	3
83	9	X			8	8				6' X 20'	3

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN.	X
4		8		X
5		2		X
6	X	2	MIN.	X
8		4		X

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

SPECIAL OVERLAPS

	PROTECTED	PERMISSIVE
O.L. "E" =	1	2
O.L. "F" =		
O.L. "G" =	5	6
O.L. "H" =		

TYPE OF LIGHTING	
BY OTHER AGENCY	X
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF INTERCONNECT COMMUNICATION	
NONE	
FIBER OPTIC NETWORK	
INTERSECTION ONLY (CELL MODEM)*	X
*LOCATION OF CELL MODEM CONTROLLER NO: S-	
SIGNAL SYSTEM :	

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

GENERAL NOTES:

1. ANY ACTUATED PHASE WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT).
3. THE WB RIGHT TURN ARROWS TIME WITH ONLY PHASE 5.

CONTROLLER TYPE: ECONOLITE

REVISION:

NEW TRAFFIC SIGNALS AND CONTROLLER/CABINET

BASE PLAN NO: 1 REVISION NO: -

PROJECT NO: 8140-00-74 | HWY: STH 27 & FIRST AVENUE/CTHT B | COUNTY: SAWYER | SEQUENCE OF OPERATIONS (SIGNAL S 57-0600) | SHEET 55 | E

PROJECT ID:	8140-00-70
INTERSECTION:	STH 27 & FIRST AVE/CTH B

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	JUMPER	SIGNAL INDICATION WIRE COLOR									
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK	PED BUTTON
SB1	15	11		RED	ORG	GRN		BLK	BLU				
		15		RED/BLK	ORG/BLK	GRN/BLK							
		62									RED/WHT	GRN/WHT	
		BUTTON											WHT/BLK
SB2	7	16		RED	ORG	GRN							
		61									BLK	BLU	
		BUTTON											WHT/BLK
SB3	12	1		RED	ORG	GRN							
		9					RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK			
SB4	12	7		RED	ORG	GRN							
		8		RED	ORG	GRN							
		10					RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK			
SB5	9	12		RED	ORG	GRN							
		14		RED/BLK	ORG/BLK	GRN/BLK							
SB6	7	13		RED	ORG	GRN		BLK	BLU				
SB7	12	4					RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK			
		6		RED	ORG	GRN							
		82									BLK	BLU	
		BUTTON											WHT/BLK
SB8	12	2		RED	ORG	GRN							
		3		RED	ORG	GRN							
		5					RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK			
		81									BLK	BLU	
		BUTTON											WHT/BLK

FROM	TO
CAB.	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	CAB.

FROM	TO
PB1	CABINET
PB14	CABINET
PB1	SB1
PB2	SB1
PB3	SB3
PB5	SB2
PB5	SB3
PB6	SB4
PB7	SB4
PB8	SB5
PB9	SB6
PB10	SB7
PB12	SB7
PB13	SB8

NOTE:
- **Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications**
- **Ensure the grounded conductor in the feeder cable and the pole cables are both 18” longer than the ungrounded conductors.**
- **At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.**
- **Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.**

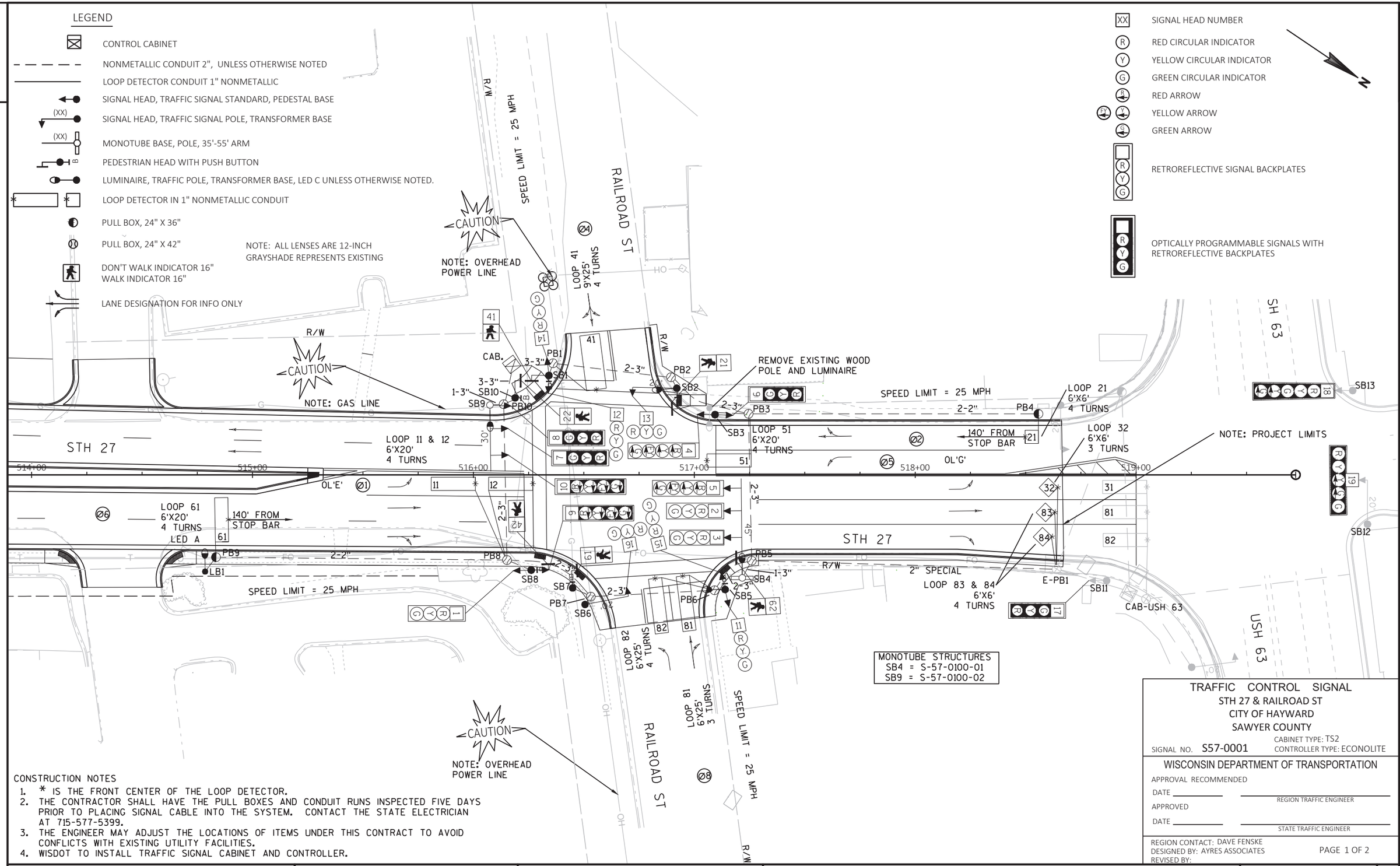
TRAFFIC CONTROL SIGNAL
STH 27 & FIRST AVE/CTH B
CITY OF HAYWARD
SAWYER COUNTY

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE, LED C UNLESS OTHERWISE NOTED.
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- DON'T WALK INDICATOR 16" WALK INDICATOR 16"
- LANE DESIGNATION FOR INFO ONLY

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- RA RED ARROW
- YA YELLOW ARROW
- GA GREEN ARROW
- RETROREFLECTIVE SIGNAL BACKPLATES
- OPTICALLY PROGRAMMABLE SIGNALS WITH RETROREFLECTIVE BACKPLATES



MONOTUBE STRUCTURES
SB4 = S-57-0100-01
SB9 = S-57-0100-02

CONSTRUCTION NOTES

1. * IS THE FRONT CENTER OF THE LOOP DETECTOR.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED FIVE DAYS PRIOR TO PLACING SIGNAL CABLE INTO THE SYSTEM. CONTACT THE STATE ELECTRICIAN AT 715-577-5399.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICTS WITH EXISTING UTILITY FACILITIES.
4. WISDOT TO INSTALL TRAFFIC SIGNAL CABINET AND CONTROLLER.

TRAFFIC CONTROL SIGNAL
STH 27 & RAILROAD ST
CITY OF HAYWARD
SAWYER COUNTY
CABINET TYPE: TS2
SIGNAL NO. S57-0001 CONTROLLER TYPE: ECONOLITE

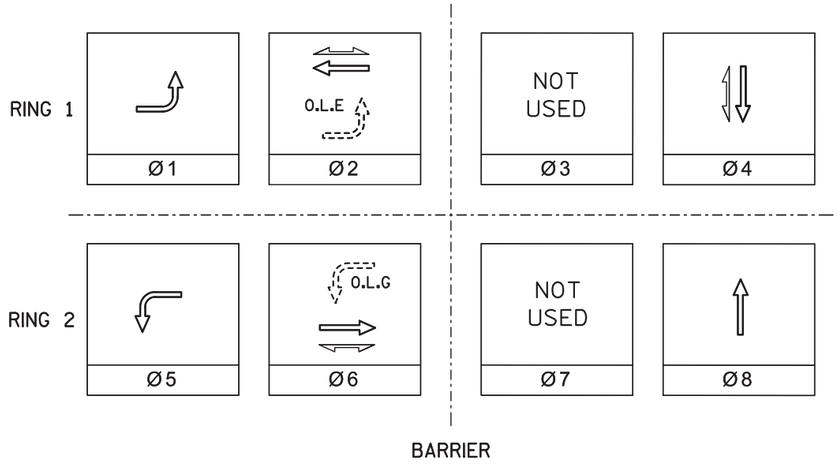
WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVAL RECOMMENDED
DATE _____ REGION TRAFFIC ENGINEER
APPROVED
DATE _____ STATE TRAFFIC ENGINEER

REGION CONTACT: DAVE FENSKE
DESIGNED BY: AYRES ASSOCIATES
REVISED BY:

PROJECT NO: 8140-00-74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC SIGNAL PLAN - RAILROAD ST	SHEET 57 E

FILE NAME : V:\TRAFFIC\WK\41069600 HAYWARD STH 27\SIGNAL PLANS\024201_SP.DWG
LAYOUT NAME - Railroad
PLOT DATE : 9/19/2018 2:29 PM PLOT BY : HICKMAN, TRISTAN PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4,5	R
Ø2	6,7,8	R
Ø4	14,15,16	R
Ø5	9,10	R
Ø6	1,2,3	R
Ø8	11,12,13	R
Ø2P	21,22	
Ø4P	41,42	
Ø6P	61,62	
Ø8P		
OLE	4,5	
OLF		
OLG	9,10	
OLH		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W/••	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN.	X
4		8		X
5		2		X
6	X	2	MIN.	X
8		4		X

TYPE OF INTERCONNECT/COMMUNICATION

NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	X
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

GENERAL NOTES:

TYPE OF COORDINATION

NONE	X
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLER NUMBER	S -
SIGNAL SYSTEM NUMBER	SS- -

TYPE OF LIGHTING

BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	11	21	51	81													PLAN LOOP DETECTOR*(S)
CALLED PHASE	1	2	5	8													CALLED PHASE
CALL OPTION	X	X	X	X													CALL OPTION
DELAY TIME																	DELAY TIME
EXTENSION OPTION	X	X	X	X													EXTENSION OPTION
EXTEND TIME																	EXTEND TIME
USE ADDED INITIAL	X	X	X	X													USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	12	41	61	82													PLAN LOOP DETECTOR*(S)
CALLED PHASE	1	4	6	8													CALLED PHASE
CALL OPTION	X	X	X	X													CALL OPTION
DELAY TIME																	DELAY TIME
EXTENSION OPTION	X	X	X	X													EXTENSION OPTION
EXTEND TIME																	EXTEND TIME
USE ADDED INITIAL	X	X	X	X													USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

TYPE OF PRE-EMPT

NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWARE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TRAFFIC CONTROL SIGNAL
STH 27 & RAILROAD ST

CITY OF HAYWARD
SAWYER COUNTY

SIGNAL NO. S57-0001
CABINET: TS2
CONTROLLER TYPE: ECONOLITE

REGION CONTACT:
DESIGNED BY:
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 8140-00-74	HWY: STH 27	COUNTY: SAWYER	SEQUENCE OF OPERATIONS	(SIGNAL NO. S57-0001)	SHEET	E

FILE NAME : V:\TRAFFIC\WK\41069600 HAYWARD STH 27\SIGNAL PLANS\024201_SP.DWG PLOT DATE : 9/19/2018 2:29 PM PLOT BY : HICKMANT LAYOUT NAME: SEQUENCE OF OPS - RAILROAD PLOT SCALE : NTS

PROJECT ID:	8140-00-74
INTERSECTION:	STH 27 & RAILROAD ST

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	JUMPER	SIGNAL INDICATION WIRE COLOR									
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK	PED BUTTON
SB1	12	12		RED	ORG	GRN							
		14		RED/BLK	ORG/BLK	GRN/BLK							
		41									BLK	BLU	
		BUTTON											WHT/BLK
SB2	15	13		RED	ORG	GRN							
		21									BLK	BLU	
		BUTTON											WHT/BLK
SB3	12	4					RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK			
		6		RED	ORG	GRN							
SB4	12	2		RED	ORG	GRN							
		3		RED	ORG	GRN							
		5					RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK			
		62									BLK	BLU	
SB5	12	11		RED	ORG	GRN							
		15		RED/BLK	ORG/BLK	GRN/BLK							
		BUTTON											WHT/BLK
SB6	5	16		RED	ORG	GRN							
SB7	5	61									RED	GRN	
		BUTTON											BLK
SB8	12	1		RED	ORG	GRN							
		9					RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK			
		42									BLK	BLU	
		BUTTON											WHT/BLK
SB9	12	7		RED	ORG	GRN							
		8		RED	ORG	GRN							
		10					RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK			
SB10	5	22									RED	GRN	
		BUTTON											BLK

Equipment grounding conductor 10 AWG Green XLP	
FROM	TO
CAB.	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	CAB.

Pull Box Bonding Jumper 10 AWG Green XLP	
FROM	TO
PB1	CABINET
PB10	CABINET
PB2	SB2
PB3	SB3
PB5	SB4
PB6	SB5
PB7	SB6
PB8	SB8

NOTE:
- Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
- Ensure the grounded conductor in the feeder cable and the pole cables are both 18” longer than the ungrounded conductors.
- At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.
- Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.

TRAFFIC CONTROL SIGNAL
STH 27 & RAILROAD ST
CITY OF HAYWARD
SAWYER COUNTY

PAGE 1 OF 1

GENERAL NOTES FOR TRAFFIC CONTROL

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR METHODS OR SEQUENCE OF OPERATION.

ADJUST SIGN SPACING TO AVOID CONFLICT WITH AND TO PROVIDE A MINIMUM SPACING OF 200 FEET (500 FEET DESIRABLE) TO EXISTING SIGNS.

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

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

REMOVE OR COVER ANY TEMPORARY OR EXISTING SIGNS THAT CONFLICT WITH "IN USE" TRAFFIC CONTROL.

ALL TRAFFIC CONTROL SIGNING WILL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, & THE WISCONSIN SUPPLEMENT, DATED MAY 25, 2011.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM OF 1500 FEET IN FRONT OF DRUMS.

IF LANE CLOSURES ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

WARNING LIGHTS SHALL NOT BE WORKING ON "COVERED" OR "DOWNED" SIGNS OR BARRICADES.

DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" LIGHTS.

ALL TYPE III BARRICADES SHALL HAVE AN EQUIVALENT WIDTH OF 8 FEET.

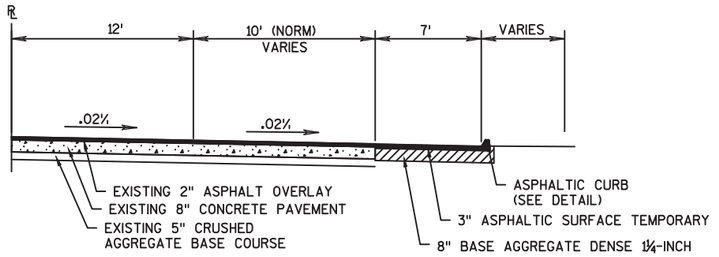
REMOVE ALL EXISTING PAVEMENT MARKINGS CONFLICTING WITH THE TRAFFIC CONTROL OR NOT APPROPRIATE TO THE TRAVEL PATH FOR OPERATIONS IN PLACE FOR MORE THAN 4 CONTINUOUS DAYS.

FOR TEMPORARY PAVEMENT MARKINGS CALLED OUT AS PAINT/REMOVABLE TAPE, THE INTENT IS TO USE REMOVABLE TAPE IN AREAS DIAGONAL TO FINAL LANES OF CONCRETE/ASPHALT AND PAINT ELSEWHERE. THE ENGINEER MAY MODIFY THE LOCATIONS OF PAINT/REMOVABLE TAPE TO FIT FIELD CONDITIONS AND SAFETY CONCERNS.

LOCAL ACCESS SHALL BE MAINTAINED AT ALL TIMES.

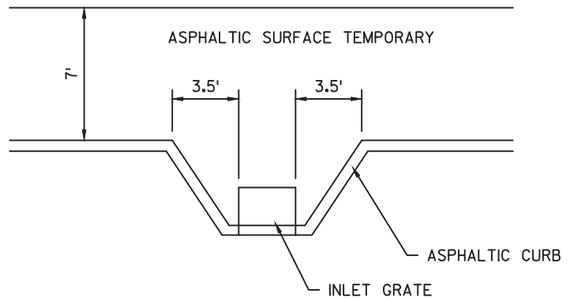
ANY TEMPORARY PAVEMENT/PATCHING SHALL BE 3" ASPHALTIC SURFACE TEMPORARY OVER 8" BASE AGGREGATE DENSE 1¼-INCH.

ALL BARRICADES PLACED ON SIDEWALKS SHALL BE BARRICADES TYPE II.



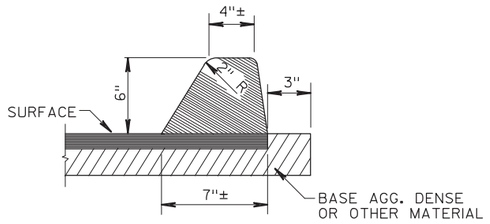
TYPICAL SECTION - TEMPORARY WIDENING

STA 504+00.00 - STA 516+00.00 (NORTHBOUND)



TEMPORARY FLUME/INLET DETAIL

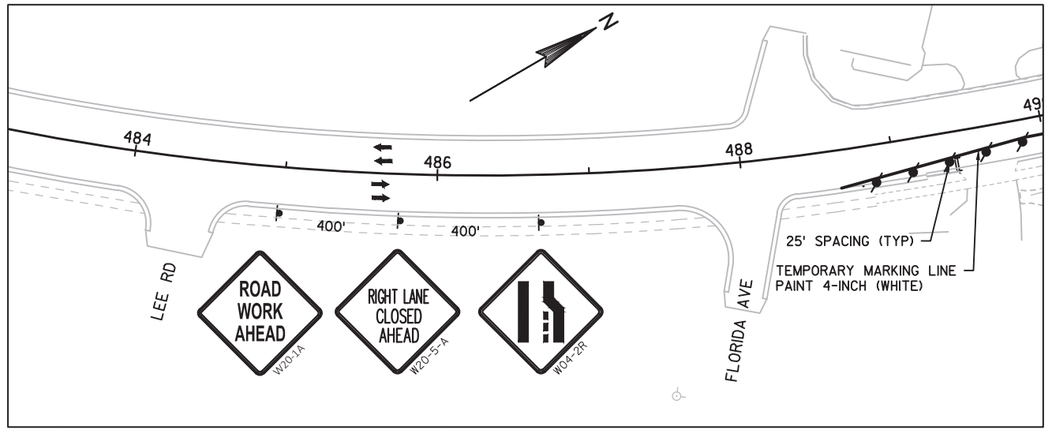
STA 506+35, RT
STA 508+55, RT
STA 509+75, RT
STA 512+75, RT
STA 514+75, RT

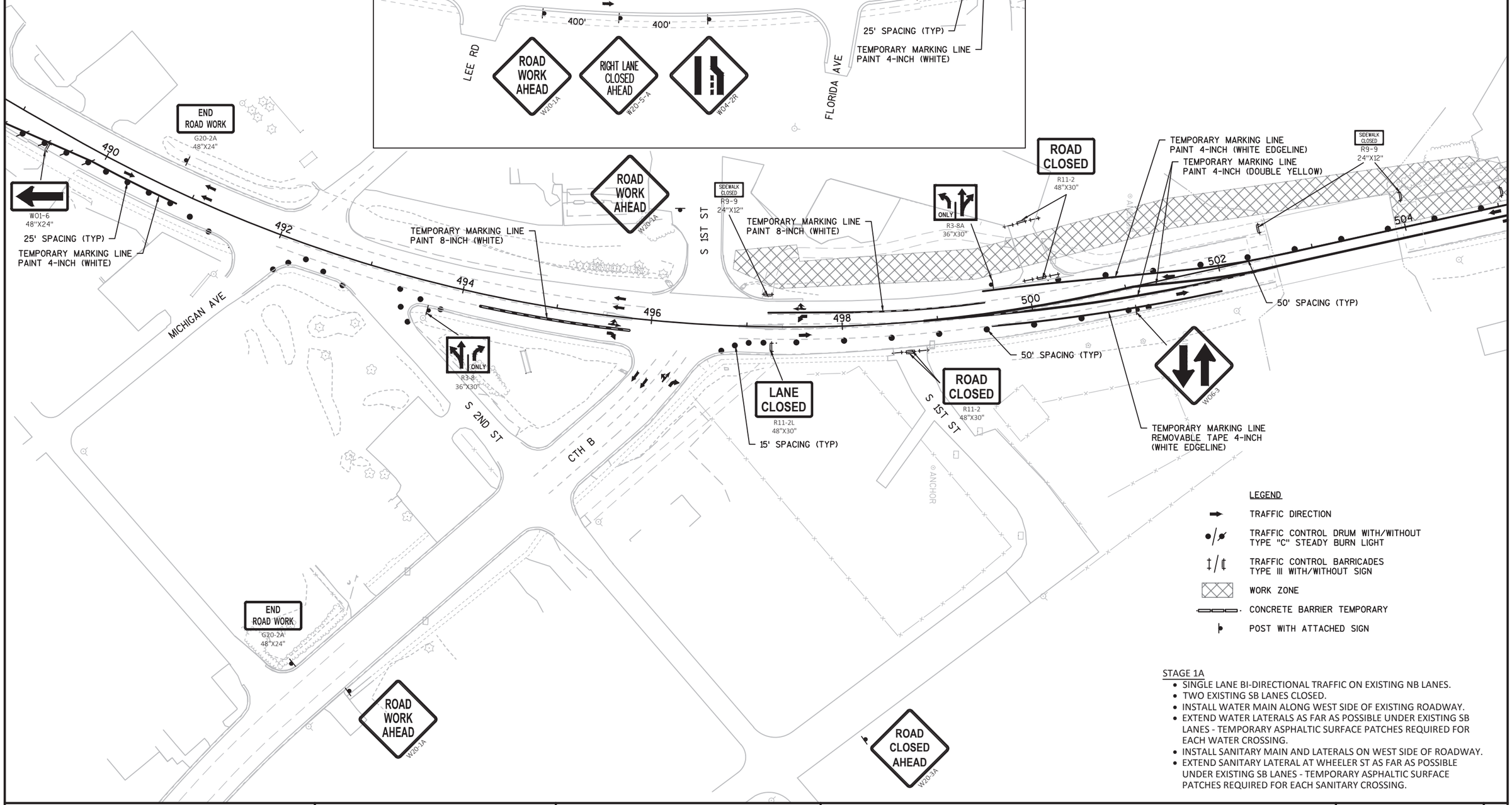


ASPHALTIC CURB DETAIL

STA 491+98 - STA 492+41, RT
STA 492+59 - STA 492+72, LT
STA 497+06 - STA 497+64, RT
STA 504+00 - STA 516+00, RT
STA 504+64 - STA 516+45, LT
STA 516+78 - STA 516+86, LT

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" AND "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL INFORMATION.





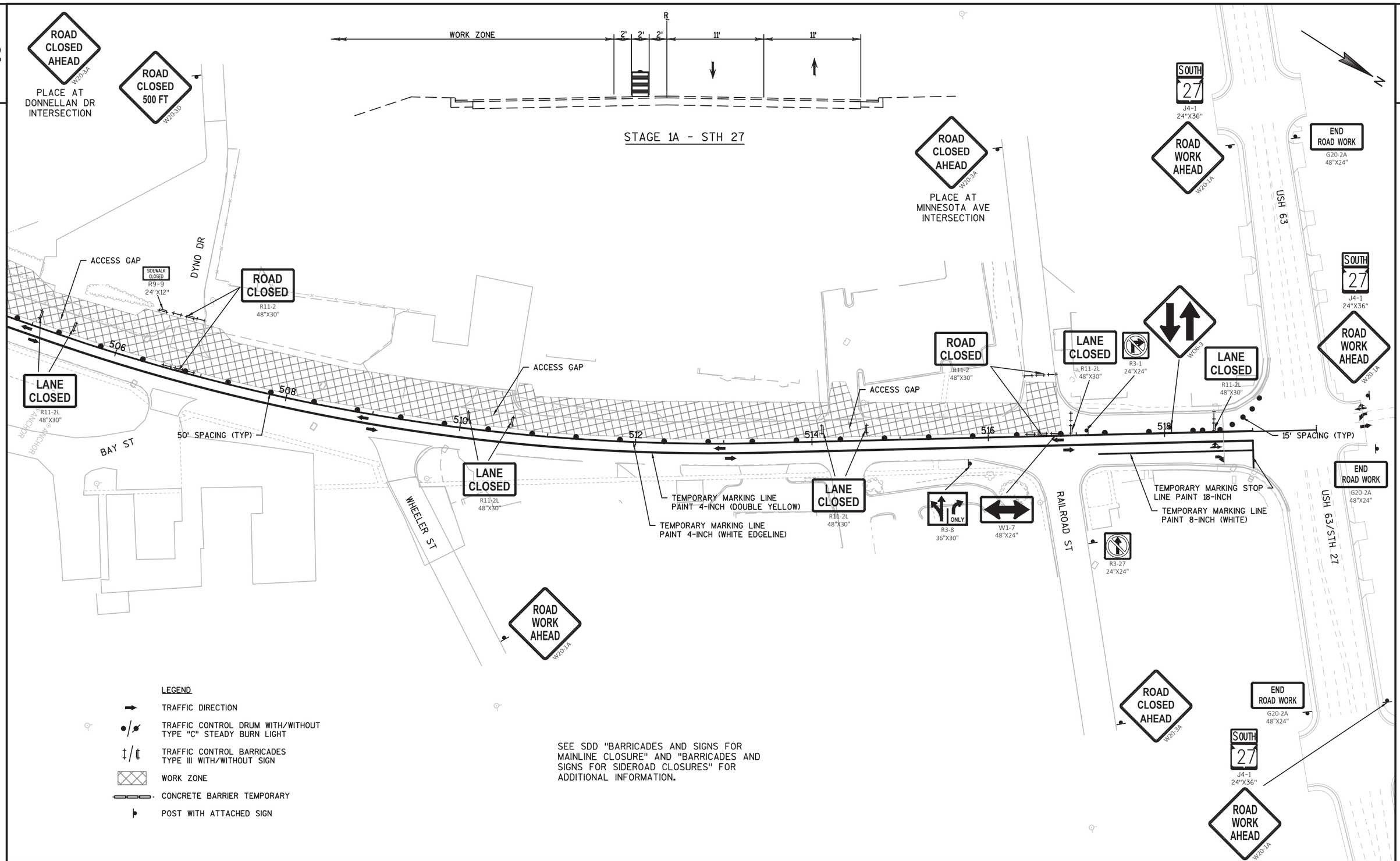
LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- POST WITH ATTACHED SIGN

STAGE 1A

- SINGLE LANE BI-DIRECTIONAL TRAFFIC ON EXISTING NB LANES.
- TWO EXISTING SB LANES CLOSED.
- INSTALL WATER MAIN ALONG WEST SIDE OF EXISTING ROADWAY.
- EXTEND WATER LATERALS AS FAR AS POSSIBLE UNDER EXISTING SB LANES - TEMPORARY ASPHALTIC SURFACE PATCHES REQUIRED FOR EACH WATER CROSSING.
- INSTALL SANITARY MAIN AND LATERALS ON WEST SIDE OF ROADWAY.
- EXTEND SANITARY LATERAL AT WHEELER ST AS FAR AS POSSIBLE UNDER EXISTING SB LANES - TEMPORARY ASPHALTIC SURFACE PATCHES REQUIRED FOR EACH SANITARY CROSSING.

PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 1A	SHEET 61	E



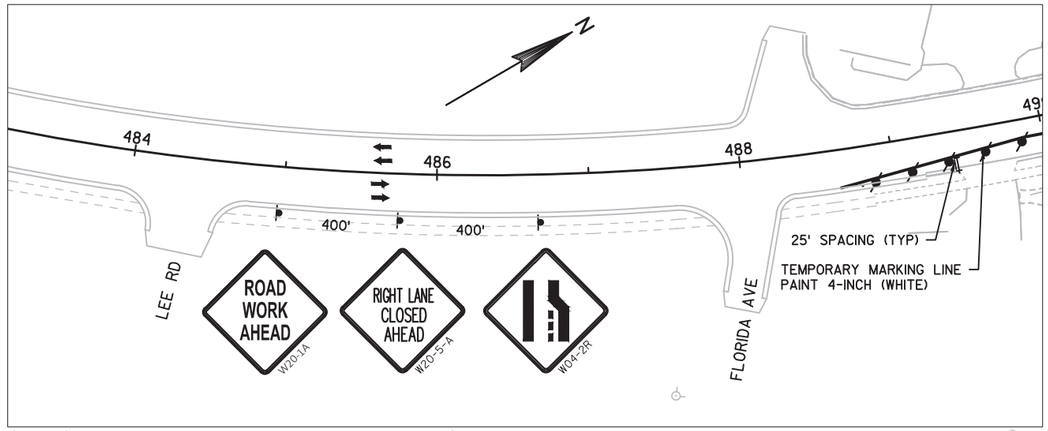
PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 1A	SHEET 62	E

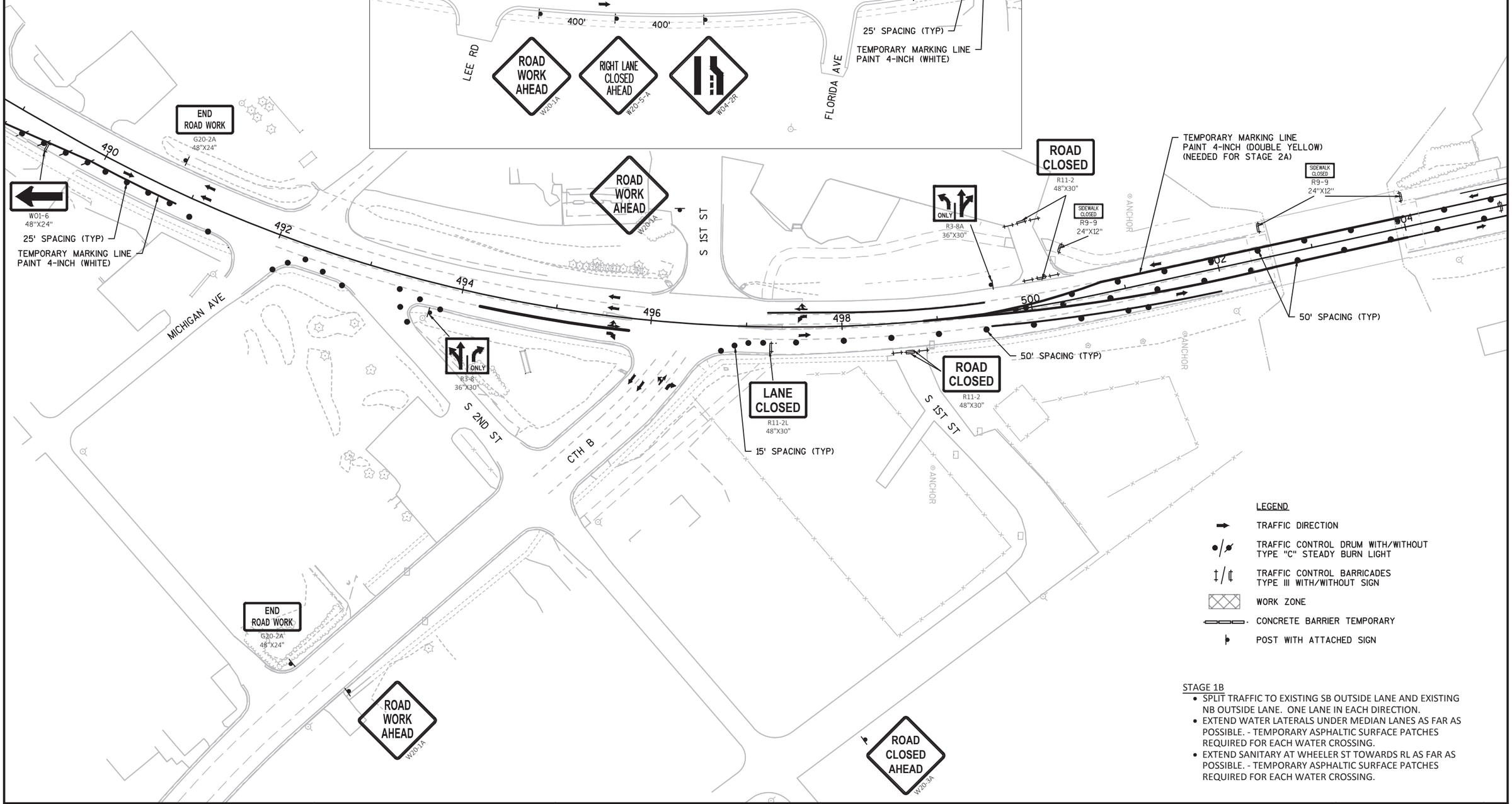
FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\026101-S1A.DWG
LAYOUT NAME - 026101-S1A - 026102-S1A

PLOT DATE : 9/21/2018 10:28 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" AND "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL INFORMATION.





LEGEND

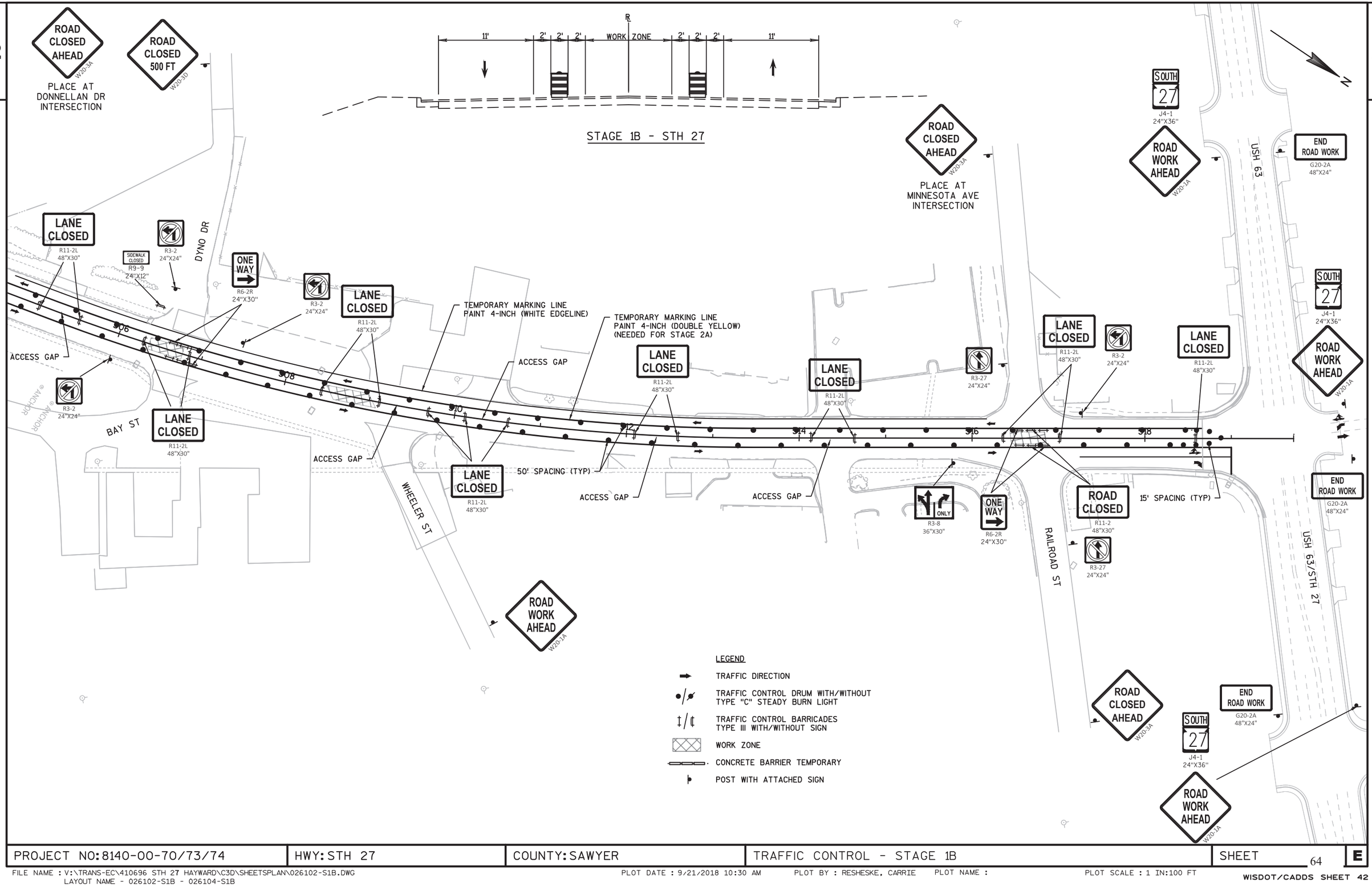
- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- POST WITH ATTACHED SIGN

STAGE 1B

- SPLIT TRAFFIC TO EXISTING SB OUTSIDE LANE AND EXISTING NB OUTSIDE LANE. ONE LANE IN EACH DIRECTION.
- EXTEND WATER LATERALS UNDER MEDIAN LANES AS FAR AS POSSIBLE. - TEMPORARY ASPHALTIC SURFACE PATCHES REQUIRED FOR EACH WATER CROSSING.
- EXTEND SANITARY AT WHEELER ST TOWARDS RL AS FAR AS POSSIBLE. - TEMPORARY ASPHALTIC SURFACE PATCHES REQUIRED FOR EACH WATER CROSSING.

PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 1B	SHEET 63	E

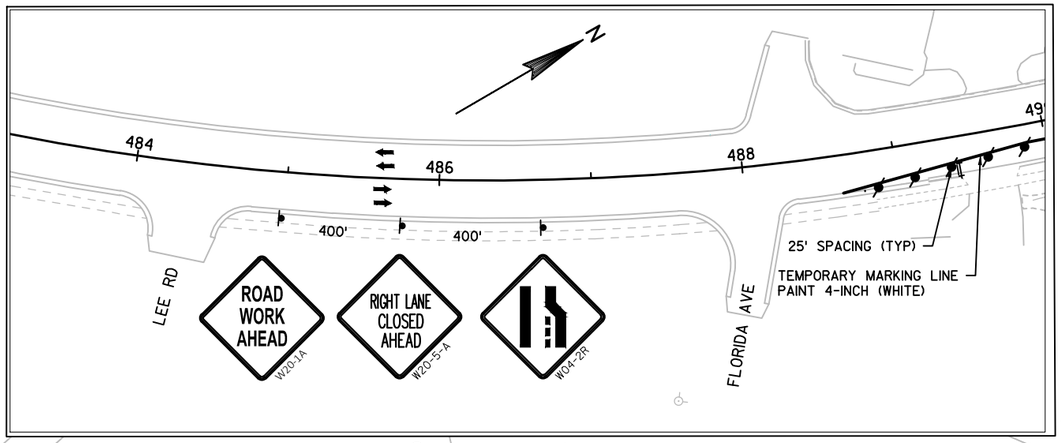
2

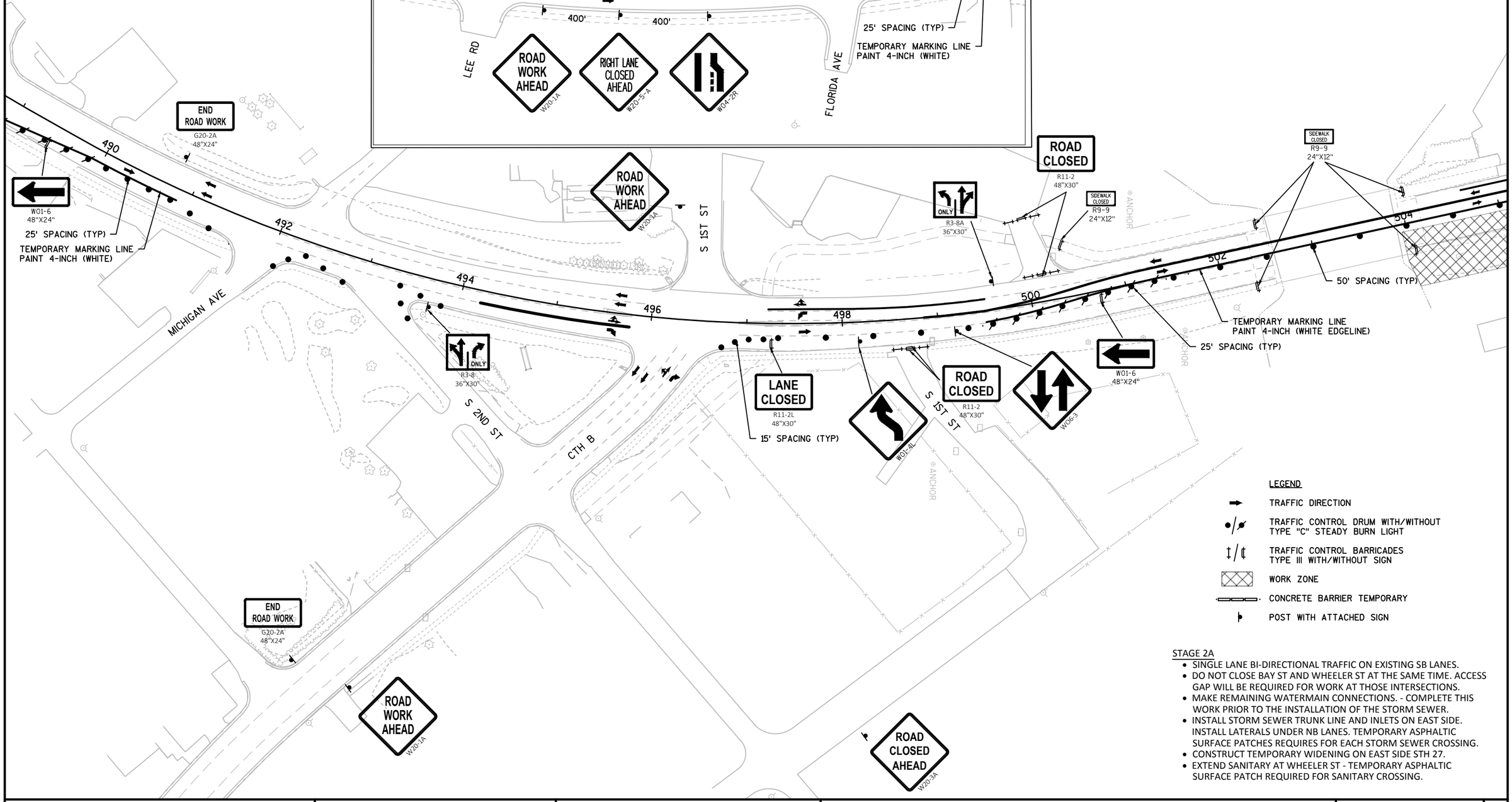


PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 1B	SHEET 64	E

2

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" AND "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL INFORMATION.





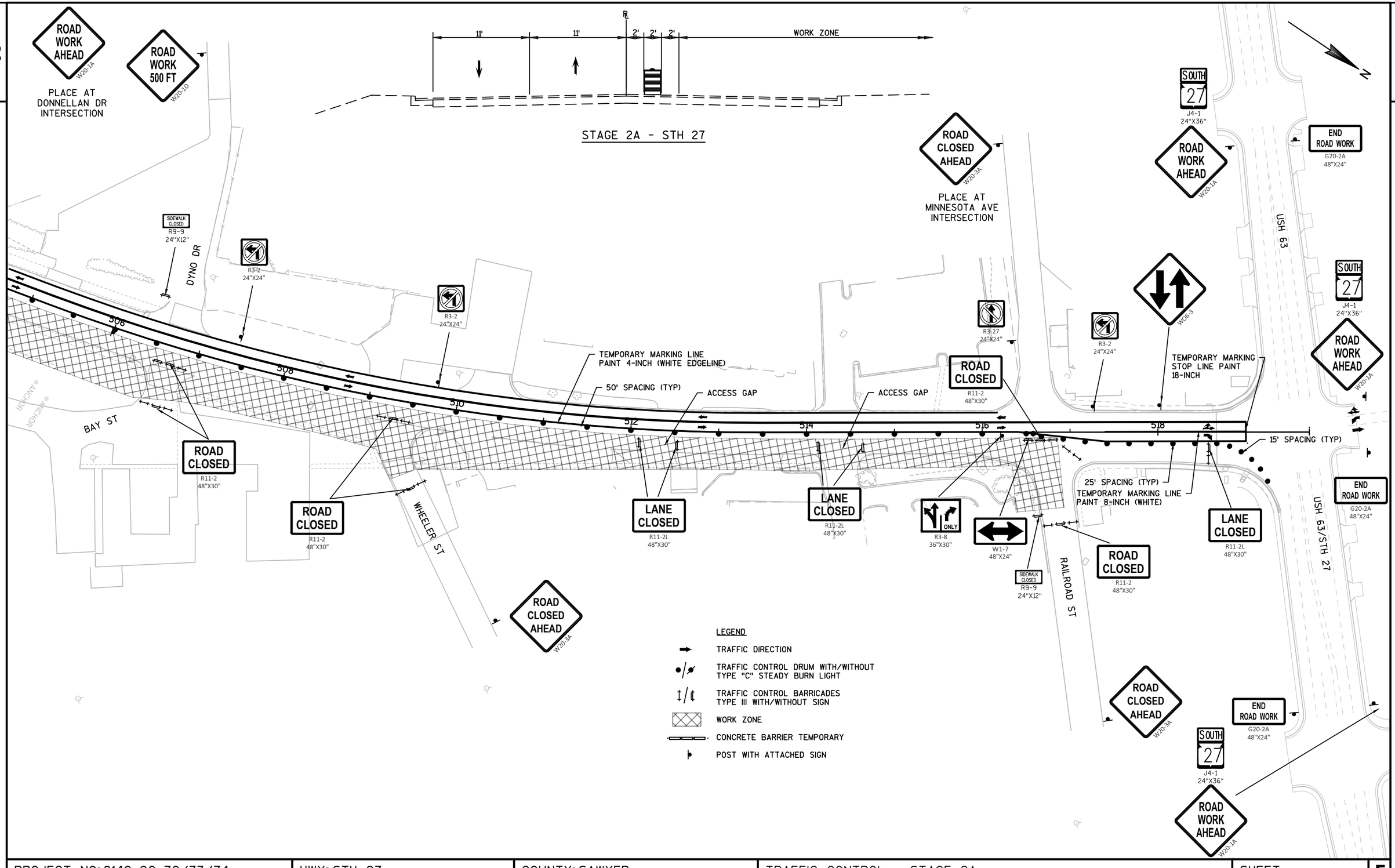
LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- POST WITH ATTACHED SIGN

STAGE 2A

- SINGLE LANE BI-DIRECTIONAL TRAFFIC ON EXISTING SB LANES.
- DO NOT CLOSE BAY ST AND WHEELER ST AT THE SAME TIME. ACCESS GAP WILL BE REQUIRED FOR WORK AT THOSE INTERSECTIONS.
- MAKE REMAINING WATERMAIN CONNECTIONS. - COMPLETE THIS WORK PRIOR TO THE INSTALLATION OF THE STORM SEWER.
- INSTALL STORM SEWER TRUNK LINE AND INLETS ON EAST SIDE. INSTALL LATERALS UNDER NB LANES. TEMPORARY ASPHALTIC SURFACE PATCHES REQUIRES FOR EACH STORM SEWER CROSSING.
- CONSTRUCT TEMPORARY WIDENING ON EAST SIDE STH 27.
- EXTEND SANITARY AT WHEELER ST - TEMPORARY ASPHALTIC SURFACE PATCH REQUIRED FOR SANITARY CROSSING.

PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 2A	SHEET 65	E



PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 2A	SHEET 66	E

2

STAGE 2B

- SPLIT TRAFFIC TO SINGLE LANE ON EXISTING SB AND SINGLE LANE ON WIDENED NB.
- EXTEND STORM SEWER UNDER MEDIAN LANES - TEMPORARY ASPHALTIC SURFACE PATCHES REQUIRED FOR EACH STORM SEWER CROSSING.

N

TRAFFIC LAYOUT THE SAME AS STAGE 1B FOR STH 27/CTH B INTERSECTION

SIDEWALK CLOSED
R9-9
24"X12"

TEMPORARY MARKING LINE
PAINT 4-INCH (WHITE EDGELINE)

TEMPORARY MARKING LINE
PAINT 4-INCH (DOUBLE YELLOW)
(NEEDED FOR STAGE 3)

490 492 494 496 498 500 502 504

MICHIGAN AVE

S 1ST ST

S 2ND ST

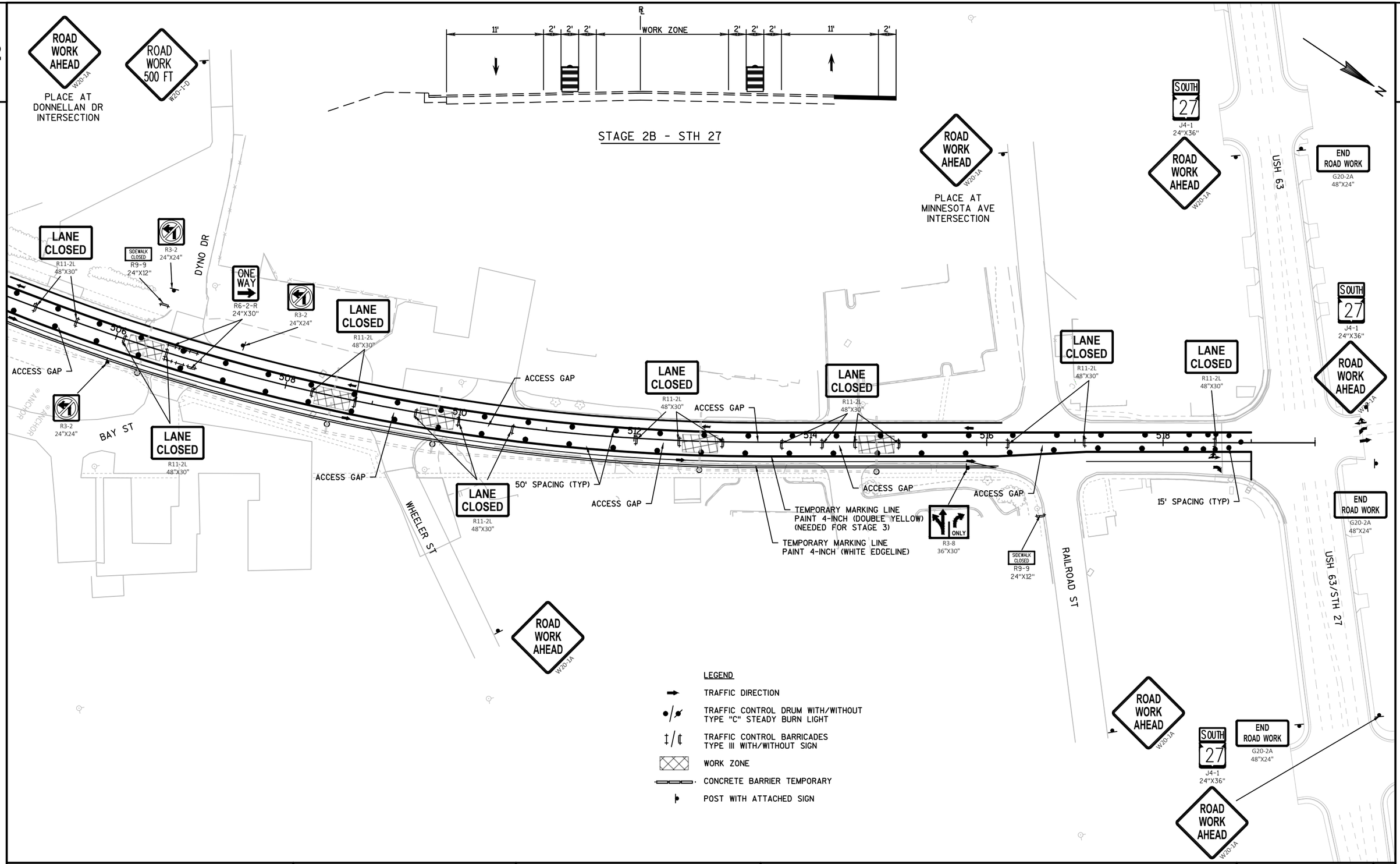
CTH B

ANCHOR

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- POST WITH ATTACHED SIGN

PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 2B	SHEET 67	E



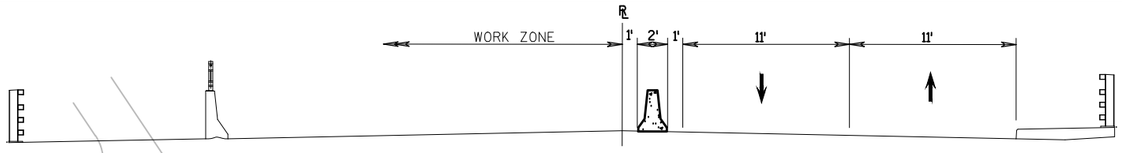
PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 2B	SHEET 68	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\026202-S2B.DWG
LAYOUT NAME - 026202-S2B - 026204-S2B

PLOT DATE : 9/21/2018 10:30 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

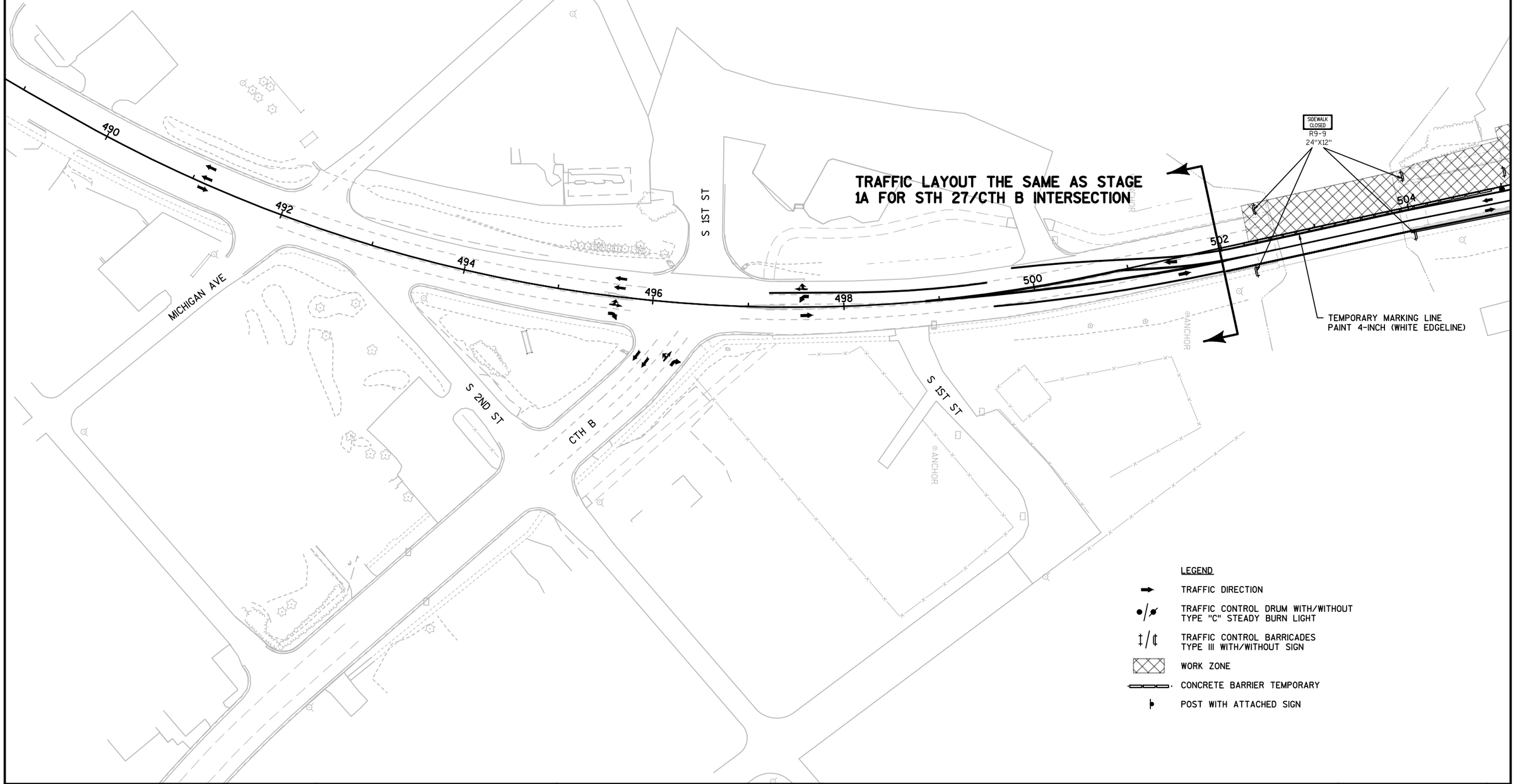
STAGE 3

- SINGLE LANE BI-DIRECTIONAL TRAFFIC ON EXISTING NB AND WIDENED NB LANES.
- INSTALL STORM SEWER INLETS ALONG SB LANES AND MAKE LATERAL CONNECTIONS ON SB SIDE.
- COMPLETE STRUCTURE ON SB HALF OF BRIDGE.
- CONSTRUCT SB LANES FINAL PAVEMENT.



N

STAGE 3 - STH 27 STRUCTURE

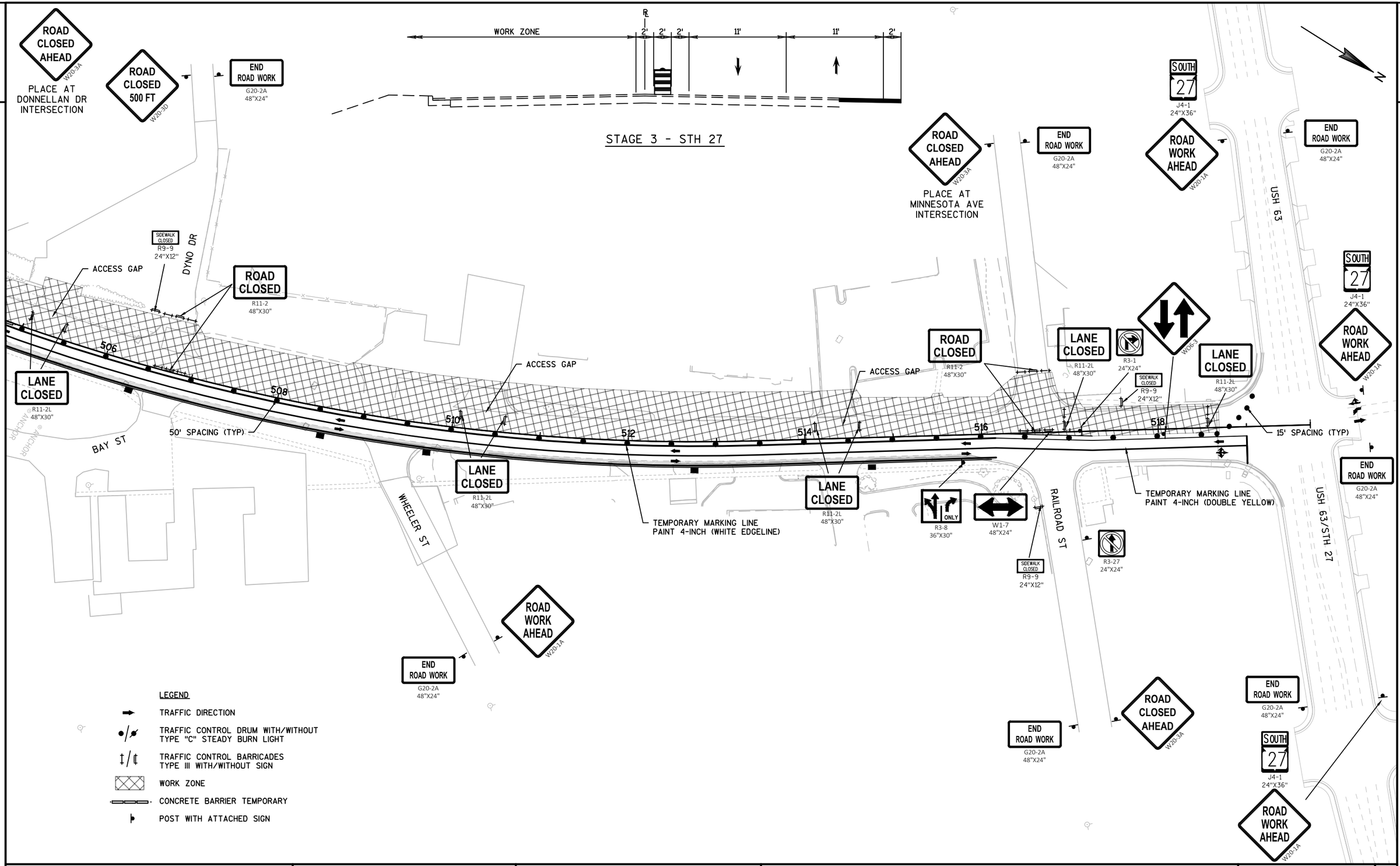


LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- POST WITH ATTACHED SIGN

PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 3	SHEET 69	E

2



PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 3	SHEET 70	E

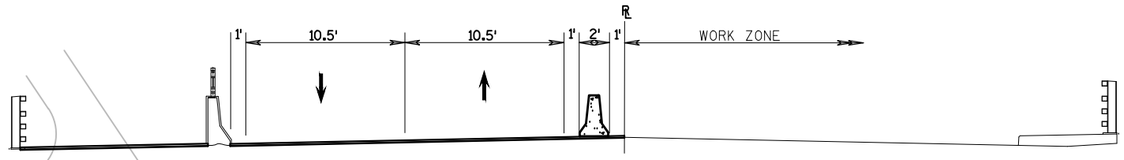
FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\026301-S3.DWG
LAYOUT NAME - 026301-S3 - 026302-S3

PLOT DATE : 9/21/2018 10:32 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

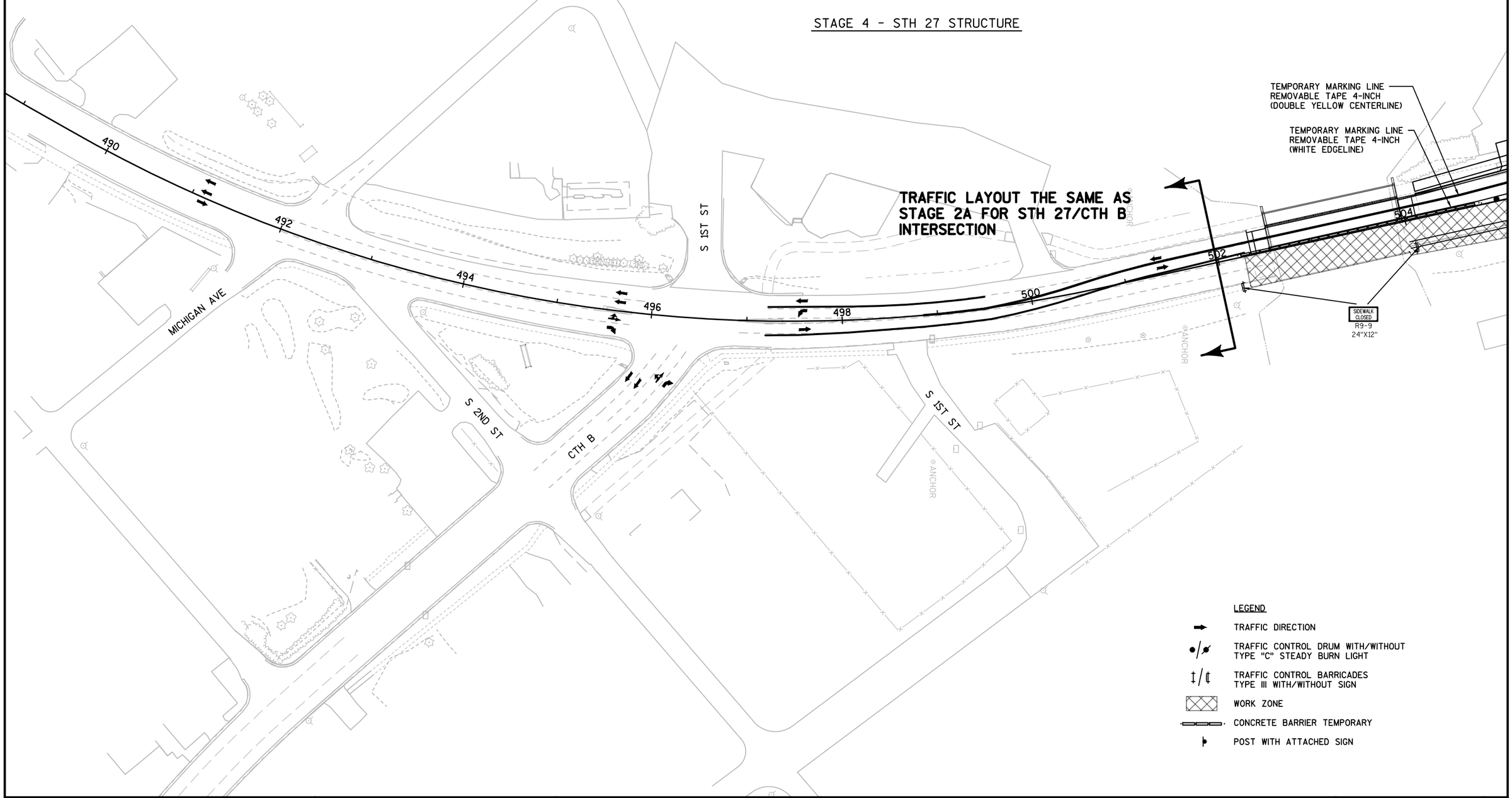
WISDOT/CADDS SHEET 42

2

STAGE 4
- SINGLE LANE BI-DIRECTIONAL TRAFFIC ON NEW SB LANES.
- DO NOT CLOSE BAY ST AND WHEELER ST AT THE SAME TIME. ACCESS GAP WILL BE REQUIRED FOR WORK AT THOSE INTERSECTIONS.
- CONSTRUCT NEW NB LANES AND PLACE FINAL CASTINGS ON STORM SEWER
- REMOVE EXISTING STORM SEWER FROM BAY ST TO WHEELER ST.
- CONSTRUCT STRUCTURE ON NB HALF OF BRIDGE
- PEDESTRIAN TRAFFIC DETOURED ONTO THE NEW SIDEWALK ALONG THE SB LANES.



STAGE 4 - STH 27 STRUCTURE



LEGEND

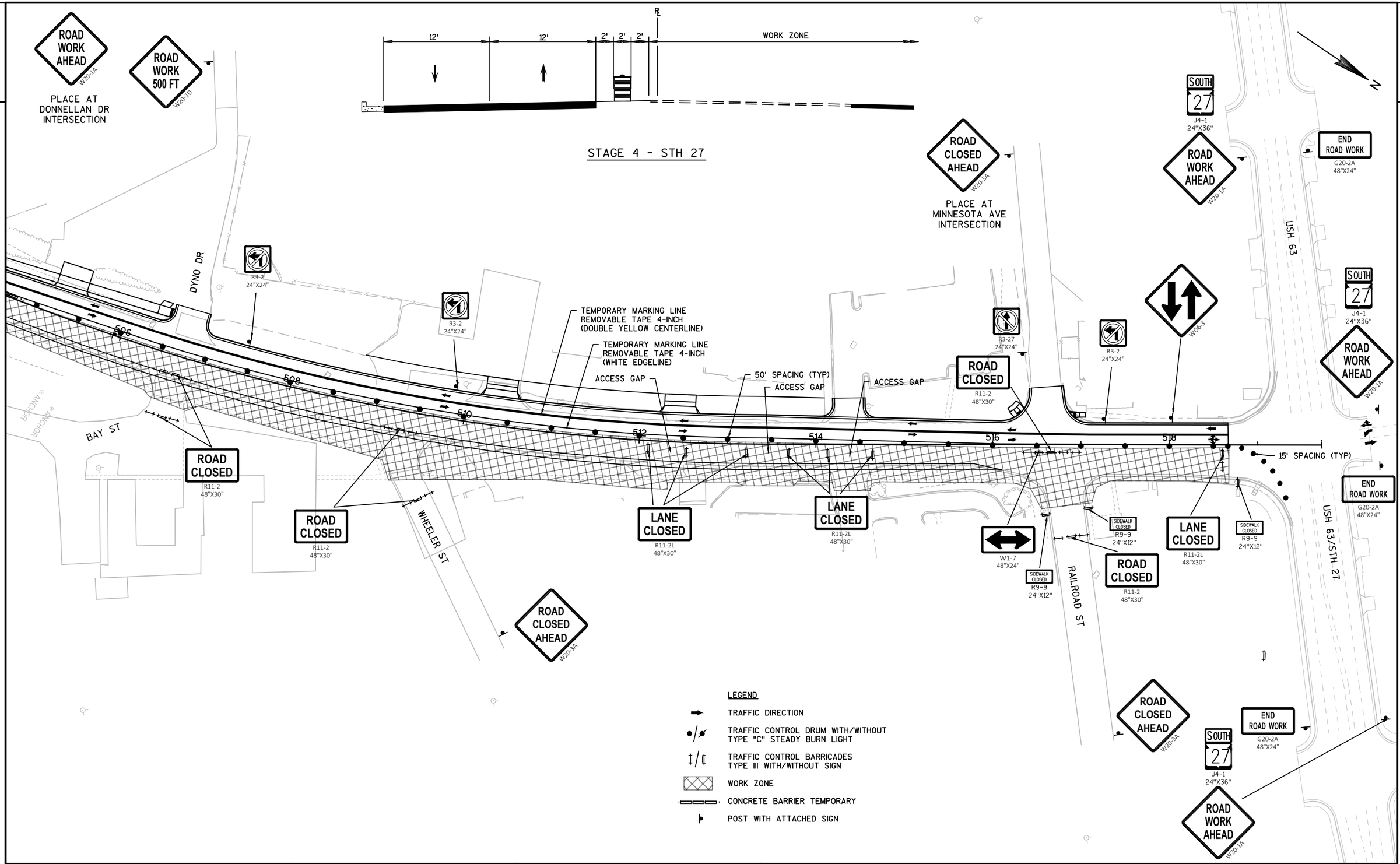
- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- POST WITH ATTACHED SIGN

PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 4	SHEET 71	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\026401-S4.DWG
LAYOUT NAME - 026401-S4 - 026501-S4

PLOT DATE : 9/21/2018 10:33 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

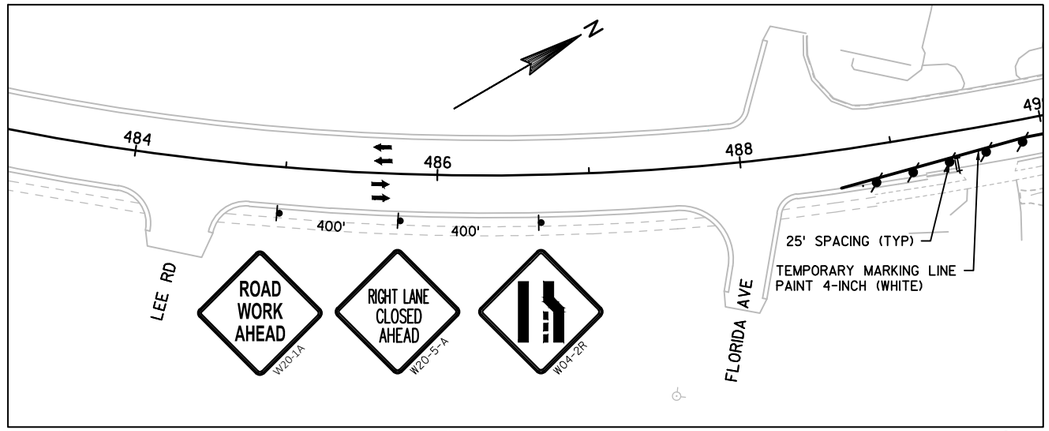
WISDOT/CADDS SHEET 42



PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 4	SHEET 72	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\026401-S4.DWG
LAYOUT NAME - 026401-S4 - 026502-S4
PLOT DATE : 9/21/2018 10:33 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



N

END ROAD WORK
G20-2A
48"X24"

490

W01-6
48"X24"

25' SPACING (TYP)

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)

492

ROAD WORK AHEAD
W20-1A

S 1ST ST

494

MICHIGAN AVE

496

498

500

502

504

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE SKIPS)

TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW CENTERLINE)

50' SPACING (TYP)

ANCHOR

R3-8
36"X30"
ONLY

S 2ND ST

CTH B

LANE CLOSED
R11-2L
48"X30"

15' SPACING (TYP)

S 1ST ST

ANCHOR

ANCHOR

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A

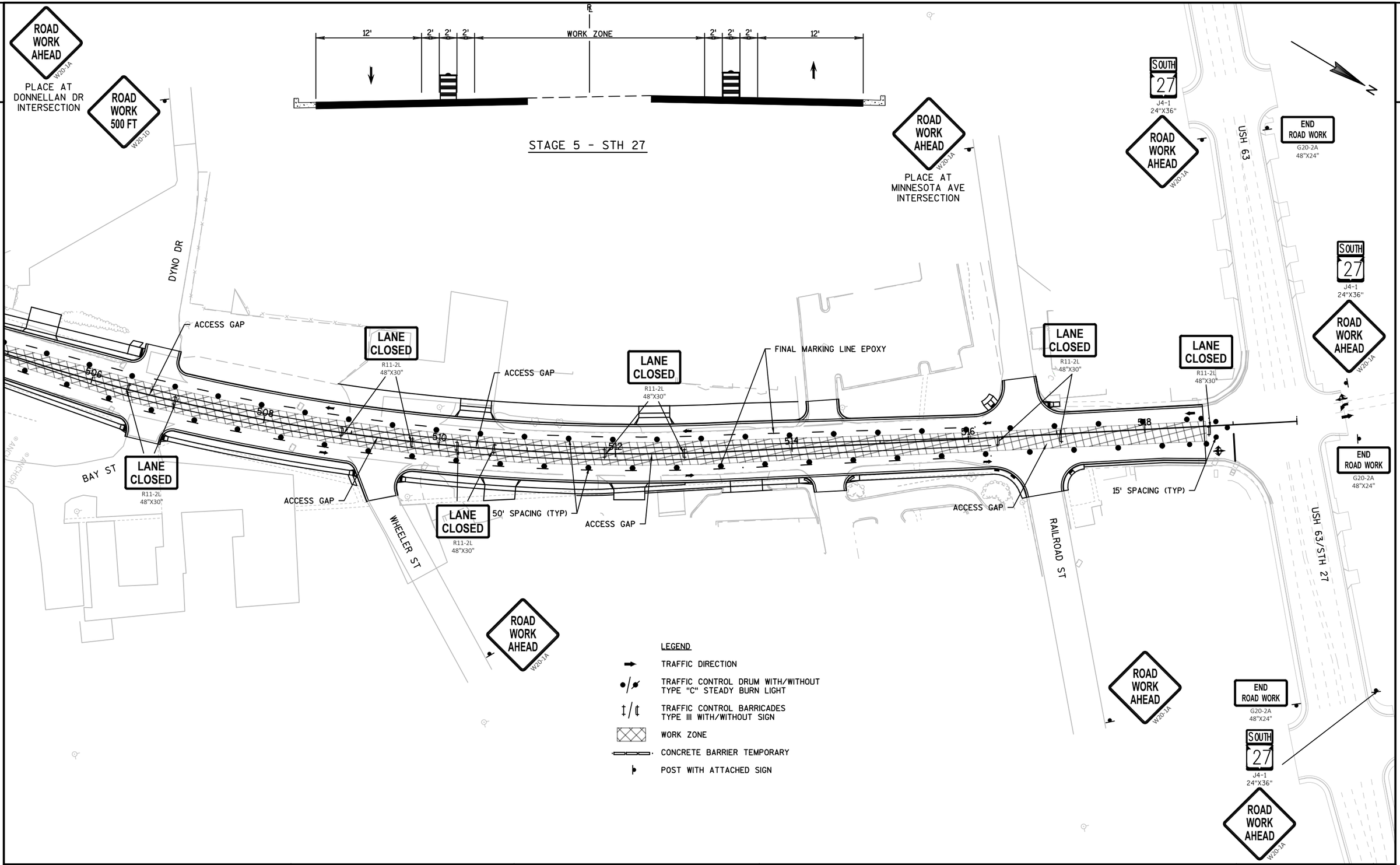
LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- POST WITH ATTACHED SIGN

STAGE 5

- SPLIT TRAFFIC TO OUTSIDE LANE OF NEW NB AND OUTSIDE LANE OF NEW SB WITH A SIGNLE LANE IN EACH DIRECTION.
- DO NOT CLOSE SB STH 27 FROM BAY ST AND WHEELER ST AT THE SAME TIME. ACCESS GAP IS REQUIRED FOR WORK AT THESE INTERSECTIONS.
- CONSTRUCT MEDIAN ISLANDS NORTH OF NAMEKEGAN RIVER BRIDGE AND PAVE TWLTL.

PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 5	SHEET 73	E



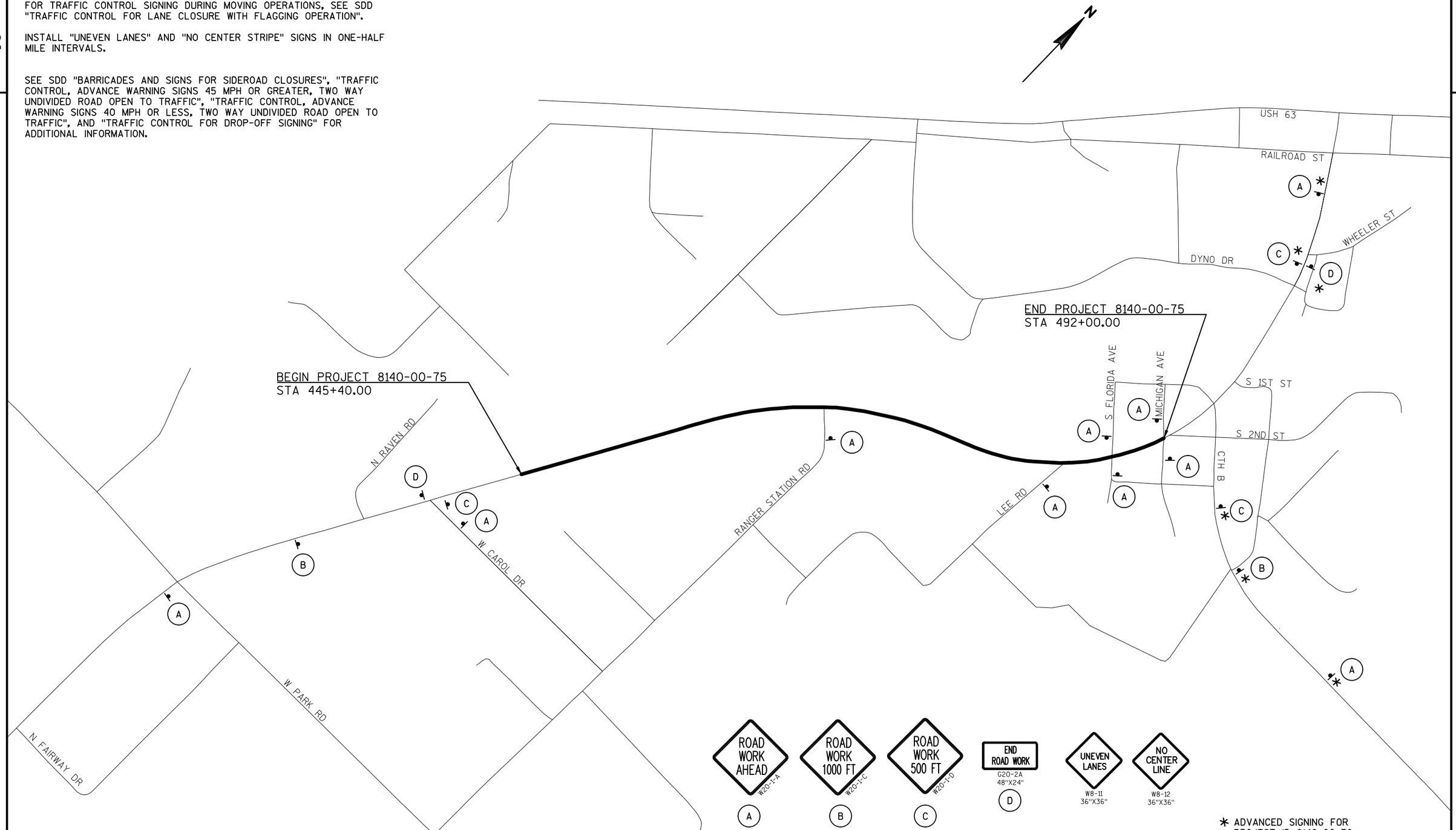
PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 5	SHEET 74	E

2

FOR TRAFFIC CONTROL SIGNING DURING MOVING OPERATIONS, SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION".

INSTALL "UNEVEN LANES" AND "NO CENTER STRIPE" SIGNS IN ONE-HALF MILE INTERVALS.

SEE SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES", "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC", "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC", AND "TRAFFIC CONTROL FOR DROP-OFF SIGNING" FOR ADDITIONAL INFORMATION.



ROAD WORK AHEAD W20-1-A — A

ROAD WORK 1000 FT W20-1-C — B

ROAD WORK 500 FT W20-1-D — C

END ROAD WORK G20-2A 48"X24" — D

UNEVEN LANES W8-11 36"X36"

NO CENTER LINE W8-12 36"X36"

PROJECT NO: 8140-00-75	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)	SHEET 75	E

STAGE 6A
- SINGLE LANE BI-DIRECTIONAL TRAFFIC ON EXISTING LANES.
- REMOVE EXISTING MEDIAN ISLANDS - TEMPORARY ASPHALTIC SURFACE PATCHES REQUIRED.

N

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

ROAD WORK AHEAD W20-1A

ROAD WORK AHEAD W20-1A

ROAD WORK AHEAD W20-1A

490 492 494 496 498 500 502 504

24 26 28 30

LANE CLOSED R11-2L 48"X30"

ROAD CLOSED R11-2 48"X30"

LANE CLOSED R11-2L 48"X30"

ROAD CLOSED R11-2 48"X30"

LANE CLOSED R11-2L 48"X30"

ROAD CLOSED R11-2 48"X30"

ROAD CLOSED R11-2 48"X30"

ANCHOR

ANCHOR

ANCHOR

END ROAD WORK G20-2A 48"X24"

ROAD CLOSED AHEAD W20-3A

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- CONCRETE BARRIER TEMPORARY
- POST WITH ATTACHED SIGN

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 6A	SHEET 76	E

2

2

STAGE 6B
- INSTALLATION OF SANITARY SEWER
- TRAFFIC ALLOWED TO RUN ON BASE AGGREGATE DURING STAGE 6B. PLACE TEMPORARY ASPHALTIC SURFACE ON NB LANES PRIOR TO OPENING TRAFFIC IN STAGE 7.

PHASE 1
SINGLE LANE BI-DIRECTIONIAL TRAFFIC ON NB LANES.
CONSTRUCT SANITARY SEWER UNDER OUTSIDE SB LANE.

PHASE 2 (OFF-PEAK HOURS ONLY)
FLAG TRAFFIC TO A SINGLE LANE ON THE OUTSIDE NB LANE.
CONSTRUCT SANITARY SEWER UNDER MEDIAN SB LANE.

PHASE 3 (OFF-PEAK HOURS ONLY)
FLAG TRAFFIC TO A SINGLE LANE ON THE OUTSIDE SB LANE.
CONSTRUCT SANITARY SEWER UNDER MEDIAN NB LANE.

PHASE 4
SINGLE LANE BI-DIRECTIONIAL TRAFFIC ON SB LANES.
CONSTRUCT SANITARY SEWER UNDER OUTSIDE NB LANE.

N

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

ROAD CLOSED AHEAD W20-3A

ROAD WORK AHEAD W20-1A

ROAD CLOSED R11-2 48"X30"

SIDEWALK CLOSED R9-9 24"X12"

490 492 494 496 498 500 502 504

24 26 28 30

END ROAD WORK G20-2A 48"X24"

ANCHOR

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- POST WITH ATTACHED SIGN

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 6B	SHEET 77	E

STAGE 7

- SINGLE LANE BI-DIRECTIONAL TRAFFIC ON EXISTING NB LANES.
- CONSTRUCT SB LANES.
- INSTALL STORM SEWER MAIN AND INLETS ON WEST SIDE OF ROADWAY.
- EXTEND STORM SEWER LATERALS UNDER EXISTING SB LANES TO MEDIAN.

N

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

ROAD WORK AHEAD W20-1A

ROAD CLOSED AHEAD W20-3A

LANE CLOSED R11-2L 48"X30"

ROAD CLOSED R11-2 48"X30"

S 1ST ST

SIDEWALK CLOSED R9-9 24"X12"

25' SPACING (TYP)

MICHIGAN AVE

W06-3

WO1-7 48"X24"

SIDEWALK CLOSED R9-9 24"X12"

CTH B

S 2ND ST

END ROAD WORK G20-2A 48"X24"

50' SPACING (TYP)

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE EDGELINE)

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)

TEMPORARY MARKING LINE PAINT 4-INCH (WHITE EDGELINE)

TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)

ANCHOR

490 492 494 496 498 500 502 504 506

24 26 28 30

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- POST WITH ATTACHED SIGN

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

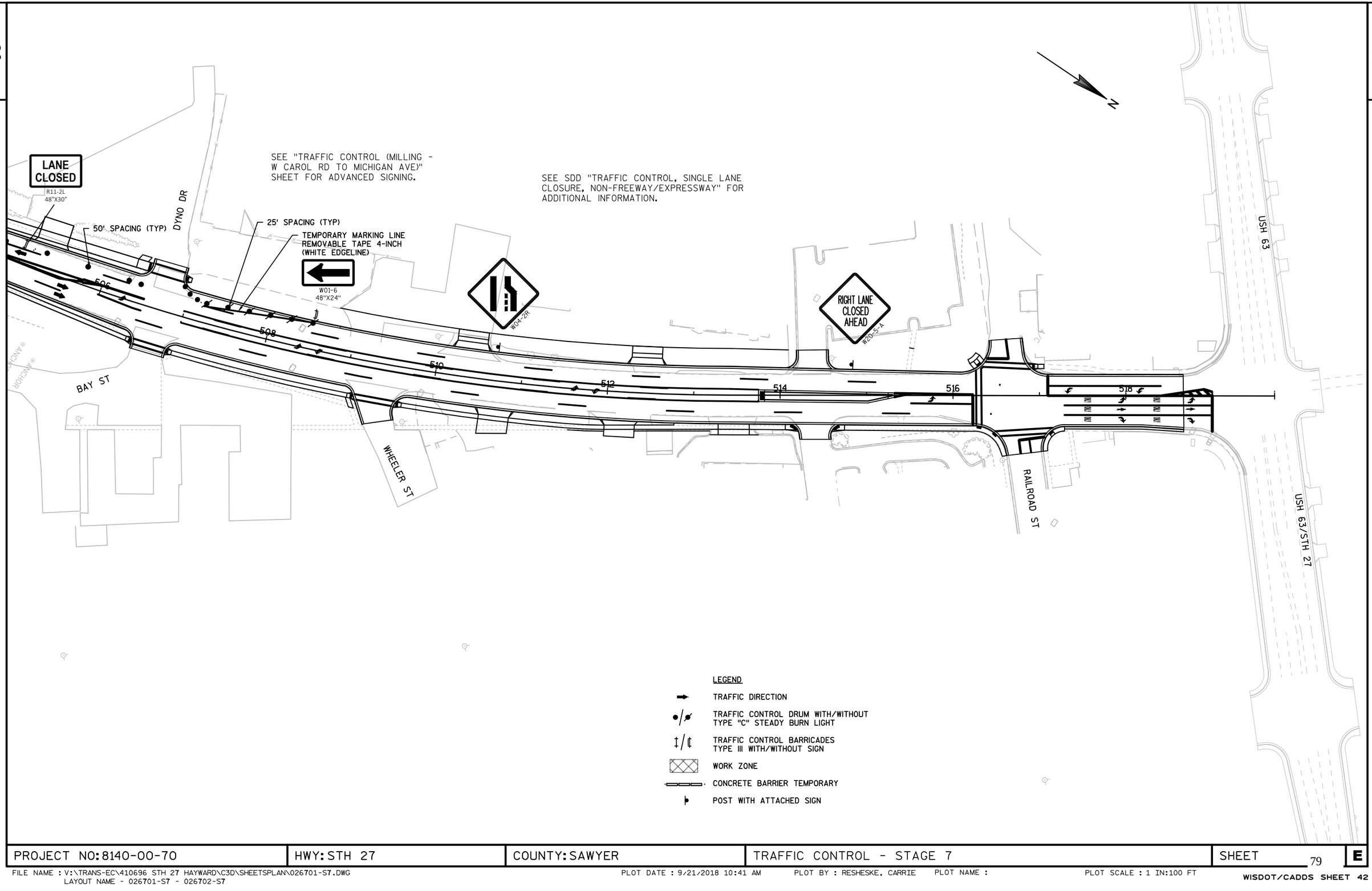
PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 7	SHEET 78 E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\026701-S7.DWG
LAYOUT NAME - 026701-S7 - 026701-S7

PLOT DATE : 9/21/2018 10:41 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 7	SHEET 79	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\026701-S7.DWG
LAYOUT NAME - 026701-S7 - 026702-S7
PLOT DATE : 9/21/2018 10:41 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

STAGE 8

- SPLIT TRAFFIC TO NEW SB OUTSIDE LANE AND EXISTING NB OUTSIDE LANE. SINGLE LANE IN EACH DIRECTION.
- EXTEND STORM SEWER LATERALS UNDER MEDIAN LANES - TEMPORARY ASPHALTIC SURFACE PATCHES REQUIRED FOR EACH STORM SEWER CROSSING.
- CONSTRUCT CTH B WB LANES. MAINTAIN BI-DIRECTIONAL TRAFFIC ON CTH B.
- CONSTRUCT MEDIAN ISLAND ON STH 27 NORTH OF CTH B.
- GAP STH 27 MEDIAN AS NECESSARY TO ALLOW SB STH 27 LEFT MOVEMENT.

N

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

ROAD WORK AHEAD W20-1A

ROAD CLOSED AHEAD W20-3A

ROAD CLOSED R11-2 48"X30"

LANE CLOSED R11-2L 48"X30"

S 1ST ST

MICHIGAN AVE

490 492 494 496 498 500 502 504

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW) (NEEDED FOR STAGE 9A)

50' SPACING (TYP)

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)

25' SPACING (TYP)

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE EDGELINE)

15' SPACING (TYP)

SIDEWALK CLOSED R9-9 24"X12"

S 1ST ST

S 2ND ST

S 3RD ST

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)

15' SPACING (TYP)

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE EDGELINE)

25' SPACING (TYP)

50' SPACING (TYP)

END ROAD WORK G20-2A 48"X24"

CTH B

MAINTAIN A MINIMUM OF TWO 11' LANES ON CTH B.

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADDITIONAL INFORMATION.

25' SPACING (TYP)

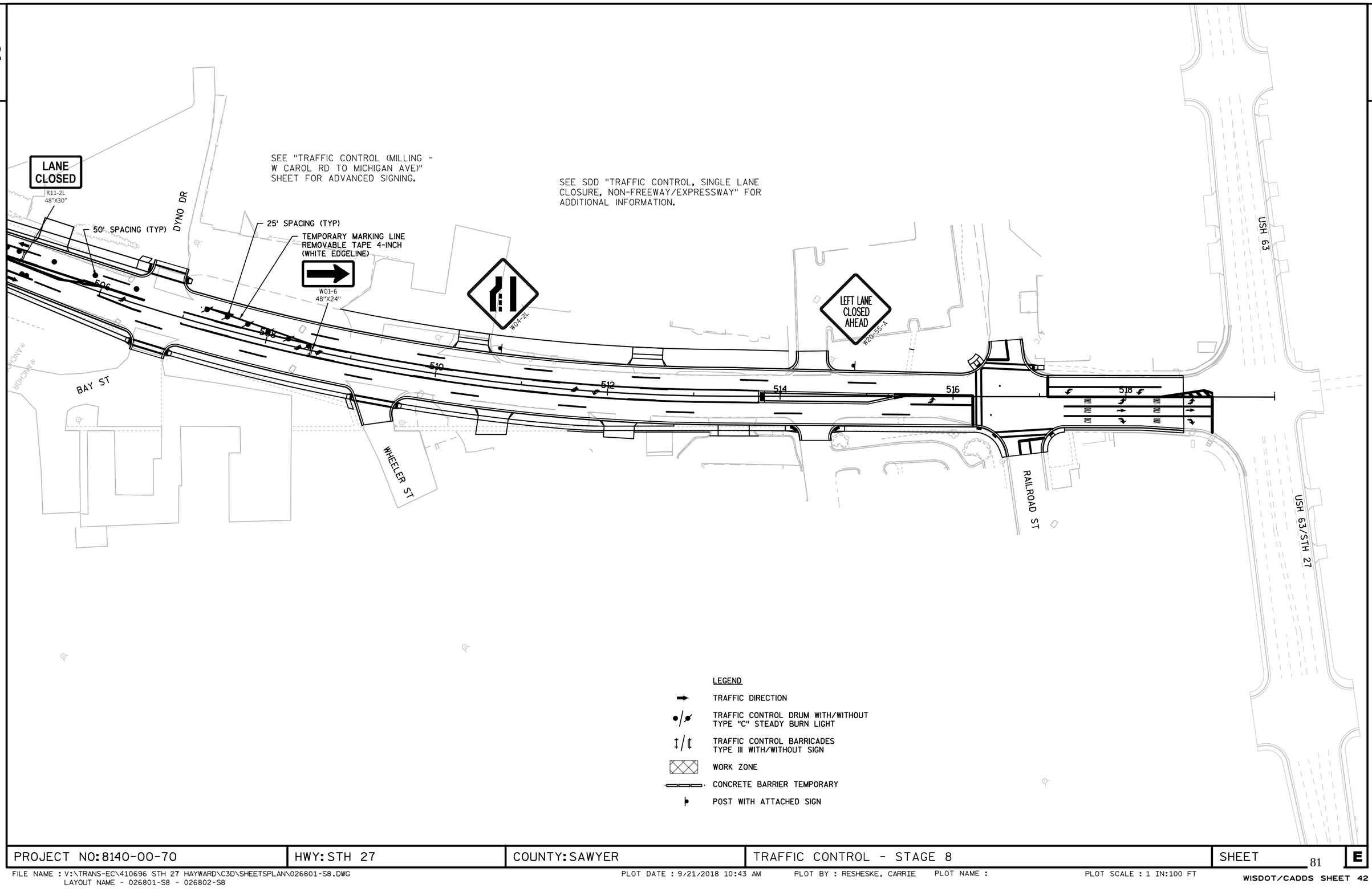
SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- POST WITH ATTACHED SIGN

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 8	SHEET 80	E

2



PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 8	SHEET 81	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\026801-S8.DWG
LAYOUT NAME - 026801-S8 - 026802-S8
PLOT DATE : 9/21/2018 10:43 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

STAGE 9A
- SINGLE LANE BI-DIRECTIONAL TRAFFIC ON NEW SB LANES.
- CONSTRUCT NB LANES NORTH OF CTH B.
- INSTALL STORM INLETS AND LATERAL CONNECTIONS UNDER NB LANES NORTH OF CTH B.
- MAINTAIN BI-DIRECTIONAL TRAFFIC ON CTH B SIMILAR TO STAGE 8.

N

SEE "TRAFFIC CONTROL - STAGE 8" SHEET FOR LEFT LANE CLOSURE TRAFFIC LAYOUT

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

ROAD WORK AHEAD W20-1A

ROAD CLOSED AHEAD W20-3A

W06-3

ROAD CLOSED R11-2 48"X30"

LANE CLOSED R11-2L 48"X30"

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)

25' SPACING (TYP)

15' SPACING (TYP)

50' SPACING (TYP)

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE EDGELINE)

SIDEWALK CLOSED R9-9 24"X12"

S 1ST ST

MICHIGAN AVE

S 3RD ST

S 2ND ST

CTH B

END ROAD WORK G20-2A 48"X24"

MAINTAIN A MINIMUM OF TWO 11' LANES ON CTH B.

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADDITIONAL INFORMATION.

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

© ANCHOR

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- POST WITH ATTACHED SIGN

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 9A	SHEET 82	E

2

2

STAGE 9B

- SINGLE LANE BI-DIRECTIONAL TRAFFIC ON NEW SB LANES.
- CONSTRUCT NB LANES SOUTH OF CTH B.
- INSTALL REMAINING STORM INLETS AND LATERAL CONNECTIONS UNDER NB LANES SOUTH OF CTH B.
- CONSTRUCT CTH B EB LANES.
- MAINTAIN BI-DIRECTIONAL TRAFFIC ON NEWLY CONSTRUCTED CTH B WB LANES.
- UTILIZE SOUTH 2ND STREET BETWEEN MICHIGAN AVENUE AND CTH B AS NECESSARY TO ACCOMMODATE NB STH 27 TO EB CTH B TRAFFIC.

N

SEE "TRAFFIC CONTROL - STAGE 8" SHEET FOR LEFT LANE CLOSURE TRAFFIC LAYOUT

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

ROAD WORK AHEAD W20-1A

ROAD CLOSED AHEAD W20-3A

W06-3

ROAD CLOSED R11-2 48"X30"

LANE CLOSED R11-2L 48"X30"

490 492 494 496 498 500 502 504

25' SPACING (TYP)

15' SPACING (TYP)

50' SPACING (TYP)

S 1ST ST

24

MICHIGAN AVE

SIDEWALK CLOSED R9-9 24"X12"

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE EDGELINE)

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE DOTTED EDGELINE)

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW EDGELINE)

S 3RD ST

S 2ND ST

CTH B

80 82 84

END ROAD WORK G20-2A 48"X24"

MAINTAIN A MINIMUM OF TWO 11' LANES ON CTH B.

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADDITIONAL INFORMATION.

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

ANCHOR

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- POST WITH ATTACHED SIGN

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 9B	SHEET 83	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\026902-S9B.DWG
LAYOUT NAME - 026902-S9B - 026902-S9B

PLOT DATE : 9/21/2018 10:46 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

STAGE 10

- TRAFFIC IN FINAL CONFIGURATION. CLOSE STH 27 NB LT TURN LANE TO S 1ST STREET
- CONSTRUCT MEDIAN ISLAND SOUTH OF CTH B.
- MILL AND OVERLAY STH 27 INTERSECTION WITH MICHIGAN AVENUE.

N

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS" FOR ADDITIONAL INFORMATION.

ROAD CLOSED AHEAD W20-3A

ROAD WORK AHEAD W20-1A

ROAD CLOSED R11-2 48"X30"

ROAD CLOSED R11-2 48"X30"

ROAD CLOSED AHEAD W20-3A

490 492 494 496 498 500 502 504

S 1ST ST 24

MICHIGAN AVE

S 3RD ST

CTH B 28 30

S 2ND ST

S 1ST ST

ANCHOR

SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

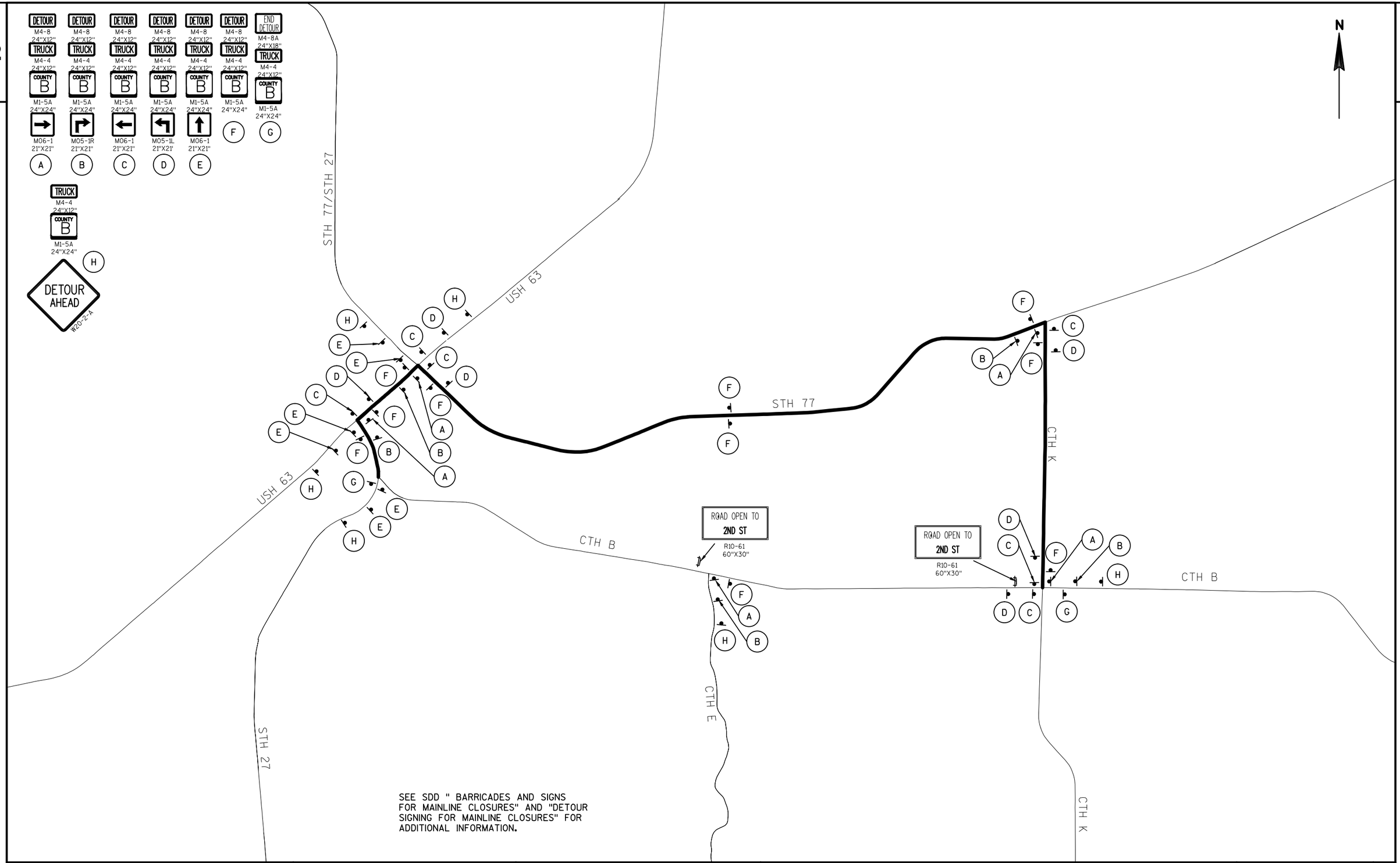
SEE "TRAFFIC CONTROL (MILLING - W CAROL RD TO MICHIGAN AVE)" SHEET FOR ADVANCED SIGNING.

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRAFFIC CONTROL - STAGE 10	SHEET 84	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\026903-S10.DWG
LAYOUT NAME - 026903-S10 - 026903-S10

PLOT DATE : 9/21/2018 10:48 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	TRUCK DETOUR ROUTE (STAGES 6 - 10)	SHEET 85	E

Estimate Of Quantities

Line	Item	Item Description	Unit	Total	8140-00-70 Qty	8140-00-73 Qty	8140-00-74 Qty	8140-00-75 Qty	8140-25-71 Qty
0002	201.0105	Clearing	STA	9.000	9.000				
0004	201.0205	Grubbing	STA	9.000	9.000				
0006	203.0700.S	Removing Old Structure Over Waterway With Debris Capture System (station) 01. 503+26	LS	1.000					1.000
0008	204.0100	Removing Pavement	SY	6,788.000	6,106.000	682.000			
0010	204.0120	Removing Asphaltic Surface Milling	SY	35,722.000	6,201.000		2,859.000	26,662.000	
0012	204.0130	Removing Curb	LF	174.000	174.000				
0014	204.0150	Removing Curb & Gutter	LF	4,908.000	1,990.000	2,345.000	573.000		
0016	204.0155	Removing Concrete Sidewalk	SY	1,198.000	1,081.000		117.000		
0018	204.0195	Removing Concrete Bases	EACH	8.000	8.000				
0020	204.0250	Abandoning Manholes	EACH	2.000	2.000				
0022	204.0260	Abandoning Inlets	EACH	7.000	7.000				
0024	204.0291.S	Abandoning Sewer	CY	52.000	52.000				
0026	205.0100	Excavation Common	CY	5,806.000	4,516.000	1,290.000			
0028	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 8140-00-70	LS	1.000	1.000				
0030	211.0100	Prepare Foundation for Asphaltic Paving (project) 02. 8140-00-74	LS	1.000			1.000		
0032	211.0100	Prepare Foundation for Asphaltic Paving (project) 03. 8140-00-75	LS	1.000				1.000	
0034	213.0100	Finishing Roadway (project) 01. 8140-00-70	EACH	1.000	1.000				
0036	213.0100	Finishing Roadway (project) 02. 8140-00-73	EACH	1.000		1.000			
0038	213.0100	Finishing Roadway (project) 03. 8140-00-74	EACH	1.000			1.000		
0040	213.0100	Finishing Roadway (project) 04. 8140-00-75	EACH	1.000				1.000	
0042	213.0100	Finishing Roadway (project) 05. 8140-25-71	EACH	1.000					1.000
0044	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	6,672.000	3,950.000	2,467.000	255.000		
0046	415.0410	Concrete Pavement Approach Slab	SY	80.000					80.000
0048	416.0160	Concrete Driveway 6-Inch	SY	289.000		289.000			
0050	450.4000	HMA Cold Weather Paving	TON	9,598.000	1,002.000	280.000	143.000	8,173.000	
0052	455.0605	Tack Coat	GAL	4,351.000	1,820.000	362.000	303.000	1,866.000	
0054	460.2000	Incentive Density HMA Pavement	DOL	5,650.000	2,590.000	720.000	370.000	1,970.000	
0056	460.7423	HMA Pavement 3 HT 58-28 H	TON	4,139.000	2,860.000	894.000	385.000		
0058	460.7445	HMA Pavement 5 HT 58-34 H	TON	4,628.000	1,147.000	226.000	189.000	3,066.000	
0060	465.0105	Asphaltic Surface	TON	250.000	222.000	28.000			
0062	465.0110	Asphaltic Surface Patching	TON	63.000	10.000	50.000	3.000		
0064	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	67.000	26.000	41.000			
0066	465.0125	Asphaltic Surface Temporary	TON	700.000	533.000	167.000			
0068	465.0310	Asphaltic Curb	LF	2,597.000	1,272.000	1,325.000			
0070	502.3200	Protective Surface Treatment	SY	815.000					815.000
0072	502.3210	Pigmented Surface Sealer	SY	95.000					95.000
0074	509.0301	Preparation Decks Type 1	SY	100.000					100.000

					8140-00-70	8140-00-73	8140-00-74	8140-00-75	8140-25-71
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**	**Qty**
0076	509.0302	Preparation Decks Type 2	SY	15.000					15.000
0078	509.0500	Cleaning Decks	SY	815.000					815.000
0080	509.1200	Curb Repair	LF	10.000					10.000
0082	509.1500	Concrete Surface Repair	SF	100.000					100.000
0084	509.2000	Full-Depth Deck Repair	SY	5.000					5.000
0086	509.2500	Concrete Masonry Overlay Decks	CY	34.000					34.000
0088	509.5100.S	Polymer Overlay	SY	285.000					285.000
0090	509.9050.S	Cleaning Parapets	LF	285.000					285.000
0092	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	2.000	2.000				
0094	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000				
0096	601.0407	Concrete Curb & Gutter 18-Inch Type D	LF	1,459.000	997.000	462.000			
0098	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	5,261.000	2,255.000	2,609.000	397.000		
0100	602.0405	Concrete Sidewalk 4-Inch	SF	13,370.000	12,015.000		1,355.000		
0102	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	220.000	170.000		50.000		
0104	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	56.000	56.000				
0106	603.8000	Concrete Barrier Temporary Precast Delivered	LF	265.000					265.000
0108	603.8125	Concrete Barrier Temporary Precast Installed	LF	265.000					265.000
0110	606.0300	Riprap Heavy	CY	10.000	10.000				
0112	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	329.000	329.000				
0114	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	437.000	437.000				
0116	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	346.000	346.000				
0118	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	474.000	474.000				
0120	608.3018	Storm Sewer Pipe Class III-A 18-Inch	LF	190.000	190.000				
0122	608.3024	Storm Sewer Pipe Class III-A 24-Inch	LF	532.000	532.000				
0124	611.0530	Manhole Covers Type J	EACH	2.000	2.000				
0126	611.0612	Inlet Covers Type C	EACH	1.000	1.000				
0128	611.0624	Inlet Covers Type H	EACH	17.000	17.000				
0130	611.2004	Manholes 4-FT Diameter	EACH	2.000	2.000				
0132	611.3004	Inlets 4-FT Diameter	EACH	1.000	1.000				
0134	611.3230	Inlets 2x3-FT	EACH	17.000	17.000				
0136	616.0206	Fence Chain Link 6-FT	LF	25.000	25.000				
0138	619.1000	Mobilization	EACH	1.000	0.400	0.300	0.100	0.100	0.100
0140	620.0300	Concrete Median Sloped Nose	SF	389.000	202.000	187.000			
0142	624.0100	Water	MGAL	400.000	330.000	50.000	20.000		
0144	625.0500	Salvaged Topsoil	SY	10,757.000	7,065.000	3,692.000			
0146	627.0200	Mulching	SY	8,807.000	6,365.000	2,442.000			
0148	628.1504	Silt Fence	LF	1,935.000	1,319.000	616.000			

					8140-00-70	8140-00-73	8140-00-74	8140-00-75	8140-25-71
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**	**Qty**
0150	628.1520	Silt Fence Maintenance	LF	1,935.000	1,319.000	616.000			
0152	628.1905	Mobilizations Erosion Control	EACH	3.000	1.000	1.000			1.000
0154	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	1.000	1.000			1.000
0156	628.2006	Erosion Mat Urban Class I Type A	SY	2,570.000	1,091.000	1,479.000			
0158	628.7005	Inlet Protection Type A	EACH	22.000	22.000				
0160	628.7015	Inlet Protection Type C	EACH	24.000	24.000				
0162	628.7504	Temporary Ditch Checks	LF	48.000	48.000				
0164	629.0210	Fertilizer Type B	CWT	6.800	4.500	2.300			
0166	630.0140	Seeding Mixture No. 40	LB	290.400	190.700	99.700			
0168	630.0200	Seeding Temporary	LB	290.400	190.700	99.700			
0170	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	55.000	45.000			10.000	
0172	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	14.000	14.000				
0174	637.2210	Signs Type II Reflective H	SF	527.680	463.680			64.000	
0176	637.2215	Signs Type II Reflective H Folding	SF	41.440	41.440				
0178	637.2230	Signs Type II Reflective F	SF	38.500	38.500				
0180	638.2102	Moving Signs Type II	EACH	10.000	10.000				
0182	638.2602	Removing Signs Type II	EACH	52.000	49.000			3.000	
0184	638.3000	Removing Small Sign Supports	EACH	50.000	47.000			3.000	
0186	641.8100	Overhead Sign Support (structure) 01. S-57-0001	LS	1.000	1.000				
0188	642.5201	Field Office Type C	EACH	1.000	1.000				
0190	643.0300	Traffic Control Drums	DAY	10,115.000	10,115.000				
0192	643.0410	Traffic Control Barricades Type II	DAY	653.000	653.000				
0194	643.0420	Traffic Control Barricades Type III	DAY	5,147.000	5,147.000				
0196	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	15.000	15.000				
0198	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	15.000	15.000				
0200	643.0705	Traffic Control Warning Lights Type A	DAY	7,498.000	7,498.000				
0202	643.0715	Traffic Control Warning Lights Type C	DAY	1,228.000	1,228.000				
0204	643.0900	Traffic Control Signs	DAY	17,511.000	17,341.000			170.000	
0206	643.5000	Traffic Control	EACH	1.000	0.900			0.100	
0208	645.0120	Geotextile Type HR	SY	15.000	15.000				
0210	646.1020	Marking Line Epoxy 4-Inch	LF	17,680.000	3,263.000	1,688.000	593.000	12,136.000	
0212	646.3020	Marking Line Epoxy 8-Inch	LF	1,178.000	666.000		512.000		
0214	646.5020	Marking Arrow Epoxy	EACH	48.000	13.000	4.000	9.000	22.000	
0216	646.5120	Marking Word Epoxy	EACH	9.000	3.000		6.000		
0218	646.6120	Marking Stop Line Epoxy 18-Inch	LF	285.000	135.000		150.000		
0220	646.6220	Marking Yield Line Epoxy 18-Inch	EACH	9.000	9.000				
0222	646.7120	Marking Diagonal Epoxy 12-Inch	LF	26.000	26.000				
0224	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	1,092.000	740.000		352.000		
0226	646.8120	Marking Curb Epoxy	LF	115.000	115.000				
0228	646.8220	Marking Island Nose Epoxy	EACH	9.000	9.000				

					8140-00-70	8140-00-73	8140-00-74	8140-00-75	8140-25-71
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**	**Qty**
0230	646.9000	Marking Removal Line 4-Inch	LF	7,153.000	7,153.000				
0232	646.9100	Marking Removal Line 8-Inch	LF	915.000	915.000				
0234	646.9300	Marking Removal Special Marking	EACH	14.000	14.000				
0236	649.0105	Temporary Marking Line Paint 4-Inch	LF	26,293.000	26,293.000				
0238	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	12,500.000	12,500.000				
0240	649.0205	Temporary Marking Line Paint 8-Inch	LF	778.000	778.000				
0242	649.0805	Temporary Marking Stop Line Paint 18-Inch	LF	52.000	52.000				
0244	650.4000	Construction Staking Storm Sewer	EACH	22.000	22.000				
0246	650.4500	Construction Staking Subgrade	LF	2,742.000	2,459.000		283.000		
0248	650.5000	Construction Staking Base	LF	2,742.000	2,459.000		283.000		
0250	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	6,655.000	3,187.000	3,071.000	397.000		
0252	650.8000	Construction Staking Resurfacing Reference	LF	4,660.000				4,660.000	
0254	650.9000	Construction Staking Curb Ramps	EACH	22.000	18.000		4.000		
0256	650.9910	Construction Staking Supplemental Control (project) 01. 8140-00-70	LS	1.000	1.000				
0258	650.9910	Construction Staking Supplemental Control (project) 02. 8140-00-74	LS	1.000			1.000		
0260	650.9920	Construction Staking Slope Stakes	LF	2,742.000	1,287.000	1,172.000	283.000		
0262	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,364.000	769.000		595.000		
0264	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	2,214.000	1,385.000		829.000		
0266	652.0605	Conduit Special 2-Inch	LF	138.000			138.000		
0268	652.0800	Conduit Loop Detector	LF	1,762.000	776.000		986.000		
0270	653.0135	Pull Boxes Steel 24x36-Inch	EACH	4.000	2.000		2.000		
0272	653.0140	Pull Boxes Steel 24x42-Inch	EACH	20.000	12.000		8.000		
0274	653.0905	Removing Pull Boxes	EACH	8.000	8.000				
0276	654.0101	Concrete Bases Type 1	EACH	9.000	4.000		5.000		
0278	654.0102	Concrete Bases Type 2	EACH	5.000	2.000		3.000		
0280	654.0105	Concrete Bases Type 5	EACH	4.000	3.000		1.000		
0282	654.0110	Concrete Bases Type 10	EACH	1.000			1.000		
0284	654.0113	Concrete Bases Type 13	EACH	3.000	2.000		1.000		
0286	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	2.000	1.000		1.000		
0288	655.0230	Cable Traffic Signal 5-14 AWG	LF	1,266.000	411.000		855.000		
0290	655.0240	Cable Traffic Signal 7-14 AWG	LF	746.000	631.000		115.000		
0292	655.0250	Cable Traffic Signal 9-14 AWG	LF	314.000	314.000				
0294	655.0260	Cable Traffic Signal 12-14 AWG	LF	1,652.000	820.000		832.000		
0296	655.0270	Cable Traffic Signal 15-14 AWG	LF	32.000	32.000				
0298	655.0320	Cable Type UF 2-10 AWG Grounded	LF	1,928.000	1,388.000		540.000		
0300	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	2,406.000	1,515.000		891.000		
0302	655.0610	Electrical Wire Lighting 12 AWG	LF	1,512.000	867.000		645.000		
0304	655.0700	Loop Detector Lead In Cable	LF	3,389.000	1,912.000		1,477.000		

					8140-00-70	8140-00-73	8140-00-74	8140-00-75	8140-25-71
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**	**Qty**
0306	655.0800	Loop Detector Wire	LF	6,496.000	2,738.000		3,758.000		
0308	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. STH 27 / CTH B	LS	1.000	1.000				
0310	656.0200	Electrical Service Meter Breaker Pedestal (location) 02. STH 27 & Railroad St	LS	1.000			1.000		
0312	657.0100	Pedestal Bases	EACH	9.000	4.000		5.000		
0314	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	9.000	5.000		4.000		
0316	657.0305	Poles Type 2	EACH	1.000			1.000		
0318	657.0310	Poles Type 3	EACH	3.000	2.000		1.000		
0320	657.0315	Poles Type 4	EACH	1.000			1.000		
0322	657.0322	Poles Type 5-Aluminum	EACH	4.000	3.000		1.000		
0324	657.0350	Poles Type 10	EACH	1.000			1.000		
0326	657.0360	Poles Type 13	EACH	3.000	2.000		1.000		
0328	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	7.000	4.000		3.000		
0330	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	2.000			2.000		
0332	657.0525	Monotube Arms 25-FT	EACH	1.000			1.000		
0334	657.0530	Monotube Arms 30-FT	EACH	1.000			1.000		
0336	657.0535	Monotube Arms 35-FT	EACH	2.000	2.000				
0338	657.0545	Monotube Arms 45-FT	EACH	1.000			1.000		
0340	657.0585	Trombone Arms 15-FT	EACH	1.000			1.000		
0342	657.0590	Trombone Arms 20-FT	EACH	2.000			2.000		
0344	657.0595	Trombone Arms 25-FT	EACH	2.000	2.000				
0346	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	3.000	2.000		1.000		
0348	657.0614	Luminaire Arms Single Member 4-Inch Clamp 8-FT	EACH	1.000	1.000				
0350	657.0615	Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT	EACH	3.000	3.000				
0352	657.0704	Luminaire Arms Truss Type 4-Inch Clamp 10-FT	EACH	3.000	1.000		2.000		
0354	657.0705	Luminaire Arms Truss Type 4 1/2-Inch Clamp 10-FT	EACH	1.000			1.000		
0356	657.0715	Luminaire Arms Truss Type 4 1/2-Inch Clamp 15-FT	EACH	3.000	3.000				
0358	657.0808	Luminaire Arms Steel 8-FT	EACH	3.000	2.000		1.000		
0360	657.0812	Luminaire Arms Steel 12-FT	EACH	1.000			1.000		
0362	657.0815	Luminaire Arms Steel 15-FT	EACH	4.000	2.000		2.000		
0364	658.0173	Traffic Signal Face 3S 12-Inch	EACH	21.000	10.000		11.000		
0366	658.0174	Traffic Signal Face 4S 12-Inch	EACH	7.000	4.000		3.000		
0368	658.0175	Traffic Signal Face 5S 12-Inch	EACH	2.000	2.000				
0370	658.0416	Pedestrian Signal Face 16-Inch	EACH	10.000	4.000		6.000		
0372	658.0500	Pedestrian Push Buttons	EACH	10.000	4.000		6.000		
0374	658.1133	Programmable Traffic Signal Face 3S 12-Inch	EACH	4.000			4.000		
0376	658.1134	Programmable Traffic Signal Face 4S 12-Inch	EACH	2.000			2.000		
0378	658.1135	Programmable Traffic Signal Face 5S 12-Inch	EACH	2.000			2.000		
0380	658.5069	Signal Mounting Hardware (location) 01.STH 27 / CTH	LS	1.000	1.000				

					8140-00-70	8140-00-73	8140-00-74	8140-00-75	8140-25-71
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty	Qty	Qty
		B							
0382	658.5069	Signal Mounting Hardware (location) 02. STH 27 & Railroad St	LS	1.000			1.000		
0384	659.1115	Luminaires Utility LED A	EACH	3.000	2.000		1.000		
0386	659.1125	Luminaires Utility LED C	EACH	9.000	5.000		4.000		
0388	661.0200	Temporary Traffic Signals for Intersections (location) 01. STH 27 and First Ave/CTH B	LS	1.000	1.000				
0390	678.0006	Install Fiber Optic Cable Outdoor Plant 6-CT	LF	615.000			615.000		
0392	690.0150	Sawing Asphalt	LF	9,519.000	8,849.000		670.000		
0394	690.0250	Sawing Concrete	LF	266.000	95.500		170.500		
0396	715.0415	Incentive Strength Concrete Pavement	DOL	500.000					500.000
0398	740.0440	Incentive IRI Ride	DOL	5,068.000				5,068.000	
0400	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000				
0402	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	630.000	630.000				
0404	SPV.0060	Special 01. Abandon Existing Water Main	EACH	15.000	15.000				
0406	SPV.0060	Special 02. Salvage Existing Hydrant	EACH	10.000	10.000				
0408	SPV.0060	Special 03. Remove and Reinstall Hydrant	EACH	1.000	1.000				
0410	SPV.0060	Special 04. Abandon Existing Hydrant	EACH	1.000	1.000				
0412	SPV.0060	Special 05. Abandon Existing Valve	EACH	16.000	16.000				
0414	SPV.0060	Special 06. Valve and Box 6-Inch	EACH	20.000	20.000				
0416	SPV.0060	Special 07. Valve and Box 10-Inch	EACH	8.000	8.000				
0418	SPV.0060	Special 08. Valve and Box 12-Inch	EACH	11.000	11.000				
0420	SPV.0060	Special 09. Hydrant	EACH	7.000	7.000				
0422	SPV.0060	Special 10. Connect to Existing Water Main	EACH	14.000	14.000				
0424	SPV.0060	Special 11. Corp Stop Curb Stop and Box 1-Inch	EACH	10.000	10.000				
0426	SPV.0060	Special 12. Corp Stop Curb Stop and Box 2-Inch	EACH	1.000	1.000				
0428	SPV.0060	Special 13. Construction Staking Water Main Structure	EACH	57.000	57.000				
0430	SPV.0060	Special 14. Adjust Existing Casting	EACH	2.000	2.000				
0432	SPV.0060	Special 15. Connect to Existing Sanitary	EACH	7.000	7.000				
0434	SPV.0060	Special 16. Sanitary Manhole Covers Type J-S	EACH	8.000	8.000				
0436	SPV.0060	Special 17. Wye 8 x 6-Inch	EACH	2.000	2.000				
0438	SPV.0060	Special 18. Wye 10 x 6-Inch	EACH	6.000	6.000				
0440	SPV.0060	Special 19. Tracer Wire Access Box	EACH	8.000	8.000				
0442	SPV.0060	Special 20. Construction Staking Sanitary Structure	EACH	16.000	16.000				
0444	SPV.0090	Special 01. Water Main PVC 6-Inch	LF	457.000	457.000				
0446	SPV.0090	Special 02. Water Main PVC 10-Inch	LF	920.000	920.000				
0448	SPV.0090	Special 03. Water Main PVC 12-Inch	LF	1,745.000	1,745.000				
0450	SPV.0090	Special 04. Water Main Directionally Drilled 6-Inch	LF	494.000	494.000				
0452	SPV.0090	Special 05. Water Main Directionally Drilled 10-Inch	LF	212.000	212.000				
0454	SPV.0090	Special 06. Water Main Directionally Drilled 12-Inch	LF	315.000	315.000				

					8140-00-70	8140-00-73	8140-00-74	8140-00-75	8140-25-71
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**	**Qty**
0456	SPV.0090	Special 07. Water Service Bored PE 1-Inch	LF	260.000	260.000				
0458	SPV.0090	Special 08. Water Service Bored PE 2-Inch	LF	79.000	79.000				
0460	SPV.0090	Special 09. Water Service PE 1-Inch	LF	350.000	350.000				
0462	SPV.0090	Special 10. Construction Staking Water Main Pipe	LF	4,143.000	4,143.000				
0464	SPV.0090	Special 11. Sanitary Sewer PVC 8-Inch	LF	724.000	724.000				
0466	SPV.0090	Special 12. Sanitary Sewer PVC 10-Inch	LF	815.000	815.000				
0468	SPV.0090	Special 13. Sanitary Sewer PVC 12-Inch	LF	38.000	38.000				
0470	SPV.0090	Special 14. Sanitary Lateral PVC 6-Inch	LF	230.000	230.000				
0472	SPV.0090	Special 15. Sanitary Lateral Pipe Bursting 6-Inch	LF	65.000	65.000				
0474	SPV.0090	Special 16. Sanitary Sewer Televising	LF	1,577.000	1,577.000				
0476	SPV.0090	Special 17. Construction Staking Sanitary Pipe	LF	1,577.000	1,577.000				
0478	SPV.0105	Special 01. Temporary Water Service	LS	1.000	1.000				
0480	SPV.0105	Special 02. Water Valve Manhole	LS	1.000	1.000				
0482	SPV.0105	Special 03. Dewatering for Storm Sewer	LS	1.000	1.000				
0484	SPV.0105	Special 04. Dewatering for Sanitary Sewer	LS	1.000	1.000				
0486	SPV.0105	Special 05. Temporary Non-Intrusive Vehicle Detection System, STH 27 and First Ave/CTH B	LS	1.000	1.000				
0488	SPV.0105	Special 06. Remove Traffic Signals, STH 27 and First Avenue/CTH B	LS	1.000	1.000				
0490	SPV.0105	Special 07. Dewatering for Water Main	LS	1.000	1.000				
0492	SPV.0200	Special 01. Sanitary Manhole 4-Foot	VF	68.230	68.230				

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CLEARING AND GRUBBING

STATION TO STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
496+00 - 497+00	LT	1	1
499+00 - 502+00	LT	3	3
504+00 - 506+00	LT	2	2
507+00 - 508+00	RT	1	1
509+00 - 510+00	LT	1	1
511+00 - 512+00	LT	1	1
PROJECT ID 8140-00-70 SUMMARY		**9**	**9**
PROJECT TOTALS		**9**	**9**

REMOVING PAVEMENT

CATEGORY	STATION TO STATION	LOCATION	204.0100 SY
0010	495+63	STH 27	11
	497+15	STH 27	16
	502+46	STH 27	111
	504+05	STH 27	109
	505+27	STH 27	53
	506+50 - 515+84	STH 27	4570
CATEGORY 0010 SUBTOTAL			**4870**
0030	11+05 - 11+32	---	63
	13+40 - 13+90	---	140
	25+23 - 25+33	CTH B, LT	8
	27+24 - 27+59	CTH B, LT	77
	27+89 - 28+17	CTH B, LT	54
	30+32 - 30+55	CTH B, LT	53
	30+70 - 30+90	CTH B, LT	32
	499+92 - 500+55	STH 27 LT	109
	505+75 - 507+50	STH 27 RT	524
	509+28 - 509+62	STH 27 RT	75
	514+20 - 514+43	STH 27 RT	47
	516+87 - 516+68	STH 27 RT	54
CATEGORY 0030 SUBTOTAL			**1236**
	PROJECT ID 8140-00-70 SUMMARY		**6106**
0010	506+69	STH 27, LT	134
	506+72	STH 27, RT	108
	509+37	STH 27, RT	209
	510+38	STH 27, LT	143
	513+45	STH 24, RT	88
	PROJECT ID 8140-00-73 SUMMARY		**682**
	PROJECT TOTAL		**6788**

REMOVING ASPHALTIC SURFACE MILLING

STATION TO STATION	LOCATION	204.0120 SY
492+00 - 502+40	STH 27	5163
24+00 - 24+60	CTH B	223
25+26 - 26+96.40	CTH B	814
PROJECT ID 8140-00-70 SUMMARY		**6201**
516+40 - 518+67	STH 27	2859
PROJECT ID 8140-00-74 SUMMARY		**2859**
445+40 - 492+00	STH 27	26662
PROJECT ID 8140-00-75 SUMMARY		**26662**
PROJECT TOTAL		**35721**

REMOVING CONCRETE SIDEWALK

CATEGORY	STATION TO STATION	LOCATION	204.0155 SY
0010	492+15 - 492+85	STH 27, RT	49
	493+53 - 495+82	STH 27, RT	161
	27+21 - 497+35	CTH B & STH 27, RT	158
	497+21	STH 27, LT	13
	498+41	STH 27, RT	5
	498+93	STH 27, RT	9
	501+99 - 502+55	STH 27, RT	36
	503+97 - 506+53	STH 27, RT	169
	506+91 - 509+18	STH 27, RT	132
	511+28 - 513+20	STH 27, RT	87
	513+69 - 514+20	STH 27, RT	28
	514+59 - 515+84	STH 27, RT	75
	515+51	STH 27, LT	12
CATEGORY 0010 SUBTOTALS			**934**
0030	27+60 - 30+31	CTH B, LT	147
CATEGORY 0030 SUBTOTALS			147
	PROJECT ID 8140-00-70 SUMMARY		**1080**
0010	515+84 - 516+62	STH 27, RT	51
	517+00	STH 27, LT	7
	517+05 - 518+67	STH 27, RT	60
	PROJECT ID 8140-00-74 SUMMARY		**117**
	PROJECT TOTAL		**1197**

REMOVING CURB AND CURB & GUTTER

CATEGORY	STATION TO STATION	LOCATION	204.0130 CURB LF	204.0150 CURB & GUTTER LF
0010	492+05 - 492+92	STH 27, RT	---	97
	492+60 - 492+83	STH 27, LT	---	37
	493+52 - 26+96	STH 27 & CTH B, RT	---	386
	495+98 - 24+38	STH 27, LT & CTH B, RT	---	51
	26+96 - 502+55	CTH B, LT & STH 27, RT	---	787
	24+26 - 499+98	CTH B & STH 27, LT	---	349
	500+27 - 502+35	STH 27, LT	---	218
	495+49 - 495+80	STH 27	70	---
	496+92 - 497+40	STH 27	104	---
CATEGORY 0010 SUBTOTAL			**174**	**1925**
0030	27+17 - 27+27	RT	---	16
	27+56 - 27+63	RT	---	14
	30+70 - 30+90	RT	---	20
	516+62 - 516+62	RT	---	15
CATEGORY 0030 SUBTOTAL			**0**	**65**
	PROJECT ID 8140-00-70 SUMMARY		**174**	**1990**
0010	503+97 - 506+54	STH 27, RT	---	272
	504+17 - 506+51	STH 27, LT	---	243
	506+90 - 509+28	STH 27, RT	---	281
	506+91 - 510+12	STH 27, LT	---	343
	509+60 - 514+23	STH 27, RT	---	513
	510+58 - 514+20	STH 27, LT	---	396
	514+55 - 515+84	STH 27, LT	---	152
	514+59 - 515+84	STH 27, RT	---	145
	PROJECT ID 8140-00-73 SUMMARY		**0**	**2345**
0010	515+84 - 516+42	STH 27, LT	---	82
	515+84 - 516+63	STH 27, RT	---	98
	516+79 - 518+66	STH 27, LT	---	212
	517+04 - 518+67	STH 27, RT	---	181
	PROJECT ID 8140-00-74 SUMMARY		**0**	**573**
	PROJECT TOTALS		**174**	**4908**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

EARTHWORK SUMMARY

STATION TO STATION	LOCATION	205.0100 EXCAVATION COMMON CY	UNEXPANDED FILL CY	(1) EXPANDED FILL CY	MASS ORDINATE +/- CY	WASTE CY
492+50 - 503+00	STH 27	1011	356	444	-567	567
24+00 - 27+00	CTH B	496	9	11	-485	485
504+16 - 518+50	STH 27	3009	128	160	-2850	2850
UNDISTRIBUTED		---	---	---	---	195
PROJECT ID 8140-00-70 SUMMARY		**4516**	**493**	**615**	**-3902**	**4097**
504+16 - 518+50	STH 27	1290	55	68	-1221	1221
UNDISTRIBUTED		---	---	---	---	61
PROJECT ID 8140-00-73 SUMMARY		**1290**	**55**	**68**	**-1221**	**1282**
PROJECT TOTALS		**5806**	**548**	**683**	**-5123**	**5379**

(1) EXPANSION FACTOR = 1.25
(2) BORROW = EXPANDED FILL - EXCAVATION COMMON

PREPARE FOUNDATION FOR ASPHALTIC PAVING

STATION TO STATION	LOCATION	211.0100 LS
492+00 - 502+40	STH 27	0.5
504+11 - 515+84	STH 27	0.5
PROJECT ID 8140-00-70 SUMMARY		**1**
515+84 - 518+67	STH 27	1
PROJECT ID 8140-00-74 SUMMARY		**1**
445+40 - 492+00	STH 27	1
PROJECT ID 8140-00-75 SUMMARY		**1**
PROJECT TOTALS		**3**

FINISHING ROADWAY

LOCATION	213.0100 EACH
8140-00-70	1
8140-00-73	1
8140-00-74	1
8140-00-75	1
8140-25-71	1
PROJECT TOTAL	**5**

CONCRETE PAVEMENT APPROACH SLAB

STATION TO STATION	APPROACH SLAB 415.0410 SY
502+40.42 - 502+55.42	40
503+96.58 - 504+11.58	40
PROJECT ID 8140-25-71 SUMMARY	**80**
PROJECT TOTAL	**80**

CONCRETE DRIVEWAY 6-INCH

STATION	LOCATION	TYPE	416.0160 SY
498+70	STH 27, RT	TYPE Z	47
500+08	STH 27, LT	TYPE Z	28
505+30	STH 27, LT	TYPE Y	18
510+38	STH 27, LT	TYPE Z	53
510+72	STH 27, RT	TYPE Z	53
512+16	STH 27, RT	TYPE Y	11
512+45	STH 27, LT	TYPE Z	53
513+47	STH 27, RT	TYPE X	27
PROJECT ID 8140-00-73 SUMMARY			**289**
PROJECT TOTAL			**289**

BASE AGGREGATE DENSE 1 1/4-INCH

CATEGORY	STATION TO STATION	LOCATION	305.0120 TON
0010	492+00 - 502+55	STH 27 & CTH B	939
	503+96 - 515+84	STH 27	945
	495+45 - 495+83	STH 27	15
	496+88 - 497+43	STH 27	22
	506+15 - 506+55	STH 27	38
	508+35 - 508+75	STH 27	40
	509+56 - 509+96	STH 27	40
	512+55 - 512+95	STH 27	39
	514+55 - 514+95	STH 27	39
	UNDISTRIBUTED	---	106
CATEGORY 0010 SUBTOTALS			**2223**
0020	491+86 - 492+47	STH 27, RT	47
	492+16 - 492+64	STH 27, LT	77
	497+05 - 497+96	STH 27, RT	91
	504+64 - 516+87	STH 27, LT	816
	508+48 - 509+08	STH 27	36
	UNDISTRIBUTED	---	53
CATEGORY 0020 SUBTOTALS			**1120**
0030	11+05 - 11+32		28
	13+40 - 13+90		62
	25+23 - 25+33	LT	4
	27+24 - 27+59	LT	34
	27+89 - 28+17	LT	24
	30+32 - 30+55	LT	24
	30+70 - 30+90	LT	14
	499+92 - 500+55	STH 27 LT	48
	505+75 - 507+50	STH 27 RT	233
	509+28 - 509+62	STH 27 RT	34
	514+20 - 514+43	STH 27 RT	21
	516+45 - 516+85	STH 27	28
	516+87 - 516+68	STH 27 RT	24
	UNDISTRIBUTED	---	29
CATEGORY 0030 SUBTOTALS			**607**
	PROJECT ID 8140-00-70 SUMMARY		**3950**
0010	503+97 - 515+84	STH 27	2347
	UNDISTRIBUTED		120
	PROJECT ID 8140-00-73 SUMMARY		**2467**
0010	515+84 - 518+67	STH 27	235
	UNDISTRIBUTED		20
	PROJECT ID 8140-00-74 SUMMARY		**255**
	PROJECT TOTAL		**6671**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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PAVEMENT ITEMS

CATEGORY	STATION TO STATION	LOCATION	460.7445 HMA PAVEMENT 5 HT 58-34 H TON	460.7423 HMA PAVEMENT 3 HT 58-28 H TON	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	455.0605 TACK COAT GAL
0010	492+00 - 502+40.42	STH 27	556	941	---	---	---	876
	24+00 - 24+60	CTH B	25	41	---	---	---	40
	25+30 - 26+96.40	CTH B	79	129	---	---	---	127
	504+11.58 - 515+84	STH 27	486	1750	---	---	---	778
	497+05 - 497+55	MULTI-USE PATH, LT	---	---	9	---	---	---
	497+05	MULTI-USE PATH, RT	---	---	3	---	---	---
	500+90 - 502+35	MULTI-USE PATH, LT	---	---	2	--	--	---
	498+74	STH 27, RT	---	---	---	---	17	---
	500+10	STH 27, LT	---	---	---	---	9	---
	495+45 - 495+83	STH 27	---	---	---	6	---	---
	496+88 - 497+43	STH 27	---	---	---	8	---	---
	506+15 - 506+55	STH 27	---	---	---	15	---	---
	508+35 - 508+75	STH 27	---	---	---	15	---	---
	509+56 - 509+96	STH 27	---	---	---	15	---	---
	512+55 - 512+95	STH 27	---	---	---	15	---	---
	514+55 - 514+95	STH 27	---	---	---	15	---	---
	UNDISTRIBUTED	---	---	---	---	4	---	---
CATEGORY 0010 SUBTOTALS			**1147**	**2860**	**14**	**93**	**26**	**1820**
0020	491+86 - 492.47	STH 27, RT	---	---	---	18	---	---
	492+16 - 492+64	STH 27, LT	---	---	---	30	---	---
	497+05 - 497+96	STH 27, RT	---	---	---	35	---	---
	504+64 - 516+87	STH 27, LT	---	---	---	312	---	---
	508+48 - 509+08	STH 27	---	---	---	14	---	---
	UNDISTRIBUTED	---	---	---	---	20	---	---
CATEGORY 0020 SUBTOTALS			**0**	**0**	**0**	**428**	**0**	**0**
0030	11+05 - 11+32	---	---	---	11	---	---	---
	13+40 - 13+90	---	---	---	24	---	---	---
	25+23 - 25+33	LT	---	---	1	---	---	---
	27+24 - 27+59	LT	---	---	13	---	---	---
	27+89 - 28+17	LT	---	---	9	---	---	---
	30+32 - 30+55	LT	---	---	9	---	---	---
	30+70 - 30+90	LT	---	---	5	---	---	---
	499+92 - 500+55	STH 27 LT	---	---	18	---	---	---
	505+75 - 507+50	STH 27 RT	---	---	88	---	---	---
	509+28 - 509+62	STH 27 RT	---	---	13	---	---	---
	514+20 - 514+43	STH 27 RT	---	---	8	---	---	---
	516+45 - 516+85	STH 27	---	---	---	11	---	---
	516+87 - 516+68	STH 27 RT	---	---	9	---	---	---
	UNDISTRIBUTED	---	---	---	---	1	---	---
CATEGORY 0030 SUBTOTALS			**0**	**0**	**208**	**12**	**0**	**0**
	PROJECT ID 8140-00-70 SUMMARY		**1147**	**2860**	**222**	**533**	**26**	**1820**

- CONTINUED -

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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PAVEMENT ITEMS

CATEGORY	STATION TO STATION	LOCATION	460.7445 HMA PAVEMENT 5 HT 58-34 H TON	460.7423 HMA PAVEMENT 3 HT 58-28 H TON	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	455.0605 TACK COAT GAL
0010	504+11.58 - 516+12	STH 27	226	894	---	---	---	362
	504+16.42 - 506+31.47	MULTI-USE PATH, LT	---	---	28	---	---	---
	505+28	STH 27, LT	---	---	---	---	10	---
	510+38	STH 27, LT	---	---	---	---	5	---
	510+72	STH 27, RT	---	---	---	---	10	---
	512+16	STH 27, RT	---	---	---	---	6	---
	512+45	STH 27. LT	---	---	---	---	5	---
	513+46	STH 27, RT	---	---	---	---	4	---
	504+00 - 516+11	STH 27, RT	---	---	---	159	---	---
	UNDISTRIBUTED	---	---	---	---	8	---	---
	PROJECT ID 8140-00-73 SUMMARY		**226**	**894**	**28**	**167**	**41**	**362**
0010	515+84 - 518+67	STH 27	189	385	---	---	---	303
	PROJECT ID 8140-00-74 SUMMARY		**189**	**385**	**0**	**0**	**0**	**303**
0010	445+40 - 492+00	STH 27	3066	---	---	---	---	1866
	PROJECT ID 8140-00-75 SUMMARY		**3066**	**0**	**0**	**0**	**0**	**1866**
	PROJECT TOTALS		**4628**	**3754**	**250**	**700**	**67**	**4351**

HMA COLD WEATHER PAVING

STATION TO STATION	LOCATION	450.4000 TON
492+00 - 502+40.42	STH 27	374
24+00 - 24+60	CTH B	17
25+30 - 26+96.40	CTH B	52
504+11.58 - 515+84	STH 27	559
PROJECT ID 8140-00-70 SUMMARY		**1002**
504+11.58 - 516+12	STH 27	280
PROJECT ID 8140-00-73 SUMMARY		**280**
515+84 - 518+67	STH 27	143
PROJECT ID 8140-00-74 SUMMARY		**143**
445+40 - 492+00	STH 27	8173
PROJECT ID 8140-00-75 SUMMARY		**8173**
PROJECT TOTAL		**9598**

ASPHALTIC SURFACE PATCHING

STATION TO STATION	LOCATION	465.0110 TON
492+00 - 502+40	STH 27	10
PROJECT ID 8140-00-70 SUMMARY		**10**
515+84 - 518+67	STH 27	3
PROJECT ID 8140-00-74 SUMMARY		**3**
445+40 - 492+00	STH 27	50
PROJECT ID 8140-00-73 SUMMARY		**50**
PROJECT TOTAL		**63**

ASPHALTIC CURB

CATEGORY	STATION TO STATION	LOCATION	465.0310 LF
0020	492+59 - 492+72	STH 27, LT	41
	504+64 - 516+45	SHT 27, LT	1197
	516+78 - 516+86	STH 27, LT	34
	PROJECT ID 8140-00-70 SUMMARY		**1272**
0010	491+98 - 492+41	STH 27, RT	55
	497+06 - 497+64	STH 27, RT	59
	504+00 - 516+00	STH 27, RT	1211
	PROJECT ID 8140-00-73 SUMMARY		**1325**
	PROJECT TOTAL		**2597**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

CONCRETE CURB AND GUTTER

CATEGORY	STATION TO STATION	LOCATION	601.0407 18-INCH TYPE D LF	601.0411 30-INCH TYPE D LF
0010	492+05 - 493+00	STH 27, LT	---	78
	492+61 - 24+09	STH 27, LT & CTH B, RT	---	424
	493+56 - 26+96	STH 27 & CTH B, RT	---	319
	26+96 - 502+55	CTH B, LT & STH 27, RT	---	784
	24+21 - 502+35	CTH B & STH 27, LT	---	585
	494+61 - 495+77	STH 27	230	---
	495+64 - 495+93	STH 27, RT	77	---
	497+00 - 500+44	STH 27	690	---
CATEGORY 0010 SUBTOTAL			**997**	**2190**
0030	27+17 - 27+27	CTH B, LT	---	16
	27+56 - 27+63	CTHB, LT	---	14
	30+70 - 30+90	CTH B, LT	---	20
	516+62 - 516+62	STH 27, RT	---	15
CATEGORY 0030 SUBTOTAL			**0**	**65**
	PROJECT ID 8140-00-70 SUMMARY		**997**	**2255**
0010	503+96 - 506+52	STH 27, RT	---	271
	504+16 - 506+50	STH 27, LT	---	249
	506+91 - 516+43	STH 27, LT	---	1027
	506+91 - 509+27	STH 27, RT	---	276
	509+57 - 516+62	STH 27, RT	---	786
	504+84 - 505+72	STH 27	175	---
	513+82 - 515+25	STH 27	287	---
	PROJECT ID 8140-00-73 SUMMARY		**462**	**2609**
0010	516+80 - 518+66	STH 27, LT	---	215
	517+04 - 518+67	STH 27, RT	---	182
	PROJECT ID 8140-00-74 SUMMARY		**0**	**397**
	PROJECT TOTALS		**1459**	**5261**

CONCRETE BARRIER TEMPORARY PRECAST

STATION TO STATION	STAGE	603.8000 DELIVERED LF	603.8125 INSTALLED LF
502+20 - 504+85	3/4	265	265
PROJECT ID 8140-25-71 SUMMARY		**265**	**265**
PROJECT TOTALS		**265**	**265**

FENCE CHAIN LINK 6-FOOT

STATION TO STATION	LOCATION	616.0206 LF
502+30 - 502+55	LT	25
PROJECT ID 8140-00-70 SUMMARY		**25**
PROJECT TOTAL		**25**

CONCRETE SIDEWALK 4-INCH

STATION TO STATION	LOCATION	602.0405 SF
492+07 - 492+98	STH 27, RT	452
493+56 - 495+45	STH 27, RT	1033
494+61 - 495+76	STH 27	565
495+65 - 495+93	STH 27, RT	427
496+54 - 497+35	STH 27, RT	448
497+00 - 500+44	STH 27	1712
497+10	STH 27, LT	91
498+50	STH 27, RT	42
498+84 - 499+00	STH 27, RT	87
501+99 - 502+55	STH 27, RT	345
503+97 - 506+52	STH 27, RT	1373
504+84 - 505+71	STH 27	290
506+40	STH 27, LT	174
506+92 - 509+14	STH 27, RT	1195
506+95	STH 27, LT	46
509+58 - 510+55	STH 27, RT	499
510+89 - 511+99	STH 27, RT	558
512+33 - 513+29	STH 27, RT	557
513+64 - 514+21	STH 27, RT	329
513+82 - 515+25	STH 27	1060
514+59 - 515+84	STH 27, RT	732
PROJECT ID 8140-00-70 SUMMARY		**12015**
516+19 - 516+35	STH 27, LT	183
515+84 - 516+62	STH 27, RT	547
516+93	STH 27, LT	90
517+04 - 518+67	STH 27, RT	535
PROJECT ID 8140-00-74 SUMMARY		**1355**
PROJECT TOTAL		**13370**

MOBILIZATION

PROJECT	619.1000 EACH
8140-00-70	0.4
8140-00-73	0.3
8140-00-74	0.1
8140-25-71	0.1
8140-00-75	0.1
PROJECT TOTAL	**1**

CONCRETE MEDIAN SLOPED NOSE

STATION	LOCATION	TYPE	**620.0300** SF
494+55	STH 27 LT	1	48
495+85	STH 27 LT	1	41
495+64	STH 27 RT	2	7
495+77	STH 27 RT	2	8
495+94	STH 27 RT	2	23
496+95	STH 27 RT	1	27
500+50	STH 27 RT	1	48
PROJECT ID 8140-00-70 SUMMARY			**202**
504+78	STH 27 LT	1	24
505+77	STH 27 LT	1	25
513+75	STH 27	1	95
515+32	STH 27	2	43
PROJECT ID 8140-00-73 SUMMARY			**187**
PROJECT TOTAL			**389**

CONCRETE COLLARS FOR PIPE

STATION	OFFSET	520.8000 EACH
498+99	47.2' RT	1
PROJECT ID 8140-00-70 SUMMARY		**1**
PROJECT TOTAL		**1**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

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STORM SEWER PIPES

FROM	-	TO	LOCATION	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 18-INCH LF	608.0324 24-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.3018 STORM SEWER PIPE CLASS III-A 18-INCH LF	608.3024 24-INCH LF	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE FT/FT
A7	-	A6	STH 27	--	--	--	109	--	--	1189.47	1189.14	0.0030
A6	-	A5	STH 27	52	--	--	--	--	--	1188.94	1188.78	0.0031
A3.1	-	A3	STH 27	--	51	--	--	--	--	1188.35	1188.20	0.0029
EX	-	A3.1	STH 27	--	--	--	24	--	--	1188.75	1188.65	0.0042
A4.1	-	A4	STH 27	76	--	--	--	--	--	1188.85	1188.65	0.0026
A5	-	A4	STH 27	--	69	--	--	--	--	1188.53	1188.40	0.0019
A4	-	A2	STH 27	--	--	--	--	190	--	1188.40	1188.18	0.0012
A2	-	AE A1	STH 27	--	--	--	--	--	305	1187.68	1187.50	0.0006
B4.1	-	B4	STH 27	--	--	--	9	--	--	1188.13	1188.10	0.0033
B3.1	-	B3	STH 27	--	--	--	9	--	--	1187.99	1187.96	0.0033
A3	-	A2	STH 27	--	12	--	--	--	--	1188.20	1188.18	0.0017
B6.1	-	B6	STH 27	--	--	--	63	--	--	1190.41	1190.14	0.0043
B6	-	B5	STH 27	201	--	--	--	--	--	1189.89	1189.27	0.0031
B5	-	B4	STH 27	--	305	--	--	--	--	1189.02	1188.10	0.0030
B4	-	B3	STH 27	--	--	122	--	--	--	1188.10	1187.96	0.0011
B3	-	B2	STH 27	--	--	224	--	--	--	1187.96	1187.69	0.0012
B2	-	AE B1	STH 27	--	--	--	--	--	227	1187.69	1187.50	0.0008
B2.1	-	B2	STH 27	--	--	--	65	--	--	1188.88	1188.69	0.0029
B3.2	-	B3.1	STH 27	--	--	--	65	--	--	1188.18	1187.98	0.0031
B4.2	-	B4.1	STH 27	--	--	--	65	--	--	1188.33	1188.13	0.0031
B5.1	-	B5	STH 27	--	--	--	65	--	--	1189.71	1189.52	0.0029
PROJECT ID 8140-00-70 SUMMARY				**329**	**437**	**346**	**474**	**190**	**532**			
PROJECT TOTALS				**329**	**437**	**346**	**474**	**190**	**532**			

ABANDONING

STATION	OFFSET	204.0250 MANHOLES EACH	204.0260 INLETS EACH
500+29	45.4' LT	--	1
506+27	17.1' RT	1	--
506+27	28.0' LT	--	1
506+27	28.8' RT	--	1
508+36	16.1' RT	1	--
508+36	23.8' LT	--	1
508+36	25.5' RT	--	1
509+84	24.8' RT	--	1
510+85	23.3' LT	--	1
PROJECT ID 8140-00-70 SUMMARY		**2**	**7**
PROJECT TOTALS		**2**	**7**

ABANDONING SEWER

STATION TO STATION	OFFSET	204.0291.S CY
499+89 - 500+29	44.2' LT - 45.4' LT	2
500+29 - 501+95	45.4' LT - 60.2' LT	11
504+15 - 506+27	52.4' LT - 17.1' RT	15
506+27 - 508+36	17.1' RT - 16.1' RT	14
508+36 - 509+84	16.1' RT - 24.8' RT	7
509+84 - 510+85	24.8' RT - 23.3' LT	3
PROJECT ID 8140-00-70 SUMMARY		**52**
PROJECT TOTAL		**52**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

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STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET*	LOCATION	520.1024 APRON ENDWALLS FOR CULVERT PIPE EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0612 INLET COVERS TYPE C EACH	611.0624 INLET COVERS TYPE H EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	RIM ELEVATION	INVERT** ELEVATION	DEPTH*** FT
A2	498+87	37.1' LT	STH 27	--	--	1	--	--	1	--	1	1191.00	1187.68	2.33
A3	498+88	25.5' LT	STH 27	--	--	--	1	--	--	1	1	1191.03	1188.20	2.04
A4	496+92	37.1' LT	STH 27	--	--	--	1	--	--	1	1	1191.39	1188.40	2.19
A5	497+01	31.5' RT	STH 27	--	--	--	1	--	--	1	1	1191.98	1188.53	2.66
A6	496+52	44.8' RT	STH 27	--	--	--	1	--	--	1	1	1191.34	1188.94	1.59
A7	495+48	64.9' RT	STH 27	--	--	--	1	--	--	1	1	1191.66	1189.47	1.36
B2	506+35	32.2' RT	STH 27	--	--	--	1	--	--	1	1	1191.19	1187.69	2.75
B3	508+55	42' RT	STH 27	--	1	--	--	1	--	--	1	1191.49	1187.96	2.54
B4	509+75	41.9' RT	STH 27	--	1	--	--	1	--	--	1	1191.85	1188.10	2.68
B5	512+75	32.5' RT	STH 27	--	--	--	1	--	--	1	1	1192.57	1189.02	2.76
B6	514+75	33.4' RT	STH 27	--	--	--	1	--	--	1	1	1193.49	1189.89	2.78
A3.1	498+90	25.5' RT	STH 27	--	--	--	1	--	--	1	1	1191.03	1188.35	1.89
A4.1	496+14	45.9' LT	STH 27	--	--	--	1	--	--	1	1	1191.54	1188.85	1.88
B2.1	506+35	32.5' LT	STH 27	--	--	--	1	--	--	1	1	1191.30	1188.88	1.58
B3.1	508+55	32.5' RT	STH 27	--	--	--	1	--	--	1	1	1190.54	1187.98	1.72
B3.2	508+55	32.5' LT	STH 27	--	--	--	1	--	--	1	1	1190.55	1188.18	1.54
B4.1	509+75	32.5' RT	STH 27	--	--	--	1	--	--	1	1	1190.93	1188.13	1.97
B4.2	509+75	32.5' LT	STH 27	--	--	--	1	--	--	1	1	1190.93	1188.33	1.77
B5.1	512+75	32.5' LT	STH 27	--	--	--	1	--	--	1	1	1192.57	1189.71	2.02
B6.1	514+75	29.5' LT	STH 27	--	--	--	1	--	--	1	1	1193.48	1190.41	2.24
AE A1	501+97	60.5' LT	STH 27	1	--	--	--	--	--	--	1	--	1189.75	--
AE B1	504+11	51.3' RT	STH 27	1	--	--	--	--	--	--	1	--	1189.74	--
PROJECT ID 8140-00-70 SUMMARY				**2**	**2**	**1**	**17**	**2**	**1**	**17**	**22**			
PROJECT TOTALS				**2**	**2**	**1**	**17**	**2**	**1**	**17**	**22**			

REMARKS
* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE
** FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE
*** DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6 -INCH ADJUSTMENT RING HEIGHT

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

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CURB RAMP DETECTABLE WARNING FIELD

STATION	LOCATION	TYPE	602.0505 YELLOW SF	602.0605 RADIAL YELLOW SF
492+12	STH 27 RT	4B1	10	---
492+88	STH 27 RT	4B1	10	---
493+58	STH 27 RT	4B1	10	---
495+44	STH 27 TURN LANE RT	2	10	---
495+74	STH 27 TURN LANE RT	6	10	---
495+85	STH 27 TURN LANE RT	6	10	---
496+62	STH 27 RT	2	---	25
497+10	STH 27 RT	3	20	---
497+10	STH 27 LT	3	20	---
506+47	STH 27 LT	2	20	---
506+50	STH 27 RT	4B1	10	---
506+94	STH 27 LT	4B1	10	---
506+94	STH 27 RT	4B1	10	---
509+09	STH 27 RT	4B1	10	---
509+62	STH 27 RT	4B1	10	---
514+17	STH 27 RT	4A1	---	16
514+64	STH 27 RT	4A1	---	15
PROJECT ID 8140-00-70 SUMMARY			**170**	**56**
516+30	STH 27 RT	7A	10	---
516+30	STH 27 LT	4B1	10	---
516+49	STH 27 RT	1A	10	---
516+93	STH 27 LT	4B1	10	---
517+14	STH 27 RT	1A	10	---
PROJECT ID 8140-00-74 SUMMARY			**50**	**0**
PROJECT TOTALS			**220**	**56**

RIPRAP & GEOTEXTILE

LOCATION	606.0300 RIPRAP HEAVY CY	645.0120 GEOTEXTILE TYPE HR SY
AE A1	6	9
AE A2	4	6
PROJECT ID 8140-00-70 SUMMARY	**10**	**15**
PROJECT TOTAL	**10**	**15**

TOPSOIL, SALVAGED TOPSOIL, MULCHING, FERTILIZER, & SEEDING

CATEGORY	STATION TO STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB
0010	492+50 - 503+00	STH 27 & CTH B	4333	3666	2.7	117.0	117.0
	UNDISTRIBUTED		217	183	.1	6	6
CATEGORY 0010 SUBTOTALS			**4550**	**3850**	**2.9**	**122.8**	**122.8**
0030	13+00 - 13+15	RT	33	33	0.02	0.9	0.9
	27+56 - 31+00	CTH B, LT	1294	1294	0.82	34.9	34.9
	490+880 - 492+38	STH 27, LT	278	278	0.2	7.5	7.5
	491+37 - 491+64	STH 27, RT	61	61	0.04	1.6	1.6
	493+03 - 493+33	STH 27, RT	45	45	0.03	1.2	1.2
	499+61 - 499+95	STH 27, LT	27	27	0.02	0.7	0.7
	500+27 - 501+81	STH 27, LT	310	310	0.2	8.4	8.4
	504+82 - 505+81	STH 27, RT	171	171	0.1	4.6	4.6
	507+03 - 507+35	STH 27, LT	151	151	0.1	4.1	4.1
	509+50 - 509+74	STH 27, LT	26	26	0.02	0.7	0.7
	UNDISTRIBUTED		120	120	0.1	3.2	3.2
CATEGORY 0030 SUBTOTALS			**2515**	**2515**	**1.6**	**67.9**	**67.9**
	PROJECT ID 8140-00-70 SUMMARY		**7064**	**6364**	**4.5**	**191**	**191**
0010	504+16 - 518+50	STH 27	3516	2326	2.2	94.9	94.9
	UNDISTRIBUTED		176	116	.1	5	5
	PROJECT ID 8140-00-73 SUMMARY		**3692**	**2442**	**2.3**	**99.7**	**99.7**
PROJECT TOTALS			**10756**	**8807**	**6.8**	**290.4**	**290.4**

SILT FENCE

STATION TO STATION	LOCATION	628.1504 LF	628.1520 MAINTENANCE LF
493+71 - 26+96	RT	243	243
496+66 - 496+96	RT	34	34
496+82 - 497+57	LT	76	76
497+14 - 498+53	RT	145	145
497+60 - 499+90	LT	223	223
500+21 - 502+53	LT	252	252
501+89 - 502+55	RT	82	82
UNDISTRIBUTED		264	264
PROJECT ID 8140-00-70 SUMMARY		**1319**	**1319**
503+97 - 504+90	LT	107	107
503+97 - 506+52	RT	304	304
505+50 - 506+34	LT	82	82
UNDISTRIBUTED		123	123
PROJECT ID 8140-00-73 SUMMARY		**616**	**616**
PROJECT TOTALS		**1935**	**1935**

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 EACH
BRIDGE TO END OF PROJECT (SPRING)	1
PROJECT ID 8140-00-70 SUMMARY	**1**
BRIDGE TO END OF PROJECT (SPRING)	1
PROJECT ID 8140-00-73 SUMMARY	**1**
MICHIGAN AVE TO BRIDGE (FALL)	1
PROJECT ID 8140-25-71 SUMMARY	**1**
PROJECT TOTAL	**3**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

EROSION MAT URBAN CLASS I TYPE A

STATION TO STATION	LOCATION	628.2006 SY
492+13 - 492+89	RT	54
492+64 - 24+09	LT	184
493+58 - 26+96	RT	200
24+21 - 500+90	LT	171
26+96 - 502+00	RT	264
UNDISTRIBUTED		218
PROJECT ID 8140-00-70 SUMMARY		**1091**
504+16 - 506+48	LT	87
504+48 - 506+50	RT	90
506+93 - 516+24	LT	655
506+94 - 509+10	RT	177
509+62 - 512+78	RT	174
UNDISTRIBUTED		296
PROJECT ID 8140-00-73 SUMMARY		**1479**
PROJECT TOTAL		**2570**

INLET PROTECTION

STATION	LOCATION	**628.7005 TYPE A EACH**	628.7015 TYPE C EACH
495+48	64.9' RT	1	1
496+14	45.9' LT	1	1
496+52	44.8' RT	1	1
496+92	37.1' LT	1	1
497+01	31.5' RT	1	1
498+87	37.1' LT	1	---
498+88	25.5' LT	1	1
498+90	25.5' RT	1	1
506+35	32.5' LT	1	1
506+35	32.2' RT	1	1
508+55	32.5' LT	1	1
508+55	32.5' RT	1	1
509+75	32.5' LT	1	1
509+75	32.5' RT	1	1
512+75	32.5' LT	1	1
512+75	32.5' RT	1	1
514+75	29.5' LT	1	1
514+75	33.4' RT	1	1
518+75	RT	---	1
519+00	RT	---	1
UNDISTRIBUTED		4	5
PROJECT ID 8140-00-70 SUMMARY		**22**	**24**
PROJECT TOTALS		**22**	**24**

REMOVING SIGNS TYPE II & SMALL SIGN SUPPORTS

SIGN NO.	STATION	LOCATION	SIGN CODE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
13	494+22	STH 27 SB LT	R2-1	1	1	"SPEED LIMIT 25"
14	493+60	STH 27 NB RT	R6-2R	1	1	Includes Removing R6-2L Sign on same post
16	494+25	STH 27 NB RT	D1-1	1	2	"LCO Ojibwa Community College"
17	494+39	STH 27 NB RT	W11-2	1	1	Includes Removing "AHEAD" sign on same post
19	495+56	STH 27 NB RT	J13-2	1	1	"B" with Right Arrow "E" with Right Arrow
21	26+50	CTH B RT	R12-55	1	1	"35 TON BRIDGE" "14" MILES AHEAD"
23	32+25	CTH B LT	J1-1	1	1	"JCT 27"
24	31+40	CTH B LT	R3-8	1	1	---
25	30+00	CTH B LT	W3-3	1	1	---
27	27+20	CTH B LT	R3-7R	1	1	"RIGHT LANE MUST TURN RIGHT"
28	25+40	CTH B LT	J3-2 D9-2 MB6-1	1	1	"SOUTH 27" with Left Arrow "NORTH 27" with Right Arrow Includes Removing Hospital signs on same post
31	25+35	CTH B LT	R3-7R	1	---	"NO TURN ON RED" on signal pole
32	25+35	CTH B LT	R1-1F	1	---	"STOP" on signal pole
33	24+48	1ST ST RT	R1-1F	1	---	"STOP" on signal pole
34	25+35	1ST ST LT	R3-7R	1	---	"NO TURN ON RED" on signal pole
35	497+10	STH 27 SB LT	J13-2	1	1	"B" with Left Arrow "E" with Left Arrow
36	497+00	STH 27 NB RT	W11-2	1	1	Includes Removing Diagonal Arrow sign on same post
39	497+10	STH 27 SB LT	---	1	1	Remove Heritage & Museum signs from same post
40	497+55	STH 27 SB LT	W11-2	1	1	Includes Removing Diagonal Arrow sign on same post
42	498+75	STH 27 SB LT	D1-1	1	2	"LCO Ojibwa Community College"
43	498+22	STH 27 NB RT	J4-1	1	1	"NORTH 27"
48	499+72	STH 27 SB LT	W11-2	1	1	Includes Removing "AHEAD" sign on same post
53	500+80	STH 27 SB LT	W3-3	1	1	Signal Ahead Symbol
52	501+50	STH 27 SB LT	R2-1	1	1	"SPEED LIMIT 25"
56	501+80	STH 27 SB LT	---	1	1	Remove Heritage & Hall of Fame signs from same post
57	502+00	STH 27 NB RT	R2-1	1	---	"SPEED LIMIT 25" sign on light pole
60	504+30	STH 27 SB LT	R7-1R	1	1	"NO PARKING ANY TIME" right arrow
61	504+75	STH 27 NB RT	R7-1L	1	1	"NO PARKING ANY TIME" left arrow
66	505+78	STH 27 SB LT	R7-1D	1	1	"NO PARKING ANY TIME" double arrow
68	506+25	STH 27 NB RT	W11-2	1	1	Includes Removing Diagonal Arrow sign on same post
70	507+07	STH 27 SB LT	W11-2	1	1	Includes Removing Diagonal Arrow sign on same post
72	507+75	STH 27 SB LT	R2-1	1	1	"SPEED LIMIT 25"
73	508+60	STH 27 NB RT	J1-1	1	1	"JCT 63"
75	509+80	STH 27 NB RT	W11-2	1	1	---
78	509+85	STH 27 NB RT	R2-1	1	1	"SPEED LIMIT 25"
76	509+90	STH 27 SB LT	R7-1D	1	1	"NO PARKING ANY TIME" double arrow
77	510+09	STH 27 SB LT	R1-1	1	1	"STOP" at business entrance
79	513+08	STH 27 NB RT	R7-1D	1	1	"NO PARKING ANY TIME" double arrow
80	512+72	STH 27 NB RT	R3-8	1	1	Left Arrow "ONLY" Ahead Arrow "ONLY" Right Arrow "ONLY'
98	514+75	STH 27 SB LT	R2-1	1	1	"SPEED LIMIT 25"
94	515+32	STH 27 NB RT	W11-2	1	1	Includes Removing W16-7L & R10-7 signs on same post
96	515+65	STH 27 NB RT	W3-3	1	1	Signal Ahead Symbol
97	515+73	STH 27 SB LT	W11-2	1	1	Includes Removing Diagonal Arrow sign on same post
100	516+38	STH 27 SB LT	R1-1	1	1	"STOP" at Railroad Street
103	517+12	STH 27 NB RT	R1-1	1	1	"STOP" at Railroad Street
104	517+23	STH 27 SB LT	W11-2	1	1	---
105	517+55	STH 27 SB LT	J4-1	1	1	"SOUTH 27"

- CONTINUED -

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

REMOVING SIGNS TYPE II & SMALL SIGN SUPPORTS

SIGN NO.	STATION	LOCATION	SIGN CODE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
						"SOUTH 63" with Left Arrow
106	518+68	STH 27 NB RT	J3-3	1	2	"NORTH 27" with Right Arrow
						"NORTH 63" with Right Arrow
107	518+70	STH 27 NB RT	D9-2	1	1	Includes Removing Arrow sign on same post
PROJECT ID 8140-00-70 SUMMARY				**49**	**47**	
NA	452+75	STH 27 SB LT	W4-2R	1	1	Lane Ends Merge Symbol
NA	457+50	STH 27 SB LT	W9-1R	1	1	"RIGHT LANE ENDS"
6	491+50	STH 27 SB LT	J4-1	1	1	"SOUTH 27"
PROJECT ID 8140-00-75 SUMMARY				**3**	**3**	
PROJECT TOTALS				**52**	**50**	

MOVING SIGNS TYPE II

SIGN NO.	STATION	LOCATION	638.2102 MOVING SIGNS TYPE II EACH	634.0614 POSTS WOOD 4X6-INCH 14-FT EACH	REMARKS
11	492+12	STH 27 NB RT	1	1	Move STOP sign to new post at Michigan Ave.
23	26+95	CTH B RT	1	1	Move Adopt-A-Highway sign to new post
26	29+50	CTH B LT	1	1	Move Signal Ahead sign to new post
38	497+00	STH 27 SB LT	1	1	Move STOP sign to new post for trail users
44	498+94	STH 27 NB RT	1	---	Move STOP sign to same post as Sign No. 45
49	499+88	STH 27 SB LT	1	---	Move STOP sign to same post as Sign No. 50
67	506+43	STH 27 SB LT	1	1	Move STOP sign to new post at Dyno Drive
69	506+97	STH 27 NB RT	1	1	Move STOP sign to new post at Bay Ave.
74	509+65	STH 27 NB RT	1	1	Move STOP sign to new post at Wheeler St.
91	514+64	STH 27 NB RT	1	---	Move STOP sign to same post as Sign No. 92
PROJECT ID 8140-00-70 SUMMARY			**10**	**7 ***	
PROJECT TOTALS			**10**	**55 ***	

* ADDITIONAL QUANTITIES LOCATED ELSEWHERE

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 LF
MICHIGAN AVE NW QUAD	LT	12
MICHIGAN AVE NE QUAD	RT	12
27+00	RT	12
UNDISTRIBUTED		12
PROJECT ID 8140-00-70 SUMMARY		**48**
PROJECT TOTAL		**48**

MOBILIZATIONS EMERGENCY EROSION CONTROL

LOCATION	628.1910 EACH
BRIDGE TO END OF PROJECT (SPRING)	1
PROJECT ID 8140-00-70 SUMMARY	**1**
BRIDGE TO END OF PROJECT (SPRING)	1
PROJECT ID 8140-00-73 SUMMARY	**1**
MICHIGAN AVE TO BRIDGE (FALL)	1
PROJECT ID 8140-25-71 SUMMARY	**1**
PROJECT TOTAL	**3**

WATER

CATEGORY	STATION TO STATION	LOCATION	624.0100 MGAL
0010	492+00 - 502+55	STH 27 & CTH B	20
	503+96 - 515+84	STH 27	20
	495+45 - 495+83	STH 27	10
	496+88 - 497+43	STH 27	10
	506+15 - 506+55	STH 27	10
	508+35 - 508+75	STH 27	10
	509+56 - 509+96	STH 27	10
	512+55 - 512+95	STH 27	10
	514+55 - 514+95	STH 27	10
	UNDISTRIBUTED	---	10
CATEGORY 0010 SUBTOTALS			**120**
0020	491+86 - 492+47	STH 27, RT	10
	492+16 - 492+64	STH 27, LT	10
	497+05 - 497+96	STH 27, RT	10
	504+64 - 516+87	STH 27, LT	20
	508+48 - 509+08	STH 27	10
	UNDISTRIBUTED	---	10
CATEGORY 0020 SUBTOTALS			**70**
0030	11+05 - 11+32		10
	13+40 - 13+90		10
	25+23 - 25+33	LT	10
	27+24 - 27+59	LT	10
	27+89 - 28+17	LT	10
	30+32 - 30+55	LT	10
	30+70 - 30+90	LT	10
	499+92 - 500+55	STH 27 LT	10
	505+75 - 507+50	STH 27 RT	10
	509+28 - 509+62	STH 27 RT	10
	514+20 - 514+43	STH 27 RT	10
	516+45 - 516+85	STH 27	10
	516+87 - 516+68	STH 27 RT	10
	UNDISTRIBUTED	---	10
CATEGORY 0030 SUBTOTALS			**140**
	PROJECT ID 8140-00-70 SUMMARY		**330**
0010	503+97 - 515+84	STH 27	40
	UNDISTRIBUTED		10
	PROJECT ID 8140-00-73 SUMMARY		**50**
0010	515+84 - 518+67	STH 27	10
	UNDISTRIBUTED		10
	PROJECT ID 8140-00-74 SUMMARY		**20**
	PROJECT TOTAL		**400**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

SIGNS TYPE II ITEMS

SIGN NO.	STATION	LOCATION	SIGN CODE	SIGN SIZE W X H (INCHES)	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 H FOLDING SF	637.2230 F SF	634.0614 POSTS WOOD 4X6-INCH 14-FT EACH	634.0616 16-FT EACH	REMARKS
12	492+60	STH 27 NB RT	R3-8A	36 X 30	7.50	---	---	1	---	Left Arrow "ONLY"/Ahead&Right Arrows
13	493+10	STH 27 SB LT	R2-1	24 X 30	5.00	---	---	1	---	"SPEED LIMIT 25"
14	493+66	STH 27 NB RT	R6-2R	24 X 30	5.00	---	---	1	---	"ONE WAY" right arrow
15			R6-2L	24 X 30	5.00	---	---		---	"ONE WAY" on same post facing north
16	494+00	STH 27 NB RT	D1-3	78 X 36	19.50	---	---	2	---	"LCO Ojibwa Community College" right arrow
18	494+60	STH 27 SB LT	J4-1	24 X 36	6.00	---	---	1	---	"SOUTH" "27"
19	495+00	STH 27 NB RT	J13-2	48 X 45	15.00	---	---	---	1	"B" with Right Arrow (RA) "E" with Right Arrow (RA)
20	495+35	STH 27 NB RT	R1-2	36 X 31	3.88	---	---	1	---	"YIELD"
21	495+70	STH 27 NB Island	W12-1D	24 X 24	---	---	4.00	1	---	Double Down Arrows
22	26+52	CTH B RT	R12-55	48 X 18	6.00	---	---	1	---	"35 TON BRIDGE" "14" MILES AHEAD"
24	32+25	CTH B LT	J1-1	24 X 39	6.50	---	---	1	---	"JCT" "27"
25	31+15	CTH B LT	R3-8	36 X 30	7.50	---	---	1	---	Replace identical existing sign
27	26+55	CTH B LT	R3-7R	30 X 30	6.25	---	---	1	---	"RIGHT LANE MUST TURN RIGHT"
28	25+45	CTH B LT	J3-2	48 X 57	19.00	---	---	---	1	"SOUTH 27" with Left Arrow (LA) "NORTH 27" with Right Arrow (RA)
29	25+44	CTH B LT	D9-2	24 X 24	4.00	---	---	1	---	"H" sign is white on blue
30			MB6-1	21 X 21	3.06					Right Arrow sign is white on blue
31	496+61	CTH B WB	R10-11B	24 X 24	4.00	---	---	---	---	Both Signs are banded to Signal Pole
31F			R1-1F	30 X 30	---	5.18				
33F	24+29	1ST ST RT	R1-1F	30 X 30	---	5.18	---	---	---	Banded to Signal Pole
34	24+35	1ST ST LT	R10-11B	24 X 24	4.00	---	---	---	---	Banded to Signal Pole facing east
NA	495+67	STH 27 SB	M1-94S	66 X 30	13.75	---	---	---	---	"'B' 'E'/S FIRST ST" MOUNT ON MONOTUBE ARM
NA	495+67	STH 27 SB	R10-50	30 X 36	7.50	---	---	---	---	"LEFT TURN YEILD ON FLASHING YELLOW" MOUNT ON MONOTUBE ARM ACROSS FROM LT TURN LANE
32F	495+83	STH 27 NB	R1-1F	30 X 30	---	5.18	---	---	---	Banded to Signal Pole
35	496+95	STH 27 SB LT	J13-2	48 X 45	15.00	---	---	---	1	"B" with Left Arrow (LA) "E" with Left Arrow (LA)
36	497+00	STH 27 NB RT	W11-2	30 X 30	---	---	6.25	---	1	
37			W16-7L	24 X 12	---	---	2.00			
41F	497+17	STH 27 SB	R1-1F	30 X 30	---	5.18	---	---	---	Banded to Signal Pole
NA	497+17	STH 27 NB	M1-94S	66 X 30	13.75	---	---	---	---	"S FIRST ST/'B' 'E'" MOUNT ON MONOTUBE ARM
NA	497+17	STH 27 NB	R10-50	30 X 36	7.50	---	---	---	---	"LEFT TURN YEILD ON FLASHING YELLOW" MOUNT ON MONOTUBE ARM ACROSS FROM LT TURN LANE
40	497+17	STH 27 SB LT	W11-2	30 X 30	---	---	6.25	---	---	Pedestrian symbol banded to Signal Pole
41			W16-7L	24 X 12	---	---	2.00			Left Diagonal Arrow mounted below W11-2 sign
42	498+15	STH 27 SB LT	D1-3	78 X 36	19.50	---	---	---	2	"LCO Ojibwa Community College" left arrow
43	498+22	STH 27 NB RT	J4-1	24 X 36	6.00	---	---	1	---	"NORTH" "27"
45	498+94	STH 27 NB RT	R3-50R	30 X 36	7.50	---	---	---	1	"RIGHT TURN ONLY" mounted below 'Moved' Stop sign
46	499+05	STH 27 SB LT	R3-8A	36 X 30	7.50	---	---	1	---	Left Arrow "ONLY"/Ahead&Right Arrows
47	499+65	STH 27 SB LT	W3-3	36 X 36	---	---	9.00	---	1	Signal Ahead Symbol
50	499+88	STH 27 SB LT	R3-50R	30 X 36	7.50	---	---	---	1	"RIGHT TURN ONLY" mounted below 'Moved' Stop sign
51	499+90	STH 27 NB RT	R2-1	24 X 30	5.00	---	---	1	---	"SPEED LIMIT 25"
52	500+50	STH 27 SB LT	R2-1	24 X 30	5.00	---	---	1	---	"SPEED LIMIT 25"
54	501+50	STH 27 SB LT	R3-5L	42 X 48	14.00	---	---	---	---	Mount to overhead mast arm over lane
55	501+50	STH 27 SB LT	R3-6R	42 X 48	14.00	---	---	---	---	Mount to overhead mast arm over lane
60	504+40	STH 27 SB LT	R7-1R	18 X 24	3.00	---	---	1	---	"NO PARKING ANY TIME" right arrow
61	505+12	STH 27 NB RT	R7-1L	18 X 24	3.00	---	---	1	---	"NO PARKING ANY TIME" left arrow
62	505+75	STH 27 SB LT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
63			R3-9D	24 X 6	1.00	---	---		---	"END" mounted on same post above R3-9B sign
64	506+00	STH 27 NB RT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
65			R3-9C	24 X 6	1.00	---	---		---	"BEGIN" mounted on same post above R3-9B sign
66	506+26	STH 27 SB LT	R7-1D	18 X 24	3.00	---	---	1	---	"NO PARKING ANY TIME" double arrow
71	507+92	STH 27 NB RT	R7-1D	18 X 24	3.00	---	---	1	---	"NO PARKING ANY TIME" double arrow

- CONTINUED -

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

SIGNS TYPE II ITEMS

SIGN NO.	STATION	LOCATION	SIGN CODE	SIGN SIZE W X H (INCHES)	637.2210 SIGNS TYPE II H SF	637.2215 REFLECTIVE H FOLDING SF	637.2230 F SF	634.0614 POSTS WOOD 4X6-INCH 14-FT EACH	634.0616 16-FT EACH	REMARKS
72	508+25	STH 27 SB LT	R2-1	24 X 30	5.00	---	---	1	---	"SPEED LIMIT 25"
73	508+77	STH 27 NB RT	J1-1	24 X 39	6.50	---	---	1	---	"JCT" "63"
76	509+87	STH 27 SB LT	R7-1D	18 X 24	3.00	---	---	1	---	"NO PARKING ANY TIME" double arrow
78	510+40	STH 27 NB RT	R2-1	24 X 30	5.00	---	---	1	---	"SPEED LIMIT 25"
79	511+73	STH 27 NB RT	R7-1D	18 X 24	3.00	---	---	1	---	"NO PARKING ANY TIME" double arrow
81	512+80	STH 27 NB RT	W3-3	36 X 36	---	---	9.00	---	1	Signal Ahead Symbol
82	513+40	STH 27 SB LT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
83			R3-9C	24 X 6	1.00	---	---		---	"BEGIN" mounted on same post above R3-9B sign
84	513+91	STH 27 SB LT	R7-1L	18 X 24	3.00	---	---	1	---	"NO PARKING ANY TIME" left arrow
85	514+00	STH 27 NB RT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
86			R3-9D	24 X 6	1.00	---	---		---	"END" mounted on same post above R3-9B sign
87	514+12	STH 27 SB LT	R1-1	30 X 30	5.18	---	---	---	1	Enforce "STOP" at business entrance
88			R3-50R	30 X 36	7.50	---	---	---		"RIGHT TURN ONLY" mounted below new Stop sign
89	514+40	STH 27 Median Island	R6-2R	24 X 30	5.00	---	---	1	---	"ONE WAY" right arrow facing west
90			R6-2R	24 X 30	5.00	---	---		---	"ONE WAY" on same post facing east
92	514+64	STH 27 NB RT	R3-50R	30 X 36	7.50	---	---	---	1	"RIGHT TURN ONLY" mounted below 'Moved' Stop sign
95	515+50	STH 27 NB RT	R10-7	24 X 30	5.00	---	---	1	---	"DO NOT BLOCK INTERSECTION"
98	516+02	STH 27 SB LT	R2-1	24 X 30	5.00	---	---	1	---	"SPEED LIMIT 25"
NA	516+07	STH 27 SB	M1-94H	66 X 18	8.25	---	---	---	---	"RAILROAD ST" MOUNT ON MONOTUBE ARM
NA	516+07	STH 27 SB	R10-50	30 X 36	7.50	---	---	---	---	"LEFT TURN YEILD ON FLASHING YELLOW" MOUNT ON MONOTUBE ARM ACROSS FROM LT TURN LANE
99	516+20	STH 27 NB RT	R7-1R	18 X 24	3.00	---	---	1	---	"NO PARKING ANY TIME" right arrow
99F	516+26	STH 27 NB	R1-1F	30 X 30	---	5.18	---	---	---	Banded to Signal Pole
100F	516+34	RAILROAD ST EB	R1-1F	30 X 30	---	5.18	---	---	---	Banded to Signal Pole
101F	517+09	STH 27 SB	R1-1F	30 X 30	---	5.18	---	---	---	Banded to Signal Pole
102F	517+14	RAILROAD ST WB	R1-1F	30 X 30	---	5.18	---	---	---	Banded to Signal Pole
NA	517+22	STH 27 NB	M1-94H	66 X 18	8.25	---	---	---	---	"RAILROAD ST" MOUNT ON MONOTUBE ARM
NA	517+22	STH 27 NB	R10-50	30 X 36	7.50	---	---	---	---	"LEFT TURN YEILD ON FLASHING YELLOW" MOUNT ON MONOTUBE ARM ACROSS FROM LT TURN LANE
105	517+48	STH 27 SB LT	J4-1	24 X 36	6.00	---	---	1	---	"SOUTH" "27"
93	517+25	STH 27 NB RT	R3-8W	54 X 30	11.25	---	---	2	---	Lt Arrow "ONLY"/Ahead Arrow "ONLY"/ Rt Arrow "ONLY"
106	518+68	STH 27 NB RT	J3-3	72 X 57	28.50	---	---	---	2	"SOUTH 63" with Left Arrow (LA) "NORTH 27" with Right Arrow (RA) "NORTH 63" with Right Arrow (RA)
107	518+70	STH 27 NB RT	D9-2	24 X 24	4.00	---	---	1	---	"H" sign is white on blue
108			MB6-1	21 X 21	3.06					Right Arrow sign is white on blue
PROJECT ID 8140-00-70 SUMMARY					**463.68**	**41.44**	**38.50**	**38 ***	**14**	
NA	446+00	STH 27 NB RT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
NA			R3-9C	24 X 6	1.00	---	---		---	"BEGIN" mounted on same post above R3-9B sign
NA	457+50	STH 27 NB RT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
NA	465+30	STH 27 NB RT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
NA	479+50	STH 27 NB RT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
NA	447+00	STH 27 SB LT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
NA			R3-9D	24 X 6	1.00	---	---		---	"END" mounted on same post above R3-9B sign
NA	459+00	STH 27 SB LT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
NA	472+00	STH 27 SB LT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
NA	481+30	STH 27 SB LT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
8	491+50	STH 27 SB LT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
7			R3-9C	24 X 6	1.00	---	---		---	"BEGIN" mounted on same post above R3-9B sign
10	491+50	STH 27 NB RT	R3-9B	24 X 36	6.00	---	---	1	---	"CENTER LANE"(left turn arrows)"ONLY"
9			R3-9D	24 X 6	1.00	---	---		---	"END" mounted on same post above R3-9B sign
PROJECT ID 8140-00-75 SUMMARY					**64.00**	**0.00**	**0.00**	**10**	**0**	
PROJECT TOTALS					**527.68**	**41.44**	**38.50**	**55***	**14**	

* ADDITIONAL QUANTITIES LOCATED ELSEWHERE

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

TRAFFIC CONTROL ITEMS

STAGE	643.0300 DRUMS EACH	643.0300 DRUMS DAY	643.0410 BARRICADES TYPE II EACH	643.0410 BARRICADES TYPE II DAY	643.0420 BARRICADES TYPE III EACH	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A EACH	643.0705 WARNING LIGHTS TYPE A DAY	643.0715 WARNING LIGHTS TYPE C EACH	643.0715 WARNING LIGHTS TYPE C DAY	643.0900 SIGNS EACH	643.0900 SIGNS DAY
STAGE 1A	55	1320	4	96	32	768	51	1224	---	---	49	1176
STAGE 1B	94	188	4	8	38	76	66	132	---	---	66	132
STAGE 2A	58	1392	7	168	36	864	52	1248	---	---	59	1416
STAGE 2B	95	475	7	35	35	175	60	300	---	---	65	325
STAGE 3	49	1078	8	176	32	704	49	1078	---	---	59	1298
STAGE 4	49	882	5	90	38	684	57	1026	---	---	58	1044
STAGE 5	75	750	---	---	12	120	24	240	---	---	38	380
STAGE 6A	33	66	---	---	28	56	44	88	6	12	26	52
STAGE 6B	20	40	4	8	30	60	39	78	20	40	29	58
STAGE 7	50	600	2	24	33	396	47	564	6	72	33	396
STAGE 8	95	1140	1	12	26	312	38	456	20	240	33	396
STAGE 9A	87	1044	2	24	35	420	51	612	25	300	37	444
STAGE 9B	91	1092	1	12	27	324	18	216	47	564	32	384
STAGE 10	8	48	---	---	12	72	20	120	---	---	16	96
STAGES 6A-10 (TRUCK DETOUR)	---	---	---	---	2	116	2	116	---	---	168	9744
PROJECT ID 8140-00-70 SUMMARY		**10115**		**653**		**5147**		**7498**		**1228**		**17341**
MILLING OPERATION	---	---	---	---	---	---	---	---	---	---	17	170
PROJECT ID 8140-00-75 SUMMARY		**0**		**0**		**0**		**0**		**0**		**170**
PROJECT TOTALS		**10115**		**653**		**5147**		**7498**		**1228**		**17511**

TRAFFIC CONTROL

LOCATION	643.5000 EACH
BRIDGE TO END OF PROJECT (SPRING)	0.45
MICHIGAN AVE TO BRIDGE (FALL)	0.45
PROJECT ID 8140-00-70 SUMMARY	**0.9**
WEST CAROL DR TO MICHIGAN AVE	0.1
PROJECT ID 8140-00-75 SUMMARY	**0.1**
PROJECT TOTAL	**1**

TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER ITEMS

STATION TO STATION	STAGE	643.0500 POSTS EACH	643.0600 BASES EACH
495+90 - 496+90	9A/9B	11	11
UNDISTRIBUTED		4	4
PROJECT ID 8140-00-70 SUMMARY		**15**	**15**
PROJECT TOTALS		**15**	**15**

MARKING LINE EPOXY 8-INCH

STATION TO STATION	DESCRIPTION	646.3020 LF
492+46 - 493+47	CHANNELIZING, LT	100
494+55 - 495+81	CHANNELIZING, RT	127
25+45 - 26+97	CHANNELIZING, LT	154
497+19 - 499+21	CHANNELIZING, LT	200
505+99 - 506+51	CHANNELIZING, RT	53
515+52 - 515+84	CHANNELIZING, RT	32
PROJECT ID 8140-00-70 SUMMARY		**666**
515+52 - 516+23	CHANNELIZING, RT	39
517+10 - 518+40	CHANNELIZING, LT	131
517+29 - 519+00	CHANNELIZING, RT	342
PROJECT ID 8140-00-74 SUMMARY		**512**
PROJECT TOTAL		**1178**

OVERHEAD SIGN SUPPORT (S-57-001)

STATION	LOCATION	641.8100 LS
501+50	STH 27 LT	1
PROJECT ID 8140-00-70 SUMMARY		**1**
PROJECT TOTAL		**1**

MARKING LINE EPOXY 4-INCH

STATION TO STATION	DESCRIPTION	646.1020 WHITE LF	646.1020 YELLOW LF
492+46 - 494+55	DOUBLE YELLOW	---	628
24+00 - 24+27	DOUBLE YELLOW	---	54
25+52 - 26+98	DOUBLE YELLOW	---	292
25+56 - 26+98	LANE LINE	36	---
499+21 - 516+23	SB LANE LINE	426	---
500+50 - 504+79	DOUBLE YELLOW	---	1124
501+50 - 516+23	NB LANE LINE	369	---
505+77 - 506+51	DOUBLE YELLOW	---	194
515+32 - 515+84	DOUBLE YELLOW	---	140
SUBTOTALS		831	2432
PROJECT ID 8140-00-70 SUMMARY			**3263**
507+00 - 513+75	TWLTL	---	1688
PROJECT ID 8140-00-73 SUMMARY			**1688**
515+84 - 516+23	DOUBLE YELLOW	---	78
RAILROAD ST WEST	DOUBLE YELLOW	---	46
RAILROAD ST EAST	DOUBLE YELLOW	---	32
517+10 - 519+00	DOUBLE YELLOW	---	437
PROJECT ID 8140-00-74 SUMMARY			**593**
445+40 - 449+04	TWLTL	---	1456
449+04 - 491+76	TWLTL	---	10680
PROJECT ID 8140-00-75 SUMMARY			**12136**
PROJECT TOTAL			**17680**

FIELD OFFICE TYPE C

LOCATION	642.5201 EACH
PROJECT	1
PROJECT ID 8140-00-70 SUMMARY	**1**
PROJECT TOTAL	**1**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

MARKING ARROW AND WORD EPOXY

STATION	LOCATION	TYPE	WORD	646.5020 ARROW EACH	646.5120 WORD EACH
492+70	LT TURN LANE	2		1	---
494+79	LT TURN LANE	2		1	---
494+79	RT LANE	3		1	---
495+17	LT TURN LANE		ONLY	---	1
495+57	LT TURN LANE	2		1	---
25+75	LT LANE	3		1	---
25+75	RT TURN LANE	2		1	---
26+15	RT TURN LANE		ONLY	---	1
26+72	LT LANE	3		1	---
26+72	RT TURN LANE	2		1	---
497+44	RT LANE	3		1	---
497+44	LT TURN LANE	2		1	---
497+85	LT TURN LANE		ONLY	---	1
498+97	RT LANE	3		1	---
498+97	LT TURN LANE	2		1	---
506+28	LT TURN LANE	2		1	---
PROJECT ID 8140-00-70 SUMMARY				**13**	**3**
508+50	TWLTL	2		2	---
511+75	TWLTL	2		2	---
PROJECT ID 8140-00-73 SUMMARY				**4**	**0**
515+75	LT TURN LANE	2		1	---
517+35	LT TURN LANE	2		1	---
517+56	LT TURN LANE		ONLY	---	1
517+56	THRU LANE		ONLY	---	1
517+56	RT TURN LANE		ONLY	---	1
517+95	LT TURN LANE	2		1	---
517+95	THRU LANE	1		1	---
517+95	RT TURN LANE	2		1	---
518+17	LT TURN LANE	2		1	---
518+36	LT TURN LANE		ONLY	---	1
518+36	THRU LANE		ONLY	---	1
518+36	RT TURN LANE		ONLY	---	1
518+75	LT TURN LANE	2		1	---
518+75	THRU LANE	1		1	---
518+75	RT TURN LANE	2		1	---
PROJECT ID 8140-00-74 SUMMARY				**9**	**6**
450+25	TWLTL	2		2	---
454+25	TWLTL	2		2	---
458+25	TWLTL	2		2	---
462+25	TWLTL	2		2	---
466+25	TWLTL	2		2	---
470+00	TWLTL	2		2	---
474+25	TWLTL	2		2	---

- CONTINUED -

MARKING ARROW AND WORD EPOXY

STATION	LOCATION	TYPE	WORD	646.5020 ARROW EACH	646.5120 WORD EACH
478+25	TWLTL	2		2	---
482+25	TWLTL	2		2	---
486+25	TWLTL	2		2	---
490+25	TWLTL	2		2	---
PROJECT ID 8140-00-75 SUMMARY				**22**	**0**
PROJECT TOTALS				**48**	**9**

MARKING STOP LINE EPOXY 18-INCH

STATION	LOCATION	646.6120 LF
491+94	MICHIGAN AVE, RT	18
492+27	MICHIGAN AVE, LT	16
495+81	STH 27 NB	26
24+26	CTH B	19
25+45	CTH B	31
497+20	STH 27 SB	25
PROJECT ID 8140-00-70 SUMMARY		**135**
516+23	STH 27 NB	34
516+52	RAILROAD ST, LT	24
516+91	RAILROAD ST, RT	29
517+10	STH 27 SB	22
519+00	STH 27 NB	41
PROJECT ID 8140-00-74 SUMMARY		**150**
PROJECT TOTAL		**285**

MARKING YIELD LINE EPOXY 18-INCH

STATION	LOCATION	646.6220 EACH
495+55	RT TURN TO CTH B	9
PROJECT ID 8140-00-70 SUMMARY		**9**
PROJECT TOTAL		**9**

MARKING DIAGONAL EPOXY 12-INCH

STATION TO STATION	LOCATION	646.7120 LF
518+50 - 519+00	STH 27, LT	26
PROJECT ID 8140-00-74 SUMMARY		**26**
PROJECT TOTAL		**26**

MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH

STATION	LOCATION	646.7420 LF
491+84	MICHIGAN AVE, RT	93
493+23	S 2ND ST, RT	118
495+57	RT TURN TO CTH B	56
25+45	CTH B	138
497+10	STH 27	97
506+70	BAY AVE, RT	74
506+70	DYNO DR, LT	76
509+35	WHEELER ST, RT	88
PROJECT ID 8140-00-70 SUMMARY		**740**
516+30	STH 27	131
516+62	RAILROAD ST, LT	101
516+82	RAILROAD ST, RT	120
PROJECT ID 8140-00-74 SUMMARY		**352**
PROJECT TOTAL		**1092**

MARKING CURB & ISLAND NOSE EPOXY

STATION	LOCATION	646.8120 CURB LF	646.8220 NOSE EACH
494+61	MEDIAN ISLAND	10	1
495+65	ISLAND RT	10	1
495+76	MEDIAN ISLAND	24	1
495+91	ISLAND RT	10	1
497+00	MEDIAN ISLAND	21	1
504+84	MEDIAN ISLAND	10	1
505+72	MEDIAN ISLAND	10	1
513+02	MEDIAN ISLAND	10	1
515+25	MEDIAN ISLAND	10	1
PROJECT ID 8140-00-70 SUMMARY		**115**	**9**
PROJECT TOTALS		**115**	**9**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

MARKING REMOVAL LINE

STATION TO STATION	DESCRIPTION	STAGE	646.9000 4-INCH LF	646.9100 8-INCH LF
493+60 - 495+75	CHANNELIZING	1A	---	215
499+00 - 517+00	NB LANELINE	1A	450	---
499+50 - 504+00	SB LANELINE	1A	113	---
501+00 - 519+00	DOUBLE CENTER	1A	3600	---
517+25 - 519+00	CHANNELIZING	1A	---	350
516+75 - 519+00	SB LANELINE	1B	57	---
499+00 - 501+00	DOUBLE CENTER	2A	400	---
517+25 - 519+00	CHANNELIZING	3	---	350
492+25 - 504+75	DOUBLE CENTER	7	1250	---
492+25 - 504+75	NB LANELINE	7	313	---
490+00 - 491+75	TWLTL	7	438	---
27+75 - 29+75	DOUBLE CENTER	8	400	---
27+75 - 29+75	LANELINE	8	100	---
507+25 - 508+50	SB LANELINE	8	32	---
PROJECT ID 8140-00-70 SUMMARY			**7153**	**915**
PROJECT TOTALS			**7153**	**915**

MARKING REMOVAL SPECIAL MARKING

STATION	DESCRIPTION	STAGE	646.9300 EACH
25+75	ARROWS	7	1
26+40	ARROWS	7	1
517+56	ONLYS	1A	3
517+95	ARROWS	1A	3
518+36	ONLYS	1A	3
518+75	ARROWS	1A	3
PROJECT ID 8140-00-70 SUMMARY			**14**
PROJECT TOTAL			**14**

TEMPORARY MARKING STOP LINE PAINT 18-INCH

STATION	STAGE	649.0805 LF
519+00	1A	30
519+00	2A	22
PROJECT ID 8140-00-70 SUMMARY		**52**
PROJECT TOTALS		**52**

TEMPORARY MARKING LINE

STATION TO STATION	DESCRIPTION	STAGE	649.0105 PAINT 4-INCH WHITE LF	649.0105 PAINT 4-INCH YELLOW LF	649.0150 REMOVABLE TAPE 4-INCH WHITE LF	649.0150 REMOVABLE TAPE 4-INCH YELLOW LF	649.0205 PAINT 8-INCH LF
493+63 - 495+76	CHANNELIZING	1A	---	---	---	---	216
497+22 - 498+85	CHANNELIZING	1A	---	---	---	---	227
498+85 - 519+00	DOUBLE CENTERLINE	1A	---	4670	---	---	---
499+51 - 519+00	EDGELINE	1A	1949	---	---	---	---
499+56 - 501+98	EDGELINE	1A	---	---	243	---	---
517+25 - 519+00	CHANNELIZING	1A	---	---	---	---	175
499+50 - 518+67	DOUBLE CENTERLINE	1B	---	3834	---	---	---
504+64 - 516+45	EDGELINE	1B	1145	---	---	---	---
499+50 - 519+00	EDGELINE	2A	1950	---	---	---	---
517+40 - 519+00	CHANNELIZING	2A	---	---	---	---	160
499+50 - 518+67	DOUBLE CENTERLINE	2B	---	3834	---	---	---
499+56 - 501+98	EDGELINE	2B	---	---	243	---	---
504+00 - 516+13	EDGELINE	2B	1223	---	---	---	---
499+25 - 501+75	EDGELINE	3	---	---	250	---	---
501+75 - 519+00	EDGELINE	3	1725	---	---	---	---
516+00 - 519+00	DOUBLE CENTERLINE	3	---	600	---	---	---
499+50 - 518+75	EDGELINE	4	---	---	1925	---	---
499+50 - 518+75	DOUBLE CENTERLINE	4	---	---	---	3850	---
497+00 - 504+75	NB LANELINE	5	194	---	---	---	---
497+00 - 504+75	SB LANELINE	5	194	---	---	---	---
499+00 - 504+00	DOUBLE CENTERLINE	5	---	1000	---	---	---
490+50 - 502+25	DOUBLE CENTERLINE	7	---	2350	---	---	---
502+25 - 504+75	DOUBLE CENTERLINE	7	---	---	---	930	---
490+50 - 502+25	EDGELINE	7	1175	---	---	---	---
502+25 - 505+50	EDGELINE	7	---	---	325	---	---
507+25 - 508+50	EDGELINE	7	---	---	125	---	---
492+60 - 504+75	DOUBLE CENTERLINE	8	---	---	---	2030	---
507+25 - 508+50	EDGELINE	8	---	---	125	---	---
25+50 - 27+00	DOUBLE CENTERLINE/EDGELINE	8	150	300	---	---	---
27+72 - 29+62	DOUBLE CENTERLINE	8	---	---	---	380	---
28+20 - 29+62	EDGELINE	8	---	---	142	---	---
490+00 - 492+73	DOUBLE CENTERLINE	9A	---	---	---	546	---
492+60 - 496+00	EDGELINE	9A	---	---	340	---	---
500+50 - 504+75	EDGELINE	9A	---	---	425	---	---
25+00 - 27+00	DOUBLE CENTERLINE/EDGELINE	9B	---	---	200	400	---
26+88 - 27+72	DOTTED EDGELINE	9B	---	---	21	---	---
SUBTOTALS			9705	16588	4364	8136	778
PROJECT ID 8140-00-70 SUMMARY			**26293**		**12500**		**778**
PROJECT TOTALS			**26293**		**12500**		**778**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

CONSTRUCTION STAKING

STATION TO STATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9920 SLOPE STAKES LF
492+00 - 502+40	1040	1040	1040
24+00 - 24+75	75	75	75
25+25 - 26+97	172	172	172
504+12 - 515+84	1172	1172	---
PROJECT ID 8140-00-70 SUMMARY	**2459**	**2459**	**1287**
504+12 - 515+84	---	---	1172
PROJECT ID 8140-00-73 SUMMARY	**0**	**0**	**1172**
515+84 - 518+67	283	283	283
PROJECT ID 8140-00-74 SUMMARY	**283**	**283**	**283**
PROJECT TOTALS	**2742**	**2742**	**2742**

CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER

STATION TO STATION	LOCATION	650.5500 LF
492+05 - 493+00	STH 27, LT	78
492+61 - 24+09	STH 27, LT & CTH B, RT	424
493+56 - 26+96	STH 27 & CTH B, RT	319
26+96 - 502+55	CTH B, LT & STH 27, RT	784
24+21 - 502+35	CTH B & STH 27, LT	585
494+61 - 495+77	STH 27	230
495+64 - 495+93	STH 27, RT	77
497+00 - 500+44	STH 27	690
PROJECT ID 8140-00-70 SUMMARY		**3187**
503+96 - 506+52	STH 27, RT	271
504+16 - 506+50	STH 27, LT	249
506+91 - 516+43	STH 27, LT	1027
506+91 - 509+27	STH 27, RT	276
509+57 - 516+62	STH 27, RT	786
504+84 - 505+72	STH 27	175
513+82 - 515+25	STH 27	287
PROJECT ID 8140-00-73 SUMMARY		**3071**
516+80 - 518+66	STH 27, LT	215
517+04 - 518+67	STH 27, RT	182
PROJECT ID 8140-00-74 SUMMARY		**397**
PROJECT TOTAL		**6655**

CONSTRUCTION STAKING RESURFACING REFERENCE

STATION TO STATION	LOCATION	650.8000 LF
445+40 - 492+00	STH 27	4660
PROJECT ID 8140-00-75 SUMMARY		**4660**
PROJECT TOTAL		**4660**

CONSTRUCTION STAKING CURB RAMPS

STATION	LOCATION	650.9000 EACH
492+12	STH 27 RT	1
492+88	STH 27 RT	1
493+58	STH 27 RT	1
495+44	STH 27 TURN LANE RT	1
495+74	STH 27 TURN LANE RT	1
495+85	STH 27 TURN LANE RT	1
496+62	STH 27 RT	1
497+10	STH 27 RT	1
497+10	STH 27 LT	1
506+47	STH 27 LT	1
506+50	STH 27 RT	1
506+94	STH 27, LT	1
506+94	STH 27 RT	1
509+09	STH 27 RT	1
509+62	STH 27 RT	1
514+17	STH 27 RT	1
514+64	STH 27 RT	1
516+30	STH 27 LT	1
PROJECT ID 8140-00-70 SUMMARY		**18**
516+30	STH 27 RT	1
516+49	STH 27 RT	1
516+93	STH 27 LT	1
517+14	STH 27 RT	1
PROJECT ID 8140-00-74 SUMMARY		**4**
PROJECT TOTALS		**22**

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

PROJECT	650.9910 LS
8140-00-70	1
8140-00-74	1
PROJECT TOTAL	**2**

SAWING

CATEGORY	STATION TO STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
0010	492+00 - 492+60	LIMITS	203	---
	492+02	MICHIGAN AVE	---	2.5
	492+02 - 493+02	RT	113	---
	492+60 - 24+09	LT	467	---
	493+46	2ND ST	27	---
	493+53	RT	9	---
	493+58 - 26+96	RT	408	---
	494+53 - 495+87	MEDIAN	287	---
	24+00	CTH B	46	---
	24+24 - 502+35	CTH B/STH 27	593	---
	26+96	CTH B	48	5
	26+96 - 502+40	CTH B/STH 27	628	---
	496+93 - 500+52	MEDIAN	740	---
	497+01	PATH, RT	10	---
	497+55	PATH, LT	10	---
	498+77	1ST ST	28	---
	499+00	SIDEWALK, RT	---	6
	500+09	1ST ST	30	---
	502+00	SIDEWALK, RT	---	6
	504+12 - 506+50	LT	254	---
	504+12 - 506+50	RT	253	---
	504+16	PATH, LT	12	---
	504+77 - 505+80	MEDIAN	222	---
	505+28	DRIVEWAY, LT	44	---
	506+15 - 506+55	STORM CROSSING	119	---
	506+40	PATH, LT	11	---
	506+70	DYNO DR	36	---
	506+72	BAY AVE	36	---
	508+35 - 508+75	STORM CROSSING	120	---
	508+77 - 514+10	LT	522	---
	509+11	SIDEWALK, RT	---	6
	509+44	DRIVEWAY, RT	32	---
	509+56 - 509+96	STORM CROSSING	120	---
	510+50	SIDEWALK, RT	---	5
	510+72	DRIVEWAY, RT	43	---
	511+58 - 513+19	RT	178	---
	512+55 - 512+95	STORM CROSSING		

- CONTINUED -

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

SAWING

CATEGORY	STATION TO STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
	512+62	RT	---	30
	513+47	DRIVEWAY, RT	56	5
	514+41	DRIVEWAY, RT	32	5
	514+37	DRIVEWAY, LT	32	5
	514+55 - 514+95	STORM CROSSING	120	---
	515+51	SIDEWALK, LT	---	5
	CATEGORY 0010 SUBTOTALS		**5889**	**75.5**
0020	491+86 - 492+47	SANITARY CROSSING	104	---
	492+16 - 492.64	SANITARY CROSSING	139	---
	497+05 - 497+95	SANITARY CROSSING	115	---
	504+64 - 516+87	SANITARY MAIN, LT	1258	---
	508+48 - 509+08	SANITARY CROSSING	136	---
	CATEGORY 0020 SUBTOTALS		**1752**	**0**
0030	11+05 - 11+32	---	54	---
	13+40 - 13+90	---	121	---
	25+23 - 25+33	LT	26	---
	27+24 - 27+59	LT	75	10
	27+89 - 28+17	LT	51	---
	30+32 - 30+55	LT	48	---
	30+70 - 30+90	LT	48	5
	499+92 - 500+55	STH 27 LT	68	---
	505+75 - 507+50	STH 27 RT	406	---
	509+28 - 509+62	STH 27 RT	76	---
	514+20 - 514+43	STH 27 RT	63	---
	516+45 - 516+85	WATER CROSSING	109	---
	516+87 - 516+68	STH 27 RT	64	5
	CATEGORY 0030 SUBTOTALS		**1208**	**20**
	PROJECT ID 8140-00-70 SUMMARY		**8849**	**96**
0010	516+08 - 516+45	LT	64	---
	516+20 - 516+66	RT	66	---
	516+61	RAILROAD ST, LT	34	2.5
	516+83	RAILROAD ST, RT	38	15
	516+76 - 518+67	LT	221	---
	517+00 - 518+67	RT	188	---
	517+05	SIDEWALK, LT	---	5
	517+29 - 518+67	SIDEWALK, RT	---	143
	518+67	LIMITS	59	5
	PROJECT ID 8140-00-74 SUMMARY		**670**	**170.5**
	PROJECT TOTALS		**9519**	**266**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

ABANDON EXISTING WATER MAIN

CATEGORY	STATION	OFFSET	SPV.0060.01 EACH
0030	27+16	36.3' LT	1
	27+47	39.5' LT	1
	30+63	25.1' LT	1
	26+82	43.1' LT	1
	497+68	51.2' LT	1
	498+47	42.8' RT	1
	498+88	46.3' RT	1
	505+94	142.7' RT	1
	506+19	133.6' RT	1
	506+28	51.6' LT	1
	506+97	83.6' LT	1
	509+40	65.8' RT	1
	516+16	38.4' LT	1
	516+63	21.2' RT	1
	516+87	26.1' RT	1
	PROJECT ID 8140-00-70 SUMMARY		**15**
	PROJECT TOTAL		**15**

SALVAGE EXISTING HYDRANT

CATEGORY	STATION	OFFSET	SPV.0060.02 (EACH)
0030	13+87	11.2' LT	1
	491+07	112.1' LT	1
	493+66	38.9' RT	1
	504+48	45.6' RT	1
	506+22	148.1' RT	1
	506+91	88.3' LT	1
	509+71	62.4' RT	1
	509+97	42.0' LT	1
	514+59	43.1' LT	1
	516+57	74.9' RT	1
	PROJECT ID 8140-00-70 SUMMARY		**10**
	PROJECT TOTAL		**10**

REMOVE AND REINSTALL HYDRANT

CATEGORY	REMOVE STATION	REMOVE OFFSET	REINSTALL STATION	REINSTALL OFFSET	SPV.0060.03 EACH	BREAKOFF ELEVATION
0030	491+51	64.0' RT	492+21	70.0' LT	1	1190.65
	PROJECT ID 8140-00-70 SUMMARY				**1**	
	PROJECT TOTAL				**1**	

ABANDON EXISTING

CATEGORY	STATION	OFFSET	SPV.0060.04 HYDRANT EACH	SPV.0060.05 VALVE EACH
0030	27+17	23.6' LT	--	1
	27+18	64.0' LT	--	1
	493+66	41.9' RT	--	1
	502+09	48.2' RT	1	--
	502+09	44.7' RT	--	1
	502+12	41.9' RT	--	1
	504+45	39.5' RT	--	1
	504+47	42.7' RT	--	1
	505+41	43.9' RT	--	1
	505+42	40.8' RT	--	1
	506+21	144.5' RT	--	1
	506+91	86.9' LT	--	1
	506+97	83.6' LT	--	1
	509+68	62.5' RT	--	1
	509+97	46.1' LT	--	1
	511+92	24.6' RT	--	1
	514+55	43.4' LT	--	1
	PROJECT ID 8140-00-70 SUMMARY		**1**	**16**
	PROJECT TOTALS		**1**	**16**

HYDRANT

CATEGORY	STATION	OFFSET	SPV.0060.09 EACH	BREAKOFF ELEVATION
0030	13+09	31.4' RT	1	1191.53
	30+80	55.1' LT	1	1191.56
	496+95	70.6' LT	1	1188.14
	500+45	39.4' LT	1	1191.84
	507+04	48.5' LT	1	1191.60
	510+71	51.9' LT	1	1192.70
	516+41	77.5' RT	1	1196.49
	PROJECT ID 8140-00-70 SUMMARY		**7**	
	PROJECT TOTAL		**7**	

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0030
UNLESS OTHERWISE NOTED

VALVE AND BOX

CATEGORY	STATION	OFFSET	SPV.0060.06 6-INCH EACH	SPV.0060.07 10-INCH EACH	SPV.0060.08 12-INCH EACH
0030	13+83	37.0' RT	1	--	--
	13+88	0.2' RT	1	--	--
	27+14	40.9' LT	--	1	--
	27+19	47.3' LT	1	--	--
	30+72	43.3' LT	--	1	--
	30+80	50.2' LT	1	--	--
	30+80	21.1' LT	1	--	--
	30+84	25.5' LT	1	--	--
	491+05	113.1' LT	1	--	--
	491+53	66.3' RT	1	--	--
	492+13	56.3' LT	1	--	--
	492+19	65.4' LT	1	--	--
	497+02	67.7' LT	1	--	--
	497+41	60.2' LT	1	--	--
	497+50	55.2' LT	--	--	1
	498+73	47.7' RT	--	1	--
	498+75	49.8' LT	--	1	--
	498+78	60.2' RT	1	--	--
	498+80	55.0' LT	--	--	1
	500+45	42.8' LT	1	--	--
	504+68	48.6' LT	--	--	1
	506+04	157.7' RT	--	1	--
	506+28	36.0' LT	--	--	1
	506+33	39.7' LT	--	1	--
	506+52	36.6' LT	--	--	1
	506+57	31.9' LT	--	1	--
	507+.04	40.8' LT	1	--	--
	509+40	38.8' LT	--	--	1
	509+46	34.9' LT	1	--	--
	509+48	79.7' RT	1	--	--
	510+71	40.0' LT	1	--	--
	514+26	34.7' LT	--	--	1
	514+32	40.5' LT	1	--	--
	516+57	30.5' LT	--	--	1
	516+61	37.1' LT	--	--	1
	516+46	76.8' RT	1	--	--
	516+73	21.2' RT	--	--	1
	516+74	67.0' RT	--	--	1
	516+76	80.1' RT	--	1	--
PROJECT ID 8140-00-70 SUMMARY			**20**	**8**	**11**
PROJECT TOTAL			**20**	**8**	**11**

CORP STOP CURB STOP AND BOX

CATEGORY	STATION	OFFSET	SPV.0060.11 1-INCH EACH	SPV.0060.12 2-INCH EACH
0030	29+57	60.2' LT	1	--
	491+12	121.1' LT	1	--
	493+15	73.5' RT	1	--
	504+93	167.6' RT	1	--
	507+25	40.2' LT	1	--
	507+39	115.7' RT	1	--
	509+64	39.8' LT	1	--
	511+47	39.0' LT	1	--
	511+93	38.2' RT	1	--
	513+44	38.7' LT	1	--
	513+86	41.0' RT	--	1
PROJECT ID 8140-00-70 SUMMARY			**10**	**1**
PROJECT TOTALS			**10**	**1**

WATER SERVICE PE 1-INCH

CATEGORY	STATION TO STATION	OFFSET	SPV.0090.09 LF
0030	29+56	47.1' LT - 65.6' LT	19
	491+07 - 491+12	112.2' LT - 121.4' LT	9
	504+93 - 506+03	167.6' RT - 153.0' RT	117
	506+54 - 507+39	76.6' RT - 115.9' RT	98
	507+25	38.0' LT - 87.2' LT	49
	509+64	38.2' LT - 62.9' LT	25
	511+47	37.7' LT - 55.0' LT	19
	513+44	36.1' LT - 56.7' LT	14
PROJECT ID 8140-00-70 SUMMARY			**350**
PROJECT TOTAL			**350**

WATER SERVICE BORED PE

CATEGORY	STATION TO STATION	OFFSET	SPV.0090.07 1-INCH LF	SPV.0090.08 2-INCH LF
0030	491+54 - 493+15	63.7' - 73.5' RT	178	--
	511+92	36.8' LT - 44.8' RT	82	--
	513+85	35.9' LT - 43.0' RT	--	79
PROJECT ID 8140-00-70 SUMMARY			**260**	**79**
PROJECT TOTALS			**260**	**79**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0030
UNLESS OTHERWISE NOTED

3

WATER MAIN

CATEGORY	STATION TO STATION	OFFSET	SPV.0090.01 PVC 6-INCH LF	SPV.0090.02 PVC 10-INCH LF	SPV.0090.03 PVC 12-INCH LF	SPV.0090.04 DIRECTIONALLY DRILLED 6-INCH LF	SPV.0090.05 DIRECTIONALLY DRILLED 10-INCH LF	SPV.0090.06 DIRECTIONALLY DRILLED 12-INCH LF	SPV.0090.10 CONSTRUCTION STAKING WATER MAIN PIPE LF
0030	491+02 - 492+16	114.5' LT - 60.9' LT	120	--	--	--	--	--	120
	492+21 - 492+16	60.9' LT - 70.0' LT	11	--	--	--	--	--	11
	491+52 - 492+16	68.0' RT - 60.9' LT	--	--	--	144	--	--	144
	496+95 - 497+08	70.6' LT - 65.2' LT	14	--	--	--	--	--	14
	497+08 - 497+34	65.2' LT - 55.0' LT	--	--	27	--	--	--	27
	497+34 - 497+41	55.0' LT	--	--	6	--	--	--	6
	497+35 - 497+41	85.0' LT - 79.5' LT	8	--	--	--	--	--	8
	497+41	79.5' LT - 55.0' LT	24	--	--	--	--	--	24
	497+41 - 498+14	55.0' LT	--	--	71	--	--	--	71
	498+14 - 498+75	55.0' LT	--	--	59	--	--	--	59
	498+75 - 498+77	55.0' LT - 47.5' RT	--	--	--	--	102	--	102
	498+75 - 499+50	550' LT - 54.0' LT	--	--	73	--	--	--	73
	499+50 - 500+44	54.0' LT - 62.4' LT	--	--	91	--	--	--	91
	500+45	62.4' LT - 39.4' LT	23	--	--	--	--	--	23
	500+45 - 501+61	62.4' LT - 67.4' LT		--	116	--	--	--	116
	25+33 - 27+19	40.8' LT - 41.2' LT	--	195	--	--	--	--	195
	27+19 - 27+20	41.2' LT - 52.7' LT	12	--	--	--	--	--	12
	27+19 - 30+80	41.2' LT - 43.1' LT	--	363	--	--	--	--	363
	30+80	43.1' LT - 55.1' LT	12	--	--	--	--	--	12
	30+80	25.0' LT - 43.1' LT	18	--	--	--	--	--	18
	30+80	19.0' LT - 25.0' LT	6	--	--	--	--	--	6
	30+80 - 30+89	19.7' LT - 26.4' LT	9	--	--	--	--	--	9
	496+63- 498+60	57.6' RT - 48.3' RT	--	202	--	--	--	--	202
	498+77 - 498+60	48.3' RT - 47.5' RT	--	18	--	--	--	--	18
	10+89 - 10+97	0.4' RT	--	8	--	--	--	--	8
	10+97 - 11+15	0.4' RT - 0.0' RT	17	--	--	--	--	--	17
	11+15 - 13+50	0.0' RT	--	--	--	236	--	--	236
	13+50 - 13+83	0.0' RT	32	--	--	--	--	--	32
	13+83	0.0' RT - 41.0' RT	41	--	--	--	--	--	41
	13+83 - 13+90	0.0' RT	7	--	--	--	--	--	7
	501+61 - 504+76	67.5' LT - 47.9' LT	--	--	--	--	--	315	315
	504+76 - 505+10	47.9' LT - 32.5' LT	--	--	37	--	--	--	37
	505+10 - 506+33	32.5' LT - 36.0' LT	--	--	121	--	--	--	121
	506+31 - 506+33	54.9' LT - 36.0' LT	--	19	--	--	--	--	19
	506+33 - 506+57	36.0' LT - 36.7' LT	--	--	23	--	--	--	23
	506+57	36.7' LT - 73.0' RT	--	--	--	--	110	--	110
	506+57 - 506+00	73.0' RT - 142.0' RT	--	92	--	--	--	--	92
	506+00 - 506+06	142.0' RT - 164.3' RT	--	11	--	--	--	--	11
	506+27 - 507+04	36.7' LT - 37.8' LT	--	--	47	--	--	--	47
	507+04	37.8' LT - 48.5' LT	11	--	--	--	--	--	11
	507+04 - 509+46	37.8' LT - 38.6' LT	--	--	237	--	--	--	237
	509+46	38.6' LT - 75.3' RT	--	--	--	114	--	--	114
	509+46 - 509+49	75.3' RT - 82.4' RT	8	--	--	--	--	--	8
	509+46 - 510+71	38.6' LT - 36.3' LT	--	--	124	--	--	--	124
	510+71	36.3' LT - 51.9' LT	16	--	--	--	--	--	16
	510+71 - 514+31	36.3' LT - 34.6' LT	--	--	357	--	--	--	357
	514+31	34.6' LT - 61.7' LT	27	--	--	--	--	--	27
	514+31 - 516+62	34.6' LT - 30.4' LT	--	--	231	--	--	--	231
	516+62 - 516+59	30.4' LT - 47.7' LT	--	--	17	--	--	--	17
	516+59	47.7' LT - 53.6' LT	--	6	--	--	--	--	6

- CONTINUED -

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0030
UNLESS OTHERWISE NOTED

3

WATER MAIN

CATEGORY	STATION TO STATION	OFFSET	SPV.0090.01 PVC 6-INCH LF	SPV.0090.02 PVC 10-INCH LF	SPV.0090.03 PVC 12-INCH LF	SPV.0090.04 DIRECTIONALLY DRILLED 6-INCH LF	SPV.0090.05 DIRECTIONALLY DRILLED 10-INCH LF	SPV.0090.06 DIRECTIONALLY DRILLED 12-INCH LF	SPV.0090.10 CONSTRUCTION STAKING WATER MAIN PIPE LF
0030	516+62 - 516+68	30.4' LT - 21.2' RT	--	--	52	--	--	--	52
	516+68 - 516+76	21.2' RT	8	--	--	--	--	--	8
	516+68 - 516+74	21.2' RT - 72.1' RT	--	--	51	--	--	--	51
	516+41 - 516+74	77.5' RT - 72.1' RT	33	--	--	--	--	--	33
	516+74 - 516+75	72.1' RT - 77.1' RT	--	--	5	--	--	--	5
	516-75 - 516+76	77.1' RT - 83.0' RT	--	6	--	--	--	--	6
	PROJECT ID 8140-00-70 SUMMARY		**457**	**920**	**1745**	**494**	**212**	**315**	**4143**
	PROJECT TOTALS		**457**	**920**	**1745**	**494**	**212**	**315**	**4143**

CONNECT TO EXISTING WATER MAIN

CATEGORY	STATION	OFFSET	SIZE (IN)	SPV.0060.10 EACH
0030	13+90	0.2' RT	6	1
	27+20	52.7' LT	6	1
	30+80	20.3' LT	6	1
	30+87	25.9' LT	10	1
	491+02	114.5' LT	6	1
	491+52	68.0' RT	6	1
	497+35	85.0' LT	6	1
	506+06	164.3' RT	10	1
	506+31	54.9' LT	10	1
	509+49	82.4' RT	6	1
	514+33	61.7' LT	6	1
	516+58	53.6' LT	10	1
	516+76	21.2' RT	12	1
	516+76	83.0' RT	10	1
	PROJECT ID 8140-00-70 SUMMARY			**14**
	PROJECT TOTAL			**14**

WATER VALVE MANHOLE

CATEGORY	STATION	OFFSET	SPV.0105.02 LS
0030	501+61	67.5	1
	PROJECT ID 8140-00-70 SUMMARY		**1**
	PROJECT TOTAL		**1**

CONSTRUCTION STAKING WATER MAIN STRUCTURE

CATEGORY		SPV.0060.13 EACH
0030	HYDRANT	7
	VALVE AND BOX	39
	CURB STOP	11
	PROJECT ID 8140-00-70 SUMMARY	**57**
	PROJECT TOTAL	**57**

DEWATERING FOR STORM SEWER

CATEGORY	LOCATION	SPV.0105.03 LS
0010	PROJECT	1
	PROJECT ID 8140-00-70 SUMMARY	**1**
	PROJECT TOTAL	**1**

TEMPORARY WATER SERVICE

CATEGORY	LOCATION	SPV.0105.01 LS
0030	PROJECT	1
	PROJECT ID 8140-00-70 SUMMARY	**1**
	PROJECT TOTAL	**1**

DEWATERING FOR SANITARY SEWER

CATEGORY	LOCATION	SPV.0105.04 LS
0020	PROJECT 8140-00-70	1
	PROJECT ID 8140-00-70 SUMMARY	**1**
	PROJECT TOTAL	**1**

DEWATERING FOR WATER MAIN

CATEGORY	LOCATION	SPV.0105.07 LS
0030	PROJECT 8140-00-70	1
	PROJECT ID 8140-00-70 SUMMARY	**1**
	PROJECT TOTAL	**1**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0030 UNLESS OTHERWISE NOTED

SANITARY SEWER

CATEGORY	FROM		TO	SPV.0090.11 PVC 8-INCH LF	SPV.0090.12 PVC 10-INCH LF	SPV.0090.13 PVC 12-INCH LF	SPV.0090.17 CONSTRUCTION STAKING SANITARY PIPE LF	SPV.0090.16 TELEVISING LF
0020	EX	-	SAN MH 9	31	--	--	31	31
	SAN MH 9	-	EX	86	--	--	86	86
	EX	-	SAN MH 7	78	--	--	78	78
	SAN MH 7	-	EX	20	--	--	20	20
	SAN MH 6	-	SAN MH 5	192	--	--	192	192
	SAN MH 5	-	SAN MH 4	190	--	--	190	190
	EX	-	SAN MH 4	127	--	--	127	127
	SAN MH 4	-	SAN MH 3	--	209	--	209	209
	SAN MH 3	-	SAN MH 2	--	210	--	210	210
	SAN MH 2	-	SAN MH 1	--	389	--	389	389
	EX	-	SAN MH 1	--	7	--	7	7
	SAN MH 1	-	EX	--	--	38	38	38
	PROJECT ID 8140-00-70 SUMMARY			**724**	**815**	**38**	**1577**	**1577**
	PROJECT TOTALS			**724**	**815**	**38**	**1577**	**1577**

CONNECT TO EXISTING SANITARY

CATEGORY	STATION	OFFSET	SPV.0060.15 EACH	NOTES
0020	492+08	43.0' RT	1	8" PVC
	492+67	58.8' LT	1	8" PVC
	497+29	30.5' RT	1	8" PVC
	497+75	35.2' LT	1	8" PVC
	509+33	76.9' RT	1	8" PVC
	516+71	56.8' LT	1	EX SAN MH 1025
	516+75	12.0' LT	1	10" PVC
	PROJECT ID 8140-00-70 SUMMARY		**7**	
	PROJECT TOTAL		**7**	

TRACER WIRE ACCESS BOX

CATEGORY	STATION	OFFSET	SPV.0060.19 EACH
0020	506+24	36.9' LT	1
	507+12	36.2' LT	1
	509+56	35.9' LT	1
	511+53	38.3' LT	1
	513+28	38.6' LT	1
	513+95	40.2' RT	1
	514+12	36.7' LT	1
	515+60	33.8' LT	1
	PROJECT ID 8140-00-70 SUMMARY		**8**
	PROJECT TOTAL		**8**

CONSTRUCTION STAKING SANITARY STRUCTURE

CATEGORY		SPV.0060.20 EACH
0020	MANHOLE	8
	TRACER WIRE ACCESS BOX	8
	PROJECT ID 8140-00-70 SUMMARY	**16**
	PROJECT TOTAL	**16**

SANITARY LATERAL

CATEGORY	STATION	OFFSET	SPV.0090.14 PVC 6-INCH LF	SPV.0090.15 PIPE BURSTING 6-INCH LF
0020	506+24	LT	28	--
	507+12	LT	62	--
	509+56	LT	36	--
	511+53	LT	28	--
	513+28	LT	26	--
	513+95	RT	--	65
	514+12	LT	27	--
	515+60	LT	23	--
	PROJECT ID 8140-00-70 SUMMARY		**230**	**65**
	PROJECT TOTALS		**230**	**65**

SANITARY MANHOLE

CATEGORY	STRUCTURE	STATION	OFFSET	SPV.0200.01 4-FOOT VF	SPV.0060.16 COVERS TYPE J-S EACH
0020	SAN MH 1	516+74	19.0' LT	12.68	1
	SAN MH 2	512+84	25.4' LT	9.47	1
	SAN MH 3	510+71	25.3' LT	7.71	1
	SAN MH 4	508+59	25.0' LT	6.20	1
	SAN MH 5	506+67	23.7' LT	5.94	1
	SAN MH 6	504+74	20.4' LT	6.91	1
	SAN MH 7	497+88	19.4' LT	10.48	1
	SAN MH 9	492+23	15.7' RT	8.84	1
	PROJECT ID 8140-00-70 SUMMARY			**68.23**	**8**
	PROJECT TOTALS			**68.23**	**8**

WYE

CATEGORY	STATION	OFFSET	SPV.0060.17 8 X 6-INCH EACH	SPV.0060.18 10 X 6-INCH EACH
0020	506+24	24.2' LT	1	--
	507+12	25.5' LT	1	--
	509+56	27.5' LT	--	1
	511+53	27.6' LT	--	1
	513+28	25.3' LT	--	1
	513+95	24.1' LT	--	1
	514+13	23.9' LT	--	1
	515+60	21.1' LT	--	1
	PROJECT ID 8140-00-70 SUMMARY		**2**	**6**
	PROJECT TOTALS		**2**	**6**

ADJUST EXISTING CASTING

CATEGORY	STATION	OFFSET	SPV.0060.14 EACH
0020	516+71	56.8' LT	1
	516+79	45.3' RT	1
	PROJECT ID 8140-00-70 SUMMARY		**2**
	PROJECT TOTAL		**2**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0020
UNLESS OTHERWISE NOTED

CONCRETE BASES

INTERSECTION: STH 27 & FIRST AVE/CTH B									
				654.0101 CONCRETE BASES TYPE 1	654.0102 CONCRETE BASES TYPE 2	654.0105 CONCRETE BASES TYPE 5	654.0110 CONCRETE BASES TYPE 10	654.0113 CONCRETE BASES TYPE 13	654.0217 CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL
BASE NO.	STATION	OFFSET		EACH	EACH	EACH	EACH	EACH	EACH
CABINET	496+82	59'	RT	---	---	---	---	---	1
SB1	496+61	45'	RT	1	---	---	---	---	---
SB2	495+86	36'	RT	---	1	---	---	---	---
SB3	495+83	30'	RT	1	---	---	---	---	---
SB4	495+67	36'	LT	---	---	---	---	1	---
SB5	24+29	27'	RT	1	---	---	---	---	---
SB6	24+46	34'	LT	---	1	---	---	---	---
SB7	497+17	34'	LT	1	---	---	---	---	---
SB8	497+17	35'	RT	---	---	---	---	1	---
LB1	495+38	50'	RT	---	---	1	---	---	---
LB2	494+17	30'	RT	---	---	1	---	---	---
LB3	498+84	30'	LT	---	---	1	---	---	---
PROJECT ID 8140-00-70 SUMMARY				**4**	**2**	**3**	**0**	**2**	**1**
INTERSECTION: STH 27 & RAILROAD ST									
CABINET	516+20	45'	LT	---	---	---	---	---	1
SB1	516+34	45'	LT	1	---	---	---	---	---
SB2	516+92	39'	LT	---	1	---	---	---	---
SB3	517+09	27'	LT	1	---	---	---	---	---
SB4	517+22	47'	RT	---	---	---	---	1	---
SB5	517+14	52'	RT	---	1	---	---	---	---
SB6	516+51	59'	RT	---	1	---	---	---	---
SB7	516+45	51'	RT	1	---	---	---	---	---
SB8	516+26	43'	RT	1	---	---	---	---	---
SB9	516+07	32'	LT	---	---	---	1	---	---
SB10	516+19	35'	LT	1	---	---	---	---	---
LB1	514+78	38'	RT	---	---	1	---	---	---
PROJECT ID 8140-00-74 SUMMARY				**5**	**3**	**1**	**1**	**1**	**1**
PROJECT TOTALS				**9**	**5**	**4**	**1**	**3**	**2**

REMOVING CONCRETE BASES

INTERSECTION	204.0195 EACH
STH 27 & FIRST AVE/CTH B	8
PROJECT ID 8140-00-70 SUMMARY	**8**
PROJECT TOTAL	**8**

REMOVING PULL BOXES

INTERSECTION	653.0905 EACH
STH 27 & FIRST AVE/CTH B	8
PROJECT ID 8140-00-70 SUMMARY	**8**
PROJECT TOTAL	**8**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

LOOP DETECTORS

INTERSECTION: STH 27 & FIRST AVE/CTH B

LOOP NO.	HOME RUN PB.	LOCATION^	SIZE (FT. X FT.)	NO. OF TURNS	PAVEMENT	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR LF	655.0700* LOOP DETECTOR LEAD-IN CABLE LF	655.0800 LOOP DETECTOR WIRE LF
11	PB6	495+57 6' RT	6' X 20'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	66	253	256
12	PB6	495+83 6' RT	6' X 20'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	72	253	288
21	PB11	498+96 18' LT	6' X 6'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	40	329	160
41	PB8	24+31 8' RT	9' X 25'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	116	300	348
51	PB12	497+46 6' LT	6' X 20'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	78	118	312
52	PB12	497+18 6' LT	6' X 20'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	68	118	272
61	PB4	494+08 19' RT	6' X 6'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	38	340	152
81	PB2	25+42 19' LT	6' X 25'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	86	67	344
82	PB2	25+74 6' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	102	67	306
83	PB2	25+48 6' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	100	67	300
PROJECT ID 8140-00-70 SUMMARY							**766**	**1912***	**2738**
INTERSECTION: STH 27 & RAILROAD ST									
11	PB8	516+01 4' RT	6' X 25'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	132	100	528
12	PB8	516+27 4' RT	6' X 25'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	128	100	512
21	PB4	518+50 17' LT	6' X 6'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	38	266	152
41	PB1	516+56 39' LT	9' X 25'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	106	23	424
51	PB3	517+06 7' LT	6' X 20'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	88	129	352
61	PB9	514+89 20' RT	6' X 20'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	66	238	264
81	PB6	516+95 46' RT	6' X 25'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	88	213	264
82	PB6	516+82 47' RT	6' X 25'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	112	213	448
INTERSECTION: USH 63 & STH 27/DAKOTA AVE									
32	E-PB1	518+64 6' RT	6' X 6'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	98	65	294
83	E-PB1	518+63 17' RT	6' X 6'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	76	65	304
84	E-PB1	518+62 28' RT	6' X 6'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)SDD 9F15-4b	54	65	216
PROJECT ID 8140-00-74 SUMMARY							**986**	**1477***	**3758**
PROJECT TOTALS							**1752**	**3389***	**6496**

^ LOCATION IS TO THE FRONT CENTER OF THE DETECTOR

* ADDITIONAL QUANTITIES UNDER THE 'SIGNAL CABLE' SECTION

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

EQUIPMENT GROUNDING CONDUCTORS & PULL BOX JUMPERS

INTERSECTION: STH 27 & FIRST AVE/CTH B

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
EQUIPMENT GROUNDING CONDUCTORS		
CABINET	SB1	28
SB1	SB2	252
SB2	SB3	19
SB3	SB4	206
SB4	SB5	106
SB5	SB6	110
SB6	SB7	94
SB7	SB8	128
SB8	CABINET	88
PULL BOX BONDING JUMPERS		
PB1	CABINET	19
PB14	CABINET	20
PB1	SB1	27
PB2	SB1	69
PB3	SB3	65
PB5	SB2	20
PB5	SB3	16
PB6	SB4	58
PB7	SB4	24
PB8	SB5	24
PB9	SB6	22
PB10	SB7	28
PB12	SB7	63
PB13	SB8	29

PROJECT ID 8140-00-70 SUMMARY **1515**

EQUIPMENT GROUNDING CONDUCTORS & PULL BOX JUMPERS - CONTINUED

INTERSECTION: STH 27 & RAILROAD ST

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
EQUIPMENT GROUNDING CONDUCTORS		
CABINET	SB1	33
SB1	SB2	86
SB2	SB3	81
SB3	SB4	111
SB4	SB5	57
SB5	SB6	85
SB6	SB7	23
SB7	SB8	86
SB8	SB9	109
SB9	SB10	22
SB10	CABINET	33
PULL BOX BONDING JUMPERS		
PB1	CABINET	27
PB10	CABINET	27
PB2	SB2	16
PB3	SB3	25
PB5	SB4	19
PB6	SB5	15
PB7	SB6	14
PB8	SB8	22

PROJECT ID 8140-00-74 SUMMARY **891**

PROJECT TOTAL **2406**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

PULL BOXES STEEL

INTERSECTION: STH 27 & FIRST AVE/CTH B					
				653.0135	653.0140
				24x36-INCH	24x42-INCH
PB NO.	STATION	OFFSET		EACH	EACH
PB1	496+74	55'	RT	---	1
PB2	25+66	33'	LT	---	1
PB3	26+20	55'	RT	---	1
PB4	494+02	29'	RT	1	---
PB5	495+77	31'	RT	---	1
PB6	495+55	4'	LT	---	1
PB7	495+53	42'	LT	---	1
PB8	24+36	40'	RT	---	1
PB9	24+35	36'	LT	---	1
PB10	497+35	31'	LT	---	1
PB11	499+02	29'	LT	1	---
PB12	497+35	4'	RT	---	1
PB13	497+34	44'	RT	---	1
PB14	496+86	49'	RT	---	1
PROJECT ID 8140-00-70 SUMMARY				**2**	**12**
INTERSECTION: STH 27 & RAILROAD ST					
PB1	516+36	51'	LT	---	1
PB2	516+89	44'	LT	---	1
PB3	517+25	28'	LT	---	1
PB4	518+55	28'	LT	1	---
PB5	517+26	39'	RT	---	1
PB6	517+09	52'	RT	---	1
PB7	516+53	55'	RT	---	1
PB8	516+15	39'	RT	---	1
PB9	514+83	37'	RT	1	---
PB10	516+14	32'	LT	---	1
PROJECT ID 8140-00-74 SUMMARY				**2**	**8**
PROJECT TOTALS				**4**	**20**

SIGNAL MOUNTING HARDWARE (ORNAMENTAL)

LOCATION	658.5069.01 LS	658.5069.02 LS
.01 STH 27 & FIRST AVE/CTH B	1	--
PROJECT ID 8140-00-70 SUMMARY	**1**	**0**
.02 STH 27 & RAILROAD ST	--	1
PROJECT ID 8140-00-74 SUMMARY	**0**	**1**
PROJECT TOTALS	**1**	**1**

ELECTRICAL SERVICE METER BREAKER PEDESTAL

LOCATION	656.0200.01 LS	656.0200.02 LS
.01 STH 27 & FIRST AVE/CTH B	1	--
PROJECT ID 8140-00-70 SUMMARY	**1**	**0**
.02 STH 27 & RAILROAD ST	--	1
PROJECT ID 8140-00-74 SUMMARY	**0**	**1**
PROJECT TOTALS	**1**	**1**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

SIGNAL CABLE

INTERSECTION: STH 27 & FIRST AVE/CTH B

FROM	TO	655.0230 5-14 AWG LF	655.0240 7-14 AWG LF	655.0250 9-14 AWG LF	655.0260 12-14 AWG LF	655.0270 15-14 AWG LF
			CABLE TRAFFIC SIGNAL			
CABINET	SB1	--	--	--	--	32
SB1	FACE 11	23	--	--	--	--
SB1	FACE 15	21	--	--	--	--
SB1	FACE 62	15	--	--	--	--
CABINET	SB2	--	244	--	--	--
SB2	FACE 16	50	--	--	--	--
SB2	FACE 61	15	--	--	--	--
CABINET	SB3	--	--	--	240	--
SB3	FACE 1	21	--	--	--	--
SB3	FACE 9	--	22	--	--	--
CABINET	SB4	--	--	--	312	--
SB4	FACE 7	44	--	--	--	--
SB4	FACE 8	25	--	--	--	--
SB4	FACE 10	--	57	--	--	--
CABINET	SB5	--	--	314	--	--
SB5	FACE 12	21	--	--	--	--
SB5	FACE 14	21	--	--	--	--
CABINET	SB6	--	231	--	--	--
SB6	FACE 13	52	--	--	--	--
CABINET	SB7	--	--	--	177	--
SB7	FACE 4	--	22	--	--	--
SB7	FACE 6	21	--	--	--	--
CABINET	SB8	--	--	--	91	--
SB8	FACE 2	42	--	--	--	--
SB8	FACE 3	25	--	--	--	--
SB8	FACE 5	--	55	--	--	--
SB8	FACE 81	15	--	--	--	--
PROJECT ID 8140-00-70 SUMMARY		**411**	**631**	**314**	**820**	**32**

* ADDITIONAL QUANTITIES WITH THE 'LOOP DETECTORS' SECTION

SIGNAL CABLE - CONTINUED

INTERSECTION: STH 27 & RAILROAD ST

FROM	TO	655.0230 5-14 AWG LF	655.0240 7-14 AWG LF	655.0250 9-14 AWG LF	655.0260 12-14 AWG LF	655.0270 15-14 AWG LF
			CABLE TRAFFIC SIGNAL			
CABINET	SB1	--	--	--	29	--
SB1	FACE 12	21	--	--	--	--
SB1	FACE 14	--	21	--	--	--
SB1	FACE 41	15	--	--	--	--
CABINET	SB2	--	--	--	89	--
SB2	FACE 13	40	--	--	--	--
SB2	FACE 21	15	--	--	--	--
CABINET	SB3	--	--	--	144	--
SB3	FACE 4	22	--	--	--	--
SB3	FACE 6	--	21	--	--	--
CABINET	SB4	--	--	--	211	--
SB4	FACE 2	55	--	--	--	--
SB4	FACE 3	45	--	--	--	--
SB4	FACE 5	66	--	--	--	--
SB4	FACE 62	15	--	--	--	--
CABINET	SB5	--	--	--	218	--
SB5	FACE 11	21	--	--	--	--
SB5	FACE 15	21	--	--	--	--
CABINET	SB6	155	--	--	--	--
SB6	FACE 16	45	--	--	--	--
CABINET	SB7	160	--	--	--	--
SB7	FACE 61	15	--	--	--	--
CABINET	SB8	--	--	--	112	--
SB8	FACE 1	21	--	--	--	--
SB8	FACE 9	--	22	--	--	--
SB8	FACE 42	15	--	--	--	--
CABINET	SB9	--	--	--	29	--
SB9	FACE 7	38	--	--	--	--
SB9	FACE 8	26	--	--	--	--
SB9	FACE 10	--	51	--	--	--
CABINET	SB10	29	--	--	--	--
SB10	FACE 22	15	--	--	--	--
PROJECT ID 8140-00-74 SUMMARY		**855**	**115**	**0**	**832**	**0**
PROJECT TOTALS		**1266**	**746**	**314**	**1652**	**32**

* ADDITIONAL QUANTITIES WITH THE 'LOOP DETECTORS' SECTION

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL BASES, ARMS, AND POLES

INTERSECTION: STH 27 & FIRST AVE/CTH B

BASE NO.	657.0100 PED. BASE EACH	657.0255 TRANS. BASE 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLE TYPE 2 EACH	657.0310 POLE TYPE 3 EACH	657.0315 POLE TYPE 4 EACH	657.0425 15-FOOT STAND. EACH	657.0430 10-FOOT STAND. EACH	657.0590 20-FOOT TROMB. EACH	657.0595 25-FOOT TROMB. EACH	657.0350 POLES TYPE 10 EACH	657.0360 POLES TYPE 13 EACH	657.0530 MONOTUBE ARMS 30-FT	657.0535 MONOTUBE ARMS 35-FT	657.0545 MONOTUBE ARMS 45-FT
SB1	1	---	---	---	---	1	---	---	---	---	---	---	---	---
SB2	---	1	---	1	---	---	---	---	1	---	---	---	---	---
SB3	1	---	---	---	---	1	---	---	---	---	---	---	---	---
SB4	---	---	---	---	---	---	---	---	---	---	1	---	1	---
SB5	1	---	---	---	---	1	---	---	---	---	---	---	---	---
SB6	---	1	---	1	---	---	---	---	1	---	---	---	---	---
SB7	1	---	---	---	---	1	---	---	---	---	---	---	---	---
SB8	---	---	---	---	---	---	---	---	---	---	1	---	1	---
PROJECT ID 8140-00-70 SUMMARY	**4**	**2**	**0**	**2**	**0**	**4**	**0**	**0**	**2**	**0**	**2**	**0**	**2**	**0**

INTERSECTION: STH 27 & RAILROAD ST

BASE NO.	657.0100 PED. BASE EACH	657.0255 TRANS. BASE 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLE TYPE 2 EACH	657.0310 POLE TYPE 3 EACH	657.0315 POLE TYPE 4 EACH	657.0425 15-FOOT STAND. EACH	657.0430 10-FOOT STAND. EACH	657.0590 20-FOOT TROMB. EACH	657.0595 25-FOOT TROMB. EACH	657.0350 POLES TYPE 10 EACH	657.0360 POLES TYPE 13 EACH	657.0530 MONOTUBE ARMS 30-FT	657.0535 MONOTUBE ARMS 35-FT	657.0545 MONOTUBE ARMS 45-FT
SB1	1	---	---	---	---	1	---	---	---	---	---	---	---	---
SB2	---	1	---	1	---	---	---	1	---	---	---	---	---	---
SB3	1	---	---	---	---	1	---	---	---	---	---	---	---	---
SB4	---	---	---	---	---	---	---	---	---	---	1	---	---	1
SB5	---	1	---	---	1	---	---	---	---	---	---	---	---	---
SB6	---	1	1	---	---	---	---	1	---	---	---	---	---	---
SB7	1	---	---	---	---	---	1	---	---	---	---	---	---	---
SB8	1	---	--	---	---	1	---	---	---	---	---	---	---	---
SB9	---	---	---	---	---	---	---	---	---	1	---	1	---	---
SB10	1	---	---	---	---	---	1	---	---	---	---	---	---	---
PROJECT ID 8140-00-74 SUMMARY	**5**	**3**	**1**	**1**	**1**	**3**	**2**	**2**	**0**	**1**	**1**	**1**	**0**	**1**
PROJECT TOTALS	**9**	**5**	**1**	**3**	**1**	**7**	**2**	**2**	**2**	**1**	**3**	**1**	**2**	**1**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL FACES

INTERSECTION: STH 27 & FIRST AVE/CTH B

SB NO.	FACE NO.	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0175 TRAFFIC SIGNAL FACE 5S 12-INCH EACH	658.1133 PROGRAMMABLE TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.1134 PROGRAMMABLE TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.1135 PROGRAMMABLE TRAFFIC SIGNAL FACE 5S 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
SB1	11	---	---	1	---	---	---	---
	15	1	---	---	---	---	---	---
	62	---	---	---	---	---	---	1
	BUTTON	---	---	---	---	---	---	---
SB2	16	1	---	---	---	---	---	---
	61	---	---	---	---	---	---	1
	BUTTON	---	---	---	---	---	---	---
SB3	1	1	---	---	---	---	---	---
	9	---	1	---	---	---	---	---
SB4	7	1	---	---	---	---	---	---
	8	1	---	---	---	---	---	---
	10	---	1	---	---	---	---	---
SB5	12	1	---	---	---	---	---	---
	14	1	---	---	---	---	---	---
SB6	13	---	---	1	---	---	---	---
SB7	4	---	1	---	---	---	---	---
	6	1	---	---	---	---	---	---
	82	---	---	---	---	---	---	1
	BUTTON	---	---	---	---	---	---	---
SB8	2	1	---	---	---	---	---	---
	3	1	---	---	---	---	---	---
	5	---	1	---	---	---	---	---
	81	---	---	---	---	---	---	1
	BUTTON	---	---	---	---	---	---	---
PROJECT ID 8140-00-70 SUMMARY		**10**	**4**	**2**	**0**	**0**	**0**	**4**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL FACES - CONTINUED

INTERSECTION: STH 27 & RAILROAD ST

SB NO.	FACE NO.	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0175 TRAFFIC SIGNAL FACE 5S 12-INCH EACH	658.1133 PROGRAMMABLE TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.1134 PROGRAMMABLE TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.1135 PROGRAMMABLE TRAFFIC SIGNAL FACE 5S 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0500 PEDESTRIAN PUSH BUTTON EACH
SB1	12	1	---	---	---	---	---	---	---
	14	1	---	---	---	---	---	---	---
	41	---	---	---	---	---	---	1	---
	BUTTON	---	---	---	---	---	---	---	1
SB2	13	1	---	---	---	---	---	---	---
	21	---	---	---	---	---	---	1	---
	BUTTON	---	---	---	---	---	---	---	1
SB3	4	---	1	---	---	---	---	---	---
	6	---	---	---	1	---	---	---	---
SB4	2	1	---	---	---	---	---	---	---
	3	1	---	---	---	---	---	---	---
	5	---	1	---	---	---	---	---	---
	62	---	---	---	---	---	---	1	---
SB5	11	1	---	---	---	---	---	---	---
	15	1	---	---	---	---	---	---	---
	BUTTON	---	---	---	---	---	---	---	1
SB6	16	1	---	---	---	---	---	---	---
SB7	61	---	---	---	---	---	---	1	---
	BUTTON	---	---	---	---	---	---	---	1
SB8	1	1	---	---	---	---	---	---	---
	9	---	---	---	---	1	---	---	---
	42	---	---	---	---	---	---	1	---
	BUTTON	---	---	---	---	---	---	---	1
SB9	7	1	---	---	1	---	---	---	---
	8	1	---	---	1	---	---	---	---
	10	---	1	---	---	1	---	---	---
SB10	22	---	---	---	---	---	---	1	---
	BUTTON	---	---	---	---	---	---	---	1
SUBTOTAL		11	3	0	3	2	0	6	6

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL FACES - CONTINUED

INTERSECTION: USH 63 & STH 27/DAKOTA AVE

SB NO.	FACE NO.	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0175 TRAFFIC SIGNAL FACE 5S 12-INCH EACH	658.1133 PROGRAMMABLE TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.1134 PROGRAMMABLE TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.1135 PROGRAMMABLE TRAFFIC SIGNAL FACE 5S 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0500 PEDESTRIAN PUSH BUTTON EACH
SB11	17	---	---	---	1	---	---	---	---
SB12	19	---	---	---	---	---	1	---	---
SB13	18	---	---	---	---	---	1	---	---
SUBTOTAL		0	0	0	1	0	2	0	0
PROJECT ID 8140-00-74 SUMMARY		**11**	**3**	**0**	**4**	**2**	**2**	**6**	**6**
PROJECT TOTALS		**21**	**7**	**2**	**4**	**2**	**2**	**10**	**10**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

LIGHTING UNITS

BASE NO.	657.0255 TRANS. BASE 11 1/2-INCH BOLT CIRCLE EACH	657.0322 POLE TYPE 5 EACH	657.0614 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 8-FT EACH	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT EACH	657.0704 LUMINAIRE ARMS TRUSS TYPE 4-INCH CLAMP 10-FT EACH	657.0705 LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 10-FT EACH	657.0808 LUMINAIRE ARMS STEEL 8-FT EACH	657.0812 LUMINAIRE ARMS STEEL 12-FT EACH	659.1115 LIGHTING UTILITY LED A EACH	659.1125 LIGHTING UTILITY LED C EACH
INTERSECTION: STH 27 & FIRST AVE/CTH B										
SB2	--	--	1	--	--	--	--	--	--	1
SB4	--	--	--	--	--	--	1	--	--	1
SB6	--	--	--	--	1	--	--	--	--	1
SB8	--	--	--	--	--	--	1	--	--	1
LB1	1	1	--	1	--	--	--	--	--	1
LB2	1	1	--	1	--	--	--	--	1	--
LB3	1	1	--	1	--	--	--	--	1	--
PROJECT ID 8140-00-70 SUMMARY	**3**	**3**	**1**	**3**	**1**	**0**	**2**		**2**	**5**
INTERSECTION: STH 27 & RAILROAD ST										
SB2	--	--	--	--	1	--	--	--	--	1
SB4	--	--	--	--	--	--	--	1	--	1
SB5	--	--	--	--	1	--	--	--	--	1
SB9	--	--	--	--	--	--	1	--	--	1
LB1	1	1	--	--	--	1	--	--	1	--
PROJECT ID 8140-00-74 SUMMARY	**1**	**1**	**0**	**0**	**2**	**1**	**1**	**1**	**1**	**4**
PROJECT TOTALS	**4**	**4**	**1**	**3**	**3**	**1**	**3**	**1**	**3**	**9**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

LIGHTING WIRE

INTERSECTION: STH 27 & FIRST AVE/CTH B			
		655.0320 CABLE TYPE UF 2-10 AWG GROUNDED	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG
FROM	TO	LF	LF
CAB.	SB2	244	--
SB2	LUM.	--	123
SB2	SB4	212	--
SB4	LUM.	--	123
CAB.	LB1	191	--
LB1	LUM.	--	123
LB1	LB2	202	--
LB2	LUM.	--	123
CAB.	SB8	92	--
SB8	LUM.	--	123
SB8	SB6	184	--
SB6	LUM.	--	129
SB6	LB3	263	--
LB3	LUM.	--	123
PROJECT ID 8140-00-70 SUMMARY		**1388**	**867**
INTERSECTION: STH 27 & RAILROAD ST			
CAB.	SB2	89	--
SB2	LUM.	--	129
SB2	SB4	140	--
SB4	LUM.	--	135
SB4	SB5	48	--
SB5	LUM.	--	129
CAB.	SB9	29	--
SB9	LUM.	--	123
SB9	LB1	234	--
LB1	LUM.	--	129
PROJECT ID 8140-00-74 SUMMARY		**540**	**645**
PROJECT TOTALS		**1928**	**1512**

TEMPORARY NON-INTRUSIVE VEHICLE DETECTION FOR INTERSECTIONS

LOCATION	SPV.0105.05 LS
.05 STH 27 & FIRST AVE/CTH B	1
PROJECT ID 8140-00-70 SUMMARY	**1**
PROJECT TOTAL	**1**

REMOVE AND SALVAGE TRAFFIC SIGNALS

LOCATION	SPV.0105.06 LS
STH 27 & FIRST AVE/CTH B	1
PROJECT ID 8140-00-70 SUMMARY	**1**
PROJECT TOTAL	**1**

INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT

FROM	TO	678.0006 LF	NOTES
CAB - RR ST.	CAB-USH 63	365	CAB - RR ST > PB1 > PB2 > PB3 > PB5 > E-PB1 > CAB - USH63
CAB - RR ST.		100	CABLE SLACK
PB 1		10	CABLE SLACK
PB 2		10	CABLE SLACK
PB 3		10	CABLE SLACK
PB 5		10	CABLE SLACK
E - PB1		10	CABLE SLACK
CAB - USH63		100	CABLE SLACK
PROJECT ID 8140-00-74 SUMMARY		**615**	
PROJECT TOTAL		**615**	

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0200.01 LS
STH 27 & FIRST AVE/CTH B	1
PROJECT ID 8140-00-70 SUMMARY	**1**
PROJECT TOTAL	**1**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

CONDUIT

INTERSECTION: STH 27 & FIRST AVE/CTH B

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF
CABINET	PB1	---	27	---
CABINET	PB14	---	30	---
PB1	PB2	---	92	---
PB2	PB3	---	206	---
PB3	PB4	318	---	---
PB3	PB5	---	106	---
PB3	PB6	---	144	---
PB6	PB7	---	76	---
PB7	PB8	---	128	---
PB8	PB9	---	150	---
PB9	PB10	---	108	---
PB10	PB11	328	---	---
PB10	PB12	---	70	---
PB12	PB13	---	80	---
PB13	PB14	---	100	---
PB1	SB1	---	34	---
PB5	SB2	10	---	---
PB5	SB3	6	---	---
PB7	SB4	---	15	---
PB8	SB5	14	---	---
PB9	SB6	12	---	---
PB10	SB7	36	---	---
PB13	SB9	---	19	---
PB3	LB1	15	---	---
PB4	LB2	15	---	---
PB11	LB3	15	---	---
PROJECT ID 8140-00-70 SUMMARY		**769**	**1385**	**0**

CONDUIT - CONTINUED

INTERSECTION: STH 27 & RAILROAD ST

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF
CABINET	PB1	---	51	---
CABINET	PB10	---	51	---
PB1	PB2	---	108	---
PB2	PB3	---	80	---
PB3	PB4	262	---	---
PB3	PB5	---	134	---
PB5	PB6	---	46	---
PB5	E-PB1	---	---	138
PB6	PB7	---	112	---
PB7	PB8	---	90	---
PB8	PB9	264	---	---
PB8	PB10	---	142	---
PB1	SB1	6	---	---
PB2	SB2	6	---	---
PB3	SB3	15	---	---
PB5	SB4	---	9	---
PB6	SB5	5	---	---
PB7	SB6	5	---	---
PB7	SB7	9	---	---
PB8	SB8	12	---	---
PB10	SB9	---	6	---
PB10	SB10	6	---	---
PB9	LB1	5	---	---
PROJECT ID 8140-00-74 SUMMARY		**595**	**829**	**138**
PROJECT TOTALS		**1364**	**2214**	**138**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

TRANSPORTATION PROJECT PLAT NO: 8140-00-20 - 4.01
AMENDMENT NO: 1

AMENDS PARCEL 2 OF TPP 8140-00-20-4.01 RECORDED AS DOCUMENT NO. 410596.
PART OF LOT 1 OF CSM 6372 RECORDED IN VOLUME 23 CERTIFIED SURVEYS, PAGE 154 AS DOCUMENT NO. 297728 AND ALSO PART OF BLOCK 2, RIVERSIDE ADDITION TO THE CITY OF HAYWARD , BEING A PART OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 27, TOWNSHIP 41 NORTH, RANGE 9 WEST, CITY OF HAYWARD, SAWYER COUNTY, WISCONSIN.

RELOCATION ORDER STH 27 - CTH B TO USH 63

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) AND (2), WISCONSIN STATUTES.

413215
PAULA CHISSER
REGISTER OF DEEDS
SAWYER COUNTY, WI
07/10/2018 08:03 AM
RECORDING FEE 25.00

PAGES: 1

The above recording information verifies that this document has been electronically recorded and returned to the submitter.

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8140-00-20- 4.01
AMENDMENT NO: 1

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NO.	OWNER(S)	INTEREST REQUIRED	R/W (SQ. FEET)			
			FEE	EXISTNG	TOTAL	TLE
1	CHIPPEWA VALLEY BANK	TLE	----	----	----	374
2	APPLE PIE, LLC	FEE	1,894	----	1,894	----

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

UTILITY INTEREST REQUIRED

UTILITY PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED
50	CENTURYLINK	RELEASE OF RIGHTS
51	WE ENERGIES	RELEASE OF RIGHTS

(50) CENTURYLINK
NO EASEMENTS OF RECORD
PARCEL 2

(51) WE ENERGIES
NO EASEMENTS OF RECORD
PARCEL 2

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), SAWYER COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

A **TEMPORARY LIMITED EASEMENT** (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES. AS DEFINED HEREIN. INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" CAPPED IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

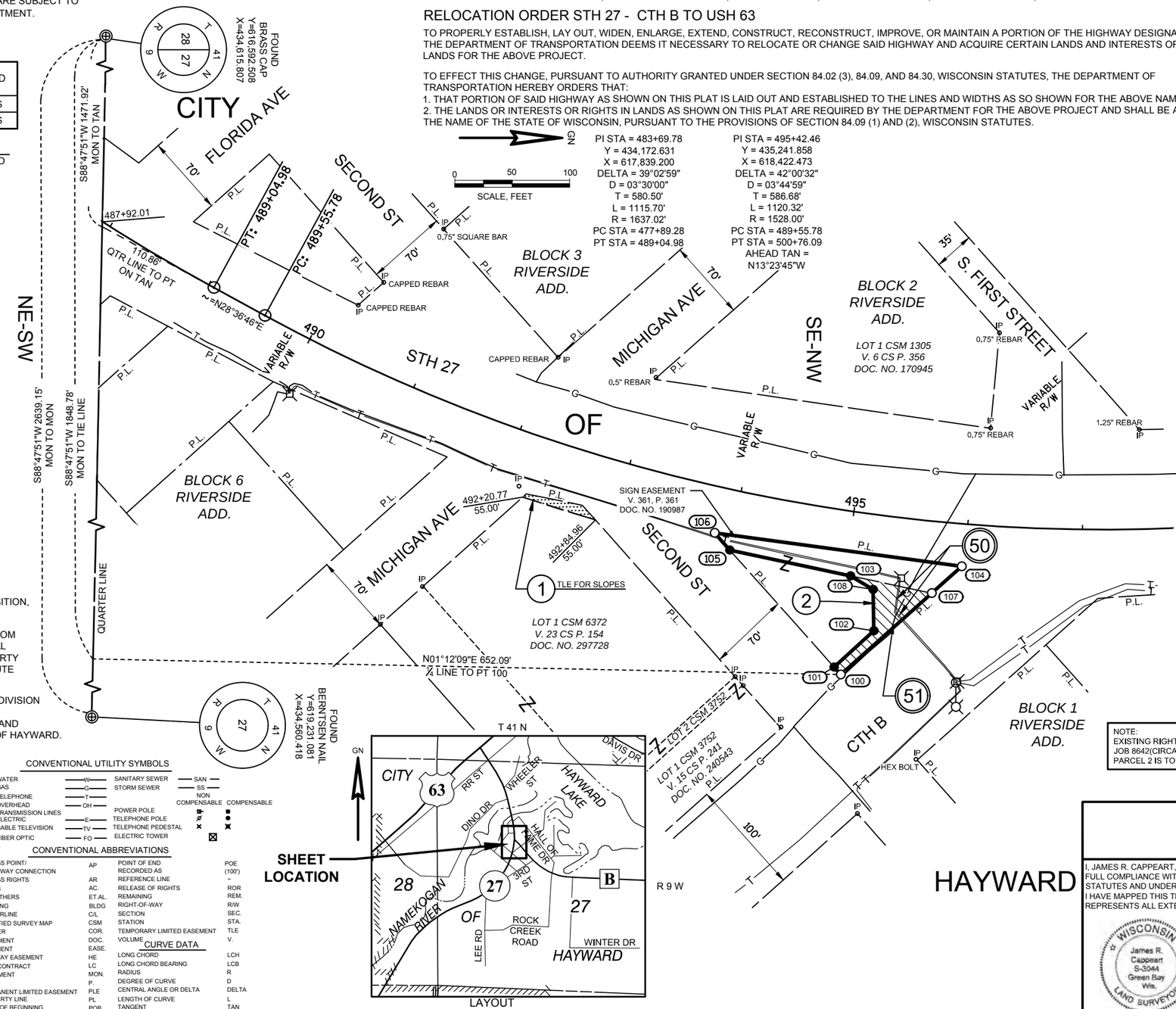
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD."

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 27 SHOWN HEREIN IS BASED ON DIVISION JOB NO. 8642.
EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH B, MICHIGAN AVE, FLORIDA AVE, AND SECOND ST SHOWN HEREIN IS BASED ON RIVERSIDE ADDITION TO THE CITY OF HAYWARD.



LINE TABLE		
LINE	BEARING	DISTANCE
100 -101	S48°18'08"W	8.82'
101-102	N42°19'39"W	46.94'
102-108	S88°46'06"W	36.06'
108-103	S31°12'08"W	22.97'
103-105	S12°03'50"W	107.57'
105-106	S48°18'08"W	20.00'
106-104	N07°43'29"E	217.45'
104-107	S41°49'30"E	35.00'
107-100	S41°49'30"E	106.45'

R/W POINT STATION & OFFSET TABLE		
POINT	STATION	OFFSET
100	495+08.12	142.30'
101	495+01.96	136.60'
102	495+30.00	100.67'
103	495+04.75	55.82'
104	495+97.45	37.05'
105	494+00.89	51.90'
106	493+85.20	40.12'
107	495+74.25	62.57'
108	495+25.00	65.00'

NOTE:
EXISTING RIGHT OF WAY ACQUIRED IN EASEMENT FOR DIVISION JOB 8642(CIRCA 1984) AND CONTAINED IN THE TRAVERSE FOR PARCEL 2 IS TO REMAIN IN HIGHWAY EASEMENT

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING TO BE REMOVED
BRIDGE

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED)

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER (25) UTILITY NUMBER (40)
TLE POINT NUMBER 25
PARALLEL OFFSETS

CONVENTIONAL UTILITY SYMBOLS

WATER	W	SANITARY SEWER	SAN
GAS	G	STORM SEWER	SS
TELEPHONE	T		NON COMPENSABLE / COMPENSABLE
OVERHEAD TRANSMISSION LINES ELECTRIC	OH	POWER POLE	
	E	TELEPHONE POLE	
CABLE TELEVISION	TV	TELEPHONE PEDESTAL	
FIBER OPTIC	FO	ELECTRIC TOWER	

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	POINT OF END RECORDED AS	POE (100')
ACCESS RIGHTS	AR	REFERENCE LINE	~
ACRES	AC.	RELEASE OF RIGHTS	ROR
AND OTHERS	ET.AL.	REMAINING	REM.
BUILDING	BLDG	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
HIGHWAY EASEMENT	HE	LONG CHORD	LCH
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PROPERTY LINE	PL	LENGTH OF CURVE	L
POINT OF BEGINNING	POB	TANGENT	TAN

HAYWARD

AYRES ASSOCIATES

I, JAMES R. CAPPEART, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN James R. Cappeart S-3044 Green Bay Wis. LAND SURVEYOR

SIGNATURE: _____ DATE: 6/27/2018
PRINT NAME: JAMES R. CAPPEART
REGISTRATION NUMBER: S-3044

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION, NORTHWEST REGION

SIGNATURE: _____ DATE: 6/27/2018
PRINT NAME: MICHAEL PILLER

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\RW\DWG\0690_RWPL.DWG
APPRAISAL PLAT DATE: 9/8/2017
PLOT DATE : 7/11/2018 11:10 AM
PLOT BY : AYRES ASSOCIATES
PLOT NAME :
PLOT SCALE : 1"=100'
8140-00-20 4.01 AMENDMENT NO: 1

TRANSPORTATION PROJECT PLAT NO: 8140-00-20 - 4.02
AMENDMENT NO: 1

AMENDS PARCELS 8, 12, AND 13 OF TPP 8140-00-20-4.02, RECORDED AS DOCUMENT NO. 410597.

PART LOT 1 OF CSM 7935 RECORDED IN VOLUME 33 CERTIFIED SURVEYS, PAGE 3 DOCUMENT NO. 387655, PART OF LOT 1 CSM 7875 RECORDED IN VOLUME 32 CERTIFIED SURVEYS PAGE 199 DOCUMENT NO. 383206, PART OF LOT 1 CSM 8084 RECORDED IN VOLUME 34 CERTIFIED SURVEYS, PAGE 22 DOCUMENT NO. 398145, AND PART OF LOT 1 CSM 5837 RECORDED IN VOLUME 20 CERTIFIED SURVEYS, PAGE 180 DOCUMENT NO. 271451, ALL BEING A PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 27, AND ALSO INCLUDING PART OF LOT 1 CSM 5837 RECORDED IN VOLUME 20 CERTIFIED SURVEYS, PAGE 180 DOCUMENT NO. 271451, PART OF LOT 1 CSM 8084 RECORDED IN VOLUME 34 CERTIFIED SURVEYS, PAGE 22 DOCUMENT NO. 398145, PART OF LOT 2 OF CSM 3583 RECORDED IN VOLUME 14 CERTIFIED SURVEYS, PAGE 309 DOCUMENT NO. 231536, AND PART OF LOT 2 CSM 3665 RECORDED IN VOLUME 15 CERTIFIED SURVEYS, PAGE 69 DOCUMENT NO. 235474, ALL BEING A PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 27, AND ALSO INCLUDING PART OF LOT 1 CSM 3480 RECORDED IN VOLUME 14 CERTIFIED SURVEYS, PAGE 118 DOCUMENT NO. 226832, AND PART OF LOT 2 SAID CSM 3583, BOTH BEING A PART THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 22, ALL IN TOWNSHIP 41 NORTH, RANGE 9 WEST, CITY OF HAYWARD, SAWYER COUNTY, WISCONSIN.

411798
PAULA CHISSER
REGISTER OF DEEDS
SAWYER COUNTY, WI
04/06/2018 9:28 AM
RECORDING FEE: 25.00
PAGES 1

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8140-00-20- 4.02
AMENDMENT NO: 1

RELOCATION ORDER STH 27 - CTH B TO USH 63

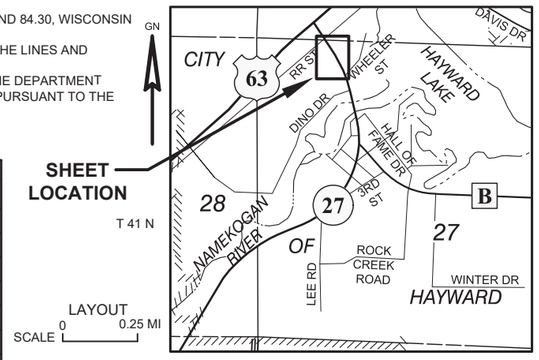
TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) AND (2), WISCONSIN STATUTES.

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NO.	OWNER(S)	INTEREST REQUIRED	R/W (SQ. FEET)	
			FEE	TLE
3	FOCUS LIGHTING, LLC	TLE	----	125
4	THE VILLAGE SMITH, LLC	TLE	----	806
5	COBORN'S, INCORPORATED	TLE	----	1,596
7	INDIANHEAD OIL CO., INC.	TLE	----	1,667
8	McDONALD'S CORPORATION	FEE & TLE	56	567
12	NORVADO, INC	FEE	321	----
13	CONVENIENCE STORE INVESTMENTS	FEE	344	----

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.



NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), SAWYER COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

A **TEMPORARY LIMITED EASEMENT** (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES. AS DEFINED HEREIN. INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE SUPERIOR.

EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 27 SHOWN HEREIN IS BASED ON DIVISION JOB NO. 8642 AND PROJECT ID 8141-03-21.

EXISTING HIGHWAY RIGHT-OF-WAY FOR RAILROAD STREET SHOWN HEREIN IS BASED ON CSM 3480, CSM 3583, AND CSM 3665.

EXISTING ACCESS CONTROL ALONG STH 27 HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT 8141-03-21.

NOTES (CONTINUED):

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" CAPPED IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD."

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

AYRES ASSOCIATES

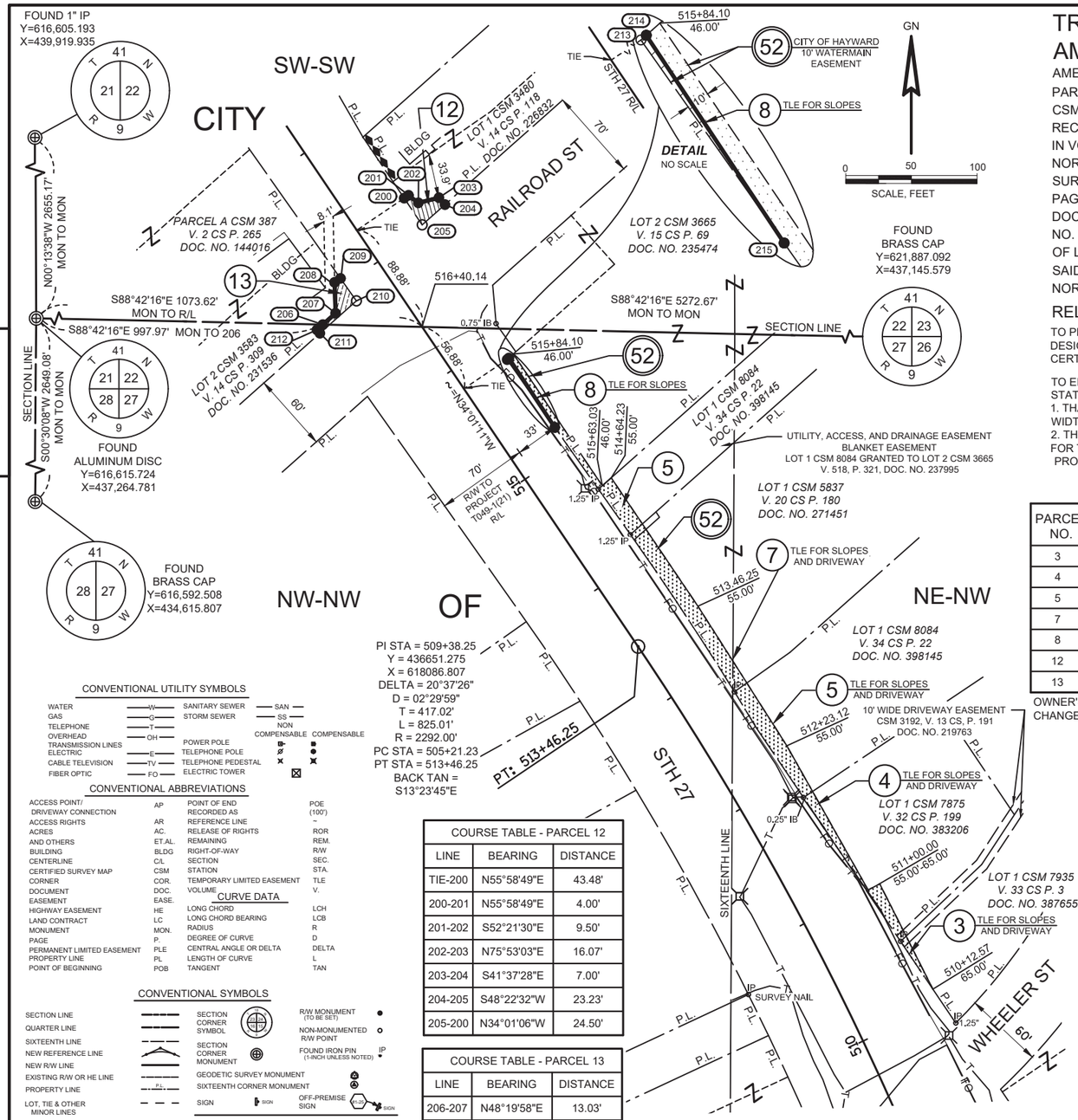
I, JAMES R. CAPPEART, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN James R. Cappeart S-3044 Green Bay Wis. LAND SURVEYOR

SIGNATURE: _____ DATE: 3/12/2018
PRINT NAME: JAMES R. CAPPEART
REGISTRATION NUMBER: S-3044

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION, NORTHWEST REGION

SIGNATURE: _____ DATE: 3/12/2018
PRINT NAME: MICHAEL PILLAR



CONVENTIONAL UTILITY SYMBOLS

WATER	W	SANITARY SEWER	SAN	
GAS	G	STORM SEWER	SS NON COMPENSABLE	COMPENSABLE
TELEPHONE	T			
OVERHEAD TRANSMISSION LINES	OH	POWER POLE		
ELECTRIC	E	TELEPHONE POLE		
CABLE TELEVISION	TV	TELEPHONE PEDESTAL		
FIBER OPTIC	FO	ELECTRIC TOWER		

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	POINT OF END RECORDED AS		POE (100')	~
ACCESS RIGHTS	AR	REFERENCE LINE			
ACRES	AC.	RELEASE OF RIGHTS		ROR	
AND OTHERS	ET AL.	REMAINING		REM.	
BUILDING	BLDG	RIGHT-OF-WAY		R/W	
CENTERLINE	C/L	SECTION		SEC.	
CERTIFIED SURVEY MAP	CSM	STATION		STA.	
CORNER	COR.	TEMPORARY LIMITED EASEMENT		TLE	
DOCUMENT	DOC.	VOLUME		V.	
EASEMENT	EASE.	**CURVE DATA**			
HIGHWAY EASEMENT	HE	LONG CHORD		LCH	
LAND CONTRACT	LC	LONG CHORD BEARING		LCB	
MONUMENT	MON.	RADIUS		R	
PAGE	P	DEGREE OF CURVE		D	
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA		DELTA	
PROPERTY LINE	PL	LENGTH OF CURVE		L	
POINT OF BEGINNING	POB	TANGENT		TAN	

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING TO BE REMOVED
BRIDGE

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN
ELECTRIC POLE
TELEPHONE POLE
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED)
COMPENSABLE
NON-COMPENSABLE
ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER
UTILITY NUMBER
TLE POINT NUMBER
PARALLEL OFFSETS

COURSE TABLE - PARCEL 12		
LINE	BEARING	DISTANCE
TIE-200	N55°58'49"E	43.48'
200-201	N55°58'49"E	4.00'
201-202	S52°21'30"E	9.50'
202-203	N75°53'03"E	16.07'
203-204	S41°37'28"E	7.00'
204-205	S48°22'32"W	23.23'
205-200	N34°01'06"W	24.50'

COURSE TABLE - PARCEL 13		
LINE	BEARING	DISTANCE
206-207	N48°19'58"E	13.03'
207-208	N01°51'20"W	23.54'
208-209	N56°03'04"E	5.42'
209-210	S35°10'53"E	20.97'
210-211	S48°22'32"W	37.19'
211-212	N41°26'51"W	3.45'
212-206	N48°19'58"E	6.08'

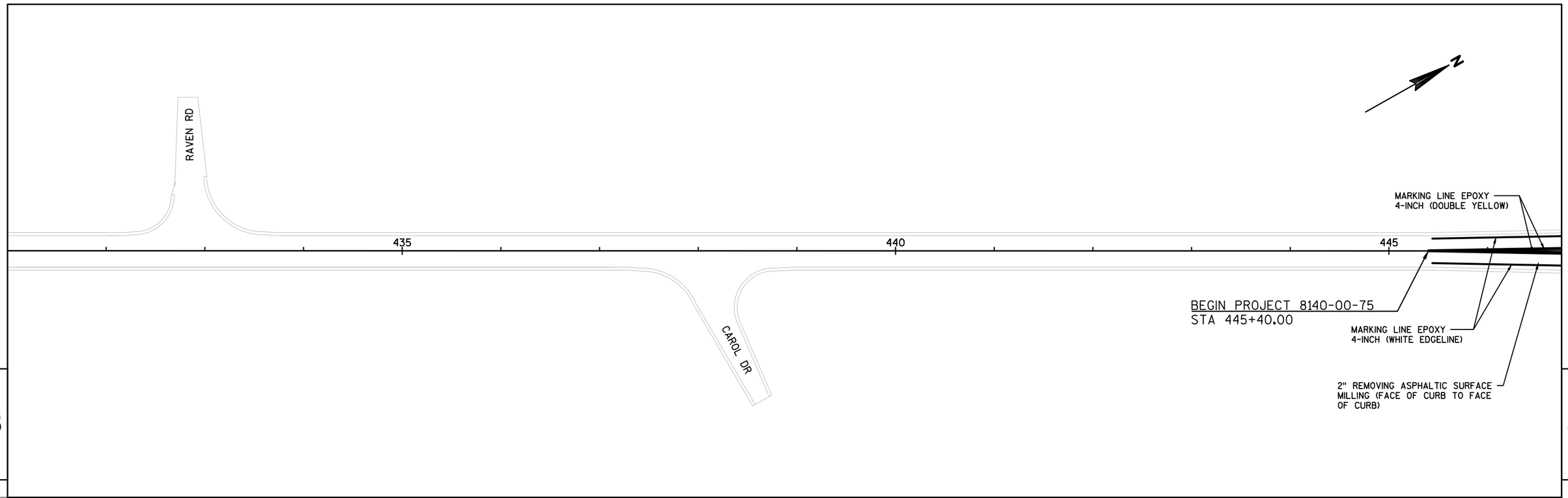
COURSE TABLE - PARCEL 8		
LINE	BEARING	DISTANCE
TIE-213	N55°58'49"W	39.63'
213-214	N48°23'27"E	1.80'
214-215	S33°33'46"E	63.32'
215-213	N35°10'53"W	63.10'

UTILITY INTEREST REQUIRED

UTILITY PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED
52	CITY OF HAYWARD	RELEASE OF RIGHTS

52 CITY OF HAYWARD
10' WATERLINE EASEMENT
V. 518, P. 336-337
DOC. NO. 237997
PARCELS 5, 7, AND 8

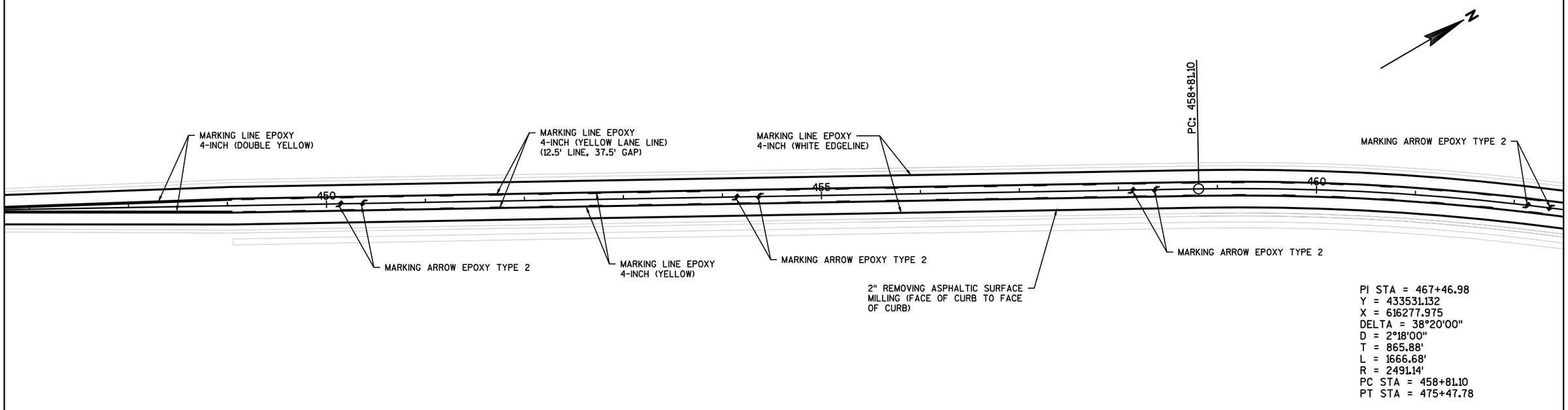
R/W POINT STATION & OFFSET TABLE		
POINT	STATION	OFFSET
200	517+29.02	43.48'
201	517+29.02	47.48'
202	517+20.00	50.46'
203	517+14.53	65.57'
204	517+07.59	66.50'
205	517+04.52	43.48'
206	516+83.87	61.73'
207	516+85.60	48.81'
208	517+05.53	36.28'
209	517+05.53	30.86'
210	516+84.56	30.44'
211	515+83.26	39.63'
212	515+83.49	41.41'
213	515+20.17	40.91'



5

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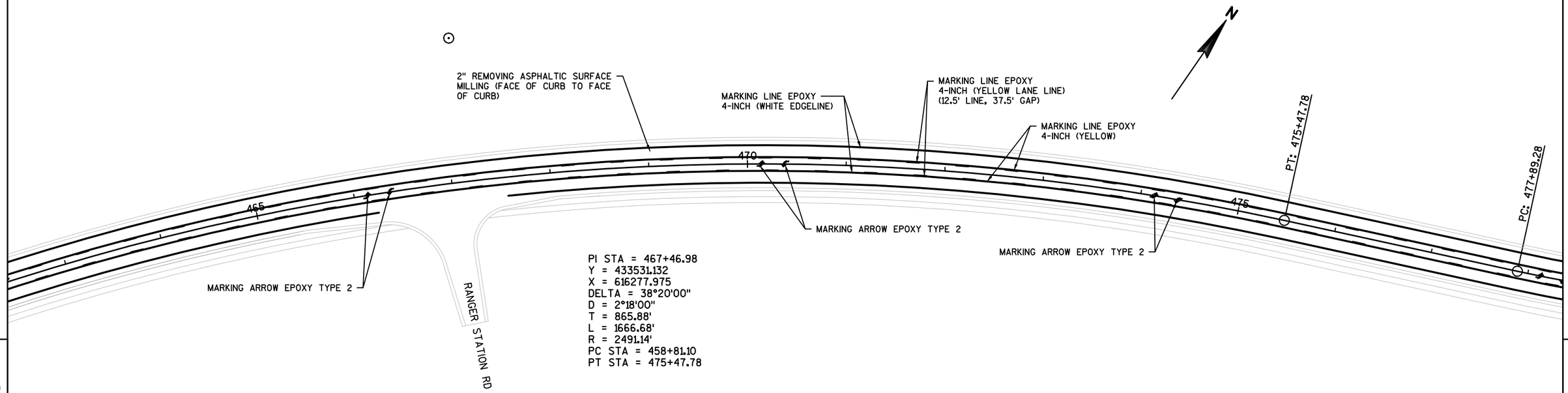
SEE SDD "PAVEMENT MARKING (TURN LANES)" FOR
ADDITIONAL INFORMATION FOR TWLTL MARKING.



PI STA = 467+46.98
Y = 433531.132
X = 616277.975
DELTA = 38°20'00"
D = 2°18'00"
T = 865.88'
L = 1666.68'
R = 2491.14'
PC STA = 458+81.10
PT STA = 475+47.78

PROJECT NO: 8140-00-75	HWY: STH 27	COUNTY: SAWYER	PLAN:	SHEET	E

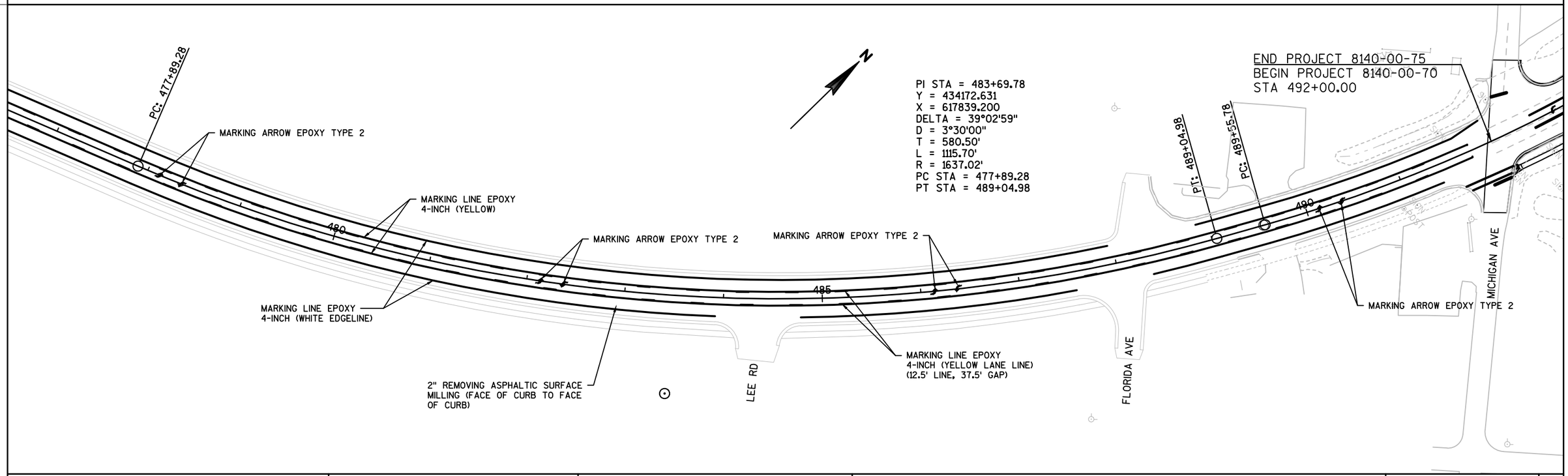
FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\SHEETSPLAN\050100_PP.DWG
LAYOUT NAME - 050101_PP
PLOT DATE : 5/25/2018 10:09 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : ---------- PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



5

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SEE SDD "PAVEMENT MARKING (TURN LANES)" FOR ADDITIONAL INFORMATION FOR TWLTL MARKING.



PROJECT NO: 8140-00-75	HWY: STH 27	COUNTY: SAWYER	PLAN:	SHEET 130	E

PI STA = 495+42.46
Y = 435241.86
X = 618422.47
DELTA = 42°00'32"
D = 3°44'59"
T = 586.68'
L = 1120.32'
R = 1528.00'
PC STA = 489+55.78
PT STA = 500+76.09

CENTURYLINK APPROXIMATE LOCATION NOT FIELD LOCATED

MICHIGAN AVE

UTILITY NOTE - SANITARY, WATER & STORM SEWER MAINTAINED BY CITY OF HAYWARD

WE ENERGIES

SLOPE INTERCEPT

STA 496+40.75, STH 27 = STA 25+00.00, CTH B

PC: 24+22.07

10' MULTI-USE PATH

STH 27 SB

STH 27 NB

5' CONCRETE SIDEWALK

CTH B

PC: 25+52.48

CENTURYLINK

END PROJECT 8140-00-75
BEGIN PROJECT 8140-00-70
STA 492+00.00

VPC STA 491+80.00
VPC EL 1192.86

VPI STA 492+60.00
VPI EL 1193.66

VPT STA 493+40.00
VPT EL 1193.40

EXISTING PROFILE

FINISHED PROFILE

-0.32%

VCL = 160.00
K = 121.05

1192.04 1192.06 | 1192.34 1192.31 | 1192.65 1192.56 | 1192.82 1192.81 | 1192.87 1193.04 | 1193.38 1193.23 | 1193.49 1193.36 | 1193.50 1193.44 | 1193.40 1193.46 | 1193.43 1193.44 | 1193.41 1193.37 | 1193.36 1193.29 | 1193.30 1193.21 | 1193.22 1193.13 | 1193.12 1193.05 | 1193.03 1192.97 | 1192.94 1192.89 | 1192.85 1192.81 | 1192.77 1192.73 | 1192.73 1192.65 | 1192.59 1192.56 | 1192.52 1192.48 | 1192.43 1192.40 | 1192.40 1192.32 | 1192.34 1192.24

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	PLAN AND PROFILE: STH 27	SHEET 131	E

PC: 24+22.07

10' MULTI-USE PATH

UTILITY NOTE - SANITARY, WATER & STORM SEWER MAINTAINED BY CITY OF HAYWARD

N

STRUCTURE B-57-0058
PROJECT ID 8140-25-71

SLOPE INTERCEPT

WE ENERGIES

CENTURYLINK

CAUTION

PT: 500+76.09

MULTI-USE PATH TO REMAIN

497+00

498+00

499+00

500+00

501+00

502+00

503+00

STH 27 SB

STH 27 NB

5' CONCRETE SIDEWALK

CENTURYLINK

SLOPE INTERCEPT

1ST ST

SPECTRUM

XCEL ENERGY (ELECTRIC)

XCEL ENERGY (ELECTRIC)

NAMEKAGON RIVER

5

5

VCL = 80.00
K = 97.35

VCL = 60.00
K = 120.00

VPC STA 501+20.00
VPC EL 1193.17

VPI STA 501+50.00
VPI EL 1193.47

VPT STA 501+80.00
VPT EL 1193.62

VPC STA 502+00.00
VPC EL 1193.72

FINISHED PROFILE

EXISTING PROFILE

0.50%

1.00%

0.50%

VPC STA 498+60.00
VPC EL 1191.73

VPI STA 499+00.00
VPI EL 1191.60

VPT STA 499+40.00
VPT EL 1191.80

VPC STA 499+95.00
VPC EL 1192.07

VPI STA 500+25.00
VPI EL 1192.22

VPT STA 500+55.00
VPT EL 1192.52

VCL = 60.00
K = 120.00

VCL = 250.00
K = 263.16

1200
1198
1196
1194
1192
1190
1188
1186
1184

497+00 +25 +50 +75 498+00 +25 +50 +75 499+00 +25 +50 +75 500+00 +25 +50 +75 501+00 +25 +50 +75 502+00 +25 +50 +75 503+00

1192.34 1192.24 1192.24 1192.16 1192.15 1192.08 1192.06 1192.00 1191.89 1191.92 1191.76 1191.84 1191.67 1191.76 1191.70 1191.69 1191.65 1191.68 1191.68 1191.74 1191.90 1191.85 1192.01 1191.97 1192.06 1192.10 1192.19 1192.26 1192.46 1192.48 1192.82 1192.72 1193.05 1192.97 1193.27 1193.22 1193.47 1193.44 1193.56 1193.60 1193.64 1193.72 1193.80 1193.84 1193.90 1193.93 1193.99 1194.03

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	PLAN AND PROFILE: STH 27	SHEET 132 E

UTILITY NOTE - SANITARY, WATER & STORM SEWER MAINTAINED BY CITY OF HAYWARD

XCEL ENERGY (ELECTRIC)

CENTURYLINK

SLOPE INTERCEPT

DYNO DR

NORVADO

SPECTRUM

WE ENERGIES

10' MULTI-USE PATH

PC: 505+21.23

STRUCTURE B-57-0058
PROJECT ID 8140-25-71

503+00 504+00 505+00 506+00 507+00 508+00 509+00

STH 27 SB

STH 27 NB

5' CONCRETE SIDEWALK

NAMEKAGON RIVER

PI STA = 509+36.78
Y = 436649.85
X = 618087.15
DELTA = 20°33'10"
D = 2°29'59"
T = 415.55'
L = 822.18'
R = 2292.00'
PC STA = 505+21.23
PT STA = 513+43.40

BAY AVE

5

5

VPI STA 503+25.00
VPI EL 1194.35

VPT STA 504+50.00
VPT EL 1193.79

VPC STA 504+60.00
VPC EL 1193.74

VPI STA 504+90.00
VPI EL 1193.61

VPT STA 505+20.00
VPT EL 1193.20

VCL = 70.00
K = 70.00

VCL = 160.00
K = 177.78

0.45%

-1.35%

-0.35%

FINISHED PROFILE

EXISTING PROFILE

VCL = 250.00
K = 263.16

VCL = 60.00
K = 66.67

VPC STA 505+65.00
VPC EL 1192.59

VPI STA 506+00.00
VPI EL 1192.12

VPT STA 506+35.00
VPT EL 1192.00

VPC STA 507+95.00
VPC EL 1191.44

VPI STA 508+75.00
VPI EL 1191.16

1200 1198 1196 1194 1192 1190 1188 1186 1184

503+00 +25 +50 +75 504+00 +25 +50 +75 505+00 +25 +50 +75 506+00 +25 +50 +75 507+00 +25 +50 +75 508+00 +25 +50 +75 509+00

| | | |

STA 509+13
REMOVE CE

WE ENERGIES
SPECTRUM
CENTURYLINK
NORVADO

UTILITY NOTE - SANITARY, WATER & STORM SEWER MAINTAINED BY CITY OF HAYWARD

SLOPE INTERCEPT

PT: 513+43.40

CAUTION

509+00 510+00 511+00 512+00 513+00 514+00 515+00

STH 27 SB

STH 27 NB

5' CONCRETE SIDEWALK

5' CONCRETE SIDEWALK

CENTURYLINK

SLOPE INTERCEPT

XCEL ENERGY (ELECTRIC)

SPECTRUM

WHEELER ST

PETROLEUM CONTAMINATED SOIL AND GROUNDWATER MANAGEMENT AREA

5

5

1202 1200 1198 1196 1194 1192 1190 1188 1186

VCL = 160.00
K = 177.78

VPT STA 509+55.00
VPT EL 1191.60

0.55%

FINISHED PROFILE

EXISTING PROFILE

VPC STA 512+75.00
VPC EL 1193.36

VPI STA 513+25.00
VPI EL 1193.63

VPT STA 513+75.00
VPT EL 1193.85

VCL = 100.00
K = 848.81

509+00 +25 +50 +75 510+00 +25 +50 +75 511+00 +25 +50 +75 512+00 +25 +50 +75 513+00 +25 +50 +75 514+00 +25 +50 +75 515+00

1191.25 1191.38 1191.34 1191.46 1191.44 1191.57 1191.54 1191.71 1191.64 1191.85 1191.76 1191.98 1191.92 1192.12 1192.08 1192.26 1192.23 1192.40 1192.38 1192.53 1192.53 1192.67 1192.60 1192.81 1192.80 1192.95 1192.95 1193.08 1193.09 1193.22 1193.23 1193.36 1193.41 1193.49 1193.56 1193.62 1193.74 1193.74 1193.83 1193.85 1193.94 1193.96 1194.06 1194.07 1194.16 1194.17 1194.29 1194.28 1194.40 1194.39

PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	PLAN AND PROFILE: STH 27	SHEET 134	E

UTILITY NOTE - SANITARY, WATER & STORM SEWER MAINTAINED BY CITY OF HAYWARD

SLOPE INTERCEPT

WE ENERGIES

CAUTION

RAILROAD ST

USH 63

EP: 519+72.24

STH 27 SB

CENTURYLINK

515+00 516+00 517+00 518+00 519+00

STH 27 NB

CAUTION

CENTURYLINK APPROXIMATE LOCATION NOT FIELD LOCATED

6' CONCRETE SIDEWALK

SLOPE INTERCEPT

CENTURYLINK

WE ENERGIES

RAILROAD ST

XCEL ENERGY (TRANSMISSION)

END PROJECT 8140-00-73
STA 515+84.00

END PROJECT 8140-00-70
STA 518+67.00
MATCH EXISTING

5

5

EXISTING PROFILE

FINISHED PROFILE

0.43%

VPC STA 516+50.00
VPC EL 1195.04

VPI STA 517+25.00
VPI EL 1195.36

VPT STA 518+00.00
VPT EL 1194.27

-1.46%

STA 518+66.95
EL 1193.29

STA 518+96.17
EL 1192.02

-4.35%

VCL = 150.00
K = 79.18

1202 1200 1198 1196 1194 1192 1190 1188 1186

515+00 +25 +50 +75 516+00 +25 +50 +75 517+00 +25 +50 +75 518+00 +25 +50 +75 519+00 +25 +50 +75 520+00 +25 +50 +75 521+00

1194.40 1194.39 | 1194.53 1194.50 | 1194.65 1194.61 | 1194.76 1194.71 | 1194.83 1194.82 | 1194.90 1194.93 | 1194.95 1195.04 | 1195.01 1195.11 | 1195.07 1195.10 | 1195.00 1195.01 | 1194.83 1194.84 | 1194.64 1194.59 | 1194.22 1194.27 | 1193.85 1193.90 | 1193.52 1193.54 | 1192.92 1192.94 | 1191.95

PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	PLAN AND PROFILE: STH 27	SHEET 135	E

N

CONSTRUCTION LIMITS
STA 24+00.00
MATCH EXISTING
SAWCUT REQ'D

SLOPE INTERCEPT

PC: 24+22.07

BP: 23+06.87

N89° 50' 35"E

PI STA = 24+89.69
Y = 435395.48
X = 618317.73
DELTA = 37°21'34"
D = 28°38'52"
T = 67.62'
L = 130.41'
R = 200.00'
PC STA = 24+22.07
PT STA = 25+52.48

UTILITY NOTE - SANITARY, WATER & STORM SEWER MAINTAINED BY CITY OF HAYWARD

SLOPE INTERCEPT

STA 496+40.75, STH 27 =
STA 25+00.00, CTH B

STH 27 SB

STH 27 NB

PI STA = 25+96.09
Y = 435328.23
X = 618406.33
DELTA = 10°28'12"
D = 12°02'13"
T = 43.61'
L = 86.98'
R = 476.00'
PC STA = 25+52.48
PT STA = 26+39.46

SLOPE INTERCEPT

PC: 25+52.48

PT: 26+39.46

SECOND ST

CONSTRUCTION LIMITS
STA 26+96.40
MATCH EXISTING
SAWCUT REQ'D

CAUTION

WE ENERGIES

SLOPE INTERCEPT

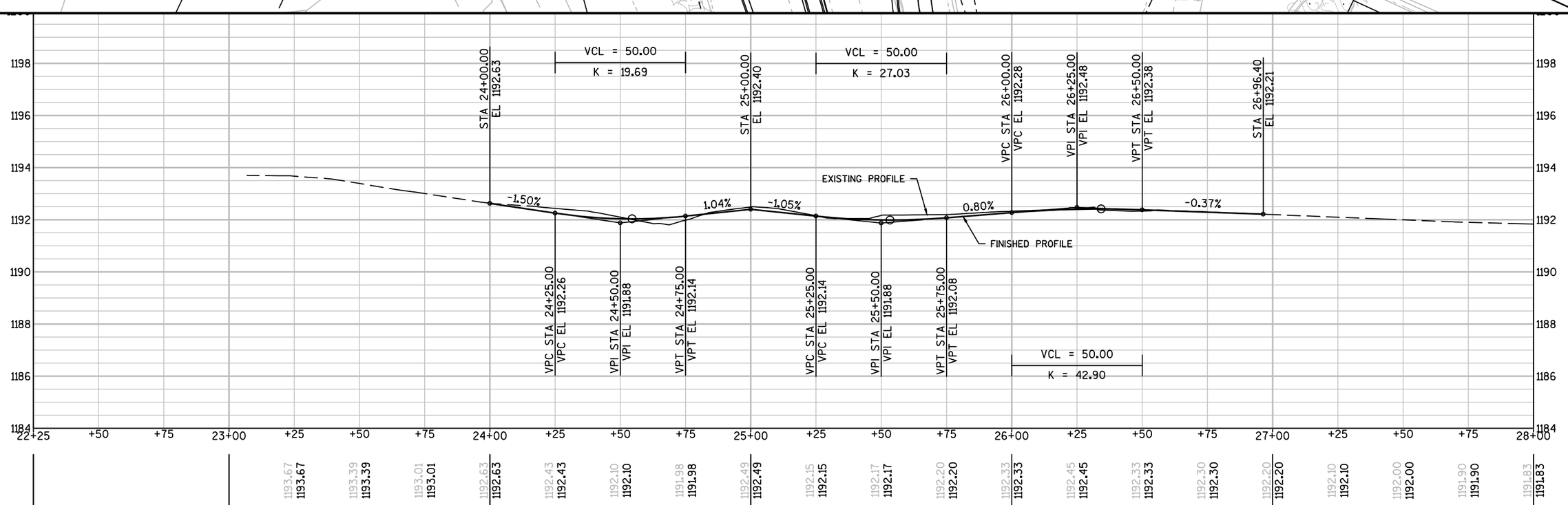
CENTURYLINK

CTH B

22+00 23+00 24+00 25+00 26+00 27+00 28+00

497+00 496+00

5 5



PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	PLAN AND PROFILE: CTH B	SHEET 136	E

Standard Detail Drawing List

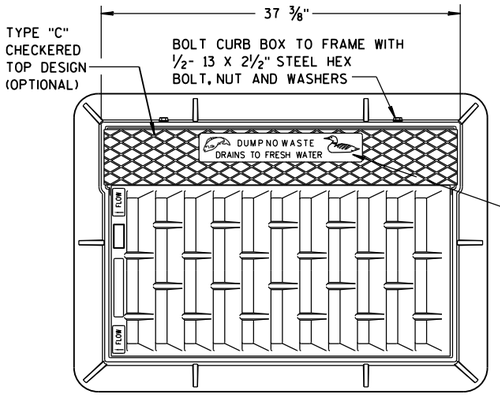
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-19A	CURB RAMPS TYPES 1 AND 1-A
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19C	CURB RAMPS TYPES 4A AND 4A1
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D18-02	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08D19-02	DRIVEWAY AND SIDEWALK RAMPS TYPE Z
08D20-01	DRIVEWAYS WITH CURB & GUTTER RETURNS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-10	CONCRETE BASE TYPE 10
09C12-09A	CONCRETE BASE TYPE 13
09C12-09B	CONCRETE BASE TYPE 13
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09E01-14A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-14B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-14C	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E05-06	TRAFFIC SIGNAL STANDARD ORNAMENTAL BRACKET MOUNTINGS TYPICAL FOR 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-08B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-08D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-08E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
11B02-02	CONCRETE MEDIAN NOSE
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
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"
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

6

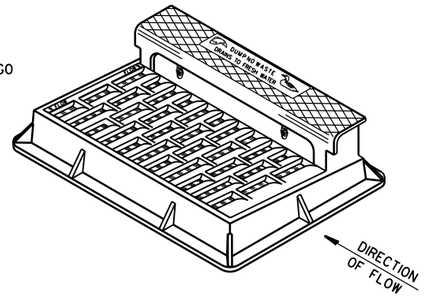
Standard Detail Drawing List

15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
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)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-04	MEDIAN ISLAND MARKING
15C19-05A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-05B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C20-02	YIELD MARKING
15C24-04	36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-03A	PAVEMENT MARKING (INTERSECTIONS)
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-06	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING

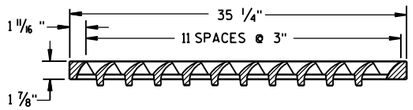
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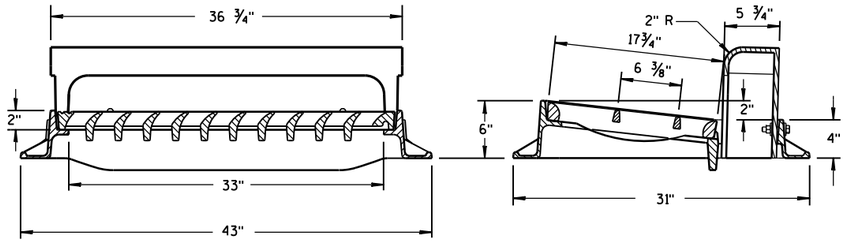


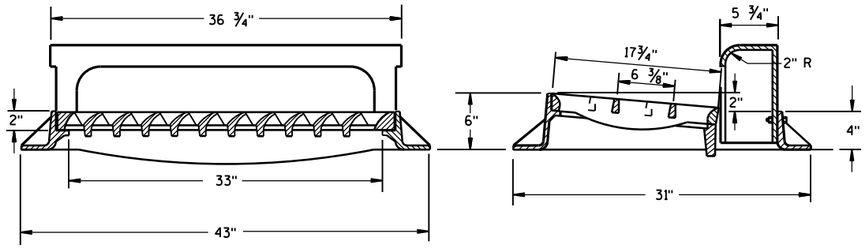
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

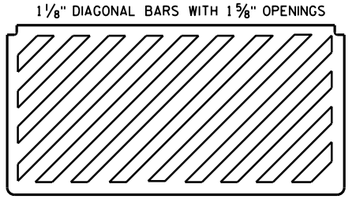






TYPE "H"

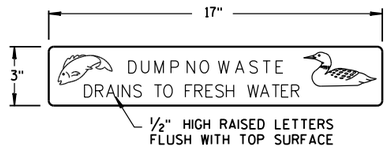
NOTE: EITHER CASTING IS ACCEPTABLE



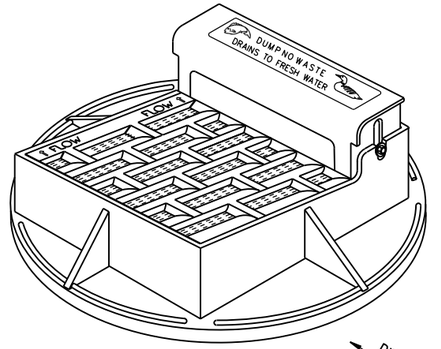
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

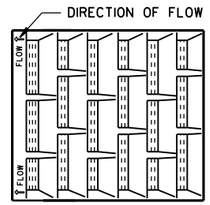
NOTE:
GRATE IS REVERSIBLE.

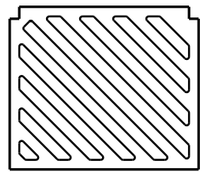
GENERAL NOTES

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

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

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

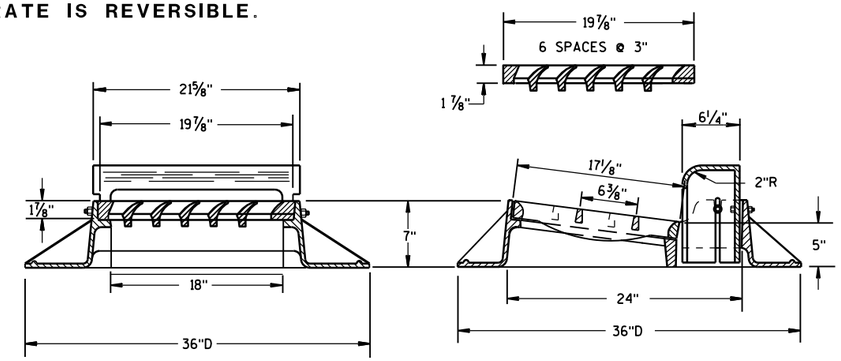




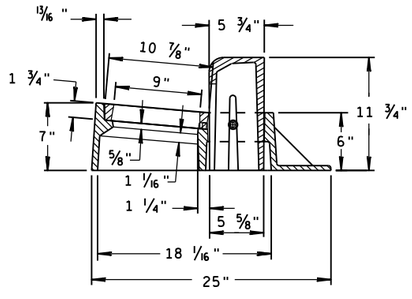
SPECIAL GRATE FOR TYPE "A" COVER

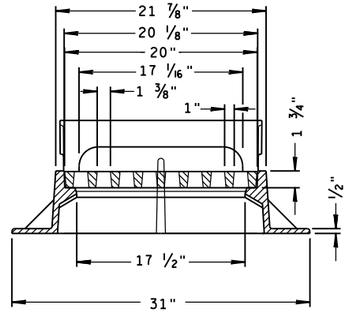
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

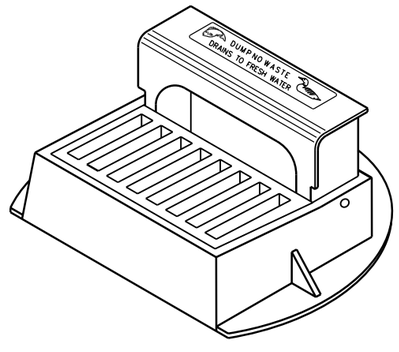


TYPE "A"





TYPE "Z"

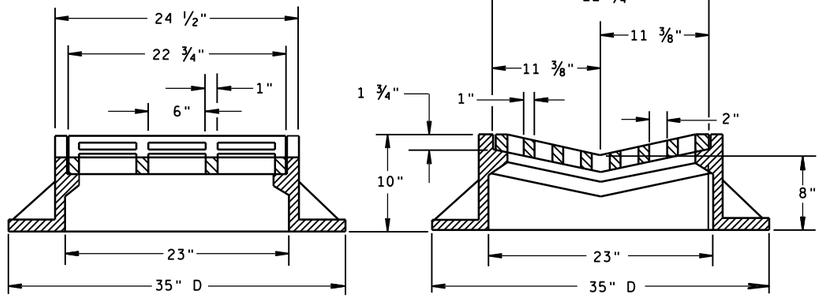


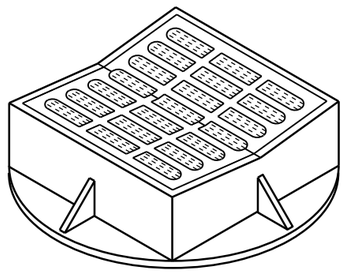
INLET COVERS
TYPE A, H, A-S, H-S & Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

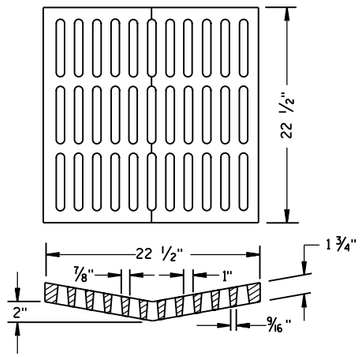
APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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



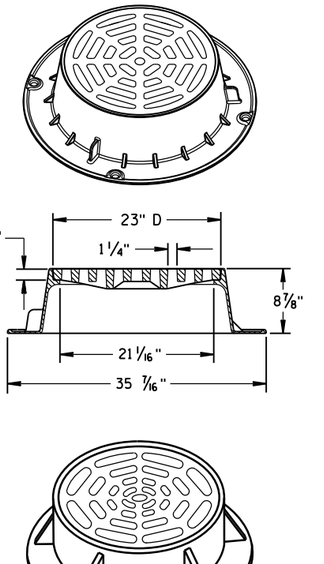


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

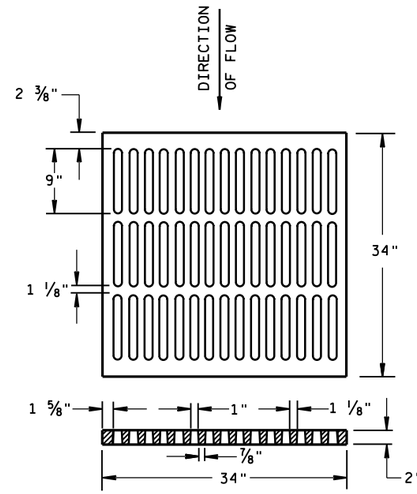
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

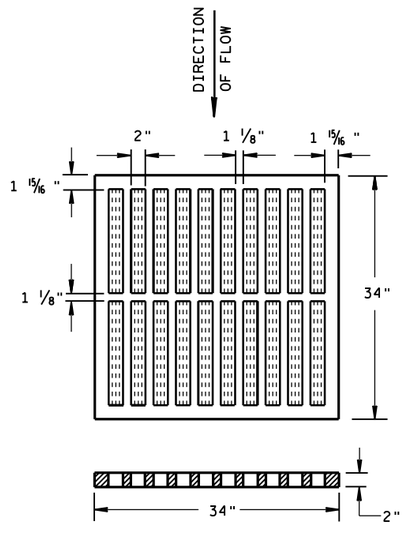
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



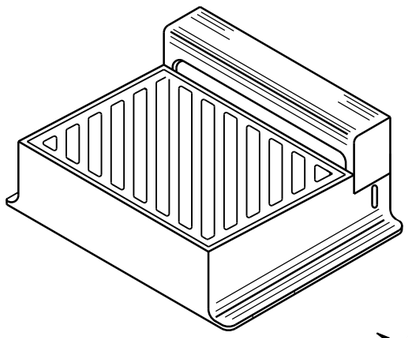
ALTERNATIVE TYPE "MS"

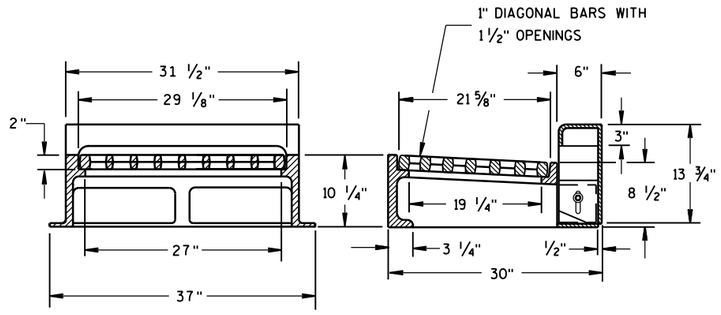
USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE





NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

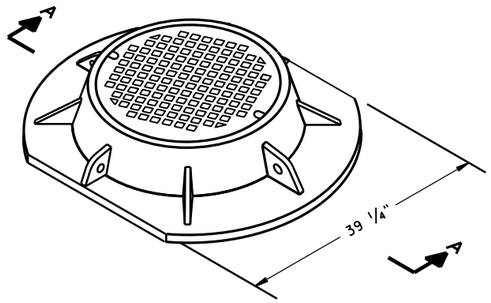
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

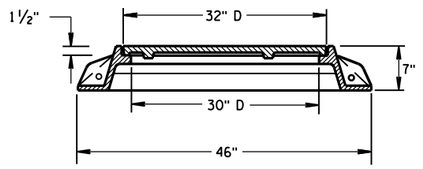
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

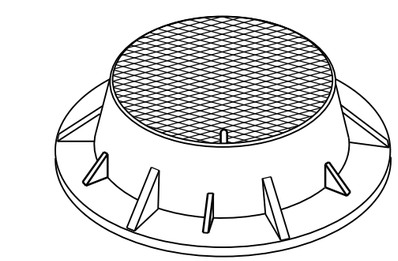
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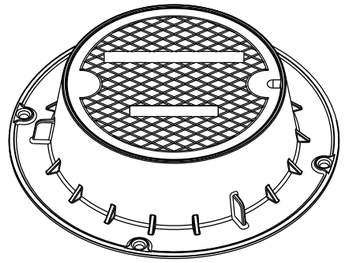
S.D.D. 8 A 5-19b

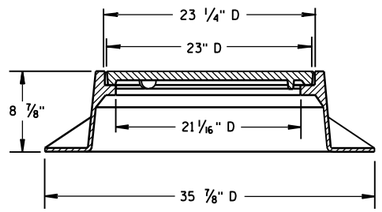


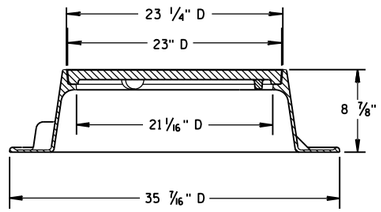


SECTION A-A
TYPE "K"









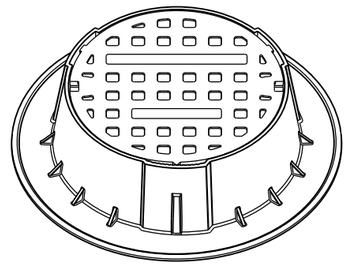
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

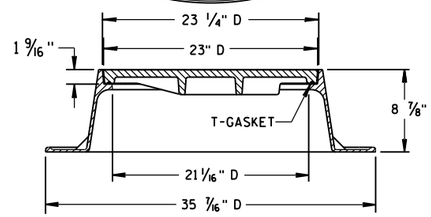
GENERAL NOTES

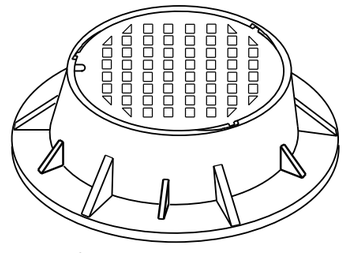
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

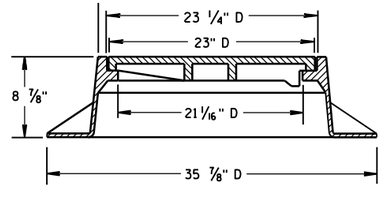
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

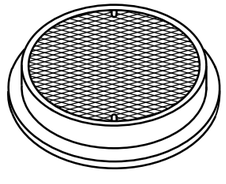


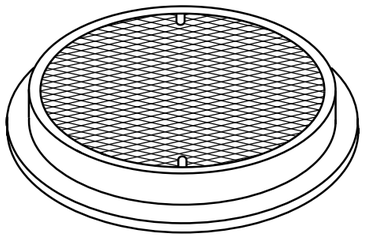


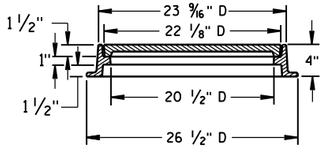




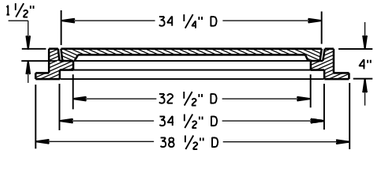
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



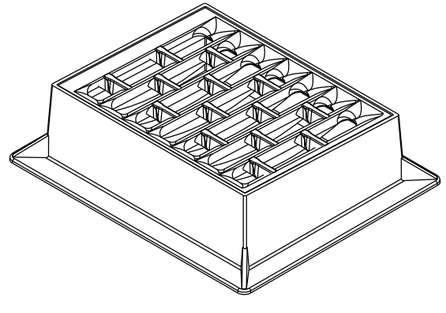


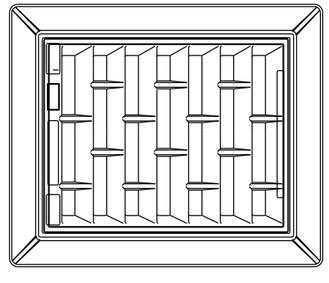


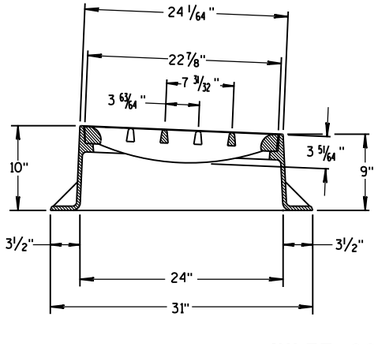
TYPE "L"

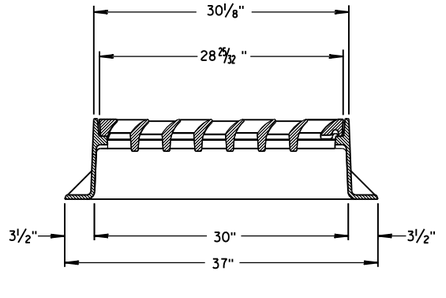


TYPE "M"









INLET COVER TYPE "BW"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

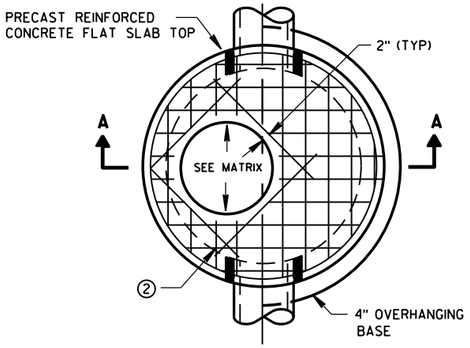
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

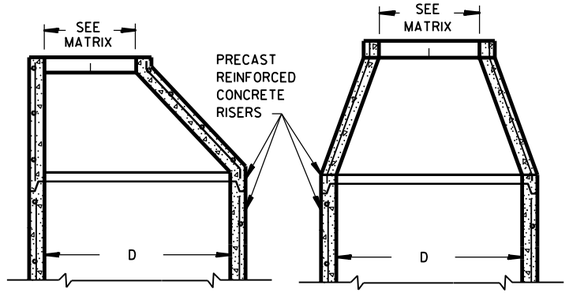
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S.D.D. 8 A 5-19d

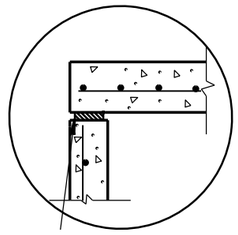


PLAN VIEW CIRCULAR OPENING

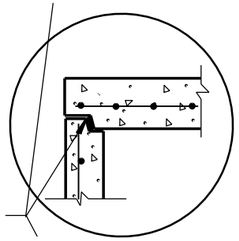


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

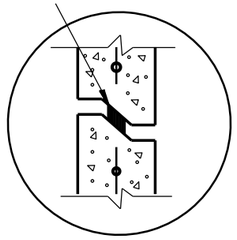


TOP WITH PLAIN END JOINT



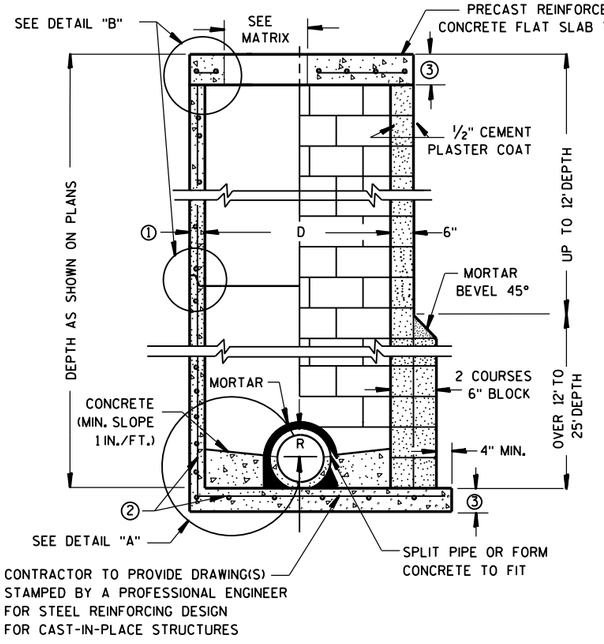
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



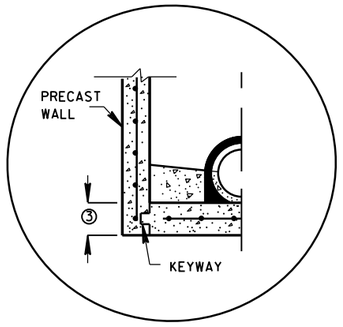
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

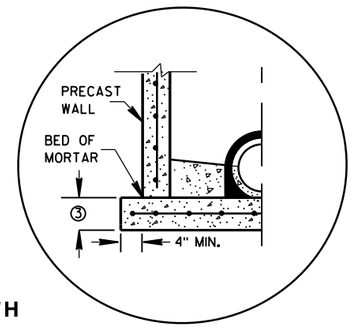


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

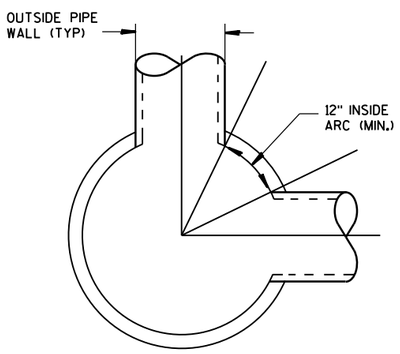


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

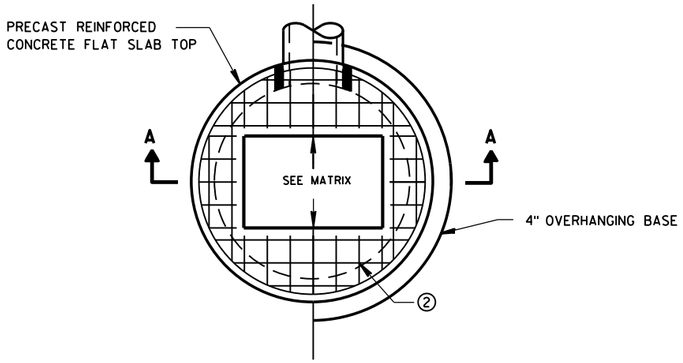
APPROVED

Sept., 2016
DATE

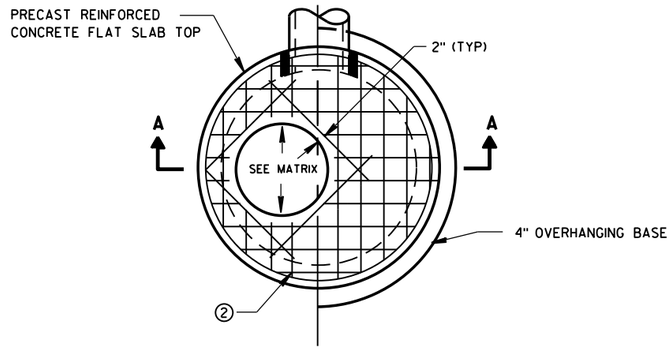
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
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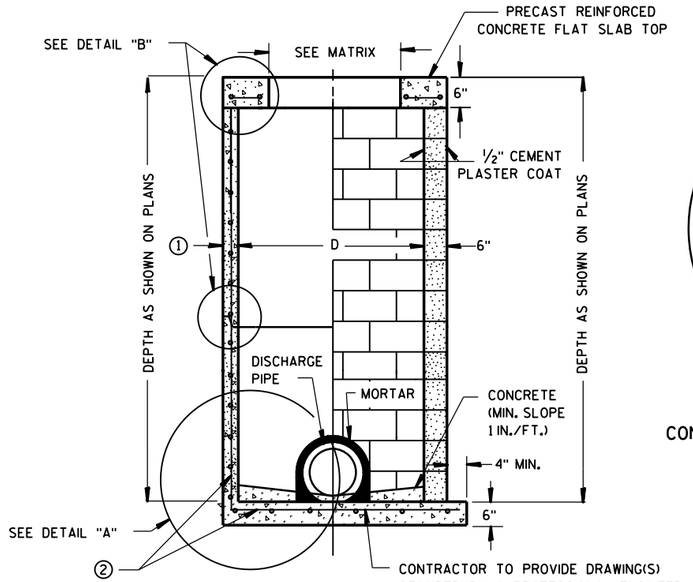
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S.D.D. 8 B 9-2



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

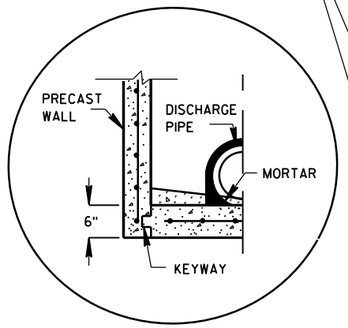


SECTION A-A

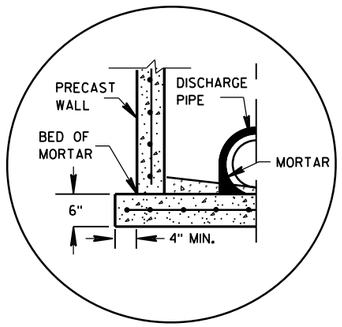
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

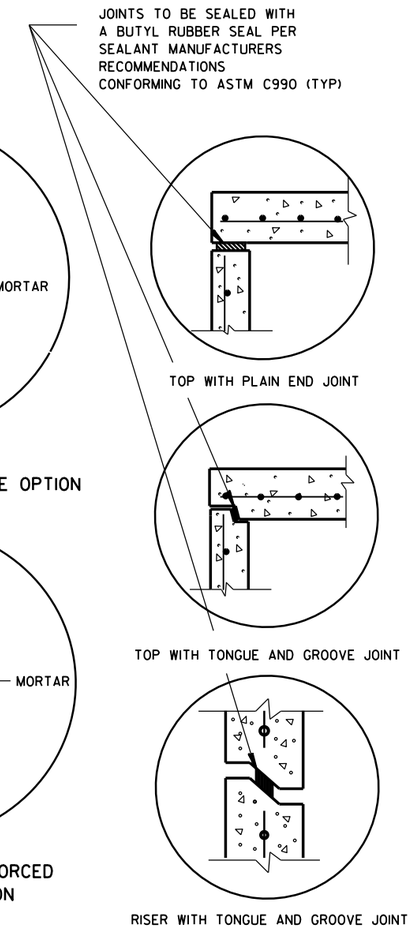


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



TOP WITH PLAIN END JOINT

TOP WITH TONGUE AND GROOVE JOINT

RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

GENERAL NOTES

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

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BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

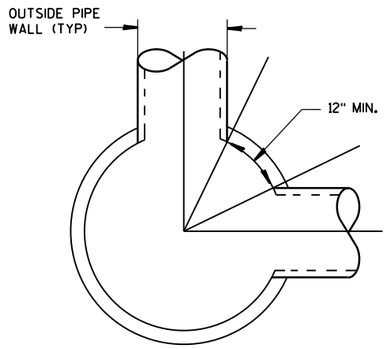
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

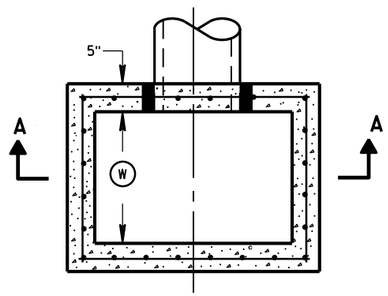
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — /S/ Rodney Taylor
DATE — ROADWAY STANDARDS | UNIT SUPERVI ENT
FHWA

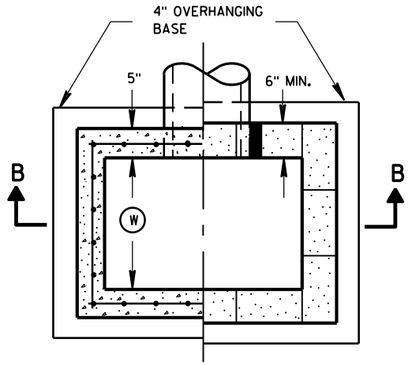
INLETS 3-FT AND 4-FT DIAMETER

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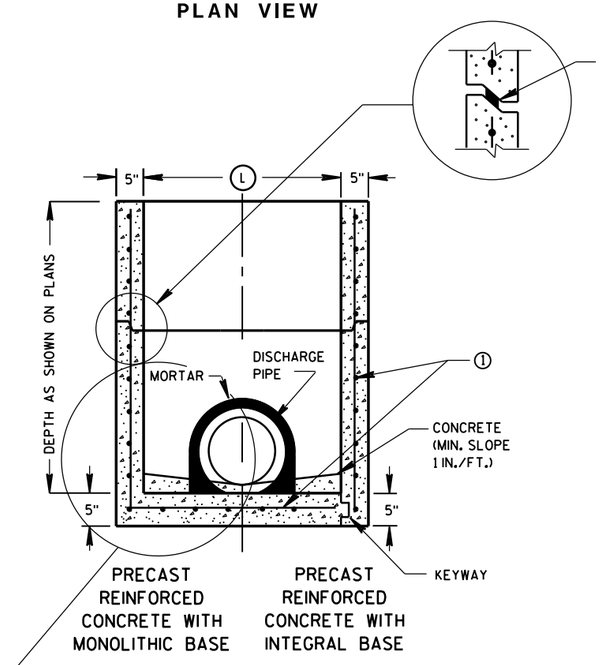
S.D.D. 8 C 6-2



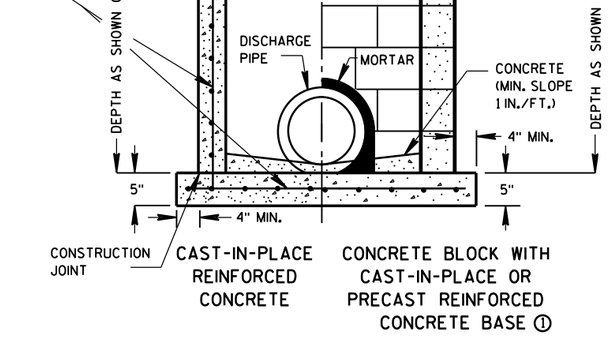
PLAN VIEW



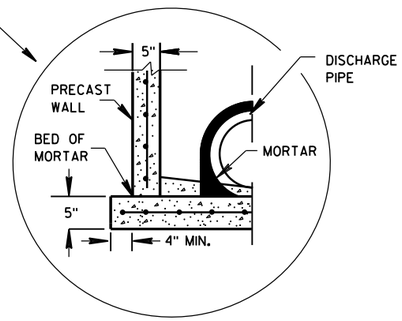
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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

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

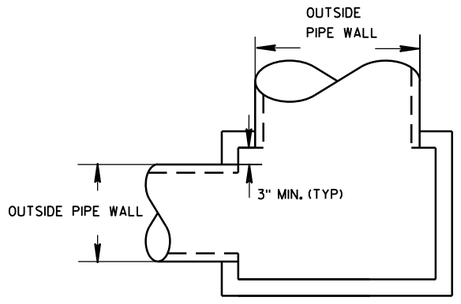
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



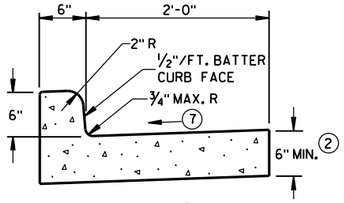
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

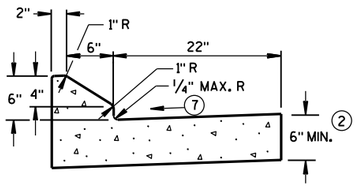
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT
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FHWA

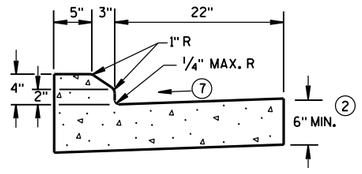
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



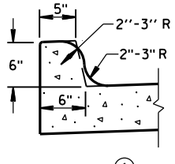
TYPES A (1) & D



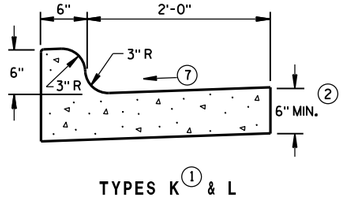
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

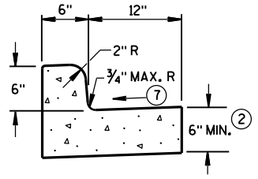


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



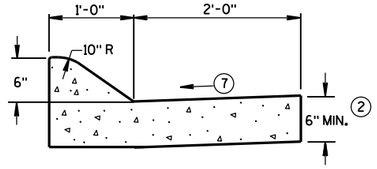
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

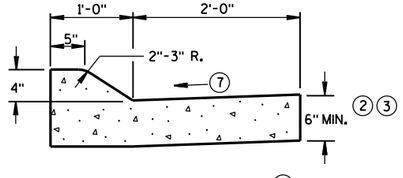


TYPES A (1) & D

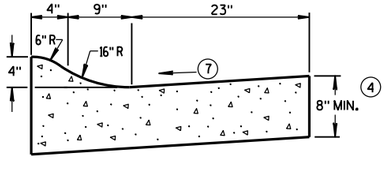
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

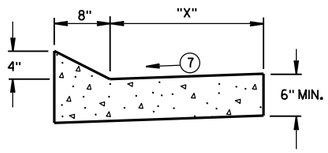


4" SLOPED CURB TYPES A (1) & D



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.

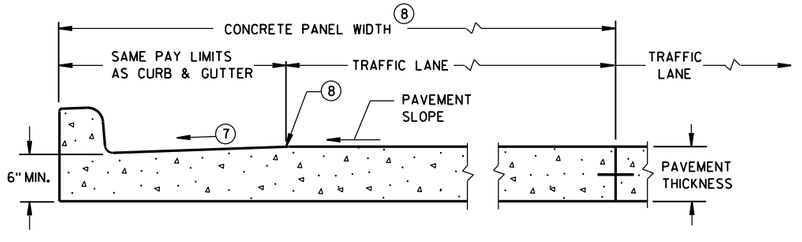
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(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.

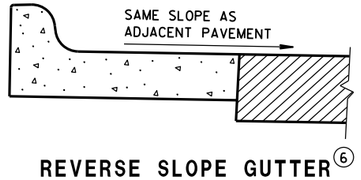
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

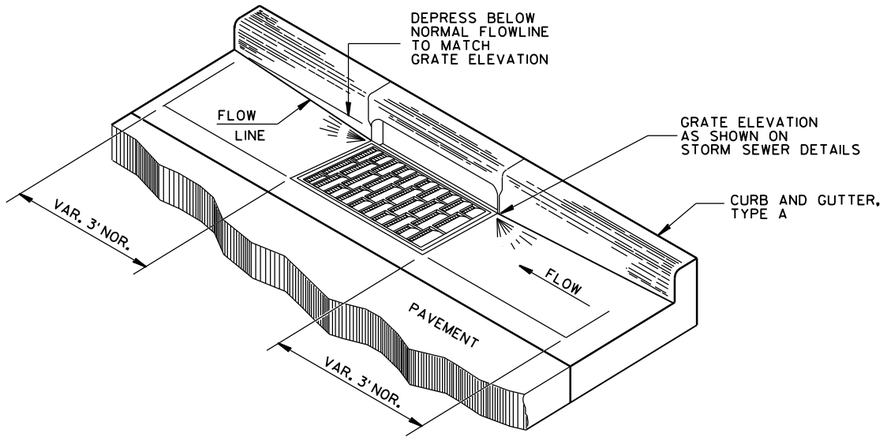
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

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

6

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.

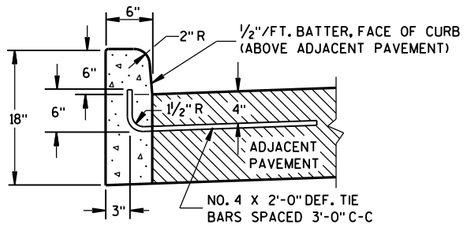
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

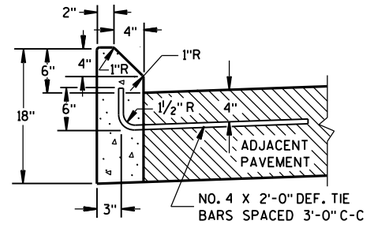
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(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.

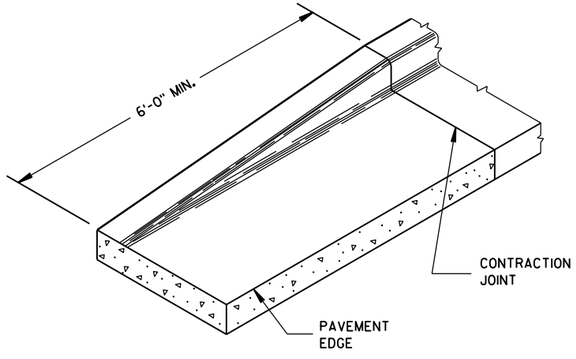


TYPES A(1) & D

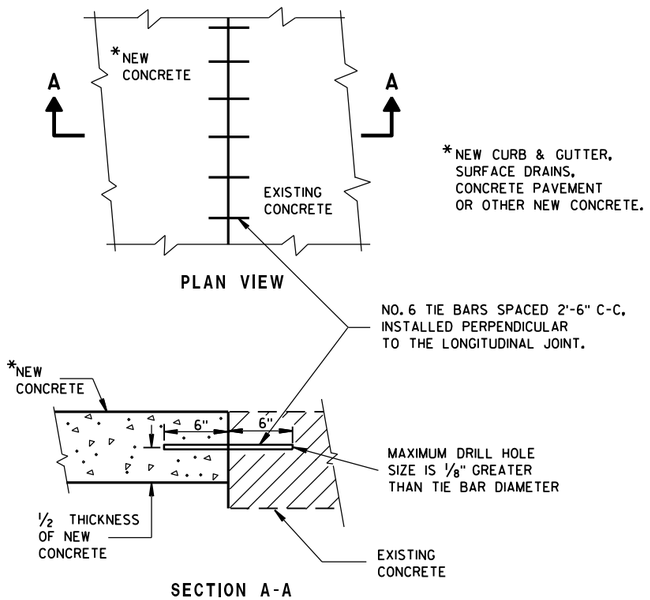


TYPES G(1) & J

CONCRETE CURB



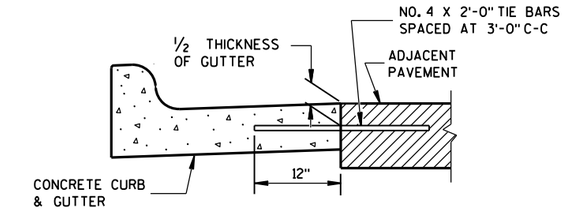
END SECTION CURB & GUTTER



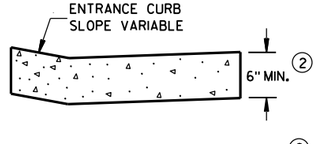
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

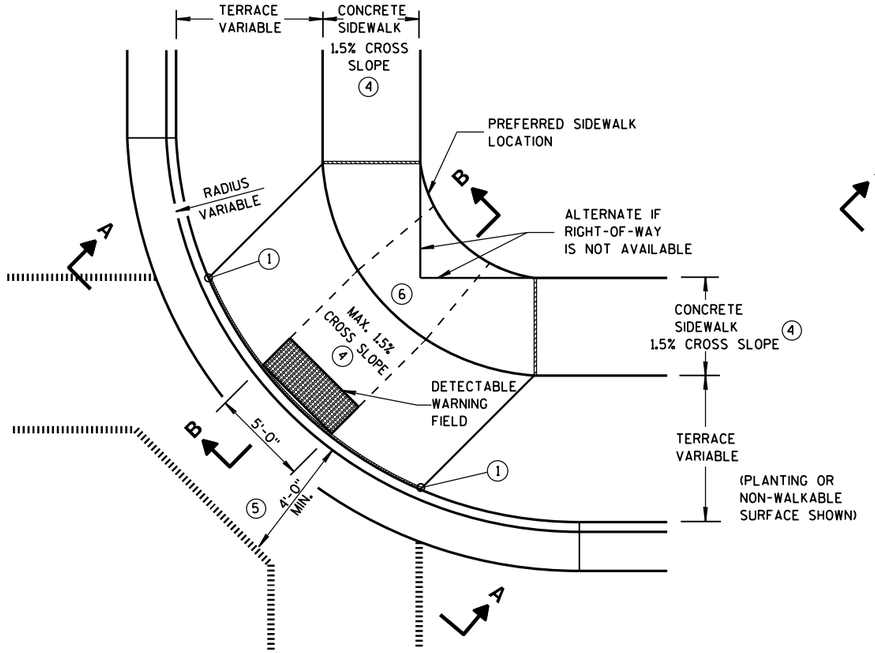
CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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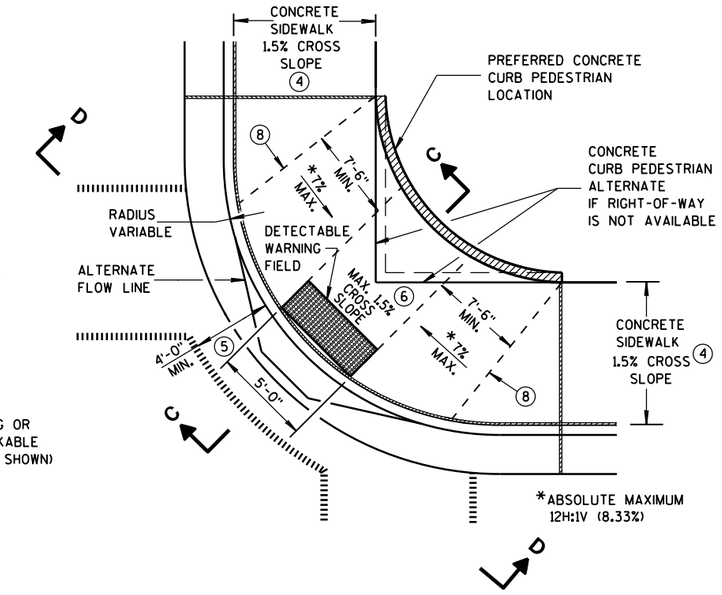
S.D.D. 8 D 1-20b



PLAN VIEW

TYPE 1 RAMP

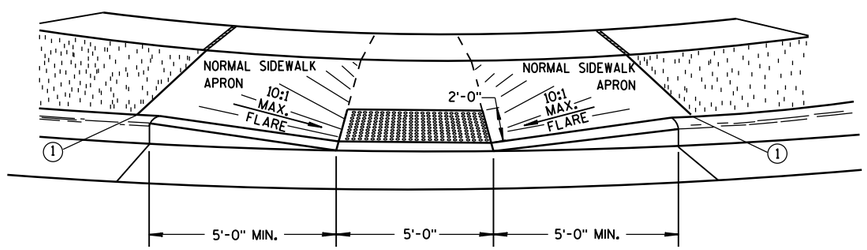
(CENTER OF CORNER RADIUS)



PLAN VIEW

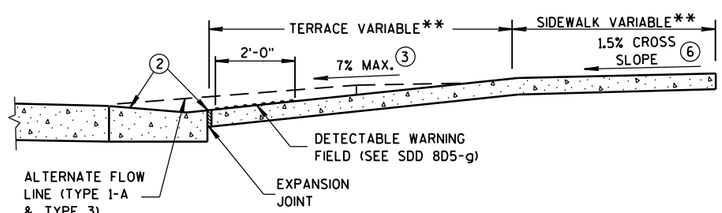
TYPE 1-A RAMP

(NO TERRACE)

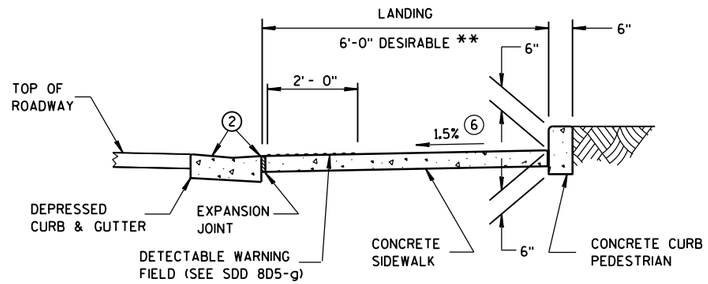


VIEW A-A

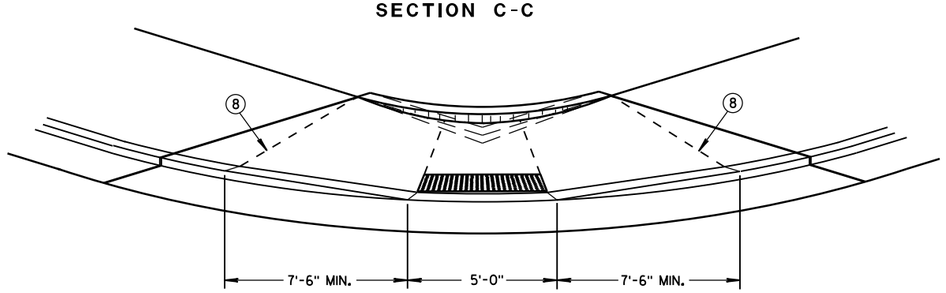
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

GENERAL NOTES

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

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

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

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

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

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

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

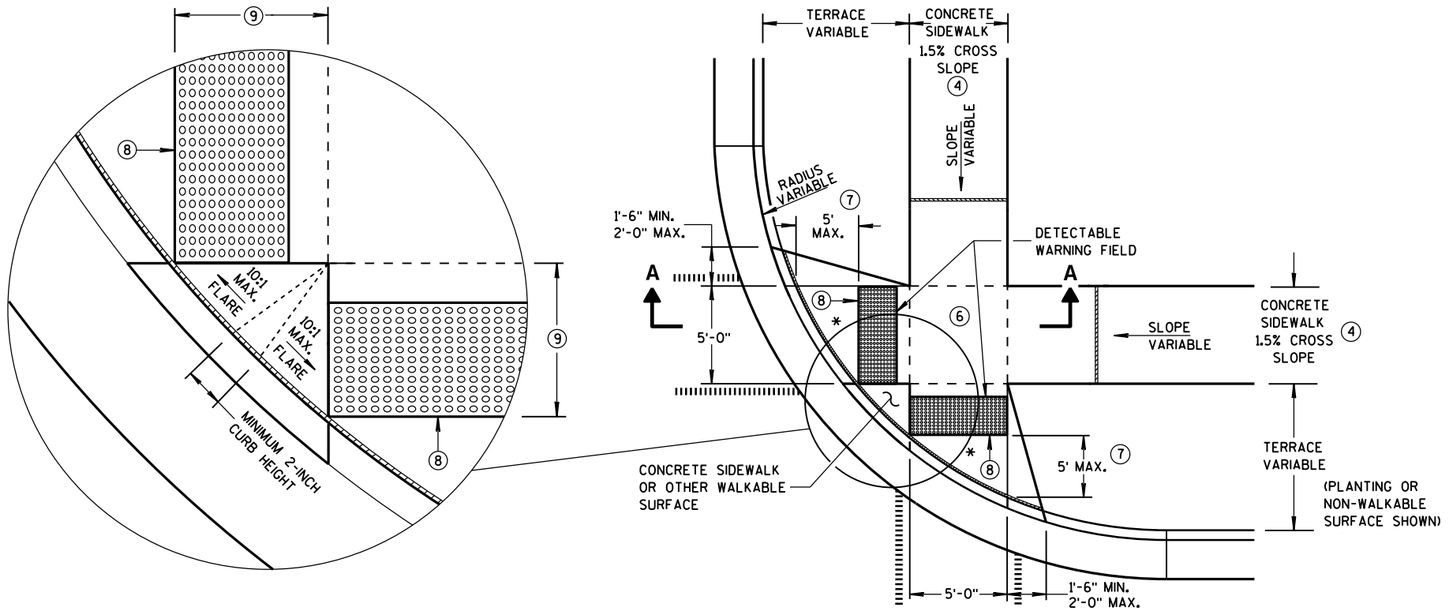
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

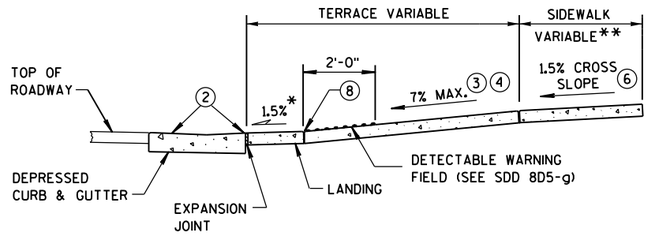
6

S.D.D. 8 D 5-19a



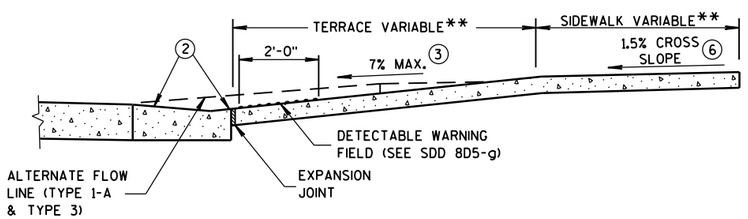
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

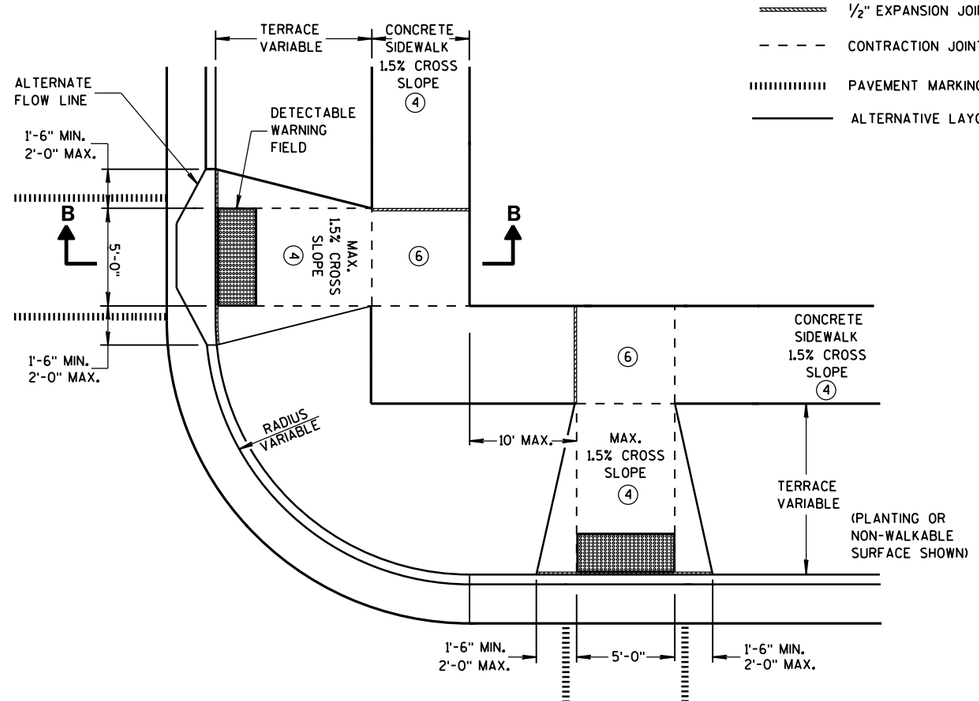


SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

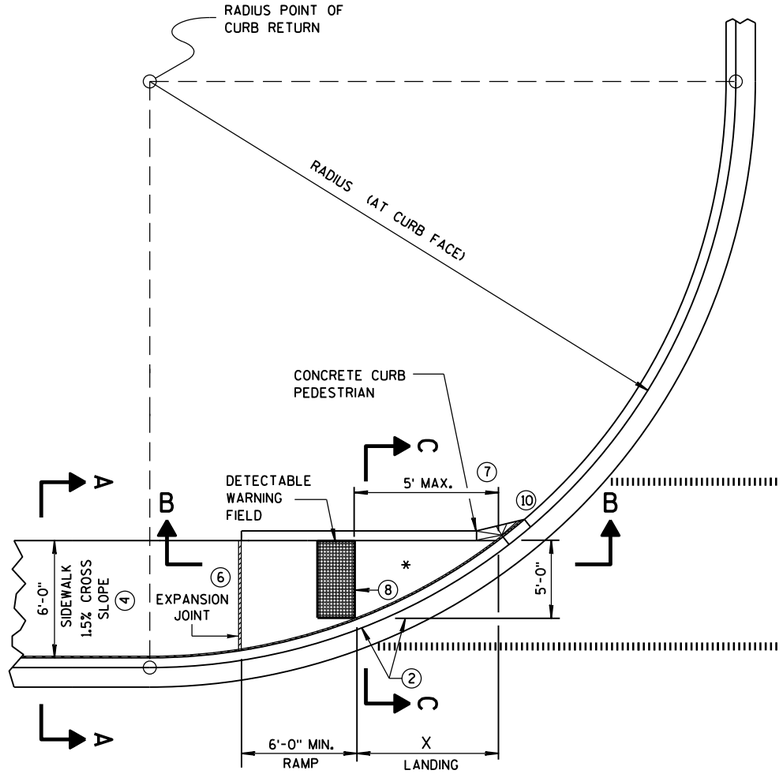
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

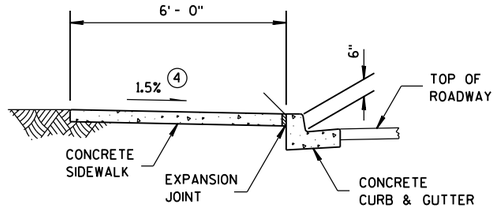
S.D.D. 8 D 5-19b



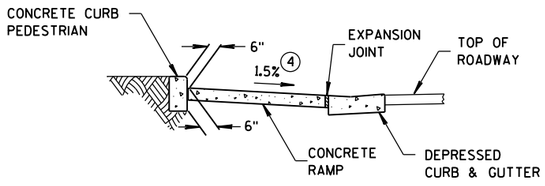
CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X
10 FEET	4'-7"
15 FEET	6'-5½"

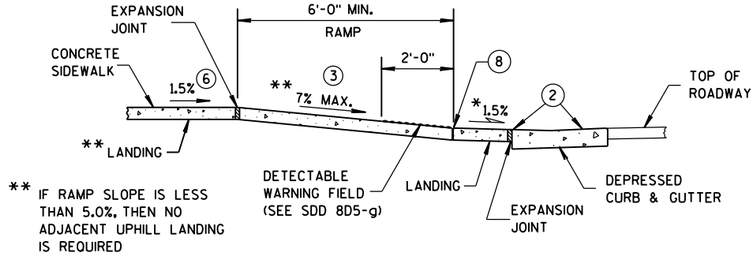
INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



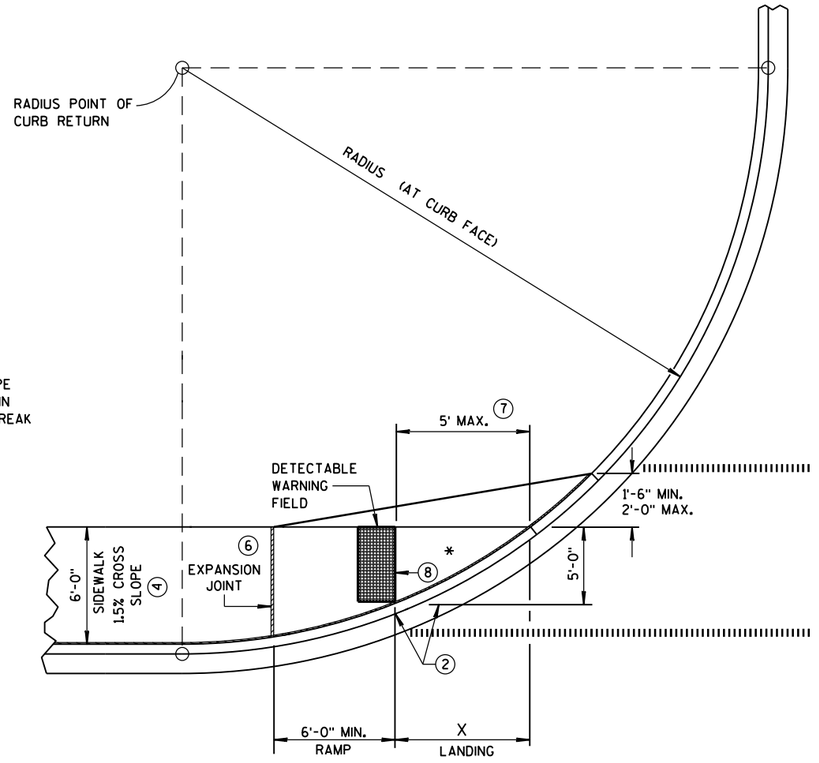
SECTION C-C FOR TYPE 4A



** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B-B FOR TYPE 4A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

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

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

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

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

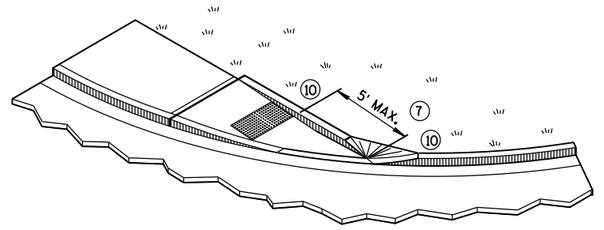
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

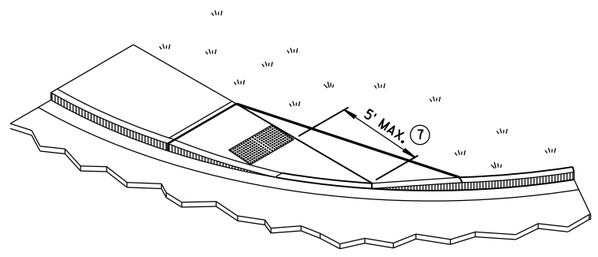
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

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



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

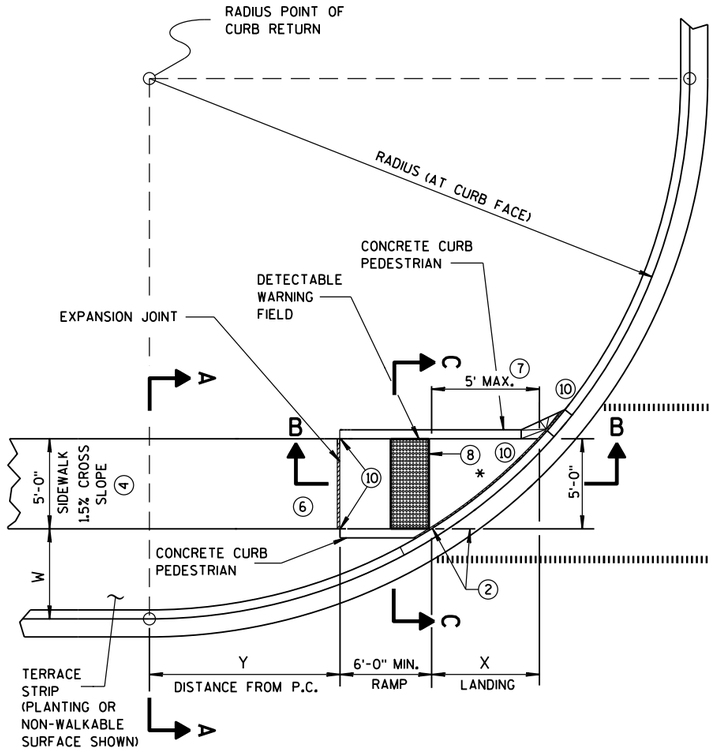
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

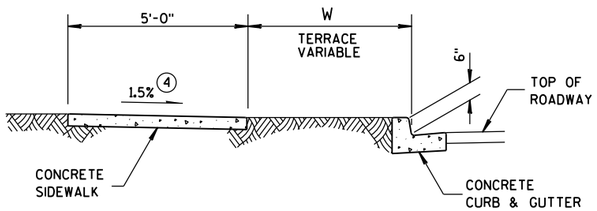
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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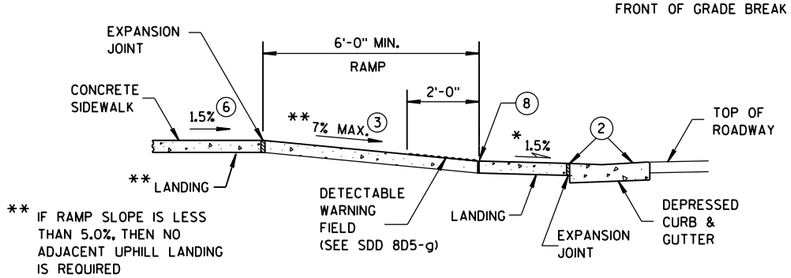
S.D.D. 8 D 5-19c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



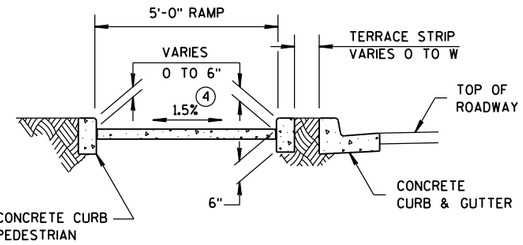
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B-B FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"		W = 8'-0"		W = 9'-0"		W = 10'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10¼"	0'-5"	2'-1"	1'-4½"	1'-5"	2'-1"	0'-10"	2'-7½"	0'-3¼"	3'-0¼"						
15 FEET	4'-6¾"	2'-1¾"	3'-9"	3'-5¼"	3'-1¼"	4'-6"	2'-6¾"	5'-4½"	2'-1"	6'-1"	1'-8"	6'-8½"	1'-3¼"	7'-2½"	0'-10¾"	7'-7¼"
20 FEET	5'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-7"	3'-3"	8'-6½"	2'-10"	9'-4½"	2'-5½"	10'-1¼"	2'-1¼"	10'-9"
30 FEET			6'-9¼"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"	4'-5½"	13'-7¾"	4'-0¾"	14'-8½"	3'-8½"	15'-8¼"
40 FEET									6'-1¾"	15'-8½"	5'-8"	17'-2"	5'-3"	18'-5¾"	4'-10¾"	19'-8¼"
50 FEET															5'-10¼"	23'-2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C-C FOR TYPE 4B

GENERAL NOTES

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

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

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

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

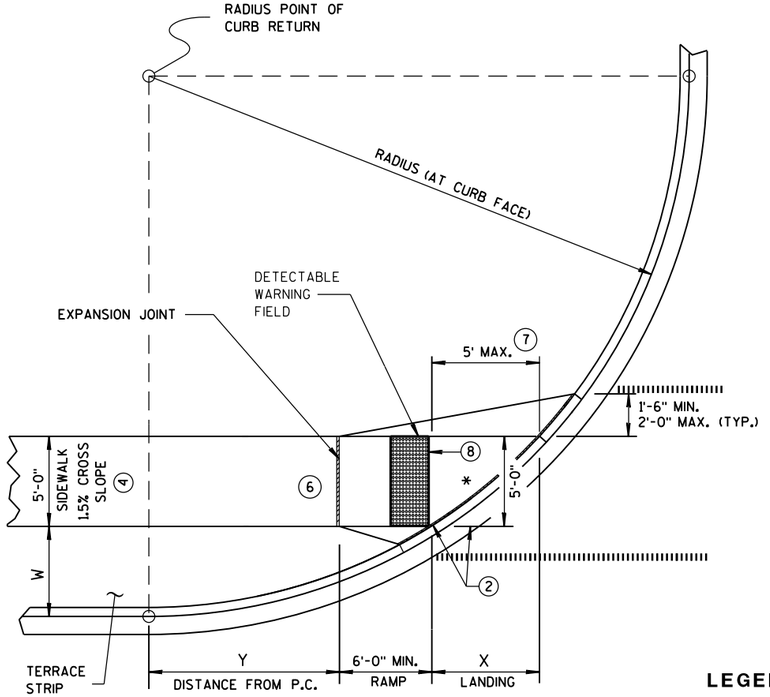
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

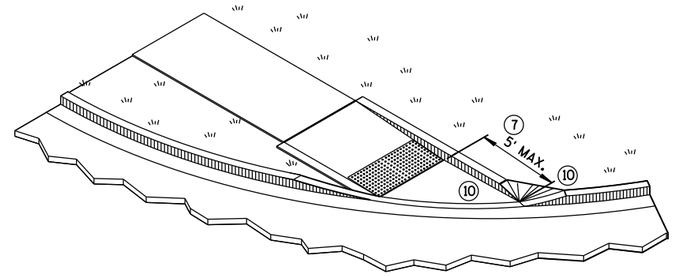
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

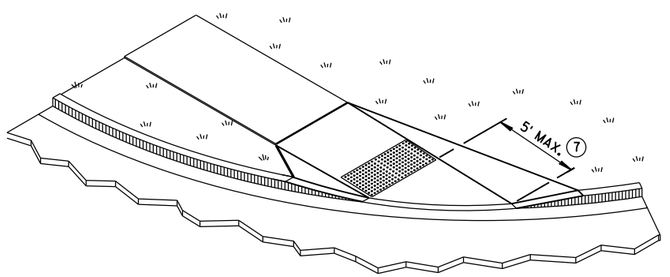
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

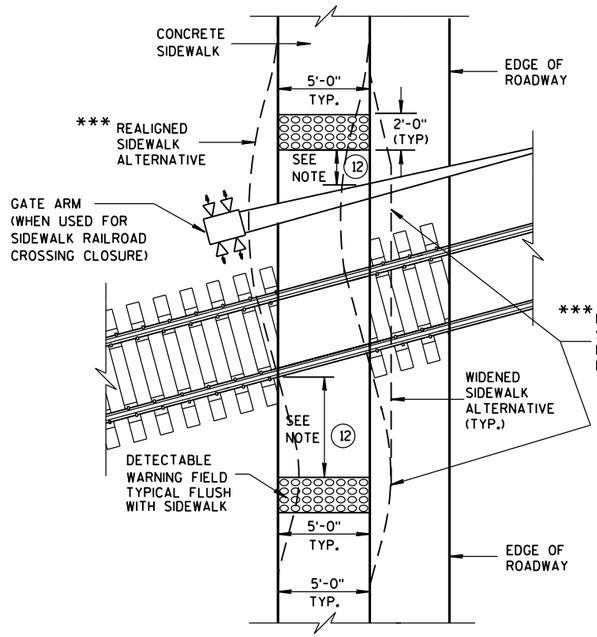
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

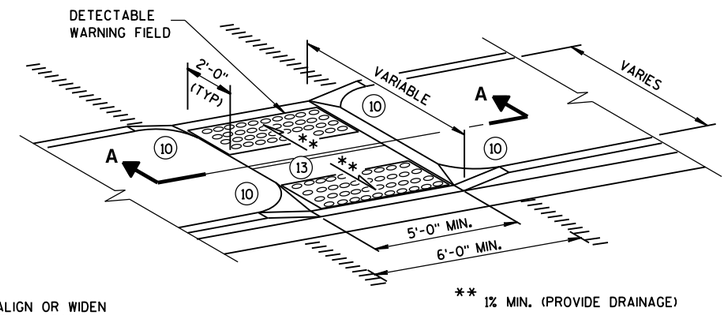
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S.D.D. 8 D 5-19d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY DESIGNER



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING
TYPE 5

GENERAL NOTES

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

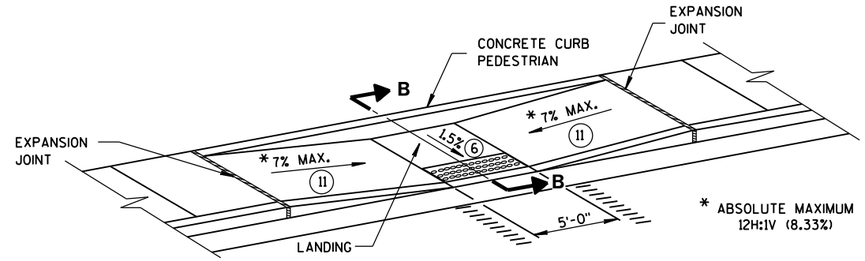
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

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

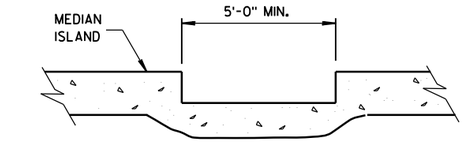
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

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

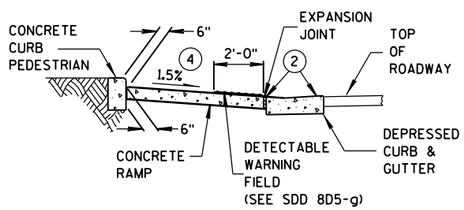
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2-FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.



MID-BLOCK CROSSING
TYPE 7A

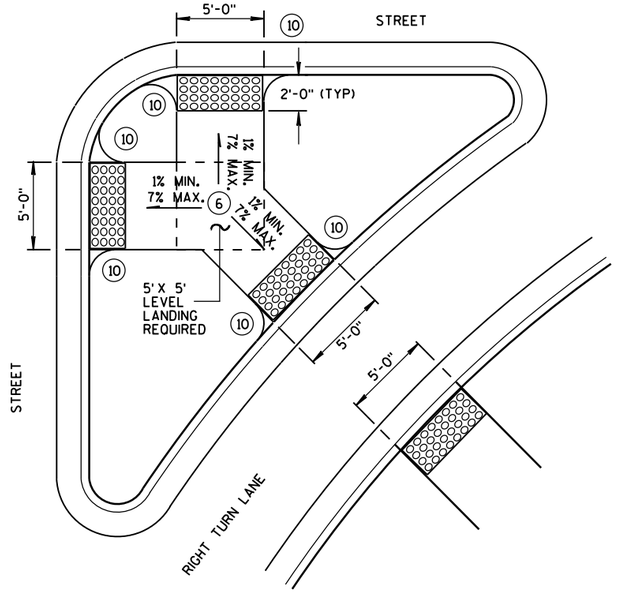


SECTION A-A

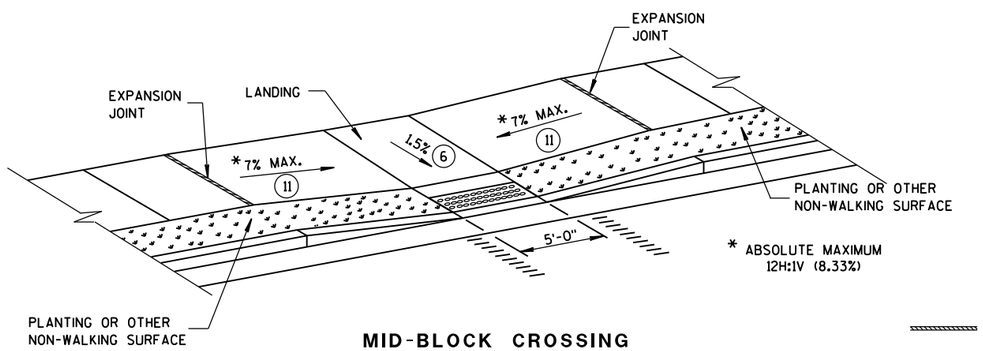


SECTION B-B

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



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

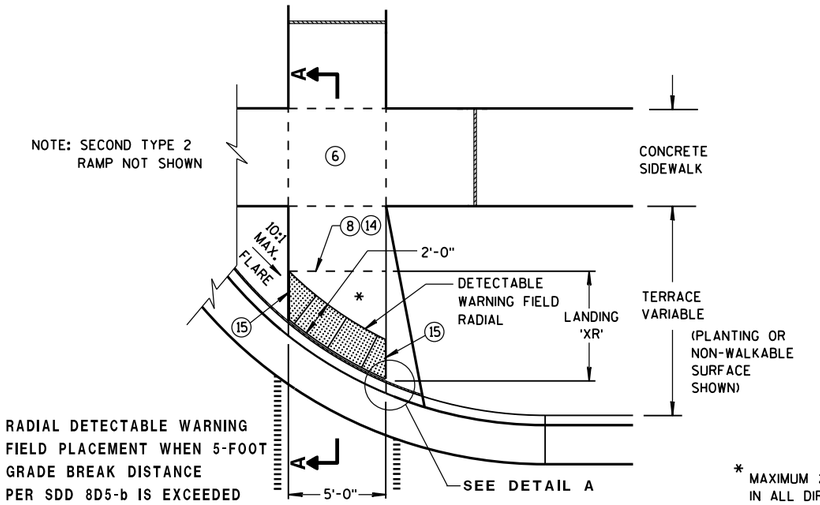
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

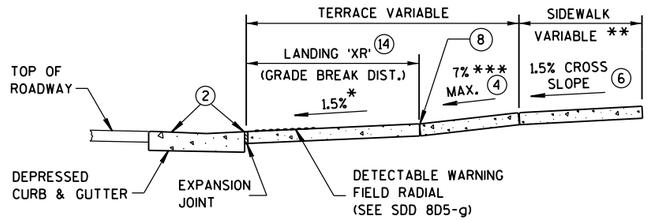
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S.D.D. 8 D 5-19e
S.D.D. 8 D 5-19e



TYPE 2 RAMP
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION A-A

LEGEND

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

GENERAL NOTES

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

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

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

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

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

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

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

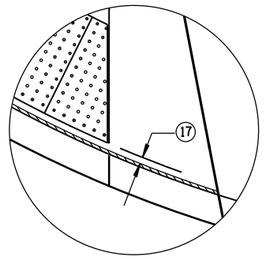
(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION 'XR') REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

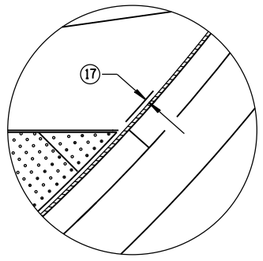
(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1'X 2' RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2'-0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

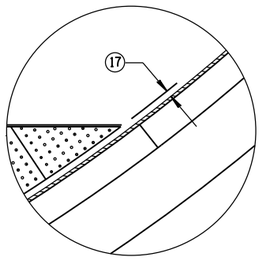
(17) A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.



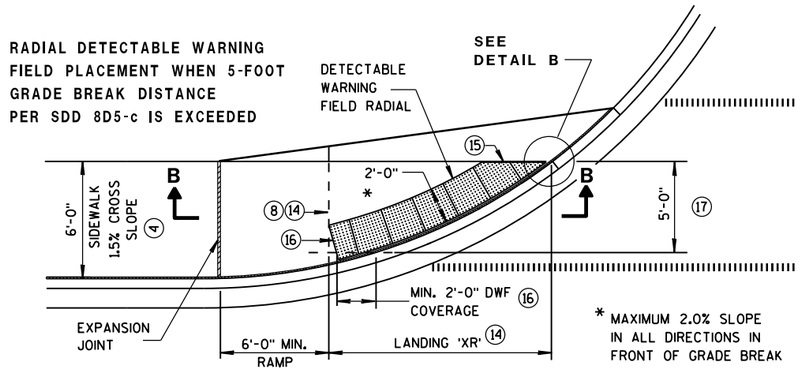
DETAIL A



DETAIL C

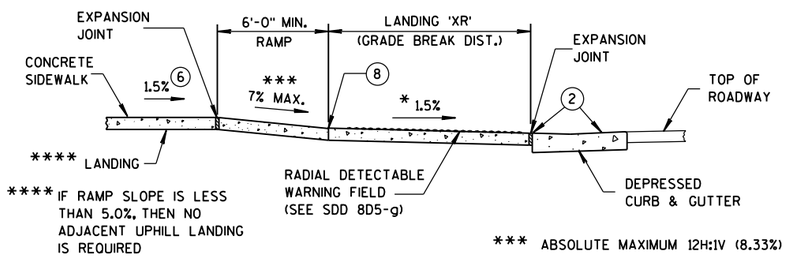


DETAIL B



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

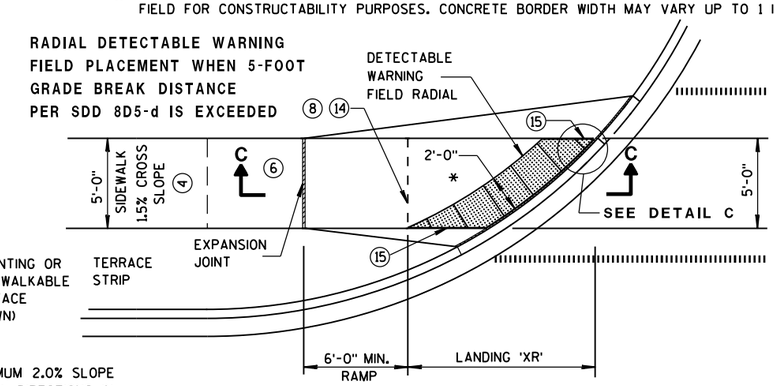
CURB RAMP TYPE 4A1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

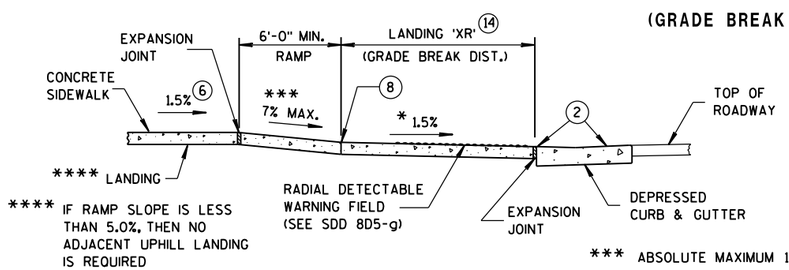
*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION B-B FOR TYPE 4A1



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

CURB RAMP TYPE 4B1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION C-C FOR TYPE 4B1

CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 152

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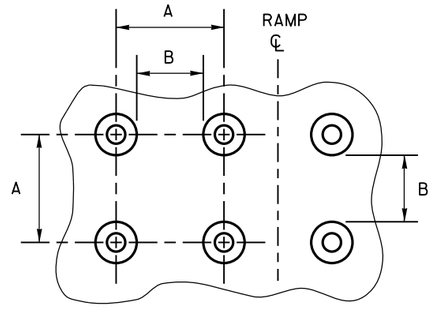
S.D.D. 8 D 5-19f

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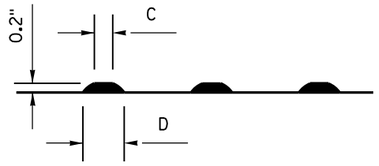
S.D.D. 8 D 5-19f

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

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



PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL

GENERAL NOTES

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

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

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

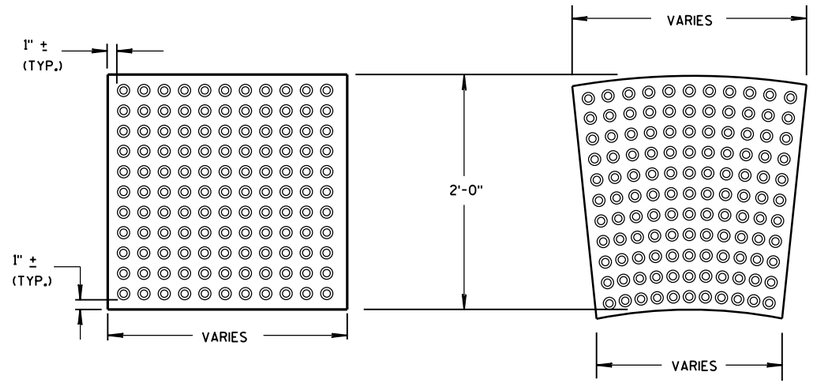
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

⑮ FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

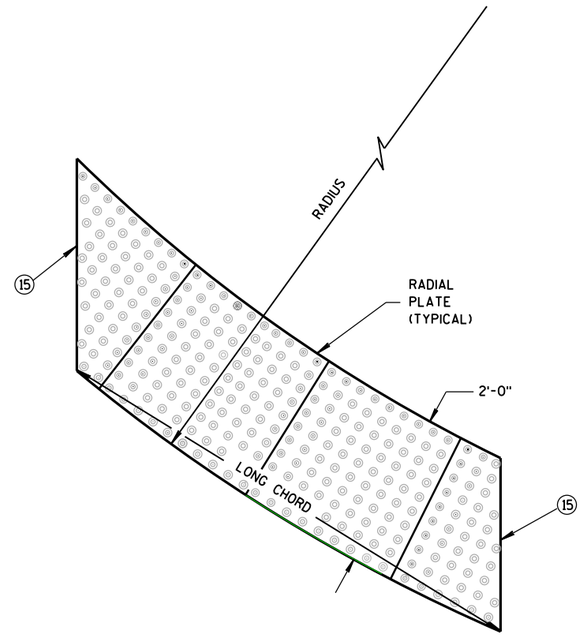


RECTANGULAR PLATES

RADIAL PLATES

DETECTABLE WARNING FIELDS (TYPICAL)

PLAN VIEW



RADIAL DETECTABLE WARNING FIELD ATTRIBUTES

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

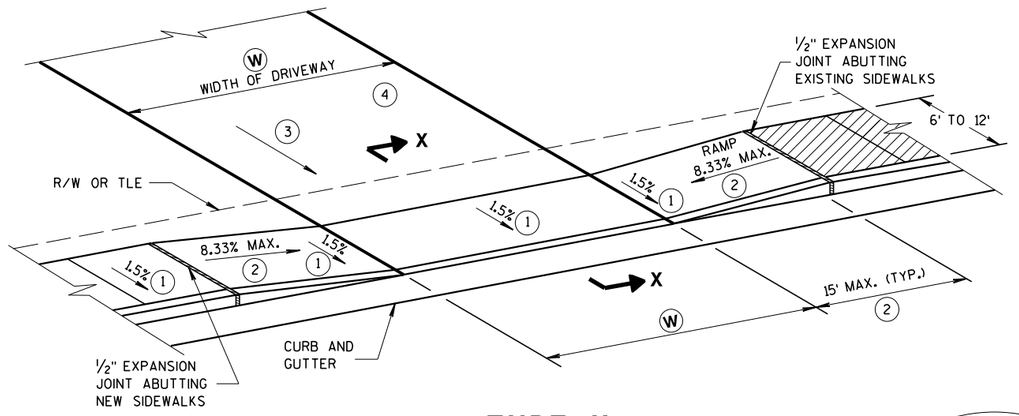
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June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
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FHWA

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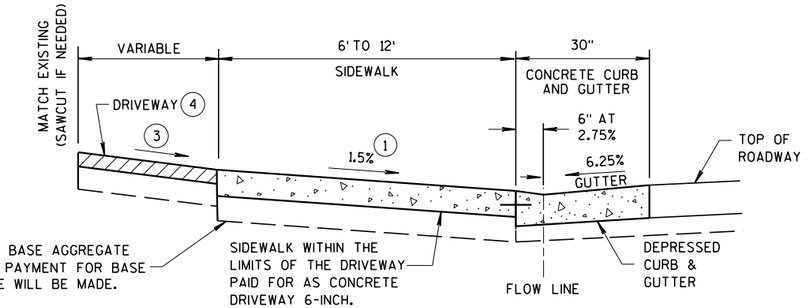
S.D.D. 8 D 5-19g

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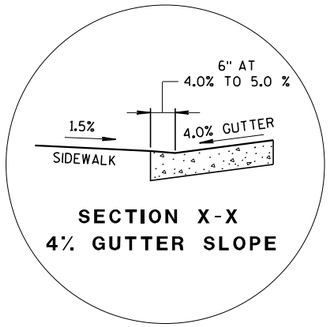
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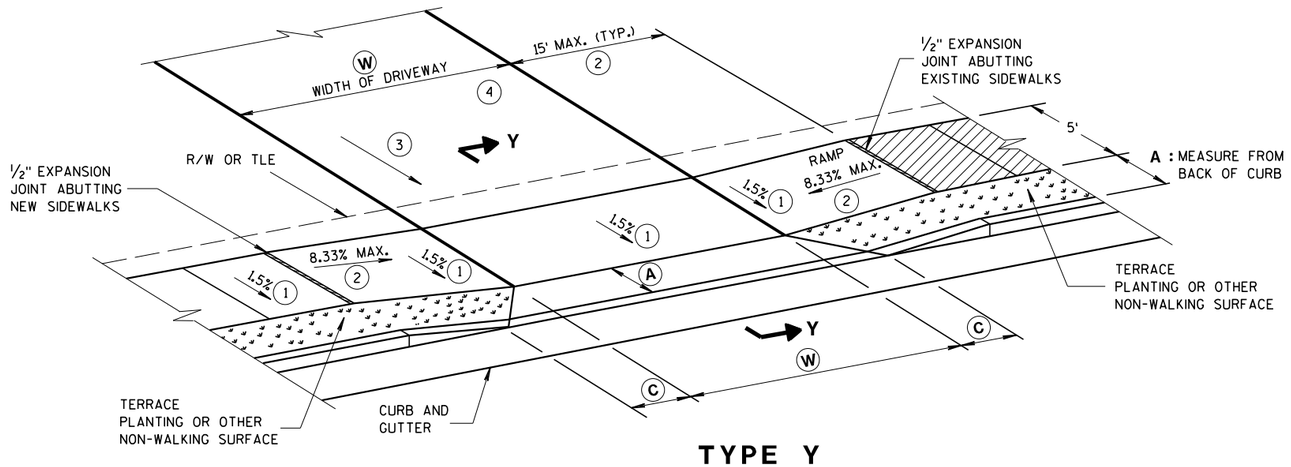
TYPE X
SIDEWALK ABUTS CURB & GUTTER
TERRACE VARIES 0 TO 3 FEET



SECTION X-X



SECTION X-X
4% GUTTER SLOPE



TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

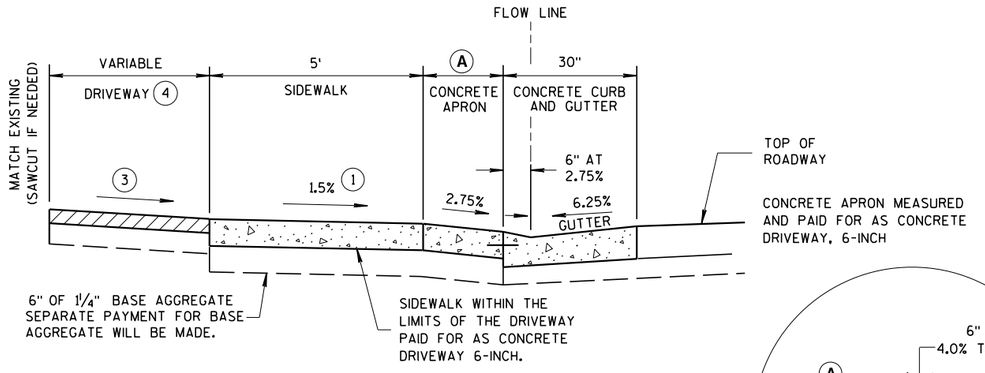
OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

(1) CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(2) THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(3) DRIVEWAY SLOPES: DESIRABLE MAXIMUM
- 10.5% UP AWAY FROM SIDEWALK (SAG)
- 8.5% DOWN AWAY FROM SIDEWALK (CREST)
- ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

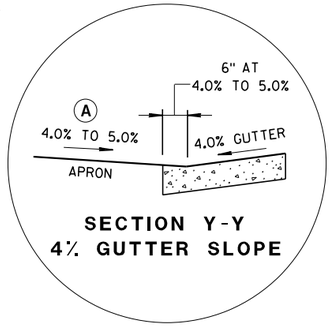
(4) DRIVEWAY TYPES
- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

SECTION Y-Y

DRIVEWAY DETAIL
WITH CONCRETE CURB & GUTTER
(URBAN AND SUBURBAN)



SECTION Y-Y
4% GUTTER SLOPE

TABLE Y

(A) FEET	(C) FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

NOT TO SCALE

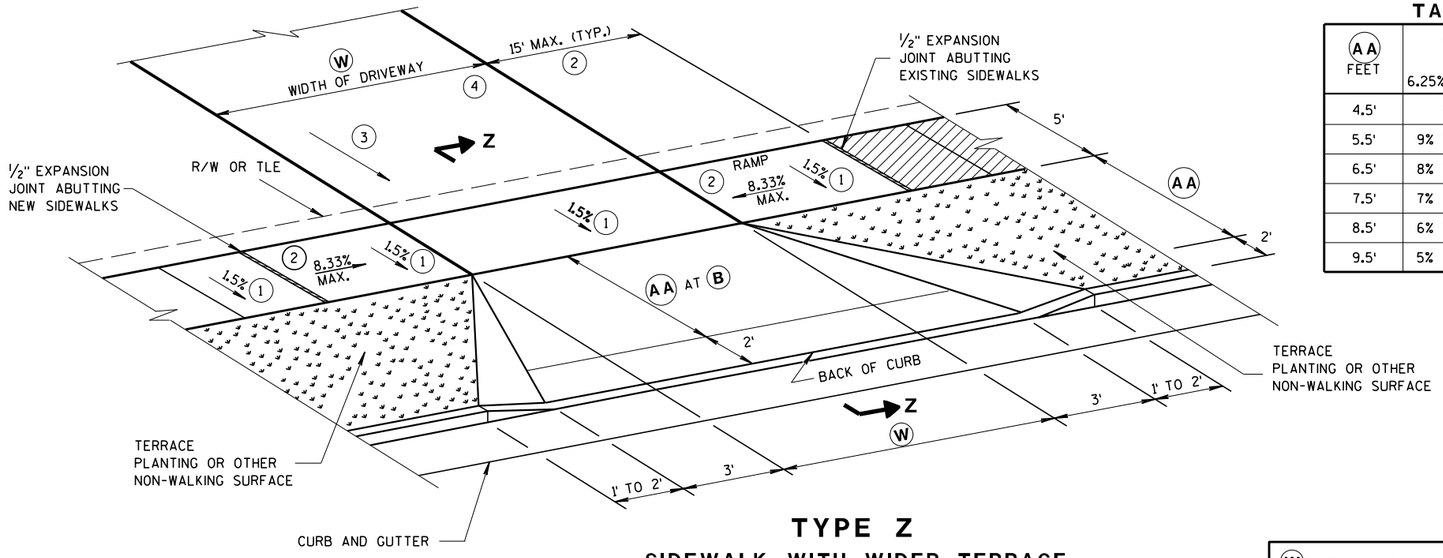
DRIVEWAY AND SIDEWALK RAMPS
TYPES X & Y

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

S.D.D. 8 D 18-2

S.D.D. 8 D 18-2



TYPE Z

SIDEWALK WITH WIDER TERRACE

TERRACE VARIES 7 TO 12 FEET

TABLE Z

(AA) FEET	(B) % 6.25% GUTTER	(B) % 4% GUTTER
4.5'	11.5%	9% TO 11.5%
5.5'	9% TO 11.5%	8% TO 11.5%
6.5'	8% TO 11.5%	6% TO 11.5%
7.5'	7% TO 11.5%	6% TO 11.5%
8.5'	6% TO 11.5%	5% TO 11.5%
9.5'	5% TO 11.5%	4% TO 11.5%

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

16' MIN. - 35' MAX. COMMERCIAL (CE)

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

(1) CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(2) THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.

(3) DRIVEWAY SLOPES: DESIRABLE MAXIMUM

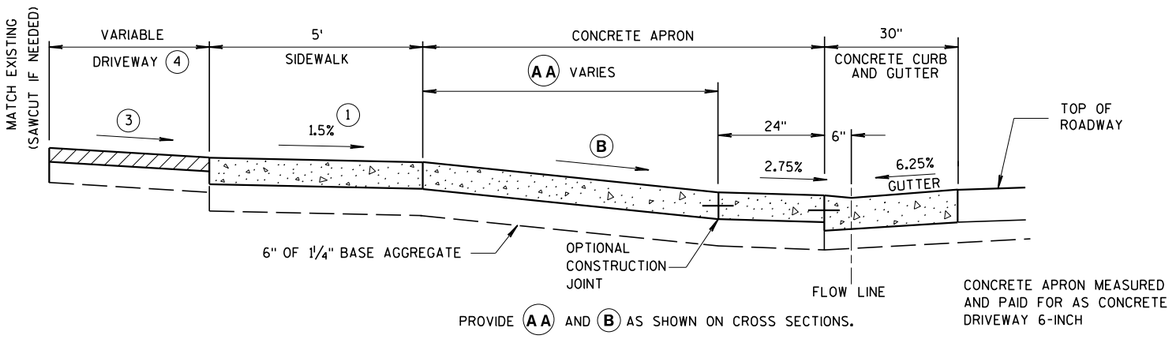
10.5% UP AWAY FROM SIDEWALK (SAG)

8.5% DOWN AWAY FROM SIDEWALK (CREST)

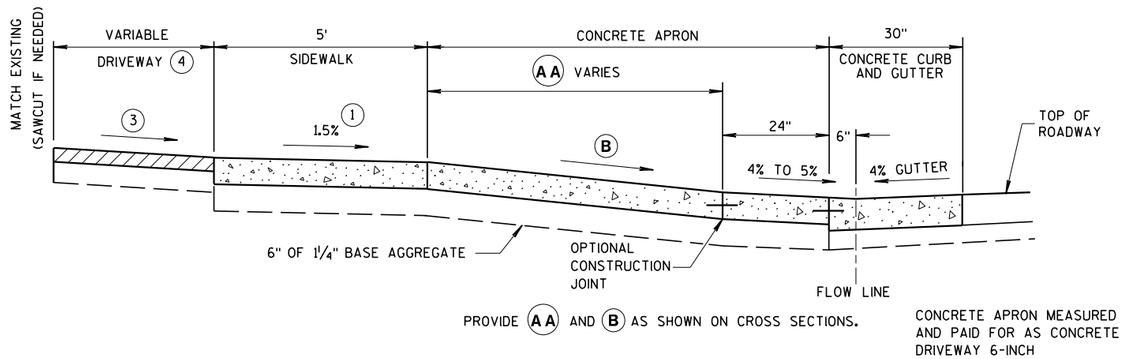
ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

(4) DRIVEWAY TYPES

- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)



6.25% GUTTER SLOPE



4% GUTTER SLOPE

NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS FOR **B** VALUES NOT SHOWN IN TABLE Z.

SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY 6-INCH.

SEPARATE PAYMENT FOR BASE AGGREGATE WILL BE MADE.

SECTION Z-Z

DRIVEWAY DETAIL WITH CONCRETE CURB & GUTTER

(URBAN AND SUBURBAN)

NOT TO SCALE

DRIVEWAY AND SIDEWALK RAMPS TYPE Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA

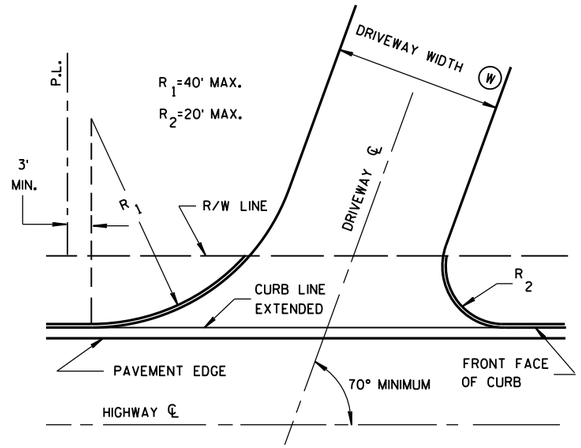
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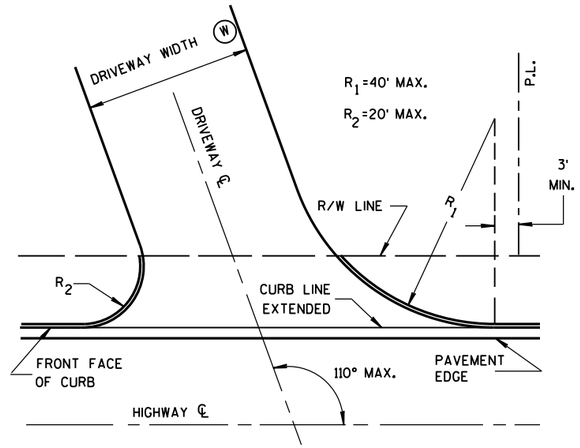
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S.D.D. 8 D 19-2

6

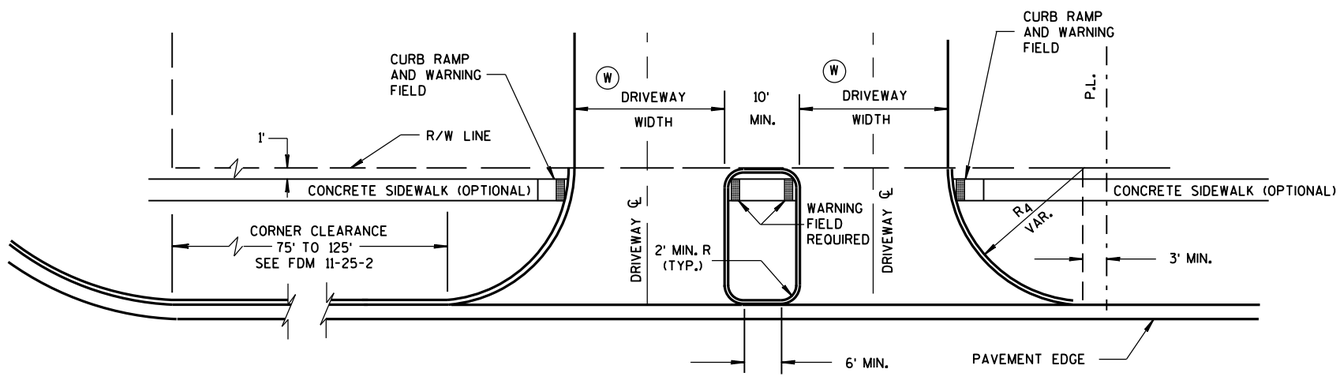
S.D.D. 8 D 19-2





SKEWED DRIVEWAY DETAILS
(COMMERCIAL AND NON-COMMERCIAL)

SIDEWALK NOT SHOWN



DRIVEWAY LOCATION AND SPACING DETAILS

SIDEWALK SHOWN

NOTES

A MAXIMUM RADIUS OF 10 FEET SHALL BE USED FOR NON-COMMERCIAL PRIVATE ENTRANCES. RADII FOR COMMERCIAL DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER BASED ON TRAFFIC AND DRIVEWAY PERMIT RESTRICTIONS.

THE MINIMUM ANGLE OF INTERSECTION BETWEEN THE DRIVEWAY AND HIGHWAY CENTERLINES SHALL BE 70°.

ALL CURVILINEAR PRIVATE ENTRANCE OUTLINES SHALL BE CONTAINED WITHIN THE HIGHWAY R/W.

NO DRIVEWAY SHALL BE BUILT WITHIN 3 FEET OF THE PROPERTY LINE EXCEPT FOR EXISTING JOINT DRIVEWAY SHARED BY TWO OWNERS.

Ⓦ DRIVEWAY WIDTHS:

COMMERCIAL - 35' MAX., 16' MIN.

RESIDENTIAL AND NON-COMMERCIAL - 24' MAX., 12' MIN.

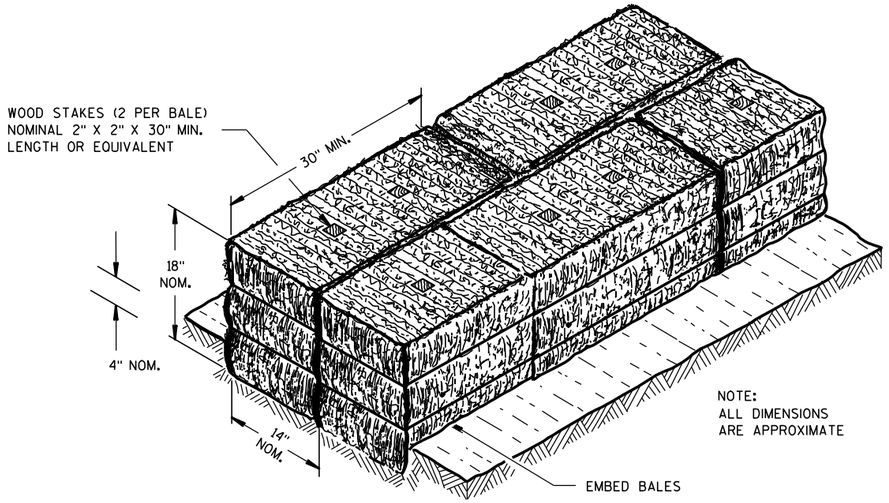
DRIVEWAYS WITH CURB & GUTTER RETURNS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

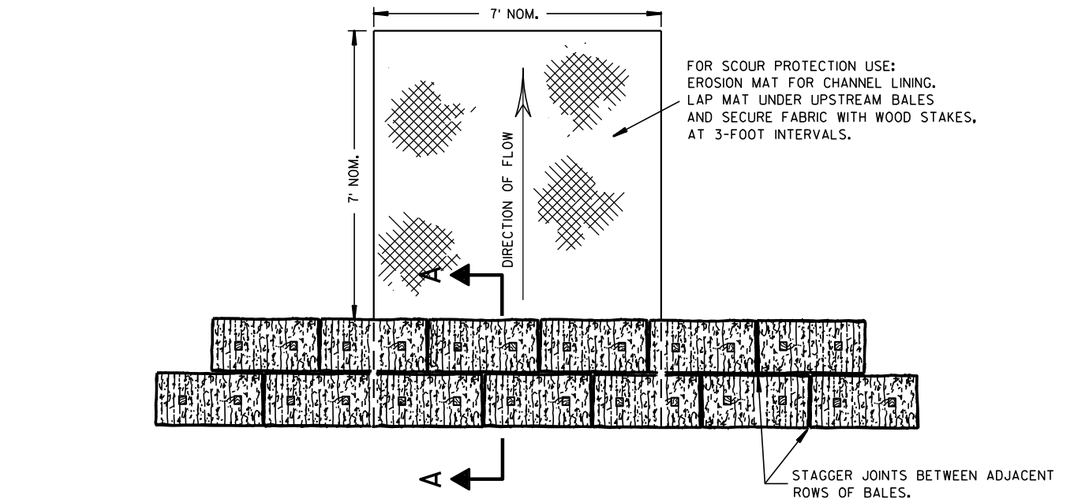
APPROVED
December, 2016 /S/ Rodney Taylor
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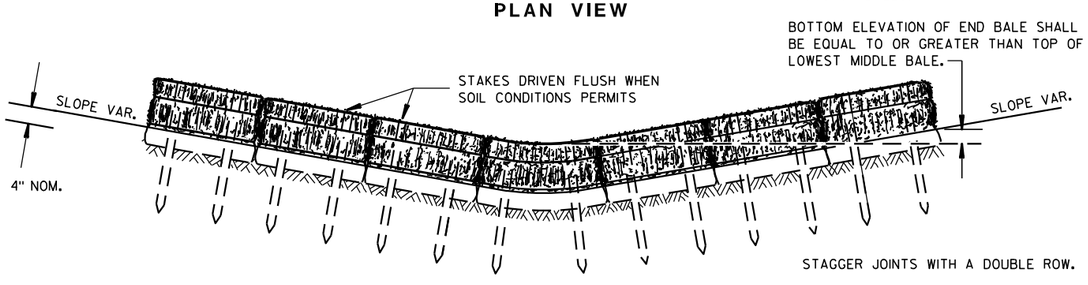
S.D.D. 8 D 20-1



SECTION A-A



PLAN VIEW



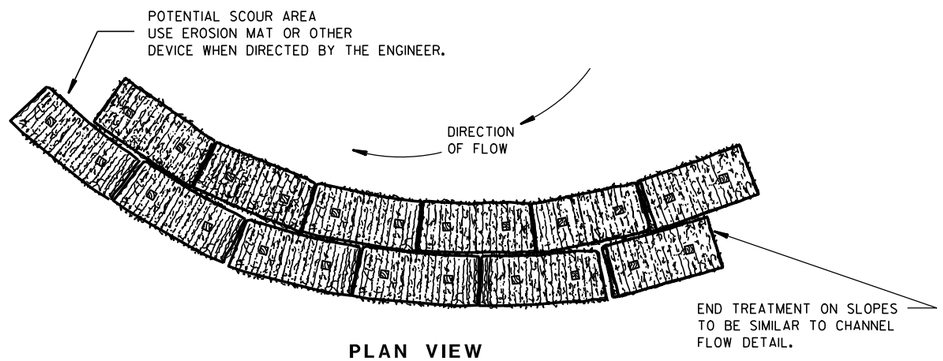
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

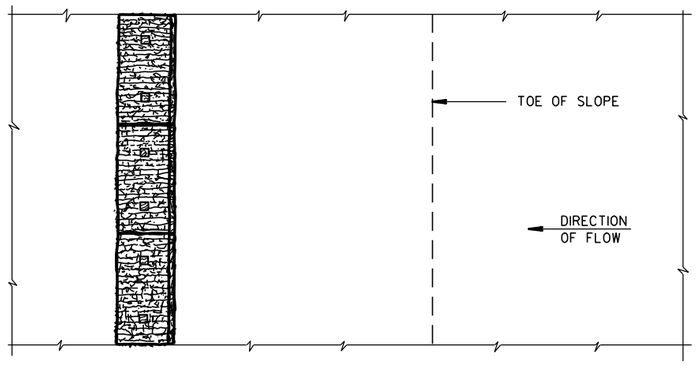
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

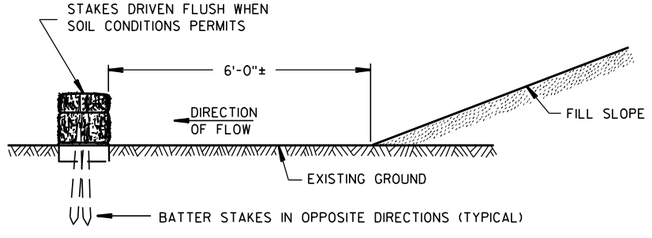


PLAN VIEW

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

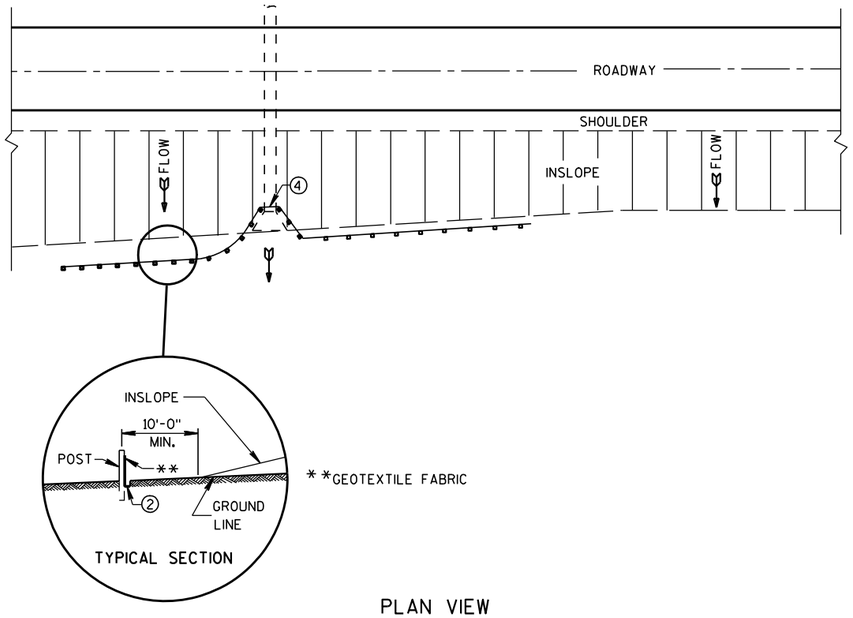
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 E 8-3

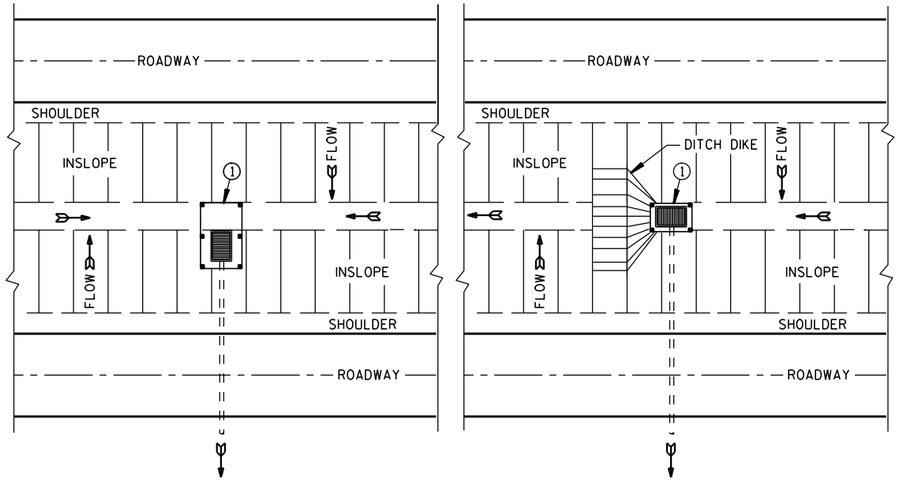
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S.D.D. 8 E 8-3



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.

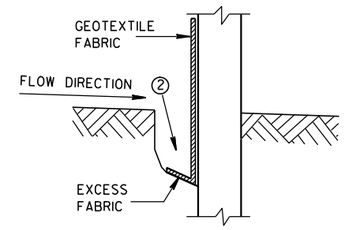
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

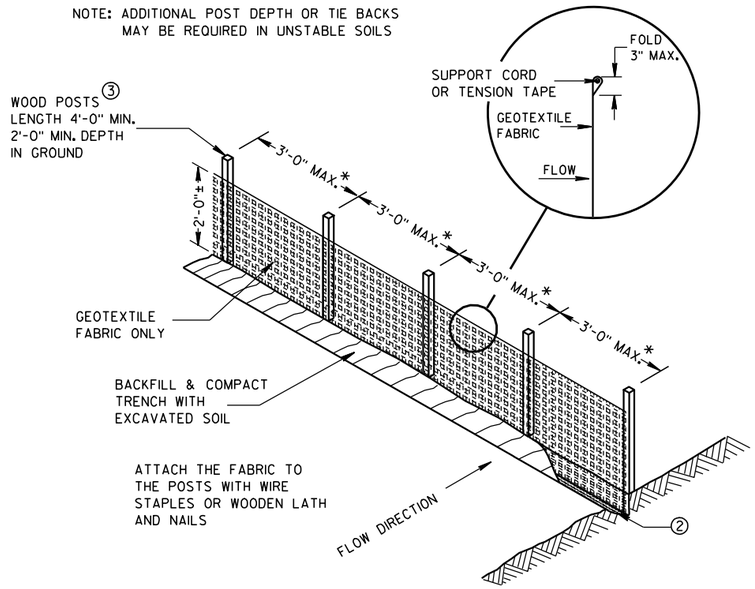
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

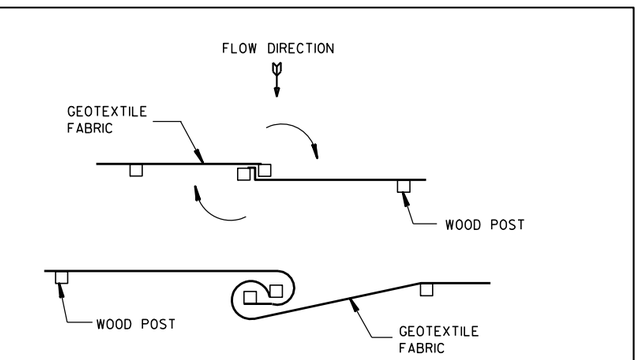
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



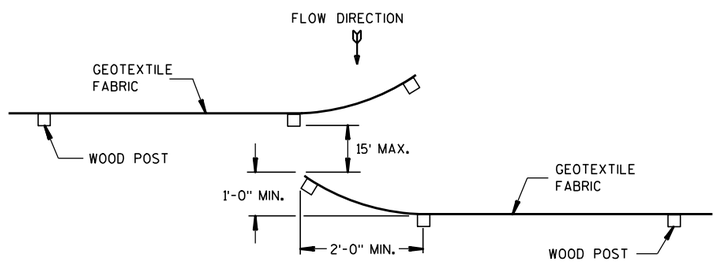
TRENCH DETAIL



SILT FENCE

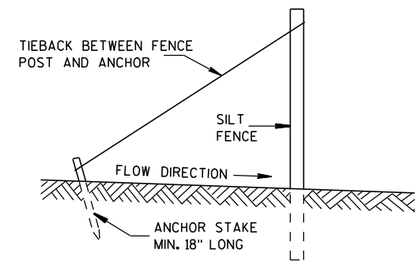


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

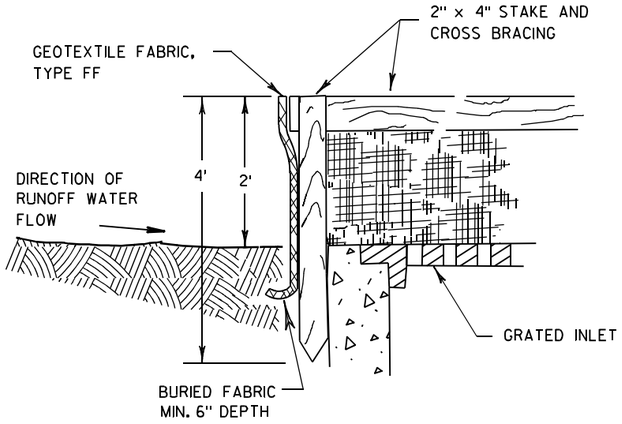
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

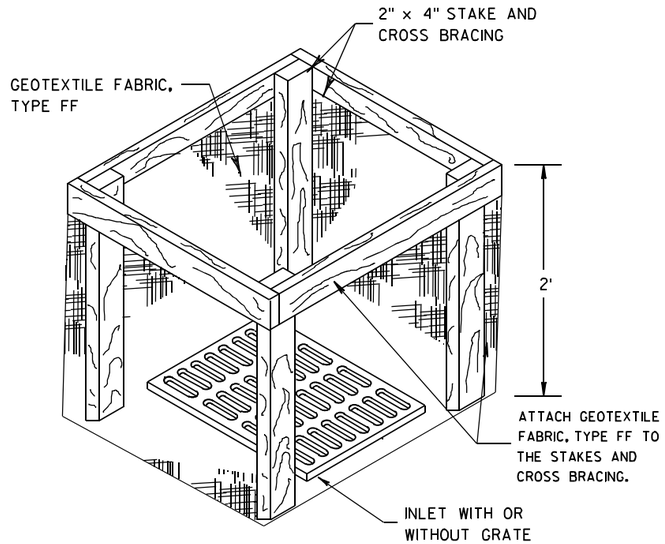
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S.D.D. 8 E 9-6

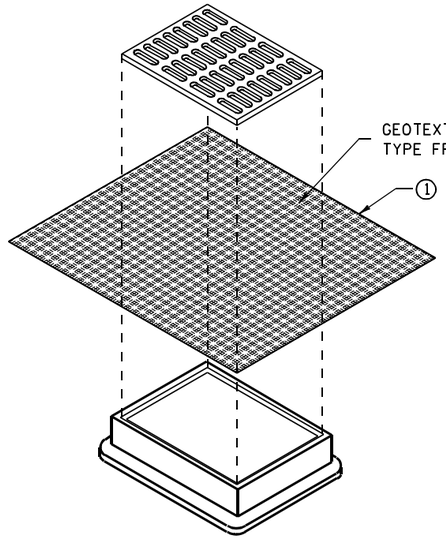
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S.D.D. 8 E 9-6



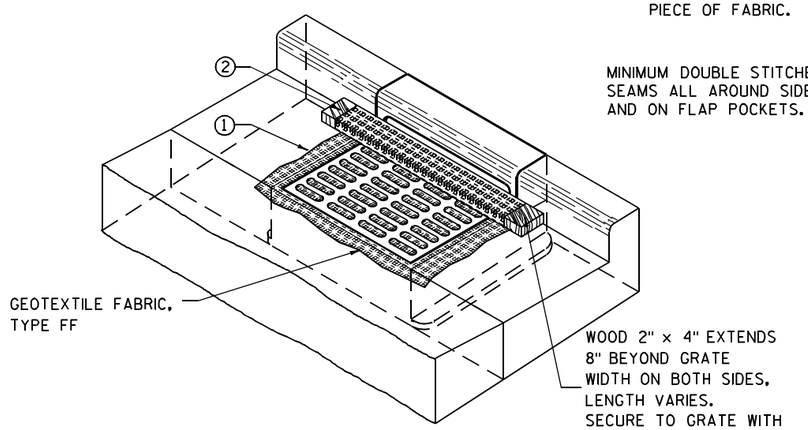


INLET PROTECTION, TYPE A

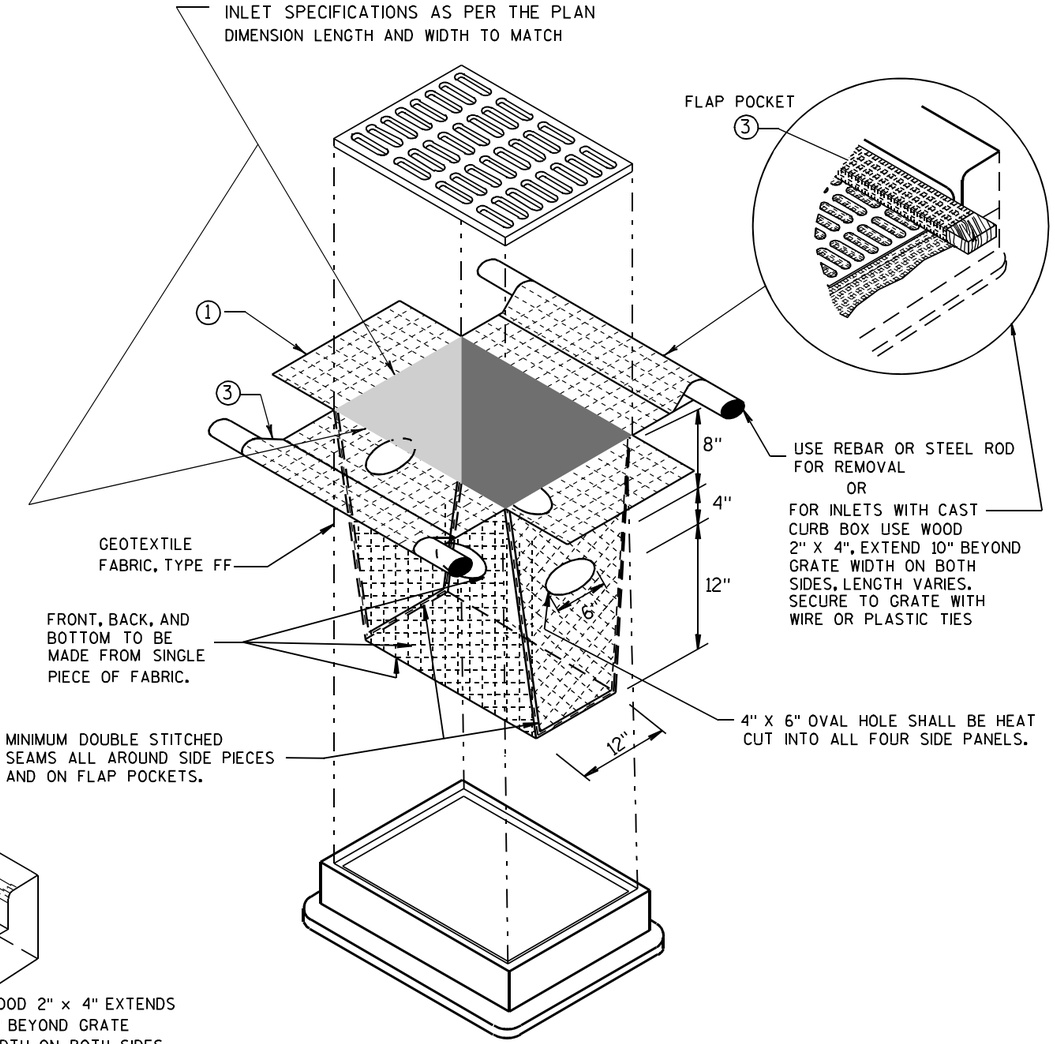


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

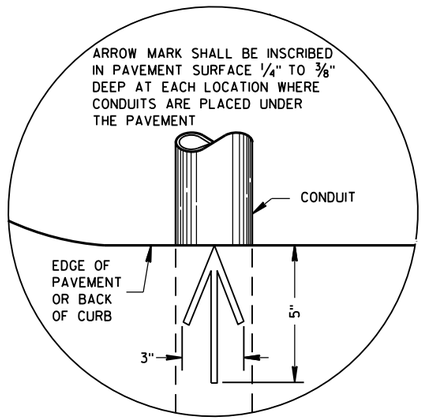
10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

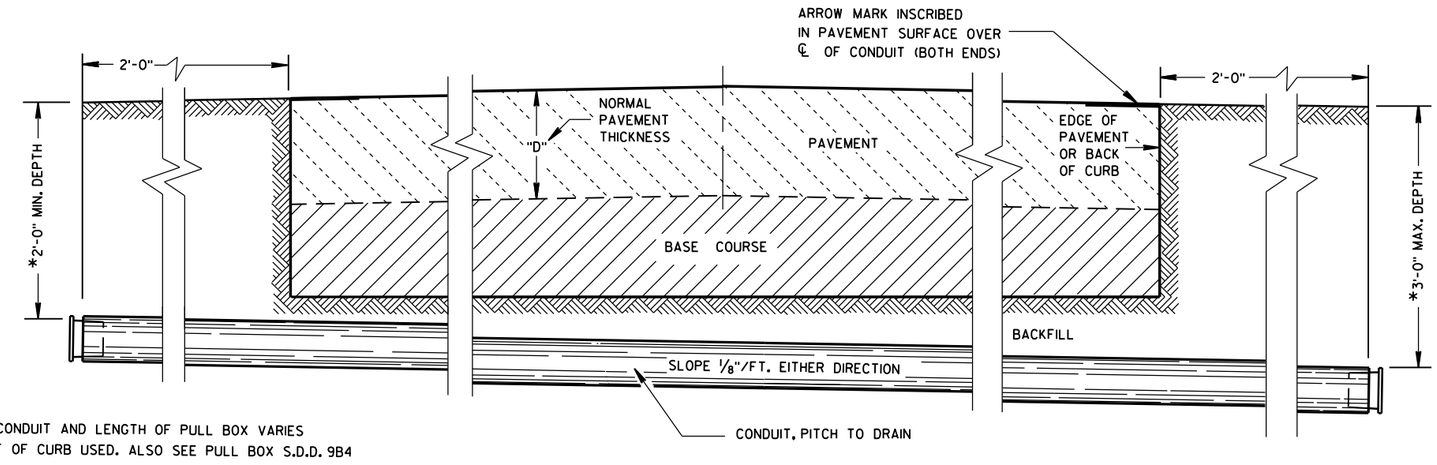
6

S.D.D. 8 E 10-2



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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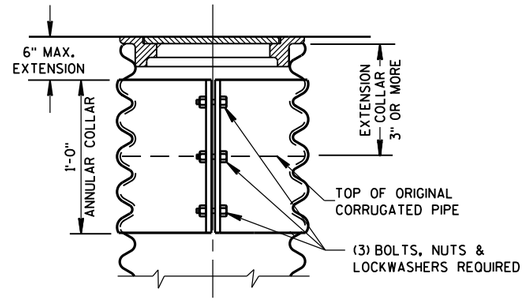
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

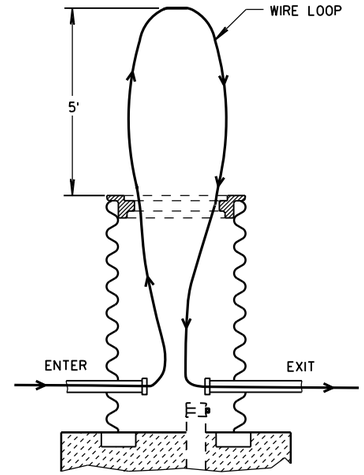
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

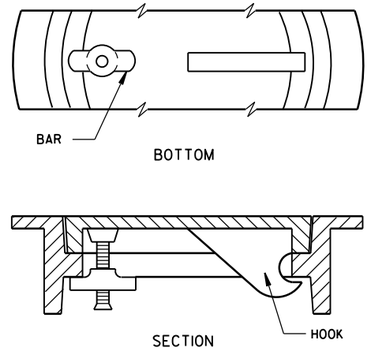
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

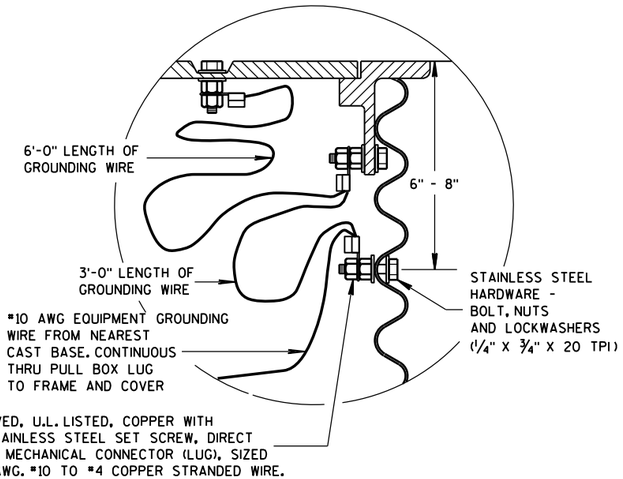


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

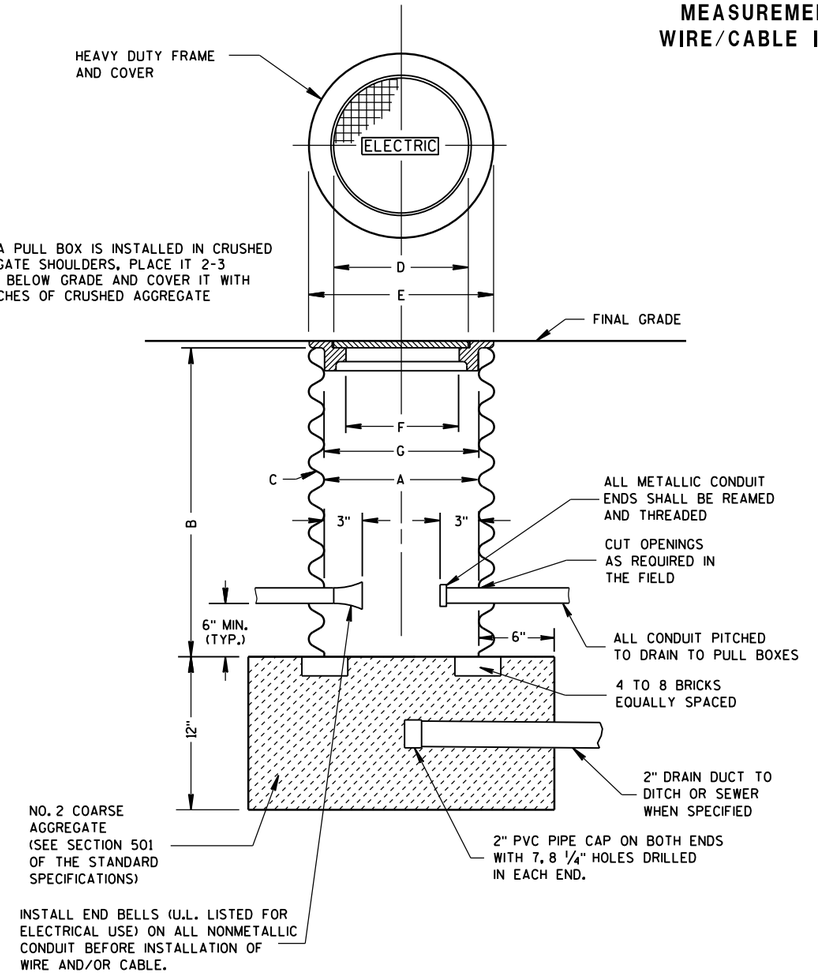
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

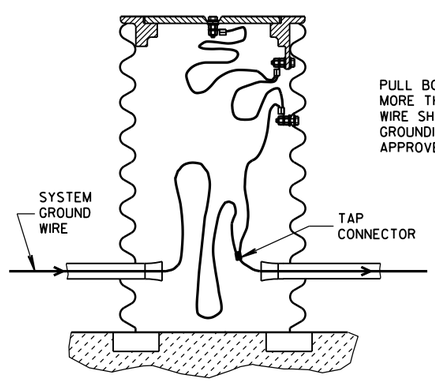
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

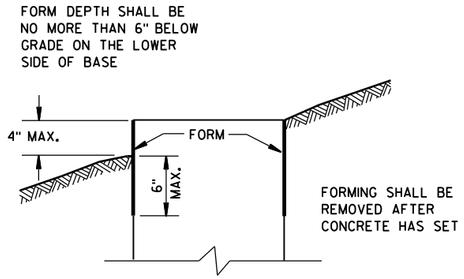
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 B 4-11



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

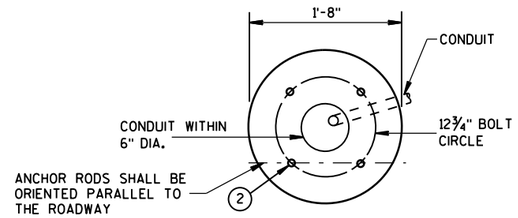
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

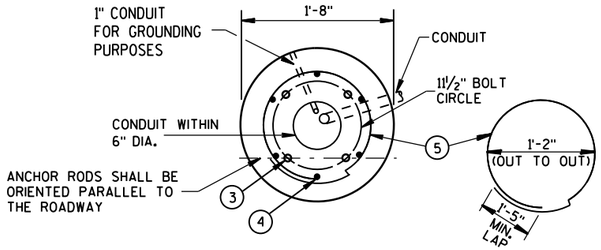
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

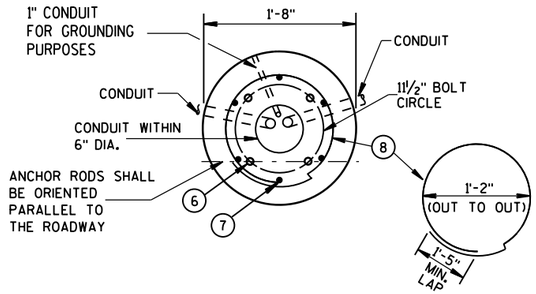
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

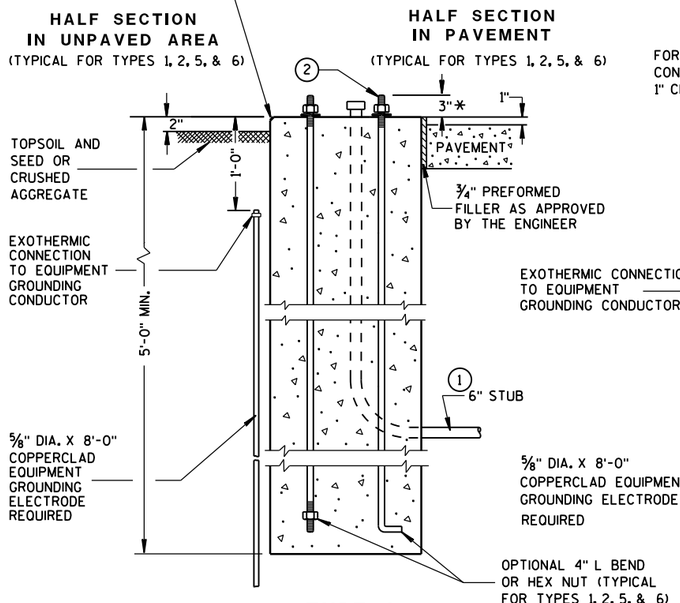




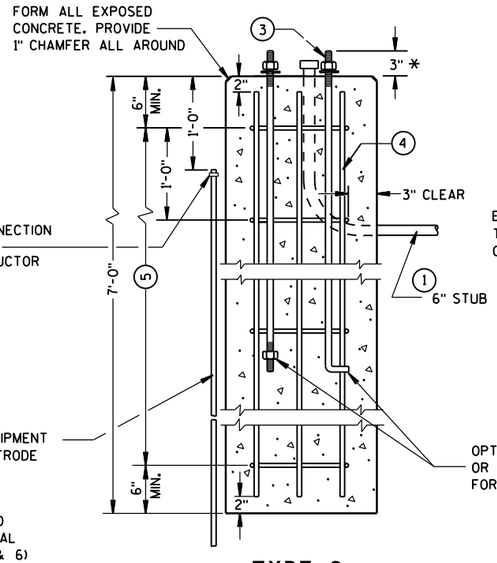


HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)

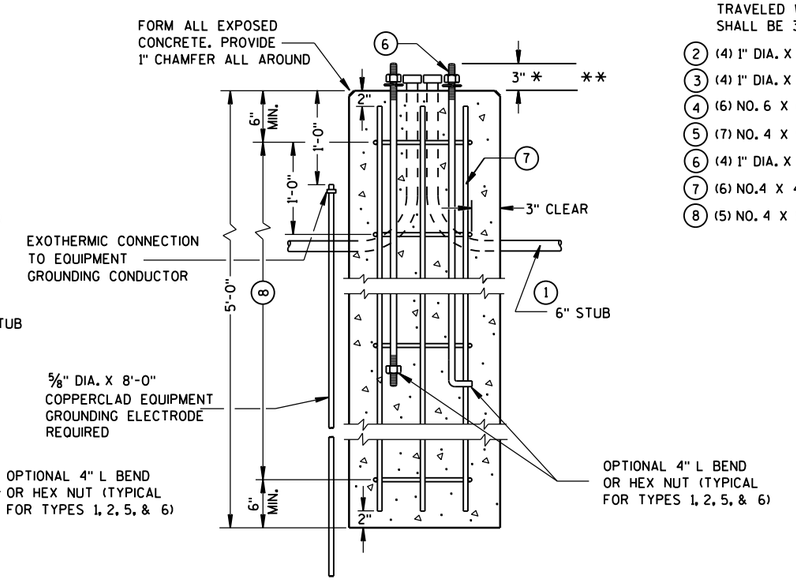
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 2-7

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

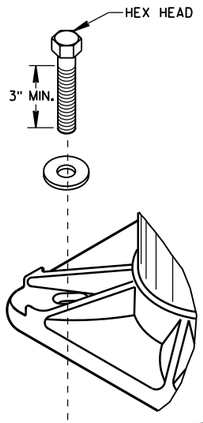
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

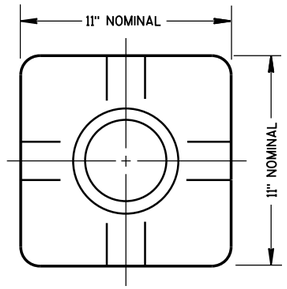
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

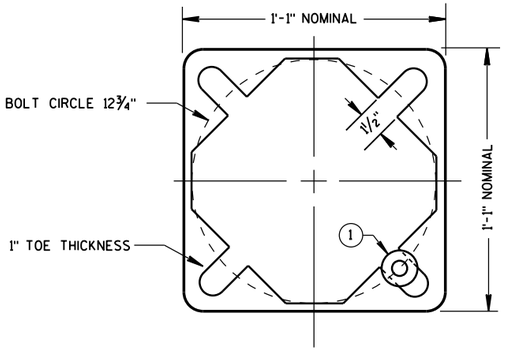
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

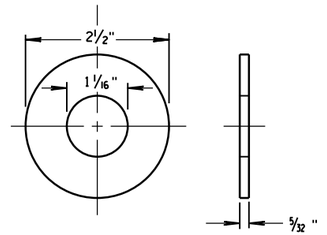




TOP VIEW
(PEDESTAL BASE)

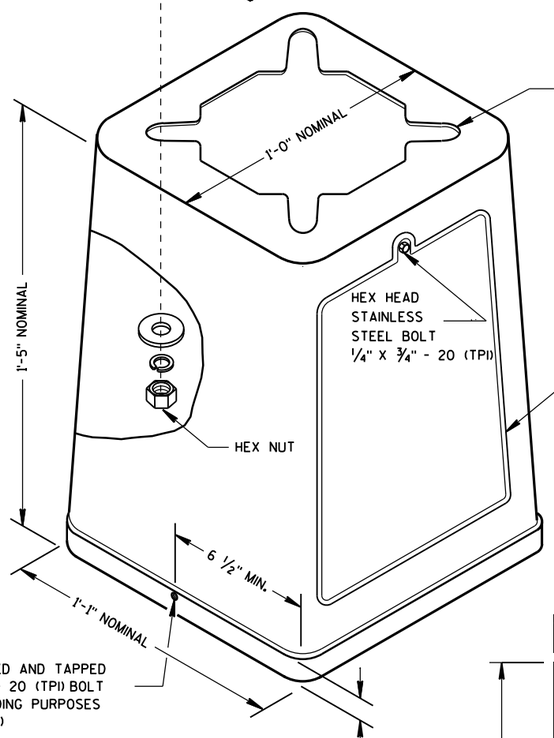


BOTTOM VIEW
(PEDESTAL BASE)

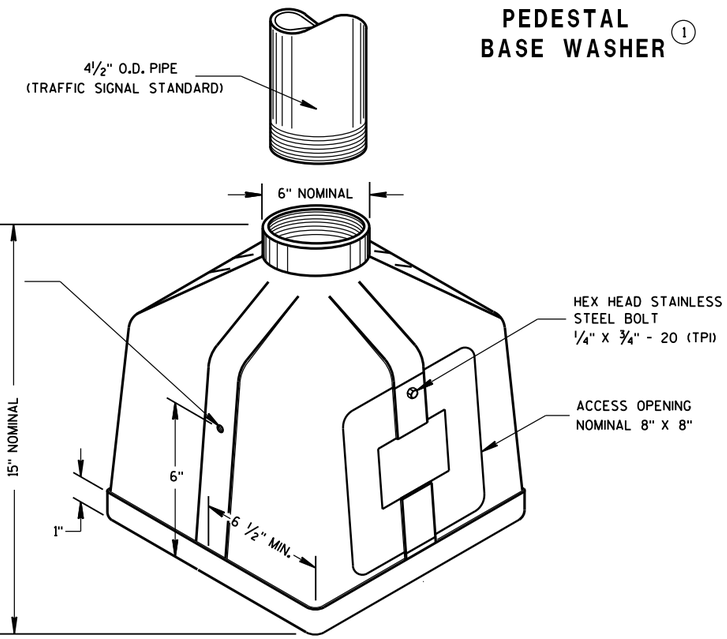


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

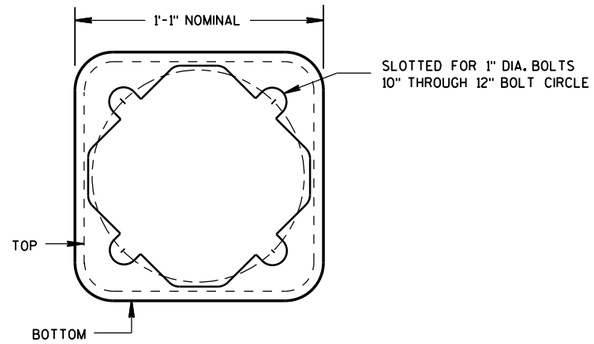


ISOMETRIC VIEW

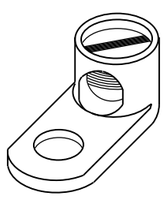


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

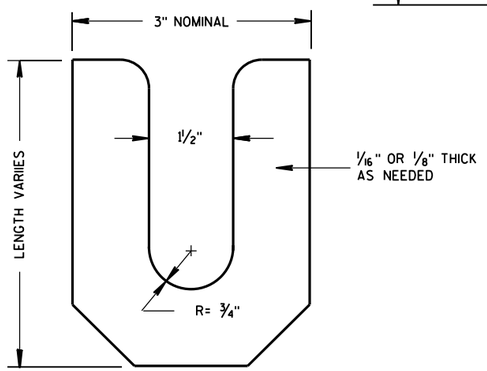


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

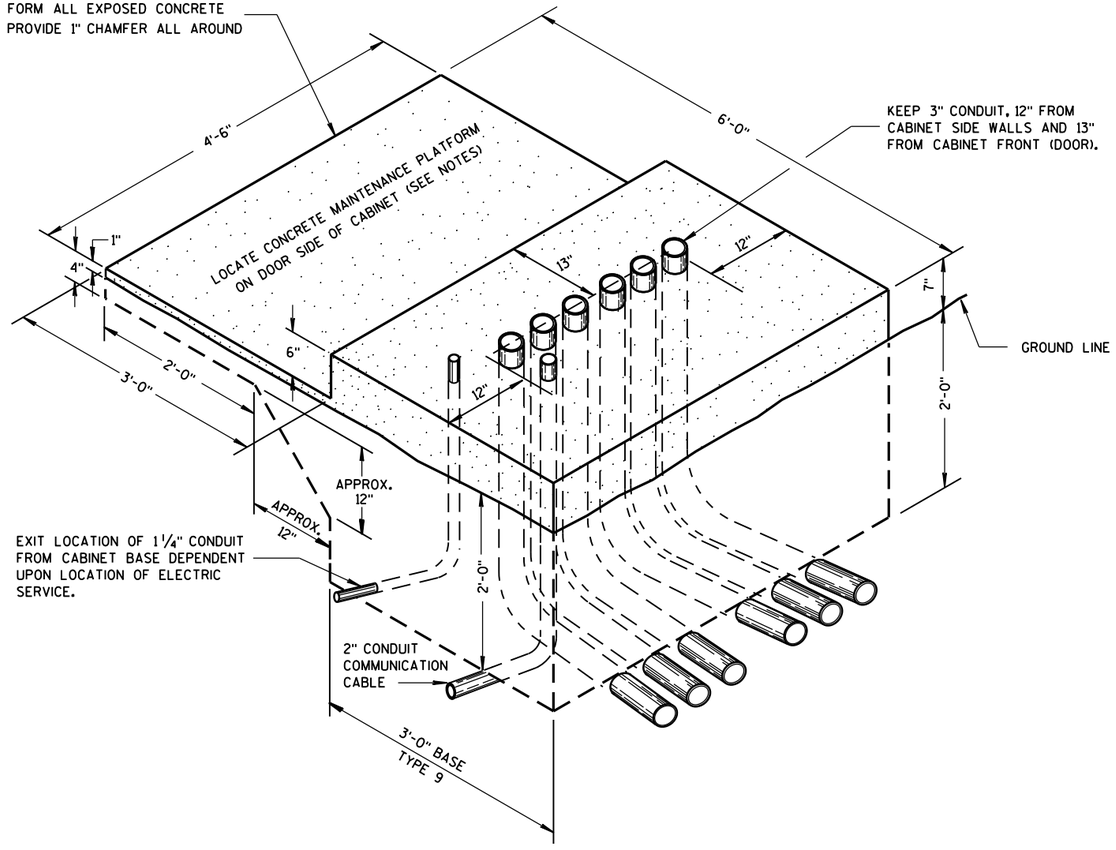
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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S.D.D. 9 C 3-4

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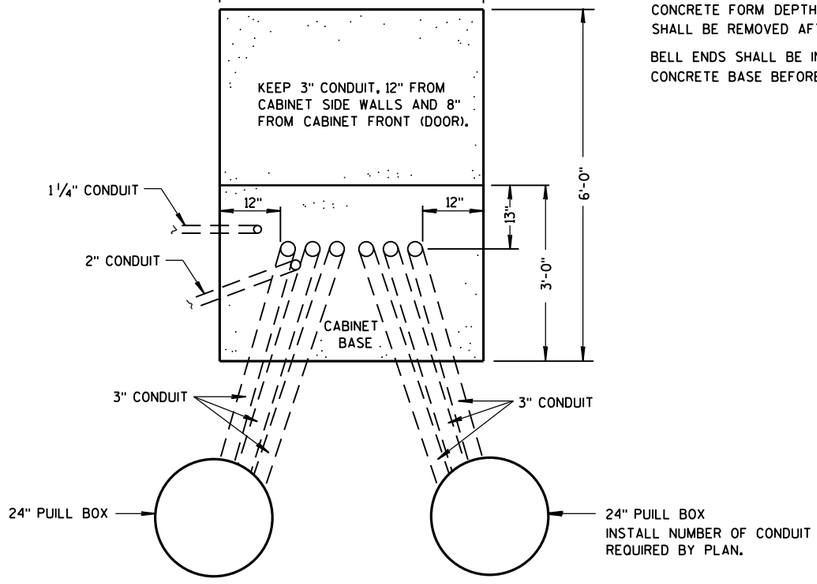
S.D.D. 9 C 3-4



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

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DEPARTMENT OF TRANSPORTATION

APPROVED
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/S/ Ahmet Demirbilek — STATE ELECTRICAL
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GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

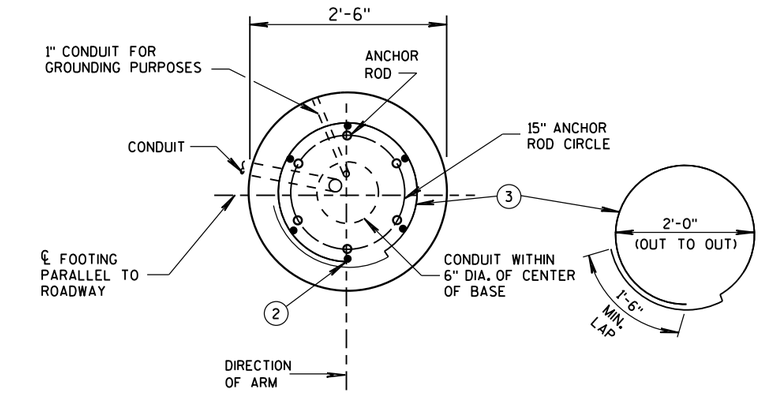
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

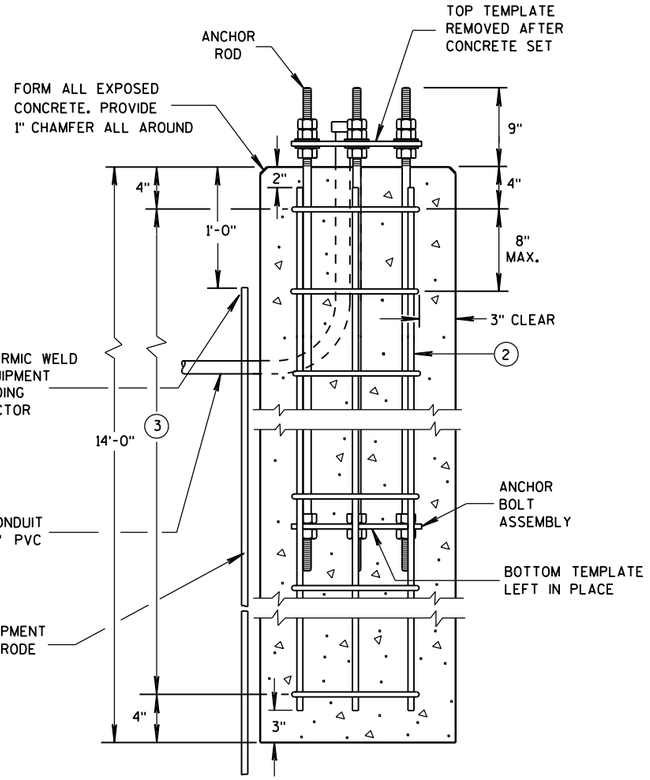
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

(3) (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

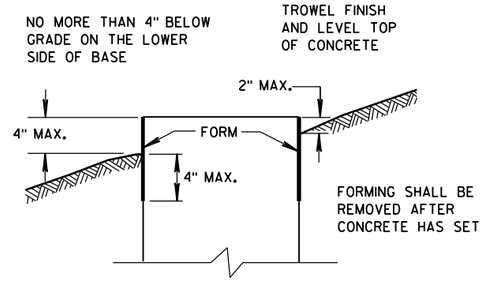
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATION)	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



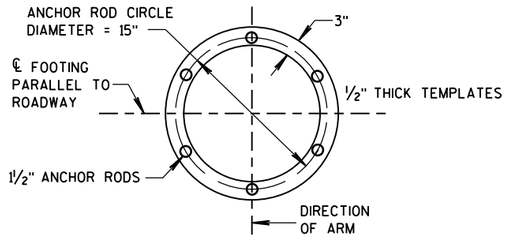


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 & OVER HEIGHT (OH) POLES)

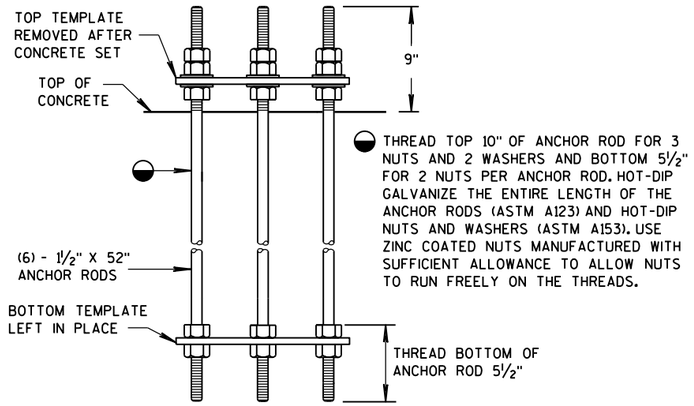
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10 ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	172
LBS. OF VERTICAL BAR STEEL	122

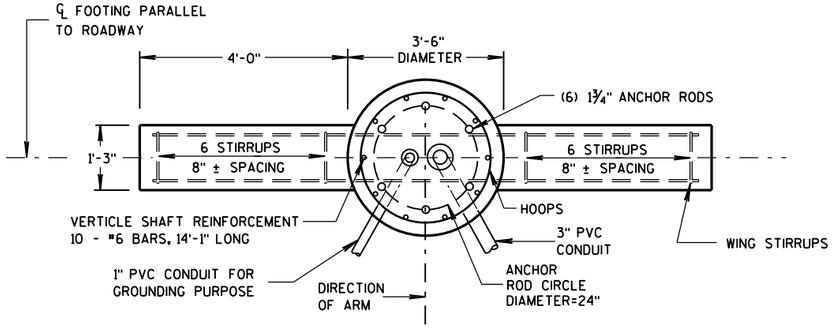
CONCRETE BASE TYPE 10

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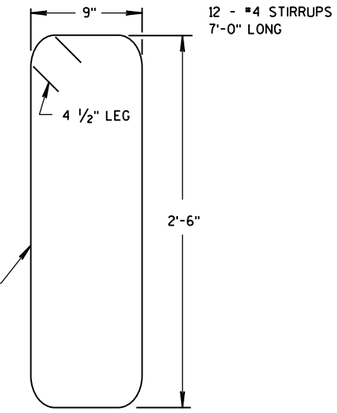
APPROVED
May 2017 — DATE
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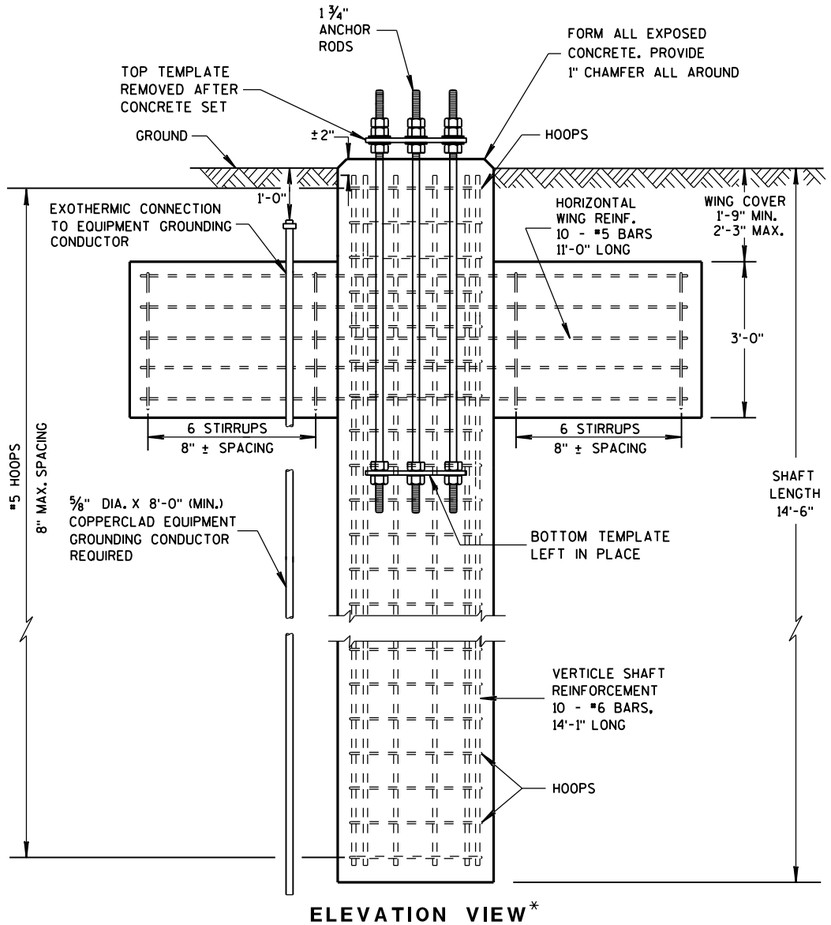
S.D.D. 9 C 11-10



PLAN VIEW

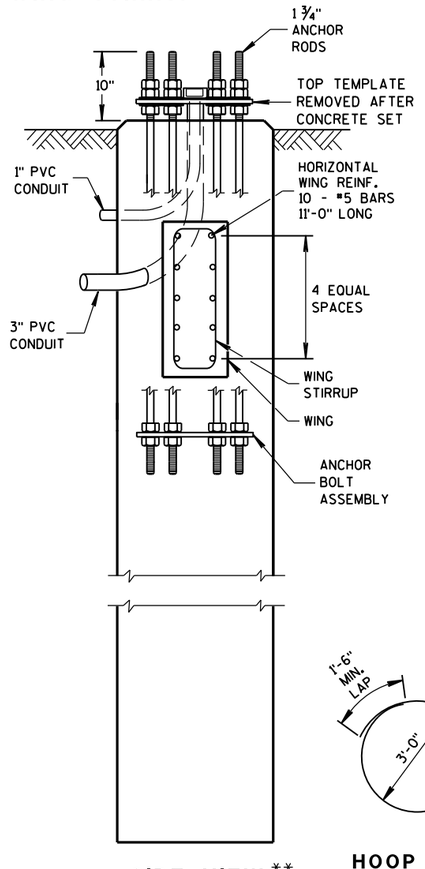


WING STIRRUP



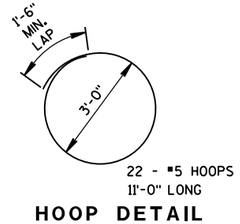
ELEVATION VIEW*

* CONDUITS ARE NOT SHOWN ON THIS VIEW FOR CLARITY



SIDE VIEW**

** HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY



HOOP DETAIL

GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF THE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE ABOVE THE CONCRETE BASE, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATIONS	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 & OVER HEIGHT (OH) POLES)

CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 635 LBS.

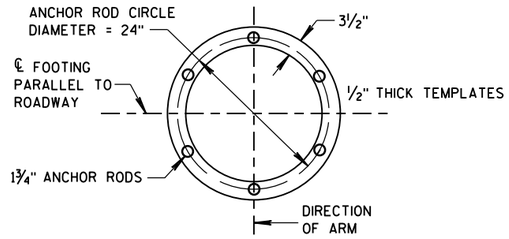
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 13

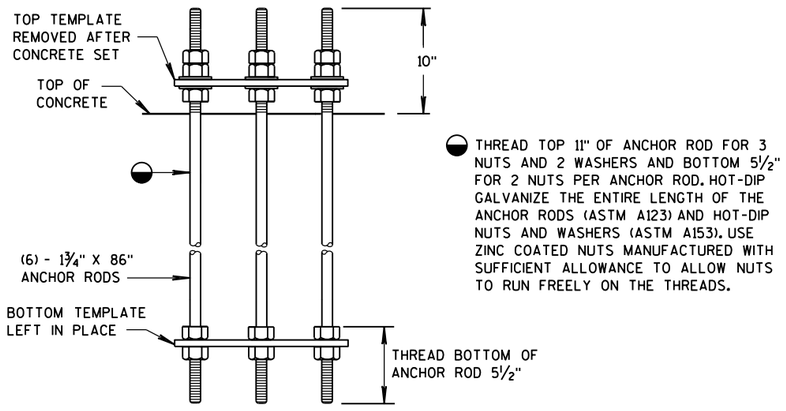
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 9 C 12-9a

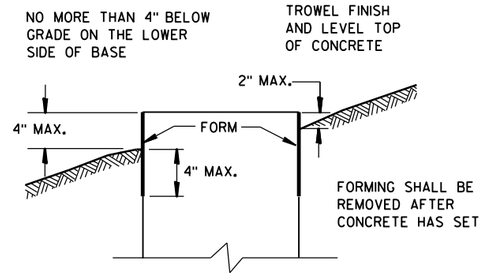


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

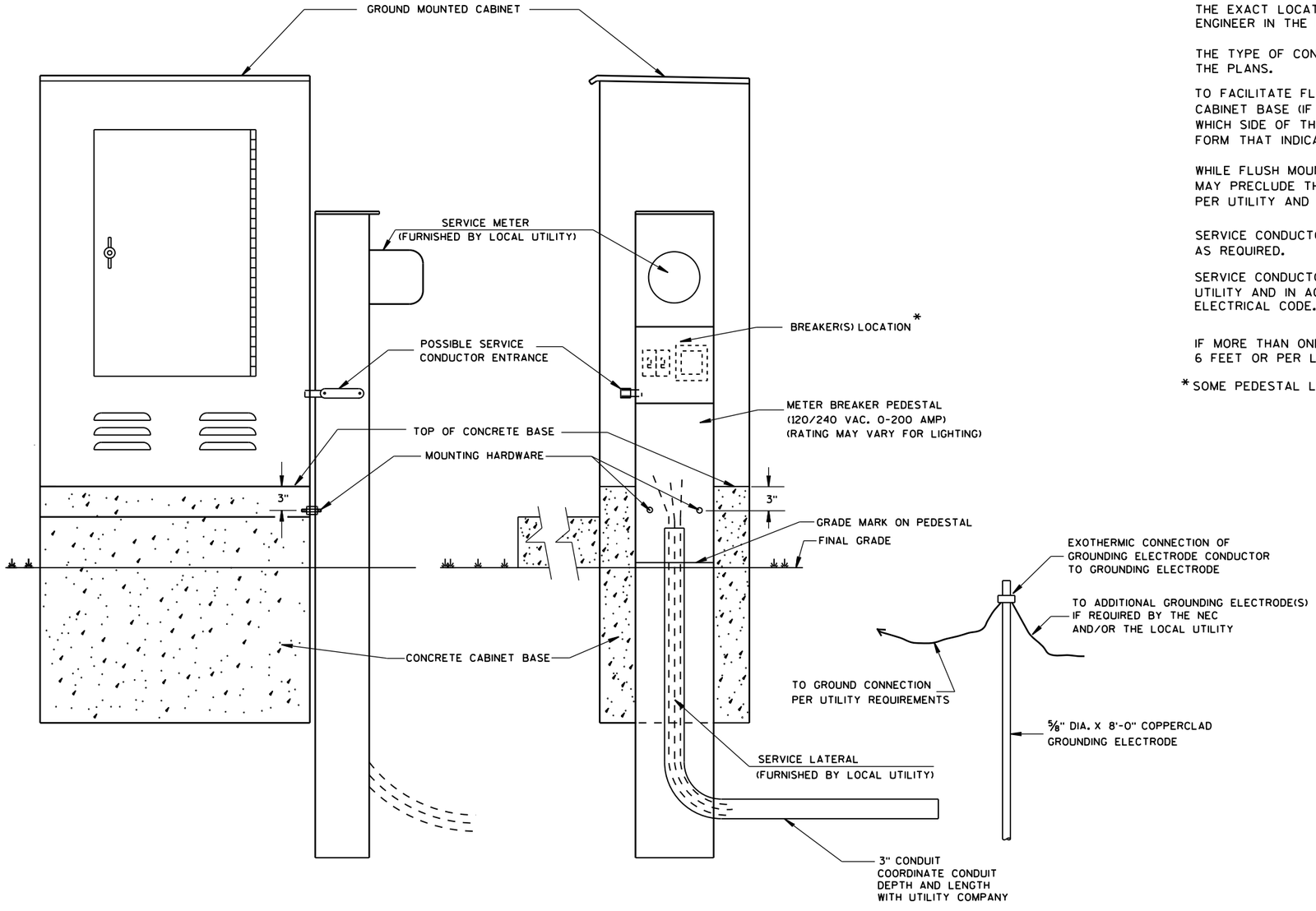
CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 — DATE
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S.D.D. 9 C 12-9b



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

*SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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S.D.D. 9 D 1-5

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S.D.D. 9 D 1-5

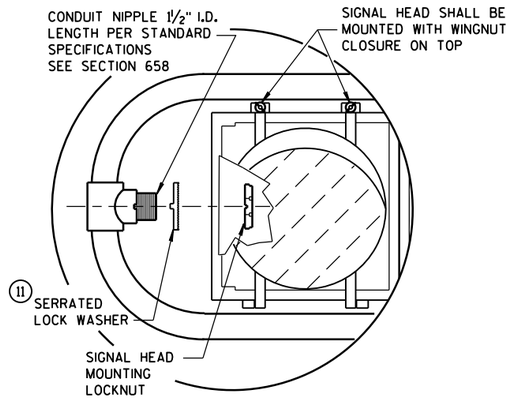
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

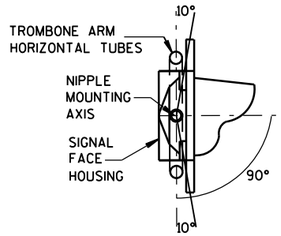
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA



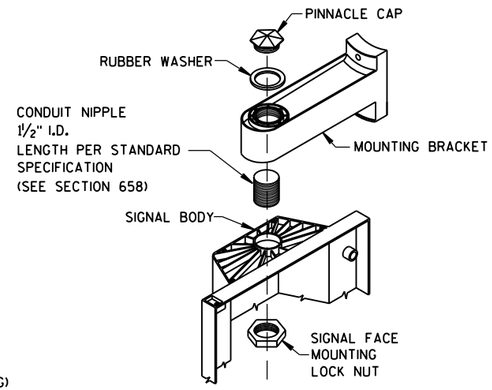
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

* SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR



SECTION A-A

(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)



SIGNAL FACE MOUNTING DETAIL

(BANDED)

GENERAL NOTES

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

POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

(3) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" LONG - 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

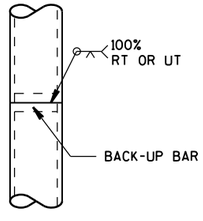
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

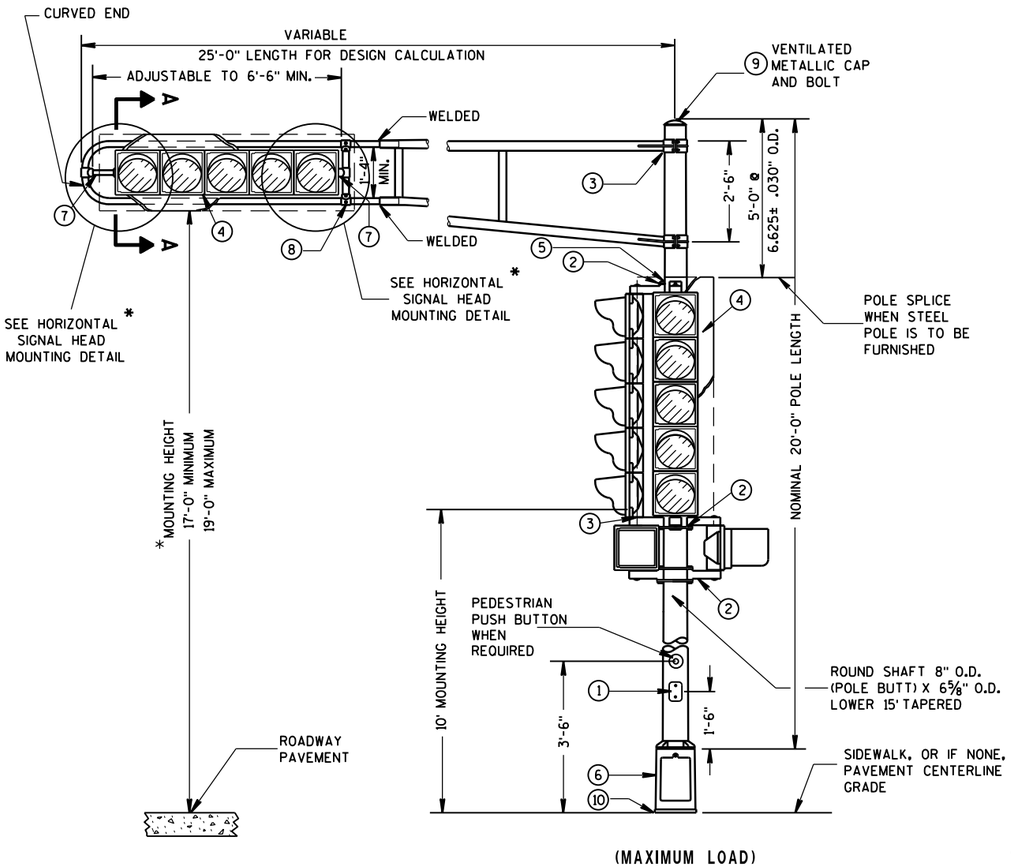
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

FOR MANUFACTURERS USE ONLY

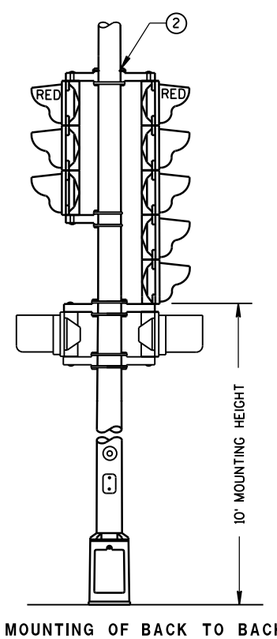
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



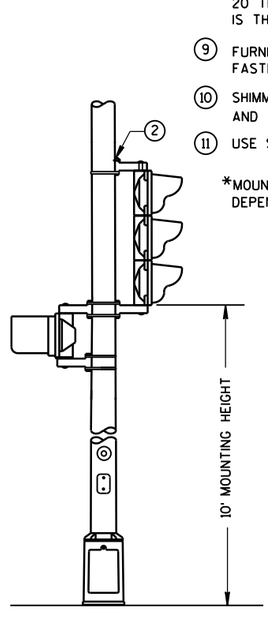
POLE SPLICE DETAIL



(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 2 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

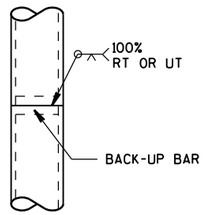
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

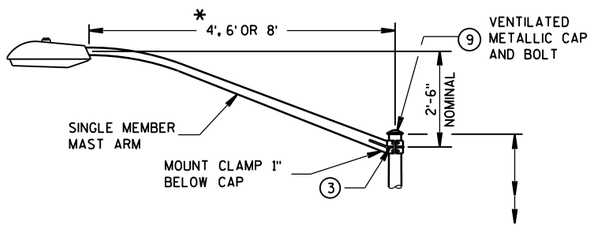
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FOR MANUFACTURERS USE ONLY

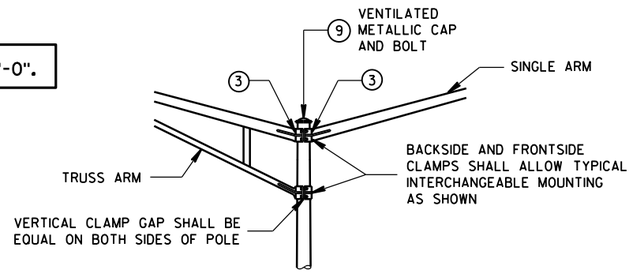
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.





POLE SPLICE DETAIL

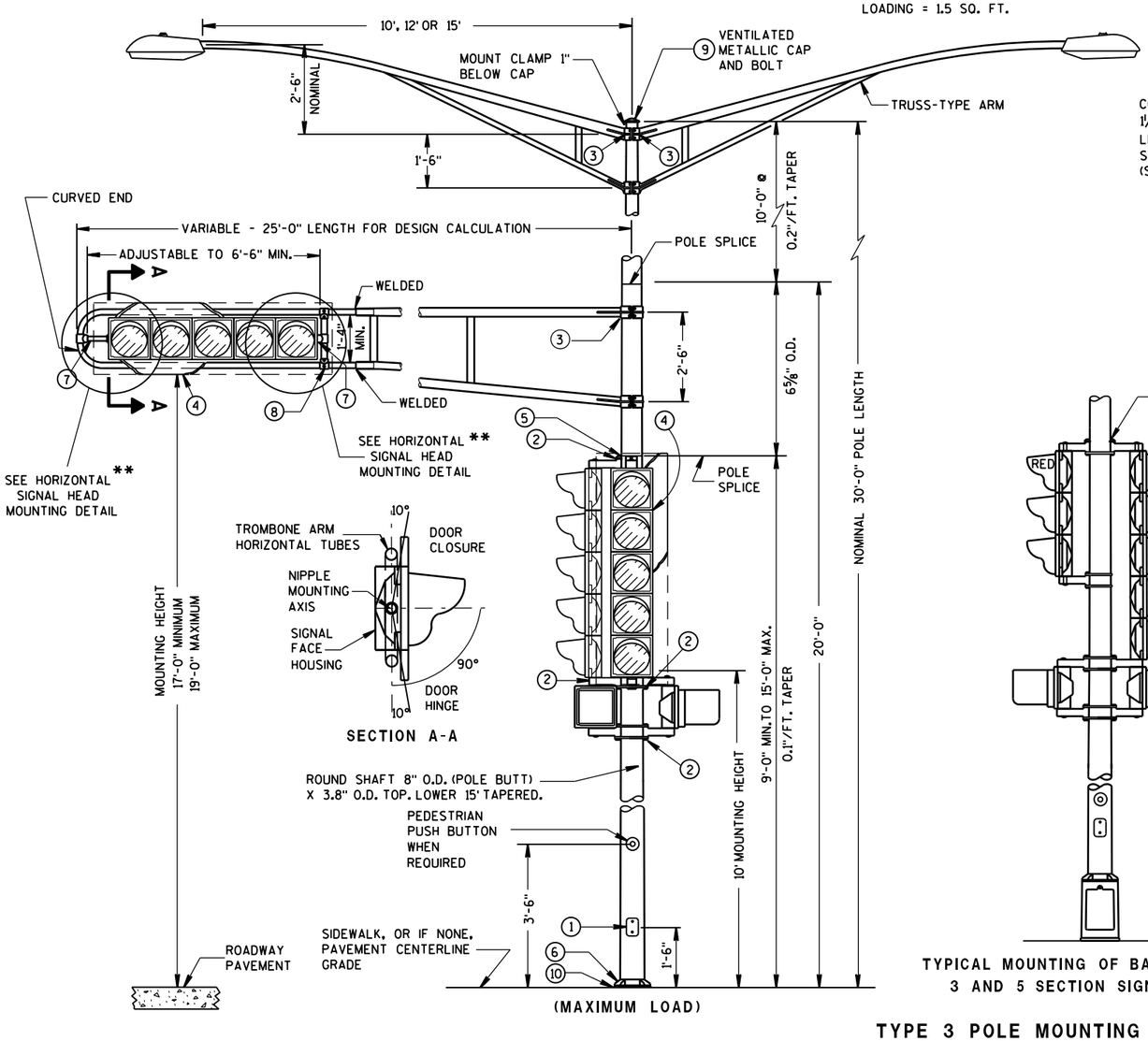
***RISE FOR 4' ARM SHALL BE 2'-0".**

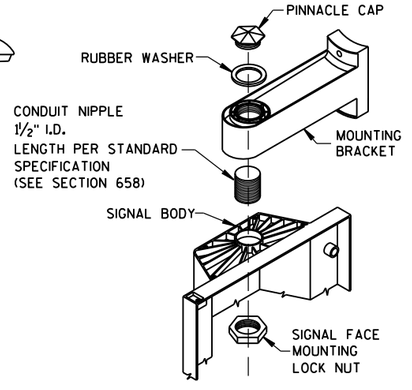


INTERCHANGEABLE MOUNTING DETAIL

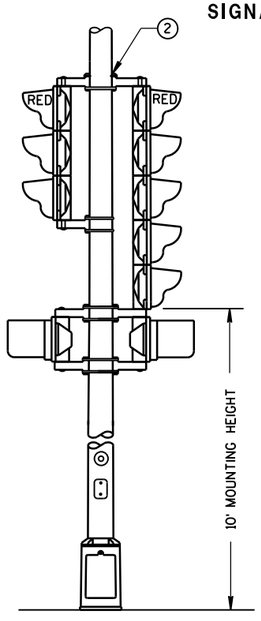
LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

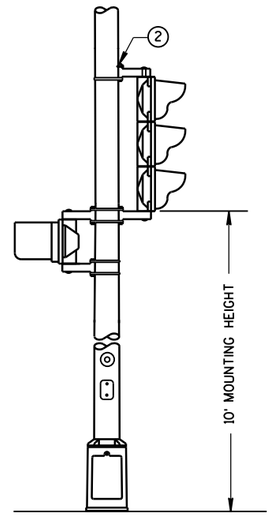




SIGNAL FACE MOUNTING DETAIL
(BANDED)



TYPICAL MOUNTING OF BACK TO BACK
3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652, SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

(3) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.

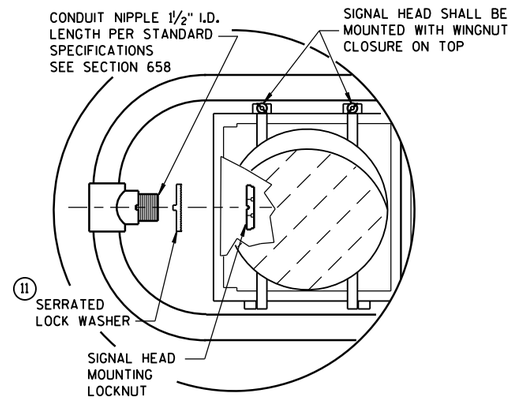
(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4 " X ¾" -20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL**

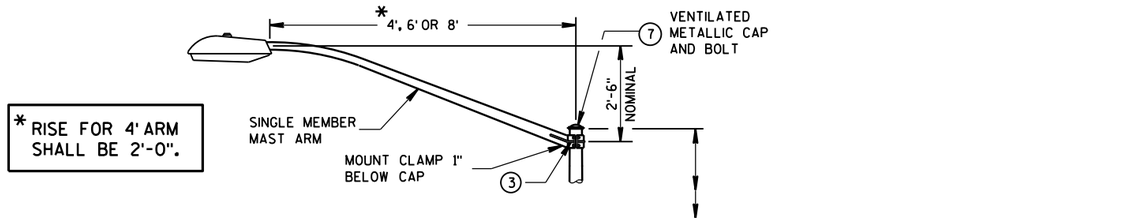
** SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

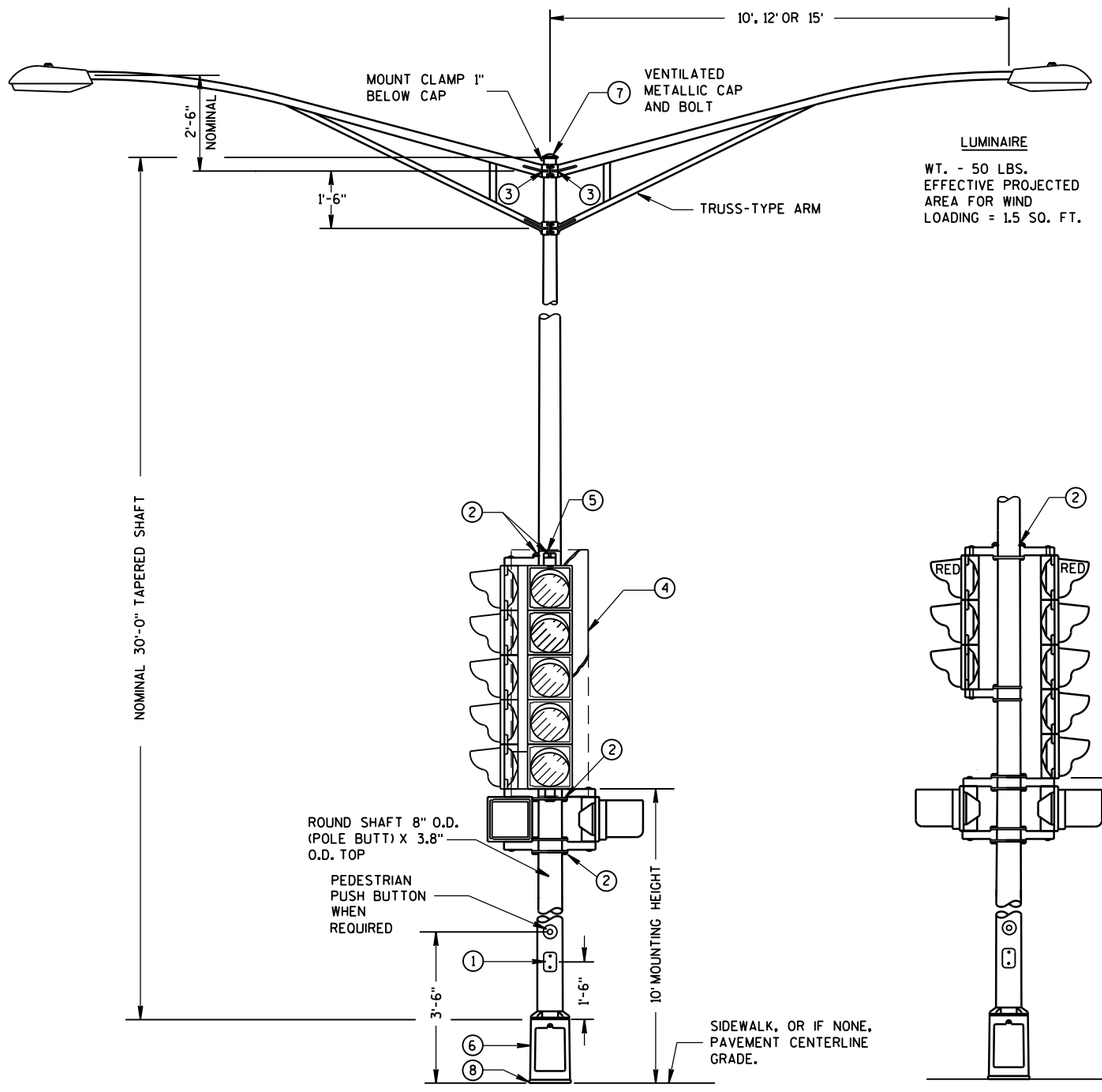
TYPE 3 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 170

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S.D.D. 9 E 1-14b

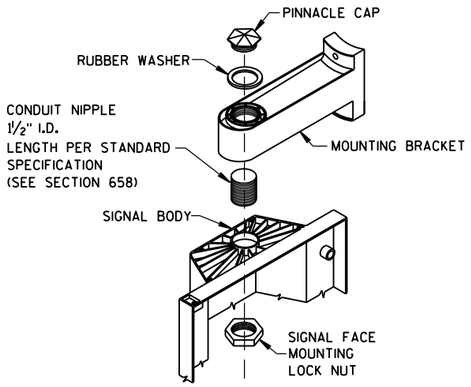




LUMINAIRE

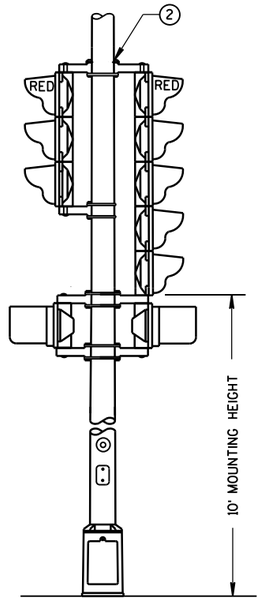
WT. - 50 LBS.
EFFECTIVE PROJECTED AREA FOR WIND LOADING = 1.5 SQ. FT.

(MAXIMUM LOAD)

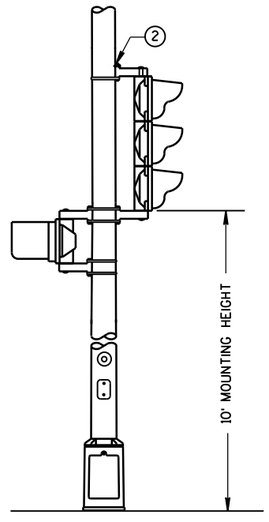


SIGNAL FACE MOUNTING DETAIL

(BANDED)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 4 POLE MOUNTING CONFIGURATION

GENERAL NOTES

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

ALL TYPE 4 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658).

(3) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

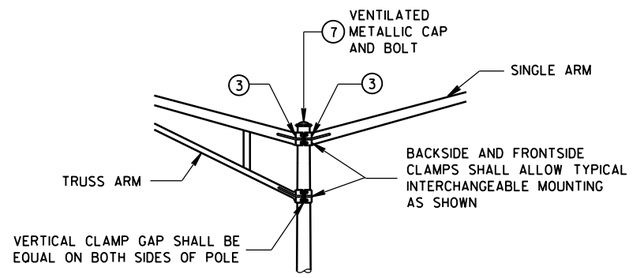
(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(7) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(8) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.



INTERCHANGEABLE MOUNTING DETAIL

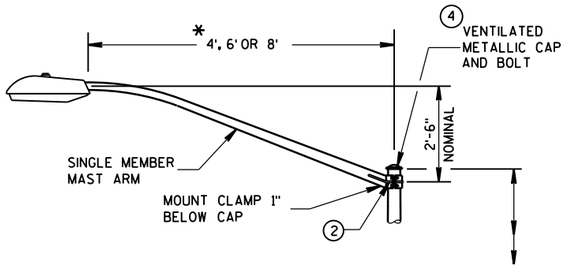
POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4

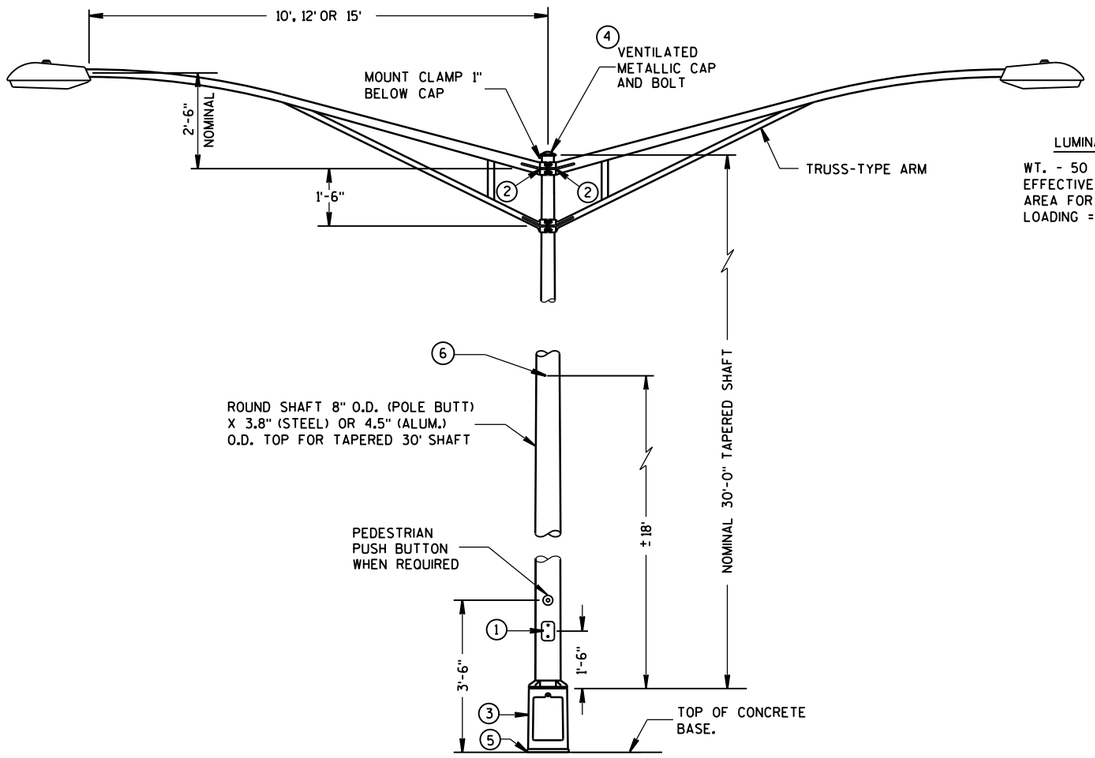
STATE OF WISCONSIN
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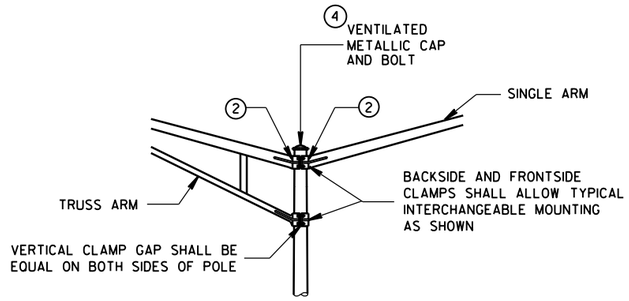
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*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

6

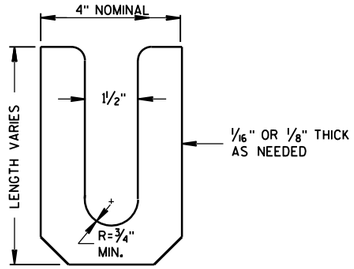
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POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

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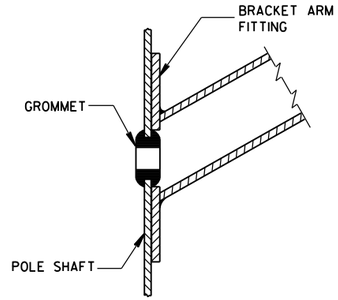
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S.D.D. 9 E 1-14d

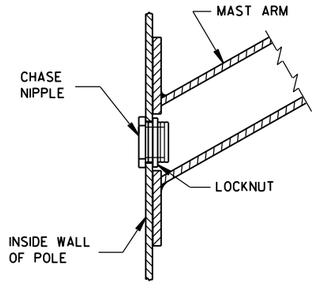


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

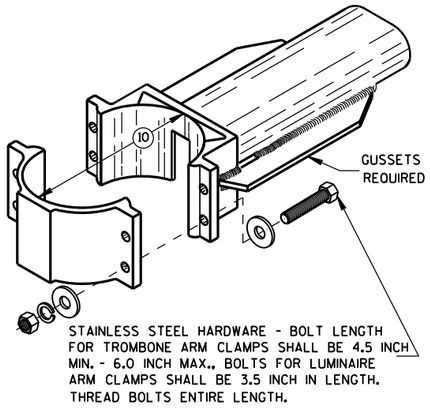
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

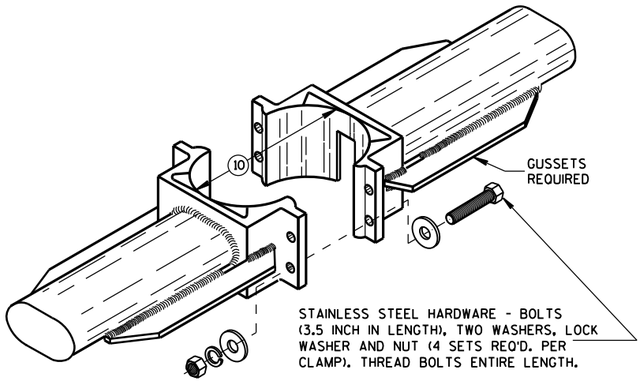
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

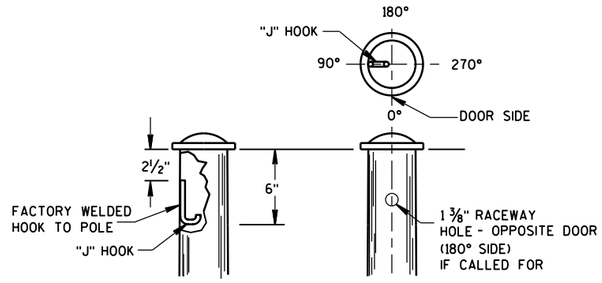
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



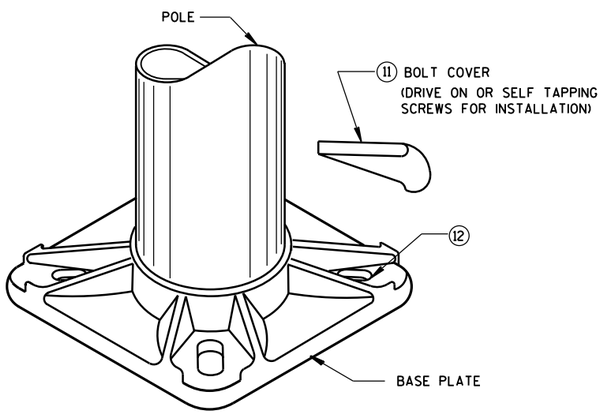
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



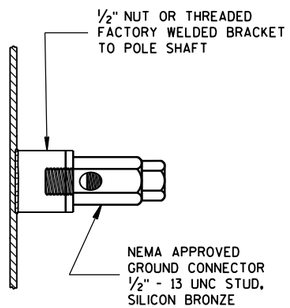
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

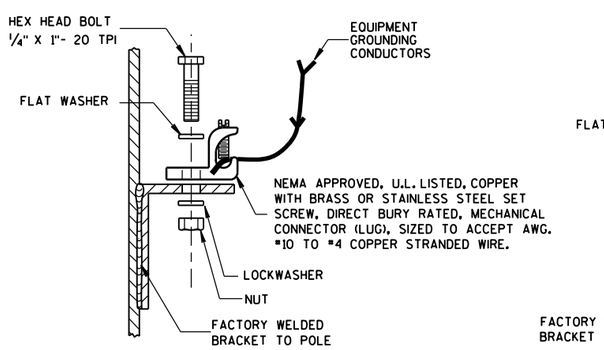


TYPICAL "J" HOOK LOCATION



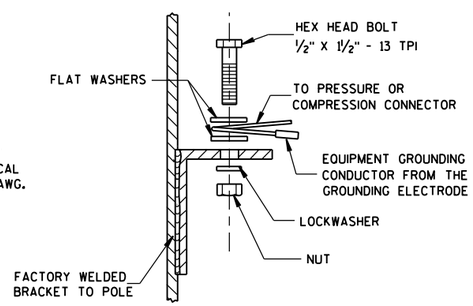
BASE PLATE





TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTINGS

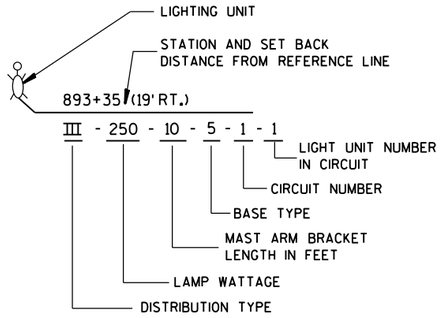
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL

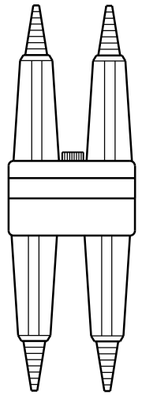
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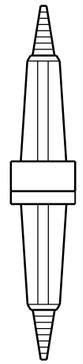
S.D.D. 9 E 1-14g



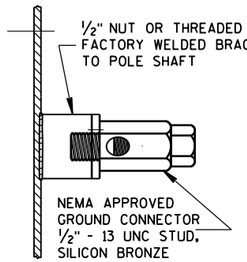
LIGHTING UNIT CODE
(TYPICAL)

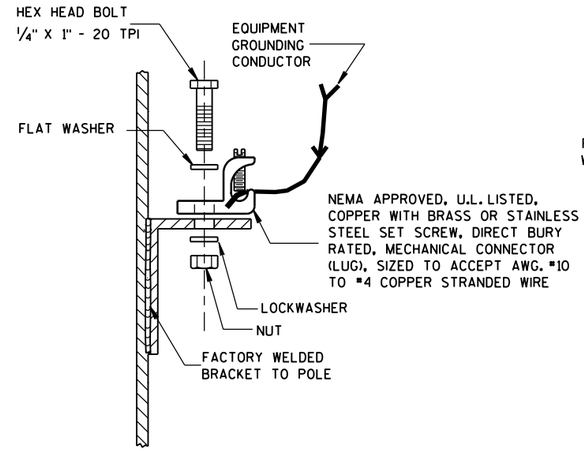


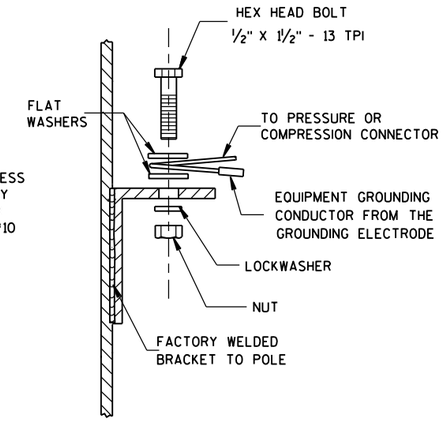
DETAIL "A"
BREAKAWY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



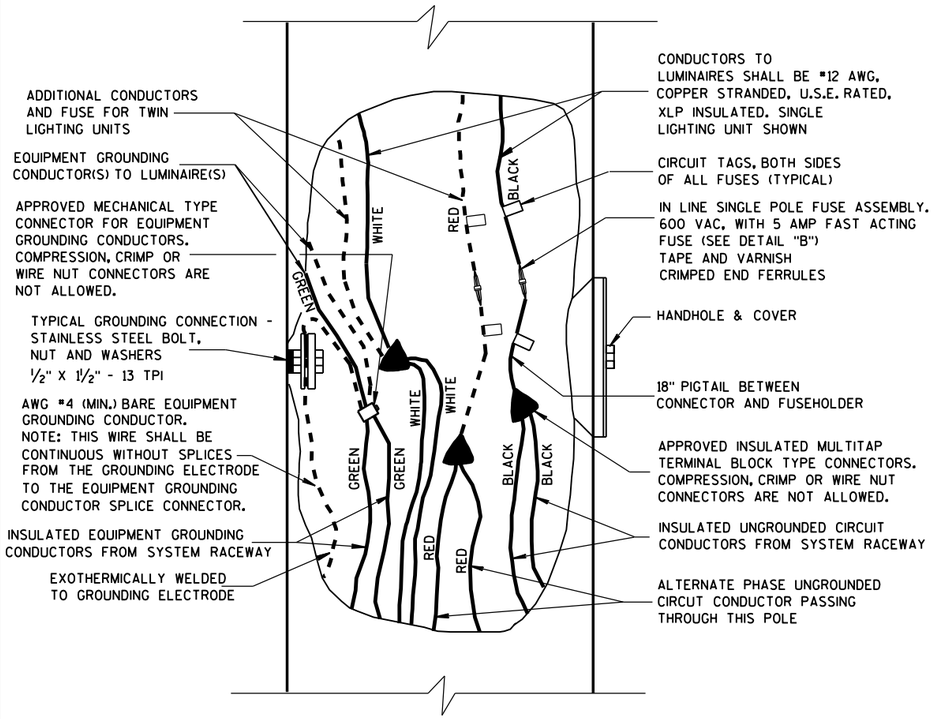
DETAIL "B"
BREAKAWY SINGLE POLE WITH WATERPROOF INSULATING BOOT



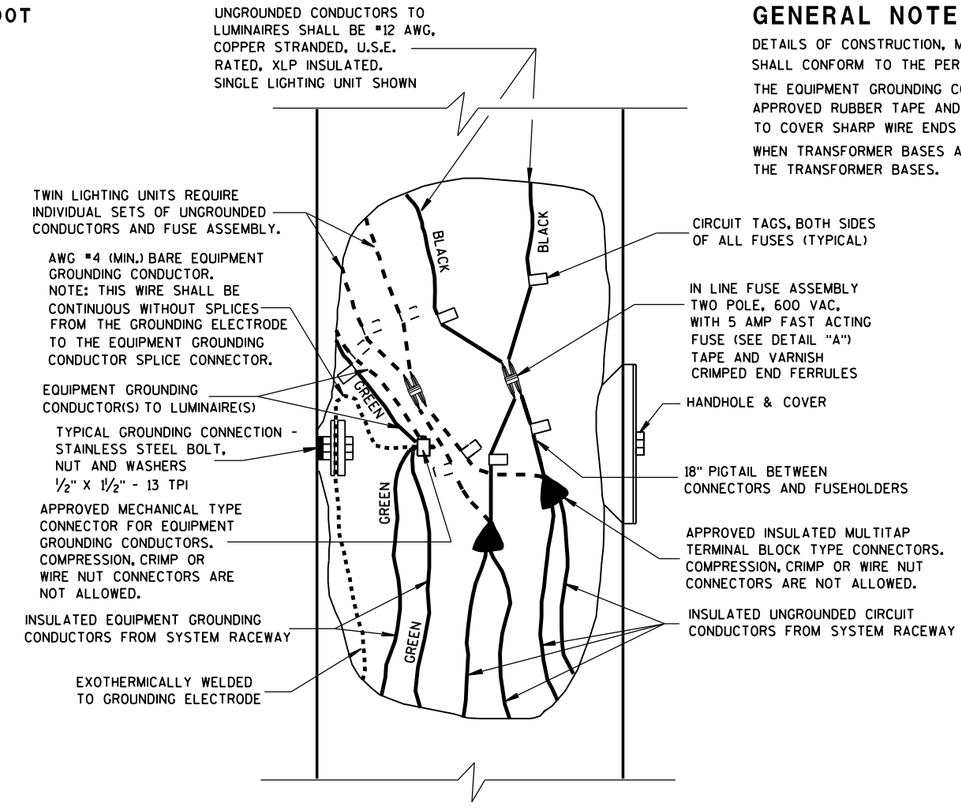




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

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

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

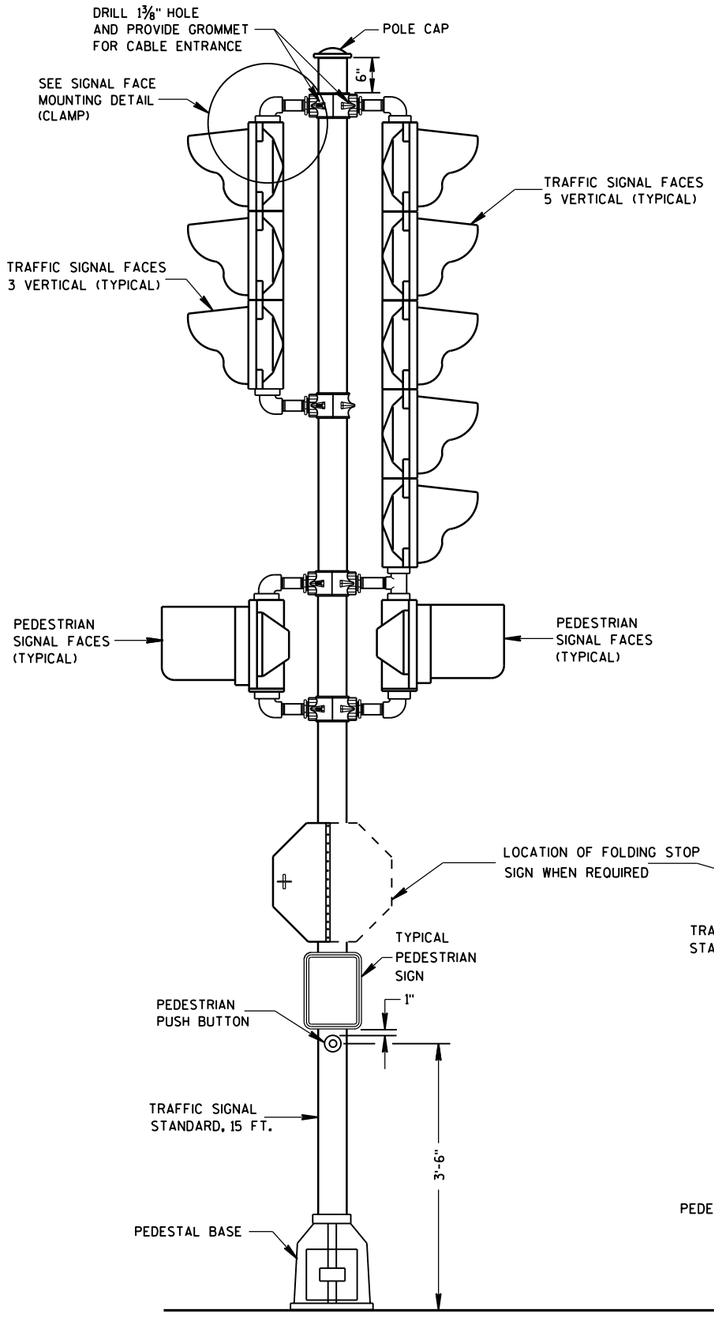
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

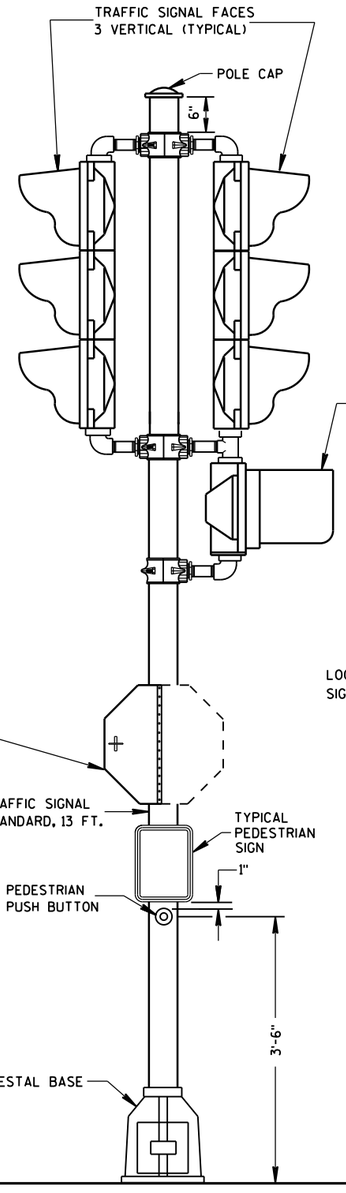
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

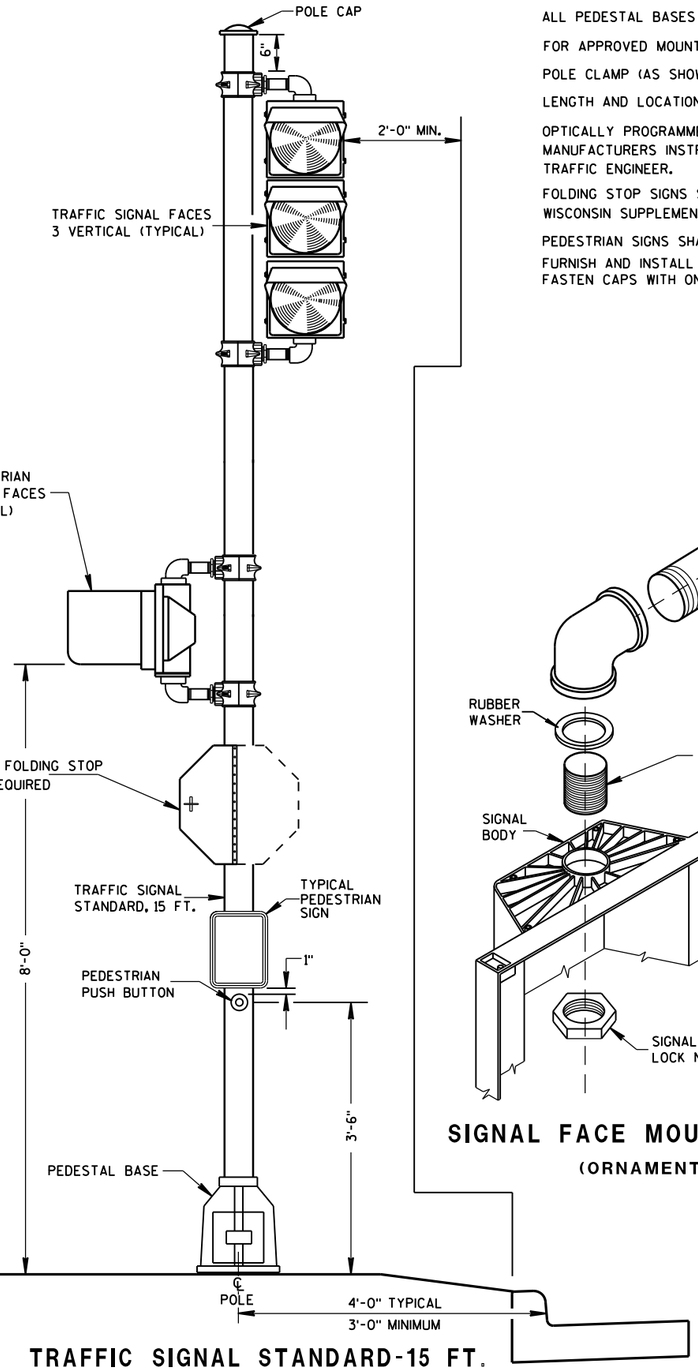
6
S.D.D. 9 E 3-5



TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLE CLAMP (AS SHOWN) MOUNTING BRACKETS SHALL BE USED.

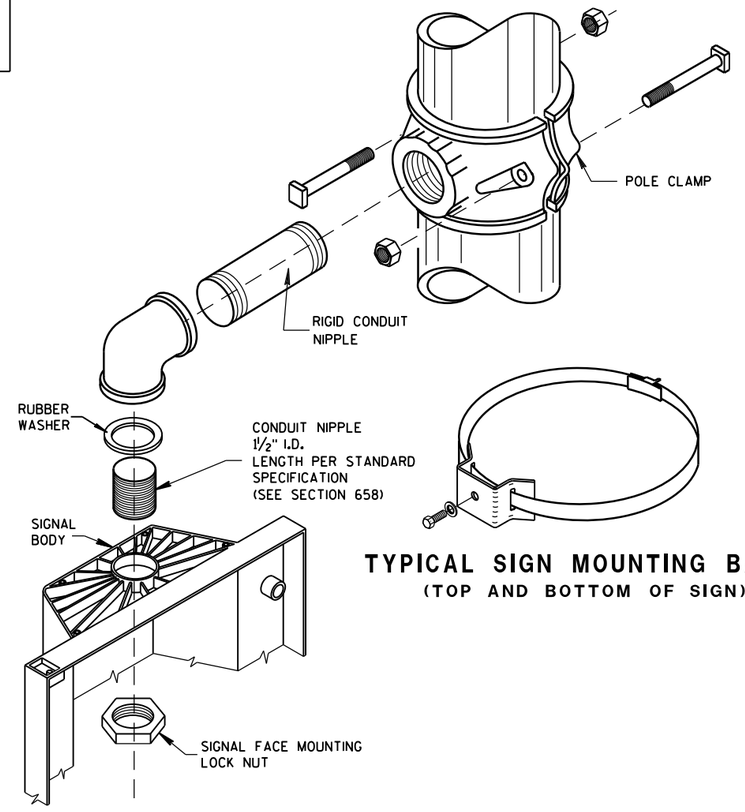
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(ORNAMENTAL)

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)

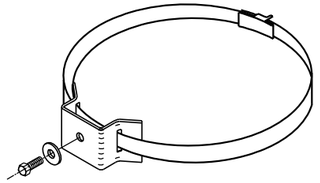
TRAFFIC SIGNAL STANDARD
ORNAMENTAL BRACKET MOUNTINGS
TYPICAL FOR 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

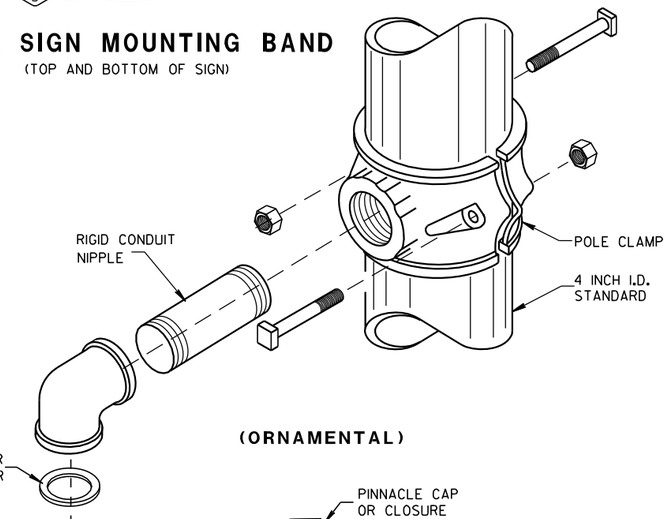
APPROVED
2/28/2013 DATE
/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA

S.D.D. 9 E 5-6

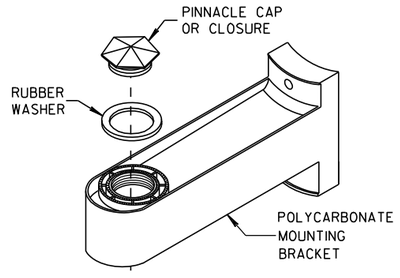
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S.D.D. 9 E 5-6



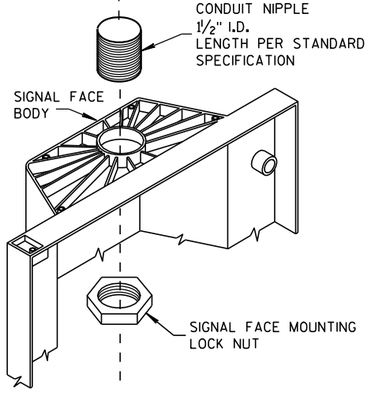
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



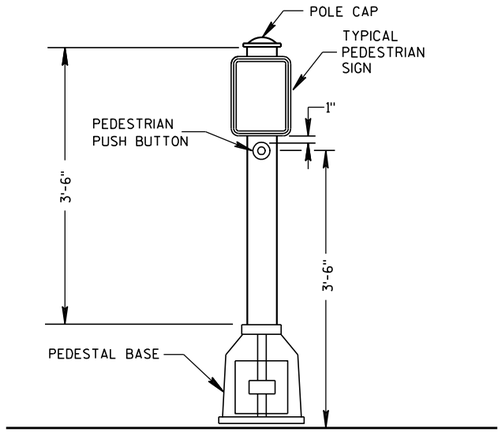
(ORNAMENTAL)



(BANDED)



SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

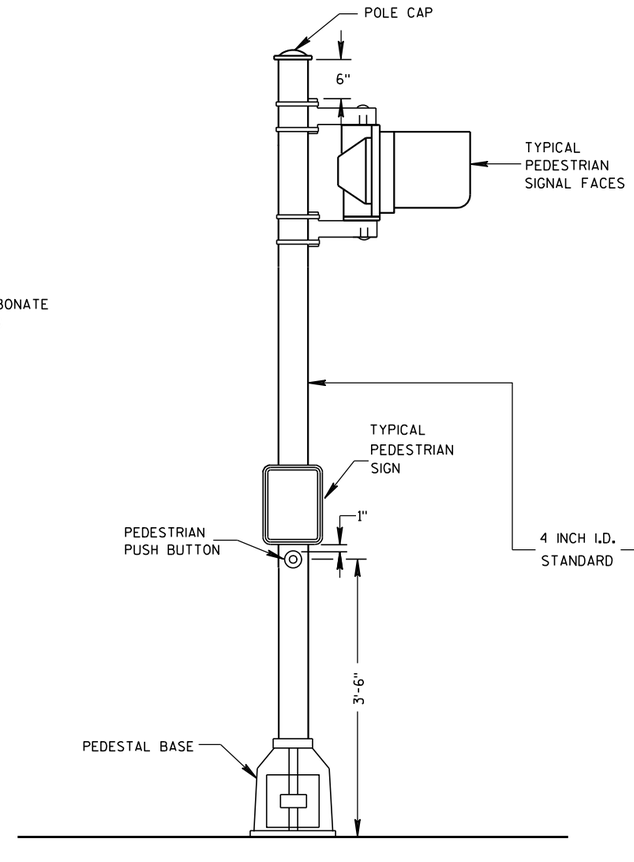
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

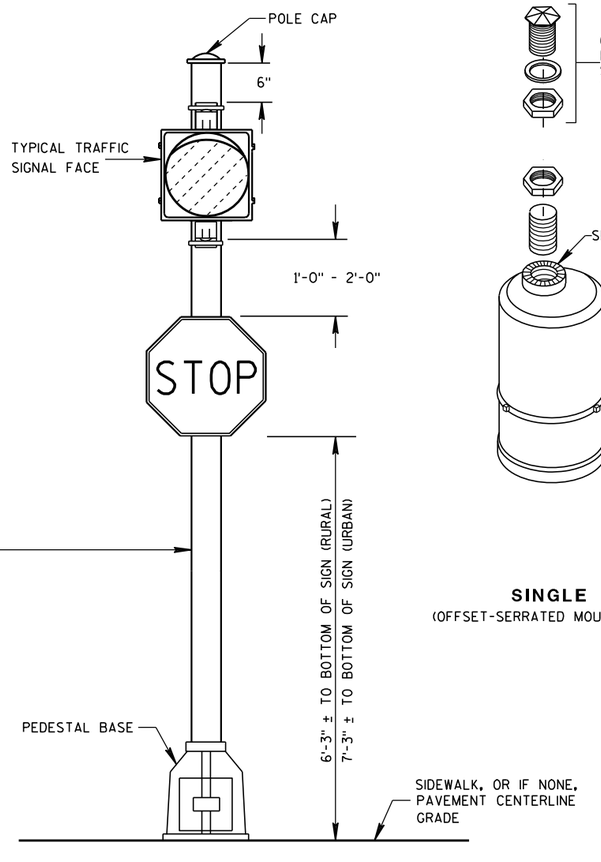
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

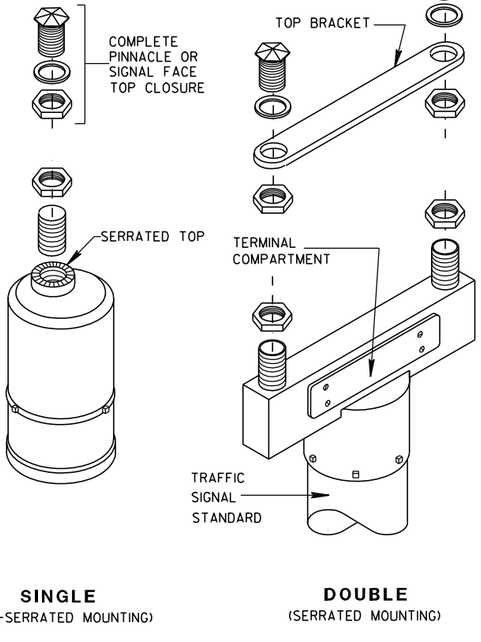
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



PEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)



STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED



SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10 — DATE

/S/ John Corbin — STATE ELECTRICAL ENGI — HWYS

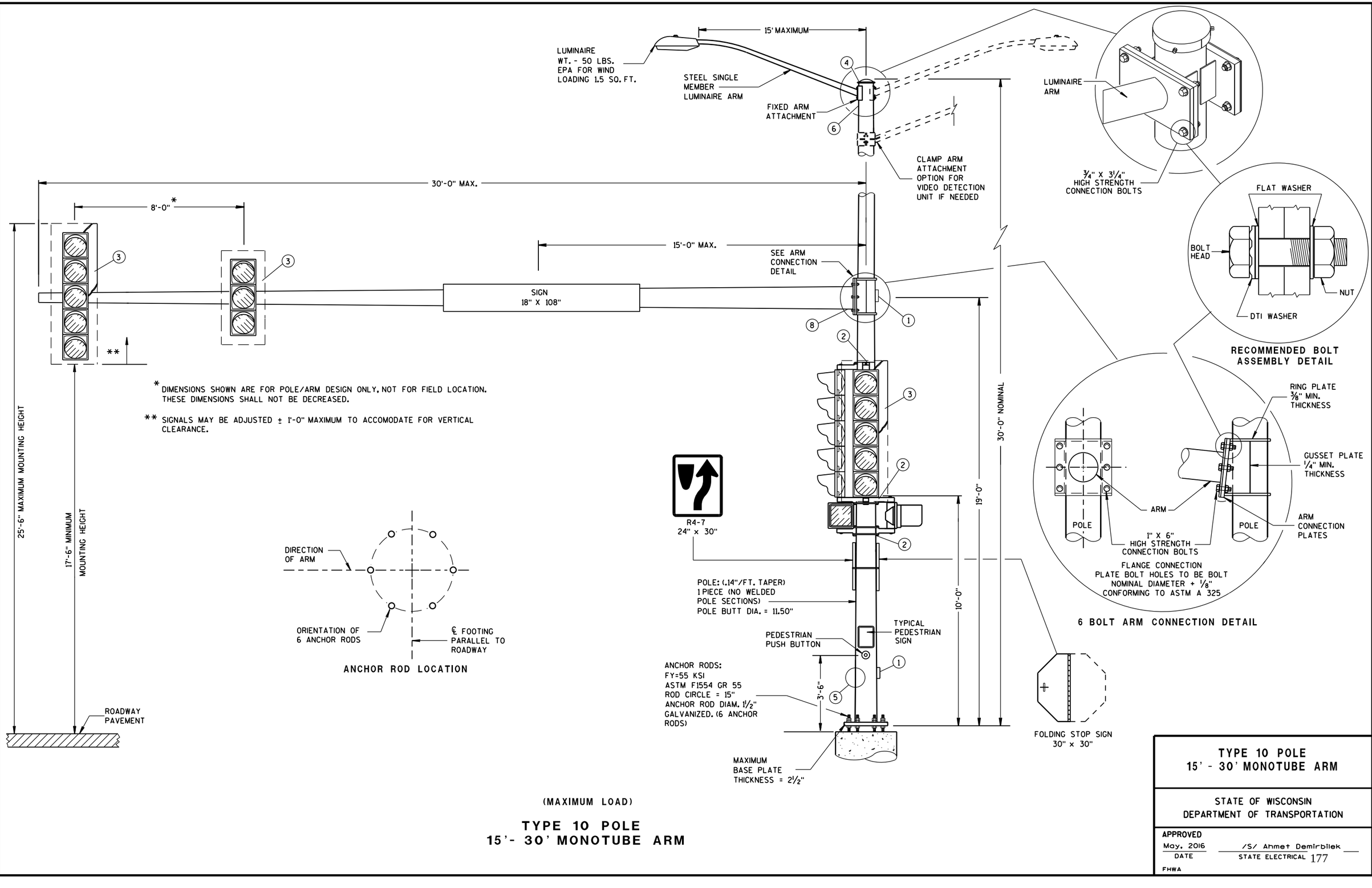
FHWA

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S.D.D. 9 E 7-5

6

S.D.D. 9 E 7-5



* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

(MAXIMUM LOAD)

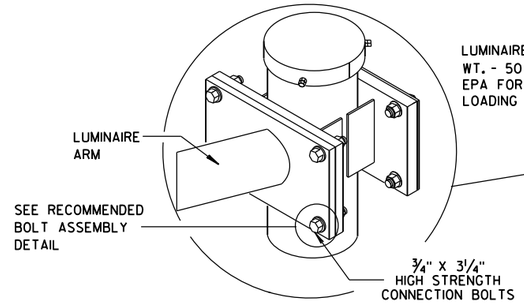
TYPE 10 POLE
15'- 30' MONOTUBE ARM

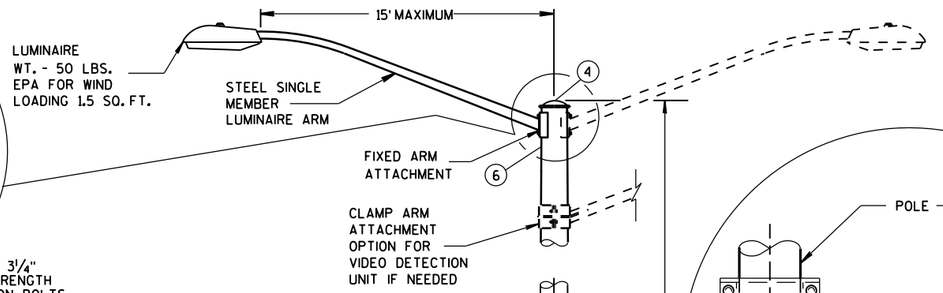
TYPE 10 POLE
15' - 30' MONOTUBE ARM

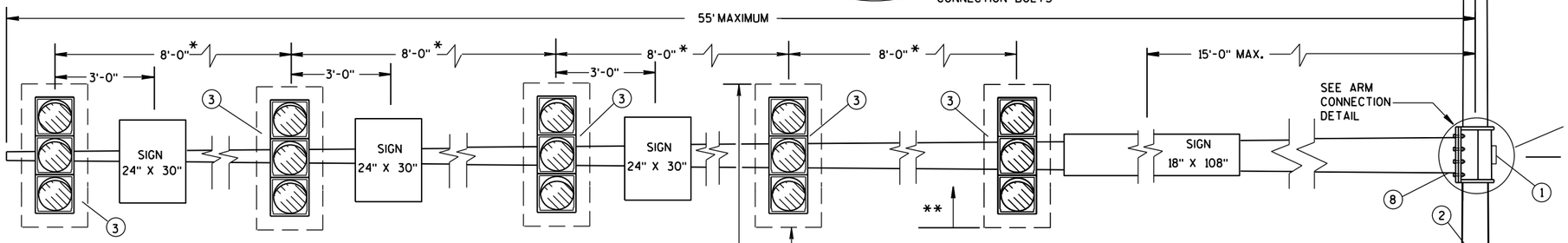
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

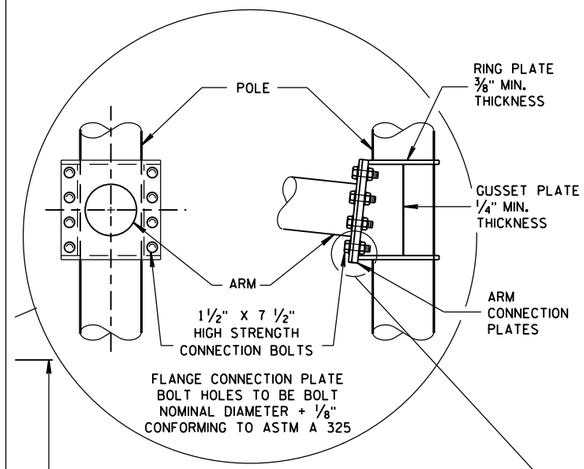
APPROVED
May, 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6
S.D.D. 9 E 8-8b





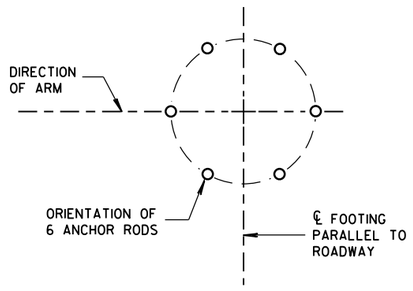




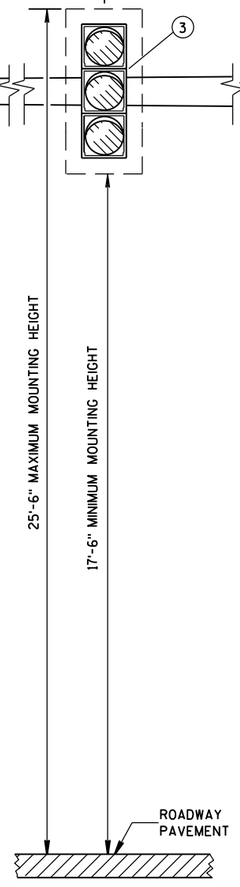
8 BOLT ARM CONNECTION DETAIL

* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

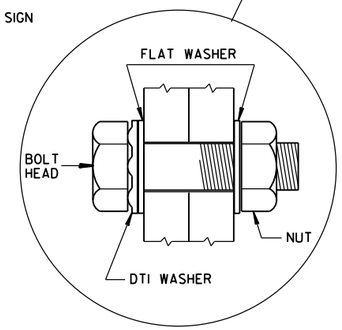
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



ANCHOR ROD LOCATION



(MAXIMUM LOAD)



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 13 POLE 35'- 55' MONOTUBE ARM

TYPE 13 POLE 35' - 55' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2016 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA	

6
S.D.D. 9 E 8-8d

GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

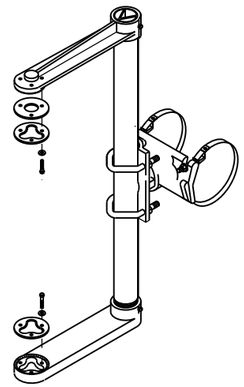
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

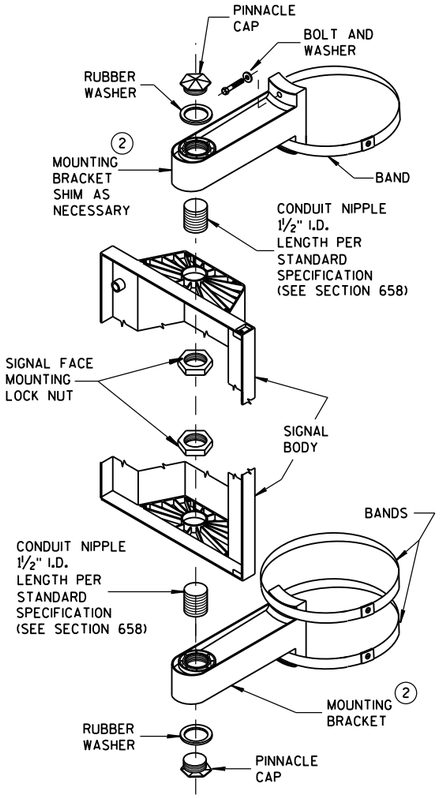
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

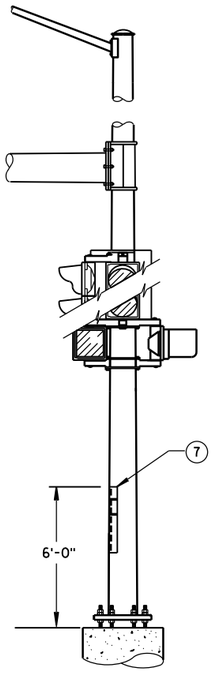


SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM

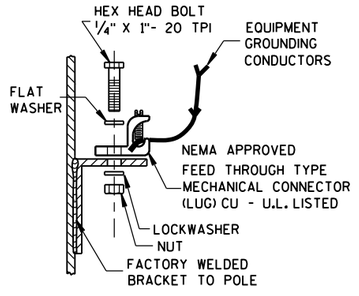
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



SIGNAL FACE
VERTICAL MOUNTING DETAIL

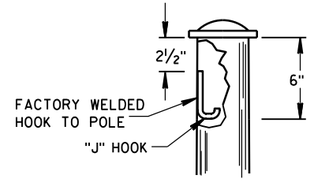


STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT



TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



"J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

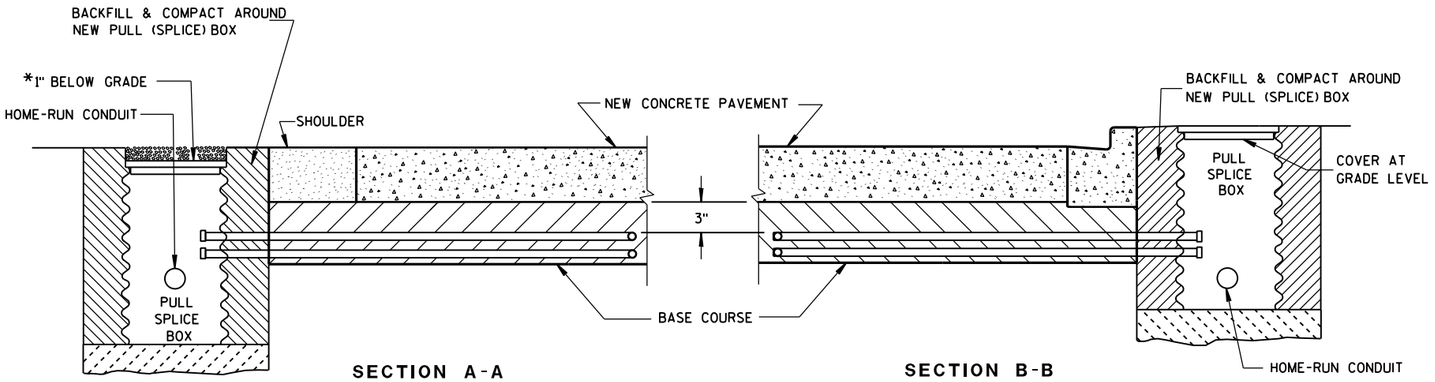
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May 2016 — DATE
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SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

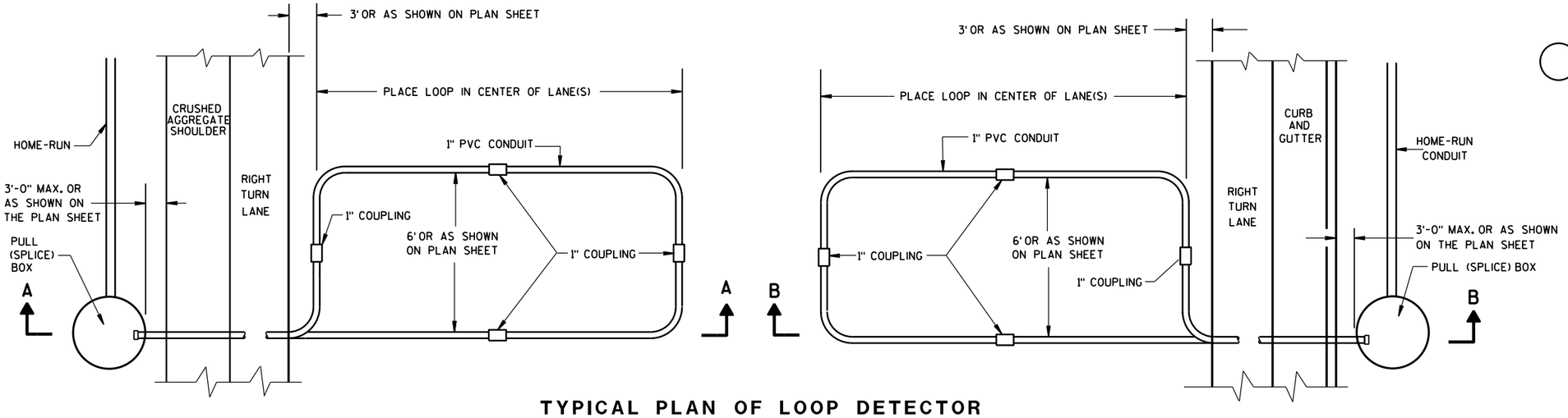
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

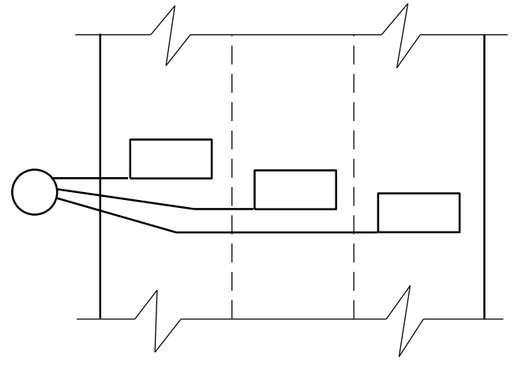
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

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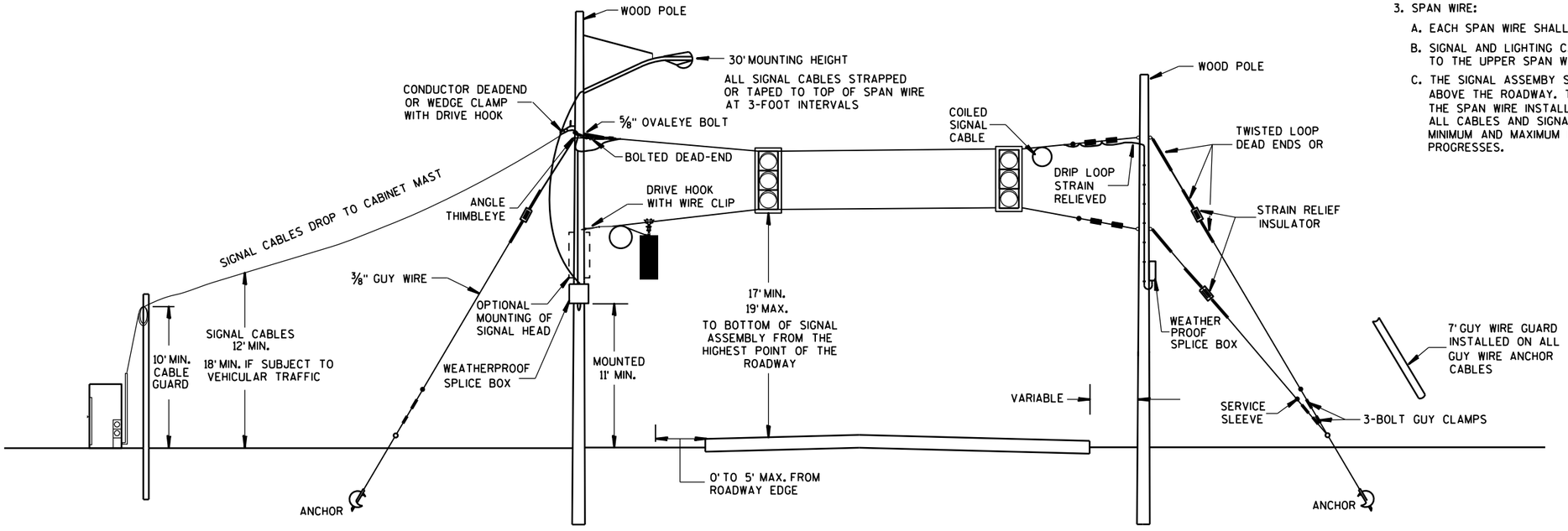
GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.

3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS

MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

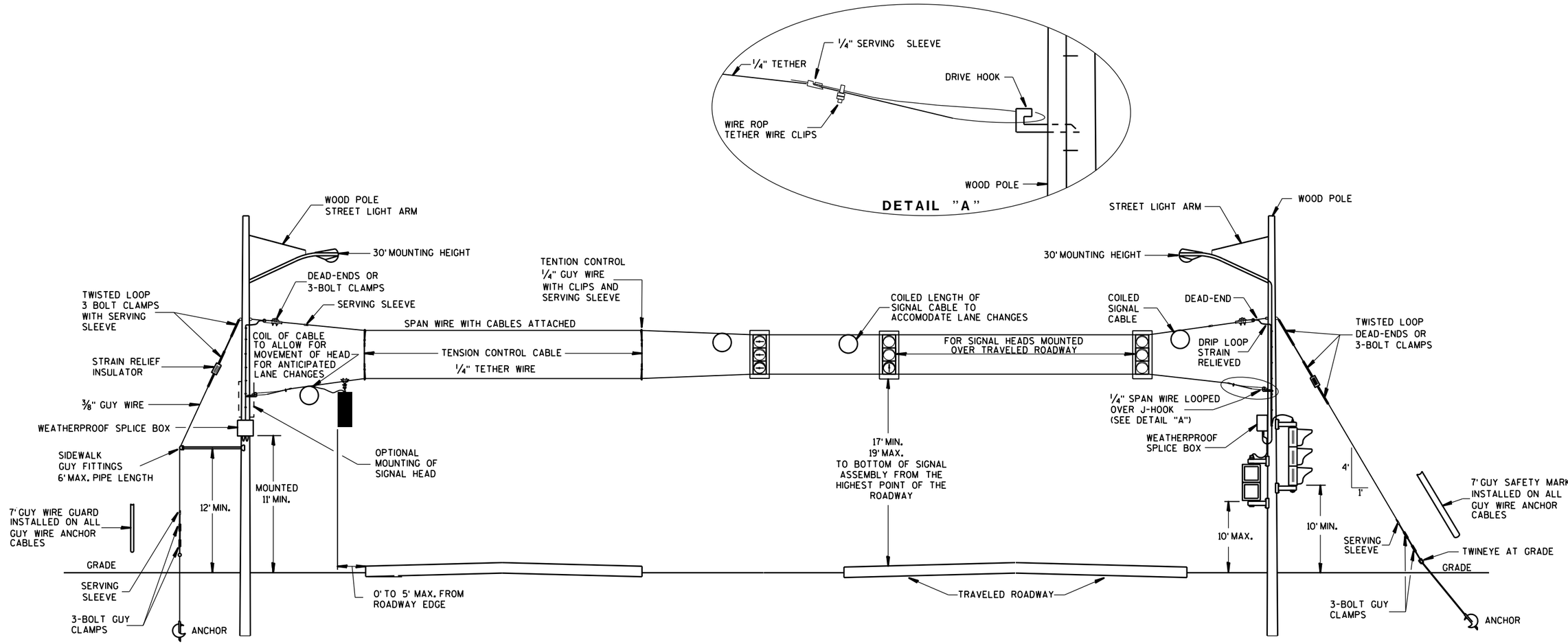
SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

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GENERAL NOTES

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

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   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

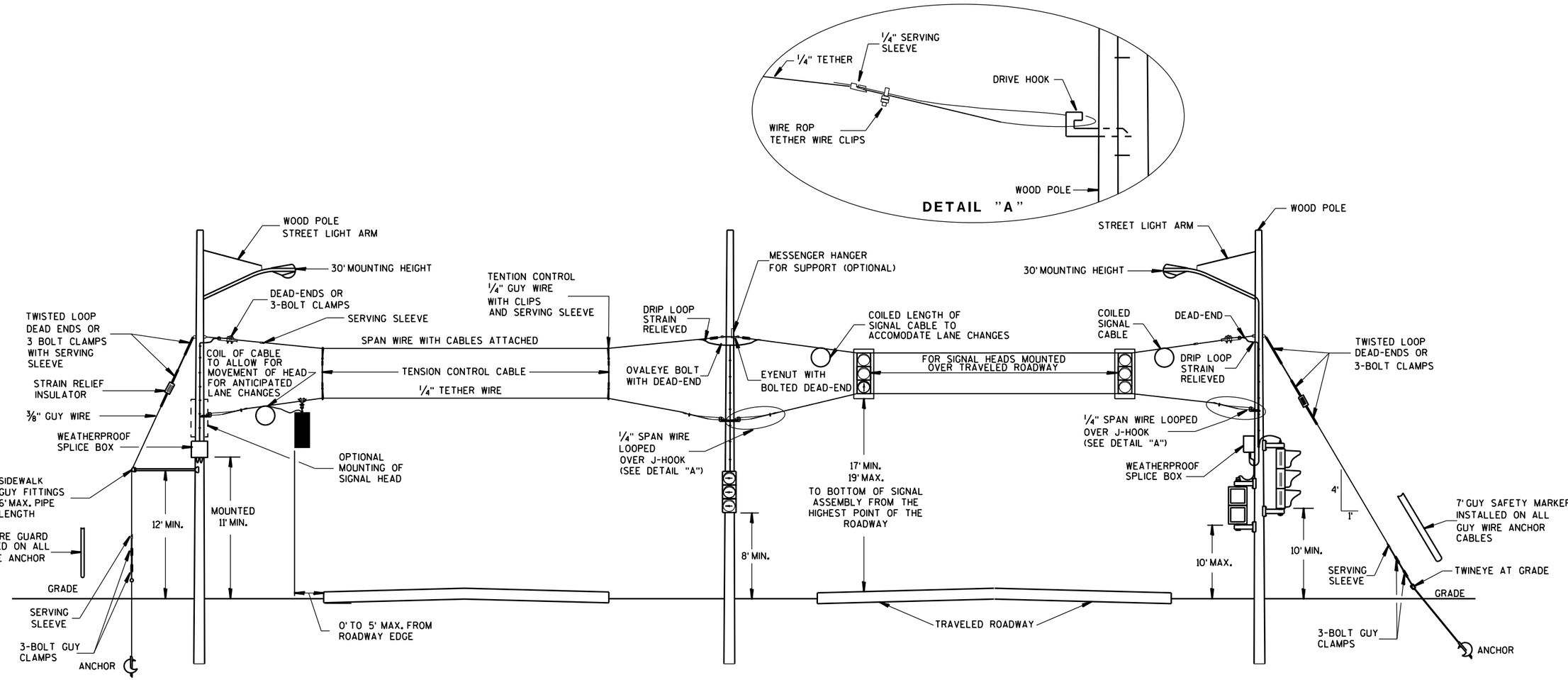
SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

GENERAL NOTES

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   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.

3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

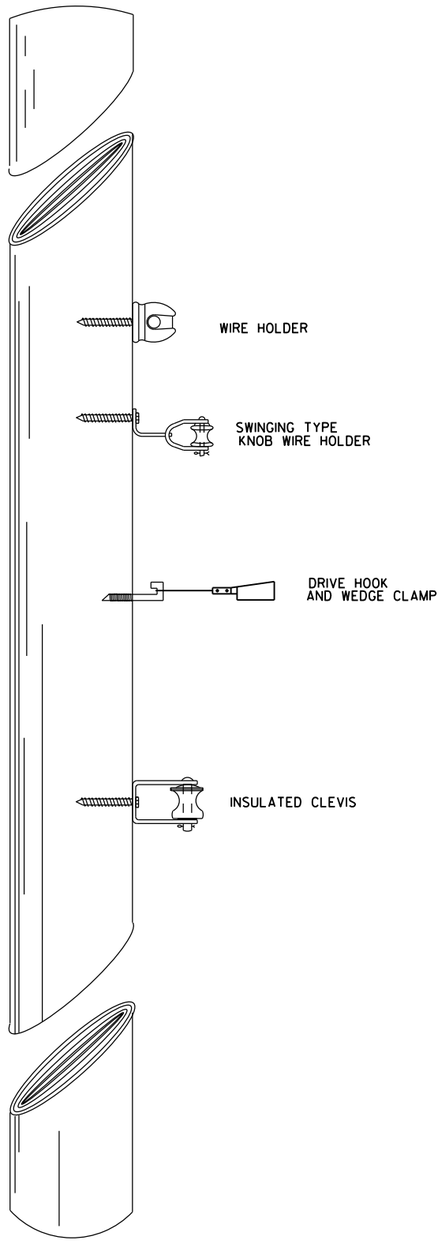
SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
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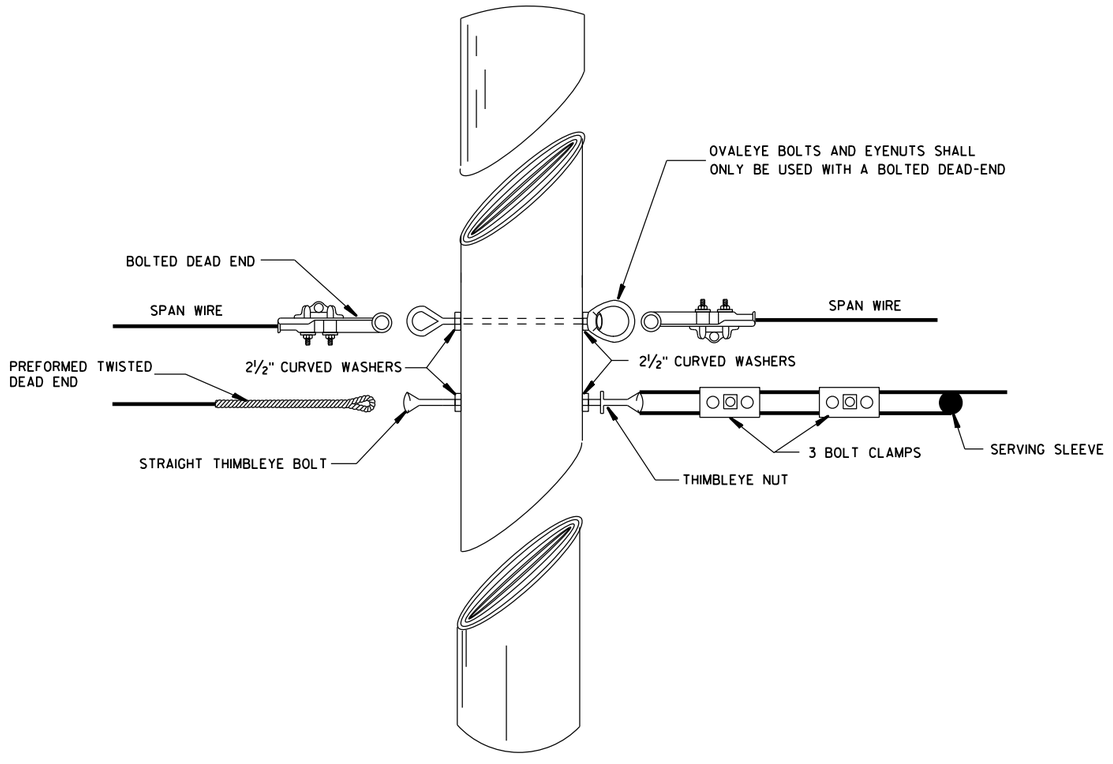
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TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

6

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SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
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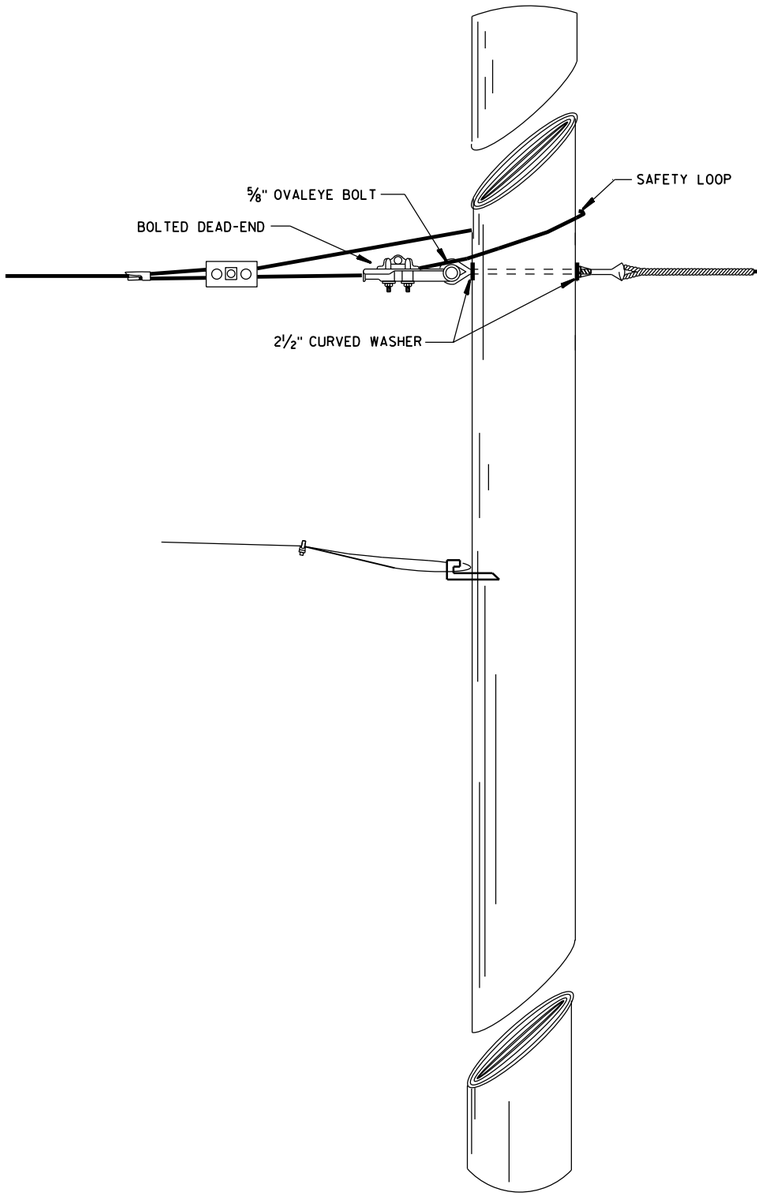
June, 2015
DATE

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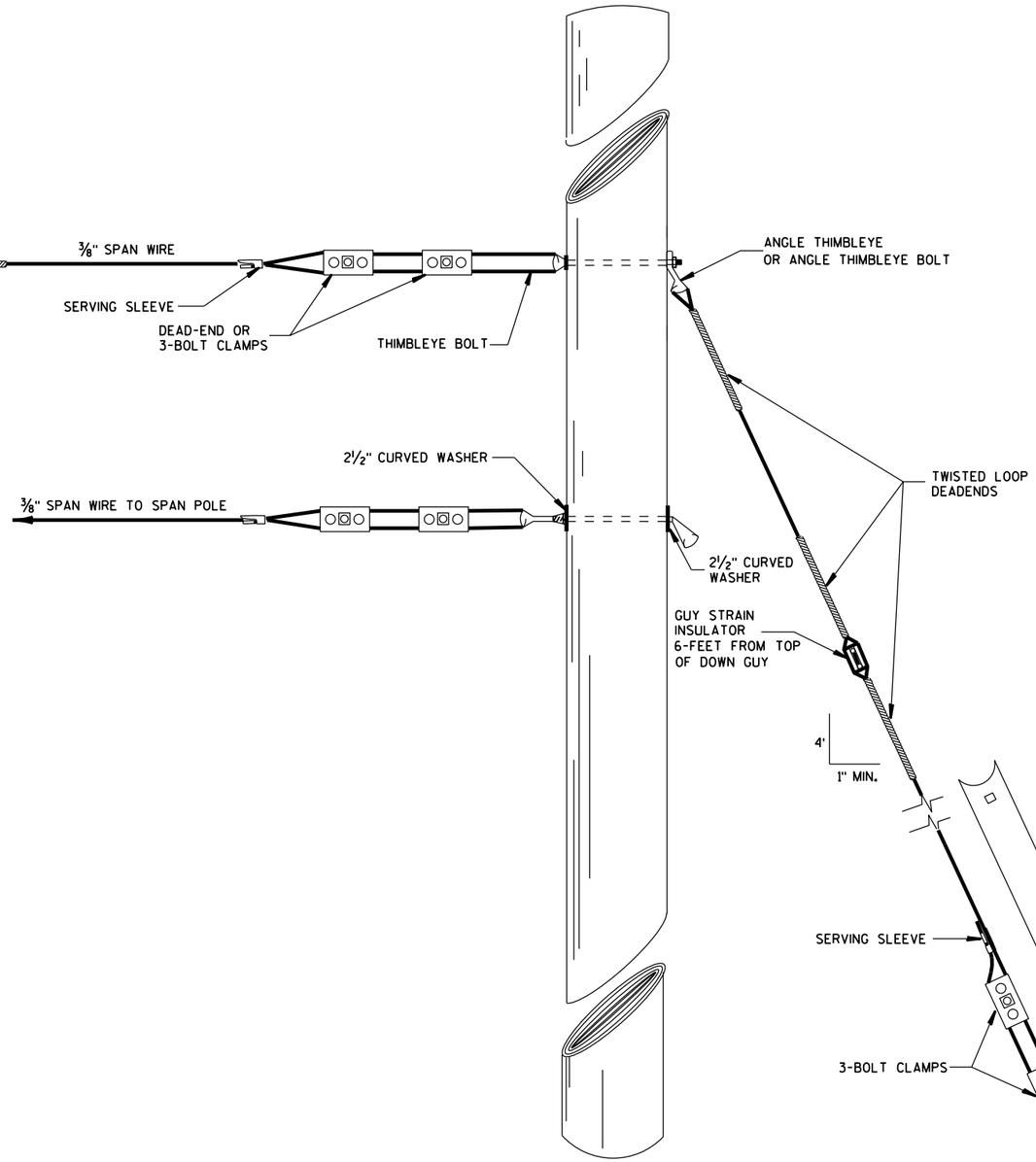
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GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE HOLE FOR ⅝" BOLTS.
2. SAFTY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE



GUY POLE

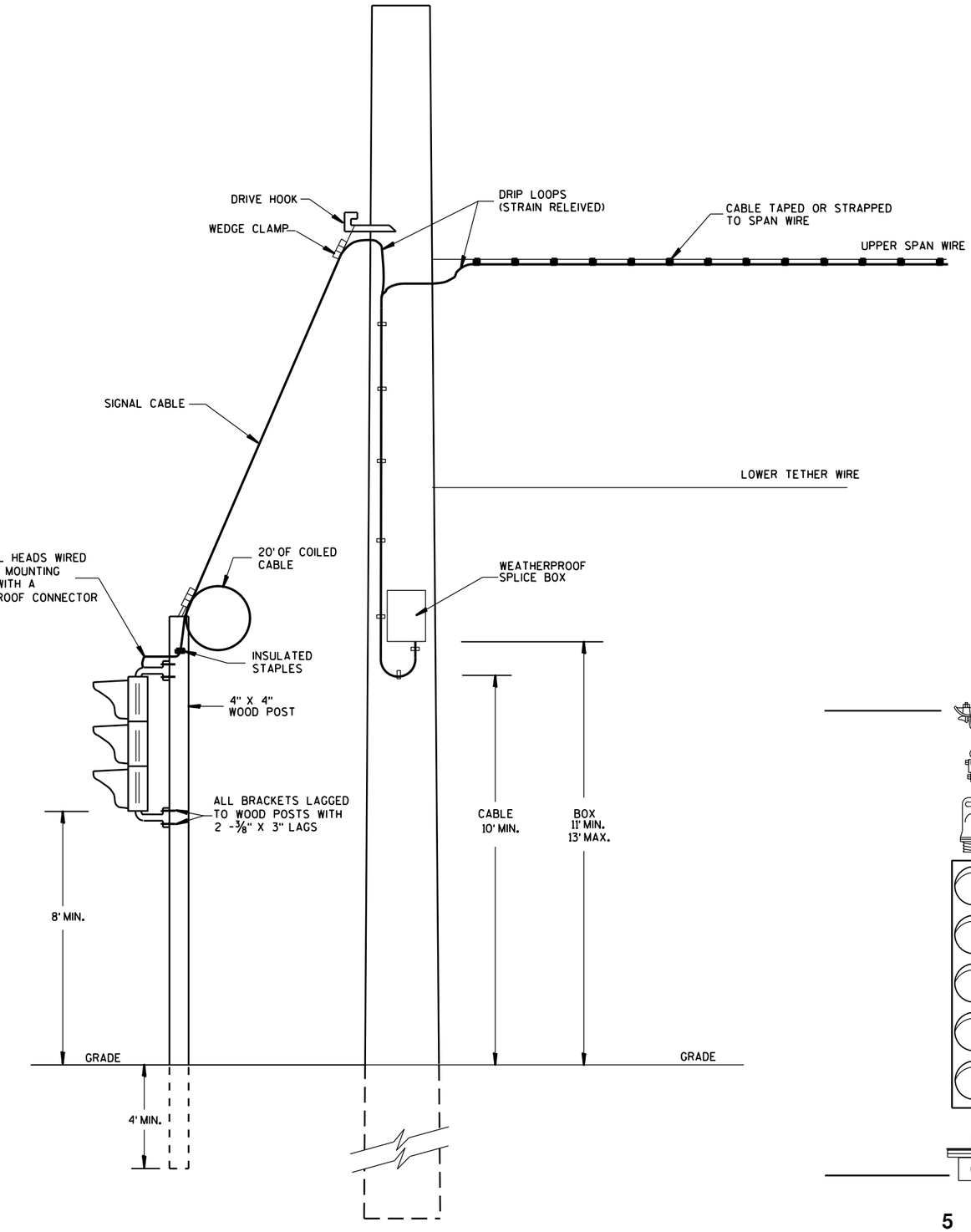
TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

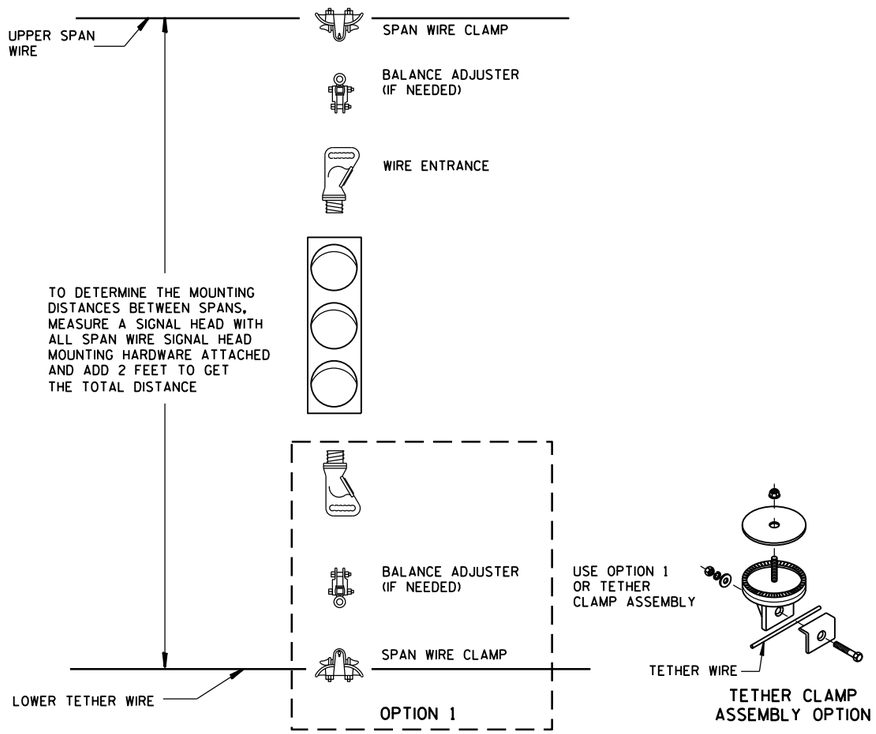
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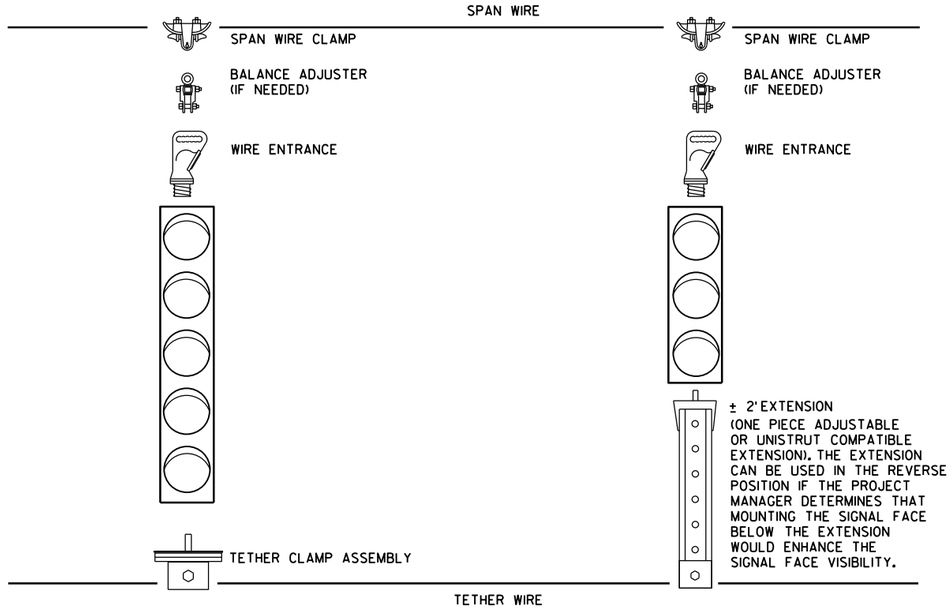


TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TETHER CLAMP ASSEMBLY OPTION

TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

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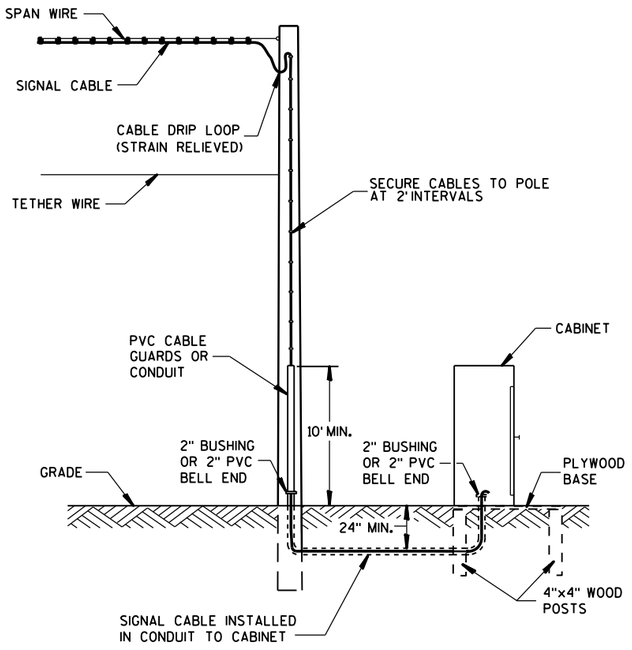
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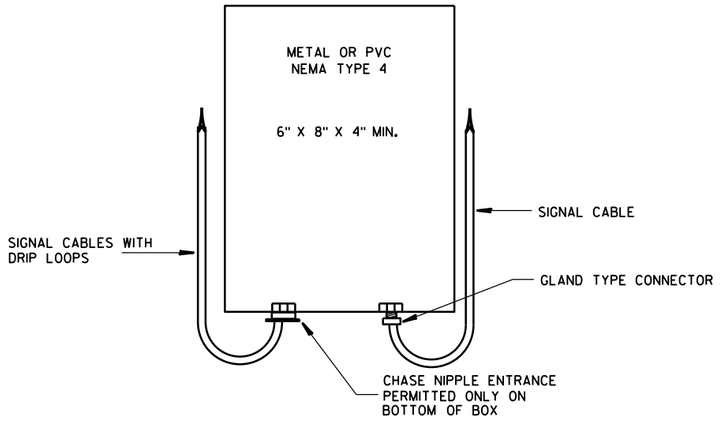
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S.D.D. 9 G 1-4f

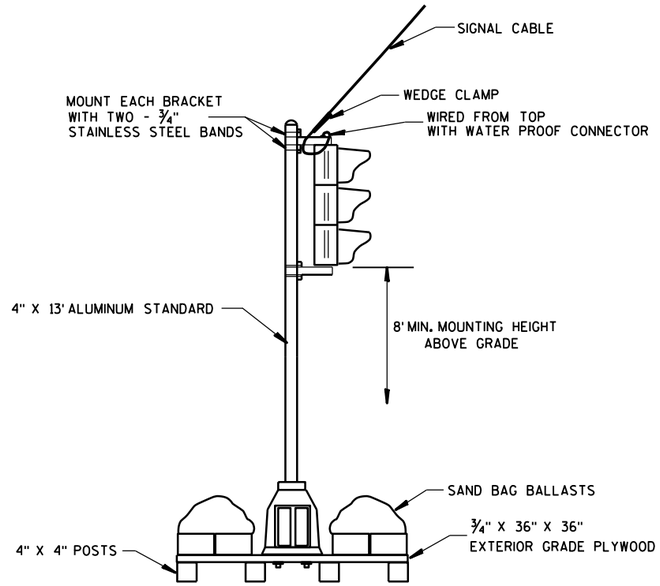
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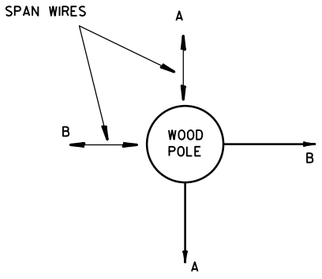




SPLICE BOX

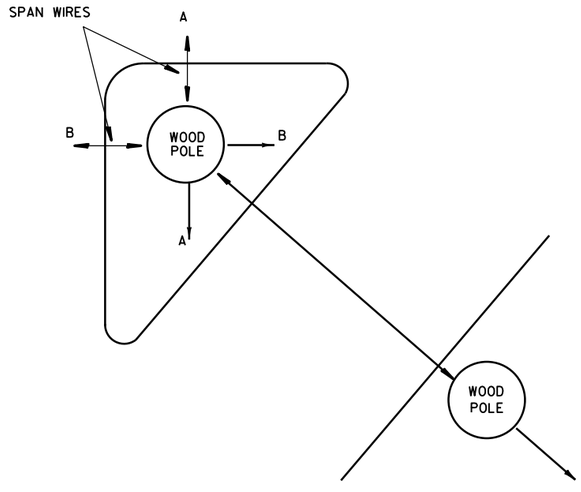


TYPICAL SKID TYPE TEMPORARY

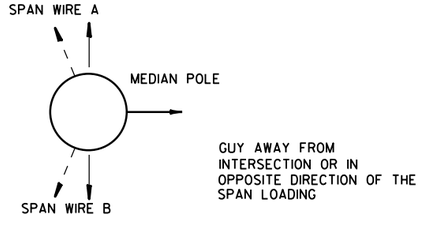


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



MEDIAN POLES

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
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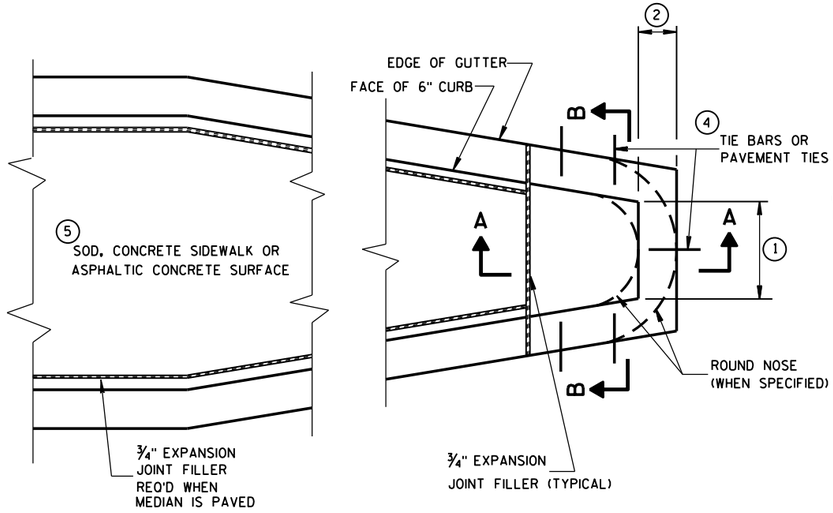
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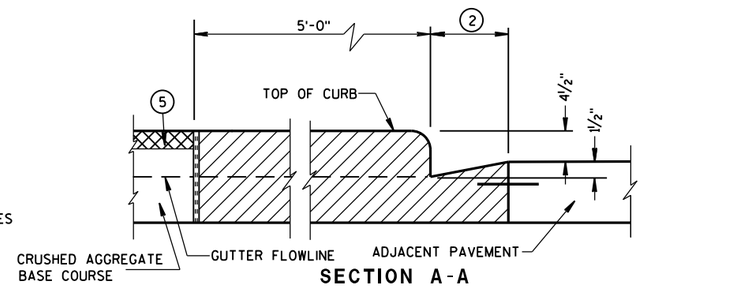
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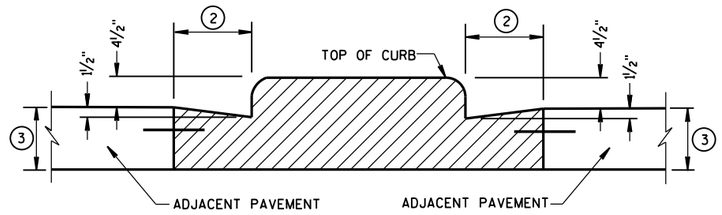
S.D.D. 9 G 1-4g

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S.D.D. 9 G 1-4g







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.

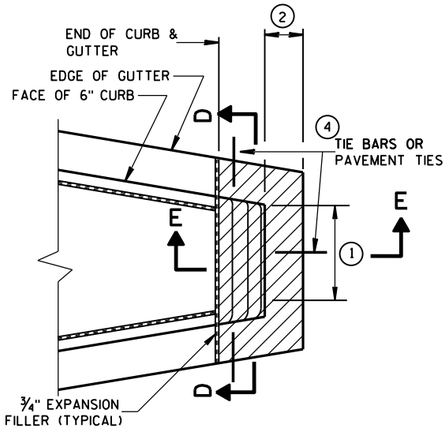
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

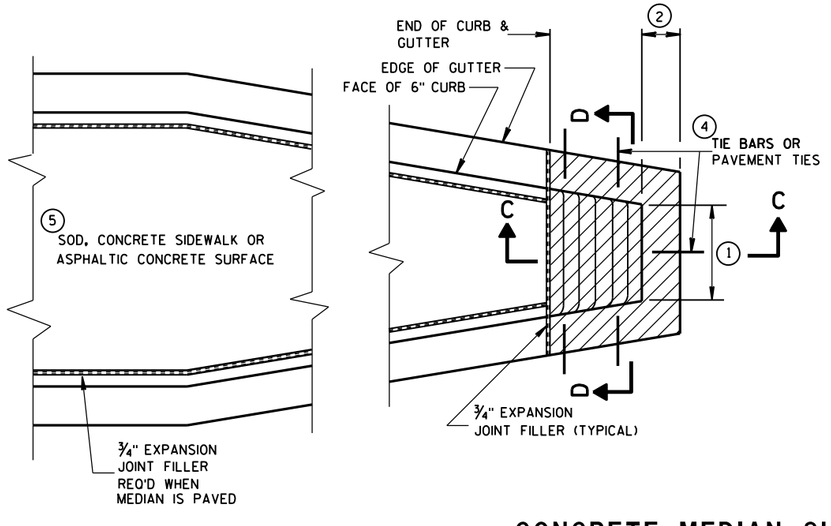
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

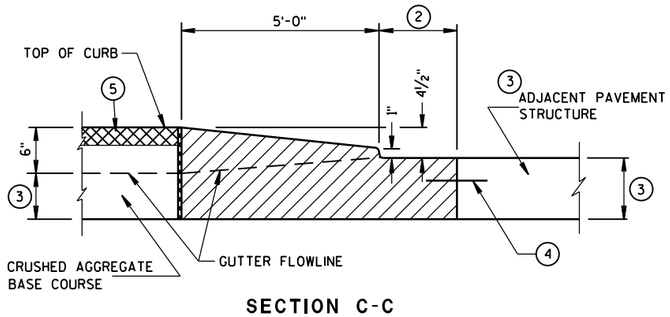
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

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.

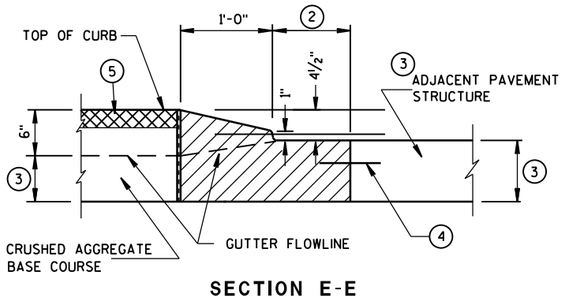
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



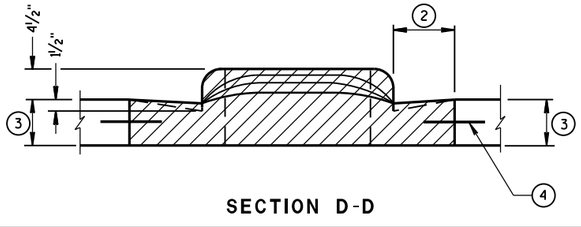




CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

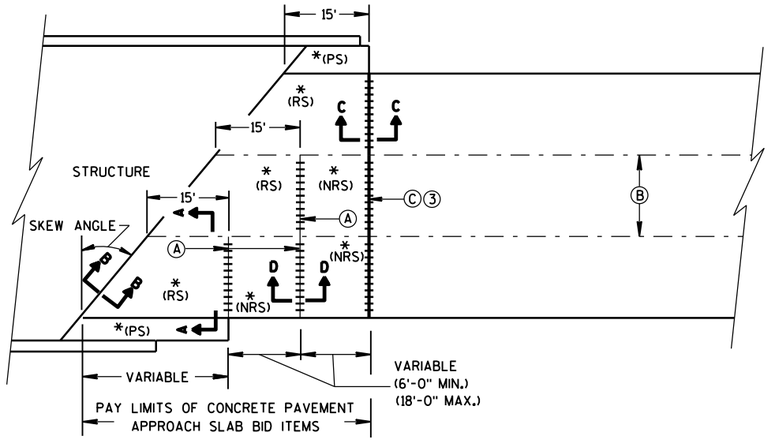
APPROVED
6/8/2006 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

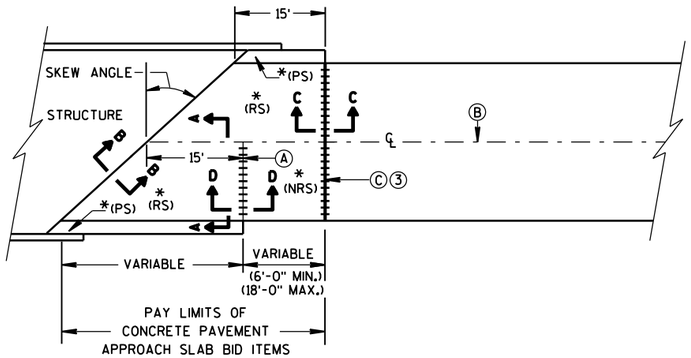
S.D.D. 11 B 2-2

6

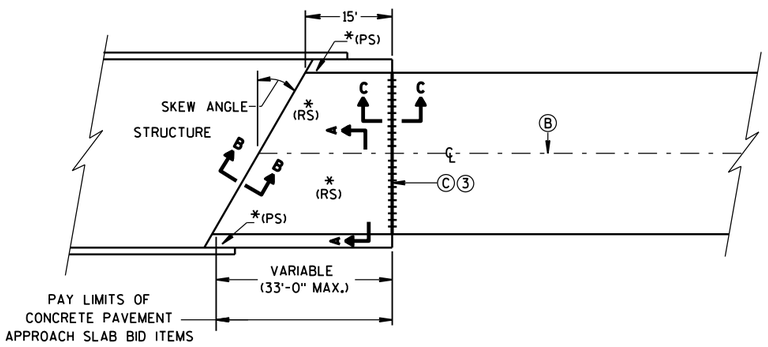
S.D.D. 11 B 2-2



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

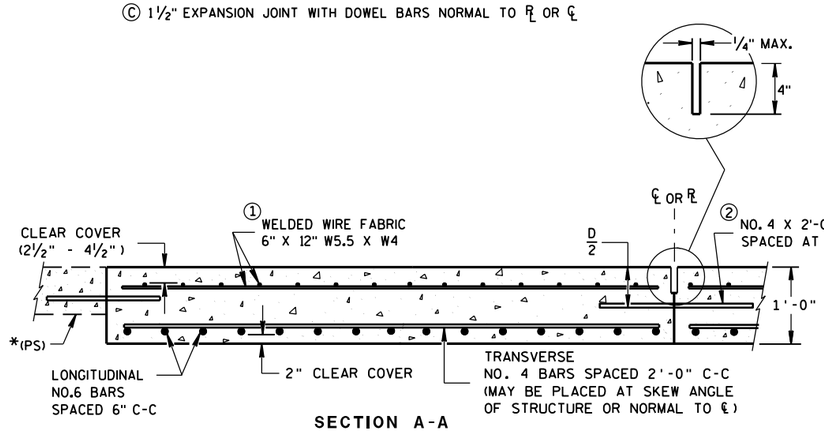
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

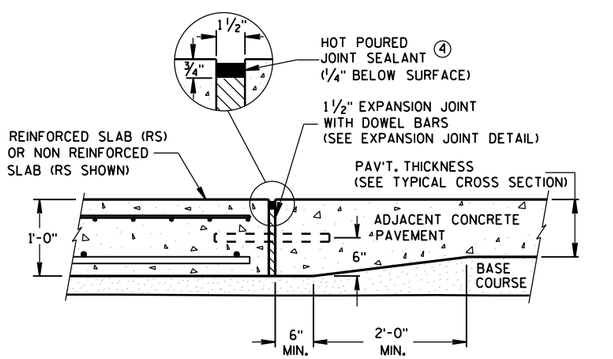
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

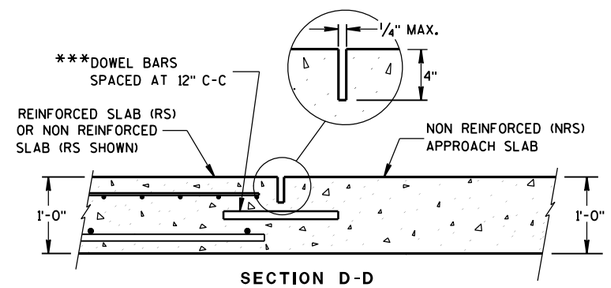
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

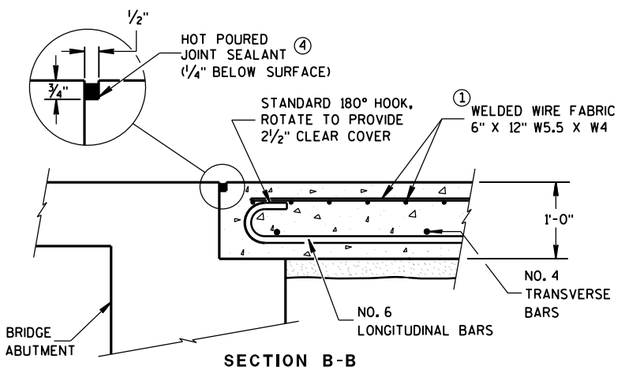
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

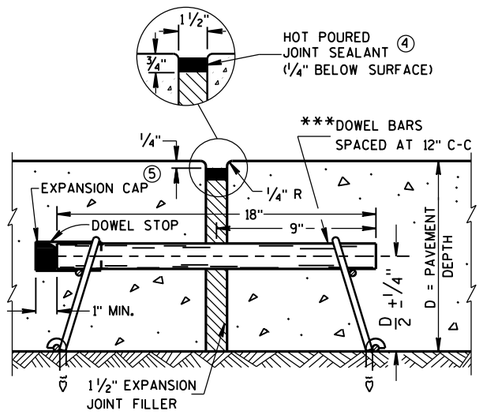
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

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



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

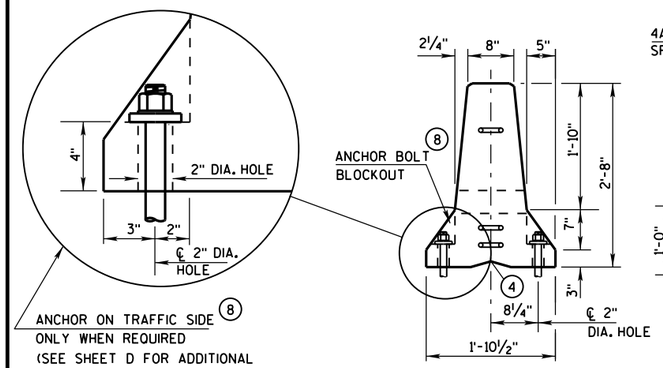
APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

6

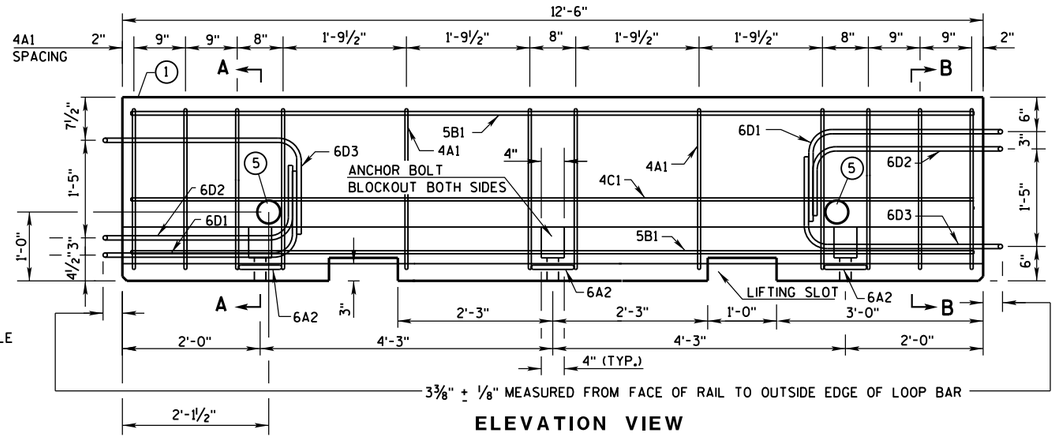
S.D.D. 13 B 2-8a

6

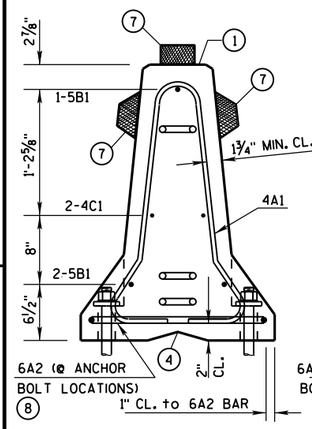
S.D.D. 13 B 2-8a



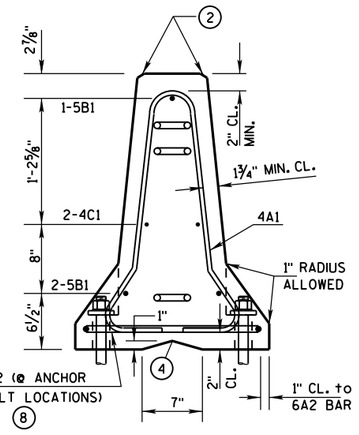
END VIEW



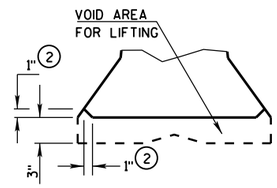
ELEVATION VIEW



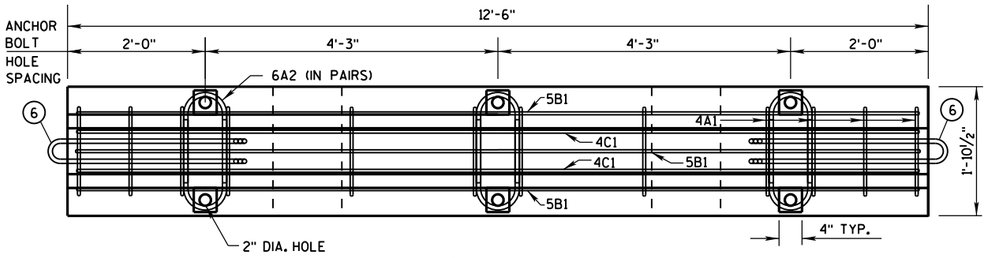
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

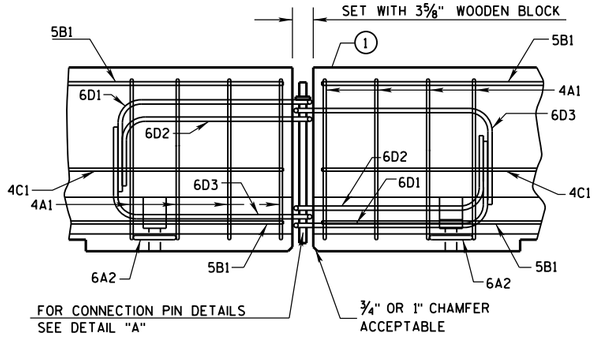


DETAIL "B"
LIFTING SLOT DETAIL

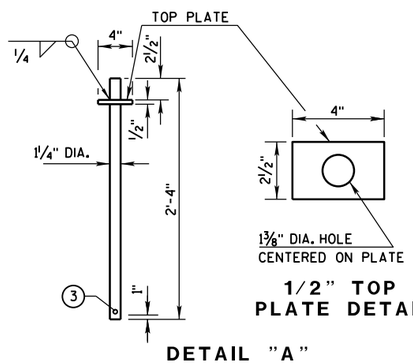


PLAN VIEW

DETAILS OF BARRIER SECTION

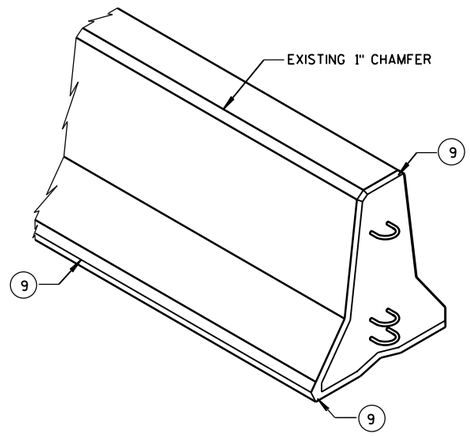


DETAILS OF BARRIER CONNECTION



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.

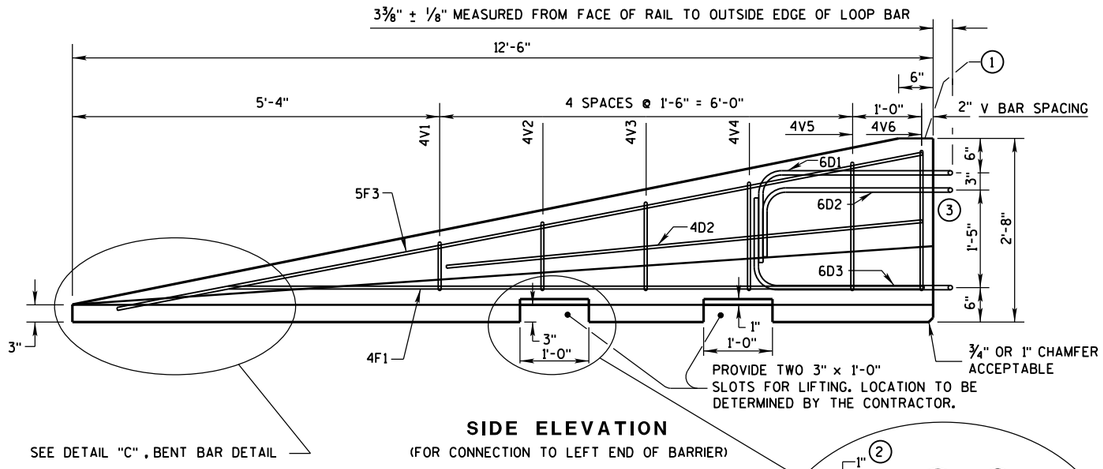
f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

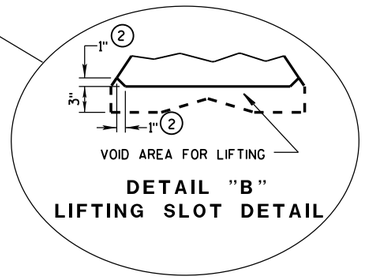
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

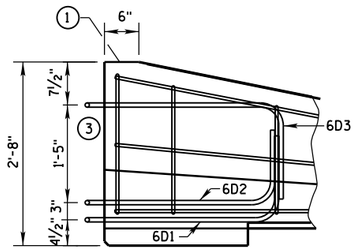
S.D.D. 14 B 7-15a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



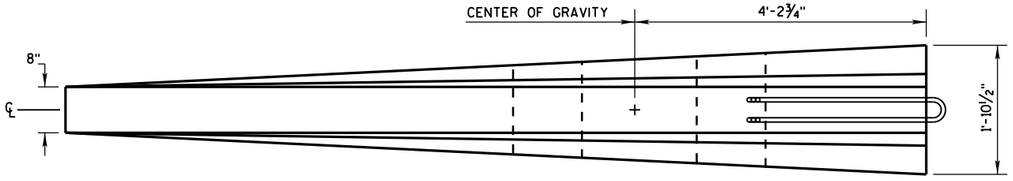
DETAIL "B"
LIFTING SLOT DETAIL



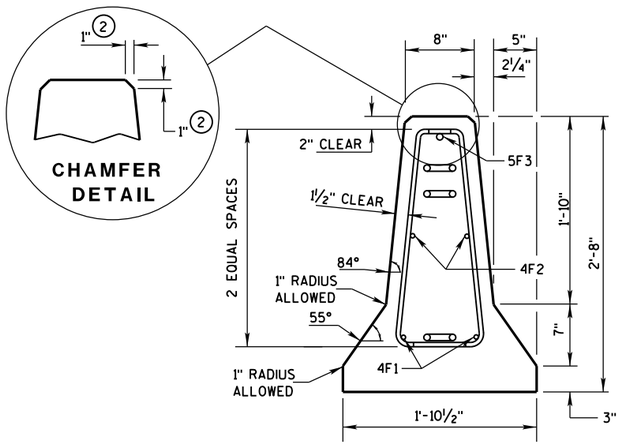
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

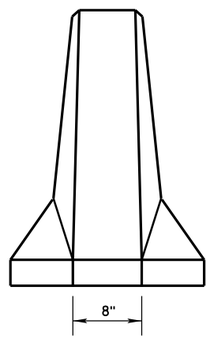
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



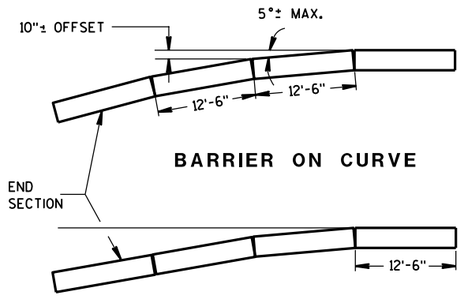
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

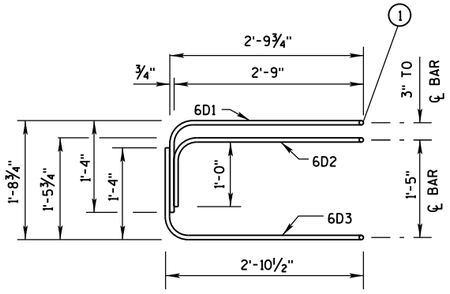
6

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

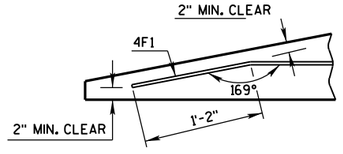
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

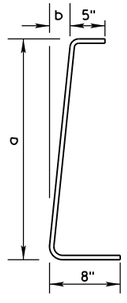
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

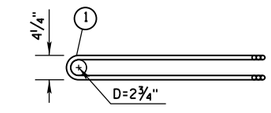
GENERAL NOTES

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

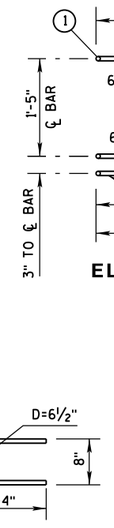
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

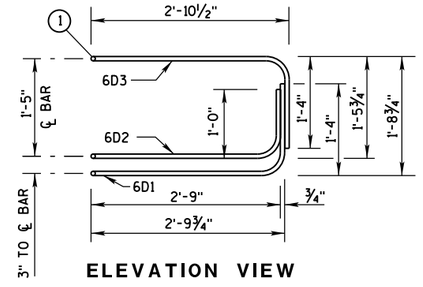
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



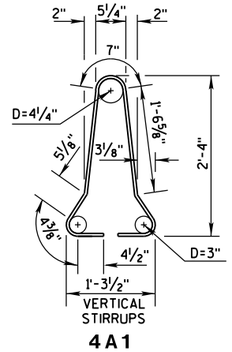
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



4A1

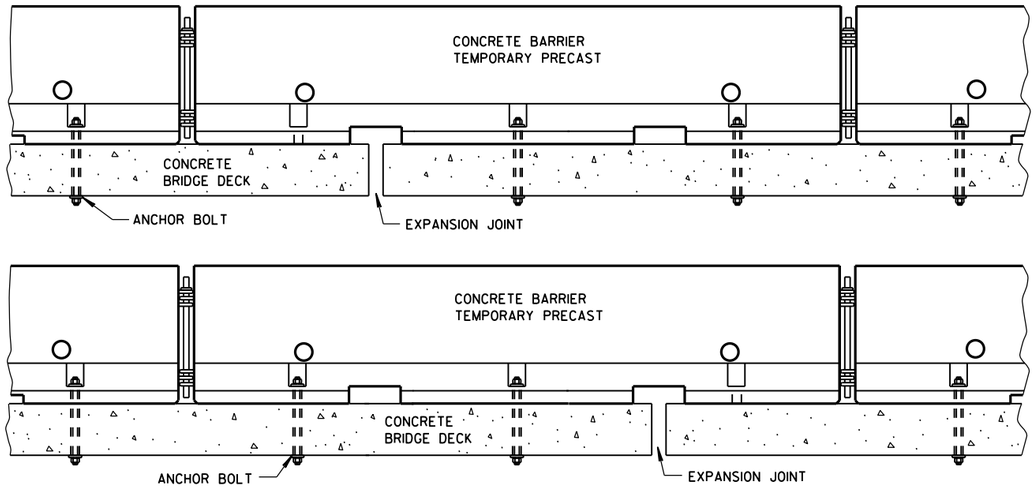
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF 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

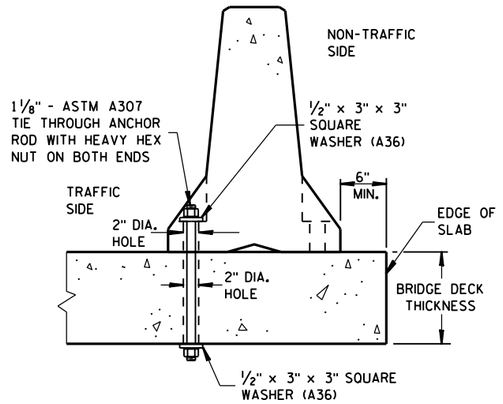
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

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.

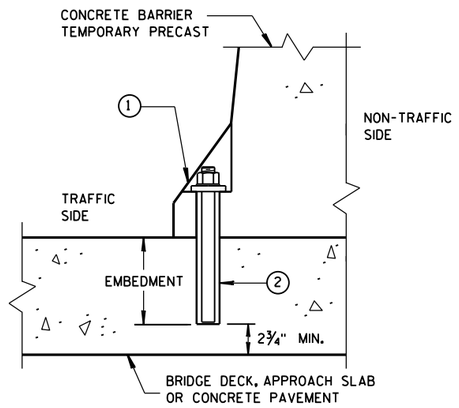
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

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



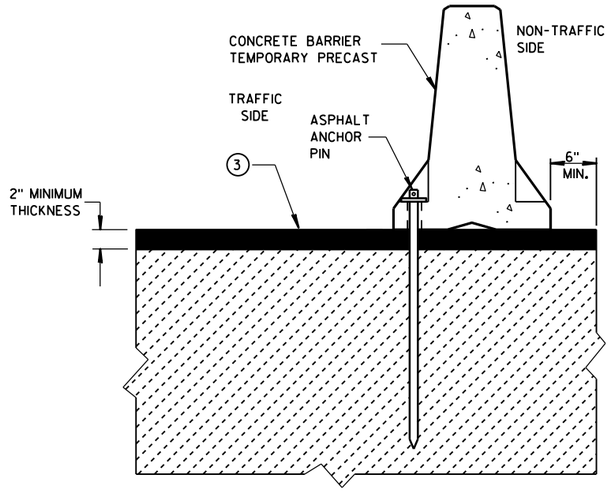
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

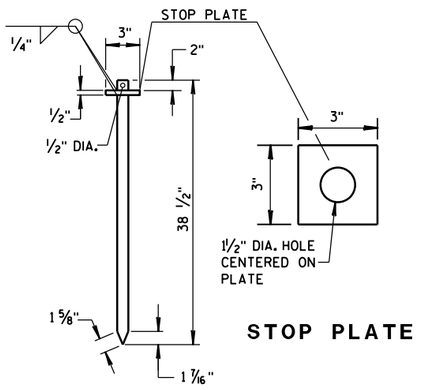


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



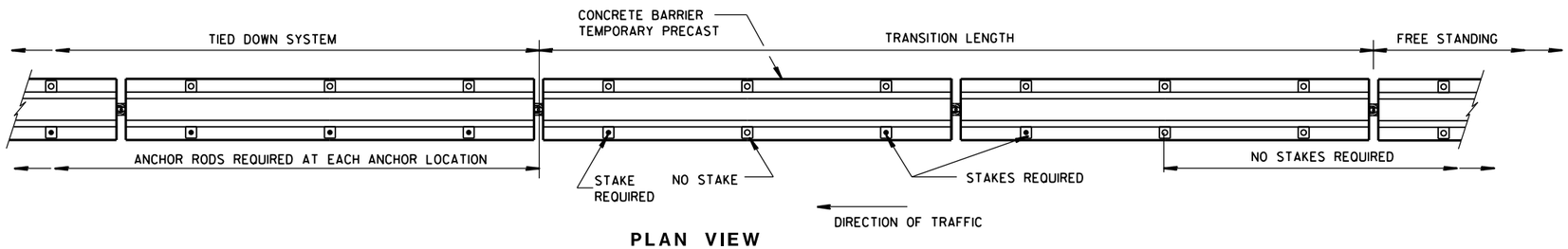
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

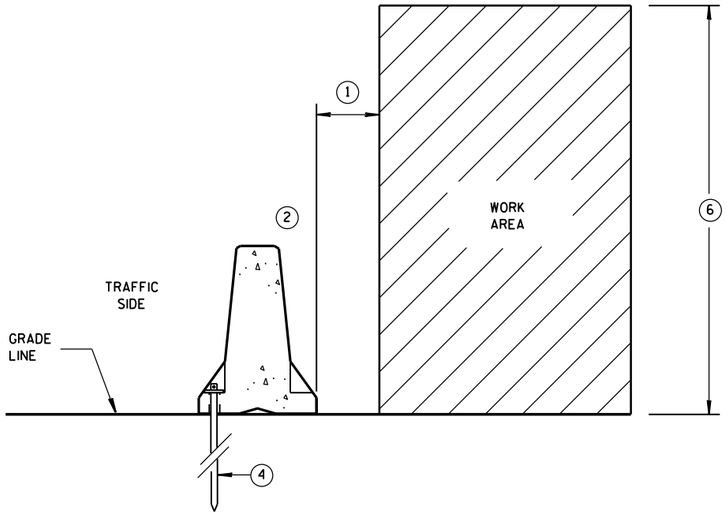
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

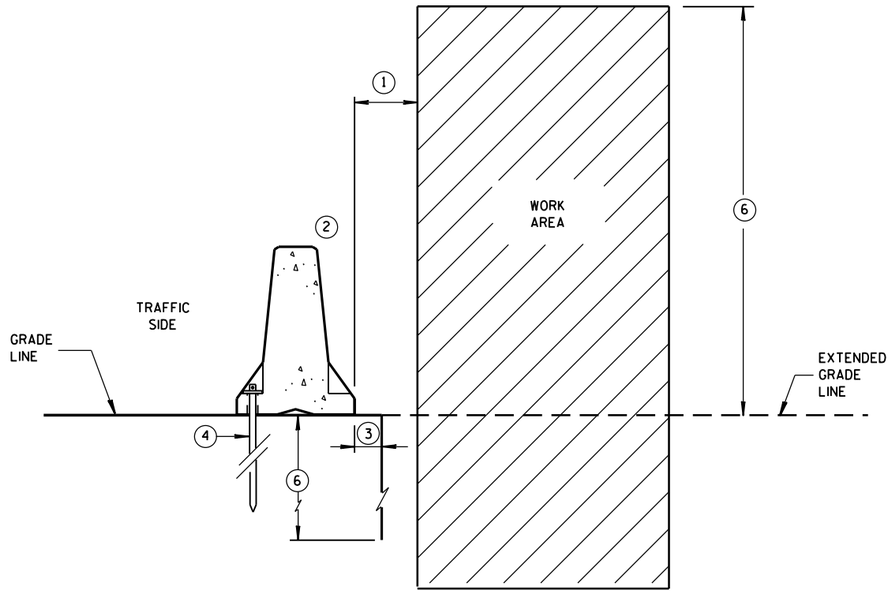
STATE OF WISCONSIN
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ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

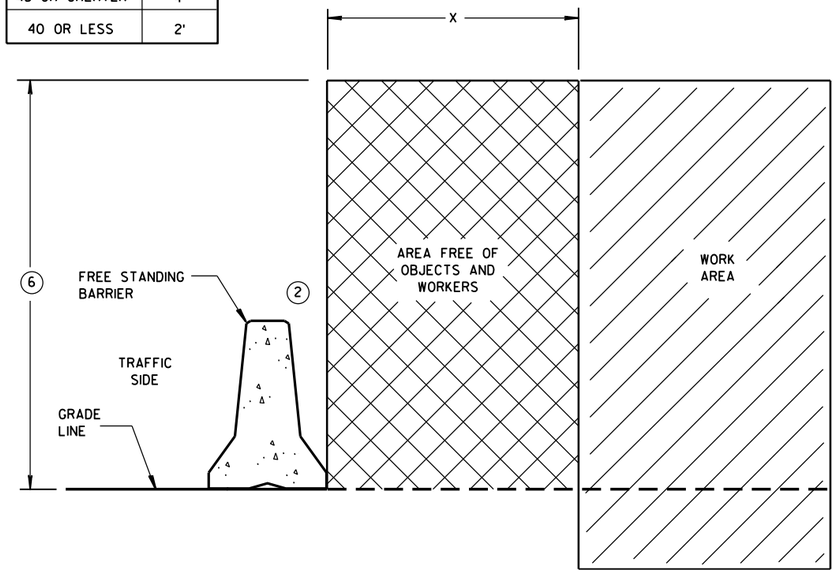


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

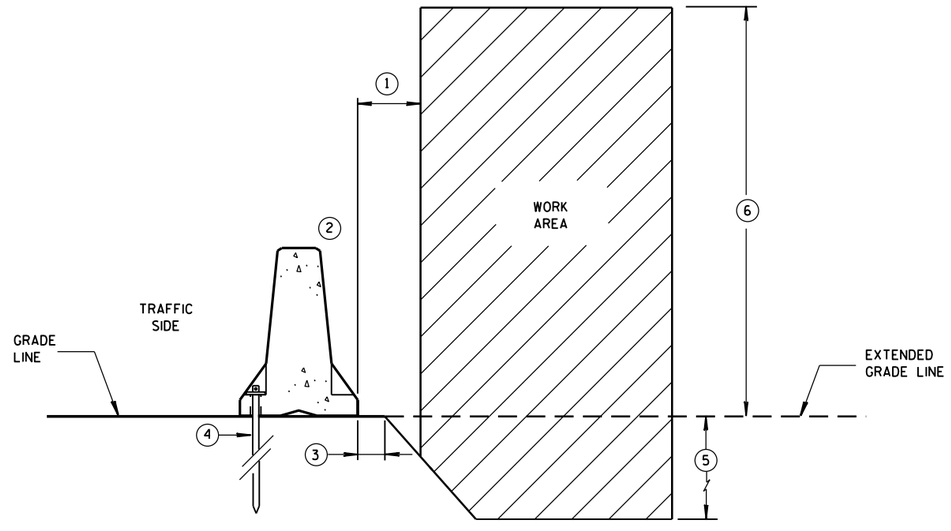
GENERAL NOTES

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



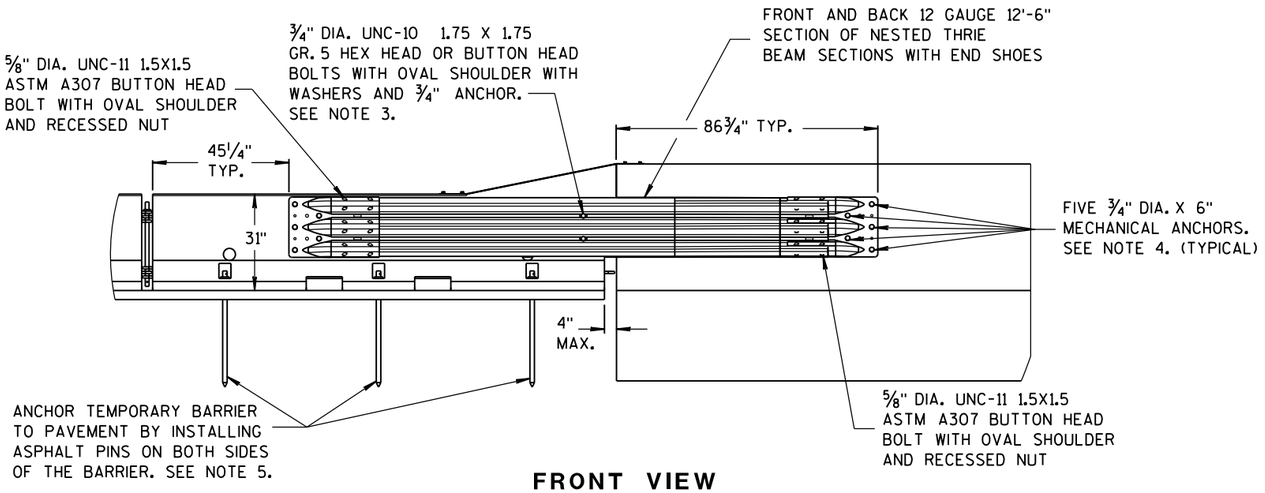
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

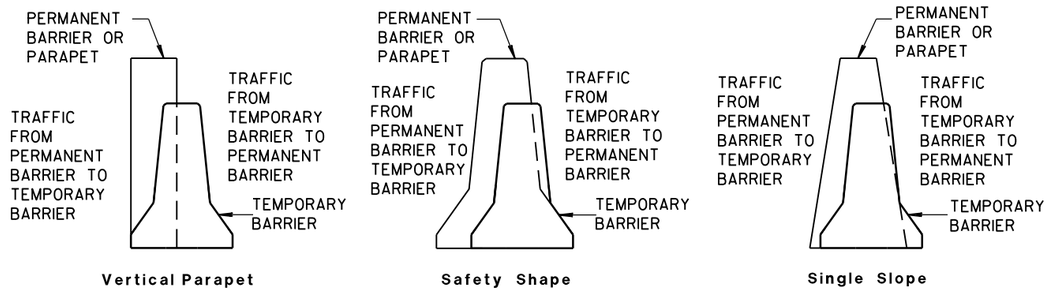
STATE OF WISCONSIN
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FRONT VIEW

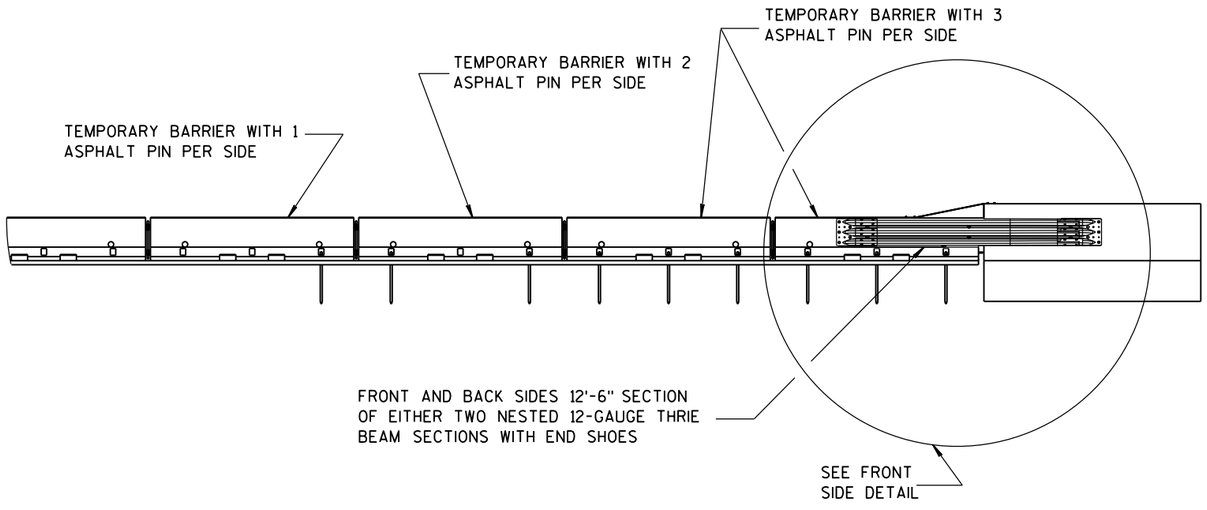


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

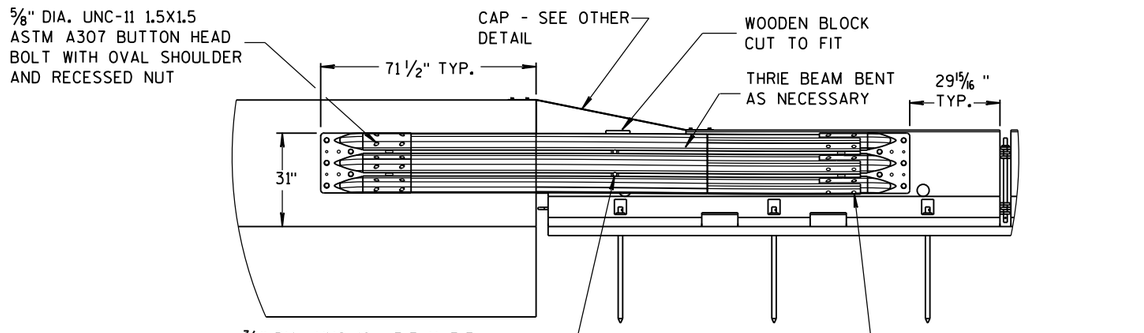
NOTES

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

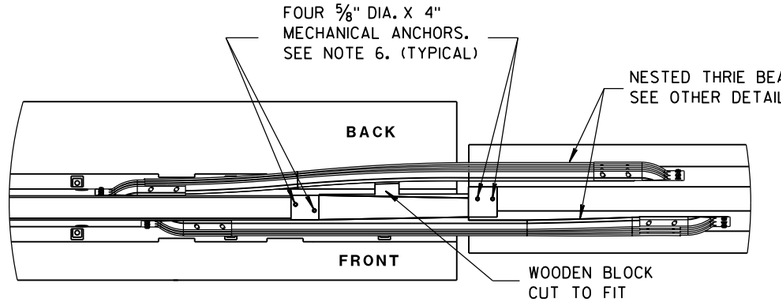
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD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



FRONT VIEW



BACK VIEW



PLAN VIEW

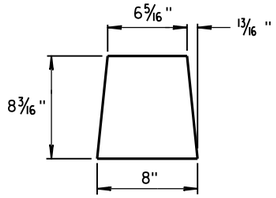
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

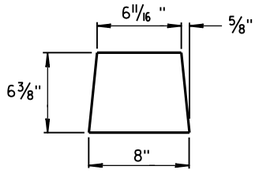
STATE OF WISCONSIN
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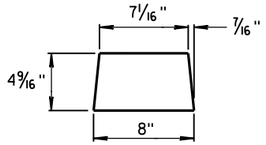
S.D.D. 14 B 7-15f



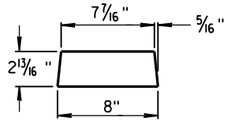
GUSSET 1



GUSSET 2

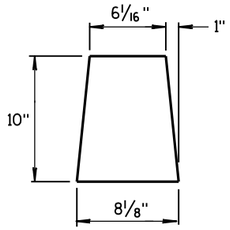


GUSSET 3

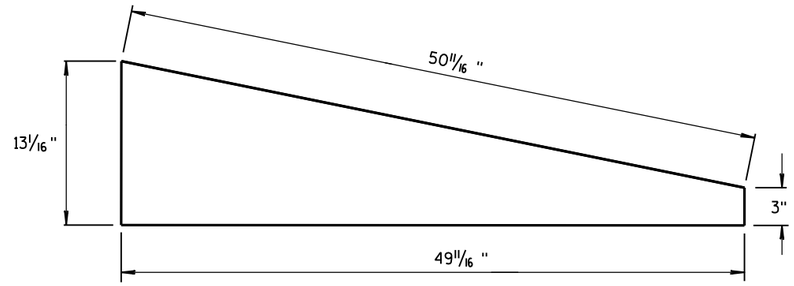


GUSSET 4

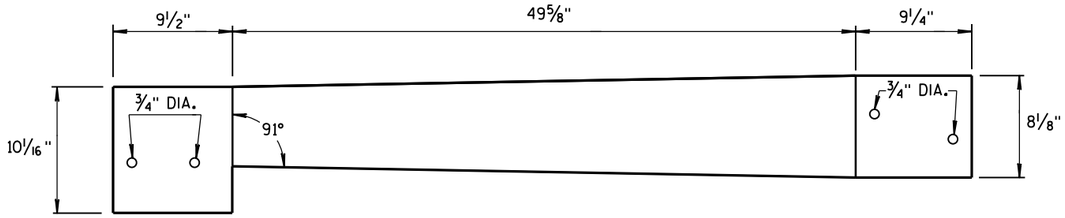
GUSSETS

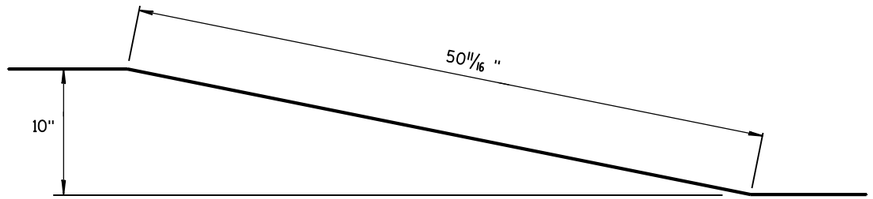


END PLATE



SIDE PLATE

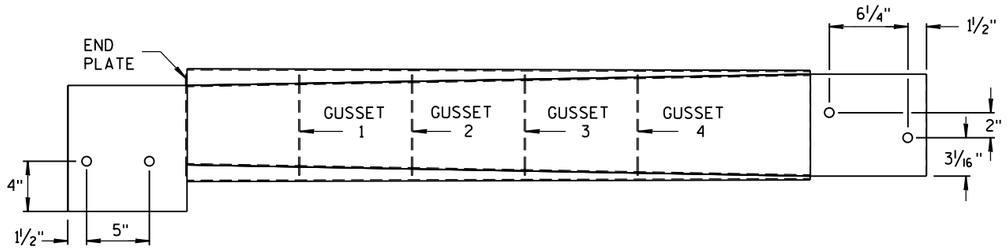


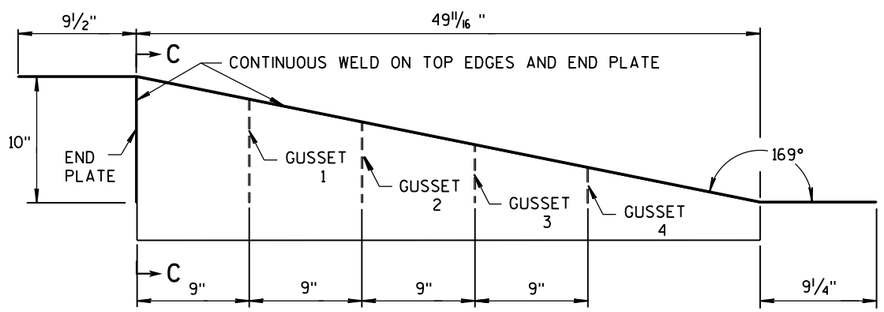


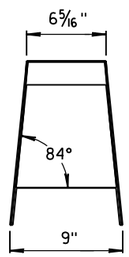
TOP PLATE

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

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







SECTION C-C

NOTES

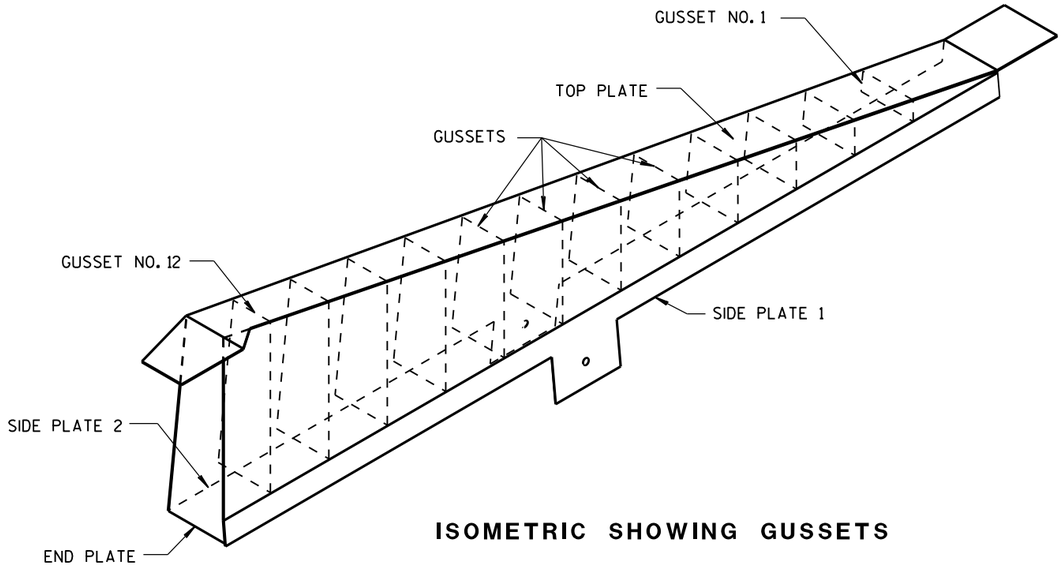
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

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

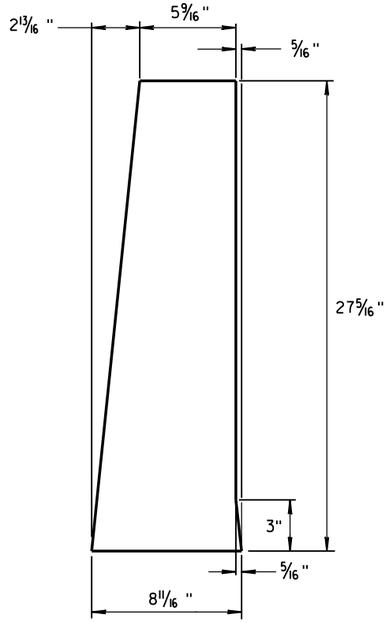
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

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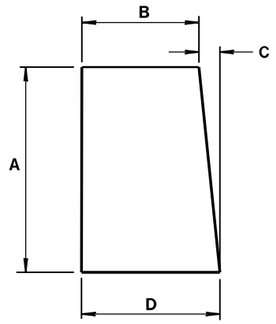


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



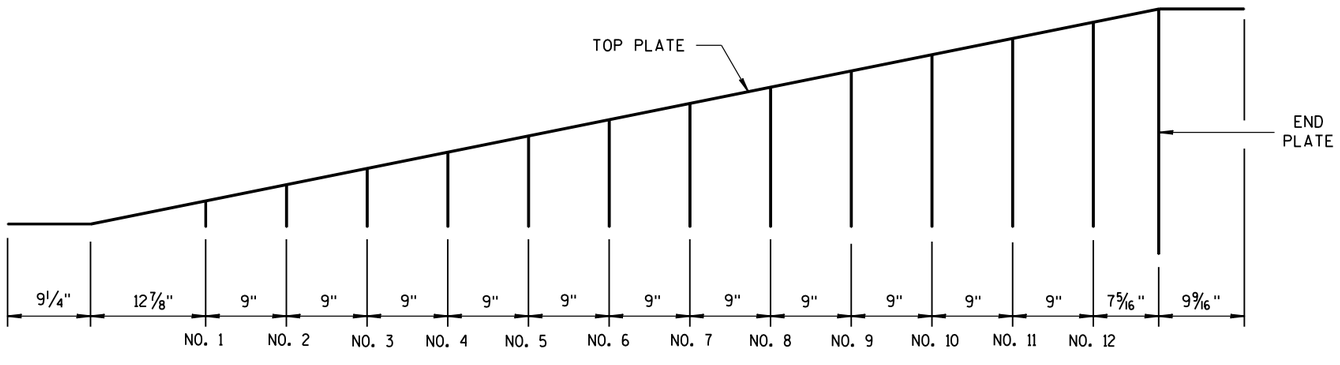
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

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

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

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



GUSSET LOCATION

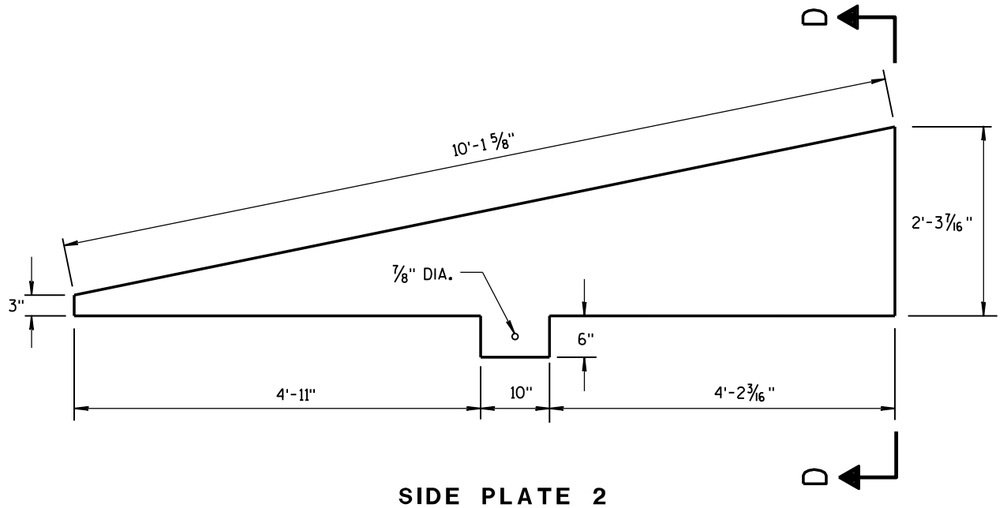
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

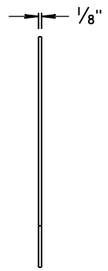
STATE OF WISCONSIN
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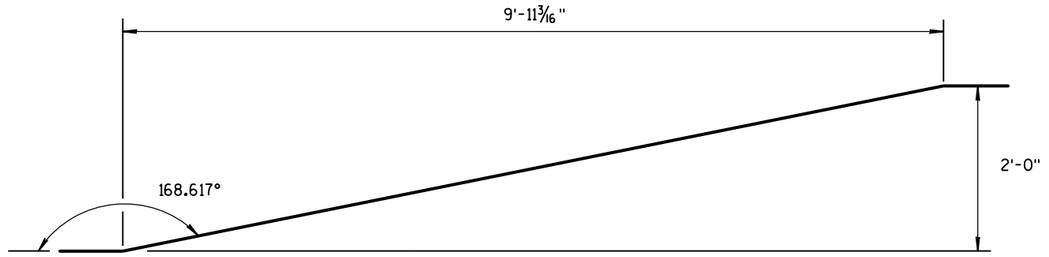
S.D.D. 14 B 7-15h



SIDE PLATE 2

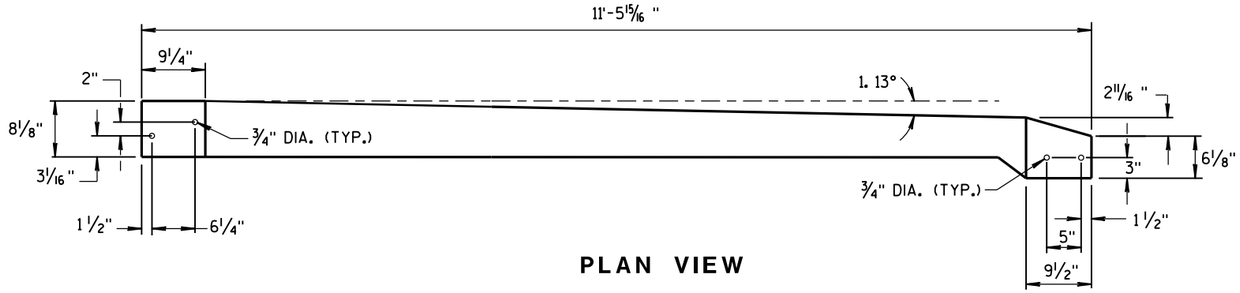


END VIEW



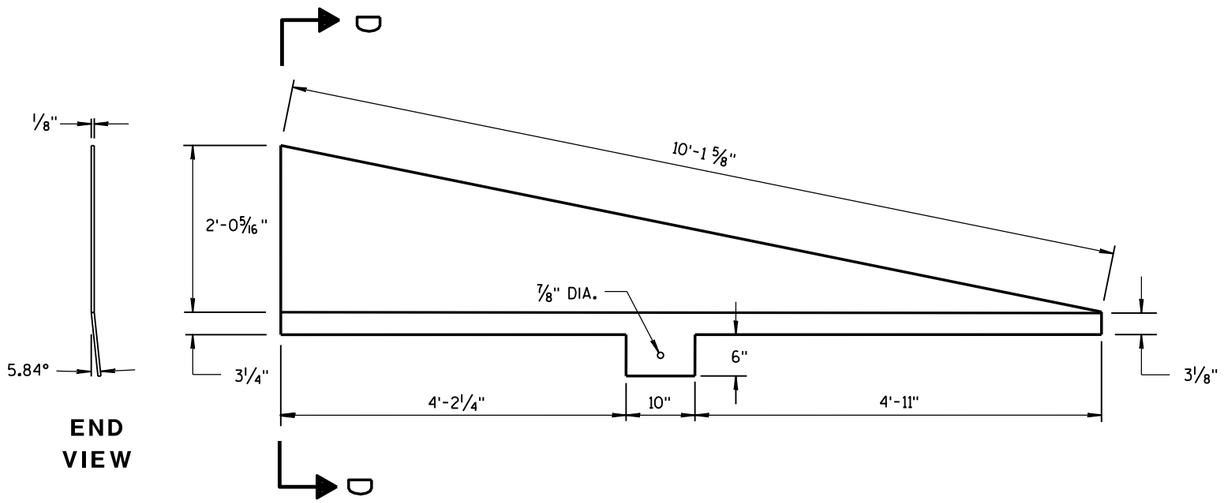
SIDE VIEW

TOP PLATE



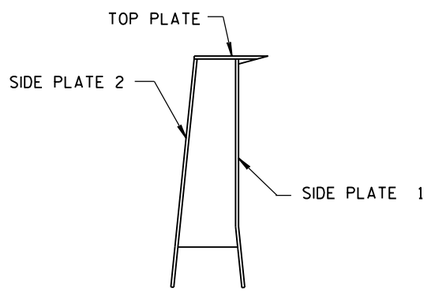
PLAN VIEW

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
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV

198

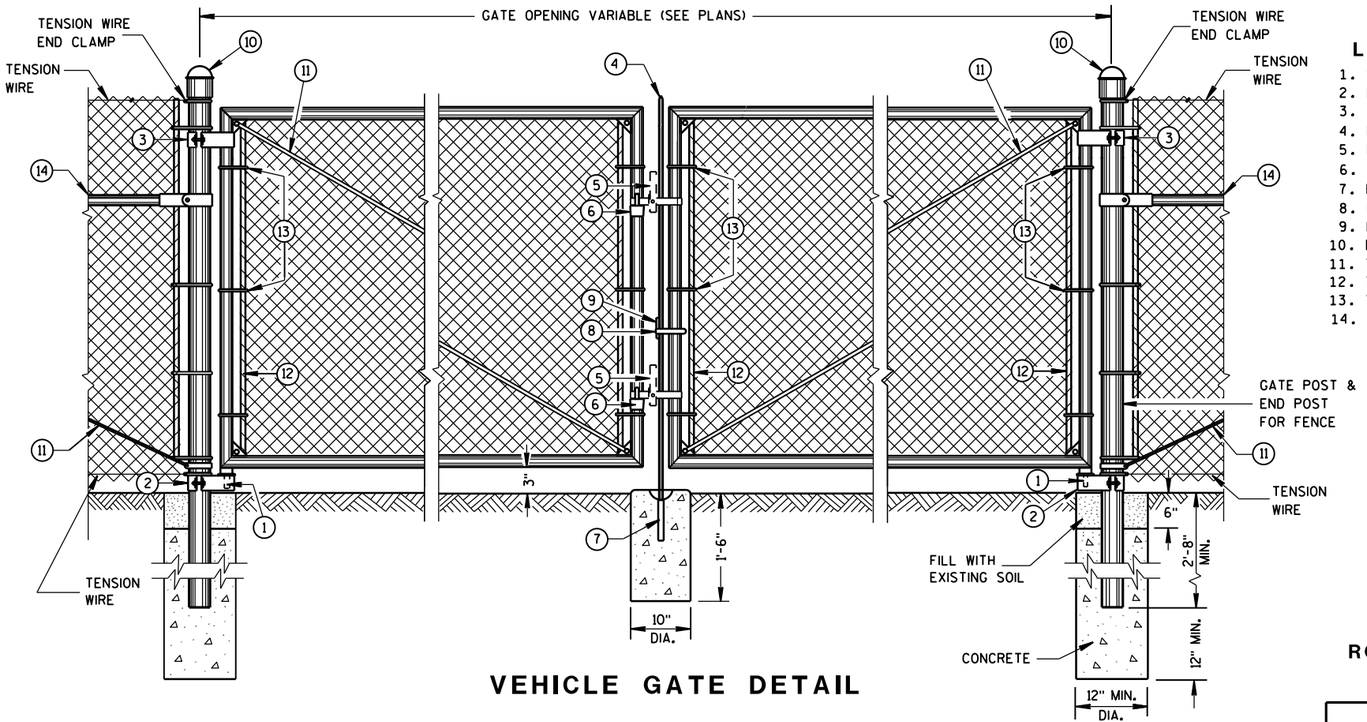
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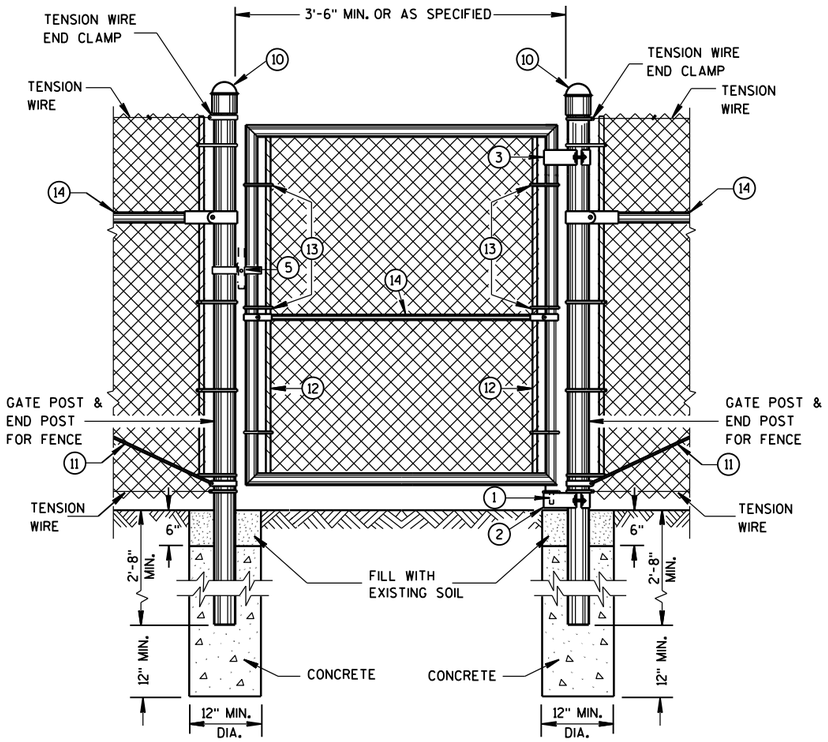
S.D.D. 14 B 7-15i

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



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

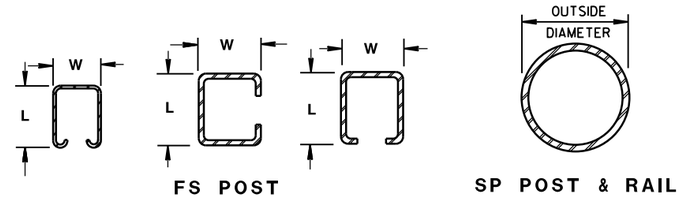
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



CROSS SECTIONS OF POSTS AND RAILS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

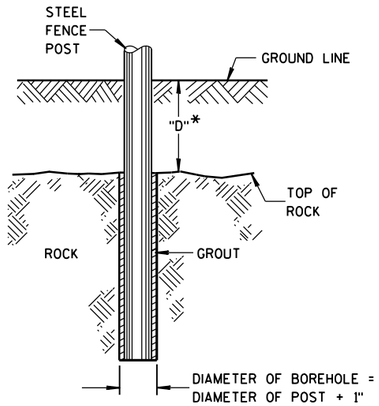
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 B 3-15a

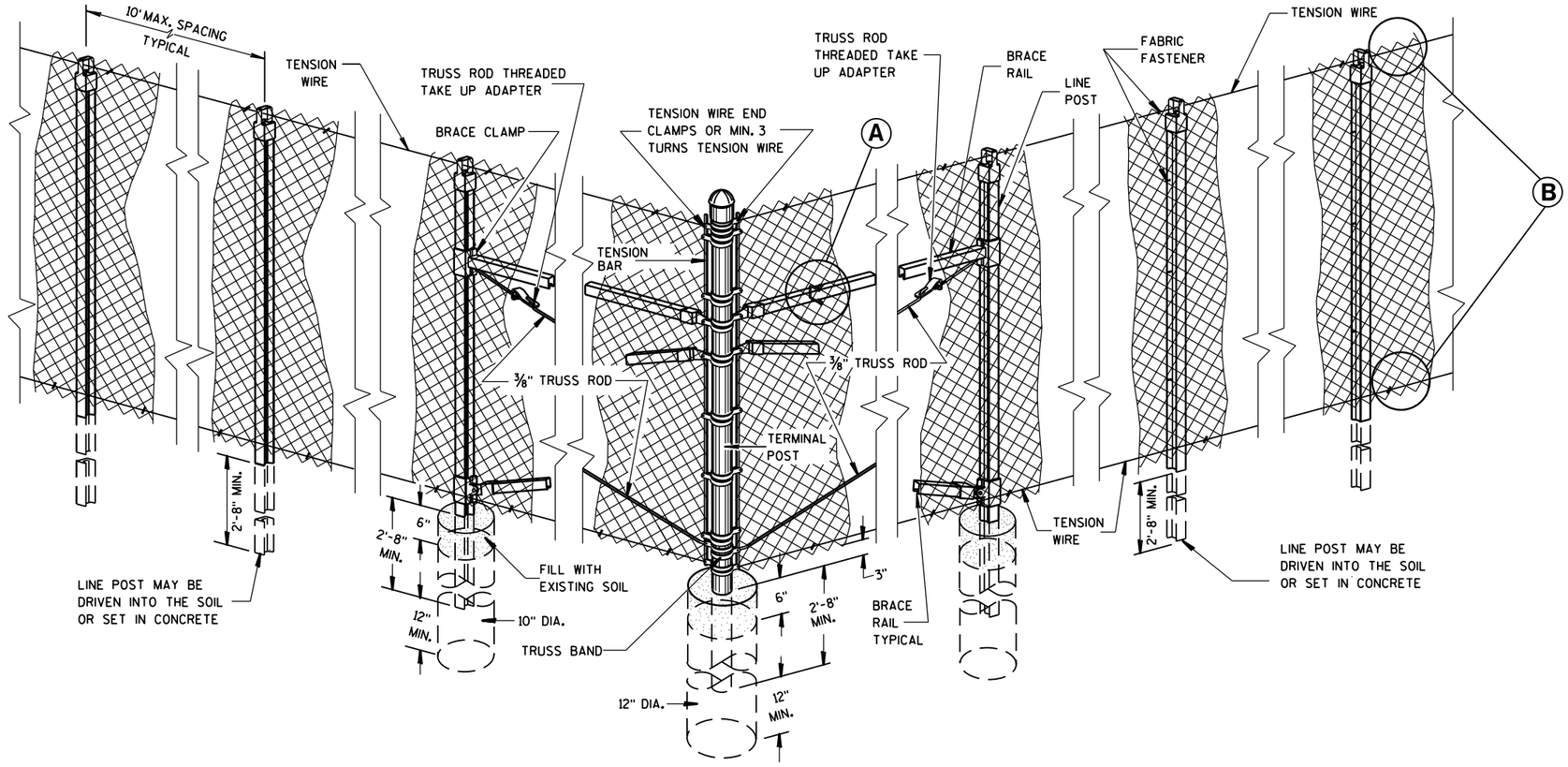
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S.D.D. 15 B 3-15a

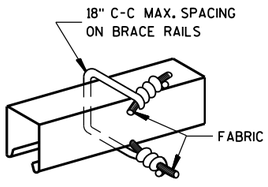


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



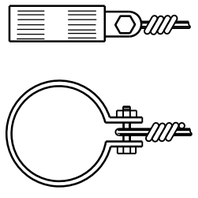
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



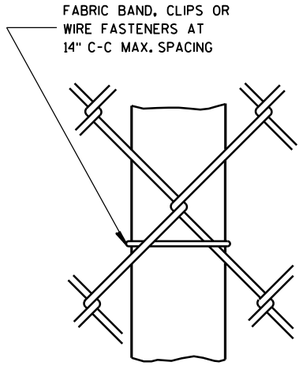
BRACE RAIL

FABRIC FASTENER

Ⓐ



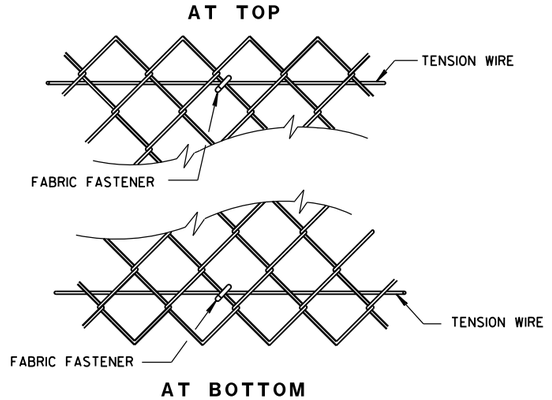
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

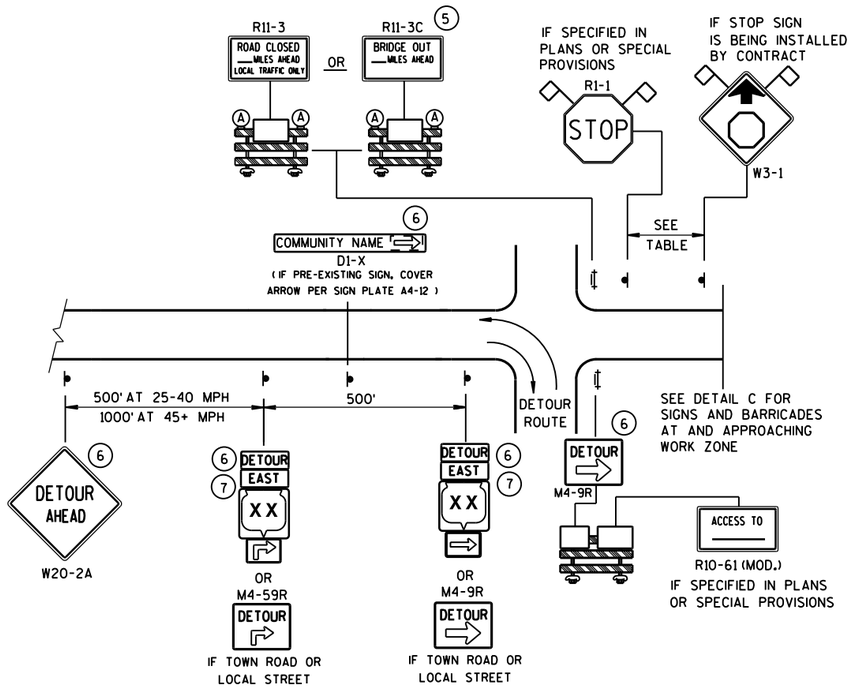
APPROVED
FEB. 2015 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 3-15b

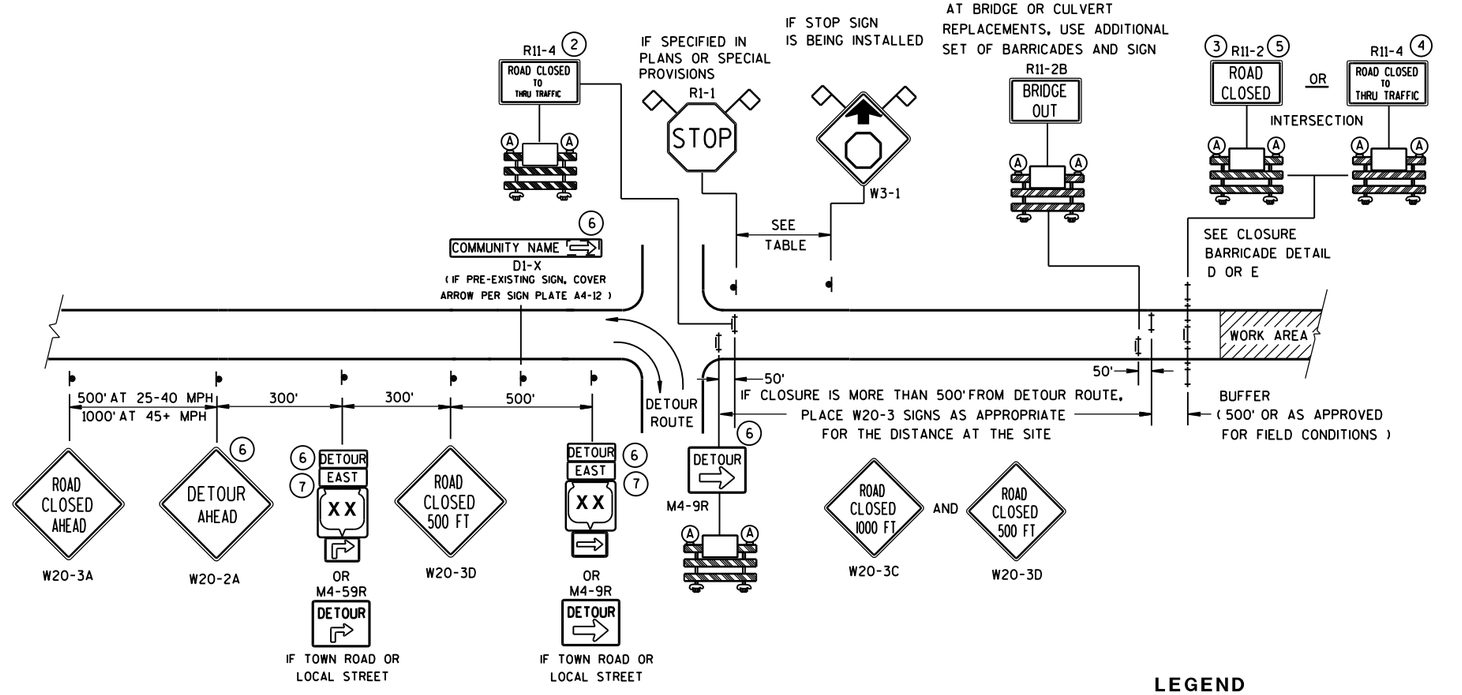
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S.D.D. 15 B 3-15b



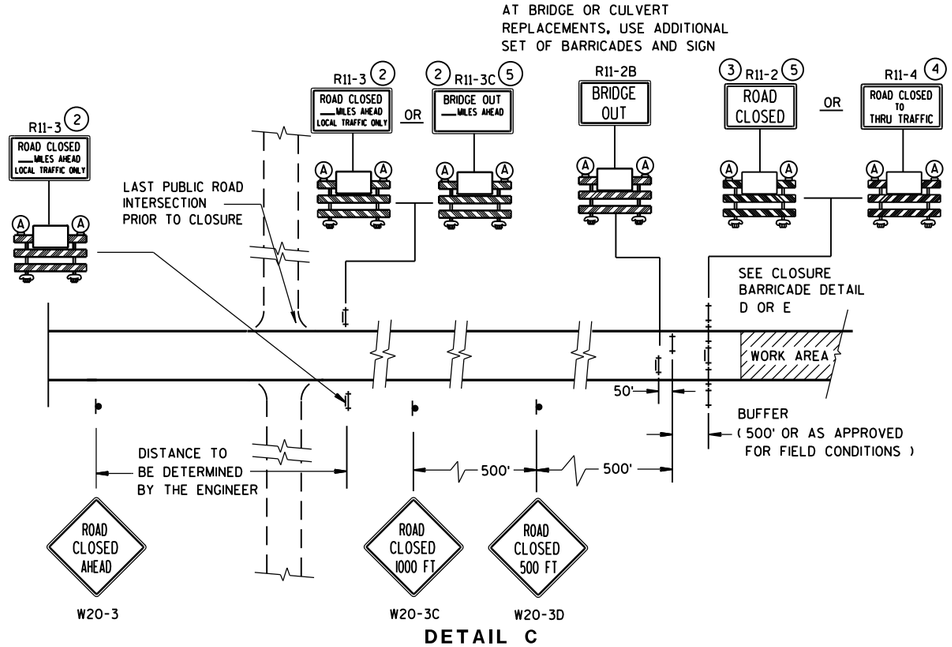
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

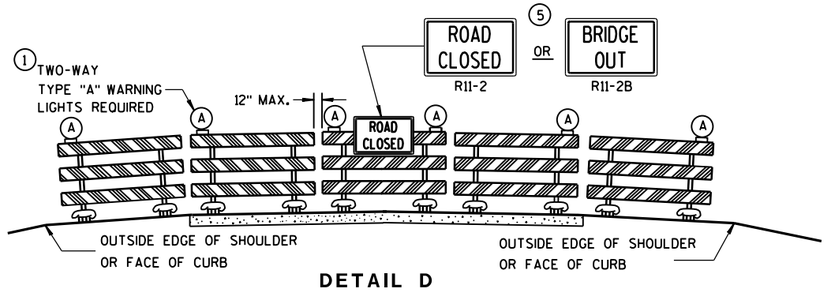
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

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

6

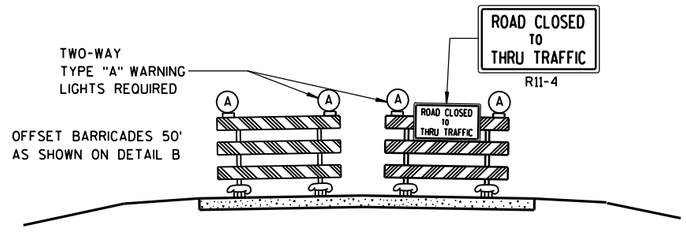
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

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

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

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

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

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

GENERAL NOTES

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

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

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

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

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

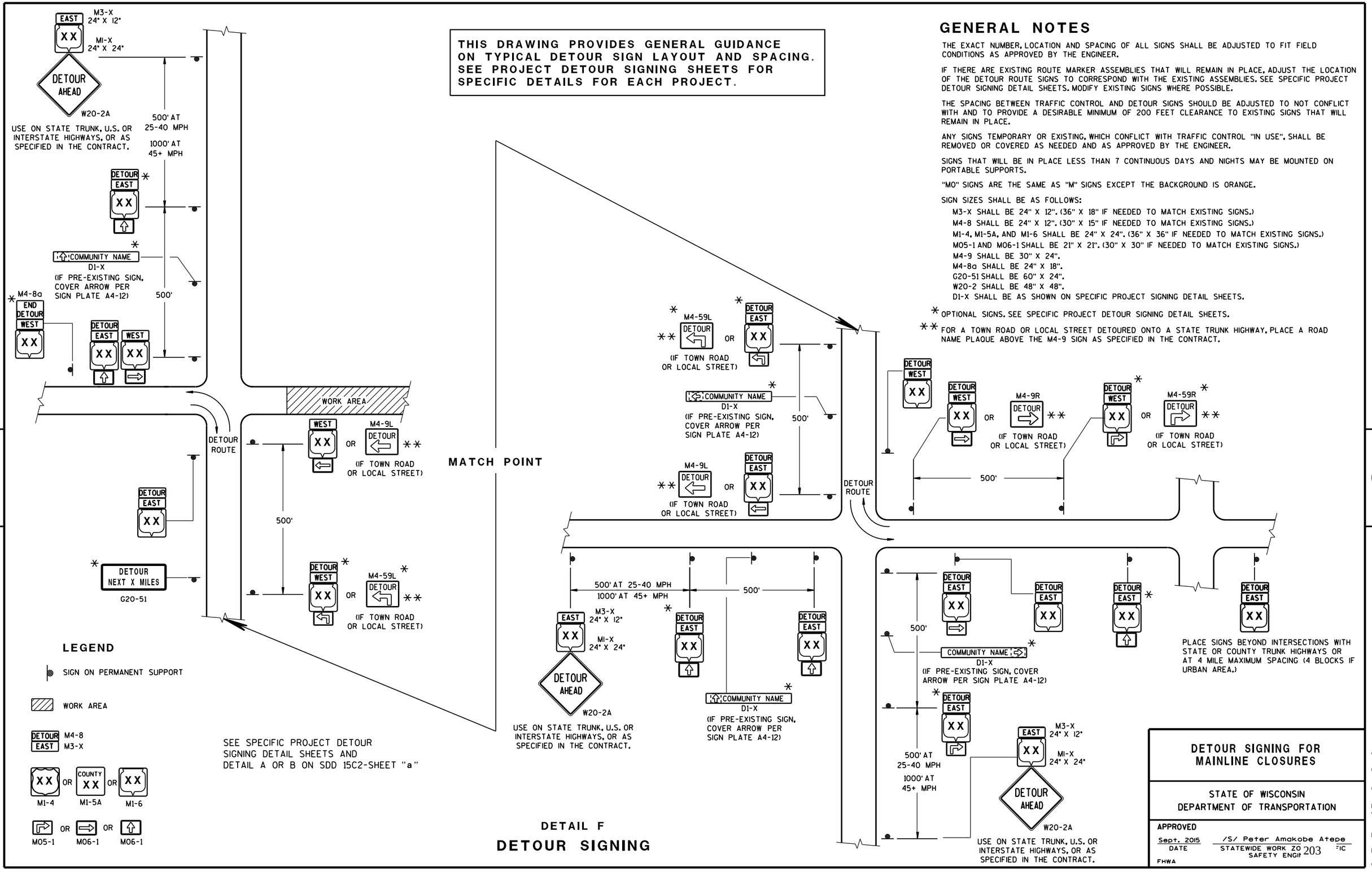
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

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

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



LEGEND

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

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

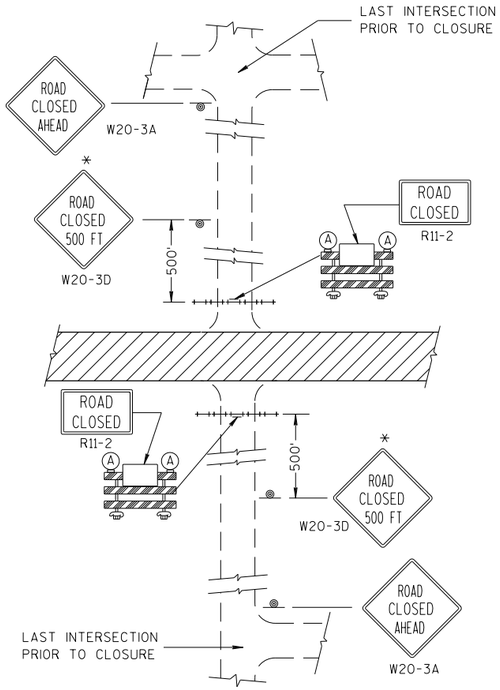
Sept. 2015 — DATE

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

FHWA

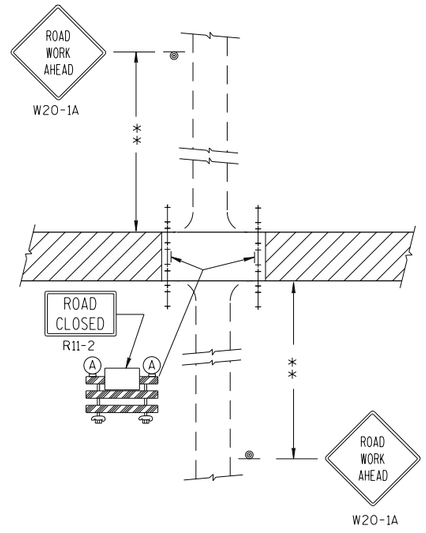
S.D.D. 15 C 2-6c

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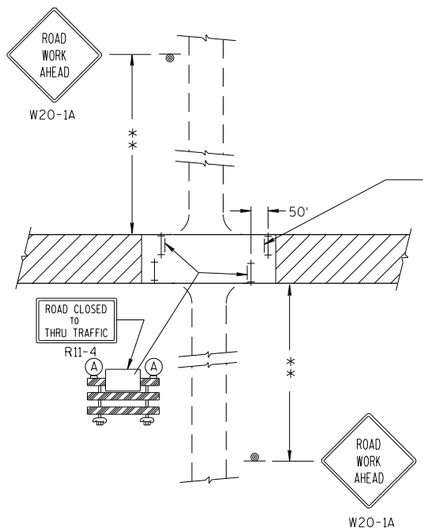
DETAIL 1

(NO ACCESS TO PROJECT)



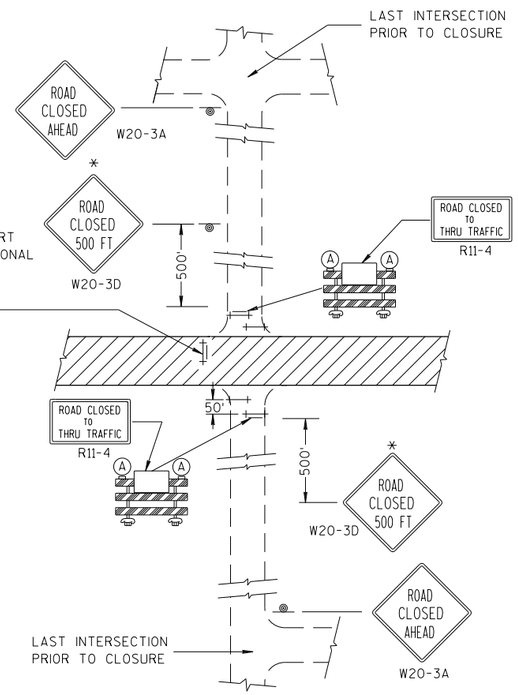
DETAIL 2

(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR,
LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

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

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

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

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

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGI

FHWA

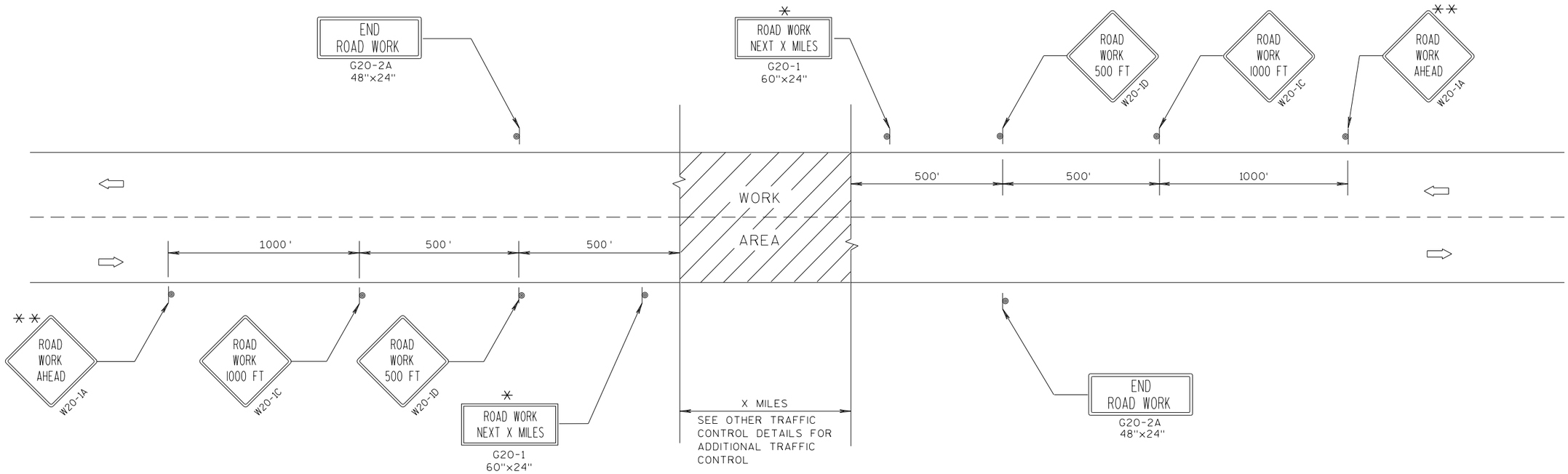
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S.D.D. 15 C 3-5

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S.D.D. 15 C 3-5

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

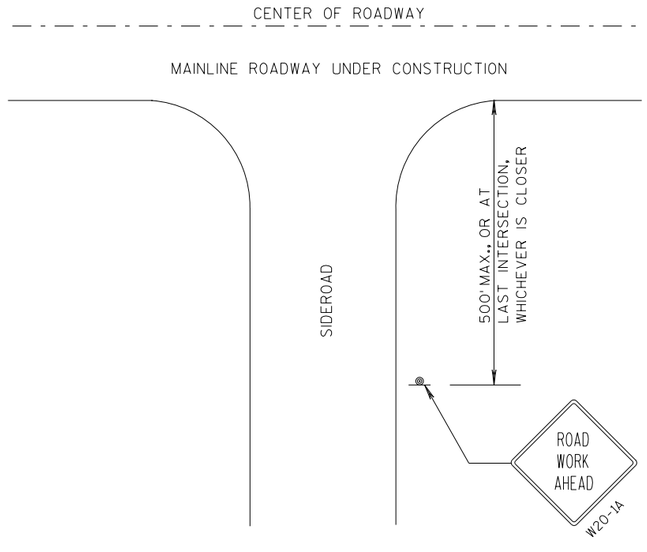
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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



LEGEND

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

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

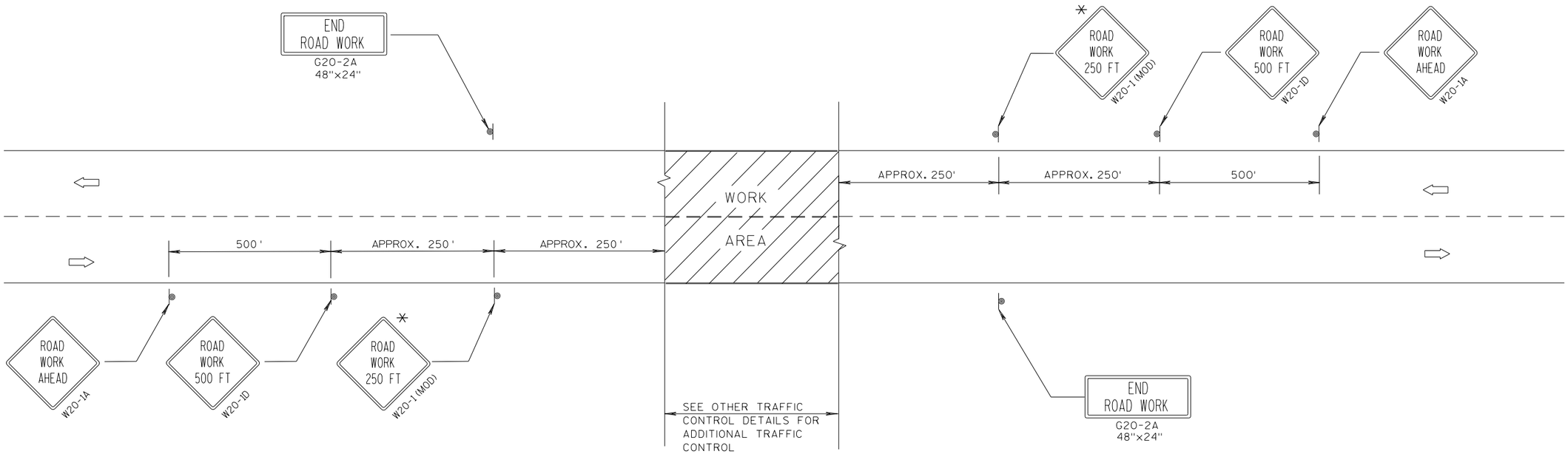
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Andrew Heldtke — WORK ZONE ENGI
FHWA

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S.D.D. 15 C 4-5

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

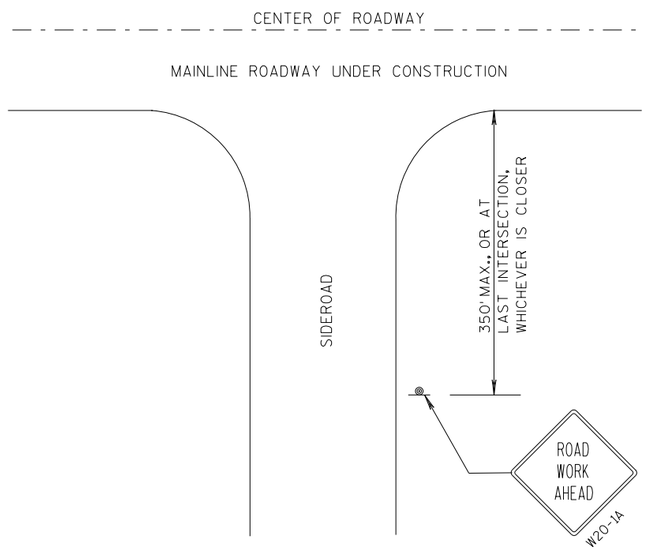
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

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



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Andrew Heldtke
WORK ZONE ENGI

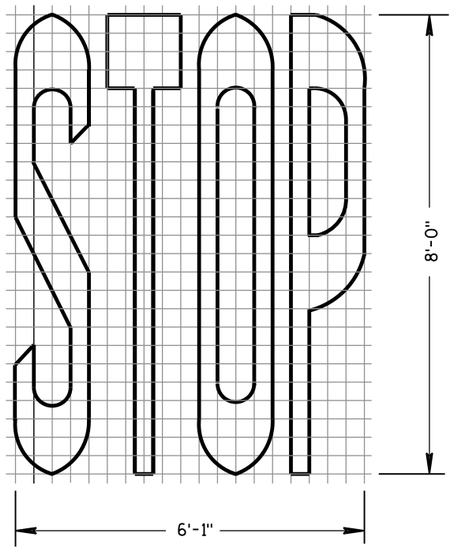
FHWA

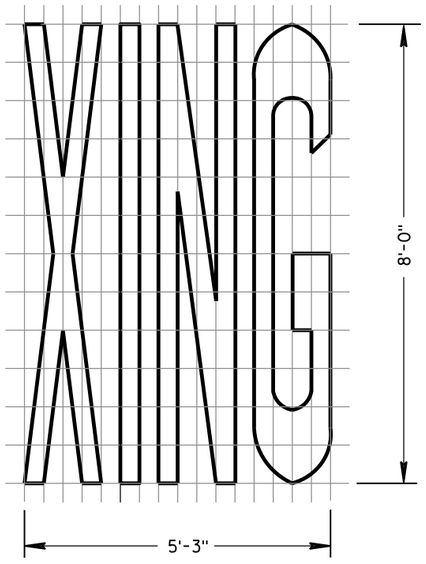
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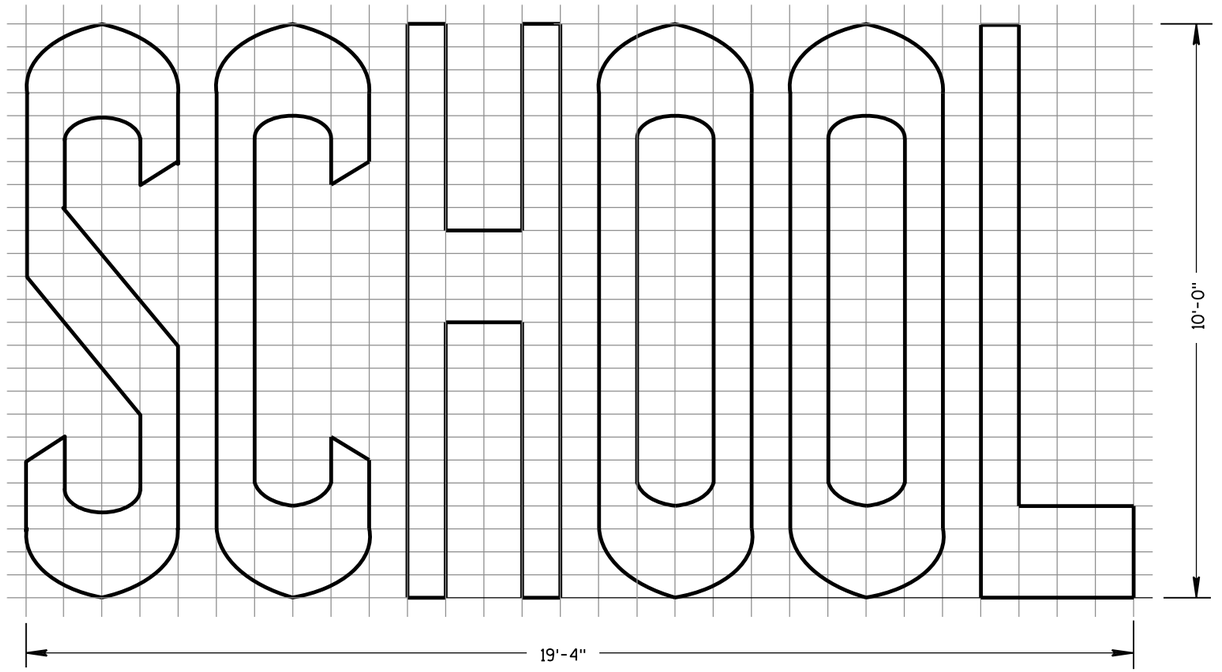
S.D.D. 15 C 5-5

GENERAL NOTES

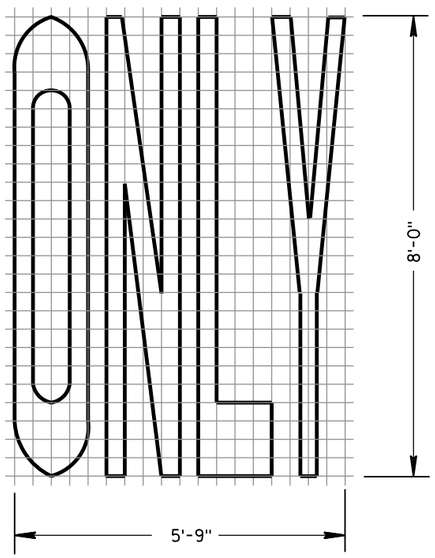
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

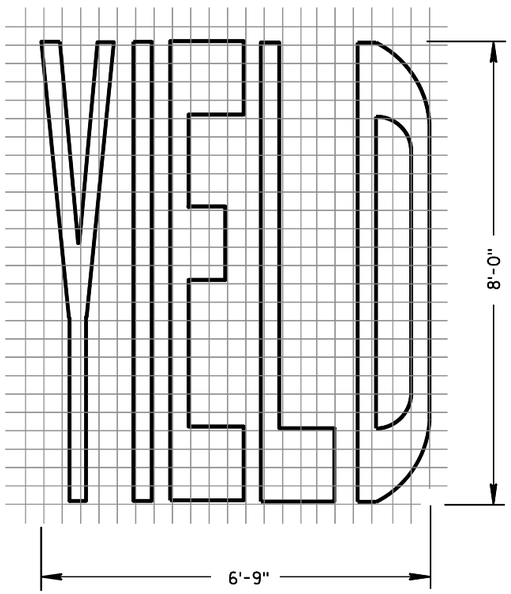


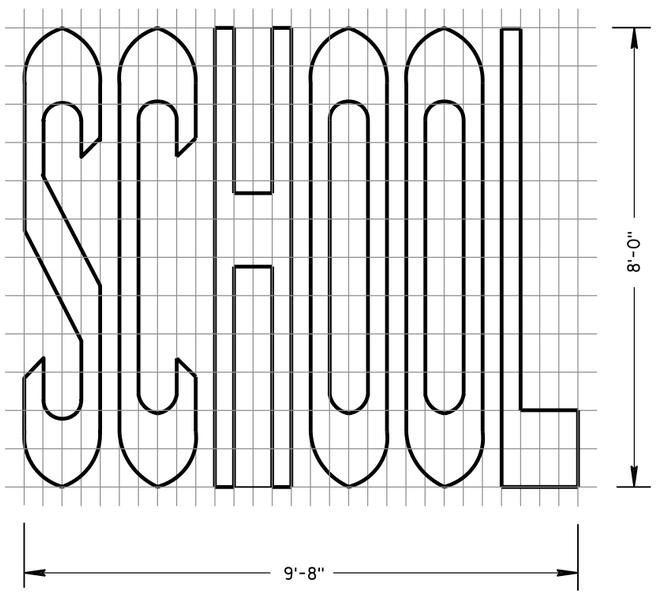




TWO-LANE







SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

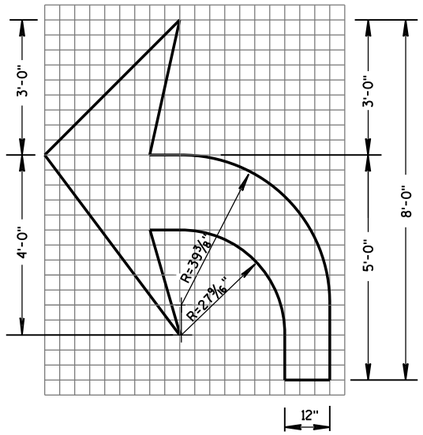
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/S/ Matthew R. Rauch — STATE SIGNING AND MARK
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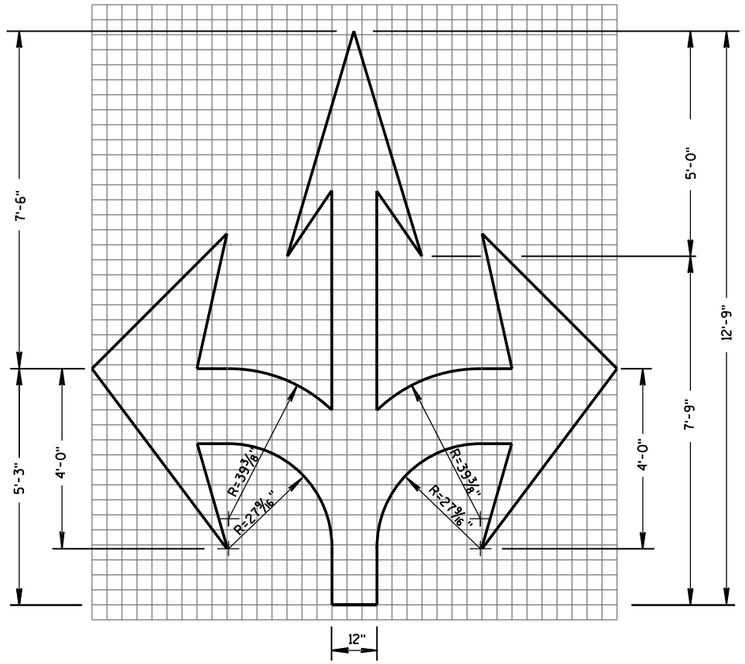
S.D.D. 15 C 7-14b

GENERAL NOTES

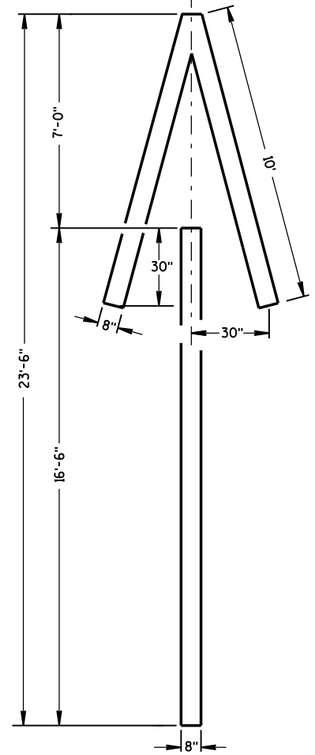
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



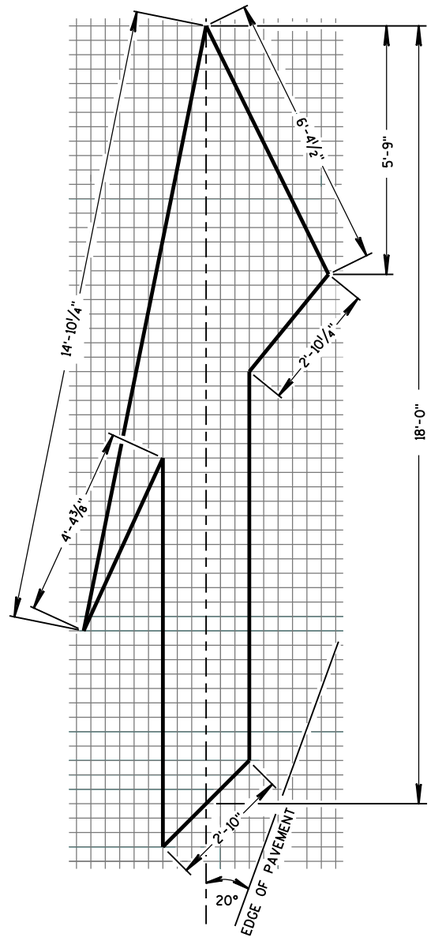
TYPE 2



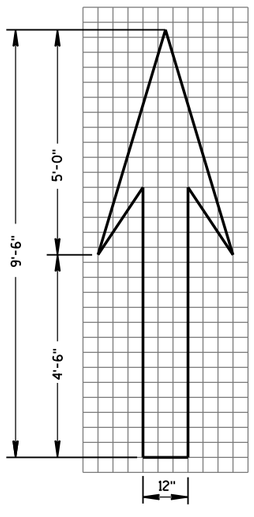
TYPE 6



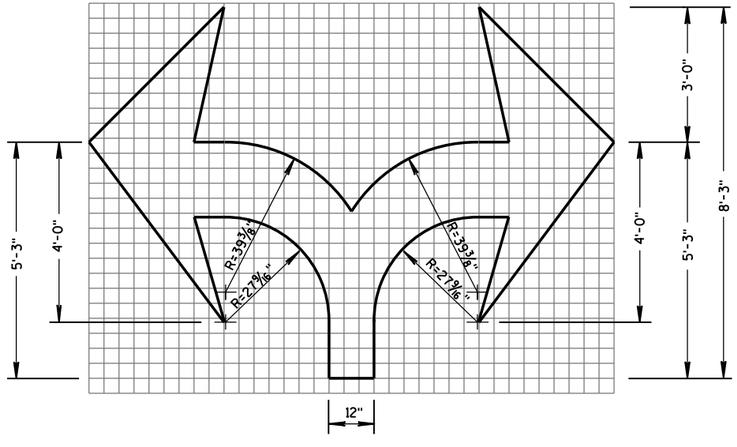
TYPE 4



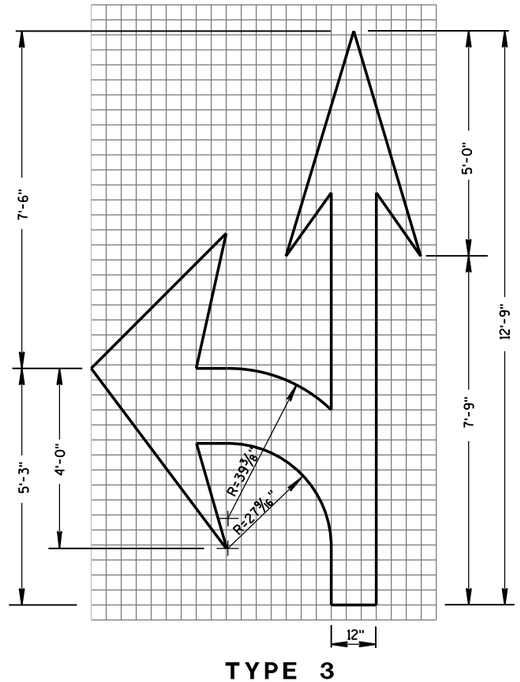
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

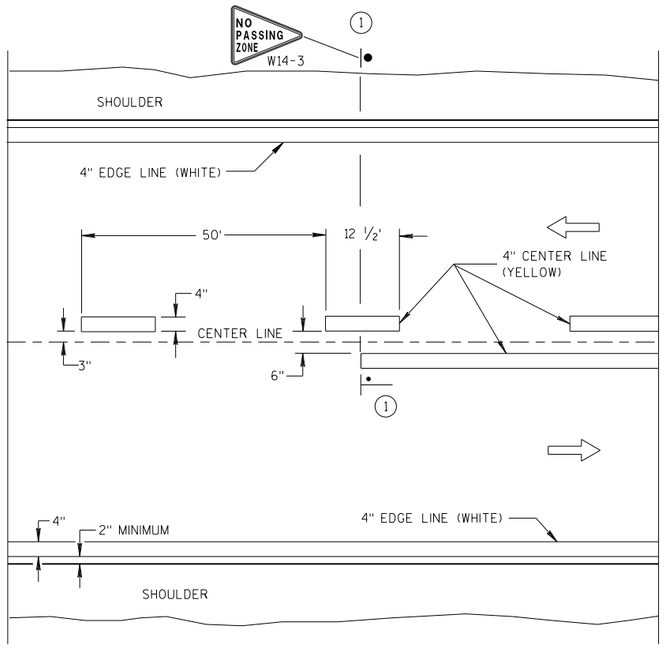
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

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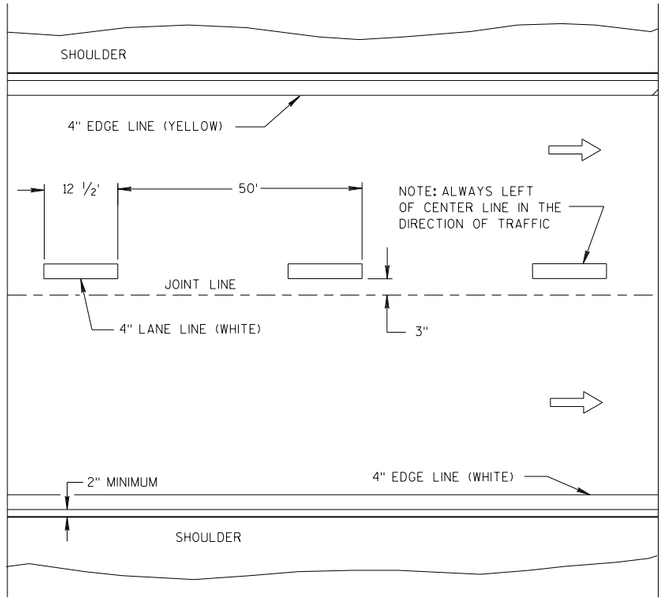
S.D.D. 15 C 7-14c

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.

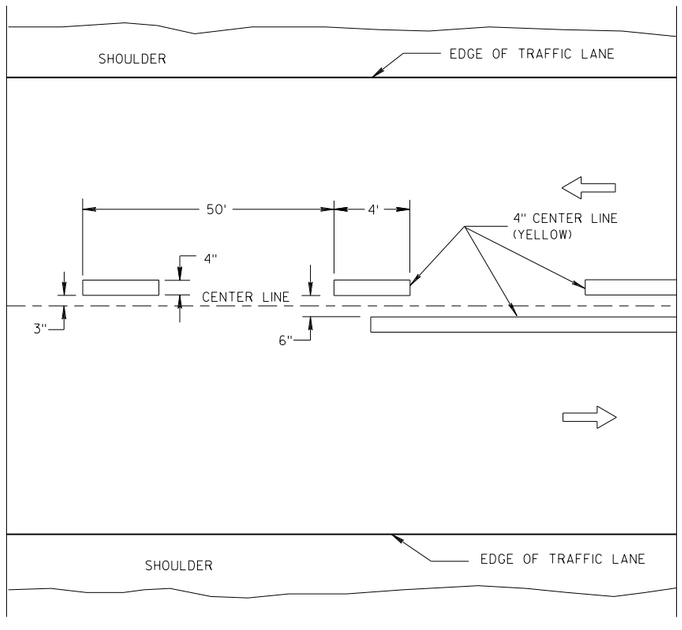
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

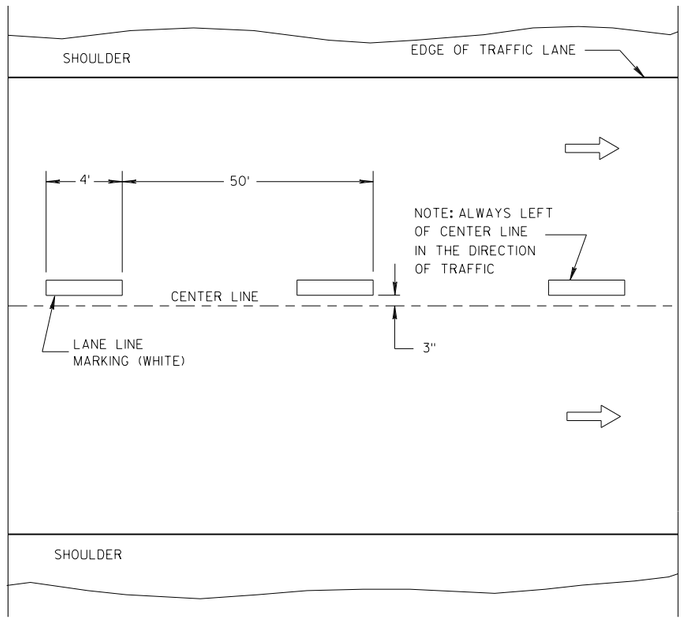
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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7/2018 — DATE

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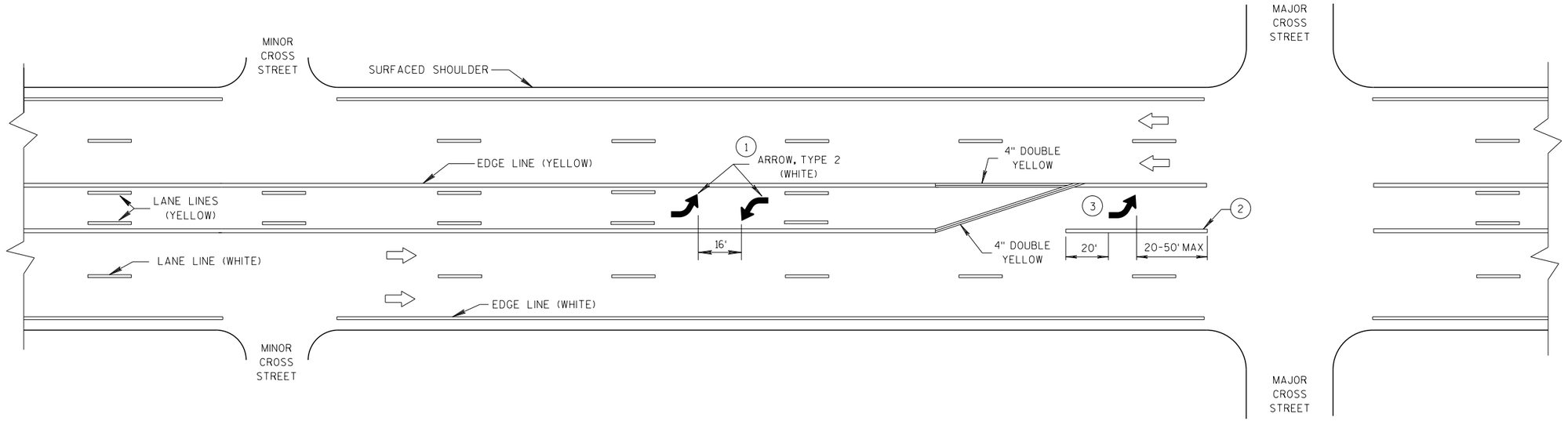
6

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



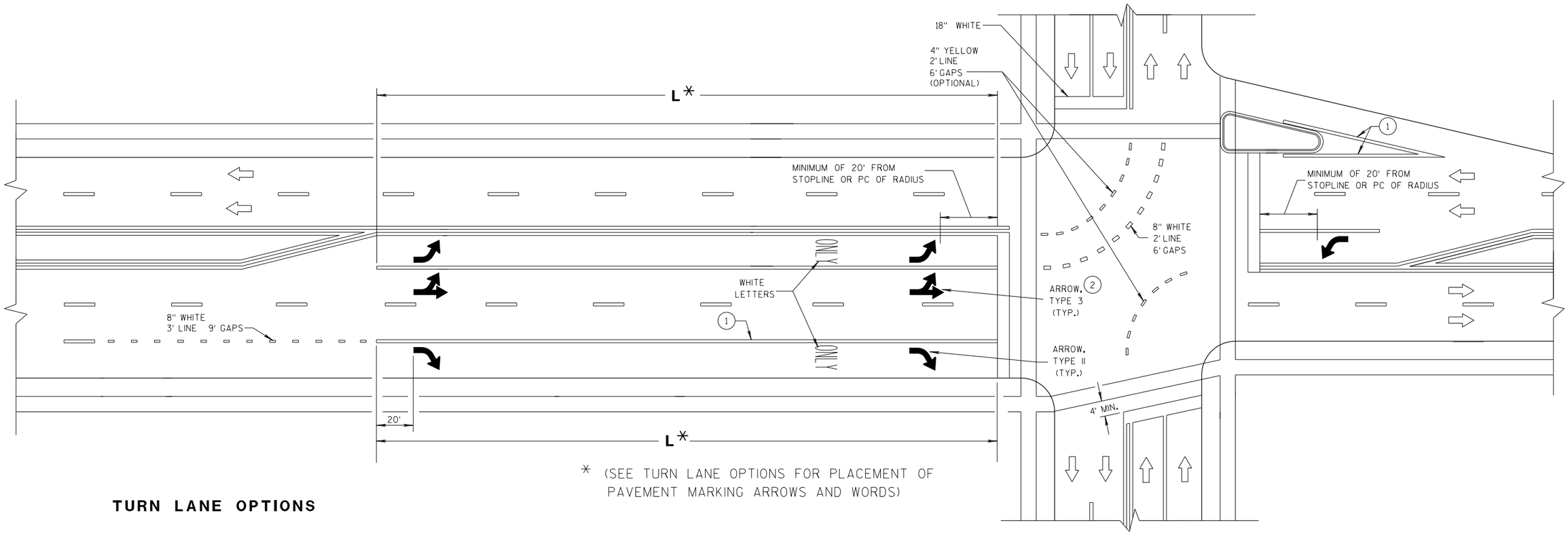
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

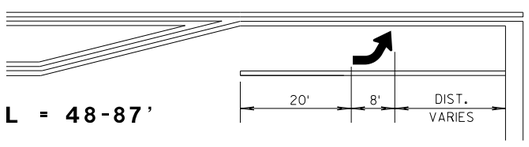
S.D.D. 15 C 8-19b



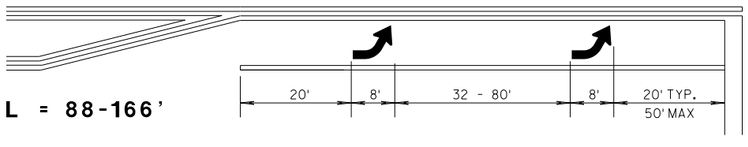
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

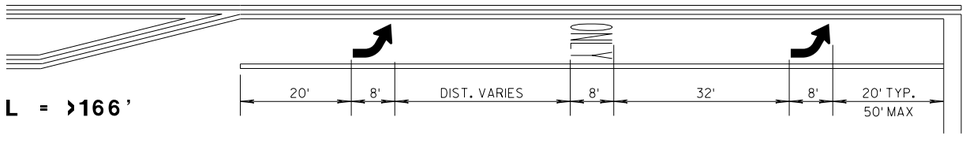
LENGTH OF TURN BAY (**L**) OF 0-47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48-87'



L = 88-166'



L = >166'

GENERAL NOTES

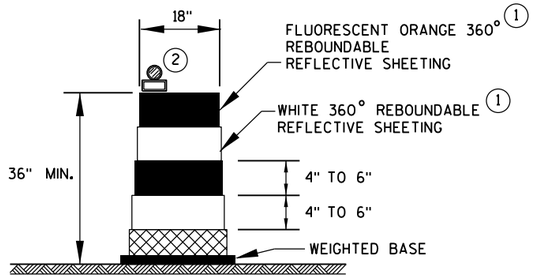
1. 8" WHITE
2. QUANTITY AND LOCATION OF TYPE 3 ARROW ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION, THE ARROWS AND ONLY MARKING ARE ELIMINATED.

⇨ DIRECTION OF TRAFFIC

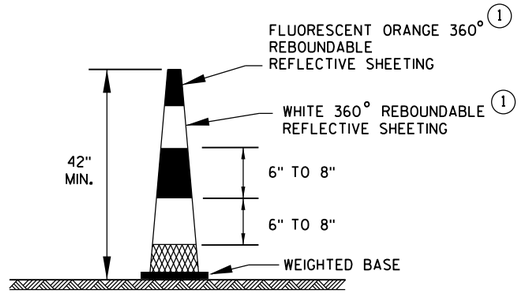
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

6
S.D.D. 15 C 8-19c



DRUM

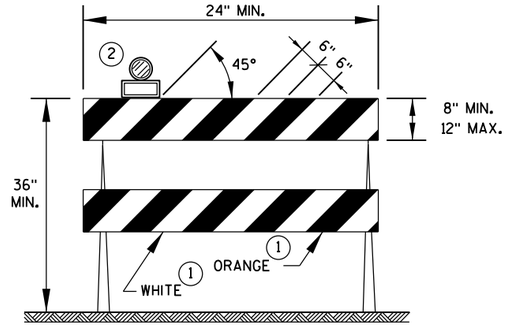


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

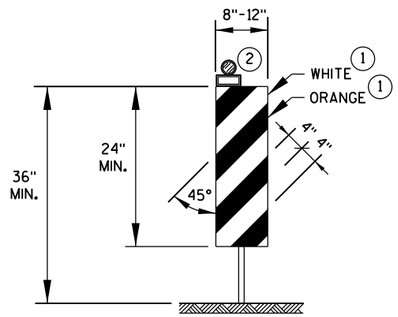
GENERAL NOTES

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.



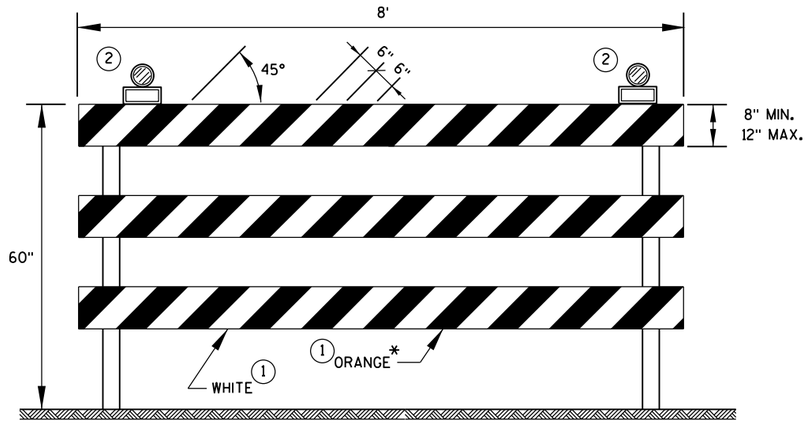
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 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

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June 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE ENG
FHWA

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S.D.D. 15 C 11-7b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

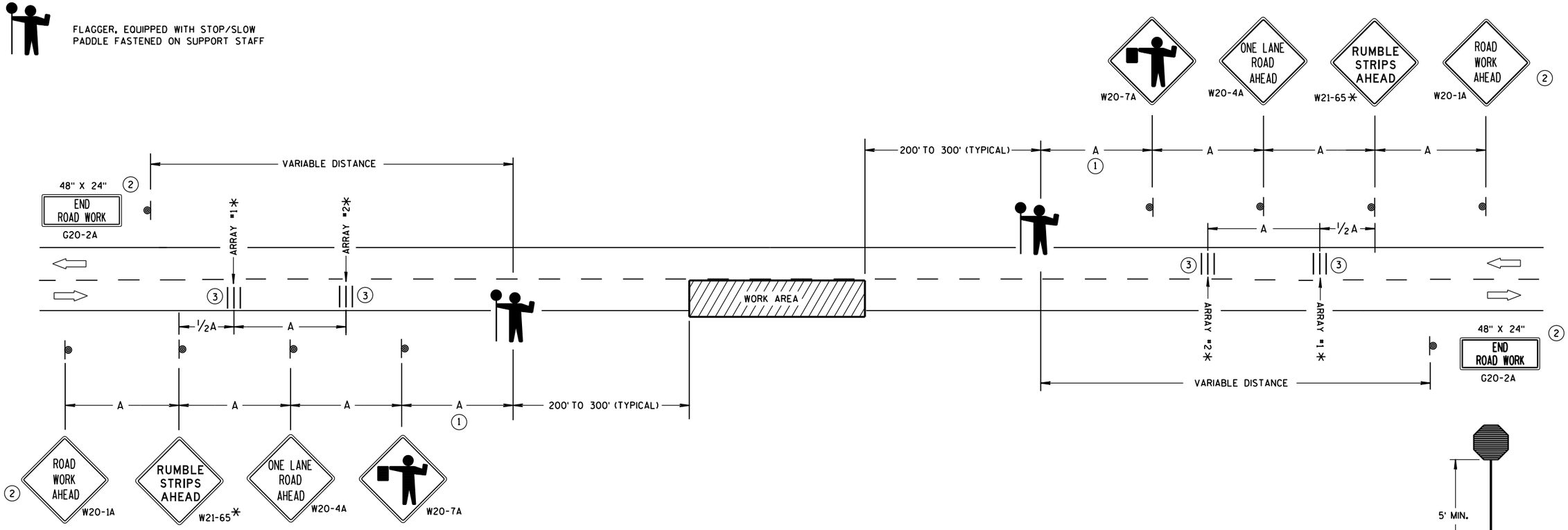
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

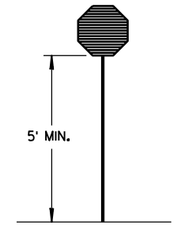
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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





STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

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

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

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

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

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

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

* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

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

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

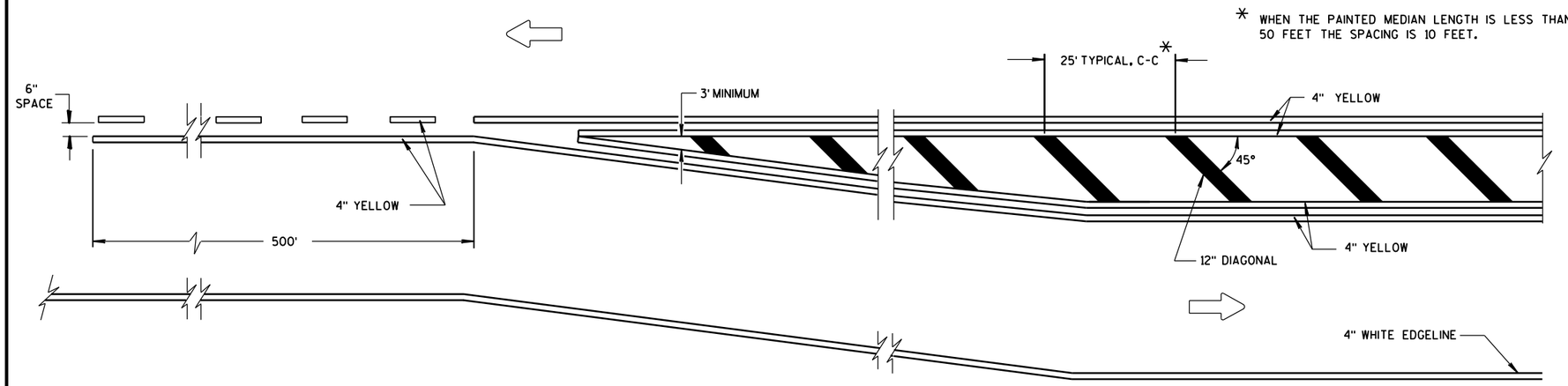
(3) EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
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S.D.D. 15 C 12-6

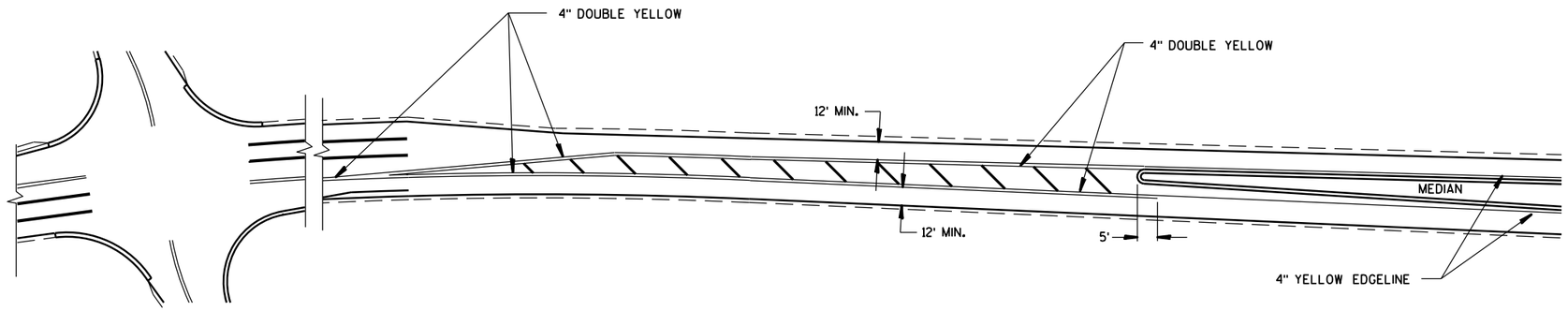


MEDIAN ISLAND DETAIL

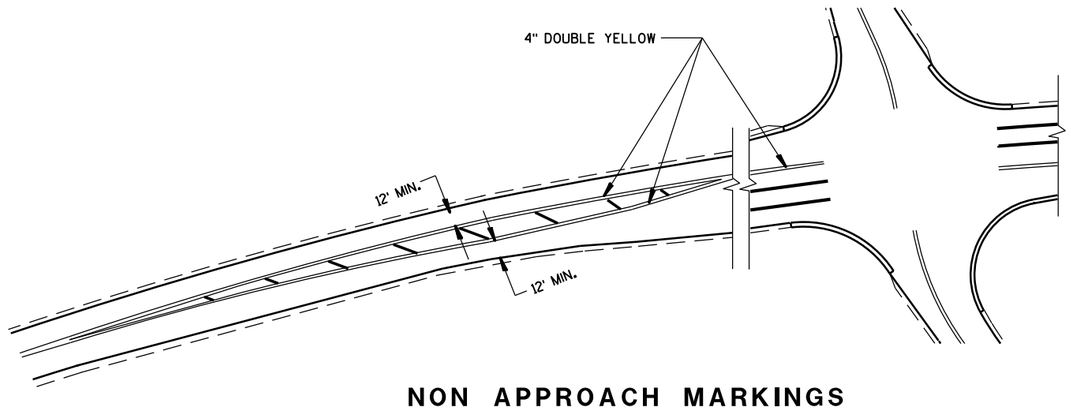
GENERAL NOTE

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

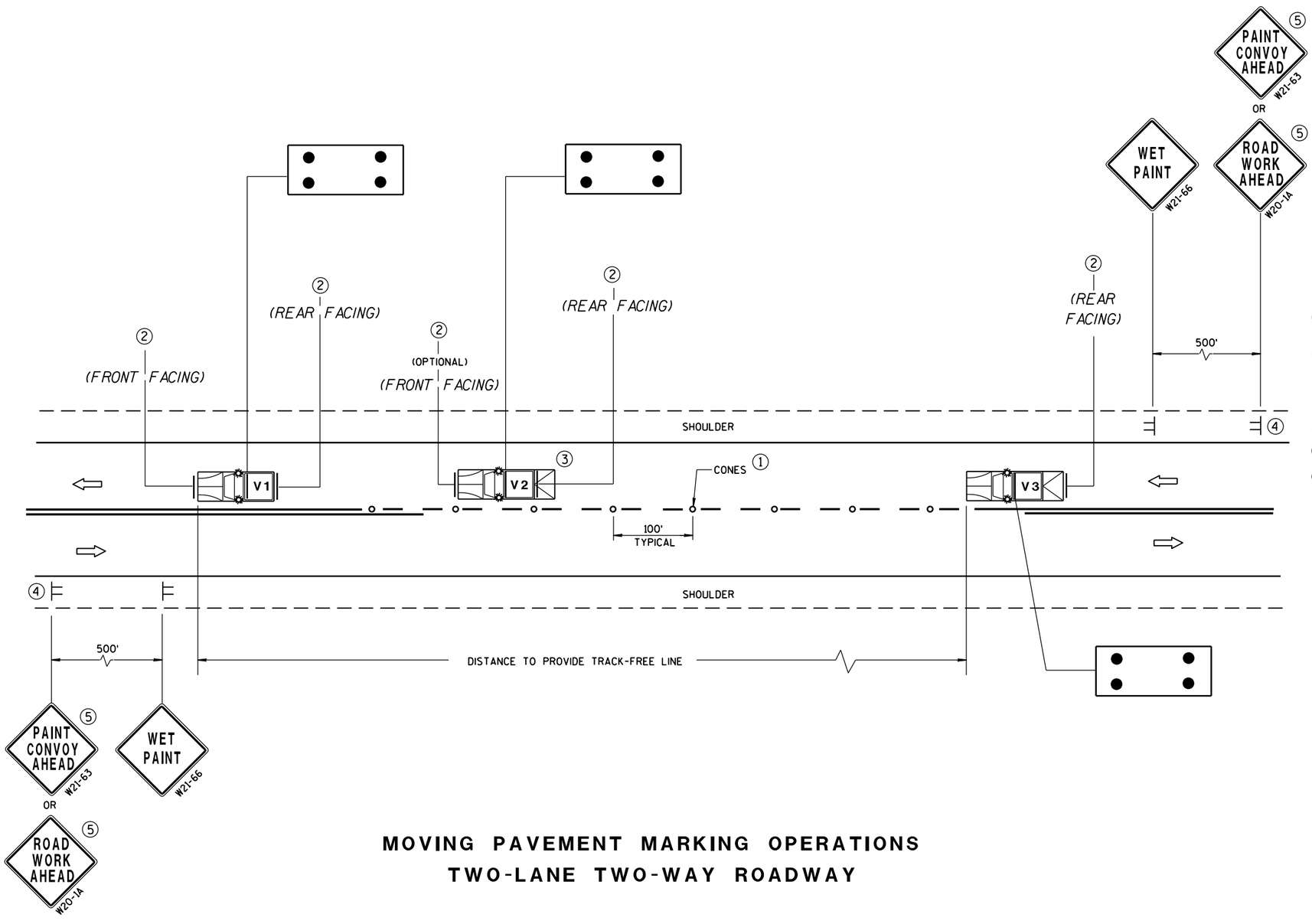
APPROVED
June 2017 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARK[illegible]EER
FHWA

6

S.D.D. 15 C 18-4

6

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.

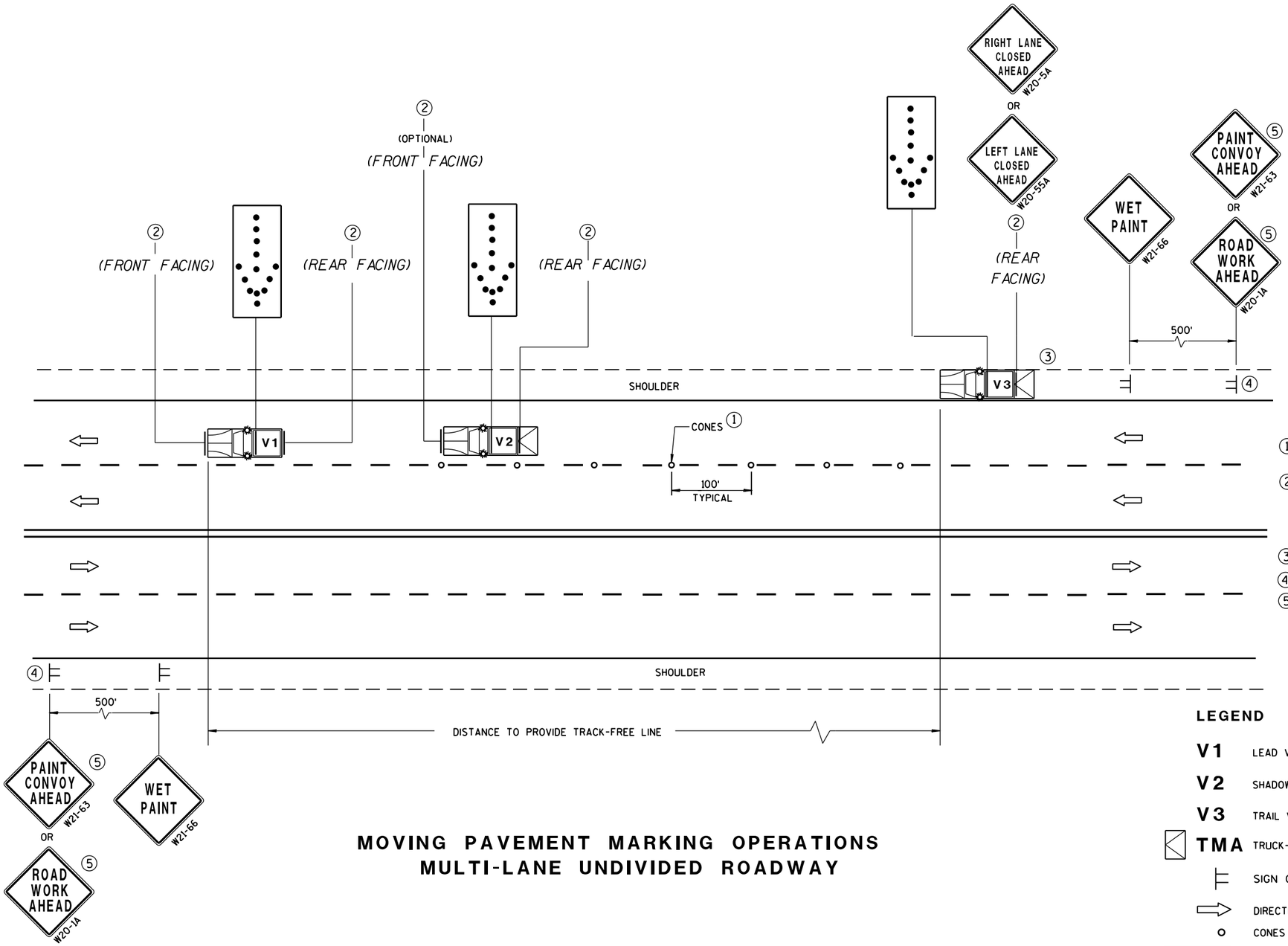
LEGEND

- **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	

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S.D.D. 15 C 19-5a



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE UNDIVIDED ROADWAY

GENERAL NOTES

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

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

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

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

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

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

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

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

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH.

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE OR LANELINE MARKING FOR MULTILANE UNDIVIDED ROADWAYS.

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

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

WET PAINT W21-64 OR WET PAINT W21-64

(3) 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 (MERGE)

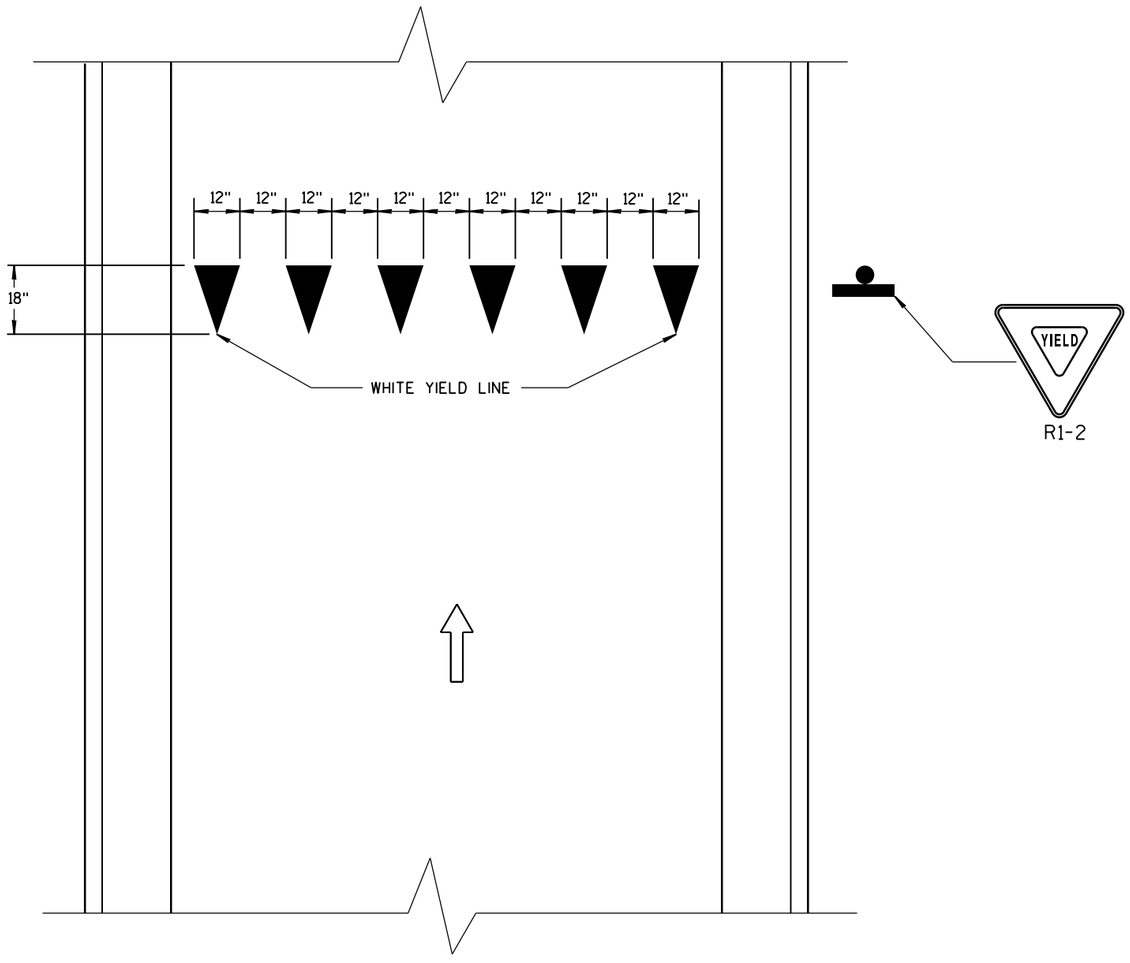
MOVING PAVEMENT MARKING OPERATION
MULTI-LANE UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENGIN
FHWA

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S.D.D. 15 C 19-5b



R1-2



DIRECTION OF TRAVEL

YIELD LINE

6

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S.D.D. 15 C 20-2

S.D.D. 15 C 20-2

YIELD MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARI

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GENERAL NOTES

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

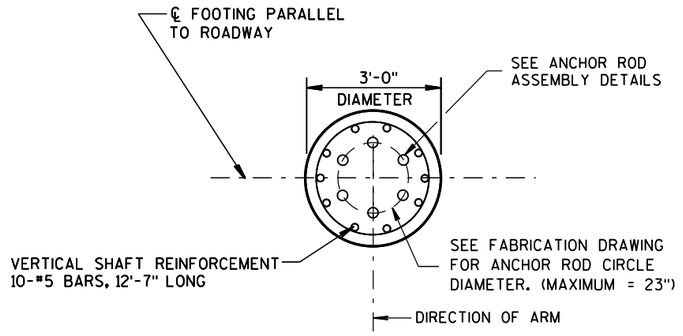
THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

FORM ALL EXPOSED CONCRETE CORNERS WITH ¾" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

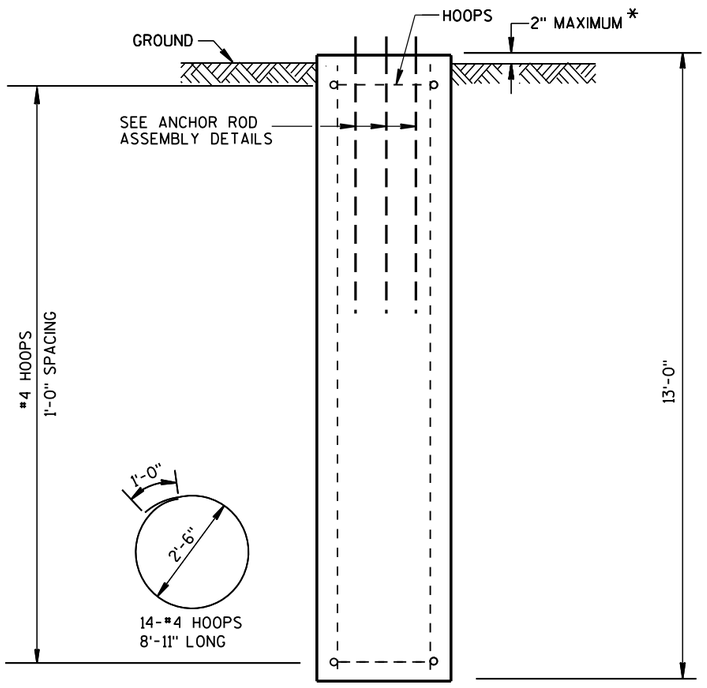
ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554, GRADE 55	fy=55,000 p.s.i.
ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.	
PLATES, ASTM A709, GRADE 36	fy=36,000 p.s.i.

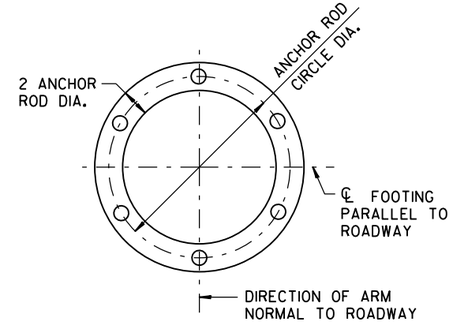
THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



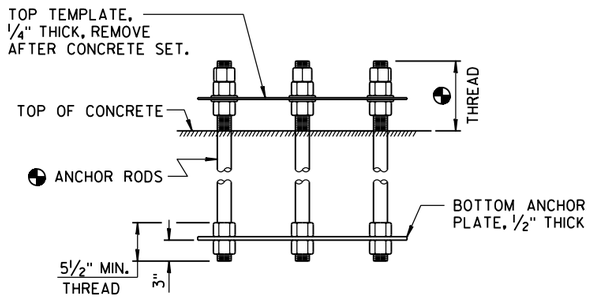
PLAN VIEW



ELEVATION VIEW



TOP TEMPLATE AND BOTTOM ANCHOR PLATE



ANCHOR ROD ASSEMBLY DETAILS

⊕ MINIMUM OF 6 ANCHOR RODS, EXACT NUMBER, SIZE, DIMENSION AND ORIENTATION AS SHOWN ON FABRICATION DRAWING.

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.

CONCRETE - 3.4 C.Y. PER FOOTING
H.S. REINFORCEMENT - 215 LBS. PER FOOTING

36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

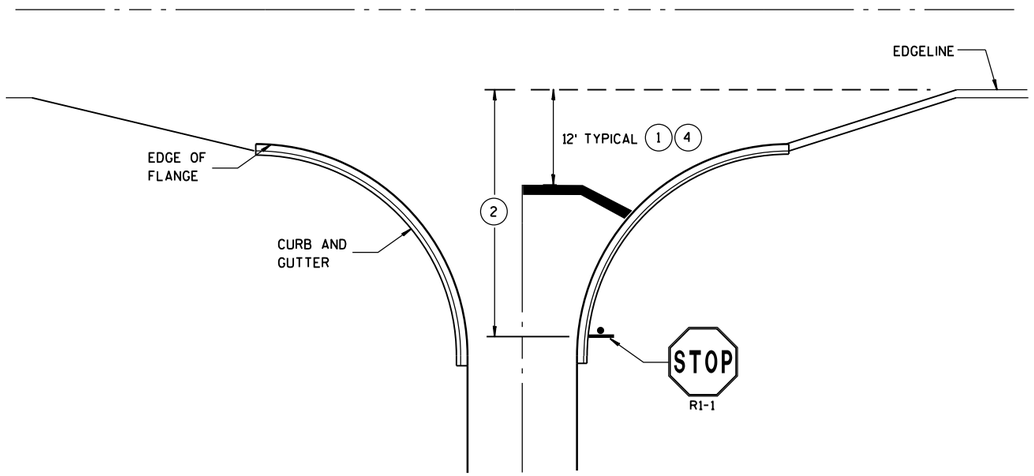
APPROVED
June 2016 — DATE
/S/ Vu Thao — WIND LOADED STRU PROGRAM LEAD
FHWA

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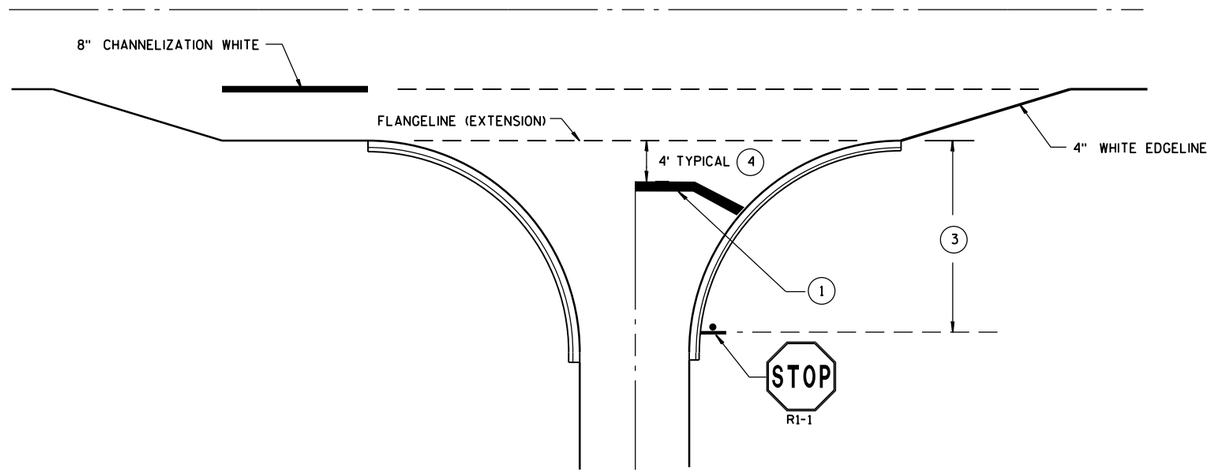
S.D.D. 15 C 24-4

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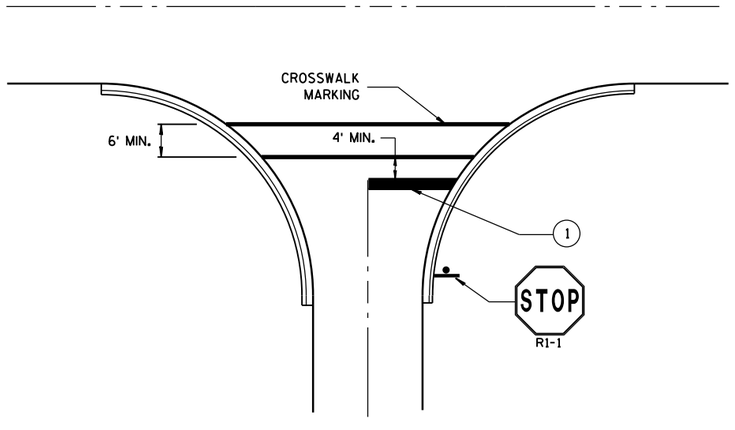
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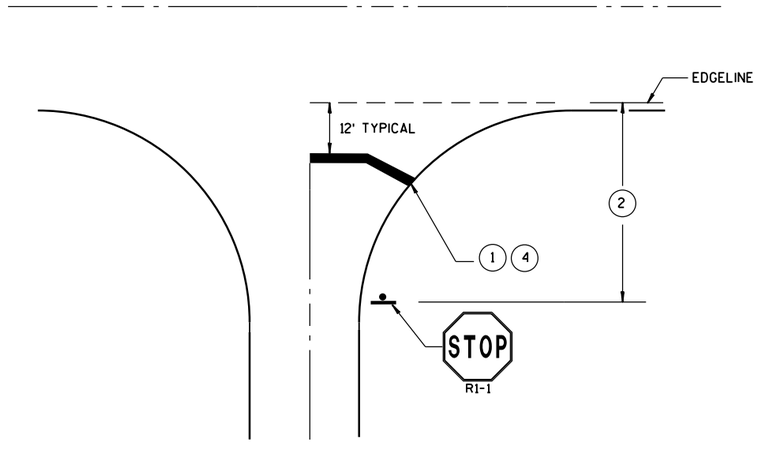
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

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

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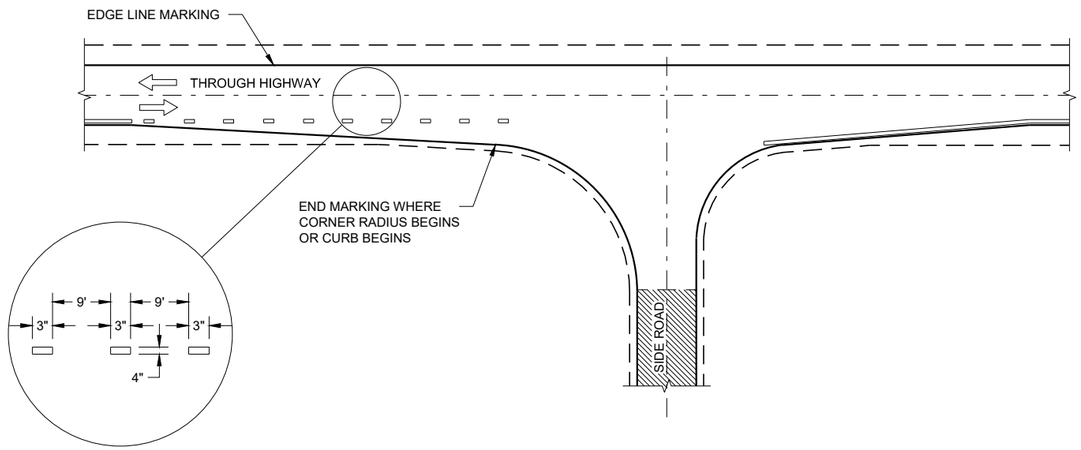
Sept., 2017 — DATE

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

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S.D.D. 15 C 33-3



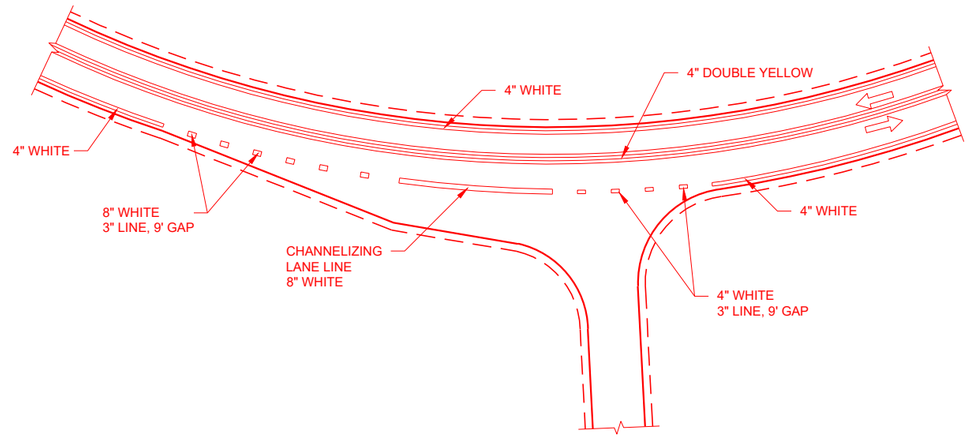
MINOR INTERSECTION

GENERAL NOTES

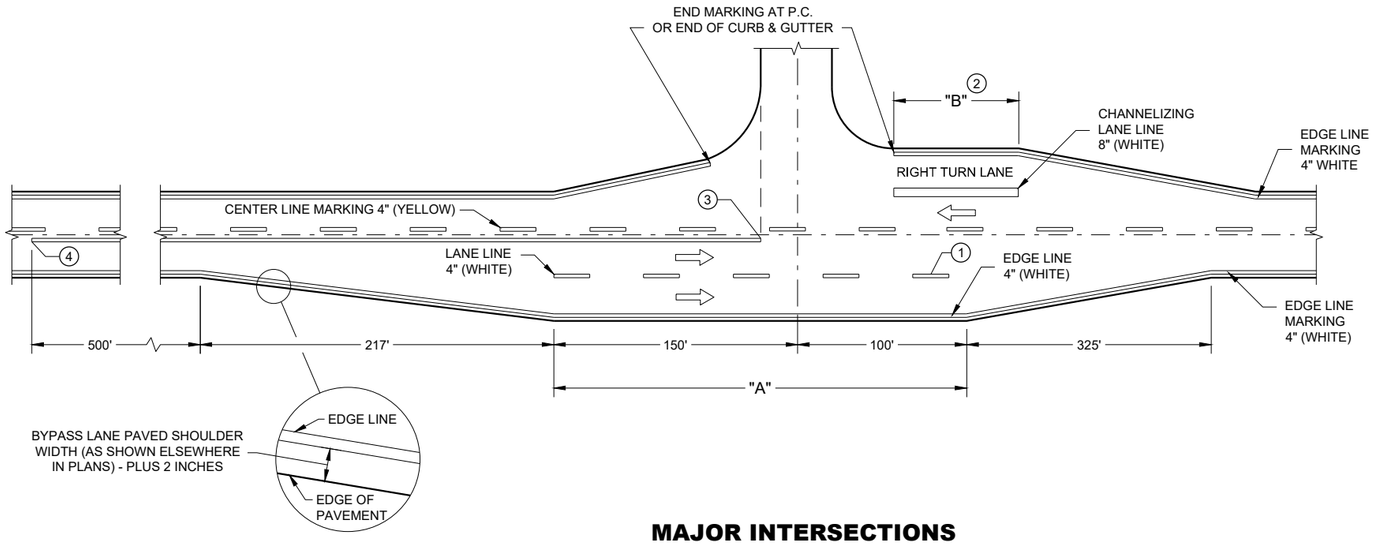
OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

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

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SDD 15C35 - 03a

SDD 15C35 - 03a

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

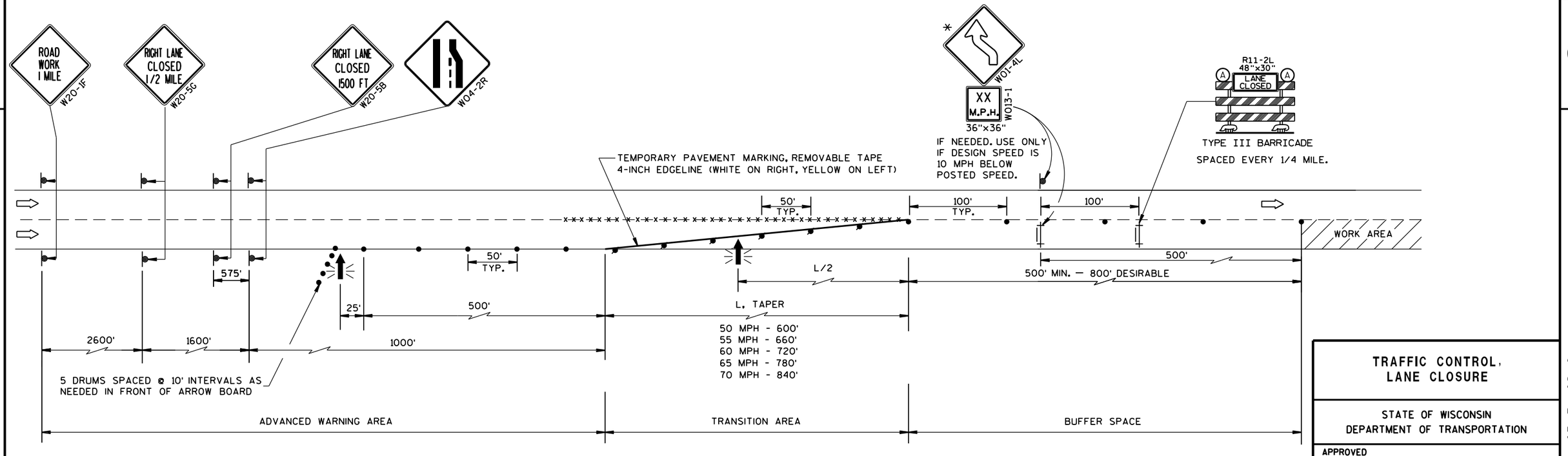
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



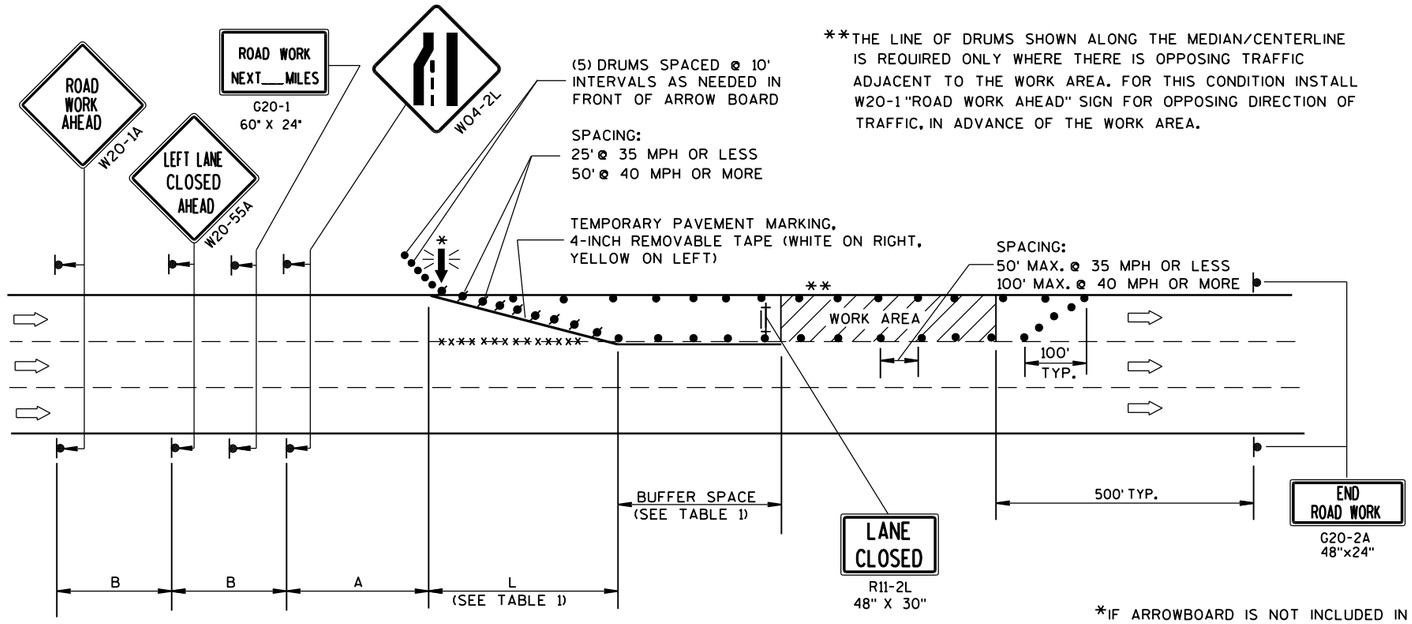
TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 12-6a



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

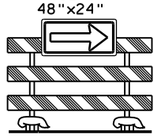


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

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

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

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

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

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

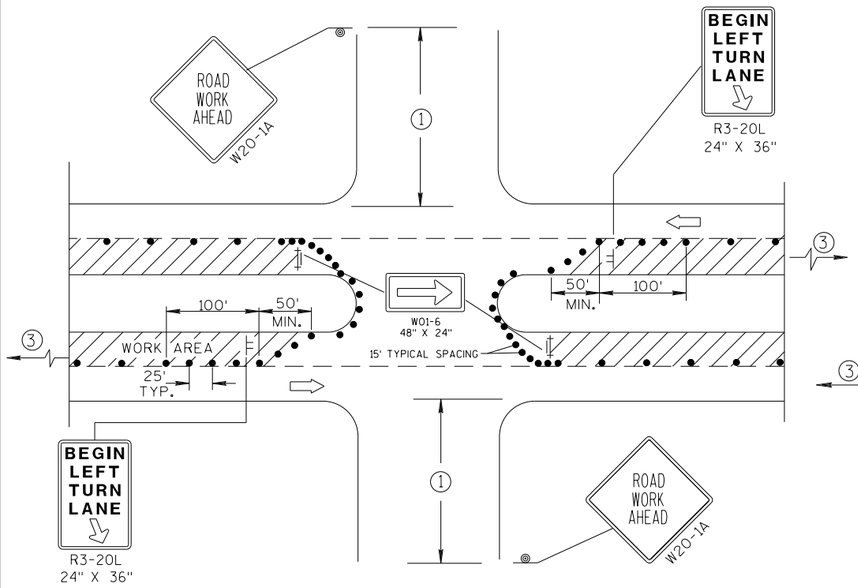
APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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S.D.D. 15 D 20-4

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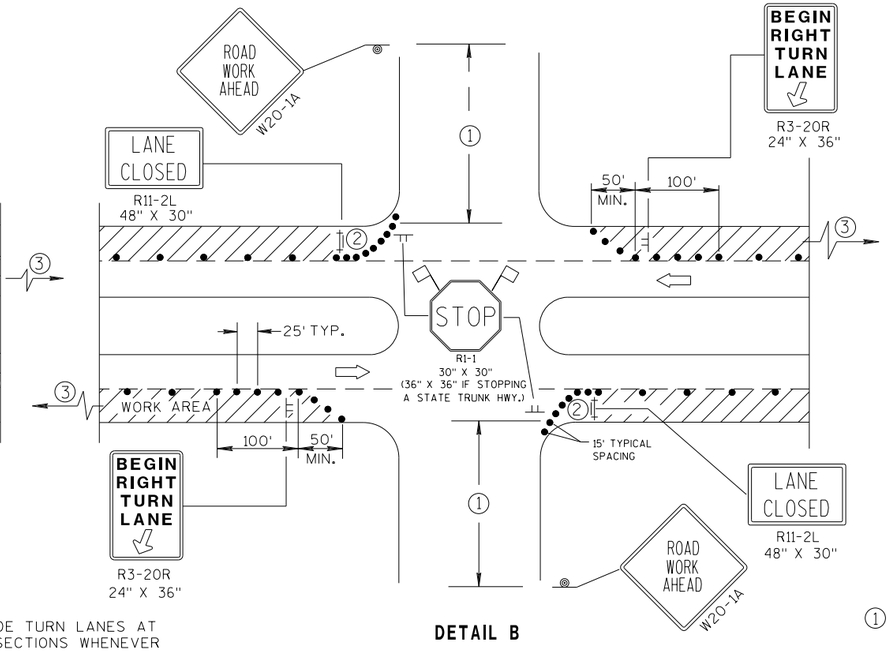
S.D.D. 15 D 20-4



DETAIL A

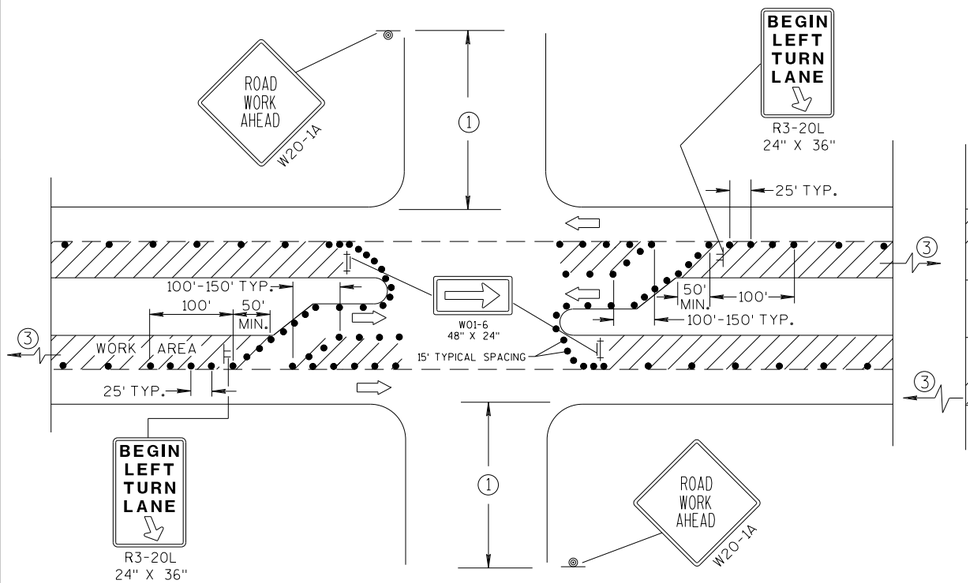
FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



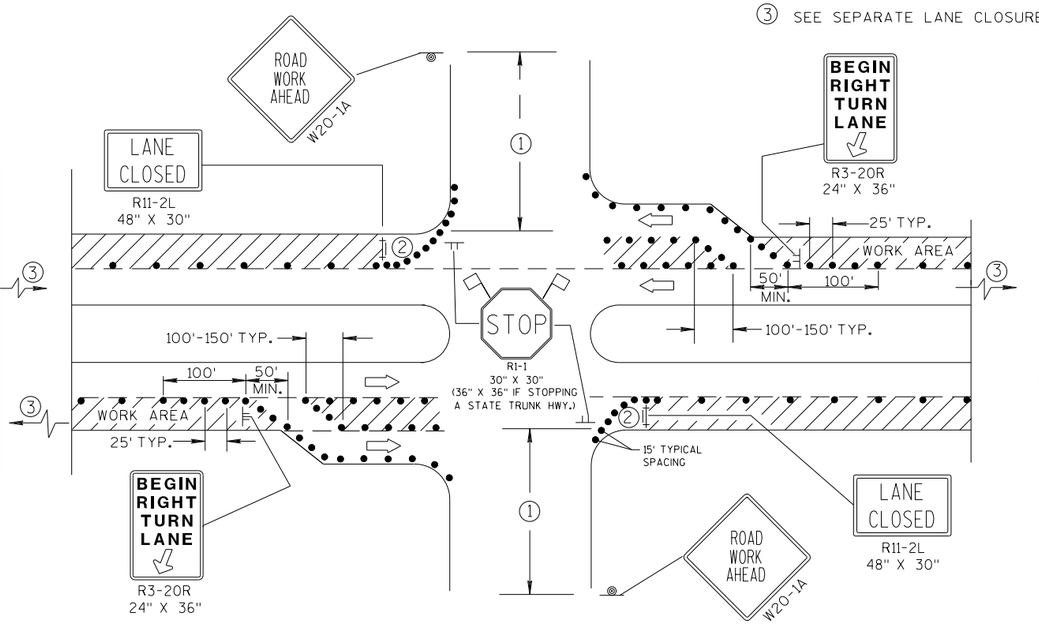
DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

(2) ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

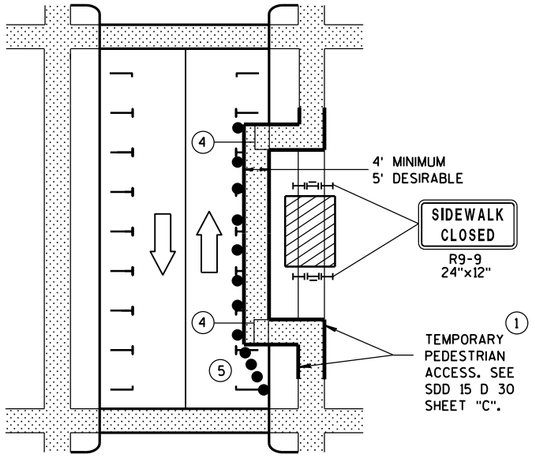
/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

6

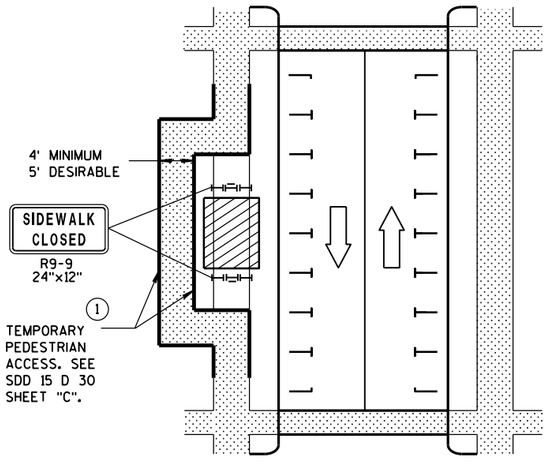
S.D.D. 15 D 21-6

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

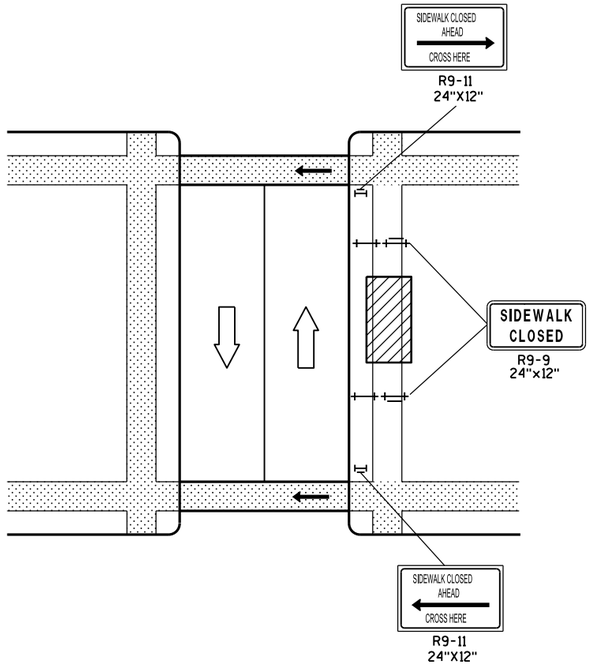


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

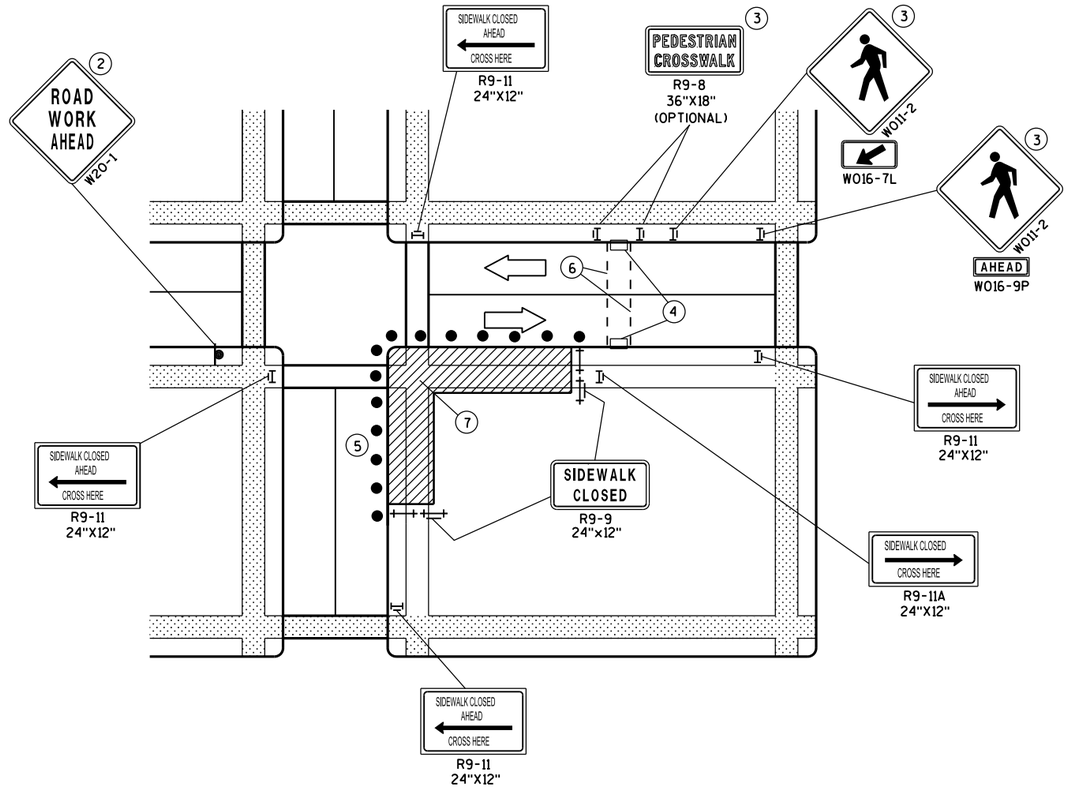
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

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

FOR NIGHTTIME CLOSURE USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

(1) IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.

(2) "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

(3) IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.

(4) TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".

(5) DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.

(6) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.

(7) LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

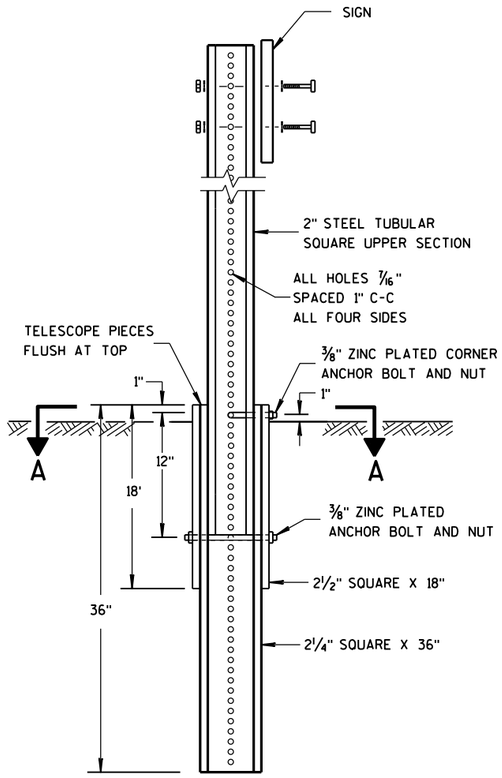
- SIGN ON PERMANENT SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC
- TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

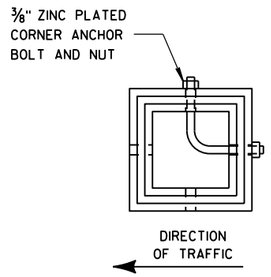
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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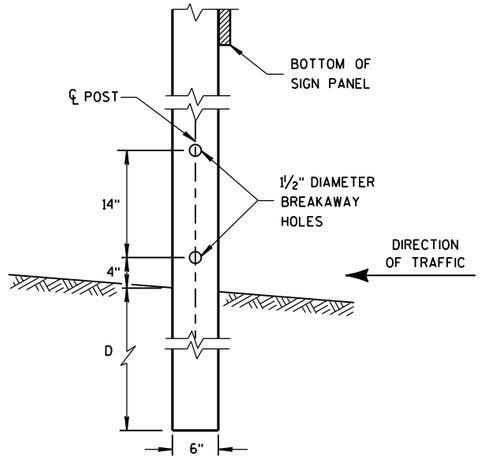
S.D.D. 15 D 30-3a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



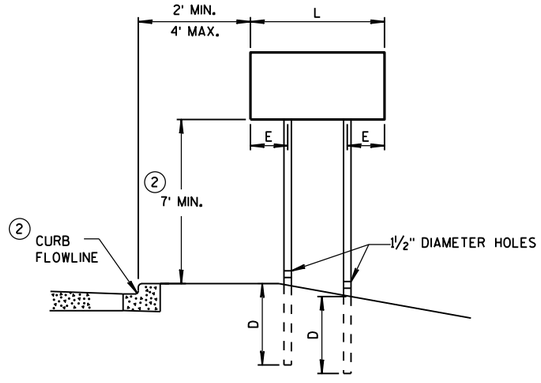
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

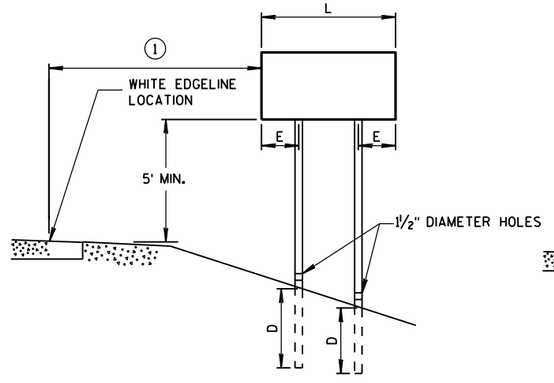
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

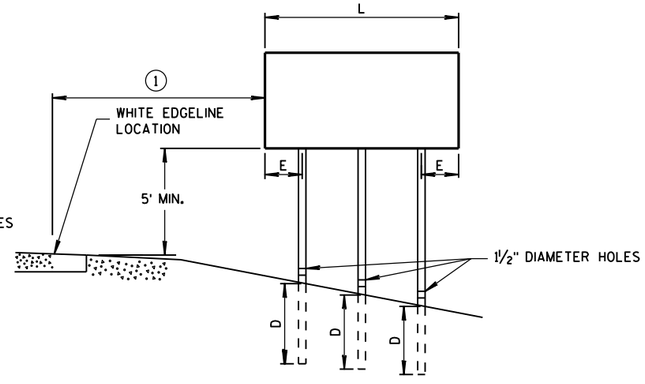
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

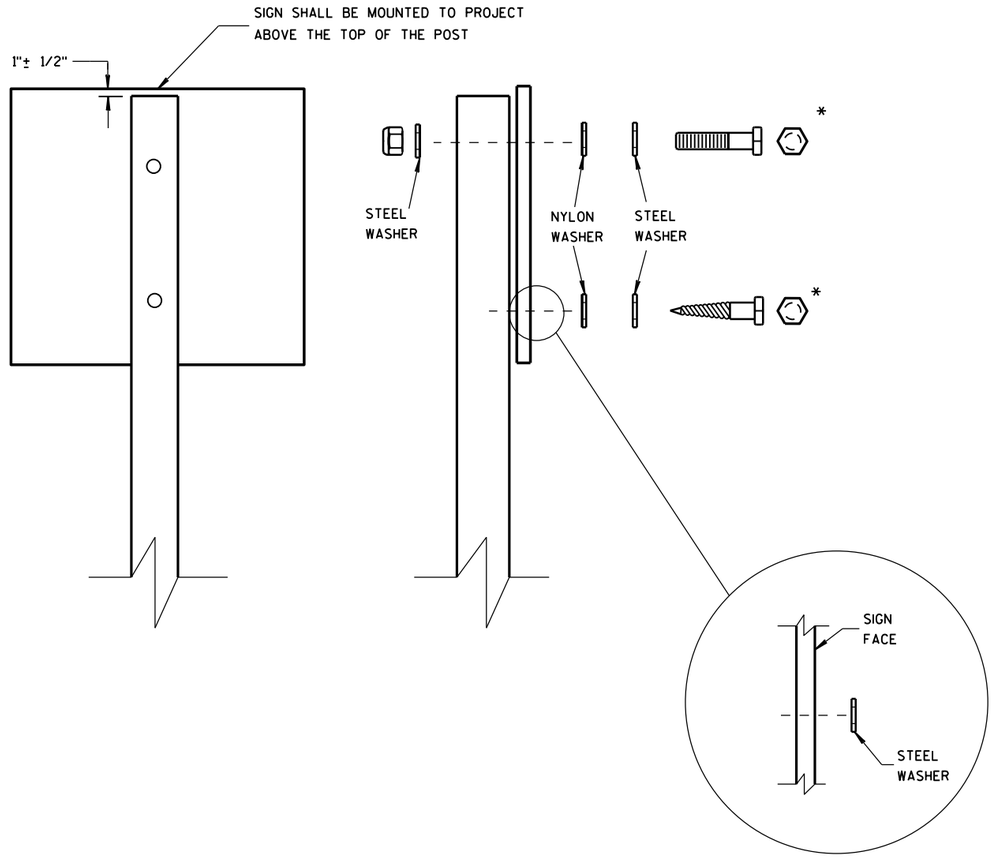
POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 15 D 38-2a



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.

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6

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

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

ATTACHMENT OF SIGNS TO POSTS

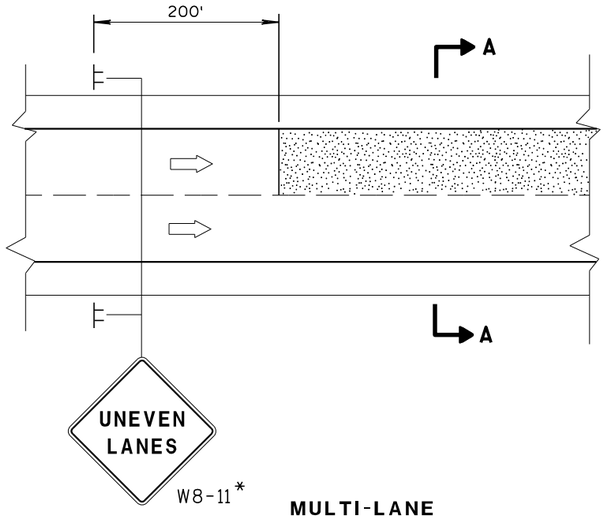
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

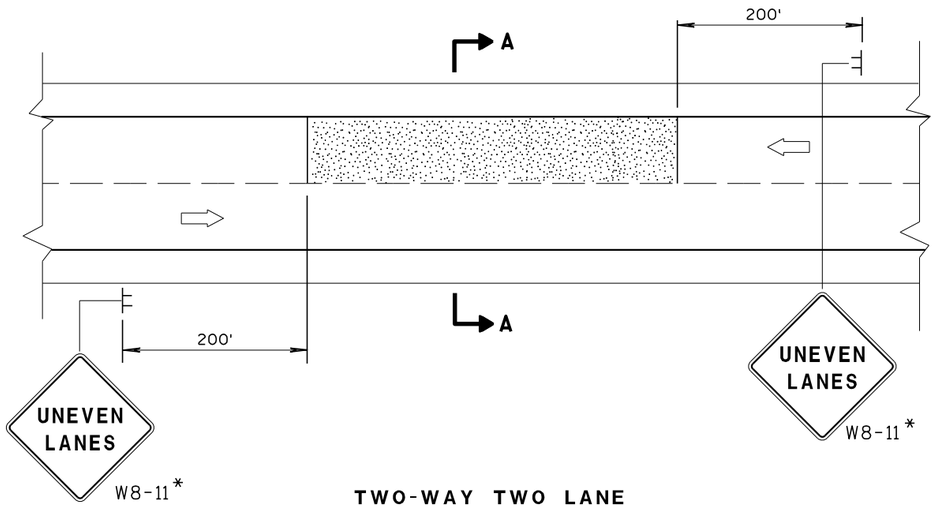
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

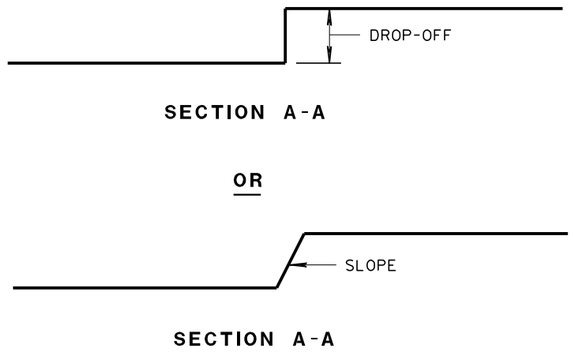
FHWA



MULTI-LANE



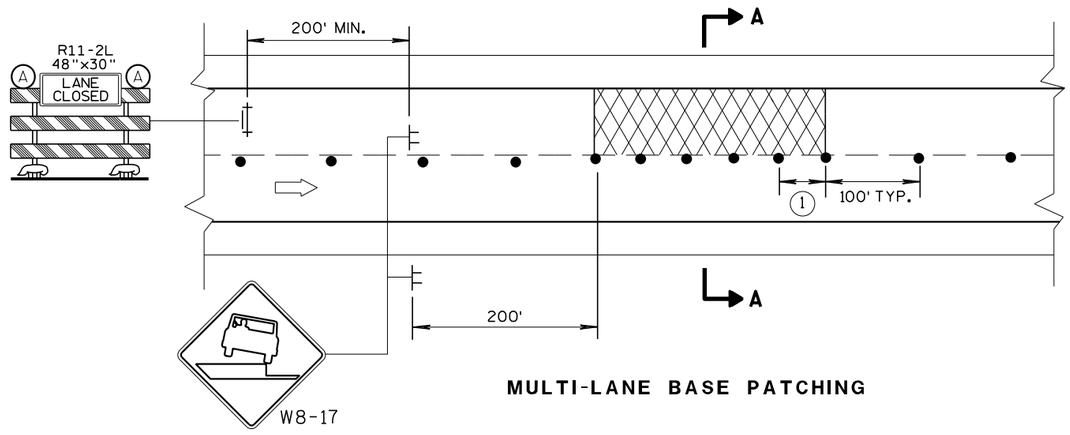
TWO-WAY TWO LANE



SECTION A-A

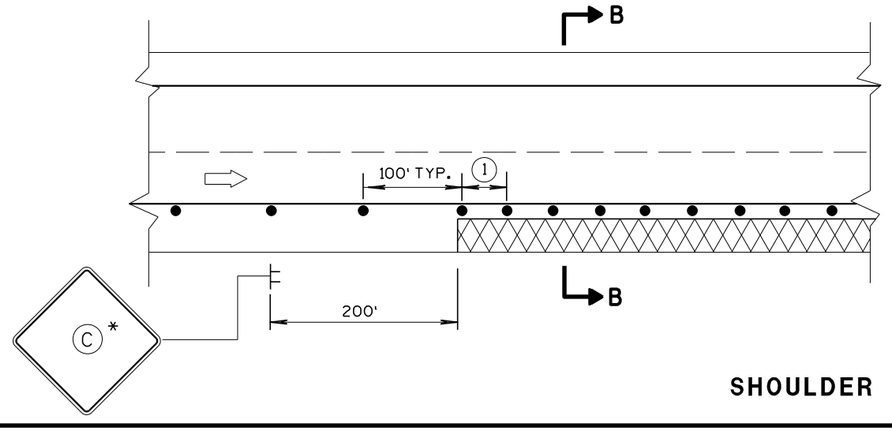
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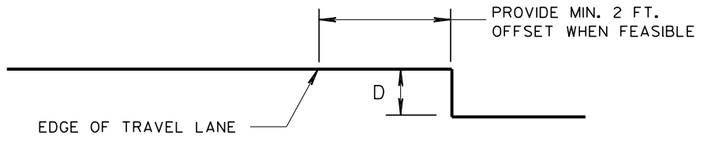
SECTION A-A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS





SECTION B-B

SHOULDER DROP-OFFS

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

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

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

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

LEGEND

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

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

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE
/S/ Andrew H
WORK ZONE EN 227
FHWA

6

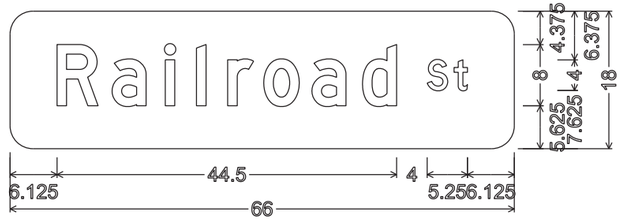
S.D.D. 15 D 39-2

6

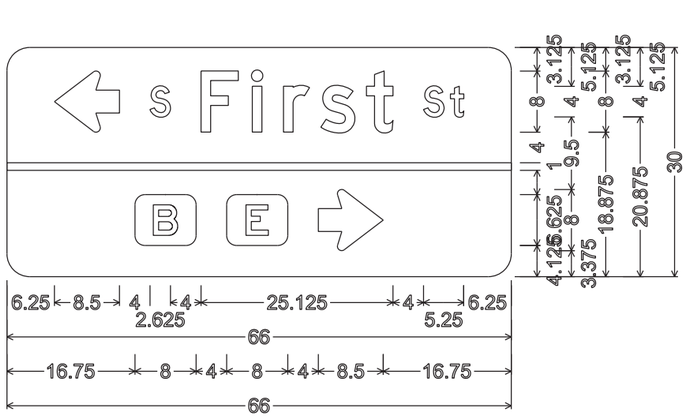
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NOTES

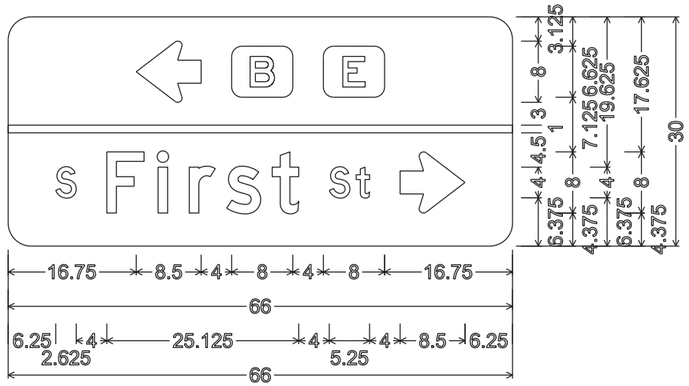
1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - D



M1-94H ; 3.000" Radius, No border



M1-94S ; 3.000" Radius, No border

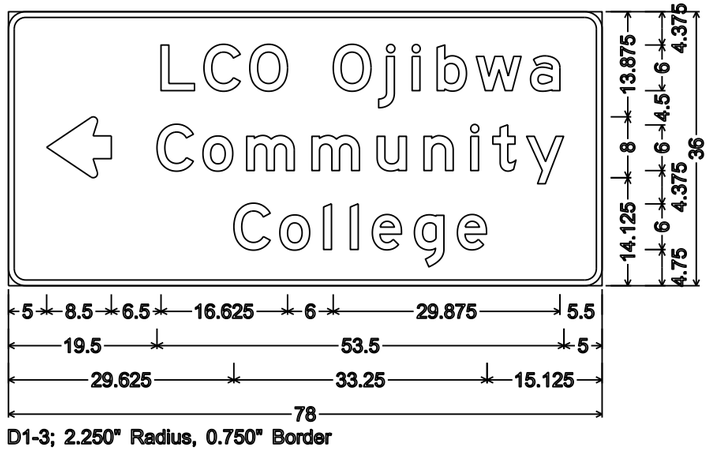


M1-94S ; 3.000" Radius, No border

PROJECT NO:	HWY: STH 27	COUNTY: SAWYER	PERMANENT SIGNING	SHEET NO: 228	E

NOTES

1. Signs are Type II- Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



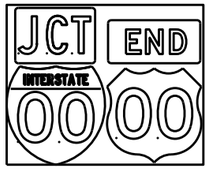
D1-3; 2.250" Radius, 0.750" Border

D1-3; 2.250" Radius, 0.750" Border

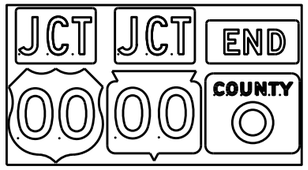
TYPICAL ASSEMBLIES



J1-1



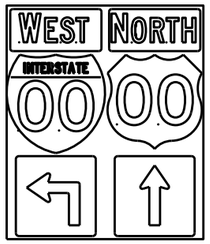
J1-2



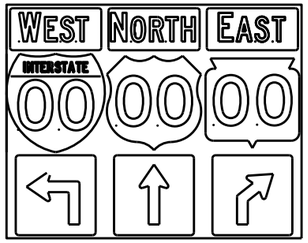
J1-3



J2-1



J2-2

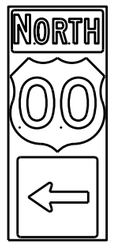


J2-3

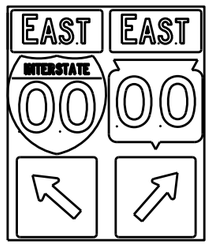


JV

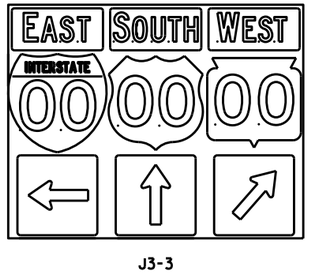
(Typical Vertical J-Assembly
See Note 10 and 11)



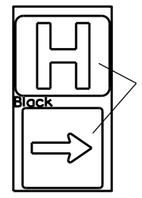
J3-1



J3-2



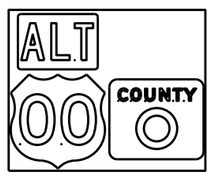
J3-3



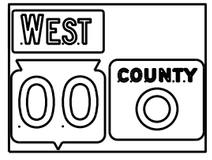
JH-1



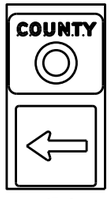
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

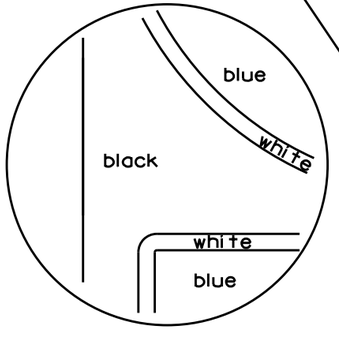


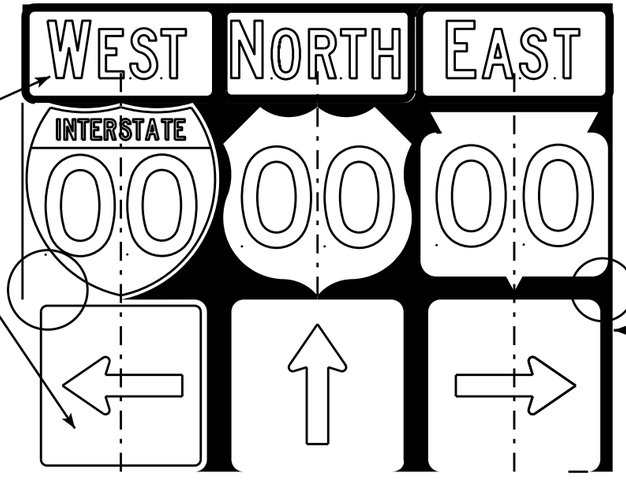
J23-1

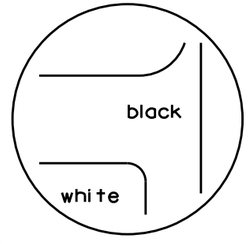


J22-1

blue background
with interstate







black background

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

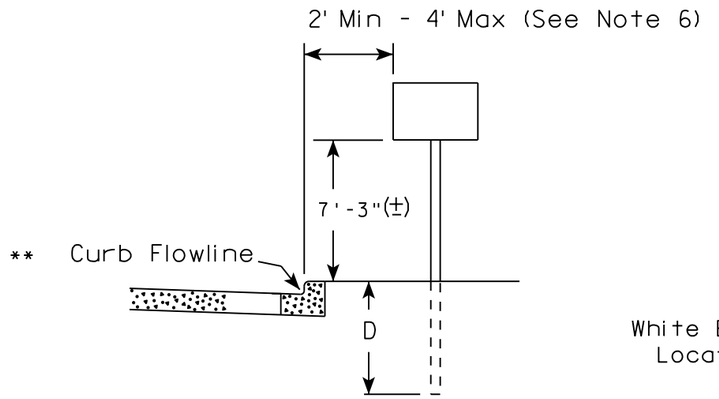
DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E

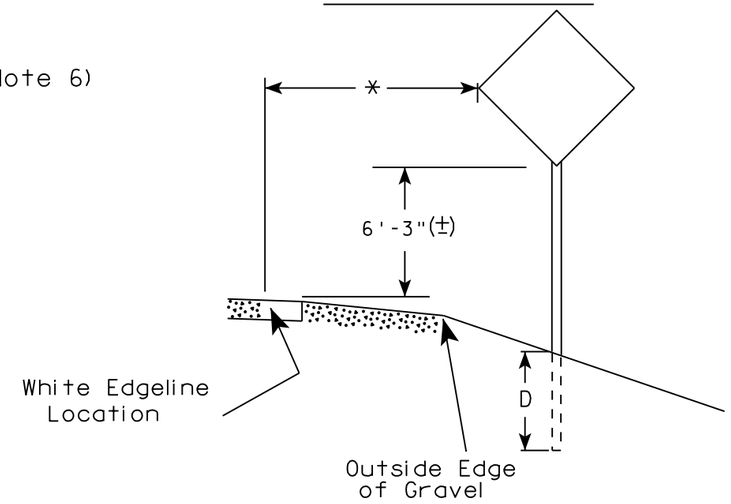
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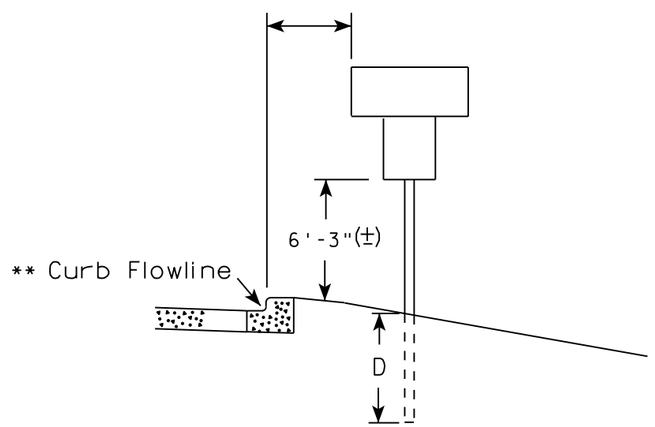
WISDOT/CADDS SHEET 42

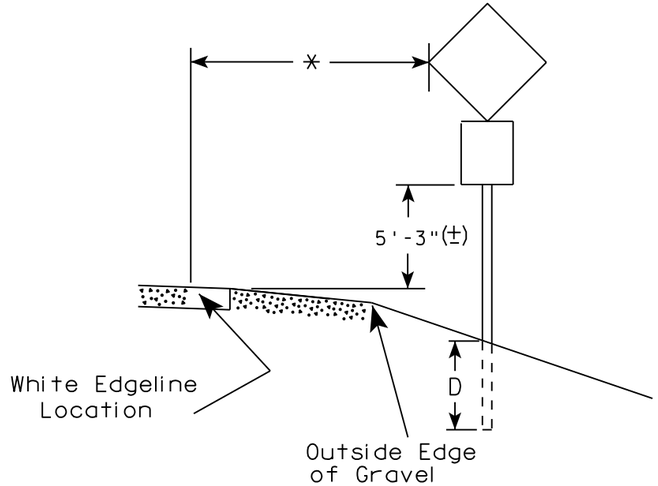
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on 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" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

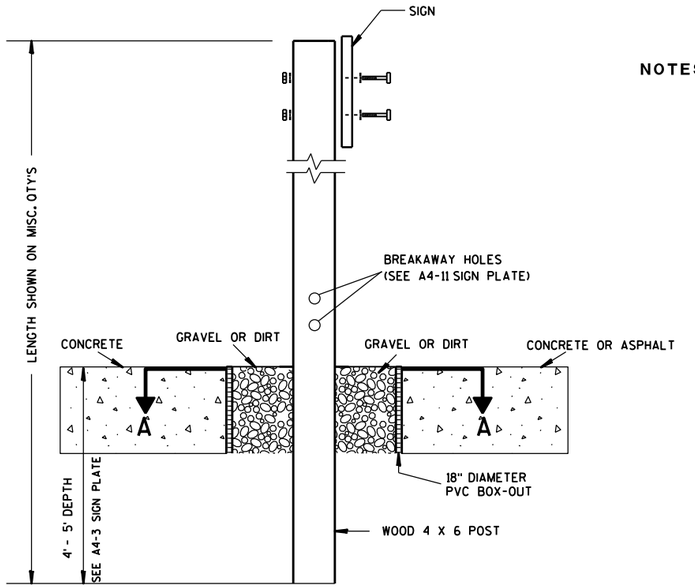
APPROVED Matthew R Rauch
for State Traffic Engineer

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

7

7

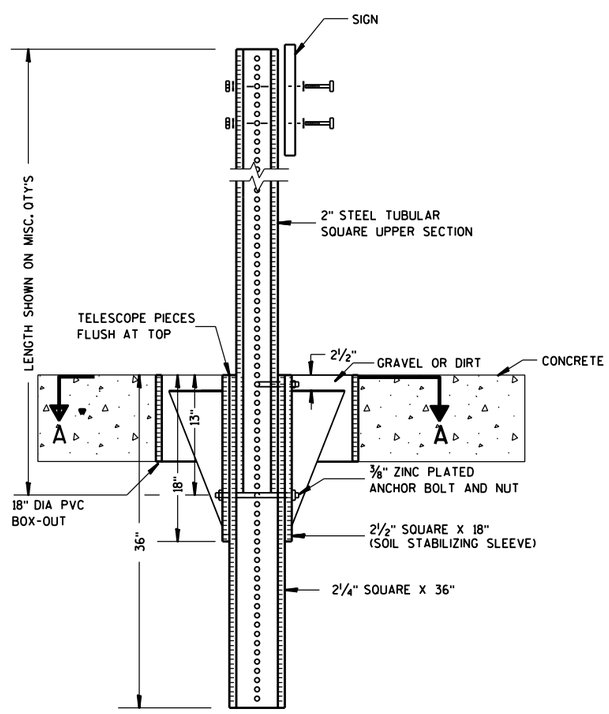
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 231	E



ELEVATION VIEW

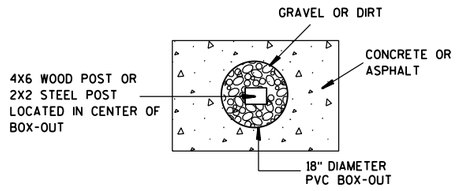
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

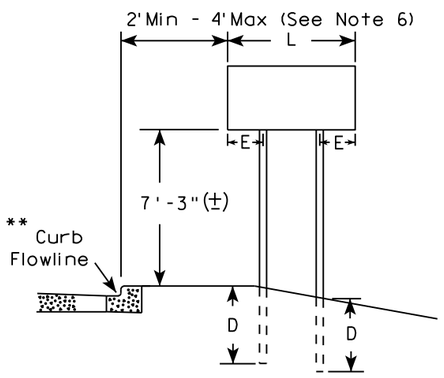
APPROVED Matthew R Rauch
for State Traffic Engineer

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

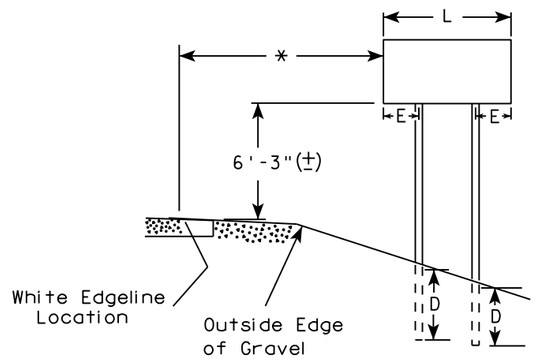
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

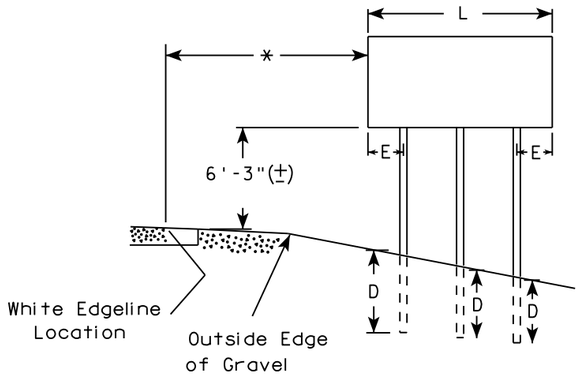
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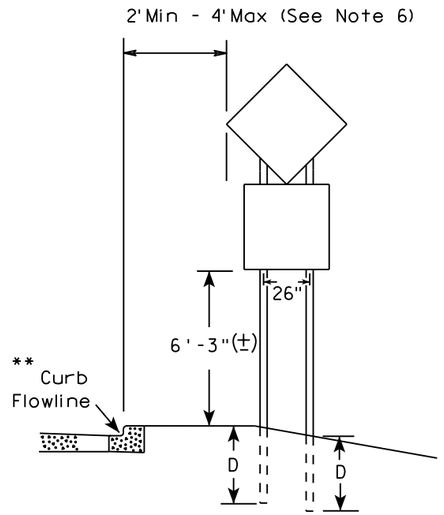
URBAN AREA



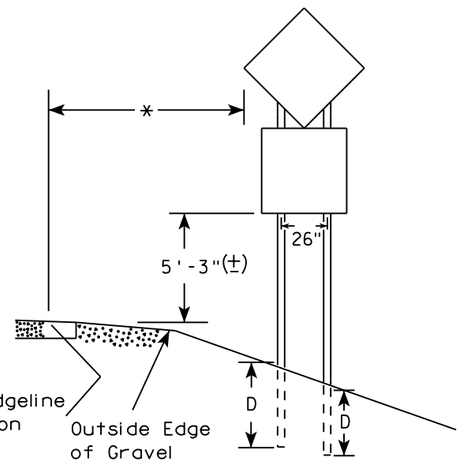
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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'

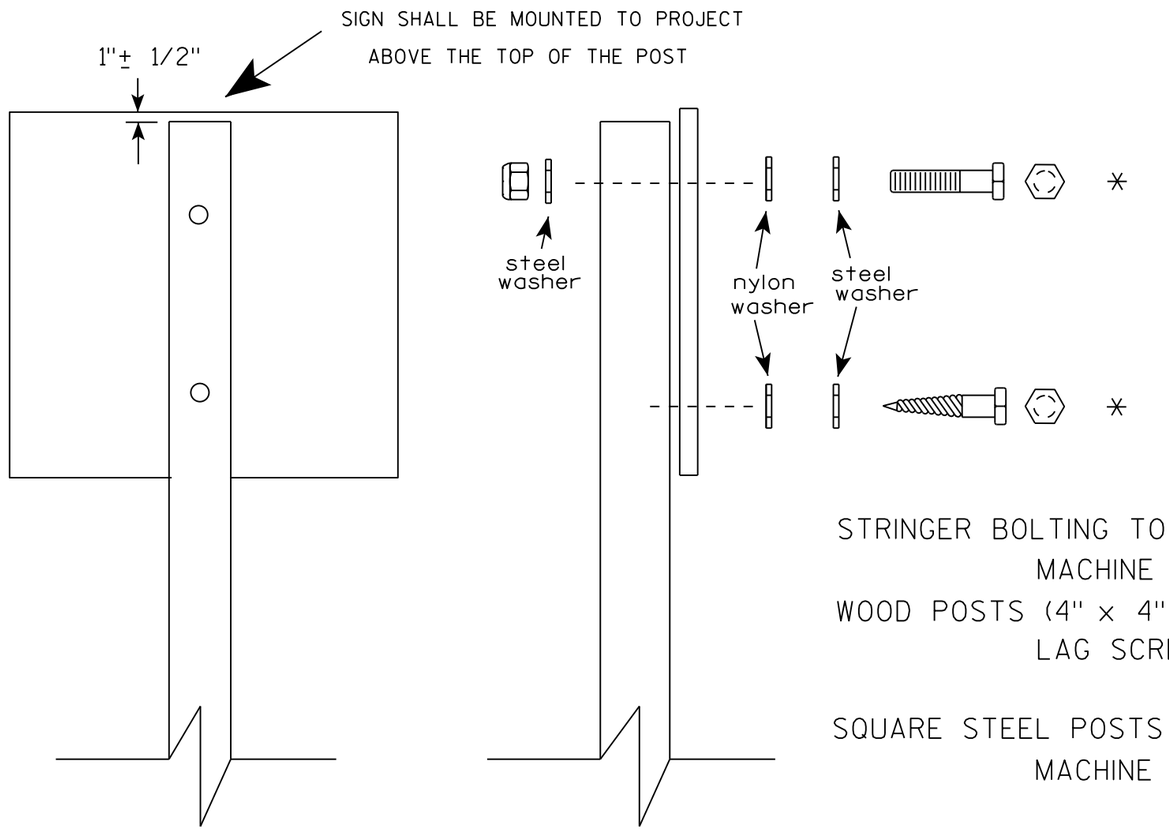
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 233	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

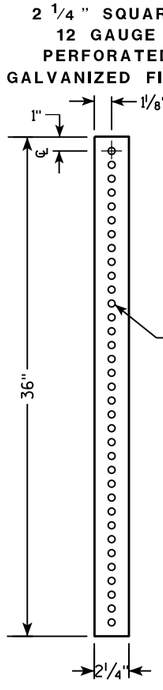
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

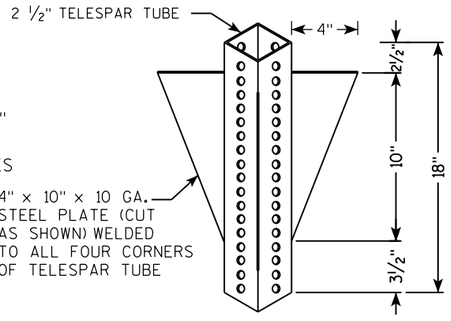
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TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

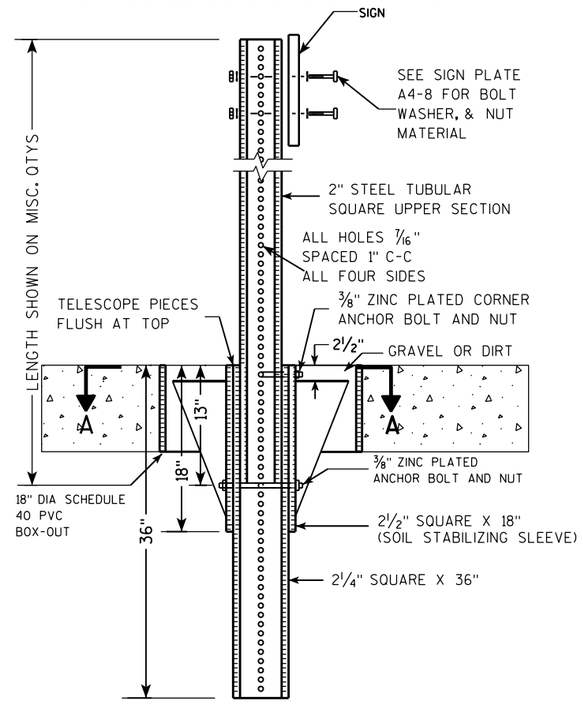
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



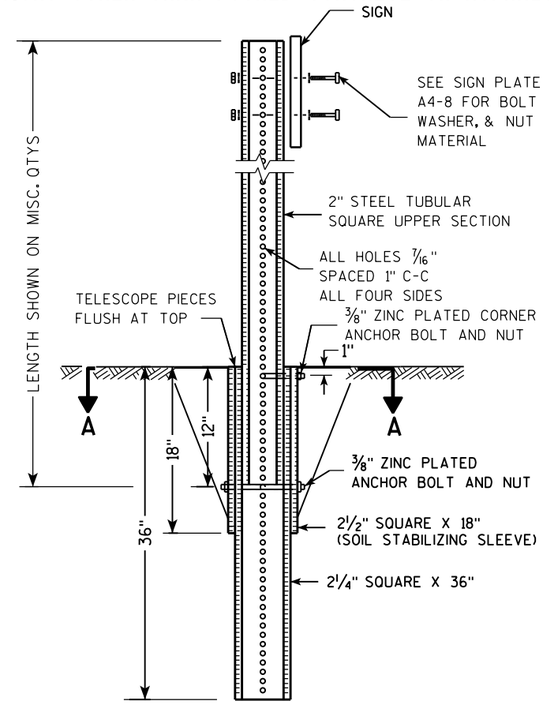
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

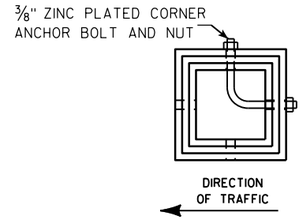


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

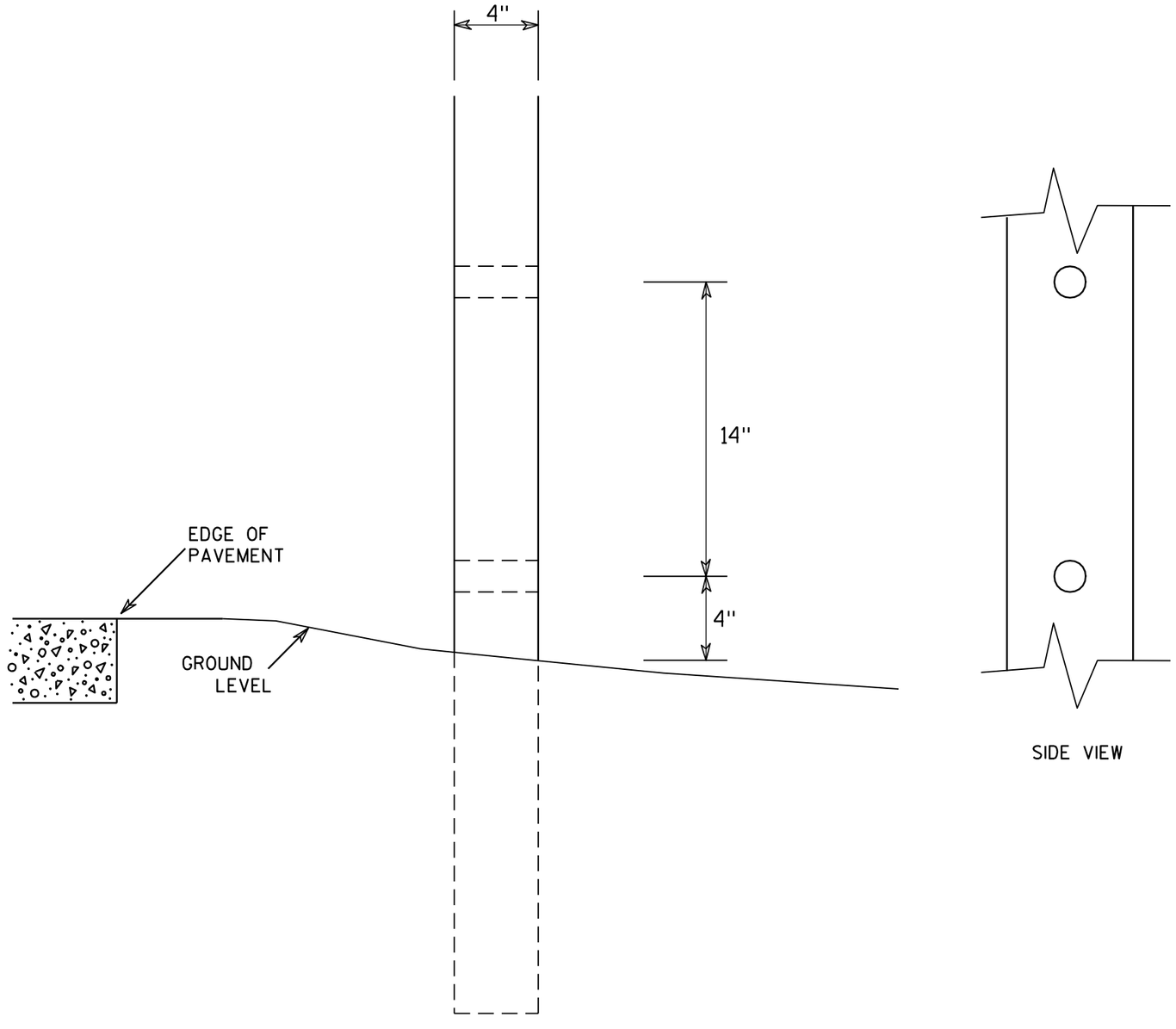
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 235 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.

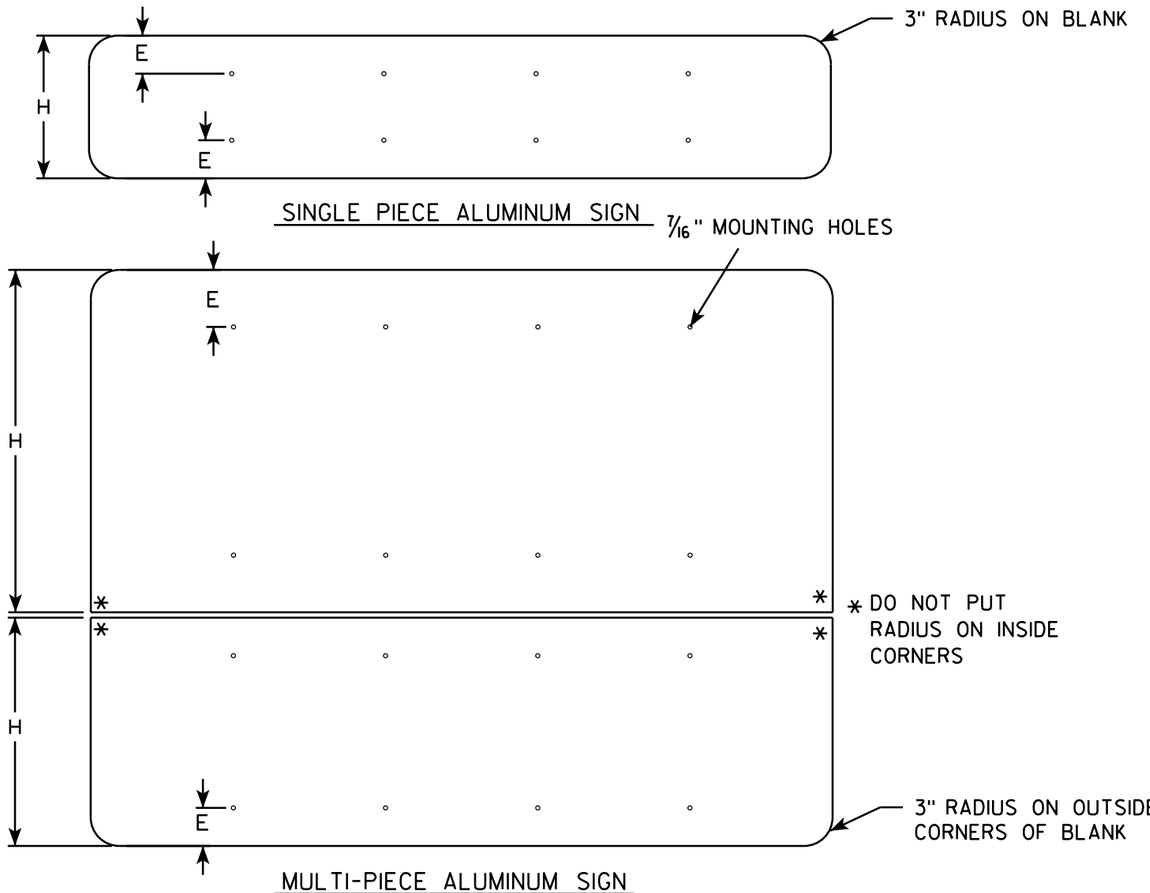
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

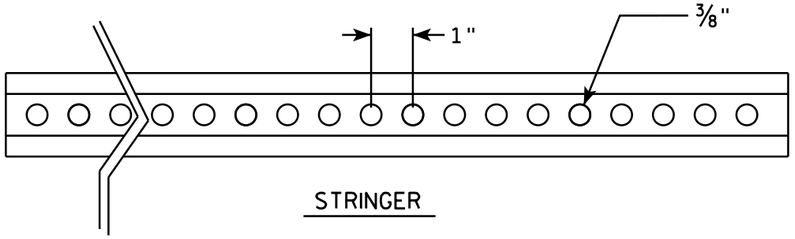
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 236	E



GENERAL NOTES

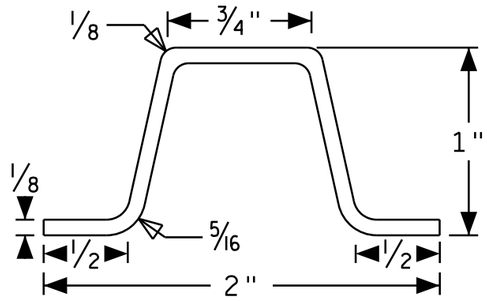
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

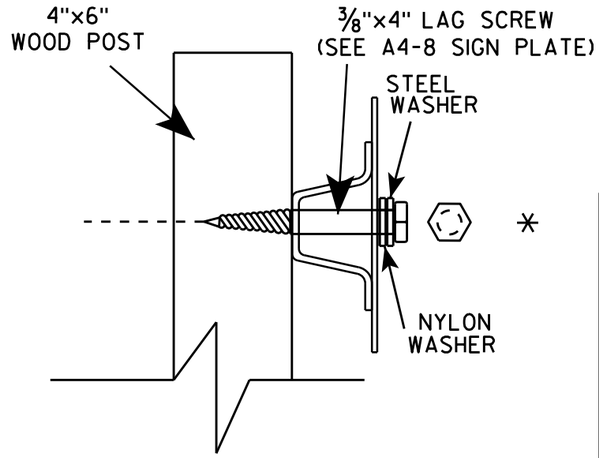


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

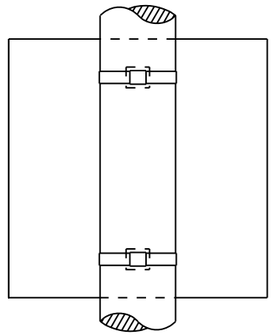
DATE 4/26/16 PLATE NO A4-18.1

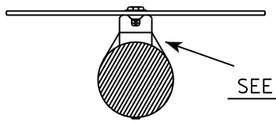
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

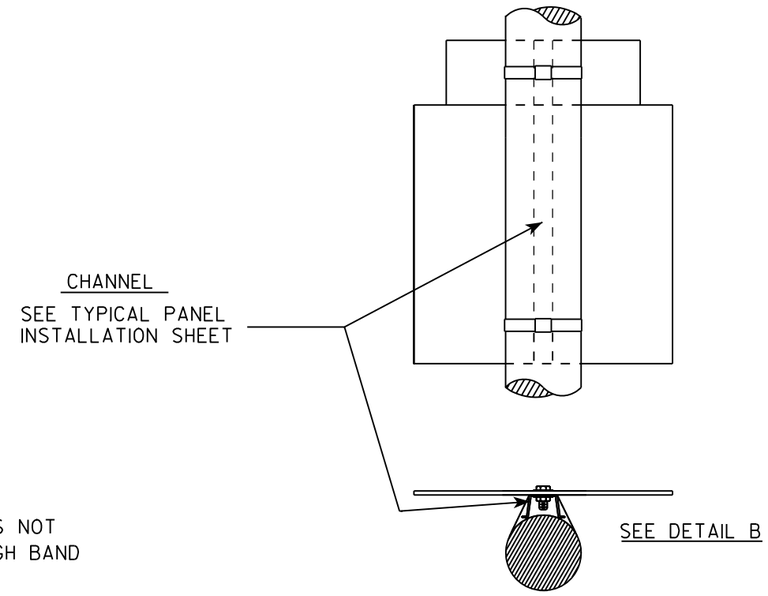
BANDING

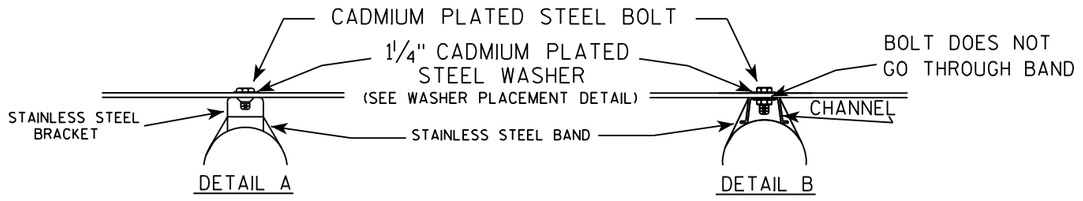
SINGLE SIGN



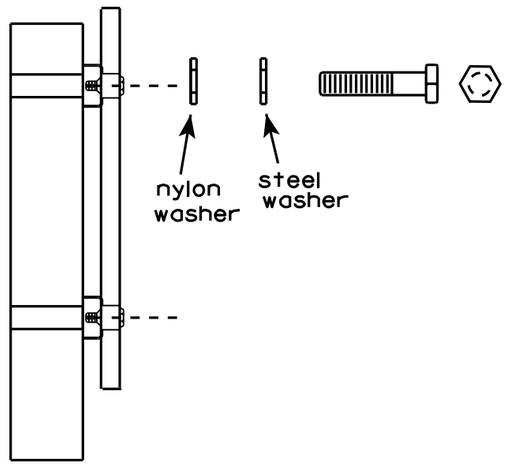


"J" ASSEMBLY





WASHER PLACEMENT



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

GENERAL NOTES

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

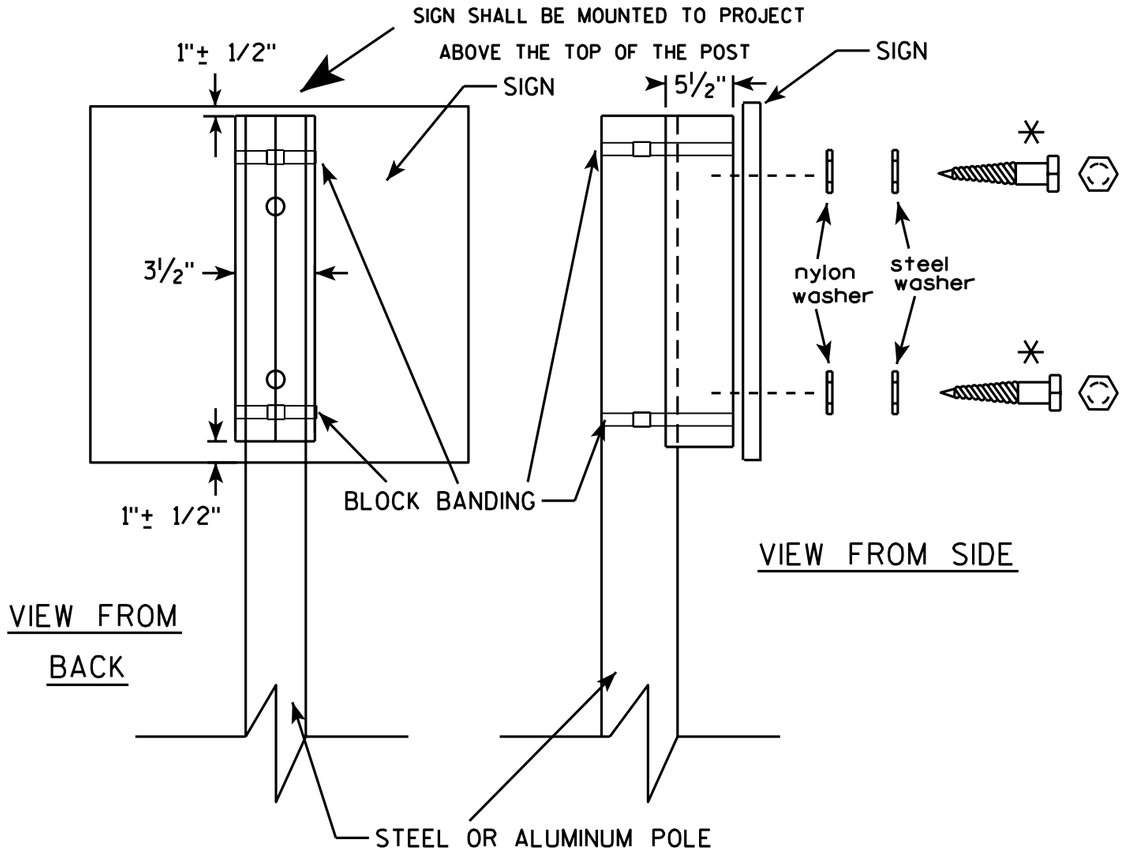
STANDARD SIGN
SIGN BANDING DETAILS

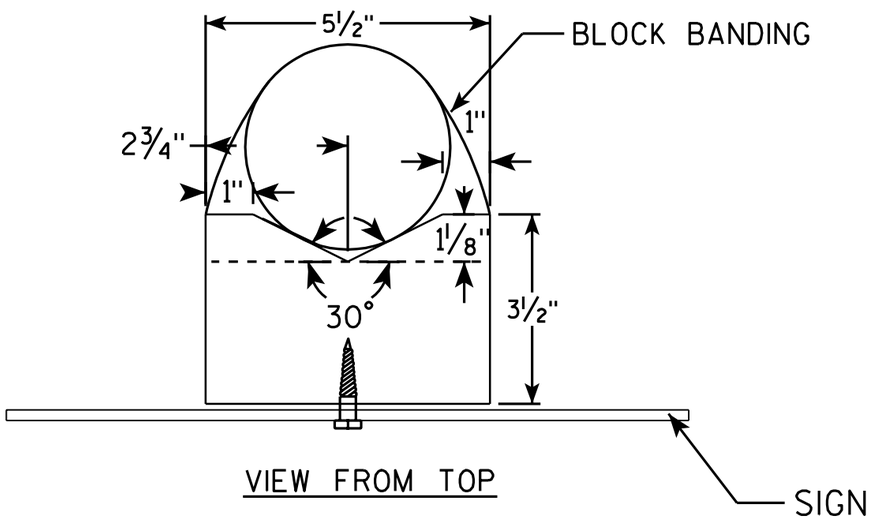
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 238	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

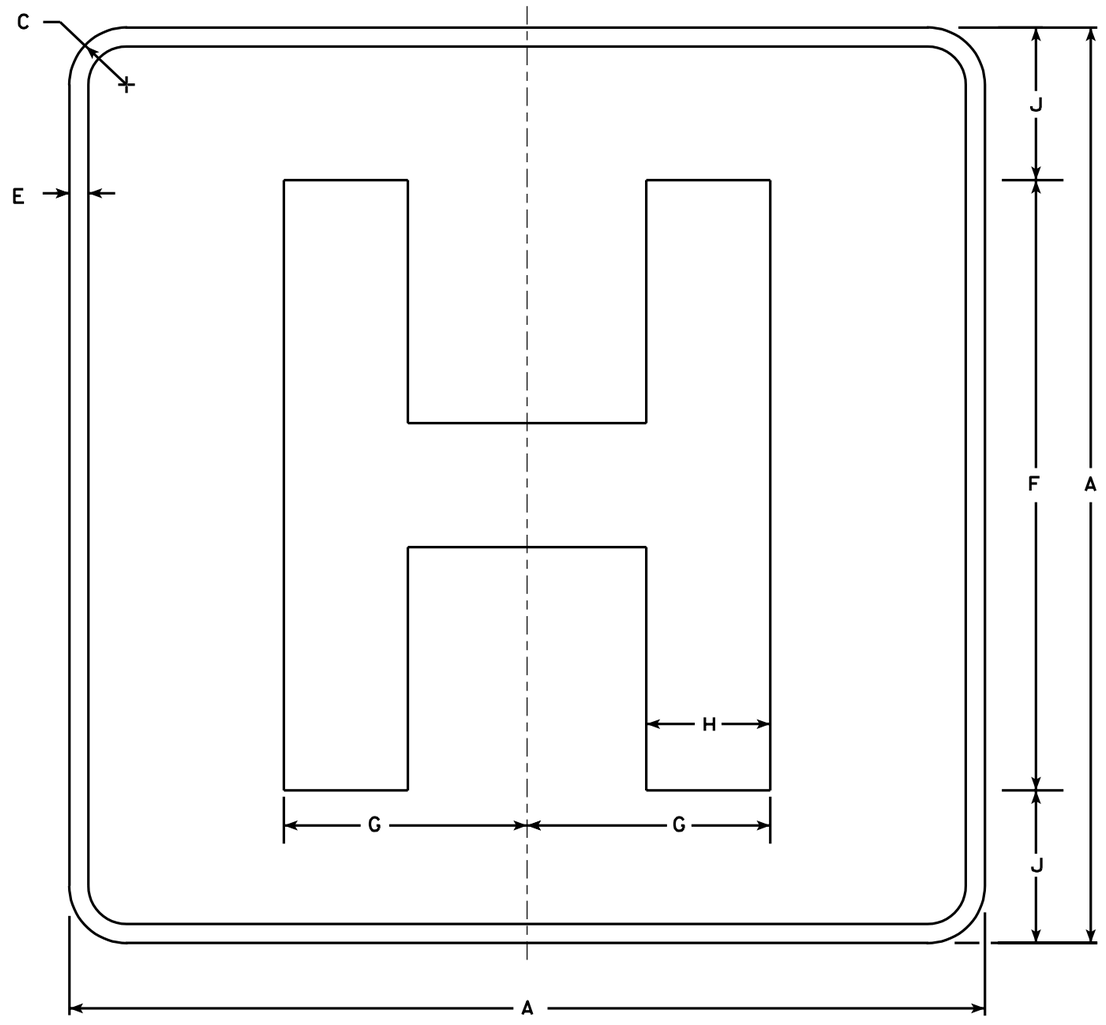
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 239 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

WISDOT/CADDS SHEET 42



D9-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
3. Message Series - E Modified
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	450 mmX 450 mm
2	600 mmX 600 mm
3	900 mmX 900 mm
4	X
5	X

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

STANDARD SIGN
D9-2

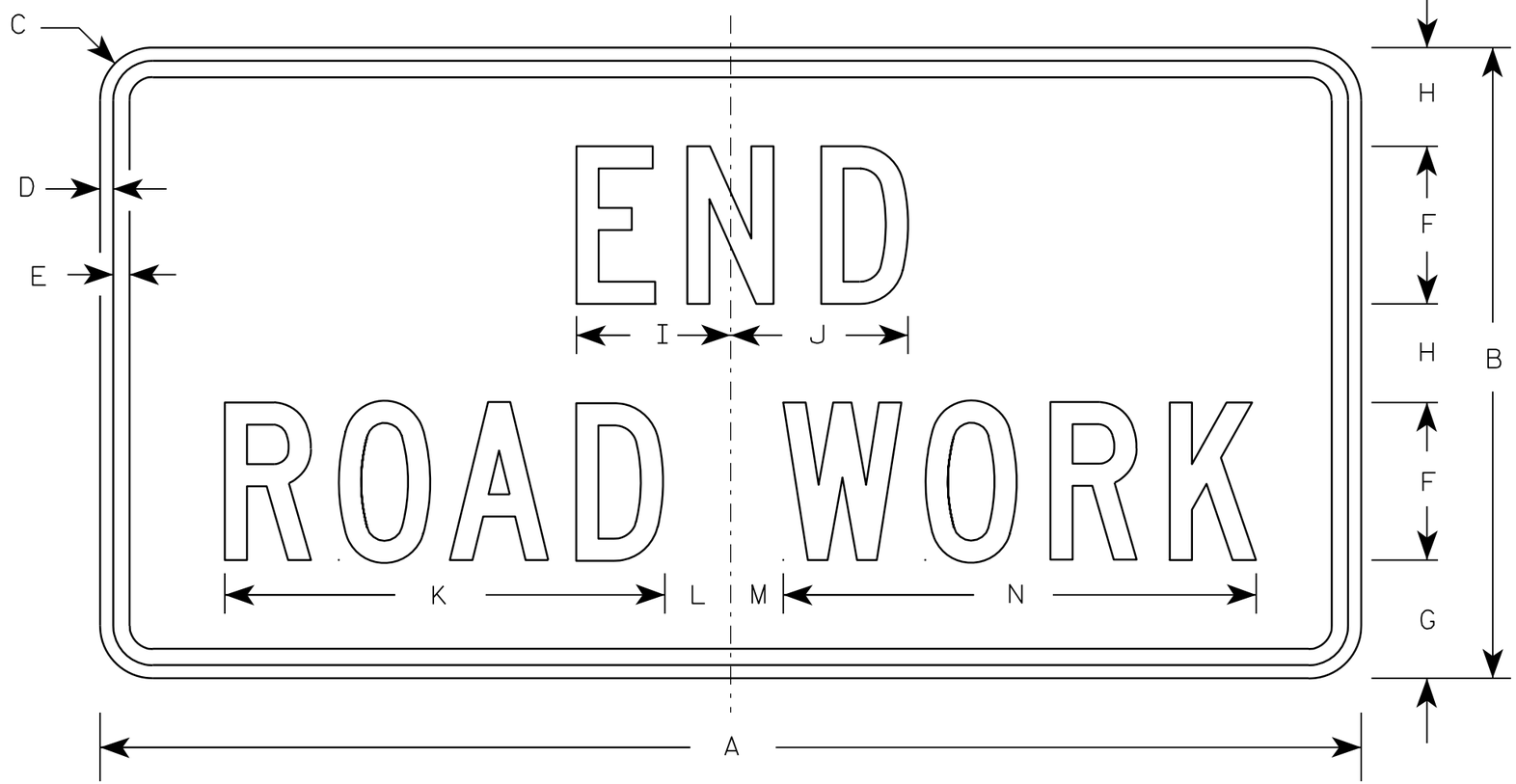
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spong
for State Traffic Engineer

DATE 1/15/02 PLATE NO. D9-2.4

PROJECT NO:

SHEET NO: 240 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

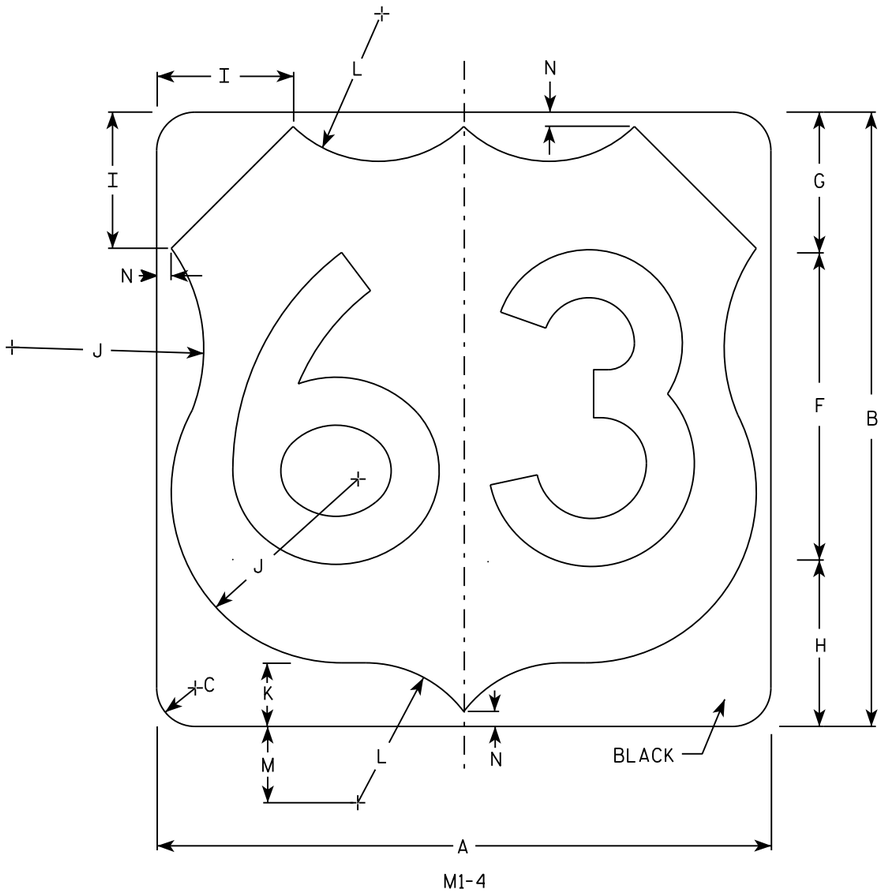
APPROVED Matthew R Rauch
for State Traffic Engineer

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

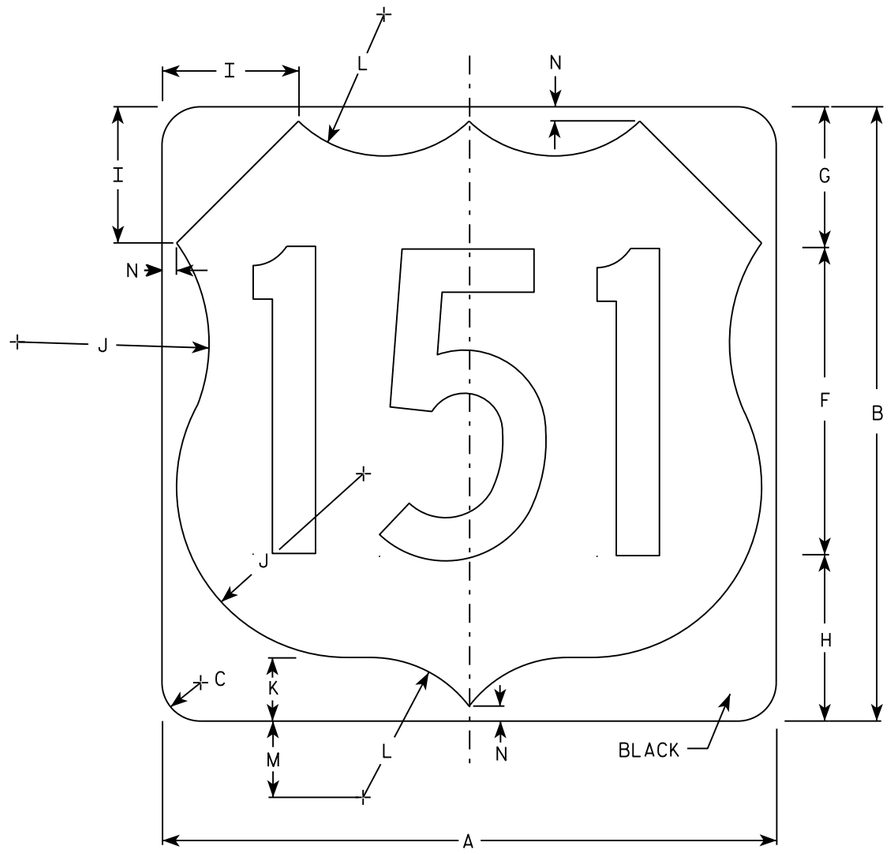
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 241	E

NOTES

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



M1-4



M1-4

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

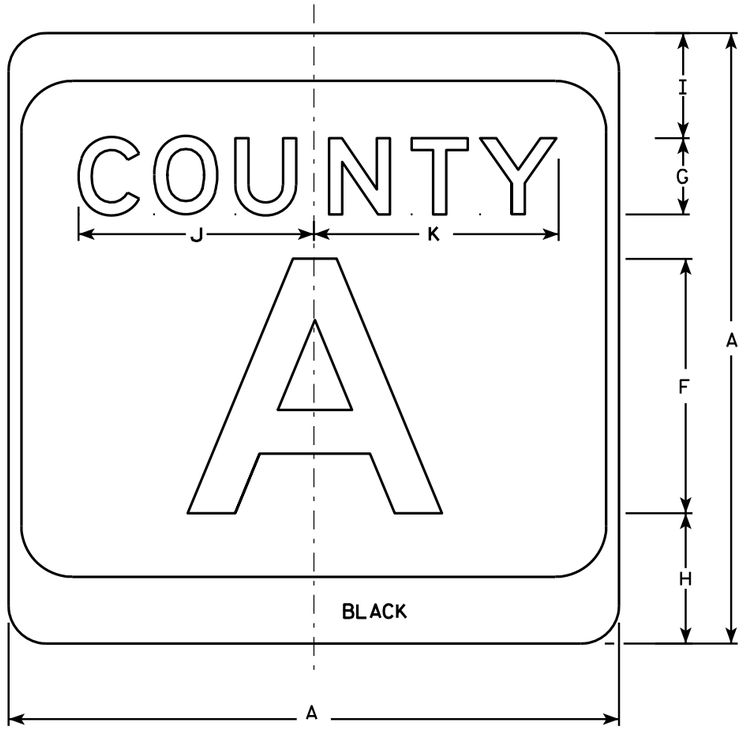
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

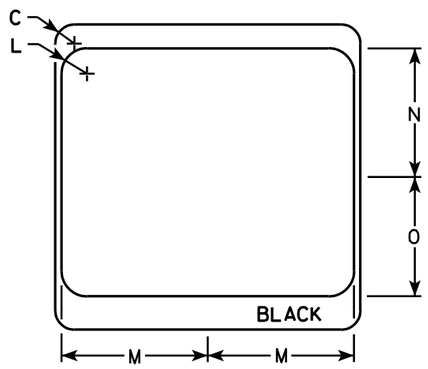
APPROVED Matthew R Rauch
for State Traffic Engineer

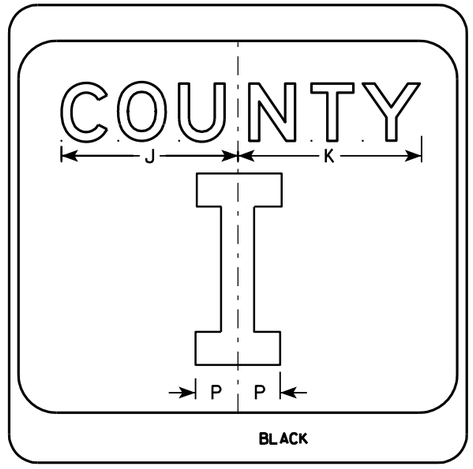
DATE 3/16/18 PLATE NO. M1-4.10

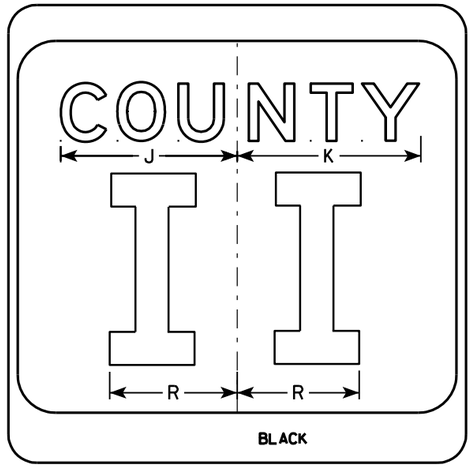
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 242 | E



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

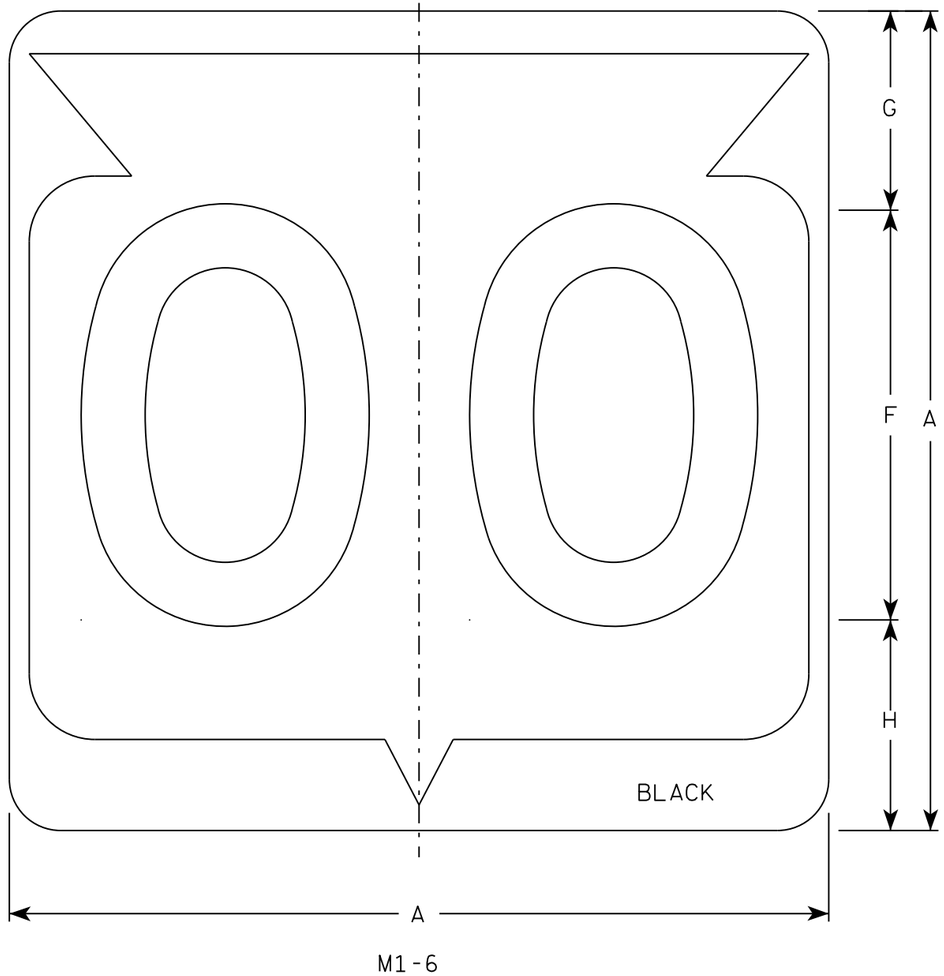
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 243 | E

7

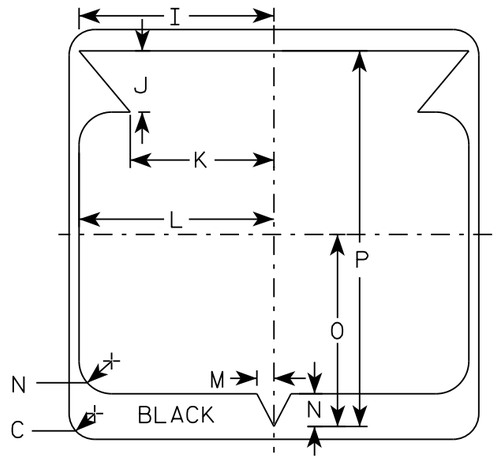
FILE NAME : C:\Users\PROJECTS\tr_stdplate\M15A.DGN PLOT DATE : 29-SEP-2011 11:25 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000
WISDOT/CADDS SHEET 42



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

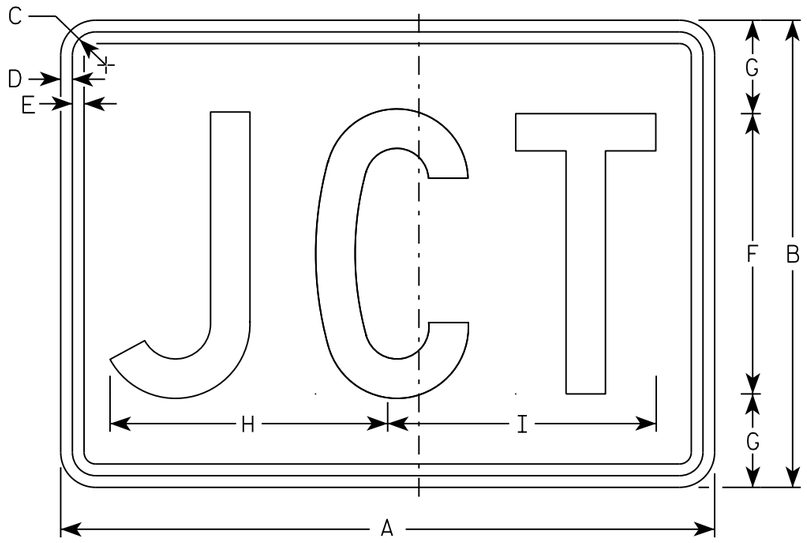
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

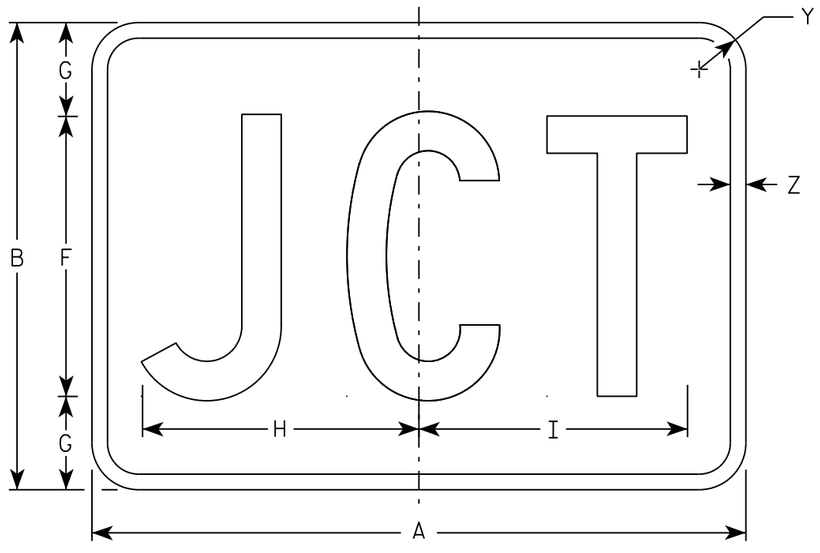
APPROVED Matthew R Rauch for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 244 E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN
M2-1

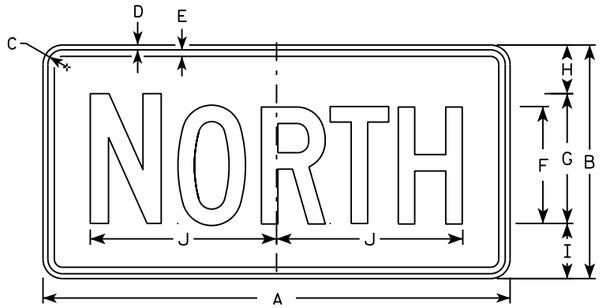
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

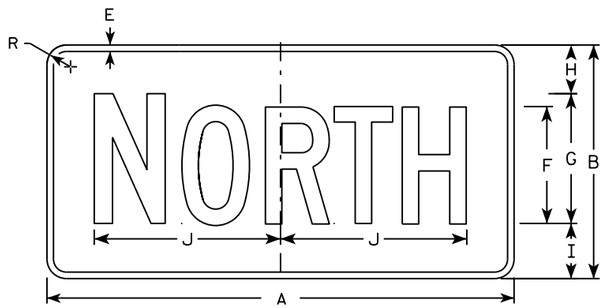
DATE 10/15/15 PLATE 245 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M21.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.864603:1.000000



M3-1
MM3-1
MP3-1



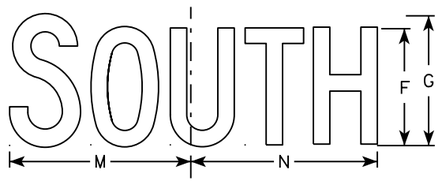
MB3-1
MK3-1
MN3-1



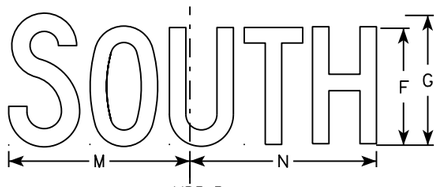
M3-2
MM3-2
MP3-2



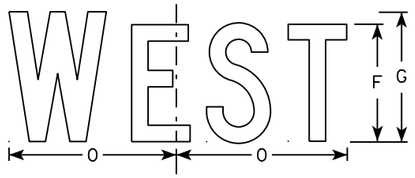
MB3-2
MK3-2
MN3-2



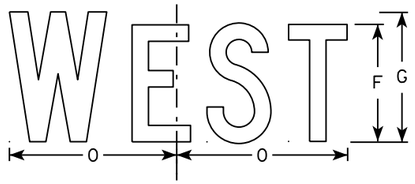
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

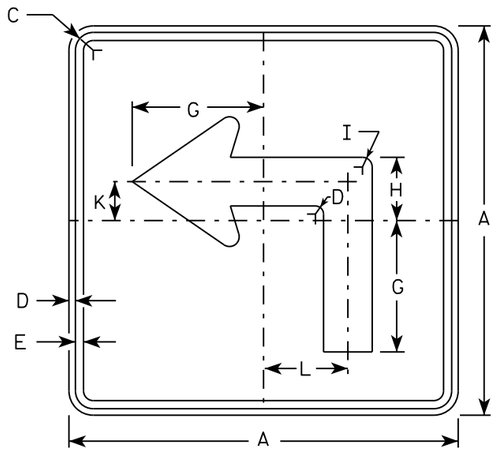
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

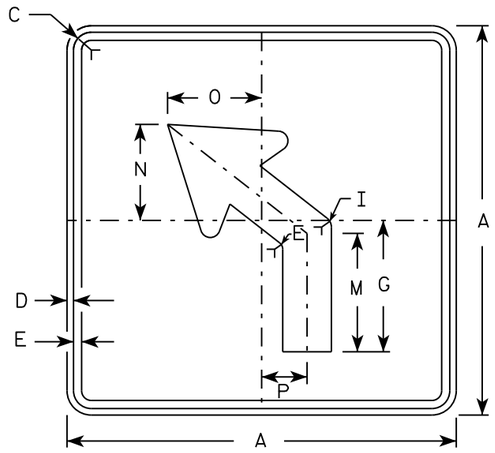
DATE 10/15/15 PLATE NO M3-1.14

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

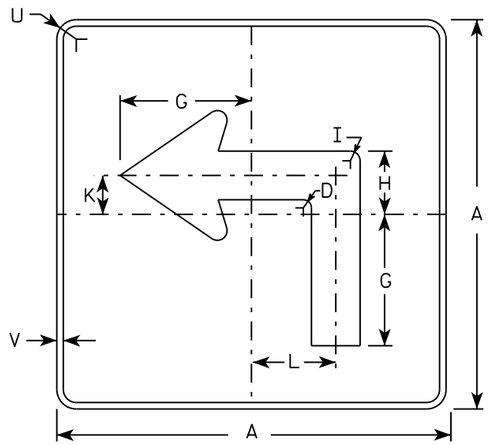
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



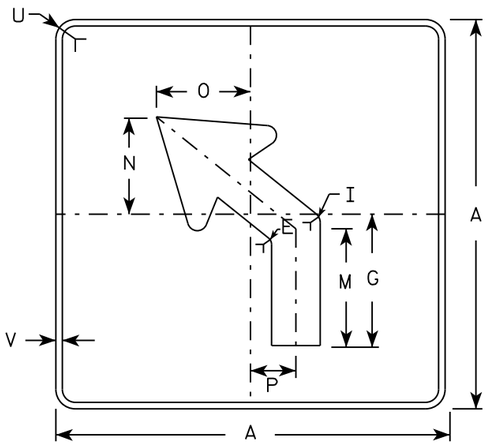
M5-1L
MM5-1L
MO5-1L
MP5-1L



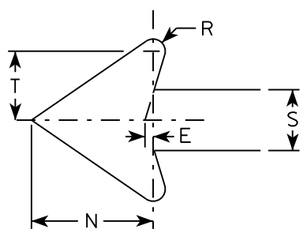
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

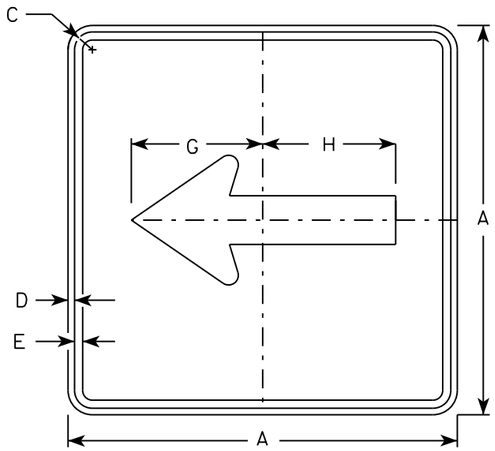
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

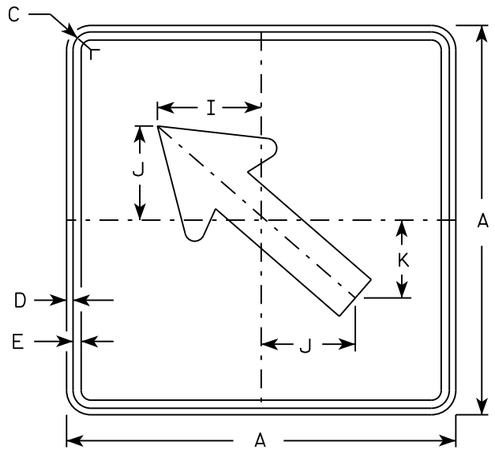
DATE 10/15/15 PLATE NO. M5-1.13

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



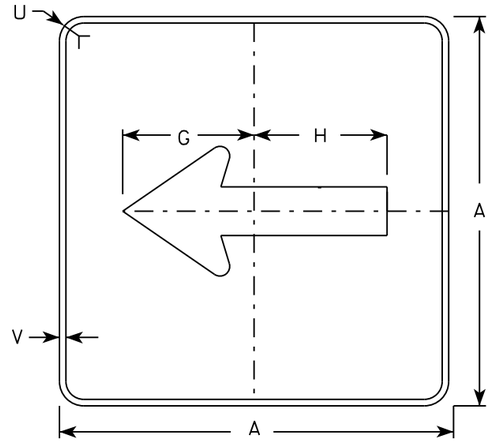
M6-1
MM6-1
MO6-1
MP6-1



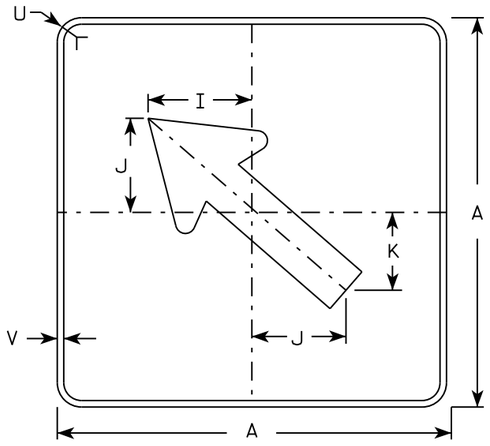
M6-2
MM6-2
MO6-2
MP6-2

NOTES

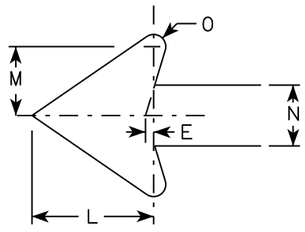
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

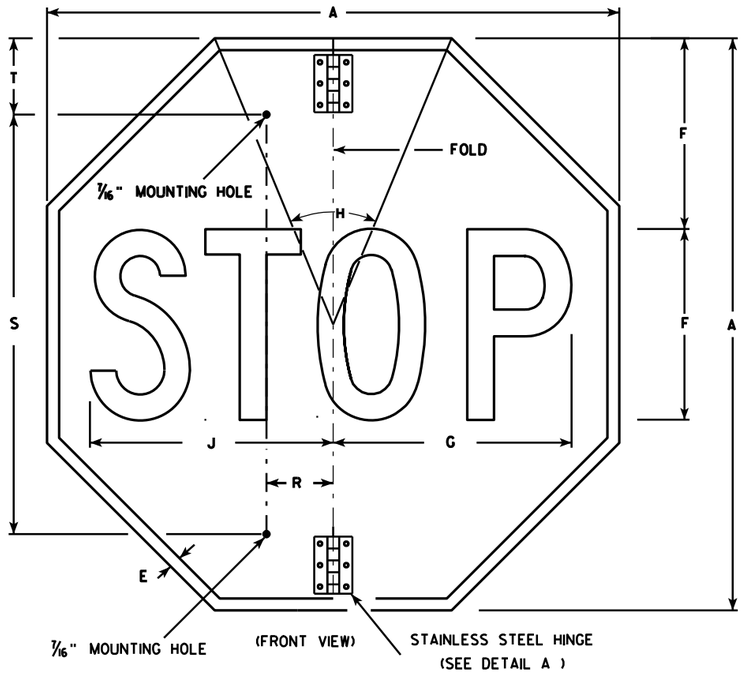
WISCONSIN DEPT OF TRANSPORTATION

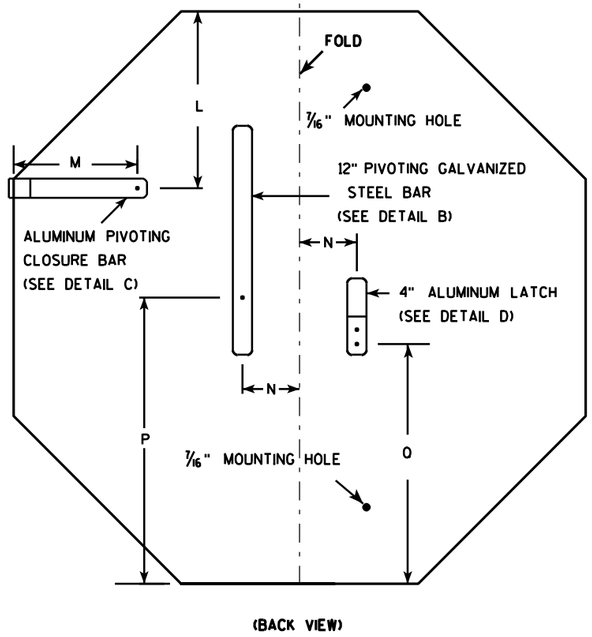
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 248 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

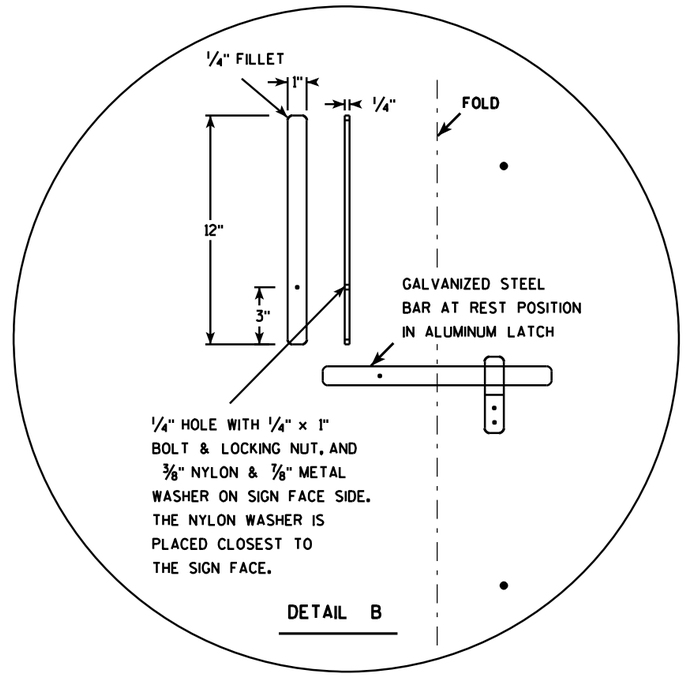
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



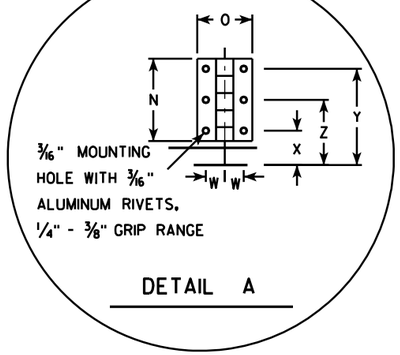


NOTES

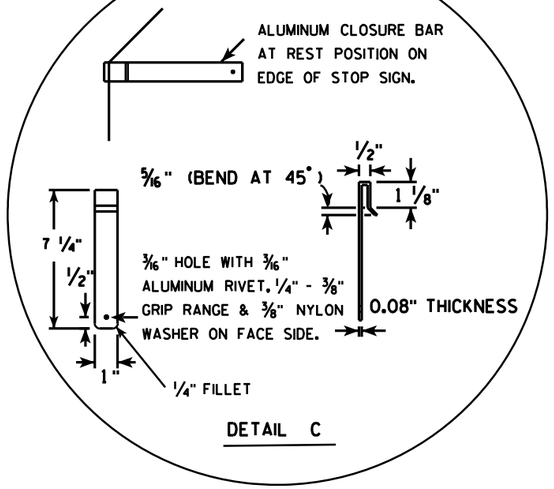
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



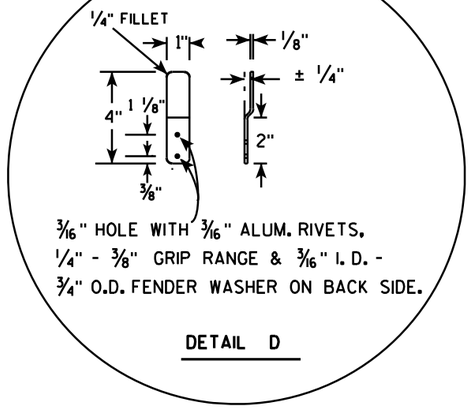
DETAIL B



DETAIL A



DETAIL C



DETAIL D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

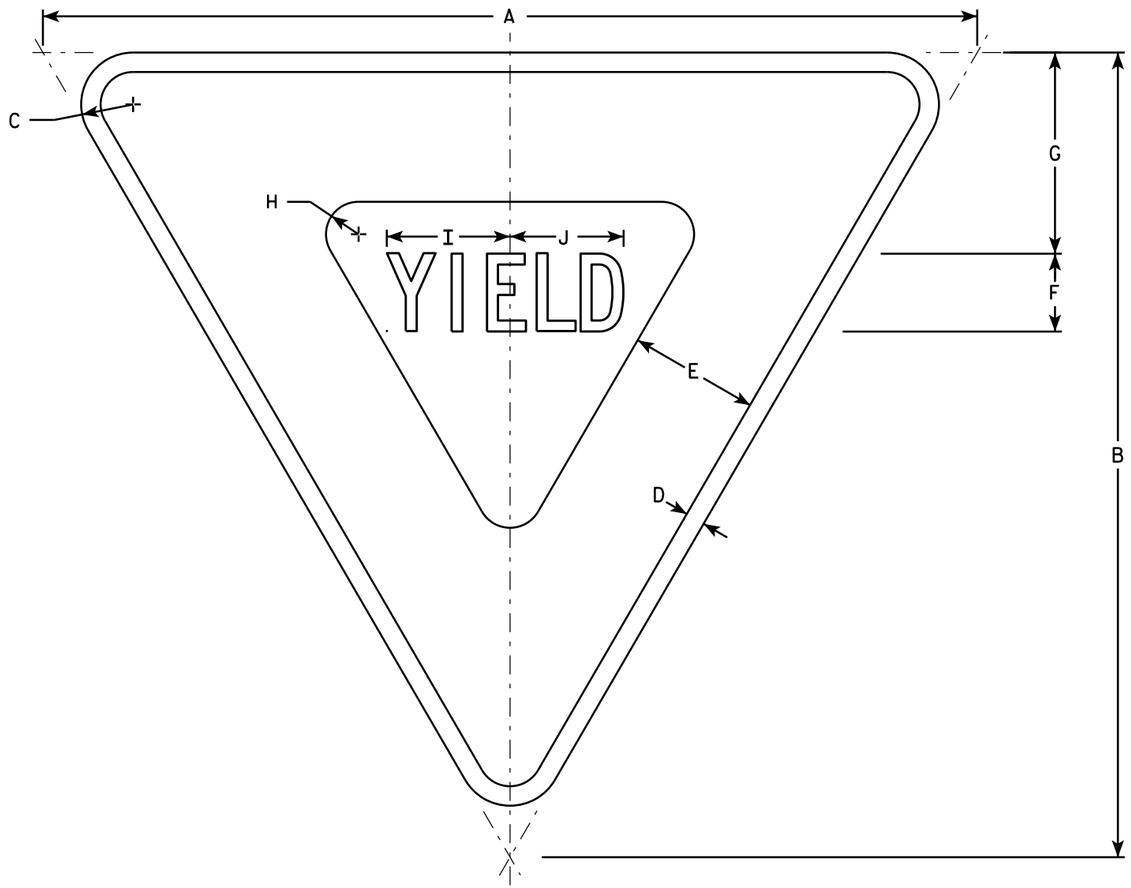
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 249 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R11F.DGN PLOT DATE : 02-DEC-2010 15:26 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 7.945391:1.000000

WISDOT/CADDS SHEET 42

7

7



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

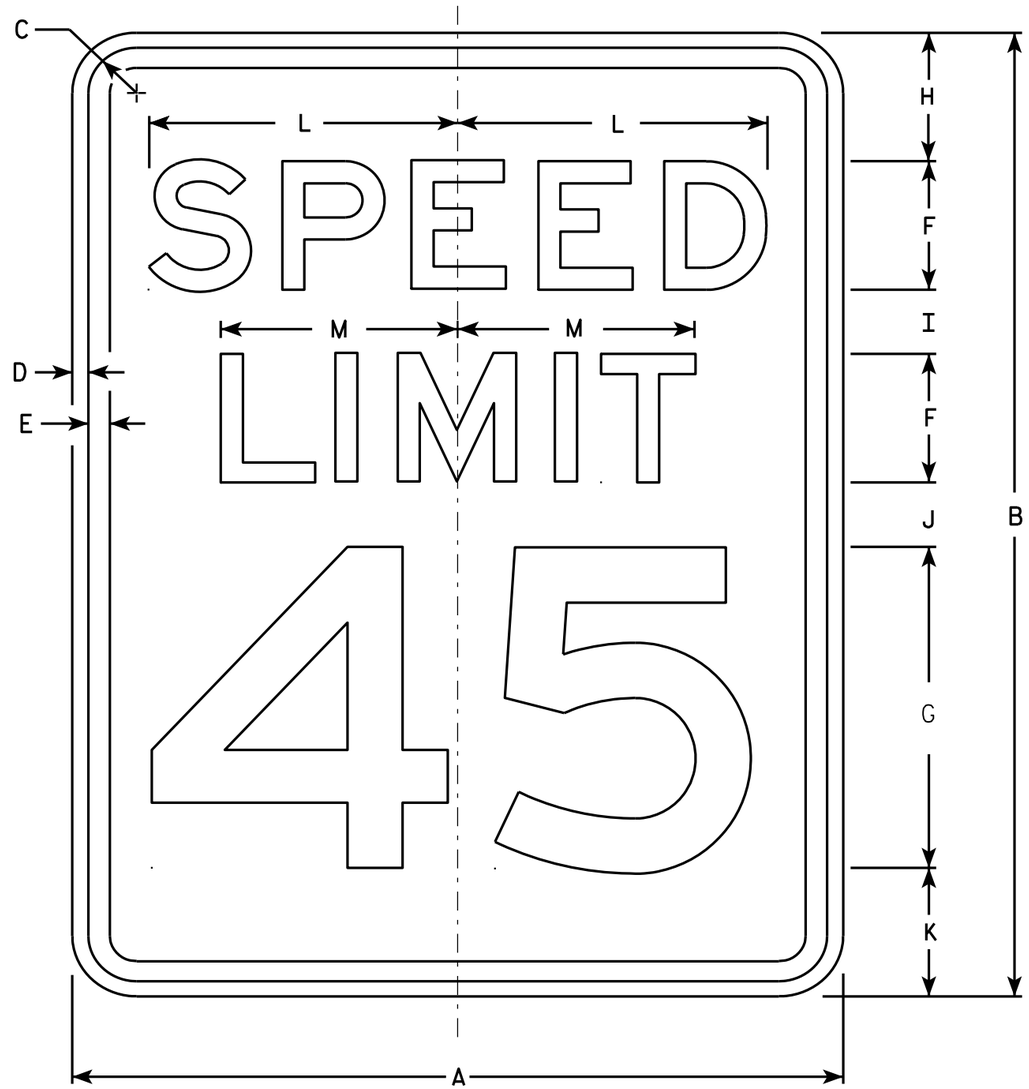
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



R2-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

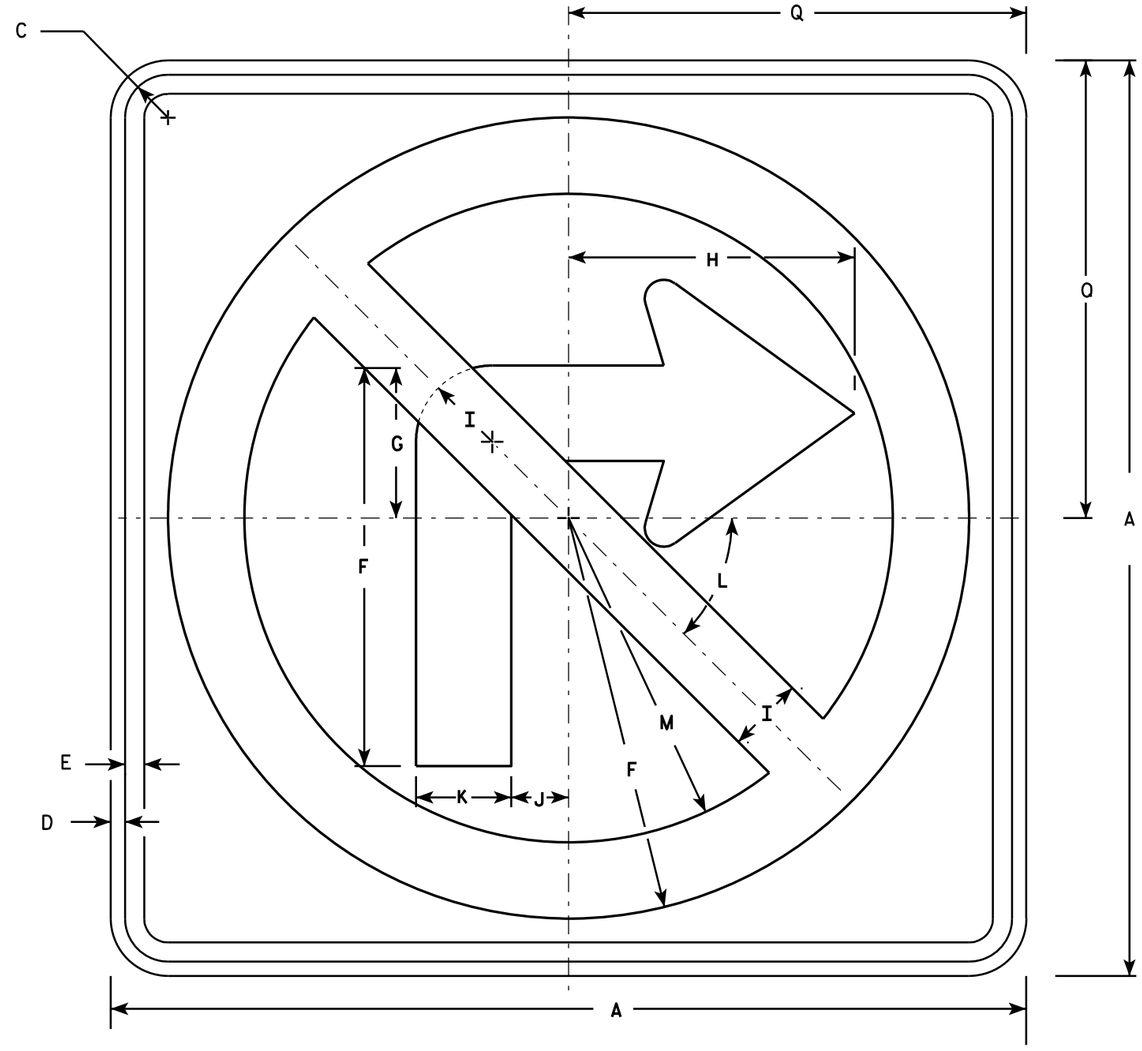
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

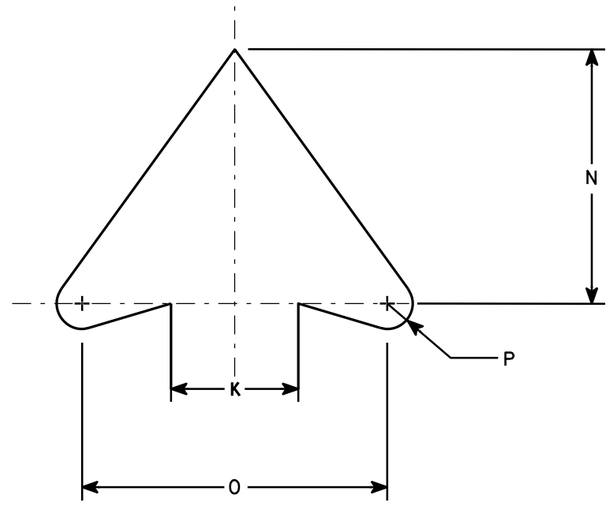
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 251 | E



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

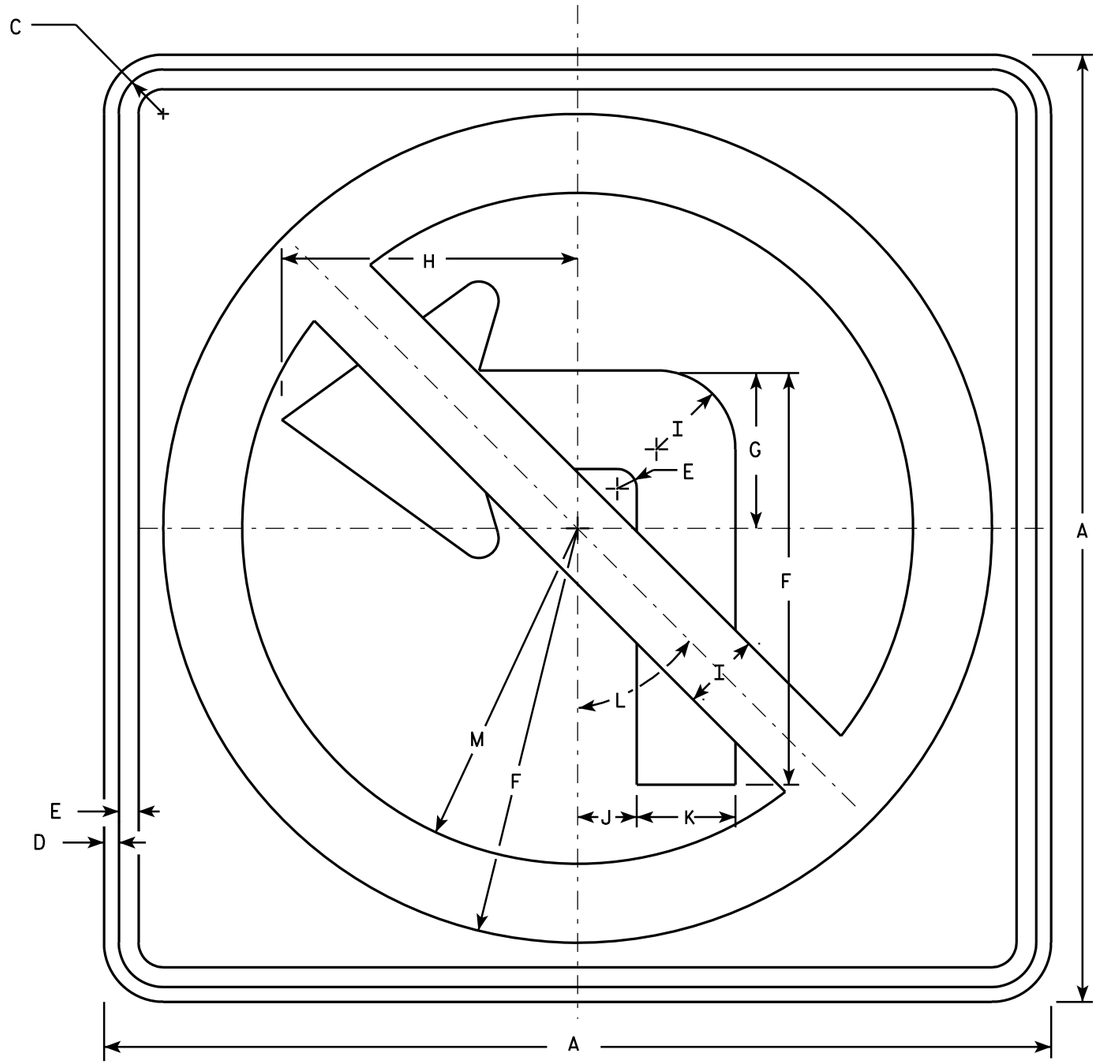
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

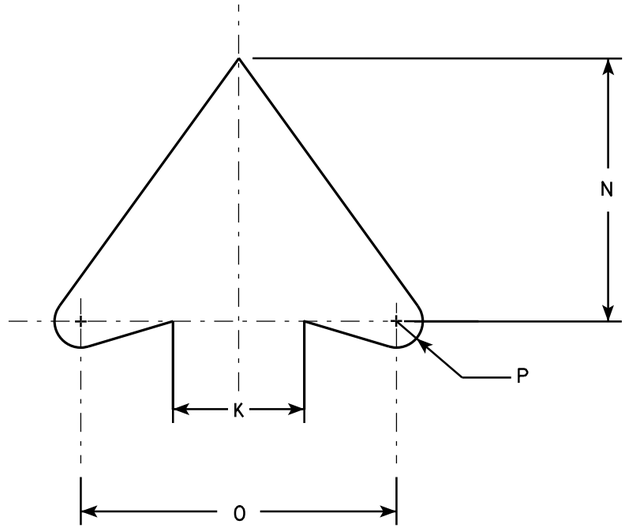
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 252	E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

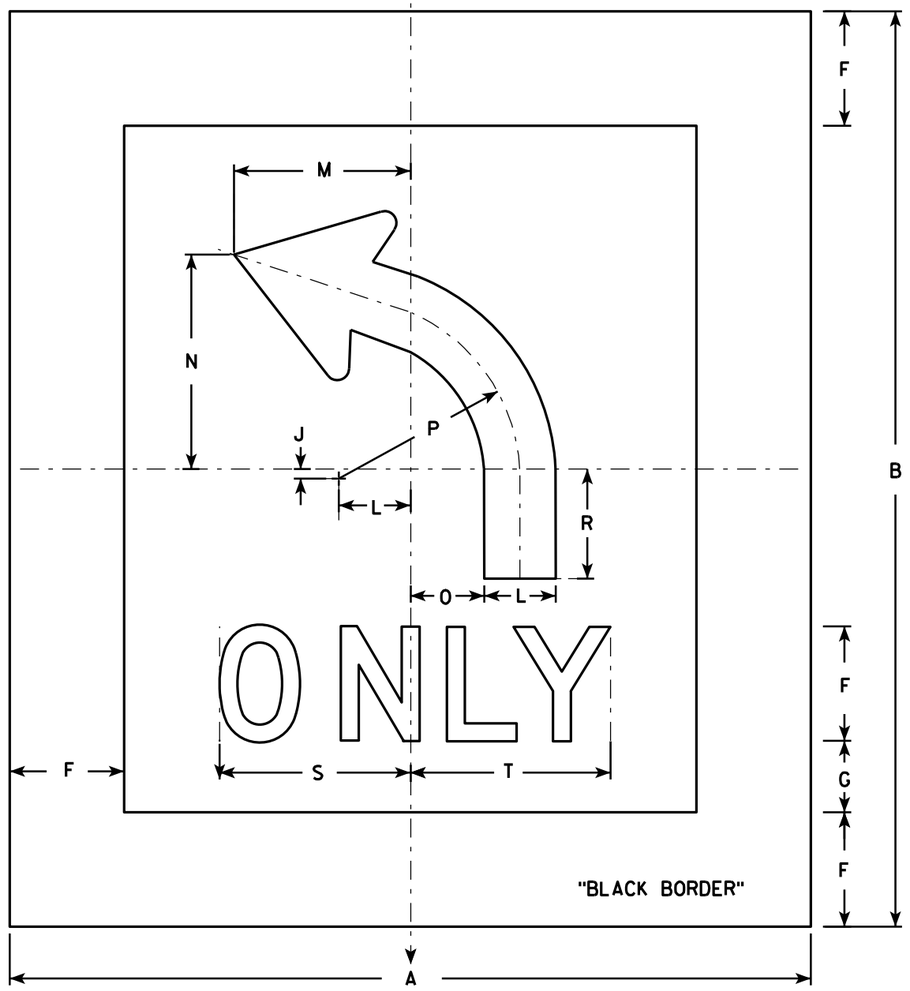
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

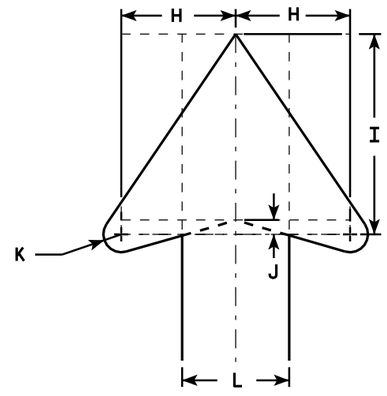
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 253	E



R3-5L

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. When base material is metal, the corners shall be rounded.
5. R3-5R is the same as R3-5L except curved portion of arrow points right.
6. The 6" border is non-reflective black.



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	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
2M	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
3																											
4																											
5																											

STANDARD SIGN
R3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/24/11 PLATE NO. R3-5.6

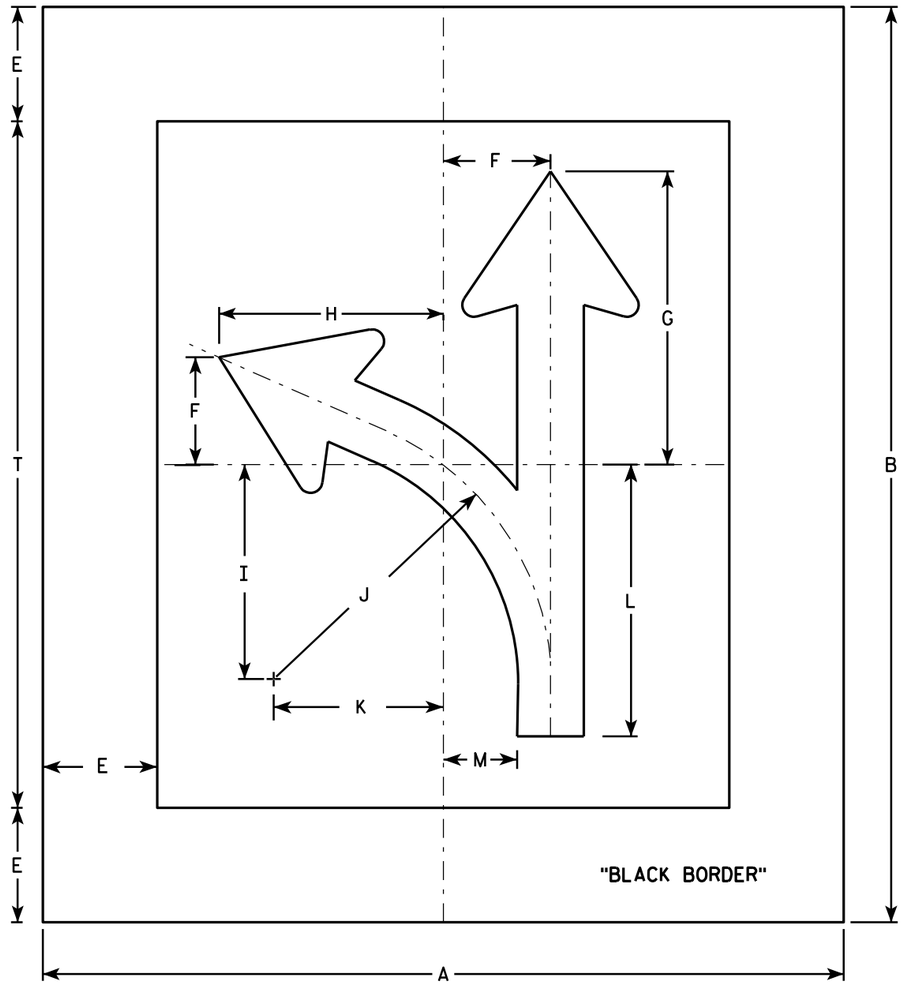
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 254 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R35.DGN PLOT DATE : 24-FEB-2011 14:53 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.945391:1.000000

WISDOT/CADDS SHEET 42

7

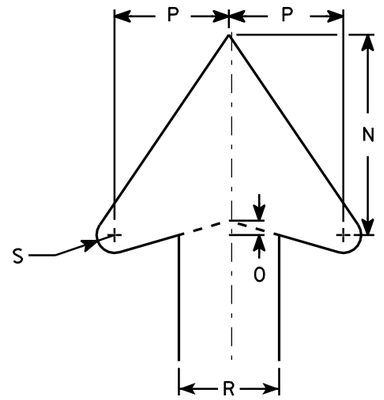
7



R3-6L

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. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
4. R3-6R is the same as R3-6L except curved portion of arrow points right.
5. The 6" border is non-reflective black.



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	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
2M	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
3																											
4																											
5																											

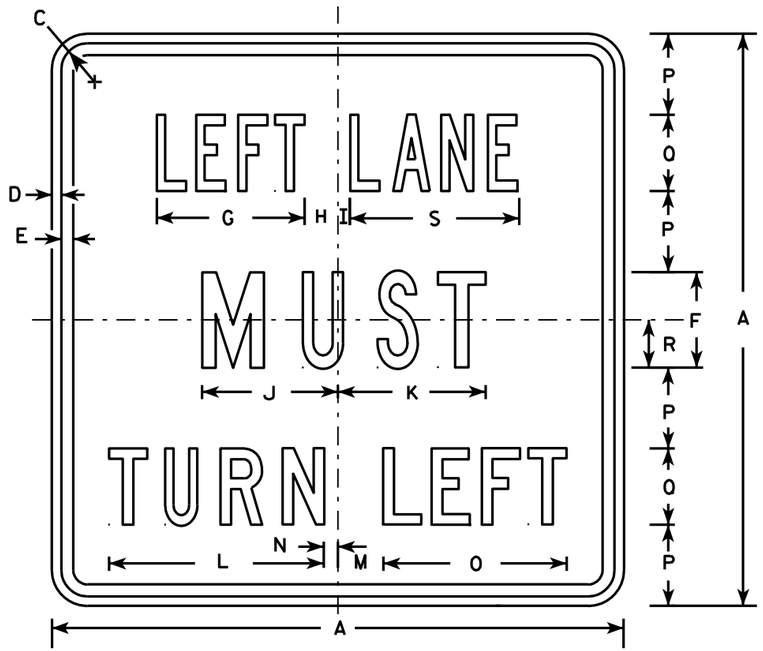
STANDARD SIGN
R3-6

WISCONSIN DEPT OF TRANSPORTATION

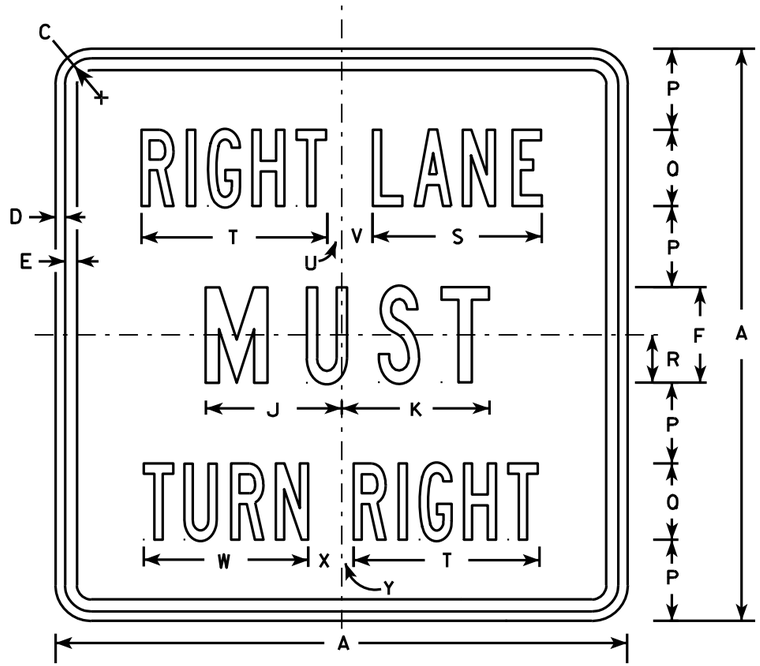
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-6.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 255 | E



R3-7L



R3-7R

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 - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

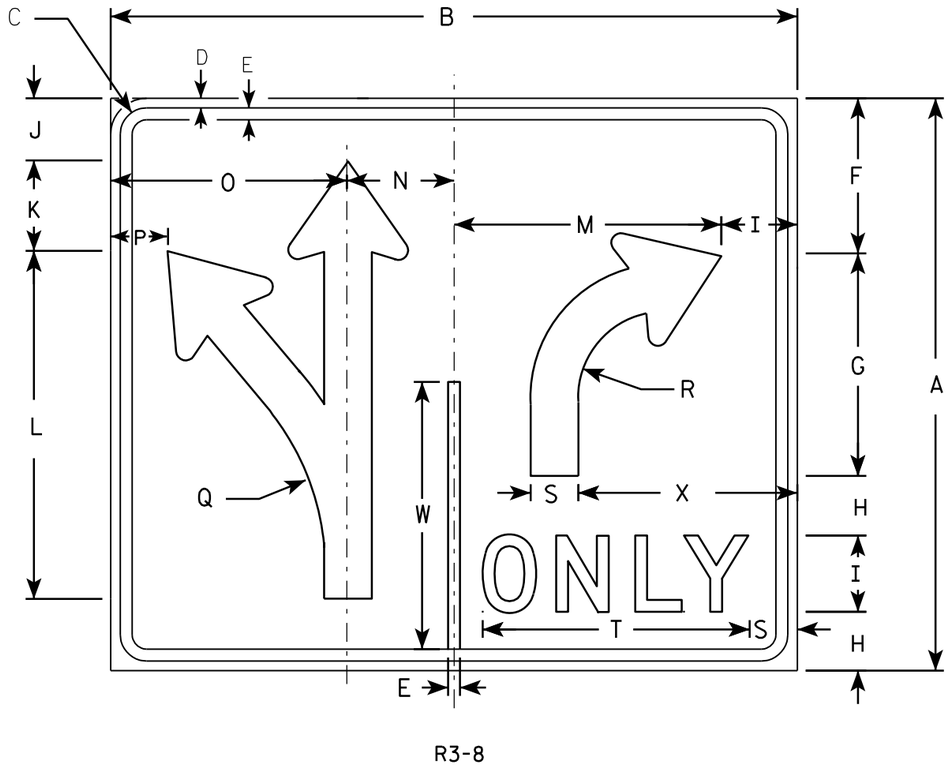
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

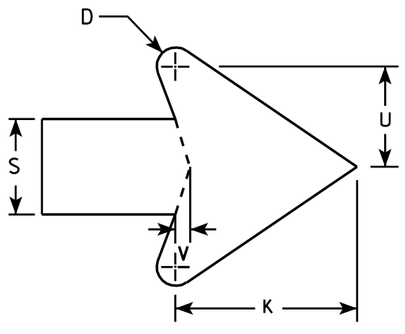
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 256 | E



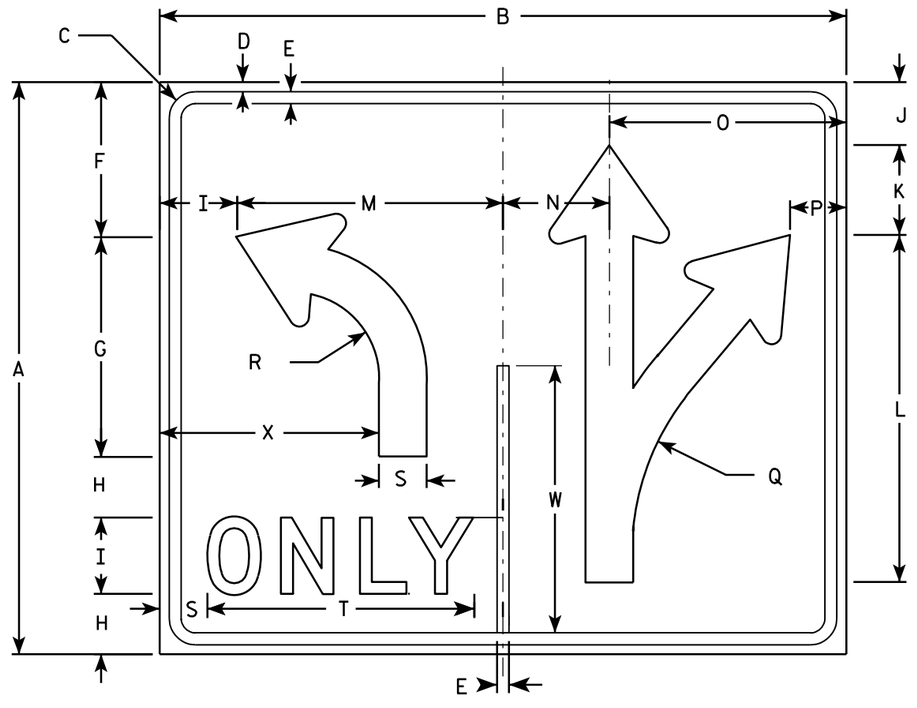
R3-8



ARROW DETAIL

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.



R3-8A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0

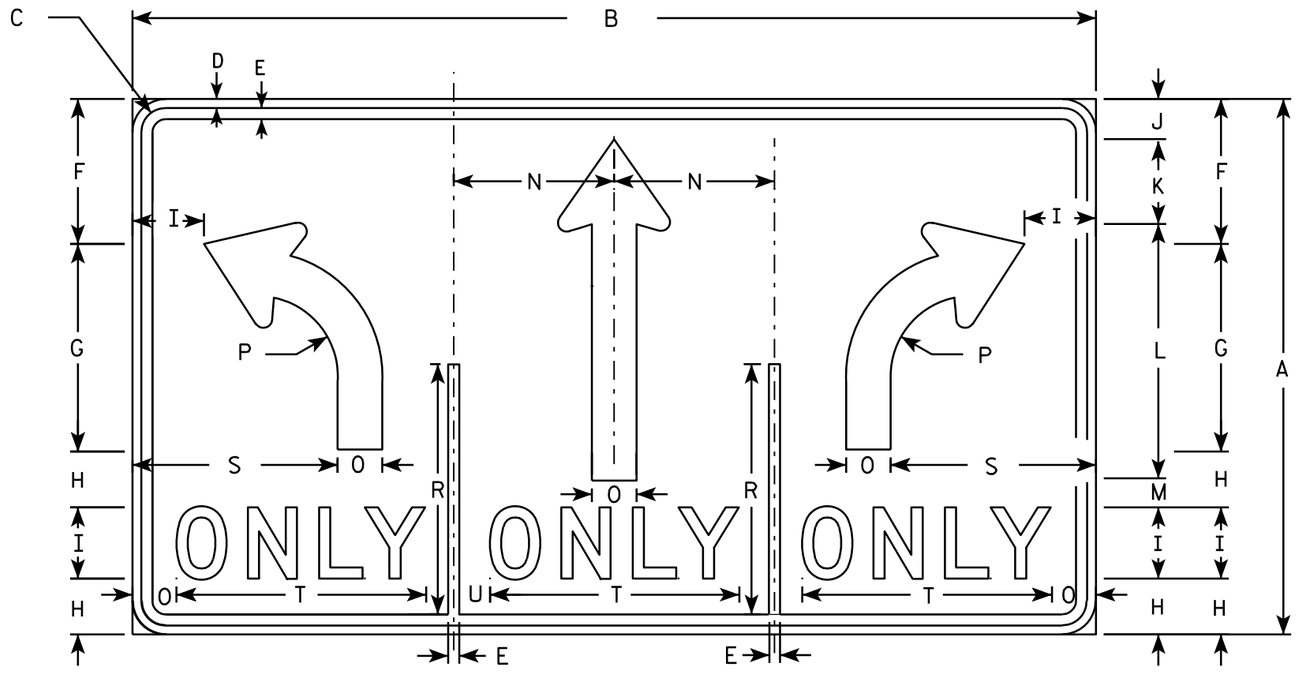
STANDARD SIGN
R3-8 & R3-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8.5

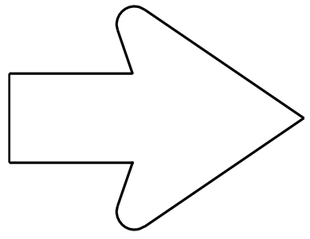
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 257	E



R3-8W

NOTES

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



SEE R3-8 FOR ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	9	2 1/2	4 1/2		14	11 1/2	14	2						11.25
2M	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	9	2 1/2	4 1/2		14	11 1/2	14	2						11.25
3																											
4	48	84	2 1/4	3/4	1	13	18 1/2	5 1/4	6	3 3/4	7	29 1/8	2 3/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 1/2	3 1/4						28.0
5	48	84	2 1/4	3/4	1	13	18 1/2	5 1/4	6	3 3/4	7	29 1/8	2 7/8	14	3 3/4	7 1/4		22 3/8	17 1/4	20 1/2	3 1/4						28.0

STANDARD SIGN
R3-8W

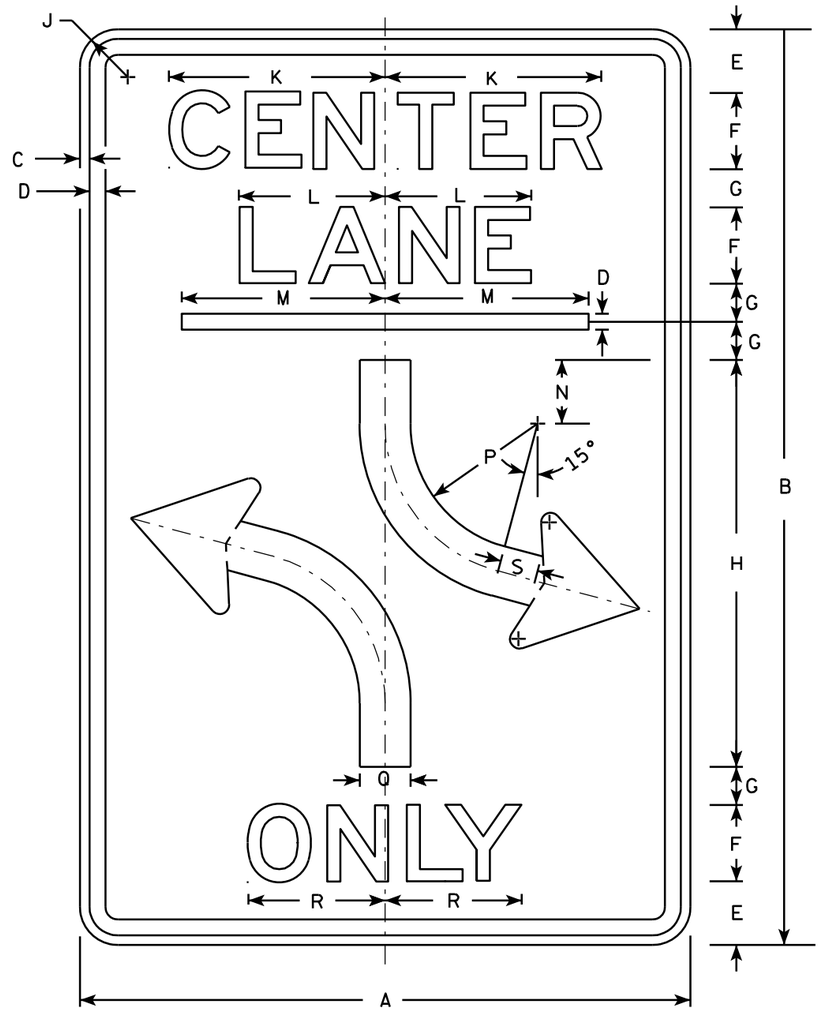
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-8W.4

PROJECT NO:

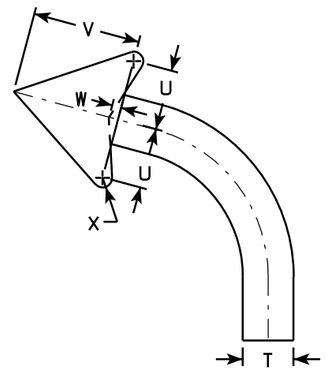
SHEET NO: 258 E



R3-9B

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	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 1/2	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
2M	24	36	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 1/2	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
3	36	48	5/8	7/8	3 1/2	5	1 1/2	20		2 1/4	14 1/8	9 1/2	12	3		4	3	9 7/8	2		3 1/2	6 1/8	1/2				12.0
4																											
5																											

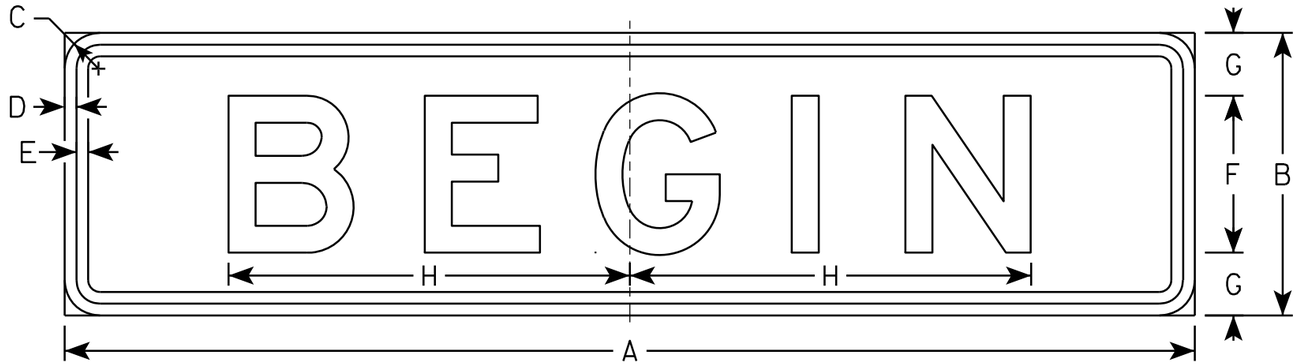
STANDARD SIGN
R3-9B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-9B.5

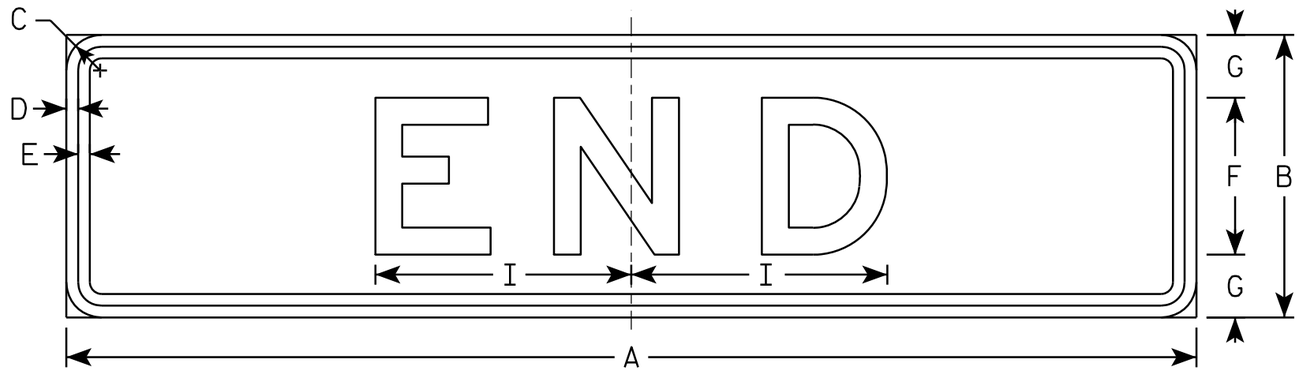
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 259 | E



R3-9C

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.



R3-9D

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	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
2M	24	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
3	36	9	1 1/8	3/8	3/8	5	2	12 3/4	8 1/8																		1.86
4																											
5																											

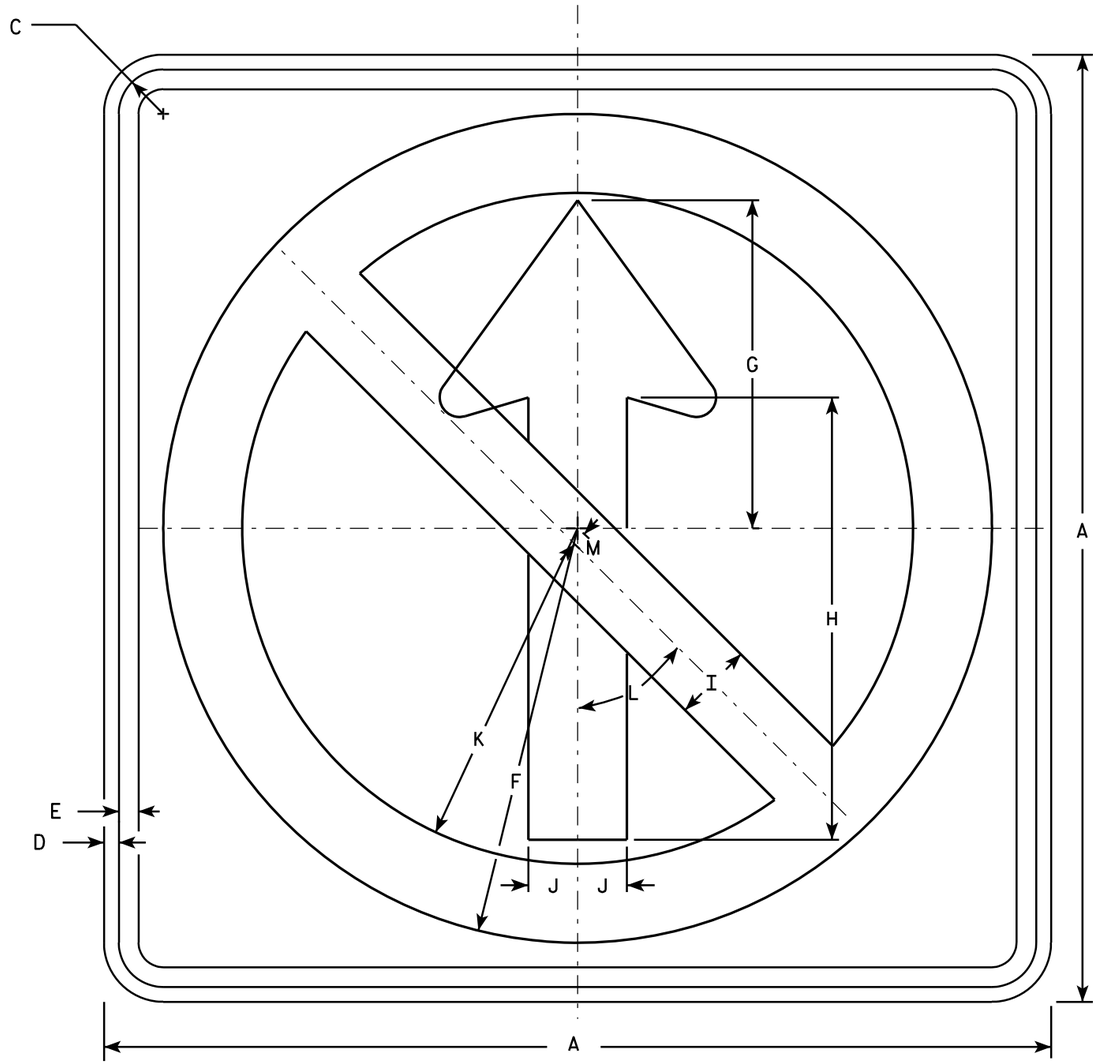
STANDARD SIGN
R3-9C & R3-9D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-9C.2

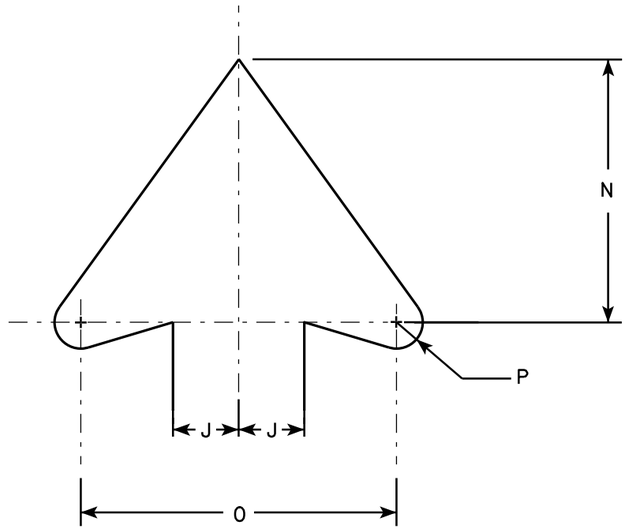
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 260	E



R3-27

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2	10 1/2	8 3/8	11 1/4	2	1 1/4	8 1/2	45°	3/8	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	12 1/2	16 3/4	3	1 7/8	12 3/4	45°	1/2	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	12 1/2	16 3/4	3	1 7/8	12 3/4	45°	1/2	7 1/2	9	3/4											9.0
4	48		2 1/4	3/4	1	21	16 5/8	22 3/8	4	2 1/2	17	45°	3/4	10	12	1											16.0
5																											

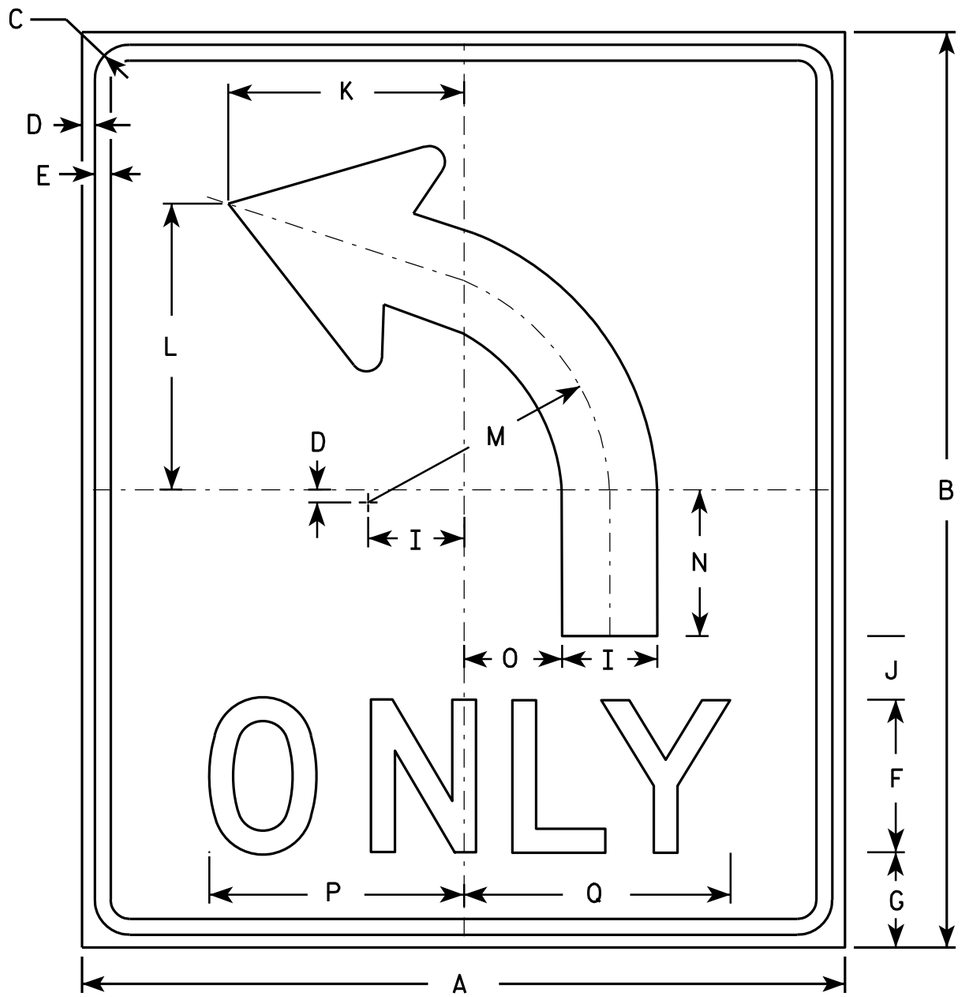
STANDARD SIGN
R3-27

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/07/10 PLATE NO. R3-27.1

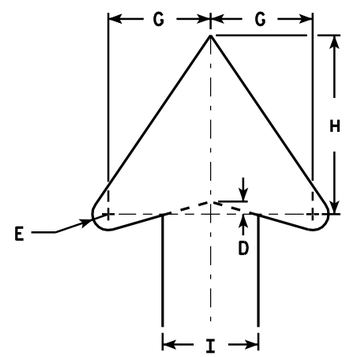
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 261	E



R3-50L

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. R3-50R is the same as R3-50L except curved portion of arrow points right.



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	30	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
2M	30	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
3																											
4																											
5																											

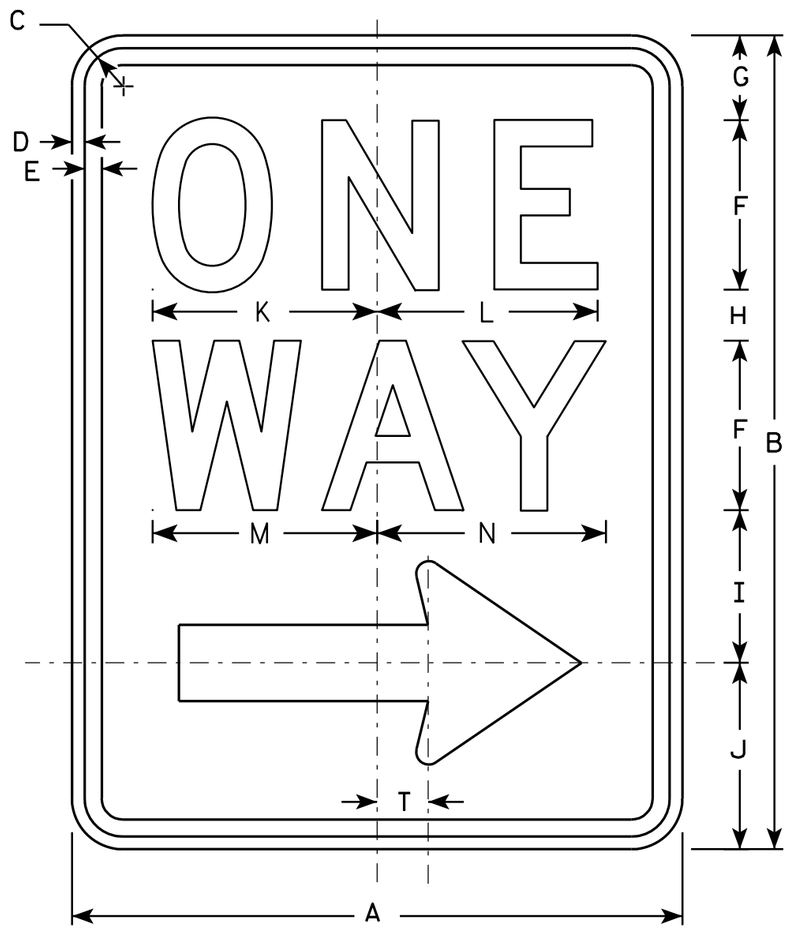
STANDARD SIGN
R3-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-50.2

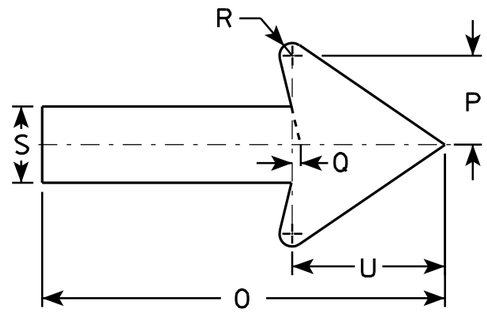
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 262 | E



R6-2R

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. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

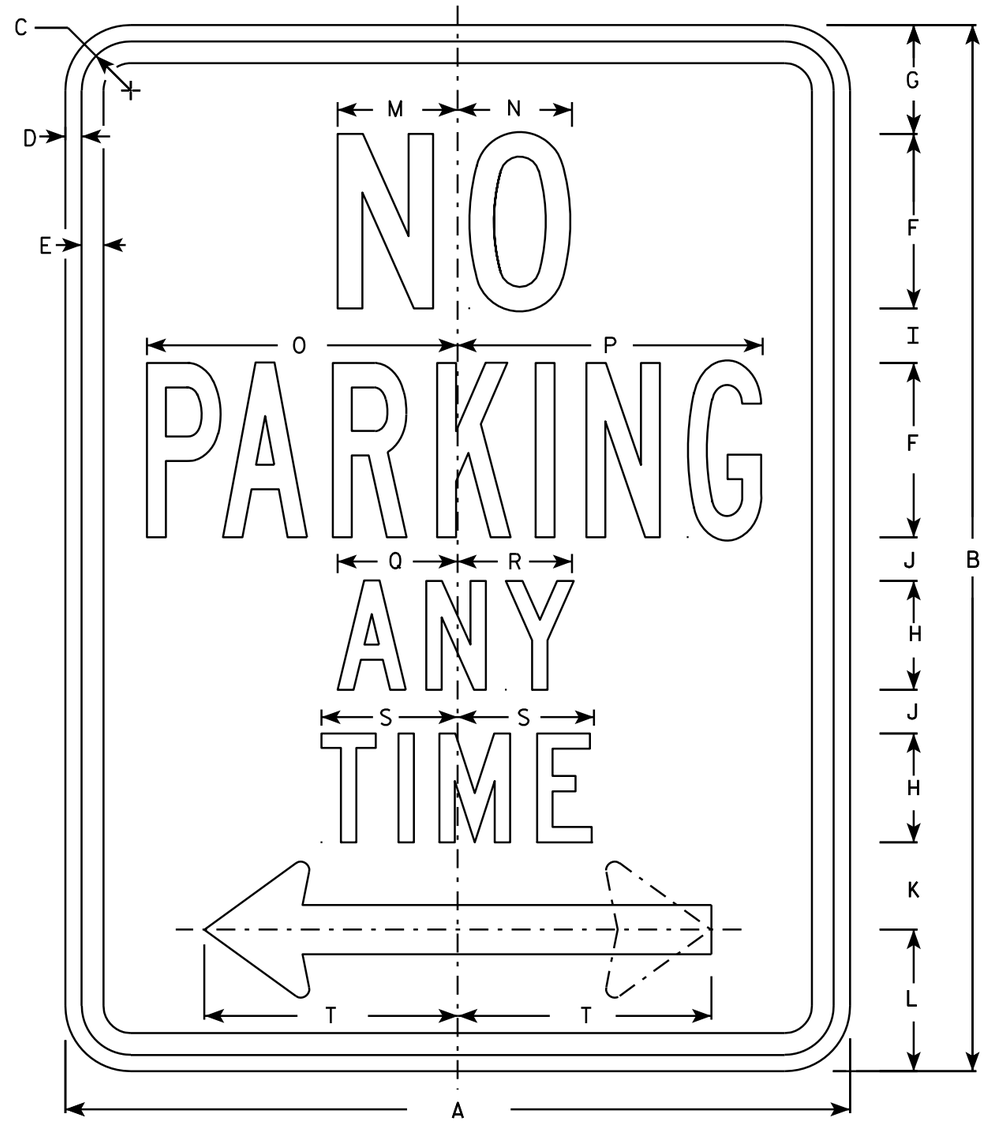
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

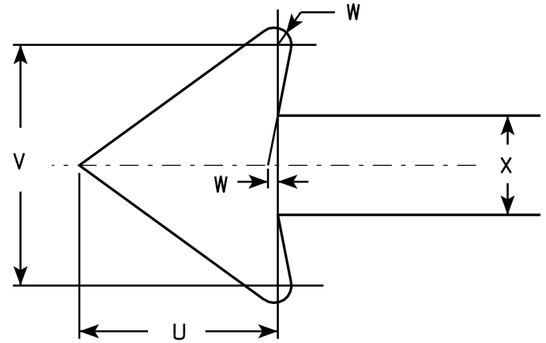
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 263 | E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

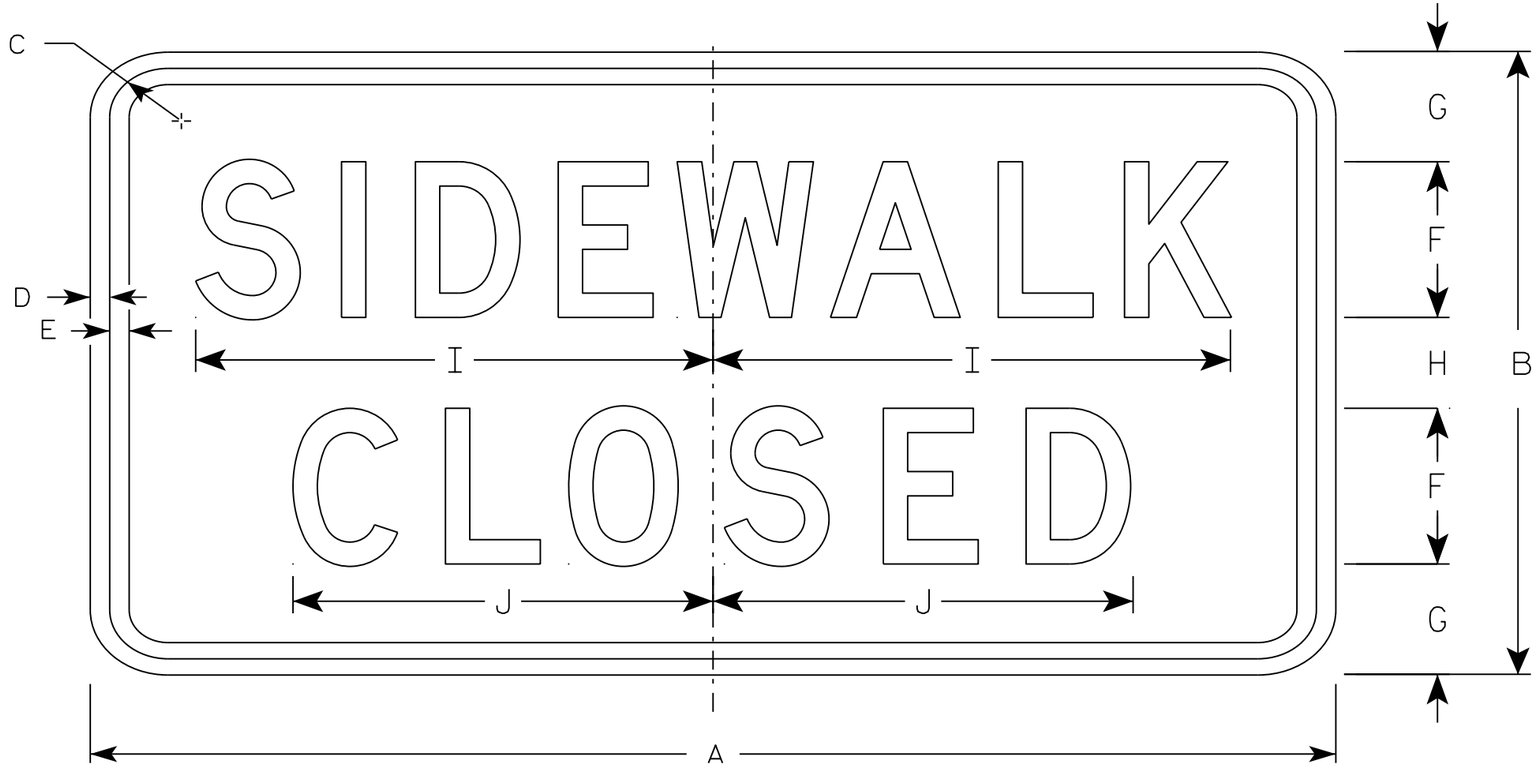
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 264	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42



R9-9

NOTES

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

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

STANDARD SIGN
R9-9

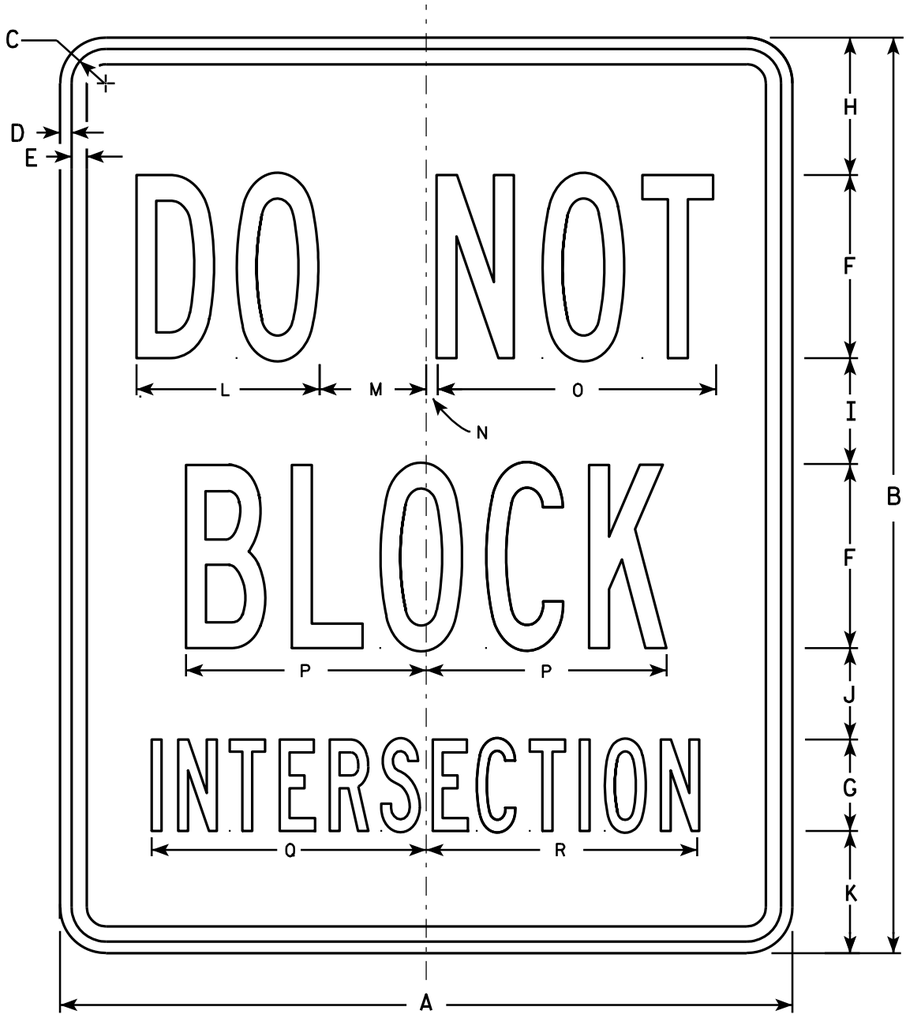
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE 265 R9-9.6

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

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



R10-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - B
4. 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	24	30	1 1/8	3/8	1/2	6	3	4 1/2	3 1/2	3	4	6	3 1/2	3/8	9 1/8	7 7/8	9	8 7/8									5.0
2M	24	30	1 1/8	3/8	1/2	6	3	4 1/2	3 1/2	3	4	6	3 1/2	3/8	9 1/8	7 7/8	9	8 7/8									5.0
3	36	48	1 3/8	1/2	5/8	10	5	7	5 1/4	4 1/2	6 1/4	10	5 5/8	1/2	15 1/8	13 1/8	15	14 7/8									12.0
4																											
5																											

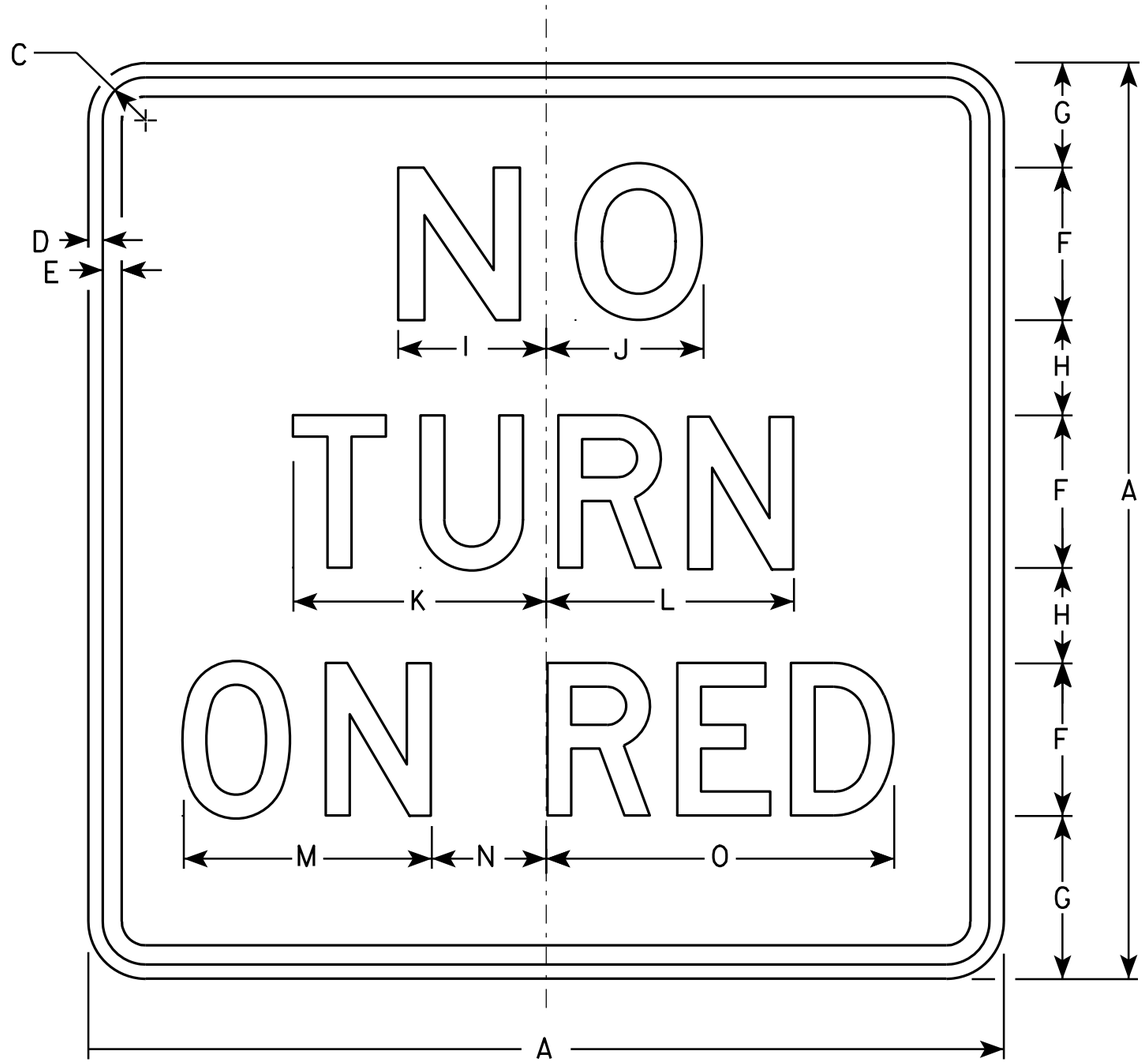
STANDARD SIGN
R10-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-7.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 266 | E



R10-11B

NOTES

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

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

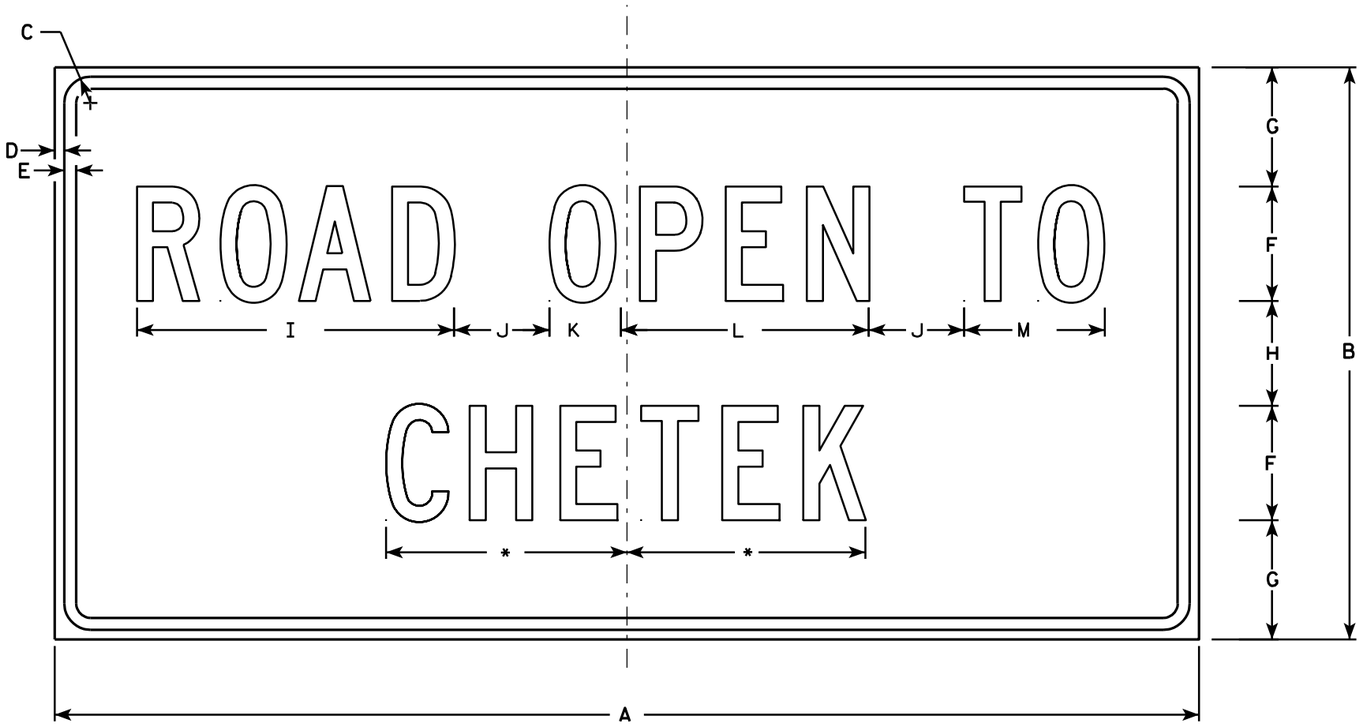
STANDARD SIGN
R10-11B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 267 | E



R10-61

NOTES

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

*See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 3/8	1/2	5/8	4	5 1/2	5	10 3/4	2	2 1/8	8 3/8	4 5/8														6.0
2S	60	30	1 3/8	1/2	5/8	6	6 1/4	5 1/2	16 5/8	5	3 3/4	13	7 3/8														12.5
2M	60	30	1 3/8	1/2	5/8	6	6 1/4	5 1/2	16 5/8	5	3 3/4	13	7 3/8														12.5
3																											
4																											
5																											

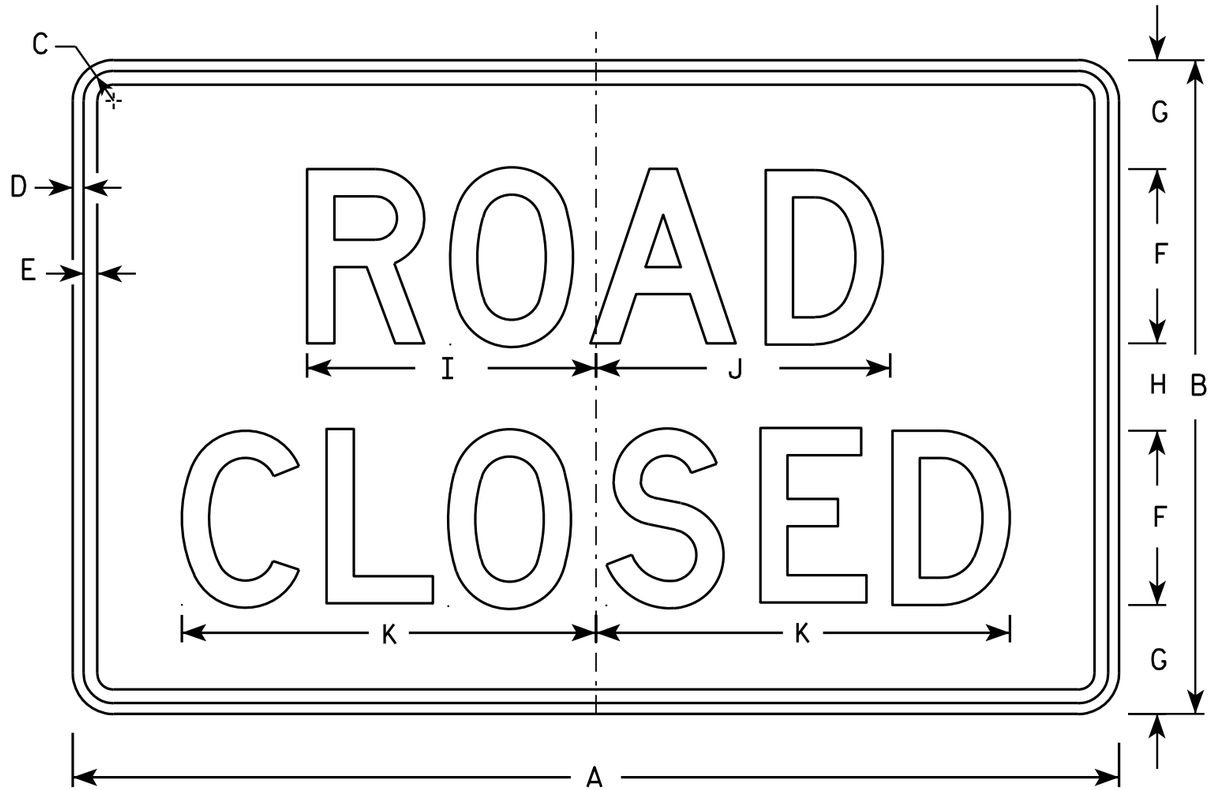
STANDARD SIGN
R10-61

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-61.5

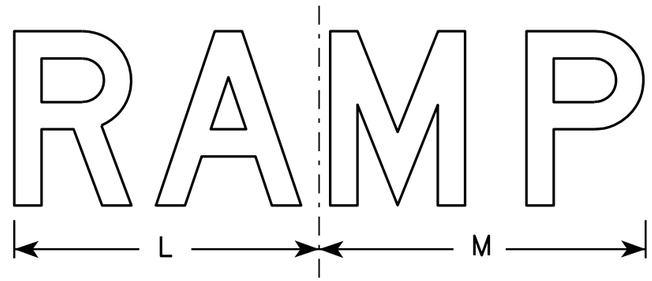
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 268	E



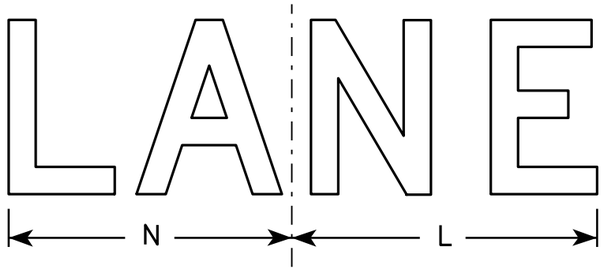
R11-2

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

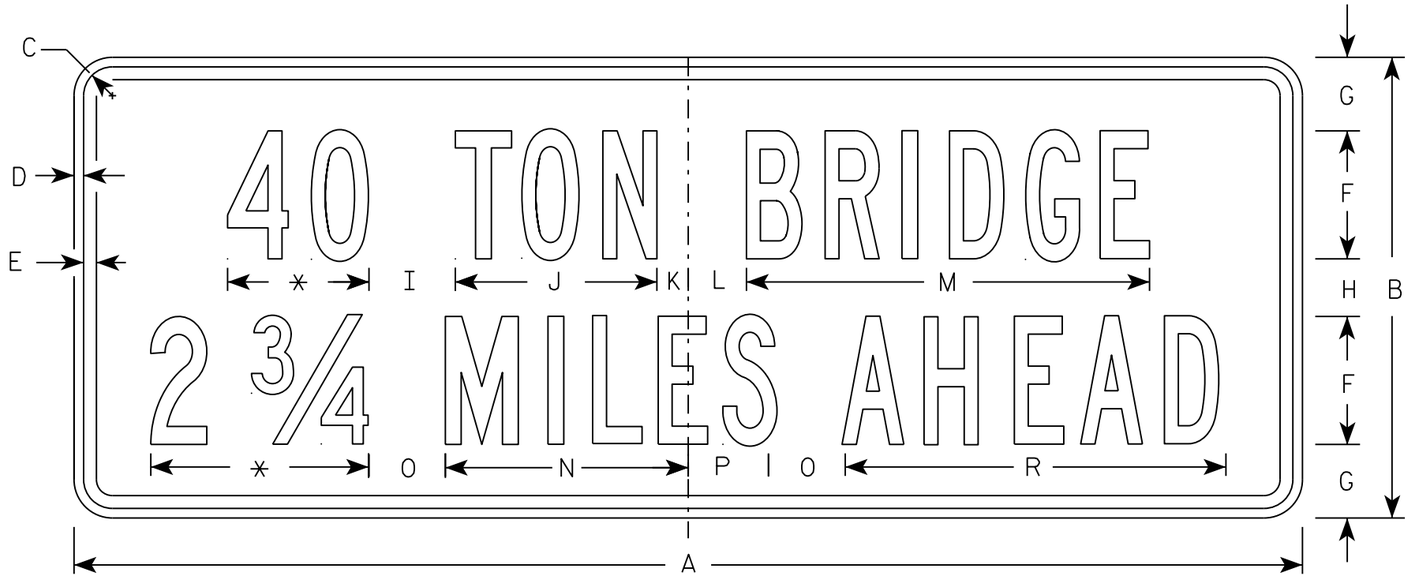
STANDARD SIGN
R11-2

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: 269 | E



* Varies

R12-55

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - B for Size 2, Series D for Sizes 3 & 4
4. Corners and border shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	18	1 1/8	3/8	1/2	5	2 7/8	2 1/4	3 3/8	7 7/8	1 1/4	2 1/4	15 3/4	9 1/2	3	3 1/8		14 7/8									6.0
2M	48	18	1 1/8	3/8	1/2	5	2 7/8	2 1/4	3 3/8	7 7/8	1 1/4	2 1/4	15 3/4	9 1/2	3	3 1/8		14 7/8									6.0
3	90	24	2 1/4	3/4	1	6	4	4	6	15 1/4	2 1/2	3 1/2	30 5/8	18 3/8	6	6 1/4		28 3/8									15.0
4	120	30	2 1/4	3/4	1	8	5 1/4	3 5/8	8	19 5/8	4	3	39 1/2	24 1/2	7	6 3/4		36 3/8									25.0
5	120	30	2 1/4	3/4	1	8	5 1/4	3 5/8	8	19 5/8	4	3	39 1/2	24 1/2	7	6 3/4		36 3/8									25.0

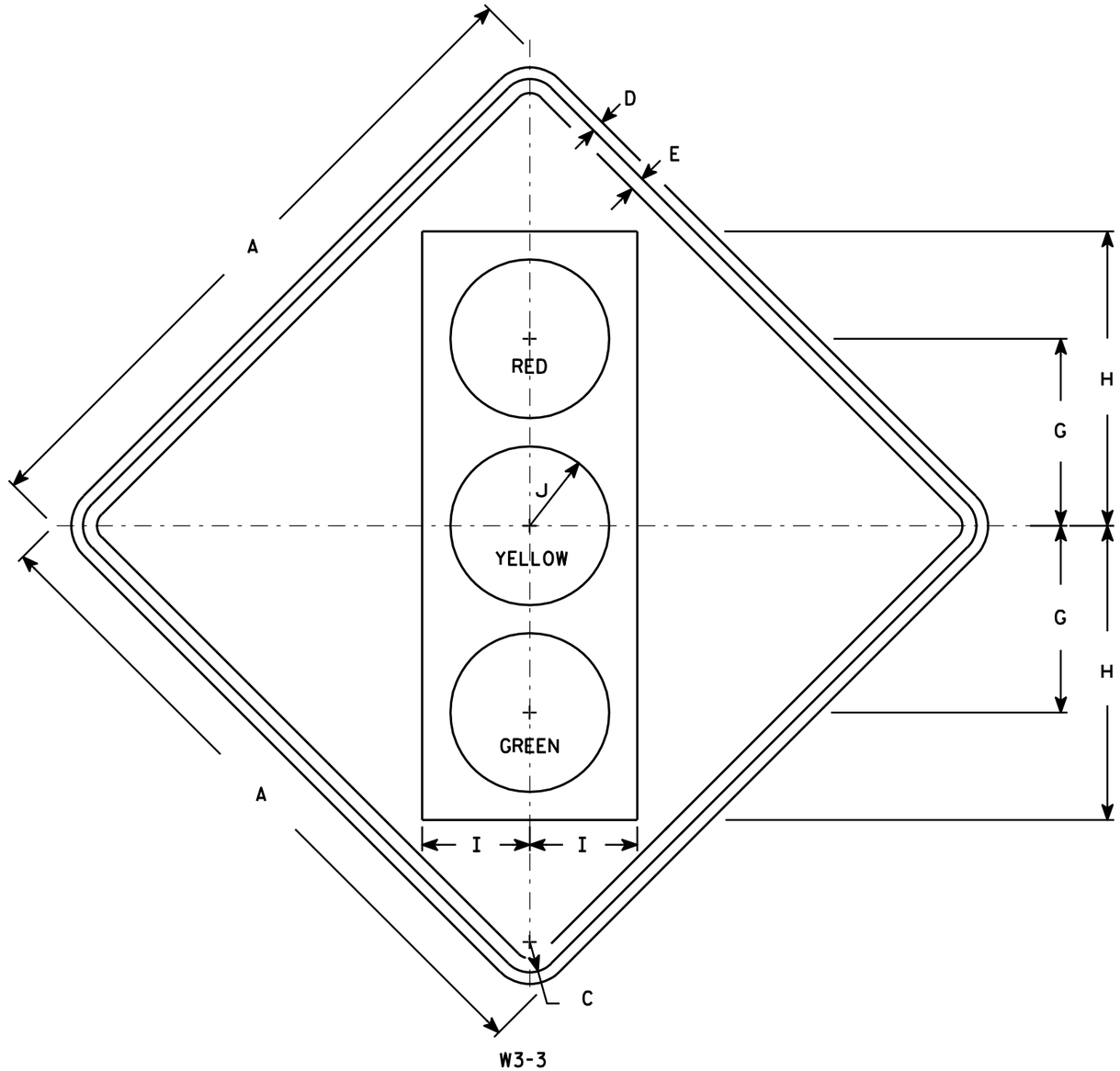
STANDARD SIGN
R12-55

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/22/17 PLATE NO. R12-55.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 270 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

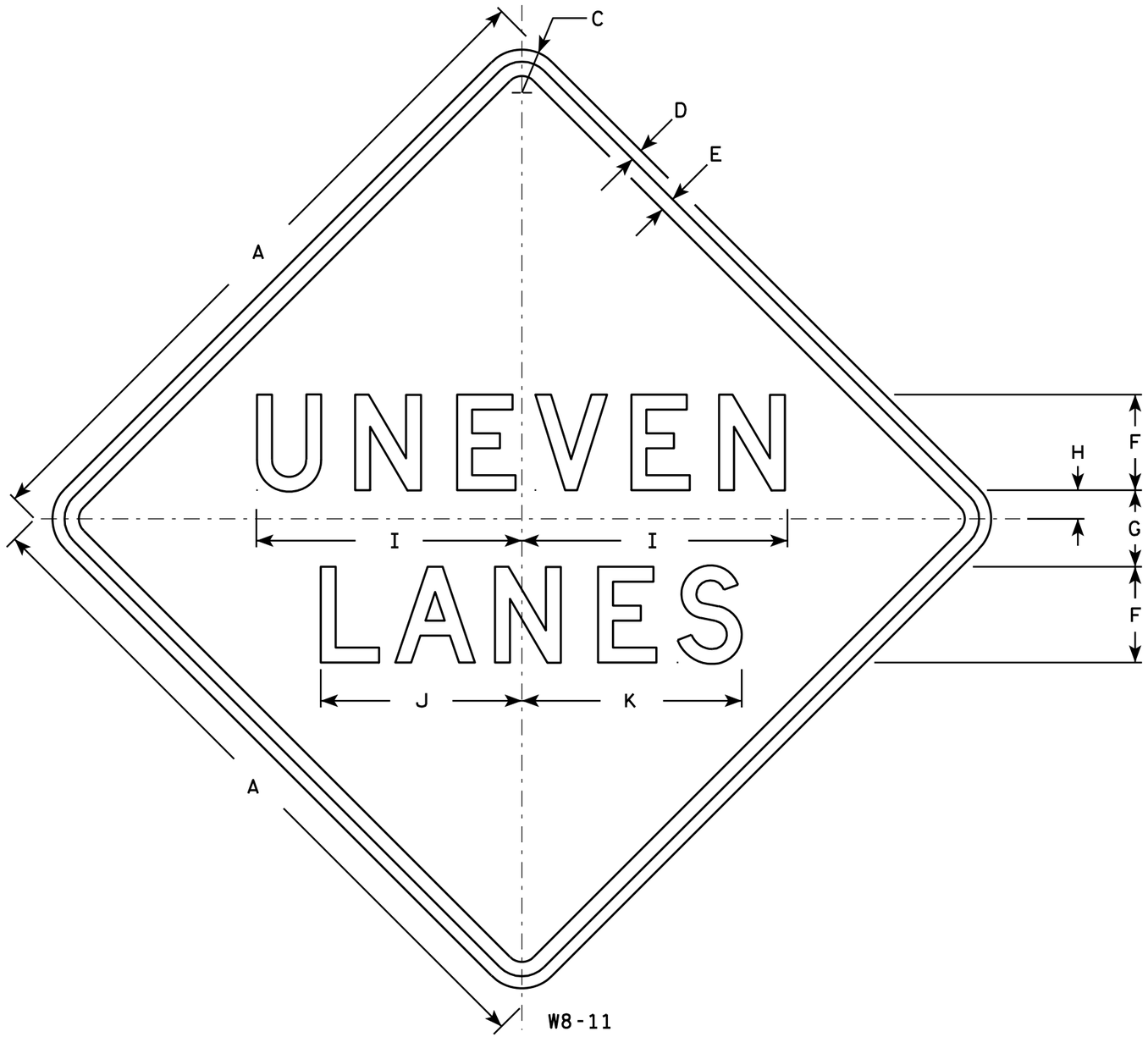
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 271 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W33.DGN PLOT DATE : 07-JUN-2010 13:07 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 7.448805:1.000000

WISDOT/CADDS SHEET 42

7

7



NOTES

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

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	36		1 5/8	5/8	3/4	5	4	1 1/2	13 7/8	10 1/2	11 1/2																9.0
2M	36		1 5/8	5/8	3/4	5	4	1 1/2	13 7/8	10 1/2	11 1/2																9.0
3																											
4	36		1 5/8	5/8	3/4	5	4	1 1/2	13 7/8	10 1/2	11 1/2																9.0
5	48		2 1/4	3/4	1	7	5	2	18 1/2	14	15 3/8																16.0

STANDARD SIGN
W8-11

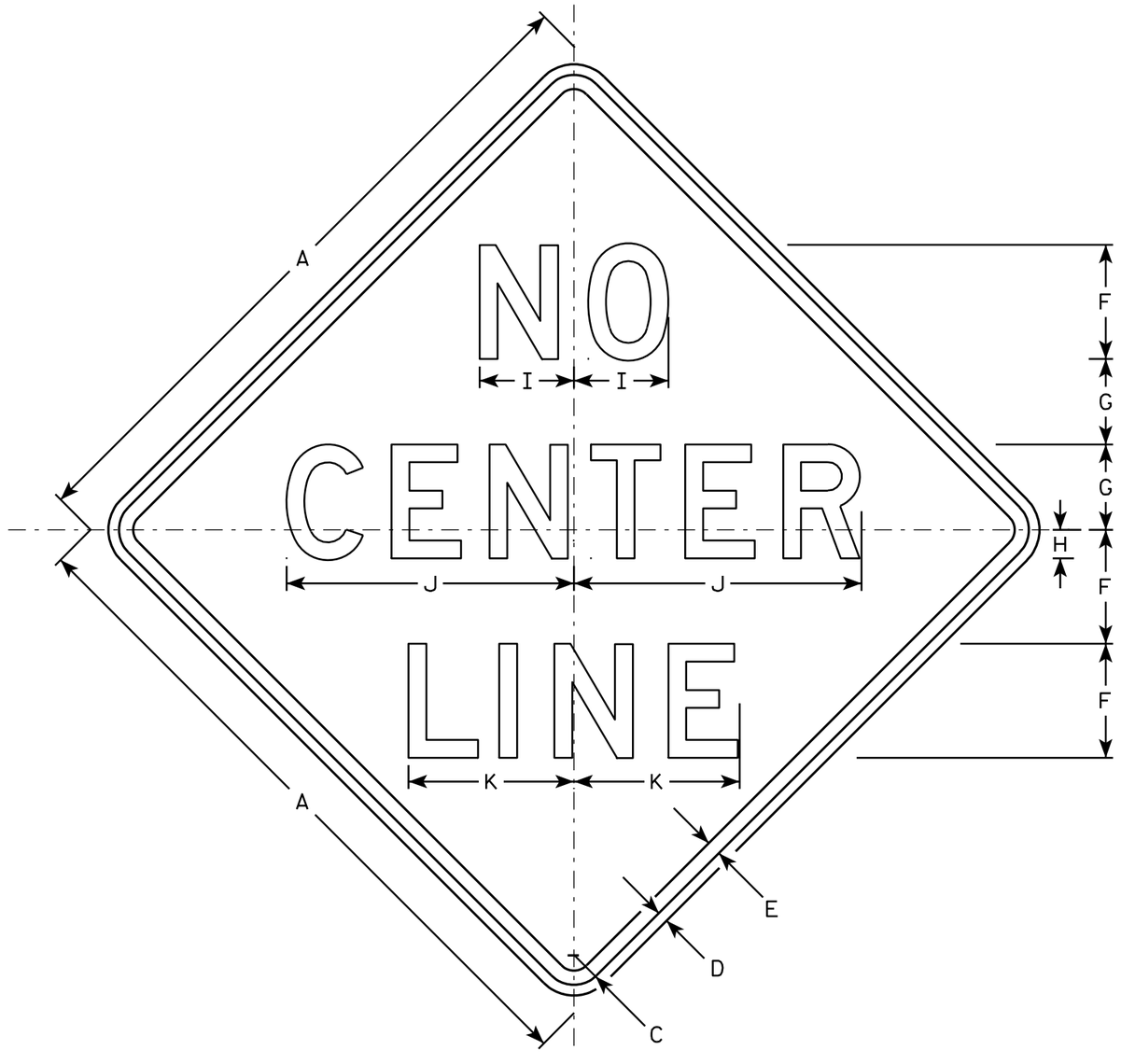
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 3/22/11 PLATE NO. W8-11.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 272 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W811.DGN PLOT DATE : 22-MAR-2011 14:12 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.703924:1.000000
WISDOT/CADDS SHEET 42



W8-12

NOTES

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

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	36		1 5/8	5/8	3/4	6	4 1/2	1 1/2	5 1/8	16	9																9.0
2M	36		1 5/8	5/8	3/4	6	4 1/2	1 1/2	5 1/8	16	9																9.0
3	48		2 1/4	3/4	1	8	6	2	6 5/8	20 1/4	11 5/8																16.0
4	48		2 1/4	3/4	1	8	6	2	6 5/8	20 1/4	11 5/8																16.0
5	48		2 1/4	3/4	1	8	6	2	6 5/8	20 1/4	11 5/8																16.0

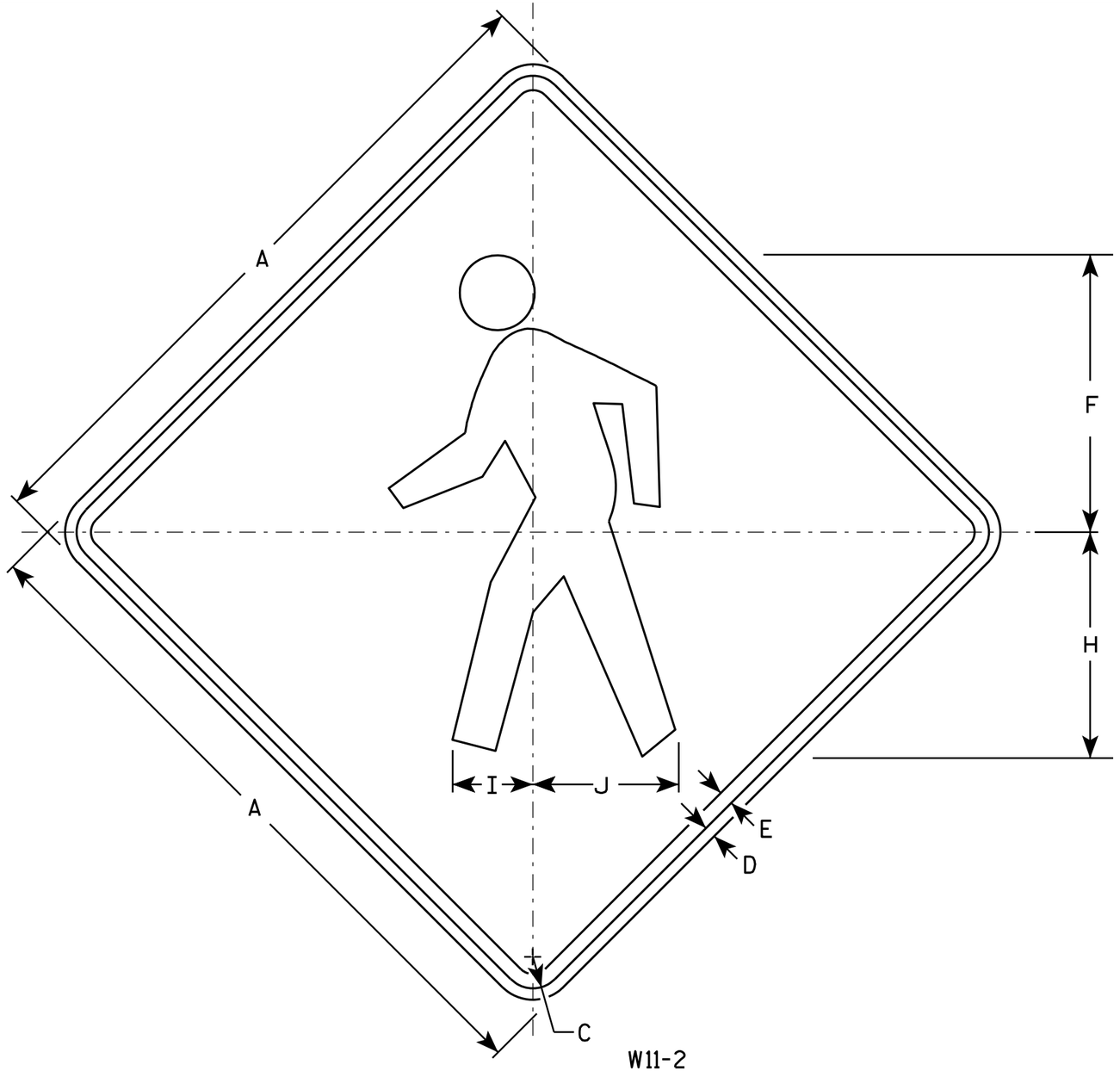
STANDARD SIGN
W8-12

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rausch
for State Traffic Engineer

DATE 8/24/10 PLATE NO. W8-12.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 273	E



W11-2

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

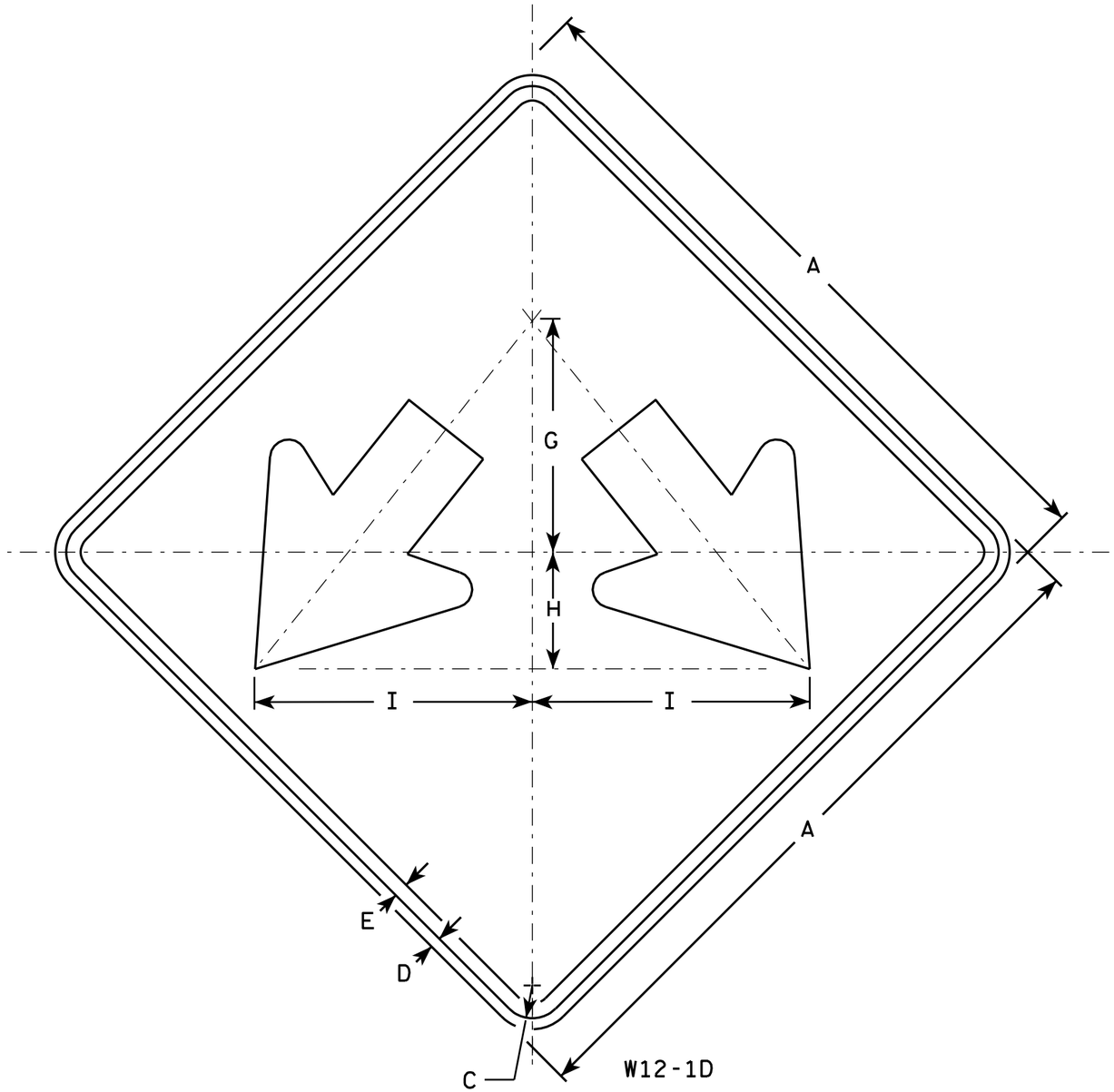
STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

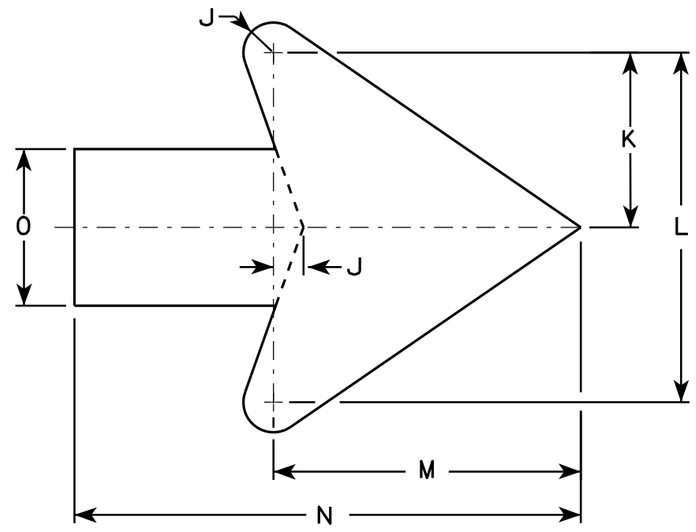
DATE 6/7/10 PLATE NO. W11-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 274	E



NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

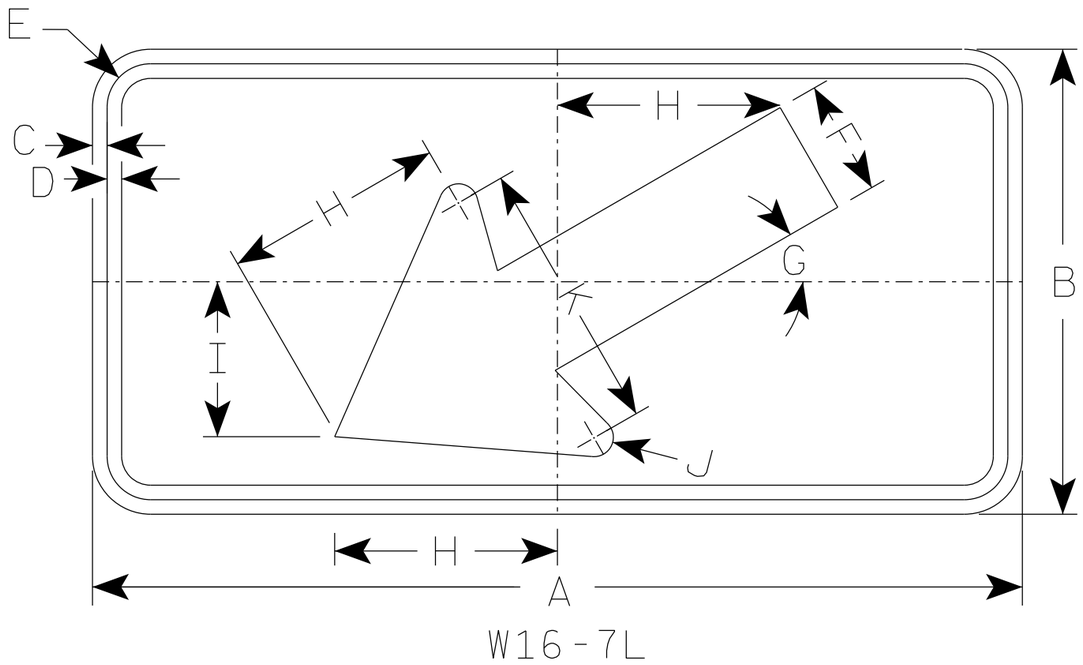
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 275	E



W16-7L

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W16-7R is the same as W16-L
   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																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
5																											

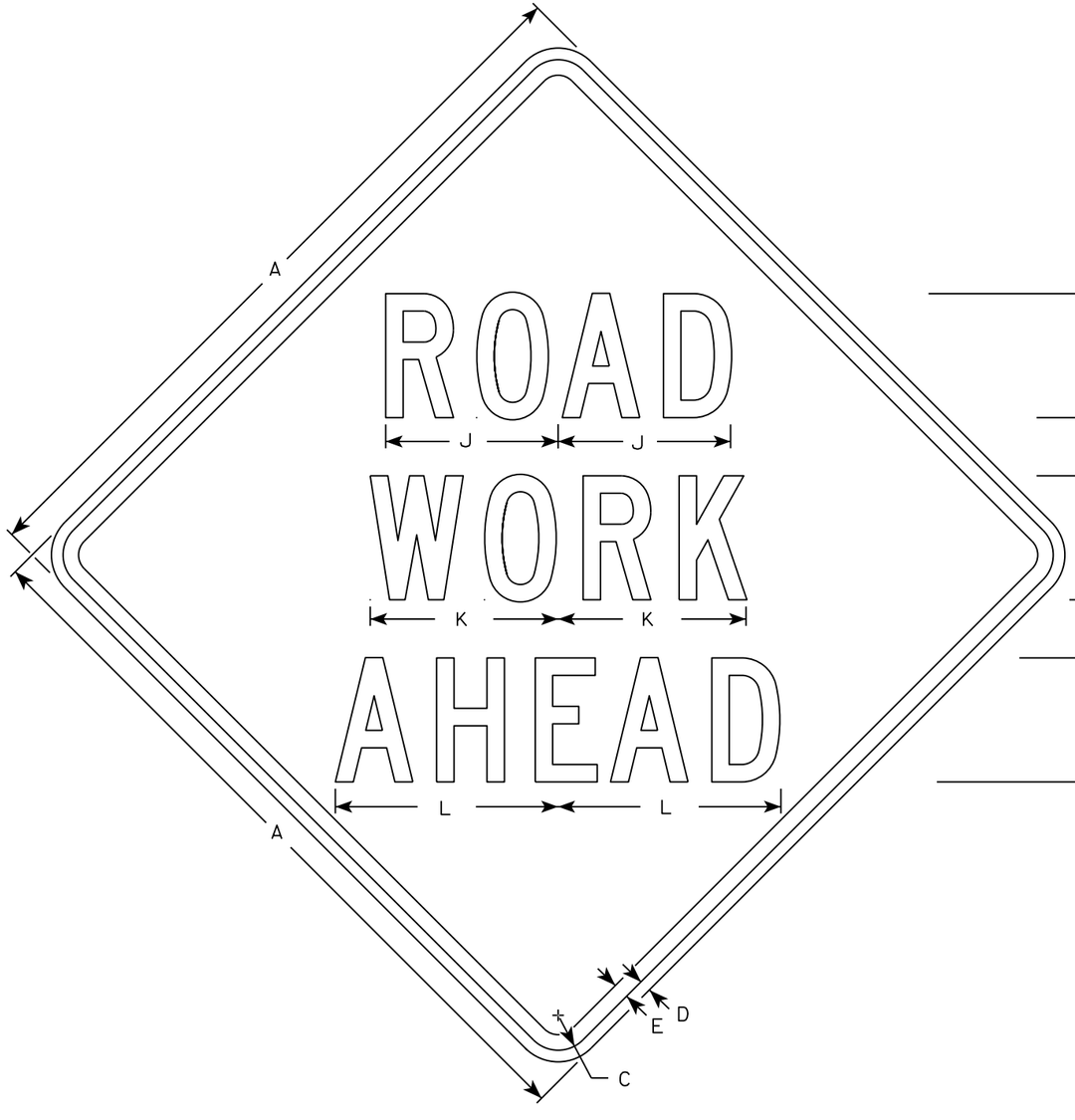
STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

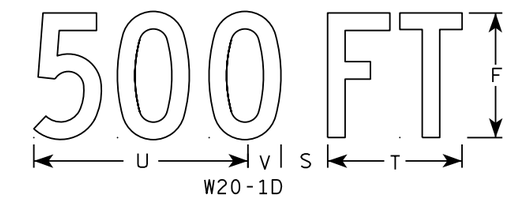
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 7/11/18 PLATE NO. W16-7.6

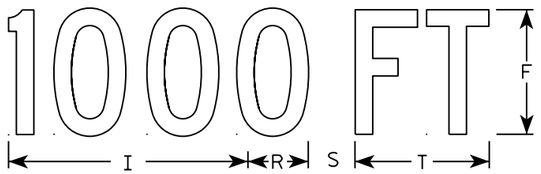
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 276 | E



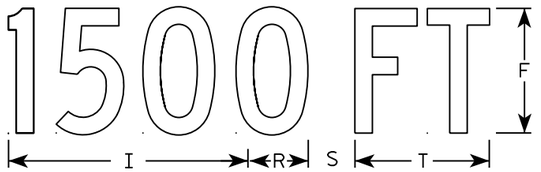
W20-1A



W20-1D



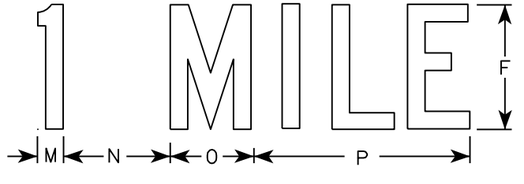
W20-1C



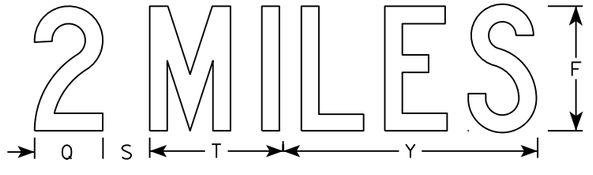
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

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

WISCONSIN DEPT OF TRANSPORTATION

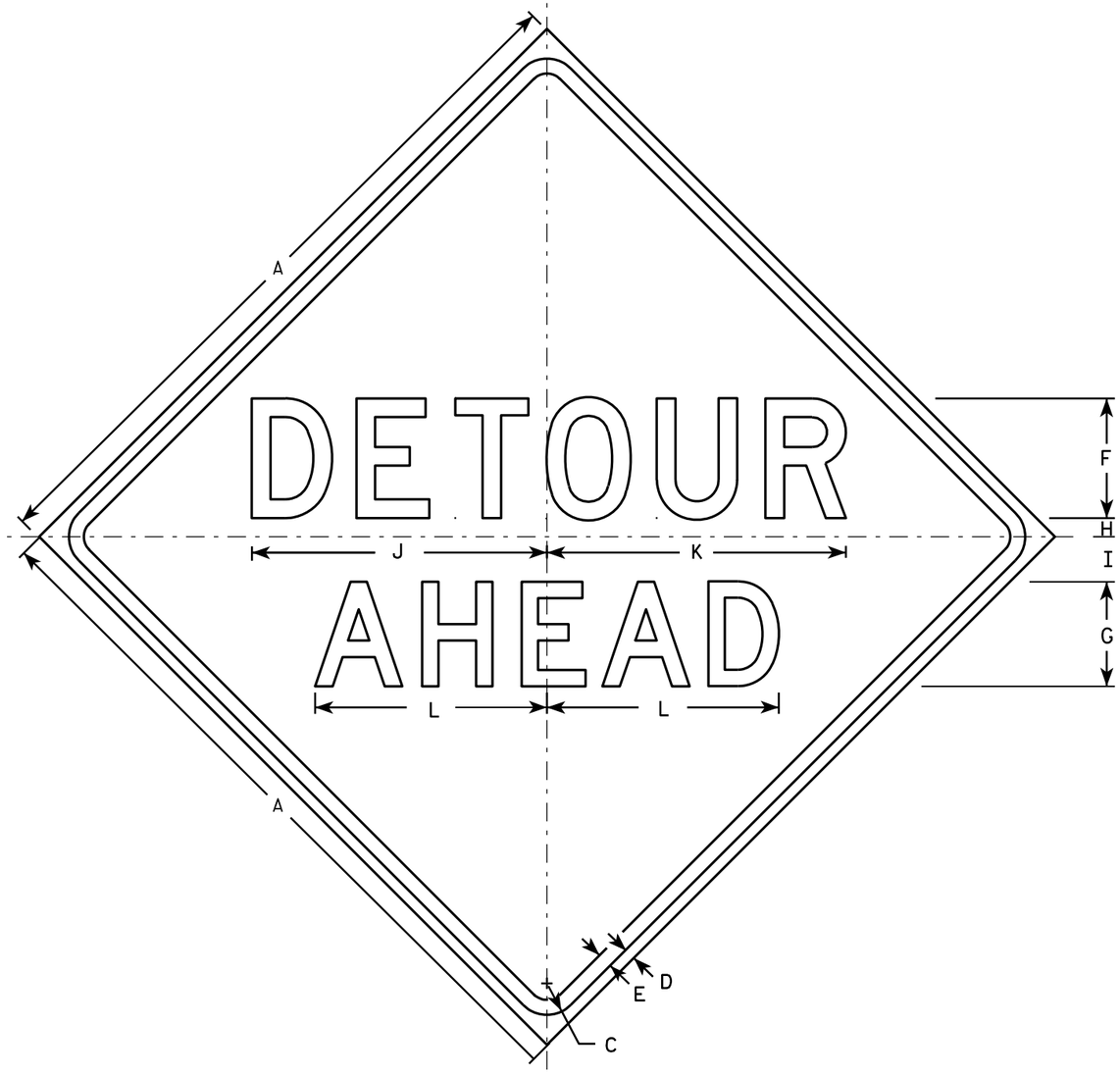
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

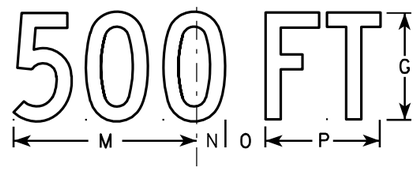
PROJECT NO:

SHEET NO: E

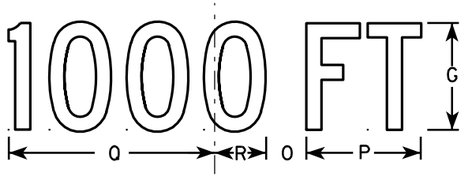
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



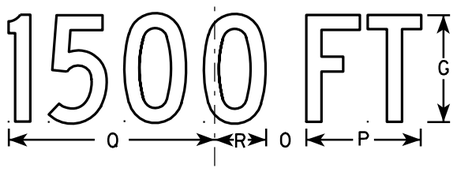
W20-2A



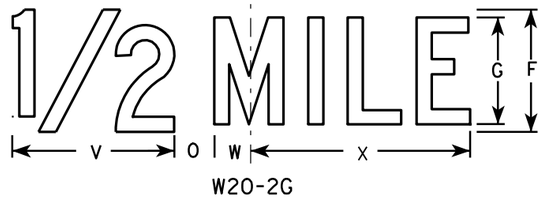
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

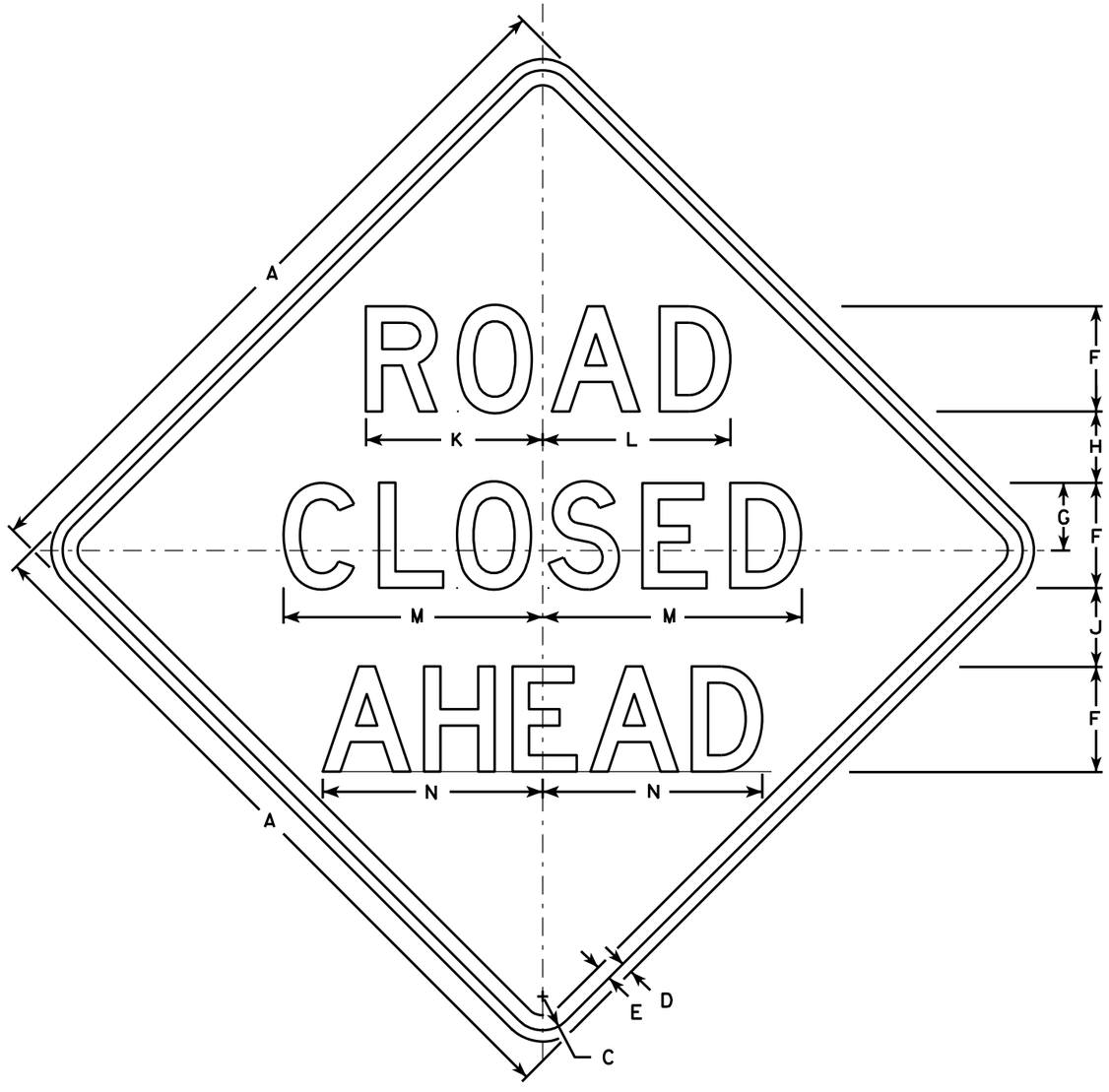
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

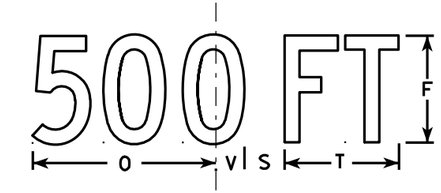
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

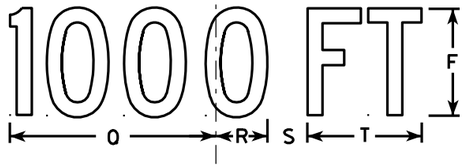
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 278	E



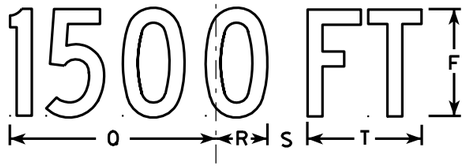
W20-3A



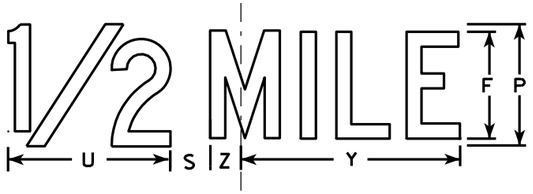
W20-3D



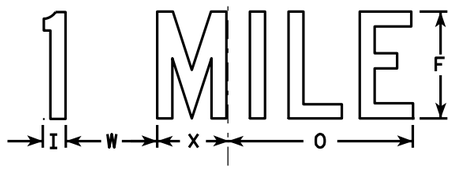
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

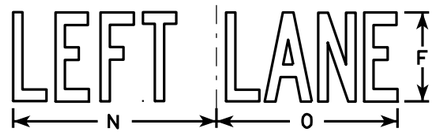
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

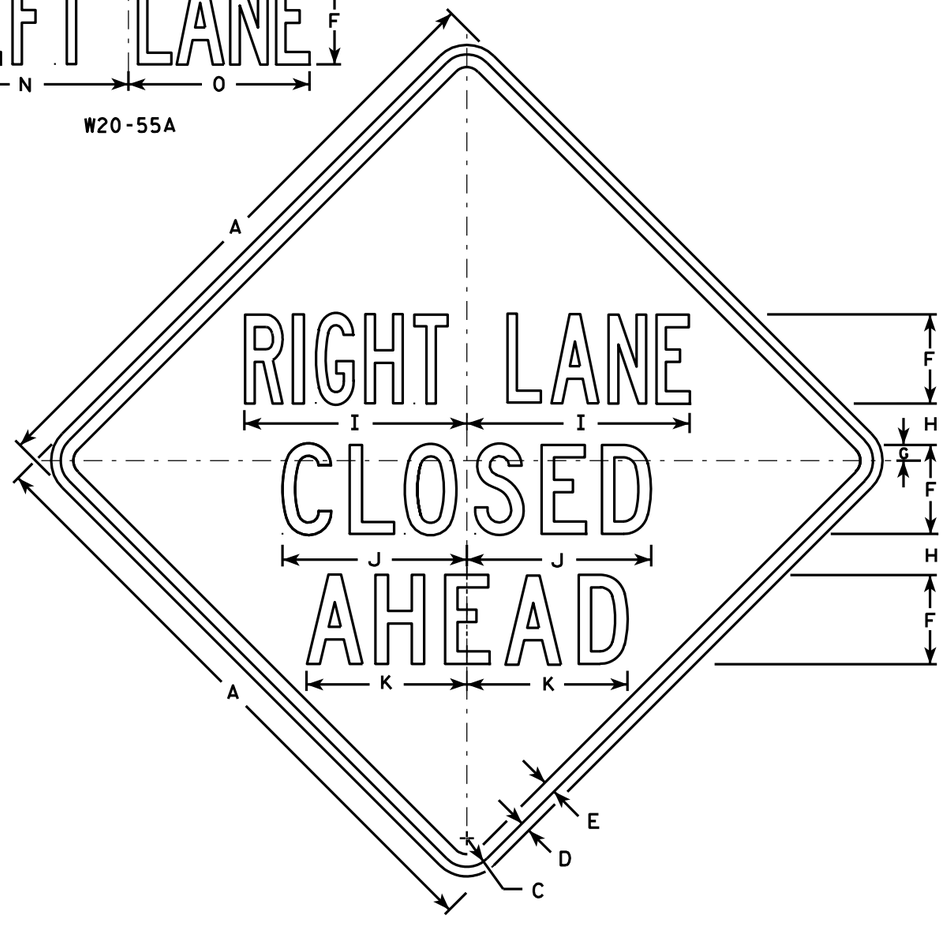
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 279 | E



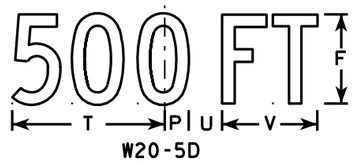
W20-56A



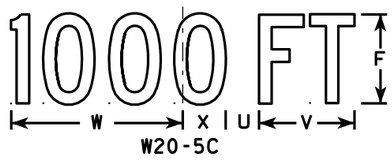
W20-55A



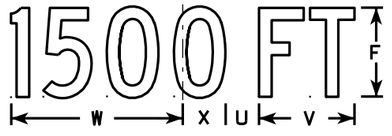
W20-5A



W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

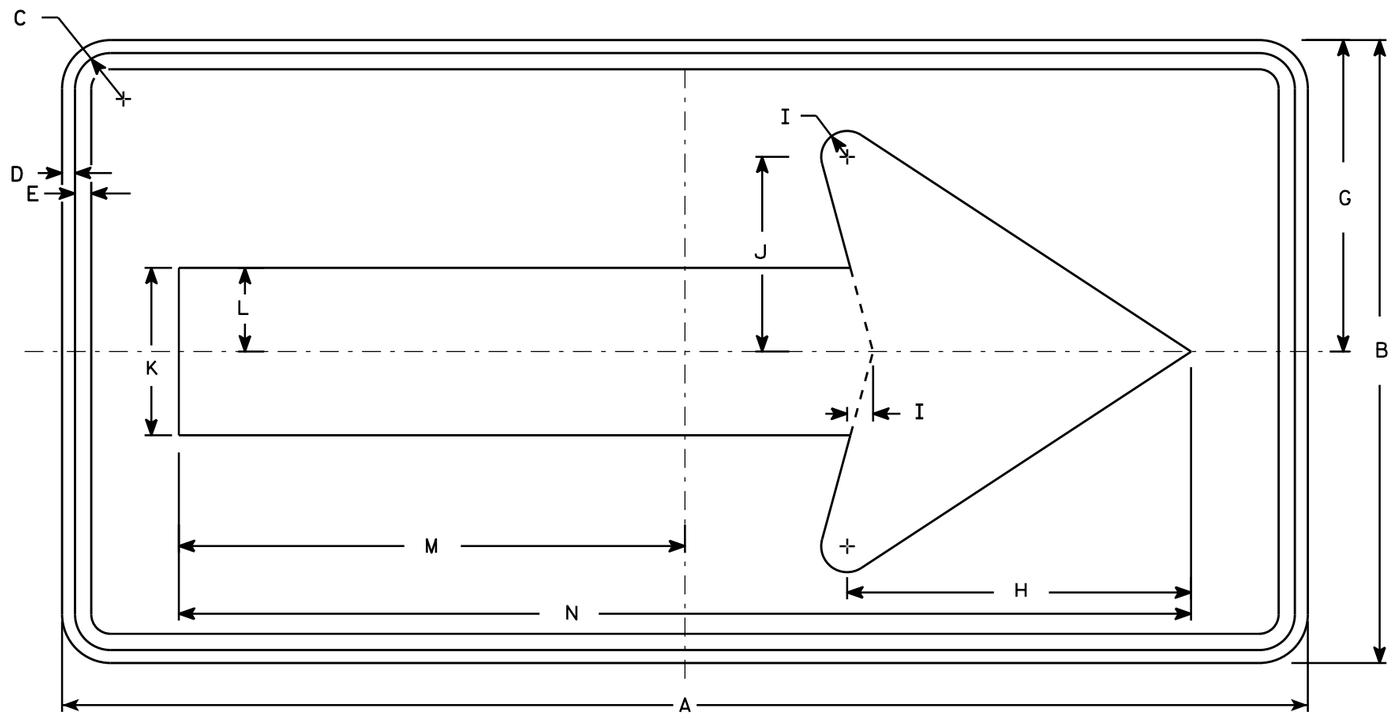
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 280	E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W01-6

NOTES

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

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

STANDARD SIGN
W01-6

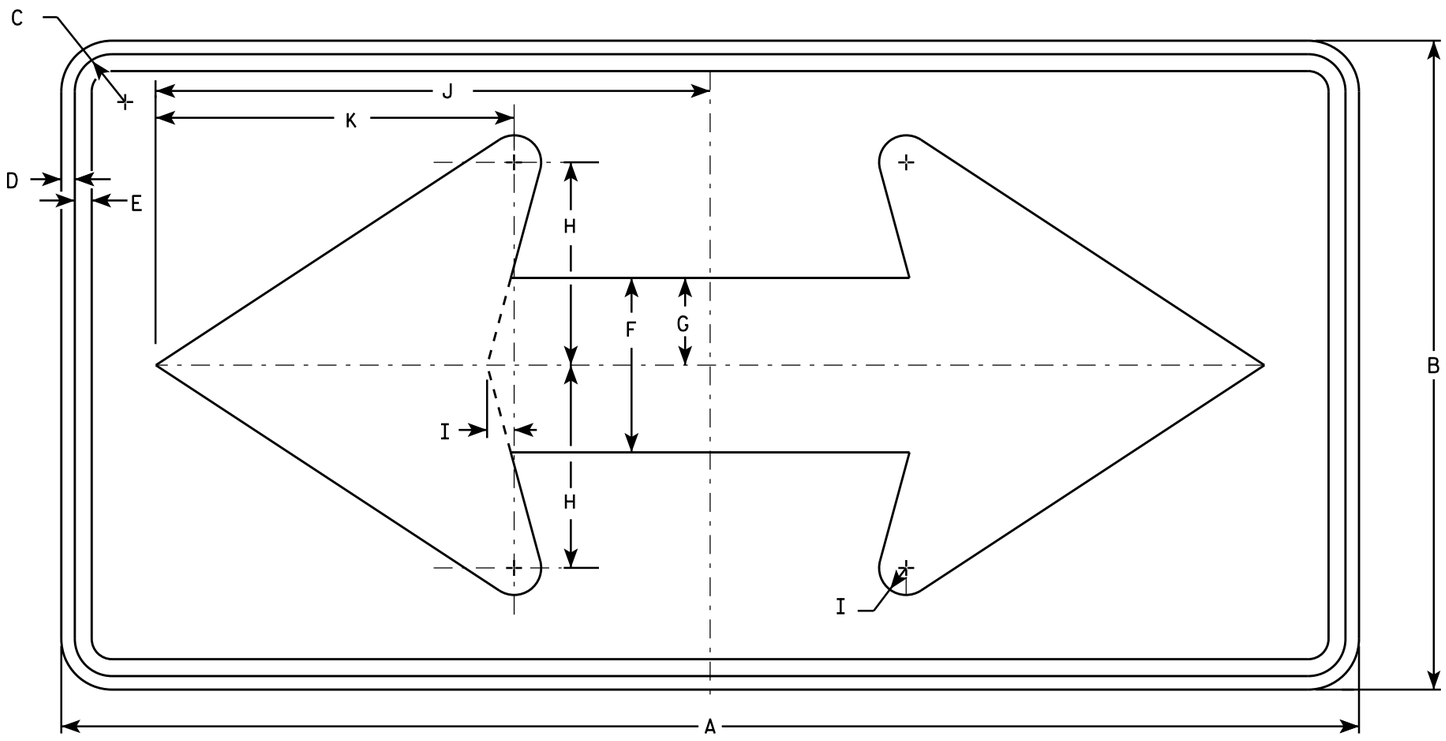
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



W01-7

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	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5

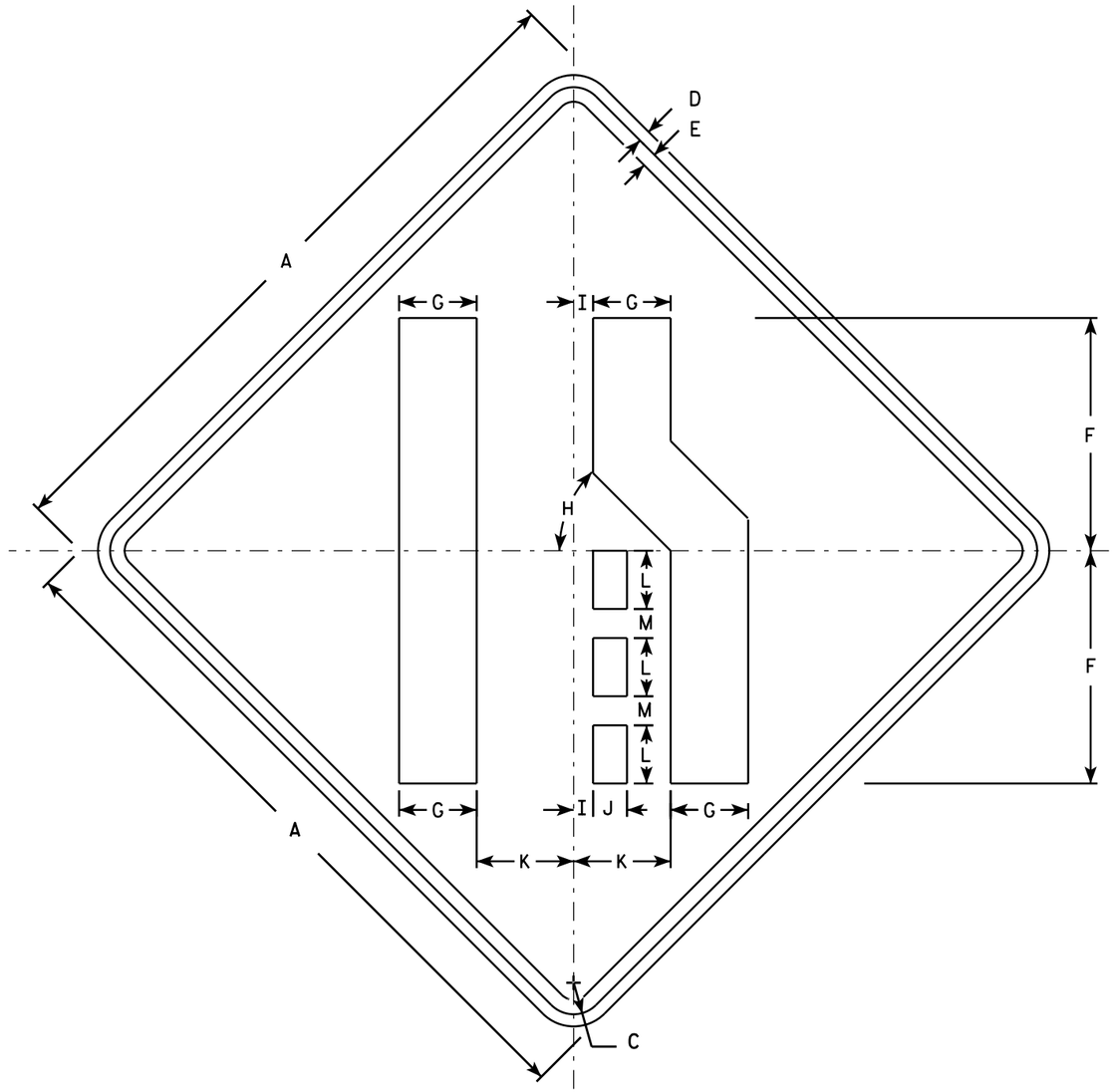
STANDARD SIGN
W01-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE 1282 W01-7.1

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



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

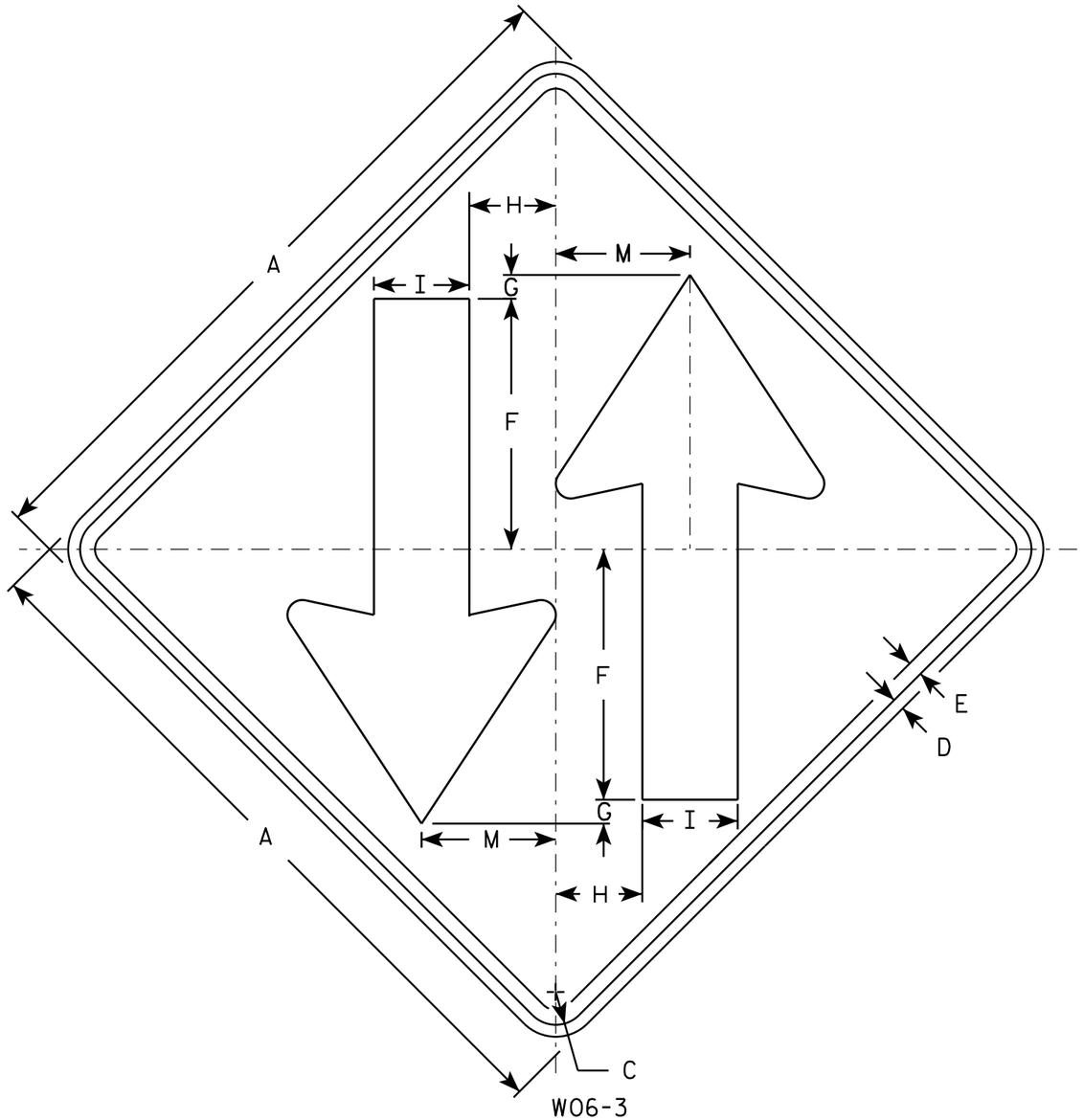
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 283 W04-2.1

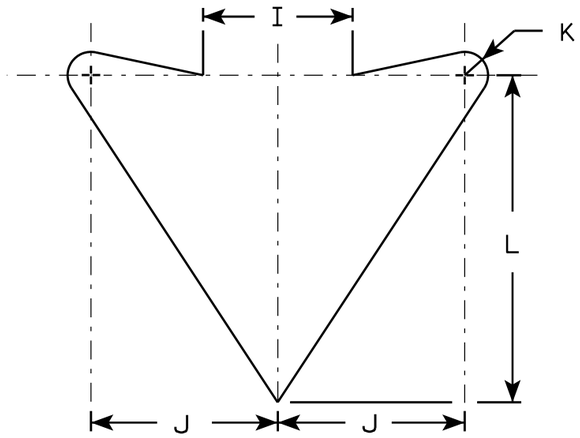
PROJECT NO: | SHEET NO: E



W06-3

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2S	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
2M	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
3	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
4	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

STANDARD SIGN
W06-3

WISCONSIN DEPT OF TRANSPORTATION

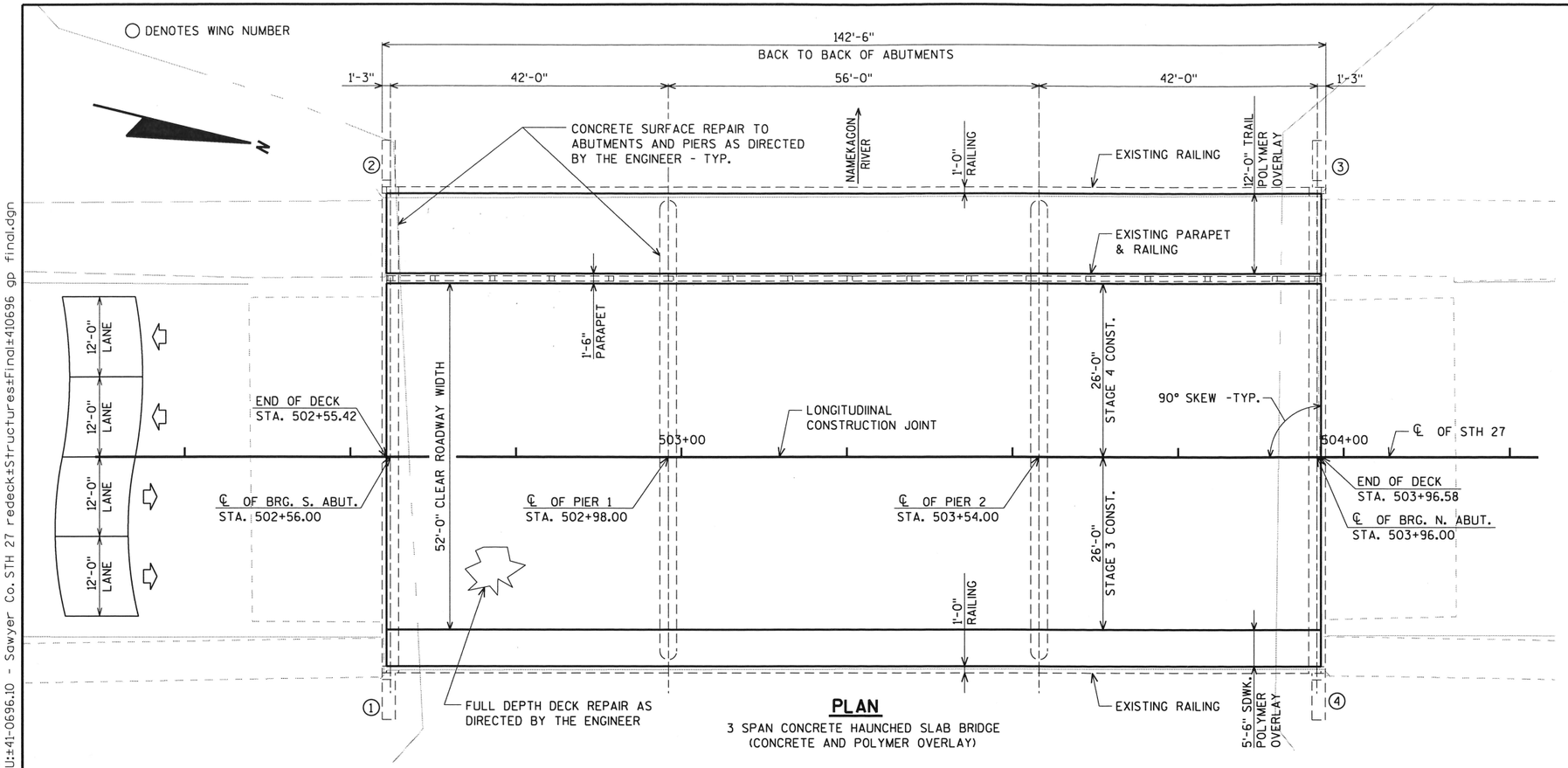
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 284 W06-3.1

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

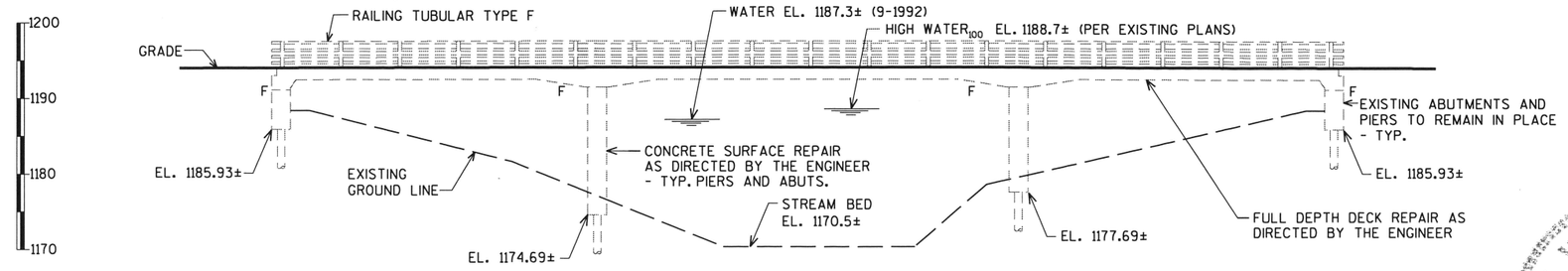
STATE PROJECT NUMBER

8140-25-71



PLAN

3 SPAN CONCRETE HAUNCHED SLAB BRIDGE
(CONCRETE AND POLYMER OVERLAY)



ELEVATION

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-22
OPERATING RATING: HS-37
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 210 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY { DECK PATCHING & SUPERSTRUCTURE ___ f'c = 4,000 p.s.i.
ALL OTHER ___ f'c = 3,500 p.s.i.

TRAFFIC DATA:

A.A.D.T. = 14,500 (2018)
A.A.D.T. = 17,400 (2038)
R.D.S. = 30 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

PREPARATION DECKS, CONCRETE SURFACE REPAIR AND FULL DEPTH DECK REPAIR SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE ENTIRE TOP SURFACE OF NEW CONCRETE OVERLAY.

PIGMENTED SURFACE SEALER IS TO BE APPLIED TO THE TOP AND FACES OF THE PARAPET.

PROFILE GRADE LINE SHALL BE DETERMINED BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER CLEANING. EXPECTED AVERAGE OVERLAY THICKNESS IS 2". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

ALL PREVIOUS PATCHES SHALL BE REMOVED UNDER THE BID ITEM "PREPARATION DECKS".

A MINIMUM OF 1- INCH OF CONCRETE SHALL BE REMOVED ON THE ROADWAY SURFACE BETWEEN THE CURBS OF THE BRIDGE DECK UNDER THE BID ITEM, "CLEANING DECKS", BUT LESS THAN 1½" MAXIMUM.

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY IS INCIDENTAL TO THE BID ITEM 'CONCRETE MASONRY OVERLAY DECKS'.

SURFACE PREPERATION FOR THE AREAS UNDER THE POLYMER OVERLAY IS INCLUDED IN THE ITEM "POLYMER OVERLAY".

FOR TYPICAL SECTION SEE SHEET 2

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTIONS AND QUANTITIES



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/02/18
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-57-58

STH 27 OVER NAMEKAGON RIVER

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
SAWYER	HAYWARD

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CJM	AEB	CLS/CJM	CBM

GENERAL PLAN

SHEET 1 OF 1
285

I.D. DATE:

DATE: DATE: DATE:
CHECKED BY: BACK CHECKED BY: CORRECTED BY:

$PRFNAME$
U:\41-0696.10 - Sawyer Co. STH 27 redeck\Structures\Final\410696 gp final.dgn

8

8

7/30/2018 PENTABLE:BReau_shd_util.tbl

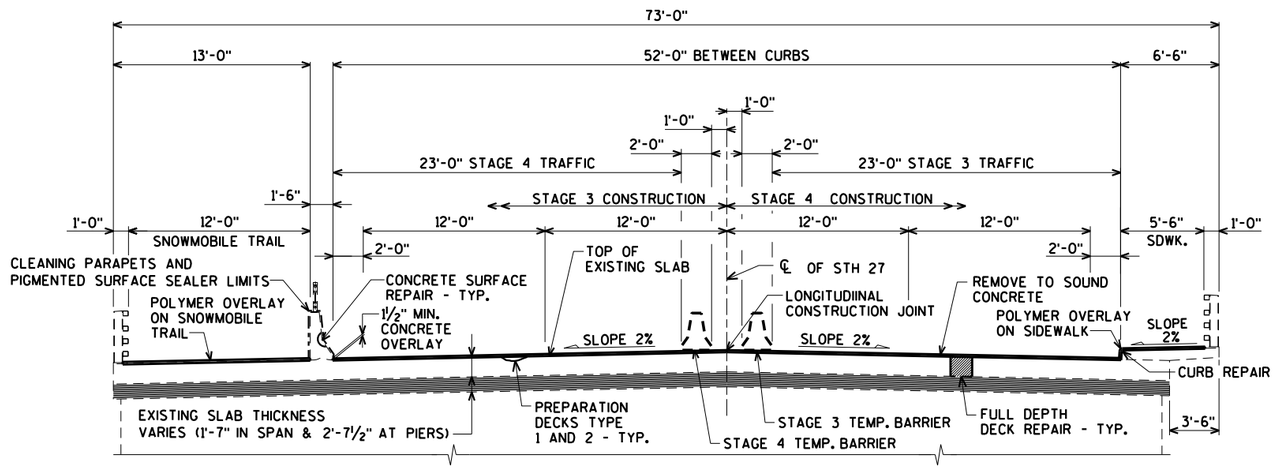
STATE PROJECT NUMBER

8140-25-71

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
203.0700.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH DEBRIS CAPTURE SYSTEM STATION 503+26	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	815
502.3210	PIGMENTED SURFACE SEALER	SY	95
509.0301	PREPARATION DECKS TYPE 1	SY	100
509.0302	PREPARATION DECKS TYPE 2	SY	15
509.0500	CLEANING DECKS	SY	815
509.1200	CURB REPAIR	LF	10
◑ 509.1500	CONCRETE SURFACE REPAIR	SF	100
509.2000	FULL-DEPTH DECK REPAIR	SY	5
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	34
509.5100.S	POLYMER OVERLAY	SY	285
509.9050.S	CLEANING PARAPETS	LF	285

◑ UNDISTRIBUTED FOR ABUTMENTS, PIERS, AND PARAPET AS DIRECTED BY THE ENGINEER.



CROSS SECTION THRU ROADWAY

LOOKING NORTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-57-58

DRAWN BY CJM | PLANS CK'D. AEB

QUANTITIES AND TYPICAL SECTION

SHEET 2 OF 2
286

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

$PRFNAME$
U:±41-0696.10 - Sawyer Co. STH 27 redeck±Structures±Final±410696 gp final.dgn

8

8

7/30/2018

PENTABLE:BReau_shd_util.tbl

EARTHWORK DATA - STH 27 SOUTH

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORDINATE
492+50.000	33.52	15.36	0.00	0.00	0.00	0.00	0.00
493+00.000	26.07	15.20	55.18	28.30	55.18	35.37	19.81
493+50.000	21.67	16.26	44.20	29.13	99.38	71.78	27.60
494+00.000	27.13	21.48	45.19	34.94	144.56	115.46	29.10
494+50.000	30.38	15.49	53.25	34.23	197.81	158.25	39.56
495+00.000	32.72	24.66	58.43	37.18	256.24	204.72	51.52
495+50.000	52.91	19.27	79.29	40.68	335.53	255.57	79.96
496+00.000	37.25	7.81	83.48	25.07	419.01	286.91	132.10
496+50.000	23.59	0.00	56.33	7.23	475.34	295.95	179.39
497+00.000	46.42	3.50	64.82	3.24	540.17	300.00	240.17
497+50.000	34.86	14.02	75.26	16.22	615.43	320.28	295.15
498+00.000	21.58	3.28	52.26	16.02	667.69	340.30	327.38
498+50.000	17.83	11.80	36.49	13.96	704.18	357.75	346.42
498+70.000	37.58	8.10	20.52	7.37	724.70	366.97	357.73
499+00.000	19.41	12.96	31.66	11.70	756.36	381.59	374.77
499+50.000	21.85	11.56	38.20	22.70	794.56	409.97	384.59
500+00.000	28.13	0.00	46.28	10.70	840.84	423.35	417.49
500+50.000	21.17	1.25	45.65	1.16	886.49	424.80	461.69
501+00.000	18.00	0.00	36.27	1.16	922.76	426.25	496.51
501+50.000	16.43	0.00	31.88	0.00	954.64	426.25	528.39
502+00.000	14.85	5.10	28.96	4.72	983.60	432.15	551.45
503+00.000	0.00	0.00	27.50	9.44	1011.10	443.95	567.15

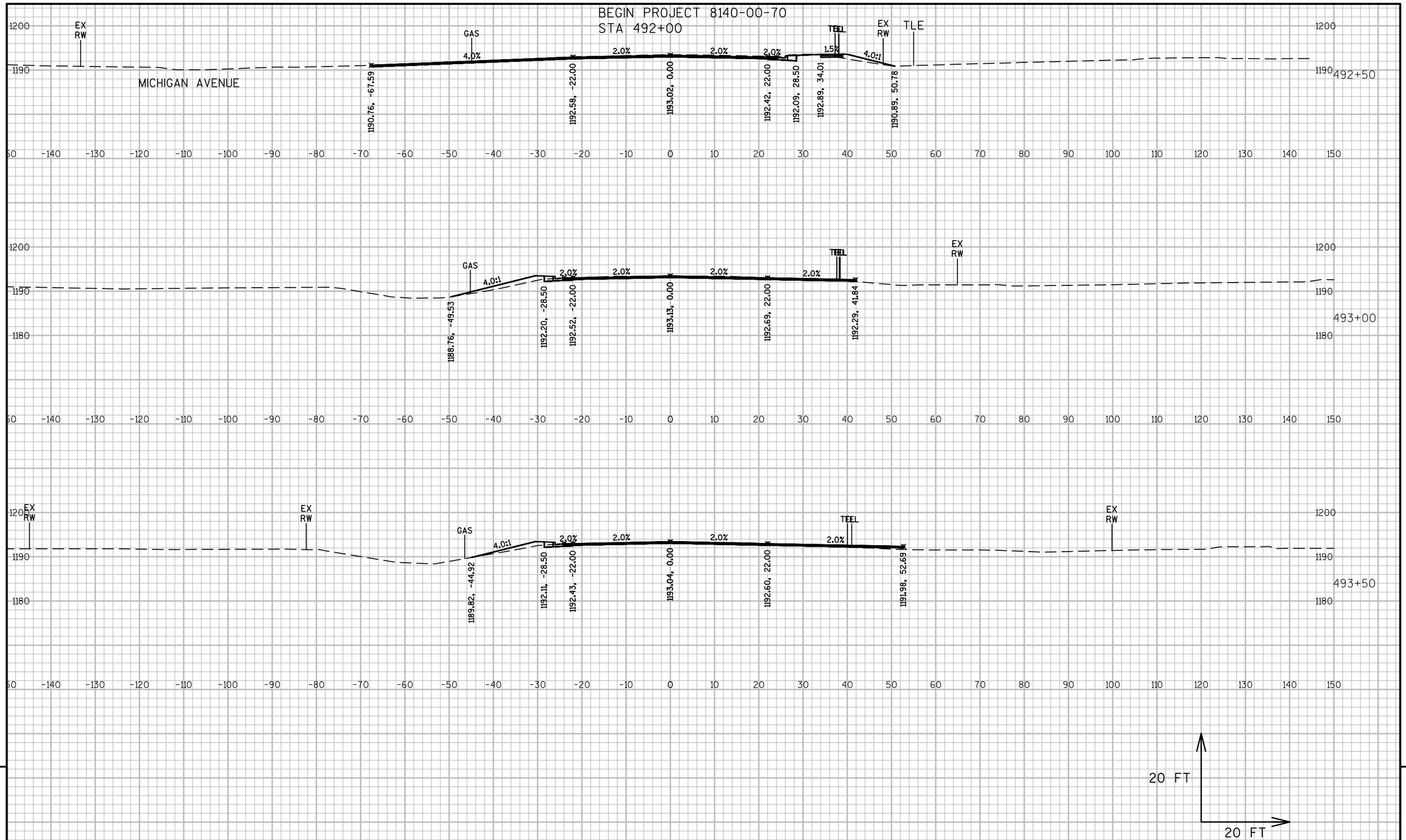
EARTHWORK DATA - CTH B

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORDINATE
24+00.000	16.85	0.00	0.00	0.00	0.00	0.00	0.00
24+25.000	40.01	0.05	26.33	0.02	26.33	0.03	26.31
24+50.000	52.66	1.81	41.41	0.72	67.74	0.93	66.82
25+50.000	51.80	0.00	186.68	2.83	254.42	4.46	249.96
25+75.000	72.80	0.00	56.14	0.00	310.55	4.46	306.09
26+00.000	41.66	2.24	51.57	0.94	362.12	5.64	356.48
26+25.000	55.34	3.46	44.00	2.40	406.12	8.64	397.48
26+50.000	31.46	0.00	39.81	1.52	445.93	10.54	435.39
26+75.000	37.89	0.22	32.11	0.10	478.04	10.66	467.38
27+00.000	0.00	0.00	17.54	0.10	495.58	10.79	484.79

EARTHWORK DATA - STH 27 NORTH

STATION	AREA (SF) CUT	AREA (SF) FILL	INCR. VOL (CY) CUT	INCR. VOL (CY) FILL	CUMULATIVE VOL (CY) CUT 1.00	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORDINATE
504+16.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
504+50.000	28.60	26.18	18.01	16.48	18.01	20.60	-2.60
505+00.000	33.52	17.33	57.52	40.29	75.53	70.96	4.56
505+28.000	51.94	2.24	44.31	10.15	119.84	83.65	36.19
505+50.000	42.31	13.20	38.40	6.29	158.24	91.51	66.73
506+00.000	39.47	11.92	75.72	23.26	233.96	120.58	113.37
506+50.000	47.68	4.59	80.69	15.29	314.65	139.69	174.96
506+70.000	68.40	0.41	42.99	1.85	357.65	142.01	215.64
507+00.000	75.19	7.01	79.77	4.12	437.42	147.16	290.26
507+50.000	104.81	2.21	166.67	8.54	604.08	157.83	446.25
508+00.000	120.50	0.30	208.62	2.32	812.71	160.74	651.97
508+50.000	91.09	0.49	195.92	0.73	1008.62	161.65	846.97
509+00.000	98.34	0.00	175.40	0.45	1184.02	162.22	1021.80
509+50.000	157.04	0.00	236.46	0.00	1420.48	162.22	1258.26
510+00.000	118.84	0.00	255.44	0.00	1675.93	162.22	1513.71
510+37.000	115.17	0.00	160.34	0.00	1836.27	162.22	1674.05
510+50.000	110.39	0.00	54.30	0.00	1890.57	162.22	1728.35
510+72.000	142.66	0.00	103.09	0.00	1993.66	162.22	1831.44
511+00.000	109.44	0.00	130.72	0.00	2124.38	162.22	1962.16
511+50.000	98.18	0.00	192.24	0.00	2316.62	162.22	2154.40
512+00.000	107.93	2.34	190.84	2.17	2507.47	164.93	2342.54
512+16.000	108.45	4.11	64.11	1.91	2571.58	167.32	2404.26
512+50.000	96.28	0.00	128.90	2.59	2700.48	170.55	2529.93
513+00.000	81.58	3.27	164.69	3.03	2865.17	174.34	2690.83
513+50.000	98.70	4.57	166.93	7.26	3032.09	183.41	2848.68
514+00.000	82.86	7.59	168.11	11.26	3200.20	197.48	3002.72
514+35.000	121.34	0.00	132.35	4.92	3332.56	203.63	3128.92
514+50.000	121.14	0.00	67.36	0.00	3399.91	203.63	3196.28
515+00.000	96.82	0.08	201.81	0.07	3601.73	203.73	3398.00
515+50.000	88.86	1.06	171.93	1.06	3773.65	205.05	3568.61
516+00.000	84.96	8.31	160.94	8.68	3934.60	215.89	3718.71
516+50.000	67.93	0.42	141.56	8.08	4076.16	225.99	3850.17
517+00.000	35.36	0.00	95.64	0.39	4171.80	226.48	3945.32
517+50.000	21.88	0.29	53.00	0.27	4224.80	226.82	3997.98
518+00.000	17.78	0.37	36.72	0.61	4261.52	227.58	4033.94
518+50.000	22.69	0.31	37.47	0.63	4299.00	228.37	4070.63

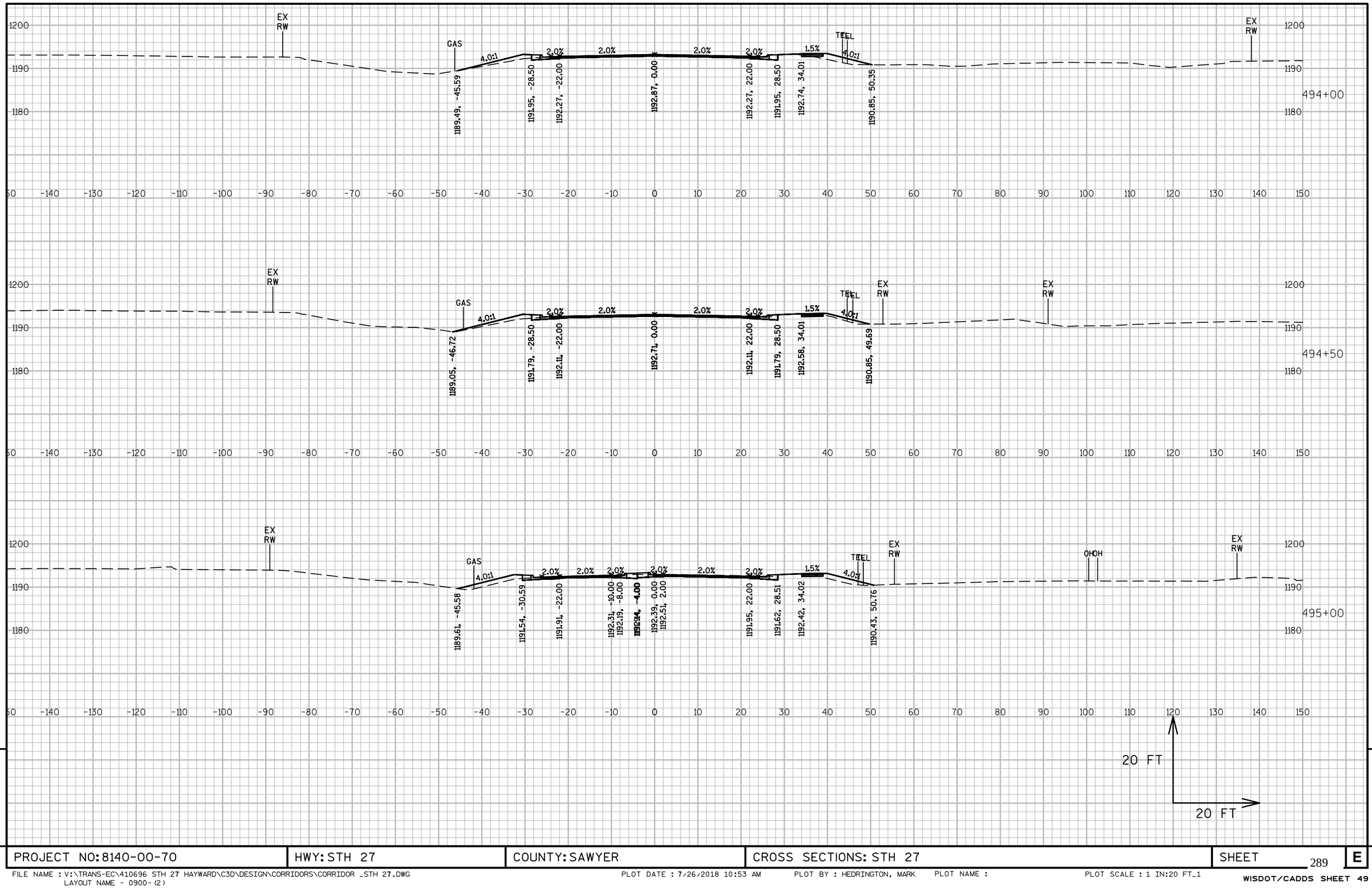
BEGIN PROJECT 8140-00-70
STA 492+00



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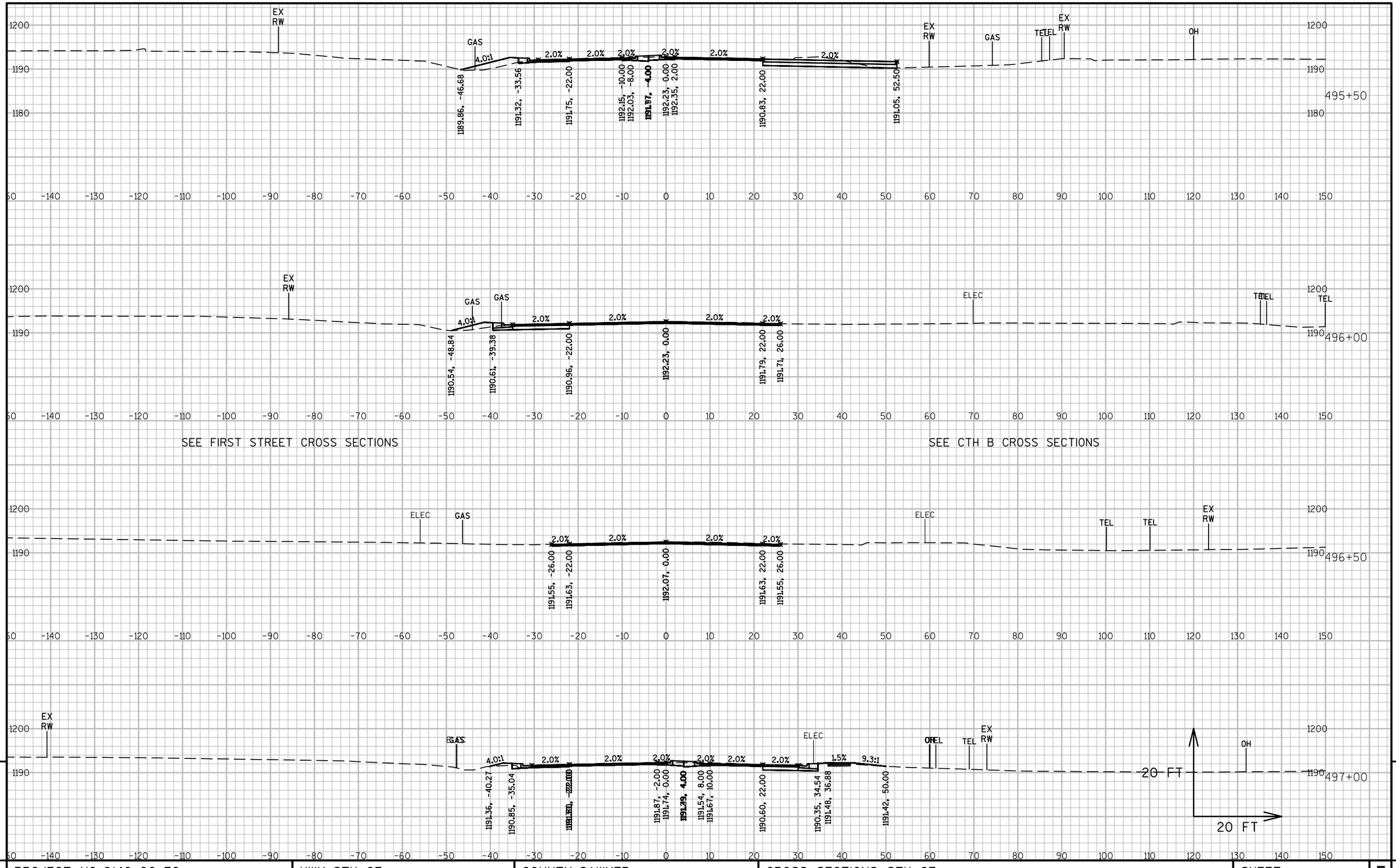
PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 288	E



PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 289	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(2)

PLOT DATE : 7/26/2018 10:53 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

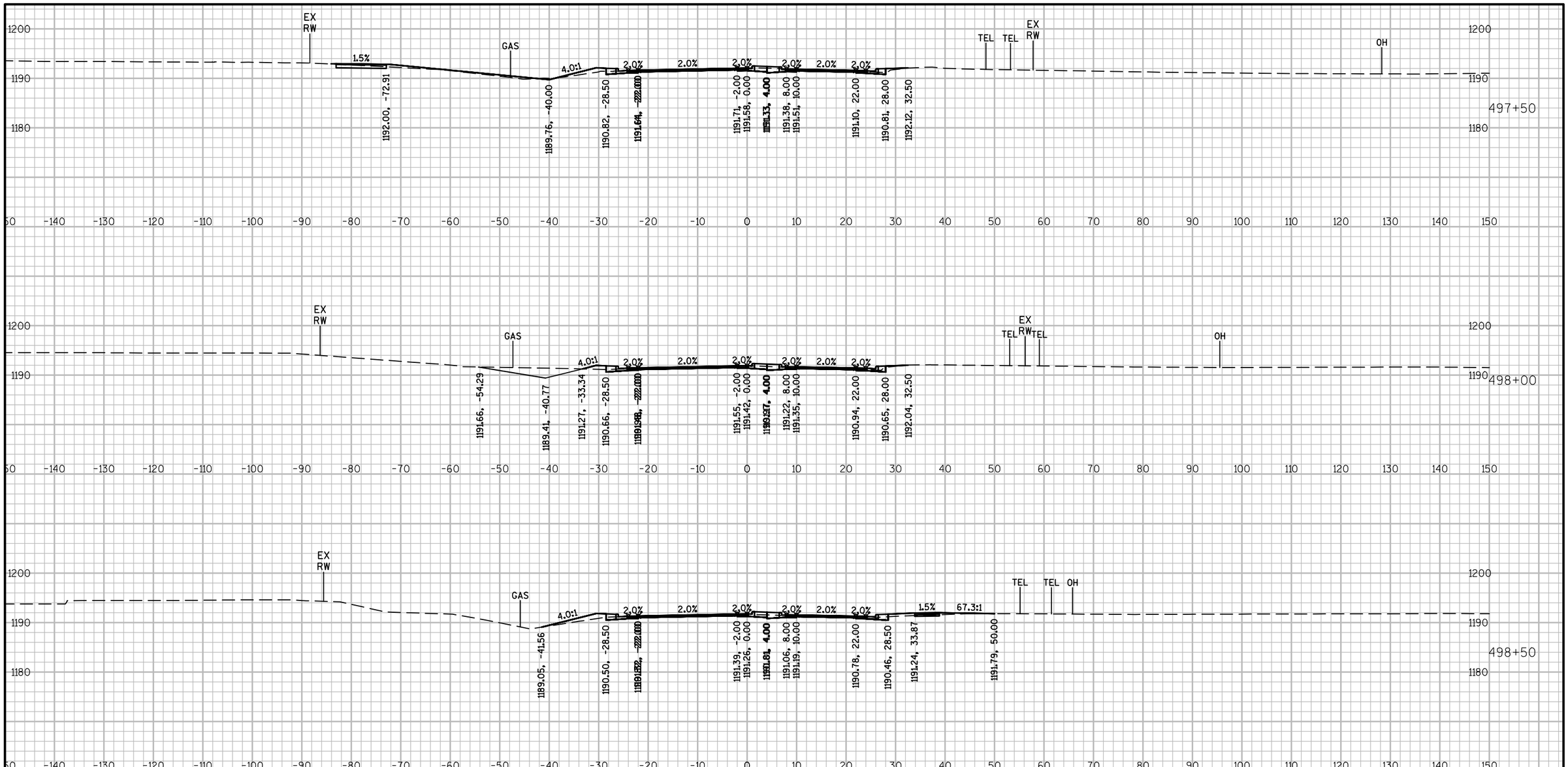


PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 290	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(3)

PLOT DATE : 7/26/2018 10:53 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



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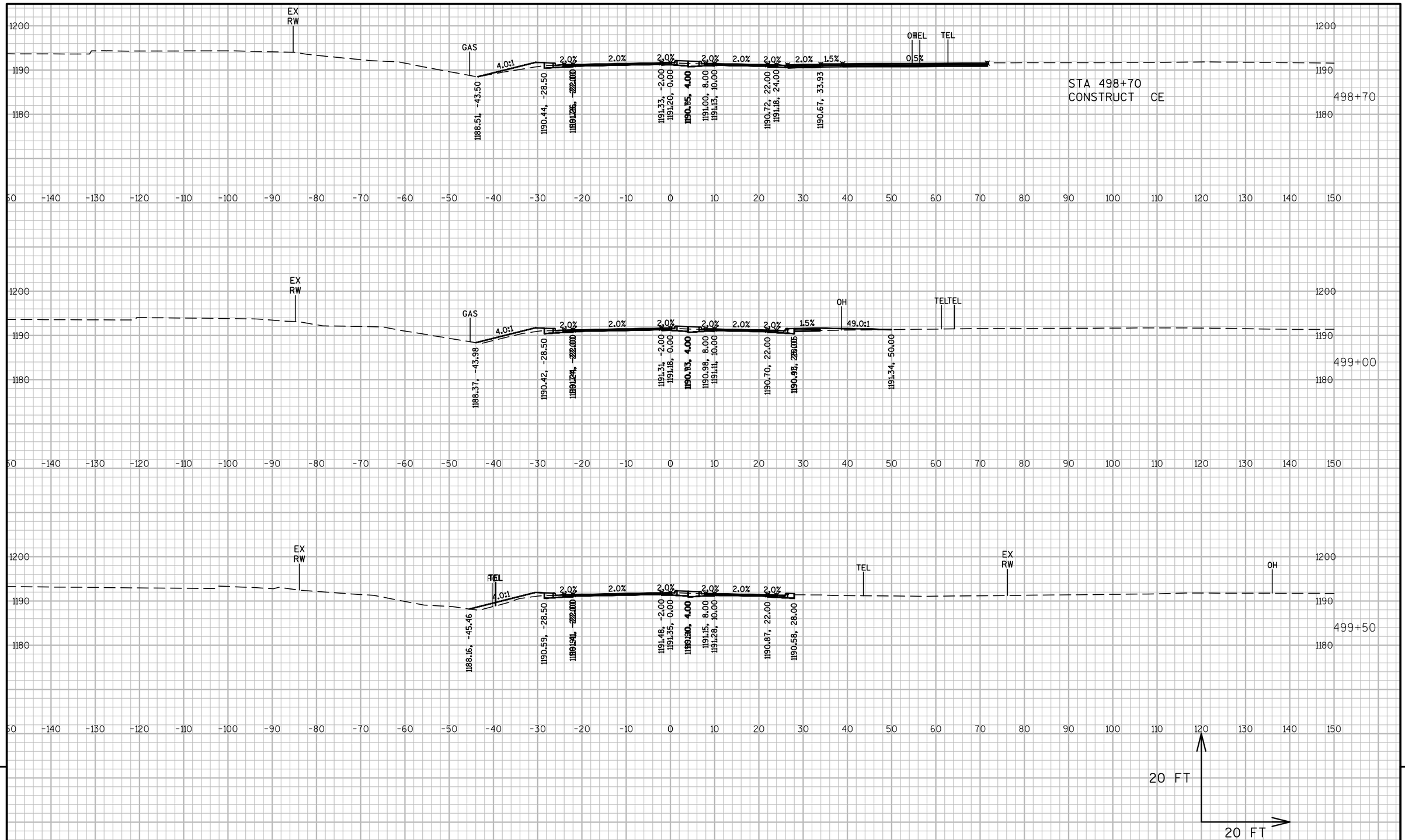
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PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 291	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(4)

PLOT DATE : 7/26/2018 3:34 PM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

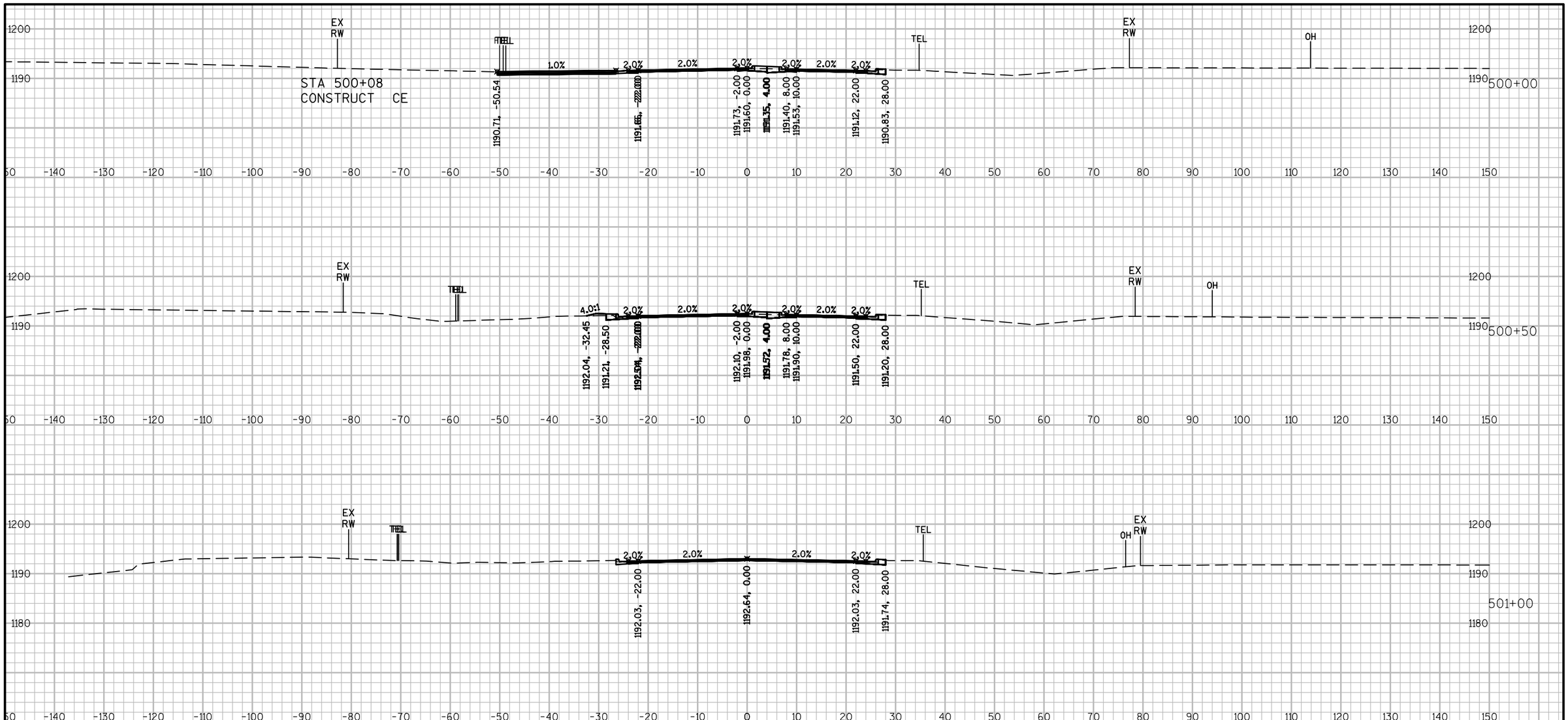
WISDOT/CADDS SHEET 49



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PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 292	E

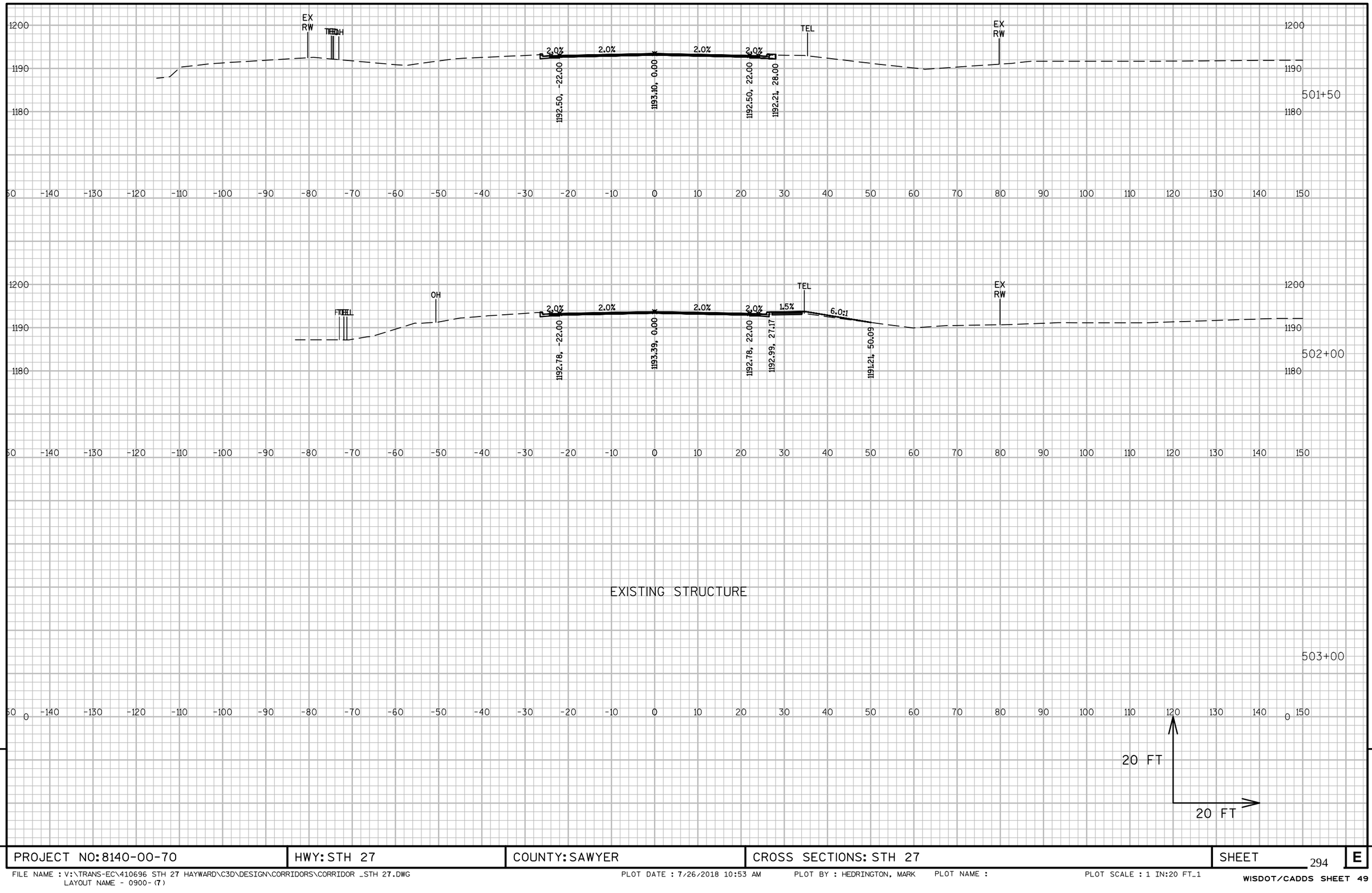


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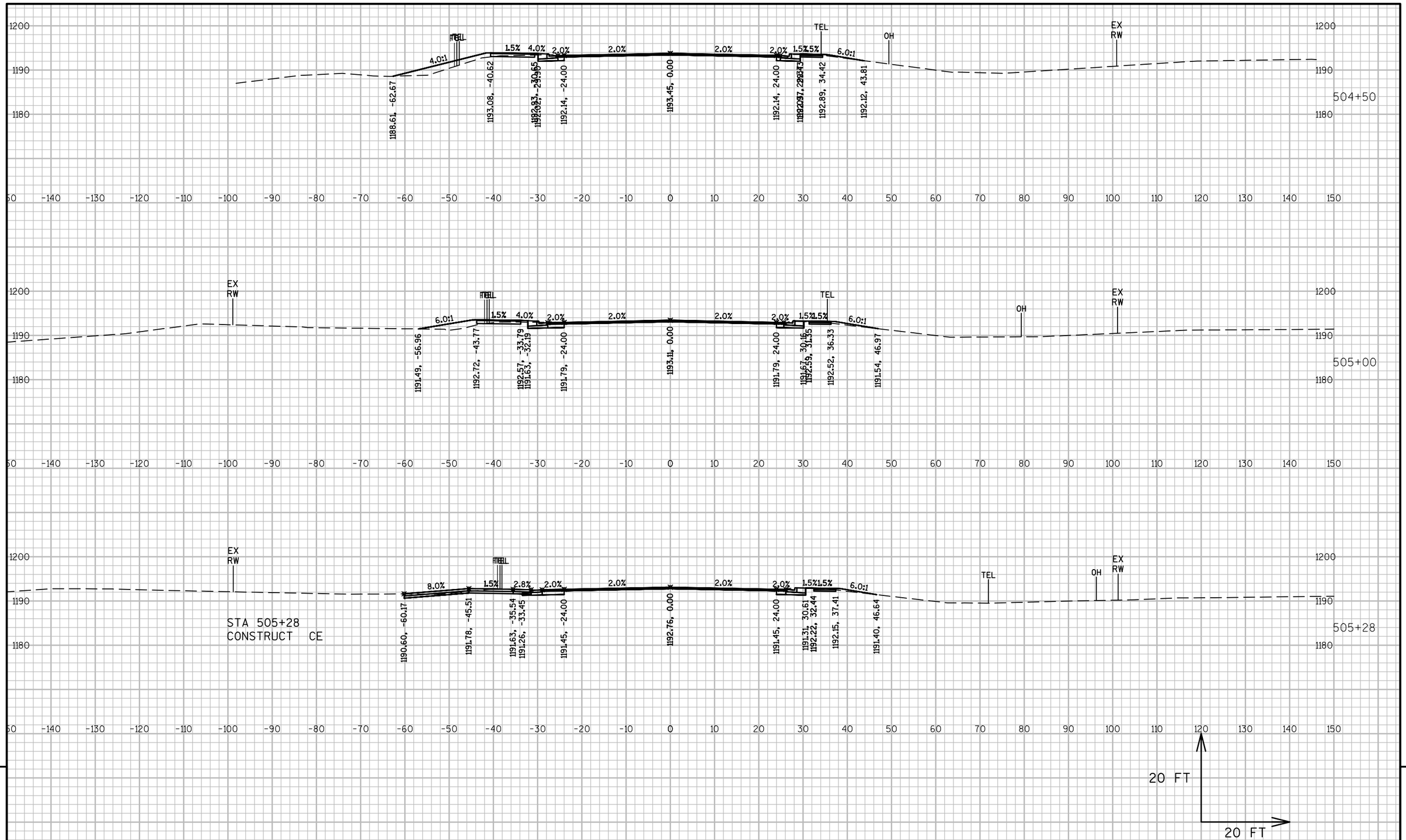
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LAYOUT NAME - 0900-(6)

PLOT DATE : 7/26/2018 10:53 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 294	E



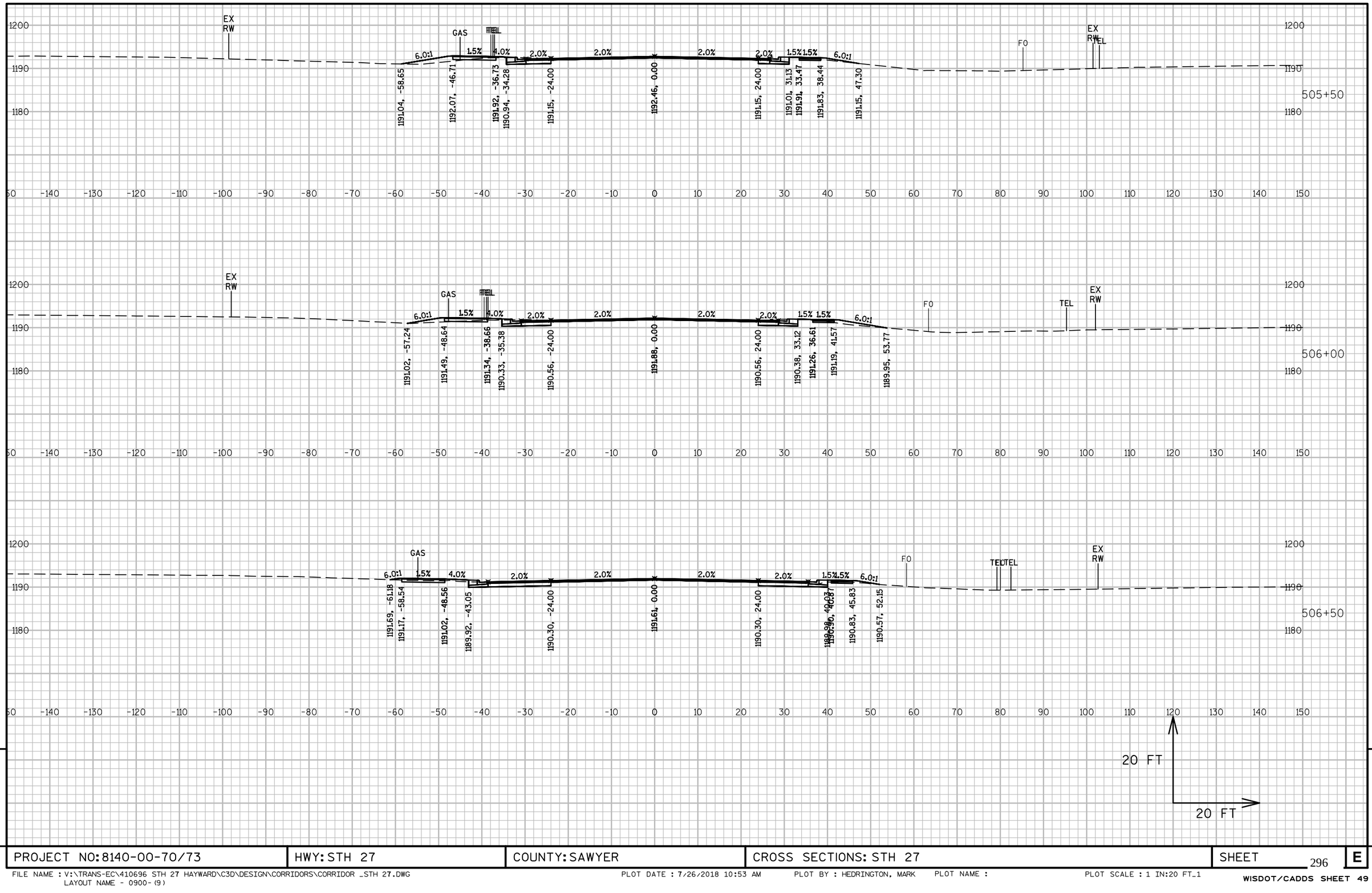
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PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 295	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(8)

PLOT DATE : 7/26/2018 10:53 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

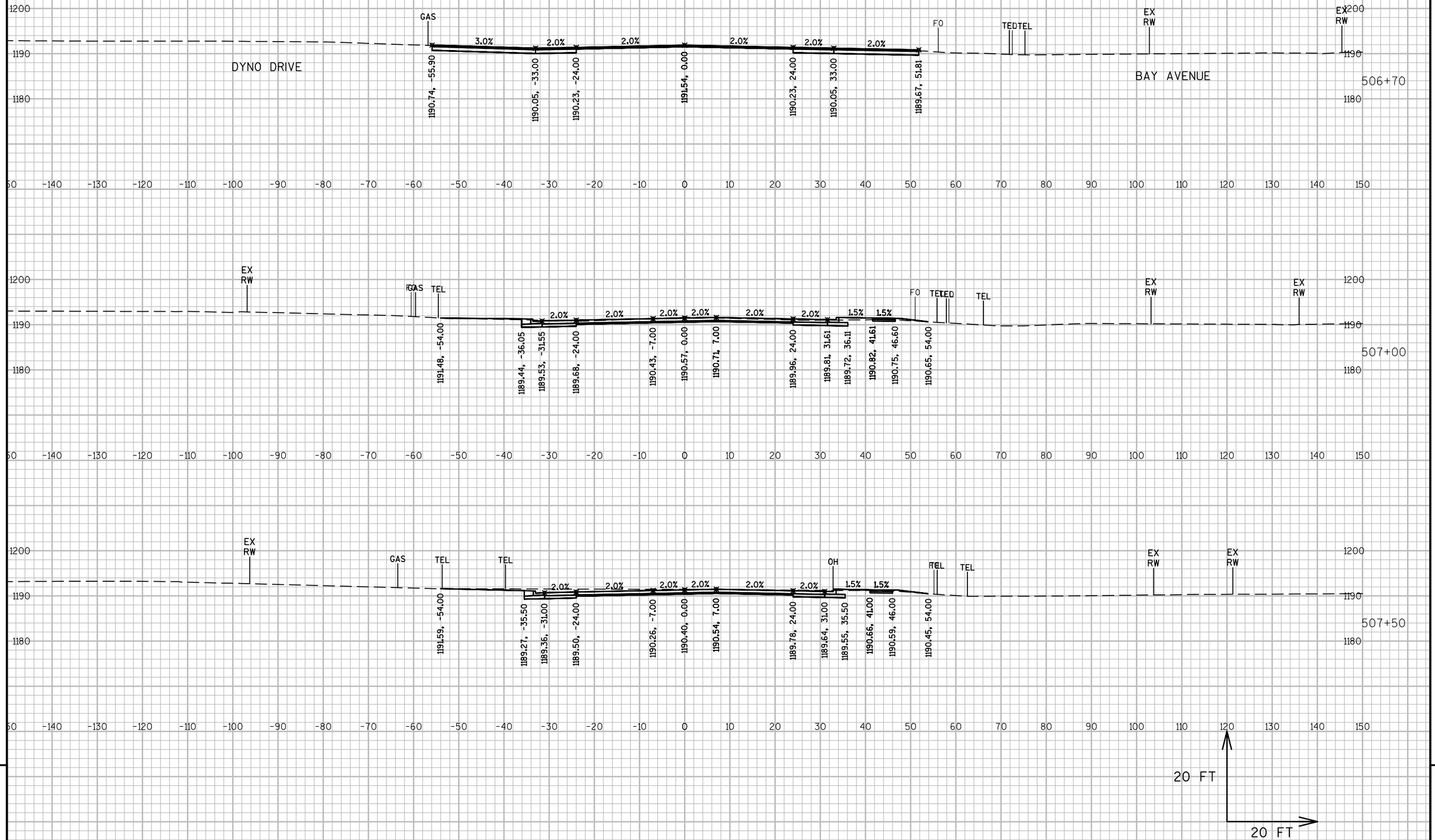


PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 296	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(9)

PLOT DATE : 7/26/2018 10:53 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

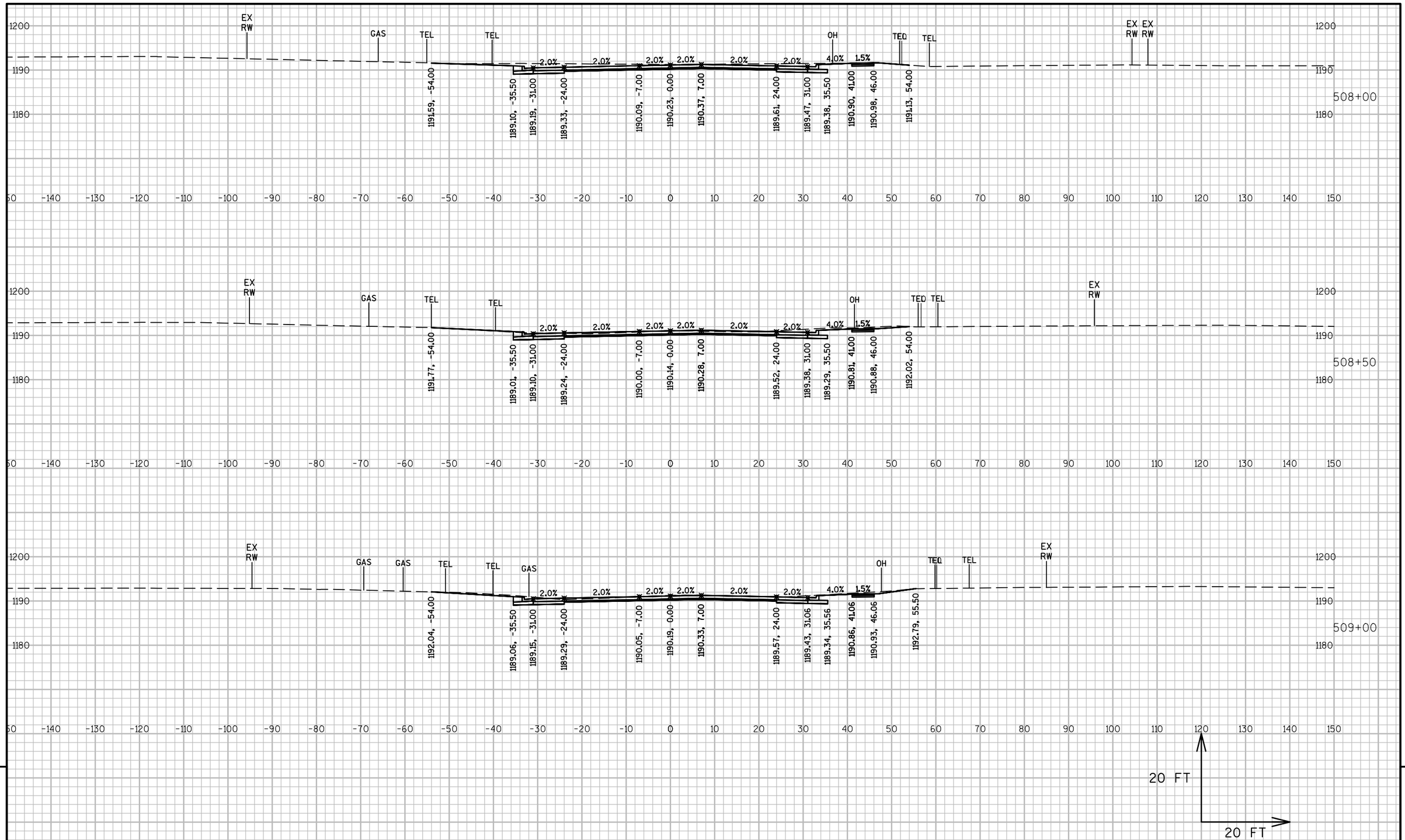
WISDOT/CADDS SHEET 49



PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 297	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(10)

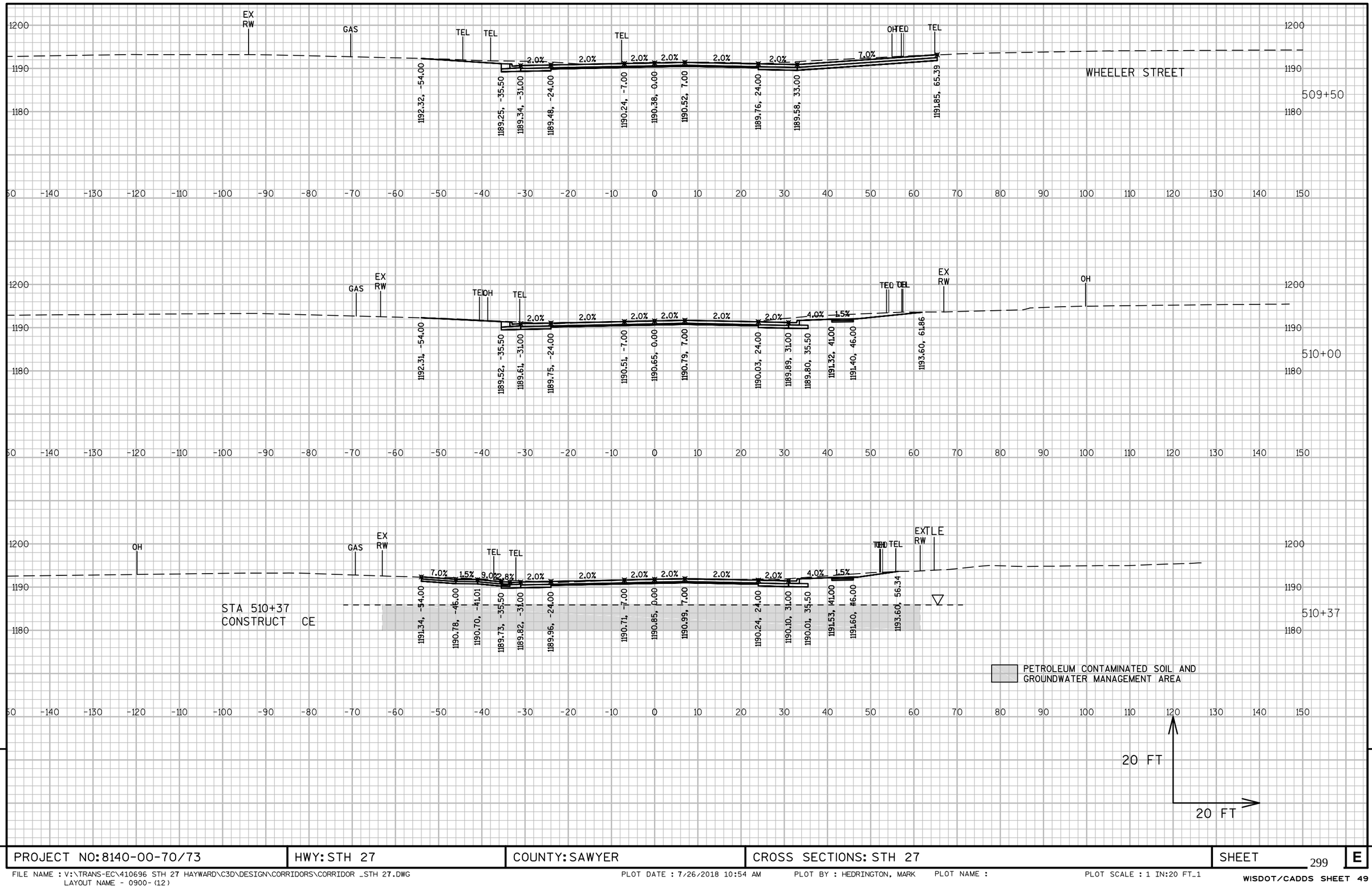
PLOT DATE : 7/26/2018 10:53 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1



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PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 298	E

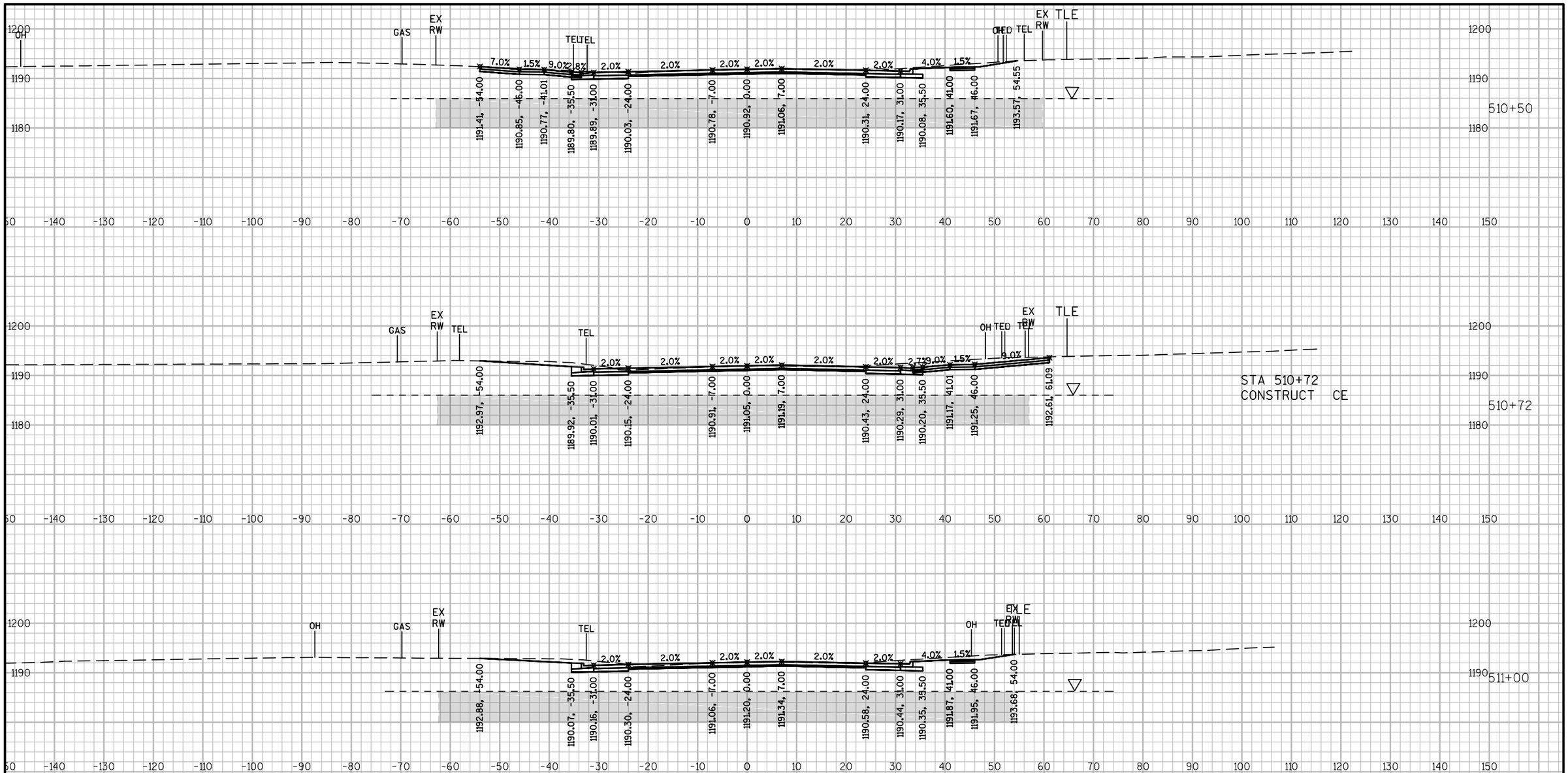


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PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 299	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(12)
PLOT DATE : 7/26/2018 10:54 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1
WISDOT/CADDS SHEET 49

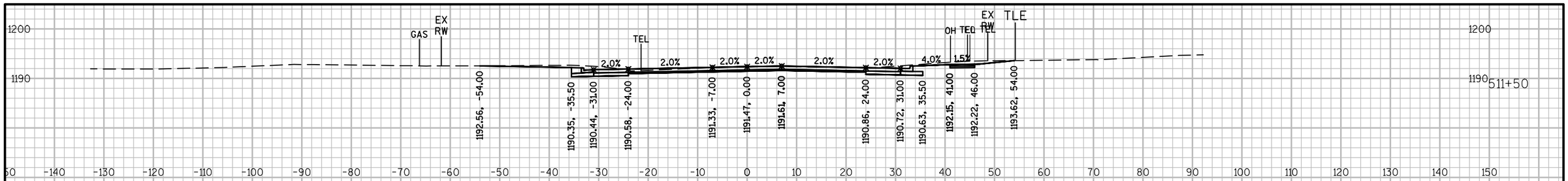


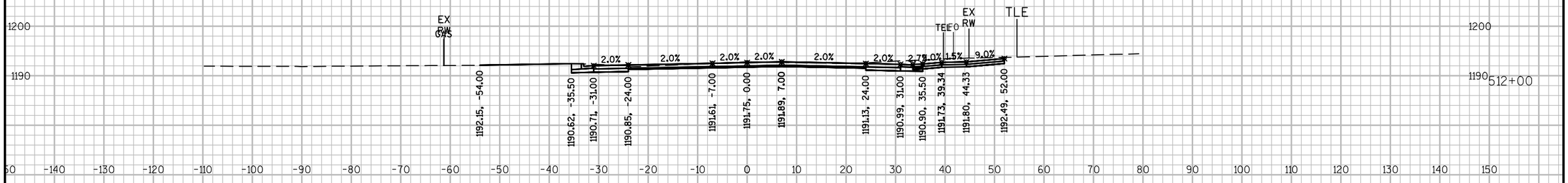
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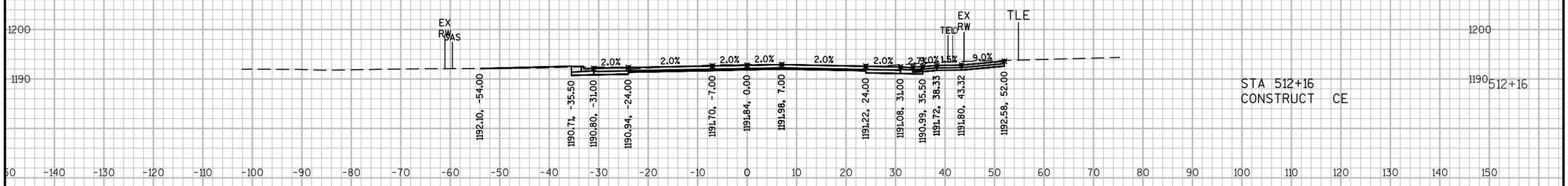
FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(13)

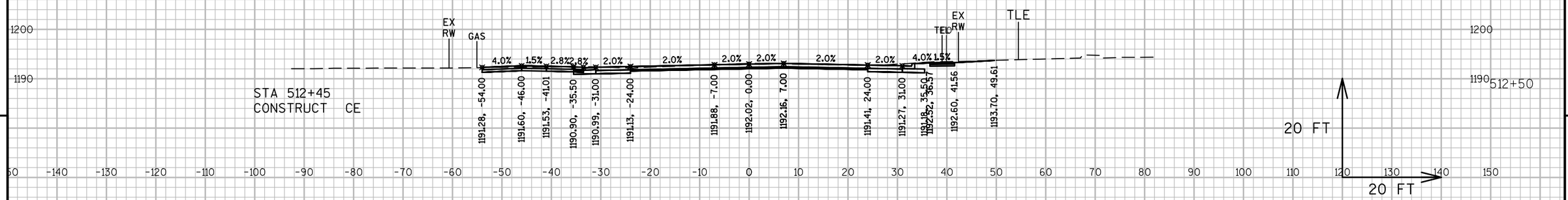
PLOT DATE : 7/26/2018 10:54 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49









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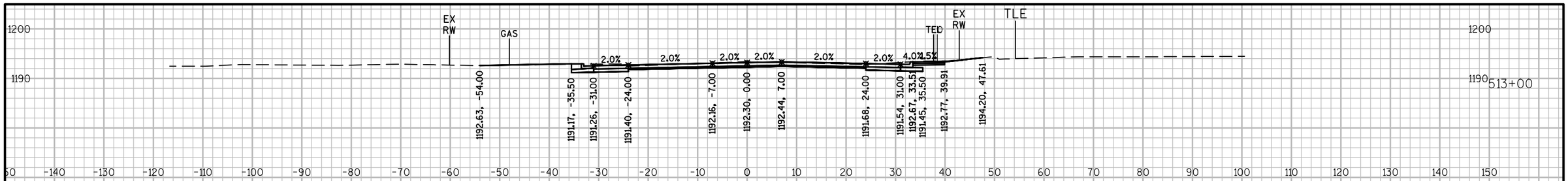
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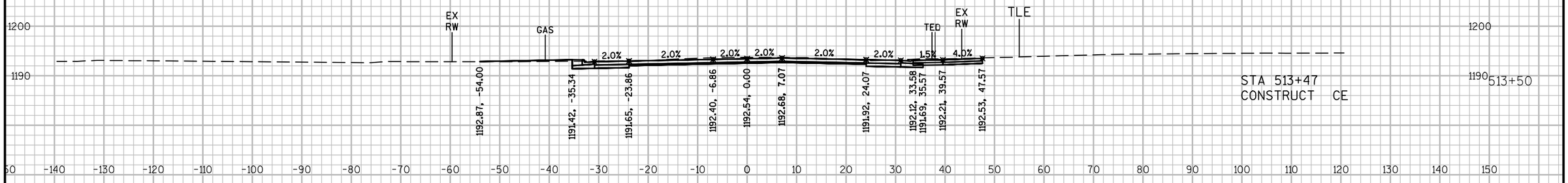
PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 301	E

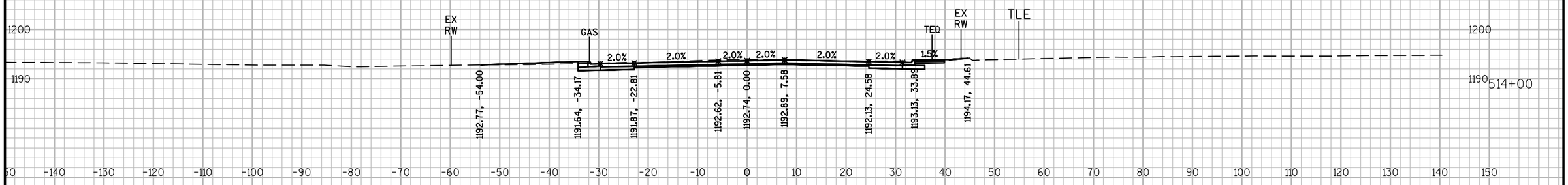
FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(14)

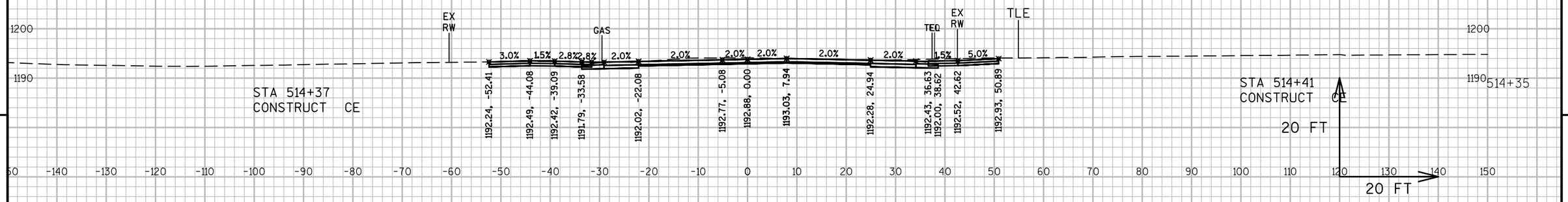
PLOT DATE : 7/26/2018 10:54 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49







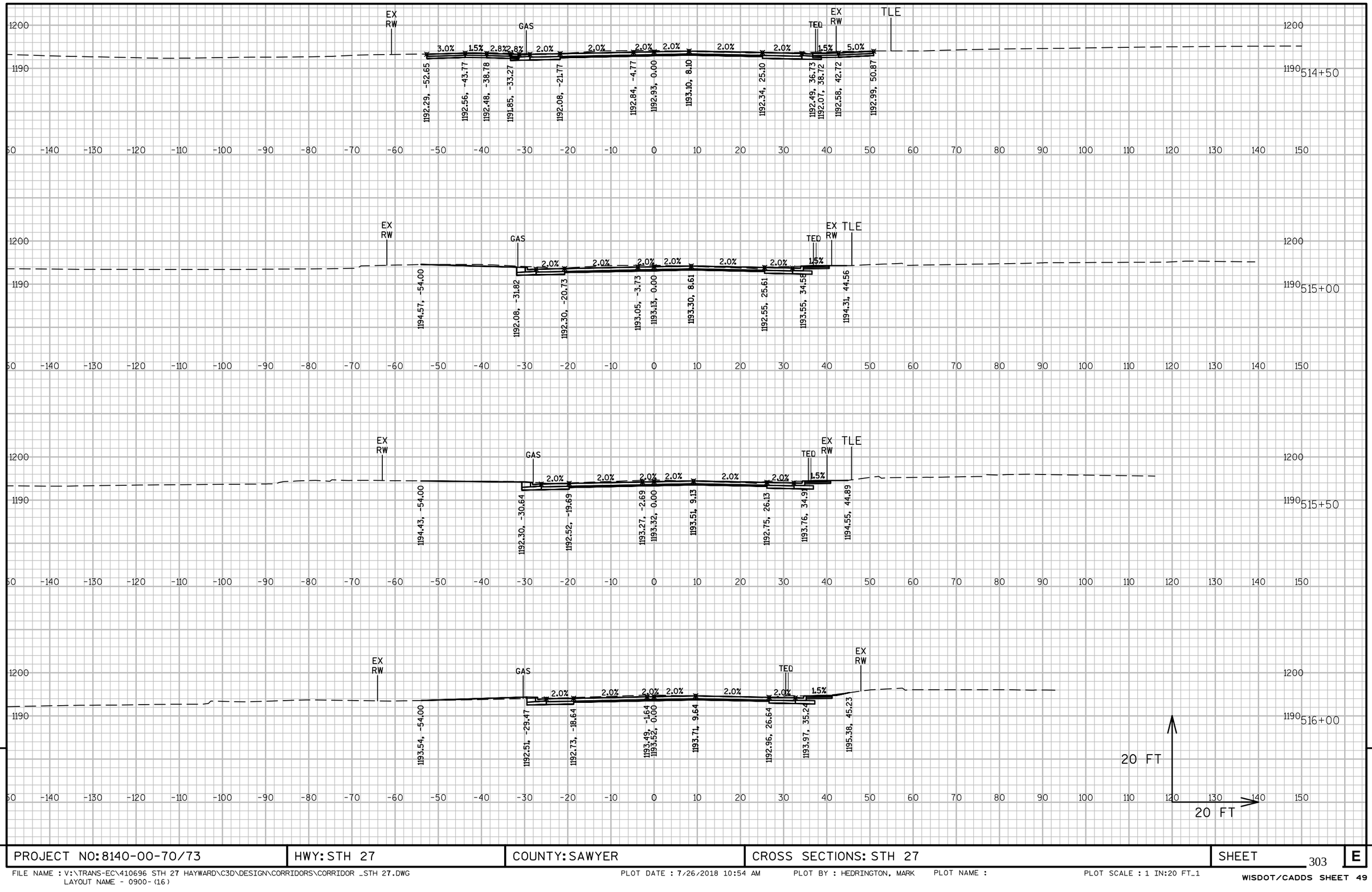


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PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 302	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(15)
PLOT DATE : 7/26/2018 10:54 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1
WISDOT/CADDS SHEET 49



9

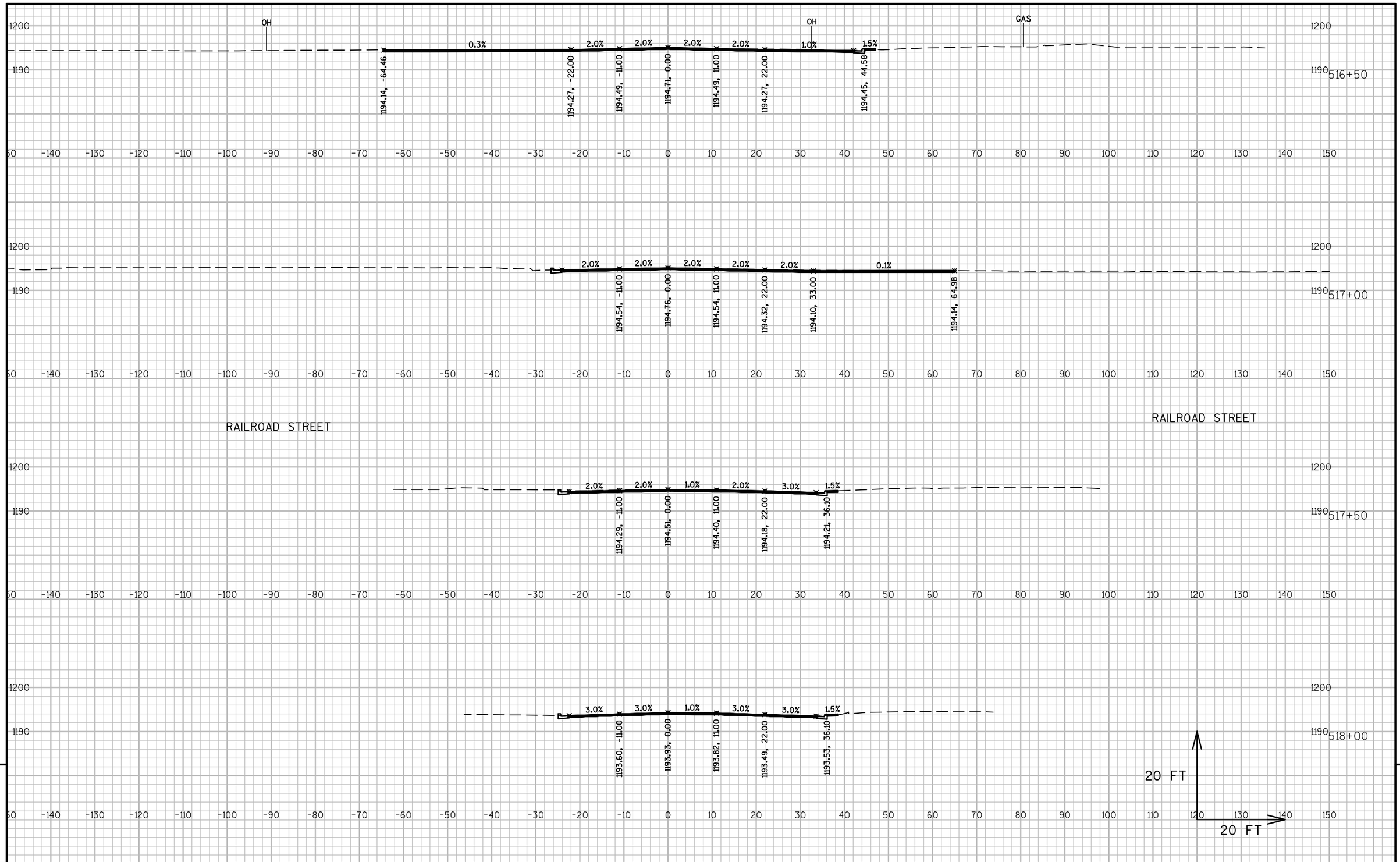
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PROJECT NO: 8140-00-70/73	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 303	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(16)

PLOT DATE : 7/26/2018 10:54 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49

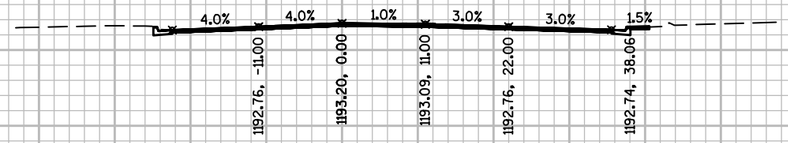


PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 304	E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0900-(17)

PLOT DATE : 7/26/2018 10:54 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

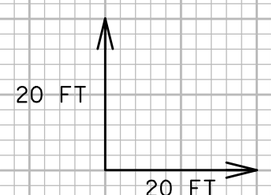
WISDOT/CADDS SHEET 49



1200
1190
1200
1190
518+50

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

END PROJECT 8140-00-70
STA 518+67

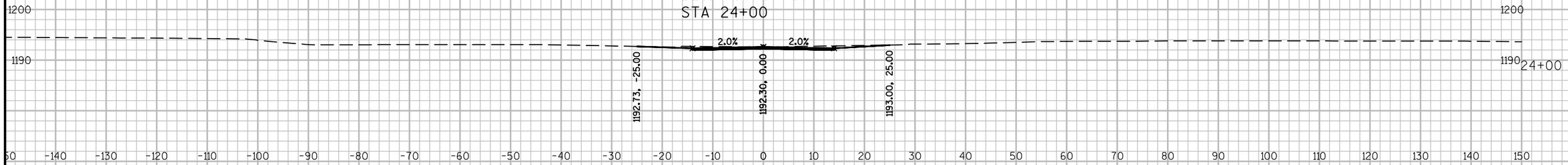


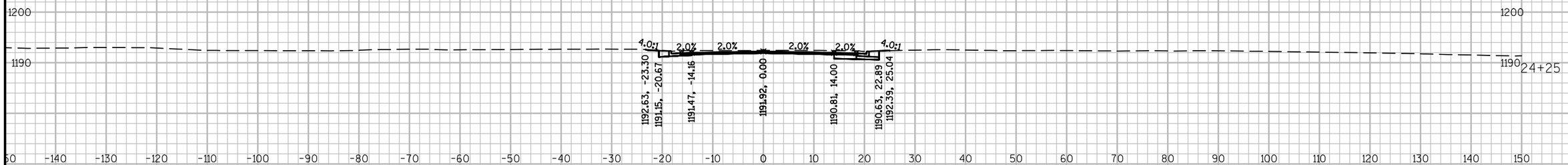
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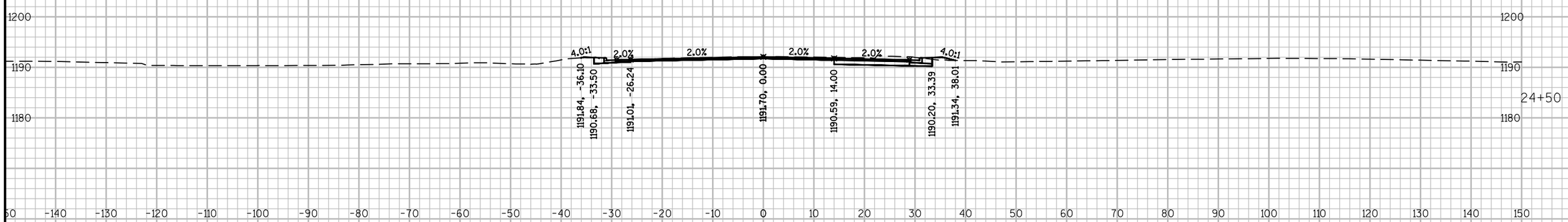
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PROJECT NO: 8140-00-70/73/74	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: STH 27	SHEET 305	E

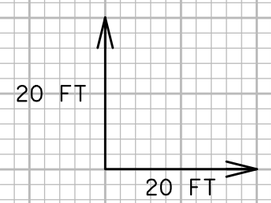
BEGIN CONSTRUCTION
STA 24+00







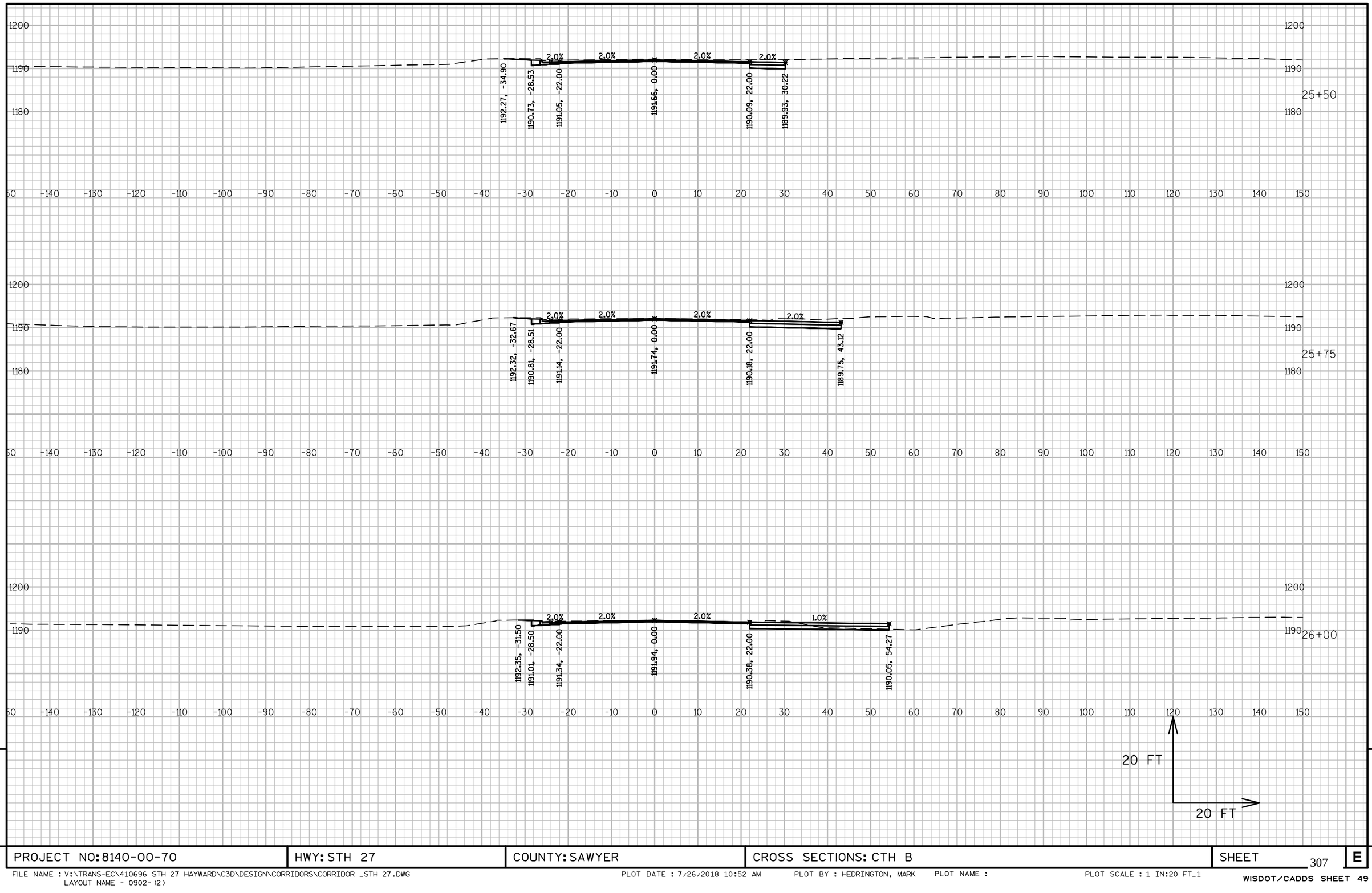
STH 27 INTERSECTION STA 25+00



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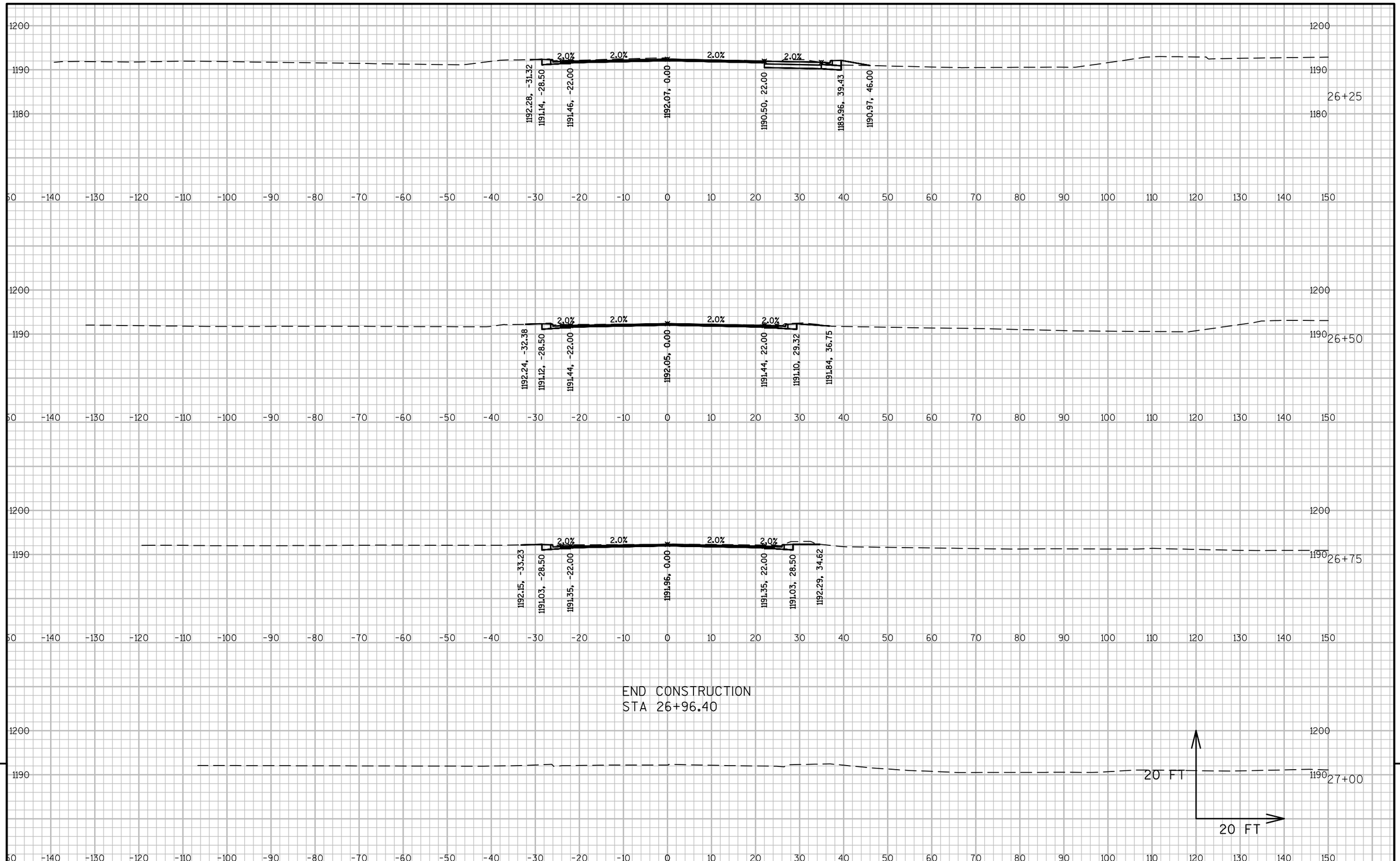
PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: CTH B	SHEET 306	E



9

9

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: CTH B	SHEET 307	E



9 9

PROJECT NO: 8140-00-70	HWY: STH 27	COUNTY: SAWYER	CROSS SECTIONS: CTH B	SHEET 308 E

FILE NAME : V:\TRANS-EC\410696 STH 27 HAYWARD\C3D\DESIGN\CORRIDORS\CORRIDOR _STH 27.DWG
LAYOUT NAME - 0902-(3)
PLOT DATE : 7/26/2018 10:53 AM PLOT BY : HEDRINGTON, MARK PLOT NAME : PLOT SCALE : 1 IN:20 FT_1
WISDOT/CADDS SHEET 49

Notes

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